

Motor India

1-2

no. 9 to.

April, May, June, - 1958



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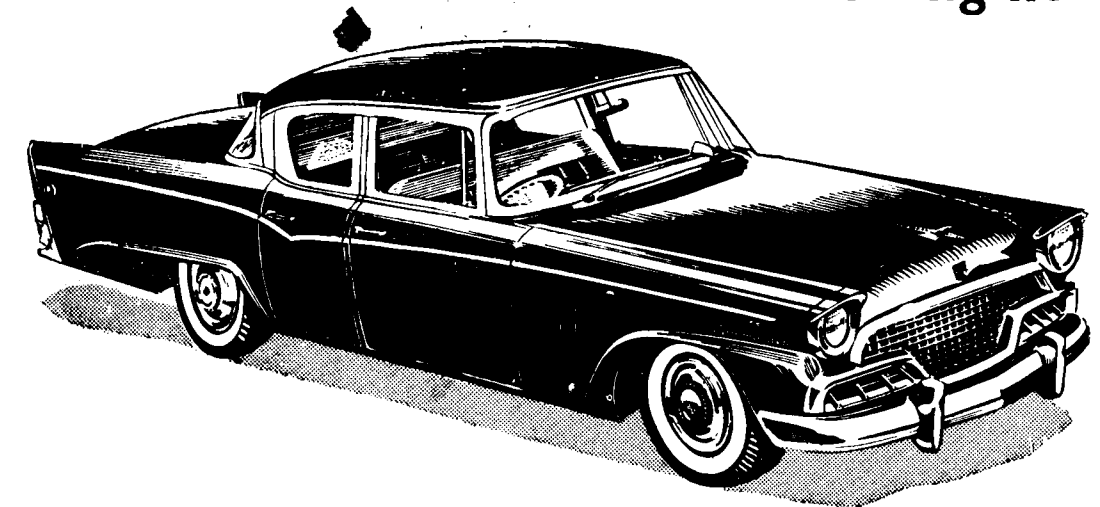
# MOTORINDIA

VOLUME 2

APRIL 1958

NUMBER 9

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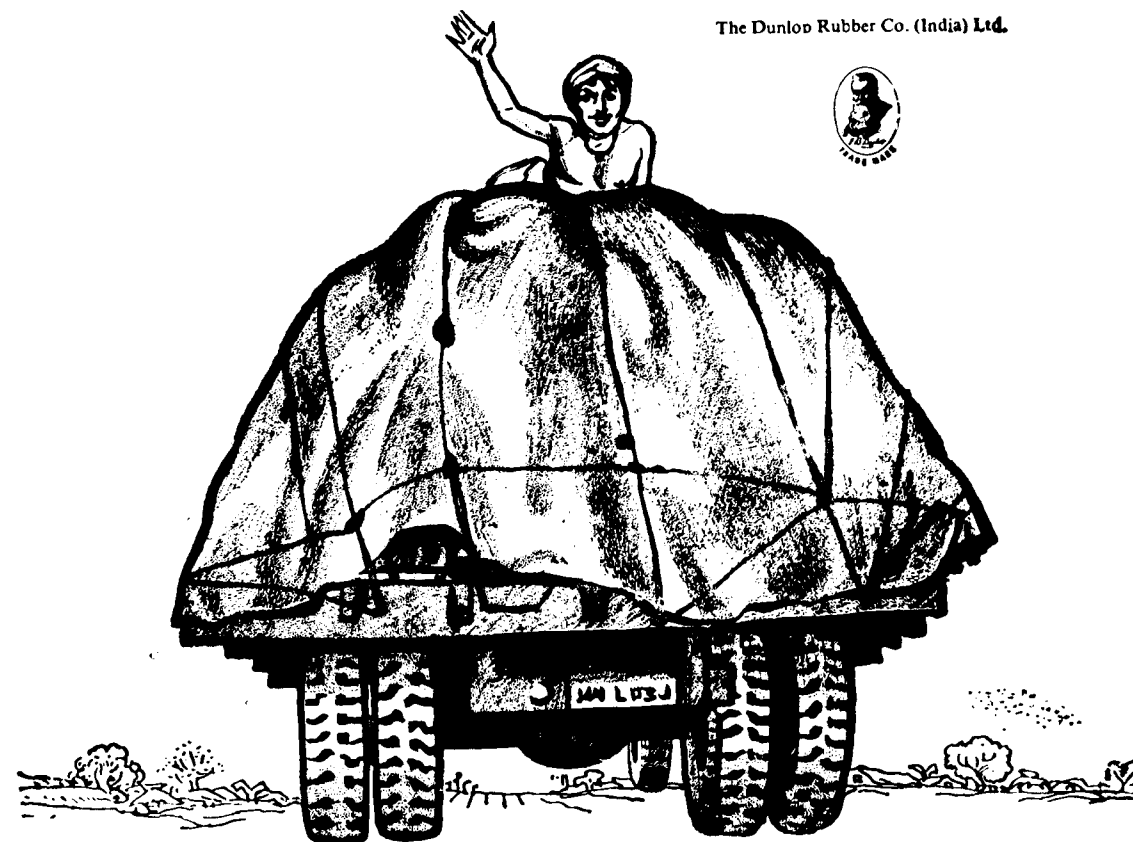
A short interlude at the service station; a smoke, a chat and, perhaps, a cup of tea nearby; then up again behind the steering wheel and off to the market.

More goods from farms, mines and factories have set motor transport a big task under the Second Plan. Rs. 269 crores have been allocated for road development in the next five years; at the end of the Plan, no well-developed village will be more than 5 miles from a main road;

the present goods fleet of about 116,000 trucks will rise at the rate of 10,000 a year.

The Dunlop factory at Sahaganj, the largest rubber manufacturing plant in Asia, has taken in hand active measures to expand output to meet the growing requirements of road transport. A new Dunlop factory is being set up at Ambattur, near Madras, and will commence production in the near future.

The Dunlop Rubber Co. (India) Ltd.

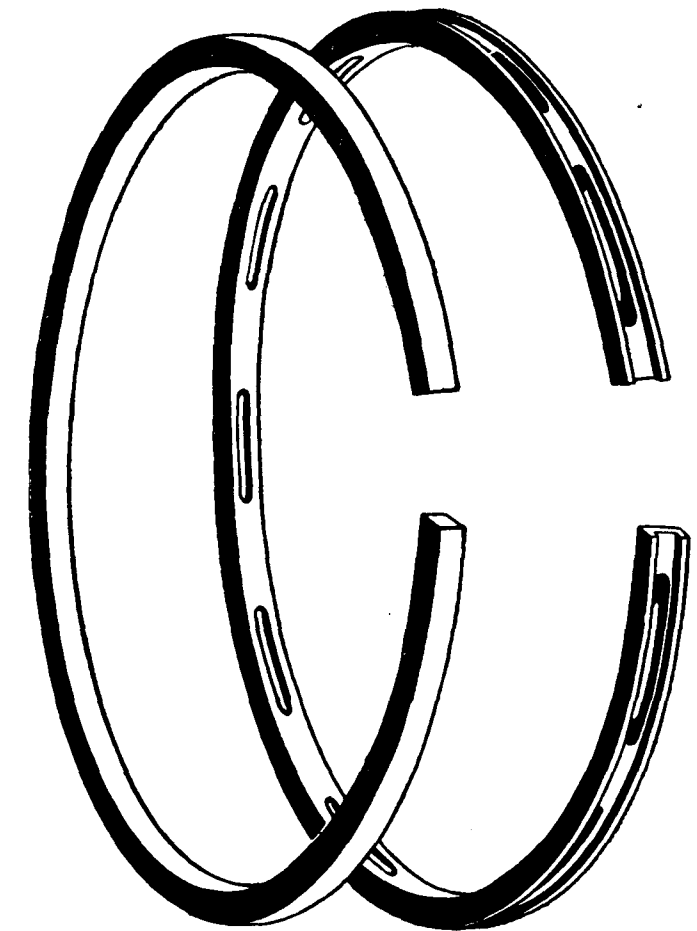


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MOTORINDIA

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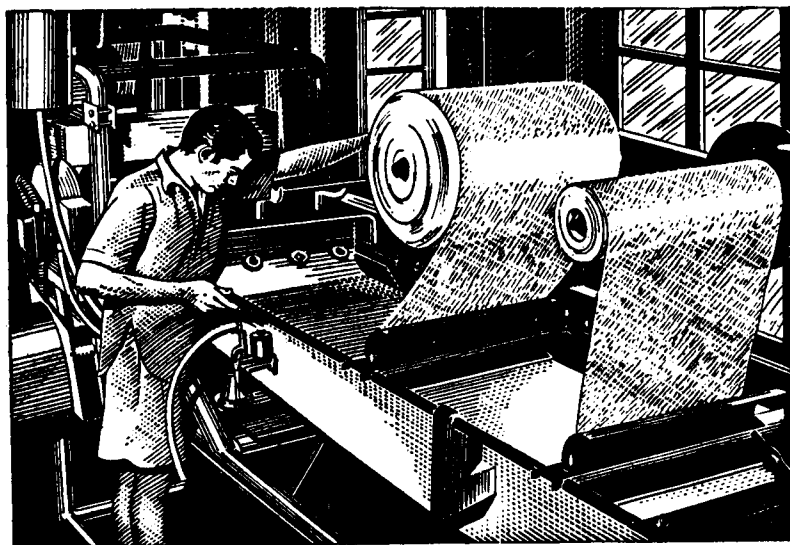
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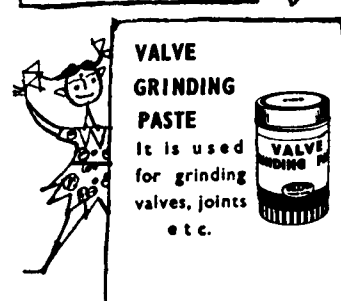
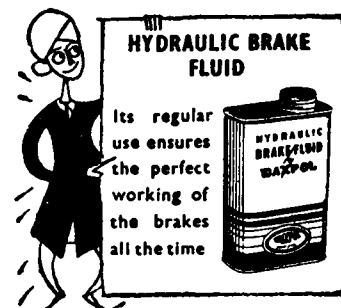
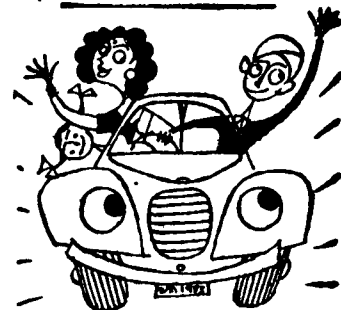
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Vol. 2

APRIL 1958

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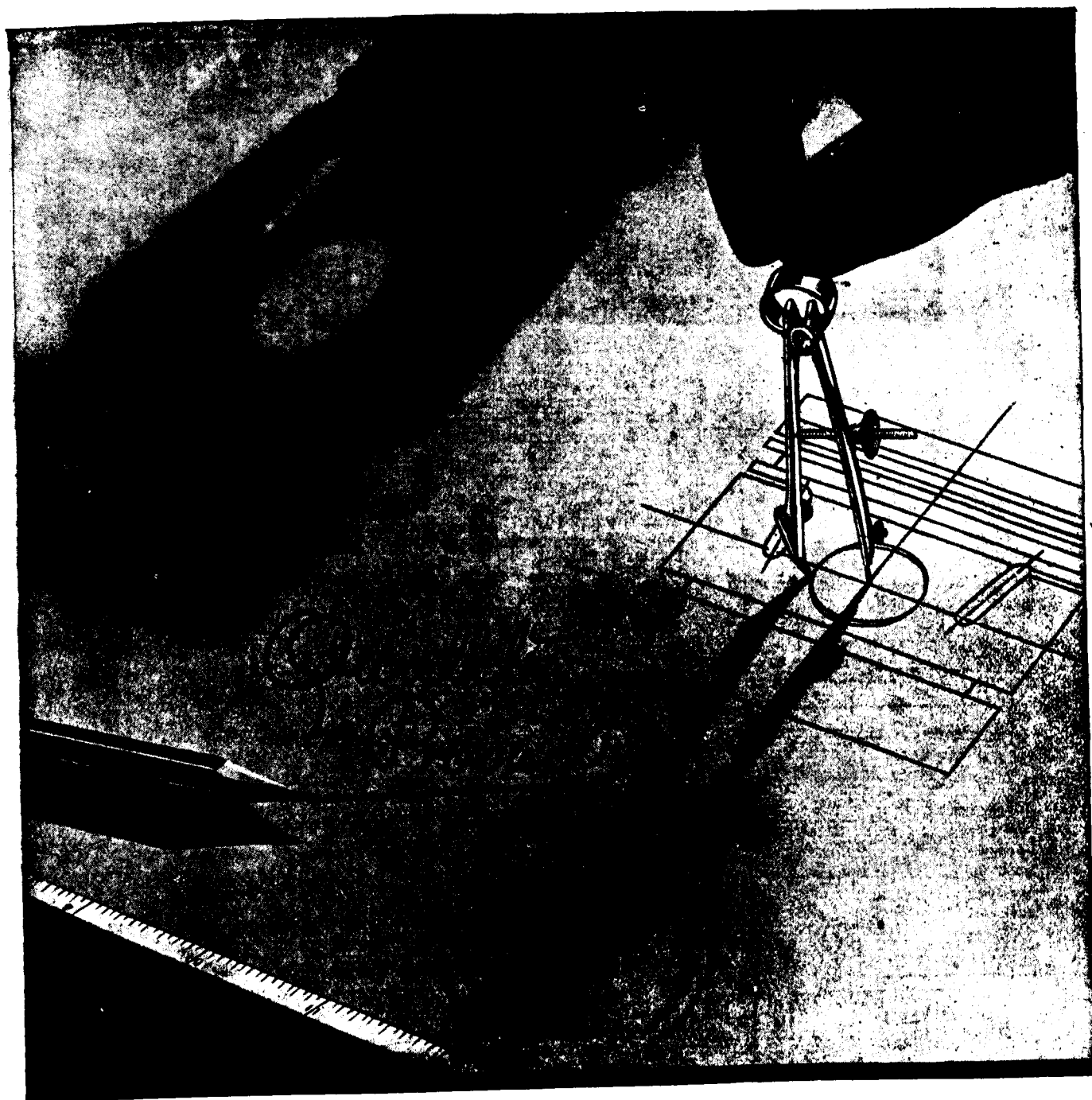
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MOTORINDIA

April 1958

## editorial

### SOARING AUTOMOBILE PRICES

The strain on the consumers of various types of automobiles, following a steady and steep increase in the prices of vehicles in recent years, has reached such a stage of unbearable limits that even those who are actually charging such prices for the automobiles, have been finding it necessary to refer to the exorbitant prices of automobiles that is prevailing in India today. Thus, we find no less a person than Lalchand Hirachand, who is himself Chairman of a firm of leading automobile assemblers and progressive manufacturers, coming out in the open, protesting against the high prices of automobiles. Of course, he finds the reasons for such an exorbitant price not so much within the industry in this country, but at the doors of the Government's policy, particularly in regard to taxation.

Readers of *Motorindia*, who are mostly atleast motor owners, are aware that recently after the protection given by the Government of India, following the Tariff Commission's recommendations to the Industry, the prices of some makes of automobiles were allowed to be increased on the ground that current prices were uneconomical for the manufacturer.

It is, therefore, a pity that while the economics of the manufacturer and other interests are readily safeguarded by the permission given for such increases by the Government, the uneconomic position in which the consumer of the automobile finds himself today has not been given equal weight and investigation by the Departments of Government concerned. Prices of automobiles have gone up nearly four-fold during the last two decades and with the increasing cost of living, the poor and busy automobile owner is put to any amount of hardships in finding the money to buy his personal transport. A rigorous Import Policy in regard to automobile spare parts has further aggravated the situation so that prices of parts for replacements are not only going up steadily, but will rise even further in the years to come. Thus, even existing owners of automobiles are finding it difficult to maintain the vehicle with a view to keeping it safe, sound and roadworthy. As regards the effect of the high prices on the Bus and Truck owner, the situation is still worse.

Elsewhere in this issue, we have published in detail an interesting speech by Mr. B. M. Shaw, erstwhile President of the Bombay Motor Merchants' Association, whose members are mostly dealers in automobiles and automobile parts. Mr. Shaw has rightly emphasized that "in spite of the encouragements given by the Government and the protection afforded to the Industry, we find that car prices in India are beyond the reach of many people particularly of the middle class and prices are surprisingly high." This is not coming from any selfish motor or truck owner, but it is coming from a President of an Association whose interest in the industry and in the automobile and allied trades is perhaps second to none. That such august persons should take up this question of exorbitant prices of automobiles, is indeed a happy augury for the future of automobile owners, whether of private or commercial vehicles.

We trust that these protests will be heeded to not only by the Government, but also by the manufacturers of automobiles and parts in this country who have got practically all they wanted in the form of protection, etc., in the Industry. Lakhs of motor owners and operators are feeling the unreasonable prices of vehicles for a long time now and it is high time that the Government and Associations interested in the industry took proper steps to see that the prices of vehicles are brought down to reasonable proportions, so that the off take of vehicles may increase to their advantage.

### OUR NEXT ISSUE

Our May issue, due for publication on 28th May, will contain a special illustrated feature on the **NEW SENSATIONAL PERKINS 1.6 LITRE FOUR-99 DIESEL ENGINE FOR CARS, vans and industrial applications.** The Engine has been successfully used on Vauxhall and other cars, resulting in a successful demonstration giving as much as 60 miles per gallon of diesel oil.

Another important feature in the May issue will relate to the Conference of the Madras State Lorry Owners' Association, also complete with description as well as illustrations.

April 1958

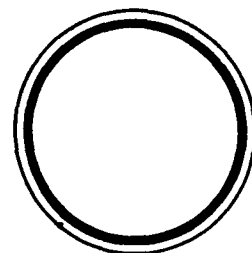
MOTORINDIA

5



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MOTORINDIA

April 1958

## Fiat dominates the GENEVA MOTOR SHOW

At the 28th Geneva International Motor Show Fiat has several stands: cars, commercial vehicles, tractors. Fiat's car production showed a considerable increase in 1957. It has already attained a European level with a daily average of over 1,300 cars. Exports of Fiat cars also registered a strong increase in 1957. At present Fiat employs no less than 80,000 people.

All Fiat's present production models are shown in the stand: the 500, the 600, the 1100, the 1200, the 1400B and the 1900B in all their versions. At the Geneva Show the 1200 (Full-Light and Roadster versions) is a novelty of great interest. Extremely efficient mechanical features, modern lines, smart coachwork, a really first-class car. The 4 doors open forwards, being hinged at the front edges to the pillars with inside hinges. The luggage boot cover also has inside hinges. New trimmings, three-spoke steering wheel, the two upper ones having finger-grip grooving.

On the stand there is also a sectioned working model of the "new 500." All the structural details of the car are revealed as the model automatically opens and closes like a book.

Another singularly attractive exhibit is a sectioned model of the m/s "Italterra," one of the "garage ships" expressly fitted out by Fiat to carry cars to overseas ports. (Readers of "MOTORINDIA" have already seen this ship photo).

On the stand is also shown the Abarth-modified 500 which recently set up several astonishing international speed and endurance records on the Monza track.

### Commercial vehicles

The range of Fiat commercial vehicles is further enriched by the addition of new models. Two versions of the "1100 T" the light lorry and the van, are on show.

Also exhibited are the 615/N (nett load 30 cwt.), the 90 h.p. C 40N which is a four-tonner for fast medium transport, the 642 N2 and the 642 N6 with special bodies built in Switzerland.

### Tractors

Again this year Fiat is showing in the tractor section: the 60 CA tractor with front loader, the 25 C with Schaeff loader for industrial purposes, and several versions of the Fiat 18 tractor, "la Piccola," the "utility farm tractor," the success of which is ever growing.

### Historical display of racing cars

This year the Show comprises an historical section, set up with the co-operation of various car manufacturers. This display is devoted to old-time racing cars. Fiat is showing its F-2 which was highly successful in the hands of Felice Nazzaro in 1907. In that year Fiat's "red thunderbolts" distinguished themselves in the three biggest races of the season: the "Targa Florio" (April 21st, 1907); the "Kaiser's Cup," Taunus Circuit (June 13th and 14th, 1907) the French "Grand Prix" (July 2nd, 1907).

The principal characteristics of this historic car are: bore 140 mm., stroke 130 mm., cylinder volume 8,000 c.c., output 72 h.p., top speed 155 km. (about 95 miles) per hour.

### The new Fiat Suisse Headquarters

On the eve of the Motor Show the new Fiat Suisse Headquarters was inaugurated. This is a vast building, provided with the most up-to-date equipment and operating according to the most efficient working methods. It occupies an area of 11,100 square meters (about 119,485 square feet), of which 8,500 sq. mts. (about 91,497 square feet) are covered. The total floor space is 16,100 sq. mts. (about 173,305 square feet).

Fiat's Swiss Organisation includes a Branch in Zurich, 36 Agents (23 for cars, 7 for commercial vehicles and 6 for tractors) and 248 Sub-Agents.

The Fiat Organisation in Switzerland has been established for several decades. In fact the first Fiat cars appeared in that country at the beginning of the century and the Geneva Branch has been operating since 1921.

The new Geneva Branch House is proof of the uninterrupted growth of Fiat's expansion in Switzerland.

Shri Morarji Desai, the Union Finance Minister accompanied by S. Pratap Singh Kairon, Chief Minister, Punjab, being shown round Goetze (India) Private Ltd., Piston Rings Factory, by Shri Swarnjit Singh, Director, when the former visited on 4th April.



MOTORINDIA

April 1958

M-3

# Comfort

## FOR THE V. I. P.

The fair is over. The car speeds smoothly as if it is conscious of the sleeping child in the rear seat.

Father at the wheel marvels at the way it almost anticipates his every move. "I bought it the year I got married - and that's nearly 7 years ago!" he reflects proudly. "Its paint doesn't gleam, the lines are definitely out of date; but I wouldn't exchange it for the latest limousine."

A car is more than a beautiful vehicle; it is a

bundle of sweet memories, happy associations. It is a matter of pride to us, therefore, that those who buy a car from us believe that with our servicing it will run merrily, long after its companions have joined the junkyard. It is this customer confidence that sustains our progress.

Today, TVS, with its several units, meets the increasing demands of the automotive industry in all its aspects in South India.



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TVS 245

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## The Gipsy Austin's New Light Utility Vehicle with 4-wheel Drive and All-Independent Suspension

From Gordon Wilkins

The Gipsy, just announced by Austin, is a light four-wheel drive utility vehicle with all-independent suspension and a choice of petrol or diesel engines. The all-steel body, with folding top, has space for three people on the front seat and a further six seats can be fitted in the rear. It is a lighter, less complicated job than the Champ, Austin's previous venture in this field and the body is more practical for civilian use.

The chassis is of steel pressings seam welded to form tubular side members and six cross members. Each wheel is carried on a single deep trailing arm of box section pivoting on a transverse torsional rubber suspension unit made under Flexitor patents by the George Spencer Moulton Company, a member of the Avon group. Piston dampers are used at the front, and telescopic dampers at the rear. The all steel body has two side doors and removable tail board. The folding two-pane windscreen has an electric wiper on the driver's side and the instrument panel is hinged for access to the electric wiring. The front seat is in foam rubber covered with plastic and the folding top is in leather-cloth, coated with polyvinyl-chloride.

The petrol engine is a four-cylinder pushrod unit with the same stroke as the engine formerly used in the Champ and the Austin-Healey sports car, but a smaller bore giving 2,199 c.c. (134.1 cu. in.). It is in fact the engine used in Austin taxis. It produces 62 b.h.p. at 4,100 r.p.m. and a torque of 1,100 lb. ft. at 1,500 r.p.m. The alternative diesel engine, also a taxi unit, has a larger bore and shorter stroke, giving 2,178 c.c. (132.7 cu. in.) and delivers 55 b.h.p. at 3,500 r.p.m., with peak torque of 89 lb. ft. at 2,800 r.p.m. Transmission is through a single plate dry clutch (9 inch diameter for the petrol engine; 10 inch for the diesel) to



The Austin Gipsy is a "Go-Anywhere" vehicle: The four speed gearbox has synchromesh on 2nd, 3rd and top. An auxiliary gearbox provides a complete set of lower ratios, and drive to all four wheels, making the "Gipsy" a truly "go-anywhere" vehicle.

a four-speed gear-box with synchromesh for the upper three ratios. On the rear end of this box is mounted a transfer box which gives four ratios direct to the rear wheels, or four ratios through a step-down to all four wheels. Open propeller shafts take the drive to pressed steel differential cases mounted on the chassis. Hydraulic brakes on all four wheels have drums of 10-inch diameter 1½ inch wide, giving a total friction lining area of 133 sq. in. The hand brake works through cables on the rear wheels only. Steering is cam-type and the electrical system is 12-volt. Instruments are speedometer, ammeter, fuel gauge and oil pressure gauge. Optional extras include mechanical tyre pump, power take-off from the transfer box by shaft for six in the rear compartment. Kerb weight with petrol engine is approximately 2,910 lb. which is 560 lb. less than the Champ.

### Austin Gipsy, Technical Details

Engine. Gasoline. 4 cyl. 3.125 x 4.374 in. 134.1 cu. in. (79.4 x 111 mm 2,199 cc) Coil ignition, Zenith down draught carburettor. Pressure cooling with pump, fan, thermostat. 62 b.h.p. at 4,100 r.p.m. 110 lb. ft. at 1,500 r.p.m. Diesel. 4 cyl. 3.25 x 4.0 in. 132.7 cu. in. 182.6 x 101.6 mm 2,178 cc) Compression ratio 20:1 C.A.V. injection pump. Comet combustion chambers. Dry cylinder liners. 55 b.h.p. at 3,500 r.p.m. 89 lb. ft. at 2,800 r.p.m. Transmission. Single plate dry clutch. Four-speed and reverse gear-box and top-speed transfer box. Overall ratios with rear wheel drive. 20.756 12.043, 7.021, 5.125 to 1. With four-wheel drive.

41.927, 24.326, 14.182, 10.352 to 1. Hypoid bevel final drive with differential at front and rear. Open propeller shafts. Suspension and steering. Independent, trailing arms on transverse. Flexitor rubber torsion units. Progressive rubber bump stops. Dampers, piston type front, telescopic rear. Cam-type steering. Brakes Hydraulic with drums 10 x 1½ in. Total lining area 133 sq. in. Dimensions. Wheel base 90 in. Track front 54½ in. rear 52 in. Length 139 in. Width 66½ in. Height (screen up) 68½ in. Ground clearance 8½ in. Tyres 6.00-16 on bolt on steel disc wheels. Dry weight (approx.) Petrol 2,690 lb. diesel 2,830 lb. Kerb weight (approx.) petrol 2,910 lb. diesel 3,050 lb. Max. approved gross weight 4,480 lb.

### Austin Gipsy road impressions

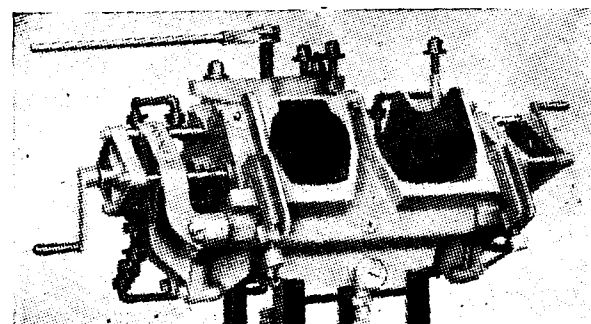
The Gipsy impresses one immediately as a rugged practical vehicle on which a serious effort has been made to reduce routine maintenance work. The suspension system requires no lubrication and the use of nylon-encased steering ball pivots eliminates the need for grease at these points. The taxi engines, petrol and diesel are obviously well-proved units designed for long hard service.

Some boldness has been shown in simplifying the independent suspension to the point where it uses only four simple trailing arms. These are deep fabricated members made from steel pressings, those at the front being pierced to allow the track rod to pass through. Obviously wheelbase and caster angle vary with suspension deflection and with the parallel wheel action,

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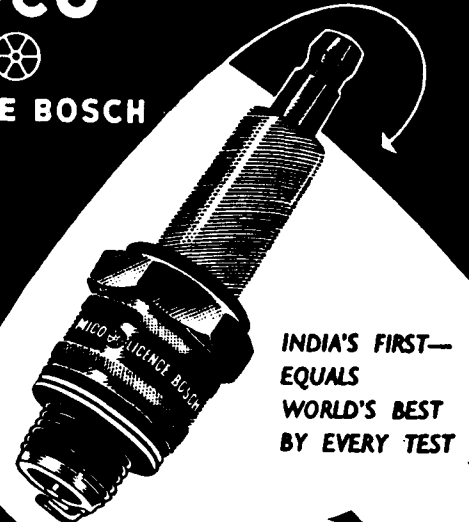
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DELHI 6

unrestrained by anti-roll device one might expect excessive roll on corners coupled with an exaggerated tendency to nose dive when braking. In fact none of these defects is apparent either across country or on hard roads. Suspensions rates have been chosen so as to give adequate control with a remarkably comfortable ride over rough country. Practically no roll is apparent even when cornering quickly on hard roads, and nose diving under hard braking is no more than on more conventional vehicles. The car tested showed a tendency to pull to the right when braking which might have been a question of adjustment only. It was found however, that loss of braking efficiency through entry of water persisted for some distance. Controllability over rough ground was excellent; the occupants experienced very little shock, and practically no reactions were felt through the steering wheel. On the road however, the steering seemed indefinite on the straight and showed an excessive degree of understeer on sharp corners. It hardly seems that this can be due to any excessive deflection of the trailing arms carrying the wheels in the rubber suspension units, in view of the figures for angular deflection quoted below:

|                        | Front.              | Rear.               |
|------------------------|---------------------|---------------------|
| Approx. periodicity.   | 115 cpm.            | 125 cpm.            |
| Axial stiffness.       | 18,000 lb. in.      | 22,000 lb. in.      |
| Radial stiffness.      | 140,000 lb. in.     | 156,000 lb. in.     |
| Resistance to tilting. | 40,000 lb. in./deg. | 56,000 lb. in./deg. |
| Tilt (normal loading). | 1/3 deg.            | 1/4 deg.            |

Total deflection range at wheels  $6\frac{1}{2}$  in. approx. of which 3 in. is static deflection.

During the development period the car was tried without any suspension dampers at all, but it was found that some degree of external damping was needed to supplement the self-damping characteristics of the rubber suspension. Telescopic dampers were therefore added at the rear and piston type dampers at the front, but the duty is so light that they have an abnormally long life. Austins say one of the Gipsy prototypes have covered, 2,200 miles on the punishing pave section at the



For business or pleasure the Victor Estate Car fits into the picture. Loading and unloading is made easier with the low floor height of 1.10' and the high upward limit of the tail door.

## VAUXHALL VICTOR ESTATE CAR ANNOUNCED

### TWO-PEDAL CONTROL AVAILABLE ON ALL VICTOR MODELS

From Gordon Wilkins

Making its debut at the Danish Motor Show at Copenhagen is a new estate car, latest addition to the Vauxhall Victor range. Based on the Victor Super, with similar trim and equipment, it is a four-door model with single-piece lift-up tailgate. Rear seats can be folded away to give a cargo platform 5 feet long behind the driving seat and upto  $45\frac{1}{2}$  cubic feet of cargo space. Maximum floor width is 4 ft. The tailgate, counter-balanced by strong torsion bar springs swings up to give ample headroom during loading and unloading. The spare wheel is carried vertically in a recess at the side of the cargo floor.

All-round vision is a feature, with curved rear quarter windows and

MIRA proving ground without failure of any suspension element, an achievement without parallel so far as is known. Suspensions with metal springs frequently fail at 500—1,000 miles.

very slim rear pillars. Compared with the saloon, rear axle load capacity has been increased by using heavier gauge axle tubes, larger hub bearings and heavier rear springs. Rear axle ratio is 4.625 : 1 against 4.125 for the saloon and rear springs have 5 leaves instead of three, giving a rate of 124 lb. in against 100 lb. in. Tyres are also larger, 5.90-13 against 5.60 and have six-ply covers instead of 4-ply. Kerb weight is 2320 lb. (1055 kg.) an increase of 165 lb. (67 kg.) over the Super saloon. Dimensions overall are the same except for a half-inch increase in height. Like the saloon, the estate car is of all-steel unit construction and is in fact the first estate car to be built entirely at the Luton Vauxhall works. Two-pedal control, now available on all Victor models, uses a centrifugal clutch of Newton design with a carefully studied control system. A compact control unit operating through the throttle linkage is mounted on the dash panel to isolate it from engine vibration. It governs clutch action

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through solenoid valves, controlling the vacuum cylinder which withdraws and re-engages the clutch. The clutch is automatically disengaged when the gear lever is touched by electrical contacts in the knob of the lever.

The centrifugal clutch automatically takes up the drive as the accelerator is depressed and disengages it when engine revs drop below 900 r.p.m. The engine cannot be started unless the gear lever is in neutral. To prevent the clutch engaging while the engine is idling fast during warming up a choke control inhibitor switch is fitted, bringing into operation a vacuum bleed which delays clutch engagement until the accelerator is depressed.

Another refinement is provision for parking in gear. This is done by a pull-out control on the instrument panel which puts the centrifugal control mechanism out of action, giving a solid connection between engine and rear wheels. Automatic clutch operation is restored when the engine is started.

In England the system costs £17 extra, plus £8½ purchase tax.

#### STANDARD'S NEW FACTORY IN FRANCE

##### Tractor plant may eventually build Cars too

*From Gordon Wilkins*

The beginning of March saw a further extension of The Standard Motor Company's production facilities overseas—the opening of a second factory in France. The new plant, situated at Beauvais, 60 miles north of Paris, is part of Standard's £2,000,000 expansion plan in France. Work undertaken there will include machining previously carried out by sub-contractors, helping to consolidate the position of Standard-Hotchkiss, Standard's French affiliate, as France's biggest producer of tractors. The main plant at St. Denis on the outskirts of Paris already produces more than 100 Ferguson tractors a day.

Possession of these two factories at St. Denis and Beauvais puts The Standard Motor Company in a unique position—it is the only British Motor Company with manufacturing facilities in France and, indeed, in the future European Free Trade Area and possibilities of car assembly leading to eventual manufacture are being examined. Most

likely choice would be the Triumph TR3 sports car. There is a three-year waiting list for it in France and the French industry has no comparable model.

#### COLLAPSIBLE CRATES SPEED BRITISH CAR EXPORTS

The British m.s. "Lynton" recently left Dagenham Dock Essex loaded with 730 cars including Austin, Ford, Nuffield, Rootes, Standard and Vauxhall products for the U.S.A.

Normally, this ship would not have been able to carry more than about 300 cars. The extra 430 were accommodated by a new technique of packing them in collapsible and returnable crates provided by the shipowner, a method devised by a British firm of packing specialists in consultation with British motor manufacturers.

The special crates permit unpacked cars to be loaded in up to four tiers instead of the normal single layer. Packing at the car factory is dispensed with and four men can pack a car into a crate at the ship's side in about ten minutes. On arrival at their destination, the crates are unpacked, collapsed and re-stowed for return to Britain.

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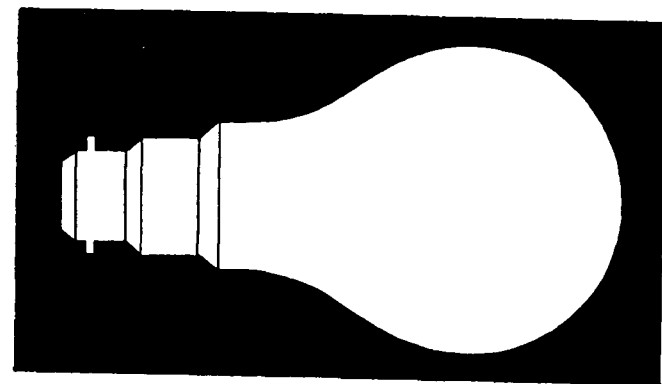
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## A SYSTEM FOR MAJOR OVERHAULS

### Flow-line Pattern Applied in London Transport's Bus Works

*With a fleet of about 8,000 vehicles (a figure likely to be raised to 10,000 when the change-over from trolley buses is complete) London Transport are faced with an enormous problem of maintenance and overhaul. The original works at Chiswick were only designed to handle a fleet of 4,500 vehicles and consequently they have been considerably overloaded for some years. New works have now been built at Aldenham to take over the general overhauling of bodies and chassis, and the Chiswick works will be confined to maintenance of engines and mechanical parts.*

The Aldenham works, which were officially opened recently by Mr. Hugh Molson, Parliamentary Secretary to the Ministry of Transport, are sited on the northern side of the Watford by-pass and were originally intended as a depot for the Northern Line extension planned to run to Elstree. There are 17 acres of usable covered space and about 1,800 people are employed, of which 155 are supervisory, and administrative staff. A group bonus scheme has been evolved and is working very satisfactorily.

#### Body is Dismounted

Inspection of the buses is divided into five rotas of different degrees of thoroughness set at intervals varying from every night to once in 36 weeks. In addition, complete overhaul is carried out every 3½ years, and it is this that is done at Aldenham. The engine and some other parts do not lend themselves to interval overhauling at the same frequency as the bodywork and therefore are dealt with on a separate basis.

At Aldenham, buses for overhaul are parked outside the works and are then brought in by electric battery tractor to the dismantling area (see flow-line diagram, Fig. 1). Here the bodies are lifted from the chassis by an overhead crane and are taken to one of six invertors (three in each line) which turn them on their side to enable the underneath to be cleaned and repaired as necessary. One of these

invertors is shown in Fig. 2. The bodies are then taken to the next section, the repair shop, and are placed in bays surrounded by staging, as shown in Fig. 3. The area layout is designed to have 49 of these "stands," of which 45 will be capable of taking double-deck bodies. Seat cushions and any interior fittings needing repair are removed, and such panels as have been damaged in service are replaced. Any other necessary work is carried out and the bodies are removed to another invertor where the undersides are sprayed with Carbolastic paint to preserve them from the effects of road splashing.

#### Chassis Repair Shop

Meanwhile the chassis has been taken to the chassis overhaul shop (which runs parallel to the body repair shop) and is attached by a chain to a rope conveyor. The chassis is then washed and stripped as it passes along on the conveyor

till it is reduced to the framework. As the amount of repair required by the framework varies greatly from one chassis to another, it is inconvenient to carry it out while the chassis is on the conveyor; arrangements are therefore made to transfer the chassis by overhead hoist to a static bay where the repairs can be undertaken. Repairs completed, the chassis frame is once again placed on a conveyor for assembly. This conveyor is of a type that has been used for chassis manufacture and consists of a series of concrete slabs, each measuring 2½ in. thick by 10 ft. wide by 3 ft. long, which move on a roller track. At the end of the line the slabs are moved vertically downwards and are turned by hydraulic arms through a right angle into a channel running between the roller tracks. The slabs are returned in this position to the starting point at a higher speed, and are then again turned through a right angle and lifted back on to the rollers. At the end of the line the body is remounted on the chassis, which has been sprayed with aluminium paint, and the vehicle is withdrawn by a battery tractor. The assembled body and chassis are given a road test within the precincts of the works, and any rectification required is carried out in an adjacent shop.

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## INTERCHANGEABILITY

The body mounted is not necessarily the one that was originally on that particular chassis, an arrangement which is made possible by the degree of standardisation that has been adopted by London Transport; indeed, it is only by standardising that such a flow-line method of maintenance as this has been made possible. While the body is in the repair shop it stands on stilts which allow access below it and also prevent the mounting points from distortion during repair. Similarly, on completion of repairs to the chassis, a gauge is applied which checks all points of contact between chassis and body to ensure interchangeability. The repair of chassis and body take up one leg of the U-sharped flow-line which has a total length of 1,000 yards; the second leg is divided into the paint and finishing lines, while between the two lie the main stores and sub-assembly shops for body repairs.

The paint-line conveyor moves in a series of steps of approximately 40 feet at intervals of about one hour, the movement being under the control of the shop foreman. The buses first pass through a paint-spray booth and then, after touching up and transfer fixing, to the varnishing booths. Each step of the conveyor movement represents a passage forward from one stage to the next. All movement is interlocked with the doors of the paint booths to ensure that the latter are open before the vehicles move forward. Within the booths are motor-driven stagings which enable the operators to reach every part of the vehicles.

After varnishing the vehicles are transferred by pedestrian-operated battery tractors to the finishing lines where those interior fittings which had been removed are replaced, and any interior painting needed is carried out, using a roller for paint application. The bus is then removed to the licensing garage where it passes the final inspection before being returned to service. Adjacent to the licensing garage is the tilt test room where both single and double-deck vehicles are checked to ensure that they will not overturn at the angles of tilt laid down by regulations—35 and 28 deg. respectively.

A very recent addition at Sahaganj is the plant for the manufacture of large earthmover tyres. Photograph shows a giant earthmover tyre being removed from the mould.



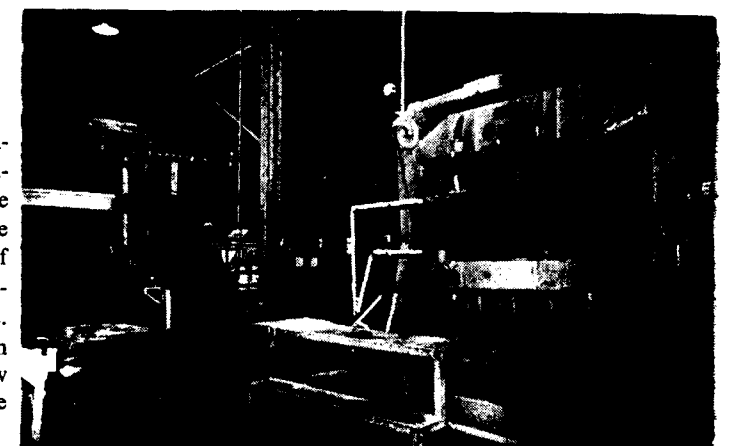
## Auxiliary Services

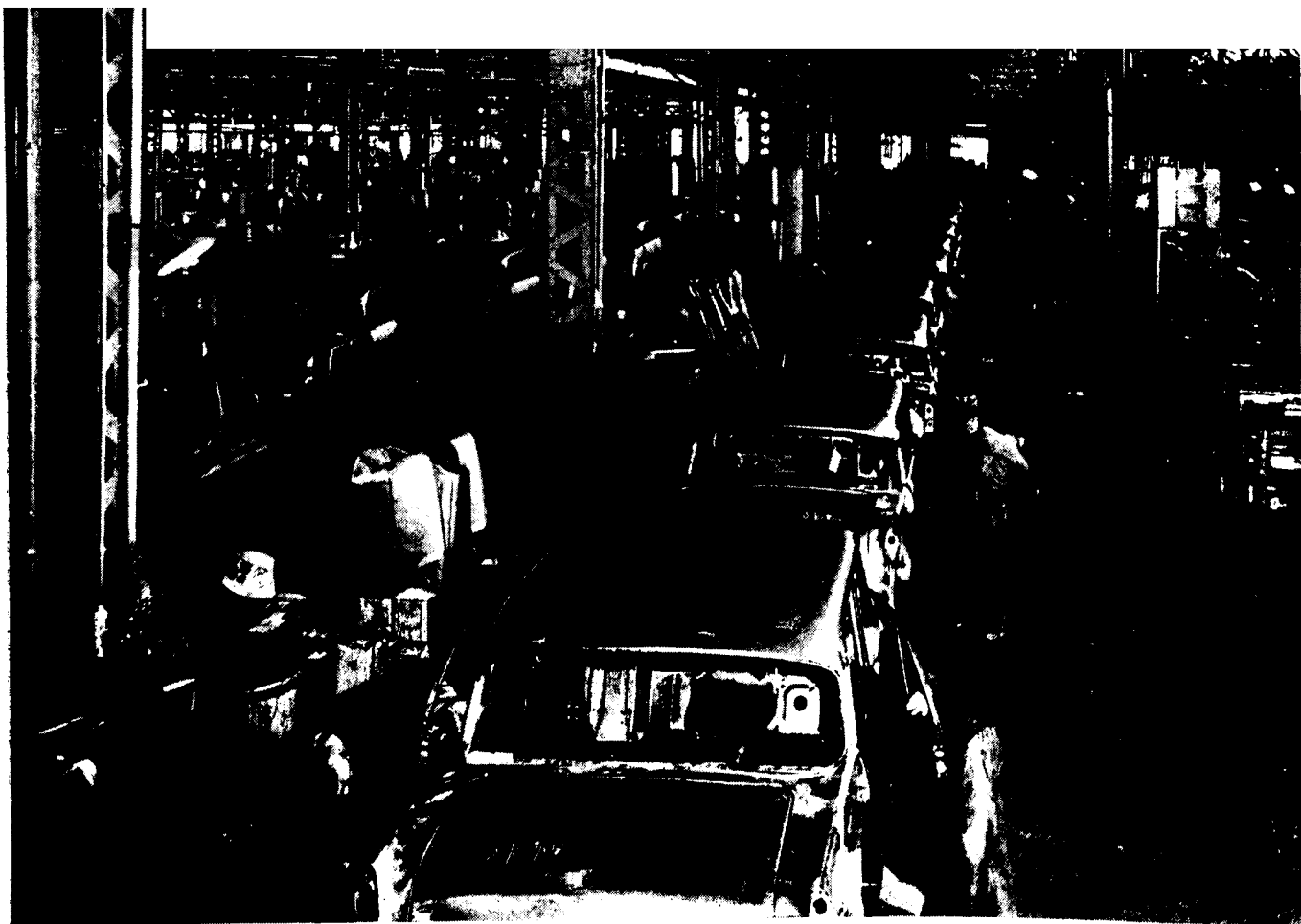
Heating for the works is supplied by a high-pressure water system which also supplies hot water for washing and other process operations. Compressed-air, oxygen, and acetylene are fed from a separate building through channels into the main works where they are distributed as required. An operating economy is that the fuel oil drained from the vehicles on arrival is stored in a large tank and is returned to the vehicles on leaving, so that a balance is maintained. In association with the main plant are: a repair shop for repairing major damage occurring in accidents; and a section for handling seats and cushions so that they can be trimmed, cleaned, and repaired for replacement; for manufacturing destination blinds; for dealing with the wooden parts; and for preparing the sheet-metal parts. New and reconditioned parts used in re-assembling the bodies are stored in sets of racks, each set feeding 10 "stands" in the repair shop. Experience has shown that this is an

economical ratio. The time taken for a vehicle to pass through the works averages 15 working days and about 56 vehicles can be completed each week.

The standardisation which has made the flow-line principle of maintenance possible can be traced back to the early days of the L.G.O.C. with the introduction of the "K" and "S" type buses. At that time overhaul was required every 12 months, with the formation of the L.P.T.B. in 1933, supervision passed from the police to the Ministry of Transport and the interval between overhauls was extended, mainly made possible by the introduction of the "RT" bus in the late 1930's. By 1949 the interval had increased to 2½ years and the principle of interchangeability of body and chassis was introduced. Now, as mentioned earlier, the interval is 3½ years, except for engines, gear-boxes, etc., which are replaced on a "condition" basis by units that have been overhauled and re-conditioned at Chiswick. —(Engineering, London).

A recent addition at Sahaganj is the plant for the manufacture of large earthmover tyres. Photograph shows a new pot for the tube curing.





The bodies of the Prince cars being produced on an assembly line basis. The monthly output is about 500 units—300 Deluxe models and 200 standard models. Note the horse shoe shaped assembly line.

## JAPANESE AUTO INDUSTRY MAKES GREAT STRIDES

EXCLUSIVE TO MOTORINDIA  
BY  
N. S. ANANTH

TOKYO—Half a century has passed since the automobile industry made its debut in Japan. During this period the industry has made great strides. However, the path has not been all smooth. But the industry capitalized even on its misfortunes to make sizable advances.

World War II crippled the industry and left it in shambles. It seemed that a come-back, if at all possible, was very far away. But the industry recouped in an amazingly short period.

Symbolic of the recovery is the Prince Skyline Deluxe. The car is symbolic not only because it is the latest and most beautiful of the

Japanese cars, but also because of the story of its development. The very factor which crippled the Japanese automobile industry—World War II—helped develop this pride of the industry.

The Prince Skyline is made by the Fuji Precision Machinery Co. Ltd. This firm is a direct descendant of the Nakajima Aircraft Co., the makers of the famous Zero fighters of the defunct Japanese Imperial Navy.

The Nakajima Aircraft Co., founded in 1924, was a member of the Nakajima Zaibatsu and was one of the big two aircraft makers of Japan.

During the war, the firm accounted for nearly 50 per cent of Japan's aircraft production. While zero was designed by the Mitsubishi group, Nakajima also designed several war

planes. The bomber Donryu was the most famous plane in this category.

After the war, when the Zaibatsu were dissolved, Nakajima Aircraft became the Fuji Industrial Co. In July, 1950, the firm became the Fuji Precision Machinery Co. and began production of sewing machines, motion picture projectors and diesel engines.

Later on, the firm, capitalising on its wartime experience, began repairing and overhauling civil aircraft engines and also power recovery turbines for the American forces and Japan's Defence Agency.

In April, 1954, the firm absorbed the Prince Automobile Co. (former Tachikawa Aircraft Co.). This firm had been engaged in the production of cars, trucks and pick-ups after

the war. The Fuji firm had been making engines for these cars.

By this time, the Japanese automobile industry was well on the way to recovery. Fuji also began designing a car that could compare with the best that others could provide.

The technicians and engineers who had been connected with the production of famous Japanese war planes were still with the firm. They brought their accumulated know-how to the new car. After 2½ years of concentrated work they brought out a car of outstanding performance and reliability—Prince Skyline Deluxe.

Immediately after its release the car attracted wide attention.

One of the most notable features of the car is the backbone tray system. This construction, which is widely used in sports cars, is still not very common in ordinary passenger cars.

In this system, the usual chassis is done away with and is replaced by an integrated tray. The body is positioned inside the tray, permitting the whole system to be lowered. This naturally gives greater stability at higher speeds.

Another advantage is that this construction enables the use of

A view of the assembly line of the Fuji Precision Machinery Co.'s Automobile plant at Mitaka on the outskirts of Tokyo.



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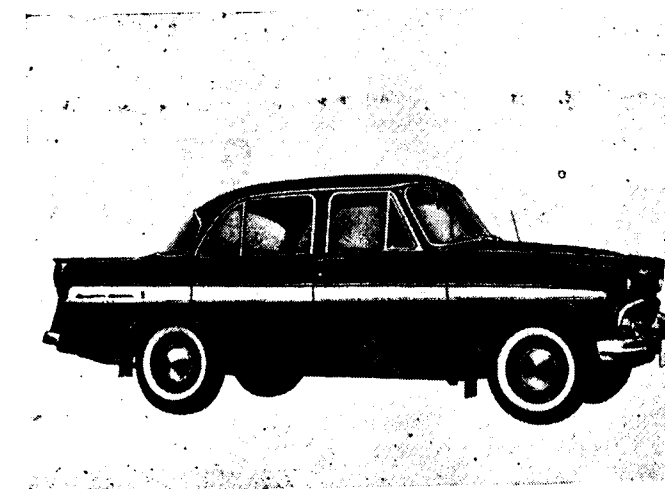


The Prince Skyline Standard is built along the same lines as the Deluxe model and differs only in internal upholstery and external appearance.

Designers and technicians, many of them once associated with the famous zero fighter, seen below busy at work blueprinting the Prince Skyline, the latest product of Japan's automobile industry.



The Prince Skyline Deluxe below boasts of the revolutionary DeDion system which gives great stability at high speeds. The model is also equipped with accessories like clock etc., as standard equipment.



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the "De-Dion System," in which the differential housing is fixed to the underside of the tray and is not a component of the rear axle. This also adds to the stability of the car while greatly increasing the passenger comfort.

As the chassis is an integrally constructed component, it has very great strength and prevents the body from being piled up in a crash, thus ensuring greater passenger safety. However, in case of a very severe crash of sufficient violence to damage the backbone tray, the whole chassis will have to be rebuilt. This will naturally mean a greater outlay than with conventional systems.

The engine is also unique among Japanese motor cars. The main difficulty with Japanese cars till now has been their low ratio of engine power to total weight. There has been much criticism on this point.

The Prince's four-cylinder, 1,500-cc engine develops 60 hp. Under favourable conditions and in tests, the car gives 16 kilometres per litre. Under ordinary driving conditions, this falls to about 12 kilometres. The car can also develop a maximum speed of about 125 kilometres per hour. The most economical speed is about 60 kilos.

Coming to the last point—a point that, incidentally has been neglected too far—the appearance of the car, the Skyline is a radical departure from the usual run of Japanese cars.

The sleek, streamlined car comes in three colours: black, brown and blue. The Deluxe model is easily distinguished from the sides by a white stripe running the entire length of the car.

The Deluxe model is also fitted with radio, clock and other accessories as standard equipment.

Satisfied with the domestic reception to the car, the manufacturers are eying foreign markets. They have already exported about 30 of the cars to Burma. The makers feel that the car is particularly suited to the newly developing countries of South-east Asia.

The export price for the Deluxe model is \$1,800 and for the Standard model \$1,600.

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## THE ROLE OF PURCHASING IN THE AUTOMOTIVE INDUSTRY

By M. K. RAJU



A challenge and an opportunity—That is the purchasing function that is rapidly coming into the fore as presenting an unusual combination of challenge and opportunity for improved performance and reduced cost.

This new concept of purchasing is applicable to any industry but a specific reference has been made to the Automotive Industry, as the development of this industry is most important, at the present phase of industrial development in India, not only in its field of production but in relation to a wide variety of ancillary industries. New machine tools and methods have been introduced. Foundries and Forge shops are being established or expanded to meet the demands of the vehicle manufacturers. Not only has there been an expansion in the capacity of engineering workshops for the new type of work undertaken, but Indian firms and labour are widening their range of experience and new high standards of precision are being established over a broad field of engineering.

The development of a self sufficient Automotive Industry in India will depend to a great extent on the large group of ancillary manufacturers required to produce satisfactory components at economic prices. The vehicles costs must be held to a minimum, if we are to foster and encourage increased sales and the complexity of the vehicle design has let to an increasing proportion of the components used in the manufacture being bought out. In the British Motor Industry between 50% to 60% of the ex-works value of the car consists of component bought out and as many as 4,000 suppliers cater to the needs of the vehicle manufacturers for over 20,000 components. This ranges from the raw materials to the semi-finished parts to the finished components.

This policy brings in so many advantages through standardization, lower costs and technical progress. The diversified group of suppliers

will make it possible for the vehicle manufacturers to continually expand and keep abreast of technical changes and developments without resorting to large scale financing and sudden expansion.

Suppliers are generally spread all over the country and the planning of flow production involves intricate scheduling to ensure that the twenty odd thousand component parts arrive at the assembly in the correct quantity and sequence.

Particularly in the Automotive Industry, inventory as low as a week's requirements are not unusual, which keep the Company's cost at a lowest minimum. To operate at such a level means a clock work precision in scheduling, processing of raw materials and procurement of finished parts in which purchasing has a prominent role. Cost factor is the main criterion and many of the spares previously produced by the vehicle manufacturers are purchased from vendors who concentrate on specialised products, if it were more economical to buy rather than make.

### New Concept of Purchasing

A new concept of purchasing has evolved in the American Industry and Management in many of

the Industrial Organizations discovered that to insure balanced consideration of the sometime complicating factors of cost and design or material or manufacturing method, purchasing cannot hold a subordinate place in the organization plan but must be on an equal plane with other departments, including finance and manufacturing from which it originally sprang. Purchasing is a function of management, a member of the Management team to be reckoned with at the planning stage and at the policy level and throughout operating cycle, if it is to render its full service value to the Company.

The function of Purchasing is the most misunderstood in many of the industrial organizations. It is the general feeling that Purchasing is there to drive down prices in a Buyer's market and to find material at any cost in a Seller's market. In any market, the quality as well as selling price of the finished product starts with sound purchasing.

Many of the Management consultants look at the Purchasing Department as a clue to Management effectiveness and the quickest way of getting an overall picture of the organization. What happens or does not happen in this one department can provide a lot of clues as to what is happening throughout the Company. It is most essential for Company Management to appreciate that Purchasing Agents are usually in a position to create more good will for the Company—inside the organization by supporting the production departments, which operate on a cost incentive basis and with outside companies through dealings with vendors.

Therefore, that Purchasing's efforts may be directed into channels which will further the objectives and policies of the Company as a whole, purchasing personnel are governed by such general policies as:—

to buy parts, materials and supplies of required quality;

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## Need to Maintain Vendor Relations

to assure adequate capacity and capability for the supply and delivery of material at scheduled time ;

to obtain, on all purchases, the lowest economical cost, in keeping with quality and delivery requirements which will permit efficient suppliers to retain a fair profit ;

to conduct all purchasing activities in such a manner as to build and maintain good community, public and employee relationship ;

to work closely with other organizational components of the company in improving the production and reducing the costs.

### Vendor Relations

Vendor relations are something like a leaking roof. When it rains the roof cannot be fixed and when it is not raining, it does not leak—so you always have a poor roof.

When materials, parts and equipment are in short supply, it is too late to do anything really effective about vendor relations. When everything is in good supply the vendor relations seem to be fine.

In the American Industry prior to World War II, purchasing Agents who took pains to develop good vendor relations fared better than their less foresighted contemporaries when the emergency came. Those who have been working to maintain and improve their vendor relations are in an enviable position—their roof will not leak if and when rains come.

Vendors form an opinion of the Company through their contacts

of the purchasing personnel. If the qualities are so judged it is necessary that the Purchasing Agent accurately reflects the basic philosophies of Management.

It is possible for any Company—irrespective of what supplier relationship they have maintained in the past—to start developing and maintaining a good vendor relations programme. Among the many ways to establish such a policy may be mentioned :—to act less arbitrarily in respect of allowable tolerances in inspection ; to make requests for quotations more clear, more complete and more concise ; to adopt a more reasonable approach when requesting adjustments presenting in a way that considers the vendor's position also ; to plan plant visits to maintain closer liaison ; to give reasonable forecasts and advance notice of production programme to facilitate pre-planning ; to make constructive suggestions that help vendors as a result of inspection reports made when materials, parts or equipment arrive at the plant ; to seriously consider a constructive suggestion from a vendor for slight change in specification that will provide better quality, quicker delivery or lower price. We are not doing the best buying if we do not invite recommendations from Vendors. Joint Engineering and product work with suppliers is a basic principle of good buying.

Purchasing personnel who have the foresight to develop such a good vendor relations programme are sheltered by friendly vendors in an emergency, when the business climate gets rough.

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## New Concept of Purchasing Vendor Relations Inventory Control

Is Management overlooking the Purchasing Agent as a responsible executive to help control that nightmare of Management problems Inventory. Inventory is many things—raw materials, goods in process, finished goods, and supplies needed to carry on the operation. A Rupee tied up in surplus materials is just as inactive as money invested in slow moving finished goods.

Would you like to reduce expediting to a minor problem even under today's market conditions ? Would you be interested in cutting in half the number of orders issued for stores item ? How would you like to be able to take more quantity discounts and at the same time improve your bargaining power.

These things are real possibilities if all the factors, including purchasing factors are accurately balanced in setting your inventory control policy. A purchasing Agent who is not backed up by good, sound inventory control is like an army which must fight a war without the proper weapons.

It is necessary to determine the most economical inventory level and the best amount to buy. The common failure to properly appreciate the importance of purchasing factors usually results in orders for many items that are too small, placed too late. Orders that are too small repeat too frequently, imposing an unnecessary burden upon the buyer and also the supplier. They eliminate worth while quantity discounts. They increase possibility of being out of stock. Orders placed too late saturate your expediting organization, divert your top flight talent from buying to expediting, remove your chance to negotiate, irritate your suppliers and usually cause purchasing to be held responsible for material shortages.

To be right, one must correctly judge the relative importance of the cost of shortage, the cost of replacement, the risk of obsolescence, the shelf life, the effect of possible discounts and the probable rate of usage.

It is possible to arrive at the correct inventory level from facts,

not arbitrary comparison with previous levels. It is a custom hallowed by tradition to consider the lowest inventory to be the best inventory. That is not true. For any set of conditions there is one best level of inventory, and any deviation from it costs more.

If we concentrate our time and attention on these items, which represent the large proportions of our investment, it is possible to do a much better job of controlling inventory, than if that time, effort and attention were dissipated equally over all items regardless of their value or importance. Large and important items are to be ordered more frequently and scheduled more closely than items low in Rupee value. To obtain maximum results, it is necessary, that this process be rationalised, so that, by analysis we can just determine how big a purchase order should be.

Every purchase order that you write and every shipment that you receive costs money. It costs money to write the order, follow it up for shipment, receive it, inspect it, and to pay the bill. It also costs money to carry extra inventory created by the order. It costs money to cover the risk of depreciation or obsolescence or the additional investment.

The best size of order to place is one which results in the best combination of these costs. You can prove mathematically that the most economical size of the order is one in which the cost of placing the orders each year is the same as the cost of carrying the inventory which results from these orders.

For an inventory of 10,000 items, with one month's safety stock or reserve factor, to stay within 60 days inventory, we will have to process 10,000 orders per month. In actual practice, it should be possible to place less than 1/5th of this number of purchase orders to get exactly the same results in the aggregate. In any typical inventory 10% of the accounts are responsible for 2/3rd of the money spent for inventory and by concentrating our time and attention on these items

it is possible to do a much better job of controlling inventory.

The size of safety stock or reserve and the procurement or lead time of each item will decide when to order. For any set of conditions, there is only one best level of inventory and any deviation from it costs more.

### Value Analysis

Every Purchasing Department is charged with the responsibility of getting maximum value for each Rupee of expenditure in products it is called upon to buy. The modern approach to this value responsibility is to go behind the requisition and the blue print—to see the basic values that are inherent in design, material and method of fabrication, and to make sure that the parts the buyer is asked to procure represent the maximum value in serving a purchase and meeting a need. A proper starting point for initiating this Company-wide policy and activity is in the Purchasing Department, where the Company's rupees are committed in exchange for purchased products and where value shows up on balance sheet.

A purchasing technique "Value Analysis" whereby every part, every purchase, every operation is analysed for value has been introduced in the General Electric Company which has saved hundreds of thousands of dollars every year. Representative tests for value are such as, does its use contribute value ; is its cost proportionate to its usefulness ; does it need all its features ; can a useful part be made by a lower cost method ; can a standard product be found which will be usable ; do material, reasonable labour, overhead and profit total its cost ; will another dependable supplier provide it for less ; is anyone buying it for less.

Value analysis is an approach to a problem, a way of thinking and of action. Value analysis focuses manufacturing, engineering and purchasing attention on one determined objective—the same performance at

## Technique of Cost Reduction

lower cost—and presses for action to accomplish this end.

Increased value may be found in many ways; change of material specification; change of machining process; change of mounting design; change of vendor; change from own manufacture to purchase from specialist vendor; change from vendor to our manufacture; change from special to standard; purchase in pre-assembled form, etc.

### Technique of Cost Reduction

The history of mass production is basically concerned with increased production at lower costs. This is the only solution to improving our country's real income and permit greater employment of people and wider distribution of products.

There are two major aspects to cost reduction—the first is broad analysis of the overall performance to determine specific areas where possibilities of cost reduction exist. The second is detailed analysis of specific parts or assemblies.

To assure a systematic cost reduction programme, it is necessary to make cost comparisons, review all requests for major price increases and make recommendations of other specific methods of cost reduction.

One broad technique is to compare price trends with general market conditions. These comparisons help to determine whether the prices are advancing or declining, at the same time, greater or lesser rate than the general trend of industrial prices.

A detailed analysis of the basic elements of cost follows our checks of comparative prices (1) material, (2) labour, (3) engineering expense, (4) tooling and (5) administrative and general overheads.

It is not an easy task to obtain costs from a supplier, but if a supplier understands that the cost information is requested to help him reduce costs and not for purpose of reducing reasonable profits, they are generally agreeable to furnishing this information.

A typical co-operative cost study with a supplier may begin with a conference of the supplier's and buyer's representatives. Visits are usually made to the supplier's plant and if it involves a major product, a detailed review of specific operations is made. Manufacturing and engineering specialists from the two companies are consulted. Important cost reduction, changes in technique and operations develop.

So also economies can be effected by better methods of material handling and shipping, preventive maintenance, reconditioning of tools, etc.

Chrysler Corporation's simple rule for avoiding wasteful purchasing is "don't buy a new tool if you have a discarded one that will do the Job," or a worn tool that can be reconditioned to meet the new requirement. Tools are generally expendable items but to expend them, while they are still capable of useful service—adds unnecessarily to the purchasing task and budget and represents a substantial waste.

The Company has 100,000 examples of factory tools headed for retirement that have been put through a reconditioning process in one single year to extend their useful lives several times beyond normal, thus cutting costs, while at the same time conserving vital metals.

There is nothing revolutionary about the methods of salvaging, reclaiming and reconditioning worn tools—The important thing is the way it is organized to effect savings on a company wide basis.

If an obsolete tool can be reworked to meet blueprint specifications for not more than half the cost of a new tool, or if an obsolete tool formerly used for another purpose will fit the new job, it is supplied to the requisitioning plant and the new purchase is avoided. In another operation 20,000 Grinding wheels were either reworked to provide fresh surfaces or substituted for other functions. One typical example is the 9/16" drill which is

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reworked to 1/2" to meet other specifications or an old drill work too short for its present job, but which can be re-sharpened and used again on another assignment where less length is required. The change of contours of worn or obsolete cutting tools for new use is common place.

Instead of reissue to other departments, many obsolete tools are sold to Chrysler Suppliers who can use them effectively in their operations for the production of parts purchased by the Company.

Tools which are broken or worn beyond repair or reclamation and obsolete tools for which no further utilization seems possible, are turned over to By-products department for disposal as scrap. Here they are spark tested by experienced workmen to determine the type of metal, for separation into 25 different classifications, permitting systematic scrapping and maximum realisation on scrap sales.

Maintenance budget is another field where purchasing has a prominent role to play. Maintenance is far more than a matter of good house keeping and general repairs. In its broad aspect, it deals with economical and continuous plant operation, lower production costs, minimum inventories of repair and equipment parts, supplies and numerous other things.

As a matter of fact the goal of progressive management in preventive maintenance, for experience has shown that it is far cheaper to keep equipment and lines in good operation than it is to wait for a break down before making replacement or repairs. As expressed by one plant man, "it is a matter of fixing something today that does not need to be fixed so that you don't have to fix it tomorrow when it has to be fixed."

## New Kind of Purchasing Agent Needed

American industry wise, it is estimated the maintenance costs range about 8 billion dollars annually. In some plants the cost may run as high as 20% of the sales Rupees—a large hunk. Thence the cost runs down to an average ranging 3 to 5%. In the Automotive Industry itself, for a large assembly plant in U.S.A., stoppage of work will cost about 3,000 dollars a minute. In the Indian Automotive Industry it may not be so expensive but shut down and stoppage of work would still run into a sizable sum which cannot be long tolerated in competitive markets.

The cold fact remains that while maintenance may be costly, shut downs of ten involve heavy costs far removed from the production line itself—say the profits of continuous operation, delays in filling orders, ruffled customers, rush procurement, delayed deliveries and a variety of other headaches.

These matters are all of primary concern to purchasing department, for in the overall picture, plant maintenance and operations are utterly dependent upon the procurement of necessary materials. It is true that purchasing must know markets and suppliers, must place orders and get needed tools, replacement parts, repair materials and supplies.

We are vitally concerned with costs and maintenance is a part of the cost of the product and a big item. A good maintenance budget should be aimed at lowering the cost of the product. It should be aimed at the lowest manufacturing cost rather than the lowest maintenance cost.

It thus reflects the need for full and complete co-operation between the Purchasing Department and those responsible for plant maintenance. The purchasing is in a strategic position to help plant

men to keep cost down, because of its knowledge of sources, services, materials, markets, buying quantities that command favourable prices and many other factors.

### Conclusion

The present tendency in U.K. and U.S.A. is to increase the bought-out components and to keep the vehicle costs down, where it is more economical to buy rather than make. In one Canadian Truck the bought out components is as high as 83% and the scope in the field of purchasing to make a mark is tremendous. One can realise the difficulties due to limited number of firms in operation and comparatively smaller range of products manufactured in India. But the position is not altered, so far as the general purchasing principles are concerned.

What happens to India would be a direct result of the efficiency and productiveness of Indian Industry. Though the country can obtain expert technical advice, no industry, large or small, can prosper if it does not cultivate creative ideas and has not the capacity to develop them.

There is nothing that should stand in the way of establishing sound buyer-seller relationship, adequate inventory control system, value analysis, cost reduction programmes and so on. If the automobile industry is to attain the same pace of development as in other countries, increased production at lower costs is the only solution—the history of mass production is basically concerned with the lower costs, which in turn will improve the country's real income and standards of living of the people.

We need a new kind of Purchasing Agent—keen, progressive and willing to challenge the established pattern. We need men with ingenuity, adaptability and vision.

Let us hope, in this country, we shall soon have men who can rise to this challenge and devote themselves in establishing a sound, self-sufficient, indigenous automotive industry and build for us a better future.

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1, 1/2, 1 3/4, 2, 2 1/4, 2 3/4, 3, 3 1/4, 3 3/4, 4, 4 1/2

# ALUMINIUM THE VERSATILE AND ATTRACTIVE METAL

Not many years ago, the oil industry had little interest in aluminium. True, the light metal competed to a limited extent with other non-ferrous metals, but scarcely at all with steel, which always heads the oil man's shopping list. Now, the position is changing fairly rapidly. Aluminium is being used increasingly for storage tanks, pipelines, structures such as drilling rigs, and containers. In the U.S.A., in particular, the aluminium producers are wooing the oil companies with ardour and persistence; and it behoves the buyer of line pipe, tankage and other oil industry requisites to weigh carefully the respective merits of the two metals before making his purchase.

For anyone accustomed to buying steel, the first impression may well be that aluminium is very expensive. Though the most abundant of all metals, accounting for 8 per cent of the earth's crust and being widely distributed in the form of the oxide (Alumina) or double fluoride, aluminium is difficult and costly to refine. Bauxite, which is the ore invariably used for large-scale production, must first be purified to give alumina, which is in turn reduced to aluminium in special electric furnaces. Since the manufacture of one ton of metal from two tons of alumina requires as much as 20,000 Kwh. of electricity, it is obvious why the price is high. The manufacturing process can be economically undertaken only where electricity is abundant and cheap—notably where it is generated from water-power, as in the U.S.A., Canada and the U.S.S.R. Out of a world production of 3.7 million short tons in 1956, these three producers accounted for 1.7, 0.6 and 0.5 million short tons, respectively. Most of the remainder was produced in European countries, which also import ingots from North America for fabrication into finished products, and a very small quantity in India.

The current price of aluminium sheets in the U.K. is a little over £300 a ton, against rather more than £50 a ton for steel sheet, while a typical pipe section would be perhaps £500 a ton, against about £70 for a roughly comparable steel product. BUT COMPARISONS ON THIS BASIS ONLY ARE QUITE MISLEADING BECAUSE A TON OF ALUMINIUM MAY DO THREE OR FOUR TIMES THE WORK OF A TON OF STEEL. Taking into account this difference in weight, the price of aluminium products such as pipes, sheets and sections will be roughly twice that of the corresponding

steel product in the U.K. and rather less in North America.

This cost disparity may be a secondary consideration if, as so often since the war, steel is hard to come by. In the past few months, however, the steel shortage has been fading away. And since aluminium is also in abundant supply as the result of increases in producing capacity, both metals are free to compete on their merits for the buyer's favour. *There seems little doubt that aluminium will from now on be increasingly used—always in the form of alloys\*—wherever its special properties can be exploited to offset its higher cost.* What, then are these special properties?

\* \* \*

The property most relevant to oil industry needs is high corrosion resistance, which results in a great economy in maintenance costs. This property depends on the existence of a thin protective film of oxide over the surface of the metal. Aluminium alloys resist the corrosive action of sulphides, e.g., in sour crudes, provided these are free from acid. They also offer good resistance to corrosive atmospheres and to the action of sea water. In consequence they have just been used (for the first time) to protect the submerged parts of four drilling platforms erected in Lake Maracaibo, where under-sea pipelines of aluminium have also been used for the same reason. The presence here of organisms which attack the protective coatings normally applied to steel has hitherto compelled drillers to use concrete piles to support their offshore platforms, which are believed to be the

\* The alloys suitable for use in the oil industry contain magnesium (up to 5 per cent) or small quantities of both magnesium and silicon. For castings, about half a dozen light alloys are in common use, while a similar number are available for wrought products.

largest all-welded aluminium structures ever built, are estimated to cost \$170,000—200,000, or about \$15—25,000 more than all-steel platforms, the extra cost if more than offset by long-term freedom from corrosion—during a life of at least 30—40 years, and possibly as much as 70 years—and by shorter erection time.

## Oil Industry uses Aluminium more and more

Corrosion resistance is also the reason why the oil industry is using aluminium drums for the transport of detergents and aluminium coils for heating crude oil in tankers. (The combination of hot sea water on the inside and oil on the outside greatly shortens the life of steel heating coils.) Similarly, aluminium paint has long been used in refineries and storage depots to protect the steel-work and, incidentally, to give the plant a spick-and-span appearance. Aluminium pipelines have been used in the U.S.A., since 1949, but the practice still seems to be to wrap and coat these, even though experiments suggest that such treatment (essential in the case of steel pipes) is unnecessary in some soils.

## Aluminium increases Vehicle's Payload

The lightness which is another familiar characteristic of aluminium alloys also offers plenty of opportunities for the saving of time and money. Aluminium pipes can be man-handled so much more easily than steel pipes; the small seismic drilling outfits and the portable well-servicing and drilling rigs now in use in the U.S.A. are more easily erected and moved; and ALUMINIUM ROAD TANKERS SAVE FUEL AND INCREASE THE VEHICLE'S PAY-LOAD. This advantage of lightness is particularly valuable where, as is in-

# ALUMINIUM SAVES VEHICLES PAY LOAD

creasingly the case, equipment has to be transported to sites by air or over difficult terrain such as swamp or desert.

Aluminium is readily fabricated and can be welded as easily as steel. A special automatic welding machine has now been evolved for pipeline used and it is reported that this takes only 17 seconds to weld a joint. The fabrication of welded structures in light alloys thus presents no special problems.

Potential users will want to know, however, whether such structures are as strong as those made of steel. There is some possibility of misunderstanding here. Under stress, the elastic deformation of aluminium is above three times that of steel, so that a light alloy structure may be less rigid and may give an illusion of being unsafe. But this does not mean that it is weaker. The medium strength-light alloys in common use have a 1 per cent proof stress (which corresponds to yield point in steel) of 15 to 18 tons per square inch and an ultimate tensile strength\* of rather more than 20 tons. In structural applications they can, therefore, compete quite well with mild steel, which has a yield strength of about 10 tons per square inch though hardly with high duty alloy steels, which have a much higher tensile strength than this. The greater elastic deformation of the light metal can, of course, be offset—at a cost—by a corresponding deepening of the girder or other, structural member concerned.

In one respect, aluminium scores heavily in competition with ferrous metals. Unlike steel, which becomes very brittle at sub-zero temperatures (especially below, say, minus 50 degrees C.), aluminium actually increases in tensile strength under these exacting conditions. This property has obvious relevance in the transport and storage of liquefied gases, such as methane, oxygen or nitrogen, where extremely low temperatures are obligatory.

\* Ultimate tensile strength is measured by the force, per square inch of cross-sectional area, required to make the metal rupture, or come part; but the force must be steadily applied and must not involve any jerking, bending or twisting. Before actual rupturing takes place the metal may begin to "yield" or stretch, and this is known as the yield point.

Other relevant characteristics of aluminium are its higher co-efficient of expansion—twice that of steel—its non-sparking properties, and its high thermal conductivity. The first mentioned might be a disadvantage in some circumstances—e.g., if it gave rise to distortion as a result of changes in temperature—and it is a point to be watched wherever steel and light alloys are used together. The non-sparking property is an obvious asset in refineries and in all places where inflammable gases may be present. The fact that it is an excellent reflector of heat had led to the use of aluminium for cladding storage tanks, etc., where it is desired to insulate them against heat loss.

## Aluminium Body Outlives Three Chassis !

Perhaps the biggest single potential use of light alloys in the petroleum industry is for tankage, especially for sour crudes, which play havoc with the roofs and upper shell courses of steel tanks. This application, which is by no means new, is already becoming important in the U.S. oil industry, and buyers elsewhere may note that the A.P.I. has issued very detailed specifications covering every aspect of the construction and inspection of aluminium tanks. In the U.K., the most important use at present is for road tankers, and cases have been reported where an aluminium body has outlived two or three chassis. There should be plenty of scope for the extended use of light alloys in this field. Aluminium cans are just coming into use for motor oil in the U.S.A., Esso Standard having placed a contract for 35 to 60 million quart cans; but they are an economical substitute for tin plate cans only if they are retained by the garage man and returned as scrap to the aluminium manufacturer. Experiments are also in progress with aluminium sucker rods, for well pumping, though these are not yet in commercial use.

Turning to tubular goods, it is difficult to see much of a future for aluminium drill pipe, though some has actually been used experimentally. This is not only because of the exacting specifications but because the driller needs weight on

the bottom of the hole (the position may, however, be different with turbo-drilling). Aluminium casing also seems to be ruled out on technical grounds, except perhaps for shallow wells, and tubing too. As already mentioned, aluminium line pipe has, however, been in use in the U.S.A. since 1949, for water and gas as well as for oil, and its lightness makes it particularly suitable for temporary lines. There seems to be a bright future for this product, especially in sizes up to 10 inches, which can be extruded fairly, cheaply and need little drawing, which tends to be expensive. Seamless tubes can be made in sizes up to 16 inches or more, but above this size they must be fabricated from plate (as are large steel pipes) and this is a more expensive process.

THE PROGRESS MADE BY ALUMINIUM IN THE OIL INDUSTRY WILL DEPEND VERY LARGELY ON THE RELATIVE PRICES OF THE TWO COMPETING METALS, ALTHOUGH AS THE LEVEL OF MONEY WAGES RISES THE SAVINGS IN MAINTENANCE WILL ASSUME INCREASING IMPORTANCE AND WILL THUS TEND TO FAVOUR ALUMINIUM. At present, the price-relationship is more favourable to aluminium in North America than it is in Europe, owing to the higher price of American steel, but it is not static anywhere. Many believe that steel prices are destined to rise as the richer iron ores are progressively worked out and as coal (especially coking coal) becomes more expensive. Aluminium prices are greatly influenced by the cost of electricity and could be reduced if this were cut. It is not certain that the wider advent of atomic power stations will achieve this desirable result. But it might affect aluminium prices favourably by allowing producing plants to be established on or near the bauxite deposits, instead of near source of hydro-electric power as at present; this might well eliminate a good deal of ocean transport and so reduce costs and selling prices. At all events, the demand for aluminium would appear to be fairly elastic. In other words, a comparatively small reduction in price might considerably extend the market for this versatile and attractive metal.

# ENGINE COOLING AND THE RADIATOR

By N. K. Chakraborty

The Radiator as its name implies is an instrument which radiates or emits heat caused by the combustion in the Engine Cylinder. The power of an Engine is derived from the terrible amount of heat produced by the explosion in each of the cylinders. This abnormal heat thus produced in order to supply energy would otherwise cause the parts of the engine to get distorted or even melt away and the engine block to get cracked into pieces, if no such arrangement would have been made to keep the Engine continuously cool under running conditions. Hence the provision of a cooling system becomes the utmost necessity. The tremendous heat of the Engine is being carried away by the continuous circulation of water, through the water jackets around the cylinder walls to the Radiator where in course of circulation through the tubes from top to bottom tank, the water is being cooled down due to fresh air contacts with the outer surface of the tubes. The smooth and even flow of air through the Radiator Core is attained in two ways, viz., (i) by the external friction with the atmosphere while the vehicle is moving and (ii) by the use of a fan which sucks the air in because of the blades being rotated by a belt coupled with the crank shaft pulley. The entire process of circulation of water from the engine block to the Radiator Assy. is maintained by means of an impeller pump which feeds the Radiator with the hot water from the engine and it is also driven by the same fan belt. So the Radiator plays the most important part in the system.

In a Radiator Assembly the "CORE" is the main factor on both ends of which water tanks are mounted with header plate being fixed to the tubes of the Core. To connect the system, tanks are fitted with inlet and outlet flanges which are extended with flexible rubber hoses to the Engine block. A water filler neck with pressure tight cap is also provided on the top tank to

fill fresh water to the system wherever necessary. In order to strengthen the Radiator Core and to get the complete assembly mounted on the mounting bracket in front of the engine, side belts with wings are fitted on both sides of the Radiator Core thus linking both the top and bottom tanks. A steam pipe is also attached with the water filler neck for releasing the steam accumulated inside which may otherwise result in blowing up of any delicate part in the system which is supposed to be air tight.

As to the design and construction of the Radiator Core in order to get maximum cooling effect under equal given conditions, opinion varies among the manufacturers. In general there are two kinds of Radiator Cores (i) "TUBULAR" type and (ii) "DIAMOND" type or otherwise known as PIPE TYPE AND HONEY COMB TYPE respectively. A tubular type of Core consists of flat brass tubes secured with continuous Copper fins from top to bottom, which makes the construction sturdy and also helps even distribution of air. Diamond type core on the other hand, is the result of a combination of two long serrated copper tapes pressed and joined on both the edges to leave a water flowing passage through the middle gap. The entire Core is constructed by laying one strap on another side-wide and are secured to each other by tin plating to give it a show of exactly a bee-hive.

It has been experienced through recent years that a Tubular type of core with continuous fins construction, the tubes made out of brass and the fins copper, give better performance and longer service under the Road conditions being rough and the climate being too hot in India.

(Servicing of such an important and delicate part will be discussed next.)



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## Madras Motor Parts Dealers Association

### IMPORT POLICY ANALYSED

Mr. V. Narayanaswamy, Hon. Secretary, The Madras Motor Parts Dealers' Association, in a circular to members on the Import Policy for the period, April-September 1958, refers to important changes effected in the Import Policy for the period in relation to the previous one. This may be read in conjunction with the Association's circular, published in the October issue of MOTOR INDIA. Further clarification, if necessary, can be had from the Association.

**Application forms:** There is no change in the present application forms.

**Income-tax verification:** Importers are advised to take steps to obtain renewal of I.V.C. Registration immediately.

**Application fees:** There is no change in the application fees.

**Last date for submission of application:** Established importers, 31st July, 1958. Actual Users, 15th August 1958.

**Basic period:** Basic period for establishment of quota for Motor Vehicle Parts, List III items, Garage Tools etc., remains unchanged. However, for Sealed Beam the basic period has been extended to cover imports made upto 1956-57. Application for establishment or re-fixation of quota should be made so as to be received by the authorities not later than 30th June 1958.

#### Points from the Policy Statement

**Roller Bearings:** Part II 19 (2) (i). Quota is reduced to 50%. There is no change in the Ball bearing position.

**Taper Roller Bearings:** Part II 19 (3) (i). Quota percentage has been reduced to 50% Gen. and 50% Soft, but for parts thereof has been increased to 60% Gen. and 60% Soft.

**Diesel Engines:** Part II 30 (e). No licences will be granted for import of Diesel Engines of Road Vehicle type. But licences for Diesel Engine parts can be obtained on the basis of 2½% of half of the best years' Import of Diesel Engines.

**Fuel injection:** Part II 30 (f). No change in the basic year for Fuel Injection equipment, which is

upto 1951-52, but quota is increased to 50%. However, provision has been made for Nationalised Transport Companies, Port Trusts, Project authorities etc., to import fuel injection equipment parts against licences issued for motor vehicle parts to meet their bona fide requirements.

**Compressors with prime movers:** Part II, S. No. 33. Quota has been reduced from 20% General and 20% Soft, to 10% General and 10% Soft.

**Compressor without prime movers:** Part II, S. No. 33 (b). Quota has been reduced from 25% General and 25% Soft to 20% General and 20% Soft.

**Sealed Beams:** Part II, S. No. 38-A (e) (ii). Quota licences for Sealed Beam has been reduced to 30% and Auto Bulbs to nil.

**Mires:** Part Li S. No. 48-B. For wires the quota licences has been reduced to 20%. But for those autocables under 45 (d) Part II the reduction is from 30% to 15%.

**Cork manufacturers:** Part IV, S. No. 154. Continues to be the same 12½%.

**Miscellaneous hardware:** Part IV, 275 (a). Quota percentage is 5% General and 5% Soft. No change in the basic year.

**Garage tools:** Part IV, 275 (b). Quota licences for Garage tools is 25% Soft and 25% General. Besides, 1% of the face value of Motor vehicle parts licences can be utilised for import of Garage tools.

#### Points from Appendix XXVI

Quota licences for Motor Vehicle Parts falling under Serial No. 293, 295 and 297 of Part IV will be issued on the basis of 25% General and 25% Soft quotas.

**List 1:** This list contains items which are totally banned for import and in the current period some more additions to the list have been made, like: Ashtrays, Auto Fans, Car heaters, coolers and Radios, Rear lights and parking lights, Battery cables, luggage carrier, Rear View mirror, Number Plate, Hand tyre Inflators (transferred to this from

List II), Frames of Motor Cycles, Scooters and three Wheelers.

**List II:** These items are again subject to 4% restriction as per the previous period. A significant factor here is that 'OIL SEALS' have been removed from this list and so these can be imported against M.V.P. licences without restriction. Laminated safety glass cut to size except windscreen glass has been added to this list.

**List III:** Quota licence for restricted items detailed in this remains unchanged with the exception of the following:

**Brake linings:** Quota 15% Gen. and 15% Soft.

(Additional licences will be granted to Established Importers on AD HOC basis against actual user orders from Industrial Establishments (Mines, Sugar, Paper, Mills, etc.) Projects and Port Trust for woven metallic Brake lining in rolls. These licences will be granted for specified varieties upto a quota of 10%. Same applies to special type of clutch facings also.)

**Electric horns:** Quota 50% Gen. and 50% Soft. (Reduced from 100%.)

**Gaskets:** Quota 50% Gen. and 50% Soft. (Reduced from 100%.)

**Radiator Assembly:** Quota 100% Soft and 100% General (New Addition).

**Piston assembly:** Quota 100% Soft and 100% General.

Against Piston Assembly licence, Pistons for Austin 8, 10, A40, Ford 10 HP., Ford V8, and Mercury. Morris 8 Minor, Vauxhall 10, 18 etc., are totally banned from Import as detailed in Annexure A (Page 419) of the current Red Book. Other restrictions remain unchanged except that Fiat, International and Studi Truck Pistons have also been included in the "25% of 33-1/3" category.

**Piston Rings:** Quota 50% Soft. and 50% General.

While Piston Rings, Quota percentage has not been changed pro-

vision has been made for grant of additional licences on an AD HOC basis to established importers for Chromium plated rings, irrespective of the sizes.

**Brake Fluid :** Part IV, S. No. 335. Banned as before.

**Actual User Licences :** Actual User applications from State Transport Authorities and other Fleet owners owning a fleet of 25 vehicles and more will be considered and licences issued on the basis of either 100% of half of their best Year's Import during any one year 1954-55, 1955-56 and 1956-57 or Rs. 150 per petrol driven vehicles and Rs. 200 per Diesel driven vehicle, whichever is more. A.U. applications should be made to the licensing authorities at the Ports.

**Cyclostyled Import application.** Income-tax verification, quota establishment, Sales tax local and Inter-State, sale Forms, etc., are available for members at nominal cost, from the Association.

## New Members

The following have been elected members of the Madras Motor Parts Dealers Association at the last meeting of the Association :

M/s. O. A. Ramalinga Mudaliar Son, Arcot Road, Vellore (N.A. Dt.); M/s. Narayan Trading Co., Begum Sahib 4th Lane, P.B. No. 2445, Madras-2; M/s. Trichy Auto Diesel Stores, 40, Palakarai Bazaar, Trichy; M/s. Majestic Motor Parts, P.B. No. 3748, 15, General Patters Road, Madras-2.

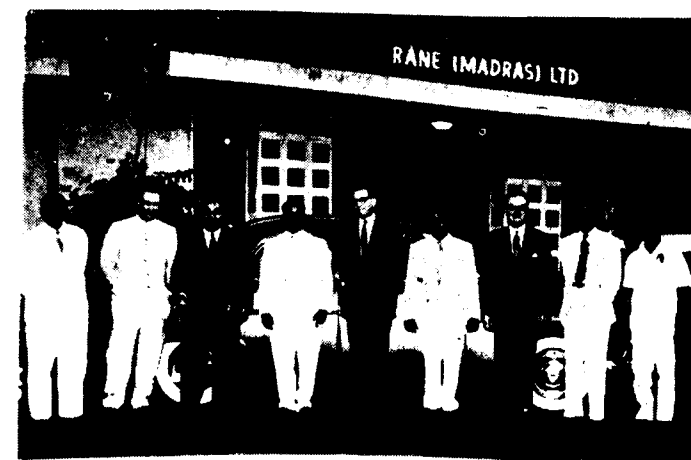


Photo taken at the show-room of M/s. Rane (Madras) Ltd., shows, Messrs. Nicholas Kelley Jr., President Chrysler Export Division, K. H. Kingley, Vice President, Mr. Chinubhai Kilachand and other distinguished visitors with Mr. L. L. Narayan, Managing Director and Mr. T. G. Raman, Director both of Ranes.

## Dealers Protest Against Automobile Classification

The Madras Motor Parts Dealers Association in a representation to the Minister of Finance, Government of Madras, points out that Sales-tax on motor vehicles parts and accessories has been included in the list of 16 items classified by the Finance Ministers' Conference at New Delhi as luxury items.

The Association points out further that the Sales-tax on motor parts and accessories in the State was 6% at one point. Several representations had already been made by various organisations that this in itself is high, considering that motor transport forms an essential service and taxation on this industry directly or indirectly can only retard its progress, and that of India's plans. If it was a fact that the Delhi Conference had included this item as a special or luxury category, raising the percentage of the taxation to 7%, the Association pointed out, that it will be a severe blow to the motor vehicle transport in the country. The transport of men and merchandise by motor vehicles is a basic requirement of the country's life and as such it was hoped that it would not be included as a luxury.

The Association, therefore, has made an earnest appeal to the Finance Minister and to the Central Government to remove the item motor vehicle parts and accessories from the list of luxuries and also to reduce the existing 6% sales-tax so that the industry may be given a fillip much needed for the development of India's transport.

## Allied Merchants' Representation to Government

The Motor Vehicles and Allied Merchants Association, in a telegram about the Import Trade Control Policy for the period, April to September 1958, addressed to the Union Minister for Industry and Commerce, states :

**Part IV, Serial No. 293—297 :** Licences for import of Motor Vehicle Parts (General) were not issued for the three months July to September 1957 and quota for six months (October to March 1958) was fixed at twenty-five per cent of the best year's imports and is continued on the same percentage for this period also. There has been expansion in road transport by increase in number of vehicles during the last two years and vehicles doing more mileage per day resulting in increased consumption of spares. Transport operators are experiencing difficulties in obtaining requirements of spare parts on tap. Government surplus parts which were available in the past years are almost exhausted. Request re-fixation of quota at fifty per cent.

**Part II, Serial No. 30 (f) (i) :** Diesel truck sales increased from 1953 and hence request fixation of basic period for fuel injection parts to be extended to 1956-57. There is acute shortage of fuel injection pump parts and transport operators find it difficult to get their requirements on tap.

**Part II, Serial No. 38-A (e) (ii) :** Sealed beam units for motor vehicles are not manufactured in our country. Request liberalisation. All vehicles imported during last four years are fitted with sealed beams. Goods vehicles operate mostly during nights. May quota be fixed at fifty per cent.

**Part IV, Serial No. 275 (b) and Part IV, Serial Nos. 293—297 :** Garage tools are very necessary for correct maintenance of road transport vehicles and Government are allowing import at one per cent of face value of motor vehicle parts licence. Request this be increased to two per cent.

# Automobile Prices are Surprisingly High

—B. M. SHAW

"In spite of all the encouragements given by the Government and the protection afforded to the Industry, we find that car prices in India are beyond the reach of many people, particularly of the middle class people and prices are surprisingly high."

Thus observed Mr. B. M. Shaw, retiring President of the Bombay Motor Merchants Association at the Annual General Meeting held recently at Vora Hall, Bombay.

Moving for adoption the audited accounts and the Annual Report of the Association for the last year, Mr. Shaw said :

*As we all know, Transport has rightly been assigned a very prominent importance in the Second Five-Year Plan, as a result of which the Automobile industry is receiving a very careful and considerate attention at the hands of the Government. Every possible protection is being given and facilities afforded for the successful expansion of this industry.*

Last year we witnessed a production of about 35,000 vehicles including cars, trucks and jeeps. By the end of the Second Five-Year Plan according to the estimates available it is expected that the production of vehicles may reach approximately 65,000. With the rapid industrialisation, more and more raw-materials and finished products are required to be transported from one end of the country to the other and more vehicles on the road will render auxiliary, but progressive service along with the Railways for doing this job. In spite of all the encouragements given by the Government and Protection afforded to this Industry, we find car prices in India are beyond the reach of many people, particularly middle class people and prices are surprisingly high. *This question can only be solved if the consumption of vehicles is increased and this can only be done by the Government in various ways. For instance the Government can help by granting subsidies in import duties paid on the parts employed in the vehicles, by reducing taxation like sales-tax, etc., by providing easy-payment facilities to the prospective buyers on necessary guarantees.*

These and many other methods can be employed which may help

to bring down the prices of cars in this country. The prosperity of Motor parts trade and industry depends upon the increased number of road vehicles both cars and trucks. At the same time with unfavourable foreign exchange position and the expansion of Automobile industry, manufacture of indigenous parts in this industry have made a notable progress, as was evident from the recent Automobile parts exhibition held in Bombay. *Many varieties of parts, accessories and tools of fairly good quality are being manufactured in this country. These indigenous products can still be improved in quality and reduced in prices by the support of dealers, assemblers and consumers. I feel that this indigenous industry deserves support.*

We dealers can play a very important role in popularising these indigenous products through proper propaganda provided we get support from the manufacturers both in respect of quality and prices. More than ourselves, vehicle-manufacturers can give more substantial support to the indigenous parts, if instead of trying to manufacture all the parts required for their vehicles they purchase these parts from the indigenous manufacturers. Of course, the prices and quality of such parts must pass through a severe test.

In no country, manufacturers of vehicles are manufacturing all the parts that they need for their vehicles. The Assemblers must, therefore, act as real assemblers and patronise indigenous manufacturers by purchasing their requirements from them. If convenient, and circumstances permit, it is high time our members think in the direction of

switching over to small-scale manufacture as under the present circumstances, it seems probably imports may not only be not liberalised, but they may be curtailed further.

**CURTAILMENT OF IMPORT LICENCES :** We have witnessed during the last period that from 60% of yearly M.V. Parts import quota in Jan.-June 1957 it has been cut to 25% for Oct.-March 1958 period (with no licences for 3 months for period of July to Sept. 1957). This during the 15 months from Jan. 1957 to March 1958 licences at our disposal were only 42-1/2% of our best year's imports besides discontinuing big amounts of special licences which were granted between period 1955-57. This terrible cut has been a matter of great worry and regret to many of us in the trade, for people with big establishments it will be difficult to carry on their show with meagre licences which they possess. For the suppliers who may not be importing themselves all the items it will be difficult to get goods at competitive prices from importers because importers themselves find their own stocks not sufficient to take care of the requirements of their own dealers. However, under the circumstances, nothing much can be done to improve the sordid position when we know too well that we have acute-shortage of Foreign Exchange. We have to balance this position from larger perspective of National view and considerations and there-

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(H. M.) DIESEL CONVERSION KITS COMPLETE

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**THE SENIOR AUTO DIESEL STORE**

2/6 Wallers Road Madras 2

Grams : ECEHEMKIT



## Shaw condemns Anti-Social Activities

fore should try to adjust matters as best as we can.

We strongly feel that licences during the last period were too meagre; it was a terrific cut and with full knowledge of our unfavourable foreign exchange position, as a responsible body of motor parts' traders we have represented to the Government to restore the licences to at least 60% as it is the minimum requirement for meeting the needs of vehicle-operators and car-owners. If this is not done, I am afraid that there will be acute shortage of many articles and no wonder that many cars running on the road may not find sufficient spare parts for repairs and they would have to be removed from the roads thus creating a deadlock which would be a handicap in the smooth transport of passengers and materials in the country. In addition to this we have made a strong representation for extending the basic period of sealed-beams to 1956-57, to grant liberal quota basis under List 3 of Appendix XXVI.

**Sales-tax:** This is another problem to us, particularly to the Mercantile community. With the introduction of Central Sales Tax our worries have been multiplied. The labour involved in maintaining various complicated forms and registers are not only manifold but have become inhuman and clerical work has considerably increased. Many business organisations and Associations have raised a hue and cry against the complicated structure of the sales-tax as a result of which Bombay Government has appointed a Committee to find out ways and means of simplifying the present sales-tax structure without any loss of revenue to the Government. Fortunately, on the Committee there are a good few prominent men of Commerce and industry and we can be sure that this Committee will go a long way in making recommendations to the Government which would reduce tension arising out of sales-tax administrative difficulties. The Mercantile community itself recognises that taxation is a necessity for the sound economy of the

country and Government should know too well by now that we do not grudge to pay taxes; but it should not be to such an extent as would break us down completely.

**Anti-Social Activities:** It has been reported to us that some of our members are involved in anti-social activities either by supplying inferior goods to up-country dealers or by passing Indian goods in the name of disposal or foreign goods and using various other unscrupulous methods which do not bring credit either to the members concerned or to the fair name of our Association. Many times on account of legal complications involved, your Committee may not be able to take necessary action against such people; but let me say categorically that we view all such activities with grave concern and would not hesitate to take suitable action when situation so demands. I, therefore, request members to abstain from such activities in the fair name of trade and our Association.

Few hints I would like to give which may be taken up by you for your consideration.

(i) Avoid over-trading; (ii) Abstain from giving credit to mofussil dealers and if at all necessary, do it within your own limits; (iii) Give fair-deal to all your customers; (iv) Avoid all types of unhealthy competition; (v) Improve your percentage of profit, but not to the extent that it may be called profiteering. You are entitled to a fair profit-margin looking to the technical and complicated nature of the trade; (vi) Respect your Association by heeding all its man-

dates; (vii) Patronise members of your Association in *iter se* purchases and Associate members for your foreign purchases; (viii) Confine your membership discount exclusively to your members and do not give to any non-members.

### Office Bearers Thanked

Proceeding Mr. Shaw expressed his thanks for the members and other office-bearers of the Association for their unstinted and whole-hearted co-operation without which his work for the Association during the last two years would not have been what it was. He expressed his gratitude to the President-elect, Mr. M. G. Kapadia, who has rendered excellent service for the Association for nearly 20 years, longer than any other member of the Trade. The rich experience that he had gained during all these years, coupled with his excellent knowledge of the Constitution of the Association and his expert knowledge of the rules of various Acts, including the Sales-tax would go a long way to make him an ideal President of the Association. The Audited accounts of the Association were then adopted as also the Report of the Secretary.

### New Office Bearers

The Association elected the following office-bearers for the current year:

Messrs. M. G. Kapadia, President; S. Gurucharan Singh Sethi, Vice-President; Satya Bhushan Anand, Honorary Secretary; R. M. Trivedi, Honorary Joint Secretary; S. Balwant Singh Chadha, Honorary Treasurer and J. P. Sheth, K. N. Sanghani, M. L. Aroar, P. G. Patel and S. Sohan Singh Sethi, Committee Members.

**FOR HIGH QUALITY WORKMANSHIP,**  
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55/56 GENERAL PATTERS ROAD MADRAS 2  
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—SPECIALISTS IN MERCEDES-BENZ—  
30 YEARS' EXPERIENCE AT YOUR SERVICE—  
GRAMS : "ATOMISER"

MOTORINDIA

April 1958

## PERKINS MAKE NEWS EVERYWHERE

### Big Order from Yugo.

A big order to supply 3,050 diesel engines to Yugoslavia has been obtained by F. Perkins Ltd., the Peterborough diesel engine company.

The order is for 2,250 three cylinder Perkins P3 engines for installation in Massey-Ferguson 35 tractors and for 800 four cylinder P4 engines for the Yugoslav-built Zadrugar tractor.

Deliveries will be completed by the end of the year.

F. Perkins Ltd., has obtained orders totalling about £2,500,000 from Yugoslavia since the Yugoslavs decided to standardise on Perkins engines in 1955.

It is estimated that there are now nearly 12,000 Perkins diesel engines operating in Yugoslavia in tractors, combine harvesters and lorries.

### Displayed at Vienna

Perkins diesel engines were displayed on 12 stands at the big Vienna Spring Fair in equipment shown by British and Continental manufacturers.

Indukont, F. Perkins Ltd.'s distributors in Australia were exhibiting L4, three cylinder P3/144(TA), and Four 99 (TA) agricultural type diesel engines on their stand.

### At the Italian Fair

Forty-eight Perkins diesel engines were displayed on 14 stands at the big Verona International Agricultural Fair in Italy.

Three and four cylinder Perkins agricultural type diesel engines were exhibited on the stand of Riberi S.R.L., of Turin, F. Perkins Ltd.'s distributors in Italy.

Riberi were showing the new 1.6 litre Perkins "Four 99" diesel engine, which develops 35 b.h.p. at 3,000 r.p.m. and is particularly suitable for small self-propelled, combine harvesters, tractors and other farm applications. This engine has a new patented combustion system and is fitted with a rotary type distributor pump.

April 1958

## UNIFORM SALES-TAX FOR MOTOR VEHICLES

"Will adversely affect both consumer and Trade," says G. K. Iyengar.

### New Joint Managing Director

Mr. Monty Prichard, M.C., Deputy Managing Director of F. Perkins Limited, has been appointed joint managing director of the Peterborough Diesel Engine Company with Mr. Frank Perkins, who now becomes chairman and joint managing director.

Mr. Perkins, who founded the company in 1932, has decided to relinquish some of his executive responsibilities.

Mr. Prichard joined F. Perkins Limited in 1953 and was appointed deputy managing director in 1956.

Educated at Felsted School, Essex, Mr. Prichard started his career with the Lister-Blackstone Group of Companies, the well-known diesel and general engineers. After his training period in England, he joined the company's agents in East India in 1936.

### Ritchie Becomes Director

It is also announced that Mr. George P. Ritchie has joined the Board of F. Perkins Limited. Mr. Ritchie became a Vice-Chairman of the Royal Automobile Club this year, and holds various directorships in the city.

Educated at Wellington College and Christchurch, Oxford Mr. Ritchie had held senior war jobs.



MOTORINDIA

Mr. G. K. Iyengar, President, Mysore Automobile Parts and Allied Merchants' Association, Bangalore, in a statement on the proposed levy of uniform sales-tax of 7% on motor vehicles and their spare parts, by the Central Government, says: "It is understood that the Central Government are considering the levy of a uniform rate of sales-tax on motor vehicles and parts thereof with the concurrence of the State Governments. It is also understood that wherever the tax is higher than seven per cent it would be allowed to stay and wherever it is less than seven per cent the sales-tax would be stepped up.

I fail to understand how this would ensure uniformity in the application of the rate of sales-tax. Particularly in Mysore and such States where there is no port facility, the enhancement of sales-tax without public opinion being elicited is likely to affect the trade adversely.

Referring to trade in Mysore State in particular, the sales-tax question has been taken up more than once and revised on the commodity referred to. Recently, when the sales-tax was revised, the traders had no other option but to go on a deputation to the Finance Minister and appeal to him to maintain parity in the sales-tax structure in between neighbouring States, as otherwise the trade would be diverted from our State and traders as well as consumers would be put to a lot of inconvenience. The Finance Minister, Sri T. Mariappa, B.A., LL.B., heard the deputation and viewed the matter very sympathetically and the Government of Mysore have levied a single point sales-tax of 5 per cent with a licence fee upto a maximum of Rs. 2,000. Automobile parts prices are already high and the consumers are finding it difficult to maintain the vehicles due to high prices and the revision of the sales-tax very often would affect the trade adversely both to the trader and the consumer at a time when free movement of transport is absolutely essential, as every one knows, for the furtherance of the Second Five-Year Plan.

It is now urged on the Authorities both Provincial and at the Centre to view the matter in the light of the facts given above and see that if a uniform levy of sales-tax is fixed up the lowest level of tax that is prevailing in the trade is taken and maintained throughout the Indian Union."

The distance between the earth and the moon would be relatively short for the Airide spring bellows shown here poised between them. The bellows, manufactured by the Firestone Tire & Rubber Company, Akron, Ohio, U.S.A., travelled 624,000 miles on a long distance bus before it was removed for inspection. The bellows is similar in construction to the smaller ones designed for air suspension systems now in use on many of the 1958 model American automobiles.

33



## The International '500' in Italy

*proved the TYRE  
for Safer  
motoring*



The International "500" at Monza, Italy, was famous for tyre safety as well as speed. The same quality control and the same manufacturing skill built into those race winning tyres are the things that create that extra safety you too can have by fitting Firestone "family type" tyres on your car.

# Firestone

New DeLuxe Champion Tubeless or with Tube  
the tyre with **BUILT-IN PEACE OF MIND**

## At the Sholavaram Air Strip

really masterful and impressive driving which was fully appreciated by the crowd.

Soon after this race, came the SENIOR OPEN CHAMPIONSHIP for Motorcycles upto 350 c.c. and event which all the motorcycle fans were looking forward to. The impressive lineup of six machines was dominated by four entries from the Deccan Club: The Norton Manx of Ashok Shah, The Triumph 80 of Kishan Raute, the Royal Enfield of A. K. Tyrewallah, and Chinks Barucha on his "Speed Star" which is a B.S.A. Gold Star engine in a Triumph Speed Twin frame. There was also Mr. D. Srinivasan of Madras on his Matchless 350 which had been slightly modified for racing. Another Madras entry was a stripped down B.S.A. which had had an accident during practice on Saturday. The distance was 7 laps. Once underway, the race claimed many victims of mechanical trouble. During the second lap, Chinks, Barucha had to stop and spend over three minutes repairing his Carb which gave trouble. Although he finally managed to repair the trouble, he was nearly one lap behind, and in spite of his superlative riding, in which he recorded lap timings which were terrific, he couldn't make up that one lap and finished fourth. Both Madras entries failed to complete the race due to mechanical trouble of some sort. The winner of the race was Ashok Shah on his Manx, and he covered the 20.93 miles in 20 minutes and 38 seconds, or an average speed of about 61 m.p.h. To do this he was touching 105 m.p.h. on the straights. A full 2½ minutes later came the second place Enfield ridden by Tyrewallah of Bombay. Third was Kishan Raute on his Triumph 80. So the 350 Open Championship was a 1-2-3 win for the Bombay Team.

The WAKEFIELD TROPHY for cars was a handicap race with the handicaps based on the performance of the cars in the previous car race. It was won easily by Hari Haran of Bangalore in his

Jag and second place went to P. V. Gajapathi Raj of Madras in his Fiat and third place was claimed by K. Rajagopal of Coimbatore, also in a Fiat 1100.

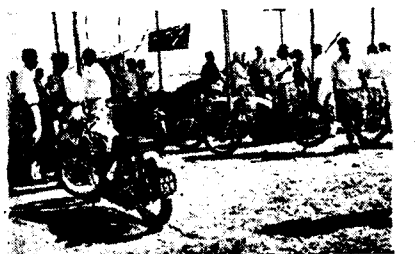
The LAST RACE of the day was the event for which everyone had been waiting. It was the Senior Open Championship for Motorcycles of Unlimited capacity. There were about 13 entries, all of which were very potent machines with experienced men to ride them. From Bombay came Chinks Barucha on his Tri-Star Special, a hybrid machine with a very hot Triumph Tiger 100 engine installed in a B.S.A. Gold Star frame, with various other makes represented. Also from Bombay came two Triumph Tiger-100s, ridden by Praveen Kumar and Mr. Daruwallah. The Bombay contingent was rounded out by Ashok Shah, riding a 350 c.c. Manx, and the eventual winner, A. K. Tyrewallah on an extremely fast Royal Enfield 500 c.c. From Ceylon came Chandra DeCosta, a man with many first places to his credit, and one of the fastest motorcycles in the world, a 500 c.c. Manx-Norton, which is capable of over 140 m.p.h. when fully geared. Clacutta was represented by Mr. Zadkar on a B.S.A. Gold Star factory racer, and from Coimbatore came Krishnasami on another B.S.A. Gold Star. Bangalore's Vinod Gupta on a Royal Enfield was there and from Madras there was a single entry of a B.S.A. 650 c.c. Golden Flash, ridden by Mr. P. G. Giriraj. After a good start, Chandra DeCosta took first position, closely followed by Dharwallah, Chinks Barucha, Tyrewallah, Giriraj of Madras, and Ashok Shah. In the fourth lap of the 10 lap race, DeCosta's clutch packed up and he retired from the course with smoke coming from the exposed clutch, testimony to the tremendous strain, all parts of the machine are put to during a race on the tricky Madras circuit. Before his forced retirement, DeCosta recorded the fastest lap of the day, and it is supposed that if he had remained in the race, he might have come away in first place. In succeeding laps 3 more clutches burned out



The lineup of cars before the race. From left to right: Citroen, Cadillac, two Jaguar Mark VIIIs, Two Jaguar XK-120s, (Barely visible). The three Fiats were to the left of the Citroen.



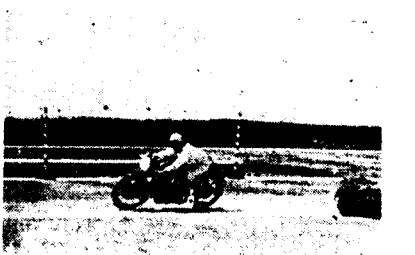
The Fiat of Mr. Soundararajan of the Coimbatore Motor Sports Club receiving the checkered flag to win the Rumeda Trophy race.



General view of the Madras Pits.



Chinks Barucha on his Tri Star at over 110 m.p.h.



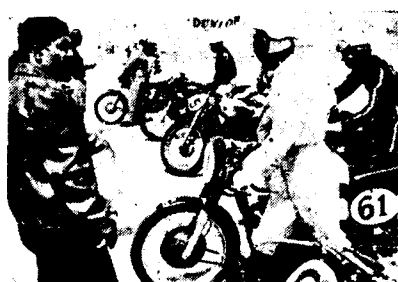
Ashok Shah of Bombay on his Manx-Norton coming out of a chicane.



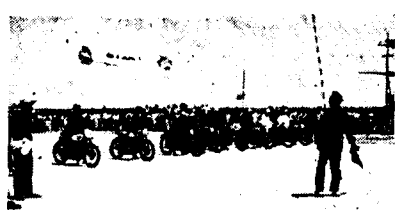
Madras pits : 66 Tri Star and other machines from Bombay.



D. V. Reddy winning the Clubman's on his Norton Dominator.



Start of the 250 Junior Championship. Ashok Shah (61) Chinks Barucha (in black suit).



Start of the Senior Unlimited Championship. (Wakefield Trophy).



Tyrewallah after his victory. Mr. Kapadia.

## BRAKES Play A Decisive Role

causing the retirement of Calcutta's Zadkar, Coimbatore's Krishnasami, and one of the Triumph Tiger 100s from Bombay. (One might explain the many burned out clutches in the following way : During each lap, the rider must slow down his machine 7 times for the 3 hairpins, the two chicanes and the two bends. To slow down from well over 100 miles per hour on brakes alone so fiercely and so often, would make the brakes burn out in 2 or 3 laps. So engine braking is employed to a large extent, which puts a heavy strain on the clutch). By the 7th lap the position was : Tyrewallah first, closely followed by Barucha and after some distance came Ashok Shah and Giriraj locked in a duel for 3rd place. The crowd was treated to a display of marvellous riding by Chinks and Tyrewallah as they fought for first place, and another display between Shah and Giriraj. *The relatively small brakes on the Tri-Star soon lost efficiency* and Barucha had to remain in second place, with Tyrewallah well ahead. In the fight for 3rd position, Giriraj had gained a fair lead over Ashok Shah, when in the last lap, *The High tension lead to the spark plug on Giriraj's Golden Flash came adrift* leaving one cylinder out of order and reducing the speed of the bike to 50 or 60 m.p.h. Shah quickly overtook the partially disabled Giriraj and came in third across the finish line. Tyrewallah was first and Barucha finished a close second, to end a really exciting race. The Senior event was really a spectacle of sheer speed (over 110 m.p.h.), superlative riding all around, and a testimony to reliability of the various machines and to the difficulty of the Madras circuit.

The race meet was well organized and good sportsmanship was the order of the day. The trophies were distributed at an enjoyable dinner at the Madras Gymkhana Club, and everyone went home

that night feeling tired, but happy to have witnessed what is described in detail above. Interest in Motor Sports in India is growing, and we may only hope that it will continue to grow, and that we may have many more race meets as enjoyable, and interesting as we had at Sholavaram, this year.

## MAHINDRA EXPANDS TRAILER MANUFACTURE

M/S. Mahindra & Mahindra Limited need no introduction to our readers. As Progressive Manufacturer of the Willys Jeep, they have played a very important part in catering to the off the road transportation required in the fulfilment of the Second Five Year Plan.

They are the country's largest trailer manufacturer and have a most up-to-date factory in Poona. To cater to the demand for their trailers from the South, they started trailer manufacturing operations early in August, 1956 in Madras. In view of the excessive demand which far outstripped supplies, they have now shifted the factory to new Premises at No. 4, Choolaimedu Road, Kodambakkam, Madras with effect from 1st April, 1958. This modern and well equipped factory has already plunged into the manufacture of Jeep Trailers and heavy trailers upto a capacity of 10 tons. Requirements of larger trailers are met by their factory at Poona.

M/S. Mahindra & Mahindra Limited have at their disposal, technical assistance from top trailer designers in the U. K. and have a well manned Design & Development Department which keeps constant track of the trailer requirements in the country. Their wide range in production has enabled them to sell trailers from Peshawar to Cape Comorin.

**FOR SALE**  
Available in first class running condition 10 H.P. Austin Cars and GYPROCO Ceiling Sheets 6' 0" x 2' 0" in large quantity  
Contact : G. M. LAL  
236 T. H. Road, Madras 21

## T.W.A. Economy Flights

Due to an unprecedented demand for the new economy service to Europe, Trans-World Airlines has increased the scheduled number of Trans-Atlantic flights providing economy fare service from 44 to 74 a week during the peak summer travel season, E. O. Cocke, T.W.A. Senior Sales Vice-President, announced today.

In addition to the Super Constellations providing all-economy service, the new low fares will be offered beginning April 1 aboard the long-range Jetstream flying non-stop to Paris, London, Shannon, Lisbon and Frankfurt, as well as from the west coast to Paris and London. First class service also will be available on these Jetstream flights.

The April schedule provides 16 all-economy Super - Constellation flights weekly in both directions with an increase to 18 flights on April 27 and 36 flights on June 1. Jetstream schedules providing economy fare service begin with 26 weekly as of April 1 and increase to a high of 38 in both directions on August 1.

The new lowfares, subject to Government approvals, will bring the round trip New York/Paris fare down to as little as Rs. 2,332.00 or Rs. 326.00 less than the present tourist fare. The cost of a round trip to Rome will be Rs. 2,817.00 at the economy fare or a saving of Rs. 318.57 over the present tourist fare.

## Swiss Air Expands

The Board of Directors of Swiss Air, have elected Mr. Ernest Schmidheiny as their new Chairman.

Also, the Board of Directors have stated their intent to propose an increase of the share capital of the Company by 50%, i.e., from 42 to 63 million Swiss Francs.

## More Americans Now on Move

Trans-World Airlines is predicting a 41 per cent increase in the volume of American air traffic to overseas points during the 1958 vacation season, according to Clyde S. Fullerton, T.W.A. Vice-President and General Sales Manager, now circling the world on a tourism survey trip.

The newly adopted economy air fare across the Atlantic is credited in part for the increase, according

# AIR NEWS

to the T.W.A. executive. He said the up-surge in overseas vacationing is also going to be felt on round-the-world routes.

Advance bookings indicate that many travellers destined to visit the Brussels Fair and Lourdes Centennial Celebration in France and planning to fly around-the-world over the new T.W.A.-North-west Airlines route.

The economy fare over the Atlantic will make it possible for a family of four to arrive at many overseas points with an extra \$273.60 in spending money this year.

## Longest Distance is Shortest for T.W.A.

Scientists in the employ of Trans-World Airlines have discovered that the longest way around can be the shortest way home when one is guiding a modern airliner around the world.

Since the advent of planes like T.W.A.'s Jetstream, longest-range airliner in service, an entirely new concept of navigation has been adopted by the airline.

T.W.A.'s pilots no longer follow the most direct route to their destination. A meandering zig-zag line might be the shortest distance between two points.....reckoned by the pilots, clock. T.W.A.'s ingenious navigation system, called "Minimum Time Route," aims at putting the high altitude winds to work in hurrying air liners to their destinations. The problem is to find the winds : to benefit from them if they are blowing in your direction, and to avoid them if they are against you.

A score of skilled meteorologists in T.W.A.'s Wind Analysis Unit in New York City keep 24-hour vigil on wind characteristics in the Northern Hemisphere. A battery of 25 teletype machines feeds them with weather information from hundreds of ground stations and from ships at sea and planes aloft.

Two hours before take-off time final recommendations are made to the plane's captain. His decision

is final ; he may accept the recommendations or alter them.

Once airborne, actual conditions encountered aloft by the flight are radioed to the Wind Analysis Unit. Often adjustments are made in the basic route, then, based upon late information, and are radioed to the plane in flight.

T.W.A.'s Jetstreams have been aloft for longer than 23 hours without landing on long, non-stop flights between California and Europe. Free to choose the fastest, safest, smoothest route to destination, a captain might cross the Atlantic near the Azores on one trip and well north of the Arctic Circle the next. Always, he and the hundreds helping him from the ground will search for the wind streams which mean faster more economical flights.

## 6,000 Planes fly passengers now

Renton, Wash.—Six thousand passenger aircraft are in use by airlines of the world, and nearly 1,500 additional passenger aircraft are on order, according to a study recently completed by the Boeing Airplane Company Transport Division market research group.

Results of the study, just made public, show that late last year the total number of airliners known to be in use was 5,994 ; 1,433 were known to be on order.

Of these totals, 99 were in use by Indian airlines and 19 were on order. Included in the total on order are the three Boeing 707 Inter-continentals Jet Stratoliners ordered by Air-India International and scheduled to enter service in 1960.

The study also shows that 757 all-cargo aircraft were in use by airlines throughout the world and 25 were on order. Of these totals, six were in use by Indian Airlines.

Boeing Airplane Company, which conducted the study, is manufacturer of Boeing 707 long-range jet Airliners and Boeing 720's for intermediate range use. Fourteen leading world airlines have ordered a total of 162 of the 600 mile-per-hour aircraft.

## TRANSATLANTIC ECONOMY FARE FLIGHTS

Daily Economy Fare flights offering the lowest fares to Europe in air transportation history will be scheduled by Trans-World Airlines, beginning April 1st, between the United States and London, Paris, Frankfurt, Rome, Lisbon and Madrid, E. O. Cocke, TWA Senior Sales Vice-President announced.

The new low fares, subject to Government approvals, will bring the roundtrip from New York to Paris for instance to as little as Rs. 2,332 or Rs. 326 less than the present tourist fare, Mr. Cocke pointed out. The cost of a roundtrip to Rome will be Rs. 2,817 at the economy fare. To a passenger flying from Bombay to New York on a roundtrip ticket this will mean a saving of Rs. 326. TWA the pioneer airline in introducing transatlantic tourist fares has been constantly endeavouring to bring air fares to a level where they will cater to a mass market, and be available to all people as the ideal means of transportation.

## ROUND TRIPS

There will be no time limitations upto a full year on the use of a roundtrip ticket and all discounts now in effect on TWA's Transatlantic services will apply to the new low fare. Passengers may make unlimited stopovers at any of TWA's cities in Europe and by using the airlines' circle routes in Europe, which join at Rome, could tour as many as 17 cities in the countries on a single roundtrip ticket.

TWA's April 1st schedules will show economy service flights at the rate of two a day in each direction. This frequency will be increased as the peak travel season advances so that by June 1st TWA will have 44 economy service flights in both directions out of a total of 124 weekly Transatlantic flights, which include first-class and tourist services. TWA will operate the economy service flights with Super-Constellation equipment.

TWA's Inaugural flight from New York to Bangkok and Manila passed through Bombay recently and was welcomed at the airport by Jules C. Gindraux, TWA's Sales Chief in India along with Michael Vaughan, TWA's District Passenger Service and Operations Manager for India.

Mr. Gindraux officially handed to Captain William Piper letters of greetings from the Mayor of Bombay and the President of the Federation of the Indian Chamber of Commerce, to the President of the Republic of Philippines and the Prime Minister of Thailand. The Mayor in his greeting emphasized closer relations between the peoples of India and the two countries, that will be brought about through this new service of TWA.

The Inaugural flight, which halted in Bombay for two hours on its way to Bangkok and Manila, marked a new era in TWA operations. TWA Super-G Constellations will connect in Manila with North-west Airlines flights to the West Coast of America via Hongkong and Tokyo, thus completing a second U.S. flag carrier round-the-world service.

TWA's service will link Manila to India, Italy and Spain for the first time by direct flights, and offer direct no-change service to the U.S.A., according to Jules C. Gindraux.

TWA's flights to Manila and Bangkok via Colombo will depart from Bombay twice weekly on Tuesdays and Fridays at 19:00 hrs. and 18:35 hrs. respectively. Flights from Bangkok and Manila will arrive in Bombay on Sundays and Thursdays at 22:40 hrs. and 23:10 hrs. respectively.

## WORLD'S FIRST VERTICAL TAKE-OFF AIRLINER

By James Macdonald

The Fairey Rotodyne, which has just made its first flight in Britain, is neither an orthodox aircraft nor a normal helicopter. It is a cross between the two; and a cross that promises to be a triumphant success. There will, of course, be a great deal of flying and testing to be done. That is automatic with every new aircraft, let alone with something as revolutionary as the Rotodyne.

United Kingdom manufacturers of orthodox aircraft have produced economical machines to take off in restricted spaces. In their various categories, the Twin Pioneer, Herald and more recently, the Accountant have all proved themselves remarkable performers.

Builders of helicopters have demonstrated that they can perform certain functions completely beyond the power of any fixed-wing machine, but they have always been hampered by the high operating costs of the helicopter, its low speed in level flight, and vibration greater than in the modern airliner, and relatively small payload.

Now the Rotodyne has shown that it is possible to build a true airliner, capable of vertical take-off and landing, which has running costs comparable with those of the fixed-wing machine, and a speed in level flight of nearly 200 miles an hour.

The new aircraft is really a twin-engine, high-level monoplane with the tips of the wings chopped-off, and a 90 feet diameter four-blade rotor added well above the fuselage. In forward flight it is driven like any other aircraft by the engines mounted in wing nacelles. Two Napier Eland propeller-turbine engines provide the power, and the necessary lift comes from the stub-wings, and partly from the free-wheeling rotor blades.

The secret of the Rotodyne's extraordinary performance lies in the system for take-off and landing. Compressed air from the Eland engines is piped through the stainless steel blades of the rotor to small Fairey Pressure-Jet units at the tip of each blade, where the compressed air is mixed with fuel and burned in the units. The four tiny jet engines give the rotor power to lift the aircraft vertically. They also replace the gears, shafts and clutches of the normal helicopter.

When operative height is reached, power is transferred to the forward-facing propellers of the Eland engines.

The Rotodyne is designed to lift a load of four-and-a-half tons of freight, or a complement of 48 passengers, over stages of up to 400 miles. It is expected to be able to fly in all weathers and at night.

When 36-year old Sqd. Ldr. Ronald Gellatly, took the flying freak for its first flight he carried with him into the realms of reality the dreams of a small team which has been working for years to produce the world's first vertical take-off airliner.

# MOTORINDIA NEWS SECTION

(BY OUR SPECIAL CORRESPONDENTS)

## T. V. S. SELLS ONE IN 10 CARS IN INDIA

M/s. Sundaram Motors' Sub-dealers of South India recently met in conference at Madras when Sri T. S. Santhanam, Managing Director, Sundaram Motors Private Limited, received the delegates and in welcoming them pointed out that the T.V.S. Units account for not less than ten per cent of the All-India sale of trucks and cars.

After reviewing the achievement of the First Plan and the allotment in the Second Plan, he emphasised the attention devoted to road transport in the Second Plan. He felt that there will be no dearth of chassis for bus or lorry in the course of this year, as there may be severe restriction, if not a complete shut-off of import of big car and a considerable cut in the availability of small cars. The standardisation of truck model is to be welcomed.

He welcomed the appointment of Sri S. K. Patil as the Minister for Transport and Communication, as Sri Patil was in close touch over the years with roads and road transport through recognised organisations. He felt confident that road transport will have a fair deal at the hands of the new Minister.

He pointed out the statutory provision in the amended Motor Vehicles Act dealing with the provision of alternate routes to bus operators in case of nationalisation and exhorted the sub-dealers to delineate the routes alternate to the routes of nationalisation and thus help the consumer points. After dealing with house affairs, he invited the comments of the various dealer points regarding their local problems and difficulties.

After a full and frank discussion during two days, there was a full awareness of the problems of road transport, supply and requirements therefor at reasonable cost and satisfactory service.

## U.S. Loan and Automobiles

The \$225 million loan to India from the U.S.A. includes a credit of \$150 million from the Export-Import Bank for purchase of U.S. capital equipment for irrigation, land reclamation, power, transport and communications, mining and industrial development. This bears interest at 5½ per cent; the term is 15 years, repayment of the principal beginning from January 1964.

The Development Loan Fund is providing the balance of \$75 million for components for manufacture of trucks, buses and jeeps, also steel for the railways, and machinery for the jute and cement industries. The loans to the railway bear interest of 3½ per cent and the other credits 5½ per cent, with repayment which can be made in rupees in 40 and 30 semi-annual instalments respectively beginning in March 1959.

## Russian Oil Production

Over 700 various products from petrol and kerosene to medicines and perfume are obtained from oil. The Soviet Union has set itself the target of annually extracting up to 350 million to 400 million tons of oil within the 15 years.

In this respect the building of new oil refineries is of great significance. Already this year, oil refineries will start operating in Perm and Gorky (RSFSR), Ferghana (Uzbekistan). By 1960 new oil refineries with a capacity of no less than 45 million tons will be built in the Soviet Union.

## World Car Production at nearly 12 Million

Production of motor vehicles in the seven leading manufacturing countries of the world rose from 11,071,000 in 1956 to 11,785,000 in 1957, the downward trend in the U.S.A. having only started towards the end of the year. Production of cars last year totalled (in thousands, with 1956 figures in brackets) 9,540 (8,783), including 6,113 (5,816) in the U.S.A., 1,040 (845) in Western Germany 861 (707) in the U.K., 738 (663) in France, 356 (374) in Canada, 318 (280) in Italy and 114 (98) in the U.S.S.R.

In contrast to the rise in output of cars, that of commercial vehicles declined, total production being 2,245 (2,288), of which 1,101 (1,104) in the U.S.A., 172 (228) in Western Germany, 290 (299) in the U.K., 190 (164) in France, 77 (90) in Canada, 33 (36) in Italy and 382 (367) in the U.S.S.R.

## Daimler-Benz

The Daimler-Benz AG of Germany announces that effective from January 1st, 1958 they have acquired the qualified majority of the shares of Auto-Union GmbH, Dusseldorf-Fingolstadt.

The Auto-Union with its qualified production program remains completely independent, retaining its original denomination, its nature of the company and its actual management.

The acquisition of the Auto-Union shares by Daimler-Benz enables the two firms to co-operate closely with a total of approximately 75,000 employees and a sales volume, in 1957, of about 2,200 million Deutsch Marks. This will strengthen the position of both firms in the future common market.

## AUTO DEALERS ASSOCIATION AT MADURAI

A meeting of the motor parts dealers of Madurai, Ramand and Tirunelveli districts was held on the 25th January 1958 at T.V.S. Head Office Buildings, Madurai. Mr. N. Kannayiram of M/s. K. Nataraja Pillai & Co., Madurai presided. After tea, Mr. M. R. Kannan, Sales Manager (Parts), M/s. T. V. Sundram Iyengar & Sons Private Ltd., Madurai spoke welcoming the guests. He stressed the need for starting an association of motor parts dealers in the south.

Messrs. Poochi Nadar of Manickam Co., Arunachalam of Bharath Trading Co., and Subramanian of Murugan Automobiles, Dindigul spoke in support of the proposal.

### Office Bearers Elected

The following Office Bearers were then elected: President, Mr. V. Rajendran of M/s. Ar. A. Shenbaga Nadar and P. V. P. Valasubramania Nadar, Madurai, Vice-Presidents, Mr. Muthukrishnan of M/s. Madura Auto Stores, Madurai, and Mr. Thangathurai of M/s. Jayaraj Nadar & Sons, Madurai; Secretary Mr. M. R. Kannan of T.V.S. & Sons Private Ltd., and Treasurer Mr. N. Kannayiram of M/s. K. Nataraja Pillai & Co., with the following as Committee Members: Messrs. Murugan Automobiles, Dindigul, Meenambigai Motor Works, Virudhunagar, R. Somanathan & Co., Nagercoil and G. N. Chakrapani Chetty & Sons, Tirunelveli.

## DECK PASSENGERS' WELFARE

The first meeting of the reconstituted Deck Passenger Welfare Committee, was held at Madras recently under the Chairmanship of the Principal Officer, Mercantile Marine Department, Madras.

The Committee discussed various problems of the deck passengers such as the conditions prevailing on board passenger ships, provision of facilities for deck passengers with regard to issue of tickets, travel documents, etc. It was resolved to recommend to the Government that the existing conditions may be improved.

The Committee deputed Shri K. V. Sugavanam, Deck Passenger Welfare Officer, to make a trip to Rangoon by M.V. "Sonavati" in

## DUNLOP HELPS EARTH MOVING

In constructing a river valley project one has literally to move mountains of earth. In the Hirakud Dam Project, for example, the earthwork done was in the region of 442 million cubic feet.

The river valley projects have undoubtedly provided the chief impetus to the use of earth-moving machines. Since 1950, approximately Rs. 20/25 crores have been spent in the import of such machines, and it is estimated that nearly 1,500 of them are now at work in the country. Very recently, a Government appointed Committee has recommended a phased programme of manufacture of such machines in India in collaboration with foreign exports.

Tyres constitute an important and costly item of expendable equipment of earth-moving machines. In view of the growing demand, the Dunlop Factory at Sahaganj, near Calcutta, it is announced, had commenced production of large earth-mover tyres suitable for the heavier type of machines in India.

The steel moulds required for such tyres are enormous, each of them weighing over 6 tons. The tyre itself—taking the 21.00 size as an example, weighs over 9 maunds, uses up 400 lbs. of tough rubber compound (compressed to 11 lbs. in the average car tyre) and has 66 miles of special reinforced tyre cord. The load capacity of the tyre is 36 tons.

Before designing this new pattern earth-mover tyre, Dunlop engineers made on-the-spot surveys of tyre behaviour at project sites in many parts of the world. The particular conditions in India, such as terrain, the need to operate under very high temperatures as well as conditions of humidity, etc., were taken into account.

The resultant tyre pattern is completely new, the directional tread bars are designed for greater traction and to reduce power loss caused by wheel spin. The tread bars are of a self-cleaning pattern and have additional load carrying areas in the centre for longer life.

order to obtain a first-hand report of the conditions obtaining in this service.

## ADVANCED TRAINING

Shri D. M. Davar, M.Sc. (Met. Eng.), Chief Metallurgist of the Premier Automobiles Ltd., has been sent by the Company to Italy, U.K., and U.S.A., for advanced training in Heat Treatment and various metallurgical aspects related to the manufacturing programme of the company and especially of the Axles (front and rear) and the Transmissions.

## MOTOR TRANSPORT WORKERS

The Tripartite Committee appointed by the Union Ministry of Labour and Employment to examine draft legislation to regulate the working conditions of motor transport workers has recommended that in view of the growing importance of the motor transport industry, Government should consider the appointment of a Commission to enquire into the working conditions, pay scales, health and work load of transport workers.

A summary of the report of the committee was placed on the table of Lok Sabha recently by the Union Deputy Minister for Labour, Shri Abid Ali, in reply to a question by Sarvashri Bhakt Darshan, S. C. Samanta, Hem Raj and Tangamani.

The Committee has stated that legislation should be made applicable to motor transport undertakings engaged in the carriage of passenger and goods and also to private carriers and to bring within its scope all motor transport workers. State Governments should administer the legislation and should have powers to make rules. The Central Government should have power to give directions, wherever necessary.

Shri Abid Ali stated that the recommendations of the Committee were being examined.

## NEW LIGHT DUTY TRUCK FOR FOUR-WHEEL-DRIVE OPERATIONS

A new, four-wheel-drive, light-duty motor truck suitable for on and off highway work designed to meet the increasing demand from operators in Australia and neighbouring countries for a vehicle of that type, is now ready for the export market. Designed and manufactured by the International Harvester Company of Australia, the truck is capable of performing in areas where additional traction is required.

Known as the Model ASW-120, it has a rated gross vehicle weight of 7,000 lb. A new loading weight has been maintained—the tray body of this four-wheel-drive unit being only one and a half inches higher than the conventional models.

The ASW-120 is powered by the International ABD-220, six-cylinder, c.h.v. engine, developing a maximum horsepower of 108. This engine delivers ample power for four-wheel-drive operations.

Power is delivered to both front and rear axles through a two-speed transfer case located behind the standard four-speed transmission. This gives a total of eight forward gears. The correct gear speed can be selected to match the right engine revs. for any particular job.

The transfer case has a power-take-off point from which a variety of drilling, generating, pumping, cutting or lifting equipment can be driven. A rear drawbar is available as an optional extra. Equipped with power take-off and drawbar, the ASW-120 would be of considerable value on any farm.

The new model retains the attractive, modern features of the International AS-line and is hard to distinguish from the conventional models: but it has a much heavier chassis than the standard International AS-120, giving it a full one-ton carrying capacity over country, which might immobilise the conventional truck.

Where exceptional clearance and traction are required, optional

## AUTO-NEWS FROM AUSTRALIA

9.00—16.8 ply tyres are available in lieu of the regular 7.30—16 tyres.

The new version eliminates the hardships usually associated with driving four-wheel-drive vehicles. The full width bench seat and the same interior comfort and safety of International sedan-type cabs have been retained, with the same attention to rear and front suspension.

The new models are released in 115" and 127" wheelbase lengths. The 115" series is available with pick-up, utility or panel van body styles, or as a de-luxe panel van, with side ventilating windows. The 127" series is available with 8-foot pick-up body or with special pick-up body, tyre carrier and toolbox.

The new design is additional to the "Tilt-Valve" ABD-264, the power unit designed to give maximum performance for both long and short distance trucking job, which the International Harvester got ready recently.

## WELDER OPERATES ON A.C. AND D.C. BOTH

A welding equipment, which can replace two machines with one, as it operates on either the direct current or the alternate current, at the turn of a switch, is now being made by the Lincoln Electric Company (Australia) Pty. Ltd.

Thousands of these machines introduced earlier in America, are reported to be giving satisfactory service, by increased welding output and greater efficiency.

The dual-arc welder registered as "Idealarc" covers direct current welding and is considered indispensable for stainless steel and non-ferrous electrodes and for hard-surfacing applications.

"Idealarc" alternating current output may be found useful in applications such as high current

down hand production welding, where arc blow may cause annoying interruptions.

The new welder is basically a direct current rectifier welder powered by alternating current suitable for welding. The alternating current supply has an arc booster which maintains a very stable arc without the hazard of a high open circuit voltage.

A separate voltage control permits variations of arc intensity on both direct and alternating current output making the "Idealarc" an extremely versatile machine.

## GERMANS—1 IN 20 HAS A CAR

Approximately every 20th Federal citizen owns a car. As compared to other European countries, the Federal Republic only hold the eighth place.

Leading is Sweden where every tenth individual owns a car. In Great Britain and France every twelfth person has an own motor-car, in Luxembourg every thirteenth, in Switzerland every fifteenth, in Belgium and Denmark every seventeenth. The Federal Republic is followed by Norway where every twenty-fourth owns a car. In the Netherlands every thirty-first, in Austria every thirty-fifth and Italy only every forty-fourth has an own car. From the middle of 1956 to the middle of the year 1957 the West German index of private cars increased by more than 420,000 to approximately 2.4 million. There are now 49 car per thousand individuals against 40 in 1956.

Approximately 35 per cent of all licensed private cars are owned by an employee, worker or official. With regard to small cars up to 500 cc. the workers' group is with two-fifths even by far the largest group.

# MODELS AND THEIR Prices

## CARS

|                                                                                                 | Rs. nP.   |
|-------------------------------------------------------------------------------------------------|-----------|
| Plymouth Cars, (Sundaram Motors Private Ltd.) Ex-Premier Automobiles Factory, Kurla ...         | 20,270 00 |
| Plymouth Suburban (Sundaram Motors, Ltd.) ...                                                   | 22,646 00 |
| Hindustan Ambassador 1957 (Southern Automotive Corporation Private Ltd.) ex-plant Uttarpara ... | 11,161 00 |
| Dodge kingsway sedan (Rane (Madras), Ltd.) ...                                                  | 20,371 00 |
| Dodge Suburban (Rane (Madras), Ltd.) ex-Bombay ...                                              | 22,899 00 |
| Vanguard Phase III (Union Co. (Motors) Ltd.) ...                                                | 14,700 00 |
| Standard Super Ten Saloon (Union Co. (Motors) Private Ltd.) on the road ...                     | 10,022 12 |
| Standard Estate Car (Union Co. (Motors) Private Ltd.) on the road ...                           | 14,889 12 |
| Studebaker 'Parkview' Station Wagon 1956 model (Reliance Motors Ltd.) ex-plant Calcutta ...     | 20,280 00 |
| Studebaker 1956 Commander (V.S.T. Motors Private Ltd.) Including S.T. & Delivery Charges ...    | 22,239 86 |
| Studebaker 1956 President Classic (V.S.T. Motors Private Ltd.) ...                              | 24,499 78 |
| The Fiat 1100 The Elegant (Sundaram Motors Private Ltd.) Ex-Factory ...                         | 9,755 00  |
| Willys C.J. 3B Universal Jeep ex-plant Bombay ...                                               | 12,160 00 |
| Willys Model Station Wagon ex-plant Bombay ...                                                  | 18,150 00 |
| Jeep 1 ton truck ...                                                                            | 13,046 00 |

## MOTOR CYCLES

|                                                                            |          |
|----------------------------------------------------------------------------|----------|
| Royal Enfield (The Madras Motors (Private) Ltd.)—                          |          |
| “150 Ensign” (any dealer point in India) ...                               | 1,890 00 |
| “350 Bullet” with spring frame (any dealer point in India) ...             | 3,430 00 |
| 499 c.c. Model ‘j2’ ...                                                    | 3,500 00 |
| “500 Bullet” with spring frame ...                                         | 3,950 00 |
| “500 Twin” with spring frame and with Magdyno or coil ignition ...         | 4,450 00 |
| “700 Super Meteor” with spring frame and with Magdyno or coil ignition ... | 4,650 00 |

## SCOOTERS

Lambretta, manufactured by Automobile Products of India Ltd. Distributors, South India Automotive Corporation Private Ltd., Madras.

|                                                                                     | Rs. nP.  |
|-------------------------------------------------------------------------------------|----------|
| (At Visakhapatnam—Western Automobiles Ltd.) Prices are ex-Factory, Bhandup, Bombay. |          |
| 48 c.c. Scooterete ...                                                              | 827 00   |
| 150 c.c. ‘LD’ Model Deluxe Scooter ...                                              | 1,795 00 |

## VANS

|                                                                          |           |
|--------------------------------------------------------------------------|-----------|
| Standard Delivery Van. (Union Co. (Motors) Private Ltd.) on the road ... | 10,628 56 |
| Hindustan Traveller, price on the road (Reliance Motor) Co. ...          | 14,700 00 |

## TRUCKS & COMMERCIAL CHASSIS

|                                                                                          |           |
|------------------------------------------------------------------------------------------|-----------|
| Sundaram Motors (P) Ltd.                                                                 |           |
| Leyland Comet “203” WB Passenger Diesel Chassis including S.T. & dely. charges ...       | 36,000 00 |
| Leyland ECPO 2/2R-176 WB full forward control Passenger Chassis S.T. & dely. charges ... | 35,500 00 |
| Leyland ECOS 2/1R-163 WB goods chassis including S.T. & dely. charges... ...             | 34,700 00 |
| Leyland ECOS 2/2R-118 full forward Tipper chassis including S.T. & dely. charges ...     | 34,500 00 |

## (V.S.T. Motors Private Ltd.)

|                                                                                                                  |           |
|------------------------------------------------------------------------------------------------------------------|-----------|
| Tata-Mercedes-Benz. Diesel Truck and Bus Chassis L 312/42 165” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ... | 26,340 00 |
| LP 312/42 165” W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur ...                              | 27,295 00 |
| LP 312-48 190” W.B. Full Forward Control Bus Chassis ex-Works, Jamshedpur ...                                    | 28,085 00 |
| L 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ...                                                  | 25,995 00 |
| LK 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ...                                                 | 29,475 00 |

## Fargo (at Sundaram Motors Private Ltd.) Dodge (at Rane (Madras) Ltd.) Prices duty paid ex-factory Premier Automobiles Ltd., Kurla, Bombay.

|                                        |           |
|----------------------------------------|-----------|
| C3D6-116” (4) 7.00×16—6 Ply ...        | 11,615 00 |
| C4D6-126” (4) 7.00×16—6 Ply ...        | 12,662 00 |
| C3PW6-126” (4) 9.00×16—10 P.W. Ply ... | 17,974 00 |
| C4G6-153” (6) 34×7—10 Ply ...          | 16,391 00 |
| C4G6-153” (6) 32×6—10 Ply ...          | 16,062 00 |

Rs. nP.

|                                         |           |
|-----------------------------------------|-----------|
| C4H6-153” (6) 34×7—10 Ply ...           | 17,710 00 |
| C4H6-153” (6) 34×7—12 Ply ...           | 17,979 00 |
| C4H6-193” (6) 34×7—10 Ply ...           | 18,116 00 |
| C4H6-193” (6) 34×7—12 Ply ...           | 18,385 00 |
| C4H6-193” (6) 34×7—10 Ply ...           | 18,479 00 |
| C4H6-193” (6) 34×7—12 Ply ...           | 18,748 00 |
| K6D200-116” (4) 7.00×16—6 Ply ...       | 12,896 00 |
| K6D200-116” (4) 7.00×16—8 Ply ...       | 12,961 00 |
| K6D300-126” (4) 7.00×16—6 Ply ...       | 12,900 00 |
| K6D300-126” (4) 7.00×16—8 Ply ...       | 12,965 00 |
| K6W300-126” (4) 9.00×16—10 P.W. Ply ... | 18,950 00 |
| K6D400-129” (6) 34×7—10 Ply ...         | 16,372 00 |
| K6D400-153” (6) 32×6—10 Ply ...         | 16,186 00 |
| K6D400-153” (6) 34×7—10 Ply ...         | 16,531 00 |
| K6D400-171” (6) 34×7—10 Ply ...         | 17,008 00 |
| K6D500-129” (6) 34×7—10 Ply ...         | 18,092 00 |
| K6D500-129” (6) 34×7—12 Ply ...         | 18,388 00 |
| K6D500-153” (6) 34×7—10 Ply ...         | 18,331 00 |
| K6D500-153” (6) 34×7—12 Ply ...         | 18,628 00 |
| K6D500-171” (6) 34×7—10 Ply ...         | 18,606 00 |
| K6D500-171” (6) 34×7—12 Ply ...         | 18,904 00 |

## PICKUP

|                                   |           |
|-----------------------------------|-----------|
| C3D6-116” (4) 7.00×16—6 Ply ...   | 15,012 00 |
| C4D6-126” (4) 7.00×16—6 Ply ...   | 16,058 00 |
| K6D200-116” (4) 7.00×16—6 Ply ... | 16,293 00 |
| K6D200-116” (4) 7.00×16—8 Ply ... | 16,358 00 |

## DIESEL CONVERSION

|                                      |           |
|--------------------------------------|-----------|
| C4H6-153” (6) 34×7—10 w.b. Ply ...   | 22,668 00 |
| C4H6-153” (6) 34×7—12 w.b. Ply ...   | 22,937 00 |
| C4H6-171” (6) 34×7—10 w.b. Ply ...   | 22,903 00 |
| C4H6-171” (6) 34×7—12 w.b. Ply ...   | 23,172 00 |
| K6D500-153” (6) 34×7—10 w.b. Ply ... | 20,997 00 |
| K6D400-171” (6) 34×7—10 w.b. Ply ... | 21,303 00 |
| K6D500-153” (6) 34×7—12 w.b. Ply ... | 22,930 00 |
| K6D500-153” (6) 34×7—10 w.b. Ply ... | 22,632 00 |
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# MOTORINDIA

VOLUME 2

MAY 1958

NUMBER 10

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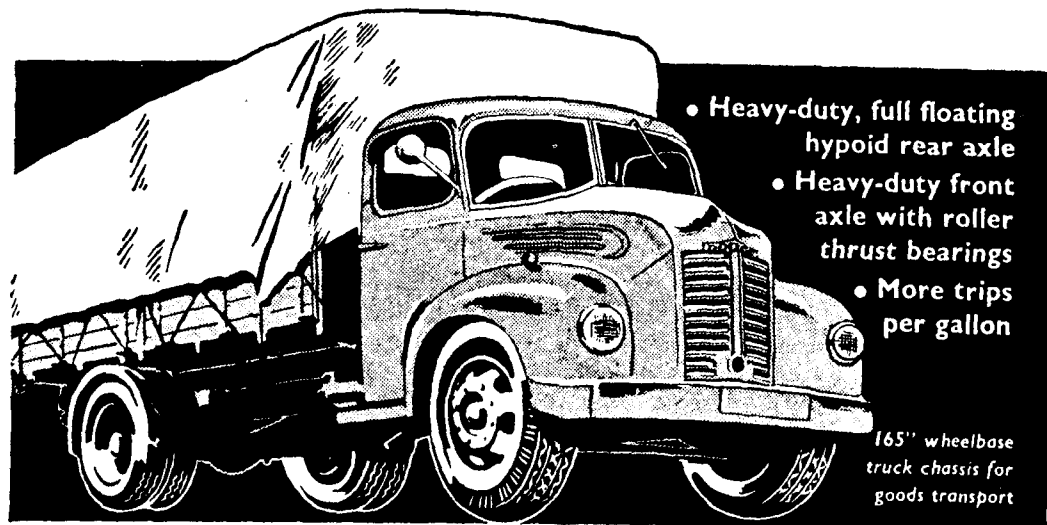
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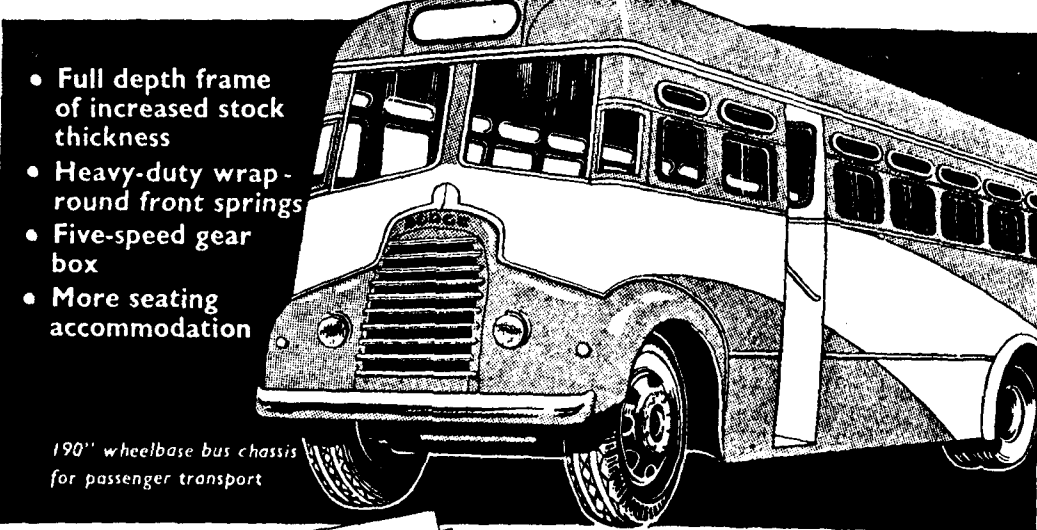


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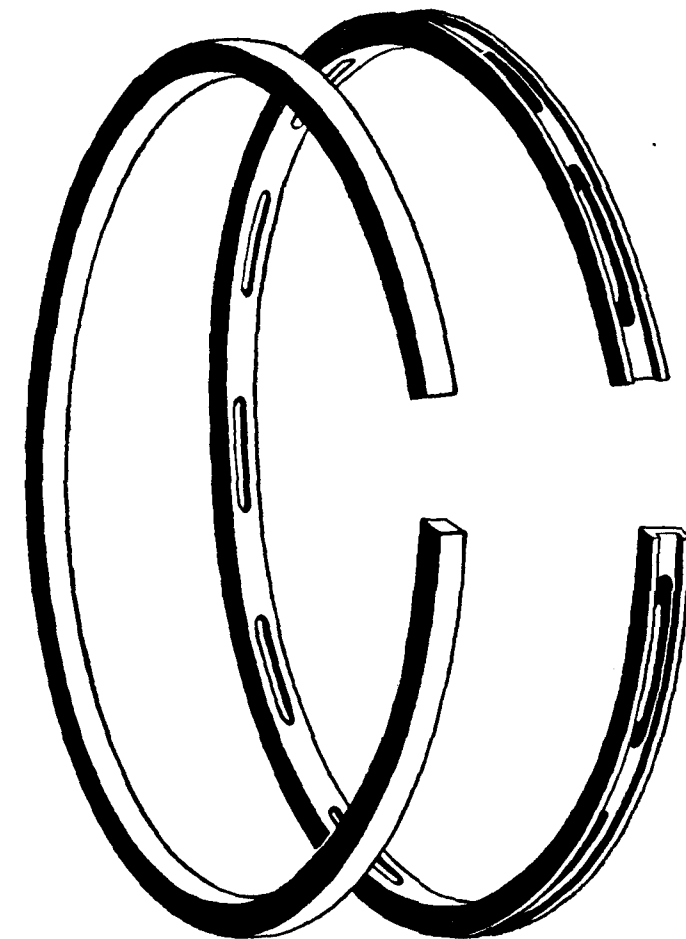
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Vol. 2

MAY 1958

No. 10

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## editorial

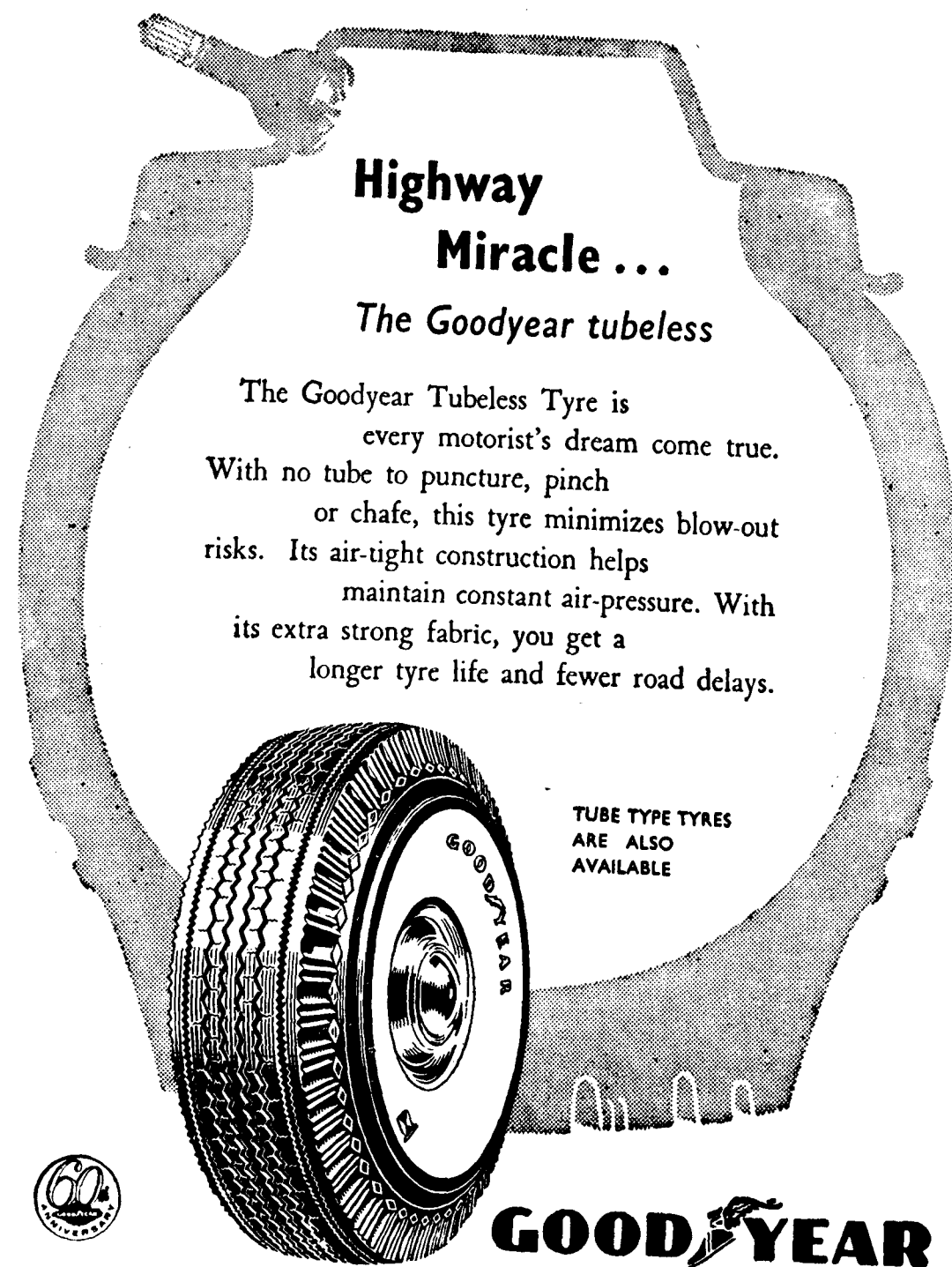
### GOOD NEWS FOR THE MOTORISTS

A beginning has been made in producing a small four cylinder, high-speed diesel engine, which combines the advantages of diesel engine power and economy with the petrol engine speed and flexibility, by the announcement of M/s. F. Perkins Ltd., the Peterborough Diesel Engine Manufacturers, recently. This sensational announcement has already made many manufacturers of automobiles to think of future possibilities. Motorists the world over are now faced with the problems of increased running costs, increased taxation and, particularly in India, increased initial outlay of vehicles. The announcement of the Four-99—that is the name of the new Engine—will, therefore, be welcomed by one and all, as approaching the subject of motoring costs in a manner that may, at some stage or other, in future help the motorists bring down running costs to less than 50%. The Engine has been fitted and tested on several medium sized vehicles by the manufacturers. It is gratifying to note that a Vauxhall Velox, fitted with the new Four-99 Engine, produced in average 56.6 miles per gallon at an average speed of nearly 35 miles. This fuel consumption is about 40% of what the same vehicle will give with the conventional Petrol Engine. Of course, the founder of the company has been very modest in saying that they do not claim the Engine as the ideal power unit for a gentlemen's town carriage, but they did feel that it had great possibilities, both for the car and for light vans. The idea of a 60% reduction in existing running costs is not something too tempting to be dismissed without a trial and it is to be hoped that even Indian manufacturers will find it possible to incorporate the Engine at not too distant a date, in Indian-built vehicles and that the Government will give all facilities towards this end by encouraging production of the Four-99 in this country as well. This, as we said before, is just a beginning and we trust that other manufacturers will come forward with their competitive plans to produce vehicles whose running cost may go down from time to time so that it will be possible in the long run for the motorists to afford his precious vehicle without which his work and efficiency will undoubtedly suffer.

### SPARE PARTS

Two drastic cuts in the import of automobile spare parts during the last 15 months have helped in deteriorating a situation which was not even otherwise very rosy. We refer to the position regarding spare parts and accessories for automobiles already on the road.

Conserving foreign exchange is no doubt a very urgent task indeed for the nation at present ; but to imagine that in trying to save the precious exchange, hundreds of thousands of motor vehicles are likely to get stranded, is something which cannot be easily reconciled. The spare parts situation in the country today is gradually degenerating from bad to worse and it will be in the interests of all concerned, and particularly the dealers most of whom are finding themselves with no product to sell their customers, that an early and liberal revision of the Import Policy of spare parts is considered an essential item by the Commerce Department.



More people, the world over, ride on Goodyear tyres than on any other kind

PSPS 14

**GOODYEAR**

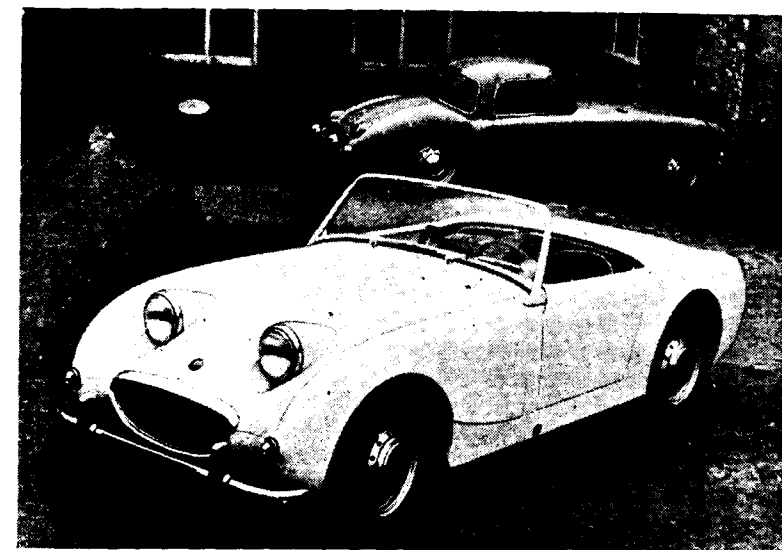
## NEW CARS

### 2 CV CITROEN WITH 4-WHEEL DRIVE

From Gordon Wilkins

For personnel transport in the Sahara where France is making an enormous effort to exploit the oil and minerals that lie under the desert, Citroen has produced a four-wheel drive version of the famous 2 C.V.

This was achieved quite simply by installing a second engine and gear-box in the luggage trunk to drive the rear wheels. Even with this extra weight, the car only weighs 1,408 lb; the unit loading on the tyres is thus quite low and it is said that normal tyre pressures can be used even in deep sand. Tyres are Michelin X 155x400. The car is said to be capable of climbing a gradient of 1 in 2½ in sand, a remarkable performance for such a light, cheap utility car. It is expected to find a ready sale among building contractors, farmers and overseas users. Rear end of the car is slightly modified to allow cool air to reach the engine, but otherwise the car is almost indistinguishable from the single-engine front wheel drive standard model. The two 425 c.c. flat twin engines each developing 14—15 bhp give a total of 28—30 bhp equivalent to 44.6—47.8 bhp per ton unladen. Fuel consumption is said to be 25—31 mp imp. gall according to terrain. BOTH ENGINES HAVE SPECIAL AIR FILTERS TO PROTECT THEM FROM THE SAND AND A FLAT UNDERSHIELD IS FITTED AT THE FRONT.



AUSTIN HEALEY SPRITE. New Baby sports car from BMC has 950 cc twin carburettor engine, pressed steel frame, floor and scuttle unit. Front end panels lift in one piece for access to engine. Vertical overrides protect the tail. Car is so low built that projecting headlamps were necessary to meet minimum height regulations in U.S.A.

### A BABY AUSTIN HEALEY

#### The Sprite has 950c.c. Engine, Unit-body Chassis Construction

A new low priced baby speed model called the Austin Healey Sprite brings sports car ownership within reach of a big new group of buyers who found existing models too expensive.

Powered by a train carburettor version of the 4-cylinder 950 c.c. engine used in the Morris Minor and Austin A 35. The Sprite has a unit-body chassis structure in steel and several interesting mechanical features. It should reach speed around 80 mph. Front suspension derived from that of the A-35 is by wishbone and coil spring, with an upper radius arm pushing on a piston-type damper. Steering is by

rack and pinion. Rear axle is carried on trailing arms with quarter elliptic springs and parallel piston dampers.

Front fenders, hood and grille lift forwards in one piece for easy access to power unit, steering, front suspension and brakes. Car is so low-built (only 49½") that the headlamps could not comply with minimum height regulations for U.S.A. If mounted in the wings and have therefore been planted on the hood, producing an odd rather bug-eyed appearance. Original idea was to make them retractable but this was not possible at the price about two-thirds the price of an MGA. The two separate front seats are plastic covered with foam rubber cushions and rubberized hair back-rests. There is an open pocket in each door and space for a small amount of luggage in the tail. Instrumentation comprises speedometer with trip and total recorders, Fuel gauge, thermometer oil pressure gauge and warning lights for dynamo charge, headlamp high beam and flashing direction indicators. A tachometer is an optional extra.

The engine with 8.3 to 1 compression and 2 S.U. carburettors delivers 42.5 bhp at 5,000 rpm. and peak torque of 52 lb. ft. at 3,300 rpm. Dry weight of the car is 1,320 lb. approx. Unladen power to weight

2 CV Citroen with 4-wheel drive.



ratio is thus 72 bhp. per ton. Fuel is fed by an A.C. mechanical pump from a 6 Imp. gal. rear tank. The engine has a full flow external fuel filter and coil ignition with centrifugal and vacuum control. The pressure cooling system uses pump, fan and thermostat.

Transmission is by single dry plate clutch of  $6\frac{1}{2}$  in. diameter, hydraulically operated by pendant pedal and a four-speed gearbox with top three ratios synchronised is controlled by a short central lever. An open propeller shaft takes the drive to the hypoid rear axle. A 4.22 to 1 axle ratio with 5.20-13 tubeless tyres on four-stud perforated steel wheels gives 15.37 mph. at 1,000 rpm. Brakes are hydraulic on all four wheels with drums of  $7" \times 1\frac{1}{4}"$  in. and two leading shoes at the front. Electrical system is 12V 38AH; it includes foot operated dipper switch, twin self parking wipers and a single horn. A fixed curved windscreen, plastic folding top and removable plastic side windows are standard equipment. Chromium overriders protect the rear panels.

#### Austin Healey sprite

Engine 4-cyl ohv pushrod  $2.478 \times 3$  in. ( $62.9 \times 76.2$  mm) 57.82 cu.in. (948 cc). Two SU carburettors. 8.3 : 1 compression 42.5 bph at 5,000 rpm. Max. torque 52 lb. ft. at 3,300 rpm.

Transmission Single plate dry clutch hydraulically operated. Four speed gearbox with central lever. Synchromesh on 2nd, 3rd and 4th. Open propeller shaft. Hypoid final drive. Overall ratios 15.31, 10.02, 5.96, 4.22 to 1. Dimensions. Wheelbase 80 in. (203 cm). Track front  $45\frac{1}{2}$  in. (116 cm). Track rear  $44\frac{1}{2}$  in. (114 cm). Length  $132\frac{1}{2}$  in. (337 cm). Width 53 in. (135 cm). Height  $49\frac{1}{2}$  in. (126 cm). Turning circle  $31\frac{1}{2}$  ft. (9.6 m.) Approx. weight dry 1,320 lb. (597 kg) approx.

### NEW SERIES 11 LAND ROVER

#### Long wheelbase models with 50 per cent more power

In the ten years since the Land Rover was introduced over 200,000 have been built and more than 75 per cent of production has been exported. Besides use by farmers, contractors, fire brigades, police, oil companies, lumber companies, airfields and innumerable other buyers in over 150 countries, the Land Rover is the Standard light vehicle of the British Army for forward areas and is used by armed forces of many other countries.



Series II—Land Rover (1909). This versatile four-wheel drive Land Rover has a powerful new 22 litre engine, greater carrying capacity, new body styling and improved seating and controls.

In celebrating the tenth anniversary, Rovers have introduced the Series 11 Land Rover with new body styles, more comfort and a number of refinements. There are two main lengths of wheelbase, 88 in. (223.5 c.m.) and 109 in. (276.8 c.m.) but the long station wagon continues on 107 in. (271.8 c.m. wheelbase).

The 109 in. wheelbase Land Rover has a new more powerful  $2\frac{1}{2}$  litre (2,286 c.c. 4-cylinder overhead valve engine developing 77 bhp. at 4,250 rpm. with a compression ratio of 7 : 1. This is an increase of 50 per cent over the power of the 1,997 c.c. engine used in short wheelbase models. The new engine which is similar in design to the Rover diesel engine has all valves in the head, departing from the usual Rover arrangement of overhead inlet and side exhaust valves. To permit high valve lifts and rapid valve accelerations without excessive wear it has roller tappets running in tin-plated bronze shoes. The three-bearing counter-balanced crankshaft is hardened and bearings are copper lead with tin overlay.

To improve the appearance the curve on the shoulder of the front wing is carried along the waist line for the full length of the vehicle, giving a longer, lower look, besides increasing the rigidity of the panels. Rear window of the cab of the 109" Land Rover has been increased in size and visibility is also improved by the addition of rounded quarter lights. All windows are now of

glass instead of plastic, and doors are all-metal, which allows better sealing against dust and water.

Comfort has been improved by redesigned seats and backrests which is deeper and softer than before. The 88" chassis has redesigned telescopic shock absorbers for greater comfort and on the 109" there are progressive-rate rear springs giving 2 in greater travel mounted on hangers which have been brought forward to give greater stability.

An increase of  $1\frac{1}{2}$  in. in track on both the 88 and 109 has reduced turning circles by 3 feet in the case of the 88 in and 5 feet for the 109 in. Fully floating rear axles are now standard equipment on both models, spreading the load over four hub bearings and making servicing easier.

Further refinements are the pendant type clutch and brake pedals mounted high on the engine side of the scuttle, to give better sealing against dust, sand and water and reduce risk of flying stones fouling the linkage. An external fuel filler is now used, incorporating a telescopic filter tube which makes it easier to refill from cans. There is a single catch for the bonnet, released from the front of the vehicle and there are new quick-action catches for the tailboard. Special side and rear lights, separate flasher indicator lights and a separate light for the rear number plate are additional features. Rigid axles on half elliptic springs are retained at front and rear. Rovers maintain they are stronger and easier to

service than independent suspension and the cross-country performance seems to meet most requirements.

There is a new range of six colours. Diesel engines are available on all models except 107 in. station wagon.

When using two-wheel drive, the Land Rover has four speeds of the high range. In four wheel drive there is a choice of two sets of four speeds; the high set is useful for keeping up a good pace on sand, snow, ice and other slippery surfaces.

### DINO 206 Ferrari's New V6 Sports Racing Car

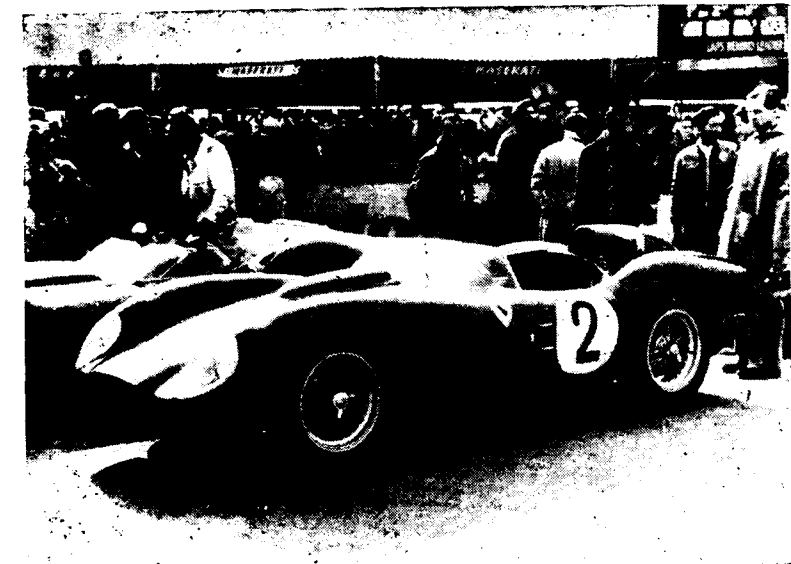
*No Ferrari ever remains "the latest" for long. There is usually something new on the way, and while the 3-litre V-12 Testa Rossa sports was winning its first big victories at the Buenos Aires 1,000 k.m. and at Sebring, the works at Maranello was busy constructing the prototype of the new 2-litre V-6 Dino 206, a new short chassis 2-litre which took second place behind Stirling Moss's 3.9-litre Aston Martin at the Goodwood Easter Meeting.*

The V-6, short, compact and rigid, seems to be currently Ferrari's favourite engine. It appeared first as a  $1\frac{1}{2}$ -litre engine for Formula 2, was enlarged to 2.4-litres for Formula 1 single seaters and now appears in 2-litre form for the new sports car. Rumour says a 3-litre is on the way.

The new sports car has a space frame of large and small diameter tubes with front suspension by coil springs and wishbones, with anti-roll bar. At the rear is a normal rigid axle on twin parallel radius arms, with a transverse Panhard rod and coil springs. The four speed gear-box is at the front in unit with the engine.

The engine, which has twin ignition from two distributors, develops 225 C.V. (221 b.h.p.) at 9,000 r.p.m. for a weight of only 130 k.g. (286 lb.). As the car weighs only 680 k.g. (1,495 lb.), this gives a power to weight ratio of 331 b.h.p. per ton. At Goodwood, the car went extremely fast, but Collins said that there is still scope for improvement in the road holding.

This model marks a change in the method of fixing type names and number for Ferraris. Hitherto the



Ferrari Dino 206 Sport.

type number has denoted the size of a single cylinder in cubic centimetres. THIS ONE IS CALLED THE DINO 206 IN MEMORY OF FERRARI'S SON ALFREDO, DINO BEING THE DIMINUTIVE OF ALFREDDINO. The first two figures of the number denote the cylinder capacity in litres and fractions and the third gives the number of cylinders. Hence this is a 2.0-litre of six cylinders. The Formula 1 Grand Prix single seater is now known as the Dino 246, i.e., a 2.4-litre six-cylinder.

#### Dino 206

Engine V6.  $77 \times 71$  mm 1,984 cc. Compression ratio 9 : 1, 221 bhp (225 CV) at 9,000 rpm. Engine weight 130 kg. 286 lb.

Transmission by dry clutch and four-speed gear-box in unit with engine. Open propeller shaft.

Dimensions : Wheelbase 222 cm 87.4 in. Track, front 124 cm 48.8 in.

Track rear 120 cm 47.25 in. Tyres, front 5.50-16, rear, 6.00-16. Weight 680 kg. 1,495 lb.

#### A NEW SMALL ECONOMY CAR THE GETABOUT

The new Gill Getabout car is based on the Astra, and has undergone extensive development during the past 2-3 years. It is powered by an ANZANI 322 c.c. twin-two-stroke fan-cooled engine mounted at the rear, developing 15 b.h.p. at 4,800 r.p.m. It has chain drive an independent suspension on all four wheels. The engine, gear-box and differential form a complete self-contained unit which is easily accessible and can be removed from the car in half an hour.

The body is of light rustless aluminium panels which is mounted on a chassis built of channel steel with jacking points. Total weight is 728 lb. and the body bolts together in sections for easy replacement. There are Girling hydraulic brakes on all four wheels and a piston type handbrake for parking.

The overall length is 9 feet 6 inches and the car is only 3 feet 7 inches wide. The turning circle is 22 feet which is about the same as for a London taxi which seems able to turn anywhere, anytime, so the Getabout should prove invaluable for parking in limited spaces.

Top speed is said to be 50 m.p.h. and fuel consumption is 60 m.p.g. There is a two-spoke steering wheel and a four gallon fuel tank, situated under the front bonnet.

Front seat visibility is good and there is exceptionally good rear vision from the wrap round perspex window. There are also perspex drop down windows in the doors. The bench type seat at the front takes 2-3 people and there is good space for luggage behind.

The Getabout is made at Hampton, Middlesex and at the moment Mr. Gill tells me he can deliver up to 20 a week, and to conserve shipping space, bodies can be assembled at their destination by simple bolting and rivetting in any reasonable sized garage or workshop. Delivery is one month and the car comes in two versions, the standard at a basic price of £322 5s and the deluxe version at £348.

## SPECIFICATION

**Engine:** Anzani 322 cc twin 2-stroke developing 15 bhp at 4,800 rpm.

**Transmission:** Chain drive to differential. Hardy coupling half shafts.

**Suspension:** Independent on all four wheels. Girling telescopic units front and rear.

**Body and Chassis:** Light rustless aluminium panels, rigid structure, mounted on chassis built of steel. Total weight 728 lb.

**Ignition:** Twin coil.

**Brakes:** Girling hydraulic on all four wheels.

**Steering:** Burman worm and nut, positive and efficient. Two spoke steering wheel.

**Starting and Lighting:** 12 V starting with noiseless SIBA DYNASTART mounted on crankshaft. 35 amp./hr. battery. 7 in diameter headlights with dipper. Side lamps incorporated.

**Fuel tank:** 4 gallons.

**Tyres:** Dunlop 4.00 x 12 in. with tubes.

**Dimensions:** Wheelbase 6 ft. 2 in. Track front and rear 3 ft. 7 in. Overall length (without bumpers) 9 ft. 6 in. Width 4 ft. 5 in. Height 4 ft. 5 in. Turning circle 22 ft.

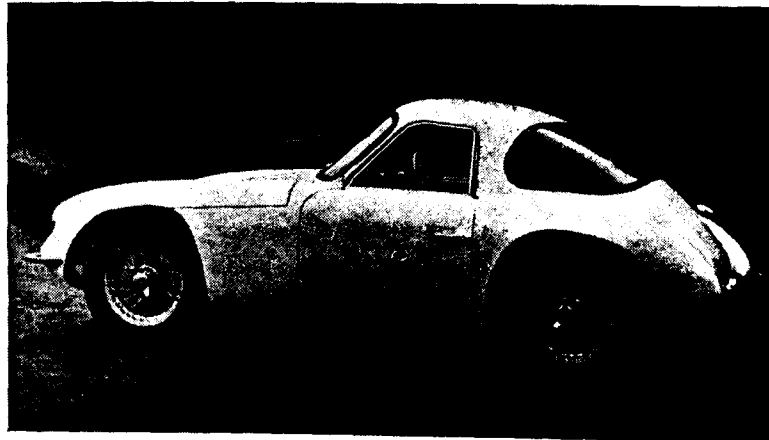
## SAAB Gran Turismo

**SAAB have just announced a Gran Turismo version of their front drive two-stroke sedan which turns it into a high performance family sports and rally car.**

Compression ratio of the 3-cylinder 748 c.c. engine has been raised to 9:1 and output is now 50 b.h.p. at 5,000 r.p.m. (SAE) against 38. This is said to give acceleration from 0 to 50 m.p.h. in 13.2 secs., 0-60 in 20.3 and the standing quarter-mile in 22.2. A speed kit is supplied which the owner can fit himself, including twin-barrel downdraught carburetter, and this is said to boost output to 57 b.h.p. (SAE). In this form, acceleration times claimed by the makers are: 0-50 m.p.h. 9.5 sec. 0-60 18.8 and standing quarter mile in 19.5.

To cope with the increased performance, larger brakes are used, with turbo cooling fins. Brake lining area is now 105 sq.in., an increase of 11½ per cent.

Standard equipment includes numerous items to fit the car for competitions and fast road work, including competition tyres, a light alloy racing steering wheel with wooden rim, tachometer and Halda Speed pilot to keep an automatic



Latest T.V.R.—Jomar with Redesigned Body work.

check on average speed. The two separate front seats are adjustable of 14 positions. The passenger's seat has a backrest adjustable down to full recline. It has a special pad for the small of the back, which is vertically adjustable, and a headrest. Both seats have a new type of shoulder harness safety belt with quick release. Hollow armrests to the rear seats contain pockets for thermos flasks, sandwiches and other small items and there are map pockets in the doors. Other items of equipment include electric screen washer, twin foglamps and twin back-up lamps, and cigarette lighter.

## T.V.R.—JOMAR COUPE New British sports car built in Blackpool

**Blackpool, the birthplace of Jaguar cars is the home of a new small sports car, the TVR-Jomar, which is just going into production. It has a tubular frame, all independent suspension and choice of two power units, the side-valve 1172 c.c. Ford 100E or the 1,098 c.c. Coventry Climax. For the American market the Ford engine will be fitted with a Shorrock supercharger.**

The car was designed and developed by T.V.R. Engineering of Blackpool and the first batch of 10 has been shipped to the United States where they are distributed by Saidel Sports Racing Cars of Manchester, New Hampshire, who have been conducting development work on prototype chassis during

the past two competition seasons. The car will later be sold in Europe and other export markets.

The Jomar project began nearly four years ago when Bernard Williams resigned his position as director of an engineering company and joined up with Trevor Wilkinson who owned a small engineering works building chassis frames for enthusiasts who constructed their own sports cars.

They designed a light sports chassis for the Coventry Climax engine which was submitted to Raymond Saidel, who was running a sports car business in Manchester, New Hampshire U.S.A. and he ordered three chassis which were to be used for racing.

In the 1957 season the experimental Jomars did well against tough competition from Cooper, Lotus and Elva cars scoring class wins at Thompson and Lime Rock Connecticut and a number of second and third places. Prototype coupes have been running for some time and the first production models incorporating the results of last year's racing experience have just been built. They have longer tails giving a more graceful line.

The low priced version with the supercharged Ford Anglia engine gives quite an interesting performance. It is said to cruise at 80 m.p.h. and reach 100 flat out with a fuel consumption of 32-36 m.p.g. Imperial (25-28 m.p. U.S. gal.). The Climax engined model is primarily a competition car but is quite tractable enough for ordinary road use.

## Japan's Auto Export More Than Doubles In Year

Japan's export of automobiles during the first 10 months of 1957 amounted to 5,105 valued at \$16,980,000 (including reparations), or 2.4 times that of the corresponding period of the preceding year.

Export during the half-year period from April to October 1957 aggregated 4,045 (including reparations), or 62.6 per cent of the goal of 6,500 for the fiscal year of April 1957 to March 1958.

Breakdown of the export during the first 10 months of 1957 is 4,347 trucks (including large and small trucks, special featured trucks and Jeep-type cars), 421 buses and 320 passenger cars. Compared with the export of 2,137 automobiles including 1,661 trucks, 452 buses, and 24 passenger cars, during the first 10 months of 1956, there was an increase of 2,968 in the total, 2,686 in the number of trucks, and 296 in the number of passenger cars, the gain being conspicuous in the export of trucks and passenger cars.

Accounting mainly for the increase

THE T.V.R.-JOMAR has independent suspension of all four wheels by parallel trailing arms and transverse laminated torsion bars with Woodhead-Monroe telescopic dampers attached to a tubular space frame. The main strength comes from four central tubes which form a deep backbone between the two seats and spread out at the front to enclose the power unit. Brakes are Girling hydraulic with two leading shoes on the front, the drums being 11 in. by 1½ in. (27.9 c.m. by 4.44 c.m.). Climax-engined cars have Al-fin turbo-finned light alloy brake drums.

With the Ford engine the normal Ford 3-speed gear-box is used and this can be supplied with close ratio gears on request. The cars with Coventry-Climax engine have MG Magnette gear-boxes. Cooling is by cross-flow radiator with remote header tank. The body is a low-built two-seater coupe in resin-bonded glass fibre, the front end being moulded in one piece which lifts up for easy access to engine and front end of chassis. There are wind-up windows in the doors and upholstery is two-tone.

in the export of trucks were Jeep-type cars, of which the export in 1957 (up to October) was 1,500 more than in 1956. Japan is on the international level in the production of Jeeps both qualitatively and quantitatively. Because Japanese Jeeps are powerful, durable and low-priced, inquiries come from all over the world.

Recently Japanese Jeeps have come to be used not only for military purposes but also for agricultural development. They are used also as substitutes for trucks in deserts and as substitutes for passenger cars in urban areas. The versatile vehicles are exported to Venezuela in South America and more than 20 other countries of the world including those in South America, Middle East, Arabia and Egypt.

Special featured trucks including dump trucks, fire engine trucks and tank lorries are mainly exported to Egypt, Burma and the Philippines, some of them as reparations.

Chile was the largest importer of Japanese buses, her purchase totalling 300. Among other importers of Japanese buses are Thailand, Okinawa and Formosa.

Most of the 320 passenger cars exported went to Okinawa. A plan is under way to make a full-fledged export of passenger cars to the United States in 1958.

To help the advance of Japanese automobiles to foreign countries, Toyota Motor Co. Ltd., has opened its branch offices in Bangkok and Los Angeles, while Nissan Motor Co., Ltd., built an assembly plant in Formosa.

To push foreign PR activities for Japanese automobiles, Japan took part in the International Rally in Australia, Auto Show in Paris, and the Import Auto Show in the United States. Japanese automobiles however, have a much shorter history of export as compared with American and European cars. Incessant efforts will therefore be exerted in the future for the promotion of Japanese automobile export.

### Stricter Export Inspection in Japan

The Japanese export of auto parts has hitherto been subject only to the Law Concerning Control of Export Commodities which goes no further than designating the

items subject to control and stipulating the standard of quality and the conditions of packing. Compulsory inspection by a Government organ or a Government-designated organ has been limited to the cases where special machines or knowledge and experience are necessary for the inspection. Otherwise the inspection has been carried out by the manufacturers of the dealers themselves.

However, the true purpose of inspection cannot be accomplished in many cases under this system. Low grade products have often been exported, giving rise to the fear that the reputation of Japanese goods abroad might be impaired. The Japanese Government therefore submitted to the National Diet a bill for the Export Inspection Law stipulating stronger control measures than the Law Concerning Control of Export Commodities. With the bill passed by the Diet, inspection is carried out under the new Export Inspection Law as from February 1 this year.

Under the new law the under-mentioned auto parts cannot be exported unless they pass a compulsory inspection by the inspection organ of the Japanese Government.

The new system eliminates the possibility of exporting low grade products as far as the undermentioned items are concerned, but it has to be borne in mind that the inspection expense, though small, has to be added to the cost of production and that the observance of the stipulated manufacturing process to assure the passage of the Government inspection will result in a rise in the prices of products to some extent.

(1) Distributor Assy. (2) Engine Piston, (3) Piston Pin, (4) Piston Ring (5) Inlet and Exhaust Valve, (6) Valve Spring, (7) Crank Metal, (8) Connecting Rod and Bolt and Nut, (9) Hub Bolt and Nut and Hub Bolt and Hub Nut (10) Leaf Spring Assy. and Leaf (11) Brake Lining (12) Clutch Facing (13) Grease Nipple (14) Back Mirror (15) Tail Lamp (16) Stop Lamp (17) Head Lamp (18) Oil Pressure Gauge (19) Ammeter (20) Thermometer (21) Fuel Gauge (22) Flasher (23) Oil Jack (24) Gear Jack.

# Motoring With A Smile

BY

A. HOLDEN

The old adage concerning a little humour now and then as being relished by the wisest men is well borne out by many large motoring organizations located in Australia.

Information notices and warning signs have long proved this to be the fact and humour greatly assists to relieve the serious business of motoring, not only for the car owner but also for the garage and service station proprietor.

Some time ago a Sydney, N.S.W. suburban garage sported a sign, designed to court custom, which was worded, "Let us do your dirty work. Cars cleaned, polished and greased, while another service station situated at Bondi, a Sydney suburb, advertised its potential as: *impossibilities attended to immediately. Miracles take a little longer.*"

And to counter any criticism of the use of inexperienced labour on car repairs and overhauls, a Parramatta city, N.S.W. service station felt it purposeful to erect a sign phrased: "All Repairs Effected by Adult Labour."

Improving on this many Australian motor repair companies use the sign: "First Class Mechanic," and yet one other Sydney service station indicates with a notice: *Engine Trouble Diagnosed by Expert Motor Analyzer.*

Not to be outdone another organization concerned with the maintenance, replacement and repairs of damaged vehicles declares, "I'll Mend Anything But a Broken Heart."

Apart from being called service stations or garages, frequently other names have been applied to such establishments in various parts of Australia. However, a Homebush, N.S.W. suburban motor repair station is called *Ye Auto Drive Inn* and one other Sydney depot has a *Baby Car Health Clinic.*

And on the South Coast of N.S.W. a firm dealing in car replacement calls itself the "House of Many Parts" much to the relief of the

travelling motorist, finding himself in difficulties.

Occasionally garage owners wax poetical to encourage support, like the enterprising Sydney representative with the following gem:

*"We Open at Seven.  
We Close at Eleven.  
To Ride on Our Tyres  
Is like Riding to Heaven."*

Shortly after an extension of trading hours for motor service throughout the metropolitan areas of New South Wales, one garage, which opened on Sunday mornings must have found that business was very satisfactory, because its sign prominently displayed was worded "Business as Usual," with the amendment turning it to read "Business Better Than Usual."

In isolated areas of Australia provision for petrol and motor oil exists at small wayside stalls, houses or stores, often unattended. "Toot for service" signs are generally employed for the traveller.

"Going to Sydney? Then let us arrange your Parking Problems." Such was the invitation displayed on a large service station, 21 miles south-west from Sydney, in an endeavour to assist motorists to overcome the parking situation in Sydney, nowadays a motorists' nightmare.

Thoughtless patrons of a garage at Singleton, in Northern N.S.W. were reminded against smoking near petrol bowsers with a notice: *Smoke if You like, But Give Us time to Get Out.*

The Sydney suburban repair depot whose sign read: *We Take the Dent Out of Accident*, while courting clients in a striking fashion in these days of reckless driving, certainly did not lack for customers.

While another gimmick employed by the owner of a petrol station in a southern suburb of Sydney ran the notice in his driveway, reading: *New Customers Wanted. No Previous Experience Necessary.*

And with garage mechanics being embarrassed by home-repair-cum-motor owning 'mechanics' wishing to borrow their tools for a "slight

repair" job, it has been found in some instances to refuse the loan of the equipment. So that it is nothing unusual to find a garage near to Sydney, N.S.W. sporting a large sign in his workshops: *Sorry The Man who Lends The Tools is Out.*

Meanwhile, the Australian motorist is fond of displaying appropriate signs on his vehicles as warnings for others, whether they be directed to motorist or pedestrian. Some show on the back of their vehicles a sign on the left side inscribed: 'suicide' with the opposite portion marked 'Right Side' so that 'overtakers' will not try to pass on the incorrect side.

Similarly a motor lorry in Sydney has made good use of arrowed notices in white indicating on the left: 'Undertaker' as against that for the right side stating 'Overtaker.'

"Don't Scratch My Back" was the information carried on the back of another Sydney car in first class condition, while in Melbourne, Victoria, one motorist deemed it fitting to have a sign: "If You Can Read This You are Too Close."

In much the same style was a Hurstville, N.S.W. motorist with the sign in the back window containing the warning, "If you can Read this, Your Bumper's Too Close. Keep Your Distance!"

To maintain courtesy and respect on the road, many motor lorries operating for a well-known Sydney business house bear neat signs saying: "Sound Your Horn So That We May Allow You the Courtesy of the Road."

And another vehicle belonging to an Inter-state firm carried the reprimand: "Something to Blow About?" But some years ago a very wide and "showroom new" car, of American vintage, had a sign in the rear window stating: *Blow Your Horn and I'll Move Over.* That was testimony to the fact that most of Australia's roads and highways are notoriously narrow by oversea standards.

In order that motorists might respect the size of his vehicle,

a man in Melbourne, Victoria, was rather direct with a sign giving out with: "Don't Strike Me In the Back. Hit One your Own Size!"

Used car organizations or second-hand car dealers sometimes have difficulties in attracting business. So much so that in a Sydney district one firm whose "wares" were lined up in front of its premises, directed a sign to those passing by in crowded and slow-moving trams (street cars): "Get Off That Tram. You'll Never Own It!" an accompanying sign said.

This would be qualified by the remark inscribed on the signboard of a second used car established in Sydney. *You can buy this car for only £15. Why Pay Fares. You'll Never Own the Railways.* It is a well-known fact that most of Sydney's public transport runs to an indifferent time-table, is affected by delays, with fares at a maximum level. By that token many folk look with acquisitive eyes at the car owner, even if his vehicle just has enough power to travel to and from his place of employment or to take him for a week-end picnic.

Mindful that potential car owners like being critical of the vehicle they may be contemplating buying, another local Sydney used car lot encouraged clients to *Come In, Browse Around, Kick the Tyres*, and a play on words was evident in the notice informing: *The Best Money for Your Car. The Best Car for Your Money.*

Car owners, too, who have lost their vehicles through theft often go to extremes to protect them and their investments when parking them in the streets. In an outer Sydney suburb some time ago a fellow thought that he would discourage thieves with a sign inside his car. *Thief! This Car is Being Watched From Window All the Time. Keep Out!*

But the man at Bondi, an outer Sydney centre, whose car had been stolen nine times felt it essential to display a warning sign: "Don't Waste Time Trying to Steal This Car. It Won't Go for You, Because it Takes Me All My Time to Start and Keep Going. It's Full of Faults and Besides That, There's Not Much Petrol in The Tank."

Users of taxi cabs in some parts of Australia have seen neat and amusing signs exhibited in the vehicles they are using for transport. Drivers do not like passengers slamming the car door or leaving the vehicle. That is why one taxi driver came out with a poem attached to each door:

*"I know The Fares Have Risen.  
I Know You're Paying More,  
I know it Hurts Your Pocket,  
But, Please Don't Hurt My Door."*

Then there was a suburban (Sydney) taxi proprietor who was affected by the same complaint.

*"I'll Take You Where You Want to Go.  
Your Business I Don't Want to Know,  
But when you Leave, Don't Slam the Door,  
And We'll Be Friends for Evermore."*

But a Queensland towing organization doesn't make it any easier for the careful motorist, when its vehicles announce with large signs: *I Keep All Appointments by Accident*, and a car parked in a large Australian town was marked by dents and scratches, and the owner apparently not personally responsible for them, had placed a sign on the front and back windows, appealing to others: *If Reversing Please Be Careful. Not Like the Mug Who Did This.*

The Editor invites interesting articles by Motorists in India, describing their experiences in buying and selling cars, in getting their cars repaired, etc., for publication in these columns.

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## Of Interest to Motorists

### FRONT COLOURED LIGHTS UNLAWFUL

—Mr. Arul

Mr. F. V. Arul, Commissioner of Police, Madras, said that double-line traffic on Mount Road could be introduced only after the recruitment of sufficient number of constables sanctioned for enforcing the "no hand carts during peak hours" restriction" introduced recently.

Mr. Arul expressed the hope that with the introduction of double-line traffic, more cars and other transport vehicles could be allowed to pass through at a time, than now. He, however, said that the traffic difficulties were enormous, with the mounting number of vehicles on the one hand and the lack of adequate traffic police staff on the other.

Mr. Arul also referred to five types of offences being commonly committed, consciously or unconsciously, by some City motorists.

Some of the cars, he said, did not have the danger lights in the rear, while others were driven with only one headlight burning. In other cases, the rear number plates were not being illuminated, sometimes, the number itself being not visible, the paint having disappeared. They had also noted motorists putting coloured lights in the front of their cars, like green or red. This was an offence under the Act and only white light should be used, in the front of automobiles.

He hoped that motorists would take these hints and make suitable amends in cases where they now violate the rules.

## A. A. S. I. NEWS

### Road information

#### Kodaikanal-Munnar Road

The short cut road over the hills between Kodaikanal and Munnar has been re-aligned and widened. The work is almost complete. The road surface is still rough. Motorists are advised to use this road with caution.

#### Cannanore-Mangalore Road

The Coastal road between Cannanore and Mangalore has been considerably improved. Bridges over the Nileshwar and the Thekkil

### Fly-over Roads for Madras

Madras: Proposals for the construction of fly-over express-ways over certain portions of Mount Road and Poonamallee High Road have been included in the Master Plan for Madras City now pending before the City Council for its approval.

The two important radial roads, the Mount Road, and the Poonamallee High Road, become very ineffective for mass transportation when they reach the centre of the City. The Round Tana and the Central Station regions are the two areas where the worst congestion of traffic prevails, due to the inter-section of a number of through traffic ways at these points. As a means of reducing this confusion, elevated road-ways or fly-overs running through the centre of these roads have been suggested to carry the long distance traffic of cars alone, allowing the local traffic movement to take place at the present level. While the width of this fly-over should be limited to 32 feet in Poonamallee High Road which is rather narrow it might be increased to 40 feet in Mount Road which is comparatively wider.

The Mount Road fly-over will commence roughly at the Spencer's Roundabout and passing over Round Tana will terminate at the Willingdon Bridge. The Poonamallee High Road fly-over will take off from a point near the office of the Deputy Commissioner of Police (Traffic and Licensing) and passing over the General Hospital Road will terminate near the Nurses Quarters.

The fly-over in both cases will run on a cantilever bridge supported by a single column all

have been constructed and are open to motorists. There are good ferries over the other three rivers across this road. This road is very picturesque, and shorter than the road via Mercara by 75 miles. Also this coastal road saves climbing over the ghats.

### New members

A very large number of motorists in Madras City and in mofussil centres have joined the Automobile Association of Southern India during the last month, according to the April Bulletin of the Association, which gives the names of all the new members.

through. The cost of construction of the two fly-overs is roughly estimated at Rs. 160 lakhs.

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## Of Interest To The Operator

### Set-Up In States For Motor Transport Administration

#### 'AD HOC' INQUIRY BODY APPOINTED BY CENTRE

New Delhi: In order to assist State Governments in reorganizing their set-up for the administration of motor transport, the Union Government have appointed an 'ad hoc' inquiry committee.

The committee will conduct a comprehensive survey of the existing arrangements and is expected to make its recommendations within six months.

The existing administrative machinery in most States is concerned more with the regulation of motor transport rather than its planned development. In order to secure the fuller development of motor transport and its expansion to meet the demand created by the Second Five-Year Plan, it is considered essential that there should be suitable machinery to look after the various problems facing the industry and Plan and foster its development.

This point, it may be mentioned, was also stressed at a conference on transport problems convened by the Federation of the Indian Chambers of Commerce and Industry some months ago. While paucity of adequate transport arrangements are on the one hand referred to motor transport, operators have been complaining of numerous restrictions preventing the maximum utilization of road transport.

### COMMITTEE PERSONNEL

The Chairman of the Committee is Mr. M. R. Masani, M.P.; Its members are: Mr. Harish Chandra Mathur, M.P.; Mr. C. R. Pat-tabhi Raman, M.P.; Mr. Mahabir Prasad Bhargava, M.P.; Mr. Chandan Mal Baid, M.L.A. (Rajasthan); Mr. Govind Sahai, M.L.A. (U.P.); Mr. D. S. Rathor, Transport Commissioner, U.P.; Mr. J. B. Bowman, Vice-Chairman, Bombay State Road Transport Corporation; Mr. T. S. Santhanam, Director, T. V. Sundram Iyengar & Sons Ltd., and Mr. Kundal Lal, Secretary, All-India Motor Unions Congress.

The Transport Department will provide an officer to work as secretary of the committee, in addition to Mr. C. S. Nair, Secretary of the Indian Roads and Transport Development Association, who will be co-secretary to assist the chairman.

### TERMS OF REFERENCE

The committee's terms of reference are the following:

(1) To survey the existing machinery for the administration of motor transport in the States, with particular reference to the working of Regional and State Transport Authorities and their suitability to look after the development, co-ordination and regulation of road transport, consistently with the economic development of the country vis-a-vis the successive Five-Year Plans and the need to expand motor transport to rural areas in order to develop village economy.

(2) To suggest a model administrative set-up which will ensure (a) the fair and speedy disposal of applications for permits; (b) the healthy growth of motor transport providing efficient services and adequate amenities to the public; (c) the elimination of inhibitory factors which stand in the way of the development of motor transport; (d) adequate development of truck-trailer combinations; (e) the fullest use of available road facilities and transport vehicles; and (f) proper co-ordination with the activities and functions of the inter-State Transport Commission, and

(3) To make any other recommendation germane to the subject matter of the inquiry.

The headquarters of the committee will be at New Delhi, but it will be free to visit such places as it may consider necessary for the purpose of its work.

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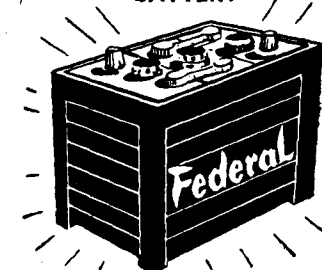
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## D.R.T.A. CRITICISED

New Delhi : The Public Accounts Committee has drawn the special attention of Parliament to the Delhi Road Transport Authority for flouting the Committee's recommendation to reconcile the stores balances for the last five years. It was stated that repeated recommendations of the Committee on the question of stores had not been attended to either by the Transport Ministry or by the Delhi Road Transport Authority. As early as September 1957, the Committee had directed that the stores balances must be reconciled within three months. Though nearly six months have elapsed no information has been received by the Committee about any progress made in the direction. The manner in which the recommendations of this Committee had been attended to by the Authority and the Ministry had compelled the Committee to draw special attention of Parliament to this very important question.

The Committee also took strong objection to the novel practice fol-

lowed by the Delhi Road Transport Authority, which made their own observations on the Audit Report relating to the accounts. This was considered highly objectionable and contrary to all conventions.

The Committee recommended that a senior officer in each Ministry should be assigned the task of dealing with the presentation to Parliament of such Accounts, Reports and other papers in pursuance of the provisions contained in Acts passed by Parliament.

## NO FURTHER NATIONALISATION IN MADRAS STATE

Apart from the city and suburban services, there will be no further nationalisation of bus transport in the State according to the policy of the present Government.

It is believed that the Government has adopted this firm policy after watching popular reaction, which is one of dissatisfaction with nationalised service.

However, the suburban routes, now operated by private owners—

Villivakkam, Red Hills, Ennore, Thiruvottiyur and Lattice Bridge—will be taken over on different dates in the immediate future.

*The operators, displaced from these routes, will be provided alternative routes since the Government, in the process of nationalisation, does not want them to suffer any financial loss.*

A broad policy has been laid down that, where alternative routes cannot be provided, private operators will be given three year's prior notice before the route is taken over by the Government. In consequence of this policy, private operators will be given three more years till 1961 on the Kancheepuram route to continue their service.

Apart from the City, Kanyakumari, the recent addition to this State, is the only district where nationalised transport is in operation. Steps are being taken to nationalise a few more routes in that district.

Thus, in accordance with the policy of the Government, nationalised bus transport system will operate in this State only in the city, and suburbs and in Kanyakumari district.

## Expansion of Road Transport

### T. S. SANTHANAM'S HOPE

The need for a healthy expansion of road transport in the country was stressed by Mr. T. S. Santhanam, Managing Director, Sundaram Motors (Private) Ltd., presiding over the valedictory function of the Automobile Engineering Association of the Madras Institute of Technology, Chrompet, recently.

Mr. Santhanam said that road transport was a business which provided the 'quickest' employment and employment on a large scale. Governments both at the Centre and in the States should bear this important fact in mind, he added.

A healthy expansion of road transport could be brought about by encouraging more people to go into it. To do this it was necessary to keep down the initial cost of the commercial vehicle. Government, through Reserve Bank and other banking and credit institutions, should help people to buy the vehicle on an instalment plan. Government should also see that taxation on transport particularly goods transport was cut down to a reasonable level.

Mr. Santhanam hoped that a greater provision would be made for road transport and automobile industry at least in the Third Plan.

Mr. Santhanam said that by starting the faculty of Automobile Engineering, the Madras Institute of Technology had earned the reputation of being the pioneer in this field. He was happy to hear that most of the boys who had passed out of the Institute qualifying themselves in Automobile Engineering had found gainful employment and that they were much sought after. It was a great credit not only to the students of the Institute but to the Institute itself.

Mr. Santhanam said that the automobile industry in India had had its growing pains and thanks to the help given by the Government and the encouragement by the public, the industry had registered considerable progress. Today quite a large number of a variety of components were produced in this country. This was a creditable achievement, considering the fact that at the end of the war, 'We had no automobile industry as such.'

He pointed out that apart from the fact they were producing their own vehicles, there was also the fact that the industry gave employment to graduate students, technicians and helped to foster growth of auxiliary industries.

Mr. Santhanam stressed that, before the expansion of road transport was planned, Government, both at the Centre and the State, would have to consider the importance of roads. Considering the growth in population and demand, the railway certainly were not in a position to provide additional transport either for the people or for the goods. It was here that the road transport industry could play a useful part.

Road Transport in the main in our country was not in the hands of any monopolistic corporation or in the hands of big business. By and large it was owned by small people. If only they took into consideration the number of vehicles on road, they would see they could certainly do with greater number of vehicles. Today, though there was great need for better roads and more roads, Government which was spending huge amounts under the Second Plan, have provided only Rs. 100 crores for road transport.

Mr. Santhanam hoped that a greater provision would be made for road transport and automobile industry in the Third Plan. Mr. S. K. Patil in charge of Transport and Communications was one of those who evinced great interest in the development of road transport and 'I am confident that under him we will find the automobile industry and road transport developing along healthy lines.'

## WRIT AGAINST NATIONALISATION

### Andhra Petition Fails

A division bench of the Andhra Pradesh High Court recently dismissed nine writ petitions seeking to quash the nationalisation of bus transport scheme under Section 68 of the Central Motor Vehicles Act and challenging the validity of the Chapter 4 of the Act. (Nationalised bus transport was extended to two routes in Krishna District on April 1, under the nationalisation scheme of the State Government.)

Their Lordships observed that any law made by a Legislature enabling a State by itself or by a corporation as its nominee to have a monopoly in regard to any trade or business would be *intra vires* and not offending the provision of Article 19 of the Constitution.

The Judges held that Section 68-B of the Central Motor Vehicles Act was not *ultra vires* of the Constitution, as it was not repugnant to any provision of the Constitution.

Their Lordships observed the contention that the fundamental rights of the citizen to carry on motor transport guaranteed by the Constitution was destroyed by the nationalisation scheme was "untenable." Article 19 (6) of the Constitution authorised the State Legislature to make a law to enable the State to have a monopoly in any trade, business, industry or service and it could be exercised by itself directly or through its nominee. When once a legislation was made in this regard, the fundamental right of a citizen in that regard was extinguished. Therefore, there was no right of a citizen coming into conflict with that of a State.

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## MR. A. E. L. COLLINS ELECTED CHAIRMAN OF I.R.T.D.A. (MADRAS BRANCH)

### Mr. M. V. Venkataraman on plight of operators

The Annual General Body Meeting of the Indian Roads and Transport Development Association Ltd., Madras branch, was held at the Hotel Oceanic at Madras recently, under the presidency of Mr. M. V. Venkataraman, Chairman.

Addressing the large number of members present, Mr. Venkataraman said :

I have great pleasure in welcoming you for the Annual General Meeting of this Association. Since we met last, the following developments have taken place in the field of road transport at an All-India level : (i) Transport Commissioners' Conference at Mussoorie ; (ii) Appointment of the Inter-State Transport Commission ; (iii) Statements in Lok Sabha by the Hon'ble Shri Lal Bahadur Shastri and Shri Raj Bahadur.

As you are aware, the Transport Commissioners' Conference have made a number of suggestions and recorded a number of decisions, the more important of them relating to the rationalisation of taxation on motor vehicles, liberalisation of the permit system and formation of viable units. The conference has also suggested that permits for public carriers should be issued freely during the next three years up to 100% of the present number throughout the country. It is not known what steps the Madras, Andhra and Kerala Governments have taken to implement them and I request them to announce them as soon as possible. The country's need of transport is growing and the sooner a decision on these vital matters is taken the better will it be for our economy.

Gentlemen, as you are aware the position of inter-State road transport in our area is far from satisfactory : number of permits and loads to be carried are restricted, level of taxation varies, operators have to bear double taxation in many cases and traffic is allowed on temporary permits of short duration to be renewed from time to time. This is a very unsatisfactory state of things as it cannot lead to consistent and progressive development and it is a great pity that such a condition should be allowed in our part of the country which is

not so favourably placed in regard to rail transport as some other parts of the country. Therefore it is heartening that the Government of India has now appointed an Inter-State Transport Commission to "Develop, co-ordinate and regulate" inter-State road transport. It is hoped that, as a result of this, inter-State traffic will now begin to develop rapidly.

The Hon'ble Shri Lal Bahadur Shastri mentioned the need to raise the mileage of national highways from 13,800 to 15,000 and to provide express-ways on Bengal, Bihar and the Madras-Mysore borders. These are welcome measures. He also made several announcements, the most important of them being Government's decision to declare a moratorium on nationalisation of goods transport in the country up to the end of the Third 5-Year Plan. I now request Government to finalise their scheme of making available to operators loans through the State Bank for the purchase of trucks so that they may make full use of Government's moratorium on nationalisation.

I was very pleased to see a reference in Mr. Raj Bahadur's speech to taxation on motor vehicles which he said was perhaps the highest in the world and requires consideration. THIS APPLIES WITH GREATER FORCE TO MADRAS WHERE THE LEVEL OF TAXATION IS THE HIGHEST IN INDIA, so high that the Union Government has suggested a ceiling of 75% of the Madras level. I was also pleased to see a reference in Mr. Raj Bahadur's speech to centralisation of taxations.

Although this is not yet a Government decision it is heartening to see a reference to it in a Minister's speech and we of the I.R.T.D.A. are particularly gratified that the initiative for centralisation has come from our Council in Bombay who as usual have taken a lead in this very important issue. I hope Government will take a decision soon in this very vital matter.

I thank you all gentlemen, for having attended this meeting in spite of the sweltering weather conditions and for having taken so much of interest in the activities of the Association.

### Office bearers elected

The Meeting then adopted the Committee's Report and Statement of accounts for the last year.

After the General Body Meeting, the election of Officer-bearers was held. Mr. A. E. L. Collins of Ashok Leylands, was unanimously elected Chairman for the year 1958, and Mr. M. R. R. Punja was elected Executive Vice-Chairman. Mr. C. S. Ramaswamy was re-elected Honorary Secretary and Treasurer, and the following were elected to the Executive Sub-Committee :—

Mr. M. R. R. Punja, Chairman ; Mr. T. S. Narayana Rao, Mr. T. G. K. Raman, Mr. J. N. Edwards, Mr. R. N. Pillai, and Mr. D. Bhimeswararao or Mr. Masud Ali Khan.

The Annual General Body Meeting also earlier elected Mr. P. M. Balasubramania Mudaliar as a member of the Committee who represent Life and Ordinary members. The Motor & General Trading and M/s George Oakes Private Ltd., Madras were elected to the Committee to represent Associate Members. 18 Supporting Member firms who had agreed to serve the Committee were also elected, to be represented on the Committee.

## Vauxhall Velox Gives 56 MPG!

with revolutionary  
new engine

Perkins  
Announce  
"Four 99"

(By Gordon Wilkins)

A new lightweight diesel engine of only 1621 c.c. (99 cu.in.) which is introduced by F. Perkins Limited open up new possibilities in the provision of diesel power for cars and light commercial vehicles which have to cover large mileages.

As installed with dynamo and starter but without clutch flywheel and clutch housing it weighs only 342 lb. (155.5 kg.) and for automobile uses develops 43 bhp at 4,000 rpm. For commercial vehicles it is governed to a slightly lower speed and gives 42 bhp. at 3,600 rpm. An industrial version is also available rated at 32-35 bhp at 3,000 rpm.

Already more than one million road miles (1.6 million km) have been covered by vehicles using this new British diesel engine. It has been adopted as standard equipment for Beardmore taxis and has been averaging 36 miles imp. gal. (7.85 lit/100 km) using only half as much fuel as petrol engined cabs on identical work.

Its economy as a power unit for light passenger cars has been demonstrated by two official tests supervised by the Royal Automobile Club. A VAUXHALL VELOX, with this engine averaged 56.6 MILES IMP. GAL (4.97 lit/100 km.) at an average speed of 34.8 mph (56 kmh) over a town and country route of 218 miles (350 km) in the Midlands of England. A FORD CONSUL with the diesel engine taken over the same route at an average speed of 34.7 mph (55.8 kmh) recorded a consumption of 50.8 MILES IMP. GAL. (5.56 lit/100 km.).

A Bedford light van with a load of 1680 lb. (765 kg.) completed an endurance test of 101,201 miles (163,000 km)



Ford Consul Car fitted with Perkins Four-99 diesel engine

on the M.I.R.A. test track lapping consistently at 56 mph (90 kmh) with an average fuel consumption of 7 miles Imp. gal (7.63 lit/100 km).

Extensive tests have already been carried out with these engines installed in Vauxhall Velox, Vauxhall Wyvern, Morris Oxford, Simca Versailles, Mercedes 180 D, Ford Consul, Simca Ariane, Opel Olympia, Renault Domane and in the Bedford, Austin and Standard commercial vehicles. Conversion kits are already available to permit operators to install it in Ford Consul, Vauxhall Velox and Wyvern, Bedford light vans, Austin Omnivan and Morris J2 van.

The engine has cast iron cylinder block and crankcase with wet cylinder liners and overhead valves operated by push rods and rockers. Smooth and quiet running is claimed as a result of the new shape adopted for the combustion chamber which is offset from the piston and has a hemispherical top with a relatively flat base. Fuel is injected into this chamber by a pintle type nozzle.

During the greater part of the compression stroke, air is transferred into the chamber from the cylinder vertically upwards through the oval port, and produces swirl in the chamber, moving transversely across the nozzle. In the later stages of compression, the direction of air transfer is gradually changed from vertical to horizontal.

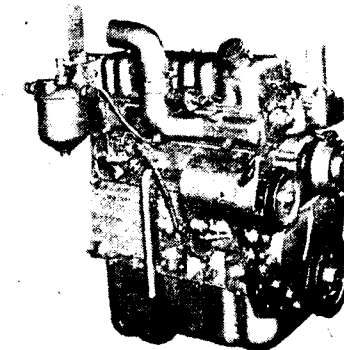
When combustion is about to begin, the final part of the air is transferred violently from the head, through special passages machined

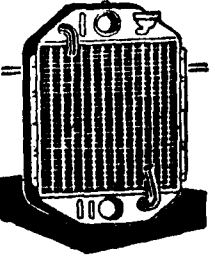
in the head and chamber insert, horizontally into the combustion chamber to promote considerable turbulence in the mixture of fuel and air already present. By this means, complete combustion is promoted and the maximum possible quantity of air is utilised.

Other factors which have made the engine possible are the rotary type LIGHT WEIGHT C.A.V.. DPA FUEL PUMP capable of operating reliably at over 4,000 rpm and the use of copper lead thin shell bearings throughout.

In a brief road test of Ford Consul and Opel Rekord cars fitted with the engine, noise level proved commendably low although the engine is still recognisable as a diesel when idling and accelerating. IT IS REMARKABLY FLEXIBLE AND QUITE COMPARABLE WITH A PETROL UNIT WHEN CRUISING. The Ford reached 67 mph by

Perkins "Four-99" diesel engine





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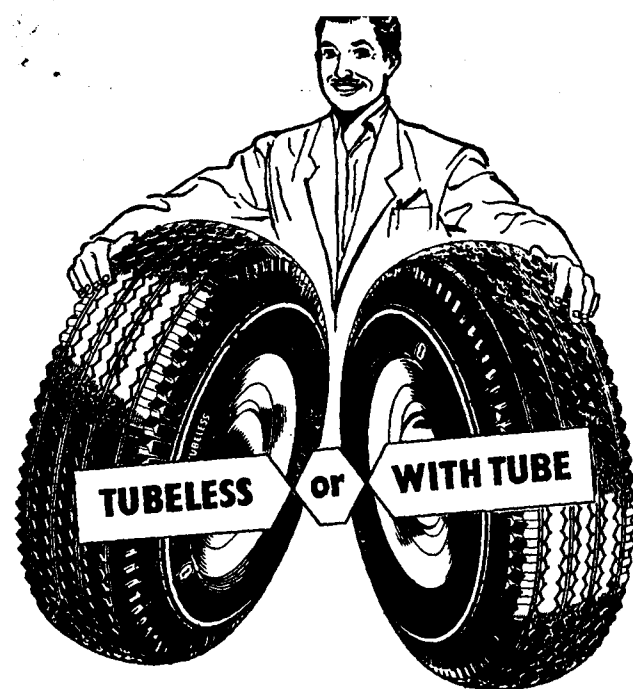
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speedometer and the Opel 68 mph. Although the engine is not quite so smooth as a petrol unit when idling and accelerating it is a perfectly acceptable power unit and a distinct advance over early diesel installations.

SAID MR. FRANK PERKINS WHO FOUNDED THE COMPANY 26 YEARS AGO, "WHO DON'T CLAIM THAT IT IS THE IDEAL POWER UNIT FOR A GENTLEMAN'S TOWN CARRIAGE BUT WE DO FEEL IT HAS GREAT POSSIBILITIES FOR THE WORK HORSE TYPE OF CAR AND IN LIGHT VANS AND BUSES."

It is naturally most suitable for cars which have to cover large mileages without being driven flat out as the economy advantage of the diesel tends to be reduced at full throttle. The possibilities are illustrated by experience with one installed in a Bedford van on delivery work involving 115 stops a day; it gave 38 mpg (7.43 lit/100 km) against 15 mpg (18.83 lit/100 km) from a petrol engine on the same job.



Bedford van with Perkins Four-99 engine.

### Perkins production

Introduction of the "Four 99" as the new diesel is called will bring Perkins engine output to 350 a day and more than 70 per cent of production is exported directly or in vehicles.

The larger Perkins Four P. 4 (C) is offered as original equipment in the Plymouth cars assembled by Chrysler in Antwerp. Fuel consumption of more than 250 taxis run by a Brussels operator including many Chevrolets has been halved by Perkins diesels and the same has

been found on three cabs operated by the Fleetway Co. in Baltimore U.S.A. Several Russian Zim cars have been equipped with the Perkins P. Four (C) in Finland and in Portugal over 500 taxis and private cars have Perkins engines. Nearly 200 manufacturers of commercial vehicles and agricultural equipment now fit Perkins engines as standard.

### Technical details

Cylinder block, crank case are in cast iron. Wet cylinder liners are centrifugally cast. There are

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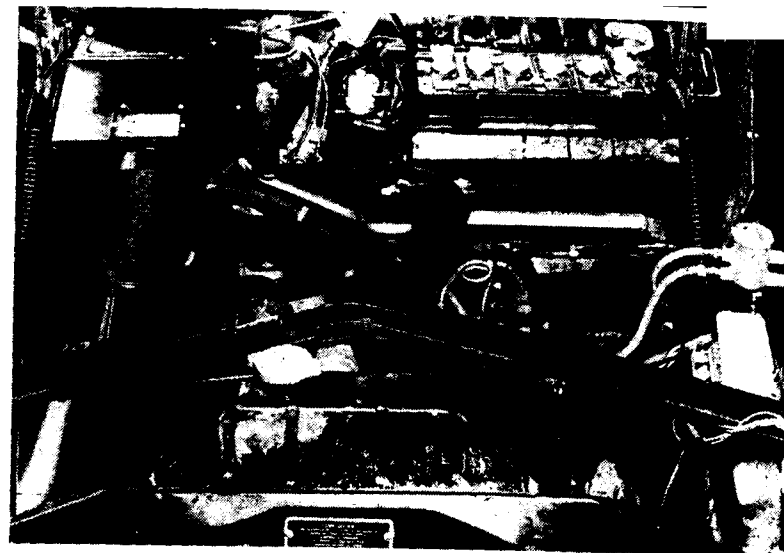
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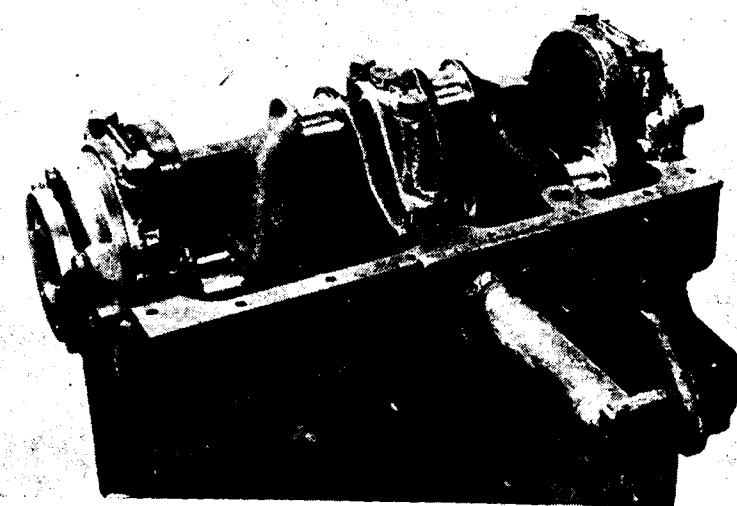
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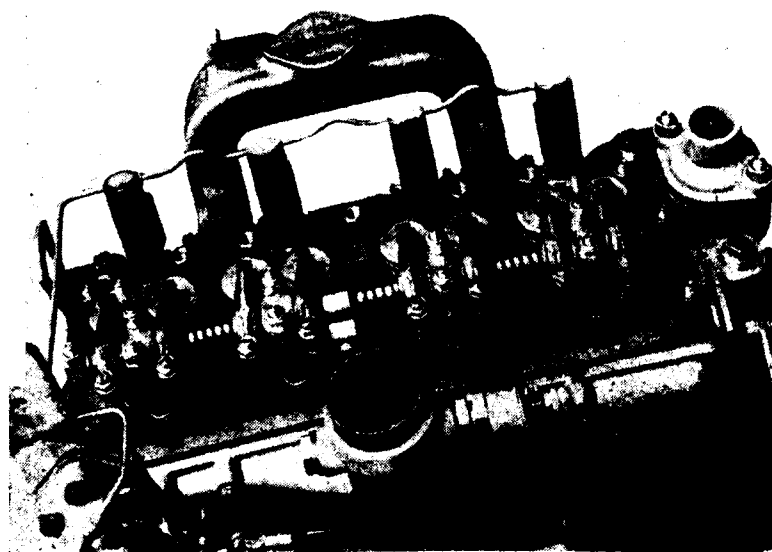


Perkins Four 99 engine installation in Vauxhall Wyvern Car.

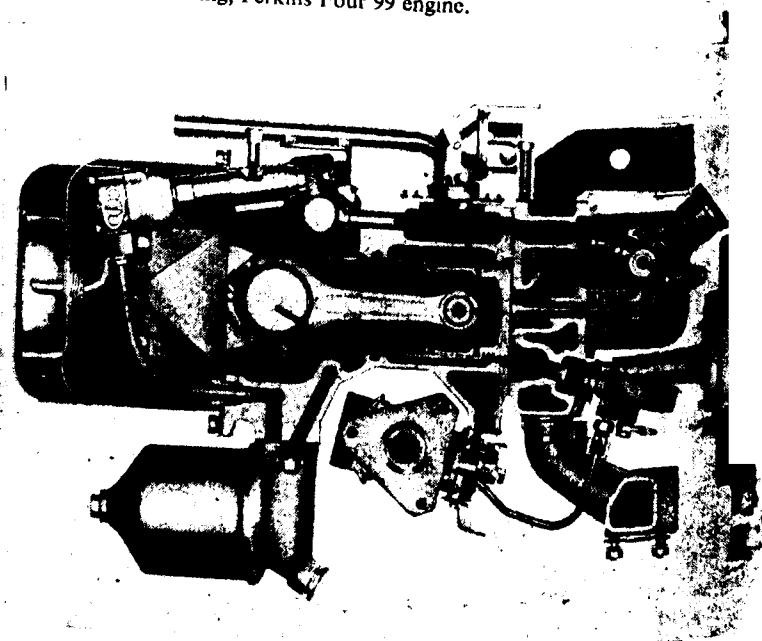


Three bearing crankshaft, Perkins "Four 99" diesel engine.

Rocker assembly, Perkins Four 99 engine.



Transverse drawing, Perkins Four 99 engine.



two valves per cylinder operated by push rods and rockers with two springs per valve. The camshaft is of cast iron and is gear driven and the crankshaft is forged from chrome molybdenum steel. Pistons are of aluminium alloy with five rings; three compression rings and one scraper above the gudgeon ring and one scraper below. The top compression ring on vehicle engines is chrome plated. Gudgeon pins are fully floating and located by circlips. Main and big end bearings are steel backed shells of copper lead. Lubrication is by a Hobourn-Eaton pump delivering through a full flow external filter with by-pass relief valve. A tapping is provided in the main oil gallery for a pressure gauge or pressure warning switch. The crank case extends to the crankshaft centre line and is closed by a pressed steel sump.

A C.A.V. pump utilises two radial plungers rotating inside a stationary cam ring and this is supplied with fuel by an eccentric vane feed pump. It incorporates a hydraulic device which varies injection timing according to engine speed by turning the cam ring in relation to the pump casing. The induction manifold is die cast in aluminium and the exhaust manifold is of cast iron. The centrifugal water pump is belt driven. Electrical equipment is 12 Volt and a C.A.V. "Thermostart" heater is fitted in the induction manifold to aid cold starting.

#### SPECIFICATIONS

Dimensions : Four cylinder ohv push-rod operated 76.2 x 88.9 mm (3.0 x 3.5 in.) 1621 cc (99 cu.in.).  
Compression ratio 20 : 1, Car engine 43 bhp at 4,000 rpm.

## SUITABLE FOR HARVESTERS and Small Tractors Also

Max torque 73 lb. ft. (10.1 mkg) at 2,250 rpm.

Mean piston speed 2,333 ft./min (11.86 m./sec.) at 4,000 rpm.

Commercial vehicle engine 42.3 bhp at 3,600 rpm.

Max. torque as above mean piston speed 2,100 ft./min. (10.67 m./sec.) at 3,600 rpm.

The new 1.6 litre diesel engine recently announced by F. Perkins Ltd., the famous British diesel engine manufacturers will be shown in Poland for the first time at the Poznan International Fair from June 8-22. This is the Four 99 (TA) agricultural type diesel engine which will be on view at the attractive Perkins stand at the exhibition.

The engine incorporates a new patented combustion system and is particularly suitable for small self-propelled combine harvesters where a constantly accurate speed is required. The Four 99 (TA) engine is also suitable for small tractors and many other farm applications.

This compact power unit develops 35 bhp. at 3,000 rpm and is a four cylinder-in-line engine with a 76.2 mm. bore and 88.9 mm stroke.

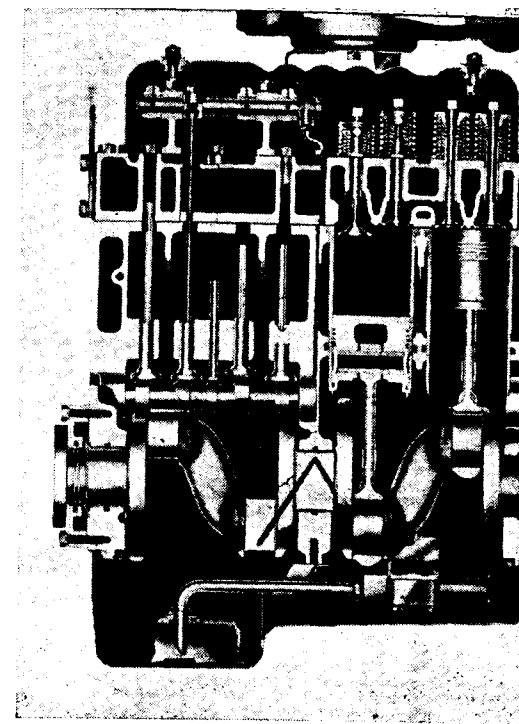
The Four 99 (TA) diesel engine is being supplied as first equipment to a number of continental manufacturers including Thermo-nius of Sweden and Epple-Buxbaum-Werke, of Austria.

F. Perkins Ltd., is also displaying a number of other diesel engines from the wide Perkins range at Poznan. These include :-

P6 (V), a six cylinder power unit rated at 83 bhp at 2,000 rpm. More than a quarter of a million P6 engines have now been made and 180,000 have been exported.

R6 (V), a six cylinder engine rated to give 104 bhp at 2,500 rpm. This engine has a 4" bore, 4 1/2" stroke and a swept volume of 5.56 litres.

L4 (TA), a four cylinder power



Longitudinal drawing, Perkins Four 99 engine.

unit developing 62 bhp at 2,000 rpm. The L4 has a 4 1/4" bore, 4 1/2" stroke, and a swept volume of 4.42 litres.

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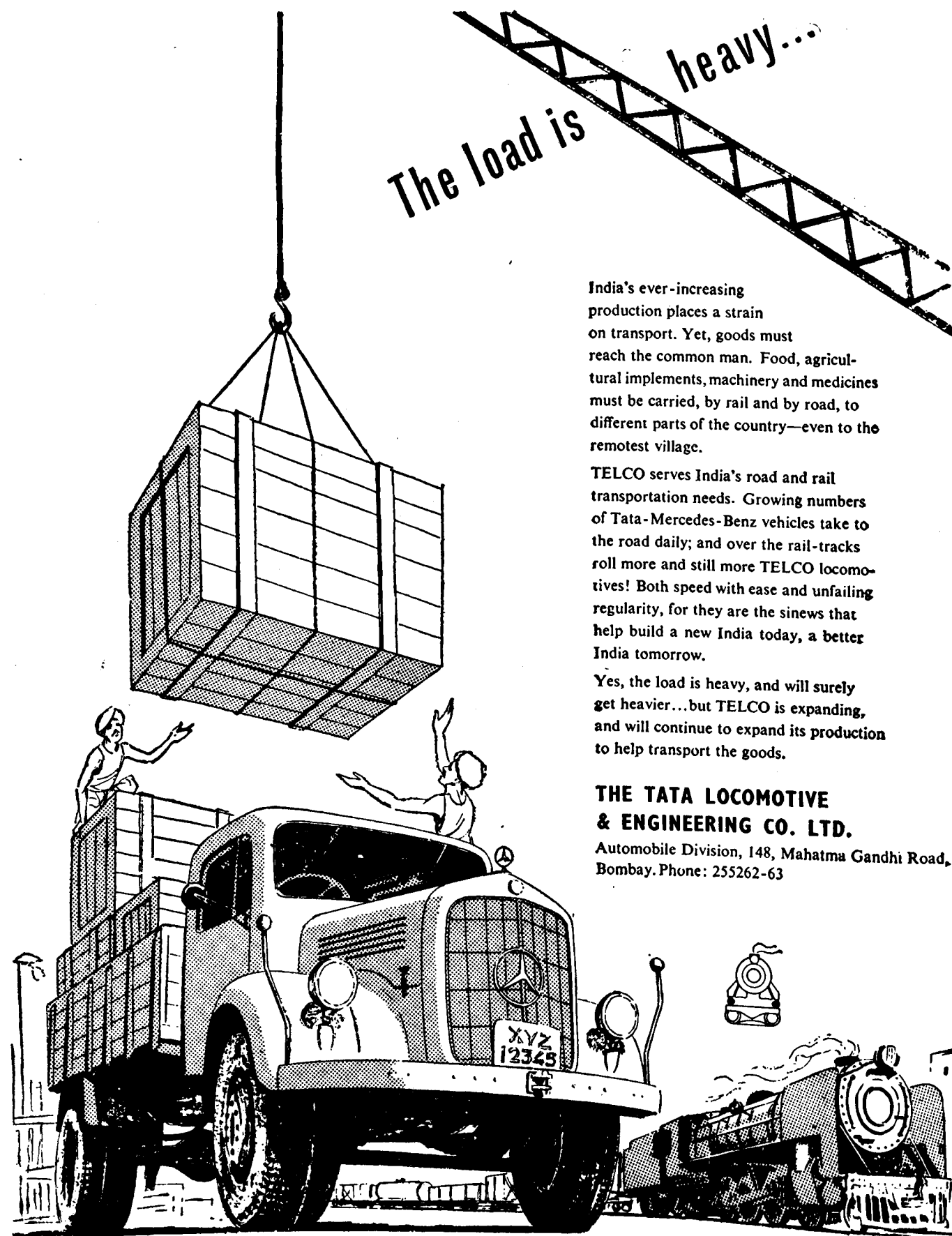
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The load is heavy...

India's ever-increasing production places a strain on transport. Yet, goods must reach the common man. Food, agricultural implements, machinery and medicines must be carried, by rail and by road, to different parts of the country—even to the remotest village.

TELCO serves India's road and rail transportation needs. Growing numbers of Tata-Mercedes-Benz vehicles take to the road daily; and over the rail-tracks roll more and still more TELCO locomotives! Both speed with ease and unfailing regularity, for they are the sinews that help build a new India today, a better India tomorrow.

Yes, the load is heavy, and will surely get heavier...but TELCO is expanding, and will continue to expand its production to help transport the goods.

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TELCO-58-1A,

EVEREST

MOTORINDIA

May 1958

#### Special Feature

### Expansion Schemes at TELCOS, Jamshedpur Tata Dealers Visit New Gear box, Heat Treatment, Body Building Etc. Shops

Important discussions were held at the second dealer meeting convened by Telco at Jamshedpur, in which all Tata-Mercedes-Benz dealers throughout the country took an active part.

The venue for the deliberations was the spacious hall of the newly built Telco Club which was officially opened during the Tata Jubilee Week in March. The four-day conference was inaugurated on March 17th by Mr. H. Stoehr, Manager, Automobile Division, who introduced to the guests the new General Manager of Telco, Mr. R. G. Da Costa. This introduction was followed by a short speech by the new General Manager, after which the Sales Manager, Mr. N. Annaswamy, addressed the dealers.

The dealers were then taken around the workshops to appraise them of the expansion schemes which had already materialised; the new Gear Box Shop, with a floor space of 46,284 sq.ft. and



Photograph taken at the Conference shows Tata-Mercedes-Benz dealers from the Northern and Eastern zones.

housing more than 125 machines and equipment; the new Heat Treatment Shop (180' x 130' in floor area) having the most up-to-date machines for hardening of auto-parts like crown wheels, rear axle drive shafts, etc., the new Body Building Shop; the new spare parts warehouse and the Apprentice Shop at which technicians would be trained for future employment at the works.



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## SAKTHI AUTOMOBILES CALICUT

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Partner

MOTORINDIA

May 1958

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In connection with the  
Annual Conference of the  
Madras State Lorry Owners' Association

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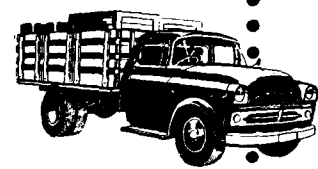
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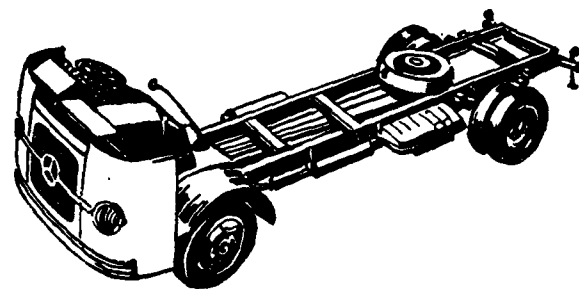
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### SALES, SPARES AND SERVICE DISCUSSED

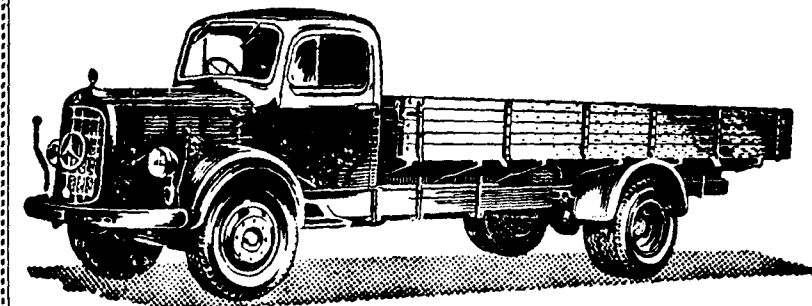
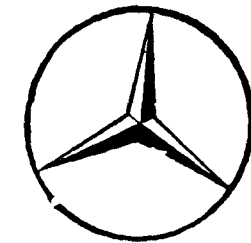
Vital Problems concerning sales, service and spare parts were discussed at meetings held during the four days of the conference. On the last day, Mr. Jackson, Technical Service Engineer of Messrs. Firestone Tyre and Rubber Co. of India Private Ltd., Bombay, who had come down to Jamshedpur, specially to address the Tata-Mercedes-Benz dealers, gave a technical talk on the causes for premature tyre failures.

The four-day session was, however, not all business talk, for the dealers and Company officials spent the first evening at the Jubilee Park where tea was served at the Lake Boat House. The next evening they all went to the Dimna Lake for a dinner party at the Lake View Bungalow overlooking the Dimna waters. On the third day, there was an interesting programme of dance and music at the Telco Club, at which some of the dealers showed their appreciation by offering silver cups, gold medals, etc., to the artists who had given some classical dance numbers.

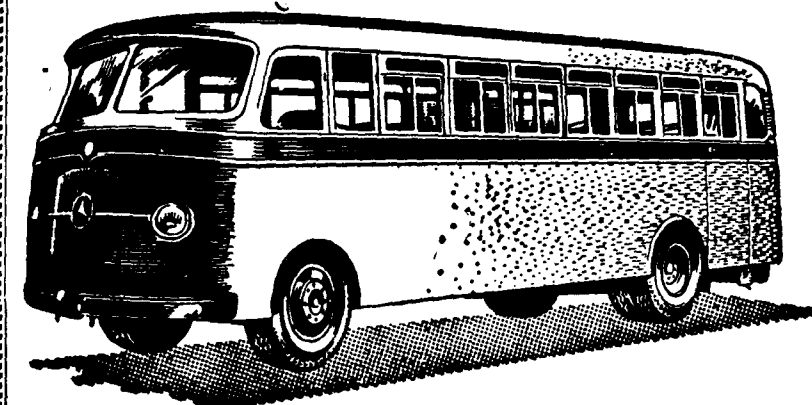
At the meeting the Company officials expressed their thanks for the co-operation which the dealers had extended to Telco, and the splendid efforts put in by them in the sale of Tata-Mercedes-Benz vehicles, which have become the first choice of operators in India. This appreciation was demonstrated by the presentation of silver plaques to Messrs. French Motor Co., Ltd., Calcutta, who had taken the largest number of vehicles; to Messrs. Motor & General Sales Private Ltd., Lucknow, who had sold the largest number of vehicles including those sold to the State Transport Organization; to Messrs. Sanghi Brothers (Indore) Private Ltd., Indore, who had done a marvellous sales job on the L-325/46, 7½ ton models, and to Messrs. Gounder & Co. Private Ltd., Coimbatore, who had taken the highest ratio of spare parts per vehicle.

May 1958

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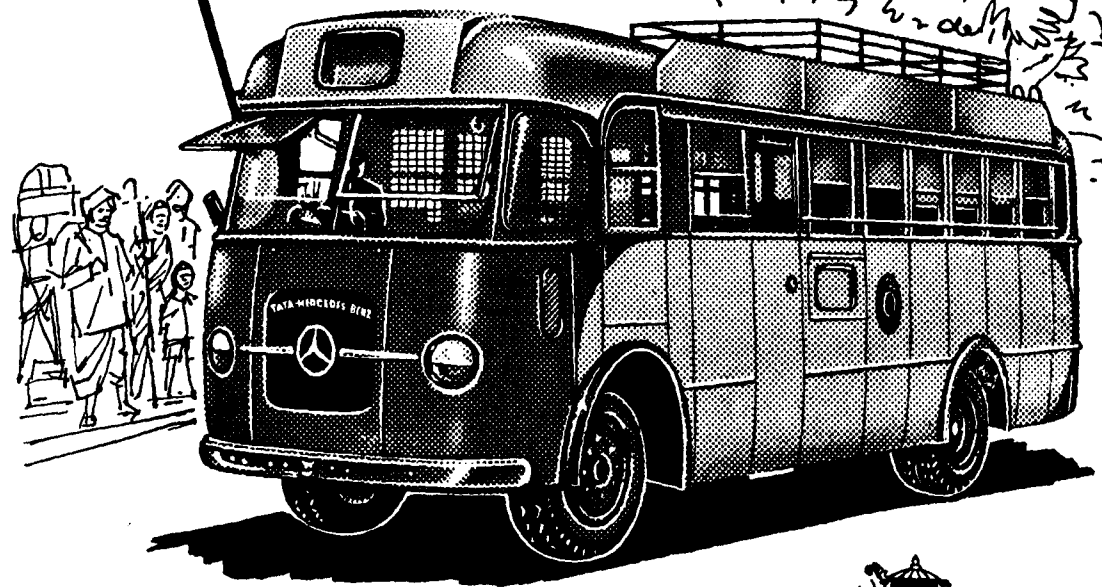
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Another  
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The 1000th bus that recently left our assembly lines marked the extent of our splendid contribution to Indian passenger transport. In the years ahead, more and better buses shall continue to leave our works to join the transport fleets all the country over - and abroad. Yes, we have entered the export market too.

While proudly recording our achievement we also refer to a happy coincidence....the 1st and the 1000th bus to leave our works were both built for the Hyderabad passenger transport.



**HYDERABAD ALLWYN METAL WORKS LTD.**  
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HAM-58-6

EVEREST

## TATA-BENZ DEALERS AND THEIR ADDRESSES

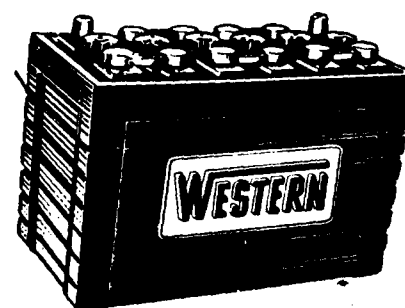
The dealers expressed their appreciation of the very cordial relations they had with Telco and the sincere and understanding manner in which the various problems have been solved at the conference. They assured the Management of their ability to handle increased sale of Tata-Mercedes-Benz vehicles to the extent of the production capacity of the Works, which is planning for a volume of 12,000 vehicles a year. They also assured their fullest co-operation in maintaining the unique position Tata-Mercedes-Benz vehicles have attained by continuing to keep their customers completely satisfied on their service problems.

In view of the importance of having trained men in their workshops and realising the scope of training provided at the Telco apprentice school, some dealers requested that their representatives be admitted to a three-year apprentice course at the Works. As the scheme would involve making arrangements for boarding and lodging of the apprentices, the dealers decided to jointly put up a "Dealer Apprentice Hall" which could provide accommodation for their men.



Shri R. V. Swaminathan, Managing Director, Pandyan Automobiles Private Ltd., Madurai, Dealers of Tata-Mercedes-Benz Vehicles, is seen discussing seriously with Shri N. Annaswamy, Sales Manager, Tata Locomotive & Engineering Co. Ltd., regarding the implementation of Hire Purchase Scheme of Tata-Mercedes-Benz Vehicles in his territory of Madurai, Ramnad and Tirunelveli Districts.

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| M/s. National Motors, Jodhpur & Kotah.            | M/s. Circars Automobiles, Guntur & Vijayawada.        |
| M/s. Globe Motors Private Ltd., New Delhi.        | Associated Indian Enterprises Private Ltd., Calcutta. |
|                                                   | M/s. J. V. Mehta & Co., Bombay.                       |

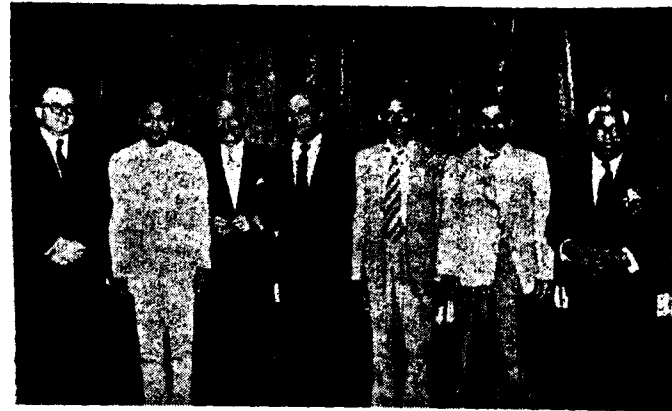
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Photograph shows the five dealers who won "Ingenuity Contest" held during the Conference (L. to R.) H. Stoehr, Telco; Mr. P. B. Kale of Jaika Motors, Nagpur; Mr. F. Webb of Webb's Sales and Service Private Ltd., Bangalore; Mr. Maduri Rajeshwar of Maduri Motors, Secunderabad; Mr. M. Ramamurthy of Jayalakshmi Automobiles, Vijayawada; Mr. M. Ramachandrapa of M.G. Brothers, Kurnool; Mr. N. Annaswamy of Telco.



(Sub-dealers), Sarafa Bazaar, Lashkar, Gwalior; WESTERN MOTORS PRIVATE LTD., Post Box 50, Rajkot; PRABHAT MOTOR STORES (Sub-dealers), near Bus Stand, Porbander; ZALAWAD MOTOR STORES (Sub-dealers), Surendranagar, (Dt. Zalawad); KANJI ODHAVJI SHAH & CO. (Sub-dealers), Junagadh; VINAL MOTOR HOUSE (Sub-dealers), Gogo Gate, Bhavnagar; JAMNAGAR MOTOR STORES (Sub-dealers), Ranjit Road, Jamnagar; JAIKA MOTORS, Post Box 1, Kingsway, Nagpur

1; BHILAI MOTORS, Ruabandha, Opp. Bhilai Hotel, Utai Road, Durg; DADAJEE DHACKJEE & CO. PRIVATE LTD., Shree Pant Bhuvan, Sandhurst Bridge, Bombay-7; GOTADKI PATIL AUTOMOBILE CO. (Sub-dealers), Angolmal, Belgaum; AUTOMOTIVE SERVICES (Sub-dealers), Tilak Road, Poona-2.

#### EASTERN ZONE

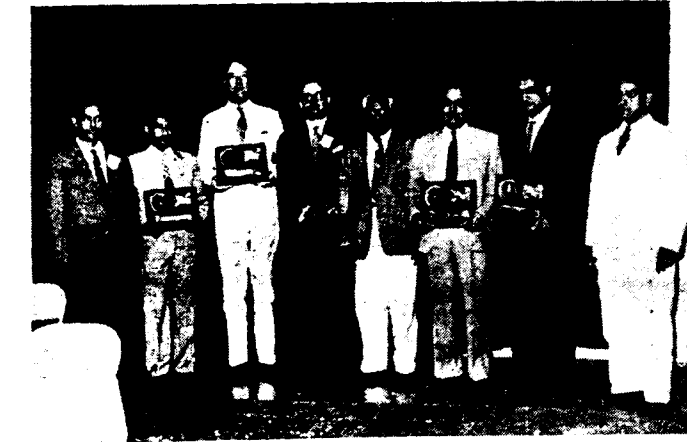
FRENCH MOTOR CAR CO., LTD., 234/3, Lower Circular Road, Calcutta-20; BHANDARI & SONS (Sub-dealers), Bhandari

Buildings, Kharagpur; MAC'S GARAGE (Sub-dealers) Sevoke Road, Siliguri (W. Bengal); N. P. VYAS & COMPANY (Sub-dealers), West End, G.T. Road, Asansol (W. Bengal); JESRAJ JIWANRAM PRIVATE LTD. (Sub-dealers), Jorhat, Assam; HIMAT-SINGKA MOTOR WORKS LTD. (Sub-dealers), Assam Trunk Road, Gauhati, Assam; HIMAT-SINGKA MOTOR WORKS LTD. (Sub-dealers), Hospital Road, Tezpur, Assam; HIMAT-SINGKA MOTOR WORKS LTD (Sub-dealers), G.T. Road, Nowgong, Assam; MITHILA MOTORS, Station Road, Motijhil, P.B. No. 5, Muzaffarpur (N. Bihar); TIWARY BECHAR & CO. PRIVATE LTD., Post Box No. 20, Jamshedpur; BHARAT MOTORS (Sub-dealers), Naya Bazar, Dhanbad; R. A. HIMAT-SINGKA & CO. (Sub-dealers), P.O. Dumka, Santhal Parganas; UTKAL AUTOMOBILES, Post Box No. 45, Cantonment Road, Cuttack.

#### SOUTHERN ZONE

MADURI MOTORS, Rashtrapathi Road, Secunderabad; M.G. BROTHERS, P.B. No. 13, Kurnool; JAYALAKSHMI AUTOMOBILES, 8-11, 232, Velagaletiwari Street, Vijayawada; SRI RAMA-

Picture shows four Tata-Mercedes-Benz dealers with the Silver Plaques awarded to them for their Sales achievements (L. to R.) Mr. K. Ramswamy, Parts Manager, Telco; Mr. A. V. Giri of Messrs. Gounder & Co. Ltd., Coimbatore; Mr. F. G. Schoolbridge of French Motor Car Co., Ltd., Calcutta; Mr. H. Soehr, Manager, Auto Division;



Mr. N. Annaswamy, Sales Manager, Telco; Mr. S. G. Sanghi of Messrs. Sanghi Brothers (Indore) Private Ltd., Indore; Mr. H. C. Gupta of Messrs. Motor & General Sales, Ltd., Lucknow; Mr. M. G. Chopra, Service Manager, Telco.

DAS MOTOR TRANSPORT PRIVATE LTD., Post Box 42, Subhas Road, Kakinada; ARVIND MOTORS PRIVATE LTD., Balmatta Road, Mangalore-1; WEBB'S SALES & SERVICE PRIVATE LTD., 30 Mahatma Gandhi Road, Bangalore, UNITED AUTOMOBILES (Sub-dealers), 220, Sayaji Rao Road, Mysore; KARNATAKA TYRES (Sub-dealers), Tyre House, Shimoga; V.S.T. MOTORS PRIVATE LTD., Gove

Buildings, 34, Mount Road, Madras-2; THE MOTOR WARE HOUSE (Sub-dealers), Palakarai, Tiruchirappalli; THE GOUNDER & CO. (PRIVATE), LTD., Goodshed Road Pollachi; PANDYAN AUTOMOBILES PRIVATE LTD., 5, Scott Road, Madurai; KULATHUNKAL MOTOR CORPORATION, Trivandrum; LAKHIA BROTHERS, Lal Darwaja, Ahmedabad; SHAKTI AUTOMOBILES, Calicut (Kerala).

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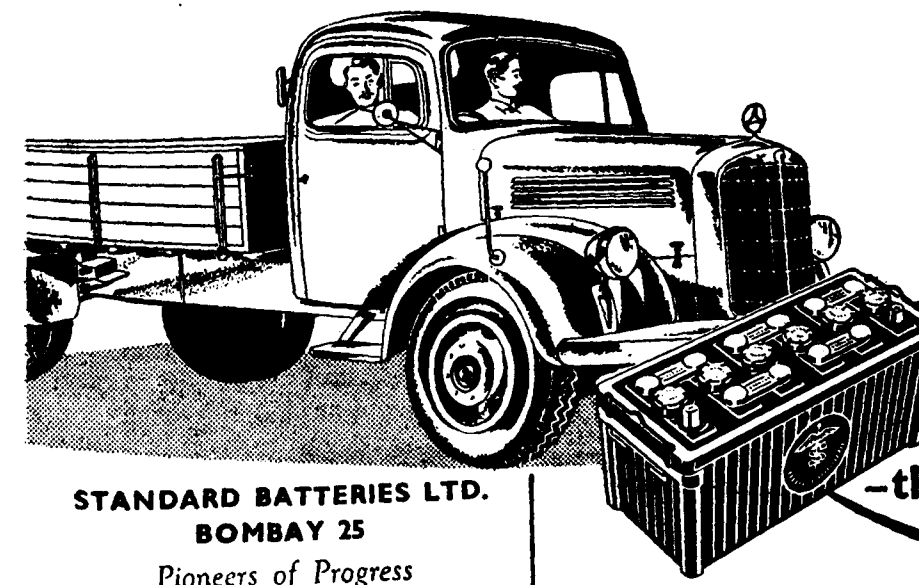
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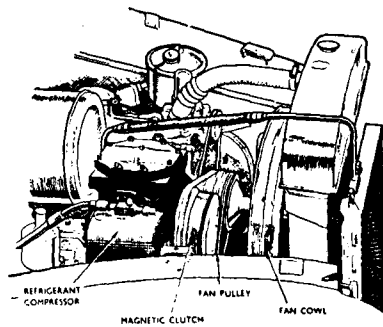
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## NEW AIR CONDITIONING SYSTEM IN ROLLS-ROYCE

For some time Rolls-Royce have been offering an air conditioning system of American design for use in hot climates but they are now offering a new, lighter and more compact system of their own as an optional extra on Rolls-Royce and Bentley cars. Rolls-Royce test drivers on cars equipped with it in Europe find that they use it practically all the time, even when the weather is not very hot, because the system also acts as a very agreeable dehumidifier when the weather is damp.

Some previous ideas on air conditioning were abandoned following a visit by senior personnel of the company to Texas last summer. It had previously been thought that any temperature difference greater than 15°F would be likely to produce thermal shock and possible nausea but in order to create acceptable conditions during a short run in a car which had been parked in the sun it was found necessary to have a big reserve capacity which could pull the temperature down within a few minutes and a temperature difference up to 30°F is now obtainable with the blower working at full capacity. The extra cost in England is £385 plus tax on the Rolls-Royce Silver Cloud and Bentley S series and £550 plus tax on the cars with special coachwork.

NEED FOR AIR CONDITIONING HAS BEEN INCREASED BY HIGH CRUISING SPEEDS WHICH MAKE IT NECESSARY TO KEEP WINDOWS CLOSED. The refrigerator unit is a vapour compression type using Dichlorodifluoromethane (Freon 12) in gaseous form. This gas is pumped to a high pressure by a condenser in front of the car's radiator, which removes heat and changes the gas into a liquid, still at high pressure but at a temperature near that of the surrounding air. The fluid then passes through an expansion valve where its pressure and consequently its temperature are reduced and it then passes to an evaporator in the luggage trunk where it picks up heat to change it back into gas. From there it is drawn to the inlet of the compressor and the cycle



is repeated. In the evaporator, the heat necessary to convert the liquid into gas is taken from the stream of air supplied to the car interior, which is correspondingly cooled.

Heating a car is relatively easy, as there is a large supply of surplus heat available from the engine and it is only a question of using it effectively. There is no corresponding supply of cool air and the refrigerator has to have a large capacity. It is equivalent to 50 domestic refrigerators or to using between two and three tons of ice a day. The equivalent energy has to be taken from the engine by the compressor which can use 3 or 4 b.h.p. at cruising conditions in hot weather. An Eaton electro magnetic clutch is built into the drive pulley so that the pump does not absorb power when the system is not operating. The radiator is masked by the condenser so the cooling system is pressurised to maintain cooling capacity.

To help the air conditioning system, the car roof is insulated. There are also more extensive heat shields between exhaust system and car floor. External sunvisors and special heat absorbing glass in the windows can also be supplied. The complete system, with the necessary chassis modifications weighs only 150 lb. 68 kg. The condenser unit is mounted in front of the engine radiator and the evaporator, which cools the air is carried in the luggage trunk.

A large reserve capacity has to be available for the reasons already explained, and some way has to be

provided as dissipating this when the desired temperature in the car has been achieved. This is done by taking some of the partly condensed gas from part way down the condenser and passing it through a control valve into the pipe line between the evaporator and compressor, so that the compressor draws some of its charge from the evaporator and some from the control valve. The driver has a three-way control on the instrument panel to regulate the air flow, which can reach 400 cubic feet a minute at maximum capacity.

### STANDARD RING THE CHANGES

True to form, Standard have recently been exploring the permutations possible on the Vanguard and Ensign. The latter, introduced at the London show in 1957 was a cleaned-up Vanguard with engine capacity reduced to 1670 c.c. and the Triumph TR-3 gear-box operated by central stick shift. It was not long before a batch of Ensigns was produced for Canada with the Vanguard engine of 2088 c.c. and the Borg-Warner automatic transmission and now Vanguards are being offered with option of the four-speed box and stick shift in place of the three speed box with steering column shift. They have not yet got round to the formula. I personally would prefer an Ensign with Vanguard engine and brakes. Meanwhile production of the sportsman has ceased. This was the specially finished car with three speed gear-box overdrive and twin carburettor engine. It was originally planned as a Triumph; hence the Triumph badges and radiator grille, but emerged as a Standard.

However, apparently demand at the price was not sufficient to justify continuing it.

## IMPORT LICENCES TO HINDUSTAN MOTORS

### MINISTER HECKLED IN PARLIAMENT

That the Parliament was keenly interested in the automobile manufacturing programme of the country, was revealed recently when members devoted plenty of time in eliciting information regarding the manufacturing programme of various cars as well as the Import Policy of the Government in regard to automobiles in completely knocked down condition. Most of the discussion centred round the grant of licences to M/s Hindustan Motors for importing Morris 1000 c.c. (Baby Hindustan) cars and many expressed the doubt whether such licence was given at the cost of other car manufacturers in the country.

Mr. M. M. Shah, Minister of State for Industry, told the members that the Tariff Commission had suggested that the permission granted to Hindustan Motors to manufacture the Baby cars should not be withdrawn. Following this, a phased programme was submitted by the Hindustan Motors for the production of Baby cars. Pending full examination of this proposal, a token licence was approved for 250 units of the new Morris 1000 c.c. model. The Government was also informed by Hindustan Motors of the additional plant and machinery needed for the manufacture of such Baby cars. Since the company also was producing the bigger Hindustan cars, which had already reached a good state of indigenous production, it was decided that the Baby car programme should come next only to the manufacture of Hindustan cars.

Mr. Shah stated that though the Government were not in favour of banning the manufacture of Baby cars, they were not in a position to allow large scale production for such cars in view of the foreign exchange position. Pending an improvement in the situation, token licences for 250 units each were being issued for the company to keep the product continuously in the market.

Referring to the policy governing the allocation of foreign exchange to different automobile units, Mr. Shah said that such allocation was

made on the basis of performance, the increase in percentage of indigenous content, the maintenance level of production, employment etc.

He also informed the House that priority was being given to commercial vehicles and jeeps over passenger cars.

Giving figures of production, Mr. Shah continued that Hindustan Motors produced 3,875 cars of the Landmaster or Ambassador in 1955, 4,825 in 1956 and 4,788 in 1957. The number of Baby cars licensed were about 500 per year on an average. He said that the current cost—Insurance—freight price of complete set of components for one Baby car imported by Hindustan Motors was Rs. 3,334 whereas the ex-factory cost of the same car was Rs. 7,650 and the listed sale price Rs. 8,300.

There have recently been many proposals from progressive manufacturers of cars for an upward revision of prices for the cars, but the Government had declined all such proposals.

To a question by Mr. Feroze Gandhi whether special import permits had been granted to M/s. Hindustan Motors for the import of Bedford and Chevrolet trucks (reported in MOTORINDIA in the last issue), Mr. Shah said that import licence for 1,008 General Motor trucks had been issued to Hindustan Motors in February 58 for the period October 57 to March

1958. This included 600 Bedford and 408 Chevrolet trucks. The foreign exchange involved in respect of Chevrolet would be 35 lakhs and for Bedford 49 lakhs. He continued that the manufacturing programme of these trucks with approved progressive deletion percentages began from April 1958 and so further licences would strictly be considered on the basis of deletion percentages. According to the approved programme, it was expected that ultimately within a period of four years, the indigenous content of Chevrolet and Bedford trucks manufactured in India progressively would rise to 70 to 75 per cent which will be about the same final percentage as the indigenous contents in other trucks being manufactured in India.

Explaining the circumstances under which this collaboration between Hindustan Motors and General Motors was approved by Government, he said that this was only a switch over from the technical collaboration with Studebakers which did not prove fruitful to the extent desired.

In regard to licence to import of trucks, Mr. Gandhi asked: "The foreign exchange component of this licence is about Rs. 85 lakhs. I would like to know in view of the fact that the indigenous content of the Mercedes-Benz truck is 43 per cent and that of the Dodge 49 per cent, why the reduced quotas of these

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MOTORINDIA

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manufacturers were not restored before the grant of this licence to the Hindustan Motors, for importing 1,000 trucks in a 'completely knocked down' condition in terms of the Government resolution of the Tariff Commission's report?"

Mr. Shah: "I would like to clarify some of the misunderstanding in the question itself. This is not at the cost of any other manufacturer." He said the Hindustan Motors was getting for the Studebaker truck a certain amount of foreign exchange. As its technical collaboration with the Studebaker could not be fruitful it only wanted substitution of another type of manufacture. The General Motor's programme was found to be entirely satisfactory. As a matter of fact for the whole year it was not possible to give it (the Hindustan Motors) any foreign exchange on trucks in spite of the fact that to other two manufacturers a very sizeable quantity had been given.

Mr. Gandhi: My question was

a direct one and that was whether the quotas of other manufacturers were reduced and whether those quotas were restored because this licence was given for importing trucks in a "completely knocked down" condition.

Mr. Shah: There is nothing like a fixed quota for anybody. The total volume of foreign exchange is given for the entire factory and not for the different units.

When Mr. Sinhasan Singh raised another question the Speaker remarked that however interested members might be "we ought not to create an impression that a Minister—if he unfortunately happens to be a Minister—is there to be attacked and is not to be allowed to give a full explanation."

Replying to further questions, the Minister assured the House that no quota had been given to the Hindustan Motors from other manufacturers' quota.



#### Obituary

We regret to report the death of Mr. H. F. Higgins (58), Chairman and Managing Director of M/s. H. F. Higgins (Eastern) Private Ltd., Bombay and allied firms.

Mr. Higgins is well-known in India as a Representative of many leading factories in India, in automobile, air craft, engineering and allied manufacture.

He was Resident Representative of Fiats in India till 1950. He was connected with a number of institutions and was an active and well-known personality in the Automobile Import Trade.

## OOTY, THE QUEEN OF HILL STATIONS

Summer in Madras usually takes people to the hill stations in and around South India, particularly to Ootacamund, known as Queen of Hill Stations.

Before Congress ever came to power in the country, the Government of Madras used to have the top administration shifted to this hill station for nearly three or four months during the summer. This mass movement of the administration gave the necessary fillip in developing Ootacamund and keeping it alive as the most popular hill station. However, the abandonment of the Ooty exodus by the popular Governments has had its own effect till recently when the Indian Government concentrated its efforts in popularizing themselves of tourist interest like Ootacamund. Travel facilities and tourist amenities on the station has been remarkably increased in recent years and every effort is now being made to make Ootacamund more and more attractive for the tourist either from within India or from abroad.

Ootacamund or Ooty, known as the Queen of Hill Stations, stands at an altitude of 7,500 feet on the Nilgiris or Blue Mountains. Its climate is both bracing and equable. The scenery is magnificent, its hills, ravines, woods and grassy downs vying with one another for capturing the interest of the tourist. This salubrious health resort is reached both by rail and by well-kept, broad ghat roads. The nearest airport, Coimbatore, is only 55 miles away by road.

Sports and games of all kinds, and all facilities for a gay social life are available for the holidaying tourist, while for the introvert and the nature-lover, the walks and drives in and around Ooty are a veritable paradise!

There is no air connection direct to Ootacamund but the nearest airport is Coimbatore which is 55 miles by road from Ooty. Railway services from Madras are very attractive and bus services also are



Ooty—A view.

available from Mettupalayam to Coonoor and Ooty, etc. For road travellers, the Coimbatore-Ooty road is in very good condition. For going round within Ootacamund, walking is usually preferred by most people, but for those who would like to have long distance runs, taxis, without metres, are available locally and fares are collected at 12 annas per mile within the town limits and at one rupee over ghat areas. There are good and modern hotels of Western and Indian style, not to mention the dak bungalows, retiring rooms and boarding houses, which are in plenty.

Ootacamund consists of an area of 14 square miles and is 7,500 feet above sea level. During summer, the maximum temperature is 70°F and the minimum of 53°F.

Winter clothing is recommended for the evenings though cotton can be worn during daytimes.

As prohibition is in force in Madras State, foreign visitors requiring hot drinks will be advised to approach the Collector of Nilgiris at Ootacamund for special liquor permits, rules regarding the issue of which have been liberalised recently. Ootacamund also has the Lawley Institute, a residential club, the Gymkhana Club, the Ootacamund Race Club, the Hunt Club, besides facilities for Golf, Boating, Shooting

and Fishing. Picnic spots and places of tourist interest in and around Ootacamund are, Doda-betta Peak, Cairo Hill, Elk Hill, Tiger Hill, Snowdon, Marliamund Lake, The Wenlock Downs, Glenmorgan, Avalanche, Mukerti Peak and Dam, The Pykara Hydro-Electric System, Toda Cathedral, Kalhatti Falls, Fish Farm and Mudumalai Game Sanctuary.

### GOVERNOR'S PRAISE FOR OOTY

The Madras Governor, Mr. Bishnuram Medhi, who has been familiar with life in hill stations, as one coming from Assam, told the Ootacamund Municipal Council recently that he admired that enchanting town of Ootacamund and its surroundings above all others and fully conceded its reasonable claim to be the Queen of Hill Stations. He was quite impressed by its beauty and charm.

The Governor said that the Government of India was deeply interested in the development of tourist centres and he was sure that if the Municipality would formulate concrete proposals for the development of Ootacamund from the tourists' point of view, the Government would have them examined and that the Government of India would be approached for necessary help in the matter.

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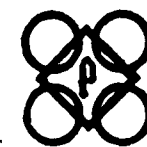
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## KASHMIR'S ATTRACTION TO TOURISTS

With a view to developing the transport system in the State and link it with the overall programme of boosting tourist traffic and providing greater facilities to tourists, visiting Kashmir during the season, the Kashmir Government have sanctioned an expenditure of nearly two million rupees.

According to the Controller of Transport, Mr. Kanth Raina, ultra-modern deluxe buses are being introduced on the Srinagar-Jammu-Pathankot route with the dual purpose of coping with the growing tourists traffic and providing greater comforts to tourists. Several additional buses were also being run to open up new areas in the Kashmir Valley for tourists and with a view to linking tourist resorts and the City of Srinagar.

## TRIBUTE TO AUTO INDUSTRY

Addressing the Indian Institute of Road Transport at Bombay, Col. V. P. S. Menon, Development Officer, Union Minister of Commerce and Industry paid a handsome tribute to the automobile industry in India, which was doing magni-

ficently well, in what he termed, a national emergency. He added that the automobile industry in India compared very favourably with other industries in the public or private sector, though it was a very difficult industry, unlike for instance the cycle or sewing machine industry.

## TOURISTS WIPEOUT EXCHANGE GAP

Tourists continue to flock to Italy in increasing numbers. Figures for 1957 broke all records and reached heights which a few years ago were believed impossible.

From January to September 1957, 12,778,000 foreign guests crossed Italian borders—almost four times as many as used to come before the war. Figures for the whole year show that some 14 million tourists came, a figure equivalent to nearly one-third of the entire Italian population. Of these, 19% came by train, 15% by road, 5% by sea and 14% by air, the month of heaviest gain in tourist traffic was April, up 44.4% over 1956. August is the leading month of the tourist year, and last August more than 3½ million tourists were checked in.

A breakdown by countries of origin shows that more than 3,000,000 Germans (24½% of the total) came South for their holidays. Austrians, French and Swiss follow in that order. Although American tourists are only about one in twenty, the number is growing year by year.

The half-billion dollars which tourists spent in Italy last year goes a long way towards writing off the Italian deficit.

Improved standards of living and more vacations with pay have caused a substantial growth in internal Italian tourism. Today the business is one of the most important in the country, with sound prospects for constant expansion. In the last eight years, hotel and paying-guest accommodation has increased 40% with a much higher increase in sleeping arrangements. Notable improvements in quality have also been made. The hotel industry has been attracting foreign capital in recent years. Total value of amenities for putting up tourists is estimated at almost a billion dollars. These developments have also meant an increase in travel agencies, which now number 625.

# MOTORINDIA NEWS SECTION

(BY OUR SPECIAL CORRESPONDENTS)

## A Millionaire's Town Carriage

*Among the varied interests of Mr. Nubar Gulbenkian, the famous oil millionaire is a love of motor cars, but cars which are different.*

*During his visits to the London Motor Show in October 1956, he decided that in London's crawling traffic a London taxi would be the quickest means of travel between his suite in the Ritz Hotel and his office in the City, but it had to be a taxi with a difference; a taxi with a million dollar look. The 26 foot turning circle and short length made it ideal for heavy traffic in narrow streets.*

Leading coach-builders showed little interest, as the alterations and modifications necessary seemed too difficult but eventually James Young Ltd., agreed to investigate the project. An initial drawing was prepared and a standard Austin taxi was ordered, minus upholstery and paintwork.

After many meetings in Jack Barclay's showroom and Mr. Gulbenkian suite at the Ritz, poring over drawings, and discussing various amendments and alterations, it was decided that Mr. Lee of Panelcraft, a small Company of sheet metal workers should carry out the initial re-styling and modifications to the shell and the timing and painting should be carried out by James Young Ltd., a Jack Barclay subsidiary.

When the full size drawing and estimate had been approved by Mr. Gulbenkian, including the addition of a plastic panel in the roof to admit light, the taxi was delivered to Panelcraft Ltd., who began to remodel it as a true brougham, with modified front fenders.

During the initial stages of the conversion, Mr. Gulbenkian visited Panelcraft Works almost weekly, making various amendments and alterations as the structure proceeded, one of which entailed the

entire re-designing and making of a new radiator and hood.

When the shell was practically complete, it was realised that the front roof over the driver tended to spoil the perfection of line of the brougham, so Mr. Gulbenkian decided that the front roof would have to slide back and disappear into the rear roof, leaving the front open as in the true carriage of this type.

Mr. Gulbenkian wanted a woven cane finish on side and rear panels "I like the old styles and this was all the rage when I was a young man fifty years ago." and although this is practically a lost art, Mr. Francis, the heraldic artist of Barnet, agreed to undertake it.

James Young completed the luxurious upholstery and the interior cabinet work which is of ebonised finish inlaid with a fine brass line. To preserve the town carriage atmosphere a dark green West of England carriage cloth was used for the upholstery with carriage lacing to the cushion edges and interior panels.

All fittings to the interior and exterior of the rear of the body are in brass. Interior fittings include a carriage clock, tubular reading lights, lamb's wool rug, etc. and all windows are electrically operated.

Mounted on the top of the centre pillars are square brass carriage lamps with blue starred glass, which act as identification lights and flashing indicators.

Construction took 18 months from start to finish.

British Motor Corporation exports for first quarter of 1958 broke all previous records, exceeding first quarter of 1957 by 21 per cent, and correspondent period of 1956 by 18 per cent B.M.C. now accounts for 40 per cent of British Industry's vehicle exports.

## Americans Invade Europe

### Buy a Car and see Europe

A mass delivery of British cars to American buyers as they stepped from their plane at London Airport—sponsored last year by the Standard Motor Co. for the first time was repeated on May 3 and 10 this year. The first party came from Los Angeles in the first B.O.A.C. Britannia 312 ever to be chartered and was to be followed by a second from the East Coast on May 10th.

181 Americans were to take part, driving their 98 Triumph TR-3 sports cars for 3,000 miles through England, France, Spain, Italy and Switzerland on a 28-day tour. These rallies are organised by The Triumph Sports Owners' Association of America, in conjunction with Standard-Triumph Sports Owners' Association of America, in conjunction with Standard-Triumph Motor Co. Inc. of New York.

## AMERICAN DEBUT FOR NEW JAGUAR

Jaguar cars have revealed that a new XK 150 open two seater coupe will make its debut at the New York show on April 5th. The new open two seater will join the existing range of XK 150 Drophead and Fixed Head Coupes. The new model is a descendant of the original XK 120 which was introduced in 1949 and has sold 20,000 models in America alone. The new Model will come in three firms; the Standard Model, the Special Equipment Model and the 'S' Type—the latter being fitted with a 9 to 1 compression three-carburettor engine which develops 250 brake horsepower giving the car a maximum speed of 410 m.p.h. Entire output of this new 2 seater will be reserved for export, particularly to America, where despite the recession, orders for Jaguar cars show no signs of diminishing. Prices of the new model in America range from \$4,495 to 5,020 according to the equipment.

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 BOMBAY · CALCUTTA · MADRAS

## B. M. C. and Standard Get Good Orders

Orders placed at the B.M.C. stand during the Sportsman's show at Toronto have reached the 500,000 dollar mark. A full range of B.M.C. products and Austin Gipsy and Austin and Morris vans. The rubber suspension system fitted to the Austin Gipsy attracted much attention. The B.M.C. development car Ex. 179 powered with 950 c.c. engine which set up 9 International and 54 American Class 'G' records at Utah Salt Flats last year, was also on view.

Reports received from John Warren, Standard Export Sales Director in Canada, show that participation in the Toronto show has meant good sales for Standard cars. Reaction to the 1958 TR-3 was enthusiastic and all cars so far imported have been sold and shipments due shortly via that St.

Lawrence has been sold in advance. The Standard Ensign model fitted with Borg Warner automatic transmission making its world debut at the show aroused much interest and sales prospects are excellent.

**Germany:** Eugen Benz., eldest son of motor pioneer Karl Benz has died at the age of 85. Born on May 1, 1873 at Mannheim, he was one of the last survivors of those who saw the world's first motor car which his father designed and built in 1885-6. Young Eugen in company with brother Richard took part in an historic journey on a Benz tricycle in 1888 when his mother piloted the vehicle from Mannheim to Pforzheim and back—a distance of 120 miles. The trip, then though a remarkable feat, was kept a dark secret from Pappa Benz for several days. It was the first journey ever accomplished by a gasoline driven vehicle over a long distance.

Eugen studied at Technical College in Darmstadt and became a dis-

tinguished engineer, excelling in the design of generators. He worked in his father's factory at Mannheim, and eventually became boss of the engine construction department. In 1903 when the firm of Karl Benz was reorganised, Karl and his sons founded their own motor enterprise K. Benz Sohne, in Ladenburg in Baden, South Germany, where they made mainly stationary engines.

**Standard Triumph Sales Boom in U.S.A.** Returning from the New York International Automobile Show, Mr. John Warren, Export Sales Director of Standard Motor Company revealed that new U.S.A. registrations of Triumph cars for January and February (including small standards sold under Triumph name in U.S.A.) were 1,400 which is treble the 1957 figure. He said "In twelve months our dealers have increased from 250 to more than 500 and I am confident of at least 15,000 Triumph U.S. registrations in 1-58. Canada too is booming and I expect a 50 per cent increase in sales there."

## British Airlift for French Cars

Hundreds of French Renault 750s and Fregates destined for England during the next year will be flown from France to England by Bristol Freighter ferryplanes as a result of an agreement reached between Renault and Silver City Airways. The cars will travel from Paris to Etaples by train, will then be driven two miles to Le Touquet Airport on the coast and then will be flown to Ferryfield to connect with a mammoth car transporter bound for the Renault Works at London.

M. Cluade-Marie Haardt, Renault's General Manager in Britain said that "The demand for the Dauphine is so great that our works at Acton are now concentrating exclusively on the assembly of this model". All other models will be flown to Britain by Silver City Airways.

**Norman Garrad**, Competition Manager of the Rootes Group, has left England for Nairobi where he will direct the Hillman Minx team taking part in the East African Safari Rally. The rally is one of the world's toughest tests for production cars and the route is 3,000 miles from Nairobi, through Kenya, Uganda and Tanganyika and terrain varies from sea level to 9,000 feet and from superb road surfaces to muddy swamps. On parts of the route there is also good chance of meeting elephant, buffalo, gazelle and zebra. The rally starts on April 4 and finishes just after Easter.

**Alvis Ltd.**, have announced that the 3 lit TC/108G model will soon go into production with Graber styled sedan drop head coupe coachwork, built under licence in this country by Park Ward. The drop head model will be similar to the Swill built exhibit shown at Earls Court last year. The sedan will also resemble the exhibit seen at last year's show but will have more leg and head room in the rear quarters. Deliveries are expected to begin in the autumn.

## ROOTES MOTORS

Rootes Motors Inc., New York will award a special trophy to encourage more Hillman and Sunbeam owners to compete in national rallies in the U.S.A. this year. The Rootes trophy will go to the consistently highest placed owner driver and/or navigator of a Rootes product—and with it will go an invite to visit the Group's factories in Britain and to tour Europe in 1959.

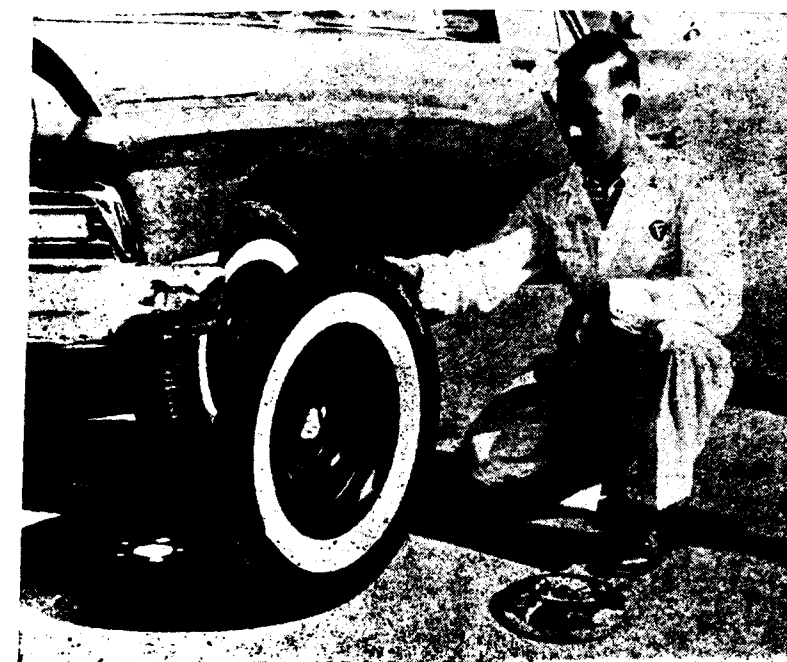
## ASTON MARTIN

Aston Martin Lagonda Limited—a subsidiary of The David Brown Corporation Ltd., have been honored with a Royal Warrant of Appointment to His Royal Highness, The Prince Phillip, Duke of Edinburgh, as Motor Car manufacturers, and are permitted to display his personal Arms.

## CIRCUIT OF IRELAND RALLY

Three Triumph TR-3 sports cars have been entered by the Standard Co. in the Circuit of Ireland Rally which has been given International status. The event was over 1,500 miles in length and said to be tough. The three TR-3 crews will be:— P. Hopkir, J. Scott, J. D. Titterton, B. McCaldin and E. T. McMillen—J. Haslett.

Firestone's Perma Spare, a new development designed as a substitute for a spare tyre is shown at Firestone's tyre proving grounds in West Texas. The unique spare tyre fits in a shallow recess in the luggage compartment. Elimination of the conventional upright spare gives automotive engineers more latitude for design. The Perma Spare is light weight and easy to instal.



MOTORINDIA

For BEST Performance INSIST on  
**'SUN-BEAM'**

AUTO



LAMP

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B. D. GOPAL DASS, Laxmi Building, Mall Road, Kanpur. (For Uttar Pradesh Only).  
R. SHANTILAL & Co. LTD., 53-A, Old China Bazaar Street, Calcutta. (For Bengal, Bihar, Orissa & Assam).  
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B. E. GOPAL DASS, Jindal Trust Building, 8-B, Ajmere Gate Extn., New Delhi. (For Delhi Only).

MOTORINDIA

## SEVERAL REPEAT ORDERS FOR LEYLANDS

LONDON: REPEAT ORDERS FOR INDIAN-BUILT LEYLAND COMET BUS CHASSIS ARE REPORTED BY THE HEAD-QUARTERS OF LEYLAND MOTORS LTD., AT LEYLAND, LAN-CASHIRE. THESE PASSENGER CHASSIS ARE MANUFACTURED BY ASHOK LEYLAND LTD. OF MADRAS.

Uttar Pradesh Roadways has placed an order for another 65 Comet bus chassis, bringing its total Comet fleet to 253.

At the same time, the Ahmedabad Municipal Transport Service, which already has 140 Leyland Comets in operation, has given a repeat order for another 15.

Twenty Indian-built Comet buses are to be put into service by the Bombay Electric Supply and Transport Undertaking, which uses Leyland Titan double-decker and Royal Tiger Worldmaster single-deck buses.

Another 10 Comets with a 230 in. wheelbase are to be added to the already large fleet operated by Madras Government Transport. The bodywork for these buses will be made at the Government Coach-building Works at Chrompet, Madras.

Kerala State Transport has ordered 10 Leyland double-decker buses from Leylands' Madras associate. They will be the first of the kind in Kerala, as the rest of that State's transport fleet consists of 140 Indian-built Leyland Comet single-deckers.

Leylands also report that several orders for Diesel-engined trucks placed by companies working on India's largest development projects have again been secured by Ashok Leyland. All these vehicles are to be supplied from the range of Indian-built Comets.

## RENAULT OUTPUT RISING

During second week of April Renault set a new record by building 1,060 Dauphines in a day at the Paris and Flins factories. Up to end of March they had built 331,855 Dauphines and 943,868 4 C.V. It is hoped to produce millionth 4 C.V. and half millionth Dauphine before the end of this year.

## Practical Patriotism of Kirloskars

On 24th April The Kirloskar Oil Engines Ltd., Kirkee (Poona) had invited a number of Press Representatives from Poona and Bombay to explain to them (and to the Country) the part that they (the Company) was playing in helping the country to earn more wealth.

The guests were welcomed by the management and were taken round the factory in batches. Each batch was in charge of a technical official of the Company. The visitors then assembled in the main hall where Shri Shantunurao Kirloskar addressed the gathering.

Recapitulating the old days, Shri Kirloskar briefly traced the history of the Company and said that when the factory was a growing concern, it

### MANUFACTURE OF MOTOR CYCLES

New Delhi: The Madras firm, licensed for the manufacture of motor cycles, turned out 1,827 motor cycles during 1957.

Giving this information in the Lok Sabha in a written reply to a question by Shri N. R. Muniswami, the Minister for Commerce and Industry, Shri Lal Bahadur Shastri, said that the programme of complete manufacture of motor cycles in India was spread over a period of five years. The capacity for which the Madras firm was licensed was 5,000 motor cycles per year and this was considered sufficient at present to meet the country's full requirements. The present annual demand was estimated between 3,000 and 4,000 motor cycles.

The following parts and accessories of a motor cycle, Shri Shastri said, were being manufactured in India:

Piston complete, seat, petrol tank, spark plug, silencer, inflator, frame, tyres and tubes, battery, rubber parts, bolts, nuts, pins and studs.

The value of the imported parts and accessories was about 60% of the value of a complete motor cycle.

found itself in an unfortunate position. There was a sharp drop in prices and glut in imported engines. That was in 1951-53. Government of India was aware of the reputation of the Kirloskars and they came to know of the unhappy state of affairs. They came to the assistance of the Company and the Company again started its activities in full swing. So much was the demand for these quality engines, that the factory was obliged to keep going all the 24 hours with 3 shifts.

Despite the fact that India needs more and more engines of the Kirloskar factory and for which they are prepared to pay a fair price, the Company has decided on a patriotic policy: of selling the engines to foreign countries even at a loss of Rs. 400 per engine. This is in order that the country may be able to earn foreign exchange. The manufacturers are aware that the Indian consumers are being deprived of these much-in-demand engines, but they feel that this inconvenience is only a temporary phase and as the factory is being expanded, they would soon be in a position to cope up with the ever-increasing demand very soon.

The Company is at present exporting to Cyprus, Australia and the Middle East and these overseas buyers are quite satisfied with the quality of the Indian made engines. Incidentally, the export business is helping the factory for importing certain essential materials for the factory.

The Kirloskar Brothers are planning the formation of another new factory for the manufacture of compressors.

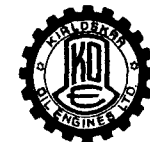
Shri Kirloskar then answered a number of questions of the guests. The very interesting function then ended with a lunch.



Just seven years ago, while there was an immense shortage of bearings, Kirloskar Engineers, who are practical technicians, produced Thin Wall Bearings in large quantity, specially for the Kirloskar Diesel. Since last four years, they are engaged in manufacturing highest quality plain bearings of STEEL BACKED White Metal, copper, lead or other bearing metals, BRONZE BACKED White Metal and various types of Bushes for automobiles, diesel engines and machine tools. These bearings are giving full satisfaction in operation.

Dealers and Sole Distributors to be appointed. Write for particulars:

**KIRLOSKAR OIL ENGINES LTD.,** Elphinstone Road, Kirkee, Poona 3



TOM & BAY LTD. (R)

# EUROPE LAUNCHES INTO MAN-MADE RUBBER

By far the most outstanding feature of this year's happenings in the petrochemical field in Western Europe will be the inception of large-scale synthetic rubber production from hydrocarbon base-stocks in Britain, Italy and France, and the big expansion of Western Germany's rubber-making capacity. Till now, the Federal Republic has been the only free-world country outside North America engaging in the synthesis of general-purpose or S-type rubber, though her current output of around 1,200 tons a year is only about a tenth of Germany's peak production at the height of World War II. In a few months' time, however, a new 45,000-ton synthetic rubber plant is due to be started up at the Huls Buna Works in the Ruhr area, where the first man-made rubber was already manufactured before the war.

Synthetic rubber production in the United Kingdom is at present confined to a few small plants set up during the past two years independently by Imperial Chemicals, Dunlop and Monsanto, to make various types of specialised rubber compounds. But before this year is out, a 50,000-ton plant for making synthetic general purpose rubber from petrochemical basestocks will be brought on stream at Fawley, near Southampton, by the International Synthetic Rubber Co., a joint enterprise of Dunlop, Good-year, Firestone and Michelin. A still bigger plant is nearing completion in Italy at Ravenna, where ANIC has built a huge factory designed to produce ultimately 65,000 tons a year of general-purpose rubber; some plant sections are already in operation. Meanwhile, a French group of ten petroleum, chemical and rubber companies expects to bring into production during this year its newly erected plant near Port Jerome for making 20,000 tons a year of synthetic butyl rubber, a material primarily used for inner tubes of car tyres. Though its importance for this particular purpose has somewhat lessened with

the advent of tubeless tyres, new compounding techniques are rapidly extending its usefulness for other automotive parts, e.g., high quality tyre treads, as well as for electric cable insulation and a variety of specialised applications. Before the end of next year, France too will enter the production of general purpose rubber at the rate of 40,000 tons annually, while in the Netherlands, Royal Dutch/Shell plans the erection of a 50,000-ton factory for making synthetic S-type rubber from petroleum at Pernis.

Italy's rubber programme is the most ambitious of the above projects. The capacity of the new 65,000 ton plant at Ravenna is equivalent to over three-quarters of the country's current consumption of natural and synthetic rubber, the latter now also being imported to the extent of about 20,000 tons a year. As the use of tree rubber is likely to continue on a substantial scale, the major part of Italy's output of the man-made material (as, later on, that of the Netherlands) will be available for export, whereas in Germany, the U.K. and France, the bulk of the new synthetic production of general purpose rubber will be absorbed in domestic consumption. As regards the raw materials basis of Italy's rubber production, this also differs from that in other European countries, where the main feedstocks for the rubber-making plants will be derived from petroleum. The operations at Ravenna will, however, be based on natural gas, via acetylene. As this route also yields large amounts of hydrogen, Italy's rubber plant has been linked with big facilities for the manufacture of nitrogenous fertilizers, planned to reach ultimately a total of 700,000 tons a year of ammonium nitrate and ammonium sulphate.

The four new European rubber plants to be started up this year, together with those already in operation in Western Germany and the U.K., will have a combined capacity of over 200,000 tons per annum. On completion of the two further factories for making synthetic S-type rubber in France and the Netherlands, that total will be raised to

nearly 300,000 tons, or over 40 per cent of the five countries' current overall consumption of tree-grown and man-made rubbers. United States and Canadian synthetic capacity, already aggregating 1½ million tons, is expected to surpass 1.8 million tons by the end of next year, if all expansion projects are realized as planned. With the completion of Western Europe's new rubber-making plants, and the probable addition of others planned in Japan, India and elsewhere, the free world's synthetic rubber capacity should approach 2½ million tons a year at the end of this decade. That of the U.S.S.R. and her satellites will then presumably have expanded to 400,000 or 500,000 tons a year as a result of the building of new plants; the most recent of these is a Rumanian factory in Moldavia, designed finally to produce 50,000 tons a year of synthetic rubber.

This fast growth of the world's rubber-making potential contrasts sharply with the virtual stagnation of natural rubber production, which has been fluctuating between 1.8 and 1.9 million tons annually ever since 1950, as against a rise in the world's overall consumption of rubber in the past seven years from 2.3 to over 3.1 million tons. Natural production is not considered to be significantly expandable before the early 1960s, when the effects of new plantings of rubber trees during recent years will begin to make themselves felt. Mounting supplies of the man-made material will therefore be indispensable for meeting an ever larger proportion of the world's future rubber needs, which are certain to keep rising at a brisk rate. Though the present economic recession in the U.S.A. and its possible repercussions on other countries may tend temporarily to retard the place of increase, these effects could well be offset by continued heavy demands from the Soviet Union, China and other countries of the Communist block, whose large purchases in the past few years were an outstanding feature of the natural rubber market.

Nevertheless, the inception of large-scale synthetic rubber production in Western Europe will accen-

tuate the already appreciable excess of the now available U.S. synthetic rubber supply potential over current demand. At the end of 1957, this surplus capacity amounted to nearly a quarter million tons per annum. It is likely to become even larger as the many new rubber plants now under construction in the United States are brought on stream, while the export market must be expected to contract as more and more countries embark on setting up their own rubber-making facilities. Obviously, any surplus in U.S. synthetic rubber capacity could readily be eliminated by further raising the proportion of the man-made product in the country's total domestic rubber consumption. In 1957 its share already exceeded 63 per cent, despite the attractively low price of natural rubber which during the year continued to decline from a monthly average of 33.2 cents a lb. in January to 29.1 cents in December. By the middle of last month it had dropped further to 26½ cents, or only about 10 per cent above that of synthetic S-type rubber, which has been maintained at between 23 and 24 cents a lb. for the past six years.

However, the consuming industries' choice between the tree-grown and man-made products is not merely governed by price considerations, but at least as much by the comparative qualitative merits of the two competing materials. Novel processes of rubber synthesis have made it possible to impart to the man-made product unique properties not possessed by its natural counterpart. This applies particularly to the growing variety of special-purpose rubbers, whose outstanding characteristics are their high resistance to heat, chemicals, and oxidation. Yet no less significance attaches to recent advances in the development of new types of general-purpose synthetics—such as Goodrich's "Ameripol" Firestone's "Coral," and others—whose molecular structure has been brought so closely to that of the natural product that they are now able to displace the latter in virtually all uses, even in heavy-duty tyres of lorries, buses and aircraft.

The overriding importance of the swift progress of rubber-making on both sides of the Atlantic lies, how-

ever, not only in ensuring that rubber supplies can readily keep pace with the growth of world demand, but also in giving major consuming countries a higher degree of self-sufficiency in meeting their rubber requirements from their own oil refining or natural gas resources. The desirability of greater independence from the vagaries of natural rubber supplies is demonstrated afresh just now by the events in Indonesia, the largest source of tree rubber. Its output of 685,000 tons last year represented 36 per cent of total world production of natural rubber, closely followed by Malaya's 640,000 tons, while other Asian countries provided a total of some 370,000 tons. Any prolonged dislocation of Indonesian supplies—or, for that matter, of those from any of the main rubber-growing regions in the Far East—would call for an immediate step-up of synthetic production. Its expansion in Europe, even though it involves a temporary increase in U.S. surplus capacity, and may in due course check the demand for natural rubber, must be regarded as a welcome assurance of rubber supplies in the troubled world of to-day.

## Mysore plan to put 500 trucks on road

**Bangalore :** The Mysore Government is considering a scheme for systematic transportation of iron and manganese ores from the mines in the State of West Coast ports for transhipment abroad. The scheme envisages putting about 500 trucks on the road for transporting minerals to ports.

There is vast scope for development of road transport in the State in view of the fact that the new Mysore State had abundant natural wealth. The huge reserves of iron and manganese ores in the State amounted to several thousand million tons and road transport has a very important role to play in exploiting these minerals for the benefit of the State. What was needed was for the automobile trade in the State to adopt itself to the changing needs of the day, according to a top Government spokesman.

## LOCOMOTIVE PARTS MANUFACTURE

### Entire workshop to be built by Indians

**New Delhi :** The Indian Railway Locomotive Components Work at Manduadih, near Banaras, is being constructed at a cost of nearly Rs. 4.8 crores.

Location on a 350-acre site, the workshop will be constructed entirely by Indian engineers. It will employ about 2,500 persons when in full production.

It will manufacture parts for both broad and metre gauge locomotives.

A training centre with the first batch of 80 trainees is expected to begin functioning in a few months and the teaching staff for it is now being recruited.

## FIAT'S NEW DIESEL RAIL COACH

A Diesel-driven passenger rail coach just completed by FIAT, the first of 24 similar rail coaches on order from the Ferrocarriles Consolidados concern of Cuba, was on view in Turin recently.

The coach develops a speed of up to 105 km. per hour. It is equipped with 56 passenger seats, a well stocked cafe-bar, and a postal service booth. Telephone connection with the other carriages in the train is maintained by a radio plant through which communication can be established with radio stations up to 20 miles distant. Synthetic resins, particularly suited to tropical climates, were employed to upholster both the interior and external parts. In addition to the 24 diesel passenger units, 19 coaches without motors are on order, including passenger carriages to seat 68, mixed passenger and luggage coaches with seats for 44, and goods vans. All are designed to weigh 35 to 40 tons each.

## INNOCENTI

The Hans Glass Co., of Germany has contracted with Innocenti of Milan for the production in France and Italy of 100,000 automobile-type vehicles. Innocenti will produce 200 vehicles daily in the 250-400 cc. classes.

# MODELS AND THEIR Prices

## CARS

|                                                                                             | Rs.    | nP. |
|---------------------------------------------------------------------------------------------|--------|-----|
| Plymouth Cars, (Sundaram Motors Private Ltd.) Ex-Premier Automobiles Factory, Kurla         | 20,270 | 00  |
| Plymouth Suburban (Sundaram Motors, Ltd.)                                                   | 22,646 | 00  |
| Hindustan Ambassador 1957 (Southern Automotive Corporation Private Ltd.) ex-plant Uttarpara | 11,161 | 00  |
| Dodge kingsway sedan (Rane (Madras), Ltd.)                                                  | 20,371 | 00  |
| Dodge Suburban (Rane (Madras), Ltd.) ex-Bombay                                              | 22,899 | 00  |
| Vanguard Phase III (Union Co. (Motors) Ltd.)                                                | 14,700 | 00  |
| Standard Super Ten Saloon (Union Co. (Motors) Private Ltd.) on the road                     | 10,022 | 12  |
| Standard Estate Car (Union Co. (Motors) Private Ltd.) on the road                           | 14,889 | 12  |
| Studebaker 'Parkview' Station Wagon 1956 model (Reliance Motors Ltd.) ex-plant Calcutta     | 20,280 | 00  |
| Studebaker 1956 Commander (V.S.T. Motors Private Ltd.) Including S.T. & Delivery Charges    | 22,239 | 86  |
| Studebaker 1956 President Classic (V.S.T. Motors Private Ltd.)                              | 24,499 | 78  |
| The Fiat 1100 The Elegant (Sundaram Motors Private Ltd.) Ex-Factory                         | 9,755  | 00  |
| Willys C.J. 3B Universal Jeep ex-plant Bombay                                               | 12,160 | 00  |
| Willys Model Station Wagon ex-plant Bombay                                                  | 18,150 | 00  |
| Jeep 1 ton truck                                                                            | 13,046 | 00  |

## MOTOR CYCLES

|                                                                        |       |    |
|------------------------------------------------------------------------|-------|----|
| Royal Enfield (The Madras Motors (Private) Ltd.)—                      |       |    |
| “150 Ensign” (any dealer point in India)                               | 1,890 | 00 |
| “350 Bullet” with spring frame (any dealer point in India)             | 3,430 | 00 |
| 499 c.c. Model ‘j2’                                                    | 3,500 | 00 |
| “500 Bullet” with spring frame                                         | 3,950 | 00 |
| “500 Twin” with spring frame and with Magdyno or coil ignition         | 4,450 | 00 |
| “700 Super Meteor” with spring frame and with Magdyno or coil ignition | 4,650 | 00 |

## SCOOTERS

Lambretta, manufactured by Automobile Products of India Ltd. Distributors, South India Automotive Corporation Private Ltd., Madras.

(At Visakhapatnam—Western Automobiles Ltd.) Prices are ex-Factory, Bhandup, Bombay.

48 c.c. Scooterete ... 827 00  
150 c.c. ‘LD’ Model Deluxe Scooter ... 1,795 00

## VANS

Standard Delivery Van. (Union Co. (Motors) Private Ltd.) on the road ... 10,628 56  
Hindustan Traveller, price on the road (Reliance Motor) Co. ... 14,700 00

## TRUCKS & COMMERCIAL CHASSIS

Sundaram Motors (P) Ltd.  
Leyland Comet “203” WB Passenger Diesel Chassis including S.T. & dely. charges ... 36,000 00  
Leyland ECPO 2/2R-176 WB full forward control Passenger Chassis S.T. & dely. charges ... 35,500 00  
Leyland ECOS 2/1R-163 WB goods chassis including S.T. & dely. charges... 34,700 00  
Leyland ECOS 2/2R-118 full forward Tipper chassis including S.T. & dely. charges ... 34,500 00

(V.S.T. Motors Private Ltd.)  
Tata-Mercedes-Benz. Diesel Truck and Bus Chassis L 312/42 165” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ... 26,820 00  
LP 312/42 165” W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur ... 27,780 00

LP 312-48 190” W.B. Full Forward Control Bus Chassis ex-Works, Jamshedpur ... 28,570 00  
L 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ... 26,475 00  
LK 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur ... 30,125 00

Fargo (at Sundaram Motors Private Ltd.) Dodge (at Rane (Madras) Ltd). Prices duty paid ex-factory Premier Automobiles Ltd., Kurla, Bombay.

C3D6-116” (4) 7.00×16—6 Ply ... 11,615 00  
C4D6-126” (4) 7.00×16—6 Ply ... 12,662 00  
C3PW6-126” (4) 9.00×16—10 P.W. Ply ... 17,974 00  
C4G6-153” (6) 34×7—10 Ply ... 16,391 00  
C4G6-153” (6) 32×6—10 Ply ... 16,062 00

|             |                         | Rs.    | nP. |
|-------------|-------------------------|--------|-----|
| C4H6-153”   | (6) 34×7—10 Ply         | 17,710 | 00  |
| C4H6-153”   | (6) 34×7—12 Ply         | 17,979 | 00  |
| C4H6-193”   | (6) 34×7—10 Ply         | 18,116 | 00  |
| C4H6-193”   | (6) 34×7—12 Ply         | 18,385 | 00  |
| C4H6-193”   | (6) 34×7—10 Ply         | 18,479 | 00  |
| C4H6-193”   | (6) 34×7—12 Ply         | 18,748 | 00  |
| K6D200-116” | (4) 7.00×16—6 Ply       | 12,896 | 00  |
| K6D200-116” | (4) 7.00×16—8 Ply       | 12,961 | 00  |
| K6D300-126” | (4) 7.00×16—6 Ply       | 12,900 | 00  |
| K6D300-126” | (4) 7.00×16—8 Ply       | 12,965 | 00  |
| K6W300-126” | (4) 9.00×16—10 P.W. Ply | 18,950 | 00  |
| K6D400-129” | (6) 34×7—10 Ply         | 16,372 | 00  |
| K6D400-153” | (6) 32×6—10 Ply         | 16,186 | 00  |
| K6D400-153” | (6) 34×7—10 Ply         | 16,531 | 00  |
| K6D400-171” | (6) 34×7—10 Ply         | 17,008 | 00  |
| K6D500-129” | (6) 34×7—10 Ply         | 18,092 | 00  |
| K6D500-129” | (6) 34×7—12 Ply         | 18,388 | 00  |
| K6D500-153” | (6) 34×7—10 Ply         | 18,331 | 00  |
| K6D500-153” | (6) 34×7—12 Ply         | 18,628 | 00  |
| K6D500-171” | (6) 34×7—10 Ply         | 18,606 | 00  |
| K6D500-171” | (6) 34×7—12 Ply         | 18,904 | 00  |

## PICKUP

|             |                   |        |    |
|-------------|-------------------|--------|----|
| C3D6-116”   | (4) 7.00×16—6 Ply | 15,012 | 00 |
| C4D6-126”   | (4) 7.00×16—6 Ply | 16,058 | 00 |
| K6D200-116” | (4) 7.00×16—6 Ply | 16,293 | 00 |
| K6D200-116” | (4) 7.00×16—8 Ply | 16,358 | 00 |

## DIESEL CONVERSION

|             |                      |        |    |
|-------------|----------------------|--------|----|
| C4H6-153”   | (6) 34×7—10 w.b. Ply | 22,668 | 00 |
| C4H6-153”   | (6) 34×7—12 w.b. Ply | 22,937 | 00 |
| C4H6-171”   | (6) 34×7—10 w.b. Ply | 22,903 | 00 |
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# 156 MOTORINDIA

VOLUME 2

JUNE 1958

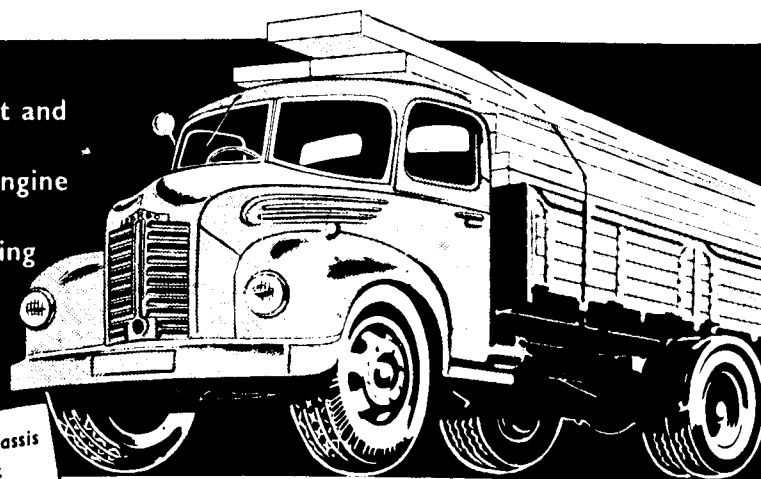
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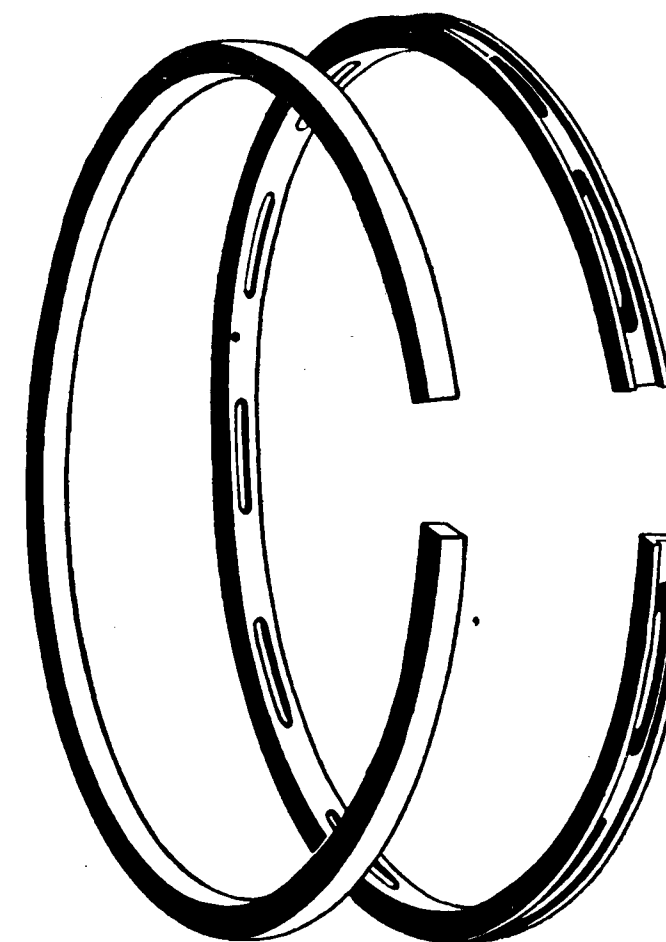
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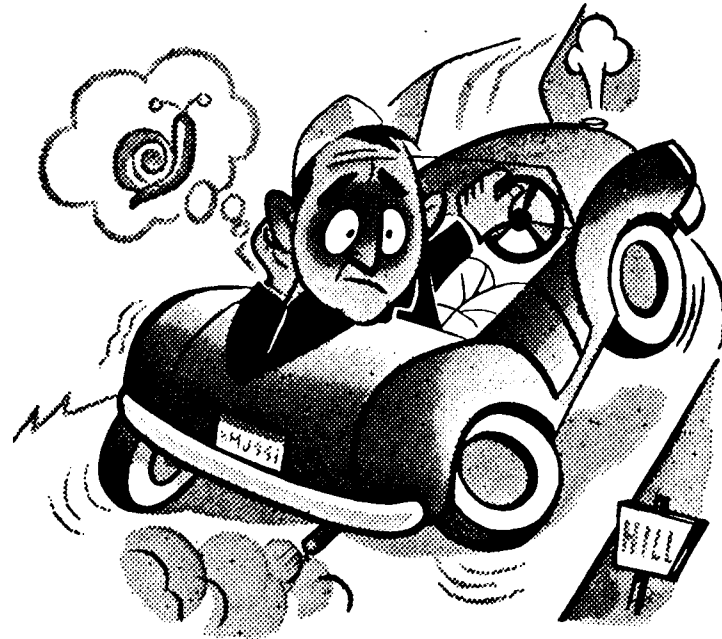
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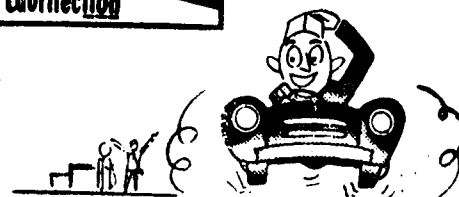
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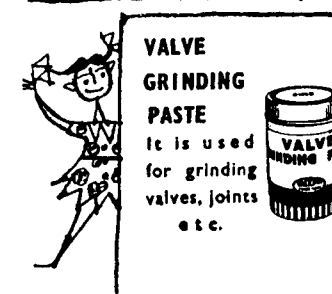
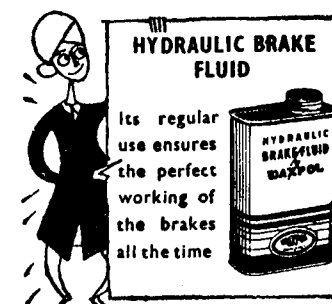
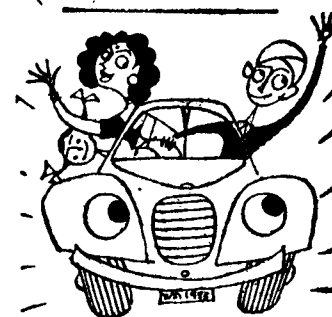


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# MOTORINDIA

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Vol. 2

JUNE 1958

No. 11

Price Re. 1

Annual Subscription Rs. 10

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# editorial

## ROAD TRANSPORT

The office-bearers of the Madras State Lorry Owners' Association deserve to be congratulated on the excellent organisation into which they have gradually built themselves up during the past two years, as was revealed at their second Annual Conference held at the Memorial Hall.

Moving goods from one place to another is an essential part of national economy and in these days when the Railways are finding themselves helpless, for obvious reasons, to move goods traffic, the road transport operators certainly play a very important role in the country's economy. Most of the food stuffs are moved more by lorries, particularly for short distances, and in these days of scarcity conditions, one can well imagine how prices will shoot up in particular places, of essential commodities but for the excellent service that the operators have been giving the public, inspite of great handicaps, and sometimes even harassment.

The road transport vehicle in Madras is perhaps more heavily taxed than its counter-part in any other part of the world. That thousands of operators working under such stressing conditions should have been present at the Annual Conference from various places of this State, shows the extent to which the honorary workers, who are office-bearers of the Association, have gone in organising an otherwise scattered, uncared-for, fraternity. The lorry operator to-day is fulfilling an essential task without which the economy of the nation will be in jeopardy.

It is, therefore, very gratifying that the Association, which was started by a few individuals a couple of years ago has grown to its present membership. There are still numerous operators in the States of South India who haven't joined either the Madras State Association or any other like Association. "In unity lies strength" is, of course, an old saying, but the truth of this will be found as the years pass more by the road transport operators than by any body of persons.

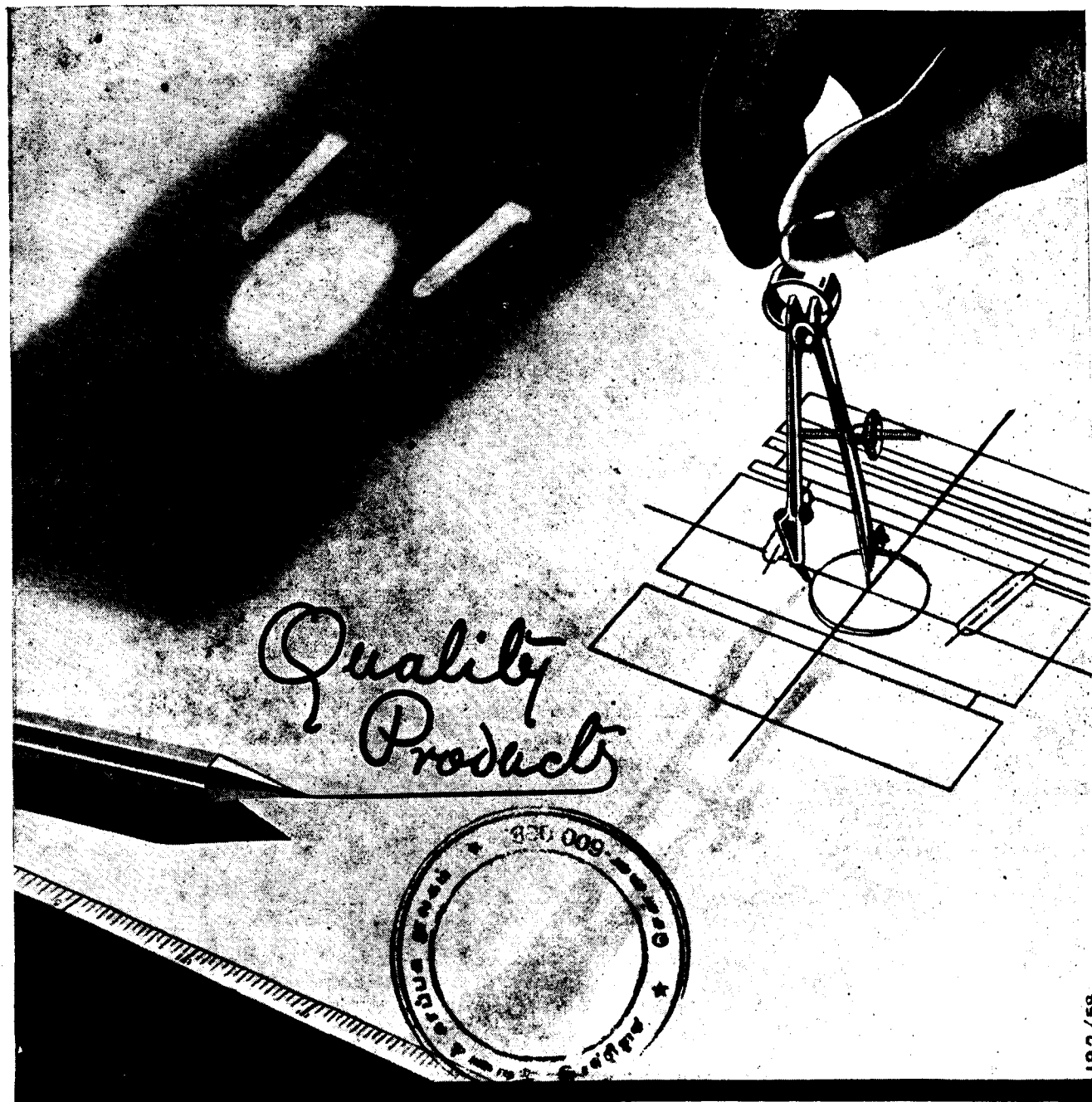
It had been represented to us that most of these operators would prefer to have a special publication in the language they like most, viz., Tamil, so that such of those—and there are quite many of them—who haven't by force of circumstances taken to the study of English, may still read about their problems and the rules and regulations facing their industry. In response to this, we have come out with a Special Tamil Supplement that has probably been read by most of the operators in South India by now. It is our earnest endeavour to serve road transport in our own humble way and we are hoping that we will be in a much better position to serve them more and better in the years to come.

June 1958

M-2

MOTORINDIA

5



Suppliers of original equipment Pistons, Gudgeon Pins, Piston Rings, Cylinder Liners and Alloy Castings to Engine Manufacturers and Replacement Trade Throughout India.



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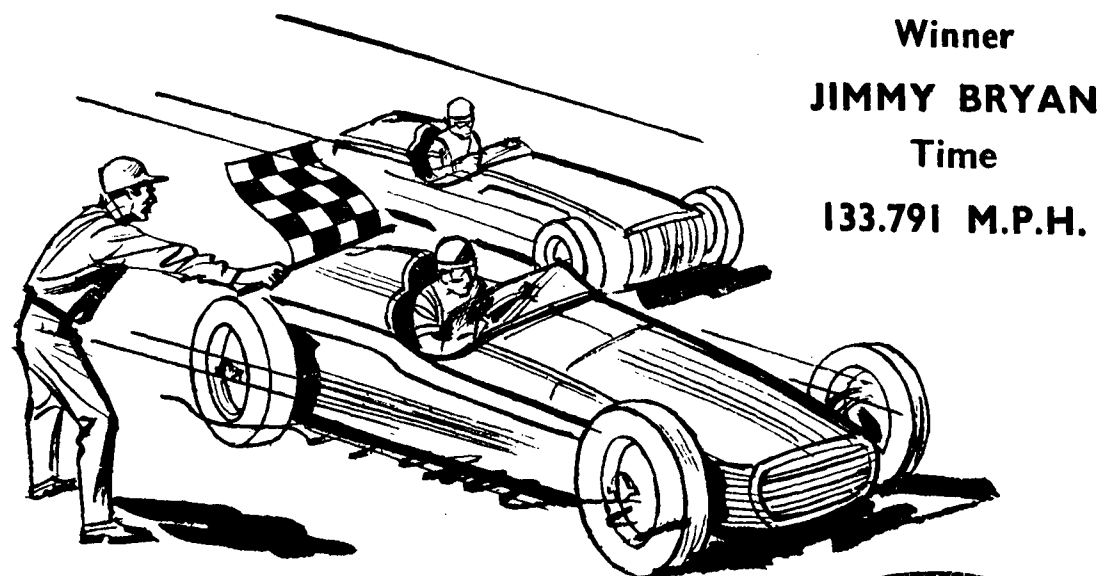
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for the **35th** Consecutive Time...

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FOR *Safer* MOTORING



N. 68

MOTORINDIA

June 1958

## SLOGANS FOR SAFETY

By A. HOLDEN

There are few countries to-day that are not without their traffic problems, whether these be in the form of too many cars indifferent and primitive roads and highways, or thoughtless drivers and pedestrians.

Road accidents are causing public, road and safety bodies much anxiety and alarm, with drivers often injured, maimed or killed and families bereaved. The road user must learn to stop and think of his future, as well as that of others!

However, as a means of forcing home the need for continuous care, courtesy, commonsense, consideration and carefulness, road safety organizations are trying to attack the problem by concentrating their attention on the road, the vehicle and the road user.

All sorts of campaigns and appeals have been made towards this end. One widespread medium of directing attention to the situation has been through the regular use of national postal administrations. Aptly-worded messages of information, warning and advice relating to motoring, have been from time to time originated and applied to mail matter as slogan postmark cancellations.

Some of these slogans carry plain-speaking messages, others are careful reminders, while more than not the blunt, direct and repetitious statements all assist towards public enlightenment and respect.

Accidents in Australia, perhaps as much as in any other country, occur through various causes, foremost of which is excessive speed, intoxication, inexperience, inattentive driving, infirmity of drivers, tired motorists or simply reckless.

Other causes for concern are the hit-run driver, not keeping to the correct side of the road, or giving way to other vehicles at intersections, failing to make turns with due care, overtaking improperly, following too close behind other vehicles, dazzled by lights of approaching vehicles, giving faulty hand signals,

pulling out of the kerb without due warning, disregarding or misunderstanding or failing to observe road signs or signals and crossing railway lines without care.

A formidable array of misdeeds, this, but perhaps this has been after all, responsible for the great number of safety slogans found on Australian mail matter.

Originally introduced throughout Australia in 1954 for the visit to the country of Queen Elizabeth II and the Duke of Edinburgh, was the slogan postmark worded: LET COURTESY REIGN ON THE QUEEN'S HIGHWAY. This is still doing service for the Australian post office.

Psychologically fitting was the slogan bearing the message: COURTESY IS CATCHING, which contrasted with the other hardy perennial definite in its simplicity, reading: ROAD CARELESSNESS KILLS.

STOP ACCIDENTS BEFORE THEY STOP YOU is another postal attempt to reduce tragic accidents on Australian roads, a warning that seems to be obeyed and understood when it is too late! Equally purposeful was the motto, which

insisted that: LIFE IS PRECIOUS. HELP TO PREVENT ACCIDENTS.

Adopted from the American slogan long in use in that republic, was another Australian mail reminder stating: SANE DRIVING, SAFE ARRIVING, in the first case must have needed some thinking out, yet its message is so meaningful and appealing.

Even the Dominion of New Zealand has its problems associated with motors and motoring, and over the years several striking postal slogans have been found to be necessary.

In tripartite arrangement one such piece of postal advice read: ROAD SAFETY. HAVE A CARE. DANGER'S THERE, has been in constant use, and another time the post office people stamped the mail with the cancellation: ROAD SAFETY. TAKE CARE. AVOID RISKS.

But apparently further appeals were brought into play, for the memo was altered to read: MOTORISTS. CARELESSNESS KILLS.

While a slogan that lend itself to almost any country in to-day's

All Motor Dealers located in South India and working under M/s Hindustan Motors Ltd., Calcutta recently formed into an Association under the name 'Hindustan Motor Dealers (South Zone) Association,' to promote comradeship and establish healthy trade practices etc. The photograph below shows Mr. R. N. Pillai, General Manager of Southern Automotive Corporation Private Ltd., Madras, addressing the first meeting.



MOTORINDIA

June 1958

7

# Comfort

## FOR THE V. I. P.

The fair is over. The car speeds smoothly as if it is conscious of the sleeping child in the rear seat.

Father at the wheel marvels at the way it almost anticipates his every move. "I bought it the year I got married - and that's nearly 7 years ago!" he reflects proudly. "Its paint doesn't gleam, the lines are definitely out of date; but I wouldn't exchange it for the latest limousine."

A car is more than a beautiful vehicle; it is a

bundle of sweet memories, happy associations. It is a matter of pride to us, therefore, that those who buy a car from us believe that with our servicing it will run merrily, long after its companions have joined the junkyard. It is this customer confidence that sustains our progress.

Today, TVS, with its several units, meets the increasing demands of the automotive industry in all its aspects in South India.



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**INDIA MOTOR PARTS & ACCESSORIES PRIVATE LTD.**, Madras  
Distributors of GM parts and accessories for all India.

**T. V. SUNDARAM IYENGAR & SONS PRIVATE LIMITED, MADURAI**



MOTORINDIA

June 1958

world, came into use in the Dominion, when it carried forth the message: **MORE MOTORS. STILL MORE CARE.**

During the last war, in New Zealand, when motoring was somewhat restricted by a shortage of petrol and replacement parts, New Zealanders were constantly asked to: **SAVE PETROL. HELP THE NATION.**

Pedestrians can cause many accidents by their thoughtless actions when stepping on to a road without making proper observations of existing traffic movements. Here we find that the New Zealand authorities have emphasised the position postally.

One of them often shown on letters said: **PEDESTRIANS, LOOK OUT BEFORE YOU STEP OUT**, while as an additional form of enlightenment there was the postmark indicating: **PEDESTRIANS, DON'T J. WALK.**

An analysis of road safety campaigns conducted in Great Britain seems to point to a re-education of motorists and pedestrians in the correct use and not abuse of roads and/or vehicles.

Some years ago now the British post office got behind the safety campaign, with a modest but informative piece of advice, stating: **MIND HOW YOU GO ON THE ROAD.**

Likewise before the last world war was the postal slogan phrased: **ROAD USERS. TAKE CARE, AND AVOID RISKS**, and yet another gentle admonishment came through the mail in the form of a cancellation inscribed: **TAKE NO CHANCES. KEEP DEATH OFF THE ROAD.**

Then the unpredictable actions of children when playing near or crossing over a roadway was symbolised in one other British slogan postmark in 1940 asking: **ROAD USERS, PLEASE MIND THE CHILDREN.**

In Ireland, the authorities have also included an appropriate plea on its letters, one to mind is recalled in: **MAKE THE ROADS SAFE.**

In Switzerland, where the Government has been responsible for intro-

ducing some very picturesque and worthwhile tourist and publicity postal slogans, one recent illustration pictured four motor cars, two of which are seen overtaking on a bend in the road. The message accompanying the picture over which a skeleton hand was superimposed stated: **DO NOT OVERTAKE ON BENDS.**

One other Swiss slogan asked for nothing more of motorists and pedestrians than: **ON THE ROAD. CARE AND COURTESY.** Likewise in persistent use at Swiss post offices is the postmark suggesting: **CARE ON THE ROAD SAVES ACCIDENTS.**

Meanwhile, one slogan from Canada, where road appeals for the betterment of motoring and road manners has been lately conducted, some time ago tourists and visitors were invited to: **TRAVEL ONTARIO ON THE KING'S HIGHWAY.**

But on recent times where the factors being the tragic road accidents rate were put down to excessive speed and lack of courtesy, officials summed up the situation as "aggressiveness." Therefore, it was not to be wondered at when the mail began to carry the slogan **DRIVE SAFELY AND MOTORISTS, TRY COURTESY.**

Not long ago letters received from the Island of Jamaica were

inscribed with cancellations worded: **LOOK ! LISTEN ! LIVE LONGER** advice that would hardly seem necessary, save for the inroads of motoring into public life.

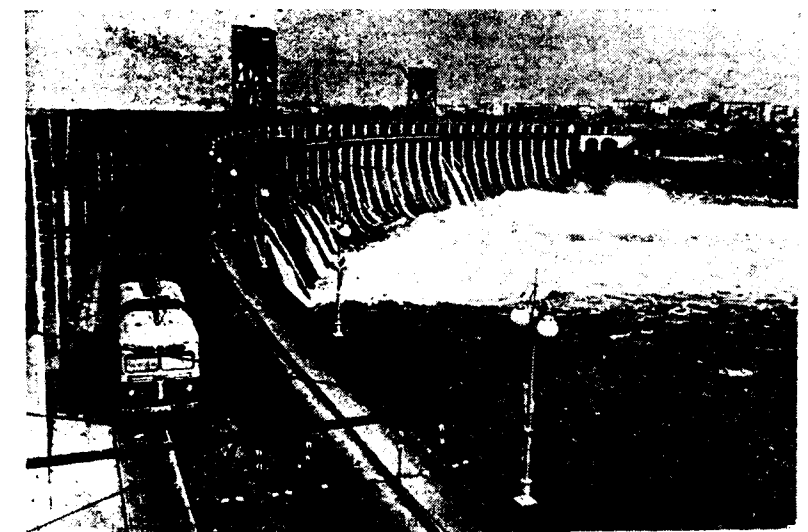
In recent years the Philippine Islands postal authorities have been imprinting its mail with the legend: **SAFE DRIVING. SANE WALKING. ACCIDENT PREVENTION.** Short and sharp.

At the same time the same source provided a worthy motto for all road users. **AVOID ACCIDENTS. DRIVE—WALK CAREFULLY.** This was a very embracing and collective statement of fact.

In Denmark it has been said that far too many motorists are listed as "temporary Danes," and a number of organizations are behind moves for public education, with apt slogans and stickers. But not so long ago the post office directed several towards children. One said: **DON'T LET CHILDREN PLAY ON THE STREETS.** A second of importance improved upon the first, with: **KEEP THE CHILDREN'S PLAY FROM THE STREETS.**

Pre-war Germany even issued a slogan wisely stating: **KEEP AN EYE OPEN FOR TRAFFIC**, while current postmarks cancellations inscribed: **LOOK OUT ON THE ROAD. BEWARE OF ACCIDENTS** are being employed in the interests of road safety. (Copyright)

A new trolleybus line, 14.4 km. long, has been built in Zaporozhye. It runs from the Stalin Prospekt to the transformer plant. Photo shows a trolleybus passing over the dam of the Dnieper Hydro Power Station.

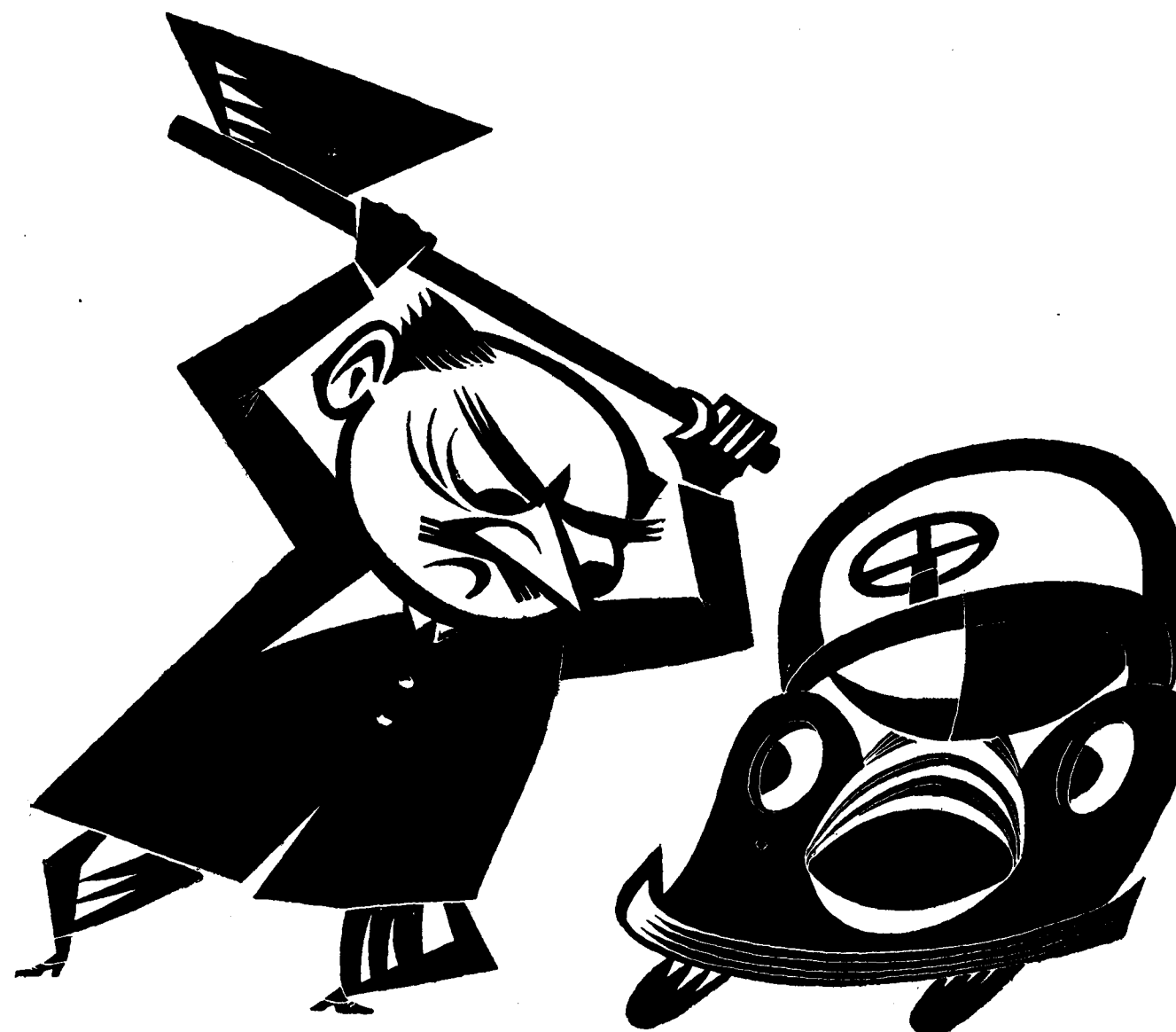


MOTORINDIA

June 1958

M—3

9



PLEASE...

SPARE that car! It's not her fault. Just drive in at the Sign of the Flying Red Horse...and then

**GO with Mobilgas!**

MOBILGAS is a STANVAC product



STANDARD-VACUUM OIL COMPANY (Incorporated in the U.S.A. with Limited Liability)

MOTORINDIA

June 1958

PERHAPS the simplest way of getting petrol to the carburettor would be to pour it in from a bottle—but as this would sooner or later result in an explosion, it is not seriously recommended, except in an emergency.

Motoring pioneers used a wick, with one end in a petrol reservoir and air passing over the other end to draw off vapor for the engine. And it worked—believe it or not!

Ensuring a steady flow of clean fuel into the carburettor was a tough problem in the early days, and it is only in comparatively recent years that it has been overcome.

Designers have given us seven basic ways to get the petrol from tank to carburettor. Five of these have been largely superseded; the other two are found in most of today's cars.

The five methods used commonly up to 1930 were gravity feed, exhaust pressure feed, combined gravity and exhaust pressure, forced-air pressure and combined gravity and vacuum. But today, with very few exceptions, fuel is supplied by a pump—either mechanical or electric.

#### Early Systems

Gravity feed, one of the earliest methods, was developed conjointly with the carburettor. In this system the fuel tank is placed higher than the engine, and the petrol flows down naturally to the carburettor. This was one of the simplest methods, and it gave the least trouble.

It was largely discarded when modern design reduced the height of the car, making it difficult to place the fuel tank above the engine. However some European manufacturers have continued with it; Volkswagen and Skoda, for instance, still find the system successful and trouble-free.

With the transfer of the fuel tank from the front to the rear of cars, someone thought of using exhaust gas pressure to force the fuel forward to the engine. A few strokes on a hand-pump supplied the petrol initially; once the engine started, a bypass on the exhaust pipe fed petrol into the sealed fuel tank, and this in turn forced the petrol through to the carburettor.

The use of a long lead from the exhaust pipe reduced the heat of the

## FUEL PUMP

(Mechanical or electric, it feeds petrol to the carburettor, can become temperamental at times)

gases and prevented fire, while a valve stopped flow back into the exhaust pipe. This method was discarded when it was found that the varying pressure led to float-control troubles in the carburettor and to flooding.

A variation was the combined gravity and exhaust pressure feed, in which exhaust pressure forced the petrol from the main fuel tank into a small reserve tank above the motor. From here on the petrol was fed to the carburettor by gravity. While the system overcame the problems of overpressure, it was not widely used and was soon discarded.

The air pressure system operated in a similar way to the exhaust pressure type. A small air pump was fitted, driven from the timing gears at the front of the engine—or, in some models, by a plunger-type pump from the valve lifters. This system was used successfully on the original Packard Six.

A hand-pump was provided for initial starting if the dashboard gauge showed insufficient pressure. When the air pump took over it supplied a steady  $1\frac{1}{2}$  to  $2\frac{1}{2}$  lb. pressure-enough for correct operation, but not to flood the carburettor. This system died out because of air-leak troubles and the necessity for hand-pumping whenever the car was left standing for some time.

One of the major improvements in petrol-feeding came with the introduction of the Stewart vacuum system. This device used intake manifold vacuum to bring the fuel from the main tank to a small supply reservoir on the dash, above the engine; it was then fed by gravity to the carburettor.

Many variations were tried, but the Stewart system proved most popular, and it still found in many of the older cars on the road today. It used two tanks, one inside the other. If the inner, or vacuum, tank was empty, a valve opened and the air was drawn out by the vacuum from the manifold. This



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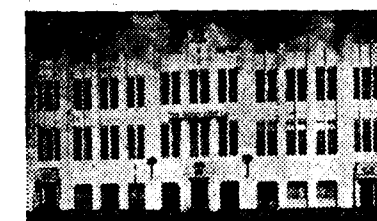
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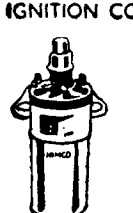
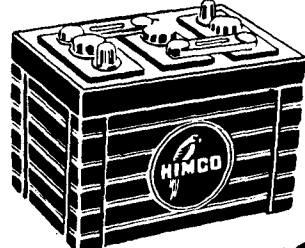
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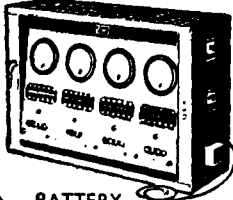
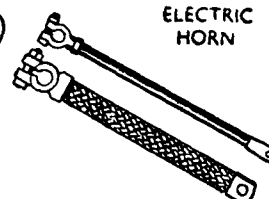
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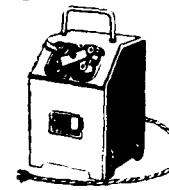








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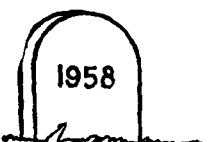
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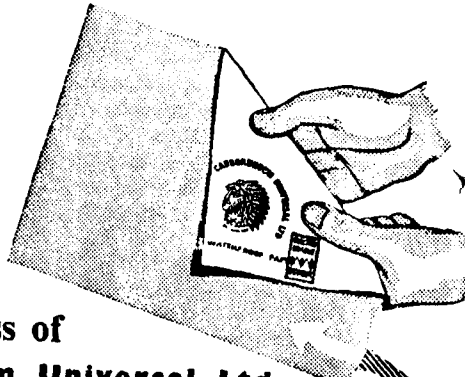
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in turn sucked the petrol from the main tank at the rear of the car.

When the inner tank filled with fuel, a float shut off the vacuum line and allowed air to enter both the inner and outer tanks, and also allowed the petrol to run into the outer tank, whence it was fed by gravity to the carburettor. As the petrol flowed from the inner tank, the cycle was repeated.

Main disadvantage was that on high-speed runs the vacuum was insufficient to draw in the petrol, and fuel starvation resulted. If the float was faulty, it was possible for the upper chamber to get flooded, and for the petrol to be drawn direct into the manifold through the vacuum pipe.

#### Mechanical Pumps

Greatest advance occurred in 1927, with the manufacture of the first mechanical fuel pump by the A.C. Division of General Motors. Although it has been improved since, the pump still follows the same basic principles; it is used almost exclusively on American cars and on some British cars. Almost trouble-free in operation, it supplies ample fuel for even the most severe speed or hill climbing test, and will function up to 100,000 miles without attention.

It is operated by a lever, camdriven off the engine camshaft. This lever is connected to a spring-loaded diaphragm, as the cam revolves it moves the lever and thus the diaphragm vertically. When the diaphragm moves upwards, it creates a vacuum in a special chamber. The resulting suction draws fuel from the main reservoir and into another special chamber in the pump.

From this chamber (or sediment bowl) the fuel is filtered, and then passes to the pump chamber, where the vacuum is created. On the downstroke the petrol is forced through a valve to the carburettor, the valve closing on the upstroke. Repetition of this cycle means that a constant supply of fuel-proportionate to the speed of the engine—is assured.

If there is an oversupply of fuel to the carburettor, the carburettor float closes the needle valve, petrol is stopped and pressure builds up in the fuel-pump vacuum chamber.

This prevents the diaphragm operating, due to the spring-loading, and no petrol is forced through until a further supply is required.

The Auto-Lite fuel pump, developed by the Chrysler Corporation, works on a similar principle, but incorporates a different valve system.

The carter pump, also American, uses the suction of the diaphragm directly to draw the fuel from the main reservoir. Despite differences in detail, all these pumps are basically the same.

Some mechanical pumps incorporate a vacuum pump to operate the windscreen wipers. This is an important feature, for when the wipers are dependent on manifold vacuum alone, their speed varies. At full throttle manifold vacuum is often insufficient to operate wipers, as many drivers know only too well.

#### Electric Pumps

Electric fuel pumps have always been favoured in Great Britain, where they have been standard equipment on most cars for many years. Most British car-makers still use them, though some have switched to the mechanical type (the American—influenced Ford and Vauxhall are two examples; Standard is another).

In the U.S.A. electric pumps are used mainly on commercial vehicles buses and trucks; you will seldom find one on an American car.

The electric pump is no recent invention—it was actually introduced before the modern mechanical pump. It can be mounted anywhere on the body or chassis, and there is now a tendency to mount the fuel pump in the boot of the car, above the main fuel tank. This is done mainly to keep any fuel-pump noises out of the car's interior. Mechanical pumps, being normally silent in operation, do not need this precaution.

Briefly, an electric pump works as follows: an electric magnet operates a diaphragm or a set of bellows, which act as a pump. If the pump is set near the carburettor it will be a suction type similar to the mechanical type; but if it is set near the fuel tank it will be a pusher type. Both the Auto-Pulse and Bendix (two popular American pumps) are suction types, while the

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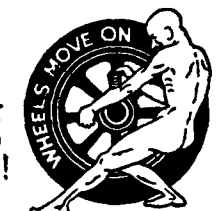
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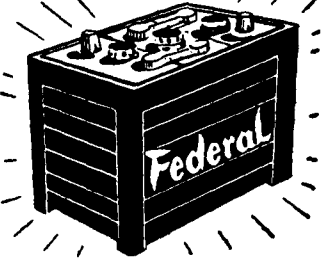
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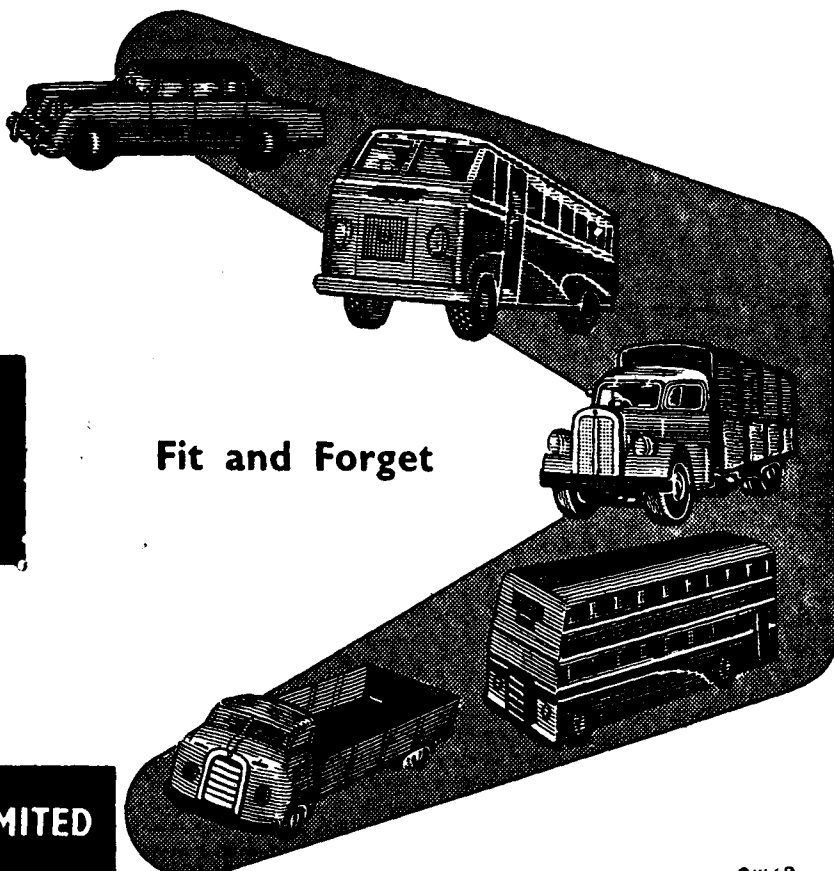
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English pumps are available in either pusher or suction types. The most popular English pump-fitted to Austin and Nuffield cars—is the S.U. electric.

Electric pumps have several advantages. For a start, they can be positioned to operate in lower-temperature conditions, so avoiding vapor lock—a trouble which often plagues the mechanical pump, because it is fitted on the engine (often in a very hot position). Secondly, the electric pump, being connected to the ignition switch, operates the moment this switch is turned on, ensuring a full supply of petrol to the carburettor for starting. With the mechanical pump the engine may have to be turned for some time with the starter before there is sufficient fuel in the carburettor to start the engine.

With the pusher-type pump the fuel in the petrol line is actually under pressure, which also helps prevent vapor lock. Also, there are no valves between carburettor and fuel tank; when the car is stopped, any excess fuel is drained back into the tank—another aid to easier starting, as the fuel is not heated while the car is stationary.

#### Troubles and Remedies—Mechanical Pump

Despite the general effectiveness of the mechanical fuel pump, it is subject to certain troubles. These are usually seen by indirect results—rarely by any sudden failure of the pump, though this does occur sometimes.

If the engine falters at high speeds and seems to lose power when a steady high-speed run is attempted, a check should be made for loose connections, leading to air leakage; over-compressed cork filter gaskets, the result of not using new gaskets after inspection or overhaul; or general wear in working parts after long service. In each case the remedy is simple. Special kits of all moving parts can be obtained, and it is only a question of taking out this worn part and replacing it.

Starting troubles can often be traced to the fuel pump. Once again general wear can be the cause, or loose connections. Check also if the valves and diaphragm are correctly positioned and in good working order. Here one basic

trouble of mechanical pumps shows up, as mentioned earlier. If the carburettor has any tendency to leak, it will be necessary for the fuel pump and the starter motor to operate for some time before there is sufficient fuel in the carburettor for starting.

Carburettor flooding cannot normally be attributed to the fuel pump, as it is carefully adjusted to prevent oversupply. However, if no other cause can be found, the pump's pressure adjustments should be checked with special equipment. Alternatively, you can borrow a pump of similar type and try it on your car; if it rectifies the trouble, your own pump obviously needs an overhaul.

The pump is designed to give 50,000 to 100,000 miles of good service. If it wears out sooner, insufficient lubrication may be the cause. This can be due to vapor condensation from the engine corroding pump parts—particularly on older type engines with poor crank-case ventilation. There is no easy remedy for this trouble—it is simpler to replace the mechanical pump with an electric one.

Mechanical pumps are normally silent; if they become noisy, this is usually due to worn parts or a broken rocker-arm spring. But, before you suspect the pump, make sure the noise isn't coming from the engine itself. This is done by removing the pump and running the engine for a few seconds without it. Watch that you don't lose too much oil while doing this.

Vapor lock can be caused by the pump being in an excessively hot position. It can be remedied by insulating the pump from the engine (or any other heat source). As a last resort, an electric pump can be fitted in a cooler position.

#### Electric Pump

With the electric unit, the first check is to disconnect the pipe-line from the fuel pump to the carburettor.

When the ignition is turned on the pump should immediately start a flow of petrol pouring out of the union where the line is disconnected. If this does not happen, the pump is at fault.

As a second check, listen for a rapid clicking noise. This will indicate that the pump is operating, but is only drawing air. There is an air leak between the fuel tank and the pump—or else your car is simply out of fuel.

If the pump itself is out of action, check for electrical faults. See if the power is getting to the pump when the ignition is turned on. Be careful that there is no free petrol around which could ignite if a spark occurs. Check to see if a fuse is blown.

If the pump is getting both fuel and power but is still not operating, it will be necessary to disconnect and disassemble it. Remember that it is a delicate instrument, carefully set to give the best and safest performance; see that it isn't damaged during the overhaul.

While repair procedure varies, depending on the type of pump, basically the following steps should be taken. First remove filter and gaskets. Clean thoroughly in petrol or cleaning fluid. Clean all sections of the pump, removing any gasket particles. Replace any obviously worn or damaged parts. Install new gaskets throughout when reassembling. All valves should be carefully checked, and replaced if worn.

With the electrical system, correct testing gear is needed for a thorough check; points must be set to the exact specification. The wisest course is to make any obvious replacements and repairs, then reassemble and test the unit. If the trouble persists, have the pump overhauled by an expert. Reference to the mechanical-pump service section of this article will give many hints that apply also to electric pumps.....(Copyright).

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## RILEY RETURNS TO THE SMALL CAR MARKET

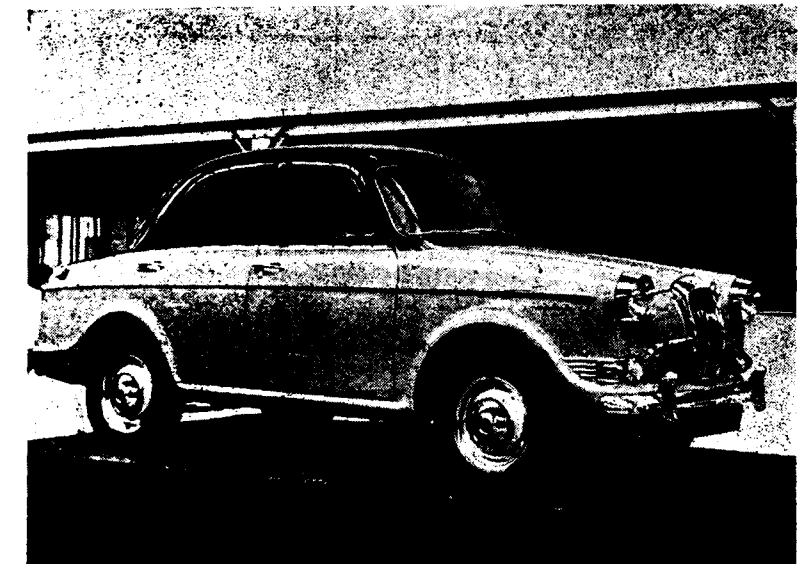
From Gordon Wilkins

New 1½ litre saloon does nearly 90 mph. 3.73 to 1 top gear

There seems to be no end to the variety of types which the B.M.C. can evolve from a limited range of engines and body units, and sometimes the results are quite exceptional. The new Riley One-Point-Five, which brings Riley back into the small high performance car market where their fame was originally established, seems to be one of the best yet. It has very little in common with previous Riley designs, but is really a development of the Wolseley 1500, using the same basic structure, and body panels and engine, with more power, better finish, and some individual touches which give it a much better appearance. It also has larger brake, to deal with its quick acceleration, and near—90 maximum speed.

The Riley front end is more graceful than that of the Wolseley. The chromium mouldings, and the colour divisions on two-tons cars are also better arranged, in a way which emphasises length rather than height. The 1489 c.c. four-cylinder engine is quite close to the one used in M.G. cars. It has two SU carburettors and with 8.3:1 compression, gives a gross 68 bhp at 5400 rpm (62 installed), with maximum torque of 83 lb. ft. at 3200. Carburettors, manifolds, valves and valve springs are different from those used on the Wolseley, and the Riley has a tachometer. The Riley takes a stage further the philosophy developed in the Wolseley, using a fairly generous size of engine in a small compact car, geared to give a high passing performance in third gear, and effortless cruising in fourth speed, which is virtually equivalent to an overdrive. (18.5 mph at 1,000 rpm.)

In a short test on the road, I found first gear would take the car quickly up to 30 mph. second was good for 50 mph and in third an indicated 80 mph could be seen by waiting a little, although for most practical purposes more advantage is gained by changing into top at about 70 mph. The car is quite compact, with a frontal area of only 18.54 sq. ft. and in top gear I soon saw 88 mph



RILEY ONE-POINT FIVE.

on the clock. Given a longer stretch of open road, it would probably have gone a little higher. The B.M.C. claim a timed 88 mph maximum and this seems credible, but one has the impression that a less angular body shape might allow it to run up into the nineties. However, with its present performance, this is one of the fastest small saloons now available in the world, and there isn't much at the price that can compete with it on performance. Accelerating from a standstill through the gears, 0-50 mph should be possible in 13 seconds or may be a little less and 0-60 mph should be possible in 18 seconds. Second gear is a very useful ratio in traffic, jumping the gap from 10-30 mph or 20-40 mph in a little over five seconds; in third speed these accelerations take about three seconds longer. No checks on fuel consumption were possible, but according to works test figures, it is 50 mpg (Imperial) at a steady 20 mph 40 mpg at 50 mph and about 34 mpg at a steady sixty.

Although it does not have quite the indefinable life and liveliness in response to the controls which a thoroughbred sports car gives, the Riley is easy, agreeable and safe to handle. It corners fast without excessive roll, and without any tricks for the driver to learn. The rack and pinion steering gear behaves

very like that on the Morris Minor, and if anything the handling on bumpy corners taken fast is a little better than on the first of the Wolseley 1500 models. (The rear dampers on both models have been moved from the axle to the body structure.)

The drop centre wheel is pleasant to handle, although not pretentious and the pendent pedals are well placed, although perhaps a bit close together for optimum ease in heel-and-toe downshifts. The driver can see both front wings, but not those at the rear.

Upholstery is in two shades of leather, and there is still a concession to tradition in the use of polished wood for facia and door fillets. Instruments include speedometer and tachometer, with a third dial comprising oil pressure gauge, thermometer and fuel gauge.

There are ashtrays on each front door, and on the centre tunnel at the rear. Headlining and sun visors are plastic finished. The floor gear-shift lever is convenient to use and presents no obstruction of any consequence, as this is essentially a four-seater car. There is also a good central pull-up handbrake. A minor irritation is the need to use one hand for the ignition key and the other for the starter, which could have been avoided by better

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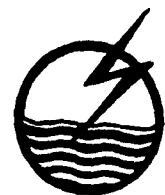
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planning, or by using a key-starter. Another point in common with the Wolseley, is restricted rear seat headroom. The rear seats are strictly not for six-footers. The tail, which is short by current standards, houses a reasonable amount of luggage, the spare wheel being housed in a separate compartment beneath. The rear seat backrest folds forward to make more luggage space available.

Well driven, especially on winding or hilly roads, this is going to be a very difficult car to catch, and in view of its performance potential, the brakes have been made bigger than those on the Wolseley. They are Girlings with front drums 9 in. x 2 1/4 in. and rear drums 8 in. x 1 1/2 in., giving a total friction lining area of 124 sq. in. for a kerb weight of 2060 lb.

Standard equipment includes pile carpets heater, windshield, washer, reversing lamp and chromium trim rings on the wheels. There are flush-fitting pull handles on the interior of the front doors; the armrests perform the same function at the rear. A trigger under the steering wheel works indicators and horns.

### TECHNICAL DETAILS

**Engine.** 4-cyl. Ohv. pushrod operated. 73.025 x 88.9 mm 1489 cc. Compression 8.3 : 1 68 bhp (gross) at 5,400 rpm. 83 lb ft. torque at 3200 rpm. Two semi-down-draught SU carburettors. Lead-indium main bearings. External full-flow oil filter. Pressurised cooling by pump, fan and thermostat. Coil ignition; centrifugal and vacuum control.

**Transmission.** Single plate Borg & Beck dry clutch. Four-speed gearbox with central remote control lever. 2nd, 3rd, top synchronised. Open propeller shaft. Three-quarter floating hypoid axle. Overall ratios, 13.56 8.25 5.12 3.73 to 1 Reverse 17.73 to 1.

**Suspension and Steering.** Independent front with wishbones and longitudinal torsion bars. Semi-elliptic rear. Piston type dampers. Rack and pinion steering.

**Brakes.** Girling hydraulic. Front drums 9 x 2 1/4 in. (22.86 x 5, 7 cm) Rear 8 x 1 1/2 in. (20.3 x 3, 8 cm) Total lining area 124 sq. in. (800 cm).

**Dimensions.** Wheelbase 86 in. (218.4 cm) Track front 50 1/2 in. (129.2 cm) Rear 50-5/16 in. (127.8 cm) Length 153 1/2 in. (389.25 cm) Width 61 in. (154.9 cm) Height 59 1/2 in. (151.75 cm) Kerb weight 2060 lb 938 kg.

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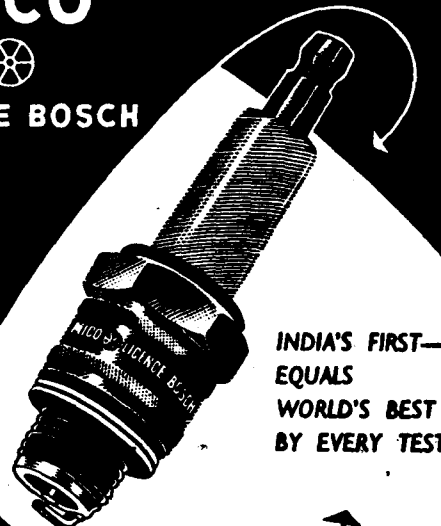
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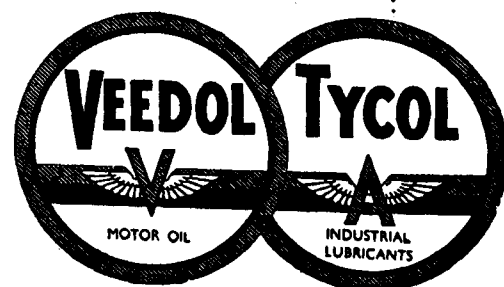
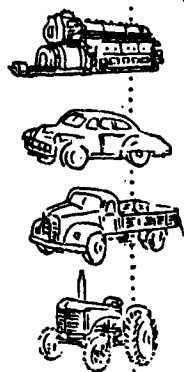
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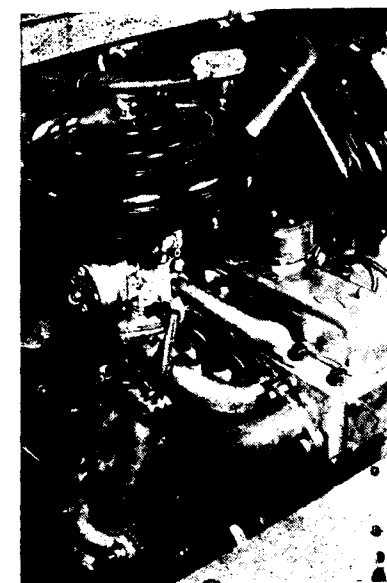
Driving the Renault Dauphine  
Gordini

The Dauphine Gordini has been produced to meet the demand among sports enthusiasts for extra power and a four-speed gearbox, which would permit fuller exploitation of the fine road holding abilities of France's famous small sedan. Developed in collaboration with Amedeo Gordini famous French racing car constructor, it is outwardly the same as the standard model, except for a script name plate on the rear hood panel, but it has a four-speed gearbox and modified engine.

Cylinder head, with inlet and exhaust manifolds are all new, valve springs are stronger and valve lift is increased, but the standard valve sizes have been retained. The carburettor is larger, a Solex 32 PICBT and an offset water pipe with two offtake leads water from cylinder head to radiator. Compression ratio is raised from 7.25 to 7.6 : 1 and power is raised from the standard 30 bhp at 4,250 rpm to 38 bhp SAE at 5,000 rpm. A new set of gears, giving four speeds with synchromesh for the top three, fits into the standard three-speed gearbox casing, giving overall ratios of 16.10, 9.21, 6.38 and 4.68 with 16.19 reverse.

First surprise is the fact that the extra power has been obtained without in anyway impairing the smoothness or quietness of the engine, and there seems to be no loss of flexibility. Gearshift is very good, but the lever still wobbles about under the effects of torque reaction, as on the standard model. I saw speedometer readings of 50 mph in second, over 71 in third and 81 in top, which suggests the makers' claim of 79 maximum is not exaggerated. Acceleration from a standstill to an indicated 50 mph took about 12 sec. With these modifications, the Dauphine becomes a very potent little road car, with much better performance in the overtaking ranges, and much better climbing potential. Third is a particularly useful gear, bringing in real urge where the standard model is labouring rather hard in top.

Extra power does however make it easier to provoke momentary



Renault Gordini Engine: New Cylinder head, with double water offtake and new exhaust system.

wheel spin if cornering hard on full throttle, and the higher, general level of performance makes it possible to produce tail-end breakaway, where this was generally difficult with the standard model. Shorter rear coil springs are now being used by some European competition specialists and would certainly help in keeping rear wheel camber angles within desirable limits during very fast cornering. There is also a "faster" steering gear used on the works team cars, and by certain French tuning experts, which would be an asset in correcting incipient slides with the minimum of wheel twirling. These modifications are not at present available from Renault, but they are offered by various French and Belgian specialists. I have tried cars so fitted and they make it possible to corner the Dauphine at staggering speeds. Same guarantee applies to the Gordini as to standard Dauphines. Production is initially 10 a day, rising to 30 a day in March 1958.

Although a very satisfying road car, the future of the Dauphine Gordini in competitions seems somewhat obscure, at least until a thousand have been built, which would allow it to compete with strong hopes of success as a series production car. At present the size and weight of the bodywork are against it in the Gran Turismo and other

complex divisions of the current rally regulations, reserved for special models and although various coach-builders have built prototypes of Dauphine sports coupes, there is no news yet of any series production.

NEWSLETTER

FROM GORDON WILKINS

Results announced by the Rootes group for 1956-57 show an extraordinary change that took place in the motor industry during 1957. In the 12 months up to 31st July the Group has made a loss of £340,197 and the ordinary dividend is halved from 8 to 4 per cent. But Sir William Rootes revealed that during the first three months of the present financial year the Group had trading profits of £500,000.

The Suez crisis had seriously affected the Rootes Group because they were about to introduce the new Humber Hawk. This crisis not only delayed the new model but had made it necessary when trade was resumed to dispose of the stock of old models at uneconomic prices.

However, the level of sales was actually a record and 55 per cent of production was being sold for export.

Despite the difficulties during the Suez crisis when home and European markets virtually closed down and the industry was also faced with wage increases and higher steel prices, the Standard Motor Co. Ltd. made a profit. Over the last few months of the financial year overall output of cars and tractors was running at the rate of 160,000 units per annum. Consolidated profit for the year was £877,520 compared with £806,788 last year and the dividend was maintained at 8 per cent.

Lord Tedder, Chairman said that they had embarked on a completely new model programme and that their stylists are working in collaboration with the Italian designer Giovanni Michelotti.

Introduction into the U.S. of special versions of the Standard 10 h.p. sedan and Companion under the name of Triumph added to the success of the Triumph TR 3 in America and orders totalling £11 m

for delivery by the end of December had been taken.

The Rover Company had maintained its position and had been successful with the 105S and 105R as well as with the Land Rover and Chairman Mr. S. B. Wilks stated that a dividend of 22½ per cent would be paid to its stockholders. Mr. Wilks warned stockholders that credit restriction, high interest rates and rising costs, coupled with increasing competition, were factors which might adversely affect business in the near future. But for the moment the order book was in a satisfactory state and the future could be faced with confidence.

Main theme of Sir Leonard Lord's statement to BMC shareholders was the sudden and marked recovery in the Group's fortune in the spring of this year. BMC announced an interim dividend in April and the trading loss for the 6 months ending in January, and preliminary results show that in the closing months BMC profit rate must have been back to 1945-55 level. Out of total output last year of 352,855 vehicles 123,341 were produced in the last 3 months and output is now running at 12,000 vehicles a week.

Exports of Morris Minors to the North American Continent have shown a big rise in 1957. In the first ten months the value of cars exported was £3,009,270 compared with £384,450 in the same period in 1956.

Austin-Healey assembly is being moved from the Austin Motor Co. at Longbridge to Abingdon, where MGs and Rileys are made. Transfer will be completed by the end of the year and is part of the BMCs "rationalisation policy" which aims at concentrating all sports car production on Abingdon. Present production of the Healey runs at about 200 a week.

News from Ford is that they have a new £8m foundry at Dagenham. Soon it will be at full production making 400 tons of castings a day. Most of the products will be cylinder blocks and heads and also larger castings for tractors. The foundry, named after the River Thames is part of Ford's £65m five-year expansion and modernisation programme.



Mr. G. Venkateswaran and Mr. K. N. Srinivasan of the Madras Port Trust seen with officers of the Indonesia Naval Police Agency in the world's largest man-made harbour at Los Angeles.

Managing Director of the Netherlands Ford plant Mr. C. Stenger told "Financial Times" reporter that Ford's British factory will introduce a new small car to compete with the Volkswagen and the small Fiat in one or two years' time. It would be a 4 cylinder model priced below £500 and would be made in Britain.

Auto Union of Inglostadt and Dusseldorf is negotiating with the State Governments of Bavaria and North-Rhine Westphalia for credit guarantees totalling DM 35m. The credits are to finance the production of Auto-Union's new 500 cc. baby car. Chassis, engine and other parts are to be produced at Inglostadt and these are to be assembled in the Dusseldorf plant where the car bodies are made.

Two British motor manufacturers are affected by the Japanese Government's decision not to allow the payment of foreign exchange for the manufacturing of foreign cars under licence in Japan after 1960. These are Rootes whose Hillman Minx is made by the Isuzu Motor Co. and BMC whose Austin is made under licence by the Nissan Motor

Co. Mr. Brian Rootes who has been in Japan recently inspecting facilities for production of Hillmans expressed concern over the Japanese decision. Third foreign concern affected is Renault whose small CV sedan is made by the Hino Company.

Production of Hillman cars is at present about 5,000 units a year. Japanese Government officials seemed to think that renewal agreements might be approved if the amount of foreign exchange to be paid out was cut down i.e., if there was a new agreement more favourable to Japan.

Output from the French motor industry rose by 10 per cent in the first 10 months of 1957 compared with the same period of 1956. Some 590,000 cars and 168,000 industrial vehicles were produced and exports are about 50 per cent up in a year though these still represent less than 20 per cent of total output. The committee of the French State Planning Commission which has just published its annual report on industry estimates that motor production should rise from 786,000 units in 1956 to 1,075,000 in 1961. (Copyright)

## THE CEAT TYRES OF INDIA

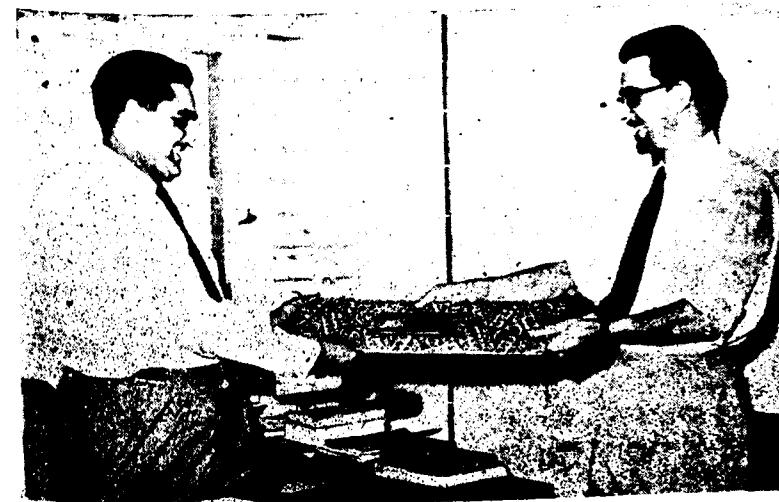
Indo-Italian technical collaboration will be further strengthened with the establishment of a factory near Bombay for the manufacture of rubber tyres. To be called the CEAT Tyres of India Ltd., the new company will be floated by Tata in collaboration with the Italian Industrial firm CEAT S.p.A. of Turin. Mr. A. D. Shroff is to be the Chairman of the new firm.

The new company, it is reported, will have an authorized capital of Rs. 4 crores and a paid-up capital of Rs. 1.15 crores, of which 60 per cent is to be subscribed by the Italian company and its associates, and 40 per cent by the public in India. This issue will be underwritten by the Investment Corporation of India Ltd.

In order to meet India's shortage of foreign exchange, the capital subscribed by CEAT and its associates will be in the form of supplies of plant, machinery and structures for the factory.

The phased programme of manufacture, it is understood, provides for the factory being commissioned some time in the middle of next year with a monthly output of 325 tons of tyres and tubes. The production will be gradually stepped up till it reaches 1,000 tons a month in the following two years. By this time, in addition to car and truck tyres and tubes, the factory will also be turning out tyres and tubes for the heavier vehicles like tractors.

The first complete set of Gaskets made in India required for the full overhaul of Perkins Diesel engines being presented by Mr. J. F. Jones, Supervising Engineer from J. Payen Limited to Mr. W. N. Talwar, Managing Director of Payen-Talbro Private Ltd Gasket manufacturers to the Indian Industry.



Photograph taken at the Cocktail party given in honour of Mr. C. C. Griffith, Chairman of Engineering Components Limited (England), during his recent visit to India by Mr. W. N. Talwar, Managing Director of Payen-Talbro Private Ltd., New Delhi, Gasket Manufacturers. Picture shows both Mr. Talwar and Mr. Griffith enjoying a joke along with other guests.

**Lloyd wins class in Australian Event.** The Lloyd Alexander, built in Australia under the name of Lloyd-Hartnett scored its first important competition success "down-under" by winning its class the tough V.P. All-Victoria Rally, and taking 9th place in the general classification. Of 77 starters only 53 finished the course. Important position already conquered by really small cars in the European market is illustrated by the fact that Lloyd has just delivered its 250,000th car.

## Air Conditioning of Automobiles

A longstanding requirement of a Refrigerator in the comfort of a car has now been achieved by an American manufacturer, overcoming the difficulty of carrying ice boxes or bags, by introducing to the Indian market for the first time a light weight Refrigerator which requires no compressors, condensers, evaporators or lavishly designed coils and hook-ups.

This Automobile Refrigerator—the Coldmaker—is so designed that it can easily be installed in cars, trucks, commercial vehicles, boats, tractors and indeed every conceivable vehicle using gasoline or petrol. This Refrigerator does not require any electrical or battery connection so that no extra load is added to the electric consumption, and this is the only appliance which offers extraordinary benefit without burdening the already complicated car electric system.

The exclusive Distributors for the Cold Maker Auto Refrigerators in India are M/s. Gorakhram Gokalchand Engineering, Choksey Chambers, Zaveri Bazar, Bombay-2.

## PLEADS FOR RAW MATERIALS FOR AUTO BULB INDUSTRY

The Madras Motor Parts Dealers Association in a communication to the Chief Controller of Imports, Government of India, New Delhi, says *inter alia*.

Thanks to the policy of the Government of India on the subject of giving protection to various industries ancillary to the Automobile Industry, quite a number of indigenous industries have been started in the past few years-contributing to the successful development of the MAIN AUTOMOBILE INDUSTRY as a whole and thereby conserving foreign exchange over these years.

The Spring Industry, The Battery Industry, Rubber Industry, Piston Industry and The Auto Lamp Bulb Industry may be mentioned as few, where development has taken place to such an extent that the Government may remain satisfied that these industries have now come to prove their ability to take adequate care of the country's entire requirements and hence a total ban on Imports of these or a more or less complete ban with a view to conserve available foreign exchange resources may be well justified.

Some of these Industries, however, still have to depend, as things are, on foreign sources for their requirements of certain vital raw materials. Some of the industries for the manufacturing activities of which the requirements of raw materials have to be obtained from foreign sources face a very dismal situation now. The Auto Lamp Bulb Industry is one facing with such a problem.

Due to the great shortage of Foreign Exchange resources however, the Government had to readjust their Import policy to suit the requirements of the Plan and during the last twelve months this had to result in a large scale curtailment of Import licences not only to Private Importers but even to many indigenous industries like the Auto Lamp Bulb Industry in that the import of the raw materials for the manufacture of Auto Lamp Bulbs

have been curtailed to a fraction. This naturally should result in the very great shortage of Auto Lamp Bulbs import of bulbs having been totally banned and the indigenous manufacture of Auto bulbs thus having been strangled as it is the situation, we see it now. Unless immediate steps are taken to either liberalise the import of Auto Lamp Bulbs which should be a greater strain on the foreign exchange position or facilities given to indigenous industries for the import of raw materials whereby to carry on their manufacturing programme. The latter suggestion requires immediate consideration for the very survival of the industry a bottleneck which has already been created.

The natural consequences of such a situation needs no elaboration. Already the automobile trade is entirely depending on a few indigenous Auto Lamp Bulb Factories only for meeting the demand of the country's requirements of auto lamp bulbs. The nationalised transports again are to be served by these Factories for their requirements of Auto Lamp Bulbs. So does the defence department. In the circumstances, the immediate attention of the Government deserves to be given to this burning problem of the day, to keep the essential Auto Lamp Factories running.

The Auto Lamp Bulb Industry is no less essential than any other industry—for the importance of Transport today—and Road Transport primarily. This is to be well appreciated. And the Auto Lamp Bulb Industry is to the Automobile Industry what the EYE is to the body. The problem is immediate—neglect of the problems has immediate consequences.

This Association hence requests that the Ministry of Commerce do give this appeal their sympathetic and urgent consideration and grant import of raw materials for the Auto Lamp Bulb Factories in line with the recent announcement of the Commerce Minister on June 9.



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In addition to popular Lines viz., HIMCO BATTERIES & ELEC. ACCESSORIES, KRALINATOR FILTER CARTRIDGES, WAXPOL PRODUCTS, LOCKHEED Brake Parts, BORG & BECK Clutch parts, Tools & Accessories, a wide range of parts for PERKINS Diesel Engine, FORDSON Tractor, BED-FORD Trucks and Vans, other G. M. Vehicles, FIAT, DODGE-FARGO are always carried in stock.

## AUTO PARTS TRADE'S DIFFICULTIES

in import of Motor Parts

During the recent visit to the City of the Minister for Commerce and Industry, the Madras Motor Parts Dealers Association, made some appropriate representations to the Minister regarding difficulties experienced by the Trade in the matter of Import of motor parts.

As regards quota for motor vehicle parts and accessories (Part IV, 293, 295 and 297), it was stated that till the end of December 1956 imports of motor vehicle parts and accessories were allowed upto 100%. In the first half of 1957, there was a cut of 40%. There was no licence for July-September 1957, and from 1st October there has been a cut of 75%.

75% cut on imports which is prevailing for the past two licensing periods has seriously affected the availability of parts for goods and passenger transport. There has been an expansion of the road transport industry in recent years. Existing vehicles have been put to greater use as Government are now permitting trucks to run on longer routes, and now vehicles have also been added in good number as will be evidenced by the production figures of the manufacturers. Moreover, most of the vehicles operating in South India have been converted to diesel operation. Therefore, the demand for spare parts is greater than before.

The prices of components for Mercedes Benz, Fargo, Dodge and Leyland are very much higher than the prices for Chevrolets and Fords. The prices of Perkins Diesel and other diesel engine parts are also higher than petrol engine parts. Therefore, for the same value fewer parts could be imported at the present time.

Road Transport is an essential service both for agriculture and industry and deserves the support of the Government for expansion and growth. It is necessary that parts and accessories required for maintaining the vehicles are available, particularly these components which

are not being manufactured in this country.

We request that taking all these into consideration, Government relax the quota from 25% to 50%. We are aware of the difficult foreign exchange position and it is for this reason that we are requesting enhancement to 50% instead of 100%.

As regards quota for diesel engine parts against import of Diesel engines, it was represented that a lot of diesel engines of road vehicle type have been sold in South India and we have to take care of the requirements of spare parts for these engines. With the meagre motor vehicle parts licences, this is not possible. There is a provision in the Red Book for issue of 14% of the value of diesel engine imports for spare parts, but this is extremely inadequate. We would like that this quota is increased at least to 10%.

The Association also made the following representation regarding quotas for Fuel Injection Equipment.

The basic year for establishing quota for fuel injection equipment is upto March 1952. Diesel engines and diesel engine parts have been sold in large quantities only after 1953 and therefore we are of the opinion that the basic period for fuel injection equipment should be extended upto 1956-57, as has been done in the case of sealed beams on a similar representation to CCI, New Delhi.

As regards the position regarding Brake Linings licences, the Association stated as follows:

Licenses for brake lining and clutch facings are issued for 15% on half of the established quota figures. Only moulded type of brake linings are manufactured in India suitable for current model cars and light trucks. Woven brake linings are not manufactured in India which is not only used on automobiles but also on various industrial machineries, like Textile, Sugar Mills, Crans, Electric lifts, earth

movers, Excavators, etc. Besides, old model vehicles are mainly dependant on woven linings and these will be off the road in case of restriction. Therefore we request that the quota percentage may be increased to 50%.

The Hon. Minister gave a patient hearing and promised to consider the representations made sympathetically.

### F. E. Foreman

Mr. F. E. Foreman, Manager, Overseas Division, Export Department of M/s British Belting & Asbestos Ltd., was in Madras recently in the course of his fortnight's visit to this country.

During his stay, he contacted some of the leading motor parts dealers handling M/s British Belting products.

Mr. Foreman was entertained at lunch at the Air-conditioned room of the New Woodlands Hotel by Mr. V. Narayanaswamy of the Madras Mercantile Agencies. A select gathering of friends from the automobile trade was present.

Mr. Foreman, who has since left this country, will tour the Far-East.

### DEENS GARAGE

"Once a customer is always a customer. That is our motto in opening our new concern," says Mr. T. M. K. Mohideen, who is well known in the Motor Parts Trade of Madras City and who has recently opened a new concern of automobile parts under the name and style of Deens Garage at Harris Road, Madras. Deens Garage, now specialises in Jeep and Ford parts and Mr. Mohideen, with his vast contacts with the cusumers of automobile and allied materials as former Manager of Khalique Automobiles, Madras, has no doubt about the success of the show.

### Import Clarifications

The Joint Chief Controller of Imports has clarified a number of points brought to his notice by M/s Sundaram Motors Private Ltd., in regard to import of spare parts.

As regards the importation of Piston assemblies other than Aluminium make, the Joint Chief Controller has confirmed that licenses issued for Piston assemblies in accordance with the policy notified in Appendix XXVI in respect of this item in List III thereof in the current Red Book, are valid for importation of such Assemblies of Cast Iron make, provided that such piston assemblies do not fall under the banned group mentioned in the Annexure 'A' to the above Appendix.

M/s. Sundaram Motors Private Ltd pointed out to the Joint Chief Controller of Imports as follows :

Para 31 of Red Book permits importation from Dollar Area against licences issued for Soft Currency Area upto 50% of the face value of Licences of Rs. 5,000 — whichever is more. It is also mentioned that Soft Currency Licences with face value of less than Rs. 5,000 will be permitted to be utilised to the full extent for imports from Dollar Area.

We presume that it is not necessary to have the Licences endorsed for usage in the above manner but the customs will allow clearances of Imports from Dollar Area under Soft Currency Licences subject to the above limitations and restrictions. Please confirm.

In reply, the Joint Chief Controller has stated that with reference to the above representation, the contention made in Paragraph (2) above is confirmed.

### Bombay Motor Merchants' Association

On a representation made by the Bombay Motor Merchants Association Ltd., to the Central Board of Revenue, it has been stated that the centre bolts and nuts are correctly assessable to duty under Item 75 (12) of the Indian Customs Tariff and that bolts and nuts recognisable as parts of motor vehicles are correctly assessable to duty under Item 75 (2), 75 (10), 75 (11) and 75 (12) of the Indian Customs Tariff according as they form part of components mentioned in the respective items. Necessary instructions have accordingly been issued to Customs Authorities for various places.

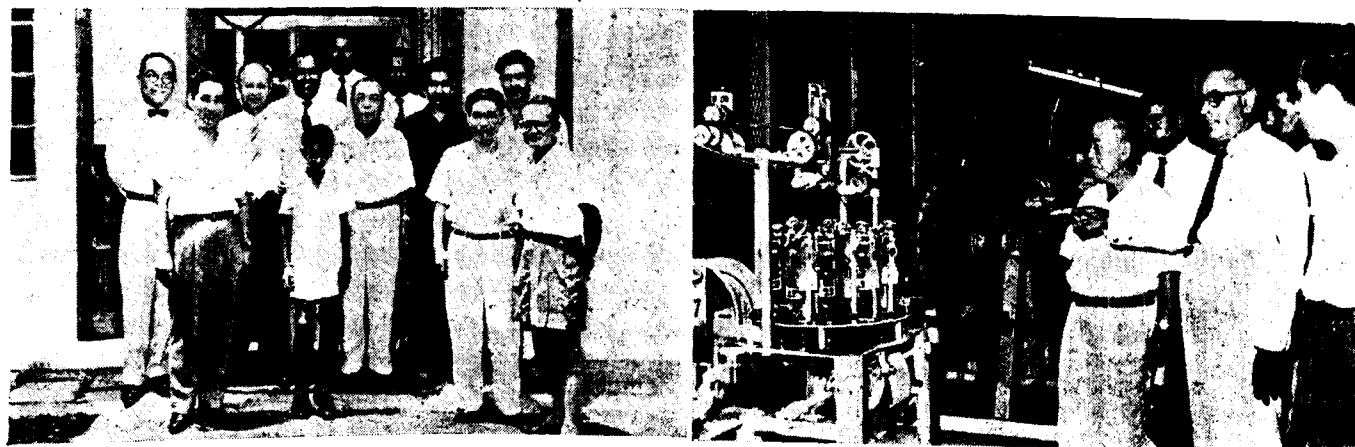
The Board also desired that if any nut and bolt of any particular specification was being assessed differently at different parts, the fact should kindly be brought to the notice of the Board for ensuring uniformity of practice.

### V. S. Powar

Mr. V. S. Powar of the Overseas Manufacturers Sales Co. of Bombay, with branches in Madras and Delhi, was recently in the City for a few days in the course of a normal business trip.

The occasion of his visit was availed of for a delightful dinner party at Woodlands which was attended by over 50 leading members of the parts trade of Madras.

Picture of the visit of the Japanese Auto Parts Mission to the Factory of the M/s Himco (India) Private Ltd., at Bombay shows (Top right) Mr. Nakaya and Mr. Nishino watching the testing arrangements ; (Right) President Imai watching the operation ; (Bottom Left) Mission members with Mr. K. R. Anand of Himcos and (Bottom Right) Mr. Imai, inspecting the braiding machines.



MOTORINDIA

June 1958

### LETTER TO THE EDITOR

DEAR SIR,

Both your editorial in the May, 1958 issue 'Good news for the motorist' and the separate article on the newly introduced Perkins Four-99 engine were quite interesting and sensational.

In India the average motorist's resources have been fairly limited whereas taxation and fuel prices, lubricants and spare parts are being enhanced very often, making it more and more difficult for him to possess and run a car economically.

Should small engines (diesel) such as the "Four 99" be introduced to the Indian market, I am sure that there will be an ever increasing demand for them throughout our country. May be this "noisy little Four-99" is not fit for a 'gentleman's town carriage' but it will certainly be the ideal power unit for the car of the average man to whom economy and utility but not luxury alone, are the most important factors.

One interesting point, is that at present Perkins engines are being progressively manufactured locally by M/s. Simpson & Co. Ltd., Madras and they very well could include either the new 'Four-99' or the P3 (V) (if not the P4 (V)) in their production programme. Since most of the components of the Perkins engines have been standardised (Ref: Automobile Engineer February, 1958) production of these engines could be started much earlier with fewer major tools and equipments in addition to those already employed in the current manufacture of the P6 (V) engines.

Of course the Government also should understand and sympathise with the motoring public and readily come forward to give a helping hand in this matter.

Yours faithfully, etc.  
S. R. RAMALINGAM  
Erode.

June 1958

### REDEX NEWS

### PRE-MONSOON CAR CARE

With the approach of the monsoon, cars need some precautionary measures to ensure smooth and care-free driving without harassing breakdowns and protection to the vehicles.

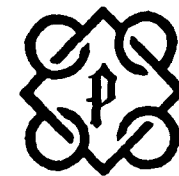
The following hints may prove useful :—

1. Try out the Wind Screen Wipers before it rains.
2. Protect the Body Paint with a good Polishing Wax and the chrome parts with grease.
3. Touch-up with paint any exposed under coating or rusty portion.
4. Make sure that no water gets under the Bonnet and on to the Engine.
5. Make sure that the luggage Booth and window Channels do not leak.
6. Renew worn-out fender Beadings to prevent Rust.
7. Check all H.T. Leads, grease Battery Terminals and wiring in general.
8. Treat the Wheel Rims from inside by Anti Rust Paint
9. Use well treaded Tyres and keep correct Tyre Pressure to avoid skids.
10. Keep tools and Jack well oiled to prevent rust.
11. Clean and Service Carburettor, Distributor, Fuel Pump, Self-Starter and Dynamo.
12. Keep the Under Chassis well greased to prevent rust.

### REDEX CAR CLUB

We are glad to report that the Redex Car Club, at its Annual Meeting held recently at Bombay, has decided to treat MOTORINDIA as the approved organ of the institution. Copies of MOTORINDIA will hereafter reach every member of the Redex Car Club in this country. Readers may, therefore, look forward to a regular coverage of the various useful activities of the Redex Car Club in which motorists in general should be very much interested.

MOTORINDIA



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AND  
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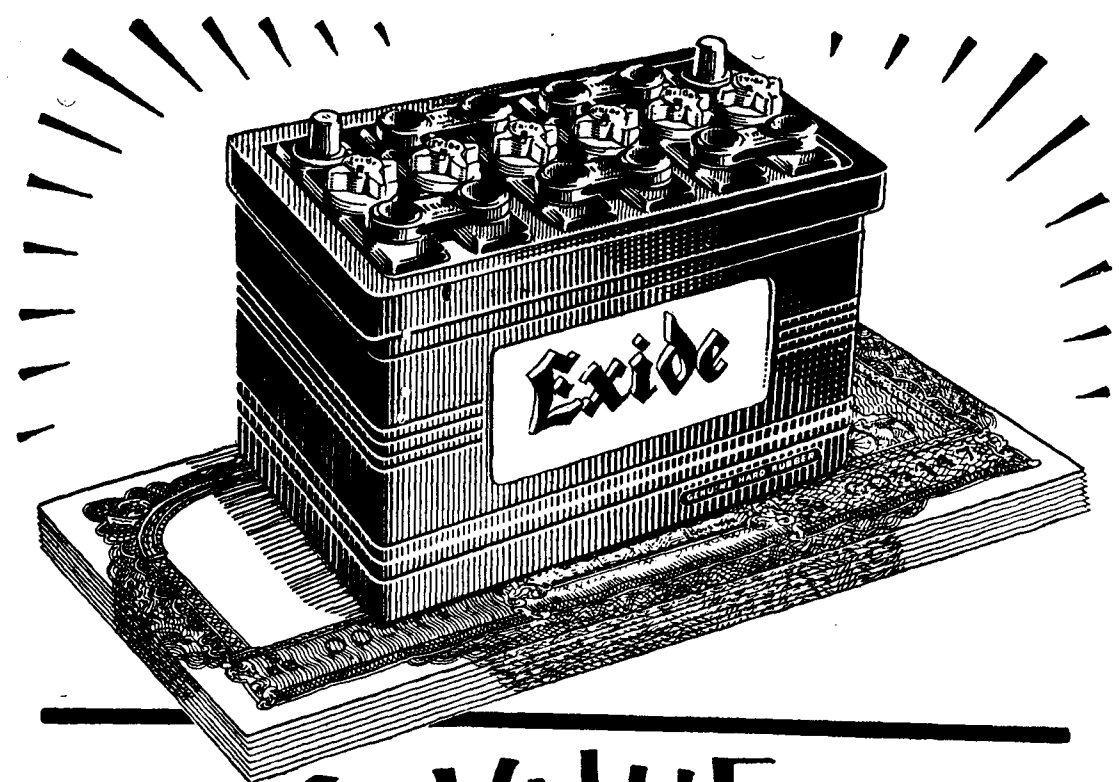
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27



## BEST VALUE FOR YOUR MONEY

A cheap battery may seem a bargain, but it is really costlier in the long run. The cheapest battery in the end is the one that gives the most in months of reliable service. The long-lived CB 95 alloy plates, the virtually indestructible Porvic separators and the shock-resistant

hard rubber container all add up to make Silver Exide the cheapest battery in the long run. You get the best value for your money when you buy Silver Exide, the battery manufactured under strict Quality Control at every stage of production.

# Silver Exide

CHLORIDE & EXIDE BATTERIES (EASTERN) PRIVATE LTD.



Still keeps  
going when  
the rest  
have  
stopped

ES-395



Mr. R. Knight and Mrs. Knight (the hosts) seen with Mr. P. C. Aspinall, Export Manager, Chlorides, London at Hotel Connemara.



Mr. E. R. Kaylor, Mr. Rama Kant and Mr. J. Meek in conversation with Mr. Aspinall

## MADRAS RECEPTION TO Mr. P. C. ASPINALL EXPORT MANAGER OF CHLORIDE AND EXIDE

Madras.—Mr. P. C. Aspinall, Export Manager, Chloride Batteries Ltd., London was entertained at a party got up by Mr. R. Knight, Madras Representative of Chloride and Exide Batteries (Eastern) Private Ltd. and Mrs. Knight at Hotel Connemara. Mr. Aspinall had come down to Madras during the course of his visit to India and the far Eastern countries.

Mr. Aspinall told *Motorindia* that the Chloride Batteries Ltd. have the largest and most progressive manufacturing organisation in the Commonwealth with factories not only in India and in the United Kingdom but also in Australia, Canada, the Central African Federation, Denmark, Holland, New Zealand, Pakistan and South Africa. Well over a third of India's total requirements for storage Batteries are supplied by Exide. *The Exide factory near Calcutta is claimed to be the best equipped battery factory not only in India but in Asia. It is almost self contained and produces all the components required for a battery including high quality hard rubber containers.*

Applications of science to comfortable living have always a touch of romance. Particularly, when such inventions become essential to day-to-day living, they become part and parcel of our every-day life. Thus people lose sight of the part played by special scientific knowledge applied to modern living.

Manufacture of 'Exide' Batteries commenced over 70 years ago in Britain and although 'Chloride and

Exide Batteries Eastern Ltd.' have been well known in this country for over 40 years, it was in 1944 that the Exide Factory was established in India.

Well over a third of India's total requirements for Storage Batteries by the Indian Government, Industry, Defence, Communications—particularly for the Railways and the general public are supplied by Exide.

The Exide factory near Calcutta with well over 800 employees is undoubtedly the best equipped Battery Factory not only in India but in Asia. It is almost wholly self-contained and produces all the components required for a battery

including high quality hard rubber containers.

Lead and antimony, the main raw materials of course have to be imported from outside in common with other battery manufacturers.

Chloride have the largest and most progressive manufacturing organisation in the Commonwealth with factories not only in India and in the United Kingdom but also in Australia, Canada, the Central African Federation, Denmark, Holland, New Zealand, Pakistan and South Africa.

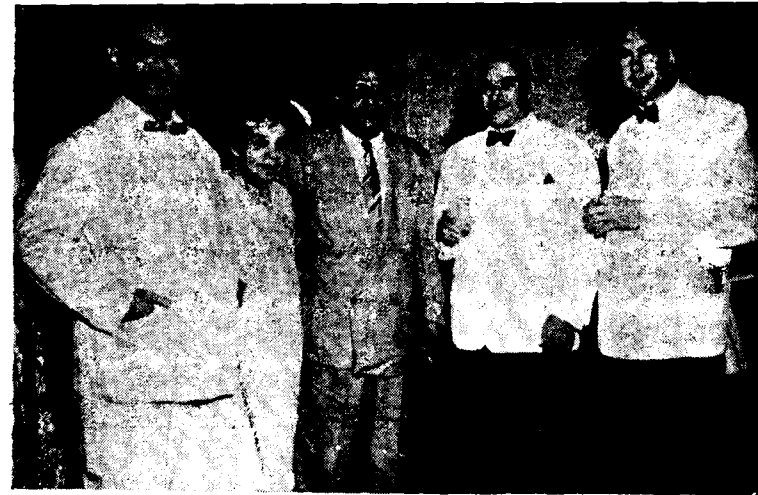
The knowledge gained of the operation of Exide batteries in tropical and cold countries through

Guests at the reception to Mr. Aspinall, included Mrs. Brazel, Mrs. Morgan, Mr. Brazel, Mrs. L. L. Pasricha and Mr. Morgan seen below





Mr. Knight, Mr. Pasricha and Mrs. Pasricha with Mr. Aspinall at the centre



Mr. P. N. Talati, Miss Talati and Mr. K. Swarup with Messrs Knight and Aspinall

## PLANS TO HELP INDIA'S FOREIGN EXCHANGE

the chain of factories and distribution agents is passed back by the parent factory in England to the Calcutta factory providing the Indian Organisation with a unique fund of knowledge which is drawn upon to constantly improve Exide products and service facilities throughout India.

Over the last few years the Calcutta factory has been producing Storage Batteries of many types at a rate of well over 150,000 batteries each year to meet the ever increasing demands of India's developing economy.

In this connection, Mr. Peter C. Aspinall, Export Manager, Chloride Batteries London Ltd., U.K. Associates of Chloride and Exide Batteries (Eastern) Private Ltd., is at present visiting India and the Far Eastern countries to study the Storage Battery market, particularly in the distribution and sales of Automotive batteries in this region.

Mr. Aspinall's visit to India at this juncture is significant because he arrives here at a time when her Foreign Exchange position is none too happy and the indigenous resources of Exide's Indian organisation is therefore being developed even further.

It may be recalled that Mr. Aspinall's last visit (since his war service as an R.A.F. pilot in both India and Burma) to India in 1955 coincided with the launching of the now well known 'Silver Exide' Battery which experience shows is now the first choice of the Indian public as far as batteries are concerned.

A select gathering of the elite was present at the business and press function held to meet Mr. P. C. Aspinall at Connemara Hotel, Madras on June 21. Those present at the reception included :—Mr. R. Knight Madras Representative, Chloride and Exide Batteries Eastern Private Ltd. Mrs. Knight ; Mr. Peter C. Aspinall, Export Manager, Chloride Batteries Ltd., London. Mr. K. Narasimhamurthi, Buyer and Material Controller, The Enfield India Ltd., Madras, Mr. H. Stanford, Technical Adviser, The Enfield India Ltd., Madras, Mr. F. Crook, Service Manager, Ashok Leyland Ltd., Madras, Mr. G. Nutley Commercial Manager, Ashok Leyland Ltd., Madras, Mrs. Nutley, Mr. A. H. Freeman, Works Manager, Ashok Leyland Ltd., Madras and Mrs. Freeman;

Mr. S. Francis, Asst. U. K. Trade Commissioner, Madras. Mr. C. H. Neale, Secretary, Standard Motor Products of India Ltd., Madras, and Mrs. Neale, Mr. K. Srinivasan, Director, Union Company (Selling Agents for Standard Cars), Mr. Rama Kant, District Manager, Madras Telephones, Mr. G. K. Ambady, Chief Electrical Engineer, Southern Railway, Madras, and Mrs. Ambady. Mr. C. L. Pasricha, Deputy Chief Electrical Engineer, Southern Railway, Madras, and Mrs. Pasricha. Mr. P. N. Talati, Controller of Stores Southern Railway, Madras, and Miss Talati ; Mr. K. Swarup, Chief Administrative Officer, Integral Coach Factory, Perambur, Madras, and Mrs. Swarup; Mr. R. K. Tandon, Deputy Controller of Stores, Integral Coach Factory, Perambur,

Mr. Ramakant of the Telephones and Mr. Swarup of the Integral Coach Factory with Mr. Knight at the centre



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Madras, Mr. E. H. Brazel, Branch Manager, English Electric Co., Ltd., Madras and Mrs. Brazel, Mr. J. Meek, Director, General Electric Co. of India Private Ltd., Madras, Mr. D. Nicholson, General Electric Co. of India Private Ltd., Madras, Mr. O. T. D. Schomburg, General Electric Co. of India Private Ltd., Madras and Mrs. Schomburg; Mr. C. S. Doraiswamy, General Electric Co. of India Private Ltd., Madras, Mr. R. Ramanathan, Asst. Manager (Electrical Dept.) Voltas Ltd., Madras, Mr. K. Heuer, Spencer & Co. Ltd., Madras, Mr. S. S. Mahadevan, Area Representative M/s. Stone & Co. (India) Private Ltd., Madras, Mr. Allan Taylor, The Mail, Madras, and Mrs. Taylor; Mr. E. R. Kaylor; Asst. Manager, W. A. Beardsell & Co., Madras, and Mrs. Kaylor. Mr. G. Morgan, Production Engineer, Standard Motor Products and Mrs. Morgan; Mr. Eswaran, Director, Easun Engineering Co. Ltd., Madras, Mr. Robert, U.K. Representative, Hackbridge, Hewettic Walton on Thames, Surrey, Mr. P. S. G. Rao, Manager, D. J. Keymer & Co., Mr. Bruce, Managing Director, The English Electric Co. Ltd., Pallavaram, Mr. Samuel, Sub-Branch Manager, The General Electric Co. of India Ltd., Coimbatore, Mr. Venkataraman, Asst. Manager, Easun Engineering Co. Ltd. Madras and Mr. T. Co-Acting General Manager, Massey-Ferguson of India Ltd., Bangalore.

## Carborundum Universal Limited

With technical help from their Associated Companies in U.K. & U.S.A. Carborundum Universal Ltd., Madras, have commenced production of Water-proof Abrasive papers, strictly following most exacting technique and rigorous standards of quality control.

Three different qualities of papers which are used as packings are specially treated to make them thoroughly waterproof. The abrasives are manufactured under the latest "Electro Coating" method wherein Silicon Carbide abrasive grains are coated in an upright position in a high voltage Electrostatic field so as to make them absolutely uniform and very sharp.

Waterproof paper is used for wet rubbing down of sealer, primer, under coat and finish coats of paints, lacquers, enamels etc.

June 1958

## SHOCK ABSORBERS THAT NEED NO LUBRICATION

Messrs. Scott & Pickstock Private Ltd., the well known Import-Export firm, situated at the Catholic Centre, Madras, have been appointed as sole selling agents in the whole of India for Andre Hartford Shock Absorbers.

These Shock Absorbers, representing a new and improved high efficiency model, have been favourite with motorists for nearly quarter of a century now. Hartford Shock Absorbers are well known for their efficiency as well as simplicity, as can be judged from the fact that leading drivers in classic road and track events in various parts of the world, have expressed their very high appreciation. The latest type of this Shock Absorber has a floating centre which avoids the tendency to stiction. Fitted with "Silentbloc" rubber bearings,

these Shock Absorbers require no lubrication or attention and they always remain silent in action.

It is claimed that the Andre Telescopic Suspension Damper which requires no fluid to leak or deteriorate, also requires no servicing. It is unique, because it can be instantly adjusted on the vehicle itself, just by the hand and without employing any tools at all.

MOTORINDIA

## One More Auto Bulb Factory

A new manufacturing unit for production of auto bulbs at Dun to cope up with the progress development of the automobile industry in the country has just been announced. The new concern styled the Miniature Bulb Industries of India and its products will be marketed as "Comet" bulbs etc.

The location of the factory, considered very ideal in as much as the hilly areas are supposed to be highly suited for this particular manufacture. With the recent establishment of the Miniature Bulb Industries factory, India can boast of four major factories engaged in the manufacture of Automotive bulbs.

With the vast scope that is ahead for automotive and automobile manufacturers in this country, with the fund of experience and organising ability that Mr. A. Jain possesses, one can safely predict a prosperous future for the manufacturing unit.

Mr. Jain was formerly founder and partner of the Glass and Miniature Bulb Industries of Kanpur.

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# A Red Letter Day for India's Foremost Coachbuilders

It was a hot May day in Hyderabad—it was the 16th instant to be precise; yet prominent Indian industrialists beamed proudly, a Chief Minister applauded warmly and workers cheered lustily as Mr. M. P. Pai, Chief Secretary of the Andhra Pradesh Government, took delivery of the 1000th Allwyn-built bus on behalf of the State Road Transport Corporation.

Complimentary exchanges were the order of the day—and quite rightly so. The compliments were well earned by the management for its initiative and enterprise and by the workers for their devotion and toil. The all-round enthusiasm was highly infectious and none grudged Mr. Pai when he struck a possessive note and said: "The 1,000th bus belongs to me and I want the day to come soon when the 2,000th bus will be delivered to me or my successor."

It was a momentous occasion for Indian industrial progress—for the Indian industries which had attained self-sufficiency were now on the field for competitive efficiency. The standards are exacting—being the same as those obtaining in countries which had launched industrial expansion programmes earlier, very much earlier, than nascent India. That Allwyn had duplicated foreign quality manufacture was indeed an achievement, rejoicing at which could never be overdone. Allwyn's achievement symbolised the aspiration of many an Indian industry—in fact the great industrial revolution.

The pervasive emotionalism failed, however, to affect one man—Mr G. B. Gadre, the Chief Engineer of the body-building section. He was precise, methodical and dispassionate in his account of Allwyn's performance in the sphere of body-building. His speech naturally centred on the technical aspect of Allwyn's progress. He traced the history from the day in October, 1946, when the first Allwyn-built double-decker rolled out of the assembly lines. The body was ordered by the Nizam

## 1000th Allwyn-built Bus Presented to A. P. Government

State Railway who, till then, had been having their coaches built by Park Royal, London.

"In the early states," the Chief Engineer said, "we were importing bus bodies in semi-knocked down condition from Park Royal and assembling them for the R.T.D. After delivering the initial 30 double-deckers and some 200 single-deckers assembled from complete semi-knocked down kits from Park Royal, we naturally decided to strive for self-sufficiency. We made a beginning in 1949 by fabricating structural parts and sub-assemblies in our shops from designs and patterns received from Park Royal, but continued to import all the fittings such as windows, seats, etc. Our progress initially was slow, mainly because we were adversely affected by the political upheaval in Hyderabad State, culminating in police action. In 1950, we were pre-occupied with fulfilling an enormous order for ballot boxes, but from 1953, when Khan Bhadur C. B. Taraporwala took over the management on behalf of the H.E.H.

The Nizam and made available extra funds for rapid expansion, we were well set for out pioneering task.

Continuing Mr. Gadre said: "At this stage we got another big boost in the form of orders from the B.E.S. & T., Bombay, which, like the Andhra R.T.D., are known for their exacting standards. It is their penchant for quality, more than any other single factor, that constantly kept us on our mettle and I take this opportunity to publicly express our gratitude for their constructive criticisms and invaluable suggestions. Our acknowledgment is also due to various other operators, notably the Delhi Transport Authority, The West Bengal State Transport, the Madras State Transport, for their support and guidance.

"Increased pressure of orders also necessitated organisational re-organisation. More workshop area, better tools, services of experts from our associates and trained technicians were obtained. A skeleton design department was also set up

Speaking at the handing over ceremony of 1000th Allwyn Built bus to the Andhra Road Transport Corporation is Mr. M. P. Pai, Chief Secretary to Government and President of the Corporation. The Andhra Chief Minister, Mr. Sanjeeva Reddy is seen in the extreme left



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to chalk out our own drawings, layouts and patterns. Simultaneously, we paid undivided attention to manufacture of bus fittings, such as windows, seat frames, destination indicators, etc. And the measure of our success may be judged from the fact that our window patterns are being copied by other manufacturers in India.

"The biggest boost, however, came in 1956 with the entry of Birla Brothers," Mr. Gadre added. "They took over the management and set out in earnest on a programme of overall expansion. Since then, we have been setting for ourselves ever-higher standards in quality, ever-bigger goals in production and, I am glad to say, we have achieved most of them. Now we have a well-equipped drawing and design office with an experimental section where prototypes are built; and we take particular pride in the fact that we can design complete bodies purely on the basis of coach-builders' chassis drawing, without even looking at the chassis, thus ensuring fullest interchangeability of parts and even complete bodies."

The Chief Engineer then touched on the changing pattern in road transport industry. From private-owned small enterprises, it was fast changing into state-run institutions. This change in turn shifted the accent in body-building industry as well. While individual operators depended on the body manufacturer to assemble and deliver buses, the State Corporations preferred to build their own bodies. Hence from erecting bodies, body manufacturers were now called upon to supply prefabricated fittings which could be erected at each locale by the transport authorities themselves.

In this respect, Mr. Gadre said, Allwyn's "meccano" body-building sets were most satisfying. "We have designed a standard body structure of all-steel construction and another of all-aluminium construction. In both cases, the kit comprises certain prefabricated jigs and fixtures which can be combined in various ways to give bodies of different lengths and widths, to suit different chassis. To improve deliveries, we have also decided to take up production of these standard parts in substantial lots of

about 150 to 200 sets at a time, and stock them in a ready-to-deliver state. In fact, we have already taken up production of the first such batch of 150 sets. Kits on these lines are being supplied right now to various operators, for instance 50 Tiscor Steel and 2 aluminium kits are being supplied to the U.P. Roadways, 20 steel and 2 aluminium kits to the Mysore Road Transport and 8 aluminium Kits to Ceylon Transport Board. We are also supplying 25 specially designed double-decker kits of chiefly aluminium construction to the West Bengal Transport who already have 44 bodies built by us in regular service for over five years."

Striking an optimistic note for the future, the Chief Engineer said that "apart from improving and increasing the business of conventional bus body-building, we have ambitions to build special types of bus and coach bodies, particularly integral bodies—vehicles of chassis-less construction—in association with some chassis manufacturers. We believe that this type of vehicle has a great future, particularly in major cities like Bombay, Delhi

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and Calcutta, because of their light weight. We would also like to build trolley bus bodies as cities like Bombay, and perhaps Calcutta, may be thinking in terms of introducing trolley buses. We also believe that some day, the Indian Railways will require a large number of diesel rail coaches for feeder services. The bodies for such coaches are usually designed and built on lines similar to bus bodies; and we think we can play an important role in the construction of such coaches when opportunity demands.

"That apart, there are various other types of public service vehicles such as ambulances, fire engines, aircraft refuellers, propaganda vans, etc., where there is much scope of original designing; and we, therefore, propose by and by to study these types of vehicles for inclusion in one range. In fact, we have made a small beginning by undertaking to build plant protection vans for the Agriculture Department of Andhra Pradesh, a blood bank vehicle for the Andhra Public Health Department. The defence Services also require a large variety of road transport vehicles and their requirements are usually extensive. We have made a beginning in trying to understand their requirements by taking up two educational orders for wireless trucks and general service bodies." Mr. Gadre pointed out.

In the context of designing new bodies, Mr. Gadre emphasised the need for testing grounds. In England, he said, "the Society of Motor Manufacturers and Traders have prepared a proving ground near Nuncaton. The ground consists of a round track where conditions obtain similar to those in most roads of the different countries of the world such as paved roads, badly corrugated roads, roads with deep pot-holes sandy tracks, ditches, etc. A vehicle, tested on such a track could be said to have passed the supreme test." Mr. Gadre went on to express his fond hope that the Government would provide one such proving ground and pointed out that such a track would not after all involve heavy expenditure as the track when boiled down to essentials amounted to only about 10 to 15 miles of bad road.



The Gateway of India provides a fitting background to the Mobile Dispensary van on a Tata Mercedes Benz, a present to Egypt from the P.M.'s National Relief Fund

#### MOBILE DISPENSARY ON TATA-MERCEDES BENZ CHASSIS FOR GOVERNMENT OF EGYPT

DONATED FROM THE PRIME MINISTER'S NATIONAL RELIEF FUND

A sleek looking Mobile Dispensary built on a Tata-Mercedes-Benz chassis has been presented to Egypt as a donation from the Prime Minister's National Relief Fund to the Government of Egypt. It was handed over by the Indian Ambassador Mr. R. K. Nehru on June 12.

Completely built of aluminium, for lightness and strength, the body is rust proof and is insulated against heat and dust.

The interior fittings include a dental chair, an examination table, a dressing table, a wash basin, a dispensing table, a work table for the Doctor and cupboards and racks for various medicines, surgical instruments, sterilizers, dressings etc. A great deal of care and attention have been bestowed in providing shock-proof fixtures for the numerous items of equipment and medicine bottles carried in the van. Felt

lined trays neatly arranged in the Doctor's working table afford complete protection for the costly surgical instruments. A dispensing window is built at a convenient height, reachable even by children from outside the van.

The superb body work has been

The examination table of the Mobile Dispensary



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carried out by Messrs. Sion Garage, Bombay, under the direction and guidance of Telco's officials and the Deputy Assistant Director General of Government Medical Stores, Bombay.

The spacious van body has been built on a Tata-Mercedes-Benz 142" wheelbase, full forward control chassis whose impressive front end adds to the beauty of this Mobile Hospital.

#### SWEDISH BATTERY EXPERT VISITS INDIA

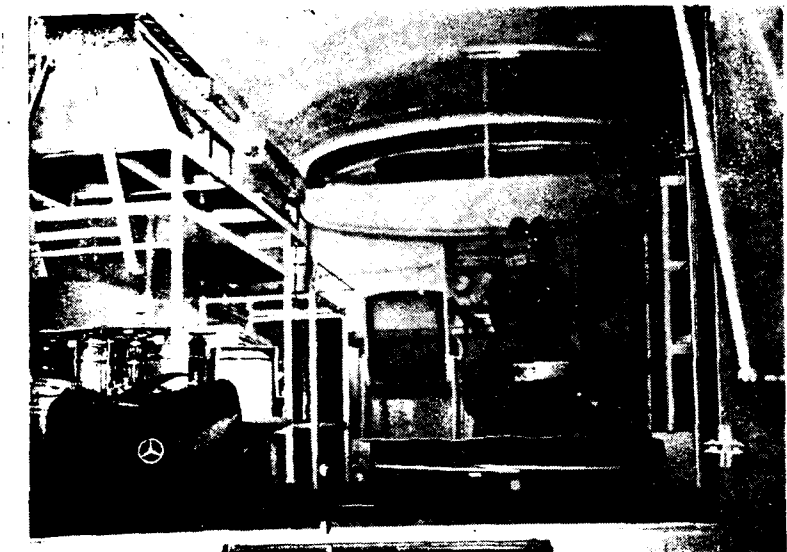
Mr. Erik Sundberg, a well-known inventor and Technical Director of Messrs. A.B. Tudor of Sweden, one of the World's best known battery manufacturers, was in India recently to visit the factory of Standard Batteries Limited—the leading national battery manufacturers, who have a technical collaboration agreement with Messrs. A. B. Tudor.

With about 40 patents in many countries to his credit, Mr. Sundberg has been responsible for several great improvements in lead-acid and alkline batteries. These include the 'dry-charging' process, the 'Mitex' Microporous Rubber Separator, the sintered plate, special improvements in submarine batteries, and the greatest battery development

Mr. E. Sundberg (garlanded) Technical Director of M/s. A. B. Tudor of Sweden, with the senior executives of Standard Batteries Ltd., at Santa Cruz airport



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The interior fittings of the Mobile Van shows a Dental Chair as well

in recent years—the 'Pg' Tubular Positive Plate.

Since most of these patents are being used by Standard Batteries Limited, Mr. Sundberg took a personal interest in the working of the Standard Batteries Factory—the largest national battery-making plant in India. Mr. Sundberg is also adviser to 22 battery factories in Europe, South America and the United States.

During his stay in India, Mr. Sundberg delivered two lectures to engineers, in Bombay and in Delhi, on the latest trends in battery design abroad. He explained the technical

value of these advancements, some of which have already been introduced in India by Standard Batteries Limited. Mr. Sundberg believes that 'Pg' Batteries are so superior technically that they will, in a foreseeable time, replace conventional types of batteries in many fields.

#### HOLLAND ORDERS 525 COMMER VANS

The success of the two Commer 1½ ton delivery vans in a six months "trial" against competing, German, French, Dutch and British makes has won for the Rootes Group an order from Holland which now totals 525 vehicles valued at over £350,000.

The order is for the mechanisation of the light freight delivery fleet of the Dutch Nationalised Railways and already 375 of the Commer vans have been delivered. A further 150 have now been ordered for delivery by the middle of this year

Their successful operation led to a second order for 215 Commer and recently truck executives flew to Amsterdam to clinch the latest order which virtually completes the mechanisation of the fleet. At every stage there was fierce competition from other European manufacturers.

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# Madras State Lorry Owners' Association Operators Meet at Annual Conference

The Second Annual Conference of the Madras State Lorry Owners' Association, was held at the Memorial Hall, Park Town on 25th May under the presidency of Sri K. Rajaram, former Minister of Madras and currently President of the Tamilnad Congress Committee. The meeting was attended by a very large number of lorry operators from Madras as well as from various important centres of the State.

After refreshments, an address of welcome was presented to Sri K. Rajaram, who presided, in the unavoidable absence of the Minister for Transport, Mr. V. Ramiah.

Mr. M. Sankaran, President of the Association, welcomed those present and exhorted them to strengthen the Association so that they can progress in an orderly manner and try to get their grievances redressed from time to time.

The Annual Report of the Association presented by Mr. A. G. Gopalakrishnan, The Secretary, stated that the Association was started in April 1956 with only a small number of members and it had now grown into a big Association not only in Madras City, but also throughout the State. Lorry Owners' Associations were also formed at various places in the State including Madura, Ramnad, Periakulam, Tiruchengode, Karur, Mettupalayam, Coimbatore, Erode and Pudukottai. Two branches of the Association were also established at Tiruchirappalli and Salem. All the various units were co-operating to the fullest measure in achieving the objects of the Association. The object of the Association was to bring together all the lorry owners scattered throughout the length and breadth of the State and to safeguard their rights and interests and to improve their lot. With this object in view, the Association had been taking up various matters pertaining to lorry owners and their services with the appropriate authorities.

Mr. Rajaram congratulated the Madras State lorry owners on the excellent organisation they have gradually built themselves into during the last two years. He said

that goods transport was vital for the country's progress and this was not his personal view. Even the Planning Commission agreed with this. The progress of any country can be measured properly only by the progress and achievements of the transport system of that country. He wanted the lorry owners to feel that they were making a great contribution to the nation by their service. The Government was indeed very much indebted to the lorry owners for the national service they were doing. In fact, Madras had two Ministers in respect of transport and the Madras Government realised the very great importance of goods transport in the State.

The zonal system which was recently introduced was an attempt to see that no place is made to suffer and that lorries are made available in all areas of the State. He had no doubt that there were many problems which were confronting the lorry owners and he was sure that given the spirit of co-operation, most of these can be easily solved by representations to Government. He also urged that lorry owners, besides insisting on their rights and privileges, should

also realise their responsibilities in the course of their business. He pleaded for drivers not being over-worked and lorries not being overloaded.

Mr. P. S. Narayanan of Raman & Raman, Mr. Mayandi Nadar, M.L.A., Srimathi Ananthanayaki, Sri T. S. Menon, Secretary of the Trichy Association and Sri S. Chinnaswamy of S.C. Brothers Lorry Service and President of the Salem Branch of the Association, then spoke on the problems confronting the lorry owners.

## RESOLUTIONS

Resolutions were passed requesting that lorries should be allowed to ply in George Town area from 2 p.m. to 4 p.m. in the afternoon in addition to the existing hours ;

pleading for the removal of all restrictions on the movement of lorry traffic in George Town area on Sundays and other public holidays ;

drawing the attention of the authorities following lorries being illegally detained ;

urging the issue of State-wide problems and explaining the disadvantages of zonal problems ;

urging the necessity to avoid delays in various Government offices with whom lorry owners come into contact ;

urging the grant of temporary permits by Regional Transport Officers pending grant of endorsements so that vehicles may not be kept idle in these days of transport shortage ;

urging the issue of necessary instructions to ban carrying of goods in buses ;

pointing out the necessity to abolish check posts for lorries established recently at various places where lorries are detained for a considerable length of time ;

urging for the extension of grace period for payment of tax from 7 days to 14 days ;

pleading for special policy in regard to the issue of public



Mr. A. G. Gopalakrishnan, Secretary of the Madras State Lorry Owners' Association

carrier permits by Transport authorities following certain principles to be laid down by Government :

explaining the evils of the present system of brokers who get load for lorries and urging a system of licensing for continuing and forwarding instructions :

urging the extension of the system of collecting single point tax in respect of road vehicles plying from Madras to Pondicherry, Karaikal, Kerala, Mysore etc. ;

pleading for the provision of weigh bridges at all district headquarters and district and city borders ;

stressing the need for the issue of A. & B permits in the form of a book instead of in loose sheets which easily gets soiled and lost ;

stressing the need for representation being given to the Association at the State Transport Advisory Committee and the Board of Transport so that a smoother working of the transport systems may be ensured.

The meeting also decided to increase the number of Committee members of the Association from 5 to 10 and elected 5 new members to be added to the Committee.



Some of the large number of delegates who attended the Conference



Mr. K. Rajaram, President of the T.N.C.C. seen inaugurating the Conference  
Mr. P. S. Narayanan of M/s. Raman & Raman is seen moving the Resolutions



## Of Interest to Operators

With effect from 21st May this year, the maximum speed limit of 15 miles per hour has been fixed for all motor vehicles passing through the following towns :

Virupakshi (Entrance to the village at the east and west); Palni (Entrance to the town at the east and west); Oddanchatram (At the east, west and north entrance); Kannivadi (At both entrance); Sembatti (At the entrance on all the four sides); Kallimandayam (At the south entrance); Koosavapatti (At the north entrance); Pattiveeranpatti (Ayyampalayam - Dindigul Junction Road); Theni ([a] Near Allinagaram, [b] Near Travellers' bungalow, [c] Entrance to Theni from Veerapandi, [d] Near Co-operative Bank); Usilampatti (Usilampatti-Peraiyar road).

The ban on lorry traffic on Gandhiji Road upto Vaigai Bridge in Paramakudi Panchayat, has been lifted from the same date.

## Inter-State Routes

Replying to representations made by the Secretary of the Madras Motor Vehicles and Allied Merchants Association, the Government of Mysore in the Home Department, Bangalore has stated in regard to transport vehicles plying on Inter-State routes and the question of double taxation : The question of entering into reciprocal arrangements with the neighbouring States regarding single point taxation of vehicles plying on Inter-State routes is under consideration of the Government. Until this question is finalised, payment of tax in each State is inevitable. The request for tax concession in respect of such vehicles cannot therefore be considered.

## TRANSPORT ADVISORY BODY FOR H.P.

*Simla* : The Himachal Administration has appointed a 15-member Transport Advisory Committee to advise the Transport Department regarding the inadequacy of passenger buses and matters pertaining to passenger and goods traffic.



Srimathi Ananthanayaki is seen pleading for justice to the operator



Mr. A. G. Gopalakrishnan, Secretary, presenting a welcome address to Mr. Rajaram

A section of the vast gathering of operators seen at Tea



The Administration of the Motor Vehicles Act in the State during the calendar year 1956 was carried on by the Transport Commissioner, the State Transport Authority and the Regional Transport Authority, Madras City and the Regional Transport Authorities in each of the districts in the State, states the report on the Administration of M.V. Act in 1956.

With the coming into force of the Motor Vehicles (Madras Amendment) Act, 1954, on 1st January 1956, drastic changes in the set up of this department and the constitution of the Transport Authorities as follows were brought about :—

(i) The Government gave up appellate powers over the orders of the State Transport Authority and also they ceased to have revisionary powers which they had under Section 64-A in force previous to the amendment.

(ii) A member of the Board of Revenue was appointed as the Transport Commissioner and invested with powers under Clauses (a) and (c) of sub-section (3) of Section 44 and sub-section (4) of the same section. The rest of the powers and functions under sections continued to be vested in the State Transport Authority.

(iii) An Officer of the rank of the District Judge was prescribed as an appellate and revisionary authority to hear and dispose of appeals and revision petitions against the orders of the Regional Transport Authorities and the State Transport Authority. The Central Road Traffic Board and the Regional Transport Authorities as constituted previously were abolished and in their places single-member State Transport Authority and Regional Transport Authorities were constituted. The Deputy Transport Commissioner, an Officer of the Department, was appointed as the State Transport Authority. In Madras City, the Commissioner of Police, Madras, was appointed as the Regional Transport Authority, Madras,

(iv) The Deputy Commissioner of Police, Traffic and Licensing, functioned as the Secretary to the Regional Transport Authority, Madras, while the Regional Transport Officer in the district was the Secretary to the Regional Transport Authority of the district.

(v) The Transport Commissioner is assisted by the Deputy Transport Commissioner in all administrative matters connected with the Department. The Deputy Transport Commissioner who is also the State Transport Authority is in turn assisted by a Secretary and two Assistant Secretaries.

The number of stage carriage operators was 573.

*Stage Carriages* : There were 3,536 vehicles with stage carriage permits in this State at the end of 1956, as against 3,946 at the end of the previous year. Though there has been an increase in the number of stage carriages due to introduction of additional buses in existing routes and opening of new routes and the addition of the Kanyakumari district, the separation of Malabar and South Kanara districts resulted in the decrease in the total number of stage carriages in the Residuary State.

*Public Carriers* : The total number of public carrier permits in force at the end of the year was 5,393 as against the number 5,388 at the end of the previous year. Though the addition of Kanyakumari district brought with it about 180 public carrier permits the separation of South Kanara and Malabar districts took away more than 1,000 vehicles for free flow of goods traffic, permits were granted for lorries for long distances.

*Private Carriers* : In the matter of grant of private carrier permits, there were no restrictions. The number of private carrier permits in force in the State at the end of 1956 was 1,875 as against 2,086 in 1955. The main reason for this decrease in that more than 300 vehicles in this

## MOTOR VEHICLES ACT ADMINISTRATION REPORT FOR 1956

and in the other districts, the Collector of each district was appointed as the Regional Transport Authority of the district.

category went with the areas removed from Madras State.

*Contract Carriages* : The number of contract carriage permits in force in the State at the end of 1956 was 1,372 as against 1,184 at the end of 1955. The carrying capacity of ordinary taxis was reduced from 5 to 4. The separation of South Kanara and Malabar districts has resulted in the depletion of more than 150 in strength of the Contract Carriages.

*State Transport Advisory Committee* : The State Transport Advisory Committee met ONCE during the year under review and its recommendations were generally accepted.

*Board of Transport* : NO meeting of this Board was convened during the year for want of sufficient subjects.

The total revenue collected under Madras Motor Vehicles Taxation Act, 1931, during the year for different classes of vehicles was—Stage carriage 1,69,44,470, Goods vehicles 1,03,63,712, Contract carriages 2,69,475 and cars, cycles and others 25,96,893 making a total of Rs. 3,00,74,551.



Sri A. Alagappan, left Bombay by Air India International plane on Friday the 13th to STUTTGART in West Germany for 3 years Service Engineers Course at Daimler-Benz, who are the manufacturers of world famous MERCEDES-BENZ Automobiles. Sri Alagappan is the brother of Mr. A. V. Giri and brother-in-law of Sri N. Mahalingam, B.Sc., A.M.I.E., M.L.A., of the Anamallais Bus Transport (P) Ltd., Sakthi Automobiles (P) Ltd., Pollachi, The Gounder & Co. (P) Ltd., and allied concerns.

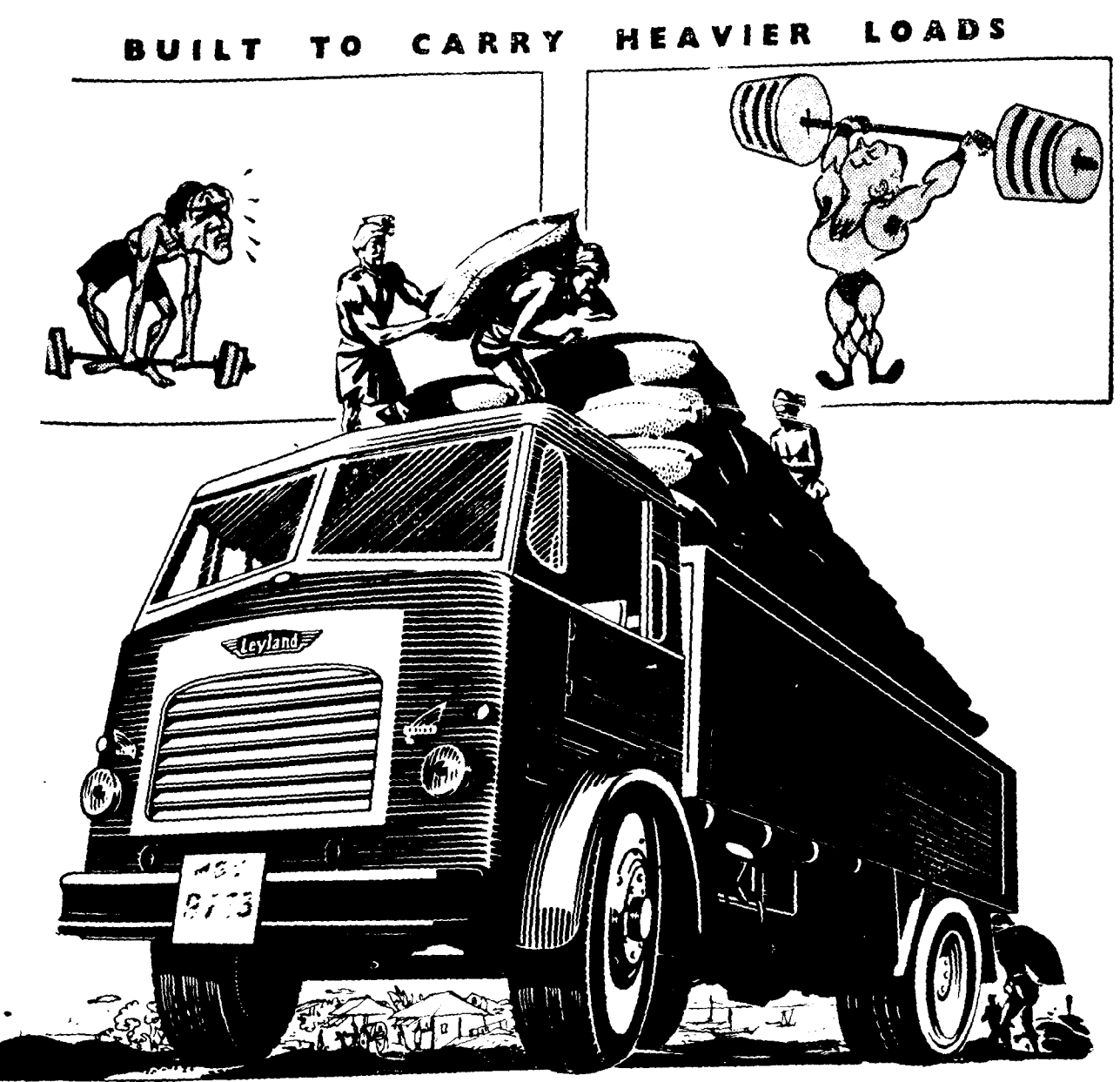
# MODELS AND THEIR Prices

| CARS                                                                                                                                | Rs.    | nP. |
|-------------------------------------------------------------------------------------------------------------------------------------|--------|-----|
| Plymouth (Sundaram Motors Private Ex-Factory, Kurla)                                                                                | 20,270 | 00  |
| Plymouth Suburban (Sundaram Motors, Ltd.)                                                                                           | 22,646 | 00  |
| Hindustan Ambassador 1957 (Southern Automotive Corporation Private Ltd.) ex-plant Uttarpara                                         | 11,161 | 00  |
| Dodge kingsway sedan (Rane (Madras), Ltd.)                                                                                          | 20,371 | 00  |
| Dodge Suburban (Rane (Madras), Ltd.) ex-Bombay                                                                                      | 22,899 | 00  |
| Vanguard Phase III (Union Co. (Motors) Ltd.)                                                                                        | 14,700 | 00  |
| Standard Super Ten Saloon (Union Co. (Motors) Private Ltd.) on the road                                                             | 10,022 | 12  |
| Standard Estate Car (Union Co. (Motors) Private Ltd.) on the road                                                                   | 14,889 | 12  |
| Studebaker 'Parkview' Station Wagon 1956 model (Reliance Motors Ltd.) ex-plant Calcutta                                             | 20,280 | 00  |
| Studebaker 1956 Commander (V.S.T. Motors Private Ltd.) Including S.T. & Delivery Charges                                            | 22,239 | 86  |
| Studebaker 1956 President Classic (V.S.T. Motors Private Ltd.)                                                                      | 24,499 | 78  |
| The Fiat 1100 The Elegant (Sundaram Motors Private Ltd.) Ex-Factory                                                                 | 9,755  | 00  |
| Willys C.J. 3B Universal Jeep ex-plant Bombay                                                                                       | 12,160 | 00  |
| Willys Model Station Wagon ex-plant Bombay                                                                                          | 18,150 | 00  |
| Jeep 1 ton truck                                                                                                                    | 13,046 | 00  |
| <b>MOTOR CYCLES</b>                                                                                                                 |        |     |
| Royal Enfield (The Madras Motors (Private) Ltd.)—                                                                                   |        |     |
| “150 Ensign” (any dealer point in India)                                                                                            | 1,890  | 00  |
| “350 Bullet” with spring frame (any dealer point in India)                                                                          | 3,430  | 00  |
| 499 c.c. Model ‘j2’                                                                                                                 | 3,500  | 00  |
| “500 Bullet” with spring frame                                                                                                      | 3,950  | 00  |
| “500 Twin” with spring frame and with Magdyno or coil ignition                                                                      | 4,450  | 00  |
| “700 Super Meteor” with spring frame and with Magdyno or coil ignition                                                              | 4,650  | 00  |
| <b>SCOOTERS</b>                                                                                                                     |        |     |
| Lambretta, manufactured by Automobile Products of India Ltd. Distributors, South India Automotive Corporation Private Ltd., Madras. |        |     |

| (At Visakhapatnam—Western Automobiles Ltd.) Prices are ex-Factory, Bhandup, Bombay.                                                        | Rs.    | nP. |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------|-----|
| 48 c.c. Scooterette                                                                                                                        | 827    | 00  |
| 150 c.c. ‘LD’ Model Deluxe Scooter                                                                                                         | 1,795  | 00  |
| <b>VANS</b>                                                                                                                                |        |     |
| Standard Delivery Van. (Union Co. (Motors) Private Ltd.) on the road                                                                       | 10,628 | 56  |
| Hindustan Traveller, price on the road (Reliance Motor) Co.                                                                                | 14,700 | 00  |
| <b>TRUCKS &amp; COMMERCIAL CHASSIS</b>                                                                                                     |        |     |
| Sundaram Motors (P) Ltd.                                                                                                                   |        |     |
| Leyland Comet “203” WB Passenger Diesel Chassis including S.T. & dely. charges                                                             | 36,000 | 00  |
| Leyland ECPO 2/2R-176 WB full forward control Passenger Chassis S.T. & dely. charges                                                       | 35,500 | 00  |
| Leyland ECOS 2/1R-163 WB goods chassis including S.T. & dely. charges...                                                                   | 34,700 | 00  |
| Leyland ECOS 2/2R-118 full forward Tipper chassis including S.T. & dely. charges                                                           | 34,500 | 00  |
| (V.S.T. Motors Private Ltd.)                                                                                                               |        |     |
| Tata-Mercedes-Benz, Diesel Truck and Bus Chassis L 312/42 165” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur                               | 26,820 | 00  |
| LP 312/42 165” W.B. Full Forward Control Truck Bus Chassis ex-Works, Jamshedpur                                                            | 27,780 | 00  |
| LP 312-48 190” W.B. Full Forward Control Bus Chassis ex-Works, Jamshedpur                                                                  | 28,570 | 00  |
| L 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur                                                                                | 26,475 | 00  |
| LK 312/36 142” W.B. 5-Ton Truck Chassis ex-Works, Jamshedpur                                                                               | 30,125 | 00  |
| Fargo (at Sundaram Motors Private Ltd.) Dodge (at Rane (Madras) Ltd). Prices duty paid ex-factory Premier Automobiles Ltd., Kurla, Bombay. |        |     |
| C3D6-116” (4) 7.00×16—6 Ply                                                                                                                | 11,615 | 00  |
| C4D6-126” (4) 7.00×16—6 Ply                                                                                                                | 12,662 | 00  |
| C3PW6-126” (4) 9.00×16—10 P.W.                                                                                                             | 17,974 | 00  |
| C4G6-153” (6) 34×7—10 Ply                                                                                                                  | 16,391 | 00  |
| C4G6-153” (6) 32×6—10 Ply                                                                                                                  | 16,062 | 00  |

|                                     |  | Rs.    | nP. |
|-------------------------------------|--|--------|-----|
| C4H6-153” (6) 34×7—10 Ply           |  | 17,710 | 00  |
| C4H6-153” (6) 34×7—12 Ply           |  | 17,979 | 00  |
| C4H6-193” (6) 34×7—10 F.F. Ply      |  | 18,116 | 00  |
| C4H6-193” (6) 34×7—12 F.F. Ply      |  | 18,385 | 00  |
| C4H6-193” (6) 34×7—10 W.S. Ply      |  | 18,479 | 00  |
| C4H6-193” (6) 34×7—12 W.S. Ply      |  | 18,748 | 00  |
| K6D200-116” (4) 7.00×16—6 Ply       |  | 12,896 | 00  |
| K6D200-116” (4) 7.00×16—8 Ply       |  | 12,961 | 00  |
| K6D300-126” (4) 7.00×16—6 Ply       |  | 12,900 | 00  |
| K6D300-126” (4) 7.00×16—8 Ply       |  | 12,965 | 00  |
| K6W300-126” (4) 9.00×16—10 P.W. Ply |  | 18,950 | 00  |
| K6D400-129” (6) 34×7—10 Ply         |  | 16,372 | 00  |
| K6D400-153” (6) 32×6—10 Ply         |  | 16,186 | 00  |
| K6D400-153” (6) 34×7—10 Ply         |  | 16,531 | 00  |
| K6D400-171” (6) 34×7—10 Ply         |  | 17,008 | 00  |
| K6D500-129” (6) 34×7—10 Ply         |  | 18,092 | 00  |
| K6D500-129” (6) 34×7—12 Ply         |  | 18,388 | 00  |
| K6D500-153” (6) 34×7—10 Ply         |  | 18,331 | 00  |
| K6D500-153” (6) 34×7—12 Ply         |  | 18,628 | 00  |
| K6D500-171” (6) 34×7—10 Ply         |  | 18,606 | 00  |
| K6D500-171” (6) 34×7—12 Ply         |  | 18,904 | 00  |
| <b>PICKUP</b>                       |  |        |     |
| C3D6-116” (4) 7.00×16—6 Ply         |  | 15,012 | 00  |
| C4D6-126” (4) 7.00×16—6 Ply         |  | 16,058 | 00  |
| K6D200-116” (4) 7.00×16—6 Ply       |  | 16,293 | 00  |
| K6D200-116” (4) 7.00×16—8 Ply       |  | 16,358 | 00  |
| <b>DIESEL CONVERSION</b>            |  |        |     |
| C4H6-153” (6) 34×7—10 w.b. Ply      |  | 22,668 | 00  |
| C4H6-153” (6) 34×7—12 w.b. Ply      |  | 22,937 | 00  |
| C4H6-171” (6) 34×7—10 w.b. Ply      |  | 22,903 | 00  |
| C4H6-171” (6) 34×7—12 w.b. Ply      |  | 23,172 | 00  |
| K6D500-153” (6) 34×7—10 w.b. Ply    |  | 20,997 | 00  |
| K6D400-171” (6) 34×7—10 w.b. Ply    |  | 21,303 | 00  |
| K6D500-153” (6) 34×7—12 w.b. Ply    |  | 22,930 | 00  |
| K6D500-153” (6) 34×7—10 w.b. Ply    |  | 22,632 | 00  |
| K6D500-171” (6) 34×7—12 w.b. Ply    |  | 23,414 | 00  |
| K6D500-171” (6) 34×7—10 w.b. Ply    |  | 23,116 | 00  |

The prices and specifications are subject to change without notice.



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