

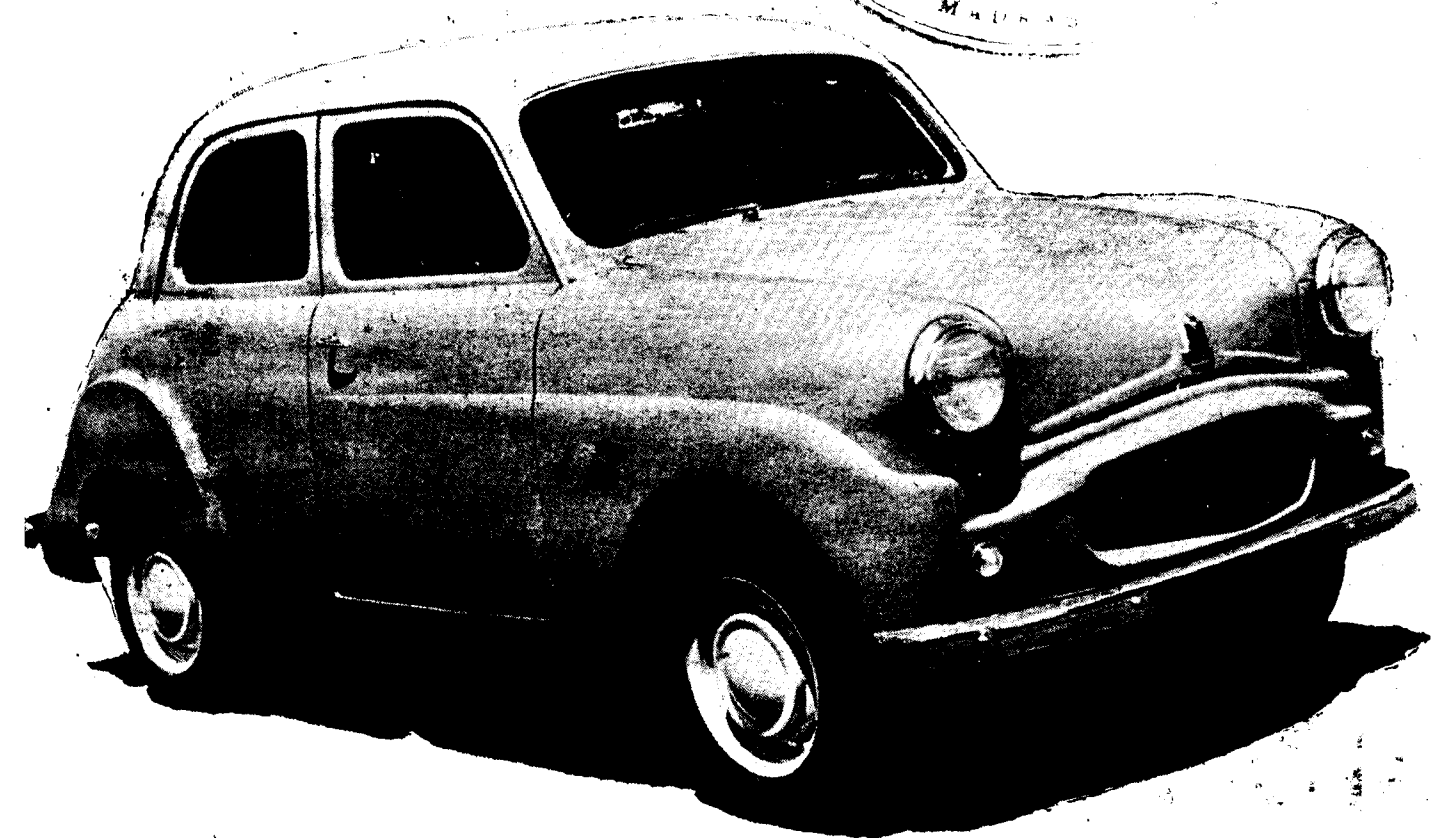
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MOTORINDIA

VOLUME 4

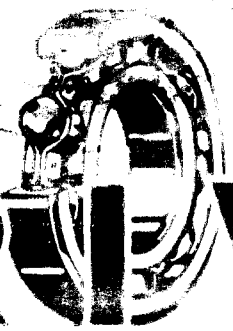
OCTOBER 1959

87 NUMBER 3



Over a score of Manufacturers are in the run for selection of a suitable small car for India. These include the "Stanmotile" shown above which was designed & constructed in three weeks at the Vandalur Factory of Standard Motor Products.

92682



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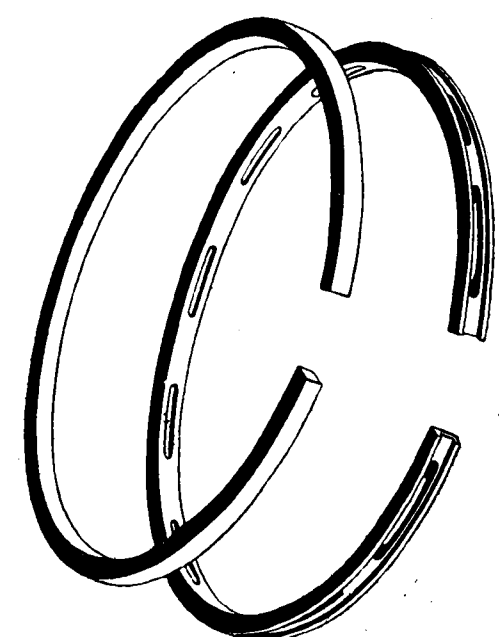
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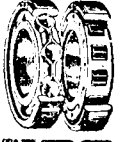
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MOTORINDIA

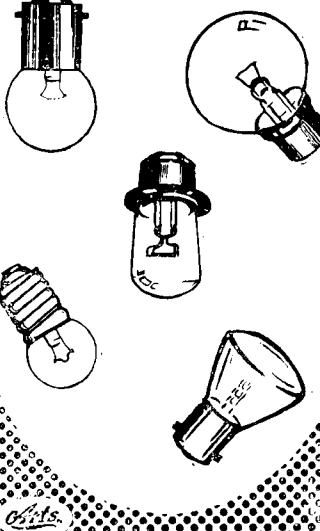
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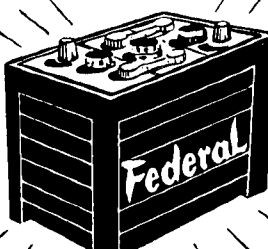
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Vol. 4

OCTOBER 1959

No. 3

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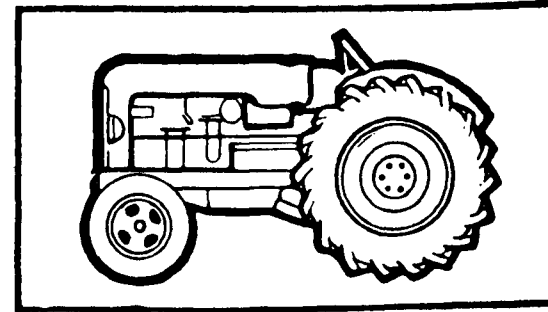
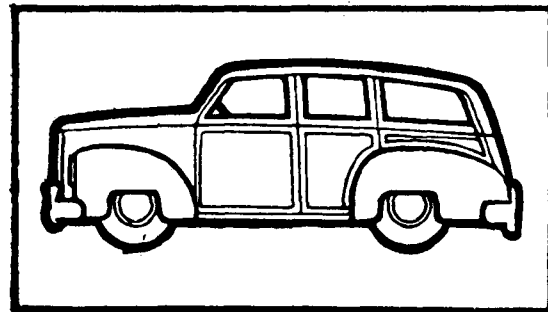
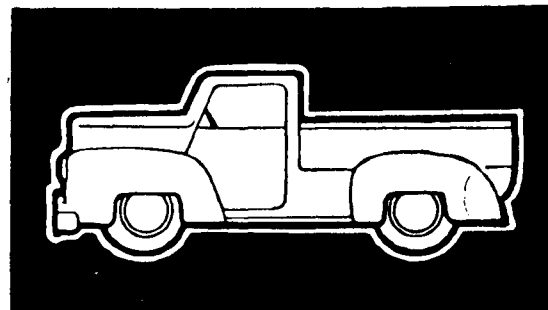
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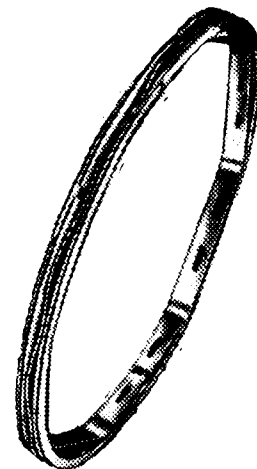
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editorial

SMALL CAR

New and exclusive details about the very large number of 1960 model cars are included in this issue along with photographs wherever possible. These models from various countries include also some of the small cars, which have attained great importance in this country at the moment, thanks to the Government's exploration of possibilities to select and approve the production of a small car for India.

Since we wrote on this in our last issue, we find nearly 22 manufacturers of small cars or their counterparts in India have submitted their schemes before the JHA Committee of automobiles, which is entrusted with the task of recommendation.

While so much is being said about the need for a small car, the point at issue actually is whether and how far the Government is prepared to go and make a small car available within reasonable prices to the consumer. If the only criterion with which the selection is to be made, is to be that of the consumer, then there is a very strong case for the Government to scrap the tariff or other duties which amount for nearly 30% or well over RS.3000 for each car. Along with this, it is also the duty and national responsibility of whichever manufacturer who is entrusted with the task, to see that the cost of production is kept down as low as possible without taking away the comfort that the vehicle can give the consumer. The greatest impediment in such a reduction appears to be that the Indian made ancillary parts are definitely more costly compared to the parts that are manufactured in other countries. Therefore, there is also a strong case for the cutting down of the cost of component parts which are being supplied by various industries to the automobile manufacturing industry. Unless all these points are tackled, we see no hope in the near future of the Indian customer getting a car for around Rs. 5000 and which can seat 4 to 5 adults in comfort, whether it is for long distance or for the City run.

There is also another aspect to be remembered in allowing a new small car to come into the market to relieve the present shortage. The manufacturer to be, should be asked to give an undertaking that whatever may be cost of living or other conditions, the agreed price of the small car should not be increased at least during the next three years. Unless this is done, we are afraid that history may repeat itself and that the moment people get the monopoly to manufacture cars, they will start producing their cars and make a case for an increase of the price to the customer. This is a tendency which contributes not a little to the already inflated conditions of our economy and it should be nailed even at the start.

Over 20 Manufacturers in the Run to Produce SMALL CAR

The Government of India appointed an *ad hoc* committee on automobiles to examine the feasibility of producing a low-cost passenger car within the price range of Rs. 5,000 to Rs. 7,000. This Committee has now concluded its enquiry.

In the meantime, Government of India are investigating the feasibility of manufacturing a low-cost passenger car in the price range of Rs. 5,000-7,000 and several manufacturers have given their schemes to manufacture cars in this price range.

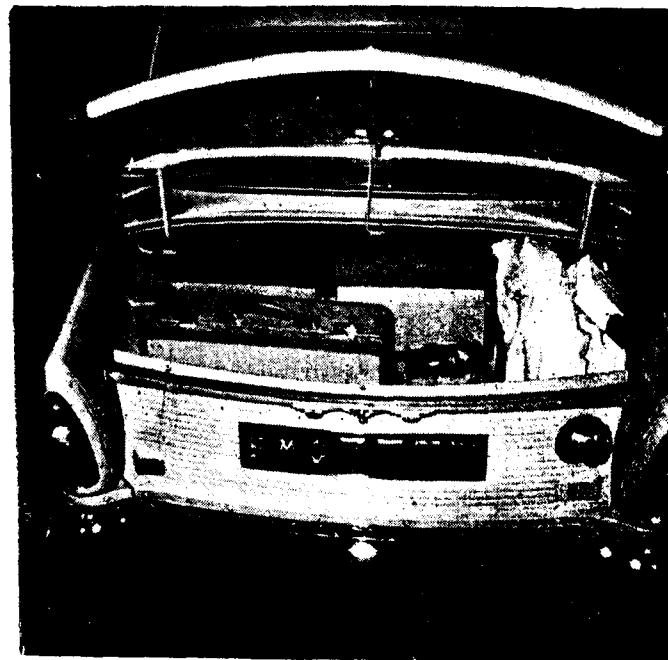
STANDARD

Standard cars who have proved their road-worthiness and reliability, with a view to meet the Government expectation for a cheaper car, making use of the main Engineering specification, such as Engine, Gearbox and transmission, Standard Motor Products of India Ltd., have designed a 2-door version with austere equipment, of the Standard Ten, capable of seating 4-5 passengers. The price of this car is figured at Rs. 8,000 ex-factory and it will be Rs. 8,500 at the dealer point, subject to local taxes and railway freight. Our front cover shows this car.

A number of other small or cheap cars such as Citroen CV, Fiat 600, Morris Miniminor are also shown to Government and the Jha Committee for consideration.

One of the 22 or so "cheap" cars being considered by the Jha Committee for possible selection and licensing for manufacture in India is the D.K.W.

The simple design of the new D.K.W. leaves scope for a big luggage boot where the spare tyre as well as plenty of luggage can be carried.



A rear view of the new D.K.W. which is now on display in India for examination by the Jha Committee on Automobiles.

D.K.W.

Whichever way you look at it, the new D.K.W. has elegant lines. It is longer, sleeker and wider than any other economy car offered in India. Because of the absence of the propeller shaft hump, it can have deep and wide seats and a flat floor running throughout the length of the body. In India, where quantities of luggage have always to be carted, there is a spacious luggage compartment and of course, small packages can be accommodated in the space below the rear window.

The ventilation system provides a generous circulation of cool or warm air as desired throughout the interior of the car. The grooved under slung steering wheel and the positive rack and pinion steering ensures driving safety. The perfectly balanced and smooth running 3-cylinder, 2-stroke engine is designed to run thousands of care-free miles with scarcely any attention. This powerful engine evolved from the experience of innumerable D.K.W. victories is capable of accelerating the car from 0 to 55 miles per hour in less than 17 seconds. It has a sustained cruising speed of 60 m.p.h. and a top speed in excess of 70 m.p.h. It is a glutton for hard work.

For the common man it is an ideal car. It is economical to run—40 miles per gallon—and cheap to maintain. You will be amazed to know that the engine has only seven moving parts—3 connecting rods and one crank shaft mounted on roller bearings and 3 pistons. The engine is not complicated with parts such as valves, valve springs, rockers, tappets and crank shafts. The engine needs no pumps for water circulation or for oil cooling. There is always fresh oil lubrication from the moment you start the engine. There is no question of engine oil change or impure oil in the crank case. START FROM SRINAGAR TO CAPE COMORIN AND MAKE A ROUND TRIP OF 5,000 MILES WITHOUT HAVING TO



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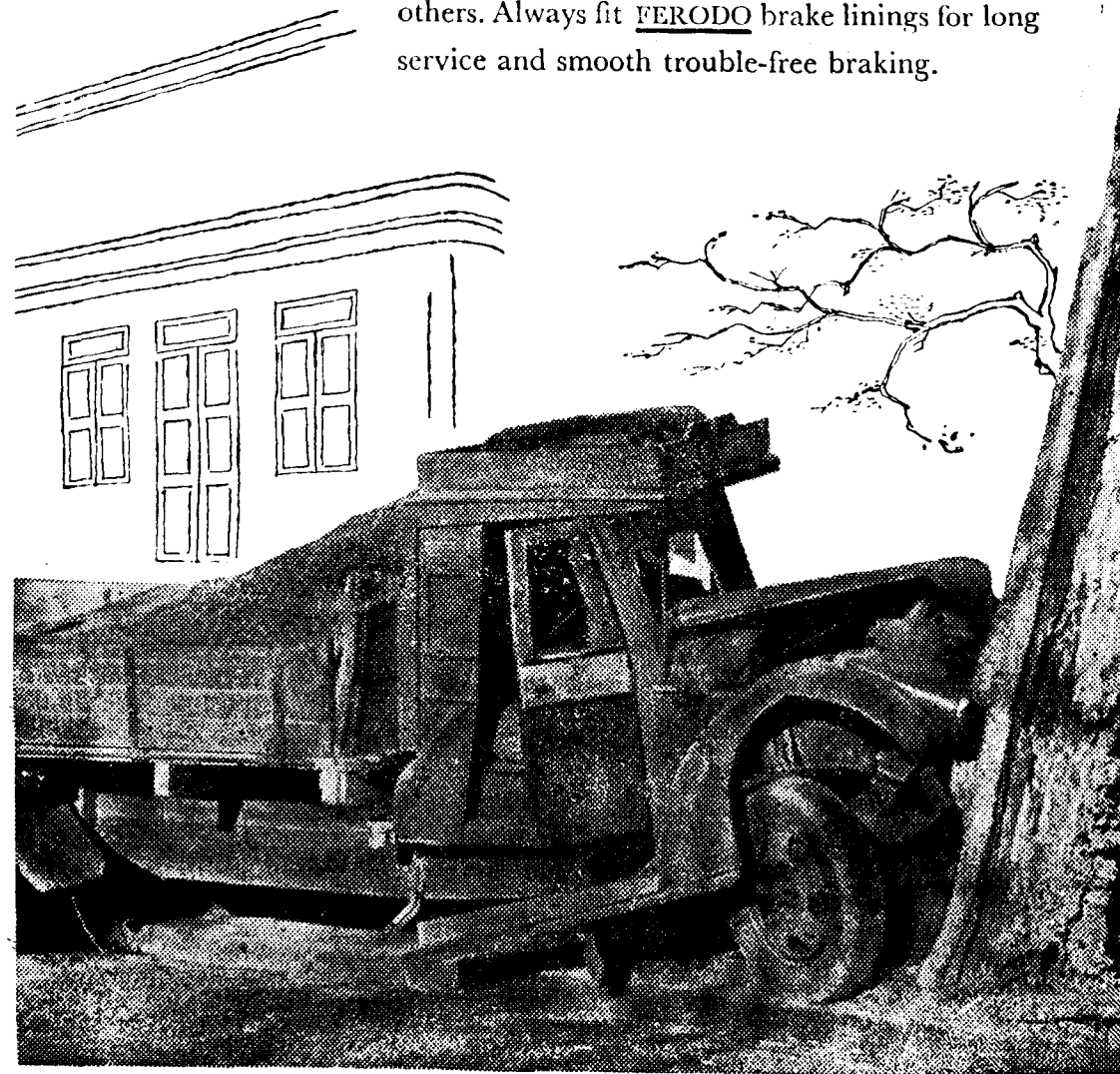
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In addition to popular Lines viz., HIMCO BATTERIES & ELEC. ACCESSORIES, KRALINATOR FILTER CARTRIDGES, WAXPOL PRODUCTS, LOCKHEED Brake Parts, BORG & BECK Clutch parts, Tools & Accessories, a wide range of parts for PERKINS Diesel Engine, FORDSON Tractor, BEDFORD Trucks and Vans, other G. M. Vehicles, FIAT, DODGE-FARGO are always carried in stock.

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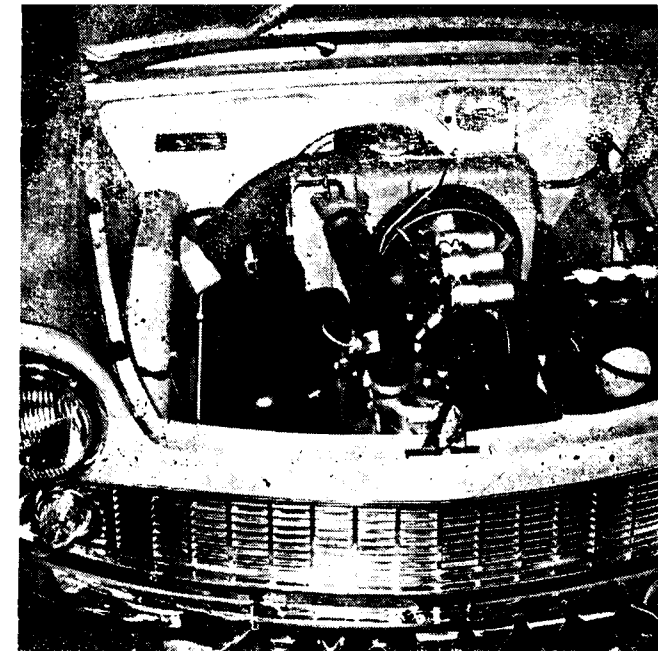
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If not, it's time you had your brakes tested. Regular brake testing every 2,500 miles means greater road safety for you... for others. Always fit **FERODO** brake linings for long service and smooth trouble-free braking.



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in England)
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A view inside the bonnet of the new D.K.W.

CHECK UP ON THE ENGINE. WHAT A BOON THIS CAN BE FOR MOST DRIVERS WHO ARE NOT MECHANICALLY MINDED.

All four wheels have independent suspension and soft sprung for a comfortable ride over any type of road surface. The four speed transmission is all fully synchronised making driving and gear shifting a real pleasure.

A front wheel drive car has numerous advantages for it pulls the car instead of pushing it. This means greater safety and road holding on curves and on slippery and wet roads. For further safety, strong, turbine type brake drums are provided for smooth stops.

The long back seat gives the small car the appearance of the big cars.



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82, OPERA HOUSE T. T. BOMBAY 4.

THE CAR CAN BE MADE AVAILABLE IN RIGHT-HAND DRIVE NOT ONLY AS A TWO-DOOR BUT ALSO AS A FOUR-DOOR AND A STATION WAGON MODEL. SO UP-TO-DATE IS THE CONCEPTION AND DESIGN OF THIS CAR THAT THERE NEED BE NO FEAR OF MODEL CHANGES FOR THE NEXT DECADE.

Tatas have put their proposals before the Jha Committee for their consideration and if the necessary sanction is given, this car will be manufactured in India by Telco at their Works at Jamshedpur.

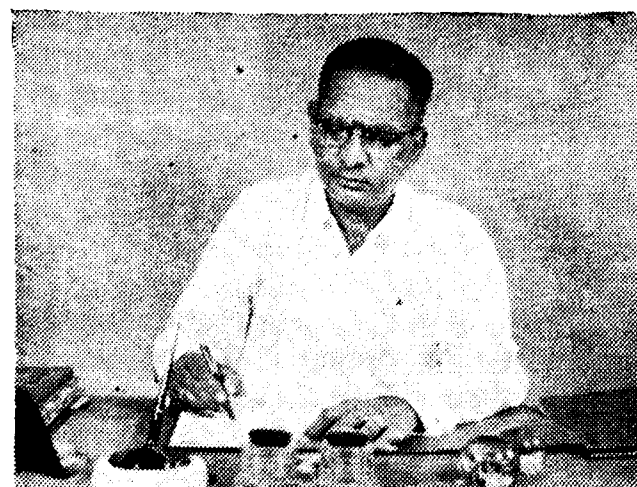
WEDDING :

Sri P. Mohanakrishnan, Partner, Foreign Agencies, with his Bride Sri Ranganayaki. The marriage was celebrated on a grand scale at Tiruchi.





Sri A. R. Shanmugam Pillai



Sri M. Somasundaram Pillai

Started in 1919, with an eight-seater bus,
**LION AUTOMOBILE
SERVICE COMPANY**, today owns
53 vehicles, all supplied and serviced by TVS

"LION AUTOMOBILE SERVICE CO., Tirunelveli Junction was founded by Sri A. R. Shanmugam Pillai in 1919 operating one eight-seater bus. Sri M. Somasundaram Pillai was with him from 1919; became his partner in 1930. The Firm now operates 53 vehicles on 21 routes, with a daily mileage of 5900 in Tirunelveli and Ramnad Districts.

We have established good and cordial relationship with T. V. Sundram Iyengar & Sons Private Ltd. All our

buses are supplied by them in addition to spares and allied service."

Sd/- A. R. Shanmugam Pillai

Sd/- M. Somasundaram Pillai

Modern business flourishes with the prosperity of a consumer. This ideal has paid us rich dividend in consumer goodwill. It is this consumer who nurtures 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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**T. V. SUNDARAM IYENGAR & SONS
PRIVATE LIMITED, MADURAI**



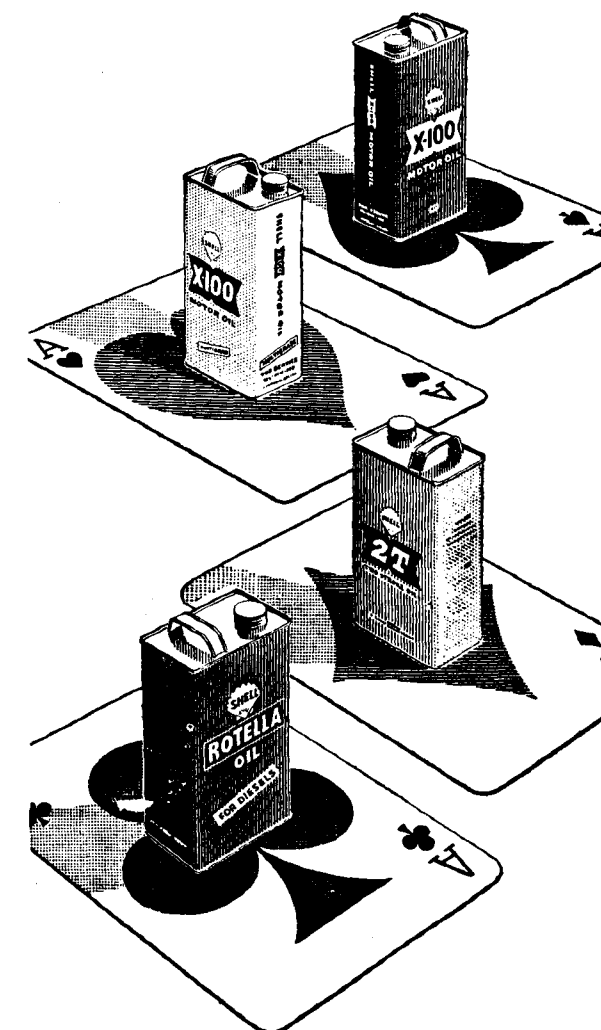
SIVARAMAN & CO. NEW BUILDING OPENED AT NAGAPATAM

Declaring open the sales office building of M/s. Sivaraman & Co., at Perumal South Street, Nagapattinam, at 5-30 p.m. on Saturday the 5th September, 1959. Janab A. K. V. Abdul Jabbar Maricair, Chairman of the Nagapattinam Municipal Council, observed that in the present context of things, especially in view of the heavy taxation it was not possible for any businessmen to make huge profits. The chairman paid glowing tributes to Sri P. S. Narayana Iyer, Managing Director, Raman & Raman (Private) Ltd., for the opening of Mobilgas-Mobil-diesel station at Nagapattinam for the benefit of motorists of that area and how by dint of hard work and industry he has come up to this level. The chairman also paid tributes for the prudence of Sri P. S. Narayana Iyer in selecting the place for the installation of the petrol and diesel pumps at the proper place in the Tiruvarur Main Road, a place which no motorist would escape to pass through.

The function was got up at a specially erected Pandal at the premises of M/s. Raman & Raman (Private) Ltd. After prayer by Mrs. Lalitha Sethuraman, Mr. N. Sethuraman presented an address of welcome to the Municipal Chairman Mr. T. S. Varadhachariar, a leading doctor of Nagapattinam and Mr. Rangarajan, Municipal Councillor also spoke on the occasion. They also praised Sri P. S. Narayana Iyer for his untiring efforts in starting his concerns Raman & Raman (Private) Ltd., Kasi & Sethu and Sivaraman & Co. Sri P. S. Narayana Iyer then explained how he started his business as a dealer in electrical goods in Nagapattinam and stated that unless the management and the labour co-operate with each other with a sense of mutual love and gratitude, it would be impossible to maintain and improve the business enterprise and thus ensure greater productivity for the good of the nation as a whole. Mr. R. Ramani, Secretary of Sivaraman & Co., proposed a vote of thanks. There was also a Flute performance by Shikkal Neela and Azhiyur Kunjuman and party.

M/s. Sivaraman & Co., is one of the sister concerns of M/s. Raman & Raman (Private) Ltd. They are dealers of M/s. Standard Vacuum Oil Co., at Nagapattinam and Tiruvarur. They are also dealers in automobile spares and accessories.

a winner every time...



you can be sure of SHELL

THE NEW DUNLOP 'Gold Seal'

CAR TYRE

IN LOOKS,
PERFORMANCE,
SAFETY — IT IS
TOMORROW'S TYRE,
HERE TODAY

Latest tread design
adapts itself to every
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Greater and safer grip,
better cornering, less
tyre noise.

High mileage, even
tread wear.

A scientifically designed casing
providing greater comfort
and immense durability.



DC 513

12

MOTORINDIA

October 1959

M I N I M I N O R



BMC's REVOLUTIONARY 70 m.p.h. BABY

Front-wheel drive. All-Independent suspension by rubber. Transverse engine with gears in the sump. Four full-sized seats in a car 10 ft. long.

With its tiny wheels stuck right out on the four corners it looks broad-shouldered, muscular and sure-footed. Any resemblance to any other automobile you ever saw is purely coincidental. Its off-beat appearance is the outward sign of its utter originality. This is the BMC's baby bomb,—the 70 m.p.h. miniature that is full of surprises,—the creation of Alex Issigonis, one of Europe's most uninhibited automobile engineers, who has been given an absolutely free hand by Sir Leonard Lord.

It will be sold with minor differences of grille and trim by Austin and Morris dealers, under the name of Austin Seven or Morris Miniminor; but it seems silly to burden it with two names, and Miniminor it should be to everyone.

This is one new BMC model that was not styled by Pinin Farina. It may be purely coincidence, but soon after they showed him the production prototype, he disappeared on a world tour and stayed away for months. But if you appreciate functional simplicity this is it. IT IS THE SIMPLEST, LIGHTEST AND CHEAPEST ENVELOPE THAT COULD BE EVOLVED TO ENCLOSE FOUR FULL-SIZED SEATS, A LOT OF SPACE FOR LUGGAGE AND ODDMENTS, TOGETHER WITH FOUR-CYLINDER ENGINE AND TRANSMISSION IN A PACKAGE ONLY 10 FEET LONG. It turns in a circle of less than 30 feet and will park in a kerbside space only 11½ feet long between other vehicles. It has 37 horsepower (SAE) under the bonnet, weighs only 1,260 lb. ready to roll and out-performs nearly all other small cars. Owners of more conventional and more costly small cars had better get used to its appearance, particularly the squat, rounded stern, for they are going to see a lot

of it. BMC engineers have made careful comparative tests of the best-selling competitive vehicles in France, Germany and Italy, and have come up with figures which show marked superiority of the Miniminor in acceleration, hill climbing and in fuel economy at a given road speed.

After tests with two-cylinder engines mounted at front and rear, it was decided that a four-cylinder water-cooled engine was essential for smoothness, quietness and good power output and the front-engine front-drive arrangement was selected as offering best road holding and steering characteristics. But to compress a four-in-line engine into minimum space, it is mounted transversely across the front of the car, and the gears are put below it, in the sump. So engine, gearbox and final drive form a single unit with one common oil supply. Engine is basically the BMC A-type chv unit, but with shorter stroke giving 848 c.c. (51.74 cu. in.). On a compression of 8.3 to 1 it gives 37 bhp (SAE) at 5,500 r.p.m. and a maximum torque of 44 lb. ft. at 2,900 r.p.m. Accessibility with this arrangement is astonishing. When you lift the hood, the valves, four plugs, coil, distributor (with centrifugal and vacuum advance), the oil dipstick, generator, and starter are all lined up in front of you. You could pull up a chair to work on them. Radiator and fan are at the side; hot air from the radiator being discharged into the left hand front wheel box. High up behind the engine is the single SU carburettor, at least as accessible as on most conventional cars. And by removing the carburettor air cleaner you can get at the wiring behind the instruments. Easily reached on scuttle or right hand wheel arch are fuses, junction box, and reservoirs for brakes and clutch control.

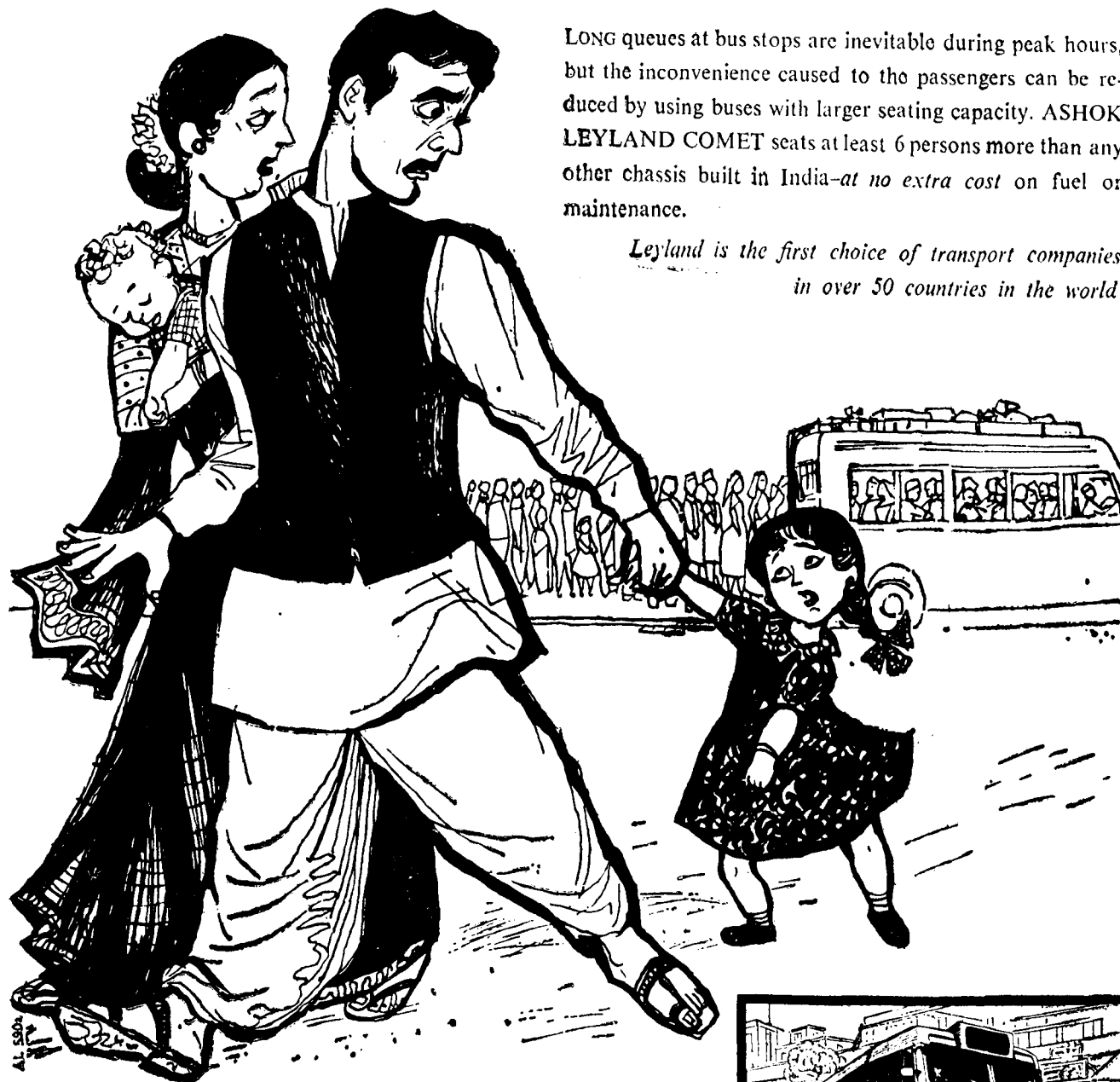
On a tiny vehicle which may have to carry nearly three-quarters of its own weight in passengers and luggage, conventional springs cannot be expected to

October 1959
M—5

MOTORINDIA

13

"I don't think we will find room in that bus. **It's not an ASHOK LEYLAND COMET"**



LONG queues at bus stops are inevitable during peak hours, but the inconvenience caused to the passengers can be reduced by using buses with larger seating capacity. ASHOK LEYLAND COMET seats at least 6 persons more than any other chassis built in India—at no extra cost on fuel or maintenance.

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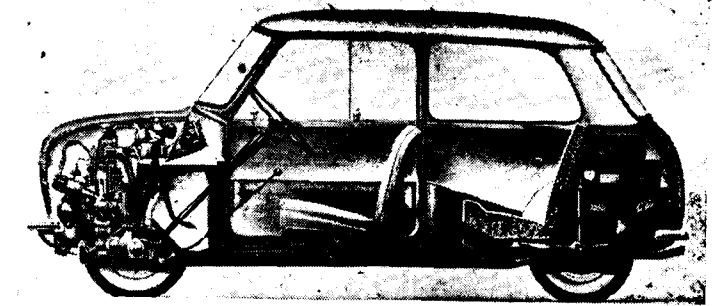
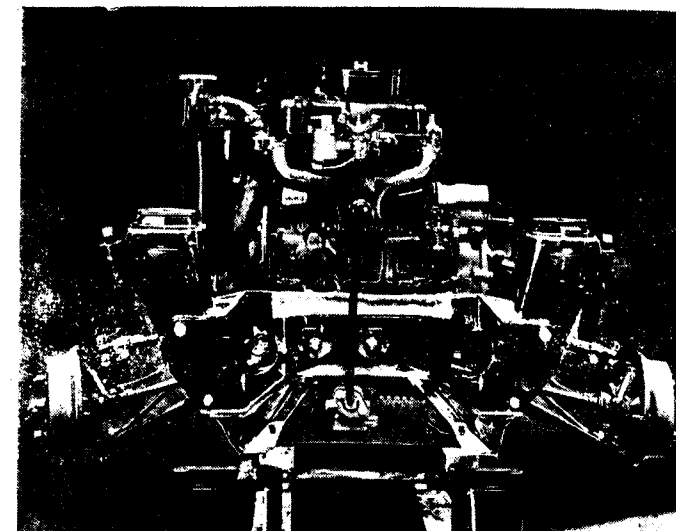


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give an equally good ride in the driver only and the fully laden state. The answer was found in an entirely new cone-shaped rubber spring evolved by Moulton Developments Limited. This is a company formed in 1956 at the instigation of Sir Leonard Lord to develop suspension and other components for use on BMC vehicles, and this is one of its first results of their collaboration. The rubber cone is loaded by levers connected to the suspension arms and gives a flexible suspension which present rising resistance with increasing deflection, a desirable characteristic which is very difficult to obtain simply with ordinary springs. It also has a good deal of self-damping action, and can therefore be used with simple, long-lasting orifice-type telescopic dampers. This suspension is so good over rough roads and tracks, and such good road holding, that very small wheels of 10 inch diameter can be used without producing a choppy ride. Dunlop (who make the Moulton-designed suspension cones) also designed special tyres for the car and put in a great deal of research to obtain the right carcass characteristics and a low rate of tread wear. Prototypes recently went from England north of the Arctic Circle, then flat out southward to Gibraltar, and back to England. 7,000 miles of tough going as fast as the car would go, and tyres were barely half worn at the end of it. Engine, transmission and front suspension are mounted on a steel sub-frame which is attached to the front of the hull by eight bolts. Rear suspension is mounted on another sub-frame attached at the rear by another eight bolts. Rubber bushes isolate the sub-frame from the body.

A WHOLE ARTICLE COULD BE WRITTEN ON THE BODY ALONE, FOR IT EMBODIES MANY NEW IDEAS ON QUICK LOW-COST PRODUCTION. Main elements are the roof, nose assembly and windshield frame, the sides, the tail panel, and the floor. These are all flanged outwards

A View from the back of the front sub-frame showing the engine and transmission shafts, the front suspension (the rubber cones and telescopic dampers are clearly visible) part of the steering mechanism, the brake drums and the gear change lever.



In addition to providing ample leg and head room for all occupants, the body of the small car accommodates an enormous quantity of luggage in the rear compartment which is accessible through a folding down lid. This lid can be used to carry a small quantity of additional luggage.

and welded together by wheel welding down the flanges. Sloping flanges, front and rear, are covered with trim strips painted the same colour as the car. Those over wheel arches and under the doors are painted on standard models, bright polished on de luxe. Two small rubber plugs in the body sides just ahead of the rear wheel give access to grease points for the rear suspension arms. Clutch housing is aluminium, gear case in magnesium, so engine and transmission unit weighs only 310 lb. Body shell, bare, weighs exactly the same amount.

WITH TWO BIG, WIDE DOORS, THERE'S NO PROBLEM ABOUT GETTING INTO THE MINOR, AND THE INTERIOR SPACE IS ASTONISHING. Four seats that can carry full-sized adults, with reasonable knee room and head room, and an amazing amount of space for oddments. There's no instrument panel, simply a big parcel shelf on to which you can fling packets, books, hand bags, cameras. Big boxes on each door provide more storage space for books, maps and bigger items. Further capacious receptacles alongside each rear seat (with ashtray and interior lights on de luxe models) and a big shelf at the rear.....and more space under the rear seat. Then there's the trunk, with fuel tank at one side (5½ Imp. gal. 6. U.S. gal.) Spare wheel lines flat on the floor and the battery is recessed in the floor, but there's still space for several suit cases, and the lid drops down as an auxiliary platform. A round circular housing in the centre of the parcel shelf contains speedometer and fuel gauge, and warning lights for dynamo charge, oil pressure, headlamp high beam. Two lenses in the sides shine lights at night to illuminate the shelf and front of the car. The steering wheel, set on a column nearer vertical than usual accommodates drivers of widely varying girth and arm reach pedals are well spaced to suit big feet. THIS IS A SMALL CAR IN WHICH BIG PEOPLE CAN BE COMFORTABLE. Windows in the doors slide, but with a difference; push both panes back for draught-free ventilation; push them both forward to stick your head out when reversing. Rear quarter windows are fixed on standard models; hinged on de luxe. Upholstery is in plastic; so is head lining. Seat fillings are foam

**THE FINEST
AND FASTEST
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ON EARTH**



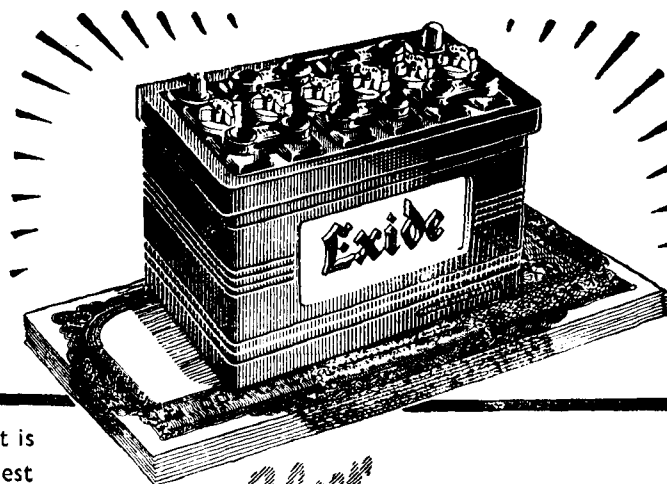
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Silver
Exide



still keeps going
when the rest
have stopped



CHLORIDE & EXIDE BATTERIES (EASTERN) PRIVATE LTD.

EBSC-20

rubber on de luxe ; rubberised hair (known to auto engineers as "birds nests" on standard).

The first few minutes at the wheel are full of surprises. The quiet smooth, willing engines ; you can rev. it high, or slam the throttle open at 10 miles an hour and let it slog away in top gear without judder or thump. And even if you are brutal enough to do the latter, top gear acceleration is by no means negligible. Acceleration is beyond all expectations for a low-cost miniature like this. On my first acquaintance with the car I had no time to take my own figures, but testers tell me the prototypes have been doing 0-30 m.p.h. in 7.1 sec. 0-40 in 12.9, 0-50 in 18 and 0-60 in 26. Gearing gives a road speed of 15.84 m.p.h. at 100 r.p.m. in top gear which spells effortless top gear cruising at 65-70 m.p.h. You can do 22 m.p.h. in first, 38 in second and 58 in third. Top three speeds have synchromesh, and control is by a long lever rising out of the toe board.

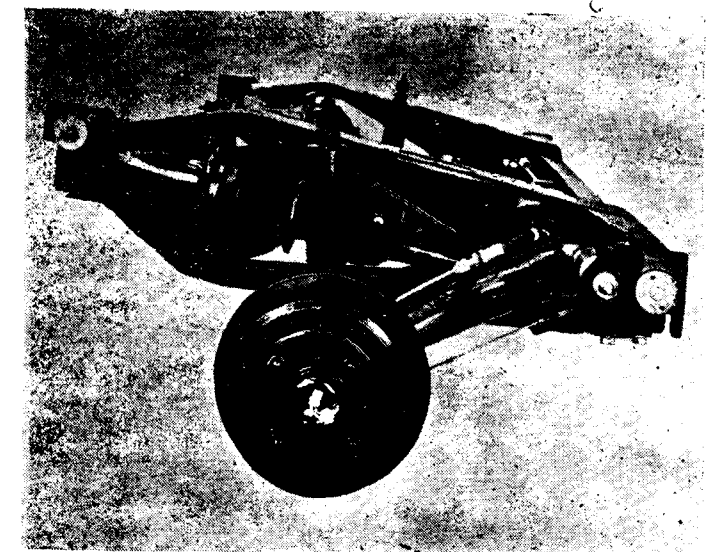
Cornering absolutely flat out on a closed circuit, the roll was not excessive and the control was excellent. Like a good front-drive car, it shows consistent understeer, and drifts out, widening the circle if you press on to the limits of tyre adhesion. If you cut the throttle, it tightens the circle again, quite neatly. If you do it very suddenly, it feels momentarily like oversteer ; actually it's an increase of cornering power. The tail stays put at all times. I never managed to get it jumping or sliding.

Brakes too are quite surprising ; smooth, light and grab-free. Because of the light weight it has been possible to use simple brakes with leading and training shoes at front and rear, but as on the new big BMC cars, there is a cut-off valve which limits maximum pressure in the rear brake lines, and so helps prevent them looking under emergency braking.

The ride is taut, level and beautifully damped, even when crashing fast over deep potholes. And rear seat ride is almost as good as in front, thanks to the placing of all four seats within the wheelbase.

Roof testing reveals two outstanding technical achievements. The mounting of the transverse engine, and the rubber shock insulation in the universal drive joints. Despite published technical theses showing that a smooth mounting for a transverse engine is almost impossible to achieve simply, Issigonis has done it. Rubber engine mountings are quite stiff vertically, to support engine and resist vertical vibrations, but they are quite flexible in allowing the engine to swing about the crankshaft axis. It can't swing far however, for it is restrained by two radius arms. One is above the clutch housing. And the other? It's the exhaust pipe ! Result is surprising ; smoothness and freedom from "boom."

Second item is apparent in the lack of any vibration and snatch in the steering when taking tight corners slowly. Rzeppa constant velocity universal joints are used at outer ends of drive shafts. Inner joints are a new Hooks type with rubber bushes evolved by Moulton Developments. Issigonis remarks drily "Prolonged testing has failed to reveal any method by which the



The lateral view of the rear sub-frame above the horizontally-mounted independent rubber cone suspension unit, the hydraulic shock absorber, the brake fluid pipe end, in cone views, the handbrake cable.

Rubber suspension or the universal joints can be destroyed."

These are only some of the features of an amazing little automobile. You'll certainly be hearing more about it. Faults? At first inspection, the electric fuel pump, attached to rear suspension sub frame, seems the only flaw in general excellent accessibility.

And the prices : In England, standard model will cost £ 350 (Rs. 4,700) before tax. That is 84 per cent of the price of the cheapest Morris Minor.

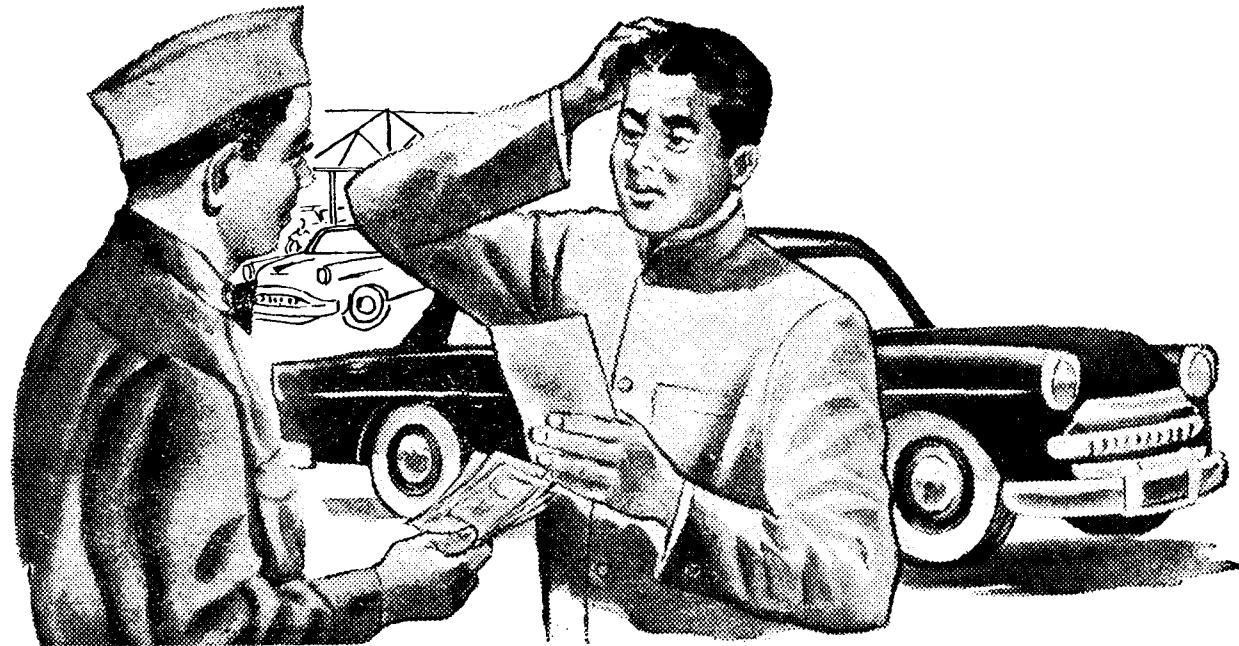
Technical details : Engine 4 cyl. 62.9 x 68.26 m.m. 848 c.c. Wheelbase : 6 feet 8 in. Track front 3 ft. 11½ in. Track rear 3 ft. 9½ in. Length 10 ft. Width 4 ft. 7 in. Height unladen 4 ft. 5 in.

Mr. P. V. S. MANI ON GLOBAL TOUR



Mr. P. V. S. MANI, Managing Partner, M.B.T., has left for the Continent, U.K. and U.S.A. on a ten-week tour under the T.C.M. Programme as a member of the delegation to study the Transport Industry abroad.

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FIAT 600

The Premier Automobiles Ltd., have submitted to the Automobile Enquiry Committee a scheme for manufacturing the world famous Fiat 600 Car. The Committee is at present studying the possibility of building low cost cars in the country.

A small car that adequately meets the demand of the country is one which combines low cost with operating economy plus a certain standard of mechanical performance and passenger comfort. The Fiat '600' more than meets these requirements.

All round economy is the prime objective of the Fiat 600. It is a full 4-Seater, 4-Cylinder saloon car with four forward speeds, produced by the Fiat of Italy and designed by their famous Automobile engineer Dr. Giacosa. It was first introduced in 1955 at the Swiss Motor Exhibition in Geneva and has, within a short period, gained unprecedented popularity all over the world as the most ingeniously designed small car in the world. About 700,000 cars have been sold so far.

Fuel economy and road performance

Of paramount importance in the choice of a small car is the fuel economy. The Fiat 600 has an average fuel consumption of 47 to 50 miles per gallon. It has an excellent pick-up and is capable of attaining a maximum speed of 62 miles per hour.

Ideal size

The designers of Fiat 600 have used extreme cunning to make a genuine 4-Seater body and a sturdily proportioned, water-cooled engine housed within the overall length of only 10'6". The overall width is 4'6" and height 4'7". Because of these dimensions and its economical running, it is unmatched in its class—a real solution for parking, garaging and traffic problems.

Body

It may be emphasized that despite its small dimensions this "baby" is not in any sense a toy car.

The well-balanced body styling is harmoniously blended with functional considerations and has enjoyed public acceptance the world over in preference to the extremely sophisticated but short-lived body styles.

The body is integrally constructed, simple but rigid. The interior is tastefully designed and is well lighted due to large glass area on all sides. The doors are large and open almost 90° for easy entry and exit, and are fitted with full drop glasses—no inconvenient sliding windows.

Driving Vision

The driving vision forward over a low scuttle and a short bonnet flanked by visible parking lights is excellent. This considerably reduces the driving fatigue in city traffic and on open roads.

Accessibility

Detailed consideration has been given to the accessibility of the mechanical components. The entire power plant unit is very easily accessible and convenient for on-the-spot attention.

Luggage space

Skilful use of space provides enough room for luggage. The rear seat backquabb can be folded down, affording a large luggage area, when desired. Additional luggage can also be accommodated under the bonnet, at the back of rear seat and on the shelf beneath the rear window.

Good Road Holding

By mounting the engine at the rear, the car has achieved a good weight distribution so essential for a small size car. Extensive use of this rear-engined car, ever since its inception, has conclusively proved that it behaves better on curves and on descents, specially on slippery roads by additional tyre "bite." The road holding is further enhanced by the independent suspension on all four wheels—an advantageous feature for a car of this size. The ride in 600 is exceptionally shock-free and utterly devoid of the oscillation which makes passengers in some modern vehicles car sick.

Ground clearance

Additional noteworthy feature of this car is its ground clearance of 6½" (with 17" tyres) which is so essential for unimproved road conditions in India.

'Proved' merits

Fiat 600 was first introduced in Italy in 1955. Since then, its world-wide use has proved that it is a sturdy and reliable car.

In 1955 Mr. Rabezzana and his companions travelled in a Fiat 600 from Beirut (Middle East) to Calcutta, a distance of over 5,000 miles and back via Delhi, Lahore, Quetta, Yezd, Teheran, Baghdad, Istanbul, Belgrade to Rome, covering 8,240 miles—a total of over 13,000 miles. During the course of this trip they passed through deserts, encountered sand storms, climbed high altitudes (6,500 ft.) waded through water and the car proved a complete match for all this—a car to be fully relied upon.

Ideal for India

Fiat 600 is thus a complete answer to the need for a low cost car for India.

It is initially inexpensive.

It is economical in operation—gives 47 to 50 miles per gallon.

It is rugged car, suitable for all kinds of extreme conditions of road and climate.

It is pleasant, comfortable and convenient to drive.

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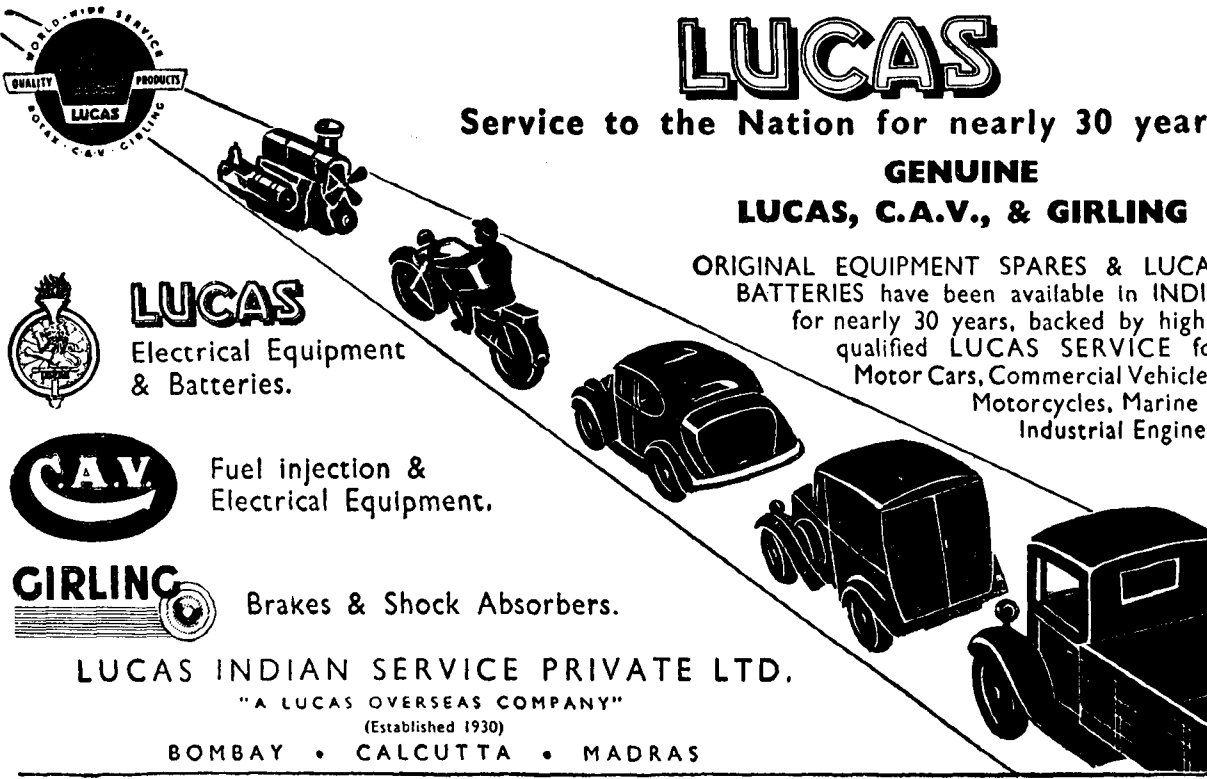
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October 1959

It is a genuine 4-Seater car, with more than ample luggage space by folding the rear seat—Ideal for business as well as pleasure.

It is suitable for all country roads due to its adequate ground clearance.

It is a car of *proved* ability.

Price

The Premier Automobiles expect to sell this car to purchaser at Rs. 7,226 at Bombay, exclusive of taxes.

Outlay required

Having such facilities as land, buildings, foundry, forge shop, machine shop, heat treatment shop, etc., already with them, the Premier Automobiles Ltd., estimate that a capital of approximately Rs. 2½ crores would be required for achieving a level of 50% local production and a further Rs. 3 crores approximately for the final phase, making a total of approximately Rs. 5½ crores only.

Fiat 600 is proposed to be produced by Premier Automobiles Ltd., producers of the famous 1100.

NEW 'EXTRA CAPACITY' BEDFORD LIGHT VAN

Better vision and seats for current model

A longer Bedford light van is now in production. Its wheelbase of 102 ins. is 12 ins. longer and its load space of 171 cu. ft. (including 9 cu. ft. beside the driver) is 20 per cent greater than that of the current light van, which continues in production with a number of improvements. The length behind the driver in the new model is 95½ ins. Turning circle is 37 ft.

The sliding doors are 12 ins. 30 c.m. wider than on the standard version. Sliding side windows are wider and deeper; ventilation is better and hand-signalling easier.

The sliding doors of the new model are held securely in one of the four positions—fully open, half-open, three-quarters-open or closed—by a spring-loaded catch. A twist of the door handle withdraws this catch.

The side frame members are of thicker material than those of the standard model, and the diameter of the propeller shaft is increased to 2½ in. The rear axle is unchanged.

Kerb weight (2,345 lb. for the 10/12 cwt. and 2,395 lb. for the 15 cwt. versions, and gross vehicles weight (3,800 lb. and 4,200 lb. respectively) are both 100 lb. more than for the corresponding standard models, but payload remains the same.

Standard and long vans now have narrower front door pillars, with a windscreen 1½ ins. wider, new seats of tubular construction.

October 1959
M-7

MGA 1600

LARGER ENGINE AND DISC FRONT BRAKES AT NO EXTRA COST

The MGA, one of the world's most popular sports cars, gains extra performance and increased stopping power at no extra cost in its latest version, the MGA 1600. Engine size is increased to 1598 c.c. (96.9 cu. in.) by enlarging the bores, making it the same size as the Twin-Cam unit. Maximum nett power as installed in the car gross up to 79.5 b.h.p. at 5,600 r.p.m. and maximum torque to 87 lb. ft. at 3,800 r.p.m. An increase of 6½ per cent in swept volume has therefore produced a rise of 10 per cent in power and 12½ per cent in maximum torque, giving quicker acceleration and a maximum speed around 100 m.p.h. Full use can be made of the extra performance without fear of brake deterioration, thanks to new Lockheed disc brakes of 11 in. diameter at the front and improved drum brakes of 10 in. diameter at the rear.

Externally, there is little to distinguish the more powerful MGA beyond a 1600 badge behind the air exit grilles on the front wings. Below the headlamps are new side lamps and amber turn indicators combined in one unit and on the rear wings new-style more prominent plinths carry separate tail and turn lamps. On the open two-seater there are now much more convenient rigid side screens with sliding plastic windows. When not in use they are stowed in a neat envelope which hangs behind the seats. A detachable hard top is available and the MGA 1600 is of course offered additionally as a fixed head coupe with glass side windows.

The larger cylinder bores have been obtained by siamesing the first and second pairs of cylinders, eliminating water spaces between them as on the Twin-Cam. Despite the extra cylinder volume, compression ratio has been held at 81.3 to 1 and valve sizes are unchanged, as they were already big enough. Big ends have lead-indium bearings; mains are white metal. Carburettors are two SU of 1½ in. There is no change in gearbox or axle ratios. Normal final drive is 4.3 to 1; 4.55 is available to order.

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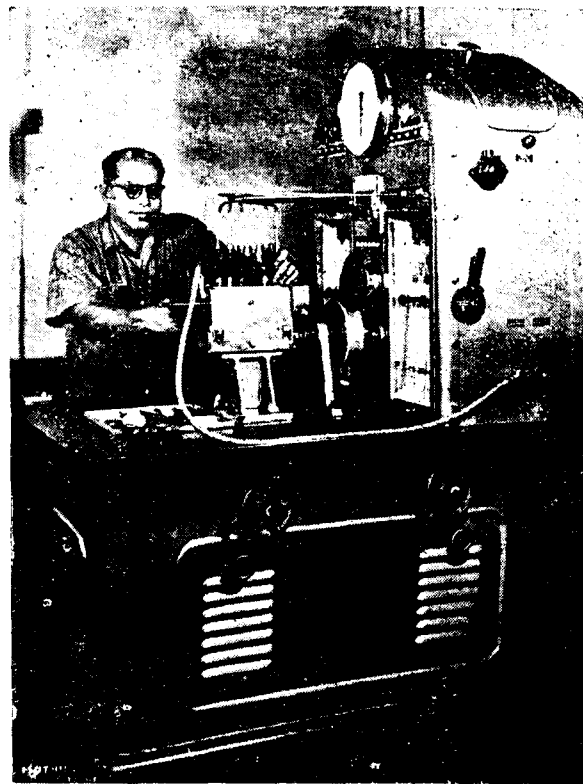
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Automobile Battery



THE NEW POPULAR : The basis of the new Ford Popular is the famous 100-E Anglia, currently serving no less than 3,50,000 motorists in all parts of the world and which last year outsold every other British car in export markets. The new Popular as all the features which have made the Anglia such an outstanding hit with motorists the world over—first class performance, good looks, comfort and rugged dependability.

NEW FORD POPULAR

SIMPLIFIED VERSION OF ANGLIA AT NEW LOW PRICE

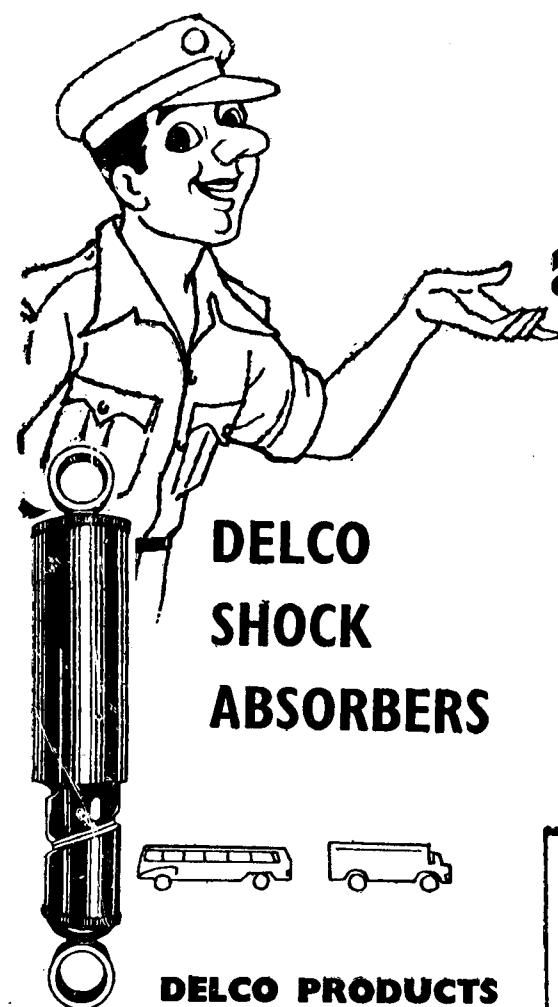
Ford has a long tradition of building the cheapest car on the British market and they sold a Popular as long ago as 1935 at £100. The same basic design, with side valve engine, and solid axles front and rear but with an improved body, was carried into the Anglia, which appeared in 1939 and went into production again after the war. It continued until 1953 and nearly 400,000 were made.

Ford management then intended to kill it, but as a temporary measure, while production of the new Anglia was building up, they stripped the old Anglia of all inessential fittings, gave it the larger perfect engine of 1,172 c.c. and launched it as a new Popular at £275, claiming it the world's cheapest sedan. It was so well received that they had to continue it for years longer than they had intended, transferring production from Dagenham to Doncaster, and about 155,000 were built before production ceased earlier this year. Because of its obsolete pre-war design, it had no great sale in export markets, but the new Popular will probably be seen in many parts of the world, for Ford directors have just repeated the magic formula, by re-grading the current Anglia with simplified trim and equipment at a sharply reduced price to make a new Popular.

Mechanically it is identical to the recent Anglia, with 1,172 c.c. side valve engine giving 36 b.h.p. at 4,500 r.p.m. independent front suspension and 8-in. hydraulic brakes.

It is a fully finished car, with bright hub plates on the wheels and chromium plated bumpers. Tail lamps are a simple group of three lenses for tail, stop and turn indicators and seats are of simpler design. There are no ashtrays, visors, interior light or oil pressure warning, but there is a speedometer with distance recorder, and warning lights for turn indicators and generator charge and there is a choice of eight body colours. The quarter windows in the doors are fixed and there is a simple screwed-on door trim without grab handles. Floor mats are a composition material and the carburettor has no air cleaner. The price, at £348 (974 dollars) in England, is 8½ per cent below that of the previous Anglia. There is also a de luxe version, with bright grille, better seats and door trim, grab handles, visors, interior light, ashtrays, moulded rubber floor covering, air cleaner, warning lights for headlamp main beam and oil pressure. Price in England £363 (1,015 dollars) which is 9 per cent below former de luxe Anglia.

This new policy clearly rules out any new smaller car from Ford but leaves the way open for a new Anglia, which cannot be long delayed. The Popular cannot compete on ride or fuel economy with some more recent designs but it looks a lot of car for the money and is a thoroughly developed model benefiting from many improvements to items like gearbox and front suspension during its career as the Anglia.

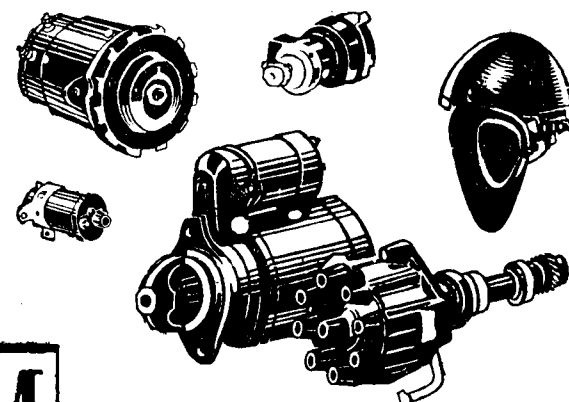


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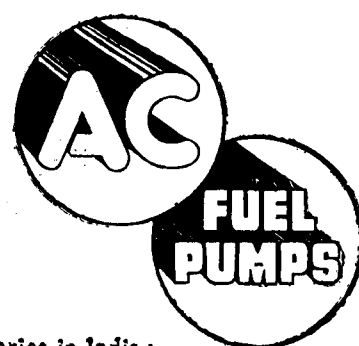
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NEW SIX-CYLINDER MERCEDES, 220, 220 S AND 220 SE. IMPROVEMENTS TO 180 AND 190

Just occasionally a car comes along which demolishes previous ideas on some aspect of automobile performance, and makes you revise your standards of judgement. A few of us assembled at Besancon in France for a secret try-out of the 1960 six-cylinder Mercedes models had that impression. After two days beating them mercilessly over the rough mountain roads of the French Jura, it seemed time to set the sights higher on road holding steering and riding comfort in extreme conditions. Not just for closed cars; for sports cars too. It would be hard to find a sports car that could stay with these sedans through a succession of tight, bumpy bends.

For utter isolation from all sensation of moving over a road surface, self-levelling air suspension still has the edge; let's just say that no other car with metal springs has yet achieved this quality of ride and none with any kind of suspension has combined it with such staggering cornering powers on rough roads. I make one reservation. I have not yet driven the Mercedes on wet roads, or over washboard corrugations; but if they fulfil the promise they showed over rough French mountain roads and tracks, then we have to revise our ideas on the possibilities of safe, fast travel over bad roads.

After only a short introduction, I was soon taking these big roomy sedans through open corners at racing speeds, marvelling at the lightness of the steering and the freedom from road reaction, the lack of tyre squeal and the absence of body shake or vibration but I really had no impression how bad the roads were. They had been specially chosen for this demonstration after some Mercedes testers found them on the way back from a trip to Spain in some prototypes.

Between us our little party had assembled at Besancon in some of the best quality cars in current European production but when we quietly tried to take our own cars over these roads at similar speeds the difference was embarrassing. They jumped, dithered and rattled and had to be fought round the corners by will power and brute force. Up to now, one could argue that the pioneer work of Mercedes engineers on suspension, steering and insulation from road shock has been accompanied by certain disadvantages. Their flexibility mounted sub-frame carrying front suspension and steering did quell road shocks and vibration, but at a cost of slight loss of definition in the steering, as on other cars using a similar type of construction. Their independent rear suspension has been steadily refined over the years, but lurking possibilities of oversteer, and sudden breakaway at the limit of adhesion made it necessary to know the car if you wanted to push it to the limit. If one may judge by the impressions of well over a hundred miles of extremely hard driving, the snags seem to have been eliminated and the advantages are indisputable.

There is one basic sedan of entirely new design, with variations of engine tune, gear ratio and equipment, called the 220, 220 S or 220 SE in ascending order of price, performance and luxury. They replace the 219, 220 S and 220 SE of the previous series, which had two different lengths of wheelbase. The new body has discreet modern style, in the Mercedes evolutionary tradition, with just a sufficient suggestion of fine at the rear to give the driver sighting points for easy manoeuvring in reverse. The bonnet is lower and the grille wider than before while headlamps, parking lamps and turn indicators are grouped under single

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MOTORINDIA

October 1959

senses as on the 300 SL sports model. This looks vulnerable and for export it may presumably be replaced by a metal frame and separate sealed beam light units as on the 300 SL cars destined for the U.S.A. Tail lamp groups are set horizontally across the rear of the car. Passenger space is increased and the capacity of the trunk has gone up by almost 50 per cent to 22.6 cu. ft.; the unit body structure is stiffer than before too, but it weighs slightly less than the old one.

There is an improved single-pivot rear suspension employing a transverse compensating spring as on the 300 SL roadster, and in an entirely new flexibly mounted front end. The new sub-frame, carrying front suspension, anti-roll bar and forward engine mountings, is attached by two vertical rubber cone mountings which are flexible vertically to absorb road shocks and vibrations, but stiff fore and aft or sideways. In addition, the sub-frame is anchored fore and aft by two stout steel spring leaves which resist road shocks and braking reactions. Finally, all connections between the recirculating ball steering gear and the road wheels have been stiffened up to eliminate random deflections under heavy loading.

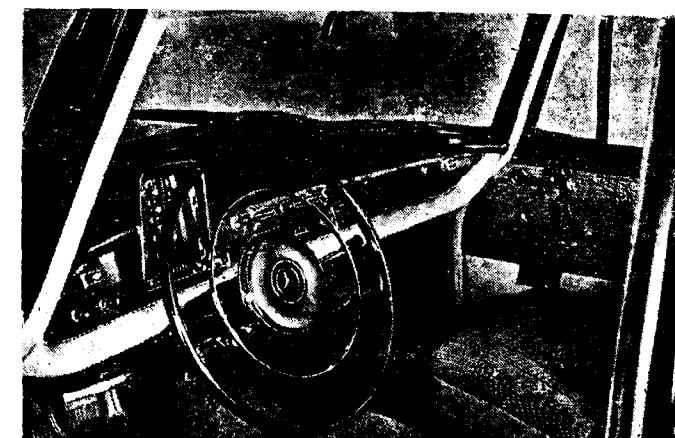
The transverse coil spring at the rear reduces the rear roll stiffness and eliminates the oversteering tendency usually found on swing axle rear suspensions, while redesign of the front suspension with greater differences in the lengths of upper and lower wishbones, has raised the front roll centre from the former 1.18 in. to a new height of 5.1 in. above ground level. Finally, there are now very long telescopic dampers at the front set out as close to the wheels as possible for maximum effect.

Apart from routine tests for comfort, control and road holding, Mercedes designers have concentrated on achieving stability and safety in emergency manoeuvres; particularly in the quick swerve, to avoid an obstacle, followed by a counter swerve to keep the car on the road. The counter swerve is the one which usually sends cars spinning backwards off the road. Mercedes engineers under Rudolf Uhlenhaut marked out a tight S-bend with rubber pylons, corresponding to the swerve and counter swerve within the width

The window area of the new models has been enlarged by 35 per cent, an advantage also for the driver in the car behind.



October 1959



The frame padded dashboard with signal speedometer and safety steering wheel.

of one track of an autobahn. The Grand Prix Mercedes, with Uhlenhaut at the wheel, could be twitched through at 90 m.p.h. After 1½ years of development they get the new sedans through at over 75. But the test ground is marked with the skid marks of cars of other makes which go out of control trying it. Their second test was cornering on wet cobblestones, using a track made of specially evil and slippery cobblestones imported from northern France. On this track, the Grand Prix car just cannot keep up with the new sedan model!

Pursuing the safety theme, a new department has been at work rendering the car interior crash-safe. Most prominent result of their work is the new steering wheel with large padded centre. This had an impromptu vindication when a Mercedes tester had a 50 m.p.h. collision with another car which spun out of control on a wet road as it came towards him. The front of the car was demolished and he hit the steering wheel with great force, but was back on the job after a day's rest. The fascia panel is encased in a cushioned frame, interior door handles are recessed flush with the door surface, window winder handles are padded, visors are softly padded and ventipanes are controlled by flexible round knobs. Even the light switch has a flexible finger grip.

Seats are beautifully shaped for comfort and good lateral support when cornering. At front are two separate front seats with a tray for oddments between them, but a detachable centre cushion will convert the seat to a bench for town shopping or theatre parties.

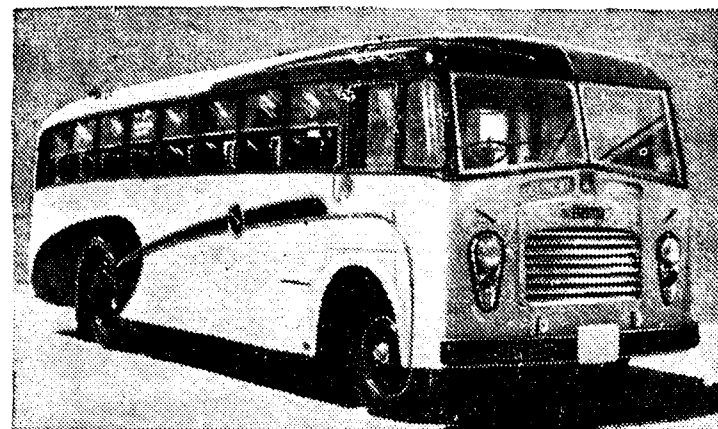
There are countless ingeniously planned details. A ring-shaped pedal switches on the screen wipers. Further pressure brings the foot into contact with a centre button which operates the screen spray. Lift the foot and you can stop the spray and keep the wipers going to finish the job, or stop both at once.

Apart from the comprehensive Daimler-Benz heating and ventilation system with separate air deliveries to front and rear, air exit vents are concealed behind bright strips on the rear quarter panels; they ensure dust

MOTORINDIA

27

Why the Preference for

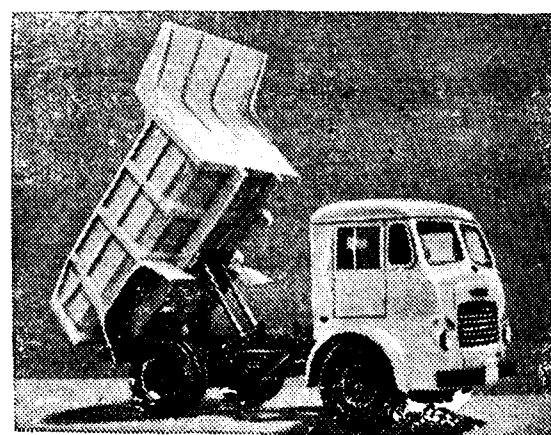


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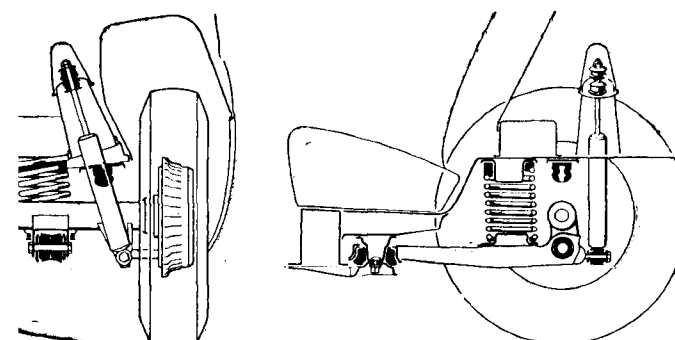
- * Simpsons are the pioneers and still lead in building all types of Road Transport Bodies.
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Arrangement of shock absorbers, thrust arms and the lateral springs of rear axle.

free ventilation and provides a quick exit for air compressed when the doors are shut, so that they need not be slammed. Trunk lid hinges cannot possibly come into contact with the luggage.

A new DB design of lever-controlled reclining seat is available on S and SE and there are angled handles on doors to help passengers support themselves during fast cornering. For moments when the driver is really trying, there are further handles in the roof.

On 220 S there is an ingenious protection against vapour lock. A return pipe from the float chambers takes excess fuel back from carburettors to tank, so at part throttle, cool fuel is circulating all the time. But at full throttle a valve closes the return pipe and all fuel goes to the float chambers, so that the pump does not have to work under overload conditions.

And then there are the tyres ; new, fat 6.70-13 nylons specially developed for this car by the German Dunlop Works. At present there seems to be no plans for other Dunlop plants to make them, but Mercedes technicians say that only they enable the full capabilities of the car to be exploited. In fact they have to modify the suspension and use different springs, sacrificing riding comfort to get comparable road holding with ordinary tyres.

And now a word about the power unit. All three cars have variations of the one six-in-line single overhead camshaft engine of 2195 c.c. (80 x 72.8 mm.) with a compression ratio of 8.7 to 1, suitable for fuel of 96-98 octane. The 220 is the car for the man who wants the basic advantages without all the frills and refinements has twin downdraught solex carburetters and gives maximum gross power of 105 b.h.p. (95 installed) at 5,000 r.p.m. and maximum gross torque of 133 lb. ft. at 3,300 r.p.m. It comes with four-speed all-synchromesh gearbox operated by steering column shift (and one of the sweetest ever made) and an axle ratio of 3.9 to 1. Brakes are non-servo, with turbo-cooled Al-fin drums and two-leading shoes at front. After being pampered by servo systems, the pedal pressure seems distinctly high, but they stand up well to hard work. Maximum speeds in gears are 28, 46, 74 and 96 m.p.h. and kerb weight is 2,890 lb.

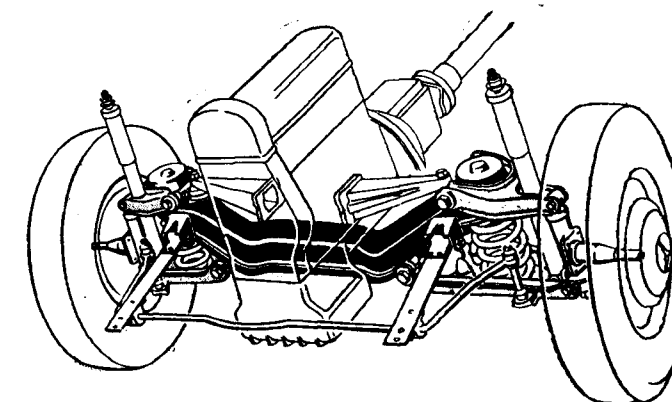
220 S with more luxurious finish and equipment, has two twin-choke carburetters, the second barrels only coming into action for full power. These take gross power upto 124 b.h.p. (110 installed) at 5,200 r.p.m. and max. gross torque rises to 139 lb. ft. at 3,700 r.p.m. To offset the greater weight of the luxury finish and equipment (2,940 lb. at kerb ready to roll) this car has a 4.1 to 1 axle ratio but makers claim a maximum of 102 m.p.h.

Star of the trio is the 220 SE with intermittent fuel injection into the manifolds. Straight instead of curved air pipes have helped raise output to 134 b.h.p. gross (120 installed) at 5,000 r.p.m. with gross torque of 151.8 lb. ft. at 4,100 r.p.m. 4.1 to 1 axle ratio : kerb weight 3,000 lb. Maximum speed, according to makers 105 m.p.h.

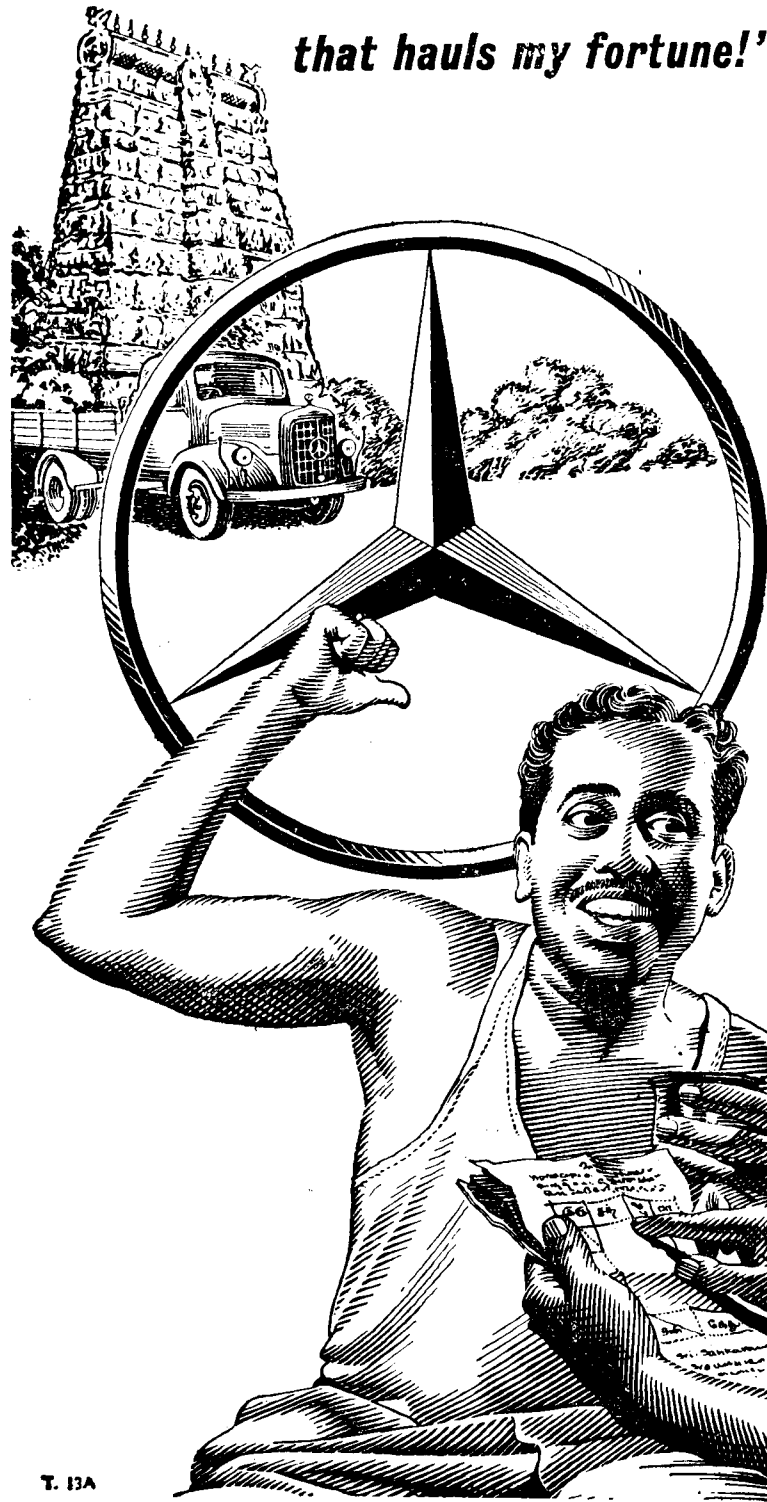
Common to all engines are new camshaft giving higher lift for exhaust valves and new valve gear. There is now no rocker shaft. Valve-actuating fingers are mounted on ball pivots, reducing weight of moving parts, giving a better angle of attack and reducing load on valve springs. This has raised safe rev. limit of engine from 6,000 to 6,500 r.p.m.

Answering the inevitable question about why they have not adopted disc brakes, Uhlenhaut gave me several technical reasons, including the well-known difficulty of adjusting servo performance to give the higher maximum pressures required with discs, while retaining decisive brake action at low speeds. And he stoutly maintained that they get all the braking they need with their new Al-fin turbo-cooled front drums. Knowing that in the past Mercedes have sometimes appeared to be satisfied with braking performances rather lower than some of their competitors, I was sceptical. So I took a 220 S with servo-assisted brakes out to try and fade them. After twelve consecutive quick stops from 60 m.p.h. without fade or even any discernible increase of pedal travel, I conceded he had a point. The brakes seem to be at their best when warm. When cold, it is rather easy to lock the rear wheels in an emergency stop, which

New is the subframe supported toward the front with leaf spring type struts. Independent front suspension with coil springs, shock absorbers nearer the wheels, and torsion bar stabilizer.



**"But Swamijee—
here's the Star
that hauls my fortune!"**



T. 13A

Yes, this three-pointed Star is more than a mere decoration on the bonnet of his Tata-Mercedes-Benz truck.

For years, Natarajan has plied his sturdy Tata-Mercedes-Benz truck to haul all kinds of loads over miles and miles—day in and day out. This Tata-Mercedes-Benz vehicle has sped over rugged terrain with effortless ease.

Is it any wonder that, on the basis of their good fortune, realists like Natarajan consider the Tata-Mercedes-Benz symbol their *real* Lucky Star?

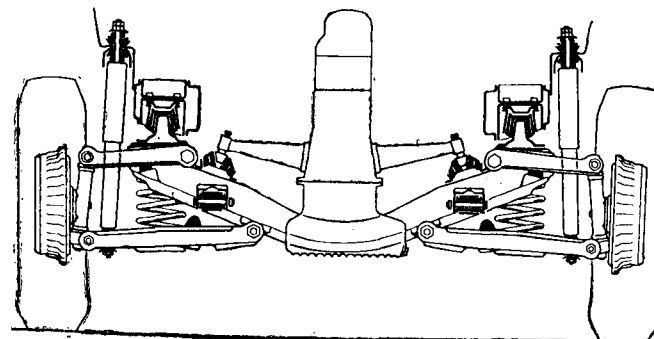
TATA-MERCEDES-BENZ

**TATA LOCOMOTIVE &
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can throw the car abruptly into a slide. A pressure limiting valve on the rear brake circuit might be a worthwhile addition.

I found the driving position excellent. Pedals are well spaced and the driver sees all four corners of the car. The vertical grouping of the instruments is not very imposing aesthetically, but keeps them well in view. In the centre is the vertical ribbon-type speedometer, showing a yellow band up to 30 m.p.h.; red above. Light shock-free steering of extraordinary



mounting of the subframe (grouping front suspension, coil springs and shock absorbers now nearer the wheels) and engine mounting in large tensioned rubber bonded metal elements.

precision, a smooth free-revving engine, easy, crisp gear change and effective synchromesh on all gears.

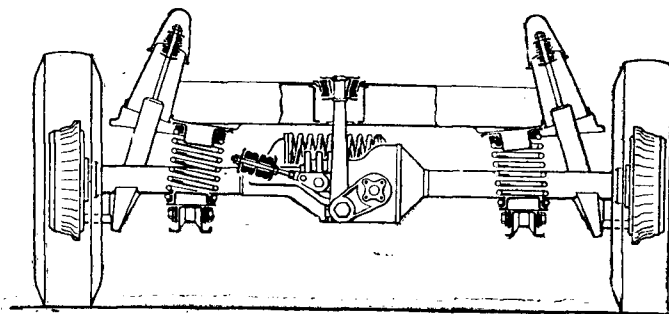
By current standards an engine of 2.2 litres is not unduly generous for a spacious sedan car 16 ft. long and with a full load of passengers and luggage the driver of a 220 may have to use the gears fairly freely to keep up a good average speed. This is where the SE injection engine shows to advantage. It is not just the higher power, and a higher maximum speed which is used but rarely; there is appreciably higher torque throughout the range, producing a response and flexibility which makes driving a pleasure.

Freedom from road noise, body shake and vibration reaches a level unsurpassed by anything in current production.

Optional at extra cost is the Daimler-Benz automatic clutch. This is a highly developed system using a plate clutch in conjunction with a fluid coupling for utmost smoothness and it works beautifully. Many manufacturers previously offering auto clutches have abandoned them after failing to sell more than 3 per cent of output with them, but Mercedes claim 20 per cent of their sedan car buyers now order the automatic clutch.

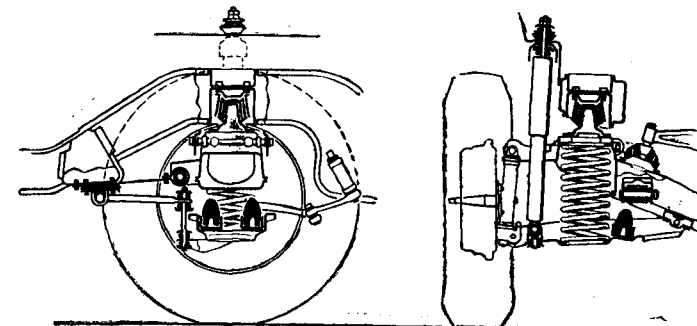
Dimensions common to all three models are : Wheel-base 108.25 in. Track front 57.9 in. Rear 58.5 in. Length 192 in. Width 70.7 in. Height 59.5 in. Turning circle 37.4 ft. Ground clearance 7.8 in.

The four-cylinder sedans 180 and 190 and their diesel versions 180 D and 190 D show several improvements



The single joint swing axle with low pivot point and compensating spring above the axle drive.

for 1960 without increase in price. Lower, broader, radiator grille, stronger bumpers and new tail lamp groups modernise the appearance. Standard equipment now includes windshield washer, turbo-cooled brake drums at front, lockable front doors and now on 180 as on others, headlamp flasher. 180 engine gives 78 b.h.p. (SAE) at 4,500 r.p.m. Output of 190 has been raised to 90 b.h.p. (SAE) at 5,000 r.p.m. Diesel output remains unchanged.



Subframe mounted on large rubber bonded metal elements and supported toward the front by leaf spring type struts. Independent front suspension with shock absorbers nearer the wheels and torsion bar stabilizer.

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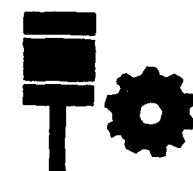
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ENGINE VALVES AND ITS MECHANISM

BY

Meherwan J. Patel

In an internal combustion engine, to admit the mixture of fuel and air and to remove the exhaust gases from the cylinder, some device is required which can open during the inlet and exhaust strokes respectively and can remain closed during the other strokes. Such a device fitted on an engine is called valves.

The valve which allows the mixture of air and fuel in the cylinder is called 'Inlet Valve' and the valve which allows to escape the hot burnt gases is called 'Exhaust Valve.' Therefore in an engine both the valves that is, inlet and exhaust, has to work under different temperatures. The inlet valve remains fairly cool because of the passage of the wet mixture whereas the exhaust valve is exposed to the intense heat of the outflowing exhaust gases. Normally the average temperature of head of the inlet valve remains about 250°C. to 275°C., but in the case of exhaust valve the temperature goes up to 70°C. to 775°C. Therefore the material required for exhaust valve should be stronger than the inlet valve. Generally the engine valves are made of high-tensile alloy steel, because they are subjected to severe impacts, tension and high temperatures.

Valve mechanism: A valve consists of a circular disc called head and from its centre is projected a stem. The head has a face which provides a good ground joint seal with the valve seat. The angle of the valve seating is usually 45° to 60°.

The complete valve mechanism is shown in the figure, which consists of a valve, valve-spring, valve plunger or tappet, valve guide and cam-shaft.

Valve operation: In order to open a valve, a cam mounted on a cam-shaft lifts, what is known as cam follower or tappet. This tappet, in turn lifts up the valve against spring tension, to give passage to incoming mixture and escaping passage to exhaust gases.

Tappet clearance:—There is some clearance provided between the valve stem and valve plunger or lifter. This clearance is called Tappet Clearance. Tappet clearance is provided for making room for expansion when the valve gets heated up. If no tappet clearance is kept, then the valve will remain partly open when

it gets heated up and thus loss of power will take place, because the gases will lick-pass through open valve. Further the head of the valve (the seating portion) will get burnt off during combustion. Therefore the valve should be adjusted to the specified tappet clearance. If they are adjusted with lesser clearance, the valve will open earlier and will close later. If the clearance is kept more, the valve will open late and will close earlier. Both the things result in loss of power.

The tappet clearance allowed depends upon the design of the engine, that is upon the relative heating of the valve and cylinder. Therefore all manufacturers specify the appropriate clearance value for their engines. For maximum power and top performance always set the tappet clearance according to manufacturer's specification.

Valve grinding: It is a process by which the face of a valve makes a good ground seat with the valve seat. After 8,000 to 10,000 miles running, the valves should be ground in on their seatings again. This should be done when the cylinders are decarbonized.

Valves failures are due to—

- (1) Improper tappet clearance.
- (2) Improper valve timing.
- (3) Improper ignition timing.
- (4) Weak valve springs.
- (5) Valve sticking in valve guide due to insufficient lubricant.
- (6) Chocked or clogged engine jackets.
- (7) Poor engine condition.

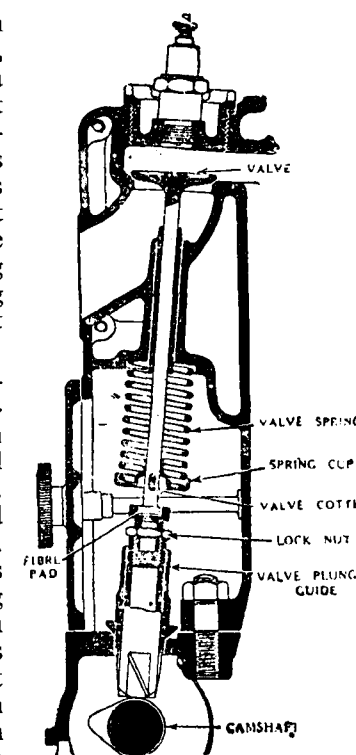
INTERNATIONAL MOTOR SHOW IN LONDON

Britain's Motor Show, world's premier exhibition of its kind, opened at Earl's Court, London, on October 21. It was the most outstanding in the show's history over the last 40 years or more; and at least 500 exhibitors between them displayed a wide range of cars, accessories and components, tyres, transport service equipments, caravans and light trailers.

The international aspect of the exhibition was, emphasized by cars from the United States, Canada, France, Germany, Italy, the Netherlands, Sweden, Czechoslovakia and for the first time, from Russia, but it was British manufacturers who will take pride of place.

There was this year a departure from normal show procedure—there was no section for marine engines and accessories, yachts and smaller sea and river craft; a great deal more space, therefore, available for exhibitors of cars, caravans and the rapidly increasing number of motorized caravans, in the manufacture of which British Industry is making rapid strides.

It is expected that the show will benefit the British automobile industry greatly, as demand for its products is at its highest. In the first seven months of this year nearly 300,000 cars were exported—an all-time record.



MOTOR SHARES ARE NO LONGER WEAK TO VULNERABLE

(By our Financial Correspondent)

Motor shares have acquired a large following and the Jha Committee's enquiry had produced enthusiasm for shares which were hardly popular a year ago. The prospect of larger imports for helping local manufacture and the chances of getting more spares and stores have a bearing on the hopeful view adopted by stock exchange operators in recent months.

Though motorists may not be very keen or definite about investment opportunities, they too will be impressed by the form of automobile shares in Bombay and other stock markets. Foreign collaboration with Indian motor manufacturers, the increased local output of components like piston rings and valves and the tariff protection afforded to the same suggest that there is a sound basis for the advance in motor shares.

The scarcity of new vehicles is not so great a factor in moulding opinion as the promise of expansion by stages for which fresh capital has been raised by some companies already. Standard Motor Products is financing its development programme including light tractors by a new rights issue. Tata locomotive, assured of Mercedes-Benz aid has made known its desire for extra resources in case the manufacture of DKW cars is undertaken in future. As for Hindusthan Motors for general engineering work undertaken by the company at Uttarpara like the arrangement for making Chevrolet and Bedford trucks in India and the early resumption of manufacture of baby cars influenced the preference of investors. Before the maiden dividend of 5 per cent was known, the 10-rupee share was well over par and the excited dealings in the last week of September and after only suggested that optimism has increased so that price was over Rs. 13.

The chances of Ashok Leyland becoming a forward share in Madras explain the great steadiness of the 5-rupee shares. The further increase of capital by a rights issue helped to raise the shares on the investors' esteem and Bombay investors have come to view it as a 'growth' stock endowed with real potentialities because of the Leyland connection and the opening of a big foundry to make forgings and castings at Ennore.

The strike at Bhandup is forgotten, so is the cut in the dividend paid by Premier Automobile shares this year. The 100-rupee shares are now over 130 because it is taken for granted that the Fiat and Chrysler connections will help the company to recover lost ground. In the case of Standard Motor Products, the assurance of essential imports by the Coventry company's association has created a definite preference for the shares so that in spite of the dividend being only 7½ per cent again the market quotation is now up to 17 cd. cr. The offer of preference shares also to shareholders is a sign that proper gearing of the capital structure

will make the equity shares more attractive in future to outside investors.

The manufacture of Willys jeeps and more recently of trailers by Mahindra and Mahindra explains the high premium commanded now by the shares after the increase in capital which makes Mahindra shares easier to market. The 10-rupee shares have risen to over 22 on the assumption that a good dividend will be paid even after extra provision for depreciation and development is made.

In the past engineering concerns which made railway wagons were ranked for above motor shares. But latterly motor shares too are in the limelight and investors recognise that Hindusthan Motor and Premier Automobiles are not war babies but successful concerns which have made good use of opportunities and have improved their prospects.

An exception to the upward trend may be found in Rane Rs. 5 shares quoting at 5.70 but this company has an interest in the new concern making engine valves in conjunction with Tranco valves. As for the success of Simpson's associates in raising output and lowering costs, there can be no question and the groups' engineering side is developing alongside the increased output of Perkins diesel engines for commercial vehicles. More than once replies in Parliament about the extra production licensed for Telco served to send up Telco shares which at one time rose to 230 in spite of the last dividend being only 9 per cent.

The cogent or immediate reason was the hint of increased production and sales on the automobile side rather than the metre gauge locomotives for which prices are scaled down with every adjustment of the unit cost of production.

In the case of Ashok Leyland the larger output of the Comet trucks may have a bearing on future earnings and the nationalised road services have recognised that the choice now lies between Tata-Mercedes-Benz and Ashok Leyland vehicles for replacements and renewals, whereas the private operator has Fargo to fall back upon.

Motor manufacturers making a few types under directions have been able to lower sale prices and the use of diesel power units has enabled them to push up sales. These generally known facts go far to explain the improvement in motor shares during 1959 and it may well turn out that auto shares, far from being a small depressed group, may be able to make a lot of running, if current form is any guide. In half a dozen shares now tested may be slow in attaining the position of BMC shares in London or American Motor's stock. But, they are not weak or vulnerable as in the last decade.

RHYMES WHILE U RIDE

BY A. Holden

In wet and rainy weather
Always watch for skids,
And carefully elsewhere
Be wary of all "kids."

Death can be so permanent,
The Safety slogans said,
Life can be so temporary,
Should a driver lose his head.

"I never carry spare parts,"
The millionaire said, "I feel
When a part wears out I
Buy at once—another automobile!"

Car racing as a sport
Requires speed and skill.
Too often 'tis a race to the
Finish, and the "kill."

The roads are so crowded
In most parts of the world
You'll have to drive on
Paths—amid the skurry and the skirl.

"I don't give much away"
The Scotsman, in sad voice;
"But only all free air.
You can take your choice."

These "back seat drivers"
Rarely make much sense
They advise, are critics
Never need a licence!

He drove on tyres smooth as glass
He braked, they did not grip

They buried him to-day 'neath
A headstone worded "R.I.P."

The traffic sign said "No Standing,"
But simple Tommy Brown
Lowered himself gently,
By the gutter he sat down.

Those who repair dents in autos
Are fond of a fancy name
One who fixes holes and bumps
Is a "dentologist" by acclaim.

It's not good having a battery
Unless it's fully "charged"
But don't overwork it—it's
Efficient by terms by and large.

"The success in motor racing"
Said the veteran lean and lank
"Is to have a sense of balance."
Sense alright, and "balance" in the bank.

Unfortunately the motorist and pedestrian
Live of each other in fearful dread
And often the driver has left
The other one for "dead."

He was held up in driving
By bees on windscreen, all alive
'Twas enough to give anyone
A severe attack of the "hives."

Life can be exciting but
Expectancy of death so short.

In Germany the average miles per
hour
Is 62, said a recent road report.

"Now, then driver! Why the
speed?"
"You see officer, my wheel's loose.
I'm rushing to the garage with it
You can't call me a goose."

Thoughtless and reckless driving
In this time and age
Can only cause trouble
Don't add to the "carnage."

"Look at that silly driver.
He's only a young whelp!"
Still in motoring don't be crazy
But sometimes a little will help.

Some car owners have no place
To keep them from the heat
So overnight and daily
They park 'em in the street.

Yes, we have a garage
But 'tis set aside for our junk
We'd never dream of using it
For our car any time, Unc!

The heading said quite clearly
"Cars burnt in the street"
Old time vehicles abandoned.
That once "burned up" our street.

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MCP-14

MOTOR INDUSTRIES CO. LTD., BANGALORE

Tata-Mercedes-Benz Dealers Conference

Far-reaching decisions were reported to have been taken during the Tata-Mercedes-Benz dealer conference held recently at Jamshedpur, which was inaugurated by the Director-in-charge of Telco, Mr. S. Moolgaokar.

Mr. Moolgaokar, in his speech, laid emphasis on the need to offer first class service to owners of Tata-Mercedes-Benz vehicles and called upon the dealers to go all out to ensure that every operator received complete satisfaction with the performance of his vehicle. The need to educate owners of trucks on the desirability of having their vehicles periodically serviced in a competent service station was brought home to the dealers. He pointed out that this was necessary in India where most operators either did their own "servicing" with improvised tools or let their vehicles be attended to by wayside mechanics. Mr. Moolgaokar explained that owners did not wish to lay off their vehicles even for a day and it was up to dealers to see that periodical servicing did not involve any financial loss to operators.

General satisfaction was expressed by all the dealers at the improved spare parts availability position and the measures adopted by Telco to cut out delays in the despatch of spare parts consignments.

The proto-type all-metal deluxe bus, provided

with cushioned seating accommodation for 46 passengers, which was built at the works at Jamshedpur, was reported to have been very enthusiastically received by dealers.

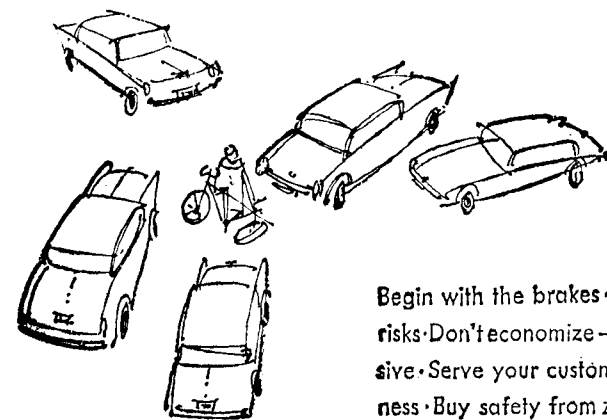
Merit plaques were presented for best spare parts sales performance to Messrs. Nav Bharat Automobiles, Agra, to Sri Ramadas Motor Transport, Co. Ltd., Kakinada, for offering best service facilities, and to Messrs. Gounder & Co. Ltd., Coimbatore, for best Hire Purchase business during the year 1958.

The Telco Sangeet Samaj entertained the dealers, officials of Telco and their families to a variety programme at the Telco Club. A documentary film "The Three Pointed Star" produced by Messrs. Daimler-Benz A.G., West Germany, depicting the progress achieved by the firm in the production of "Mercedes-Benz" vehicles, was also shown to the audience.



Photo shows the Telco's Director-in-charge Mr. Moolgaokar, addressing the dealers on the opening day of the conference.

SAFETY FIRST

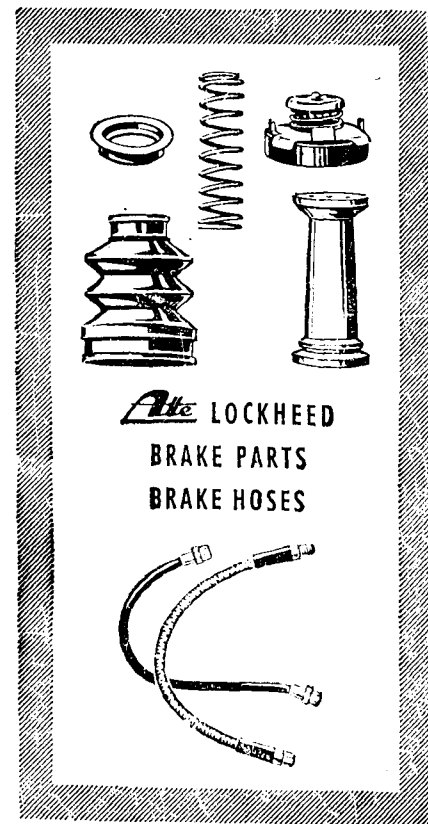


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Madras State Lorry Owners' Association

The Secretary, Madras State Lorry Owners' Association, in a circular to all its members says that he has received from the Home Department, Government of Madras, the following G.O.Ms. No. 2400 regarding Draft Amendment of some Rules of the Madras Motor Vehicle Rules, 1940.

It is proposed that in the said Rules for Rule 269, the following rule shall be substituted, namely—

"269. Schedule of timings.—(1) The transport authority may, if no schedule of timings is already fixed or approved for a stage carriage or a service of stage carriages on any route, either on its own motion or on an application made to it in writing, by a general or special order, fix and approve a schedule of timings for the particular stage carriage or the service of stage carriages, and while approving a schedule of timings, on an application made to it in writing, it may approve the schedule with such modification as it deems necessary in the interest of the public and to avoid clashes, unhealthy competition or racing with the other stage carriages if any, on the route or any portion thereof.

Notwithstanding anything contained in sub-rule (1), the transport authority may, at any time, either on its own motion or on an application made to it in writing, if satisfied of the expediency, revise or modify any schedule of timings already fixed or approved for any particular stage carriage or any service of stage carriage on any route or portion thereof, after giving an opportunity of being heard to the applicant, if any, and any person likely to be or claiming to be affected by the revision or modification."

COMPLAINT AGAINST LORRY OWNER FAILS

In the Tiruvellore Sub-Magistrate's Court, Sri S. Venkataraman, Sub-Magistrate, recently dismissed the complaint filed by Sub-Inspector of Police, Vengal, against Mr. Gopalaswamy, lorry owner, for the offence under Section 42 (1) read with 123 M.V. Act.

The following is the judgment delivered by Sri Venkataraman :

The accused stands charged by S.I. of Police, Vengal, with having on 7th July 1959 at 5-30 p.m. at Damana-pakkam Junction road found lorry MSZ 7371 plying from Red Hills to Tiruvellore and the owner having allowed the lorry to ply in the route without permit, offence punishable under Section 42 (1) read with 123 M.V. Act.

The accused, when examined, denied the offence. The prosecution examined two witnesses. P.W. 1 Krishnaswamy, S.I., Vengal, deposed that the said lorry on the road between Red Hills and Tiruvellore and as the lorry had no route permit made a note in the G.V.R. and laid the charge sheet.

P.W. 2, Ramanuja Doss deposed that S.I., Vengal, stopped the lorry and checked inside the lorry and the records were perused by the P.W. 1. A memo was filed by S.I., Vengal, requesting this court to call for the G.V.R. Trip Sheets for perusal which was in the possession of the accused. The accused produced the said record on the next hearing date and filed along with the examination of accused statement and taken as part of record. He denied having allowed the lorry to go in a prohibited route. He did not examine defence witness.

The learned Counsel for the accused argued on the hollowness of the prosecution story and showed the G.V.R. which did not contain any endorsement of the P.W. 1 as stated by him in his evidence and the same vehicle has been checked even the next day by higher authorities and contain other endorsements and the accused has been left to defend a case in which the prosecution has not established any of the ingredients of the offence. There is much force in the contention of the argument. While P.W. 1 has categorically stated that he made endorsement in the G.V.R. on the particular route which if established would go to prove the prosecution case, has been exposed by the production of G.V.R. which does not contain any entry. The page numbers are all printed and were correct. Normally the prosecution should prove that this particular route is not an authorised route for the vehicle. No enquiries worth the name have been made by prosecution by calling for records and issuing notice to the owners to prove the authorised routes for the vehicle to show that the route taken is an unauthorised route. The second inference that this vehicle did ply within the unauthorised route has not also been proved by the prosecution beyond reasonable doubt. If the vehicle was searched on the date at the place, then other defects if any could have been checked and verified. The evidence of P.W. 2 is not accepted as natural for the reason that the same witness gives evidence both for the case against the driver and the case against the owner and gives an entirely different version in each, thus belying his own evidence. The date of incident is 7th July 1959 but the charge sheet was filed in this court only on 15th July 1959 after a lapse of a week. The name of the witness has been subsequently added to the charge sheet and not written in the same within the original party case charge sheet. I therefore disbelieve P.W. 2's evidence as being set up to suit the occasion.

The very fact that the evidence of P.W. 1 that he made entry in G.V.R. which on examination found to be not correct, it is very doubtful if the vehicle did ply on the date and that on the place and, it is not also established that that particular junction route is unauthorised. The owner was not also found to have any knowledge of the same to infer knowledge of the offence. In the absence of such specific ingredients, I have no alternative but to give the benefit of doubt to the accused, acquit him under Section 245 (1) Cr.P.C.

Indian Roads and Transport Development Association Ltd.

ANNUAL REPORT FOR 1958

The Annual Report for the year 1958 of the Bombay Branch of the Indian Roads and Transport Development Association Ltd., was presented by the Secretary on 30th September at the Thirty-first Annual General Meeting of the Association.

According to the Report, the year under review was one of intense preparation for the important role which road transport has inevitably to play in India's economy in the coming years. As a result of the climate prepared for the development of road transport in the country by the amendments made to the Indian Motor Vehicles Act at the end of 1956, the Government of India appointed in March 1958 the inter-State Transport Commission envisaged by the Act, for the purpose of developing, co-ordinating and regulating motor transport on inter-State routes. Towards the end of the year the Executive Vice-President of the Association was appointed a member of that Commission, thus giving the Association an opportunity to assist in fostering inter-State road transport in India and in focussing attention effectively on the removal of the impediments which have hitherto handicapped road transport. Already the small expansion noticeable in inter-State Services during the brief period during which the Commission has been functioning has been proving useful to commercial and industrial undertakings.

Considerable impetus to the promotion of the Association's aims and objects is now expected from the work of the Road Transport Reorganisation Committee of the Government of India, appointed in May 1958 to recommend a model administrative machinery for road transport in the country. Not only was the Chairmanship of the Committee accepted by Mr. M. R. Masani, M.P., a former President of the Association, but the Secretary of the Association also served the Committee as its Joint Secretary on the invitation of the Government of India, thereby giving the Association an opportunity to place its views fully before the Committee at every stage.

The Report says that a further landmark during the year was the preparation of a new Road Plan for India to succeed the Nagpur Road Plan of 1943 and of about twice the size of that plan. The plan when implemented over the 20-year period 1961 to 1981 is designed to double India's present road mileage.

Liaison with Members of Parliament

The Association's work was attracting the attention of many members of Parliament who recognized that road transport must play a more important role in India's economy in future. The Council felt while this was satisfactory, the Association should sustain and widen this interest by making more members aware of the Association's aims and activities. Accordingly the Executive Vice-President, during his visit to Delhi contacted many members of Parliament and they were supplied with the Association's booklet "Roads and Road Transport in India" which presented

an up-to-date picture of the transport position in India with particular reference to road transport and potentialities for its future expansion.

Membership

There were 921 members on the Association's rolls on 31st December 1958, as against 909 in the previous year. These members belonged to the following categories : Donors-19 ; Patrons-76 ; Supporting-133 ; Associate-65 ; Ordinary-340 and Life-288.

Accounts

As an indication of the expansion in the Association's activities, it may be pointed out that against an income of Rs. 53,000 at the end of 1953 the income for 1958 is over Rs. 1½ lakhs.

A social gathering of all the members of the Madras City Petrol Dealers' Association was held at Woodlands Hotel, Madras, on 29th August. Most of the members had responded to the invitation, and even some members had come down from Bombay to attend the function. The programme included a Magic Show and Oriental Dances. Light refreshments and tea were served at the function.

MYSORE AUTOMOBILES PARTS AND ALLIED MERCHANTS' ASSOCIATION

A meeting of the Managing Committee of the Mysore Automobile Parts and Allied Merchants' Association was held on 12th September at Bangalore, Mr. Ujagar Singh presiding.

The applications from Messrs. Simpson & Co. Ltd., Post Box No. 7, Bangalore-1, and Kerala Automobiles, L/71, Lalbagh Fort Road, Bangalore-4 were considered and they were admitted as members of the Association with immediate effect.

It was resolved to shift the offices of the Association from 14, Silver Jubilee Park Road to Room No. 17, 2nd floor, Ramakrishna Building on Sri Narasimharaja Road, Bangalore-2 from 14th September.

In a circular to all its members, the Secretary of the Mysore Automobile Parts and Allied Merchants' Association states that further to the representation made by the Association to the Hon'ble Sri T. Mariyappa, Minister for Finance, Government of Mysore, on the purchases by the Government Departments under 'D' Form of Central Sales Tax (Second Amendment) Act, 1958, he has received a letter from the Under Secretary to Government, Revenue Department, Government of Mysore.

The letter says : "In your letter No. F-606/4/59/RAD, you have mentioned that the system of Government Departments making purchases direct from dealer outside the State subject to levy of 1% inter-State Sales Tax on production of 'D' Forms has placed the local business community at a disadvantage as the rate of local sales tax is 7% for automobile parts. In respect of purchases made through the Stores Purchase Com-

mittee, adequate safeguards have been devised to ensure that the difference between sales tax leviable on purchases made on 'D' Forms and the State Sales tax does not place local dealers at a disadvantage when compared with dealers of other States selling to this Government."

The Secretary states that it is evident from the above letter that the Government had accepted their representation in principle and in respect of the purchases made through the Stores Purchase Committee, Bangalore, adequate safeguards have been devised to ensure that the difference between sales tax leviable under 'D' form and local tax does not place the local dealers of a disadvantageous position.

TAMILNAD MOTOR PARTS DEALERS' ASSOCIATION

The ordinary general meeting of the Tamilnad Motor Parts Dealers' Association, Madurai, was held on 20th September at their Vice-President's residence at Dindigul, Mr. V. Rajendran presiding.

Welcoming the gathering, Mr. O. Chinnasamy Pillai stressed the importance of improving their trade and requested all members to enrol new members. He also stressed the need for having a building for the Association.

The President, in his inaugural address, thanked Mr. Chinnasamy Pillai, the host, for his elaborate arrangements. He stressed the need to intimate and have close contacts with the Government to benefit the special preferences that are given to the Association members, particularly in the issue of Import licences and to contact the Government authorities to enable them to recognise the Association.

The Secretary, Mr. Rm. A. Rm. Ramanathan Chettiar read out his report in which he called for the unstinted co-operation of all members, and informed them of the need for strict collection of the Association fee from all touring representatives.

Regarding the Import Policy of the Government, he explained the difficulties experienced by all dealers, and said that these were mainly due to wide disparity between promise and production of the manufacturers. He further said that unless this wide gap was narrowed down considerably, the automobile dealers will be victims to all the existing difficulties.

Subsequently the Secretary read out the letter from the Mysore Automobile Parts and Allied Merchants' Association, and it was decided to send a telegram to the Seminar to be held at Bangalore. The Executive Committee was authorised to select the members of the delegation and it was suggested the month of February 1960 was mostly convenient to partake in the Seminar.

Mr. Meyyappan of Lakshmi Motors reminded the gathering about the 1% allowance to member dealers on all purchases, to which the Secretary explained that even the Madras Motor Parts Dealers' Association had withdrawn this policy due to practical difficulties and hence it would not be mutually beneficial.

Mr. Rajagopalan of Rajagopal & Sons suggested

that the Association should request the Ministry of Commerce and Industry to consider the issue of New Comer Licences and the Secretary was requested to take necessary steps in this respect.

Mr. A. P. R. Rajappa in his vote of thanks thanked Mr. O. Chinnasamy Pillai for having arranged this meeting at Dindigul and his generosity in entertaining the members with a sumptuous and delicious lunch and tea. He also thanked Mr. Murugan Automobiles and others who co-operated in making the function a success.

THE MADRAS MOTOR PARTS DEALERS' ASSOCIATION

In a circular to its members, the Honorary Secretary of the Madras Motor Parts Dealers' Association says that he has received the following letter from Sri R. M. Sundaram, Commissioner of Commercial Taxes, regarding submission of copies of invoices to the transport companies.

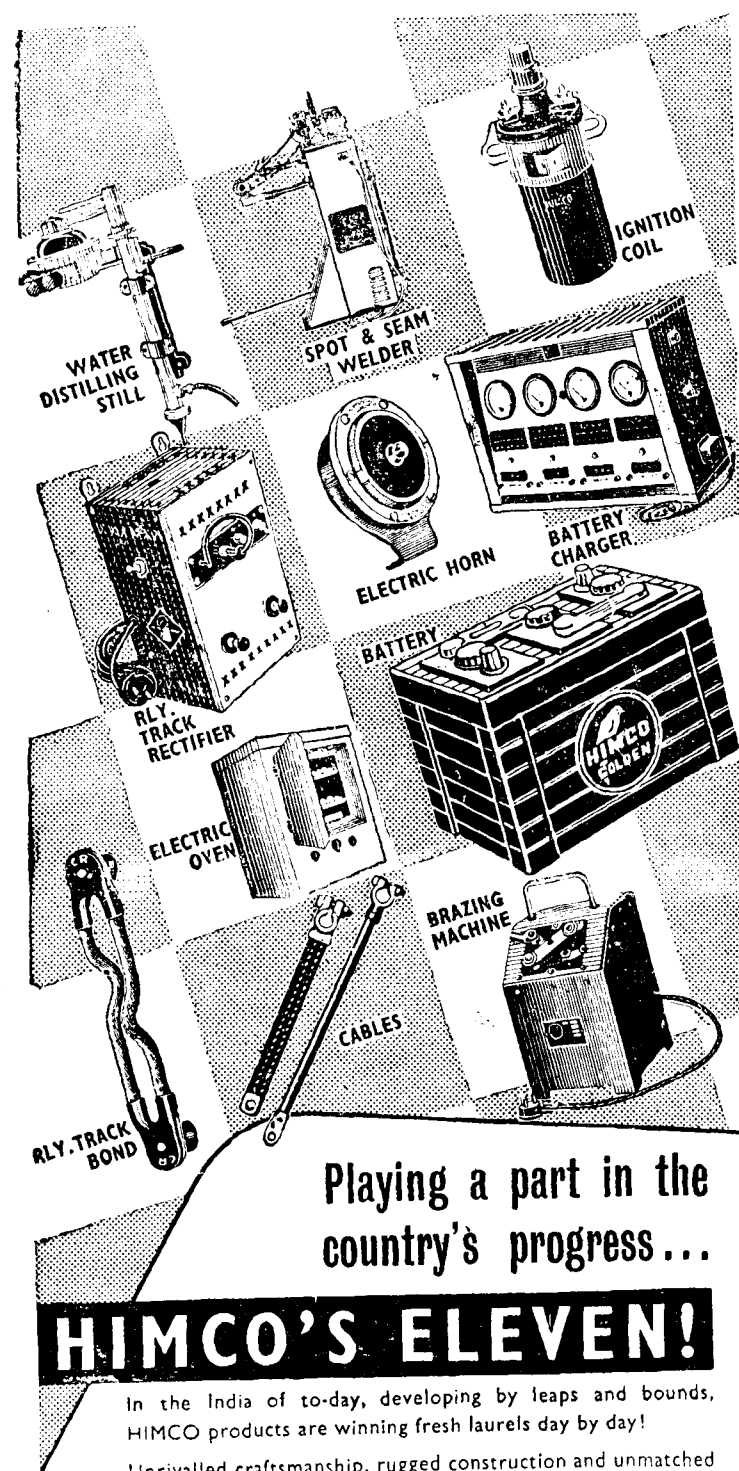
"The Madras Motor Parts Dealers' Association is informed that a delivery note containing the particulars mentioned in Rule 35 (1) of the Madras General Sales Tax Rules, 1959, will be sufficient if the seller is not inclined to furnish a copy of the invoice. It is not possible to dispense with the requirement of Rule 35 (1) completely."

Rule 35 (1) of the Madras General Sales Tax Rules, 1959, is given below :

"35. (1) The owner or other person in charge of a goods vehicle or boat shall carry with him a goods vehicle record, a trip sheet or a log book, as the case may be, and a bill of sale or a delivery note containing the following particulars in respect of the goods carried in the goods vehicle or boat—

1. Full name and address of the selling dealer and his registration certificate number.
2. Full name and address of the buying dealer and his registration certificate number.
3. Description of the goods.
4. Quantity or weight.
5. Value of the goods.
6. Name of the person to whom delivered.
7. Relationship of the person referred to in item (6) to the buyer.
8. Signature of the person taking delivery of the goods.
9. Signature of the person delivering the goods on behalf of the seller.
10. Relationship of the person referred to in item (9) to the seller.

The owner or other person in charge of a goods vehicle or boat shall within forty-eight hours after the goods are delivered, submit to the Commercial Tax Officer having jurisdiction over the area in which the goods are delivered, copies of the goods vehicle record, trip sheet or log book, as the case may be, and



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also the bill of sale or delivery note which accompanies the goods vehicle."

NEW MEMBER.

The Hon. Secretary of the Association says in a circular that Messrs. Madras Auto Service Private Ltd., 37, Mount Road, Madras 6, have been enrolled as member of the Association with effect from 19th September, 1959.

EASING LONDON'S TRAFFIC FLOW

ROAD COMMITTEE PLANS

Road improvements in London for 20 years ahead are envisaged in the report of the London Roads Committee, just published. The report foresees a London with its traditional character unspoilt, but with improved roads carrying half as much traffic again and with parking meters for short-term parkers and off-street garages for long-term ones.

The committee has drawn up two programmes, one of £ 120,000,000 and an alternative one costing £ 200,000,000—should the road programme of the country as a whole be enlarged. A "three-pronged" attack on present problems of congestion is proposed by road works, by the regulation of parking and by strict enforcement of no-waiting regulations.

There must be teamwork, says the committee, between the engineer, the architect and the town planner "to focus the traffic needs against the broad background of the lives and well-being of the inhabitants..... Decisions which alter the face and character of areas of London may have to be taken from time to time, but they must only be taken after full consideration of the effects of the change."

In both the alternative road programmes, it is proposed that improvements in the early years should be concentrated on improving major intersections where congestion is greatest and on removing bottlenecks. The £ 200,000,000 programme includes additional schemes concentrating on the extension of certain main radial roads into London.

With regard to parking, the committee estimates that about 50,000 vehicles are daily parked on the streets of Central London, of which some 30,000 belong to long-term parkers. It is believed that the broad effect of clearing all parked vehicles off the streets except at parking meters might be to increase their traffic capacity by 15 to 25 per cent.

As a general principle, the committee (which was appointed in November 1957 by the Minister of Transport) says that the objects of a "realistic road improvement programme" must be to improve the system so that traffic flows more easily and more safely but, if possible, without attracting so many more vehicles that the benefit of the improvement is lost, and to make the traffic capacity of the streets available for the movement of public transport vehicles, taxis and delivery vans.

MADRAS MOTOR PARTS DEALERS' ASSOCIATION

IMPORT POLICY—OCTOBER 1959—MARCH 1960

A summary of the current import policy, relating to Motor Vehicle Spare Parts, Accessories and allied items for the period October 1959-March 1960 is given below :

APPLICATION FORMS : Printed application forms are available in the Custom House, Madras-1.

INCOME-TAX VERIFICATION NUMBER : Importers are advised to see that they hold a Valid IVC Number.

APPLICATION FEES : There is no change in the application fees.

LAST DATE FOR SUBMISSION OF APPLICATIONS :

Established Importers	...	31st December, 1959.
All others, including actual users.	...	31st January, 1960.

BASIC PERIOD :

Motor Vehicle Parts and Accessories. S. Nos. 293, 295 and 297 of Part IV, inclusive of List III Items	...	Upto 1956-57.
Ball, Roller and Taper Roller Bearings	...	Upto 1957-58.
Garage Tools. CS. No. 275 (b) of Part IV	...	Upto 1958-59.

Applications for establishment/refixation of quota should be made so as to be received not later than 15th December 1959. Applications received thereafter will be entertained upto 15th March 1960, subject to the condition that quota certificates granted on the basis of such late applications will not entitle the applicants to claim licences for October 1959-March 1960 period.

PERIOD OF VALIDITY OF LICENCE :

Nine months as before. Small value licences upto Rs. 2,500 are valid for 12 months. This facility is available to quota/*ad hoc* licences, granted to established importers only.

Licences for Motor Vehicle Parts falling under S. Nos. 293, 295 and 297 of Part IV will be granted to established importers on the basis of a joint quota of past imports of all the articles falling under these serial numbers, excluding the List III items. Quotas already established will not, however, be disturbed.

The quota licences for October 1959-March 1960 will be issued on the basis of 25% General and 25% Soft quotas.

Actual users applications from fleet owners, owning a fleet of 25 vehicles or above will be considered and licences issued on the basis of either 100% half of their best year's imports during any one year 1954-55, 1955-56 and 1956-57 or Rs. 250 per petrol driven vehicle or Rs. 350 per diesel driven vehicle, whichever is more.

Firms with approved manufacturing programme will also be allowed licences on an ad-hoc basis. The applicants should indicate the utilisation of licences granted to them in the last two or three licensing periods. They should make applications under usual procedure to the Chief Controller of Imports, New Delhi, through the Development Wing.

Licences for Motor Vehicle Parts granted on the basis indicated in the preceding paragraphs will not be valid for the import of the items specified in List I and List III ; and not more than 3% of the face value of the licences can be utilised for the import of items specified in List II.

Upto 2% of the face value of the licences for Motor Vehicle Parts granted on the basis indicated in the previous paragraphs can be utilised for the import of ball bearings, used on motor vehicles not specified in Appendix XIV of the Red Book. However, (i) Water pump bearings (used exclusively for all vehicular types of engines but not general purpose bearings), (ii) front axle inner bearings (imported in equal number in the form of cones, cups and retainers), (iii) front axle outer bearings (imported in equal number in the form of cones, cups and retainers), and (iv) Clutch and release bearings with or without collar can be imported against the licences for motor vehicle parts without restriction.

Bolts, nuts, screws and washers whether specifically adapted for use on motor vehicles or not will be allowed clearance to the extent of 1% of the face value of licences for motor vehicle parts falling under S. Nos. 293, 295 and 297 of Part IV.

Upto 4% of the face value of quota licences as well as Actual Users' Licences can be utilised for import of Garage Tools detailed in Appendix XXV of the Red Book. Parts of such permissible types of garage tools which are not classified elsewhere under any other serial number and part of the I.T.C. Schedule and are not otherwise banned, can also be imported against the licences for motor vehicle parts within the face value of 4%.

Upto 2½% of the face value of licences for motor vehicle parts can be utilised for import of automotive tachographs.

List I

Licences issued for motor vehicle parts falling under S. Nos. 293, 295 and 297 of Part IV will not be valid for the import of following items and component parts thereof :—

I. Bulb horns.

II. Fan belts whose bottom width (*i.e.*, on the inner diameter) is more than 0.250 inch and the following rubber parts : (1) Radiator hoses, (2) Hand and foot pump connections, (3) Rubber horn bulbs and air horns, (4) Rubber mats, (5) Grommet used

with screen wiper, (6) Rubber buffers-doors, (7) Rubber connection for filler tube-petrol tank, (8) Air vent pipe rubber connection-petrol tank, (9) Rubber insulating washers for bolts connecting body and chassis, (10) Rubber connection—Air cleaner, (11) Rubber mountings for silencer, (12) Joint-washer—Petrol filler tube with cap, (13) Rubber packing for battery clamping channel, (14) Sealing strips for trafficator boxes, (15) Sleeve rear drain pipe, (16) Rear strip roof opening, (17) Side strip roof opening, (18) Strip steering column, (19) wind shield wiper tubing, (20) Hose pipes other than brake hose pipes, (21) Mascots and motifs, (22) Ash-trays, (23) Auto fans, (24) Car heaters, coolers and radios, (25) Rear lights and parking lights, (26) Battery cable, (27) Luggage carrier, (28) Rear view and mudguard mirrors, (29) Number plates, (30) Hand tyre inflators [Hand inflator pumps which can be easily used for cycles with slight modification and change of nozzle will be treated as accessories of cycles (S. No. 310/IV) and cannot be imported against licences for motor spare parts], (31) Frames of motor cycles and scooters and three wheelers, and (32) Sun shade or sun visor.

III. Seat cushions of all types, kool cushions of all types, Hairlock, cushion covers of all types, materials cut to size or otherwise for kool and seat cushions and leather, leatherette, plastic or cloth for upholstery for all motor vehicles.

IV. Cab bodies, bus bodies, station wagon bodies, truck bodies, steel cabs for lorries, pick-up bodies and panel bodies.

V. Dynamo lighting sets.

VI. Shackles, shackle pins, 'U' bolts, centre bolts, clips and pressure plates (*i.e.*, those used on the leaf spring assembly but not those of clutch assembly).

VII. Malleable iron brackets and shackles as well as cast iron shackles and brackets.

VIII. Muffler and tail pipes and extension thereof.

IX. Motor cycle locks.

List II

Items for which not more than 3 per cent of the licences issued for motor vehicle parts falling under S. Nos. 293, 295 and 297 of Part IV can be utilised.

- (1) Leaf springs and spring leaves.
- (2) Laminated safety glass cut to size and shape except wind screen glass.
- (3) Dynamo pulleys.
- (4) Hub caps.
- (5) Component parts of Items 1 to 4 above.

List III

The items listed below required as spare parts of equipments falling under S. Nos. 29, 30, 31, 32, 33, 33-A, 33-B, 34 and 36 of Part II, S. Nos. 4 and 5 of Part III, S. Nos. 293, 295 and 297 of Part IV and S. Nos. 65, 74 and 86 of Part V will be licensed in accordance with the provisions made below. Imports thereof will not be permitted under any licence issued or any provision made against any other serial numbers and

Part of the I.T.C. Schedule. This restriction will not, however, apply to the import of 'Aircraft spares' falling under S. Nos. 87-88/V and the provision made in remark (12) against S. No. 74 (iii)/V in Section II of the Red Book.

Quotas, if necessary, may be re-established on the basis of over-all imports in the best year included in the basic period.

LICENCES GRANTED FOR ITEMS SPECIFIED IN LIST III WILL ALSO BE VALID FOR IMPORT OF OTHER MOTOR VEHICLE SPARES NOT MENTIONED IN LISTS I, II OR III OF THIS APPENDIX.

NOTE: Spare parts of these items will also be regulated only against licences for these items, unless otherwise stated in this list.

NOTE: The Piston Assemblies, Piston Rings, Valves, Filters, Cylinder Liners, Gaskets, Spark Plugs, Thin-Walled Bearings and Fuel Injection Equipment referred to in List III of Appendix XXVI pertain to those for Internal Combustion Engines only.

S. No.	Article	Policy for Established Importers	Remarks
(1)	(2)	(3)	(4)
1	Brake Linings in any form.	15% Gen. 15% Soft.	(i) Additional licences will be granted to Established Importers on <i>ad hoc</i> basis against Actual User orders from industrial establishments (Mines, Sugar, Paper Mills, etc.), Projects and Port Trusts for woven metallic brake linings in rolls or set form. These licences will be granted for specified varieties upto a quota of 10% Gen. and 10% Soft. (ii) Supplementary licences will also be granted to established importers on an <i>ad hoc</i> basis on a quota of 5% Gen. and 5% Soft. These supplementary licences will however, be valid only for import of brake blocks of thickness of $\frac{3}{8}$ " and over. (iii) Please also see remark (12) against S. No. 74 (iii)/V in Section II.

(1)	(2)	(3)	(4)
3	Cylinder liners.	100% Gen. 100% Soft.	NOTE: Imports of brake linings in roll or sheet form made under licences for S. Nos. 7A, 7B and 8 of Part II will also be taken into account for calculation of quota. NOTE: Quota licences issued to Established Importers for Spare Parts of Agricultural Tractors S. No. 74 (iii)/V and spare parts of earthmoving equipment [S. No. 65(5) (i) (a)/V] may be endorsed for import of wet or loose cylinder liners specifying the part number, dimension and the quantities. Such endorsements should be only for the items for which the applicants are the sole agents in India.
2	Clutch facings in any form.	20% Gen. 20% Soft.	(i) Additional licences will be granted to Established Importers on the basis of a quota of 10% Gen. and 10% Soft against orders from Actual Users like Project Authorities, Port Trusts, etc., using earthmoving equipment for— (a) gear out discs, (b) sintered metal discs and segments, (c) cone clutch plates and segments, and (d) metal plate. NOTE: Importers of clutch facings in roll or sheet form made under licences for S. Nos. 7A, 7B, 7C and 8 of Part II will also be taken into account for calculation of quota. (ii) Established importers of Agricultural tractors [S. No. 74(I)/V] having quotas for this item may be granted licences on an <i>ad hoc</i> basis for this item on the basis of a quota of 10% Gen. and 10% Soft against past imports of this item. The licences thus granted will, however, be valid for import of clutch facings of the woven type only. (iii) Please also see remark (12) against S. No. 74 (iii)/V in Section II.
4	Electric horns.	50% Gen. 50% Soft.	(i) Not more than 50% of the face value of the licences can be utilised for filter cartridge and filter inserts. (ii) The quota may be established on past import of complete filter/cleaner assemblies and filter Cartridge/Filter Inserts. (iii) Please also see remark (12) against S. No. 74 (iii)/IV in Section II.
5	"Filter/Cleaner Assembly, Air, Fuel or Lubricating Oil."	50% Gen. 50% Soft.	(1) Not more than 12½% of the face value of quota licences can be utilised for the import of single cylinder pumps and nozzle holders. (2) Not more than 10% of the face value of quota licences can be utilised for import of elements and delivery valves. (3) Not more than 50% of the face value of quota licences can be utilised for import of nozzles and parts thereof. (4) Quota licences will not be valid for import
6	Fuel injection equipment component parts thereof.	50% Gen. 50% Soft.	

Spare parts for **DIESEL ENGINES**

TRUCKS & TRACTORS

THE INDIAN ENGINEERING & TRADING CO.,
26, Wallers Road, Mount Road, Madras-2.

- (1) (2) (3) (4)
- of bodies and racks of single cylinder pumps and bodies of nozzle holders of non-integral type.
- (5) Applications from actual users for the import of bodies and racks of single cylinder pumps and bodies of nozzle holders of non-integral type will be considered ad hoc in consultation with the Development Wing.
- (6) Applications from Actual Users like private fleet-owners will also be considered ad hoc in consultation with the Development Wing.
- (7) The Project Authorities, Nationalised Transport Companies and Port Trusts will be allowed to import this item against licences held by them for spare parts of earth moving equipment [S. No. 65 (5) (ii) (a)/V] and motor vehicles parts (S. Nos. 293, 295 and 297 of part IV) to meet their *bonafide* requirements.
- (8) Past imports of Fuel injection equipment of Diesel engines of all types including the road vehicular type will be taken into account for calculation of quota. Quota licences will be valid for import of fuel injection equipment for all types of diesel engines.
- (9) Applications from actual users/established importers having firm orders from actual users will be considered for the following items on *ad hoc* basis in consultation with Development Wing.
- (a) Fuel Injection Equipment, where pump, nozzle and nozzle holder is one unit and always of single cylinder type (similar to Cumins or

- (1) (2) (3) (4)
- G.M.C. type) and parts thereof.
- (b) Distributor type of pump and parts thereof with the exception of nozzle holder and nozzles.
- (c) All single cylinder pumps with a plunger diameter of 20 mm. and above or a fuel injection capacity of more than 1.75 cc. (m) (Cubic centimetre) per stroke parts of pumps, nozzles and nozzle holders will not be permitted on these additional licences.
- (10) Please also see remark (12) against S. No. (iii)/V in Section III
- 7 Gaskets 30 % Gen. 30 % Soft.
- 8 Piston rings 50 % Gen. 50 % Soft.
- (i) Not more than 25 % of the face value of these quota licences can be utilised for import of piston rings of 6" dia. and below.
- (ii) Piston rings (both of 6" dia. and below, and over 6" dia.) will also be allowed to be imported when they are imported with :
- (a) original equipment either c.k.d. or assembled ;
- (b) fitted to pistons when imported as complete piston assemblies under item No. (9) below.
- (iii) Established importers of motor cycle spares having quotas for piston rings may be granted additional licences for import of this item on the basis of a quota of 10 % Gen. and 10 % Soft. The additional licences will, however, be valid only for import of piston rings specially adapted for use on motor cycles and scooters.

- (1) (2) (3) (4)
- (iv) Please also see remark (12) against S. No. 74 (iii)/V in Section II.
- 9 Piston 100 % Gen. Assemblies 100 % Soft.
- (i) Not more than 50 % of the face value of quota licences can be utilised for import of aluminium piston assemblies of 6" dia. and less. Within the face value restriction of 50 %, not more than 25 % of this part of the licence can be utilised for import of Aluminium Piston Assemblies (including oversizes) for models detailed in Annexure 'A' to this Appendix.
- (ii) Applications from Government projects and State Transport organisations for import of complete piston assemblies of vehicles against their A.U. licences will be considered *ad hoc* with the exception of those preferred to in Annexure 'A.' Such permission where granted, would be endorsed on their A.U. licences and for the specified parts indicating Part No. the sizes and the respective quantities. Such permission may be allowed only in consultation with the Development Wing.
- (iii) Quota licences issued to established importers for import of spares of agricultural tractors [S. No. 74 (iii)/V], spare parts of motor cycles and scooters and spares of earthmoving equipment [S. No. 65 (5)(ii) (a)/V] may be endorsed for the import of complete piston assemblies other than those mentioned in Annexure 'A.' Such endorsements should be made only for the specified parts indicating part number and the size and the respective quantities and should

- (1) (2) (3) (4)
- be limited only to those equipments for which the applicant is the sole agent in India. Such permission may be granted upto a value of Rs. 2,500 in each case. This may be extended upto Rs. 4,000 in the case of established importers of spare parts of earthmoving equipment S. No. 65 (5) (ii) (a)/V.
- (iv) Licences will not be valid for the import of piston rings except as a component part of complete piston assemblies. Please refer to entry against item 8 in this list.
- (v) Quota will be calculated on the basis of import of complete piston assemblies and pistons.
- Note.*—Past imports of Gudgeon Pins, Bushing and circlips will not be taken into account in the calculation of quotas for piston assemblies. Past imports of these items can be taken into account for calculation of quotas under the respective S. Nos. for spare parts.
- (vi) Please also see remark (12) against S. No. 74 (iii)/V in Section II.
- (vii) Not more than one set of complete piston assembly for any internal combustion engine may be licensed to actual owner of the equipment at the ports provided not more than one licence is issued to each party during the period.
- (viii) Piston pins and bushings whether made of aluminium or cast iron as parts of aluminium piston assemblies of 6" dia. and below (excluding banned type) can only be imported within the face value restrictions for aluminium piston assemblies. However,

- (1) (2) (3) (4)
- piston pins and bushings irrespective of their size or metal of which they are made, when imported as parts fitted to piston assemblies of permissible type, which is not subject to face value restrictions will be allowed clearance without any face value restrictions.
- 10 Radiator Assembly 75% Gen. (i) Quota will be established on the basis of past imports of complete radiator assembly and cores.
75% Soft. (ii) Quota licences granted can also be utilised for the import of parts of radiator or assembly, namely, radiator core, tank, anker plates, cap, drain plugs, shroud and thermostats. Licences for motor vehicle parts cannot be utilised for import of parts of radiator assembly.

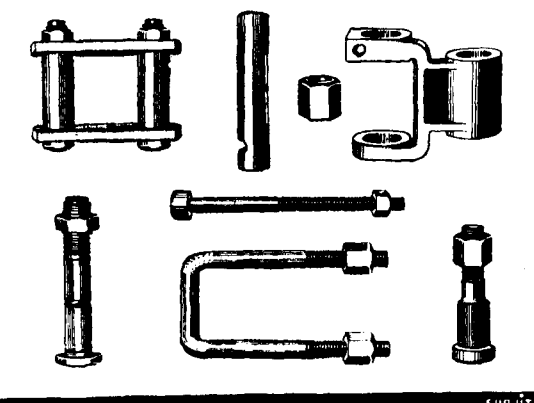
- 11 Shock absorbers 100% Gen.
125% Soft.

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- (1) (2) (3) (4)
- 12 Spark Plugs 5% Gen. (i) Licences will not be valid for import of spark plugs of 14 mm. and 18 mm. sizes.
5% Soft. (ii) Licences issued under this item will also permit import of one spark plug water-proof cover along with each spark plug, provided the value of the licence is not exceeded thereby.
- 13 Thin-walled bearings 70% Gen. (1) The following types of bearings of thickness 3/16" or below will be considered as thin-walled bearings:
70% Soft. (i) bearings for cam shafts;
(ii) bearings for connecting rods (small end and big end); and
(iii) bearings for crank shaft.
(2) Requests from established importers of spares of agricultural tractors [S. No. 74 (iii)/V] and spares of earthmoving equipment [S. No. 65 (5) (ii) (a)/V] for import of this item will be considered *ad hoc* provided their past licences for this item have been fully utilised.

- 14 Inlet and exhaust poppet valves, valve rotators, tappers springs valve seat inserts. 70% Gen. Please also see remark (12) against S. No. 74 (iii)/V in Section II.
70% soft

Quota Percentage

- S. No. 38-A (e) (ii) of Part II—Head Lamp Sealed Beam Units 30% Gen. 30% Soft.
- S. No. 45 (d) of Part II—Auto cables—Nil.
- S. No. 275 (b) of Part IV—Garage tools—50% Gen. 50% Soft.

The 25% face value restriction for the import of starred items is applicable only to quota licences for a value over Rs. 5,000. Single ended spanner is included in the list. The basic period for this item has been extended upto 1958-59.

- S. No. 92 (k) of Part V—Pressure Gauges—25% Gen. 25% Soft.

The New Dunlop "GOLD SEAL" Car Tyre

The Dunlop Rubber Co. (India) Ltd., have announced the introduction of a new pattern car tyre named Dunlop "Gold Seal."

Various distinctive improvements have been incorporated in this new tyre. One of the important features is the scientifically designed knife-cuts which open up to give a multitude of gripping edges in all directions. These knife-cuts contribute to the excellent road holding quality, particularly when cornering, accelerating and braking on wet roads due to the new pattern's greater ability to "wipe dry." It has longer tread life and the specially graduated withds of the tread pattern reduce the chances of irregular wear, while tyre noise and squeal are reduced by the ingenious variable pitch design. The low buffing rib protects the White Sidewall Tyre from casing damage and at the same time improves its appearance.

The new Dunlop "Gold Seal", now manufactured at the Dunlop Factory at Sahaganj, is standard equipment for all car manufacturers and is available in popular sizes.



A Dunlop "Gold Seal" car tyre being checked for accuracy of construction in the laboratory of the Dunlop Sahaganj Factory.

WORLD'S LARGEST TYRE BUILT BY GOODYEAR

The largest tyre in the world was built recently by the Goodyear Tyre and Rubber Company, Akron, Ohio, U.S.A. The two-ton tyre stands 10 feet high, four feet wide and sells for £14,000.

When equipped with its rim, also built by Goodyear and also the world's largest in its field, total weight goes to three tons.

It was built on a sprawling, electronically-operated machine that covers 4,500 square feet of floor space. The tyre building machine and the 60-ton mould used to vulcanize the record-breaking tyre cost more than £250,000.

Enough rubber was used in this one tyre to produce 320 passenger car tyres. Over 7,000 pairs of ladies' nylon hose could have been made from the tyre cord used.

October 1959

Size designation for the tyre is 44.5-45. This means the distance from sidewall to sidewall is 44 and one-half inches and bead diameter is 45 inches. This year's Plymouth, Ford and Chevrolet cars are being equipped with 7.50-14 tyres.



These two young gentlemen are overwhelmed by the awesome size of the world's largest tyre. Built by the Goodyear Tyre & Rubber Co., Akron, Ohio, U.S.A., the tyre costs £14,000. Tyre weighs two tons, stands 10 feet high and is four feet wide.

The tyre is a research model for a planned line of earth-

mover and special-purpose tyres for huge construction machines and other vehicles still in design stages.

Earthmoving vehicles, rubber-tyred bulldozers and huge scrapers used to build major construction projects need large tyres with low-pressure and high flotation to prevent bogging in soft earth.

Vehicles equipped with Goodyear's new 44.5-45 tyres at 32 ply rating will be able to carry more than 30 tons at 30 miles per hour with 35 pounds of air pressure. Load capacity for the same tyre with a 50 ply rating will increase payload to more than 40 tons at better than 50 miles per hour. This is more than twice the carrying capacity of 33.5-33 tyres, the largest earthmover tyres now in general use.

TWO DUNLOP DIAMOND JUBILEE FILMS

Two interesting documentary films were recently shown to the Press at the Lighthouse Cinema, Calcutta. These films have been produced by the Dunlop Rubber Co. (India) Ltd., to mark their Diamond Jubilee in India.

One of these films, based on the theme that transport is helping to link the country more closely together, is entitled "Our Children will know each other better." The script for this film was prepared by the well-known film director, Sri Satyajit Ray, who has also supervised its production.

This first documentary of Satyajit Ray tells the story of a young Punjabi boy who runs away from his village home in search of his father who works in Madras. As a stowaway he goes in a truck to Delhi, and is taken

MOTORINDIA

from there by the truck driver to Calcutta. The boy eventually reaches Madras and is united with his father.

The whole journey of the boy has been treated in pure cinematic terms. As the journey progresses and village landscapes alternate with urban and industrial scenes, the boy wonders wide-eyed at the things he sees—the High Court at Chandigarh, the Kutab Minar, the Chowrah Bridge.....But most wonderful of all, he meets children from other regions of India, whose language he does not understand, but who, nonetheless, have the same love for fun and jollity, and with whom he quickly develops a sense of kinship.

The part of the boy is played with charm and simplicity by Surjeet Singh, a student in Calcutta. The music, composed by V. Balsara, has been used with wonderful effect.

The second film, "The Road to Ambattur," gives a record of Dunlop's sixty years of activity in India. It shows J. B. Dunlop inventing the first practicable pneumatic tyre and traces the growth of the company on Indian soil.

A short while is spent on a rubber plantation in South India. The camera then makes a tour of the Sahaganj factory of Dunlop and conveys an idea of its vastness and that of the surrounding estate.

The growth of the second Dunlop factory at Ambattur, near Madras, is shown from the very beginning. The successful search for a source of water is followed by the selection of a suitable site for the factory. Soon land surveys begin and slowly, before our eyes, a gigantic tyre factory takes shape, a factory that embodies the theme of Dunlop's Diamond Jubilee Celebrations, "Still growing at sixty."

Testing the tensile strength of a piece of textile fabric in the laboratories of the Dunlop Factory at Sahaganj. A still from the Dunlop Diamond Jubilee film THE ROAD TO AMBATTUR.



Sri M. V. Arunachalam (extreme right), Managing Director, Carborandum Universal Ltd., left Bombay by Air India International for a study tour of West Germany, U. K. and U.S.A. as a member of the National Productivity Council Team on Top Management and Organisation. He was seen off at the Madras Airport by Sri A.M.M. Murugappa Chettiar and Sri A.M.M. Arunachalam.



Sri Lalchand Hirachand, Chairman of the Premier Automobiles, photographed on the arrival from his trip to U.K. and U.S.A.



Photo taken on the occasion of the send off given to Mr. C. R. Seetharaman, Works Manager, Amco Batteries, on the eve of his departure for the States for training at the Gould-National Batteries. Mr. K. G. Parameswaram, Managing Director, is seen garlanding Mr. Seetharaman.

Shri V.M. Meswani, General Manager of the Premier Automobiles photographed at the Santacruz Airport on the arrival from his trip to U.K. & U.S.A.



Yes-I will take the best

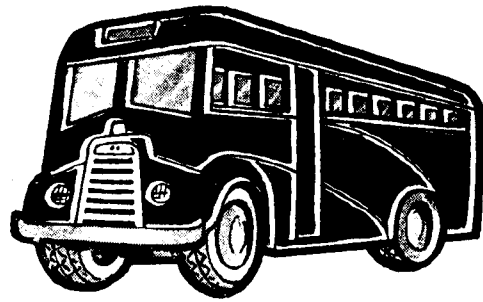
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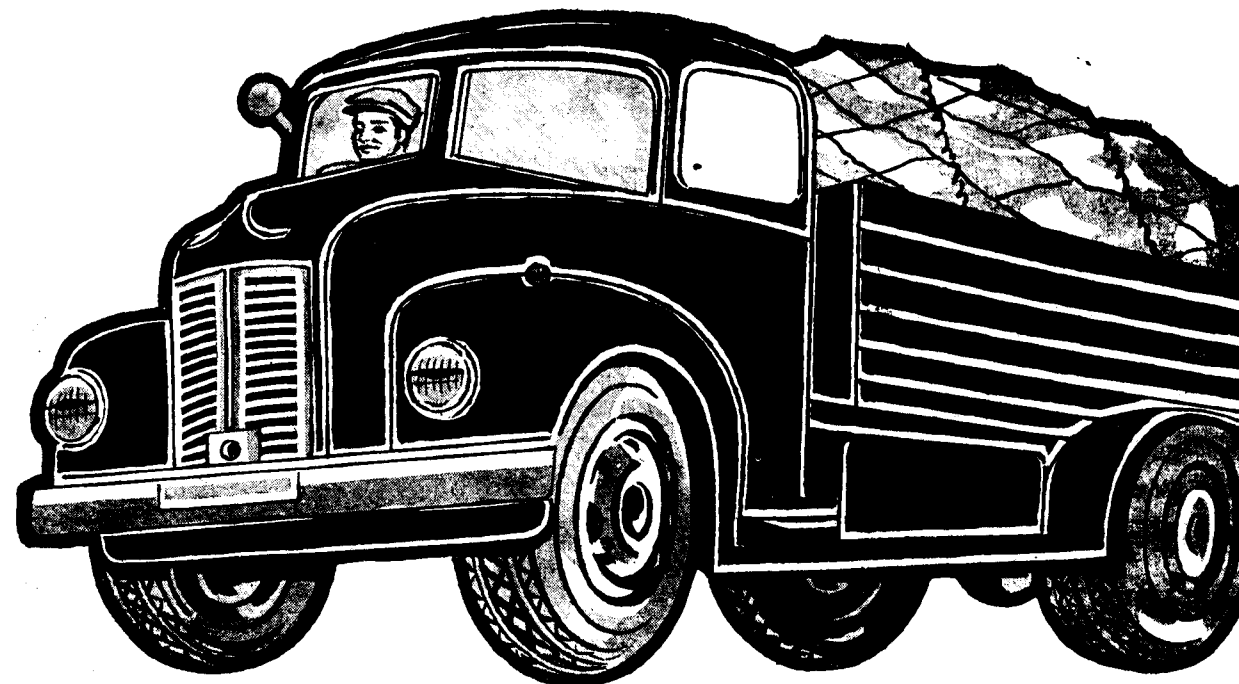
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