



DISAPPEARING side windows are a feature of the new Zodiac convertible, but when the power-operated top is raised large quarter lights give safe and convenient all-round vision from the driving seat.

1957 CARS

# FORD

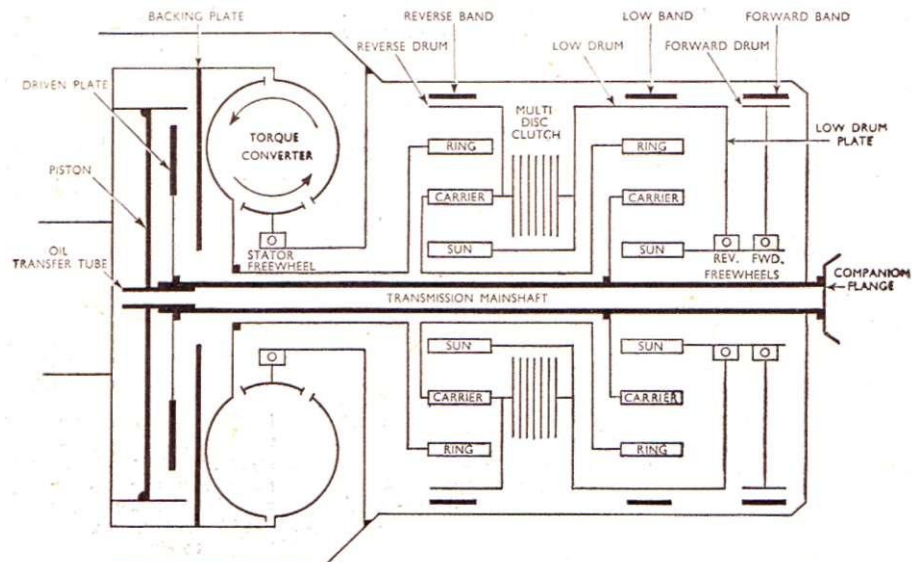
LL the familiar Ford-of-Dagenham range continues A into next season, covering a wide range of tastes from Britain's cheapest car, the Popular, through the Anglia, Prefect, Consul and Zephyr models to the stylish Zodiac. Henceforth, however, a Zodiac convertible model will be available, similar in style to the Consul and Zephyr convertibles but with a power-operated folding roof and the distinctive Zodiac styling features. A photograph shows the impressive appearance of this car, which is based on the 2j-litre six-cylinder model introduced earlier this year, the large-area side windows which disappear completely from view when required being a very practical feature.

Another innovation is the cataloguing by the Ford Motor Co. of "station-wagon" conversions of the Consul, Zephyr and Zodiac, as well as the existing 1,172 c.c. station wagons. The new conversions are by the well-known coachbuilders E. D. Abbott, Ltd., who undertook similar conversions privately on some hundreds of the previous Ford Zephyr model. They feature an extended body rear section of all-steel construction, strong enough to have a roof rack for luggage permanently and neatly fixed to it, and a sideways-

opening tail door giving access to a roomy luggage compartment. Many options in respect of interior layout can be provided, including a sliding roof, a flat rear floor concealing the spare wheel, and seats which fold either to accommodate bulky goods or to make a bed. The basic cost of converting a Consul or Zephyr is £165, or for a Zodiac £170, purchase tax adding 50% to these prices for home motorists if the conversion is carried out on a car less than six months old. When new cars are supplied with the conversion, oversize tyres and reinforced rear springs to suit increased load-carrying capacity are included in the specification.

Most important item of news from Dagenham this autumn, however, is that the latest Zephyr and Zodiac will henceforth be available with a Borg-Warner fully automatic two-pedal transmission, at an extra cost of £125 plus £62 10s. purchase tax, as compared with the three-speed gearbox—to which, at a smaller extra cost, a

DIAGRAMMATIC layout of the Borg-Warner automatic transmission now optional on Zephyr and Zodiac models shows, from left to right, the direct-drive clutch, hydraulic torque converter, low-and-reverse epicyclic gear train, and 2nd gear epicyclic gear train.



semi-automatic overdrive unit can be added if desired.

A diagram shows the essential elements which go to make up the well-proven automatic transmission. This comprises a hydraulic torque converter, a plate clutch to provide a direct top gear, two epicyclic gear trains which provide 1st, 2nd and reverse gear ratios, and the automatic "brain" which controls the mechanism without the need for any intervention by the driver. This "brain" engages the most suitable of the three gear ratios for any combination of car speed and throttle opening, using only moderate engine r.p.m. in the indirect ratios if the throttle opening is small, but allowing the engine to rev. more freely if the accelerator pedal is fully depressed.

In the diagram, 1st gear is obtained by engagement of the "low" and "forward" brake bands, so that the two epicyclic reduction gears work in series. When the control brain selects 2nd gear, the "low" brake band is released and the multi-plate clutch engaged by oil pressure, only the rear epicyclic reduction gear function-

ing. In each of these two cases, power from the engine reaches the gearbox through the hydraulic torque converter, which at low speeds slips and gives an output torque in excess of input torque.

For top gear, the clutch located ahead of the torque converter is engaged by oil pressure from the control "brain," this giving a direct drive from engine to propeller shaft with no hydraulic slip. Thus, although this transmission is inevitably heavier than the simple synchromesh gearbox which it can replace, there is no hydraulic slip in ordinary top-gear driving to increase fuel consumption. To meet special driving conditions, the driver can select "low" gear with the control lever if requiring engine braking down a long or steep hill, and can select "Park" when desiring to engage a sprag in the transmission for parking on a steep gradient.

Reverting from mechanical innovations to visible coachwork refinements, a new alternative to hide upholstery in de-luxe Ford cars is now offered in the form of Nylonweave. Softer and smarter than the p.v.c. used in standard cars, it is a hard-wearing, as well as modern-looking, material.

Automatic Transmission Offered on Six-cylinder Cars; Station Wagons and New Zodiac Convertible Added to Range

CONVERSIONS of the Consul, Zephyr (seen here) and Zodiac models into all-steel estate-car form, by E. D. Abbott, Ltd., can now be supplied by Ford dealers. The rear door gives access to a deep luggage compartment, which can be given a flat floor to line up with fold-forward rear seats. Built-in with the sturdy extended roof is a stainless steel luggage rack, oversize tyres and special rear springs adapting the car for carriage of heavy loads.

