SECTION L

THE HYDRAULIC DAMPERS

Maintenance.

MAINTENANCE

The maintenance of the hydraulic dampers, when in position on the vehicle, is confined to examination for leakage and examination of the anchorage to the chassis to ensure that the fixing bolts are tight. No adjustment of the hydraulic dampers is required or provided. They are accurately set before leaving the manufacturer to give the amount of damping most suitable for the car. **Any attempt to dismantle the assembly will seriously affect the operation and performance.**

Section L.1

TOPPING UP

The fluid level of the front hydraulic dampers should be topped up by removing the filler plug and filling up to the bottom of the filler plug hole. **Use Armstrong Super (Thin) Shock Absorber Fluid No. 624.** (If this fluid is not available, any good-quality mineral oil to Specification S.A.E. 20/20W should be used, but this alternative is not suitable for low-temperature operation.)

Before removing the filler cap, which is located on the top of the damper, carefully wipe the exterior, as it is of utmost importance that no dirt whatever enters through the filler hole.

On no account neglect the operation of topping up the damper fluid because if the low-pressure chamber of the unit is allowed to become empty, air will enter the pressure cylinders and the action of the damper will be impaired.

The rear dampers must be removed from the chassis frame (see Section L.2) for topping up of the fluid.

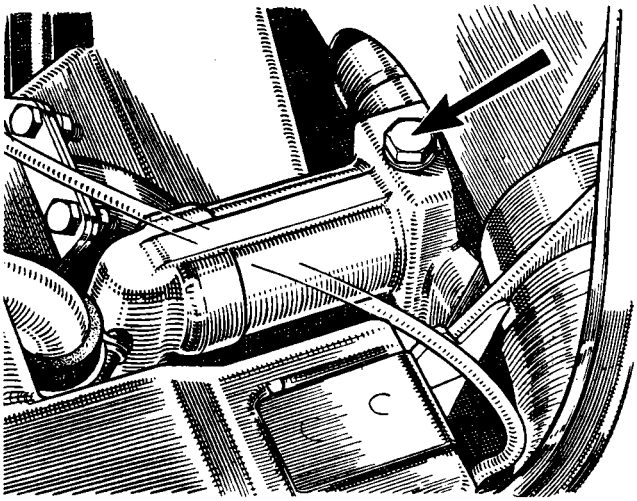

Fig. L.1
A front damper, showing the filler plug

Section L.2

REMOVING AND REPLACING REAR DAMPERS

Jack up the rear of the car below the axle or rear springs and remove the rear wheel.

Remove the nut and spring washers securing the damper arm to the bracket on the rear spring.

Remove the nuts and spring and flat washers from the two bolts securing the damper to the chassis side-member and withdraw the damper.

When replacing the damper, it is advisable to work the lever arm up and down a few times through its full stroke to expel trapped air from the pressure chambers.

NOTE.—**When handling hydraulic dampers that have been removed from the chassis for any purpose, it is important to keep the assemblies upright as far as possible, otherwise air may enter the operating chamber, resulting in free movement.**

Section L.3

REMOVING A FRONT DAMPER

Jack up the car under the lower wishbone spring pan until the wheel is clear of the ground.

Remove the wheel and take out the swivel pin top pivot bolt. Swing out the hub unit clear of the upper wishbone and support it on a suitable stand to prevent straining the brake hose. Unscrew the four nuts holding the damper to the chassis frame.

Section L.4

TESTING THE DAMPERS

If the hydraulic dampers do not appear to function satisfactorily, the resistance may be roughly checked by bouncing each corner of the car up and down. A uniform movement indicates that no attention is required, but if the resistance is erratic or free movement of the car is felt, the damper should be removed for checking and topping up.

Indication of their resistance can be obtained by carrying out the following check.

Bolt the damper, in an upright position, to a plate held in a vice.

Move the lever arm up and down through its complete stroke. A moderate resistance throughout the full stroke should be felt. If the resistance is erratic, and free movement in the lever arm is noted, it may indicate lack of fluid.

While adding fluid the lever arm must be worked throughout its full stroke to expel any air that may be present in the operating chamber.

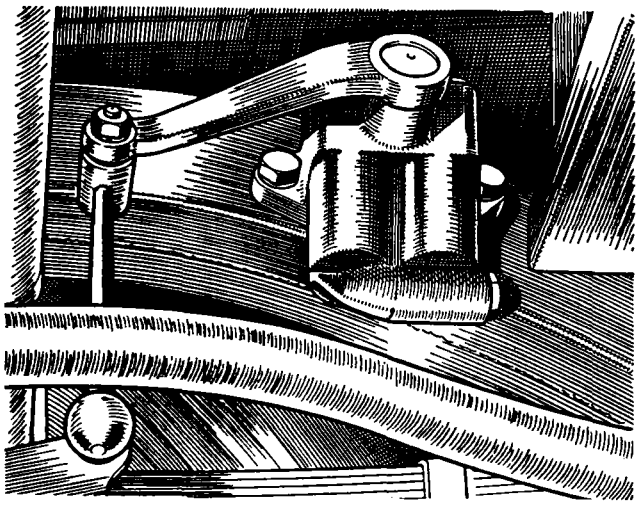

Fig. L.2

Rear dampers must be removed by unscrewing the two securing bolts and disconnecting the lower end of the link from the rear spring bracket

If the addition of fluid gives no improvement a new damper should be fitted.

Too much resistance, i.e. when it is not possible to move the lever arm by hand, indicates a broken internal part or a seized piston.

As it is essential for the dampers to apply the correct restraining action on the suspension, they should be checked whenever there is any doubt regarding their functioning.

The arms should not be removed from the dampers at any time as it is essential that they should be assembled to the damper shaft in the right relation to the damper cam lever so that there is the full range of movement on either side of the centre-line.

It must be clearly understood that there is no provision for adjusting the setting of the dampers, and if they are in any way defective they must be returned to the manufacturers for attention.