

## GENERAL DESCRIPTION

'Hydrolastic' is the name given to the type of suspension used on this vehicle. It is designed to reduce pitching and, to a great extent, rolling, and therefore to give a smooth, flat ride with the best possible handling characteristics.

The system consists of two front and two rear displacer units intercoupled longitudinally. Each is made of sheet steel and rubber and consists of a piston, a diaphragm, a lower and upper chamber housing, and a conical spring of compressed rubber.

Contact of the front wheels with a road irregularity forces the piston to push the diaphragm up; increased pressure displaces some of the fluid from the bottom chamber to the top chamber. The rubber springs, due to the pressure increase and fluid displacement, deflect, and the resultant pressure increase causes fluid to discharge through the interconnecting pipe into the rear displacer unit.

The fluid entering the rear displacer forces the diaphragm to react against the piston, resulting in the car height at the rear being raised. These events are virtually simultaneous and the car therefore rides an obstruction without pitch motion on the body. The action of the suspension is similar when the rear wheels negotiate the irregularity.

The fluid used in the system is a mixture of water and alcohol into which an anti-corrosive agent has been introduced.

The front suspension also comprises upper and lower

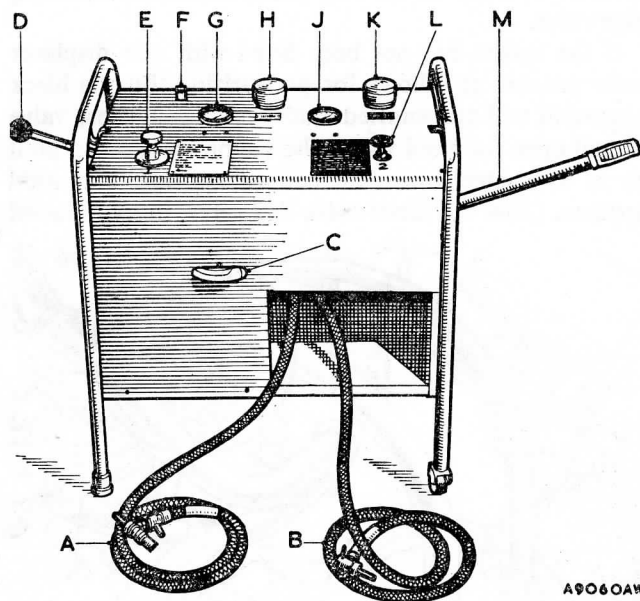


Fig. H.4

The suspension service unit

- |   |                          |
|---|--------------------------|
| A. Depressurizing and pressurizing connecting tube. | G. Vacuum gauge.         |
| B. Evacuating tube.                                 | H. Vacuum tank.          |
| C. Sight tube.                                      | J. Pressure gauge.       |
| D. Vacuum pump handle.                              | K. Pressure tank.        |
| E. Valve 1.   | L. Valve 2.              |
| F. Dipstick.  | M. Pressure pump handle. |

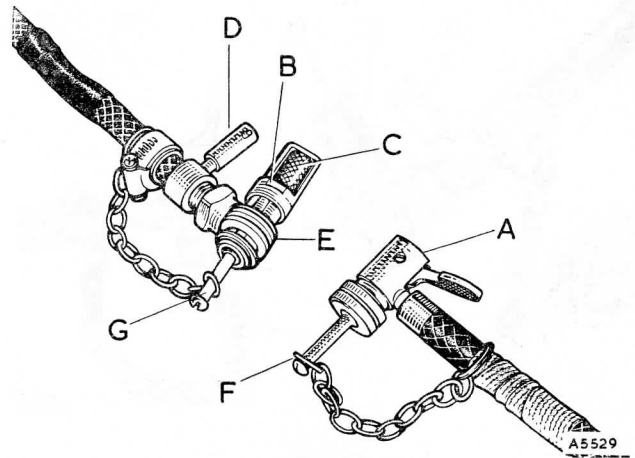


Fig. H.5

The suspension service unit connectors

- |   |   |
|---|---|
| A. Evacuating connector.                      | E. Locking slide.   |
| B. Depressurizing and pressurizing connector. | F. Sealing plug (evacuating connector).                       |
| C. Knurled knob.                              | G. Sealing plug (depressurizing and pressurizing connectors). |
| D. Bleeding screw.                            |   |

arms of unequal length located in the side-members of the front sub-frame with their outer ends attached by ball joints to the swivel hubs. Maintenance is confined to lubrication as detailed in Section N.3.

The rear suspension, in addition to the Hydrolastic units, consists of independent trailing arms, auxiliary springs, and an anti-roll bar.

## Section H.1

### CASTOR AND CAMBER ANGLES AND SWIVEL HUB INCLINATION

The castor and camber angles, swivel hub inclination and wheel alignment of the front suspension, and the camber and wheel alignment of the rear suspension are design settings that have a very important bearing on the general handling of the car. Each setting, with the exception of the front wheel alignment, is determined by machining and assembly of components and none is adjustable.

Should the car suffer damage to the suspension, the angles (as given in 'GENERAL DATA') must be verified with a camber, castor, and swivel hub inclination gauge and new parts fitted as found necessary.

## Section H.2

### DEPRESSURIZING, EVACUATING, AND PRESSURIZING

Before any major work can be carried out on the suspension and its components the system has to be depressurized and in some cases evacuated. When the component overhaul is completed the system has then to be pressurized to the recommended pressure. For these operations special service equipment is necessary. **Before using the service equipment check that the pressure**