

is operated, the height control is actuated or the accumulator bleed screw opened.

5. Fit a bleed pipe to the gauge connecting pipe bleed screw, open the bleed screw, thus allowing the pressure gauge reading to fall. When the pressure has fallen to between 126,55 kg/sq.cm. and 133,58 kg/sq.cm. (1,850 lb/sq.in. and 1 900 lb/sq.in.) the accumulator control valve should allow the pump to cut in again and charge the accumulator back to 175,77 kg/sq.cm. (2 500 lb/sq.in.).

If the above requirements are met the accumulator is operating correctly.

6. If, on first starting the engine, the pressure gauge needle fluctuates violently, rapidly climbs to 175,77 kg/sq.cm. (2 500 lb/sq.in.) and then immediately falls to zero when the brake pedal is depressed, this indicates a complete loss of nitrogen pressure from the accumulator sphere.

This could be caused by a leaking charging cap or a failure of the diaphragm in the sphere.

7. If when the engine is started, the gauge needle jumps to a pressure less than the accumulator nitrogen pressure of 70,31 kg/sq.cm. (1 000 lb/sq.in.) this indicates a partial loss of nitrogen pressure from the sphere. When the above condition exists the sphere must be further charged.

If, on starting the engine, the pressure gauge correctly jumps to 70,31 kg/sq.cm. (1 000 lb/sq.in.) but then fails to attain between 168 kg/sq.cm. and 182 kg/sq.cm. (2 400 lb/sq.in. and 2 600 lb/sq.in.) this could be due to the accumulator controlling at a low pressure or leakage. Should the gauge needle rise to a pressure below 168 kg/sq.cm. (2 400 lb/sq.in.) and then remain steady the accumulator valve is controlling at too low a pressure. If leakage is suspected the valve assembly should be overhauled or renewed. To adjust the accumulator controlling pressure, partly dismantle the valve housing assembly; fit sufficient adjusting washers behind the regulating spring to obtain a pressure of between 168 kg/sq.cm. and 182 kg/sq.cm. (2 400 lb/sq.in. and 2 600 lb/sq.in.). Adjusting washers are available in a range from between 0,127 mm. and 1,22 mm. (0.005 in. and 0.045 in.). If the regulator spring is renewed, fully compress the new spring several times before fitting. in order to reduce initial spring pressure variation.

If observation of the gauge shows that the pump is still pumping (needle fluctuating with the pump pulses) without giving a rise in pressure then there is a leak equal to the pump flow at that pressure. Pump 'cut out' indicated by the change of audible note of the pump can be heard if the end of the engine dipstick is placed on top of the pump and used as a hearing aid.

To verify an accumulator internal leak, depressurise the systems, remove the hose connection and blank off the high pressure outlet from the accumulator. Repeat the test. If the symptoms persist then the accumulator valve body has an internal leak and the valve assembly should be overhauled. If however, the gauge now behaves correctly and the pumps can be heard to 'cut-out'

the leakage is occurring downstream and further checks will be necessary in order to isolate the faulty item.

The component isolating procedure necessary to locate the fault consists of depressurising the systems then removing or blanking off the pressure feed to the various components in turn and repeating the test procedure.

The pressure feeds to the components can be readily identified from the colour coding chart (see Section G3) and the symptoms for determining whether units are functioning correctly are given under the applicable test procedures within the respective sections.

Note

When a unit has been blanked off, before removing the blank the systems must be depressurised either by continuous system operation with the engine switched off or by bleeding the appropriate accumulator until it is depressurised.

If when the engine is started, the gauge works correctly and the accumulator controls at between 168 kg/sq.cm. and 182 kg/sq.cm. (2 400 lb/sq.in. and 2 600 lb/sq.in.) but then the pressure drops steadily without brake or height control actuation, until the accumulator allows the pump to cut in again at between 130 kg/sq.cm. and 133,6 kg/sq.cm. (1 850 lb/sq.in. and 1 900 lb/sq.in.) a leak in the system is indicated and the component checking procedure should be carried out to determine the location.

After tests have been carried out involving blanking off components all blanks should be removed and components reconnected. The systems should then be bled in accordance with the information given in Section G4.