Brake Servo - Test Procedure

Behind the brake pedal sits the servo, which transforms the effort exerted by the driver on the pedal to a higher pressure on the brake fluid.

In the centre of the servo lies a diaphragm and when the pedal is pressed, air will enter one side of the diaphragm into the rear chamber. The pressure difference acting on the diaphragm allows the driver’s efforts to be increased. Although often referred to as a “vacuum servo”, there is some air present on either side of the diaphragm and it is not a true vacuum with an absence of air. On petrol vehicles, the “vacuum” is drawn from the inlet manifold and on diesel vehicles from a pump.

If the driver feels no assistance from the servo, it generally means one of the following has occurred:
A: The pump has failed (diesel vehicles only)
B: The non return valve has failed
C: There is a leak from the vacuum pipe or servo.
D: The vacuum pipe has collapsed (which cannot be seen externally)

Replace any of the above as required!
To test for correct servo action, follow the instructions below:

**Test 1** Pump the brake pedal with the engine off until it becomes stiff and doesn’t travel.

**Test 2** Press the pedal with some pressure, start the engine and the pedal should travel as the vacuum should increase.

**Test 3** Disconnect the vacuum pipe. Connect to gauge to check for vacuum with engine running (min of 0.5 bar negative pressure). If there’s low or no vacuum, check the pipe, connections and pump (if it’s a diesel vehicle) and replace as required.

**Caution!** On some diesel vehicles, if pressure is applied to the brake pedal for too long, the vacuum pump will build up enough energy and generate too much pressure in the brake system which can result in long pedal travel. This could make the driver think there is a problem.

To be extra cautious, complete the steps as per Test 1. Then press and hold the brake pedal for a couple of minutes. If there is a leak in the hydraulics, the pedal travel will increase without servo assistance then follow the steps of Test 2.