

ACCELERATION

The shift from first speed to second, second speed to third, and third speed to fourth (direct drive) will occur at progressively higher speed ranges depending upon the amount of pressure on the accelerator pedal. With slight accelerator pedal pressure, the shifts will occur at lower speeds. As accelerator pressure is increased, the shifts will occur at higher car speeds.

FORCED DOWNSHIFT

Extra performance is obtainable in either of the two DR ranges or in LO range simply by depressing the accelerator pedal. The transmission will then shift down to a lower speed for faster acceleration and will return to a higher speed automatically as car speed increases or pressure on the accelerator pedal is released. Car speed and the range in which the transmission is operating determine how far the accelerator pedal must be depressed to cause the transmission to downshift. The downshifts occur as follows:

1. When driving in the left DR position in fourth speed at about 27 MPH or less, partially depressing the accelerator pedal will cause the transmission to downshift into third speed. At speeds from 28 MPH to 60 MPH it is necessary to completely depress the accelerator pedal to cause this shift.

2. When driving at a speed below approximately 20 MPH in either DR range the transmission will downshift to second speed when the accelerator pedal is fully depressed.

3. When driving in either of the DR positions or LO at speed less than approximately 10 MPH, the transmission will downshift to first speed when the accelerator is fully depressed. **CAUTION AGAINST COASTING IN NEUTRAL:** *Do not coast with the control lever in N (neutral) position. This procedure is unlawful in many states and under some conditions is harmful to the transmission.*

STOPPING THE CAR

To stop the car, release the pressure on the accelerator pedal. Leave the control lever in the driving position; the engine will then give additional braking to help slow down the car. For further retarding effort apply the brakes in the conventional manner. **CAUTION:** *Under no circumstances should the control lever remain in any other position except N when the driver leaves car with the engine still running. For additional safety, apply parking brake when*

opening garage doors or removing mail from rural mail box, etc. This precaution prevents movement of the vehicle, should the accelerator pedal be accidentally depressed by a passenger.

LO RANGE POSITION

The LO range position is provided for pulling through deep sand or snow and ascending or descending steep grades where traffic signs call for placing the transmission in first or second gear. It is also best for getting the car in motion on icy roads, since the transmission starts in second gear in LO range.

The change from either of the two DR positions to LO is made by lifting the control lever and moving it to the LO position. This change can be made at any car speed; however, LO range will not engage until the car speed is reduced to below 50 MPH. Release the accelerator pedal when moving the selector lever from either of the two DR positions to LO. **CAUTION:** *The change from either of the two DR positions to LO should only be made on dry roads where traction is good. It is not recommended to change to LO on slippery roads since this change could induce a skid. On slippery roads, safety demands that the car speed be reduced by judicious use of brakes.*

In LO range the transmission starts normally in second speed. It is possible, however, to start in first speed by depressing the accelerator pedal to wide open throttle position. About 45 MPH the transmission will shift into fourth speed.

REVERSE

It is not necessary to bring the car to a complete stop before engaging reverse; simply raise the control lever and move it to the R position. Moving the lever between LO and R with light accelerator pressure permits rocking the car when required to get out of deep snow, mud or sand. Avoid engaging reverse at speeds above 5 MPH. **NOTE:** The control lever will stop at the left DR position when moved from reverse towards neutral with the lever raised. This prevents unwanted "over-selecting" into neutral.

PARKING

For additional safety while parking, turn off ignition key and move selector lever to R position. This permits engagement of transmission parts thereby

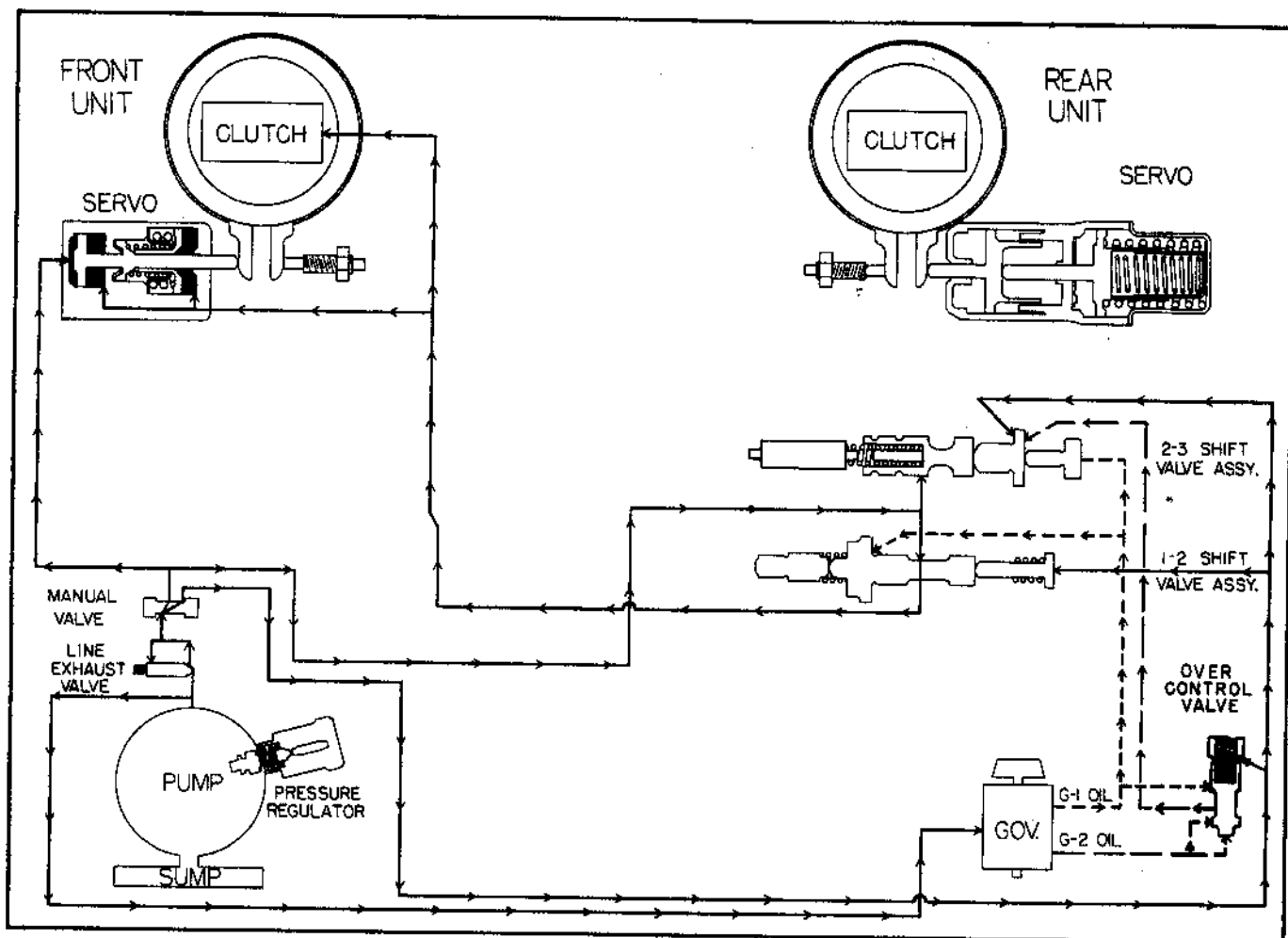


Fig. 20 Hydraulic Action in LO Range—Second Speed

LOW RANGE

SELECTOR LEVER IN LO POSITION

When the manual valve is in the low range position, main line oil against the 2-1 detent plug moves the 1-2 shift valve to the open position. This allows main line oil to pass through the 1-2 shift valve and release the front band and apply the front clutch, shifting the transmission to second speed.

At the same time main line oil is directed behind the 2-3 auxiliary valve to hold the 2-3 shift valve closed. This prevents governor oil pressure from causing a 2-3 upshift.

Above approximately 42 MPH, LO oil pressure acts on the larger diameter of the over control valve, thus assisting G-2 oil and opens valve against spring pressure. Both G-1 and G-2 oil then act on the 3-4 shift valve, thus completing the shift to fourth speed.

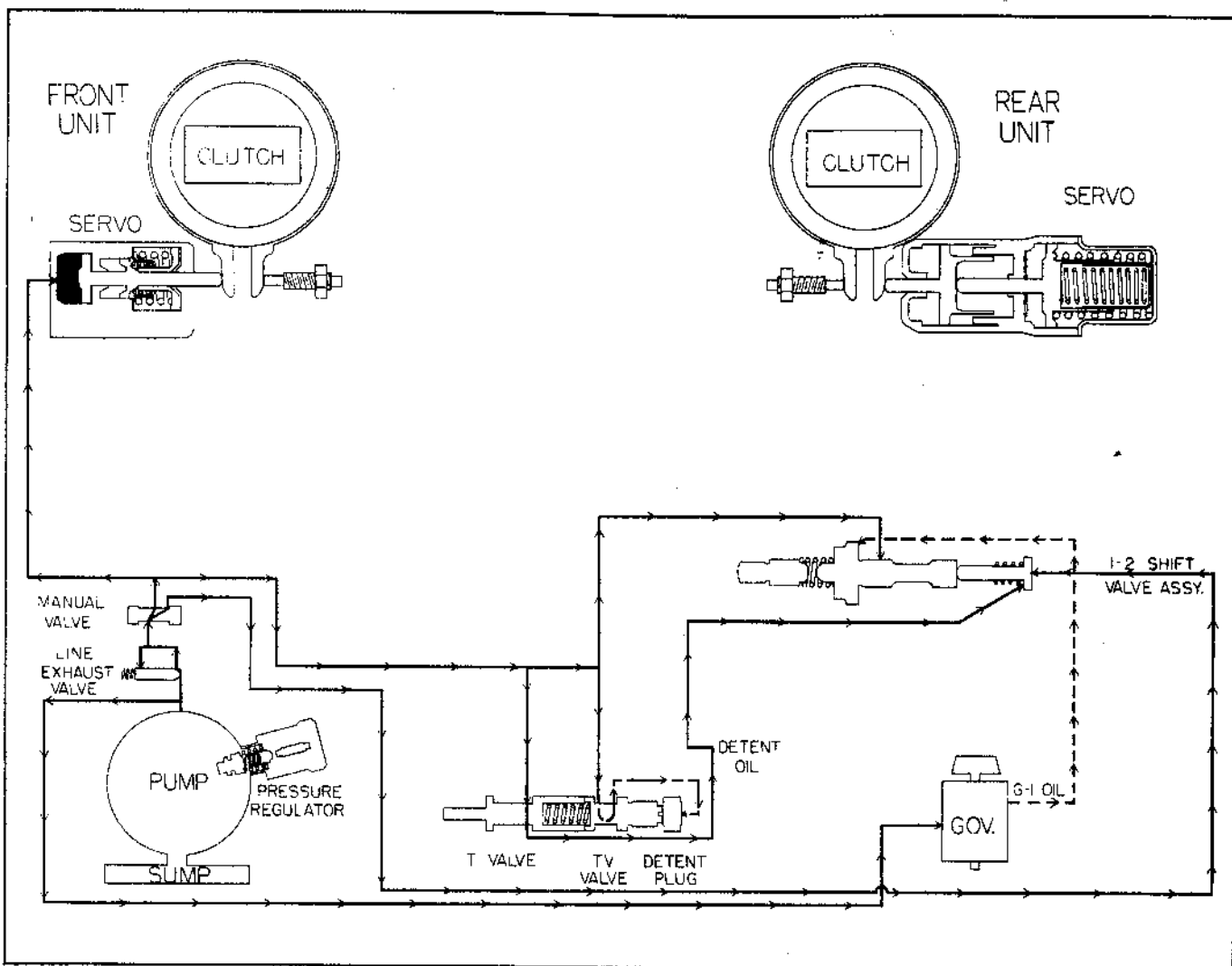


Fig. 26 Hydraulic Action in Forced 2-1 Downshift

FORCED 2-1 DOWNSHIFT

A forced 2-1 downshift can be obtained for greater acceleration in low range or either drive range at speeds below approximately 10 MPH. Governor oil pressure on 1-2 shift valve is low enough at this speed for regulated TV oil pressure (which becomes equal to main line oil pressure with full throttle) to force 1-2 shift valve closed, causing the transmission to shift from 2-1.

Since main line oil which is directed behind the 2-1 detent plug in low range would hold the 1-2 shift valve open, detent oil is directed to the 2-1 detent plug to aid spring force in moving it back. For this reason, it is possible to start out in first speed in low range by pressing the accelerator pedal to the floor.