

TRANSMISSION – MANUAL

GENERAL DESCRIPTION

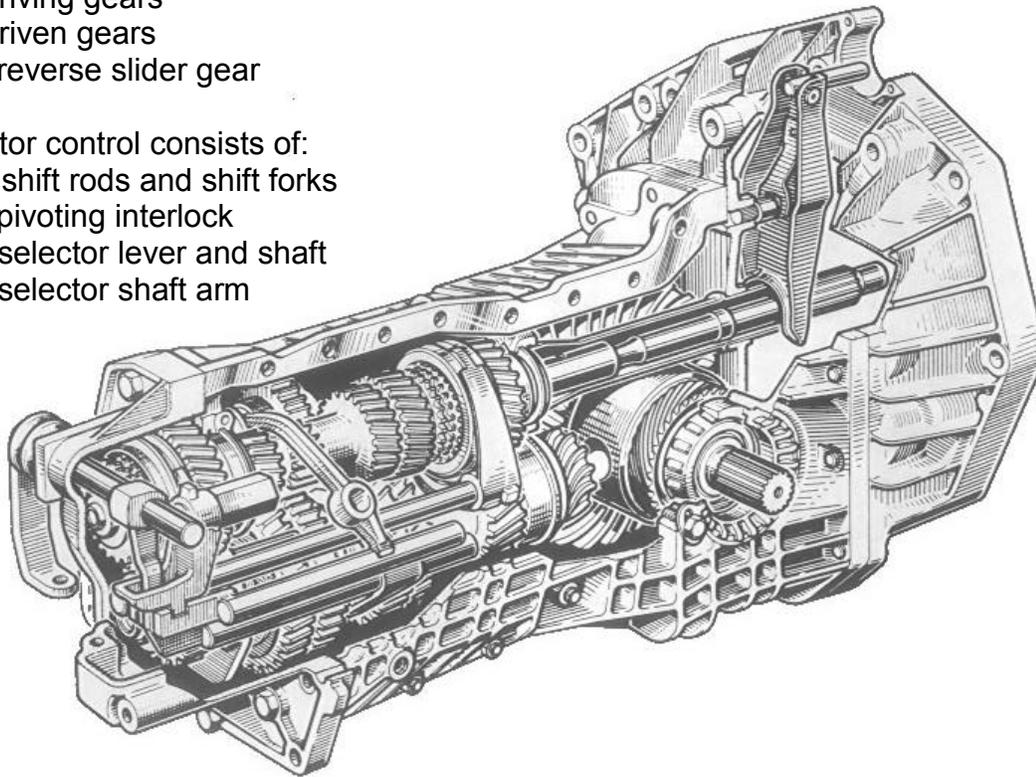
The manual transmission is a constant mesh five speed. All forward gears are fully synchronized for ease of shifting. The aluminum case consists of two halves which, when repair is necessary, can be separated to provide easy access to internal parts. The final drive components are also contained within the transmission case. Both the final drive and transmission use the same lubricant eliminating the need for a separate final drive lube.

The power train consists of:

- A. Primary (input) shaft
- B. Secondary (output) shaft
- C. Six driving gears
- D. Six driven gears
- E. One reverse slider gear

The selector control consists of:

- A. Four shift rods and shift forks
- B. One pivoting interlock
- C. One selector lever and shaft
- D. One selector shaft arm



OPERATION

All forward gear power flow is transferred via:

- A. Primary shaft (input)
- B. The selected driving gear (primary shaft)
- C. The selected driven gear (secondary shaft)
- D. Pinion shaft/final drive unit

Reverse gear power flow is transferred by means of:

- A. Primary shaft
- B. Reverse driving gear
- C. Reverse slider gear
- D. Reverse driven gear
- E. Pinion shaft/final drive unit

All gears are selected manually by the driver using the gearshift lever attached to the selector lever mounted on the side of the transmission rear housing. Inside the rear housing, a selector shaft arm, attached to the selector shaft, fits through a slot in the pivoting interlock. When a gear is selected, the selector shaft arm moves the interlock to the desired position and moves the appropriate shift rod in or out depending on the gear selected. The shift fork attached to the shift rod moves the desired gear into the proper position while the synchronizer ring matches the speed of the two gears being coupled. This shift sequence is repeated for all forward gears. Reverse operation is the same with the exception of the synchronizer ring, which is not required, since the vehicle should be stationary when shifting to reverse.

Gear ratios are as follows:

1st Gear:	3.36
2nd Gear:	2.06
3rd Gear:	1.38
4th Gear:	1.06
5th Gear:	0.82
Reverse Gear:	3.18

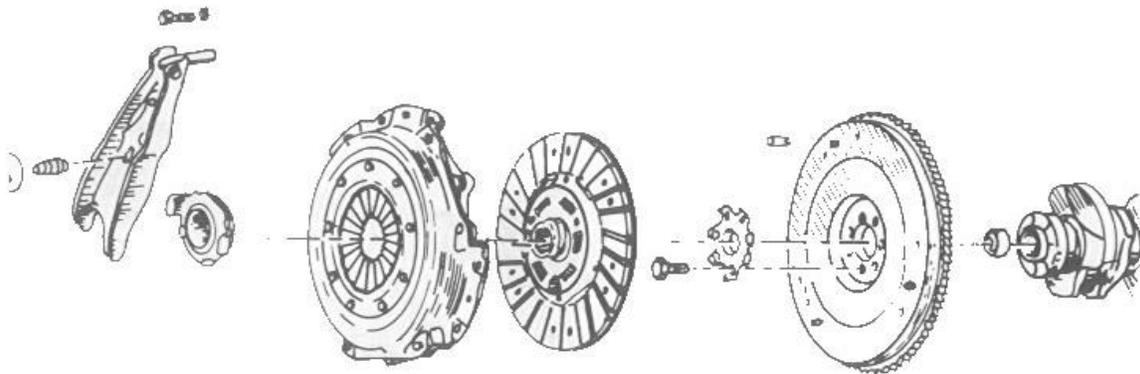
CLUTCH

GENERAL DESCRIPTION

The vehicle, when equipped with the five speed manual transmission, uses a single dry disc type clutch. The clutch is hydraulically operated. The pressure plate is a diaphragm spring type and the disc has a spring cushioned hub. A self-aligning, sealed ball-type throw-out bearing is used to depress the diaphragm spring. The clutch has its own fluid reservoir and master cylinder which provides hydraulic pressure when the clutch pedal is depressed.

OPERATION

The clutch pedal is connected to the master cylinder with a pushrod. When the pedal is depressed, the pushrod exerts pressure against the master cylinder piston. As the piston begins to move, it draws fluid from the fluid reservoir and forces it through the hydraulic line to the slave cylinder piston. Slave cylinder piston pressure causes the clutch fork to move the throw-out bearing against the pressure plate. As the diaphragm spring is depressed, pressure on the disc is released and the clutch disengages. When the clutch pedal is released, the procedure is reversed and the clutch engages.



TRANSMISSION – AUTOMATIC

GENERAL DESCRIPTION

The three (3) speed automatic transmission uses a conventional torque converter. This converter has a single stator supported on a one-way roller clutch. The final drive unit is contained within the transmission case. Gear reduction, direct drive, and reverse are achieved using one (1) planetary gear set, two (2) reaction members, and two (2) internal clutch packs. Hydraulic pressure for this transmission is developed with a crescent gear type oil pump. The pump is driven by a shaft which runs the entire length of the transmission case. This shaft is splined to the converter and turns at engine speed. Main line pressure is regulated by a pressure regulator valve and a vacuum operated actuator. As engine vacuum decreases, the valve increases main line pressure to assure positive application of the clutches and reaction members. The shift valves in the valve body are controlled by a computer governor assembly and two (2) electric solenoids. By comparison, a conventional valve body uses a mechanical governor and a vacuum modulator (or throttle valve) to perform this same function. The valve body is not servicable and must be replaced as a unit if required. The hydraulic transmission is operated and lubricated by automatic transmission fluid while the final drive assembly is in a separate area filled with gear lube.

