1. General

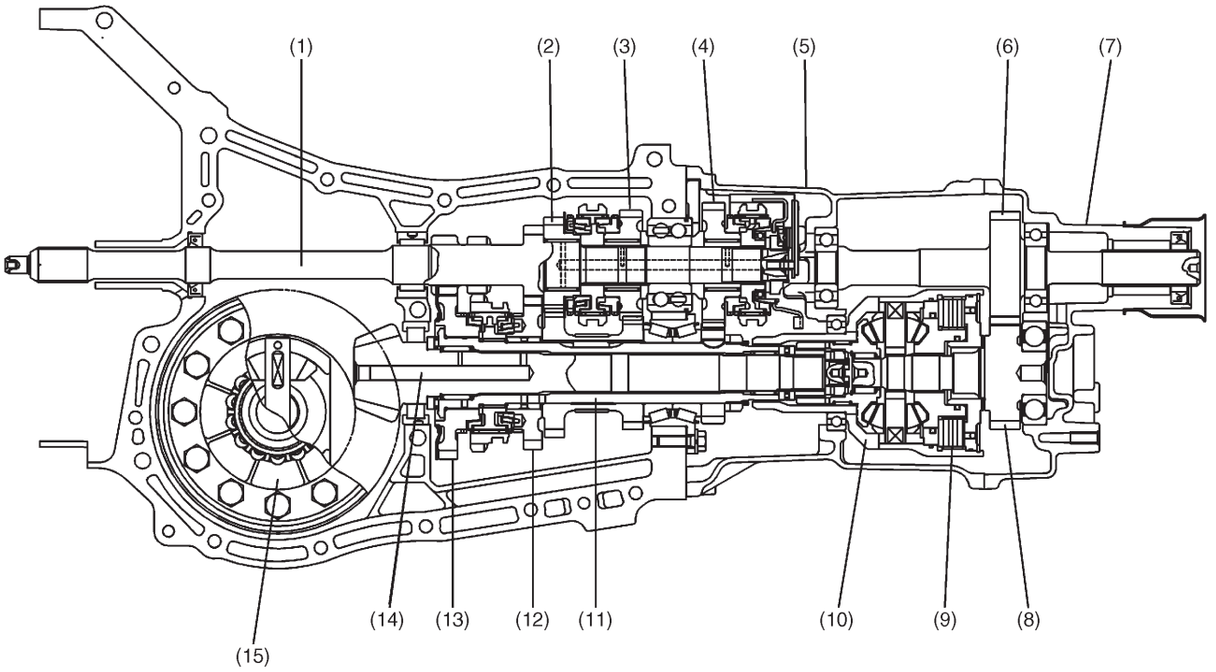
The transmission provides five forward speeds and one reverse speed and utilizes a floor shift lever design for gear selection. All forward gears are provided with synchromesh mechanisms that utilize inertia lock-key designs.

The transmission is unitized with the differential and housed in an aluminum case which is unitized with the clutch housing. The aluminum case is divided into left and right halves. Major features of the transmission are as follows: The clutch shaft has been extended to form a mainshaft, the countershaft combines the function of the final reduction drive pinion shaft, and the hypoid gear is “offset” to form a compact power train design. The forward gears are helical and feature high toothface strength, high engagement ratios and quiet operation. Reverse direction is achieved by engaging a selective-sliding reverse idler gear with the drive gear on the mainshaft and the driven gear on the 1st-2nd synchronizer hub of the drive pinion shaft. The 1st gear on the pinion side utilize sub-gear to reduce noise.

It is a compact, “full-time” transmission that utilizes a center differential provided with a viscous coupling at the rear of a transfer unit. The viscous coupling serves as a differential-action control.

The center differential utilizes a highly reliable, bevel gear. It not only delivers an equal amount of drive power to both the front and rear, but controls the difference in rotating speed between the front and rear wheels. A viscous coupling and center differential gears are located in the center differential case to connect the front and rear wheel drive shafts. With this arrangement, the transfer system realized a compact construction.

In addition, the viscous-coupling serves as a differential-action control to eliminate a mechanical lock mechanism.



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(1) Main shaft
(2) 3rd drive gear
(3) 4th drive gear
(4) 5th drive gear
(5) Transfer case
(6) Transfer driven gear
(7) Extension
(8) Transfer drive gear
(9) Viscous coupling
(10) Center differential with viscous coupling
(11) Driven shaft
(12) 2nd driven gear
(13) 1st driven gear
(14) Drive pinion shaft
(15) Front differential ASSY