9. Lubrication System

A forced lubrication system using an oil pump has been employed to ensure adequate supply of oil to the components of the six-speed transmission. The oil (gear oil) from the oil pump is distributed to the oil chamber, main shaft, drive pinion shaft, transfer gears, and other components.

The oil chamber has functions of accumulating oil and supplying with oil the central oil passage in the drive pinion shaft uninterruptedly. In a conventional transmission without an oil chamber, the oil level is typically maintained at a height corresponding to the midpoint of the driven gear assembly. Such a large amount of gear oil (which has a relatively high viscosity) inflicts considerable frictional resistance on the gears when the transmission is operating. The use of the oil chamber can lower the oil level and thus reduce the friction between gears and oil by temporarily storing oil and supplying gears with it in an adequate amount.

(1) Oil guide
(2) Oil pan
(3) Oil strainer
(4) Oil pump
(5) Pressure regulator valve
(6) Pressure relief valve
(7) Oil chamber
(8) Main shaft
(9) Driven gear assembly
(10) Drive pinion shaft