

GENERAL

MANUAL TRANSMISSION AND DIFFERENTIAL

1. General

The six-speed manual transmission has been newly developed to exploit the full potential of the STi model's engine and enable the model to have a surpassing driving performance.

The major features of this new transmission are as follows:

- The driver can make a gear shift with a smaller force than with conventional transmissions owing to the double-cone synchronizers employed for the 1st, 3rd and reverse gears and the triple-cone synchronizer employed for the 2nd gear. In addition, the synchronizing elements of the 2nd to 6th gears have splines with asymmetric chamfers in order to prevent generation of undesirable loads that would cause simultaneous engagement of two gears ("double meshing") as well as to ensure improved gear shift feeling.
- The reverse idler gear is a constant-mesh type with a new sub gear.
- The shift/select mechanism is of a parallel link design. It has shift rods each supported by a slidable ball bearing and provided with a detent mechanism that uses a plunger with a ball inside.
- The reverse check mechanism prevents unintended engagement of the reverse gear when the driver makes a shift into the 5th or 6th gear.
- The transmission case is split into three pieces lateral direction like that of the automatic transmission used in the standard model. It is highly rigid owing to appropriately arranged ribs.
- The oil pump incorporated in the transmission case ensures improved lubricating and cooling performance.
- An APTRAC type limited slip differential has been introduced for the front differential.
- The center differential uses a driver-controllable center differential which controls the drive power distribution to the front and rear wheels according to driving and road conditions.