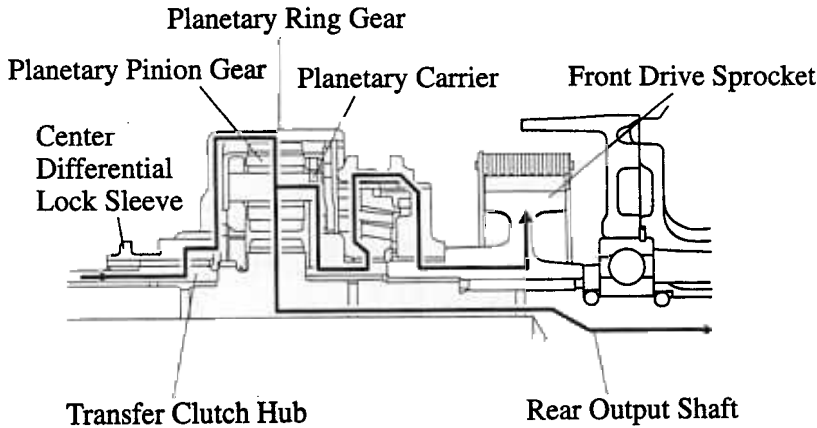


Operation

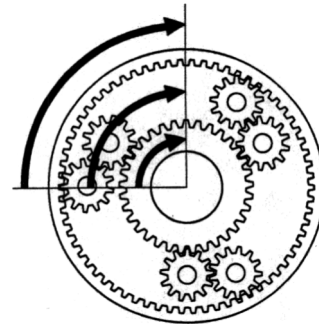
1) Free Mode

a. When the Vehicle is Travelling Straight

There is practically no speed difference between the front and rear wheels the vehicle is running straight a constant speed. In this condition, the transfer clutch hub, drive sprocket and rear output shaft rotate at the same speed. That is, they rotate together with the center differential unit. In this case, the driving force from the transfer clutch hub is distributed uniformly and transmitted to the front and rear wheels from the planetary pinion carrier.



160RN15

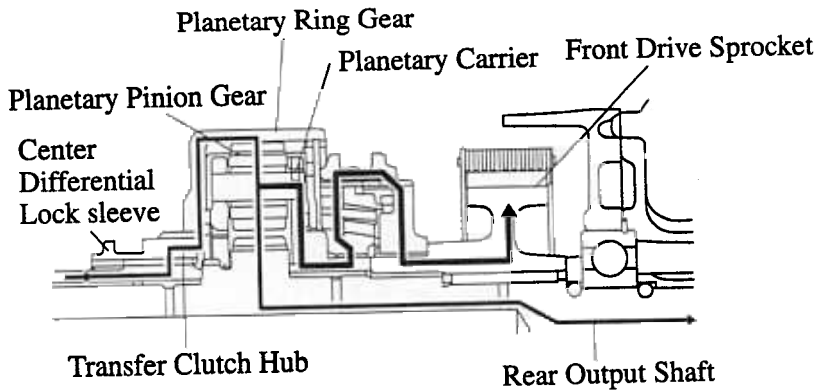


160RN16

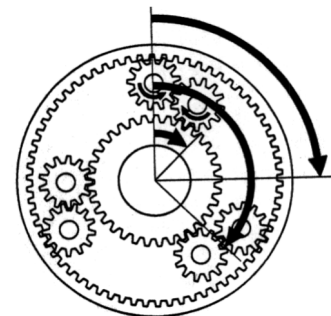
CH

b. When the Vehicle is Cornering

If a speed difference is generated between the front and rear wheels due to a turn, etc., the planetary pinion of the center differential unit rotates and absorbs the speed difference. For example, if the speed of the front wheels becomes greater than the speed of the rear wheels, the front drive sprocket rotates faster than the transfer clutch hub. As a result, the planetary carrier rotates faster, but in the same direction as the planetary ring gear. This causes the pinion gear (outer), which is meshed with the planetary ring gear, to rotate in the opposite direction while orbiting (revolving) the ring gear in the same direction. As a result, the other pinion gear (inner) rotates in the same direction as the ring gear and the rotation of the rear output shaft becomes slower than that of the drive sprocket by the amount of the rotating of the pinion gear.



160RN17

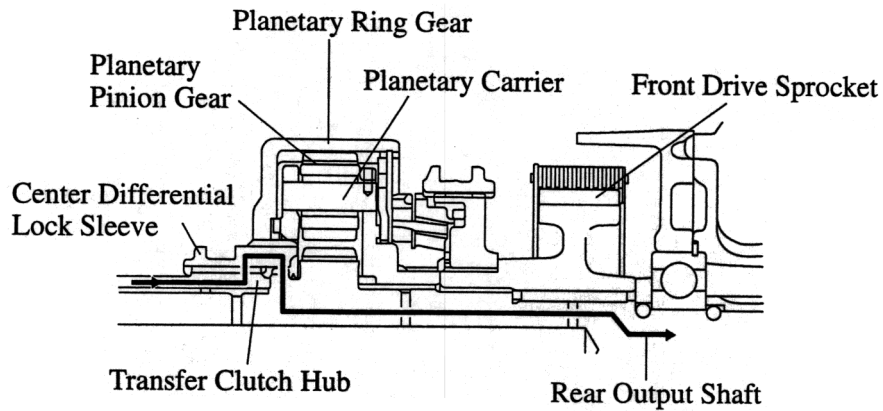


160RN18

2) Lock Mode

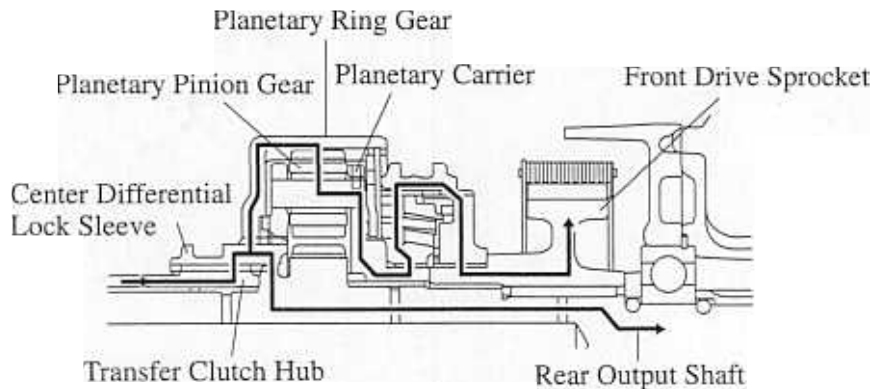
The center differential lock sleeve moves to the right, enabling the inner teeth of the center differential lock sleeve to mesh with the rear output shaft.

As a result, the center differential stops operating and assumes a locked state.



160RN30

Center Differential Free



160RN19

Center Differential Lock