

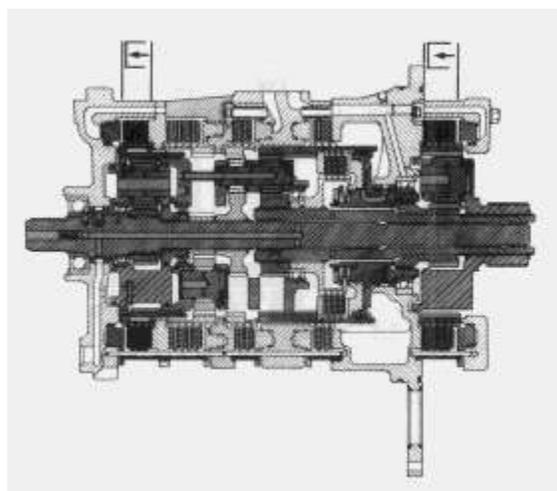
### Fifth Speed Forward

When fifth speed is selected No.3 and No.4 clutches are engaged.

Input shaft (28) has No.3 sun gear (24) splined to it. No.3 sun gear is engaged with No.3 planetary gears (10), which in turn are engaged with No.3 clutch ring gear (9). The engaged No.3 clutch holds ring gear (9) stationary so that planetary gears (10) rotate within the ring gear and force the No.2, 3 and 4 carrier (7) to rotate in the same direction as the input shaft.

In both fourth and fifth speeds rotation of carrier (7) causes rotation of No.4 planetary gears (11). No.4 clutch ring gear (13) is held stationary by the engaged No.4 clutch. Thus, planetary gears (11) rotate around the inside of the ring gear and drive No.4 sun gear (23). Torque is transmitted from No.4 sun gear to output shaft (21).

## First and Second Speeds Reverse



### First Speed Reverse

When first or second speed reverse is selected No.1 clutch is engaged.

The engaged No.1 clutch (3) holds No.1 ring gear (1). The ring gear is connected to No.1 carrier (26), which is also held stationary. Input shaft (28) transmits drive through No.1 sun gear (27) to No.1 planetary gears (29). Planetary gears (29) drive coupling gear (2) in the opposite direction to the input shaft. Coupling gear (2) is mechanically connected to No.2, 3 and 4 carrier (7), which also turns in the opposite direction to the input shaft.

When first speed reverse is selected No.6 clutch is engaged.

Rotation of carrier (7) causes rotation of No.4 planetary gears (11), which are engaged with No.4 clutch ring gear (13). No.4 clutch ring gear is splined to housing assembly (22), which in turn is splined to No.6 sun gear (20). No.6 sun gear meshes with No. 6 planetary gears (18), which also mesh with No.6 clutch ring gear (17). Rotation of No.4 planetary gears (11) is therefore transmitted to No.6 planetary gears (18) by ring gear (13), housing assembly (22) and sun gear (20). Since No.6 clutch (16) is engaged, ring gear (17) cannot turn so that rotation of planetary gears (18) causes No.6 carrier (19) to