

DIAGNOSIS

A. VI. Fails to shift to direct drive, or slips after direct drive clutch is engaged

CAUSES

1. Improper governor valve operation:
 - (a) Damaged governor.
 - (b) Governor sticking on the governor shaft.
 - (c) Governor valve sticking (closed).
2. High converter pressure preventing engagement of the direct drive clutch:
 - (a) Sticking converter valve.
 - (b) Leaking direct drive clutch piston seals.
 - (c) Mainshaft valve assembly loose and twisted out of correct position.
3. Leakage in the direct drive clutch passage.
4. Blocked oil passage in collector ring.
5. Improper direct drive clutch operation:
 - (a) Sticking or distorted direct drive clutch piston.
 - (b) Clutch wear.
 - (c) Broken oil seal rings on main shaft or front ring gear shaft.

A. VII. Engine cannot be cranked by pushing car, also reverse and park interlocks inoperative.

CAUSES

1. Rear pump pressure low:
 - (a) Damaged or excessively worn rear pump parts.

- (b) Damaged rear pump drive gear.
- (c) Sheared rear pump drive gear pin.
- (d) Valve block assembly incorrectly installed
- (e) Leaking valve block assembly gaskets.
- (f) Porous valve block castings.
- (g) Leaking extension case gaskets.
- (h) Porous extension case castings.

A. VIII. Car rolls free while selector lever is in P position.

CAUSES

1. Parking pawl does not engage:
 - (a) Incorrect adjustment of the manual selector linkage.
 - (b) Incorrect adjustment of the parking pawl linkage.
 - (c) Extension case misaligned on the transmission case.
 - (d) Parking pawl interlock piston stuck in the locked position.
 - (e) Parking pawl or linkage binding.
 - (f) Parking pawl or linkage broken.
2. Parking pawl slips after engagement:
 - (a) Incorrect adjustment of the parking pawl linkage.
 - (b) Sprung or damaged linkage, or excessive play in linkage.

GROUP B

Poor performance, engine labours and Automatic Transmission overheats.

The conditions in this group are characterized by poor performance in one or more of the driving ranges. Conditions B.I-B.V are usually caused by failure of one of the hydraulic control units to function (see the operation chart on page 35). Conditions B.VI-B.XI are usually caused by failure of one of the driving units to release.

B. I. The engine labours or stalls when the selector lever is shifted to D.

CAUSES

1. Incorrect adjustment of accelerator-to-governor lever linkage.
2. Improper governor valve operation.
 - (a) Governor binding.
 - (b) Governor sticking on the governor shaft.
 - (c) Governor valve sticking open due to:
 - (1) Governor control detent piston sticking or installed backwards.
 - (2) Governor control plunger and linkage binding.
 - (3) Blocked governor valve drain passage.
3. Damaged main shaft oil seal rings or front planetary set ring gear oil seal rings.

B. II. The engine shudders or stalls when the car is stopped while the selector lever is in D.

CAUSES

1. Incorrect adjustment of accelerator-to-governor lever linkage.
2. Improper governor valve operation:
 - (a) Damaged governor.
 - (b) Governor sticking on the governor shaft.
 - (c) Governor valve sticking open.
 - (1) Governor control detent piston sticking or installed backwards.
 - (2) Governor control plunger and linkage binding.
 - (3) Blocked governor valve drain passage.
 - (4) Damaged main shaft oil seal rings or front ring gear oil seal rings.
 - (5) Main shaft valve assembly out of position.