

# 9. Crankshaft/Transmission

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## Service Information

- This section covers crankcase separation in order to service the crankshaft, transmission and alternator shaft.
- The following parts must be removed before separating the crankcase.
  - Alternator (Section 13)
  - Clutch/gearshift linkage (Section 8)
  - Cylinder head/cylinder/piston (Section 7)
  - Engine (Section 6)
  - Oil pump (Section 4)
  - Starter motor (Section 15)
- Prior to assembling the crankcase halves, apply a sealant to their mating surfaces. Wipe off excess sealant thoroughly.
- Mark and store the bearing inserts to be sure of their correct locations for reassembly. If the inserts are improperly installed they will block the oil holes, causing insufficient lubrication and eventual engine seizure.

## Troubleshooting

### Excessive Noise

- Worn connecting rod big-end bearing
- Bent connecting rod
- Worn crankshaft main bearing
- Worn transmission bearing

### Hard To Shift

- Improper clutch operation
- Incorrect engine oil viscosity
- Incorrect clutch adjustment
- Bent shift fork
- Bent fork shaft
- Bent fork claw
- Damaged shift drum cam grooves
- Bent shift spindle

### Transmission Jumps Out Of Gear

- Worn gear dogs or slots
- Bent fork shaft
- Broken shift drum stopper
- Worn or bent shift forks
- Broken shift linkage return spring

### Engine Vibration

- Excessive crankshaft runout
- Loose engine mount bolts