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TRANSMISSION REMOVAL & INSTALLATION - A/T

Article Text

1983 Mazda RX7

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Sunday, August 26, 2001 04:50PM

ARTICLE BEGINNING

Automatic Transmission Removal

1983 MAZDA

PICKUP

REMOVAL

1) Raise vehicle and support with safety stands. Disconnect battery tube. Remove shift rod from right side of transmission case. Remove bolts and nuts attaching exhaust pipe and catalytic converter.

2) Remove solenoid and inhibitor switch connector. Remove speedometer cable. Remove drive shaft. Fit main shaft holder (49 0259 440) into main shaft in transmission case to prevent oil leak. Remove starter and gusset plates.

3) Remove lower covers from front and rear of engine. Remove converter housing bolts. Remove vacuum pipe clip. Remove bolt, pipe clip and installation blot from left side of transmission.

4) Remove connector bolts and washers from left side of transmission. Remove engine hanger. Remove clip and bolt from top of converter housing. Remove oil filter pipe and level gauge.

5) Securely support transmission with hydraulic jack. Remove transmission mounts. Cover oil filter pipe and connector bolt mounting hole on transmission case.

6) Insert screwdriver through torque converter installation hole in drive plate. Press against torque converter to prevent it from separating when transmission is removed. Remove transmission-to-engine bolts and slowly lower transmission out of vehicle.

INSTALLATION

Reverse removal procedure to install transmission. After transmission is installed, rotate cranshaft several times to be sure that transmission rotates freely without binding.

GLC (RWD), 626 & RX-7

REMOVAL

1) Disconnect negative battery cable. On RX-7, remove air cleaner, converter housing upper and side covers, and top bolts attaching transmission to engine. On models so equipped, disengage torsion shaft from accelerator linkage. Raise vehicle and support with safety stands

2) Drain fluids from transmission. Remove drive shaft. Use output shaft to prevent oil leakage from rear of transmission. Remove any exhaust pipe from manifold. Disconnect shift linkage from manual shaft on transmission

3) Disconnect all electrical and vacuum leads from transmission. Disconnect speedometer cable. Remove oil filter tube

TRANSMISSION REMOVAL & INSTALLATION - A/T

Article Text (p. 2)

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from transmission, then disconnect both oil cooler pipes.

4) Disconnect governor tube from converter housing and transmission case (if equipped). Support transmission with wood block between oil pan and transmission jack.

5) Remove converter inspection plates. Mark converter and flywheel for realignment reference during installation. Remove torque converter -to-flywheel attachment bolts.

6) Remove rear mount and crossmember mounting bolts. Remove starter (lower transmission as needed to gain access to starter bolts). Remove transmission-to-engine bolts and slowly lower transmission out of vehicle.

INSTALLATION

Reverse removal procedure to install transmission, noting the following: When installing torque converter, be sure that notch in converter lines up with notch in oil pump. When bolting converter to flywheel, be sure to align mark made during removal to ensure proper alignment. After transmission is installed, rotate crankshaf several times to be sure that transmission rotates freely without binding.

GLC (FWD)

REMOVAL

1) Drain all fluid from transaxle assembly (oil pan must be removed to completely drain transaxle as drain plug along will not drain all the fluid). Disconnect negative cable from battery. Disconnect speedometer cable , inhibitor switch connector, neutral switch connector and kickdown solenoid connector.

2) Remove graphic diaphragm lines. Raise front end of vehicle and support. Remove wheel, disconnect lower control arm ball joints and pull drive shaft out of transaxle. Use care when removing drive shaft to avoid stressing outer constant velocity joint to its limit, as this will damage the joint. Remove engine undercover.

3) Attach engine support to engine hanger and support engine. Remove crossmember. Disconnect oil hose from oil pipe and plug ends of hose and pipe. Remove rear transmission mount. Remove starter, end cover and torque converter to-drive plate retaining bolts.

4) Support transaxle with jack and remove transaxle-to-engine retaining bolts. Lower transaxle assembly out of vehicle. Use care when removing transaxle so that torque converter does not fall out.

INSTALLATION

Reverse removal procedure to install

END OF ARTICLE

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ARTICLE BEGINNING

1983 Automatic Transmission Servicing
MAZDA

RX7

IDENTIFICATION

TRANSMISSION CODES

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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
Application                                                                                                     Codes
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RX7 ..... 3N71B  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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LUBRICATION

SERVICE INTERVALS

Inspect automatic transmission fluid level every 7,500 miles or 8 months.

FLUID LEVEL

- 1) Check fluid with vehicle on level floor. Apply parking brake firmly and run engine approximately 2 minutes at 1200 RPM.
- 2) With engine running at normal idle, move selector lever through all gears, pausing at each gear to allow for engagement.
- 3) Return to "P" position and leave engine running. Wipe area clean around dipstick filler tube and remove dipstick.
- 4) Wipe dipstick clean, reinsert, withdraw, and note reading. If between "L" and "F" marks, level is satisfactory. If not, add fluid.

FLUID TYPE

Automatic Transmission Fluid (ATF)
Type "F"

FLUID CAPACITY

6.6 qts. (6.2L)

DRAINING & REFILLING

Transmission

- 1) If draining and refilling is required for any operation, remove pan bolts and allow fluid to drain. Remove pan and gasket, (discard gasket).
- 2) Clean pan thoroughly and reinstall new gasket, tightening

TRANSMISSION SERVICING - A/T

Article Text (p. 2)

1983 Mazda RX7

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pan bolts to 36-60 INCH lbs. (4-9 N.m). Add fluid, make sure not to overfill.

Transaxle

1) Drain oil by removing drain plug on bottom of differential. Remove speedometer driven gear and oil pan. Clean oil pan. Replace oil pan and speedometer driven gear.

2) Replace oil through oil filler tube. Place selector lever in "P", warm engine, and check oil level. Oil level must not be higher than "F" on gauge.

ADJUSTMENT

BRAKE BAND

1) Loosen servo piston stem lock nut and back off a few turns.

2) Using a torque wrench, tighten servo piston stem to 108-132 INCH lbs. (12-15 N.m), then back off piston stem 2 turns.

3) Hold piston stem in this position and tighten lock nut to 132-348 INCH lbs. (15-39 N.m) on RWD models.

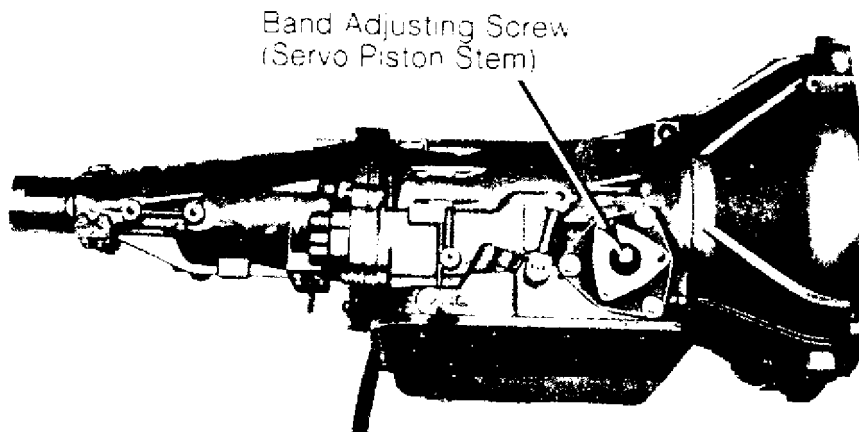


Fig. 1: RX7 Transmission Brake Band Adjustment

KICKDOWN SWITCH & DOWNSHIFT SOLENOID

1) Depress accelerator pedal to limit. Near wide open throttle, click should be heard from solenoid. Switch must operate at or after 7/8 of pedal travel.

2) If not, loosen switch retaining nut and adjust switch to engage when pedal is at 7/8 of its full travel, tighten retaining nut and check solenoid.

TRANSMISSION SERVICING - A/T

Article Text (p. 3)

1983 Mazda RX7

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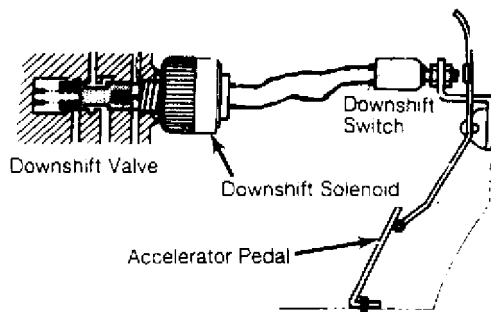


Fig. 2: Kickdown Switch and Downshift Solenoid

SHIFT LINKAGE

NOTE: Before linkage is adjusted, be sure engine idle is properly set.

RX7

Remove boot plate. Place selector lever in "P" position. Loosen selector lever plate bolt. Place transmission in "P" position. Tighten selector lever plate bolt and replace boot.

SELECTOR LEVER HANDLE ADJUSTMENT

Loosen and back off lock nut. Screw handle fully down until no play exists in the push button. Unscrew handle 1 complete turn at a time until smooth shifting operation is obtained. Tighten lock nut.

NEUTRAL SAFETY SWITCH

- 1) After checking and adjusting shift linkage, place the transmission lever in the "N" position.
- 2) Loosen safety switch retaining bolts. Remove screw from alignment pin hole at bottom of switch.
- 3) Rotate switch and insert a .078" (2 mm) diameter alignment pin through the alignment hole and into hole of internal rotor. Tighten switch retaining bolts and remove alignment pin.
- 4) Reinstall alignment pin hole screw. Check operation of switch. The engine should only start in "N" or "P" position.

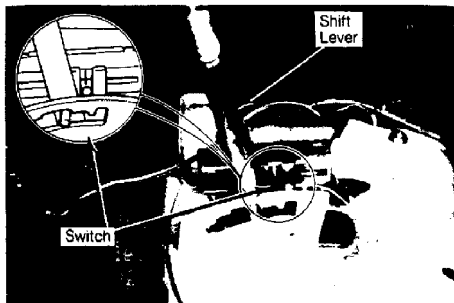


Fig. 3: Adjusting Neutral Safety Switch On RX7 Transmissions

TRANSMISSION SERVICING - A/T

Article Text (p. 4)

1983 Mazda RX7

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