

# TRANSMISSION SERVICING - A/T

## LUBRICATION

### SERVICE INTERVALS

Check fluid level and condition of fluid at each engine oil change. Under normal, light duty operating conditions, change fluid, replace filter and adjust bands every 2 yrs. or 25,000 miles. Under heavy duty service, change fluid, replace filter and adjust bands every 12 months or 12,500 miles.

### CHECKING FLUID LEVEL

Park vehicle on a level surface and apply parking brake. With engine idling at normal operating temperature, move transmission selector lever through all gears, ending in "N" ("P" for AW-4 transmission). Check fluid level. Fluid level should be between "FULL" and "ADD ONE PINT" mark on dipstick. Add fluid as needed. **DO NOT** overfill.

### RECOMMENDED FLUID

Use only Dexron II automatic transmission fluid.

### FLUID CAPACITY

**NOTE:** Transmission and converter capacities are approximate. Fluid level should always be determined by reading on dipstick, rather than amount of fluid added.

### TRANSMISSION REFILL CAPACITIES

Application	Capacity
All Models	
Including Converter	8.5 qts. (8.0L)
Without Converter	4.3 qts. (4.0L)

### DRAINING & REFILLING

1. Loosen oil pan bolts, tap pan to break it loose and allow fluid to drain. Remove pan. Install new filter on bottom of valve body and tighten retaining screws. Install new "O" ring on fluid pick-up pipe (if needed). Clean oil pan and install with new gasket.
2. Refill transmission with fluid. Start engine and allow to run at curb idle for a few minutes. With vehicle on level surface, engine idling and parking brake applied, move shift selector lever through all gear ranges, ending in "N" ("P" for AW-4 transmission). Add fluid up to "ADD ONE PINT" mark on dipstick.
3. Recheck fluid level when transmission reaches normal operating temperature. Fluid should be between "ADD ONE PINT" and "FULL" marks on dipstick. Transmission must NOT be overfilled.

## ADJUSTMENT

**NOTE:** Bands on the AW-4 (4-speed overdrive) transmission are not adjustable. If slippage occurs, bands must be replaced.

### KICKDOWN (FRONT) BAND

1. Locate kickdown band adjusting screw on left side of case (near throttle lever shaft). Loosen adjusting screw lock nut and back off approximately 5 turns. Ensure adjusting screw turns freely in case.
2. Using Adapter (J-24063) and 5/16" square socket, tighten screw to 36 INCH lbs. (4 N.m). If adapter is not used, tighten screw to 72 INCH lbs. (8 N.m). Back off adjusting screw. See **KICKDOWN (FRONT) BAND ADJUSTMENT** . Hold adjusting screw in position and tighten lock nut to 35 ft. lbs. (48 N.m).

#### KICKDOWN (FRONT) BAND ADJUSTMENT

<b>Application</b>	<b>(1) Back Off Screw</b>
All Models	2 1/2 Turns
(1) Tighten screw to 72 INCH lbs. and back off indicatd number of turns.	

### LOW-REVERSE (REAR) BAND

1. Raise vehicle, drain transmission fluid and remove oil pan. Locate adjusting screw on rear servo lever. Loosen adjusting screw lock nut and back off about 5 turns.
2. Tighten screw to 41 INCH lbs. (4.6 N.m) and back off indicated number of turns. See **LOW-REVERSE (REAR) BAND ADJUSTMENT** . Hold adjusting screw in position and tighten lock nut to 35 ft. lbs. (48 N.m). Install oil pan and fill transmission with fluid.

#### LOW-REVERSE (REAR) BAND ADJUSTMENT

<b>Application</b>	<b>Tighten Screw to INCH lbs. (N.m)</b>	<b>Back Off Screw</b>
Model 727	41 (4.6 N.m)	2 Turns
Model 904	41 (4.6 N.m)	7 Turns
Models 999	41 (4.6 N.m)	4 Turns

### TRANSMISSION THROTTLE CABLE/LINKAGE

**NOTE:** A special Idle Speed Actuator (ISA) Exerciser Box Tool is required to initially set ISA motor and adjust transmission throttle linkage on models with 999 transmissions with 4-cylinder engines.

#### 727 Transmission with 6-Cylinder Engines

1. Disconnect throttle control rod spring. Use spring to hold transmission throttle control lever forward, against stop. Block choke open and release fast idle cam.
2. On carburetors equipped with throttle operated solenoid valve, turn key to "ON" position to energize solenoid. Open throttle halfway to allow solenoid to lock. Return throttle to idle position.
3. Loosen retaining bolt on throttle control adjusting link. **DO NOT** remove spring clip or nylon washer. Pull on end of link to eliminate lash. Tighten link retaining bolt. Reconnect throttle control rod spring.

## 727 Transmission with V8 Engines

1. Disconnect throttle control rod spring. Use spring to hold transmission throttle valve control lever against forward stop. Block choke open and release fast idle cam.
2. On carburetors equipped with throttle operated solenoid valve, turn key to "ON" position to energize solenoid. Open throttle halfway to allow solenoid to lock. Return throttle to idle position.
3. Loosen retaining bolt on throttle control rod adjusting link. Remove spring clip and slide nylon washer to rear of link. Push on end of link to eliminate lash and tighten retaining bolt. Install nylon washer and spring clip. Reconnect throttle control rod spring.

## 904 Transmission with 6-Cylinder Engines

1. Remove air cleaner. Hold throttle control lever rearward against its stop. Block choke plate open and set carburetor linkage completely off fast idle cam.
2. Unlock throttle control cable by lifting "T" shaped adjuster clamp with small screwdriver. Move cable outer sheath forward to remove any cable load on throttle cable bellcrank.
3. Adjust cable by moving cable and sheath rearward until there is no lash between cable and throttle linkage. Lock cable by pressing "T" shaped clamp downward until clamp snaps into place. Install and reconnect any parts removed and/or disconnected.

## 999 Transmission with 4-Cylinder Engine

1. Raise vehicle. Using a spring, hook one end on throttle control lever and other end on torque converter housing. Lower vehicle.
2. Disconnect the ISA motor and connect Exerciser Box to ISA. Adjustment light should turn off and ready light should turn on. Press retract button. Wait until ISA adjusts, ready light goes off and adjust light goes on.
3. Loosen bolt on throttle control link. Pull on link end to eliminate lash. Tighten adjusting bolt. Press extend button on Exerciser Box. When ISA retracts, release button and disconnect Exerciser Box. Connect ISA wiring and remove spring from throttle control lever. Install and reconnect any parts removed and/or disconnected.

## 999 Transmission with 6-Cylinder Engines

1. Disconnect throttle control rod spring. Use spring to hold adjusting link in forward position, against nylon washer. Block choke open and release fast idle cam.
2. Raise vehicle. Loosen both retaining bolts on adjusting link clamp. **DO NOT** remove spring clip or nylon washer. Use a spare spring to hold transmission throttle lever against forward stop.
3. Push adjusting link to eliminate lash and pull clamp to rear so that bolt in rod bottoms in rear of slot in rod. Tighten forward clamp retaining bolt.
4. Pull throttle control rod to the rear so that bolt in rod bottoms in front of slot and tighten rear retaining bolt. Remove spare spring. Lower vehicle and reconnect throttle control rod spring.

## AW-4 Transmission with All Engines

1. With ignition off, retract cable self-adjusting mechanism fully. Press cable button down and push cable plunger inward.
2. Rotate throttle lever to wide open throttle position. While holding throttle lever in position, allow cable plunger to extend. When plunger is fully extended, release throttle lever. Cable is now adjusted.

## **SHIFT LINKAGE**

### **Cable Linkage**

1. Place gearshift lever in "P" position and raise vehicle. Using a small screwdriver, unlock shift control cable by releasing U-shaped cable adjuster clamp. Remove cable from mounting bracket.
2. Move transmission shift lever rearward until fully seated into Park detent. Ensure that driveshaft cannot be rotated. Snap control cable into cable mounting bracket and replace U-shaped cable adjuster clamp.
3. Lower vehicle and verify engine starting. Engine should start only with shifter in "P" or "N" position.

### **Rod Linkage**

1. Loosen shift rod trunnion jam nuts at transmission lever. Remove shift rod-to-bellcrank lock pin. Disengage trunnion and shift rod. Place selector lever in "P" position and lock steering column. Move transmission shift lever to full rear Park position.
2. Adjust shift rod trunnion to obtain free pin fit in bellcrank arm. Tighten jam nuts. On vehicles with shift lever on column, make sure linkage lash is eliminated by pulling down on shift rod and pushing up on outer bellcrank when tightening jam nuts.
3. Check steering column lock for ease of operation. Ensure engine starts in "N" or "P", only. If starter engages in any drive gear, or does not work in "N" or "P", check for proper shift linkage adjustment or faulty neutral safety switch.

## **NEUTRAL SAFETY SWITCH**

1. Switch combines functions of neutral safety switch and back-up light switch. With transmission linkage properly adjusted, switch should allow starter operation in "P" and "N" only.
2. To test switch, remove wire connector and test for continuity between center pin of switch and case. Continuity should only exist when transmission is in "P" or "N".
3. Check for continuity between 2 outer pins. Continuity should exist with transmission in "R" only. There should be no continuity between either outer pin and transmission case. If any of these conditions are not met, the switch should be replaced.
4. To replace switch, unscrew from case. Move selector lever to "P" and "N" positions and check that switch operating fingers are centered in switch opening. Install switch and new seal in case. Check fluid level and add as needed.