

# TRANSMISSION SERVICING - A/T

1993 Jeep Cherokee

TRANSMISSION SERVICING  
Chrysler Corp. Automatic Transmission

Jeep; Cherokee, Grand Cherokee, Grand Wagoneer, Wrangler

## IDENTIFICATION

### JEEP AUTOMATIC TRANSMISSION APPLICATIONS TABLE

Model	Transmission
Except Wrangler .....	Aisin Warner AW-4
Wrangler .....	Chrysler 32RH (Formerly A-999)

## LUBRICATION

### SERVICE INTERVALS

Transmission  
Check fluid level and condition of fluid at 7500 mile intervals. Change fluid, replace filter and adjust bands at 30,000 miles or 30 month intervals.

Transfer Case  
Check transfer case fluid every 7500 miles and replace fluid every 30,000 miles or 30 month intervals.

### CHECKING FLUID LEVEL

Transmission  
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 Neutral (Park for AW-4 transmission). Check fluid level. Fluid level should be between FULL and ADD mark on dipstick. Add fluid as needed. DO NOT overfill.

Transfer Case  
Remove fill plug. Check oil level. If level is not up to bottom of fill plug opening, add lubricant.

### RECOMMENDED FLUID

Transmission  
Aisin Warner AW-4 transmissions and transfer cases use Mercon type ATF. Chrysler 32RH transmissions use Dexron-II type ATF.

Transfer Case  
Transfer cases use same fluid as attached transmission.

### FLUID CAPACITY

NOTE: Transmission and converter capacities are approximate. Always determine fluid level by reading on dipstick, rather than amount of fluid added. See appropriate REFILL CAPACITIES table.

### TRANSMISSION REFILL CAPACITIES TABLE

Application	Qts. (L)
AW-4 .....	8.5 (8.0)
32RH .....	8.0 (7.6)

TRANSFER CASE REFILL CAPACITIES TABLE

Application	Pts. (L)
Model 231 .....	3.3 (1.5)
Model 242 .....	3.0 (1.4)
Model 249 .....	3.0 (1.4)

**DRAINING & REFILLING**

Transmission

1) Position large drain pan under transmission. Loosen oil pan bolts, tap pan to break it loose and allow fluid to drain. Remove pan and oil filter. Install NEW filter on bottom of valve body and tighten retaining screws to 35 INCH lbs. (4 N.m). Clean oil pan and install with NEW gasket. Tighten bolts to 150 INCH lbs. (17 N.m).

2) Refill transmission with approximately 5 qts. (4.7L) of ATF. Start engine and allow to run at curb idle. With vehicle on level surface, engine idling and parking brake applied, move shift selector lever through all gear ranges, ending in Neutral (Park for AW-4 transmission).

3) Recheck fluid level when transmission reaches normal operating temperature. Add fluid to FULL mark on dipstick.

Transfer Case

Remove drain plug from transfer case. Remove fill plug for easier draining. With fluid fully drained, reinstall drain plug. Fill transfer case and install fill plug. Tighten drain plug and fill plug to 20 ft. lbs. (27 N.m).

**ADJUSTMENTS**

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

**KICKDOWN (FRONT) BAND**

32RH

1) Locate kickdown band adjusting screw on left side of case (near throttle lever shaft). See Fig. 1. Loosen adjusting screw lock nut and back off 4-5 turns. Ensure adjusting screw turns freely in case.

2) Tighten adjusting screw to 72 INCH lbs. (8 N.m). If Adapter Extension (J-24063) is used, tighten adjusting screw to 50 INCH lbs. (5 N.m). Back off adjusting screw 2 1/2 turns. Hold adjusting screw and tighten lock nut to 30 ft. lbs. (41 N.m).

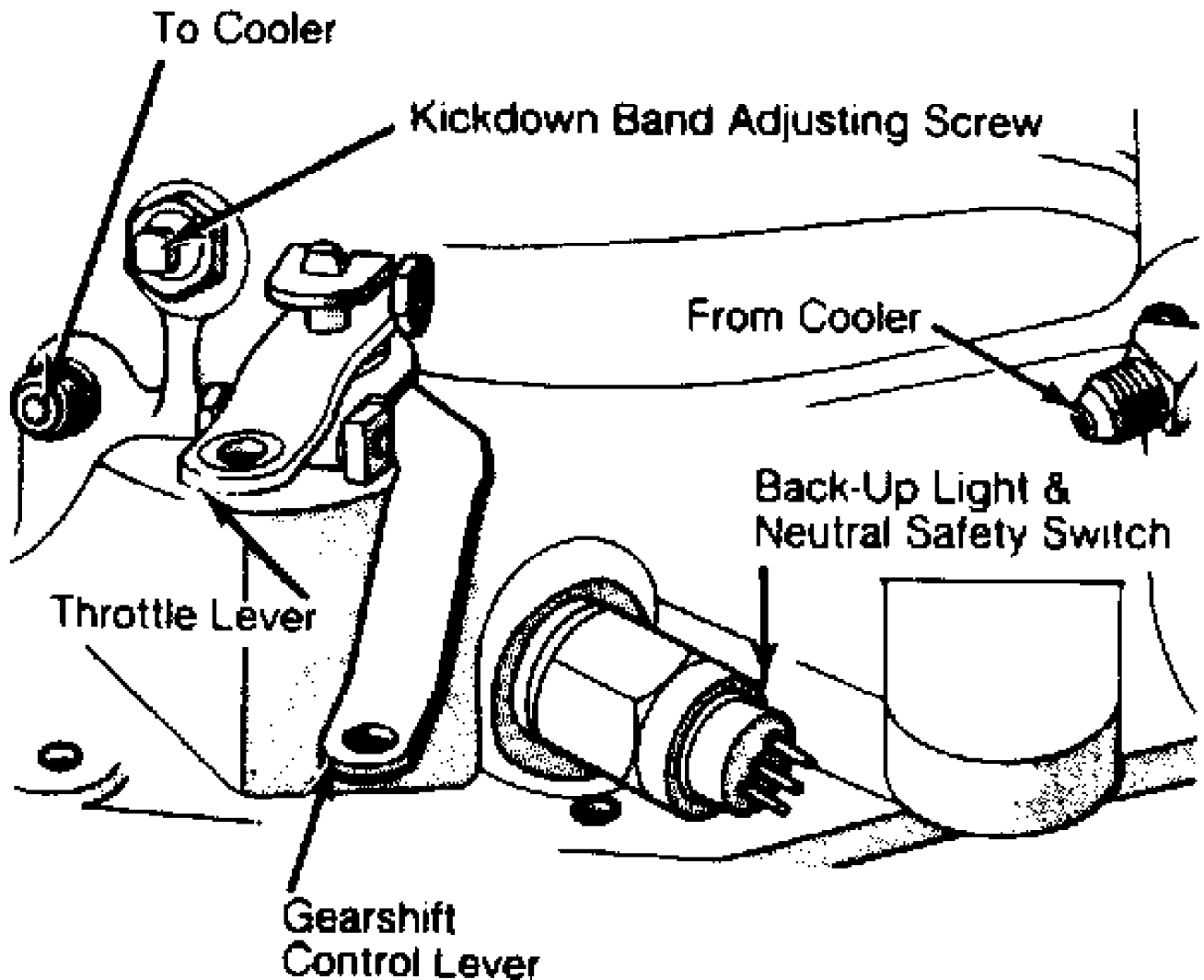


Fig. 1: Adjusting Kickdown (Front) Band  
 Courtesy of Chrysler Corp.

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

32RH

1) Raise and support vehicle. Drain transmission fluid and remove oil pan. Locate low-reverse band adjusting screw on rear servo lever. See Fig. 2. Loosen adjusting screw lock nut. Back off lock nut 5-6 turns.

2) Tighten adjusting screw to 72 INCH lbs. (8 N.m). Back off adjusting screw 4 turns. Hold adjusting screw and tighten lock nut to 25 ft. lbs. (34 N.m). Install oil pan and fill transmission with fluid.

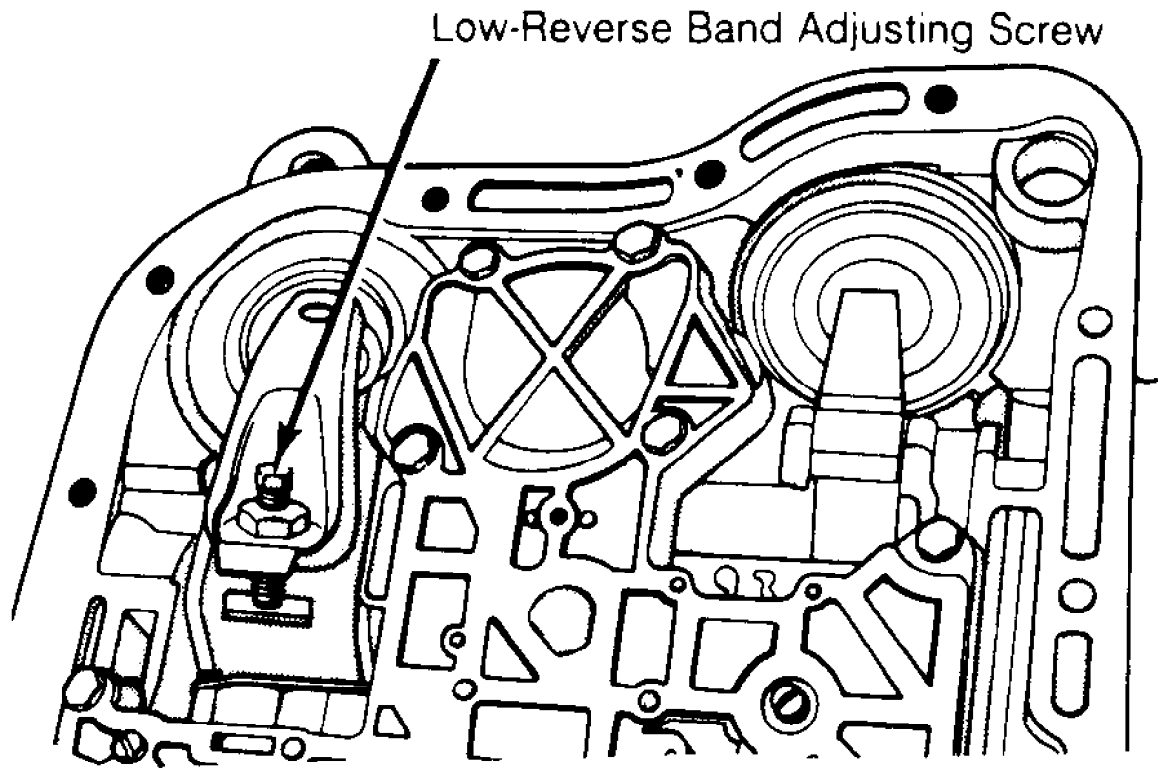


Fig. 2: Adjusting Low-Reverse (Rear) Band (Typical)  
 Courtesy of Chrysler Corp.

## THROTTLE CABLE

With ignition off, fully retract cable plunger. Press cable button down and push cable plunger inward. Rotate throttle lever to wide open throttle position. Cable will ratchet to correct position. Release throttle lever. Cable is now adjusted.

## SHIFT LINKAGE

AW-4

1) Place gearshift lever in Park 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 drive shaft cannot be rotated. Snap control cable into cable mounting bracket and replace "U" shaped cable adjuster clamp. Lower vehicle and verify engine starting. Engine should start only with shifter in Park or Neutral.

32RH

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 Park 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, ensure linkage lash is eliminated by pulling down on shift rod and pushing up on outer bellcrank when tightening jam nuts.

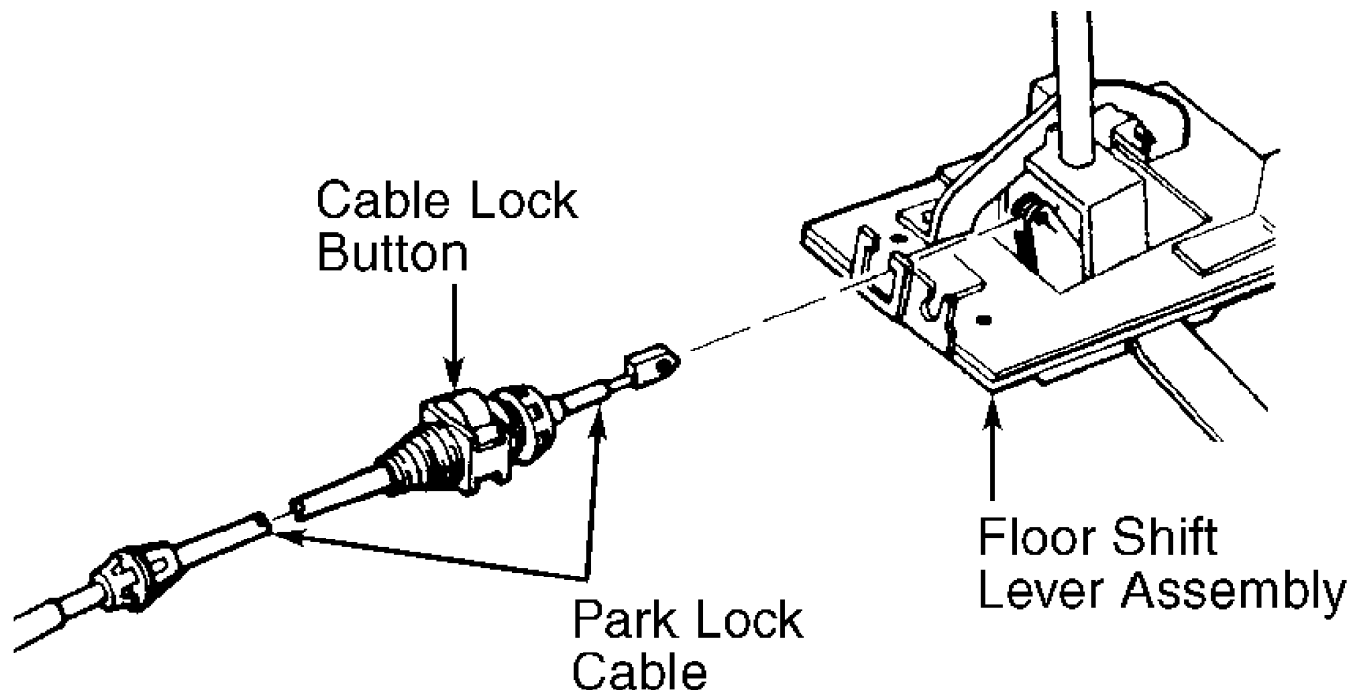
3) Check steering column lock for ease of operation. Ensure engine starts in Neutral or Park only. If starter engages in any drive gear, or does not work in Neutral or Park, check for proper shift linkage adjustment or faulty neutral safety switch.

## PARKING LOCK CABLE

AW-4

1) Shift transmission to Park. Turn ignition switch to lock position. Remove center console bezel to access cable adjustment.

2) Pull cable lock button up to release cable. See Fig. 3. Pull cable forward and release. Press lock button down until it snaps in place.



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Fig. 3: Adjusting Shift Cable  
Courtesy of Chrysler Corp.

3) Verify adjustment by trying to move shifter. Shifter button and/or shifter should not move.

4) Turn ignition on. Move shifter to Neutral. If ignition switch cannot be turned to Lock position, cable is adjusted. Repeat this step with shifter in Drive.

## NEUTRAL SAFETY SWITCH

AW-4

1) With transmission linkage properly adjusted, switch allows starter operation in Park or Neutral only.

2) To test switch, remove wire connector. Using ohmmeter, ensure continuity exists between proper terminals with transmission at specified gear range. See Fig. 4. Replace switch if faulty.

3) To replace switch, disconnect wire connector. Bend switch washer lock tabs upward and remove switch retaining nut and adjusting bolt. Remove switch assembly.

4) To install, disconnect shift linkage from transmission shift lever. Rotate shift lever all the way rearward and then forward 2 detent positions. This is the Neutral position. Install switch assembly.

5) Install adjusting bolt finger tight only. Install lock washer and retaining nut. Tighten nut to 61 INCH lbs. (7 N.m). Rotate switch to align standard line with groove of manual valve shaft. See Fig. 4. Tighten adjusting bolt to 108 INCH lbs. (13 N.m). Bend over lock tabs and install remaining components.

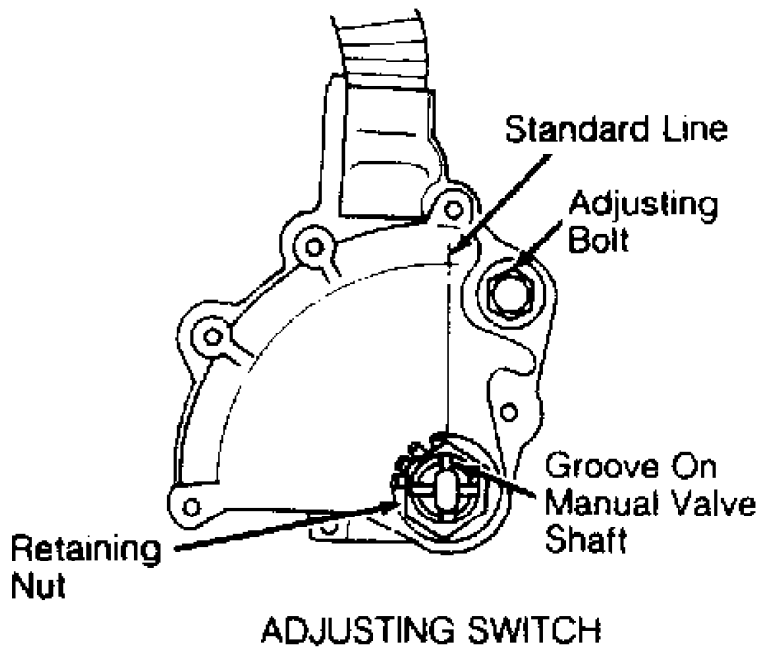
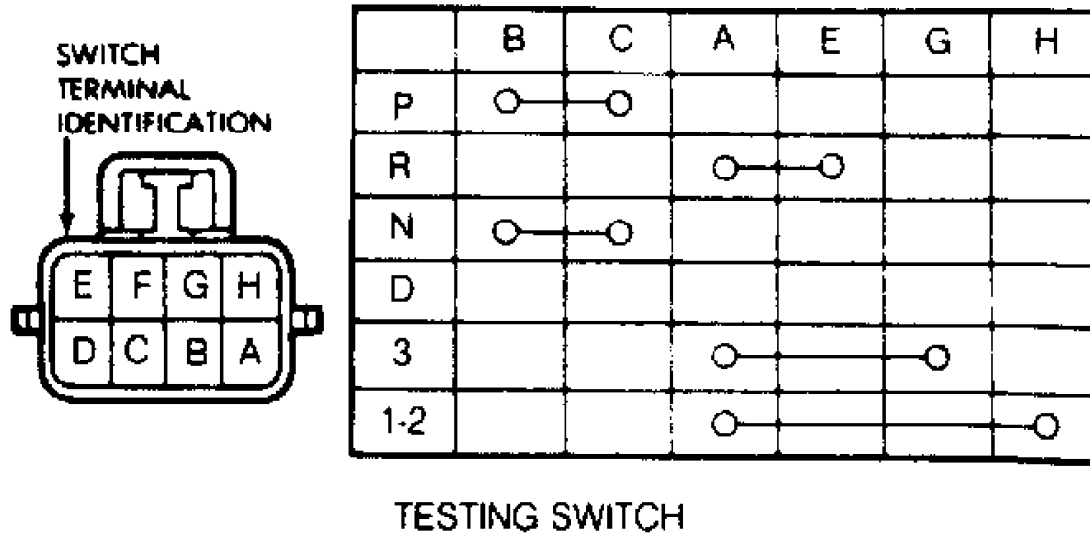


Fig. 4: Testing & Adjusting Neutral Safety Switch  
Courtesy of Chrysler Corp.

32RH

1) With transmission linkage properly adjusted, switch should

allow starter operation in Park or Neutral only.

2) To test switch, remove wire harness and test for continuity between center pin of switch and transmission case. Continuity should only exist when transmission is in Park or Neutral.

3) Shift transmission into Reverse. Check for continuity between 2 outer switch terminals. Continuity should exist with transmission in Reverse only. With transmission in Reverse, check continuity between each outer switch terminal and transmission case. No continuity should exist between terminals and transmission case.

4) To replace switch, disconnect wire connector and unscrew switch from case. Move selector lever to Park and Neutral positions and ensure switch operating fingers are centered in switch opening.

5) Install switch and NEW seal in case. Tighten switch to 24 ft. lbs. (33 N.m). Check fluid level and add as needed.

## TORQUE SPECIFICATIONS

### TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Kickdown (Front) Band Lock Nut .....	30 (41)
Low-Reverse (Rear) Band Lock Nut .....	25 (34)
Neutral Safety Switch (32RH) .....	25 (34)
Oil Pan Bolts .....	13 (18)
Transfer Case Fill Plug .....	20 (27)
	INCH Lbs. (N.m)
Filter	
AW-4 .....	84 (10)
32RH .....	35 (4)
Kickdown (Front) Band .....	(1) 72 (8)
Low-Reverse (Rear) Band .....	72 (8)
Neutral Safety Switch (AW-4)	
Retaining Nut .....	61 (7)
Adjusting Bolt .....	108 (13)

(1) - If adapter extension is used, tighten to 50 INCH lbs. (5 N.m). See text for complete adjusting procedure.