

# TRANSMISSION SERVICING - A/T

## 1993 Mitsubishi Montero

1993 TRANSMISSION SERVICING  
Chrysler/Mitsubishi Automatic Transmission

Dodge; Ram-50  
Mitsubishi: Montero & Pickup

### IDENTIFICATION

#### AUTOMATIC TRANSMISSION APPLICATIONS TABLE

Model	Transmission/Transaxle
Ram-50	
RWD & 4WD	Model R4AC1 Transmission
Montero	Model V4AW2 Transmission
Pickup	
RWD & 4WD	Model R4AC1 Transmission

### LUBRICATION

#### SERVICE INTERVALS

Transaxle/Transmission

Check fluid level every 12 months or 15,000 miles. Change fluid and filter every 30,000 miles. If vehicle is operated under severe conditions, change fluid more often. If severe darkening of fluid and strong odor are noted, bands should also be adjusted.

Transfer Case

On 4WD and AWD models, change transfer case fluid every 30,000 miles.

#### CHECKING FLUID LEVEL

Transaxle/Transmission

1) Park vehicle on level area. Ensure oil is at normal operating temperature, parking brake is engaged, and engine is at idle. Move gear selector through each position, stopping briefly at each selection.

2) Place gear selector in Neutral, and clean area around dipstick tube. Ensure fluid level is between lower and upper marks, but never over upper mark, in HOT range. Add or drain fluid if necessary.

CAUTION: If severe darkening of fluid and strong odor are noted, change fluid and filter, and adjust bands.

Transfer Case

Lubricant level should be to bottom of fill hole on side of transfer case.

#### RECOMMENDED FLUID

Transaxle/Transmission

Use Chrysler Plus/Mitsubishi Plus ATF, Dexron or Dexron-II ATF.

Transfer Cases  
 Use SAE 75W-85 gear oil with API GL-4 rating or higher.

## FLUID CAPACITIES

### TRANSAXLE/TRANSMISSION REFILL CAPACITIES TABLE

Application	Refill Qts. (L)	Dry Fill Qts. (L)
Montero .....	5.8 (5.5)	7.4 (7.0)
Pickup & Ram-50 .....	(1) 4.2 (4.0)	7.4 (7.0)

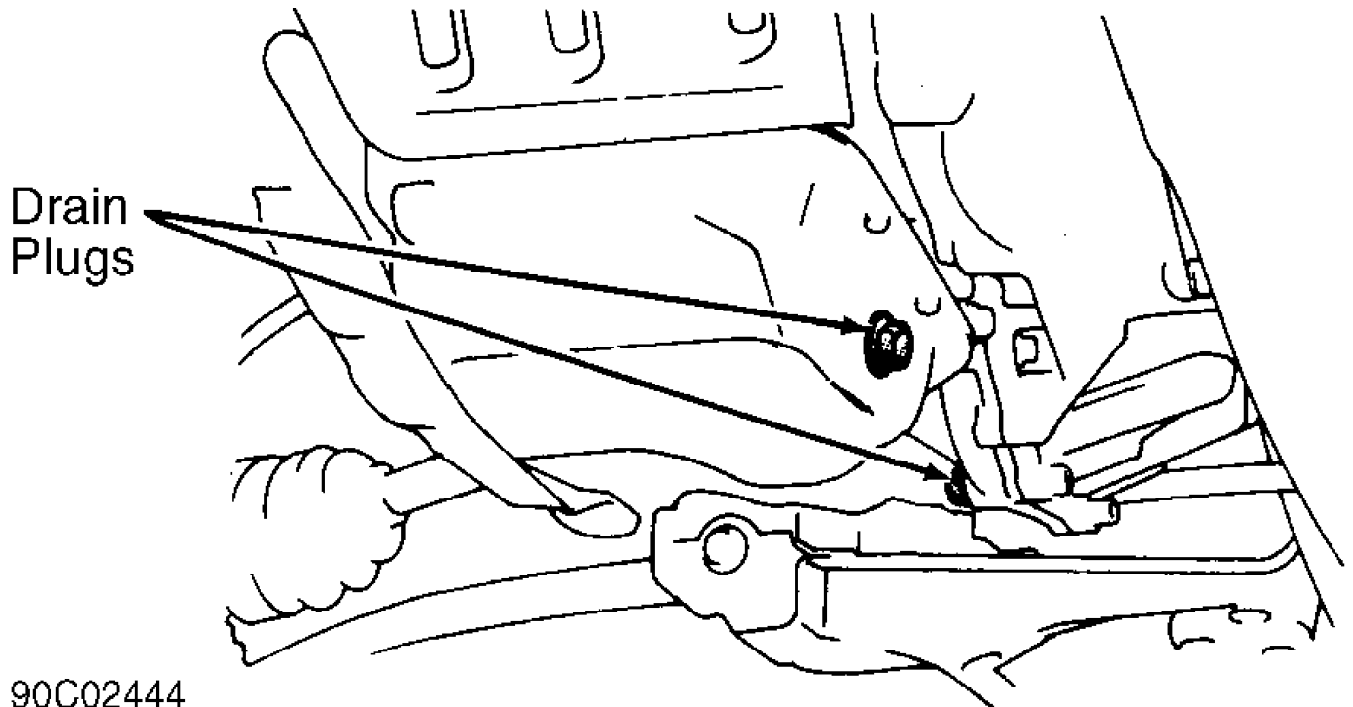
(1) - Idle engine in Neutral, then add fluid to bring level between notches at "H" mark.

### TRANSFER CASE REFILL CAPACITIES TABLE

Application	Pts. (L)
Montero .....	4.9 (2.3)
Pickup & Ram-50 .....	4.6 (2.2)

## DRAINING & REFILLING

NOTE: Although manufacturer recommends changing only fluid, the oil filter/screen may also require replacement. If replacing oil filter/screen, note length and location of all bolts.



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Fig. 1: Locating Drain Plugs  
 Courtesy of Mitsubishi Motor Sales of America.

#### Transmission

- 1) Remove drain plug (if equipped) from transmission pan, and

allow fluid to drain. On models without drain plug, oil pan must be removed to drain fluid. Remove oil filter/screen if necessary.

2) If oil filter/screen is replaced, tighten bolts to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. Clean oil pan, replace gasket, and install oil pan. Tighten oil pan bolts and drain plug to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article. Fill transmission, through filler tube, with 5.3 qts. (5.0L) of Dexron-II ATF on Montero, or 2.0 qts. (1.9L) on all others. Start engine, and allow to idle for 2 minutes.

3) Shift transmission into each position, ending in Neutral. Check fluid level with engine running at idle. If necessary, add sufficient fluid to bring level to lower mark of dipstick. Recheck fluid level after transmission is at normal operating temperature.

#### Transfer Case

Drain plug is located on bottom of transfer case. Change drain plug gasket whenever fluid is changed. Lubricant level should be at bottom of fill hole on side of transfer case.

## ADJUSTMENTS

### KICKDOWN BAND

#### Pickup & Ram-50

1) Locate kickdown band adjusting screw on left side of transmission case. Loosen lock nut, and back off 5 turns. Ensure adjusting screw turns freely in transmission case.

2) Using torque wrench, tighten adjusting screw to 72 INCH lbs. (8 N.m). Back off adjusting screw 2 7/8 turns. Hold adjuster screw in this position, and tighten lock nut to 30 ft. lbs. (41 N.m).

### LOW-REVERSE BAND

#### Pickup & Ram-50

1) Raise vehicle, drain transmission, and remove oil pan. Loosen adjusting screw lock nut, and back off nut 5 turns. Ensure adjusting screw turns freely in lever.

2) Using torque wrench, tighten band adjusting screw to 30 INCH lbs. (3.5 N.m). Back off adjusting screw 6 turns. Hold adjusting screw in this position, and tighten lock nut to 25 ft. lbs. (34 N.m).

3) Reinstall oil pan using new gasket. Tighten pan bolts to 150 INCH lbs. (17 N.m). Refill transmission with specified fluid.

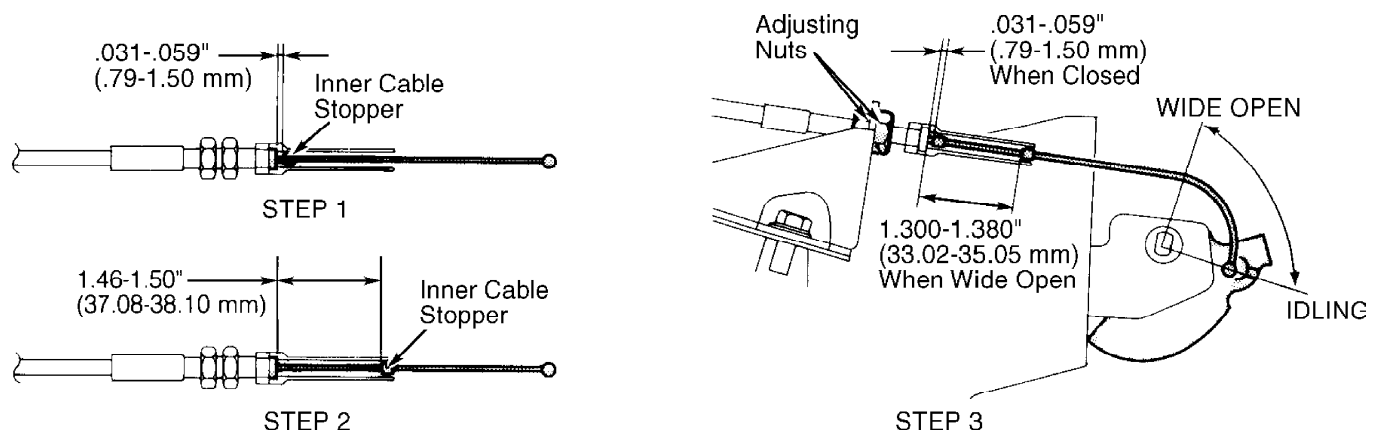
### TRANSMISSION THROTTLE CONTROL

**CAUTION:** On Pickup and Ram-50, always adjust throttle control cable whenever idle is adjusted.

#### Pickup & Ram-50

1) Ensure engine idle is adjusted correctly. Ensure throttle lever and throttle cable bracket are not bent. Pull lightly on inner throttle cable.

2) While in closed throttle position, measure gap between inner cable stopper and outer cable housing. Adjust cable as necessary to obtain a gap of .031-.059" (.79-1.50 mm). See Fig. 2 (STEP 1).



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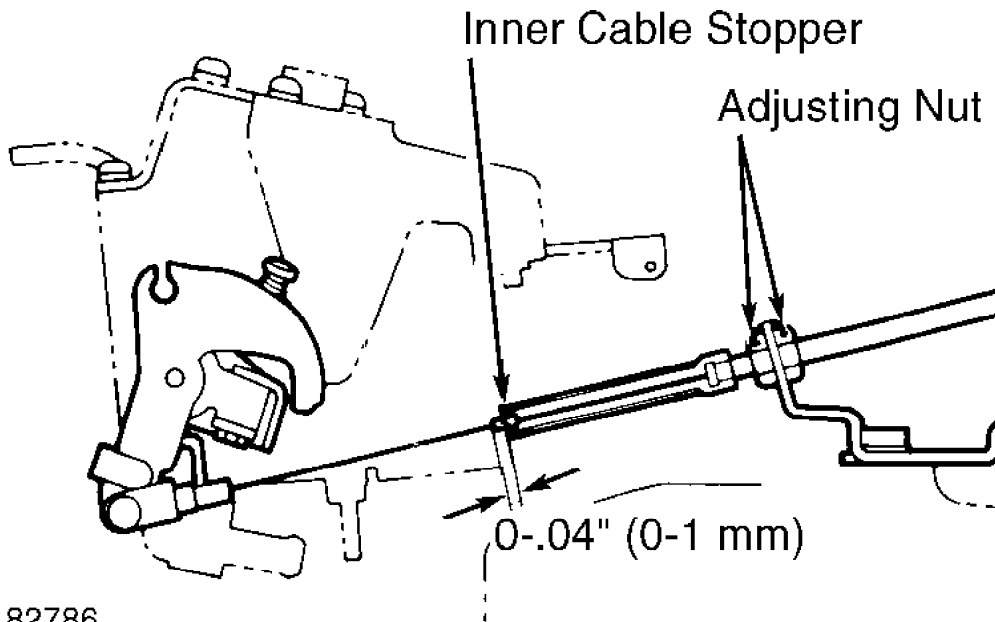
Fig. 2: Adjusting Kickdown Cable (Pickup & Ram-50)  
 Courtesy of Mitsubishi Motor Sales of America.

3) While holding throttle in wide open position, pull on inner throttle cable. Adjust bellcrank as necessary to obtain a gap of 1.46-1.50" (37.08-38.10 mm) between inner cable stopper and outer cable. See Fig. 2 (STEP 2).

4) With throttle fully closed, recheck gap between inner cable stopper and outer cable housing. Gap should be .031-.059" (.79-1.50 mm). See Fig. 2 (STEP 3). While holding throttle in wide open position, pull on inner throttle cable. Check for a gap of 1.30-1.38" (33.02-35.05 mm).

Montero

Ensure throttle lever and throttle cable bracket are not bent. Ensure distance between inner cable stopper end and dust cover is 0-.04" (0-1.0 mm). See Fig. 3.



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Fig. 3: Adjusting Throttle Cable (Montero)  
 Courtesy of Mitsubishi Motor Sales of America.

Montero

Loosen swivel nut on transmission control rod. See Fig. 4.  
Ensure shift and transmission levers are both in Neutral. Tighten  
swivel nut.

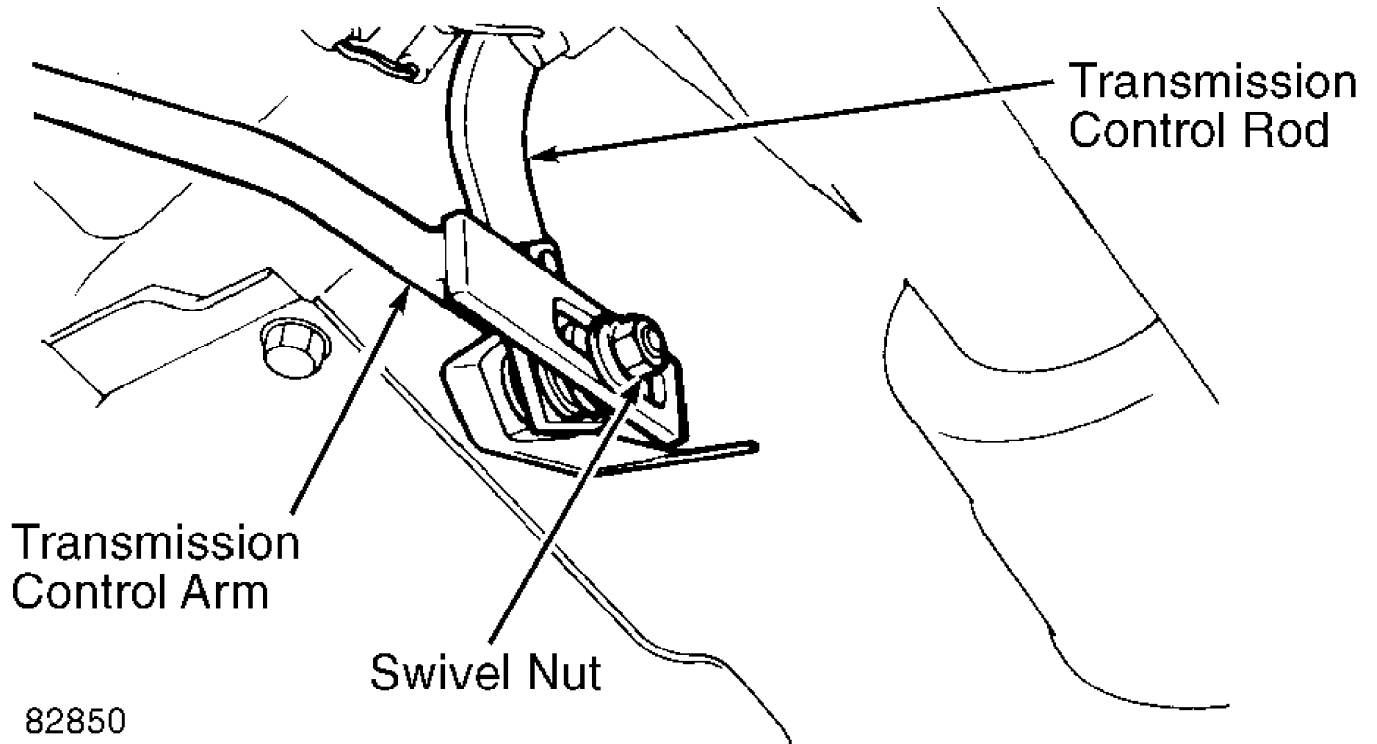


Fig. 4: Adjusting Shift Linkage (Montero)  
Courtesy of Mitsubishi Motor Sales of America.

Pickup & Ram-50

Adjust shift cable at transaxle/transmission end of cable.  
Place shift lever in Neutral. Ensure shift lever and neutral safety  
switch are in Neutral position. If cable was replaced, ensure toothed  
washer is installed. See Fig. 5. Turn adjuster at cable end so it fits  
into manual lever on transaxle/transmission, and no slack exists in  
cable. See Fig. 5.

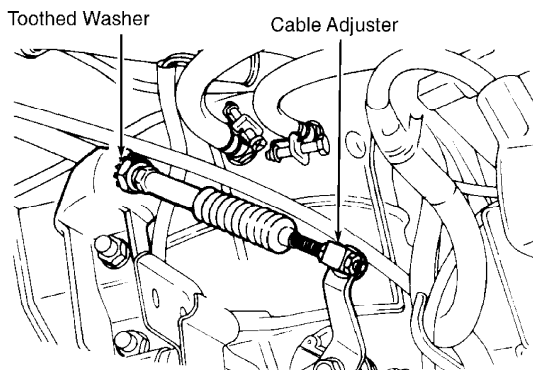


Fig. 5: Adjusting Shift Cable (Pickup & Ram-50)  
Courtesy of Mitsubishi Motor Sales of America.

SHIFT LEVER SLEEVE

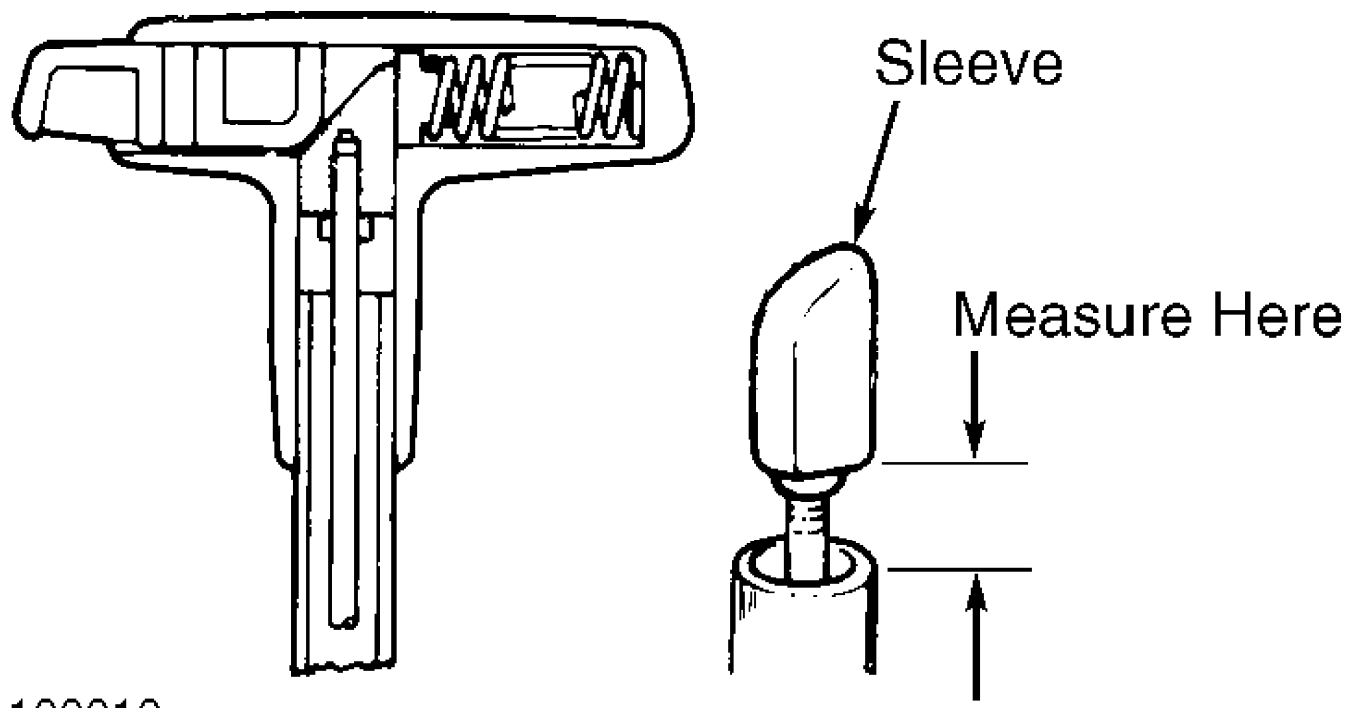
NOTE: Pickup and Ram-50 do not have shift lever sleeve.

Montero

To adjust shift lever sleeve, remove shift handle on top of shift lever. With lever in Neutral, turn sleeve so distance between sleeve and lever end is within specification. See SHIFT LEVER SLEEVE CLEARANCE SPECIFICATION table. See Fig. 6. Ensure beveled side of sleeve faces toward push button (if equipped).

SHIFT LEVER SLEEVE CLEARANCE SPECIFICATION TABLE

Application	Clearance In. (mm)
Montero .....	.72-.74 (18.2-18.9)



100010

Fig. 6: Adjusting Shift Lever Sleeve (Montero)  
Courtesy of Mitsubishi Motor Sales of America.

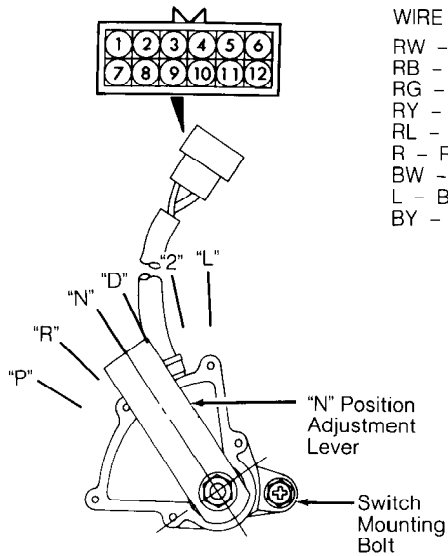
NEUTRAL SAFETY SWITCH

Montero

- 1) Neutral safety switch is located under shift lever console. Remove neutral safety switch connector. See Fig. 7.
- 2) Using an ohmmeter, check continuity for each position of transmission control lever. See Fig. 7.
- 3) After ensuring correct continuity in all positions, move selector lever to "N" position. Loosen adjusting nut of control cable. Loosen park/neutral switch mounting bolt.
- 4) Adjust neutral safety switch by turning park/neutral switch so that the bosses for aligning "N" position on park/neutral switch are aligned with the "N" position adjustment lever. Tighten park/neutral switch mounting bolt to specification. See TORQUE SPECIFICATIONS TABLE at the end of this article.
- 5) Gently pull end of transmission control cable in direction of arrow. See Fig. 7. Tighten adjusting nut to specification. See

TORQUE SPECIFICATIONS TABLE at the end of this article.

6) Ensure selector lever is in "N" position after adjustment.  
 Ensure each range of the transmission functions correctly at appropriate position of the selector lever.

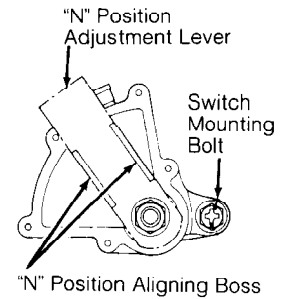
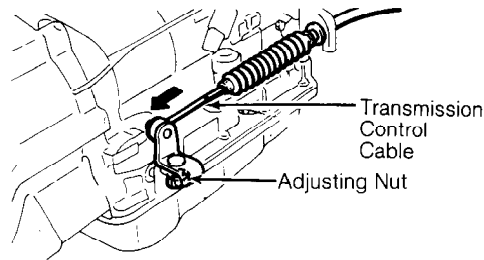


WIRE COLOR CODES

- RW - Red/White
- RB - Red/Blue
- RG - Red/Green
- RY - Red/Yellow
- RL - Red/Blue
- R - Red
- BW - Black/White
- L - Blue
- BY - Black/Yellow

Terminal	Wire Color	P	R	N	D	2	L
1	RW						
2	RB					○	
3	RG						○
4	RY				○		
5	RL		○	○			
6	R	○	○	○			
7	BW	○	○	○	○	○	○
9	L	○	○	○	○	○	○
12	BY	○		○			

NOTE: ○—○ Indicates continuity between terminals.



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 Fig. 7: Adjusting Neutral Safety Switch (Montero)  
 Courtesy of Mitsubishi Motor Sales of America.

Pickup & Ram-50

Neutral safety switch is part of transmission-mounted neutral safety/back-up light switch assembly, and is non-adjustable.

**TORQUE SPECIFICATIONS**

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Drain Plug	
Transaxle/Transmission	
Montero .....	13-17 (18-24)
Pickup & Ram-50 .....	22-25 (30-35)
Transfer Case .....	22-25 (30-35)
Transmission Control Cable	
Adjusting Nut .....	17 (24)
	INCH Lbs. (N.m)
Oil Filter/Screen Bolt	
Montero .....	43-52 (4.9-5.9)
Pickup & Ram-50 .....	36 (4.0)
Oil Pan Bolt	
Montero .....	36-42 (4.0-4.8)
Pickup & Ram-50 .....	156 (18)
Park/Neutral Switch Mounting Bolt (Montero) .....	48 (5.4)

