

Diagnosis and Repair Bulletin

**Subject: Six-Cylinder Camshaft
Pin Breakage**

**Application: 1977-80 Jeep Vehicles
With Six-Cylinder Engines**

**File: POWER PLANT
Engines**

No. 80-3 Feb. 4, 1980

If incorrect valve timing is indicated after checking valve timing, the cause may be a broken camshaft pin. It is no longer necessary to replace the camshaft because of pin failure. A spring pin is now available as a service replacement part.

Service correction involves replacing a broken camshaft pin with a new spring pin.

The following parts are available and will be required.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
PIN, Spring (Camshaft)	1	GM456384	1.040
GASKET SET, Timing Case Cover	1	8129097	1.121
SCREW, Hex Washer Head Tapping	1	G448423	17.671

PROCEDURE

- (1) Disconnect battery negative cable.
 - (2) Drain radiator.
- NOTE: Do not waste usable coolant. Collect drained coolant in a clean container.**
- (3) Remove fan and shroud.
 - (4) Disconnect overflow hose, radiator hoses and transmission cooler lines from radiator and remove radiator.
 - (5) If equipped with air conditioning:
 - (a) Remove air conditioning belt intermediate pulley.
 - (b) Disconnect and remove alternator.

CAUTION: Do not loosen or disconnect any air conditioning system fittings. Move the condenser aside as a complete assembly.

- (c) Remove air conditioning condenser attaching bolts and move condenser up and out of way.

- (6) Remove all drive belts.

- (7) Remove crankshaft vibration damper.

- (8) Remove timing chain cover.

- (9) Remove camshaft gear bolt and remove gear and chain.

CAUTION: The following procedural step must be performed to prevent the camshaft from damaging the rear camshaft plug during pin installation.

- (10) Remove fuel pump. Insert suitable tool into fuel pump opening and wedge tool against side of opening and camshaft to prevent camshaft movement.

- (11) Inspect damaged camshaft pin.

- (a) If pin is spring pin, remove broken pin by inserting G448423 screw into pin and carefully pulling pin from camshaft.

- (b) If pin is dowel pin:

CAUTION: Be sure the exact center is located when center punching the pin.

1. Center punch pin.
2. Drill through pin center using 5/32-inch drill bit.
3. Insert G448423 screw into drilled pin and carefully pull pin from camshaft.

NOTE: Cover the open oil pan area to prevent metal chips from entering the pan.

- (12) Clean camshaft pin hole of any loose material.

- (13) Compress replacement spring pin in center using vise grips. Carefully drive pin into camshaft until it is seated.

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CAUTION: *If the camshaft moves rearward, reposition the tool wedged against the camshaft so that the camshaft cannot move. If the camshaft moves rearward, damage to the rear camshaft plug may result.*

(14) Install camshaft gear and timing chain. Tighten camshaft gear bolt to 50 foot-pounds (68 N·m) torque. Check valve timing as outlined in 1980 Jeep Technical Service Manual.

(15) Remove tool wedged in fuel pump opening. Install fuel pump. Tighten pump bolts to 16 foot-pounds (22 N·m) torque and connect fuel lines.

(16) Remove timing case cover seal and clean cover.

(17) Position oil pan tab gaskets on oil pan and use RTV type sealer to hold gasket in place. Coat both sides of timing case cover gasket with sealer. Apply 1/8-inch (3 mm) bead of sealer to joint formed at oil pan and cylinder block.

(18) Loosen front four oil pan bolts about 3 turns to allow oil pan movement during timing case cover installation.

(19) Position timing case cover on engine. Place timing case alignment tool and seal installer J-22248, in crankshaft opening of cover.

(20) Install and tighten oil pan and front cover screws.

NOTE: *Tighten 1/4-20 oil pan screws to 7 foot-pounds (9 N·m) torque and 5/16-18 oil pan screws to 11 foot-pounds (15 N·m) torque.*

(21) Remove cover aligning tool and position replacement oil seal on tool with lip facing outward. Apply

light film of AMC Perfect Seal, or equivalent, on outside diameter of seal.

(22) Position tool and seal in front cover opening. Use vibration damper bolt to pull seal into front cover. Turn bolt until tool bottoms against cover.

(23) Remove tool and install vibration damper on crankshaft. Tighten damper bolt to 80 foot-pounds (108 N·m) torque.

NOTE: *If the crankshaft turns before the damper bolt torque value is reached, the damper can be held from turning by placing two 5/16 X 1-1/2-inch bolts into the vibration damper front pulley holes and wedging a bar between them. Rotate the bar until it contacts the frame member to prevent the damper from turning.*

(24) If equipped with air conditioning:

- (a) Install air conditioning belt intermediate pulley.
- (b) Install alternator.
- (c) Install air conditioner condenser.

(25) Install drive belts on pulleys.

(26) Install radiator. Connect radiator hoses, transmission cooler lines if equipped and fill cooling system.

(27) Install fan and shroud.

(28) Follow belt tightening procedure outlined in 1980 Jeep Technical Service Manual.

(29) Tighten fan assembly nuts to 18 foot-pounds (24 N·m) torque.

(30) Connect battery negative cable.

The following operation and standard work times will apply:

OPERATION DESCRIPTION	COST CODE	OPERATION NUMBER	MODEL	YEAR AND TIME				SKILL LEVEL
				77	78	79	80	
PIN, SPRING CAMSHAFT GEAR DRIVE— REPLACE	1.040	1163	6-Cyl.	1.7	1.7	1.7	1.7	G
With Air Conditioning— Add				0.3	0.3	0.3	0.3	
With Power Steering— Add				0.4	0.4	0.4	0.4	
Includes 6 minutes helper time.								

80-044-01A/J

Diagnosis and Repair Bulletin

Subject: Oil Leakage at Cylinder Head Cover or Oil Pan Gasket Surface

Application: All 1976-1978 Jeep Models

File: POWER PLANT Engines Group 1.000

No. 8-03 July 11, 1978


If oil leaks occur at either the cylinder head cover or oil pan gasket surfaces of the subject vehicles, two methods of sealing may be used. A room temperature vulcanizing (RTV) adhesive such as Gasket-in-a Tube, part number 8993317, or equivalent may be used in place of a gasket; or a gasket coated on both sides with a quick drying adhesive such as AMC part number 8127960, or equivalent may be used.

Procedures for sealing cylinder head covers and oil pans are published in the appropriate Jeep Technical Service Manual. The following chart lists the engine, model, year, Technical Service Manual and page number of the procedures applying to the vehicles involved.

Year and Technical Service Manual Page Number

Engine/Model	1976	1977	1978
6 Cyl. Engine			
CJ-5 & 7 Cyl. Head Cover	1A-9 1977 Jeep Technical Service Manual	1A-9	1B-16, Volume 1
Oil Pan	1A-21	1A-22	1B-21, Volume 1
Cherokee Cyl. Head Cover	1A-9 1977 Jeep Technical Service Manual	1A-9	1B-16, Volume 1
Oil Pan	1A-21	1A-22	1B-21, Volume 1
Truck Cyl. Head Cover	1A-9 1977 Jeep Technical Service Manual	1A-9	1B-16, Volume 1
Oil Pan	1A-21	1A-22	1B-21, Volume 1
8-Cyl. Engine			
CJ-5 & 7 Cyl. Head Cover	1B-11	1B-12	1B-51, Volume 1
Oil Pan	1B-24	1B-25	1B-56, Volume 1
Wagoneer Cyl. Head Cover	1B-11	1B-12	1B-51, Volume 1
Oil Pan	1B-24	1B-25	1B-56, Volume 1
Cherokee Cyl. Head Cover	1B-11	1B-12	1B-51, Volume 1
Oil Pan	1B-24	1B-25	1B-56, Volume 1
Truck Cyl. Head Cover	1B-11	1B-12	1B-51, Volume 1
Oil Pan	1B-24	1B-25	1B-56, Volume 1

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The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
COVER, CYL. HEAD — RESEAL WITH RTV	1.072	1011	6 Cyl.	0.5	0.5	0.5	G
			8 Cyl. One	0.5	0.5	0.5	
			8 Cyl. Both	0.7	0.7	0.7	
Material Allowance For Sealer is \$1.30							
Oil Pan — Reseal With RTV	1.152	A	6 Cyl.	0.8	0.8	0.8	G
			8 Cyl.	0.8	0.8	0.8	
Material Allowance For Sealer is \$1.30							
PAN, 6 OR 8 CYL. ENGINE OIL — RESEAL WITH RTV	1.152	1013	6 Cyl.	0.9	0.9	0.9	G
			8 Cyl.	0.9	0.9	0.9	
Material Allowance For Sealer is \$1.30							

Diagnosis and Repair Bulletin

Subject: V-8 Engine Oil Pressure - New Oil Pressure Relief Spring

Application: 1977-1978 V-8 Engines in Vehicles With Oil Pressure Gauges

File: POWER PLANT Engines
No. 8-07² July 3, 1978

Some 1977-1978 V-8 engines may have oil pressure gauge readings that are within specifications but less than what is normal for V-8 engines. This condition may be the result of a weak pressure relief spring in the oil pump.

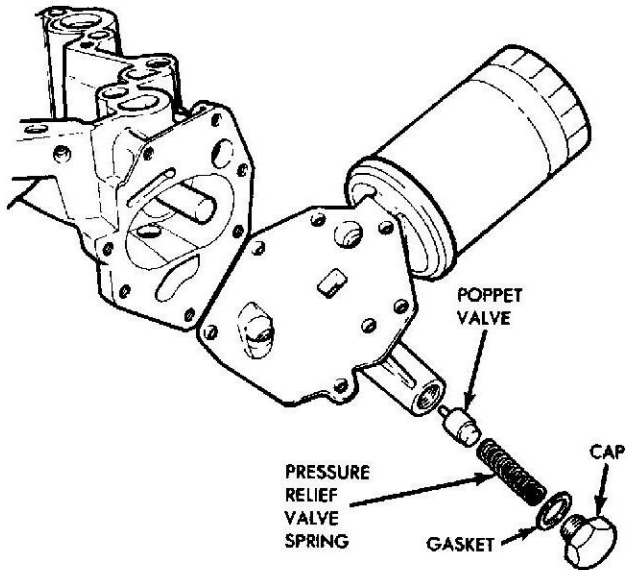
Service correction involves replacing the weak spring with a new replacement spring.

The following part is available and may be required:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Spring, Engine Oil Pump Release Valve	1	3233994	1.176

PROCEDURE

- (1) Check oil level.
- (2) Remove oil pressure relief valve spring by removing retaining cap from cover (see illustration).
- (3) Measure free length, if less than 3.25 inches (82.55 mm), replace spring.
- (4) Check the operation of relief valve by sliding poppet valve back and forth. It should move freely.
- (5) If the spring length is 3.25 inches and poppet is free, check oil pump gear clearance as outlined in appropriate Jeep Technical Service Manual.



Pressure Relief Valve Assembly

- (6) Assemble relief valve, spring, and retaining cap back into cover.
- (7) Torque retainer cap to 28 foot pounds (38 newton-meters) torque.
- (8) Start engine and check oil pressure and check for oil leaks.

The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.

8-097-01A/J

Diagnosis and Repair Bulletin

Subject: V-8 Engine Oil Consumption-Intake Manifold Gasket

Application: All 1978 V-8 Engines

File: POWER PLANT Engines

No. 8-01 June 30, 1978

Some 1978 V-8 engines may have an oil consumption rate of 2 or more quarts per thousand miles at highway speeds. This may be caused by the intake manifold gasket locating dowels being too long and bottoming out in the cylinder head counter bores.

Service correction involves checking for external oil leaks, verifying the engine condition (i.e., compression test and/or cylinder leakage test), and confirming the oil consumption rate. If after checking these items, the cause of the oil consumption is not apparent replace the intake manifold gasket.

PROCEDURE

- (1) Check for external engine oil leaks.
- (2) Verify engine condition (i.e. compression test and/or cylinder leakage) and repair as necessary.
- (3) Confirm rate of engine oil consumption.
- (4) Remove intake manifold as outlined in 1978 Jeep Technical Service Manual, Volume I, page 1B-50.
- (5) Inspect existing intake manifold gasket dowels to confirm cause of oil consumption.

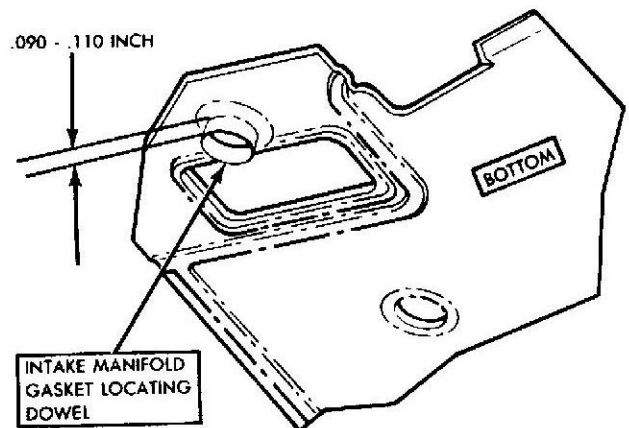


Fig. 1 Intake Manifold Gasket Locating Dowel

- (6) Inspect new intake manifold gasket for proper dowel length which should be between .090 and .110 inch (Fig. 1).
- (7) Install intake manifold as outlined in the 1978 Jeep Technical Service Manual, Volume I, page 1B-50.

The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.

8-098-01A/J

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Diagnosis and Repair Bulletin

Subject: Radiator Coolant Overflow

Application: 1978 Cherokee, Wagoneer, and Truck Models With Air Conditioning or Heavy Duty Cooling.

File: POWER PLANT Cooling

No. 8-01 October 20, 1977

Some 1978 Cherokee, Wagoneer and Truck models equipped with air conditioning or heavy duty cooling may experience a radiator coolant overflow. This condition may be caused by the absence of a coolant recovery bottle and the installation of a closed system radiator cap.

Service correction involves the installation of a coolant recovery bottle. The following parts will be required:

Description	Quantity	Part No.	Group
Bottle, Coolant Recovery	1	5358025	2.025
Screw	2	4005466	14.801
Clamp, Hose	1	3223128	2.025

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
BOTTLE, COOLANT RECOVERY — INSTALL	2.971	2009	CKE- WAG- TRK	—	0.2	—	M

8-003-02J

PROCEDURE

- (1) Install coolant recovery bottle on front wheelhouse panel.
- (2) Install hose from radiator filler neck into coolant recovery bottle and secure with hose clamp.

NOTE: Hose should be submerged into bottle so end is below ADD mark.

- (3) Fill radiator.
- (4) Check coolant recovery bottle at normal operating temperature. Coolant should be between **FULL** and **ADD** marks on bottle. Add coolant to recovery bottle as necessary.

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Diagnosis and Repair Bulletin

Subject: Ammeter Circuit and Wiring Diagram Revisions

Application: 1978-79 Cherokee, Wagoneer, and Truck Models

File: POWER PLANT Engine Electrical

No. 9-02 February 13, 1979

This bulletin is being issued to revise the ammeter circuit illustration for Cherokee, Wagoneer, and Truck models on page 1L-43, Volume I of the 1978 Technical Service Manual and on page 1L-45 of the 1979 Technical Service Manual. The revised circuit illustration is shown in figure 1. In addition, the wiring diagram for Cherokee, Wagoneer, and Truck models on page W-5 in the 1979 Technical Service Manual has also been revised to identify splice "B" as shown in figure 2.

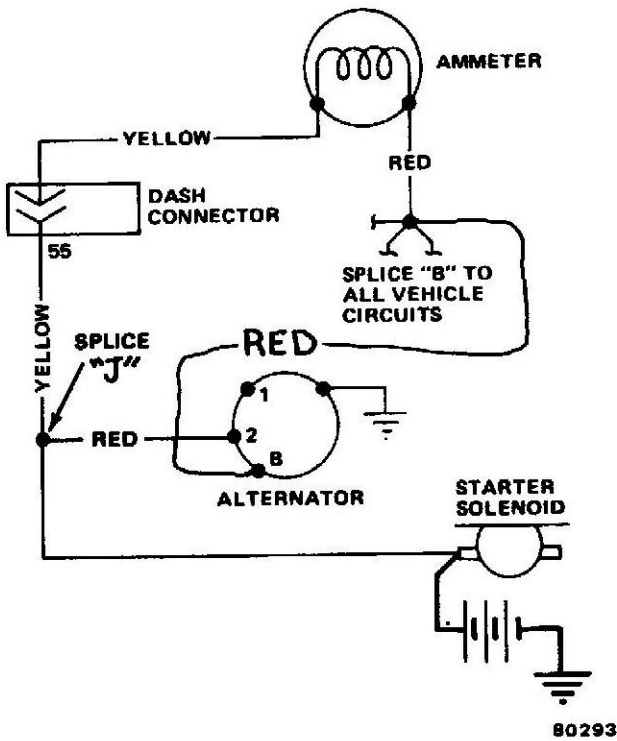


Fig. 1 Ammeter Circuit — Cherokee - Wagoneer - Truck Models

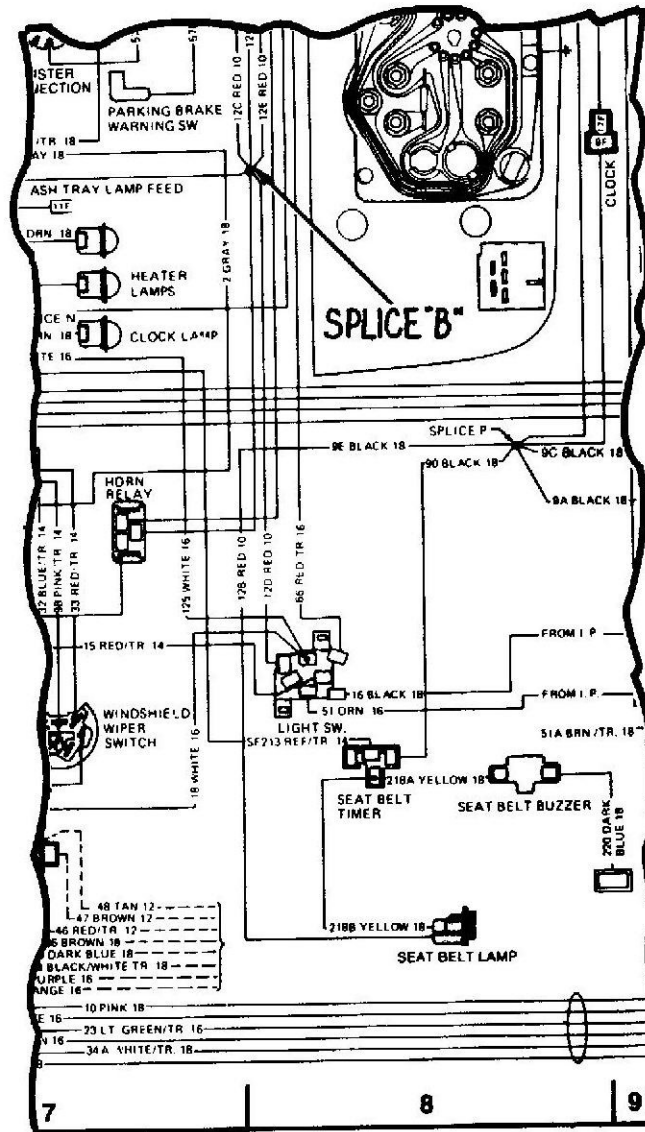


Fig. 2 Wiring Diagram W-5 — Cherokee - Wagoneer - Truck

9-056-SGJ

Diagnosis and Repair Bulletin

Subject: Altitude Performance Adjustments

Application: 1968-80 Jeep Vehicles

File: POWER PLANT Fuel and Exhaust

No. 80-7 Nov. 10, 1981

This bulletin is being issued to outline the altitude performance adjustments for 1968-80 Jeep vehicles required under a newly established Federal standard. The adjustments are intended to improve driveability performance as well as emissions performance at altitudes other than that for which the vehicles were originally certified.

Any Jeep vehicle that has been so adjusted must have a unique emission control information label installed. These unique labels are available in a kit, part number 3242106 from the following facility:

American Motors Corporation
Distribution Services
37200 Amrhein Road
Livonia, Michigan 48150

The adjustment procedures and unique labels must be made available at no cost to independent repair facilities and the general public. A notification is also provided in current owners manuals to make customers aware of these adjustments.

ADJUSTMENT PROCEDURES

On Jeep vehicles originally sold for operation at altitudes below 4,000 feet that are being operated above 4,000 feet, the ignition timing, as shown on the vehicle emission control label located in the engine compartment or specified in the appropriate Jeep Technical Service manual should be advanced 5° (not to exceed 15° total advance). The engine idle speed should be reset according to the procedures and idle speed specification outlined in the appropriate Jeep Technical Service Manual for the year of vehicle being serviced.

After performing these adjustments, attach emission control label, part number EF 8130457, to the engine compartment dash panel. Do not attach the label to any component that can be readily removed from the vehicle.

These adjustments apply to all 1968-80 Jeep vehicles that were sold for principal use at altitudes below 4,000 feet. Refer to the vehicle emission control label in the engine compartment to identify these vehicles.

On 1968-80 Jeep vehicles originally sold for operation at altitudes above 4,000 feet that are being operated below 4,000 feet, the ignition timing, as shown on the vehicle emission control label located in the engine compartment or specified in the appropriate Jeep Technical Service Manual should be retarded 5°. The engine idle speed should be reset according to the procedures and idle speed specifications outlined in the appropriate Jeep Technical Service Manual for the year of the vehicle being serviced. After performing these adjustments, attach emission control label, part number EF 8130458, to the engine compartment dash panel. Do not attach the label to any component that can be readily removed from the vehicle.

These adjustments apply only to 1968-80 Jeep vehicles that were sold for principal use at altitudes above 4,000 feet. Refer to the vehicle emission control label in the engine compartment to identify these vehicles.

81-114-04A/J

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Diagnosis and Repair Bulletin

Subject: Rough or High Engine Idle Speed or Dieseling When Warm Engine is Shut Off

Application: 1976-78 Cherokee, Wagoneer, or Truck Models Equipped with 360 or 401 CID Engine and 4V Carburetor

File: POWER PLANT Fuel and Exhaust Systems

No. 8-08 June 19, 1979

Some of the subject vehicles may have a rough idle, high idle speed, or may diesel when shut off after the engine reaches normal operating temperature. These conditions may be the result of worn accelerator pump linkage or the secondary throttle plates not closing completely.

Service correction involves replacing the accelerator pump link and installing a secondary throttle plate helper spring.

The following parts are required and will be available after August 6, 1979. Do not order parts before this date.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group No.</u>
KIT, Secondary Throttle Repair	1	8132560	4.001
Kit Contents:			
SPRING, Secondary Helper	1		
WASHER, Spring	1		
LINK, Accelerator Pump	1		
RETAINER	1		

PROCEDURE

(1) Allow throttle to return to closed position.

NOTE: *The fast idle screw should not contact the fast idle cam and the throttle solenoid should not be energized.*

(2) Observe position of notch in accelerator pump arm. Measure distance between notch and index mark cast in air horn (see illustration). Record this dimension.

(3) Remove nylon nut from accelerator pump link.

(4) Remove accelerator pump link-to-throttle lever retainer.

(5) Remove accelerator pump link.

(6) Install new accelerator pump link into lower forward hole of throttle lever (see illustration).

NOTE: *There are two types of throttle levers in use, a two-hole and a three-hole lever. The lower, forward hole is the only hole used on Jeep applications.*

(7) Install new accelerator pump link-to-throttle lever retainer.

(8) Install nylon nut on accelerator pump link. Adjust nut until notch in accelerator pump arm is in position recorded in step (2).

NOTE: *If the nylon nut on the accelerator pump appeared to have been tampered with prior to removal, refer to the Metering Rod Carrier Stroke Adjustment in the applicable Technical Service Manual to correctly position nylon nut.*

(9) Remove air horn cover screw located above primary throttle shaft on accelerator pump side of carburetor. Install washer on screw and start screw in hole. Hook one end of helper spring around screw and tighten screw (see illustration).

(10) Hook other end of helper spring between secondary throttle link rod retainer and primary linkage (see illustration).

CAUTION: *Prior to starting engine check the carburetor linkage for proper operation and be sure secondary throttle plates are closing completely.*

(11) Spray choke and linkage cleaner (8993549) on both ends of secondary shaft to clean shaft.

(12) Hold choke open and operate carburetor linkage to wide open throttle position several times to ensure proper operation.

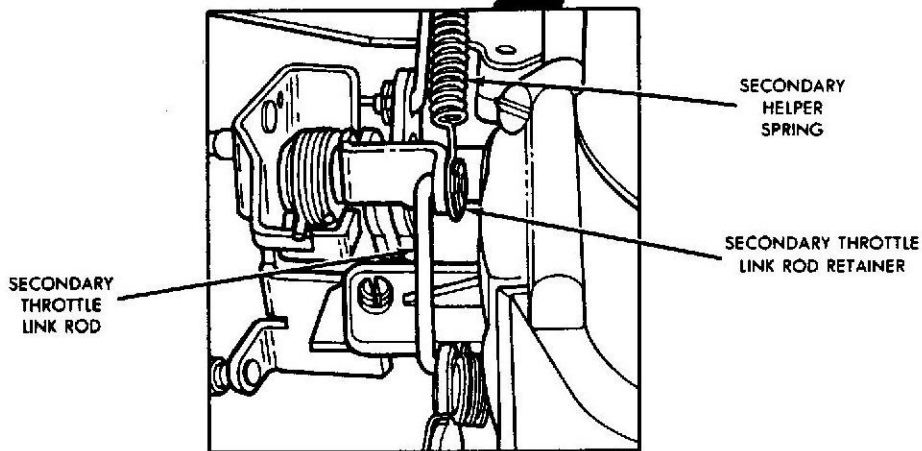
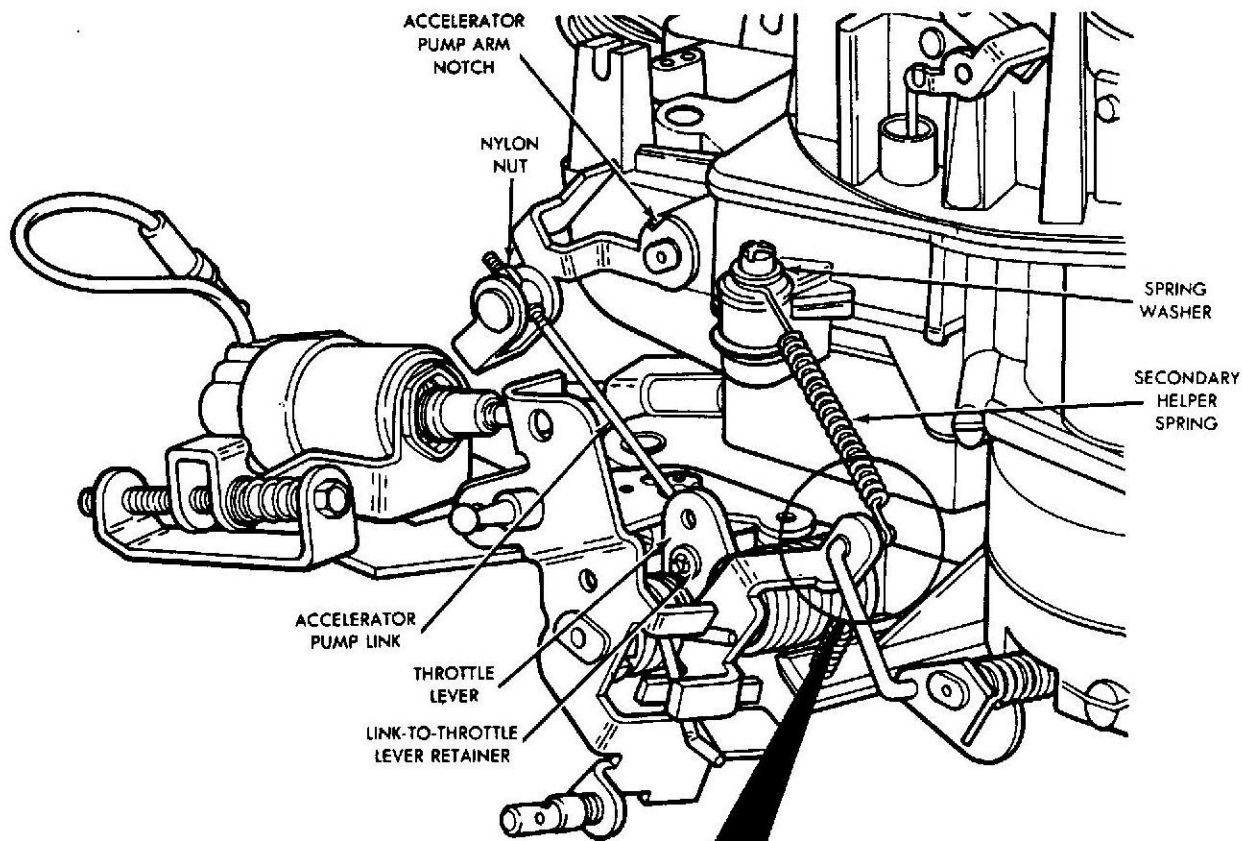
(13) Adjust curb idle speed.

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
KIT, CARBURETOR — INSTALL.....	4.006	4039	WAG-CKE-TRK	0.3	0.3	0.3	G

9-090-04 J

Diagnosis and Repair Bulletin

Subject: Left Rear Quarter Panel Rattle

Application: 1978-79 Wagoneer and Cherokee Models

File: POWER PLANT Fuel & Exhaust Systems

No. 9-04 May 19, 1979

Some 1978-79 Wagoneer or Cherokee models may have a rattle in the left rear quarter panel area.

This may be caused by movement of internal check ball and ramp inside the rollover check valve.

Service correction involves wrapping the exterior of the rollover check valve with vinyl insulation.

The following part is available and required:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group No.</u>
INSULATION	1	3693126	13.440

PROCEDURE

- (1) Open tailgate.
- (2) If equipped with inside-mounted spare, remove spare from carrier and remove carrier.

- (3) Remove inside rear quarter panel trim.
 - (4) Cut insulation into strips approximately 2 inches x 9½ inches (save any remaining for repair on another vehicle).
 - (5) Completely wrap rollover valve with two insulation strips.
- NOTE:** Upon completion of the wrapping operation, be sure the rollover valve female fitting is perpendicular to the floorpan of the vehicle.
- (6) Install quarter panel trim.
 - (7) Install spare tire carrier and tire if equipped.
 - (8) Close tailgate.

The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
VALVE, ROLLOVER — INSULATE	4.165	4201	CKE-WAG		0.2	0.2	G
Inside mounted spare tire — R & R	4.165	A			0.2	0.2	G

9-079-BSJ

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Diagnosis and Repair Bulletin

Subject: Emission Components

Application: All 1976-1978 Jeep Models

**File: POWER PLANT
Fuel and Exhaust Systems
Group 4.000**

No. 8-07 April 23, 1979

The following charts reflect emission components using the information found on the "Vehicle Emission Control Information Label" located in the engine compartment. These charts identify the latest emission control devices used on the applicable models. Correct part numbers are also identified for certain devices with multiple applications.

To use the charts:

- Select the chart with the correct model year heading (i.e., 1978 Jeep, etc.)
- Locate the model in the first column of the chart.
- Open the hood and find "Vehicle Emission Control Information Label" (V.E.C.I.L.) or Jeep Heavy-Duty Emission Control Label. Record the following information for use in the second column on the chart.

- Engine CID
- Engine Family
- Evaporative Family (1978 CJ models only) or carburetor type (Jeep Heavy Duty)

(d) Determine from the V.E.C.I.L. the certification area (i.e., 49S = 49 State, Alt = High Altitude, Cal = California). Use this information to locate the correct box in the third column on the chart.

(e) Determine what transmission the vehicle has and use this information to select the correct box in the fourth column of the chart.

(f) The above information aligns across the chart. The remainder of the information should be used to check the vehicle for correct component application.

LEGEND

Vehicle Emission Control Information Label (VECIL)
 Engine CID
 Engine Family
 Evaporative Family (1978 models only)

Jeep Heavy-Duty Application

Engine CID
 Carburetor Type:
 1V (One Venturi)
 2V (Two Venturi)
 4V (Four Venturi)

● = On All Models Specified
 — = Not Applicable

V.E.C.I.L. = Vehicle Emission Control Information Label

Area = (49S = 49 State, Alt = High Altitude, Cal = California)

Trans. = Transmission Type
 Man = 3- or 4-speed Manual
 M4 = 4-Speed Manual
 M3 = 3-Speed Manual
 A = Automatic

Carburetor Number = Number on Tag Attached to Carburetor

Distributor Number = Number on Tag Attached to Distributor

EGR Valve Number = Number on Face of Diaphragm Housing

EGR Code = Number or Letter Adjacent to Valve Number

EGR CTO Temp = Nominal Temperature at Which CTO Switches

115°F Valve = Part Number 3228288; Optional with 3225912

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160°F Valve = Part Number 3228894; Optional with 3226361, 3229449

AG = Air Guard

Cat. Conv. = Catalytic Converter

TVS = Thermal Vacuum Switch

SVV = Solenoid Vacuum Valve

PCV = Positive Crankcase Ventilation

TAC Type = Thermostatically Controlled Air Cleaner

V = Vacuum

M = Mechanical

Spark CTO Type

160° F Valve = Standard Switch, Part Number 3216448; Optional with 3229450

220° F Valve = Heavy-Duty Switch, Part Number 5358881

Spark CTO Temp. = Nominal Temperature at which CTO Switch Starts to Open

NLV = Nonlinear Valve

TCS = Transmission Controlled Spark

CVTC = Carburetor Vented to Canister

FTVC = Fuel Tank Vapor Control

TS = Throttle Solenoid

EC = Electric Choke

DP = Dashpot

TM = Throttle Modulator

① = + Pre-Catalytic Converter

② = Nominal Temperature for EGR CTO Switches

③ = EGR Back-Pressure Transducer 3229120; Orifice Plate 3233536

④ = Nominal Temperature for Spark CTO Switches

⑤ = Delay Valve

⑥ = Anti-diesel Solenoid in PCV Line

⑦ = Warm-up + Pellet type

⑧ = Delay Valve in Vacuum Line Between Manifold Vacuum and Diverter Valve

⑨ = Optional Switch 5358880 Used on Heavy-Duty Cooling Package

⑩ = Special Air Pump Pulley and Diverter

⑪ = Includes Vacuum Check Valve

1978 JEEP

Model	VECIL	Area	Trans	Carb. Number	Dist. Number	EGR Valve Number	EGR Code	EGR CTO Temp. ②	AG	Cat. Conv.	PCV	TAC Type	Spark CTO Temp. ④	TCS	CVTC	FTVC	TS	EC	DP	TM
CJ5, 7	232 I-T E-I-T	49S	M3	7230	3232434	3230189	R	115°F	•	—	•	V	160°F	—	•	•	•	—	—	—
CJ5, 7	232 I-T E-I-T	ALT	M3	7231	3232434	3230183	K	115°F	•	•	•	V	160°F	—	•	•	—	—	—	—
CJ5, 7	258 I-T E-I-T	49S	MAN 3.54 Axle	7230	3232434	3230184	L	115°F	•	—	•	V	160°F	—	•	•	•	—	—	—
CJ5, 7	258 I-T E-I-T	49S	MAN 14.09 Axle	7230	3232434	3230179	F	115°F	•	—	•	V	160°F	—	•	•	•	—	—	—
CJ, 7	258 I-T E-I-T	49S	A	7228	3232434	3230179	F	115°F	•	—	•	V	160°F	—	•	•	—	—	—	—
CJ5, 7	258 I-T E-I-T	ALT	MAN	7231	3232434	3230191	T	115°F	•	•	•	V	160°F	•	•	•	—	—	—	—
CJ5, 7	258 I-T E-I-T	CAL	MAN	7230	3232434	3230189	R	115°F	•	•	•	V	—	—	•	•	•	—	—	—

1978 JEEP Cont'd.

Model	VECIL	Area	Trans	Carb Number	Dist Number	EGR Valve Number	EGR Code	EGR CTO Temp ①	AG	Cat Conv	PCV	TAC Type	Spark CTO Temp ①	TCS	CVTC	FTVC	TS	EC	DP	TM
CJ, 7	258 I-TC E-1-T	CAL	A	7201	3232434	3230175	B	115°F	•	•	•	V	160°F	•	•	•	•	—	—	—
CJ5, 7	304 II-T E-4-T	49S	M3 (3.54 Axle)	8DM2	3231340	3230192	U	115°F	•	•	•	V	—	—	•	•	—	—	—	—
CJ5, 7	304 II-T E-4-T	49S	M3 (4.09 Axle)	8DM2	3231340	3230188	Q	115°F	•	•	•	V	—	—	•	•	—	—	—	—
CJ, 7	304 II-T E-4-T	49S	A	8DA2J	3230443	3230189	R	115°F	•	•	•	V	—	—	•	•	•	—	—	—
CJ5, 7	304 II-T E-4-T	ALT	M3	8DM2A	3231340	3230194	W	115°F	•	•	•	V	160°F	—	•	•	—	•	—	—
CJ, 7	304 II-T E-4-T	ALT	A	80A2A	3230443	3230191	T	115°F	•	•	•	V	160°F	•	•	•	•	•	—	—
CJ5, 7	304 II-TC c/o E-4-T	CAL	M3	8DM2C	3231340	3223980 ①	Red	115°F	•	•	•	V	—	•	•	•	—	•	•	—
CJ, 7	304 II-T E-4-T	CAL	A	8DA2JC	3231340	3230839	Z	115°F	•	•	•	V	160°F ①	•	•	•	•	•	—	—
Cherokee Truck	258 I-HD 2V	49S	MAN & A	8107	3232434	3218739	Blue	160°F	—	—	•	V	160°F ①	—	—	—	—	—	—	—
Cherokee Truck	360 III-HD 2V	49S	MAN	8RHA2C	3230443	3219052 ③	None	160°F	•	—	•	V	160°F ①	—	—	—	—	—	—	•
Cherokee Wagoneer Truck	360 III-HD 2V	49S	A	6RHA2	3231341	3219052 ①	None	160°F	•	—	•	V	160°F ①	—	—	—	•	—	—	—
Cherokee Wagoneer Truck	360 III-HD 2V	CAL	A	8RHA2C	3233174	3233596	AH	115°F	•	•	•	V	220°F	—	•	•	•	—	—	—
Cherokee Truck	360 III-HD 4V	49S	M4	6THM4	3230443	3219052 ③	None	160°F	•	—	•	V	160°F ①	—	—	—	—	—	—	•
Cherokee Wagoneer Truck	360 III-HD 4V	49S	A	6THA4	3231341	3219052 ③	None	160°F	•	—	•	V	160°F ①	—	—	—	•	—	—	—
Cherokee Wagoneer Truck	401 III-HD 4V	49S	A	6THA4	3231341	3219052 ③	None	160°F	•	—	•	V	160°F ①	—	—	—	•	—	—	—

1977 JEEP

Model	VECIL	Area	Trans	Carb Number	Dist Number	EGR Valve Number	EGR Code	EGR CTO Temp ①	AG	Cat Conv	PCV	TAC Type	Spark CTO Temp ①	TCS	CVTC	FTVC	TS	EC	DP	TM
CJ5, 7	232 I-T	49S	M3 (3.54 Axle)	7154	3229719	3230184	L	115°F	•	—	•	M	160°F	—	•	•	•	—	—	—
CJ5, 7	232 I-T	49S	M3 (4.09 Axle)	7154	3229719	3230179	F	115°F	•	—	•	M	160°F	—	•	•	•	—	—	—
CJ5, 7	232 I-TC	ALT	M3	7110	3229719	3230183	K	115°F	•	•	•	M	160°F	—	•	•	•	—	—	—
CJ5, 7	258 I-T	49S	MAN (3.54 Axle)	7154	3229719	3230184	L	115°F	•	—	•	M	160°F	—	•	•	•	—	—	—
CJ5, 7	258 I-T	49S	MAN (4.09 Axle)	7154	3229719	3230179	F	115°F	•	—	•	M	160°F	—	•	•	•	—	—	—
CJ, 7	258 I-T	49S	A	7151	3239719	3230190	S	115°F	•	—	•	M	160°F	—	•	•	•	—	—	—
CJ, 7	258 I-TC	ALT	A	7111	3229719	3230192	U	115°F	•	•	•	M	160°F	•	•	•	•	—	—	—
CJ5, 7	258 I-TC	CAL	MAN	7154	3229719	3230186	N	115°F	•	•	•	M	160°F	—	•	•	•	—	—	—
CJ, 7	258 I-TC	CAL	A (3.54 Axle)	7153	3229719	3230186	N	115°F	•	•	•	M	160°F	•	•	•	•	—	—	—
CJ, 7	258 I-TC	CAL	A (4.09 Axle)	7153	3229719	3230846	AD	115°F	•	•	•	M	160°F	•	•	•	•	—	—	—
CJ5, 7	304 II-T	49S	M3	6DM2	3228264	3230188	Q	115°F	•	•	•	V	—	—	—	•	•	—	—	•
CJ, 7	304 II-T	49S	A	6DA2J	3228263	3230193	V	115°F	•	•	•	V	—	—	—	•	•	—	—	•

1977 JEEP Cont'd.

Model	VECIL	Area	Trans	Carb. Number	Dist. Number	EGR Valve Number	EGR Code	EGR CTO Temp ①	AG	Cat. Conv.	PCV	TAC Type	Spark CTO Temp ②	TCS	CVTC	FTVC	TS	EC	DP	TM
CJ5 7	304 II-T	ALT	M3	7DM2A	3228264	3230194	W	115°F	•	•	•	V	160°F	—	—	•	—	•	—	—
CJ 7	304 II-T	ALT	A	7DA2A	3228263	3230191	T	115°F	•	•	•	V	160°F	•	—	•	•	•	—	—
CJ5 7	304 II-TC c/b	CAL	M3	6DM2J	3228264	3223980 * *	Red	115°F	•	•	•	V	160°F	•	—	•	—	•	—	—
CJ 7	304 II-T	CAL	A	6DA2J	3228264	3230186	N	115°F	•	•	•	V	160°F	•	—	•	•	—	—	—
Cherokee Truck	258 I-HD 2V	495	MAN & A	8107	3229719	3218739	Blue	160°F	—	—	•	M	160°F ①	—	—	—	—	—	—	—
Cherokee Truck	360 III-HD 2V	495	MAN	6RHM2	3228263	3219052	None	160°F	•	—	•	V	160°F ①	—	—	—	—	—	—	•
Cherokee Wagoneer Truck	360 III-HD 2V	495	A	6RHA2	3228265	3219052	None	160°F	•	—	•	V	160°F ①	—	—	—	•	—	—	—
Cherokee Truck	360 III-HD 4V	495	M4	6THM4	3228263	3210952 ①	None	160°F	•	—	•	V	160°F ①	—	—	—	•	—	—	•
Cherokee Wagoneer Truck	360 III-HD 4V	495	A	6THA4	3228265	3219052 ①	None	160°F	•	—	•	V	160°F	—	—	—	•	—	—	—
Cherokee Wagoneer Truck	401 III-HD 4V	495	A	6THA4	3228265	3219052 ①	None	160°F	•	—	•	V	160°F	—	—	—	—	—	—	—
Cherokee Truck	360 IV-HD 4V	CAL	M4	6THM4	3228263	3230261	Y	160 F	•	•	•	V	160°F	—	•	•	—	—	—	•
Cherokee Wagoneer Truck	360 IV-HD 4V	CAL	A	6THA4C	3228265	3230261	Y	160 F	•	•	•	V	160°F	—	•	•	—	—	—	•
Cherokee Wagoneer Truck	401 IV-HD 4V	CAL	A	6THA4C	3228265	3230261	Y	160 F	•	•	•	V	160°F	—	•	•	—	—	—	•

** Orifice Plate 3225145 / Back Pressure Transducer 3229120

1976 JEEP

Model	VECIL	Area	Trans	Carb Number	Dist Number	EGR Valve Number	EGR Code	Back Pressure Transducer	EGR CTO Temp ①	AG	Cat Conv	PCV	TAC Type	Spark CTO Temp ②	TCS	DV	FTVC	TS	EC	TM
CJ5 7	232 I-T	495	M3	7109	3227331	3223980	Red	3228838 Orifice Plate 3225242	115°F	—	—	•	M	—	—	—	•	—	—	—
CJ5 7	258 I-T	495	MAN	7109	3227331	3223980	Red	3228838 Orifice Plate 3225242	115°F	—	—	•	M	—	—	—	•	—	—	—
CJ5 7	258 I-TC	CAL	MAN	7084	3227331	3223980	Red	3228836 Orifice Plate 3226657	115°F	•	•	•	M	—	—	—	—	—	—	—
CJ7	258 I-T	495	A	7083	3227331	3223980	Red	3228838 Orifice Plate 3225144	115°F	—	—	•	M	—	—	—	•	—	—	—
CJ7	258 I-TC	CAL	A	7085	3227331	3223980	Red	3228836 Orifice Plate 3225956	115°F	•	•	•	M	160°F	•	—	•	•	—	—
CJ5 7	304 II-T	495	M3	6DM2	3228264	3223980	Red	3229117 Orifice Plate 3228338	115°F	•	•	•	V	—	—	—	•	—	—	—
CJ7	304 II-T	495	A	6DA2J	3228263	3223980	Red	3229118 Orifice Plate 3225145	115°F	•	•	•	V	—	—	—	•	•	—	—
CJ5 7	304 II-TC	CAL	M3	6DM2J	3228264	3223980	Red	3229120 Orifice Plate 3225956	115°F	•	•	•	V	160°F	•	—	•	—	—	—

1976 JEEP Cont'd.

Model	VECIL	Area	Trans	Carb Number	Dist Number	EGR Valve Number	EGR Code	Back Pressure Transducer	EGR CTO Temp ①	AG	Cat Conv	PCV	TAC Type	Spark CTO Temp ①	TCS	DV	FTVC	TS	EC	TM
CJ7	304 H-T	CAL	A	6DA2J	3228264	3223980	Red	3229119 Orifice Plate 3225956	115°F	•	•	•	V	160°F	•	—	•	•	—	—
Cherokee Truck	258 I-HD 1V	49S	MAN	7088	3227331	3228739	Blue	—	160°F	—	—	•	M	160°F	—	—	—	—	—	—
Cherokee Truck	258 I-HD 1V	49S	A	7088	3227331	3228739	Blue	—	160°F	—	—	•	M	160°F	—	—	—	—	—	—
Cherokee Truck	360 III-HD 2V	49S	MAN	6RHM2	3228263	3229052	None	—	160°F	•	—	•	V	160°F	—	—	—	—	—	•
Cherokee Wagoneer Truck	360 III-HD 2V	49S	A	6RHA2	3228265	3229052	None	—	160°F	•	—	•	V	160°F	—	—	—	•	—	—
Cherokee Truck	360 III-HD 4V	49S	MAN	6THM4	3228263	3229052	None	—	160°F	•	—	•	V	160°F	—	•	—	—	—	•
Cherokee Wagoneer Truck	360 III-HD 4V	49S	A	6THA4	3228265	3229052	None	—	160°F	•	—	•	V	160°F	—	•	—	•	—	—
Cherokee Truck	360 III-HD 4V	CAL	MAN	6THM4	3228265	3223981	Yellow	3223407	160°F	•	—	•	V	160°F	—	•	•	—	—	•
Cherokee Wagoneer Truck	360 III-HD 4V	CAL	A	6THA4C	3228265	3223981	Yellow	3223407	160°F	•	—	•	V	160°F	—	•	•	—	—	•
Cherokee Wagoneer Truck	401 III-HD 4V	49S	A	6THA4	3228265	3225952	None	—	160°F	•	—	•	V	160°F	—	•	—	•	—	—
Cherokee Wagoneer Truck	401 III-HD 4V	CAL	A	6THA4	3228265	3225951	Black	3223407	160°F	•	—	•	V	160°F	—	•	•	•	—	—

9-009-04A:J

Diagnosis and Repair Bulletin

Subject: Gas Tank Sending Unit

Application: 1975-1978 Cherokee and Wagoneer

File: POWER PLANT Fuel and Exhaust System Group 4.000

No. 8-06 May 9, 1978

The fuel gauge in some 1975-1978 Cherokees and Wagoneers may indicate 3/4 full when the tank is known to be full. This condition may be the result of inaccuracy in the fuel tank sending unit.

Service correction involves removing the fuel tank from the vehicle, removing the sending unit from the fuel tank, and reshaping the sending unit lever arm to correspond with the attached template.

Before proceeding to the repair procedure, verify the accuracy of the fuel gauge by using the DARS Charts on page 1L-8, Volume 1 of the 1978 Technical Service Manual. If the tests indicate inaccuracy in the sending unit, proceed to the repair procedure. If the tests indicate inaccuracy in the fuel gauge, refer to the appropriate model/year Technical Service Manual for the correct replacement procedure.

NOTE: The procedures found in the DARS Charts on page 1L-8 of the 1978 Technical Service Manual are applicable to 1975-1978 vehicles.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
SENDING UNIT, FUEL TANK — DIAGNOSIS	3.614	4197	CKE-WAG	0.2	0.2	0.2	G
Sending Unit, — Remove, Adjust, and Install With Skid Plate — ADD	3.614	A	CKE-WAG	0.9 0.3	0.9 0.3	0.9 0.3	G
Sending Unit, — Replace With Skid Plate — ADD	3.614	B	CKE-WAG	0.9 0.3	0.9 0.3	0.9 0.3	G

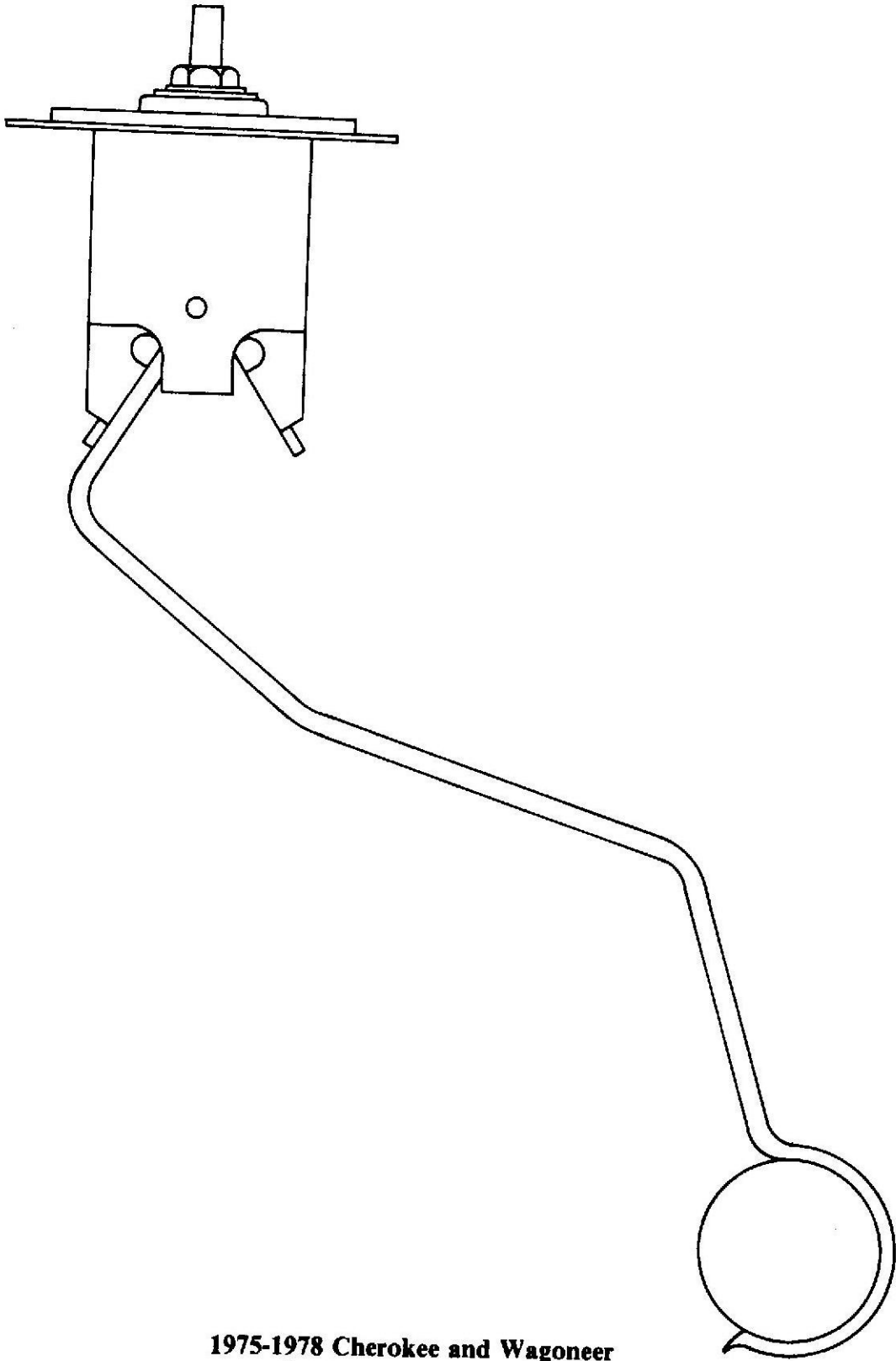
NOTE: Combination A and B cannot be used together. Both include drain, R&R and refill fuel tank as required

8-069-04J

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**1975-1978 Cherokee and Wagoneer
Sending Unit Template**

Diagnosis and Repair Bulletin

Subject: Inability to Obtain W.O.T. or Actuate the Choke Unloader

Application: 1978 Wagoneer, Cherokee, and Truck Models

**File: POWER PLANT
Fuel and Exhaust Systems**

No. 8-05 April 20, 1978

Some owners of 1978 Wagoneer, Cherokee, and Truck models may find it difficult to obtain wide open throttle or release the choke by depressing the throttle pedal. This may be the result of inadequate throttle travel.

Service correction involves inspecting for wide open throttle and unloader actuation, and correcting the throttle travel in accordance with the following inspection and repair procedures.

INSPECTION

- (1) Position drop light for proper visual inspection of throttle linkage travel.
- (2) Push throttle pedal down to wide open throttle position.
- (3) Observe position of carburetor linkage in relationship to throttle stop (see figures 1, 2, and 3).

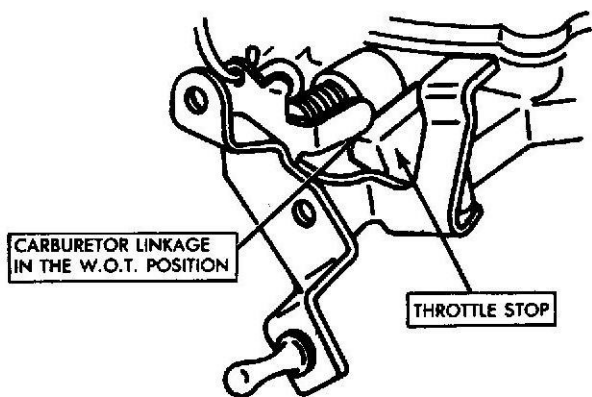


Fig. 1 258 2-V

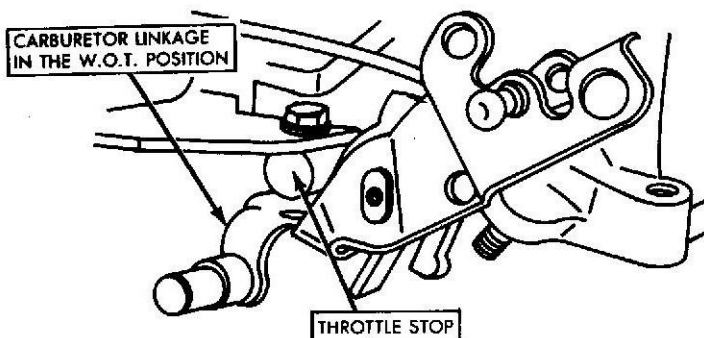


Fig. 2 360 2-V

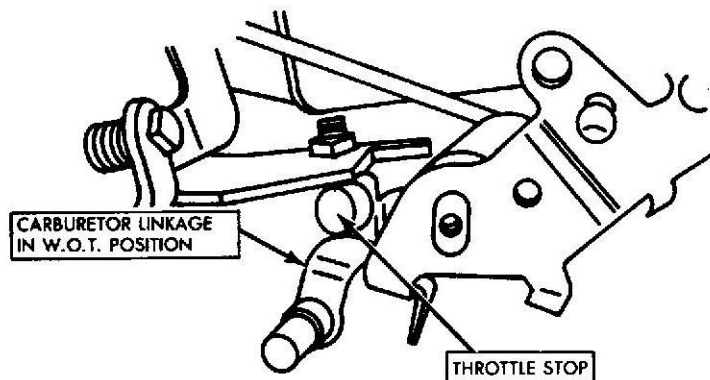


Fig. 3 360/401 4-V

(4) If carburetor linkage contacts throttle stop, throttle linkage geometry is correct. Proceed to step (5). If linkage does not contact throttle stop, proceed to Repair Procedure.

(5) Remove drop light and return vehicle to owner.

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REPAIR PROCEDURE

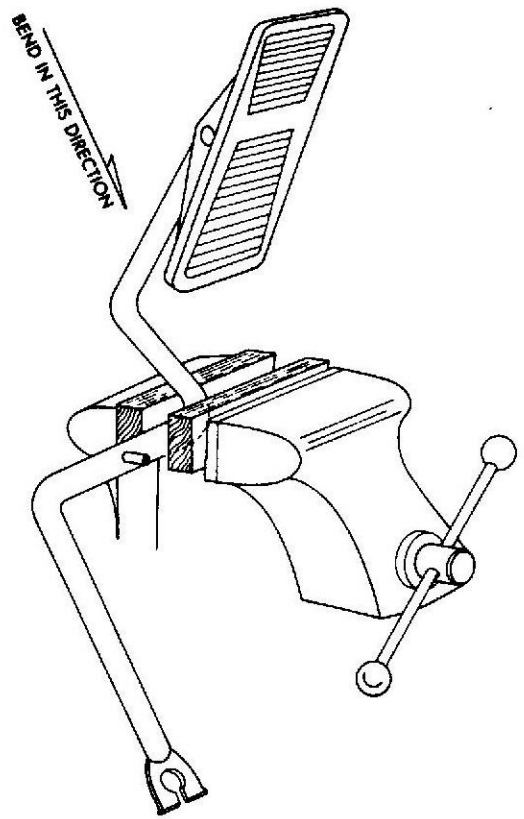


Fig. 4

- (1) Have helper hold accelerator pedal to floor.
- (2) Measure distance between throttle linkage and carburetor stop and record measurement.
- (3) Remove three throttle pedal retaining screws.
- (4) Disconnect throttle cable from pedal bellcrank.
- (5) Remove bellcrank assembly from vehicle.

(6) Place bellcrank in vise using wood or suitable material to protect bellcrank.

CAUTION: *The vise must have protective material on the jaws to prevent damage to the accelerator bellcrank pivot surface.*

(7) Bend accelerator bellcrank as shown in figure 4, distance recorded in step (2).

CAUTION: *Do not bend more than the required amount as this would strain the linkage at wide open throttle.*

(8) Remove bellcrank from vise.

(9) Position bellcrank with inner and outer brackets on firewall of vehicle.

NOTE: *Position throttle bellcrank on firewall side of the kickdown switch lever on automatic transmission equipped vehicles.*

(10) Install three bellcrank retaining screws.

(11) Connect throttle cable to bellcrank.

(12) Check for wide open throttle.

(13) If required repeat steps (2) through (12).

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME		SKILL LEVEL
				78		
LINKAGE, THROTTLE — INSPECT . .	4.050	4735	WAG-CKE-TRK		.1	G
Bellcrank — Adjust		A			.2	G

8-028-04J

Diagnosis and Repair Bulletin

Subject: Cold, Hard Starting	Application: 1978 Cherokee and Truck Models With 258 CID Engine and 2V Carburetor	File: POWER PLANT Fuel and Exhaust Systems
		No. 8-04 December 21, 1977

Some owners of 1978 Cherokee and Truck models with 258 CID engine and 2V carburetor may complain of a cold, hard starting problem.

Service correction involves replacing the choke housing baffle plate restrictor and changing the initial choke valve clearance, fast idle cam setting, and the choke cover setting. The following part will be required.

Description	Quantity	Part No.	Group
Plate, Baffle Restrictor	1	8129399	4.001

NOTE: Parts for this bulletin will be available the week of January 30, 1978. Do not order parts before this date.

PROCEDURE

- (1) Remove air cleaner.
- (2) Remove choke cover.
- (3) Remove choke heat inlet baffle restrictor plate.
- (4) Install replacement choke heat inlet baffle restrictor plate.
- (5) Install choke cover, turn 1/4 turn rich and tighten one retaining screw.
- (6) Open throttle valve setting to place fast idle screw on high step of cam.
- (7) Pull diaphragm against stop using tool No. J23738 or any vacuum source which holds at least 19 inches of mercury (Hg).
- (8) Measure clearance between choke plate and air horn wall. Refer to Carburetor, Service Specifications Chart.
- (9) Adjust initial choke valve clearance.
 - (a) Open throttle slightly and place fast idle screw on second step of cam to obtain the new fast idle cam position.
 - (b) Measure and adjust distance between choke plate and air horn wall. Refer to Carburetor Service Specification Chart.

NOTE: Adjust clearance by bending fast idle cam link down to increase measure or up to decrease measurement.

- (10) Loosen choke housing cover screw and set to index.
- (11) Tighten choke housing retaining screws.
- (12) Install air cleaner.
- (13) Verify problem has been corrected.

Carburetor Service Specifications Chart

List Number	Application	Float Level		Vacuum Piston Gap		Initial Choke Valve Clearance		Fast Idle Cam Setting		Automatic Choke Cover Setting (Notches Rich)		Accelerator Pump Dimensions		Choke Unloader	Fast Idle Speed		Choke Bimetal ID
		Set To	OK Range	Set To	OK Range	Set To	OK Range	Set To	OK Range	Set To	OK Range	Set To	OK Range		Set To	OK Range	
8107	258 Manual Automatic 49 State	0.25	0.218 to 0.282	0.040	0.025 to 0.055	0.150	0.135 to 0.165	0.110	0.095 to 0.125	INDEX	1/2 NR to 1/2 NL	0.440	0.420 to 0.460	0.280	1700	1650 to 1750	T

¹ Hot with TCS Solenoid and EGR disconnected

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
PLATE, BAFFLE — INSTALL..... Includes carburetor adjustment	4.805	4067	CKE-TRK	—	0.3	—	G

8-013-04J

Diagnosis and Repair Bulletin

Subject: California Emission, Carburetion, and Tune-Up Specifications — Addition to Volume I of the 1978 Jeep Technical Service Manual

Application: 1978 California Wagoneer, Cherokee and Truck Models With 360 CID Engine, 2V Carburetor and Automatic Transmission

File: POWER PLANT Fuel and Exhaust Systems

No. 8-03 December 8, 1977

This bulletin is being issued to add the new emission, carburetion and tune-up specifications for 1978 California Wagoneer, Cherokee and Truck models with 360 CID engine, 2V carburetor and automatic transmission.

Reference to this bulletin should be noted on the appropriate charts in Section 1A and 1J in Volume I of your 1978 Jeep Technical Service Manual.

Page 1A-2

Emission Components — California

Engine CID and Venturis	Series	Trans.	Air Guard	Cat. Conv.	EGR	EGR CTO Temp.	Fuel Tank Vapor Control	PCV	TAC Type	TCS	Spark CTO	Spark CTO Temp.	Carb. Vent to Can.	Elect. Choke	Throttle Solenoid
360 2V	CKE WAG TRK	A	•	•	•	115F	—	•	V	—	—	—	•	—	•

Page 1A-22

Idle Drop — California

Engine	Transmission	Emission Package	Idle Drop (Rpm)
360 2V	Auto	Cal	20

Page 1J-51

Tune-Up Specifications — On Vehicle — California

Engine CID and Carburetion	Transmission	Initial Timing at Curb Idle or Less With Vacuum Hose Disconnected		Curb Idle Speed — RPM (Auto in Drive, Manual in Neutral)		Distributor Model Number	Vacuum Unit Number	Total Degrees Advance at 2000 RPM	Centrifugal Advance	Spark Plug Type
		Set To	OK Range	Set To	OK Range					
360 2V	A	10° BTDC	8° 12°	700	600 800	3233174	YA-12	27.5 to 37.0	6 to 10.5 @ 2000	N12Y 0.035

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Model 2100 Carburetor Specifications — California

List Number	Application	Float Level (Wet)		Float Level (Dry)	Initial Choke Valve Clearance		Fast Idle Cam Setting		Automatic Choke Cover Setting (Notches Rich)		Choke Unloader	Fast Idle Speed		Bowl Vent Clearance	Choke Bimetal ID
		Set To	OK Range		Set To	OK Range	Set To	OK Range	Set To	OK Range		Set To	OK Range		
8RHA2C	360 Automatic California	0.93	0.868 to 0.922	0.555	0.136	0.113 to 0.159	0.126	0.111 to 0.141	2	1-½ to 2-½	0.250 MIN.	1600	1500 to 1700	0.120	TFA

8-021-04J



PRODUCT RECALL CAMPAIGN

Diagnosis and Repair Bulletin No. 8-02

Subject:

JSP... Campaign (Type S Product Recall Campaign)
 Addition of an Accelerator Return Spring

SAFETY

Date: December 06, 1977

Application: 1978 Cherokee and Truck Models as Specified Below

File: POWER PLANT Fuel and Exhaust Systems

This is a Type S Campaign, subject to all campaign procedures and involving safety-related elements. A copy of the combined owner notification and correction reporting card for this campaign is shown in Figure 2.

Another accelerator return spring is being added to all 1978 Jeep Cherokee and Truck models with a 258 CID engine and 2V carburetor, built between VINs J8XXXXC000008 and J8XXXXC037866, to assure that the throttle will close rapidly under the most extreme operating conditions.

The following part is required.

Description	Quantity	Part No.	Group
Spring -Accelerator Return	1	SF-5358241	4.080

The zone will provide a VIN list and an initial supply of parts for each dealer with any vehicles involved. However, the campaign procedures apply to all dealers. On all undelivered, campaign-involved vehicles, the correction must be made before the vehicle is sold or otherwise put into service.

Additional parts can be ordered, as needed, on or after December 21, 1977.

PROCEDURE

- (1) Connect short end of accelerator return spring into carburetor lever-to-accelerator cable bracket (in same hole as existing spring) (see Figure 1).
- (2) Connect long end of accelerator return spring into forward hole of carburetor pull back spring bracket (see Figure 1).
- (3) Check throttle operation.

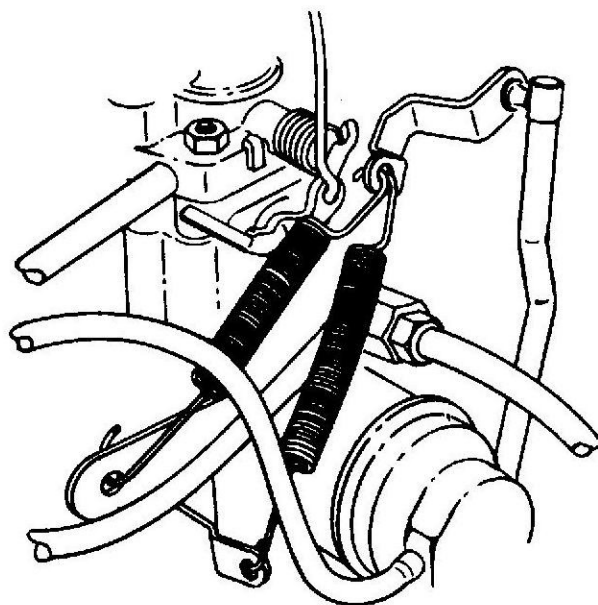


Fig. 1 Carburetor Return Springs

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
SPRING, CARBURETOR RETURN— INSTALL (JSPRING CAMPAIGN) Applicable Defect Code: 56-Product Recall Campaign	4.082	4117	CKE-TRK	—	0.1	—	G

CLAIM HANDLING

Several vehicles may be listed on a single RFC/RO form, Reference Warranty Administration Manual, Section 7, Product Recall Campaign.

CAUTION: On multiple-vehicle claims, do not delay any claim so that we will receive it beyond the time limit outlined in the WAM.

Complete and mail the reporting half of the notification card (Figure 2) for each vehicle as soon as campaign service is complete.

Side 1 Notice of Product Recall Campaign Involving Your Vehicle

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Jeep Corporation has determined that some 1978 model Jeep Trucks and Cherokees equipped with six-cylinder engines and two-barrel carburetors fail to conform to Federal Motor Vehicle Safety Standard No. 124, ACCELERATOR CONTROL SYSTEMS. The Standard requires that your Jeep vehicle should rapidly return to idle speed when you remove your foot from the accelerator pedal even if an accelerator return spring should become disconnected or severed.

Your Jeep vehicle, which is identified on the reverse side of the card, is being recalled by Jeep Corporation to have another accelerator return spring added. This spring will be installed to ensure that your vehicle will return to idle speed under conditions specified by the Standard.

If your accelerator return spring does become disconnected or severed before the campaign service is completed, the vehicle may not return to idle speed rapidly. If you should experience a slower-than-normal return to idle, this may be a warning of the spring condition and if not heeded, could lead to a vehicle crash. Should this happen, exercise extreme caution in driving and take your vehicle to your dealer for service as soon as possible.

Jeep Corporation recommends, for your safety, that you contact your dealer now to arrange an appointment to have your vehicle serviced. Your dealer will be prepared to service your vehicle and have the necessary parts by December 26, 1977. This correction usually requires no more than one-half hour and will be performed at no charge to you.

If your dealer should be unable to handle this campaign service promptly, please contact the local Zone Office (listed in your Owner's Manual) or Jeep Corporation, Owner Relations, 14250 Plymouth Road, Detroit, Michigan 48235 (Telephone No. (313) 493-2341). If you are unable to obtain this campaign service without charge and within 90 days after your transfer of the vehicle to your dealer at any time following December 26, 1977, you may contact the Administrator, National Highway Traffic Safety Administration, Washington, D.C. 20590.

When your vehicle goes in for the required attention: **Please be sure this complete notification card goes with it because the card is to be used by the dealer for reporting purposes.** In case you do not now own this vehicle, please send us the "Change of Ownership" information, using side 2 of this card.

**American Motors Corporation
Campaign Data Reporting Section**

**National Traffic and Motor Vehicle Safety Act of 1966
Product Recall Campaign Reporting Card**

Instructions: OWNER

If you do not now own this car, please just fill in below (either a, b or c) and MAIL DIRECTLY TO AMERICAN MOTORS.

a. Sold or Traded to: _____
Name (Please Print)

Address _____

City _____ State _____

b. Present owner name and address not known

c. Removed from service because of collision damage or otherwise

VIN (Vehicle Identification Number) _____

Instructions: DEALER

This section is for the dealer to use when your car goes in for the required attention.

Correction made

Zone and Dealer Code

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JSPRING CAMPAIGN (773)

Dealer Signature _____

Date Car Serviced _____

**American Motors Corporation
Campaign Data Reporting Section**

Fig. 2 Owner Notification and Correction Reporting Card

Diagnosis and Repair Bulletin

Subject: Possible Hesitation or Stumble on Initial Acceleration

Application: 1978 Wagoneer, Cherokee and Truck Models With 360 CID, V8 Engine and 2V Carburetor (Except California)

File: POWER PLANT Fuel and Exhaust Systems

No. 8-01 November 21, 1977

Some owners of 1978 Wagoneer, Cherokee, or Truck models equipped with 360 CID, V-8 engine and 2V carburetor may complain of hesitation or stumble on initial acceleration.

another problem such as excessively lean carburetor fuel mixture, disconnect vacuum line, incorrect ignition timing, or by dirt in the fuel system.

Service correction involves installing a delay valve in the vacuum hose between the EGR valve and the CTO switch. The following part will be required:

PROCEDURE

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Valve, Delay	1	5355276	4.700

(1) Cut vacuum hose mid-way between EGR valve and CTO switch.

(2) Install delay valve between cut ends of hose.

NOTE: Before performing the procedure outlined in this bulletin be sure that the condition is not caused by

NOTE: Delay valve is to be installed with red end of valve toward CTO switch and blue end toward EGR valve.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
VALVE, DELAY — INSTALL	4.700	4273	WAG- CKE- TRK	—	0.2	—	G

8-010-04J

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Improved Procedures for Clutch Overcenter Spring and Clutch Pedal Replacement

Application: 1977-79 CJ Models

**File: CHASSIS
Clutch - Manual
Transmission
Group 6.000**

No. 9-02 July 18, 1979

Improved procedures for replacing the clutch overcenter spring and clutch pedal on CJ Models have been developed. They supersede the procedures outlined in the 1977-79 Jeep Technical Service Manuals. The new procedures are as follows:

PROCEDURES

Clutch Overcenter Spring Replacement

(1) Remove windshield washer hose grommet from engine compartment side of dash panel (see illustration).

(2) Feed 3-foot long double strand of mechanics wire through grommet hole. Wrap wire around end of clutch pedal overcenter spring and feed wire back out of grommet hole. Twist ends of wire together securely to form loop.

(3) Insert 2 x 4 board through looped end of wire. Position second 2 x 4 board against dash panel to pry against.

CAUTION: *Be sure the 2 x 4 boards do not contact any of the brakelines during overcenter spring removal or installation.*

(4) Position bottom end of 2 x 4 board inserted in looped end of wire against 2 x 4 on dash panel and pull back on board to release clutch overcenter spring from clutch pedal.

(5) Disconnect overcenter spring from brake pedal support bracket (under instrument panel).

(6) Connect replacement overcenter spring to brake pedal support bracket.

(7) Install mechanics wire on overcenter spring and position spring on lower portion of clutch pedal.

(8) Pull 2 x 4 board (with wire wrapped around it) forward until overcenter spring slides into and seats in pedal slot.

NOTE: *As the spring is pulled forward, it will ride along the pedal edge until it seats in the pedal slot.*

(9) Remove boards and mechanics wire.

(10) Install windshield washer hose grommet in dash panel.

(11) Check and adjust clutch pedal free play if necessary.

Clutch Pedal Replacement

(1) Disconnect clutch pedal push rod at bellcrank.

(2) Disconnect battery negative cable.

(3) Remove fuse panel attaching screws and remove fuse panel.

(4) Remove windshield washer hose grommet from dash panel (see illustration).

(5) Feed 3-foot long double strand of mechanics wire through windshield washer grommet hole. Wrap wire around end of clutch overcenter spring and feed wire back out through grommet hole. Twist wire ends together securely to form loop.

(6) Insert 2 x 4 board through looped end of wire. Position second 2 x 4 board against dash panel to pry against.

CAUTION: *Be sure the 2 x 4 boards do not contact any of the brakelines during overcenter spring removal.*

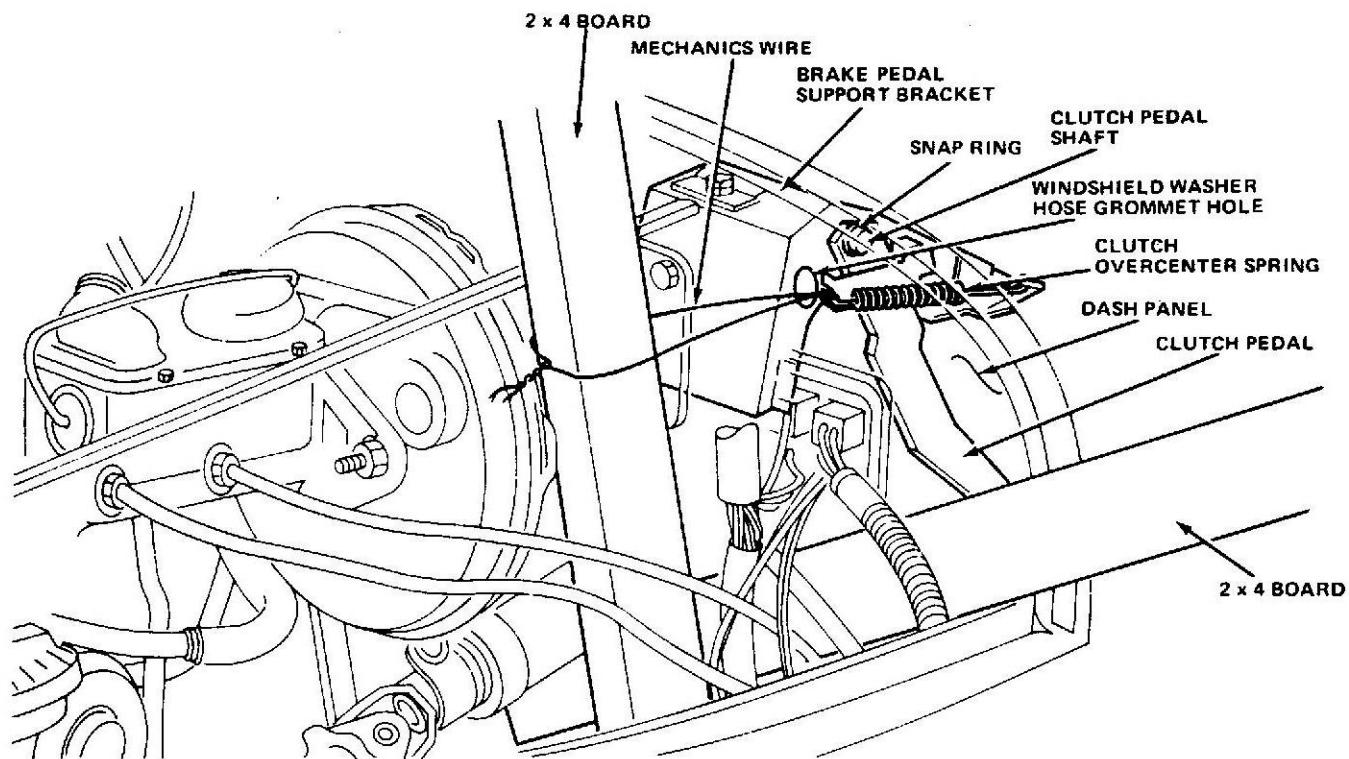
(7) Position bottom end of 2 x 4 board inserted in looped end of wire against 2 x 4 on dash panel and pull back on board to release clutch overcenter spring from clutch pedal.

(8) Remove snap ring on end of pedal shaft and remove clutch pedal from shaft.

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CLUTCH OVERCENTER SPRING INSTALLATION

- (9) Install replacement clutch pedal on shaft and install snap ring.
- (10) Install fuse panel.
- (11) Connect clutch pedal push rod to bellcrank.
- (12) Position overcenter spring-end on brake pedal support bracket.
- (13) Pull forward on 2 x 4 board until overcenter spring slides into and seats in pedal slot.

NOTE: As the spring is pulled forward, it will ride along the pedal edge and snap into the pedal slot.

- (14) Remove mechanics wire and 2 x 4 boards.
- (15) Install windshield washer hose grommet in dash panel.
- (16) Connect battery negative cable.
- (17) Check and adjust clutch pedal free play if necessary.

The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
PEDAL, CLUTCH—REPLACE.	5.135	5006	83-93	.4	.4	.4	G
SPRING, CLUTCH OVERCENTER—REPLACE	5.973	5010	83-93	.3	.3	.3	G

9-100-05J

Diagnosis and Repair Bulletin

Subject: Model T-150, 3-Speed Manual Transmission With Interflow Lubrication System

Application: 1978 CJ Models Built After VIN J8FXXXX097193

File: CHASSIS Clutch - Manual Transmission

No. 8-03 June 23, 1978

The interflow lubrication system that is presently used in the T-15A, 3-speed manual transmission has now been incorporated into the T-150, 3-speed manual transmission. As a result of the incorporation of the interflow lubrication system into the Model T-150 transmission, changes have been made in transmission component design, lubricant level requirements, and service parts information. Pertinent information pertaining to each of these areas is as follows:

TRANSMISSION COMPONENT DESIGN CHANGES

- Four holes have been added to the rear face of the transmission case for venting and oil circulation between the transmission and transfer case (Fig. 1).
- The transmission to transfer case gasket has been redesigned as shown (Fig. 1).
- The transmission adapter plate seal has been eliminated.
- The rear oil slinger has been relocated to a position in front of the rear ball bearing (Fig. 2).

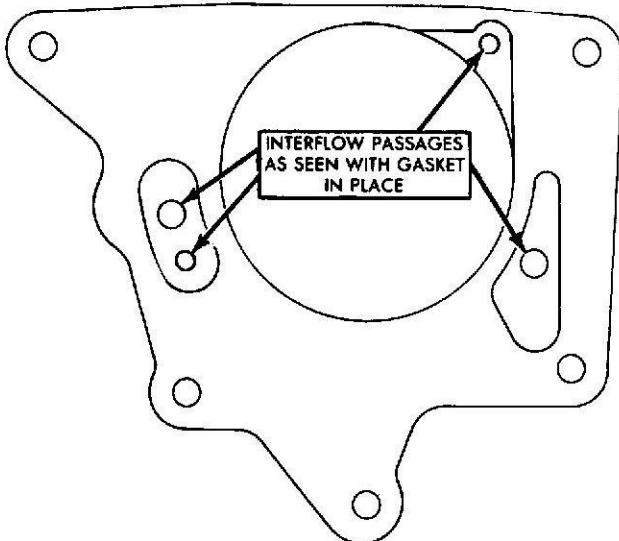


Fig. 1 Tremac 3-Speed Manual Housing With Interflow Lubrication System

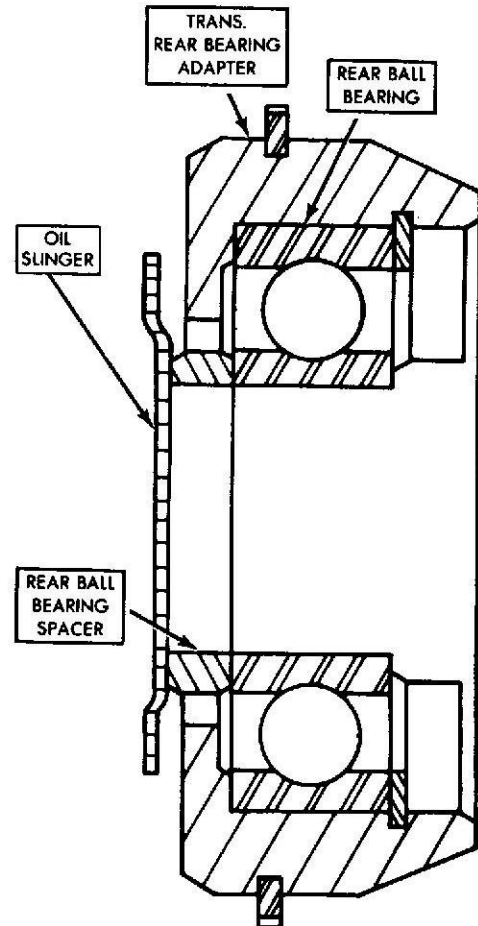


Fig. 2 Tremac 3-Speed Manual Transmission Rear Bearing Adapter, Rear Ball Bearing, and Oil Slinger

LUBRICANT LEVEL REQUIREMENTS

The transmission and transfer case lubricant level requirements are listed on the following chart.

Capacities	U.S. Measure	Imperial Measure	Metric Measure
Transmission	3 pints	1.06 Imp. Qts.	1.4 Liters
Transfer Case	3 pints, 12 oz.	1.24 Imp. Qts.	1.8 Liters

(OVER)

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Additional copies of this bulletin are available through your zone office.

The oil levels may vary by a pint or so from one unit to the other when checked; however, regardless of overfill condition, the oil levels should be corrected to the proper level.

NOTE: *If the transmission is found to be underfilled and the transfer case is correctly filled or underfilled, the system was not correctly filled at the last servicing or there is a leak in the transmission or transfer case. Check and correct leaks and correct the oil levels.*

SERVICE PARTS INFORMATION

Transmissions equipped with the interflow lubrication system have four parts that are unique and not

interchangeable with non-interflow lubrication system transmissions: transmission case, transmission-to-transfer case gasket, oil slinger, and rear bearing adapter. Part numbers for the transmission case, oil slinger, and rear bearing adapter will be forthcoming from the parts division as soon as they are available.

CAUTION: *The new transmission-to-transfer case gasket (5359022) is available and must be used in all repairs involving the Model T-150, 3-speed manual transmissions which have the interflow lubrication system.*

The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.

8-062-06J

PRODUCT RECALL CAMPAIGN

Diagnosis and Repair Bulletin No. 8-02

Subject:

TRANLUB Campaign (Type S Product Recall Campaign): Three Speed Transmission Adapter Plate Seal May Be Improperly Seated.

Date: April 11, 1978

Application: 1976, 1977, and 1978 CJ-5, CJ-6, and CJ-7 Models as Specified Below

File: CHASSIS Clutch - Manual Transmission

This is a Type S Campaign, subject to all campaign procedures and involving safety-related elements. Copies of the combined owner notification and correction reporting cards for this campaign are shown in Figure 4 and Figure 5.

1976, 1977, and 1978 CJ-5, CJ-6, and CJ-7 Jeep vehicles equipped with a 3-speed transmission may have been built with the transmission adapter plate seal improperly seated. This condition could allow the gradual transfer of lubricant from the transmission to the transfer case. If lubricant transfer takes place the transmission could eventually become damaged and inoperative.

Vehicles involved include 1976 CJ models between VINs J6F93FH000015 and J6F93AH102513, 1977 CJ models between VINs J7F83AA000008 and J7F93AA128208, and 1978 CJ models between VINs J8F83AH000071 and J8F93AA064933.

Vehicles built before April, 1977 will require a transfer case lubricant level inspection. If the inspection indicates that four or more ounces of excess lubricant are present in the transfer case, seal replacement is required. Proceed to the TRANSMISSION OIL LEVEL INSPECTION PROCEDURE.

Vehicles built from April 1, 1977 through December 16, 1977 require mandatory transmission adapter plate seal and spacer replacement. **THESE VEHICLES DO NOT REQUIRE INSPECTION;** proceed to the TRANSMISSION ADAPTER PLATE SEAL REPLACEMENT PROCEDURE.

The following parts may be required:

Description	Qty.	Part Number	Group	Dealer Net
Seal, Transmission Adapter Plate	1	5358980	6.053-2	1.29 ea.
Spacer	1	5359069	6.053-20	.15 ea.
Gasket, transfer case to transmission	1	5358840	18.001-3	.21 ea.

The Zone will provide a VIN list and an initial supply of parts for each dealer with any vehicles involved. However, the campaign procedures apply to all dealers. On any undelivered, campaign-involved vehicle, the correction must be made before the vehicle is sold or otherwise put into service.

Additional parts can be ordered, as needed, on or after May 22, 1978.

TRANSMISSION OIL LEVEL INSPECTION PROCEDURE

- (1) Obtain a paper cup and remove lip so excess transfer case lubricant can be caught when fill plug is removed.
- (2) Remove transfer case fill plug and catch all excess oil that flows out filler hole (see fig. 1). Pour excess oil into measuring cup graduated in ounces.

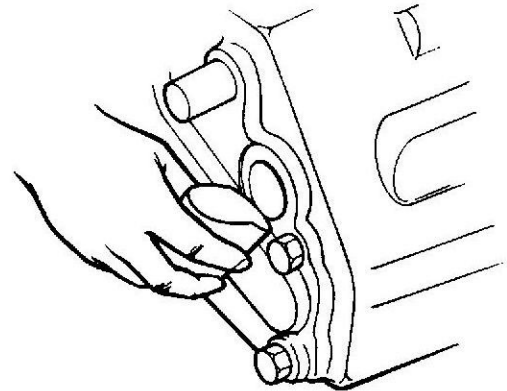


Fig. 1 Collecting Excess Lubricant with Paper Cup.

NOTE: In the event that a graduated cup is not available, the inside cavity of Installer Tool J-26852 can be used to measure the lubricant (see fig. 2).

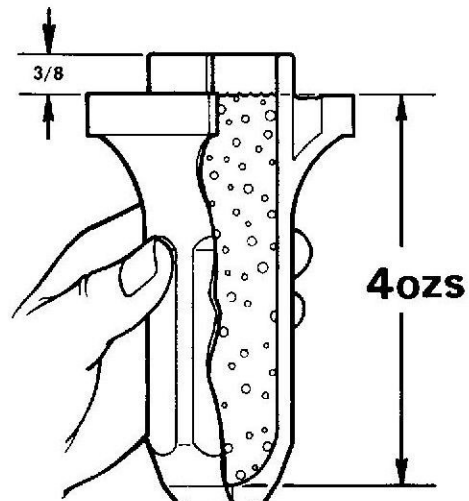


Fig. 2 Using Tool J-26852 to Measure Lubricant.

(3) If excess lubricant exceeds four ounces, transmission adapter plate seal replacement is necessary. Refer to the Transmission Adapter Plate Seal Replacement Procedure in this Diagnosis and Repair Bulletin.

(4) If excess lubricant is less than four ounces, adapter plate seal is properly positioned. Install fill plug.

(5) Remove transmission fill plug and check lubricant level. Correct lubricant level if necessary.

(6) Install transmission fill plug.

(7) Apply a daub of white paint above transmission fill plug to identify campaign completion.

TRANSMISSION ADAPTER PLATE SEAL REPLACEMENT PROCEDURE

(1) Remove shift lever knob, trim ring, and boot from transmission and transfer case shift levers.

(2) Remove floor covering (if equipped) and remove transmission access cover from floorpan.

(3) Place transmission lever in first gear position and firmly secure it using rope or equivalent material.

NOTE: The shift lever must be secured as described to prevent the rear bearing retainer from moving outward when the transfer case mainshaft gear locknut is removed. If the rear bearing retainer is allowed to move outward the internal transmission parts may separate. If the internal parts separate, the transmission will have to be removed for reassembly.

(4) Raise vehicle.

NOTE: A visual inspection of the transmission and transfer case should be made. If oil leakage is evident, the cause of leakage must be eliminated.

(5) Drain transfer case and transmission lubricant.

(6) Disconnect torque reaction bracket from crossmember.

(7) Position support stand under clutch housing to support engine and transmission.

(8) Remove rear crossmember.

(9) Disconnect front and rear propeller shaft yokes and mark for assembly reference.

(10) Disconnect speedometer cable at transfer case.

(11) Remove bolts attaching transfer case to transmission and remove transfer case. Remove transfer case gasket.

NOTE: One transfer case attaching bolt must be removed from the front end of the case. This bolt is located at the bottom right corner of the transmission.

(12) Remove transfer case mainshaft gear, washer, and locknut.

(13) Remove adapter plate seal from rear bearing adapter.

(14) If oil slinger is found behind seal, remove it.

(15) Clean oil from transmission adapter plate and rear bearing adapter.

(16) Inspect transfer case mainshaft gear sealing surface for smooth finish to assure seal lip seating. Replace the gear if the sealing surface is not smooth.

(17) Inspect inside diameter of rear bearing adapter for smooth surface to assure proper sealing between adapter bore and seal housing. Replace the rear bearing adapter if the inside diameter surface is not smooth.

(18) Install spacer in place of oil slinger, if originally equipped with oil slinger.

NOTE: If the transmission did not originally have an oil slinger, a spacer must not be installed.

(19) Coat adapter plate seal lip with gear lubricant.

(20) Slide seal onto Installer Tool J-26852.

NOTE: The adapter plate seal is stamped FRONT and REAR on the seal housing. When the seal is correctly positioned on the seal installer, the side marked REAR is against the seal driving surface of the installer. (see Fig. 3)

NOTE: Seal Installer Tool J-26852 must be used to install the adapter plate seal to assure proper alignment and sealing.

(21) Slide transfer case mainshaft gear onto mainshaft. Apply hand pressure against gear and check clearance between forward surface of transfer case mainshaft gear and rear face of adapter plate seal. Clearance should be no less than .050" at any point between seal housing and mainshaft gear. If clearance is less than .050" use Installer Tool J-26852 to reseat adapter plate seal and repeat clearance check.

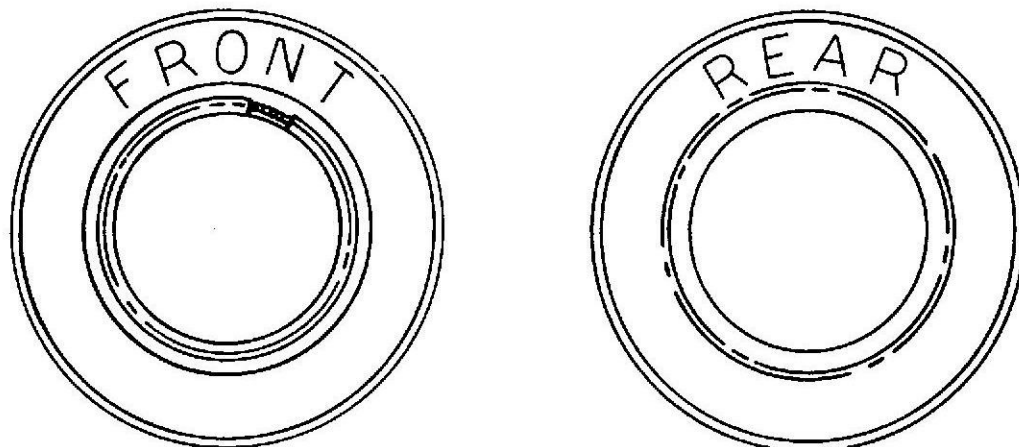


Fig. 3 Adapter Plate Seal.

(22) Install transmission mainshaft washer and lock-nut. Tighten nut to 150 foot pounds torque (205 newton meters).

(23) Install transmission-to-transfer case gasket on transmission.

(24) Shift transfer case to 4L position.

(25) Install one 3/8 - 16 x 4-inch dowel pin on each side of transmission to assist in guiding transfer case into place during installation.

(26) Install and position transfer case on dowel pins.

(27) Rotate transfer case output shaft (by turning yoke) until mainshaft gear on transmission engages rear output shaft gear in transfer case. Slide transfer case forward until case seats against transmission.

CAUTION: *Be sure the transfer case is flush against the transmission. Severe damage to the transfer case will result if the attaching bolts are tightened while the transfer case is in a bind or is cocked.*

(28) Install two transfer case tightening bolts but do not tighten completely.

(29) Remove dowel pins and install remaining transfer case attaching bolts. Tighten all bolts to 30 foot pounds torque (22 newton meters).

(30) Connect speedometer driven gear to transfer case.

(31) Connect front and rear propeller shafts to transfer case.

(32) Connect torque reaction bracket.

(33) Fill transmission and transfer case with SAE 80W-90 gear lubricant (API-G14). Fill each unit to bottom of fill plug hole.

(34) Apply a daub of yellow paint above transmission fill plug to identify campaign completion.

(35) Lower vehicle and remove rope or equivalent material securing shift lever.

(36) Install transmission plate on floorpan. Install floor covering, if equipped.

(37) Install boots, trim rings and shift knobs.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WRC	OPERATION NO.	MODEL	YEAR & TIME			SKILL LEVEL
				76	77	78	
TRANLUB CAMPAIGN LUBRICANT LEVEL - Inspect	6.613	6033	83-84-93	.2	.2	-	6
Seal, Adapter Plate - Replace	6.614	A	83-84-93	1.2	1.2	-	6
SEAL, ADAPTER PLATE - Replace	6.615	6035	83-84-93	-	1.2	1.2	6
Applicable Defect Code: 56 - Product Recall Campaign							

CLAIM HANDLING

Several vehicles may be listed on a single warranty claim, reference Warranty Administration Manual, Section 7, Product Recall Campaigns. The transmission adapter plate seal and oil slinger that is removed and replaced is a returnable part and must be tagged and returned with your regular claim material shipment.

Complete and mail the reporting half of of the notification card (Figs. 4 and 5) for each vehicle as soon as campaign service is complete.

CAUTION: *On multiple-vehicle claims, do not delay any claim so that we will receive it beyond the time limit outlined in the WAM.*

(See Reverse Side)

Side 1 Notice of Product Recall Campaign Involving Your Vehicle

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. Jeep Corporation has determined that a defect which relates to motor vehicle safety exists in some 1976, 1977 and 1978 CJ-5, CJ-6 and CJ-7 vehicles equipped with three-speed manual transmissions. A condition that allows a gradual displacement of lubricant from the transmission to the transfer case may exist in some of the vehicles. Your vehicle, identified on the reverse side of this card, should be inspected by your Jeep dealer. Any necessary corrections will be performed by your dealer at no charge to you.

Lubricant in the transmission may be displaced during normal vehicle operation. A low lubricant condition could cause the transmission to become damaged or inoperative and could lead to a loss of vehicle control and a crash without any prior warning.

If your transmission becomes difficult to shift, it may be a warning that the lubricant level is low and should be checked and refilled, if necessary. However, you may have no prior warning of lubricant displacement and should avoid driving at prolonged highway speeds until your vehicle has been inspected and repaired, if necessary, by your dealer. Your dealer will have the necessary parts and will be prepared to make repairs by May 22, 1978. The correction usually requires no more than ninety minutes and in many cases will require less than thirty minutes.

If your dealer should be unable to handle this campaign service promptly after May 22, 1978, please contact the local Zone Office (listed in your Owner's Manual) or Jeep Corporation, Owner Relations, 14250 Plymouth Road, Detroit, Michigan 48232 (telephone 313-493-2341). If you are unable to obtain this campaign service without charge and within 60 days after your tender of the vehicle to your dealer any time following May 22, 1978, you may contact the Administrator, National Highway Traffic Safety Administration, Washington, D.C. 20590.

When your vehicle goes in for the required attention: Please be sure this complete notification card goes with it because the card is to be used by the dealer for reporting purposes. In case you do not now own this vehicle please send us the "Change of Ownership" information, using side 2 of this card.

Product Recall Campaign Reporting Card

Instructions: OWNER

If you do not now own this vehicle, please just fill in below (either a, b, or c) and MAIL DIRECTLY TO AMERICAN MOTORS SALES CORPORATION

a. Sold or Traded to: _____
Name (Please Print)

Address _____

City _____ State _____

b. Present owner name and address not known

c. Removed from service because of collision damage or otherwise

VIN (Vehicle Identification Number): _____

Side 2, Please see side 1

Instructions: DEALER

This section is for the dealer to use when your vehicle goes in for the required attention

- Correction made
- Correction not required

Zone and Dealer Code					

Dealer Signature _____

Date Vehicle Serviced _____

Campaign Data Reporting Section

Fig. 4 Owner Notification and Correction Reporting Card for all 1976 Vehicles and 1977 Vehicles Built Before April 1977.

Product Recall Campaign Reporting Card

Instructions: OWNER

If you do not now own this vehicle, please just fill in below (either a, b, or c) and MAIL DIRECTLY TO AMERICAN MOTORS SALES CORPORATION

a. Sold or Traded to: _____
Name (Please Print)

Address _____

City _____ State _____

b. Present owner name and address not known

c. Removed from service because of collision damage or otherwise

VIN (Vehicle Identification Number): _____

Side 2, Please see side 1

Instructions: DEALER

This section is for the dealer to use when your vehicle goes in for the required attention

- Correction made

Zone and Dealer Code					

Dealer Signature _____

Date Vehicle Serviced _____

Campaign Data Reporting Section

Fig. 5 Correction Reporting Card for 1977 and 1978 Vehicles Built from April 1, 1977 through December 16, 1977.

Diagnosis and Repair Bulletin

**Subject: Manual Transmission Model T-15A
Shift Control Housing Technical Service
Manual Correction**

**Application: 1973 through 1978 Jeep
Technical Service Manuals**

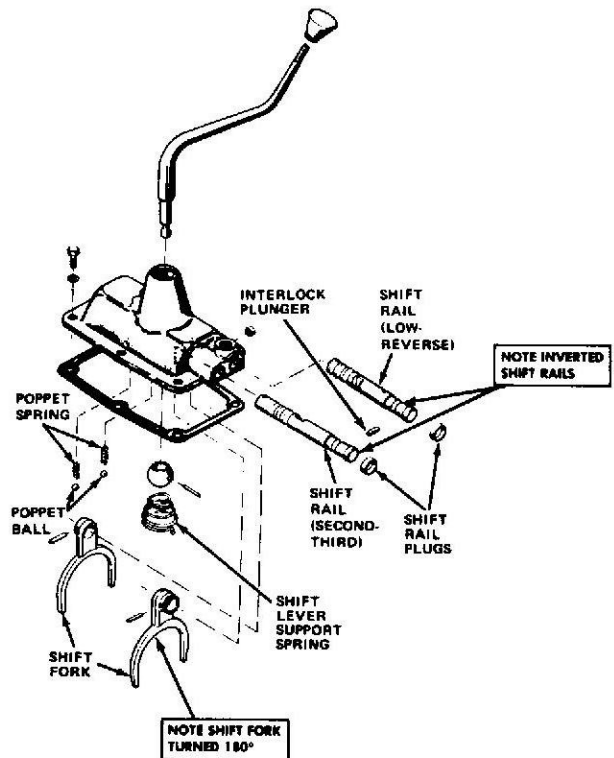
**File: CHASSIS
Clutch - Manual
Transmission
Group 6.000**

No. 8-01 March 6, 1978

This bulletin is being issued to correct an error in the illustration of the shift control housing used on Model T-15A manual transmissions.

The Technical Service Manual, page number, and illustration (Fig.) numbers are listed below. Also included is a corrected illustration.

<u>Technical Service Manual</u>	<u>Page</u>	<u>Illustration (Fig.) Number</u>
1973	6-5	Fig. 22
1974	6-8	Fig. 6-24
1975	6-8	Fig. 6-24
1976	6-17	Fig. 6-34
1977	6-17	Fig. 6-34
1978 Vol. 2	2B-18	Fig. 2B-35



8-045-06J

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Fluid Overflow From Automatic Transmission Fill Tube or Vent Tube Caused by Overfill or Vent Tube Restriction

Application: 1977-79 Jeep Models with Automatic Transmission

File: CHASSIS Automatic Trans. Group 7.000

No. 9-02 April 30, 1979

On some 1977-79 Jeep models with automatic transmission, fluid may overflow from the transmission fill tube or vent tube.

Service correction involves verifying the overflow condition, inspecting the vent tube for restrictions, checking the fluid level and calibrating the transmission dipstick if necessary.

PROCEDURE

(1) Inspect transmission fill tube and vent tube for evidence of fluid overflow.

(a) If tubes do not have evidence of overflow, return vehicle to owner.

(b) If tubes exhibit evidence of overflow, proceed to next step.

(2) Check transmission vent tube for restriction by inserting length of stiff wire into tube.

(a) If tube is restricted, repair as necessary and return vehicle to owner.

(b) If tube is not restricted, proceed to next step.

(3) Check transmission fluid level as outlined in appropriate Jeep Technical Service Manual. If fluid level is incorrect, adjust to proper level and road test vehicle with owner.

(a) If overflow does not occur during road test, return vehicle to owner.

(b) If overflow does occur during road test, proceed to step (4).

NOTE: *If an overflow condition occurs only when towing a trailer, the road test must be conducted with the trailer in tow.*

(4) Raise vehicle on hoist. Loosen vacuum modulator adapter retainer bolt. Pull modulator outward approximately 1/2 to 1-inch and drain one pint of fluid from transmission. Seat modulator and tighten modulator attaching bolt after draining fluid. Lower vehicle and road test to verify correction.

(5) Check fluid level again and file new mark on transmission dipstick at adjusted fluid level.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
OVERFLOW, AUTOMATIC TRANSMISSION—DIAGNOSE AND CORRECT	16.022	16205		0.8	0.8	0.8	G

9-063-17J

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Diagnosis and Repair Bulletin

Subject: Premature Part Throttle Kickdown

Application: 1978 Wagoneer and Cherokee Models With V-8 Engine and Automatic Transmission

File: CHASSIS Automatic Transmission

No. 8-0⁴ June 1, 1978

Some 1978 Wagoneer and Cherokee models with V-8 engines and automatic transmissions may have a sensitive 3-2 kickdown on light acceleration.

JM model transmissions built prior to JM32276 can be updated to correct premature kickdown by installing the new 3-2 valve spring. The following parts are available and required:

Description	Quantity	Part No.	Group
Spring, Control Valve Assembly (3-2 Valve)	1	8129681 (Green)	6.660
Gasket, Transmission Oil Pan	1	8626931	6.507-2

NOTE: When a vehicle with the described condition is returned to the dealer for service, the engine should first be checked to assure proper engine operation. On non-California vehicles, the EGR vacuum hose must have a vacuum delay valve inserted in the hose between the EGR valve and CTO switch. (Reference: Diagnosis and Repair Bulletin, Power Plant, Fuel and Exhaust System, No. 8-01, November 21, 1977).

PROCEDURE

- (1) Drain transmission.
- (2) Remove oil pan.
- (3) Remove filter.
- (4) Remove detent roller and spring.

NOTE: Do not remove detent solenoid. If detent solenoid is removed the valve body spacer plate and check balls will separate and fall.

- (5) Remove valve body.
- (6) Lift gasket slightly for access to 3-2 spring retaining pin. Using needle nose pliers, remove retaining pin, bore plug, 3-2 spring and spacer (Fig. 1).

NOTE: Be careful not to release 3-2 spring when removing retaining pin.

- (7) Install spacer, new 3-2 spring (green), bore plug, and retaining pin (Fig. 1).

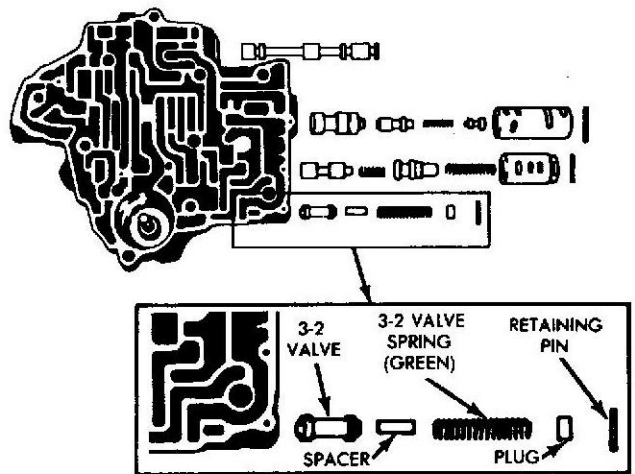


Fig. 1 Control Valve Assembly Spring

- (8) Install valve body and shift detent roller spring.
- (9) Torque all valve body bolts to 10 foot pounds.
- (10) Install filter and torque retaining bolts to 10 foot pounds.
- (11) Clean transmission oil pan and install new gasket.
- (12) Install pan and torque bolts to 13 foot pounds.
- (13) Lower vehicle.
- (14) Fill transmission with AMC, Dexron, or equivalent transmission fluid to specified level.
- (15) Road test vehicle.

(OVER)

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME		SKILL LEVEL
					78	
SPRING, 3-2 VALVE — REPLACE... Includes Road Test	16.195	6215	WAG-CKE		1.0	G
Valve, Delay — Install..... Except California	4.700	A			.1	G

8-068-06J

Diagnosis and Repair Bulletin

Subject: Automatic Transmission Vacuum Modulator Testing Procedure

Application: All 1974-1978 Jeep Models With Automatic Transmission

File: CHASSIS Automatic Transmission Group 6.000

No. 8-03 April 21, 1978

A new procedure has been developed for bench testing automatic transmission vacuum modulators. This information is supplemental to the procedures in Volume 2, page 2C-59 of the 1978 Technical Service Manual, but also applies to 1974-1977 vehicles.

If transmission operating characteristics, pressure tests or other diagnostic work indicates that a modulator may not be operating properly, use the results of the following tests to determine the condition of the modulator.

PROCEDURE

(1) Apply vacuum to modulator and observe plunger travel. Refer to Vacuum Modulator Movement Specifications Chart for vehicle model year, transmission model and vacuum readings, for approximate beginning and ending of modulator plunger travel.

NOTE: The transmission serial number is stamped on a metal plate attached to the right side of the transmission case. The serial number must be included in any communication involving parts ordering or requests for transmission information.

(2) Measure distance of plunger travel with maximum vacuum applied. Distance from plunger to edge of cylinder should measure approximately 5/8 inch (see Fig. 2).

NOTE: Maximum applied vacuum should remain constant for at least 30 seconds. If modulator will not hold vacuum as required, replace the modulator.

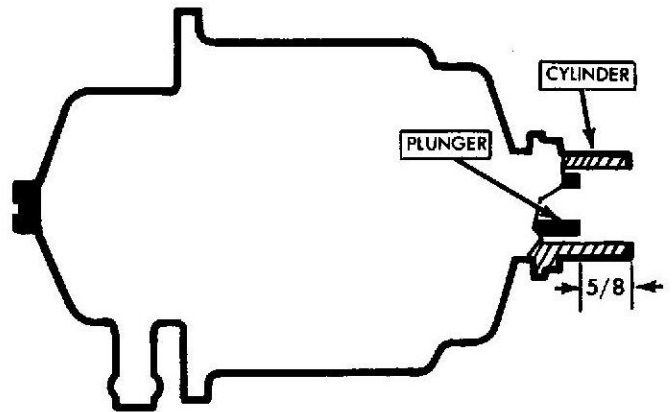


Fig. 2 Vacuum Modulator

YEAR	TRANSMISSION MODEL						
	JC	JH	JJ	JK	JM	JR	JS
1974	•	16 21	16 21	16 21	16 21	16 21	•
1975	•	16 21	16 21	16 21	16 21	16 21	•
1976	16 21	•	•	16 21	12 16	12 16	16 21
1977	16 21	•	•	16 21	12 16	12 16	16 21
1978	16 21	•	•	16 21	12 16	12 16	16 21

B — Approximate Vacuum at Which Beginning of Plunger Movement Should Occur
E — Approximate Vacuum at Which Ending of Plunger Movement Should Occur

All vacuum readings are in inches HG
 • Not Applicable

Fig. 1 Vacuum Modulator Movement Specifications Chart

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
VACUUM MODULATOR — TEST	16.260	6272		0.1	0.1	0.1	G

8-060-17J

Diagnosis and Repair Bulletin

Subject: Gear Shift Knob Replacement

**Application: 1976-1978 Jeep Models
With Automatic Transmission**

**File: CHASSIS
Automatic Transmission
Group 7.000**

No. 8-02 March 28, 1978

When a shift lever knob is in need of replacement on a 1976-1978 Jeep model with automatic transmission, it is no longer necessary to replace the shift lever and knob as an assembly.

NOTE: Replacement shift lever knob can also be used on 1973-1975 Jeep Models with automatic transmission.

The following part is available and required:

Description	Quantity	Part No.	Group
Knob, Shift Lever	1	3216462	7.030

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
KNOB, GEAR SHIFT LEVER — REPLACE	7.030	7022		.2	.2	.2	G

8-043-BSA/J

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Diagnosis and Repair Bulletin

Subject: Transmission Hunting

Application: 1978 Wagoneer, Cherokee, and Truck Models With 360 CID, V8 and 2V Carburetors (Except California)

File: CHASSIS Automatic Transmission

No. 8-01 February 12, 1978

Some owners of 1978 Wagoneer, Cherokee, or Truck models equipped with 360 CID, V8 engine and 2V carburetor may complain of the transmission downshifting to second gear at moderate throttle opening after the 2-3 shift. Transmission hunting occurs when the EGR valve opens causing a vacuum drop which downshifts the transmission from third to second. This condition can occur in rapid succession at a constant throttle on a slight upgrade.

Service correction involves installing a delay valve in the vacuum hose between the EGR valve and CTO switch. The following part is required and is presently available:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Valve, Delay	1	5355276	4.700

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
VALVE, DELAY – INSTALL	4.700	4273	WAG-CKE-TRK		0.2		G

8-034-16J

NOTE: Before performing the procedure outlined in this bulletin be sure that the condition is not caused by another problem such as excessively lean carburetor fuel mixture, disconnect vacuum line, incorrect ignition timing, or by dirt in the fuel system.

PROCEDURE

- (1) Cut vacuum hose mid-way between EGR valve and CTO switch.
- (2) Install delay valve between cut ends of hose.

NOTE: Delay valve is to be installed with red end of valve toward CTO switch and blue end toward EGR valve.

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Diagnosis and Repair Bulletin

Subject: Improved Stick-Slip Correction Procedure

Application: 1973-79 Jeep Vehicles With Quadra-Trac Transfer Case

File: CHASSIS Transfer Case/Quadra-Trac

No. 9-01 Jan. 12, 1981

This bulletin supercedes Technical Bulletins Number 2, 7600 Series, Number 5, 7500 Series, Number 6, 7400 Series, and Number 13, 7300 Series, Group 18.000, dated February 9, 1976. Remove and destroy these bulletins and replace them with this current bulletin.

The Quadra-Trac transfer case in some 1973-79 Jeep vehicles may develop a low frequency pulsating grunting, or rasping noise that occurs when cornering at slow speed or when parking the vehicle. This noise may occur if the Quadra-Trac differential brake cones tend to stick then release suddenly or release at different torque values. This condition is referred to as stick-slip.

To counteract this condition, a new Quadra-Trac lubricant has been developed to correct stick-slip. When the new lubricant is used, a transfer case remote vent kit must also be installed. Because water adversely affects performance of the new lubricant, the vent kit must be used to prevent water entry and lubricant contamination.

Service correction involves checking tire pressures, sizes, and types, draining and refilling the transfer case with the following new lubricant, and installing a remote vent kit on the transfer case if required.

NOTE: *The new Quadra-Trac lubricant is intended for use in vehicles exhibiting stick-slip. For vehicles that do not exhibit stick-slip, the current Quadra-Trac lubricant, part number 5958652, remains the normal replacement lubricant.*

The following parts are available and required.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
LUBRICANT, Quadra-Trac	AR	8130444	18.500
STRAP, Tie	AR	3223227	3.165
KIT, Vent	1	8130445	18.500

Kit Contents:

Vent Tube	1
Vent Tube Clip	4
Vent Tube Fitting	1
Vent Tube Hose	1

PROCEDURE

- (1) Inspect vehicle tires. Tires must all be same size, type, make, and tread design. Correct if necessary.
- (2) Check and correct tire inflation pressures if necessary. All tires must be inflated to recommended pressures and not vary by more than 1/2 to 1 psi (3.45 to 6.895 kPa).
- (3) Raise hood and raise vehicle on hoist.
- (4) Check transfer case lubricant level. If level is low, inspect for leaks and correct as necessary.
- (5) Inspect transfer case vent. If transfer case is equipped with remote vent tube that is routed into engine compartment, proceed to step (8). If transfer case does not have remote vent tube, proceed to steps (6) and (7) for vent kit installation.
- (6) On CJ models, install remote vent kit as follows:
 - (a) Clean vent area and remove and discard original vent tube fitting.
 - (b) Apply silicone sealant to threads of replacement vent tube fitting and install fitting on transfer case.
 - (c) Cover straight end of vent tube with tape.
 - (d) Insert straight end of vent tube upward above crossmember and to rear of transfer case. Rotate curved end of tube upward and position it between dash panel and engine. Remove tape from straight end of tube.
 - (e) Cut and connect four-inch length of vent tube hose to vent tube fitting and vent tube.
- (7) **CAUTION:** *The hose must be securely connected to the fitting and tube to prevent water from entering the transfer case and contaminating the lubricant.*
- (8) Secure lower (straight) end of vent tube to Quadra-Trac Emergency Drive vacuum tube using S-clip provided in kit and proceed to step (8).

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- (7) On Cherokee, Wagoneer, and Truck models, install remote vent kit as follows:
 - (a) Clean vent area and remove and discard original vent tube fitting.
 - (b) Apply silicone sealant to threads of replacement vent tube fitting and install fitting on transfer case.
 - (c) Lower vehicle.
 - (d) Cover straight end of vent tube with tape.
 - (e) Insert straight end of vent tube downward between engine and dash panel. Position lower (straight) end of tube to rear of transfer case and upper (curved) end next to vacuum modulator vacuum tube.
 - (f) Secure upper curved end of vent tube to vacuum modulator vacuum line using tie strap.
 - (g) Close hood and raise vehicle.
 - (h) Cut and connect four-inch length of vent hose to vent tube fitting and vent tube.

CAUTION: The hose must be securely connected to the fitting and tube to prevent water from entering the transfer case and contaminating the lubricant.

- (i) Secure vent tube to transmission filler tube and Quadra-Trac Emergency Drive vacuum tube using tie straps and proceed to step (8).

- (8) Position drain pan under transfer case, remove drain and fill plugs from transfer case and allow

unit to drain completely. If transfer case is equipped with reduction unit, loosen reduction unit attaching bolts, pull unit forward and allow lubricant to drain from reduction unit.

- (9) Install and tighten transfer case drain plug to 20 foot-pounds (27 N-m) torque. If equipped with reduction unit, seat unit in transfer case and tighten reduction unit attaching bolts. Tighten 3/8-16 bolts 20 foot-pounds (27 N-m) torque. Tighten 5/16-18 bolts to 9 foot-pounds (12 N-m) torque.
- (10) Fill transfer case and reduction unit, if equipped, with new Quadra-Trac lubricant. Transfer case requires two quarts (1.9 liters) of lubricant. Reduction unit requires one pint, if equipped.

NOTE: Shake the Quadra-Trac lubricant container vigorously before filling the transfer case. It is important that the lubricant be mixed thoroughly before use.

- (11) Install and tighten transfer case fill plug to 20 foot-pounds (27 N-m) torque.
- (12) Lower vehicle.
- (13) On CJ models, secure upper (curved) end of vent tube to vacuum modulator vacuum tube using tie strap and close hood.
- (14) Drive vehicle in circles both clockwise and counterclockwise for approximately 15 minutes to circulate lubricant throughout transfer case.

CAUTION: Do not turn to or hold the steering wheel at the stop position when driving the vehicle in circles.

The following standard servicing operations and work times will apply:

OPERATION DESCRIPTION	COST CODE	OPERATION NUMBER	MODEL	YEAR AND TIME	SKILL LEVEL
				1973-1979	
STICK-SLIP, QUADRA-TRAC — CORRECT Includes lubricant change and 15 minute driving time	18.670	18395	Cke-Wag Trk-CJ-7	0.6	G
With reduction unit — Add				0.2	
Vent Kit — Install	18.670	A		0.3	G

9-122-18J

Diagnosis and Repair Bulletin

Subject: Quadra-Trac With Reduction Unit - Disengages From High Range

Application: 1977 and 1978 Jeep Vehicles With Quadra-Trac and Reduction Unit

File: CHASSIS Transfer Case/Quadra-Trac Group 18.000

No. 8-01 May 16, 1978

Some 1977 and 1978 Jeep vehicles equipped with Quadra-Trac and the optional low range unit may occasionally disengage from high range. This can be caused by improperly shifting the low range unit from low range to high range or by a worn or otherwise substandard direct drive sleeve.

Service correction involves verifying that the proper shifting procedure as described in the Owner's Manual has been used. If the shifting procedures used are correct and the Quadra-Trac disengages from high range, inspect the reduction unit direct drive sleeve. If necessary, replace the direct drive sleeve.

NOTE: To insure that a new direct drive sleeve will improve the condition, compare it with Fig. 1.

The following parts are available and required:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Sleeve, Direct Drive	1	8122689	18.615-17
Ring, Power Takeoff Cover to Transfer Case Cover Sealing	1	8122406	18.515-3
Gasket, Reduction Unit to Power Takeoff Housing	1	8122707	18.610-9

PROCEDURE

- (1) Remove reduction unit as described in appropriate Technical Service Manual.
- (2) Remove power takeoff cover.
- (3) Position 11/16 inch, 1/2 inch drive deep well socket in vise and clamp securely. Allow two inches of socket to extend beyond top of vise.
- (4) Mount reduction unit on socket. Be sure socket enters bore of sun gear (Fig. 2). Reduction unit should be supported by socket.
- (5) Move reduction unit control lever rearward to high range position.
- (6) Remove snap ring and spacer from mainshaft (Fig. 3).
- (7) Lift reduction unit housing upward and off gear train (Fig. 4).
- (8) Slide direct drive sleeve off main shaft.

NOTE: To insure that the new direct drive sleeve will improve the condition compare it with Fig. 1.

- (9) Install direct drive sleeve.

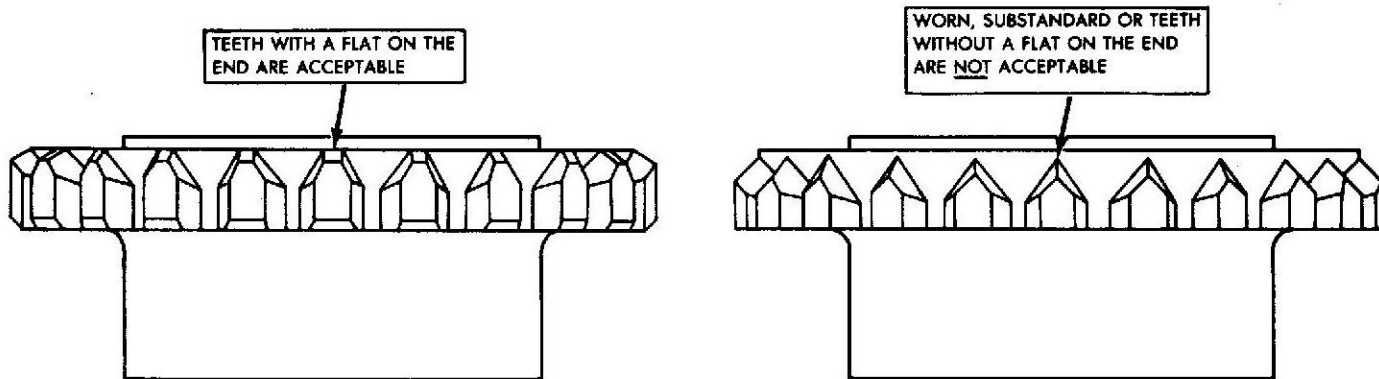


Fig. 1 Direct Drive Sleeve

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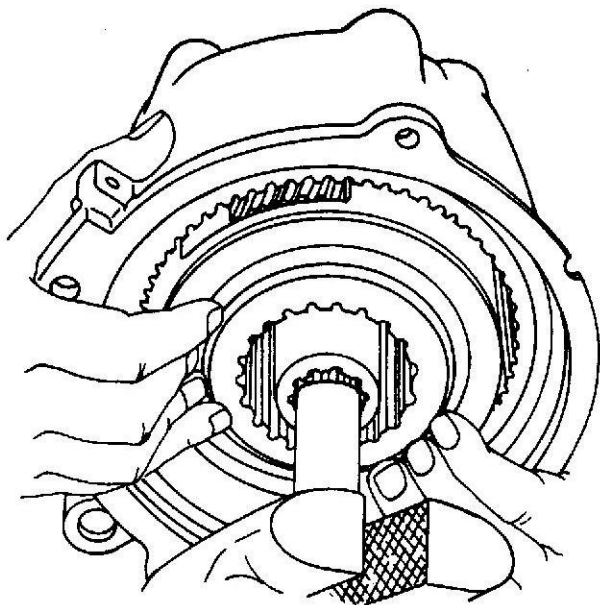


Fig. 2 Mounting Reduction Unit on Socket

(10) Align splines on assembled parts and install housing. Be sure housing is seated firmly against direct drive sleeve.

(11) Install rear spacer and snap ring. Be sure snap ring is fully seated in snap ring groove.

NOTE: The snap ring is a select fit component which is available in seven different sizes and used to maintain 0.004- to 0.009 inch clearance between the spacer and snap ring. Snap rings can be found in the current Parts Catalog, Group 18.615-2.

(12) Install power takeoff cover and gasket. Tighten cover attaching bolts to 20 foot-pounds (27 N·m) torque.

(13) Remove assembled unit from support socket.

(14) Install reduction unit as described in appropriate Technical Service Manual.

(15) Check fluid level of Quadra-Trac and reduction unit and fill with Jeep Quadra-Trac Lube (PN 8997212).

(16) Road test vehicle to insure proper reduction unit operation.

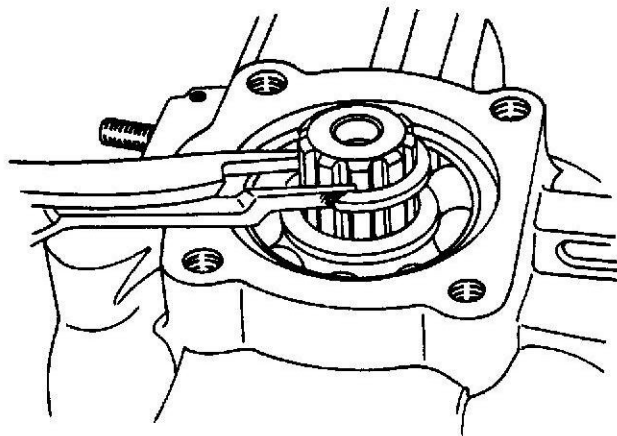


Fig. 3 Main Shaft Snap Ring Removal - Installation

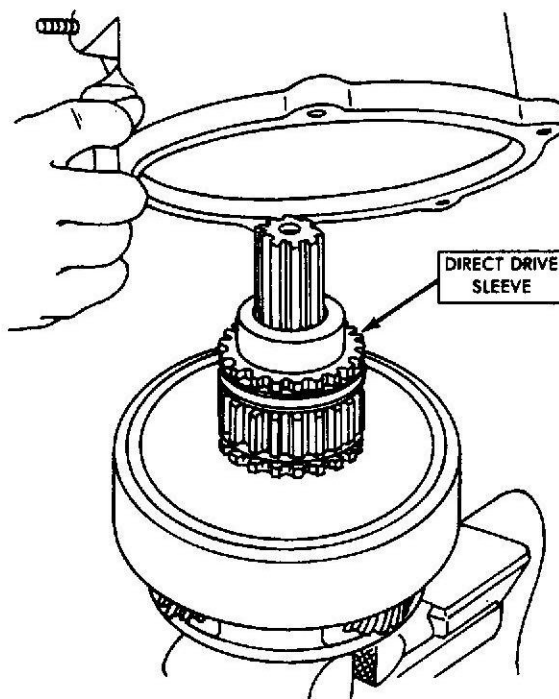


Fig. 4 Housing Removal - Installation

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78		
REDUCTION UNIT, GEAR SLEEVE REPLACE.....	18.735	18353		0.7	0.7		G

8-067-18J

Diagnosis and Repair Bulletin

Subject: Rear Axle Housing Cover Service

Application: 1977-79 CJ Models

**File: CHASSIS
Axles-Propeller Shaft**

No. 9-02 May 15, 1979

When performing a service operation that requires removal of the rear axle housing cover, the cover should be aligned prior to installing it.

Servicing involves inspecting the cover to determine whether it extends below the bottom edge of the axle housing and either repositioning or grinding the cover as required.

PROCEDURE

- (1) Position rear axle housing cover on axle housing with attaching bolts loosely installed.
- (2) Inspect rear axle cover for alignment as follows:
 - (a) If cover does not extend beyond bottom edge of rear axle housing, no realignment is required. Proceed to step (5).
 - (b) If cover extends beyond bottom edge of rear axle housing, realign cover by moving it upward. If

movement aligns cover, mark position for installation and proceed to step (5).

- (3) Remove attaching bolts and rotate axle cover on axle housing. Inspect bottom edge of axle housing, as cover is rotated, to determine if cover no longer extends beyond housing.

(a) If rotating eliminates condition, mark cover position for installation and proceed to step (5).

(b) If rotating cover does not eliminate condition, scribe area of cover that extends below bottom edge of axle housing.

- (4) Remove cover and grind scribed area off cover using bench grinder. Remove all sharp edges from cover with file after grinding.

- (5) Clean axle housing and housing cover mating surfaces thoroughly. Apply a thin bead of Jeep Gasket-in-a-Tube or equivalent silicone sealer to housing and cover, or install a replacement gasket. Install and tighten cover bolts to 20 ft. lbs. (27 N•m) torque.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
COVER, REAR AXLE — MODIFY	9.007	9051	83-93	0.1	0.1	0.1	G

9-073-09J

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Diagnosis and Repair Bulletin

Subject: Revised Ball Stud Preload Correction and Front Wheel Shimmy Procedures

Application: All 1978-79 Jeep Models

**File: CHASSIS
Axles - Propeller Shaft**

No. 9-01 January 25, 1979

Service procedures and related specifications for Front Wheel Shimmy inspection/correction and front axle Ball Stud Preload Correction in the 1978 and 1979 Jeep Technical Service Manuals have been revised.

These revisions apply to both the 1978 and 1979 Jeep Technical Service Manuals and are outlined separately as follows.

BALL STUD PRELOAD CORRECTION

Refer to Ball Stud Preload Correction on page 2F-5 and change steps (2), (3), (9), (10), (11), and (12) to read:

- (2) Loosen lower ball stud jamnut.
- (3) Remove cotter pin and slotted nut from upper ball stud.
- (9) Install and tighten upper ball stud slotted nut to 10-20 foot-pounds (13-27 N•m) torque to draw lower ball stud into tapered hole in axle yoke. Do not install upper ball stud split ring seat at this time.
- (10) Tighten replacement lower ball stud jamnut to 80 foot-pounds (108 N•m) torque.
- (11) Remove upper ball stud slotted nut and install replacement split ring seat using tool J-25158. Tighten seat to 50 foot-pounds (68 N•m) torque.
- (12) Install slotted nut on upper ball stud. Tighten nut to 100 foot-pounds (136 N•m) torque. Align and install cotter pin without loosening slotted nut.

Refer to the Torque Specifications Chart on page 2F-12 in the 1978 manual and on page 2M-6 in the 1979 manual. Change the lower ball stud jamnut set-to torque to 80 foot-pounds (108 N•m) torque. The upper ball stud retaining nut remains at 100 foot-pounds (136 N•m).

FRONT WHEEL SHIMMY

Refer to step (7) under Front Wheel Shimmy on page 2M-5 and change substep (b), and substeps (g) through (k) to read:

- (b) Loosen lower ball stud jamnut and remove cotter pin and slotted nut from upper ball stud.
- (g) Install and tighten upper ball stud slotted nut to 10-20 foot-pounds (13-27 N•m) torque to draw lower ball stud into tapered hole in axle yoke. Do not install upper ball stud split ring seat at this time.
- (h) Tighten replacement lower ball stud jamnut to 80 foot-pounds (108 N•m) torque.
- (i) Remove upper ball stud slotted nut and install replacement split ring seat using tool J-25158. Tighten seat to 50 foot-pounds (68 N•m) torque. Install and tighten upper ball stud slotted nut to 100 foot-pounds (136 N•m) torque. Align and install cotter pin without loosening slotted nut.
- (j) Loosely install axle shafts and steering spindles and measure turning effort of each steering knuckle. Refer to Ball Stud Preload Measurement in Chapter 2F — Axles, page 2-F4. If turning effort is less than 10 foot-pounds (14 N•m) torque, proceed to next substep. If turning effort is more than 10 foot-pounds (14 N•m) torque, replace upper and lower ball studs and repeat Ball Stud Preload Correction procedure in Chapter 2F — Axles.
- (k) Install axle shafts and repeat procedure outlined in step (7).
- (l) Install wheels and lower vehicle.

The current operations and standard work times are not affected by this bulletin.

9-012-SGJ

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Diagnosis and Repair Bulletin

Subject: Driveline Noise or Vibration

Application: 1978 Jeep CJ Models Equipped With Warn Selective Drive Hubs (M-245) (SE2063019) and (M-243) (SE2063021)

File: CHASSIS Axles - Propeller Shaft

No. 8-02 November 17, 1978

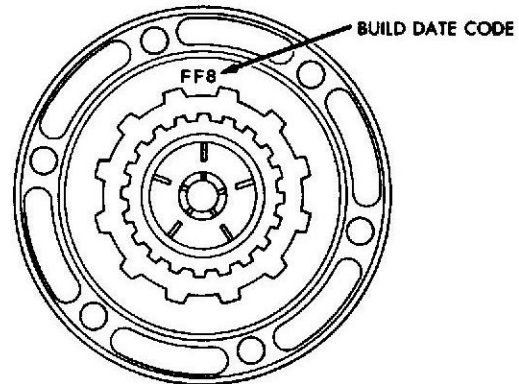
Some 1978 Jeep CJ vehicles equipped with Warn selective drive front wheel hub models M-243 or M-245 may develop a condition which produces noise or slight vibration after being driven over a bump. This condition may be caused by rust forming on the internal clutch assembly due to a slightly oversize sealing surface in the cap which prevents complete sealing of the selective control dial O-ring. The rust that may form on the internal clutch assembly of the selective drive hub does not affect the operation of the front axle assembly or steering. However, the rust may make the selective control dial hard to turn.

Service correction will involve an inspection and possible replacement of the drive hubs.

Remove the hub covers and check the hub build date code. The code is stamped on the hub seal recess (see illustration) and consists of two letters and a number. Refer to the Hub Build Date Chart for decoding procedure.

If the hubs were built prior to date code FF8 and hub internal parts are rusty, replace the hubs as a set. If the hubs were built on or after date code FF8 and do not exhibit signs of rust, reinstall the hub covers; then refer to Driveline Vibration, Page 2E-3, Volume 2 of the 1978 Jeep Technical Service Manual.

NOTE: Do not attempt to clean and lubricate rusty hubs; replace the hubs as a set only.



Hub Build Date Code Location

Hub Build Date Code Chart

First Letter	Second Letter	Number
A through L represent Jan. through Dec. (F = June)	A through U represent Working Day of Month (F = 6th Working Day)	0 through 9 represent Year (8 = 1978)

The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
HUB, MANUAL LOCKING — INSPECT	35.611	15615	CJ	—	0.1	—	G
HUB, MANUAL LOCKING — REPLACE ... (Selective drive)	35.611	15594		—	0.2	—	G

8-102-09J

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Diagnosis and Repair Bulletin

Subject: Lubrication — Double Cardan Universal Joint

Application: All 1976-1978 Models (Except CJ Models With Manual Transmission)

File: CHASSIS
Axles - Propeller Shafts
Group 9.000

No. 8-01 April 10, 1978

This bulletin is being released to emphasize the importance of properly lubricating the front propeller shaft double cardan universal joint. Failure to lubricate this universal joint at the intervals outlined in the Mechanical Maintenance Schedule may result in accelerated wear. Lubrication of the double cardan universal joint on Wagoneer, Cherokee, and Truck models should occur every 15,000 miles under normal service and 5,000 miles or 5 months under heavy duty service. On CJ-7 models, lubrication should occur every 5,000 miles under normal service and every 3,000 miles or 3 months under heavy duty service.

The double cardan universal joint is located at the transfer case end of the front propeller shaft. The construction which allows the double cardan joint to operate smoothly also makes proper lubrication of its components very important. The lubrication fittings are located in the spiders of the universal joints and in the ball socket yoke (see figure 1).

It will be necessary to obtain an Alemite lubrication adapter, model number 6783, or equivalent to perform the following procedure.

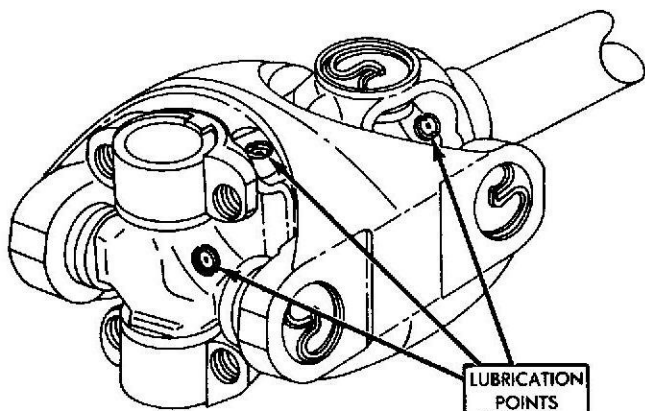


Fig. 1 Double Cardan Universal Joint

PROCEDURE

- (1) Raise vehicle and support so that front wheels are free to turn.
- (2) Mark propeller shaft yoke and transfer case output shaft yoke for assembly alignment reference.
- (3) Disconnect front propeller shaft at transfer case.
- (4) Push on propeller shaft until slip yoke at axle end of shaft is fully collapsed.
- (5) Rotate propeller shaft and flex universal joints until lubrication fitting for front universal joint spider is accessible.
- (6) Lubricate spider until grease just begins to appear around bearing cap seals.
- (7) Repeat steps (5) and (6) for rear universal joint spider.
- (8) Rotate propeller shaft and flex universal joints until lubrication fitting for ball socket is accessible.
- (9) Lubricate ball socket until grease appears at vent hole located on rear of ball socket yoke.
- (10) Position propeller shaft and connect to transfer case.
- (11) Remove grease squeezed out of slip yoke vent hole at axle end of propeller shaft.
- (12) Lubricate propeller shaft slip yoke until grease appears at vent hole.
- (13) Lower vehicle.

The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.

8-033-09J

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Diagnosis and Repair Bulletin

Subject: Brakedrum and Rotor Repair vs Replacement

Application: All 1976-79 Jeep Vehicles

**File: CHASSIS
Brakes-Wheels-Tires
(Group 8.000)**

No. 9-01 February 20, 1979

It is not necessary to replace drums or rotors if the braking surface is rusted or lightly scored, and within dimensional specifications. Instead of replacement, restore surface finish maintaining dimensions within allowable tolerances by using a brake lathe. Replacement is necessary only if drums or rotors have hard spots or machining would cause the part to exceed specified limits.

Because drum and rotor tolerances must be accurate to ensure proper brake operation, correct service procedures are very important. The specifications and procedures for drum and rotor service are as follows.

ROTOR SERVICE

Rotor Inspection

- (1) Raise and support front of vehicle.
- (2) Remove front wheels.
- (3) Remove caliper (do not disconnect brakeline).
- (4) Inspect rotor braking surfaces. If surfaces are only lightly rusted or scored, proceed to step (5). If surfaces are severely scored, cracked, chipped, excessively worn, or have hard spots (a series of shiny or dark colored spots), replace rotor.
- (5) If rotor surfaces are only lightly scaled, rusted or scored, remove rotor, bearings and seal from rotor. Clean rotor hub bearing surfaces and mount rotor in brake lathe. Clean surfaces using flat sanding discs while rotor is turning in lathe.
- (6) Remove rotor from lathe.
- (7) Check rotor thickness at center of lining contact area. Thickness must be larger than minimum (replacement) specification and provide sufficient stock for refinishing if necessary. If rotor is within limits, proceed to next step. If rotor is less than minimum thickness specification or refinishing would leave it below minimum thickness specification, replace rotor.
- (8) Install bearings and seal in rotor.
- (9) Install rotor on steering spindle and check runout and thickness variation. Refer to Rotor Specifications.

Rotor Measurement

- (1) Measure rotor lateral (face) runout.
 - (a) Mount dial indicator on support stand or steering spindle.
 - (b) Position indicator stylus so it contacts center of rotor lining contact area and zero indicator.
 - (c) Turn rotor 360 degrees and note indicator reading. Runout must not exceed limit stated in Rotor Specifications.
 - (d) Refinish rotor if runout exceeds stated limit. Replace rotor if runout is so severe that machining would cause rotor to fall below minimum (replacement) thickness specification. Refer to Rotor Specifications.
 - (e) If runout is within limits, proceed to step (2).

NOTE: *Excessive lateral runout will cause rotor wobble resulting in chatter, vibration, and pedal pulsation.*

- (2) Measure rotor thickness variation.
 - (a) Measure variation using micrometer or two dial indicators.
 - (b) Take readings at four or more equally spaced points around rotor circumference and one inch (25 mm) inward from outer edge of rotor.
 - (c) Thickness variation, from point-to-point, must not vary by more than limit stated in Rotor Specifications.
 - (d) Refinish rotor if thickness variation exceeds stated limit. Replace rotor if machining will not correct variation or if machining would cause rotor to fall below minimum thickness specification.

NOTE: *Excessive thickness variation will cause pedal pulsation and vibration when the brakes are applied.*

(OVER)

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Rotor Refinishing

Rotor refinishing should only be performed using equipment that will machine both of the rotor surfaces simultaneously (machining one side at a time can produce a tapered rotor). The correct surface finish is 15 to 80 microinches for CJ models; 20 to 60 microinches for Cherokee, Wagoneer, and Truck models and must not have tool marks (grooves) after machining.

NOTE: *If a rotor is glazed or highly polished, sanding the rotor may not produce the required rotor finish. It may be necessary to turn the rotor to meet the finish requirements.*

To ensure a correct surface finish, follow the lathe manufacturer's recommendations for feed and speed and either sharpen or replace dull cutting tool bits before machining rotor.

- (1) Remove rotor from steering spindle.
- (2) Remove bearings and seal from rotor and clean bearing surfaces in rotor hub thoroughly.
- (3) Mount rotor in lathe according to manufacturer's instructions and install anti-chatter band.
- (4) Sharpen or replace cutting tool bits as necessary.
- (5) Machine rotor as necessary and according to lathe manufacturer's instructions only. Make two cuts if required and do not remove more than 0.007 inch (0.18 mm) at a time.

CAUTION: *Do not attempt to refinish rotor if machining would cause the part to fall below the minimum (replacement) thickness specification for that rotor. Refer to Rotor Specifications.*

NOTE: *If one disc brake assembly requires a new set of shoes, the shoes on the other assembly must be replaced to ensure even braking.*

ROTOR SPECIFICATIONS

1979 Models

Rotor Diameter:

CJ. 11.7 in. (29.7 cm)

Cke, Wag, J-10 Trk. 12.0 in. (30.48 cm)

J-20 Trk. 12.5 in. (31.75 cm)

Rotor Hub to Bore Runout (All). 0.010 in. (0.254 mm)

Rotor Lateral Runout (All). . . . 0.005 in. (0.12 mm)

Rotor Minimum (Replacement) Thickness:

CJ. 0.815 in. (20.7 mm)

Cke, Wag, Trk. 1.215 in. (30.86 mm)

Rotor Thickness Variation (All). 0.001 in. (0.02 mm)

1978 Models

Rotor Diameter:

CJ. 11.7 in. (29.7 cm)

Cke, Wag, J-10 Trk. 12.0 in. (30.48 cm)

J-20 Trk. 12.5 in. (31.75 cm)

Rotor Hub to Bore Runout (All). 0.010 in. (0.254 mm)

Rotor Lateral Runout (All). . . . 0.005 in. (0.12 mm)

Rotor Minimum (Replacement) Thickness:

CJ. 1.120 in. (28.45 mm)

Cke, Wag, Trk. 1.215 in. (30.86 mm)

Rotor Thickness Variation (All). 0.001 in. (0.02 mm)

1977 Models

Rotor Diameter:

CJ. 11.7 in. (29.7 cm)

Cke, Wag, J-10 Trk. 12.0 in. (30.48 cm)

J-20 Trk. 12.5 in. (31.75 cm)

Rotor Hub Bore Runout (All). .0.010 in. (0.254 mm)

Rotor Lateral Runout (All). . . . 0.003 in. (0.076 mm)

Rotor Minimum (Replacement)

Thickness (All). 1.125 in. (28.5 mm)

Rotor Thickness Variation (All). 0.0005 in. (0.013 mm)

1976 Models

Rotor Diameter:

Cke, Wag, J-10 Trk. 12.0 in. (30.48 cm)

Rotor Hub Bore Runout (All). . . 0.010 in. (0.254 cm)

Rotor Lateral Runout (All). . . . 0.003 in. (0.076 mm)

Rotor Minimum (Replacement) Thickness

(All). 1.125 in. (28.5 mm)

Rotor Thickness Variation (All) 0.0005 in. (0.013 mm)

BRAKEDRUM SERVICE

Inspection and Measurement

- (1) Raise and support vehicle.
- (2) Remove wheels.
- (3) Remove brakedrums.
- (4) Clean drums using soap and water solution. If drums are grease or oil contaminated, clean drums with alcohol before cleaning with soap and water.

BRAKEDRUM SPECIFICATIONS

(5) Inspect drums for cracks, severe scoring, distortion, or hard spots (a series of shiny or dark colored spots on contact surface). Replace drums that exhibit these conditions. If drums appear in good condition, proceed to next step.

(6) Refer to Brakedrum Specifications then measure drum inside diameter. If diameter is within limits and refinishing would not create an oversize condition, proceed to next step. If diameter exceeds limits or if drum needs refinishing but would exceed allowable size limits after machining, replace drum.

(7) Mount drum in lathe according to lathe manufacturer's instructions.

(8) Mount dial indicator on lathe so indicator stylus contacts lining surface of drum; zero dial indicator.

(9) Measure drum radial runout.

(a) Rotate drum 360 degrees and observe readings.

(b) Move indicator stylus until readings have been taken across entire contact surface of drum.

(c) Drum runout must not exceed 0.005 inch (0.12 mm) total indicator reading at any point. Also note if indicator readings increase or decrease greatly as stylus is moved across drum surface. Large changes may indicate tapered or bell-mouthed drum.

(10) If drum is within limits and does not need refinishing, install drum. If drum is not within limits or is lightly scored, refinish drum. Refer to Brakedrum Refinishing.

Brakedrum Refinishing

(1) Sharpen or replace cutting tool bit if necessary.

(2) Install anti-chatter band on drum.

(3) Machine drum according to lathe manufacturer recommendations for feed and speed. Do not remove more than 0.010 inch (0.25 mm) of stock during any cut.

(4) Check drum radial runout again after completing machining operations.

NOTE: When brake shoes are replaced on one wheel, they must also be replaced on the opposite wheel.

1979 Models

Maximum Drum Diameter:

CJ. 10.060 in. (25.5 cm)

Cke, Wag, Trk. 11.060 in. (28.09 cm)

J-20 Trk. 12.060 in. (30.6 cm)

Maximum Drum Radial Runout. 0.005 in. (0.12 mm)

1978 Models

Maximum Drum Diameter:

CJ. 10.060 in. (25.5 cm)

Cke, Wag, Trk. 11.060 in. (28.09 cm)

J-20. 12.060 in. (30.6 cm)

Maximum Drum Radial Runout. 0.005 in. (0.12 mm)

1977 Models

Maximum Drum Diameter:

CJ. 10.060 in. (25.5 cm)

Cke, Wag, Trk. 11.060 in. (28.09 cm)

J-20 Trk. 12.060 in. (30.6 cm)

Maximum Drum Radial Runout. 0.007 in. (0.18 mm)

1976 Models

Maximum Drum Diameter:

CJ. 10.060 in. (25.5 cm)

Cke, Wag, Trk. 11.060 in. (28.09 cm)

J-20. 12.060 in. (30.6 cm)

Maximum Drum Radial Runout. 0.007 in. (0.18 mm)

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME				SKILL LEVEL
				76	77	78	79	
SHOE SET, FRONT (DISC BRAKE) – REPLACE	8.152	8060		0.5	0.5	0.5	0.5	G
Disc Assembly – Clean.....		A		0.1	0.1	0.1	0.1	G
Disc Assembly – Resurface..... (One)	8.163	B		0.5	0.5	0.5	0.5	P
(Both)	8.163			1.0	1.0	1.0	1.0	P
Includes clean, inspect and repack wheel bearings. Material allowance for bearing lubricant is \$0.30.								
<i>NOTE: Refer to the appropriate combinations listed for operation Brake Shoes, Four Wheels – Replace (8050) as they apply.</i>								
BRAKE SHOES, TWO WHEELS (REAR) – REPLACE.....	8.202	8020		0.8	0.8	0.8	0.8	G
Includes adjust parking brake.								
Brake Drum – Reface..... Both	8.222	A		0.3	0.3	0.3	0.3	P
Rear Wheel Bearings – Repack (Full Floating Rear Axle).....	9.073	B		0.4	0.4	0.4	0.4	G
Material allowance for bearing lubricant is \$0.30.								
<i>NOTE: Refer to the appropriate combinations listed for Operation Brake Shoes, Four Wheels – Replace (8000)(8050) as they apply.</i>								
BRAKE SHOES, (DRUM BRAKE) TWO WHEELS (FRONT) – REPLACE.....	8.102	8010	83-93	0.7	0.7			G
Front Wheel Bearings – Repack.....	8.909	A		0.4	0.4			G
Remove, wash, inspect, repack, install new seals and adjust. Material allowance for bearing lubricant is \$0.30.								
Drum – Reface – Both.....	8.127	B		0.3	0.3			P

9-036-08A/J

Diagnosis and Repair Bulletin

Subject: Power Steering Gear Repair vs Replacement

Application: All 1977-79 Jeep Vehicles Equipped with Power Steering

File: CHASSIS Steering and Suspension (1977 Group 10.000)

Revised

No. 9-01 January 16, 1979

This bulletin is being revised to correct the information in step (D) under "1977 Jeep Technical Service Manual" and step (E) under "1979 Jeep Technical Service Manual." Please remove and discard DRB No. 9-01, Power Steering Gear Repair vs. Replacement, dated November 20, 1978.

The Warranty Administration Manual states that partial or complete overhaul of an assembly shall take precedence over replacement of that assembly; except when the sum total of replacement parts and labor costs (at RFC values) to repair the assembly would amount to 80 percent or more of the sum total parts and labor costs (at RFC values) to replace the assembly.

The appropriate Jeep Technical Service Manuals state that adjustment of the steering gear must be done with the gear assembly removed from the vehicle.

On the other hand, the Standard Servicing Operations Manual (SSO) has an operation and time for steering gear adjustment performed with the gear assembly on the vehicle.

In order to make the Jeep Technical Service Manuals and the Standard Servicing Operations Manual correct and to create continuity requires several changes. After these changes have been made, dealers should have less difficulty complying with requirements of the Warranty Administration Manual. The following procedural changes to the 1977-79 Jeep Technical Service Manuals are necessary. Also, note the changes in the Standard Servicing Operations Manual.

I. 1977 JEEP TECHNICAL SERVICE MANUAL

A. On page 11-47 of the SERVICE DIAGNOSIS CHART under the heading "CONDITION" and after subtitle "POOR RETURN OF STEERING WHEEL TO CENTER," add step (11).

<u>Possible Cause</u>	<u>Correction</u>
(11) Kink in Return Hose	(11) Replace Return Hose

(OVER)

B. On page 11-57 under subtitle "ASSEMBLY - STEERING GEAR HOUSING COMPONENTS," step (12) should be changed to read: Install end plug in rack piston. Tighten end plug to 75 foot-pounds (102 N•m) torque.

C. On page 11-58 under the subtitle "WORMSHAFT BEARING PRELOAD," step (3) should be changed to read: Measure counterclockwise one-half inch (13mm) from first index mark and remark housing. Refer to Figure 1 below.

D. On page 11-58 under the subtitle "PITMAN SHAFT OVERCENTER DRAG TORQUE," step (1) should be changed to read: Loosen locknut, turn pitman shaft adjuster screw (counterclockwise) until fully extended, then turn it back (clockwise) one full turn. Step (7) should be changed to read: Tighten pitman shaft adjusting screw locknut to 20 foot-pounds (27 N•m) torque after adjusting overcenter drag torque.

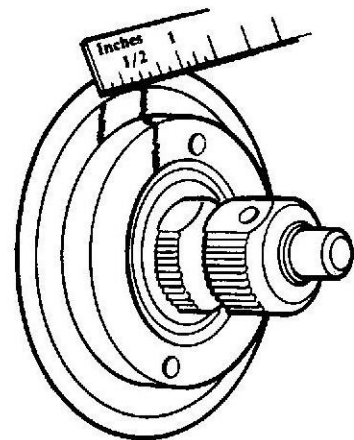


Fig. 1 Indexing Gear Housing

II. 1978 JEEP TECHNICAL SERVICE MANUAL

A. On page 2L-8 of the SERVICE DIAGNOSIS CHART under the heading "CONDITION," add step (11) to subtitle "POOR RETURN OF STEERING WHEEL TO CENTER."

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Possible Cause

Correction

(11) Kink in Return Hose (11) Replace Return Hose.

B. On page 2L-12, fig. 2L-7, View A, the information referring to the ball plug should read as shown in fig. 2.

C. On page 2L-32 under subtitle "STEERING GEAR ASSEMBLY AND ADJUSTMENT," step (19) should be changed to read: Install end plug in rack piston. Tighten end plug to 75 foot-pounds (102 N • m) torque.

D. On page 2L-34 under the subtitle "WORM BEARING PRELOAD," step (3) should be changed to read: Measure counterclockwise one-half inch (13mm) from first index mark and remark housing. (Refer to fig. 1.)

E. On page 2L-34 under subtitle "PITMAN SHAFT OVERCENTER DRAG TORQUE," step (1) one should be changed to read: Loosen locknut, turn pitman shaft adjuster screw (counterclockwise) until fully extended, then turn it back (clockwise) one full turn. Step (7) should be changed to read: Tighten pitman shaft adjusting screw locknut to 20 foot-pounds (27 N•m) torque after adjusting overcenter drag torque (fig. 2H-115).

III. 1979 JEEP TECHNICAL SERVICE MANUAL

A. On page 2L-8 of the SERVICE DIAGNOSIS CHART under the heading "CONDITION," add step (11) to subtitle "POOR RETURN OF STEERING WHEEL TO CENTER." Step (11) will read as follows:

Possible Cause

Correction

(11) Kink in Return Hose (11) Replace Hose

B. On page 2L-12, figure 2L-7, View A, the information referring to the ball plug should read as shown in fig. 2.

Seat ball in housing with blunt-nosed punch. Spray ball area with Loctite solvent No. 75559, then dry with compressed air. Cover ball with Loctite adhesive 290. Let adhesive cure approximately two hours and reinstall housing in vehicle.

C. On page 2L-32 under the subtitle "STEERING GEAR ASSEMBLY AND ADJUSTMENT," step (19) should be changed to read: Install end plug in rack piston. Tighten end plug to 75 foot-pounds (102 N • m) torque.

D. On page 2L-34 under the subtitle "WORM BEARING PRELOAD," step (3) should be changed to read: Measure counterclockwise one-half inch (13mm) from first index mark and remark housing. Refer to Figure 1.

E. On page 2L-35 under the subtitle "PITMAN SHAFT OVERCENTER DRAG TORQUE," step (1) should be changed to read: Loosen locknut, turn pitman shaft adjuster screw (counterclockwise) until fully extended, then turn it back (clockwise) one full turn. Step (7) should be changed to read: Tighten pitman shaft adjusting screw locknut to 20 foot-pounds (27 N•m) torque after adjusting overcenter drag torque.

IV. STANDARD SERVICING OPERATIONS MANUAL

In the October 9, 1978, printing at the bottom of page 2-08-5 is the operation description GEAR, POWER STEERING — ADJUST (ON-VEHICLE) with operation number 10290. DO NOT USE THIS OPERATION NUMBER.

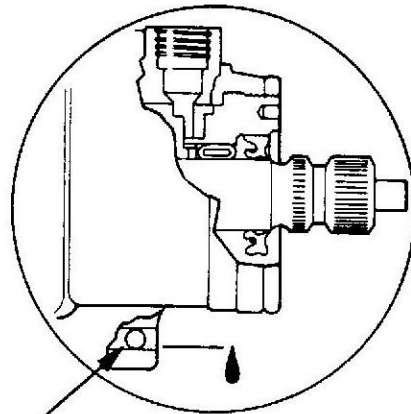


Fig. 2 Revised Steering Gear Leak Diagnosis and Corrective Action (View A)

The following operation and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
GEAR ASSEMBLY, POWER STEERING — R & R	10.500	10310	WAG-CKE-TRK	0.6	0.6	0.6	G
With snow plow — Add			83-93	0.8	0.8	0.8	
Gear assembly — Adjust	10.959	A		0.1	0.1	0.1	
Gear assembly — Replace	10.501	B		0.2	0.2	0.2	G
Gear assembly — Overhaul	10.502	C		0.1	0.1	0.1	G
Adjuster Plug — Replace	10.555	D		1.2	1.2	1.2	G
Valve Body assembly — Replace	10.615	E		0.3	0.3	0.3	G
				0.5	0.5	0.5	G

NOTE: Combinations D and E include adjustment. Use combination C only as a separate operation.

Diagnosis and Repair Bulletin

Subject: Rivnut Replacement

Application: 1977-1978 CJ Models Equipped With Front Stabilizer Bar

File: CHASSIS Steering and Suspension Group 10.000

No. 8-03 September 6, 1978

A procedure has been developed to replace loose or damaged Rivnuts used on 1977-1978 CJ Models equipped with a front stabilizer bar.

Service correction involves removing the Rivnut and installing a 3/8" x 1-1/2" SAE grade 8 bolt and hardened nut.

The following parts are available through local jobbers. The quantities listed are required for each Rivnut replaced.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
3/8" x 1-1/2" SAE Grade 8 Bolt	1	—	—
3/8" x 1" O.D. Flat Washer	2	—	—
3/8" Lock Washer	1	—	—
3/8" Hardened Nut	1	—	—

PROCEDURE

(1) Remove front stabilizer bar support bracket bolts and pull stabilizer bar and bracket away from frame (see Fig. 1).

(2) Using a cold chisel and hammer, remove head of damaged Rivnut by chiseling horizontally along bottom of frame rail.

NOTE: When replacing the Rivnut closest to the front of the vehicle, partially remove the front stabilizer bar support bracket spacer by tapping it with a punch toward the center of the vehicle (see Fig. 1).

(3) Run mechanics wire up through hole where Rivnut was located and out through elliptical hole located on top of frame approximately 3" rearward of Rivnut hole (see Fig. 2).

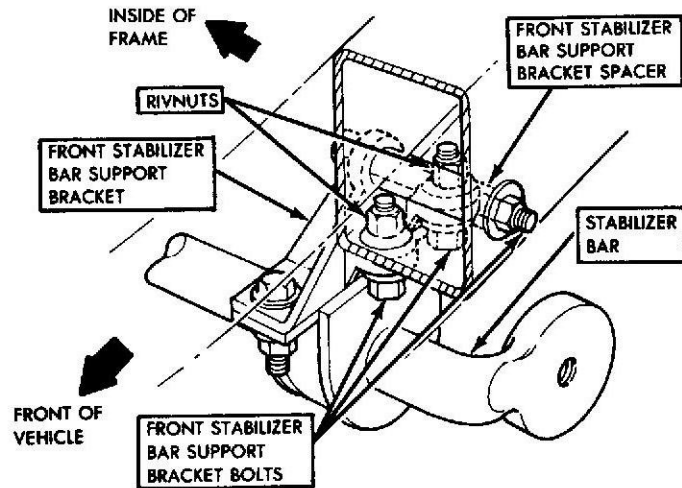


Fig. 1

(4) Attach a 3/8" x 1-1/2" SAE grade 8 bolt with a 3/8" x 1" O.D. flat washer to wire and pull shank of bolt through hole (see Fig. 2).

NOTE: Leave the wire attached to the bolt shank to help pull the bolt through the front stabilizer bar support bracket during installation.

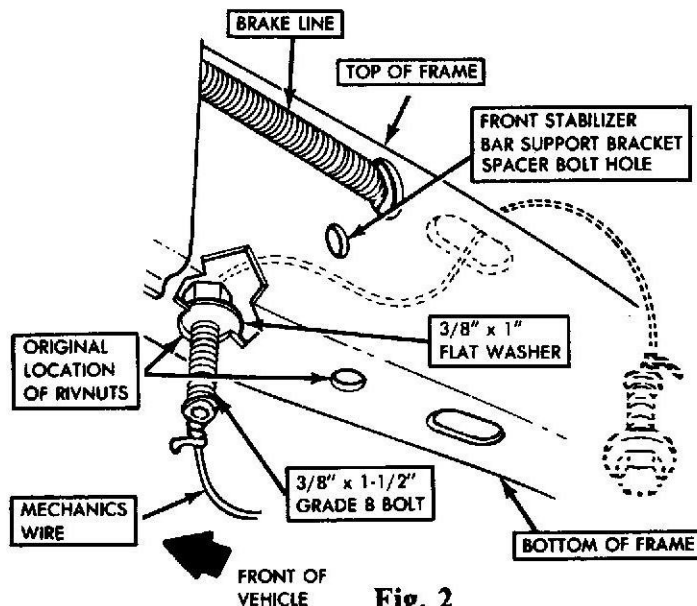


Fig. 2

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(5) Place a 3/8" x 1" O.D. flat washer in spot faced area of stabilizer bar support bolt hole in bracket and slide support bracket over exposed threaded area of bolt. Use wire which was attached to shank of bolt to help pull bolt through stabilizer support bracket. Install a 3/8" lock washer and hardened nut (see Fig. 3).

(6) Tighten nut to 30 ft./lbs. (41 Newton-meters) torque.

NOTE: If the bolt turns during tightening use a 1/2" crowfoot adapter on the torque wrench and hold the shank of bolt with a small pair of locking pliers.

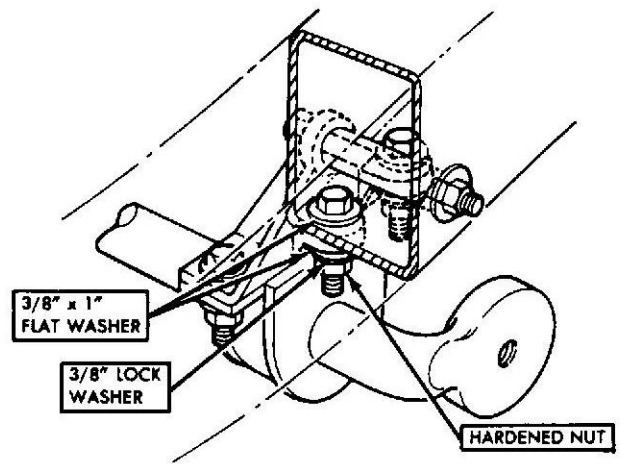


Fig. 3

The following operation and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78		
RIVNUT, STABILIZER BAR	10.260	10189	83-93				G
One or Two — Replace				0.5	0.5		
Three — Add				0.1	0.1		
All — Add				0.1	0.1		

8-103-10J

Diagnosis and Repair Bulletin

Subject: Sport Steering Wheel Skirt Replacement

Application: 1977-1978 Jeep Vehicles Equipped With Sport Steering Wheel

File: CHASSIS Steering, Suspension

No. 8-02 July, 10, 1978

A replacement procedure has been developed for the sport steering wheel skirt used on 1977-1978 vehicles equipped with the sport steering wheel option.

The sport steering wheel skirt is available through the current Parts Catalog under Group No. 10.283-1 and can be installed as follows:

PROCEDURE

- (1) Disconnect battery negative cable.
- (2) Remove center horn button by lifting it up and pulling it out.
- (3) Remove steering wheel nut and washer.

NOTE: Check for alignment marks on steering shaft and steering wheel. Paint alignment marks on shaft and wheel if none are present.

- (4) Remove three horn button receiver retaining screws, remove receiver and plate. Use steering wheel puller J-21232 to remove steering wheel.

CAUTION: Do not hammer on the end of the shaft. Hammering could shear or loosen the plastic retainers which maintain rigidity of the energy-absorbing feature of the column.

- (5) Remove steering wheel skirt by removing three retaining screws that hold center horn button receiver insulator.

- (6) Color coat replacement skirt following procedures outlined in 1978 Jeep Technical Service Manual, Metal Repair and Painting, Page 3B-3, Volume 3.

- (7) Install new skirt with three retaining screws that hold center horn button receiver insulator.

- (8) Align steering shaft and steering wheel marks, and install wheel on shaft.

- (9) Install plate, horn button receiver and bushing with three screws.

NOTE: The horn button receiver cup has a notch cut in it which must be indexed to the 12 o'clock position when installing.

- (10) Install washer and nut and tighten nut to 25 foot pounds (34 N/M) torque.

CAUTION: If for any reason a new steering shaft nut must be used, inspect and identify the shaft nut thread-type before installing the replacement nut. Metric shafts have an identifying groove in the shaft steering wheel splines and Metric nuts are color-coded blue for identification.

- (11) Install center-type horn button by indexing projection on rubber retaining ring with notch in cup and pushing cup down to engage ring.

- (12) Connect battery negative cable.

- (13) Reset clock if equipped.

The following operation and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78		
SKIRT, STEERING WHEEL, SPORT — REPLACE	10.280	10251		0.3	0.3		M

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PRODUCT RECALL CAMPAIGN

Diagnosis and Repair Bulletin No. 8-01

Subject:

SAFETY

CJPOT (Type S Product Recall Campaign): Steering Gear Intermediate Shaft Coupling May Have Oversized Serrations

Date: May 4, 1978
Application: 1978 CJ-5 and CJ-7 Models With Manual Steering as specified below
File: CHASSIS Steering and Suspension

This is a Type S Campaign, subject to all campaign procedures and involving safety-related elements. A copy of the combined owner notification and correction reporting card for this campaign is shown in Figure 3.

Some vehicles built between VINs J8XXXXX030289 and J8XXXXX064263 may have the steering gear intermediate shaft coupling machined oversize in the serration area where it attaches to the steering gear cross shaft. This may have prevented the coupling from properly tightening on the shaft when the steering gear clamp and bolt were installed. The coupling may then slip on the steering gear cross shaft when the steering wheel is turned. If coupling slippage occurs, a raspy noise will be heard in the steering accompanied by approximately forty degrees of free play (movement) in the steering wheel. Should vehicle operation be continued, the steering gear clamping bolt may by-pass the notch in the steering gear cross shaft and result in a loss of steering.

The steering intermediate shaft coupling on all involved vehicles will be inspected and replaced if machined oversize. If replacement is necessary, the following part will be available and required:

Description	Qty.	Part		Dealer Net
		Number	Group	
Kit, Coupling	1	8129811	10.740	8.39ea.

The Zone will provide a VIN list for each dealer with any vehicles involved. However, the campaign procedures apply to all dealers. On all undelivered, campaign-involved vehicles, the inspection/correction must be made before the vehicle is sold or otherwise put into service.

The Zone will not make an initial shipment of parts to dealers for this Product Recall Campaign. Only a

small number of vehicles will require parts replacement. Each vehicle is to be inspected first before ordering the campaign parts kit. **Under no circumstances is a replacement kit to be ordered for dealer stock!**

Parts will be available on May 15, 1978.

INSPECTION PROCEDURE

- (1) Torque intermediate shaft coupling housing clamp bolt to 55 foot pounds (74 newton meters) (see figure 1).
- (2) Inspect intermediate shaft coupling by passing a 3/64" drill (approximately .050" diameter wire) through entire length of slot (see figure 1). If drill or wire will not pass freely through slot, replace intermediate shaft coupling as described below under Replacement Procedure.
- (3) If intermediate shaft coupling passes inspection apply a daub of white paint on top of steering box, in a highly visible area, and return vehicle to owner.

REPLACEMENT PROCEDURE

- (1) Mark position of intermediate shaft to steering column for assembly reference.
- (2) Remove intermediate shaft to steering column clamp bolt and nut (see Figure 2).
- (3) Remove coupling to steering gear clamp bolt and nut.
- (4) Remove intermediate shaft and coupling assembly.
- (5) Wrap intermediate shaft with shop towel and place in vise or suitable holding fixture.

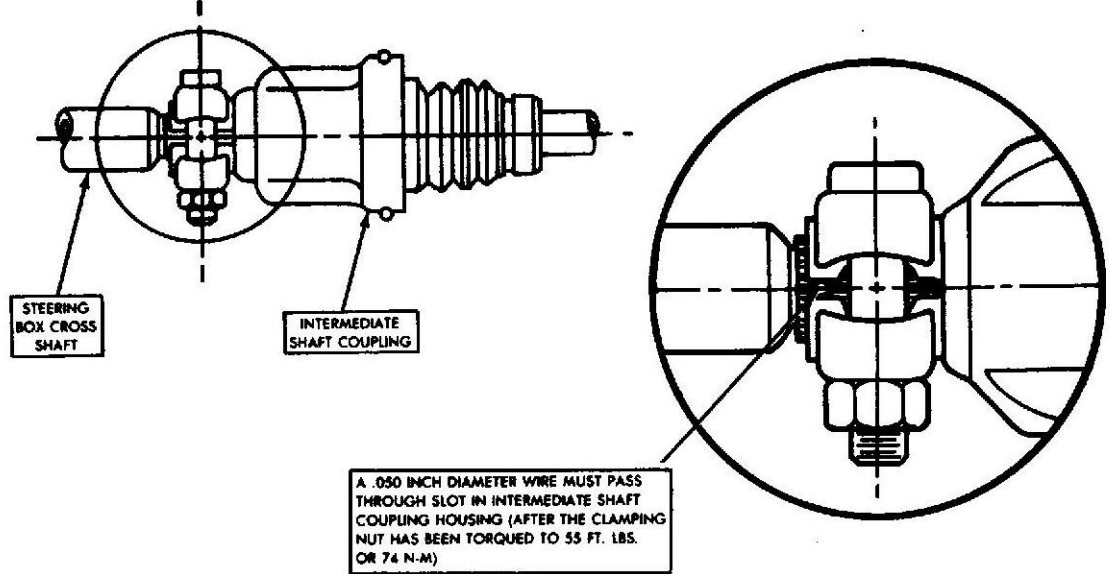


Figure 1

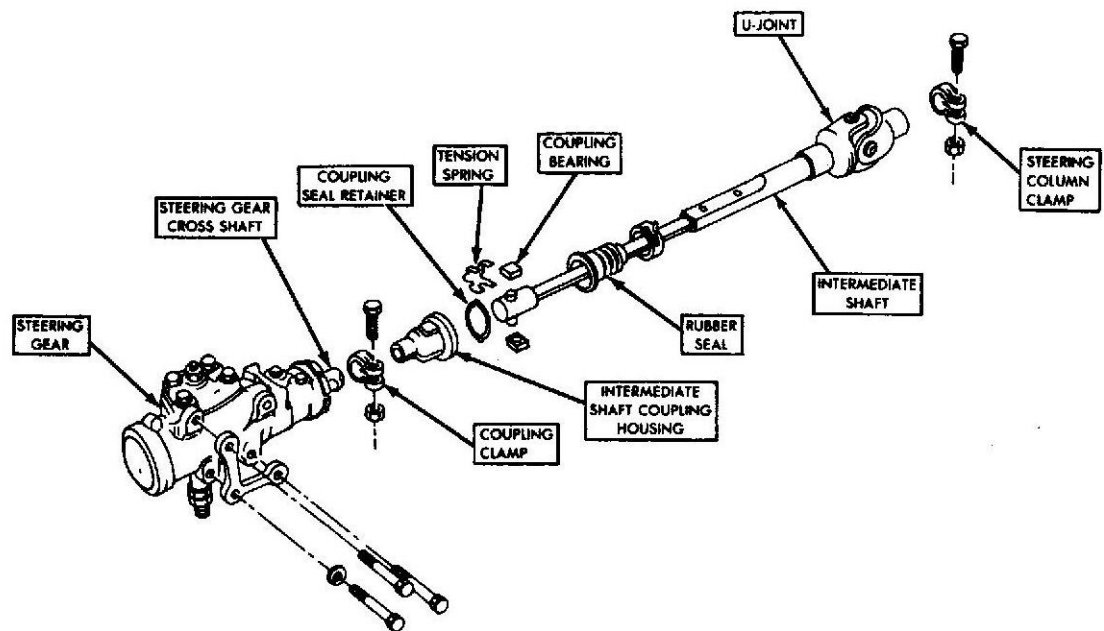


Figure 2

(6) Remove coupling seal retainer ring and pull rubber seal back.

(7) Remove coupling housing from intermediate shaft.

NOTE: Be careful at this point not to lose the coupling bearings or tension spring when removing coupling housing from intermediate shaft.

(8) Remove rubber seal.

(9) Lubricate bearing surfaces of new coupling housing with grease supplied with the parts kit.

(10) Compress coupling bearings against tension springs and slide coupling housing on over bearings.

(11) Install rubber seal and install seal retainer ring.

(12) Remove intermediate shaft assembly from vise.

(13) Slide intermediate shaft to steering column retaining clamp over intermediate shaft U-joint clamping area.

(14) Slide intermediate shaft to steering gear retaining clamp onto coupling housing.

(15) Install intermediate shaft coupling and U-joint onto mating shafts at steering gear and steering column with reference marks aligned.

(16) Install coupling clamp bolt and nut and torque to 55 foot pounds (74 Newton meters).

(17) Install intermediate shaft to steering column clamp bolt and nut and torque to 55 foot pounds (74 Newton meters).

(18) Place a daub of yellow paint on steering box to indicate campaign compliance and return vehicle to owner.

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR & TIME			SKILL LEVEL
				77	78	79	
COUPLING, INTERMEDIATE SHAFT FLEXIBLE – Inspect (CJPOT Campaign)	10.311	10.223	83-93	–	.1	–	6
Coupling-Replace	10.312	A	83-93	–	.2	–	6
Applicable Defect Code: 56-Product Recall Campaign							

CLAIM HANDLING

Several vehicles may be listed on a single warranty claim form, Reference Warranty Administration Manual, Section 7, Product Recall Campaign.

Complete and mail the reporting half of the notification card (figure 3) for each vehicle as soon as campaign service is complete.

The steering shaft coupling that is removed and replaced is a returnable part and must be tagged and returned with your regular claim material shipment.

CAUTION: On multiple-vehicle claims, do not delay any claim so that we will receive it beyond the time outlined in the WAM.

8-055-10J

National Traffic and Motor Vehicle Safety Act of 1966 Product Recall Campaign Reporting Card	
<p>Side 2. Please use side 1.</p> <p>Instructions: OWNER</p> <p>If you do not now own this vehicle, please just fill in below (either a, b or c) and MAIL DIRECTLY TO JEEP CORPORATION.</p> <p>a. Sold or Traded to: _____ Name (Please Print)</p> <p>Address _____</p> <p>City _____ State _____</p> <p>b. Present owner name and address not known <input type="checkbox"/></p> <p>c. Removed from service because of collision damage or otherwise <input type="checkbox"/></p> <p>VIN (Vehicle Identification Number) _____</p>	<p>Instructions: DEALER</p> <p>This section is for the dealer to use when your vehicle goes in for the required attention.</p> <p><input type="checkbox"/> Correction made <input type="checkbox"/> Correction not required</p> <p>Dealer Code _____</p> <p>CJPOT CAMPAIGN (782)</p> <p>Dealer Signature _____</p> <p>Date Vehicle Serviced _____</p> <p style="text-align: center;">Jeep Corporation Campaign Data Reporting Section</p>

Side 1	Notice of Product Recall Campaign Involving Your Vehicle
<p>This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.</p> <p>Jeep Corporation has determined that a defect which relates to motor vehicle safety exists in some 1978 CJ-5 and CJ-7 vehicles equipped with manual steering.</p> <p>The coupling that attaches the intermediate steering shaft to the steering gear shaft may have overlaid serrations which may prevent the coupling from being properly tightened on the steering gear shaft. This could allow the coupling to slip on the shaft, causing excessive free play in the steering wheel, sometimes accompanied by a raspy noise. Failure to heed these warnings could result in a total loss of steering under some high-effort steering conditions and a vehicle crash could possibly occur.</p> <p>To minimize the possibility of a loss of steering, avoid driving conditions that require a high steering effort. If excessive free play is experienced, or a raspy noise is heard in the steering system, do not operate your vehicle until it has been repaired.</p> <p>Your vehicle, identified on the reverse side of this card, should be inspected by your Jeep dealer. If necessary, the coupling will be replaced at no charge to you. Jeep Corporation recommends you contact your dealer now for an appointment to inspect your steering system. The inspection usually requires less than fifteen minutes. If correction is necessary, your dealer will order the replacement part (two-three day delivery) and the correction will require an additional fifteen minutes.</p> <p>If your dealer should be unable to handle this campaign service promptly after May 15, 1978, please contact the local Zone Office (listed in your Owner's Manual) or Jeep Corporation, Owner Relations, 14250 Plymouth Rd., Detroit, Michigan 48232 (telephone 313-495-2341). If you are unable to obtain this campaign service without charge and within 60 days after your transfer of the vehicle to your dealer any time following May 15, 1978, you may contact the Administrator, National Highway Traffic Safety Administration, Washington, D.C. 20590.</p>	
<p>When your vehicle goes in for the required attention: Please be sure this complete notification card goes with it because the card is to be used by the dealer for reporting purposes. In case you do not now own this vehicle, please send us the "Change of Ownership" information, using side 2 of this card.</p> <p style="text-align: right;">Jeep Corporation Campaign Data Reporting Section</p>	

Fig. 3 Owner Notification and Correction Reporting Card

Diagnosis and Repair Bulletin

Subject: Wagoneer Limited, Front Fender Woodgrain Moulding Retention

Application: 1978-79 Wagoneer Models with Limited Trim Option

**File: BODY
Body General**

No. 9-05 February 2, 1979

A procedure has been developed for repairing loose vinyl woodgrain moulding on the front upper corner of the front fender on Wagoneer Limited models.

The service correction involves drilling and counter-boring a hole in the moulding, installing a pop rivet, and inserting a color-coordinated vinyl plug to fill the remaining recess.

The following parts are required and will be available February 2, 1979. Do not order parts before this date.

Description	Quantity	Part No.	Group No.
RIVET, Pop	2	4004962	12.078
PLUG, Moulding	2	5750596	12.078

PROCEDURE

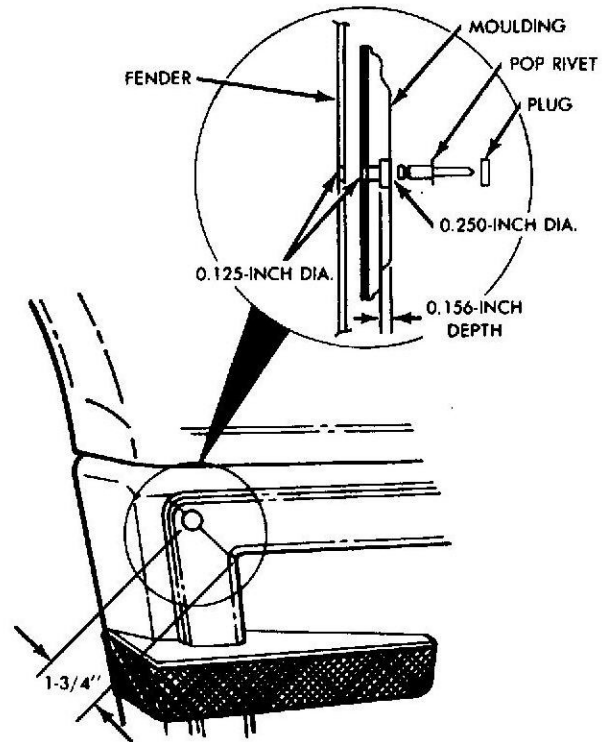
(1) Measure up from bottom edge of miter joint 1-3/4 inches along center of miter joint and make a mark at this point (see illustration).

(2) Push moulding flush against fender and drill 0.125-inch hole through moulding and fender at mark.

CAUTION: Care should be taken to prevent the drill chuck from contacting the moulding when drilling through the fender.

(3) Counterbore a 0.250-inch diameter hole to a depth of 0.156 inches at original 0.125-inch diameter hole (see illustration).

(4) Push moulding flush against the fender and install pop rivet through fender and moulding.



**Wagoneer Limited
Moulding Retention**

(5) Apply adhesive to moulding plug, align woodgrain pattern and install plug in counterbore (see illustration).

NOTE: Before applying adhesive to the plug it may be necessary to trim the plug to fit flush with the moulding surface.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
MOULDING, WOODGRAIN — REPAIR Both sides	26.030	26009	WAG		0.2	0.2	G

9-031-BSJ

AM American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Windshield Cracking During Extreme Cold Weather

Application: 1978-79 CJ Models Built Prior to J9XXXXH035319 (Toledo) and J9XXXXH804015 (Brampton)

**File: BODY
Body General**

No. 9-03 December 8, 1978

Some subject vehicles may exhibit windshield stress cracks in extremely cold weather. When this condition occurs, the crack originates at the bottom of the windshield at or above the defroster opening.

Service correction involves replacing the windshield as outlined in the appropriate Jeep Technical Service Manual and installing new defroster air deflectors.

The following parts are available and required:

Description	Quantity	Part No.	Group
DEFLECTOR, Windshield Defroster Air, LH	1	5750339	25.004
DEFLECTOR, Windshield Defroster Air, RH	1	5750340	25.004

The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
GLASS, WINDSHIELD — REPLACE Includes sealing	25.001	25130	83-93		0.8	0.8	G
Material allowance for sealant is \$0.90							
Mirror mounting support kit — Install	25.001	A			0.1	0.1	G
Deflectors, windshield defroster — Replace	13.115	C			0.1	0.1	G

NOTE: *Combination B is not applicable.*

8-115-BSJ

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Door Lock and Latch Mechanism Freeze-Up

Application: All 1978-79 Cherokee, Wagoneer and Truck Models

**File: BODY
Body General**

No. 9-02 November 10, 1978

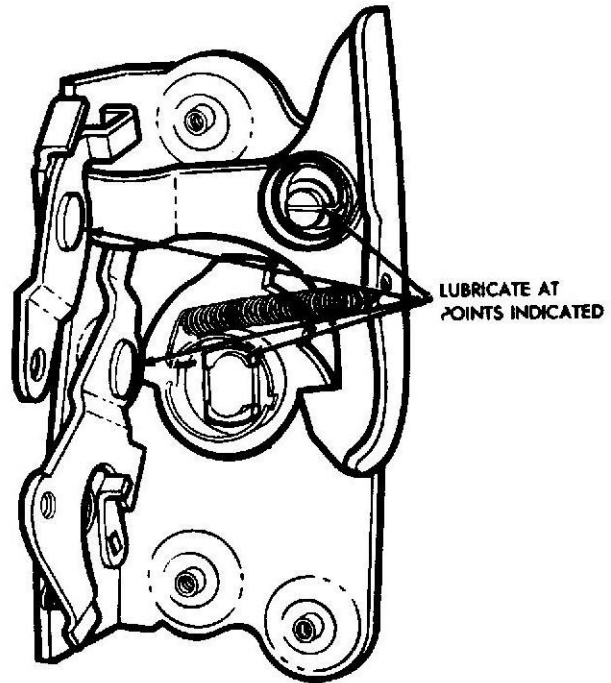
In an effort to minimize the annual door lock/latch freeze-up complaints during adverse winter weather, a service procedure has been developed to help prevent recurrence.

Service correction involves removing the door trim panel, blowing any accumulated moisture out of the affected mechanism, and lubricating the lock or latch mechanism.

NOTE: *If a deicing fluid containing alcohol is used on a lock or latch mechanism, the lock or latch mechanism must be lubricated to prevent further freeze-up.*

PROCEDURE

- (1) Remove door latch remote control handle and door window regulator handle.
- (2) Remove armrest overlay and armrest from door trim panel.
- (3) Remove ash receiver screws and ash receiver, if equipped.
- (4) Remove lower door trim panel screws and pry door trim panel nylon spring clips loose with tool J-2631-01 and remove panel.
- (5) Cut upper rear portion of water shield (dam) paper and fold paper back to gain access to lock and latch mechanisms.
- (6) Remove moisture from lock assembly by applying moderate air pressure through face of lock cylinder.
- (7) Spray AMC/Jeep Silicone Lubricant (8993542) or equivalent into keyhole of lock cylinder.
- (8) Remove moisture from latch mechanism using moderate air pressure to avoid removing lubricant present on latch mechanism.
- (9) Lubricate designated latch areas with AMC/Jeep Lubriplate (8990685) or equivalent (see illustration).
- (10) Position water shield (dam) paper and fasten in place with masking tape. Tape all edges or areas cut or loosened when removed.
- (11) Position trim panel on door and install nylon spring clips in holes of inner door panel.
- (12) Install lower door trim panel screws.
- (13) Install ash receiver and screws, if so equipped.
- (14) Install armrest and armrest overlay.
- (15) Install door latch remote control handle and door window regulator handle.



**Door Latch Mechanism
Lubrication Points**

(OVER)

AMC/Jeep American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
LOCK AND LATCH - DOOR - EACH - LUBRICATE Front Rear	23.050 23.051	23185	CKE-WAG-TRK	0.3	0.3	0.3	M

9-015-BSJ

Diagnosis and Repair Bulletin

Subject: Wagoneer Limited Trim Package

Application: 1978 Wagoneer Models

**File: BODY
Body General**

No. 8-08 ² May 11, 1978

A new body trim package, the Wagoneer Limited, has been introduced on the 1978 Wagoneer models and consists of the following items:

- Bodyside and tailgate woodgrain overlay with new vinyl surround mouldings
- "Limited" nameplates
- New 15" x 7" forged aluminum road wheels
- HR 78 x 15" Goodyear American Eagle WSW radial tires
- Bucket seats, center armrest, and door trim panels upholstered with leather and corduroy fabric.
- Deep pile carpeting in both passenger compartment and cargo area.
- Leather wrapped steering wheel
- Combination dome and reading lamp
- Woodgrain overlay on lower instrument panel
- Lighted visor/vanity mirror
- Color keyed A/C evaporator housing and duct

A general description and service procedures for new items are as follows:

Body Side and Tailgate Woodgrain Overlay Surround Mouldings

The surround scuff mouldings are made of extruded vinyl with an adhesive backing.

Woodgrain Overlay Surround Moulding Replacement

- (1) Use 3M Release Agent 8971 or equivalent to remove moulding from panel.
- (2) Clean any adhesive residue from surface with a cloth dampened with 3M General Purpose Adhesive Cleaner 8984 or equivalent.

(3) To insure proper moulding alignment, stretch a piece of string at desired level along panel and attach it at both ends with tape.

(4) Position moulding on car with backing tape attached, and cut to fit.

(5) Peel backing and press moulding to body of car, parallel with string.

(6) Press moulding to body with roller or heavy hand pressure.

(7) Remove string.

(8) Check moulding alignment and trim moulding with razor blade, if necessary.

(9) If moulding comes loose, apply 3M Plastic and Emblem Adhesive 8061, or equivalent to moulding surface and press firmly to body.

Dome/Reading Lamp

The combination dome/reading lamp replaces the standard dome light. The dome lamp is operated by either the headlight switch or door switches. Two reading lamps are built into the housing and illuminate the driver and passenger seat position. The reading lamps are operated individually by a sliding switch located by each reading lamp.

Bulb Replacement

- (1) Squeeze dome lamp lens to disengage retaining tabs.
- (2) Remove dome lamp lens.
- (3) To remove bulb pull down and out.
- (4) Insert bulb directly into socket to install.
- (5) Squeeze lens and install in lens opening. Release lens, be sure retaining tabs are properly engaged.

(OVER)

AM American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

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Lighted Vanity Mirror

The color-keyed lighted vanity mirror is attached to the passenger sun visor. It has two lamp assemblies, one mounted at either end of the vanity mirror. The lamp switch is located on the right side of the mirror assembly.

Bulb Replacement

(1) Insert a thin flat tool between lens and housing and pry up.

(2) Remove lens by pulling down after retaining tabs have been disengaged.

(3) Pull the bulb straight out of socket.

NOTE: Do not twist the bulb.

(4) To install bulb press straight into socket.

(5) Lens is keyed top to bottom. Push lens into proper position to install.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME		SKILL LEVEL
					78	
MOULDING (WOODGRAIN) R & R	26.030	26007	WAG		0.3	G
One					0.2	
Each Additional					0.1	
Replace one or more	26.030	A				
BULB AND/OR LENS, VANITY MIRROR — REPLACE	27.091	3474	WAG		0.1	G
BULB, DOME LAMP OR REAR QUARTER — REPLACE	3.346	3872	WAG		0.2	G
BULB, READING LAMP — REPLACE	3.346	3352	WAG		0.2	G
LAMP ASSEMBLY, DOME, REAR QUARTER OR REAR SEAT — REPLACE ..	3.346	3280	WAG		0.2	G

8-061-BSJ

Diagnosis and Repair Bulletin

Subject: Transmission Shift Cover Contacting Floorpan

Application: 1976, 1977, and 1978 Cherokee and Truck Models With 4-Speed Transmission

**File: BODY
Body General**

No. 8-01 December 16, 1977

The transmission shift tower may contact the floorpan on the subject vehicles causing a noise similar to gear rattle to be transmitted into the passenger compartment. This interference problem will normally occur where the tower portion of the shift cover extends through the opening provided in the floorpan for the shift lever.

Service correction involves providing clearance between the shift tower and floorpan by removing a piece of the floorpan at the contact point.

NOTE: Before proceeding with any transmission repairs involving a rattling type noise on the subject vehicles, it is advised that the vehicle be inspected for the described interference problem.

PROCEDURE

- (1) Using large screwdriver, disengage shift lever boot retainers from floorpan.
- (2) Slide boot up shift lever.
- (3) Check tower and floorpan for actual contact or for signs of contact such as chipped paint or shiny metal.
- (4) If contact between floorpan and tower is not evident proceed with diagnostic procedures to isolate cause of noise. If contact is evident proceed to step (5).

- (5) Remove a piece of floorpan large enough to provide a one inch (1") clearance between floorpan and tower. Cutting operations may be done using an air chisel or by drilling a series of closely spaced holes and cutting with a sharp cold chisel (Fig. 1).

- (6) Slide shift lever boot down into position and secure to floorpan with retainers.

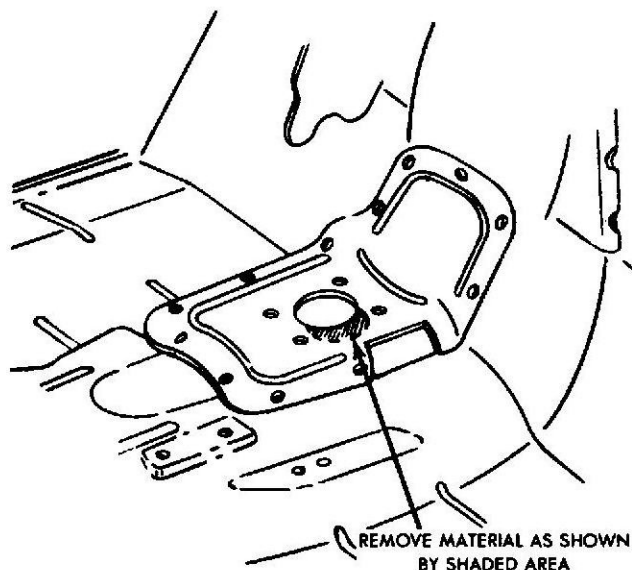


Fig. 1

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
FOUR-SPEED TRANSMISSION TO FLOORPAN CLEARANCE INSPECT . . .	20.005	20.125	CKE-TRK	0.1	0.1	0.1	G
Cut floorpan to provide clearance	20.005	A		0.1	0.1	0.1	G

8-025-BSJ

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Moisture Entering Parking and Front Directional Signal Lamp Assembly

Application: 1976-80 CJ Models

**File: BODY
Body Electrical**

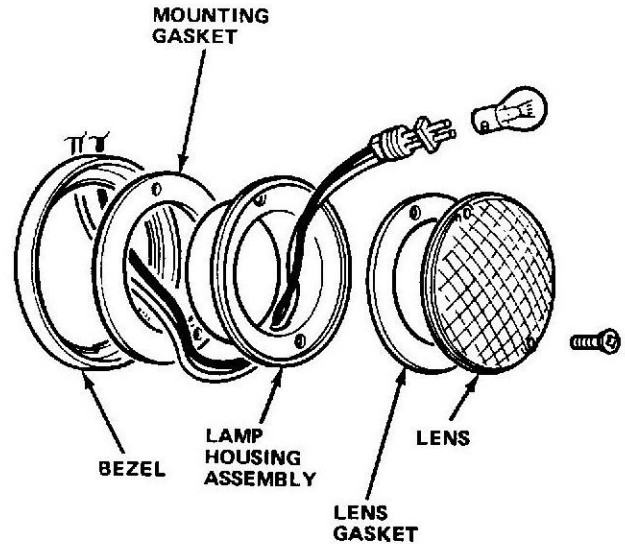
No. 80-2 Dec. 7, 1979

Some 1976-80 CJ models may have moisture entering the parking and front directional signal lamp assembly through the wire harness entrance into the upper side of the lamp housing.

Service correction involves repositioning the lamp housing and replacing the lens gasket or the lamp assembly if necessary.

The following parts are available if required:

Description	Quantity	Part No.	Group
LAMP, Assembly Parking and Front Directional Signal	AR	5461340	3.292
GASKET, Directional Lamp Mounting and Parking	AR	991400	3.292



Lamp Assembly and Gaskets

PROCEDURE

- (1) Remove park and turn signal lamp assemblies from grille panel and inspect mounting gasket for any distortion. Replace gasket if distorted.
- (2) Inspect internal bulb sockets for corrosion.
 - (a) If corrosion is not present, then continue procedure on existing assemblies.
 - (b) If corrosion is present, obtain replacement lamp and continue procedure.
- (3) Apply chassis lubricant or dielectric compound, 8127445, to bulb socket to prevent corrosion.

(4) Remove two screws that attach lens and gasket to lamp housing. Separate lens from lamp housing and gasket. Rotate housing and gaskets 180° so wires exit from bottom of housing and assemble lens to housing (see illustration).

(5) Install assembly (with new mounting gasket if required) to grille panel being careful not to strip screws.

NOTE: Use locally procured oversized mounting screws if required.

The following operations and standard work times will apply:

OPERATION DESCRIPTION	COST CODE	OPERATION NUMBER	MODEL	YEAR AND TIME 76-80	SKILL LEVEL
LAMP ASSEMBLIES, PARK AND FRONT DIRECTIONAL SIGNAL—INSPECT AND/OR REPOSITION	3.292	3403	CJ	0.1	G
Replace (One or both)	3.292	A	CJ	0.1	G

80-032-BSA

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

Diagnosis and Repair Bulletin

Subject: Tailgate Glass Defogger Wire Repair

Application: 1977-79 Wagoneer and Cherokee with Tailgate Glass Repair

**File: BODY
Body Electrical**

No. 9-01 June 7, 1979

If during a tailgate glass repair or during a tailgate glass defogger repair, if either the feed or ground wire for the defogger is found to be broken or chafed adjacent to the tailgate glass lower channel, it can be repaired.

Service correction involves removing any excess tailgate glass-to-channel sealer that would interfere with the correct routing of the feed or ground wire(s), soldering the broken wire, covering the soldering joint with heat shrinkable tubing and securing the repaired wire(s) to the lower glass channel with a nylon strap.

The following parts are available and required:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group No.</u>
KIT, Rear Window Defogger	1	8129876	3.774

PROCEDURE

- (1) Remove tailgate glass and channel assembly as outlined in appropriate Jeep Technical Service Manual.
- (2) If wire(s) requiring repair is not broken, remove nylon strap and cut wire(s) adjacent to tailgate glass lower channel (see fig. 1).

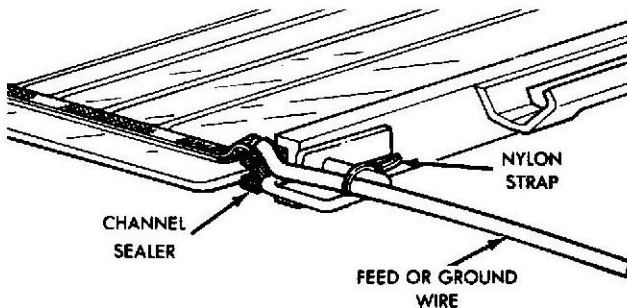


Fig. 1 Defogger Wire Interference

- (3) Remove any excess channel sealer that protrudes from end of channel (see fig. 2).

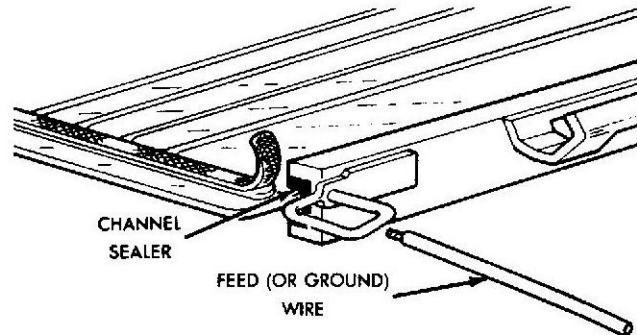


Fig. 2 Trimming Channel Sealer

- (4) Clean both ends of wire(s) where cut or broken.
- (5) Trim insulation from feed or ground wire(s) to expose approximately 1/4 inch of bare wire.
- (6) Slide heat shrinkable tubing over feed or ground wire(s).

NOTE: Use 60/40 solder or equivalent such as Eutec Rod 157B for this solder joint.

- (7) Solder feed or ground wire(s) to braided strap keeping joint as small as possible. Be sure solder joint is as close as possible to glass.
- (8) Slide heat shrinkable tubing over the solder joint(s) (see fig. 3).

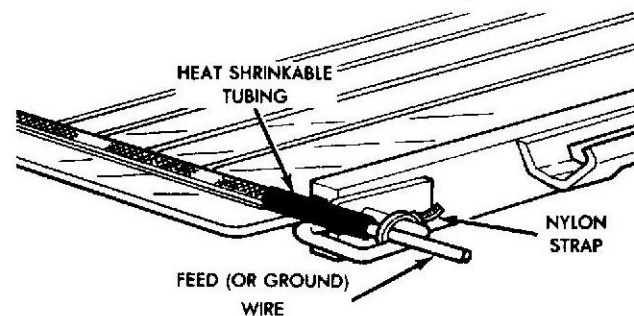


Fig. 3 Tailgate Glass With Defogger Wire In Position

- (9) Shrink tubing with low heat soldering gun.

(OVER)

American Motors Sales Corporation

Service Engineering Department • 14250 Plymouth Road • Detroit, Michigan 48232

Additional copies of this bulletin are available through your zone office.

(10) Secure feed or ground wire(s) with nylon strap to inside of square loop located on channel.

(11) Install tailgate glass and channel assembly as outlined in appropriate Technical Service Manual.

The following operation and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
GLASS, TAILGATE — R & R	25.127	25150	WAG-CKE	0.4	0.4	0.4	G
Replace	25.127	A		0.1	0.1	0.1	G
Wire, Defogger — Repair One side	3.807	B		0.1	0.1	0.1	G

9-086-BSJ

Diagnosis and Repair Bulletin

Subject: Electric Tailgate Regulator and Motor Change

Application: 1978 Wagoneer and Cherokee Models With Electrically Operated Tailgate Window

**File: BODY
Body Electrical**

No. 8-07 July 28, 1978

There has been a running change in the tailgate window regulator and motor assemblies on 1978 Wagoneer and Cherokee models starting with VIN J8XXXXX088090. The tailgate motor is a two-wire design, using polarity of the circuit to change rotation. The motor and drive unit are serviced as an assembly. As a result of these changes it is necessary to update the parts and diagnosis information.

NEW PARTS

Description	Quantity	Part No.	Group
Motor, Tailgate Electric Operated Window Regulator	1	8129549	23.310-1
Regulator, Tailgate Electric Operated Window (Less Spring)	1	8129550	23.306-1
Regulator, Tailgate Electric Operated Window (With Spring)	1	8129551	23.306-1
Harness, Tailgate Electric Operated Window Regulator	1	5465056	23.320-1
Switch, Tailgate Electric Operated Window Regulator (On Tailgate)	1	5465053	23.330-3
Switch, Tailgate Electric Operated Window Regulator (On Instrument Panel W/Heated Rear Window)	1	5465054	23.330-1 (3.770)
Switch, Tailgate Electric Operated Window Regulator (On Instrument Panel W/O Heated Rear Window)	1	5465057	23.330-1

NOTE: The parts listed above are not interchangeable with the parts used in the earlier design.

DIAGNOSIS INFORMATION

When diagnosing this system keep in mind the following:

NOTE: A wiring schematic of the new electric tailgate window circuitry is included for use with the following information and procedures.

- (1) The ignition switch must be in the ON position when attempting to diagnose electrical problems related to the instrument panel switch. When checking the tailgate switch, turn the tailgate switch with the ignition key to the UP or DOWN position.
- (2) The ground circuit goes to ground through the instrument panel control switch.
- (3) The tailgate safety switch must be closed when attempting to check for current.

Diagnosis can be accomplished as follows:

Feed Circuit - Instrument Panel Switch

- (1) Using a 12 volt test lamp ground one end of test lamp and check for current in red wire running from fuse panel to instrument panel tailgate switch.
- (2) If no current is present, check circuit breaker and repair before proceeding.
- (3) With both switches in neutral position, there should only be current at red wire terminal. If current is present at either or both terminals, check for a shorted harness or switch.

Feed Circuit - Tailgate Switch

- (1) Check red w/tr wire for current at tailgate switch. If no current is found at tailgate switch check for broken or disconnected red w/tr wire.
- (2) If tailgate motor is operational from instrument panel switch and tailgate switch will not work, replace tailgate switch.

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UP Position

(1) Ground one end of 12 volt test lamp and check for current in tan wire at tailgate motor.

(2) With instrument panel or tailgate switch in UP position, lamp should light, if not, replace faulty switch.

NOTE: The tailgate safety switch must be in the CLOSED position when checking the UP circuit.

Down Circuit

(1) Ground one end of 12 volt test lamp and check for current in brown wire at tailgate motor.

(2) With instrument panel or tailgate switch in DOWN position, test lamp should light, if not replace faulty switch.

NOTE: The tailgate safety switch must be in the CLOSED position when checking the DOWN circuit.

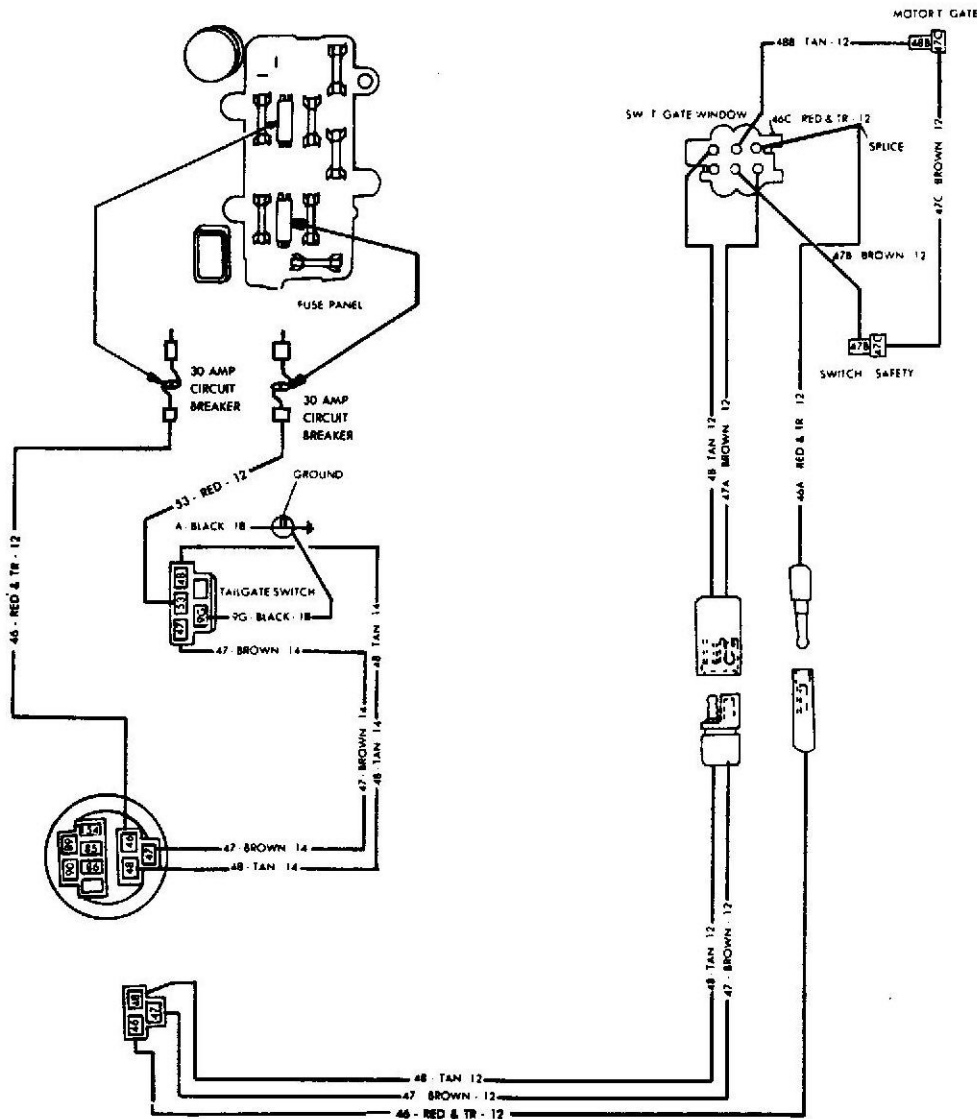
Motor

(1) Check all circuits as described above.

(2) If all above circuits check good and motor does not turn, replace motor.

The Standard Servicing Operation and work time as published in the current SSO Manual are not affected by this bulletin.

8-082-BSJ



**Electric Tailgate Window Wiring Schematic
1978 Wagoneer and Cherokee**

Diagnosis and Repair Bulletin

Subject: Windshield Wiper Motor Disassembly and Assembly Procedure Supplementary Technical Service Manual Information

Application: 1974,1975, 1976, 1977, and 1978 Jeep Wagoneer, Cherokee, and Truck Models

**File: BODY
Body Electrical
Group 3.000**

No. 8-06 March 31, 1978

This bulletin is being issued to supplement the listed model-year Technical Service Manual procedures pertaining to windshield wiper motor disassembly and assembly. The supplementary information includes the following:

- (1) An additional Troubleshooting in Vehicle diagnosis procedure for worn-out wiper motor gears.
- (2) Wiper motor disassembly and assembly which includes wiper motor gear replacement.
- (3) Standard Servicing Operations update.

DIAGNOSIS PROCEDURE

When the windshield wiper motor gear wear-out is suspected, check under the dash at the motor to insure the linkage is properly attached. If the linkage is intact, turn the ignition to the *on* position, then turn the wiper motor on and listen for the noise of the motor running. If the wiper motor runs, but does not move the linkage, gear replacement is the recommended repair. If the wiper motor does not run, refer to the Troubleshooting Procedures in the appropriate Technical Service Manual.

The following parts are listed and available through the Parts Catalog; however, the current supply of Drive Gear Kits is exhausted. Do not order parts until after March 27, 1978.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Drive Gear Kit	1	941916	22.031

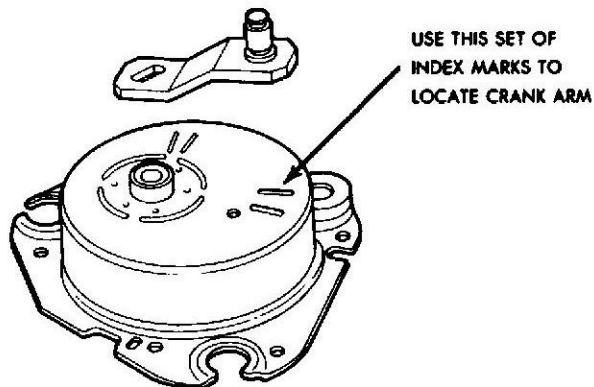
DISASSEMBLY AND ASSEMBLY PROCEDURE

- (1) Disconnect battery ground cable.
- (2) Manually place the wiper arms in Park position on windshield.
- (3) Disconnect wiper drive link from crank under instrument panel.
- (4) Disconnect motor wires at motor under hood. (OVER)

- (5) Remove wiper motor-to-dash panel mounting screws and remove motor.
- (6) Clamp crank arm in vise and loosen crank arm retaining nut, remove nut and arm from motor.
- (7) Remove seal cap, retaining clip, and end plate washer.
- (8) Punch out gear box cover retaining rivets and remove cover and gear train.

NOTE: Mark ground strap location for reassembly.
(9) Repack cover with a waterproof grease, part number 8991416 or equivalent.

- (10) Install gear and pinion over terminal board shaft.
- (11) Install gear and shaft in gear train cover.
- (12) Install washer and retaining clip.
- (13) Install seal cap and crank arm on shaft. Do not secure arm.
- (14) Make sure motor linkage is in Park position. Line crank arm up with the identification marks on cover (see illustration).



CRANK ARM ALIGNMENT

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(15) Place gear train cover over dowel pins and secure cover. Be sure cover is located properly over locating dowel pins.

(16) Clamp crank arm in vise and secure crank arm nut.

(17) Position motor on dash panel and install mounting screws.

(18) Connect motor wires to motor.

(19) Connect wiper drive link to motor crank.

(20) Connect battery ground wire.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME					SKILL LEVEL
				74	75	76	77	78	
MOTOR, WINDSHIELD WIPER- R & R	22.027	22010	WAG-CKE-TRK	.3	.3	.3	.3	.3	G
Gear Set — Replace.....		B		.3	.3	.3	.3	.3	G

8-035-BSJ

Diagnosis and Repair Bulletin

Subject: CB Radio Antenna and Splitterbox Adjustment Procedure

Application; 1978 Wagoneer, Cherokee, and Truck Models With CB Radio

**File: BODY
Body Electrical**

No. 8-05 December 20, 1977

The information contained in this bulletin supersedes all previous information published in regards to CB radio antenna and splitterbox adjustment. Please remove and discard Diagnosis and Repair Bulletin 8-02, dated October 13, 1977, File: BODY - Body Electrical.

All 1978 Wagoneer, Cherokee, and Truck Models with a CB radio will require an operational inspection prior to delivery. The inspection involves installing a VSWR (Voltage Standing Wave Ratio) meter, such as the Amserve CB Mobile Tester Model AMX 386S, in line between the radio and the splitterbox to measure the antenna trim. Adjustment of the splitterbox or antenna may be necessary depending on the readings of the test instrument.

Most trim adjustments can be made by adjusting the splitterbox. The antenna base is pre-set to a master at the factory and usually does not require adjustment.

The following procedure is to be used for the operational inspection and adjustment of the splitterbox/antenna.

NOTE: *VSWR checking procedures require transmitter operation and FCC regulations governing CB radio operations apply. A copy of these regulations are available from your district F.C.C. office.*

NOTE: *For best results when checking VSWR, the car should be located out-of-doors and at least 30 feet from other cars, people or buildings. Doors should be closed, and the antenna mast must be tight on the antenna base.*

CAUTION: *Before performing the following procedure be sure that the microphone connector detents are properly aligned as faulty radio operation could result.*

PROCEDURE

- (1) With radio off, disconnect coaxial cable inline connector located between radio and splitterbox.
- (2) Connect test instrument to radio and splitterbox leads. Follow instrument manufacturer's instructions for connections.

NOTE: *Most VSWR meters require the use of a coaxial jumper cable with two male ends to connect test instrument to radio coaxial lead.*

- (3) Turn radio on. Measure VSWR on channels 1 and 40 using test instrument manufacturer's instructions.

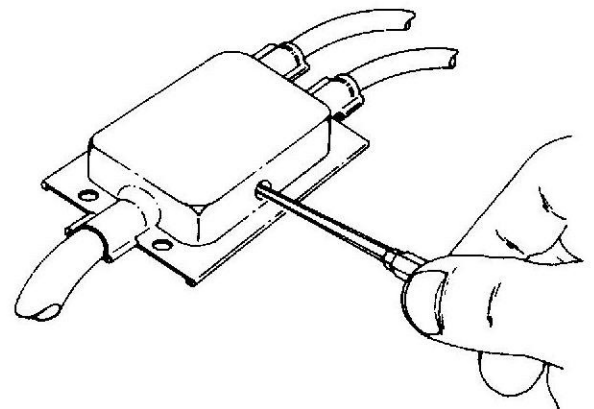
(a) If VSWR readings for both channels are 3.5 or less, and are within $\pm .5$ of one another, proceed to step (13).

(b) If either VSWR reading is higher than the specified 3.5 or if the two readings are not within the $\pm .5$ spread, the splitterbox must be adjusted. Proceed to step (4).

- (4) Adjust the splitterbox (see illustration) using a 5/64 inch Allen wrench or a 5/64 inch hexagon non-metallic alignment tool (available at most radio or television repair outlets).

(a) Insert tool into splitterbox adjusting screw.

(b) Turn adjusting screw clockwise or counterclockwise, until the VSWR readings on both channels (1 and 40) are within $\pm .5$ of one another.



NOTE: *If adjustment is made using an Allen wrench, the wrench must be removed from the splitterbox before checking the VSWR reading.*

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- (5) Observe the VSWR readings on channels 1 and 40.
 (a) If readings on both channels are 3.5 or less and are within $\pm .5$ of one another, proceed to step (13).
 (b) If either reading is greater than 3.5, an antenna base adjustment must be made. Proceed to step (6).
- (6) Measure VSWR on channel 20.
- (7) Remove antenna mast from base.
- (8) Remove mylar tape from top of antenna base.
- (9) Insert a 5/64 inch Allen wrench at least 3-1/2" long into antenna base adjusting screw.
- (10) Turn antenna adjusting screw clockwise or counter-clockwise 1/2 turn. Securely install antenna mast; and measure VSWR on channel 20.

(11) Continue to remove antenna and make adjustments in half turn increments until lowest VSWR is attained.

NOTE: *Antenna mast must be tight on antenna base for meaningful test results.*

(12) If necessary, readjust splitterbox so that VSWR reading on both channels 1 and 40 are 3.5 or less and with $\pm .5$ of one another.

(13) Turn radio off. Disconnect and remove test instrument.

(14) Connect inline connector between radio and splitterbox, be sure connection is tight.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
RADIO, CB — INSPECT		3011	WAG	—	0.1	—	G
AM CB	15.326		CKE				
AM/FM CB	15.328		TRK				
Splitterbox — Adjust	15.032	A		—	0.1	—	G
Antenna — Adjust	15.032	B		—	0.1	—	G

Diagnosis and Repair Bulletin

**Subject: Electric Tailgate Window Regulator
Pinion Gear Shaft Loose**

**Application: 1974, 1975, 1976, 1977
and 1978 Wagoneer and Cherokee
Models With Electric Tailgate Window**

**File: BODY
Body Electrical (1977 and
Prior Group 3.000)**

No. 8-04 October 13, 1977

If the electrically operated tailgate window, on one of the above vehicles, is inoperative and the problem is caused as a result of a loose pinion gear shaft on the window regulator, it is no longer necessary to replace the window regulator.

Effective repairs can be made, providing the gear teeth are not damaged, by restaking and welding the pinion gear shaft in accordance with the following procedure.

PROCEDURE

- (1) Lower tailgate window.
- (2) Open tailgate.
- (3) Remove tailgate carpet and access cover.
- (4) Remove retainers attaching regulator arms to channel.
- (5) Disengage regulator arm pins from channel.
- (6) Support window glass in raised position.

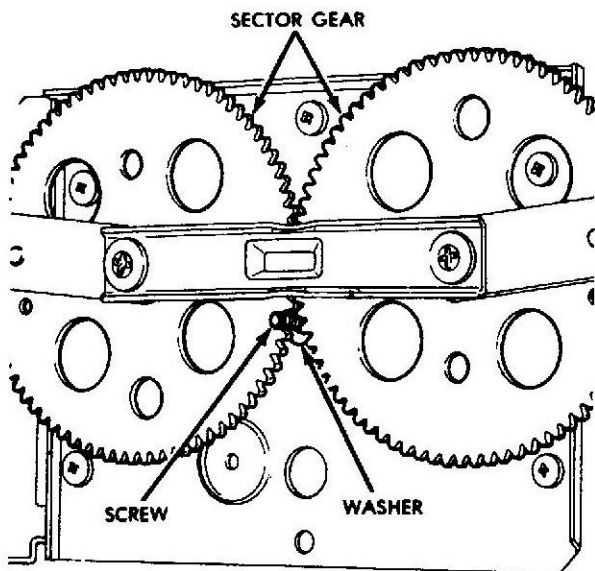


Fig. 1 Locking Electric Operated Window Regulator Gears

WARNING: Regulator spring tension MUST be retained before removing motor and drive unit from regulator.

- (7) Install a 1/4 inch by 1 inch screw, with flat washer, between the sector gear teeth (Fig. 1).
- (8) Remove motor attaching screws and slide motor from under regulator.
- (9) Remove regulator attaching screw and regulator. If attaching screws are not accessible, proceed as follows:
 - (a) Grasp regulator arm as far outboard as possible.
 - (b) Push downward on arm until sector gear holes align with attaching screw.
 - (c) Hold regulator arm down and insert screw between sector gear teeth.
 - (d) Remove regulator attaching screws and regulator.
- (10) Clean regulator in solvent and dry with compressed air.
- (11) Wire brush area around pinion gear shaft.
- (12) Stake pinion gear shaft in position.
- (13) Tack weld pinion gear shaft in three places (Fig. 2).

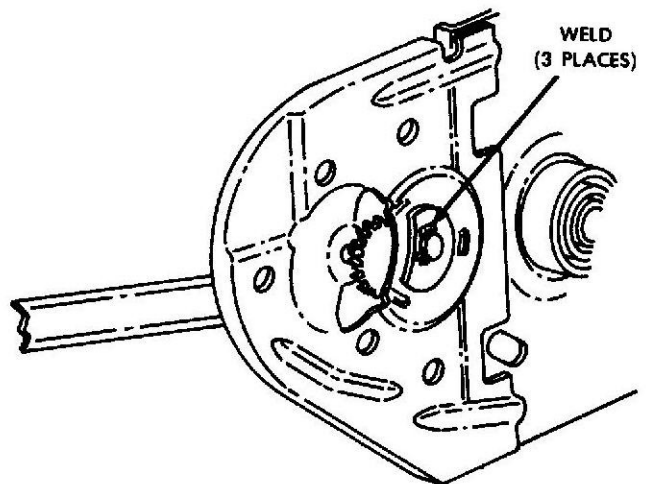


Fig. 2 Pinion Gear Shaft Weldment

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- (14) Clean welded area using a wire brush.
- (15) Paint welded area using black AMC/Jeep spray paint, part number 8990636, or equivalent.
- (16) Lubricate regulator pinion gears and sector gears with Lubriplate Multi-Purpose grease, or equivalent.
- (17) Install regulator in tailgate.
- (18) Install regulator motor.
- (19) Remove screw from between sector gear teeth.

- (20) Engage regulator arm pins to channel.
- (21) Install retainers attaching regulator arm to channel.
- (22) Install tailgate window.
- (23) Install tailgate access cover and carpet.
- (24) Close tailgate.
- (25) Raise tailgate window and check for proper operation.

The following operations and standard work times will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME					SKILL LEVEL
				74	75	76	77	78	
REGULATOR, ELECTRICAL TAILGATE WINDOW — REPAIR	23.306	23393	WAG-CKE	0.8	0.8	0.8	0.8	0.8	G

Diagnosis and Repair Bulletin

**Subject: Broken Electrical Connector—
Tailgate Window Motor**

**Application: 1974, 1975, 1976, 1977,
and 1978 Wagoneer and Cherokee
Models With Electrically Operated
Tailgate Window**

**File: BODY
Body Electrical (1977 and
Prior Group 3.000)**

No. 8-03 October 13, 1977

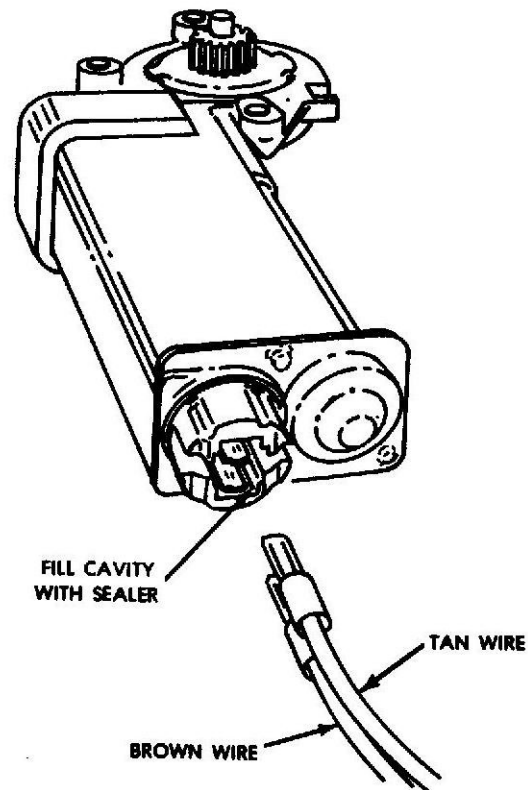
If the electrically operated tailgate window, on one of the above vehicles, is inoperative and the problem is caused as a result of a broken electrical connector on the motor, it is no longer necessary to replace the motor.

Effective repairs can be made by cutting the female connector from the wires, installing two quick connect terminals, and filling the connector cavity on the motor with a sealer. The following parts will be required.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Sealer Gasket-in-a-Tube	AR	8993317	15.260
Terminal 1/4 Inch Quick Connect	2	—	—

PROCEDURE

- (1) Lower tailgate window.
- (2) Open tailgate.
- (3) Remove tailgate carpet and access cover.
- (4) Raise tailgate window, using safety switch.
- (5) Loosen window regulator screw.
- (6) Remove motor from window regulator.
- (7) Disconnect female connector from motor.
- (8) Cut off wires at female connector.
- (9) Strip ends of both wires.
- (10) Attach 1/4 inch quick connect female terminal to each wire.
- (11) Connect tan wire to upper motor terminal (see illustration).
- (12) Connect brown wire to lower motor terminal (see illustration).



Electric Tailgate Window Motor

- (13) Fill motor connector cavity with Gasket-in-a-Tube Sealer, part number 8993317, or equivalent (see illustration).
- (14) Install motor on window regulator.
- (15) Tighten window regulator screw.
- (16) Install tailgate access cover and carpet.
- (17) Lower tailgate window, using safety switch.
- (18) Close tailgate.
- (19) Check tailgate window for proper operation.

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME					SKILL LEVEL
				74	75	76	77	78	
MOTOR, TAILGATE WINDOW — REPAIR	23.310	23391	WAG-CKE	0.6	0.6	0.6	0.6	0.6	G

7-083-BSJ

Diagnosis and Repair Bulletin

Subject: CB Radio Antenna And Splitterbox Adjustment Procedure

Application; 1978 Wagoneer, Cherokee, and Truck Models With CB Radio

**File: BODY
Body Electrical**

No. 8-02 October 13, 1977

This bulletin is being reissued to change the warranty reporting codes. Please remove and discard DRB No. 8-01, CB Radio Antenna and Splitterbox Adjustment Procedures, dated September 8, 1977, File: BODY — Body Electrical and insert this new bulletin.

All 1978 Wagoneer, Cherokee and Truck Models equipped with a CB radio will require an operational inspection prior to delivery. Some radios may also require an adjustment of the antenna and splitterbox.

The following procedure is to be used for the operational inspection and adjustment of the antenna and splitterbox. A test instrument, such as a VSWR (Voltage Standing Wave Ratio) meter or a CB Mobile Tester (Amserv Model AMX 386S) must be used for inspection or adjustment.

PROCEDURE

NOTE: For best results when checking SWR, the vehicle should be located out-of-doors and at least 100 feet from other vehicles, people, or buildings. Doors on vehicle should be closed.

- (1) Disconnect coaxial cable between transmitter and splitterbox at inline connection near splitterbox.
- (2) Connect transmitter end of coaxial cable to a jumper wire. Jumper wire should not be more than 18 inches long.
- (3) Connect jumper wire to transmitter terminal of test instrument.
- (4) Connect splitterbox end of coaxial cable to antenna terminal of test instrument.
- (5) Turn radio on, measure SWR on Channel 1 and 40.
 - (a) If SWR reading on channels 1 and 40 is 3.5 or less radio is within specification and no further adjustment is required. Proceed to step (11).
 - (b) If SWR reading of 3.5 or less cannot be attained on channels 1 and 40 antenna must be adjusted. Proceed to step (6).

- (6) Turn transmitter channel selector to channel 20.
- (7) Disconnect antenna mast from base, and remove mylar tape from antenna base.
- (8) Adjust antenna base adjusting screw (slug) using a 5/64 inch Allen wrench at least 3½ inches long. Insert Allen wrench into antenna base and turn adjusting screw (slug) clockwise or counterclockwise, one quarter turn at a time, until lowest possible reading on SWR test instrument is attained.

NOTE: Antenna mast must be installed securely to obtain an accurate SWR reading.

- (9) Measure SWR on channels 1 and 40.
 - (a) If SWR on channels 1 and 40 is 3.5 or less radio is within specifications and no further adjustment is required. Proceed to step (11).
 - (b) If SWR on channels 1 and 40 is greater than 3.5, the splitterbox must be adjusted. Proceed to step (10).
- (10) Adjust splitterbox using a 5/64 inch hexagon non-metallic alignment tool (available at most radio or television repair outlets).

NOTE: If adjustment is made using an Allen wrench, the wrench must be removed from splitterbox before checking SWR reading.

 - (a) Insert alignment tool into adjusting screw hole on side of splitterbox.
 - (b) Turn adjusting screw clockwise or counterclockwise, in one quarter turn increments, until a reading of 3.5 or less is attained on channels 1 and 40.
- (11) Disconnect splitterbox end of coaxial cable from antenna terminal of test instrument.
- (12) Disconnect jumper wire from transmitter end of coaxial cable.
- (13) Connect coaxial cable between transmitter and splitterbox at inline connection near splitterbox.

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The following standard operations and work times will apply.

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				76	77	78	
RADIO, CB—INSPECT		3011	WAG-	—	—	0.1	G
AM CB	15.326		CKE-				
AM/FM CB	15.328		TRK				
Antenna and Splitter Box—Adjust ..	15.032	A		—	—	0.2	G

Diagnosis and Repair Bulletin

Subject: Cracked Headlamp Bulb

Application: 1977 and 1978 CJ-5 and CJ-7 Models Built Between VINs J7XXXXXX108715 and J8XXXXXX013665

**File: BODY
Body Electrical
(1977 Group Body Section)**

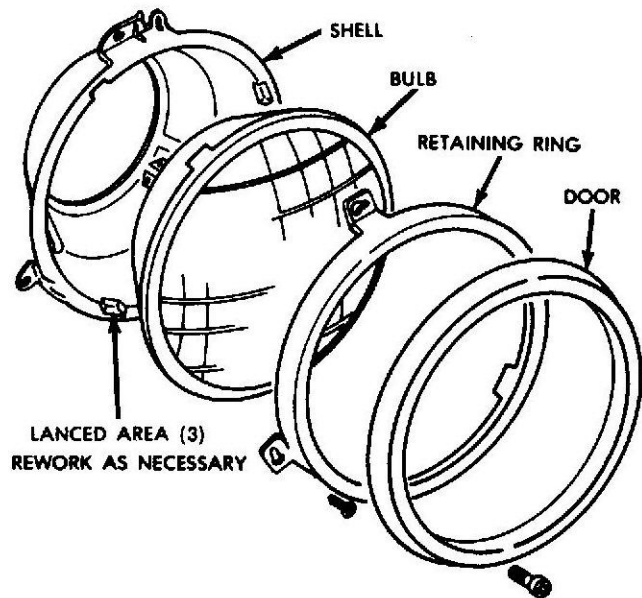
No. 8-01 September 27, 1977

If a sealed beam headlamp unit is reported to be cracked on a CJ-5 or CJ-7, built between the above VINs check to be sure that the lamp was positioned in the shell properly. When replacing the unit, make sure that the shell lances align properly with the bosses on the lamp. If an interference between one of the shell lances and the lamp bosses is encountered, correct the condition as outlined in the following procedure.

PROCEDURE

- (1) Remove headlamp door.
- (2) Remove headlamp retaining ring.
- (3) Remove and discard cracked bulb.
- (4) Position replacement bulb in shell and check for proper alignment.
- (5) File lanced area of shell that interferes with bosses of bulb (see illustration).
- (6) Install headlamp bulb.
- (7) Install headlamp retaining ring.

- (8) Aim headlamp(s).
- (9) Install headlamp door.



The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
SHELL, HEADLAMP — REWORK	3.245	3373	83-93	0.2	0.2	—	M
Both Headlamps — Add				0.1	0.1	—	
Includes aiming headlamps							

8-002-BSJ

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Diagnosis and Repair Bulletin

Subject: Air Control Cable Operation

Application: 1978-81 CJ-5 and CJ-7 Models

File: BODY Heater — Air Conditioning

No. 81-1 April 13, 1981

In November, 1980, a new cowl fresh air intake duct assembly was phased into production of 1981 CJ models. The new duct assembly provides improved air control cable and intake duct vent operation and can also be used on all 1978-81 CJ-5 and CJ-7 models.

If service diagnosis indicates that a bind in the fresh air intake duct linkage caused the air control cable to bind or break due to excessive cable operating effort, the new fresh air duct assembly should be installed along with a replacement air control cable if necessary.

The following part is available and may be required:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
DUCT ASSEMBLY, Fresh Air Intake	1	5758809	22.020

PROCEDURE

Removal

- (1) Disconnect battery negative cable.
- (2) Drain two quarts of coolant from radiator into clean container.
- (3) Disconnect heater hoses at heater housing.
- (4) Remove heater housing drain hose.
- (5) On models with air conditioning, remove screws attaching evaporator housing to instrument panel. Move housing away from panel and disconnect wires at air conditioning control switches.
- (6) Remove screw attaching heater motor housing to bracket.
- (7) Remove nuts that attach heater housing to engine compartment side of dash panel.
- (8) Disconnect speedometer cable.
- (9) Remove glove box.

- (10) Tilt heater housing back, pull housing rearward, and lower housing.
- (11) Disconnect heater control cables.
- (12) Remove defroster duct and tube assembly.
- (13) Remove fresh air intake panel from cowl.
- (14) Remove fresh air intake duct assembly from cowl.

Installation

- (1) Install defroster duct and tube assembly.
- (2) Raise and secure windshield.
- (3) Install replacement fresh air intake duct assembly.
- (4) Install fresh air intake panel on cowl.
- (5) Connect heater control cables.
- (6) Position heater housing assembly on dash panel.
- (7) Install nuts attaching heater housing to dash panel.
- (8) Install glove box.
- (9) Connect speedometer cable.
- (10) Install screw attaching heater housing to bracket.
- (11) On models with air conditioning, connect wires to air conditioning control switches and install evaporator housing on instrument panel.
- (12) Connect drain tube to heater housing.
- (13) Connect heater hoses.
- (14) Refill radiator.
- (15) Connect battery negative cable.

The standard servicing operations and work times published in the appropriate SSO manual are not affected by this bulletin.

81-060-13J

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Diagnosis and Repair Bulletin

Subject: Heater Diagnosis and Repair

Application: All 1978-79 Jeep Vehicles

**File: BODY
Heater-Air Conditioning**

No. 9-01 April 6, 1979

For all heater repairs, the logical and proper procedure is diagnosis before disassembly. Never assume any component to be the cause of a problem without verification. A systematic diagnosis procedure is extremely important in avoiding time consuming and costly repair delays caused by incorrect or unnecessary repairs. The most effective approach to any heater malfunction involves four basic procedures which are: problem definition and initial inspection, coolant flow checks, vacuum system checks, and a check of all heater system mechanical components. The four procedures should be performed in the sequence outlined and as described in the following paragraphs.

PROBLEM DEFINITION AND INITIAL INSPECTION

Problem definition is the first and most important step in resolving any heater malfunction. Have the owner describe and, if possible, demonstrate the problem condition before proceeding any further.

(1) Have owner describe and demonstrate problem. Problem may simply be misunderstanding how heater controls work. If owner knows how to operate controls, proceed to next step. If owner does not know how controls operate, demonstrate proper use and return car to owner.

(2) Raise hood and inspect heater system underhood components. Look for: loose or missing hose clamps, collapsed hoses, loose or missing radiator cap, insufficient coolant in radiator, damaged or loose fan belt, disconnected vacuum hoses, and visually observable coolant leaks. On CJ Models, check for evidence of coolant in the heater housing drain tube.

(3) Inspect interior components and controls. Be sure heater controls operate correctly and do not bind. Also be sure control cables and vacuum lines are securely attached and are not kinked. On Cherokee, Wagoneer and Truck models, signs of coolant on the passenger side floor mat or carpeting may indicate problem with heater core or related components. Refer to Mechanical Component Checks, step (6).

(4) Check engine coolant temperature. If coolant does not achieve proper operating temperature (189°F; 87°C) after engine warm-up, thermostat may be staying open or radiator cap may be leaking or developing insufficient pressure.

NOTE: *Insufficient radiator cap pressure can increase engine warm-up time.*

(5) If problem was revealed during initial inspection, repair as necessary and return car to owner. But, if initial inspection did not reveal problem, refer to next procedure in diagnosis sequence — Coolant Flow Checks.

COOLANT FLOW CHECKS

(1) Check thermostat operation. Perform this check only when coolant is well below operating temperature of 189°F (87°C). Remove radiator cap and start engine. Increase engine speed momentarily and observe coolant motion in radiator top tank. There should be no appreciable flow through tank. If pronounced flow occurs, thermostat is inoperative and should be replaced. If flow was negligible, proceed to next step.

(2) Place heater controls in MAX heat position and operate engine until it reaches operating temperature. If engine coolant reaches proper operating temperature but heat output is still insufficient, proceed to next step. If heat output is sufficient, return car to owner.

WARNING: *The engine coolant is hot and under pressure. Wear safety goggles, cover the radiator cap with a shop towel and remove the cap slowly to prevent coolant surge out of the radiator.*

(3) Remove radiator cap (slowly) and note coolant level.

If coolant level is OK, install cap and proceed to next step. If coolant level is low, add coolant as necessary and check heater output again. If output is now OK, return car to owner. If output is still insufficient, proceed to next step.

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(4) Bleed air from system. Loosen clamp attaching 3/4-inch I.D. return hose to heater core and allow air that may be trapped in cooling system to bleed off. Check heater output again. If OK, return car to owner. If not OK, proceed to next step.

(5) Stop engine and remove radiator cap. Test cap for leakage and capacity using cooling system pressure tester. If cap is OK, proceed to next step. If cap is faulty, replace cap and check heater output again. If output is now OK return car to owner. If not OK, proceed to next step.

WARNING: *Coolant is hot and under pressure. Wear safety goggles and be sure the hose end is directed into the bucket or drain pan.*

(6) Check for system restrictions. Remove heater return hose from heater core outlet. Attach length of heater hose to outlet and secure end of hose in bucket or drain pan. Have helper start and operate engine while you observe flow from hose into container.

(7) If coolant flow is restricted, check flow out of water pump, inlet hose, and through water valve using a length of heater hose and a container as described in step (6).

NOTE: *Be sure to inspect the heater core inlet and outlet tubes and the water pump and thermostat housing inlet and outlet necks for casting flash which can also restrict flow.*

(8) If flow is restricted at any point, repair or replace component(s) as necessary. If coolant flow was OK at all points, proceed to next procedure in diagnosis sequence— Vacuum Checks.

VACUUM CHECKS

Improper vacuum assisted heater door operation or coordination can restrict or completely block heater air flow. The vacuum motors, hoses, and reservoir can be checked using Vacuum Tester J-23738 or applying vacuum by connecting a hose to an intake manifold fitting and operating the engine. Refer to Chapter 3D — Heater in the appropriate Jeep Technical Service Manual for system operation and component location.

(1) Check operation of each vacuum motor using Tester J-23738 or by apply engine vacuum.

(2) If tester indicates a motor or hose will not maintain steady vacuum, replace as necessary and check operation of replacement component.

(3) If vacuum motors and hoses test OK, check vacuum reservoir if equipped. If reservoir will not hold vacuum, replace it. If reservoir is OK, proceed to next step.

(4) Check vacuum assisted heater door operation. If doors are binding or stuck, repair as necessary and check operation again. If doors operate correctly, proceed to next sequence in diagnosis procedure — Mechanical Component Checks.

MECHANICAL COMPONENT CHECKS

A malfunction of the cable operated heater doors can also restrict or completely block heater air flow. In addition, misadjusted door cables or a cracked or damaged heater housing can restrict or diffuse air flow.

(1) Check cable operation. Cables must be securely connected and not binding. Adjust cables if necessary.

(2) Check heater air intake for foreign material. On Jeep vehicles, the intake is located on cowl between hood and windshield.

(3) Check air flow from outlet ducts. Be sure that carpeting is not blocking ducts.

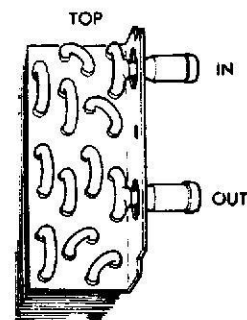
(4) Check heater housing for cracks. Operate fan at intermediate speed and listen for escaping air. Wet fingers and probe around housing to further detect any possible cracks or voids.

NOTE: *Small cracks or voids in the heater housing can be repaired using 3-M Strip Caulk 8578 or equivalent.*

(5) If above components are OK, verify system operation and check for internal obstructions in heater housing by comparing performance with known good car. If air flow is not comparable to known good car, check and repair heater housing as necessary.

(6) If coolant was observed on passenger side carpeting on Cherokee, Wagoneer, Truck models or in heater housing drain tube on CJ models, remove heater core and check for leaks. Cap one outlet tube in core, apply 15 psi air pressure to core, and immerse it completely in container filled with water. Bubbles at any point on the core indicate leak. Replace or repair core as necessary if leak is evident.

NOTE: *Check Cherokee, Wagoneer and Truck model heater core end caps for proper positioning (see illustration).*



HEATER CORE TUBE LOCATION

The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.

9-041-13A/J

Diagnosis and Repair Bulletin

Subject: Heater Core Repair

Application: 1978 Wagoneer, Cherokee, and Truck Models

**File: BODY
Heater —
Air Conditioning**

No. 8-02 April 27, 1978

The Service Diagnosis, Page 3D-7 of the 1978 Technical Service Manual, Volume 3 is applicable when diagnosing heater related problems; however, due to a design change at the beginning of the current model year the following additional information is of importance.

The heater core has tubes running through the core area connected on one end with end caps (see illustration). If the end caps leak, the following could result:

- Coolant may be found dripping from the bottom of the heater core housing.
- Coolant may be found around the heater core inlet and outlet.

Service correction for heater core leaks involves inspection and repair as directed in HEATER CORE LEAK INSPECTION.

It is also possible to mislocate the heater core end caps when installing them. If the heater core end caps are positioned differently than shown in the illustration, the following could occur:

- Coolant flow may be blocked, resulting in no heat.
- Coolant may not flow through the complete heater core circuit, resulting in partial heater output.

Service correction for mislocated end caps involves removing the heater core and having a competent repairman remove and correctly install end caps that are incorrectly positioned. The recommended repair procedure can be found under HEATER CORE END CAP REMOVAL AND INSTALLATION.

HEATER CORE LEAK INSPECTION

- (1) Pressure test cooling system and inspect heater hose connection at heater core and check bottom edge of heater housing for coolant.
- (2) If leakage is evident at heater core connections, tighten hose clamps and recheck for leakage.

(a) If leakage stops after tightening hose clamps, return vehicle to owner.

(b) If leakage continues after tightening hose clamps, proceed to Heater Core Leak Repair.

(3) If coolant is found at bottom edge of housing, proceed to Heater Core Leak Repair.

HEATER CORE LEAK REPAIR

- (1) Remove heater core as described on page 3D-8, Volume 3 of the 1978 Jeep Technical Manual.
- (2) Inspect heater core for leaks, if heater core is repairable, have a competent repairman make necessary repairs.

NOTE: It is suggested that the heater core end caps be checked for proper positioning at this time (see Fig. 1).

- (3) Pressure test heater core for leaks prior to installing in vehicle.
- (4) Install heater core as described on page 3D-8, Volume 3 of the 1978 Jeep Technical Service Manual.

HEATER END CAP REMOVAL AND INSTALLATION

- (1) Remove heater core as described on page 3D-8, Volume 3 of the 1978 Jeep Technical Service Manual.
- (2) Compare heater core end cap positions with Fig. 1.

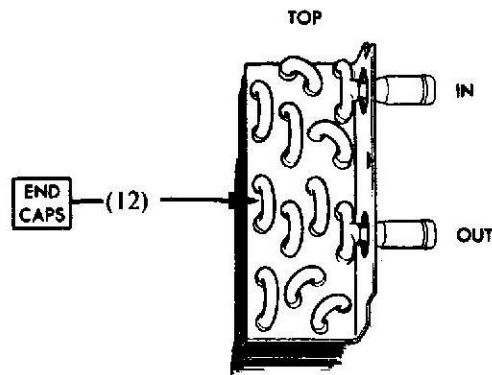


Fig. 1 Heater Core End Caps

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(3) If end caps are incorrectly positioned on heater core, have competent repairman remove and correctly install end caps.

(5) Install heater core as described on page 3D-8, Volume 3 of the 1978 Jeep Technical Service Manual.

(4) Pressure test heater core prior to installing in vehicle.

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME		SKILL LEVEL
					78	
HEATER LEAK — INSPECT Includes pressure test system and cap, tighten loose bolts, nuts, and add coolant if required	13.028	13067	WAG-CKE-TRK		0.2	G
Leak, Heater core — Repair With air conditioning — Add	13.028	A			0.7 0.1	G
End cap, heater core — R&R With air conditioning — Add	13.028	B			0.6 0.2	G
Note: Combinations A and B cannot be used together						
END CAP, HEATER CORE — R&R With air conditioning — Add	13.028	13069	WAG-CKE-TRK		0.7 0.1	G

8-041-13J

Diagnosis and Repair Bulletin

Subject: Heater Noise (Moan)

Application: 1978 CJ-5 and CJ-7 Models With V-8 Engine

File: BODY Heater-Air Conditioning

No. 8-01 November 21, 1977

A loud noise (moan) may be emitted from the heater on some 1978 CJ-5 or CJ-7 models with V-8 engine. The noise is most noticeable at wide open throttle and at engine speeds above 2500 RPM.

This condition can be corrected by installing a flow control valve in the heater inlet hose approximately 4 inches from the connection in the intake manifold. The following parts will be required.

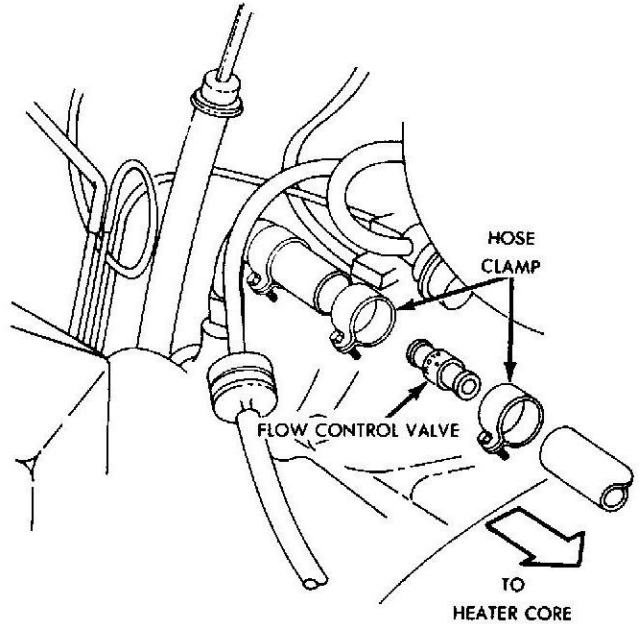
NOTE: Arrow on valve must be toward heater core.

- (5) Slide hose clamps over ends of valve and tighten.
- (6) Fill radiator to proper level.
- (7) Check for coolant leaks and verify that noise has been eliminated.

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
Valve, Flow Control	1	5455957	13.035
Clamp, Hose	2	G443632	13.086

PROCEDURE

- (1) Drain approximately 2 quarts of coolant from radiator.
- (2) Cut heater inlet hose approximately 4 inches from connection on intake manifold.
- (3) Position hose clamps over cut ends of hose.
- (4) Install flow control valve between cut ends of hose (see illustration).



Flow Control Valve Installation

The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78	79	
VALVE, FLOW CONTROL—INSTALL	13.034	13031	83-93	—	0.3	—	G

8-018-13J

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Diagnosis and Repair Bulletin

Subject: Seat Cover Button Replacement

Application: 1977 and 1978 Jeep Models With Seat Cover Buttons

File: BODY Instrument Panels - Seat Assemblies

No. 8-01 April 25, 1978

In the event that a seat button has been pulled from a seat cover, it is not necessary to replace the seat cover when only a seat button and retainer are required. The seat buttons can be found in Group 29.367-1 and the retainers in Group 29.367-2 of the current Parts Catalog. The procedures for replacing seat cover buttons are as follows:

SEAT BUTTON REPLACEMENT PROCEDURES

CJ-5 and CJ-7 Individual Seat Back and Wagoneer Seat Back-Bench Seat

- (1) Remove front seat per appropriate Technical Service Manual.
- (2) Remove hog rings from bottom of trim to loosen seat cover.
- (3) Pull loose cover forward.
- (4) Starting at bottom edge of seat cover, slide seat button retainer up into position between cover and seat. Push button stem through seat cover hole and seat button retainer.
- (5) Pull loose cover back to installed position and install hog rings.
- (6) Install front seat per appropriate Technical Service Manual.

Cherokee - Truck Individual Front Seat Back

- (1) Unzip front seat back zipper to loosen cover.
- (2) Pull loose cover forward.
- (3) Starting at bottom edge of seat cover, slide seat button retainer up into position between seat cover and seat. Push button stem through seat cover and seat button retainer.
- (4) Pull seat cover back to installed position and close zipper.

Wagoneer - Cherokee Rear Seat Back

- (1) Fold rear seat back down.
- (2) Remove necessary hog rings from bottom edge of seat cover to allow positioning of seat button retainer.
- (3) Slide seat button retainer into position and insert seat button stem through seat cover and retainer.
- (4) Pull seat cover back to installed position and install hog rings.
- (5) Return seat back to upright position.

Truck Seat Back - Bench Seat

- (1) Remove seat back.
- (2) Remove necessary hog rings from bottom edge of seat cover to allow positioning of seat button retainer.
- (3) Slide seat button retainer into position and insert seat button stem through seat cover and retainer.
- (4) Pull seat cover back to installed position and install hog rings.
- (5) Install seat back.

Truck Seat Cushion - Bench Seat

- (1) Remove seat per appropriate Technical Service Manual.
- (2) Remove necessary hog rings from rear edge of seat cover to allow positioning of seat cover and retainer.
- (3) Slide seat button retainer into position and insert seat button stem through seat cover and retainer.
- (4) Pull seat cover back to installed position and install hog rings.
- (5) Install seat per appropriate Technical Service Manual.

(OVER)

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The following operation and standard work time will apply:

OPERATION DESCRIPTION	WARRANTY REPORTING CODE	OPERATION NUMBER	MODEL	YEAR AND TIME			SKILL LEVEL
				77	78		
BUTTON, SEAT TRIM — INSTALL	29.367	29037	CJ-15	.3	.3		G
Each Back Panel — Front			16-17	.2	.2		
Each Back Panel — Rear			25-45-46	.3	.3		
			15-16-				
			17-18	.3	.3		
			25-45-46	.4	.4		
Each Seat Cushion			25-45-46	.3	.3		

8-059-BSA/J

Diagnosis and Repair Bulletin

Subject: Paint Information-7800 Phase-Out/7900 Phase-In Program-Supplement

Application: 7800 Jeep Vehicles

**File: BODY
Metal Repair-
Painting-Water
Leaks/Wind Noise**

No. 8-02 August 23, 1978

On July 28, 1978 DRB 8-01, File: BODY, Metal Repair-Painting-Water Leaks/ Wind Noise was issued to provide available paint information pertaining to the 7800 Phase-Out/ 7900 Phase-In Program. Since that time some of the

formulas that were marked N/A have become available and are listed below. Any formulas that have not been published will be available through local paint jobbers within the next few weeks.

ALPACA BROWN ENAMEL

DITZLER P/N DAR3106	
Mixing Code	1 Quart Setting
DMR453	20
DMR490	60
DMR435	130
DMR433	190
DMR476	580
DXR495	600
DMR482	1040

RUSSET METALLIC ENAMEL

DITZLER P/N DAR3108	
Mixing Code	1 Quart Setting
DMR477	16
DMR433	32
DMR435	112
DMR452	282
DMR460	772
DXR495	792
DMR499	1022

SABLE BROWN METALLIC ENAMEL

DITZLER P/N DAR3112	
Mixing Code	1 Quart Setting
DMR440	2
DMR433	12
DMR435	32
DMR453	76
DMR490	174
DMR482	314
DXR495	334
DMR476	1034

8-107-BSA/J

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Diagnosis and Repair Bulletin

Subject: Paint Information 7800 Phase-Out/ 7900 Phase-In Program	Application: 7800 Jeep Vehicles	File: BODY Metal Repair - Painting - Water Leaks/Wind Noise No. 8-01 July 28, 1978
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As part of the 7800 Phase-out/7900 Phase-in program twelve new exterior 1979 colors are being used on 1978 model vehicles as follows:

- | | |
|------------------------------|-------------------------|
| 9A Alpaca Brown | 9K Sable Brown Metallic |
| 9B Olympic White | 9L Saxon Yellow |
| 9C Russet Metallic | 9N Morocco Buff |
| 9E Wedgwood Blue | 9P Bordeaux Metallic |
| 9H Cumberland Green Metallic | 9T Ensign Blue |
| 9J Arrowhead Silver Metallic | 9W Mandarin Orange |

NOTE: Some intermix formulas are marked N/A because they were not available at time of publication. Contact your local paint jobber for information not contained herein.

ALPACA BROWN ENAMEL	ALPACA BROWN ENAMEL	ALPACA BROWN LACQUER	ALPACA BROWN LACQUER																																																								
<table border="1"> <tr><th colspan="2">DITZLER</th></tr> <tr> <th>Mixing Code</th> <th>1 Quart Setting</th> </tr> <tr> <td colspan="2" style="text-align: center;">N/A</td> </tr> </table>	DITZLER		Mixing Code	1 Quart Setting	N/A		<table border="1"> <tr><th colspan="2">SHERWIN-WILLIAMS 35-30169</th></tr> <tr> <th>Mixing Code</th> <th>1 Quart Setting</th> </tr> <tr> <td>F5W80</td> <td>5.9</td> </tr> <tr> <td>F5M78</td> <td>35.2</td> </tr> <tr> <td>F5B81</td> <td>88.0</td> </tr> <tr> <td>F5N76</td> <td>182.0</td> </tr> <tr> <td>F5N85</td> <td>334.0</td> </tr> <tr> <td>V6V175</td> <td>379.0</td> </tr> <tr> <td>F5S101</td> <td>907.0</td> </tr> </table>	SHERWIN-WILLIAMS 35-30169		Mixing Code	1 Quart Setting	F5W80	5.9	F5M78	35.2	F5B81	88.0	F5N76	182.0	F5N85	334.0	V6V175	379.0	F5S101	907.0	<table border="1"> <tr><th colspan="2">DITZLER</th></tr> <tr> <th>Mixing Code</th> <th>1 Quart Setting</th> </tr> <tr> <td colspan="2" style="text-align: center;">N/A</td> </tr> </table>	DITZLER		Mixing Code	1 Quart Setting	N/A		<table border="1"> <tr><th colspan="2">SHERWIN-WILLIAMS P/N 34-30169</th></tr> <tr> <th>Mixing Code</th> <th>1 Quart Setting</th> </tr> <tr> <td>L4W301</td> <td>4.7</td> </tr> <tr> <td>L4B320</td> <td>28.5</td> </tr> <tr> <td>L4M338</td> <td>56.9</td> </tr> <tr> <td>L4S345</td> <td>104.3</td> </tr> <tr> <td>L4S343</td> <td>284.0</td> </tr> <tr> <td>L4N314</td> <td>882.0</td> </tr> </table>	SHERWIN-WILLIAMS P/N 34-30169		Mixing Code	1 Quart Setting	L4W301	4.7	L4B320	28.5	L4M338	56.9	L4S345	104.3	L4S343	284.0	L4N314	882.0										
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**RUSSET METALLIC
ENAMEL**

DITZLER	
Mixing Code	1 Quart Setting
N/A	

**RUSSET METALLIC
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30174	
Mixing Code	1 Quart Setting
F5S69	58.0
F5M71	131.0
F5S74	204.0
F5R100	306.0
F5N76	454.0
V6V175	499.0
F5E84	906.0

**RUSSET METALLIC
LACQUER**

DITZLER P/N DDL3108	
Mixing Code	1 Quart Setting
DMA360	20
DMA312	70
DMA307	230
DMA356	990

**RUSSET METALLIC
LACQUER**

SHERWIN-WILLIAMS P/N 34-30174	
Mixing Code	1 Quart Setting
L4Y333	33.8
L4S335	146.0
L4E306	484.0
L4M338	878.0

**WEDGWOOD BLUE
ENAMEL**

DITZLER P/N DAR3109	
Mixing Code	1 Quart Setting
DMR410	10
DMR491	205
DMR414	420
DXR495	440
DMR400	1,275

**WEDGWOOD BLUE
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30147	
Mixing Code	1 Quart Setting
F5P92	10.5
F5B81	31.5
F5L68	62.1
V6V175	107.0
F5W80	1,000.0

**WEDGWOOD BLUE
LACQUER**

DITZLER P/N DDL3109	
Mixing Code	1 Quart Setting
DMA342	6
DMA346	60
DMA321	104
DMA311	704
DMA310	1,084

**WEDGWOOD BLUE
LACQUER**

SHERWIN-WILLIAMS P/N 34-30147	
Mixing Code	1 Quart Setting
L4M318	4.7
L4B320	18.0
L4L305	40.7
L4W301	948.0

**CUMBERLAND GREEN
METALLIC
ENAMEL**

DITZLER P/N DAR3110	
Mixing Code	1 Quart Setting
DMR435	36
DMR482	92
DMR433	156
DMR490	304
DMR441	584
DXR495	604
DMR499	1,014

**CUMBERLAND GREEN
METALLIC
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30093	
Mixing Code	1 Quart Setting
F5G90	191.0
F5B81	385.0
V6V175	430.0
F5S101	902.0

**CUMBERLAND GREEN
METALLIC
LACQUER**

DITZLER P/N DDL3110	
Mixing Code	1 Quart Setting
DMA307	10
DMA304	120
DMA358	260
DMA312	430
DMA309	600
DMA384	990

**CUMBERLAND GREEN
METALLIC
LACQUER**

SHERWIN-WILLIAMS P/N 34-30093	
Mixing Code	1 Quart Setting
L4G311	242.0
L4B320	484.0
L4S345	886.0

**ARROWHEAD SILVER
ENAMEL**

DITZLER P/N DAR3118	
Mixing Code	1 Quart Setting
DMR450	15
DMR435	45
DMR414	93
DMR490	153
DMR433	228
DXR495	248
DMR499	1,023

**ARROWHEAD SILVER
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30176	
Mixing Code	1 Quart Setting
F5W80	7.2
F5P92	21.5
F5L68	38.7
F5B81	139.0
V6V175	184.0
F5S101	901.0

**ARROWHEAD SILVER
LACQUER**

DITZLER P/N DDL3118	
Mixing Code	1 Quart Setting
DMA311	2
DMA357	12
DMA375	24
DMA320	134
DMA312	294
DMA310	994

**ARROWHEAD SILVER
LACQUER**

SHERWIN-WILLIAMS P/N 34-30176	
Mixing Code	1 Quart Setting
L4M321	18.5
L4L305	53.0
L4B320	212.0
L4S345	482.0
L4S343	884.0

**SABLE BROWN
METALLIC
ENAMEL**

DITZLER	
Mixing Code	1 Quart Setting
N/A	

**SABLE BROWN
METALLIC
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30148	
Mixing Code	1 Quart Setting
F5M78	63.0
F5S69	169.0
F5B81	338.0
V6V175	383.0
F5N85	912.0

**SABLE BROWN
METALLIC
LACQUER**

DITZLER P/N DDL3112	
Mixing Code	1 Quart Setting
DMA309	4
DMA312	32
DMA384	72
DMA358	166
DMA307	876
DMA310	986

**SABLE BROWN
METALLIC
LACQUER**

SHERWIN-WILLIAMS P/N 34-30148	
Mixing Code	1 Quart Setting
L4S343	37.5
L4S335	97.6
L4M338	187.7
L4B320	352.0
L4N314	878.0

**SAXON YELLOW
ENAMEL**

DITZLER P/N DAR3113	
Mixing Code	1 Quart Setting
DMR491	14
DMR481	54
DMR400	394
DMR487	898
DXR495	918
DMR499	1,208

**SAXON YELLOW
ENAMEL**

SHERWIN-WILLIAMS	
Mixing Code	1 Quart Setting
N/A	

**SAXON YELLOW
LACQUER**

DITZLER P/N DDL3113	
Mixing Code	1 Quart Setting
DMA346	10
DMA322	50
DMA328	340
DMA311	1,040

**SAXON YELLOW
LACQUER**

SHERWIN-WILLIAMS P/N 34-30092	
Mixing Code	1 Quart Setting
L4B320	1.0
L4Y333	72.6
L4Y303	190.0
L4W301	946.0

**MOROCCO BUFF
ENAMEL**

DITZLER P/N DAR3115	
Mixing Code	1 Quart Setting
DMR475	18
DMR490	40
DMR486	410
DMR400	1,140
DXR495	1,160
DMR499	1,250

**MOROCCO BUFF
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30149	
Mixing Code	1 Quart Setting
F5R100	6.7
F5B81	26.7
F5Y93	153.0
V6V175	198.0
F5W80	999.0

**MOROCCO BUFF
LACQUER**

DITZLER P/N DDL3115	
Mixing Code	1 Quart Setting
DMA313	6
DMA392	18
DMA358	30
DMA329	210
DMA311	890
DMA310	1,090

**MOROCCO BUFF
LACQUER**

SHERWIN-WILLIAMS P/N 34-30149	
Mixing Code	1 Quart Setting
L4R304	9.4
L4B320	20.7
L4Y303	178.0
L4W301	942.0

**BORDEAUX METALLIC
ENAMEL**

DITZLER P/N DAR3111	
Mixing Code	1 Quart Setting
DMR435	4
DMR490	16
DMR433	36
DMR452	254
DXR495	274
DMR476	1,032

**BORDEAUX METALLIC
ENAMEL**

SHERWIN-WILLIAMS P/N 35-30150	
Mixing Code	1 Quart Setting
F5P92	38.4
F5B81	86.3
F5E84	150.0
F5S101	258.0
V6V175	303.0
F5M78	902.0

**BORDEAUX METALLIC
LACQUER**

DITZLER P/N DDL3111	
Mixing Code	1 Quart Setting
DMA312	22
DMA320	72
DMA315	452
DMA363	892
DMA310	992

**BORDEAUX METALLIC
LACQUER**

SHERWIN-WILLIAMS P/N 34-30150	
Mixing Code	1 Quart Setting
L4B320	24.0
L4M321	72.1
L4E306	162.1
L4S345	274.0
L4M338	874.0

**ENSIGN BLUE
ENAMEL**

**ENSIGN BLUE
ENAMEL**

**ENSIGN BLUE
LACQUER**

**ENSIGN BLUE
LACQUER**

DITZLER P/N DAR3117	
Mixing Code	1 Quart Setting
DMR486	16
DMR400	56
DMR490	126
DMR450	236
DXR495	256
DMR410	1,026

SHERWIN-WILLIAMS P/N 35-30170	
Mixing Code	1 Quart Setting
F5P92	41.4
F5W80	120.0
F5B81	210.0
V6V175	255.0
F5L70	912.0

DITZLER P/N DDL3117	
Mixing Code	1 Quart Setting
DMA329	4
DMA357	48
DMA311	188
DMA358	338
DMA342	1,018

SHERWIN-WILLIAMS P/N 34-30170	
Mixing Code	1 Quart Setting
L4M321	42.8
L4B320	41.7
L4W301	276.0
L4L336	872.0

**MANDARIN ORANGE
ENAMEL**

**MANDARIN ORANGE
ENAMEL**

**MANDARIN ORANGE
LACQUER**

**MANDARIN ORANGE
LACQUER**

DITZLER P/N DAR3116	
Mixing Code	1 Quart Setting
DMR401	50
DMR484	320
DMR491	430
DMR476	770
DXR495	790
DMR464	1,360

SHERWIN-WILLIAMS P/N 35-30171	
Mixing Code	1 Quart Setting
F5B81	19.0
F5Y87	147.0
V6V175	192.0
F5E86	993.0

DITZLER P/N DDL3116	
Mixing Code	1 Quart Setting
DMA358	8
DMA311	18
DMA360	32
DMA307	86
DMA336	1,080

SHERWIN-WILLIAMS P/N 34-30171	
Mixing Code	1 Quart Setting
L4B320	11.5
L4Y333	106.2
L4E317	956.0

8-106-BSA/J

Service Technical Letter

File: Service General
 No. 9-10 July 24, 1979

Subject	Information																								
<p>Replacement of Watershield Paper— 1977-79 Cherokee-Wagoneer-Truck Models</p>	<p>In some instances when removing the door trim panel and watershield paper, the paper becomes damaged and must be replaced to prevent water leaks.</p> <p>Watershield paper and adhesive will be available as a replacement part after August 20, 1979. Do not order parts before this date.</p> <p>Part numbers are as follows:</p> <table border="1"> <thead> <tr> <th data-bbox="733 705 1020 746"><u>Description</u></th> <th data-bbox="1020 705 1126 746"><u>Qty.</u></th> <th data-bbox="1126 705 1338 746"><u>Part No.</u></th> <th data-bbox="1338 705 1459 746"><u>Group</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="733 766 1020 838">Paper, Watershield Rear Door, Left</td> <td data-bbox="1020 766 1126 807">1</td> <td data-bbox="1126 766 1338 807">5464553</td> <td data-bbox="1338 766 1459 807">23.012</td> </tr> <tr> <td data-bbox="733 858 1020 930">Paper, Watershield Rear Door, Right</td> <td data-bbox="1020 858 1126 899">1</td> <td data-bbox="1126 858 1338 899">5464554</td> <td data-bbox="1338 858 1459 899">23.012</td> </tr> <tr> <td data-bbox="733 950 1020 1022">Paper, Watershield Front Door, Left</td> <td data-bbox="1020 950 1126 991">1</td> <td data-bbox="1126 950 1338 991">5464555</td> <td data-bbox="1338 950 1459 991">23.012</td> </tr> <tr> <td data-bbox="733 1042 1020 1113">Paper, Watershield Front Door, Right</td> <td data-bbox="1020 1042 1126 1083">1</td> <td data-bbox="1126 1042 1338 1083">5464556</td> <td data-bbox="1338 1042 1459 1083">23.012</td> </tr> <tr> <td data-bbox="733 1134 1020 1246">Adhesive (Quantity Sufficient for One Door)</td> <td data-bbox="1020 1134 1126 1175">1</td> <td data-bbox="1126 1134 1338 1175">3624805</td> <td data-bbox="1338 1134 1459 1175">23.012</td> </tr> </tbody> </table> <p>The Standard Servicing Operations and work times as published in the current SSO Manual are not affected by this bulletin.</p>	<u>Description</u>	<u>Qty.</u>	<u>Part No.</u>	<u>Group</u>	Paper, Watershield Rear Door, Left	1	5464553	23.012	Paper, Watershield Rear Door, Right	1	5464554	23.012	Paper, Watershield Front Door, Left	1	5464555	23.012	Paper, Watershield Front Door, Right	1	5464556	23.012	Adhesive (Quantity Sufficient for One Door)	1	3624805	23.012
<u>Description</u>	<u>Qty.</u>	<u>Part No.</u>	<u>Group</u>																						
Paper, Watershield Rear Door, Left	1	5464553	23.012																						
Paper, Watershield Rear Door, Right	1	5464554	23.012																						
Paper, Watershield Front Door, Left	1	5464555	23.012																						
Paper, Watershield Front Door, Right	1	5464556	23.012																						
Adhesive (Quantity Sufficient for One Door)	1	3624805	23.012																						

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Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 9-06

March 30, 1979

Subject	Information
<p>Frozen Door Handle Pushbutton Repair — 1978-79 Cherokee, Wagoneer, and Truck Models</p>	<p>Ice may accumulate on the outside door handle pushbutton on the subject vehicles making it inoperative. The following outlines the service correction for this condition.</p> <p>Thaw any ice that has accumulated on the pushbutton mechanism. Depress the button and spray a liberal amount of WD-40 penetrating lubricant, or equivalent, past the button using the small plastic spray tube. Repeat the operation on all door pushbuttons and allow 15 minutes to dry. After drying, repeat the above procedure using AMC/Jeep Silicone Lubricant (8993542) or equivalent.</p>
<p>Bronze Tone Tint Damage - CJ-7 Golden Eagle</p>	<p>CAUTION: If an aftermarket heated grid rear window defogger is installed on a bronze tone rear window, it will cause damage to the tint of the glass. Such installations are not approved.</p>
<p>Tire Size Capacity of Rear Swing-Out Spare Tire Carrier — 1976-79 CJ-5 and CJ-7 Models</p>	<p>Tires larger than the 9-15 LT Tracker must not be mounted on the swing-out spare tire carriers. The carrier may be damaged if larger than specified tires are installed.</p>

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Service Technical Letter

OF INTEREST TO:

- | | |
|---|--|
| <input type="checkbox"/> Dealer Principal | <input checked="" type="checkbox"/> Service Writer |
| <input checked="" type="checkbox"/> Service Manager | <input checked="" type="checkbox"/> Mechanic |

File: Service General

No. 9-05

March 3, 1978

Subject	Information
<p>Compression Pressure Specification Update - 1977-79 Six- and Eight-Cylinder Engines</p>	<p>The compression pressure specifications for 1977-79 six- and eight-cylinder engines have been updated. The pressure specifications for both six- and eight-cylinder engines are now 120 to 150 psi with a maximum allowable pressure variation between cylinders of 30 psi.</p> <p>The updated specifications should be noted in the 1977-79 Jeep Technical Service Manuals.</p>
<p>Roof Rack Moan - 1979 Wagoneer and Cherokee Models</p>	<p>A roof rack moan may be produced by the front end rail of the roof rack. The moaning noise can be eliminated by positioning the front end rail over the center stanchion with the large diameter of the end rail toward the front of the vehicle.</p> <p>NOTE: The roof rack moan is very similar to an axle noise. Be sure not to misdiagnose the noise.</p>

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Service Technical Letter

OF INTEREST TO:

- Dealer Principal Service Writer
 Service Manager Mechanic

File: Service General

No. 9-02 October 2, 1978

Subject

Information

Service Technical Letter Number 8-07, dated September 28, 1978

The subject Service Technical Letter was inadvertently numbered 8-07. The correct number should be 9-01. Please make the necessary correction and file this Service Technical Letter in the Service General of your 1979 Diagnosis and Repair Bulletin binder.

All 1979 Jeep Models Equipped With Quadra-Trac--Transmission to Quadra-Trac O-Ring Seal

All Jeep Models equipped with Quadra-Trac built after August 4, 1978 and VIN J9A15NN009209 have an O-ring seal between the automatic transmission and Quadra-Trac mating surface.

The Quadra-Trac housing has been machined to accept the O-ring seal that replaces the gasket previously used.

Part numbers for the O-ring seal and Quadra-Trac assembly (w/O-ring seal) are as follows:

<u>Description</u>	<u>Quantity</u>	<u>Part No.</u>	<u>Group</u>
O-ring, Transfer Case to Transmission	1	5359090	18.500
Transfer Case Assembly (WQT)	1	8128994	18.500

NOTE: If the front half of Quadra-Trac housing needs replacing, you must order the old style housing (group 18.510-2, PN 8122386) and a gasket (group 18.500-3, PN 998315). The front half of the Quadra-Trac housing that is machined to accept the O-ring seal is not available as a replacement part at this time.

(over)

Service Technical Letter (cont'd)

Subject	Information
All 1979 Jeep Models - Starter Solenoid With Blade Terminals	<p>The starter solenoid on the subject vehicles has blade type terminals attached to the S and I stud terminals. The addition of the blade terminals allows either an early or late style harness to be connected to the solenoid.</p> <p>CAUTION: Do not remove the blade type terminals on service applications that require the study type (push-on) terminals. Loosening the stud retaining nut may cause a loss of the internal connection and render the solenoid inoperative.</p>
1978 Jeep Owner's Manual Supplement	<p>Under separate cover, we have sent to all dealers several copies of a supplement to the Owner's Manual for 1978 Cherokees equipped with the Brush Guard accessory. In the event that you need additional copies, contact your local Zone Office.</p>
1979 Jeep Technical Service Manual Correction	<p>On pages 2E-6 and 2E-8 of the 1979 Jeep Technical Service Manual, tool number J-28488 appears twice on DARS Chart step 7 and step 12. This tool number should be J-24649. Please make the necessary correction.</p>

Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 8-06 August 18, 1978

Subject

Information

Power Steering Gear Diagnosis

In some instances, power steering gear assemblies have been replaced even though an in-dealership repair was all that was necessary. Complete diagnosis and repair procedures are described in the appropriate Technical Service Manual. Be sure to follow these procedures.

1978 Model BBD-2V Carburetor - Accelerator Pump Change

Carburetors built after date code K718 suffix A (stamped on the metal identification tag) have a new design accelerator pump which has no check ball or drilled passage in the bottom of the pump well.

1979 CJ-7 Models Equipped With Soft Top

The soft top used on 1979 CJ-7 Models has longer sides at the rear quarter panel area to allow the snaps to be installed on the vertical section of the quarter panel rather than on the upper flange as was the case in 1978 (see 1979 CJ-7 Model installation instruction sheets for detailed installation procedures).

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Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 8-05 June 23, 1978

Subject	Information
<p>Canvas Top Installation - CJ-7 Models Which Previously Had a Factory Installed Hardtop and Rollbar</p>	<p>Prior to installing a canvas top on a CJ-7 model that has had a factory installed hardtop and a rollbar, check the hole in the top-center of the rollbar for burrs. This hole is drilled in the rollbar for use in attaching the rubber bumper used on CJ-7 models that have the hardtop option. Remove the burrs as necessary to eliminate the possibility of contact with the canvas top material.</p>
<p>Brake Master Cylinder Push Rod Retainer - 1977-1978 CJ Models With Manual Disc Brakes</p>	<p>Master cylinder push rod retainers are available as an individual part (part number 8129287, group 8.054). It is not necessary to order a master cylinder push rod to obtain a push rod retainer.</p>
<p>Batteries in CJ Models Built After May 16, 1978</p>	<p>CJ models built after May 16, 1978 have a nylon strap around the battery and battery tray. This strap is installed for transportation tie-down only. It may be left on or removed, but is not a necessary part after the vehicle has reached its original destination.</p>
<p>Valve Train Noise - V-8 Engines</p>	<p>On some V-8 engines, the valve rocker arm may contact the spring retainer if the keepers sink too far into the retainer. To validate this condition remove the retainer and inspect the bottom surface for flaring. However; the presence of tooling marks on the retainer surface will not affect the operation or the durability of the retainer.</p>

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Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 8-03

March 28, 1978

Subject	Information				
Spark Plug Fuel Fouling at Low Mileage - New Vehicles	<p>Reports of wet-fuel-fouling of spark plugs on dealer inventory vehicles have been received. This is the result of numerous start/stop engine operations during transportation or dealership maneuvering of inventory vehicles. This condition predominately occurs during colder temperatures in the winter months. This problem can be prevented by occasionally bringing the engine to operating temperature during the start/stop maneuvering. It can be corrected, if it occurs, by simply air drying or cleaning the effected spark plugs.</p>				
1978 Jeep Technical Service Manual Revision - Transfer Case	<p>The torque specification for the front and rear output shaft yoke on page 2D-11 of the 1978 Jeep Technical Service Manual, Volume 2 should read as follows:</p> <table border="0" data-bbox="616 1098 1316 1260"> <tr> <td>Service Set-To Torque</td> <td>120 Foot Pounds</td> <td>Service In-Use Recheck Torque</td> <td>90-150 Foot Pounds</td> </tr> </table>	Service Set-To Torque	120 Foot Pounds	Service In-Use Recheck Torque	90-150 Foot Pounds
Service Set-To Torque	120 Foot Pounds	Service In-Use Recheck Torque	90-150 Foot Pounds		
Quadra-Trac Use When Plowing Snow	<p>It is recommended that the Quadra-Trac emergency drive be engaged when plowing snow on slippery surfaces. This means that the Quadra-Trac emergency drive light would be on and the control in the glove box would be set in the red area. This will prevent excessive exercising of the limited slip clutches and prevent their damage.</p> <p>However, it is imperative that the control in the glove box be repositioned to the normal (green) position immediately upon completion of snow plowing.</p>				

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Service Technical Letter (cont'd)

Subject	Information
<p>Quadra-Trac - Front Output Shaft Spline Change</p>	<p>There has been a running change on the front output shaft and yoke assembly splines. The earlier splines had ten teeth, the later have twenty-six teeth. If a Quadra-Trac assembly is to be replaced, check the number of teeth on the front output shaft; if necessary, order a new front yoke with a twenty-six tooth spline. The new yoke assembly part number is 8129363.</p>

Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 8-02 November 18, 1977

Subject	Information
<p>Typographical Error - 1977 Technical Service Manual, page 7-50 and 1978 Technical Service Manual, page 2C-53</p>	<p>The dimensional thickness of the direct clutch flat steel plates, referenced in the note immediately following step (9) should be changed from 0.0195 to 0.0915.</p>
<p>Battery Post Contamination - All Models</p>	<p>The battery posts on some low mileage vehicles or service batteries may develop a condition, referred to as "black post". If a no-start condition is encountered, or when a new battery is put into service, clean the battery posts with a cylindrical wire brush and apply a thin coat of grease.</p>
<p>Correction of Rear Wheel Cylinder Diameter - 1976 Technical Service Manual, page 9-41 and 1977 Technical Service Manual, page 9-47.</p>	<p>The rear wheel cylinder dimension for CJ models listed in the "Brake Size and Application Chart" is incorrect. Please change this dimension from 15/16 inch to 7/8 inch.</p>

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Service Technical Letter

OF INTEREST TO:

Dealer Principal

Service Writer

Service Manager

Mechanic

File: Service General

No. 8-01 September 15, 1977

Subject	Information
<p>Rocker Arm Pivot Hole Off Center - 1978 Models With V-8 Engines</p>	<p>Some V-8 engines with build date codes between 107(N, P, Z)20 and 107(N, P, Z)26 may experience a rough idle or a miss on one or more cylinders. This condition may be caused by the valve not seating properly as a result of the rocker arm pivot hole being slightly off center. If this condition is encountered, replace the rocker arm(s) on any dead cylinders. Also replace bridge pivot(s), if scored. A compression test should be performed to isolate the dead cylinder(s).</p> <p>NOTE: Before replacing rocker arm(s) or bridge pivot(s), check ignition initial timing and carburetion to be sure they are set to specifications.</p>

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