

or valve seat at center of piston plate, replace parts.

Replace an excessively worn leather packing or piston rod leather seal.

c. Assembly

Be sure all metal parts are clean and thoroughly dry. Refer to Figure 26 and assemble piston plate as follows: With ribbed portion up, position the leather packing and piston plate. Install the wick, expander spring and wick retainer plate.

NOTE: Dip the wick in vacuum cylinder oil prior to installation.

Refer to Figure 27 and assemble the mounting ring and end plate as follows:

Insert the end plate mounting plate screws in the end plate and install the rubber gasket. Apply silicone grease to outer face of gasket around center hole. Position the piston rod seal and retainer and retaining spring. Coat the bearing surface of mounting ring with silicone grease and install the mounting ring (ribbed portion up).

Slide the piston rod stop washer on the piston rod.

CAUTION

Before inserting the piston rod through the leather seal, cover approximately 1¼ inches of the piston

rod with scotch tape to prevent the sharp edges of the piston rod from damaging the seal.

Insert the piston rod through the seal and position the piston spring on the end plate. Insert the piston rod into the piston and install the retaining pins (Fig. 25).

Insert the valve rod in the piston and install the valve rod spring, washer and snap ring. Install the valve rod seal and valve rod nylon button.

Position the retainer plate, spring, and poppet on the piston. Install the tube and plate assembly.

NOTE: Pedal is slotted to provide clearance for removal of brake pedal assembly.

d. Installation of Pedal Linkage in Pedal Bracket

CAUTION

Use extreme care during assembly or handling of the linkage, as the power brake pedal trigger arm is easily damaged.

After reinstalling brake pedal linkage in pedal bracket, a wooden wedge should be placed between power brake lever and forward edge of triangular hole in pedal bracket (if power unit has been removed). This will prevent trigger arm from extending beyond extremities of bracket.

SERVICE DIAGNOSIS

PEDAL RELEASES SLOWLY AFTER APPLICATION OR BRAKE PEDAL VIBRATES (BOOSTER CHATTER)

Pedal trigger arm improperly adjusted. Rotate linkage adjusting screw in counter-clockwise direction. See paragraph "Adjustments."

DELAY IN APPLICATION (NOTED DURING FAST BRAKE APPLICATION)

Pedal trigger arm improperly adjusted. Rotate the linkage adjusting screw in a clockwise direction. See paragraph "Adjustments."

LACK OF POWER ASSISTANCE (WHEN COLD)

NOTE: This condition only occurs when the car has been setting for a long period of time (storage). Unit must be disassembled, cleaned of all old lubricants, seals and diaphragm must be softened with silicone grease before unit will function properly.

LEAKS IN BOOSTER (Whistle when Brake is Applied)

- a. Air leaks in vacuum lines.
- b. Leaks in power cylinder. Recondition complete power cylinder assembly.

Section IV

ACCESSORY BELT DRIVES

The satisfactory performance of the belt driven accessories depends on the maintenance of the proper belt tension. If the specified tensions are not main-

tained, belt slippage may cause engine overheating, lack of power steering assist, loss in air conditioning capacity, air suspension height control failure, re-

duced generator charging rates, and greatly reduced belt life. To avoid any such adverse effects, the following service procedure should be followed:

1. Adjust all belts "in use"* to the specified belt tension at new car preparation.
2. Readjust all belts at the 2,000 mile inspection and service.
3. Check all belts by the deflection method at servicing and readjust if needed.
4. The new belt tension specifications should be used on all new belt installations and the above procedure followed thereafter.

There are two methods by which belt tensions can be properly established:

Torque Method — All generator and power steering pump belts can be tightened to the specified tension (see Tension Specifications that follow), by use of a torque wrench. The generator belts are tensioned by using a special tool C-3379, and torque wrench. The power steering belts are tightened by inserting the torque wrench in the square hole provided in the bracket. Other belts can also be tightened by this method if the adjusting bracket has a square hole.

To tighten belts by the torque method, loosen all mounting bolts and apply the specified torque to the accessory or idler. Tighten all mounting bolts while the torque is applied to the accessory. If it is not possible to use the torque wrench because of clearance, use an extension.

Belt Deflection Method — All belts can also be adjusted by measuring the deflection of the belt at the mid-point between two pulleys under a five-pound push or pull. A small spring scale can be used to establish the five-pound load. See Figure 29 for correct location at which to measure deflection.

This method should be used only when it is not possible to use the torque method, as it is a less accurate method. To tension the belts by the deflection method, loosen all mounting bolts and use a bar to apply tension to the belts being careful not to damage the accessory. A Johnson bar can be used if the accessory has a square hole. Tighten the mounting bolts and check the deflection. (see Belt Tension specifications). It may be necessary to repeat this procedure several times to establish the correct tension.

* Any belt that has operated for a minimum of a half-hour is considered to be "in use."

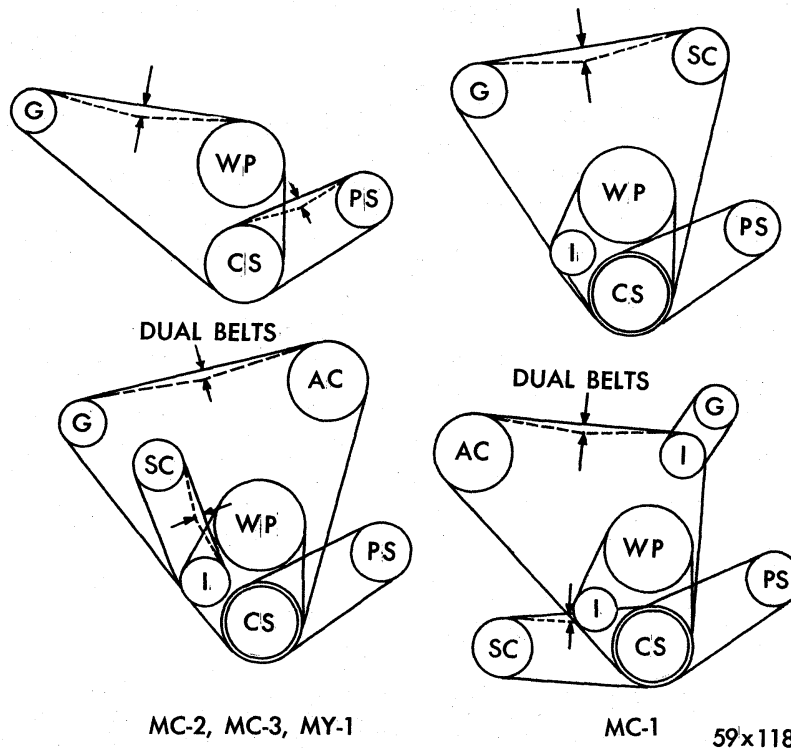


Fig. 29 — Belt Deflection Location

1. CS—Crankshaft
2. WP—Water Pump
3. G—Generator
4. PS—Power Steering

5. I—Idler
6. AC—Air Conditioning
7. SC—Suspension Compressor

BELT TENSION SPECIFICATIONS TORQUE METHOD

Torque (Ft. Lbs.) to be Applied to Components

ACCESSORY	BELT IN USE	NEW BELT
POWER STEERING BRACKET.....	55	90
GENERATOR—WITHOUT AIR CONDITIONING.....	20	30
MC-1 WITH AIR CONDITIONING.....	10	15
MC-2, MC-3, MY-1 WITH AIR CONDITIONING.....	35	65
WITH SUSPENSION COMPRESSOR.....	30	40
FAN IDLER BRACKET.....	35	50
AIR CONDITIONING IDLER BRACKET (MC-1).....	50	85

BELT DEFLECTION METHOD

Deflection (inches) to be Applied at Mid-Point of Belt Segment Under a 5 pound Load—See Figure 29

ACCESSORY	BELT IN USE	NEW BELT
POWER STEERING.....	$\frac{3}{16}$	$\frac{1}{8}$
FAN BELT—IDLER.....	$\frac{1}{8}$	$\frac{1}{16}$
GENERATOR—WITHOUT AIR CONDITIONING.....	$\frac{1}{4}$	$\frac{1}{8}$
WITH SUSPENSION COMPRESSOR.....	$\frac{9}{16}$	$\frac{5}{16}$
MC-1 WITH AIR CONDITIONING.....	$\frac{1}{4}$	$\frac{1}{8}$
MC-2, MC-3, MY-1—WITH AIR CONDITIONING.....	$\frac{3}{8}$	$\frac{1}{4}$
SUSPENSION COMPRESSOR BELT MC-1 WITH AIR CONDITIONING.....	$\frac{1}{4}$	$\frac{1}{8}$
SUSPENSION COMPRESSOR BELT MC-2, MC-3, MY-1 WITH AIR CONDITIONING.....	$\frac{1}{8}$	$\frac{1}{16}$

SERVICE DIAGNOSIS

Insufficient Accessory Output Due to Belt Slippage
Check belt tension and belt condition. If belt is excessively glazed or worn, install new belts and adjust as specified.

Belt Squeal when Accelerating Engine

- a. Belts too loose—retighten.
- b. Belts glazed—install new belts.

Belt Squeak at Idle

- a. Misaligned pulleys—align accessories (file brackets or use spacers as required).
- b. Non-uniform groove or eccentric pulley—replace pulley.

c. Non-uniform belt—replace belt.

d. Dirt and paint imbedded in belt—replace belt.

e. Belt too loose—retighten.

f. Belts glazed—install new belts and tighten to specified tension.

Belt Rolled Over in Groove

Broken cord in belt—replace belt.

Belt Jumps Off

- a. Belt too loose—retighten.
- b. Misaligned pulleys—align accessories.