

SECTION 3D2

REAR SUSPENSION

NOTICE: These fasteners are important attaching parts in that they could affect the performance of vital components and systems, and/or could result in major repair expense. They must be replaced with one of the same part number or with an equivalent part if replacement becomes necessary. Do not use a replacement part of lesser quality or substitute design. Torque values must be used as specified during reassembly to assure proper retention of all parts. There is to be no welding as it may result in extensive damage and weakening of the metal.

B-G SERIES

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DESCRIPTION

A four link rear suspension is used on "B-G" series. The axle housing is connected to the frame by two upper and two lower control arms with rubber pivot bushings at each end of the control arm. The control arms maintain the geometrical relationships of the rear axle with the frame, oppose torque reaction on acceleration and braking and provide for optimum handling characteristics (Figure 1).

Two coil springs support the weight of the car in the rear suspension. They are retained between seats in the frame and brackets welded to each axle housing tube (Figure 1). A rubber insulator is used to isolate the coil spring upper end from the frame seat and the lower end sits directly on the axle tube mounted bracket.

Sealed shock absorbers are mounted between a bracket welded to each axle housing tube and the upper spring seat, with the top inclined toward the center of the car. The shock absorbers are externally the same for all models (except for length), but vary in hydraulic control to provide a well-controlled but soft ride.

A steel stabilizer shaft is used to improve side roll stability on models with optional stabilizer bar. The one-piece shaft attaches to the lower control arms and is positioned directly under the rear axle housing. The shaft will not support the weight of the car when a two-post axle engaging hoist is used for lifting.

Rubber bumpers are mounted near the outer ends of the axle housing and at the center of the frame cross-member to prevent metal-to-metal contact during compression travel or bottoming of the suspension.

SHOCK ABSORBERS

Double acting standard and heavy duty shock absorbers are filled with a calibrated amount of fluid and sealed during production. They are non-adjustable, non-refillable and cannot be disassembled. The only service they require is replacement if they have lost their resistance, are damaged or leaking oil. See Section 3 for operation and diagnosis of standard and heavy duty shock absorbers.

The double action shock absorbers are mounted by bolts through the frame at the top and to brackets welded on the axle housing at the bottom.

ON CAR SERVICE

SHOCK ABSORBERS

Removal

If necessary to replace, raise car and support rear axle to prevent stretching of brake hose. The lower end has a stud which is an integral part of the shock. Remove the nut and tap shock free from bracket. To disconnect the shock at the top, on all models, remove two bolts, nuts and lockwashers.

Installation

See NOTICE on Page 3D2-1 of this section.

Loosely attach shock at both ends. Tighten upper bolts and nuts to 26 N·m (20 ft. lbs.). Tighten lower nut to 90 N·m (65 ft. lbs.).

UPPER CONTROL ARMS

If both control arms are to be replaced, remove and replace one control arm at a time to

3D2-2 REAR SUSPENSION

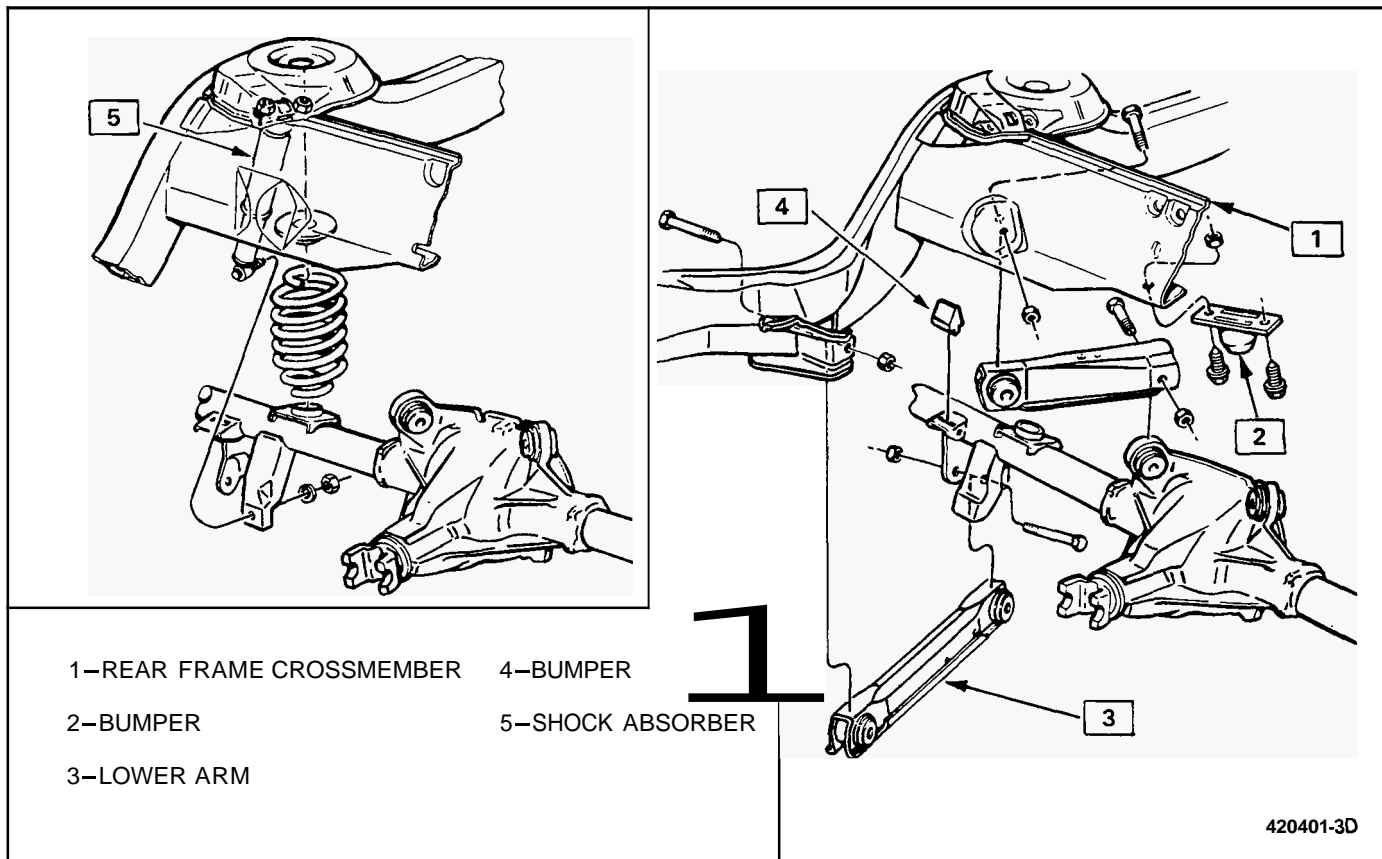


Figure 1 Rear Suspension

prevent the axle from rolling or slipping sideways, as this might occur with both upper control arms removed, making replacement difficult.

Removal

1. Remove nut from rear arm to rear axle housing bolt and while rocking rear axle, remove the bolt. On some cars disconnecting lower shock absorber stud will provide clearance. Use support under rear axl nose to aid in bolt removal.

2. Remove front and rear arm attaching nuts and bolts.
3. Remove suspension arm and inspect bushing for damage.

Installation

See NOTICE on Page 3D2-1 of this Section. To install, reverse removal procedure. Torque nuts to specifications with car resting at normal trim height.

LOWER CONTROL ARMS

If both control arms are to be replaced, remove and replace one control arm at a time to prevent the axle from rolling or slipping sideways as this might occur with both lower control arms removed, making replacement difficult.

Removal

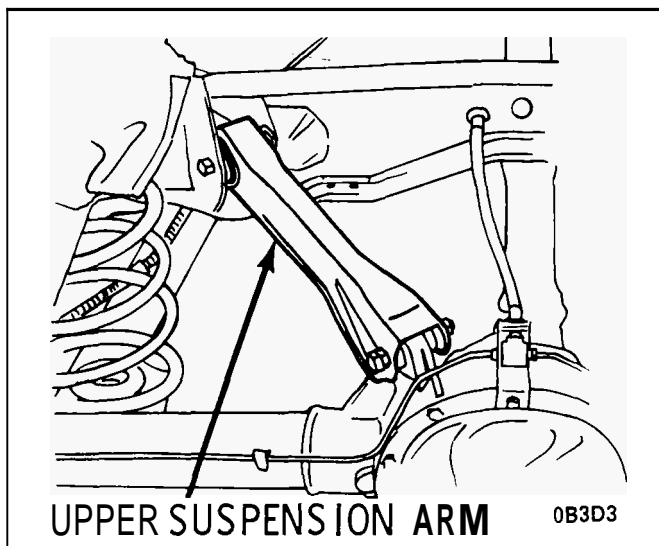
1. Raise car and support under axle housing.
2. Remove rear arm to axle housing bracket bolt.
3. Remove front arm to bracket bolts and remove lower control arm.

Installation

See NOTICE on Page 3D2-1 of this Section. To replace arm, reverse the removal sequence of operations. Torque arm attaching nuts to specifications with the weight of the car on the rear springs.

BUSHING (REAR AXLE CARRIER)

If both bushings are to be replaced, remove and replace one bushing at a time to prevent the axle from rolling or slipping sideways as this might occur with both upper control arms disconnected.



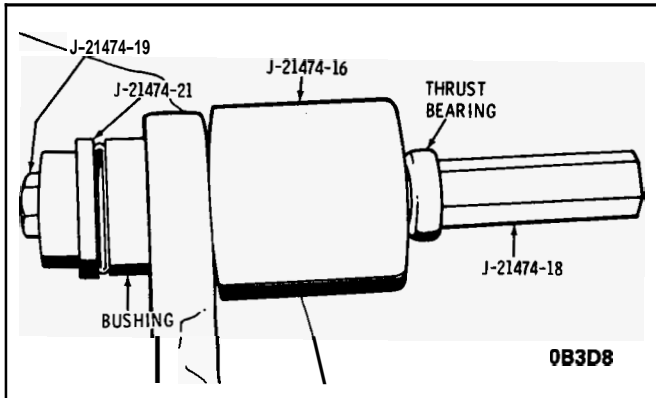
0B3D3 Figure 2 Typical Upper Control Arm Attachment

Removal

See Figure 3

The bushings in the rear axle carrier can be replaced as follows:

1. Raise car and support under frame, lower axle housing until proper clearance is obtained.
2. Disconnect upper arm at rear axle and hold it up and out of the way.
3. Position tools and remove bushing.



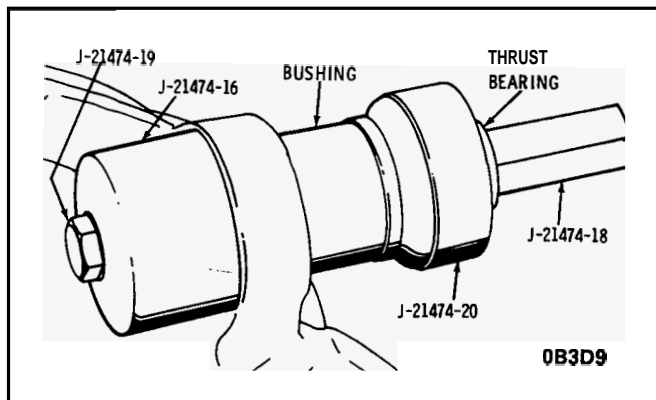
0B3D8 Figure 3 Bushing Removal Rear Axle Housing

Installation

See Figure 4

See NOTICE on Page 3D2-1 of this Section.

To install the bushing, reverse the tool and pull bushing into position. Connect the upper control arms. Install bolt and torque nut to specifications with weight of car on wheels.



0B3D9 Figure 4 Bushing Installation Rear Axle Housing

BUSHING (CONTROL ARMS)

The bushings in the ends of the control arms on the "B-G" Series can be replaced as follows.

Removal

1. Remove control arms as specified in the Upper and Lower Control Arm Removal Procedure(s).
2. Place receiver **J-25317-2** over flanged side of bushing.
3. Use an arbor press to force the bushing out of the arm, using large O.D. of a driver such as **J-21465-8** contacting O.D. of bushing outer sleeve (Figure 5).

Installation

See NOTICE on Page 3D2-1 of this section.

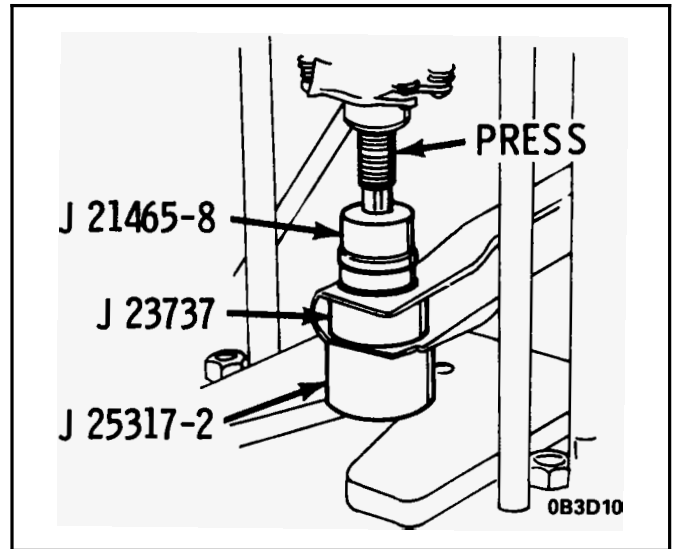
To install the bushing, reverse the tool and push bushing into position. Connect the upper control arms. Install bolt and torque nut to specifications with weight of car on wheels.

COIL SPRINGS

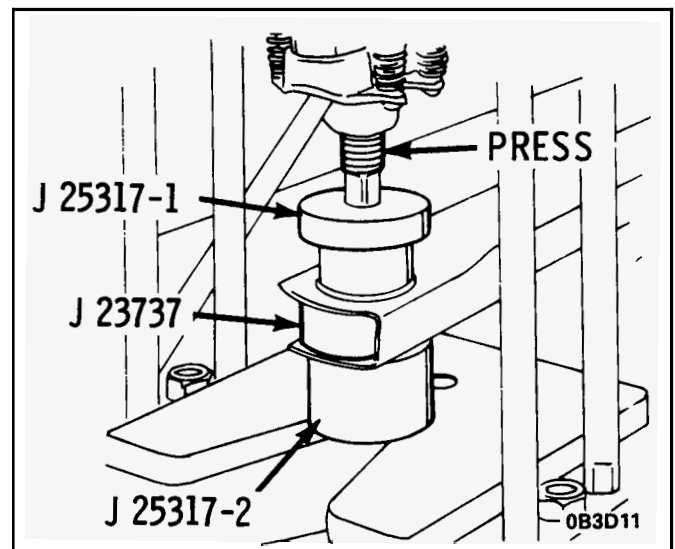
see Figure 7

Removal

1. Hoist rear of car on axle housing and support at frame rails with floor stands. Do not lower hoist at this time.



0B3D10 Figure 5 Bushing Removal Control Arm



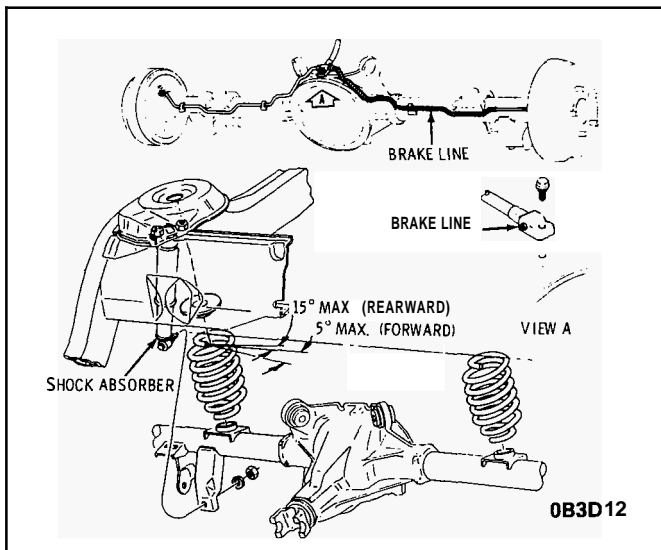
0B3D 11. Figure 6 Bushing Installation Control Arm

2. Disconnect brake line at axle housing.
3. Disconnect upper control arms at axle housing.
4. Remove shock at lower mount.
5. Lower hoist at rear axle.
Do not allow the rear brake hose to become kinked or stretched.
6. Remove spring.

Installation

1. Install coil spring.
2. Raise hoist at rear axle.

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OB3D12 Figure 7 Coil Spring Mounting

3. Install shock at lower mount.
4. Install upper control arm bolts at axle housing and torque to specifications.
5. Connect brake line at axle housing.
6. Remove jack stands and lower car.

AXLE HOUSING

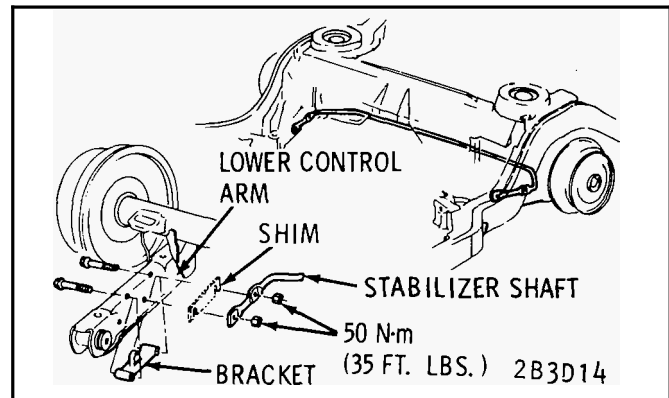
For removal or installation of Axle Housing, Refer to REAR AXLE - Section 4B.

BUMPER (RUBBER)

The rear axle bumper is located on the top of the axle housing and is attached by snapping into a bracket on the axle housing. If found deteriorated or damaged, it must be replaced.

REAR STABILIZER SHAFT

The rear stabilizer shaft is available as an option.



OB3D14 Figure 8 Rear Stabilizer Shaft "G" Series Shown

ELECTRONIC LEVEL CONTROL

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GENERAL DESCRIPTION

Electronic Level Control (E.L.C.) is provided as an option on ALL series. The leveling system is an addition to the standard rear suspension system and automatically adjusts the rear height with changes in vehicle loading. The system consists of a compressor assembly, air dryer, exhaust solenoid, compressor relay, height sensor, air adjustable shock absorbers, wiring, air tubing and pressure limiter. The compressor is activated when the ignition is on and excess weight is added to the vehicle. The exhaust solenoid is connected directly to battery (+) allowing the system to exhaust with the ignition off when excess weight is removed from the trunk.

COMPRESSOR

See Figures 9 & 10

The compressor assembly, is a positive displacement single piston air pump powered by a 12V DC permanent magnet motor. The compressor head casting contains piston, intake and exhaust valves plus a solenoid operated exhaust valve which releases air from the system when energized. The compressor is serviceable and is located on the rear ("B-G" Series) of the left wheelhouse in the engine compartment.

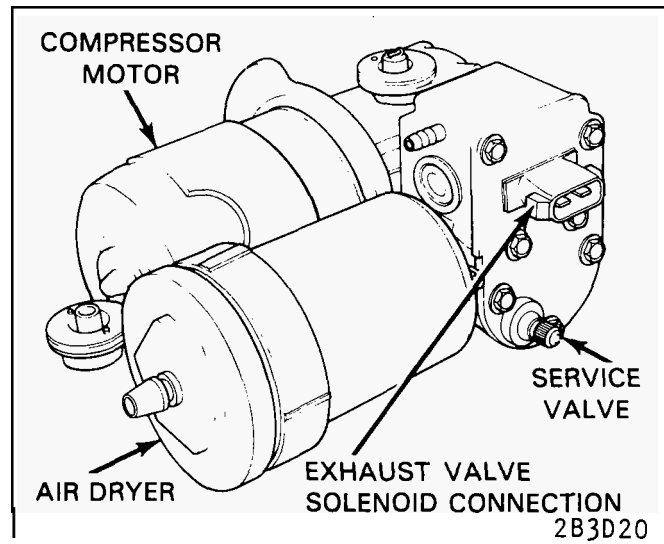


Figure 9 ELC Compressor Assembly

AIR DRYER

The air dryer is attached externally to the compressor output and provides a dual function:

1. It contains a dry chemical that absorbs moisture from the atmosphere before it is delivered to the shocks and returns the moisture to the atmosphere when it is being exhausted.

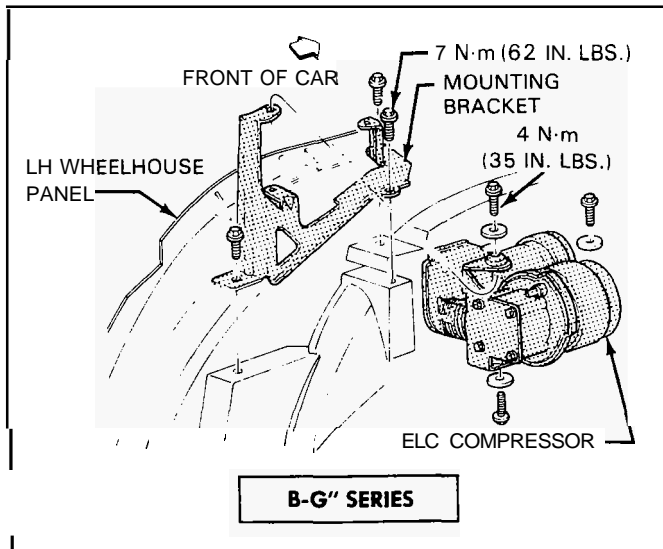


Figure 10 ELC Compressor Mounting

2. The air dryer also contains a valving arrangement that maintains 8-14 psi, minimum air pressure, in the shocks for improved ride characteristics.

EXHAUST SOLENOID

The exhaust solenoid is located in the compressor head assembly and provides a dual function:

1. It exhausts air from the system when energized. The height sensor controls this function.
2. It acts as a blow-off valve to limit maximum pressure output of the compressor.

COMPRESSOR RELAY

The relay, located in the harness near the steering column, completes the 12V(+) circuit to the compressor motor and dash light when energized. The height sensor controls this function.

HEIGHT SENSOR

See Figure 11

The height sensor is an electronic device that controls two basic circuits:

1. Compressor relay coil and indicator light ground circuit.
2. Exhaust solenoid coil ground circuit.

To prevent falsely actuating the compressor relay or exhaust solenoid circuits during normal ride motions, the sensor circuitry provides a 10-14second delay on "B-G" cars before ground is completed to either circuit.

In addition, the sensor electronically limits compressor run time or exhaust solenoid energized time to a maximum of 5 minutes. This time limit function is necessary to prevent continuous compressor operation in case of a severe system leak or continuous exhaust solenoid operation. **Turning the ignition "off and on" resets the electronic timer circuit to renew the 5 minute maximum run time.** The Electronic Timer Circuit is also reset for each change in exhaust and compressor signal from the height sensor with the ignition on.

The height sensor is mounted to the frame cross member in the rear with the sensor actuator arm attached to the rear axle housing.

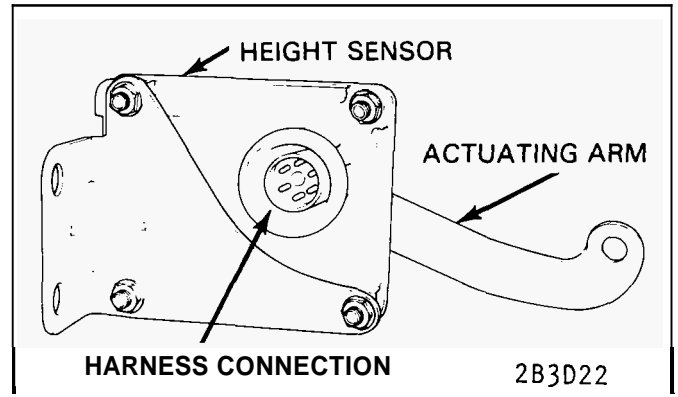


Figure 11 Height Sensor

AIR ADJUSTABLE SHOCKS

See Figures 12, 13

The air adjustable shock is essentially a conventional shock absorber enclosed in an air chamber. The shocks are constructed with a rubber-like sleeve attached to the dust tube and shock reservoir. This makes a flexible chamber which will extend the shock when air pressure in the chamber is increased. When air pressure is reduced, the weight of the car collapses the shock. In order to maintain proper operation and reliability of the air adjustable shocks, a minimum pressure of 10-14 psi must be maintained at all times.

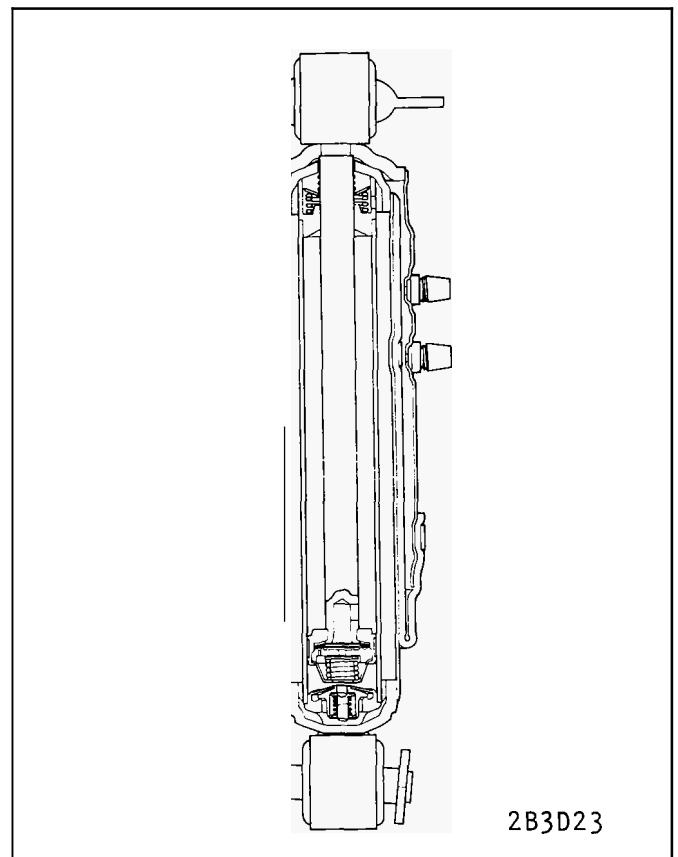


Figure 12 Air Adjustable Shocks

AIR LINES AND FITTINGS

Flexible air lines of 1/8 inch diameter tubing are used throughout the system. A "snap on" connector, is used to attach the air line tubing to the shock absorbers and compressor air dryer. The connector housing has a retainer

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spring which snaps into a groove in the shock or dryer locking the air line in position. All air line fittings are sealed with two o-rings.

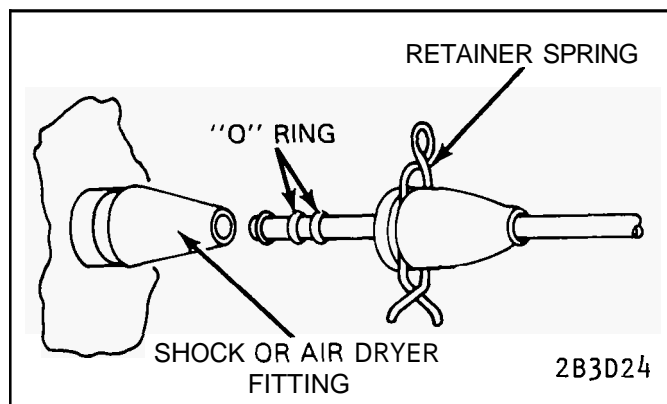


Figure 13 Air Line Connection

SYSTEM OPERATION

RAISING CAR

When a load is added to the vehicle, the vehicle body is forced downward causing the height sensor actuating arm to rotate upward. This action causes the internal timing circuit to activate. After an initial time delay of 10-14 seconds the sensor grounds pin 3 which in turn completes the compressor relay circuit to ground. With the relay energized, the 12V(+) circuit to the compressor is complete and the compressor runs sending air to the adjustable shock absorbers thru the plastic tubing. Compressor operation is accompanied by the illumination of the "Level Ride" light on the instrument panel.

As the air shocks inflate, the vehicle body moves upward, rotating the height sensor actuating arm back towards its original position prior to the load addition. Once the body reaches its original height (± 1 in.), the sensor opens the compressor relay circuit and shuts off the compressor.

Lowering Car

When an excess load is removed from the rear of the vehicle, the body is forced upward, causing the height sensor actuating arm to rotate downward. The downward rotation of the actuating arm causes the internal timing circuit to activate. After an initial delay of 10-14 seconds the sensor completes the exhaust solenoid circuit to ground. With the exhaust solenoid energized, air starts exhausting out of the shocks back through the air dryer and exhaust solenoid valve into the atmosphere.

As the vehicle body lowers, the height sensor actuating arm is rotated toward its original position. When the vehicle body reaches its original height (± 1 in.), the sensor opens the exhaust solenoid circuit which stops further air from escaping.

A minimum air pressure of 8-14 psi is maintained on all cars. The minimum pressure provides improved ride characteristics when the vehicle has minimum load.

DIAGNOSIS

See Figure 14

These diagnostic procedures are guidelines that will lead to the most probable causes of E.L.C. system problems. They include all parts of the system: compressor, height sensor, wiring, air lines, shocks, etc.

It is important to accurately identify the complaint or condition before selecting the appropriate diagnostic chart. A system performance check is provided with references to the short diagnostic charts on the following page.

USE THE **SYSTEM CHECK**, TO DETERMINE THE PROPER DIAGNOSTIC CHART TO FOLLOW. If additional detail is needed after the short diagnostic charts have been used, refer to the additional charts and tests as noted.

Reference is made to certain tests or checks in the diagnosis procedure such as:

1. Compressor performance test.
2. Height sensor operational check.
3. Height sensor adjustment.
4. System leak test.

When reference is made to the above tests and/or checks, refer to the detailed explanation for each. When certain tests require raising the car on a hoist, the hoist should support the rear wheels or axle housing. When a frame type hoist is used, two additional jack stands should be used to support the rear axle housing in its normal curb weight position.

HEIGHT SENSOR OPERATIONAL CHECK

1. Cycle ignition "OFF" then "ON". This will assure resetting the height sensor timer circuits.
2. Raise vehicle on hoist. Be sure rear wheels or axle housing are supported as close as possible to trim height dimension.
3. Check that wiring is properly and securely connected to height sensor and harness ground wire is securely connected.
4. Disconnect link from height sensor arm.
5. Move metal sensor arm up. **There should be 10-14 second delay** before compressor turns "ON" and shocks start to inflate. As soon as shock absorber air boots noticeably fill, stop compressor by moving sensor arm down.
6. Move sensor arm down below position where compressor stopped. **There should be a 10-14 second delay** before shocks start to deflate and vehicle lowers.

HEIGHT SENSOR ADJUSTMENT

The attaching link should be securely connected to the sensor actuating arm when any adjustments are made.

1. Loosen the lock nut that secures the metal arm to the plastic sensor arm.
2. To raise the vehicle trim height (i.e. turn the compressor ON with less travel of the rear suspension), move the plastic arm upward to the top of the slot and retighten the lock nut.
3. To lower the vehicle trim height (i.e. turn the compressor ON only after additional travel of the rear suspension), move the plastic arm to the bottom of the slot and retighten the lock nut.
4. If vehicle can not be adjusted properly, check for proper sensor.

COMPRESSOR PERFORMANCE TEST

See Figure 17

Compressor current draw, pressure output and leak down test.

This test may be performed on the car or bench.

1. Disconnect wiring from compressor motor and exhaust solenoid terminals.

SYSTEM CHECK					
INITIAL CONDITIONS					
		<ul style="list-style-type: none"> • HOOD OPEN, TRUNK OPEN AND UNLOADED, IGNITION OFF • CHECK HEIGHT AT REAR WHEELHOUSE OPENING • IGNITION ON, ENGINE STOPPED • RESET RUNNING TIME. WITH IGNITION ON, CYCLE SHIFT LEVER PARK-REVERSE-PARK 			
STEP			NEXT STEP		
1	SET INITIAL CONDITIONS. ADD 300 LBS. LOAD TO TRUNK	COMPRESSOR STARTS WITHIN 28 SECONDS	CAR BEGINS TO LEVEL	2	
			CAR DOESN'T MOVE	B	
		COMPRESSOR DOES NOT OPERATE	CAR STANDS HIGH	D	
			STANDING HEIGHT OK	A	
2	COMPRESSOR STOPS WITHIN 2 MIN.	CAR RETURNS TO WITHIN 1" OF UNLOADED HEIGHT		3	
		CAR LEAKS DOWN -- RAPIDLY OR SLOWLY		B	
		CAR IS NOT WITHIN 1" OF UNLOADED HEIGHT	ADJUST SENSOR	1	
		COMPRESSOR RUNS CONTINUOUSLY	CHECK HEIGHT SENSOR LINK TO ARM	C	
3	REMOVE LOAD FROM TRUNK	EXHAUST STARTS WITHIN 28 SEC.	AFTER 1½ - 2 MIN. CAR RETURNS TO WITHIN 1" ORIGINAL HEIGHT	STOP	
			CONTINUOUS EXHAUST	B	
			CAR NOT WITHIN 1" ORIGINAL HEIGHT	REPLACE HEIGHT SENSOR	1
			NO EXHAUST		D

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Figure 14 ELC System Check

2. Disconnect existing pressure line from dryer and attach pressure gage J22124-A or equivalent to dryer fitting.
3. Connect 12V(+) supply to compressor thru an ammeter and note the following:
 - a. Current draw should not exceed 14 amps.
 - b. When gage reads approximately 100 psi minimum, shut off compressor and observe if pressure is maintained or whether it leaks down, (allow pressure to stabilize).
If compressor is permitted to run until it reaches its maximum output pressure (120-150 psi), the solenoid exhaust valve will act as a pressure relief valve. The resulting leak-down when compressor is shut off will indicate a **False** leak.
4. Refer to trouble chart if compressor fails to meet specifications.
5. If ok, connect wiring and air line connections.
2. With the shut-off valve open (up), apply shop air pressure through the service valve on the gage until the gage reads 100-120 psi.
3. If a leak is indicated, close the shut-off valve (down) and continue to observe for pressure drop. This isolates the compressor from the remainder of the system.
 - a. If the gage pressure continues to drop, the leak is external to the compressor. Leak test all connections with a soap and water or leak test solution.
 - b. If the gage pressure does not drop further, the leak is internal to the compressor. Check for leaks.
4. If pressure builds up rapidly, but car does not raise, check for pinched pressure lines and stuck shocks.

ON-CAR SERVICE

HEIGHT SENSOR CONNECTOR

An **oval** connector lock is included at the wiring connector to the height control sensor.

If harness disconnection is required, squeeze the oval sides of the connector lock to release the two locking tabs and pull the harness connector from the height sensor plug.

ELC SYSTEM LEAK TEST

1. Tee pressure gage 5-22124-A into the ELC system between the drier assembly and the system air line with shut-off valve on the compressor side of gage.

(A) COMPRESSOR DOES NOT OPERATE

1				2
2	APPLY + 12V. AND GROUND DIRECTLY TO COMPRESSOR	RUNS	REPLACE FAULTY WIRES AND/OR FUSES†	1

1	DISCONNECT EXHAUST SOLENOID GROUND YELLOW TEST LEAD	CAR BEGINS TO RAISE	CHECK FOR GROUND IN WHITE WIRE TO EXHAUST SOLENOID TEST HEIGHT SENSOR	REPAIR*	1
		CAR DOESN'T MOVE -- OR RAISES AND LEAKS DOWN			2
2	CHECK FOR LEAKS AND PINCHES IN THE SYSTEM CHECK SOLENOID EXHAUST VALVE CHECK COMPRESSOR PERFORMANCE			REPAIR.	1

(C) COMPRESSOR RUNS CONTINUOUSLY

1	RESET RUNNING TIME	DISCONNECT RELAY	COMPRESSOR RUNS	CHECK FOR SHORT TO B+ IN GREEN WIRE	1	
			COMPRESSOR STOPS		2	
2	LEAKING OR CONTINUAL EXHAUSTING	YES		TEST HEIGHT SENSOR	REPAIR	8
		NO	GROUND AT PIN 3 OF HEIGHT SENSOR	YES		3
				NO		3
3	CHECK FOR GROUND IN YELLOW WIRE CHECK RELAY CHECK COMPRESSOR PERFORMANCE				REPAIR†	1

(D) NO EXHAUST

	RESET RUNNING TIME	POWER AT ORANGE WIRE TO SOLENOID	NO		2
			YES		3
2	TRACE POWER TO SOLENOID THROUGH FUSES		POWER		3
			NO POWER	REPLACE FAULTY WIRES AND/OR FUSES	1
3	WITH CONNECTORS OFF APPLY + 12V AND GROUND DIRECTLY TO THE SOLENOID	EXHAUST OPENS	CHECK FOR OPEN IN WHITE WIRE TEST HEIGHT SENSOR	REPAIR*	1
		NO EXHAUST	REPLACE EXHAUST SOLENOID VALVE		1

- SEE CHART A
- t SEE CHART B
- SEE SYSTEM LEAK TEST
- ‡ IF COMPRESSOR RUNS BUT TELLTALE DOES NOT LIGHT, CHECK BULB

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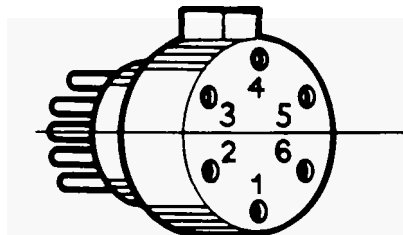
Figure 15 Diagnostic Charts

CHART A – ELECTRICAL CHECKS

NOTICE: THIS CHART SHOULD NOT BE USED UNLESS ALL OTHER PROCEDURES LEADING TO IT HAVE BEEN FOLLOWED — ORDER TO PREVENT MISDIAGNOSIS.

STEP					NEXT STEP	
1	IGNITION ON ENGINE STOPPED	DISCONNECT HARNESS FROM SENSOR	POWER AT TERMINAL 5	YES	2	
				NO	REPAIR OPEN IN CIRCUIT TO TERMINAL 5 (CHECK FUSE)	1
2	POWER AT TERMINAL 6	YES	TEST LIGHT LEAD TO TERMINAL 4; PROBE TERMINAL 6	LIGHT	3	
				NO LIGHT	REPAIR SYSTEM GROUND	1
				NO	REPAIR OPEN IN CIRCUIT TO TERMINAL 6 (CHECK FUSE)	1
3	JUMPER TERMINALS 3 AND 4	COMPRESSOR RUNS; SHOCKS BEGIN TO INFLATE			4	
		COMPRESSOR DOESN'T RUN	REPAIR OPEN IN CIRCUIT TO TERMINAL 3		1	
4	JUMPER TERMINALS 2 AND 4	EXHAUST; SHOCK DEFLATE		WIRING OK CHECK SENSOR AND CONNECTOR	1	
		NO EXHAUST		REPAIR OPEN IN CIRCUIT TO WIRE 2	1	

IGNITION MUST BE OFF WHEN RECONNECTING THE ELC HARNESS TO THE SENSOR.



ELC HARNESS CONNECTOR

CHART B – RELAY, FUSE CHECK

NOTICE: THIS CHART SHOULD NOT BE USED UNLESS ALL OTHER PROCEDURES LEADING TO IT HAVE BEEN FOLLOWED IN ORDER TO PREVENT MISDIAGNOSIS.

STEP					NEXT STEP	
1	IGNITION "ON" ENGINE STOPPED	GROUND YELLOW TEST LEAD	REMOVE RELAY	POWER AT CAVITY 39 E = 839	YES	2
				NO	REPLACE FUSE	1
2	TEST LIGHT LEAD TO CAVITY 923; PROBE 39 E = 839	LIGHT		REPLACE RELAY		1
		NO LIGHT		REPAIR OPEN IN YELLOW WIRE TO COMPRESSOR		1

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Figure 16 Chart A & B

MALFUNCTION	CORRECTION
COMPRESSOR RUNS BUT CURRENT DRAW EXCEEDS 14.0 AMPS.	REPLACE MOTOR-CYLINDER ASSEMBLY.
COMPRESSOR INOPERATIVE	REMOVE MOTOR END HOUSING AND INSPECT ITEMS CALLED OUT IN FIGURE 3D-23. IF NO DEFECT IS FOUND, REPLACE MOTOR-CYLINDER ASSEMBLY.
PRESSURE BUILD UP OK BUT LEAKS DOWN BELOW 90 PSI BEFORE HOLDING STEADY. (DOESN'T GO TO 0 PSI)	REPLACE SOLENOID VALVE.
PRESSURE LEAKS DOWN TO 0 PSI	PERFORM COMPRESSOR/ DRYER LEAK TEST, FIGURE 3D-24 AND MAKE CORRECTIONS AS REQUIRED
PRESSURE BUILD UP LESS THAN 110 PSI	PERFORM COMPRESSOR/ DRYER LEAK TEST, FIGURE 3D-24. IF NO LEAK IS FOUND REPLACE MOTOR-CYLINDER ASSEMBLY. 2B3D30

Figure 17 Compressor Trouble Chart

To assure proper circuit connections, the height sensor plug has an indexing slot and a matching boss is molded into the outer diameter of the weatherproof connector.

When reconnecting the harness to the sensor, push the connector into the sensor plug until the sloped shoulder on the rear edge of the boss is visible in the plug slot, then push the oval connector lock onto the plug until its two locking tabs snap over the shoulder of the sensor plug.

DISCONNECTING AIR LINES

The air lines include spring clip connections with molded sealing shoulders in the retainer and on the end of the air line with **double o-ring** seals. Before making any air line disconnection, clean the connector and surrounding area. Squeeze the spring clip to release the connector. To reassemble, moisten the o-rings and push the air line and connector fully into the fitting.

COMPRESSOR "B-G"

Removal

1. Disconnect electrical connectors from exhaust solenoid and motor terminals and air line from drier.
2. Remove three screws securing compressor bracket to LH wheelhouse panel and remove compressor.
3. Remove compressor from bracket by removing three mounting screws from isolators.

Installation

1. Position compressor to mounting bracket and secure with three mounting screws at isolators. Tighten screws to 5 N·m (45 in. lbs.). Make sure compressor is not touching bracket and the isolators are properly positioned.

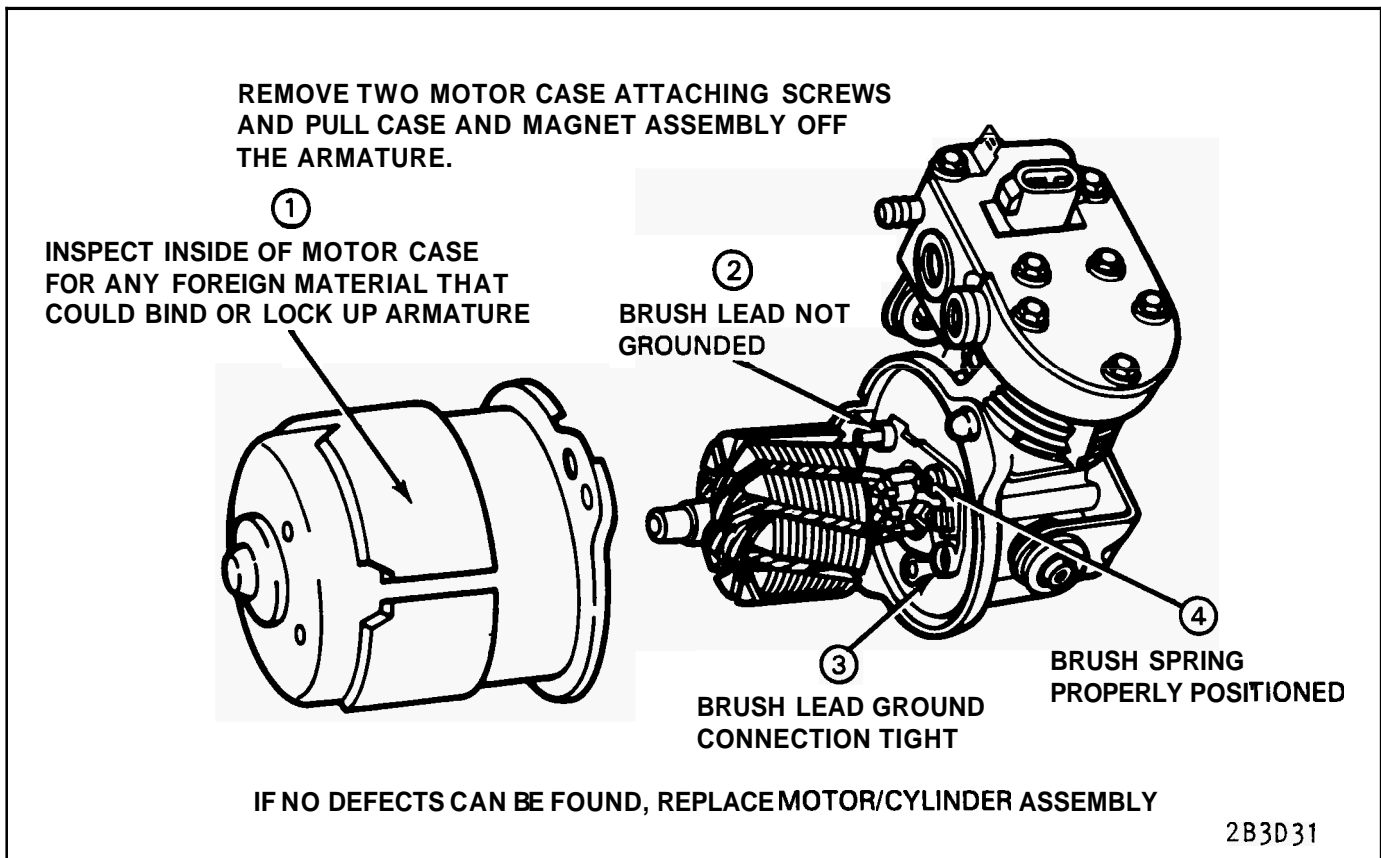


Figure 18 Compressor Motor Inspection

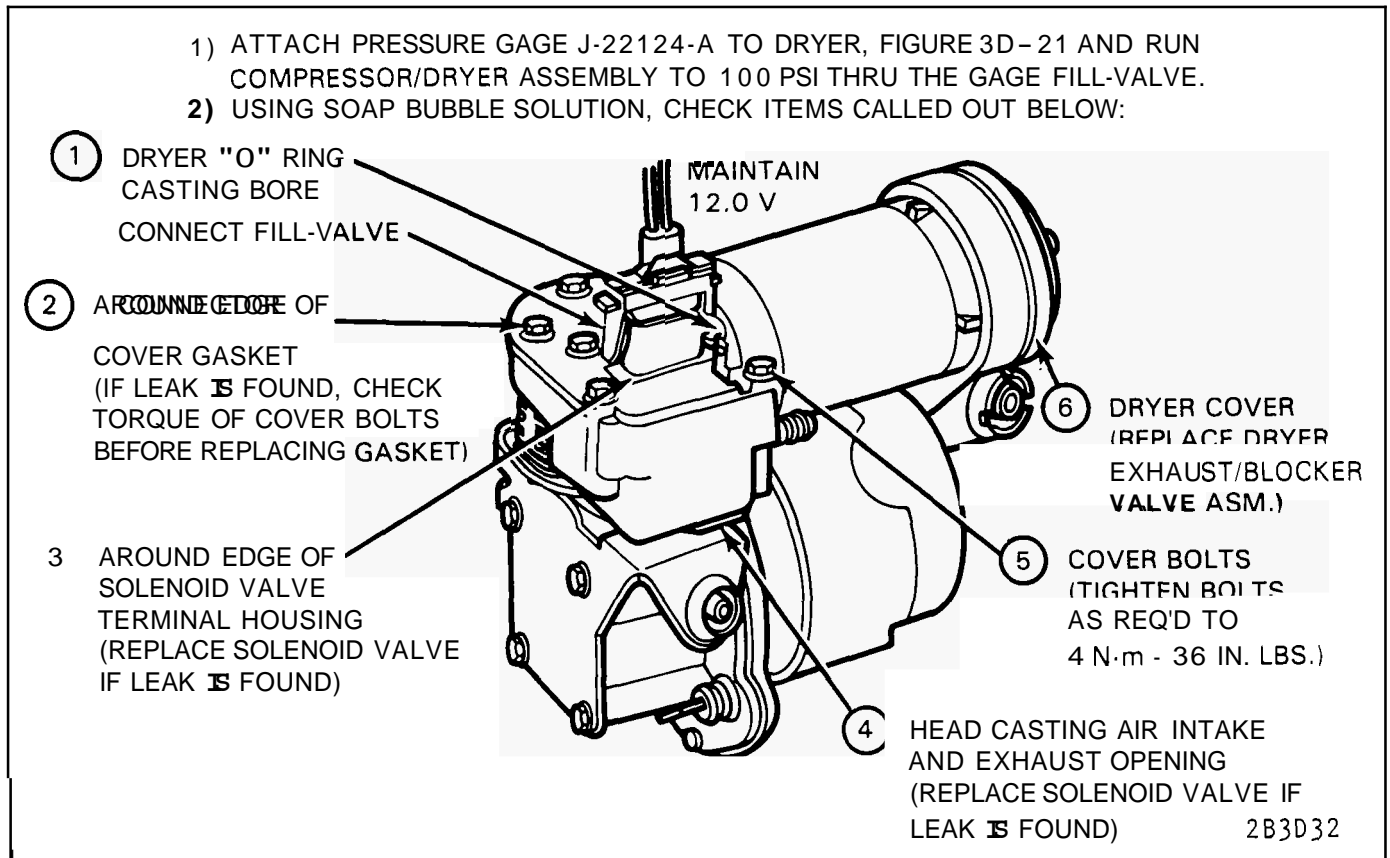


Figure 19 Compressor Leak Test

2. Position compressor/bracket assembly to LH wheelhouse panel and secure with two screws. Tighten screws to 7 N·m (62 in. lbs.).
3. Connect electrical connectors to solenoid and motor terminals and air line to drier.
4. Lightly pressurize system by applying air pressure to compressor service valve.

HEIGHT SENSOR "B-G"

Removal

1. Raise car and suitably support. See Section OA.
2. Disconnect electrical connector from height sensor by squeezing sides of connector retainer.
3. Disconnect link from height sensor arm.
4. Remove two screws securing sensor to frame and remove sensor.

Installation

1. Position height sensor to frame and secure with two screws. Tighten screws to 15 N·m (133 in. lbs.).
2. Connect link to sensor arm.
3. Connect electrical connector to height sensor and snap retainer securely on sensor boss.
4. Assure trim height adjustment screw is in center of slot.

UNIT REPAIR

COMPRESSOR/DRYER

Dryer Assembly

See Figure 20

Replacement dryers are supplied with "O" ring.

1. Rotate retainer spring 90° and pull dryer out of casting. Be sure to remove "O" ring if it remains in the casting.
2. Lubricate "O" ring lightly with vaseline or equivalent before installing it on dryer port.
3. Return retainer spring to its original position and re-install dryer.

If some difficulty is experienced when re-assembling dryer in casting, rotate it slightly while applying pressure.

Compressor Assembly

(Less dryer and mounting brackets).

1. Remove dryer and mounting brackets from original compressor and install them on the replacement compressor. Be sure to use a new "O" ring when re-installing the dryer.

Compressor Head Assembly

See Figure 22

(Includes solenoid valve).

1. Remove dryer assembly
2. Remove the three (3) screws that attach the head assembly to the cylinder casting.

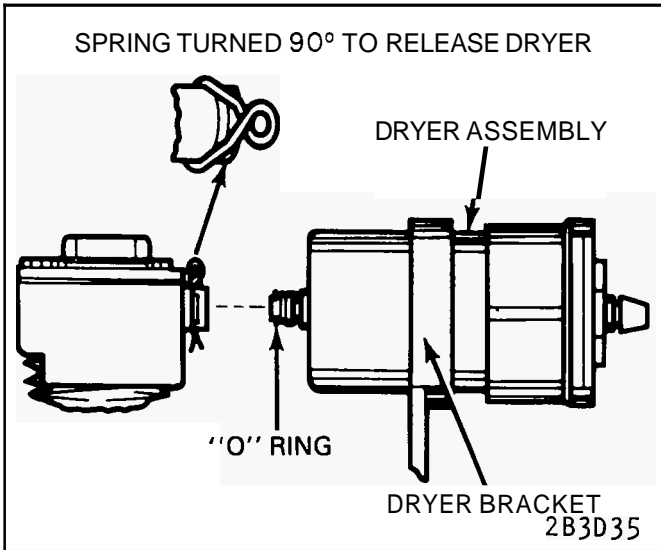


Figure 20 Dryer Removal & Installation

3. Remove "O" ring gasket. Use new "O" ring when re-installing head assembly and torque the attaching screws in sequence.

Motor-Cylinder Assembly

(Includes piston and rod assembly).

1. Remove dryer, mounting brackets and head assembly and save for re-assembly.
2. When re-assembling parts to new motor/cylinder assembly, be sure to use new "O" ring gasket between head assembly and cylinder casting and a new dryer "O" ring. Torque attaching screws to specifications.

Solenoid Valve Assembly

(Service package also contains head cover, filters, and exhaust valve and spring, and other misc. parts.)

1. Remove head assembly.
2. Remove the four (4) remaining cover screws.
3. Remove and discard cover, gasket, exhaust valve and spring, and foam filters.

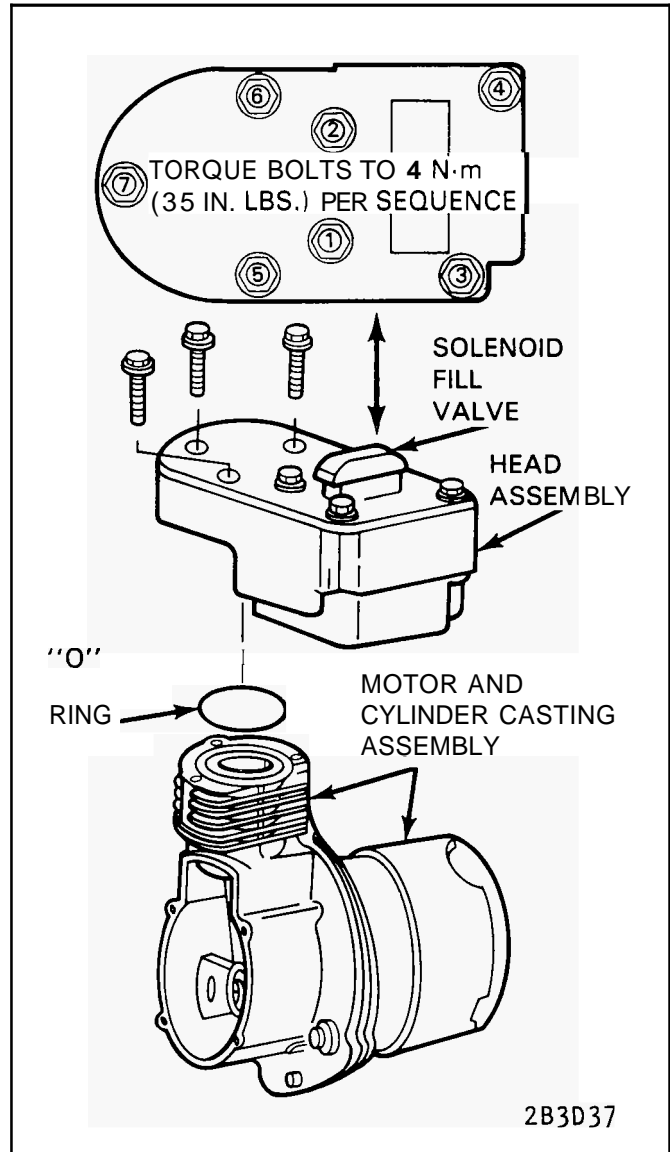


Figure 22 Head, Motor & Cylinder Assembly

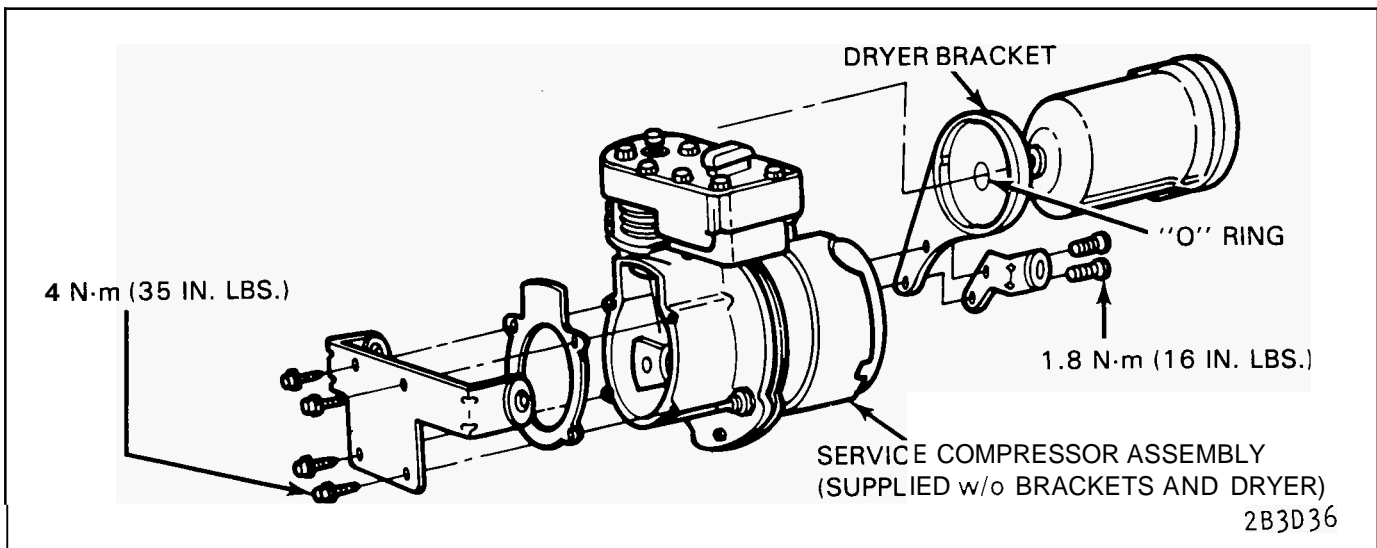


Figure 21 Compressor, Dryer & Mounting Brackets

4. Remove solenoid valve as follows: push valve assembly toward "O" ring side and lift up to clear the locking tab, then slide "O" ring fitting of valve out of casting.
5. To re-assemble replacement parts, reverse steps 1 thru 4. Torque head assembly cover screws in sequence.

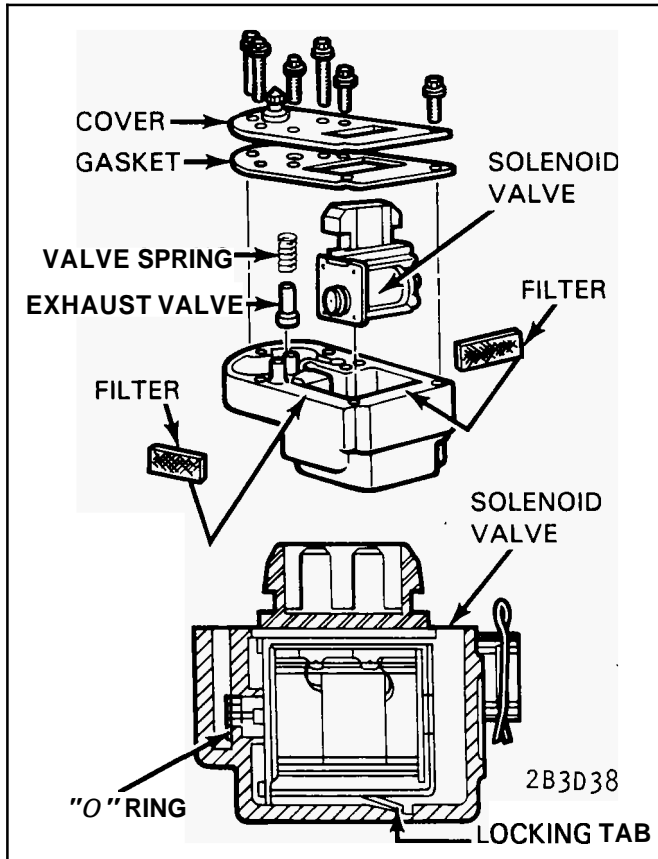


Figure 23 Disassembled Head Assembly

HEIGHT SENSOR

Replacement height sensors are supplied less the mounting bracket. When replacing a height sensor, the bracket orientation should be carefully noted on the original unit so it can be correctly installed on the replacement sensor.

AIR LINE (TUBING) REPAIR

Service repair kits contain a length of tubing with a snap-on type of fitting plus the necessary parts to permit splicing it to an existing line.

1. Detach existing line from shock absorbers or compressor dryer.
2. Cut the tubing to length using a razor blade or very sharp knife.
3. Splice the tubing to the existing tubing:
 - a. Remove the plastic retainer pin from one of the nuts and slide the replacement tubing into the nut until it bottoms in the rubber seal.
 - b. Maintaining the tubing in position described in step (a), tighten the nut securely. During the tightening of the nut, a collar on the metal sleeve breaks loose. When the collar breaks loose, continue to tighten the nut until secure.
 - c. Attach original tubing to other end of coupling as described in steps (a) and (b).
 - d. Using a tie strap, secure the tubing to the car in a location where it will not be pinched or contact the exhaust system.

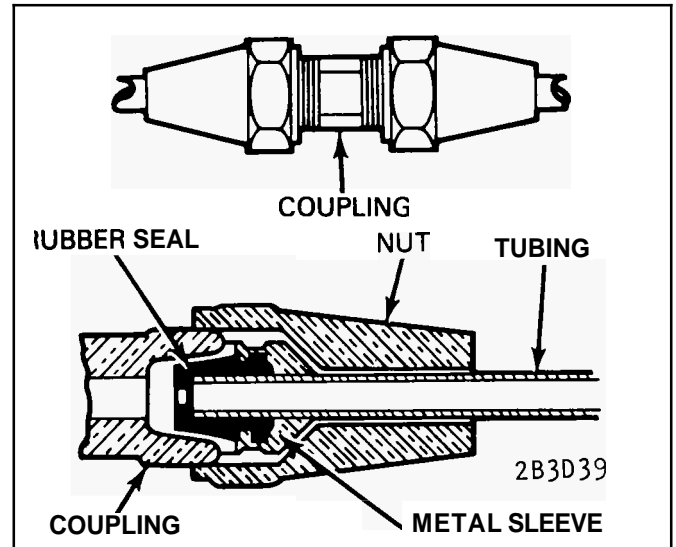


Figure 24 Air Line Tubing

SERVICING WIRING HARNESS

Due to the uniqueness of the height sensor wiring connector, a service part is available which consists of the connector and a short section of the wiring. This repair part can be spliced into the harness instead of replacing the entire harness due to damage to the connector.

TORQUE SPECIFICATIONS

(NOTE: Specified torque is for installation of parts only.
Checking of torque during inspection may be 10% below that specified.)

APPLICATION	"G" Series		"B" Series		"E" Series	
	N·m	FT. LBS.	N·m	FT. LBS.	N·m	FT. LBS.
Shock Absorbers						
Upper Attaching Bolts	26	20	26	20	90	65
Lower Stud Nut.....	90	65	90	65	90	65
"Control Arms						
Upper Arm to Frame Nuts.....	95	70	130	95		
Upper Arm to Axle Housing Nuts.....	95	70	95	70		
Upper Arm to Axle Housing Bolts.....	95	70	110	80		
Lower Arm to Frame Nuts.....	95	70	130	95		
Lower Arm to Axle Housing Nuts.....	110	80	130	95		
Lower Arm to Axle Housing Bolts.....	95	70	160	120		
Control Arm to Frame Nuts.....					100	75
Stabilizer Shaft to Lower Control Arm Bolt...			70	50		
Stabilizer Shaft to Lower Control Arm Nut...	50	35				
Stabilizer Shaft Front Link to Lower Cont. Arm					85	63
Stabilizer Shaft to Rear Link.....					27	20
Stabilizer Shaft Rear Link to Cont. Arm Brkt...					40	30
'Spring						
Axle Housing Bumper.....	11	8	20	15		
Hub and Bearing Assembly to Control Arm..					50	37
Splash Shield to Plate.....					9	6

*Torque with Weight of Car on Wheels

2B3D40

Figure 25 Torque Specifications

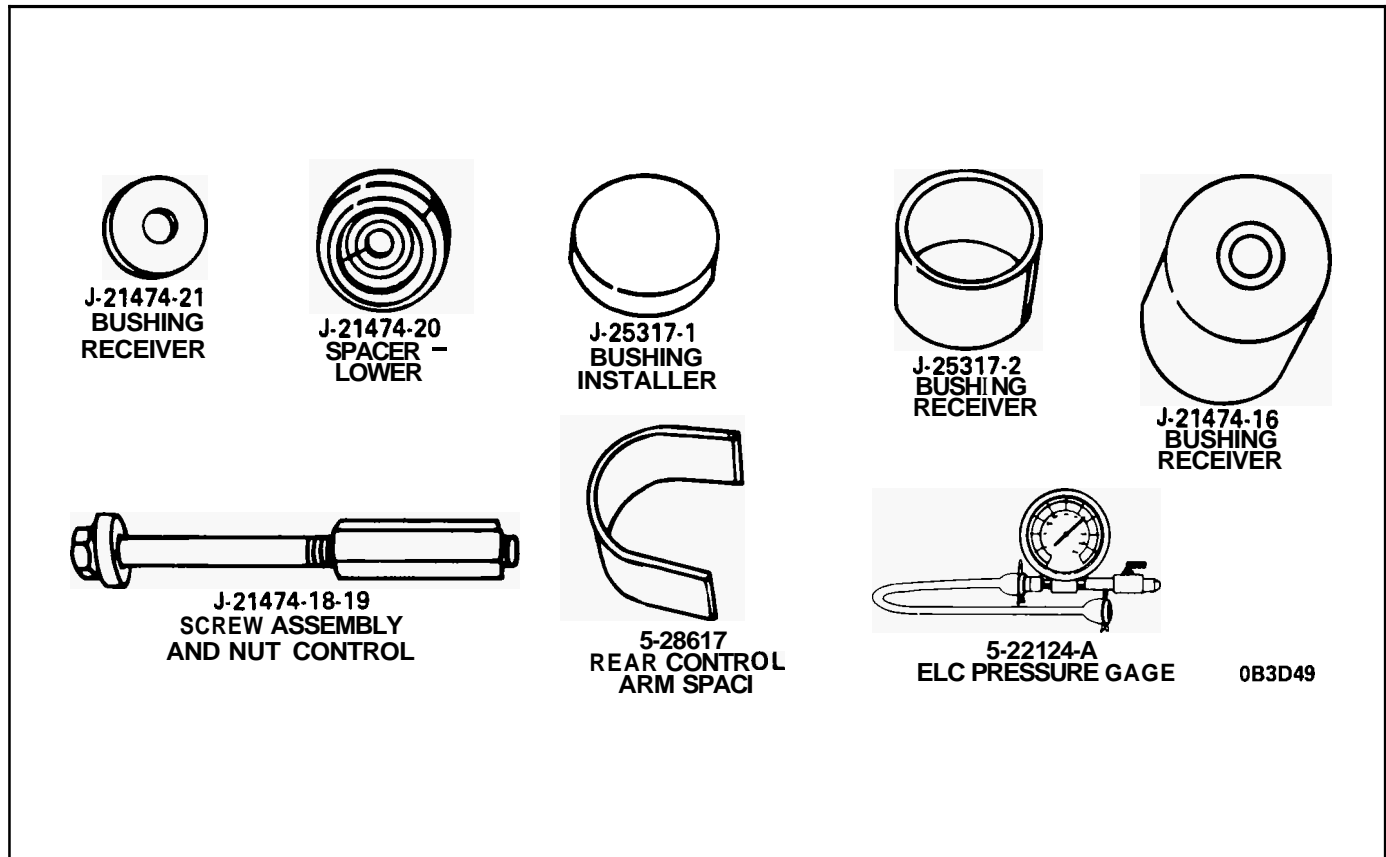


Figure 26 Tools