

CHASSIS SUSPENSION

GENERAL DESCRIPTION

The chassis suspension system used on 1955 Cadillac cars is very similar to that used on 1954 series cars, and information relative to service procedures remains the same as that outlined in Section 6 of the 1954 Shop Manual.

Shock absorber valving has been changed slightly to improve ride characteristics and the rear spring seat has been changed to accommodate the shock absorber bayonet type lower mounting stud.

Tubeless tires are used as standard equipment on all 1955 series cars. These tires employ a butyl liner (not puncture sealing), which is an integral part of the tire casing, to protect against

blowouts and rapid loss of air when a puncturing object penetrates the casing. Tire service information is covered in the following notes.

Disc wheels, identical to those used on 1954 series cars, are standard equipment on all 1955 series cars except the Eldorado. Forged aluminum, chrome plated wheels are standard equipment in the Eldorado styles and are available as optional equipment on all other 62 and 60S series, 1955 Cadillac cars.

Wheel mounting studs on the left side have left hand threads on 1955 series cars.

SERVICE INFORMATION

(1) Checking and Repairing Air Leaks

Loss of air may be due to a hole in the tire, a poor seal between the tire bead and the rim or between the valve stem and the rim, a leaking valve core, or a loose rivet or open weld joint in the wheel.

If the source of the air leak is not readily located, the tire and wheel assembly should be removed from the car, inflated to 50 lbs. pressure, and immersed in a tank of water. When air bubbles appear, mark location of leak on tire or rim.

If leak is in tire, reduce tire pressure to 10 lbs. remove puncturing object and repair casing as follows:

(a) Holes up to 3/32" in diameter may be repaired without removing the tire from the rim, by forcing tire sealing dough in the hole, using a commercially available pressure gun with the nozzle held firmly over the hole in the tire. Fig. 6-1.

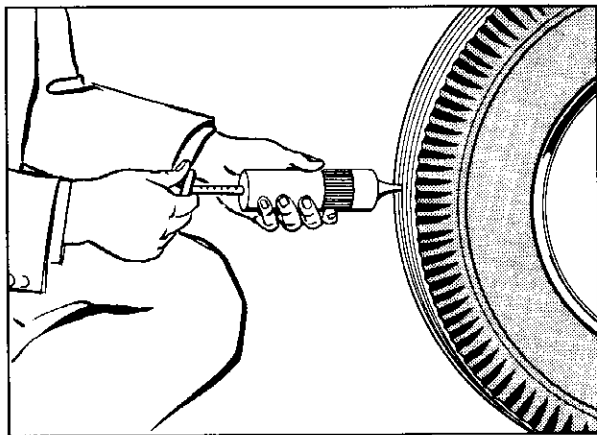


Fig. 6-1 Sealing Holes with Pressure Gun

6-1. If the nozzle goes into hole in casing, it is an indication that the hole is too large and the tire should be removed from the wheel to be repaired.

(b) Holes up to 1/4" in diameter may be repaired using a hot patch or by installing a special rubber plug in the hole with its large flange cemented to the inside of the tire. Fig. 6-2.

(c) Holes larger than 1/4" in diameter should be vulcanized by the authorized tire dealer in accordance with the instructions of the tire manufacturer.

(d) Leaks between the rim and the casing necessitate removal of the tire from the wheel and inspection of the sealing area on both the tire bead and the rim flange. The rim flange should be cleaned with a wire brush. Any weld beads should be filed smooth and dents in the rim flange should be straightened.

(e) Leaks around the valve stem, at the wheel, require replacement of the valve stem. Fig. 6-3.

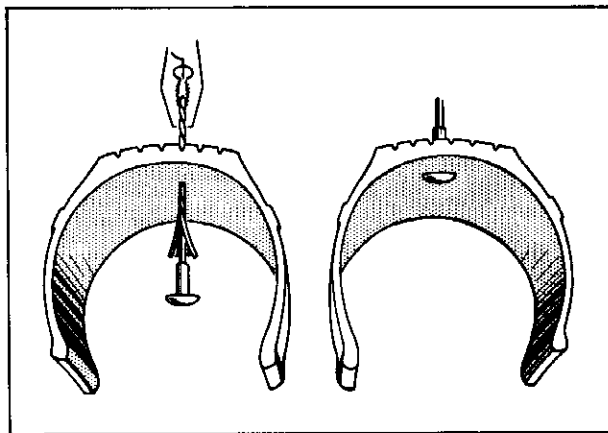


Fig. 6-2 Puncture Repair with Rubber Plug

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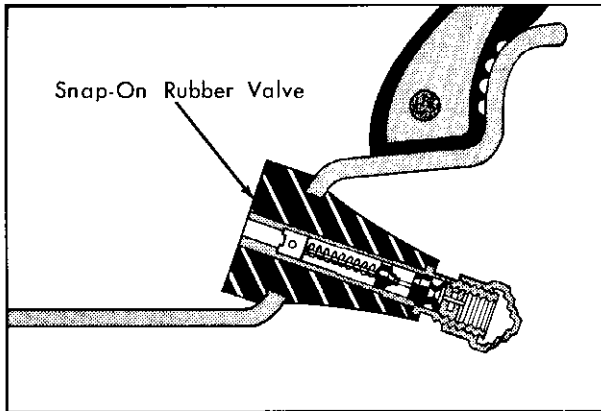


Fig. 6-3 Valve Stem Assembly

Before installing a new stem, remove any foreign material around hole or any burrs which would prevent seating of the valve stem.

(f) Occasionally an air leak may be encountered in the wheel weld joint or at a rivet. If the rivet is not visibly loose, it may be sealed with a cement, available from tire manufacturers, for this purpose.

CAUTION: Under no condition should the rivet or wheel be peened, welded or brazed. Replace the wheel if the air leak cannot be repaired with cement or if rivet is noticeably loose. On the Sabre Spoke aluminum wheels, a sealing tape is cemented into the tire well to seal the joint between the aluminum forging and the steel back rim. Use care not to disturb this tape when mounting or removing tire.

(2) Removal and Installation of Tire

a. Removal

1. Remove valve cap and core.
2. Using a bead breaker tool, force beads away from rim flange.

CAUTION: The use of tire irons for breaking beads away from rim is not recommended as there is a possibility of damaging the sealing surface on the tire bead.

3. Work outside tire bead over rim, starting adjacent to the valve stem, and then remove the inside bead.

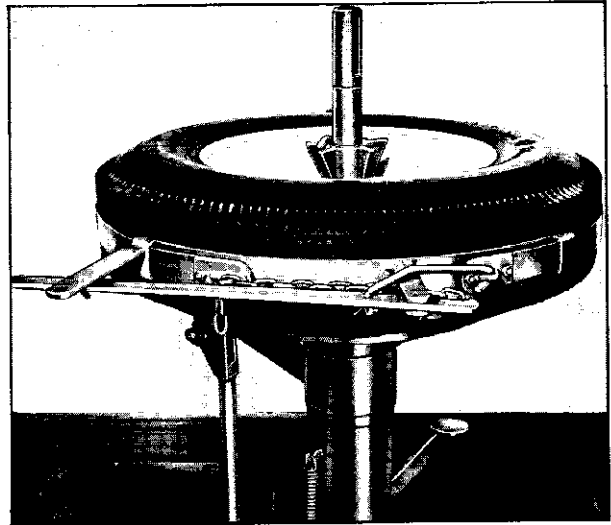


Fig. 6-4 Expanding Beads Against Rim with Mounting Band

b. Installation

1. Inspect rim ledges and flanges for foreign particles and remove with emery cloth or a file. Straighten rim flange if bent.
2. Carefully install beads over rim, using either a special tire installing tool or tire irons. A small amount of water may be used on the beads to facilitate installation. Soap solutions or solvents are not recommended. Start tire over rim flange at a point opposite valve stem so that stem will not prevent bead from dropping into rim well, as last section of bead is forced over rim.
3. Install valve core. Place a tire mounting band around center of tread and engage it to force tire beads out against rim. Fig. 6-4.

NOTE: If a tire mounting band is not available, a heavy sash cord may be installed around the tire circumference and tightened with a tire iron to serve the same purpose.

4. Inflate tire to hold bead against rim (approx. 5 lbs.). Remove band and inflate to 50 lbs. pressure.
5. Leak test tire and wheel assembly and, if satisfactory, reduce to recommended pressure.

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SPECIFICATIONS

Subject and Remarks	55-62, 60S	55-75	55-86 Comm.
King Pin inclination	5° 51'	5° 51'	5° 51'
Camber of front wheels	-3/8° to +3/8°	-3/8° to +3/8°	-3/8° to +3/8°
*Caster angle	0° to -1°	0° to -1°	0° to -1°
Toe in (Car standing)	3/16" to 1/4"	3/16" to 1/4"	3/16" to 1/4"
Turning radius	21'8", 22'6"	25'10"	29'
*Adjustment must be within 1/2° or less on both sides of car.			
SHOCK ABSORBERS -- Front			
Type	Delco Hydraulic Direct Acting		
Bore	1"	1"	1"
Model No. (Replacement Type)	542G	542G	542G
SHOCK ABSORBERS -- Rear			
Type	Delco Hydraulic Direct Acting		
Bore	1"	1"	1"
Model No. (Replacement Type)	544X	544X	544X
RIMS			
Diameter	15"	15"	15"
Width	6"	6"	6"
Eccentricity	3/64" max.	3/64" max.	3/64" max.
Runout	3/64" max	3/64" max.	3/64" max.
TIRES			
Inflation pressure, in pounds --			
Front	24	28	24
Rear	24	28	30
Ply rating	4	6	6
Size (Black Walls)	8.00 x 15	8.00 x 15	8.90 x 15
Size (White Walls)	8.20 x 15	8.20 x 15	8.90 x 15
WHEELS			
Type	Slotted Disc Optional - Sabre Spoke Aluminum Wheels	Slotted Disc	Slotted Disc
Make	Kelsey-Hayes	Kelsey-Hayes	Kelsey-Hayes

FRONT SPRING DATA CHART

Series	Part No.	Color Daub	Normal Load	Rate Per In.
55-6019 (Without Air Conditioner)	1460196	Yellow	2300	350
55-6219, 6237, and 6237D (Without A.C.)	1460194	Light Blue	2250	350
55-6267 and 6267S (Without A.C.)	1460197	Aluminum	2380	375
55-6019, 6219, 6237 and 6237D (With A.C.)	1460197	Aluminum	2380	375
55-7523 and 7533 (Without A.C.)	1460192	Orange	2650	400
55-7523 and 7533 (With A.C.)	1460198	Dark Red	2760	400
55-86	1460199	Green	2725	540
55-86 Heavy Duty	1460998	None	3000	540
Inside diameter of springs is 4.00 inches.				

NOTE: On cars equipped with Air Conditioner, Spring 1460197 or 1460198 is used on both sides, with Shim 1457838 on R.H. side only.

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REAR SPRING DATA CHART

Series	Part No.	Color Daub	Normal Load	Rate Per In.	No. of Leaves
55-6019, 6219, 6237 and 6237D (Without Air Conditioner)	1460924	Light Blue	1190	115	5
55-6267 and 6267S (Without Air Conditioner)	1460925	Pink	1260	120	5
55-6019, 6219, 6237 and 6237D (With Air Conditioner)	1460925	Pink	1260	120	5
55-60 and 62 - Heavy Duty	1460930	Dark Red	1330	140	6
55-7523 and 7533 (Except Exports)	1460927	Purple	1440	140	6
55-7523 and 7533 - Export	1460929	Yellow	1430	170	7
55-86	1460928	None	1700	235	9
55-86 - Heavy Duty	1460931	White	1900	235	9

All springs are 2.50 inches in width.

Color daub to appear on rear eye only.

SPRING HEIGHTS

The spring heights should be:

Model	Weight*		Front Spring Height in Inches	Rear Spring Height in Inches
	Front	Rear		
6019	2455	2250	4-1/2 to 5-1/4	8-3/4 to 9-1/2
6237	2390	2170	4-1/2 to 5-1/4	8-3/4 to 9-1/2
6237D	2410	2215	4-1/2 to 5-1/4	8-3/4 to 9-1/2
6267	2510	2335	4-1/2 to 5-1/4	8-3/4 to 9-1/2
6219	2390	2180	4-1/2 to 5-1/4	8-3/4 to 9-1/2
7523-33	2700	2500	5-3/8 to 6-1/8	10 to 10-3/4
86 Comm. (approx.)	2550	3040	5-1/2 to 6-1/4	9-5/8 to 10-3/8

*Car weight with full tank of gasoline, heater, radio, and wheel discs.

TORQUE TIGHTNESS

	Size	Ft. Lbs. Min.	Ft. Lbs. Max.
Knuckle to brake plate and steering arm	7/16-20	60	70
Knuckle support arm - fixed threaded bushings --			
In lower end of knuckle support	Special	200 Min.	
In lower suspension arm	Special	195	205
In upper suspension arm	Special	140	150
Knuckle support, upper and lower, nut	Special	70	90
Rubber bumper to lower suspension arm	3/8-24	16	20
Spring bolt (front end)	Special	65	75
Spring shackle bushings and hanger bushings	Special	65	75
Stabilizer bracket to frame	3/8-24	25	30
Steering idler arm threaded bushing	Special	110	115
Steering tie rod adjuster clamp bolts	5/16-24	20	20
Steering tie rod pivots to steering arms	1/2-20	50	55
Suspension arm shaft to frame (lower)	7/16-20	60	70
Suspension arm shaft to frame (upper)	9/16-18	150	160
Wheel mounting nuts	1/2-20	90	100
Wheel mounting nuts Lefthand threads on left side			