Nash

TECHNICAL SERVICE MANUAL

SUPPLEMENT

Nash-Healey

1952 — 1953

Inside front cover - no text

Supplement to the Nash 1952 Technical Service Manual

FOREWORD

The Nash-Healey sports car is the result of Nash Motors' half-century of research and engineering in the automotive industry, combined with traditional European craftsmanship and experience in the building of thoroughbred sports cars.

The use of an improved Nash "Ambassador" engine and drive line, the frame and front suspension of the trailing link type designed and made by the Donald Healey Company of England, are combined to form the chassis of the Nash-Healey. The custom hand-built body is designed and built by the famous custom body designer Pinin Farina of Turin, Italy.

The Nash-Healey is truly a fine sports car and is designed as such, but it should not be considered as a competition car to be used for racing purposes. It is suggested that the factory be contacted for information pertaining to modifications for racing.

The following product information will provide complete Nash-Healey Service Information when used in conjunction with the Nash 1952 Technical Service Manual.

This product information should be kept in a convenient location, together with the 1952 Technical Service Manual, so that complete information for Nash automobiles will be at the Mechanic's disposal for best service to Nash Owners.

Nash Motors

DIVISION OF NASH-KELVINATOR CORPORATION

DETROIT 32, MICHIGAN

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TECHNICAL SERVICE MANUAL

for the

1952-1953 NASH-HEALEY SPORTS CAR

Nash Motors

Division of

Nash-Kelvinator

Corporation

Detroit, Michigan

U. S. A.

GROUP INDEX

ENGINE SECTION

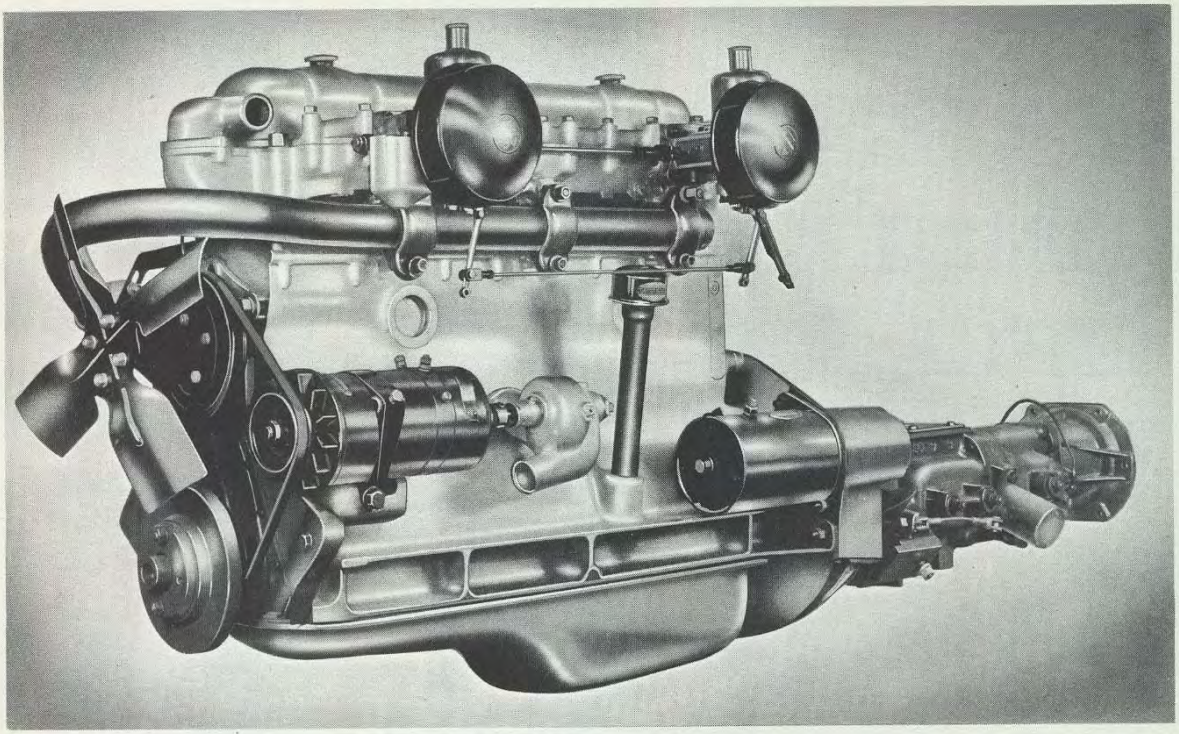


FIGURE 1—*Engine Assembly.*

The basic difference between the Nash-Healey and "Ambassador" engines exists in the cylinder head construction and carburetion.

CYLINDER HEAD

The cylinder head is cast aluminum with steel valve seat inserts.

To remove valve seat inserts, deburr the peaning and drill two holes 180° apart not quite through the insert; use a drill slightly smaller than the seat insert width. Cut the insert through the rest of the material with a sharp chisel removing the insert in two pieces.

To install valve seat inserts, the cylinder head should be uniformly heated to approximately 350° and the seat insert cooled in a dry ice pack approximately 15 minutes. The insert will then readily drop into its bore. Be sure insert sits squarely in its bore, and pean in place with blunt end, ball-shaped punch; then, grind seat concentric to guide.

Valve guide installation is the same as the "Ambassador" Series with the use of Tool J-4687, with guides driven to a depth which permits $^{25}/_{32}$" protrusion. This is controlled by the driving tool.

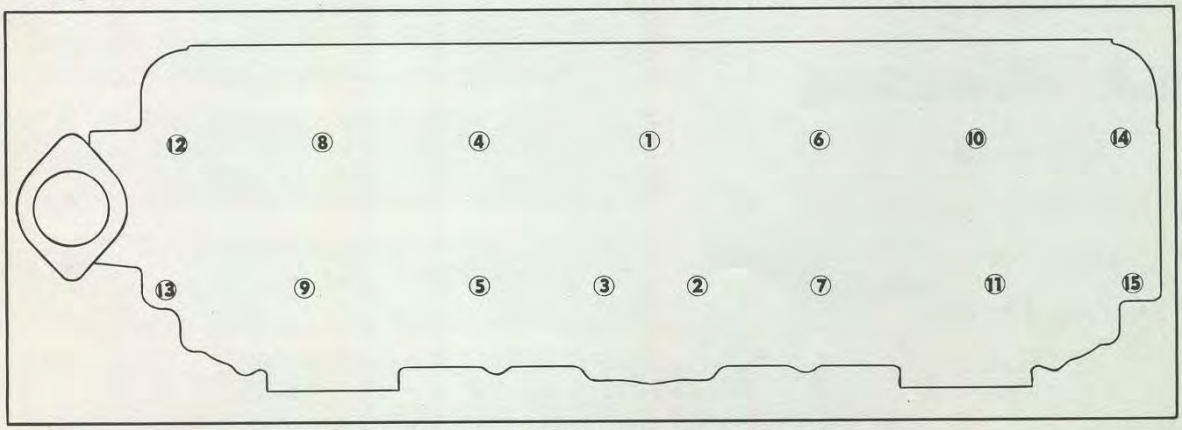


FIGURE 2—*Cylinder Head Torque Tightening Sequence.*

ENGINE SECTION

CAUTION: *When removing valve guides, drive upward from the combustion chamber to release the valve guide lock ring seated in a counterbore in the cylinder head.*

CYLINDER HEAD TORQUE

Tighten cylinder head stud nuts to 55-60 foot-pounds torque with cylinder head at room temperature.

ENGINE REMOVAL

The engine assembly is removed through the hood opening after removing the hood, exhaust pipe, fan assembly, and radiator core.

Separate the engine at the clutch housing.

Remove the front engine supports from the frame and engine to obtain additional movement of the engine for alignment of the clutch shaft during removal and replacement of the engine.

SPECIFICATIONS

	Prior to Car Serial #N-2250—Engine #1163	At Car Serial #N-2250
Engine Type	Valve-In Head 6 Cylinder	Valve-In Head 6 Cylinder
Bore and Stroke	3⅜″ x 4⅜″	3½″ x 4⅜″
Piston Displacement	234.8 Cu. Inches	252.6 Cu. Inches
Compression Ratio	8.1:1	8.1:1
Taxable Horsepower	27.34	29.4
Brake Horsepower	125 @ 4,000 R.P.M.	140 @ 4,000 R.P.M.
Maximum Torque	210 Ft. Lbs. @ 1,600 R.P.M.	230 Ft. Lbs. @ 2,000 R.P.M.

OIL SYSTEM

Oil Pump Type	Gear
Normal Oil Pressure	30 Lbs. @ 20 M.P.H.
Oil Pressure Release	50-58 P.S.I. Range
Engine Oil Refill Capacity	6 Qts.

PISTON AND PISTON RINGS

Piston to Bore Fit	Desired .0018″—Fit to Support Piston Weight (Dry) Inverted in Bore.
Piston Rings	4 Used Per Piston—2 Compression and 2 Oil Control Rings. "U" Flex Ring Used in Lower Oil Control Ring Groove.
Ring Gap	.007″ Except "U" Flex Ring.
Ring Groove Clearance	.002″-.004″
Ring Groove Widths	
Compression Rings	.0930″-.0935″
Oil Control Rings	.154″-.155″
Ring Groove Thickness	
Compression Rings	.165″-.175″
Oil Control Ring	.157″
"U" Flex Ring	.143″-.155″

CRANKSHAFT

Main Bearings	Seven
Bearing Type	Replaceable
Main Journal Diameter	2.479″
Bearing Oil Clearance	.002″
Main Bearing Cap Screw Torque	66-70 Ft. Lbs. (Dry)
Crankshaft End Play	.005″-.008″
End Thrust Taken By	Center Main Bearing
Crank Pin Diameter	2.000″

CONNECTING RODS AND BEARINGS

Bearing Type	Replaceable
Crank Pin Diameter	2.000″
Bearing End Play	.006″-.014″
Bearing Cap Bolt Nut Torque	52-56 Ft. Lbs. (Dry)
Bearing Oil Clearance	.001″-.0025″

VALVE ADJUSTMENT

For peak performance and economy, the valves must be adjusted with the engine running at normal operating temperature.

Valve Settings are:	
Intake	.012″
Exhaust	.016″

VALVES AND VALVE SPRING SPECIFICATIONS

Valve Face Angle	
Intake	29°
Exhaust	44°
Valve Seat Angle	
Intake	30°
Exhaust	45°
Valve Spring Tensions	
Valve Open	144-154 P.S.I. @ $1\frac{7}{16}$″
Valve Closed	53-58 P.S.I. @ $1\frac{13}{16}$″
Valve Spring Free Height	$2\frac{1}{16}$″
Valve Head Diameter	
Intake	1.787″
Exhaust	1.468″
Valve Clearance Running Hot	
Intake	.012″
Exhaust	.016″
Valve Stem to Guide Clearance	.002″-.004″
Valve Stem Diameter	
Intake	.3720″-.3730″
Exhaust	.3725″-.3735″

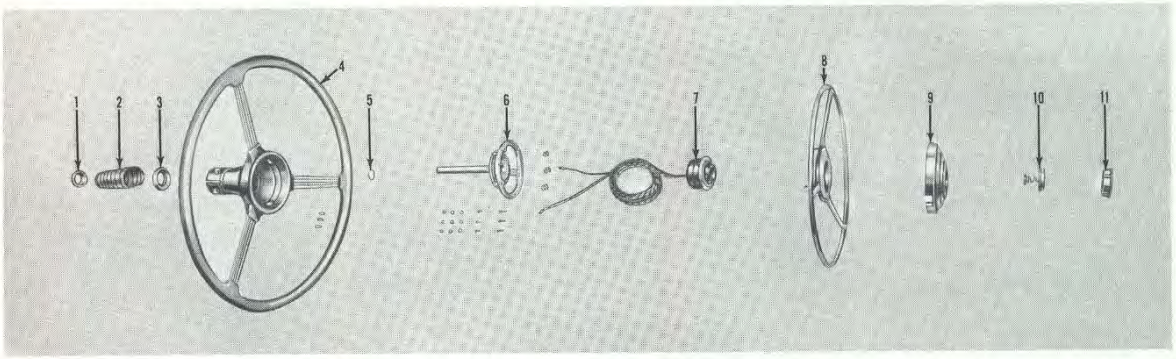
ENGINE SECTION

TUNE-UP DATA

Engine Idle	R.P.M. 600-650
Ignition Timing	T.D.C. Marking on Vibration Damper
Breaker Point	.018″-.024″
Cam or Dwell Angle	31°-37°
Valve Lash	.012″ Intake .016″ Exhaust Engine at Operating Temperature
Spark Plugs	Auto-Lite AL-5 Gap at .030″
Spark Plug Torque	25 Ft. Lbs. (Dry)
Compression Pressure at Cranking Speed	130 Lbs. + Engine at Operating Temperature
Float Level	
S. U. Carburetor	Adjust to Obtain a Fuel Level ⅛″ to ¼″ Below The Bridge in Each Carburetor
Carter Carburetor	7/16″ Top of Float to Bowl Cover

ELECTRICAL SECTION

DISASSEMBLY OF HORN BLOWING AND OVERDRIVE KICKDOWN SWITCH ASSEMBLY



1. Lower Telescopic Adapter Cap
2. Telescopic Adapter
3. Upper Telescopic Adapter Cap
4. Steering Wheel
5. Snap Ring, Steering Wheel Retaining
6. Horn Ring Retainer
7. Overdrive Kickdown Switch and Horn Contact Assembly
8. Horn Ring
9. Steering Wheel Cap
10. Kickdown Button Assembly
11. Kickdown Button Retainer

FIGURE 1—*Horn Blowing and Overdrive Kickdown Control.*

The horn blowing and overdrive kickdown switch assembly can be removed and disassembled without the removal of the steering wheel.

Detach horn blowing and overdrive kickdown lead wires from connector in engine compartment.

Remove the three set screws that retain the horn ring retainer to steering wheel hub (Fig. 1), and remove the retainer, horn ring, and kickdown switch from the steering wheel as an assembly.

With a strong knife, blade, or thin screw driver tip, pry the overdrive kickdown button retainer from the steering wheel cap (be careful of paint surface) and remove button assembly.

Remove three attaching screws from back of horn ring retainer, which thread into steering wheel cap, and remove cap.

Remove the nuts, washers, and springs which hold the horn ring to horn ring retainer, and remove the horn ring.

Remove the three screws from the horn ring retainer, which thread into the kickdown button and horn contact assembly, and remove the horn contact and overdrive kickdown contact assembly.

Reverse the above procedure for assembly.

NOTE: *The horn blowing circuit is completed to ground through the steering wheel hub. The overdrive kickdown circuit is completed to ground through the electrical wire conduit tube.*

NASH-HEALEY TACHOMETER AND VACUUM GAUGE

In the event that a Nash-Healey Tachometer and Vacuum Gauge Sending Switch, or Cable and Socket Assembly becomes inoperative during the standard warranty period, replacement will be made with a new unit by the authorized Nash Dealer.

A Tachometer and Vacuum Gauge Assembly, which becomes inoperative beyond limits of the regular warranty period, will be returned by the authorized Nash Dealer to the factory for repairs.

SPECIFICATIONS

GENERATOR

	Prior to Serial #N-2250	At Serial #N-2250
Model—Delco-Remy	#1102730	#1102777
Type	Shunt	Shunt
Rotation	RH Drive End	RH Drive End
Brush Spring Tension	Approx. 25 Ounces	28 Ounces
Max. Controlled Charging Rate (Controlled by Current Setting)	32-40 Amps.	47 Amps.

ELECTRICAL SECTION

VOLTAGE REGULATOR

	Prior to Serial #N-2250	At Serial #N-2250
Model—Delco-Remy	#1118302	#1118732
Cut-out Relay Voltage at Closing	5.9 Volts Adjust to 6.2 Volts	5.9-6.7 Volts Adjust to 6.4 Volts
Air Gap	.020″	.020″
Voltage Regulator Volts	7.0-7.7 Volts Adjust to 7.4 Volts	7.0-7.7 Volts Adjust to 7.4 Volts
Air Gap	.075″	.075″
Current Regulator Amperes	32-40 Amperes Adjust to 36 Amperes	45-51 Amperes Adjust to 47 Amperes
Air Gap	.075″	.075″

BATTERY

Model	Auto-Lite 1M-100RD
Ampere Hours: 20 Hour Rating	100
Amperes: 20 Minute Rating	120
No. of Plates	15

STARTING MOTOR

Model	Delco-Remy #1107950
Brush Spring Tension	24-28 Ounces
Lock Test Amperage Draw	600
Volts	3.0
Torque in Foot-Pounds	16
No Load Test Amperage Draw	60
Volts	5.0
R.P.M.	6,000

CIRCUIT BREAKER

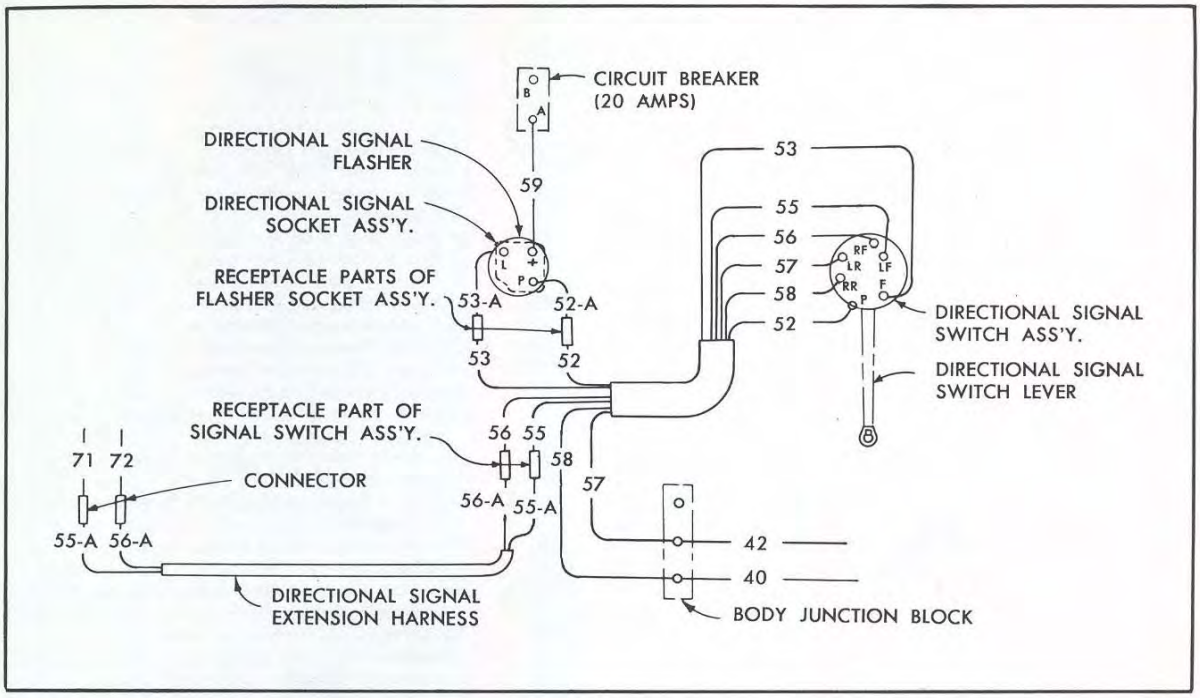
For Main Wiring Circuit	30 Amperes (Located on Light Switch)
For Stop Lights and Overdrive Relay	20 Amperes (Located on Left Rear Side of Hood Opening)

DISTRIBUTOR SPECIFICATIONS

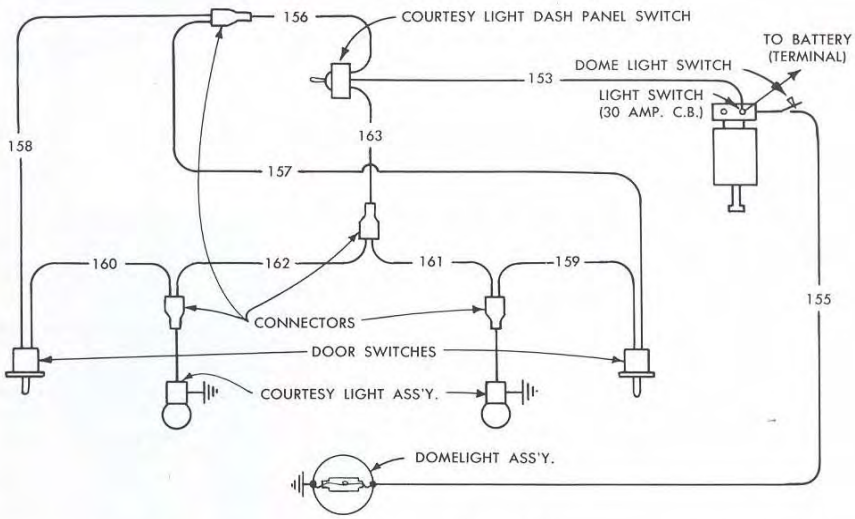
Make	Delco-Remy
Model	1110227
Rotation	Counterclockwise at Drive End
Cam Angle	31 to 37 Degrees
Contact Point Pressure	17 to 21 Ounces
Contact Point Opening	.022″
Condenser Capacity	.18 to .23 Mfd.
Automatic Advance	Start at 4.0 Engine Degrees at 700 Engine R.P.M. Intermediate—12 Engine Degrees at 1300 Engine R.P.M. Maximum 26.0 Engine Degrees at 2700 Engine R.P.M.
Vacuum Advance	4 to 6 Inches Vacuum to Start Travel 15 Inches Vacuum for 10-14 Degrees Engine Advance ($\frac{7}{64}$″ Travel)

1952-1953
NASH-HEALEY
SPORTS CAR
WIRING DIAGRAM

ELECTRICAL SECTION



DIRECTIONAL SIGNAL WIRING



CIRCUIT NUMBER	ROUTE OF WIRE
153	Light Switch Circuit Breaker to Courtesy Light Dash Switch
154	Light Switch Circuit Breaker to Dome Light Dash Switch
155	Dome Light Switch to Dome Light
156	Courtesy Light Dash Switch to Connector
157	Connector to Courtesy Light Door Switch, Right
158	Connector to Courtesy Light Door Switch, Left

CIRCUIT NUMBER	HOUSE OF WIRE
159	Courtesy Light Door Switch to Connector, Right
160	Courtesy Light Door Switch to Connector, Left
161	Courtesy Light Connector to Dash Switch Connector, Right
162	Courtesy Light Connector to Dash Switch Connector, Left
163	Courtesy Light Dash Switch to Connector

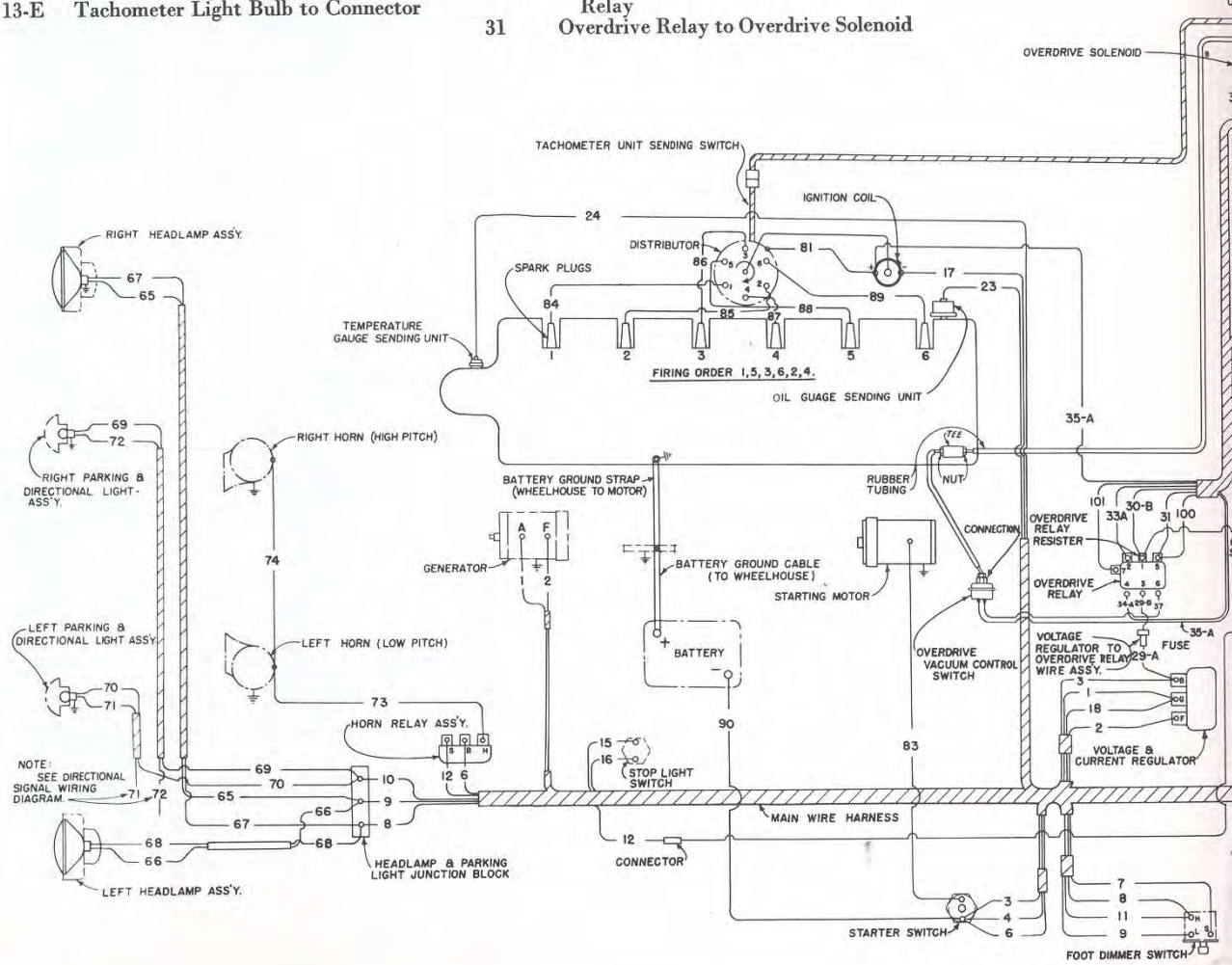
INTERIOR WIRING

NASH-HEALEY
1952-1953
WIRING DIAGRAM

CIRCUIT NUMBER	ROUTE OF WIRE
1	Generator to Voltage Regulator
2	Generator Field to Voltage Regulator
3	Voltage Regulator to Starter Switch
4	Starter Switch to Light Switch
5	Ignition Switch to Light Switch
6	Horn Relay to Starter Switch
7	Light Switch to Dimmer Switch
8	Dimmer Switch to Junction Block—Headlamp (High Beam)
9	Dimmer Switch to Junction Block—Headlamp (Low Beam)
10	Light Switch to Junction Block Parking Light
11	Dimmer Switch to Connector (High Beam Indicator)
11-A	High Beam Indicator Bulb to Connector
12	Horn Relay to Horn Button Connector
12-A	Horn Button to Connector
13	Light Switch to Instrument Light Connector
13-D	Instrument Light Bulb to Connector
13-E	Tachometer Light Bulb to Connector

CIRCUIT NUMBER	ROUTE OF WIRE
15	Stop Light Switch to Circuit Breaker
16	Stop Light Switch to Connector
17	Ignition Switch to Ignition Coil
18	Voltage Regulator to Connector (No Charge Indicator)
18-A	No Charge Indicator Bulb to Connector
19	Ignition Switch to Circuit Breaker (20 Amps)
20	Heater & Defroster Switch to Circuit Breaker (20 Amps)
22	Heater & Defroster Switch to Heater Motor
23	Oil Pressure Indicator Gauge to Engine Unit
24	Temperature Indicator Gauge to Engine Unit
28	Circuit Breaker to Instrument Wire Harness Connection
29-A	Voltage Regulator to Fuse
29-B	Fuse to Overdrive Relay
30-B	Junction Block (Body) to Overdrive Relay
31	Overdrive Relay to Overdrive Solenoid

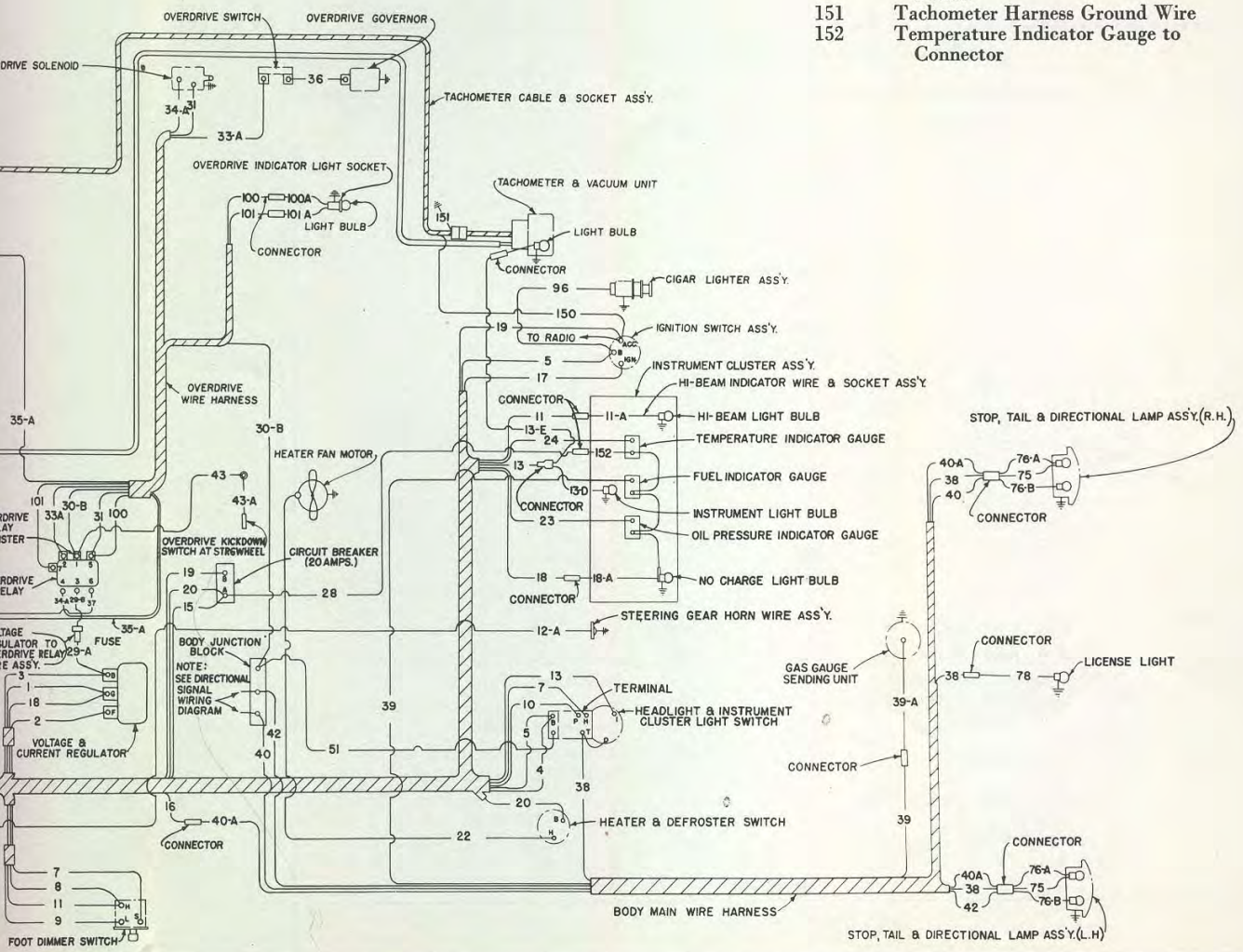
CIRCUIT NUMBER	ROUTE OF W
33-A	Overdrive Relay to Ov Switch
34-A	Overdrive Relay to Ov
35-A	Overdrive Vacuum Sw Coil
36	Overdrive Governor t Lockout Switch
37	Overdrive Relay to Ov Switch
38	Light Switch to Tail Connectors
39	Fuel Indicator Gauge Connector
39-A	Fuel Gauge Tank Uni
40	Junction Block (Bod Directional Light C
40-A	Stop Light Switch Co Light Connector
42	Junction Block (Body Directional Light C
43	Overdrive Relay to St Terminal
43-A	Steering Wheel Termi Button
51	Light Switch to Junct
52	Directional Signal S Socket Connector
52-A	Flasher Socket Assem Connector



ROUTE OF WIRE
Overdrive Relay to Overdrive Lockout Switch
Overdrive Relay to Overdrive Solenoid
Overdrive Vacuum Switch to Ignition Coil
Overdrive Governor to Overdrive Lockout Switch
Overdrive Relay to Overdrive Vacuum Switch
Light Switch to Tail & License Light Connectors
Fuel Indicator Gauge to Tank Unit Connector
Fuel Gauge Tank Unit to Connector
Junction Block (Body) to Right Directional Light Connector
Stop Light Switch Connector to Stop Light Connector
Junction Block (Body) to Left Directional Light Connector
Overdrive Relay to Steering Wheel Terminal
Steering Wheel Terminal to Kickdown Button
Light Switch to Junction Block (Body)
Directional Signal Switch to Flasher Socket Connector (Pilot)
Flasher Socket Assembly (Pilot) to Connector

CIRCUIT NUMBER	ROUTE OF WIRE
53	Directional Signal Switch to Flasher Socket Connector (Lamp)
53-A	Flasher Socket Assembly (Lamp) to Connector
55	Directional Signal Switch to Directional Light Extension Harness Connector
55-A	Directional Signal Switch Connector to Left Front Directional Light Connector
56	Directional Signal Switch to Directional Light Extension Harness Connector
56-A	Directional Signal Switch Connector to Right Front Directional Light Connector
57	Directional Signal Switch to Junction Block (Body) Left Rear
58	Directional Signal Switch to Junction Block (Body) Right Rear
59	Flasher Socket Assembly (+) to Circuit Breaker (20 Amp)
65	Right Headlamp (Low Beam) to Junction Block
66	Left Headlamp (Low Beam) to Junction Block
67	Right Headlamp (High Beam) to Junction Block
68	Left Headlamp (High Beam) to Junction Block

CIRCUIT NUMBER	ROUTE OF WIRE
69	Right Parking Light to Junction Block
70	Left Parking Light to Junction Block
71	Left Directional Light Bulb to Connector
72	Right Directional Light Bulb to Connector
73	Left Horn to Horn Relay
74	Left Horn to Right Horn
75	Tail Light Bulb to Connector
76-A	Stop Light Bulb to Connector
76-B	Directional Light Bulb to Connector
78	License Light Bulb to Connector
81	Distributor to Ignition Coil (Low Tension)
83	Starting Motor to Starting Switch
84	#1 Spark Plug to Distributor
85	#2 Spark Plug to Distributor
86	#3 Spark Plug to Distributor
87	#4 Spark Plug to Distributor
88	#5 Spark Plug to Distributor
89	#6 Spark Plug to Distributor
90	Battery to Starting Switch
96	Cigar Lighter Housing to Ignition Switch
100	Overdrive Relay to Indicator Light Connector
100-A	Indicator Light to Overdrive Harness Connection
101	Overdrive Relay to Indicator Light Connector
101-A	Indicator Light to Overdrive Harness Connection
150	Tachometer Harness to Ignition Switch
151	Tachometer Harness Ground Wire
152	Temperature Indicator Gauge to Connector



TECHNICAL SERVICE LETTER REFERENCE

Date	Letter No.	Subject	Changes information on Page No.

FUEL-CARBURETION SECTION

Prior to the following car identification, Model S.U. Carburetors were installed as original equipment. Starting at the following identification Model "YH" Horizontal Climatic Control Carburetors are supplied:

102" Wheel Base	108" Wheel Base
Serial Number 2310	Serial Number 3024
Engine Number 1325	Engine Number 1247

THE S.U. CARBURETOR

The S.U. carburetor is of the automatic expanding choke type in which the cross-sectional area of the main air passage adjacent to the fuel jet, and the effective orifice of the jet is variable. This variation takes place in accordance with the demand of the engine as determined by the degree of throttle opening, the engine speed, and load.

An approximate constant air velocity and an approximate constant degree of low pressure is maintained at all times in the region of the fuel jet. This velocity is such that the air flow demanded by the engine, in order to develop its maximum power, is not appreciably impeded although good atomization of the fuel is assured under all conditions of speed and load.

The maintenance of a constant high air velocity across the jet, even under idling conditions, eliminates the necessity for a separate idling jet. A single jet only is used in the S.U. carburetor.

CONSTRUCTION

The main constructional features of the carburetor in its simplest form (Fig. 1) illustrates a typical

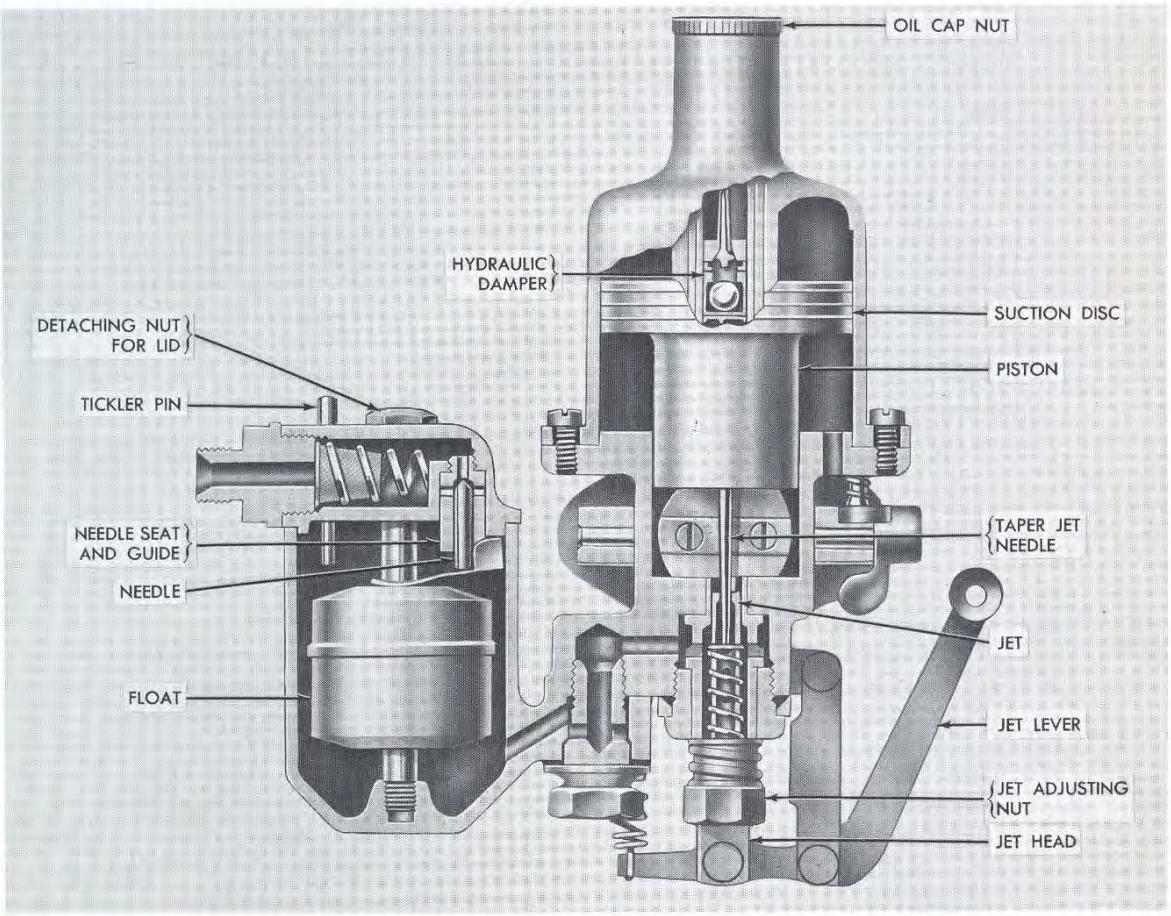


FIGURE 1—*Cross Sectional View—S.U. Carburetor.*

horizontal-type carburetor. This diagram illustrates the main body, butterfly throttle, automatically expanding choke, and variable fuel jet arrangement. It also illustrates the means whereby the jet is lowered through the use of a manual control to effect enrichment of the mixture for starting and warming up. A float-chamber of the type normally employed is also illustrated.

Figure 1 illustrates a butterfly throttle mounted on a spindle located close to the engine attachment flange at one end of the main air passage, and an adjustable idling stop screw arranged to prevent complete closure of the throttle, thus regulating the flow of mixture from the carburetor under idling conditions. A piston is mounted toward the other end of the main passage. This piston is enlarged at its upper end and slides within the bore of the suction chamber, while its lower part constitutes a shutter, restricting the cross-sectional area of the main air passage in the vicinity of the fuel jet as the piston falls. Mounted at the bottom of the piston is a tapered needle which is retained by means of a set-screw.

The piston is carried upon a central spindle which is mounted within a bushing fitted in the central boss forming the upper part of the suction chamber casting.

An extremely accurate fit is provided between the spindle and the bushing in the suction chamber so that the enlarged portion of the piston is held out of contact with the bore of the suction chamber within which it operates with an extremely fine clearance. Similarly, the needle is restrained from contacting the bore of the jet which it penetrates, moving in correspondence with the rise and fall of the piston. As the piston rises, the air passage in the neighborhood of the jet becomes enlarged and passes an additional quantity of air. Provided the needle is of proper tapered form, its simultaneous withdrawal from the jet insures delivery of the required proportion of fuel corresponding to any given position of the piston, and hence to a given air flow.

In the absence of any positive vacuum force, the piston, by its own weight in certain cases assisted by the light compression spring, will occupy its lowest position, two slight protuberances on its lower face contacting the bottom surface of the main air passage adjacent to the jet. The surface in this region is raised somewhat above the general level of the main bore of the carburetor and is referred to as the "bridge".

Raising of the piston is achieved by means of the induction vacuum which takes effect within the suction chamber, and thus upon the upper surface of the enlarged portion of the piston. Passages in the lower part of the piston connect this region and that lying between the piston and the throttle. The annular space beneath the enlarged portion of the piston is completely vented to atmosphere by ducts not indicated in the diagram.

Since the weight of the piston assembly is constant, and the augmenting load of the spring approximately so, a substantially constant degree of vacuum will prevail within the suction chamber and consequently in the region between the piston and throttle for any given degree of lift of the piston between its limits of travel.

This floating condition of the piston will be stable for any given air-flow demand as imposed by the degree of throttle opening, the engine speed, and the load. Any tendency of the piston to fall momentarily will be accompanied by an increased restriction to air flow in the space limited by the lower side of the piston and the bridge. This will be accompanied by a corresponding increase in the vacuum between the piston and throttle, which, being connected to the interior of the suction chamber, will immediately counteract the initial disturbance by proportionately raising the piston.

The float-chamber contains a needle valve located within a separate seat which in turn is screwed into the float-chamber lid. Upward movement of the float in response to rising fuel level causes closure of the needle upon its seat.

The float-chamber is a unit separate from the main body of the carburetor. Suitable passages are provided therein to direct the fuel from the lower part of the float-chamber to the region surrounding the jet.

A fuel level approximately $\frac{1}{8}''$ below the jet bridge is maintained. This can be observed after first detaching the suction chamber and suction piston, and then lowering the jet to its full rich position. The level can vary a further $\frac{1}{4}''$ downwards without any ill effects.

Under idling condition, the piston is completely dropped, being then supported by the two small protuberances provided on its lower surface which are in contact with the bridge; the small gap thus formed between piston and bridge permits the flow of sufficient air to meet the idling demand of the engine without creating enough vacuum in the regions required to raise the piston.

The fuel discharge required from the jet is very small under these conditions; therefore, the diameter of that portion of the needle now obstructing the opening of the jet is nearly equal to the jet bore. Perfect concentricity of the needle and the

jet bore in manufacturing is impracticable. An individual adjustment for this is provided. The jet is not mounted directly in the main body, but is housed in the jet bearings.

The upper jet bearing is provided with a flange which forms a face seal against a recess in the body, while the lower one carries a similar flange contacting the upper surface of the hollow hexagon locking screw.

Tightening the hollow hexagon lock screw will lock the jet and jet bearings in position. Ample lateral clearance is provided between the jet bearings and the bores formed in the main body and the locking screw. The assembly can be moved laterally until perfect concentricity of the jet and needle is achieved. This operation is referred to as centering of the jet (Fig. 2). The jet lock screw is then tightened.

In addition to this concentricity adjustment, an axial adjustment of the jet is also provided for regulating the idling mixture ratio.

Since the needle tapers throughout its length, raising or lowering the jet within its bearing will alter the effective opening of the jet orifice and the rate of fuel discharge. To provide for this adjustment, the jet is movably mounted within its bearings.

A compression spring at its upper end serves to compress the small sealing gland to prevent any fuel leakage between the jet and the upper jet bearing. At its lower end, this spring contacts a similar sealing gland, thus preventing leakage of fuel between the jet and the lower jet bearing.

In both locations, a brass washer is located between the end of the spring and the sealing gland. An additional sealing gland, together with a conical brass washer, is provided to prevent fuel leakage between the jet screw and the main body.

The upward limit of movement of the jet is determined by the position of the jet-adjusting nut. The enlarged jet head finally contacts this nut as the jet is moved upwards towards the "lean" position.

The adjustment of the nut determines the idling mixture ratio setting of the carburetor after the jet has been fully raised and returned to its normal running position by means of the manual starting and cold-running control.

The manual mixture control for starting and cold-running is connected to the main body by a link member and attached by means of a clevis pin to the jet head. A tension spring is provided to assist in returning the jet-moving mechanism to its normal running position.

Passages in the float-chamber bolt, the main body, the jet, and slots in the upper jet bearing serve to conduct fuel from the float-chamber to the jet orifice.

The spindle upon which the piston is mounted is hollow and contains a small stationary damper piston attached to the suction chamber cap by means of a rod. The hollow interior of the spindle contains a quantity of thin engine oil. The slight retarding effect upon the movement of the main piston assembly, caused by the resistance of this small piston, provides the momentary enrichment desirable when the throttle is quickly opened. The damper piston construction provides little resistance to the passage of the oil during the downward movement of the main piston. A throttle-edge connection is provided (on the front carburetor) for use in conjunction with vacuum operated ignition advance mechanism.

AIR BLEED TO JET CHAMBER

An air bleed for the jet protrudes from the side of the carburetor body. Its purpose is to provide better mixture stability under certain conditions of throttle opening.

Normal care requires keeping the air bleed free of obstructions which may impair carburetion. When cleaning the air bleed, the size of the bleed hole must not be altered.

ADJUSTMENT

The adjustment of the S.U. carburetor is very simple. Before adjustment is attempted, determine that all parts, needle, jet, etc. are of the proper standard size.

The only adjustment then is centering the needle in the jet and adjusting the jet properly for correct idling.

If the engine then runs poorly after running properly before, do not change the needle because generally this would not be the cause.

For idle, the jet location must be adjusted by means of the jet adjusting nut until best running idle is obtained. After this adjustment, the whole range of operation is set. This adjustment determines whether or not economy and good performance are obtained.

In the event a needle change is desired, a larger needle will give a leaner mixture while the smaller needle will give the richer mixture. The effect of a needle change is reflected through the carburetor's entire operating range. The needles are stamped on their upper shank for identification.

THE HYDRAULIC SUCTION PISTON DAMPER

The Hydraulic suction piston damper (Fig. 1) is located in the hollow piston rod and attached to the oil cap nut. It consists of a plunger with a one way valve. Its operation is to restrain quick movement of the rising piston to enable acceleration enrichment. The oil reservoir must be serviced with thin oil once a month.

POSSIBLE CARBURETOR DIFFICULTIES

The four points of possible carburetor difficulty are outlined below:

1. Piston Sticking

   The piston assembly consists of the piston forming the choke, the needle, and suction disc. A piston rod inserted into the piston slides in a bearing provided in the suction chamber. The only parts making contact are the piston rod in its bearing. The other parts have sufficient clearance provided so tendency to stick is eliminated. Therefore, to correct a sticking piston condition, remove the suction chamber and piston assembly and clean thoroughly. On reassembly, lubricate the piston rod bearing only with a few drops of thin oil. Refill the oil reservoir after assembly.

   To check for a sticking piston, insert finger through the air intake and lift the piston and allow it to fall, returning to its seat. The piston should move freely.

2. Water or Dirt in Carburetor

   When dirt or water is suspected, first wash out with gasoline. This can be done by raising the piston and, by means of the tickler pin, flowing gasoline through the carburetor and out of the jet. If this cannot be done, dirt or an obstruction is in the passages or jet. Start engine and with fairly high RPM, hold the piston up, and with the hand, shut off the air intake. This can be done several times. The high vacuum applied on the jet will, in most cases, free the jet and passages of dirt. If this procedure does not correct the condition, the jet must be disassembled and cleaned. When reassembly is made, the jet must be centered.

3. Jet Not Centered

   This is the most important assembly operation on this type of carburetor. When centering the jet, remove the pin at base of the jet which connects jet head to the jet operating lever. Remove jet, jet adjusting nut, and adjusting nut spring (Fig. 2).

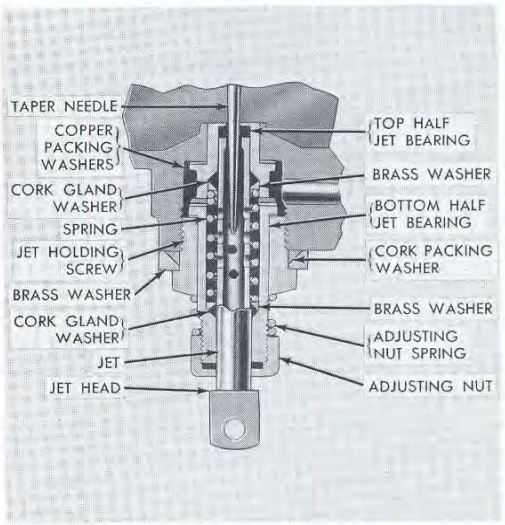


FIGURE 2—*Jet Assembly.*

Replace the adjusting nut without its spring and screw it up to its highest position. At this point, the piston must be perfectly free. If it is not, loosen the jet screw and move the lower part of the assembly including the projecting part of the bottom half jet bearing, adjusting nut, and jet head. Be sure that this time this assembly is slightly loose. The piston should now rise and fall freely because the needle can now move the jet into the required central location. Tighten the jet screw and recheck the piston for free operation. Repeat the operation of centering if the piston is still not perfectly free.

After perfect centering of the jet is obtained, remove the jet adjusting nut, install the spring, and screw the adjusting nut back to its proper location.

4. Carburetor Float-Chamber Flooding

   This is caused either by dirt below the float needle valve on its seat, or a leaky float. Dirt can usually be flushed from the needle valve seat by actuating the tickler pin. When this condition exists, the first indication is fuel leakage and dripping at the air inlet.

STARTING THE ENGINE

A mixture control is provided to allow enrichment of the fuel-air mixture upon a cold start by

lowering the jet. Place this control in the rich position and open the throttle slighly more than normal. Turn on the ignition and start the engine Leave the mixture control in the rich position only as long as necessary.

For a warm start, use of the mixture control is not required.

SYNCHRONIZING THE TWIN S.U. CARBURETORS

Before attempting to tune the carburetors, make sure all other engine adjustments are correct.

Check carburetors for fuel level in jets and centering of jet assemblies. Check pistons for freeness of operation.

Now loosen the clamping mechanism linking the two carburetor throttles together.

Disconnect the mixture control linkage by removing one of the fork swivel pins (Fig. 3). Remove the suction chambers. Check to see that the needles are in the same position in both pistons and that the jets are the same distance below the bridge in both carburetors when they are pushed up against their adjusting nuts. Replace the suction chambers.

Back-off or unscrew the throttle adjustment speed screws until the screws will just hold a thin piece of paper between their tips and the stop lugs; then screw them in one complete turn.

Start the engine and run it until normal operating temperature is reached. Adjust the engine speed by moving each throttle adjusting screw an equal amount until desired RPM is obtained. To synchronize the throttle opening, adjust the throttle stop screws by listening to air noise at air inlets. If the hiss is louder on one than on the other, unscrew its throttle adjusting screw until the sound level is equal. When throttle synchronization adjustment has been obtained, set the idle speed again to the desired RPM. Then adjust the idle mixture on both carburetors until smoothest RPM and best exhaust is heard. Resetting of the throttle speed screws may be required due to improved idle mixture adjustment giving higher RPM.

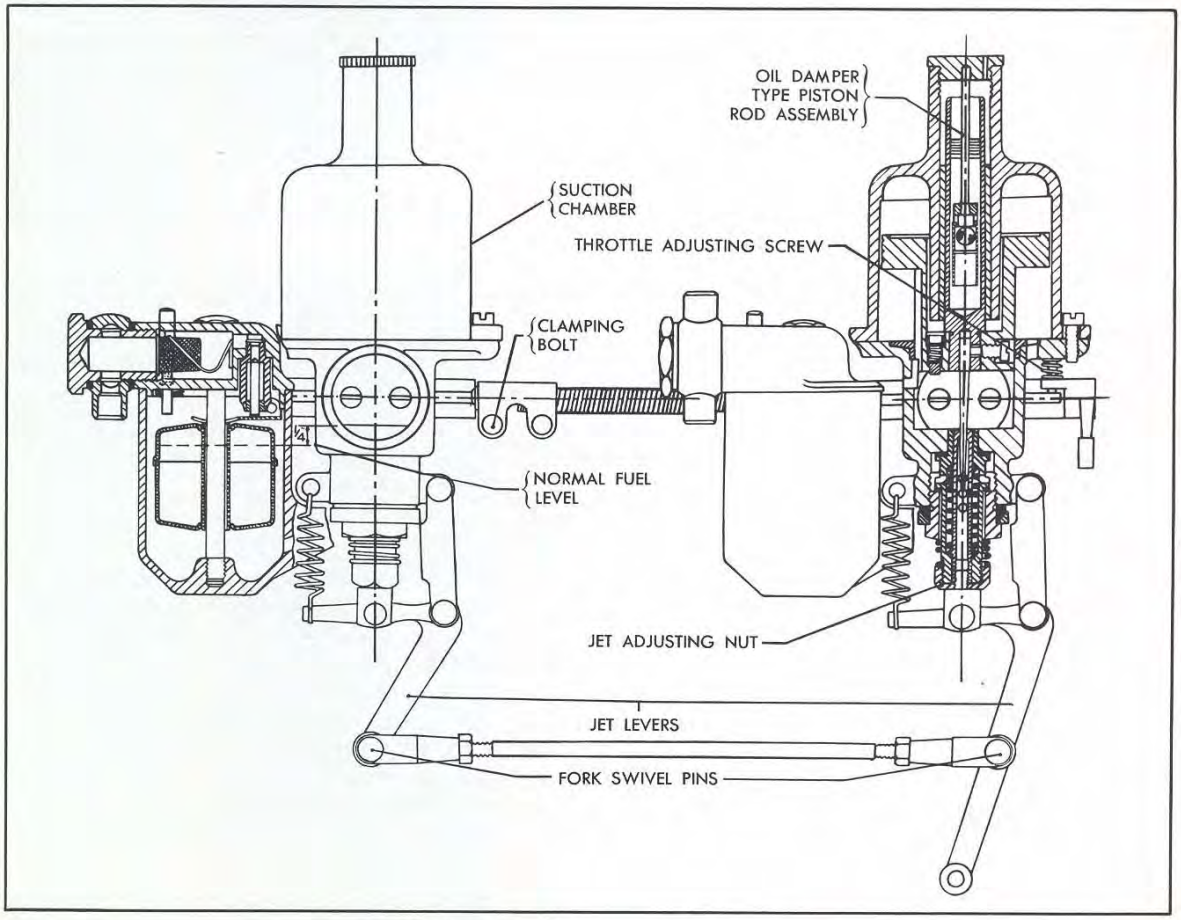


FIGURE 3—*Adjustment Diagram.*

To check the idle mixture, raise the piston of one carburetor. The engine should run roughly. If lifting the piston of one carburetor stops the engine and lifting the other piston does not, the mixture on the first carburetor is too lean and should be enriched.

Before reconnecting the mixture control linkage, be sure the jets are firmly up against the jet adjusting nuts. Check the linkage in this condition so that the linkage clevis pins will slide freely in their operating holes. Lengthen or shorten, if necessary, to obtain the proper mixture linkage adjustment while the jets are in the proper idle position.

Tighten the throttle connector clamping bolt.

Carter Carburetor Horizontal Climatic Control Model "YH" 973-S Front, "YH" 974-S Rear

Refer to the 1952 Technical Manual for disassembly and adjustment procedure.

SPECIFICATIONS

Dimensions:	Flange size, Special 1¼" 3 bolt. Primary venturi, 11/32" I.D. Secondary venturi, 11/16" I.D. Main venturi, 15/16" I.D.
Float Level:	Distance from float (at free end) to float chamber cover, with free weight of float on needle and spring to be 7/16".
Vents:	Outside, none. Inside balance vent tube to air horn ahead of choke valve.
Gasoline Intake:	Square vertical, spring loaded, needle. Size No. 46 (.081") (2.06 mm) drill, in needle seat.
Low Speed Jet Tube:	Jet size No. 70 (.028") drill, By-pass in body, size 1.25 mm (.0492") drill. Idle bleed size No. 58 (.042") drill. Economizer, size No. 54 (.055") drill.
Idle Ports:	Upper port, slot type; length .162". Width, .030".
Idle Port Opening:	Top of port: .124" to .128" (3.15 to 3.25 mm), above top edge of valve with valve tightly closed. Lower port size: .0615" to .0655" (1.56 to 1.66 mm) diameter.
Set Idle Adjustment Screw:	¾ to 1¾ turns open. For richer mixture, turn screw out. Do not idle engine below 550 r.p.m.
Main Nozzle:	In primary venturi, angle 35° off vertical. Discharge jet size .086" (2.18 mm) inside diameter.
Metering Rod:	Economy stem, .0685" (1.74 mm) diameter; power step, .051" (1.3 mm) diameter. Length 2.922" (53.64 mm).
Metering Rod Jet:	.098" (2.49 mm) diameter.
Metering Rod Setting:	See Adjustments.
Accelerating Pump:	Diaphragm type, vacuum and mechanically operated. Discharge (pump) jet size No. 68 (.031") drill (discharges in nozzle passage). Intake ball check (in diaphragm housing) seat size .115-.120" diameter. Discharge ball check (in body) seat size .115-.120" diameter. Vacuum passage restriction (in body) size No. 46 (.081") drill. Vacuum bleed (to throttle bore) size No. 65 (.035") drill.
Pump Stroke:	No Adjustments.
Choke:	Carter Climatic Control, set one point lean. Butterfly type, offset choke valve. Choke heat suction hole, size No. 42 (.0935") (2.37 mm) drill.
Vacuum Spark Port:	Slot type. Size .125 by .041". Bottom of horizontal port .026 to .036" above top edge of valve in closed position.

ADJUSTMENTS

Float Adjustment:

With gasket removed, bowl cover assembly inverted, and float resting on pin in seated needle, the distance from the bowl cover to the top of float should be 7/16" (Gauge T-109-81). Do not depress float lip against spring loaded pin in needle, but let float rest of its own weight. Adjust by bending float lever. Float setting must be checked with bowl cover held at eye height in a level position.

Float Drop:

With bowl cover assembly held in upright position, the distance between float stem (at free end) and bowl cover should be 2". Adjust by bending stop tab on float arm.

Metering Rod Adjustment:

This adjustment is important and should be checked each time the carburetor is reassembled. Insert gauge T-109-104 in place of metering rod, seating tapered end of gauge in metering rod jet. Hold gauge vertical to insure seating in jet. With throttle valve tightly closed, press down on diaphragm shaft until metering rod arm contacts lifter link at diaphragm stem. With diaphragm shaft held in this position, metering rod pin must rest lightly on metering rod gauge. To adjust, bend metering rod arm. Use bending tool T-109-22.

After adjusting, metering rod arm must contact lifter link at diaphragm shaft and at outer end of lifter link.

Accelerating Pump:

If acceleration is not satisfactory, remove pump housing, intake rivet plug, and ball check. Then remove discharge ball check and spring. Examine diaphragm for wear or damage. Be sure intake check and discharge check are not clogged with lint or foreign matter. Intake and discharge ball checks must seat, as a leak at these points will result in poor acceleration. Inspect and replace all worn parts; clean all passages. Pump jet is permanently installed, do not remove.

Fast Idle Adjustment:

With thermostatic coil housing, gasket, and baffle plate removed, partial open throttle, close choke valve and then close throttle valve. This will allow the fast idle cam to revolve to fast idle position. With choke valve held tightly closed and slight tension on throttle lever, there should be .030" (Gauge T-109-29) clearance between throttle valve and bore of carburetor (side opposite idle port). Adjust by bending connector link at lower angle.

Underloader Adjustment:

This adjustment must be made after a fast idle adjustment. Hold throttle valve in wide open position and close choke valve as far as possible without forcing. There should be 1/2" clearance between lower edge of choke valve (vent tube side) and inner wall of air horn (Gauge T-109-83). Adjust by bending choke shaft unloader arm (Use Bending Tool T-109-105).

On-The-Car Adjustment of Carburetors:

After the carburetors are bench calibrated and mounted on the engine, several adjustments must be made to synchronize them:

First, remove the air cleaner boots and "Tee" from carburetor air horns.

Start with the rear carburetor and adjust throttle stop screw until valve is seated in closed position. While doing this, the choke valve must be held in the open position to insure throttle stop screw contacting low speed stop in the fast idle cam mechanism.

Turn throttle stop screws about two turns to crack valves slightly.

Start engine and run to obtain operating temperature.

Attach tachometer to engine and observe R.P.M.

Adjust rear carburetor to maintain minimum of 550 R.P.M.

By means of the connecting throttle linkage between carburetors, adjust front carburetor to synchronize with rear, maintaining rear carburetor throttle on idle stop position while checking.

During adjustment, reference must be made to the tachometer because it will indicate when front carburetor throttle is opened beyond rear throttle. The point at which further opening of the front carburetor throttle would cause an increase in R.P.M. is the point of throttle synchronization. At this time, the air inlet noise of each carburetor will be identical.

To make the idle mixture adjustment, replace air cleaner boots and "Tee" connections. Turn rear carburetor mixture adjustment screw in (lean) until engine operation becomes rough; then open 1/4 turn toward rich. Repeat this on front carburetor.

Another idle speed throttle synchronization adjustment may be required because of improved idle mixture. Adjust idle speed 550-560 R.P.M.

CLUTCH SECTION

CLUTCH

A single plate, dry disc type clutch, identical to the "Ambassador" Series is used. Please refer to the 1952 Technical Service Manual for complete overhaul procedure.

LINKAGE

Disassembly Procedure:

Insert screw driver in front yoke of throwout lever cable and remove anchor nut.

Remove tapered pin from bellcrank lever and tap lever off of bellcrank shaft.

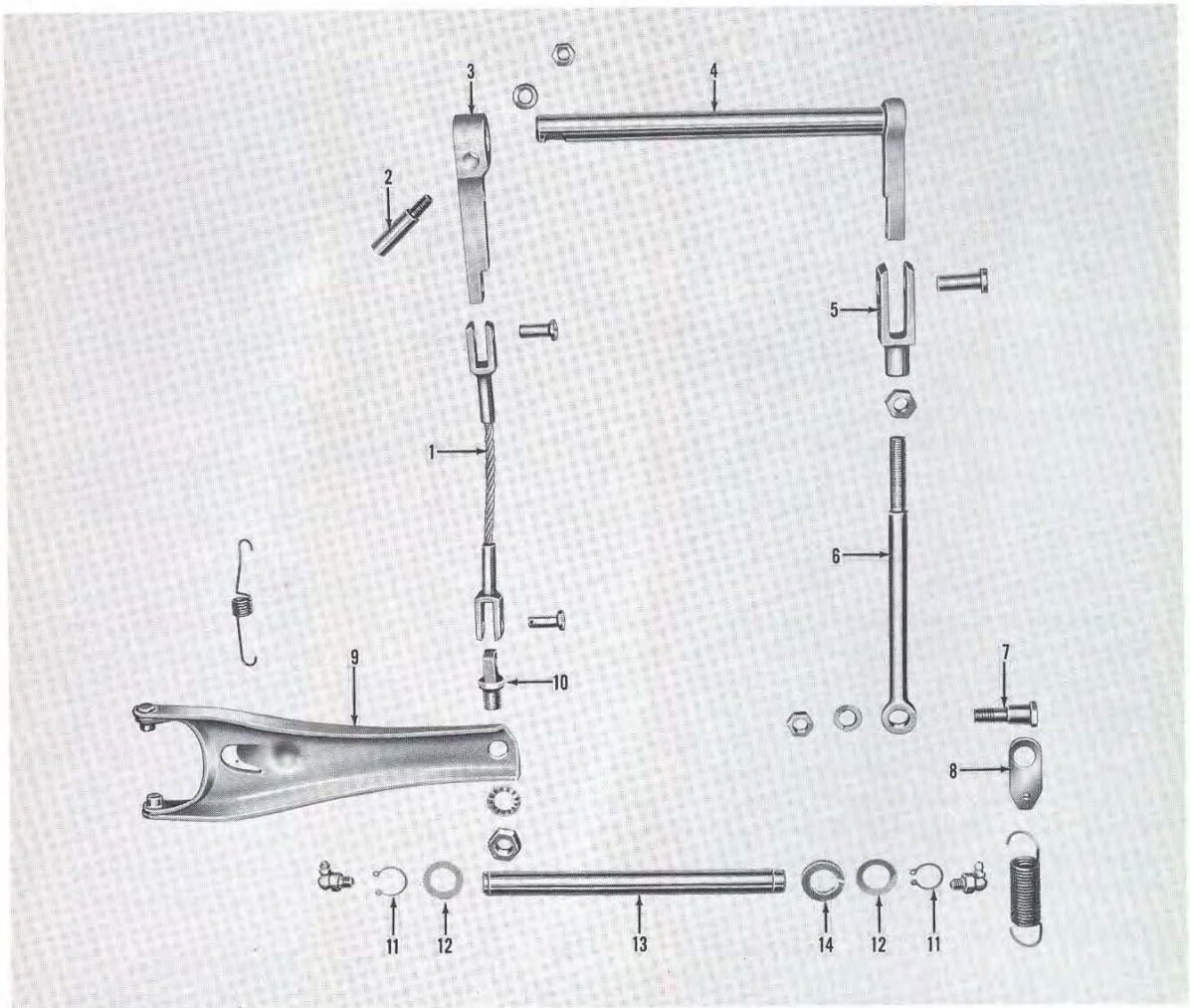
Disconnect bellcrank to clutch pedal adjusting link return spring and anchor bolt.

Remove bellcrank and adjusting link by sliding shaft out of frame bushing tube.

The cotter keys and clevis pins can then be removed from their parts.

NOTE: *REPACK BUSHINGS AND BELLCRANK WITH LUBRIPLATE. LUBRICATE ALL MOVING PARTS.*

To remove the clutch and brake pedal shaft, remove the zerk fitting at the brake pedal side and remove the snap ring. Remove the metal bracket



1. Clutch Throwout Lever Cable
2. Clutch Throwout Bellcrank Lever Tapered Pin
3. Clutch Throwout Bellcrank Lever
4. Clutch Throwout Bellcrank
5. Clutch Pedal to Bellcrank Adjusting Yoke
6. Clutch Pedal to Bellcrank Adjusting Link
7. Clutch Adjusting Lever to Pedal Shoulder Bolt
8. Clutch Pedal Return Spring Anchor
9. Clutch Throwout Lever
10. Clutch Throwout Lever Cable Anchor
11. Clutch and Brake Pedal Shaft Retaining Snap Rings
12. Clutch and Brake Pedal Shaft Spacers
13. Clutch and Brake Pedal Shaft
14. Clutch and Brake Pedal Shaft Tension Spring

FIGURE 1—*Clutch Linkage.*

at the left side which keeps the shaft from turning and remove the shaft.

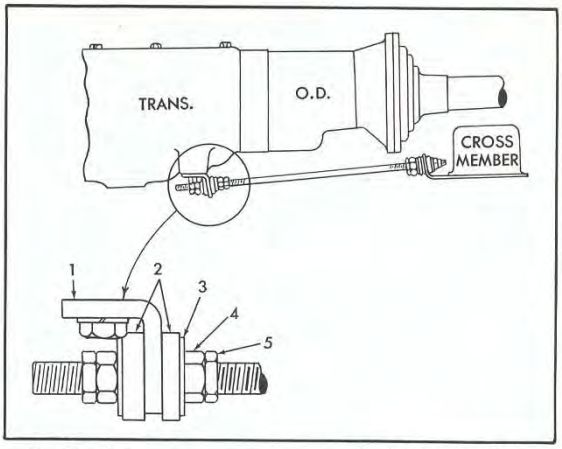
Clutch pedal free play should be from ½" to ¾". To obtain this adjustment, lengthen the clutch pedal to bellcrank adjusting link to reduce the play. Shorten the link to increase pedal play.

UNIT POWER PLANT STABILIZER

The engine stabilizer consists of a rod threaded at both ends; one end is attached to a bracket under the center of the transmission and the other end is attached to a bracket welded to the cross member back of the overdrive.

UNIT POWER PLANT STABILIZER ADJUSTMENT

The fabreeka washers adjacent to the cross member bracket are to be tightened fairly snug by the adjusting nuts and held secure by the lock nuts. Loosen the rear adjusting nut on the transmission bracket and tighten the front adjusting nut to obtain a slight tension on the rod. Then tighten the rear adjusting nut and secure both by tightening the lock nuts.



1. Bracket
2. Fabreeka Washers
3. Plain Washer
4. Adjusting Nut
5. Lock Nut

FIGURE 2—*Engine Stabilizer.*

NOTE: *The function of the unit power plant stabilizer is to insure smooth operation by minimizing the fore and aft movement of the power plant alleviating the possibility of erratic pressure plate finger movement in the clutch cover during clutch application.*

TRANSMISSION AND OVERDRIVE SECTION

Refer to the Transmission and Overdrive Section of the 1952 Technical Service Manual for complete Overhaul Procedure.

TRANSMISSION REMOVAL

Remove complete seat assembly.

Remove screws from floor panels and remove panels.

Drain lubricant from transmission and overdrive. Disconnect wires from solenoid and shift switch.

Remove speedometer cable and speedometer driven gear from overdrive case.

Disconnect overdrive cable and remove from bracket at transmission.

Disconnect hand brake cable and remove metal strap from torque tube.

Disconnect rear brake main hydraulic line at left rear of frame.

Remove lower saddles from rear axle tube housing.

Disconnect sway bar at left rear and remove from pivot bolt.

Disconnect torque tube from overdrive adapter.

Remove four nuts and lock washers from transmission to flywheel housing studs.

Lift transmission and overdrive to clear center of frame cross member.

OPERATION OF OVERDRIVE CONTROL SYSTEM WITH STEERING WHEEL KICKDOWN OPERATING BUTTON

Through the use of a specially designed relay, the overtake or kickdown operation of overdrive permits the driver instant kickdown control by means of a small push-button incorporated in the steering wheel.

For overdrive operation, the dash control is moved to the forward or overdrive position which closes the overdrive lockout switch and mechanically places the transmission in overdrive operating position.

Electrical Operation *(First Type)*

The overdrive relay contains two coil assemblies "A" (overdrive solenoid coil operating section) and "B" (indicator light section).

With engine running, battery voltage is supplied through the resistor to the relay coil "A". When a speed above 28 miles per hour is reached, the overdrive governor contacts close permitting completion of governor circuit to ground energizing relay "A".

With relay "A" energized, contact points 1-1 will close supplying battery voltage through fuse assembly to overdrive solenoid terminal #3, energizing overdrive solenoid permitting overdrive engagement with momentary release of throttle. Energizing relay "A" at this time also opens points 2-2, which opens the ignition interrupter circuit between the ignition coil and interrupter points of overdrive solenoid which close to ground, upon overdrive engagement. Energizing relay "A" and closing points 1-1 also energizes relay "B" which closes points 3-3. Closing points 3-3 completes the circuit between the grounded solenoid interrupter points and indicator terminal post #7. Since the indicator light assembly is connected across the relay terminal post #5 (which supplies battery voltage) and terminal post #7, the circuit is completed to ground through solenoid ignition interrupter points and the indicator bulb will light.

OVERTAKE OPERATION

For kickdown operation, pressing the steering wheel button by-passes to ground relay terminal post #1 (battery voltage supplied through relay resistor) thereby de-energizing coil "A." De-energizing coil "A" opens points 1-1 which de-energizes overdrive solenoid, closes points 2-2 which completes the ignition interruptor circuit, and opens points 3-3 thereby opening the indicator light circuit. Car is now in conventional or third speed.

The vacuum switch is wired in series with the ignition interrupter circuit as a precautionary means of preventing an ignition interruption at times of high intake vacuum due to reverse torque in a vehicle coasting condition. Under reverse torque while coasting, an ignition interruption would not release the overdrive. This would cause loading of the exhaust system with unburned fuel

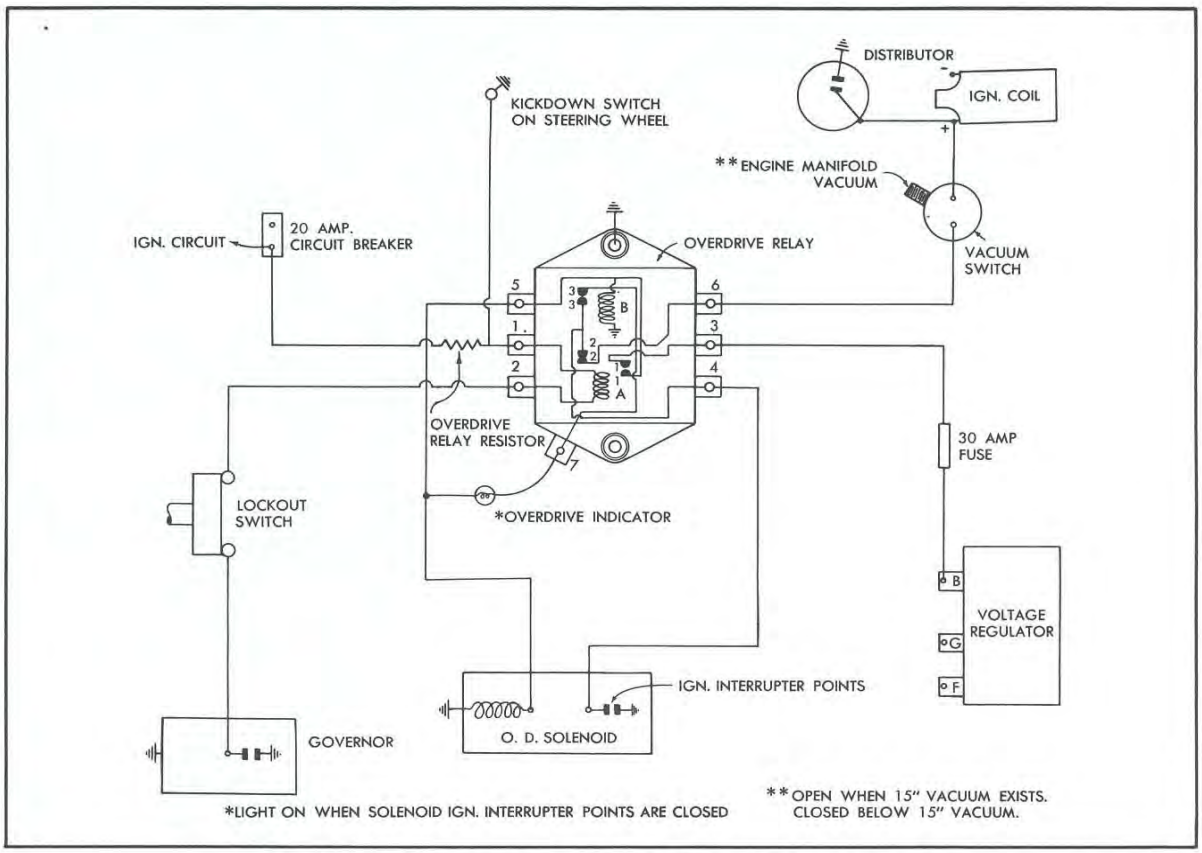
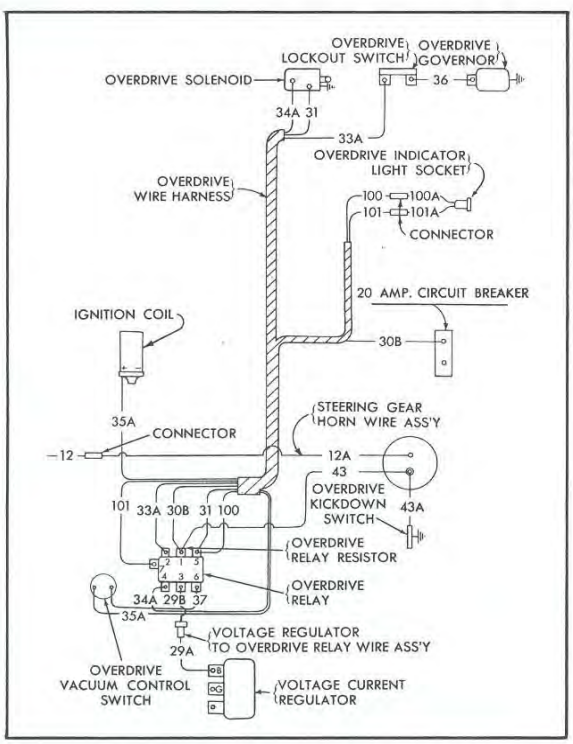


FIGURE 1—*Overdrive Electrical Controls (First Type).*



mixture that could possibly ignite resulting in damage to the muffler.

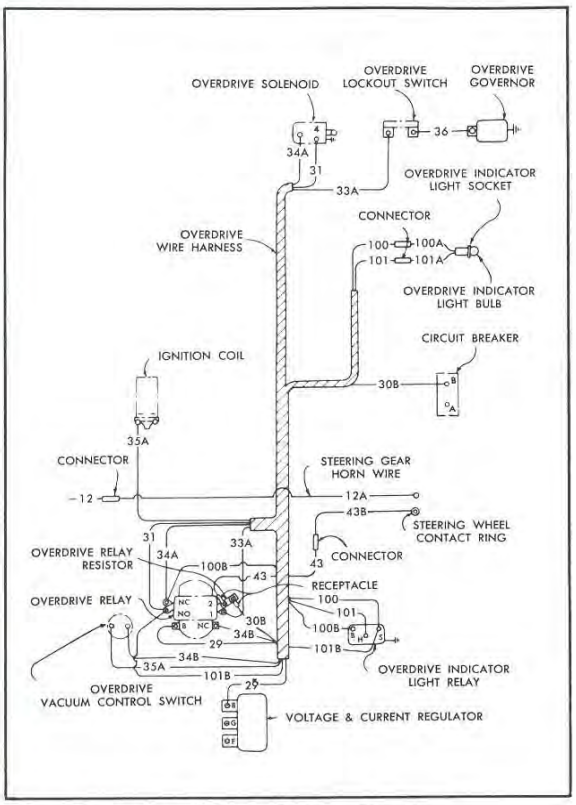
Electrical Operation *(Late Type)*

The electrical supply for the governor circuit is controlled by the ignition switch and shift switch. The ignition switch, when turned on, permits electrical pressure (voltage) to be present through

12	**Horn Relay to Horn Button Connector**
12A	**Horn Button to Connector**
29A	**Voltage Regulator to Fuse**
29B	**Fuse to Overdrive Relay**
30B	**Circuit Breaker to Overdrive Relay**
31	**Overdrive Relay to Overdrive Solenoid**
33A	**Overdrive Relay to Overdrive Lockout Switch**
34A	**Overdrive Relay to Overdrive Solenoid**
35A	**Overdrive Vacuum Switch to Ignition Coil**
36	**Overdrive Governor to Overdrive Lockout Switch**
37	**Overdrive Vacuum Switch to Overdrive Relay**
43	**Overdrive Relay to Steering Wheel Terminal**
43A	**Steering Wheel Terminal to Kickdown Button**
100	**Overdrive Relay to Overdrive Light Connector**
100A	**Overdrive Harness Connector to Indicator Light**
101	**Overdrive Relay to Overdrive Light Connector**
101A	**Indicator Light to Overdrive Harness Connector**

FIGURE 2—*Overdrive Wiring Diagram (First Type).*

the 20 ampere circuit breaker to which is attached a wire from the #2 terminal on the overdrive relay (Fig. 3).



29	Overdrive Relay to Voltage Regulator
30B	Overdrive Relay to Circuit Breaker
31	Overdrive Relay to Overdrive Solenoid
33A	Overdrive Relay to Overdrive Lockout Switch
34A	Overdrive Relay to Overdrive Solenoid
34B	Overdrive Relay to Vacuum Switch
35A	Overdrive Vacuum Switch to Ignition Coil
36	Overdrive Governor to Lockout Switch
43	Overdrive Relay to Kickdown Button Wire Connection
43B	Kickdown Button Wire Connection to Kickdown Button
100	Indicator Light Relay to Indicator Light
100A	Indicator Light to Overdrive Harness Connection
100B	Overdrive Relay to Indicator Light Relay
101	Indicator Light Relay to Indicator Light Connection
101A	Indicator Light to Overdrive Harness Connection
101B	Overdrive Relay to Indicator Light Relay

FIGURE 3—*Overdrive Wiring Diagram (Late Type).*

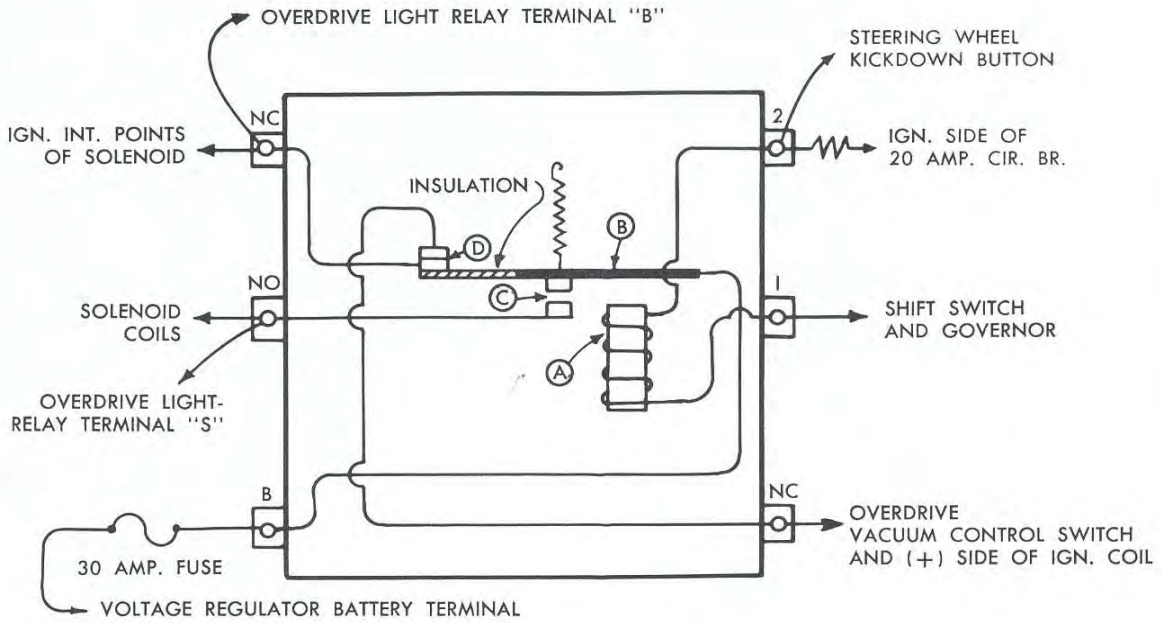
The electrical pressure is present through the overdrive relay coil "A" (Fig. 4) and down to the shift switch. When the dash overdrive control is pushed in for overdrive operation, the shift switch is closed. This permits electrical voltage to be present to the overdrive governor insulated point. When car speed is increased to governor cut-in speed 29-30 M.P.H., the governor contacts close completing the governor circuit to ground and an electrical current flows through this circuit. The current flow through relay coil "A" makes it become an electromagnet pulling armature "B" downward. At this moment, contacts "C" are closed and contacts "D" are opened. Voltage at points "C" from the generator voltage regulator battery terminal through the 30 ampere fuse, and terminal "B" of the overdrive relay, causes current flow from terminal "NO" of the overdrive relay to terminal #4 on the overdrive solenoid energizing the solenoid actuating and holding coils. This electromagnetically places the solenoid pawl on the step of the overdrive sun gear balk ring and opens the actuating coil points. Now the holding coil, with a low amperage requirement only, holds the solenoid pawl on the balk ring. A release of the throttle provides the needed reversal of torque in the drive line to slip the solenoid pawl from the step on the balk ring into a window of the sun gear hub to obtain overdrive operation. As the solenoid pawl moves into a window of the sun gear hub, the ignition interrupter points are closed connecting to ground.

The closing of points "C" in overdrive relay also provides voltage to the overdrive light relay terminal "S" (Fig. 4) from overdrive relay terminal "NO" and also to one side of the overdrive indicator light. The other side of the light is connected to terminal "H" on the light relay. Current flows through the light relay coil from terminal "S" on the relay to ground. This closes the light relay points and current flows through the points from terminal "H" to terminal "B" and also to terminal "NC" on overdrive relay. From terminal "NC", the current flows to ground through the solenoid ignition interrupter points. This causes the completion of the indicator circuit so the light is on.

Decreasing car speed to approximately 25 M.P.H. will result in the opening of the overdrive governor points opening the governor circuit. This will demagnetize the governor relay coil and points "C" will be opened. As soon as points "C" open, the current supply to the overdrive solenoid coil and indicator light is cut off and the solenoid return spring pulls the solenoid pawl out of the sun gear hub because on deceleration no side load is present on the pawl. The car will now freewheel and with throttle applied will pull in third speed operation.

To obtain third speed overtake operation while in overdrive, the button on the steering wheel is depressed. In doing so, the voltage present at terminal 2 of the overdrive relay is shunted to ground through the push button ground contact. A short circuit in the supply voltage is prevented

SCHEMATIC DRAWINGS OF
OVERDRIVE RELAY AND OVERDRIVE LIGHT RELAY CIRCUITS



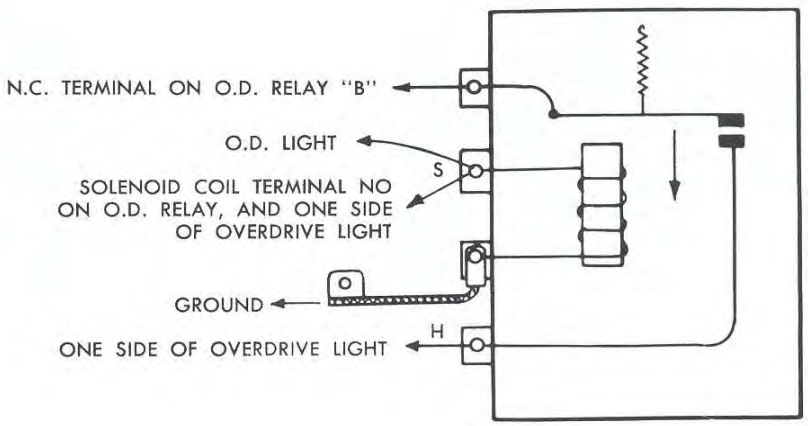


FIGURE 4—*Overdrive Electrical Controls (Late Type).*

by the use of the 5 ohm resistance element in series with the battery circuit. This immediately de-energizes the overdrive relay coil opening points "C" and closing points "D". Opening points "C" de-energizes the solenoid and overdrive light relay. The light then goes out and tension of the solenoid return spring tends to pull the pawl out of the sun gear hub. The side thrust holds the pawl in. It is necessary to reverse the drive line torque for a moment. This is done by the interruption of the ignition system for approximately two revolutions of the engine.

Remember: When points "C" of overdrive relay opened, points "D" closed. With points "D" closed, the ignition primary circuit on the distributor side of the coil is grounded by the circuit completed through the vacuum switch, points "D" and the ignition interrupter points of the solenoid. As soon as the solenoid releases, the interrupter points within it are opened and the engine again fires normally. The drive through the overdrive is then direct and third speed operation is obtained.

The vacuum switch is wired in series with the ignition interrupter circuit as a precautionary means of preventing an ignition interruption at times of high intake vacuum due to reverse torque in a vehicle coasting condition. Under reverse torque while coasting, an ignition interruption would not release the overdrive. This would cause loading of the exhaust system with unburned fuel mixture that could possibly ignite resulting in damage to the muffler.

SHIFTING SYSTEM SECTION

REMOVAL OF GEAR SHIFT ASSEMBLY

Remove gear shift selector lever knob.

Disconnect linkage rods at shifter rods.

Remove cap screws at rear of gear shift housing.

Remove cap screws at front of gear shift housing.

Loosen cap screw at overdrive adapter and front support brace.

Loosen nuts at upper end of torque tube and rear support brace, and remove gear shift assembly.

The gear shift assembly is removable from the under side of the car.

GEAR SHIFT DISASSEMBLY

Remove the two cap screws holding shifter rod retaining plate and remove plate.

Remove shifter rods.

Disconnect and remove anti-rattle spring at lower end of gear shift selector lever.

Remove snap ring, using long-nose pliers, and remove retaining plate, tension spring, and ball seat race.

Lift out selector lever.

Remove set screw and lower ball seat race.

NOTE: *Lubricate all moving parts when parts are being reassembled.*

ADJUSTMENT AFTER ASSEMBLY

To adjust the selector lever, set transmission levers in the neutral position.

Connect the low and reverse, second, and high linkage rods to shifter rods.

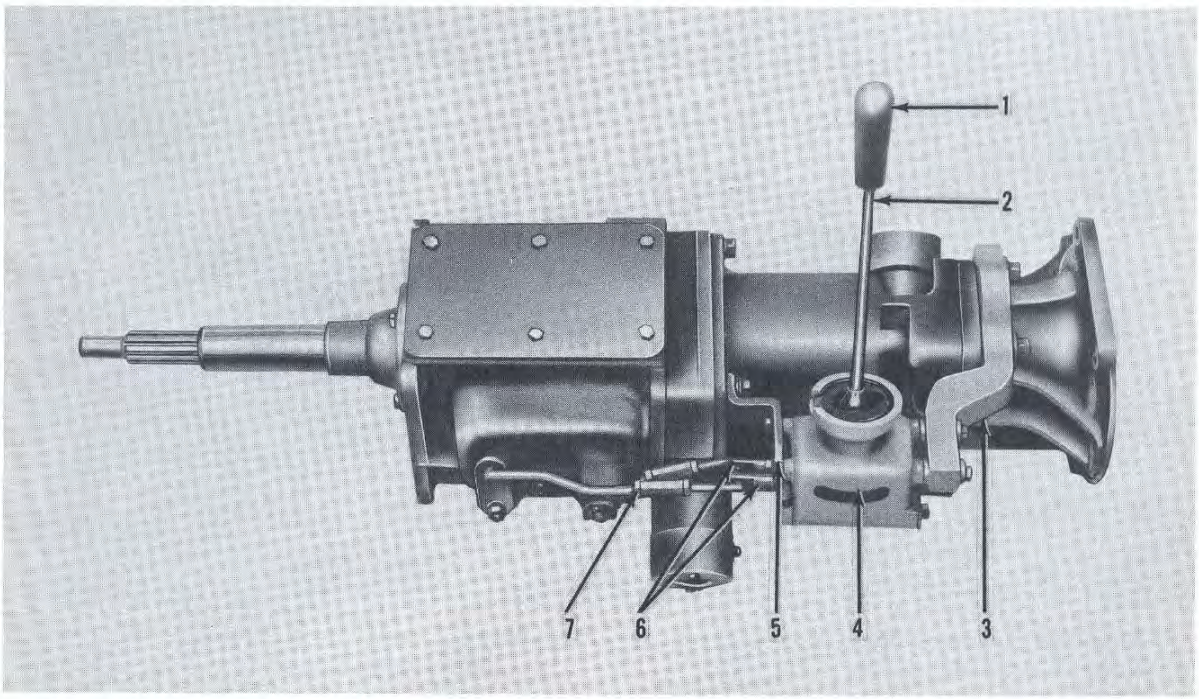
The shifter rods must be aligned so that the lower end of the selector lever lines up with both slots on the shifter rods.

NOTE: *These slots must be aligned to insure proper cross-over shift.*

Adjust the linkage rods and insert in hole of shifter rods, using two plain washers, one on each side of the shifter rod, and install $\frac{3}{32}$" cotter keys.

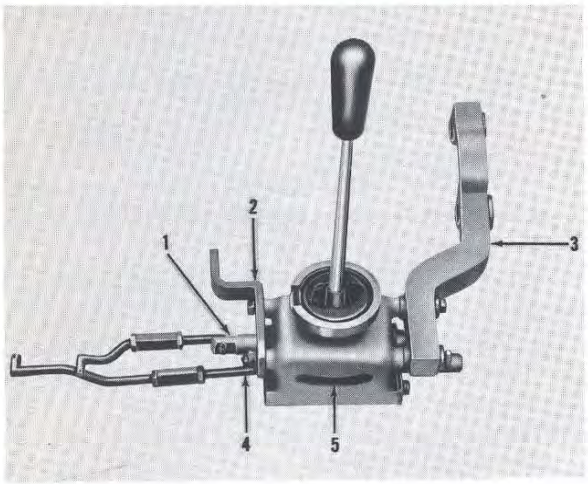
Tighten lock nuts securely on the linkage adjusting nut.

NOTE: *The short and long ends of the linkage rods are both right hand threads.*



1. Gear Shift Selector Knob
2. Gear Shift Selector Lever
3. Rear Brace
4. Gear Shift Housing
5. Front Brace
6. Shifter Rods
7. Linkage Rods

FIGURE 1—*Gear Shift Assembly.*



1. Shifter Rod—Low and Reverse
2. Gear Shift Brace—Front
3. Gear Shift Brace—Rear
4. Shifter Rod—Second and High
5. Housing Assembly

FIGURE 2—*Gear Shift Assembly Removed.*

1. Shifter Rod—Second and High
2. Shifter Rod—Low and Reverse
3. Front Brace
4. Gear Shift Housing
5. Shifter Rod—Retaining Plate
6. Rear Brace
7. Ball Seat—Race
8. Anti-Rattle Spring (Coil)
9. Tension Spring Retaining Plate
10. Retaining Plate Snap Ring
11. Gear Shift Lever

FIGURE 3—*Gear Shift Disassembled.*

BRAKE AND WHEELS SECTION

For detailed information, refer to the Brake Section of the 1952 Technical Service Manual.

BRAKE SPECIFICATIONS

	Prior To Serial #N-2250	At Serial #N-2250
Type of Mechanism	Lockheed Hydraulic	Lockheed Hydraulic
Make	Bendix Servo	Bendix Servo
Total Foot Braking Area	160 Sq. In.	171 Sq. In.
Lining Size—Width and Length		
Primary—Front	2″ x 9″	2″ x 9″
Rear	2″ x 9″	2″ x 9″
Secondary—Front	2″ x 11 3/32″	2 1/2″ x 11 3/32″
Rear	2″ x 11 3/32″	2″ x 11 3/32″
Clearance, Toe, Inches	.015″	.015″
Clearance, Heel, Inches	.015″	.015″
Pedal Free Play	1/4″ to 1/2″	1/4″ to 1/2″
Drum Diameter	10″	10″
Wheel Cylinder	Straight Bore	Straight Bore
Front Cylinder Bore, Diameter	1 1/16″	1 1/16″
Rear Cylinder Bore, Diameter	15/16″	15/16″
Master Cylinder, Bore Inches	1 1/8″	1 1/8″
Piston Clearance, Wheel and Master Cylinder, Inches	.001″ to .003″	.001″ to .003″

WHEELS AND TIRES

Wheel Size	15″
Tire Size	6.40 x 15″
Tire Pressure, Front and Rear Wheels	24 Pounds Cold

REAR AXLE SECTION

REAR AXLE REMOVAL

The floor pan cover and exhaust tail pipe must be removed before the rear axle assembly can be removed for overhaul.

OVERHAUL PROCEDURE

For detailed overhaul procedure refer to the Rear Axle and Propeller Shaft Section of the 1952 Technical Service Manual.

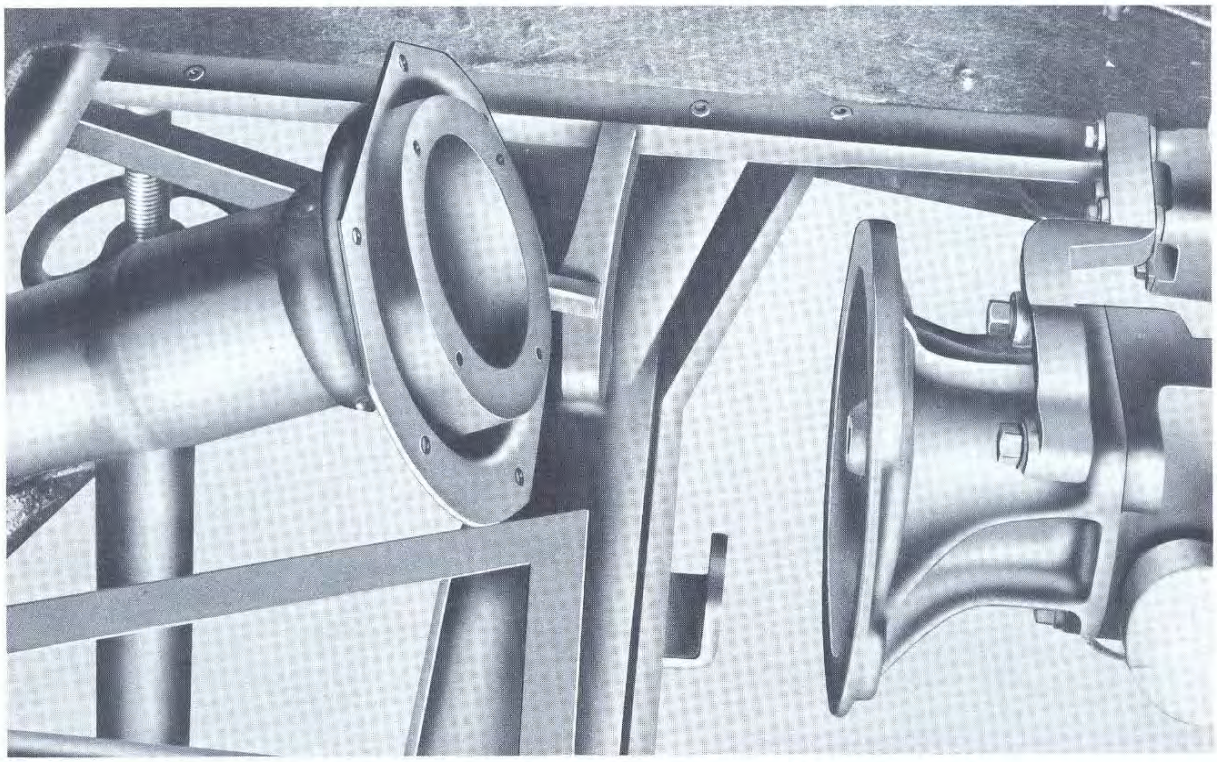


FIGURE 1—*Removing Rear Axle—Floor Pan Removed.*

SPECIFICATIONS

Type	Semi-Floating
Drive Gear Type	Hypoid
Ring Gear and Pinion Backlash	.002″ to .006″
Axle Shaft End Play	.002″ to .004″
Pinion Shaft Bearing Preload	15 to 18 In. Lbs. Torque
Pinion Bearing Adjustments	Shims
Differential Side Bearing Preload	.004″ to .006″
Differential Side Bearing Adjustment	Shims
Axle Shaft End Play Adjustment	Shims
Lubrication Capacity	4 Pts.
Type of Lubrication	SAE 90 Hypoid*
Rear Axle Ratio	(10-41) 4.1-1

*NOTE: *HYPOID REAR AXLE LUBRICANT IS TO BE USED IN ALL NEW ASSEMBLIES OR FOLLOWING THE INSTALLATION OF REPLACEMENT PARTS. After the rear axle has been run-in, or at the recommended drain and refill period, an SAE 90 All Purpose, Multi-Purpose, or other brand designation lubricant may be used as long as it is suitable for Hypoid Rear Axle Service.* NOTE: *The results of such use are the responsibility of the lubricant supplier or servicing dealer.*

FRONT SUSPENSION AND STEERING GEAR SECTION

FRONT SUSPENSION

The Nash-Healey front suspension is the trailing link type. The knuckle spindle bracket is attached to the lower arm which extends toward the rear. This arm is referred to as the trailing link.

The arms of the double-acting piston type shock absorbers form the upper control arms.

The eccentric pin which attaches the arm to the knuckle spindle bracket provides a means of adjusting the caster angle (Fig. 1).

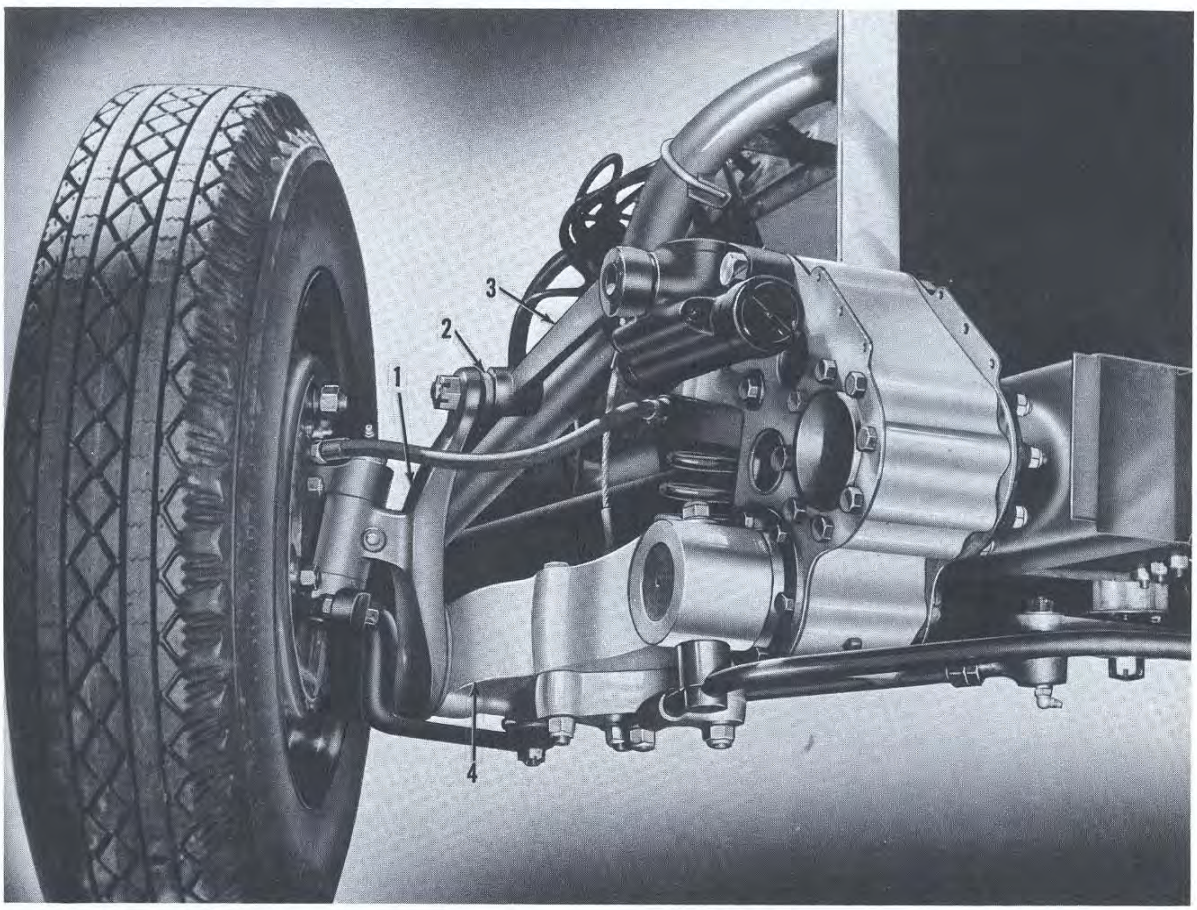
The assembly sequence of the knuckle spindle and its mounting bracket is illustrated in Figure 2.

The mounting bracket assembly is removed from the trailing link by removing the bearing cap with a spanner wrench, and then removing the retaining screw (Fig. 3).

The trailing link and main shaft may be removed as an assembly by removing the retaining cap and the three retaining screws from the end of the main shaft.

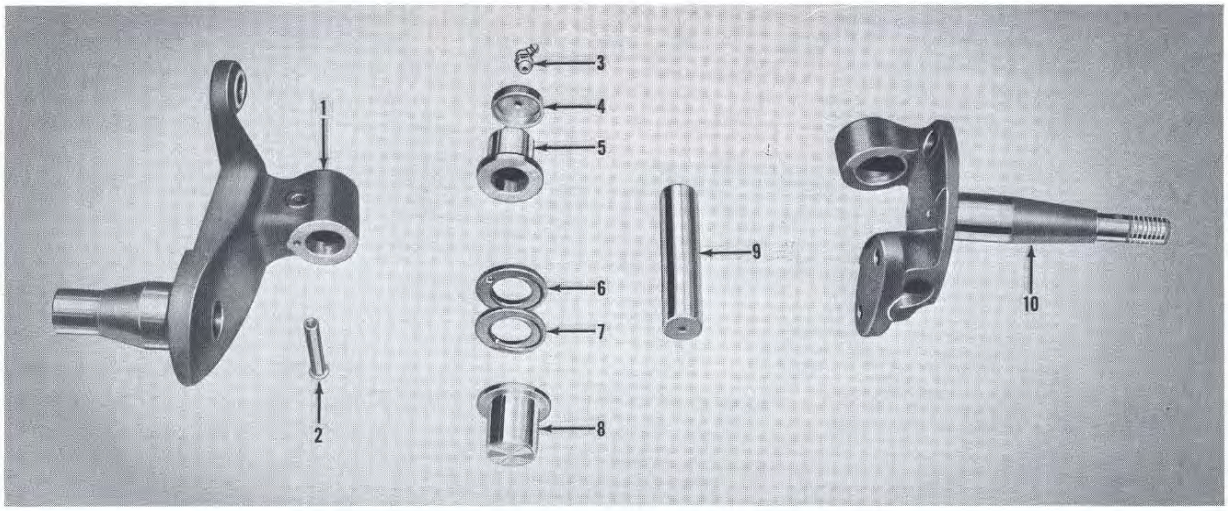
The cast alloy front suspension box is shrunk onto the cross tubes of the car frame, and also onto the main shaft bearing housing. The front suspension box is heated to 212°F. to provide the necessary clearance fit for installation on the cross tube and bearing housing.

Ball bearings and needle bearings are used in this type suspension and are lubricated at normal lubrication periods by means of pressure fittings located on the trailing link and front suspension box assembly.



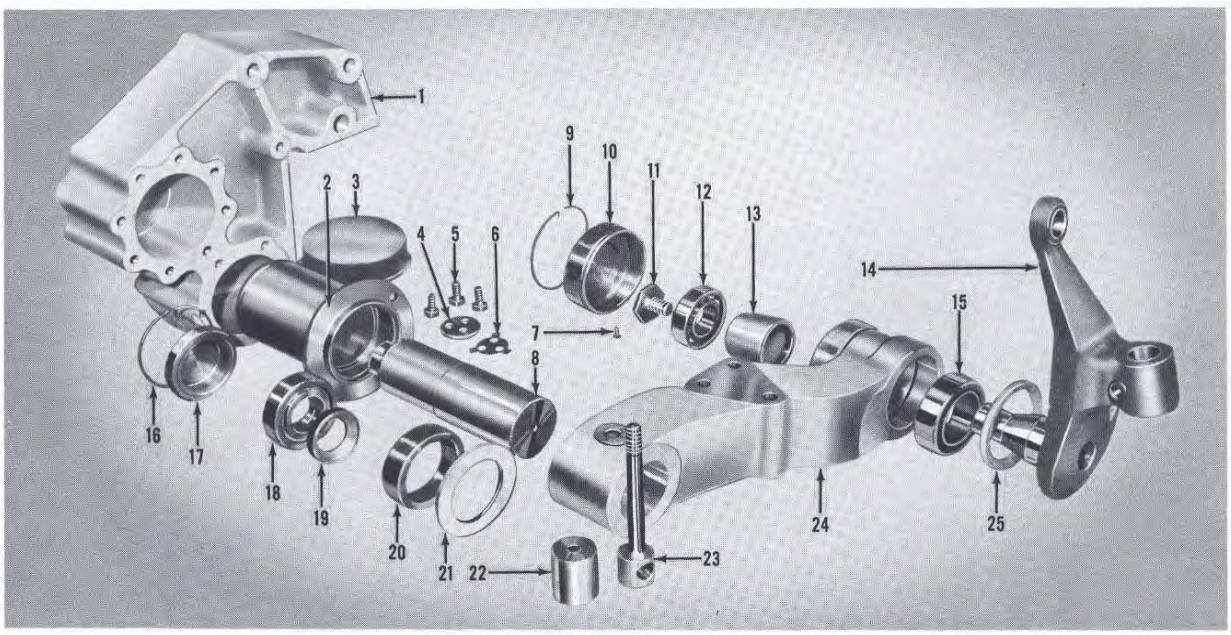
1. Knuckle Spindle Bracket
2. Eccentric Pin
3. Shock Absorber Arm
4. Trailing Link

FIGURE 1—*Front Suspension Assembly (Right Side).*



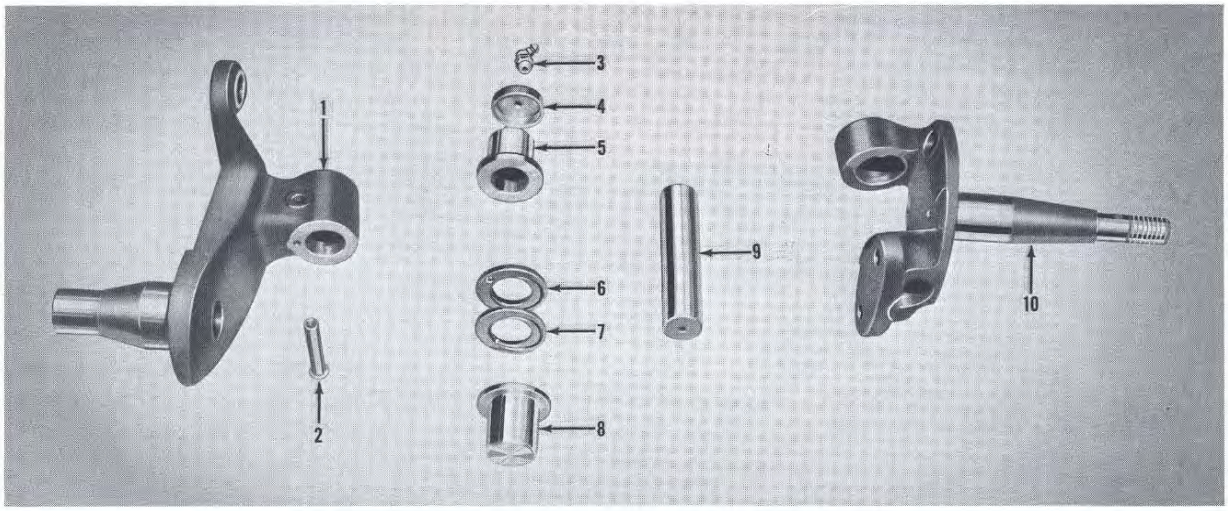
1. Spindle Bracket
2. Retaining Pin
3. Oiler
4. Upper Bushing Cap
5. Upper Bushing
6. Thrust Washer
7. Selective Thrust Washer
8. Lower Bushing
9. Knuckle Pin
10. Knuckle Spindle

FIGURE 2—*Knuckle Spindle and Spindle Bracket.*



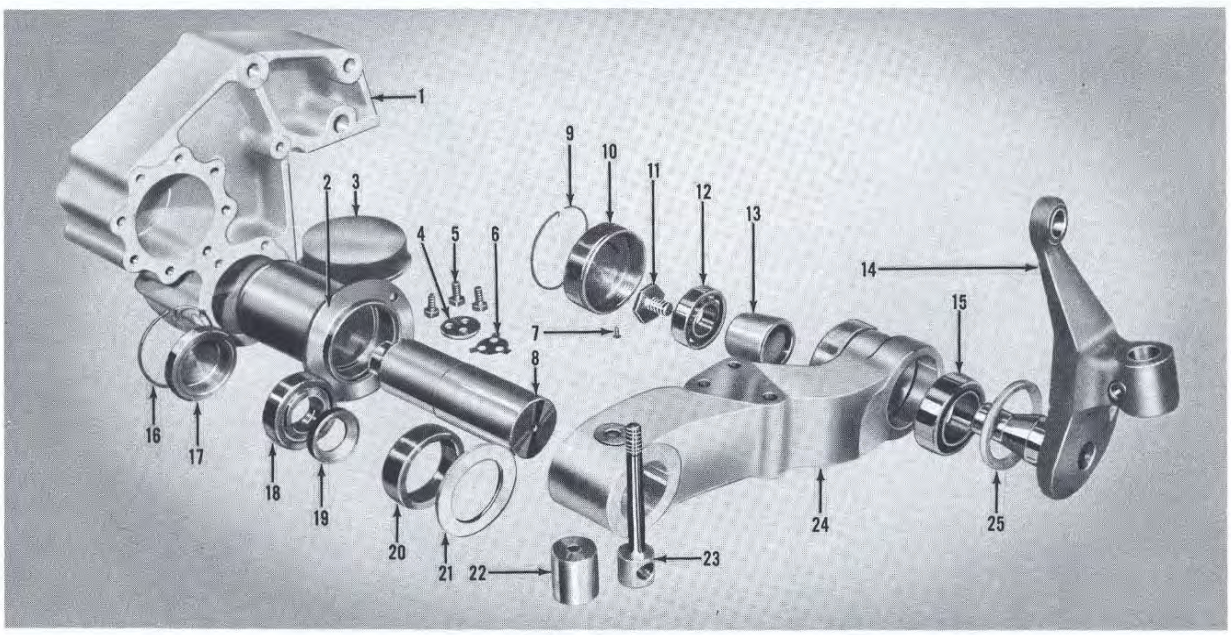
1. Front Suspension Box
2. Bearing Housing
3. Lower Spring Seat
4. Inner Bearing Retainer
5. Retainer Cap Screws
6. Retainer Lock
7. Lock Screw
8. Main Shaft
9. Lock Ring
10. Bearing Cap
11. Bearing Retaining Screw
12. Inner Bearing (Ball Bearing)
13. Bearing Spacer
14. Spindle Bracket
15. Outer Bearing (Needle Bearing)
16. Lock Ring
17. Bearing Cap
18. Main Shaft Inner Bearing (Ball Bearing)
19. Inner Bearing Spacer
20. Main Shaft Outer Bearing (Needle Bearing)
21. Outer Bearing Felt Washer
22. Sway Bar Anchor Sleeve
23. Sway Bar Anchor
24. Trailing Link
25. Outer Bearing Felt Washer

FIGURE 3—*Exploded View Front Suspension.*



1. Spindle Bracket
2. Retaining Pin
3. Oiler
4. Upper Bushing Cap
5. Upper Bushing
6. Thrust Washer
7. Selective Thrust Washer
8. Lower Bushing
9. Knuckle Pin
10. Knuckle Spindle

FIGURE 2—*Knuckle Spindle and Spindle Bracket.*



1. Front Suspension Box
2. Bearing Housing
3. Lower Spring Seat
4. Inner Bearing Retainer
5. Retainer Cap Screws
6. Retainer Lock
7. Lock Screw
8. Main Shaft
9. Lock Ring
10. Bearing Cap
11. Bearing Retaining Screw
12. Inner Bearing (Ball Bearing)
13. Bearing Spacer
14. Spindle Bracket
15. Outer Bearing (Needle Bearing)
16. Lock Ring
17. Bearing Cap
18. Main Shaft Inner Bearing (Ball Bearing)
19. Inner Bearing Spacer
20. Main Shaft Outer Bearing (Needle Bearing)
21. Outer Bearing Felt Washer
22. Sway Bar Anchor Sleeve
23. Sway Bar Anchor
24. Trailing Link
25. Outer Bearing Felt Washer

FIGURE 3—*Exploded View Front Suspension.*

Clean all parts thoroughly and inspect for worn or broken parts.

Reverse the above procedure for assembly.

NOTE: *There are 14 ball bearings in each bearing assembly. Thick grease should be used to retain them in their correct positions.*

ADJUSTMENTS

The worm gear end play is controlled by shims located under the lower bearing retainer.

Cross shaft end play is controlled by an adjusting screw in the housing cover plate.

Adjusting procedures as outlined in the Steering Gear Section of the 1952 Technical Manual should be followed.

FRONT WHEEL ALIGNMENT

Caster

Caster adjustment is accomplished by loosening the eccentric pin, attaching the shock absorber arm to the knuckle spindle bracket, and turning the eccentric pin to the desired caster angle of 1° Positive.

Camber

½° to 1½° Positive. Camber is not adjustable.

Toe-in

Toe-in is adjusted by loosening the two jamb nuts on the steering tie-rod adjusting tubes and turning the tubes to attain a toe-in of 3/16" measured 15" from the road.

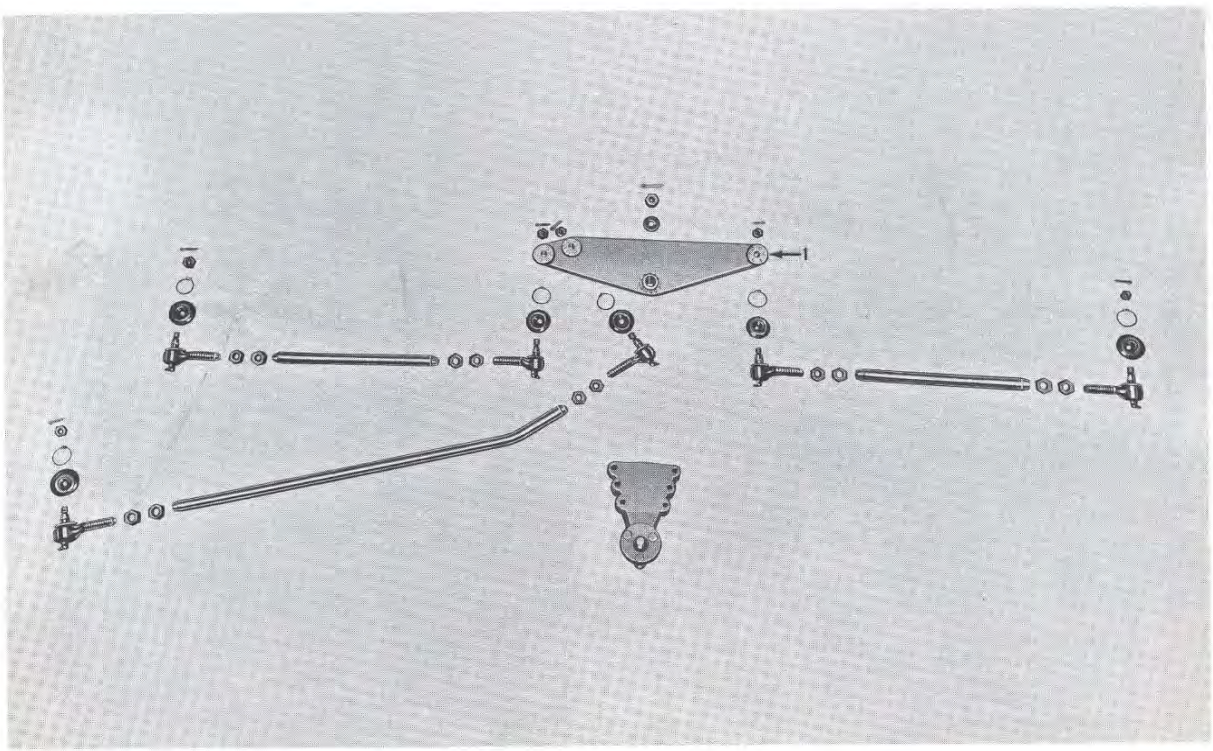
Turning Radius Stops

The maximum turning radius angle is fixed by stops located in the steering gear box and by adjustable stops which limit the travel of the pitman arm.

Steering Linkage Pivot Box

The steering linkage cross beam (Fig. 5) is attached to the taper on the main shaft of the pivot box assembly. The pivot box assembly utilizes needle bearings and ball bearings to provide ease of steering. This assembly is lubricated with wheel bearing lubricant at time of assembly.

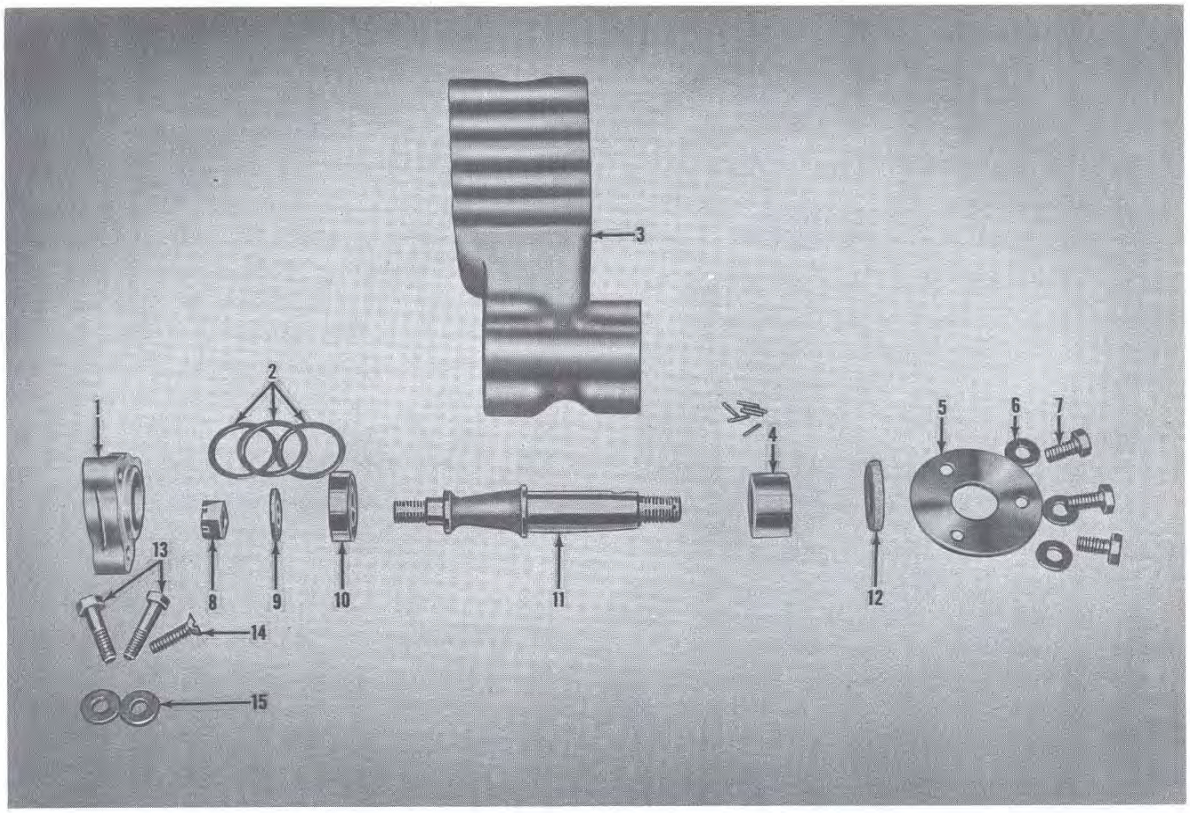
The end play (Zero desired) is adjusted by means of adjusting washers between the upper cover and the upper bearing.



1. Cross Beam

FIGURE 5—*Steering Linkage Assembly.*

FRONT SUSPENSION, STEERING SECTION



1. Upper Cover
2. Adjusting Washers
3. Pivot Box
4. Lower Bearing (Needle Bearing)
5. Lower Cover
6. Washers
7. Cover Cap Screws
8. Main Shaft Nut
9. Bearing Retainer
10. Upper Bearing
11. Main Shaft
12. Felt Washer
13. Cover Cap Screws
14. Cover Screw
15. Cap Screw Washers

FIGURE 6—*Steering Linkage Pivot Box Exploded View.*

SPECIFICATIONS

Caster Angle	1° Positive
Camber (Fixed)	½° Negative to 1½° Positive
Toe-In (15″ Above Road)	3/16″

RUNNING GEAR SECTION

SPRINGS

Coil springs are used on both the front and the rear. The springs are insulated from the body and axle by means of fiber insulating washers to minimize the transmission of road noises to the body.

REMOVING FRONT COIL SPRINGS

Raise the car and remove the lower spring seat support bracket from the trailing link.

REMOVING REAR COIL SPRINGS

The procedure outlined in the Running Gear section of the 1952 Technical Service Manual should be followed.

NOTE: *THE REAR SPRING SEAT BRACKETS HAVE A CUT-OUT TO PROVIDE CLEARANCE FOR THE TRACK BAR BRACKET ON THE AXLE TUBE.*

FRONT SHOCK ABSORBER

The front shock absorbers are double-acting piston type. The arm of the shock absorber also forms the upper control arm of the front suspension.

The eccentric pin which attaches the arm to the knuckle spindle bracket is insulated from the shock absorber arm by a tight rubber bushing.

FRONT SHOCK ABSORBER INSPECTION

To inspect the shock absorber on the car, it is necessary to raise the front end of the car. Then disconnect the shock absorber arm from the knuckle spindle bracket.

Operate the shock absorber slowly throughout its range several times to bleed out any air in the chambers. When this is done, note the operation through the complete range. If it is erratic or jerky, add fluid. However, if the erratic action still exists after fluid has been added, the unit should be replaced.

REAR SHOCK ABSORBERS

The rear shock absorbers are direct, double-acting telescoping type.

REAR SHOCK ABSORBER INSPECTION

The procedure outlined in the Running Gear Section of the 1952 Technical Service Manual can be followed.

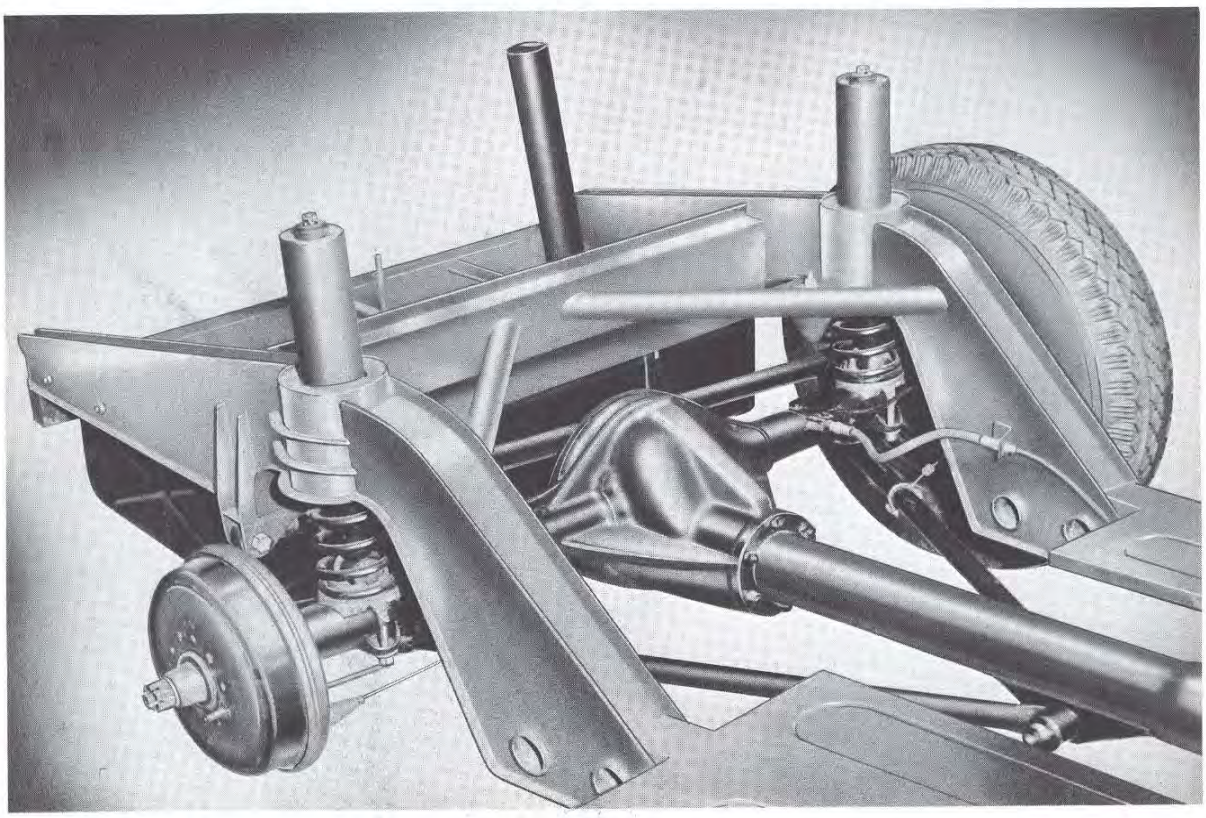


FIGURE 1—*Rear Coil Spring and Shock Absorber Mounting.*

RUNNING GEAR SECTION

FRONT COIL SPRINGS SPECIFICATIONS

Free Height in Inches	8.125″
Loaded Height in Inches	5.75″
Rate Lbs. Per Inch After Loaded Weight	300 Lbs.
Interchangeability	Interchangeable (L & R)

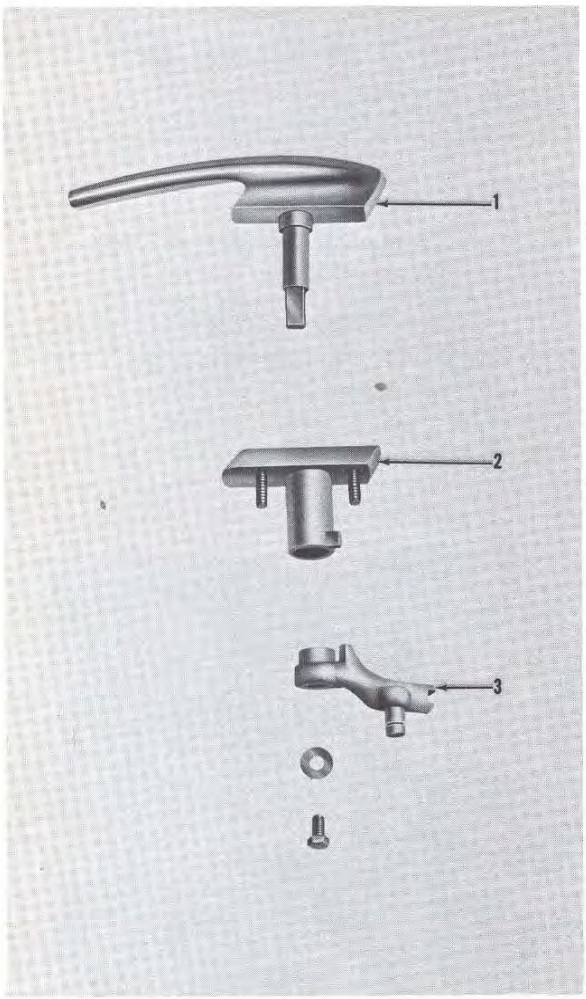
REAR COIL SPRINGS SPECIFICATIONS

Free Height Inches	11.75″
Loaded Height Inches	8.5″
Rate Lbs. Per Inch After Loaded Weight	153 Lbs.
Interchangeability	Interchangeable (L & R)

HOOD, FENDERS AND BUMPERS SECTION

The hood is of a one piece aluminum construction.

A stay lock hinge supports the hood when in the open position.

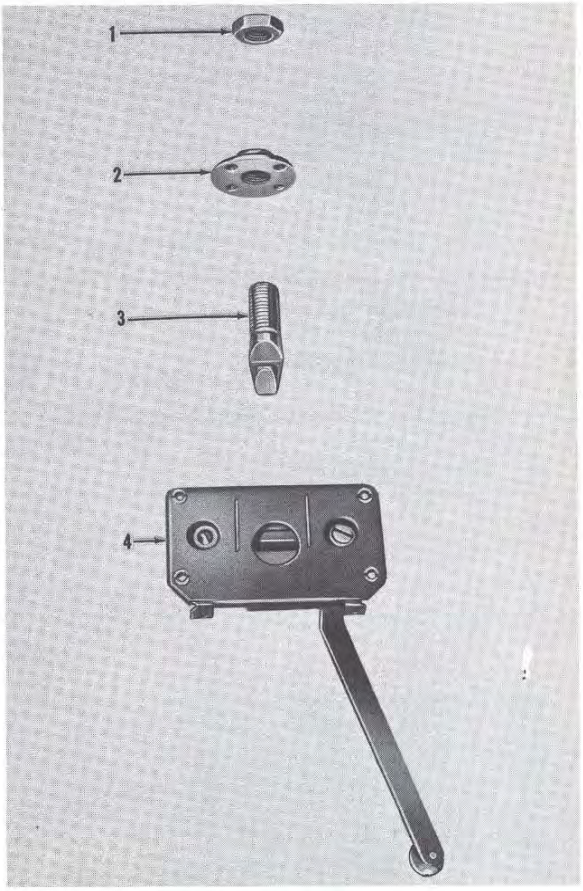


1. Hood Ornament and Safety Release Handle
2. Handle Pivot Support Bearing
3. Hood Release Catch Lock Arm

FIGURE 1—*Hood Ornament and Attaching Parts.*

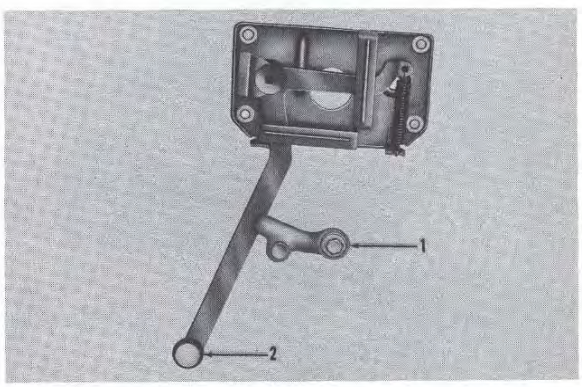
The hood ornament serves as a safety lock which holds the hood release latch lever in the locked position.

The hood ornament must be turned to the side before the release lever can be operated.



1. Hood Lock Bolt Nut
2. Hood Lock Bolt Mounting Support
3. Hood Lock Bolt
4. Hood Release Latch

FIGURE 2—*Hood Latch and Lock Bolt.*



1. Hood Release Latch Lock Arm
2. Hood Release Latch Lever

FIGURE 3—*Lock Arm Holding Release Lever in Locked Position.*

WEATHER EYE–SPEEDOMETER–INSTRUMENT SECTION

WEATHER EYE

The Nash-Healey Weather Eye heating system is similar in operation and construction to that used in the "Rambler" model. Fresh air is taken in through the cowl ventilator assembly as shown in Figures 1 and 2 and directed from a rectangular sheet metal conduit into the cover assembly. A filter secured by the cover assembly against the heater core filters any incoming dust and dirt. The air then absorbs heat from the warm water in the heater core and then passes into the fan section and passenger compartment being directed properly by the heat deflector (Fig. 3).

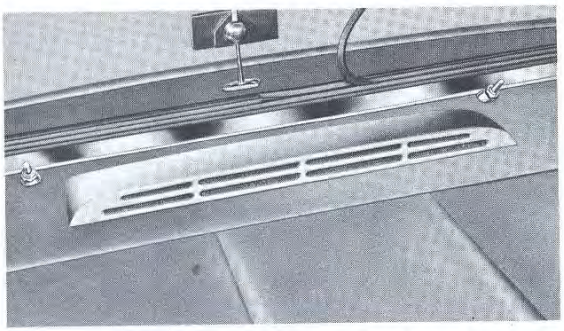
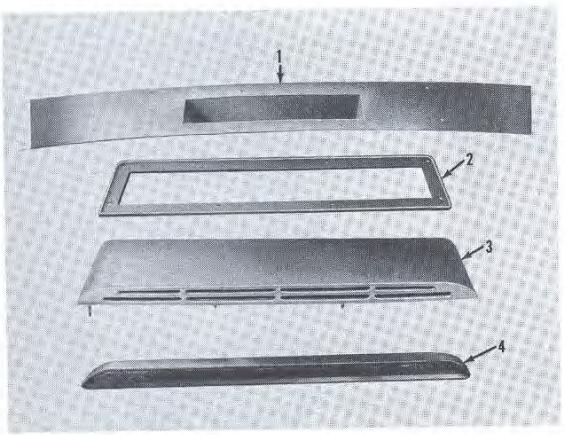
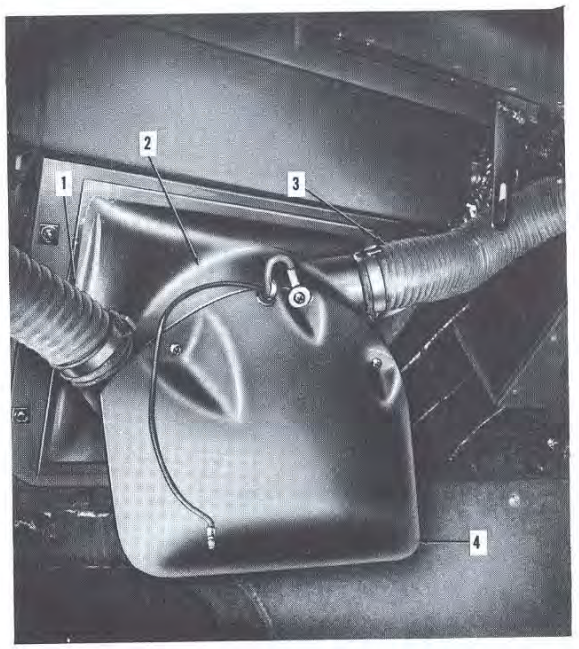


FIGURE 1—*Cowl Intake.*



1. Cowl Ventilator Duct
2. Cowl Ventilator Hood Gasket
3. Cowl Ventilator Hood
4. Cowl Ventilator Hood Screen

FIGURE 2—*Cowl Ventilator Assembly.*



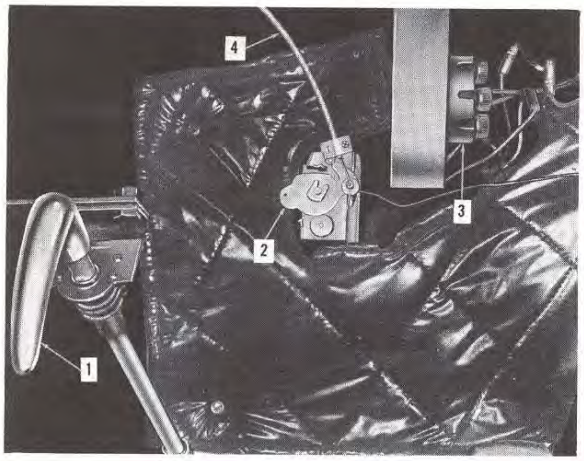
1. Left Defroster Hose
2. Fan Section
3. Right Defroster Hose
4. Heat Deflector

FIGURE 3—*Weather Eye Installed Showing Defroster Hose Routing and Heat Deflector.*

The temperature in the passenger compartment is controlled by the water valve and cowl ventilator controls.

The cowl ventilator control simply opens or closes the cowl ventilator permitting or preventing air intake from the outside. The control can also be located in an intermediate position between open and closed.

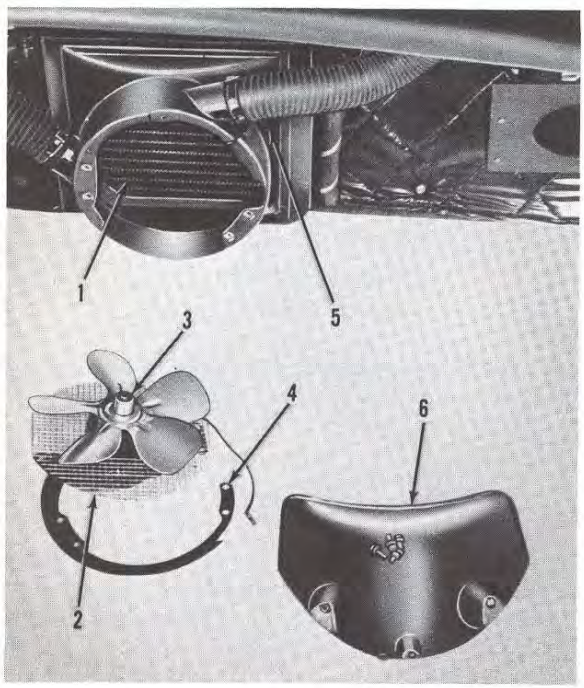
The heat valve control positions the valve bellows tensioner for any desired temperature. The sensing capillary tube located near the heat outlet then controls the automatic positioning of the water valve, Figure 4.



1. Parking Brake Assembly
2. Water Control Valve
3. Electrical Junction Block
4. Water Valve Control Cable

FIGURE 4—*Heater Water Valve Control.*

To remove the heater motor and fan assembly, remove the heat deflector and screen reinforcement, Figure 5, Items 4 and 6. The motor support and motor assembly will then be free of the fan housing section.



1. Heater Core
2. Guard Screen
3. Motor and Fan Assembly
4. Motor Guard Screen Support
5. Motor Fan Section
6. Heat Deflector

FIGURE 5—*Removing Motor and Fan Assembly.*

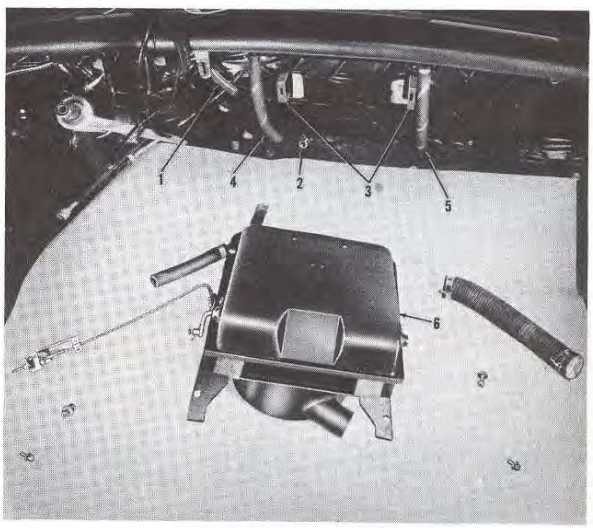
Two methods can be used to change a Weather Eye dust filter. The first method is more time consuming than the latter. By either method, the cooling system must be drained to a level below the heater core to water pump connection.

Loosen the heater core to water pump and water valve hoses.

Loosen the cowl ventilator control inner and outer cable from the cowl ventilator damper arm.

Remove the two core and cover assembly upper attaching screws.

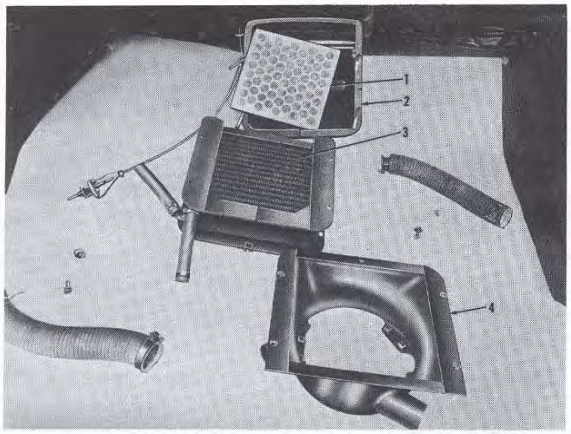
Remove the two side attaching nuts and screws. The whole unit less conduit box and drain hoses can be removed as shown in Figure 8.



1. Tube From Water Valve
2. Tube to Water Pump
3. Wall Mounting Brackets
4. Conduit Box Drain Hose, Left
5. Conduit Box Drain Hose, Right
6. Heater Cover and Core Assembly

FIGURE 6—*Heater Cover and Core Assembly.*

After heater and core assembly removal, the filter can be removed by removing cover from core assembly. It is retained with four long screws, Figure 7.



1. Filter
2. Cover
3. Core and Frame
4. Fan Housing Section

FIGURE 7—*Cover and Core Disassembled to Change Filter.*

The simpler way to change the filter would be to first remove the entire heater assembly as shown in the following figures. Then separate the cover from the core and frame and change the filter.

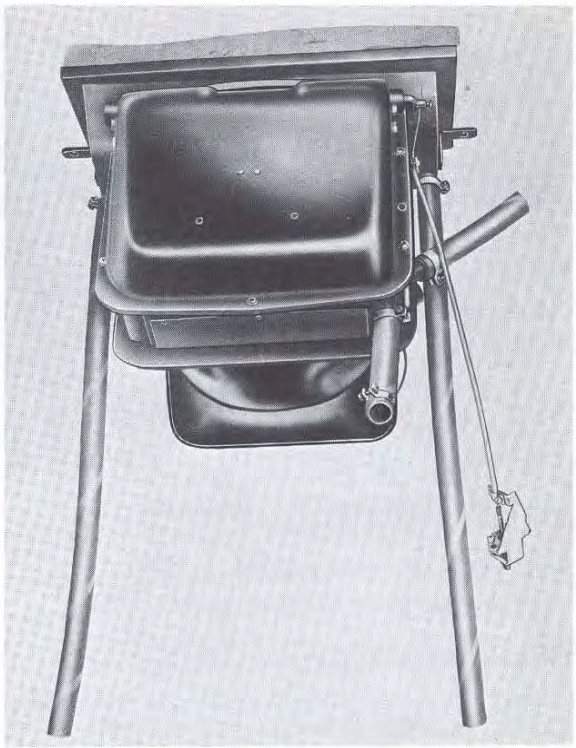
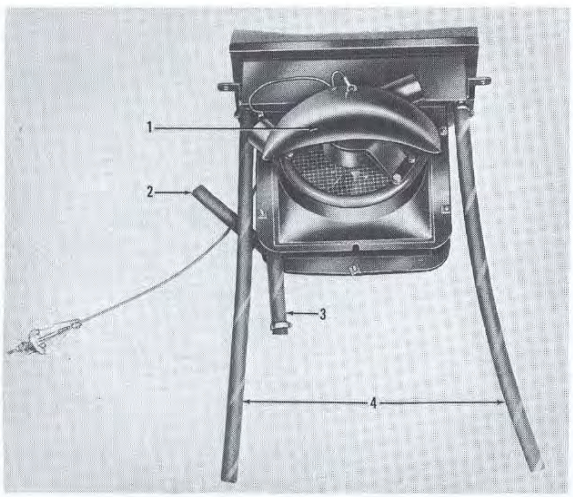


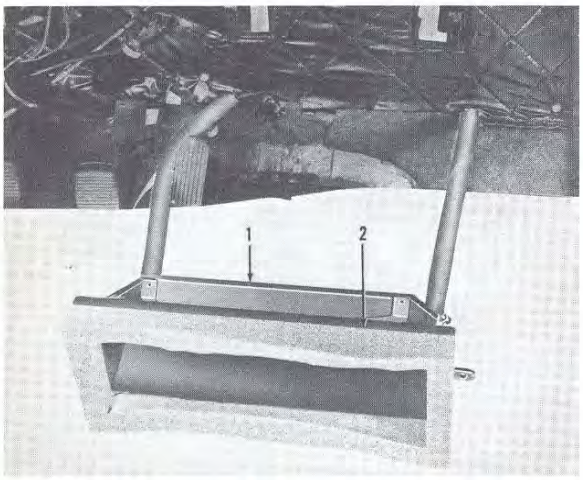
FIGURE 9—*Weather Eye Assembly, Front View.*



1. Complete Heater Assembly
2. Hose From Water Valve
3. Hose to Water Pump
4. Rain Drain Hoses

FIGURE 8—*Weather Eye Assembly, Back View.*

FIGURE 10—*Weather Eye Assembly, Left Side.*



1. Conduit Box, Air Intake
2. Seal Rubber

FIGURE 11—*Air Intake Conduit Box, Drain Hoses and Seal Rubber.*

SPEEDOMETER

The speedometer (similar in type to the "Ambassador" Series) is of the rotating magnet type. For servicing of the speedometer head within warranty, it is recommended that the head be replaced with a unit from stock. For maintenance service after the warranty period, the speedometer head should be removed and taken to an authorized service station.

TACHOMETER AND VACUUM GAUGE

For detailed information on Tachometer and Vacuum Gauge, refer to the Electrical Section.

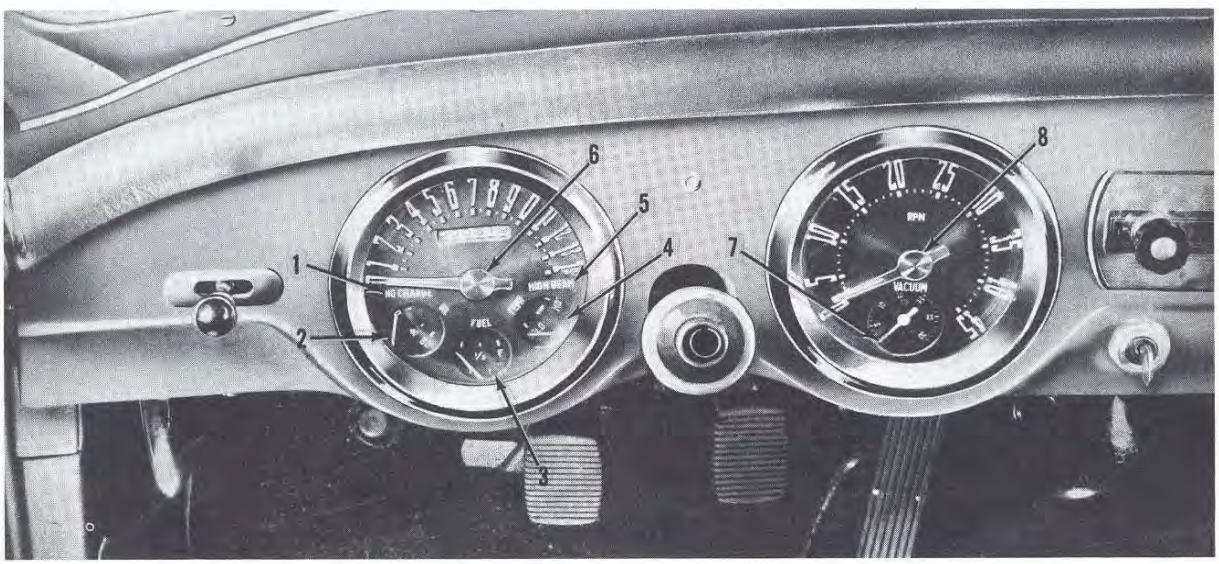
ELECTRIC GAUGES

The gauge receiver units are of the magnetic type using a variable magnet field in balanced coils to deflect the indicator needle armatures. The pointers of the needle armatures indicate existing coolant temperature, oil pressure, or fuel level. The gauge sending units are located in the cylinder head (temperature), in the oil pressure channel line (oil pressure), and the fuel tank (fuel level). They are simply rheostats or variable resistors which vary the current flow through each needle deflecting coil causing the needle to indicate accordingly.

These units may be tested but cannot be repaired in the field. When one fails to function properly, it is necessary to replace it. Gauges can be removed separately.

NOTE: *For detailed test procedure, refer to the 1952 Technical Service Manual.*

CAUTION: *Whenever any work is to be performed on the instrument cluster, speedometer, ignition switch, or horn blower, disconnect one battery lead at the battery terminal.*



1. No-Charge Indicator
2. Oil Pressure Gauge
3. Fuel Gauge
4. Temperature Gauge
5. High Beam Indicator
6. Speedometer
7. Vacuum Gauge
8. Tachometer

FIGURE 12—*Instrument Location.*

LUBRICATION SECTION

LUBRICATION SPECIFICATIONS

	Mile Intervals	Lubrication Recommendations
Air Cleaner	1,000	Dry Type—Clean.
Axle Shaft Bearings (Rear Wheels)	15,000	Wheel Bearing Lubricant—Repack.
Brake Controls	1,000	Light Engine Oil.
Carburetor	1,000 or Once Each Month	Remove Suction Chamber Cap. Fill Reservoir With Light Machine Oil.
Linkage	1,000	Light Engine Oil.
Clutch and Brake Pedal Shaft	1,000	Chassis Lubricant—2 Fittings.
Distributor	1,000 5,000	Wipe Breaker Plate Cam With Petrolatum Jelly—1000 Miles. Drop of Light Engine Oil on Wick of Rotor Shaft.
Engine Oil	2,000 Under Normal Conditions	6 Qts. SAE 20 or 20W Above 32°F. Below 32°F.--SAE 10W. Sub Zero—SAE 5W.
Front Suspension		
Trailing Link	1,000	Chassis Lubricant—6 Fittings.
Steering Linkage	1,000	Chassis Lubricant—6 Fittings.
Front Wheel Bearings	10,000	Bearing Lubricant—Repack.
Fuel Pump	5,000	Clean Screen to Eliminate Sediment.
Generator	5,000	Light Engine Oil—2 Oil Cups.
Master Cylinder	1,000 (Check)	Lockheed 21-B Brake Fluid.
Rear Axle Drive Gears	1,000 (Check) Change Every 10,000 Miles or Yearly	Use Only SAE 90. Rear Axle Oil Suitable for Hypoid Gear Service.
Starting Motor	5,000	Light Engine Oil—2 Oil Cups.
Steering Gear	3,000 (Check)	SAE 90 Steering Gear Lubricant.
Transmission and Overdrive	1,000 (Check) 10,000 Change and Refill	3½ Pts. SAE 90 Mineral Oil in Warm Weather. SAE 80 in Cold Weather.
Water Pump	5,000	Water Pump Lubricant.
MISCELLANEOUS		
Cooling System		
Pressurized	10 Lbs.	
Capacity	17 Qts.	Including Weather Eye

TECHNICAL SERVICE LETTER REFERENCE

Date	Letter No.	Subject	Changes information on Page No.

TECHNICAL SERVICE MANUAL

for the

1952-1953 NASH-HEALEY SPORTS CAR

Nash Motors
Division of
Nash-Kelvinator
Corporation
Detroit, Michigan
U. S. A.

GROUP INDEX

SUBJECT PAGE

MODEL AND BODY IDENTIFICATION SECTION

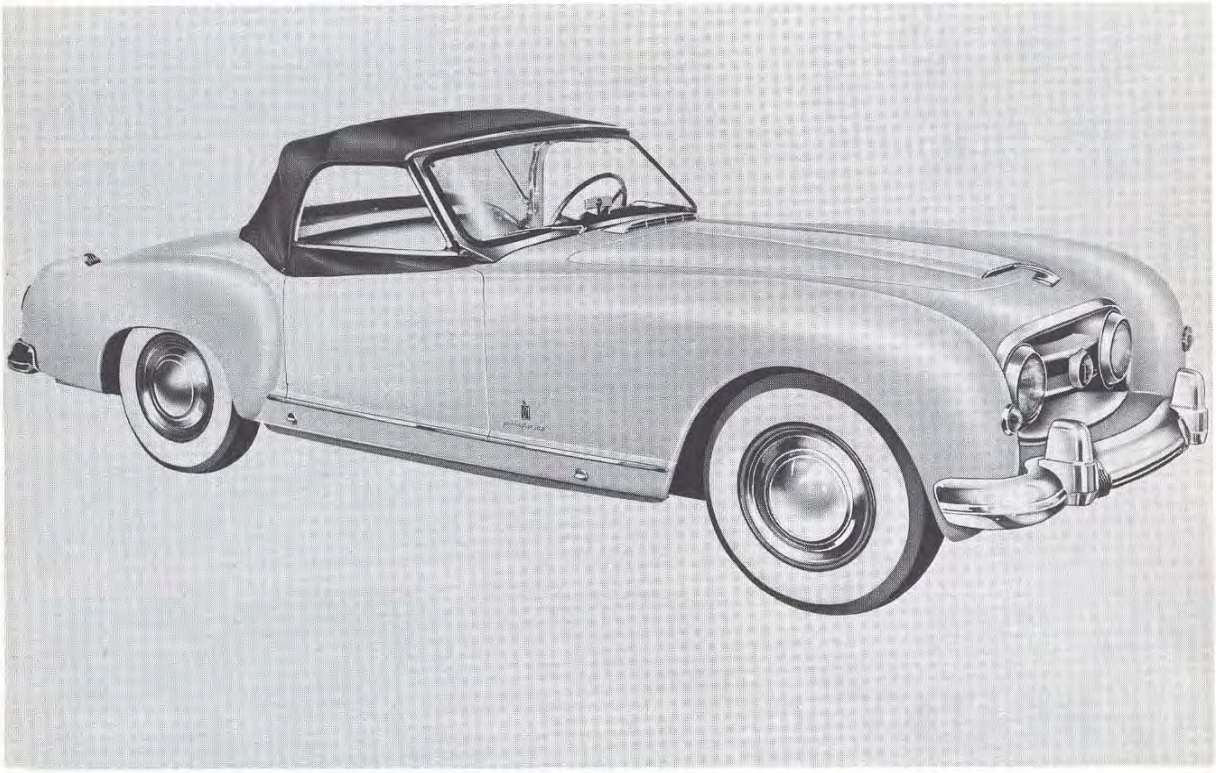


FIGURE 1—*Nash-Healey Convertible Sports Car With Top Raised.*

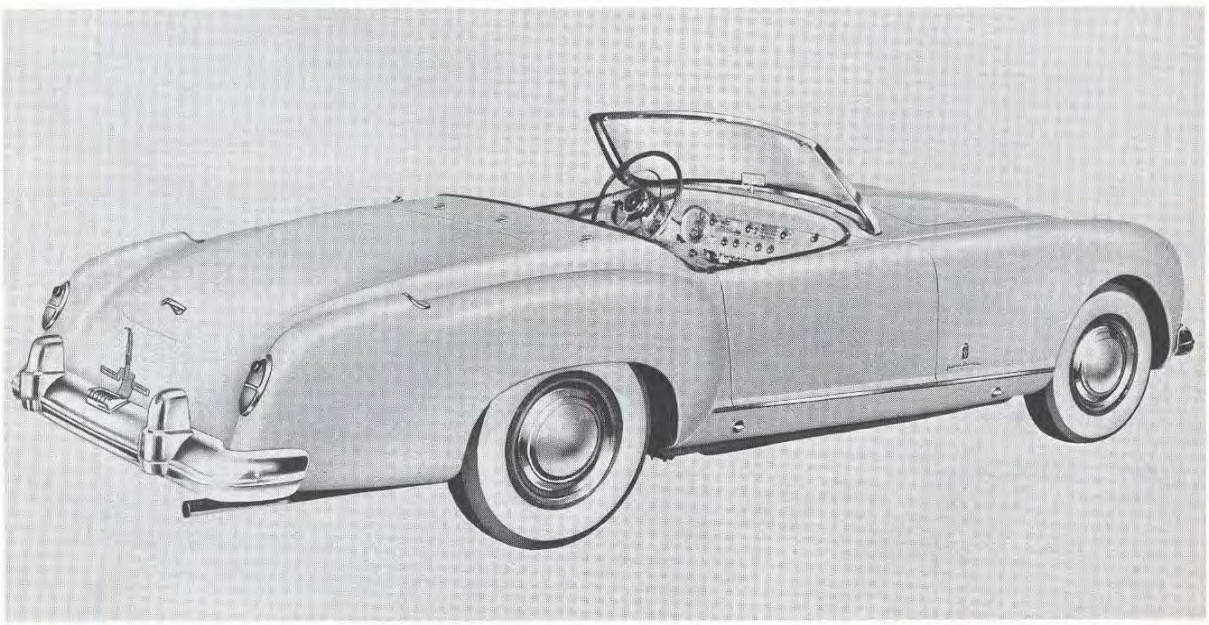


FIGURE 2—*Nash-Healey Convertible Sports Car, Top Folded In Hidden Compartment Behind the Folding Seat Back.*

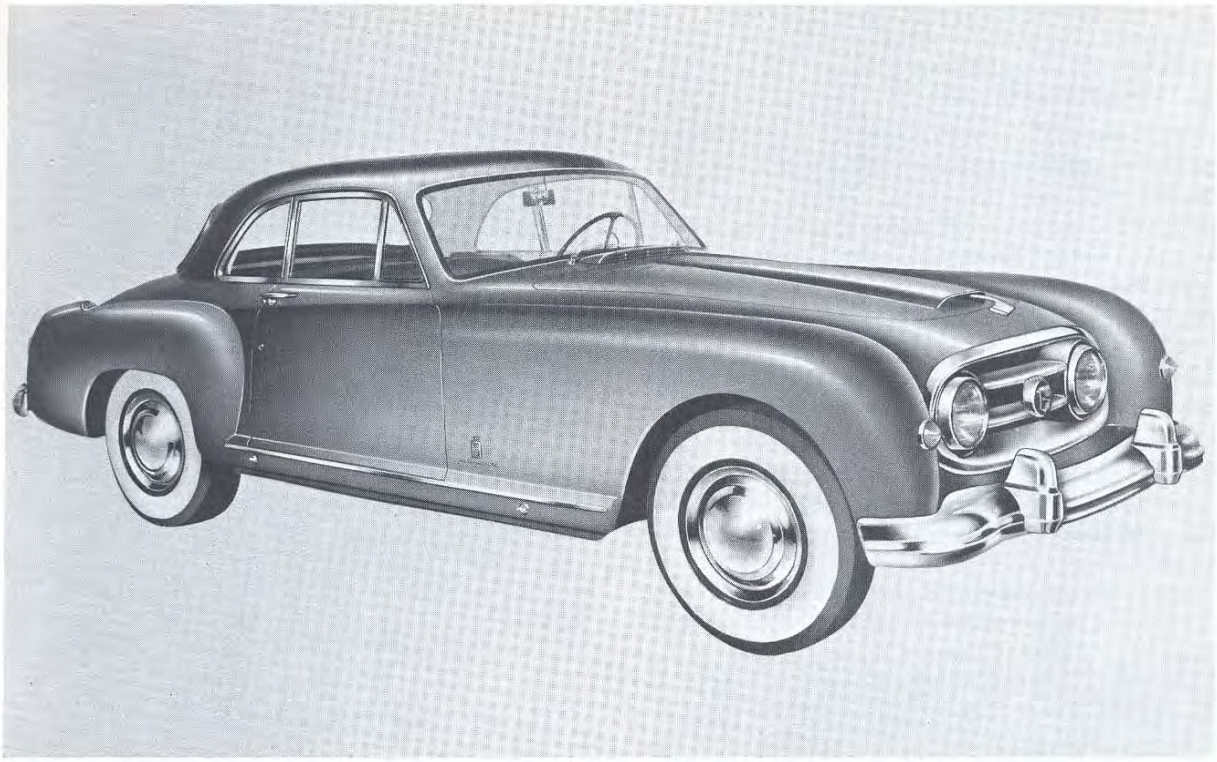


FIGURE 3—*Nash-Healey LeMans Hardtop Sports Car (Right Side and Front).*

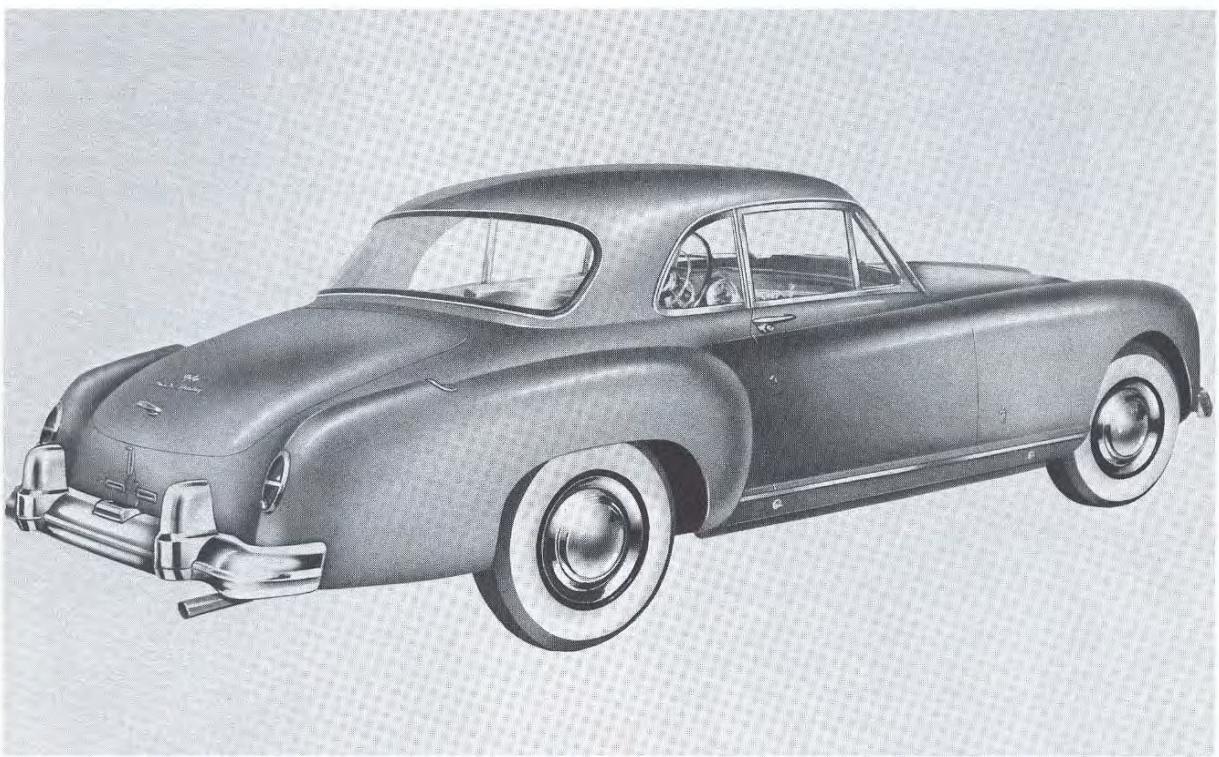


FIGURE 4—*Nash-Healey LeMans Hardtop Sports Car (Right Side and Rear).*

The Nash-Healey Sports Car is produced in two body styles. They are the Nash-Healey Convertible (102″ Wheelbase) and Nash-Healey LeMans Hardtop (108″ Wheelbase).

The Convertible model has a fabric top which folds into a hidden compartment behind the folding seat back.

The Hardtop Model with an all steel top is permanently welded to and forming an integral part of the body.

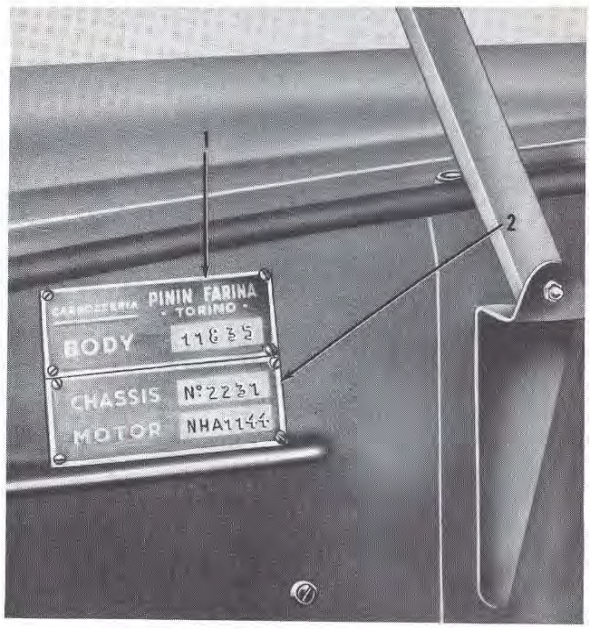
In addition to the body style names, there are car identification numbers. These are the serial or chassis number, engine number, and the body number.

Each of these numbers are stamped into a plate which is fastened to the right front wheelhouse panel on the right side of the engine. This identification number plate is visible when the hood is raised.

The Serial or chassis number is also die cut into the front suspension cross tube. This is visible from the outside of the car when looking at the front suspension cross tube below the center of the radiator core.

The engine number is also die cut into the engine block on the right side at the top front edge. This number is prefixed by the letters N.H.A.

When reference is made to the car or various parts of the body, engine or chassis, these numbers with the body type name should be given.



1. Body Number
2. Chassis and Motor Numbers

FIGURE 5—*Car Identification Number Plate (On Right Wheelhouse Panel at Side of Engine Visible When Hood Is Raised).*

BODY CONSTRUCTION

The body is constructed of individual formed panels of 19 minus gauge sheet steel all butt welded together forming a one piece unit.

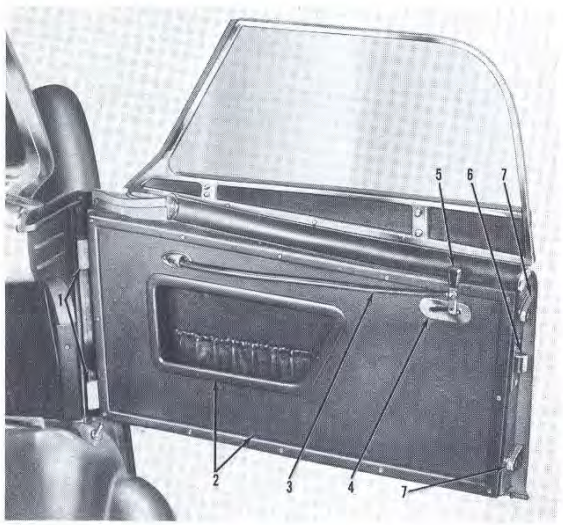
By means of supports and braces, the body is mounted and welded to a box type frame.

The doors, deck cover, and hood are separate units hinged to the body at their various locations.

DOOR TRIM, HARDWARE AND GLASS SECTION

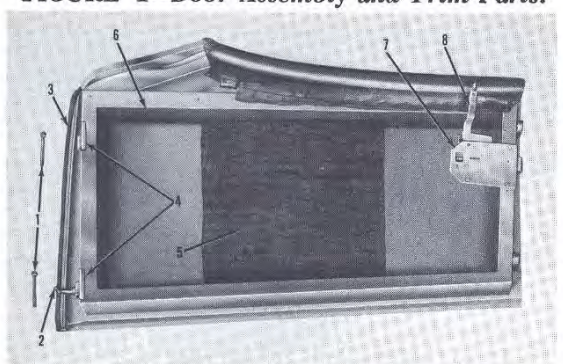
DOORS (CONVERTIBLE)

The door assembly consists of an outer steel panel welded to a steel frame and trimmed with a leather covered aluminum trim panel on the inner side of the door. Two strong hinges support the door at the front. The hinges are both screwed and welded to the door and front door hinge reinforcement on the body. Two pivot bolts retain the door hinge halves together, Figures 1 and 2.



1. Door Hinges
2. Trim Panel and Pocket
3. Door Handle Pull Cord
4. Door Handle Opening Trim
5. Door Handle Knob
6. Door Anti-Rattle Dove Tails
7. Door Latch

FIGURE 1—*Door Assembly and Trim Parts.*



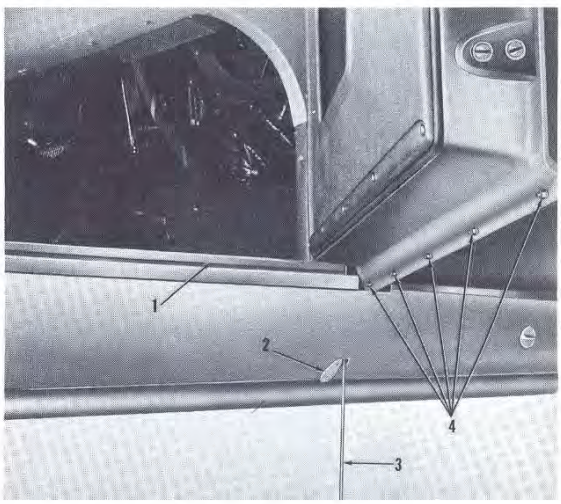
1. Door Hinge Bolts
2. Door Check Hook
3. Door Front Seal Rubber
4. Door Hinge Halves
5. Sound Deadener
6. Door Frame
7. Door Lock
8. Door Lock Handle

FIGURE 2—*Door Panel and Frame Assembly.*

DOOR HINGES (CONVERTIBLE AND HARDTOP MODELS)

The hinge bolts are machined with a hexagon acorn nut integral on top. A trim and retaining acorn nut is screwed to the lower end. For lubrication, a hole is drilled on the top down the center of the pin to a depth of about ½". Another hole is drilled at a right angle to this hole. A groove connecting this lateral hole is machined the length of the pin. Therefore, light engine oil applied at the top hole will reach all bolt friction surfaces.

To remove a door, the door trim scuff plate must be removed. The hole cover plate on the side sill panel below the door hinge also must be slid aside. Remove the lower trim retaining acorn nuts from the hinge pins. With a rod slightly less in diameter than the hinge pins (5/16"), the hinge pins can be knocked out from below as shown in Figure 3.



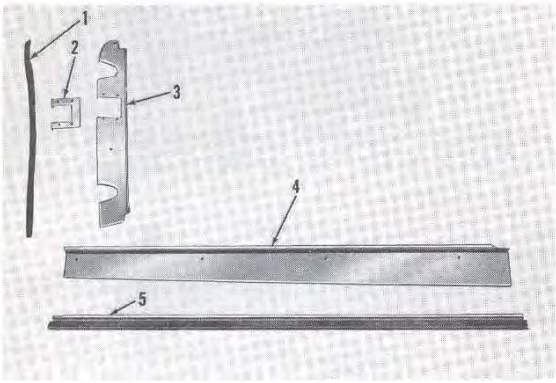
1. Trim Scuff Plate Removed
2. Access Hole Cover
3. Pin Driving Rod
4. Door Lower Trim Moulding Retaining Nuts

FIGURE 3—*Removing the Door (Convertible Shown).*

BODY LOCK PILLAR TRIM PARTS AND SILL PANEL SCUFF PLATE (CONVERTIBLE)

The door opening at the rear is trimmed with a long trim strip of aluminum cut out for the lock striker and female rubber dove tails. A door rubber rear seal strip is held in place by this trim strip and door striker opening trim piece. The lower section of the door opening is trimmed with

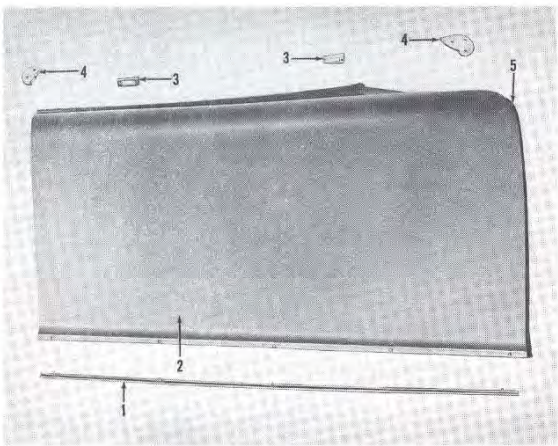
an aluminum trim scuff plate and lower door sealer rubber and strip assembly as shown in Figure 4.



1. Door Rear Seal Rubber
2. Striker Trim Strip
3. Door Opening Rear Trim Strip
4. Door Opening Lower Trim and Scuff Plate
5. Lower Door Seal and Trim Strip Assembly

FIGURE 4—*Rear and Lower Door Opening Trim and Weather Seal Parts.*

The outer door panel is trimmed with a lower moulding of aluminum. Tee shaped screws are crimped into the moulding and then the moulding is secured to the door panel with nuts from the inside (Fig. 5).



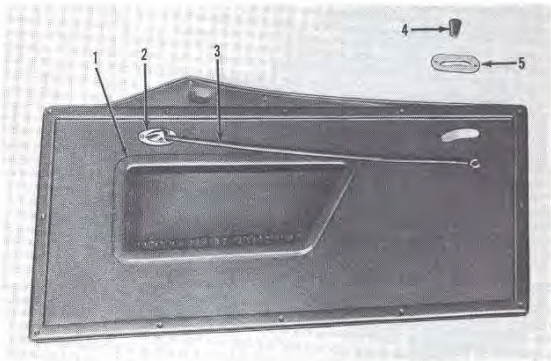
1. Door Lower Moulding
2. Door Panel
3. Side Window Support Insert Trim Plate
4. Crash Pad Trim Plates
5. Door Front Seal Rubber

FIGURE 5—*Door Panel and Trim, Outer.*

DOOR TRIM PANEL (CONVERTIBLE)

The door trim panel and pocket assembly is a leather covered aluminum assembly.

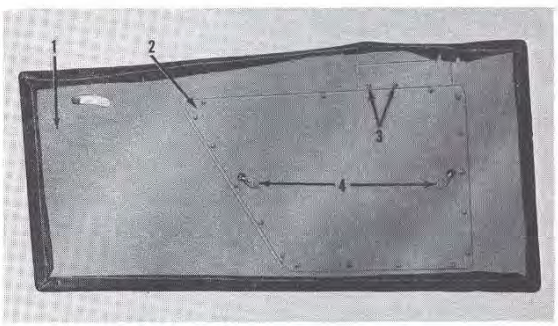
The inner door trim panel and pocket assembly is attached to the door frame with sheet metal screws. The trim panel is removed from the door after having removed the door handle knob, handle trim plate, pull cord from handle, and panel attaching screws (Fig. 6).



1. Door Trim Panel and Pocket Assembly
2. Door Pull Strap Bracket
3. Door Pull Strap
4. Door Handle Knob
5. Door Handle Trim Plate

FIGURE 6—*Door Trim Panel Removed.*

The door pocket is a box of aluminum built to the outside of the trim panel. An elastic cord sewed in the top of the pocket is attached to clips at the rear of the panel assembly (Fig. 7).

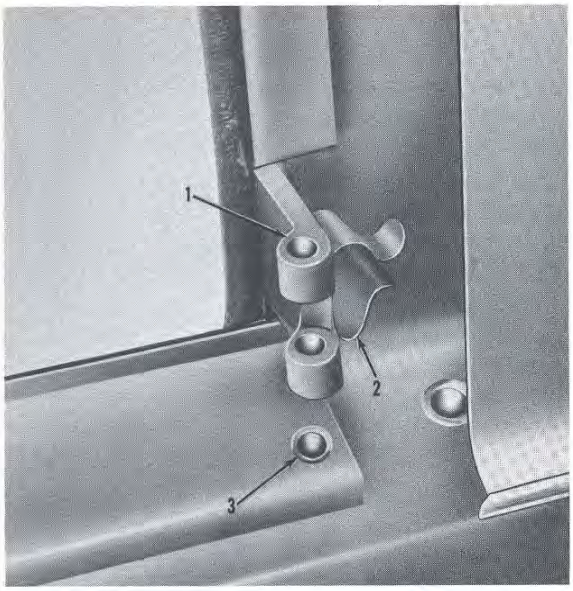


1. Aluminum Panel
2. Pocket Section
3. Pull Strap Front Mounting Bracket Attaching Nuts
4. Elastic Cord Attaching Brackets

FIGURE 7—*Trim Panel and Pocket Assembly (Rear View).*

DOOR CHECK (CONVERTIBLE AND HARDTOP MODELS)

The door is held open in the full open position by a door check. The check mechanism consists of a check retainer spring clip, Figure 8, and a hook on the door as shown in Figure 2.



1. Door Hinge
2. Door Check Retainer Spring Clip
3. Hole Under Scuff Plate for Removing Door Hinge Bolts

FIGURE 8—*Door Check Retainer Spring on Lower Hinge (Convertible Shown).*

When the door is closed, two dove tails and the lock latch hold it firm in the opening.

There is no adjustment on the door. It is tailor made for the opening and once fitted requires no alignment or resetting in service.

DOOR LOCK (CONVERTIBLE)

In order to change a door lock assembly, it is necessary to remove the door trim panel. The door lock assembly is retained by four (4) screws to the door frame.

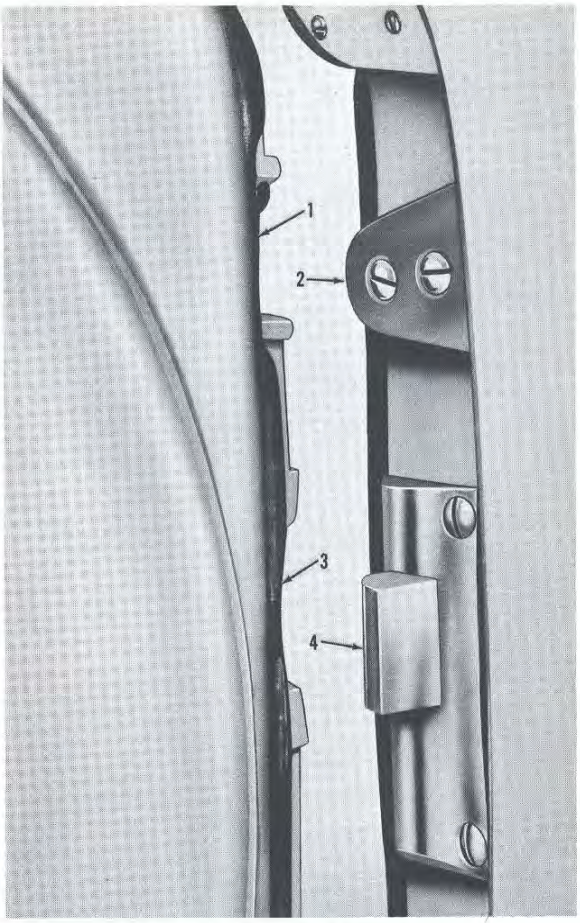
DOOR SIDE WINDOWS (CONVERTIBLE)

The door side windows are constructed of a steel frame with chrome plated steel trim strips and top material trim. A panel of plexiglass is fitted in the frame and a front rubber trim strip is used to seal between windshield and side window.

The side windows are retained to the door by means of two supports (Fig. 12).

To replace the plexiglass panel, four upper frame to lower frame screws must be removed, Figure 13, Items 4 and 6.

Setting tape should be used around the perimeter of the new glass upon installation.



1. Dove Tail Female, Upper
2. Dove Tail Male, Upper Fabreeka
3. Door Latch Striker Entry
4. Door Latch

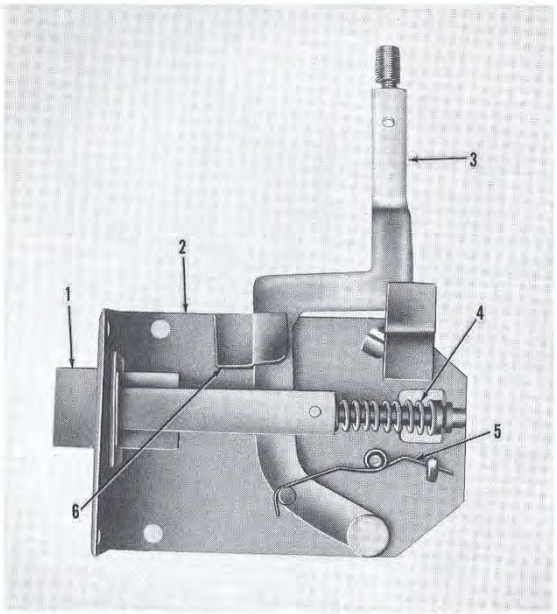
FIGURE 9—*Door Approaching the Closed Position (Convertible).*

To change a side window support, the side window trim strip and top material trim strip must be removed as shown in Figures 14 and 15.

COWL TRIM PANEL (HARDTOP)

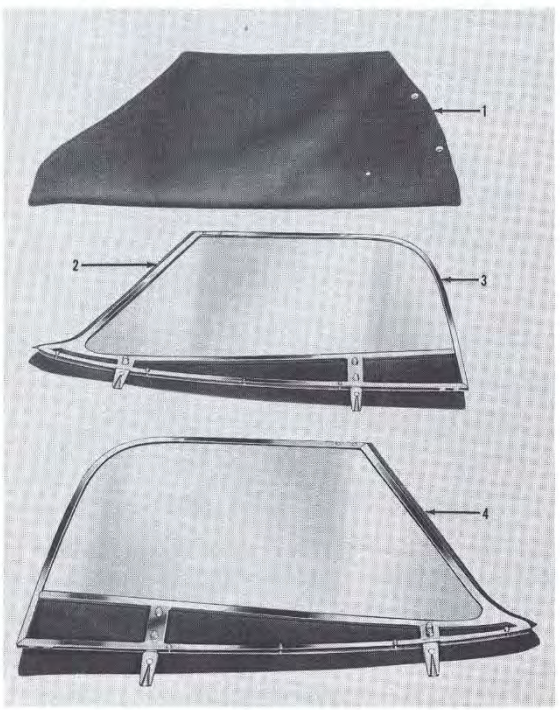
The interior surface of the body hinge pillar is covered by the cowl trim panel. It consists of a wood panel neatly padded and upholstered.

A stormstrip of matching upholstery is tacked to the edge of the trim panel to seal against the door hinge pillar when the door is closed. The cowl trim panel assembly is fastened to the body cowl side and hinge pillar with sheet metal screws. This is illustrated in Items 1 and 2, Figure 16.



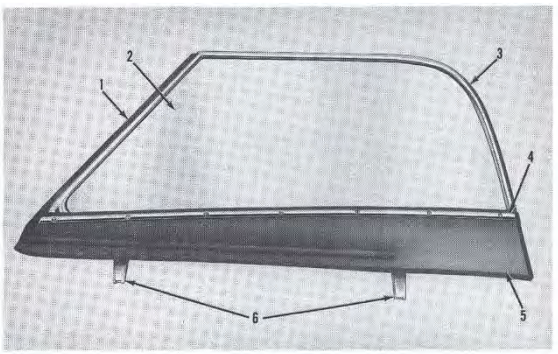
1. Latch
2. Lock Frame
3. Latch Release Handle
4. Latch Return Spring
5. Handle Anti-Rattle Spring
6. Door Handle Stop

FIGURE 10—*Door Lock Assembly.*



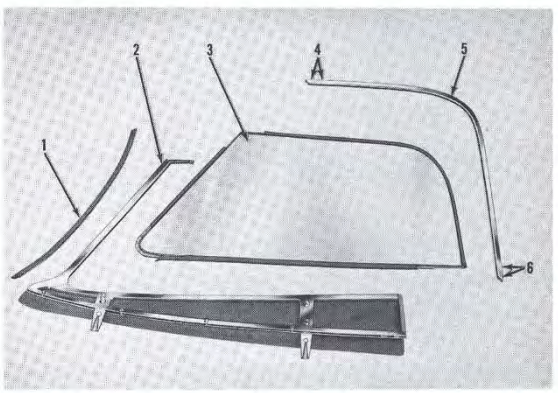
1. Side Window Container
2. Side Window Front Seal Rubber
3. Right Side Window
4. Left Side Window

FIGURE 11—*Side Windows and Carrier.*



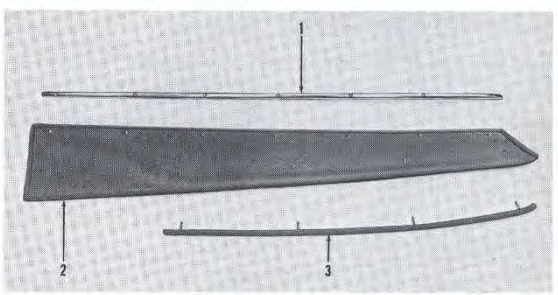
1. Front Seal Rubber
2. Plexiglass Panel
3. Glass Retainer Frame, Upper
4. Trim Strip
5. Top Trim Material
6. Side Window Supports

FIGURE 12—*Side Window Outside View.*



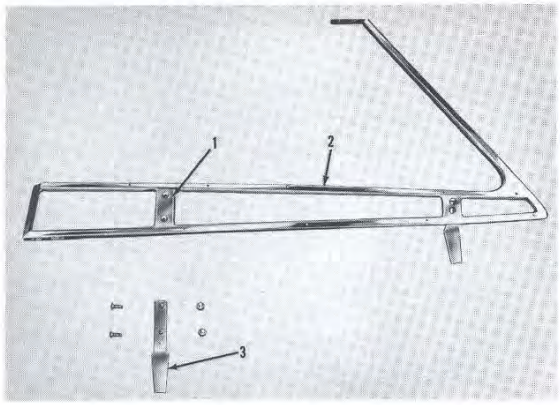
1. Front Seal Rubber
2. Window Frame, Lower
3. Pane of Plexiglass
4. Rear Glass Retaining Frame Top Attaching Screw Location
5. Rear Glass Retaining Frame
6. Rear Glass Retaining Frame Bottom Attaching Screw Location

FIGURE 13—*Removing Plexiglass Side Window Panel.*



1. Side Window Trim Strip
2. Top Material Trim
3. Top Material Trim Strip

FIGURE 14—*Top Material Side Window Trim Removed.*



1. Support Bracket
2. Window Main Frame
3. Side Window Support Removed From Frame

FIGURE 15—*Side Window Support Removed From Main Window Frame.*

BODY HINGE PILLAR FACE PLATE (HARDTOP)

The face of the body hinge pillar, visible when the door is open, is covered with a face plate painted in matching colors to the car exterior. This is fastened to the hinge pillar with sheet metal screws. It is removable from the body pillar after the cowl trim panel is removed (Fig. 16).

COURTESY LIGHT SWITCH AND BRACKET (HARDTOP)

The courtesy light door switch is inserted (press fit) into a mounting bracket which is fastened to the top outside edge of the hinge pillar face plate, with screws (Fig. 16).

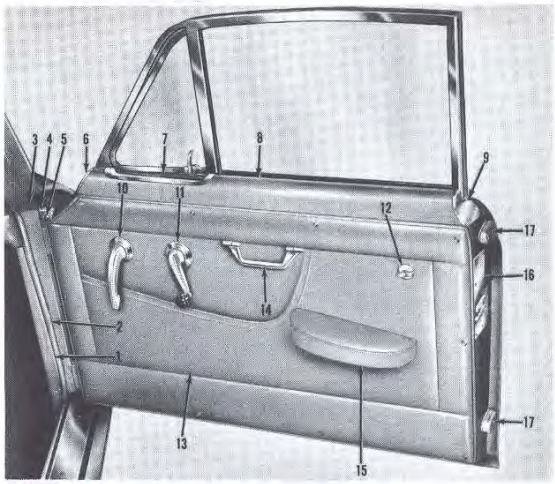
The switch can be removed by prying it from its mounting bracket. However, to remove the bracket, the hinge pillar face plate must be removed to provide accessibility to the bracket screws (Fig. 16).

DOOR HINGES (HARDTOP)

The door hinges and hinge bolts are similar in design to the Convertible model and are removed in the same manner (Figs. 2 and 3).

DOOR CHECK (HARDTOP)

The door check bracket is similar in design and operation to those used on the Convertible model and are removed in the same manner (Figs. 2 and 9).



1. Cowl Trim Panel
2. Stormstrip, Tacked to Cowl Trim Panel
3. Front Body Hinge Pillar Face Plate
4. Courtesy Light Door Switch Mounting Bracket
5. Courtesy Light Door Switch
6. Door Finish Moulding Front End Trim Plate (Chrome)
7. Door Finish Moulding Top Trim Plate (Chrome)
8. Door Finish Moulding
9. Door Finish Moulding Rear End Trim Plate (Chrome)
10. Remote Control Handle
11. Window Regulator Handle
12. Door Inside Locking Knob and Screw
13. Door Trim Panel
14. Door Pull Handle
15. Door Armrest
16. Door Lock Pillar Trim Plate (Chrome)
17. Male Dovetails (Rubber Block and Chrome Base Retainer)

FIGURE 16—*Door Assembly and Trim Parts (Hardtop Model).*

DOOR TRIM PANEL (HARDTOP)

The door trim panel has a wood base to which the upholstery and the edge welt is tacked. This assembly is fastened to the door frame with chrome sheet metal screws. Then the remote control and window regulator handles and the inside locking knob is installed. These must be removed before the trim panel can be removed.

DOOR PULL HANDLE (HARDTOP)

The door pull handle (Item 14, Fig. 16) has two studs which are inserted through the trim panel and fastened with nuts on the back side.

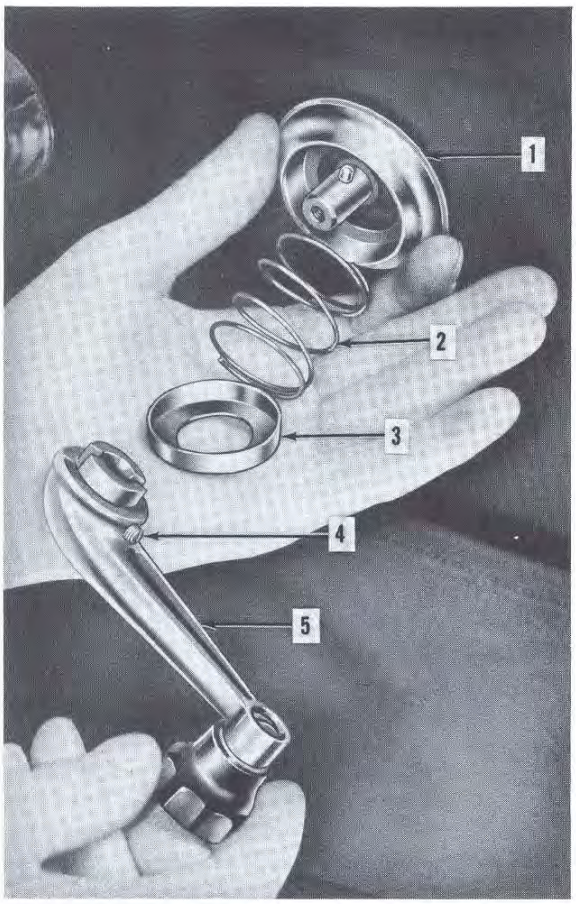
Removal of the trim panel is required before this handle can be removed.

DOOR ARMREST (HARDTOP)

The door armrest (Fig. 16) is fastened to the trim panel with screws before the trim panel is installed to the door. They are accessible only after the trim panel is removed.

WINDOW REGULATOR HANDLE (HARDTOP)

The window regulator handle and its related parts are shown in Figure 17. It is retained to the window regulator by a set screw.



1. Escutcheon, Window Regulator and Remote Control Handles
2. Spring, Window Regulator and Remote Control Handles
3. Spring Retainer, Window Regulator and Remote Control Handles
4. Handle Set Screw, Window Regulator and Remote Control Handles
5. Window Regulator Handle

FIGURE 17—*Window Regulator Handle and Attaching Parts (Hardtop).*

REMOTE CONTROL HANDLE (HARDTOP)

The remote control handle (Fig. 16) is retained to the remote control shaft by a set screw in the same manner as the window regulator handle.

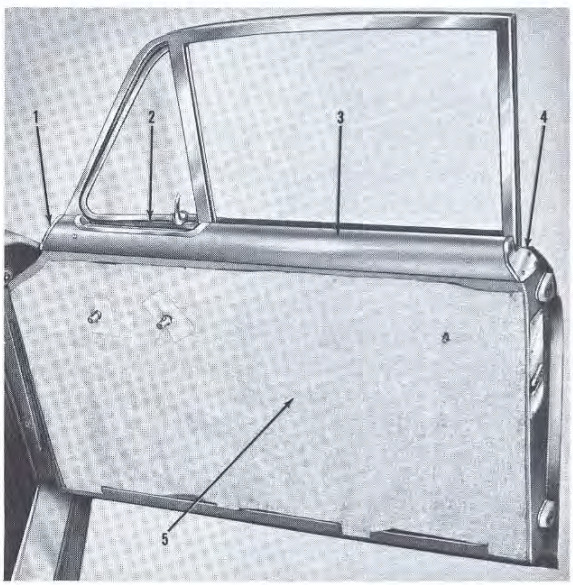
The escutcheon, retaining spring, and spring retainer, as shown in Figure 17, are interchangeable on both the window regulator and remote control handles.

DOOR FINISH MOULDING AND TRIM PLATES

The painted door finish moulding is fastened to the door with two screws in the face of the moulding. The ends are retained to the door by the end trim plates, which are screwed to both the moulding and the door pillars.

The moulding end finish plates can be removed without removing the moulding. However, they must be loosened from the door when the moulding is removed (Items 1, 3, and 4, Fig. 18).

The finish moulding top trim plate opposite the door ventilator is fastened to the finish moulding with machined screws and nuts. These nuts are only accessible after the finish moulding is removed (Fig. 18).



1. Door Finish Moulding Front End Trim Plate (Chrome)
2. Door Finish Moulding Top Trim Plate (Chrome)
3. Door Finish Moulding
4. Door Finish Moulding Rear End Trim Plate (Chrome)
5. Door Water Dam Cloth

FIGURE 18—*Door Finish Moulding, Trim Plates And Water Dam Cloth (Hardtop).*

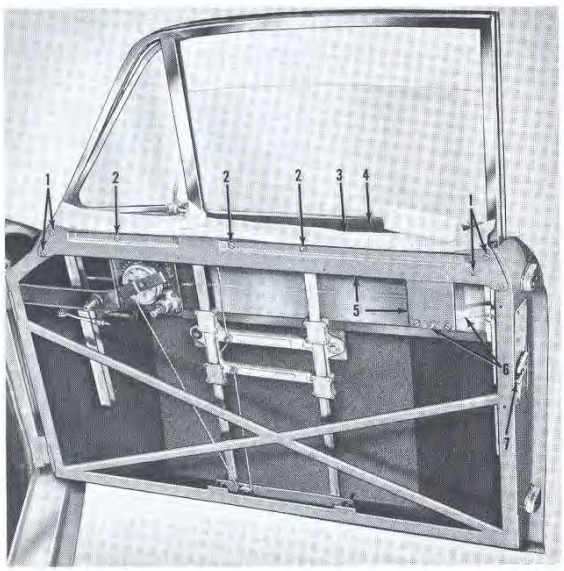
WATER DAM CLOTH

The water dam cloth is cemented at the top to the finish moulding and window regulator support plate, the door pillars on the sides, and door bottom flange at the bottom. Its purpose is to prevent moisture from inside of door contacting the inner side of the door trim panel (Fig. 18).

DOOR FINISH MOULDING AND WINDOW REGULATOR SUPPORT PLATE

This plate spans the inside top edge of the door and serves the purpose for which its name implies. Welded to this plate is a bracket for mounting the inside locking control and link assembly (Fig. 19).

This support plate is fastened by four screws to the door pillars and three screws to the window regulator assembly (Items 1 and 2, Fig. 19). These screws are visible after the water dam cloth is raised.



1. Screws, Support Plate to Door
2. Machined Screws Support Plate to Window Regulator Assembly
3. Water Dam Cloth
4. Glass Weatherstrip Inside
5. Door Finish Moulding and Window Regulator Support Plate
6. Door Inside Locking Knob, Control, and Link (Part of Door Lock)
7. Door Lock Assembly

FIGURE 19—*Door Finish Moulding and Window Regulator Support Plate.*

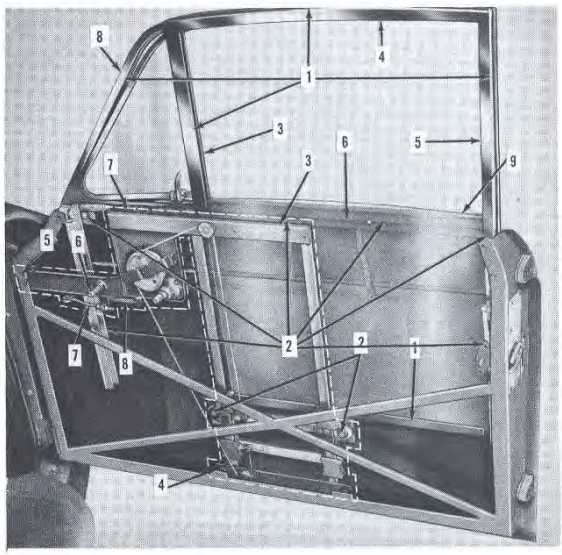
INSIDE GLASS WEATHERSTRIP

On the top surface of this plate in the door glass opening section, the inside glass weatherstrip is installed. It is fastened by screws. Its purpose is to seal against the glass to prevent cold air entering the body in winter, when the glass is raised. The weatherstrip is accessible for adjustment or removal after the finish moulding is removed.

DOOR GLASS (HARDTOP)

The laminated door glass is set into a glass bottom channel (Fig. 20).

The glass bottom channel mounting brackets are bolted to the window regulator glass mounting and elevator bar (Item 2, Fig. 20).



1. Door Glass Bottom Channel
2. Screws, Glass Bottom Channel To Window Regulator
3. Window Regulator Assembly
4. Door Glass Adjusting Screws, Bottom of Window Regulator to Door
5. Screws, Window Regulator to Door Hinge Pillar
6. Remote Control Shaft on Window Regulator Frame
7. Remote Control Shaft Link
8. Remote Control Handle Return Spring
9. Top Edge of Glass Flush With Window Reveal

FIGURE 20—*Window Regulator Assembly and Door Glass Mounting (Hardtop).*

The glass bottom channel mounting brackets have vertical elongated slots for the up and down adjustment of the bottom channel to the elevator bar. They also have horizontal serrations to assist in securing the bottom channel to the elevator bar when the bolts are tightened (Item 2, Fig. 21).

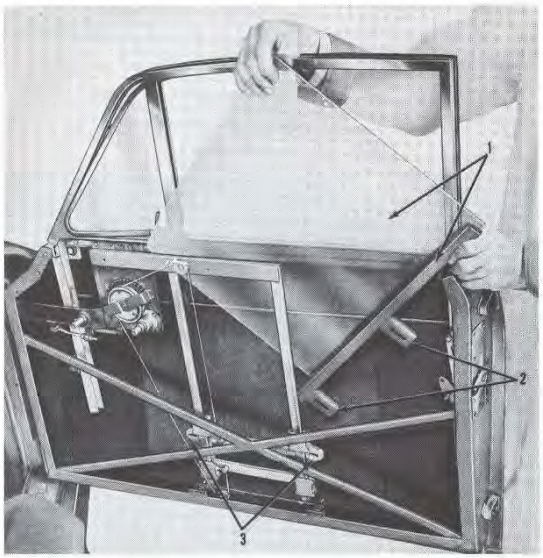
The elevator bar has horizontal elongated slots for the side adjustment of the bottom channel to the elevator bar (Item 3, Fig. 21).

Removing Door Glass

To remove the door glass, the door trim panels and the door finish moulding and window regulator support must be removed.

Lower the glass as shown in Figure 20, and remove the two bolts holding the glass bottom channel to the elevator bar.

Raise the end of glass and remove from door as shown in Figure 21.



1. Glass and Bottom Channel Assembly Tilted For Removal from Door
2. Mounting Brackets Welded to Glass Bottom Channel—Note Horizontal Serrations and Vertical Elongated Slots
3. Window Regulator Glass Mounting and Elevator Bar—Note Horizontal Elongated Slots

FIGURE 21—*Removing Door Glass From Door.*

Installing and Adjusting Door Glass

When the glass is installed as shown in Figure 20, the glass should be raised so the top edge of the glass is flush with window reveal (Item 9). Crank the window regulator so the glass is raised to the full up position. Loosen the bolts sufficiently so the glass can be straightened to close at the top and in alignment with the side slide channels. Then tighten the bolts so the bottom channel will be held securely to the elevator bar.

This will affect the vertical and horizontal adjustments of the glass and bottom channel to the elevator bar in one operation and permit the glass to be centered properly in the glass slide channels.

To adjust the elevator bar slides to an in or out position so the glass can be aligned to raise straight in the slide channels of the door ventilator and glass frame assembly, refer to Item 4, Figure 20. This illustrates the adjustable studs which serve a dual purpose of fastening this assembly to the door and permitting this adjustment.

In all cases where either the glass, window regulator assembly, or the door ventilator and door glass frame assembly has been removed or readjusted, the adjustable studs (Item 4, Fig. 20) should be loosened so the bottom of the window regulator elevator slide assembly can move freely, and the proper in or out adjustment can be selected and maintained by tightening these lock nuts.

WINDOW REGULATOR ASSEMBLY

The window regulator assembly as outlined in Item 3, Figure 20 includes the handle shaft and gear assembly, glass elevator slides and bar assembly, and the remote control handle shaft.

This complete assembly is mounted to the door at the bottom by two adjustable studs, at the door hinge pillar by two sheet metal screws, and to the door finish moulding and window regulator support plate at the top by three machined screws (Fig. 19).

To remove this assembly from the door, the door glass must be removed first as shown in Figure 21.

DOOR VENTILATOR AND GLASS FRAME ASSEMBLY

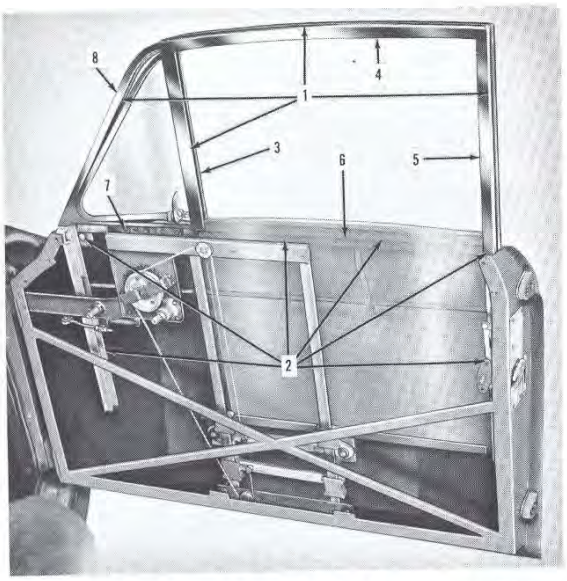
The door ventilator and glass frame assembly, as shown in Item 1, Figure 22, is mounted to the door at the front channel by two screws, and at the door lock pillar by two screws. The top screw is visible, however, the lower screw is accessible and visible only after the glass slide channel is pulled from the frame channel (Item 2, Fig. 22).

It is also fastened to the door reveal in the window opening with sheet metal screws. These are visible after the glass weatherstrip is removed (Item 6, Fig. 22).

The door glass must be removed before this assembly can be removed from the door.

DOOR GLASS SLIDE CHANNELS

The door glass slide channels are cemented to the channel sections of the frame assembly. (Items 3, 4, and 5, Fig. 22). The door glass must be removed before these can be removed and replaced.



1. Door Ventilator And Door Glass Frame Assembly
2. Fastening Screws Frame Assembly To Door
3. Glass Slide Channel Center Division Bar
4. Glass Slide Channel Top
5. Glass Slide Channel Lock Side
6. Glass Weatherstrip Outside (On Frame Assembly)
7. Ventilator Bottom Pivot Friction Clamp and Screw
8. Ventilator Top Bracket Rivet

FIGURE 22—*Door Ventilator and Glass Frame Assembly (Hardtop).*

DOOR VENTILATOR

The door ventilator frame and glass assembly is mounted to the door ventilator and glass frame assembly. The bottom of the ventilator has a pivot shaft which is clamped to the frame assembly by a friction clamp bracket. The tightening or loosening of the friction clamp screw controls the proper operation of the ventilator.

The top brackets of the ventilator are connected by a chrome rivet (Item 8, Fig. 22).

The ventilator frame and glass assembly friction screw (Item 7, Fig. 22) is accessible only after the door finish moulding and window regulator support plate (Item 1, Fig. 19) is removed.

DOOR VENTILATOR GLASS

The ventilator glass is anchored into the ventilator frame by two small stops. These are inserted between the edge of the glass and the frame at the top and bottom ends. These are fastened to the frame by a chrome screw. These stops must be removed before the glass can be removed.

DOOR VENTILATOR HANDLE

The door ventilator handle is fastened to the ventilator frame shaft by a chrome set screw. This is visible when the handle is placed in the locked position.

DOOR LOCK CHROME TRIM PLATE

The door lock trim plate covers the door lock to pillar screws and lock oil hole.

CAUTION: *When this trim plate is removed, note length of screws as they are removed. Reinstall them in original location.*

Screw holes (Item 2, Fig. 22) require only short screws, as long screws will obstruct operation of lock.

After screws are installed, place the lock outside forked latch in the vertical position; then push the door handle push button (Item 3, Fig. 23). This should release the forked latch, if not, remove screws (Item 2) and install shorter screws.

DOOR LOCK

The door locks are a toggle latch trigger release type. The outside forked latch serves as a male dovetail when the door is closed against the lock striker and female dovetail on the body lock pillar.

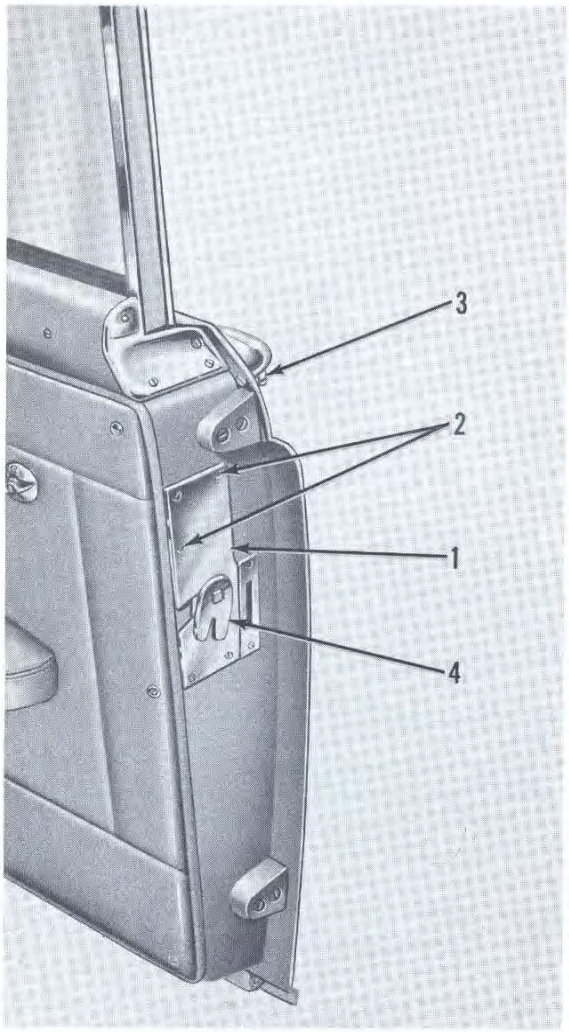
When the door is closed, the revolving action of the lock outside forked latch (Item 1, Fig. 24) places it under spring tension and in a latched position. The outside door handle and remote control serve only as lock operating controls to release the lock for opening the door.

The inside locking control and link assembly is riveted to the door lock (Item 6, Fig. 19) and it is controlled by the inside locking knob (Item 12, Fig. 16).

The inside locking control and link is fastened to the door finish moulding and window regulator support plate (Fig. 19), while the door lock is fastened to the door lock pillar face by four screws (Item 2, Fig. 24). These are visible after the door lock trim plate (Fig. 23) is removed.

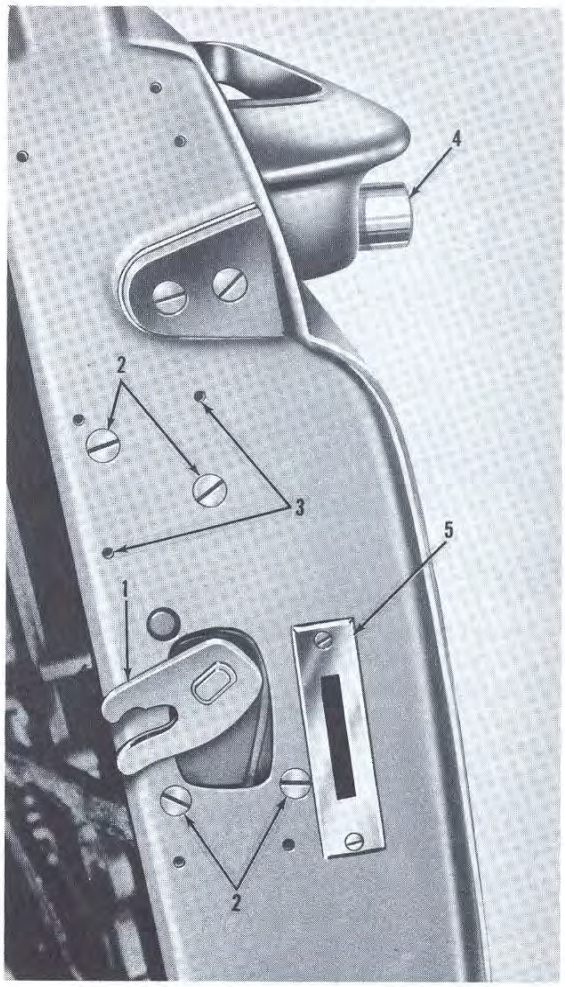
To remove the door lock from the door, the door ventilator and glass frame assembly (Fig. 22) must be removed to obtain sufficient clearance between the door pillar and glass slide channel. Then remove the door lock fastening screws.

NOTE: *The two screw holes for the door lock chrome trim plate (Item 3, Fig. 24) must have* short *screws otherwise they will obstruct the operation of the lock, and the handle push button will not release the forked latch and*



1. Door Lock Chrome Trim Plate
2. SHORT SCREWS—Caution: Install Short Screws Only, Otherwise Handle Push Button Will Not Release Lock
3. Door Handle Push Button
4. Lock Outside Forked Latch

FIGURE 23—*Door Lock Chrome Trim Plate (Hardtop).*



1. Door Lock Outside Forked Latch In Horizontal Position
2. Screws, Door Lock to Door Lock Pillar
3. Screw Holes For Door Lock Chrome Trim Plate—Caution: Use Only Short Screws
4. Door Handle Push Button
5. Door Key Cylinder Lock—Lock

FIGURE 24—*Door Lock and Key Lock.*

permit it to rotate from the vertical position to the horizontal position.

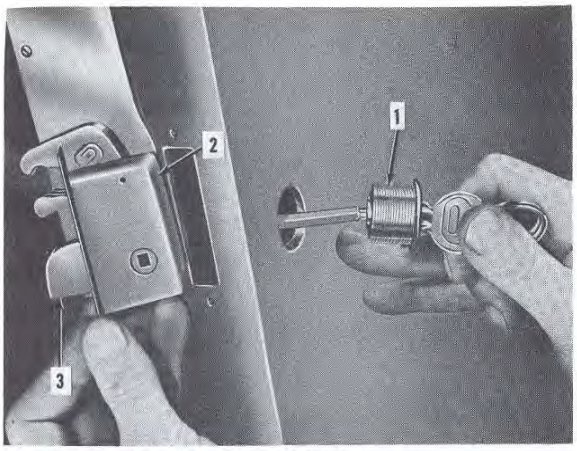
DOOR KEY LOCK AND LOCK

The door key lock consists of two assemblies namely the door key lock cylinder and shaft assembly, and the door key lock cylinder lock (Fig. 25).

The door key lock cylinder and shaft is inserted through the door outer panel and then into the lock. The cylinder portion of the key lock is threaded for fastening to the door inner panel with a retaining nut.

To remove the key lock, the door trim panel must be removed and the glass raised; then the lock retaining nut is accessible for removal.

The door key lock cylinder *LOCK* (Item 2, Fig. 25) is inserted into the face of the door lock pillar and fastened with two screws as shown in Item 5, Figure 24.



1. Door Key Lock Cylinder
2. Door Key Lock Cylinder Lock
3. Door Key Lock Cylinder—Lock Bolt

FIGURE 25—*Door Key Locks.*

It is removable from the door after the key lock cylinder and shaft is removed as shown in Figure 25.

LOCKING DOOR FROM OUTSIDE

When the key is turned in the cylinder lock, this causes the lock bolt (Item 3, Fig. 25) to revolve outward and engage into the slot of the lock bolt receiver case (Item 5, Fig. 26) which is on the body lock pillar.

This lock has no connection with the door lock and when it is locked with the key, it must be unlocked with the key before the door can be opened.

DOOR DOVETAIL

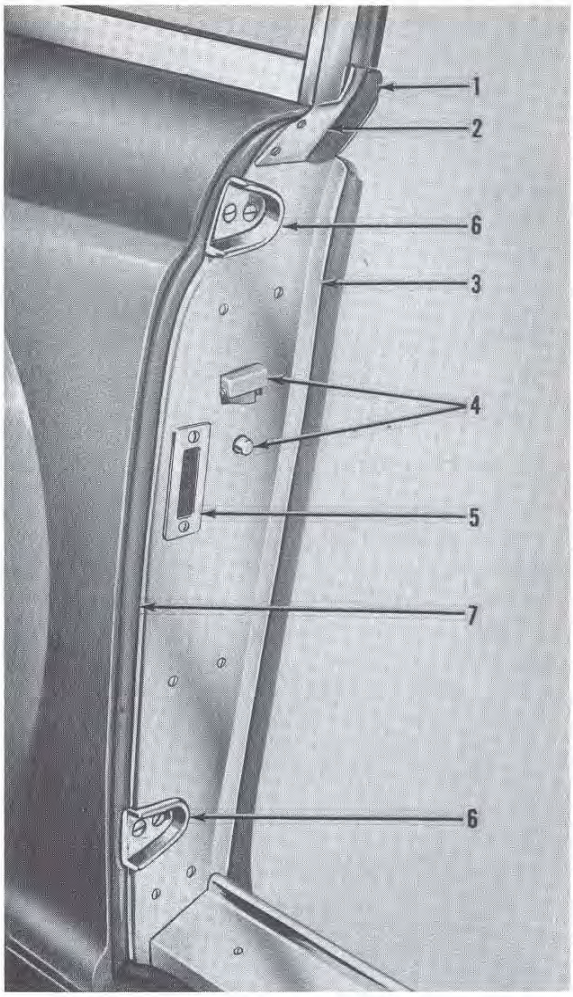
The male dovetails on the door lock pillar are of hard rubber composition. They are set into a chrome base retainer and fastened to the door hinge pillar with two screws (Item 17, Fig. 16).

When the door is closed, they center into the female dovetail cases as shown in Item 6, Fig. 26. They serve to support the lock side of the door in the door opening, preventing possible up and down movement.

DOOR LOCK STRIKER ASSEMBLY

The door lock striker (Item 4, Fig. 26) serves a dual purpose. It keeps the door lock in a latched position to the body and also serves as a female dovetail, preventing the door from moving up and down in the door opening.

When the door is closed, the latch pin engages the forked section of the lock outside latch (Item 1, Fig. 24 causing it to revolve, forcing its top surface under the upper wedge on the striker.



1. Body Lock Pillar Upper Trim Plate Weatherstrip
2. Body Lock Pillar Upper Trim Plate (Chrome)
3. Body Lock Pillar Lower Trim Plate (Chrome)
4. Door Lock Striker
5. Door Key Lock, Lock Bolt Receiver Case
6. Door Dovetail Case (Female)
7. Body Lock Pillar to Door Sealer Rubber

FIGURE 26—*Body Lock Pillar and Attaching Parts (Hardtop).*

The upper wedge on the striker is tapered. It moves in and out under spring tension when opening and closing the door. This movement allows a constant bearing for the top surface of the latch without binding.

The lock striker assembly is fastened with screws to the body lock pillar. It is adjusted to the proper closing of the door; then tack welded to this selected position. The holding screws and welds are visible after the body lock pillar lower trim plate (chrome) is removed (Item 3, Fig. 26).

BODY LOCK PILLAR TRIM PLATES (CHROME)

The body lock pillar upper trim plate (Item 2, Fig. 26) also serves as a rear quarter finish moulding end trim plate.

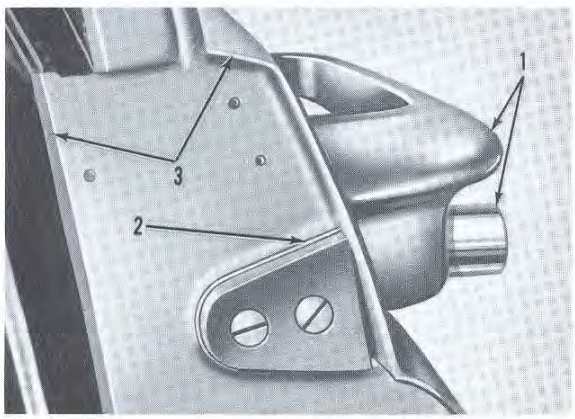
This plate has a vertical slot in which a rubber weatherstrip is inserted (Item 1, Fig. 26).

The body lock pillar lower trim plate is also chrome and is retained to the pillar by sheet metal screws and the female dovetail cases. The inner flange of this plate serves as a support for the rear quarter trim panel stormstrip.

The outside edge of this plate serves as a retainer for the door sealer rubber (Item 7, Fig. 26).

DOOR OUTSIDE HANDLE

The door outside handle and push button assembly is mounted to the door outer panel by two screws. One screw is on the exterior of the door pillar and is visible when the door is open (Item 2, Fig. 27). The other screw is visible when the trim panel is removed and is accessible after the door glass is removed.



1. Door Outside Handle and Push Button Control
2. Handle Fastening Screw Outside Flange of Door
3. Handle Fastening Screw Inside of Door Visible When Door Trim Panel Is Removed and Accessible After Door Glass Is Removed

FIGURE 27—*Door Outside Handle.*

The handle push button when pressed in, serves as a contact to trip the door lock trip lever so the door can be opened. This push button is under spring tension by a coil spring encased in the handle assembly.

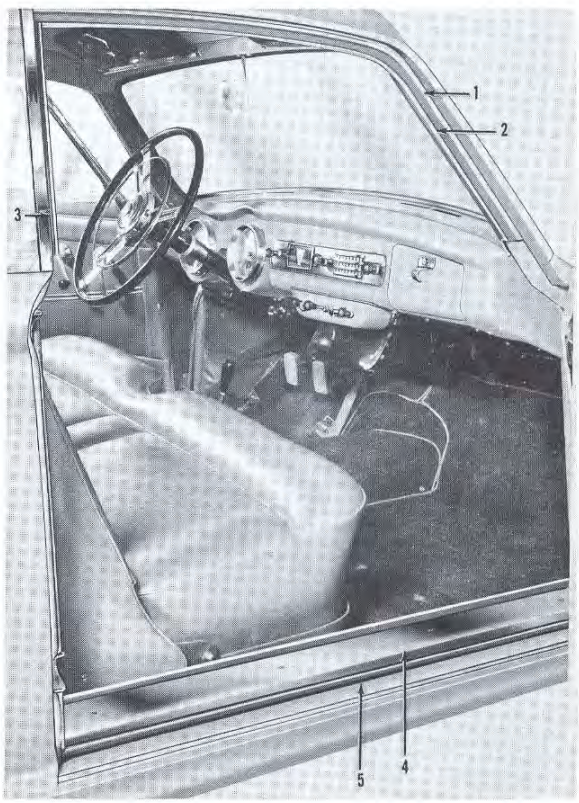
To provide proper contact of the handle push button to the door lock trip lever, an adjustable contact screw is set into the inside surface of the push button. This is accessible for adjustment when the door panel is removed and the door glass raised.

Caution should be exercised when adjusting this contact screw to provide clearance for free movement of the lock contact lever. Yet close enough to lock contact lever that it will release the lock trip lever when the handle push button is pressed in.

DOOR SEALER RUBBER (ROOF RAIL AND FRONT BODY PILLAR UPPER)

The sealer rubber for the top of the door glass frame assembly is set into a retainer.

The retainer is fastened to the roof rail and upper portion of the front body pillar with screws. They are visible when the sealer rubber is removed. The screw holes in the retainer are elongated to provide in or out movement for proper alignment and sealing to the door glass frame assembly (Items 1 and 2, Fig. 28).



1. Door Sealer Rubber Retainer (Roof Rail and Front Body Pillar)
2. Door Sealer Rubber (Roof Rail and Front Body Pillar)
3. Rear Quarter Window Weatherseal (On Rear Quarter Window)
4. Scuff Plate
5. Scuff Plate Sealer Rubber

FIGURE 28—*Roof Rail and Body Side Sill Door Sealer Rubbers*

The rear edge of the door glass frame is sealed by a sealer rubber mounted into the front edge of the rear quarter window frame assembly.

To obtain the proper sealing of the door frame and glass assembly to the body sealing rubber, the door should be in alignment so the door outer panel is flush with the rear quarter panel.

Then the glass frame on the lock side should contact the sealer rubber on the rear quarter window. The top edge of the door glass frame may be tilted in or out as required by adjustment of its fastening screws to the door (Item 2, Fig. 22).

Then the sealer rubber and its channel retainer is moved on the body roof rail and upper portion of the front body pillar so it will seal against the door ventilator and glass frame.

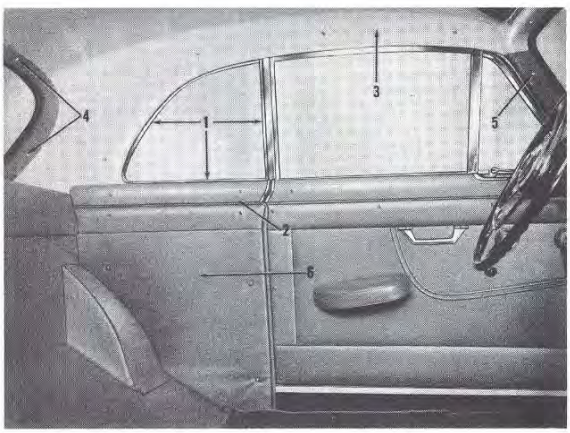
DOOR SCUFF PLATE AND BOTTOM SEALER RUBBER

The sealer rubber for the bottom of the door is retained by the body side sill and by the scuff plate (Fig. 28). It is adjustable against the door by moving the scuff plate.

REAR QUARTER TRIM, HARDWARE AND GLASS SECTION

SIDE ROOF RAIL TRIM PANEL (HARDTOP)

The side roof rail trim panel (Item 3, Fig. 1) is an aluminum panel trimmed in matching trim to the headlining material. It extends from the windshield to the rear window and is fastened to the body with chrome screws.



1. Rear Quarter Window Frame and Glass Assembly
2. Rear Quarter Window Finish Moulding
3. Side Roof Rail Trim Panel
4. Rear Window Finish Moulding and End Screws
5. Windshield Finish Moulding and Screws
6. Rear Quarter Trim Panel

FIGURE 1—*Rear Quarter Window and Trim Panels.*

The front, rear, and lower ends are concealed under the windshield finish moulding, rear window frame, and rear quarter window finish moulding.

To remove this trim panel, the rear quarter window finish moulding must be removed; the end screws of the rear window finish moulding frame and windshield finish moulding should be removed. This will permit *free movement* of the trim panel under the mouldings for removal and installation.

REAR QUARTER TRIM PANEL (HARDTOP)

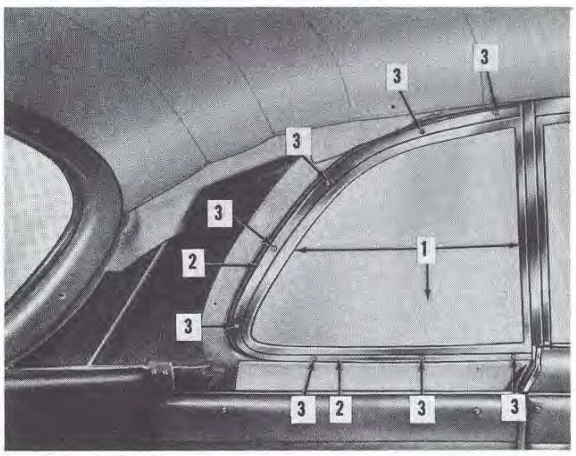
The rear quarter trim panel (Item 6, Fig. 1) has a wood base to which the upholstery, door stormstrip, and top welt is tacked. It is fastened to the body with chrome screws. It is removable without removing any other parts.

REAR QUARTER WINDOW FRAME AND GLASS ASSEMBLY (HARDTOP)

An angle shaped rear quarter window frame and glass assembly RETAINER is fastened to the window opening with sheet metal screws.

The window frame and glass assembly is then installed into the window opening from the outside and pressed against the flange of the retainer. Sheet metal screws are then inserted through the retainer flange from the inside into the glass frame.

These retaining screws are visible after the side roof rail trim panel and rear quarter window finish moulding are removed (Fig. 2).



1. Rear Quarter Window Frame and Glass Assembly
2. Rear Quarter Window Frame and Glass Assembly Retainer (Screwed to Body Window Opening)
3. Screws Retainer to Window Frame

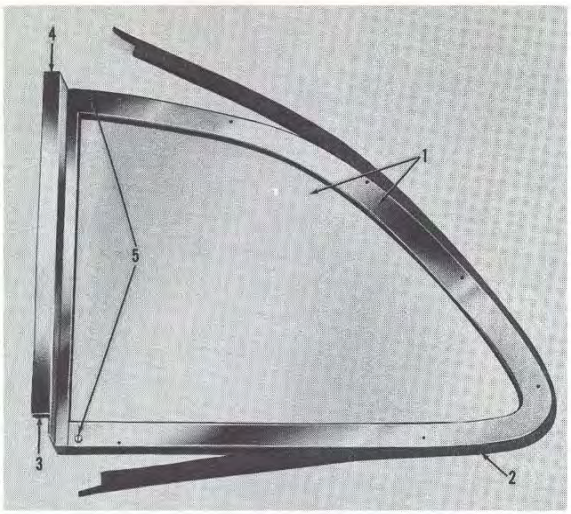
FIGURE 2—*Rear Quarter Window Frame and Glass Assembly, Retainer, and Fastening Screws.*

The rear quarter glass frame is recessed for a frame to body sealer rubber (Fig. 3).

This frame has a front rail which encloses the front edge of the glass. It is retained by one screw at each end.

The outside surface of this bar forms a narrow "U" channel which retains a sealer rubber for sealing against the door.

REAR QUARTER TRIM, HARDWARE AND GLASS



1. Rear Quarter Window Frame and Glass
2. Sealer Rubber, Rear Quarter Window Frame to Body
3. Sealer Rubber Rear Quarter Window Frame Front Rail to Door
4. Rear Quarter Window Frame Front Rail
5. Screws, Rear Quarter Window Frame Front Rail to Rear Section

FIGURE 3—***Rear Quarter Window Frame and Glass Assembly (Inside View of Right Side Shown).***

DECK COVER, WEATHERSTRIPS AND HARDWARE SECTION

DECK COVER ASSEMBLY (CONVERTIBLE AND HARDTOP)

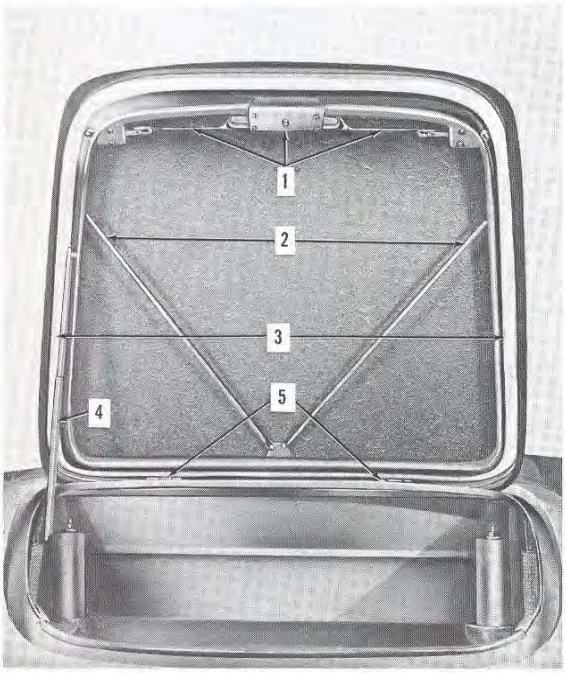
The construction of the deck cover consists of an aluminum panel formed and flanged with all reinforcements welded to it.

Two deck cover brace rods are bolted to the deck cover, as is the stay hinge bracket.

The deck cover hinges are welded to the upper deck panel and bolted to the deck cover.

The hinge pivot is of a bolt type secured with an acorn nut.

This pivot nut and bolt must be removed to remove the deck cover after the stay hinge has been disconnected.



1. Deck Cover Links and Lock Assembly
2. Deck Cover Brace Rods
3. Deck Cover Hinges and Pivot Bolt
4. Deck Cover Stay Hinge
5. Deck Cover Sealer Rubber

FIGURE 1—*Deck Cover Assembly and Component Parts (Convertible Shown).*

The rear deck opening flange rubber weatherstrip contacts the center line of the deck cover rubber seal forming a positive seal when the deck cover is closed.

The rear deck lock link is joined to the lock latch (Item 2, Fig. 3) by a key slot in the links which hook onto the lock latch studs.

The links are fastened to the deck lock studs and secured with self-locking nuts.

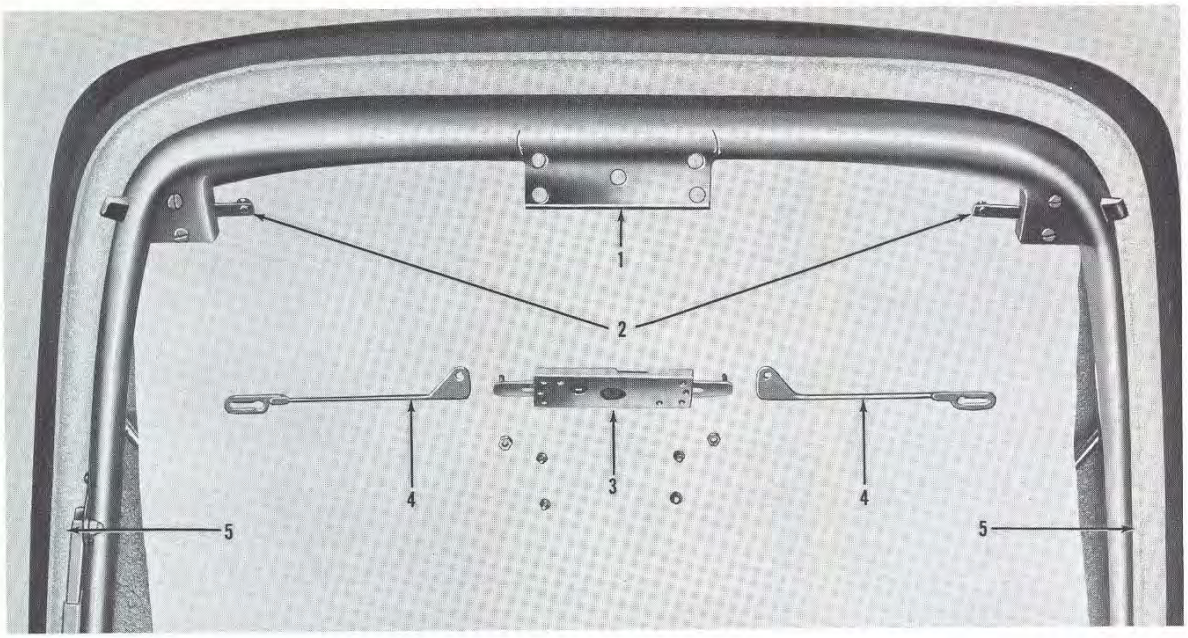
To remove the key lock cylinder, it is necessary to remove the handle from the deck cover.

Then remove the snap ring which will permit the removal of the escutcheon.

Remove the set screw at the base of the handle which will release the cylinder lock when the key is inserted into the lock.

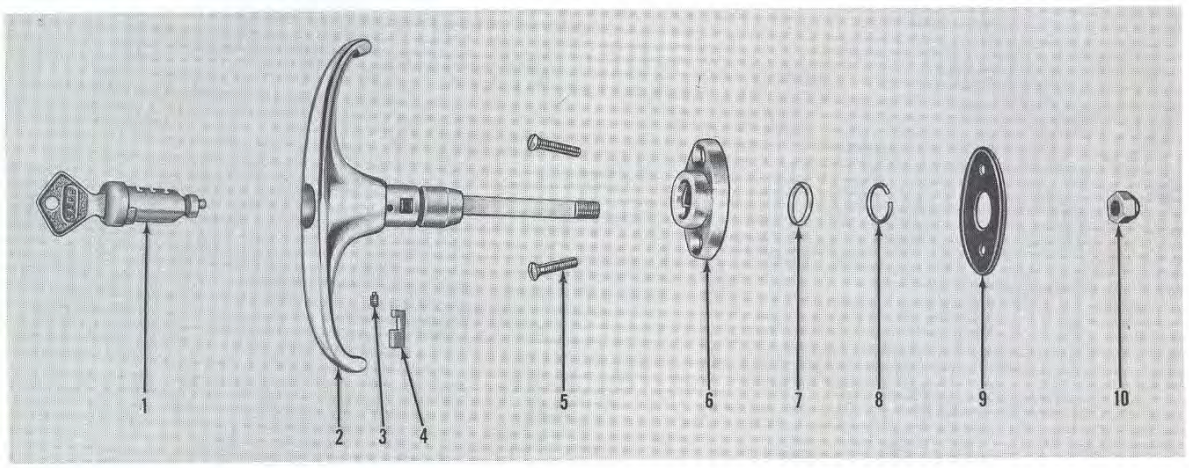
1. Rear Deck Opening Flange Rubber Weatherstrip, Top and Sides
2. Lock Latch Strikers
3. Rear Deck Opening Flange Rubber Weatherstrip, Bottom

FIGURE 2—*Rear Deck Opening Weatherstrip (Convertible Shown).*



1. Deck Lock Mounting Bracket
2. Deck Lock Latch
3. Deck Lock
4. Deck Lock Links
5. Rear Deck Drain Rubber Weatherstrip

FIGURE 3—*Rear Deck Cover Lock (Convertible Shown).*



1. Key and Lock Cylinder
2. Deck Lock Handle
3. Key Lock Cylinder Retaining Set Screw
4. Locking Plunger
5. Handle Assembly to Deck Mounting Screws
6. Escutcheon
7. Spacer
8. Snap Ring
9. Gasket
10. Handle Locking Nut

FIGURE 4—*Deck Lock Handle.*

WINDSHIELD-REAR WINDOW-WINDSHIELD WIPER SECTION

WINDSHIELD ASSEMBLY (CONVERTIBLE)

The windshield consists of a one piece frame glass and setting rubber channel with filler strip.

The frame is bolted to the cowl top by two studs on each end of the windshield and one in the center.

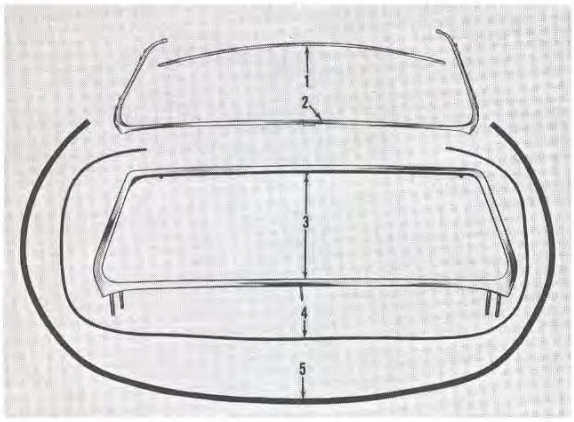
Removal of Windshield Assembly from Body

Remove windshield wiper arms and blades.

Remove the glove box.

Remove nuts from studs under cowl at center and right and left ends of windshield frame to cowl top.

Lift windshield assembly from the body.



1. Windshield Finish Moulding, Upper
2. Windshield Finish Moulding, Bottom and Sides
3. Windshield Frame One Piece
4. Filler Windshield Rubber Channel
5. Windshield Rubber Channel

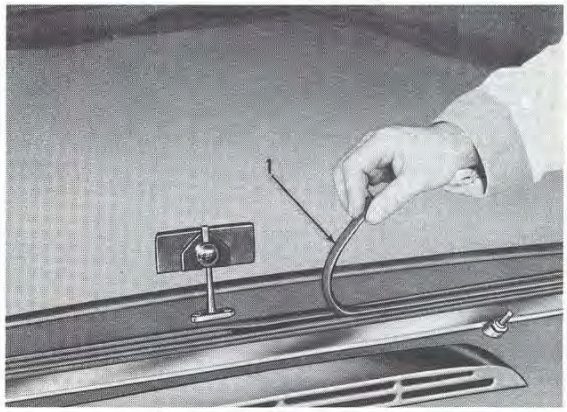
FIGURE 1—*Windshield Component Parts (Convertible).*

Windshield Glass Removal (Convertible and Hardtop)

To remove and replace windshield glass, locate the filler strip joint usually joined at the bottom center of the windshield.

Pull the filler from the windshield rubber channel.

Remove windshield glass from rubber channel along top of windshield and lift windshield from channel.



1. Filler Windshield Rubber Channel

FIGURE 2—*Removing Filler Strip (Convertible Shown).*

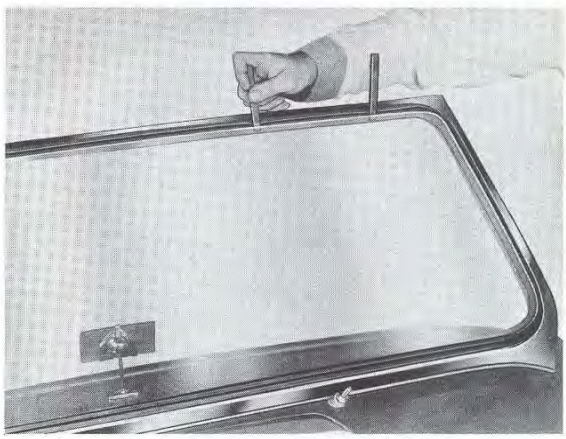


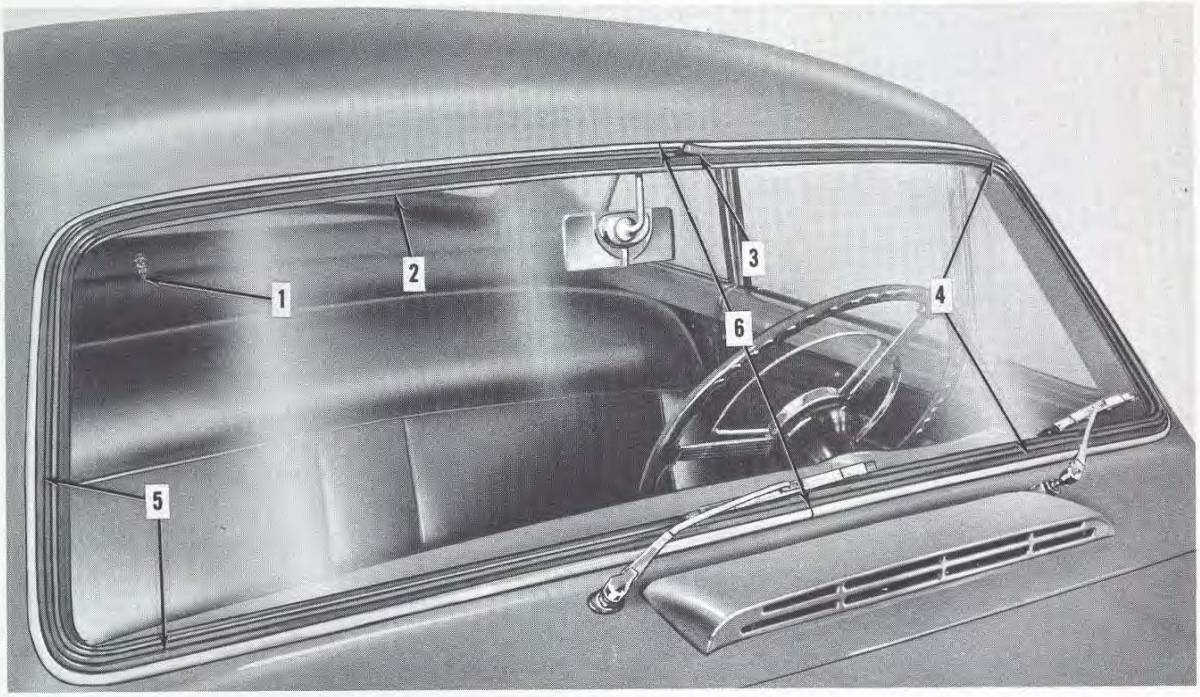
FIGURE 3—*Removing Windshield Glass (Convertible Shown).*

Refer to Figures 4 and 5 for exterior and interior parts of the Hardtop Model.

Windshield Glass Installation (Convertible and Hardtop)

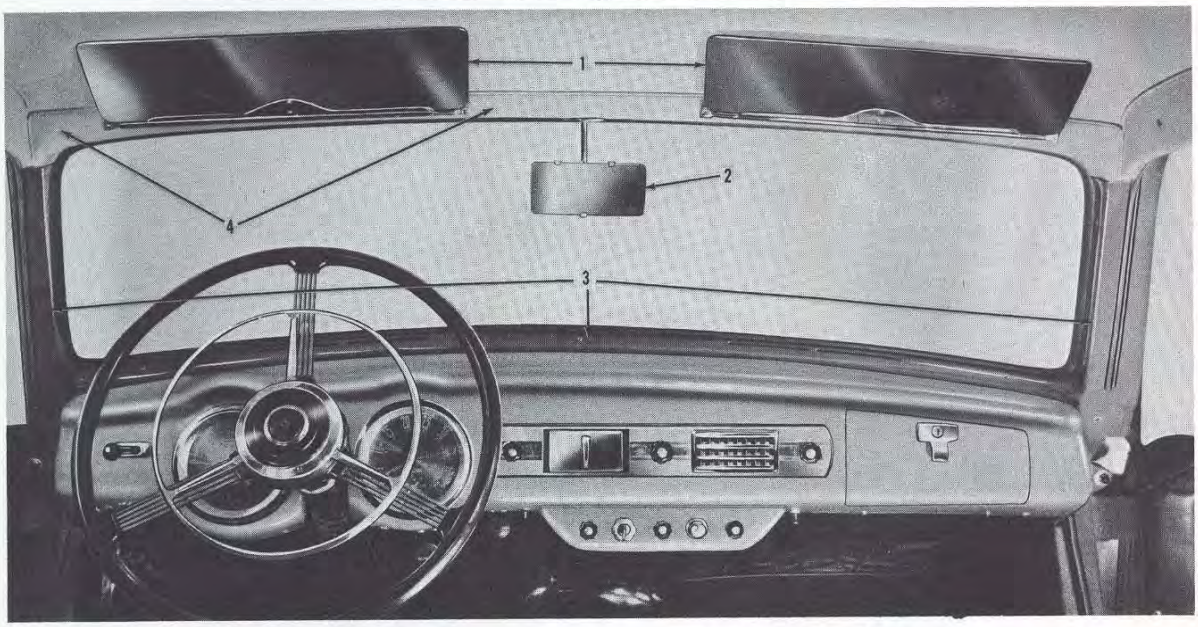
To install the windshield glass, install the windshield rubber channel to the windshield opening flange with the filler strip groove to the outside or front of the car.

Set the glass into the bottom of the rubber channel spacing it in the opening. Use a wedge shaped fibre or wood stick to fit the glass into the rubber channel along the top and sides.



1. Windshield Glass Trade Name (TRIPLEX PLATE)
2. Windshield Glass Channel (Rubber)
3. Windshield Glass Channel Filler Rubber
4. Windshield Reveal Moulding (Left) Screwed to Window Opening
5. Windshield Reveal Moulding (Right) Screwed to Window Opening
6. Windshield Reveal Moulding Joint

FIGURE 4—*Windshield Glass, Setting Rubbers and Moulding (Hardtop).*

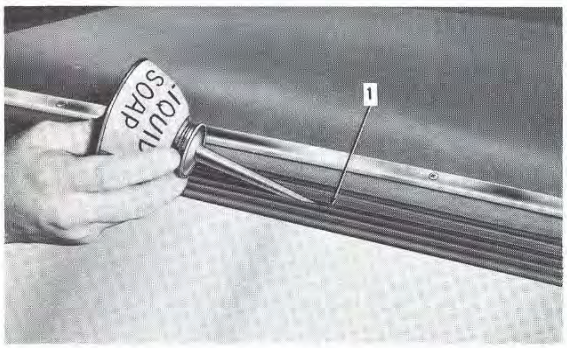


1. Sun Visors
2. Rear View Mirror
3. Finish Moulding
4. Windshield Header Trim Panel

FIGURE 5—*Interior Parts to be Removed in Glass Replacement (Hardtop).*

Apply liquid soap to the filler strip groove for ease of installation.

Thread the filler strip through the handle and eye of the special tool especially designed for this purpose.

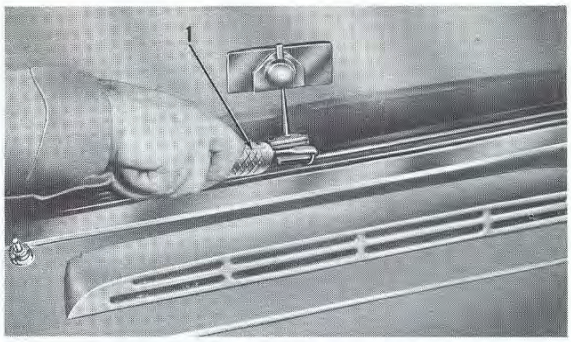


1. Filler Strip Groove

FIGURE 6—*Applying Liquid Soap (Convertible Shown).*

The filler strip should overlap the starting point one-half to one inch. It can then be forced into place with the pin on the heel of the special tool handle.

Insert the eye of the special tool and filler strip into the groove of the channel rubber and hold the end of the filler in place.



1. Special Tool (Filler Strip Installer)

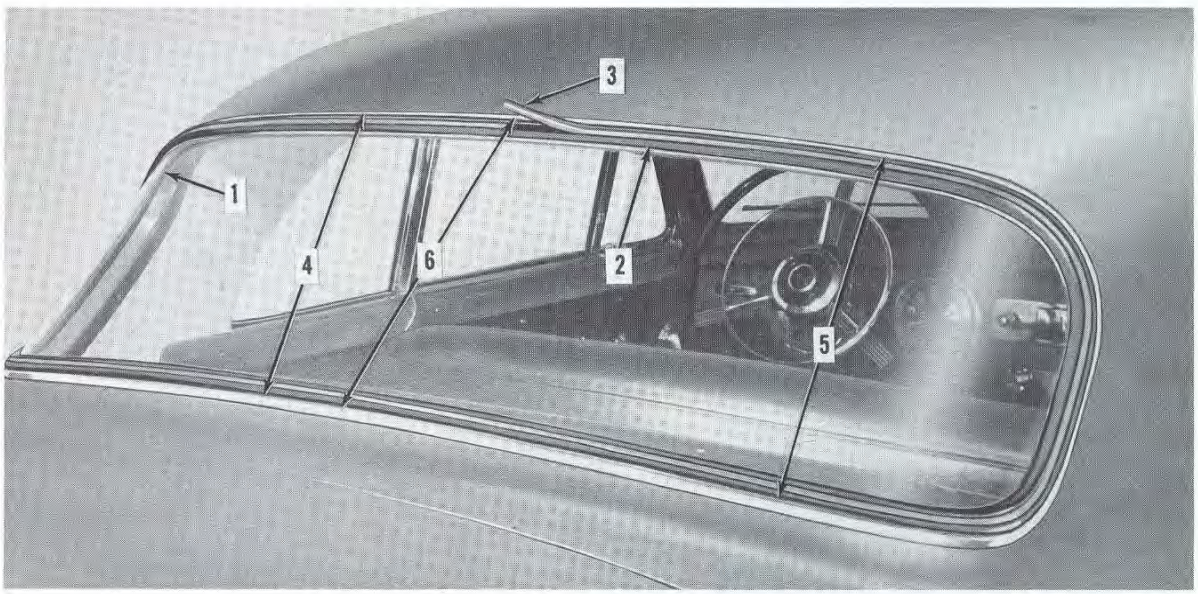
FIGURE 7—*Installing Filler Strip with Special Tool (Convertible Shown).*

Insert approximately eight inches of the rubber filler strip into the groove; then move the tool back one to two inches which will allow the filler strip to retract.

Continue this operation until complete filler is installed.

REAR WINDOW GLASS (HARDTOP)

The curved rear window glass in the Hardtop models is laminated safety glass. It is set into the body by a channel rubber and locking filler strip. The reveal moulding is screwed to the window opening flange before the channel rubber is installed (Fig. 8).



1. Rear Window Glass Trade Name (TRIPLEX PLATE)
2. Rear Window Glass Channel (Rubber)
3. Rear Window Glass Channel Filler Rubber
4. Reveal Moulding (Left) Screwed to Window Opening
5. Reveal Moulding (Right) Screwed to Window Opening
6. Reveal Moulding Joint

FIGURE 8—*Rear Window Glass, Setting Rubber and Moulding (Hardtop).*

The glass is removed and installed in the same manner as shown for the Convertible windshield glass.

WINDSHIELD WIPER

The windshield wiper motor is driven electrically and controlled by the wiper knob located on the instrument panel.

The windshield wiper motor is located on a mounting bracket under the hood on the left side next to the dash panel or fire wall.

Windshield Wiper Motor Removal

Disconnect battery.

Remove wiper transmission cover and cable connecting arm.

Remove three motor to mounting bracket stud nuts.

Disconnect wires from motor.

WINDSHIELD WIPER ARMS AND BLADES

The windshield wiper arms are fastened to the wiper drive shafts with friction nuts which set on the shaft and screw into the arm.

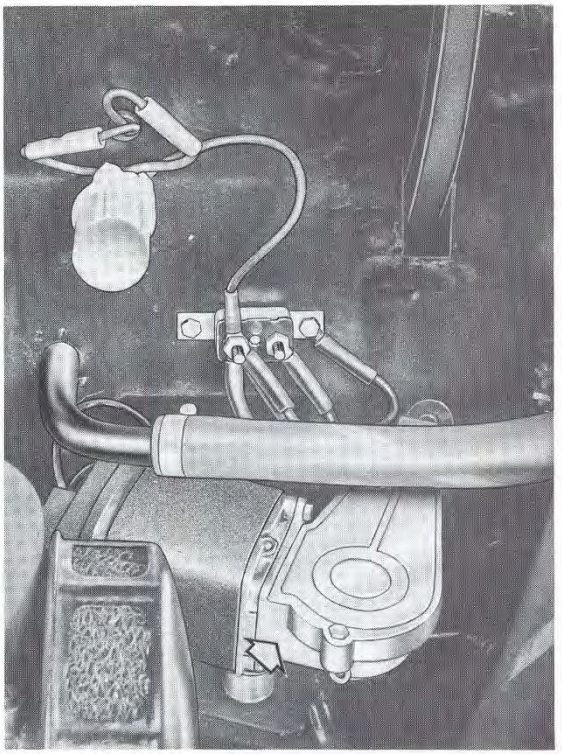
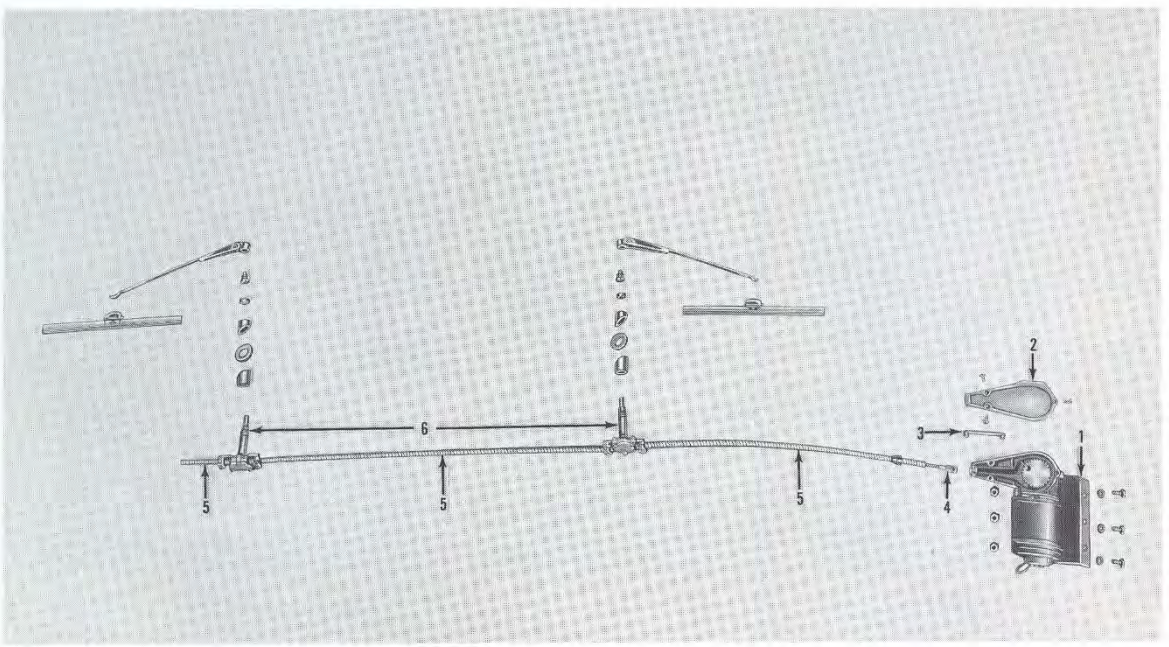


FIGURE 9—*Wiper Motor Location.*



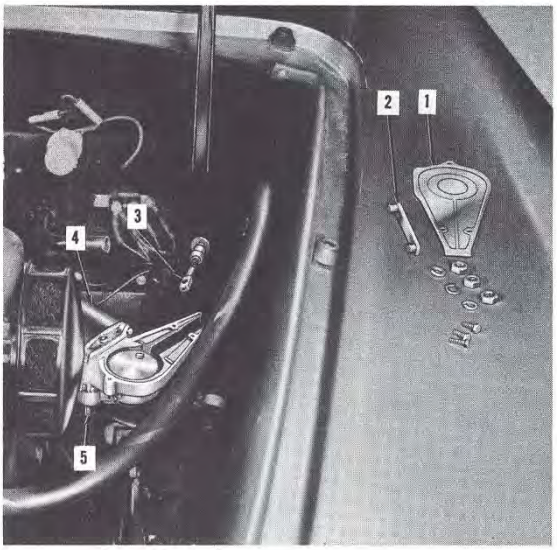
1. Windshield Wiper Motor and Transmission Assembly
2. Transmission Cover (removed)
3. Transmission to Cable Connection Arm
4. Actuating Cable (Motor End Shown)
5. Cable Armor
6. Windshield Wiper Arm, Drive Shaft, and Housing Assembly

FIGURE 10—*Windshield Wiper Assemblies as Removed From Car.*

Wiper Arm Removal and Installation

The wiper arm friction lock nut has a right hand thread.

Loosen the friction nut and slide arm and nut off the shaft.



1. Wiper Transmission Cover
2. Transmission to Cable Connecting Arm
3. Cable Motor End
4. Wiper Motor
5. Fastening Stud Motor to Bracket

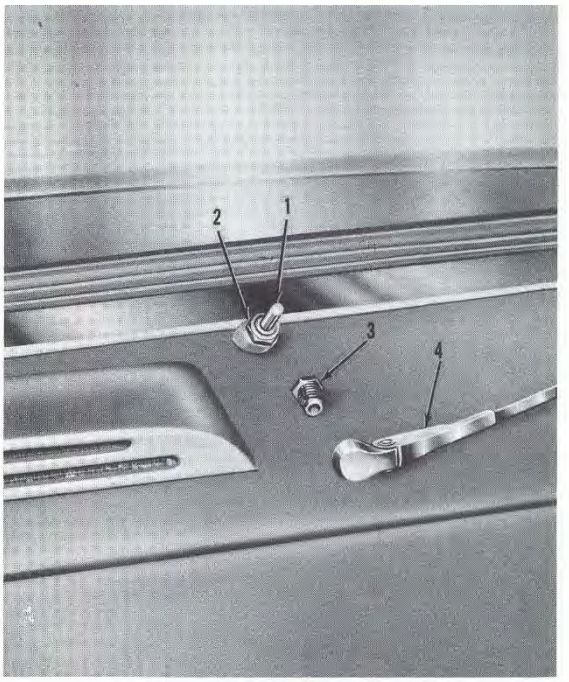
FIGURE 11—*Disconnecting Cable From Motor.*

When installing wiper arms, a final adjustment must be made whereby both arms will have the same limit of travel.

Wiper Shaft Removal

Disconnect the battery.

Remove the wiper arms and blades.



1. Windshield Wiper Shaft
2. Wiper Shaft Holding Nut
3. Wiper Arm Friction Lock Nut
4. Wiper Arm

FIGURE 12—*Wiper Arm Removed.*

Remove cover plate from wiper transmission.

Remove cable to transmission connecting arm.

Remove wiper shaft holding nuts.

Pull cable and armor through dash panel to the inside of the car.

The complete cable and drive shaft assembly can then be removed from under the instrument panel by moving the assembly out the left side.

INSTRUMENT PANEL SECTION

INSTRUMENT PANEL

The instrument panels are similar in face design, however, due to the different construction of the bodies, they are not interchangeable.

HARDTOP

The instrument panel for the Hardtop has a top surface which extends under the windshield finish moulding, and is fastened with screws to the cowl rail. These screws are visible when the finish moulding is removed (Fig. 4). The ends of the instrument panel are also fastened to each body pillar.

CONVERTIBLE

The instrument panel in the Convertible does not have a top surface, due to the extension of the cowl top to the inside of the windshield, which serves as a top surface for the instrument panel.

The top edge of the instrument panel has a sharp right angle flange and is mounted to the cowl top under the crash pad (Fig. 5).

The instrument panel is bolted to the cowl top with four (4) studs, which are welded to the cowl top.

The right and left ends are held to the cowl side reinforcements by a vertical bolt.

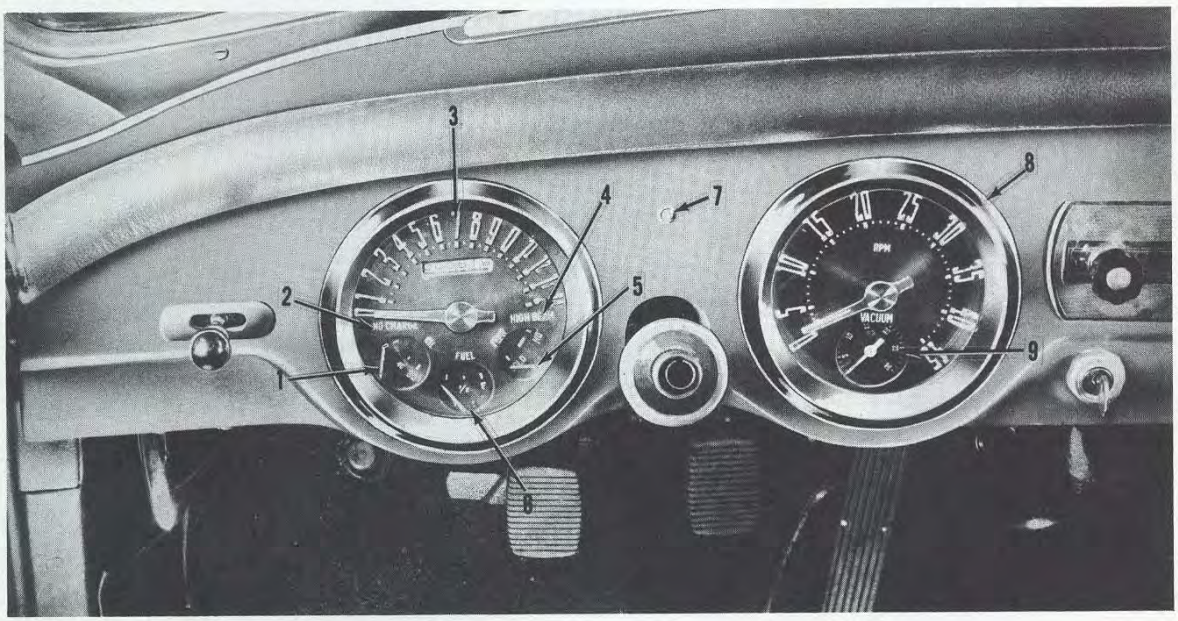
GLOVE BOX LOCK

Removal

To remove the glove box lock, the leather trim panel must be removed from the glove box cover by removing the screws in the cover flange. This will expose the lock to cover fastening nuts.

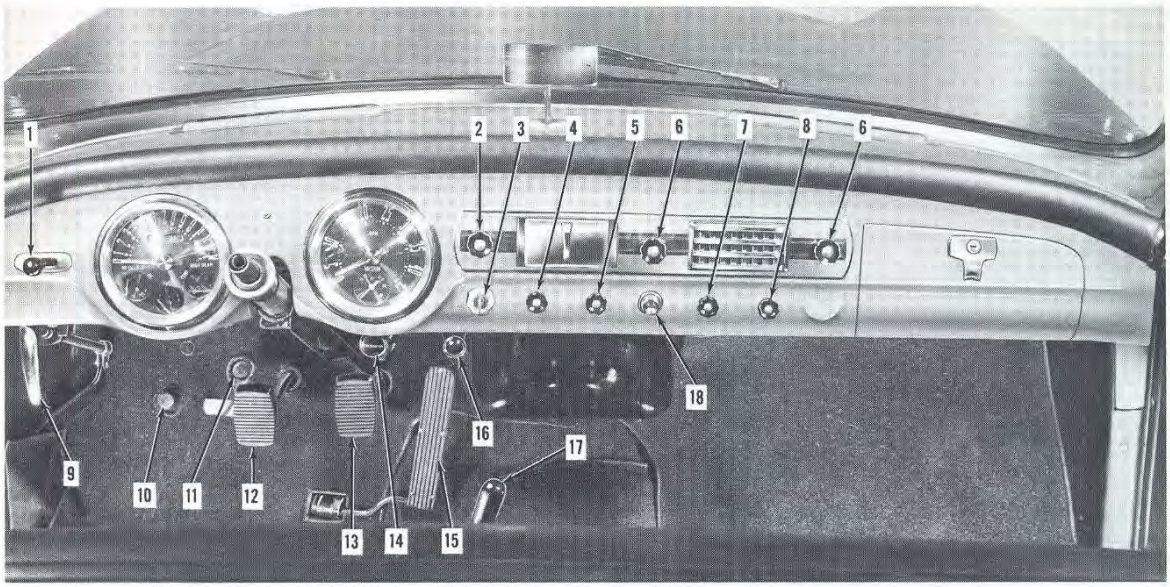
With the lock removed from glove box cover, the cylinder lock can be removed from the housing by inserting the key and turning it to the vertical position. This will position the lock plunger for removal of the cylinder. Then remove the key.

Insert a paper clip in the small round hole and depress the retaining plunger; at the same time, pull out on the cylinder until the retaining plunger passes to the outside of the housing. Then insert the key and remove the cylinder from the housing.



1. Oil Pressure Gauge
2. No Charge Indicator Light
3. Speedometer
4. High Beam Indicator Light
5. Temperature Gauge
6. Fuel Gauge
7. Overdrive Indicator Light
8. Tachometer
9. Vacuum Gauge

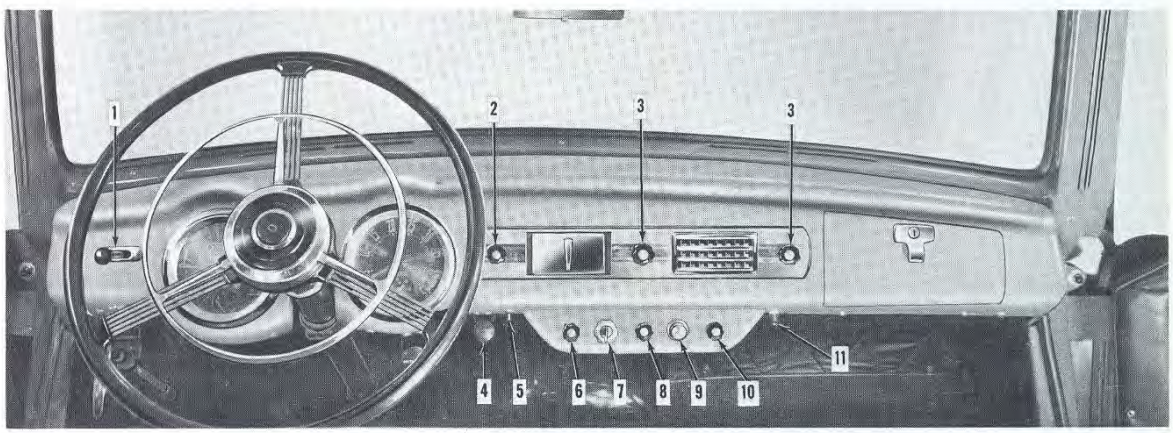
FIGURE 1—*Instrument Panel With Mounted Instruments (Steering Wheel Removed—Convertible Shown).*



1. Directional Signal Switch
*2. Weather Eye Heater Motor and Cowl Ventilator Control
#2. Weather Eye Valve and Heater Motor Control
3. Ignition Switch
*4. Starting Mixture Control
#4. Windshield Wiper Control
5. Head Light Switch
6. Radio Controls
7. Courtesy Light Switch
*8. Windshield Wiper Control
#8. Not Used
9. Hand Brake Lever
10. Dimmer Switch
11. Starter Switch
12. Clutch Pedal
13. Brake Pedal
14. Overdrive Control Knob
15. Accelerator Pedal
*16. Heater Valve Control
#16. Cowl Ventilator Control
17. Gear Shift Lever
18. Cigar Lighter

* S.U. Carburetor Equipped
\# Carter Carburetor Equipped

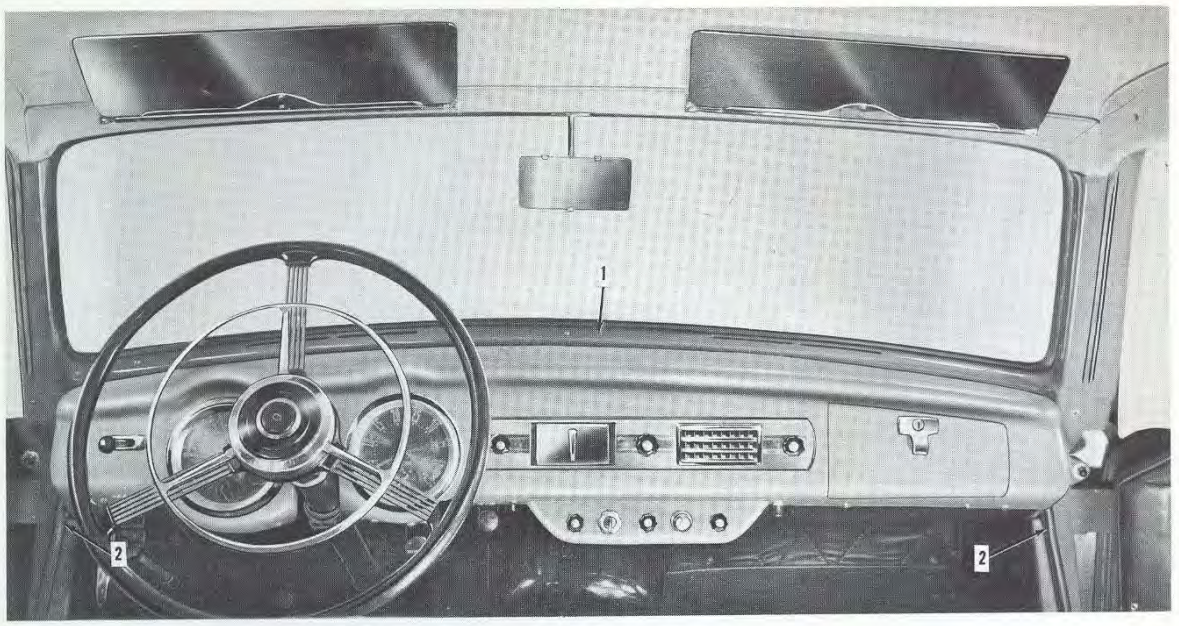
FIGURE 2—*Instrument Panel and Driving Controls (Steering Wheel Removed—Convertible).*



1. Directional Signal Switch
*2. Starting Mixture Control
#2. Weather Eye and Heater Motor Control
3. Radio Controls
4. Cowl Ventilator Control
5. Courtesy Light Switch
6. Windshield Wiper Control
7. Ignition Switch
*8. Weather Eye Valve and Motor Control
#8. Head Light Switch
9. Cigar Lighter
*10. Head Light Switch
#10. Not Used
11. Dome Light Switch

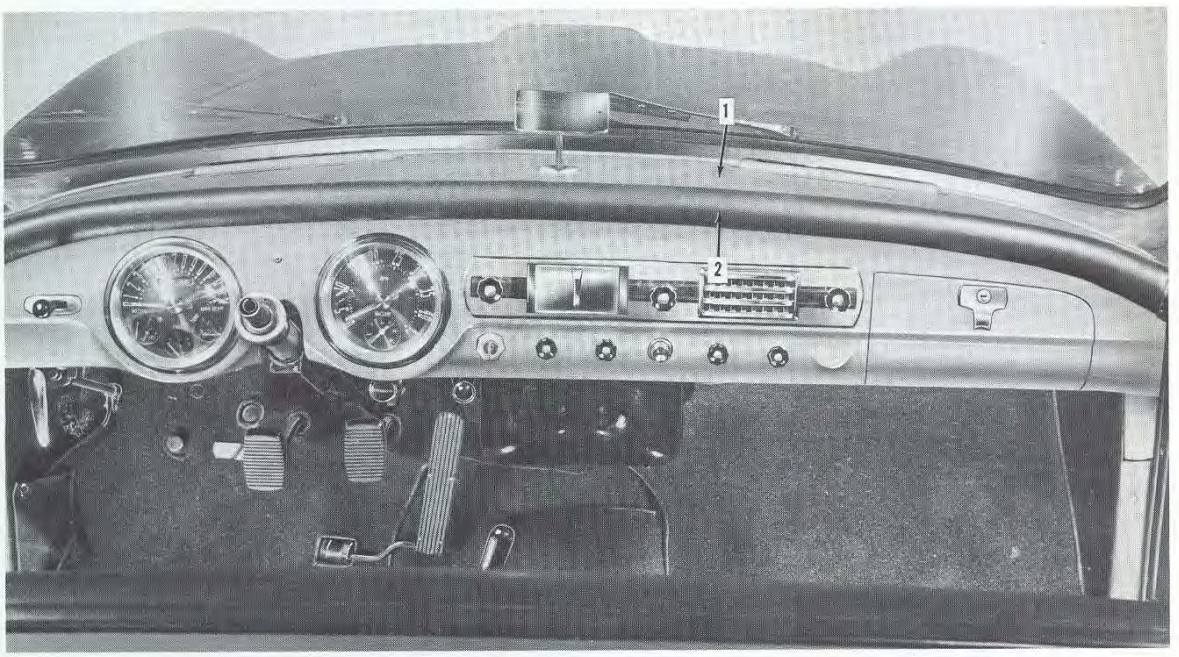
* S.U. Carburetor Equipped
\# Carter Carburetor Equipped

FIGURE 3—*Instrument Panel and Controls (Hardtop).*



1. Screws to Cowl Rail Under Finish Moulding
2. Screws Instrument Panel Ends to Body Pillars

FIGURE 4—*Instrument Panel (Hardtop).*



1. Cowl Top Inside of Windshield
2. Top of Instrument Panel Flanged and Fastened to Cowl Top

FIGURE 5—*Instrument Panel (Convertible).*

Installation

Lubricate the lock cylinder plungers with powdered graphite.

Depress all plungers and insert key.

Then insert key and cylinder into the lock housing. Hold the cylinder in the lock housing and remove the key.

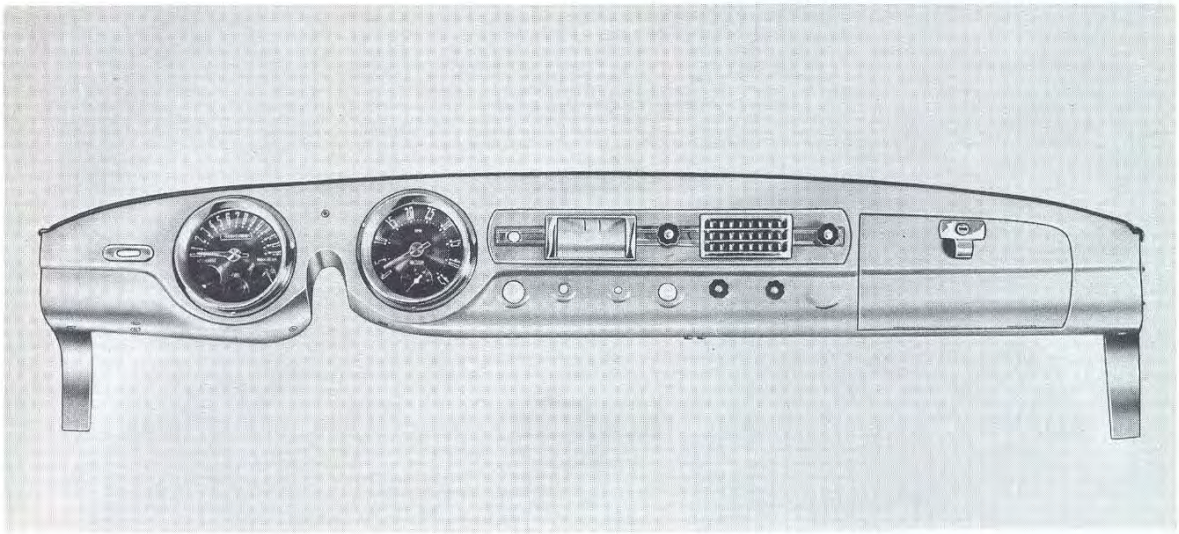


FIGURE 6—*Instrument Panel Removed From Car.*

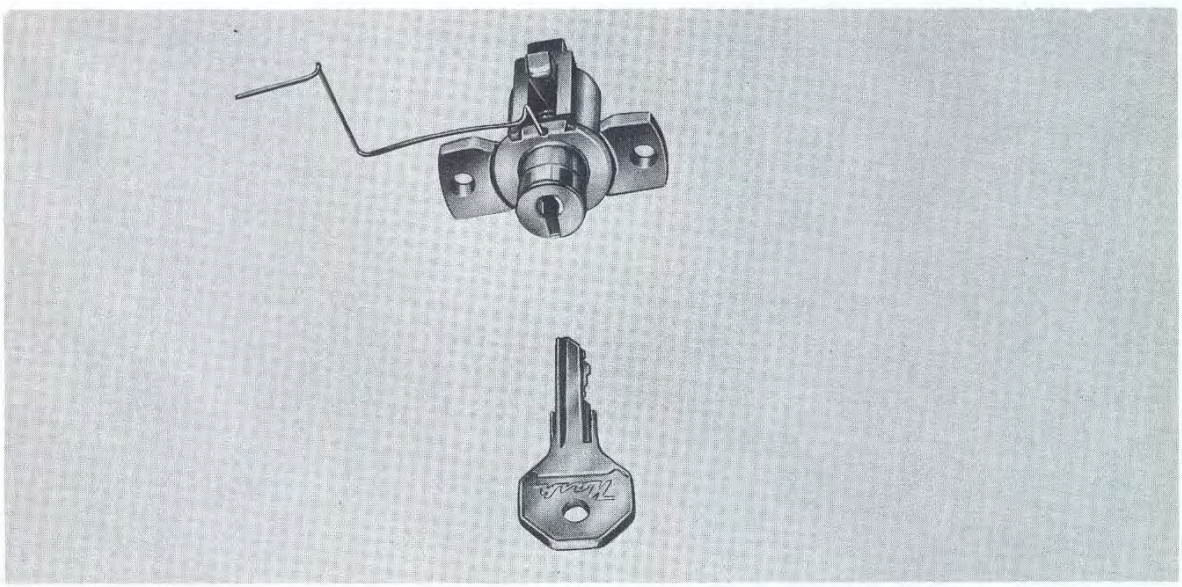


FIGURE 7—*Glove Box Lock Cylinder Removal.*

SEAT ASSEMBLIES AND ADJUSTERS SECTION

SEAT BACK AND FRAME ASSEMBLY

Two types of seat back assemblies are used, solid seat backs with cut center arm rests and those with folding center armrests.

SEAT BACK AND FRAME ASSEMBLY CENTER ARMREST

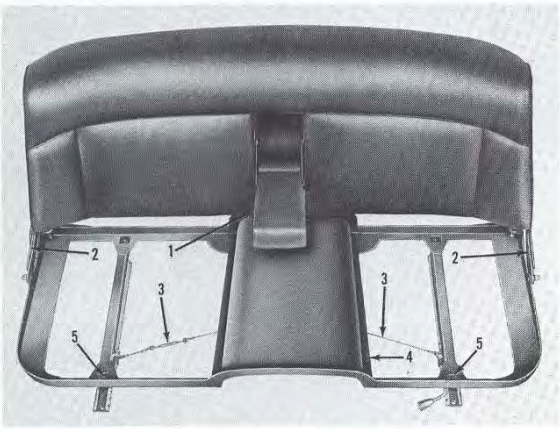
The seat back assembly is bolted to the base. The bolts also are used as the pivot for folding the seat back forward.

The center armrest assembly folds into a well provided in the seat back.

The seat back upholstery (front of back) is tacked to the seat frame. The kickpad is screwed to the seat back frame.

The kick pad scuff plate protects the kick pad when the folding top is in the lowered position. This scuff plate is on Convertible models only.

The seat back adjusting screw provides a desired tilt to the seat back.



1. Folding Center Armrest Assembly
2. Seat Back Hinge Bolt to Seat Base
3. Seat Adjuster Slide Latch Cable and Adjusting Turn Buckle
4. Seat Base
5. Seat Adjuster Slides

FIGURE 1—*Seat Back and Base Assembly.*

Seat Back and Cushion Removal:

Remove the seat cushion by lifting the front of the cushion from the base.

Move the seat to the forward position on the adjusters.

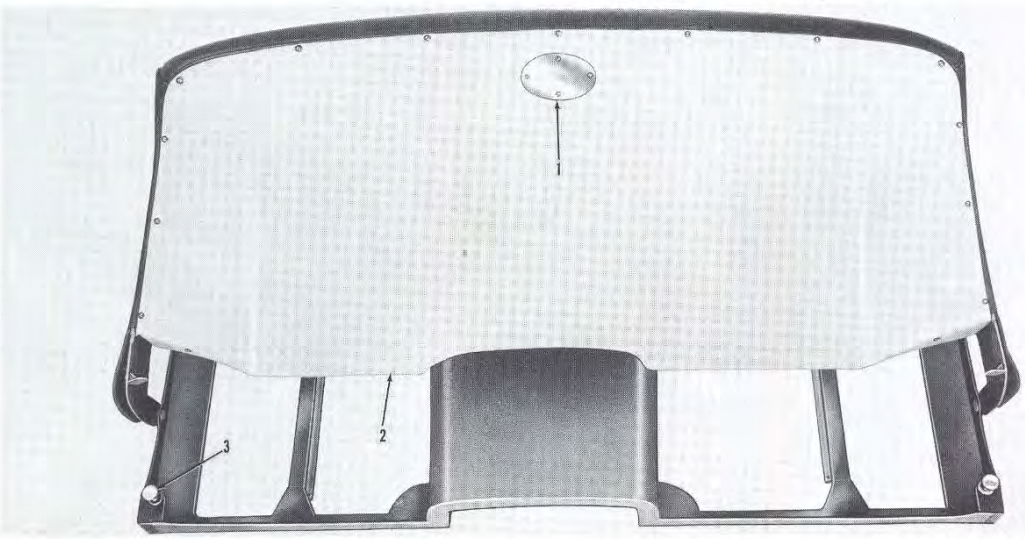
Remove the adjuster to floor mounting screws at the rear of the adjusters.

Then move the seat to the rear-most position on the adjusters and remove the two front screws, adjuster to floor.

The seat back and adjusters can then be removed from the body.

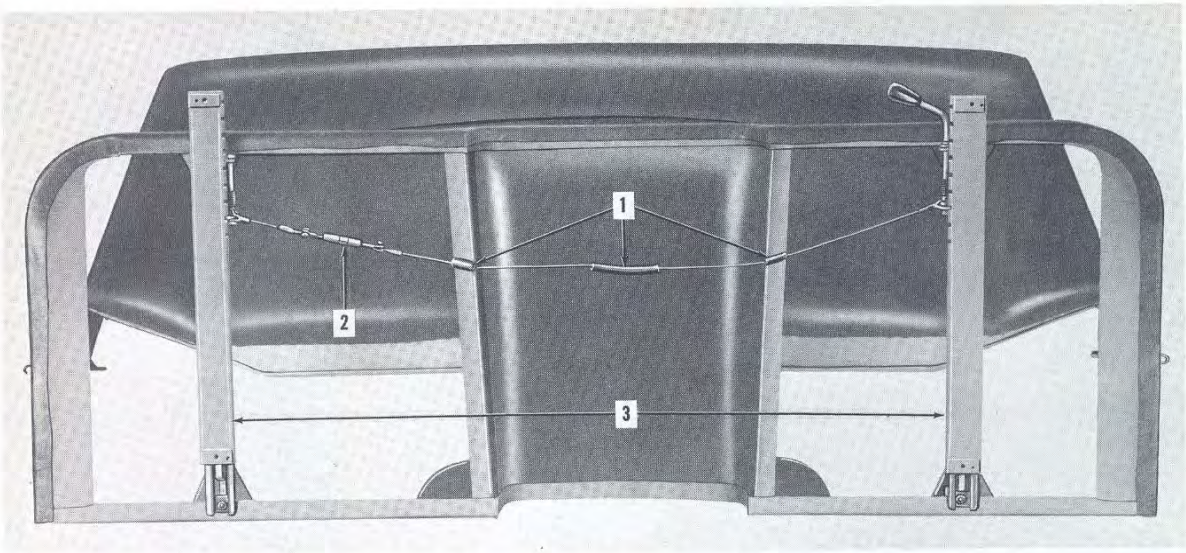
To remove the seat adjusters from the seat frame, disconnect the latch cable from each adjuster by removing the attaching pins.

Remove the seat frame to adjuster nuts, thereby removing the seat adjuster.



1. Kickpad Scuff Plate
2. Kickpad
3. Seat Back Adjusting Screws

FIGURE 2—*Seat Back and Base, Rear View (Convertible).*



1. Seat Adjuster Latch Cable Guide Supports
2. Latch Cable Adjusting Turn Buckle
3. Seat Adjusters

FIGURE 3—*Seat Back Base and Adjuster Assembly (Bottom View).*

DOME LIGHT—HEADLINING SECTION

DOME LIGHT

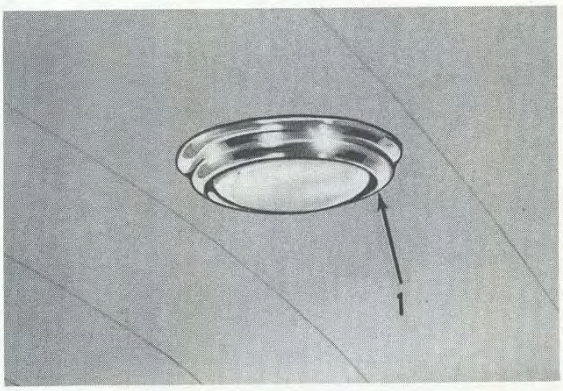
The dome light switch is located on the bottom of the instrument panel to the right of the control panel.

The dome light rim and glass assembly is retained into the dome light base by four spring clips.

It can be easily removed by inserting a putty knife blade between the edge of the rim and headlining and carefully prying rim from ceiling of car (Fig. 1).

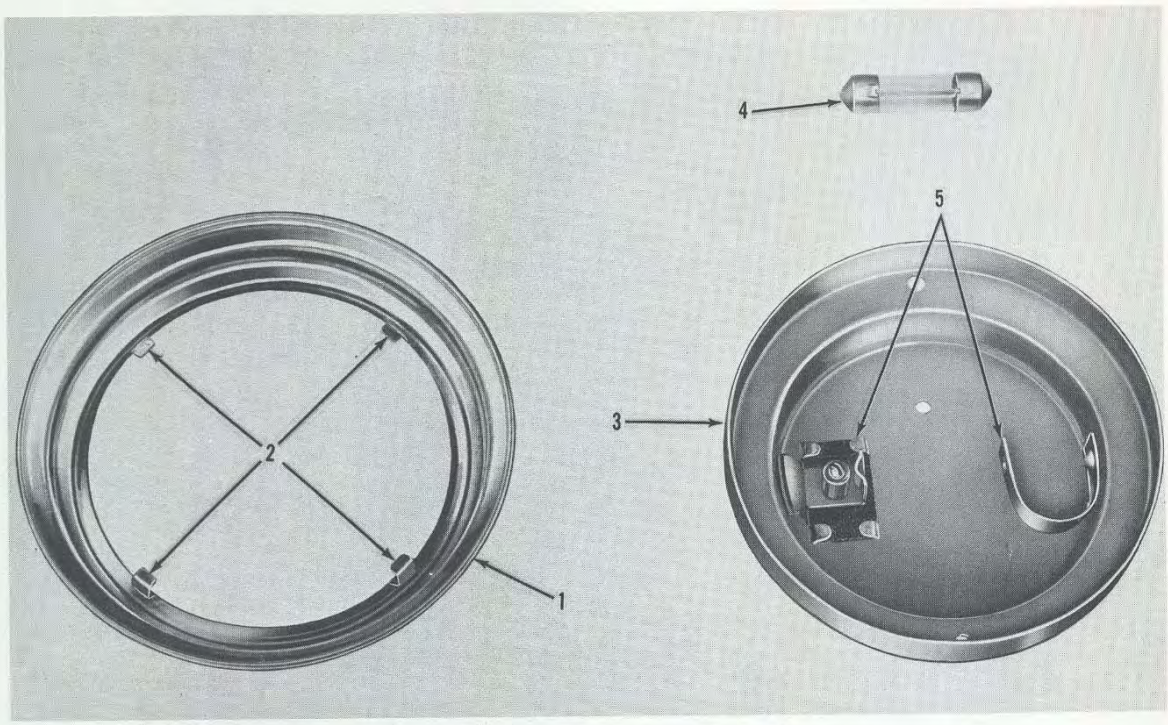
The dome light base is mounted to a support by two screws visible when the rim and glass is removed.

The bulb is a tubular design and is retained in the base under spring tension by the ground contact section of the socket (Fig. 2).



1. Pry Lens Down For Removal From Base

FIGURE 1—*Dome Light and Lens Assembly.*



1. Dome Light Rim and Lens Assembly
2. Retaining Clips
3. Dome Light Base
4. Dome Light Bulb
5. Dome Light Bulb Retainer

FIGURE 2—*Dome Light Assembly Removed.*

HEADLINING

The headlining is tailored to conform with the contour of the roof panel and provide an interior trim surface for the car ceiling.

At the seam of each of these fitted panels, a tubular cloth strip or listing is sewed. Listing wires are inserted through these listings, then the ends of the wires are fastened to the side roof rails with screws. This serves as a support for the headlining from the windshield header to the rear window frame.

The front edge of the headlining is cemented to the windshield header, then held in place by a steel trim rail fastened with screws, all of which are concealed by the headlining.

The rear edge of the headlining is cemented to the rear window frame and concealed by the finish moulding frame.

Headlining Removal

Remove the rear window shelf panel by removing the two end screws (Fig. 3). This will provide access for removing the bottom screws of the rear window finish moulding.

Remove rear window finish moulding.

Remove rear quarter window finish moulding.

Remove windshield finish moulding.

Remove sun visors, rear view mirror, and windshield header trim panel.

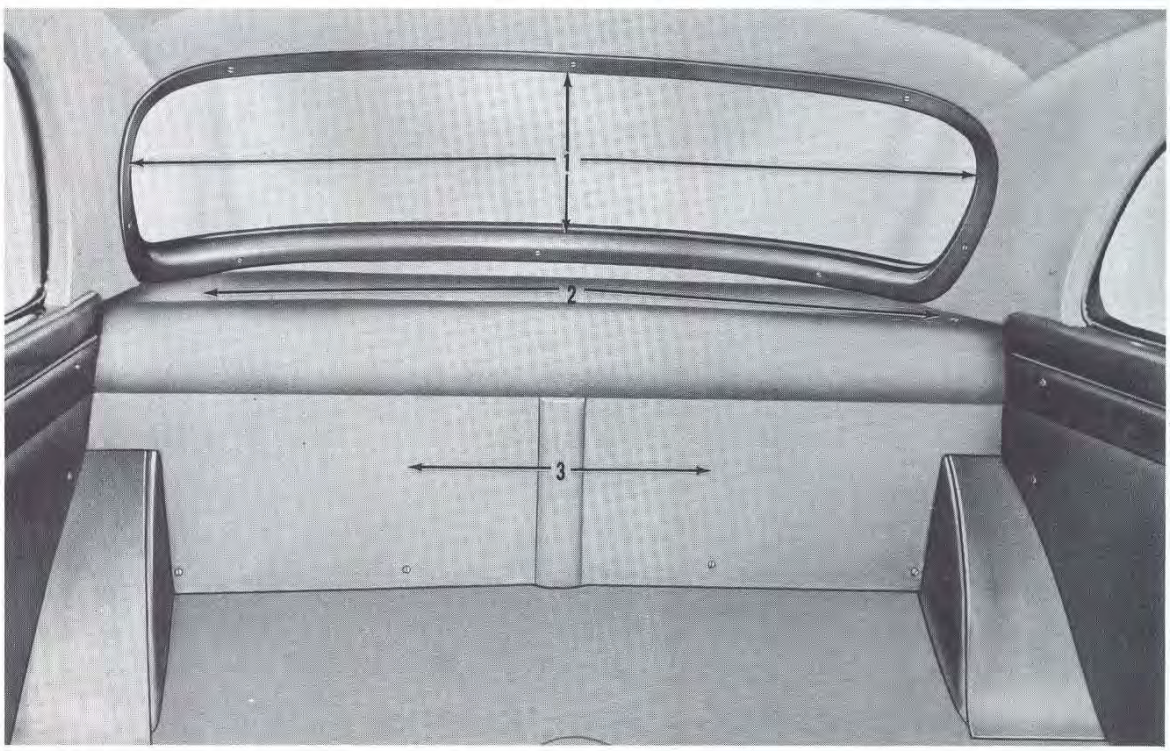
Remove side roof rail trim panel.

Remove dome light rim and glass assembly. Then disconnect wire and remove dome light base, loosening edges of headlining cemented to dome light support.

Loosen rear edge of headlining cemented to rear window frame and along both side roof rails, using masking tape to hold edge of headlining up as shown in Figure 5.

Remove screws holding both sides of listing wires to side roof rail.

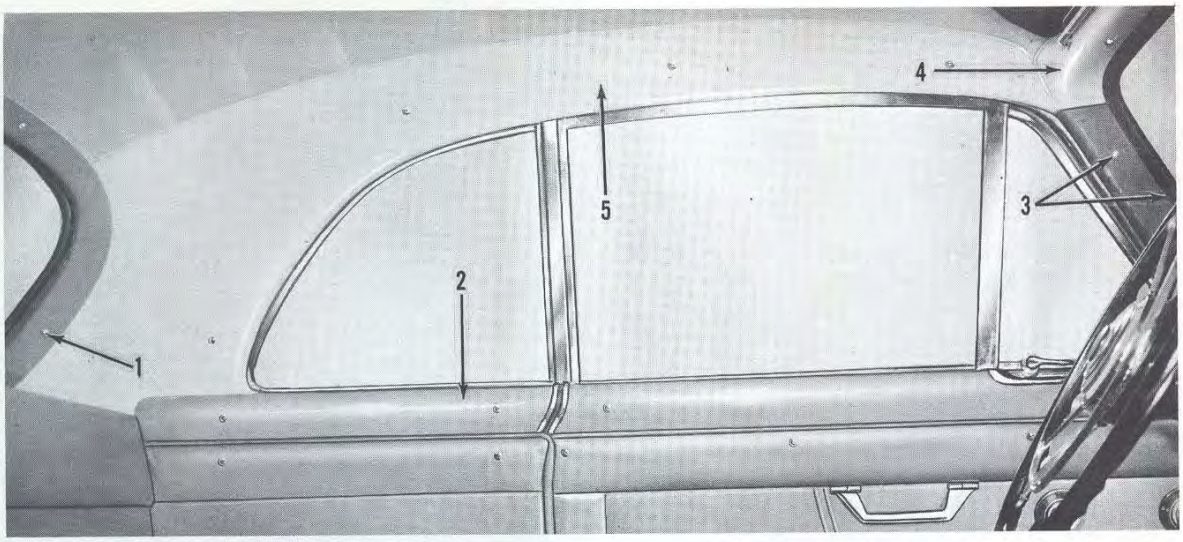
Start at the rear listing wire at the rear window and continue toward the windshield.



1. Rear Window Finish Moulding
2. Rear Window Shelf Panel (End Screws)
3. Rear Compartment—Back Board Trimmed

FIGURE 3—*Rear Window Finish Moulding and Trim Panels.*

DOME LIGHT — HEADLINING

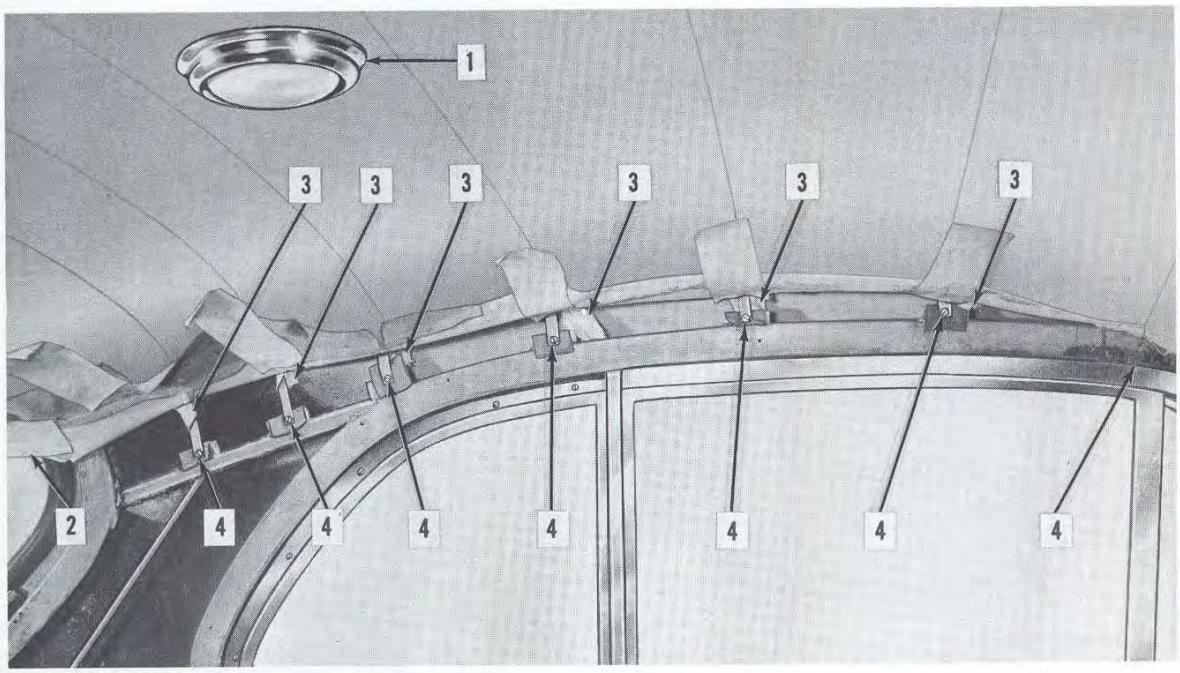


1. Rear Window Finish Moulding
2. Rear Quarter Window Finish Moulding
3. Windshield Finish Moulding
4. Windshield Header Trim Panel
5. Side Roof Rail Trim Panel

FIGURE 4—*Trim Parts To Be Removed For Headlining Removal.*

With the headlining lowered in this manner, the inside front edge trim rail at the windshield header will be visible and accessible for removal to completely free the headlining for removal from the car.

NOTE: *The headlining wires are of different lengths and should be left in the headlining at the time of removal. When a new headlining is to be installed, the listing wires must be transferred to their correct location.*



1. Dome Light Assembly
2. Headlining Cemented to Rear Window Frame
3. Headlining Listings Sewed to Headlining
4. Headlining Listing Wires Screwed to Side Roof Rail

FIGURE 5—*Headlining Listing Wires.*

CONVERTIBLE TOP SECTION

CONVERTIBLE TOP

The convertible top is lowered and raised manually. When in the lowered position, it is compactly folded behind the seat back.

Lowering the Top

Release the seat adjuster handle and move the seat to the forward position.

Unhook the three toggle clamps along the top of the windshield.

Raise the top header from the windshield and fold the top back until the slat iron rests on the belt rail crash pad scuff plate.

Unfasten the top to body fastener on each side and slide the rear curtain bar out of the hold down brackets.

Fold the rear window over the rear bow and then fold the ends of top rear curtain toward the center of the car.

NOTE: *CARE MUST BE TAKEN TO PREVENT DAMAGE TO THE REAR WINDOW.*

Tilt the seat back forward.

Depress the thumb release latch on both sides of the car and push the top assembly forward and down behind the seat back.

NOTE: *FOLD THE TOP MATERIAL IN SUCH A MANNER THAT IT WILL NOT REST BETWEEN ANY TWO BRACKETS WHEN THE TOP IS IN THE LOWERED POSITION.*

Raising the Top

Slide the seat on the adjuster to the forward position.

Tilt the seat back forward and pull the top forward and up.

Hook the rear curtain bar into the hold down brackets.

Then fasten the top header to the windshield by setting the three toggle clamps.

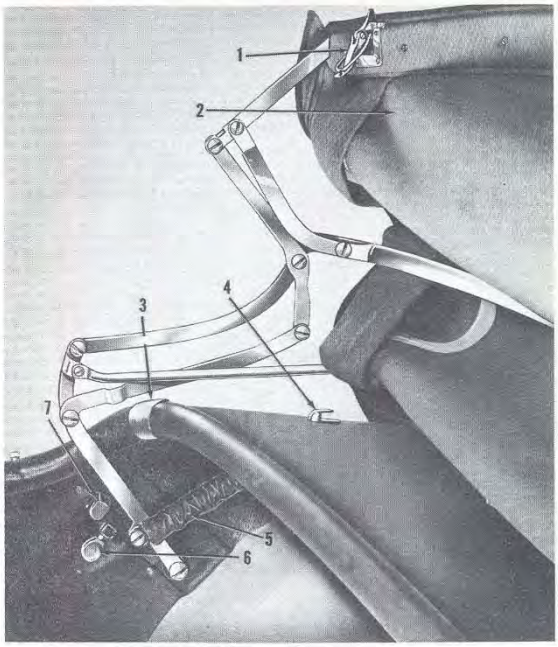
Fasten top to side fasteners.

Do not wipe rear window with dry cloth as this will scratch the back vinyl window. Always use a damp cloth.

Convertible Top Removal

To remove the top assembly from the body, fold the top back away from the windshield.

Release the side fasteners and unhook the rear curtain bar from the hold down brackets.



1. **Toggle Clamp**
2. **Complete Top and Slat Iron Assembly**
3. **Scuff Plate Rear Belt Rail Crash Pad**
4. **Bracket Convertible Top Hold Down**
5. **Tension Spring**
6. **Convertible Top Thumb Release and Latch Lock**
7. **Top Catch Lock Bracket**

FIGURE 1—*Top Hinge Slat Iron Unhooked From Latch Bracket to Release Spring Tension.*

Depress the thumb release latch lock and unhook the slat iron hinge from the top catch lock bracket, which will allow the top to move back far enough to release the tension of the spring.

Remove the spring attaching bolts and unhook the springs from the studs.

Remove the hinge slat to body pivot screws and remove slats from studs.

The top assembly can now be removed.

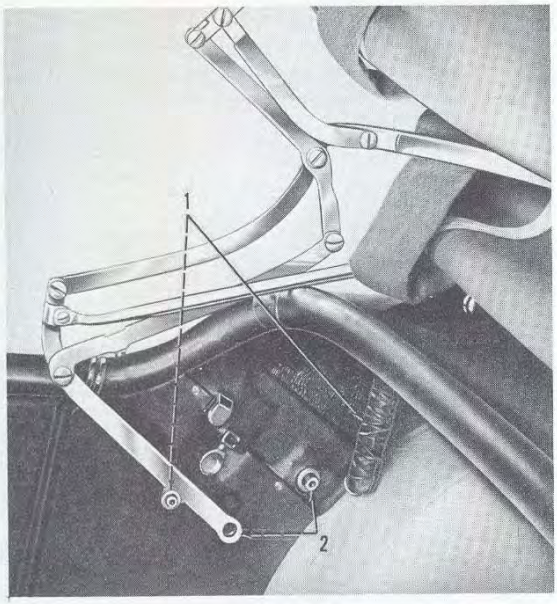
Convertible Top Construction

The slat irons are screwed to one another and to the top bows.

The top covering is tacked to the header rail and the tacks are concealed by an aluminum moulding.

The slat iron and top bow assembly is fastened to the top header rail with screws (Fig. 3).

The stay pads are fastened to the bows with screws and sewed to the rear curtain bar through holes provided in the metal bar (Fig. 4).



1. Tension Spring Released
2. Slat Iron Hinge Removed From Body Stud

FIGURE 2—*Top Assembly Removal, Right Side Shown.*

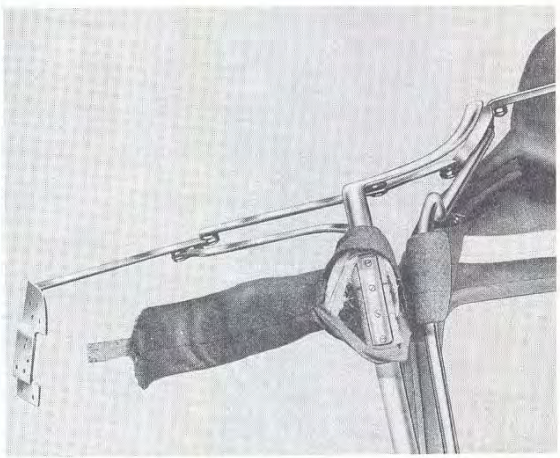


FIGURE 4—*Stay Pad Screwed to Bows.*

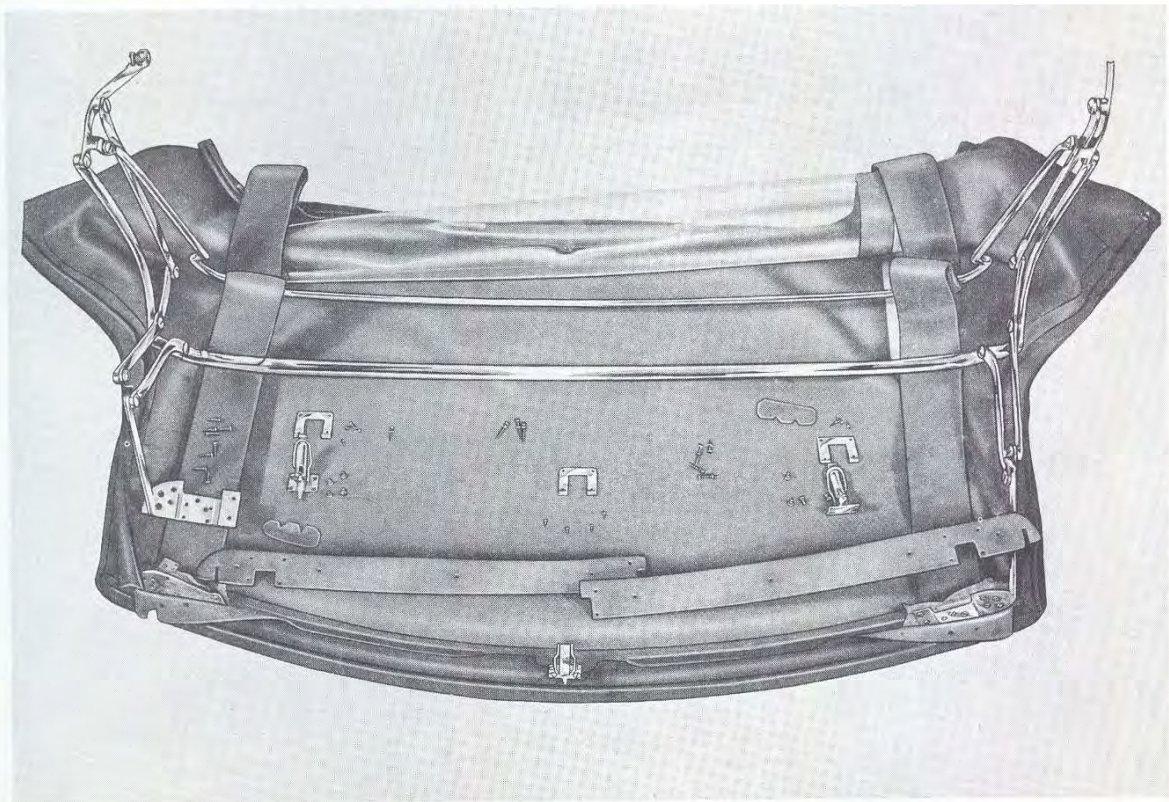


FIGURE 3—*Slat Iron Assembly Removed From Header.*

TECHNICAL SERVICE LETTER REFERENCE

Date	Letter No.	Subject	Changes information on Page No.

Inside back cover - no text

NAS 53-737—3M—7-53

LITHOGRAPHED IN U.S.A.