1959 Corvette: Service Bulletin: Windshield Washers

1959 Corvettes did not come with a windshield washer system as a standard option. It could be ordered with RPO #109. This Chevrolet Service Bulletin - DR #405 is not in the factory Shop Manual for 1959 Corvettes.

CHEVROLET—CENTRAL OFFICE

DIVISION OF GENERAL MOTORS CORPORATION
DETROIT 2, MICHIGAN

TECHNICAL SERVICE BULLETIN

Service and Mechanical Department

SUBJECT: 1959 PASSENGER CAR WINDSHIELD WASHERS

BULLETIN No. DR #405

SECTION I
CROSS REFERENCE XV

TO: ALL CHEVROLET DEALERS

March 18, 1959

In the event malfunction of 1959 Passenger Car Windshield Washer is encountered, the following items should be checked and corrected as necessary.

HOSES

The most important item to be checked on 1959 Passenger Car windshield washers are the hoses. Check hoses thoroughly for cracks, kinks or hoses not fully pushed on fittings. If any of these conditions are found, replace plastic hoses with rubber hoses.

PARTS DATA

Rubber Hose #601585* 5/32" I.D. - Outlet
Rubber Hose #601607* 7/32" I.D. - Inlet

Washer Type	Hose Location	Size I.D.	Length
USED WITH 2-SPEED WIPER	Reservoir to Pump	7/32"	32"
	Pump to L.H. Nozzle	5/32"	22"
	Pump to R.H. Nozzle		
ELECTRIC WASHER USED WITH SINGLE SPEED WIPER	Reservoir to Tee	7/32"	14"
	Tee to L.H. Nozzle	5/32"	8"
	Tee to R.H. Nozzle	5/32"	22"
FOOT OPERATED	Pump to Reservoir	7/32"	20"
	Reservoir to Tee	5/32"	15"
	Tee to L.H. Nozzle	5/32"	8"
	Tee to R.H. Nozzle	5/32"	22"

* Bulk hose.

It will be necessary to reshape existing hose clips along front of dash to accomodate the larger O.D. rubber hose.

ANTI-FREEZE PROTECTION

G.M. Windshield Washer Anti-Freeze #987867 must be used to provide full freeze-up protection.

Regular Windshield Washer Solvents such as Kleer-View Windshield Washer Solvent #987631 will protect in only that the fluid freezes to a "slush." This "slush" can hold inlet and outlet check valves open on pumps causing malfunction.

The primary causes of failure on the electric pump used with the single speed wiper has been cracked pump reservoirs due to freezing.

ELECTRICAL CONNECTIONS

Check all electrical connectors to assure they are fully in position.

There is a possibility some early production units were built where the switch at the instrument panel is not properly grounded. To correct, install a 1/2" I.D. internal tooth lock washer between switch and instrument panel. Lock washer is positioned between switch body and backside of instrument panel.

Check wiper ground strap at front of dash to assure a good ground.

WASHER WITH TWO-SPEED WIPER

Washer Does Not Pump

If washer does not pump or pumps only a small amount and pump can be heard to be operating, the inlet check valve may not be seating. To check, remove pump inlet hose at washer jar and attempt to draw on hose with mouth. This should shut-off valve at pump and no air or water should be drawn out of hose. If valve does not seal off hose, proceed as follows:

1. Blow into hose. It is possible that dirt, ice, or "slush" holding valve open. Reference - see paragraph on use of Anti-Freeze. Repeat trying to draw on hose to see if valve now closes.
2. If step one failed to correct the condition, it will be necessary to remove complete wiper and pump unit. Reference - Page 14-10, 1959 Passenger Car Shop Manual.
3. Remove water inlet and outlet valve assembly (containing water intake and discharge ports) from pump. Check rubber intake and discharge valves. If valves are out of position or have a white deposit built up under them, replace valve assembly.

   NOTE: As an aid in trouble shooting, hook up unit and bench test before reinstalling in vehicle.

WASHER DOES NOT STOP AT END OF CYCLE. The normal cycle produces approximately twelve (12) intermittent squirts of water.

A few very early units may have a relay armature with a small opening or window which may contact the drive pawl. This could allow the drive pawl to push the armature up out of the park position and allow unit to recycle. Later armatures had a wider window and also a notch at end that contacts nylon gear. This notch prevented the drive pawl from catching top of ratchet tooth which also may cause unit to recycle. Later armatures incorporated additional features to maintain free movement and assume proper stop.

CORRECTION: Replace Relay and Terminal Board Assembly, #4906055 (late type armature is part of this assembly).

1. Remove pump cover. Cover is retained by three (3) screws. See Figure #1.

2. Lift terminal board up.

3. Pull relay out of pump body. Relay is retained by clip. Relay, armature and terminal board will come out together. See Figure #2.

4. Reinstall new Relay and Terminal Board Assembly, #4906055.

NOTE: See Figure #4, examples of early and late armature.

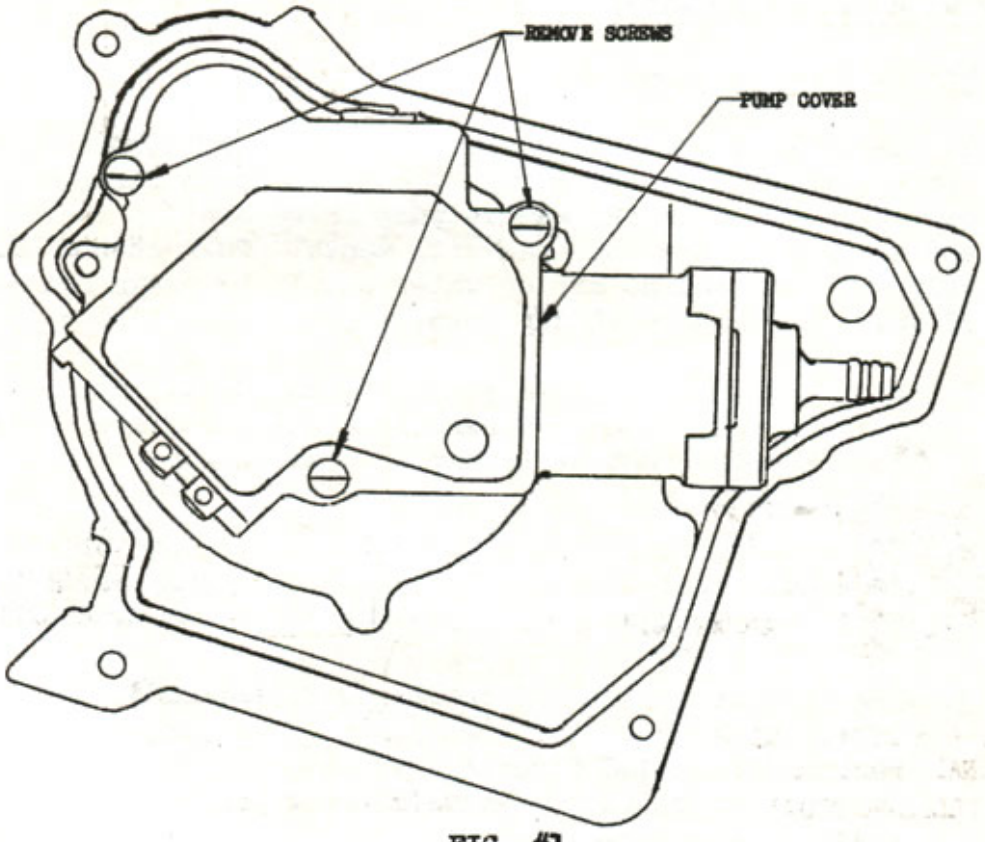
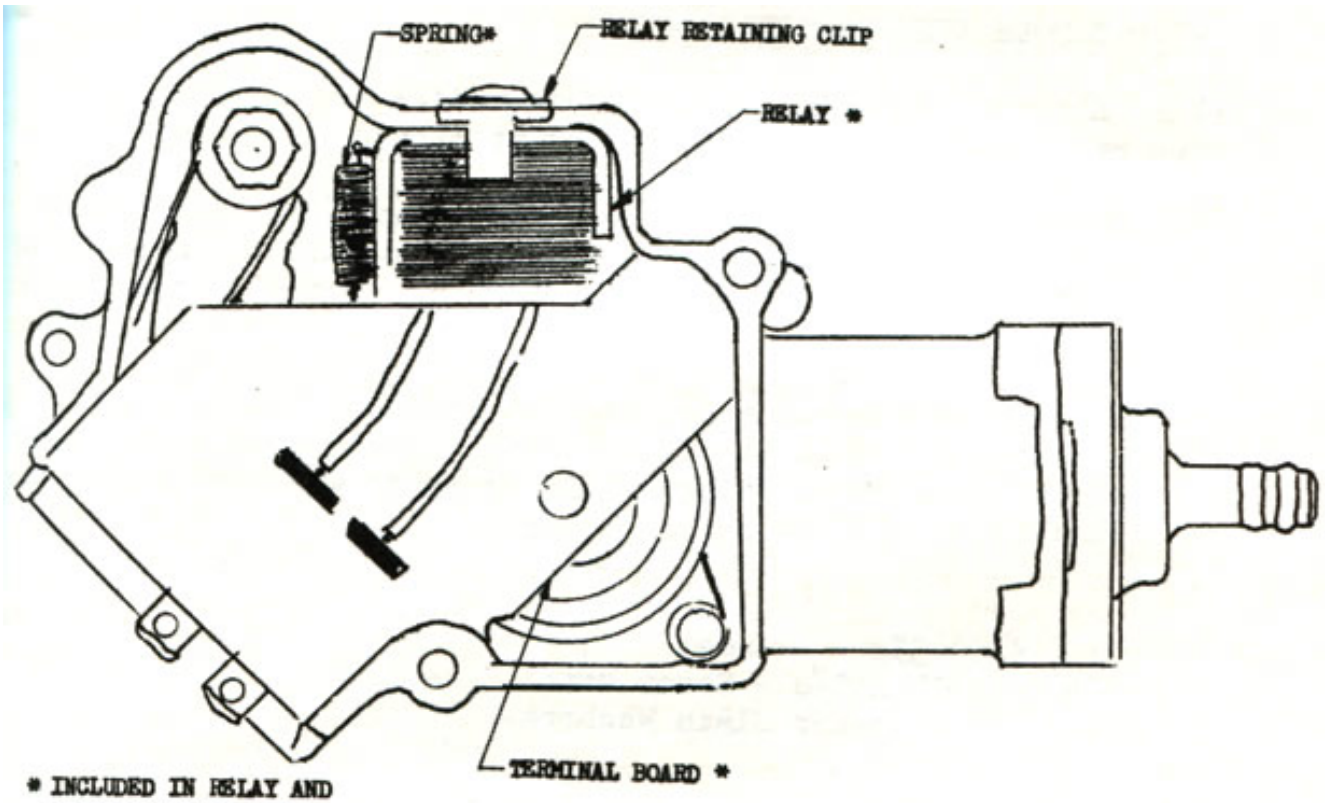
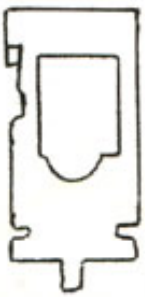


FIG. #1

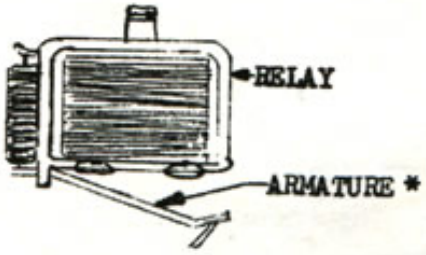


* INCLUDED IN RELAY AND TERMINAL BOARD ASSY., #906055

FIG. #2

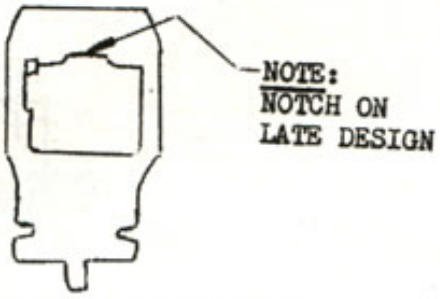


ARMATURE - EARLY DESIGN



RELAY & ARMATURE WITH TERMINAL BOARD REMOVED (FOR ILLUSTRATION)

FIG. #3



ARMATURE - LATE DESIGN

FIG. #4

WASHER WITH SINGLE SPEED ELECTRIC WIPER

In the event complaints of excessive noise are received on the above washer, the following steps should be taken:

1. Drive shaft housing tube loose at cover. Re-cement tube using Duco lacquer thinner 3361 or equivalent. Dip end of the tube in thinner and reposition in cover. Allow 20 to 30 minutes to dry.

2. If tube as covered above was not loose or has been re-cemented and unit is still noisy, the complete washer unit can be remounted, using rubber grommets which will help to isolate washer and reduce noise.

PARTS DATA

Four (4) #1944355 - Grommets
Four (4) #10-12 x 5/8 - Sheet Metal Screws
Four (4) 3/8 Diameter Plain Washers.

Rework as follows:

1. Cut off tip of #1944355 grommet as shown in Figure #5.

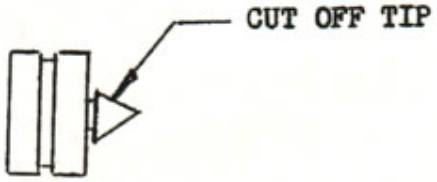


FIG. #5

2. Drill out the four attaching holes in washer mounting bracket to 7/16". Cut away out board edge of attaching holes so grommet can be pressed into bracket. See Figure #6.

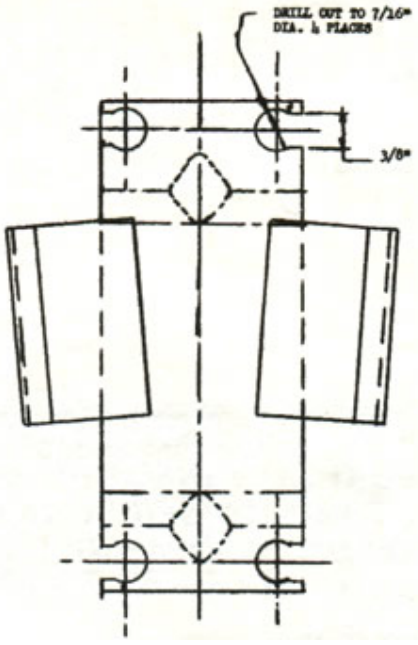


FIG. #6

3. Place 3/8 diameter flat washers on front side of reworked grommets and attach bracket to dash. See Figure #7.

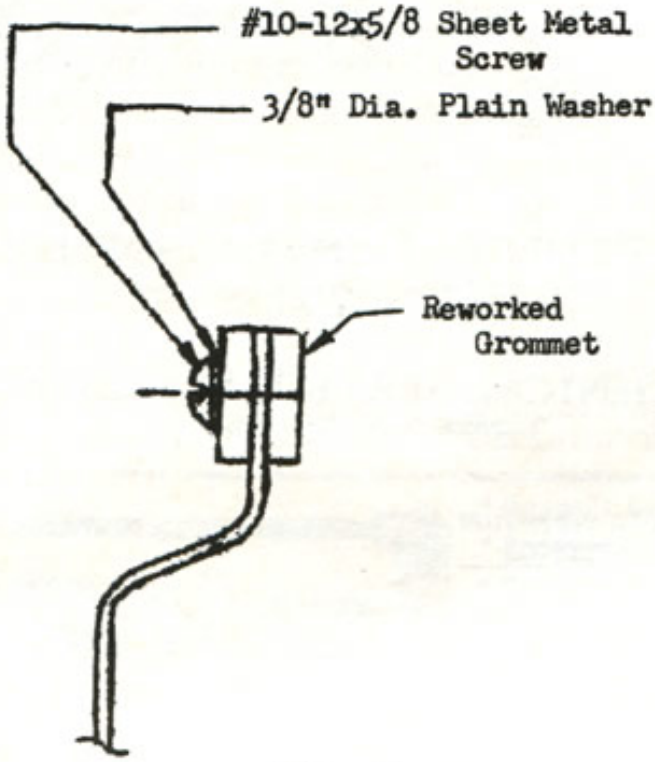


FIG. #7

CAUTION: Unit should never be operated without water. Excessive operation can burn out the lower shaft bearing.

E. L. Lang

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