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Cleaning Corvair Vent Valves

... IMPORTANT AT TUNE-UP TIME!

All Corvair models have a .062" (.089" for Turbocharged) fixed orifice except those vehicles with air conditioning and R10 models which use the conventional CV-584-C ventilation valve.

Use a 1/16" drill size for cleaning the .062" orifice and a No. 43 drill (.089") should be used for cleaning the .089" orifice. Replace CV-584-C when plugged.

Oil Level Gauges for L-6 Engines

The 1965 Chevy II oil level gauge does not always go through the hole in the oil pan baffle as intended but deflects instead along the top of the baffle.

If the above is experienced, the below charted oil level gauge assembly parts for service may be used. Application for all passenger cars is as follows:

**L-6 ENGINE
OIL LEVEL GAUGE FOR SERVICE**

VEHICLE	YEARS	PART NUMBER
Chevy II	1962 thru 1965	3788460
Chevrolet & P10	1963	3860442
Chevrolet, Chevelle, P10 and G10	1964-5	3860442

Servicing Paper Filters

"THROW AWAY FILTER WHEN DIRTY".

The paper element type carburetor air cleaner filter is not serviceable. This filter is to be discarded when dirty.

Inspect at first 12,000 miles, check element, if satisfactory, element may be reused but must be rechecked every 6,000 miles thereafter.

To improve efficiency of the filter a special film of oil was added to the filter at the factory; however, no attempt should be made to clean the filter after once being installed.

Gear Ratio Change 3 Speed Transmission

283 CU. IN. V-8 ENGINE MODELS

Chevelle and Chevy II

Gear ratios have been changed to agree with the same ratios provided for the L-6 engine.

	<i>1st Design</i>	<i>2nd Design</i>
First	2.58	2.94
Second	1.48	1.68
Third	1.00	1.00
Reverse	2.58	2.94

Count the gear teeth of the parts being replaced (determine which design part is being replaced) if both parts are not being replaced at the same time.

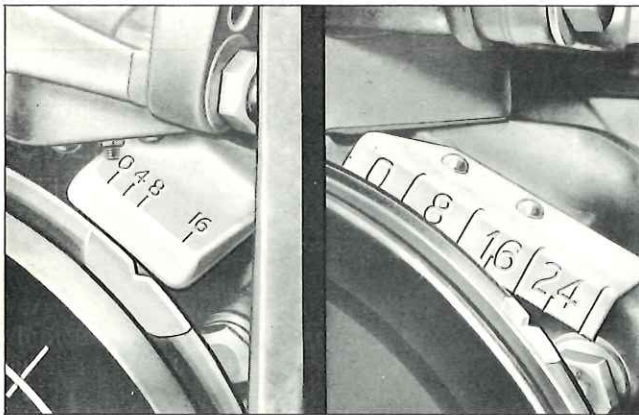
	<i>1st Design</i>	<i>2nd Design</i>
Clutch Gear	3848100	3848101
Counter Gear	3834208	3834207

Important Corvair Tune-Up Change

W/AIR CONDITIONING AND POWERGLIDE TRANSMISSION

The 110 H.P. engine ignition timing (equipped w/air conditioning and P/G) was noted in the May Service News as a change to 24° BTC. However, it should be noted that this timing applies *only for the 2nd design* engine change which is identified by the timing tab. The 1st design is to be set at 14° BTC, as presently specified.

The photo below distinguishes the 1st and 2nd design change timing markers.



1st Design (14°)
Ignition Timing

2nd Design (24°)
Ignition Timing

Belt Tensioning Changes

CHEVROLET, CHEVELLE, CHEVY II AND CORVETTE

The revised belt tension specifications below covering the 3/8" and 15/32" "V" belts apply to all "V" belts of these widths regardless of application for models noted above or such as air conditioning compressor, fan and generator, etc.

NOTE: *It is important that any belt be considered a used belt after its initial installation and under no circumstances be retensioned to the new specification.*

The following are recommended strand tension gauge specifications.

	NEW	USED
3/8" Belt (*) 13" to 16"	125#	75#
3/8" Belt (*) 7" to 10"	125#	75#
15/32" Belt (*) 13" to 16"	140#	95#
15/32" Belt (*) 7" to 10"	140#	95#

(*) Center to center distance of pulleys.

Follow Air Conditioning Test Procedures

Many repairs are reported being made by technicians without properly checking and testing the air conditioning components first.

One specific report indicated that there seems to be differences of opinion amongst some personnel as to when a seal should be changed. Many technicians base the seal changing requirement on the amount of oil thrown out through the seal on to the hood and fender as the criteria.

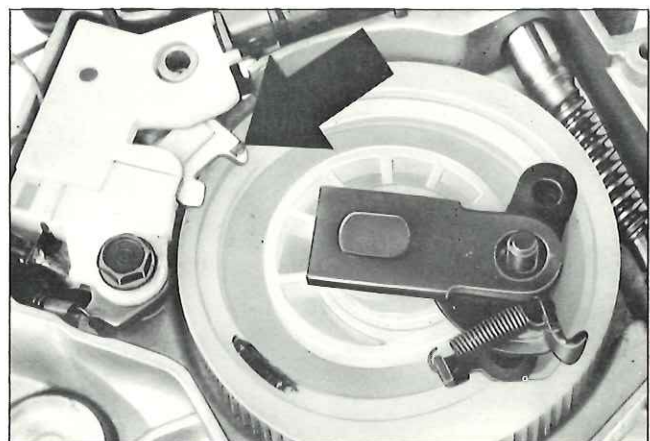
Another similar field check reported that it was admitted by most technicians that many unnecessary seal changes are made as a result of the ring of oil that appears on the hood and fender skirt from normal lubrication of the seal faces.

Leakage however in all cases should be and can be determined *only* by following the regular test procedures outlined in the Shop Manuals.

No attempt should be made to replace seals until necessary steps have been taken to confirm that leaks exist by following published test procedures.

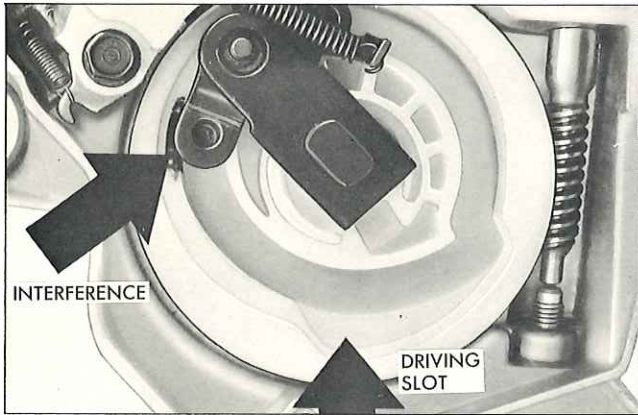
Repair and Adjust—Two Speed Depressed Park Windshield Wiper Units

Two speed (depressed park) windshield wiper units that are unmarked, marked white spot and green spot (identified by a daub of paint on the sheet metal motor housing) should be repaired with repair kit #4916270. Failure of the windshield wiper to shut off is due to internal mechanical damage. See operating procedure, page 3; four stages of operation, page 4; and IN-CAR DIAGNOSIS, page 5.



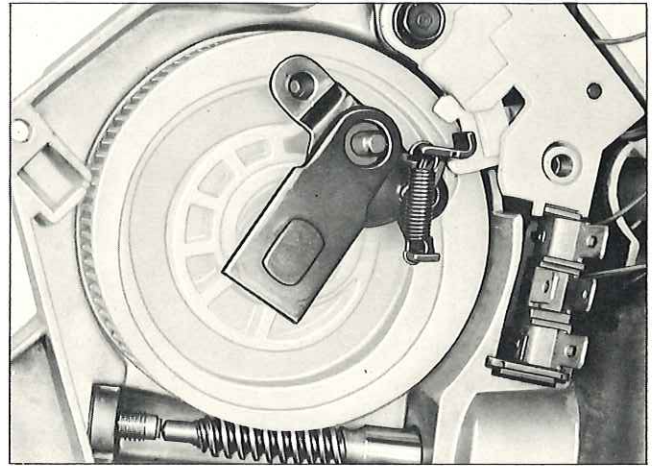
(View of mechanism shut off at mid stroke by turning off ignition.)

Above failure to shut off caused by pawl overriding latch can be diagnosed when wear marks appear on latch tooth face.



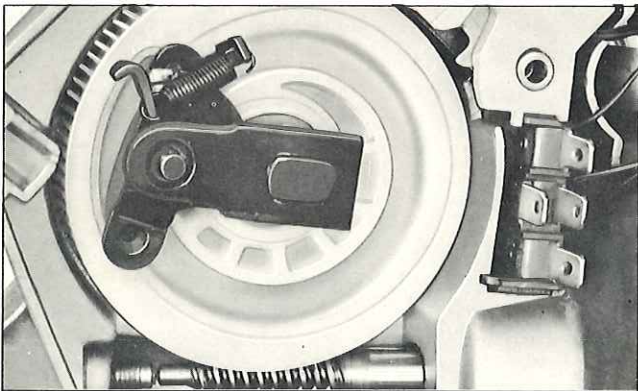
PARK POSITION

- Dash Switch off
- Relay Switch off
- Drive Pawl Roller stopped at interference area in cam. (indicated by shaded line)



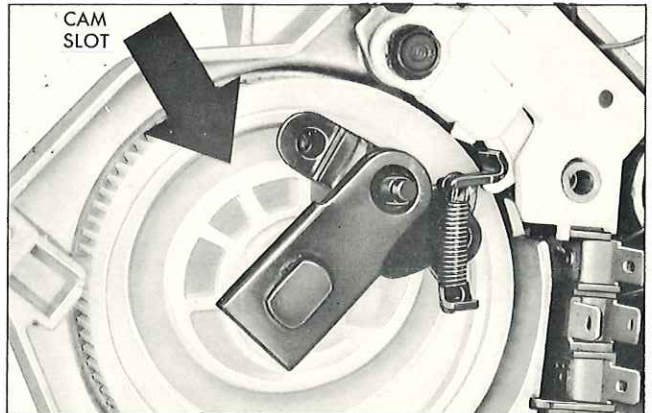
SWITCH OFF—BEGINNING OF PARK CYCLE

- The drive pawl engages the latch arm and is stopped from rotating. The motor is still energized and the gear continues to rotate.



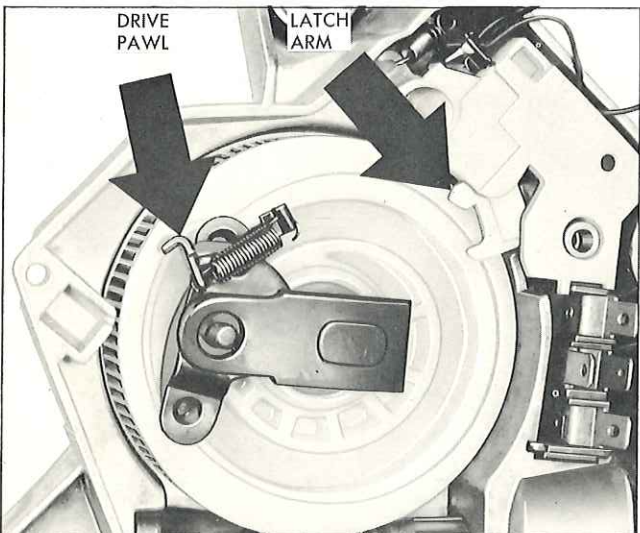
RUNNING HIGH OR LOW SPEED

- Dash switch on—which energizes relay magnet. This pulls the latch arm down disengaging latch arm from switch and drive pawl. This switch starts the motor, rotating the gear until the pawl rollers are picked up in the driving slot of the gear. The mechanism will remain in the driving slot and will rotate with the gear during normal operation.



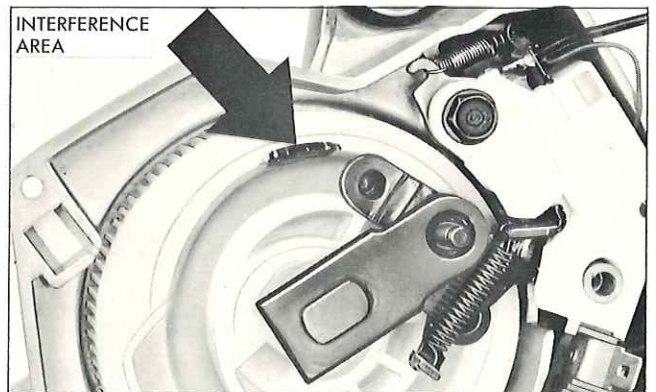
SWITCH OFF—PARKING CYCLE

- With the pawl held by the latch and the gear still rotating, the drive and lock pawls are rotated out of the driving slot and into the parking cam slot.



WIPER RUNNING—SWITCH TURNED OFF

- Mechanism is still rotating as shown in running high or low speed. The Relay Magnet is de-energized and the latch arm is released to the latching position.



SWITCH OFF—PARKING CYCLE

- Further rotation of the gear (now driving the two pawls in the parking cam) causes the driving pawl to rotate about its axis and travel into the slot in the switch housing pushing the latch arm with it. The latch arm contacts the moveable switch arm causing the switch to open. The device then coasts until the drive pawl roller stops at an area of interference in the cam.

Air Conditioning Blower Motor

CHEVELLE W/CUSTOM AIR CONDITIONING

The following procedure should be included with present air conditioning service procedures now covered in the Shop Manuals for all Chevelle models equipped with custom installations.

REPLACEMENT

1. Disconnect battery cable.
2. Remove glove box.
3. Remove blower motor to duct attaching screws.

4. Remove bolt attaching upper bracket to blower motor.
5. Remove bolts securing lower blower motor bracket to dash panel.
6. Disconnect wire to blower motor.
7. Remove blower motor and case as an assembly.
8. Remove blower motor and fan assembly.
9. Remove fan.
10. Remove blower motor adapting plate.
11. Remove hose and motor.
12. Reverse above sequence and assemble the above parts.

SERVICE TIPS

Installing Rocker Covers

327 CU. IN. V-8 ENGINES

Install the valve rocker covers with the "O" stamped on the cover toward the inboard side on all of the 327 cu. in. engines.

Crack is a Mold Mark

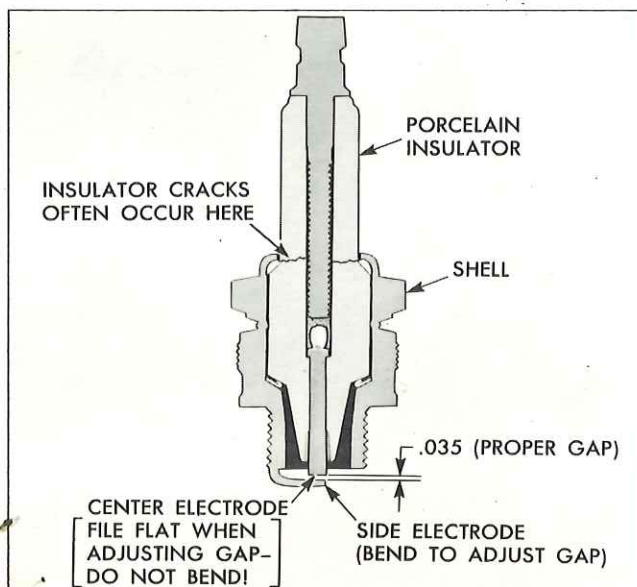
(INSTRUMENT CLUSTER LENS—ALL PASSENGER CARS)

What appears as a crack at the radio knob holes and in some cases at the upper corner of the radio dial opening are actually plastic mold marks. Sometimes as the plastic is poured into the mold the material tends to flow together and cool at these areas leaving a slight mark which has the appearance of a crack.

Replacement of the lenses should be discouraged and the cause of the mark explained.

Servicing Spark Plugs!

Some of the following reminders at the next



Servicing Spark Plugs

tune up will help toward maximum spark plug performance.

CLEANING: Use extreme care when using tap to prevent cross threading. Also crank engine several times to blow out any material dislodged during cleaning operation.

ADJUSTING: Never bend the center electrode to adjust gap. Always adjust by bending ground or side electrode.

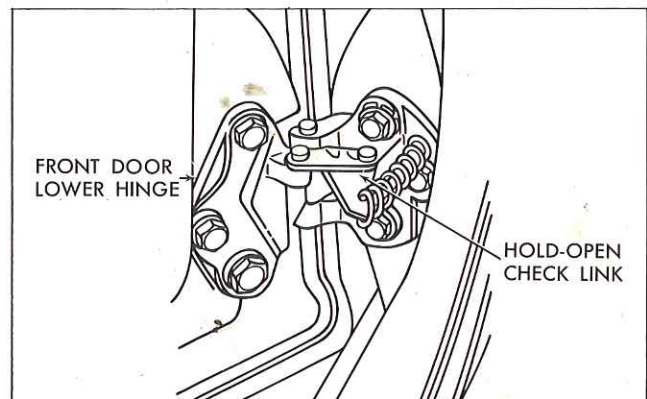
INSTALLING: Always install spark plugs with new gaskets.

NOTE: *Improper installations is one of the greatest single causes of unsatisfactory spark plug performance. Improper installation is the result of one or more of the following practices:*

- Installation of plugs with insufficient torque to fully seat the gasket.
- Installation of the plugs using excessive torque which changes gap settings.
- Installation of plugs on dirty gasket seal.
- Installation of plugs to corroded spark plug hole threads.

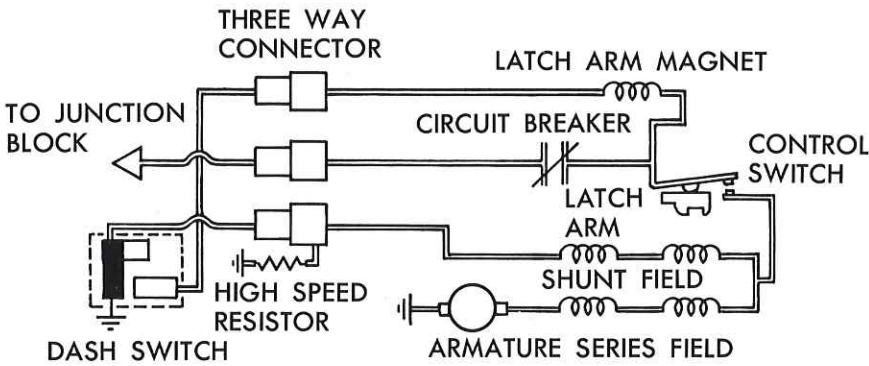
A Little Door Hinge Lubrication Is Needed!

A simple step of lubricating the Corvair hold-open check link with 630 AAW Lubriplate or equivalent will prevent binding and the front door lower hinge hold-open from becoming noisy.

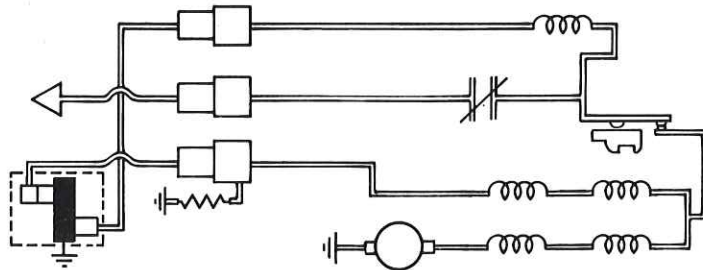


Front Door Hinge Lubrication

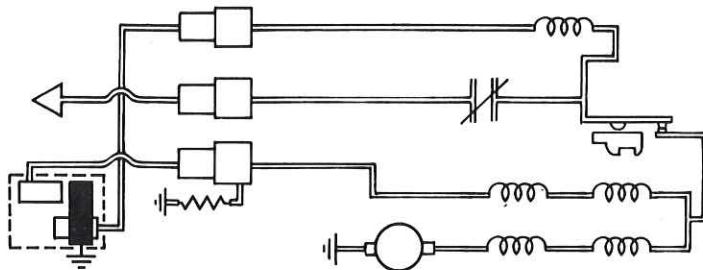
NOTE: The positive (hot) circuit is always present at the motor and all control is accomplished by varying negative (ground) conditions.



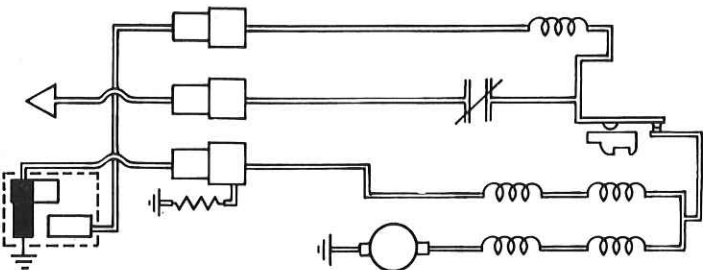
OFF-PARKED



ON-LOW SPEED



ON-HIGH SPEED



OFF-PARKING

OFF-PARKED

- A. Dash switch opens ground circuit to magnet.
- B. Latch arm is pushed (mechanically) into control switch causing points to open.

ON-LOW SPEED

- A. Dash switch closes ground circuit to magnet—which pulls latch arm away from control switch. Control switch points close completing motor circuit.
- B. Dash switch also grounds the shunt field (bypassing high speed resistor). The motor runs at low speed.

ON-HIGH SPEED

The shunt field ground is removed causing shunt current to flow through the high speed resistor. The motor runs at high speed.

OFF-PARKING

- A. The ground to magnet is opened releasing the latch arm.
- B. The shunt field is grounded and the motor runs low speed.
- C. The motor continues to run until the latch arm is pushed into the control switch causing the contacts to open.

IN-CAR DIAGNOSIS—TWO SPEED DEPRESSED PARK WINDSHIELD WIPER

COMPLAINT	TESTING	STANDARD CONDITIONS	SPECIAL CONDITIONS	DIAGNOSIS
WIPER INOPERATIVE	A. Switch and Wiring	1. Ignition on, Engine off. 2. Have 2nd person operate dash switch off-on several times.	Listen at W/W Motor for "Click- ing" of Latch Arm to Magnet.	1. If "Clicking" is heard the switch and wiring are O.K. Proceed with Step D. 2. If no click is heard proceed with Step B.
	B. Power Supply	1. 3 Way Plug removed at W/W Motor. 2. Ignition on, engine off.	Check from center terminal of plug to ground with test lamp or volt- meter.	1. If center terminal is "hot", power supply is O.K. Proceed with Step C. 2. If terminal is not "hot" an open circuit exists between ignition switch and 3 way plug.
	C. Switch and Wiring	1. Ignition on, Engine off. 2. W/W Switch on (high or low). 3. 3 Way Plug partially installed (making contact but leaving blades partially exposed).	Jump a wire from outboard blade to motor housing.	1. If wiper operates, an open circuit exists in switch or wiring. 2. If motor does not run proceed with Step D.
	D. Motor Ground	Same as in Step C.	Jump a wire from motor housing to chassis ground.	1. If motor operates, the main ground (brass strap) is open. 2. If motor does not run, an open circuit exists inside the motor assembly.
NO LOW SPEED (HIGH SPEED IN BOTH POSITIONS)	Switch and Wiring	1. Ignition on, Engine off. 2. Wiper running. 3. 3 Way Plug Partially installed.	Jump a wire from inboard terminal to ground.	1. If motor speed drops to low an open circuit exists in switch or wiring. 2. If motor continues to run fast, an open circuit exists in the motor shunt field circuit.
WIPER RUNS LOW OR HIGH (OFF IN OTHER POSITION)				Defective Switch.
NO HIGH SPEED (LOW SPEED IN BOTH POSITIONS)	Switch and Motor Wiring	Ignition on, Engine off.	Remove 2 way plug from dash switch and jump a wire from black with blue stripe wire connection to ground.	1. If motor runs high speed, switch is defective. 2. If motor continues to run low speed, a ground exists in the motor shunt circuit or the black wire in switch wiring.
WIPER WILL NOT SHUT OFF (RUNS COMPLETE WIPE CYCLE)	Switch and Motor Wiring	Wiper running.	1. Remove 2 way plug from dash switch.	1. If motor stops, switch wiring and motor wiring are O.K. 2. If motor continues to run a ground exists in the switch wiring or latch magnet circuit.
	Motor	Ignition on.	1. Remove 3 way plug from wiper motor. 2. Jump a wire from center ter- minal of plug to center blade on motor.	1. If motor runs, a ground exists inside motor.
	Internal Park Mechanism	Shut off wiper with ignition switch so blades are in approximate center of windshield.	1. Remove cover from wiper as- sembly and inspect latch arm for evidence of overriding by drive pawl.	1. If latch shows evidence of over- riding it will be necessary to install P/N 4916270 Repair Kit.
WIPER WILL NOT SHUT OFF (CONTINUES TO RUN IN PARK CYCLE)	Switch		Check same as for no low speed.	Normally, the wiper will continue to run in park if low speed is in- operative.
WIPER WILL NOT SHUT OFF (CONTINUES TO RUN IN PARK CYCLE)	Internal Mechanism	1. Remove cover from wiper as- sembly—then re-install grounding strap screw. 2. Wiper off and re-cycling in park position. 3. Low Speed operation previously checked O.K.	Observe operation of mechanism for coasting sufficient to permit the control switch contacts to reclose. See mechanical operation section for description.	If the mechanism is sufficiently loose to permit excessive coasting, it will be necessary to install Repair Kit P/N 4916270.
INTERMITTENT OPERATION (CIRCUIT BREAKER CUT OUT)	Motor Speed	Operate at low and high speeds on wet windshield.	Count cycles per minute at both speeds.	Specifications: 40-50 cycles per min.—low 70-85 cycles per min.—high If wiper runs appreciably lower than minimum specs. check linkage for binding, and gear and armature for end play.
	Motor Current	Operate at low speed on wet windshield.	Install ammeter in series at power supply plug. If no ammeter is available the same test can be made with a 3. amp fuse between the terminals of the power plug. (A 3.0 amp fuse is capable of carrying 4.5 amps for 1-2 minutes)	Max. current draw should be 5.0 amperes. If current is excessive check same as above for binding conditions.