

## 2001 ACCESSORIES & EQUIPMENT

### Wiper/Washer Systems - Corvette

#### DESCRIPTION & OPERATION

**WARNING:** Vehicles are equipped with air bag supplemental restraint system. Before attempting any repairs involving steering column, instrument panel or related components, see **SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM** in appropriate **AIR BAG RESTRAINT SYSTEMS** article.

**CAUTION:** To prevent scratching, wet windshield before turning on wipers.

Windshield wiper/washer system consists of a permanent magnet depressed park wiper motor assembly, wiper linkage assemblies, wiper arm and blade assemblies, a washer pump mounted on a washer fluid reservoir and wiper/washer switch assembly.

Pulse and timing functions, along with demand wash function, are controlled by a electronic circuit board located in wiper motor cover assembly. There are five different windshield wiper operating modes: HI, LO, INT, OFF, and MIST.

Depressed park positioning is accomplished by an external drive mechanism on wiper motor assembly.

Accessory voltage is supplied to windshield wiper/washer switch and windshield wiper motor. During mist, low, and pulse/delay operation, voltage is supplied through windshield wiper/washer switch to on and pulse/delay signal circuits to windshield wiper motor. The on signal circuit is supplied to windshield wiper motor through a 24 k/ohm resistor when switch is in MIST, INT, LO, or HI positions. Pulse/delay signal circuit determines pulse/delay interval or low speed operation. During high speed operation high speed signal circuit is closed to accessory voltage circuit while on and pulse/delay signal circuits remain at voltage levels used to activate low speed operation. Accessory voltage supply circuit to windshield wiper motor is used to operate wiper motor during all operating modes.

When windshield washer switch is pressed, accessory voltage is supplied through switch to windshield wiper switch on signal circuit. The 12 volt signal to windshield wiper motor causes low speed operation to occur for as long as washer switch is pressed and approximately 6 seconds

after being released. Accessory voltage is supplied through windshield washer switch to windshield washer pump for as long as switch is pressed.

Instrument Panel Cluster (IPC) illuminates LOW WASHER FLUID indicator in message center when IPC receives a hardwire input from low washer fluid level sensor (signal is low).

## **ADJUSTMENTS**

Check wiper arm tip pressure (force needed to lift wiper arm perpendicular to windshield) at tip of arm with wipers at mid-wipe position and wiper blade assemblies removed. Force needed to lift wiper arms should be 30-36 oz. (8.3-10.1 N). If force required to lift wiper arm is not as specified, replace wiper arm. See **WIPER ARMS** under REMOVAL & INSTALLATION.

## **TROUBLE SHOOTING**

### **PRELIMINARY INSPECTION**

Before performing any test on wiper/washer system, check the following items to eliminate common problems:

- Check wiper/washer-related fuses.
- Check washer reservoir level.
- Check for kinked or damaged washer hoses.
- Check for damaged washer pump.
- Check for damaged, loose or corroded connections.
- Check for damaged wiring harness.
- Ensure washer nozzles are not plugged.
- Check for binding or damaged wiper arm linkage.
- Inspect for aftermarket devices which could affect operation of wiper/washer system.
- Inspect easily accessible or visible system components for obvious damage or conditions which could cause symptom.

If problem is found, repair as necessary. To verify repairs, perform **SYSTEM OPERATION CHECK**. If no problem is found, repair concern by symptom. See **SYMPTOM INDEX** table under SYSTEM TESTS.

### **SYSTEM OPERATION CHECK**

1. Turn ignition switch to RUN position. With wiper/washer switch off, press washer switch

for 2-4 seconds and release. Washer should spray as long as switch is held in On position. Wipers should run at low speed. After switch is released, washer stops, and wipers return to Park position after 2-4 sweeps.

2. Move wiper/washer switch to INT position. Move wiper/washer switch through delay range. Wipers should make one complete sweep, and then pause for 1-22 seconds (depending on delay setting) before making next sweep. With wiper/washer switch in INT position, depress washer switch. Washer should spray as long as switch is held. Wipers should run at low speed while spraying and continue 2-4 sweeps after switch is released. Wipers should then return to pulse operation.
3. Move wiper/washer switch to LOW position. Wipers should operate continuously at low speed. Move wiper/washer switch to HIGH position. Wipers should operate continuously at high speed.
4. Move wiper/washer switch to OFF position. Wipers should return to Park position at low speed. Move wiper/washer switch to MIST position and release. Wipers should make one complete sweep and return to Park position. If wiper system does not function properly, diagnose by symptom. See **SYMPTOM INDEX** table under SYSTEM TESTS.

## **INTERMITTENTS**

### **PROBLEM DIAGNOSIS**

Intermittent problem diagnosis requires duplication of circuit or component failure in order to identify problem. See **TEST PROCEDURES** . These procedures may lead to Powertrain Control Module (PCM) recording a DTC which may help diagnosis.

If system does not set a DTC, use scan tool or DVOM to monitor voltage or resistance values while attempting to reproduce conditions which will create an intermittent problem.

When monitoring voltage, ensure specified test conditions are met. When monitoring resistance, ensure ignition switch is in LOCK position or negative battery cable is disconnected. A status change on scan tool or DVOM while performing test procedures indicates area of problem.

### **TEST PROCEDURES**

#### **Intermittent Simulation**

Use the following methods to reproduce conditions causing intermittent problem(s):

- Apply light vibration to components.
- Apply small amount of heat to component.

## 2001 Chevrolet Corvette

### 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

- Wiggle or bend wiring harness.
- Remove/apply vacuum supply source.

Monitor circuit/component voltage or resistance while attempting to simulate intermittent. If vehicle is running, monitor for DTCs. Use test results to identify problem component or circuit.

#### **TROUBLE SHOOTING INTERMITTENTS**

##### **Symptom Definition**

Malfunction Indicator Light (MIL) comes on but does not stay on. A stored DTC may or may not exist.

##### **Possible Causes & Corrections**

Use the following procedures to determine possible causes of intermittent MIL operation:

- Check for poor mating of one connector to another. Terminals may not be fully seated. Check for improperly formed or damaged terminals. Check wire-to-terminal connections.
- Check for poor connection from ignition coil to ground or arcing at spark plug wires or plugs.
- Check for poor connections at PCM ground terminals.
- Check for electrical system interference caused by defective relay, PCM-driven solenoid or switch, which may cause sharp electrical surge. This type of problem will normally occur when problem component is operated.
- Check for aftermarket parts which may not have been produced to manufacturer's specifications. Solenoids without original equipment diodes for circuit protection or voltage regulators using transistors instead of silicone-chip circuitry may cause voltage surges (up to 300 volts) in PCM wiring, causing temporary PCM shutdown. PCM shutdown is a normal response to system over voltage (over 16 volts on most models). PCM re-powers when condition ceases to exist. A rapid shutdown and re-power could cause a flickering MIL with no DTCs set in memory.
- Check for improper installation of electrical accessories such as auxiliary lights, cell phones or 2-way radios.
- Ensure ground wire from PCM to distributor or ignition module is connected to a good ground.
- Check for intermittent short to ground on data circuits of DLC or in MIL circuit. See ENGINE PERFORMANCE article in WIRING DIAGRAMS.
- On vehicles not equipped with a driver information center, use scan tool to check for

## 2001 Chevrolet Corvette

### 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

intermittent wiring problem. See appropriate SELF-DIAGNOSTICS article in ENGINE PERFORMANCE.

## SYSTEM TESTS

**NOTE:** Before testing, see PRELIMINARY INSPECTION under **TROUBLESHOOTING**. For circuit, terminal and wire color identification, see WIRING DIAGRAMS .

## SYMPTOM INDEX

Symptom	Perform Test
Low Washer Fluid Indicator Always On	<u>A</u>
Low Washer Fluid Indicator Inoperative	<u>B</u>
Washers Always On	<u>C</u>
Washers Inoperative	<u>D</u>
Wipers Always On	<u>E</u>
Wipers Inoperative - All Modes	<u>F</u>
Wipers Inoperative - One Or More Modes	<u>G</u>
Wipers Operate At Incorrect Speed	<u>H</u>

### TEST A: LOW WASHER FLUID INDICATOR ALWAYS ON

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See DESCRIPTION & OPERATION . See PRELIMINARY INSPECTION under TROUBLE SHOOTING.
2. Verify windshield washer reservoir is at or near full. Turn ignition switch to RUN position. Wait one minute. If LOW WASHER FLUID message is not displayed on Driver Information Center (DIC), go to next step. If LOW WASHER FLUID message is displayed on DIC, concern may be intermittent. See PROBLEM DIAGNOSIS under INTERMITTENTS.
3. Disconnect windshield washer solvent level switch 2-pin harness connector. Windshield washer solvent level switch is located in washer solvent reservoir. Turn ignition switch to RUN position. Wait one minute. If LOW WASHER FLUID message is displayed on DIC, go to next step. If LOW WASHER FLUID message is not displayed on DIC, go to step 5 .
4. Check for short to ground in windshield washer solvent level switch signal circuit, Black/White wire between instrument panel cluster Black 34-pin harness connector C1 terminal A4 and windshield washer solvent level switch harness connector terminal "A". See WIRING DIAGRAMS . If problem exists, repair as necessary and go to step 7 . If no

problem exists, go to step 6 .

5. Replace windshield washer solvent level switch. See **WINDSHIELD WASHER PUMP & SOLVENT LEVEL SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to step 7 .
6. Replace instrument panel cluster. See INSTRUMENT PANEL CLUSTER under REMOVAL & INSTALLATION in ANALOG INSTRUMENT PANELS - CORVETTE article. After repairs are made, go next step.
7. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

**TEST B: LOW WASHER FLUID INDICATOR INOPERATIVE**

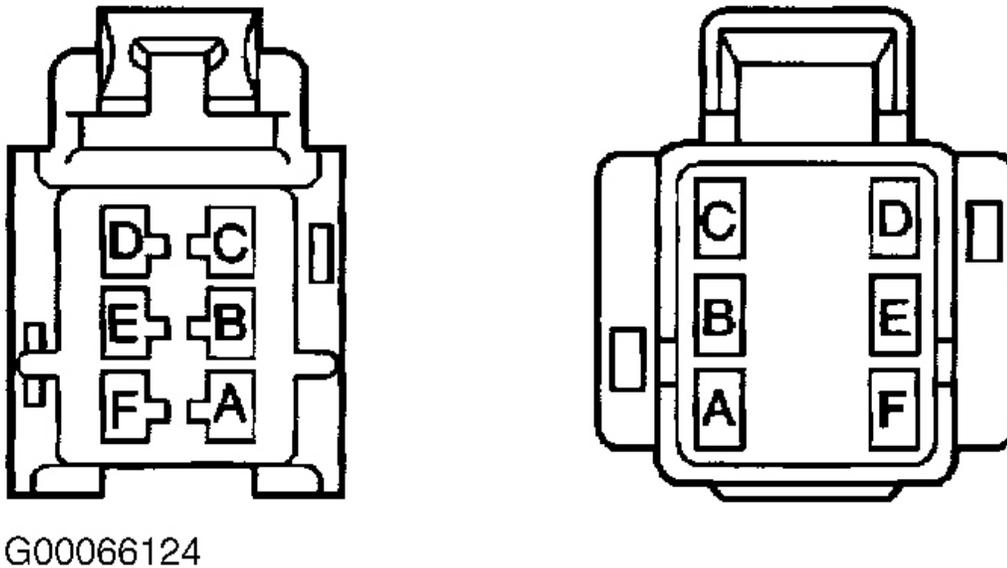
1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Verify windshield washer reservoir is at or near empty. Turn ignition switch to RUN position. Wait one minute. If LOW WASHER FLUID message is not displayed on Driver Information Center (DIC), go to next step. If LOW WASHER FLUID message is displayed on DIC, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.
3. Disconnect windshield washer solvent level switch 2-pin harness connector. Windshield washer solvent level switch is located in washer solvent reservoir. Connect a fused jumper wire between ground and windshield washer solvent level switch harness connector terminal "A". See **WIRING DIAGRAMS** . Turn ignition switch to RUN position. Wait one minute. If LOW WASHER FLUID message is not displayed on DIC, go to next step. If LOW WASHER FLUID message is displayed on DIC, go to step 5 .
4. Check for open or high resistance in windshield washer solvent level switch signal circuit, Black/White wire between instrument panel cluster connector C1 terminal A4 and windshield washer solvent level switch harness connector terminal "A". See **WIRING DIAGRAMS** . If problem exists, repair as necessary and go to step 8 . If no problem exists, go to step 7 .
5. Check for open or high resistance in windshield washer solvent level switch ground circuit, Black wire between ground and washer solvent level switch harness connector terminal "B". Ground point is located on left frame rail, near brake pressure modulator valve. See **WIRING DIAGRAMS** . If no problem exists, go to next step. If problem exists, repair as necessary and go to step 8 .
6. Replace windshield washer solvent level switch. See **WINDSHIELD WASHER PUMP & SOLVENT LEVEL SWITCH** under REMOVAL & INSTALLATION. After repairs

are made, go to step 8 .

7. Replace Instrument Panel Cluster (IPC). See **INSTRUMENT PANEL CLUSTER** under **REMOVAL & INSTALLATION** in **ANALOG INSTRUMENT PANELS - CORVETTE** article. After repairs are made, go to next step.
8. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

**TEST C: WASHERS ALWAYS ON**

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under **TROUBLE SHOOTING**.
2. Turn ignition switch to RUN position. If windshield washers do not stop, go to next step. If windshield washers stop, concern may be intermittent. See **PROBLEM DIAGNOSIS** under **INTERMITTENTS**.
3. Disconnect windshield wiper/washer switch 6-pin pigtail harness connector C219. Pigtail harness connector C219 is located at base of steering column. If windshield washers do not stop, go to next step. If windshield washers stop, go to step 5 .
4. Repair short to voltage in windshield washer pump control circuit, Pink wire between windshield wiper/washer switch harness connector C219 terminal "E" and windshield washer fluid pump harness connector terminal "A". See **Fig. 1** . After repairs are made, go to step 6 .
5. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under **REMOVAL & INSTALLATION**. After repairs are made, go to next step.
6. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .



**Fig. 1: Identifying Windshield Wiper/Washer Switch Pigtail Harness Connector C219 Terminals**

Courtesy of GENERAL MOTORS CORP.

**TEST D: WASHERS INOPERATIVE**

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Turn ignition switch to RUN position. Operate windshield washer switch. If windshield washers do not operate normally, go to next step. If windshield washers operate normally, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.
3. Disconnect windshield washer pump 2-pin harness connector. Turn ignition switch to RUN position. Connect test light between washer motor harness connector terminals "A" (Pink wire) and "B" (Black wire). See **WIRING DIAGRAMS** . Operate windshield washer switch. If test light does not illuminate, go to next step. If test light illuminates, go to step 7 .
4. Check for open or high resistance in windshield washer pump ground circuit, Black wire between ground and windshield washer pump harness connector terminal "B". Ground point is located on left frame rail, near brake pressure modulator valve. If no problem exists, go to next step. If problem exists, repair as necessary and go to step 8 .
5. Check for open or high resistance in windshield washer pump control circuit. Pink wire

## 2001 Chevrolet Corvette

### 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

between windshield wiper/washer switch harness connector C219 terminal "E" and windshield washer fluid pump harness connector terminal "A". See **Fig. 1** . If no problem exists, go to next step. If problem exists, repair as necessary and go to step 8 .

6. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to step 8 .
7. Replace windshield washer pump. See **WINDSHIELD WASHER PUMP & SOLVENT LEVEL SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to next step.
8. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

#### TEST E: WIPERS ALWAYS ON

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Turn ignition switch to RUN position. Turn windshield wipers/washer switch to Off position. If windshield wipers do not remain in Park position, go to next step. If windshield wipers remain in Park position, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.
3. Disconnect windshield wiper/washer switch 6-pin pigtail harness connector C219. Pigtail harness connector C219 is located at base of steering column. If windshield wipers stop, go to next step. If windshield wipers do not stop, go to step 5 .
4. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to step 6 .
5. Replace windshield wiper motor module. See **WINDSHIELD WIPER MOTOR MODULE** under REMOVAL & INSTALLATION. After repairs are made, go to next step.
6. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

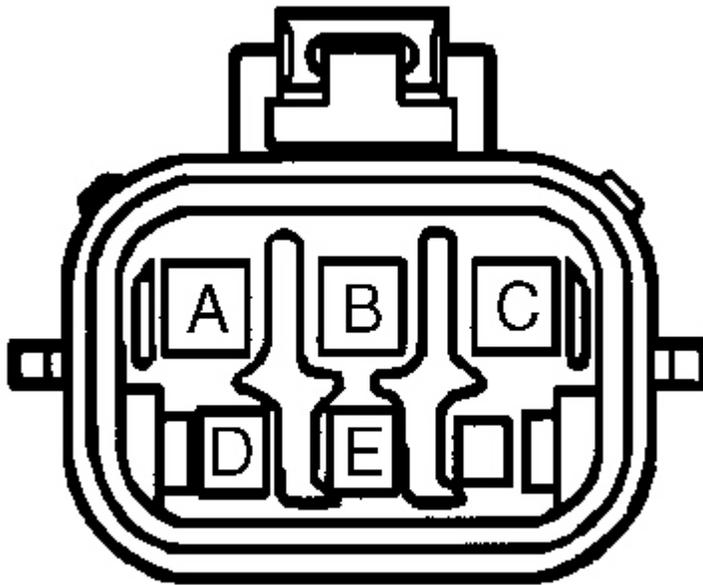
#### TEST F: WIPERS INOPERATIVE - ALL MODES

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Turn ignition switch to RUN position. Operate windshield wiper/washer switch through all switch positions. If windshield wiper/washers do not operate normally, go to next step. If

windshield wiper/washers operate normally, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.

3. Disconnect windshield wiper motor 6-pin harness connector. Windshield wiper motor is located at left side of plenum. Using test light connected to ground, probe accessory voltage supply circuit, Yellow wire between windshield wiper motor harness connector terminal "B" and underhood fuse block harness connector C2 terminal E8. See **Fig. 2** . Turn ignition switch to RUN position. If test light illuminates, go to next step. If test light does not illuminate, go to step 7 .
4. Connect test light between windshield wiper motor harness connector terminals "A" (Black wire) and "B" (Yellow wire), windshield wiper motor ground and accessory voltage supply circuits. Turn ignition switch to RUN position. If test light illuminates, go to next step. If test light does not illuminate, go to step 8 .
5. Using test light connected to ground, probe windshield wiper motor harness connector terminal "D" (Gray wire), windshield wiper/washer switch On signal circuit. See **Fig. 2** . Turn ignition switch to RUN position. Press windshield washer switch. If test light does not illuminate, go to next step. If test light illuminates, go to step 10 .
6. Disconnect windshield wiper/washer switch 6-pin pigtail harness connector C219. Pigtail harness connector C219 is located at base of steering column. Using test light connected to ground, probe windshield wiper/washer switch pigtail harness connector C219 terminal "C" (Yellow wire), accessory voltage supply circuit. See **Fig. 1** . Turn ignition switch to RUN position. If test light illuminates, go to step 11 . If test light does not illuminate, go to step 9 .
7. Repair open or high resistance in windshield wiper motor accessory voltage supply circuit, Yellow wire between windshield wiper motor harness connector terminal "B" and underhood junction block harness connector C2 terminal E8. See **Fig. 2** . After repairs are made, go to step 12 .
8. Repair open or high resistance in windshield wiper motor ground circuit, Black wire between ground and windshield wiper motor harness connector terminal "A" . See **Fig. 2** . Ground point is located at base of driver's side "A" pillar. After repairs are made, go to step 12 .
9. Repair open or high resistance in windshield wiper/washer switch accessory voltage supply circuit, Yellow wire between underhood fuse block harness connector C2 terminal E8 and windshield wiper/washer switch harness connector C219 terminal "C" . See **Fig. 1** . After repairs are made, go to step 12 .
10. Replace windshield wiper motor. See **WIPER MOTOR** under REMOVAL & INSTALLATION. After repairs are made, go to step 12 .
11. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to next step.

12. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .



G99C02043

**Fig. 2: Identifying Wiper Motor Connector Terminals**  
Courtesy of GENERAL MOTORS CORP.

**TEST G: WIPERS INOPERATIVE - ONE OR MORE MODES**

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Turn ignition switch to RUN position. Operate windshield wiper/washer switch through all switch positions. If windshield wiper/washers do not operate normally, go to next step. If windshield wiper/washers operate normally, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.
3. Disconnect windshield wiper/washer switch pigtail harness connector C219. Pigtail harness connector C219 is located at base of steering column. Using DVOM, measure resistance

## 2001 Chevrolet Corvette

### 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

between windshield wiper/washer switch pigtail harness connector C219 terminals "C" (Yellow wire) and "B" (Gray wire). See **Fig. 1** . Turn windshield wiper/washer switch from MIST to LO to HI positions. Resistance readings should be 0-2 ohms. If resistance readings are as specified, leave DVOM connected and go to next step. If resistance readings are not as specified, go to step 10 .

4. Turn windshield wiper/washer switch to INT position. Move wiper/washer switch through entire delay range, one notch at a time. Resistance should change smoothly from about 35 to 685 k/ohms. If resistance readings are as specified, go to next step. If resistance readings are not as specified, go to step 8 .
5. Using DVOM, measure resistance between windshield wiper/washer switch pigtail harness connector C219 terminals "C" (Yellow wire) and "E" (Dark Green wire). See **Fig. 1** . Turn windshield wiper/washer switch from MIST to INT to LO to HI positions. Resistance reading should be about 24 k/ohms. If resistance readings are as specified, go to next step. If resistance readings are not as specified, go to step 9 .
6. Check for open or high resistance in windshield wiper/washer switch pulse/delay signal circuit, Gray wire between windshield wiper motor harness connector terminal "D" and windshield wiper/washer switch harness connector C219 terminal "E". See **Fig. 1** and **Fig. 2** . If no problem exists, go to next step. If problem exists, repair as necessary and go to step 12 .
7. Check for open or high resistance in windshield wiper/washer switch low speed circuit, Dark Green wire between windshield wiper motor harness connector terminal "E" and windshield wiper/washer switch harness connector C219 terminal "A". If problem exists, repair as necessary and go to step 12 . If no problem exists, go to step 11 .
8. Check for short to ground in windshield wiper/washer switch pulse/delay signal circuit, Gray wire between windshield wiper motor harness connector terminal "D" and windshield wiper/washer switch harness connector C219 terminal "E". See **Fig. 1** and **Fig. 2** . If problem exists, repair as necessary and go to step 12 . If no problem exists, go to step 10 .
9. Check for short to ground in windshield wiper/washer switch low speed circuit, Dark Green wire between windshield wiper motor harness connector terminal "E" and windshield wiper/washer switch harness connector C219 terminal "A". See **Fig. 1** and **Fig. 2** . If no problem exists, go to next step. If problem exists, repair as necessary and go to step 12 .
10. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to step 12 .
11. Replace windshield wiper motor module. See **WINDSHIELD WIPER MOTOR MODULE** under REMOVAL & INSTALLATION. After repairs are made, go to next step.
12. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

**TEST H: WIPERS OPERATE AT INCORRECT SPEED**

1. After reviewing wiper/washer system description and operation and performing preliminary inspection, go to next step. See **DESCRIPTION & OPERATION** . See **PRELIMINARY INSPECTION** under TROUBLE SHOOTING.
2. Turn ignition switch to RUN position. Turn windshield wiper/washer switch to HI position. If wipers do not operate at high speed, go to next step. If wipers operate at high speed, concern may be intermittent. See **PROBLEM DIAGNOSIS** under INTERMITTENTS.
3. Disconnect windshield wiper/washer switch pigtail harness connector C219. Pigtail harness connector C219 is located at base of steering column. Using DVOM, measure resistance between windshield wiper/washer switch pigtail harness connector C219 terminals "C" (Yellow wire) and "D" (Purple wire). See **Fig. 1** . Turn windshield wiper/washer switch to HI position. Resistance readings should be 0-2 ohms. If resistance readings are as specified, go to next step. If resistance readings are not as specified, go to step 5 .
4. Disconnect windshield wiper motor 6-pin harness connector. Windshield wiper motor is located at left side of plenum. Check for an open or high resistance in windshield wiper motor high speed signal circuit, Purple wire between windshield wiper motor harness connector terminal "C" and windshield wiper/washer switch harness connector C219 terminal "D". If problem exists, repair as necessary and go to step 7 . If no problem exists, go to step 6 .
5. Replace windshield wiper/washer switch. See **WIPER/WASHER SWITCH** under REMOVAL & INSTALLATION. After repairs are made, go to step 7 .
6. Replace windshield wiper motor module. See **WINDSHIELD WIPER MOTOR MODULE** under REMOVAL & INSTALLATION. After repairs are made, go to next step.
7. Operate system in order to verify repair. If system operates normally, testing is complete. If system does not operate normally, go to step 3 .

**REMOVAL & INSTALLATION**

**WARNING:** Vehicles are equipped with air bag supplemental restraint system. Before attempting any repairs involving steering column, instrument panel or related components, see **SERVICE PRECAUTIONS and DISABLING & ACTIVATING AIR BAG SYSTEM** in appropriate **AIR BAG RESTRAINT SYSTEMS** article.

**CAUTION:** When battery is disconnected, vehicle computer and memory

**systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See **COMPUTER RELEARN PROCEDURES** article in **GENERAL INFORMATION** before disconnecting battery.**

## **WINDSHIELD WASHER PUMP & SOLVENT LEVEL SWITCH**

### **Removal & Installation**

Drain washer fluid reservoir. Disconnect electrical connectors from washer motor and fluid level sensor. Disconnect washer hose from reservoir. Remove reservoir mounting screws and reservoir. Remove washer motor from reservoir. To install, reverse removal procedure. Tighten mounting screws to specification. See **TORQUE SPECIFICATIONS** .

## **WIPER ARMS**

### **Removal & Installation**

Raise hood. Turn ignition switch to RUN position. Turn wiper/washer switch to INT position. Turn ignition off when wipers are in inner-wipe position. Place a piece of masking tape on windshield at tip of each wiper blade for reassembly reference. Remove retaining nut cover and nut. Disconnect washer hose from nozzle. Separate wiper arm from wiper transmission shaft. To install, reverse removal procedure. Tighten wiper arm nut to specification. See **TORQUE SPECIFICATIONS** .

## **WIPER DRIVE MODULE ASSEMBLY**

### **Removal & Installation**

Raise hood. Disconnect negative battery cable. Remove wiper arms. See **WIPER ARMS** . Remove cowl vent screen. Remove bolts and wiper drive module assembly mounting screws. Disconnect wiper motor electrical connector and module assembly. To install, reverse removal procedure. Tighten mounting screws to specification. See **TORQUE SPECIFICATIONS** . Check wiper operation.

## **WIPER MOTOR**

### **Removal & Installation**

Disconnect negative battery cable. Disconnect electrical connectors from wiper motor. Remove wiper arms. See **WIPER ARMS** . Remove left cowl vent screen. Remove wiper drive module assembly. See **WIPER DRIVE MODULE ASSEMBLY** . Disconnect wiper transmission

## 2001 Chevrolet Corvette

### 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

linkage from crank arm. Remove bolts and wiper motor from wiper module. Remove crank arm. To install, reverse removal procedure. When installing crank arm to wiper motor, ensure position of park latch is .157-197" (4-5 mm) from park tab. Tighten fasteners to specification. See **TORQUE SPECIFICATIONS** . Check wiper operation.

#### WIPER/WASHER SWITCH

**NOTE:** Wiper/washer switch is an integral part of multifunction switch. See **STEERING COLUMN SWITCHES - CORVETTE** article.

#### TORQUE SPECIFICATIONS

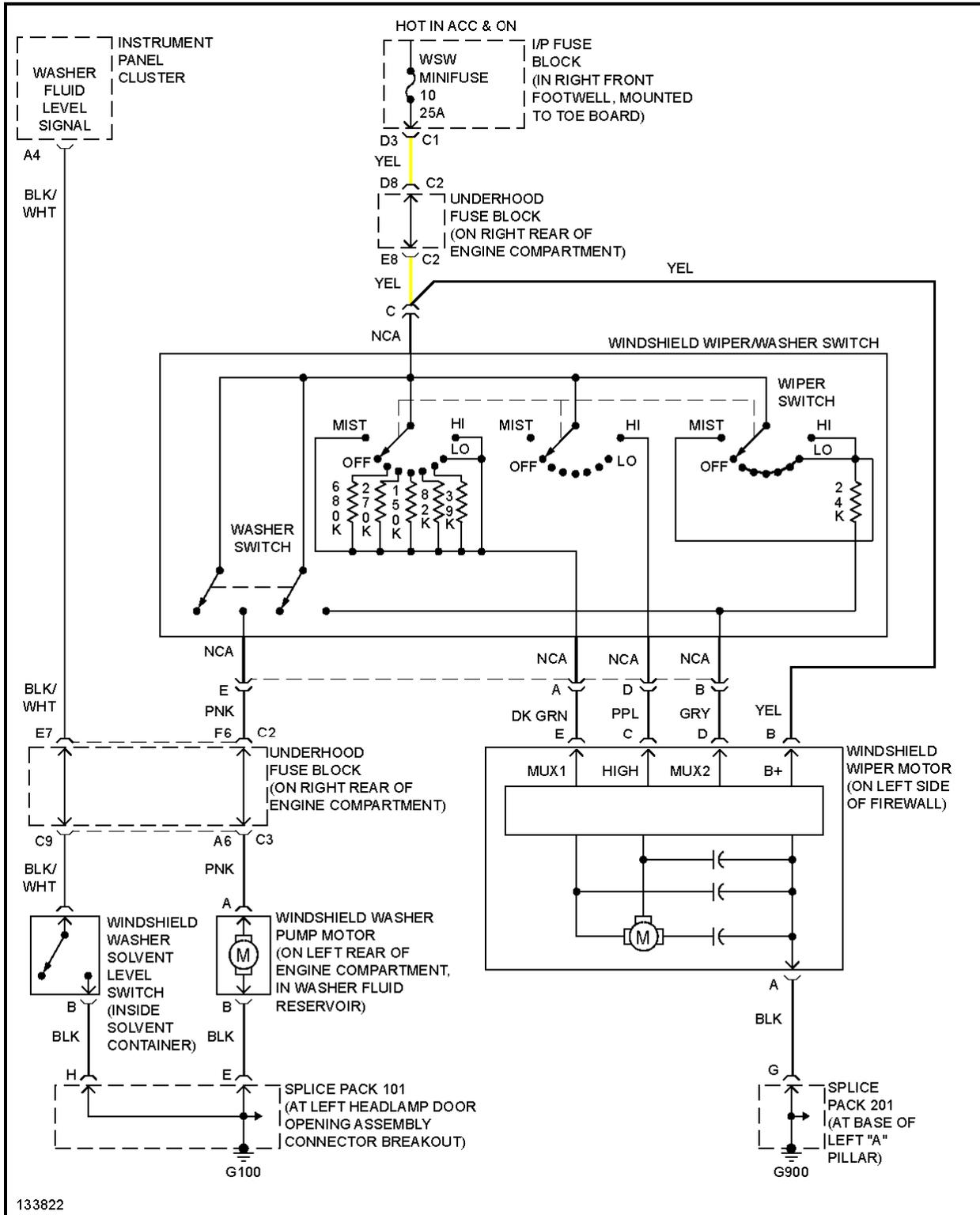
##### TORQUE SPECIFICATIONS

<b>Application</b>	<b>Ft. Lbs. (N.m)</b>
Wiper Arm Assembly-To-Shaft Nut	18 (25)
Wiper Motor Crank Arm Screw	11 (15)
	<b>INCH Lbs. (N.m)</b>
Washer Reservoir Mounting Screws	66 (7.5)
Wiper Drive Module Screw	88 (10)
Wiper Motor-To-Bracket Screw	88 (10)
Wiper Transmission-To-Frame Screws	88 (10)

#### WIRING DIAGRAMS

# 2001 Chevrolet Corvette

## 2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette



**2001 Chevrolet Corvette**

2001 ACCESSORIES & EQUIPMENT Wiper/Washer Systems - Corvette

**Fig. 3: Wiper/Washer System Wiring Diagram (Corvette)**