

WIPER/WASHER SYSTEM

1992 Infiniti G20

1992 SAFETY EQUIPMENT
Infiniti Wiper/Washer Systems

G20, M30, Q45

DESCRIPTION & OPERATION

A 2-speed front wiper motor with intermittent feature is used on all models. Wiper switch is part of the combination switch on the steering column. See Figs. 1 and 2.

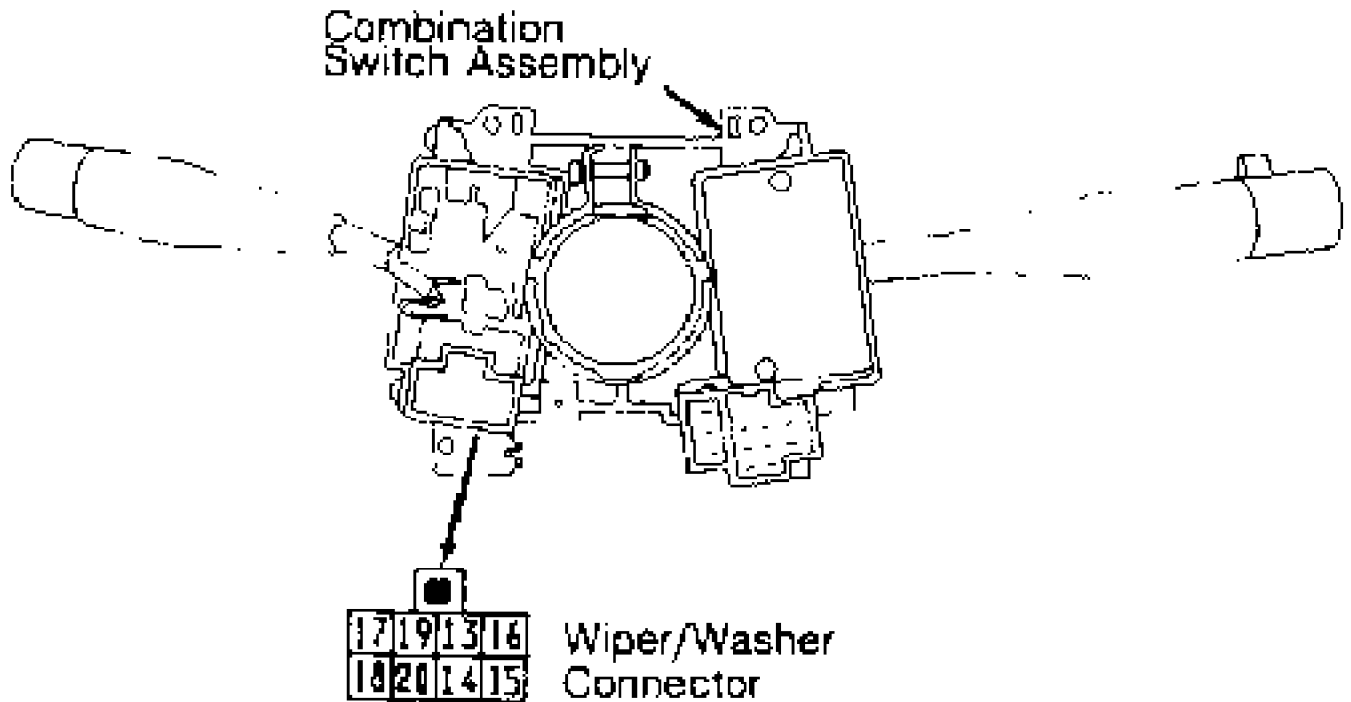


Fig. 1: Identifying Combination Switch Terminals (G20 & M30)
Courtesy of Nissan Motor Co., U.S.A.

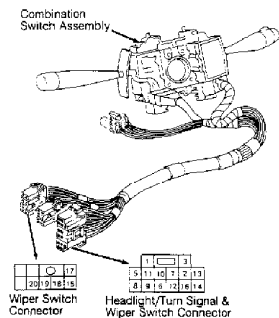


Fig. 2: Identifying Combination Switch Terminals (Q45)
Courtesy of Nissan Motor Co., U.S.A.

ADJUSTMENTS

WIPER ARM ADJUSTMENT

1) Ensure wiper switch is in the off position. Lift wiper blade up and then set wiper blade down on glass surface to ensure wiper arm is in full rest position. Measure clearance between end of wiper blade and bottom of windshield.

2) If clearance is not within specification, adjust wiper arm as necessary. See WIPER BLADE CLEARANCE table. If wiper arm adjustment is necessary, clean wiper arm pinion shaft threads with a wire brush before installing wiper arm. Tighten wiper arm retaining nut to 9-13 ft. lbs. (12-18 N.m).

WIPER BLADE CLEARANCE TABLE

Application	In. (mm)
G20	
Driver's Side	.728-1.319 (18.5-33.5)
Passenger's Side	.768-1.358 (19.5-34.5)
M30	
Driver's Side	.98-1.38 (25-35)
Passenger's Side	1.38-1.77 (35-45)
Q45	.39 (10)

TESTING

WIPER MOTOR

Testing information is not available from manufacturer.

WIPER/WASHER SWITCH

Remove steering column lower cover. Disconnect wiper/washer switch connector. With wiper/washer switch in the indicated positions, check for continuity between specified switch connector terminals. See WIPER/WASHER SWITCH CONTINUITY table.

WIPER/WASHER SWITCH CONTINUITY TABLE

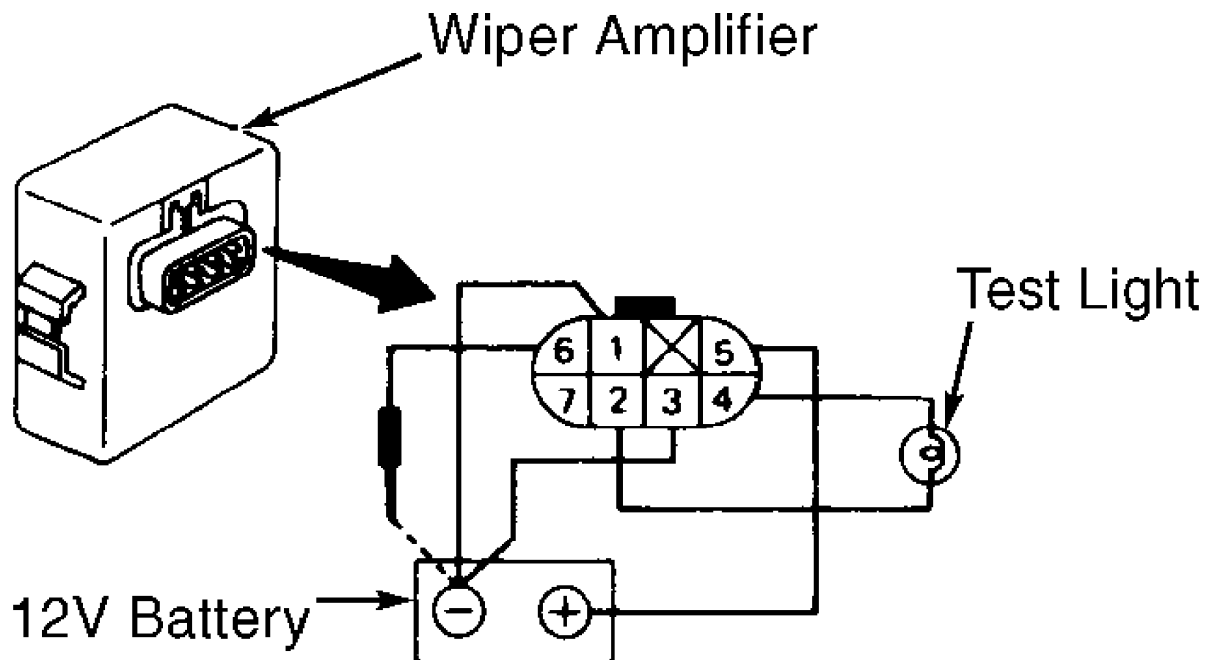
Switch Position	Continuity Between Terminals No.
Off	13 & 14
Intermittent	13 & 14; 15 & 17
Low	
G20 & M30	14 & 17
Q45	14, 15 & 17
Hi	
G20 & M30	16 & 17
Q45	15, 16 & 17
Wash	17 & 18

WIPER AMPLIFIER

Q45

1) Disconnect and remove amplifier from vehicle or position so test leads, battery and test light can be connected to amplifier terminals. Use care to prevent improper connections since amplifier can be damaged.

2) Connect test light to terminals No. 2 and 4. See Fig. 3. Connect terminal No. 5 to battery positive post and terminal No. 1 to battery negative post. As the last connection, connect terminal No. 6 to battery ground. If test light glows, amplifier is okay. If test light does not glow, replace amplifier.



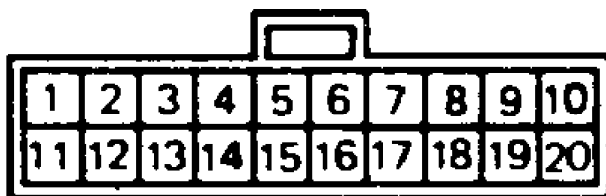
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Fig. 3: Testing Wiper Amplifier (Q45)
Courtesy of Nissan Motor Co., U.S.A.

TIME CONTROL UNIT

NOTE: The Time Control Unit (TCU) operates several different systems. The following circuit test procedures only check circuits that control the intermittent wiper and washer operation.

1) When testing time control unit, insert probes into harness side of connector while still plugged into control unit. See Fig. 4.



AS VIEWED FROM HARNESS SIDE

91E01515

Fig. 4: Time Control Unit Harness Connector Terminal ID
Courtesy of Nissan Motor Co., U.S.A.

2) TCU is located behind driver's side kick panel. Ensure ignition key is in correct position when testing each circuit. Perform

tests in order: POWER CIRCUIT, TCU OUTPUT WIPER RELAY CIRCUIT, WIPER SWITCH CIRCUIT, INTERMITTENT WIPER CIRCUIT, and WIPER/WASHER CIRCUIT. See WIPER TIME CONTROL UNIT TESTS table.

WIPER TIME CONTROL UNIT TESTS TABLE

Symptom	Affected Circuit
No Power At Connector	Power Circuit
Intermittent Wiper Inoperative	TCU Output Wiper Relay
Intermittent Wiper Inoperative	Wiper Switch
Intermittent Time Not Adjustable	Intermittent Wiper Speed
Wiper/Washer Do Not Operate Together	Washer Switch

Power Circuit

1) Turn ignition to OFF position. From harness side, there should be continuity between terminal No. 15 and ground. If continuity does not exist, inspect TCU harness circuit and repair or replace as needed.

2) Measure from harness side of connector. Turn ignition to OFF position. Battery voltage should be present between time control unit connector terminals No. 9 and 15. There should be no battery voltage measured between terminals No. 5 and 15 or between terminals No. 2 and 15.

3) Turn ignition switch to ACC position. Battery voltage should be present between time control unit connector terminals No. 9 and 15 and between terminals No. 2 and 15. There should be no battery voltage between terminals No. 5 and 15.

4) Turn ignition switch to ON position. Battery voltage should be present between time control unit connector terminals No. 9 and 15, between terminals No. 5 and 15 and between terminals No. 2 and 15.

TCU Output Wiper Relay Circuit

Turn ignition switch to the ACC position. Measure voltage between terminals No. 1 and 15. With wiper switch in OFF position there should be battery voltage. With wiper switch to the INT position. Voltage reading should change every 3 to 23 seconds from zero to battery voltage, and then back again. If switching does not occur, check wiper switch circuit.

Wiper Switch Circuit

Turn ignition switch to the OFF position and wiper switch to INT position. Voltage between terminals No. 12 and 15 should be zero. With wiper switch in the OFF position, battery voltage should be present. If test results are okay, replace TCU. If test results are not okay, check wiper switch. See WIPER/WASHER SWITCH.

Intermittent Wiper Circuit

Turn ignition off. Using an ohmmeter, measure resistance between terminals No. 14 and 15 while turning intermittent wiper switch. Reading should be zero ohms with switch in the "S" position and approximately one ohm in the "L" position. If reading is correct, replace time control unit. If reading is not correct, check wiring harness continuity between TCU and intermittent wiper switch.

Wiper/Washer Circuit

Turn ignition to ACC. Check voltage between terminals No. 13 and 15 while holding wiper/washer lever in the ON position. Battery voltage should be read. With washer in OFF position, zero voltage should exist. Using an ohmmeter, check wiring harness between TCU and washer switch. If continuity exists, replace TCU.

REMOVAL & INSTALLATION

Procedures for removing and installing wiper/washer components are not available from manufacturer.