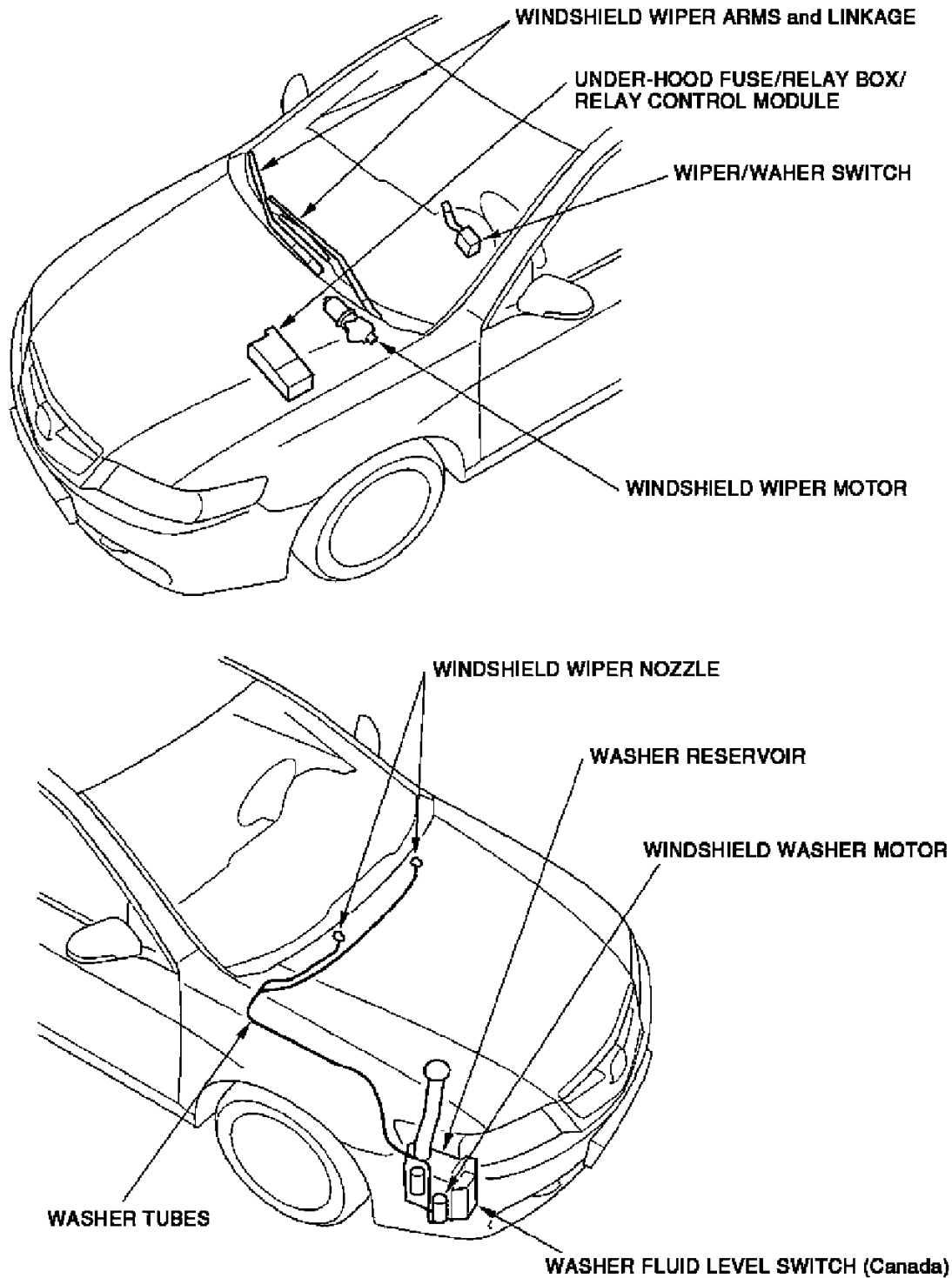
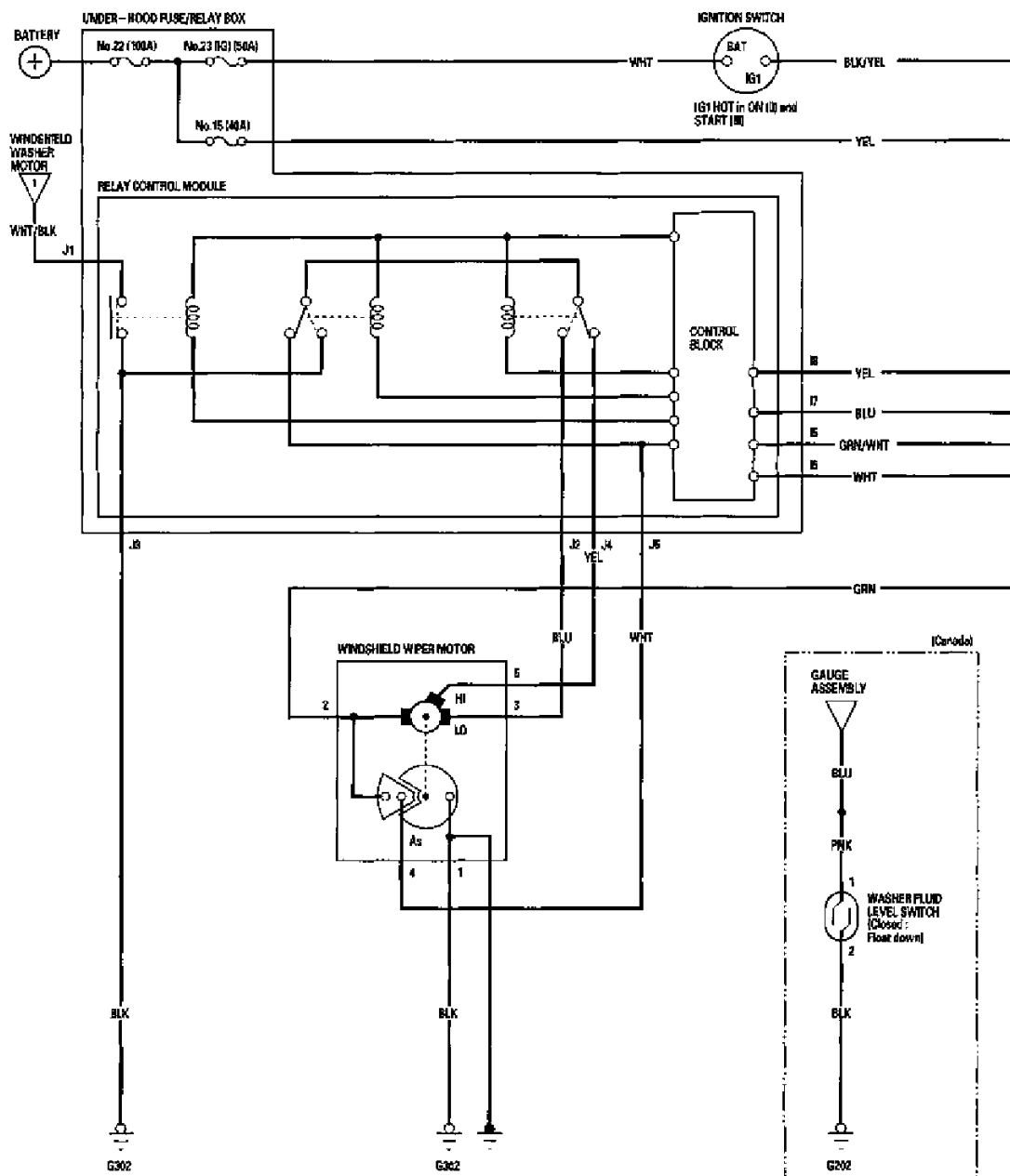




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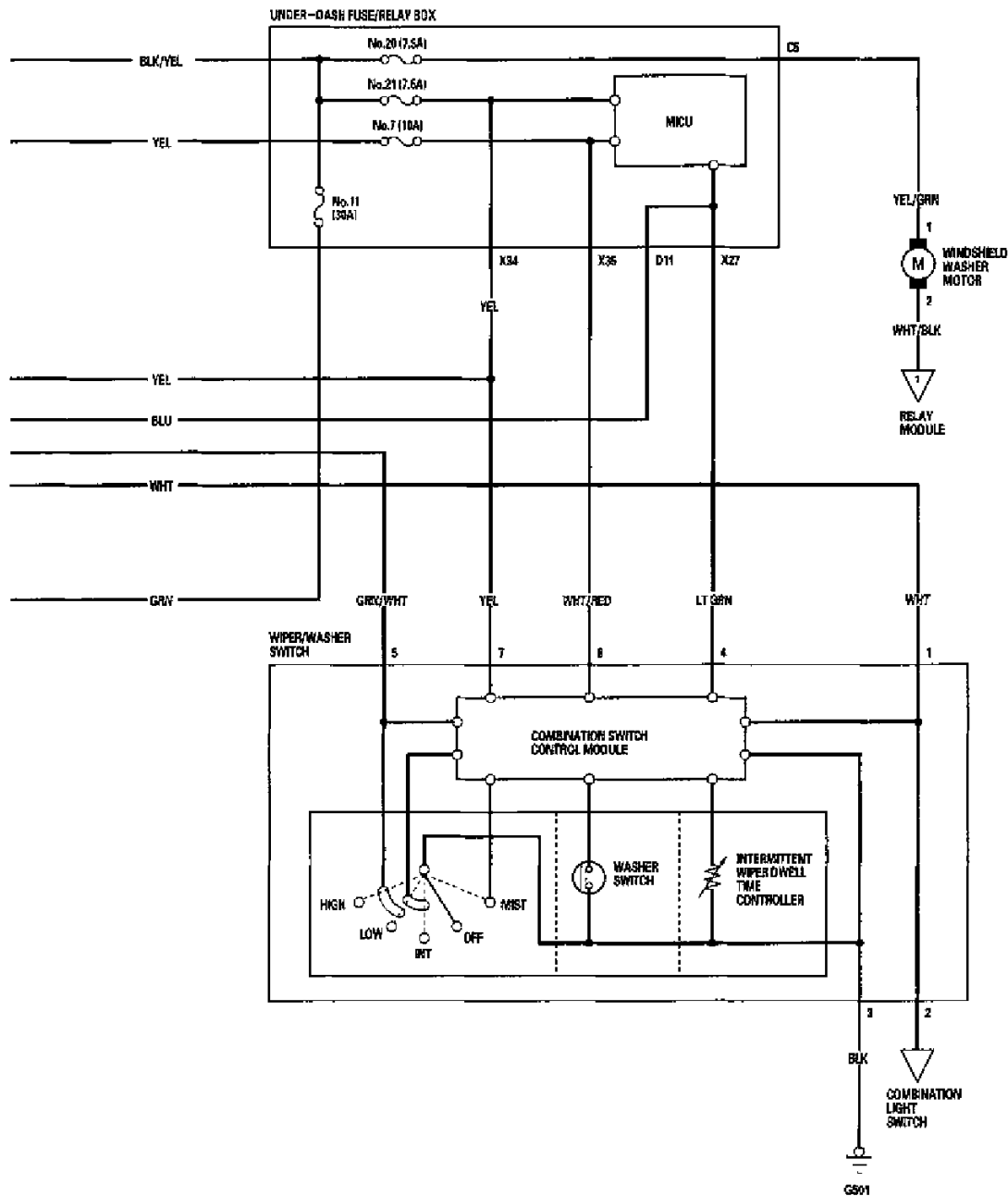
Fig. 1: Locating Wipers/Washers Components

CIRCUIT DIAGRAM



G01821036

Fig. 2: Wipers/Washers Wiring Diagram (1 Of 2)



G01B21037

Fig. 3: Wipers/Washers Wiring Diagram (2 Of 2)

DTC TROUBLESHOOTING

DTC B1076: WINDSHIELD WIPER SIGNAL ERROR

1. Clear the DTCs using the HDS.
2. Cycle the ignition switch to OFF and then back ON (II).

3. Turn the wiper switch to INT, LOW, then HIGH for at least 2 seconds each.
4. Check for DTCs using the HDS.

Is DTC B1076 indicated?

YES - Go to step 5.

NO - Intermittent failure. The windshield wiper system is OK at this time. Check pinfits and connections.

5. With the wiper/washer switch OFF, select WINDSHIELD WIPERS from the HDS, and enter the DATA LIST.
6. Check the ON/OFF information of the Windshield Wiper Switch (BACK-UP) in the DATA LIST.

Is the information indicator OFF?

YES - Go to step 7.

NO - Go to step 11.

7. Turn the wiper switch ON (low or high).
8. Check the ON/OFF information of the Windshield Wiper Switch (BACK-UP) in the DATA LIST.

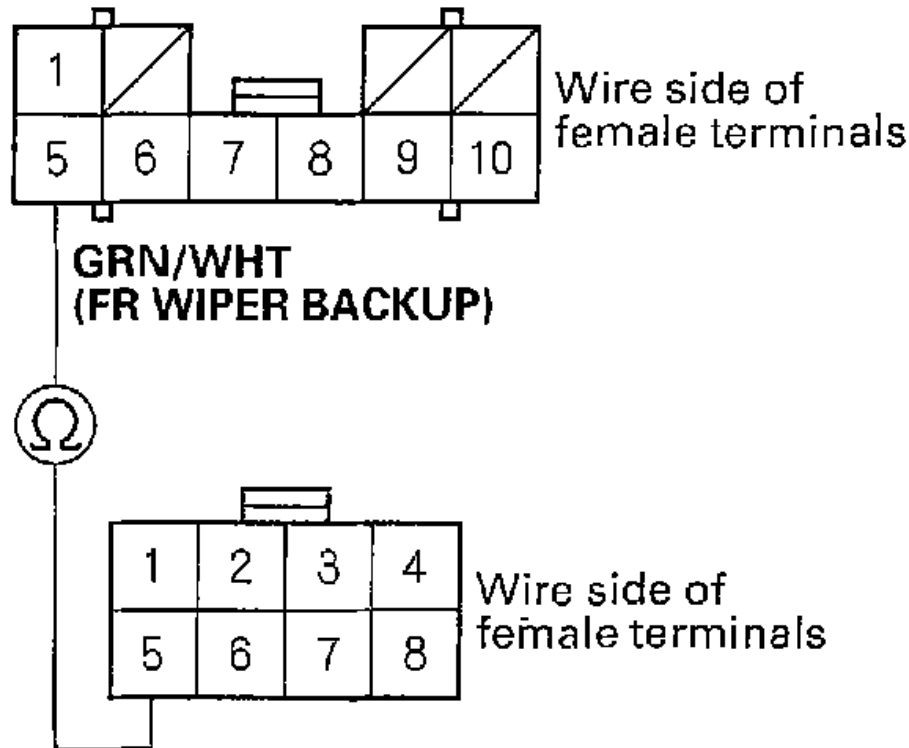
Is the information indicator ON?

YES - Faulty relay control module; replace the under-hood fuse/relay box.

NO - Go to step 9.

9. Disconnect the relay control module 10P connector and the wiper/washer switch 8P connector.
10. Check for continuity between the No. 5 terminal of the relay control module 10P connector and the No. 5 terminal of the wiper/washer switch (combination switch control unit) 8P connector.

RELAY CONTROL MODULE 10P CONNECTOR (UNDER-HOOD FUSE/RELAY BOX)



WIPER/WASHER SWITCH 8P CONNECTOR

G01821038

Fig. 4: Checking For Continuity Between The Relay Control Module 10P Connector And The Wiper/Washer Switch 8P Connector

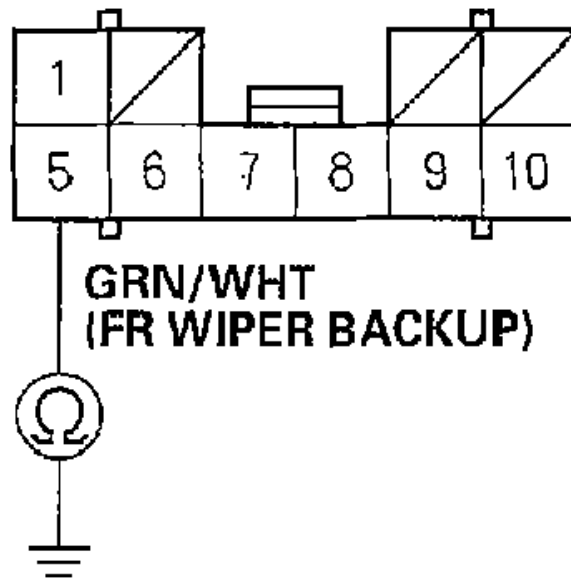
Is there continuity?

YES - Faulty combination switch control unit; replace the wiper/washer switch.

NO - Repair an open in the GRN/WHT wire.

11. Disconnect the relay control module 10P connector and the wiper/washer switch 8P connector.
12. Check for continuity between the No. 5 terminal of the relay control module 10P connector and body ground.

RELAY CONTROL MODULE 10P CONNECTOR (UNDER-HOOD FUSE/RELAY BOX)



Wire side of female terminals

G01821039

Fig. 5: Checking For Continuity Between The No. 5 Terminal Of The Relay Control Module 10P Connector And Body Ground

Is there continuity?

YES - Repair a short in the GRN/WHT wire.

NO - Faulty relay control module; replace the under-hood fuse/relay box.

DTC B1077: WINDSHIELD WIPER (AS) SIGNAL ERROR

1. Clear the DTCs using the HDS.
2. Cycle the ignition switch to OFF and then back ON (II).
3. Turn the wiper switch to INT, LOW, then HIGH for at least 2 seconds each.
4. Check for DTCs using the HDS.

Is DTC B1077 indicated?

YES - Go to step 5.

NO - Intermittent failure. The windshield wiper system is OK at this time. Check pinfits and connections.

5. Turn the ignition switch ON (II).
6. Select WINDSHIELD WIPERS from the HDS and enter the DATA LIST.
7. Turn the windshield wiper switch ON.
8. Check the ON/OFF information of the Windshield Wiper Switch (INTERMITTENT), Windshield Wiper Switch (LOW), and Windshield Wiper Switch (HIGH) in the DATA LIST at each wiper switch position.

Is the information indicator ON at each switch position?

YES - Go to step 9.

NO - Go to step 17.

9. Select FUNCTIONAL TEST from the TEST MODE MENU, and operate the windshield wiper motor with Windshield Wiper Switch (LOW) and Windshield Wiper Switch (HIGH).

Does the windshield wiper motor run?

YES - Go to step 10.

NO - Go to step 18.

10. Turn the windshield wiper switch OFF, and stop the wiper arms at the park position. (If the wiper arms do not stop at the park position, turn the ignition switch OFF and stop them at the park position correctly.)
11. Turn the ignition switch ON (II).

Do the wipers begin to run as soon as the ignition switch is cycled ON?

YES - Go to step 16.

NO - Go to step 12.

12. Check the ON/OFF information of the Windshield Wiper Motor PARK Switch in the DATA LIST.

Is the information indicator OFF?

YES - Go to step 13.

NO - Faulty relay control module; replace the under-hood fuse/relay box.

13. Turn the ignition switch ON (II), and turn the windshield wiper switch ON at low speed.

14. Check the ON/OFF information of the Windshield Wiper Motor PARK Switch in the DATA LIST.

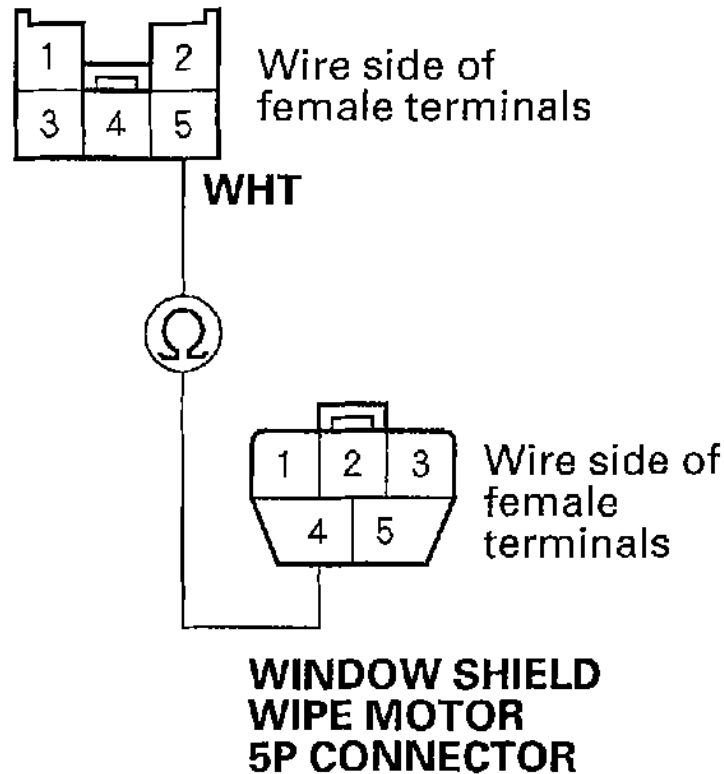
Does the DATA LIST information indicate ON and OFF alternately as the wipers pass the PARK position?

YES - Intermittent failure, the windshield wiper system is OK at this time. Check pinfits and connections.

NO - Go to step 15.

15. Check for continuity between the No. 4 terminal of the windshield wiper motor 5P connector and No. 5 terminal of the under-hood fuse/relay box 5P connector J.

UNDER-HOOD FUSE/RELAY BOX 5P CONNECTOR J



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Fig. 6: Checking For Continuity Between The Windshield Wiper Motor 5P Connector And The Under-Hood Fuse/Relay Box 5P Connector J

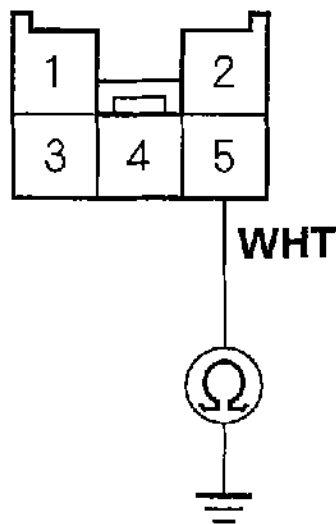
Is there continuity?

YES - Faulty windshield wiper motor; replace it.

NO - Repair an open in the WHT wire.

16. Check for continuity between the No. 5 terminal of the under-hood fuse/relay box 5P connector J and body ground.

UNDER-HOOD FUSE/RELAY BOX 5P CONNECTOR J



Wire side of female terminals

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Fig. 7: Checking For Continuity Between The No. 5 Terminal Of The Under-Hood Fuse/Relay Box 5P Connector J And Body Ground

Is there continuity?

YES - Repair a short in the WHT wire.

NO - Faulty windshield wiper motor; replace it.

17. Check the No. 7 (10A), No. 11 (30A) and No. 21 (7.5A) fuses in the under-dash fuse/relay box.

Are the fuses OK?

YES - Faulty relay control module; replace the under-hood fuse/relay box.

NO - Replace the blown fuse and recheck the system.

18. Turn the ignition switch OFF, and check the No. 11 (30A) fuse in the under-dash fuse/relay box.

Is the fuse OK?

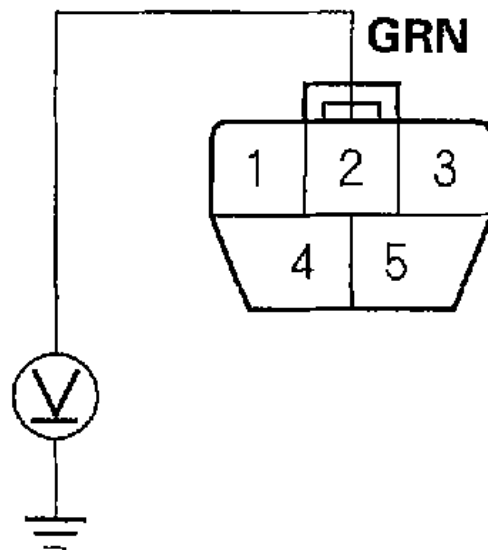
YES - Go to step 19.

NO - Replace the blown fuse and recheck the system.

19. Turn the ignition switch ON (II).

20. Check for voltage between the No. 2 terminal of the windshield wiper motor 5P connector and body ground.

WINDSHIELD WIPER MOTOR 5P CONNECTOR



Wire side of female terminals

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Fig. 8: Checking For Voltage Between The No. 2 Terminal Of The Windshield Wiper Motor 5P

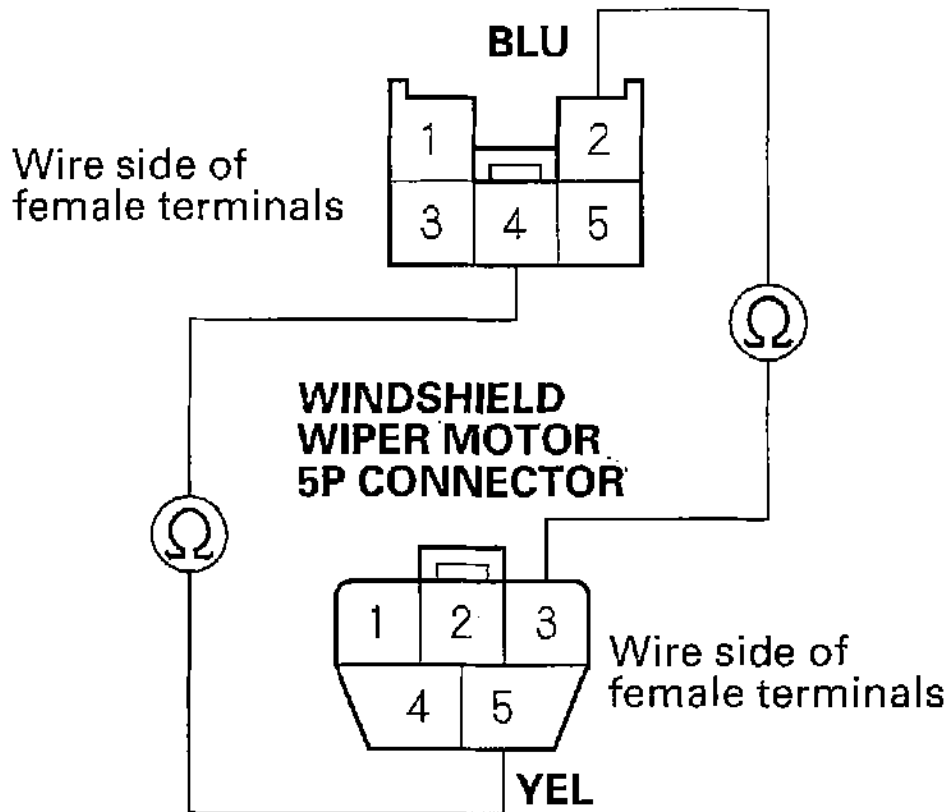
Connector And Body Ground

Is there battery voltage?

YES - Go to step 21.

NO - Repair an open in the GRN wire.

21. Check for continuity between the No. 3 and No. 5 terminals of the windshield wiper motor 5P connector and the No. 2 and No. 4 terminals of the under-hood fuse/relay box 5P connector J.

UNDER-HOOD FUSE/RELAY BOX 5P CONNECTOR J

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Fig. 9: Checking For Continuity Between The Windshield Wiper Motor 5P Connector And The Under-Hood Fuse/Relay Box 5P Connector J

Is there continuity?

YES - Repair an open in the BLU or YEL wire.

NO - Go to step 22.

22. Perform the wiper motor test (see **WIPER MOTOR TEST**).

Does the wiper motor operate correctly?

YES - Faulty relay control module; replace the under-hood fuse/relay box.

NO - Replace the windshield wiper motor.

DTC B1281: WINDSHIELD WIPER SWITCH MIST POSITION CIRCUIT MALFUNCTION, DTC B1282: WINDSHIELD WIPER SWITCH INT (AUTO) POSITION CIRCUIT MALFUNCTION, DTC B1283: WINDSHIELD WIPER SWITCH LOW POSITION CIRCUIT MALFUNCTION, DTC B1284: WINDSHIELD WIPER SWITCH HIGH POSITION CIRCUIT MALFUNCTION

1. Clear the DTCs using the HDS.
2. Cycle the ignition switch to OFF and then back ON (II).
3. Turn the windshield wiper switch in MIST and wait for 2 seconds.
4. Turn the windshield wiper switch OFF and wait for 2 seconds.
5. Turn the windshield wiper switch in INT (AUTO) and wait for 2 seconds.
6. Turn the windshield wiper switch in LOW and wait for 2 seconds.
7. Turn the windshield wiper switch in HIGH and wait for 2 seconds.
8. Check for DTCs using the HDS.

Is DTC B1281, B1282, B1283, or B1284 indicated?

YES - Replace the windshield wiper/washer switch.

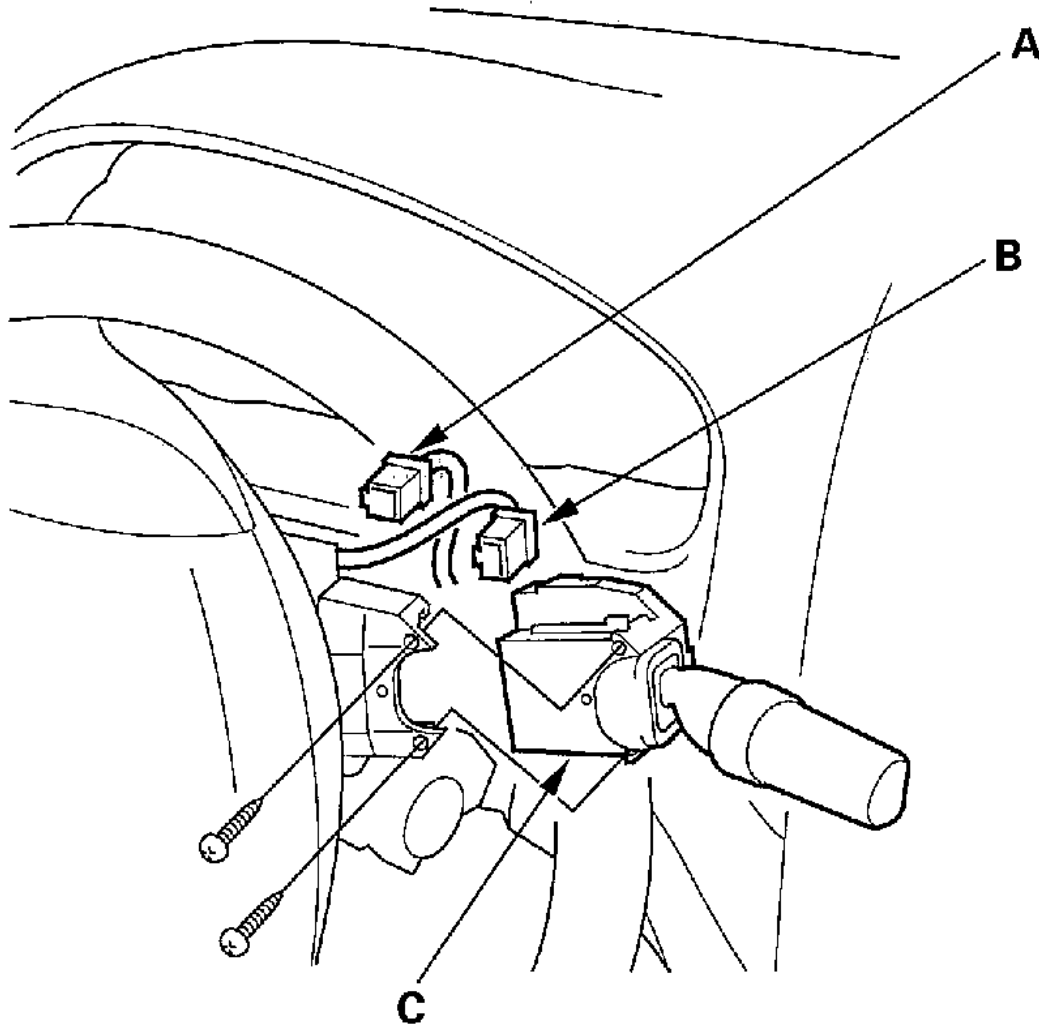
NO - Intermittent failure, the windshield wiper/washer switch and the combination switch control unit are OK at this time. Check pin fits and connections.

WIPER/WASHER SWITCH TEST/REPLACEMENT

NOTE: The wiper/washer switch is built into the combination switch control unit. For the wiper/washer test, refer to the combination switch control unit input test (see **WIPER/WASHER SWITCH INPUT TEST**).

1. Remove the dashboard lower cover (see **DRIVER'S DASHBOARD LOWER COVER REMOVAL/INSTALLATION**).
2. Remove the steering column covers (see **STEERING COLUMN REMOVAL AND INSTALLATION**).
3. Disconnect the combination light switch 12P connector (A) and dashboard wire harness 8P connector (B)

from the wiper/washer switch (C).



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Fig. 10: Removing Wiper/Washer Switch

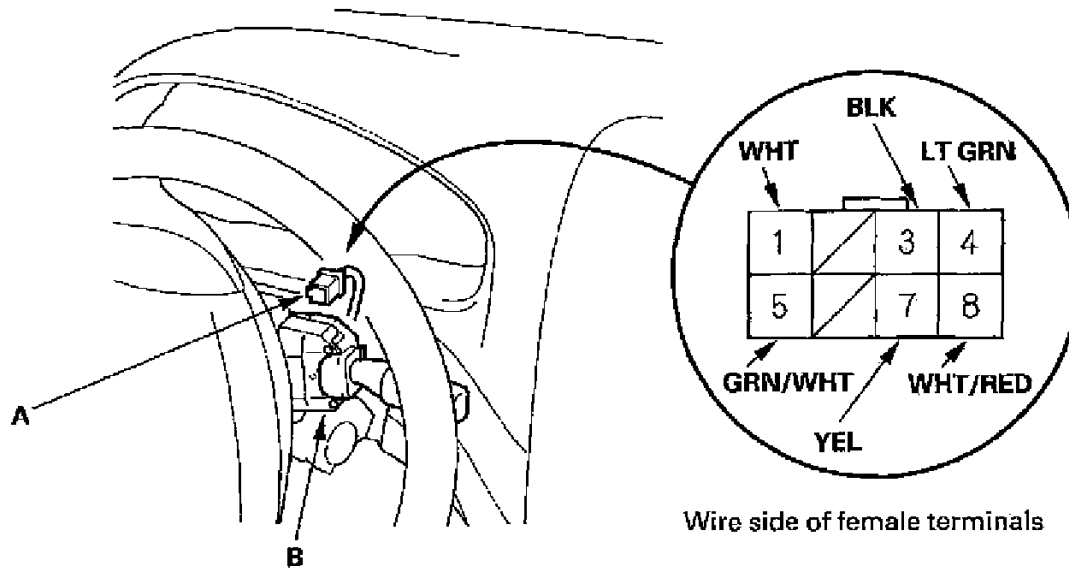
4. Remove the two screws, then slide out the wiper/washer switch.

WIPER/WASHER SWITCH INPUT TEST

1. Before troubleshooting the wiper/washer system, troubleshoot the B-CAN System Diagnosis Test Mode A (see page 22-77).
2. Remove the dashboard lower cover (see **DRIVER'S DASHBOARD LOWER COVER**

REMOVAL/INSTALLATION).

3. Remove the steering column covers (see **STEERING COLUMN REMOVAL AND INSTALLATION**).
4. Disconnect the 8P connector (A) from the wiper/washer switch (B).



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Fig. 11: Disconnecting The 8P Connector From The Wiper/Washer Switch

5. Inspect the connector and socket terminals to be sure they are all making good contact.
 - If the terminals are bent, loose or corroded, repair them as necessary, and recheck the system.
 - If the terminals look OK, go to step 6.
6. With the connector still disconnected, make these input tests at the connector.
 - If any test indicates a problem, find and correct the cause, then recheck the system.
 - If all the input tests prove OK, replace the wiper/washer switch (combination switch control unit).

Cavity	Wire	Test condition	Test; Desired result	Possible cause if result is not obtained
3	BLK	Under all conditions	Check for continuity to ground: There should be continuity.	• Poor ground (G501) • An open in the wire
8	WHT/RED	Under all conditions	Check for voltage to ground: There should be battery voltage.	• Blown No. 15 (40A) fuse in the under-hood fuse/relay box • Blown No. 7 (10A) fuse in the under-dash fuse/relay box • An open in the wire
7	YEL	Ignition switch ON (II)	Check for voltage to ground: There should be battery voltage.	• Blown No. 21 (7.5A) fuse in the under-dash fuse/relay box • An open in the wire
5	GRN/WHT	Under all conditions	Check for continuity between the No. 5 terminal and under-hood fuse/relay box 10P connector No. 5 terminal: There should be continuity.	• An open in the wire
4	LT GRN	Under all conditions	Check for continuity between the No. 4 terminal and under-dash fuse/relay box X connector No. 27 terminal: There should be continuity.	• An open in the wire
1	WHT	Under all conditions	Check for continuity between the No. 1 terminal and under-hood fuse/relay box 10P connector No. 6 terminal: There should be continuity.	• An open in the wire

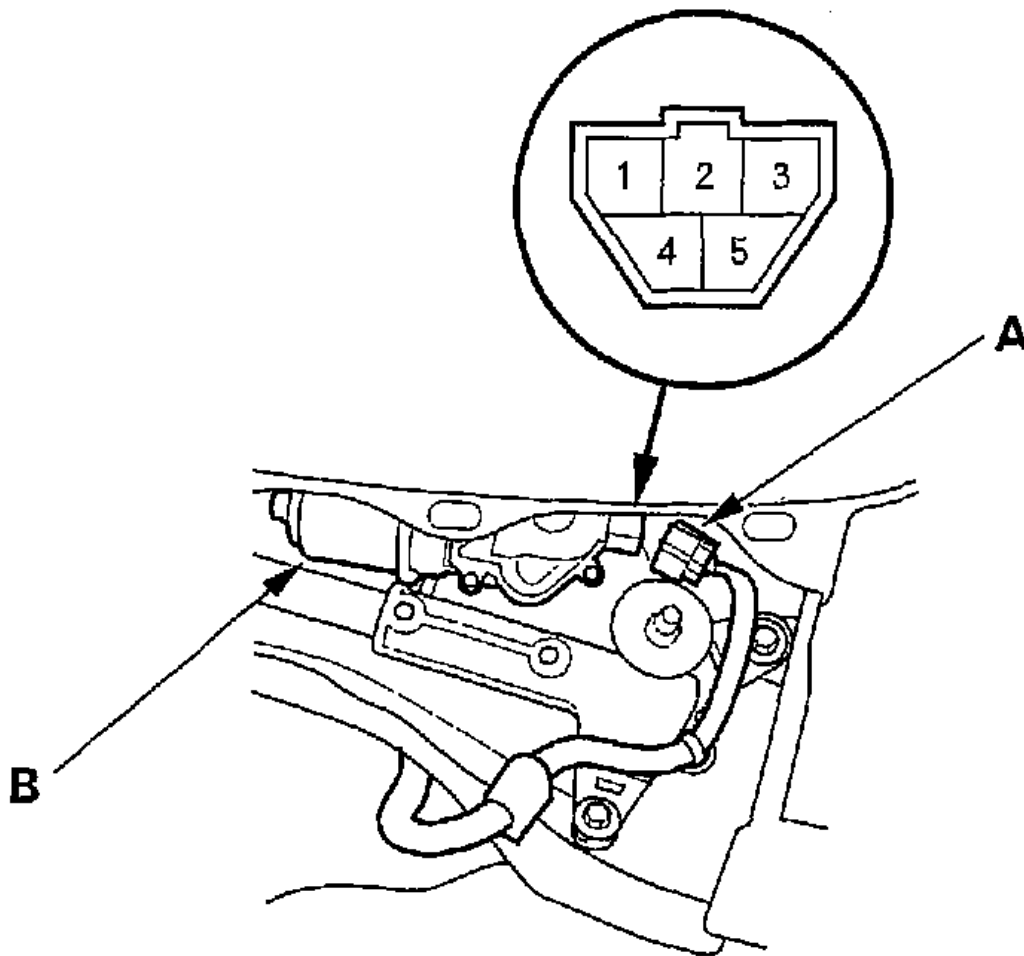
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Fig. 12: Wiper/Washer Switch Input Test**WIPER MOTOR TEST**

1. Open the hood, and remove the wiper arms.

NOTE: Carefully remove the wiper arms, so that they do not touch the hood.

2. Remove the hood seal and cowl cover.
3. Disconnect the 5P connector (A) from the wiper motor (B).



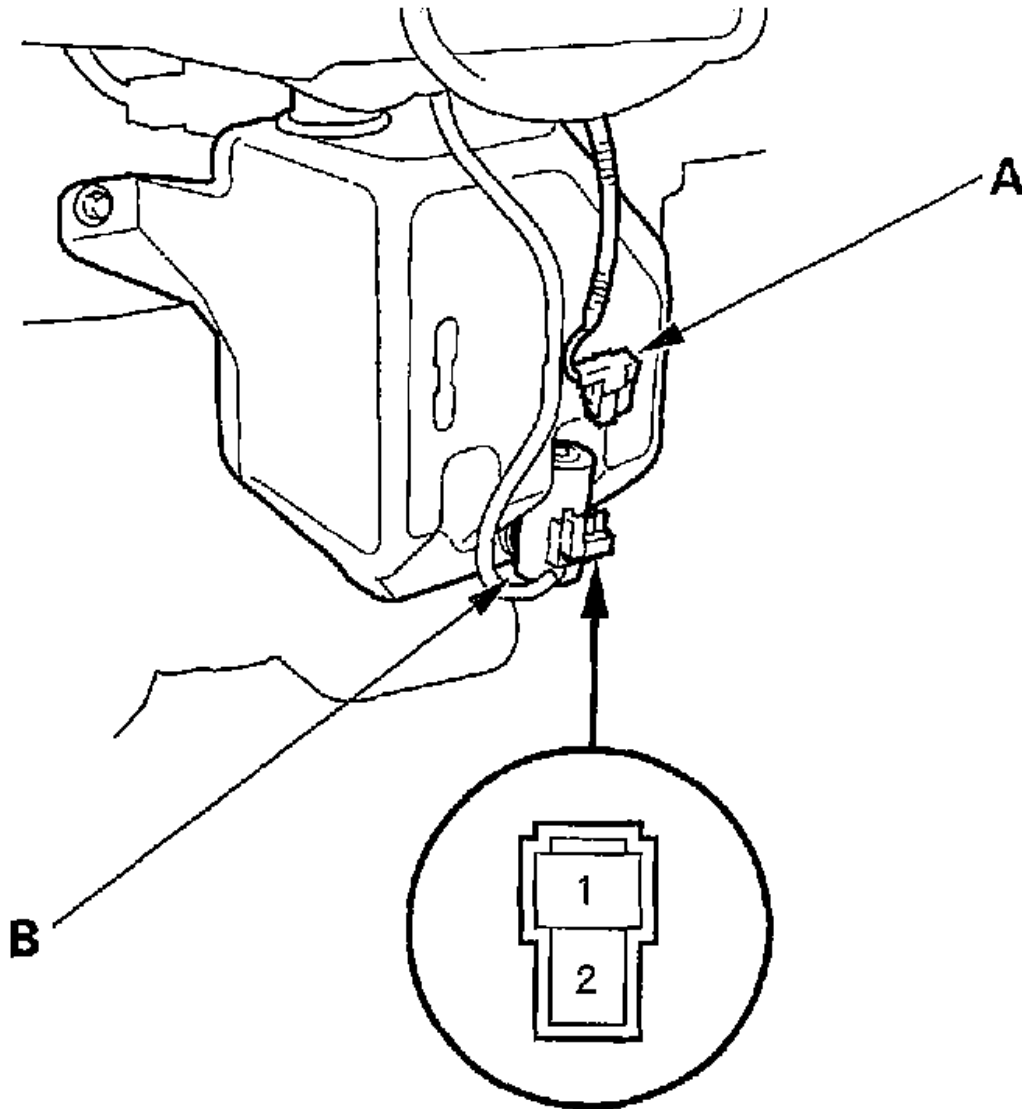
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Fig. 13: Disconnecting The 5P Connector From The Wiper Motor

4. Test the motor by connecting battery power to the No.2 terminal and ground the No. 3 terminal of the wiper motor 5P connector. The motor should run at low speed. If the motor does not run or fails to run smoothly, replace the motor.
5. Test the motor by connecting battery power to the No. 2 terminal and ground the No. 5 terminal of the wiper motor 5P connector. The motor should run at high speed. If the motor does not run or fails to run smoothly, replace the motor.
6. Connect an analog voltmeter between the No. 4 (+) and No. 1 (-) terminals, and run the motor at low or high speed. The voltmeter should indicate 12 V and 4 V or less alternately. If it does not, replace the motor.

WASHER MOTOR TEST

1. Remove the right inner fender (see **FRONT INNER FENDER REPLACEMENT**).
2. Disconnect the 2P connector (A) from the washer motor (B).



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Fig. 14: Disconnecting The 2P Connector From The Washer Motor

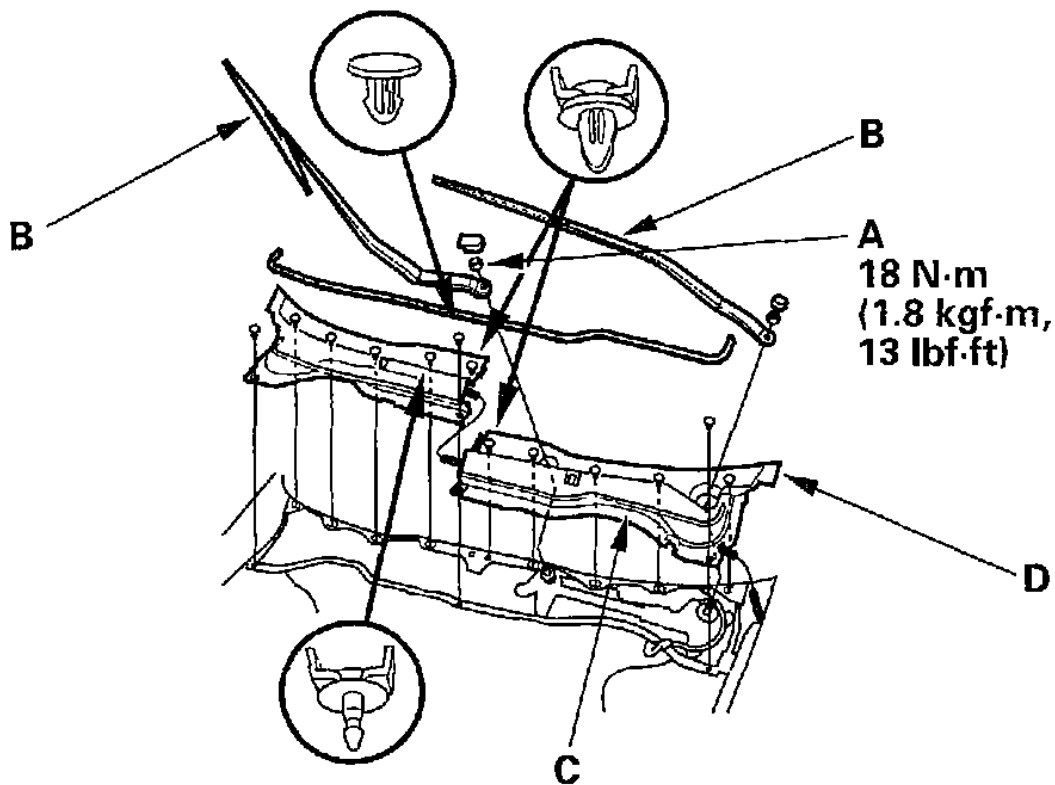
3. Test the motor by connecting battery power to the No. 1 terminal and ground to the No. 2 terminal of the

washer motor. The motor should run.

- If the motor does not run or fails to run smoothly, replace it.
- If the motor runs smoothly, but little or no washer fluid is pumped, check for a disconnected or blocked washer hose, or a clogged washer motor outlet.

WIPER MOTOR REPLACEMENT

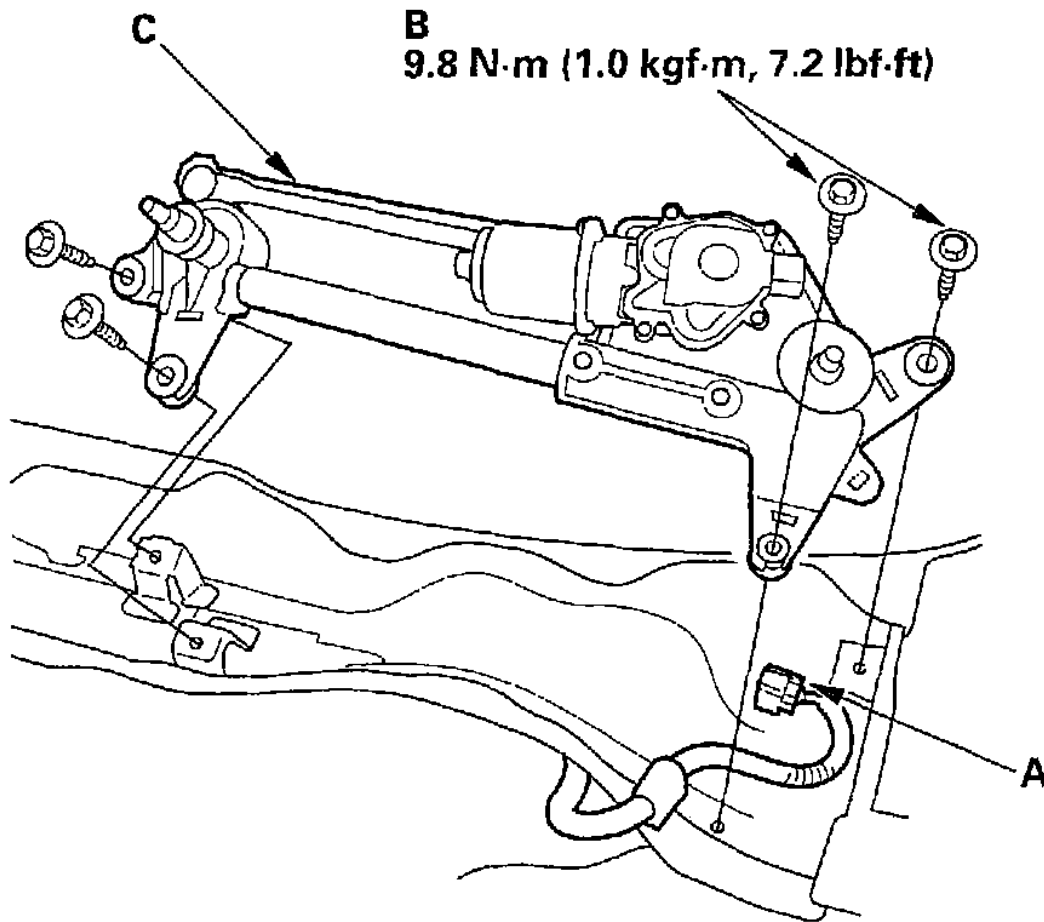
1. Open the hood. Remove the caps, nuts (A), and the windshield wiper arms (B).



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Fig. 15: Removing The Caps, Nuts, And The Windshield Wiper Arms

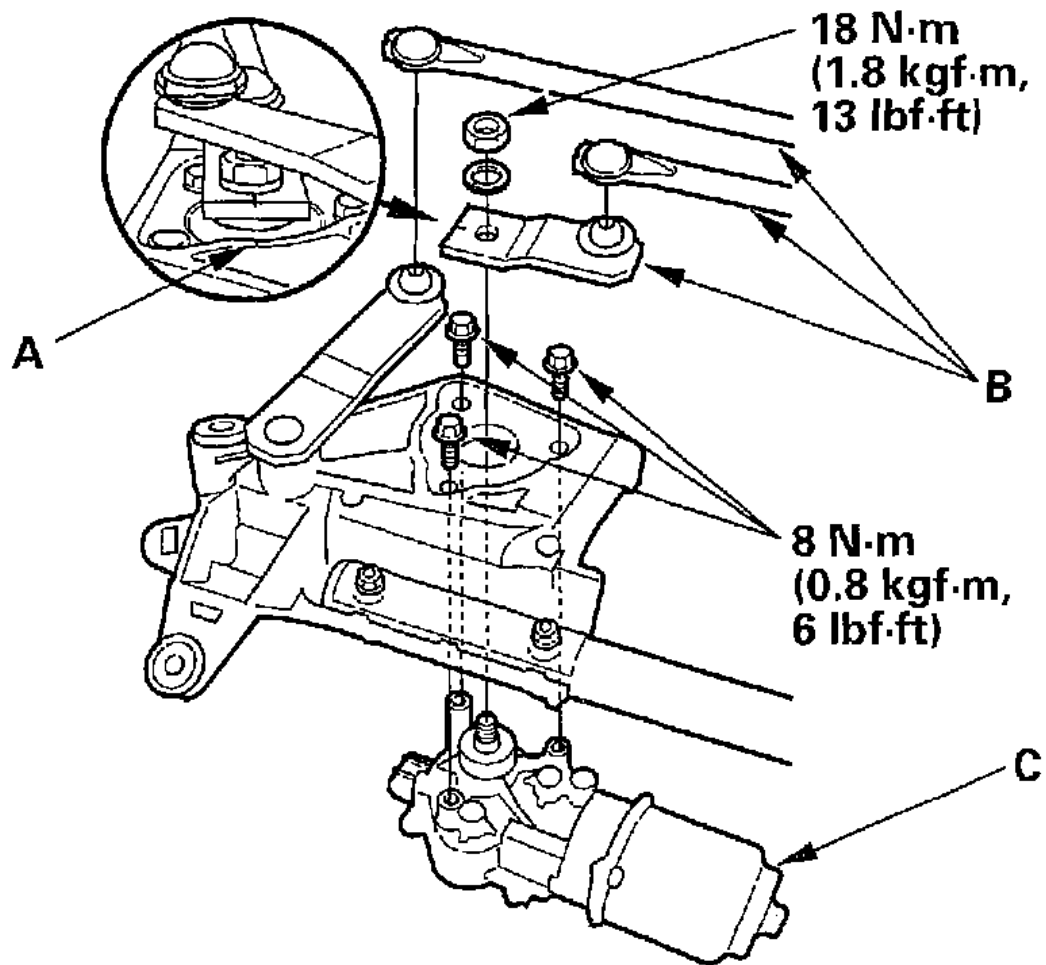
2. Remove the hood seals (C) and cowl covers (D).
3. Disconnect the 5P connector (A) from the wiper motor.



G01821050

Fig. 16: Removing The Wiper Linkage Assembly

4. Remove the four bolts (B) and wiper linkage assembly (C).
5. Scribe a line (A) across the link and windshield wiper linkage to show the original adjustment. Separate the windshield wiper linkage (B) from the wiper motor (C).



G01821051

Fig. 17: Separating The Windshield Wiper Linkage From The Wiper Motor

6. Install in the reverse order to removal, and note these items:
 - Apply multipurpose grease to the moving parts.
 - Before reinstalling the wiper arms, turn the wiper switch ON, then OFF to return the wiper shafts to the park position.
 - If necessary, replace any damaged clips.
 - Check the wiper motor operation.

WASHER RESERVOIR REPLACEMENT

1. Remove the right inner fender (see **FRONT INNER FENDER REPLACEMENT**).

2. Disconnect the washer tube (A) and washer motor 2P connector (B).

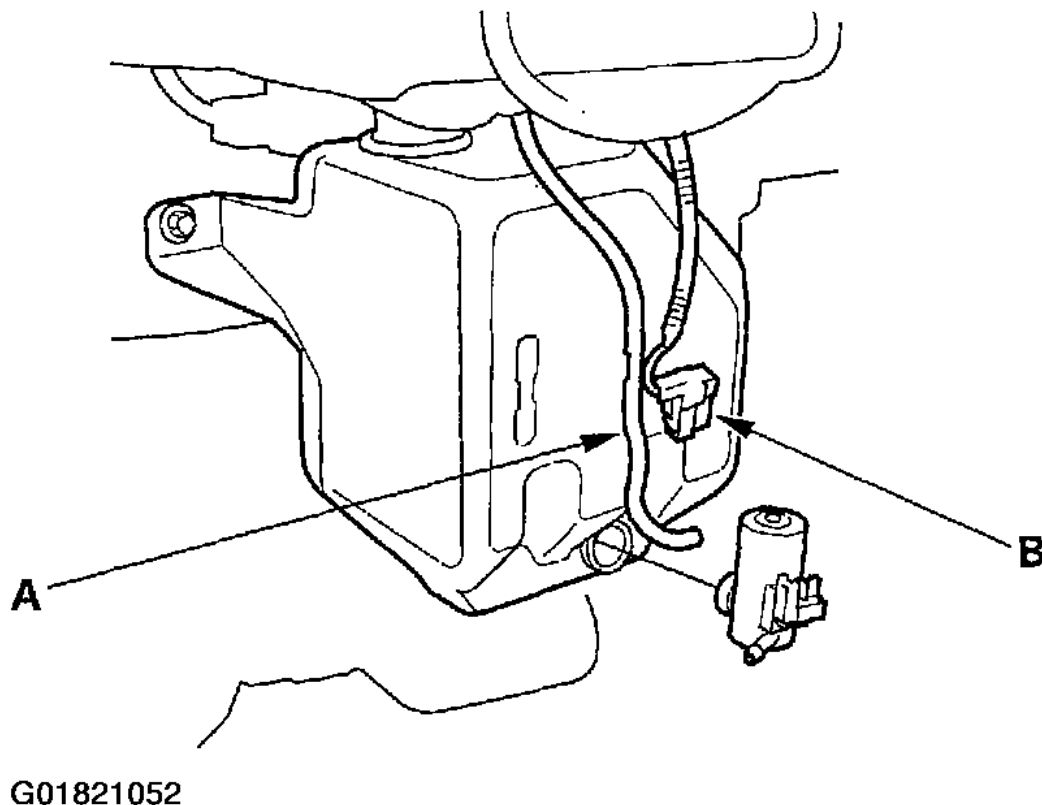


Fig. 18: Disconnecting The Washer Tube And Washer Motor 2P Connector

3. Remove the three bolts (A), then remove the washer reservoir (B).

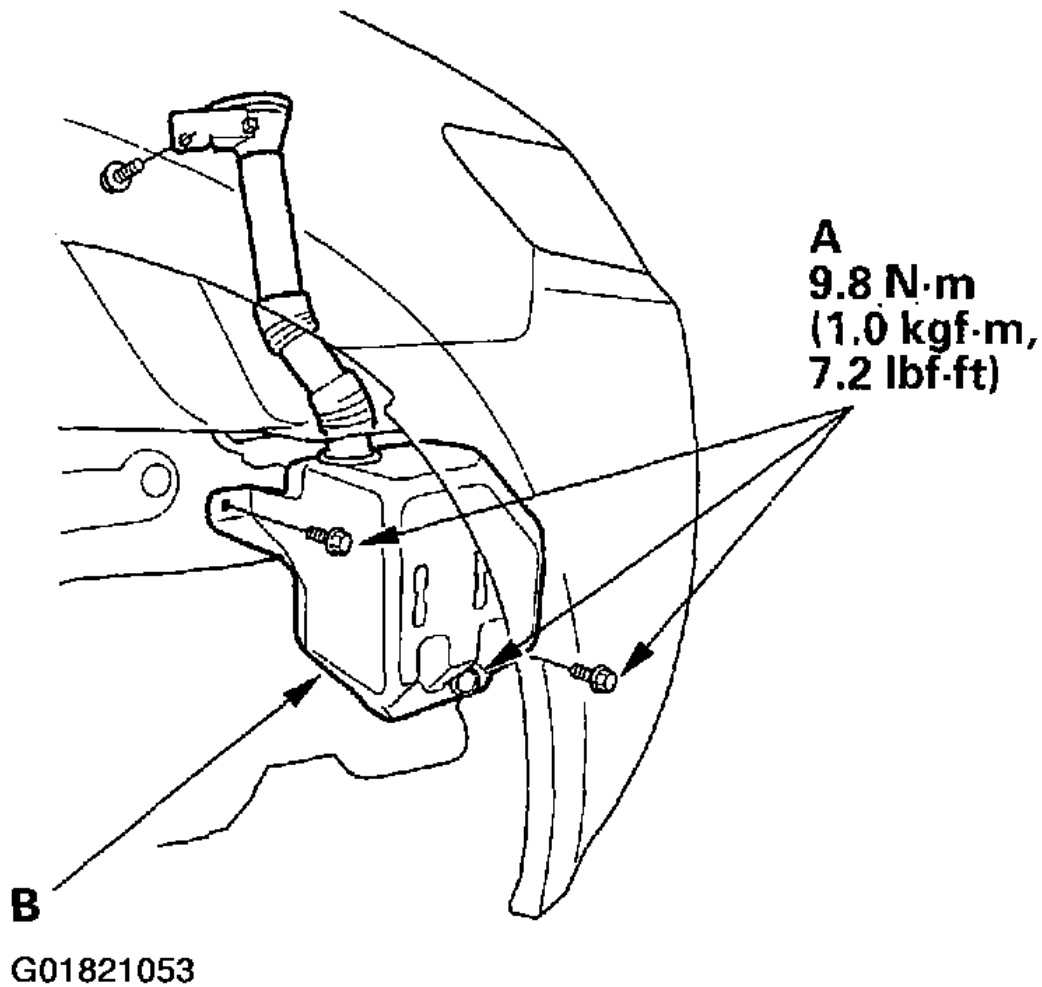


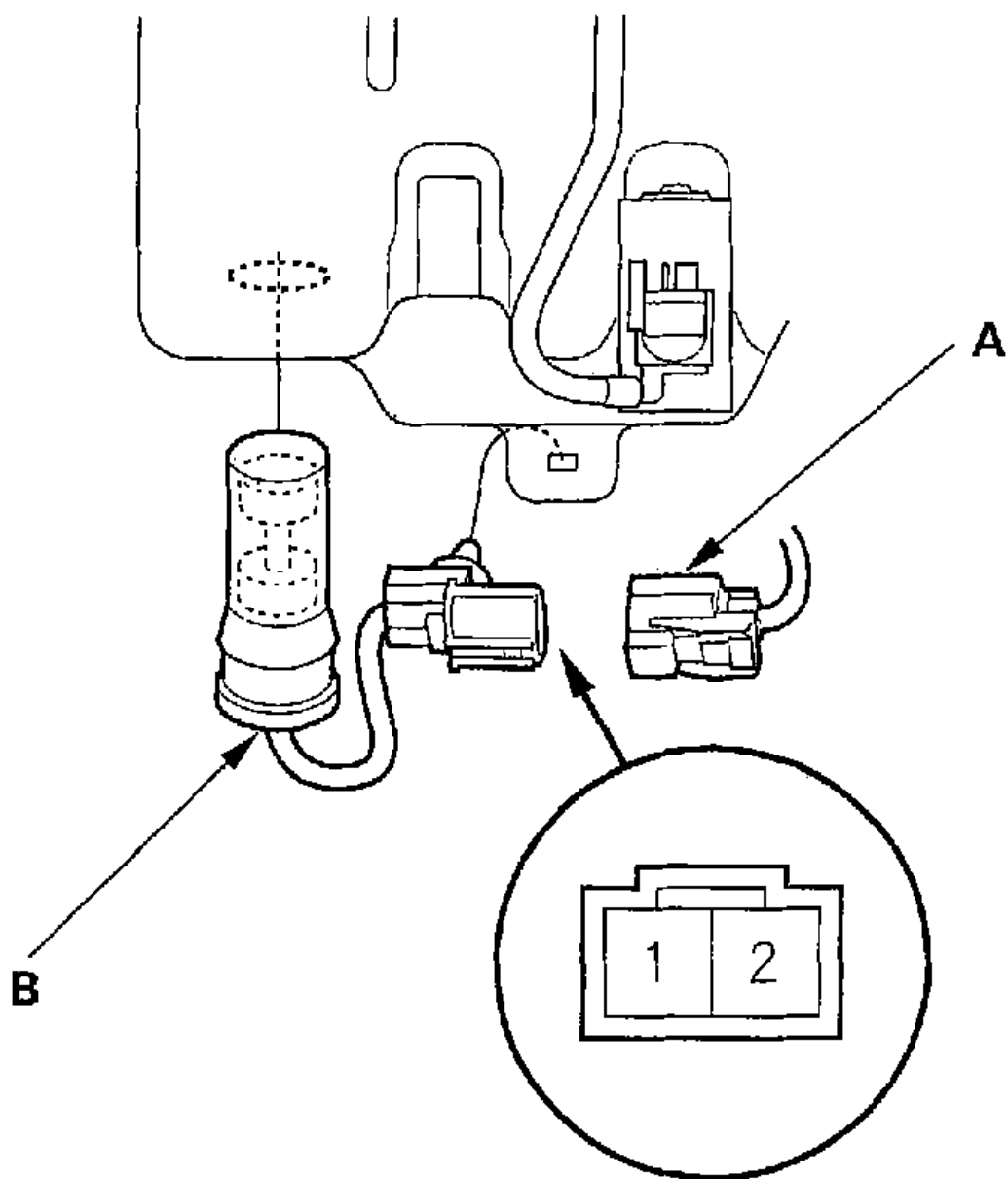
Fig. 19: Removing The Washer Reservoir

4. Install the reservoir in the reverse order of removal.

WASHER FLUID LEVEL SWITCH TEST

CANADA

1. Remove the right inner fender (see **FRONT INNER FENDER REPLACEMENT**).
2. Disconnect the 2P connector (A) from the washer fluid level switch (B).



Terminal side of male terminals

G01821054

Fig. 20: Disconnecting The 2P Connector From The Washer Fluid Level Switch

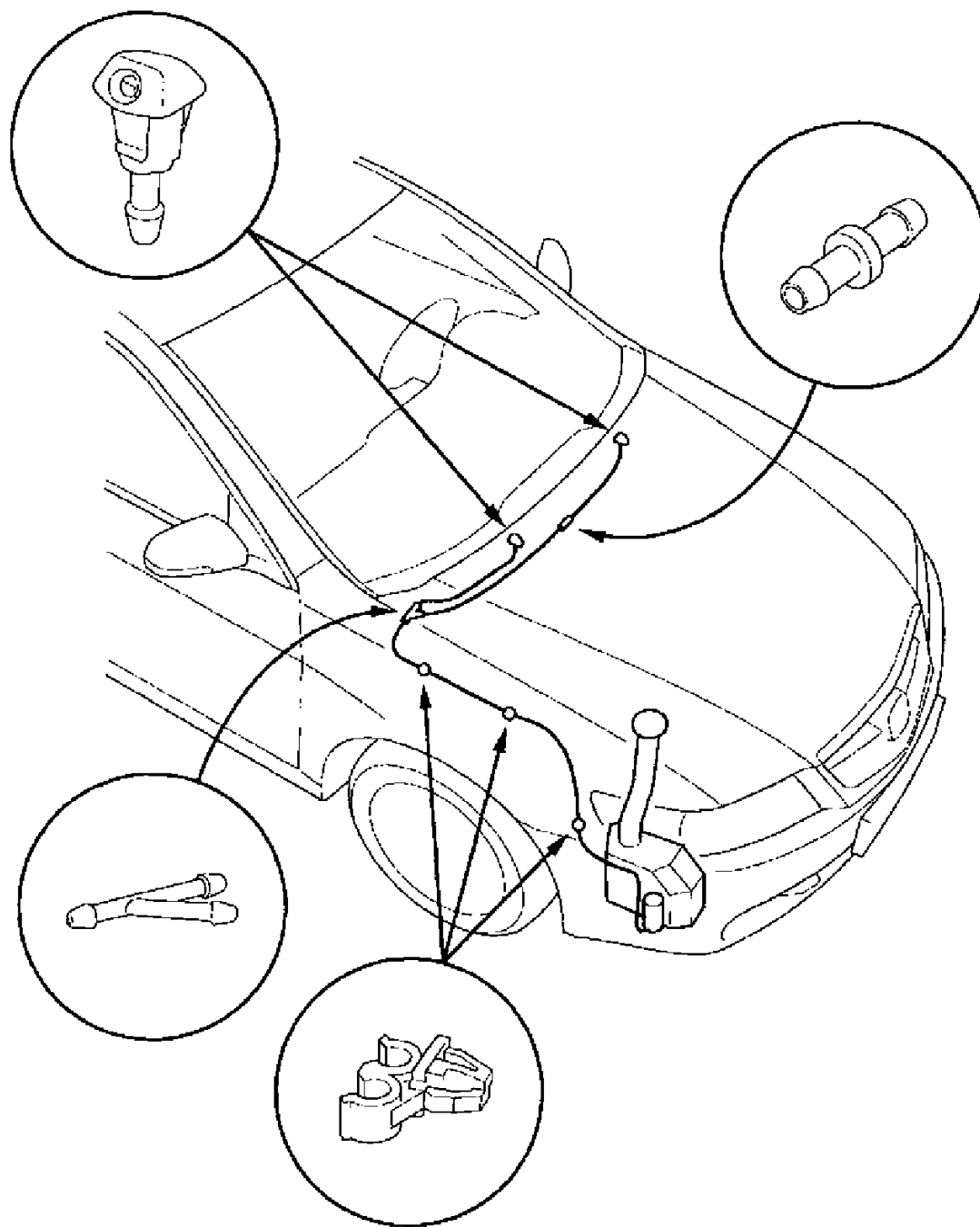
3. Remove the washer fluid level switch from the reservoir.

NOTE: **Fluid may flow out of the opening.**

4. Check for continuity between the No. 1 and No. 2 terminals in each float position (C).
 - There should be continuity when the float is down.
 - There should be no continuity when the float is up.

WASHER TUBE REPLACEMENT

1. Remove the right inner fender (see **FRONT INNER FENDER REPLACEMENT**).
2. Remove the windshield washer nozzles and clips, then remove the tube.



G01021055

Fig. 21: Removing The Windshield Washer Nozzles, Clips, And Then The Tube

3. Install in the reverse order of removal. Take care not to pinch the washer tube. Check the windshield washer operation.