Component Tests

The ignition switch must be in RUN position for all tests. Verify proper operation of windshield wiper motor in low speed. With system operating in LO, turn turn signal and windshield wiper switch to OFF when windshield wiper blades are in vertical (straight-up) position. Windshield wiper motors should complete cycle and depress park (below windshield). If turn signal and windshield wiper switches do not park, locate the system's condition on the list below and test and service as indicated.

- Windshield wiper motor stops when turn signal and windshield wiper switch is turned to OFF (does not complete cycle).

1. Remove windshield wiper motor park switch connector and check for battery voltage, using Rotunda Digital Volt-Ohmmeter 014-00407 or equivalent, on Circuit 65 (dark green). If battery voltage is not present, service circuit as required. If voltage is present, go to Step 2.
2. Check windshield wiper motor ground wiring at turn signal and windshield wiper switch connector.
3. With both windshield wiper motor connectors disconnected, use an ohmmeter, such as Rotunda Digital Volt-Ohmmeter 014-00407 or equivalent, to verify continuity (less than one ohm) between Circuits 28 and 56 in wiring harness. If continuity is not present, trace and service as required. If continuity is OK, leave connectors disconnected and go to Step 4.
4. Check for continuity to ground terminal on gear cover at Circuit terminal 28 on windshield wiper motor. If open, replace windshield wiper motor. If ground is present, leave connectors disconnected and go to Step 5.
5. Verify continuity (less than one ohm resistance) between Circuits 61 and 63 in wiring harness. If continuity is not present, trace and service as required. If lack of continuity is traced to windshield wiper governor, check turn signal and windshield wiper switch for continuity. Refer to «Section 11-05». Replace turn signal and windshield wiper switch if continuity is not present. If continuity is present in turn signal and windshield wiper switch and lack of continuity has been traced to windshield wiper governor, replace windshield wiper governor. If continuity between Circuits 61 and 63 is OK, leave connectors disconnected and go to Step 6.
6. Check for continuity between Circuit terminals 63 and 65 on windshield wiper motor. If open, replace windshield wiper motor.

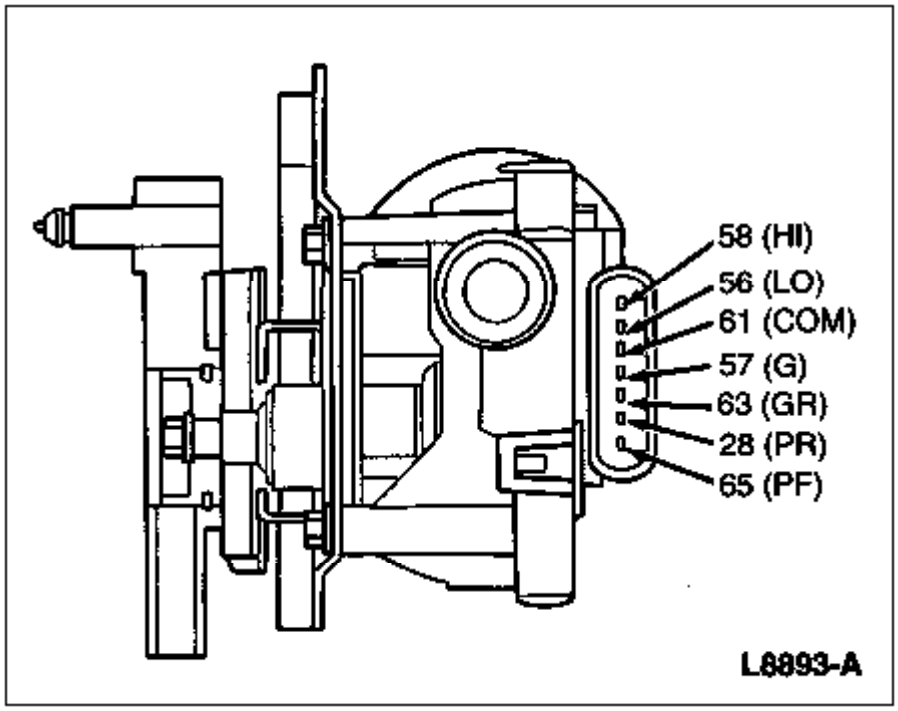
- Windshield wiper blades go into depressed park (below windshield), but windshield wiper motor keeps running. Replace windshield wiper motor.
- Windshield wiper blades stall or jam, (windshield wiper motor starts running in reverse direction) while going from park to depressed park (below windshield).

1. Check windshield wiper mounting arm and pivot shaft and service as required. If OK, go to Step 2.
2. Check windshield wiper motor drive arms and windlatch assembly. If bent or cracked, replace windshield wiper motor.

- Windshield wiper blades complete cycle, but continue to wipe for part of another cycle and park on windshield, or
- Windshield wiper blades run continuously when turn signal and windshield wiper switch is in OFF or INT position, or
- Windshield wiper blades run to bottom of windshield and stop, but will not depress park below

windshield.

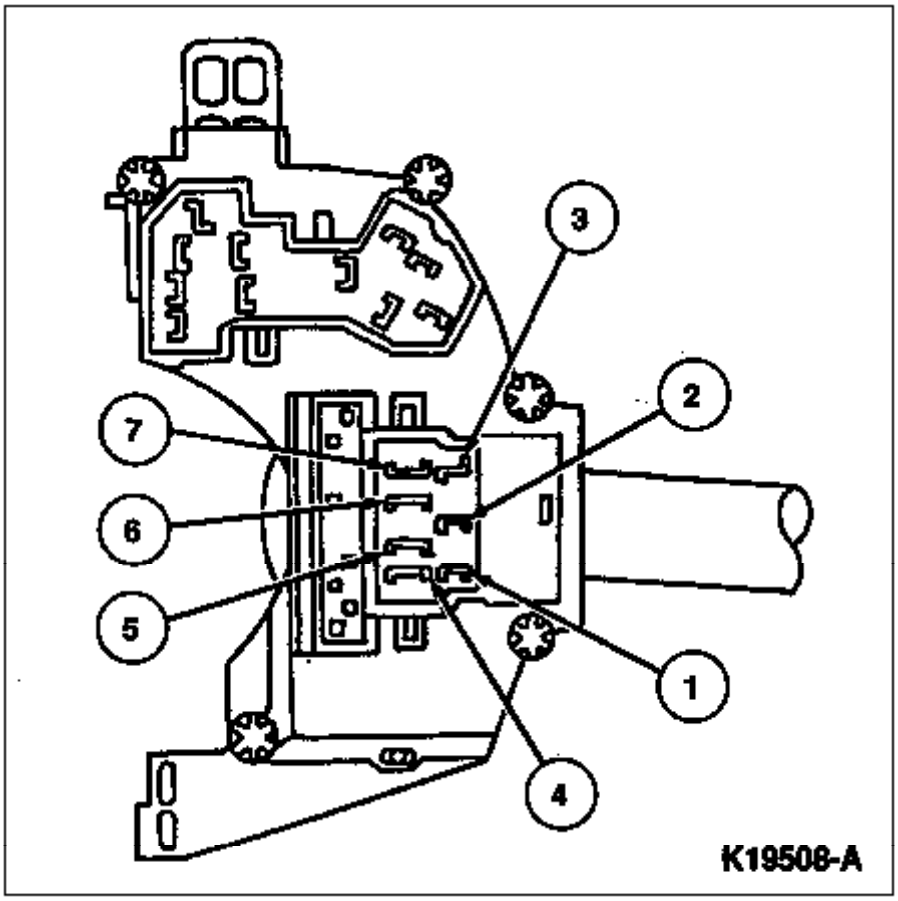
1. Perform turn signal and windshield wiper switch continuity test. Refer to «Section 11-05». If continuity test fails, replace turn signal and windshield wiper switch. If continuity test is OK on interval wiper system, go to Step 2.
2. Check wash Circuit 941 for no voltage. If any voltage is present, service as required. If no voltage is present, go to Step 3.
3. Disconnect connectors at windshield wiper motor and check for continuity between Circuits 61 and 63 going to windshield wiper governor. If open, replace windshield wiper governor. If continuity is present, replace windshield wiper motor.



Windshield Wiper Switch Test

Refer to the following illustration and Turn Signal and Windshield Wiper Switch Test to resolve concerns with the turn signal and windshield wiper switch wiper and washer switch circuits.

Testing should be done with an ohmmeter such as Rotunda Digital Volt Ohmmeter 007-00001 or equivalent.



NOTE:
Terminals 1, 2 and 3 are the only ones used for this test.

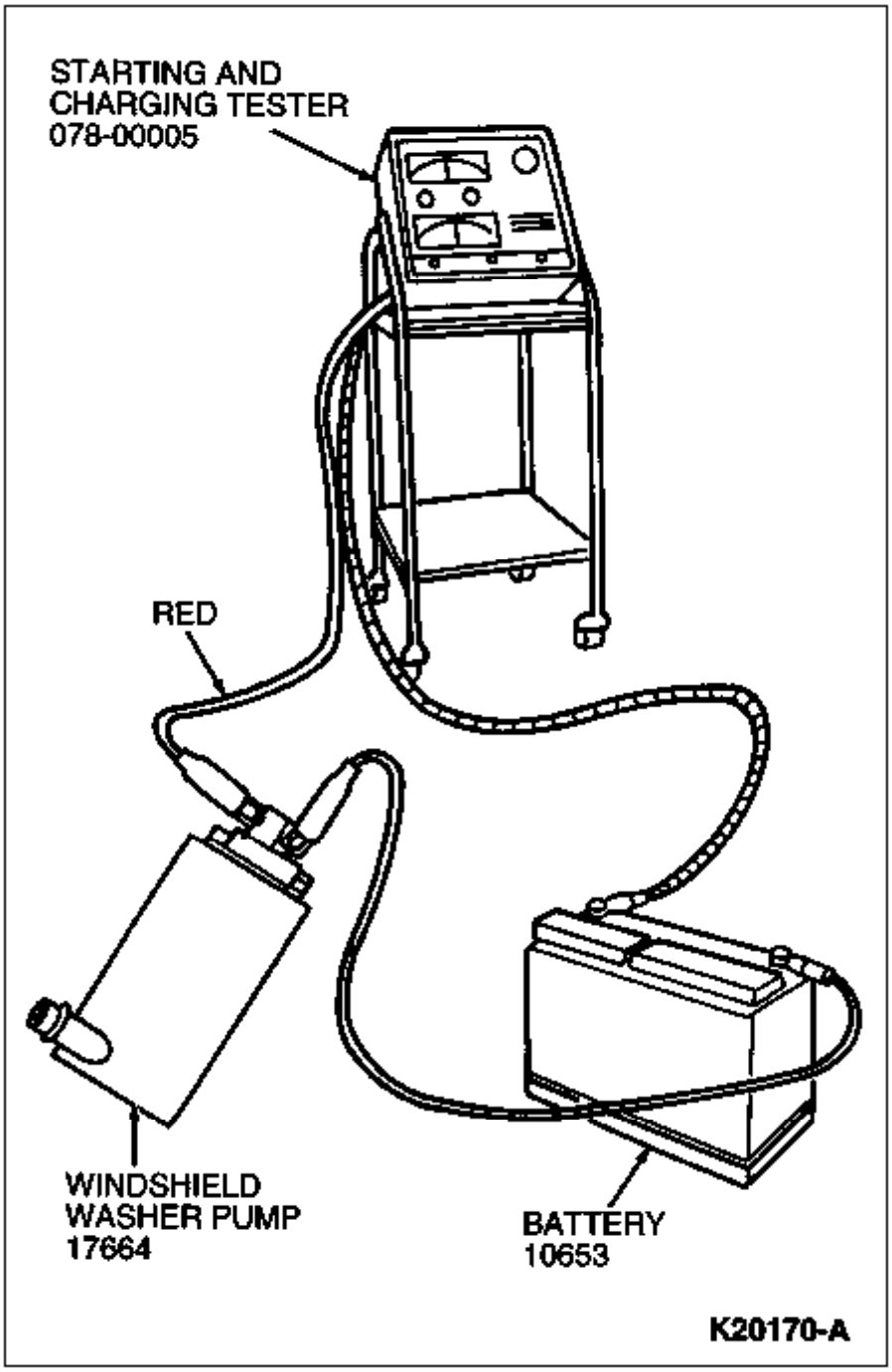
WINDSHIELD WIPER SWITCH TEST

Switch Position	Resistance by Pin Number
Interval Wiper/Washer Switching:	
• Wash OFF	Resistance pin 2 to pin 1, 3.3 K ohms
• Wash ON	Closed pin 2 to pin 1
• Wiper OFF	Resistance pin 2 to pin 1, 103.3 K ohms
• Wash OFF	Resistance pin 2 to pin 3, 47.6 K ohms
• Wiper Interval at MAX. • Delay (Closest Position to OFF) to MIN. Delay (Closest Position	Resistance pin 2 to pin 3, 11.33 K ohms Resistance pin 2 to pin 1 linear decreasing from 103.3 K ohms to 3.3 K ohms
• Wiper LO • Wash OFF	Resistance pin 2 to pin 1, 3.3 K ohms Resistance pin 2 to pin 3, 4.08 K ohms
• Wiper HI • Wash OFF	Resistance pin 2 to pin 1, 3.3 K ohms Closed pin 2 to pin 3

Current Draw

Windshield Washer Pump

Attach leads of the volt-amp tester, such as Rotunda Starting and Charging Tester 078-00005 or Rotunda Digital Volt-Ohmmeter 014-00407 or equivalent. Current draw should not exceed four amps or indicate less than two amps while the windshield washer pump is pumping fluid.



Windshield Wiper Motor

The windshield wiper motor tests are performed with the windshield wiper motor removed from the vehicle with windshield wiper mounting arm and pivot shaft disconnected.

Connect the positive (red) lead from Rotunda Starting and Charging Tester 078-00005 or equivalent to the

common (c) terminal on the windshield wiper motor connector, and connect the green lead from the tester to the battery positive post. Connect a jumper wire from the battery negative post to the low speed terminal on the windshield wiper motor connector and read the current draw. Move the jumper wire from the low-speed terminal to the high-speed terminal and read the high-speed current draw. In either case, the current draw should not exceed 3.5 amperes. If the current draw does exceed 3.5 amperes, check the output arm and windlatch mechanism for binding or damage before replacing the windshield wiper motor.