

operate wiper in "Lo" speed. Next, disconnect jumper wire No. 1. This should operate wiper in "Hi."

—*Wiper operated correctly*—has both speeds—Look for a grounded condition in the wire between wiper terminal No. 3 and dash switch.

—*Wiper still has one speed "Slow"*—Remove wiper from car and check for a ground in the wiper motor black wire that connects to No. 3 terminal.

#### **E—Wiper Will Not Park Blades Correctly:**

(i.e., when dash switch is turned to "Off" position blade movement stops immediately regardless of blade position on windshield.)

1. Remove wiper from car and check that parking switch contacts are not bent, dirty or broken.

#### **F—Wiper Speed Normal in "Lo" But Too Fast in "Hi":**

1. Remove wiper from car and check for an open terminal board resistor.

#### **G—Intermittent Operation:**

(Wiper cycles on and off automatically)

1. Remove wiper from car and follow Intermittent operation checking procedures outlined under "Trouble Shooting—Wiper Detached".

#### **Wiper Detached from Car:**

##### **Check Wiper operation as follows:**

"Lo" Speed—Using an ammeter in the feed wire circuit from battery connect up wiper as shown in Figure 19.

"Hi" Speed—Disconnect jumper lead No. 1 from No. 3 terminal.

To Park Wiper—Leave jumper No. 1 connected and disconnect jumper lead No. 2 from ground.

#### **A—Wiper Inoperative:**

The following ammeter readings will provide a hint as to where trouble might be located.

##### *Ammeter Reading*

Approx. 2 amps

##### *Check the Following*

—Open armature, hung brushes, solder connections, broken green lead, etc. (See Figure 17).

0

—Dirty or defective circuit breaker contacts, solder connections at circuit breaker terminals (See Figure 17).

Approx. 13 amps —Broken gear or some similar condition that would stall the wiper.

#### **B—Wiper Will Not Shut Off:**

1. Check that wiper has "Lo" speed. If wiper has only one speed (fast), look for an open shunt field circuit. (See fig. 17).

2. Check that parking switch contacts are opening as follows:

- a. Remove wiper gear from housing (See Dis-

assembly Procedure) and check that parking switch contacts are not stuck or bent together.

- b. To double check operation of park switch, slide gear and shaft out of housing far enough to disengage gear teeth from worm shaft. Turn gear so that gap in ring can be positioned over the raised part of the parking switch and slide gear back in housing. Connect a test light as shown in Figure 20. Test lamp should not light.

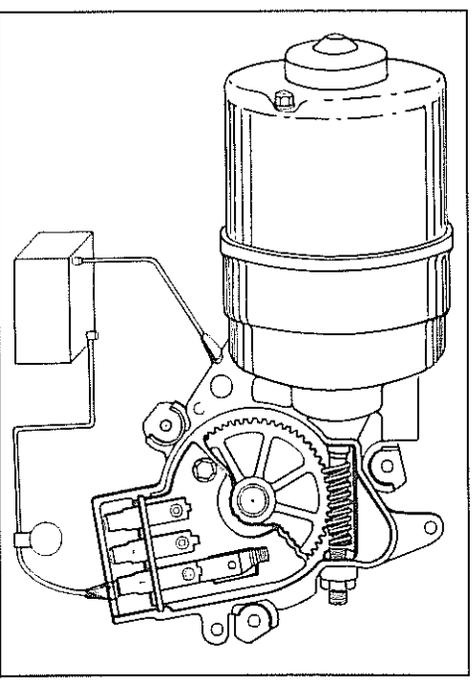


Fig. 20—Test Lamp Connections

3. If the checks in step 1 fail to locate the trouble, look for a grounded condition in the green lead.

#### **C—Wiper Has One Speed (Fast):**

1. Check for an open shunt field circuit (fig. 17).

#### **D—Wiper Has One Speed (Slow):**

1. Look for a grounded condition in the shunt field circuit (fig. 17).

#### **E—Wiper Crank Arm Stops Rotating Immediately When Jumper No. 2 Is Disconnected From Ground:**

1. Check for an open position (i.e., stops in any position) (i.e., stops in any position)
  1. Check that parking switch contacts are not dirty, bent or broken.

#### **F—Wiper Speed Normal in "Lo" But Too Fast in "Hi":**

1. Check for an open resistor on wiper terminal board.

#### **G—Intermittent Operation:** (Wiper cycles on and off automatically)

1. Operate wiper in "Lo" speed and observe current draw. If current draw exceeds that shown in specification table, check the following items:
  - a. Armature end play too tight.
  - b. Armature shorted or grounded.
  - c. Field Assembly shorted.
  - d. Gear Assembly end play tight.

If current draw is normal, a defective circuit breaker is indicated and it should be replaced.