FORD MOTOR CO. WINDOW DEFOGGER GRID

All Models

DESCRIPTION

System components include a grid of wires baked on the inside of the rear window, an indicator light, control switch, and relay. Power feed to the relay is directly from the battery side of the starter solenoid, through a fusible link. Power to the control switch is from an ignition switch controlled connection on the fuse panel.

OPERATION

The rear window defogger operates only when the ignition switch is "ON". A spring-loaded 3-position switch turns the relay on, then returns to center position. The relay will stay on indefinitely on Granada, Monarch, Pinto and Bobcat models. On all other models, the relay will automatically turn off after 10 minutes. On all cars, the defogger can be turned off by moving the control switch to the "OFF" position, or by turning off the ignition.

TROUBLE SHOOTING

If defogger does not operate, check relay operation and power at circuit breaker or fuse. If defogger light operates, but grid does not heat, check continuity in wiring harness from relay to grid, then check grid ground connection. Ground screw must be clean and tight.

TESTING

WINDOW GRID WIRES

1) Shine a strong light through grid from inside vehicle. Check for broken grids which will appear as brown spots.

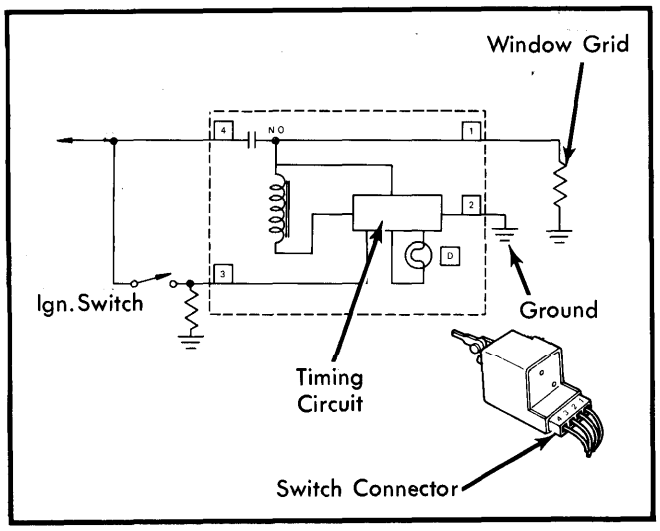

Fig. 1 Heated Rear Window Wiring Diagram Continental, Mark VI, Ford, Mercury Thunderbird, Cougar XR-7

2) Run engine at idle, turn control switch to "ON", the indicator light should come on.

3) Using a 12 volt DC voltmeter, contact wide silver strips on back window. Reading should be 10-13 volts. If voltage is lower, window grid ground connection (pigtail on passengers side) is loose.

4) Contact a known good ground with meter negative lead. Reading should not change.

5) With negative lead connected to ground, touch each grid line at its mid-point with meter positive lead. A reading of about 6 volts indicates grid line is good. A zero volts reading indicates the grid is broken between the mid-point and the hot side. A 12 volts reading indicates the grid is broken between the mid-point and ground, or that ground connection is loose.

CONTROL SWITCH

NOTE — *Thunderbird, Cougar XR-7, Ford, Mercury, Continental and Mark VI use a system which combines timer relay and control switch in one assembly. No separate switch testing is possible. Use the following procedure for all other models.*

1) With switch in "NORM" position, test all terminals with ohmmeter. Continuity should exist between 2 terminals.

2) With switch in "ON" position, there should be continuity between all terminals. In "OFF" position, there should be no continuity.

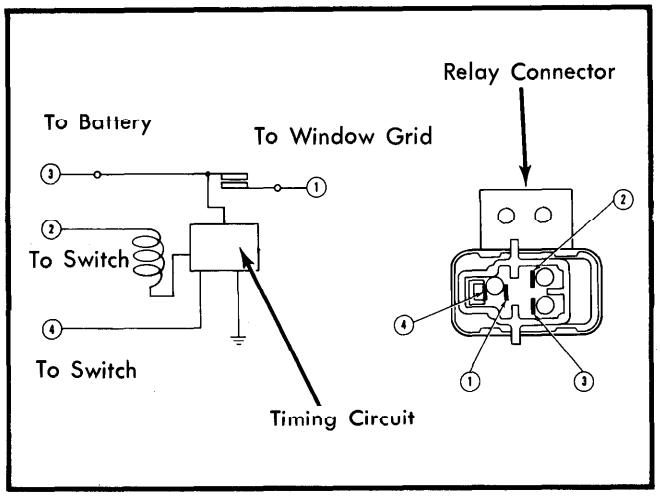

Fig. 2 Heated Rear Window Relay Connections Versailles, Fairmont, Zephyr

RELAY/TIMER

Thunderbird, Cougar XR-7, Ford, Mercury, Continental, Mark VI — 1) These models use a combined switch and relay assembly. Remove wiring connector and use a jumper wire to ground pin 2. See *Fig. 1*.

2) Connect a test lamp from pin 1 to ground. Connect power to pin 4, then use a jumper from pin 4 to pin 3. Lamp should not be lit.

FORD MOTOR CO. WINDOW DEFOGGER GRID (Cont.)

3) Move switch to "ON" position momentarily. Test lamp should light and remain lit when jumper to pin 3 is removed. Test lamp should go out if power is removed from pin 4, if switch is moved to "OFF", or if 10 minutes elapse.

All Other Models — **1)** Ground the relay case and connect a jumper wire between pins 1 and 2. Connect a test lamp between pin 3 and ground.

2) Connect power to pin 2. The test lamp should not light. Short between terminals 2 and 4 momentarily. The lamp should light and remain lit after short is removed. On Granada, Monarch, Pinto, and Bobcat models, the light should remain on until power is disconnected. On all other models, the light will shut off after 10 minutes, or when power is disconnected.

Relay Location — **1)** On Continental, Mark VI, Ford, Mercury, Thunderbird, and Cougar XR-7, the relay and switch are combined and located behind switch button on instrument panel.

2) On Versailles, Granada, and Monarch, the relay is located above the glove box on the right side of the instrument panel.

3) On Fairmont, Zephyr, Mustang, Capri, Pinto and Bobcat, the relay is located behind the glove box on the right side of the instrument panel.

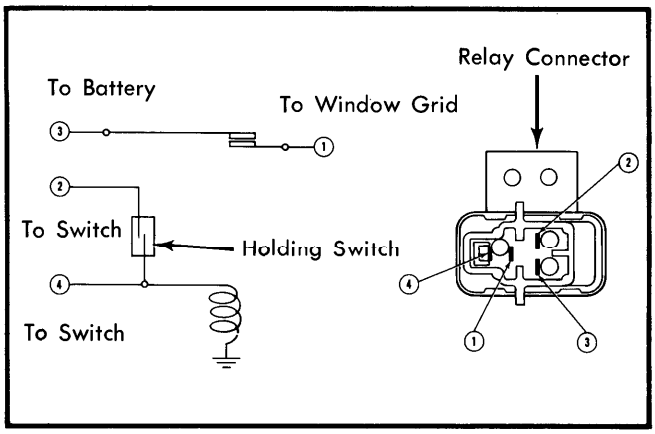

Fig. 3 Heated Rear Window Relay Connections Granada, Monarch, Pinto, Bobcat