

# Wiper/Washer Systems

## FORD MOTOR CO. NON-CONCEALED SYSTEM

Capri, Mustang  
 Escort, EXP, LN7 & Lynx  
 Fairmont, Zephyr  
 Granada, Cougar  
 Thunderbird, XR7

### DESCRIPTION & OPERATION

#### STANDARD WIPERS

Wipers are actuated by a 2-speed permanent magnet motor. Wiper arms and blades are mounted on pivot shafts, connected to the motor by linkage arms and retaining clips. Power is supplied to the wiper system by a 6 amp circuit breaker mounted in the fuse panel on all models.

#### INTERMITTENT WIPERS

Intermittent operation is controlled by a variable resistor in the wiper switch and an electronic governor. Varying the resistance by turning the switch varies the delay between wiper cycles. The intermittent system uses the same motor as the standard system.

### TESTING

#### WIPER MOTOR CURRENT DRAW

Disconnect battery. Disconnect motor linkage and electrical connector. Connect ammeter as shown. Current draw in both low and high should not exceed 3 amps.

#### WIPER MOTOR PARK TEST

Stop wiper system with key so blades are not in the park position. Connect jumper wires as shown. The wipers should run no more than one cycle, then park. If motor will not park or run to park, replace motor. If motor stops, check wiring and switch.

#### CIRCUIT BREAKER TEST

1) Remove circuit breaker from fuse panel. Connect tester to circuit breaker, adjust to 6 amps, and leave on for 10 minutes. Replace circuit breaker if it opens.

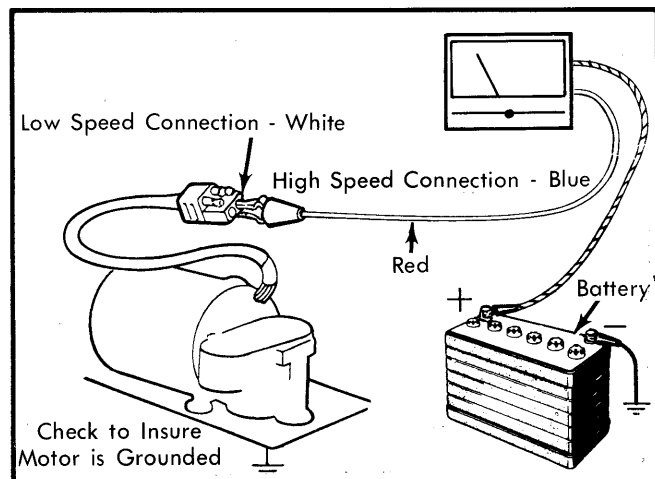


Fig. 1 Motor Current Draw Test

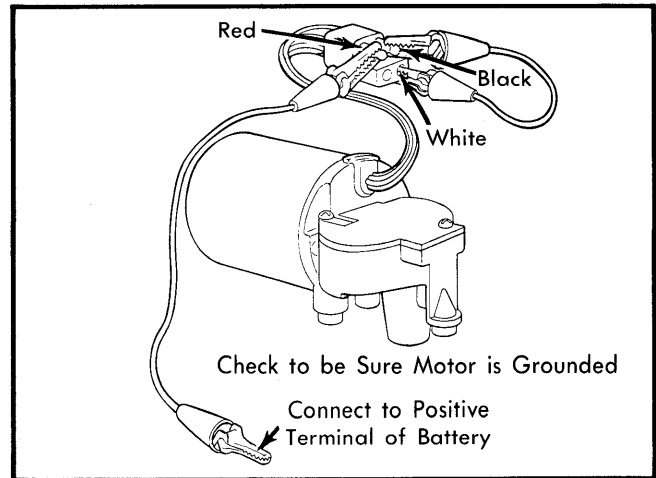


Fig. 2 Motor Park Test

2) Adjust tester so current flow is 12 amps. Breaker should open within 30 seconds. If it does not, replace breaker.

#### WIPER SWITCH CONTINUITY TEST

Test Switch continuity with an ohmmeter connected between switch terminals as shown in Fig. 3. To detect marginal operation of the switch, move the switch lever as each reading is being taken. If switch does not show continuity or if poor continuity exists, replace switch.

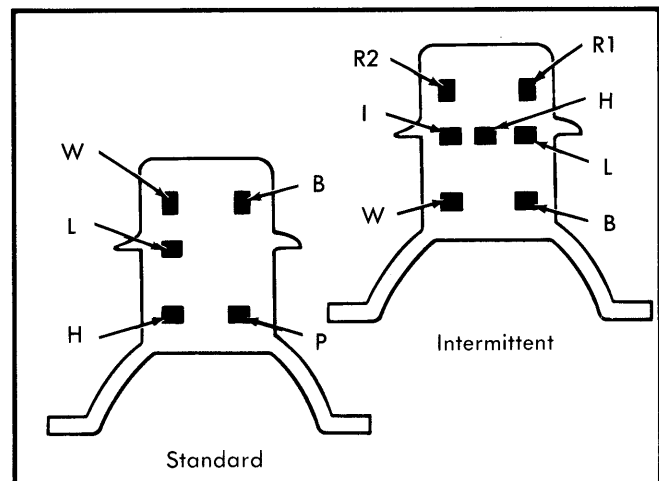


Fig. 3 Wiper Switch Continuity Test Terminal Locations

Wiper Continuity Test		
Position	Standard Wiper	Intermittent Wiper
Off	P-L	.....
LOW	B-L	B-L
HIGH	B-H	B-H-L
WASH	B-W	B-W
INTER	.....	B-I
ANY	.....	⊙R1-R2

⊙ — Variable resistance between R1 and R2 should be minimum of 420 and maximum of 13,000 ohms.

## FORD MOTOR CO. NON-CONCEALED SYSTEM (Cont.)

### REMOVAL & INSTALLATION

#### WIPER MOTOR

**Removal (Escort, EXP, LN7 & Lynx)** – Disconnect battery cables. Lift water shield cover from cowl on passenger side. Disconnect power lead from wiper motor. Remove linkage retaining clip from wiper arm and remove 3 attaching screws from motor and bracket assembly. Remove operating arm from motor; remove 3 bolts and separate motor from mounting bracket.

**Installation (Escort, EXP, LN7 & Lynx)** – To install, reverse removal procedure and test motor for proper operation.

**Removal (All Other Models)** – Disconnect battery. On Fairmont and Zephyr, remove left wiper arm. On all models, remove right wiper arm assembly. Remove cowl screws and grille. Remove retaining clip and disconnect motor drive arm. Remove mounting screws, disconnect wiring, and remove motor.

**Installation (All Other Models)** – To install, reverse removal procedure, making sure motor arm is in "Park" position.

#### WIPER SWITCH

**Removal (Escort, EXP, LN7 & Lynx)** – Disconnect negative battery cable. Remove upper and lower steering column shrouds. Disconnect electrical connector to switch. Peel back foam sight shield; remove 2 hex head screws holding switch. Remove switch.

**Installation (Escort, EXP, LN7 & Lynx)** – To install, reverse removal procedure and check steering column operation.

**Removal (All Other Models)** – Remove 4 steering column cover screws. Separate top and bottom halves of shroud. Remove 2 wiper switch screws and remove the switch. Push connector off wiper switch with screwdriver.

**Installation (All Other Models)** – To install, reverse removal procedures.

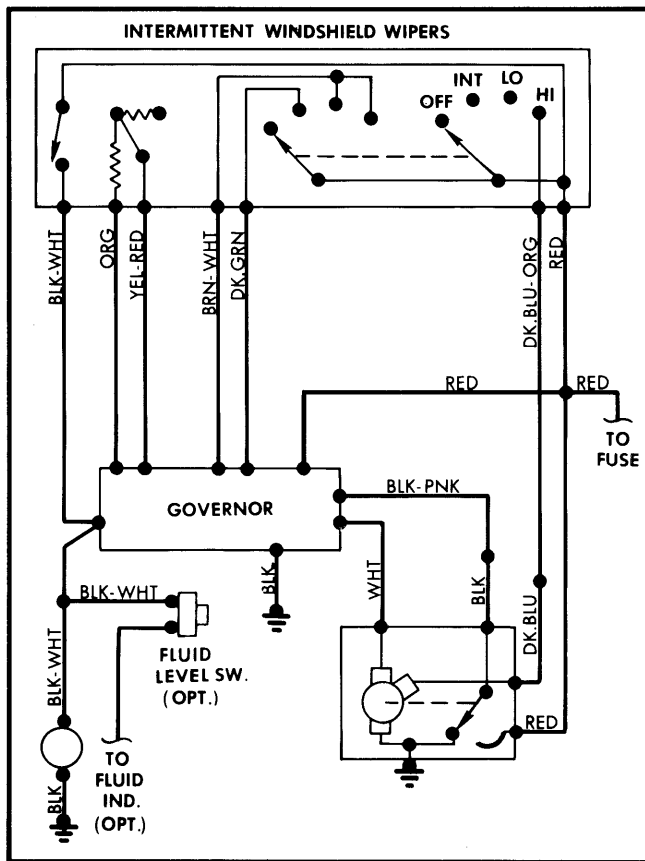


Fig. 4 Ford Non-Concealed Intermittent Wiper System Wiring Diagram (All Models)

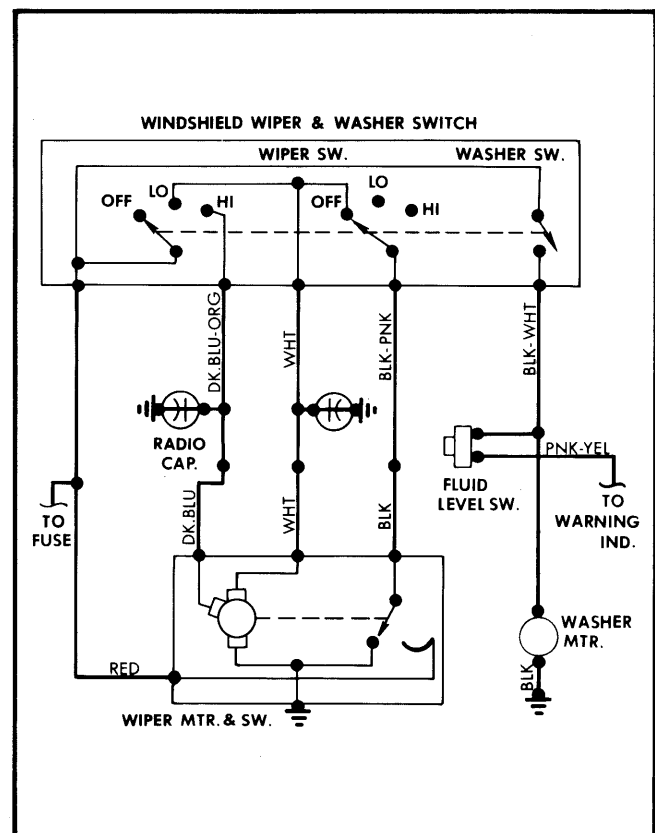


Fig. 5 Ford Non-Concealed Standard Wiper System Wiring Diagram (All Models)