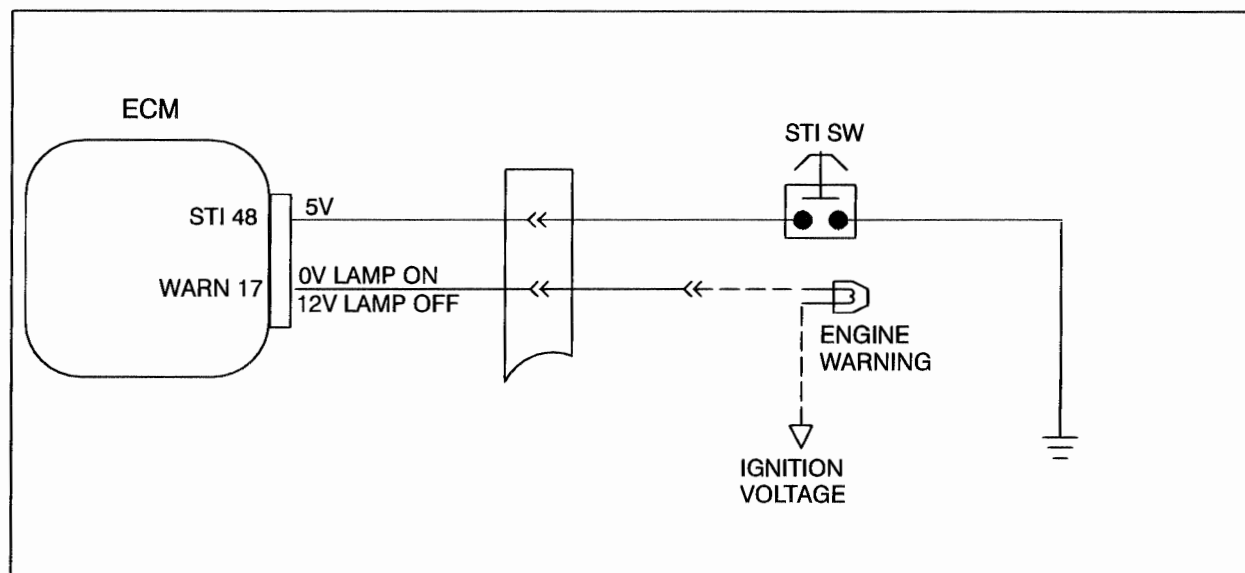


## ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

### SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

#### SELF TEST INPUT SWITCH AND ENGINE WARNING LIGHT



#### SIGNAL FUNCTION

##### SELF TEST INPUT (STI) SWITCH

The STI switch (or ProLink EST) can be used to run the Key On Engine Off (KOEO) Standard Tests. Faults detected during this test result in active fault codes, which are transmitted as FLASH codes with the Warning Light. If no faults are detected, the ECM will FLASH code 111 (indicates no faults detected).

ECM terminal 48 has 5 volts with the key ON and engine OFF. Depressing the STI switch grounds terminal 48, causing it to change from 5 volts to 0 volts, signaling the ECM to start the KOEO Standard Tests.

##### ENGINE WARNING LIGHT

When the key switch is turned to ON, the amber Engine Warning Light (EWL) turns ON and stays ON, while the ECM runs normal startup tests, and then turns OFF. If the ECM detects a problem, the EWL remains on.

Ignition power from fuse F6 (fuse A2 w/FBC) is applied to the EWL. The ground side of the EWL is connected to ECM terminal 17, which is a ground switch. The ECM applies 12 volts to terminal 17 (light OFF) or 0 volts (light ON), in response to engine conditions.

##### FAULT DETECTION MANAGEMENT

There are no ECM diagnostics for the STI or Warning light circuits.

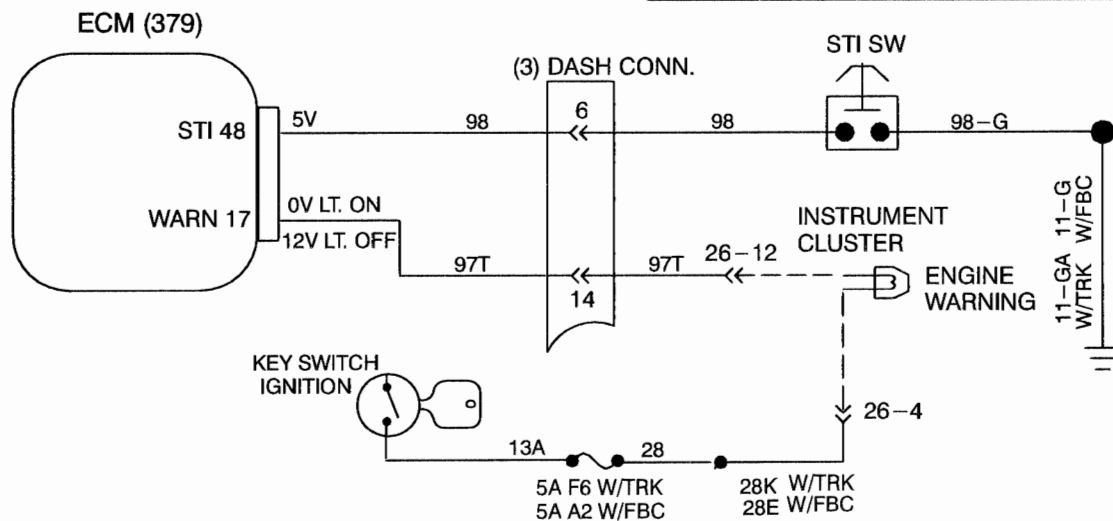
# ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

## SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

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**Self Test Input/  
Engine Warning Light  
(STI/EWL)**

**Fault Codes:  
No Diagnostic Codes for these Systems**



### Test STI switch with ignition key "OFF"

Test Points	Spec.	Comments
Across Switch Terminals	> 1000 ohms open position	< than 1000 ohms replace switch.
Across Switch Terminals	< 5 ohms closed position	> than 5 ohms replace switch.

### Test at STI switch connection with ignition key "OFF"

Test Points	Spec.	Comments
98 to grd.	> 1000 ohms	< than 1000 ohms locate short to ground

### Test at STI switch connection with ignition key "ON"

Test Points	Spec.	Comments
98 to grd	$5 \pm .5$ volts	< than 4.5v check connections, if 0 volts, check for open/short to ground in ckt. 98
98 to 98-G	$5 \pm .5$ volts	< than 4.5v check connections, if 0 volts, check for open in ground circuit.

#### IF warning light does not turn on when key is turned ON

1. Check fuse and bulb condition.
2. Disconnect (379) from ECM and install breakout box to harness. Jumper terminal 17 to ground and note if light is ON.
  - A. If light is ON, the ECM is defective.
  - B. If light does not turn ON, check circuit for open condition.
  - B. If light goes OFF, ECM is defective.

#### IF warning light STAYS ON after self test

1. Check for active fault conditions (use Prolink or STI flash codes).
  - A. If active fault conditions are present correct faults.
  - B. If no fault conditions are present go to step 2.
2. Disconnect (379) from ECM and note if LIGHT remains ON.
  - A. If light remains ON, check for short to ground in circuit.

# ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

## SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

### EXTENDED DESCRIPTION

Refer to circuit diagram on page 205 for the following discussion.

#### STI SWITCH

The STI switch (or Prolink EST) can be used to run the Key On Engine Off (KOEO) Standard Tests. Faults detected during this test result in active fault codes, which are transmitted as FLASH codes with the Warning Light. If no faults are detected, the ECM will FLASH code 111 (indicates no faults detected).

Depressing the STI switch with the key ON and engine OFF starts the test cycle. The KOEO Standard tests include: (1) ECM Internal Tests and (2) Output Circuit Check (OCC) tests.

The normally open (N.O.) switch has one pole connected through circuit 98 and ECM connector (379) to the ECM's STI terminal 48. The other switch pole is connected (circuit 98-G/11-GA) to the G2 ground stud.

ECM terminal 48 has 5 volts with the key ON and engine OFF. Depressing the STI switch grounds terminal 48, causing it to change from 5 volts to 0 volts, signaling the ECM to start the KOEO Standard Tests.

#### ENGINE WARNING LIGHT

When the key switch is turned to ON, the amber Engine Warning Light (EWL) turns ON and stays ON, while the ECM runs normal startup tests, and then turns OFF. If the ECM detects a problem, the EWL remains on.

Refer to circuit diagram on page 205 for the following discussion.

Ignition power from fuse F6 (fuse A2 w/FBC) is applied to the EWL. The ground side of the EWL is connected to ECM terminal 17, which is a ground

switch. The ECM applies 5 volts to terminal 17 (light OFF) or 0 volts (light ON), in response to engine conditions.

#### ECM DIAGNOSTICS

There are no ECM diagnostics for the STI or Warning Light circuits.

#### TROUBLESHOOTING

##### SELF TEST INPUT (STI) SWITCH

If depressing the STI switch with key on and engine off does not cause the OCC tests to run (if no faults are detected code 111 should flash), perform Testing The STI Circuit on page 206.

##### ENGINE WARNING LIGHT (EWL)

If the EWL does not turn ON during the ECM startup tests, or stays ON after the engine is running with NO ACTIVE FLASH CODES, perform Engine Warning Light Does Not Turn ON test page 207 or Engine Warning Light Stays ON test page 208.

#### BEFORE TROUBLESHOOTING

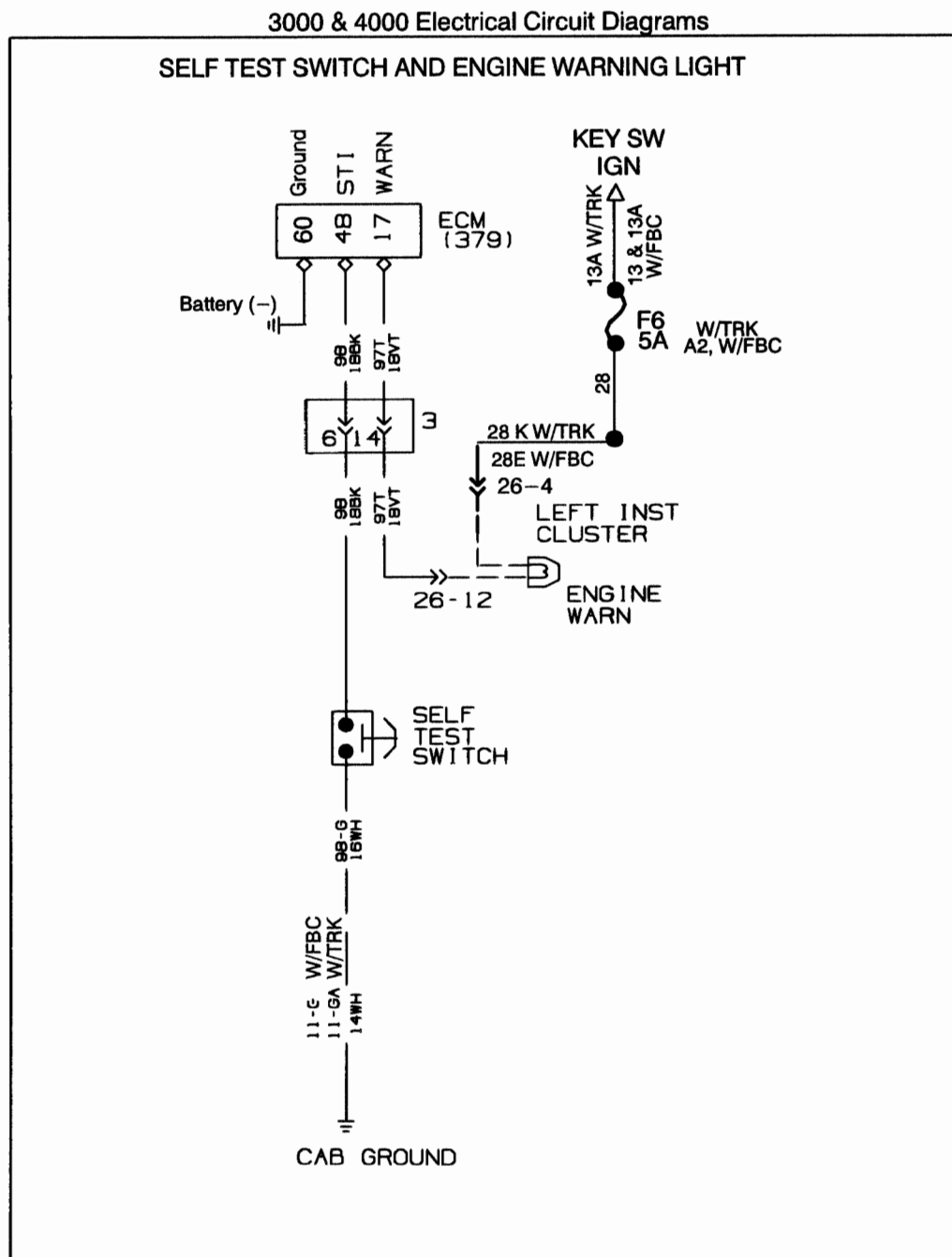
- A. Before troubleshooting, make sure that the batteries are fully charged! Check battery connections and grounds for clean, tight connections free of damage. Voltage tests will give misleading results if the batteries are not fully charged.
- B. Before troubleshooting, inspect circuit connectors for pushed back, loose, or damaged (spread or bent) terminals, or wires with cut strands, etc. Wires and connections must be free of damage or corrosion. When some connectors corrode, a light white residue will be present that must be removed.
- C. Before troubleshooting, inspect suspect circuit grounds for clean, tight connections free of damage.

# ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

## SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

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### CIRCUIT DIAGRAM

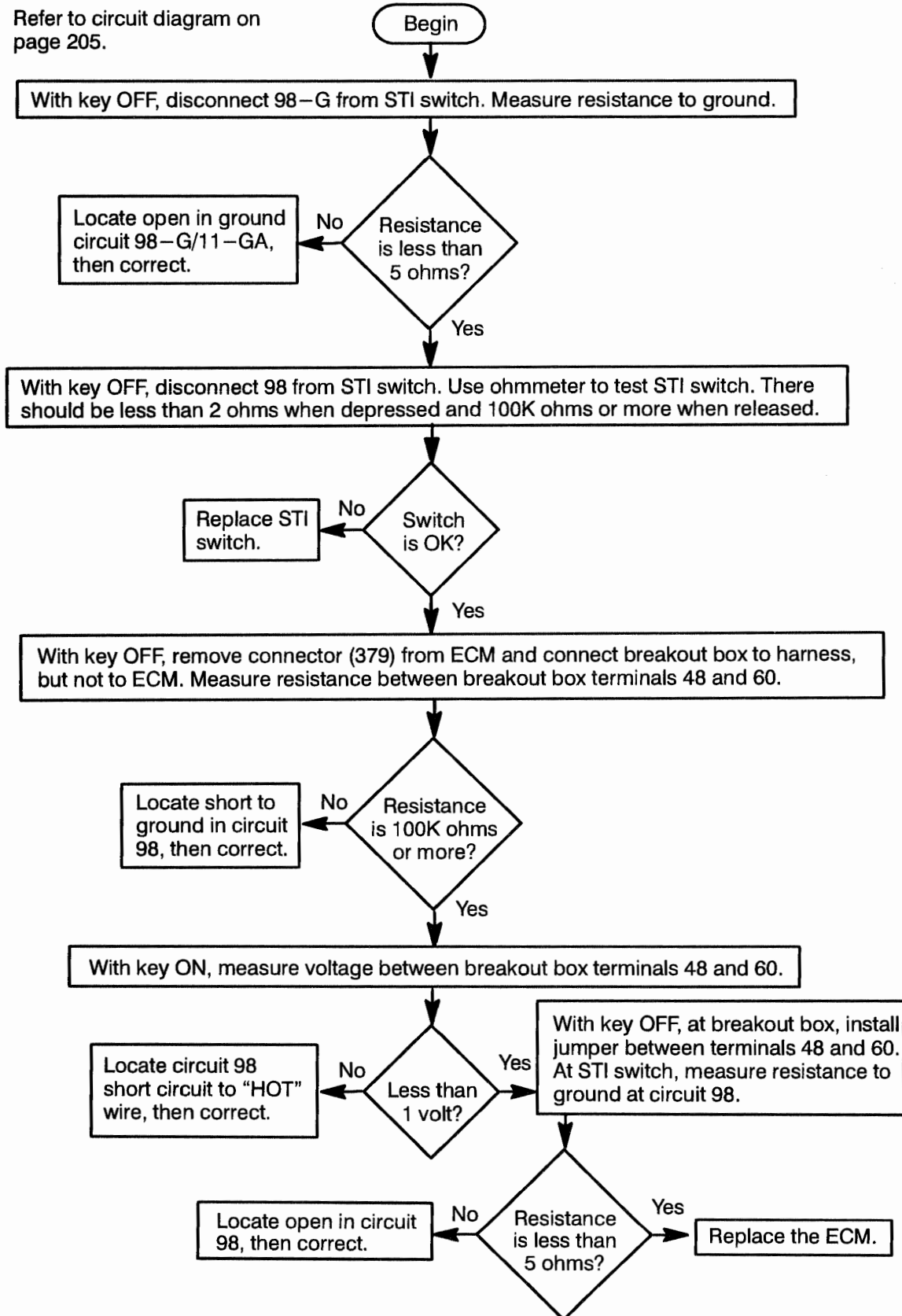


# ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

## SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

### TESTING THE SELF TEST INPUT (STI) CIRCUIT

Refer to circuit diagram on page 205.

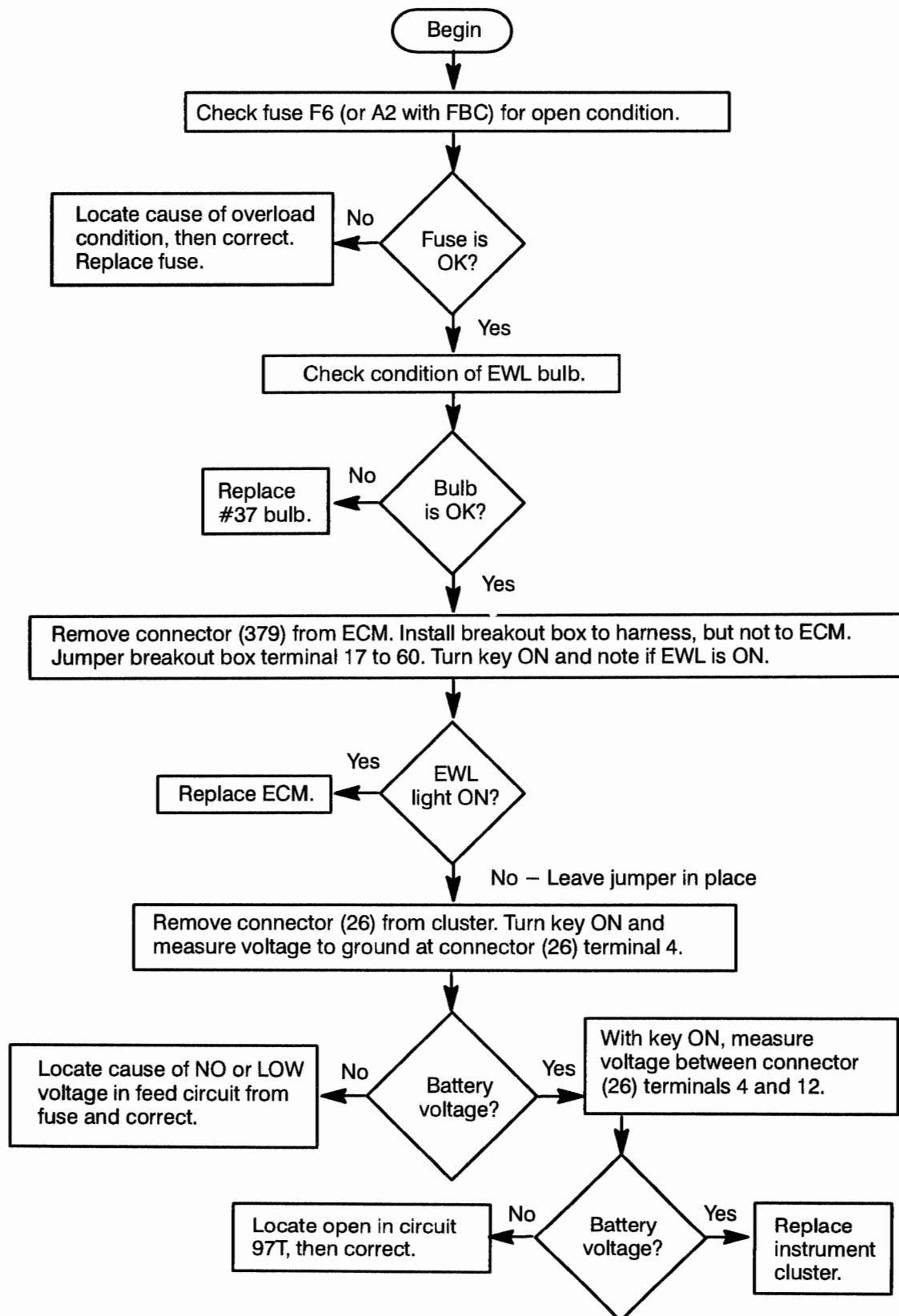


# ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

## SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

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### ENGINE WARNING LIGHT DOES NOT COME ON DURING START-UP



## ELECTRONIC CONTROL SYSTEM DIAGNOSTICS

### SELF TEST INPUT SWITCH & ENGINE WARN LIGHT (STI/EWL)

#### ENGINE WARNING LIGHT STAYS ON

