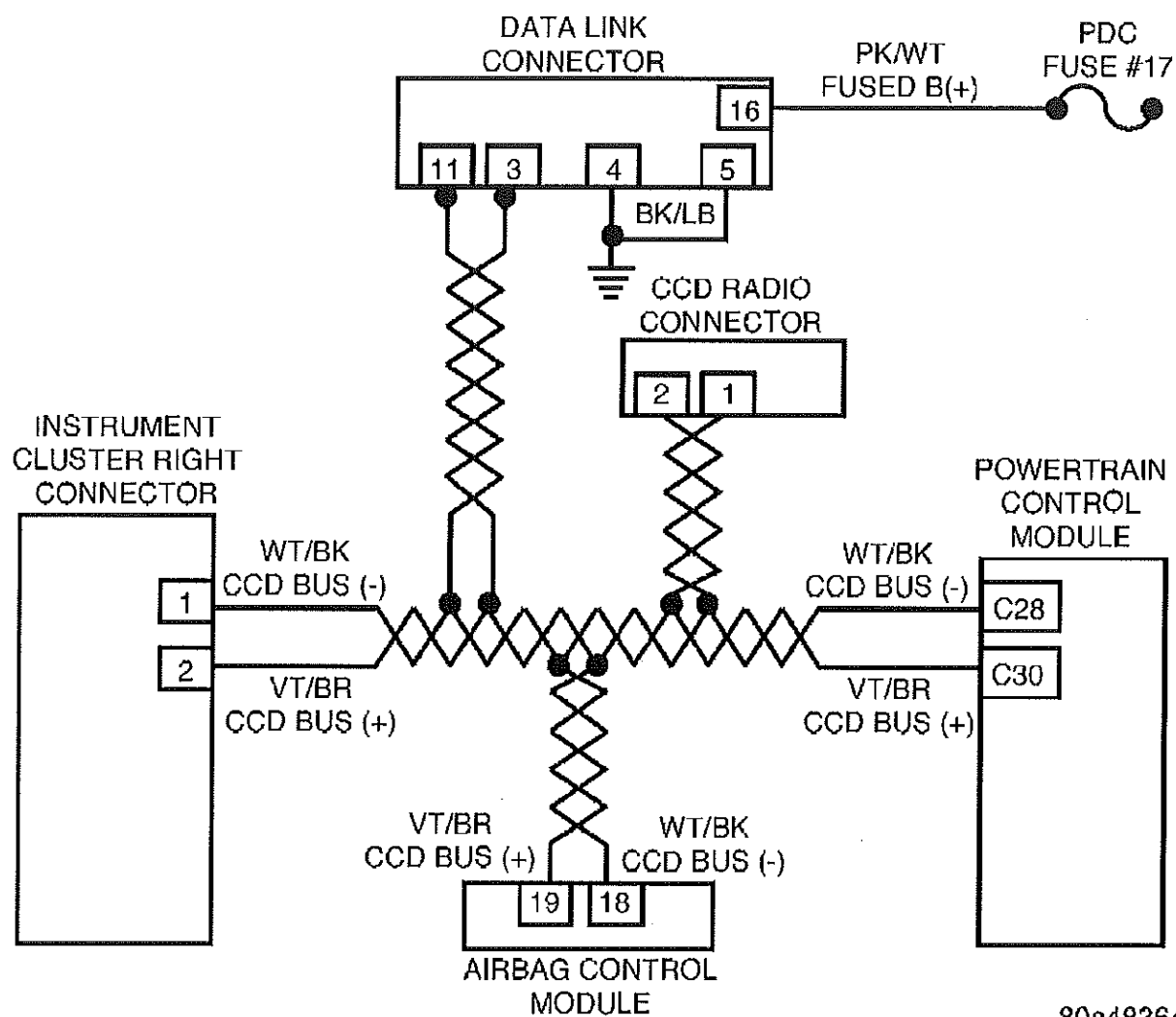


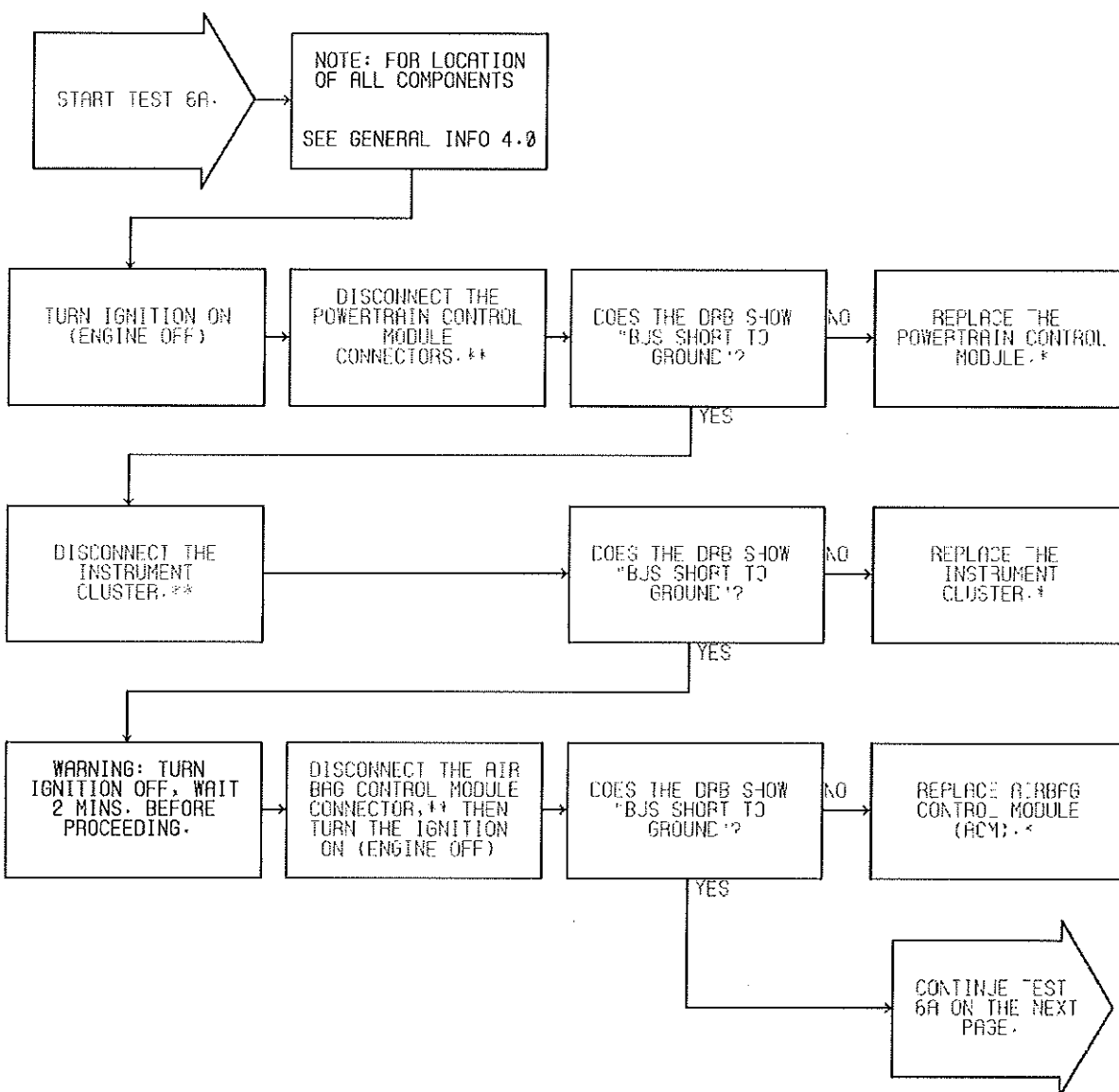
## TEST 6A

## REPAIRING SHORT TO GROUND FAILURE

Perform TEST 1A Before Proceeding



80a48364

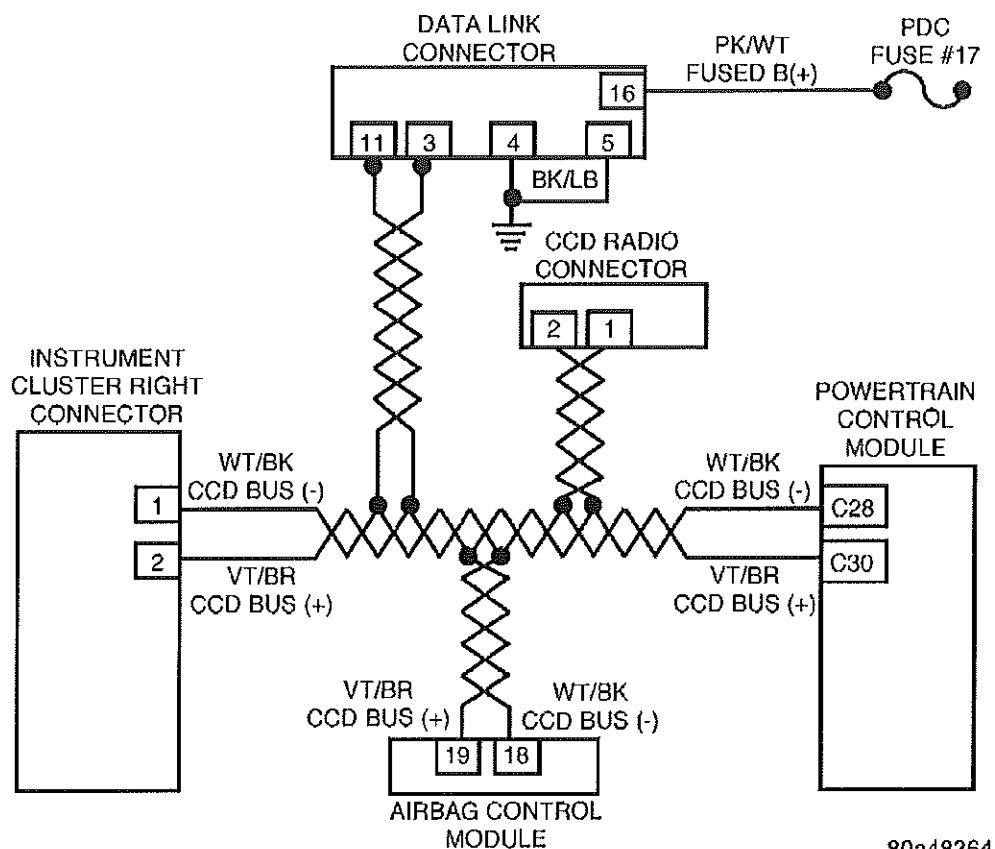
**TEST 6A****REPAIRING SHORT TO GROUND FAILURE****Perform TEST 1A Before Proceeding**

\*Perform Verification TEST VER-2A.

\*\*Check connectors - Clean / repair as necessary.

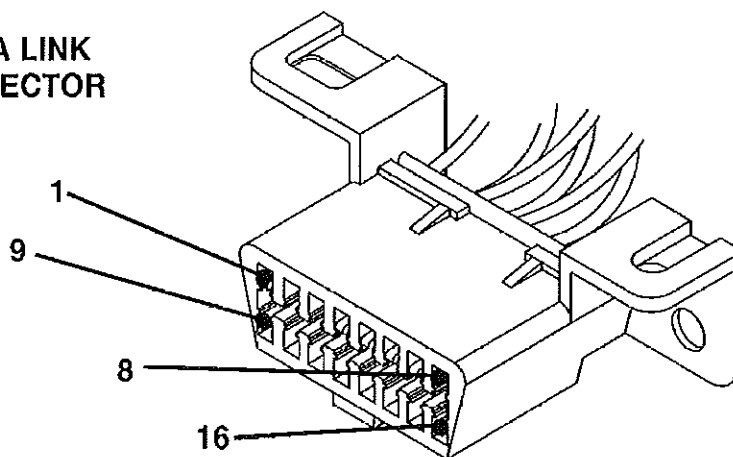
TEST 6A

CONTINUED - REPAIRING SHORT TO GROUND FAILURE



80a48364

DATA LINK CONNECTOR



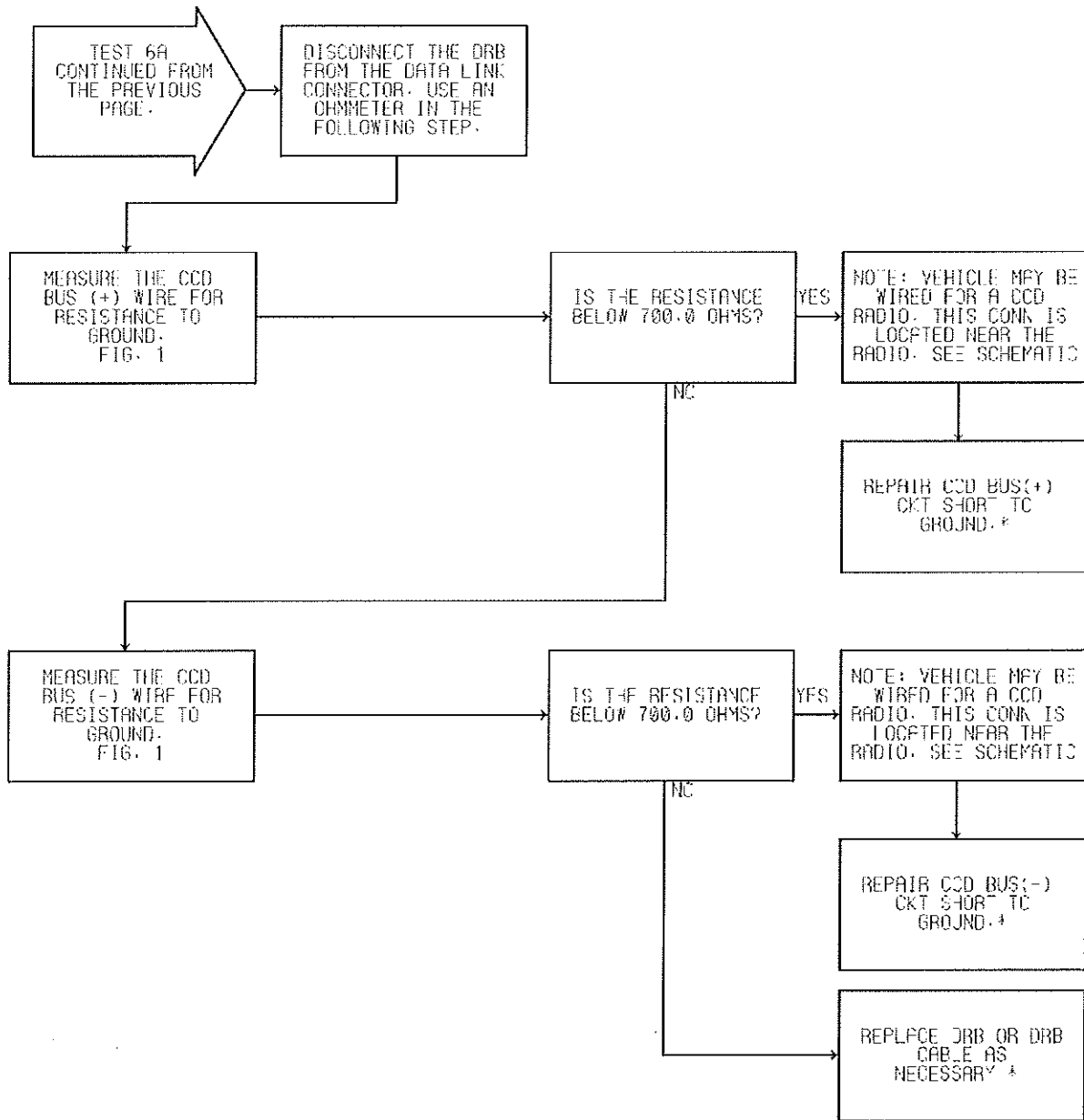
CAV	COLOR	FUNCTION
3	VT/BR	CCD BUS (+)
4	BK/LB	GROUND
5	BK/TN	GROUND
6	LG	SCI RECEIVE
7	PK	SCI TRANSMIT/ISO 9141K
11	WT/BK	CCD BUS (-)
16	PK/WT	FUSED B(+)

80a4508e

FIG. 1

# TEST 6A

## CONTINUED - REPAIRING SHORT TO GROUND FAILURE



\*Perform Verification TEST VER-2A.

\*\*Check connectors - Clean / repair as necessary.

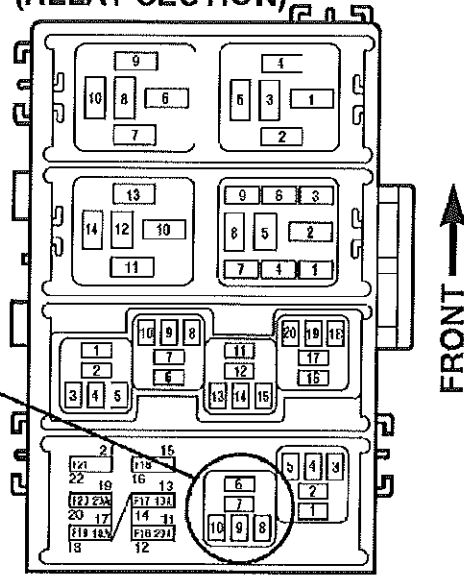
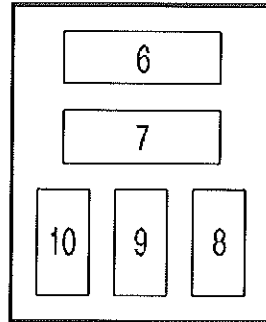
**TEST NS-5A CHECKING THE FUEL PUMP**

Perform TEST NS-2A Before Proceeding

TJ BODY

**POWER DISTRIBUTION CENTER (PDC)  
(RELAY SECTION)**

**FUEL PUMP  
RELAY**



FRONT ↑

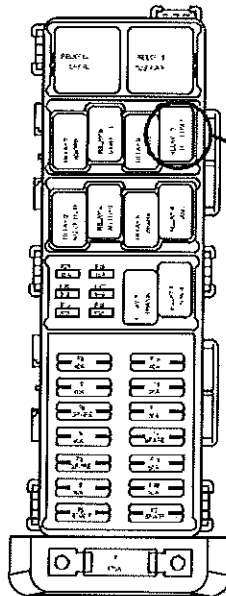
CAV	COLOR	FUNCTION
6(30)	DG/BK	Fused B(+)
7(87)	DG/WT	Fuel Pump Relay Output
8(86)	RD/LG	Fused Ignition Switch Output
10(85)	BR	Fuel Pump Relay Control

80a50364

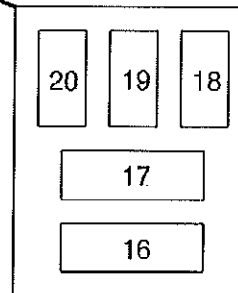
FIG. 1

ZJ BODY

**POWER  
DISTRIBUTION  
CENTER**



**FUEL PUMP  
RELAY  
CONNECTOR**



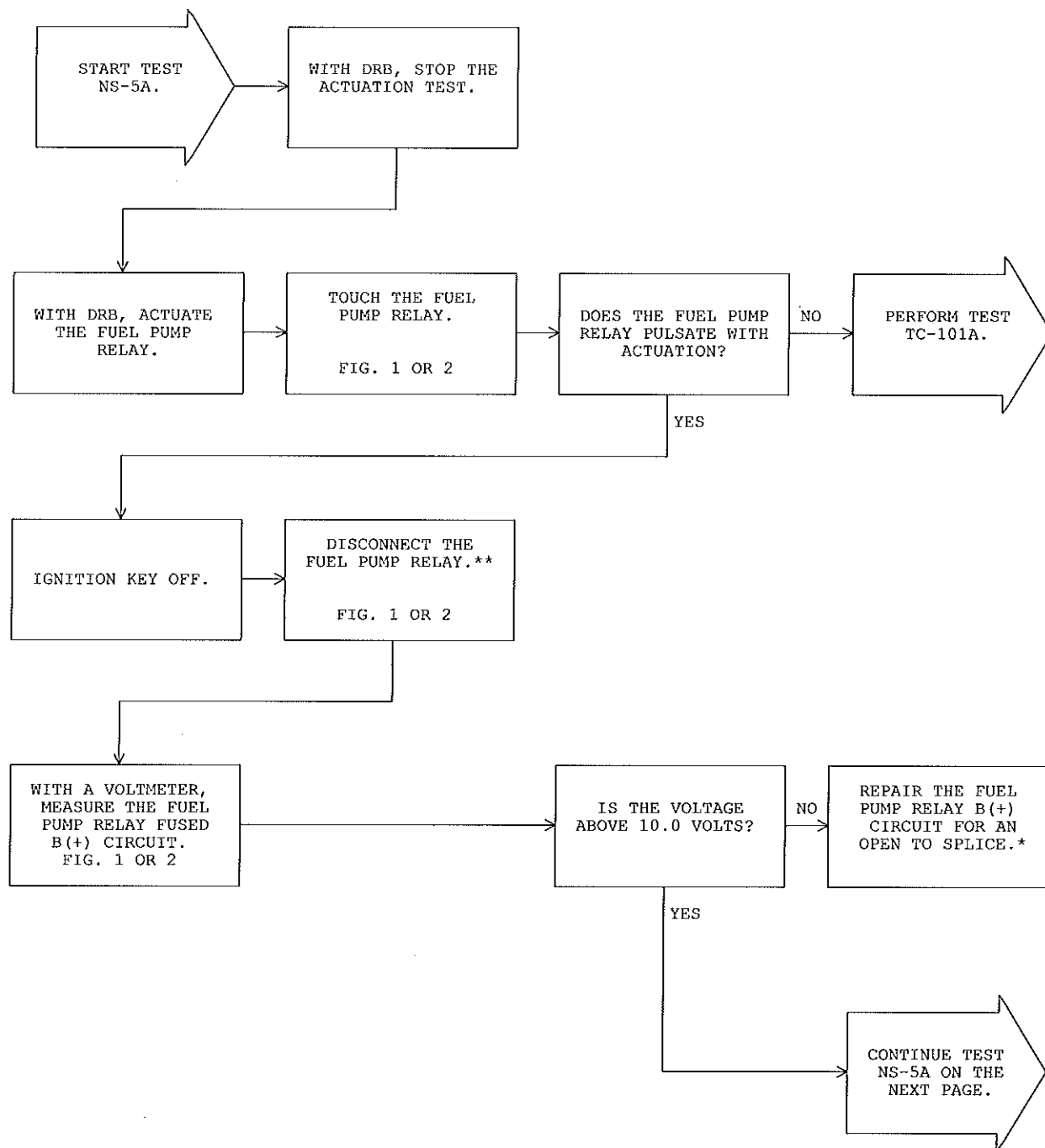
CAV	COLOR	FUNCTION
C16 (30)	DG/BK	FUSED B(+)
C17 (87)	DG/WT	FUEL PUMP RELAY OUTPUT
C18 (86)	OR	FUSED IGNITION SWITCH OUTPUT
C20 (85)	DB	FUEL PUMP RELAY CONTROL

80a8ea0e

FIG. 2

# TEST NS-5A CHECKING THE FUEL PUMP

Perform TEST NS-2A Before Proceeding

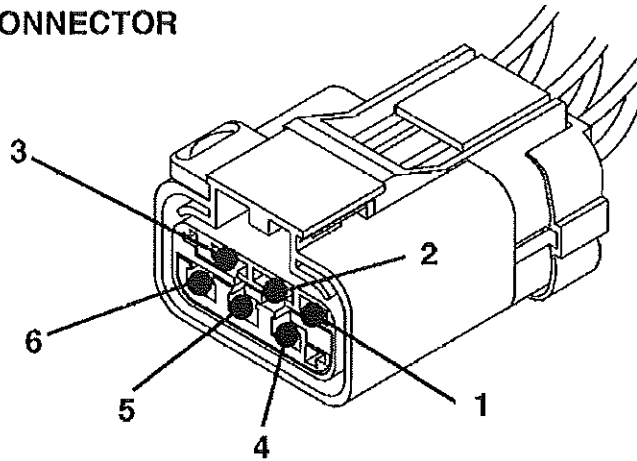


\*Perform Verification TEST VER-1A.

\*\*Check connectors - Clean / repair as necessary.

TJ BODY

**FUEL PUMP  
CONNECTOR**



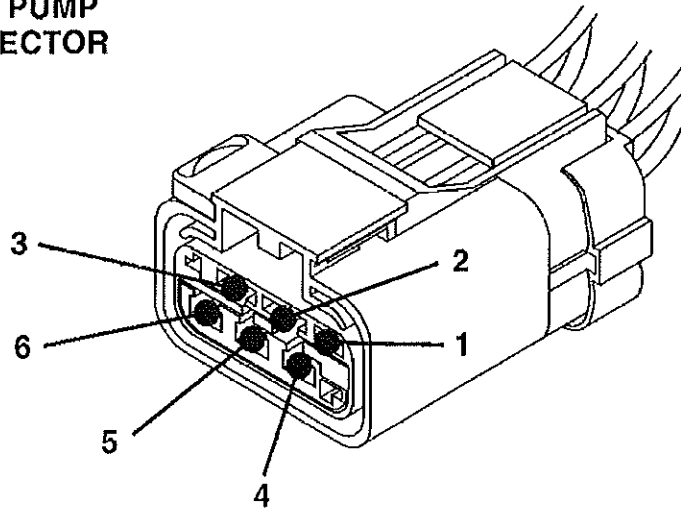
CAV	COLOR	FUNCTION
1	DG/WT	FUEL PUMP RELAY OUTPUT
3	DB/LG	FUEL LEVEL SENSOR SIGNAL (OBD II)
4	BR/YL	SENSOR GROUND
6	BK	GROUND

80a4eff5

FIG. 1

ZJ BODY

**FUEL PUMP  
CONNECTOR**

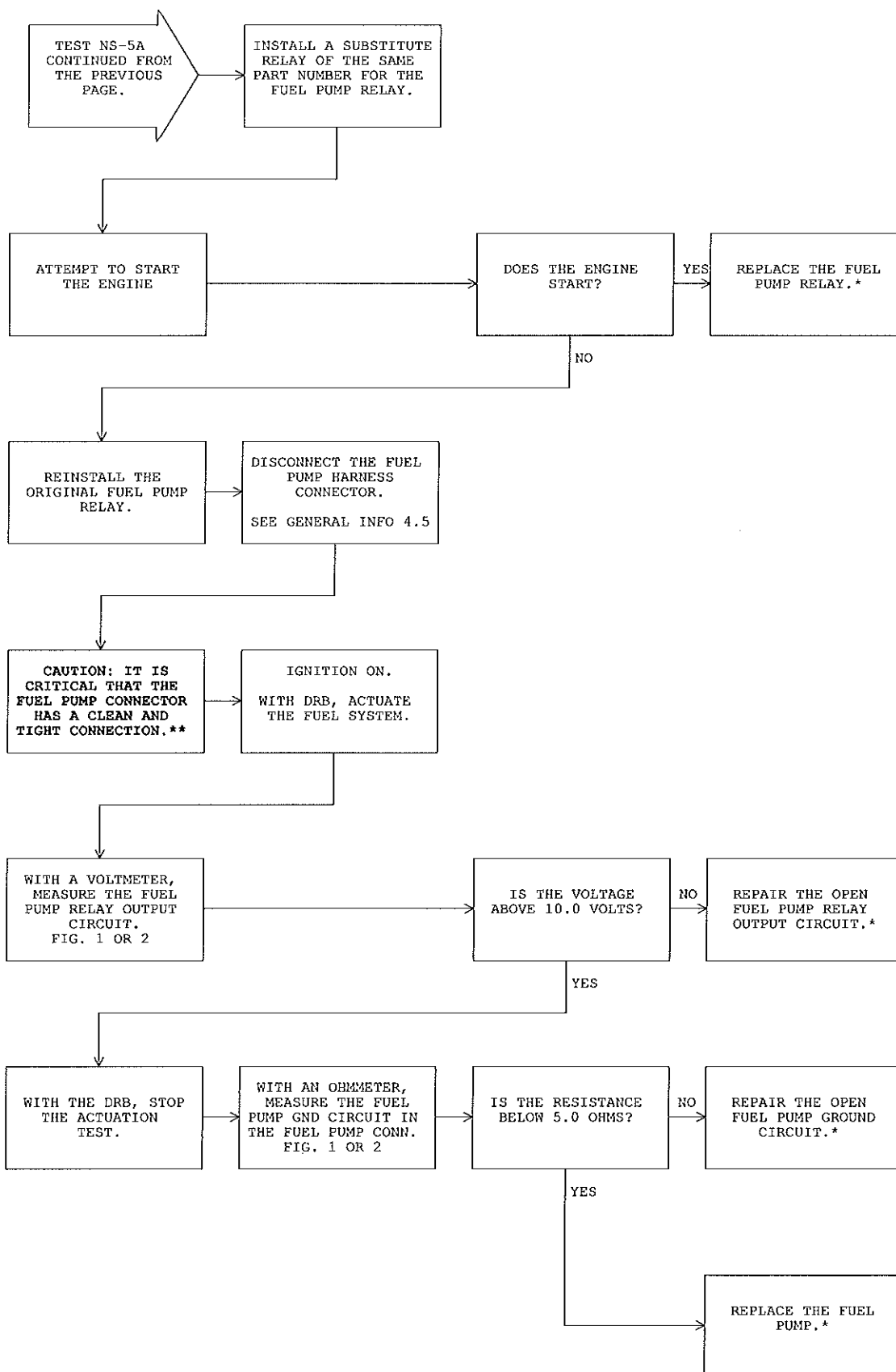


CAV	COLOR	FUNCTION
1	DG/WT	FUEL PUMP RELAY OUTPUT
3	LB/BK	FUEL LEVEL SENSOR SIGNAL (OBD II)
4	BR/YL	SENSOR GROUND
6	BK	GROUND

80a929d9

FIG. 2

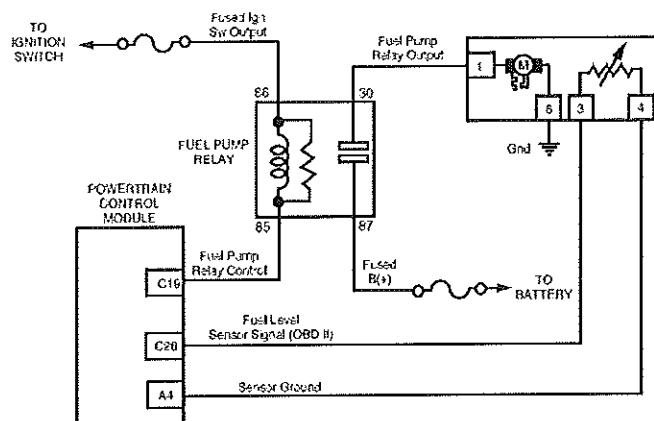
## TEST NS-5A CONTINUED - CHECKING THE FUEL PUMP



\*Perform Verification TEST VER-1A.

\*\*Check connectors - Clean / repair as necessary.



**TEST TC-101A REPAIRING - FUEL PUMP (SYSTEM) RELAY CONTROL CIRCUIT****Perform DTC TEST Before Proceeding****TJ AND ZJ BODIES**

80a534ce

**Name of code:** Fuel Pump Relay Control Circuit**When monitored:** With the ignition key on and battery voltage greater than 10 volts.**Set condition:** An open or shorted condition is detected in the fuel pump relay control circuit.

**Theory of operation:** The fuel pump relay controls the 12-volt source to the fuel pump. The relay is located in the power distribution center (PDC). One side of the relay control coil is supplied with 12 volts when the ignition switch is turned to the "run" position. The circuit is completed when the other side of the relay coil is grounded by the powertrain control module. The PCM grounds the relay when the ignition switch is in either the run or crank position and engine RPM is detected. If engine RPM is not detected, the PCM will remove the fuel pump relay control circuit ground.

**Possible causes:**

- > Relay coil open or shorted
- > Fused ignition switch output circuit open
- > Fuel pump relay control circuit is open or shorted
- > Inoperative circuit driver in powertrain control module
- > Connector terminals
- > Connector wires

3350206

**FIG. 1****INACTIVE TROUBLE CODE CONDITION**

You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem:

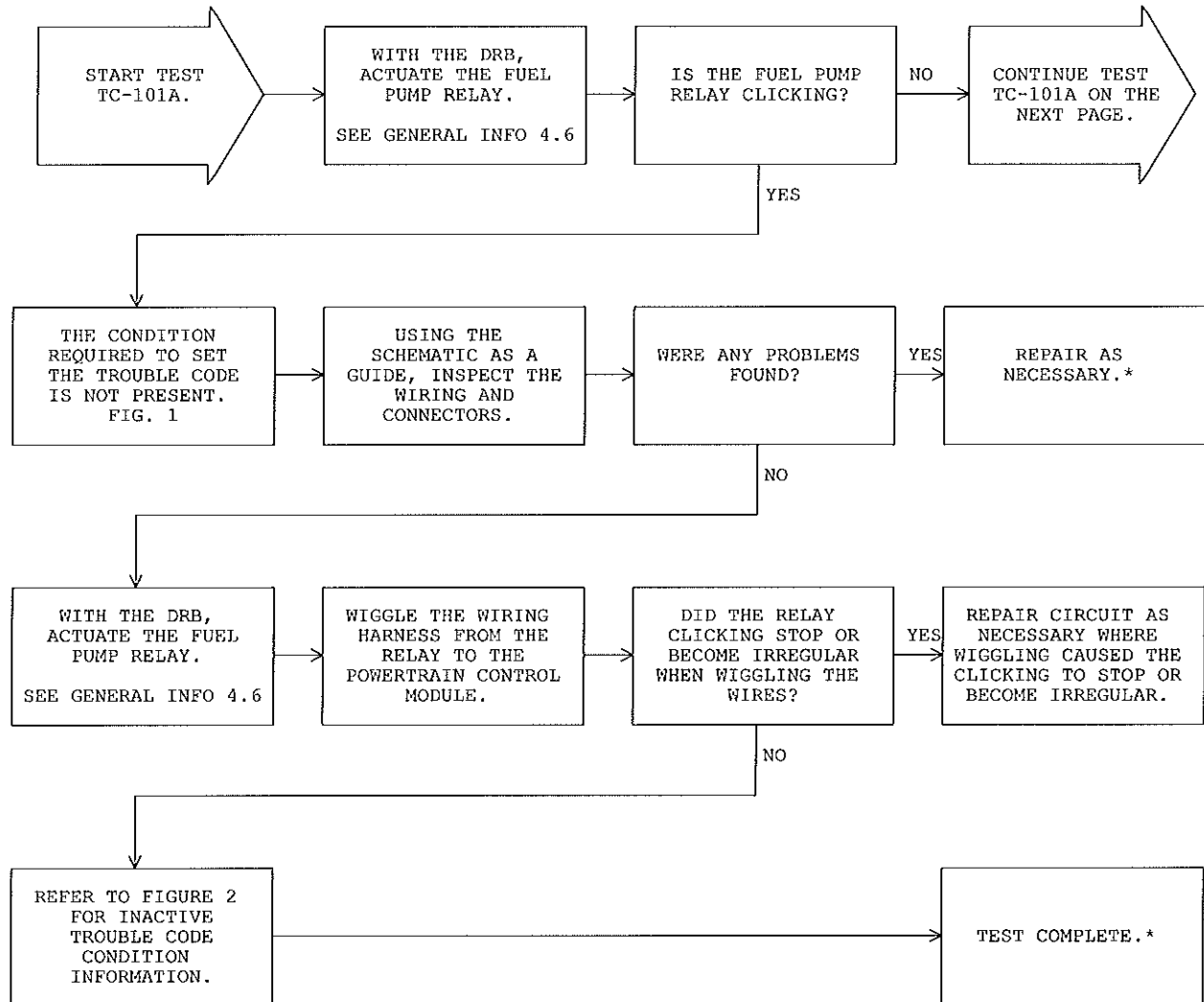
- Visually inspect related wire harness connectors. Look for broken, bent, pushed out, or corroded terminals.
- Visually inspect the related harnesses. Look for chafed, pierced, or partially broken wire.
- Refer to any hotlines or technical service bulletins that may apply.

0750604

**FIG. 2**

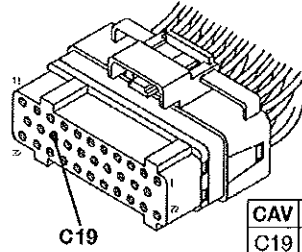
**TEST TC-101A REPAIRING - FUEL PUMP (SYSTEM) RELAY CONTROL CIRCUIT**

Perform DTC TEST Before Proceeding

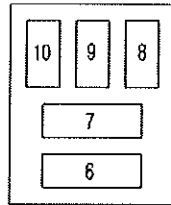
**\*Perform Verification TEST VER-2A.****\*\*Check connectors - Clean / repair as necessary.**

## TEST TC-101A CONTINUED - REPAIRING - FUEL PUMP (SYSTEM) RELAY CONTROL CIRCUIT

## TJ BODY

POWERTRAIN  
CONTROL MODULE  
GREY CONNECTOR

CAV	COLOR	FUNCTION
C19	BR	Fuel Pump Relay Control

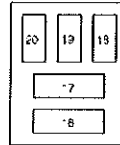
FUEL PUMP  
RELAY CONNECTOR  
(IN PDC)

CAV	COLOR	FUNCTION
6 (30)	DG/BK	Fused B(+)
7 (87)	DG/WT	Fuel Pump Relay Output
8 (86)	RD/LG	Fused Ignition Switch Output
10 (85)	BR	Fuel Pump Relay Control

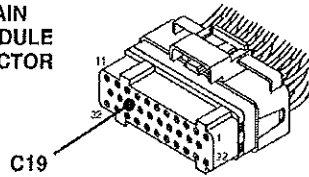
FIG. 1

80a41072

## ZJ BODY

FUEL PUMP  
RELAY  
CONNECTOR

CAV	COLOR	FUNCTION
C16 (30)	DG/BK	FUSED B(+)
C17 (87)	DG/WT	FUEL PUMP RELAY OUTPUT
C18 (86)	OR	FUSED IGNITION SWITCH OUTPUT
C20 (85)	DB	FUEL PUMP RELAY CONTROL

POWERTRAIN  
CONTROL MODULE  
GREY CONNECTOR

CAV	COLOR	FUNCTION
C19	DB	FUEL PUMP RELAY CONTROL

FIG. 2

80a9833e

## TYPICAL RELAY

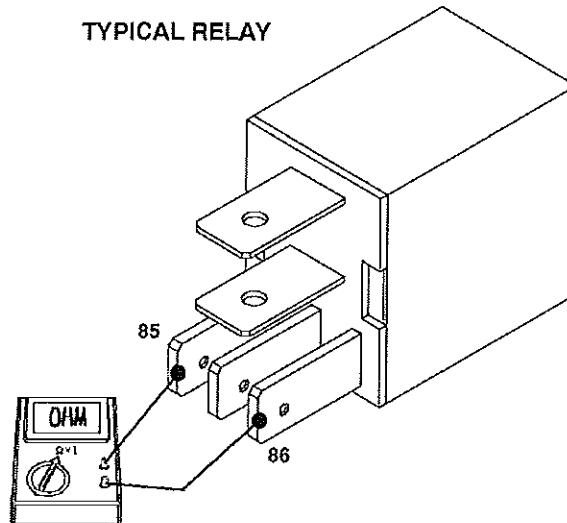
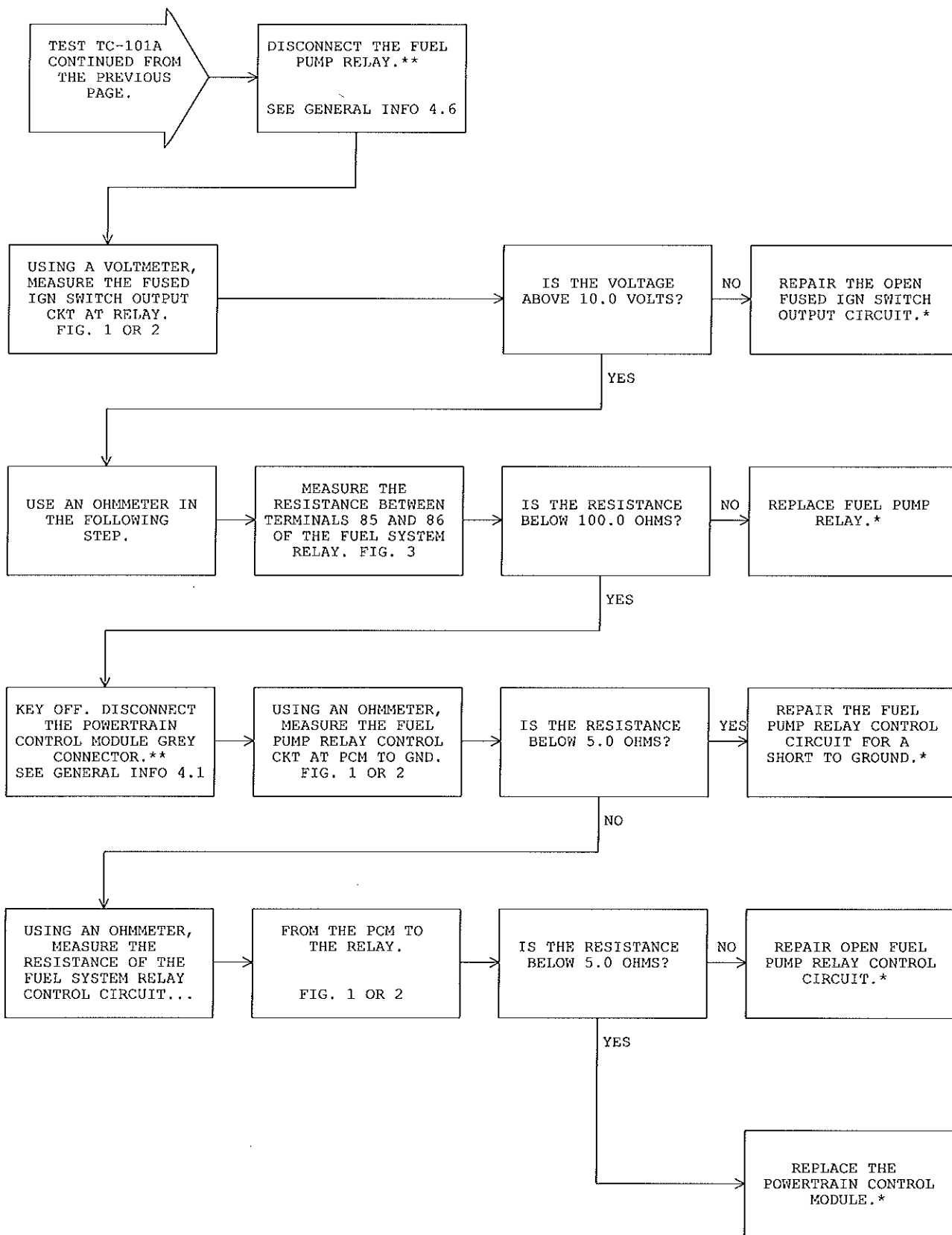


FIG. 3

2660405

# TEST TC-101A CONTINUED - REPAIRING - FUEL PUMP (SYSTEM) RELAY CONTROL CIRCUIT

## TROUBLE CODE TESTS



\*Perform Verification TEST VER-2A.

\*\*Check connectors - Clean / repair as necessary.

## FUEL PUMP RELAY

The fuel pump relay is located in the Power Distribution Center (PDC) Power Distribution Center (PDC). Refer to label on PDC cover for relay location. Check condition of relay terminals and connector terminals for corrosion and for pin height (pin height should be the same for all terminals within the connector). Repair if necessary before installing relay.