

G - TESTS W/CODES

Article Text

1991 Toyota MR2

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Wednesday, November 25, 1998 03:27AM

ARTICLE BEGINNING

1991 ENGINE PERFORMANCE

Toyota 4-Cylinder Self-Diagnostics

MR2

INTRODUCTION

If no faults were found while performing F - BASIC TESTING, proceed with self-diagnostics. If no fault codes or only pass codes are present after entering self-diagnostics, proceed to H - TESTS W/O CODES article in the ENGINE PERFORMANCE Section for diagnosis by symptom (i.e., ROUGH IDLE, NO START, etc.).

SELF-DIAGNOSTIC SYSTEM

Hard Failures

Hard failures cause malfunction light to illuminate and remain on until problem is repaired. If light comes on and remains on (light may flash) during vehicle operation, cause of malfunction must be determined using diagnostic (code) charts. If a sensor fails, control unit will use a substitute value in its calculations to continue engine operation. In this condition, commonly known as limp-in mode, the vehicle runs but driveability will not be optimum.

Intermittent Failures

Intermittent failures may cause CHECK ENGINE light to flicker or illuminate and go out after the intermittent fault goes away. However, the corresponding trouble code will be retained in ECU memory. If related fault does not reoccur within a certain time frame, related trouble code will be erased from ECU memory. Intermittent failures may be caused by a sensor, connector or wiring related problems. See INTERMITTENTS in H - TESTS W/O CODES article in the ENGINE PERFORMANCE Section.

RETRIEVING CODES

1) Before retrieving codes, verify CHECK ENGINE light comes on with ignition on and engine off. The CHECK ENGINE light should go off when engine is started. If CHECK ENGINE light does not come on, see appropriate DIAGNOSTIC CIRCUIT CHECK under CODE CHARTS. If light remains on, system has detected a malfunction or abnormality.

2) Ensure battery voltage is greater than 11 volts and charging system is okay. Engine should be at normal operating temperature.

3) Apply parking brake. Shift transaxle to Neutral (M/T) or Park (A/T). Turn A/C and all accessories off. Close throttle valve.

4) Turn ignition on with engine off. Install jumper wire between terminals TE1 (or T) and E1 in engine check connector. See Fig. 1.

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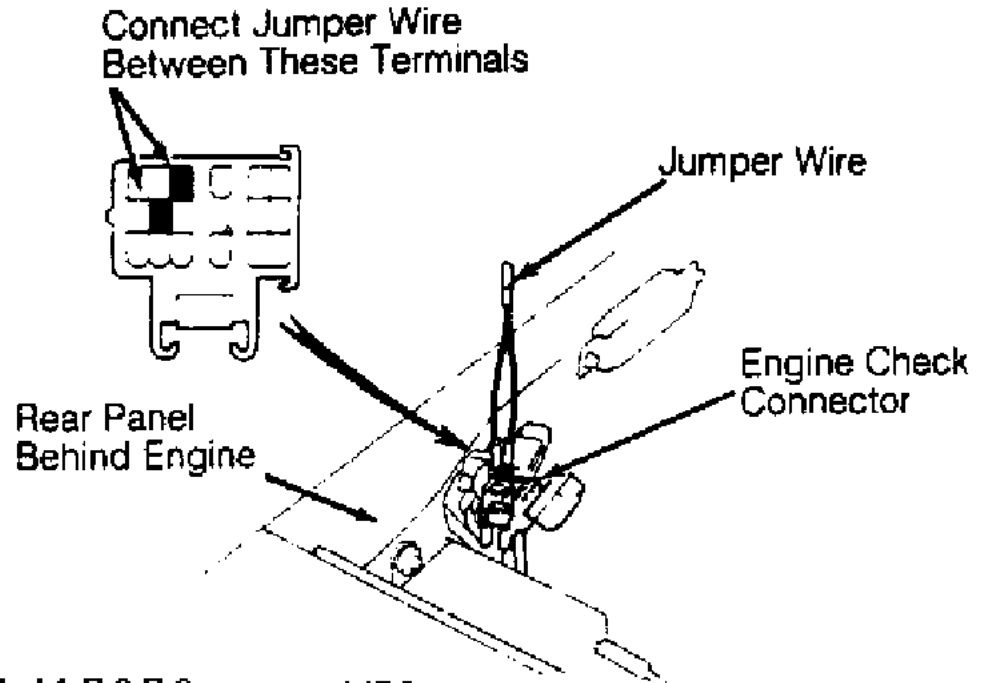
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Fig. 1: Check Connector Jumper Wire Installation
Courtesy of Toyota Motor Sales, U.S.A., Inc.

5) Count number of flashes from CHECK ENGINE light. If system is operating properly (with no codes), CHECK ENGINE light will flash continuously and evenly. See Fig. 2.

NOTE: If CHECK ENGINE light will not flash diagnostic codes, see appropriate DIAGNOSTIC CIRCUIT CHECK under CODE CHARTS.

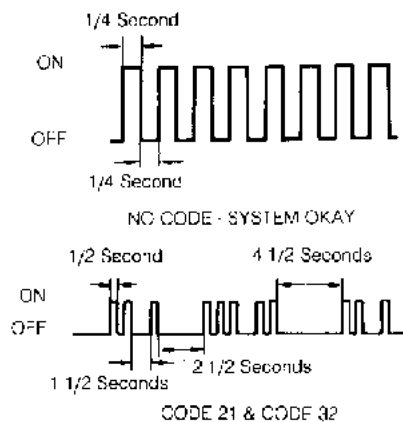


Fig. 2: Displaying Codes
Courtesy of Toyota Motor Sales, U.S.A., Inc.

6) If code exists, digits of each code will flash at 1/2-second intervals, with a 1 1/2-second pause between first and second

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digits. See Fig. 2.

7) If more than one code is stored, a 2 1/2-second pause will occur before next code is flashed. Once all codes are displayed, a 4 1/2-second pause will occur then code(s) will be repeated.

8) Codes are displayed from the smallest to largest code. After codes are retrieved, remove jumper wire to exit diagnostic mode.

NOTE: Cressida has a normal and test mode for retrieving codes. To prevent damage to ECU, connect only specified terminals.

NOTES ON CODES

1) No other code will appear with Code 11.

2) After malfunction is repaired, CHECK ENGINE light will go off, but codes (except 51 and 53) will remain in ECU memory until code is cleared.

CLEARING CODES

1) After repairs are performed, clear ECU memory of all stored codes. To clear memory, turn ignition off. Remove EFI (15 amp) fuse from main fuse block in engine compartment fuse/relay box for approximately 30 seconds or more.

2) Depending on ambient temperature, fuse may need to be removed for more than 30 seconds. Replace fuse and exit diagnostic mode. Codes can also be cleared by disconnecting vehicle battery. However, other memory functions (clock, radio, etc.) will need to be reset.

ECU LOCATION

ECU is located on center of panel behind engine, toward rear of vehicle.

SUMMARY

If no hard fault codes (or only pass codes) are present, driveability symptoms exist or intermittent codes exist, proceed to H - TESTS W/O CODES article in the ENGINE PERFORMANCE Section for diagnosis by symptom (i.e., ROUGH IDLE, NO START, etc.) or intermittent diagnostic procedures.

SELF-DIAGNOSTICS

NOTE: Code diagnostic hints table may be used to determine a common cause for a code to be set.

CODE DIAGNOSTIC HINTS TABLE

Code	Diagnostic Hints
11 Momentary Interruption Of Power Supply To ECU

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12	No "G" or "NE" (RPM) Ignition Signal To ECU Within 2 Seconds After Engine Is Cranked
13	.....	No "NE" (RPM) Ignition Signal To ECU When Engine Speed Is Greater Than Approximately 1000 RPM
14	.....	No IGF Ignition Signal To ECU From Ignitor Several Times In Succession
16	.....	Fault In Transmission/Transaxle ECU
21	.....	Defective O2 Sensor, Open Or Short Circuit In O2 Sensor Signal
22	.....	Open Or Short Circuit In Coolant Temp. Sensor Signal
24	.....	Open Or Short Circuit In Intake Air Temp. Sensor Signal
25	.....	Lean Signal Sent By O2 Sensor For Several Seconds
26	.....	Rich Signal Sent By O2 Sensor For Several Seconds
27	.....	Open Or Short Circuit In Sub-O2 Sensor Signal
28	.....	Defective No. 2 O2 Sensor Open Or Short Circuit In No. 2 O2 Sensor Signal
31	.....	Open Or Short Circuit In Airflow Meter Or Vacuum Sensor Signal
32	.....	Open Or Short Circuit Between Airflow Meter Terminals
34	.....	Turbocharger Pressure Is Abnormal
35	.....	Open Or Short Circuit In Turbocharger Pressure Sensor Or High Altitude Compensator Signal
41	.....	Open Or Short Circuit In Throttle Position Sensor Signal
42	.....	No SPD Signal From Vehicle Speed Sensor For Several Seconds With Engine Speed Approximately 2500-5500 RPM
43	.....	No STA Signal To ECU Until Engine Reaches 800 RPM With Vehicle Not Moving
51	.....	(1) Problem In One Of 3 Circuits Monitored By ECU
52	.....	Open Or Short Circuit In Knock Sensor Signal
53	.....	Knock Control In ECU Is Faulty
71	.....	EGR Gas Below Predetermined Level During EGR Control

(1) - The throttle position sensor, neutral safety switch and A/C
Signal circuits are monitored.

CODE IDENTIFICATION

CODE IDENTIFICATION TABLE

Code No.	System Affected	Probable Cause
12 & 13	... RPM Signal	Distributor Or Circuit, Starter Circuit, ECU
14	..... Ignition Signal	Distributor Or Circuit To ECU, ECU
21 Oxygen Sensor Signal ...	Oxygen Sensor Or Circuit, (1) Oxygen Sensor Heater, ECU
22 Coolant Temp. Sensor Signal	Coolant Temp. Sensor Or Circuit, ECU

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24	Intake Air Temp. Sensor Signal	Intake Air Temp. Sensor Or Circuit, ECU
25	Lean Air/Fuel Mixture	ECU, Injector Or Circuit, Oxygen Sensor Or Circuit, Fuel Pressure, Ignition System, Coolant Temp. Sensor, (2) Airflow Meter/Vacuum Sensor
26	.....	Rich Air/Fuel Mixture	.....	Fuel Pressure, (2) Airflow Meter/Vacuum Sensor, ECU, Injector Or Circuit, Oxygen Sensor Or Circuit, Cold Start Injector Or Circuit, Coolant Temp. Sensor
27 (3)	....	Sub-Oxygen Sensor Signal	.....	Sub-Oxygen Sensor Or Circuit, ECU
31	.....	(2) Airflow Meter/Vacuum Sensor Signal	.....	Airflow Meter/Vacuum Sensor Or Circuit, ECU
32 (1)	....	Airflow Meter Signal	.....	Airflow Meter Or Circuit, ECU
34,35(1)	..	Turbocharger Pressure Sensor	...	Turbocharger Pressure Sensor Or Circuit, ECU
41	.....	Throttle Position Sensor Signal	....	Throttle Position Sensor Or Circuit, ECU
42	.....	Vehicle Speed Sensor Signal	.....	Vehicle Speed Sensor Or Circuit, ECU
43	.....	Starter Signal	.....	Starter Signal Circuit, Ignition Switch Or Circuit, ECU
51	.....	Switch Condition Signal	.....	A/C Switch/Amplifier Circuit, ECU, Neutral/Start Switch Or Circuit, TPS Or Circuit
52 (1)	....	Knock Sensor Signal	.....	Knock Sensor Or Circuit, ECU
53 (1)	....	Knock Sensor Control (ECU)	.....	ECU
71 (4)	....	EGR System Malfunction	.....	EGR System, EGR Temp. Sensor Or Circuit, ECU, EGR VSV Or BSV

(1) - Used on 3S-GTE only.

(2) - Airflow meter used on 3S-GTE and vacuum sensor on 5S-FE.

(3) - Used on Calif. 5S-FE only.

(4) - Used on Calif. 3S-GTE and all 5S-FE.

CODE CHARTS

NOTE: All schematics and diagnostic flow charts are courtesy of Toyota Motor Sales, U.S.A., Inc.

ECU TERMINAL IDENTIFICATION

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CAUTION: Perform all voltage measurements with ECU harness connector installed. Use a high-impedance DVOM (10,000-ohm minimum).

Verify battery voltage is greater than 11 volts.

E01	No. 1	No. 2	STJ	RSC	HT	TPC				IGF	G2	NE	VF		OX1	RNK	THW	THA	VS	VC	STA	ACT	SPD	ABS	FPR	W	STP	ELS	BATT			
E02	No. 3	No. 4	EGR	RSD		IGT		TVIS	FC		G1	E1	GND	T	OX2	PIM	IDL	VTA	THG	E2									PS	PSCT	+B	-B1

Fig. 3: ECU Terminal Identification (3S-GTE)

E01	No. 10	No. 20	MSCD	ISDC	FPU	STJ	S1	S2	SL	IGF		NE	VF	DG	OX1	THW	TMA	PIM	VC	STA	A/C	SPD	PS	OD2	PSCT	W	B/K	ELS	BATT		
E02			EGR			IGT	L	2	SP2	E21	G1	E1	GND	T	OX2	IDL	VTA	THG	E2	NSW	ACT	OD1							FC	+B	+B1

Fig. 4: ECU Terminal Identification (5S-FE With A/T)

E01	No. 10	STA	STJ	FPU	MSCD	OX1	GND	G1	IGF	T	THA	PIM	THW	PSCT	B/K	ELS	FC	VF	BATT	+B1
E02	No. 20	IGT	E1	EGR	MSCD	OX2	E21	NE	THG	IDL	VC	PSW	E2	PS		SPD	A/C		W	+B

Fig. 5: ECU Terminal Identification (5S-FE With M/T)

DIAGNOSTIC CIRCUIT CHECK

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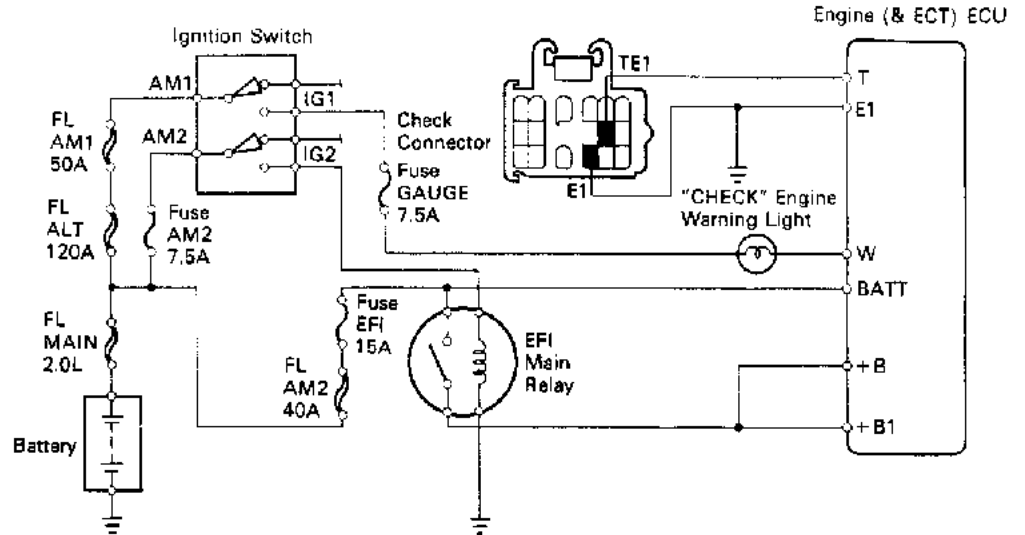


Fig. 6: Diagnostic Circuit Check Schematic

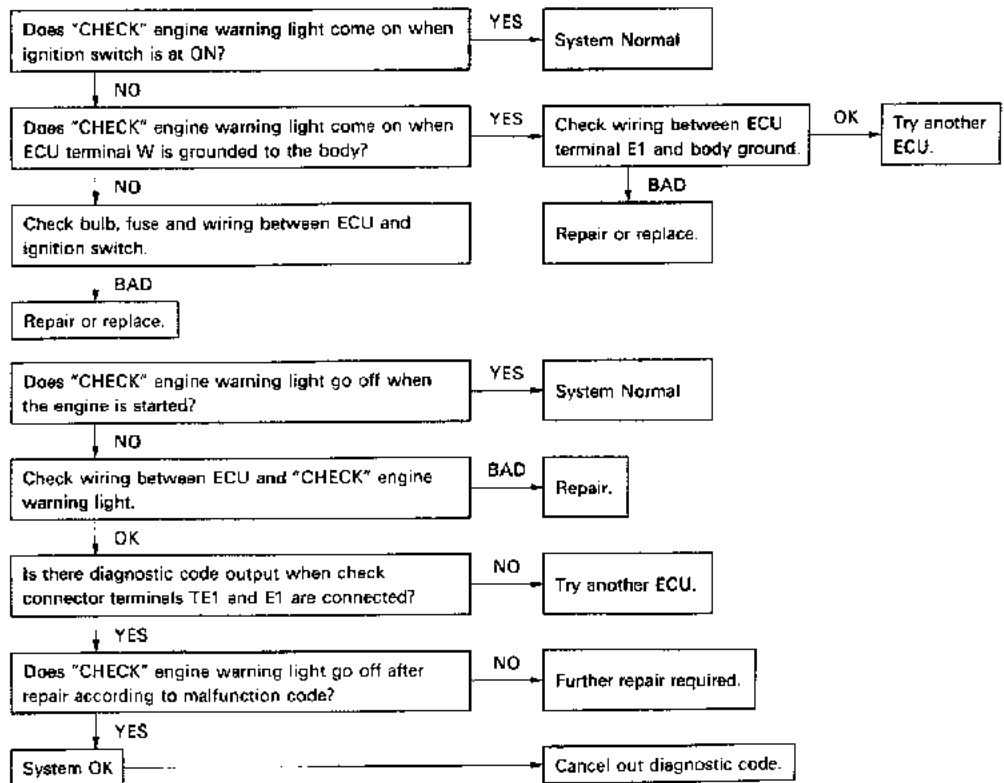


Fig. 7: Diagnostic Circuit Check Flow Chart

TEST NO. 1 - ECU POWER SOURCE

TEST NO. 1-ECU POWER SOURCE TROUBLE TABLE

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Terminals	Trouble	Condition	STD Voltage
BATT - E1	No Voltage	—	10 - 14V

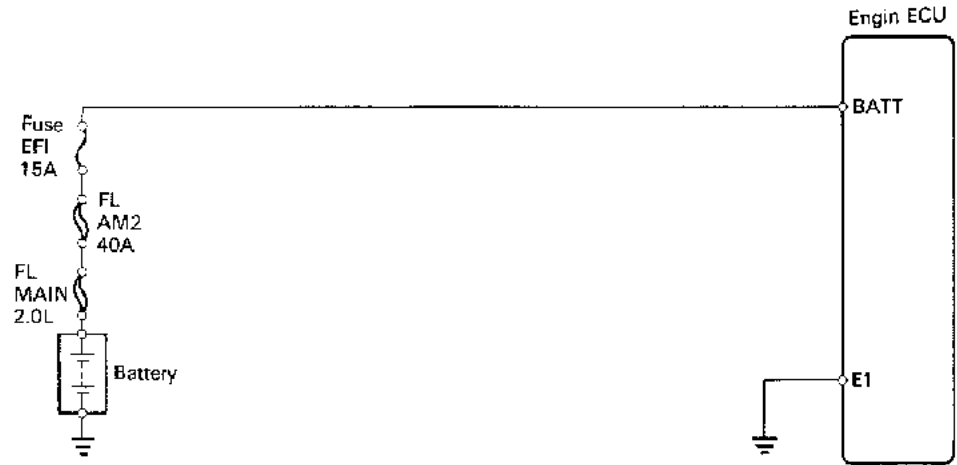


Fig. 8: Test No. 1 Schematic
ECU Power Source

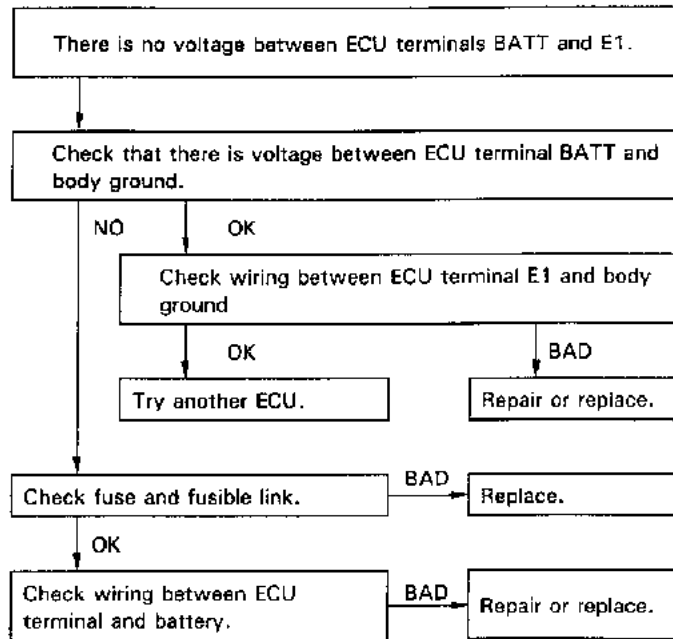


Fig. 9: Test No. 1 Flow Chart
ECU Power Source

TEST NO. 2 - ECU (+B) CIRCUIT

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TEST NO. 2-ECU (+B) CIRCUIT TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
+B - E1 +B1 - E1	No Voltage	Ignition Switch ON	10 - 14V

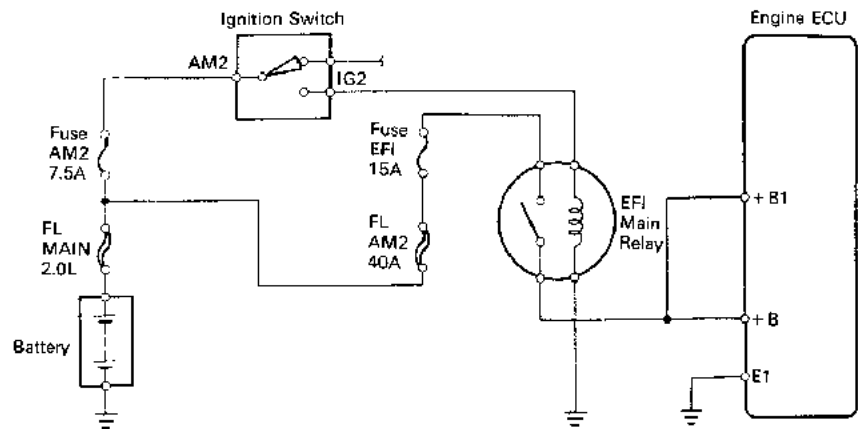


Fig. 10: Test No. 2 Schematic
ECU (+B)

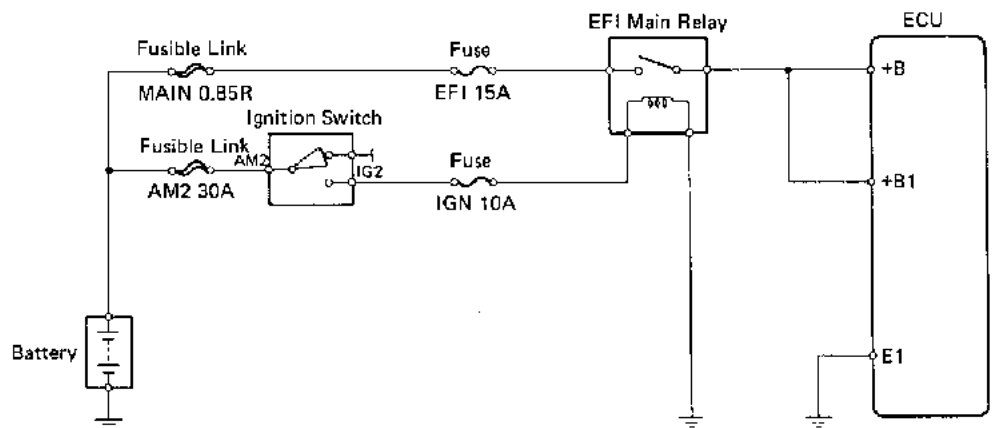


Fig. 11: Test No. 2 Flow Chart
ECU (+B)

CODE 12, 13 - RPM SIGNAL

Code 12 is caused by loss of signal "G2", "G1", or "NE" (3S-GTE) or "G" or "NE" (all others) from distributor to ECU for at least 2 seconds after starter signal is received at ECU. Ensure starter signal exists at ECU. See TEST NO. 10 OR CODE 43. Code 13 is caused by loss of "NE" signal from distributor to ECU when engine RPM exceeds 1000 RPM.

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NOTE: Diagnostic chart not available from manufacturer.

CODE 14/TEST NO. 3 - IGNITION SIGNAL

NOTE: To check ignition system components, see I - SYS/COMP TESTS article in the ENGINE PERFORMANCE Section.

CODE 14/TEST NO. 3-IGNITION SIGNAL TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
IGT - E1	No Voltage	Idling	0.8 - 1.2V

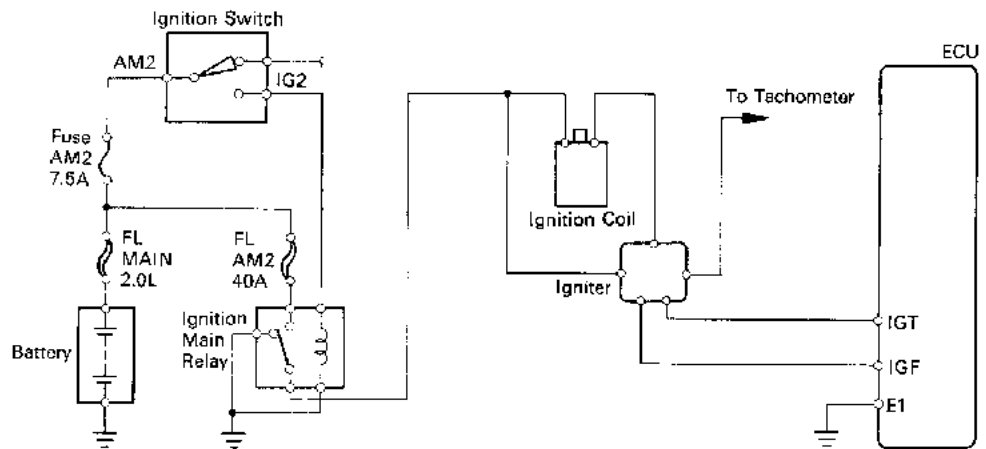


Fig. 12: Code 14/Test No. 3 Schematic Ignition Signal

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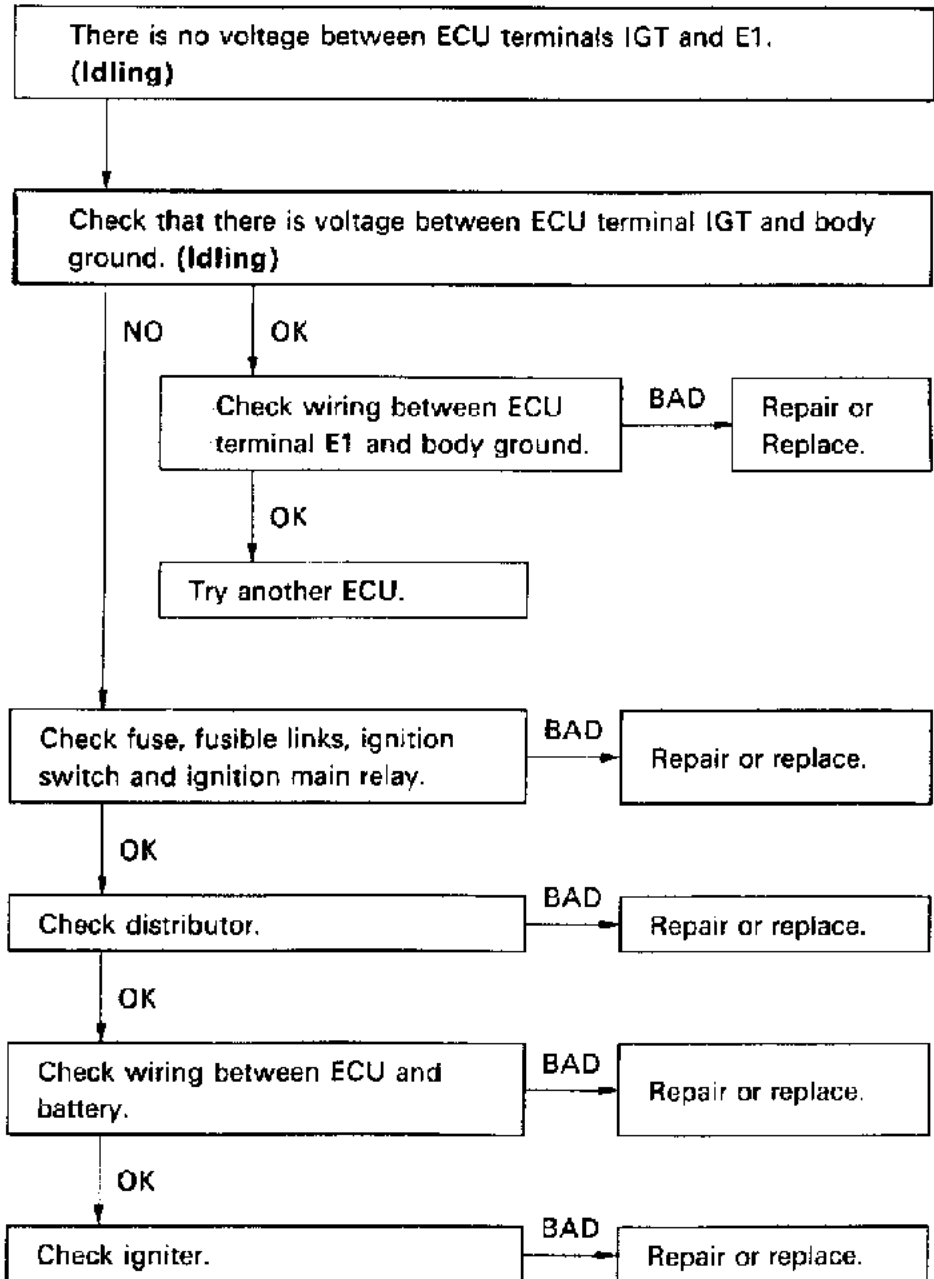


Fig. 13: Code 14/Test No. 3 Flow Chart
Ignition Signal

CODE 21, 27/TEST NO. 4 - OXYGEN SENSOR SIGNAL

NOTE: Code 27 applies to 5S-FE only.

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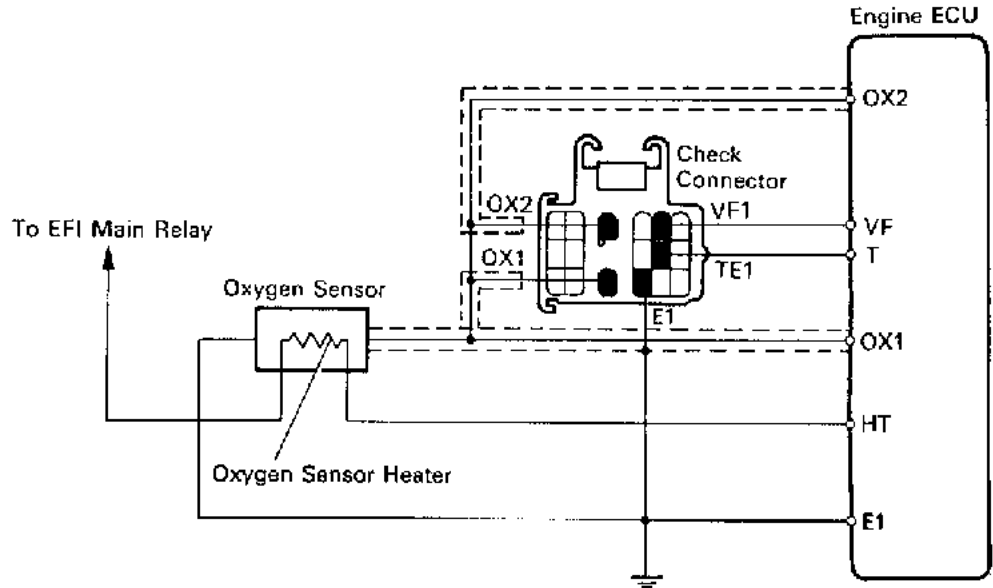


Fig. 14: Code 21/Test No. 4 Schematic (3S-GTE)
Oxygen Sensor Signal

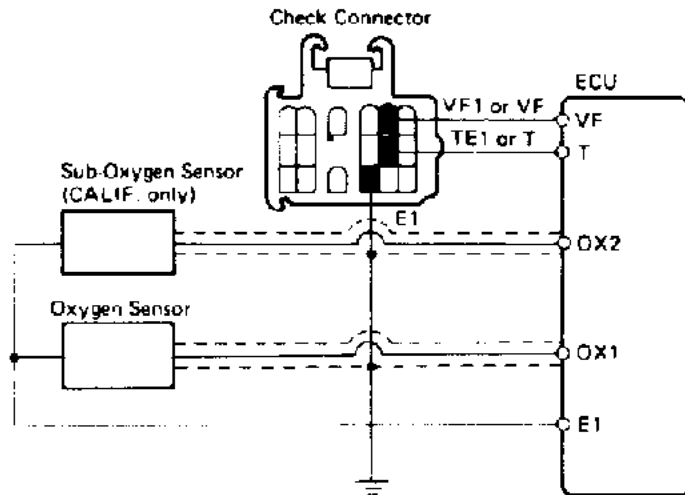


Fig. 15: Code 21, 27/Test No. 4 Schematic (5S-FE)
Oxygen Sensor Signal

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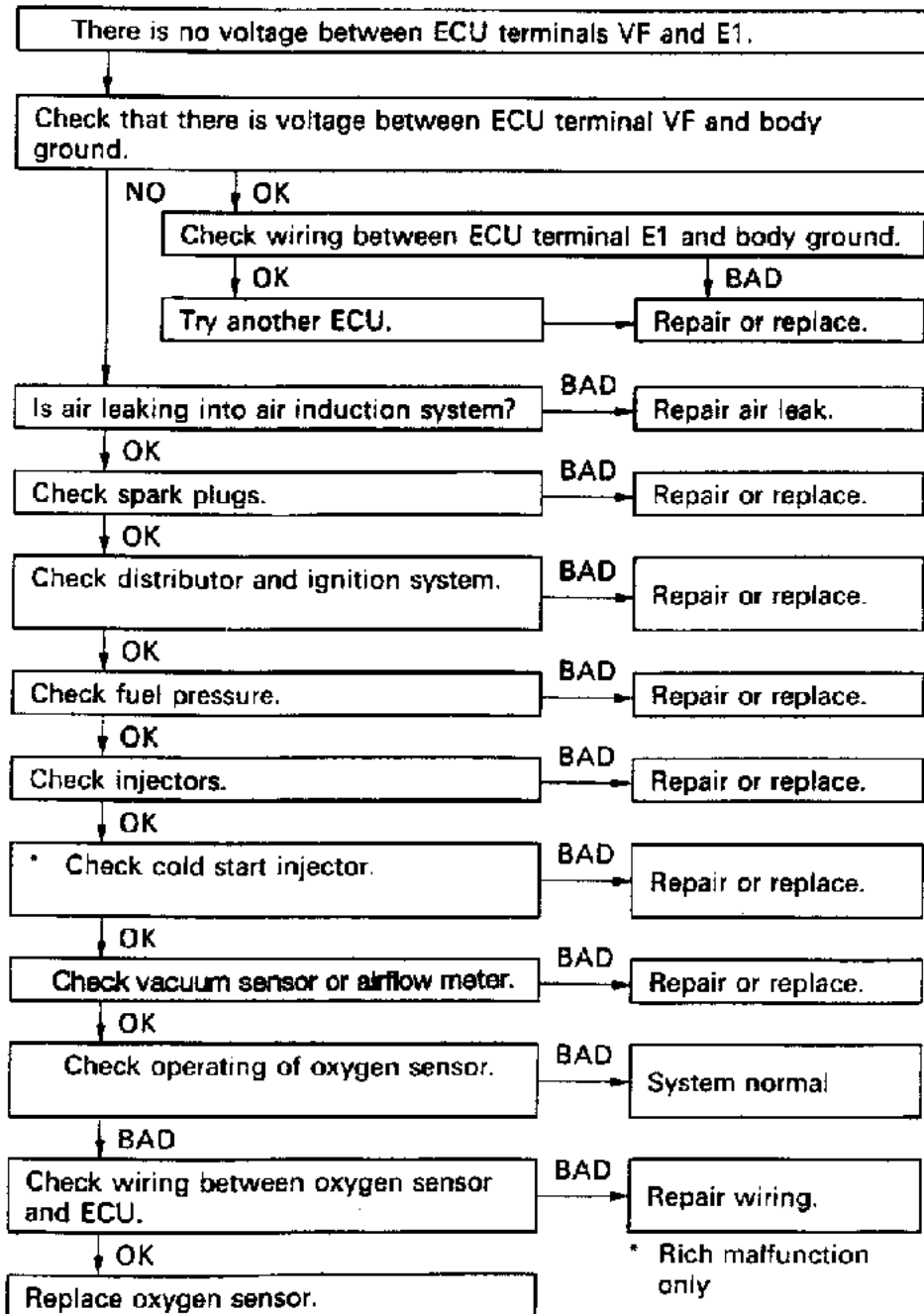


Fig. 16: Code 21, 27/Test No. 4 Flow Chart (All Engines)
Oxygen Sensor Signal

CODE 22/TEST NO. 5 - COOLANT TEMPERATURE SENSOR SIGNAL

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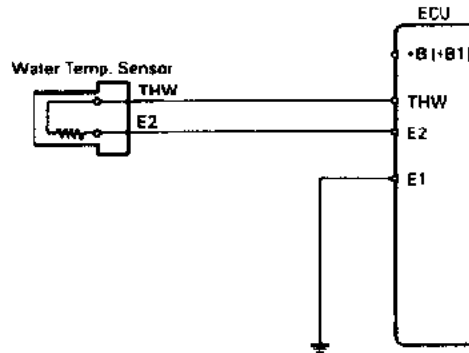
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NOTE: Water temperature sensor is also referred to as coolant temperature sensor.

CODE 22/TEST NO. 5-CTS SENSOR SIGNAL TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
3S-GTE			
THW - E2	No Voltage	Ignition Switch ON Coolant Temp. 80°C (176°F)	0.1 - 1.0V
5S-FE			
THW - E2	No Voltage	Ignition Switch ON Coolant Temp. 80°C (176°F)	0.3 - 0.8V



NOTE: Water temperature sensor is also referred to as coolant temperature sensor.

Fig. 17: Code 22/Test No. 5 Schematic
Coolant Temperature Sensor Signal

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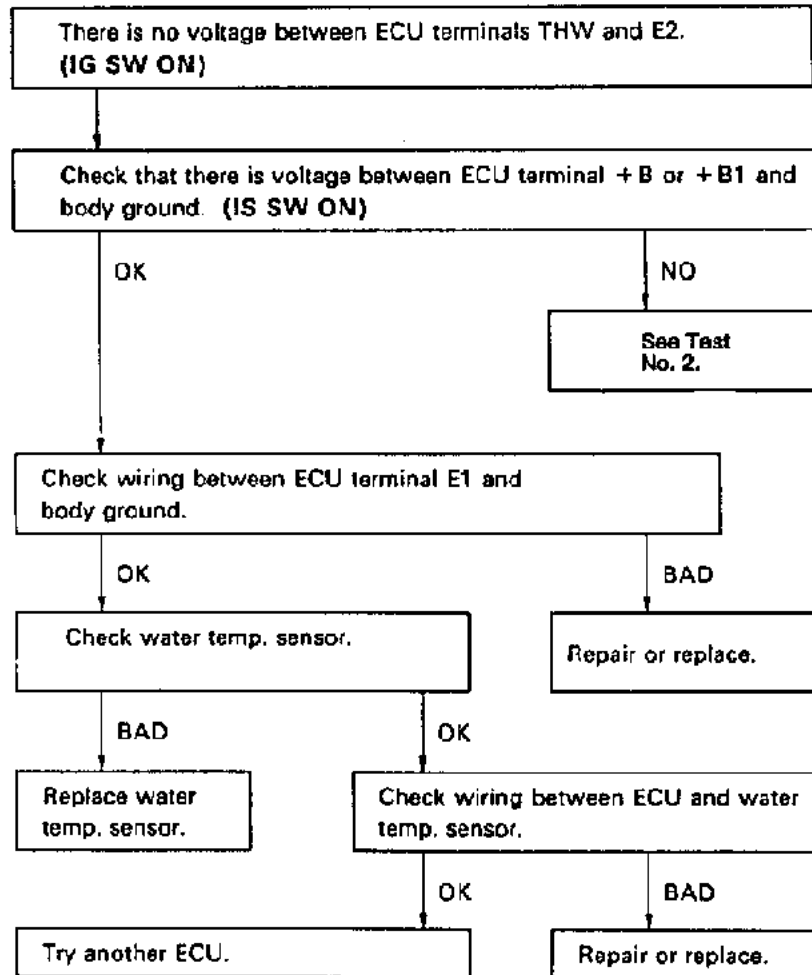


Fig. 18: Code 22/Test No. 5 Flow Chart
Coolant Temperature Sensor Signal

CODE 24/TEST NO. 6 - INTAKE AIR TEMPERATURE SENSOR SIGNAL

CODE 24/TEST NO. 6-IAT SENSOR SIGNAL TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
3S-GTE			
THA1 - E2	No Voltage	Ignition Switch ON Int. Air Temp. 20°C (68°F)	1 - 3V
5S-FE			
THA - E2	No Voltage	Ignition Switch ON Int. Air Temp. 20°C (68°F)	1.7 - 3.1V

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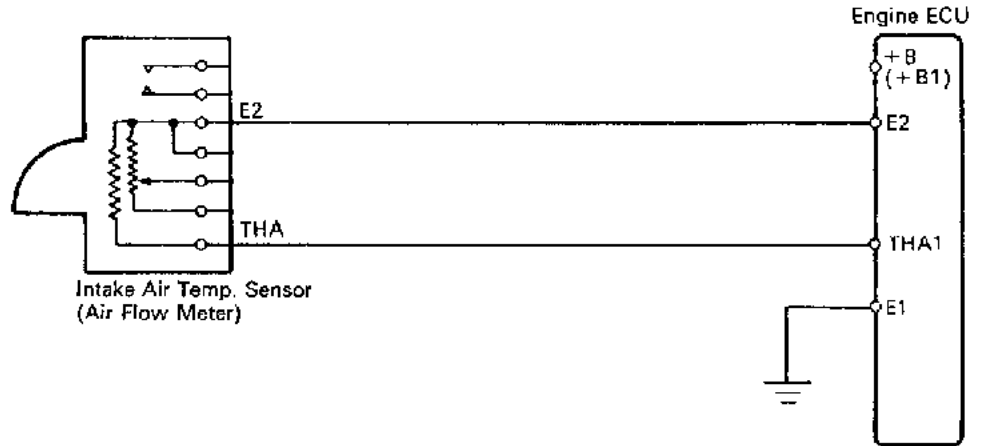


Fig. 19: Code 24/Test No. 6 Schematic (3S-GTE)
Intake Air Temperature Sensor Signal

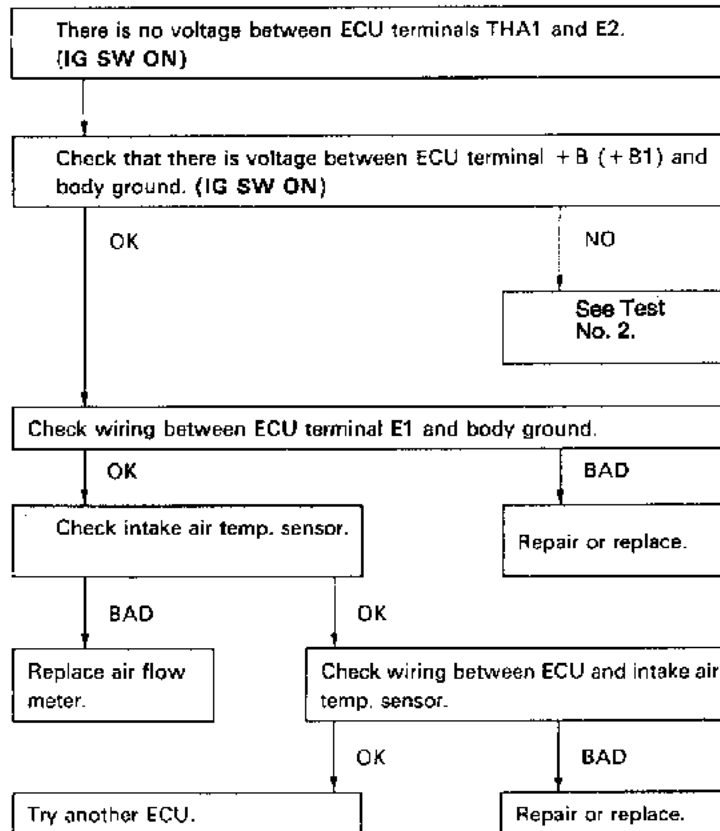


Fig. 20: Code 24/Test No. 6 Flow Chart (3S-GTE)
Intake Air Temperature Sensor Signal

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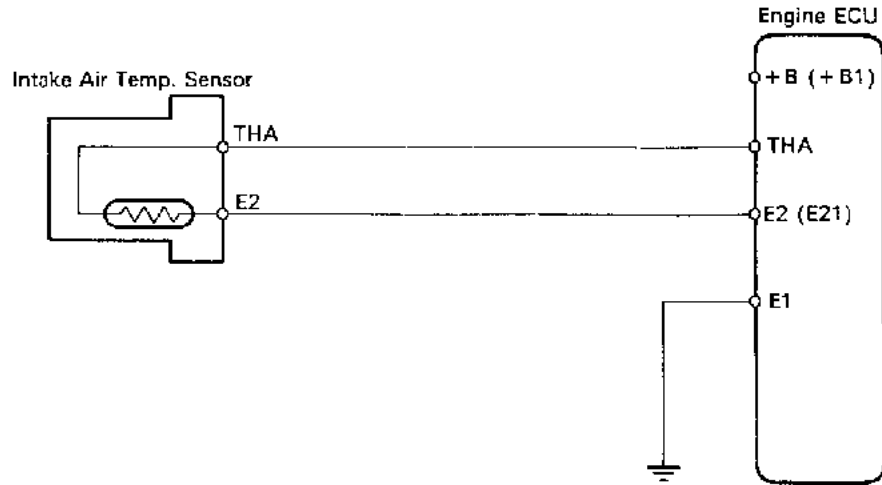


Fig. 21: Code 24/Test No. 6 Schematic (5S-FE)
Intake Air Temperature Sensor Signal

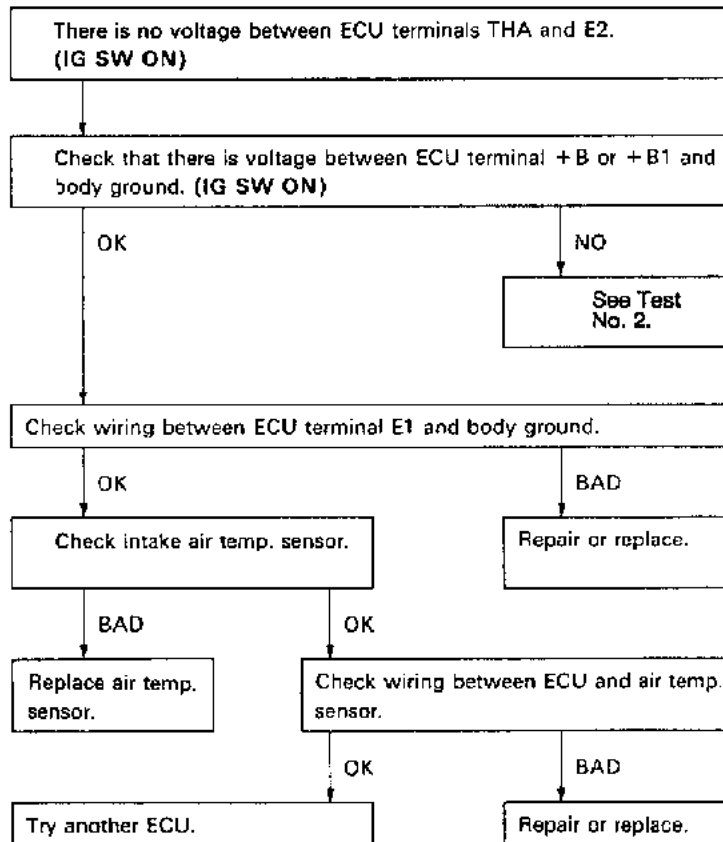


Fig. 22: Code 24/Test No. 6 Flow Chart (5S-FE)
Intake Air Temperature Sensor Signal

CODE 25 - LEAN AIR/FUEL MIXTURE

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Probable Causes:

- * Airflow Meter
- * Air Intake System
- * Coolant Temperature Sensor
- * ECU
- * Fuel Pressure
- * Ignition System
- * Injector Circuit or Injector
- * Oxygen Sensor or Sensor Circuit
- * Vacuum Sensor

NOTE: Diagnostic chart not available from manufacturer.

CODE 26 - RICH AIR/FUEL MIXTURE

Probable Causes:

- * Airflow Meter
- * Cold Start Injector
- * Coolant Temperature Sensor
- * ECU
- * Fuel Pressure
- * Injector Circuit or Injector
- * Oxygen Sensor or Sensor Circuit
- * Vacuum Sensor Circuit

NOTE: Diagnostic chart not available from manufacturer.

CODE 31/TEST NO. 7 - VACUUM SENSOR SIGNAL (5S-FE)

CODE 31/TEST NO. 7-VACUUM SENSOR SIGNAL TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage
PIM-E2	No Voltage	Ignition Switch ON	3.3-3.9V
VCC-E2	No Voltage	Ignition Switch ON	4.5-5.5V

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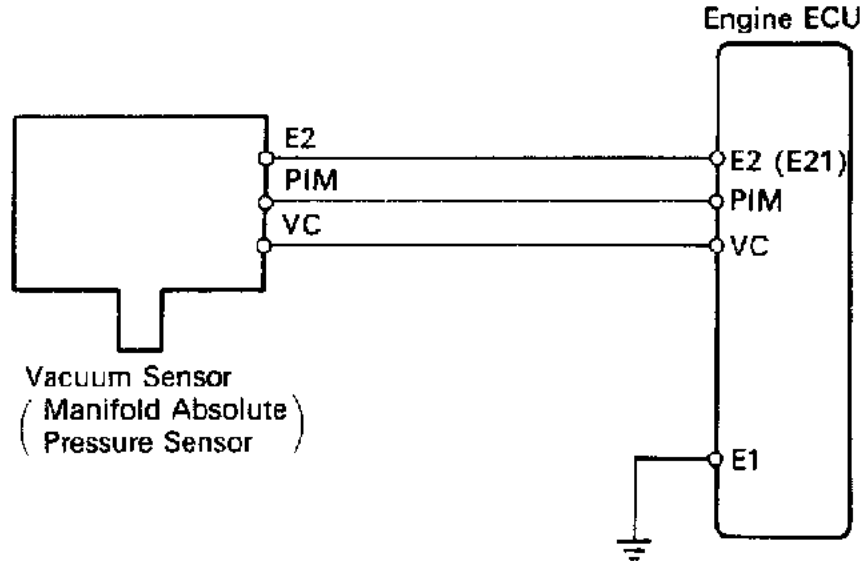


Fig. 23: Code 31/Test No. 7 Schematic (5S-FE)

Vacuum Sensor Signal

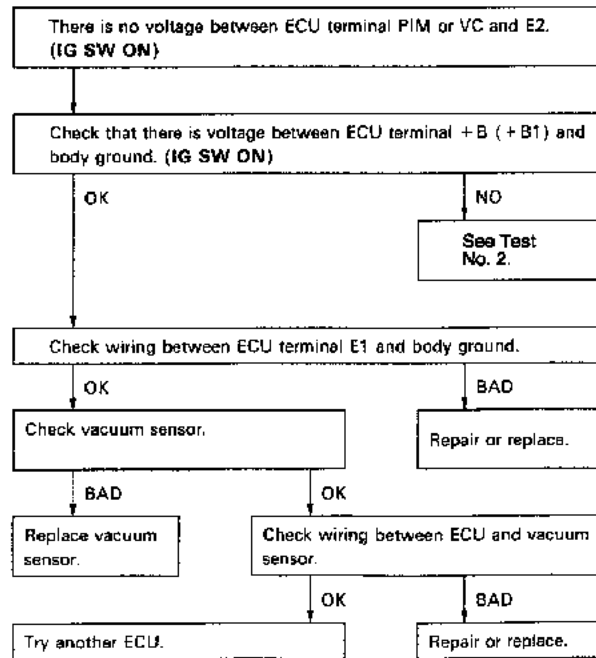


Fig. 24: Code 31/Test No. 7 Flow Chart (5S-FE)

Vacuum Sensor Signal

CODE 31, 32/TEST NO. 7 - AIRFLOW METER SIGNAL (3S-GTE)

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CODE 31,32/TEST NO. 7-AIRFLOW METER SIGNAL TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
VC - E2	No Voltage	---	4-6V
VS - E2		Ignition Switch ON Measuring Plate CLOSED	3.7-4.3V
VS - E2		Ignition Switch ON Measuring Plate OPEN	0.2-0.5V
VS - E2		Idling (No Load)	2.6-3.6V
VS - E2		3000 RPM (No Load)	1.0-2.0V

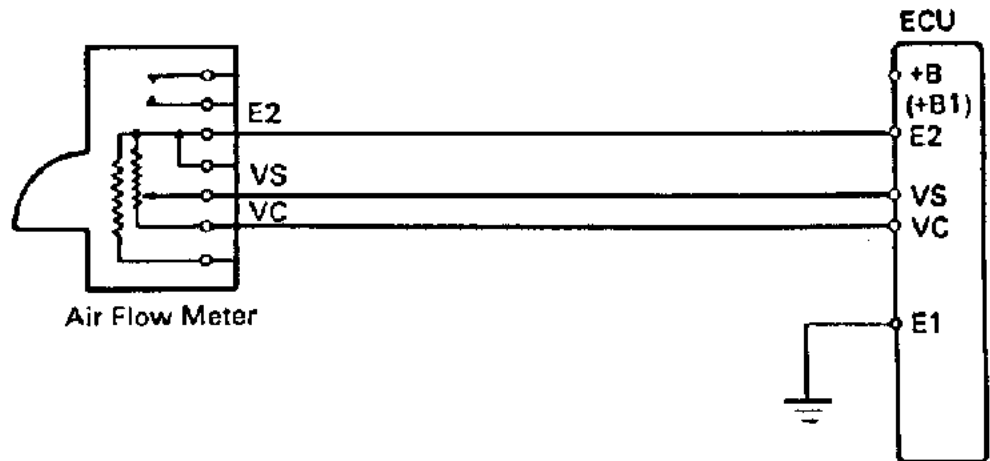


Fig. 25: Code 31, 32/Test No. 7 Schematic (3S-GTE)
Airflow Meter Signal

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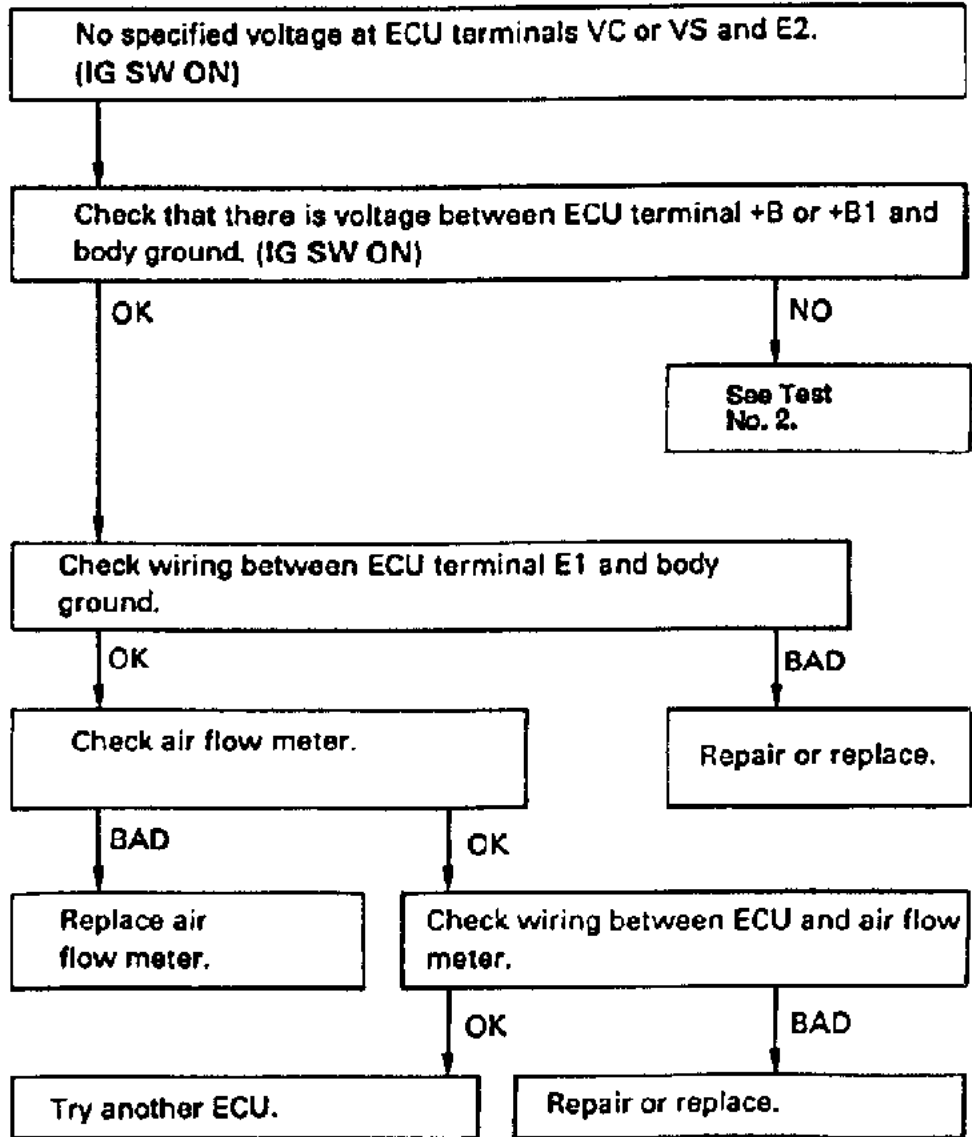


Fig. 26: Code 31, 32/Test No. 7 Flow Chart (3S-GTE)
Airflow Meter Signal

CODE 34, 35/TEST NO. 8 - TURBOCHARGER PRESSURE (3S-GTE)

CODE 34, 35/TEST NO. 8-TURBOCHARGER PRESSURE TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage
PIM-E2	No Voltage	Ignition Switch ON	2.5-4.5V
VC-E2	No Voltage	Ignition Switch ON	4-6V

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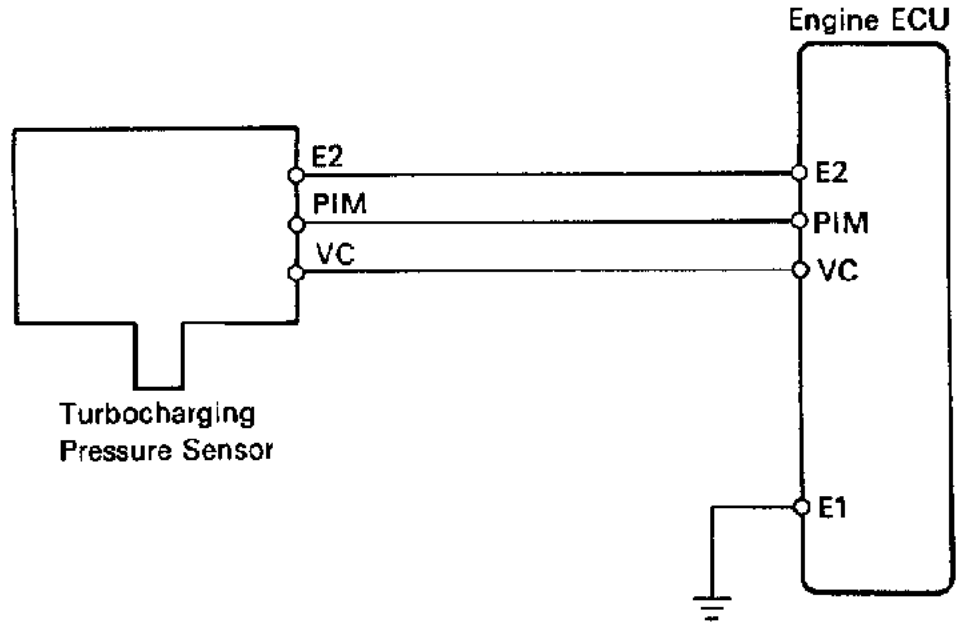


Fig. 27: Code 34/Test No. 8 Schematic Turbocharger Pressure

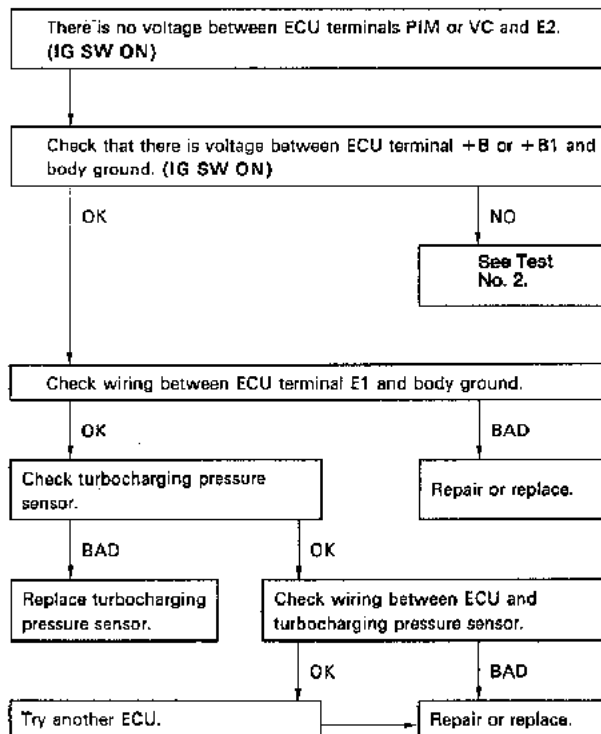


Fig. 28: Code 34/Test No. 8 Flow Chart Turbocharger Pressure

CODE 41/TEST NO. 9 - THROTTLE POSITION SENSOR SIGNAL

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CODE 41/TEST NO. 9-TPS SENSOR SIGNAL TROUBLE TABLE

Terminals	Trouble	Condition	STD Voltage
3S-GTE			
IDL - E2	No Voltage	IG SW ON-Throttle Valve OPEN	8-14V
VC - E2		IG SW ON-	4-6V
VTA - E2		IG SW ON-Throttle Valve SHUT	0.7-1.0V
		IG SW ON-Throttle Valve OPEN	3.2-4.2V
5S-FE With A/T			
IDL - E2	No Voltage	IG SW ON-Throttle Valve OPEN	8 - 14V
VCC - E2		IG SW ON-	4.5-5.5V
VTA - E2		IG SW ON-Throttle Valve SHUT Throttle Opener Must Be Cancelled First	0.8 - 1.2V
		IG SW ON-Throttle Valve OPEN	3.2 - 4.2V
5S-FE With M/T			
IDL - E1	No Voltage	IG SW ON-Throttle valve OPEN	8 - 14V
PSW - E1		IG SW ON-Throttle valve SHUT Throttle Opener Must Be Cancelled First	4 - 6V

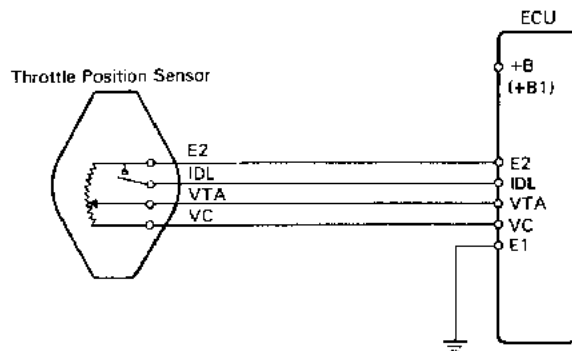


Fig. 29: Code 41/Test No. 9 Schematic (5S-FE A/T & 3S-GTE)
Throttle Position Sensor Signal

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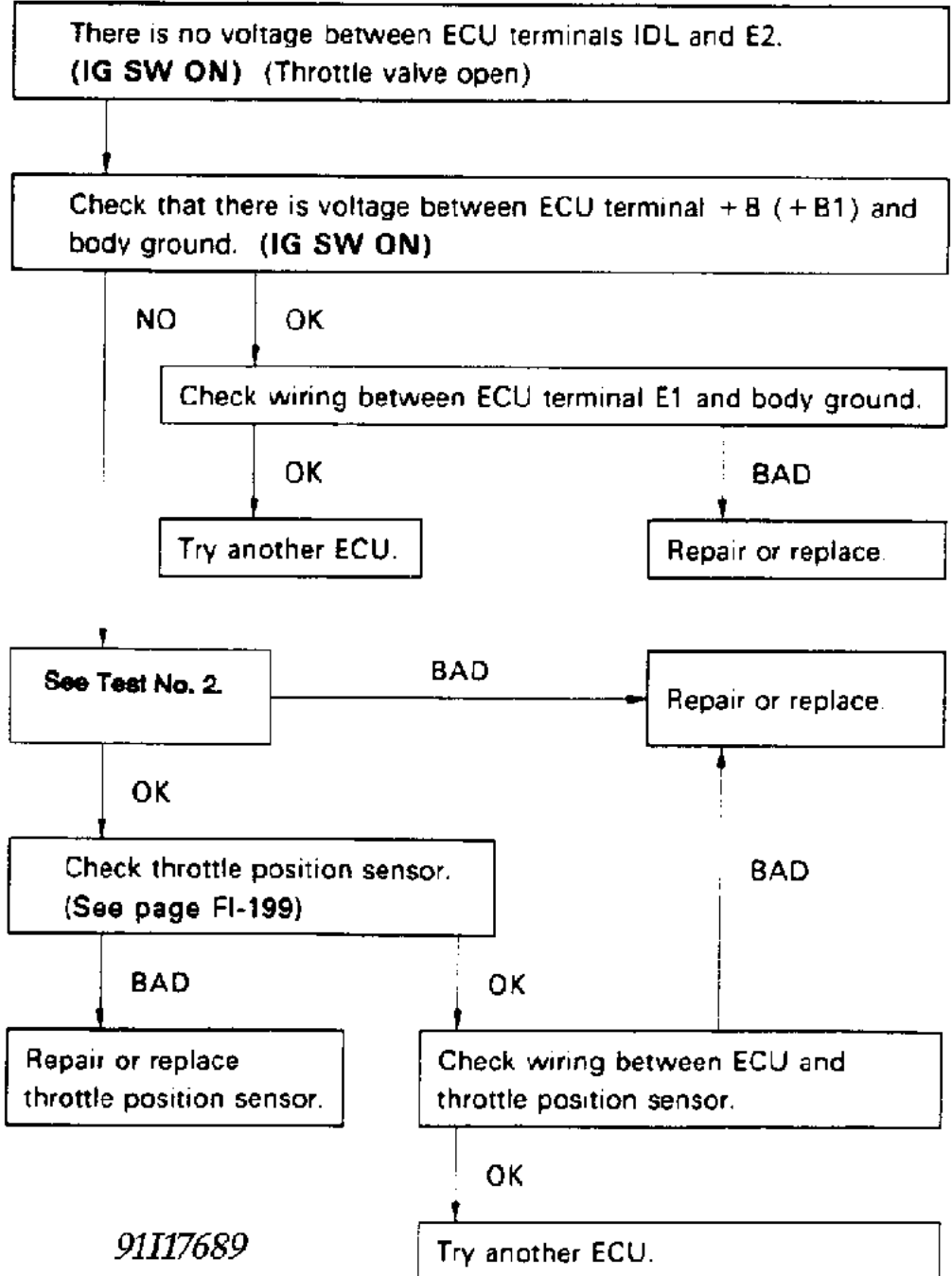
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① • IDL - E2



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Fig. 30: Code 41/Test No. 9 Flow Chart, IDL - E2 (5S-FE A/T & 3S-GTE)
Throttle Position Sensor Signal

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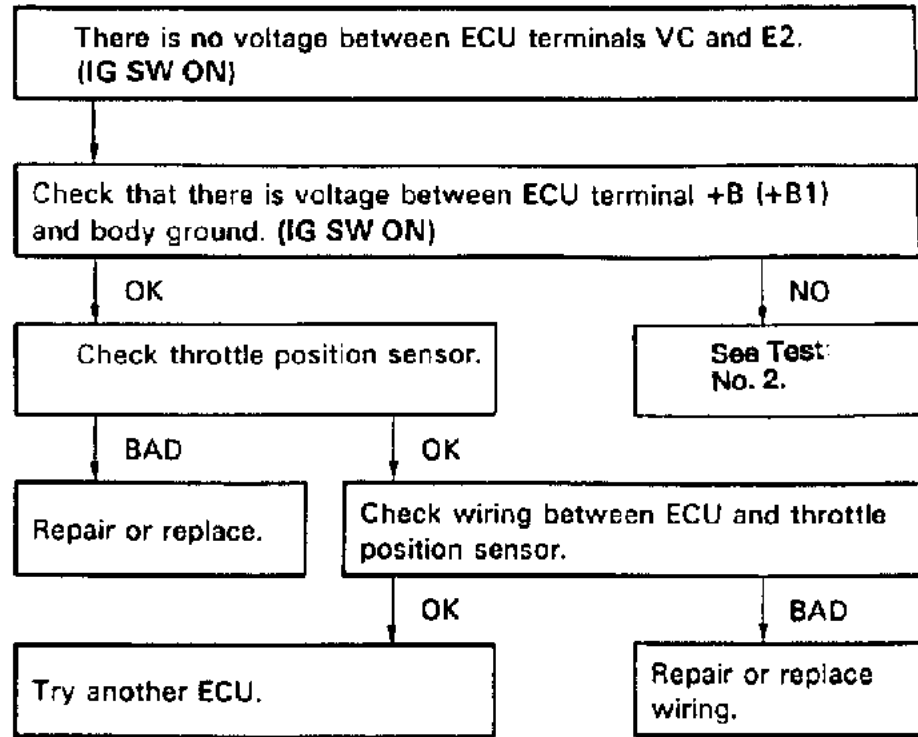


Fig. 31: Code 41/Test No. 9 Flow Chart, VC - E2 (5S-FE A/T & 3S-GTE) Throttle Position Sensor Signal

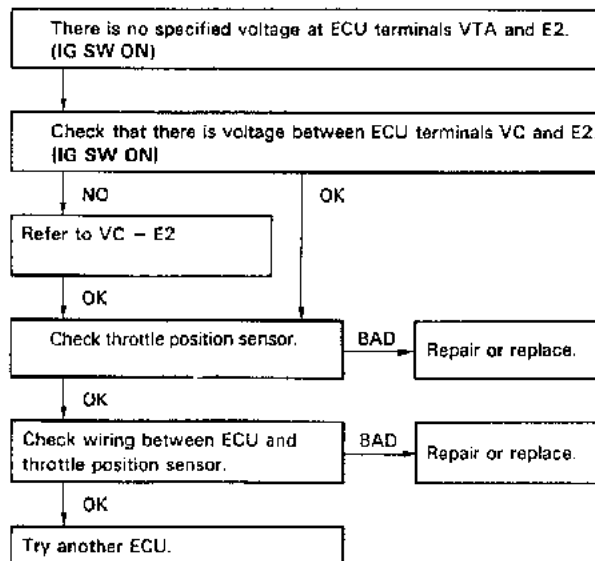


Fig. 32: Code 41/Test No. 9 Flow Chart, VTA - E2 (5S-FE A/T & 3S-GTE) Throttle Position Sensor Signal

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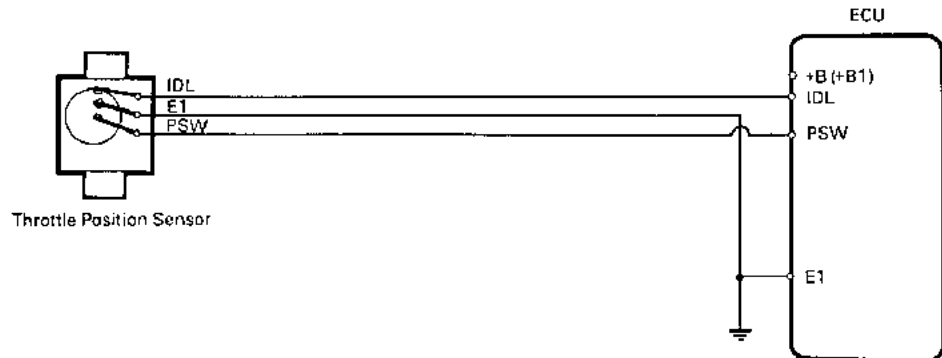


Fig. 33: Code 41/Test No. 9 Schematic (5S-FE With M/T)
Throttle Position Sensor Signal

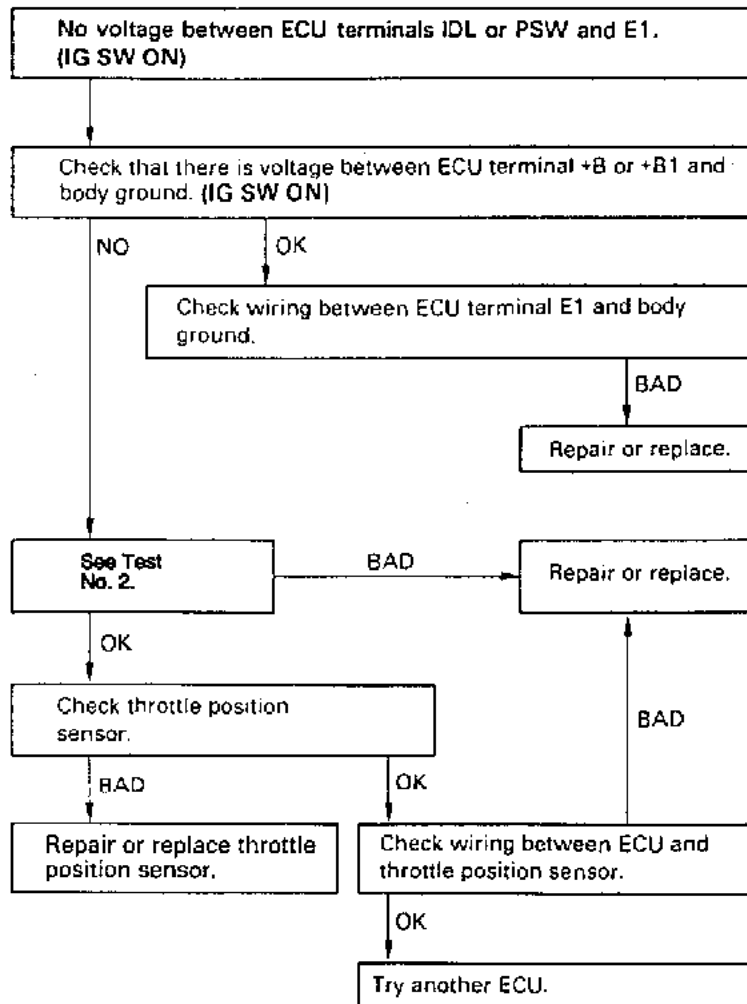


Fig. 34: Code 41/Test No. 9 Flow Chart (5S-FE With M/T)
Throttle Position Sensor Signal

CODE 42 - VEHICLE SPEED SENSOR SIGNAL

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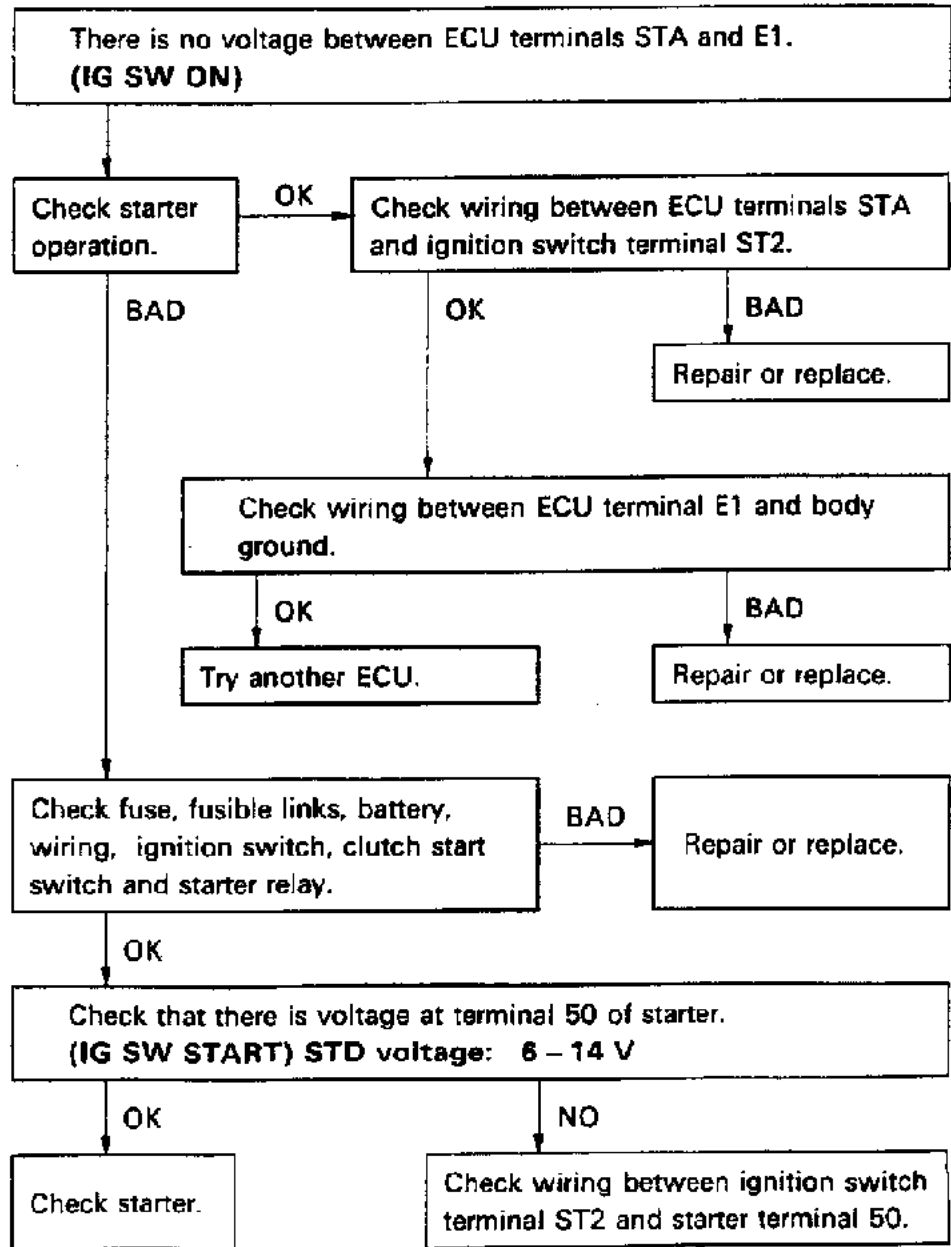


Fig. 37: Code 43/Test No. 10 Flow Chart
Starter Signal

CODE 51/TEST NO. 11 - SWITCH SIGNAL

Probable Causes:

- * A/C Switch or Switch Circuit

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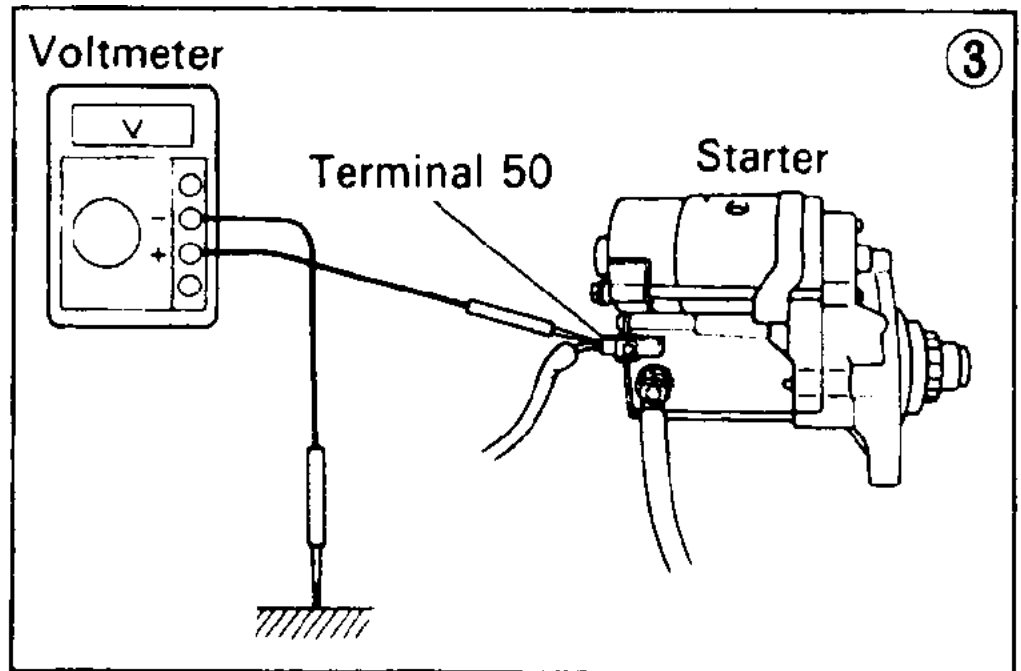
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- * A/C Amplifier
- * Accelerator Pedal or Cable
- * Neutral/Start Switch or Switch Circuit
- * Throttle Position Sensor IDL Circuit
- * ECU

NOTE: To check A/C switch signal, use the following procedure.

CODE 51/TEST NO. 11-SWITCH SIGNAL TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage
A/C-E1	No Voltage	Air Conditioning ON	8-14V



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Fig. 38: Code 51/Test No. 11 Schematic
Switch Signal

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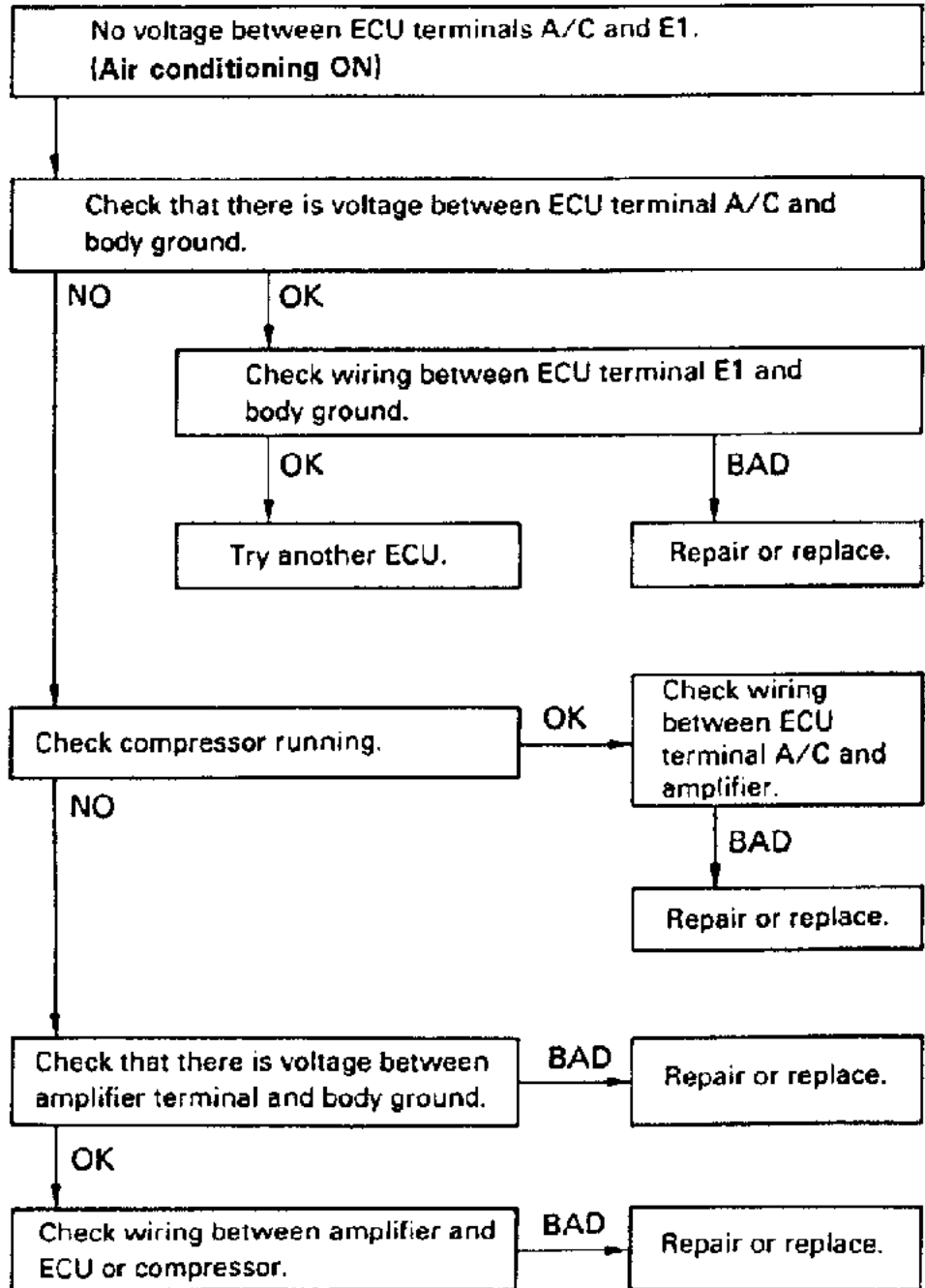


Fig. 39: Code 51/Test No. 11 Flow Chart
Switch Signal

CODE 52 - KNOCK SENSOR SIGNAL (3S-GTE)

Probable Causes:

- * Knock Sensor or Sensor Circuit

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* ECU

NOTE: Diagnostic chart not available from manufacturer.

CODE 53 - KNOCK SENSOR CONTROL (ECU) (3S-GTE)

Probable Causes:

* ECU

NOTE: Diagnostic chart not available from manufacturer.

CODE 71/TEST NO. 12 - EGR SYSTEM MALFUNCTION

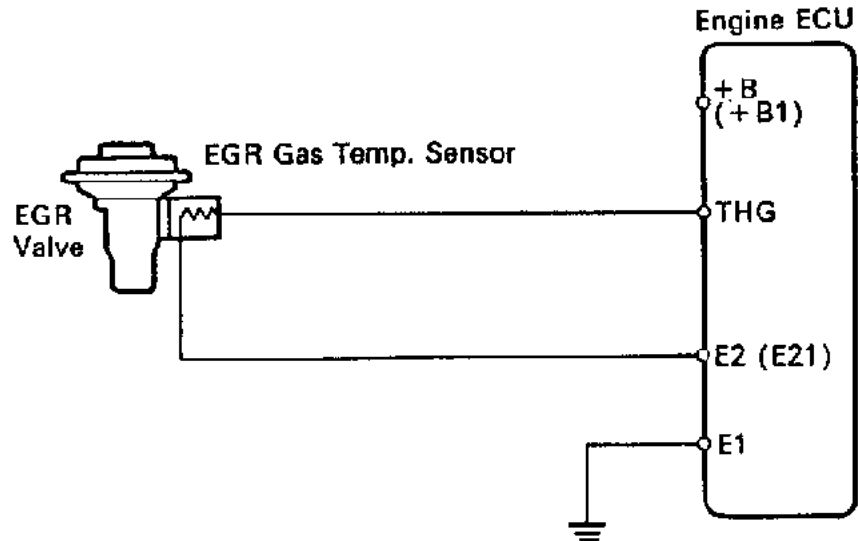


Fig. 40: Code 71/Test No. 12 Schematic
EGR System Malfunction

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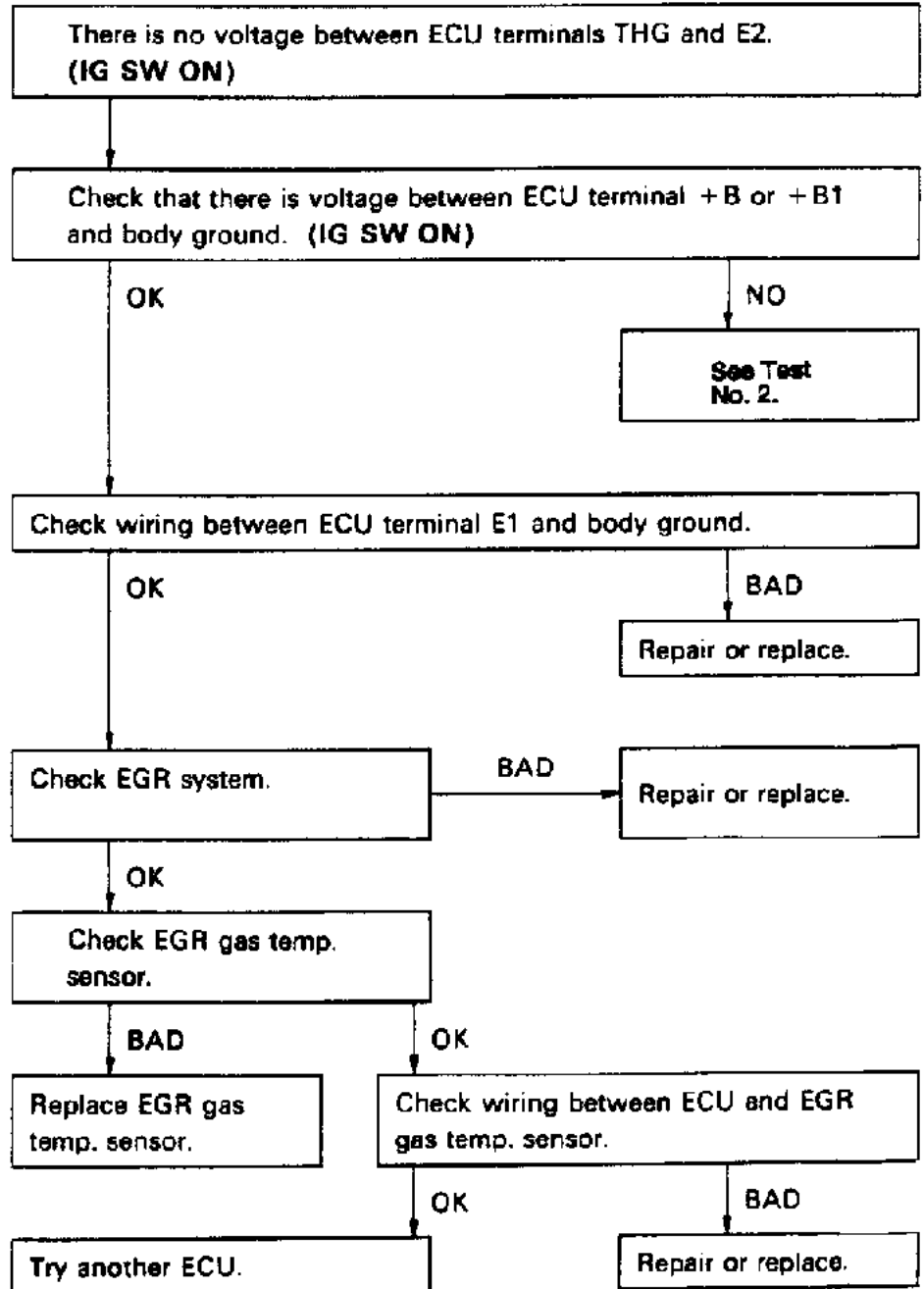


Fig. 41: Code 71/Test No. 12 Flow Chart
EGR System Malfunction

TEST NO. 13 - INJECTOR CIRCUIT

TEST NO. 13-INJECTOR CIRCUIT TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage

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3S-GTE			
No.1,2,3 & 4 to E01 & E02	No Voltage	Ignition Switch ON	10-14V
5S-FE			
No.10 & No.20 to E01 & E02	No Voltage	Ignition Switch ON	10-14V

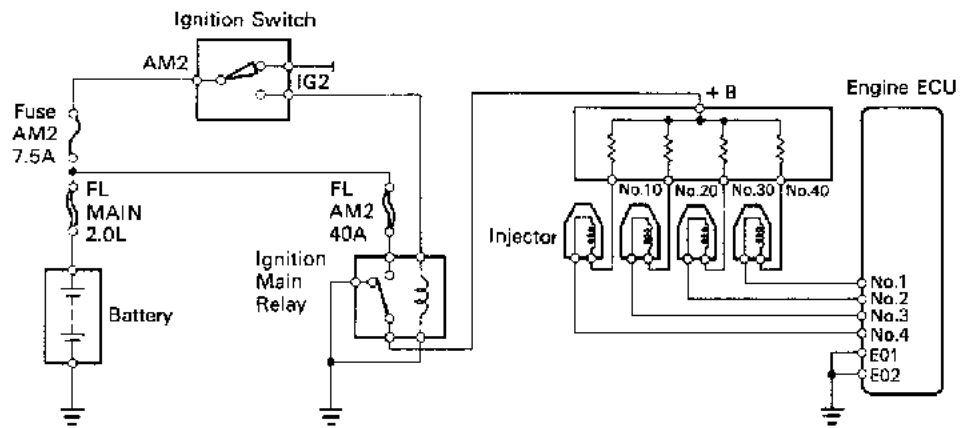


Fig. 42: Test No. 13 Schematic (3S-GTE)
Injector Circuit

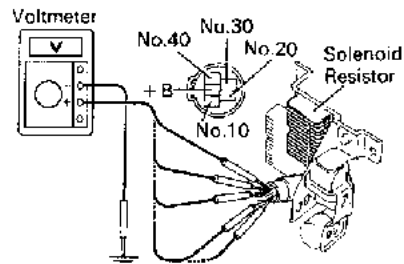


Fig. 43: Test No. 13 Component Diagram (3S-GTE)
Injector Circuit

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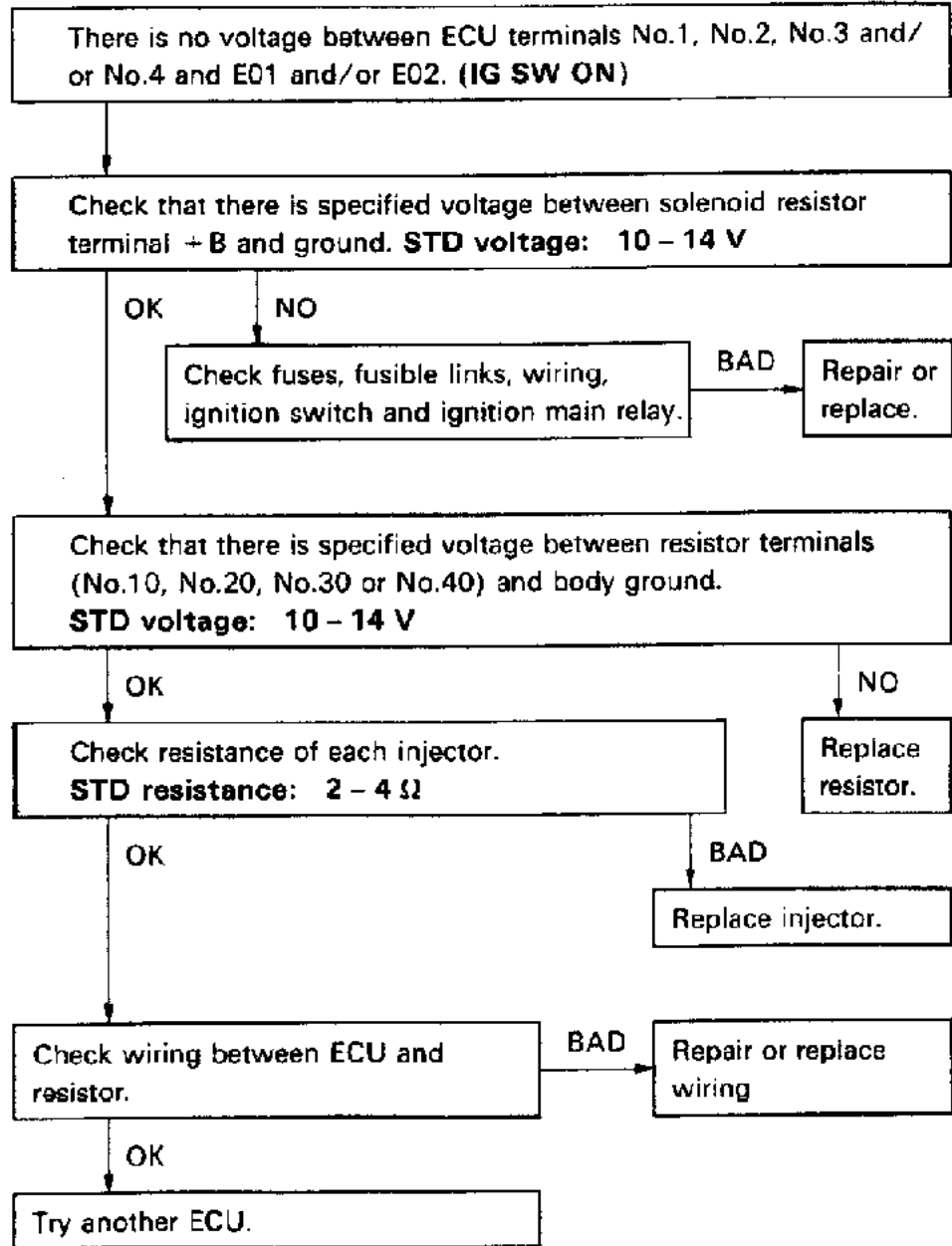


Fig. 44: Test No. 13 Flow Chart (3S-GTE)
Injector Circuit

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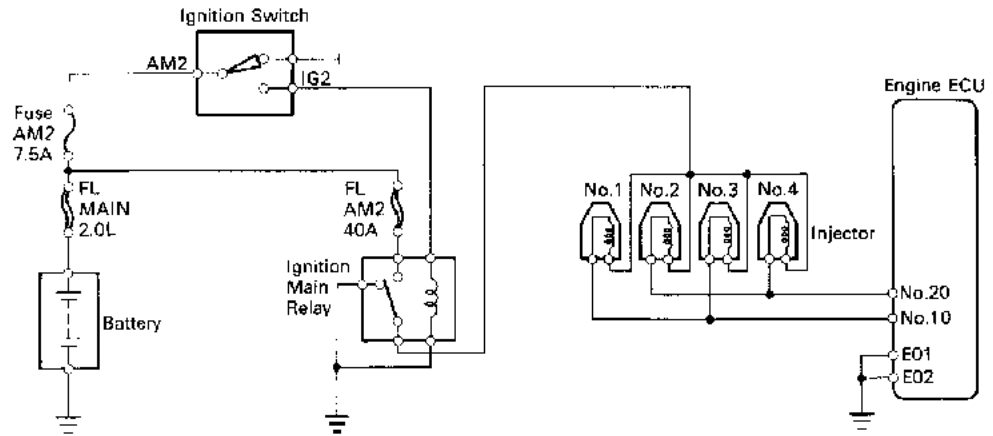


Fig. 45: Test No. 13 Schematic (5S-FE)
Injector Circuit

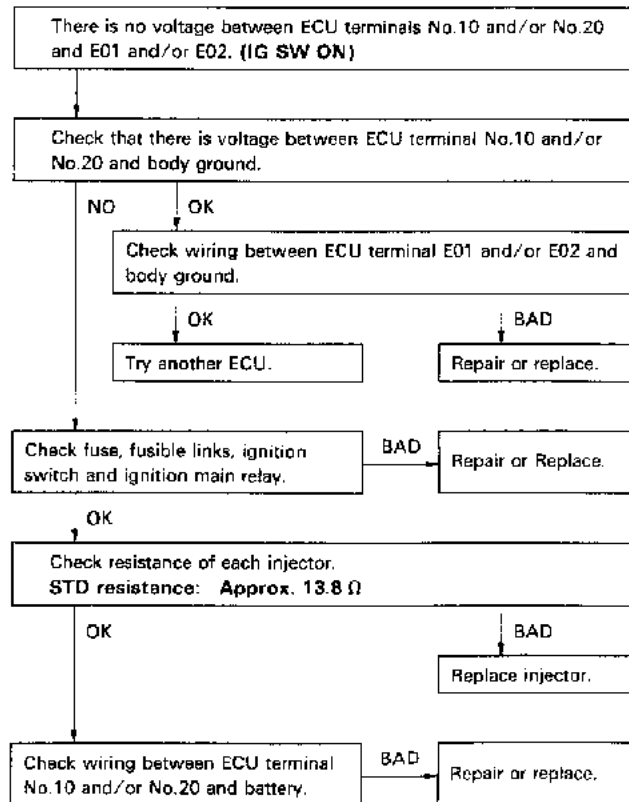


Fig. 46: Test No. 13 Flow Chart (5S-FE)
Injector Circuit

TEST NO. 14 - IDLE SPEED CONTROL CIRCUIT

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TEST NO. 14-IDLE SPEED CONTROL CIRCUIT TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage
3S-GTE			
RSC-E1	No Voltage	Ignition Switch ON	8-14V
RSO-E1	No Voltage		
5S-FE			
ISCC-E1	No Voltage	Ignition Switch ON	8-14V
ISCO-E1	No Voltage		

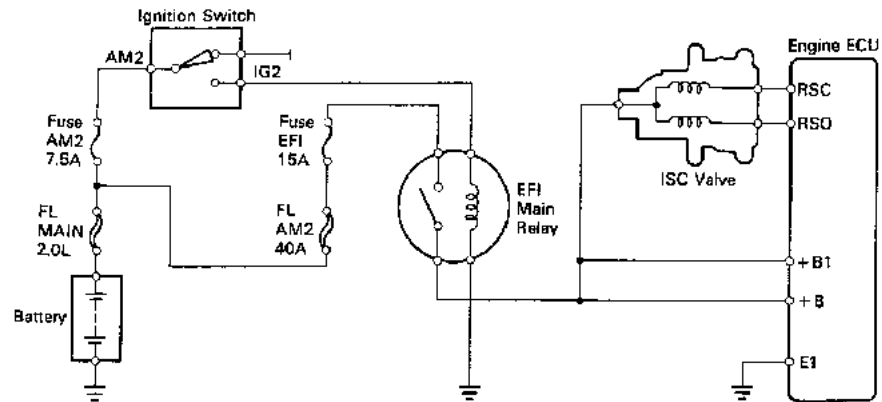


Fig. 47: Test No. 14 Schematic (3S-GTE)
Idle Speed Control Circuit

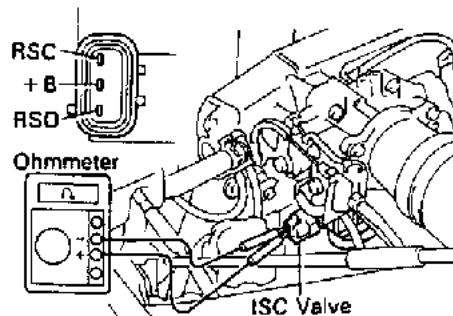


Fig. 48: Test No. 14 Component Diagram (3S-GTE)
Idle Speed Control Circuit

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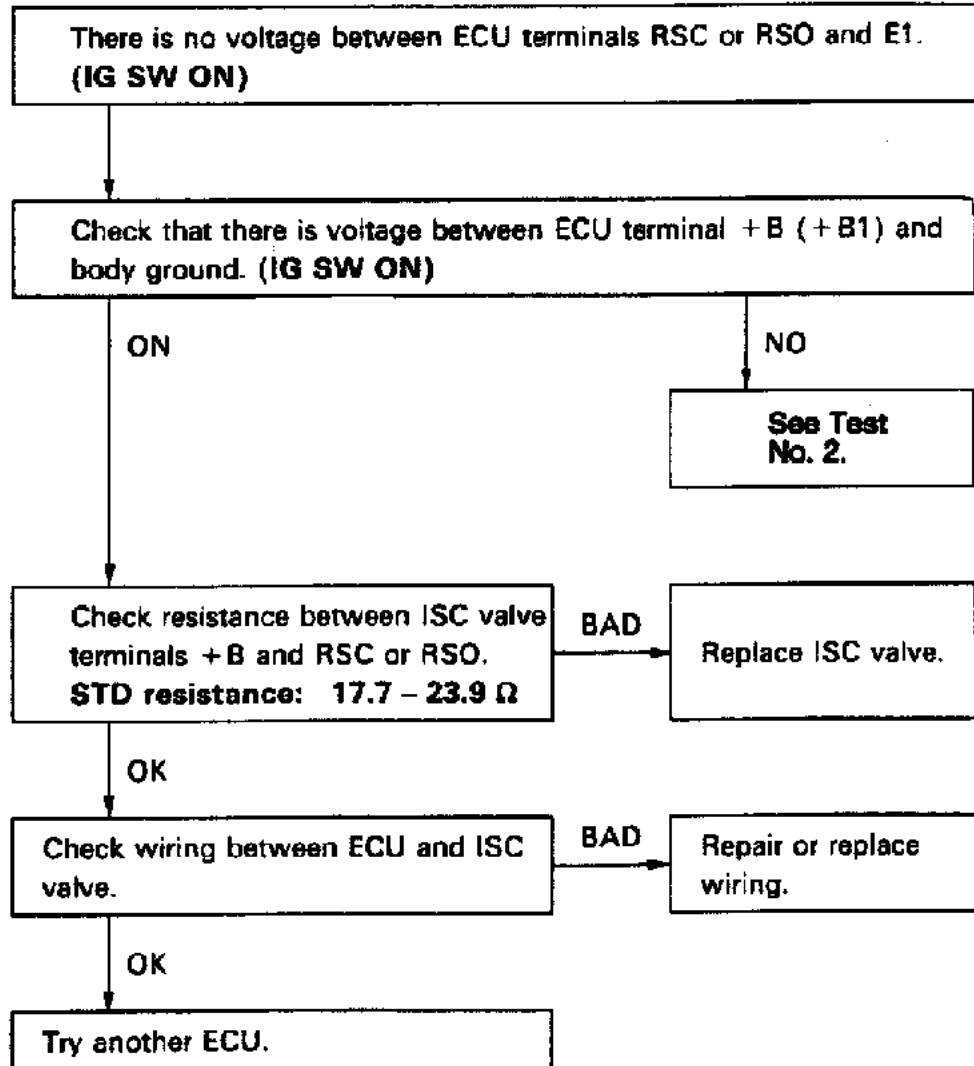


Fig. 49: Test No. 14 Flow Chart (3S-GTE)
Idle Speed Control Circuit

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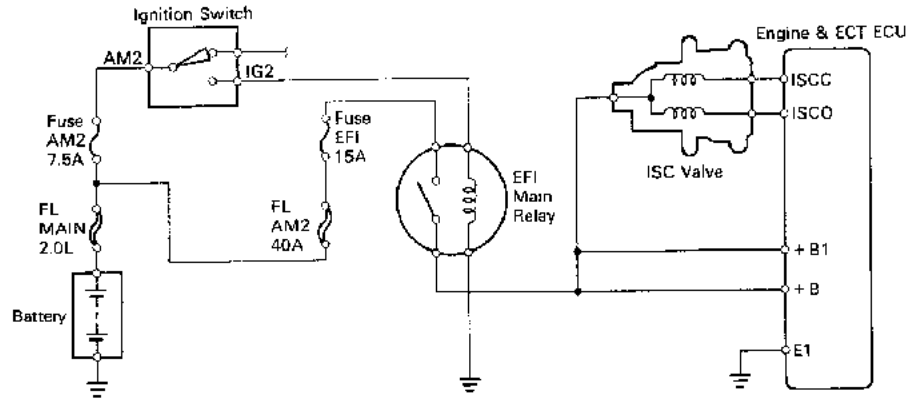


Fig. 50: Test No. 14 Schematic (5S-FE)
Idle Speed Control Circuit

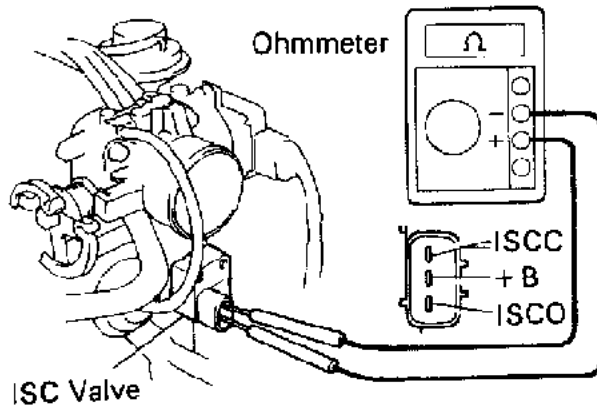


Fig. 51: Test No. 14 Component Diagram (5S-FE)
Idle Speed Control Circuit

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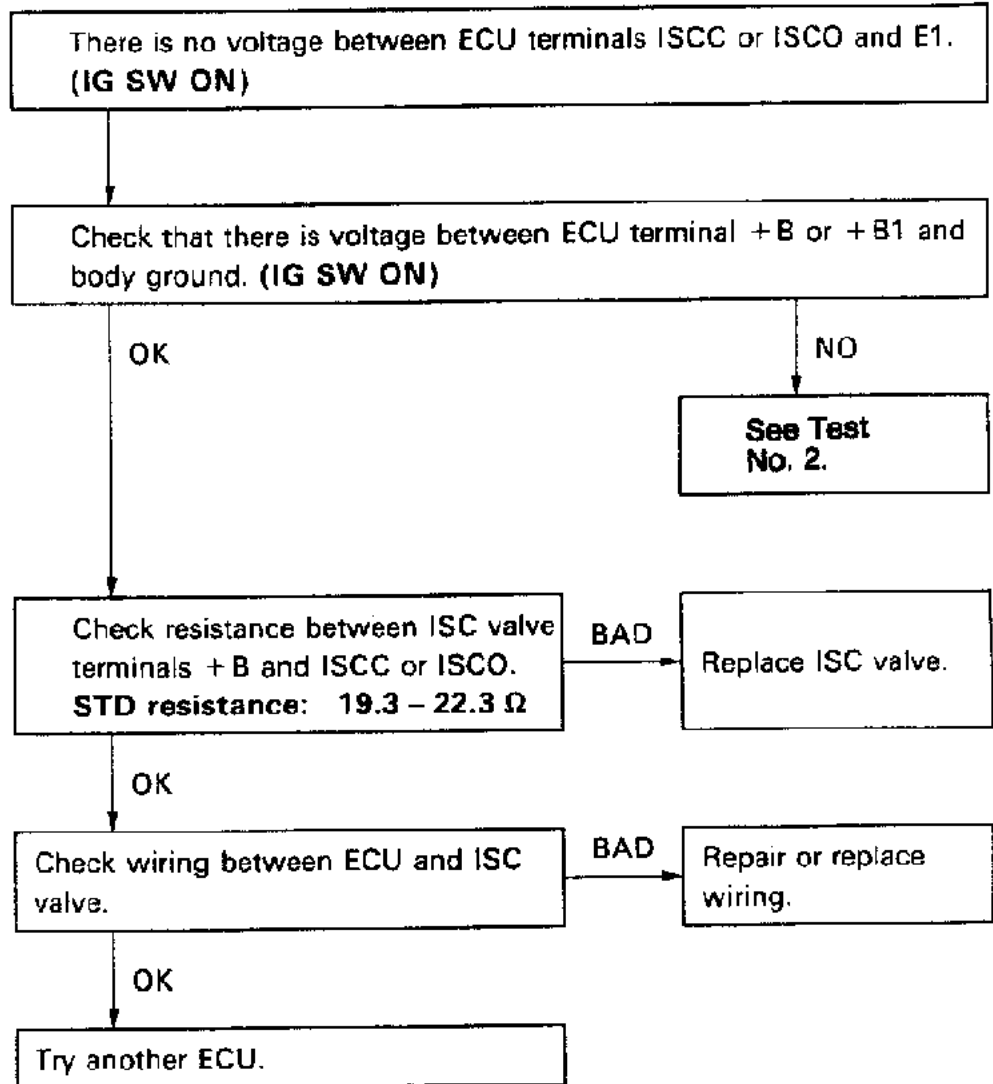


Fig. 52: Test No. 14 Flow Chart (5S-FE)
Idle Speed Control Circuit

TEST NO. 15 - CHECK ENGINE LIGHT CIRCUIT

TEST NO. 14-CHECK ENGINE LIGHT CIRCUIT TROUBLE TABLE

Terminal	Trouble	Condition	STD Voltage
W-E1	No Voltage	No Trouble (Check Engine Light OFF) and Engine Running	10-14V

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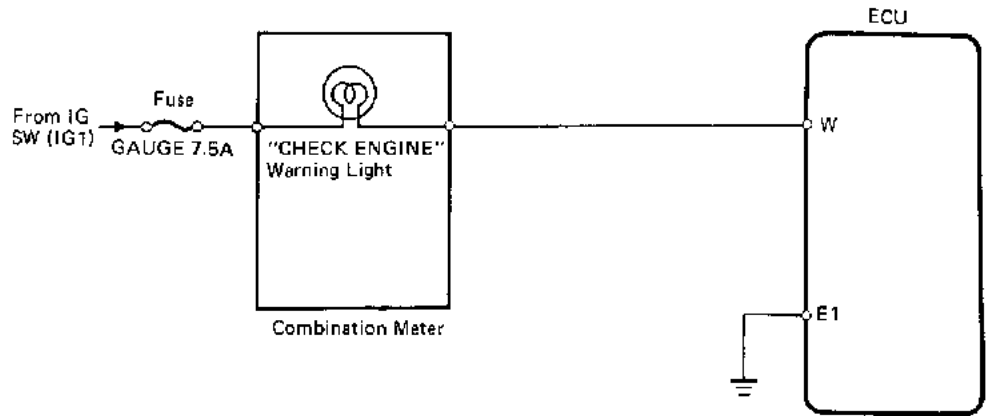


Fig. 53: Test No. 15 Schematic
Check Engine Light Circuit

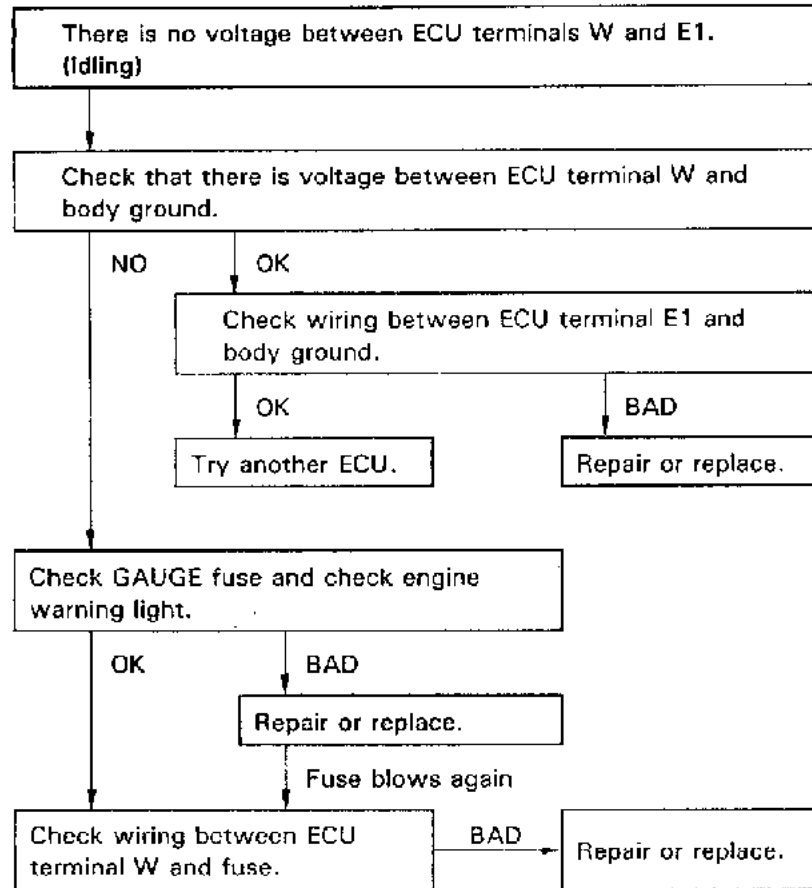


Fig. 54: Test No. 15 Flow Chart
Check Engine Light Circuit

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