

SECTION 4

Engine Supplement— Passenger Car

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1.6L Naturally Aspirated

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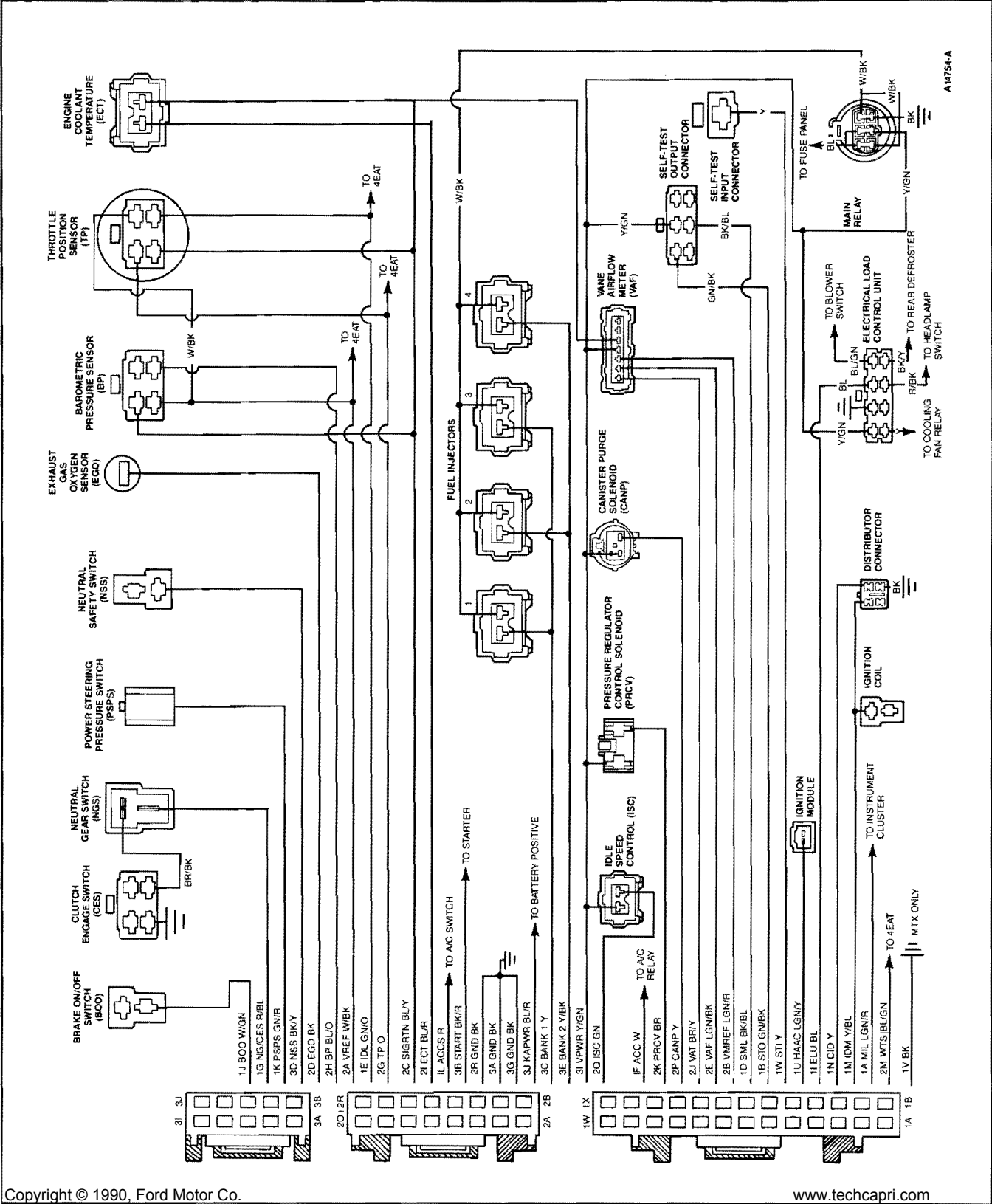
1.6L Turbo

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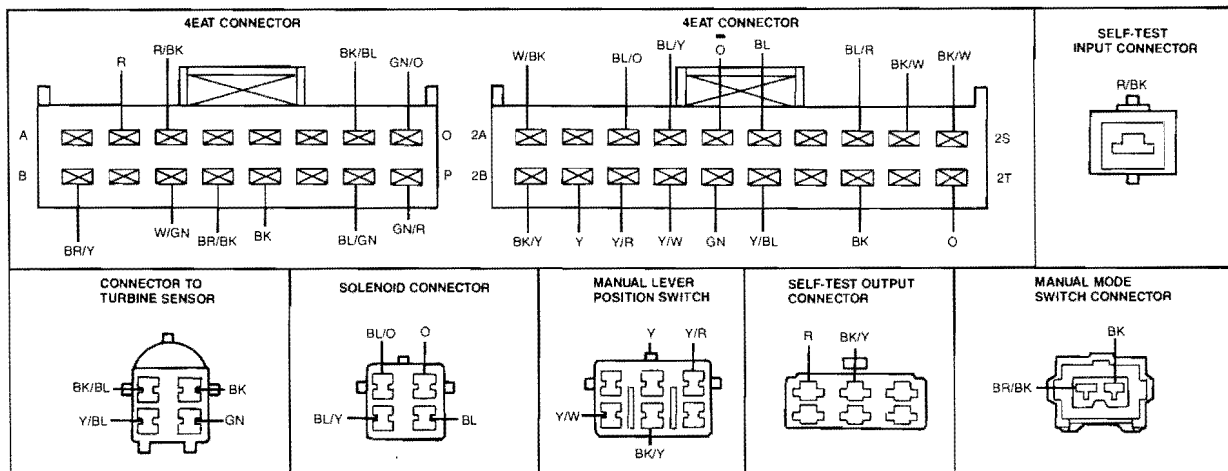
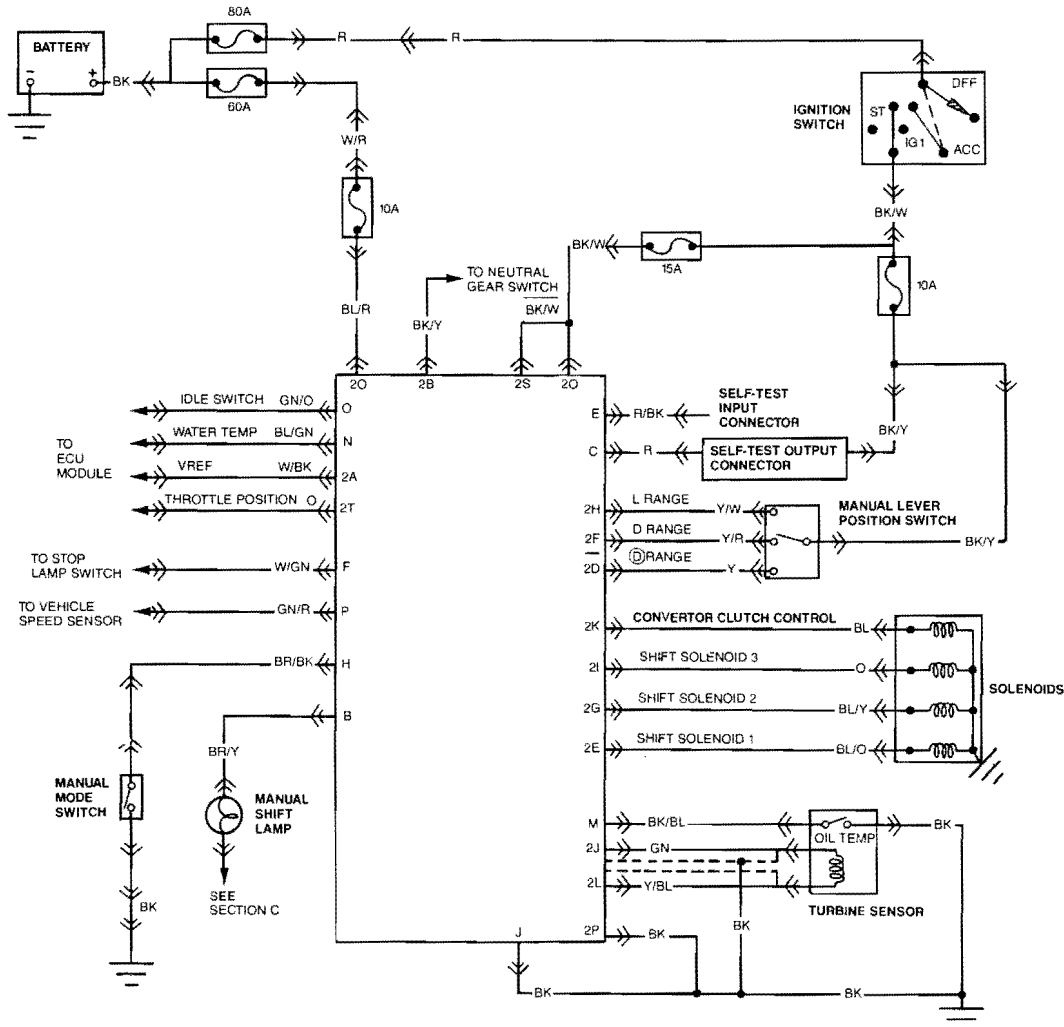
Electrical Schematic

1.6L
Naturally
Aspirated



Electrical Schematic

4EAT



A14755-A

ECA Connector Pin Usage

**1.6L
Naturally
Aspirated**

ECA PIN	BREAKOUT BOX PIN	WIRE COLOR	APPLICATION	ABBREV.
1A	51	LGN/R	MIL Lamp	MIL
1B	17	GN/BK	Self-Test Output	STO
1D	38	BK/BL	Switch Monitor Lamp	SML
1E	28	GN/O	Idle Switch	IDL
1F	30	W	A/C Relay	ACC
1G	8	R/BL	Neutral Gear/Clutch Engage Switch	NG/CES
1I	24	BL	Electrical Load Control Unit	ELU
1J	3	W/GN	Brake On/Off Switch	BOO
1K	19	GN/R	Power Steering Pressure Switch	PSPS
1L	14	R	A/C Control Switch	ACCS
1M	6	Y/BL	Ignition Diagnostic Monitor	IDM
1N	34	Y	Cylinder Identification Sensor	CID
1U	36	LGN/Y	High Altitude Advance Control	HAAC
1V	44	BK	Ground	GND
1W	48	Y	Self-Test Input	STI
2A	26	W/BK	Reference Voltage	VREF
2B	18	LGN/R	Vane Air Flow Reference	VMREF
2C	46	BL/Y	Signal Return	SIGRTN
2D	29	BK	Exhaust Gas Oxygen Sensor	EGO
2E	43	LGN/BK	Vane Air Flow Signal	VAF
2G	47	O	Throttle Position Sensor	TP
2H	45	BL/O	Barometric Pressure Sensor	BP
2I	7	BL/R	Engine Coolant Temperature Sensor	ECT
2J	25	BR/Y	Vane Air Temperature Sensor	VAT
2K	31	BR	Pressure Regulator Control Solenoid	PRCV
2M	52	BL/GN	4EAT Water Temperature Switch	WTS
2P	32	Y	Canister Purge Solenoid	CANP
2Q	41	GN	Idle Speed Control/By-Pass Air	ISC/BPA
2R	49	BK	Ground	GND
3A	20	BK	Ground	GND
3B	5	BK/R	Starter Interlock	START
3C	59	Y/BK	Fuel Injectors 2 and 4	BANK 2
3D	2	BK/Y	Neutral Safety Switch	NSS
3E	58	Y	Fuel Injectors 1 and 3	BANK 1
3G	40	BK	Ground	GND
3I	37	Y/GN	Vehicle Power	VPWR
3J	1	BL/R	Keep Alive Power	KAPWR

Quick Test Codes and Code Definition

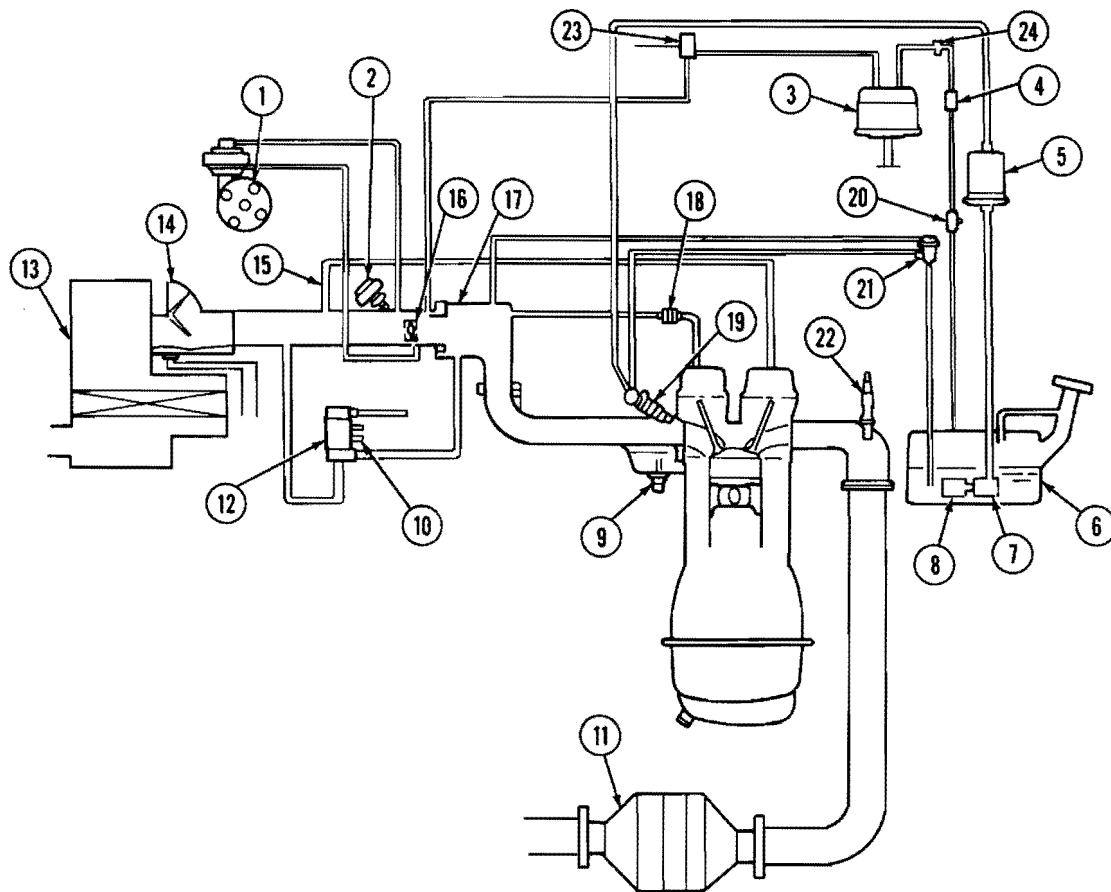
**1.6L
Naturally
Aspirated**

SERVICE CODE	SERVICE CODE DEFINITION
01	Ignition Diagnostic Monitor
03	Cylinder Identification Sensor
08	Vane Air Flow Meter
09	Engine Coolant Temperature Sensor
10	Vane Air Flow Temperature Sensor
12	Throttle Position Sensor
14	Barometric Pressure Sensor
15	Exhaust Gas Oxygen Sensor Voltage Always Below 0.55V (Lean)
17	Exhaust Gas Oxygen Sensor Voltage has not Changed 30 sec. After Engine Exceeds 1,500 RPM
25	Pressure Regulator Control Solenoid
26	Canister Purge Solenoid
34	Idle Speed Control Solenoid
"STO LO" Always ON	Not Able to Initiate Self-Test
"STI LO" Always ON And No Codes (Blank SUPER STAR II Screen)	Pass Code

4EAT SERVICE CODE	SERVICE CODE DEFINITION
05	Vehicle Speed Sensor
12	Throttle Position Sensor
55	Pulse Generator
60	1-2 Shift Solenoid Valve
61	2-3 Shift Solenoid Valve
62	3-4 Shift Solenoid Valve
63	Lock-Up Control Solenoid Valve

Schematic Diagram Mechanical Emission Related Systems

**1.6L
Naturally
Aspirated**



A14756-A

Component Identification Mechanical Emission Related Systems

**1.6L
Naturally
Aspirated**

Item	Description
1	Distributor
2	Dashpot
3	Charcoal Canister
4	Two-Way Valve
5	Fuel Filter (outlet)
6	Fuel Tank
7	Fuel Pump (in tank)
8	Fuel Filter
9	Water Thermo Sensor
10	Hot Water
11	Catalytic Converter
12	ISC Valve
13	Air Cleaner
14	Vane Air Flow Meter (VAF)
15	Orifice
16	Throttle Position Sensor
17	Surge Tank
18	PCV Valve
19	Injector (four)
20	Check and Cut Valve
21	Fuel Pressure Regulator
22	Oxygen Sensor
23	Canister Purge Solenoid Valve
24	Restrictor

COMPONENT LISTING BY SYSTEM

RELATED SYSTEMS

COMPONENT (ITEM NUMBER)

Bypass Air Control

10, 12

Catalyst and Exhaust

11, 22

Evaporative Emission

3, 4, 23

Inlet Air Control

13, 14, 17

Crankcase Ventilation

18

Fuel Delivery

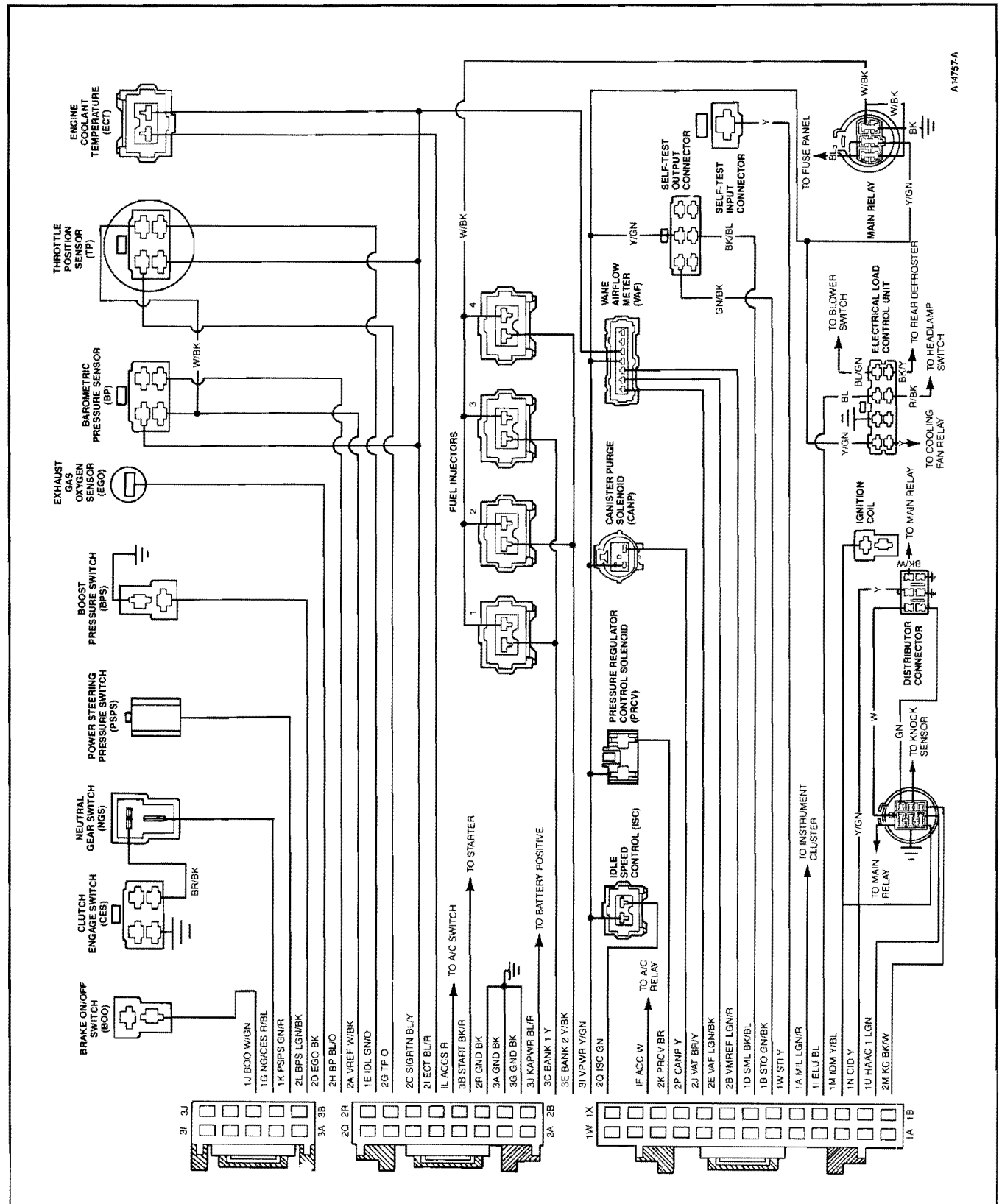
5, 6, 7, 19, 20, 21

Electronic Engine Controls

1, 2, 9, 12, 14, 16, 19, 22, 23

Electrical Schematic

1.6L Turbo



ECA Connector Pin Usage

1.6L Turbo

ECA PIN	BREAKOUT BOX PIN	WIRE COLOR	APPLICATION	ABBREV.
1A	51	LGN/R	MIL Lamp	MIL
1B	17	GN/BK	Self-Test Output	STO
1D	38	BK/BL	Switch Monitor Lamp	SML
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2J	25	BRaw	Vane Air Temperature Sensor	VAT
2K	31	BR	Pressure Regulator Control Solenoid	PRCV
2L	12	LGN/BK	Boost Pressure Switch	BPS
2M	52	BK/W	Knock Control	KC
2P	32	Y	Canister Purge Solenoid	CANP
2Q	41	GN	Idle Speed Control/By – Pass Air	ISC/BPA
2R	49	BK	Ground	GND
3A	20	BK	Ground	GND
3B	5	BK/R	Starter Interlock	START
3C	59	Y/BK	Fuel Injectors 2 and 4	BANK 2
3E	58	Y	Fuel Injectors 1 and 3	BANK 1
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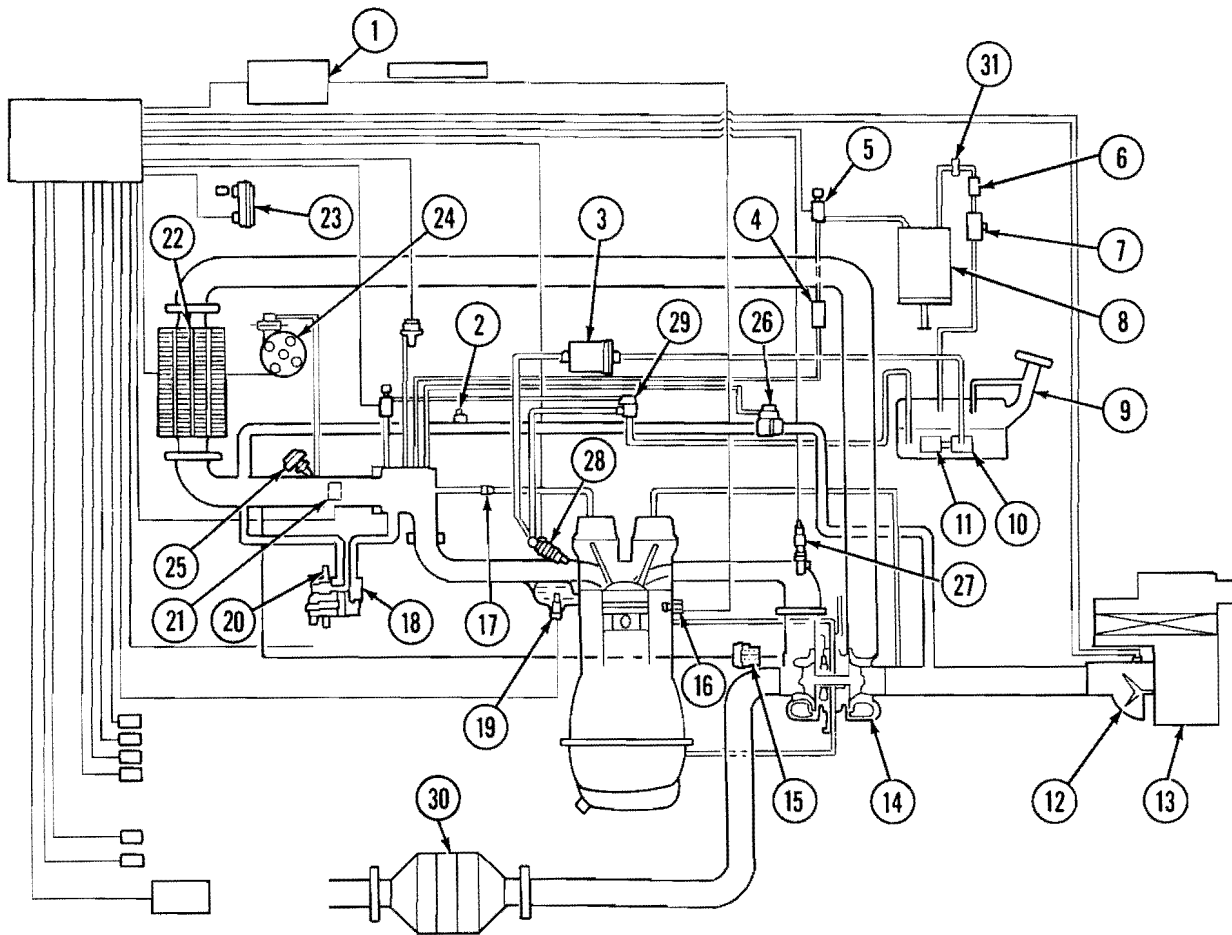
Quick Test Codes and Code Definitions

**1.6L
Turbo**

SERVICE CODE	SERVICE CODE DEFINITION
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"STO LO" Always ON	Not Able to Initiate Self-Test
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Schematic Diagram Mechanical Emission Related Systems

1.6L
Turbo



A14758-A

Component Identification Mechanical Emission Related Systems

**1.6L
Turbo**

Item	Description
1	Knock Control Unit
2	Orifice
3	Fuel Filter (outlet)
4	Check Valve
5	Canister Purge Solenoid Valve
6	Two-Way Valve
7	Check and Cut Valve
8	Charcoal Canister
9	Fuel Tank
10	Fuel Pump (in tank)
11	Fuel Filter
12	Vane Air Flow Meter (VAF)
13	Air Cleaner
14	Turbo Charger (water cooled)
15	Wastegate Valve
16	Knock Sensor
17	PCV Valve
18	ISC Valve
19	Water Thermo Sensor
20	Hot Water
21	Throttle Position Sensor
22	Inter Cooler
23	Barometer Sensor
24	Distributor
25	Dashpot
26	Bypass Air Valve
27	Oxygen Sensor
28	Injector (four)
29	Fuel Pressure Regulator
30	Catalytic Converter
31	Restrictor

COMPONENT LISTING BY SYSTEM

RELATED SYSTEMS

COMPONENT (ITEM NUMBER)

Bypass Air Control	18, 26
Catalyst and Exhaust	27, 30
Evaporative Emission	4, 5, 6, 8
Inlet Air Control	12, 13, 14, 22
Crankcase Ventilation	17
Fuel Delivery	3, 7, 9, 10, 11, 28
Turbocharger	1, 14, 15, 16, 22
Electronic Engine Controls	1, 2, 12, 16, 18, 19, 21, 23, 24, 27, 28

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