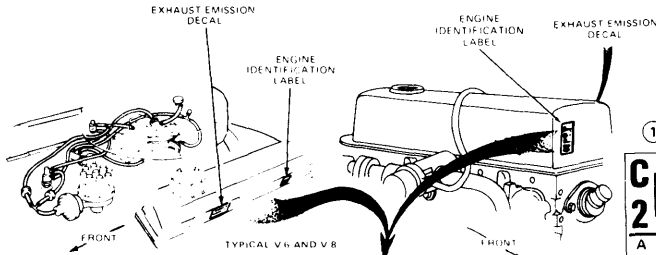


1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams

HOW TO USE THE CALIBRATION SHEETS

To find the engine calibration and revision level on a vehicle, refer to the engine identification label (not the colored exhaust emission decal). This identification label is located at the rear of the left rocker cover (V6 and V8 engines) or the front of the rocker cover on four and six cylinder engines.

Once you have determined the calibration and revision level, turn to the corresponding 1977 calibration sheet in this section.



1977 D.S.O. ENGINE CODE LABEL IDENTIFICATION CHART

POSITION : 1	POSITION : 2	POSITION : 3, 4, 5
YEAR	S - PASSENGER	DSO ENGINE CODE TAKE OFF FROM THIS BASE ENGINE CODE.
0	T - LIGHT & MEDIUM TRUCK	
1	U - HEAVY TRUCK	
2	V - PARCEL DELIVERY	
3	W - EXPORT	
4	X - INDUSTRIAL (U.S.)	
5	Y - INDUSTRIAL MARINE (U.S.)	POSITION : 6, 7
6	Z - INDUSTRIAL (CANADA)	
7		
8		
9		

ORDER'S DESIGN AND CALIBRATION REVISION LEVEL.



YEAR	50 S	49 S	CANADA	CALIF.
0	0	A	L	S
1	1	B	M	T
2	2	C	N	U
3	3	D	P	W
4	4	E	R	X
5	5	F	L	S
6	6	G	M	T
7	7	H	N	U
8	8	J	P	W
9	9	K	R	X

1977 ENGINE CODE LABEL IDENTIFICATION CHART

- A - AIR/CONDITIONING
- B - NON AIR/CONDITIONING
- C - INDUSTRIAL & MARINE
- D - EXPORT
- E - OVER 6000 LBS/NON THERM
- F - THERMACTOR WITHOUT A/C
- G - A/C OR NON A/C ENGINES
- H - POWER STEERING
- J - THERMACTOR WITH A/C
- K - THERMACTOR A/C OR NON A/C
- L - OVER 6000 LBS/THERM

*ALL OVER 6000 TRUCK ENGINES MUST HAVE THIS TAG AFFIXED TO THE SAME ENGINE COMPONENT AS THE EMISSION DECAL.

BASE DISPLACEMENT
VEHICLE APPLICATION
INERTIA WEIGHT
AXLE RATIO
TRANSMISSION

ENGINE BUILD DATE: A B C D E F G H I J K L M 1 2 3 '77 1 2 3 4 5 6 7 8 9 0

DESIGN LEVEL A - USED TO INDICATE INITIAL RELEASE

CALIB & REVISION LEVEL A - USED TO INDICATE INITIAL RELEASE

(PLANT OPTION) DENOTES CARB & DIST. USED ON ENGINE

CALIBRATION NUMBER

REVISION LEVEL

SERVICE LEVEL (CONTROLLED BY INDIVIDUAL PLANTS)

*CALENDAR YEAR MUST BE HERE FOR ALL ENGINES

INITIAL TIMING (PLANT OPTION)

DENOTES PLANT SOURCED TO PRODUCE ENGINES

D	-	DEARBORN ENGINE PLANT
L	-	LIMA ENGINE PLANT
C1	-	CLEVELAND ENGINE PLT 1
C2	-	CLEVELAND ENGINE PLT 2
W1	-	WINDSOR ENGINE PLT 1
W2	-	WINDSOR ENGINE PLT 2

RPM SETTING (PLANT OPTION)

Ford		FORD MOTOR COMPANY		SHIFT SCHED.	MAINT. SCHED. B
VEHICLE EMISSION CONTROL INFORMATION					
ENGINE FAMILY 302 'D' (1CVS) EGR/CATALYST/PCV*					
ENGINE DISPLACEMENT 302 CID					
SPARK PLUG ARF 52 GAP .048-.052					
VALVE LASH	HYD - NOT ADJ				
TRANSMISSION/GEAR	AUTO/NEUT	AUTO/DRIVE	MAN/NEUT		
IGNITION TIMING	6° BTDC				
TIMING RPM	500				
CHOKE SETTING	INDEX				
FAST IDLE RPM	HIGH CAM KICKDOWN	2100			
CURB IDLE RPM	A/C	650			
	NON-A/C	650			
TSP OFF RPM	A/C				
	NON-A/C				
IDLE MIXTURE ARTIFICIAL ENRICHMENT RPM					
STD. FLOW PCV VALVE	GAIN	30-110			
	RESET	40-80			
HIGH FLOW PCV VALVE	GAIN	80-180			
	RESET	80-120			
<p>MAKE ALL ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE. A/C AND HEADLIGHTS OFF. CONSULT SERVICE PUBLICATIONS FOR ADDITIONAL INSTRUCTIONS ON THE FOLLOWING PROCEDURES.</p> <p>IGNITION TIMING - ADJUST WITH HOSES DISCONNECTED AND PLUGGED AT THE DISTRIBUTOR; AND AT THE VACUUM SWITCH, IF EQUIPPED WITH CCT SYSTEM.</p> <p>CURB IDLE - ADJUST WITH ALL VACUUM HOSES CONNECTED. AIR CLEANER IN POSITION AND THROTTLE SOLENOID POSITIONER ENERGIZED (IS SO EQUIPPED).</p> <p>IDLE MIXTURE - PRESET AT THE FACTORY. DO NOT REMOVE THE LIMITER (CAPS), EXCEPT IN ACCORDANCE WITH SERVICE PUBLICATIONS.</p>					
*REPLACE PCV WITH HIGH FLOW VALVE NO. EV 93 AT AND AFTER 30,000 MILES.					
CATALYST					
D7BE-9C485-MA				7-025	

1976 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Vacuum Diagrams (Cont.)

FORD MOTOR CO. VACUUM DIAGRAM REFERENCE CHART						
Engine & Model	Application	Transmission	A/C	Non A/C	Calibration	Fig. No.
2300 cc 4 Cyl.						
Pinto, Bobcat, Mustang	Calif.	Auto.	X		7-1N-R0	1
Pinto, Bobcat	Calif.	Auto.		X	7-1T-R0	2
Pinto, Bobcat	Calif.	Auto.	X		7-1T-R0	3
Pinto, Bobcat, Mustang	Hi. Alt.	Auto.	X		7-1X-R0	4
Pinto, Bobcat, Mustang	Hi. Alt.	Auto.		X	7-1X-R0	5
Pinto, Bobcat	Fed.	Man.	X		7-2A-R0	6
Pinto, Bobcat	Fed.	Man.		X	7-2A-R0	7
Pinto, Bobcat	Fed.	Man.		X	7-2A-R13	8
Pinto, Bobcat, Mustang	Fed.	Man.	X		7-2B-R0	9 & 10
Pinto, Bobcat, Mustang	Fed.	Man.		X	7-2B-R0	11
Pinto, Bobcat, Mustang	Calif.	Man.		X	7-2N-R0	12
Pinto, Bobcat, Mustang	Calif.	Man.		X	7-2N-R1	13
Pinto, Bobcat, Mustang	Calif.	Man.	X		7-2N-R1	14
Pinto, Bobcat	Calif.	Man.	X		7-2T-R0	15
Pinto, Bobcat	Calif.	Man.		X	7-2T-R0	16
Pinto, Bobcat, Mustang	Fed.	Man.	X		7-21A-R0	17
Pinto, Bobcat, Sedan	Fed.	Auto.		X	7-21A-R0	18
Pinto, Bobcat	Fed.	Auto.	X		7-21A-R0	19
Pinto, Bobcat, Mustang	Fed.	Auto.		X	7-21B-R0	20
Pinto, Bobcat	Fed.	Auto.	X		7-21B-R0	21
2800 cc V6						
Mustang	Fed.	Man.			7-3A-R2	22
Pinto, Bobcat, Mustang	Fed.	Auto.			7-4A-R2	23
Pinto, Bobcat	Calif.	Auto.	X	X	7-4N-R1	24
200" 6 Cyl.						
Maverick, Comet, Granada, Monarch	Fed.	Man.	X	X	7-6B-R1	25
Maverick, Comet	Fed.	Auto.	X	X	7-7B-R10	26
250" 6 Cyl.						
Maverick, Comet	Fed.	Man.	X	X	7-8A-R2	27
Granada, Monarch	Fed.	Man.		X	7-8A-R2	27
Granada, Monarch	Fed.	Man.	X		7-8A-R3	28
Maverick, Comet	Fed.	Man.	X	X	7-8A-R3	29
Granada, Monarch	Fed.	Man.		X	7-8A-R3	29
Maverick, Comet	Calif.	Auto.	X	X	7-9N-R0	30
Granada, Monarch	Calif.	Auto.		X	7-9N-R0	30
Granada, Monarch	Calif.	Auto.	X		7-9N-R0	31
Granada, Monarch, Maverick, Comet	Fed.	Auto.	X	X	7-29A-R1	32
Granada, Monarch, Maverick, Comet	Fed.	Auto.	X	X	7-29A-R3	33
302" V8						
Mustang	Fed.	Man.			7-10A-R0	34
Granada, Monarch	Fed.	Man.			7-10B-R0	35
LTD II, Cougar, Thunderbird, Ranchero	Fed.	Auto.			7-11E-R0	36
Granada, Monarch	Calif.	Auto.			7-11P-R0	37
Maverick, Comet	Calif.	Auto.			7-11Q-R0	38
Mustang	Fed.	Auto.			7-31A-R0	39
Maverick, Comet	Fed.	Auto.			7-31B-R0	40
Granada, Monarch	Fed.	Auto.			7-31C-R0	41

1977 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Vacuum Diagrams (Cont.)

FORD MOTOR CO. VACUUM DIAGRAM REFERENCE CHART						
Engine & Model	Application	Transmission	A/C	Non A/C	Calibration	Fig. No.
351" M V8						
LTD II, Cougar, Ranchero Ranchero, Thunderbird, Sta. Wgns.	Fed.	Auto.	X	X	7-14A-R1	42
LTD II, Cougar, Ford Ranchero, Thunderbird, Sta. Wgns.	Fed.	Auto.	X	X	7-14B-R1	43
LTD II, Cougar, Ford LTD II, Cougar	Fed.	Auto.	X	X	7-14B-R1	44
Thunderbird, Ranchero LTD II, Cougar,	Fed.	Auto.	X	X	7-14B-R10	45
Thunderbird, Ranchero	Calif.	Auto.	X	X	7-14N-R0	46
351" W V8						
LTD II, Cougar, Thunderbird	Fed.	Auto.			7-32B-R1	47
LTD II, Cougar, Thunderbird, Ford	Fed.	Auto.			7-32V-R10	48
400" V8						
LTD II, Thunderbird, Sta. Wgns., Cougar, Mk V, Ford, Merc.	Fed.	Auto.	X	X	7-17B-R1	49
LTD II, Sta. Wgns., Cougar, Ranchero, Thunderbird, Ford, Mercury, Mk V	Fed.	Auto.	X	X	7-17C-R1	50
LTD II, Cougar, Ranchero	Calif.	Auto.	X	X	7-17N-R0	51
LTD II, Cougar	Calif.	Auto.	X	X	7-17P-R0	52
Ford, Mercury, Mk V, Lincoln	Fed.	Auto.	X	X	7-19A-R2	53
460" V8						
Ford, Mercury, Mk V, Lincoln	Fed.	Auto.	X	X	7-19A-R3	54
Ford, Mercury, Mk V, Lincoln	Fed.	Auto.	X	X	7-19A-R8	55

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

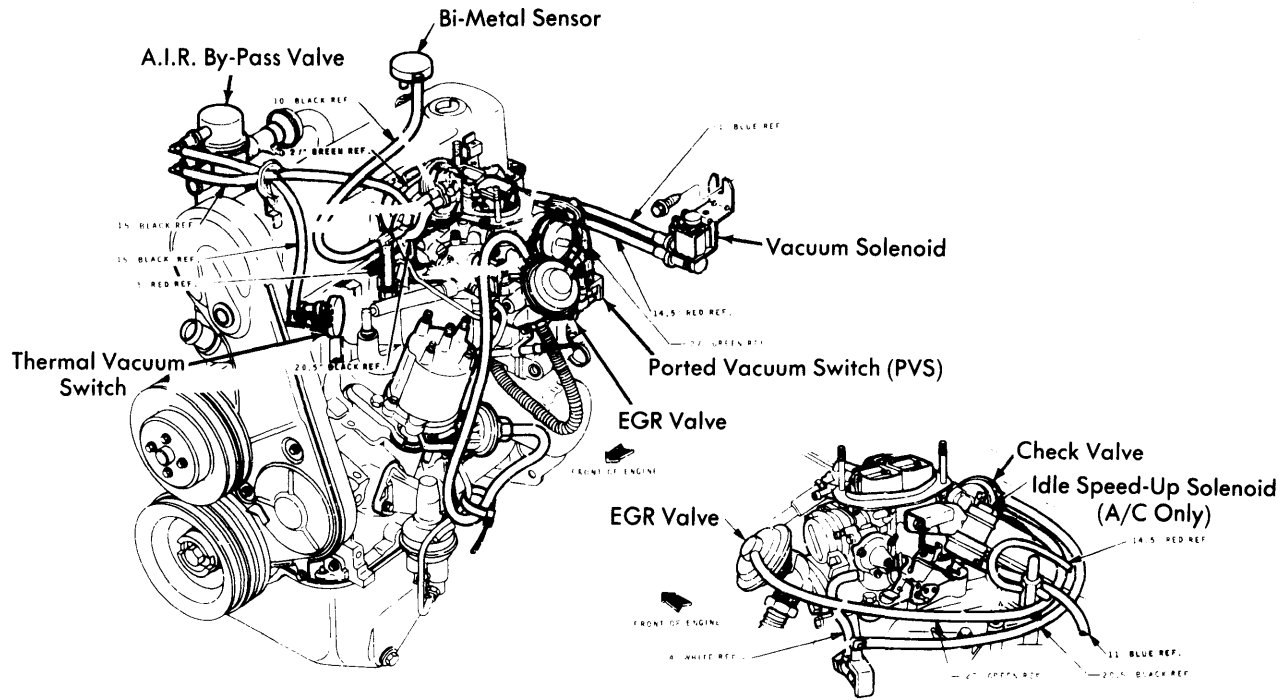


Fig. 1 7-1N-R0, Calif., A/C, Auto. Trans., 2.3L
(Pinto, Bobcat, Mustang)

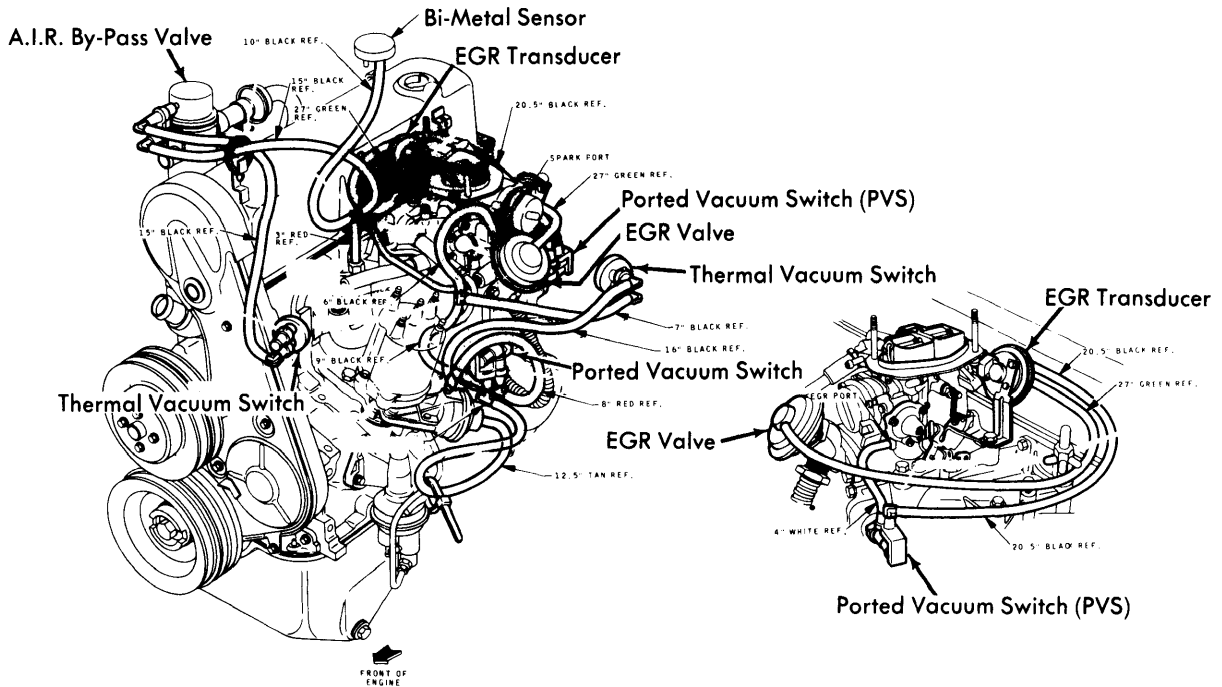


Fig. 2 7-1T-R0 Calif., Non A/C, Auto. Trans., 2.3L
(Pinto, Bobcat)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

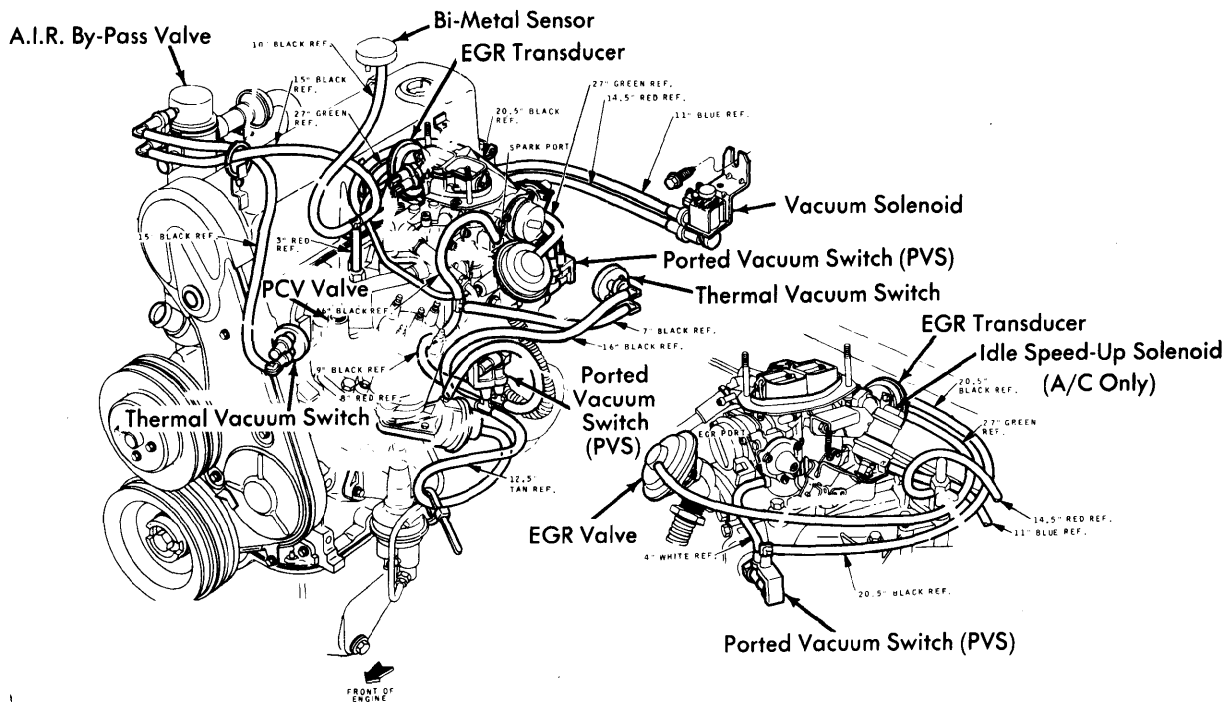


Fig. 3 7-1T-R0 Calif., A/C, Auto. Trans., 2.3L
(Pinto, Bobcat)

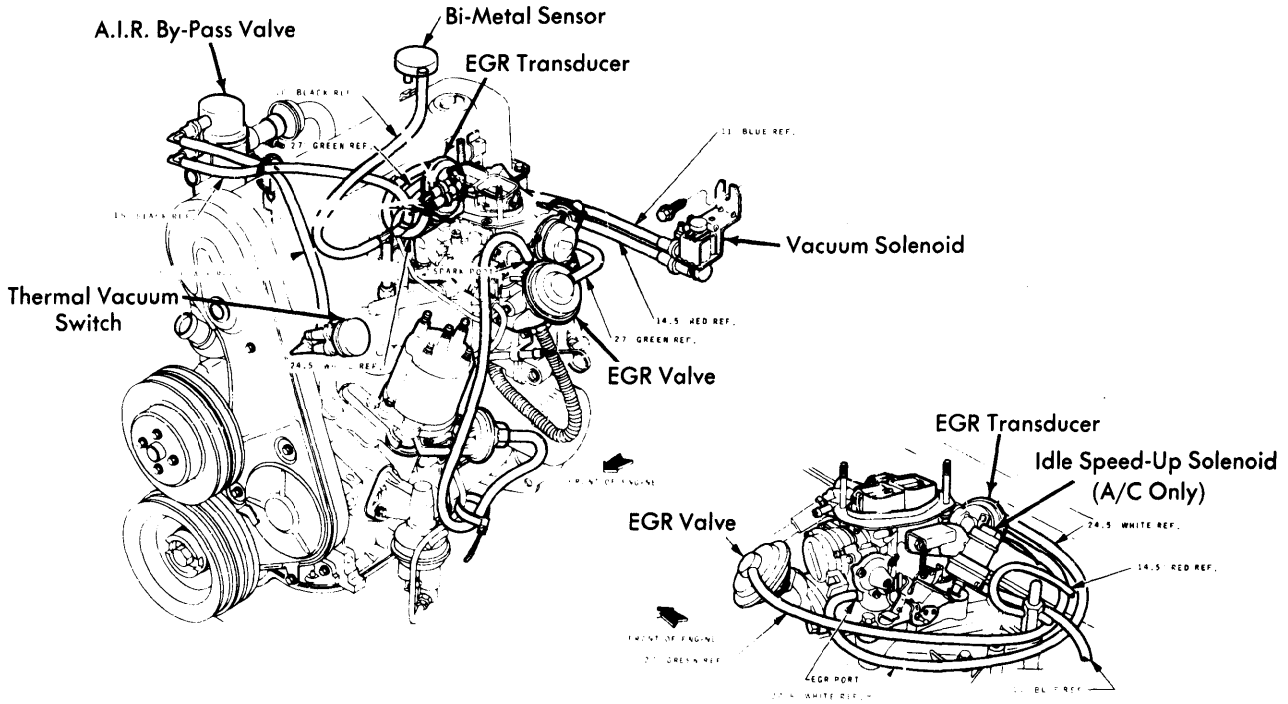


Fig. 4 7-1X-R0 High Alt., A/C, Auto. Trans., 2.3L
(Pinto, Bobcat, Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

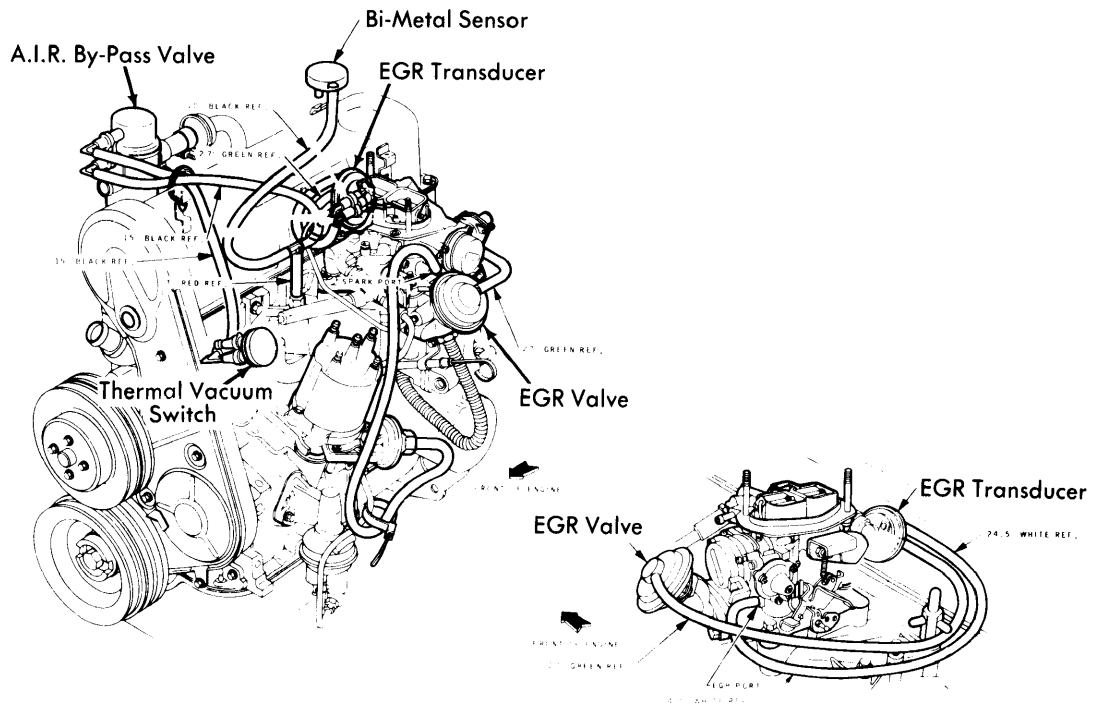


Fig. 5 7-1X-R0 High Alt., Non A/C, Auto. Trans., 2.3L
(Pinto, Bobcat, Mustang)

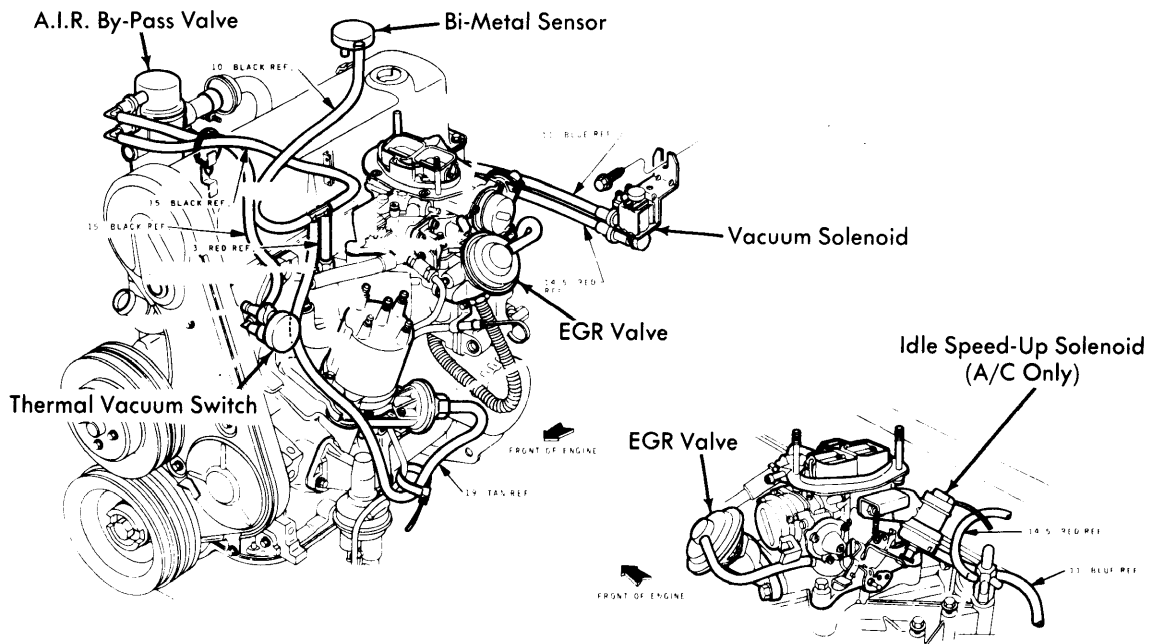


Fig. 6 7-2A-R0 Federal, A/C, Man. Trans., 2.3L
(Pinto, Bobcat)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

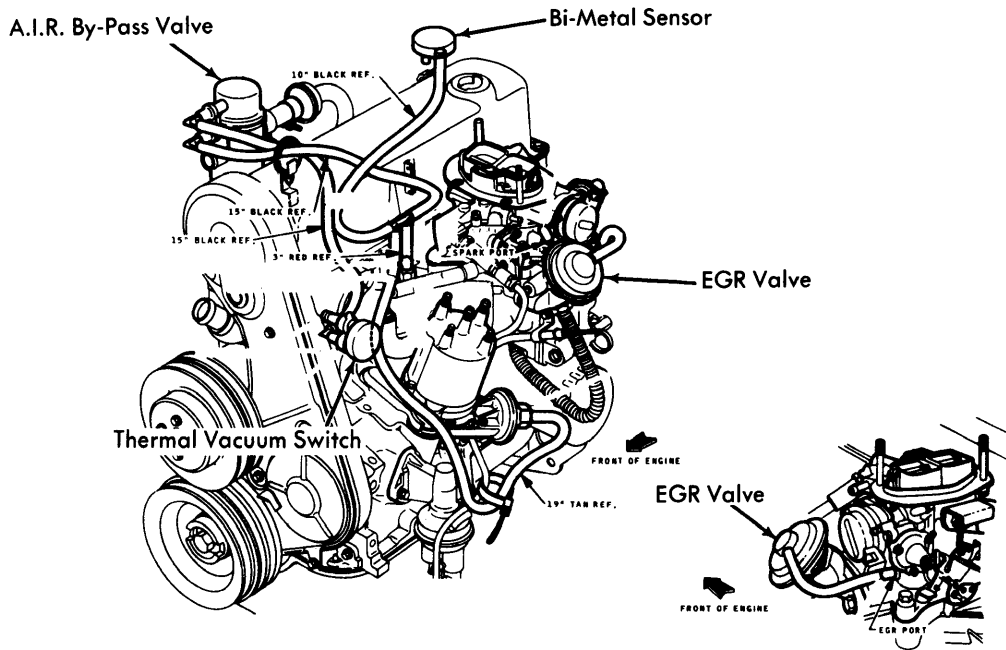


Fig. 7 7-2A-R0 Federal, Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat)

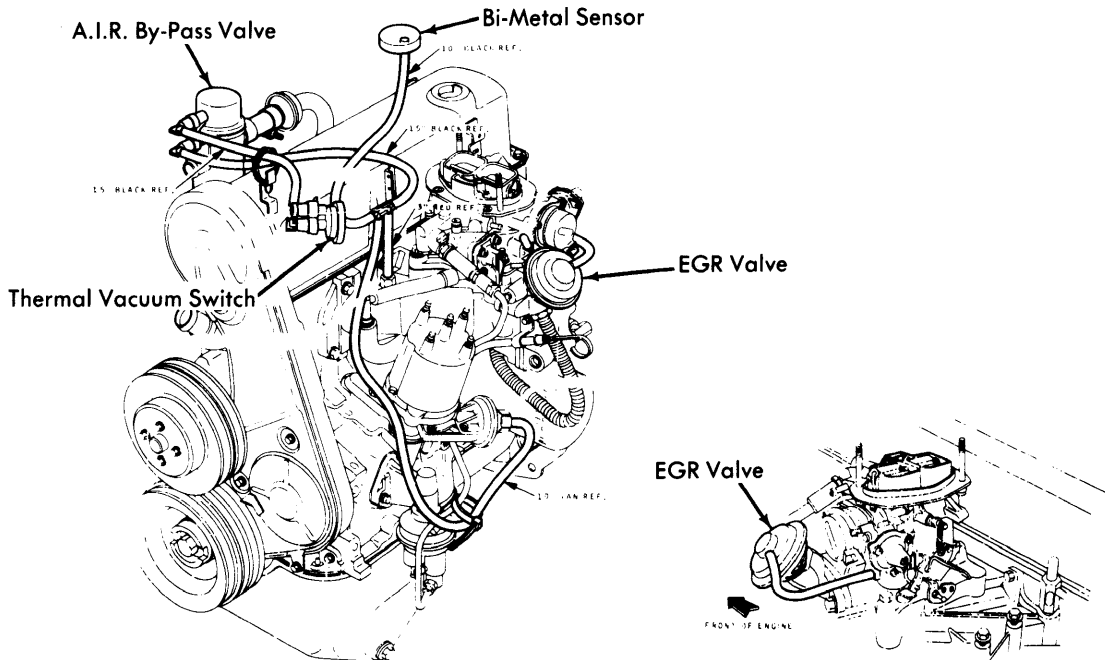


Fig. 8 7-2A-R13 Federal, Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

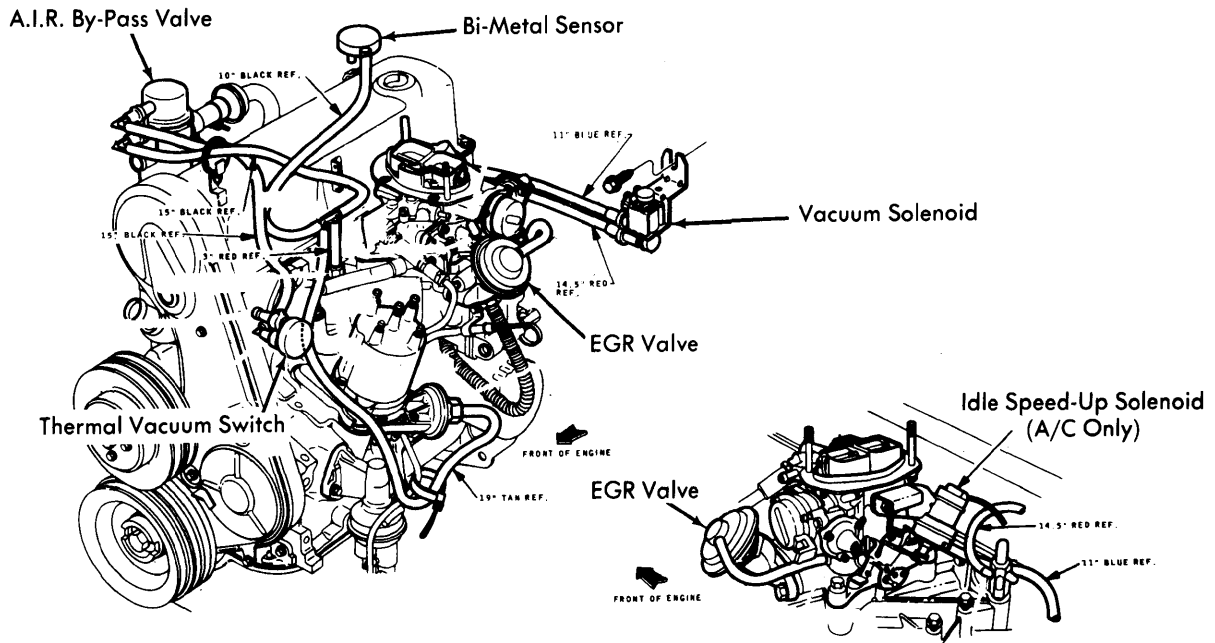


Fig. 9 7-2B-R0 Federal, A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

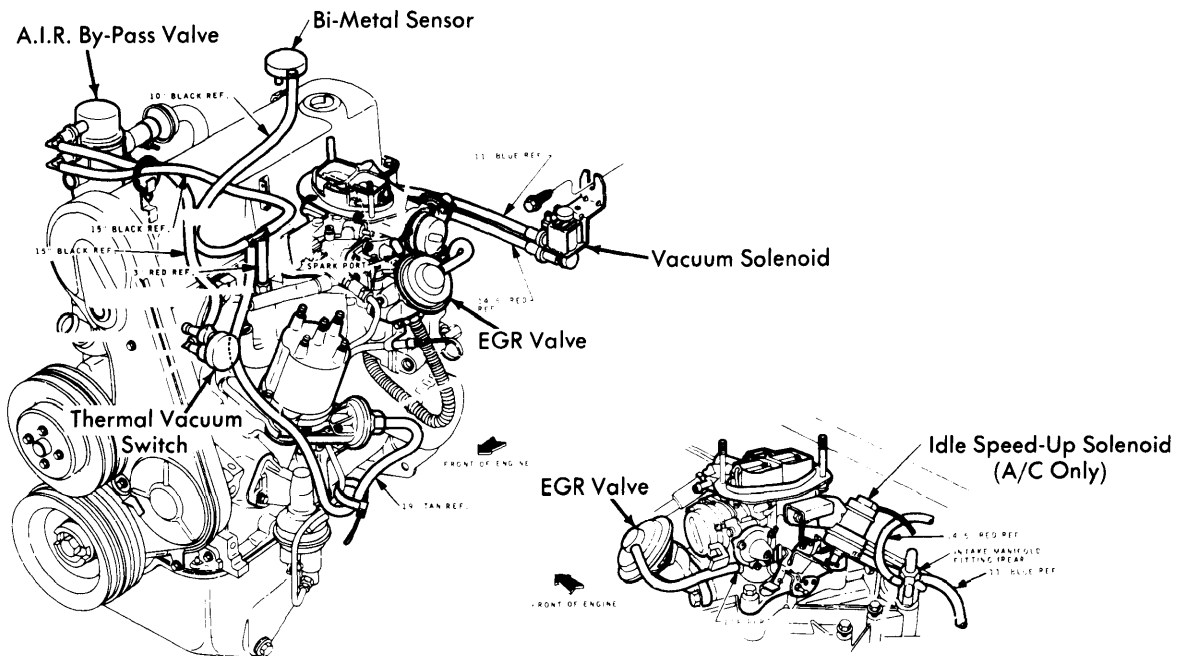


Fig. 10 7-2B-R0 Federal, A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

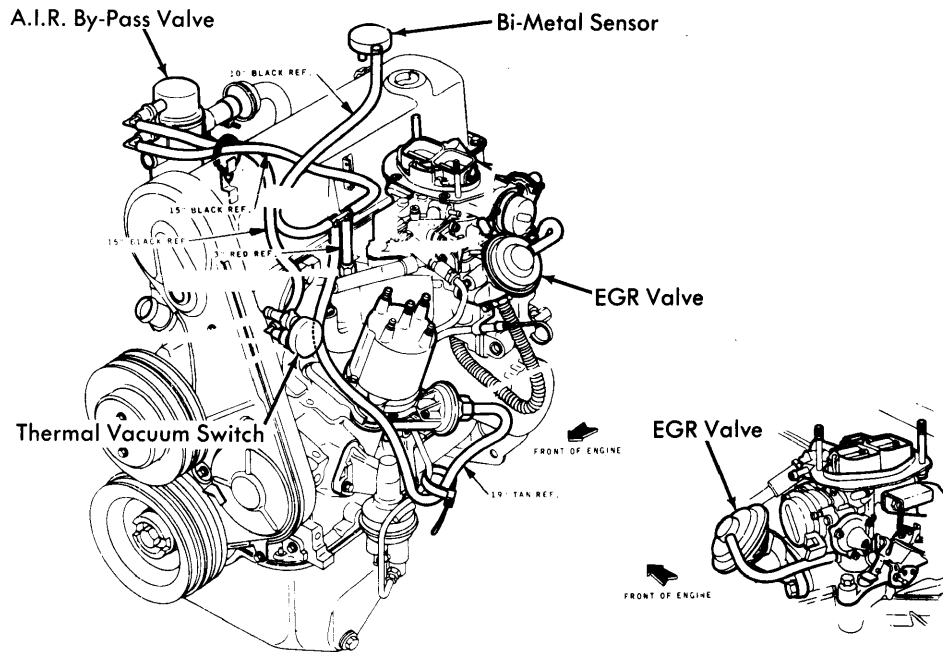


Fig. 11 7-2B-R0 Federal, Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

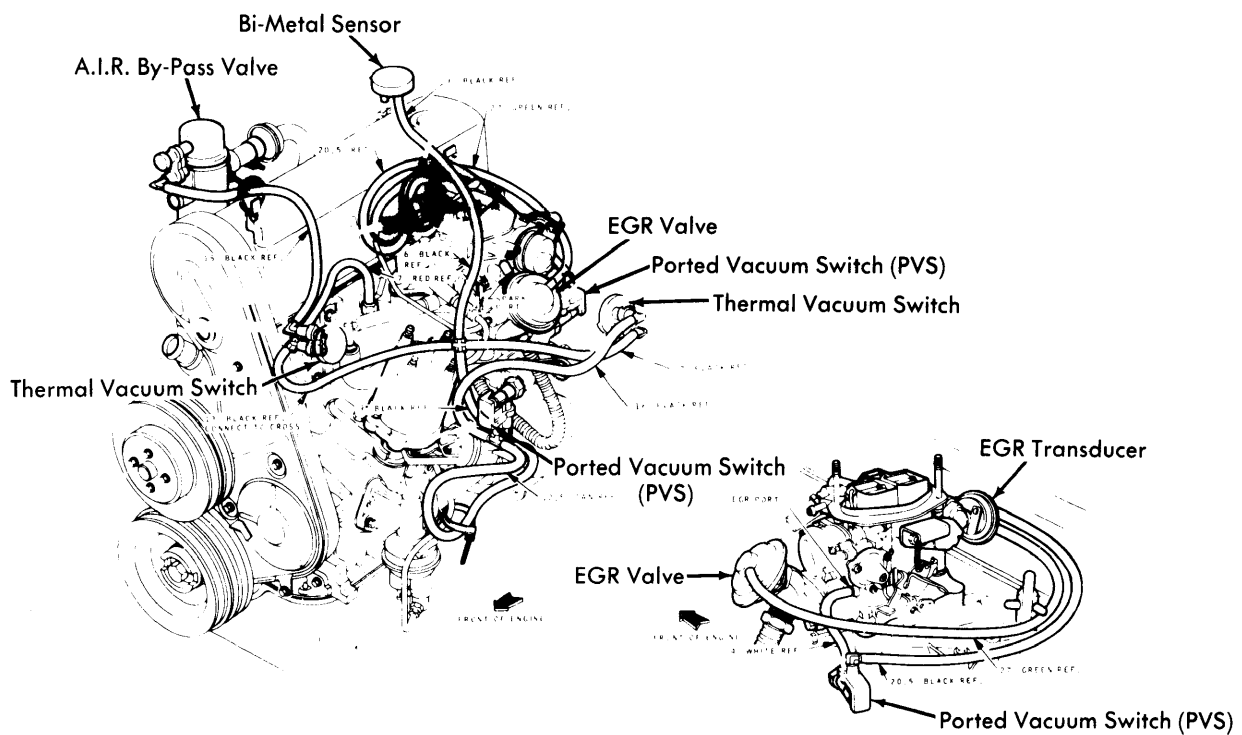


Fig. 12 7-2N-R0 Calif., Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

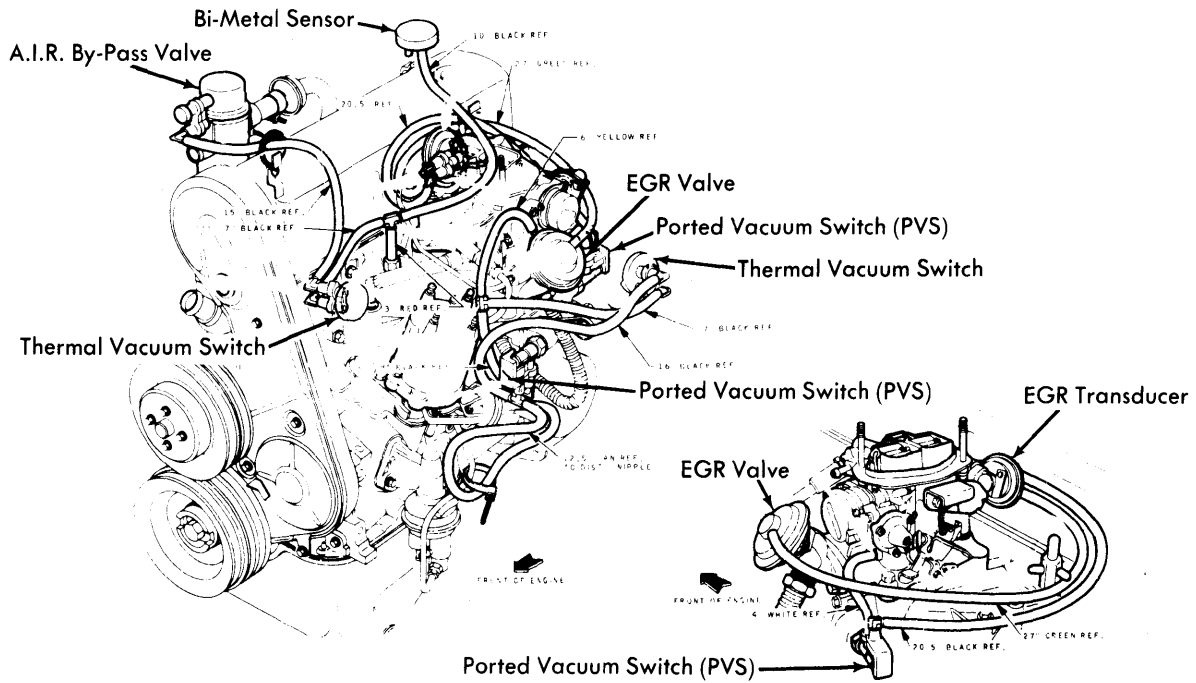


Fig. 13 7-2N-R1 Calif., Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

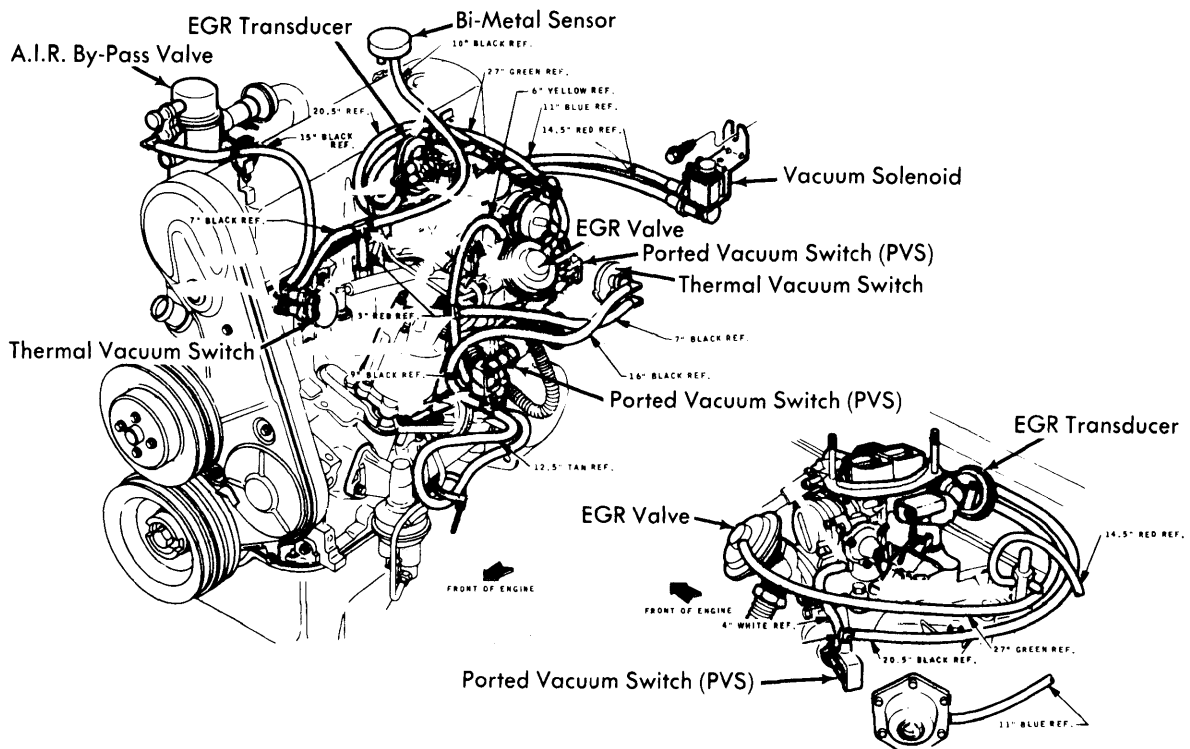


Fig. 14 7-2N-R1 Calif., A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

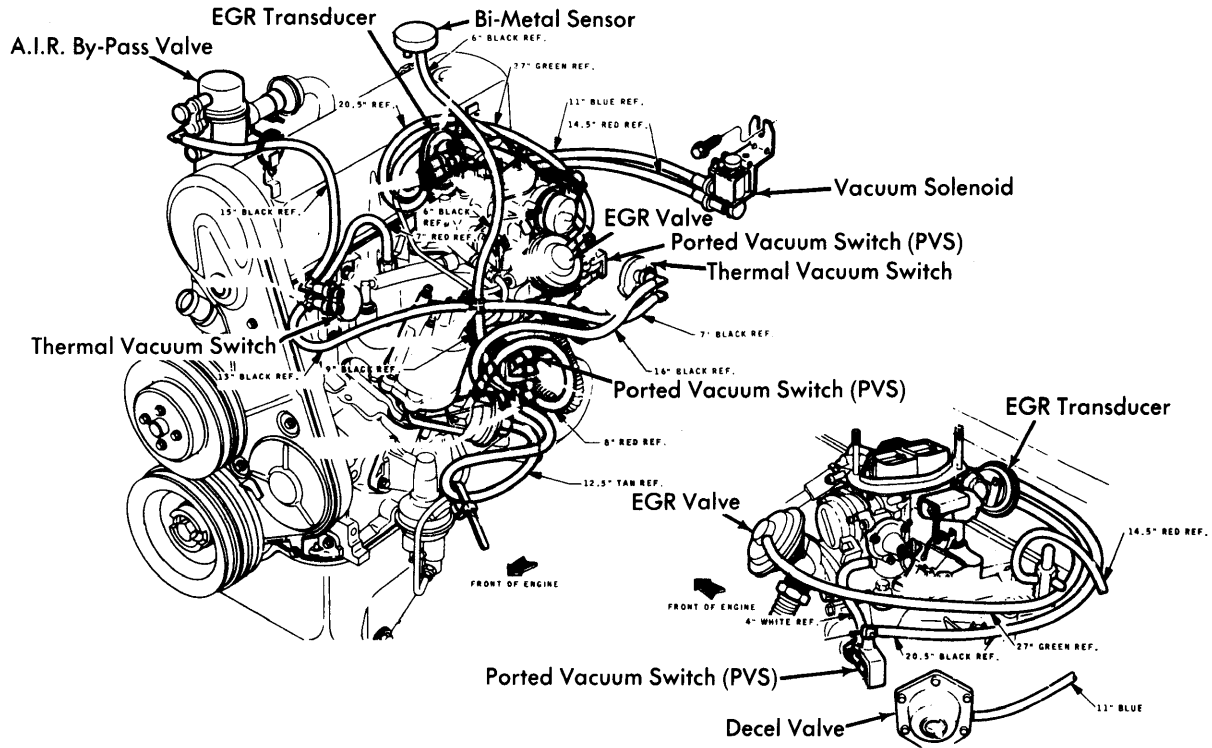


Fig. 15 7-2T-R0 Calif., A/C, Man. Trans., 2.3L
(Pinto, Bobcat)

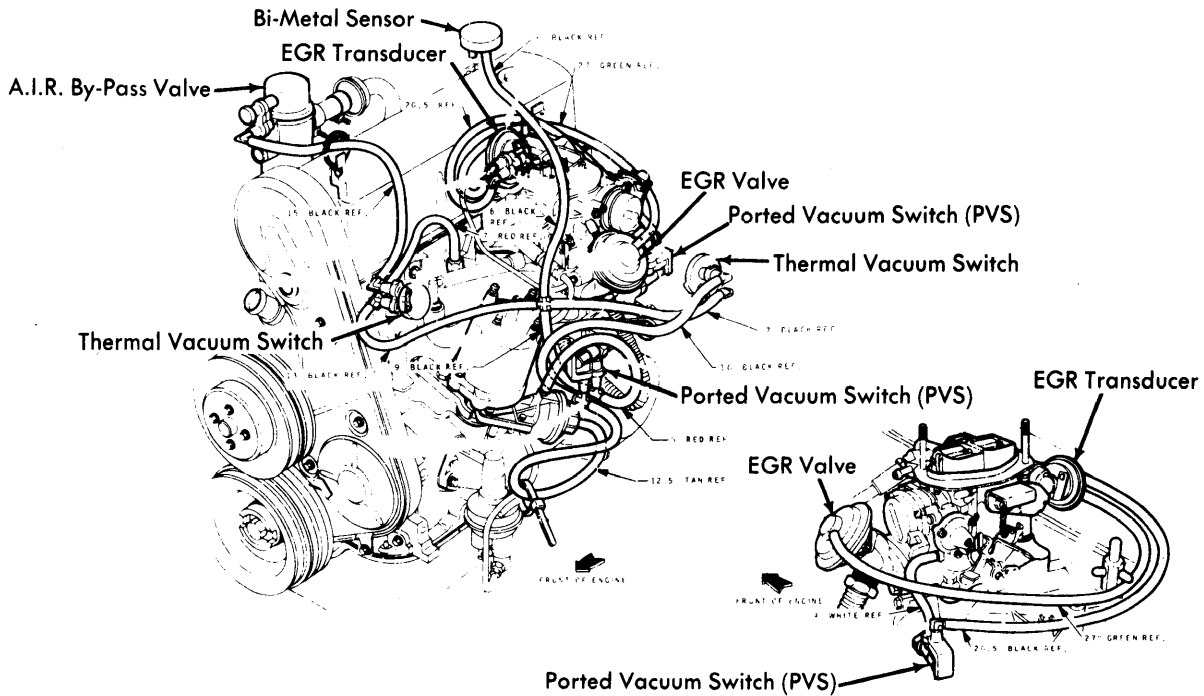


Fig. 16 7-2T-R0 Calif., Non A/C, Man. Trans., 2.3L
(Pinto, Bobcat)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

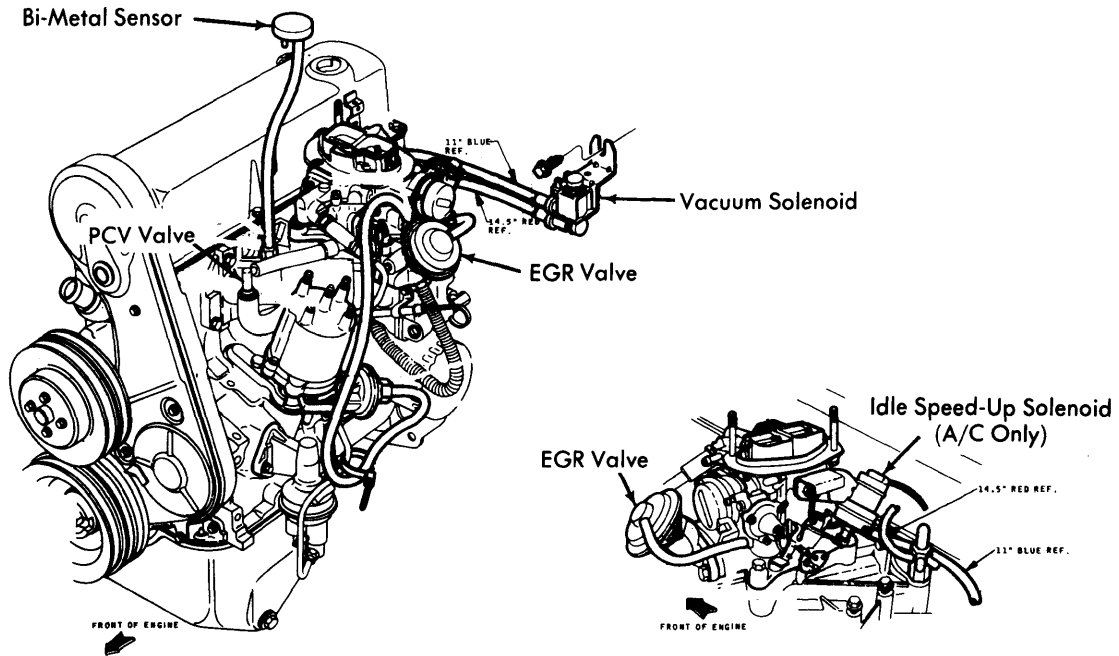


Fig. 17 7-21A-R0 Federal, A/C, Man. Trans., 2.3L
(Pinto, Bobcat, Mustang)

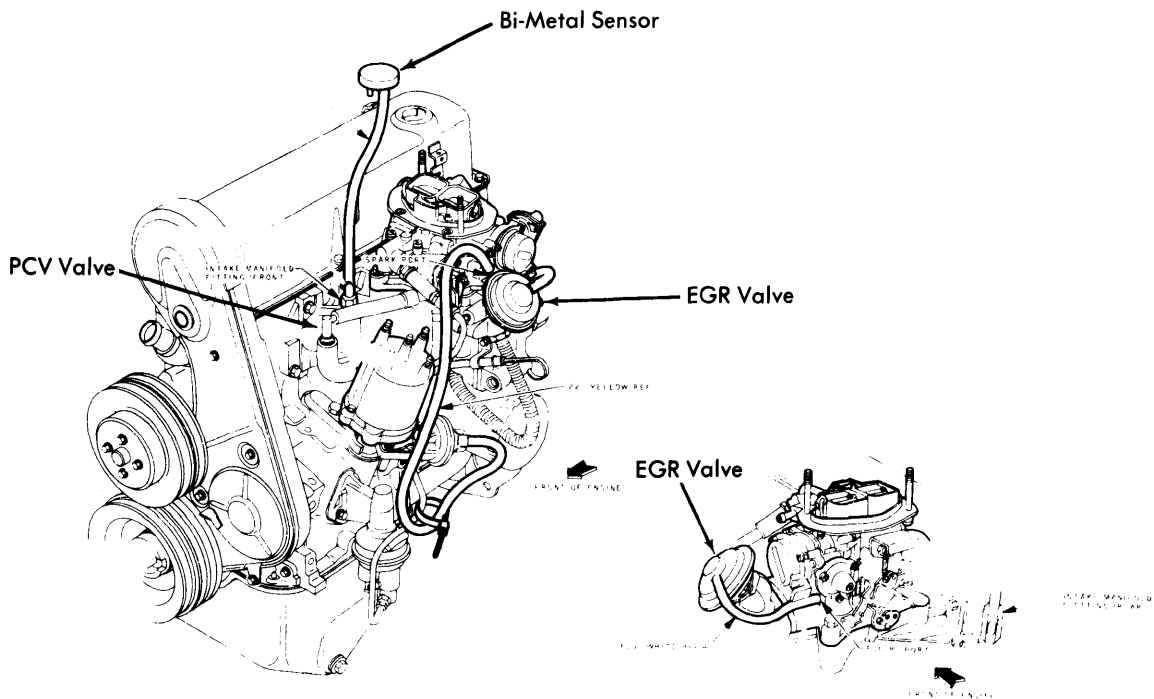


Fig. 18 7-21A-R0 Federal, Non A/C, Auto. Trans., 2.3L
(Pinto, Bobcat, Sedan)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

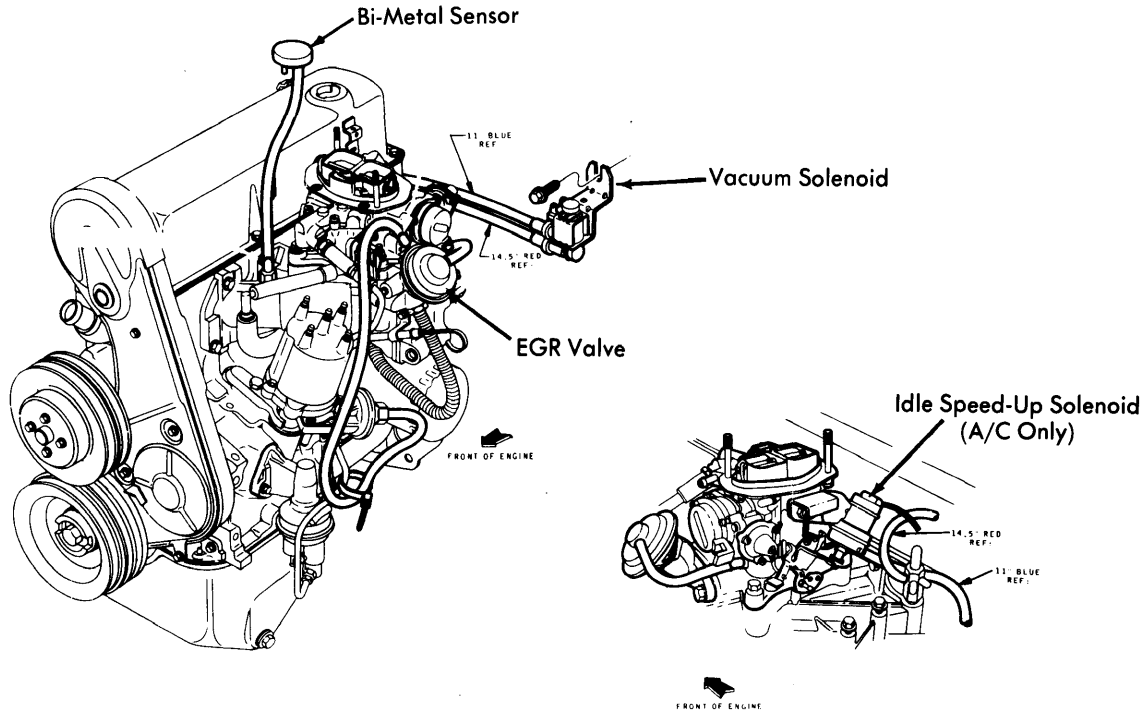


Fig. 19 7-21A-R0 & 7-21B-R0 Feder, A/C, Auto. Trans., 2.3L
(Pinto, Bobcat)

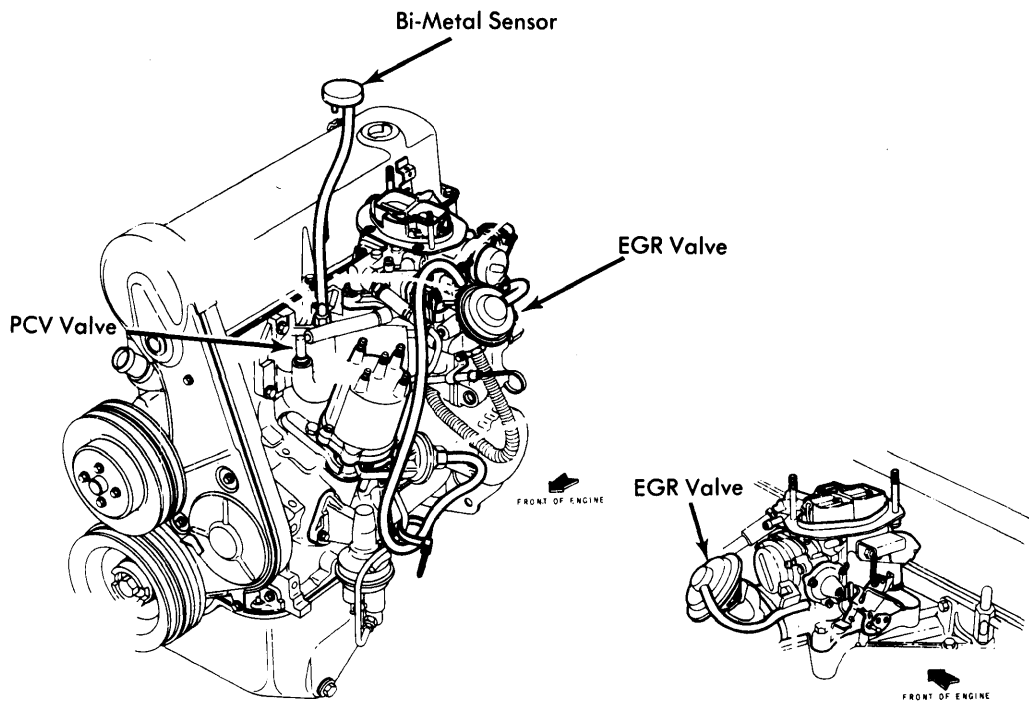


Fig. 20 7-21B-R0 Federal, Non A/C, Auto. Trans., 2.3L
(Pinto, Bobcat, Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

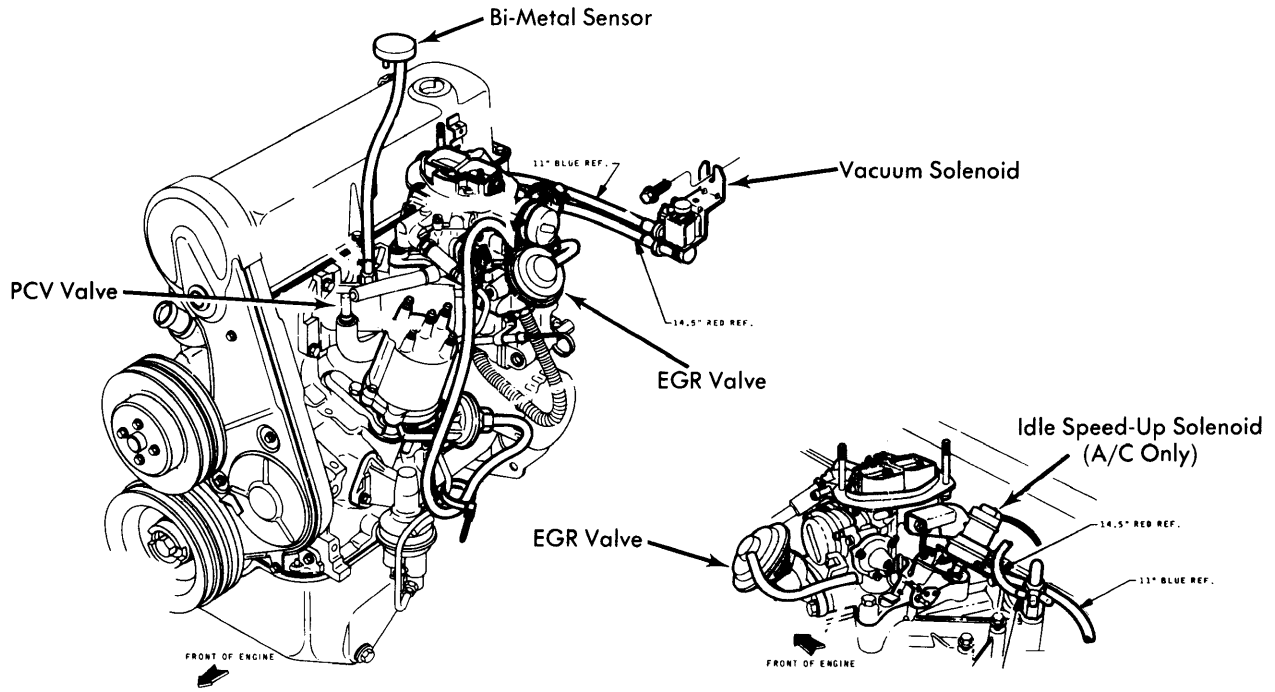


Fig. 21 7-21B-R0 Federal, A/C, Auto. Trans., 2.3L
(Pinto, Bobcat)

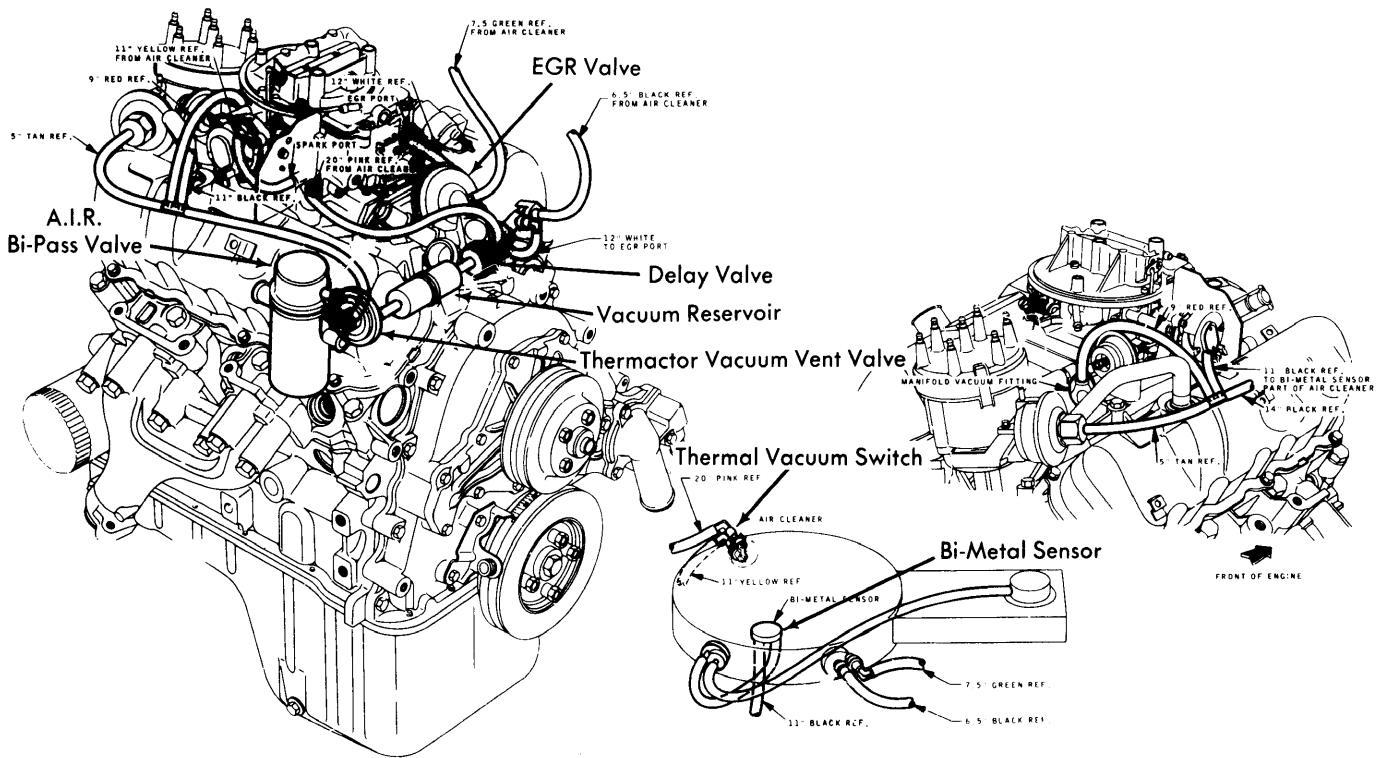


Fig. 22 7-3A-R2 Federal, Man. Trans., 2.8L
(Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

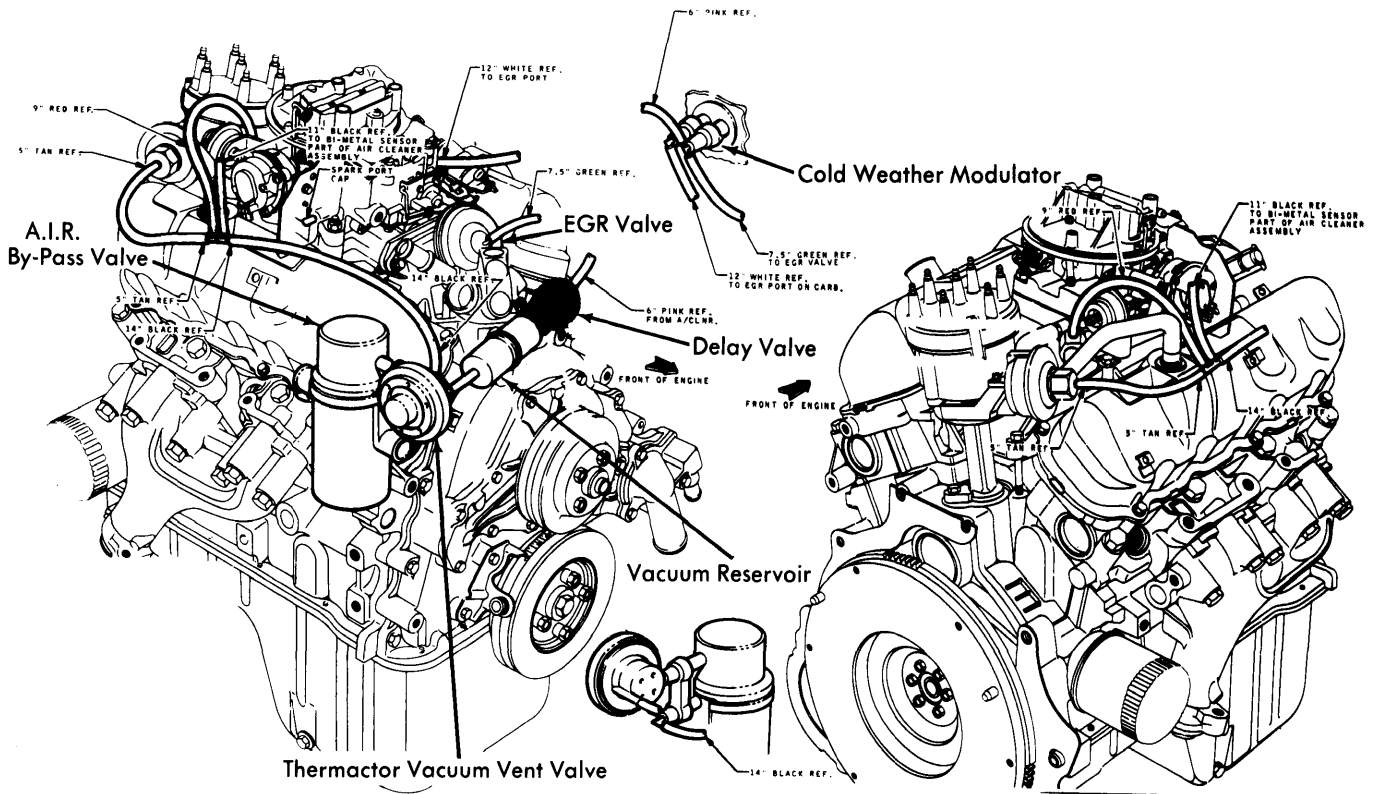


Fig. 23 7-4A-R2 Federal, Auto. Trans., 2.8L
(Pinto, Bobcat, Mustang)

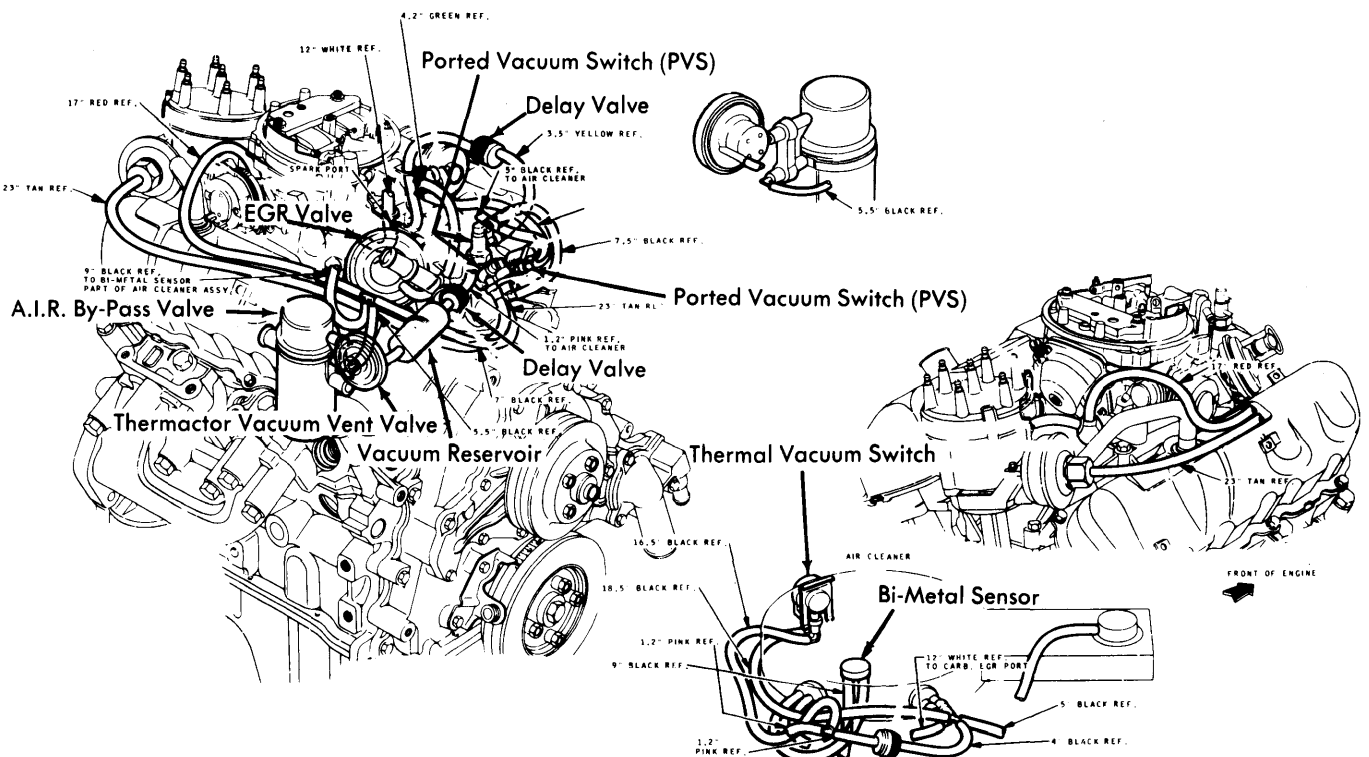


Fig. 24 7-4N-R1 Calif., A/C & Non A/C, Auto. Trans. 2.8L
(Pinto, Bobcat)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

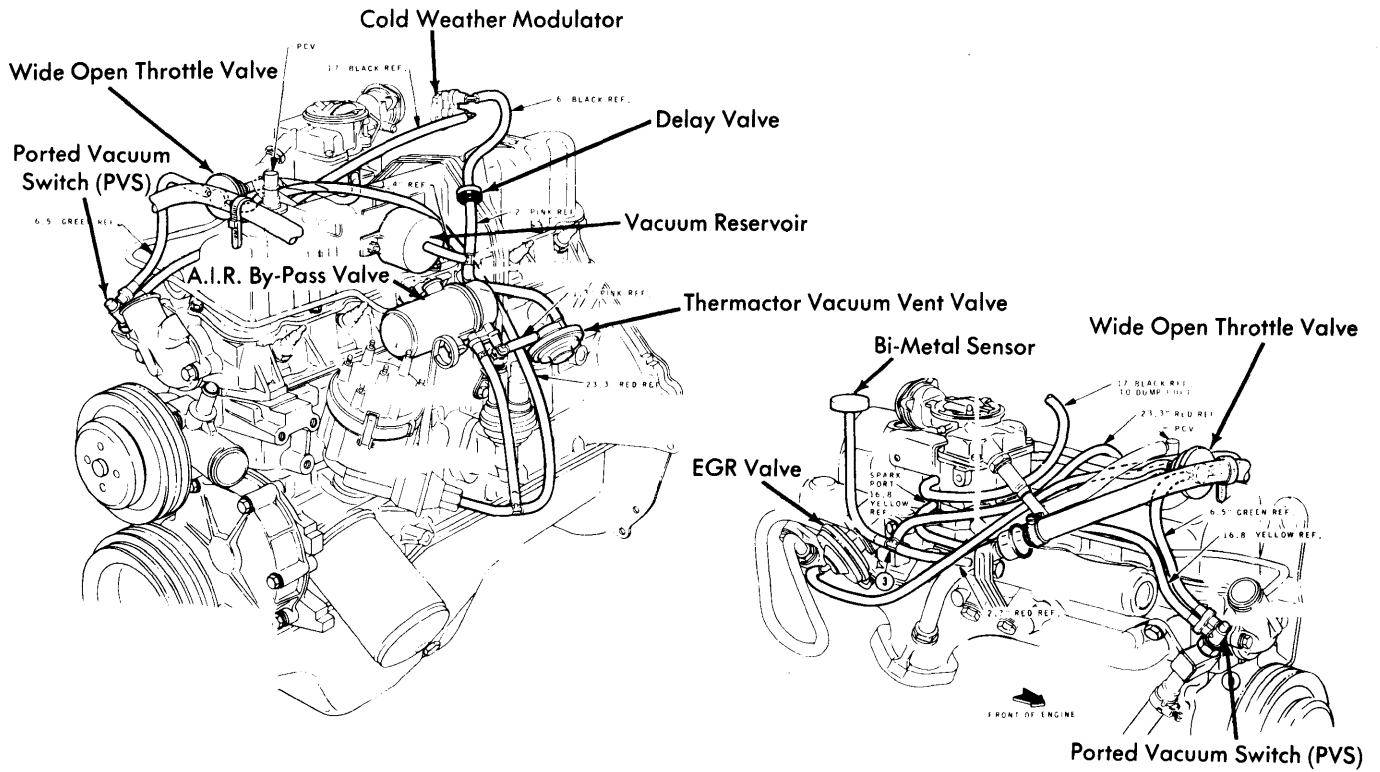


Fig. 25 7-6B-R1 Federal, A/C & Non A/C, Man. Trans. 200"
(Maverick, Comet, Granada, Monarch)

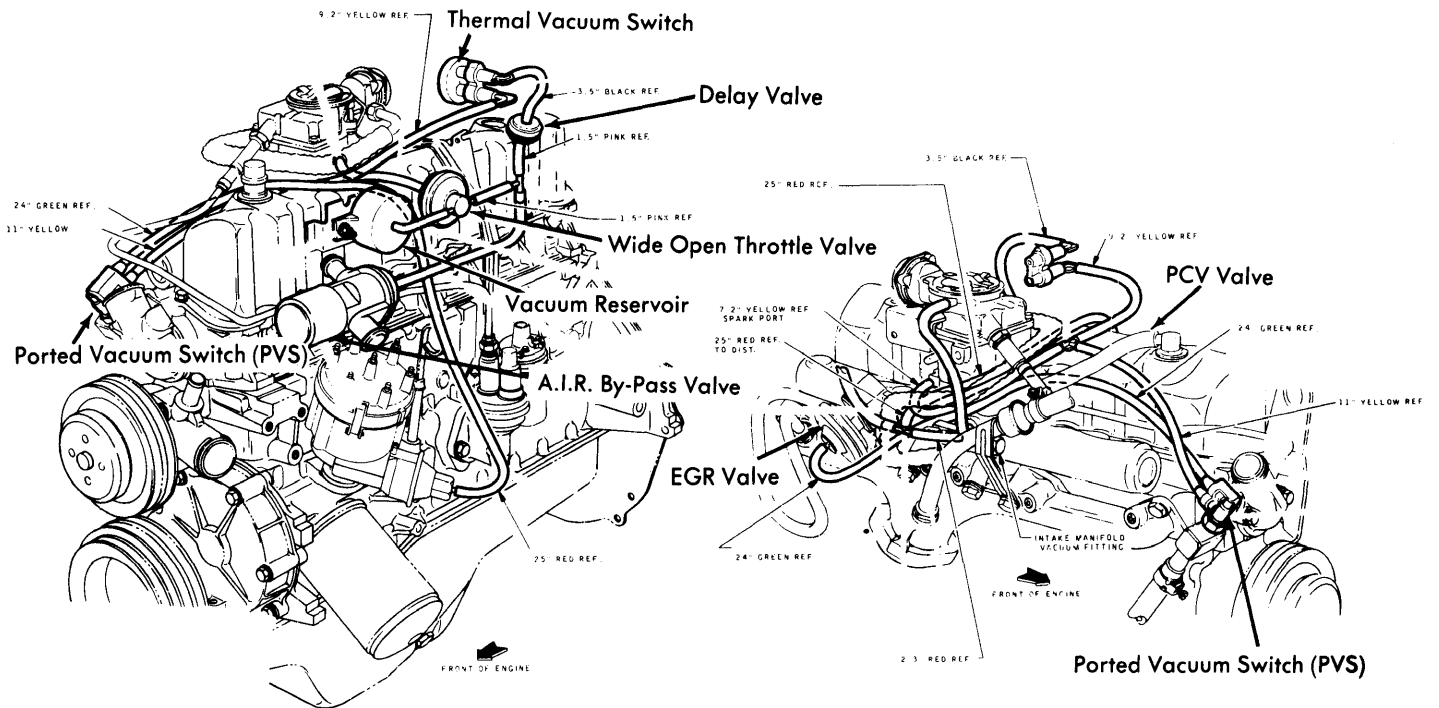


Fig. 26 7-7B-R10 Federal, A/C & Non A/C, Auto. Trans. 200"
(Maverick, Comet)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

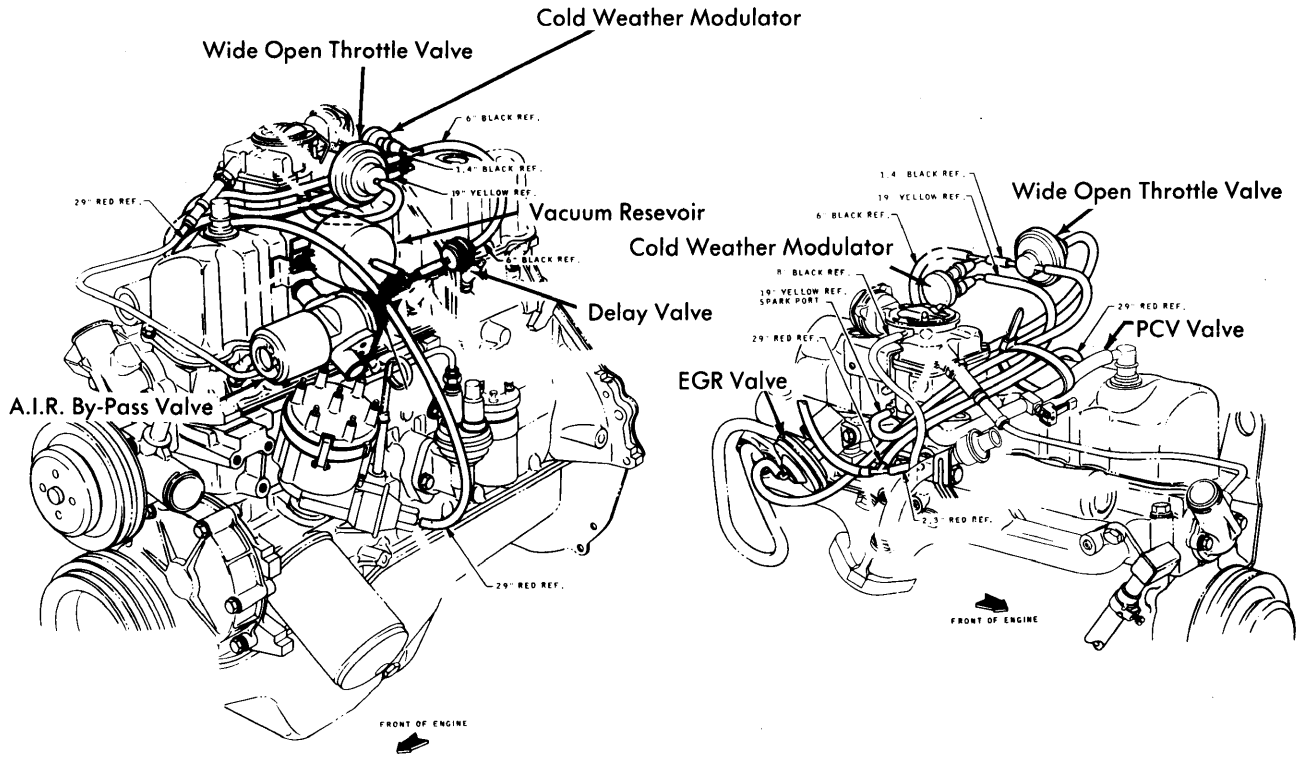


Fig. 27 7-8A-R2 Federal, Man. Trans., 250"
(A/C & Non A/C Maverick & Comet - Non A/C Granada, Monarch)

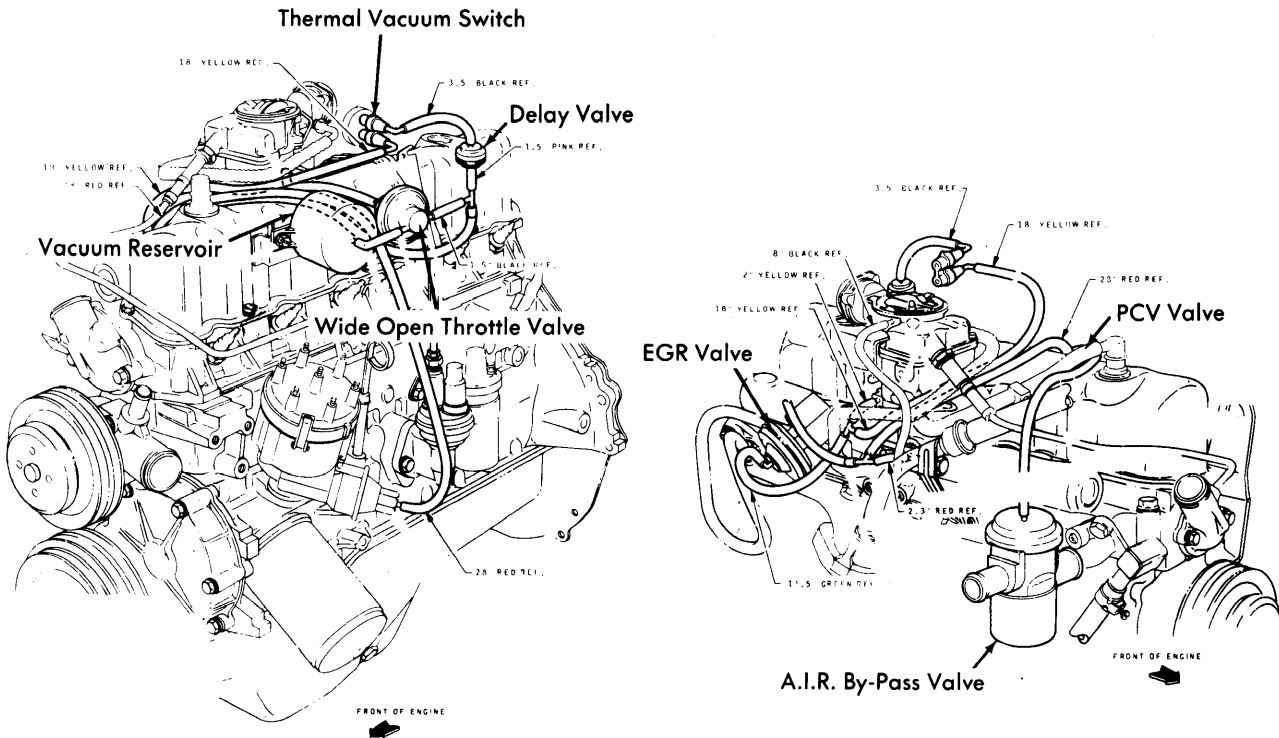


Fig. 28 7-8A-R3 Federal, A/C, Man. Trans., 250"
(Granada, Monarch)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

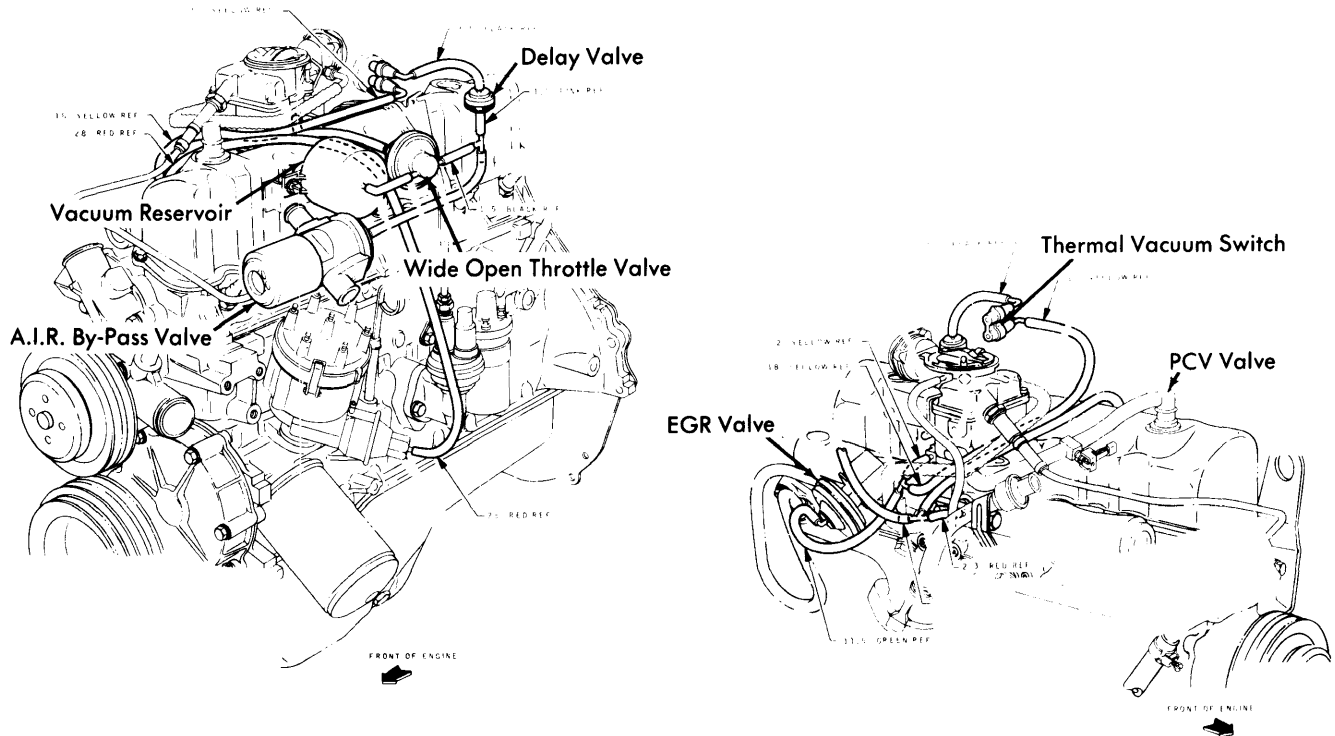


Fig. 29 7-8A-R3 Federal, Man. Trans., 250"
(A/C & Non A/C Maverick, Comet - Non A/C Granada, Monarch)

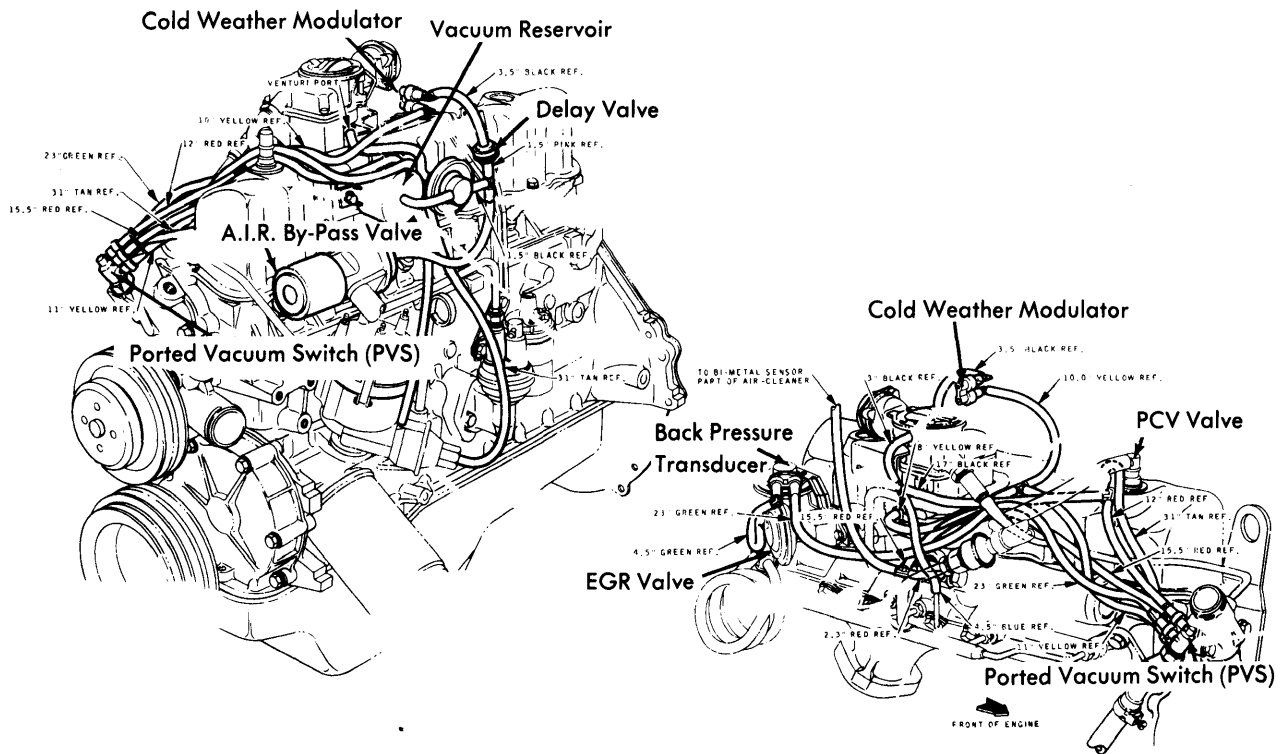


Fig. 30 7-9N-R0 Calif., Auto. Trans., 250"
(A/C & Non A/C Maverick, Comet - Non A/C Granada, Monarch)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

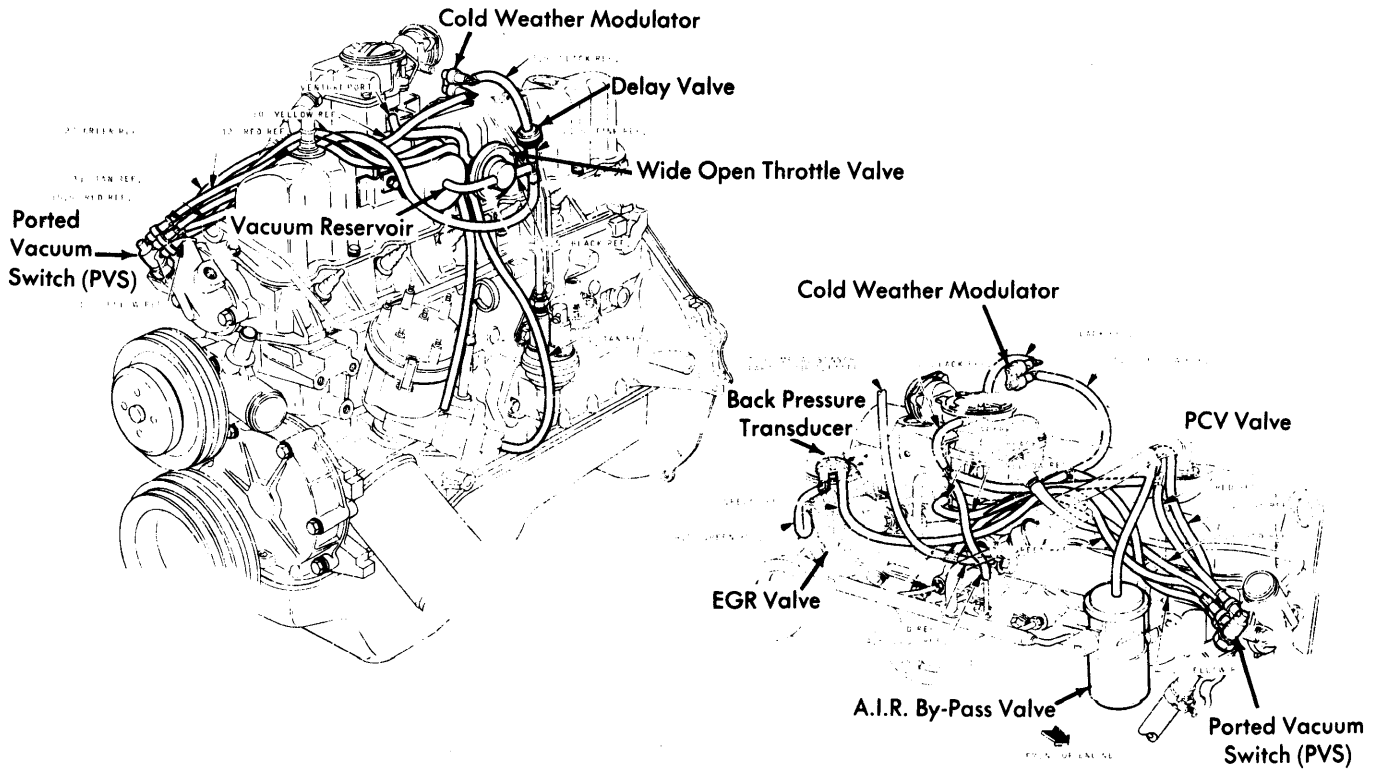


Fig. 31 7-9N-R0 Calif., Auto. Trans., A/C, 250"
(Granada, Monarch)

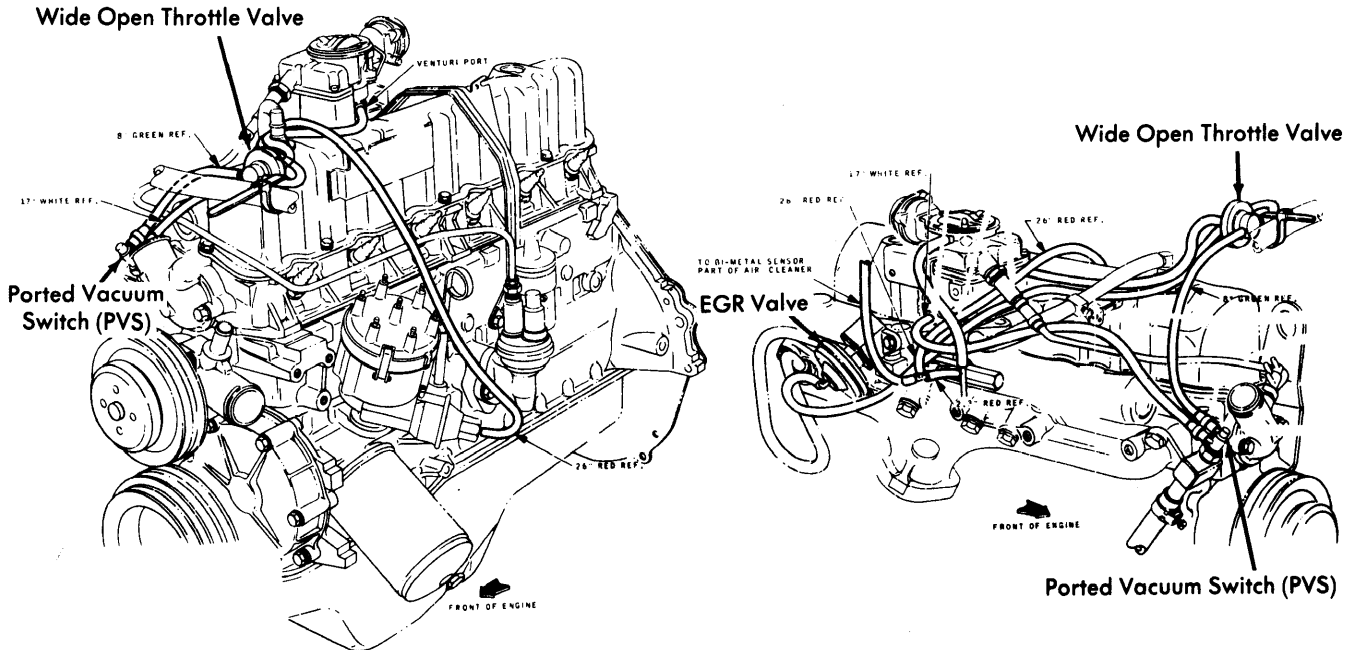


Fig. 32 7-29A-R1 Federal, A/C & Non A/C, Auto. Trans., 250"
(Granada, Monarch, Maverick, Comet)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

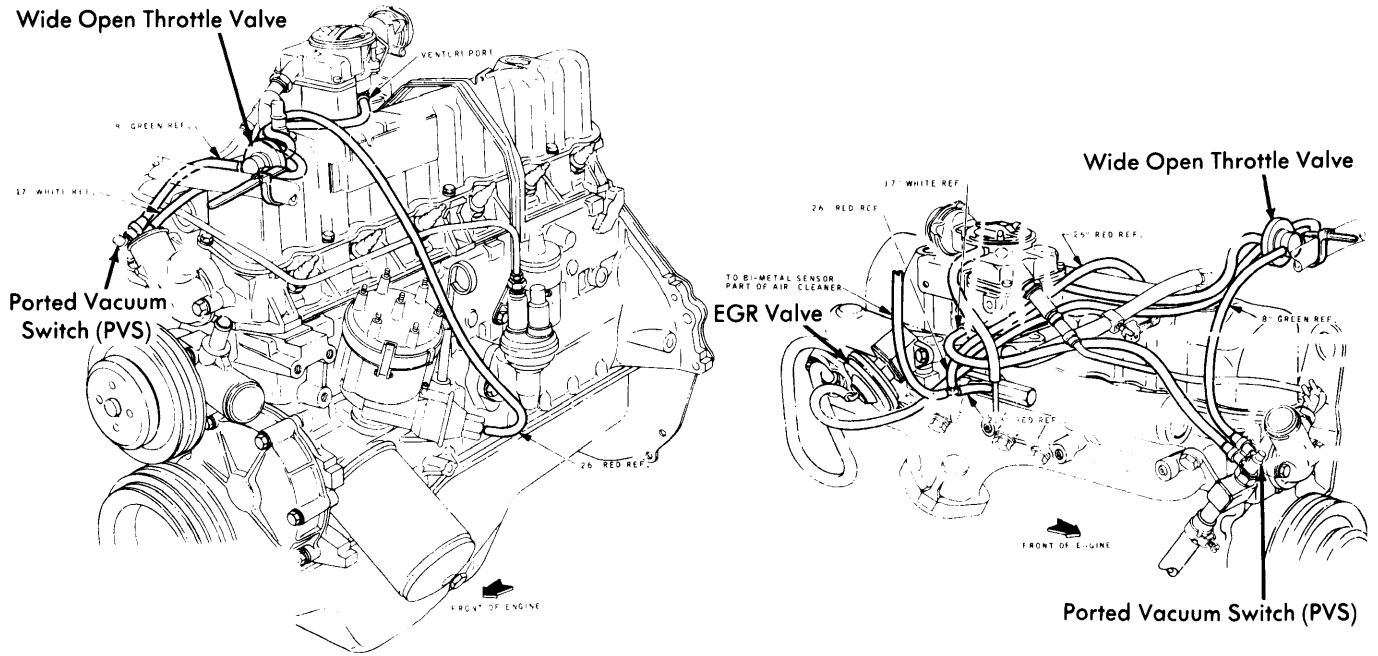


Fig. 33 7-29A-R3 Federal, A/C & Non A/C, Auto. Trans., 250"
(Granada, Monarch, Maverick, Comet)

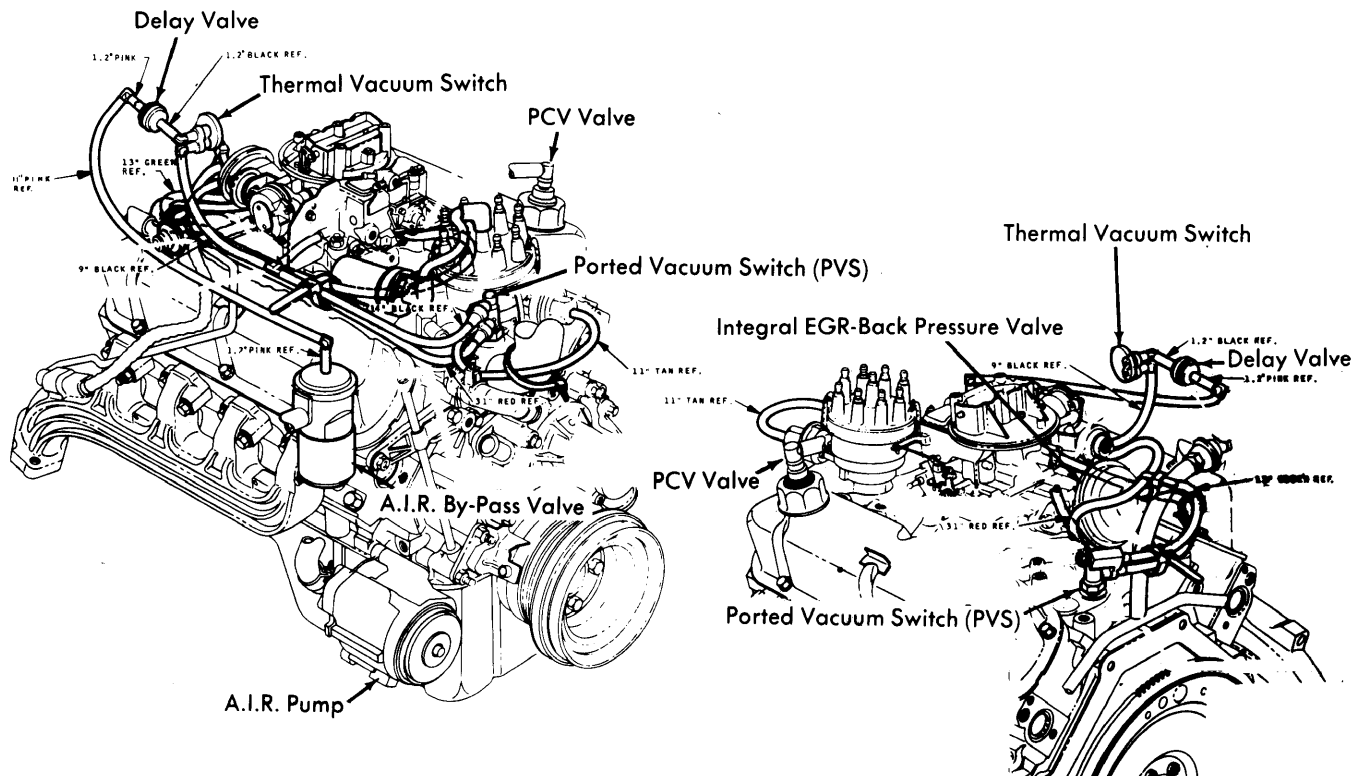


Fig. 34 7-10A-R0 Federal, Man. Trans., 302"
(Mustang)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

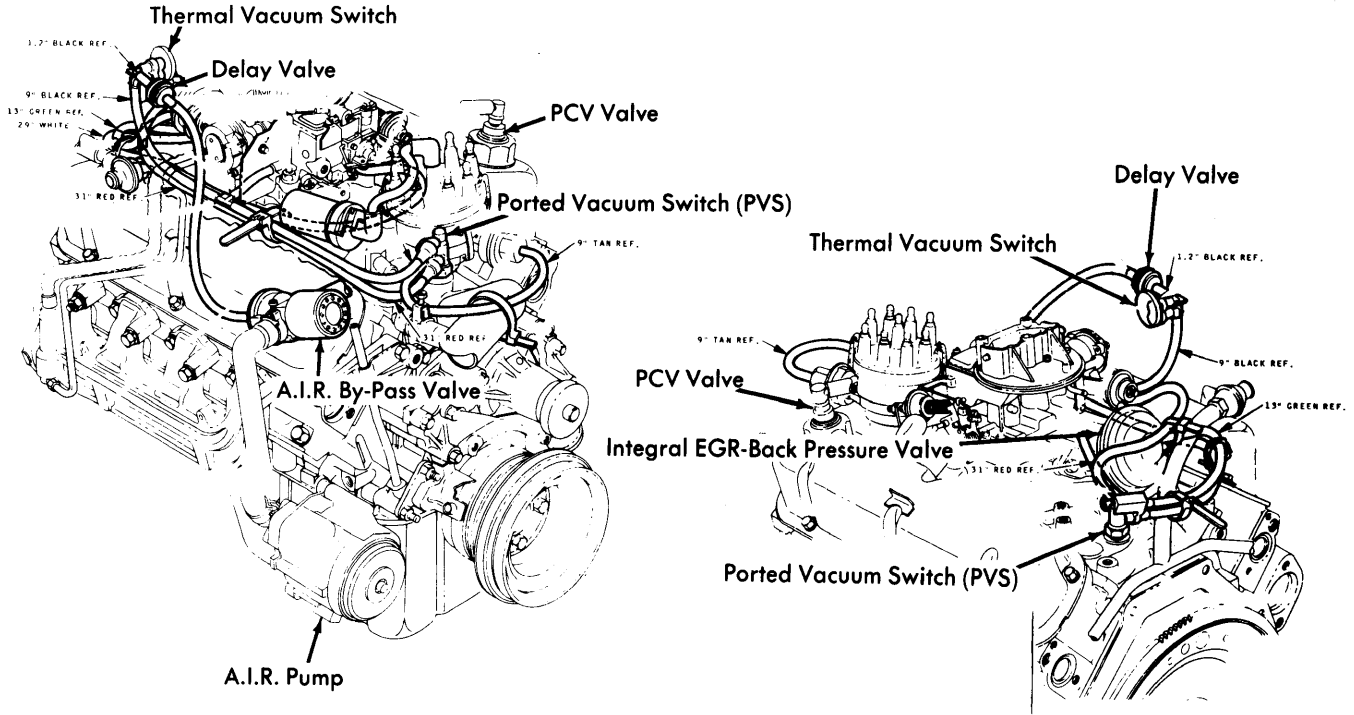


Fig. 35 7-10B-R0 Federal, Man. Trans., 302"
(Granada, Monarch)

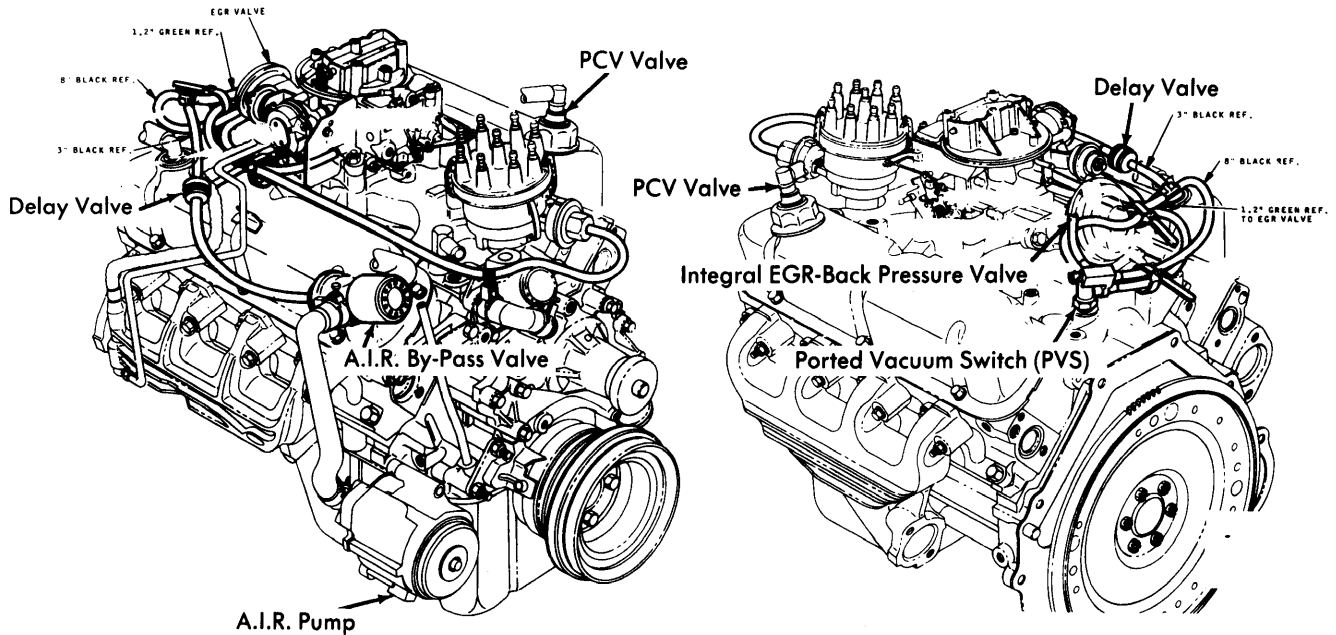


Fig. 36 7-11E-R0 Federal, Auto. Trans., 302"
(LTD II, Cougar, T-Bird, Ranchero)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

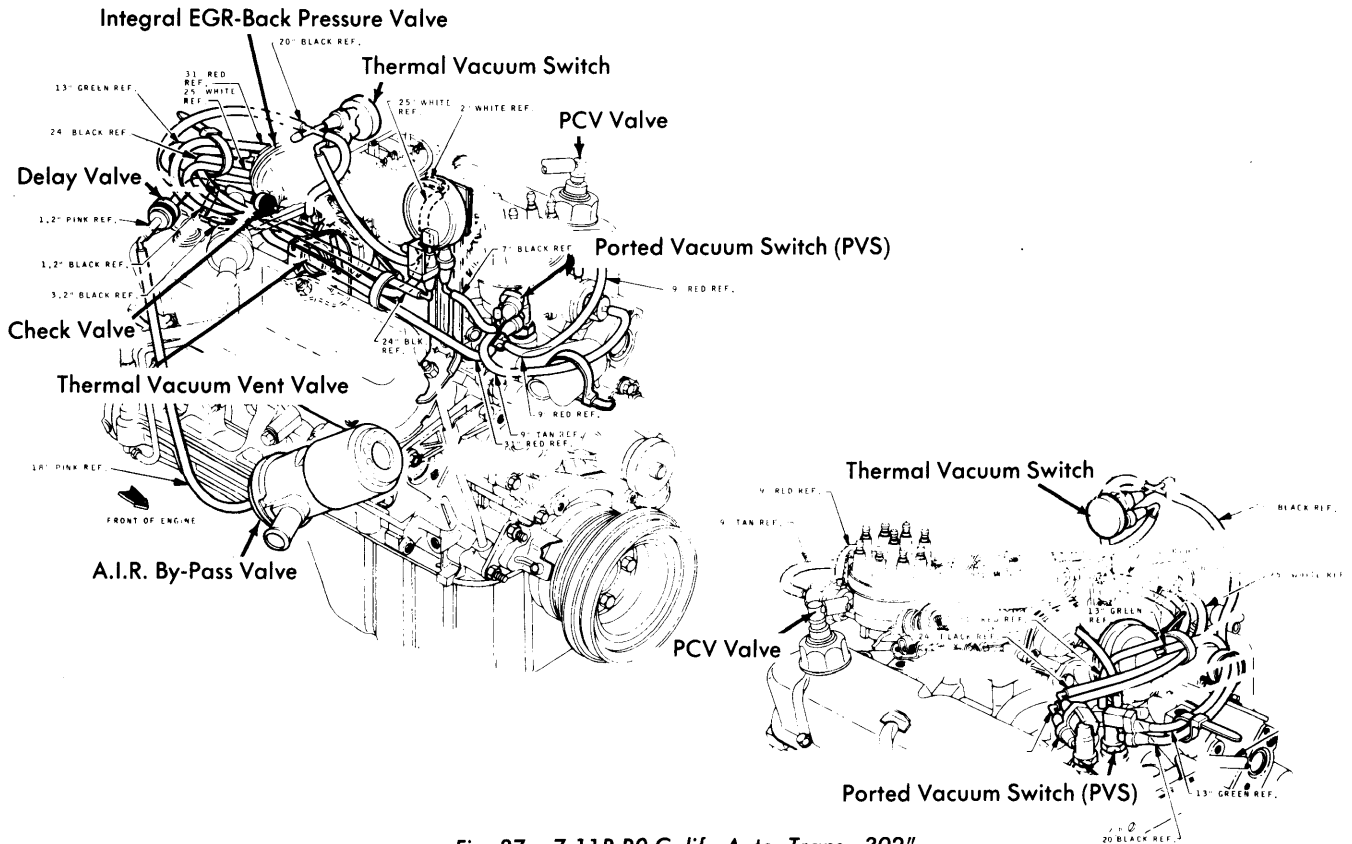


Fig. 37 7-11P-R0 Calif., Auto. Trans., 302"
(Granada, Monarch)

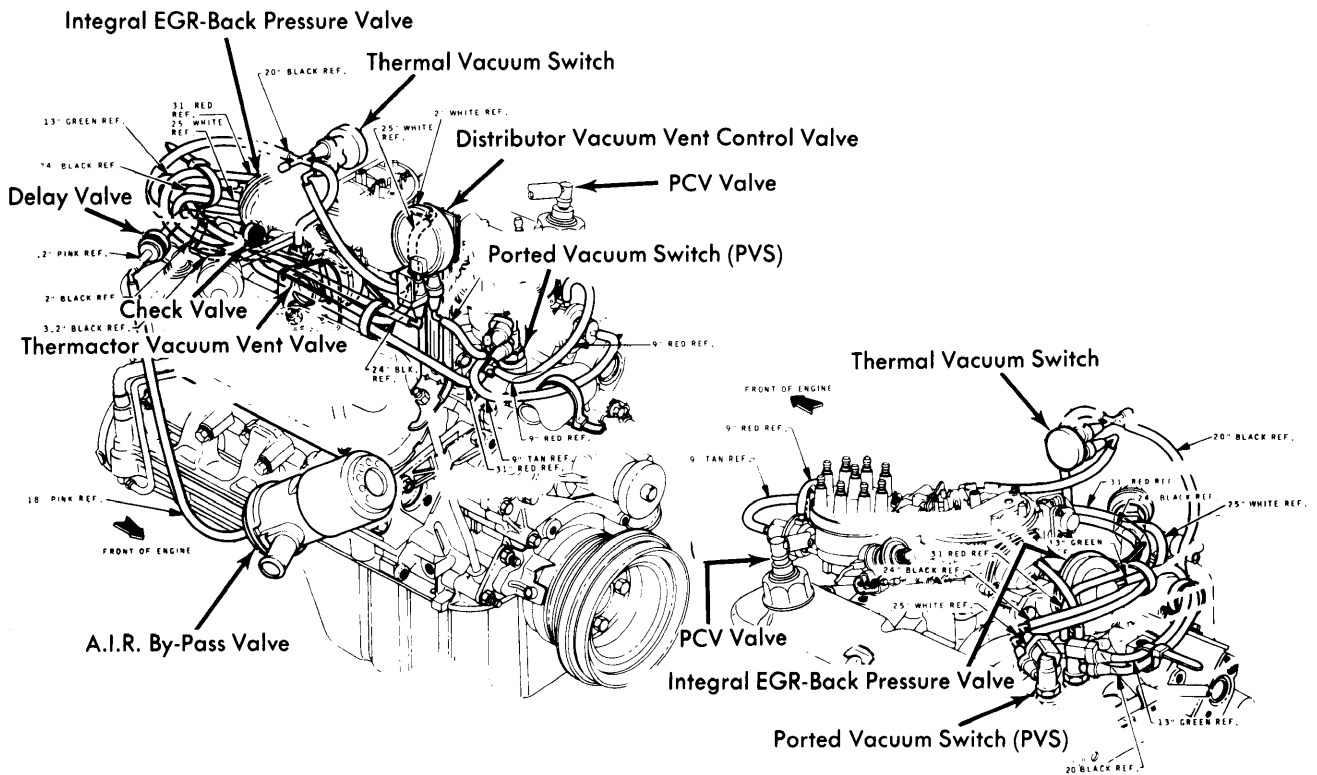


Fig. 38 7-11Q-R0 Calif., Auto. Trans., 302"
(Maverick, Comet)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

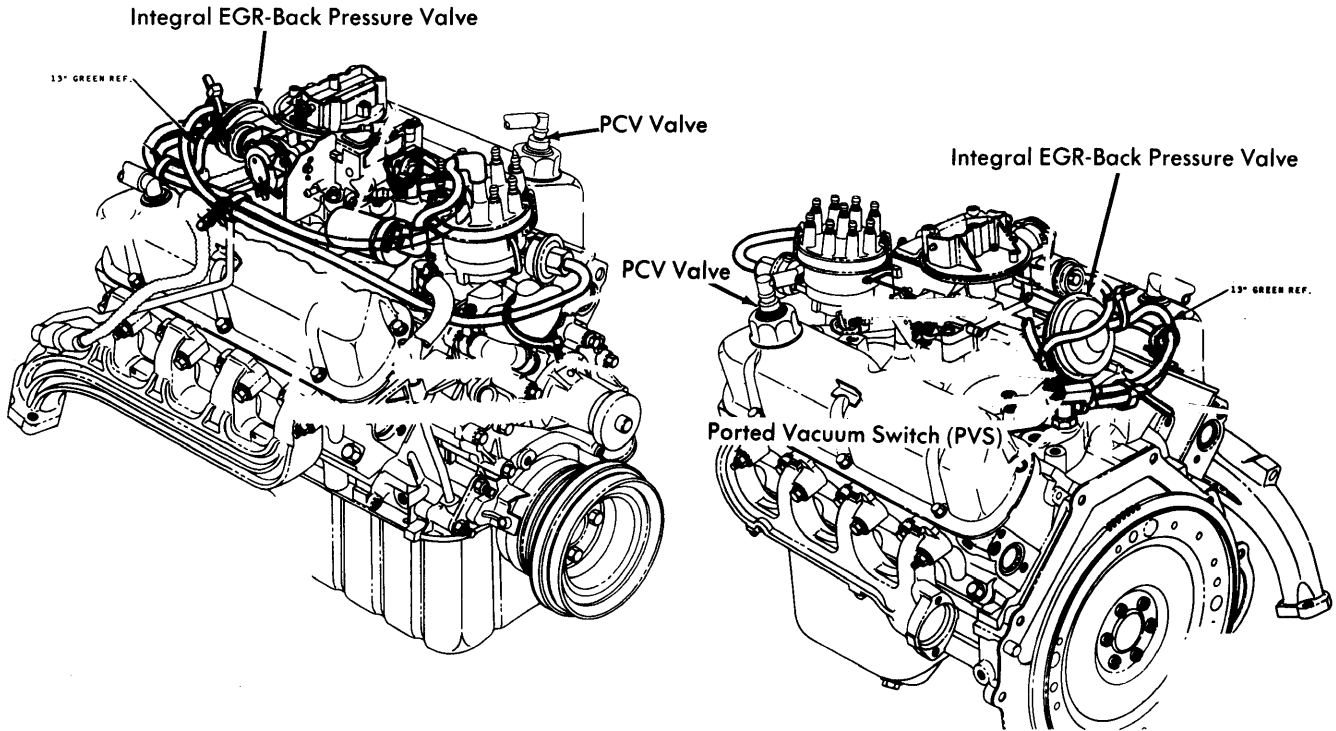


Fig. 39 7-31A-R0 Federal, Auto. Trans., 302"
(Mustang)

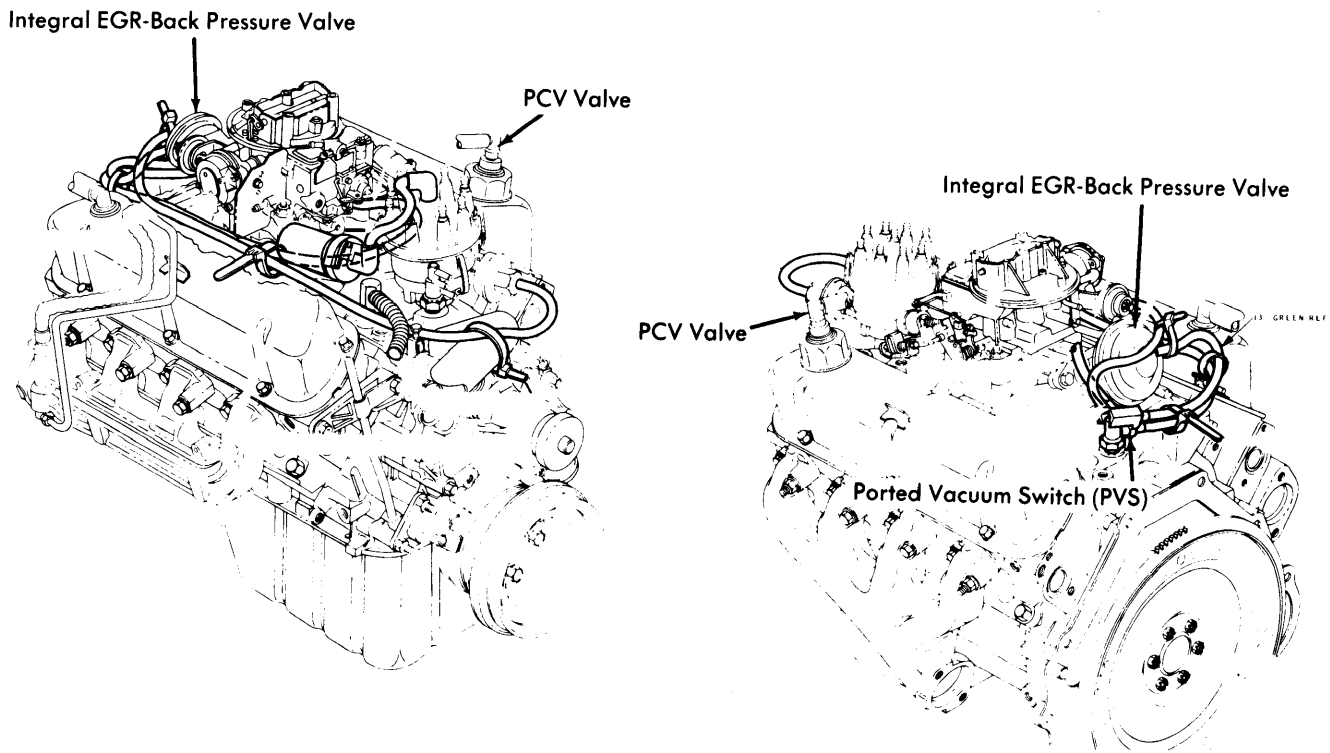


Fig. 40 7-31B-R0 Federal, Auto. Trans., 302"
(Maverick, Comet)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

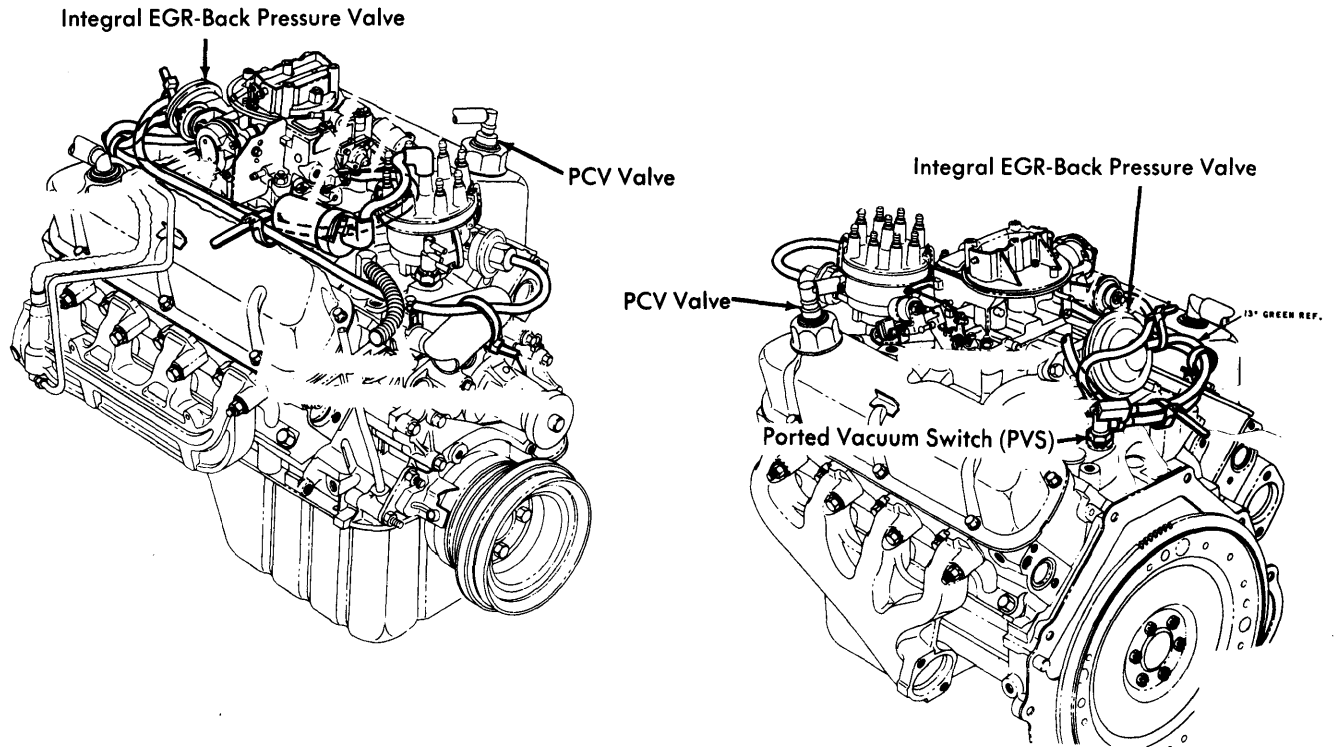


Fig. 41 7-31C-R0 Federal, Auto. Trans., 302"
(Granada, Monarch)

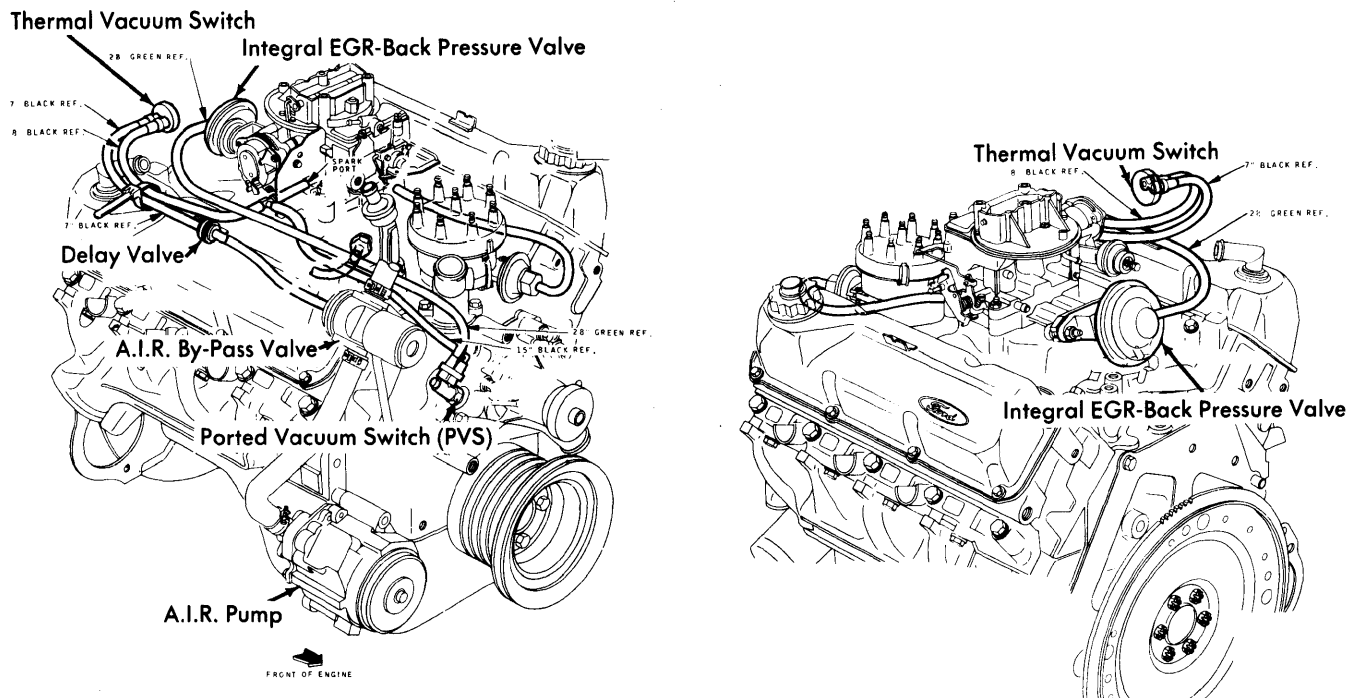


Fig. 42 7-14A-R1 Federal, A/C & Non A/C, Auto. Trans., 351"^M
(LTD II, Cougar, Ranchero)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

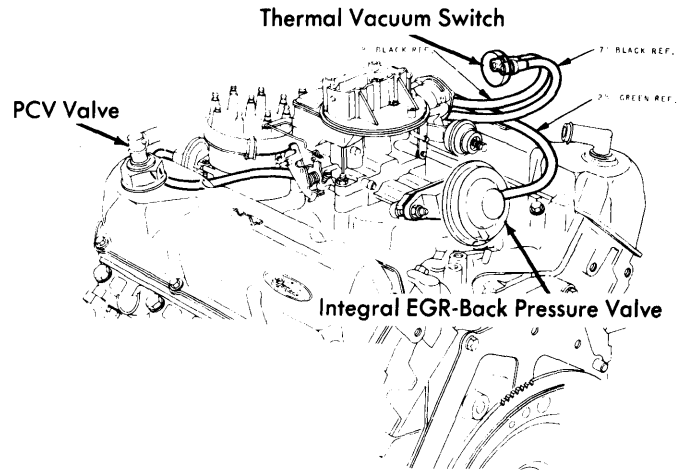
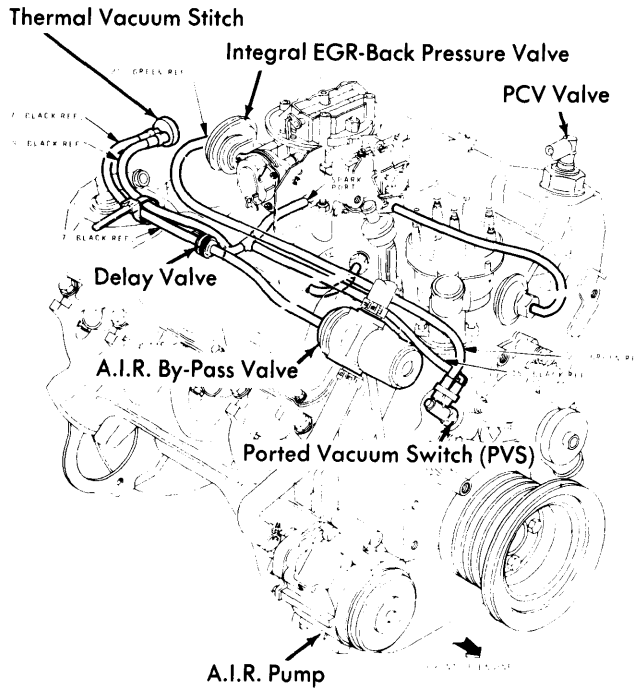


Fig. 43 7-14B-R1 Federal, A/C & Non A/C, Auto. Trans., 351"M
(Ranchero, T-Bird, Sta. Wgns., LTD II, Cougar, Ford)

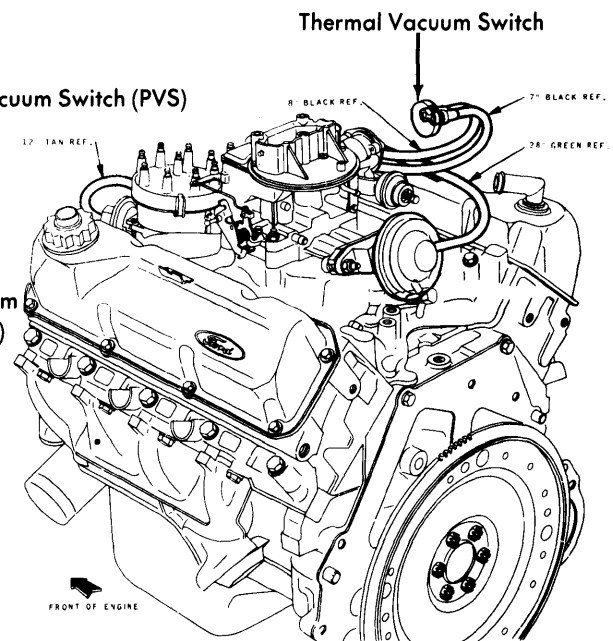
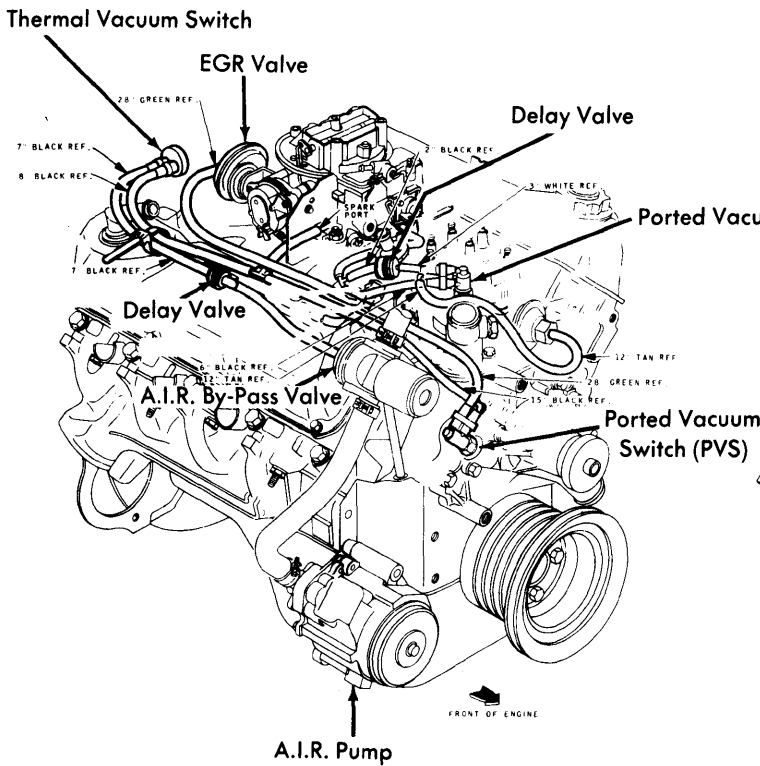


Fig. 44 7-14B-R1 Federal, A/C & Non A/C, Auto. Trans., 351"M
(LTD II, Cougar, Ford, Ranchero, T-Bird, Sta. Wgns.)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

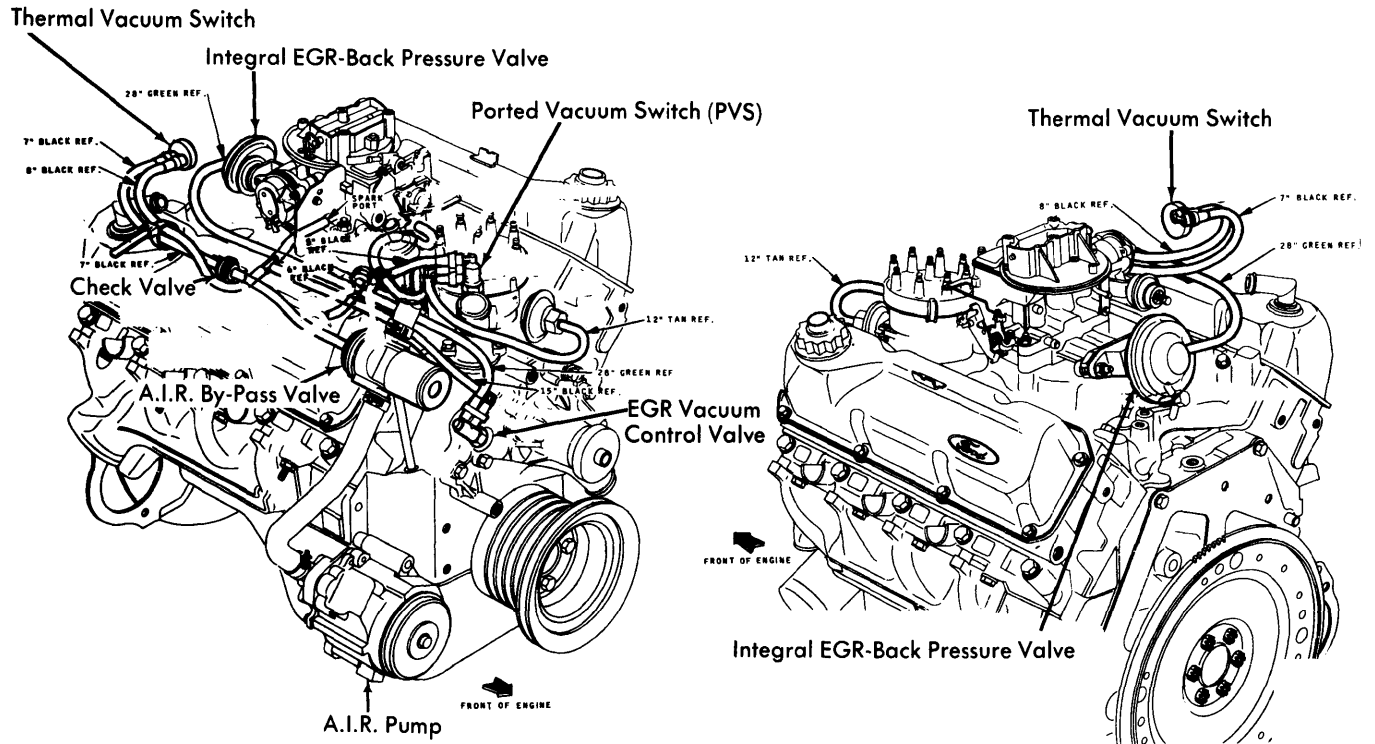


Fig. 45 7-14B-R10 Federal, A/C & Non A/C, Auto. Trans., 351\"M
(LTD II, Cougar, Ranchero, T-Bird)

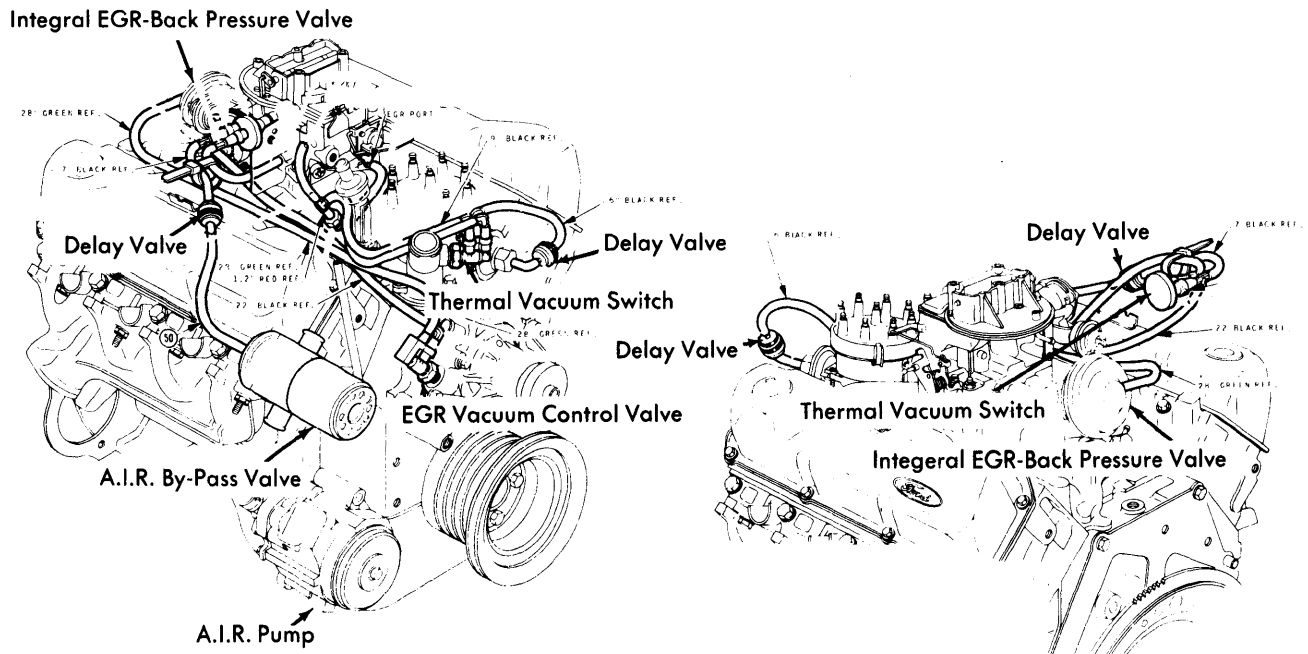


Fig. 46 7-14N-R0 Calif., A/C & Non A/C, Auto. Trans., 351\"M
(LTD II, Cougar, T-Bird, Ranchero)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

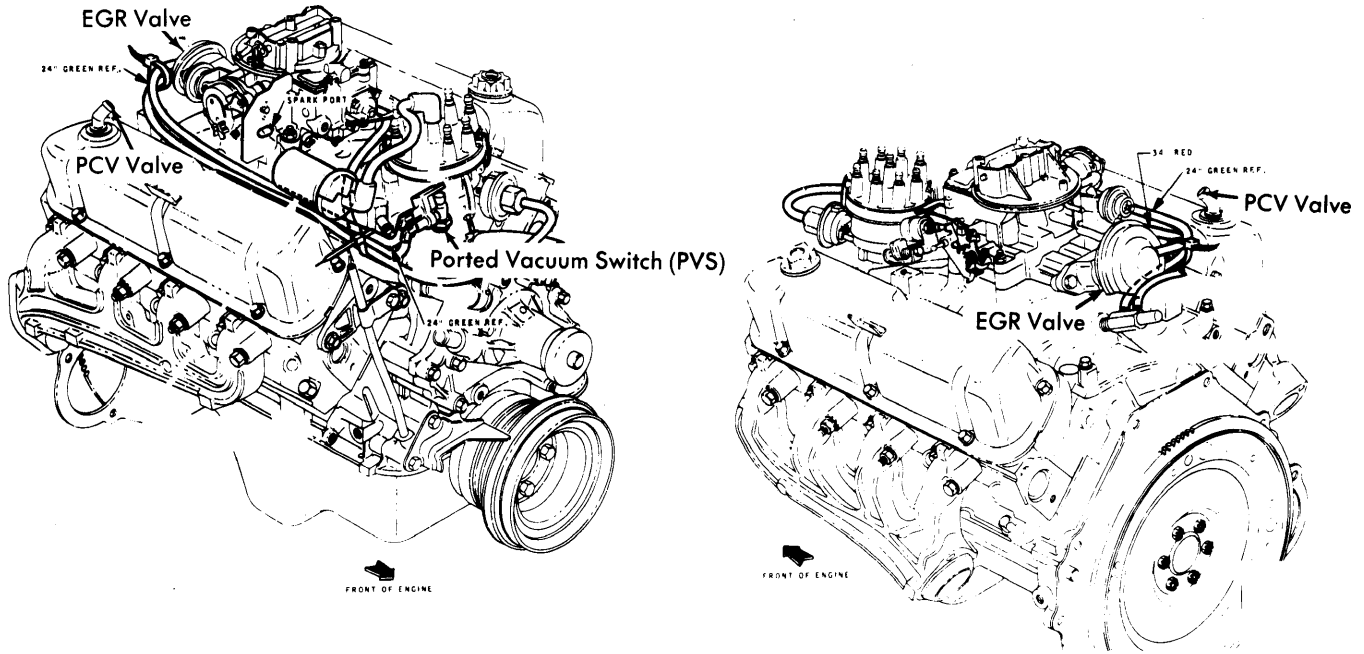


Fig. 47 7-32B-R1 Federal, Auto. Trans., 351"W
(LTD II, T-Bird, Cougar)

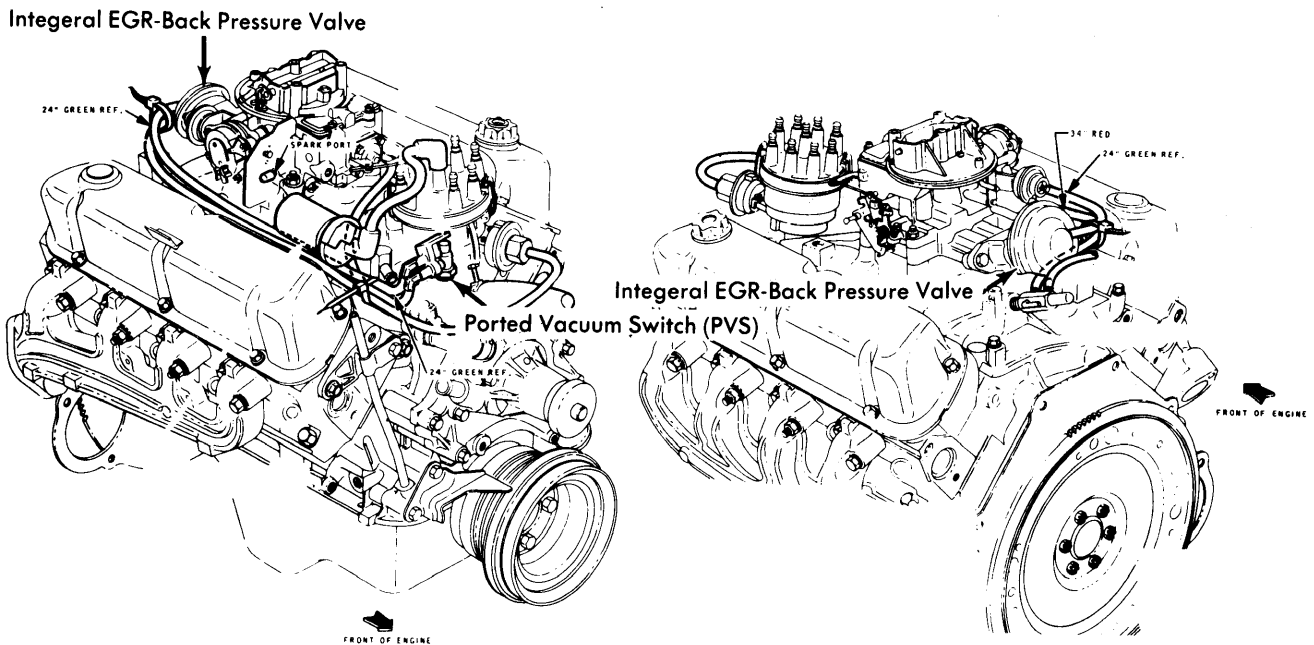


Fig. 48 7-32V-R10 Federal, Auto. Trans., 351"W
(LTD II, T-Bird, Cougar, Ford)

1977 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Vacuum Diagrams (Cont.)

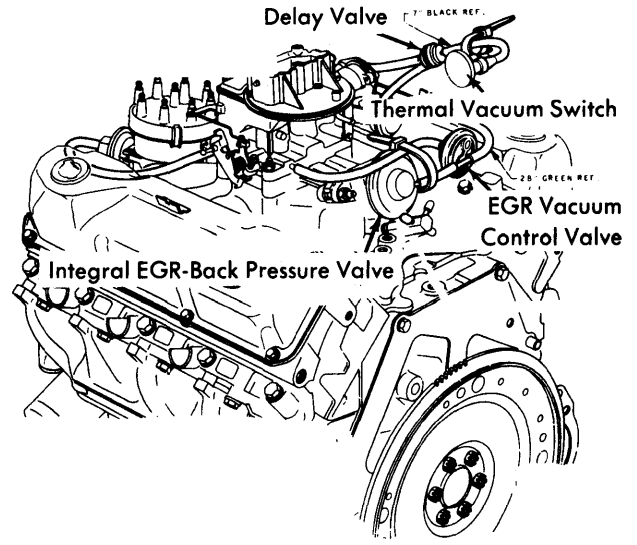
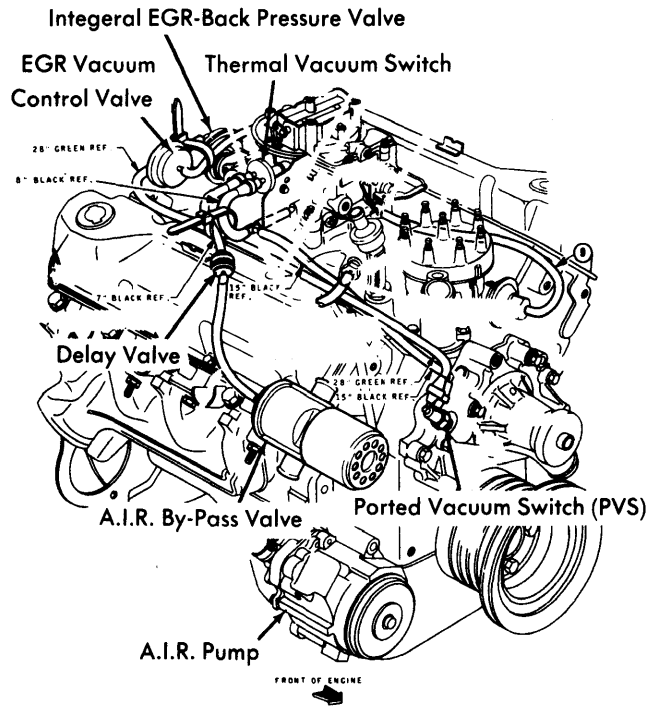


Fig. 49 7-17B-R1 Federal, A/C & Non A/C, Auto. Trans., 400"
(LTD II, T-Bird, Cougar, MK V, Ford, Mercury, Sta. Wgn.)

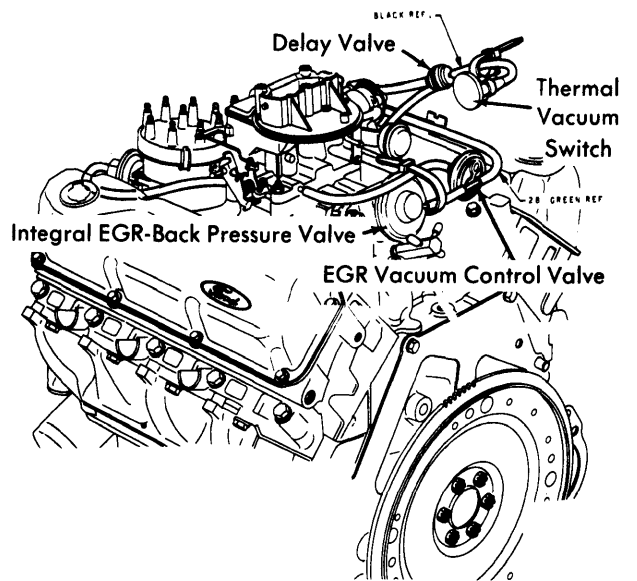
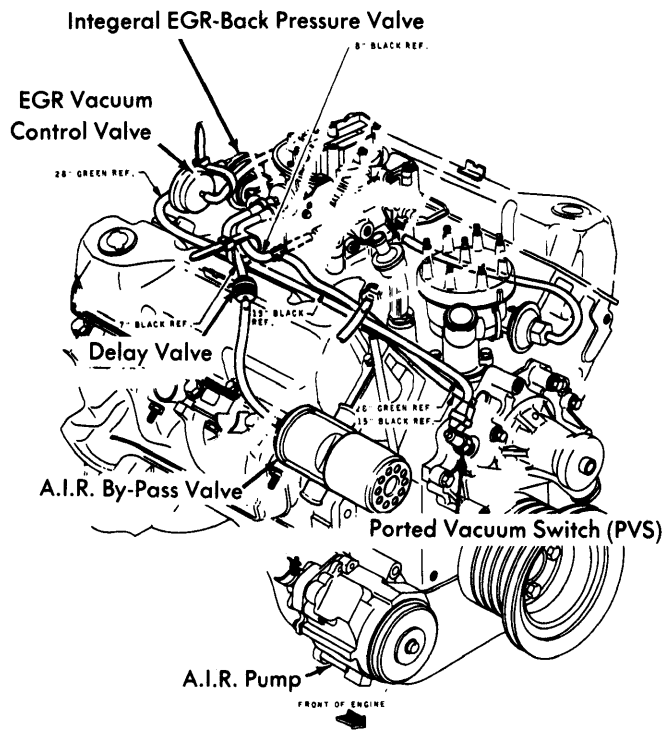


Fig. 50 7-17C-R1 Federal, A/C & Non A/C, Auto. Trans., 400"
(LTD II, Cougar, Ranchero, T-Bird, LTD II Sta. Wgn., Cougar Sta. Wgn., Ford, Mercury, Ford Sta. Wgn., Mercury Sta. Wgn., MK V)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

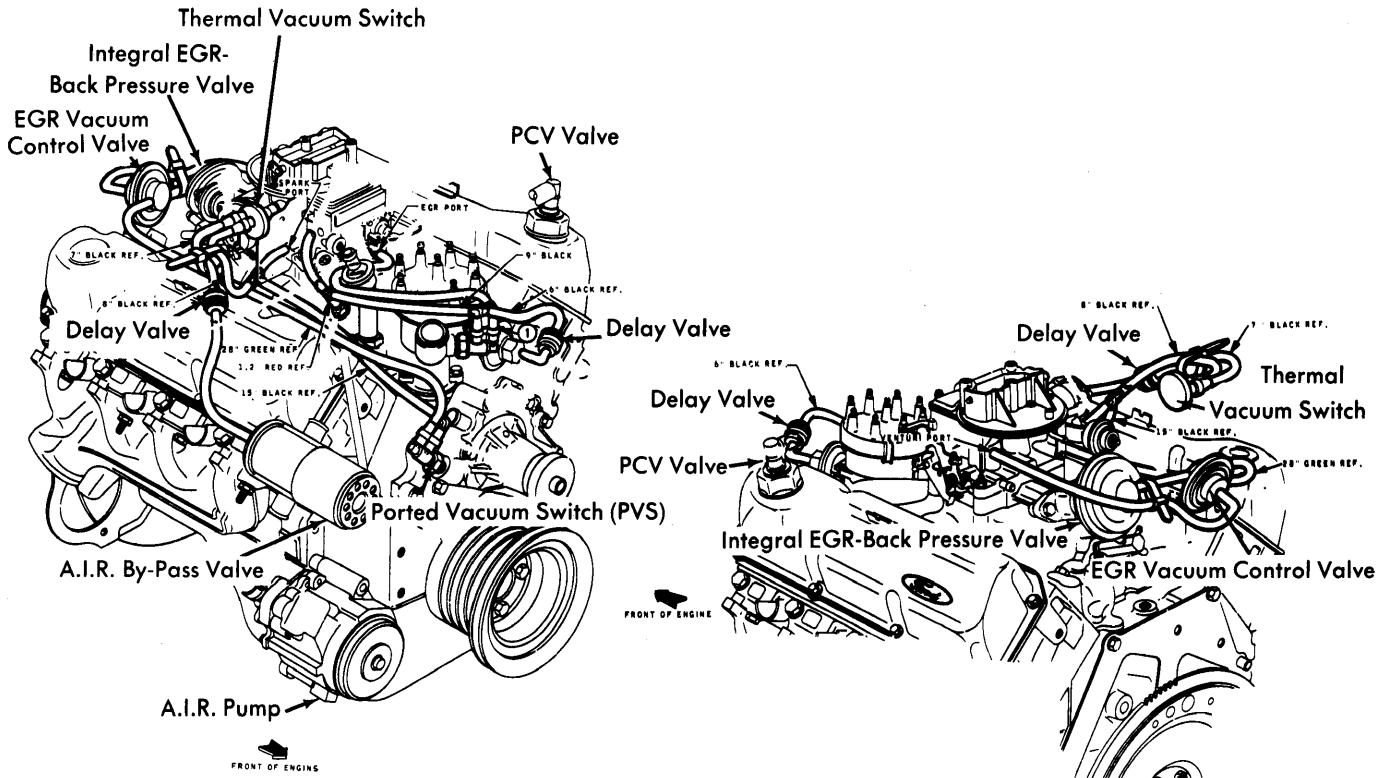


Fig. 51 7-17N-R0 Calif., A/C & Non A/C, Auto. Trans., 400"
(LTD II, Cougar, Ranchero)

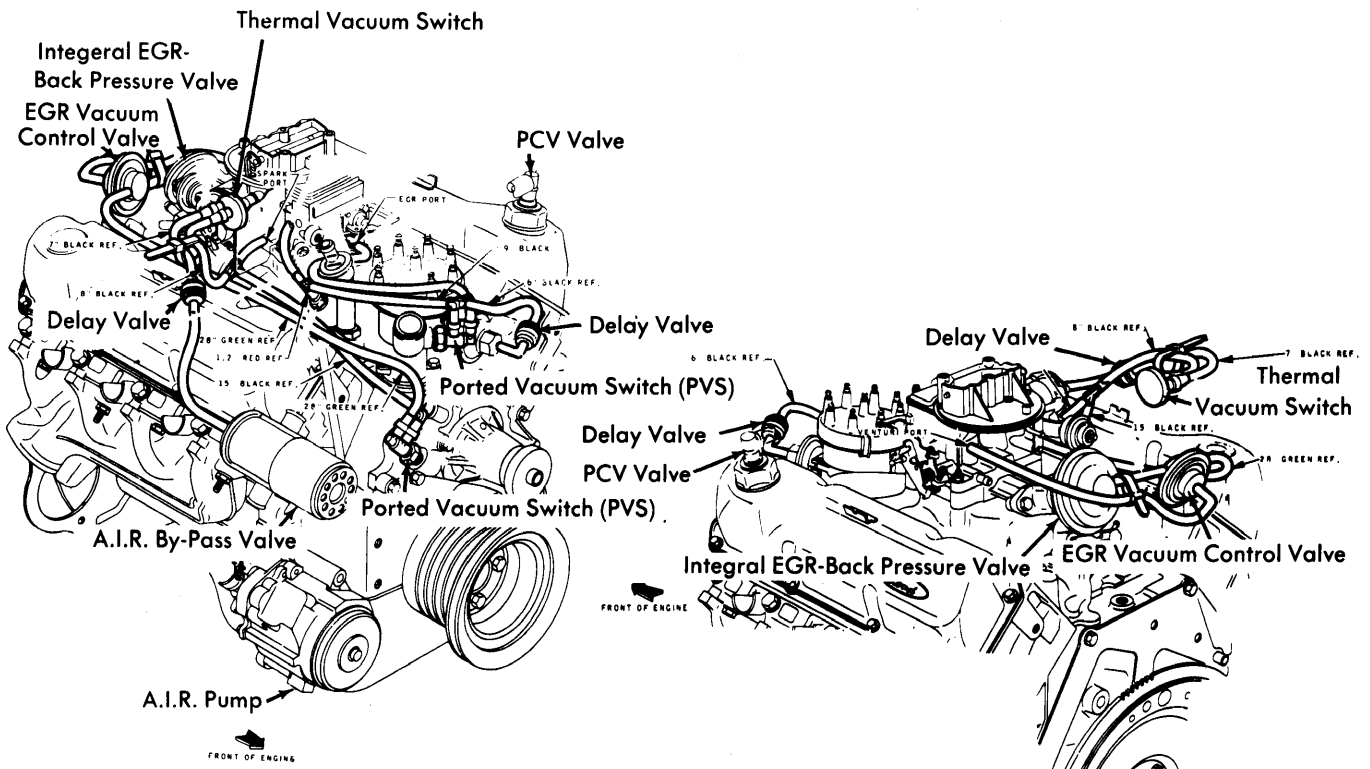


Fig. 52 7-17P-R0 Calif., A/C & Non A/C, Auto. Trans., 400"
(LTD II, Cougar)

1977 EXHAUST EMISSION SYSTEMS

Ford Motor Co. Vacuum Diagrams (Cont.)

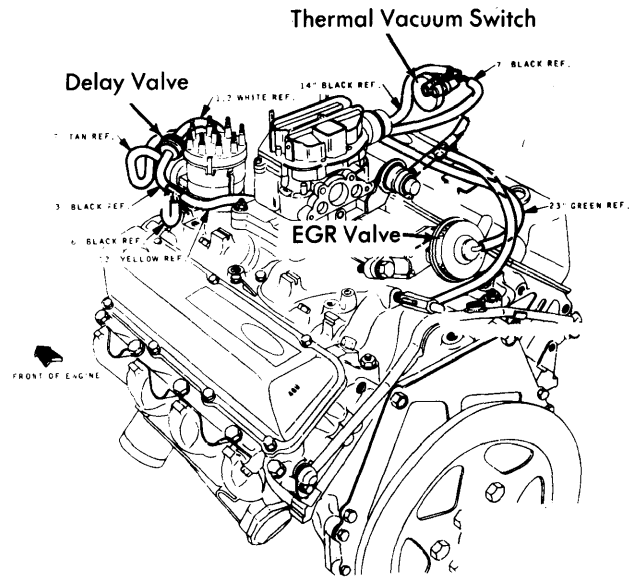
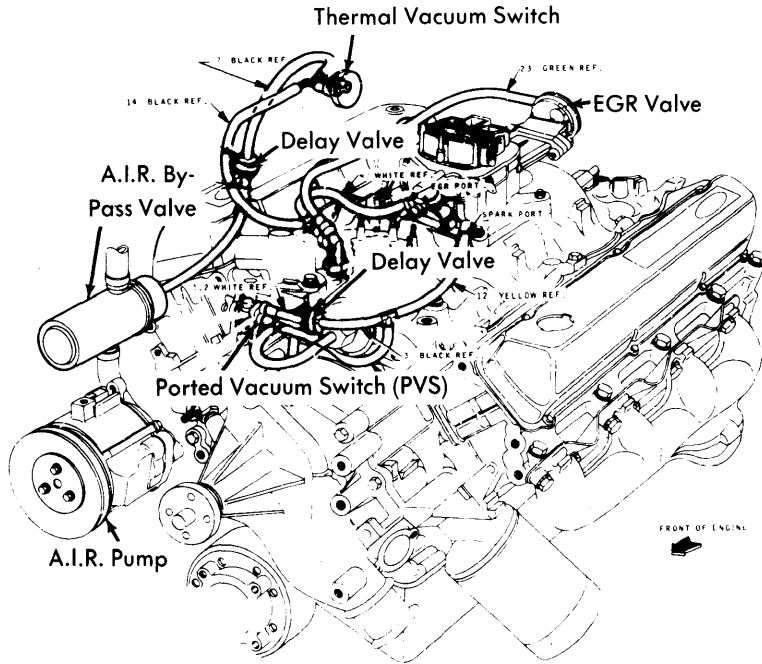


Fig. 53 7-19A-R2 Federal, AC & Non A/C, Auto. Trans., 400"
(Ford, Mercury, MK V, Lincoln)

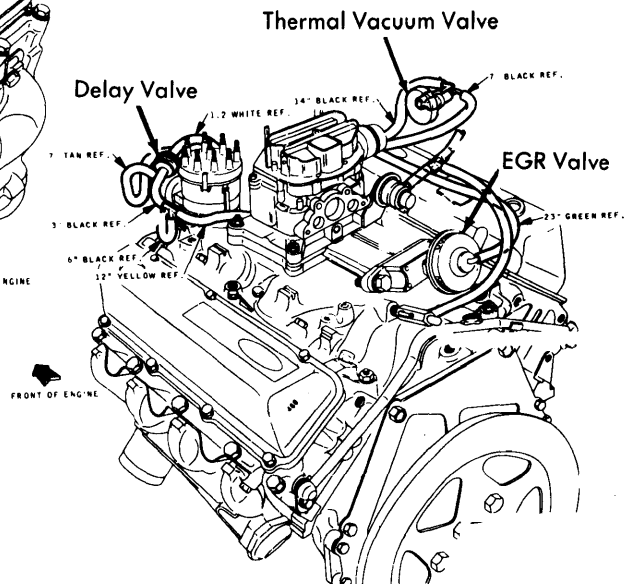
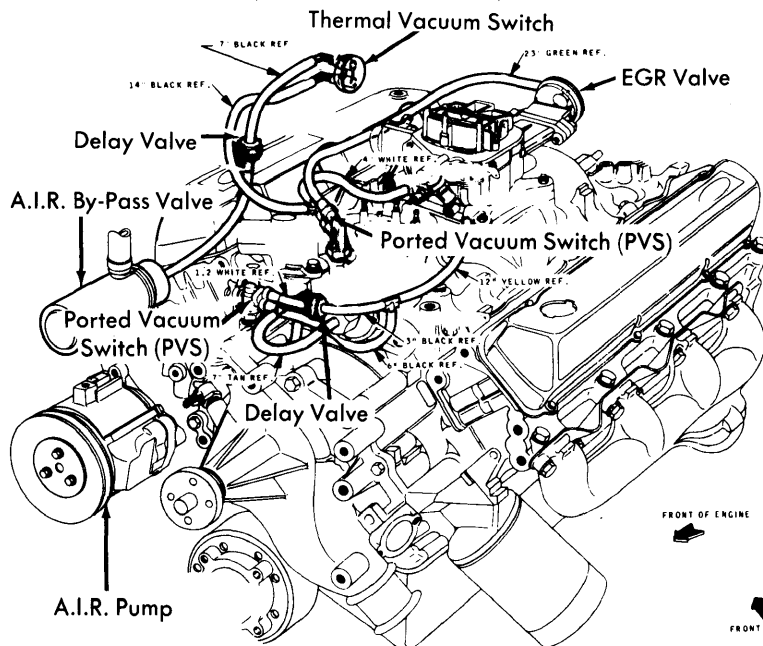


Fig. 54 7-19A-R3 Federal, A/C & Non A/C, Auto. Trans., 460"
(Ford, Mercury, MK V, Lincoln)

1977 EXHAUST EMISSION SYSTEMS Ford Motor Co. Vacuum Diagrams (Cont.)

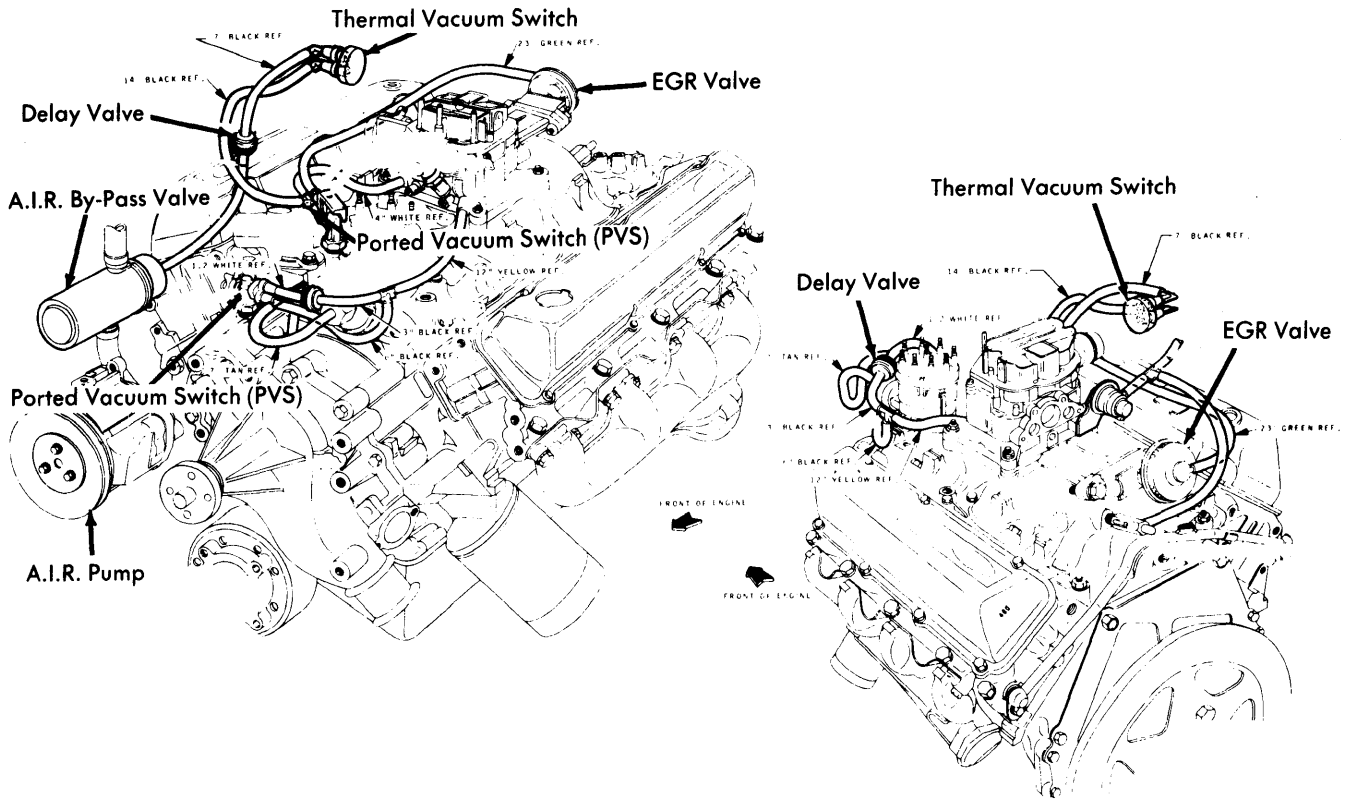


Fig. 55 7-19A-R8 Federal, A/C & Non A/C, Auto. Trans., 460"
(Ford, Mercury, MK V, Lincoln)