

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-133-12
Relating to Exemptions under Section 27156
of the Vehicle Code

REDLINE, INC., A SUBSIDIARY OF IMPAC
REDLINE CARBURETOR CONVERSION KITS #K8607 AND #K8608
USING ONE (1) WEBER MODEL 32/34 DFT9 A or 32/39 DFT11 A

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Redline Carburetor Conversion Kits #K8607 and #K8608 using one (1) Weber 32/34 DFT9 A or 32/34 DFT11 A carburetor have been found not to reduce the effectiveness of required motor vehicle pollution control devices and, therefore, are exempt from the prohibitions of Section 27156 of the Vehicle Code for the vehicles listed below:

<u>Year</u>	<u>Make</u>	<u>Model</u>	<u>Engine (liter, CID)</u>	<u>Redline Kit No.</u>
1977-1978	Ford	Courier	2.3, 140	K8607
1979-1980	Ford	Courier	2.3, 140	K8608

The following modifications to the exhaust emission control system are permitted:

- 1) The throttle positioner (dashpot), on vehicles so equipped, may be removed.
- 2) The deceleration control valve (Coasting Richer valve) and accelerator microswitch, on vehicles so equipped, may be disconnected and removed.
- 3) The vacuum hose routing may be changed as specified in the installation instructions.

All other original equipment emission control devices must be retained. The vehicle must be tuned to the vehicle manufacturer's specifications.

This Executive Order is valid provided that installation instructions for this device will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

Changes made to the design or operating conditions of the device, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of a kit as an individual device.

This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE REDLINE CARBURETOR CONVERSION KITS #K8607 AND #K8608.

No claim of any kind, such as "Approved by Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644. (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

REDLINE, INC.

EXECUTIVE ORDER D-133-12
(Page 3 of 3)

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at El Monte, California, this 8th day of September, 1986.



R. D. Drachand, Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS
NO. K8607 AND NO. K8608 USING ONE (1) 32/34 DFT9 A OR
32/34 DFT11 A WEBER CARBURETOR FOR EXEMPTION FROM
THE PROHIBITIONS OF VEHICLE CODE SECTION 27156
IN ACCORDANCE WITH SECTION 2222, TITLE 13
OF THE CALIFORNIA ADMINISTRATIVE CODE

SEPTEMBER, 1986

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS
NO. K8607 AND NO. K8608 USING ONE (1) 32/34 DFT9 A OR
32/34 DFT11 A WEBER CARBURETOR FOR EXEMPTION FROM
THE PROHIBITIONS OF VEHICLE CODE SECTION 27156
IN ACCORDANCE WITH SECTION 2222, TITLE 13
OF THE CALIFORNIA ADMINISTRATIVE CODE

by

Mobile Source Division
State of California
AIR RESOURCES BOARD
9528 Telstar Avenue
El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Redline, Inc., a distributor of Italian made Weber carburetors, has applied for exemption from the prohibitions of Vehicle Code Section 27156 for the Redline Carburetor Conversion Kits No. K8607 and No. K8608 using one (1) Weber model 32/34 DFT9 A or 32/34 DFT11 A carburetor.

These Redline Carburetor Conversion Kits are designed to replace the Hitachi carburetors found on 1977-1980 Ford Courier pick-up trucks with 2.3 liter engines.

Comparative exhaust emission tests and other information submitted demonstrate that the aftermarket Redline Carburetor Conversion Kits No. K8607 and No. K8608 using one (1) Weber model 32/34 DFT9 A or 32/34 DFT11 A carburetor do not adversely affect emissions of the applicable vehicles. Based on the results of the tests and the evaluation of the Redline Carburetor Conversion Kits, the staff recommends that the exemption be granted as requested for the following vehicle applications:

<u>Year</u>	<u>Make</u>	<u>Model</u>	<u>Engine (liter, CID)</u>	<u>Redline Kit No.</u>
1977-1978	Ford	Courier	2.3, 140	K8607
1979-1980	Ford	Courier	2.3, 140	K8608

CONTENTS

	<u>Page Number</u>
<u>SUMMARY</u>	i.
<u>CONTENTS</u>	ii.
I. <u>INTRUODUCTION</u>	1
II. <u>CONCLUSION</u>	1
III. <u>RECOMMENDATION</u>	2
IV. <u>DEVICE DESCRIPTION</u>	2
V. <u>DEVICE EVALUATION</u>	4
VI. <u>DISCUSSION</u>	5
 <u>APPENDIX</u>	
OEM Carburetor Diagrams	A-1
Weber 32/34 DFT9 A	A-2
Installation Instructions: K8607, K8608	A-3
Underhood label	A-4
Carburetor Calibrations: K8607, K8608	A-5
Identification Labels: K8607, K8608	A-6

EVALUATION OF THE REDLINE CARBURETOR CONVERSION KITS NO. K8607 AND NO. K8608 USING ONE (1) MODEL 32/34 DFT9 A OR 32/34 DFT11 A WEBER CARBURETOR FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13 OF THE CALIFORNIA ADMINISTRATIVE CODE

I. INTRODUCTION

Redline, Inc. of Compton, California, a subsidiary of Imported Parts and Accessories Corporation (IMPAC), is a distributor of Italian made Weber carburetors. The company has applied for exemption from the prohibitions of Vehicle Code Section 27156 for two Carburetor Conversion Kits designated as Redline Kits No. K8607 and No. K8608 using one (1) Weber model 32/34 DFT9 A or 32/34 DFT11 A carburetor to replace the original equipment manufacturer (OEM) Hitachi two-barrel carburetors found on the following vehicles:

<u>Year</u>	<u>Make</u>	<u>Model</u>	<u>Engine (liter, CID)</u>	<u>Redline Kit No.</u>
1977-1978	Ford	Courier	2.3, 140	K8607
1979-1980	Ford	Courier	2.3, 140	K8608

This report describes the evaluation of the Redline Carburetor Conversion Kits and the findings.

II. CONCLUSION

Comparative exhaust emission data and other information submitted by the applicant demonstrated that the Redline Kits No. K8607 and No. K8608 using one (1) 32/34 DFT9 A or 32/34 DFT11 A Weber carburetor meet the Air Resources Board (ARB) requirements for exemption from the prohibitions of Vehicle Code Section 27156.

III. RECOMMENDATION

Based on the submitted information and the emissions test data on the Redline Carburetor Conversion Kits, the staff recommends that Redline, Inc. be

granted exemption from the prohibitions of Vehicle Code Section 27156 for the Redline Carburetor Conversion Kits No. K8607 and No. K8608 for use on the vehicles described above and that Executive Order No. D-133-12 be issued.

IV. DEVICE DESCRIPTION

The Redline Carburetor Conversion Kits No. K8607 and No. K8608 are similar in design. Each kit uses one (1) model 32/34 DFT9 A or 32/34 DFT11 A Weber carburetor as an economical replacement for the OEM carburetors found on the 1977-1980 Ford Courier pick-up trucks described previously.

These vehicles are equipped with a Hitachi carburetor. These Hitachi carburetors are of the progressive two-barrel design (See Appendix 1).

The Weber 32/34 DFT is a progressive two-barrel carburetor which is similar in basic design to the OEM carburetors (See Appendix 2). The Weber 32/34 DFT is a slightly different version of the Weber DFT (Ford 740) carburetors used as original equipment on some Ford imports originally sold in California. It has provisions for vacuum operated emission control systems, including distributor vacuum advance/retard units, EGR and air injection control systems.

A variety of emission control devices are used on these vehicles. Some are integral to the OEM carburetor and others are external devices which either control specific functions of the OEM carburetor or are activated by movement of the throttle. The installation of the Weber carburetor retains most of these devices or duplicates the functions of the devices in a different manner, however, some devices cannot be retained. These devices and their disposition after the installation of the Weber carburetor are:

- 1) The throttle positioner (dashpot), on vehicles so equipped, is removed.

- 2) The deceleration control valve (Coasting Richer Valve) and accelerator switch, on vehicles so equipped, are disconnected and removed.

The Redline Kits No. K8607 and No. K8608 come complete with a Weber DFT carburetor, an air cleaner adaptor and all the hoses, gaskets and hardware necessary to install the Weber carburetor on the Ford Courier. Installation instructions, which are included in every kit, show the kit installer how to properly install the Weber carburetor. Vacuum hose routing diagrams, contained in the instructions, show the proper vacuum hose connections to the Weber carburetor (see Appendix 3). An underhood label, included in the kit, is to be affixed to the vehicle near the OEM vacuum hose routing diagram which states that the vehicle is equipped with a Redline Kit and that appropriate vacuum hose routing diagrams may be found in the applicable Redline Kit installation instructions. For persons who may have technical questions or need a copy of a vacuum hose routing diagram, the Redline technical information phone numbers (Tech Lines) are included on this label (see Appendix 4). The carburetor calibrations for the kits No. K8607 and No. K8608 are shown in Appendix 5. Facsimilies of the identification labels are shown in Appendix 6.

V. DEVICE EVALUATION

The applicant performed comparative cold-start CVS-75 exhaust emission tests at Import Certification Laboratories in Anaheim, California. A 1980 Ford Courier pick-up truck with a 2.3 liter engine and a 5-speed manual transmission was used as the test vehicle. The 1980 model-year vehicle was used for testing since vehicles of 1980 model-year were required to meet more

stringent emission standards than vehicles of the previous model-years. It would be expected that vehicles of previous model-years would have the same degree of performance/emissions impact as the vehicle tested when using the same Redline Kit.

The results of the submitted data are shown in Table 1.

Table 1
Test Procedure: CVS-75

<u>Condition</u>	Exhaust Emissions gm/mi			Fuel Economy City mi/gal
	<u>HC</u>	<u>CO</u>	<u>NOx</u>	
Baseline	1.54	25.77	0.71	19.30
	1.72	30.31	0.75	18.76
Average	1.63	28.04	0.73	19.03
Redline Kit	1.28	15.98	0.69	17.51
	1.32	15.51	0.72	17.65
Average	1.30	15.75	0.71	17.58

Confirmatory testing was performed at the Haagen-Smit Laboratory, on the same vehicle and the results of these tests are shown in Table 2.

Table 2
Test Procedure: CVS-75

<u>Condition</u>	Exhaust Emissions gm/mi			Fuel Economy City mi/gal
	<u>HC</u>	<u>CO</u>	<u>NOx</u>	
Baseline	1.68	23.07	0.94	17.7
	1.56	23.94	0.84	17.6
Average	1.62	23.51	0.89	17.6
Redline Kit	1.36	17.95	0.76	15.3
	1.33	13.66	0.70	15.6
Average	1.35	15.81	0.73	15.5

VI. DISCUSSION

The results of the emission testing show no increase in emissions. This demonstrates that the installation of the Redline Kit. No. K8608 and the modifications to the original exhaust emission control system required for the installation will not have an adverse effect on emissions from the 1980 Ford Courier pick-up test vehicle which was selected to be representative of all the vehicles on this exemption application. Since Redline Kits No. K8607 and No. K8608 are similar in design, it would be expected that the conversion kit No. K8607 would achieve the same level of emission control when installed on the same type of vehicles to replace OEM carburetors of similar designs.

Redline has submitted all the required information and fulfilled the requirements for an exemption.

HITACHI DCS 328 2-BARREL (Cont.)

10) Mark the primary throttle plate location in reference to its bore and to its relative position on throttle shaft. Remove throttle plate and shaft from lower body.

INSPECTION & CLEANING

Clean all parts thoroughly in solvent and check all passages and parts for wear or damage. Make sure that all jets are clear and clean. Do not attempt to clean jets by using wire or

other objects which might damage calibrated orifices. Discard old gaskets and use new gaskets for assembly.

REASSEMBLY

Reassemble carburetor in reverse order of disassembly. Make sure that primary and secondary components are installed in their correct locations. When installing throttle valve or choke valve, make sure to eliminate gap between valve and wall of carburetor. When assembling float, ensure float collar is installed.

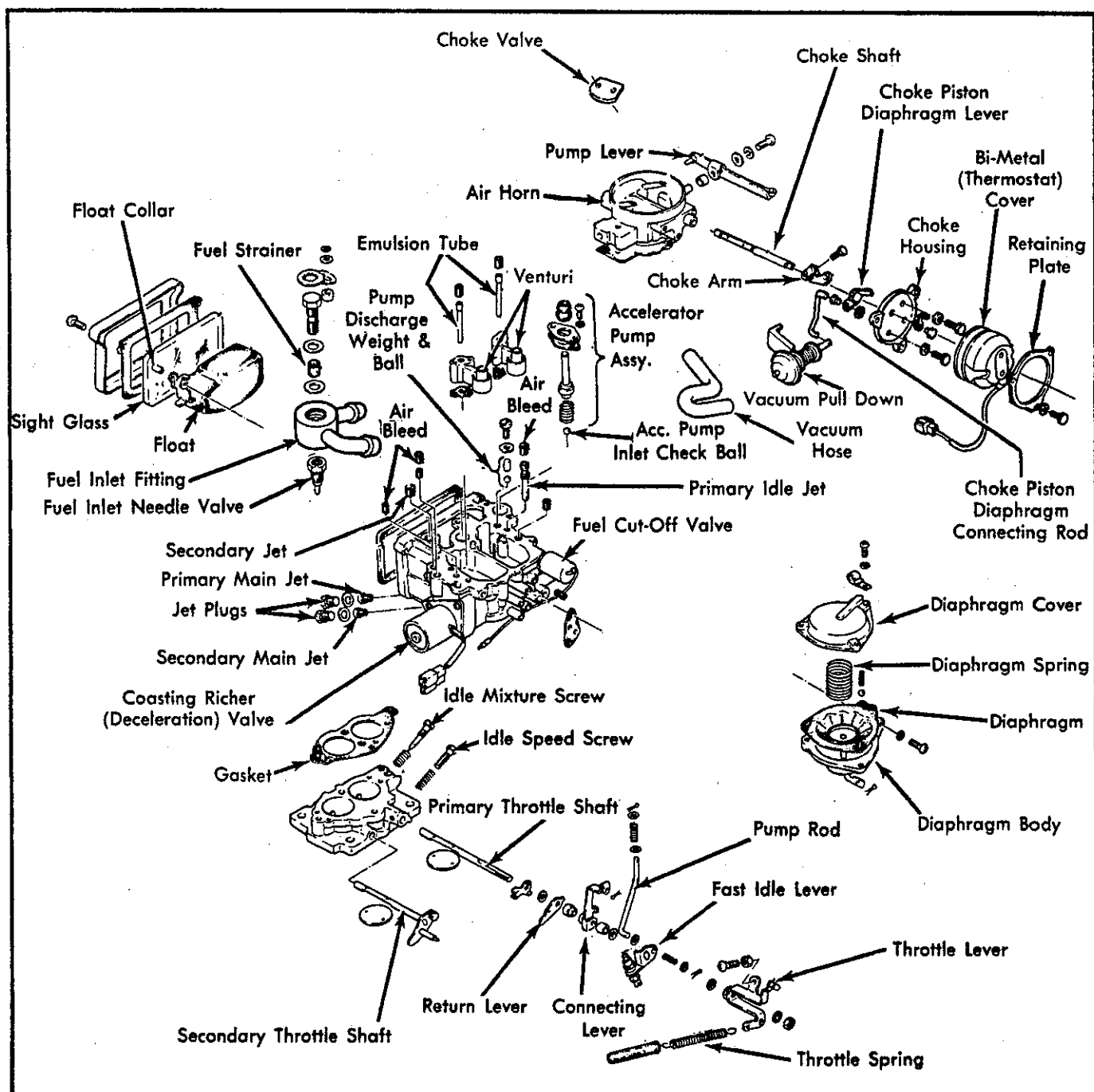
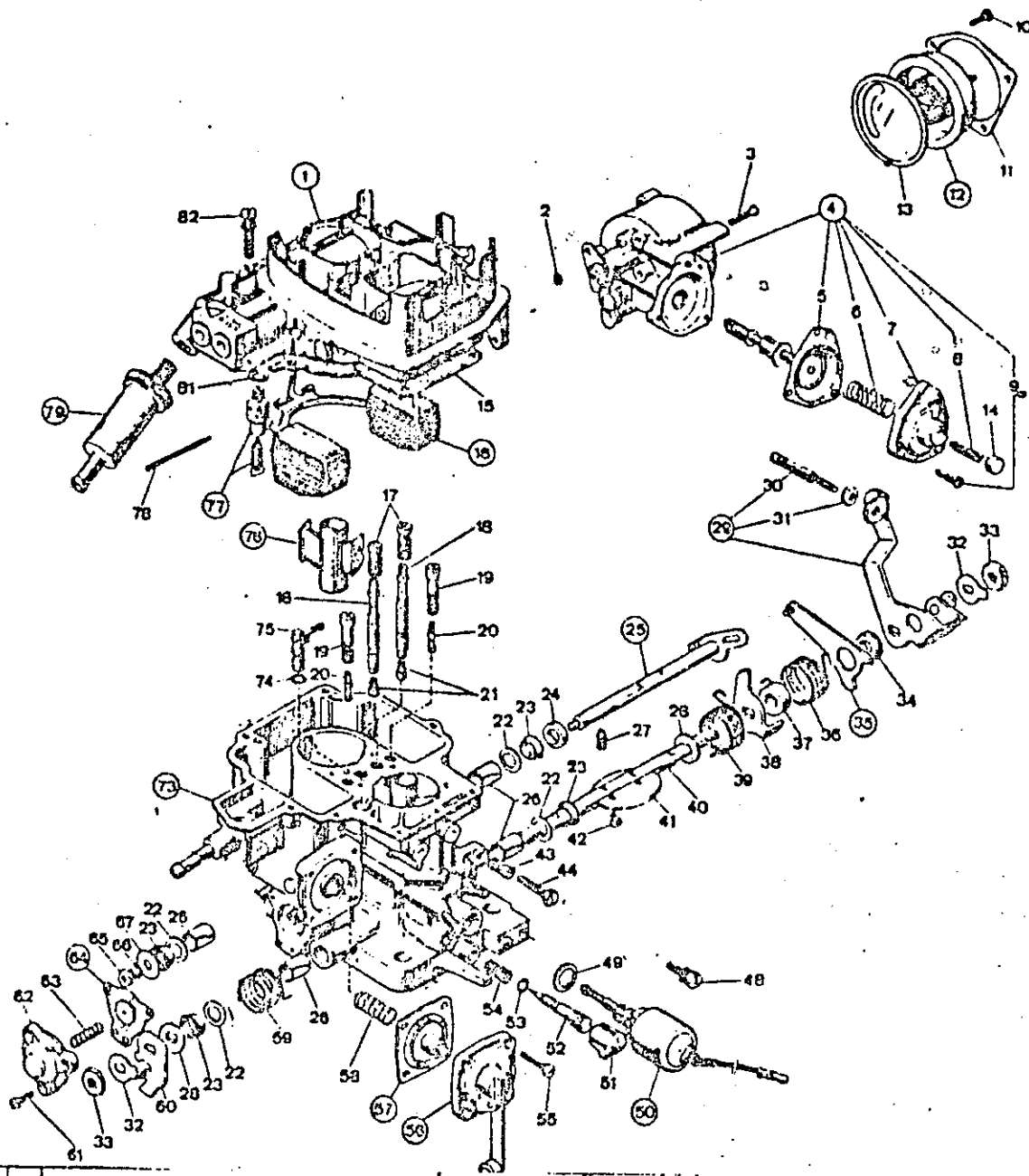


Fig. 7 Exploded View of Hitachi DCS 328 2-Barrel Carburetor
(Ford Courier 2300)



Key Nr.	Qty	PART NAME	Reference number	Key Nr.	Qty	PART NAME	Reference number
1	1	TOP COVER ASSY	31715.710	18	1	Secondary emulsion tube	61450.12
2	1	Auto choke "O" ring seal	41555.008	19	2	Idle jet holder	65070.00
3	3	Auto-choke fixing screw	64555.001	20	1	Primary idle jet	74103.00
4	1	AUTO-CHOKE ASSY including:	57004.225	20	1	Secondary idle jet	74403.00
5	1	- Choke diaphragm	47407.159	21	1	Primary main jet	73403.10
6	1	- Diaphragm loading spring	47600.225	21	1	Secondary main jet	73405.10
7	1	- Diaphragm cover	32384.041	22	4	Washer	65610.00
8	1	- Diaphragm adjusting screw	64555.022	23	4	Shaft sealing bush	41570.01
9	3	- Diaphragm cover fixing screw	64550.004	24	1	Spacer	12700.05
10	3	Plate fixing screw	64615.008	25	1	Secondary shaft	10075.00
11	1	Thermostat housing lock ring	52135.029	26	4	Shaft bearing plate	62100.01
12	1	Thermostat housing	57004.225	27	1	Secondary throttle adjusting screw	64500.01
13	1	Host sealing gasket	41040.034	28	2	Washer	65600.01
14	1	Screw plug	61075.011	29	1	Throttle valve control lever including	40051.01
15	1	Carburetor cover gasket	41105.037	30	1	- Fast idle adjusting screw	64500.01
16	1	Float	41030.012	31	1	- Adjusting screw fixing nut	64710.01
17	1	Primary air correction jet	77501.250*	32	2	Lock washer	65600.01
17	1	Secondary air correction jet	77501.250*	33	2	Primary shaft fixing nut	64710.01
18	1	Primary emulsion tube	61450.222*	34	1	Bush for free lever	12700.05

5/13/86

THIS VEHICLE IS EQUIPPED WITH A REDLINE/WEBER CARBURETOR CONVERSION KIT. (See carburetor identification tag for kit number) PLEASE REFER TO THE APPROPRIATE VACUUM DIAGRAM SUPPLIED WITH THE KIT FOR PROPER VACUUM HOSE ROUTING. IF NEEDED, COPIES OF THE APPLICABLE VACUUM MAP ARE AVAILABLE THROUGH REDLINE, INC.

TECH LINES

California 1-800 932-3722
U.S. 1-800 932-3787

(213) 604-0275

Stage of Development ProtoDate: 9/16/86Prototype # K-8608

Location of # _____

Carburetor Model 32/34 DFTPart # 22670.045CNA = Not Applicable
AF = As FactoryApplication: Ford Model Courier Year 80 Month _____Engine Size 2.3 Air Cond. - (Yes) NoTransmission: (MT) AT-----
Calibrated Parts

Adjustments

		Value
Main venturi	32/34	<u>Float levelling:</u>
Auxiliary venturi	4.0/4.0	with gasket (brass) mm
Main jet	"117" / 115	with gasket (plastic) 7 mm
Air corrector jet	155 / 160	without gasket (brass) mm
Emulsion tube	F-21 / F-30	without gasket (plastic) mm
Full power fuel bush	.50	from face to carburetor bowl mm
full power air bush	A/F	Maximum float stroke 19 mm
Power valve spring	47600 131 P.n.	
Fuel enrichment bush	170	<u>Accelerating pump:</u>
Air enrichment bush	110	10 complete pump strokes
Mixture enrichment tube/hole	2.00	delivery cm ³
Auxiliary venturi mixture enrichment bush		<u>Pump Cam</u> Throttle opening pump 14850 130
		Stroke adjustment mm

Calibrated Parts, Con't.

Adjustments, Con't.

				Value
Idle jet	"60" / "60"			Main throttle plate adjustment
Idle air bush	175/70			1st throttle opening at start of 2nd one 7.2 mm
Irreversibility hole	NA			
Idle mixture adjusting hole/bush	1.20			Dash-pot
Idle mixture bush	NA			Throttle opening at dash pot contact NA mm
Sonic idle air bush/hole	NA			
By-pass idle air hole				
By-pass idle mixture hole				Manual starter
Spark Advance hole	AF			Mechanical pull-down mm
Progression hole	AF	T ¹		Fast idle mm
	AF	T ²		Pneumatic pull-down mm
		T ³		Minimum pneumatic pull-down mm
		T ⁴		Max pneumatic pull-down (half choke) mm
		T ⁵		
				Starter rod complete P.n.
				Starter spring P.n.
Progression slot	NA			Automatic starter
Throttle plate angle	78°/78°			Starter plate clearance adj. .6 mm
Needle valve	1.50			Mechanical pull-down 5 mm
Fuel recycle hole	.50			Fast idle on starter piston
				Fast idle
Pump jet	.50			Fast idle cam timing (mm/step nr.)
Pump discharge				Pull-down lever/modular clr. mm
Inlet valve w/discharge pump	.45			Minimum pneumatic pull-down mm
Pneumatic pump jet	NA			Maximum pneumatic pull-down mm
Pneumatic pump discharge	NA			Fixed index mark
Mechanical pump diaphragm	47407.050	P.n.		Moving index adjustment

librated Parts, Con't.

Adjustments, Con't.

		Value
Starter jet	Bimetal assembly 57804 416	P.n.
Starter air jet	Pull-down diaphragm spring	P.n.
Gasket kit P.n.	Starter spring	P.n.
Tune up kit P.n.	Starter spring	P.n.
Master repair kit P.n.		

ADDITIONAL NOTES

SEE ATTACHMENT

Stage of Development Proto

Date: 9/16/86

Prototype # K-8608

Location of # _____

Carburetor Model 32/34 DFT

Part # 22670.045C

NA = Not Applicable

Application: Ford Model Courier Year 80 Month _____

AF = As Factory

Engine Size 2.3 Air Cond. - (Yes) No

Transmission: (MT) AT

Calibrated Parts

Adjustments

		Value
Main venturi	32/34	<u>Float levelling:</u>
Auxiliary venturi	4.0/4.0	with gasket (brass) mm
Main jet	"117" / 115	with gasket (plastic) 7 mm
Air corrector jet	155 / 160	without gasket (brass) mm
Emulsion tube	F-21 / F-30	without gasket (plastic) mm
Full power fuel bush	.50	from face to carburetor bowl mm
full power air bush	A/F	Maximum float stroke 19 mm
Power valve spring	47600 131 P.n.	
Fuel enrichment bush	170	<u>Accelerating pump:</u>
Air enrichment bush	110	10 complete pump strokes
Mixture enrichment tube/hole	2.00	delivery cm ³
Auxiliary venturi mixture enrichment bush		<u>Pump Cam</u> Throttle opening pump 14850 130
		Stroke adjustment mm

Calibrated Parts, Con't.

Adjustments, Con't.

			Value
Idle jet	"60" / "60"		Main throttle plate adjustment
Idle air bush	175/70		1st throttle opening at start of 2nd one 7.2 mm
Irreversibility hole	NA		
Idle mixture adjusting hole/bush	1.20		Dash-pot
Idle mixture bush	NA		Throttle opening at dash pot
Sonic idle air bush/hole	NA		contact NA mm
By-pass idle air hole			
By-pass idle mixture hole			Manual starter
Spark Advance hole	AF		Mechanical pull-down mm
Progression hole	AF	T ¹	Fast idle mm
	AF	T ²	Pneumatic pull-down mm
		T ³	Minimum pneumatic pull-down mm
		T ⁴	Max pneumatic pull-down (half choke) mm
		T ⁵	
			Starter rod complete P.n.
			Starter spring P.n.
Progression slot	NA		Automatic starter
Throttle plate angle	78°/78°		Starter plate clearance adj. .6 mm
Needle valve	1.50		Mechanical pull-down 5 mm
Fuel recycle hole	.50		Fast idle on starter piston
			Fast idle
Pump jet	.50		Fast idle cam timing (mm/step nr.)
Pump discharge			Pull-down lever/modular clr. mm
Inlet valve w/discharge pump	.45		Minimum pneumatic pull-down mm
Pneumatic pump jet	NA		Maximum pneumatic pull-down mm
Pneumatic pump discharge	NA		Fixed index mark
Mechanical pump diaphragm	47407.050 p.n.		Moving index adjustment

lubricated Parts, Con't.

Adjustments, Con't.

			Value
Starter jet		Bimetal assembly 57804 416	P.n.
Starter air jet		Pull-down diaphragm spring	P.n.
Gasket kit	P.n.	Starter spring	P.n.
Tune up kit	P.n.	Starter spring	P.n.
Master repair kit	P.n.		

ADDITIONAL NOTES

SEE ATTACHMENT

CARBURETOR

REDLINE-WEBER

32/34 DFT 9A/11A

K 8607

CARB E.O. No. D133-X



CARBURETOR

REDLINE-WEBER

32/34 DFT 9A/11A

K 8608

CARB E.O. No. D133-X

INSTALLATION INSTRUCTIONS



READ & UNDERSTAND ALL STEPS OF THESE INSTRUCTIONS BEFORE BEGINNING THIS INSTALLATION. AFTER UNPACKING, EXAMINE THE CARBURETOR AND OTHER COMPONENTS FOR SHIPPING DAMAGE.

THESE INSTRUCTIONS SHOULD BE RETAINED WITH VEHICLE RECORDS AFTER INSTALLATION OF THIS KIT FOR SMOG INSPECTION PURPOSES.

FORD COURIER & MAZDA PICKUP 1972 TO 1984

*Kit Nos. K8605 and 52-50701 ('72-'78 Courier 1.8 and Mazda B1600, B1800)
K8606 and 52-50703 ('79-'82 Courier, 2.0 and '79-'84 Mazda B2000)
K8607 and 52-50704 ('77-'78 Courier, 2.3)
K8608 and 52-50705 ('79-'80 Courier, 2.3)*

TOOLS AND EQUIPMENT NEEDED

Combination, box or open-end wrenches (metric)
Socket Set (metric)
Screwdrivers (regular and Phillips)
Pliers
Wiping Rags
Knife
Gasket Scraper
Cleaning Solvent
Gasket Sealer

PARTS SUPPLIED WITH INSTALLATION KIT:

1 - 32/34 DFT Weber Carb.
1 - Air Filter Adaptor
1 - Wire Assembly
1 - Under Hood Label
1 - Hardware Kit

TUNE-UP SPECIFICATIONS

All tune-up specifications for the Weber Carburetor remain the same as those specified by the Factory for the original unit. Emissions tune-up should be carried out by a suitably qualified Dealer or independent garage, using infrared gas and analyzing equipment.

NOTE: Late model vehicles fitted with Emission Control Systems have many vacuum lines and electrical connections in the fuel systems. It is essential when dismantling, that disconnected lines should be identified with a corresponding number tag or label system. To establish function, locate and identify the source of each line. Use the under hood emissions diagram or the factory service manual for reference when identifying hoses. (Modified vacuum diagrams showing the Weber installation are provided in these instructions)

DISASSEMBLY

1. Remove the vehicle's gas cap.
2. Disconnect the battery.
3. **'72-'78 VEHICLES 1.6-1.8 LITRE ENG.:**
'77-'78 2.3 LITRE ENG.: Loosen the air filter clamp and attached hoses. Remove the air filter from the carburetor.
4. **'79-'84 VEHICLES 2.0-2.3 LITRE ENG.:**
Remove the two air filter mounting nuts, (INSIDE AIR FILTER HOUSING.) Disconnect the air pump hoses and remove the filter assembly. Retain the mounting nuts for use later.
5. Remove the servo-diaphragm assembly and (if equipped) the dashpot & bracket assembly. These devices will not be used with the Weber carburetor. Remove the vacuum hoses for

Kit Nos. K8605, K8606, 52-50701 and 52-50703 are sold under the provisions of California Air Resources Board Executive Order No. D-133-7 (C.A.R.B. E.O. No. D-133-7) Products with C.A.R.B. E.O. numbers are exempt from the prohibitions of Section 27156 of the California Vehicle Code. Performance kits so noted are legal for use on public highways in California.

WEBER DISTRIBUTION

these devices and plug the vacuum sources with the plugs provided in the kit.

6. If the vehicle is equipped with a "Coasting Richer" micro-switch, unplug the wires and remove the switch from the bracket. This device will not be used with the Weber carburetor.
7. Disconnect the fuel inlet and fuel return lines from the original carburetor.
8. **'72-'75 VEHICLES:** Disconnect and remove the original dashpot, coasting richer valve and the accelerator switch. Disconnect all vacuum lines connected to the stock carburetor. All vacuum lines except the distributor vacuum advance should be plugged with the rubber caps provided in the kit.
9. **'76-'84 VEHICLES:** Disconnect all vacuum hoses and electrical wires connected to the original carburetor. Use a factory service manual or the underhood vacuum diagram to identify and tag each hose. (Note: Weber modified vacuum diagrams are found at the end of these instructions for '76-'84 model years)
10. Disconnect the throttle linkage from the carburetor. Remove the throttle return spring.
11. Remove the stock carburetor hold-down nuts and washers. Carefully lift the carburetor off the intake manifold.
12. Remove the stock heat spacer and flange gaskets. Insert a clean rag in the intake manifold ports.
13. Thoroughly clean the carburetor mounting surface of the intake manifold.
14. **ALL 1.6-1.8 LITRE ENG.:** Remove the stock throttle lever from the original carburetor. Cut the micro-switch tab off and install the lever on the Weber carburetor. (FIG. A)

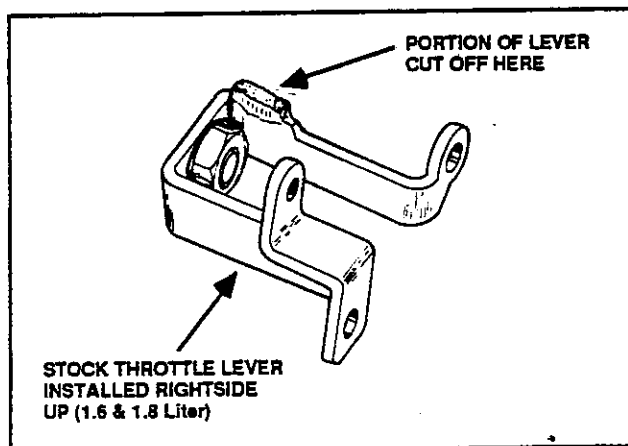


FIG. A

15. **ALL 2.0 LITRE ENG.:** The throttle lever required for these applications is already installed on the Weber carburetor.
16. **ALL 2.3 LITRE ENG.:** Remove the stock throttle lever from the original carburetor. Turn the lever **UPSIDE DOWN** and install it on the Weber carburetor. (FIG. B) **CAUTION:** When installing the throttle lever on the Weber carburetor, **DO NOT OVERTIGHTEN THE NUT.** Proper tightness can be achieved by installing the nut just slightly more than finger-tight. After tightening the nut, open the choke by hand and check for full throttle operation from idle to wide-open-throttle. If any sticking or binding occurs, loosen the nut and re-tighten with reduced torque. If excessive torque is applied, realignment of the throttle plate may be necessary. Recheck throttle operation. When proper tightness of the nut has been achieved, and no sticking or binding occurs during operation of the throttle; lock the nut in position by bending the tab on the lockwasher around the nut.

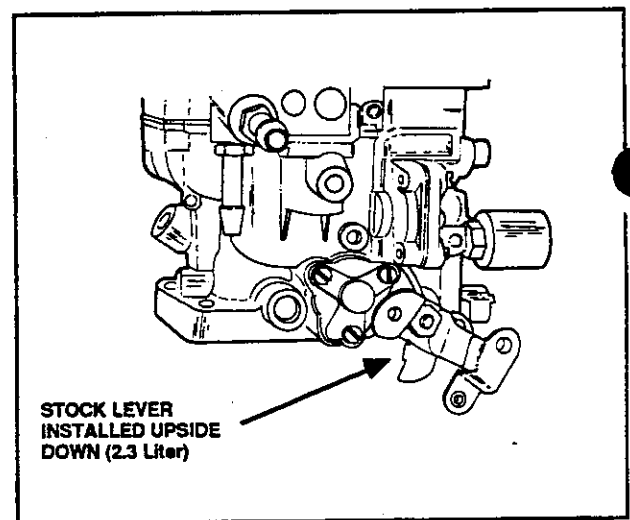


FIG. B

17. Remove the stock carburetor mounting studs from the intake manifold using either a stud tool or the "double-nut" method, if the proper tool is not available. (**DOUBLE NUT METHOD:** Install two nuts approx. 1/3 the way down on the stud and lock them together. Using a suitable wrench on the lower nut, loosen the stud and remove.)
18. Install the new studs provided in the kit using either a stud tool or the "double-nut" method described in step #16. (**FOR STUD INSTALLATION USE THE TOP NUT TO TIGHTEN THE STUD INTO THE INTAKE MANIFOLD FLANGE.**)

INSTALLATION

19. Remove the rags from the intake manifold parts. Lightly coat both sides of the manifold flange gasket, provided in the kit, with a suitable gasket sealer. Install the flange gasket on the intake manifold. **NOTE:** The 2.0 litre eng. manifold gasket is the smaller of the two gaskets in the kit and has one oblong hole in the center. The smaller end of the hole faces toward the driver's side fender well. (FIG. C)
20. Install the heat spacer on top of the manifold flange gasket. **NOTE:** The 2.0 Liter spacer has a notch that must face the driver's side fender well to clear the EGR valve assembly. (FIG. C)
21. Install the carburetor flange gasket on top of heat spacer. (FIG. C)

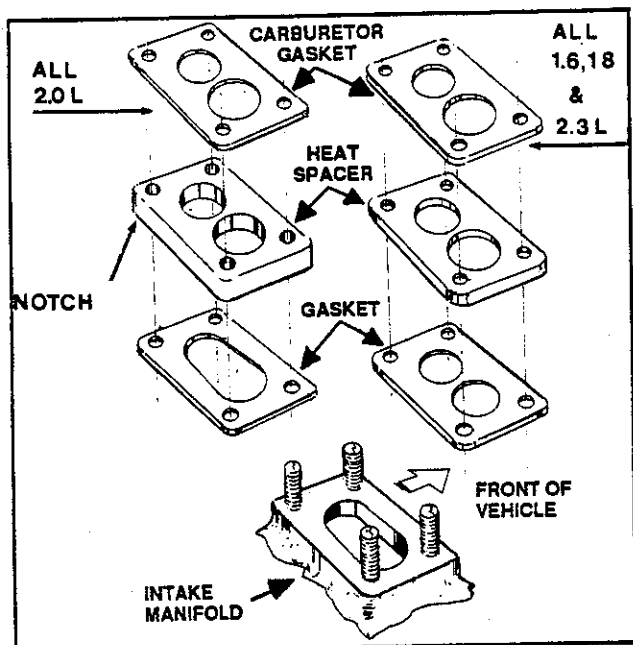


FIG. C

22. **ALL 1.6, 1.8, 2.3 LITRE ENG.:** Install the Weber carburetor on the vehicle with the choke element facing towards the **FRONT (RADIATOR)** of the engine.
ALL 2.0 LITRE ENG.: Install the Weber carburetor on the vehicle with the choke element facing towards the **REAR (FIREWALL)** of the engine component.
23. Install the carburetor washers and mounting nuts supplied in the kit. **CAUTION; DO NOT OVER-TIGHTEN CARBURETOR MOUNTING NUTS. MAXIMUM TORQUE SHOULD NOT EXCEED 7 FT. LBS.**
24. **ALL 1.6, 1.8, 2.3 LITRE ENG.:** Connect the throttle linkage to the Weber carburetor using the spacers and longer bolts from the kit. (FIG. D)

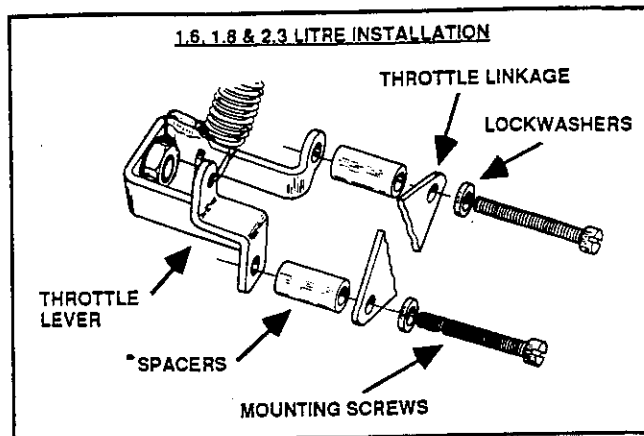


FIG. D

25. **ALL 2.0 LITRE ENG.:** Connect the throttle linkage directly to the carburetor throttle lever, reusing the stock hardware.
26. **ALL 1.6, 1.8, 2.0 LITRE ENG.:** Reconnect the throttle return spring to its original position in the stock return spring bracket. (FIG. D)
- ALL 2.3 LITRE ENG.:** Install the throttle return spring bracket supplied in the kit using the original bolt on the left rear side of manifold. (FIG. E)

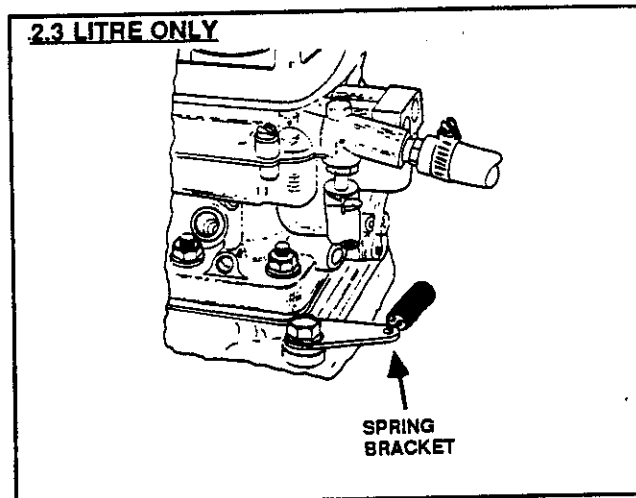


FIG. E

27. Reconnect the fuel supply and fuel return lines to the Weber carburetor as shown in FIG. F. Extra hose is provided in the kit if the return line should need to be rerouted.
28. **'72-'75 VEHICLES (ALL):** Connect the Distributor vacuum advance hose to the port on the Weber carburetor shown in FIG. F. Cap off the carburetor EGR port with the rubber cap provided in the kit. **NOTE: ALL OTHER ORIGINAL DEVICES SHOULD HAVE BEEN REMOVED AS EXPLAINED IN STEP #8.**

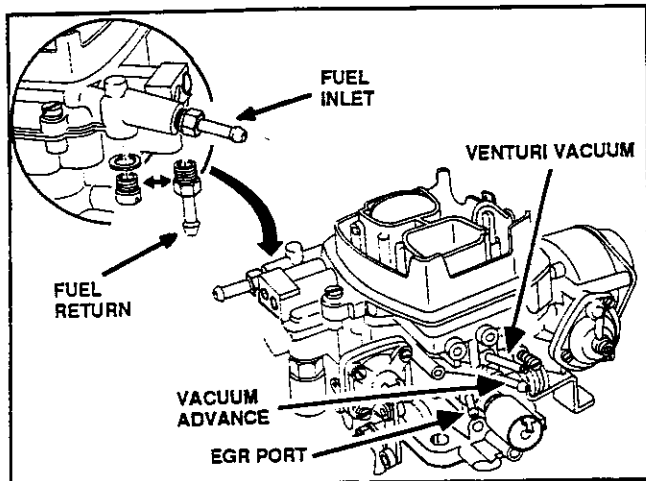


FIG. F

29. '76-'84 VEHICLES (ALL): Refer to the appropriate vacuum diagram for your year & engine size for correct vacuum hose routing. (FIGS. G THRU Q) NOTE: ALL DEVICES CIRCLED ON THESE DIAGRAMS SHOULD BE DISCONNECTED AND REMOVED.

30. Connect the wire assembly supplied in the kit to the Weber choke element and idle cut-off solenoid. Connect the remaining end to the original 12V source used for the stock carburetor. **CAUTION: BE SURE NO HOSES OR ELECTRICAL WIRES CONTACT THE EGR CONTROL VALVE. HIGH TEMPERATURES ARE PRESENT AND CAN DAMAGE WIRES/HOSES CAUSING ELECTRICAL SHORTS AND VACUUM LEAKS.**

31. Install the air filter adapter on the Weber carburetor and secure it using the two Allen bolts from the kit.
32. Replace the stock air filter assembly and secure in place using the original hardware. Reconnect any hoses attached to the air filter assembly.
33. Reconnect the battery and reinstall the gas cap.
34. **CAUTION: CHECK THROTTLE FOR FREE OPERATION. IF THERE IS ANY INDICATION OF STICKING OR BINDING, CORRECT AS NECESSARY BEFORE PROCEEDING.**
35. Start the engine. Check for fuel and vacuum leaks.
36. Adjust idle speed and mixture to factory specifications.
37. Affix underhood label.
38. **CHECK FOR ADEQUATE HOOD CLEARANCE BEFORE CLOSING THE HOOD.**

If after following these instructions, you require further assistance, please call the Weber Tech. Service Dept. at the phone numbers listed below, during normal business hours.

1-800-WEBER US (Outside CA)
(932-3722)

1-800-WEBER CA (CA Only)
(932-3787)

1976 COURIER/MAZDA 1.8 & 2.3 ENGINE

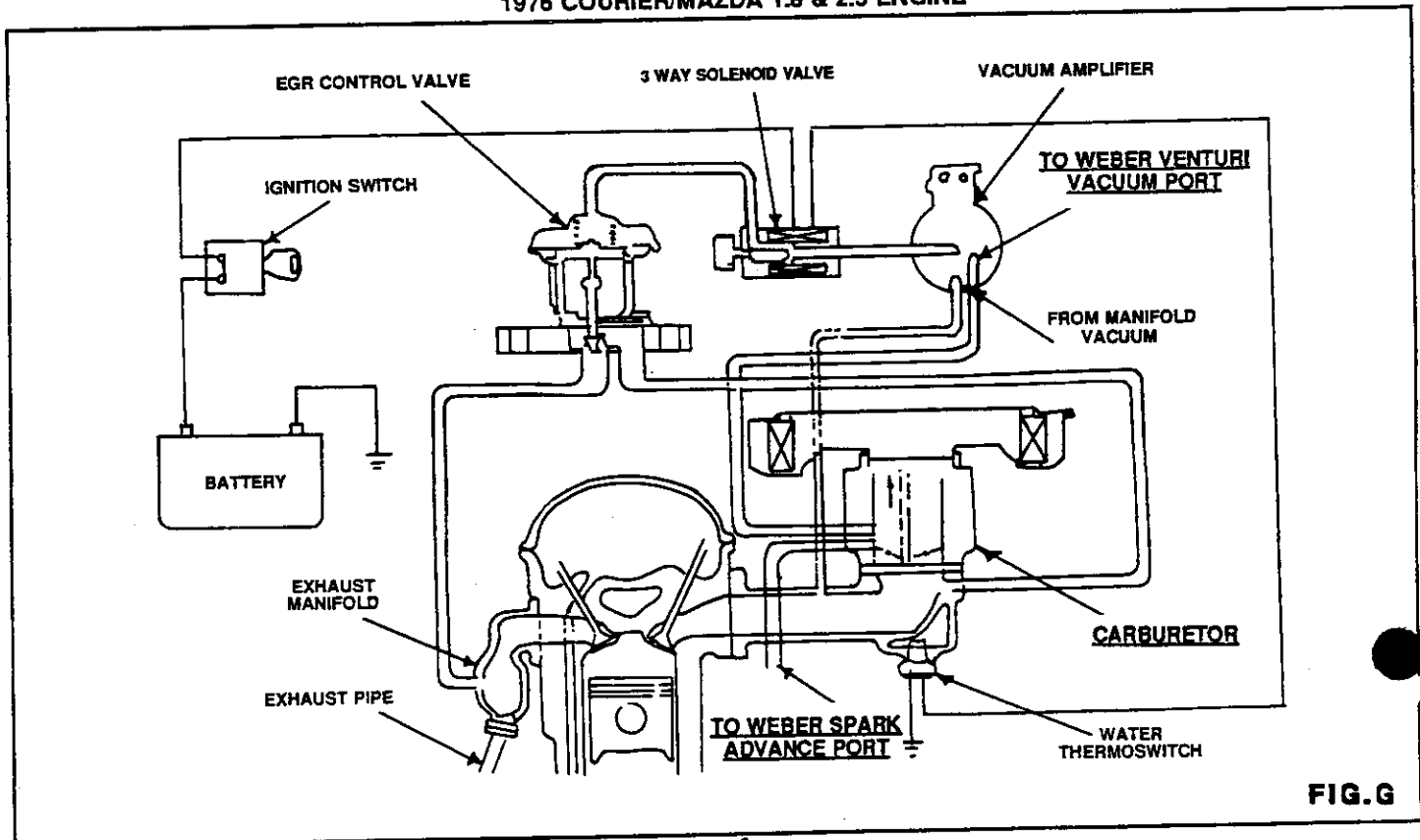


FIG. G

'77 - '78 COURIER 1.8 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

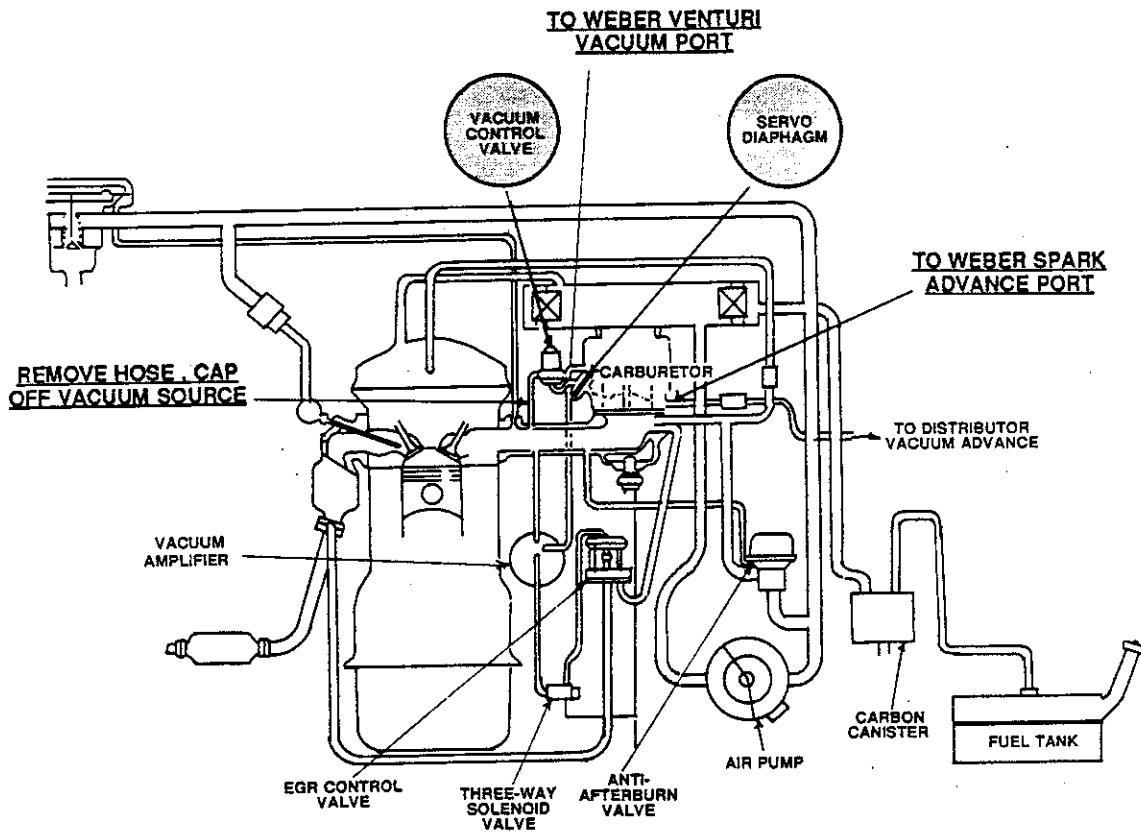


FIG. H

'77 - '78 COURIER 2.3 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

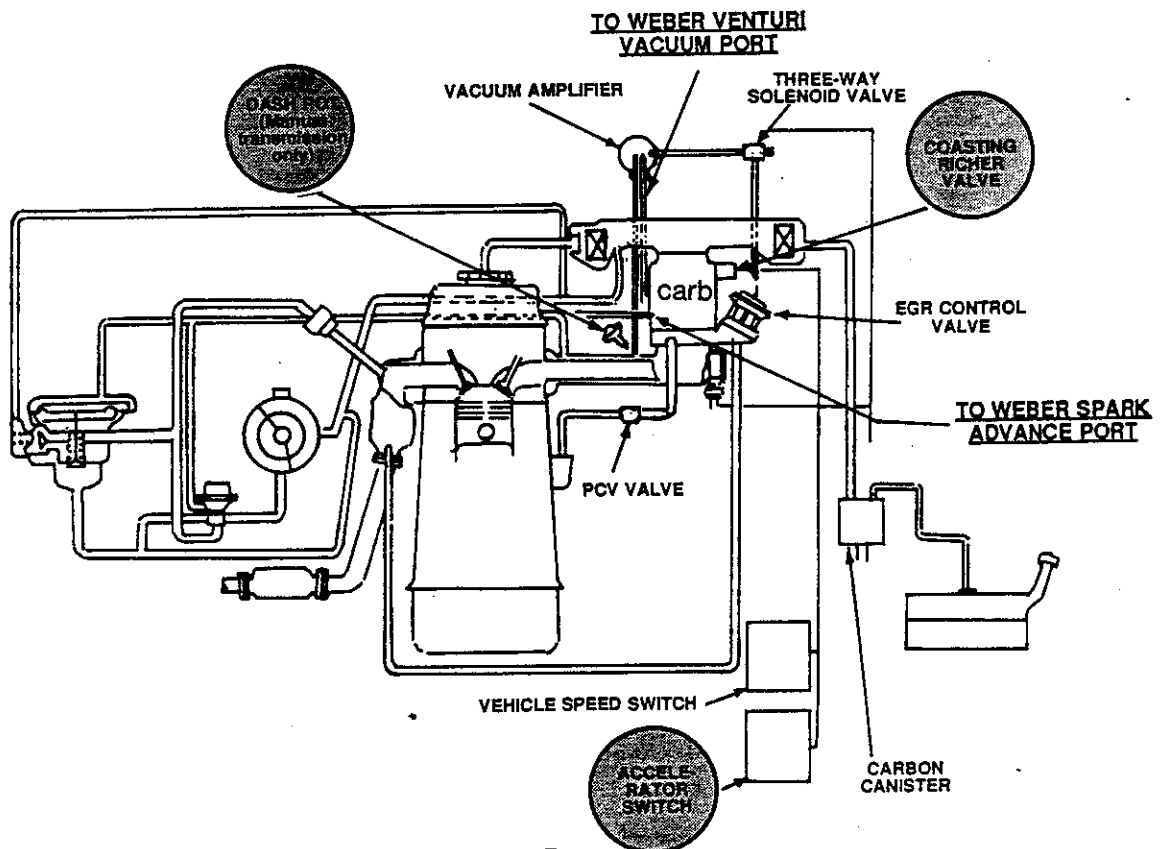


FIG. I

'79 - '80 COURIER 2.0 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

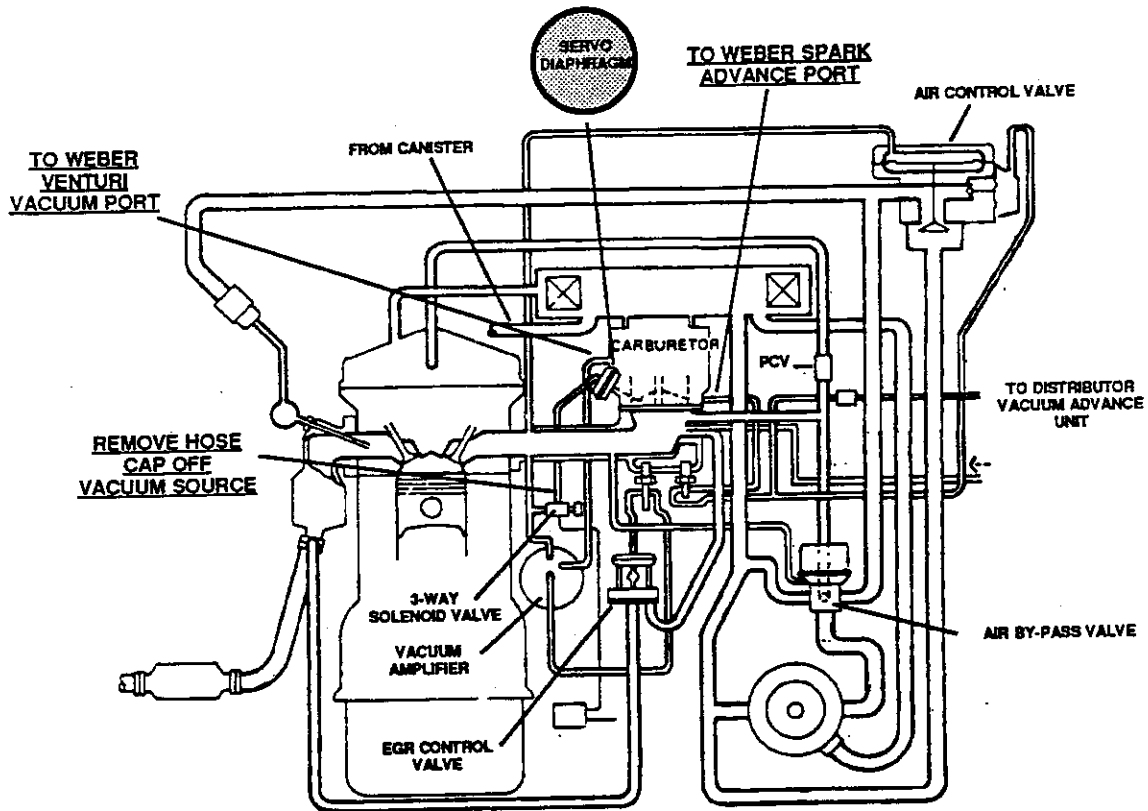


FIG. J

'79 - '80 COURIER 2.3 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

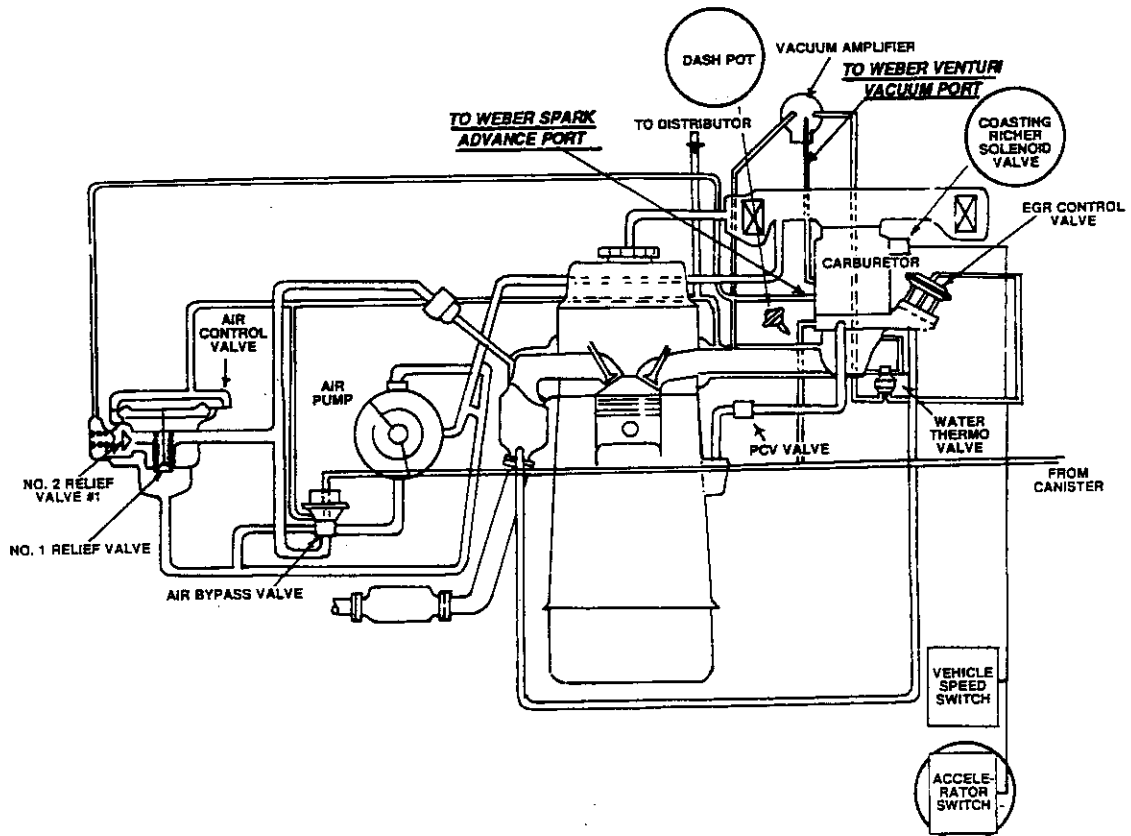


FIG. K

'80 -'81 COURIER 2.0 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

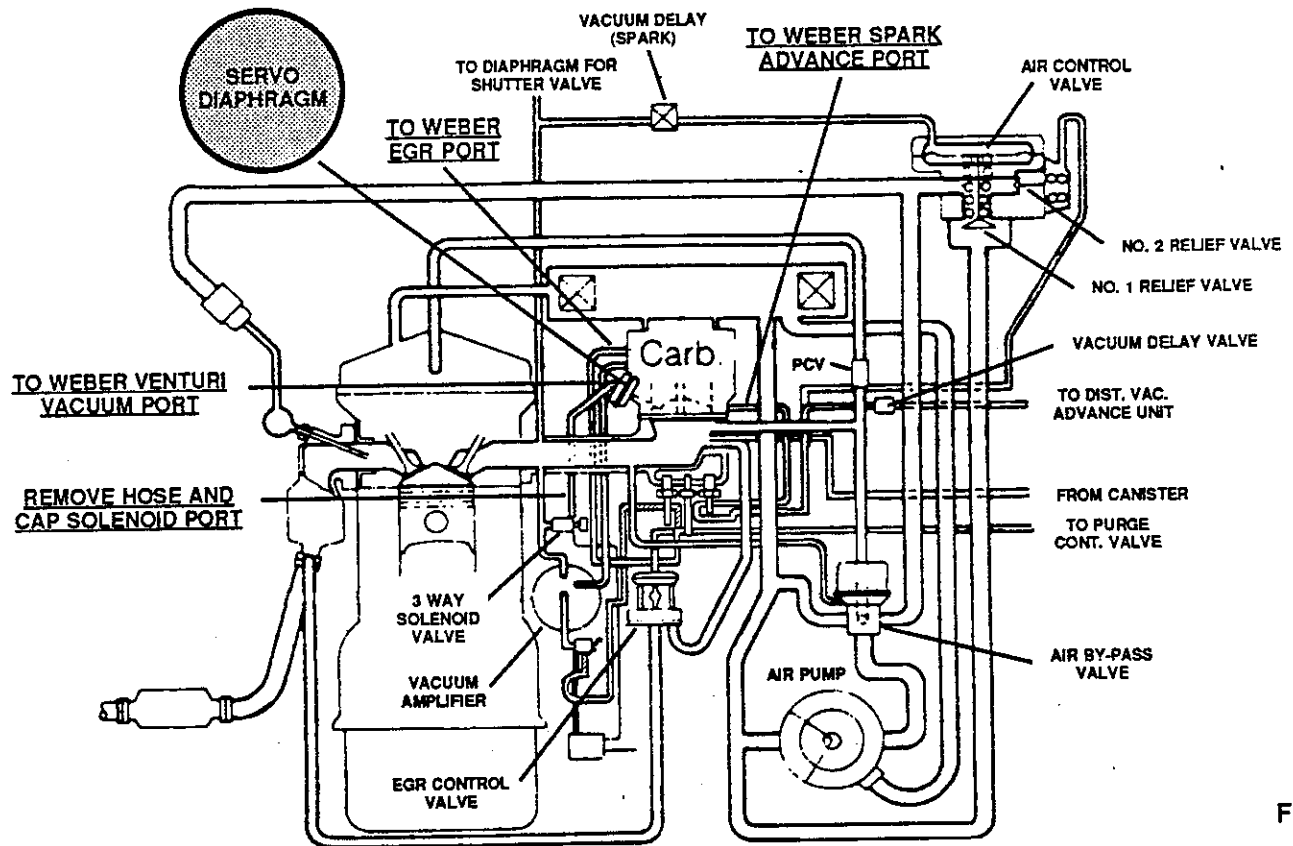
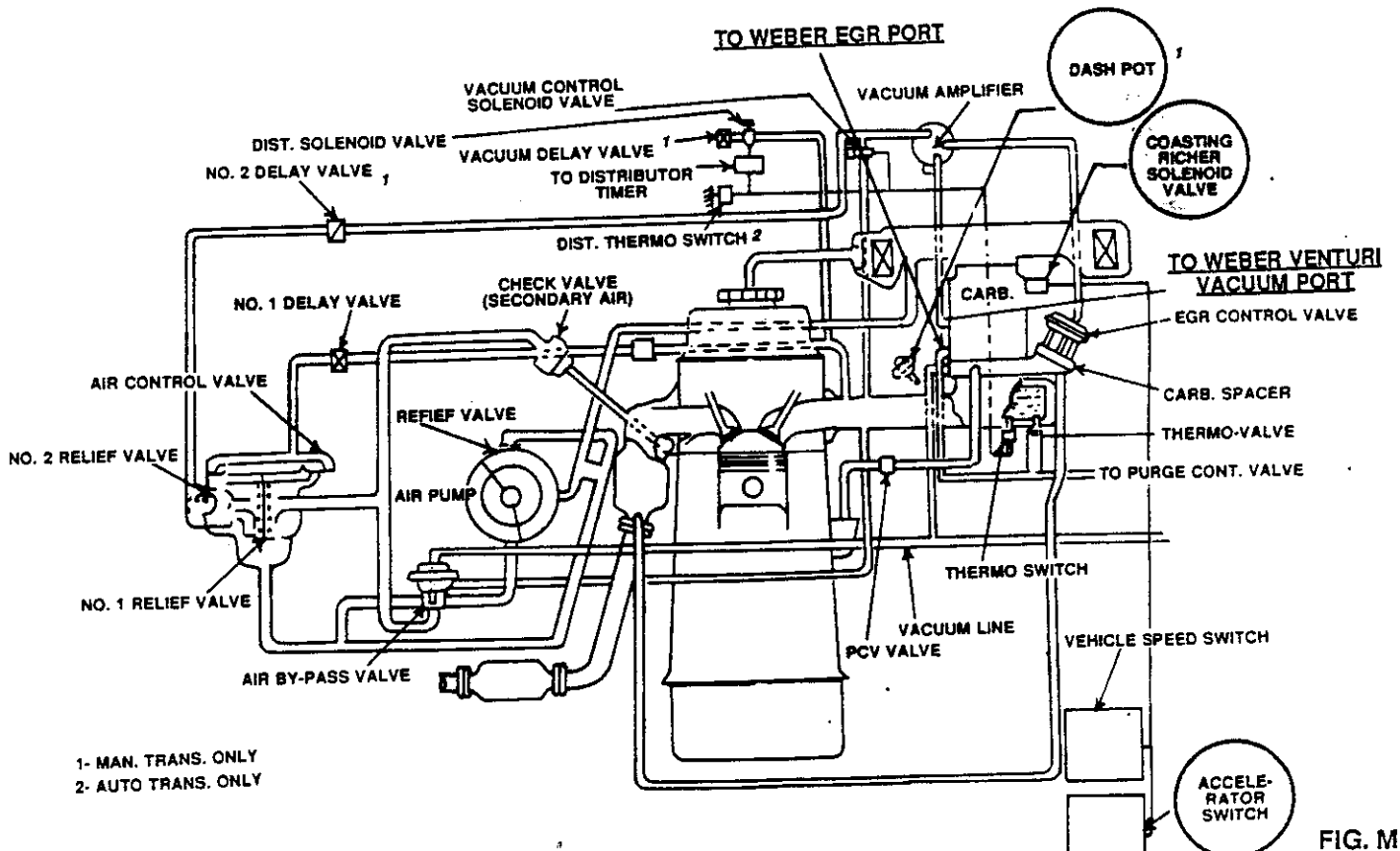


FIG. L

'81 -'82 COURIER 2.3 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]



1- MAN. TRANS. ONLY
2- AUTO TRANS. ONLY

FIG. M

'79 - '80 MAZDA B2000 2.0 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

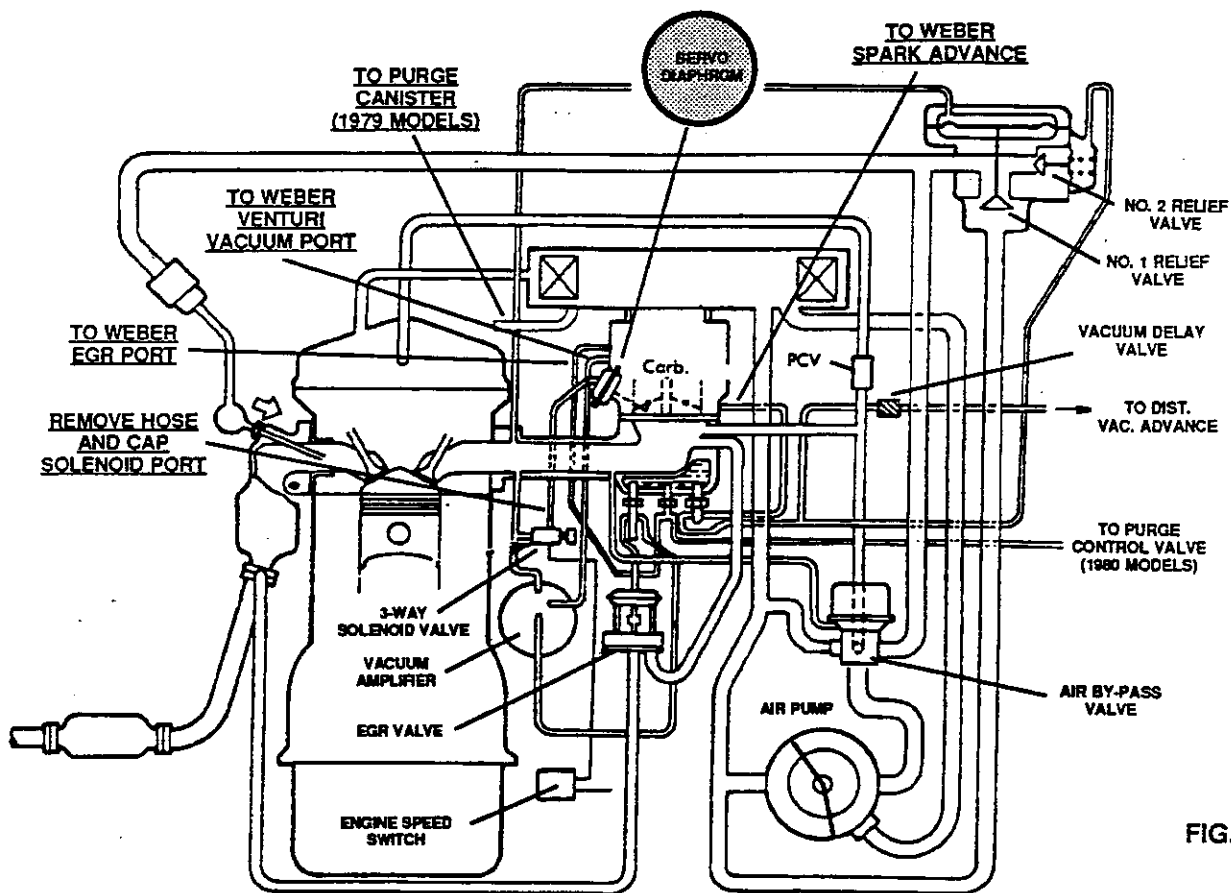


FIG. N

'81 - '82 MAZDA B2000 2.0 LITRE (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

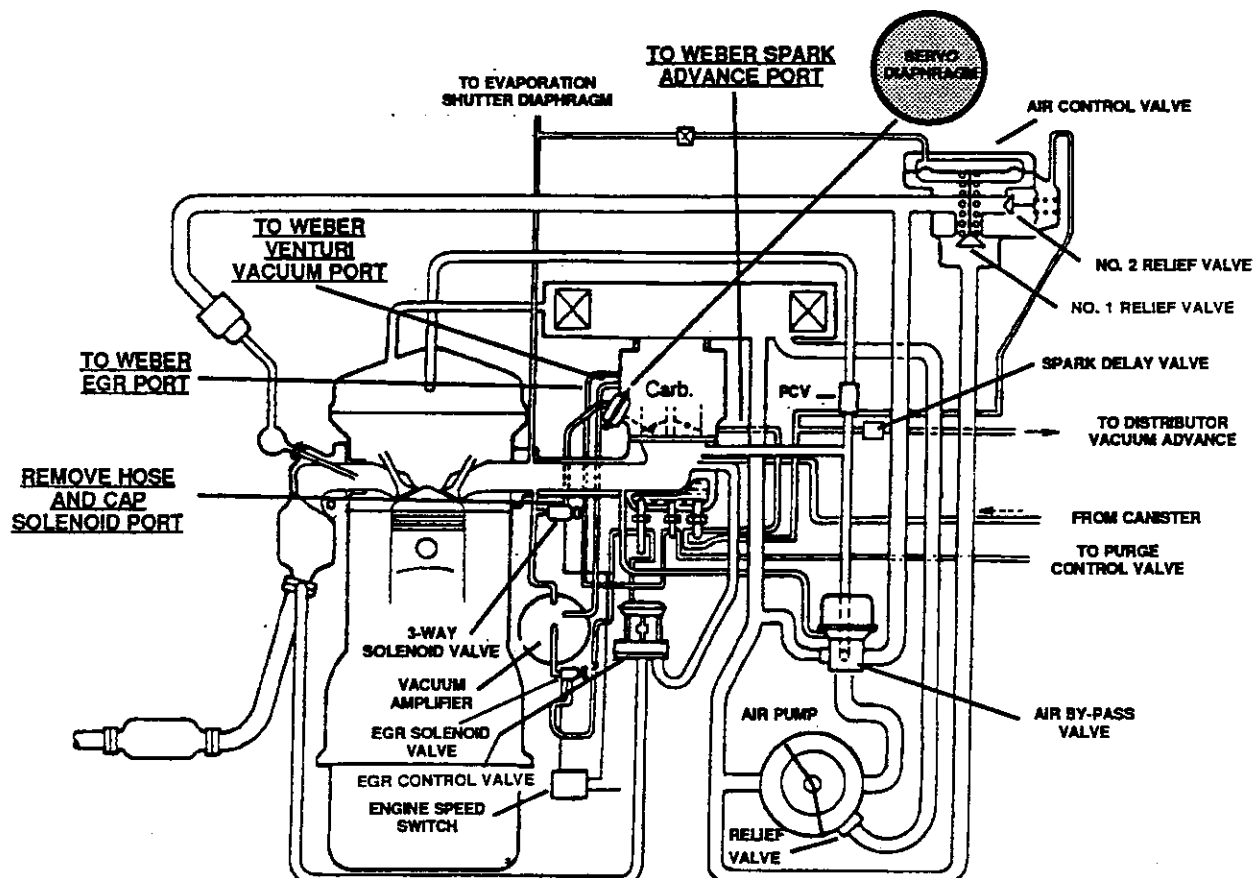


FIG. O

'83 MAZDA 2.0 LITRE ALL/T (CAL.)
'84 MAZDA 2.0 LITRE M/T (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

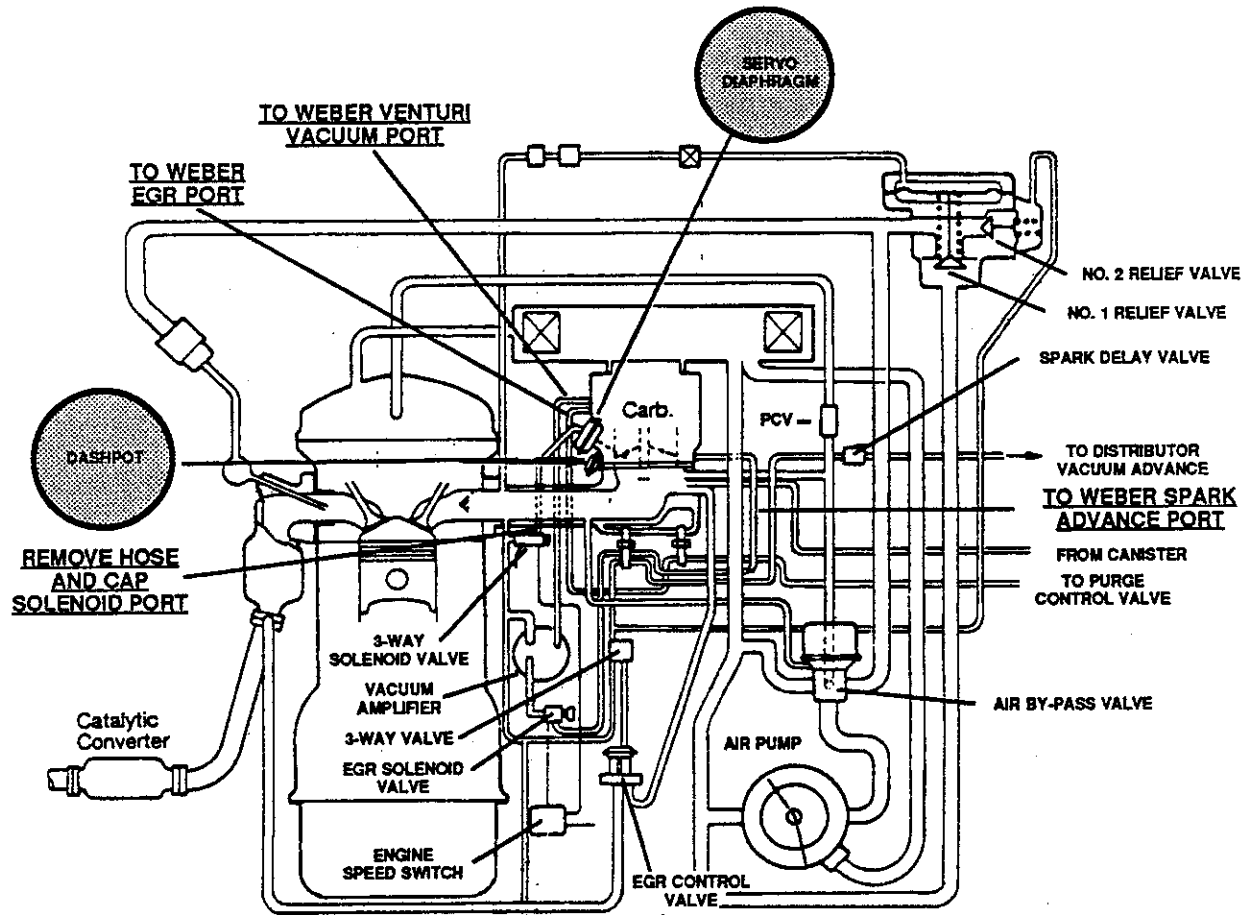


FIG. P

'84 MAZDA 2.0 LITRE A/T (CAL.)

[ALL DEVICES CIRCLED SHOULD BE DISCONNECTED AND REMOVED]

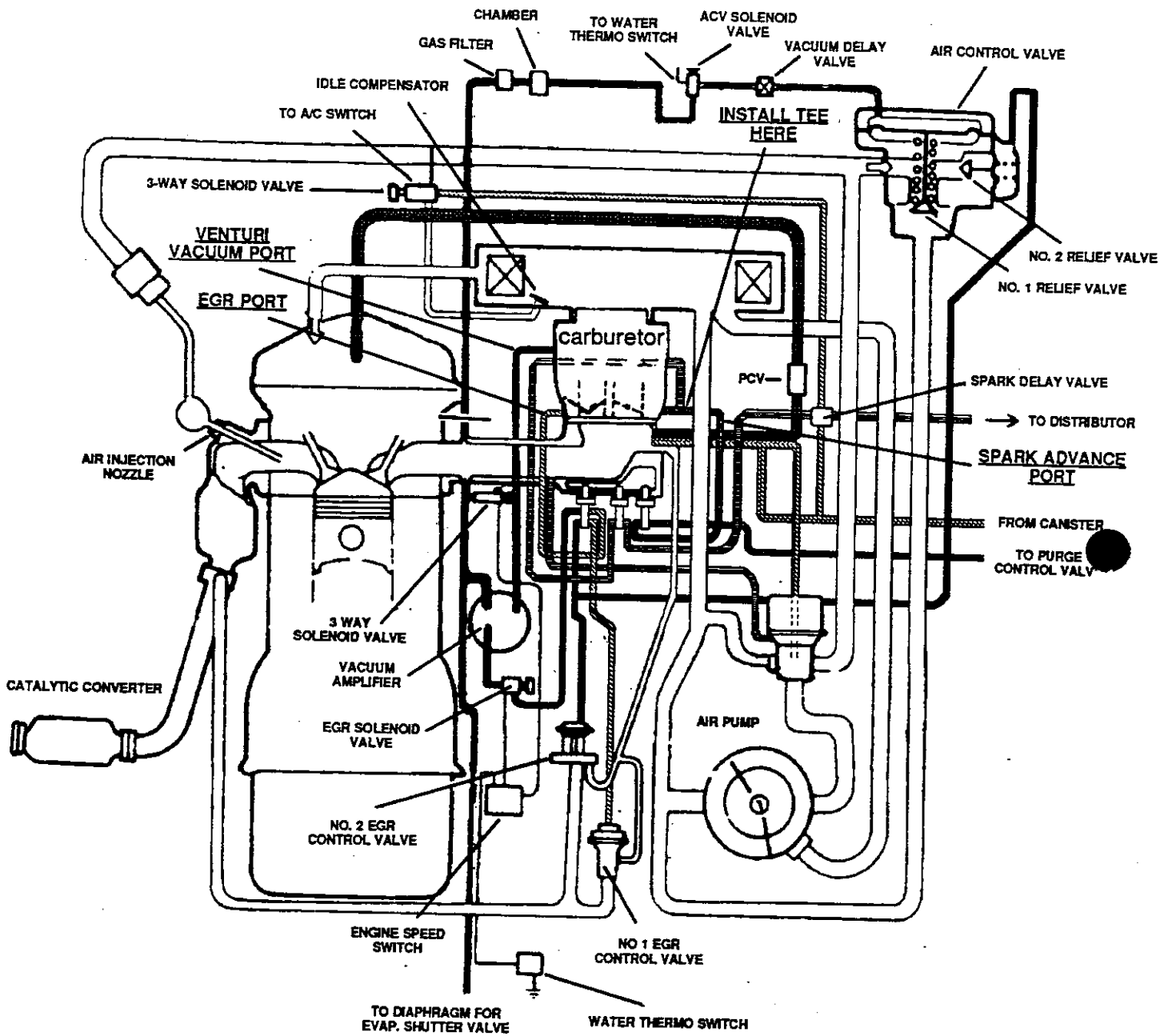


FIG. Q