SPACE AGE STAR

FEBRUARY 2017

NEBRASKA STATE POLICE CHEVROLETS, RAMJET FUEL INJECTION, 1992 CHEVROLETS TURN 25

ANTIQUE AUTOMOBILE CLUB of AMERICA

Table of Contents

I hope everyone's New Year is off to a good start. Here are a few notes. First, as we prepared the region roster to send to AACA headquarters, we noticed that quite a few region members aren't listed on the national roster. Please remember that you must be a member of the national AACA in order to join a region. I'm not removing anyone from the newsletter email list yet. This will serve as a reminder for those members who wish to renew their AACA membership.

The second note concerns the AACA Museum. I received a follow-up letter, addressed to region presidents, regarding the club's split from the museum. The letter asked region presidents to inform members that you'll no longer be able to contribute to the museum at the national meeting. If you wish to contribute to the museum, you should send contributions directly to them.

Third is a request to any region members attending the AACA meet in Ocala, Florida on February 23. Please take pictures of 1955-92 Chevrolets you spot at the meet. We can use them for a newsletter article.

Thanks to Myron Smith for sending information regarding Nebraska police cars. This is a nice follow-up to the police car article from the August 2016 newsletter. As always, any and all submissions are appreciated and will make for a better newsletter.

Thanks for reading, I hope you enjoy the newsletters - *Russell Heim*

CLASSIFIED ADS

THE OWL WORKS AT NIGHT - Mechanical Repairs for Antique Cars

This is the name I used when I was repairing cars at my first home in Deer Park, New York. I was also running a five bay installation center similar to Pep Boys as my full time job. Most of the cars the club members have today were very common at the time.

My labor rates are in tune with 1975. I am a bit slower now but still do meticulous work. I am hereby offering my services to this and other regions of this club.

If any of you need anything done, whether it be regular maintenance or a project that you can't seem to get to please give me a call. I can be reached at 631-880-8489.

Thank you, Ken Michaels

1957 Chevrolet 210 Two-door Sedan For Sale

Six cylinder with three speed transmission.

Bone stock.

$20K

Call Ken Michaels at 631-880-8489

1979 NEBRASKA STATE PATROL CARS - IMPALA TWO-DOOR SEDANS -

BY MYRON SMITH

As a follow up to the August 2016 article about police cars, I am sending some documentation about the 1979 Chevrolet Impala two-door state patrol cars in Nebraska. I have heard two reports of the number of cars the state of Nebraska ordered, one being 114 and the other 138. The discrepancy could be because they also had a few station wagons. The photos are of a car that was still in service (see below) at that time and decorated as a patrol car. The other photo (see cover) is of one of the two I own (one is actually for sale since I am out of storage space).

I recall the cars being prepped for delivery at the Chevrolet dealership. My next association with them was when a good friend bought one with a blown engine. It had popped the top off a valve and had ruined the head. He repaired it and drove it for years. I liked the car, so I went to the next surplus auction and bought mine.

1295

DU TEAU CHEVROLET COMPANY

CARS
18TH ST. & O

TRUCKS
18TH ST. & P

Lincoln, Nebraska 68508

PHONE 402 - 474-2020

POS

Fed ID #47-0366256
State Tax #23965

SOLD TO Nebraska State Patrol
ADDRESS 14th and Burnham
Lincoln, Nebraska 68502

DATE 8-7-79

603703

YEAR	NEW OR USED	MAKE	COLOR	MODEL	INVOICE	STOCK NO.	CUST. NO.	USED STK. NO.	SOURCE
79	New	Chevrolet	White	Impala		21392	12042		

V.I. OR SERIAL NO. 1L47L9S | KEY NOS. 1

SALESMANS NUMBER Hickerson 15 | MODEL NUMBER

INSURANCE COVERAGE INCLUDES

☐ FIRE & THEFT ☐ PUBLIC LIABILITY-AMT. $
☐ COLLISION-AMT. DED. $ ☐ PROPERTY DAMAGE-AMT. $

OPTIONAL EQUIPMENT AND ACCESSORIES

GROUP	DESCRIPTION	PRICE
	as equipped	
	DEALER INSTALLED:	
	Trans Cooler	
	Man Throttle	
	Locking Gas Cap	
	PR PROT 304.90 26C	

DESCRIPTION	ACCT. NO.	SALE	M	COST
NEW UNIT SOLD CUC	412@			
NEW CAR RETAIL	401			
NEW CAR FLEET	414	6793.44		6681.09
NEW TRUCK RETAIL	421			
NEW TRUCKS FLEET	421			
	614	31.30		
INVENTORY NEW CUC	231@			
INVENTORY NEW CAR	231			
INVENTORY NEW TRUCK	237			
USED UNIT SOLD CUC	433@			
USED CAR OR TRUCK RETAIL	433			
USED CAR OR TRUCK WHSLE	433			
SALES TAX	324			
LICENSE AND TITLE	805			
TOTAL CASH PRICE		6488.84		
FINANCING				
INSURANCE				
TOTAL TIME PRICE				
DEPOSIT	2208		+	
CASH ON DELIVERY	220A		+	
Balance Due 220C		6488.84	+	
TRADE-IN ALLOWANCE				
PAYMENTS MONTHS 0 DOLLARS 0 PER MONTH				
TOTAL		6488.84		
PAY OFF BAL. OWING FINANCE CO.	3008		-	
			+	
			+	
FINANCE CONTRACT	205		+	
			+	
			+	
RECONDITIONING- USED CARS RETAIL	4__D		-	
RECONDITIONING- USED TRUCKS RETAIL	4__7F		-	
COST OF SALES- USED CARS RETAIL	630		-	
COST OF SALES- USED TRUCKS RETAIL	635		-	
VALUE OF TRADE-IN(S)	240		+	
	241		+	

DESCRIPTION OF TRADE-IN

YEAR	MAKE	BODY COLOR	MODEL

V.I. OR SERIAL NO.

I hereby acknowledge that the Chevrolet New Vehicle Warranty and the Maintenance Schedule have been explained to me.

This vehicle is equipped with a General Motors engine produced in a General Motors plant operated by the _____ Division.

WE ARE NOT RESPONSIBLE FOR THE SOLUTION IN RADIATOR. NOTICE TO BUYER: DO NOT SIGN THIS CONTRACT BEFORE YOU READ IT, OR IF IT CONTAINS BLANK SPACES. YOU ARE ENTITLED TO A COPY OF THE CONTRACT YOU SIGN. BUYER STATES THAT THE AMOUNTS SHOWN ON THIS INVOICE WERE QUOTED TO HIM BEFORE HE AGREED TO THE SALE.

There are no warranties, expressed or implied, made by the seller herein, or the manufacturer, on the vehicle or chassis described on the face hereof except that in the case of a new vehicle or chassis the printed General Motors new vehicle warranty delivered to purchaser with such vehicle or chassis shall apply and the same is hereby made a part hereof as though fully set forth herein. The new vehicle warranty is the only warranty applicable to such new vehicle or chassis and is expressly in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. In the case of a used vehicle or chassis, no merchantability or any other manufacturer's warranty thereon, if any, shall be determined solely by the terms of such warranty.

C L Howell
BUYER

Gary Hickerson
DEALER

CUSTOMER PURCHASE ORDER

COMPANY OR FIRM NAME —

ADDRESS

CITY

SALESMAN HICKERSON

PURCHASER NEBRASKA STATE PATROL

ADDRESS 14th & BURNHAM

CITY LINCOLN COUNTY

STATE AND ZIP CODE NE PHONE

MAKE	MODEL	NEW / USED	(SERIAL OR MOTOR NO)	DATE
Chevrolet	IMPALA	NEW	1L47L95	7-18-79
YEAR	COLOR	TYPE	MILEAGE	STOCK NO.
1979	WHITE	2 DR	3.8	1392

9981

ADDITIONAL EQUIPMENT-OPTIONS or WORK TO BE DONE			
PURCHASE ORDER NO	CASH PRICE OF VEHICLE	$6488	84
	TOTAL CASH DELIVERED PRICE	6488	84
FED ID NO 47-0366256	TRADE ALLOWANCE		
	DIFFERENCE LESS FET	16	50
	PRICE PROTECTION BASE	257	40
	PRICE PROTECTION FREIGHT	31	00
	BALANCE OWED ON TRADE		
Dealer Installed	DEPOSIT		
TRANS COOLER ✓	CASH ON DELIVERY		
MAN THROTTLE ✓	UNPAID BALANCE	6793	14
LOCKING GAS CAP ✓			
	CREDIT DESIRED - YES ☐ NO ☒ FLEET		
TAX EXEMPT	INSURANCE DESIRED - YES ☐ NO ☒ (see contract conditions #2)		

RECORD OF TRADE-IN

MAKE & YEAR	TYPE	MODEL	COLOR
MILEAGE	SERIAL NO.		

contract conditions

1. VEHICLE SOLD "AS IS": CUSTOMER NOTE THAT THE VEHICLE IS BEING SOLD "AS IS" BY THE SELLING DEALER. SHOULD THE MANUFACTURER'S WARRANTY APPLY TO THIS VEHICLE, IT IS DIRECTLY OFFERED BY THE MANUFACTURER TO THE CUSTOMER. THE SELLING DEALER HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF THIS VEHICLE. BUYER SHALL NOT BE ENTITLED TO RECOVER FROM THE SELLING DEALER ANY CONSEQUENTIAL DAMAGES, DAMAGES TO PROPERTY, DAMAGES FOR LOSS OF USE, LOSS OF TIME, LOSS OF PROFITS, OR INCOME, OR ANY OTHER INCIDENTAL DAMAGES.
2. CREDIT OR INSURANCE: Should credit or insurance as indicated above, be part of this contract, all required information is a part of this instrument and is contained on the attached sheets.
3. DEALER ACCEPTANCE: This contract when signed by the purchaser and accepted by the dealer or his authorized officer is binding on both parties. If rejected by the dealer, neither party has any further obligation.
4. DEPOSIT: The purchaser agrees that the deposit, as set forth herein, is not returnable in the event that if after dealer acceptance, the purchaser fails to complete the purchase of the vehicle, and the purchaser certifies that he/she is of majority age.
5. MANUFACTURER'S INCREASE: It is noted that the manufacturer has reserved the right to change the list price without notice. The cash delivered price would thus be subject to an increase because of the manufacturer's action. The purchaser may, if dissatisfied with the increased price, cancel this order.

X _____
BUYER'S SIGNATURE

X _____
BUYER'S SIGNATURE

_____
ACCEPTING DEALER'S SIGNATURE

NOTICE TO BUYER: Do not sign this instrument before you read it, or, if it contains blank spaces. You are entitled to a copy of the instrument you sign. Buyer states that the amounts shown on this instrument were quoted to him before he agreed to the sale.

C39324	DUC	6XA	2MY	62R7L7C.G3C9	.	393241	1L47L9S

10 SCHED. NO. DATE	11	12 FRAME	13 CONTROL ARMS FRONT	14 REAR	15 FRT SPRING	16 REAR SPRING	17 FRT SHOCK	18 REAR SHOCK	19 STRG KNUCKLE	20 STEERING GEAR LKG	21 STAB BAR FRT RR	22 X-MEM	23	24 OF SEQ NO.
17-0674 07-02	2MY-	DY	BU BU BU BU	YH WT	APC APC	NXY NXY	JN	RE RE	SJ SJ	BC 390	CK 720	BU	.	310247

25 EXHAUST	26 ENG	27 TRANS	28 SPEEDO GEAR	29 FUEL PUMP	30 START MOTOR	31 AIR/E & PULLEY	32 P/S PUMP & PULLEY	33 CRANK & FAN PULLEY	34 FAN ASM	35	36	37	38	39 CARB	40 SMALL CYL HOSE	41 VAC FITTINGS	42 ENGINE MOUNTS
74 92 36 25	DUC-8	6XA-	18BRNVT	987	065	JJ	KU AC	CE AA	713CB	VC	UL	GA	**	CMA	743	174.	71 71 20 20

43 PROP SHAFT	44 ENGINE HARNESS	45 RADIATOR	46 RADIATOR HOSES	47 BATT	48 BATTERY CABLES	49 FRT END HARNESS	50 FUEL SYSTEM GAUGE	FILTER	TANK	51 HTR HOSE INLET	52 HTR HOSE OUTLET	53 AIR CLEANER	54 TRANS COOLER INLET	OUTLET	55 HYDRO BRACE	56 RAD FAN SHROUD UPR	LWR	57	58
YWPUPK	KL	BJ .	TC UC	402	KD HX	HV	398	CJ	738**	HM	KH	CX	HF	HJ	749	CD	CD	0 . . .	......

59	60 STRG COL & COLOR	61 STRG WHL	62 H/LINER	63 DOOR PADS	64 SHELF TRIM	65 FRONT SEAT BELTS OUTER CTR	66 RR SEAT BELTS CTR CTR	67 CARPET FRONT	68 REAR	69 BACKPAD	70	71	72	73	74	75 WHEEL TRIM
LG.	YS DCTN	005	.0..	3...	15.	S BLACK	033 .	262.C	INS	. .	.	BEIGE	.	. .	A01P.	AJ .

76 MODEL	77 TRIM	78 TOP	79 COLOR LW UP ST W	80 BRK VALVE	81 MSTR CYL	82 SPEEDO CABLE	83 I.P. HARNESS	84 INST CLUSTER	85 THROTTLE CABLES	86 RADIO	87 I.P. PADS	88 BODY FRT HARNESS	89 WHEELS FRT/RR SPR	90 TIRES
1BL47	62N .	. .	11L11U. 11	F	PS YP	SV SU	EA .	KAC C	HZ	AM 2	. 019	U05	TA TA	U7P7 U7P7 U7P7

91 EMISSION LABELS	92 TIRE PRESS. TABLE CODE	93 CONS. INFO. TABLE CODE	94 BUMPER HT. CODE	95 FUEL ECON LABEL	96 ENG CERT	97	98	99	100	101	102	103	104	105	106
AZ .	18E	71.AHF	EADA	USA	C121C	. CD4	C60.	PT	. .	. 7W8 8DT	. .	.	WHITE	.........H	. ....

A01	TINTED GLASS	D33	LH-REM RV MIR	QCX	GR70-15B WW	1K5---	LOW GEAR B/O	7K4---	80 AMP GEN		
A52	BENCH SEAT	F41	SPEC PERF SUS	UA1	HD BATTERY	11L	WHITE LOWER	7PC	FRT SPRG RH		
B48	DLX LUGG TRIM	GU4	3.08 AXLE	UN9	RADIO SUPPRES	11U	WHITE UPPER	7P4---	ENG BLOCK HTR		
B84	BODY SIDE MLD	G80	POSITRACTION	UP7	MONO RAD-PROV	199	BLACK BELTS	7W8---	LH SPOTLAMP		
CD4	PLS W/S WA&WI	G92	PERF-RR AXLE	U05	DUAL HORN	5JM---	HR70-15B BW	7X7---	SPEAKER		
C60	AIR CONDITION	K81	63 AMP ALT	U35	ELEC CLOCK	6C7---	DOME LAMP SW	7Y1---	UNDERHOOD LMP		
		LM1	350-4 BBL ENG	U63	AM RADIO	6C9---	CBL CONDUIT	7Z9---	POLICE SPEEDO		
		M38	TRANS-AUTO	U75	POWER ANTENNA	6G3---	HD 50-50 SEAT	8D1---	UNDERCOAT		
		NA5	FEDERAL-EMISS	U80	RR SPEAKER	6PC	FRT SPRING-LH	8XY	REAR SPRG LH		
				VK3	FRT LIC PL MT	6R7---	HD CLOTH TRIM	9A3	SPEEDO		
				V01	HD RADIATOR	6Z1---	2 PIECE SPEDO	9C1---	POLICE CAR		
				V30	F&R BMP GUARD	61Q	MED BEIGE MLD	9XY	REAR SPRG RH		
						62I	DK CAMEL TAN	D1J	SPEEDO GEAR		
						62N	DK CAMEL TAN	E1H	ADAPTER-SPEDO		
								E6F	SLEEVE-SPEEDO		
								E9Z	LESS SPEEDO		

9C1- Police

F S 3701

FUEL ECON ABA-BLA BPR/CD EADA GVWR 5245 GAWR F 2586 R 2659

BODY SHOP
% TRIM SHOP
* STANDARD

109 CHARGED TO
DU TEAU CHEVROLET COMPANY
1800 "O" STREET
LINCOLN NE 68508
29-219

111 SFX547 SFX547

ZONE 112	DEALER 113	CLASS 114	118	
29	219		F	

ST. LOUIS PLANT GM ASSEMBLY DIVISION GENERAL MOTORS CORPORATION ST. LOUIS, MISSOURI

108

CAR LINE
CHEVROLET

LABEL LOCATION AND SIGNATURE: AFFIXED / IN GLOVE BOX

110 SHIPPED TO

TAG 115	ZONE 116	DEALER 117	119 DATE SHIPPED	120 ROUTING	121 CAR & LOAD NUMBER	122 DESTINATION CHARGES	123
				CBLUFF CJ		357	28.35 .

STATEMENT OF ACCEPTANCE BY CARRIER

THE UNDERSIGNED CARRIER RECEIVES AND ACCEPTS FOR TRANSPORTATION THE NEW VEHICLE DESCRIBED HEREON IN ORDER TO BE DELIVERED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE UNIFORM BILL OF LADING OR IN ACCORDANCE WITH THE CARRIER'S CONTRACT WITH GENERAL MOTORS CORPORATION.

SIGNED FOR:

DATE ________ BY ________

XXXXXXX
X
X
X
X
X
XXXXXXX

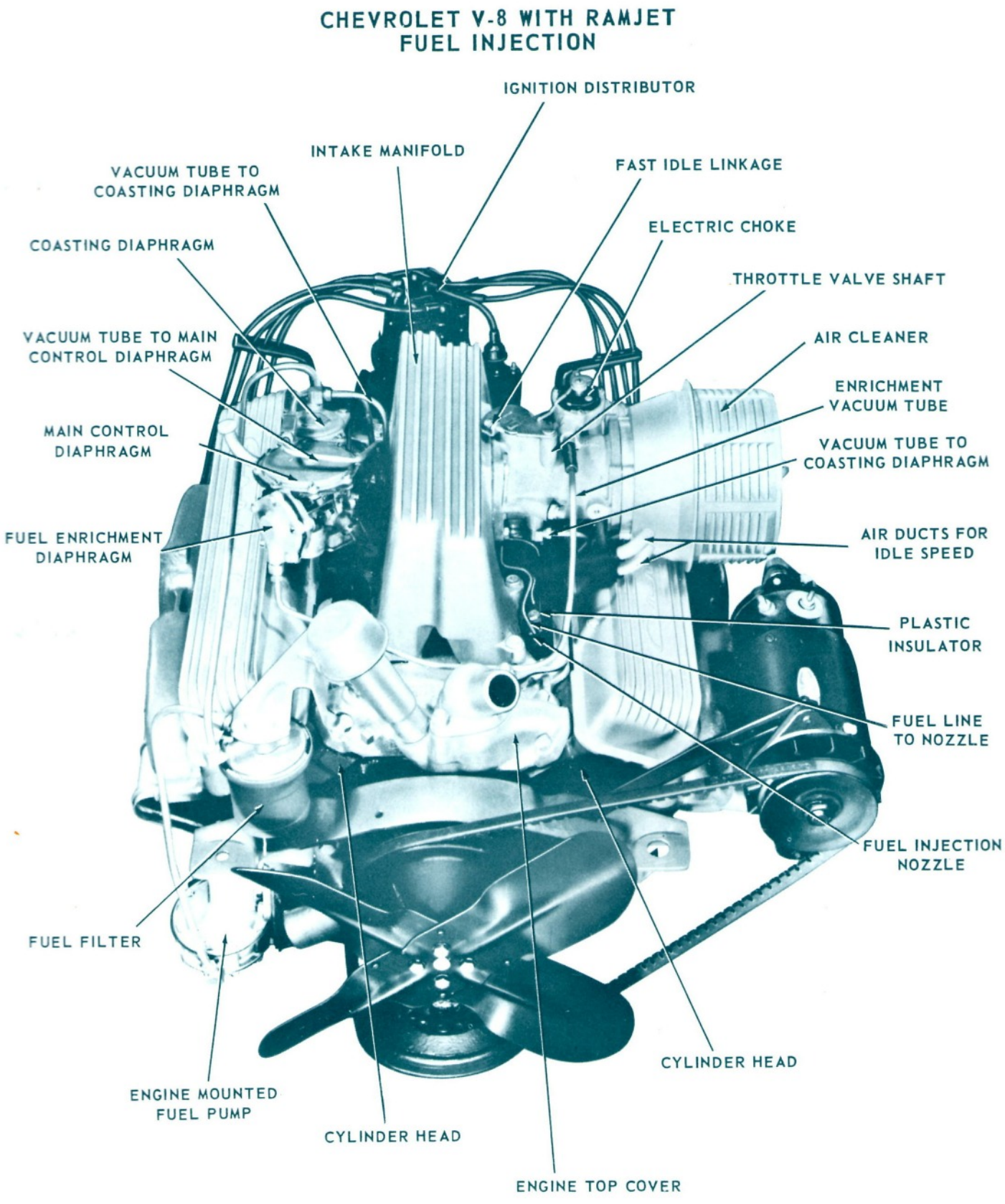
2

PTG. 6-78

The following language applies to shipments to General Motors of Canada Limited but not other shipments. Legal title, ownership, right to possession and control of goods specified in this document shall remain with General Motors Corporation until such goods reach the customs station at the place of entry in Canada ... [illegible]

1957 RAMJET FUEL INJECTION

BY RUSSELL HEIM



We covered the 1957 introduction of Turboglide in the August 2014 newsletter. This month we cover the other big 1957 introduction, Ramjet Fuel Injection.

Chevrolet seemed proud to introduce fuel injection as an option for the 1957 model year. The *1957 Chevrolet Engineering Achievements* book called Ramjet "an entirely new, highly efficient system for supplying a precisely controlled air and fuel mixture to each cylinder of the engine." The book described fuel injection advantages as "faster response to the accelerator and a resulting sense of greater smoothness, both during engine warm-up and under normal operating conditions." Starting the car was "quick and positive, even in severe weather, and smoother idling and low speed operation, together with greater overall fuel economy, is obtained."

Despite Ramjet Fuel Injection's 1957 status as optional equipment, and carburetors' status as standard equipment, the book was unkind to carburetors. "Carburetors and their various disadvantages are eliminated." They listed some disadvantages:

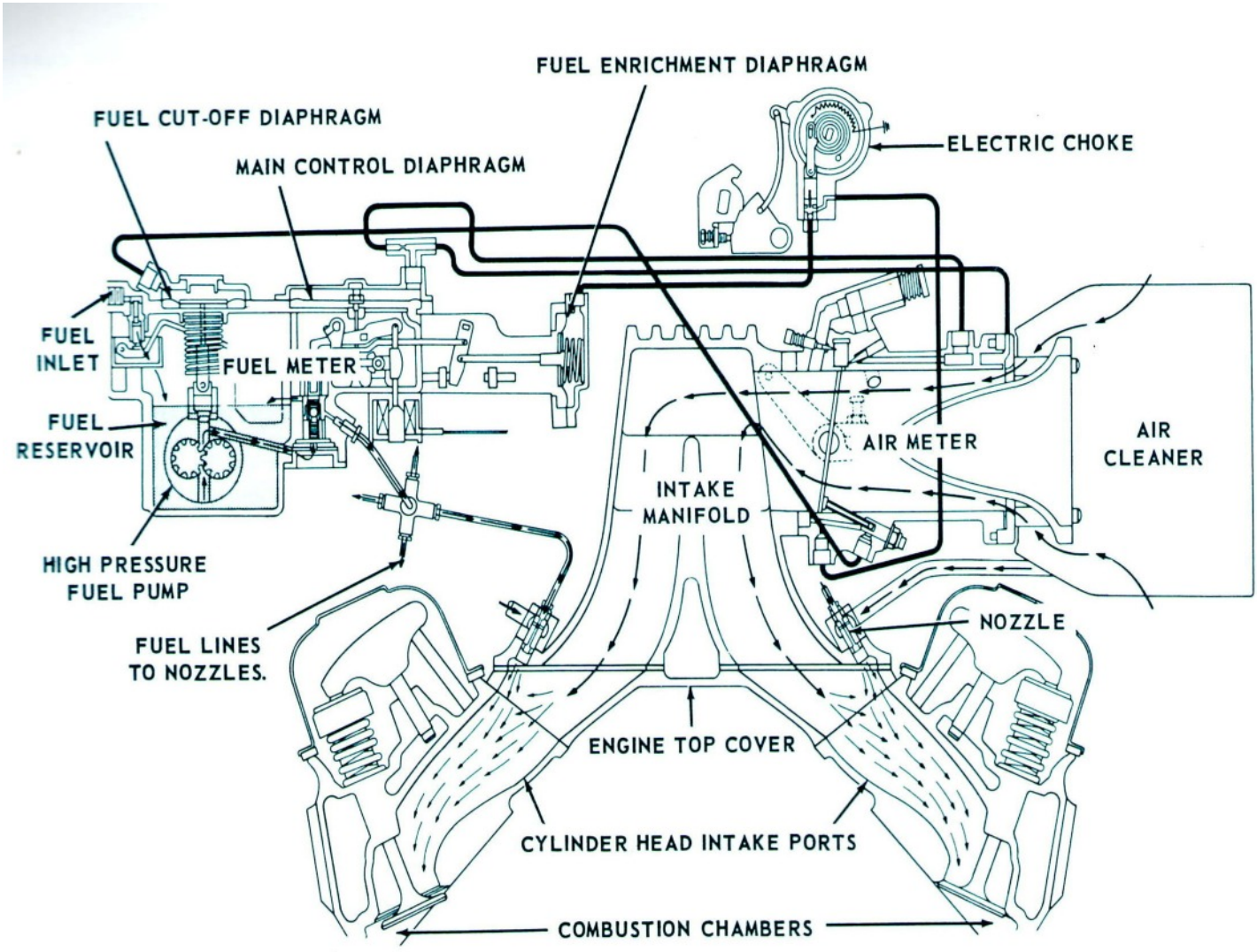
- Atomized fuel had to travel "all the way" from the carburetor, through the intake manifold, to the intake ports at each cylinder.
- Carburetors required intake manifold passages large enough for easy breathing, but small enough to maintain adequate air flow velocity.
- Carburetors must be heated to help vaporize the gasoline and to prevent formation of ice on cold starts.
- The required heat expanded the incoming air, making it less dense and causing power loss.

Ramjet Fuel Injection remedied these problems. It delivered fuel directly to the cylinder head intake ports through individual fuel lines. Separate passages provided clean air, "unencumbered by gasoline vapors" to each cylinder head intake port. Fuel was finely atomized by the injection nozzles, mixed thoroughly with fast moving air and drawn into each combustion chamber. This provided precise and uniform cylinder-to-cylinder fuel distribution.

Fuel vaporized at the intake ports didn't pass through a carburetor venture where refrigeration took place. Fuel injection didn't require heat to prevent icing or to help atomize the fuel. Incoming air wasn't subjected to external heat. A larger amount of air was drawn into the combustion chamber. Volumetric efficiency was improved and engine power increased.

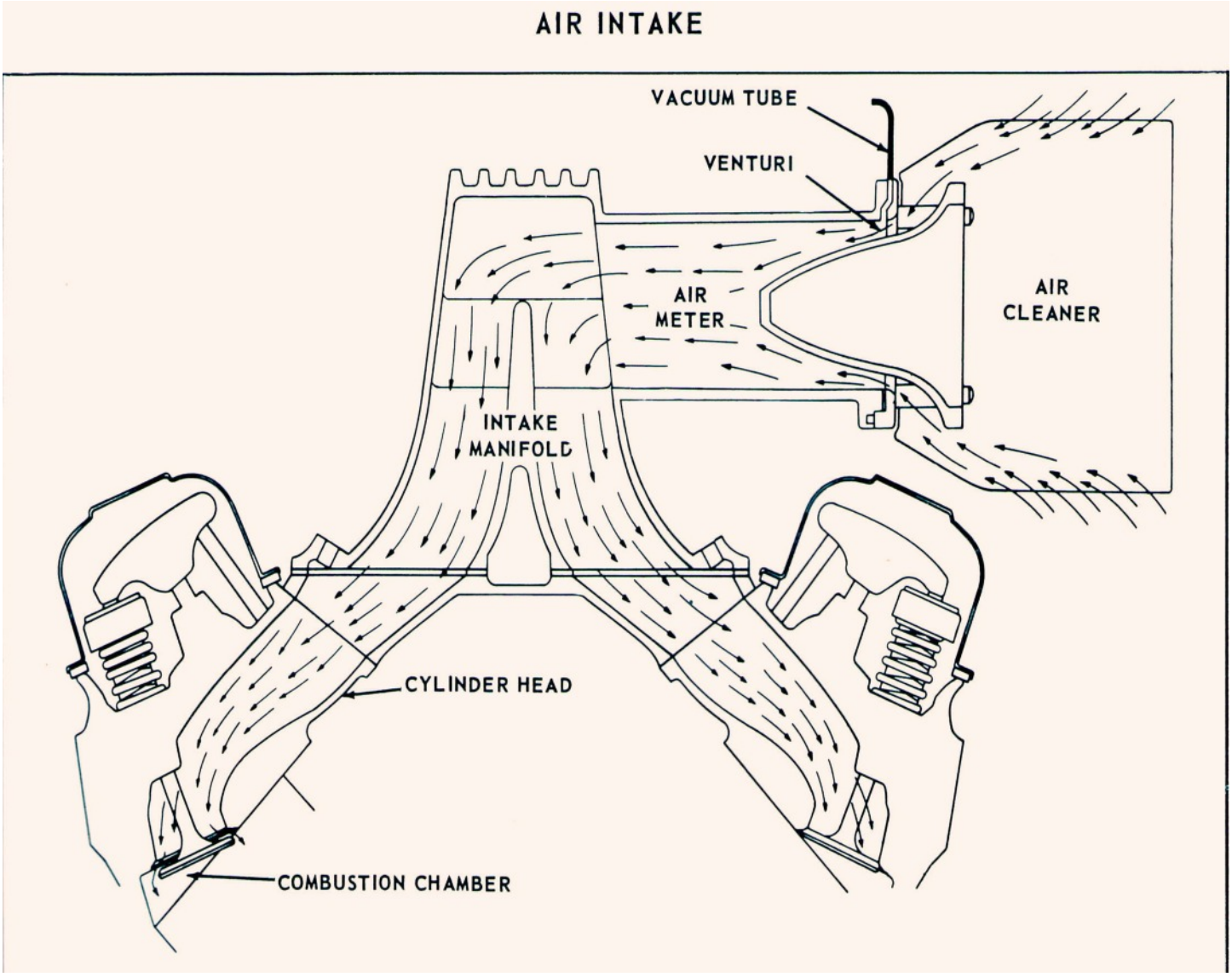
The book stated "In broad principle, the operation of the Chevrolet Ramjet Fuel Injection system is simple." The following parts made up Ramjet Fuel Injection:

- Air metering system
- Fuel metering system
- Fuel nozzles
- Two separate aluminum castings. The lower casting formed the engine top cover. The upper casting contained the air passages and mounting for the air and fuel metering systems.
- Auxiliary fuel filter
- Special ignition distributor
- High pressure fuel pump
- Electric choking system for cold starting



Engineering Achievements described each function of the system individually. The following pages contain an illustration and a brief description of the functions.

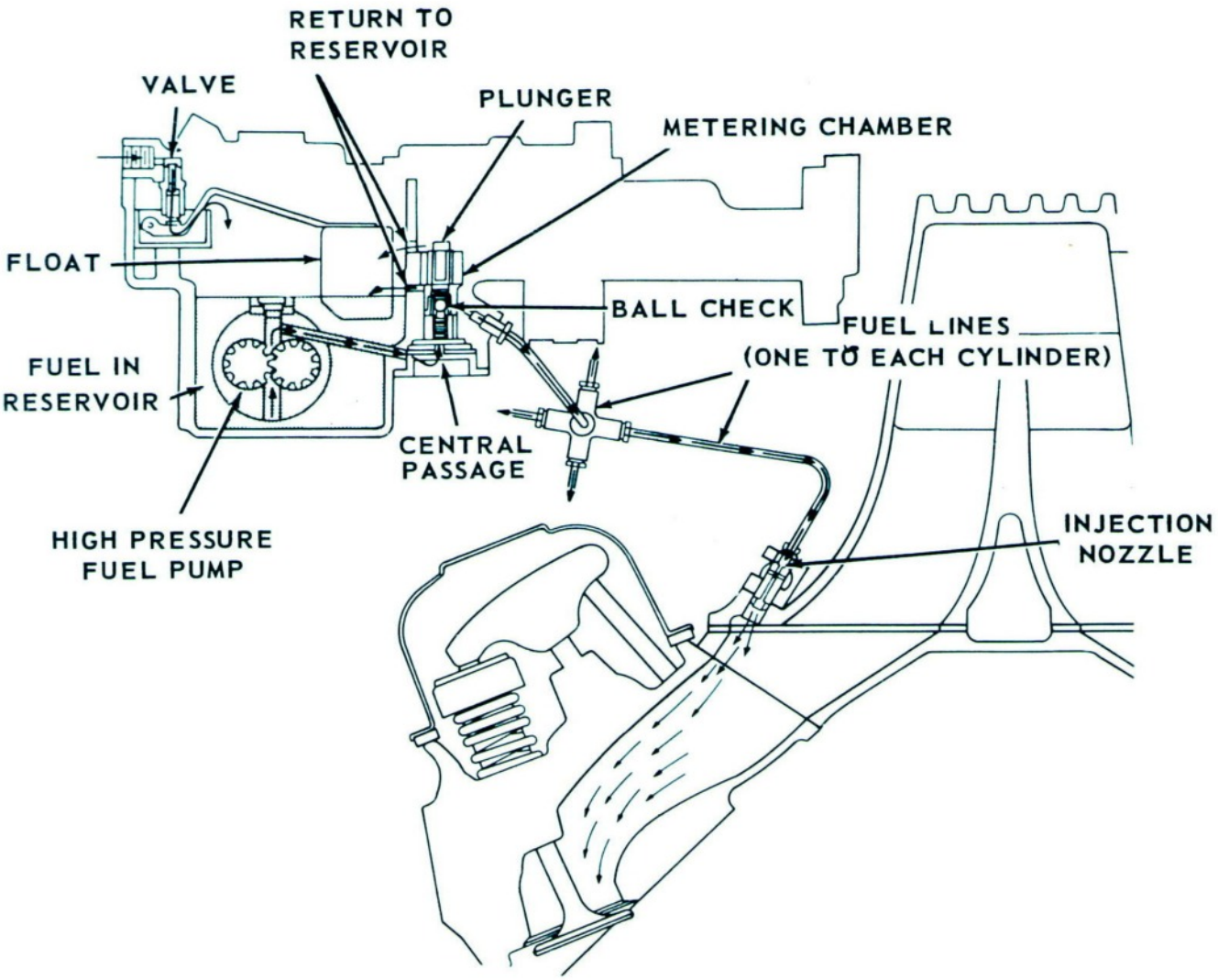
Air Intake: Outside air was routed through an air cleaner. This filtered out dust and foreign matter. Air next passed through an air meter then into the intake manifold, cylinder head, and combustion chamber.



Fuel Intake: The system used a fuel meter to supply and regulate fuel. The engine fuel pump sent fuel through a filter and into a reservoir in the fuel meter housing. A float-controlled valve maintained the fuel quantity in the reservoir. A separate, high-pressure fuel pump was housed in the reservoir. This pump was driven by the ignition distributor through a flexible cable. Fuel passed through the pump into a central passage, where it lifted a ball check, before it flowed through a series of small holes into a metering chamber.

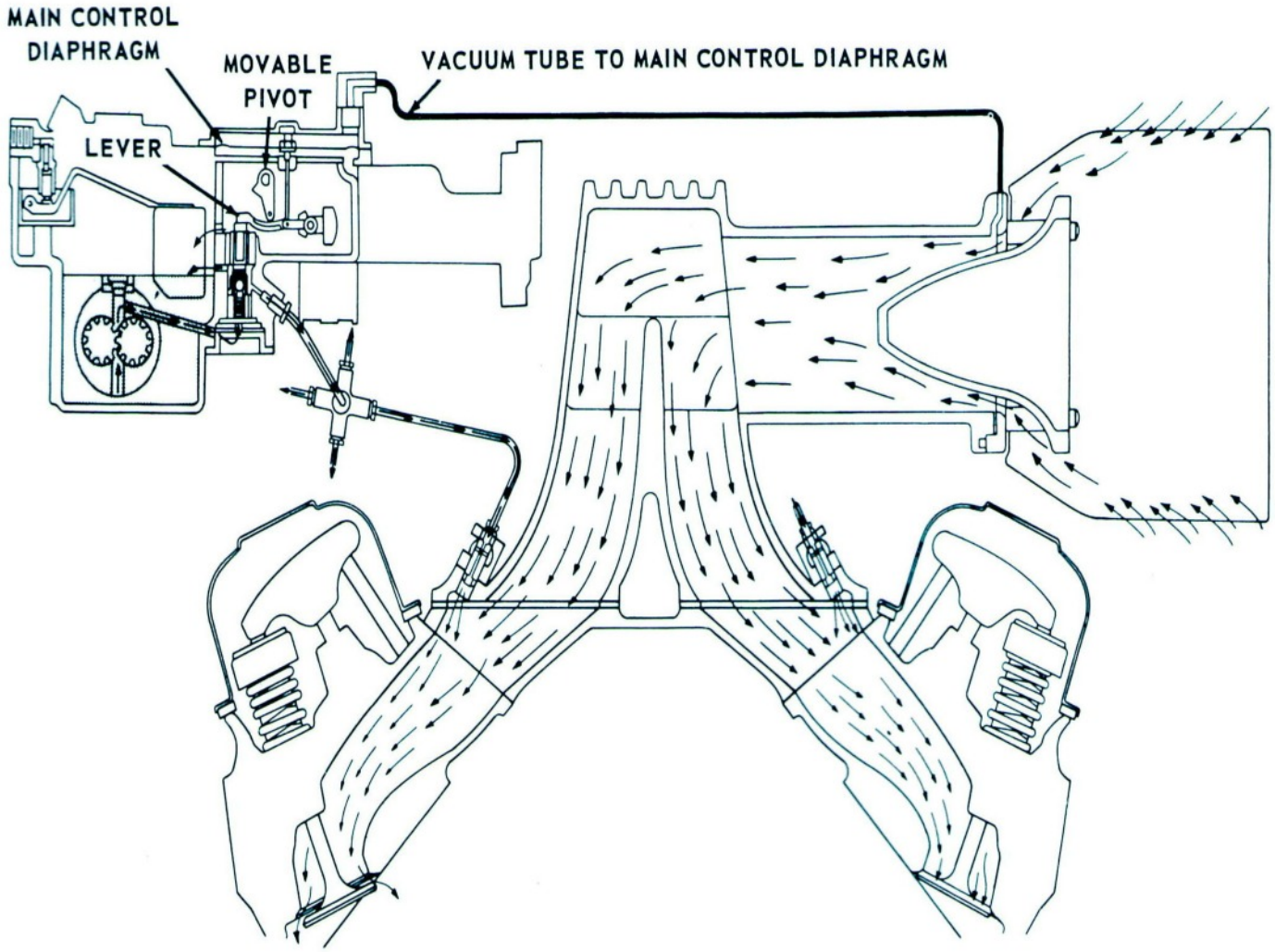
Fuel then went to the injection nozzles or back to the reservoir. A plunger determined where the fuel went. If the plunger was raised, fuel flowed back to reservoir. As the plunger lowered, a portion of the fuel flowed into the injection nozzles. The remainder returned to the reservoir. The ball check allowed fuel to flow from the pump when fuel pressure was 15 pounds or higher. This compressed any vapors that may have formed back into a liquid.

FUEL INTAKE



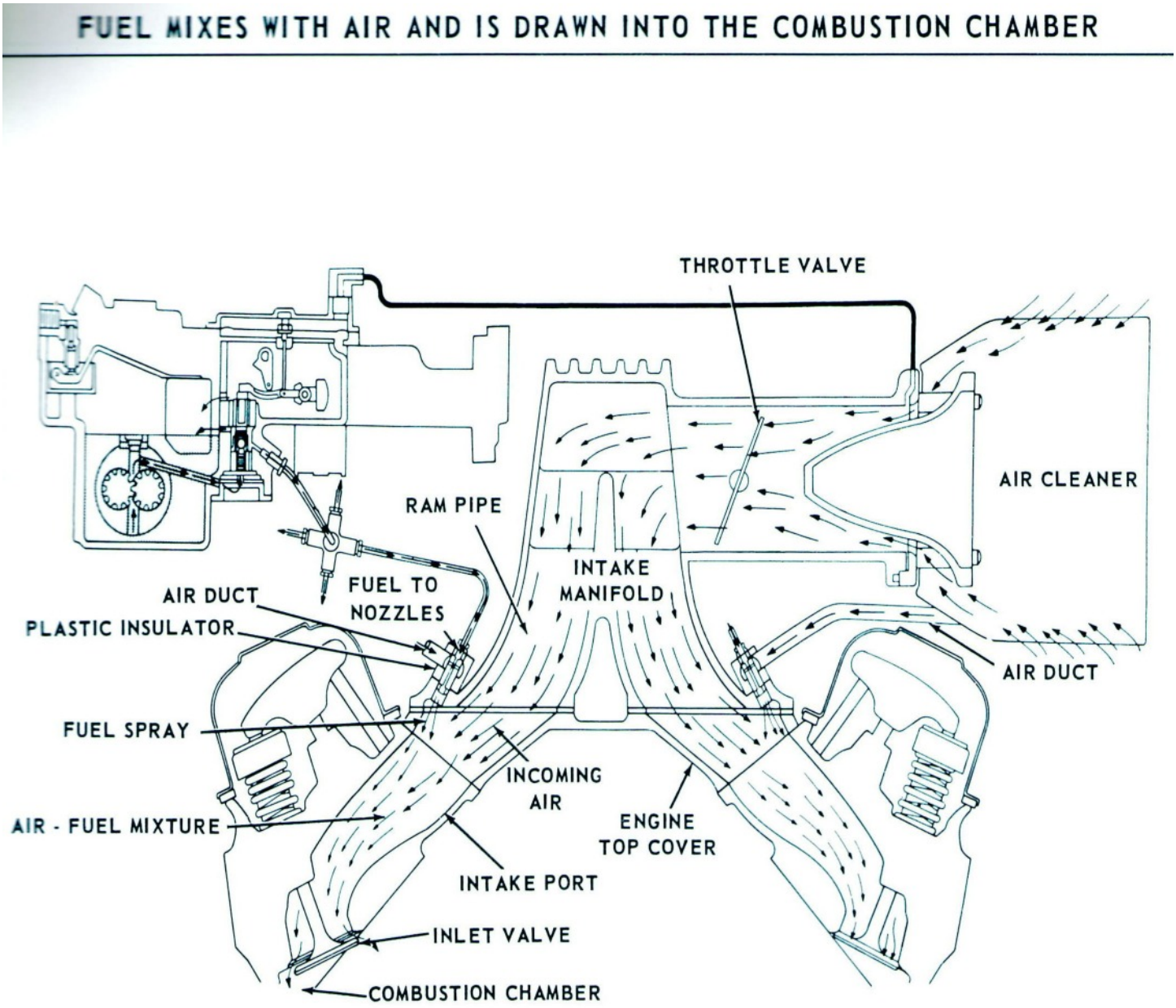
Matching Fuel and Air Flow: High air flow called for high fuel flow. Low air flow called for low fuel flow. As incoming air passed through the venturi and was measured, it sent a vacuum signal to a main control diaphragm in the fuel meter. Based on the amount of vacuum, the diaphragm metered the fuel by raising or lowering the plunger through a lever. This delivered, with high accuracy, the precise amount of fuel required by the engine for the volume of air being used.

RIGHT AMOUNT OF FUEL TO MATCH AIR FLOW



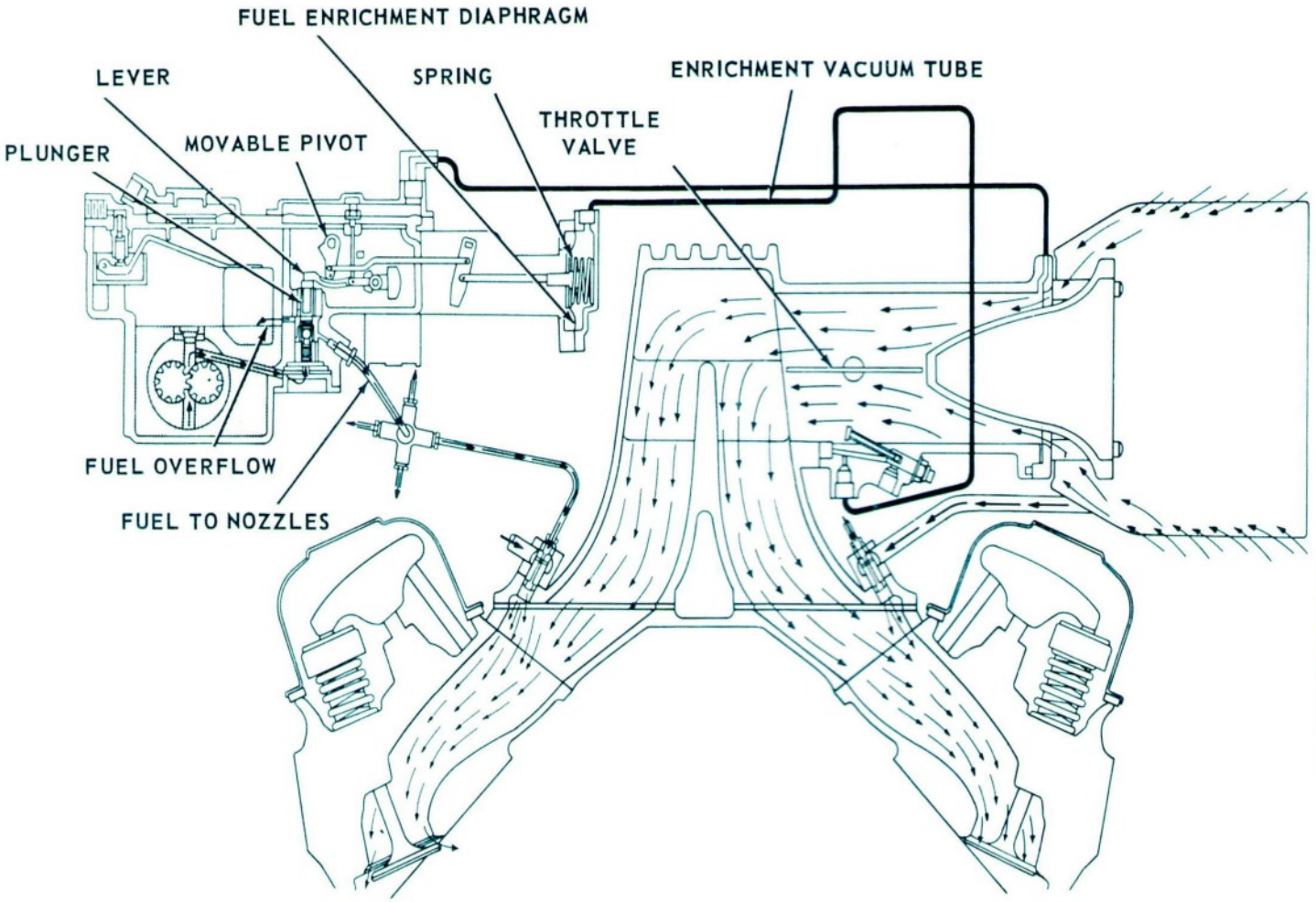
Fuel Mixed with Air and Drawn into the Combustion Chamber: The intake manifold had eight individual passages, called ram pipes, one pipe for each cylinder. The fuel injection nozzles were mounted in plastic insulators in the lower part of the intake manifold, near the cylinder head intake ports. As the inlet valves opened, the nozzles sprayed fuel, which had mixed with onrushing air, into the combustion chamber. Inside the combustion chamber, the fuel-air mixture was compressed and ignited. A throttle valve, controlled by the driver through the accelerator, determined the amount of air and fuel supplied to the engine.

The nozzles were designed to inject fuel into atmospheric pressure. This allowed the fuel amount to be determined solely by the fuel metering system, removing influence of vacuum variations.



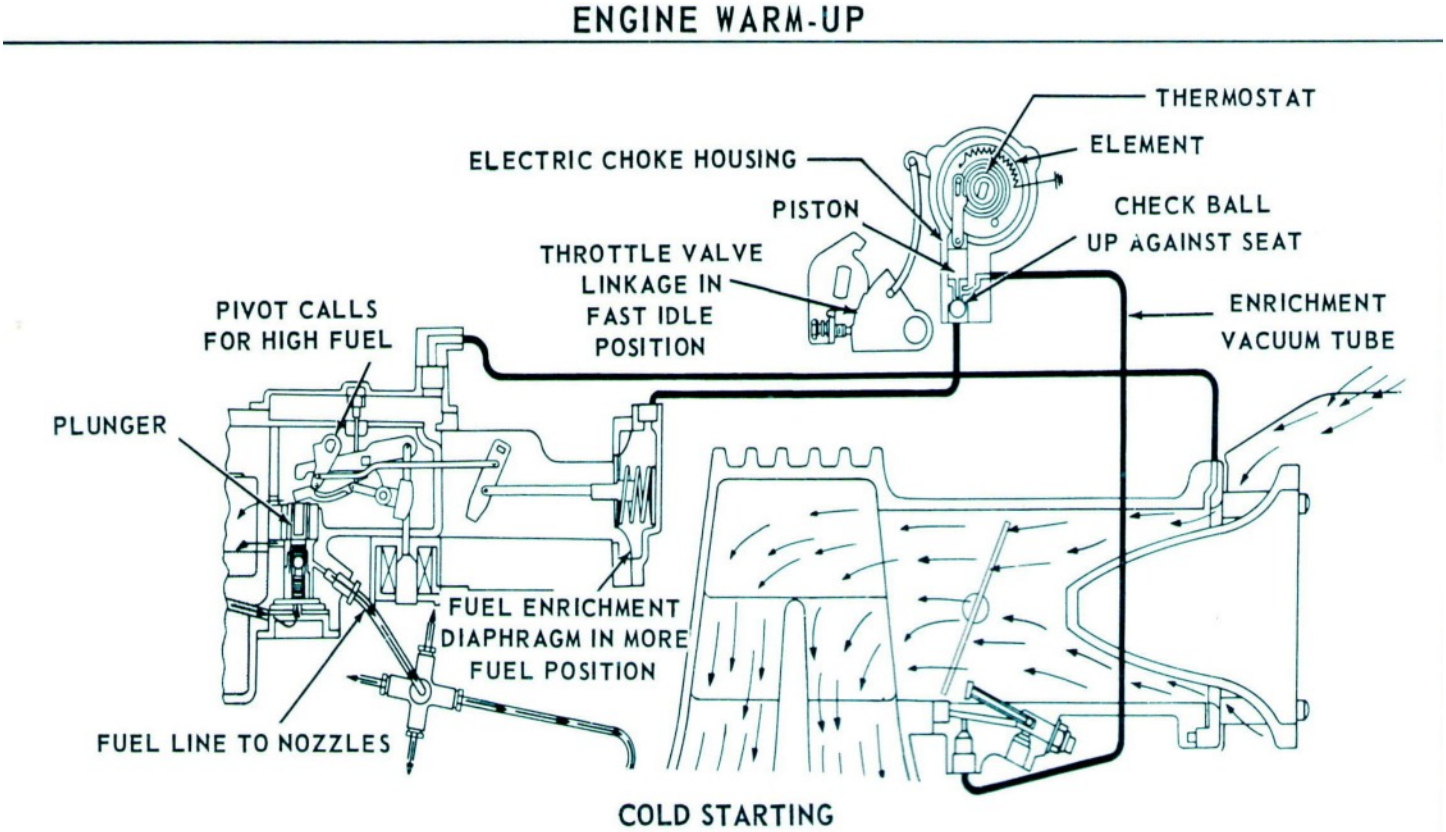
Fast Acceleration: The fuel metering system had a movable pivot connected by a rod to a fuel enrichment diaphragm. The pivot was normally held in a position that provided maximum operation economy. When the driver pressed on the accelerator to speed up, the throttle valve opened wider. This enlarged the opening for the incoming air, drawing less on the enrichment vacuum tube, reducing the vacuum. The movable pivot was pushed toward the end of the lever and moved the plunger down. This reduced fuel return to the reservoir and increased fuel flow to the injectors. The richer mixture increased power for acceleration.

FAST ACCELERATION

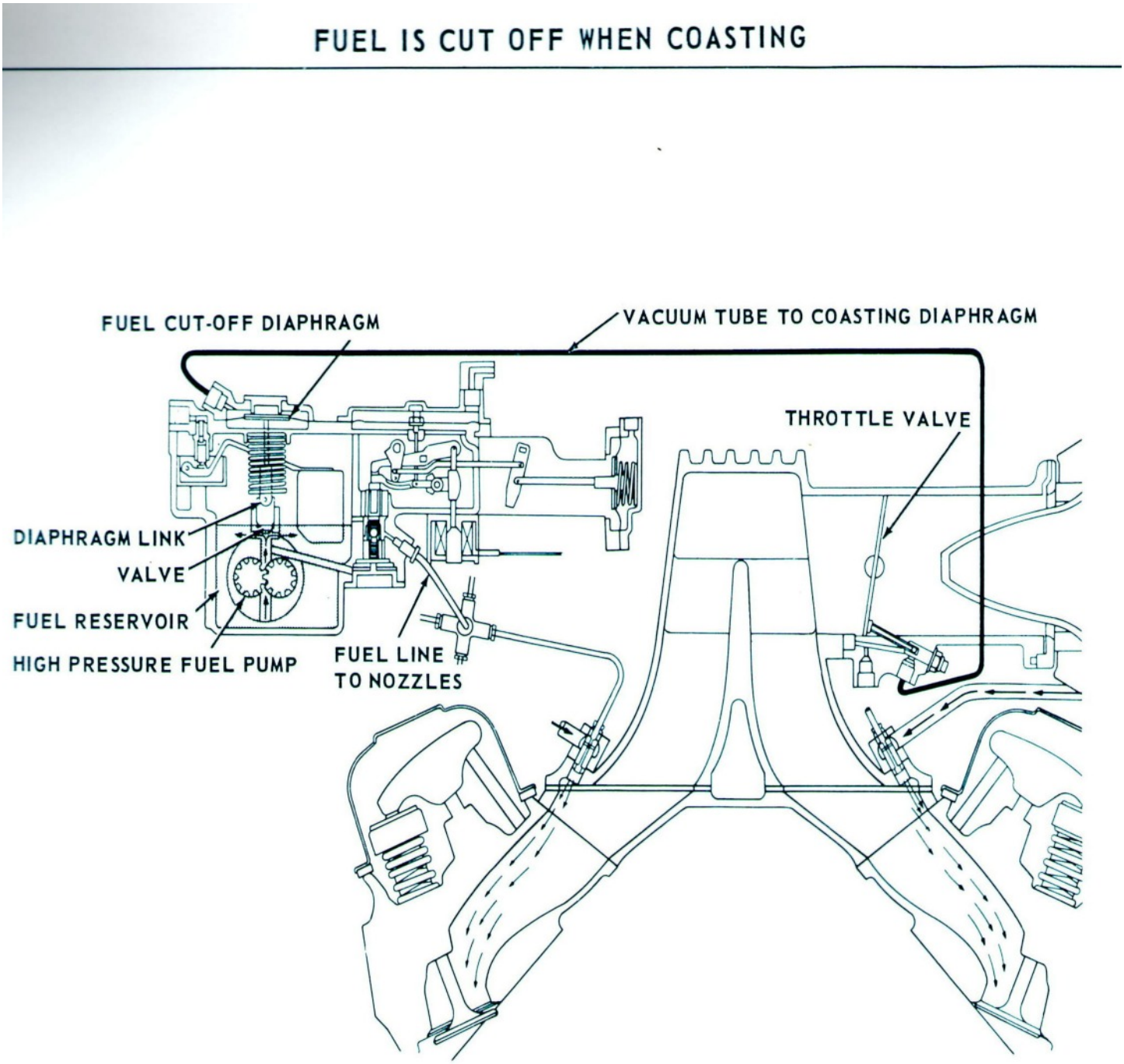


Easy Cold Starting: A solenoid opened a direct passage to the fuel nozzles when the engine was started. The starter motor automatically energized this solenoid. This forced a solenoid link upward which then forced the plunger down and unseated the ball check. Fuel was then routed directly from the fuel pump to the nozzles. When the driver released the starting switch, the solenoid was de-energized.

Engine Warm-Up: The system provided a richer fuel mixture during warm-up by changing the position of the pivot in the fuel metering system to call for more fuel. The fuel enrichment system and an electric choke were used. For cold starts, vacuum in the housing pulled a check ball upward against a seat. This cut off vacuum to the enrichment diaphragm. Inside the choke housing, the vacuum was applied to the bottom of a piston. The top of this piston was linked to a thermostat. As this thermostat was heated, it relaxed and allowed vacuum to pull the piston downward. In its lowest position, the piston pushed the check ball off its seat, returning the fuel enrichment system to normal operation. The electric choke also held the throttle valve slightly open for fast engine idling after cold starts. As the thermostat heated up, the engine idle speed returned to normal.



Fuel Cut Off When Coasting: An automatic fuel cut-off system stopped fuel waste and discharge of exhaust containing unburned fuel when the car was coasting or decelerating. This allowed for quieter engine operation and eliminated exhaust sputtering. The high vacuum caused by large quantities of air pulled in by coasting downhill sent a signal to a diaphragm located above the high pressure fuel pump. The high vacuum raised the diaphragm which opened a valve over the fuel pump. This discharged the fuel directly back to the reservoir. No fuel went to the nozzles. As the high vacuum diminished, the valve over the fuel pump closed and fuel again flowed to the nozzles.



Ramjet Fuel Injection was only available on the new for 1957 283 cubic-inch V-8. There were two horsepower ratings for fuel injected cars, 250 at 5,000 rpm, or with the addition of a "competition" camshaft, 283 horsepower at 6,200 rpm. The 250 horsepower version provided 305 pounds/feet of torque at 3,800 rpm. The 283 horsepower version gave 290 pounds/feet at 4,400 rpm. Fuel injection was available for all Chevrolets and Corvettes in 1957. It was available with any of Chevrolet's transmission choices.

Chevrolet issued a 29 page Fuel Injection shop manual for the 1957 model year. The introduction stated: "This manual was produced to provide the service man with complete information on the construction, operation, maintenance and repair of the Chevrolet Fuel Injection System." Pages 1 - 14 described how the system was constructed and how it worked. These pages used diagrams similar to the ones from the *Engineering Achievements* book.

Pages 15 - 29 described procedures to be used for adjusting, servicing, testing, disassembling, reassembling and troubleshooting the Ramjet units. The manual illustrated and described procedures for removing the complete unit from the engine and for the removal of the main assemblies. It also described how to clean and inspect parts of the system.

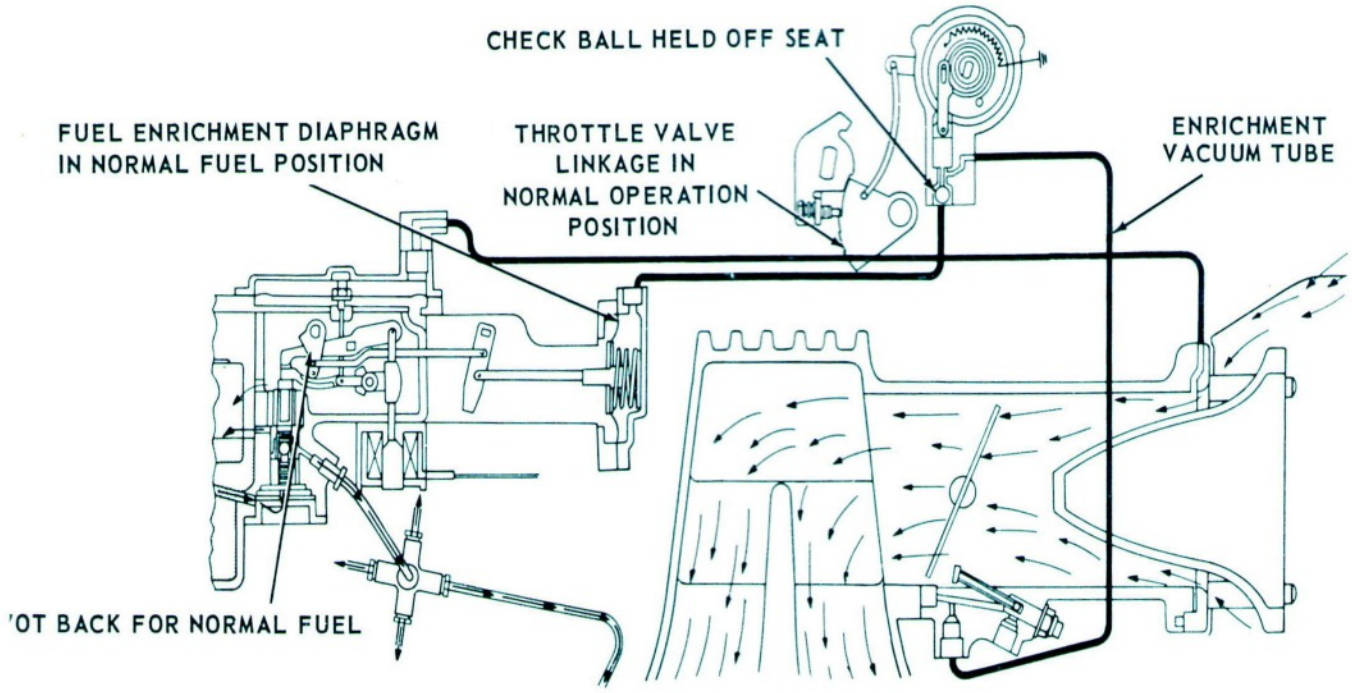
Chevrolet touted Ramjet Fuel Injection in the sales brochure. "Here's even greater performance – two powerful versions of the special 'Corvette' V8 engine, available in all passenger car models for 1957! Chevrolet's trend-starting new fuel injection, most far-reaching engine improvement in the entire industry. With the carburetor completely eliminated, fuel injection results in the most instantaneously responsive power you've ever known … and a brand new measure of fuel efficiency."

According to the *Chevrolet Stock Car Guide*, published in April of 1957, Ramjet Fuel Injection was not allowed in NASCAR racing. The guide advised dealers to "always check the rules of the association in which competition is planned to be sure Ramjet Fuel Injection is permissible before ordering a car with this equipment." Where fuel injection was allowed in racing, "here is one of the very finest high performance engines ever offered on any production automobile. Produces 283 rated gross horsepower at 6,200 rpm, with peak torque at high engine speeds. Ramjet Fuel Injection produces instantaneous response unmatched by conventional carburetion." The guide stated that fuel injected engines didn't need rebuilding for competition, unlike most other available engines. Race mechanics were advised not to alter the valve timing or camshaft on Ramjet equipped engines. Doing so would cause serious trouble. "This unit is designed to produce peak power and instantaneous throttle response as originally manufactured. There is no known modification that will measurably improve the maximum performance of a properly calibrated Ramjet Fuel Injection system. Do not experiment – make only the necessary adjustments, and perform these with great care, in strict accordance with the Chevrolet Fuel Injection Shop Manual."

Cars equipped with fuel injection displayed a special badge that featured crossed racing flags and the words "fuel injection". The *Standard Catalog of Chevrolet 1912-1998* states that fuel injected car cost $484 more than a standard six-cylinder equipped car. *75 Years of Chevrolet* lists the price of the fuel injection option as $675. Neither book lists production figures for Ramjet equipped cars. *75 Years of Chevrolet* states that the fuel injection units gave great performance

but miserable highway fuel economy. The book also says that few mechanics of the day were experienced enough with the systems to repair and set them up correctly.

Chevrolet offered fuel injection on passenger cars only until 1959. The option was discontinued on Corvettes during 1965, when the big block engine became available.



NORMAL WARM ENGINE OPERATION

Fuel injected 1957 Chevrolet 150 race car seen at the 2017 Mecum auction in Kissimee, Florida. Photos by John Mahoney.

1992 CHEVROLETS ELIGIBLE FOR AACA JUDGING - BY RUSSELL HEIM

AACA welcomes a new model year to participation eligibility each year. This year, 1992 models are eligible. Here's a brief look at Chevrolet's 1992 offerings.

Corvette – The one-millionth Corvette was produced on July 2, 1992. It was polo white with a sportsman red interior, just like the first Corvette. Corvette received a new ASR anti-skid system. The 300 horsepower LT1 engine replaced the previous L98 350 cubic inch, 245 horsepower engine from 1991.

Caprice – This year's new LTZ option package included a heavy duty frame and brakes, sport suspension, wide tires and limited slip differential. The Caprice LTZ was *Motor Trend* car of the year. A new 180 horsepower 350 cubic-inch V8 was optional this year on Caprice station wagons.

Camaro – 1992 marked the 25th anniversary of Camaro's introduction. Chevrolet celebrated the anniversary with a Heritage Edition appearance package. The 3.1 liter V6 engine was standard on RS models. Z28 models came with a standard 5.0 liter V8. The 5.7 liter V8 was a Z28 option.

Lumina – Chevrolet added the Euro 3.4 option for the four-door sedan in 1992. ABS brakes were now standard on Euro and 3.4 models. Base models had four-wheel disc brakes and a 2.5 liter four-cylinder engine.

Cavalier – Power door locks and ABS brakes were now standard features on all Cavaliers. The standard 2.2 liter four-cylinder engine now produced 110 horsepower. The Z24 convertible returned to Cavalier's line-up. The 3.1 liter V6, making 140 horsepower, was standard on Z24 models and optional for all other Cavaliers.

Corsica and Beretta – ABS brakes now were now a standard feature. The 2.2 liter four cylinder engine's power was upped to 110 horsepower. The Corsica hatchback was dropped from the line-up.

1992 Sales Figures

Cavalier – 225,633
Camaro – 70,007
Corsica – 144,833
Beretta – 52,451
Lumina – 236,306
Caprice - 116,781
Corvette – 20,428

1992 Chevrolet Cavalier RS

1992 Chevrolet Camaro Z28

The Space Age Star is the official publication of the Space Age Chevrolet Region of the Antique Automobile Club of America. This is a non-geographic region dedicated to the enjoyment, restoration, and history of 1955 and later AACA eligible Chevrolet cars and trucks. We publish the newsletter six times each year.

Region Officers:

President: Russell Heim

Vice President: John Mahoney, Jr.

Secretary: Ana Heim

Newsletter Editor: Russell Heim

Webmaster: Bill Pritchett

Please send all articles and classified ads to the editor at spaceagechevy@gmail.com

Our Web Address is: http://spaceage.aaca.com