1964 Corvette: Service News: Servicing 1964 Corvette Fuel Injection Units

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Two models of the fuel injection unit, which differ only slightly in design, have been furnished as RPO L84 for 1964 Corvettes.

The Part No. 7017375-R Fuel Injection Unit used on 1964 early production Corvettes is, in effect, the 1963 design except for changes in calibration that were incorporated to satisfy 1964 engine requirements.

Fuel Injection Unit 7017380, used in later production 1964 Corvettes, is basically similar to the 1963 and the early 1964 units except that instead of using the manifold vacuum controlled cranking signal valve system to provide fuel for cold engine cranking; the 7017380 utilizes a solenoid controlled by-pass fuel circuit for this purpose.

When the engine cold starting fuel circuit is in operation on the 7017380 Unit, the entire output of the regular engine fuel pump (A/C diaphragm type) is delivered thru a by-pass line directly to the fuel distributor (spider), where the fuel then passes thru a ball-check valve and is routed to the nozzle in each cylinder. The control solenoid for the cold starting circuit will be energized to open a fuel valve and provide fuel delivery thru this circuit whenever the ignition key is held in the “Start” position and the accelerator pedal is not being depressed more than 1/3 of its travel distance. A micro-switch mounted on the injector throttle linkage, when tripped by depressing the accelerator pedal beyond the first third of this travel, will stop all fuel delivery to the fuel

spider via the cold starting circuit.

Before stating a cold engine, the accelerator pedal should be depressed once and then fully released, thereby allowing the fast idle cam to properly index for starting. The cold engine should then be cranked with the accelerator pedal remaining fully released until the engine starts.

The extremely low fuel volume that is supplied thru the fuel meter when the accelerator pedal is depressed to ½ of its travel distance will assure quick, hot engine starts at this pedal position. The volume of fuel metered to the cylinders at cranking would decrease as the pedal is depressed further. Cranking with the pedal fully depressed will clear a flooded engine.

All fuel injection service procedures detailed in Section 6M of the 1963 Corvette Shop Manual are also applicable to both 1964 Units, except that information in the Manual relative to the cranking signal valve cold starting system does not apply to the 7017380 Unit. The specifications required for service checks and adjustments on the 1964 Fuel Injection Units are provided in the following chart.

1964 Fuel Injection Specifications

		Early Prod. Unit 7017375-R	Late Prod. Unit 7017380
Fuel Pressure @ .5" H_2O	At Power Stop.... At Economy Stop..	1.1" Hg. (+/- .1) .8" Hg. (+/- .1)	1.9" Hg. (+/- .1) 1.0" Hg. (+/- .1)
Enrichment Diaphragm — Vacuum to Apply	At Economy Stop.. At Travel Center.. At Power Stop....	7" Hg. 4.5" Hg. 2" Hg.	7" Hg. 4.5" Hg. 2" Hg.
Enrichment Diaphragm Clearance		.040"	.040"

(Min.)..... Cold Enrichment Housing Cover Setting.....	On Index	On Index
Cranking Signal Valve—Vacuum to Apply...	1" Hg. (Max.)	Not Used
Main Control Diagphragm—Vacuum to Apply..	1/2" to 30" H_2O	1/2" to 30" H_2O
Float Level..... Float Drop.....	2 9/32" 2 27/32"	2 9/32" 2 27/32"
Engine Fast Idle Speed. (Engine Hot).....	2000 RPM	2000 RPM

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