Model C-039-122 Series Regulator Parts Description, Installation & Operation

General

The C-039-122 is designed for sensitivity and simple operation. It is used with low pressure vaporized gaseous fuels, where dependable starting is required. Because of its extreme sensitivity, the C-039-122 offers excellent results in most remote starting applications (standby power generators, etc.) if installed and maintained properly.

Warning!

Special Note: By NFPA definition, an atmospheric zero regulator is not considered a positive shut-off valve, and an approved automatic shut-off device shall be installed to assure that the flow of fuel will be stopped should the engine fail while unattended.

Operation

The C-039-122 is an atmospheric zero regulator which acts like the float. The needle valve in the carburetor creates a vacuum which acts through the outlet of the C-039-122 on the diaphragm. Atmospheric pressure then forces the diaphragm toward the vacuum, depressing the lever and pulling the valve seat away from the orifice which allows fuel to flow as long as the demand persists. When the vacuum ceases, a spring force pushes on the lever and forces the valve seat against the orifice shutting off the fuel flow. **It is important to remember that fuel should not flow through the C-039-122 when the engine is not running.** A properly adjusted C-039-122 requires a vacuum of only 0.25" to 0.35" of water column to start the opening sequence. Due to this sensitivity, most installations do not need priming to start unless low cranking speed or restricted and lengthy piping are required.

If priming is necessary and a manual primer is installed, use only 1 or 2 second bursts of fuel and immediately try to start the engine.
If there is a choke on the carburetor, do not use it as this will probably cause flooding and hard starting.

If you are having trouble operating the engine, in most cases the fuel controller is NOT malfunctioning. There is generally a problem with the engine or fuel supply, so do not make adjustments or attempt to service the C-039-122 .

Installation

The C-039-122 should be mounted as close to the carburetor as possible with the arrow on the cover pointing up and the diaphragm in a vertical position. This helps to minimize the effects of gravity on diaphragm travel. The unit should also be placed for easy access to the primer if provided.

There are two sets of mounting holes provided. Either set of mounts will adequately support the C-039-122 . The bottom set of holes have a 1-3/4" bolt spacing. The mounting bosses on cover are spaced 5-3/4" apart for use with 1/4" bolts.

Before installing the fuel supply line, be sure that the gas pressure is no more than the maximum inlet pressure shown on the front of the C-039-122. If the pressure is greater, leakage could result in a fire hazard and/or hard starting. The piping to the inlet should be of sufficient size to allow full flow to the C-039-122. This is very important in natural gas installations as any restrictions can affect engine performance.

If a solenoid is used ahead of the C-039-122 in the low pressure line, it should have an orifice at least as big as the orifice in the C-039-122.
Flexible piping to the inlet should be used to prevent cracking from vibration if the C-039-122 is mounted on the engine or other vibrating surface.
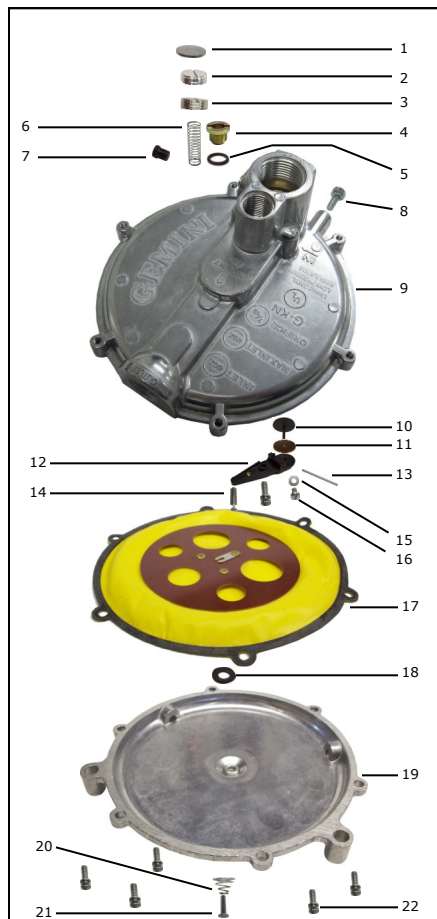
No.	Part No.	Description	Qty.
1	C-C11-1	Cap, Adj. Screw, TR	1
2	C-S2-18	Screw, Lock, Adj. Spring	1
3	C-S2-11	Screw, Pressure Adj.	1
4	C-J1-3	Jet, 7/16"	1
5*	C-W1-6	Seal, Jet	1
6*	C-S3-14	Spring	1
7	C-P3-3	Plug, 1/8 NPT, Hex Head	1
8	C-S1-5	Screw-Lockwasher	2
9	C-B1-3	Standard Body	1
10*	C-S5-1	Seat	1
11*	C-W1-5	Washer, Seat Backup	1
12*	C-L1-5	Lever	1
13	C-P1-11	Pin, Lever Fulcrum	1
14*	C-P1-12	Pin, Connector	1
15	C-W1-42	Flat Washer	2
16	C-S10-11	Screw, #4-40 x 1/4" Pan Head	2
17*	C-D1-7A	Diaphragm Assembly, Silicone	1
18	C-W1-27	Washer, Primer	1
19	C-C1-7	Cover, Back	1
20	C-S2-21	Spring, Primer	1
21	C-P1-1	Pin, Primer	1
22	C-S1-3	Screw: 10-24 x 5/8" SEMS	6
Repair Kit: C-039-99			
* Indicates Repair Kit Components			