

# MODEL C-11A17-0001 REGULATOR REPAIR KIT INSTRUCTIONS

**Important:** Any maintenance, service or repair should be performed by trained and experienced service technicians. Proper tools and equipment should be used to prevent injury to the servicing technician, property or system components. Service repairs should always be performed in a safe environment and the technician should always wear protective clothing to prevent injury.

The Century C-R11-17 repair kit instructions will provide the technician information to successfully repair the model C-11A17-0001. The kit may also be used to repair other brand Model 11A17 regulators. Always inspect the major casting pieces for damage, corrosion or cracks before attempting a service repair. Be sure the repair kit part number you are using is correct for the regulator being serviced.

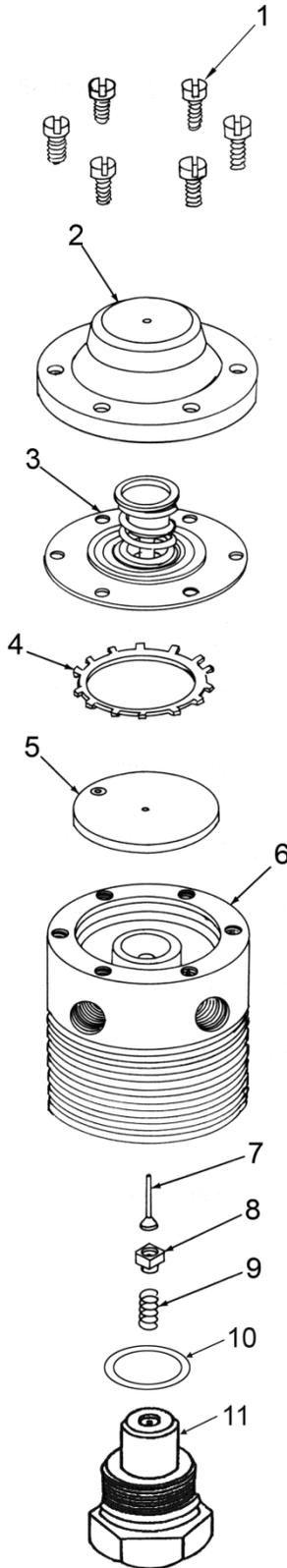


**C-11A17-0001 Regulator**

## REPAIR KIT

PART #	DESCRIPTION
C-R11-17	Repair Kit, C-11A17-0001 Major

	<b>WARNING</b>
Do not use Teflon tape to seal any fuel fittings used to carry fuel in the fuel system. Failure to follow this warning may cause the regulator to leak internally, that may cause serious injury and/or property damage.	



ITEM #	DESCRIPTION	QTY
1*	Screw, Cover	6
2	Cover	1
3*	Diaphragm Assy	1
4*	Retainer	1
5	Plate	1
6	Body	1
7*	Valve Stem	1
8*	Valve Guide	1
9*	Spring, Valve	1
10*	O-ring, Plug Seal	1
11	Plug	1

\*Included in repair kit P/N: C-R11-17



1. Remove the Screws (1) securing the Top Cover (2).



2. Remove the Top Cover (2) and the Diaphragm Assembly (3) from the Body (6).



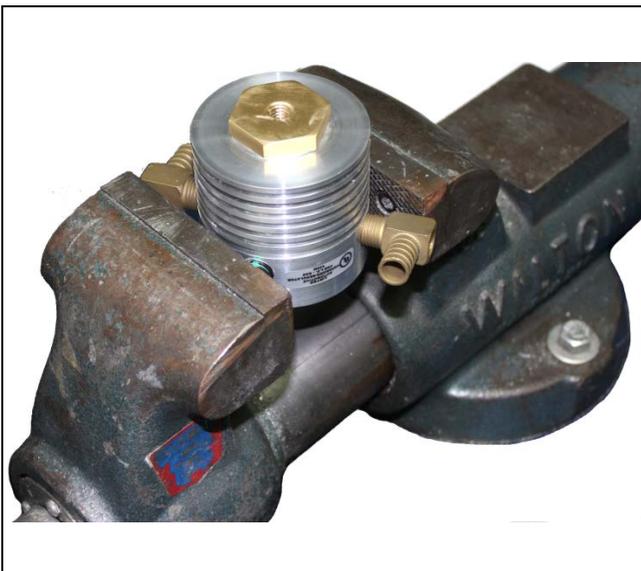
3. While not damaging the Body (6), the Retainer ring (4) or the Plate (5), **Carefully** remove the Retainer ring (4).  
Once the Retainer ring is removed, remove the Plate (5) from the regulator.



4. If there is a plug in the regulator's outlet port opposite of the inlet port, remove the outlet port plug.



5. Insert any spare 1/4" NPT fitting into the regulator ports on the Regulator Body (6) on opposite sides. (180 degrees from each other)



6. Place the Regulator upside down in the jaws of a vise and turn counter clockwise until the fittings are up against the jaws of the vise.

**NOTE:** The fittings are necessary to prevent the cylindrical regulator from turning while secured in the vise. The use of the outlet plugs or not using spare fittings to secure the regulator may result in heavy scoring of the regulator body from the vise jaws.

**WARNING:** Do not over tighten vise. Excessive tightening will damage the regulator body.



7. Use a **1-3/8"** socket to remove the brass Plug (11).

**NOTE:** The use of an open end or adjustable wrench will likely round off and damage the hex ends of the brass Plug (11).

**Always** use a socket or box end wrench to remove the brass Plug (11).

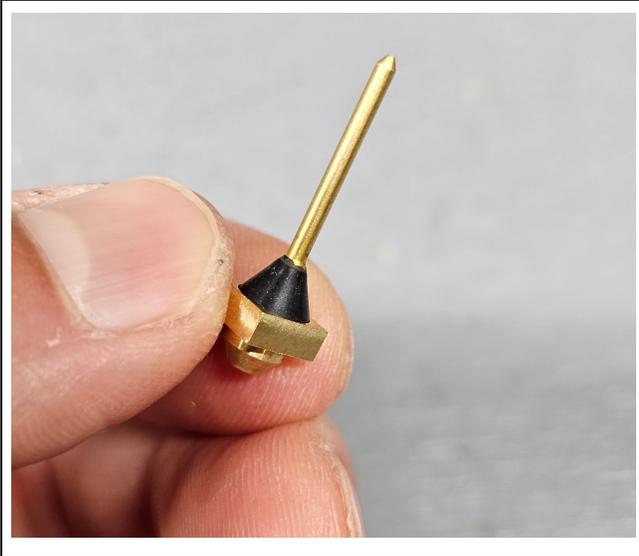


8. Using a pair of pliers, remove the Valve Stem (7), Spring (9) and Valve Guide (8) assembly from the Regulator Body (6).

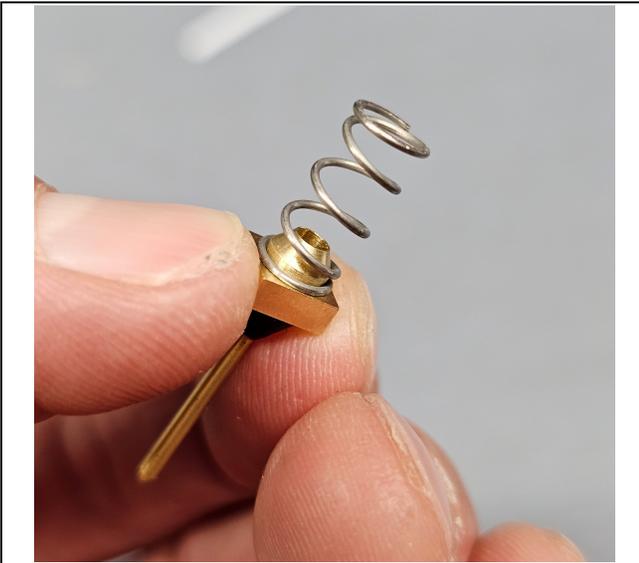


9. Inspect the Regulator Body (6) for scoring or damage.

Inspect all of the parts removed from the Regulator and those in the repair kit for dirt, debris or damage. Clean as necessary.



10. Push the Valve Stem (7) into the Valve Guide (8).



11. Push the Spring (9) onto the Valve Guide (8). Make sure the Spring is fully seated onto the Valve Guide (8).



12. Insert the Valve Stem (7), Spring (9) and Valve Guide (8) into Regulator Body (6).



13. Ensure the Spring (9), Valve Guide (8) and Stem (7) assembly is properly seated in the Regulator Body (6).



14. Place the O-ring (10) onto the brass Plug (11) and into the lower most O-ring groove, closest to the hex portion of the brass Plug (11).

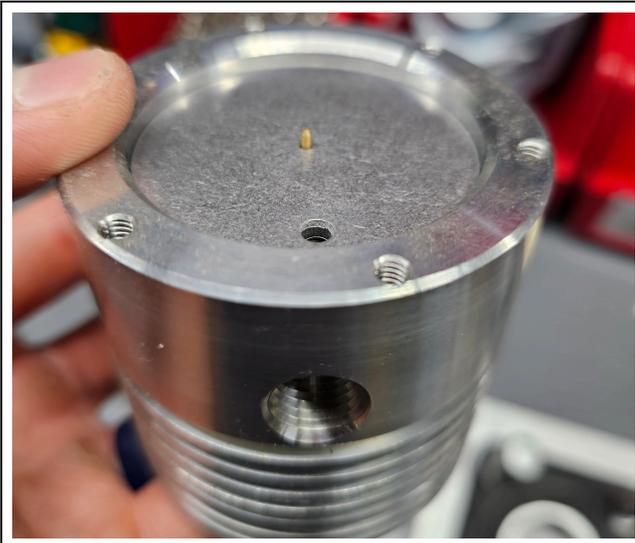


15. Apply a light amount of O-ring lubricant to the O-ring (10).



16. Loosen vise and turn the Regulator counter clockwise until the fittings are up against the jaws. Insert brass Plug (11) into Regulator Body (6) and torque to 40 ft lbs.

**WARNING:** Do not over tighten vise. Excessive tightening will damage the regulator body.



17. Rotate Plate (5) so that the opening is centered over the outlet port directly opposite (180 degrees) from the inlet port.



18. Place the Retainer Ring (4) over the Plate (5) with the teeth of the Retainer Ring (4) pointing up. Press down all around the Retainer Ring (4) into place using the **1-3/8"** socket.



19. Turn over and place the diaphragm assembly on top of the Regulator and align holes.



20. Insert one Screw (1) through the Top Cover, diaphragm assembly and turn a few times, but do not tighten. Insert another Screw on the opposite side and turn, but do not tighten.

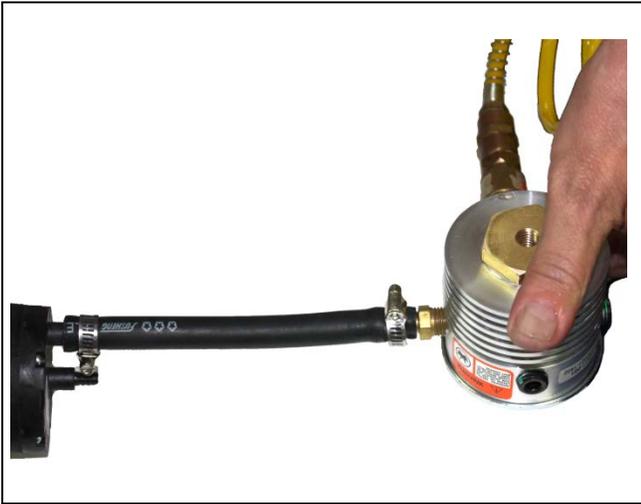


21. Insert the remaining screws and lightly finger tighten each, then in a criss-cross pattern, torque each to 28-36 in/lbs.



22. Place pipe thread compound on the port plug and insert into the port outlet. Torque until finger tight, plus 1-2 full turns.

**CAUTION:** Use only pipe thread compound compatible with LPG. **Do not use Teflon tape.**



23. Insert a male quick release air hose fitting into the 1/4" NPT fuel inlet port then fit a hose barb into the fuel outlet.

Connect a hose to the barb and 15 psi pressure gauge. Secure hose fittings using hose clamps.



24. Connect to shop air pressure (approximately 90 psi). The outlet pressure reading should be 9-13 psi. Any pressure readings below or above 9-13 psi indicates the Regulator or rebuild has failed and must be replaced.



25. Apply a commercial liquid leak test solution to all seals, fittings and the atmospheric vent (the small hole on top of the cover (2)) to ensure there are no leaks.  
If leaks are found, repair or replace the Regulator.
26. If no leaks are detected, the Regulator may be returned to service.

# WARNING:

## IMPROPER INSTALLATION OR USE OF THIS PRODUCT MAY CAUSE SERIOUS INJURY AND/OR PROPERTY DAMAGE.

**SERVICE TECHNICIANS AND USERS** SHOULD CAREFULLY READ AND ABIDE BY THE PROVISIONS SET FORTH IN NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #37 FOR STATIONARY ENGINES, #52 FOR CNG VEHICULAR FUEL SYSTEMS OR #58 FOR LPG SYSTEMS.

**INSTALLERS** LPG INSTALLATIONS IN THE UNITED STATES MUST BE DONE IN ACCORDANCE WITH FEDERAL STATE AND LOCAL LAWS AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #58, STANDARD FOR STORAGE AND HANDLING OF LIQUEFIED PETROLEUM GASES, TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION OF FEDERAL, STATE OR LOCAL LAW.

**COUNTRIES OUTSIDE OF USA** REFER TO THE GOVERNING AGENCIES OVERSEEING CNG AND PROPANE APPLICATIONS.

**CNG INSTALLATIONS IN THE UNITED STATES** MUST BE DONE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAW AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #52, COMPRESSED NATURAL GAS (CNG) VEHICULAR FUEL SYSTEMS, TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION OF FEDERAL, STATE OR LOCAL LAW.

**LPG AND/OR NATURAL GAS INSTALLATIONS ON STATIONARY ENGINES** MUST BE DONE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAW AND NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #37, STATIONARY COMBUSTION ENGINES AND GAS TURBINE ENGINES, TO THE EXTENT THESE STANDARDS ARE NOT IN VIOLATION WITH FEDERAL, STATE OR LOCAL LAW. FAILURE TO ABIDE BY THE ABOVE WILL VOID ANY IMPCO WARRANTY ON THE PRODUCTS AND MAY CAUSE SERIES INJURY OR PROPERTY DAMAGE.

**SERVICE TECHNICIANS** DUE TO THE INHERENT DANGER OF GASEOUS FUELS, IMPCO PRODUCTS SHOULD NOT BE INSTALLED OR USED BY PERSONS NOT KNOWLEDGEABLE OF THE HAZARDS ASSOCIATED WITH THE USE OF GASEOUS FUELS. ANY MAINTENANCE, SERVICE OR REPAIR SHOULD BE PERFORMED BY TRAINED AND EXPERIENCED SERVICE TECHNICIANS.

**PROPER TOOLS AND EQUIPMENT** PROPER TOOLS AND EQUIPMENT SHOULD BE USED TO PREVENT INJURY TO THE SERVICING TECHNICIAN, PROPERTY OR SYSTEM COMPONENTS. SERVICE REPAIRS SHOULD ALWAYS BE PERFORMED IN A SAFE ENVIRONMENT AND THE TECHNICIAN SHOULD ALWAYS WEAR PROTECTIVE CLOTHING TO PREVENT INJURY.

**INSPECT BEFORE USE** ALWAYS INSPECT THE MAJOR CASTING PIECES FOR DAMAGE, CORROSION OR CRACKS BEFORE ATTEMPTING A SERVICE REPAIR. BE SURE THE REPAIR KIT PART NUMBER YOU ARE USING IS CORRECT FOR THE REGULATOR BEING SERVICED.

**NO TEFLON TAPE** DO NOT USE TEFLON TAPE TO SEAL ANY FUEL FITTINGS. FAILURE TO FOLLOW THIS WARNING MAY CAUSE THE REGULATOR TO LEAK INTERNALLY, POSSIBLY RESULTING IN SERIOUS INJURY, DEATH AND/OR PROPERTY DAMAGE AND MAY VOID ANY WARRANTY COVERAGE.