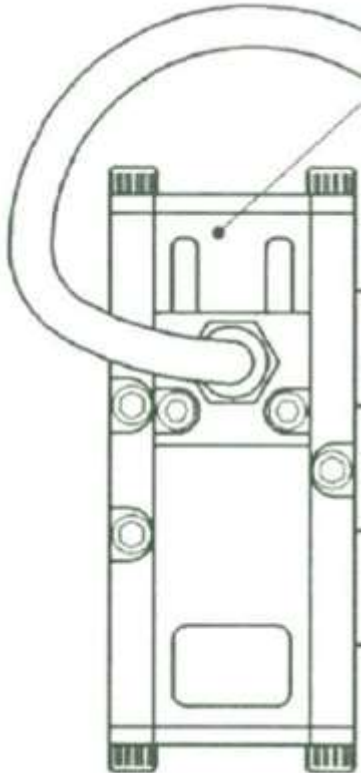




# **Pneumatic Relay (Update) or Repair**



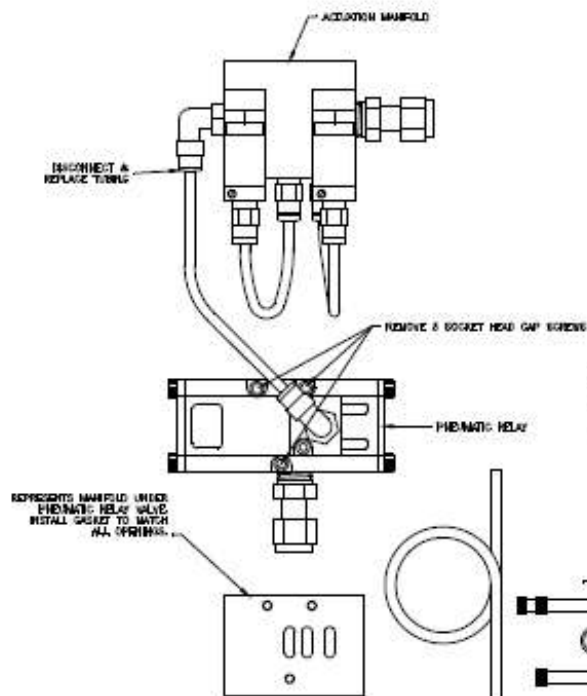
If you have the OLD  
STYLE Pneumatic Relay  
it should be Upgraded  
using Upgrade Kit P/N  
D3-0029





# Upgrade Kit P/N D3-0029



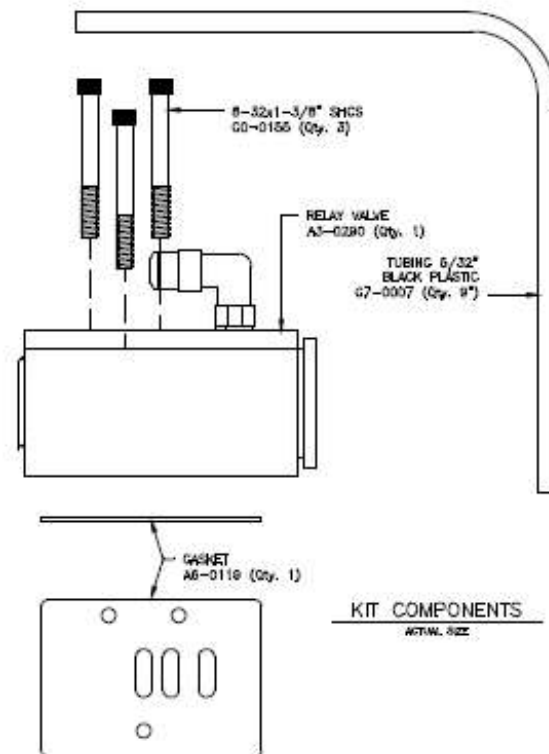
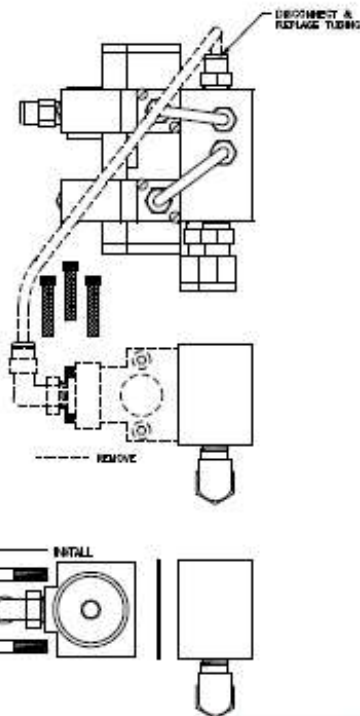


### NOTES

APPLICATIONS VARY. PNEUMATIC RELAY VALVE USED IN CABINETS & POLYMER ENCLOSURES. INSTRUCTIONS CONSISTANT WITH BOTH APPLICATIONS. MOUNTING OF EQUIPMENT DIFFERS SLIGHTLY IN VARIOUS APPLICATIONS. INSTRUCTIONS SIMILAR.

### INSTRUCTIONS

PLACE UNIT IN STANDBY MODE. SHUT OFF ACTUATION SUPPLY TO UNIT. DISCONNECT PNEUMATIC SUPPLY LINE TO RELAY MANIFOLD. DISCONNECT & REPLACE 5/32" BLACK PLASTIC TUBING AT FITTING ON ACTUATION MANIFOLD. REMOVE THE THREE SOCKET HEAD CAP SCREWS AND DISCARD. LIFT OFF OLD VALVE RELAY. REMOVE OLD GASKET AND ASSURE GASKET AREA IS CLEAN. PLACE BOLTS THROUGH NEW PNEUMATIC VALVE RELAY AND GASKET. LINE UP ON VALVE MANIFOLD AND TIGHTEN NEW SOCKET HEAD CAP SCREWS TO SEAL GASKET. CONNECT NEW TUBING TO RELAY WAVE AND CONNECT PNEUMATIC SUPPLY LINE. OPEN PNEUMATIC SUPPLY, CHECK FOR LEAKS. SET SYSTEM TO RUN.



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UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE INCHES (mm)  
INTERPRET DIM AND TOL.  
PER ASME Y14.5-2009

TOLERANCES:	XX	+ .020(1.27)
	.XX	+ .010(.254)
	.XXX	+ .005(.127)
	?	+ .5"
	FRACTIONS	+ 1/64(.38)
	FINISH	125-7500"

THIRD ANGLE PROJECTION

**MILTON ROY**  
www.miltonroy-america.com MILTON ROY COMPANY

TITLE  
**RETROFIT REPAIR KIT  
PNEUMATIC RELAY VALVE**

DO NOT SCALE DRAWING	SIZE B	DRAWING NO. D3-0029	REV 01
		SCALE 1:1	SHEET 1/1

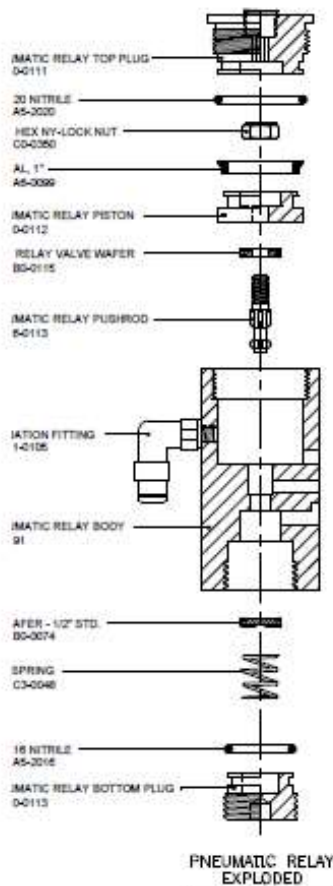
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# If You Have The Current Style Pneumatic Relay, It May be Serviced Using Kit P/N D3-0301



## Repair Kit Instructions



- Stop operation of the system.
  - Place the system status switch in stand-by.
  - Turn off the source of gas supply to the odorizer or pneumatic relay.
- Remove the pneumatic relay valve.
  - Disconnect the plastic tubing from the solenoid to the pneumatic relay at the actuation fitting P/N A1-0105 on the relay by pressing inward on the round ring of the actuation fitting at the point where the plastic tubing attaches, at the same time pull outward on the plastic tubing to remove it.
  - Remove the 3 relay mounting screws P/N C0-0155 that attach the relay to the manifold, using a 9/64" hex wrench.

**Note:** Before taking the valve apart, prepare a flat clean working surface, and familiarize yourself with the valve components from your repair kit and exploded view drawing.

- Disassemble the pneumatic relay valve.
  - Remove the manifold gasket, if still attached.
  - Remove the top plug P/N B0-0111 by using a 12mm end wrench, or small adjustable wrench on the actuation fitting P/N A1-0105 and turning counter clockwise. (If the fitting loosens before the top plug, continue to remove the fitting, then use a 3/16" hex wrench in the exposed hex socket at the bottom of the 1/8" nut port of the plug.)
  - Remove the bottom plug P/N B0-0113 using a 1/2" hex wrench and turning counter clockwise.
  - Remove spring P/N C3-0048 and CV wafer P/N B0-0074 from the bottom of the relay assembly.
  - Using a non-metallic push tool, gently push the exposed end of push rod P/N A6-0113 out of the body from the bottom of the relay assembly. The piston/pushrod will come out as an assembly.
  - Insert a small hex wrench or pin punch in the small hole in the side of push rod P/N A6-0113. This will serve as backup while removing hex nut P/N C0-0350.

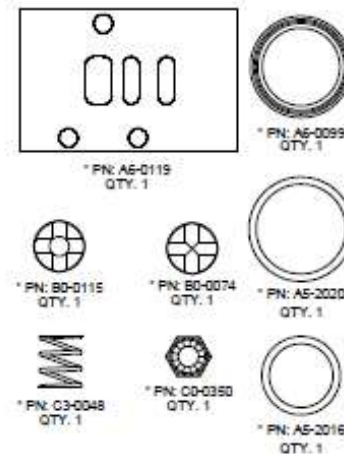
**Note: DO NOT USE PLIERS ON THE PUSHROD.**

Remove hex nut P/N C0-0350 using a 3/8" socket or nut driver. Remove the relay wafer P/N B0-0115 from the push rod.

- Clean and examine all metal parts. Discard all replacement items supplied in the repair kit.
- Valve assembly.
  - Install the new relay wafer P/N B0-0115 onto the push rod P/N A6-0113. Assemble the relay wafer, and push rod, into the actuation piston P/N B0-0012. Install a new hex lock nut P/N C0-0350 onto the threaded end of the push rod, and again utilize a small hex wrench or pin punch as backup while tightening the nut. Tighten securely using a 3/8" socket or nut driver.
  - Install a new O-ring P/N A5-0099 onto the actuation piston P/N B0-0112.
  - Install the piston/push rod assembly into the relay body P/N A3-0291. A thin film of light assembly lubricant may be used on the O-ring to make installation easier, but is not required.
  - Install the new O-ring P/N A5-2020 onto top plug P/N B0-0111. Lubricate the O-ring with a thin film of light assembly lubricant, and install the plug and O-ring assembly into the relay body. (Re-install the actuation fitting P/N A1-0105 if it was removed in step 3b. Use Teflon tape on the 1/8" nut pipe threads of the fitting.) Tighten the top plug securely by using a 12mm end wrench, or small adjustable wrench, and turning the fitting/top plug assembly clockwise.
  - Install the new CV wafer P/N B0-0074 and new spring P/N C3-0048 into the relay body as shown.
  - Install the new O-ring P/N A5-2016 onto bottom plug P/N B0-0113. Lubricate the O-ring with a thin film of light assembly lubricant, and re-install the relay bottom plug into the relay body using a 1/2" hex wrench. Tighten the bottom plug securely using 1/2" hex wrench, and turning the bottom plug assembly clockwise.
- Install the relay assembly.
  - Place the relay assembly along with a new gasket P/N A6-0119 onto the actuation manifold. Secure it with the 3 mounting screws P/N C0-0155 that were removed in step 2b. Tighten them securely using a 9/64" hex wrench.
  - Attach the plastic tubing from the solenoid to the actuation fitting by simply pushing the tubing into the fitting.
- Restart the system.
  - Turn on the source of gas supply to the odorizer or pneumatic relay.
  - Place the system back in the run mode by switching the system status switch out of stand-by position.

**\*Caution:**  
Parts removed during the rebuilding process may contain residue of odorant. Be sure to utilize approved disposal methods.

## KIT COMPONENTS ACTUAL SIZE



02/23/2012	14906	CHANGED TO MILTON ROY TITLE BLOCK.	BRB		01
DATE	ECN	DESCRIPTION	UPD BY	APPR BY	REV

### REVISION HISTORY

ALL DIMENSIONS UNLESS SPECIFIED: DIMENSIONS ARE INCH (mm) INTERPRET DIM AND TOL PER ASME Y14.5-2009 TOLERANCES: X ± .0001 (27) .XX ± .010 (254) .XXX ± .005 (127) † ± .2" FRACTIONS ± 1/64 (254) FINISH: 125-1/64"		www.miltonroy-americas.com MILTON ROY COMPANY		
TITLE REPAIR KIT 63/73/8300 PNEUMATIC RELAY				
THIRD ANGLE PROJECTION	DO NOT SCALE DRAWING	SIZE B	DRAWING NO D3-0301	REV 01
		SCALE 1:1	SHEET 1/1	

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# Place Your N-300 in Stand By Mode





# Turn off the Supply Gas

- Close V-16 (Black Knob if in Poly Enclosure.



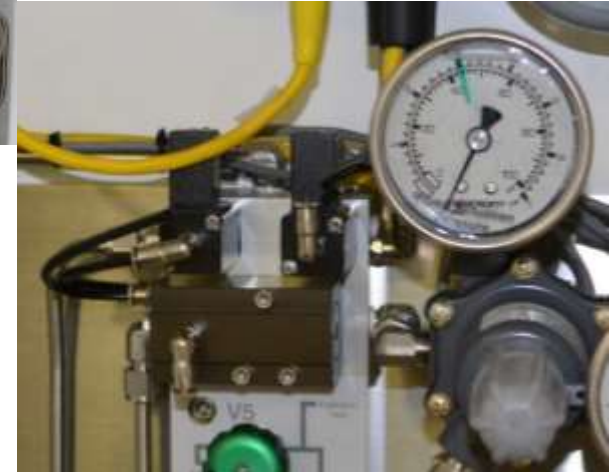
- Close/Isolate Gas supply from the Pipeline to the actuation Regulator on the right side of the S.S. Enclosure, if installed in a Stainless Steel Enclosure.







# Remove Quick Connect Hoses





# Remove the Three Attaching Screws using a 9/64 Allen Wrench





Remove The Pneumatic Relay Assembly...(It may require Pliers to remove from the gasket if stuck).



## Now remove the old Gasket

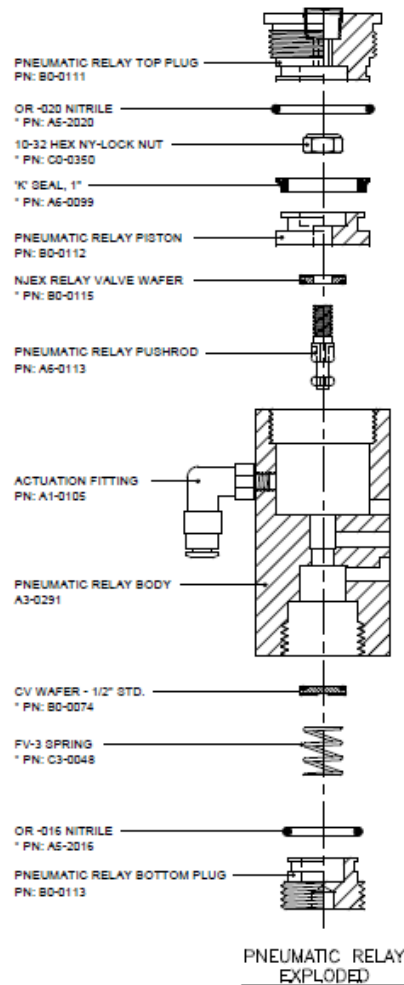




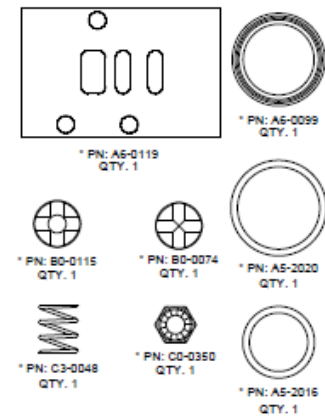
# Use the P/N D3-0301 Kit to Overhaul your Pneumatic Relay



## D3-0301 Kit



### KIT COMPONENTS ACTUAL SIZE





1<sup>st</sup> remove the Top Plug using  
a 1/4" Allen Wrench





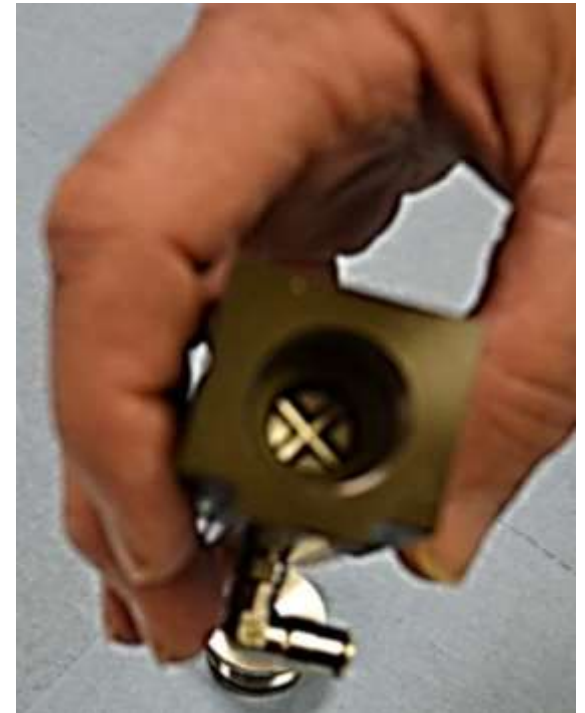
Next remove the Bottom Plug  
using a 1/4" Allen Wrench







When Removing The Bottom Plug note the Spring and C.V. Wafer Positions



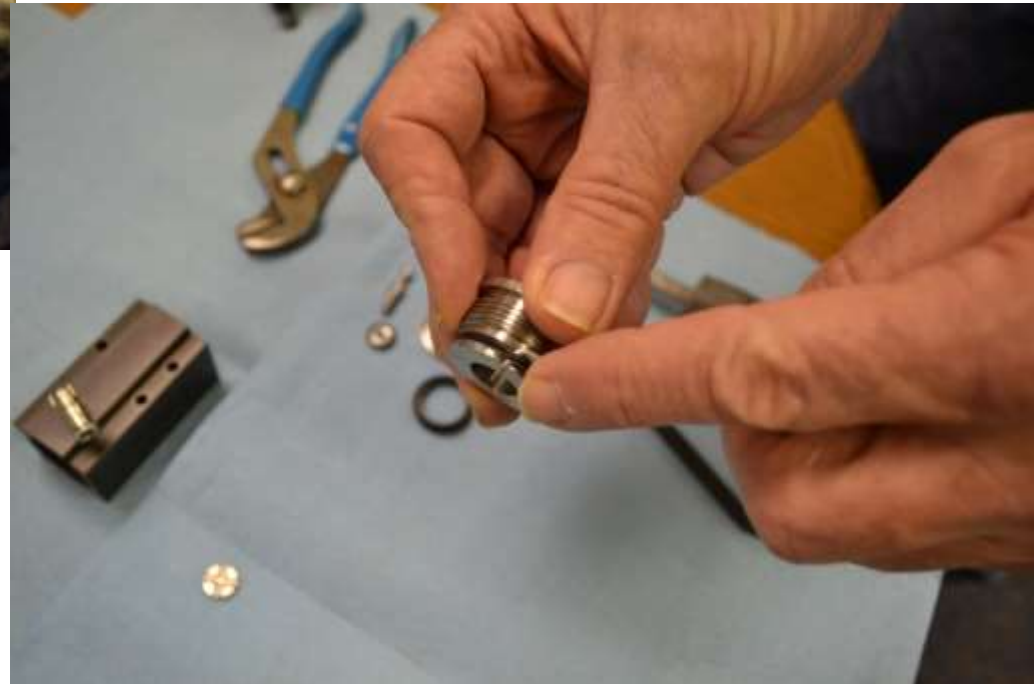


# View With all Parts Removed





# Carefully Remove old O-Rings and Seal





# Next Dis-Assemble The Piston Assy.





Carefully Grip The Push Rod  
with Pliers, While Loosening  
the Retaining Nut with a 3/8"  
Nut Driver





# Piston Dis-Assembled





You will need to Have a Light  
Lubricant for Re-Assembly





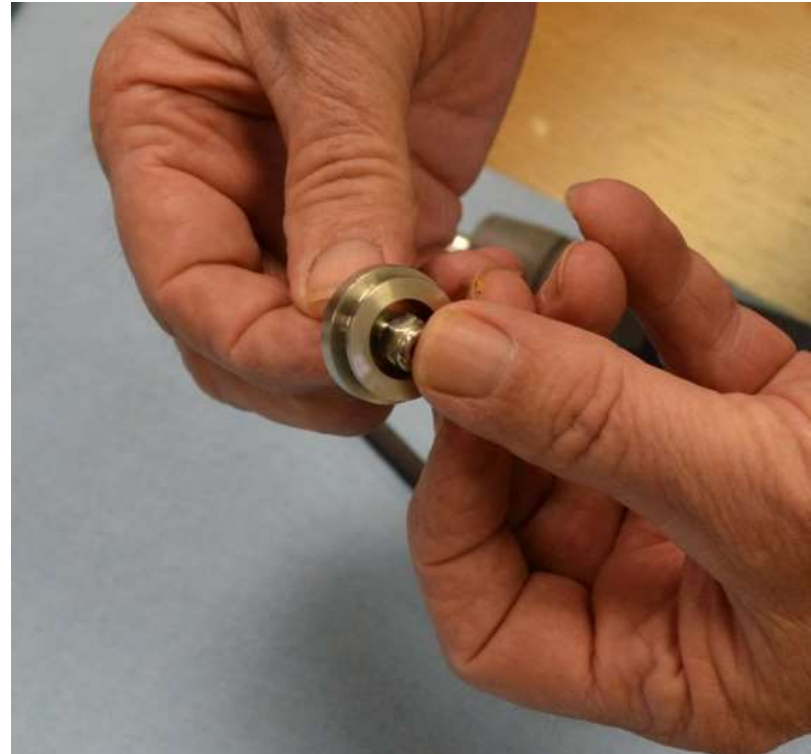
# Install the New Relay Valve Wafer on The Push Rod







# Push the Push Rod into The Piston





Carefully Grip The Push Rod with Pliers, While Tightening the Retaining Nut with a 3/8" Nut Driver





# Install the New K-Seal on The Piston Using Light Lubricant



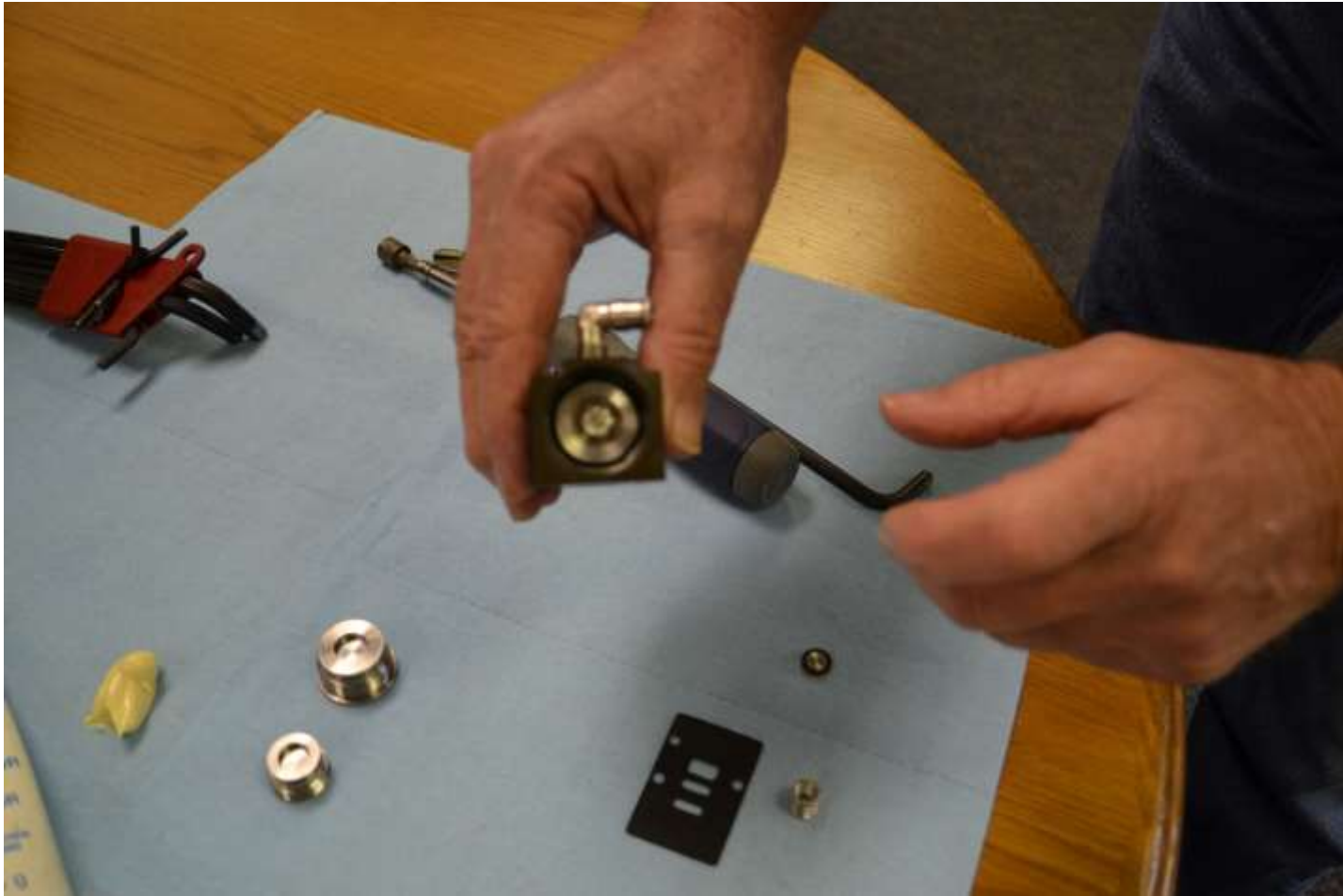


# Assembled Piston Assembly





# Insert Piston Assembly in The Relay Body





# Lubricate and Install The O-Ring on the Upper Head





# Install The Upper Head





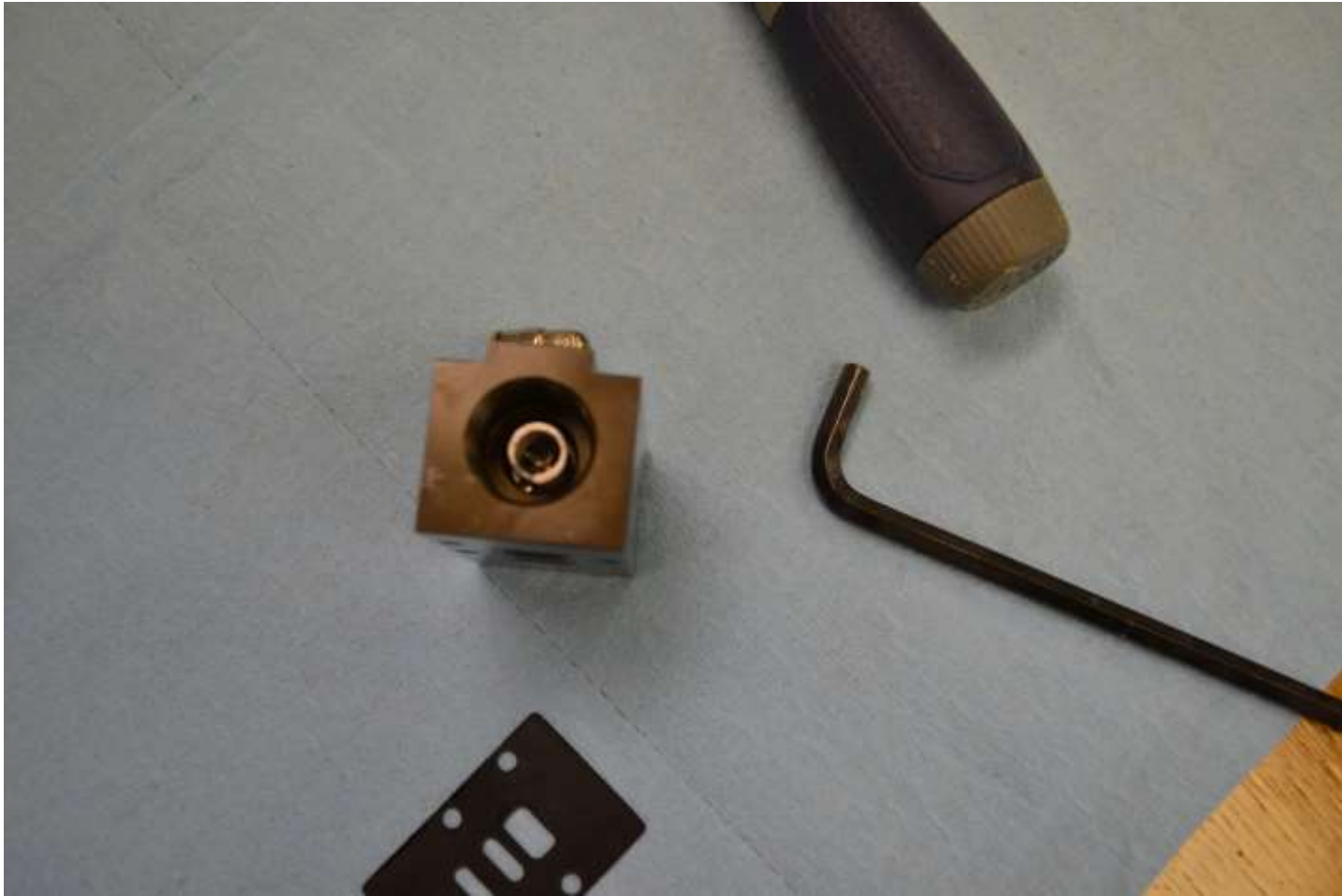
# Install the New C.V. Wafer in the Lower Body Cavity...Note Orientation







# Next Install The Spring





# Lubricate and Install The Lower Plug





Place The New Gasket on Relay, and position all (3) Screws as Shown





# Align the Relay Assembly on the Manifold



## Start all (3) Screws





# Tighten all (3) Screws





# Replace all Hoses





# Turn On the Supply Gas

- Open V-16 (Black Knob if in Poly Enclosure.



- Open/Isolate Gas supply from the Pipeline to the actuation Regulator on the right side of the S.S. Enclosure, if installed in a Stainless Steel Enclosure.







# Take The N-300 OUT of The Stand By Mode

