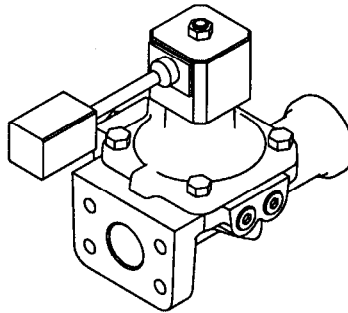
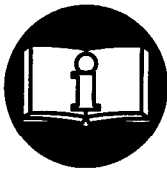


INSTALLATION AND MAINTENANCE MANUAL for ST400-C339 SOLENOID VALVE



TPE_1032



▲ WARNING

**IMPORTANT SAFETY INFORMATION ENCLOSED.
READ THIS MANUAL BEFORE OPERATING VALVE.
IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION
IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.**

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

- Always bleed off the air pressure before attempting to remove the Starter Relay Valve from the Air Tank or before attempting to perform any maintenance on the Starter Relay Valve.
- When activating manual override, make sure that the vehicle is in NEUTRAL. The vehicle must be in neutral to prevent any movement during engine start-up.
- The Coil can be replaced with the Valve still mounted in the system. No further disassembly of the Valve should be attempted while the Valve is still mounted.

NOTICE

The use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased starter relay valve performance and increased maintenance, and may invalidate all warranties.

Ingersoll-Rand is not responsible for customer modification of valve for applications on which Ingersoll-Rand was not consulted.

Repairs should be made only by authorized, trained personnel. Consult your nearest Ingersoll-Rand Authorized Servicenter.

Refer All Communications to the Nearest
Ingersoll-Rand Office or Distributor.

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INGERSOLL-RAND
PRODUCTION EQUIPMENT

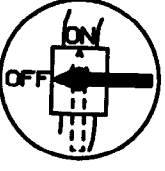

WARNING LABEL IDENTIFICATION



WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

	 WARNING
	Always wear eye protection when performing maintenance on this valve.

	 WARNING
	Always wear hearing protection when testing this valve.

	 WARNING
	Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this valve, or before performing any maintenance on this valve.

	 WARNING
	Do not use damaged, frayed or deteriorated air hoses and fittings.

***For Order Entry, Order Status
and Technical Support***

***Ingersoll-Rand
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P.O. Box 618
White House, TN 37188
Phone: (615) 672-0321
Fax: (615) 672-0801***

***Web Site at:
www.airstarters.com***

MAINTENANCE SECTION

WARNING

Always wear eye protection when performing any maintenance on this valve.

Always isolate the electrical power supply to the valve.

Pre-Installation

1. Check to make sure foreign material has been removed from the pipework prior to the installation of this valve.
2. Ensure that enough space is left for removal and service of this valve.
3. Ensure that the pipework is suitably aligned and supported to avoid strained joints.
4. Do not over-tighten the pipework connections.
5. All valve are to be installed with the solenoid vertical above the pipeline unless otherwise stated. This will optimise the life and performance of the installed unit.

Features

1. Manual Override – Allows the Valve to be activated without electrical power.

WARNING

If it is necessary to use the Manual Override, make sure that the vehicle is in NEUTRAL. The vehicle must be in neutral to prevent any movement. To activate Manual Override remove Plug, shown on page 4. Depress Plunger to open Valve.

2. Inlet Check Valve Port – Can be used to charge Reservoir Tank, shown on page 4.
3. Test Points – Pressure readings can be taken at the two 1/4" – 18 NPT test points, shown on page 4.

NOTICE

This Starter Relay Valve is specially designed and manufactured by Ingersoll-Rand for use on Starter installations. Install it according to the following instructions:

Installation of the Starter Relay Valve

1. Place the O-Ring supplied with the flange fitting onto Valve Housing.
2. Mount the ST400-C339 Solenoid Valve to the tank using ST400-16 Flange Assembly. The air flow arrow must point toward the starter.

3. Tighten the four flange bolts to 35–45 ft-lbs (47–61 Nm) torque.

Tune-up Kits

NOTICE

Three Tune-up Kits are available for maintaining the Solenoid Valve:

- ST400-K1051A – Coil Tune-up Kit
- ST400-K619A – Cover Tune-up Kit
- ST400-K618A – Bladder Tune-up Kit

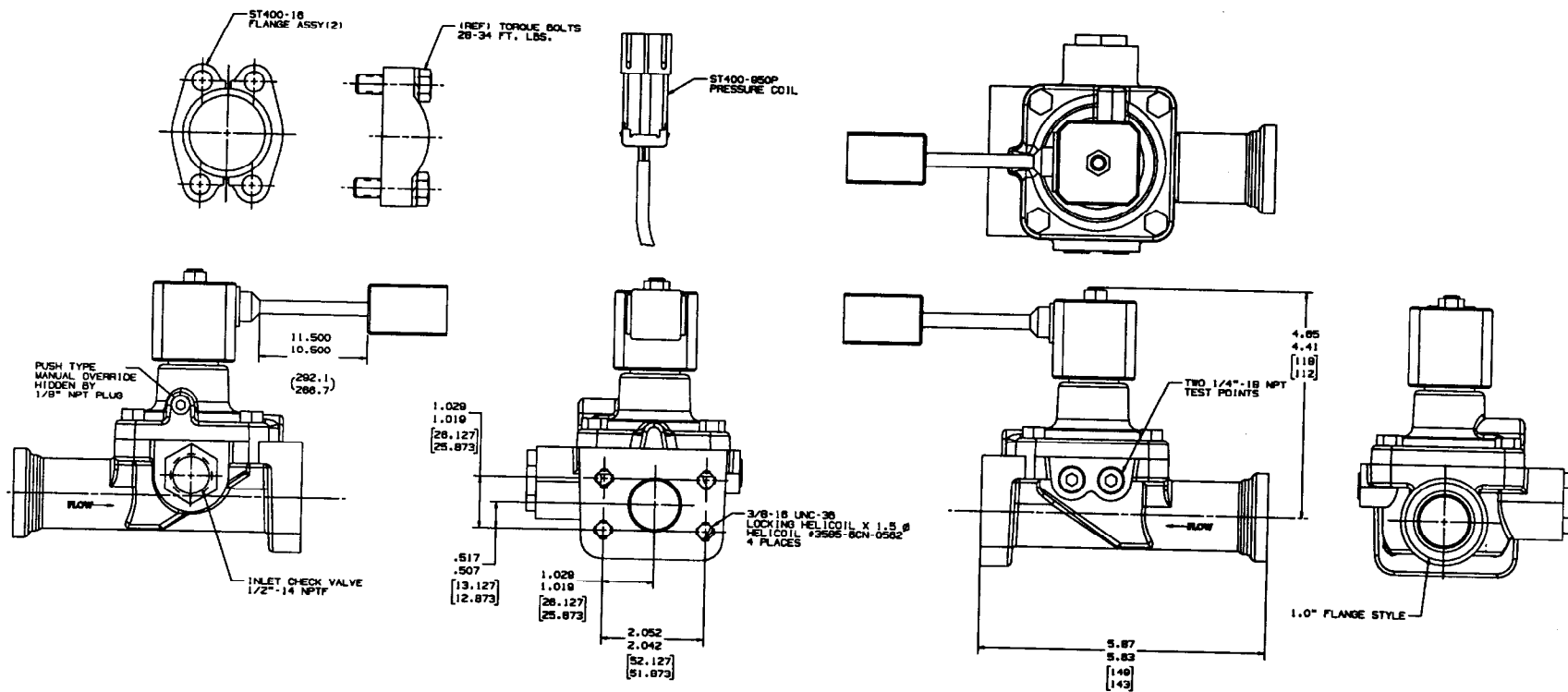
Disassembly of the Tune-up Kit

1. Ensure electrical supply is isolated from the coil.
2. Disconnect Packard connection from the electrical supply.
3. Remove the 4 M8 bolts, which retain the valve bonnet to body.
4. Remove the valve bonnet.
5. Remove existing bladder and spring, not the orientation of fit.
6. Remove existing non-return end cap assembly and spring noting orientation of parts.
7. Remove non-return "O" ring ensuring no damage to end cap 'O' ring contacting faces.

Assembly of the Tune-up Kit

1. Place the replacement bladder in the same orientation as previously fitted.
2. Place the replacement spring over the riveted section upon the bladder as previously fitted.
3. Place the valve bonnet onto the valve body ensuring that the orientation has not altered from when disassembled.
4. Replace the 4 M8 bolts tightening evenly to a torque of 16 ft-lb (24N/m)
5. Place the replacement non-return spring into its location bore as previously fitted.
6. Place the non-return assembly as previously fitted ensuring the orientation has not altered.
7. Place the non-return 'O' ring on the non-return end cap.
8. Assemble the non-return end cap tightening to a torque 16 ft-lb (24N/m) .
9. Assemble coil and label and tighten M8 nut to a torque of 15 ft-lb (22N/m).
10. Reconnect the ST400-950P Packard connector to supply.
11. Always check for leaks after assembly.

ST400-C339 SOLENOID VALVE DIMENSIONS



REFERENCE DRAWINGS

Specifications

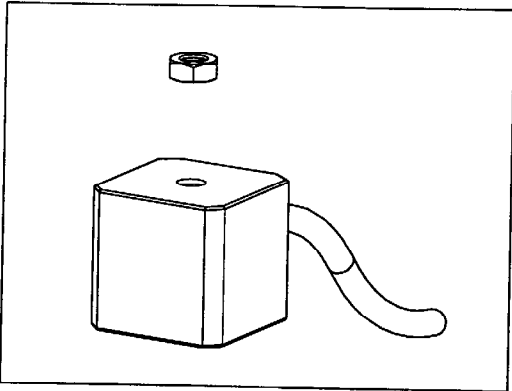
- Voltage : 12 / 24 VDC
- Maximum Operating Pressure : 150 psig
- Proof Pressure : 225 psig
- Burst Pressure : 750 psig
- Media : Air, Inert Gases, Natural Gas
- Operating Temperature : -20° F to 120° F

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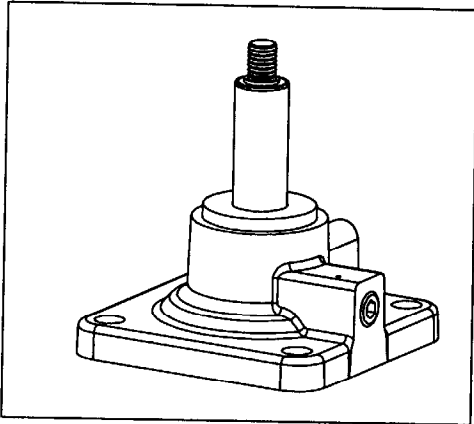
DUAL
DIMENSIONS

INCH
(MM)

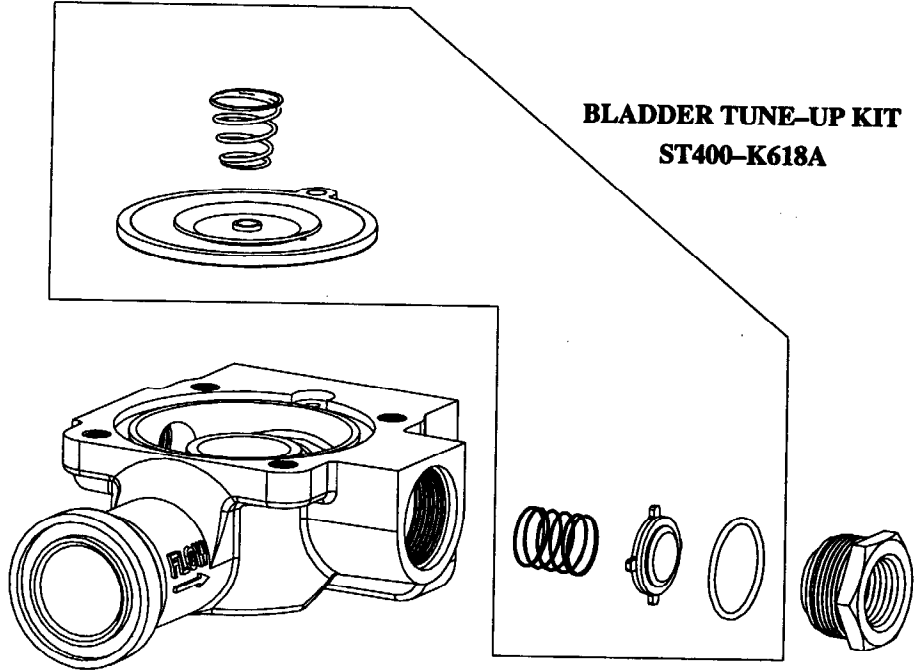
MAINTENANCE SECTION



**COIL TUNE-UP KIT
ST400-K1051A**



**COVER TUNE-UP KIT
ST400-K619A**



**BLADDER TUNE-UP KIT
ST400-K618A**

TPE_1034

NOTES

NOTES

