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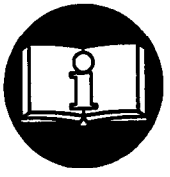
# INSTALLATION AND MAINTENANCE MANUAL for NO. SRV100, SRV125, SRV150 OR SRV150SS STARTER RELAY VALVE



**⚠ WARNING**

**IMPORTANT SAFETY INFORMATION ENCLOSED.**
**READ THIS MANUAL BEFORE OPERATING TOOL.**
**FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.**
**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.**

- **Always bleed off the air pressure before attempting to unscrew the Starter Relay Valve from the Receiver or before attempting to perform any maintenance on the Starter Relay Valve.**
- **Never attempt to remove the Retaining Ring (12) from the bottom side of the Starter Relay Valve until after the air pressure has been bled off. If the Retaining Ring is removed while there is pressure in the Receiver, internal parts of the Starter Relay Valve will be blown out with considerable force.**

**NOTICE**

**This Starter Relay Valve is specially designed and manufactured by Ingersoll–Rand for for use on Starter installations. Install it in accordance with the following instructions.**

## Installation of the Starter Relay Valve

1. Use a short pipe nipple between the Receiver and the Relay Valve. Use a 1" nipple with the SRV100, 1–1/4" nipple with the SRV125, and a 1–1/2" nipple with the SRV150 or SRV150SS.
2. Apply No. SMB–441 Ingersoll–Rand Sealant to the male thread on the nipple, and install the nipple in the Receiver. Tighten the connection so that it is airtight.
3. Note that one of the tapped inlets on the Relay Valve is marked "IN". Thread this inlet onto the nipple and tighten the connection so that it is airtight.
4. Apply Ingersoll–Rand Sealant to the male threads on the air line that goes to the Starter, and thread this line into the tapped outlet on the Relay Valve that is marked "OUT". Make certain the connection is airtight.
5. Attach the air hose from the outlet side of a 3–way normally vented Control Valve to the small tapped hole in the top of the Relay Valve. Use Ingersoll–Rand Sealant on the male thread.

**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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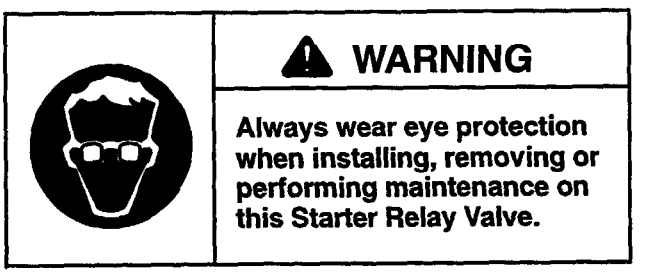
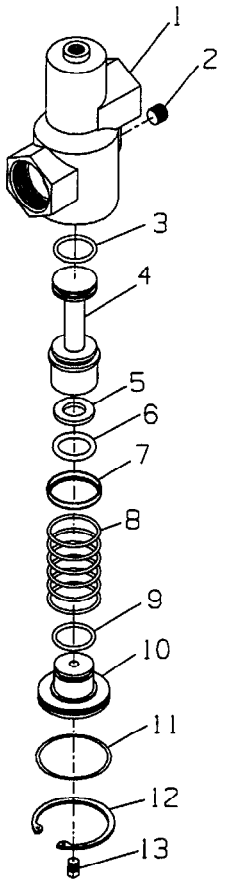
**INGERSOLL-RAND®**
**ENGINE STARTING SYSTEMS**

## *WARNING LABEL IDENTIFICATION*






(Dwg. TPD1731)

| | | | PART NUMBER FOR ORDERING | | | | PART NUMBER FOR ORDERING |
|---|---|---|---|---|---|---|---|
| | 1 | Valve Housing | | | 10 | End Plug | |
| | | for SRV100 ..... | SRV100–40 | | | for SRV100, SRV125 | |
| | | for SRV125 ..... | SRV125–40 | | | and SRV150 ..... | SRV150–338 |
| | | for SRV150 ..... | SRV150–40 | | | for SRV150SS ..... | SRV150SS–338 |
| | | for SRV150SS ..... | SRV150SS–40 | ♦ | 11 | End Plug Seal O–ring ..... | Y327–143 |
| | 2 | Pipe Plug ..... | HSPPS–2 | ♦ | 12 | Retaining Ring ..... | SRV150–340 |
| ♦ | 3 | Upper Piston O–ring ..... | SRV150–210 | | 13 | Pipe Plug (for SRV150SS only) . | SRV150–368 |
| | 4 | Piston ..... | SRV150–246 | | * | Tune–up Kit (includes illustrated | |
| ♦ | 5 | Bumper ..... | SRV150–339 | | | parts 3, 5, 6, 7, 9, 11, 12 and | |
| ♦ | 6 | Piston O–ring ..... | SRV150–211 | | | non–illustrated Part | |
| ♦ | 7 | O–ring Retainer ..... | SRV150–33 | | | No. SRV–GR55 Grease) ..... | SRV150–TK3 |
| | 8 | Spring ..... | SRV150–250 | | | | |
| ♦ | 9 | End Plug O–ring ..... | SRV150–67 | | | | |

♦ Indicates Tune–up Kit part.

**⚠ WARNING**

**Always wear eye protection when lubricating or performing maintenance on the Starter Relay Valve. Always bleed off the air pressure before lubricating or performing any maintenance on the Starter Relay Valve.**

## LUBRICATION

### Periodically lubricate the Starter Relay Valve as follows:

1. Bleed off the air pressure.
2. Disconnect the No. 4 Hose from the tank at the control air supply port near the bottom of the valve opposite the air inlet. In some installations, this 1/4" N. P. T. will be plugged.
3. Remove the plug. Squirt about 1 ounce (30 cc) of 10W oil into the valve through the hose or plug opening.
4. Reconnect the hose or reinstall the plug.

**NOTICE**

**No. SRV150-TK3 Tune-up Kit is available for maintaining the Starter Relay Valve. This Tune-up Kit includes all O-rings, Bumper and End Plug Retaining Ring.**

## INSTALLATION OF THE TUNE-UP KIT

### Disassembly of the Starter Relay Valve

1. Bleed off the air pressure.
2. Clamp the Relay Valve in a vise with the Retaining Ring (12) up.
3. Carefully remove the Retaining Ring. The End Plug (10) should spring out. If it does not, tap the Valve Housing (1) lightly with a soft hammer until the End Plug springs out.
4. Remove the End Plug, Spring (8), and Piston Assembly (4).
5. Remove and discard all used O-rings and Bumper (5).
6. Clean all other parts in a clean, suitable cleaning solution in a well ventilated area.

### Assembly of the Starter Relay Valve

1. Using o-ring lubricant, lubricate and install the new Piston O-ring (6) and the new Upper Piston O-ring (3) on the Piston.

**NOTICE**

**The Upper Piston O-ring is slightly larger in diameter than the End Plug O-ring (9).**

2. Turn the Piston over and insert the new Bumper (5).
3. Using o-ring lubricant, lubricate and install the new End Plug Seal O-ring (11) and the new End Plug O-ring (9) on the End Plug (10).
4. Lubricate the lower small bore of the Valve Housing (1) with o-ring lubricant.
5. Insert the Piston Assembly into the Valve Housing. Push on the Piston until the Piston O-ring (6) seats against the beveled face.
6. Install the O-ring Retainer (7) with the large opening over the Piston O-ring.
7. Place the Piston Spring (8) on the Piston.
8. Place the End Plug Assembly on the Piston Spring.
9. Using a press to hold down the End Plug Assembly, install the End Plug Retaining Ring (12).