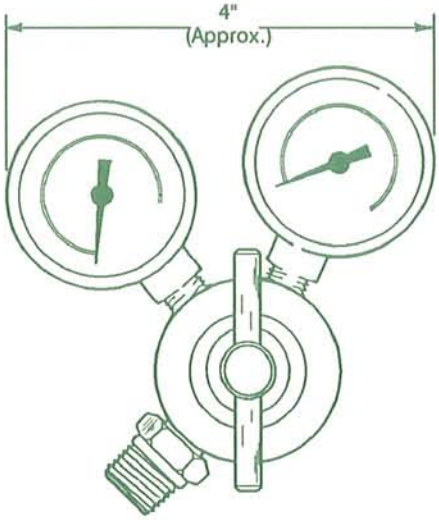
VICTOR®

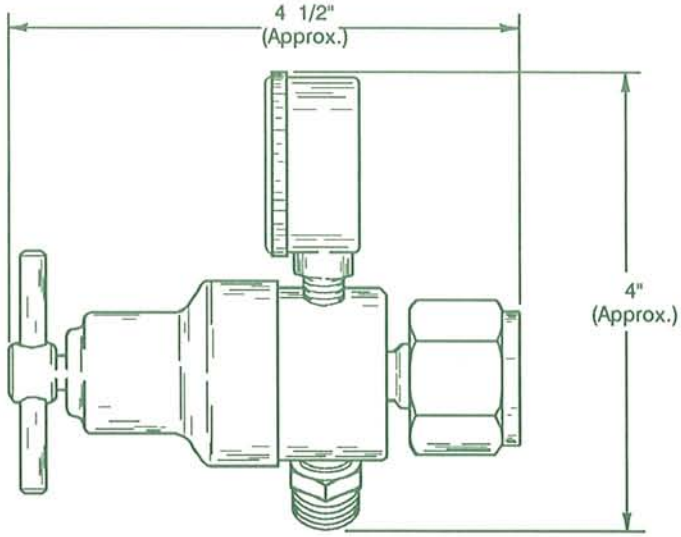
PARTS & SERVICE BULLETIN

SR 150CR and SR 160AR Regulators

FORM NO. 56-1292

EFFECTIVE 8-89





MODEL INFORMATION

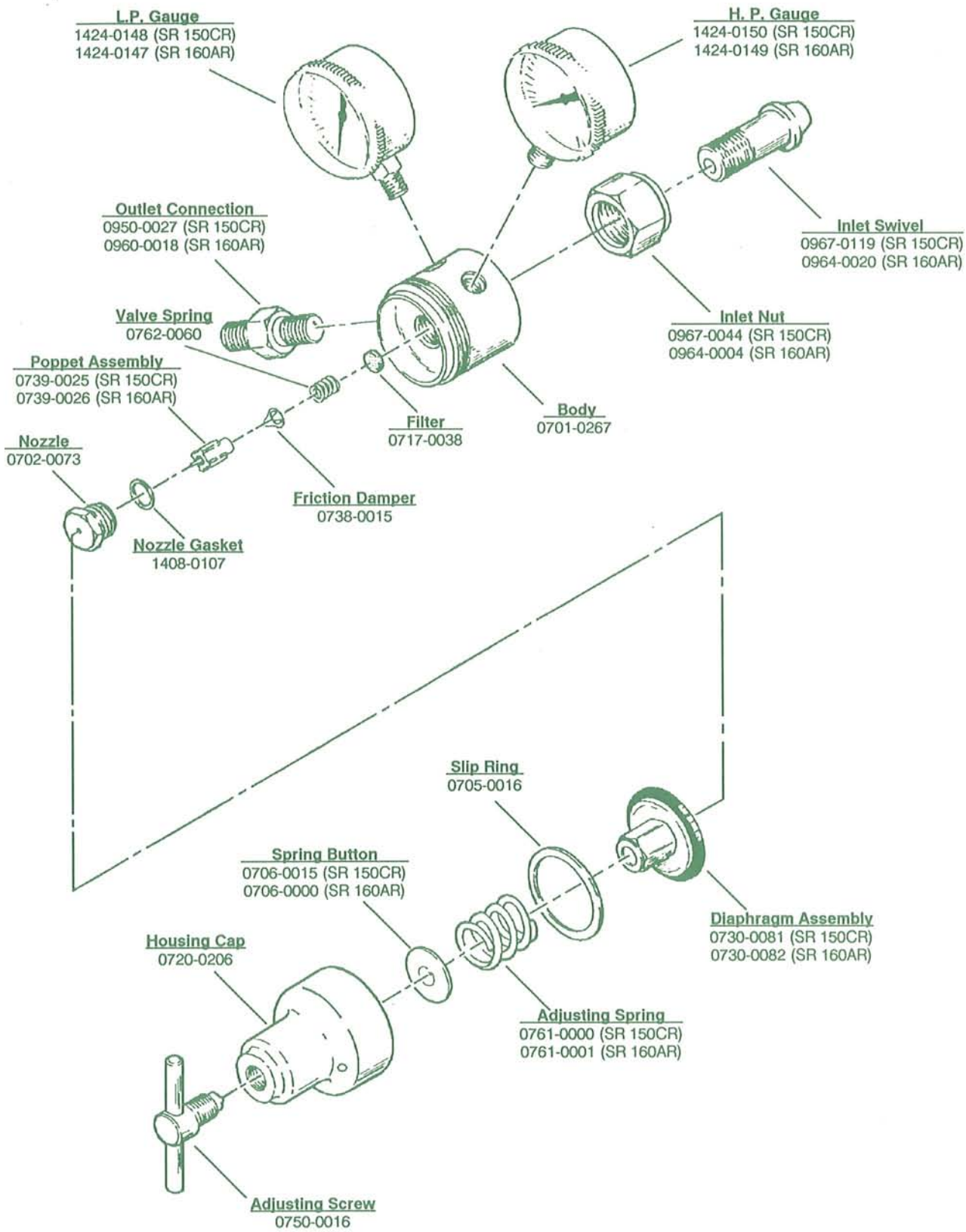
Gas	CGA Inlet No.	Model No.	Delivery Range
Acetylene	200	SR 160AR	2-15 PSIG
Oxygen	540	SR 150CR	4-80 PSIG

WARNING!

Welding apparatus improperly operated, maintained or repaired can be dangerous. Some parts and accessories manufactured by others may fit VICTOR apparatus but not conform to VICTOR's exacting standards. For your own protection, specify and use ONLY VICTOR-made parts and accessories with your VICTOR apparatus.

Service or repair of VICTOR apparatus should be performed only by a qualified technician. Improper service or repair, or modification of the product could result in damage to the product or injury to the operator.

SR 150CR and SR 160AR Regulators



SERVICE INSTRUCTIONS

Recommended Tools and Supplies:

Body Wrench RT-120 (1420-0191)
Strap Wrench RT-119(1420-0190)
Adjustable Open-End Wrench
Socket Wrench
9/16", 3/4", 11/16" Sockets
9/16" Box-end Wrench
Torque Wrench
Inlet Swivel Ass'y Plug RT-4 (1420-0014) - CGA 540
Inlet Swivel Ass'y Plug RT-91 (1420-0143) - CGA 200
Bench Vise
LOCTITE® #79 (0028-0056)
TEFLON® Tape (0028-0028)
LIQUID O-RING® #151L (0034-0021)

Disassembly Procedure

1. Clamp the appropriate Inlet Swivel Assembly Plug in the Bench Vise and attach the Regulator to it with Gauge(s) face up.
2. Remove the Adjusting Screw from the Housing Cap.
3. Hold the Outlet Connection with the 9/16" Box-end Wrench and remove the Housing Cap from the Body with the Strap Wrench.
4. Remove the Spring Button, Adjusting Spring, Slip Ring,and Diaphragm Assembly from the Body. Discard the Slip Ring.
5. Remove the Nozzle from the Body with the Hex Socket.
6. Remove the the Nozzle Gasket, Poppet Assembly, Friction Damper, Valve Spring and Filter from the Body. Discard the Nozzle Gasket, Poppet Assembly, Friction Damper and Filter.
7. Secure the Body in the Body Wrench. Clamp the Body Wrench handle in the Bench Vise.
8. Remove the Outlet Connection from the Body.
9. Remove the Gauges from the Body.
10. Remove the Inlet Swivel from the Body. Remove the Inlet Nut from the Inlet Swivel.

CAUTION: Discard the Slip Ring, Nozzle Gasket, Poppet Assembly, Friction Damper and Filter. Replace them each time you reassemble a Regulator.

Cleaning Regulator Parts

Clean all metal parts with FREON® TF solvent or equivalent. Always use cleaning solvents in accordance with the manufacturers instructions. **WARNING:** DO NOT allow nonmetal parts to come in contact with any cleaning solvent! Cleaning solvents cause these materials to swell and stress crack. If these parts require cleaning, use a mild soap solution, followed by a thorough rinsing in water. Dry these parts completely before installing in the regulator. REPLACE NONMETAL PARTS THAT HAVE COME IN CONTACT WITH OIL, GREASE, OR ANY OTHER PETROLEUM BASED SUBSTANCE! Petroleum based substances become dangerously flammable in the presence of oxygen.

Assembly Procedure

1. Place the Body Wrench in the Bench Vise. Install the Body in the Body Wrench.
2. Slide the Inlet Nut onto the Inlet Swivel. Apply two or three layers of TEFLON® tape around the Inlet Swivel threads. Install the Inlet Swivel in the Body and tighten to a torque of 12 to 16 ft.-lbs.
3. Apply two or three layers of TEFLON® tape around the Gauge threads. Install the Gauges in the Body and tighten to a torque of 10 ft.-lbs. minimum.
4. Apply a small amount of LOCTITE® #79 to the second and third male threads of the Outlet Connection. Install the Outlet Connection in the Body and tighten to a torque of 20-22 ft.-lbs.
5. Remove the Body from the Body Wrench.

   CAUTION: To remove contaminants that could cause Regulator malfunction, connect the Inlet Swivel to a source of oil-free air or dry nitrogen. Slowly open and close the Cylinder Valve two or three times. Blow out the Body with pressurized oil-free air or dry nitrogen to remove debris.
6. Clamp the Inlet Swivel Assembly Plug in the Bench Vise and attach the Regulator to it with the Gauge(s) face up.
7. Place the new Friction Damper on the new Poppet Assembly.
8. Place the new Filter, Valve Spring, Poppet Assembly and Nozzle Gasket in the Body.
9. Install the Nozzle in the Body and tighten it to a torque of 8 to 10 ft.-lbs.
10. Place the Diaphragm Assembly, a new Slip Ring (raised lip turned away from the Diaphragm Assembly) and the Adjusting Spring on the Body.
11. Place the Spring Button (raised side toward the Adjusting Spring) on the Adjusting Spring.
12. Carefully place the Housing Cap over the Adjusting Spring and screw it onto the Body. Hold the Outlet Connection with the 9/16" Box-end Wrench and tighten the Housing Cap to a torque of 25 to 27 ft.-lbs.
13. Apply a small amount of LIQUID O-RING® #151L to the end and first few threads of the Adjusting Screw. Start the Adjusting Screw in the Housing Cap.

Test Procedure

Recommended Tools and Supplies:

Test Gun(quick-opening on/off valve) with #70(.028) Restricting Orifice
2000 ±200 PSI Source of Oil-Free Air or Dry Nitrogen

WARNING: Always perform the following test procedure after assembling a Regulator. Test with oil-free air or dry nitrogen ONLY! Always wear eye protection when testing a regulator. *Never stand directly in front of or behind a regulator when opening the Cylinder Valve or Test Manifold.* Always stand so that the Cylinder Valve or Test Manifold is between you and the Regulator.

1. Slowly open and close the Cylinder Valve Or Test Manifold several times to remove any contaminants that may enter the Regulator. Leave the valve closed.
2. Attach the Regulator to the Cylinder Valve or Test Manifold. The Cylinder Valve or Test Manifold must deliver the appropriate pressure listed below.

   SR 150CR: 2000 ±200 PSIG
   SR 160AR: 250 ±20 PSIG

3. Turn the Adjusting Screw clockwise several turns to open the Seat. Slowly open and close the Cylinder Valve or Test Manifold several times. Back out the Adjusting Screw until there is no pressure on the Adjusting Spring.
4. Attach the Test Gun (with #70 orifice) to the Outlet Connection.
5. **MINIMUM DELIVERY**

   Open the Test Gun. Turn the Adjusting Screw clockwise until it stops. The appropriate minimum pressures are listed below.

   SR 150CR: 60 PSIG
   SR 160AR: 14 PSIG

   NOTE: if the Relief Valve relieves before the minimum delivery pressure is reached, the Diaphragm Assembly must be replaced.
6. **MAXIMUM DELIVERY**

   Close the Test Gun. The Regulator should not deliver over the appropriate maximum pressure listed below.

   SR 150CR: 115 PSIG
   SR 160AR: 30 PSIG
7. **LEAK TEST**
   a. Adjust the Regulator to deliver the appropriate pressure listed below.

      SR 150CR: 60 PSIG
      SR 160AR: 15 PSIG

   b. Close the Inlet Valve. Turn the Adjusting Screw one turn counterclockwise.
   c. Observe the L.P. Gauge and the H.P. Gauge for five (5) minutes. No change in either Gauge reading is permitted during this period.
8. **DROP TEST**
   a. Close the Test Gun.
   b. Adjust the Regulator to deliver the appropriate pressure listed below.

      SR 150CR: 20 PSIG
      SR 160AR: 5 PSIG

   c. Open the Test Gun. Observe the new indicated delivery pressure. Drop (indicated pressure static minus indicated pressure flowing) must not exceed the pressures listed below.

      SR 150CR: 4 PSIG
      SR 160AR: 3 PSIG
9. **SLOW SHUT-OFF/CREEP TEST**
   a. With the indicated delivery pressure listed below, close the test Gun.

      SR 150CR: 20 PSIG
      SR 160AR: 5 PSIG

   b. Observe the L.P. Gauge for five (5) minutes. During the first minute, the appropriate initial shut-off increase listed below is permissible.

      SR 150CR: 4 PSIG
      SR 160AR: 2 PSIG

      No further creep is allowed during the remaining four (4) minutes. If the Gauge reading changes, a leak exists. Disassemble the Regulator, replace any suspect or damaged parts. Reassemble and retest the Regulator.
10. Release the pressure from the Regulator by opening the Test Gun.
11. Remove the Test Gun from the Regulator.
12. Remove the Regulator from the Test Manifold.

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