

# 0–900 psi Pressure-Reducing Diaphragm Regulator

## Description

The Nordson 0–900 psi diaphragm regulator reduces high primary pressures to lower secondary pressures. It is a non-venting regulator designed for use in systems with low fluid flow rates.

## Installation



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

1. Refer to *Specifications* for mounting and panel cutout dimensions.
2. Install fluid lines with  $\frac{3}{8}$ -in. NPT fittings in the IN and OUT fluid ports.

## Repair



**WARNING:** System may be pressurized. Relieve pressures. Failure to observe this warning may result in serious injury or death.

Repair is limited to replacing the parts included in the service kits. See *Repair Kits* for available repair parts and kits.

The fluid regulator diaphragm service kit listed in *Repair Kits* upgrades regulators to prevent paint from spraying out of the regulator if the diaphragm fails.

## Diaphragm Replacement

See Figure 1.

1. Remove the cap (1), nut (2), and knob (3). Remove the regulator from the panel or bracket.
2. Remove the bonnet ring (4), bonnet washer (7), bonnet (8), spring (9), spring pad (10), and spacer (12).
3. Remove the diaphragm assembly. This includes the sensor (13), diaphragm (14), diaphragm button (15), spacer (12), and O-ring (11).
4. Apply synthetic lubricant to both ends of the diaphragm button (15). See *Parts* section.
5. Install the new diaphragm assembly in the body. Install the spring pad (10) and spring (9) on the diaphragm assembly.
6. Install the bonnet (8), bonnet washer (7), and bonnet ring (4). Tighten the bonnet ring to 169.4–176.2 N•m (125–130 ft.-lb). Wait a minimum of one hour, then retighten the bonnet ring.
7. Install the regulator on the panel or bracket.
8. Install the knob (3), nut (2), and cap (1).

## Ball and Seat Replacement

See Figure 1.

1. Remove the back cap (22) and replace the following parts:
  - O-rings (17, 21)—lubricate with O-ring grease.
  - seat (18)
  - ball (19)
  - spring (20)
2. Install the back cap and tighten it to 54–68 N•m (40–50 ft.-lb).

## Regulator Assembly

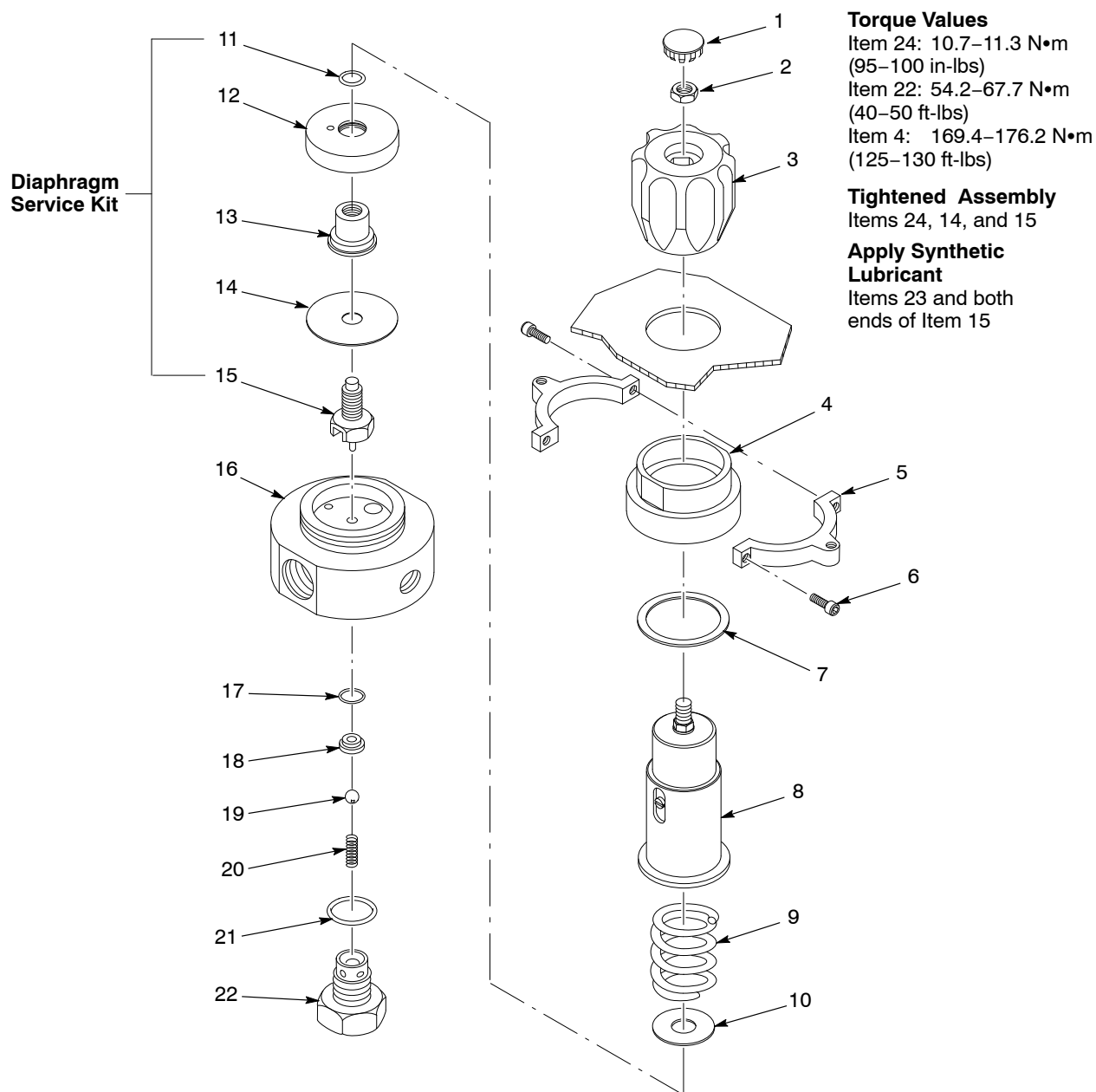


Figure 1 0–900 psi Regulator

- |                     |                      |              |
|---------------------|----------------------|--------------|
| 1. Cap              | 9. Spring            | 17. O-ring   |
| 2. Nut              | 10. Spring pad       | 18. Seat     |
| 3. Knob             | 11. O-ring (spacer)  | 19. Ball     |
| 4. Bonnet ring      | 12. Spacer           | 20. Spring   |
| 5. Mounting bracket | 13. Sensor           | 21. O-ring   |
| 6. Screw            | 14. Diaphragm        | 22. Back cap |
| 7. Bonnet washer    | 15. Diaphragm button |              |
| 8. Bonnet           | 16. Regulator body   |              |

## Parts

## Regulator Assembly

To order parts, contact Nordson customer support at (800) 433–9319 or contact a local Nordson representative.

See Figure 2.

Item	Part	Description	Quantity	Note
–	1009069	REGULATOR, diaphragm, with bracket and gauge	1	
1	1600090	• GAUGE, pressure, 0–1000 psi, 0–70 kg/cm <sup>2</sup>	1	
2	983140	• WASHER, lock, e, split, 1/4 in., steel, nickel	2	
3	981208	• SCREW, hex, 1/4–20 x 0.625 in., cap cap, zinc	2	
4	1009070	• REGULATOR, diaphragm, 0–900 psi	1	
5	1009071	• BRACKET, regulator	1	
6	145393	• BRACKET, mounting, regulator	1	
NS	973415	• PLUG, pipe, socket, standard, 1/4 in., stainless steel	1	
NS: Not Shown				

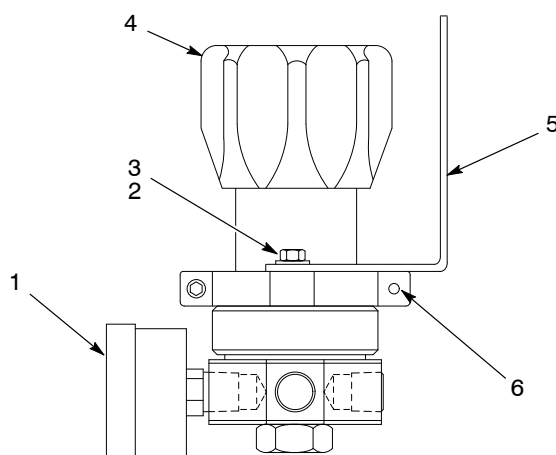


Figure 2 0–900 psi Regulator Assembly

## Maintenance Material

Part	Description	Quantity	Note
1610165	LUBRICANT, synthetic	AR	2 oz. tube
AR: As Required			

## Repair Kits

### Fluid Regulator Diaphragm Service Kit

See Figure 3

Item	Part	Description	Quantity	Note
—	1080888	KIT, service, diaphragm, fluid regulator	1	
1	-----	• BUTTON, diaphragm	1	
3	-----	• SENSOR, diaphragm, regulator	1	
2	-----	• DIAPHRAGM	1	
4	940164	• O-RING, Buna N, 0.625 x 0.750 x 0.063, black	1	
5	-----	• SPACER, diaphragm	1	

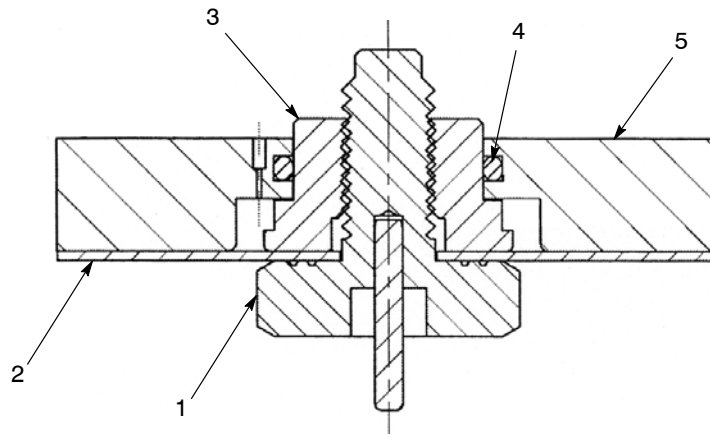


Figure 3 Regulator Diaphragm Service Kit

### Fluid Regulator Rebuild Kit

Part	Description	Quantity	Note
1610196	KIT, rebuild, fluid regulator, iTRAX	1	
-----	• DIAPHRAGM	1	
-----	• SEAT	1	
-----	• BALL	1	
-----	• SPRING	1	
-----	• O-RING, seat seal, PTFE	1	
-----	• O-RING, back cap seal, PTFE	1	
-----	• WASHER	1	
940164	• O-RING, Buna N, 0.625 x 0.750 x 0.063, black	1	

# Specifications

Maximum inlet pressure	207 bar (3000 psi)
Maximum outlet pressure	62 bar (900 psi)
Operating temperature	-54–74 °C (-65–165 °F)
Inlet/Outlet ports	3/8-in. NPT
Outlet gauge ports	1/4-in. NPT
Weight	1.4 kg (3 lb)

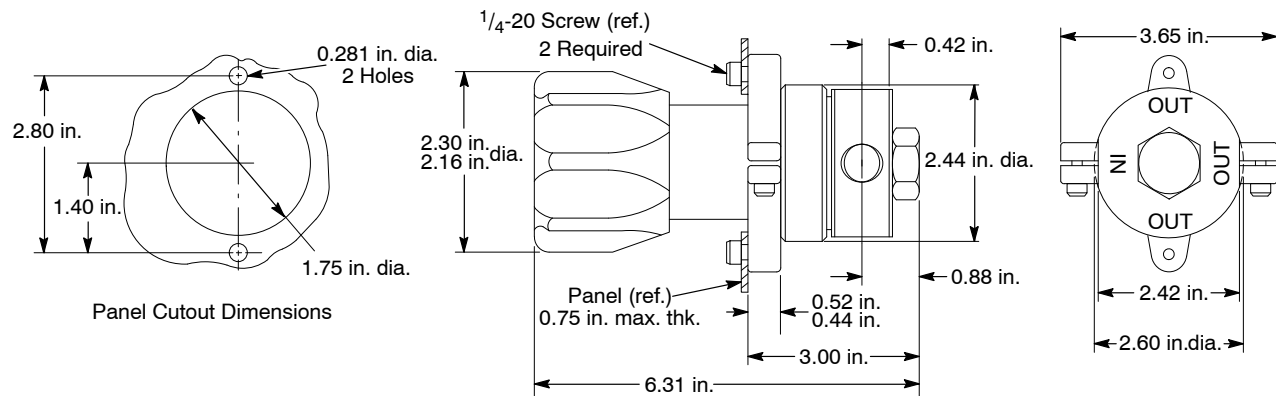


Figure 4 Panel-Mount Dimensions

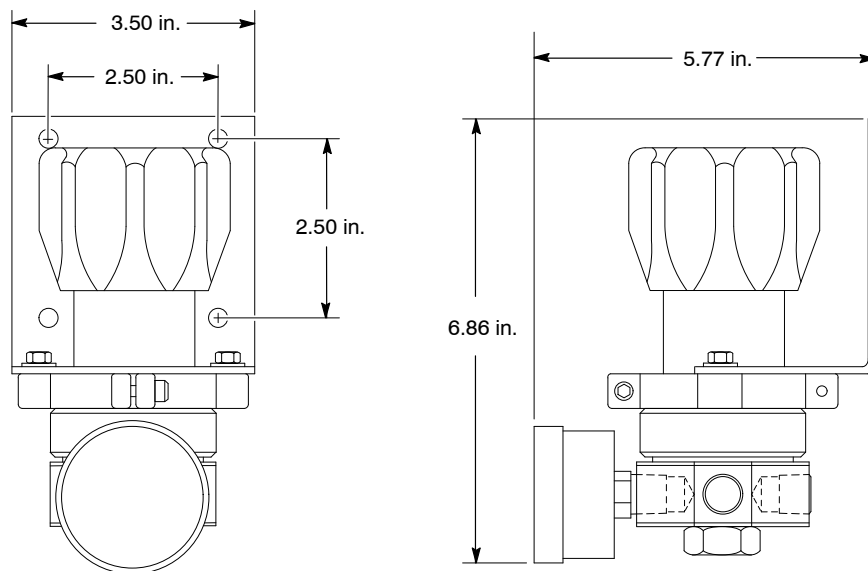


Figure 5 Bracket-Mount Dimensions

Issued 2/18

Original copyright date 2001. Nordson and the Nordson logo are registered trademarks of Nordson Corporation.