KR-200 Regulator Specifications
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All PacSeal Hydraulics' KR Pressure Regulators are designed with ShearFlo® metal-to-metal sealing technology. ShearFlo® sealing technology features:

- High cycle life and anti-wear design is suitable for critical service applications, including contaminated fluids.
- Leak proof, contaminant resistant metal-to-metal seal is accomplished by lapping and polishing hardened stainless steel sealing elements to exacting standards of finish and flatness.
- The sealing elements are spring preloaded and pressure energized, which maintains contact between the two sealing surfaces at all times.

All KR Regulators are tested to PacSeal's strict quality control standards to ensure proper function and reliability. Every ShearFlo® sealing component in a repair kit is inspected to ensure trouble-free performance after field maintenance and repair.

PacSeal Hydraulics' KR Pressure Regulators serve as pressure reducing and regulating valves to maintain system pressure at a desired value (set pressure) which is below that of the supply pressure.

The operator controls the outlet pressure by modulating the compression of springs that act on a pressurized piston. This in turn balances the hydraulic load inside the body. The operator options are as follows:

- Manual
- Failsafe Air Motor with Manual Override
- Failsafe Hydraulic Motor with Manual Override
- Hydraulic Pilot

The internal override bypass operator provides a lean solution for tight space applications by allowing full accumulator pressure to be supplied downstream of the regulator without a dedicated 4-way bypass valve in the hydraulic circuit.

General Specifications	
Supply Port Size	1-1/4 in. NPT or SAE (2X)
Outlet Port Size	2 in. NPT or SAE
Vent Port Size	1 in. NPT or SAE (2X)
Working Pressure Options (Liquid)	3000, 5000, or 6000 psi
Regulated Outlet Pressure Options	See Product Configurator
Cv Factor Outlet	43
Cv Factor Vent	4.1
Rated Flow	400 gpm
Temperature Rating (Regulators and Failsafe Air Motors)	-40° to 250°F
Fluid Media	Hydraulic oil or lubricated water[1]
Weight	See installation drawings
Materials	
ShearFlo Sealing Components (i.e. Rotor and Seal Rings)	Hardened stainless steel[1]
Body	Stainless Steel
Flanges and Operators	Coated carbon steel
Hardware	Coated Carbon Steel
O-rings	Buna-N (N), Viton (V), or EPR (E)
Backup Rings	Teflon

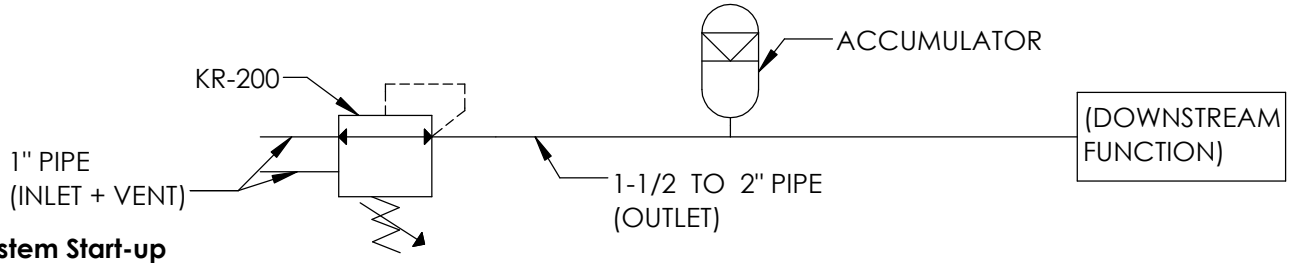
[1]*For water based media, special alloy seal rings may be required for optimum perfomance and durability - Contact PacSeal for details.*

Model	Supply Pressure [psi]	Regulated Outlet Pressure [psi]	Deadband Range [psi]*
L	3000/5000	300-1800	100-150
D	5000/6000	500-3000	200-300
H	5000/6000	500-3300	100-150
W	6000	700-4500	200-300
P	3000/5000/ 6000	50-6000	0-100

*Deadband is the difference between the set pressure and the actual outlet pressure that triggers the KR to open. The deadband will vary depending on factors that influence the friction between the seal rings and flow plates. Namely, type of fluid and lubricity properties, temperature, differential pressure between supply and regulated outlet, seal ring and flow plate wear condition, and lastly interpretation influenced by gauge sensitivity.
The Reset Range or Hysteresis is within +/- 150 psi for all models.

Circuit Design Considerations

The KR-150, -175, and -200 regulators are subject to hammering if the outlet flow is restricted or not adequate to match the inlet flow rate. To prevent hammering, the downstream hydraulic circuit must have adequate flow; such that the pipe/hose diameter matches or is greater than that of the KR-150 outlet, there are little to no restrictions after the outlet (minimize bends, no check valves, no ball valves, etc.). To safeguard this further, a 1 Qt - 2.5 gal. accumulator with 1 to 1-1/4 NPT port (with precharge set to ~1/3 of the system pressure) is recommended to be used just downstream, in close proximity to the regulator's outlet. The larger the accumulator and port, the better. See circuit schematic example, below.



System Start-up

Upon system start-up, there must be load on the pressure regulator piston to prevent hammering/shock that may damage the KR.

- For KR regulators with a manual operator, the top of the manual adjustment handle must be about 2-3/4 inches from the top of the adjustment head.
- For KR regulators with failsafe air/hydraulic remote operators, the top of the manual adjustment handle must be about 4-1/4 inches from the top of the adjustment head.
- For KR regulators with hydraulic pilot operators, there should be about 1500 psi (500 psi minimum) supplied to the pilot inlet.

Rated Regulated Outlet Pressure

KR pressure regulators are rated to output a regulated pressure range that is tested and verified prior to shipment. Operating at a pressure outside of this range is possible, but may diminish as the KR wears during service. 0 psi can be achieved by completely unloading the pressure adjustment (decompressing spring to its free state). To match the supply pressure, the pressure adjustment must be completely loaded (compressing springs to solid), which allows the supply pressure to free-flow through the regulator.
NOTE: Although 0 psi is the output, DO NOT attempt to perform maintenance or disassemble any components downstream of the KR while in this state.
To maximize the regulated outlet pressure range, the hydraulic pilot operator is the best option. This operator regulates pressure down to 50 psi and up to the supply pressure.

Set Pressure Adjustment

When the set pressure on a spring operator is being changed or adjusted, the outlet needs to be briefly opened and closed a few times to allow the operator and pressure to stabilize. This can be achieved by operating a manifold control valve or installing a separate, much smaller valve directly on the outlet line near the KR. The control valve should be briefly opened and closed after the KR has been adjusted; this will stabilize the pressure reading. Once satisfied with the set pressure, tighten the locking handle down to the adjustment head.

Avoid Series Installation

It is NOT recommended that KRs be installed in series (e.g. do NOT connect the outlet of one KR to the inlet of another). Doing so may prevent set pressure stabilization.

Pressure Relieving Feature

The KRs are designed to self-relieve (vent) at an over-pressurization condition to maintain the regulated set pressure. Thus, the vent port must always be connected without any restrictions and not joined with any other common returns to the reservoir or tank at ambient pressure (i.e. solo low pressure hydraulic hose or tubing from KR to tank) to ensure proper safety and function.

In the event of a supply seal ring or flow plate failure, the supply pressure will leak into the KR body through the vent seal ring port and then be directed to the reservoir or tank.

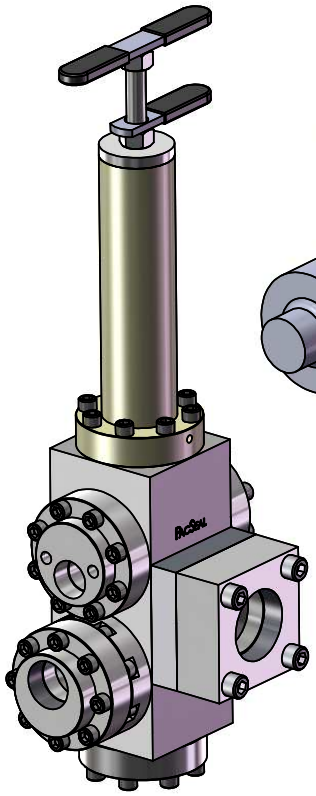
Model Number Configurator

Basic Model	Ports	Supply Pressure	Regulated Outlet Pressure: Operating Range[2]	Regulated Outlet Pressure: Deadband	Operator	Internal Override Bypass	Water Glycol App's
KR-200	N NPT S SAE C Code-61[1] D Code-62[1]	3 3000 psi 5 5000 psi 5 5000 psi 6 6000 psi 6 6000 psi 3, 5, or 6	L 300-1800 psi D 500-3000 psi H 500-3300 psi W 700-4500 psi P[3] 50-6000 psi	100-150 psi 200-300 psi 100-150 psi 200-300 psi 0-100 psi	M Manual FSA Failsafe Air Motor FSH Failsafe Hydraulic H Hydraulic Pilot	-IO Direct -IS with SV-25 -IX with SVx- *Leave blank if N/A*	- W Special Alloy Seal Rings

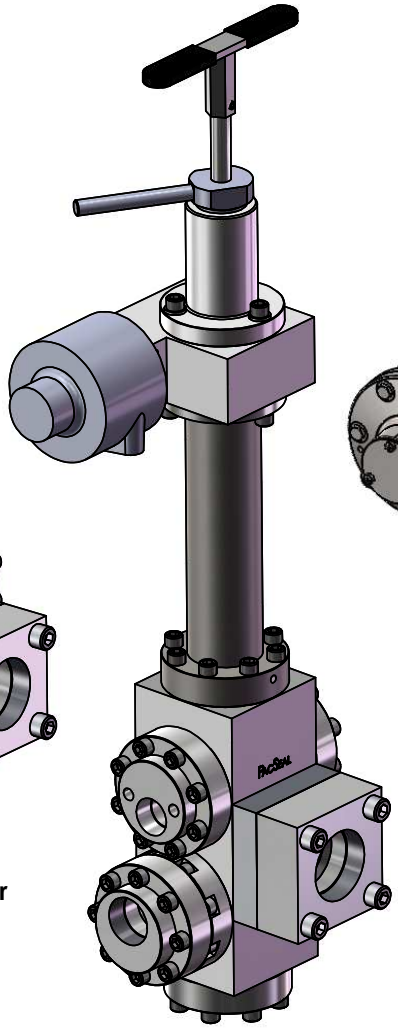
Notes: [1] *Not a standard option - special order only*

[2] *Regulated Outlet Pressure cannot exceed supply pressure. Absolute Outlet Pressure is 0 psi up to 25% above the maximum operating*

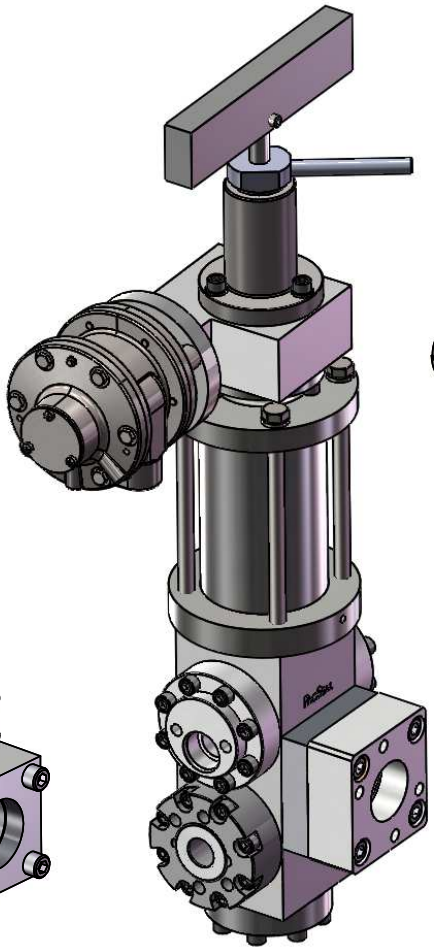
[3] *Maximum regulated outlet pressure matches the supply pressure for a regulator with the Hydraulic Pilot operator*



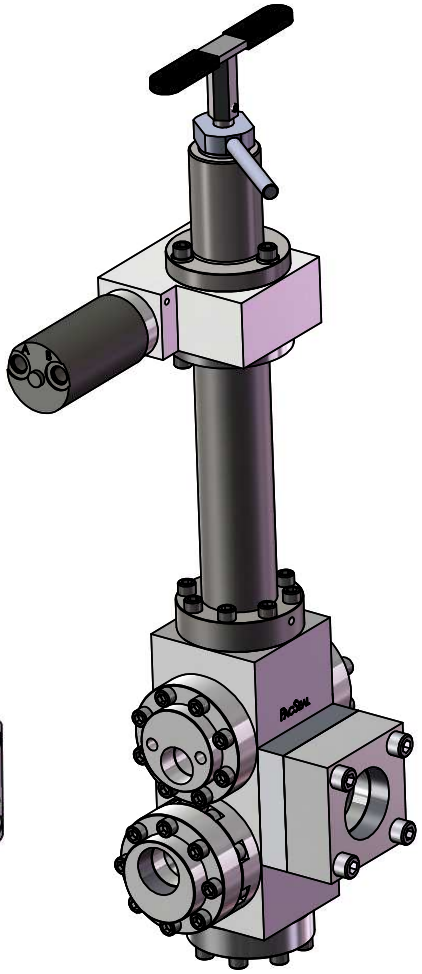
KR-200 Regulator with Manual Operator *(KR-200N3DM)*



KR-200 Regulator with Failsafe Air Motor Operator *(KR-200S3LFA)*



KR-200 Regulator with High Pressure Low Deadband and Failsafe Air Motor Operator *(KR-200C3HFSA)*



KR-200 Regulator with Failsafe Hydraulic Motor Operator *(KR-200N3DFSH)*

NOTES:

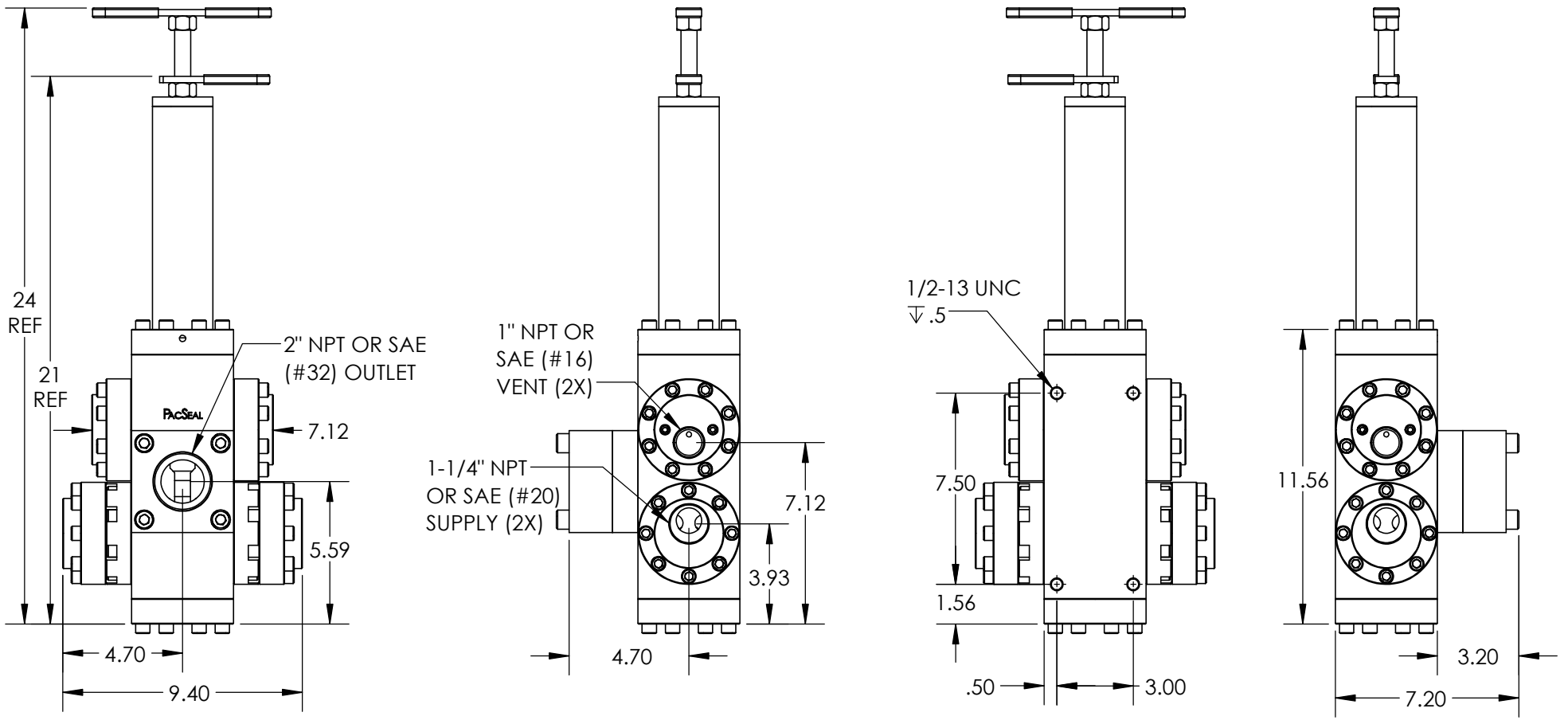
1. *Displayed models are just a few examples of the many potential configurations*

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TITLE: **Configuration Overview**

SIZE: A | REV: 4



Notes:

1. Adjustment handle can be threaded in or out to increase or decrease compression on the spring and thus on the regulated outlet pressure.
2. Model configuration (Regulated Outlet Pressure) options: L, D
3. Weight - 84 lb.
4. All dimensions are consistent for KR-200 NPT or SAE ORB porting options, regardless of supply/outlet pressure and operator selection.

PacSeal Hydraulics

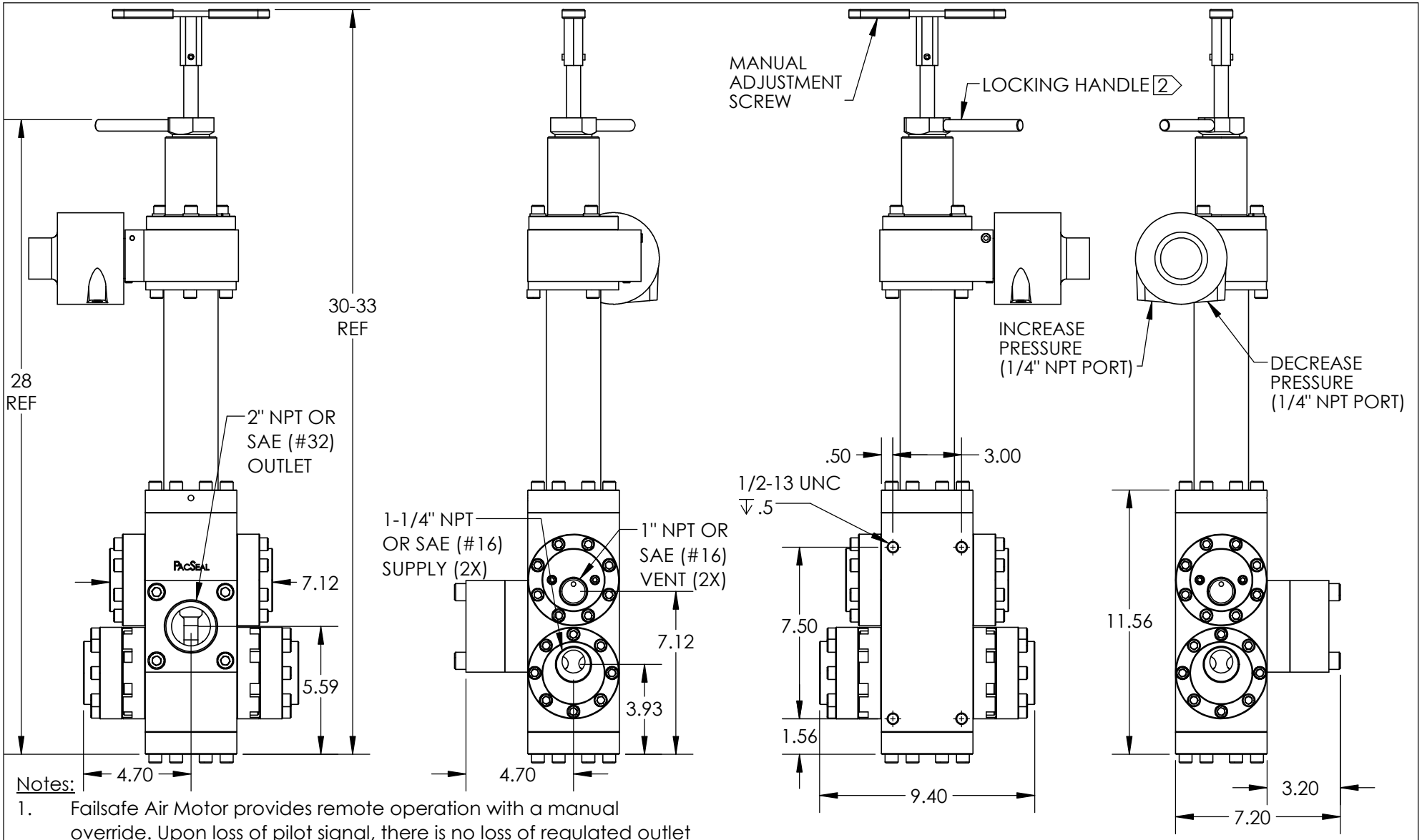
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TITLE
Regulator w/ Manual Operator (NPT/SAE) Installation Drawing

SIZE A | REV 4

SHEET 5 OF 22

5 4 3 2 1



Notes:

1. Failsafe Air Motor provides remote operation with a manual override. Upon loss of pilot signal, there is no loss of regulated outlet pressure.
2. Turn locking handle clockwise to lock for failsafe operation. Turn locking handle counter-clockwise to unlock for manual operation/override.
3. Recommended Air Supply - 115 psi max with 1/2" tubing
4. Model configuration (Regulated Outlet Pressure) options: L, D
5. Weight - 113 lb.
6. All dimensions are consistent for KR-200 NPT or SAE ORB porting options, regardless of supply/outlet pressure and operator selection.

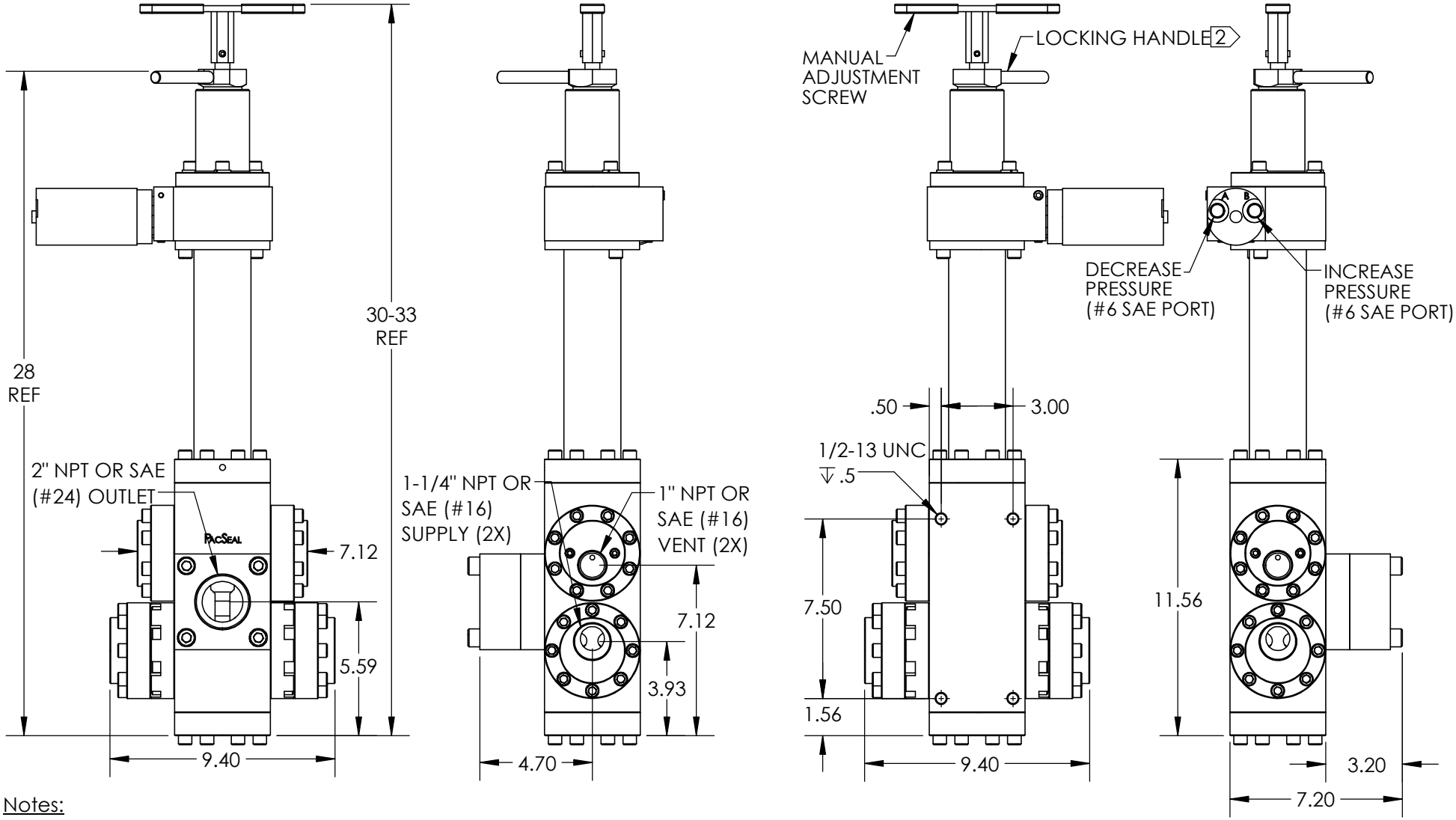
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TITLE
Regulator w/ Failsafe Air Operator (NPT/SAE) Installation Drawing

SIZE A | REV 4

5 4 3 2 1



Notes:

1. Failsafe Hydraulic Motor provides remote operation with a manual override. Upon loss of pilot signal, there is no loss of regulated outlet pressure.
2. Turn locking handle clockwise to lock for failsafe operation. Turn locking handle counter-clockwise to unlock for manual operation/override.
3. Max Hydraulic Motor Supply Pressure - 1500 psi
4. Model configuration (Regulated Outlet Pressure) options: L, D
5. Weight - 110 lb.
6. All dimensions are consistent for KR-200 NPT or SAE porting options, regardless of supply/outlet pressure and operator selection.

PACSEAL HYDRAULICS

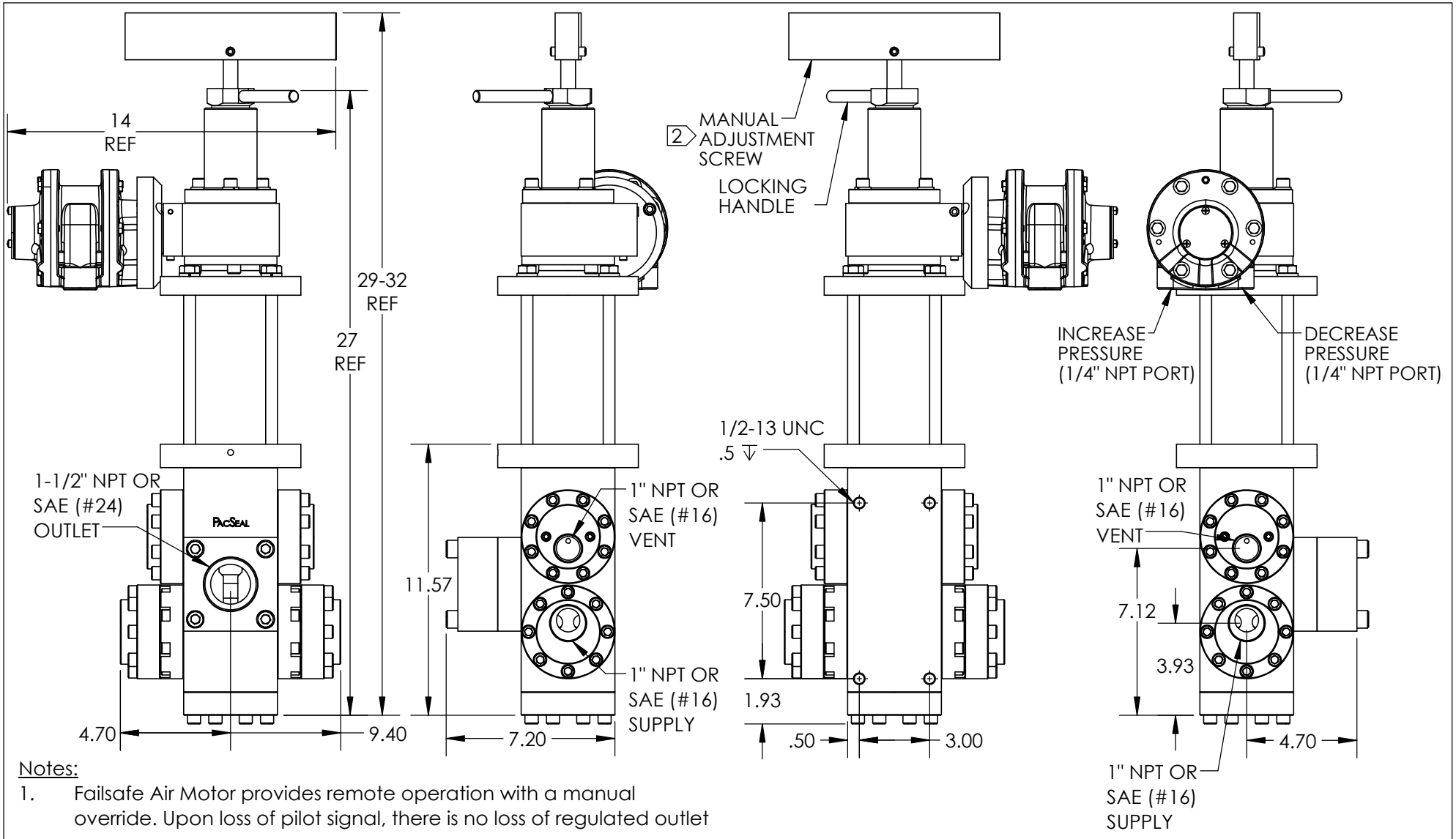
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TITLE **Regulator w/ Failsafe Hydarulic Operator (NPT/SAE) Installation Drawing**

SIZE **A** | REV **4**

SHEET 7 OF 22

5 4 3 2 1



Notes:

1. Failsafe Air Motor provides remote operation with a manual override. Upon loss of pilot signal, there is no loss of regulated outlet pressure.
2. Turn locking handle clockwise to lock for failsafe remote operation. Turn locking handle counter-clockwise to unlock for manual operation/override.
3. Recommended air supply - 115 psi max w/ 1/2" tubing.
4. Model configuration (Regulated Outlet Pressure) option: H (5000/6000 psi supply)and W (6000 psi supply)
5. Weight - 141 lb.
6. All dimensions are consistent for KR-200 NPT or SAE ORB porting options, regardless of supply/outlet pressure and operator selection.

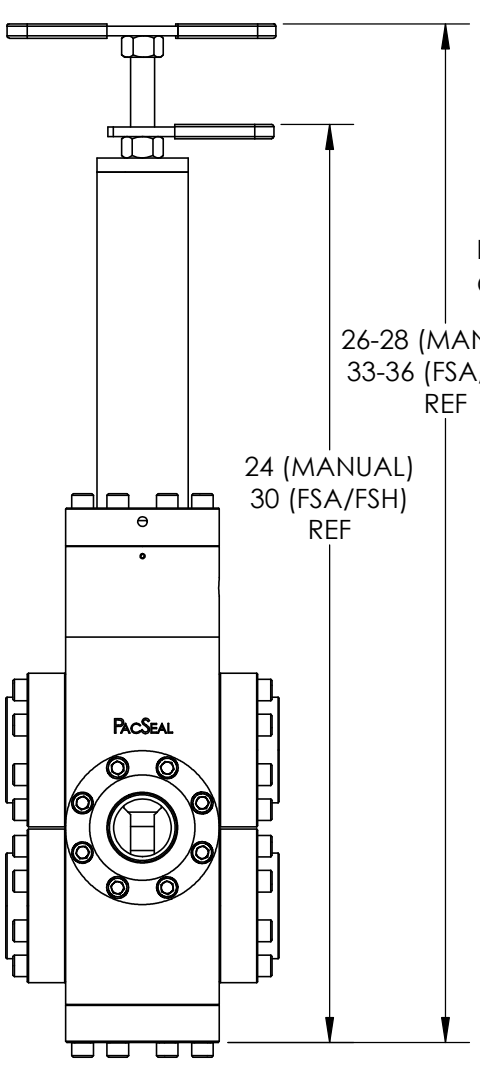
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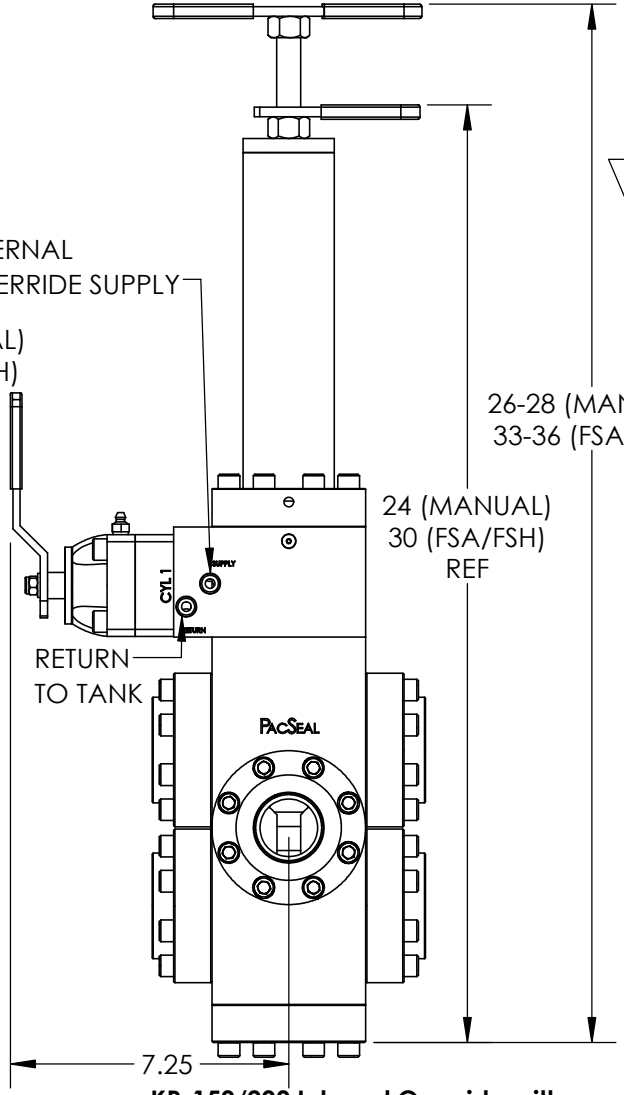
TITLE: **High Pressure Output Regulator w/ High Torque Failsafe Air Operator**

SIZE: A | REV: 4

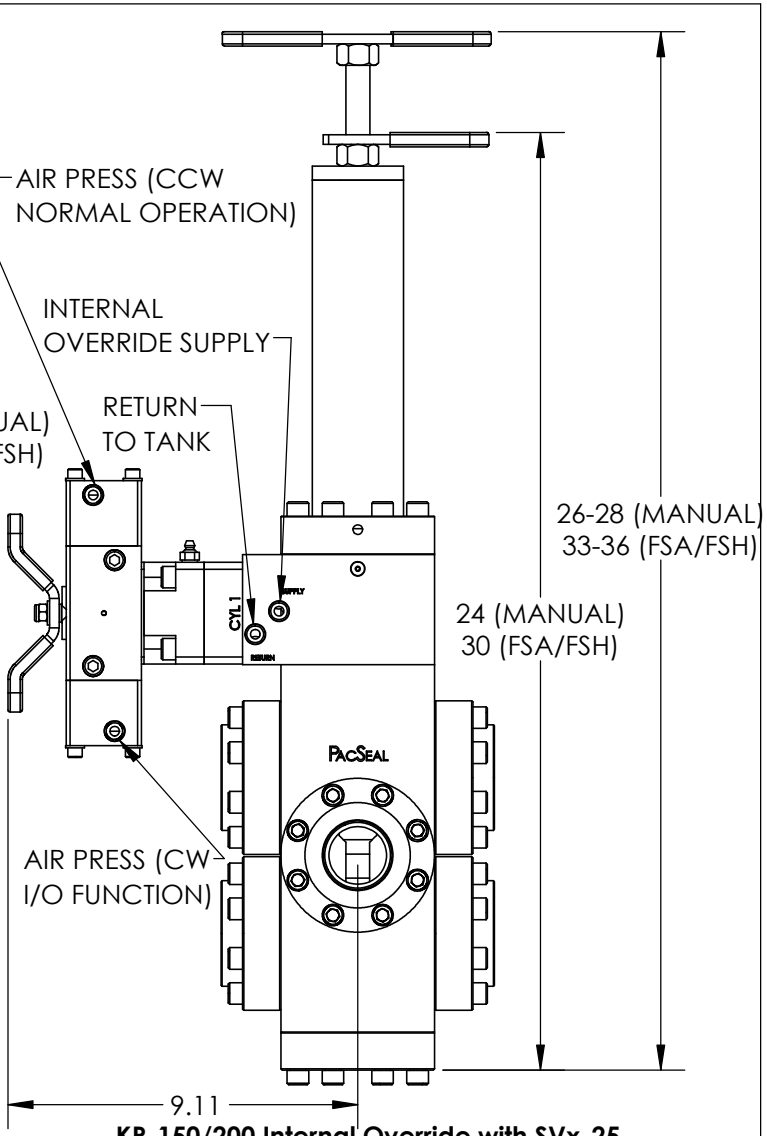
5 4 3 2 1



KR-150/200 Internal Override
Remote Pilot Operation (-IO)



1 KR-150/200 Internal Override with SV-25 Open Center Pilot Valve (-IS)



KR-150/200 Internal Override with SVx-25
2 Open Center Pilot Air Actuated Valve (-IX)
(80-150 psi air inlet)
(3000 psi working pressure)

The I/O Bypass operator allows full accumulator pressure to be supplied downstream of the regulator without a dedicated 4-way bypass valve in the circuit. The over-ride bypass is accomplished by applying a pilot signal to the I/O operator which is equal to or greater than the accumulator pressure. The pilot pressure forces the piston/ seal container assembly to the full open position where supply pressure flows through the regulator to the output circuit. Relieving the pilot signal allows the regulator to return to the original set pressure.

Notes:
1. See SV-25 product information for further details
2. See SVx-25 product information for further details
3. Regulated outlet pressure options: L, D

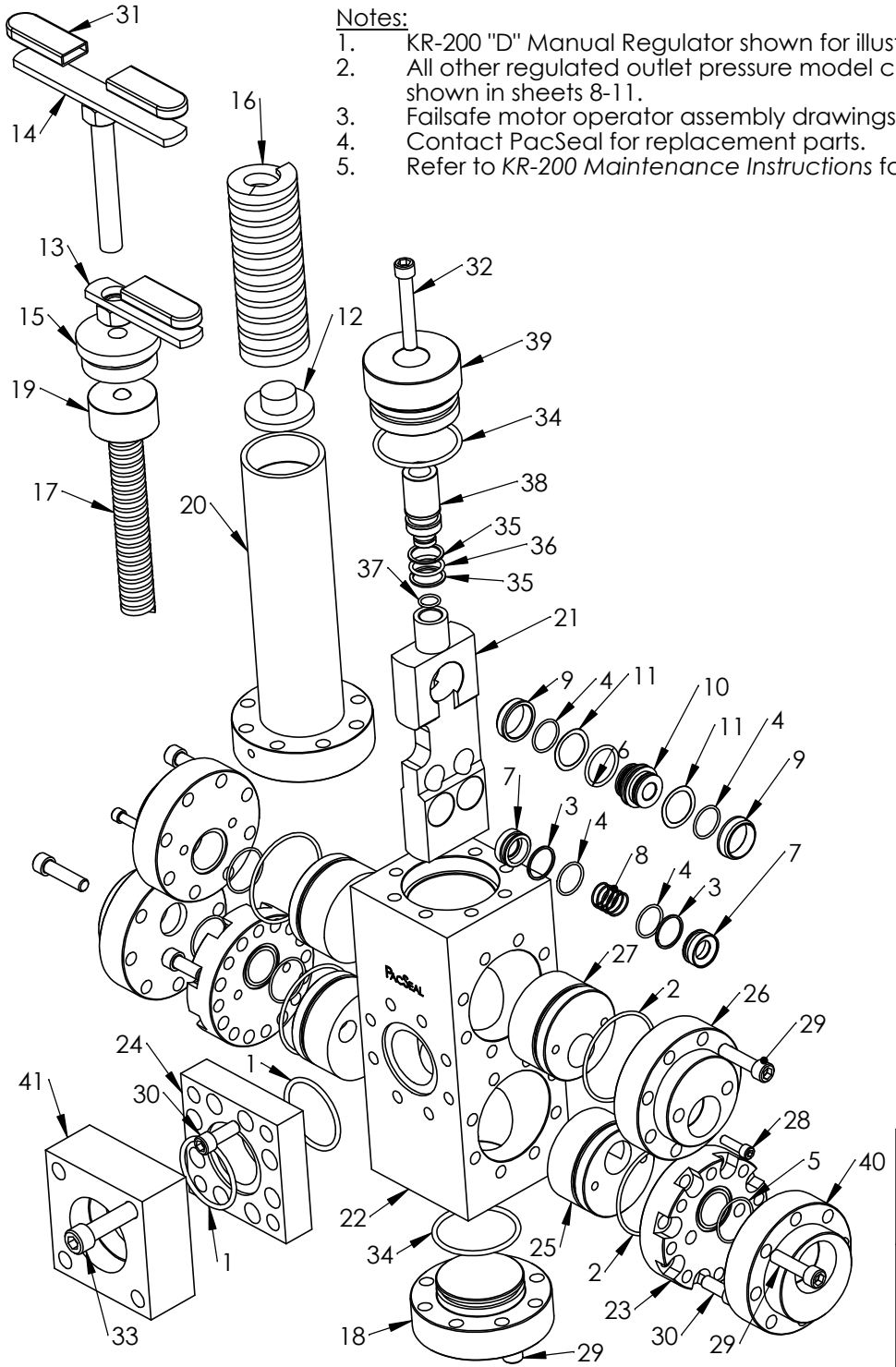
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TITLE
Internal Override Options Installation Drawing

SIZE **A** | REV **4**

5 4 3 2 1



Notes:

1. KR-200 "D" Manual Regulator shown for illustration purposes.
2. All other regulated outlet pressure model configurations shown in sheets 8-11.
3. Failsafe motor operator assembly drawings shown in sheet 12.
4. Contact PacSeal for replacement parts.
5. Refer to *KR-200 Maintenance Instructions* for more details.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1126	O-Ring	2
2	23-1263	O-Ring	4
3	23-1322	Backup Ring	4
4	23-1323	O-Ring	6
5	23-1325	O-Ring	6
6	23-1334	O-Ring	1
7	40-0014	Seal Ring,	4
8	40-0110	Spring	2
9	40-0113	Seal Ring- Vent	2
10	40-0114	Valve Cage	1
11	40-0115	Wave Spring	2
12	40-0134	Spring Plate	1
13	40-0135	Lock Handle	1
14	40-0136	Adjusting Screw & Handle	1
15	40-0140	Plug, Adjustment Head	1
16	40-0143	Spring, Outer	1
17	40-0144	Spring, Inner	1
18	40-0197	Flange, Lower	1
19	40-0300	Spring Guide	1
20	40-0383	Ajustment Head	1
21	40-0714	Seal Container, KR-150	1
22	40-1343	Body, KR-200	1
23	40-1345	Adapter, Inlet 1-1/4 NPT	2
24	40-1347	Adapter, Outlet Flange 2" NPT	1
25	40-1350	Flow Plate, Supply	2
26	40-1383	Flange, Inlet & Vent	2
27	40-2213	Flow Plate Vent, KR-200	2
28	50-0066	SHCS	8
29	50-0069	Bolt, SHCS	48
30	50-0072	SHCS	24
31	50-0239	Grip, Handle	3
32	50-0331	SHCS	1
33	50-0340	SHCS	4
34	Note 2	O-Ring	2
35	Note 2	Backup Ring	2
36	Note 2	O-Ring	1
37	Note 2	O-Ring	1
38	Note 2	Piston, Manual	1
39	Note 2	Piston Guide, KR-150 Manual	1
40	Note 4	Flange, 1-1/4" NPT Inlet	2
41	Note 4	Flange, 2" NPT Outlet	1

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TITLE

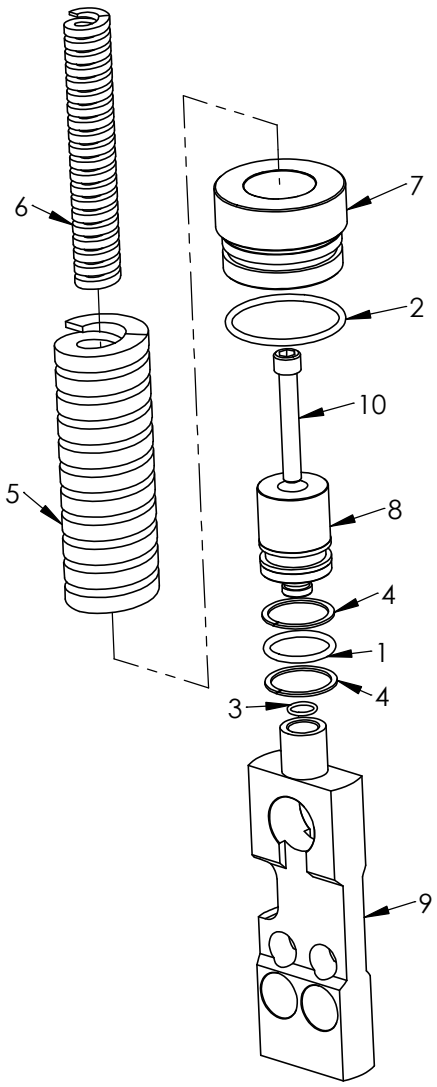
General Assembly Overview

SIZE **A** | REV **4**

5 4 3 2 1

Notes:

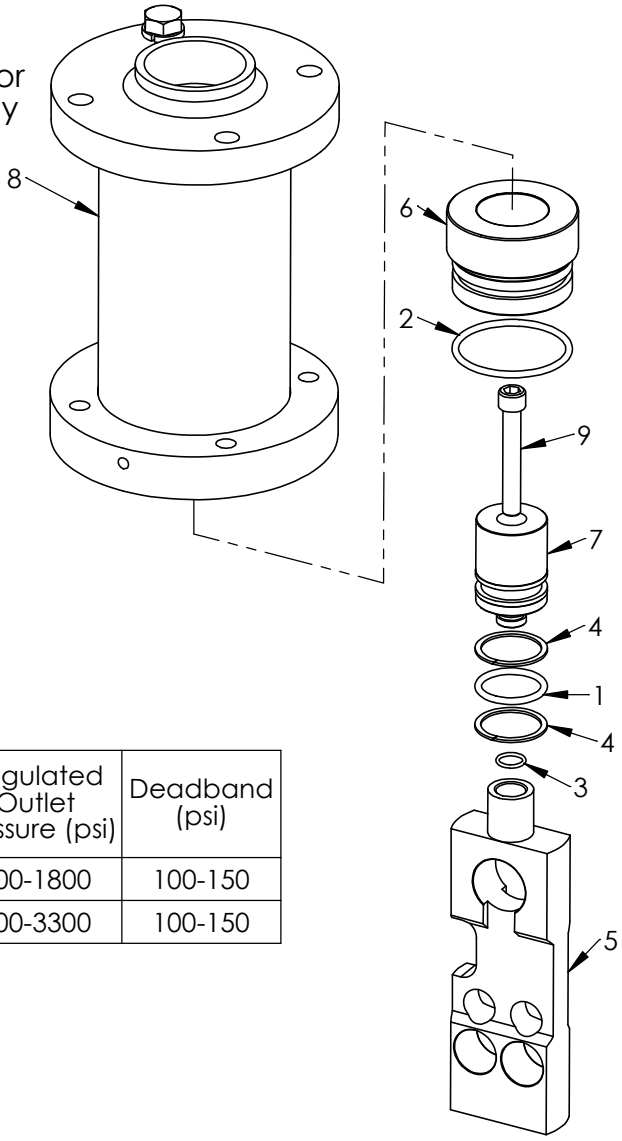
1. The listed components vary based on Supply and Regulated Outlet Pressures, while all other regulator components (shown in sheet 10 "General Assembly Overview") are shared.



KR-200 L Regulator

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1124	O-Ring	1
2	23-1319	O-Ring	1
3	23-1333	O-Ring	1
4	23-1342	Backup Ring	2
5	40-0143	Spring, Outer	1
6	40-0144	Spring, Inner	1
7	40-1351	Piston Guide, L	1
8	40-1352	Piston, L	1
9	40-0714	Seal Container	1
10	50-0331	Screw	1

Model	Supply Pressure (psi)	Regulated Outlet Pressure (psi)	Deadband (psi)
L	3000/5000	300-1800	100-150
H	5000/6000	500-3300	100-150



KR-200 H Regulator
With High Pressure Output Adjustment Head

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1124	O-Ring	1
2	23-1319	O-Ring	1
3	23-1333	O-Ring	1
4	23-1342	Backup Ring	2
5	40-0714	Seal Container	1
6	40-1351	Piston Guide, L	1
7	40-1352	Piston, L	1
8	40-2927	KR-75/140/150 L-HP Manual Operator	1
9	50-0331	Screw	1

PACSEAL HYDRAULICS

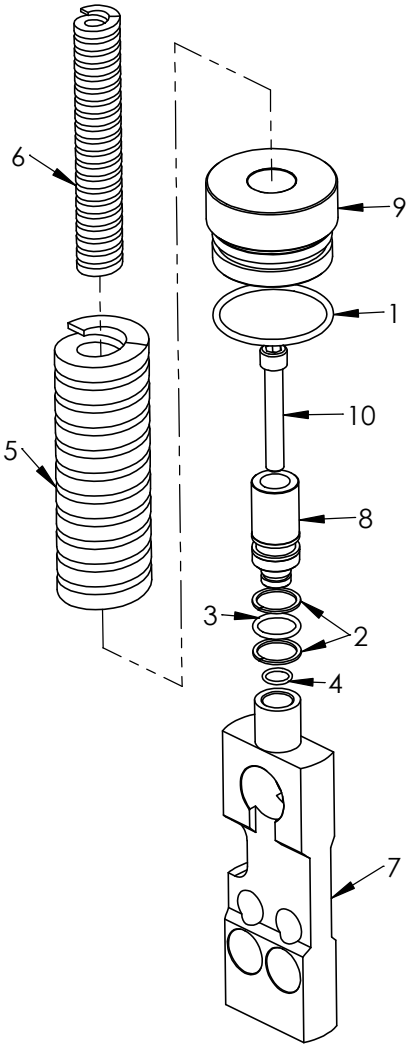
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TITLE: **L and H Model Configurations Assembly Drawing**

SIZE: A | REV: 4

Notes:

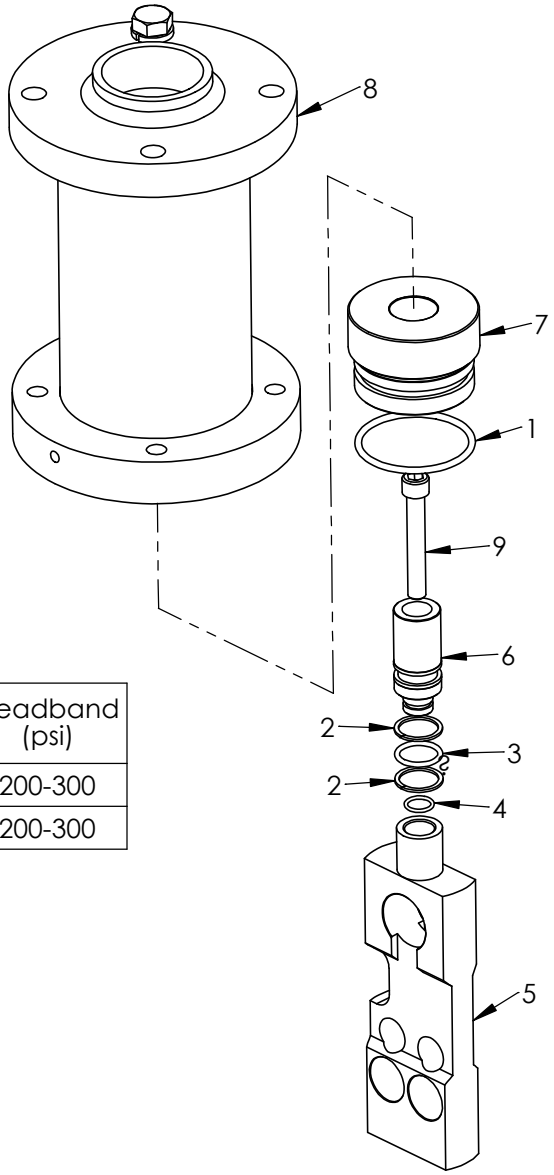
1. The listed components vary based on Supply and Regulated Outlet Pressures, while all other regulator components (shown in sheet 10 "General Assembly Overview") are shared.



KR-200 D Regulator

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1319	O-Ring	1
2	23-1331	Backup Ring	2
3	23-1332	O-Ring	1
4	23-1333	O-Ring	1
5	40-0143	Spring, Outer	1
6	40-0144	Spring, Inner	1
7	40-0714	Seal Container	1
8	40-0717	Piston, D	1
9	40-0718	Piston Guide, D	1
10	50-0331	SHCS	1

Model	Supply Pressure (psi)	Regulated Outlet Pressure (psi)	Deadband (psi)
D	5000/6000	500-3000	200-300
W	6000	700-4500	200-300



KR-200 W Regulator
with High Pressure Output Adjustment Head

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1319	O-Ring	1
2	23-1331	Backup Ring	2
3	23-1332	O-Ring	1
4	23-1333	O-Ring	1
5	40-0714	Seal Container	1
6	40-0717	Piston, D	1
7	40-0718	Piston Guide, D	1
8	40-2927	High Pressure Output Adj. Head	1
9	50-0331	SHCS	1

PACSEAL HYDRAULICS

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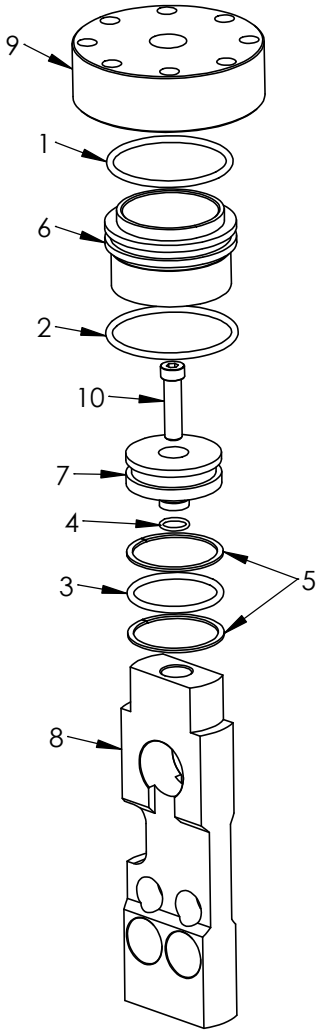
TITLE: **D and W Model Configurations Assembly Drawing**

SIZE: **A** | REV: **4**

Notes:

1. The listed components vary based on Supply and Regulated Outlet Pressures, while all other regulator components (shown in sheet 10 "General Assembly Overview") are shared.

Model	Supply Pressure (psi)	Regulated Outlet Pressure (psi)	Deadband (psi)
P	3000/5000/6000	50-6000	0-100



KR-200 P Regulator (Hydraulic Pilot)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1128	O-Ring	1
2	23-1327	O-Ring	1
3	23-1330	O-Ring	1
4	23-1333	O-Ring	1
5	23-1413	Backup Ring	2
6	40-0318	Piston Guide, KR-150	1
7	40-0319	Piston, Hydraulic	1
8	40-0320	Seal Container	1
9	40-0324	Hydraulic Head	1
10	50-0068	Bolt, SHCS	1

PACSEAL HYDRAULICS

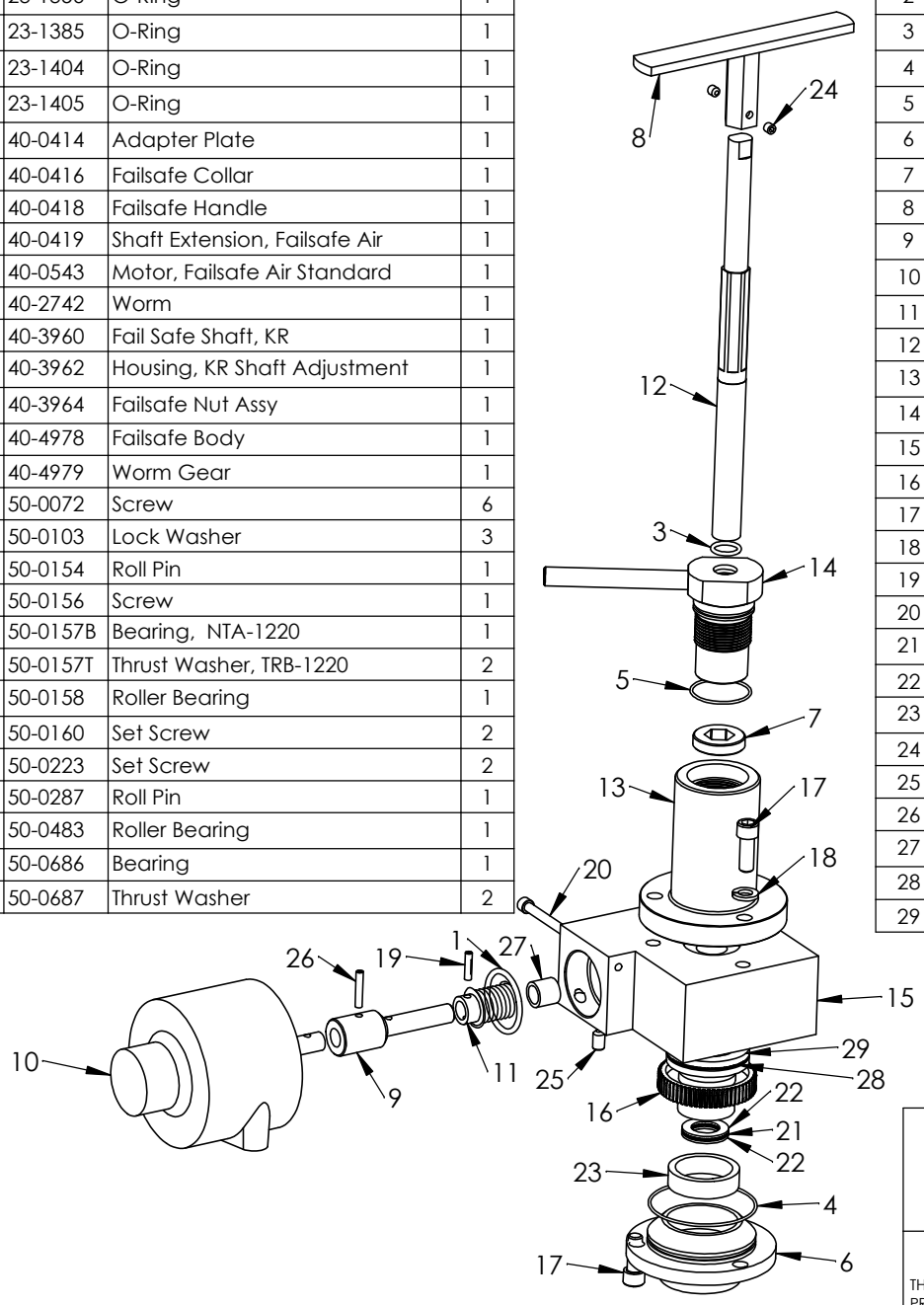
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TITLE: **P Model Configurations Assembly Drawing**

SIZE: A | REV: 4

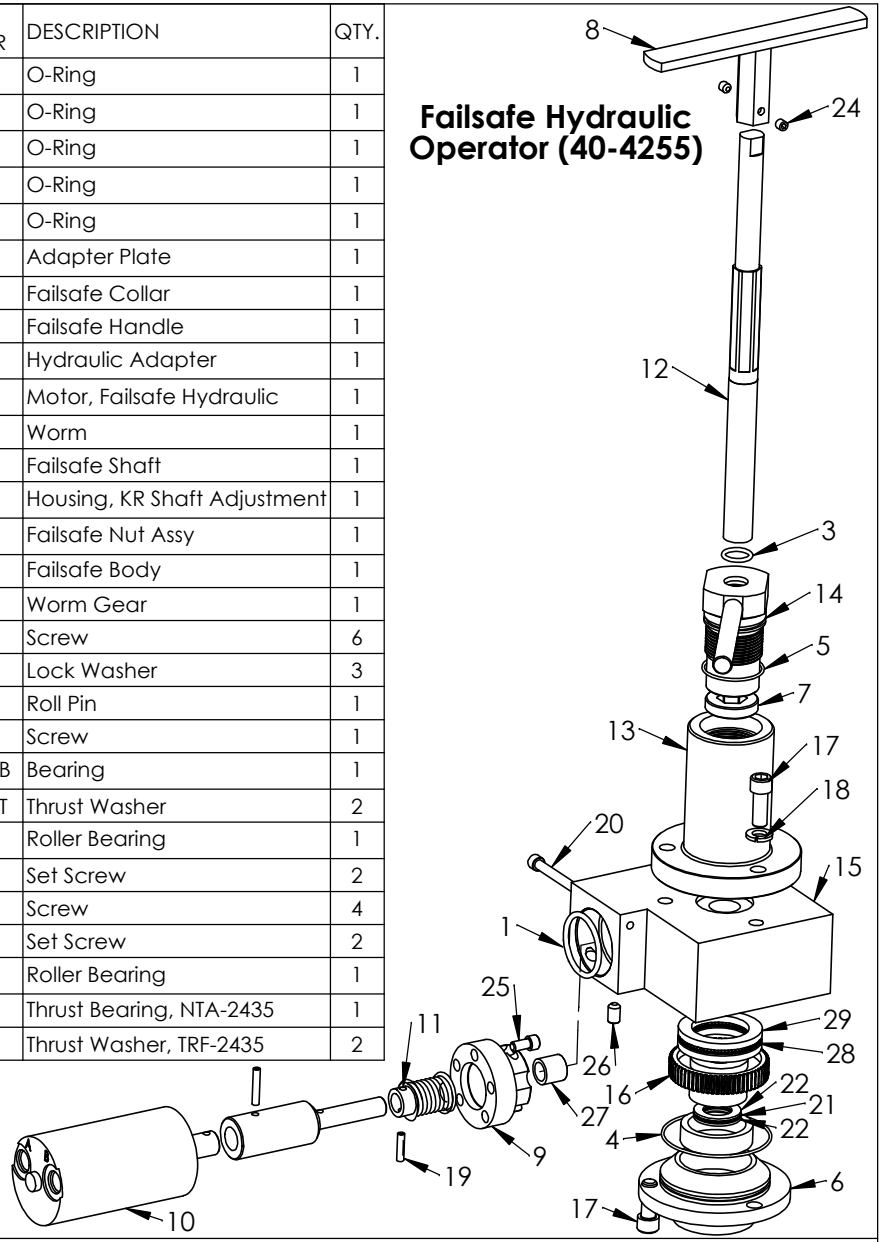
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Failsafe Collar	1
8	40-0418	Failsafe Handle	1
9	40-0419	Shaft Extension, Failsafe Air	1
10	40-0543	Motor, Failsafe Air Standard	1
11	40-2742	Worm	1
12	40-3960	Fail Safe Shaft, KR	1
13	40-3962	Housing, KR Shaft Adjustment	1
14	40-3964	Failsafe Nut Assy	1
15	40-4978	Failsafe Body	1
16	40-4979	Worm Gear	1
17	50-0072	Screw	6
18	50-0103	Lock Washer	3
19	50-0154	Roll Pin	1
20	50-0156	Screw	1
21	50-0157B	Bearing, NTA-1220	1
22	50-0157T	Thrust Washer, TRB-1220	2
23	50-0158	Roller Bearing	1
24	50-0160	Set Screw	2
25	50-0223	Set Screw	2
26	50-0287	Roll Pin	1
27	50-0483	Roller Bearing	1
28	50-0686	Bearing	1
29	50-0687	Thrust Washer	2

Failsafe Air Operator (40-3963)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Failsafe Collar	1
8	40-0418	Failsafe Handle	1
9	40-0715	Hydraulic Adapter	1
10	40-0719	Motor, Failsafe Hydraulic	1
11	40-2742	Worm	1
12	40-3960	Failsafe Shaft	1
13	40-3962	Housing, KR Shaft Adjustment	1
14	40-3964	Failsafe Nut Assy	1
15	40-4978	Failsafe Body	1
16	40-4979	Worm Gear	1
17	50-0072	Screw	6
18	50-0103	Lock Washer	3
19	50-0154	Roll Pin	1
20	50-0156	Screw	1
21	50-0157B	Bearing	1
22	50-0157T	Thrust Washer	2
23	50-0158	Roller Bearing	1
24	50-0160	Set Screw	2
25	50-0215	Screw	4
26	50-0223	Set Screw	2
27	50-0483	Roller Bearing	1
28	50-0686	Thrust Bearing, NTA-2435	1
29	50-0687	Thrust Washer, TRF-2435	2

Failsafe Hydraulic Operator (40-4255)



PACSEAL HYDRAULICS

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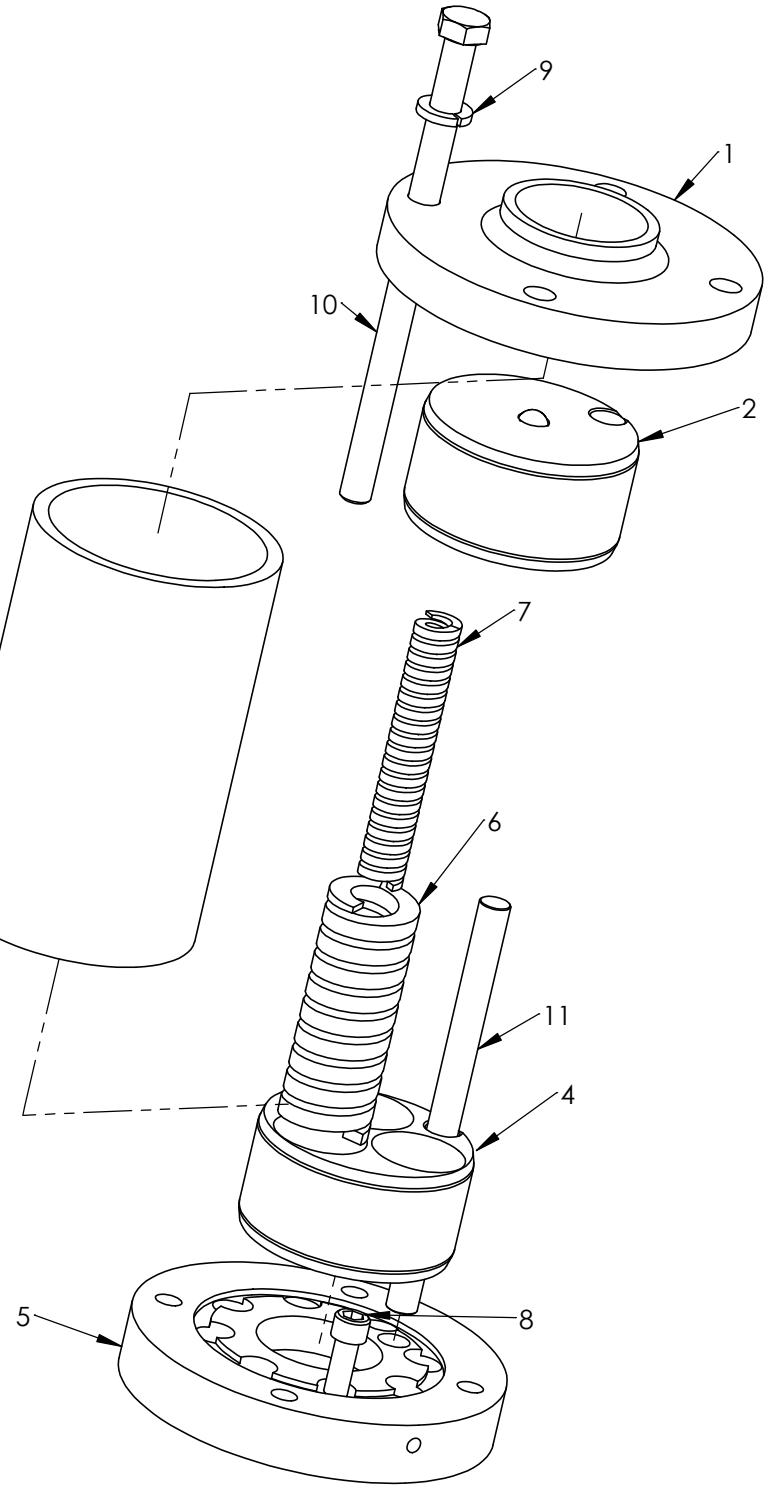
TITLE **Failsafe Air and Hydraulic Operators Assembly Drawing**

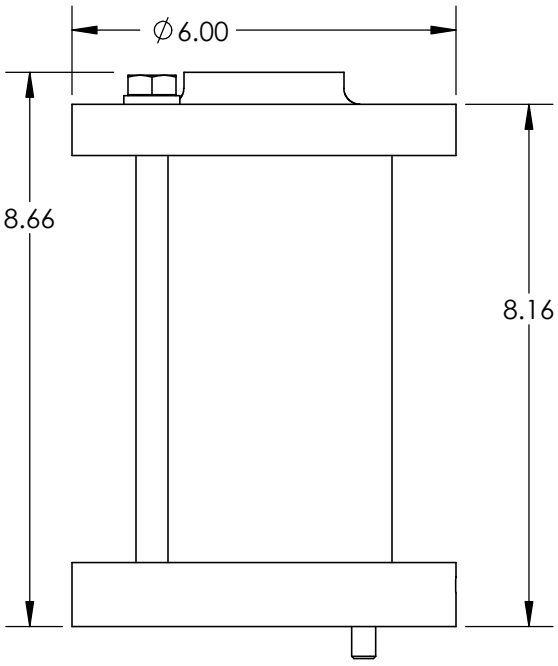
SIZE **A** REV **4**

SHEET 14 OF 22

5 4 3 2 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-2654	Plate, Upper Actuator	1
2	40-2655	Plate, Upper Spring	1
3	40-2656	Cylinder, Actuator	1
4	40-2657	Plate, Lower Spring	1
5	40-2658	Plate, Lower Actuator	1
6	40-2659	Spring, Outer	3
7	40-2660	Spring, Inner	3
8	50-0072	SHCS	8
9	50-0104	Lock Washer	4
10	50-0434	Bolt	4
11	50-0435	Rod	1





KIT PART NUMBER
40-2927

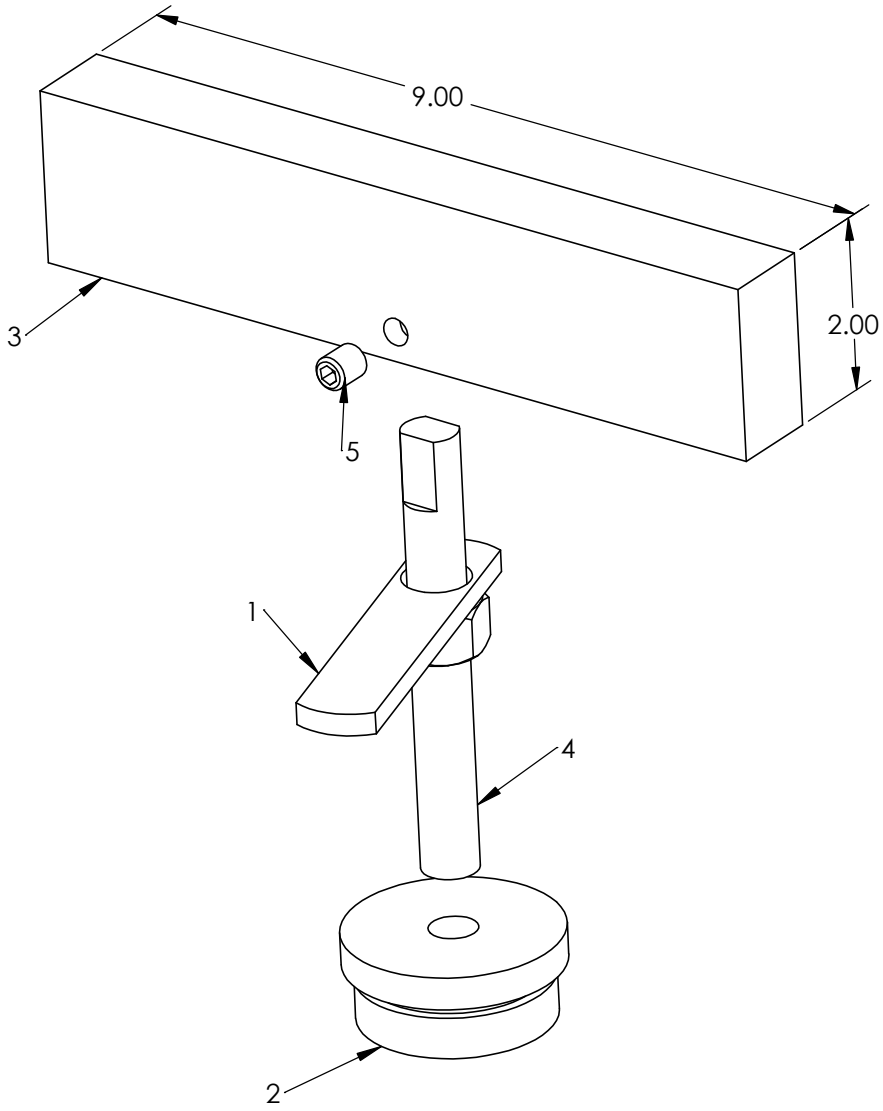
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TITLE **High Pressure Low Deadband Adjustment Head Assembly Drawing**

SIZE **A** | REV 4

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-0135	Lock Handle	1
2	40-0140	Plug, Adjustment Head	1
3	40-3237	Handle, Fail Safe HP	1
4	40-3414	Adjusting Rod	1
5	50-0482	Set Screw	2



KIT PART NUMBER
40-3558

PacSeal Hydraulics

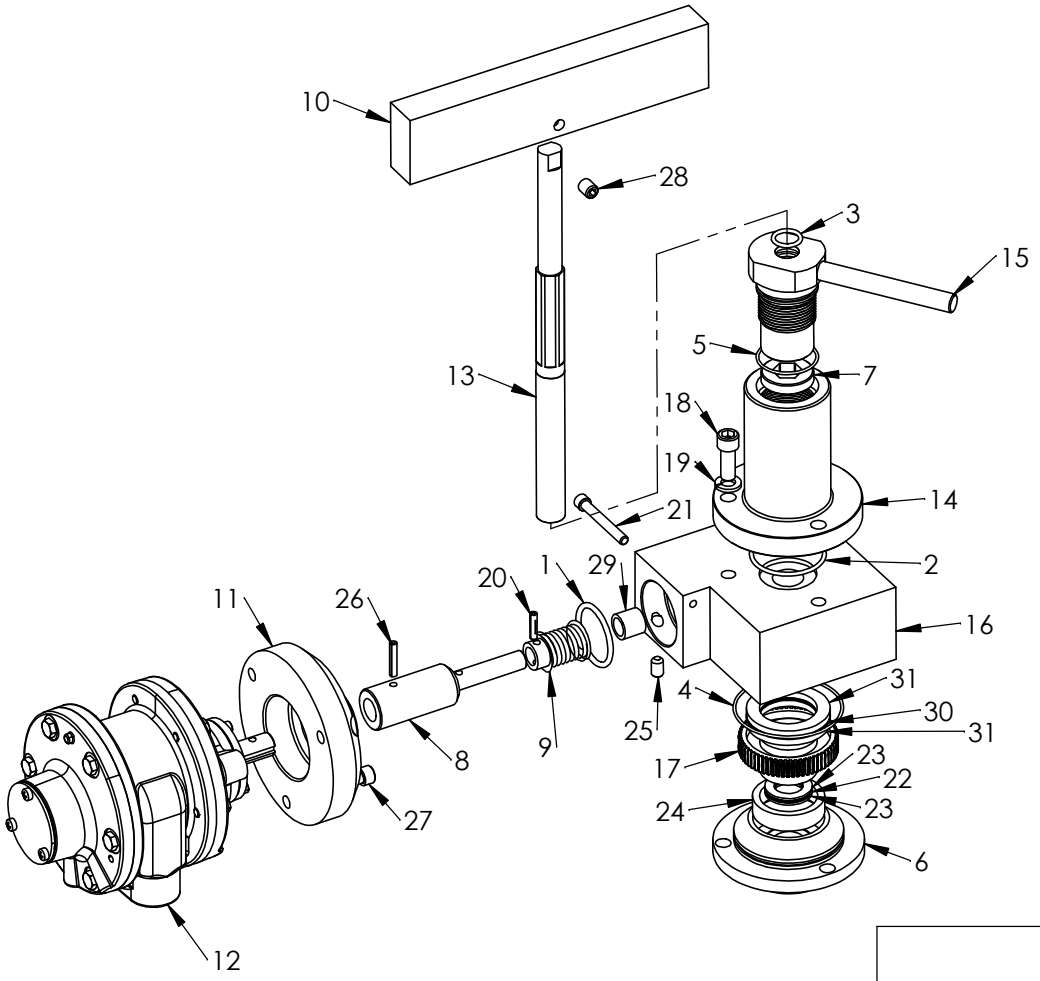
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TITLE
High Pressure Output Manual Handle Assembly Drawing

SIZE **A** | REV 4

High Pressure Output Failsafe Air Actuator (40-4982) with Standard Motor

Used exclusively with "H" and"W" Regulators



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Collar	1
8	40-0716	Shaft Extension	1
9	40-2742	Worm	1
10	40-3237	Handle	1
11	40-3757	Adapter Plate	1
12	40-3761	Air Motor	1
13	40-3960	Fail Safe Shaft	1
14	40-3962	Housing	1
15	40-3964	Fail Safe Nut Assy	1
16	40-4978	Fail Safe Body	1
17	40-4979	Worm Gear	1
18	50-0072	SHCS	6
19	50-0103	Lock Washer	3
20	50-0154	Roll Pin	1
21	50-0156	Screw	1
22	50-0157B	Bearing	1
23	50-0157T	Thrust Washer	2
24	50-0158	Roller Bearing	1
25	50-0223	Hex Socket Set Screw	2
26	50-0287	Roll Pin	1
27	50-0319	Screw	3
28	50-0482	Set Screw, Cup Point	2
29	50-0483	Roller Bearing	1
30	50-0686	Thrust Bearing	1
31	50-0687	Thrust Washer	2

PACSEAL HYDRAULICS

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TITLE
High Pressure Output Failsafe Air Operators Assembly Drawing

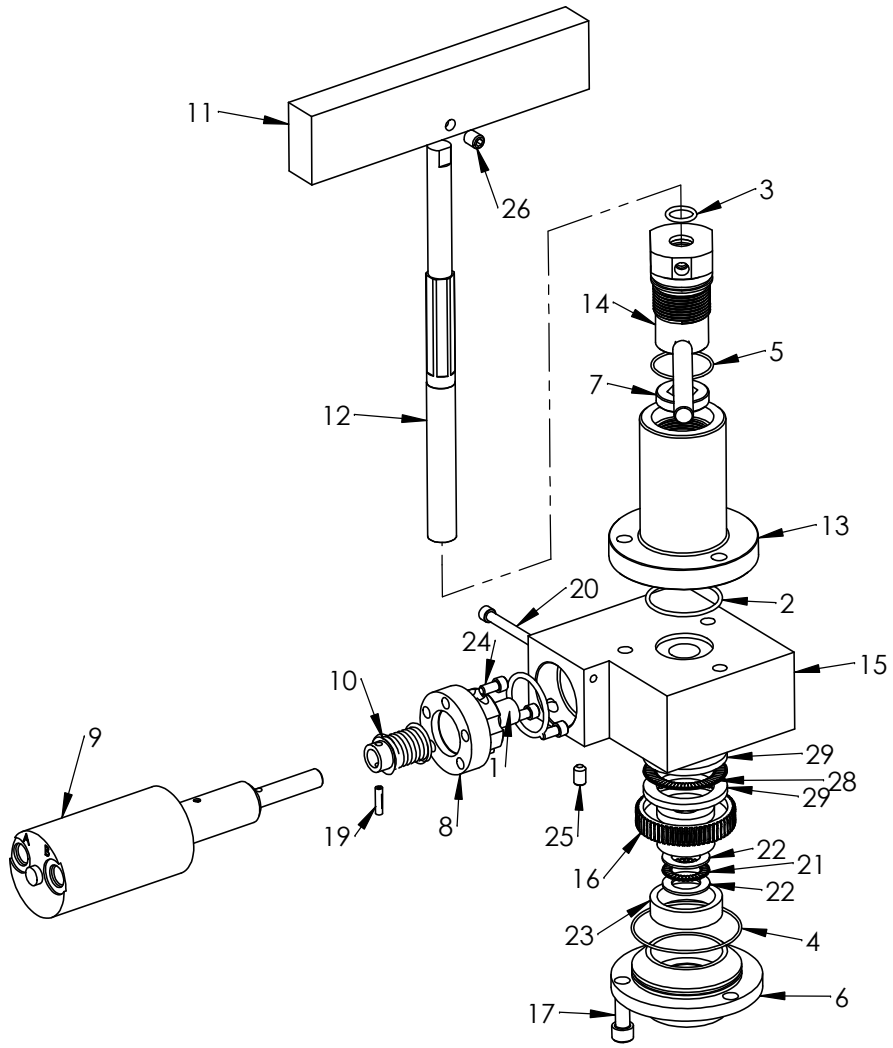
SIZE **A** | REV **4**

SHEET 17 OF 22

5 4 3 2 1

High Pressure Output Failsafe Hydraulic Actuator (40-4981) with High Torque Motor

Used exclusively with "H" and "W" Regulator



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Collar	1
8	40-0715	Hydraulic Adapter	1
9	40-0719	Motor	1
10	40-2742	Worm	1
11	40-3237	Handle	1
12	40-3960	Shaft	1
13	40-3962	Housing	1
14	40-3964	Fail Safe Nut Assy	1
15	40-4978	Fail Safe Body	1
16	40-4979	Worm Gear	1
17	50-0072	Screw	6
18	50-0103	Lock Washer	3
19	50-0154	Roll Pin	1
20	50-0156	Screw	1
21	50-0157B	Bearing	1
22	50-0157T	Thrust Washer	2
23	50-0158	Roller Bearing	1
24	50-0215	Screw	5
25	50-0223	Set Screw	2
26	50-0482	Set Screw	2
27	50-0483	Roller Bearing	1
28	50-0686	Thrust Bearing	1
29	50-0687	Thrust Washer	2

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TITLE
High Pressure Output Failsafe Hydraulic Operator Assembly Drawing

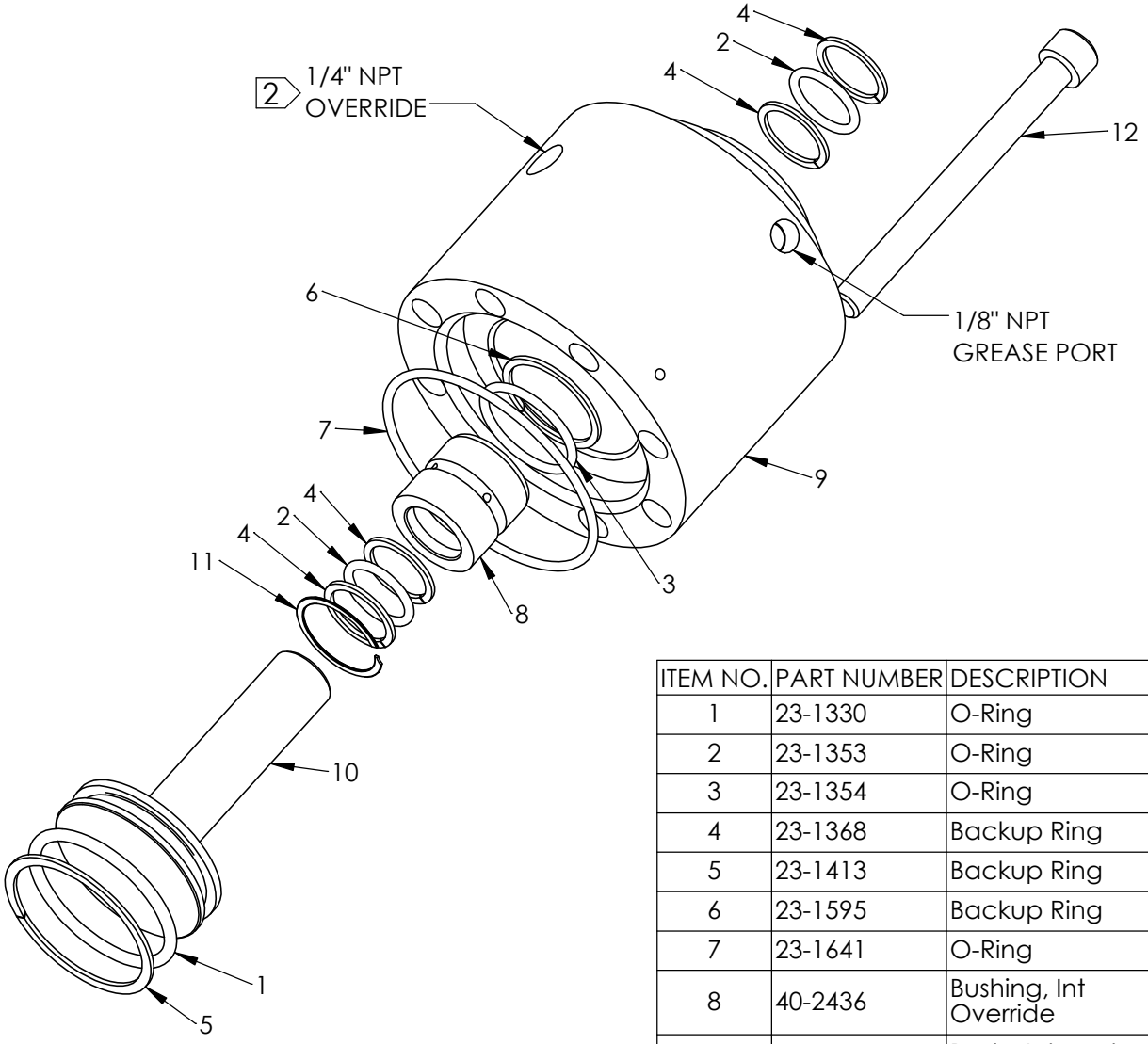
SIZE **A** | REV **4**

5 4 3 2 1

KIT PART NUMBER
40-4886

NOTES:

1. IO to KR Mounting Bolts (8 required, not included)
   - 50-0493: FOR MODELS "L", "R", "D" & "V"
   - 50-0327: FOR MODELS "H" & "W"
2. OVERRIDE PRESSURE MUST BE EQUAL TO OR EXCEED INLET PRESSURE. NORMAL OPERATION MUST BE VENTED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1330	O-Ring	1
2	23-1353	O-Ring	2
3	23-1354	O-Ring	1
4	23-1368	Backup Ring	4
5	23-1413	Backup Ring	1
6	23-1595	Backup Ring	1
7	23-1641	O-Ring	1
8	40-2436	Bushing, Int Override	1
9	40-4887	Body, Internal Override	1
10	40-4888	Piston, Override	1
11	50-0409	Retaining Ring	1
1 12	NOTE 1	SHCS	8

PACSEAL HYDRAULICS

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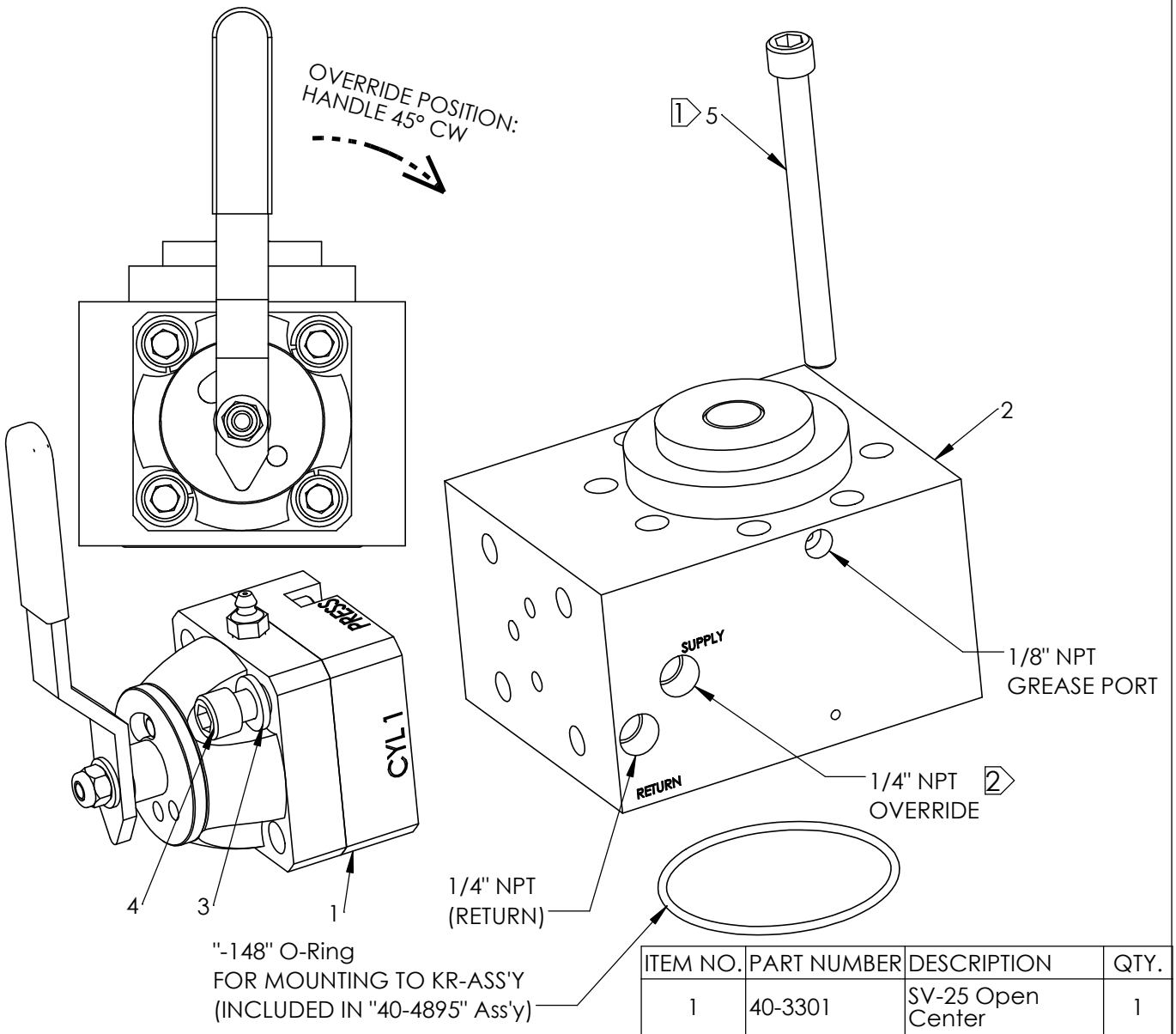
TITLE **Internal Override Bypass Direct Operation Assembly Drawing**

SIZE **A** REV **4**

KIT PART NUMBER
40-4899

NOTES:

1. IO to KR Mounting Bolts (8 required, not included)
   - 50-0493: FOR MODELS "L", "R", "D" & "V"
   - 50-0327: FOR MODELS "H" & "W"
2. OVERRIDE PRESSURE MUST BE EQUAL TO OR EXCEED INLET PRESSURE. NORMAL OPERATION MUST BE VENTED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-3301	SV-25 Open Center	1
2	40-4895	Internal Override, SV	1
3	50-0103	Lock Washer	4
4	50-0338	SHCS	4
1 5	NOTE 1	SHCS	8

PACSEAL HYDRAULICS

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TITLE: **Internal Override Bypass w/ SV-25 Assembly Drawing**

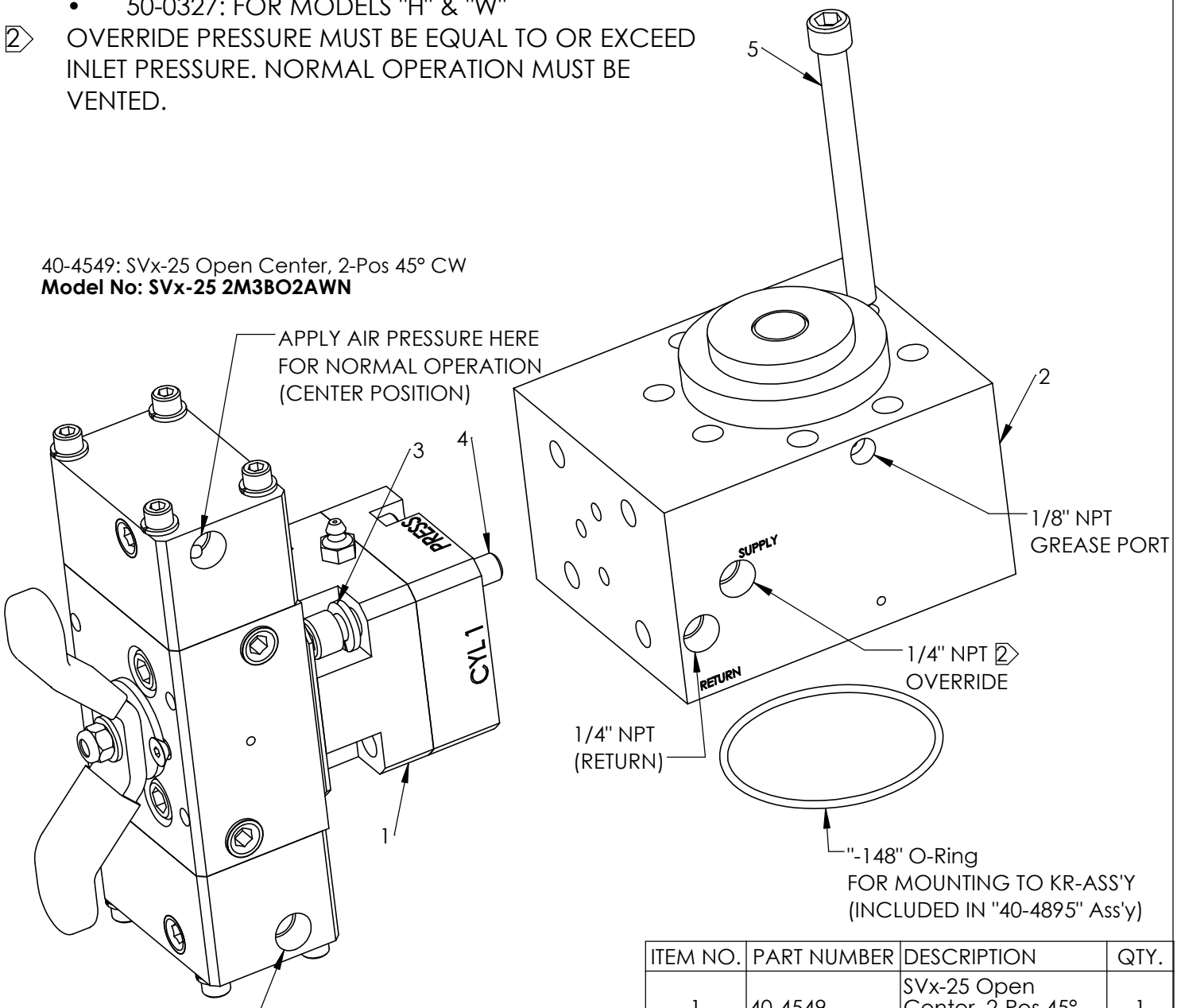
SIZE: A | REV: 4

KIT PART NUMBER
40-4894

NOTES:

1. IO to KR Mounting Bolts (8 required, not included)
   - 50-0493: FOR MODELS "L", "R", "D" & "V"
   - 50-0327: FOR MODELS "H" & "W"
2. OVERRIDE PRESSURE MUST BE EQUAL TO OR EXCEED INLET PRESSURE. NORMAL OPERATION MUST BE VENTED.

40-4549: SVx-25 Open Center, 2-Pos 45° CW
Model No: SVx-25 2M3BO2AWN



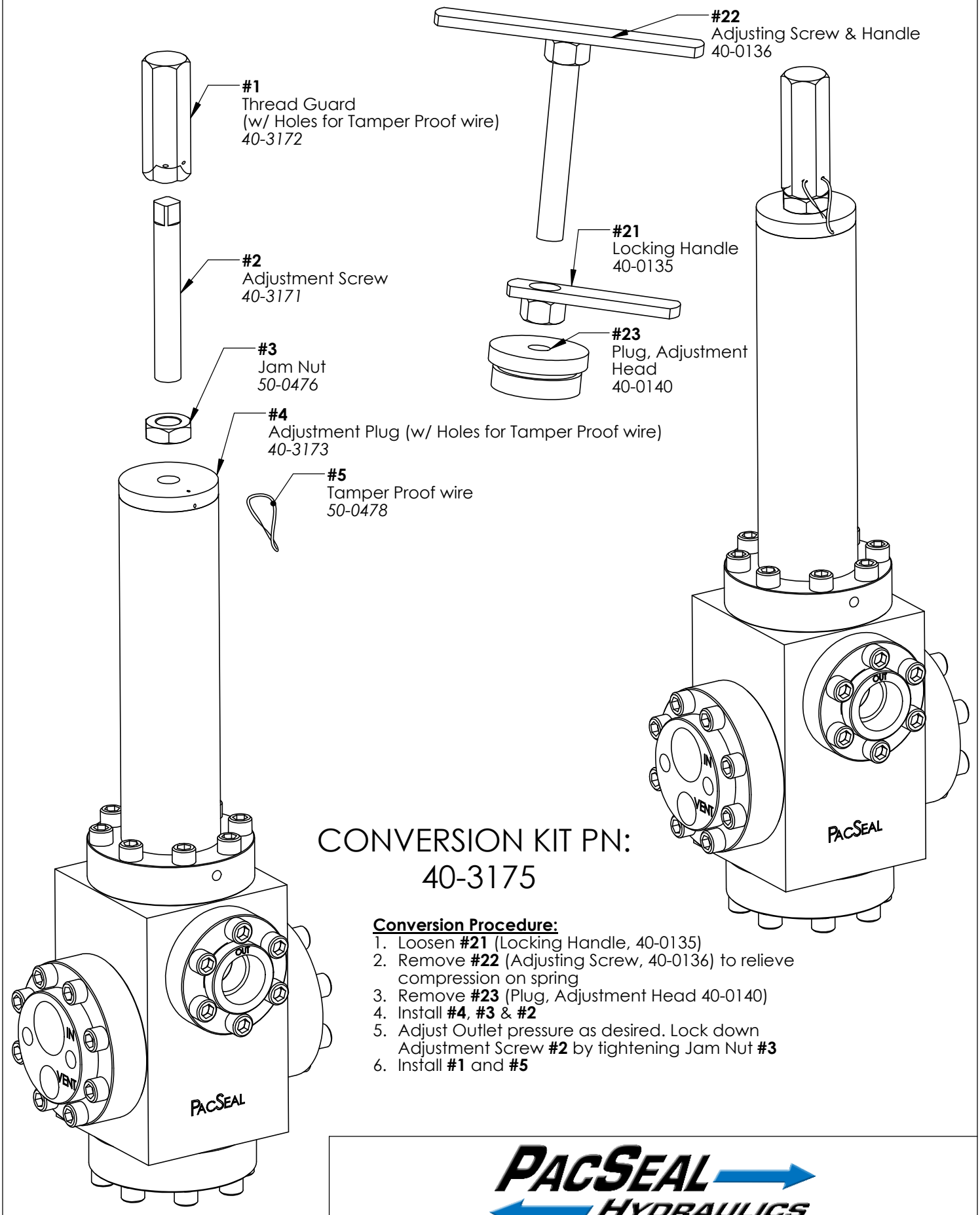
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-4549	SVx-25 Open Center, 2-Pos 45° CW	1
2	40-4895	Internal Override, SVX	1
3	50-0103	Lock Washer	4
4	50-0549	SHCS	4
5	NOTE 1	SHCS	8

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TITLE: **Internal Override Bypass w/ SVX-25 Assembly Drawing**

SIZE: A | REV: 4



CONVERSION KIT PN: 40-3175

Conversion Procedure:

1. Loosen **#21** (Locking Handle, 40-0135)
2. Remove **#22** (Adjusting Screw, 40-0136) to relieve compression on spring
3. Remove **#23** (Plug, Adjustment Head 40-0140)
4. Install **#4**, **#3** & **#2**
5. Adjust Outlet pressure as desired. Lock down Adjustment Screw **#2** by tightening Jam Nut **#3**
6. Install **#1** and **#5**

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TITLE: **Tamper Proof Conversion Kit**

SIZE: A | REV: 4