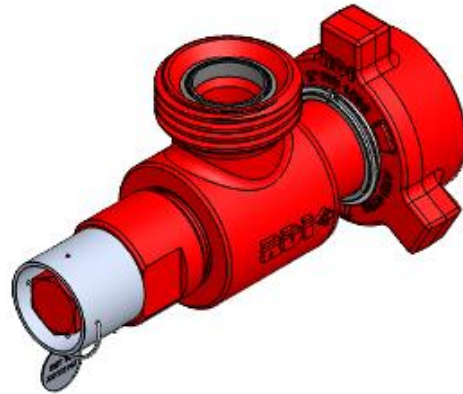


Red Deer Ironworks



2" 1502STD Pressure Relief Valve Maintenance Manual

Parts Covered: PRV21502STD

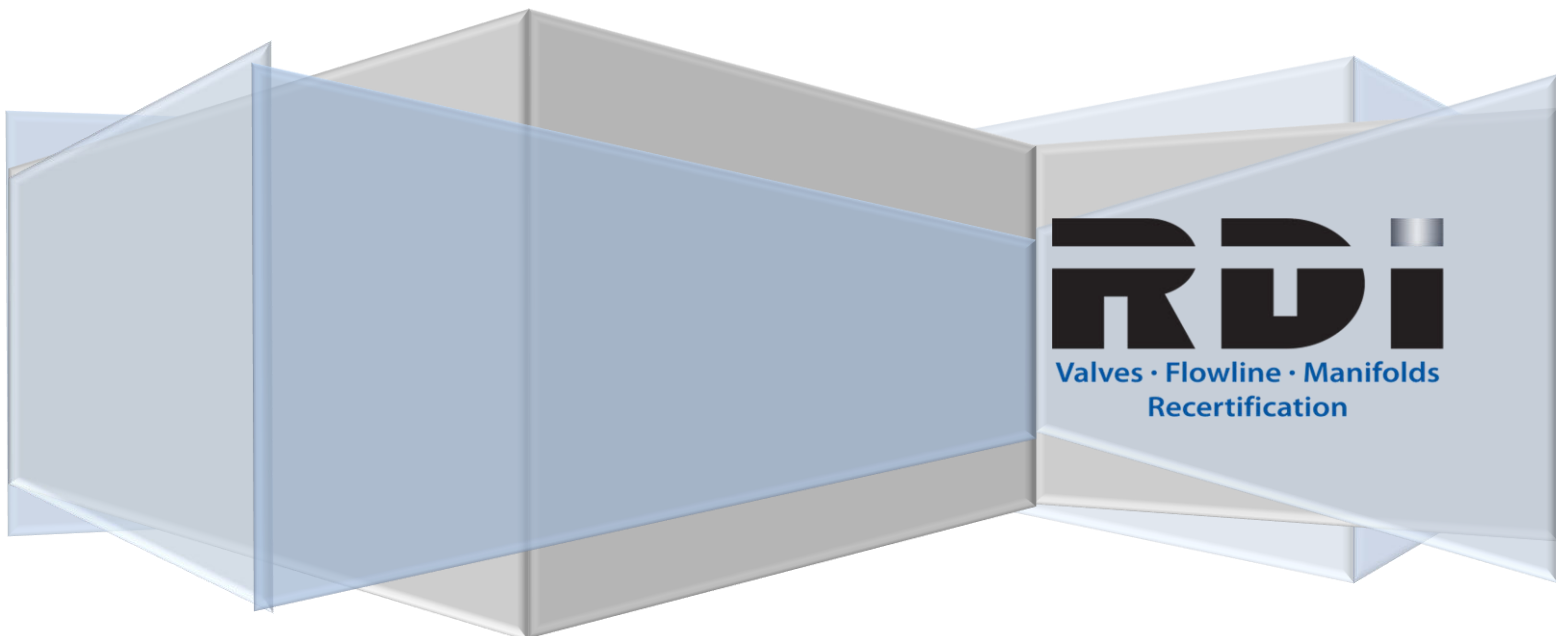


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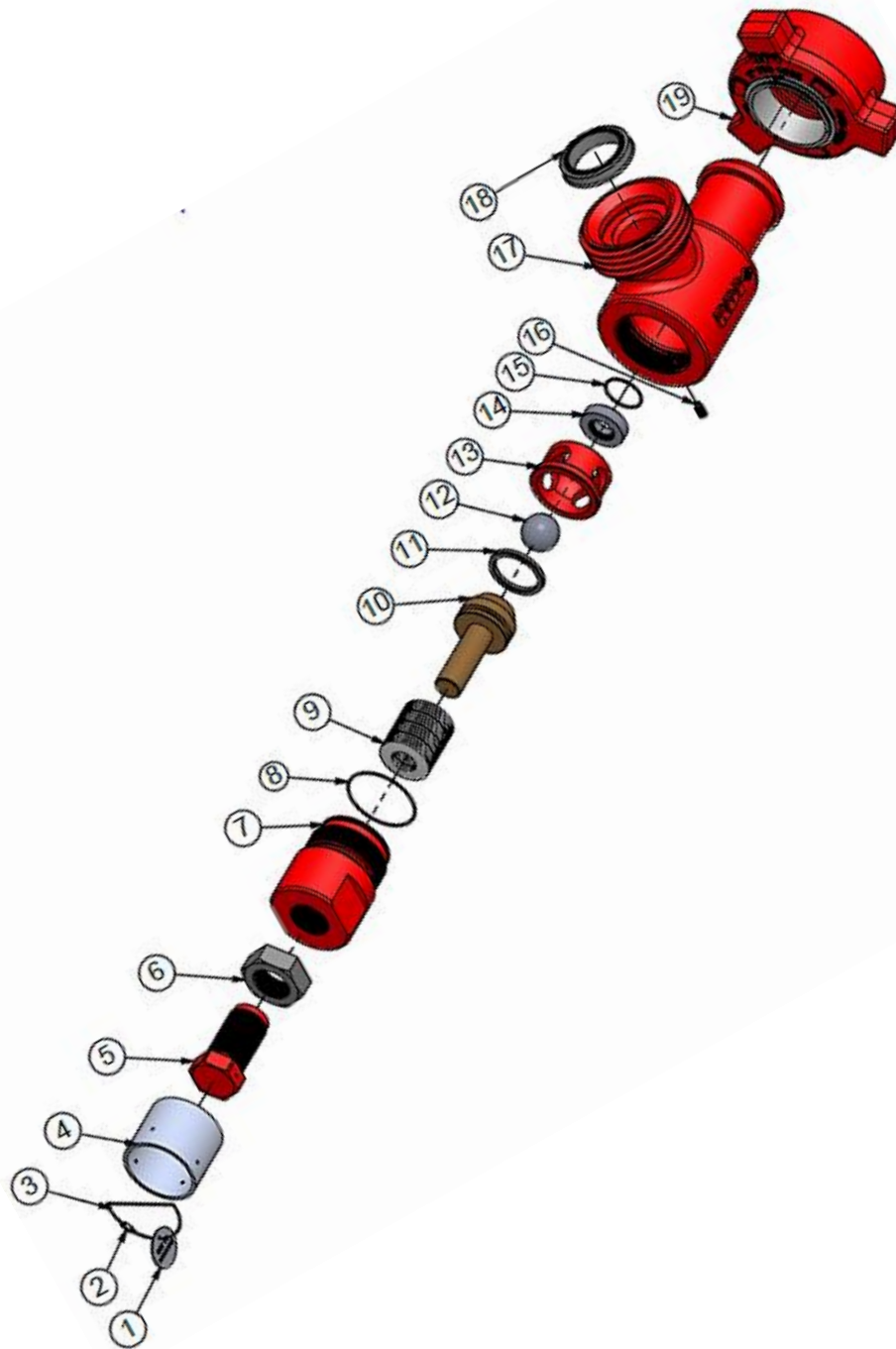
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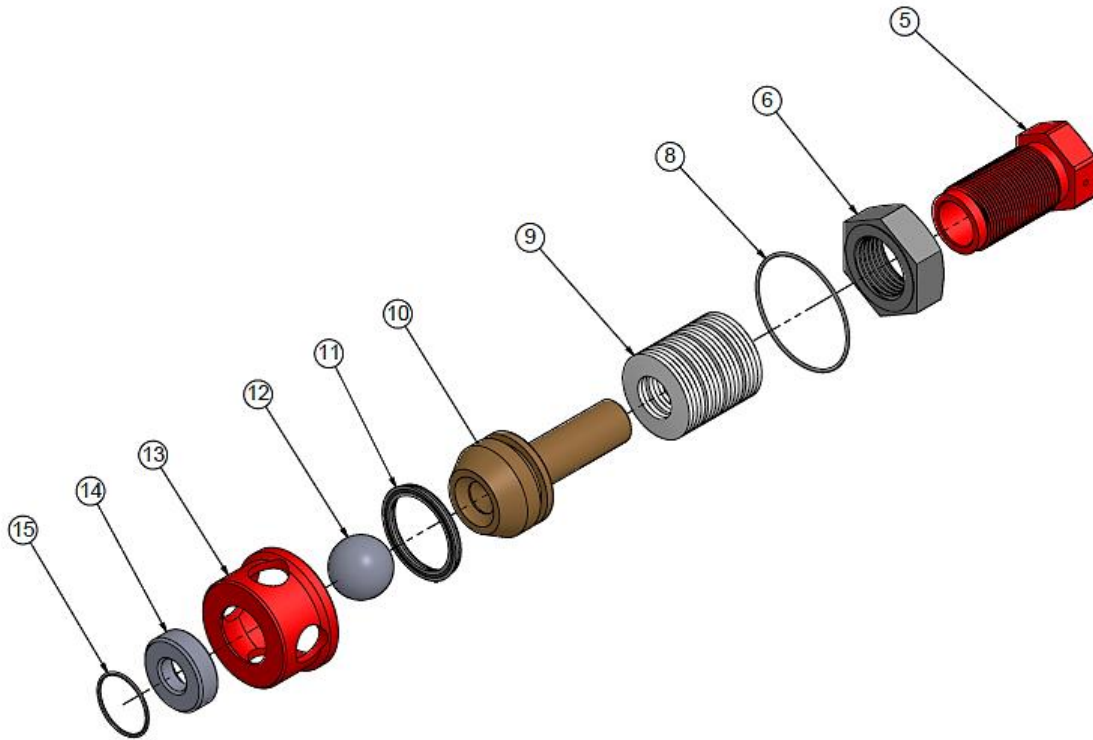
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Parts Listing - 2" 1502STD Pressure Relief Valve

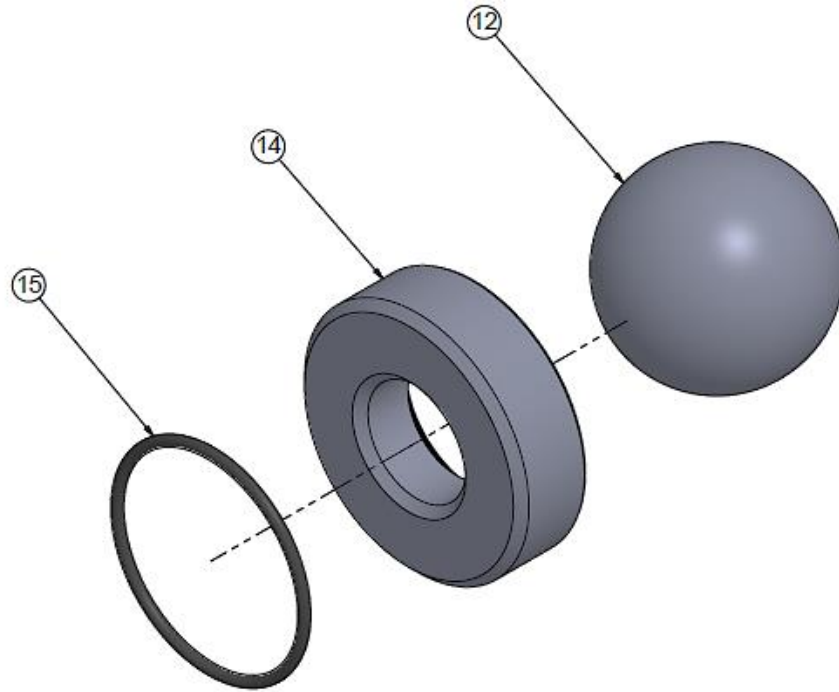
Item	Qty	Description	Part #
1	1	Factory Seal Tag, 1.50" DIA X 0.04375" (19ga) Thick	PRV2SEALTAG
2	1	Aluminum Oval Compression Sleeve, 1/16" DIA Rope, 3/8" L	PRV2CSLEEVE
3	1	Galvanized Wire Rope - 1/16" DIA, 7x7 Strand Core	PRV2WROPE
4	1	Factory Seal Cap	PRV2SEALCAP
5	1	Adjusting Screw	PRV2ADJSCREWSTD
6	1	Thin Hex Nut, 1-1/2-12 (Jamb Nut)	HNU TT 1.500-12-D-N
7	1	Cap	PRV2CAPSTD
8	1	O-Ring 038	OR-N70-038
9	16	Disk Spring	PRV2DISKSPRING
10	1	Keeper	PRV2KEEPER
11	1	Loaded U-Cup, 1 3/4" X 2 1/8" X 3/16"	PRV2CUPPACK
12	1	Ball	PRV2BALL
13	1	Spider	PRV2SPIDERSTD
14	1	Seat	PRV2SEAT
15	1	O-Ring 028	OR-N90-028
16	1	Set Screw, Socket Head, Brass Tip 5/16-18 X 3/32 X 3/16	SSSFTSKT- 0.3125-18x0.5-HX-Cx0.3125x.0.1875
17	1	Pressure Relief Valve Body	PVR21502STD
18	1	Union Seal	SEAL2STD
19	1	Wingnut Kit - 2in FIG 1502 15,000PSI Standard Service	WNKIT21502STD

Major Repair Kit Parts Listing - 2" 1502STD Pressure Relief Valve



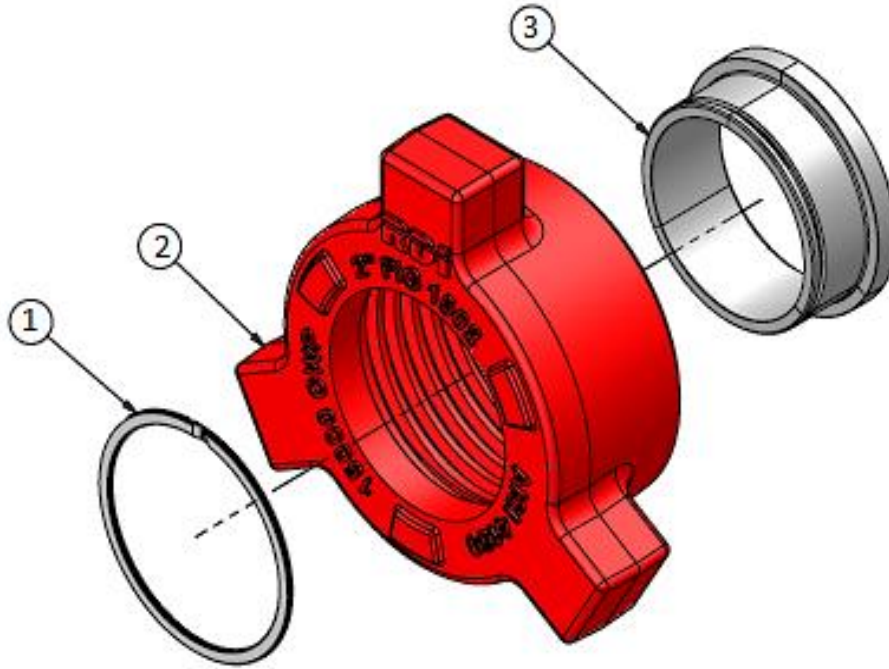
Item	Qty	Description	Part #
		Major Repair Kit	PRV21502STDMAJ
5	1	Adjusting Screw	PRV2ADJSCREWSTD
6	1	Thin Hex Nut, 1-1/2-12 (Jamb Nut)	HNU TT 1.500-12-D-N
8	1	O-Ring 038	OR-N70-038
9	16	Disk Spring	PRV2DISKSPRING
10	1	Keeper	PRV2KEEPER
11	1	Loaded U-Cup, 1 3/4" X 2 1/8" X 3/16"	PRV2CUPPACK
12	1	Ball	PRV2BALL
13	1	Spider	PRV2SPIDERSTD
14	1	Seat	PRV2SEAT
15	1	O-Ring 028	OR-N90-028

Minor Repair Kit Parts Listing - 2" 1502STD Pressure Relief Valve



Item	Qty	Description	Part #
		Minor Repair Kit	PRV21502STDMIN
12	1	Ball	PRV2BALL
14	1	Seat	PRV2SEAT
15	1	O-Ring 028	OR-N90-028

Wingnut Kit Parts Listing - 2" 1502STD Pressure Relief Valve



Item	Qty	Description	Part #
		Wingnut Kit	WNKIT21502STD
19.1	1	Spiral Retaining Ring	SNAPRINGWST334
19.2	1	Wingnut Body	WN215DETSTD
19.3	1	Segment Set (3)	SEG21502

Assembly Procedure

It is important that the workstation is clean and free of any contaminants such as metal shavings, dirt, etc. Do not sand or de-burr any items while at the assembly workstation.

Note: RDI-6430 (assembly grease) and Nikal (anti-seize compound) are used in this procedure. Use of grease other than listed in this manual is not recommended as it may adversely affect the performance and functionality of the Valve.

1. Clean and inspect all parts for any damage (i.e. dents, scratches, sharp edges and burrs), particularly on the sealing areas and threads prior to assembly.

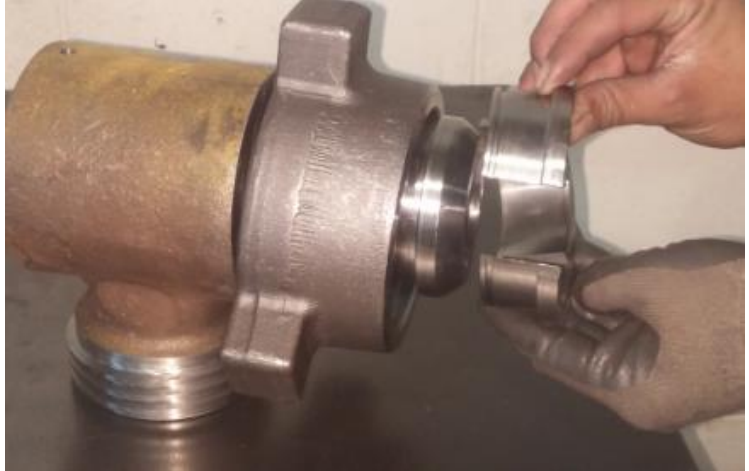


2. Install the **Spiral Retaining Ring (#19.1)** onto the male end of the **Pressure Relief Valve (PRV) Body (#17)**.

Refer to **Wingnut Kit Parts Listing**.



3. Slide the **Wingnut Body (#19.2)** onto the male end up against the **PRV Body** and **Spiral Retaining Ring**. Place the **Segment Set (3) (#19.3)** around the male end and pull the **Wingnut Body** over the **Segments** to hold them in place.



4. Pry the **Spiral Retaining Ring** around into the groove of the **Segments** to secure the **Wingnut**.



Mount the **PRV Body** on a bench receiver.



5. Coat **O-Ring 028 (#15)** with **grease** then install into the groove in the **PRV Body**.



6. Coat the **Seat (#14)** with **grease** and place on top of the **O-Ring 028** with bevel side facing up.



7. Coat the **Spider (#13)** with **grease** and place on top of the **Seat**.



8. Coat the **Ball (#12)** with **grease** and place in **Spider**.



9. Coat the **Loaded U-Cup (#11)** with **grease** then install into the groove of the **Keeper (#10)** with concave side facing down.



10. Apply **anti-seize compound** on the internal threads of the **PRV Body**.



11. Place the **Keeper** on top of the **Ball**.



12. Apply a liberal amount of **grease** on the **Disk Springs (16 pcs) (#9)** and slide them onto the **Keeper** with the first two concave springs facing up then two concave springs facing down - repeat the sequence for the rest of the springs.



13. Coat **O-Ring 038 (#8)** with **grease** and install it into the groove of the **Cap (#7)**.



14. Apply **anti-seize compound** on the threads of the **Cap** then thread it into the **PRV Body** and tighten snugly.



15. Apply **anti-seize compound** on the threads of the **Adjusting Screw (#5)** then thread the **Hex Nut (#6)** all the way onto the **Adjusting Screw**. Install the **Adjusting Screw** into the **Cap** until it just touches the **Keeper**.

Note: The **Set Pressure** is set through a Hydro Test prior to locking the **Hex Nut** against the **PRV Body** and the installation of the **Set Screw (#16)**. The **Factory Seal Cap (#4)**, **Galvanized Wire Rope (#3)**, **Compression Sleeve (#2)** and **Seal Tag (#1)** are installed after painting.



Maintenance Schedule

Once the Pressure Relief Valve is installed in operation, it may be subjected to harsh conditions such as sand, rocks and chemicals which may cause pitting and washing in the body that will affect the performance of the valve. To ensure proper reliable operation, RDI recommends the following maintenance schedule for service.

Under normal pressure operation, the valve is recommended for service:

- At least every three (3) months.
- After every frac job or every 25 stages.
- After every overpressure event while in operation.
- An annual inspection whether the valve has been used or not.

Tear-Down Procedure

Refer to the steps in the Assembly Procedure to tear-down the Valve.

Thoroughly degrease and clean all parts that are disassembled. Check for any damage, replace as necessary with RDI Repair Kit only.

WARNING: Only qualified Service Technician should perform the Tear-Down, Assembly and Relieving Pressure Setting procedures.

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