
GARDNER DENVER®

310FWF997 Rev A
SEPT 2011

WELL SERVICING PUMP

MODEL

**GD-2500Q
GD-2500Q-HD
QUINTUPLEX PUMPS**

**SUPER GWS FLUID END (UNI-FLANGE)
PARTS LIST**

**Gardner
Denver**

GD- 2500Q SGWS WELL SERVICING PUMP

MAINTAIN PUMP RELIABILITY AND PERFORMANCE WITH GENUINE GARDNER DENVER PARTS AND SUPPORT SERVICES

Gardner Denver® genuine pump parts, manufactured to design tolerances, are developed for optimum dependability. Design and material innovations are the result of years of experience with hundreds of different pump applications. Reliability in materials and quality assurance are incorporated in our genuine replacement parts.

Gardner Denver supports your needs with these services:

1. Trained parts specialists to assist you in selecting the correct replacement parts.
2. Repair and maintenance kits designed with the necessary parts to simplify servicing your pump.

Authorized service technicians are factory trained and skilled in pump maintenance and repair. They are ready to respond and assist you by providing fast, expert maintenance and repair services.

For the location of your local authorized Gardner Denver distributor refer to the yellow pages of your directory or contact:

Factory (Tulsa):	Service Center (Odessa):	Service Center (Ft. Worth)
Gardner Denver Well Servicing Pumps 4747 South 83 rd East Avenue Tulsa, Oklahoma 74145	Chaparral 2121 West 44 th Street Odessa, Texas 79768	Geoquip 7533 Kathy Lane Ft. Worth, Texas 76126
Phone: (918) 664-1151 (800) 637-8099	Phone: (432) 366-5433 (800) 368-1134	Phone: (817) 249-6400 (800) 824-0271
Fax: (918) 664-6225	Fax: (432) 363-9940	Fax: (817) 249-6401

INSTRUCTION FOR ORDERING REPAIR PARTS

When ordering parts, specify Pump MODEL and SERIAL NUMBER (see nameplate on unit). The Serial Number is also stamped on top of the cylinder end of the frame (cradle area).

Where NOT specified, quantity for parts required per pump unit is one (1); where more than one is required per unit, quantity is indicated in parenthesis.

SPECIFY THE NUMBER OF PARTS REQUIRED.

DO NOT ORDER BY SETS OR GROUPS.

To determine the Right Hand and Left Hand side of a pump, stand at the power end and look toward the fluid end. Right Hand and Left Hand are indicated in parenthesis following the part name, i.e. (RH) & (LH), when appropriate

GARDNER DENVER PRODUCT WARRANTY

GENERAL PROVISIONS AND LIMITATIONS

Gardner Denver (the "Company") warrants to each original retail purchaser ("Purchaser") of its new products, assemblies or parts from the Company or its authorized distributors that such products are, at the time of delivery to the Purchaser, made with good material and workmanship. No warranty is made with respect to:

1. Any product which has been repaired or altered in such a way, in the Company's judgment, as to affect the product adversely.
 2. Any product which has, in the Company's judgment, been subject to negligence, accident, or improper storage, improper installation, operation or application. (Examples: over-pressure, sand-outs, cavitation, corrosion, erosion or degradation).
 3. Any product which has not been operated or maintained in accordance with the recommendations of the Company.
 4. Components or accessories manufactured, warranted and serviced by others.
- Any reconditioned or prior owned product.

Claims for items described in (4) above should be submitted directly to the manufacturer.

WARRANTY PERIOD

The Company's obligation under this warranty is limited to repairing or, at its option, replacing, during normal business hours at an authorized service facility of the Company, any part or assembly which in the Company's judgment proved to have unsatisfactory material or workmanship within the applicable Warranty Period as follows.

Except for the products or components listed below, and subject to the limitations and restrictions set forth in the "Disclaimer" section set forth below, the Warranty Period for all products is 1,250 hours of operation or three (3) months after start-up, not to exceed 120 days after delivery to Purchaser, whichever occurs first. The exceptions are as follows:

1. Power end is warranted for twelve (12) months from date of start-up or eighteen (18) months from date of delivery to the Purchaser, whichever occurs first.
2. Forged steel fluid cylinders are warranted for materials and workmanship for 6 months from the date of installation or 18 months

from the date of delivery to the purchaser, which ever occurs first.

3. Repairs are warranted for 90 days from the date of delivery, for the workmanship and materials of the new parts installed.
4. Weld repaired fluid ends and weld repaired components are not warranted.
5. Expendable fluid end parts, including, but not limited to, valves, valve parts, packing, liners and pistons, are not covered by this warranty due to variable abrasive nature of material pumped.

PRESERVATION ASSEMBLIES DESTINED FOR STORAGE

In order for warranty acceptance any pump assembly not immediately installed or destined to be in storage or in transit for extended periods of time must be prepared for storage as defined in the Company's Long Term Storage Procedure. This includes but is not limited to:

- Drain and thoroughly clean inside power end crankcase.
- Spray rust inhibiting oil on all bearing, machined and inside surfaces of the power end.
- Induce clean gear oil into any circulating pump, filter, heat exchanger and piping.
- Remove valves, seats and plungers from the fluid end. Thoroughly clean and dry these parts and all internal surfaces. Coat all cylinder bores, valve covers and reusable expendable parts with rust preventative.
- Flush all water, and contaminants from pump, tanks, hoses and spray nozzles. Spray all components with a rust inhibiting oil.
- Rotate pump every 30 days to insure bearings are oiled.
- At the expense of the Purchaser, any product properly preserved must be inspected by an authorized agent of the Company, prior to the Company, granting any extended warranty beyond that stated in this warranty.

LABOR TRANSPORTATION AND INSPECTION

The Company will provide labor, by Company representative or authorized service personnel, for repair or replacement of any product or part thereof which in the Company's judgment is proved not to be as warranted. Labor shall be limited to the amount

specified in the Company's labor rate schedule. Labor costs in excess of the Company rate schedules caused by, but not limited to, location or inaccessibility of the equipment, or labor provided by unauthorized service personnel is not provided for by this warranty.

All costs of transportation of product or parts claimed not to be as warranted and, of repaired or replacement parts to or from such service facility shall be borne by the Purchaser. The Company may require the return of any part claimed not to be as warranted to one of its facilities as designated by the Company, transportation prepaid by the Purchaser, to establish a claim under this warranty.

Replacement parts provided under the terms of this warranty are warranted for the remainder of the Warranty Period of the product upon which installed to the same extent as if such parts were original components.

The Company may request a root cause analysis be performed in-order to identify if a request for warranty claim meets the requirements of this warranty.

DISCLAIMER

Except as to title, the foregoing warranty is the sole and exclusive warranty of the Company. The Company hereby extends other manufactures' warranty or guaranties, if any given to Company by such manufacturer, but only to the extent the Company is able to enforce such warranty or guaranties. The Company has not authorized any party to make any representation or warranty other than as expressly set forth herein. SELLER HEREBY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS, IMPLIED OR STATUTORY WARRANTIES, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER (EXPRESS, IMPLIED OR STATUTORY), OF LAW OR OTHERWISE, ON ANY EQUIPMENT, COMPONENT PARTS OR ACCESSORIES SOLD HEREUNDER WHICH, ARE NOT MANUFACTURED BY COMPANY.

NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE FOREGOING WARRANTY SHALL BE THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO THE PURCHASER. UNDER NO CIRCUMSTANCES, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL THE COMPANY'S TOTAL LIABILITY ARISING IN CONNECTION WITH ANY PURCHASE ORDER EXCEED THE AMOUNT OF ANY SALES OR OTHER PROCEEDS RECEIVED PURSUANT THERETO. IN ADDITION, UNDER NO CIRCUMSTANCES, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL THE COMPANY BE LIABLE FOR LIQUIDATED, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, EXPENSES OR COSTS, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR FACILITY DOWNTIME, HOWEVER CAUSED AND EVEN IF THE POTENTIAL OF SUCH DAMAGES WAS DISCLOSED AND/OR KNOWN.

No statement, representation, agreement, or understanding, oral or written, made by any agent, distributor, representative, or employee of the Company which is not contained in this Warranty will be binding upon the Company unless made in writing and executed by an officer of the Company.

This warranty shall not be effective as to any claim which is not presented within 30 days after the date upon which the product is claimed not to have been as warranted. Any action for breach of this warranty must be commenced within one year after the date upon which the cause of action occurred.

Any adjustment made pursuant to this warranty shall not be construed as an admission by the Company that any product was not as warranted.

WARRANTY REQUESTS

Products to be returned for warranty analysis shall be approved for return in writing by the Company prior to shipment. All requests for product return shall be submitted by email. Facsimile or letter to:

Warranty Department c/o
Gardner Denver Petroleum Pumps
4747 South 83rd East Avenue
Tulsa, Oklahoma 74145

Email: CCR.QAR@gardnerdenver.com
Facsimile: (918) 664-6225

SPECIAL NOTICE CONCERNING PART COMPATIBILITY

THIS PARTS LIST CONTAINS PART NUMBERS THAT ARE COMPATIBLE WITH THE GARDNER DENVER GD-2500Q AND GD-2500Q-HD SGWS FLUID CYLINDERS. THE PART NUMBERS LISTED MAY NOT BE COMPATIBLE WITH OTHER FLUID ENDS AVAILABLE FOR THE GD-2500Q AND GD-2500Q-HD PUMP MODELS. ALL PART NUMBERS IN THIS MANUAL ARE COMPATIBLE WITH THE FOLLOWING BARE FLUID CYLINDER PART NUMBERS:

Part No.	Part Name
375FWFSGWS 375FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 3.75"
400FWFSGWS 400FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 4.0"
450FWFSGWS 450FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 4.5"
500FWFSGWS 500FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 5.0"
550FWFSGWS 550FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 5.5"
600FWFSGWS 600FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 6.0"
675FWFSGWS 675FWFSGWSS	SUPER GWS QUINT Fluid Cylinder, 6.75"

BEFORE ORDERING, VERIFY THAT YOUR BARE FLUID CYLINDER PART NUMBER MATCHES ONE OF THE BARE FLUID CYLINDER PART NUMBERS LISTED ABOVE.

TABLE OF CONTENTS

MAINTAIN PUMP RELIABILITY AND PERFORMANCE	i
GARDNER DENVER PRODUCT WARRANTY	ii
SPECIAL NOTICE CONCERNING PART COMPATIBILITY	iv
3.75" SGWS FLUID CYLINDER ASSEMBLY	1
4.0" SGWS FLUID CYLINDER ASSEMBLY	4
4.5" SGWS FLUID CYLINDER ASSEMBLY	7
5.0" SGWS FLUID CYLINDER ASSEMBLY	9
5.5" SGWS FLUID CYLINDER ASSEMBLY	13
6.0" SGWS FLUID CYLINDER ASSEMBLY	16
6.75" SGWS FLUID CYLINDER ASSEMBLY	19
ADJUSTABLE HNBR CDI PACKING	22
ADJUSTABLE UTEX PACKING ASSEMBLY	25
DISCHARGE FLANGE ASSEMBLY	28
SUCTION MANIFOLDS	31
DIRECT TORQUE INDICATING WASHER INSTRUCTIONS	36
SGWS FLUID END SERVICE TOOLS	37

TABLE OF FIGURES

Figure 1: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	1
Figure 2: SUPER GWS FLUID CYLINDER FRONT VIEW	1
Figure 3: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	2
Figure 4: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	4
Figure 5: SUPER GWS FLUID CYLINDER FRONT VIEW	4
Figure 6: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	5
Figure 7: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	7
Figure 8: SUPER GWS FLUID CYLINDER FRONT VIEW	7
Figure 9: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	8
Figure 10: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	10
Figure 11: SUPER GWS FLUID CYLINDER FRONT VIEW	10
Figure 12: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	11
Figure 13: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	13
Figure 14: SUPER GWS FLUID CYLINDER FRONT	13
Figure 15: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	14
Figure 16: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	16
Figure 17: SUPER GWS FLUID CYLINDER FRONT VIEW	16
Figure 18: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	17
Figure 19: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW	19
Figure 20: SUPER GWS FLUID CYLINDER FRONT VIEW	19
Figure 21: SUPER GWS FLUID CYLINDER SECTION A-A VIEW	20
Figure 22: ADJUSTABLE CDI PACKING	22
Figure 23: ADJUSTABLE UTEX PACKING	25
Figure 24: 2" 1502 THREADED UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	28
Figure 25: 3" 1502 THREADED UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	28
Figure 26: 3" 1502 MALE UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	29
Figure 27: 2" 1502 MALE UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	29
Figure 28: BLIND UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	30
Figure 29: BLEED OFF UNIMOUNTING DISCHARGE FLANGE ASSEMBLY	30
Figure 30: 6" SUCTION MANIFOLD WITH VICTAULIC ENDS	31
Figure 31: 6" SUCTION MANIFOLD WITH VICTAULIC ENDS & VALVE LIFTERS	31
Figure 32: 6" CO2 SUCTION MANIFOLD ASSEMBLY WITH 2 CLEANOUTS	32
Figure 33: 6" ZOOMIE SUCTION MANIFOLD ASSEMBLY & THREADED INLET	32
Figure 34: 8" SUCTION MANIFOLD WITH VICTAULIC ENDS	33
Figure 35: 8" SUCTION MANIFOLD WITH VICTAULIC ENDS & VALVE LIFTERS	33
Figure 36: 8" ZOOMIE SUCTION MANIFOLD ASSEMBLY WITH VICTAULIC END	34
Figure 37: 6" LOW PROFILE ZOOMIE SUCT. MANIFOLD ASSY W/ VICTAULIC END	34
Figure 38: 6" CO2 SUCTION MANIFOLD ASSEMBLY WITH 5 CLEANOUTS	35
Figure 39: STUD AND FLAT INDICATING WASHER	36
Figure 40: STUD, FLAT AND INDICATING TORQUE WASHER	36

3.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

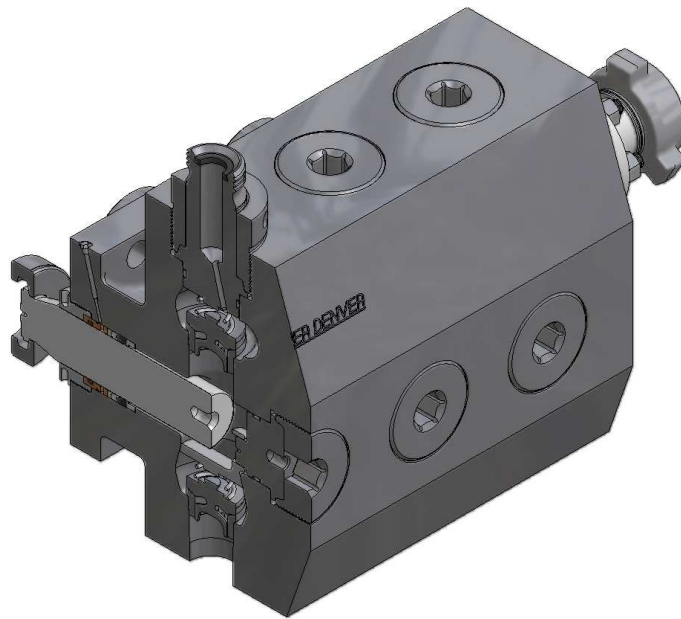


Figure 1: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

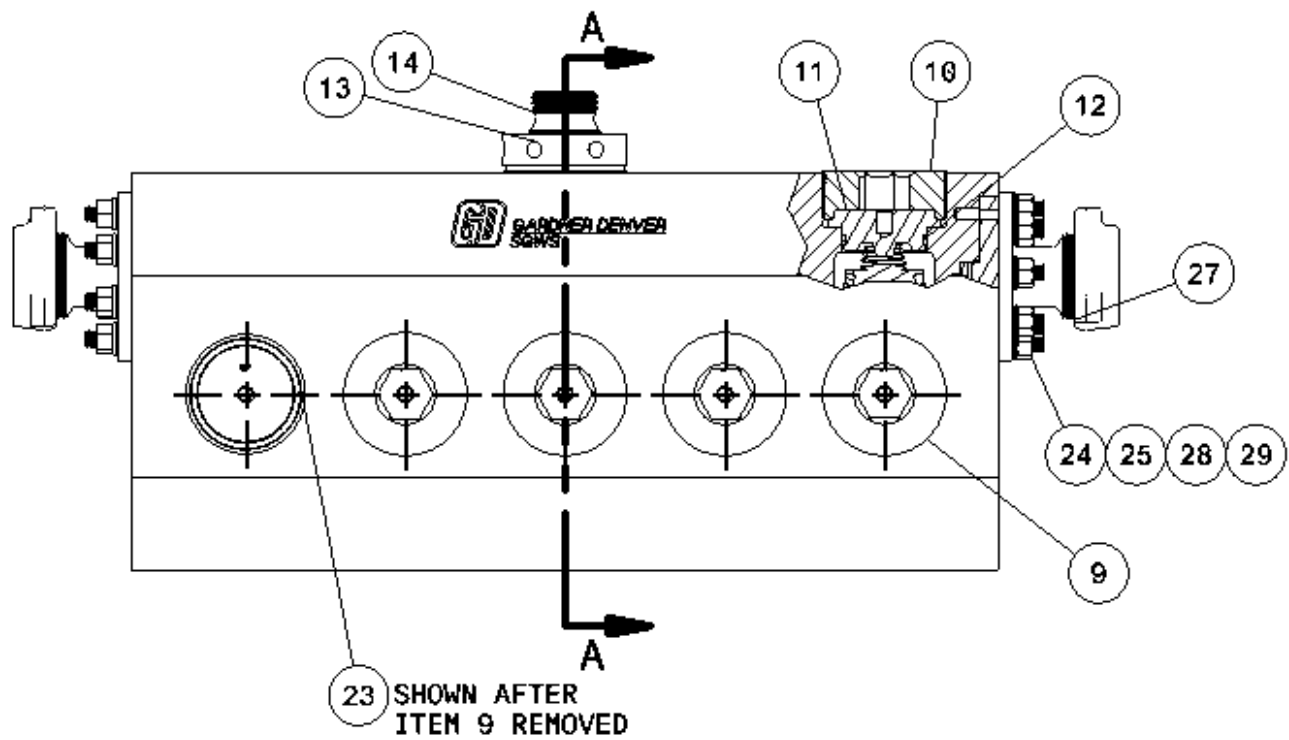


Figure 2: SUPER GWS FLUID CYLINDER FRONT VIEW

3.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

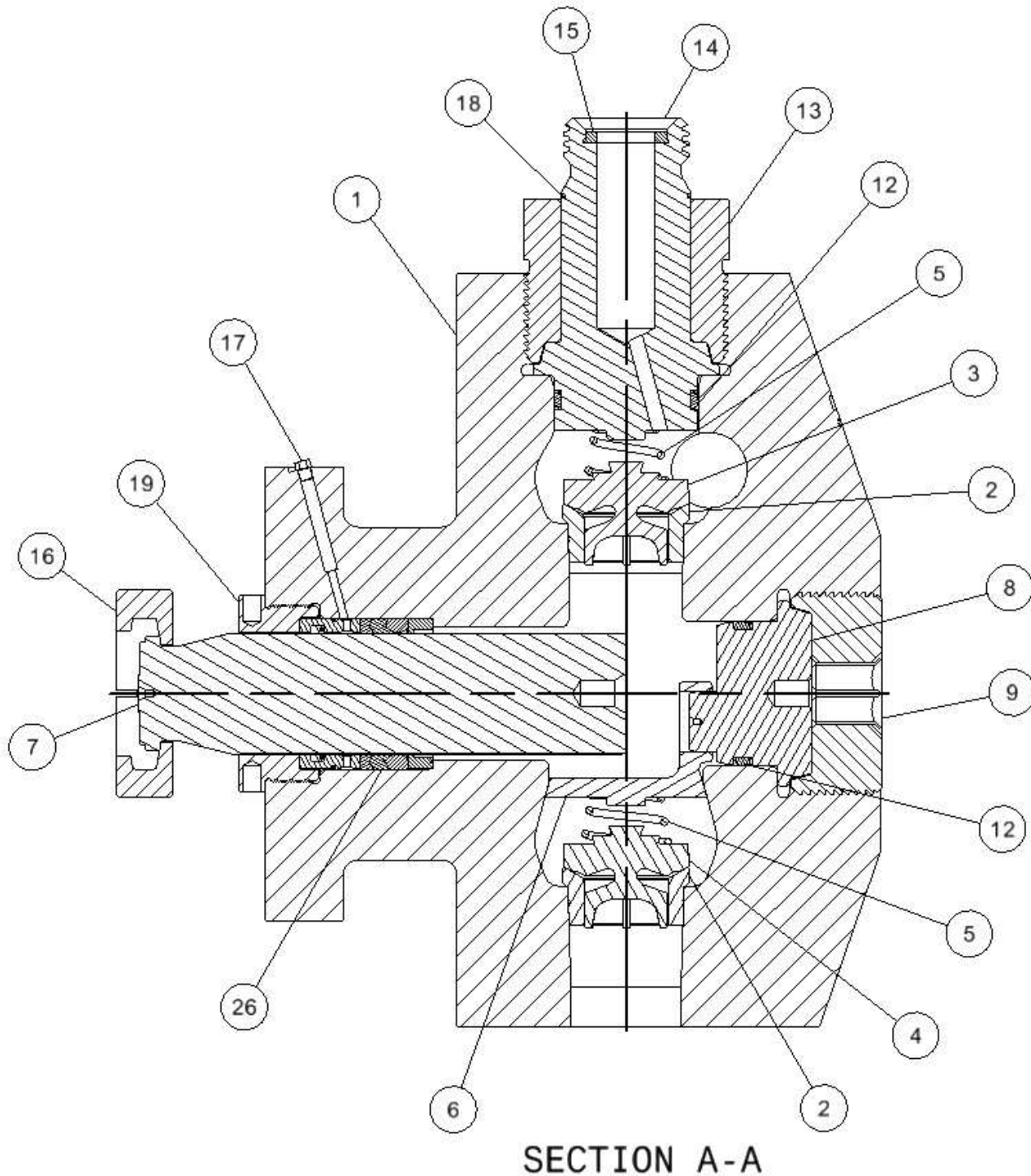


Figure 3: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

3.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

Ref No.	Part Name	Qty.	Part No.
1	Fluid Cylinder, 3.75" SGWS, Steel	1	375FWFSGWS
	Fluid Cylinder, 3.75" SGWS, Stainless Steel	1	375FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100349
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-10
3	Discharge Valve – Novatech	5	101498
	Discharge Valve – Mission	5	927SH01-10
4	Suction Valve – Novatech	5	101498
	Suction Valve – Mission	5	927SH01-10
5	Valve Spring (Discharge and Suction)	10	918VP023
6	Suction Spring Retainer	5	PP1027654
7	Plunger	5	508895000
8	Suction Valve Cover	5	PP1055492
9	Retainer Nut – Suction Valve Cover	5	PP1027593
10	Retainer Nut – Discharge Valve Cover	4	PP1027593
11	Discharge Valve Cover	4	PP1055493
12	Seal	10	VP1056477
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	PP1027607
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1055494
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	302THD092
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1064598
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Flat Washer	16	VP1033900
29	Direct Torque Indicating Washer	16	VP1033901

4.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

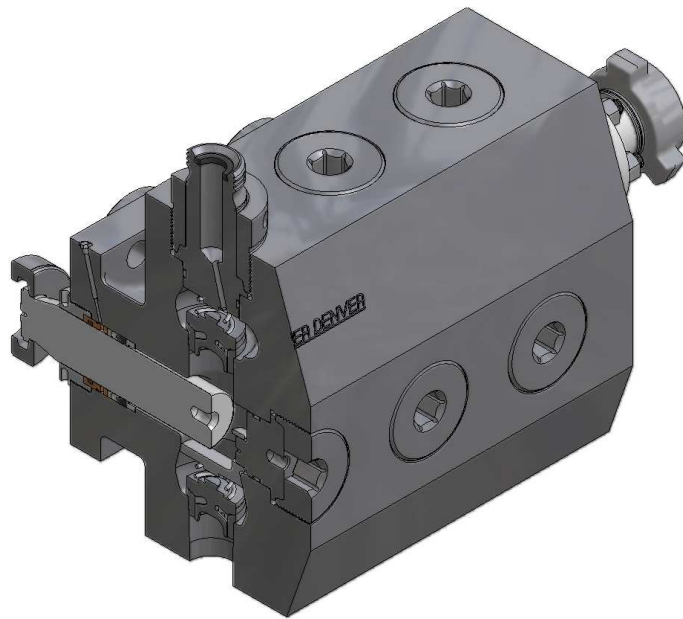


Figure 4: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

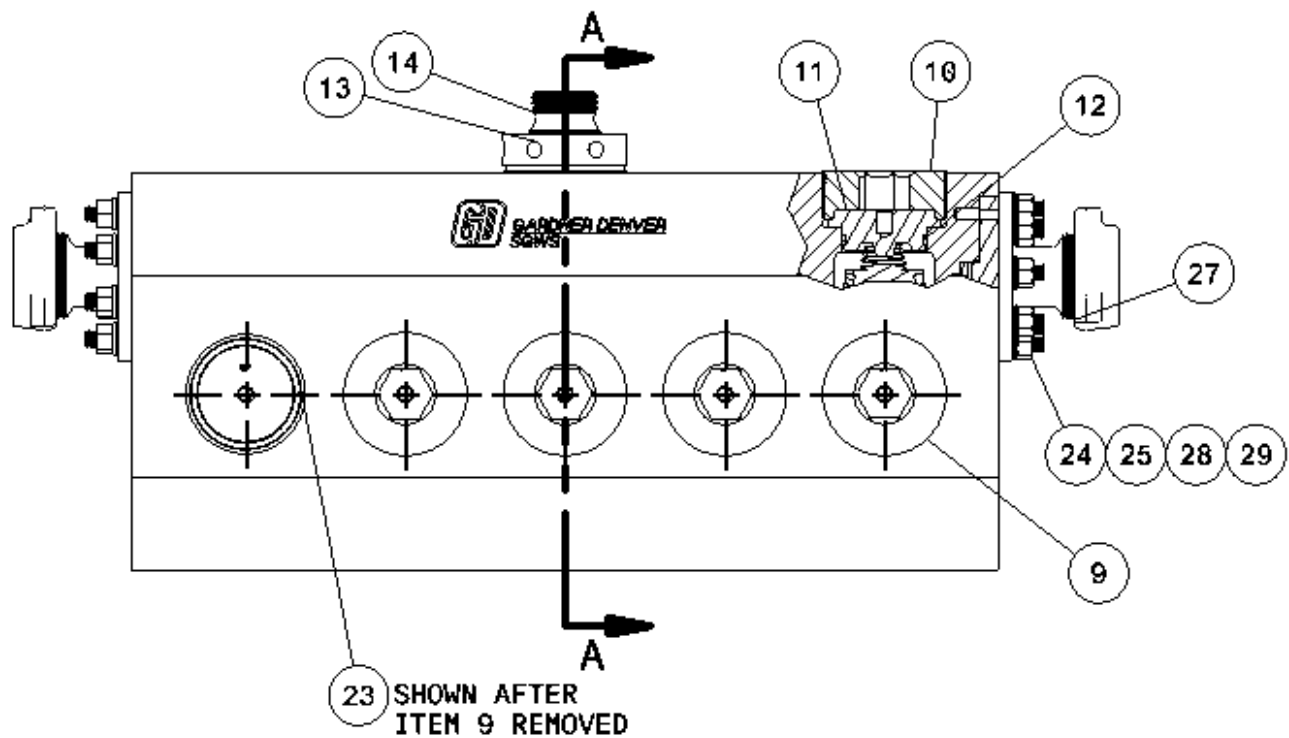


Figure 5: SUPER GWS FLUID CYLINDER FRONT VIEW

4.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

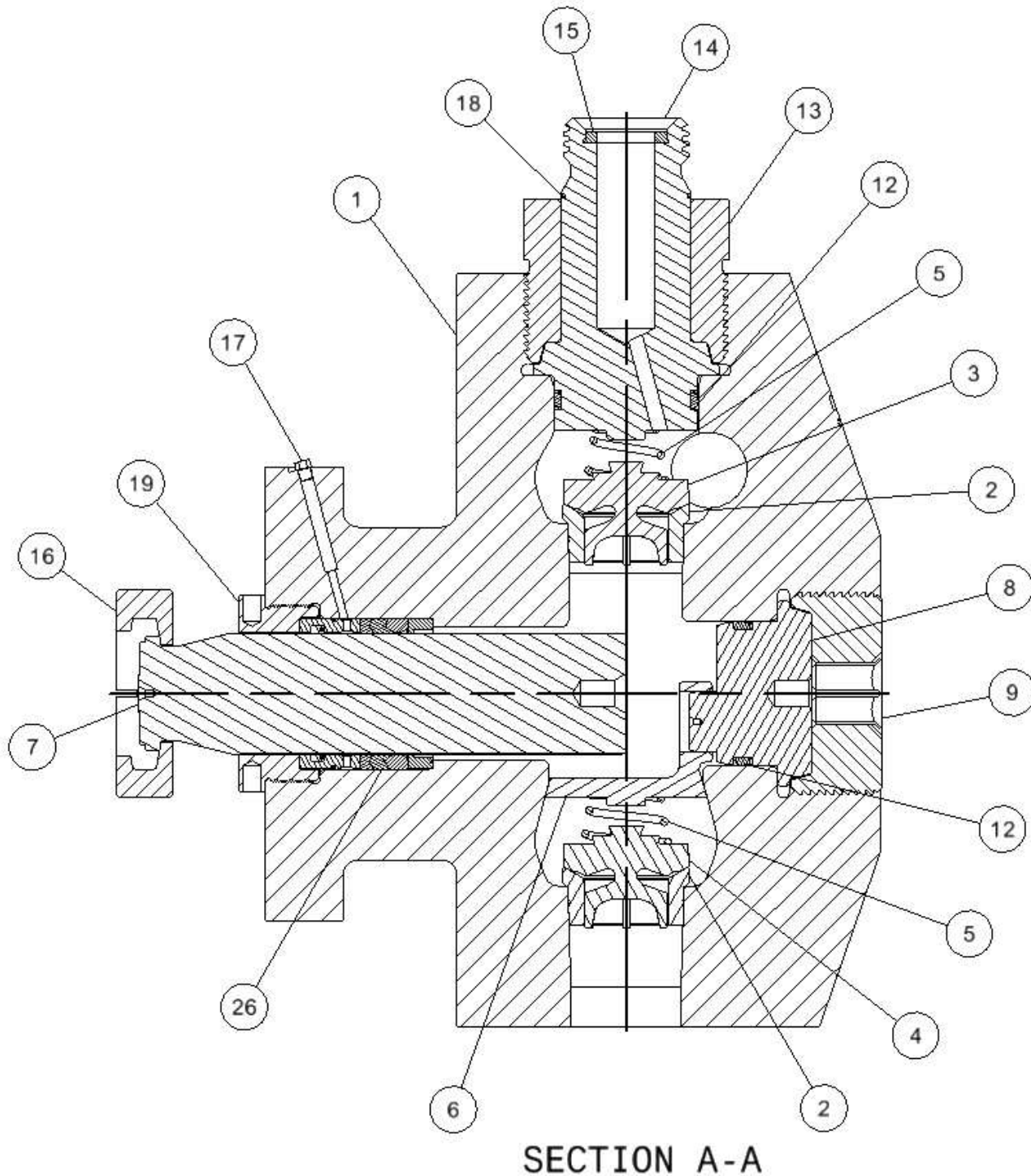


Figure 6: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

4.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

Ref No.	Part Name	Qty.	Part No.
1	Fluid Cylinder, 4" SGWS, Steel	1	400FWFSGWS
	Fluid Cylinder, 4" SGWS, Stainless Steel	1	400FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100349
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-10
3	Discharge Valve – Novatech	5	101498
	Discharge Valve – Mission	5	927SH01-10
4	Suction Valve – Novatech	5	101498
	Suction Valve – Mission	5	927SH01-10
5	Valve Spring (Discharge and Suction)	10	918VP023
6	Suction Spring Retainer	5	PP1027654
7	Plunger	5	157PN009
8	Suction Valve Cover	5	PP1055492
9	Retainer Nut – Suction Valve Cover	5	PP1027593
10	Retainer Nut – Discharge Valve Cover	4	PP1027593
11	Discharge Valve Cover	4	PP1055493
12	Seal	10	VP1056477
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	PP1027607
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1055494
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-78
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1055491
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Flat Washer	16	VP1033900
29	Direct Torque Indicating Washer	16	VP1033901

4.5" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

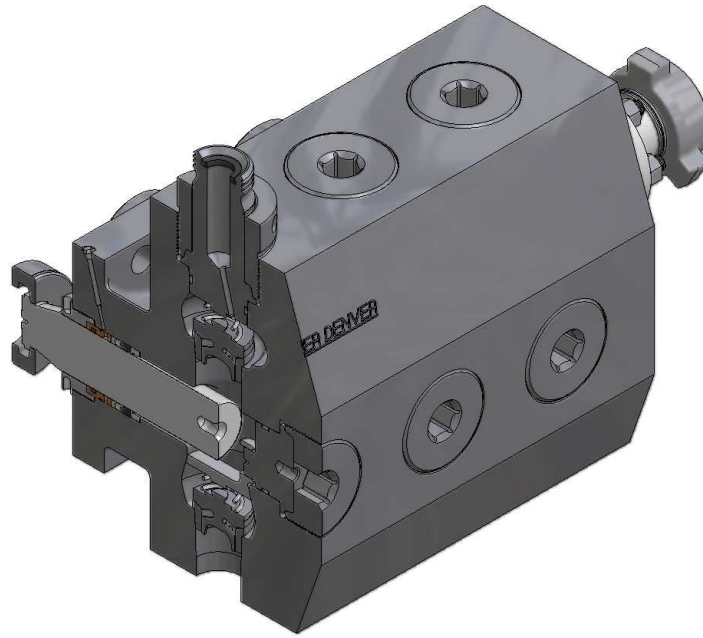


Figure 7: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

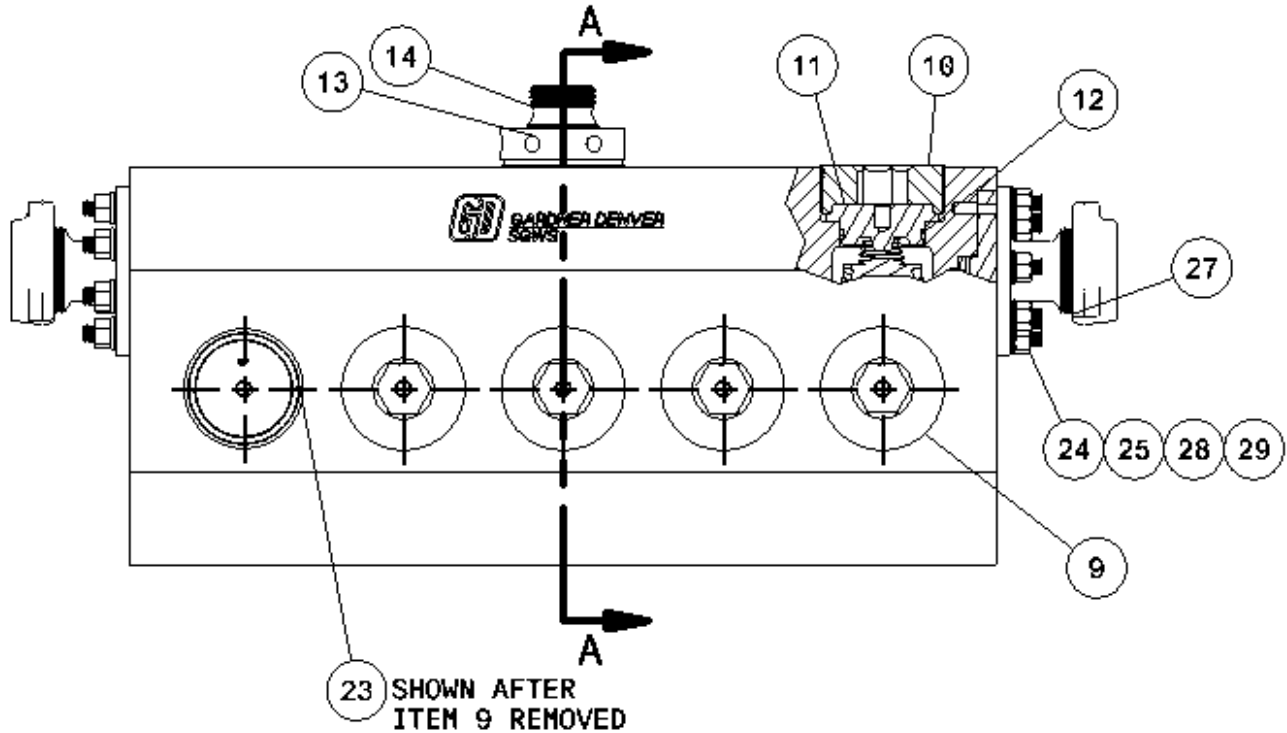


Figure 8: SUPER GWS FLUID CYLINDER FRONT VIEW

Order by part number and description. Reference numbers are for your convenience only.



4.5" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only

Ref No.	Part Name	Qty.	Part No.
1	Fluid Cylinder, 4.5" SGWS, Steel	1	450FWFSGWS
	Fluid Cylinder, 4.5" SGWS, Stainless Steel	1	450FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100241
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-1
3	Discharge Valve – Novatech	5	101469
	Discharge Valve – Mission	5	927VP010-004
4	Suction Valve – Novatech	5	101469
	Suction Valve – Mission	5	927VP010-004
5	Valve Spring (Discharge and Suction)	10	918PN05
6	Suction Spring Retainer	5	PP1014077
7	Plunger	5	512893000
8	Suction Valve Cover	5	PP1055575
9	Retainer Nut – Suction Valve Cover	5	309TLS205
10	Retainer Nut – Discharge Valve Cover	4	309TLS205
11	Discharge Valve Cover	4	PP1052997
12	Seal	10	306TLS316
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	315TLS205
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1004025
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-76
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1055576
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Flat Washer	16	VP1033900
29	Direct Torque Indicating Washer	16	VP1033901

5.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

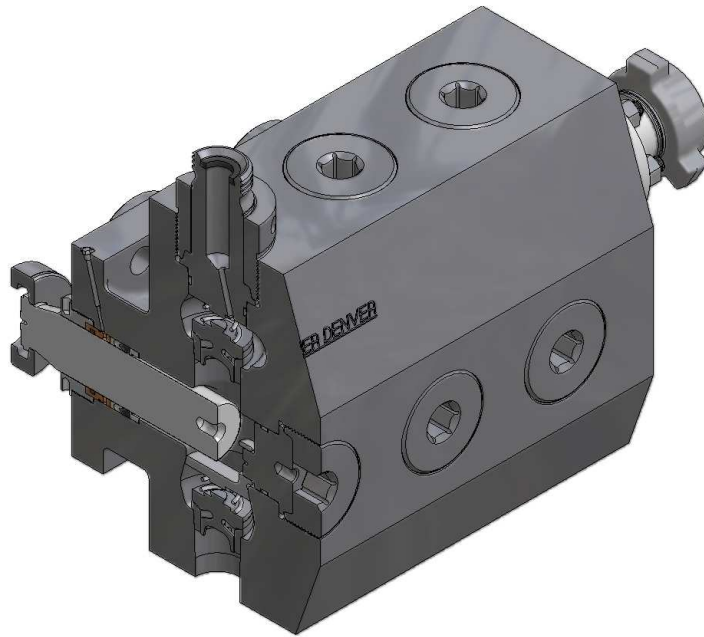


Figure 10: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

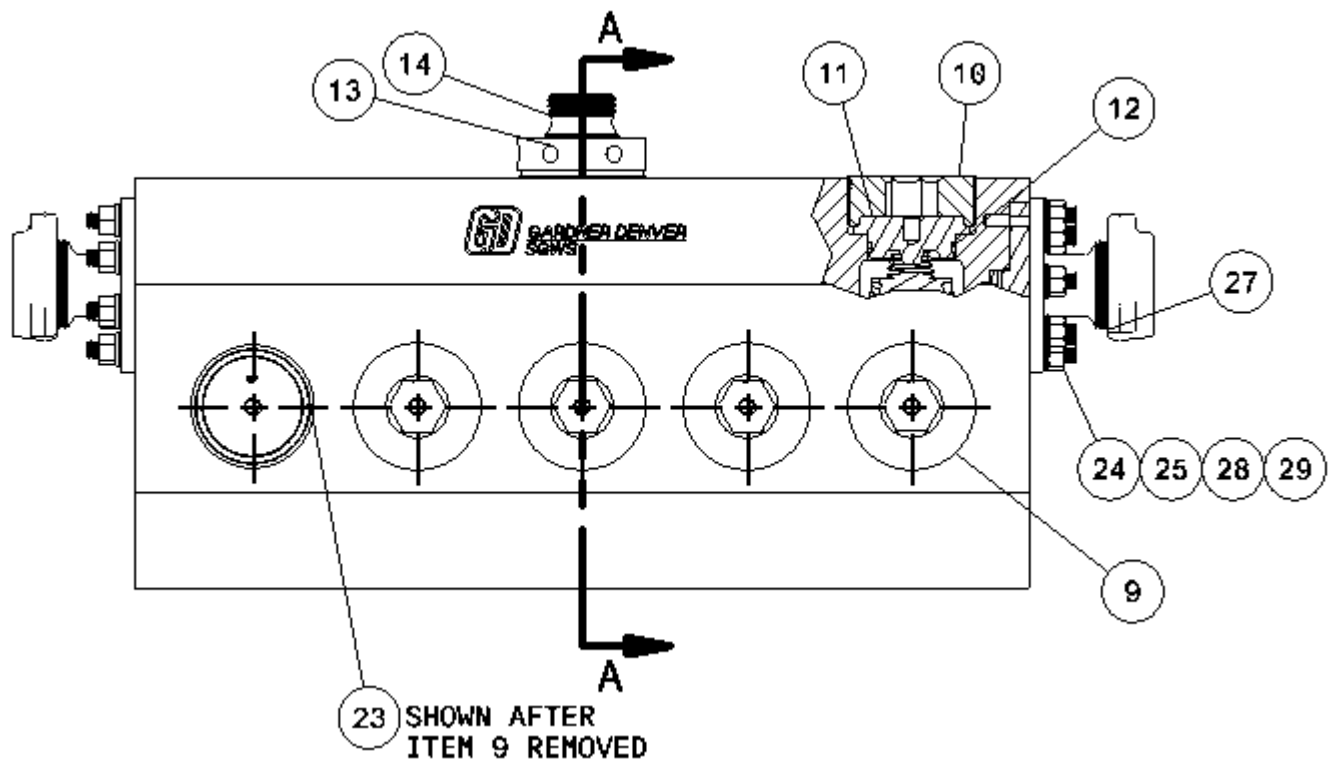


Figure 11: SUPER GWS FLUID CYLINDER FRONT VIEW

5.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

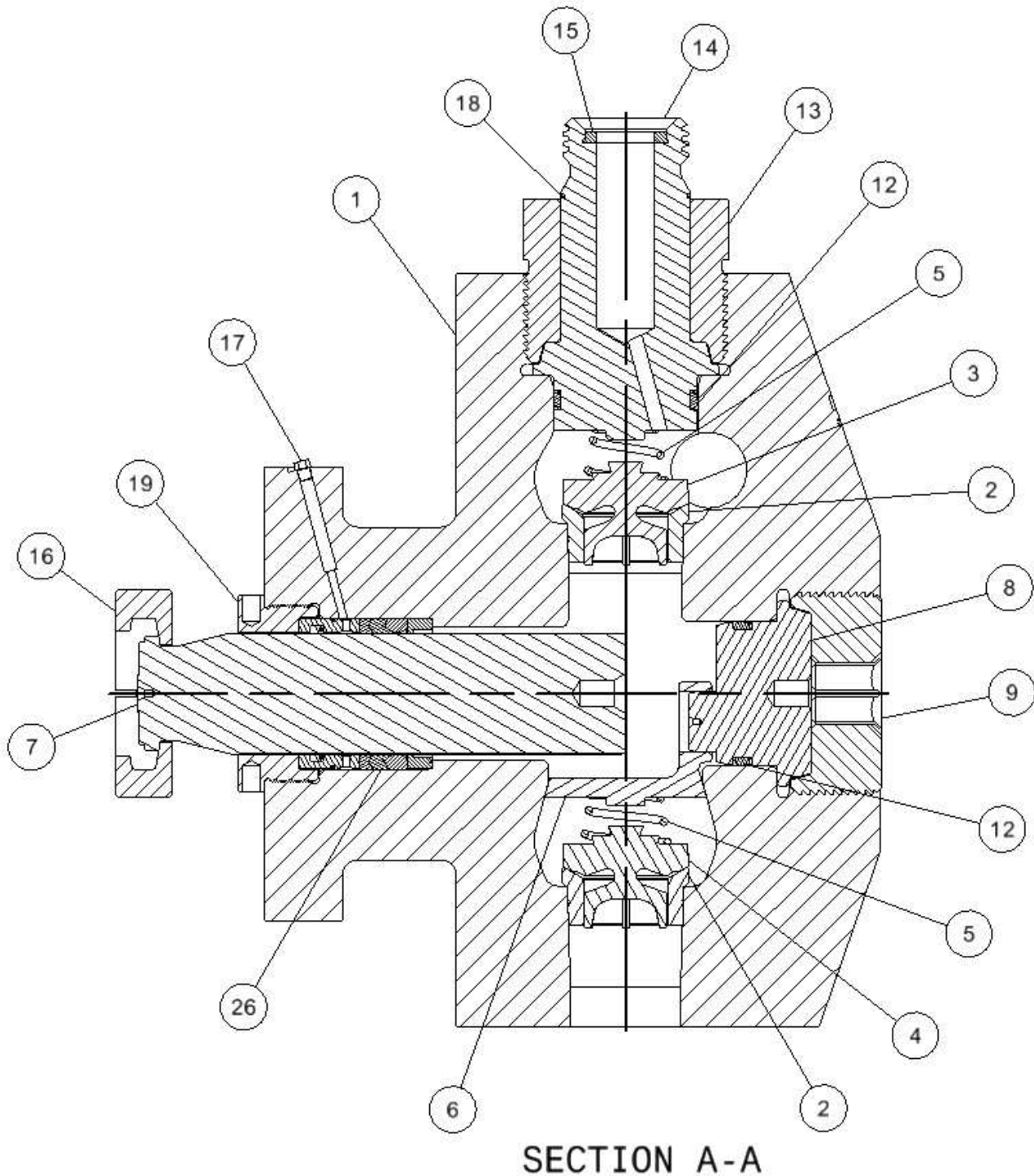


Figure 12: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

5.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

Ref No.	Part Name	Qty.	Part No.
1	Fluid Cylinder, 5.0" SGWS - Steel	1	500FWFSGWS
	Fluid Cylinder, 5.0" SGWS – Stainless Steel	1	500FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100241
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-1
3	Discharge Valve – Novatech	5	101469
	Discharge Valve – Mission	5	927VP010-004
4	Suction Valve – Novatech	5	101469
	Suction Valve – Mission	5	927VP010-004
5	Valve Spring (Discharge and Suction)	10	918PN05
6	Suction Spring Retainer	5	PP1014077
7	Plunger	5	478640000
8	Suction Valve Cover	5	PP1055575
9	Retainer Nut – Suction Valve Cover	5	309TLS205
10	Retainer Nut – Discharge Valve Cover	4	309TLS205
11	Discharge Valve Cover	4	PP1052997
12	Seal	10	306TLS316
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	315TLS205
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1004025
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-77
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1057845
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Flat Washer	16	VP1033900
29	Direct Torque Indicating Washer	16	VP1033901

5.5" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

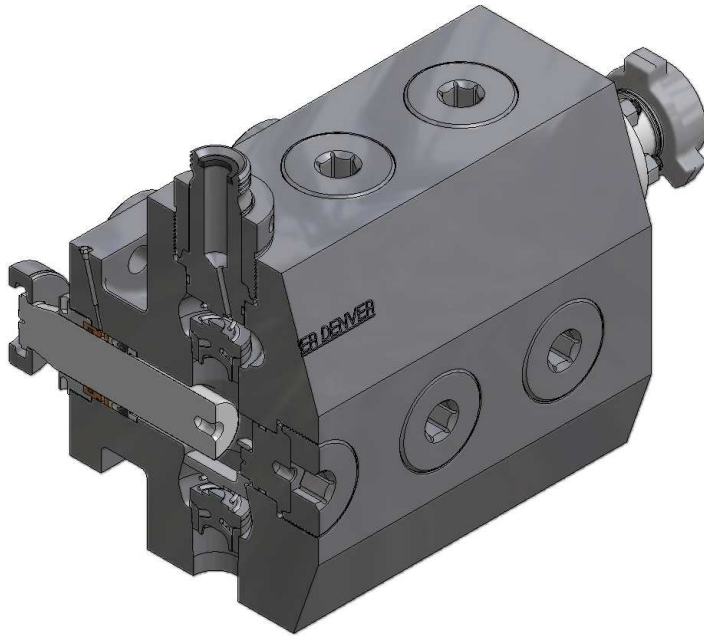


Figure 13: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

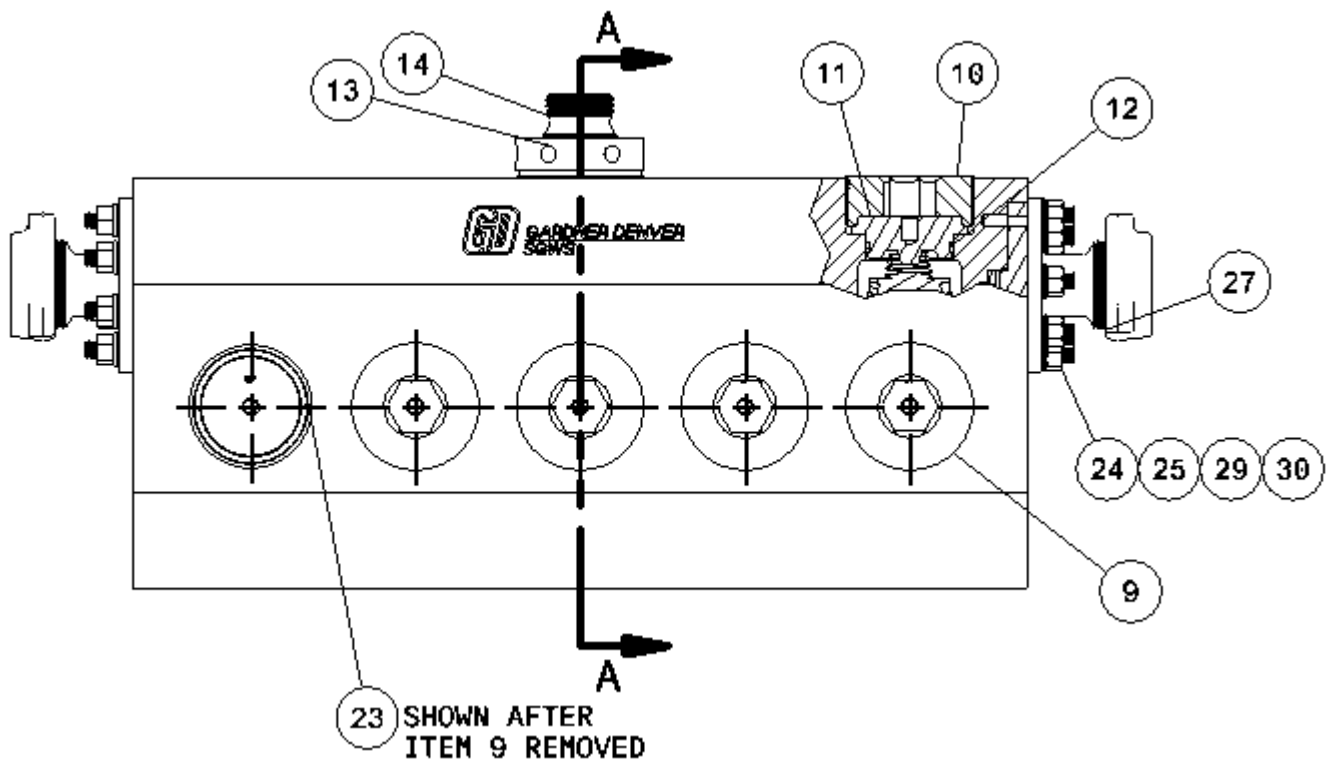


Figure 11: SUPER GWS FLUID CYLINDER FRONT VIEW

5.5" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only

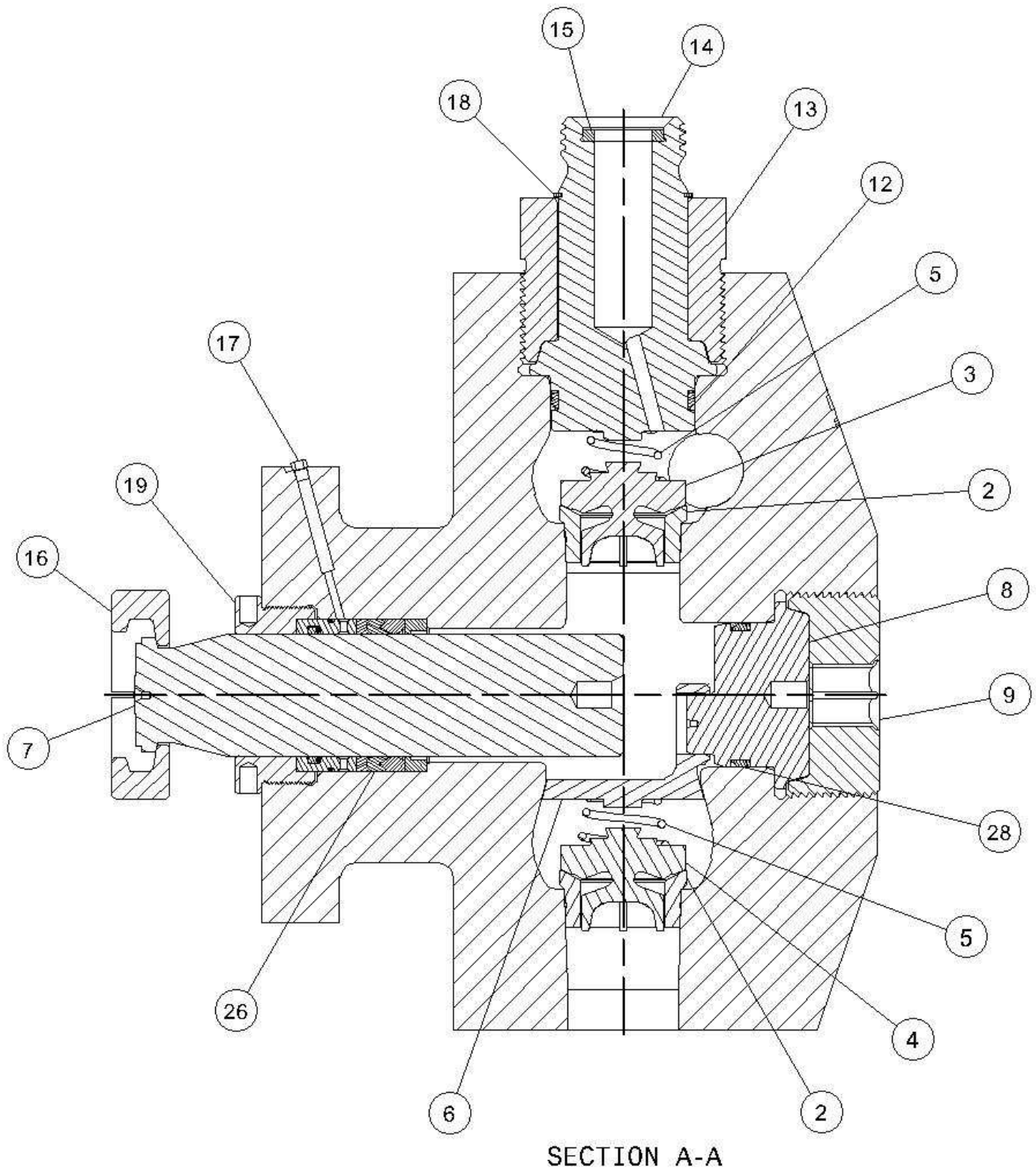


Figure 15: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

5.5" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

Ref No.	Part Name	Qty	Part No
1	Fluid Cylinder, 5.5" SGWS, Steel	1	550FWFSGWS
	Fluid Cylinder, 5.5" SGWS, Stainless Steel	1	550FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100241
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-1
3	Discharge Valve – Novatech	5	101469
	Discharge Valve – Mission	5	927VP010-004
4	Suction Valve – Novatech	5	101469
	Suction Valve – Mission	5	927VP010-004
5	Valve Spring (Discharge and Suction)	10	918PN05
6	Suction Spring Retainer	5	PP1014077
7	Plunger	5	478658000
8	Suction Valve Cover	5	PP1005365
9	Retainer Nut – Suction Valve Cover	5	309TLS205
10	Retainer Nut – Discharge Valve Cover	4	309TLS205
11	Discharge Valve Cover	4	PP1052997
12	Seal	5	306TLS316
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	315TLS205
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1004025
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-77
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1063166
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Seal	5	VP1028128
29	Flat Washer	16	VP1033900
30	Direct Torque Indicating Washer	16	VP1033901

6.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

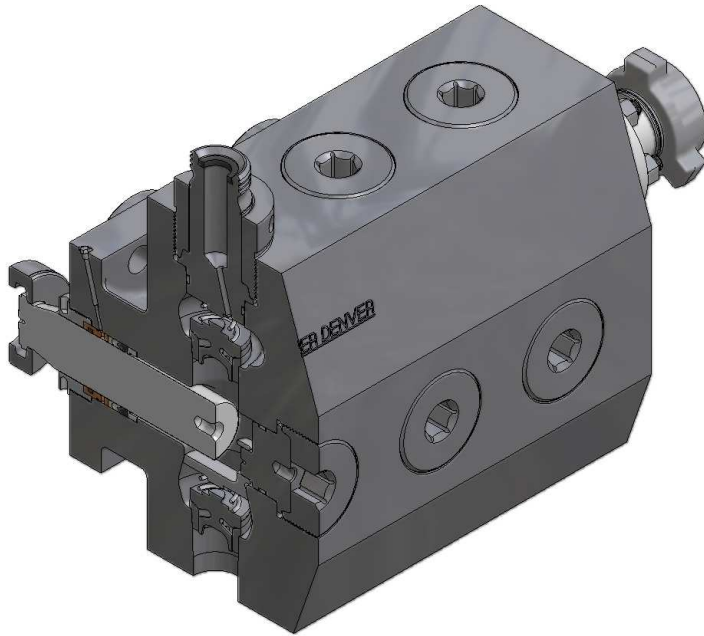


Figure 16: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

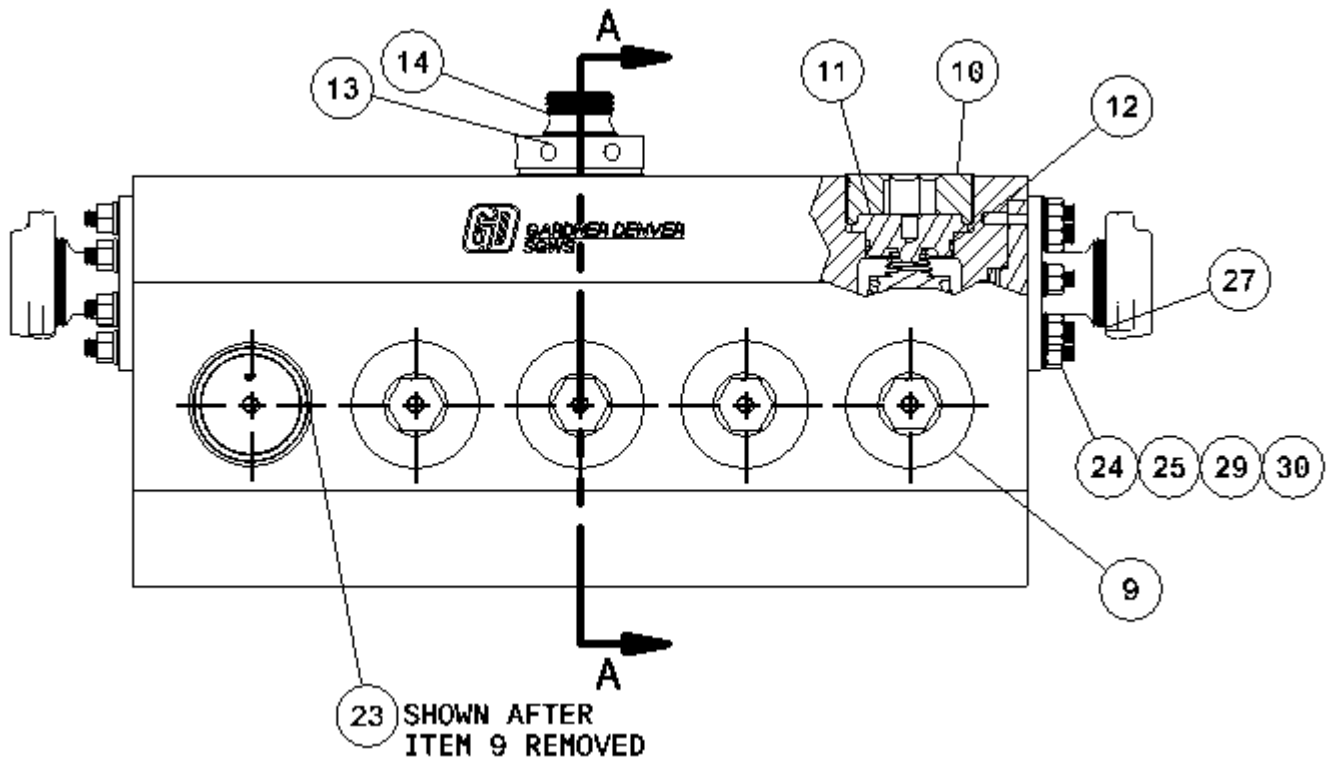


Figure 17: SUPER GWS FLUID CYLINDER FRONT VIEW

6.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

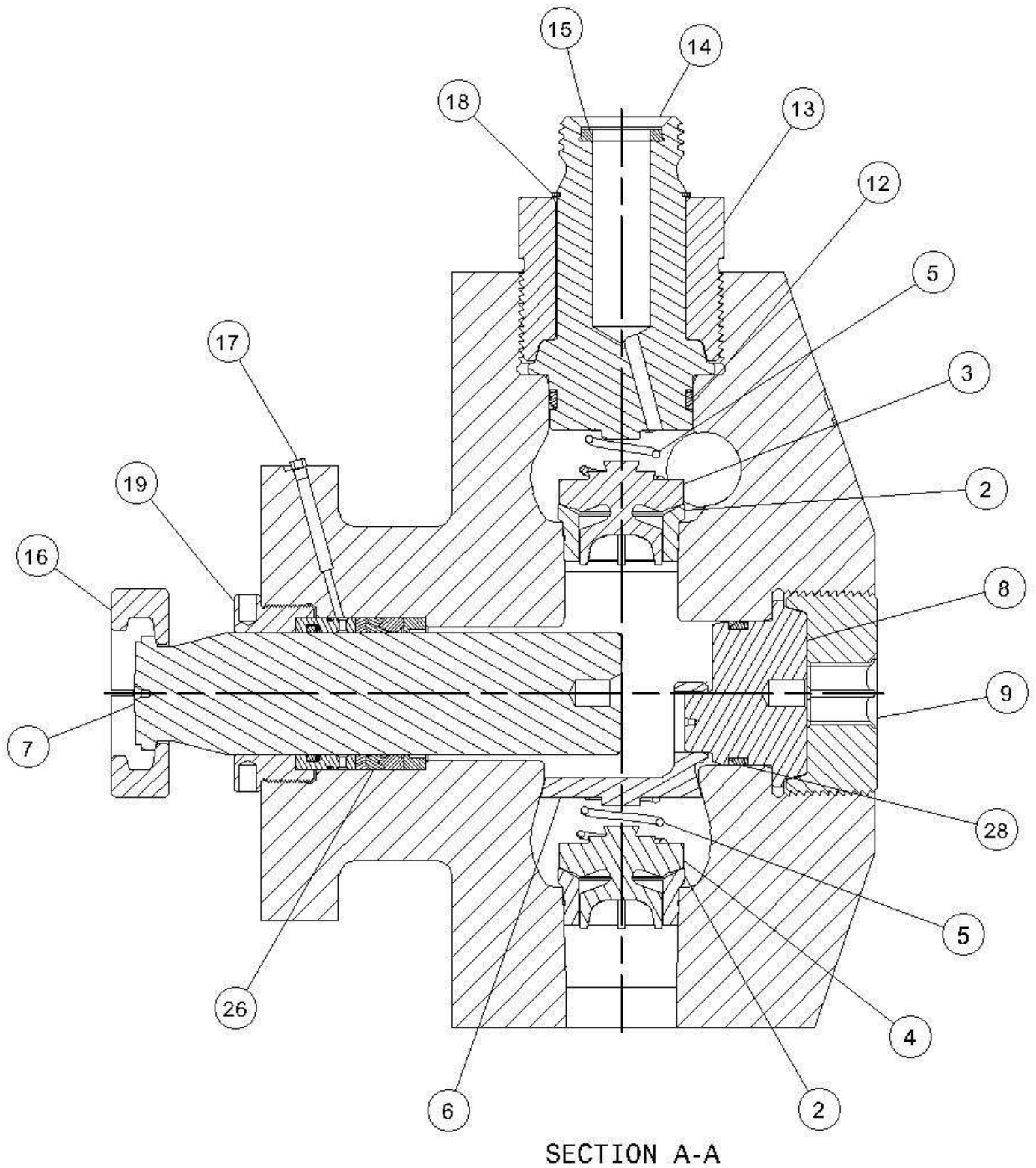


Figure 18: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

6.0" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

Ref No.	Part Name	Qty.	Part No
1	Fluid Cylinder, 6.0" SGWS, Steel	1	600FWFSGWS
	Fluid Cylinder, 6.0" SGWS, Stainless Steel	1	600FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100241
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-1
3	Discharge Valve – Novatech	5	101469
	Discharge Valve – Mission	5	927VP010-004
4	Suction Valve – Novatech	5	101469
	Suction Valve – Mission	5	927VP010-004
5	Valve Spring (Discharge and Suction)	10	918PN05
6	Suction Spring Retainer	5	PP1014077
7	Plunger	5	211OPB038
8	Suction Valve Cover	5	PP1005365
9	Retainer Nut – Suction Valve Cover	5	309TLS205
10	Retainer Nut – Discharge Valve Cover	4	309TLS205
11	Discharge Valve Cover	4	PP1052997
12	Seal	5	306TLS316
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	315TLS205
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1004025
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-77
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1060786
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Seal	5	VP1028128
29	Flat Washer	16	VP1033900
30	Direct Torque Indicating Washer	16	VP1033901

6.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

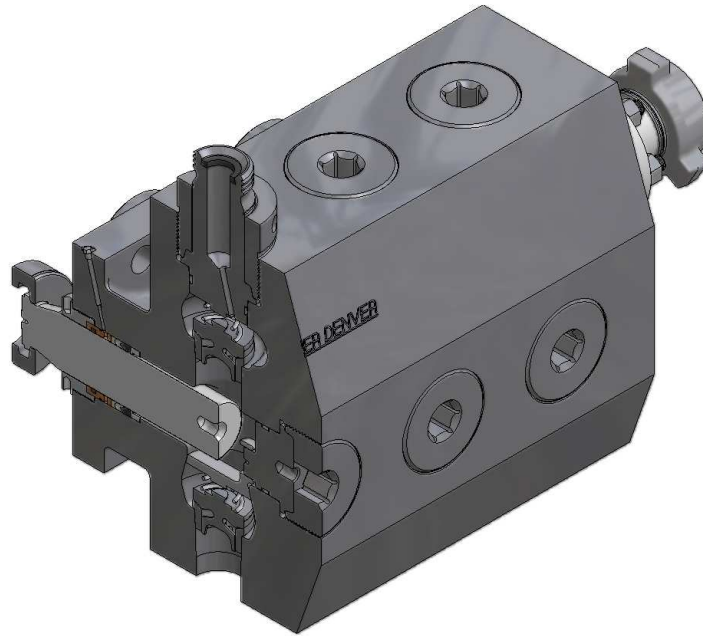


Figure 19: SUPER GWS FLUID CYLINDER SECTIONED ISO VIEW

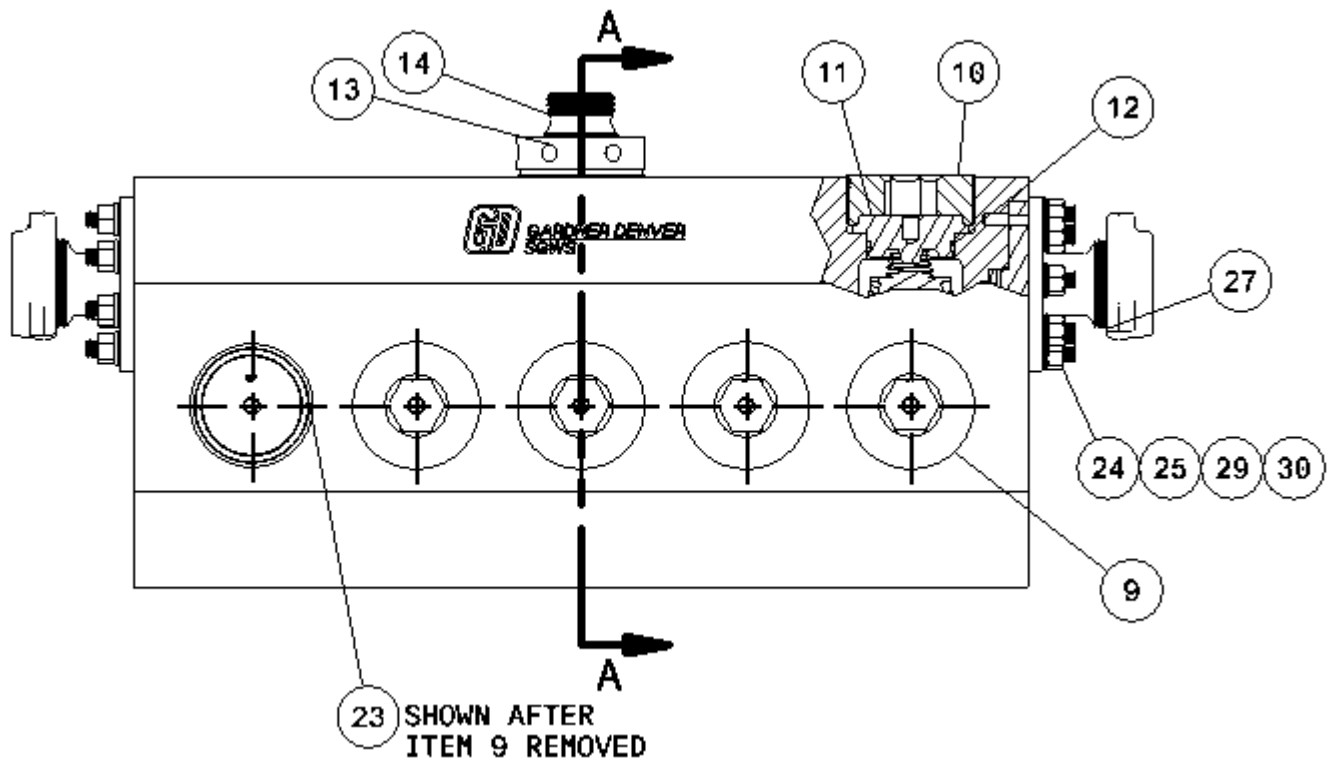


Figure 20: SUPER GWS FLUID CYLINDER FRONT VIEW

6.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

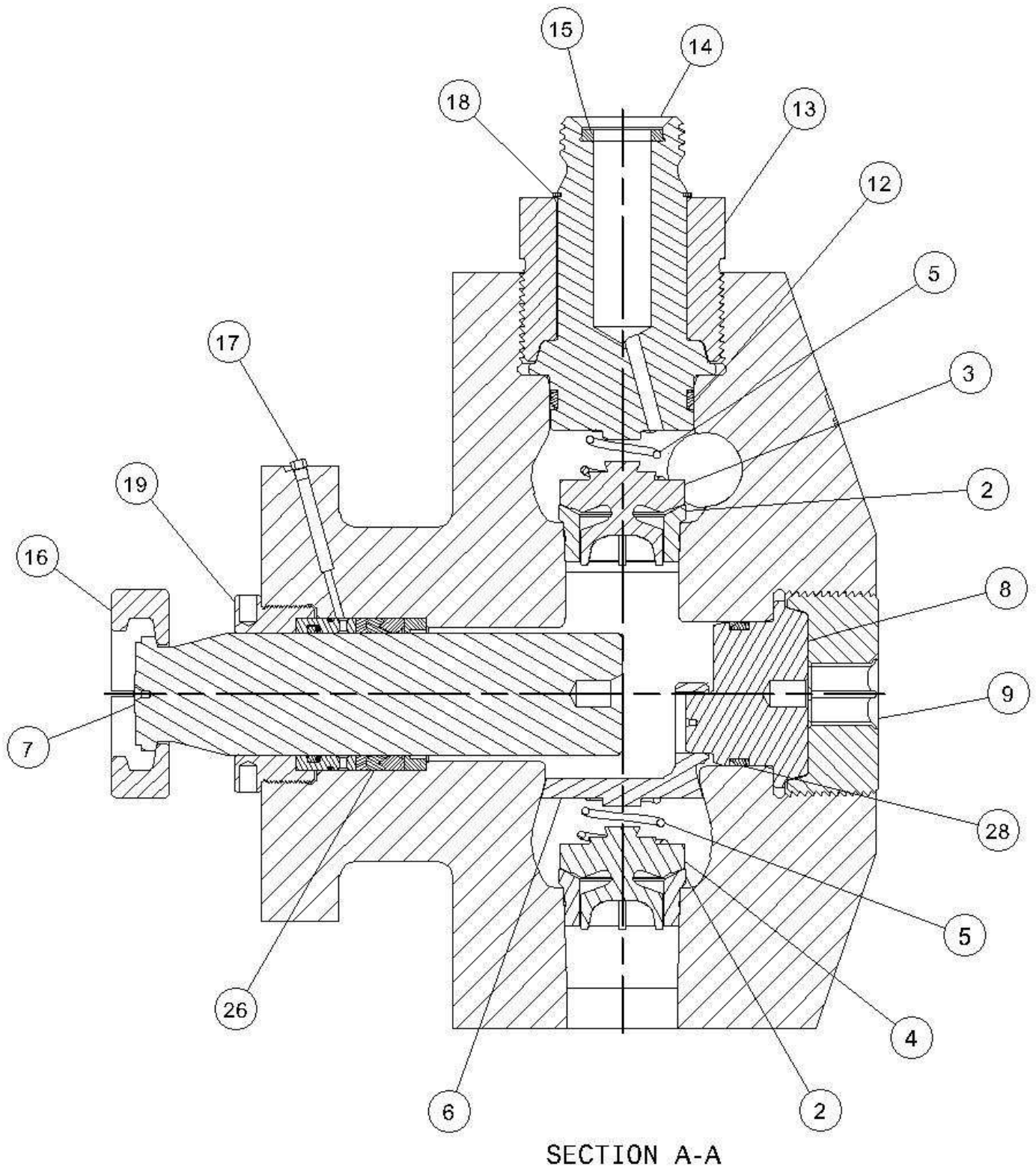


Figure 21: SUPER GWS FLUID CYLINDER SECTION A-A VIEW

6.75" SGWS FLUID CYLINDER ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only

Ref No.	Part Name	Qty.	Part No.
1	Fluid Cylinder, 6.75" SGWS, Steel	1	675FWFSGWS
	Fluid Cylinder, 6.75" SGWS, Stainless Steel	1	675FWFSGWSS
2	Valve Seat (Discharge and Suction) – Novatech	10	100153
	Valve Seat (Discharge and Suction) – Mission	10	928SH01-6
3	Discharge Valve – Novatech	5	101470
	Discharge Valve – Mission	5	927VP010-005
4	Suction Valve – Novatech	5	101470
	Suction Valve – Mission	5	927VP010-005
5	Valve Spring (Discharge and Suction)	10	300TLS105
6	Suction Spring Retainer	5	PP1014077
7	Plunger	5	157PN008
8	Suction Valve Cover	5	PP1064492
9	Retainer Nut – Suction Valve Cover	5	321TLS205
10	Retainer Nut – Discharge Valve Cover	4	309TLS205
11	Discharge Valve Cover	4	317TLS147
12	Seal	5	301TLS316
13	Retainer Nut – Discharge Valve Cover, Gauge Connection	1	315TLS205
14	Discharge Valve Cover – 2" 1502 Gauge Connection	1	PP1004826
15	Seal – 2" 1502 Weco	1	901SH06-1
16	Plunger Clamp	5	342-C-77
17	Plug	5	082276
18	Retaining Ring	1	65U45
19	Gland	5	PP1064409
23	Dowel Pin	5	62M48
24	Stud	16	PP1033190
25	Hex Nut	16	PP1033191
26	Packing Group	5	See Page 20-25
27	Discharge Flange	2	See Page 26-28
28	Seal	5	VP1028133
29	Flat Washer	16	VP1033900
30	Direct Torque Indicating Washer	16	VP1033901

ADJUSTABLE HNBR CDI PACKING

Order by part number and description. Reference numbers are for your convenience only.

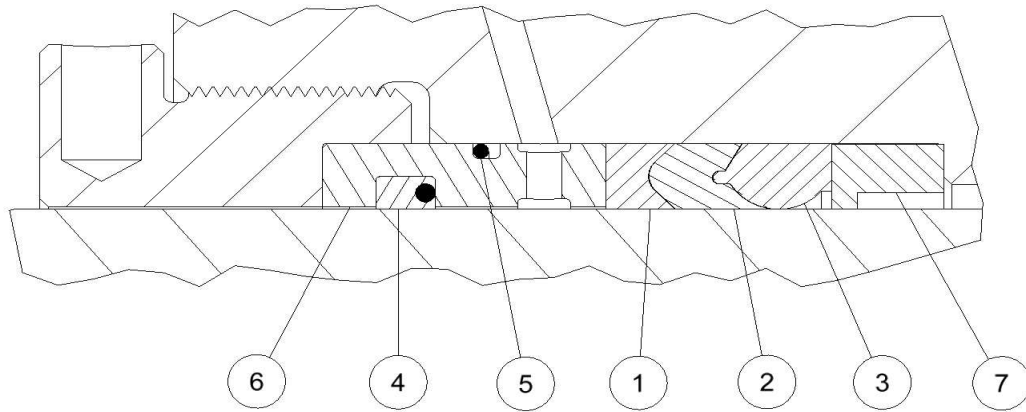


Figure 22: ADJUSTABLE CDI PACKING

3.75" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595687000
2	PACKING RING	1	595695000
3	HEADER RING	1	595703000
4	WIPER SEAL	1	60AM71
5	O-RING	1	25AH24
6	LANTERN SPACER	1	PP1064587
7	RING-JUNK	1	PP1066540

4.0" PACKING ASSEMBLY

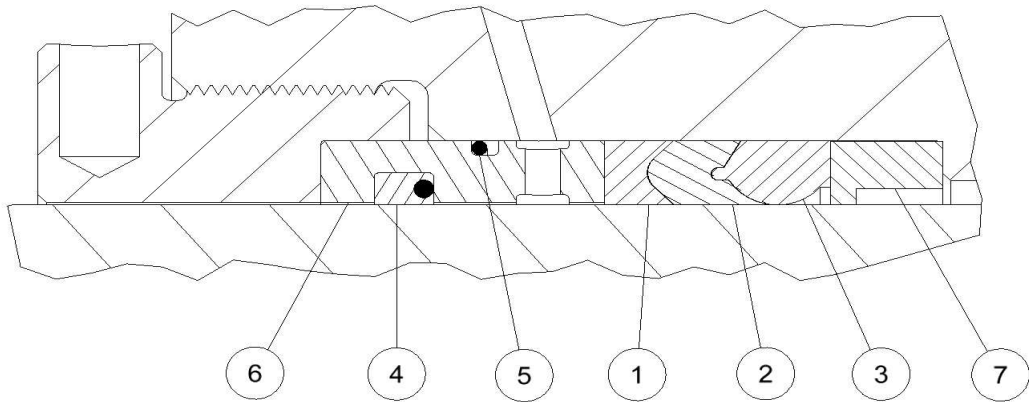
Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	309OPE170
2	PACKING RING	1	310OPE222
3	HEADER RING	1	303OPE222
4	WIPER SEAL	1	60AM84
5	O-RING	1	25AH26
6	LANTERN SPACER	1	PP1055490
7	RING-JUNK	1	301TWC317

4.5" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595688000
2	PACKING RING	1	595696000
3	HEADER RING	1	595704000
4	WIPER SEAL	1	60AM73
5	O-RING	1	901SH05-252
6	LANTERN SPACER	1	PP1055577
7	RING-JUNK	1	302TWC317

ADJUSTABLE HNBR CDI PACKING

Order by part number and description. Reference numbers are for your convenience only.



ADJUSTABLE CDI PACKING

5.0" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595689000
2	PACKING RING	1	595697000
3	HEADER RING	1	595705000
4	WIPER SEAL	1	60AM74
5	O-RING	1	901SH05-256
6	LANTERN SPACER	1	PP1057894
7	RING-JUNK	1	303TWC317

5.5" PACKING ASSEMBLY

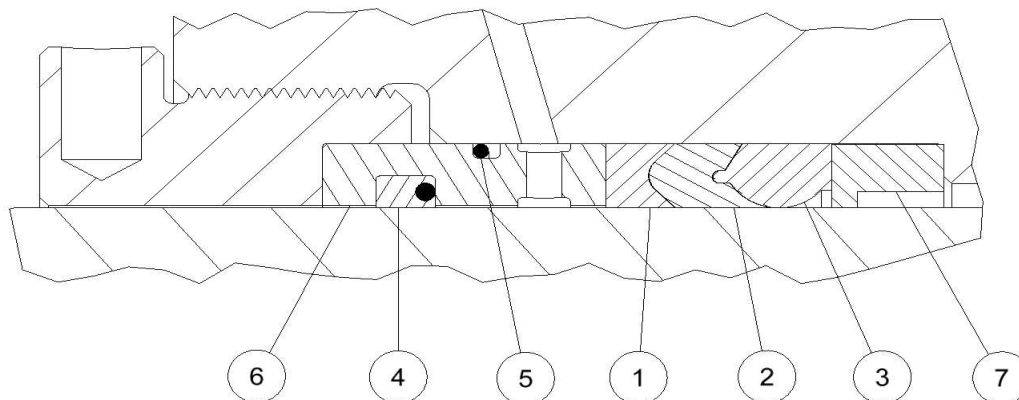
Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595690000
2	PACKING RING	1	595698000
3	HEADER RING	1	595706000
4	WIPER SEAL	1	60AM75
5	O-RING	1	108515
6	LANTERN SPACER	1	PP1063165
7	RING-JUNK	1	304TWC317

6.0" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595691000
2	PACKING RING	1	595699000
3	HEADER RING	1	595707000
4	WIPER SEAL	1	60AM76
5	O-RING	1	167661
6	LANTERN SPACER	1	PP1060785
7	RING-JUNK	1	305TWC317

ADJUSTABLE HNBR CDI PACKING

Order by part number and description. Reference numbers are for your convenience only



ADJUSTABLE CDI PACKING

6.75" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	FEMALE ADAPTER	1	595693000
2	PACKING RING	1	595701000
3	HEADER RING	1	595709000
4	WIPER SEAL	1	60AM78
5	O-RING	1	108515
6	LANTERN SPACER	1	PP1064655
7	RING-JUNK	1	PP1064666

ADJUSTABLE UTEX PACKING ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

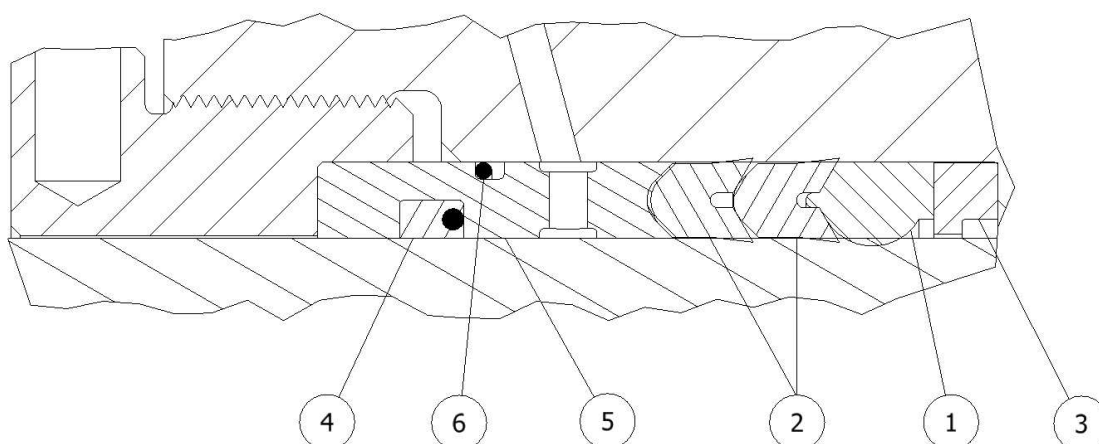


Figure 23: ADJUSTABLE UTEX PACKING

3.75" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-004
2	PACKING RING	2	901VP002-004
3	RING-JUNK	1	PP1066518
4	WIPER SEAL	1	60AM71
5	LANTERN SPACER	1	PP1064593
6	O-RING	1	25AH24

4.0" PACKING ASSEMBLY

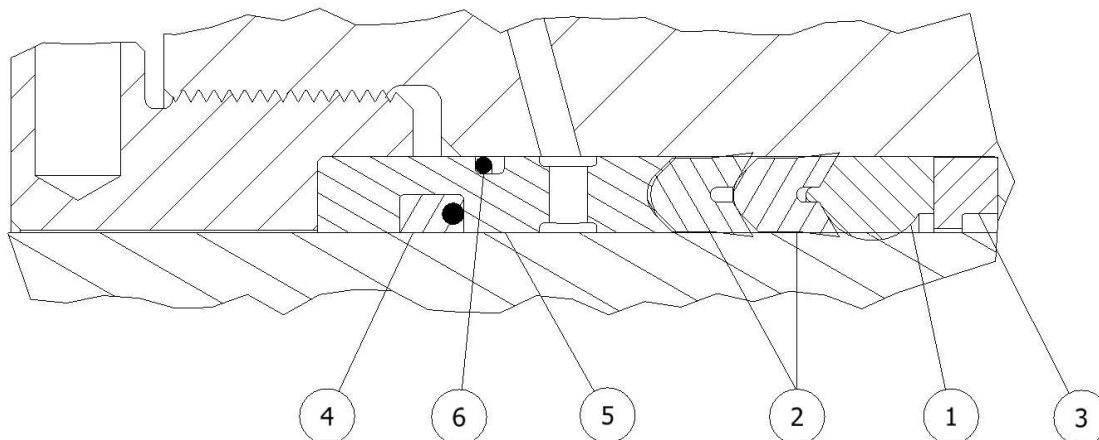
Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-005
2	PACKING RING	2	901VP002-005
3	RING-JUNK	1	PP1044942
4	WIPER SEAL	1	60AM84
5	LANTERN SPACER	1	PP1058958
6	O-RING	1	25AH26

4.5" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-014
2	PACKING RING	2	901VP002-014
3	RING-JUNK	1	595737000
4	WIPER SEAL	1	60AM73
5	LANTERN SPACER	1	PP1063557
6	O-RING	1	901SH05-252

ADJUSTABLE UTEX PACKING ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.



ADJUSTABLE UTEX PACKING

5.0" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-009
2	PACKING RING	2	901VP002-009
3	RING-JUNK	1	595738000
4	WIPER SEAL	1	60AM74
5	LANTERN SPACER	1	PP1058606
6	O-RING	1	901SH05-256

5.5" PACKING ASSEMBLY

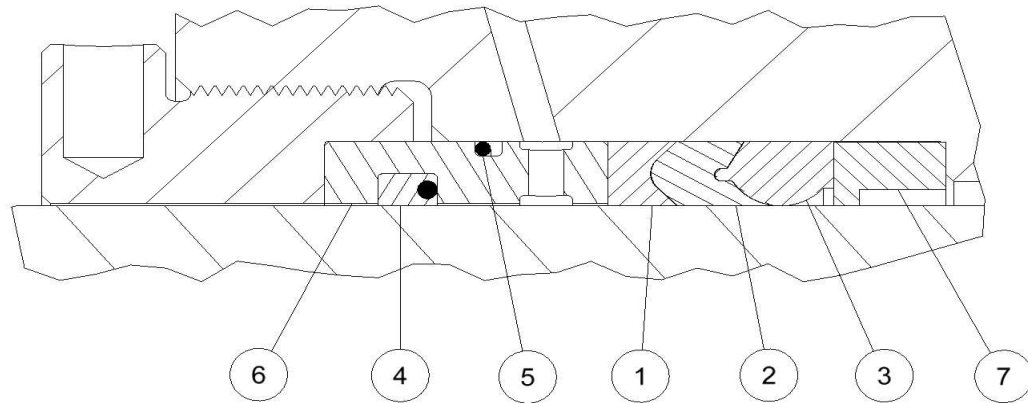
Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-008
2	PACKING RING	2	901VP002-008
3	RING-JUNK	1	595739000
4	WIPER SEAL	1	60AM75
5	LANTERN SPACER	1	PP1061269
6	O-RING	1	108515

6.0" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	HEADER RING	1	901VP014-007
2	PACKING RING	2	901VP002-007
3	RING-JUNK	1	PP1060787
4	WIPER SEAL	1	60AM76
5	LANTERN SPACER	1	PP1061270
6	O-RING	1	167661

ADJUSTABLE UTEX PACKING ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only



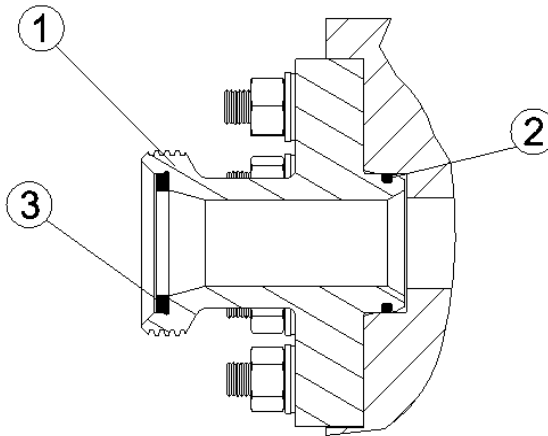
ADJUSTABLE UTEX PACKING

6.75" PACKING ASSEMBLY

Ref No.	Part Name	Qty.	Part No.
1	HEADER RING, 6.75"	1	901VP014-011
2	PACKING RING	2	901VP002-011
3	RING-JUNK	1	PP1064411
4	WIPER SEAL	1	60AM78
5	LANTERN SPACER	1	PP1064420
6	O-RING	1	177668

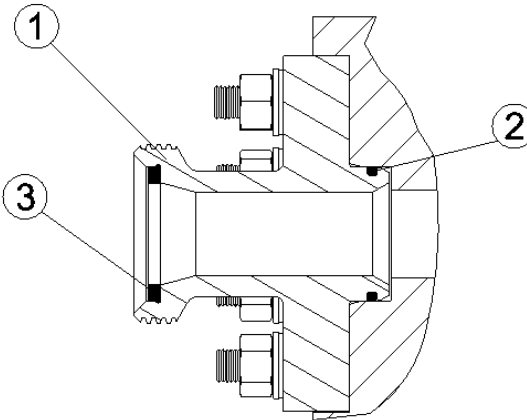
DISCHARGE FLANGE ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.



**Figure 24: 2" 1502 THREADED FEMALE UNMOUNTING DISCHARGE FLANGE ASM
3.75" TO 6.75" FLUID END:**

Ref No.	Part Name	Qty.	Part No.
1	2" 1502 Male Unmounting Flange	1	PP1080705
2	Seal	1	100279
3	Seal – 2" 1502 Weco	1	901SH06-1



**Figure 25: 3" 1502 THREADED FEMALE UNMOUNTING DISCHARGE FLANGE ASM
3.75" TO 6.75" FLUID END:**

Ref No.	Part Name	Qty.	Part No.
1	3" 1502 Male Unmounting Flange	1	PP1074543
2	Seal	1	100279
3	Seal – 3" 1502 Weco	1	901SH06-2
	Seal – Anti-Extrusion	1	449373000

DISCHARGE FLANGE ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

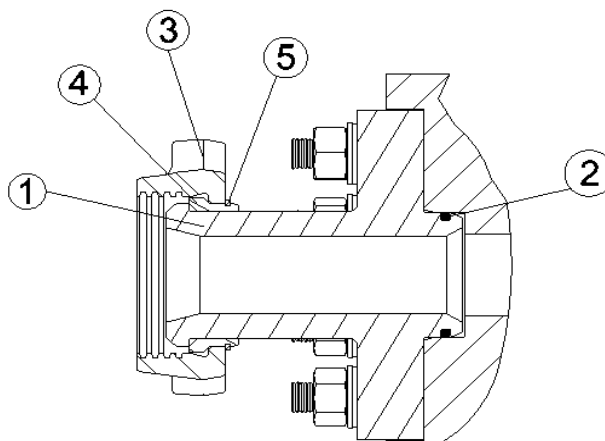


Figure 26: 3" 1502 MALE UNIMOUNTING DISCHARGE FLANGE ASSEMBLY

3.75" TO 6.75" FLUID END:

Ref No.	Part Name	Qty.	Part No.
1	3" 1502 Male Unimounting Flange	1	PP1075106
2	Seal	1	100279
3	Union Nut	1	431200090
4	Retaining Segments	3	431042090
5	Retaining Ring	1	421067000

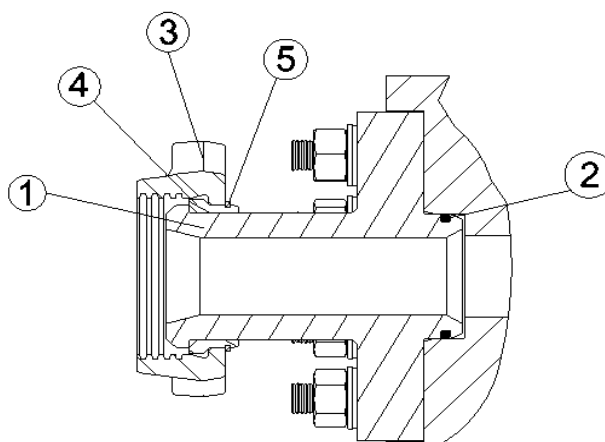


Figure 27: 2" 1502 MALE UNIMOUNTING DISCHARGE FLANGE ASSEMBLY

3.75" TO 6.75" FLUID END:

Ref No.	Part Name	Qty.	Part No.
1	3" 1502 Male Unimounting Flange	1	PP1078948
2	Seal	1	100279
3	Union Nut	1	415468090
4	Retaining Segments	3	415472090
5	Retaining Ring	1	415473000

DISCHARGE FLANGE ASSEMBLY

Order by part number and description. Reference numbers are for your convenience only.

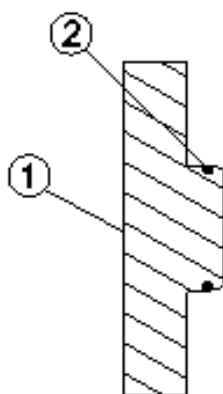


Figure 28: BLIND UNIMOUNTING DISCHARGE FLANGE ASSEMBLY

3.75" TO 6.75" FLUID END:

Ref No.	Part Name	Qty.	Part No.
1	Blind Unimounting Flange	1	PP1075385
2	Seal	1	100279

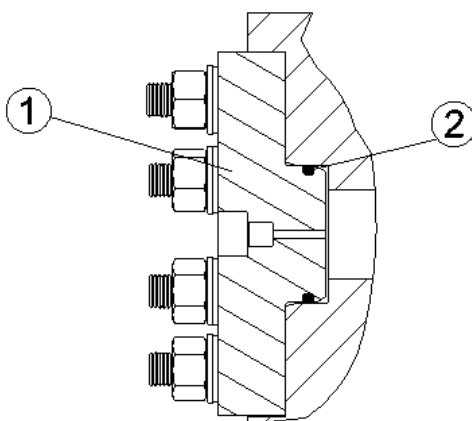


Figure 29: BLEED OFF DISCHARGE FLANGE ASSEMBLY

3.75" TO 6.75" FLUID END:

Ref No.	Part Name	Qty.	Part No.
1	Bleed Off Unimounting Flange	1	PP1075404
2	Seal	1	100279

SUCTION MANIFOLDS

Order by part number and description. Reference numbers are for your convenience only.

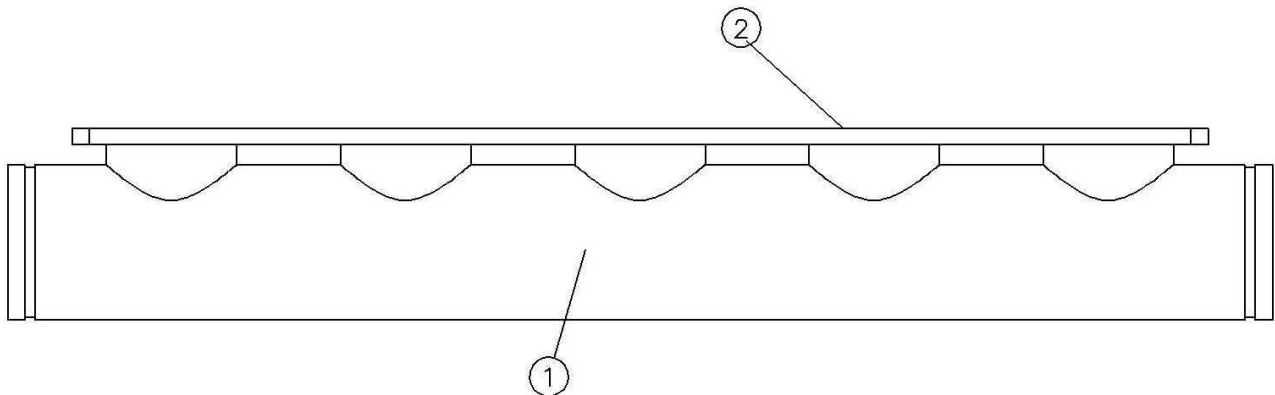


Figure 30: 6" SUCTION MANIFOLD WITH VICTAULIC ENDS

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080070
2	O-ring	5	107992

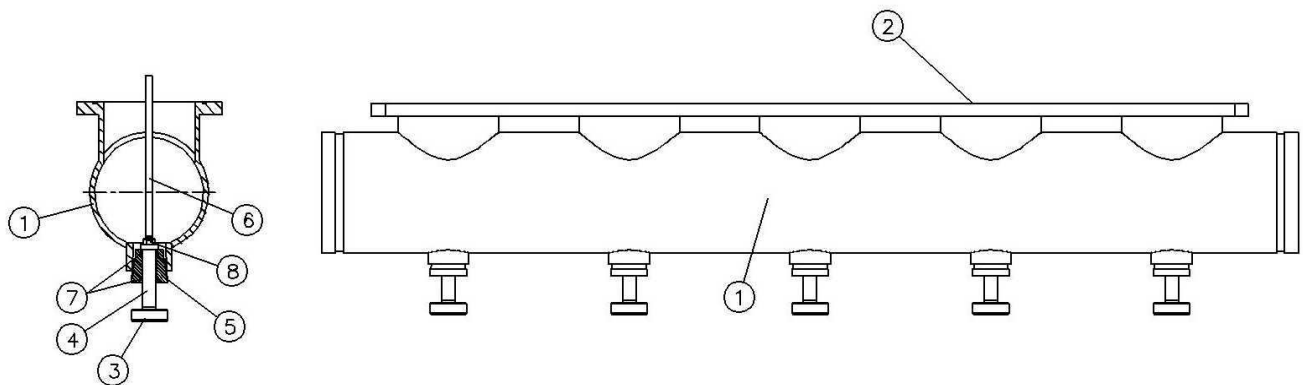


Figure 31: 6" SUCTION MANIFOLD WITH VICTAULIC ENDS & VALVE LIFTERS

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080071
2	O-ring	5	107992
3	Lifter Disc	5	595PN01
4	Lifter Shaft	5	595PN02
5	Coupling	5	102487-1
6	Push Rod	5	595PN04
7	O-ring	5	107956
8	Hex Nut	5	50AQ3

SUCTION MANIFOLDS

Order by part number and description. Reference numbers are for your convenience only.

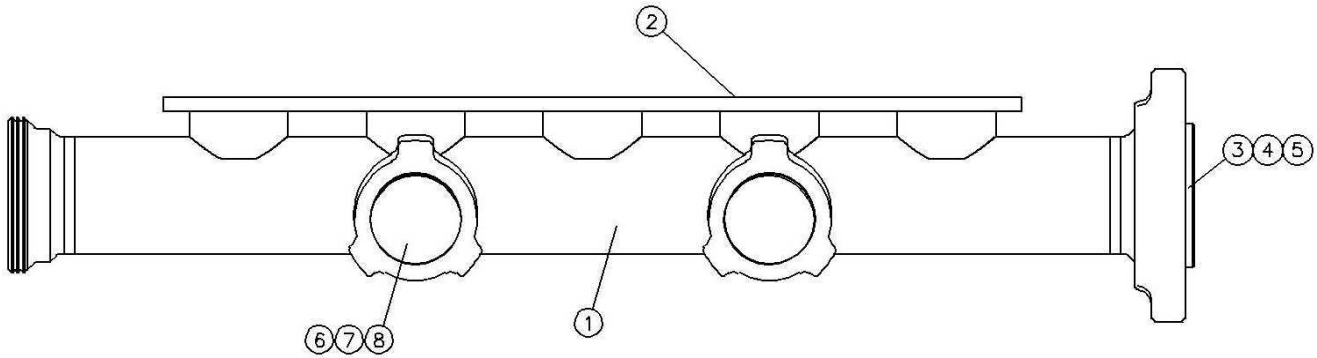


Figure 32: 6" CO2 SUCTION MANIFOLD ASSEMBLY WITH 2 CLEANOUTS

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1009502
2	O-ring – Fluid End	5	107992
3	Plug – End	1	VP1009631
4	Wing Nut – End Plug	1	VP1009630
5	O-ring – End Plug	1	107992
6	Plug – Cleanout	2	64EB876
7	Wing Nut – Cleanout	2	64EB875
8	O-ring – Cleanout	2	124642

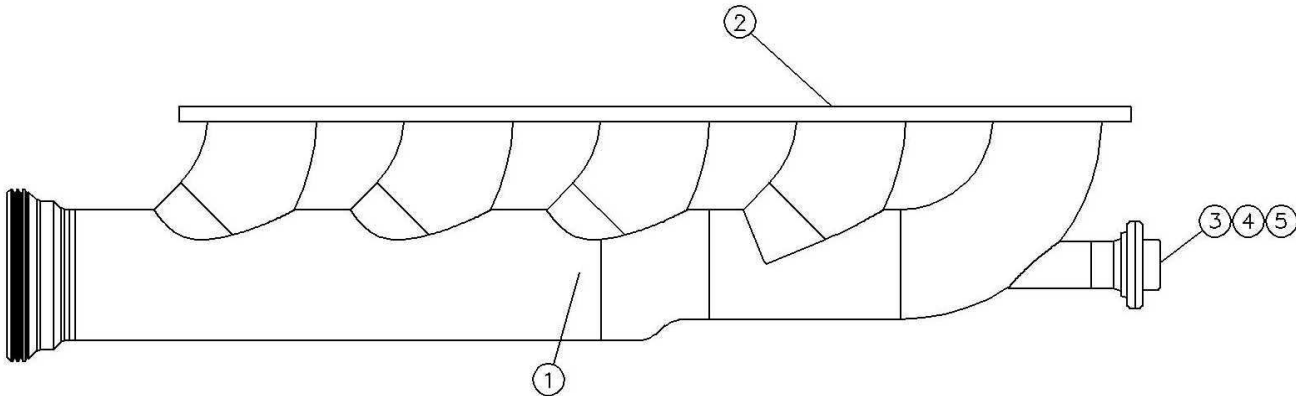


Figure 33: 6" ZOOMIE SUCTION MANIFOLD ASSEMBLY & THREADED INLET

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1010837
2	O-ring – Fluid End	5	107992
3	End Plug	1	501002
4	O-ring – End Plug	1	108502
5	Wing Nut	1	PP1000686

SUCTION MANIFOLDS

Order by part number and description. Reference numbers are for your convenience only.

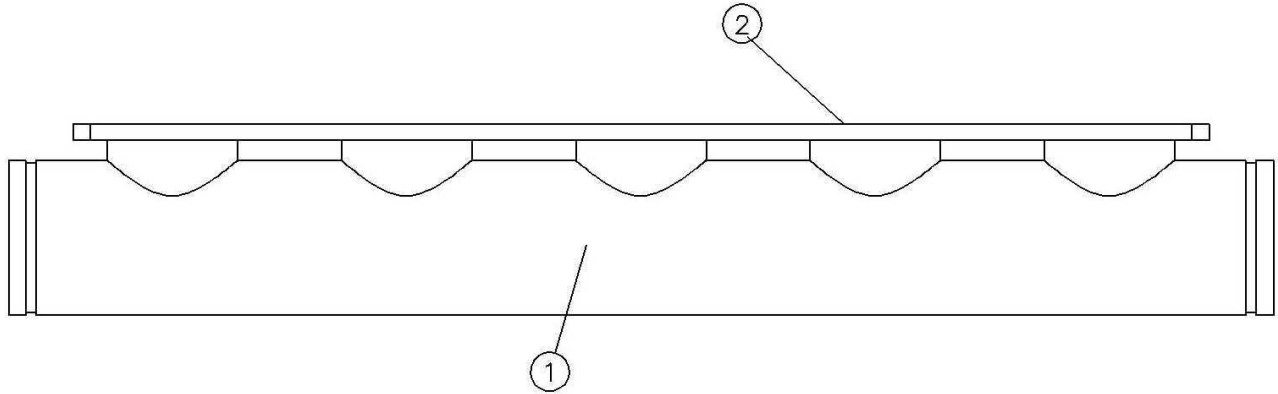


Figure 34: 8" SUCTION MANIFOLD WITH VICTAULIC ENDS

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080072
2	O-ring	5	107992

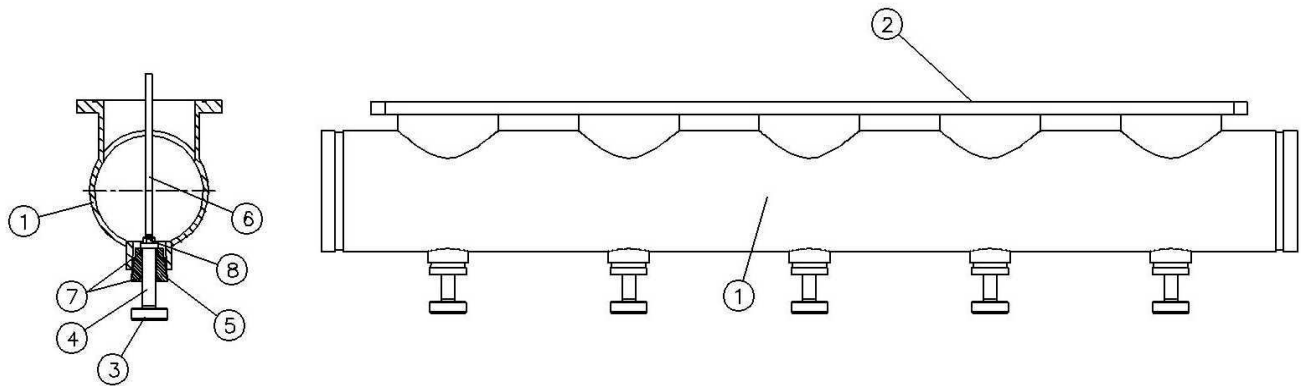


Figure 35: 8" SUCTION MANIFOLD WITH VICTAULIC ENDS & VALVE LIFTERS

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080073
2	O-ring	5	107992
3	Lifter Disc	5	595PN01
4	Lifter Shaft	5	595PN02
5	Coupling	5	102487-1
6	Push Rod	5	595PN04
7	O-ring	5	107956
8	Hex Nut	5	50AQ3

SUCTION MANIFOLDS

Order by part number and description. Reference numbers are for your convenience only.

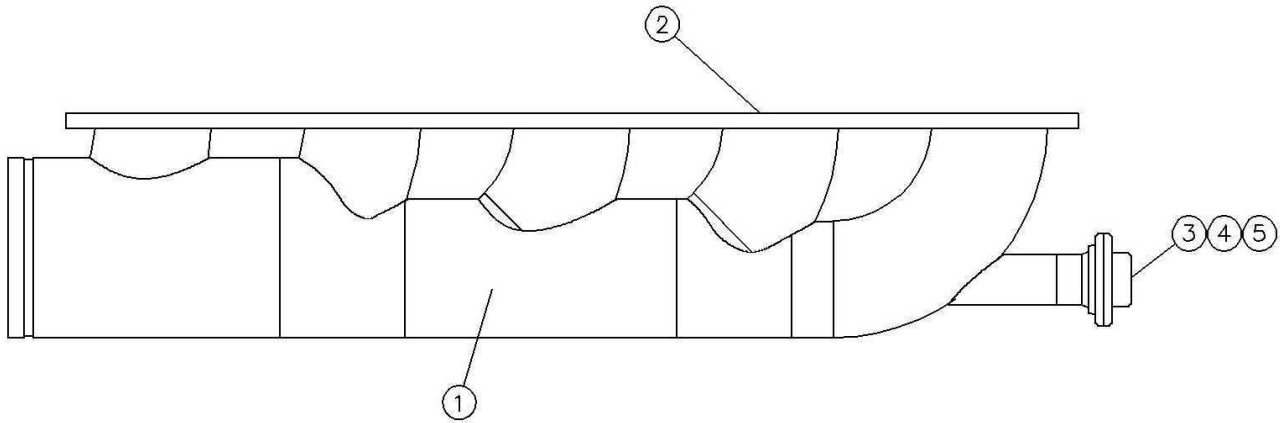


Figure 36: 8" ZOOMIE SUCTION MANIFOLD ASSEMBLY WITH VICTAULIC END

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080074
2	O-ring – Fluid End	5	107992
3	End Plug	1	501002
4	O-ring – End Plug	1	108502
5	Wing Nut	1	PP1000686

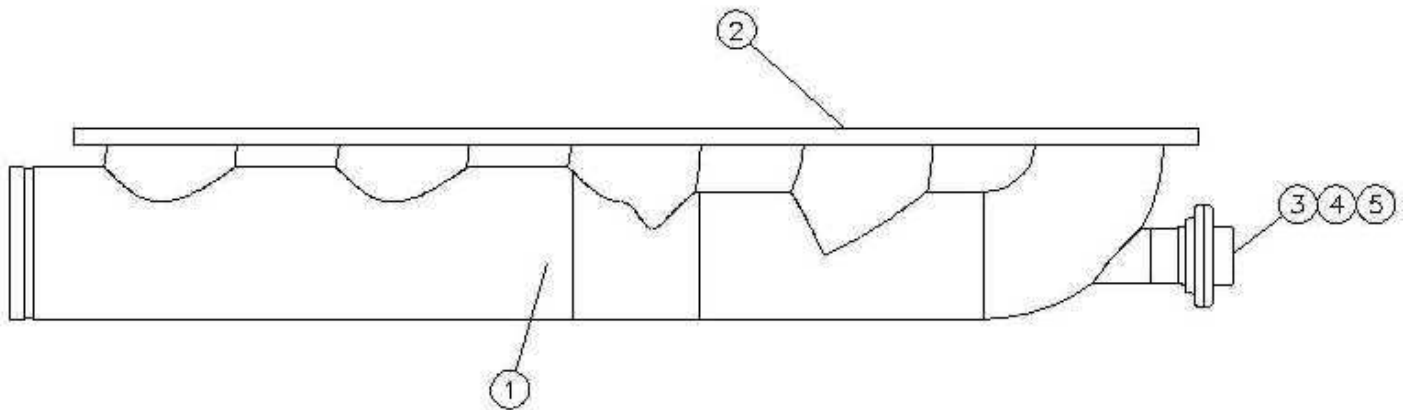


Figure 37: 6" LOW PROFILE ZOOMIE SUCT. MANIFOLD ASSY W/ VICTAULIC END

Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1080075
2	O-ring – Fluid End	5	107992
3	End Plug	1	501002
4	O-ring – End Plug	1	108502
5	Wing Nut	1	PP1000686

SUCTION MANIFOLD

Order by part number and description. Reference numbers are for your convenience only.

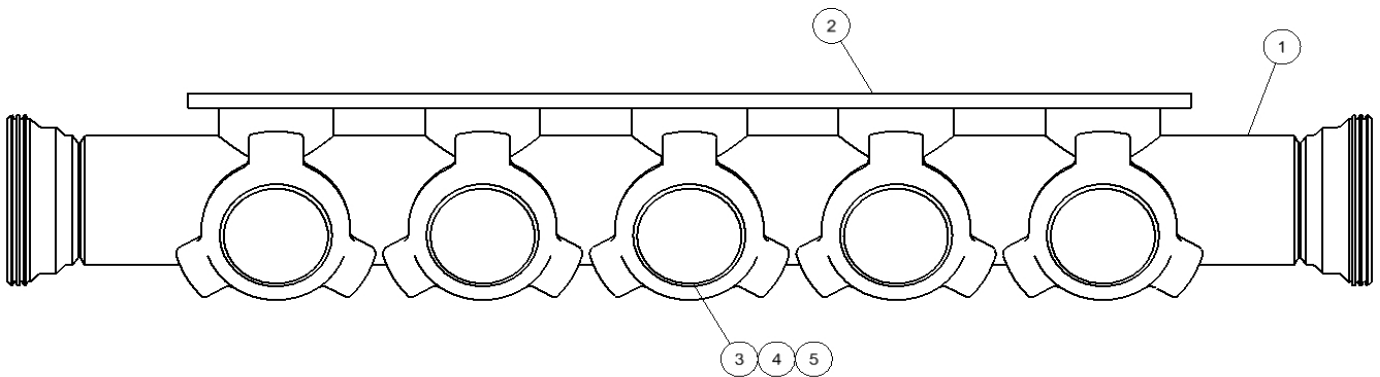
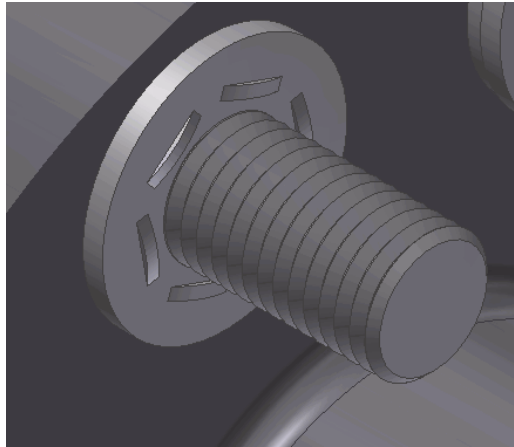


Figure 38: 6" CO2 SUCTION MANIFOLD ASSEMBLY WITH 5 CLEANOUTS

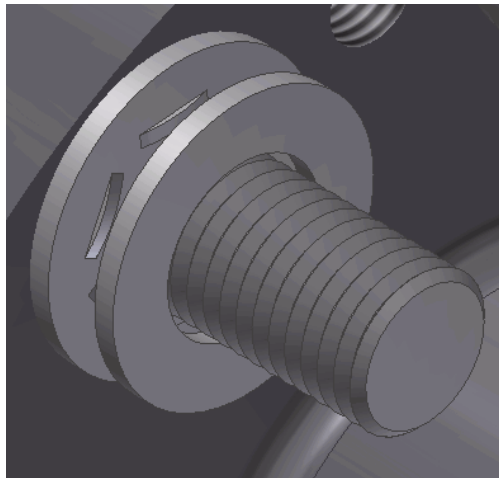
Ref No.	Part Name	Qty.	Part No.
1	Suction Manifold	1	PP1040884
2	O-ring – Fluid End	5	107992
3	Plug - Cleanout	5	64EB876
4	Wing Nut - Cleanout	5	64EB875
5	O-Ring - Cleanout	5	124642

DIRECT TORQUE INDICATING WASHER INSTRUCTIONS

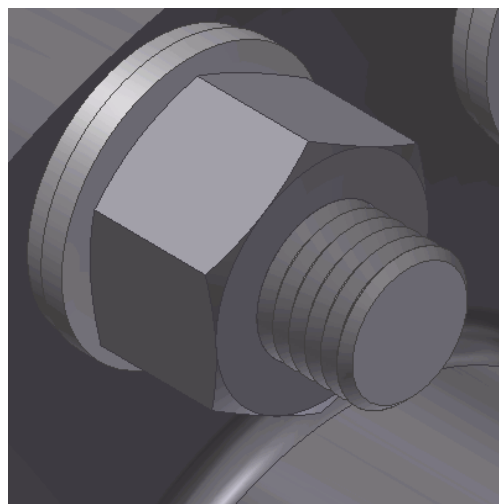
1. Place direct torque indicating washer with studs facing away from the fluid cylinder.



2. Place flat washer on stud



3. Tighten hex-nut down until you can no longer place a .005 feeler gauge into half of the gaps between the two washers.



SGWS FLUID END SERVICE TOOLS

Order by part number and description. Reference numbers are for your convenience only.

3.75- 4.0" TOOL-FL/CYL MAINTENANCE

Ref No.	Part Name	Qty.	Part No.
1	Packing Nut Wrench	1	200OPB933
2	2" Hex Wrench	1	P-A-09
3	Slide Hammer Puller	1	590PN006

4.5" - 6.75" TOOL-FL/CYL MAINTENANCE

Ref No.	Part Name	Qty.	Part No.
1	Packing Nut Wrench	1	200OPB933
2	3" Hex Wrench	1	342-A-89
3	Slide Hammer Puller	1	590PN006

VALVE SEAT PULLER KITS

Ref No.	Part Name	Qty.	Part No.
1	3.75" – 4" Valve Seat Puller Kit* (*Includes the following 3 items)	1	402THD6031
	* Seat Puller Jack Assembly	1	102014
	* Puller Head Assembly	1	PP1049188
	* Tool Box	1	H-400
2	4.5" – 5" Valve Seat Puller Kit* (*Includes the following 3 items)	1	403THD6031
	* Seat Puller Jack Assembly	1	102014
	* Puller Head Assembly	1	PP1062146
	* Tool Box	1	H-400
3	5.5" – 6" Valve Seat Puller Kit* (*Includes the following 3 items)	1	404THD6031
	* Seat Puller Jack Assembly	1	102014
	* Puller Head Assembly	1	PP1049189
	* Tool Box	1	H-400



北京

信德迈科技(北京)有限公司CNMEC Technology
北京朝阳区胜古中路2号金基业大厦201室
邮编：100029
电话：010-8428 2935 13910962635
传真：010-8428 8762
主页：[//www.cnmec.biz](http://www.cnmec.biz)
电子邮件：sales@cnmec.biz

西安

西安嘉岳自动化技术有限公司Garye Automation
地址：西安经开区凤城二路天地时代广场B座23层22312室
邮编：710016
电话：029 - 8610 8648 15319759129
传真：029 - 8610 6806
主页：<http://www.garye.cn>
电子邮件：sales@garye.cn

For additional information contact your local representative or
Gardner Denver Inc.
4747 South 83rd East Avenue, Tulsa, OK 74145
PH: (918) 664-1151, (800) 637-8099
FAX: (918) 664-6225
www.gardnerdenver.com

Specifications subject to change without notice.
Copyright © 2010 Gardner Denver, Inc. Litho in U.S.A.