

# 1" GEN2 10 ksi Damping Pressure Regulator

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
<b>REV 001</b>	<b>06/15/23</b>	<b>Document No: 135-061523-001</b>	<b>AJP</b>	<b>BR</b>

#### COMPANY PROPRIETARY INFORMATION

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#### For more information:

Call (800) 469-8786

[INFO@Gilmore.com](mailto:INFO@Gilmore.com)

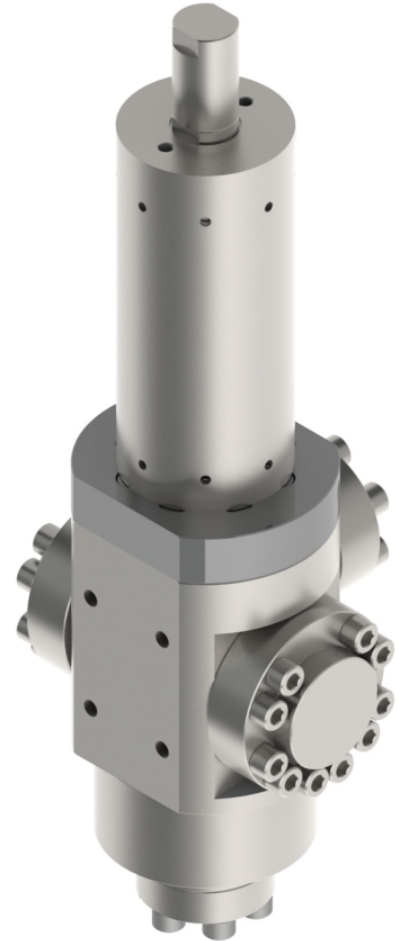
Gilmore  
1231 Lumpkin Road  
Houston, TX 77043

## 1" GEN2 10 ksi Damping Pressure Regulator

Gilmore announces the new 1" GEN2 10 ksi Damping Pressure Regulator, with manually adjustable spring for critical applications both subsea and topside. Gilmore's proprietary Tungsten Carbide seal trim combined with the patented damped carrier design provides benchmark reliability.

### Features and Benefits:

- Qualification exceeds API 16D requirements – 10,000 cycles
- Patented guided hydraulic damping technology:
  - Reduces oscillation, hunting, chattering and vibration
  - Allows for quicker system hydrostatic testing
- Low deadband performance optimizes reaction time
- Tungsten Carbide seal trim for debris tolerance
- Bolted plunger guide for ease of maintenance
- Dynamic Plunger T-Seal
- Improved Valve Materials:
  - 17-4PH 1150D Body & T316 Flanges
  - Nitronic 60 Seal Carrier
  - T316 Spring Housing



**Figure 1. PN 29230: 1" GEN2, Pressure Regulator, 10 ksi, Manual Spring, 3/4" SAE Ports, 5500-3000 psi range**

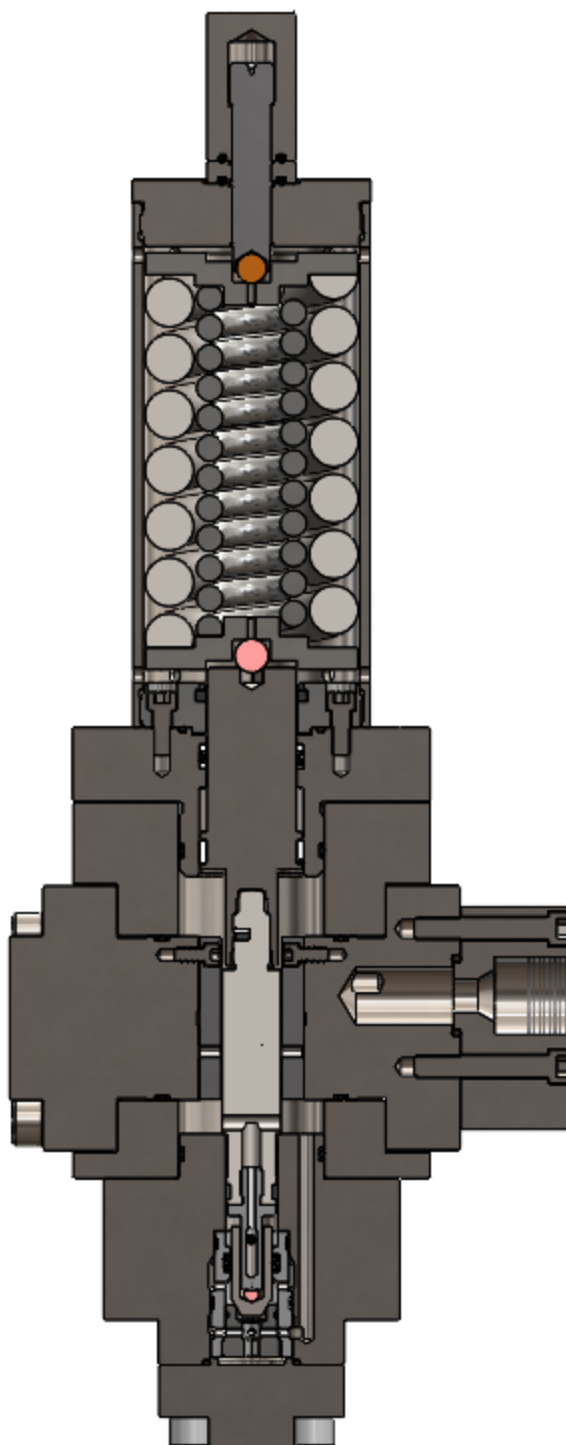


Figure 2. PN 29239: 1" GEN 2, Pressure Regulator, 10 ksi, Manual Spring, 1" MP Ports, 5500-3000 psi range

## 1" GEN2 10 ksi Damping Pressure Regulator

Gilmore has exceeded API 16D requirements by qualifying the new 1" GEN2 Damping 10 ksi Pressure Regulator designs to two endurance qualification tests of 10,000 cycles, at a maximum flow rate of 85 gpm at 10,000 psi, single inlet, with 1% - 4% water glycol test fluid.

**Table 1. New 1" GEN2 Damping Pressure Regulator:**

Item	New Valve Description	New Valve PN	New Repair Kit PN
1	1" GEN2 Regulator, Damping, 10 ksi, Manual, ¾" SAE, Single Inlet, 5500-3000 psi range	29230	29230 RK
2	1" GEN2 Regulator, Damping, 10 ksi, Manual, ¾" SAE, Single Inlet, 3500-2000 psi range	29231	29231
3	1" GEN2 Regulator, Damping, 10 ksi, Manual, 1" MP Ports, Single Inlet, 3500-2000 psi range	29238	29230 RK
4	1" GEN2, Regulator, Damping, 10 ksi, Manual, 1" MP Ports, Single Inlet, 5500-3000 psi range	29239	29230 RK
5	1" GEN2, Regulator, Damping, 10 ksi, Manual, 1" MP Ports, Dual Inlet, 5500-3000 psi range	29240	29230 RK

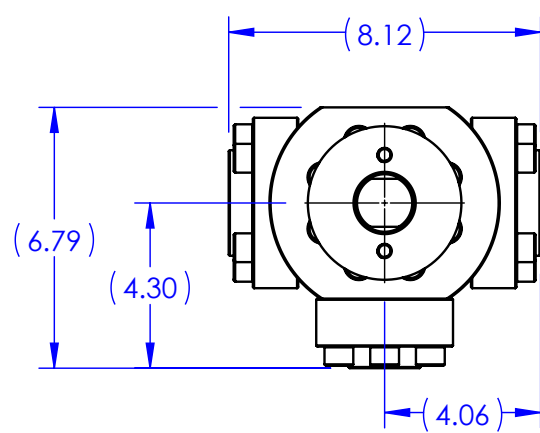
The new product family of 1" GEN2 10 ksi Damping Pressure Regulator designs is now available. Specific customer requirements for different actuators or connection types will be accommodated. Please contact Gilmore Customer Service to request additional drawings and quotations for these new 1" GEN2 10ksi Damping Pressure Regulators at [Info@gilmore.com](mailto:Info@gilmore.com).

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**PRESSURE DATA**  
 SUPPLY PRESSURE: 10,000 PSI  
 REGULATED PRESSURE: 5,500 - 3,000 PSI  
 VENT PRESSURE: 5,500 PSI  
 GAUGE PRESSURE: 5,500 PSI

**FLOW DATA**  
 (B) DEADBAND DECREASE @ 10 KSI = 800 ± 200 PSI  
 DECREASE @ 7.5 KSI = 600 ± 100 PSI  
 DEADBAND INCREASE @ 10 KSI = 1000 ± 200 PSI  
 INCREASE @ 7.5 KSI = 1000 ± 200 PSI  
 Cv SUPPLY: 7 (CALC)  
 Cv VENT: 1 (CALC)  
 TYPICAL HIGH DEMAND SYSTEM FLOW RATE: 65-85 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

REVISIONS						
REV	ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	024876	JB 3/28/23	RV 3/28/23	AJP 3/28/23	[Signature] 3/29/23	VP 3/29/23

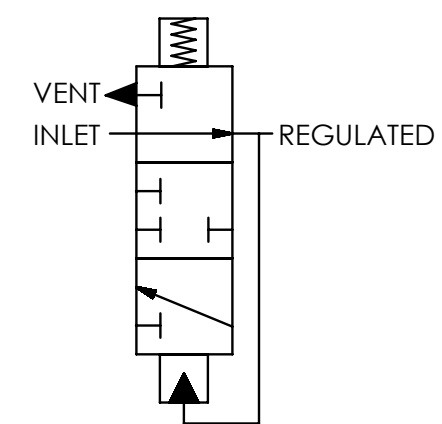
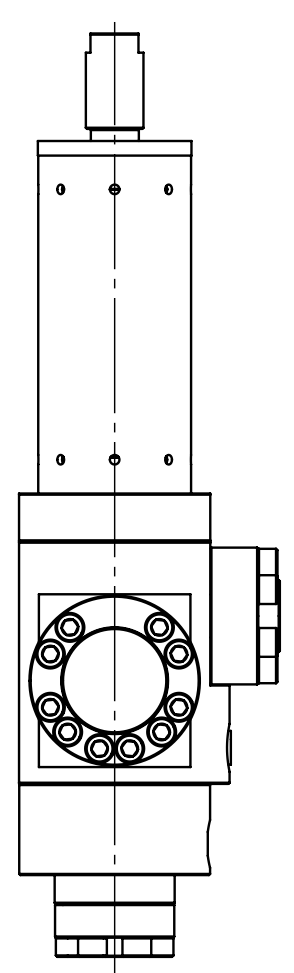
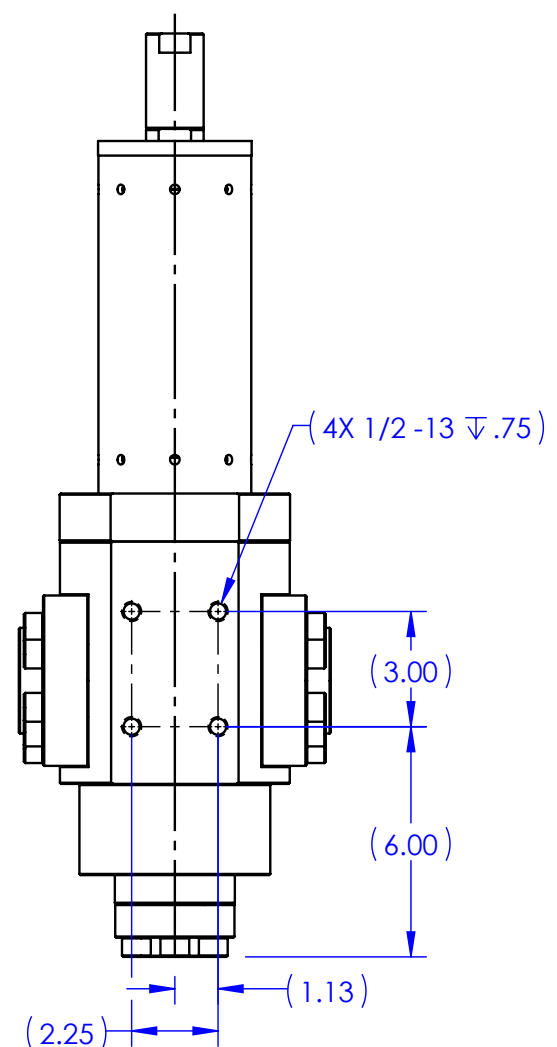
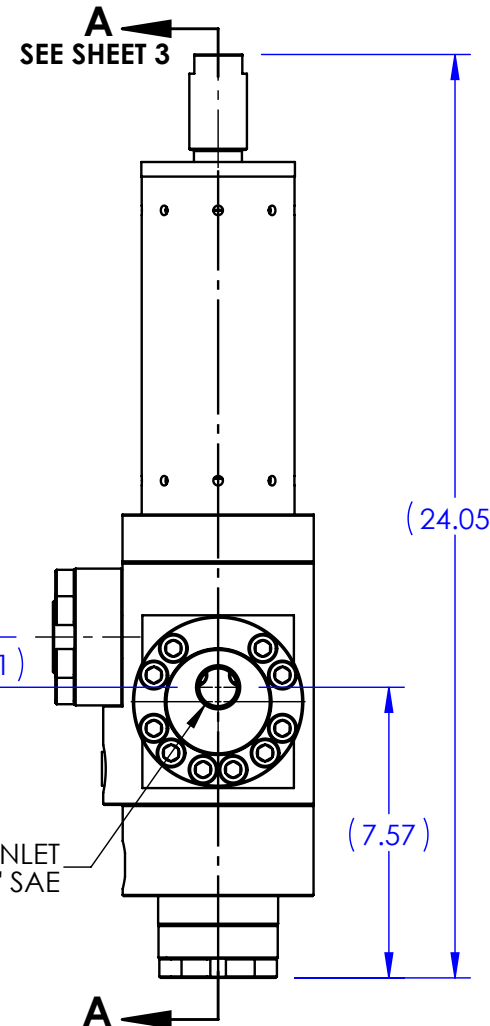
**PORTS**  
 INLET: 3/4" SAE  
 REGULATED OUTLET: 3/4" SAE  
 VENT: 1/2" SAE  
 GAGE: 1/2" SAE

**GENERAL DATA**  
 TEMP RANGE: 32°F TO 150°F  
 APPROX WEIGHT: 107 LBS  
 ONE ADJUSTMENT TURN EQUALS  
 △ 700 PSI SETPOINT CHANGE

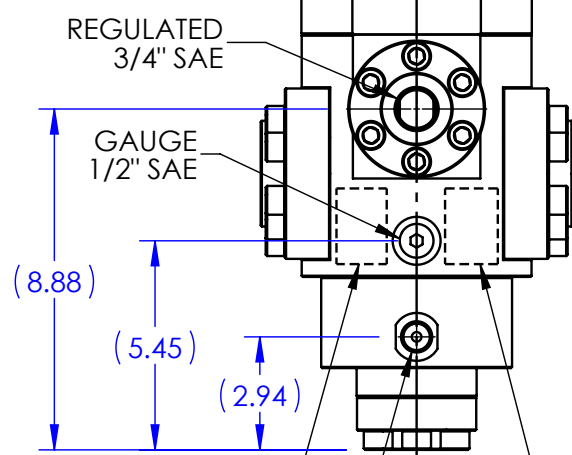
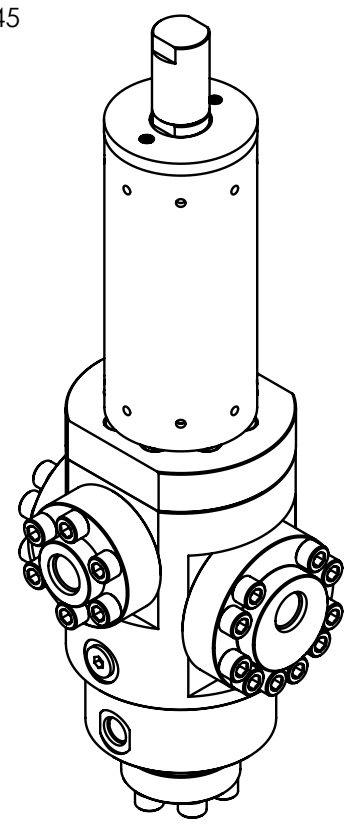
- NOTES:
- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
  - REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT WITH SUPPLY PRESENT
  - X IN THE BOM INDICATES PARTS IN REPAIR KIT 29230 RK AND SEAL KIT 29230 SK.
  - ASSEMBLY PROCEDURE: 50397  
 STANDARD FAT PROCEDURE: 50398  
 EXTENDED FAT PROCEDURE: 50399  
 SERVICE MANUAL: 51045
  - TORQUE TO 10 FT/LB
  - TORQUE TO 50 FT/LB
  - TORQUE TO 5 FT/LB
  - TORQUE TO 40 FT/LB
  - ALL MANUFACTURED ITEMS ARE PASSIVATED.

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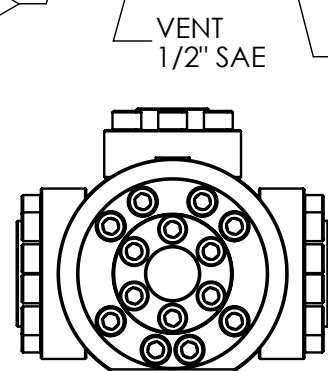
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SCHEMATIC



**Gilmore GEN2**  
 LOGO AND COMPANY INFO



29230  
 VER (AX VERSION #)  
 (SERIAL NUMBER)  
 10,000 PSI  
 PATENT: 9,657,850 & 10,739,796  
 (DATE OF MFG)  
 SEE SHOP TRAVELER  
 FOR ADDITIONAL  
 INFO REQUIRED

U.S. PATENT 9,657,850 & 10,739,796

(B)

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THIRD ANGLE PROJECTION ESTIMATED WEIGHT: 107 LBS	MATERIAL: SEE BOM	APPROVAL		
	CONDITION:	DRAWN BY CMY	DATE 2/15/2023	
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.	TREATMENT:	DRAFT CHECKED BY JB	DATE 2/15/2023	<b>VALVE, 10k REGULATOR, DAMPING, MANUAL, GEN 2, 3/4" SAE SINGLE INLET, 3000-5500 PSI, DAMPENED</b>
	PROCEDURE NUMBER:	ENGR. REVIEW BY AJP	DATE 2/15/2023	
		ENGR. APPROVE BY MS	DATE 2/15/2023	SIZE <b>B</b>
		MFG. APPROVE BY	DATE	DWG NO
		ECO NUMBER 024584	DATE 2/9/2023	<b>29230</b>
				REV <b>B</b>
				SCALE 1:8
				SolidWorks
				SHEET 1 OF 5

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## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	192384	ADAPTER, SPRING HOUSING	A276 TP S21800 (NITRONIC 60)	1		
2	177586	HOUSING, SPRING	A511 MT 316/316L	1		
3	219621	CAP, SPRING HOUSING, 3/4 NC	A276 UNS S21800 (NITRONIC 60)	1		
4	219618	NUT, O-LOCK, 3/4 NC	A276 TP 316 (316SS)	1		
5	219619	CAP, LOCK, 3/4 NC	A276 TP 316 (316SS)	1		
6	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE/NICKEL	1	X	
7	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE/NICKEL	4	X	
8	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X	
9	219620	SCREW, ADJUSTING, 3/4 NC	F593 GR2 (T316)	1		
10	193757	PLATE, SPRING, 1-1/4"	A276 TP 316	2		
11	192847	SPRING, COMPRESSION	X-750	1		
12	13125	SPRING, COMPRESSION	INCONEL X750	1		
13	154797	PELLET, NYLOK	NYLON	1	X	X
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LG	316/316L	6	X	X
15	18100-103K1	O-RING	HNBR	1	X	X
16	18100-051K1	O-RING	HNBR	2	X	X
17	18100-082K1	O-RING	HNBR	3	X	X
18	18100-026K1	O-RING	HNBR	4	X	X
19	18100-113K1	O-RING	HNBR	2	X	X
20	18100-009K1	O-RING	HNBR	2	X	X
21	193354	WEARBAND, 1-1/4"	PEEK	2	X	X
22	192385	WIPER, D-STYLE, 1-1/4" OD PLUNGER	POLYURETHANE	1	X	X
23	195435	RING, BACKUP	PEEK	4	X	X
24	195437	RING, BACKUP	PEEK	8	X	X
25	154659	RING, BACKUP	PEEK	4	X	X
26	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE/NICKEL	1	X	
27	161776	WEARBAND, SEAL CONTAINER	PEEK	1	X	X
28	204649	BODY	A564 TP 630	1		
29	204659	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1		
30	231939	GUIDE, PLUNGER, 1-1/4"	A276 TP 316 (316 SS)	1		
31	204654	FLANGE, BLANK	A276 TP 316 (316 SS)	1		
32	204653	FLANGE, 3/4" SAE	A276 TP 316 (316 SS)	1		
33	204655	FLANGE, OULET, 3/4" SAE	A276 TP 316 (316 SS)	1		
34	204651	COVER, VENT VALVE	A276 TP 316 (316 SS)	1		

## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
35	204663	LIFTER, VENT VALVE	A564 TP 630 (17-4 PH)	1		
36	236163	SEAT, VENT VALVE	30% CARBON FILLED PEEK	1	X	X
37	204665	POPPET, VENT VALVE	NITRONIC 60	1	X	X
38	204650	BODY, VENT VALVE	A276 TP 316 (316 SS)	1		
39	204667	SPACER, VENT VALVE	A276 TP S21800 (NITRONIC 60)	1		
40	18100-090K1	O-RING	HNBR	1	X	X
41	204669	RING, BACKUP	PEEK	2	X	X
42	231940	PLUNGER, 1-1/4"	A276 TP S21800 (NITRONIC 60)	1		
43	18100-012K1	O-RING	HNBR	1	X	X
44	204670	RING, BACKUP	PEEK	2	X	X
45	204671	RING, BACKUP	PEEK	2	X	X
46	18100-002K1	O-RING	HNBR	1	X	X
47	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X	X
48	192473	WEAR BAND, PLUNGER, 1-1/4"	DELIN AF	1	X	X
49	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
50	204666	PIN, SPRIOL	STAINLESS STEEL T420 (UNS S42000)	1	X	X
51	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A453 GR 660	26		
52	18224-030	SHCS, 1/2-13 UNC X 2-1/2" LG	A453 GR660	8		
53	18224-005	SHCS 0.500-13 UNC X 1.50 LG	A453 GR660	14		
54	18224-045	SHCS, 5/16-18 UNC X 3/4" LG	A453 GR 660	4		
55	18108-509	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
56	18100-007K1	ORING	HNBR	1	X	X
57	18800-043	BALL, 9/16" DIA	A276 TP 316	1		
58	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
59	18800-021	BALL, 1/4" DIA.	NITRILE	1	X	X


**Gilmore**
**ENGINEERING**

SIZE	DWG NO	REV
<b>B</b>	<b>29230</b>	<b>B</b>
SCALE	1:8	SHEET 2 OF 5
SolidWorks		

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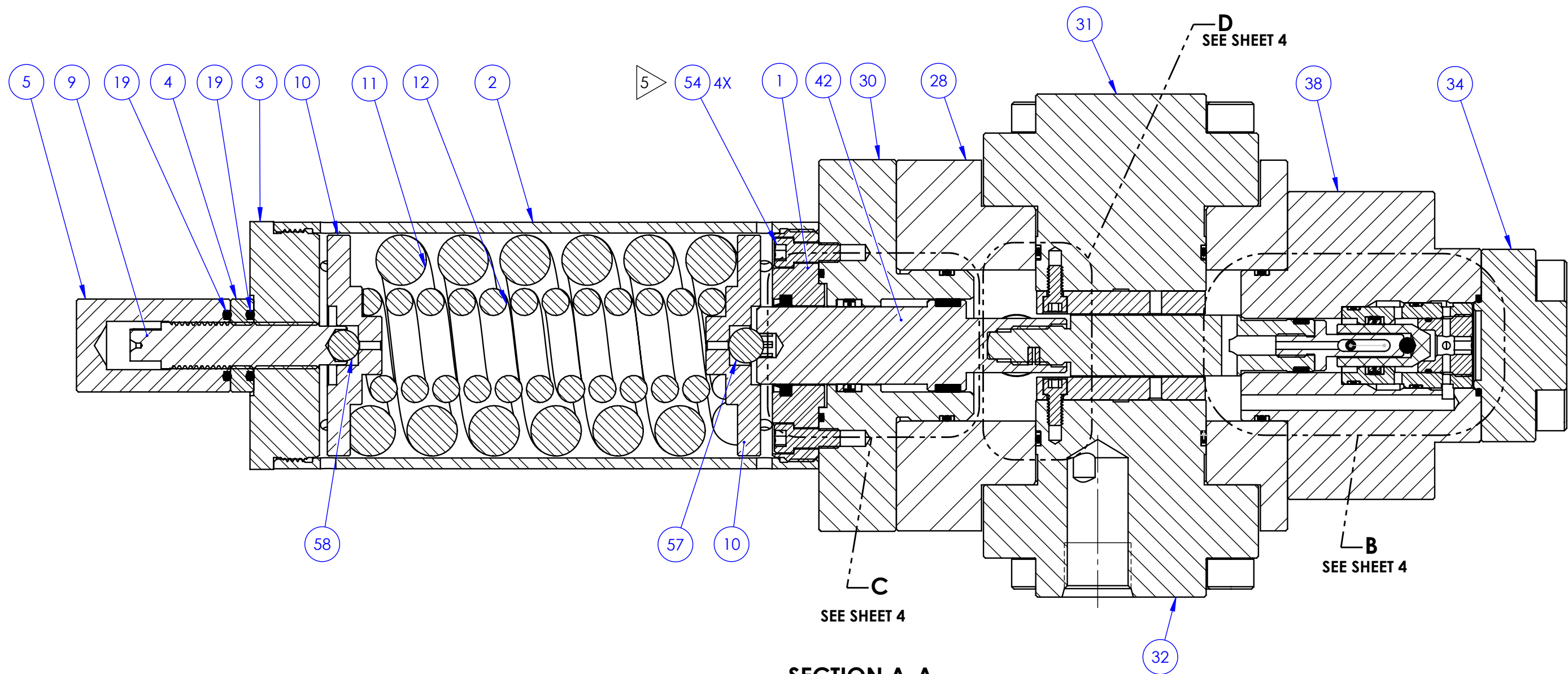
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**SECTION A-A  
ROTATED 90°**

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SIZE <b>B</b>	DWG NO <b>29230</b>	REV <b>B</b>
SCALE 1:8	SolidWorks	SHEET 3 OF 5

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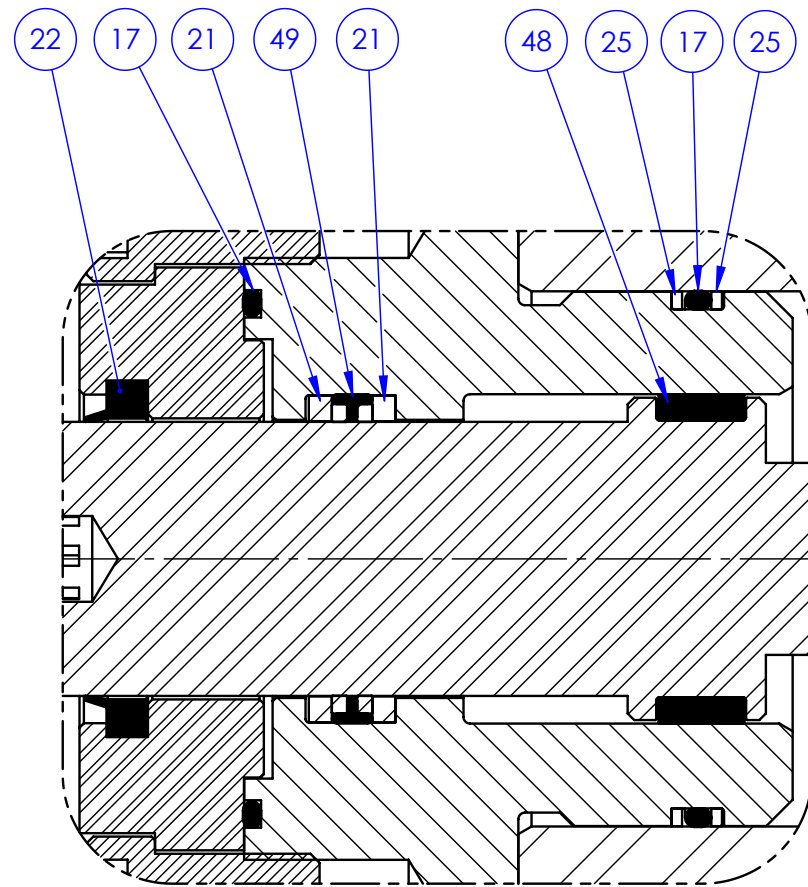
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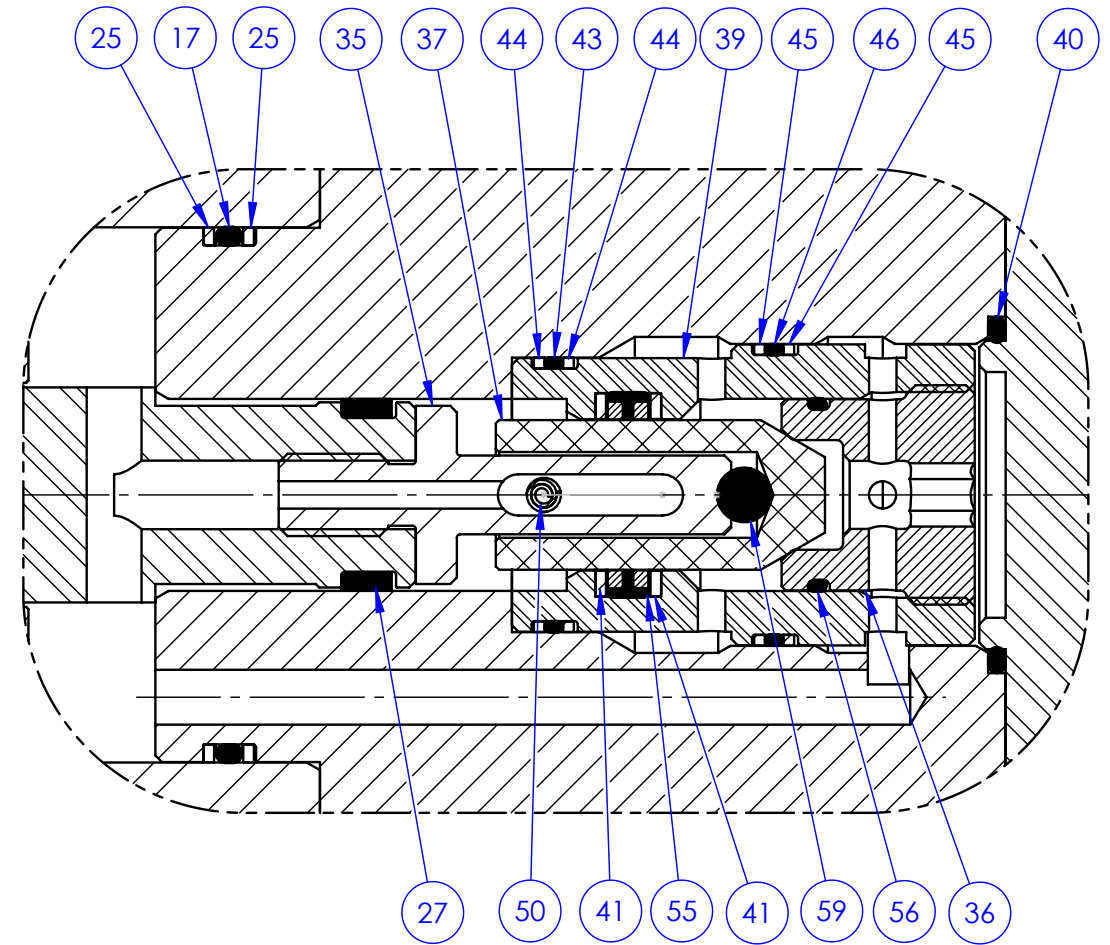
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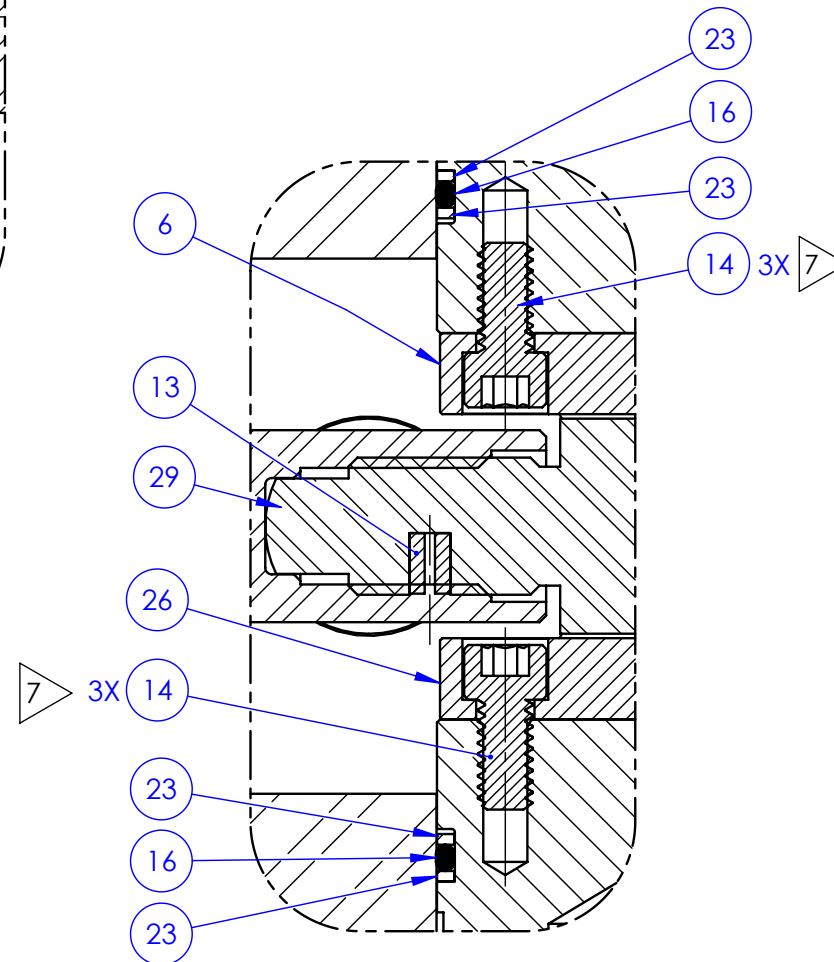
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DETAIL C



DETAIL B



DETAIL D

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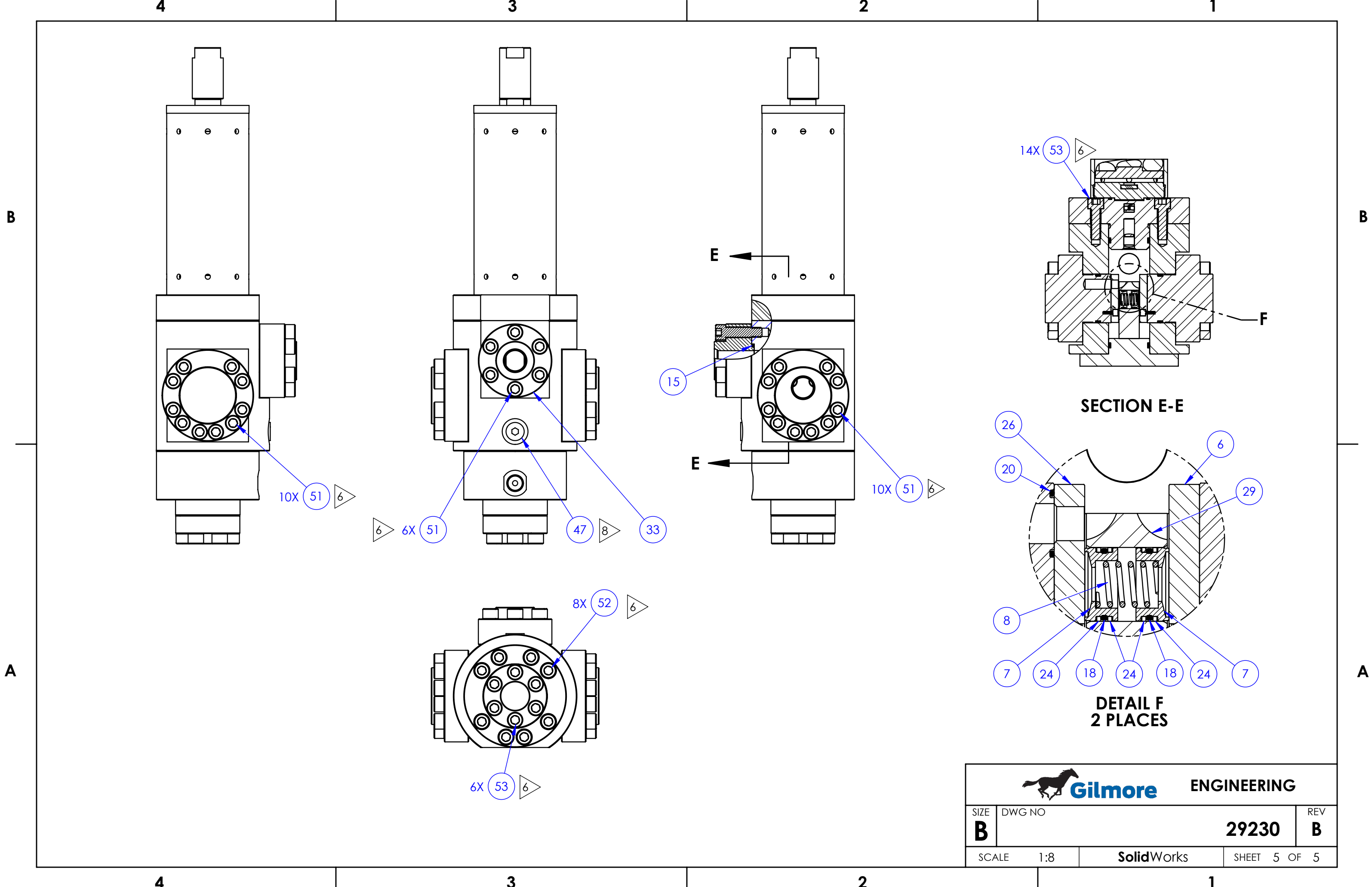
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SIZE <b>B</b>	DWG NO <b>29230</b>
SCALE 1:8	REV <b>B</b>
SolidWorks	SHEET 4 OF 5





SIZE	DWG NO	REV
<b>B</b>	<b>29230</b>	<b>B</b>
SCALE	1:8	SHEET 5 OF 5
SolidWorks		

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REVISIONS						
REV	ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	024876	JB 3/28/23	RV 3/28/23	AJP 3/28/23	VP 3/29/23	VP 3/29/23

**PRESSURE DATA**

SUPPLY PRESSURE: 10,000 PSI  
 REGULATED PRESSURE: 3,500 - 2,000 PSI  
 VENT PRESSURE: 5,500 PSI  
 GAUGE PRESSURE: 5,500 PSI

**FLOW DATA**

DEADBAND DECREASE @ 10 KSI = 800 ± 200 PSI  
 DECREASE @ 7.5 KSI = 600 ± 200 PSI  
 DEADBAND INCREASE @ 10 KSI = 1000 ± 200 PSI  
 INCREASE @ 7.5 KSI = 1000 ± 200 PSI

Cv SUPPLY: 7 (CALC)  
 Cv VENT: 1 (CALC)  
 TYPICAL HIGH DEMAND SYSTEM FLOW RATE: 65-85 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS**

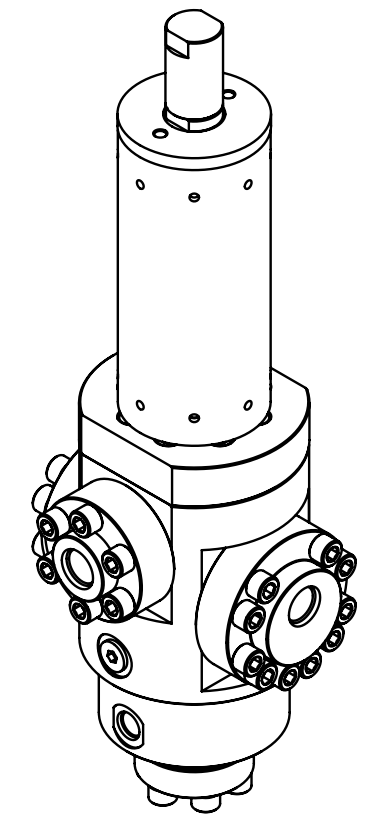
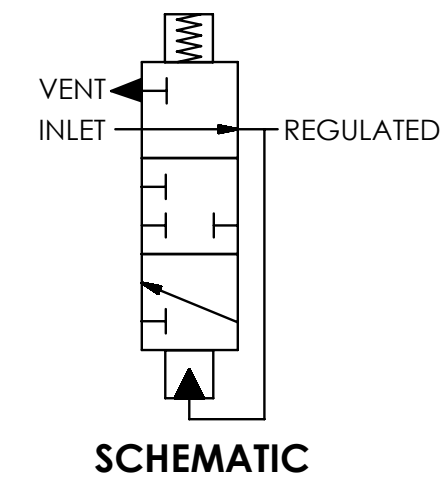
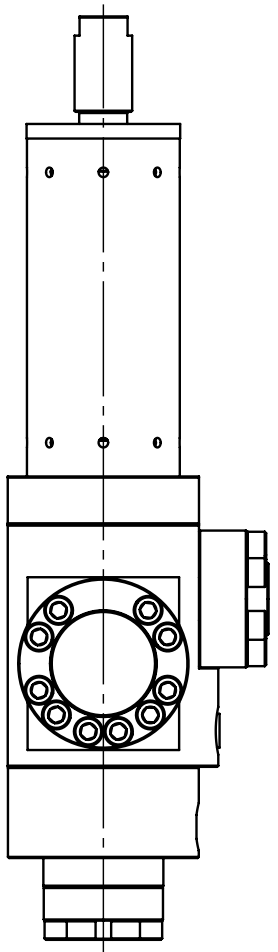
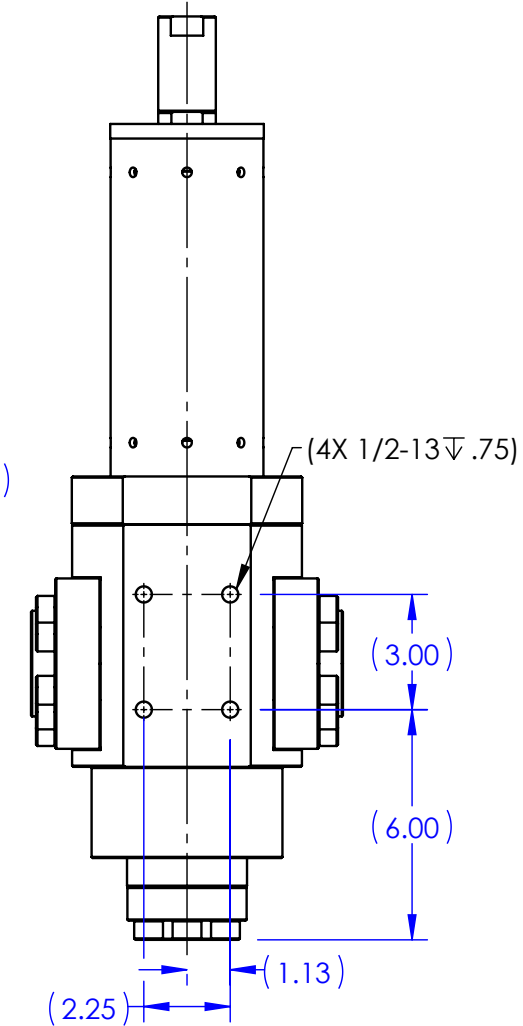
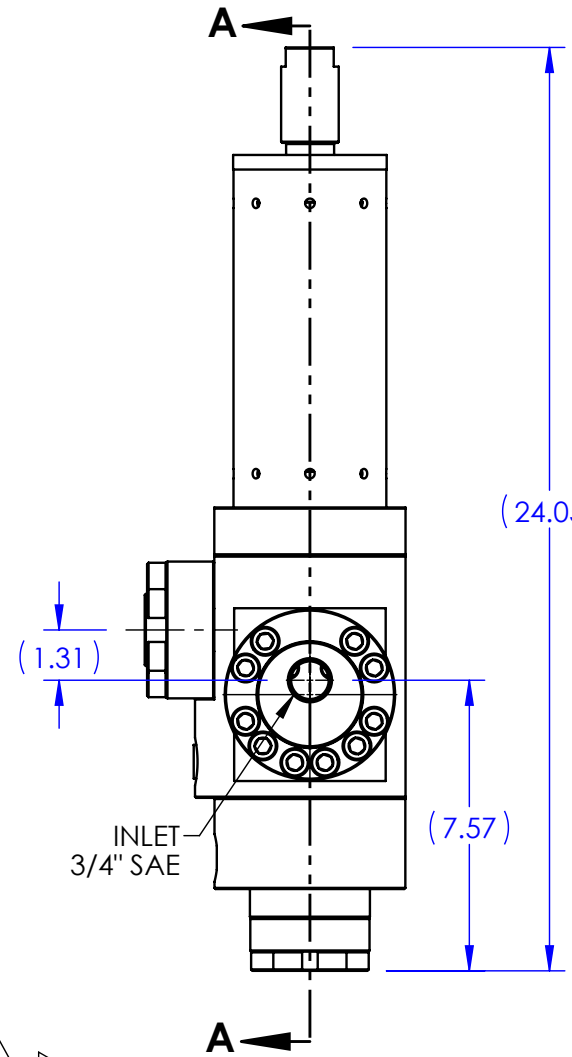
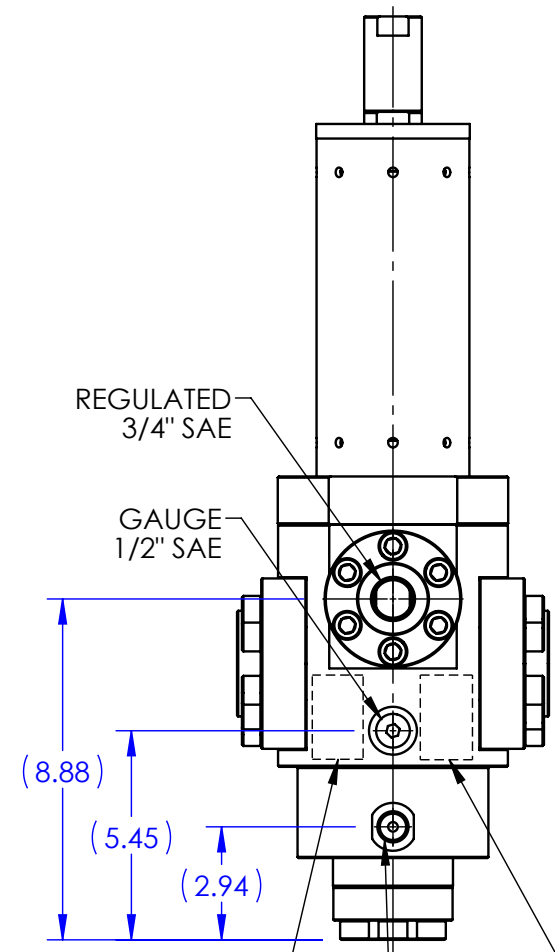
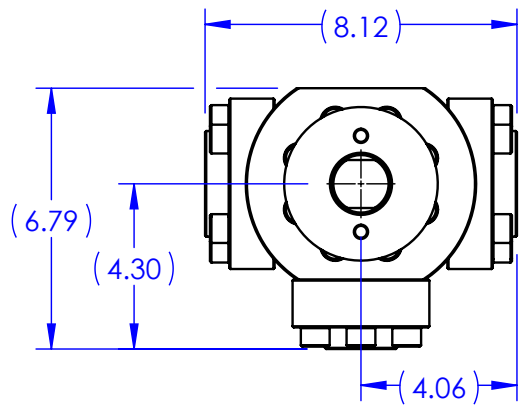
INLET: 3/4" SAE  
 REGULATED OUTLET: 3/4" SAE  
 VENT: 1/2" SAE  
 GAGE: 1/2" SAE

**GENERAL DATA**

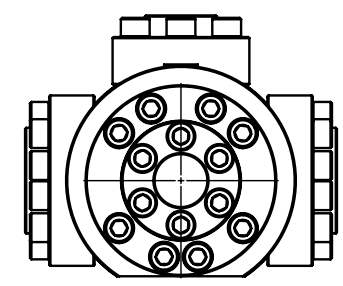
TEMP RANGE: 32°F TO 150°F  
 APPROX WEIGHT: 107 LBS  
 ONE ADJUSTMENT TURN EQUALS  
 Δ 400 PSI SET POINT CHANGE

NOTES:

- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT WITH SUPPLY PRESENT
- X IN THE BOM INDICATES PARTS IN REPAIR KIT 29231 RK AND SEAL KIT 29231 SK.
- ASSEMBLY PROCEDURE: 50397  
 STANDARD FAT PROCEDURE: 50398  
 EXTENDED FAT PROCEDURE: 50399  
 SERVICE MANUAL: 51045
- TORQUE TO 10 FT/LB
- TORQUE TO 50 FT/LB
- TORQUE TO 5 FT/LB
- TORQUE TO 40 FT/LB
- ALL MANUFACTURED ITEMS ARE PASSIVATED.



U.S. PATENT 9,657,850 & 10,739,796



29231  
 VER (AX VERSION #)  
 (SERIAL NUMBER)  
 10,000 PSI  
 PATENT: 9,657,850 & 10,739,796  
 (DATE OF MFG)  
  
 SEE SHOP TRAVELER  
 FOR ADDITIONAL  
 INFO REQUIRED

THIRD ANGLE PROJECTION	MATERIAL: SEE BOM	APPROVAL	
	ESTIMATED WEIGHT: 107 lbs	DRAWN BY CMY	DATE 2/15/2023
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.	CONDITION:	DRAFT CHECKED BY JB	DATE 2/15/2023
	TREATMENT:	ENGR. REVIEW BY AJP	DATE 2/15/2023
	PROCEDURE NUMBER:	ENGR. APPROVE BY MS	DATE 2/15/2023
		MFG. APPROVE BY VP	DATE 2/15/2023
		ECO NUMBER 024612	DATE 2/14/2023

**Gilmore ENGINEERING**

**VALVE, 10k REGULATOR, DAMPING, MANUAL, GEN 2, 3/4"SAE, SINGLE INLET, 2000-3500 PSI, DAMPENED**

SIZE <b>B</b>	DWG NO	REV <b>B</b>
SCALE 1:5		SHEET 1 OF 5

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## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	156614	ADAPTER, SPRING HOUSING	A276 TP S21800 (NITRONIC 60)	1		
2	177586	HOUSING, SPRING	A511 MT 316/316L	1		
3	219621	CAP, SPRING HOUSING	A276 UNS S21800 (NITRONIC 60)	1		
4	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
5	219619	CAP, LOCK, .75 NC	A276 TP 316 (316SS)	1		
6	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE/NICKEL	1	X	
7	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE/NICKEL	4	X	
8	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X	
9	219620	SCREW, ADJUSTING, .75 NC	F593 GR2 (T316)	1		
10	154526	PLATE, SPRING	A276 TP 316	2		
11	12968	SPRING, COMPRESSION	A313 TP 316	1		
12	13125	SPRING, COMPRESSION	INCONEL X750	1		
13	154797	PELLET, NYLOK	NYLON	1	X	X
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LG	316/316L	6	X	X
15	18100-103K1	O-RING	HNBR	1	X	X
16	18100-051K1	O-RING	HNBR	2	X	X
17	18100-082K1	O-RING	HNBR	3	X	X
18	18100-026K1	18100-026K1	BUNA-N	4	X	X
19	18100-113K1	O-RING	HNBR	2	X	X
20	18100-009K1	O-RING	HNBR	2	X	X
21	158317	RING, BACKUP	DELIN AF	2	X	X
22	161775	WIPER, D-STYLE, 1.500 PLUNGER	POLYURETHANE	1	X	X
23	195435	RING, BACKUP	PEEK	4	X	X
24	195437	RING, BACKUP	PEEK	8	X	X
25	154659	RING, BACKUP	PEEK	4	X	X
26	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE/NICKEL	1	X	
27	161776	WEAR BAND, SEAL CARRIER	DELIN AF	1	X	X
28	204649	BODY	A564 TP 630	1		
29	204659	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1		
30	204652	GUIDE, PLUNGER, 1-1/2"	A276 TP 316 (316 SS)	1		
31	204654	FLANGE, BLANK	A276 TP 316 (316 SS)	1		
32	204653	FLANGE, 3/4" SAE	A276 TP 316 (316 SS)	1		
33	204655	FLANGE, OUTLET, 3/4" SAE	A276 TP 316 (316 SS)	1		
34	204651	COVER, VENT VALVE	A276 TP 316 (316 SS)	1		

## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
35	204663	LIFTER, VENT VALVE	A564 TP 630 (17-4 PH)	1		
36	236163	SEAT, VENT VALVE	30% CARBON FILLED PEEK	1	X	X
37	204665	POPPET, VENT VALVE	A276 UNS S21800	1	X	X
38	204650	BODY, VENT VALVE	A276 TP 316 (316 SS)	1		
39	204667	SPACER, VENT VALVE	A276 S21800	1		
40	18100-090K1	O-RING	HNBR	1	X	X
41	204669	RING, BACKUP	PEEK	2	X	X
42	204660	PLUNGER, 1-1/2"	A276 TP S21800 (NITRONIC 60)	1		
43	18100-012K1	O-RING	HNBR	1	X	X
44	204670	RING, BACKUP	PEEK	2	X	X
45	204671	RING, BACKUP	PEEK	2	X	X
46	18100-002K1	O-RING	HNBR	1	X	X
47	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X	X
48	184195	WEAR BAND, PLUNGER	DELIN AF	1	X	X
49	18108-522	T-SEAL, ROD	CARBOXYLATED NITRILE / NYLATRON	1	X	X
50	204666	PIN, SPRIOL, .156" OD, .625" LG	STAINLESS STEEL T420 (UNS S42000)	1	X	X
51	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A453 GR 660	26		
52	18224-030	SHCS, 1/2-13 UNC X 2-1/2" LG	A453 GR660	8		
53	18224-005	SHCS 0.500-13 UNC X 1.50 LG	A453 GR660	14		
54	18224-045	SCHS, 5/16-18 UNC X 3/4" LG	A453 GR 660	4		
55	18108-509	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
56	18100-007K1	ORING	HNBR	1	X	X
57	18800-043	BALL, 9/16" DIA	A276 TP 316	1		
58	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
59	18800-021	BALL, 1/4" DIA.	NITRILE	1	X	X


**Gilmore**
**ENGINEERING**

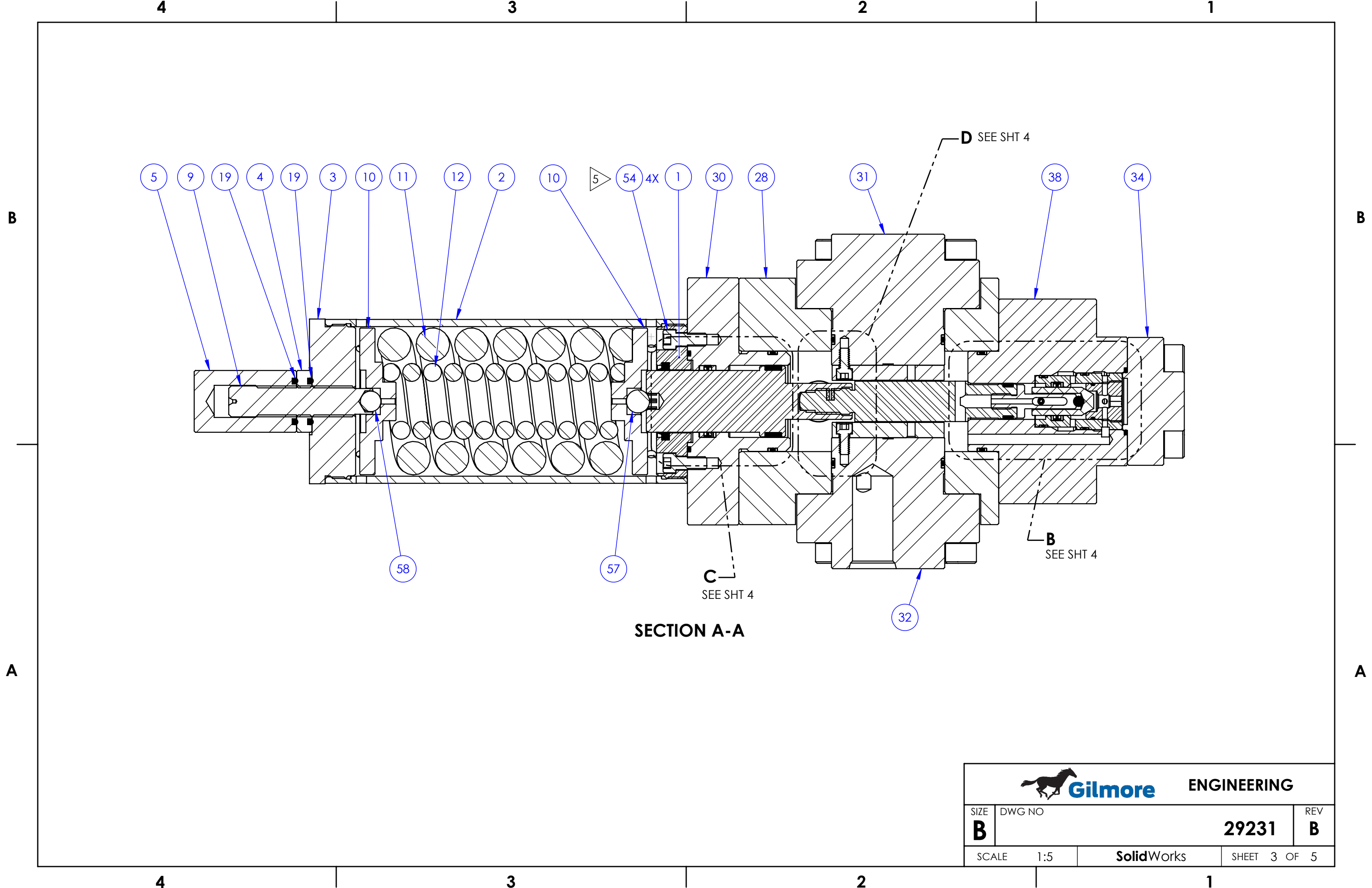
SIZE	DWG NO	REV
<b>B</b>	<b>29231</b>	<b>B</b>
SCALE	1:12	SHEET 2 OF 5
SolidWorks		

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**SECTION A-A**

		
SIZE <b>B</b>	DWG NO <b>29231</b>	REV <b>B</b>
SCALE 1:5	SolidWorks	SHEET 3 OF 5

4

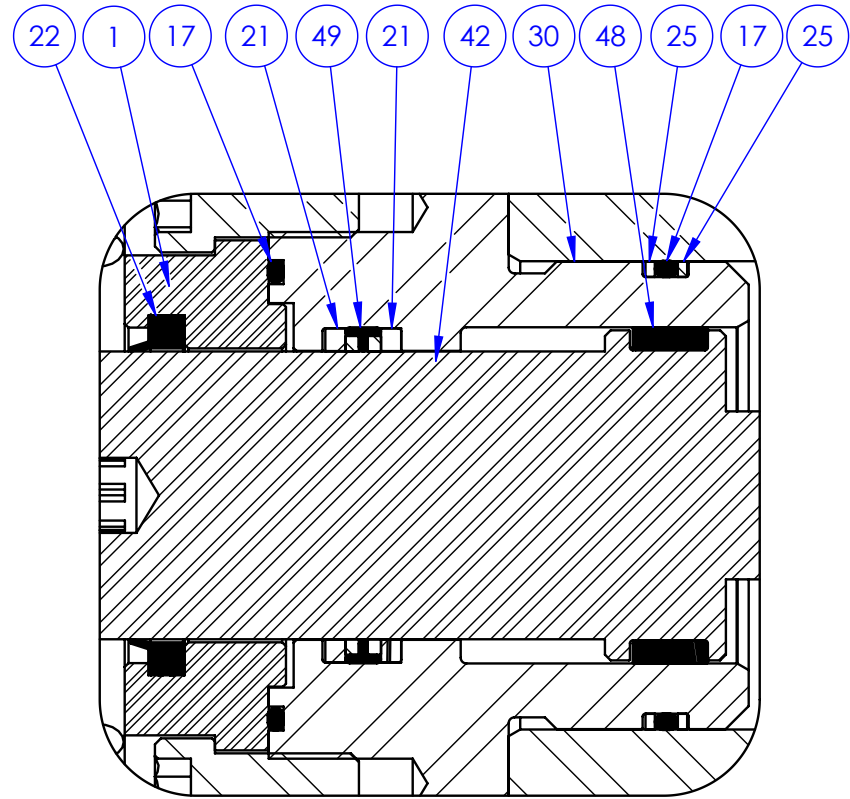
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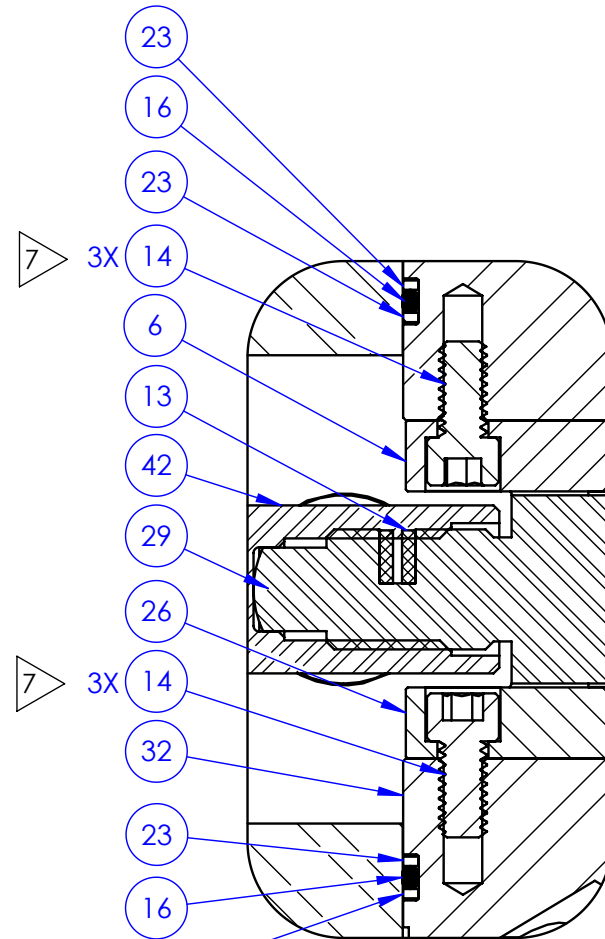
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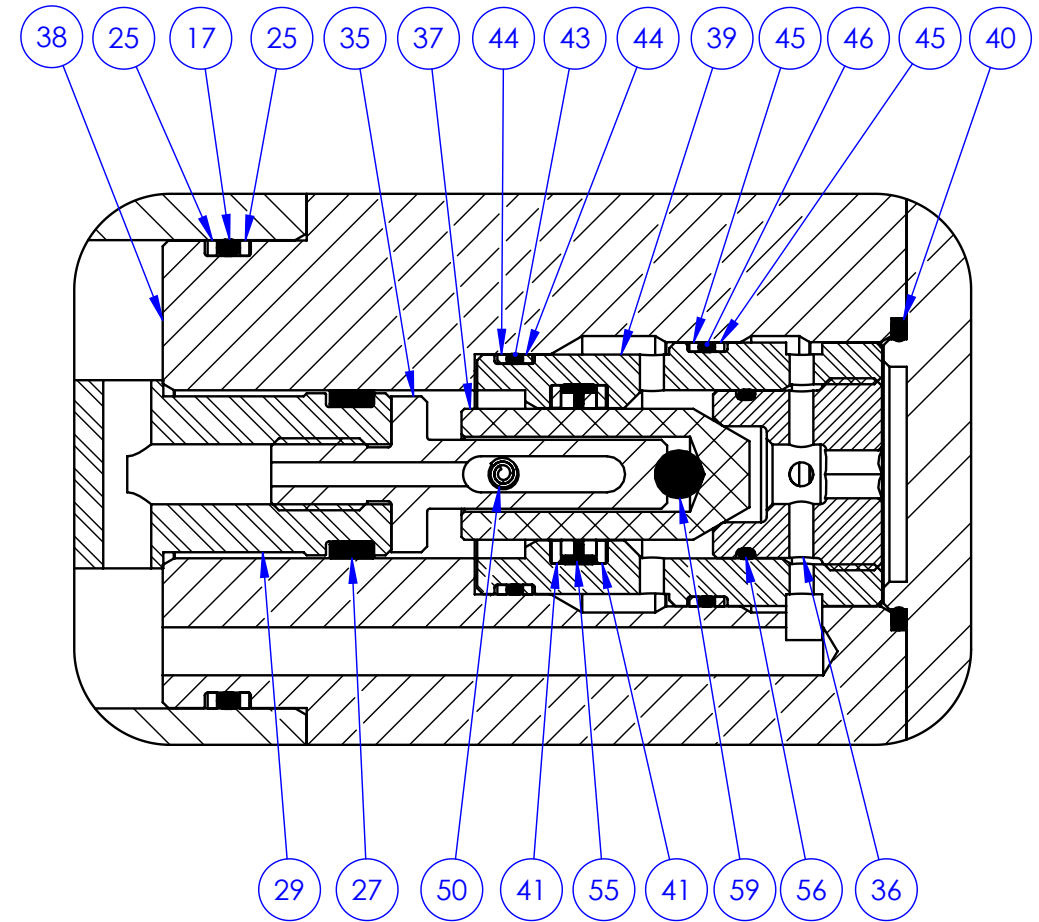
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DETAIL C



DETAIL D



DETAIL B

A

A

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**Gilmore**

**ENGINEERING**

SIZE

DWG NO

REV

**B**

**29231**

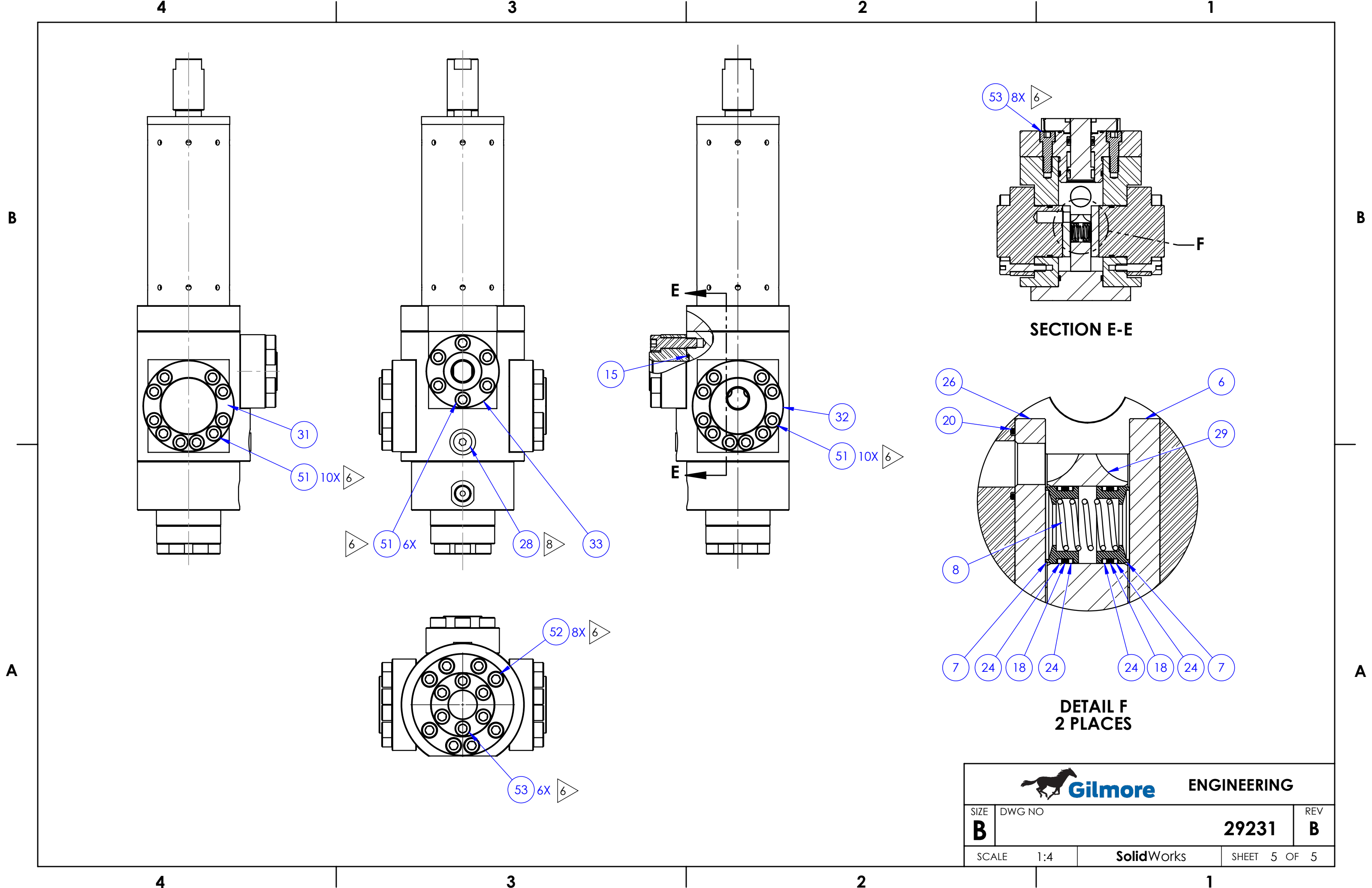
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SCALE

1:5

**SolidWorks**

SHEET 4 OF 5



SIZE <b>B</b>	DWG NO <b>29231</b>	REV <b>B</b>
SCALE 1:4	SolidWorks	SHEET 5 OF 5

4

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REVISIONS						
REV	ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	024876	JB 3/27/23	RV 3/28/23	AP 3/28/23	MP 3/29/23	VP 3/29/23

**PRESSURE DATA**

SUPPLY PRESSURE: 10,000 PSI  
 REGULATED PRESSURE: 3,500 - 2,000 PSI  
 VENT PRESSURE: 5,500 PSI  
 GAUGE PRESSURE: 5,500 PSI

**FLOW DATA**

DEADBAND DECREASE @ 10 KSI = 800 ± 200 PSI  
 DECREASE @ 7.5 KSI = 600 ± 100 PSI  
 DEADBAND INCREASE @ 10 KSI = 1000 ± 200 PSI  
 INCREASE @ 7.5 KSI = 1000 ± 200 PSI

Cv SUPPLY: 7 (CALC)  
 Cv VENT: 1 (CALC)  
 TYPICAL HIGH DEMAND SYSTEM FLOW RATE: 65-85 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS**

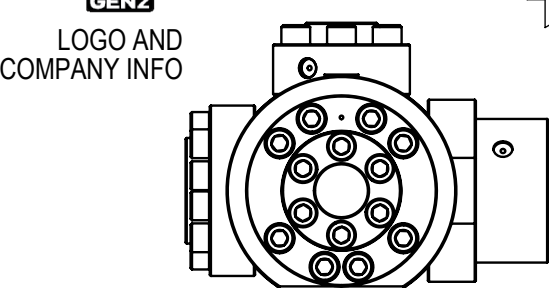
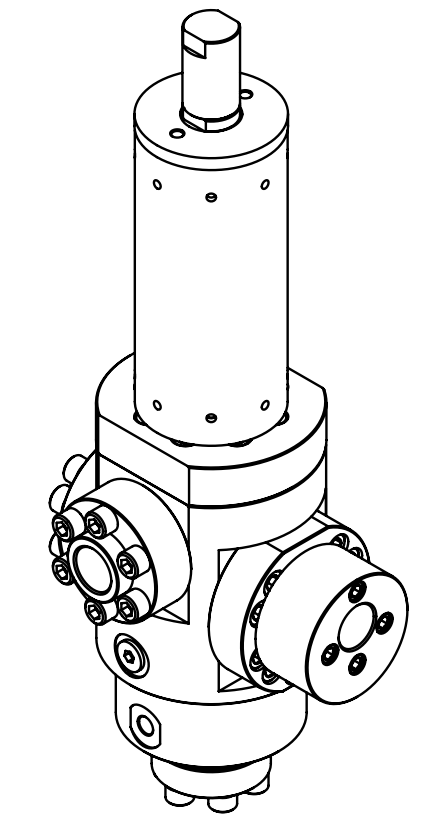
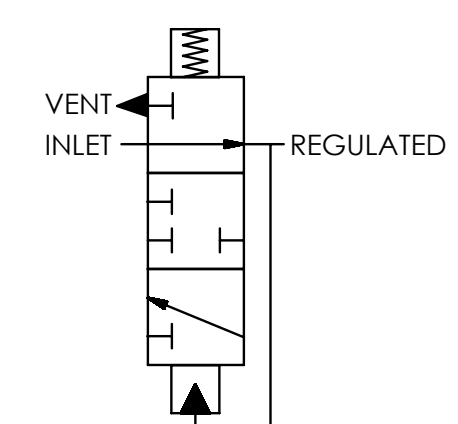
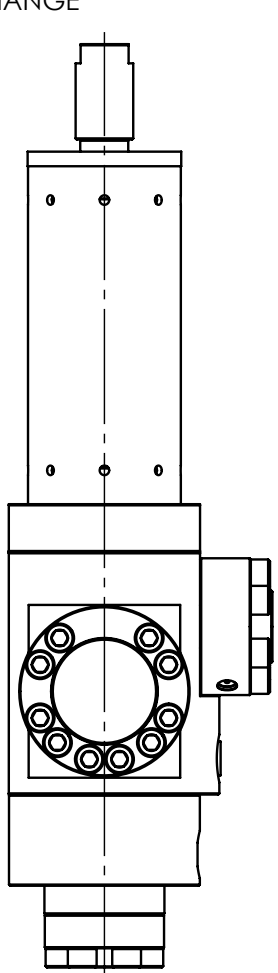
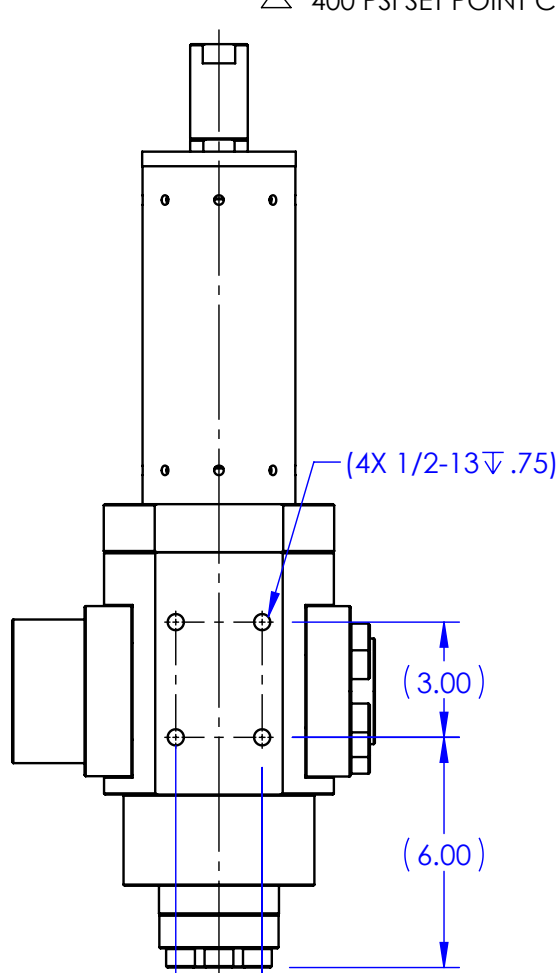
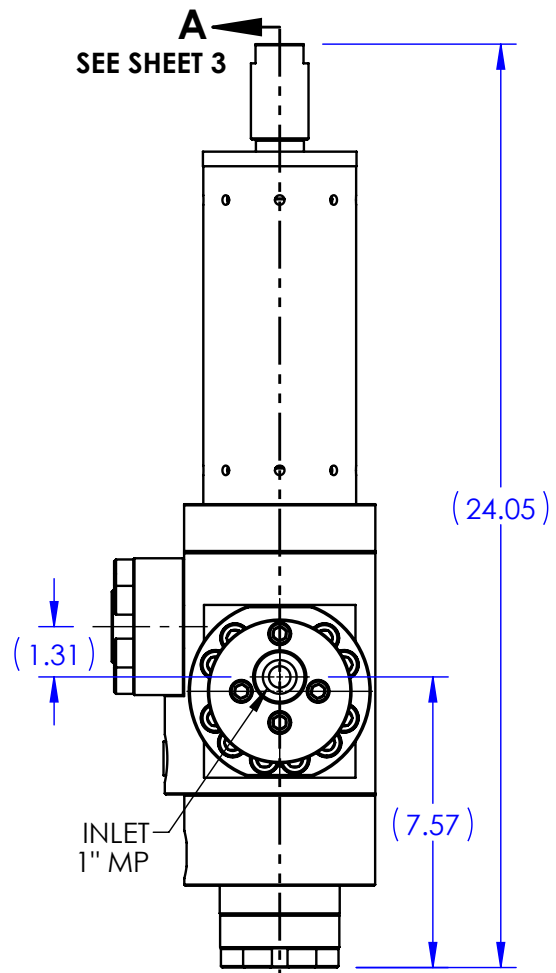
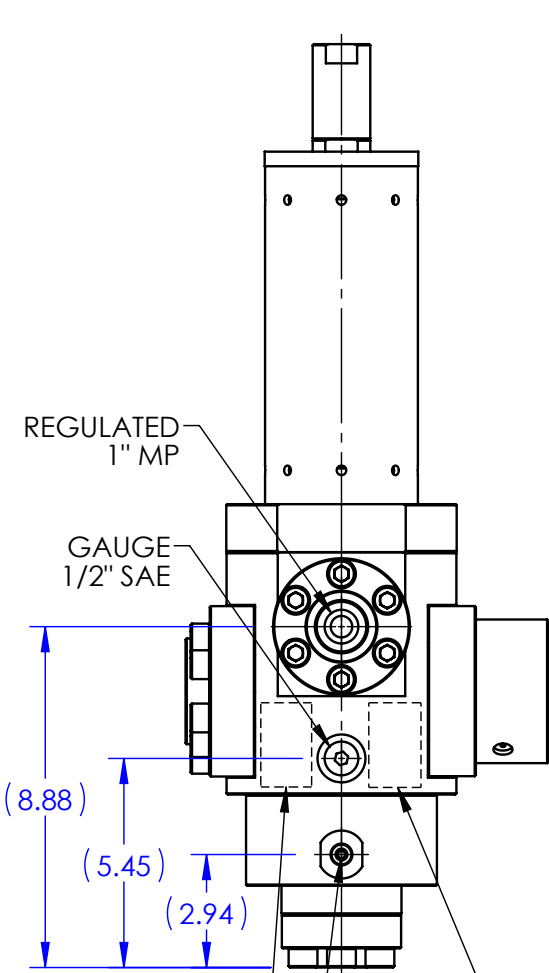
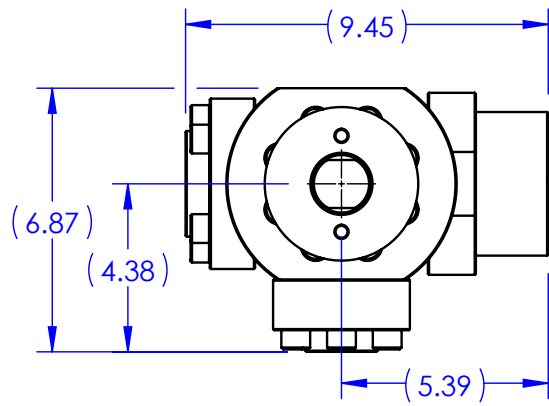
INLET: 1" MP  
 REGULATED OUTLET: 1" MP  
 VENT: 3/8" MP  
 GAGE: 1/2" SAE

**GENERAL DATA**

TEMP RANGE: 32°F TO 150°F  
 APPROX WEIGHT: 110 LBS  
 ONE ADJUSTMENT TURN EQUALS  
 △ 400 PSI SET POINT CHANGE

**NOTES:**

- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT WITH SUPPLY PRESENT
- X IN THE BOM INDICATES PARTS IN REPAIR KIT 29238 RK AND SEAL KIT 29238 SK.
- ASSEMBLY PROCEDURE: 50397  
 STANDARD FAT PROCEDURE: 50398  
 EXTENDED FAT PROCEDURE: 50399  
 SERVICE MANUAL: 51045
- TORQUE TO 10 FT/LB
- TORQUE TO 50 FT/LB
- TORQUE TO 5 FT/LB
- TORQUE TO 40 FT/LB
- TORQUE TO 20 FT/LB
- ALL MANUFACTURED ITEMS ARE PASSIVATED.



29238  
 VER (AX VERSION #)  
 (SERIAL NUMBER)  
 10,000 PSI  
 PATENT: 9,657,850 & 10,739,796  
 (DATE OF MFG)

SEE SHOP TRAVELER  
 FOR ADDITIONAL  
 INFO REQUIRED

THIRD ANGLE PROJECTION	MATERIAL: SEE BOM	APPROVAL	
	ESTIMATED WEIGHT: 110 LBS	DRAWN BY JB	DATE 2/22/2023
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.	CONDITION:	DRAFT CHECKED BY RV	DATE 2/28/2023
	TREATMENT:	ENGR. REVIEW BY AP	DATE 2/28/2023
	PROCEDURE NUMBER: 4	ENGR. APPROVE BY MP	DATE 2/28/2023
		MFG. APPROVE BY VP	DATE 2/28/2023
	ECO NUMBER 024668	DATE 2/21/2023	

U.S. PATENT 9,657,850 & 10,739,796

**Gilmore ENGINEERING**

**VALVE, 10K REGULATOR, DAMPING, MANUAL, GEN 2, 1" MP, SINGLE INLET, 2000-3500 PSI, DAMPENED**

SIZE <b>B</b>	DWG NO	REV <b>B</b>
SCALE 1:5		SHEET 1 OF 5

**29238**

SolidWorks

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## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	
1	156614	ADAPTER, SPRING HOUSING	A276 TP S21800 (NITRONIC 60)	1		
2	177586	HOUSING, SPRING	A511 MT 316/316L (SEAMLESS TUBE)	1		
3	219621	CAP, SPRING HOUSING	A276 UNS S21800 (NITRONIC 60)	1		
4	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
5	219619	CAP, LOCK, .75 NC	A276 TP 316 (316SS)	1		
6	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE/NICKEL	1	X	
7	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE/NICKEL	4	X	
8	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X	
9	219620	SCREW, ADJUSTING, .75 NC	F593 GR2 (T316)	1		
10	154526	PLATE, SPRING	A276 TP 316	2		
11	12968	SPRING, COMPRESSION	A313 TP 316	1		
12	13125	SPRING, COMPRESSION	INCONEL X750	1		
13	154797	PELLET, NYLOK	NYLON	1	X	X
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LG	A593 T316	6	X	X
15	18100-103K1	O-RING	HNBR	1	X	X
16	18100-051K1	O-RING	HNBR	2	X	X
17	18100-082K1	O-RING	HNBR	3	X	X
18	18100-026K1	18100-026K1	BUNA-N	4	X	X
19	18100-113K1	O-RING	HNBR	2	X	X
20	18100-009K1	O-RING	HNBR	2	X	X
21	158317	RING, BACKUP	DELTRIN AF	2	X	X
22	161775	WIPER, D-STYLE, 1.500 PLUNGER	POLYURETHANE	1	X	X
23	195435	RING, BACKUP	PEEK	4	X	X
24	195437	RING, BACKUP	PEEK	8	X	X
25	154659	RING, BACKUP	PEEK	4	X	X
26	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE/NICKEL	1	X	
27	161776	WEAR BAND, SEAL CARRIER	DELTRIN AF	1	X	X
28	204649	BODY	A564 TP 630	1		
29	204659	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1		
30	204652	GUIDE, PLUNGER, 1-1/2"	A276 TP 316 (316 SS)	1		
31	204654	FLANGE, BLANK	A276 TP 316 (316 SS)	1		
32	238935	FLANGE, 1" MP INLET, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	1		
33	238940	FLANGE, OUTLET, 1" MP, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	1		
34	204651	COVER, VENT VALVE	A276 TP 316 (316 SS)	1		

## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	
35	204663	LIFTER, VENT VALVE	A564 TP 630 (17-4 PH)	1		
36	236163	SEAT, VENT VALVE	30% CARBON FILLED PEEK	1	X	X
37	204665	POPPET, VENT VALVE	A276 UNS S21800	1	X	X
38	238934	BODY, VENT VALVE, REGULATOR, GEN 2, 10K, 3/8" MP	A276 TP 316 (316 SS)	1		
39	204667	SPACER, VENT VALVE	A276 S21800	1		
40	18100-090K1	O-RING	HNBR	1	X	X
41	204669	RING, BACKUP	PEEK	2	X	X
42	204660	PLUNGER, 1-1/2"	A276 TP S21800 (NITRONIC 60)	1		
43	18100-012K1	O-RING	HNBR	1	X	X
44	204670	RING, BACKUP	PEEK	2	X	X
45	204671	RING, BACKUP	PEEK	2	X	X
46	18100-002K1	O-RING	HNBR	1	X	X
47	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X	X
48	184195	WEAR BAND, PLUNGER	DELTRIN AF	1	X	X
49	18108-522	T-SEAL, ROD	CARBOXYLATED NITRILE / NYLATRON	1	X	X
50	204666	PIN, SPRIOL, .156" OD, .625" LG	STAINLESS STEEL T420 (UNS S42000)	1	X	X
51	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A453 GR 660	10		
52	18224-030	SHCS, 1/2-13 UNC X 2-1/2" LG	A453 GR 660	8		
53	18224-005	SHCS 0.500-13 UNC X 1.50 LG	A453 GR 660	14		
54	18224-045	SHCS, 5/16-18 UNC X 3/4" LG	A453 GR 660	4		
55	18108-509	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
56	18100-007K1	ORING	HNBR	1	X	X
57	18800-043	BALL, 9/16" DIA	A276 TP 316	1		
58	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
59	18800-021	BALL, 1/4" DIA.	NITRILE	1	X	X
60	18224-017	HEX-SHCS 1/2-13 UNC X 2 LG	DUPLEX	6		
61	18224-028	SHCS, 1/2-13 UNC X 1-1/4" LG	A453 GR 660	10		
62	18100-110K1	O-RING	HNBR	1	X	X
63	238965	ADAPTER, 1" MP, FLANGE, REGULATOR, GEN 2, 10K	A276 TP 316(316 SS)	1		
64	18224-019	SHCS, 3/8 - 16 UNC - 2-1/4" LG	A453 GR 660	4		


**Gilmore**
**ENGINEERING**

SIZE

DWG NO

REV

**B****29238****B**

SCALE

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SolidWorks

SHEET 2 OF 5

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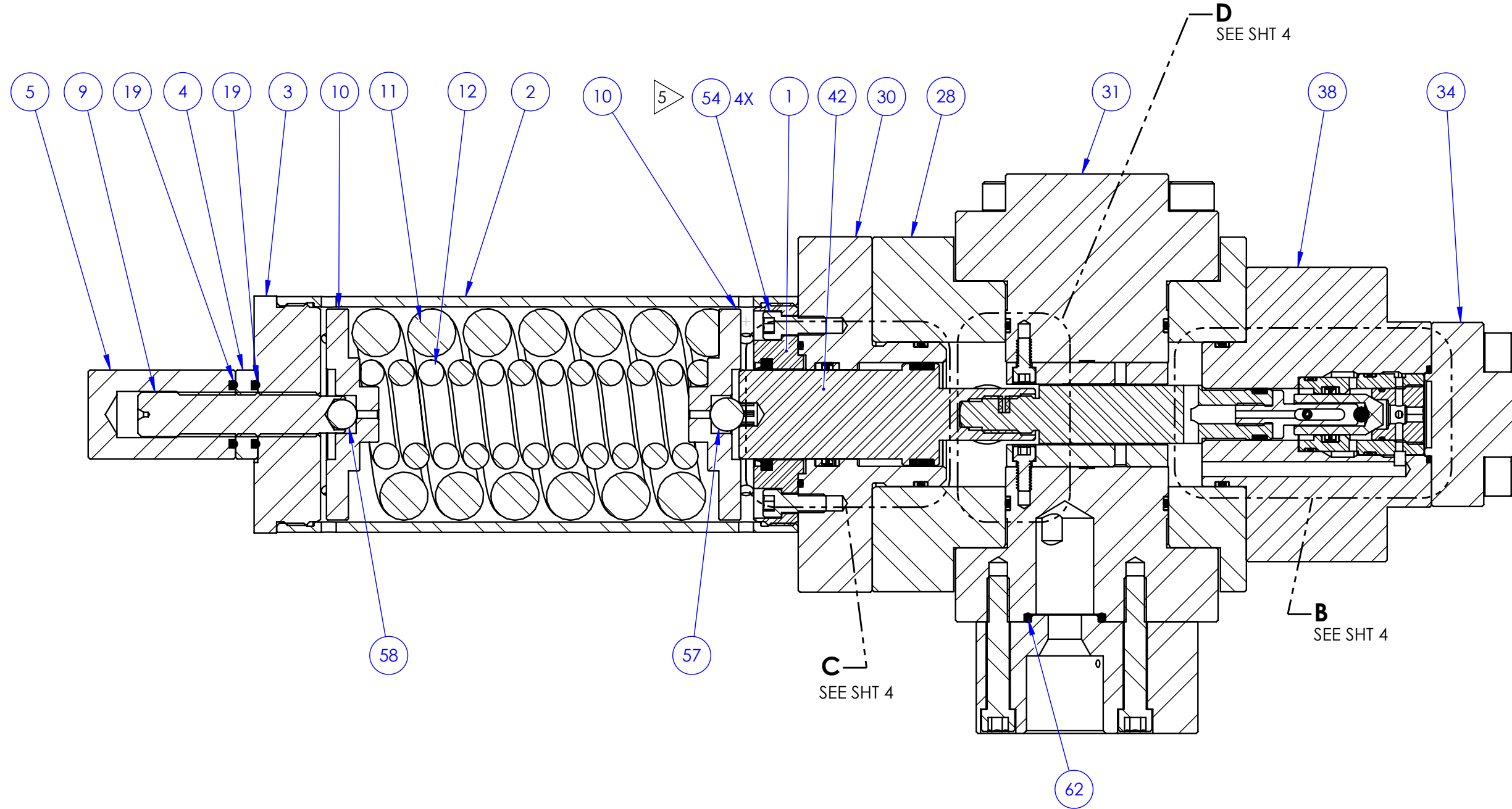
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SECTION A-A



ENGINEERING

SIZE	DWG NO	REV
<b>B</b>	<b>29238</b>	<b>B</b>
SCALE	1:5	SHEET 3 OF 5
SolidWorks		

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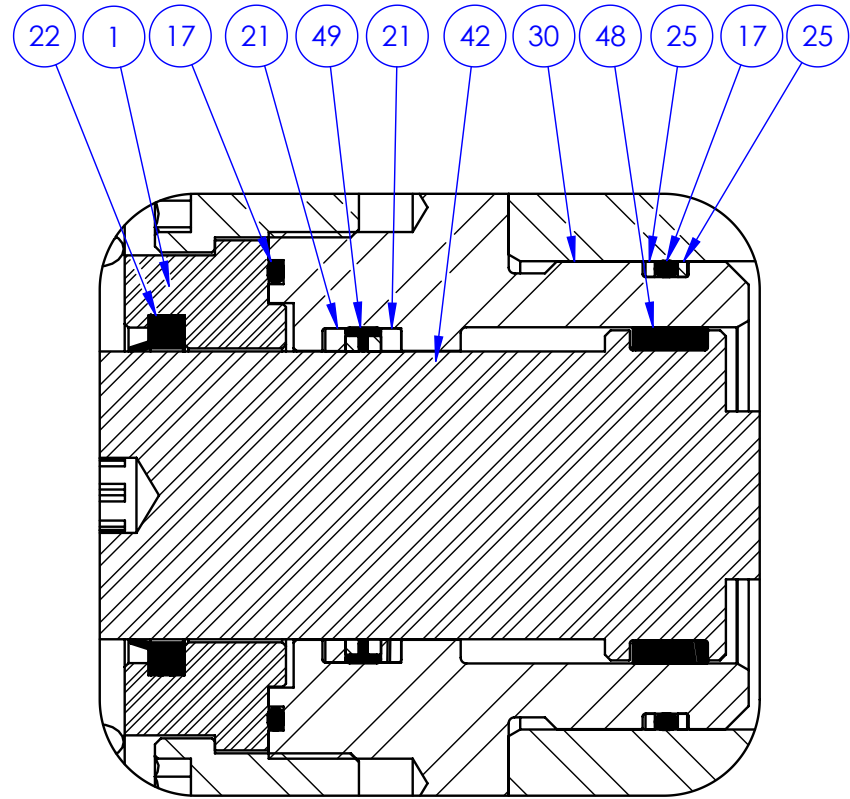
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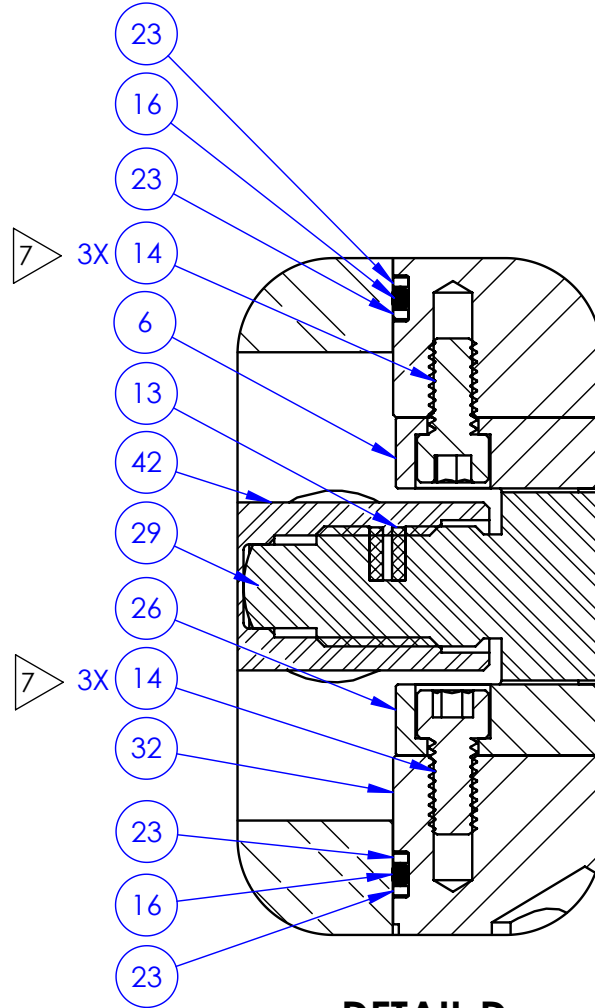
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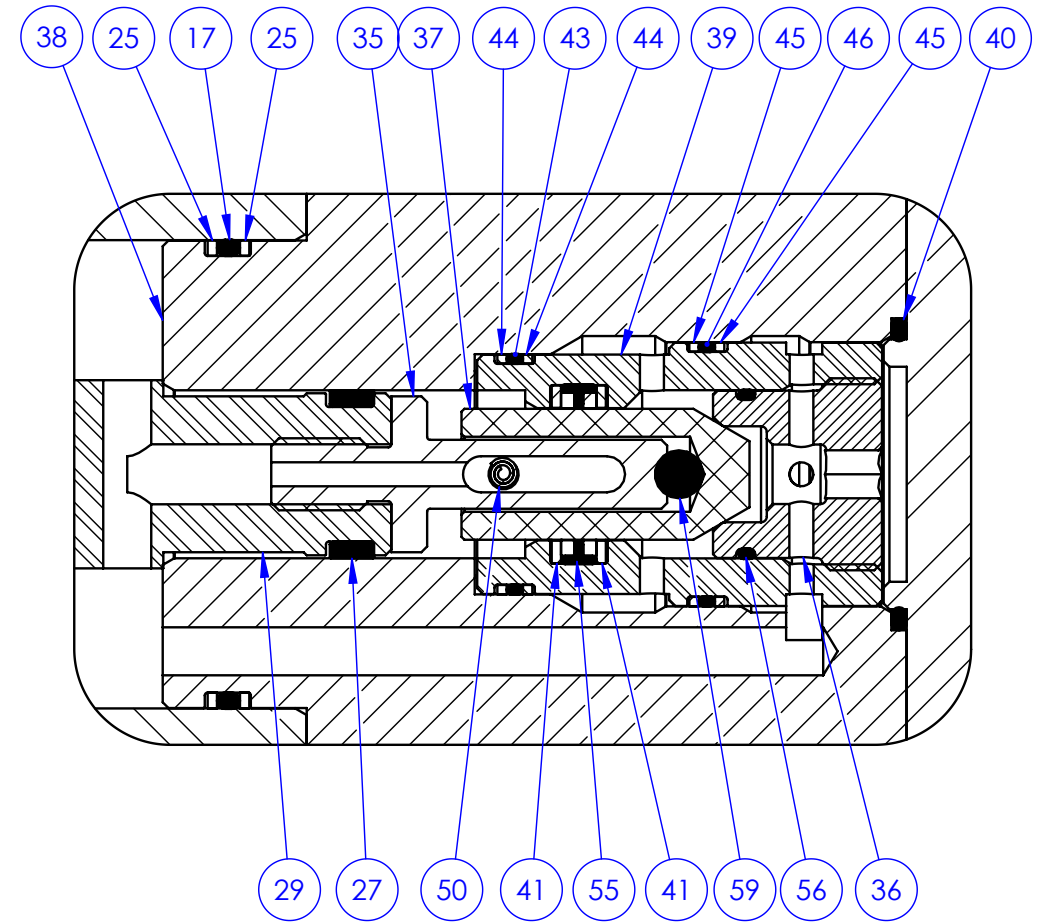
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DETAIL C



DETAIL D



DETAIL B

A

A

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**Gilmore**

**ENGINEERING**

SIZE

DWG NO

REV

**B**

**29238**

**B**

SCALE

1:5

**SolidWorks**

SHEET 4 OF 5

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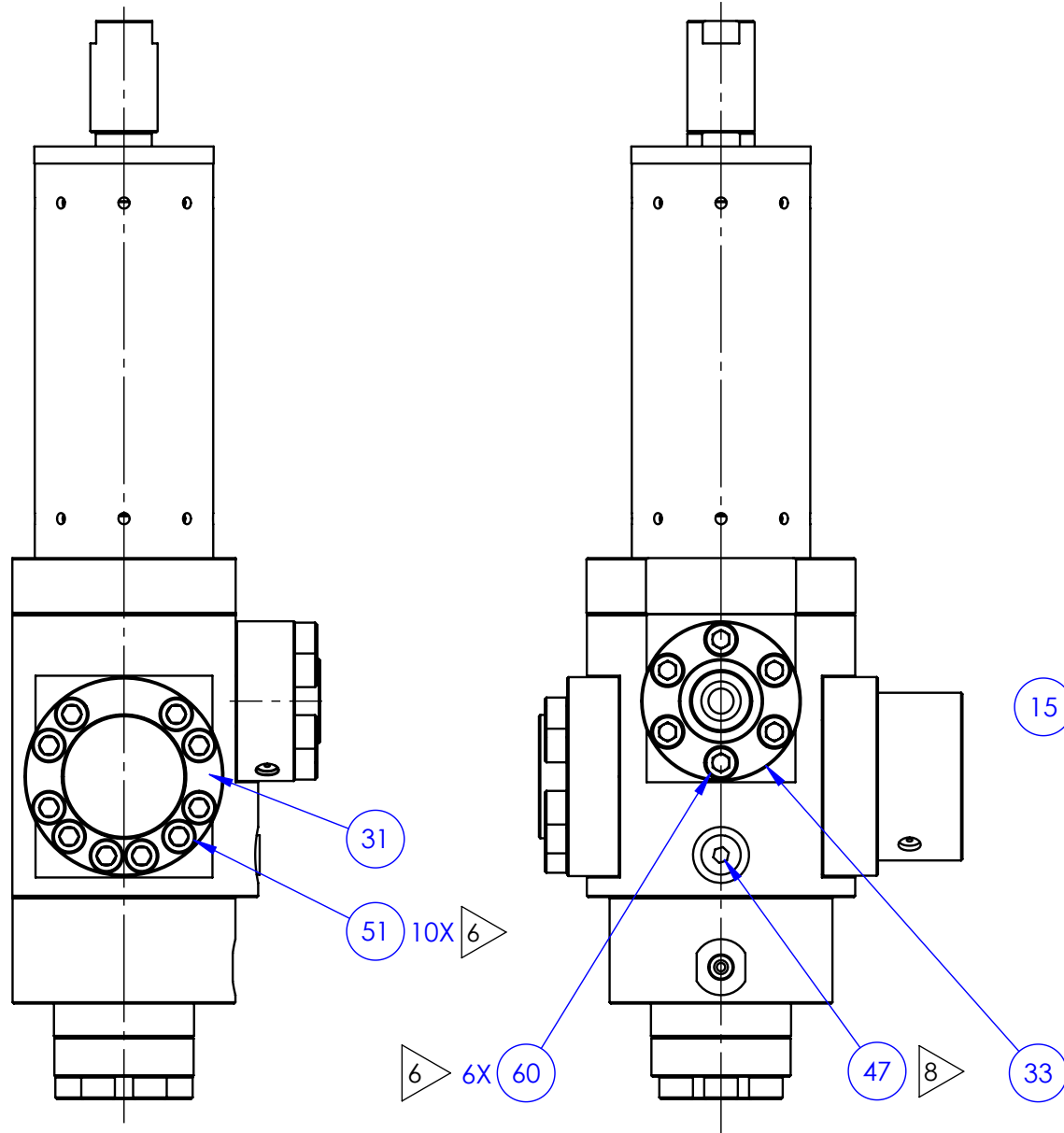
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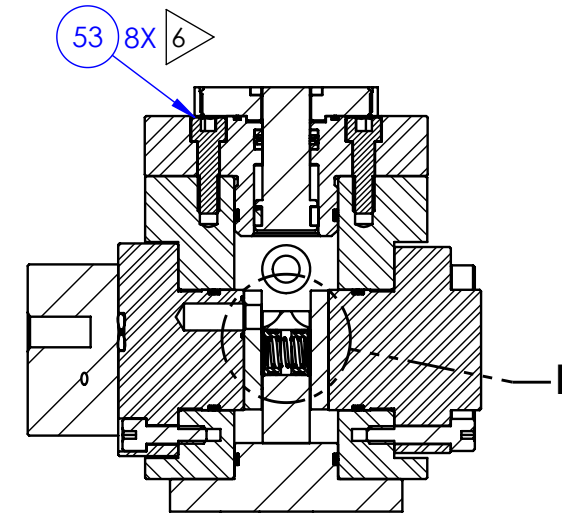
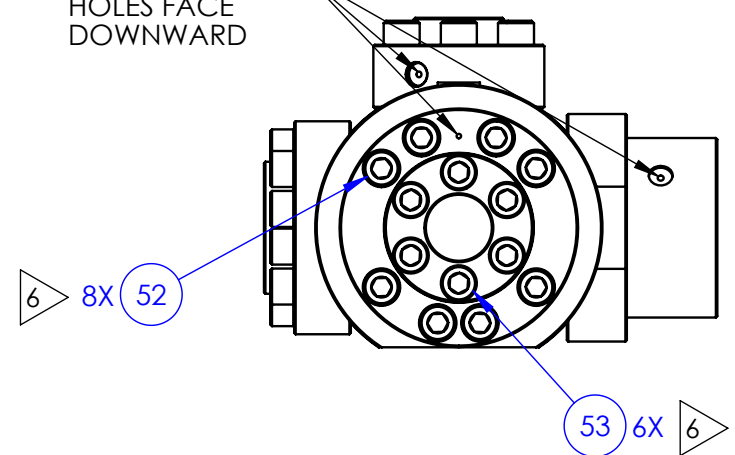
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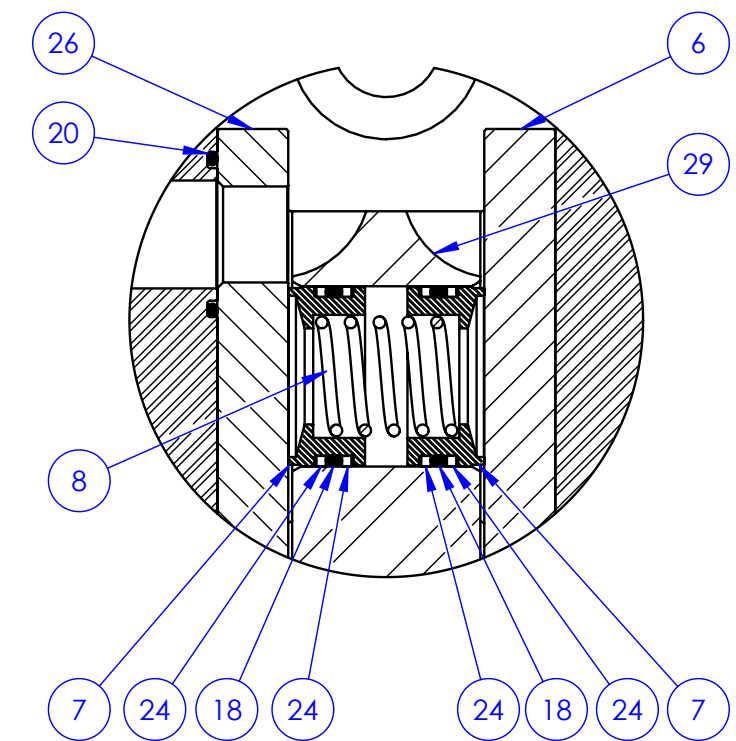
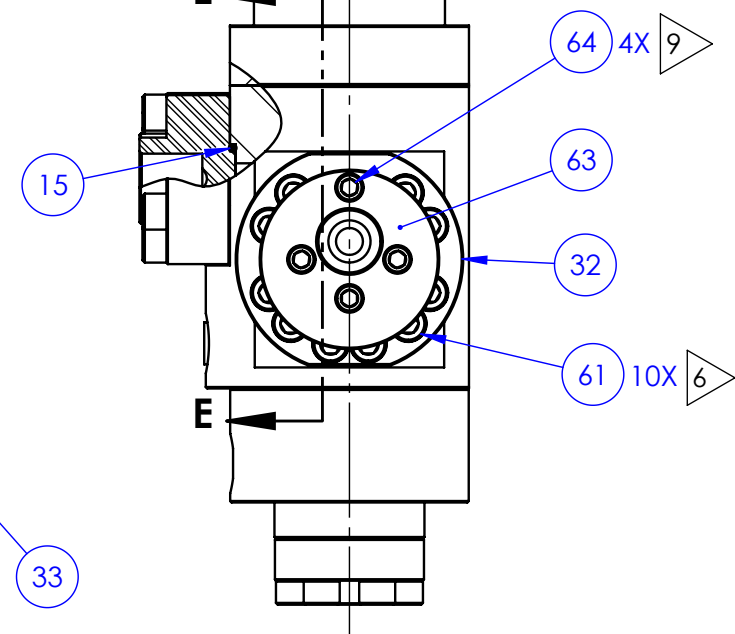
A



MP PORT VENT  
HOLES FACE  
DOWNWARD



SECTION E-E



DETAIL F  
2 PLACES

SIZE <b>B</b>	DWG NO <b>29238</b>
SCALE 1:4	REV <b>B</b>
SolidWorks	
SHEET 5 OF 5	

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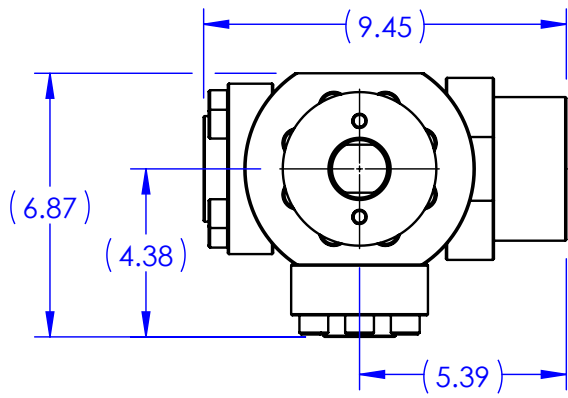
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**PRESSURE DATA**

SUPPLY PRESSURE: 10,000 PSI  
 REGULATED PRESSURE: 5,500 - 3,000 PSI  
 VENT PRESSURE: 5,500 PSI  
 GAUGE PRESSURE: 5,500 PSI

**FLOW DATA**

(B) DEADBAND DECREASE @ 10 KSI = 800 ± 200 PSI  
 DECREASE @ 7.5 KSI = 600 ± 200 PSI  
 DEADBAND INCREASE @ 10 KSI = 1000 ± 200 PSI  
 INCREASE @ 7.5 KSI = 1000 ± 200 PSI

Cv SUPPLY: 7 (CALC)  
 Cv VENT: 1 (CALC)  
 TYPICAL HIGH DEMAND SYSTEM FLOW RATE: 65-85 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS**

INLET: 1" MP  
 REGULATED OUTLET: 1" MP  
 VENT: 3/8" MP  
 GAGE: 1/2" SAE

**GENERAL DATA**

TEMP RANGE: 32°F TO 150°F  
 APPROX WEIGHT: 110 LBS  
 ONE ADJUSTMENT TURN EQUALS  
 △ 700 PSI SETPOINT CHANGE

**REVISIONS**

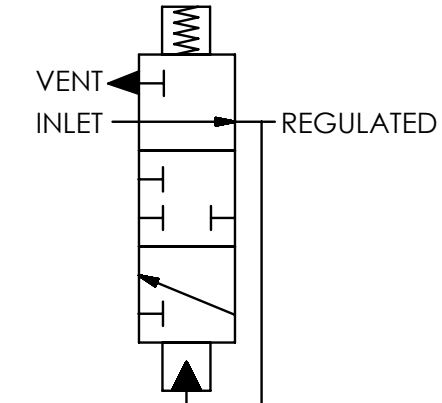
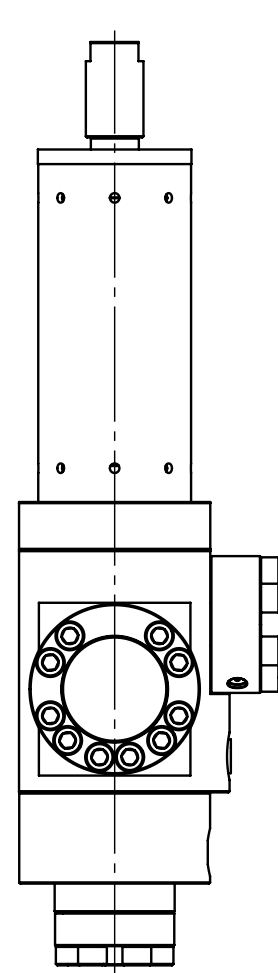
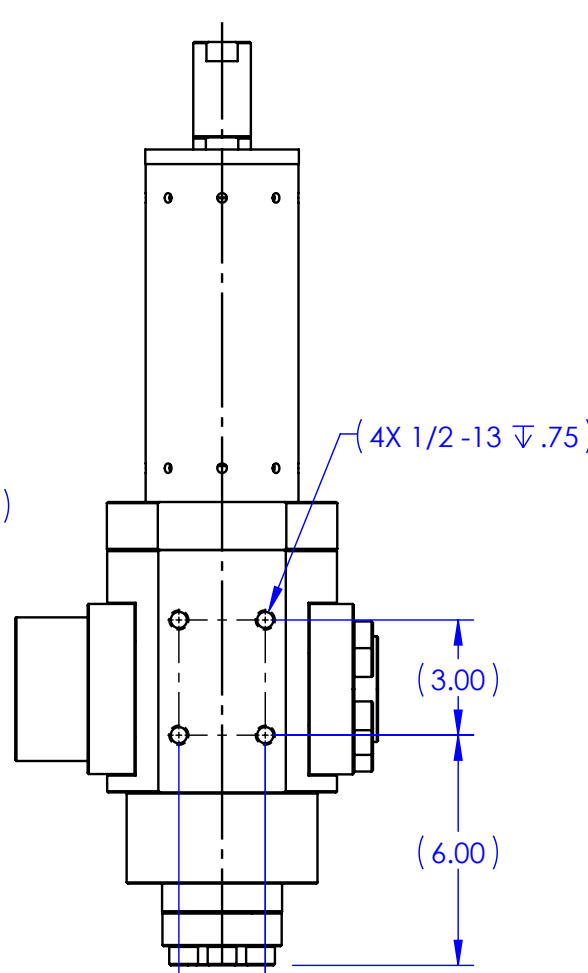
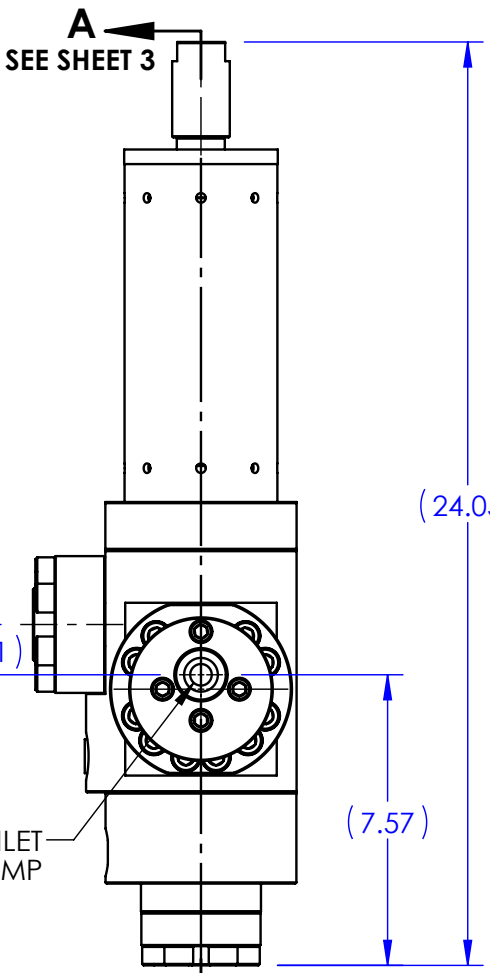
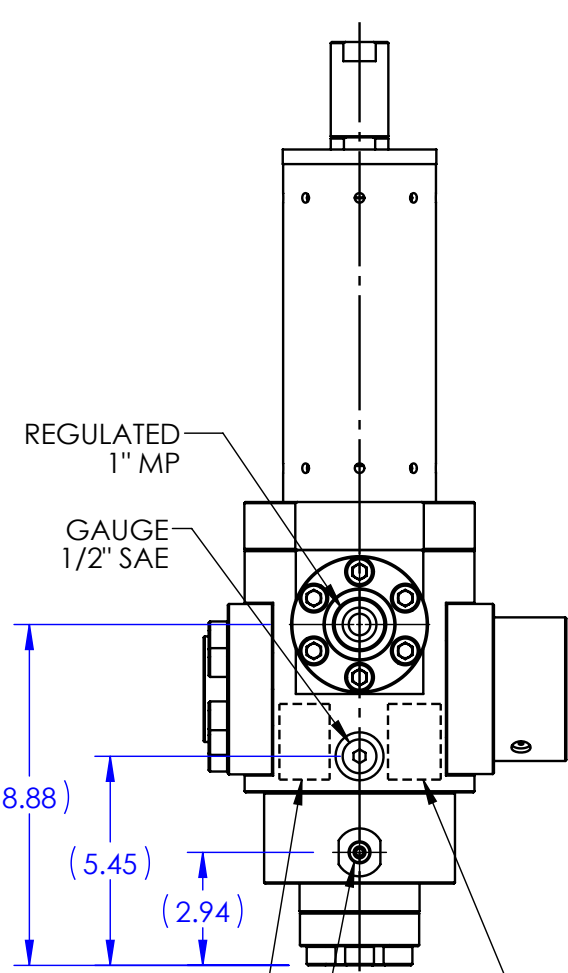
REV	ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	024876	JB 3/27/23	RV 3/28/23	AP 3/28/23	MS 3/29/23	VP 3/29/23

**NOTES:**

- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT WITH SUPPLY PRESENT
- X IN THE BOM INDICATES PARTS IN REPAIR KIT 29239 RK AND SEAL KIT 29239 SK.
- ASSEMBLY PROCEDURE: 50397  
 STANDARD FAT PROCEDURE: 50398  
 EXTENDED FAT PROCEDURE: 50399  
 SERVICE MANUAL: 51045
- TORQUE TO 10 FT/LB
- TORQUE TO 50 FT/LB
- TORQUE TO 5 FT/LB
- TORQUE TO 40 FT/LB
- TORQUE TO 20 FT/LB
- ALL MANUFACTURED ITEMS ARE PASSIVATED.

B

B

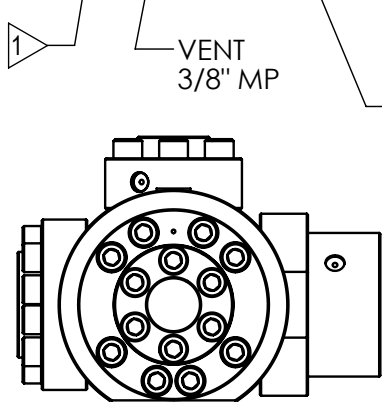


**SCHEMATIC**

U.S. PATENT 9,657,850 & 10,739,796

A

**Gilmore GEN2**  
 LOGO AND COMPANY INFO



1 29239 VER (AX VERSION #) (SERIAL NUMBER) 10,000 PSI  
 PATENT: 9,657,850 & 10,739,796 (DATE OF MFG)

SEE SHOP TRAVELER FOR ADDITIONAL INFO REQUIRED

<p>THIRD ANGLE PROJECTION</p>	MATERIAL: SEE BOM	APPROVAL		
	ESTIMATED WEIGHT: 110 LBS	DRAWN BY: JB	DATE: 2/27/2023	
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.	CONDITION:	DRAFT CHECKED BY: RV	DATE: 2/28/2023	
	TREATMENT:	ENGR. REVIEW BY: AP	DATE: 2/28/2023	
	PROCEDURE NUMBER:	ENGR. APPROVE BY: MS	DATE: 2/28/2023	
		MFG. APPROVE BY: VP	DATE: 2/28/2023	
	ECO NUMBER: 024668	DATE: 2/21/2023		
				SIZE: B DWG NO: 29239 SCALE: 1:8 SolidWorks SHEET 1 OF 5

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BILL OF MATERIALS

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	192384	ADAPTER, SPRING HOUSING	A276 TP S21800 (NITRONIC 60)	1		
2	177586	HOUSING, SPRING	A511 MT 316/316L	1		
3	219621	CAP, SPRING HOUSING	A276 UNS S21800 (NITRONIC 60)	1		
4	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
5	219619	CAP, LOCK, .75 NC	A276 TP 316 (316SS)	1		
6	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE/NICKEL	1	X	
7	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE/NICKEL	4	X	
8	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X	
9	219620	SCREW, ADJUSTING, .75 NC	F593 GR2 (T316)	1		
10	193757	PLATE, SPRING	A276 TP 316	2		
11	192847	SPRING, COMPRESSION	AMS5670 (X-750) AMS 5667 (X-750) AMS 5699 (X-750)	1		
12	13125	SPRING, COMPRESSION	INCONEL X750	1		
13	154797	PELLET, NYLOK	NYLON	1	X	X
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LG	316/316L	6	X	X
15	18100-103K1	O-RING	HNBR	1	X	X
16	18100-051K1	O-RING	HNBR	2	X	X
17	18100-082K1	O-RING	HNBR	3	X	X
18	18100-026K1	O-RING	HNBR	4	X	X
19	18100-113K1	O-RING	HNBR	2	X	X
20	18100-009K1	O-RING	HNBR	2	X	X
21	193354	WEARBAND, 1-1/4"	DELFIN AF	2	X	X
22	192385	WIPER, D-STYLE, 1-1/4" OD PLUNGER	POLYURETHANE	1	X	X
23	195435	RING, BACKUP	PEEK	4	X	X
24	195437	RING, BACKUP	PEEK	8	X	X
25	154659	RING, BACKUP	PEEK	4	X	X
26	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE/NICKEL	1	X	
27	161776	WEAR BAND, SEAL CARRIER	DELFIN AF	1	X	X
28	204649	BODY	A564 TP 630	1		
29	204659	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1		
30	231939	GUIDE, PLUNGER, 1-1/2"	A276 TP 316 (316 SS)	1		
31	204654	FLANGE, BLANK	A276 TP 316 (316 SS)	1		
32	238935	FLANGE, 1" MP INLET, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	1		
33	238940	FLANGE, OUTLET, 1" MP, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	1		
34	204651	COVER, VENT VALVE	A276 TP 316 (316 SS)	1		

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
35	204663	LIFTER, VENT VALVE	A564 TP 630 (17-4 PH)	1		
36	236163	SEAT, VENT VALVE	30% CARBON FILLED PEEK	1	X	X
37	204665	POPPET, VENT VALVE	A276 UNS S21800	1	X	X
38	238934	BODY, VENT VALVE, REGULATOR, GEN 2, 10K, 3/8" MP	A276 TP 316 (316 SS)	1		
39	204667	SPACER, VENT VALVE	A276 S21800	1		
40	18100-090K1	O-RING	HNBR	1	X	X
41	204669	RING, BACKUP	PEEK	2	X	X
42	231940	PLUNGER, 1-1/2"	A276 TP S21800 (NITRONIC 60)	1		
43	18100-012K1	O-RING	HNBR	1	X	X
44	204670	RING, BACKUP	PEEK	2	X	X
45	204671	RING, BACKUP	PEEK	2	X	X
46	18100-002K1	O-RING	HNBR	1	X	X
47	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X	X
48	192473	WEAR BAND, PLUNGER	DELFIN AF	1	X	X
49	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
50	204666	PIN, SPRIOL, .156" OD, .625" LG	STAINLESS STEEL T420 (UNS S42000)	1	X	X
51	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A453 GR 660	10		
52	18224-030	SHCS, 1/2-13 UNC X 2-1/2" LG	A453 GR660	8		
53	18224-005	SHCS 0.500-13 UNC X 1.50 LG	A453 GR660	14		
54	18224-045	SHCS, 5/16-18 UNC X 3/4" LG	A453 GR 660	4		
55	18108-509	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
56	18100-007K1	ORING	HNBR	1	X	X
57	18800-043	BALL, 9/16" DIA	A276 TP 316	1		
58	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
59	18800-021	BALL, 1/4" DIA.	NITRILE	1	X	X
60	18224-017	HEX-SHCS 1/2-13 UNC X 2 LG	DUPLEX	6		
61	18224-028	SHCS, 1/2-13 UNC X 1-1/4" LG	A453 GR 660	10		
62	18100-110K1	O-RING	HNBR	1	X	X
63	238965	ADAPTER, 1" MP, FLANGE, REGULATOR, GEN 2, 10K	A276 TP 316(316 SS)	1		
64	18224-019	SHCS, 3/8 - 16 UNC - 2-1/4" LG	A453 GR 660	4		

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SIZE <b>B</b>	DWG NO <b>29239</b>
SCALE 1:8	SHEET 2 OF 5
REV <b>B</b>	

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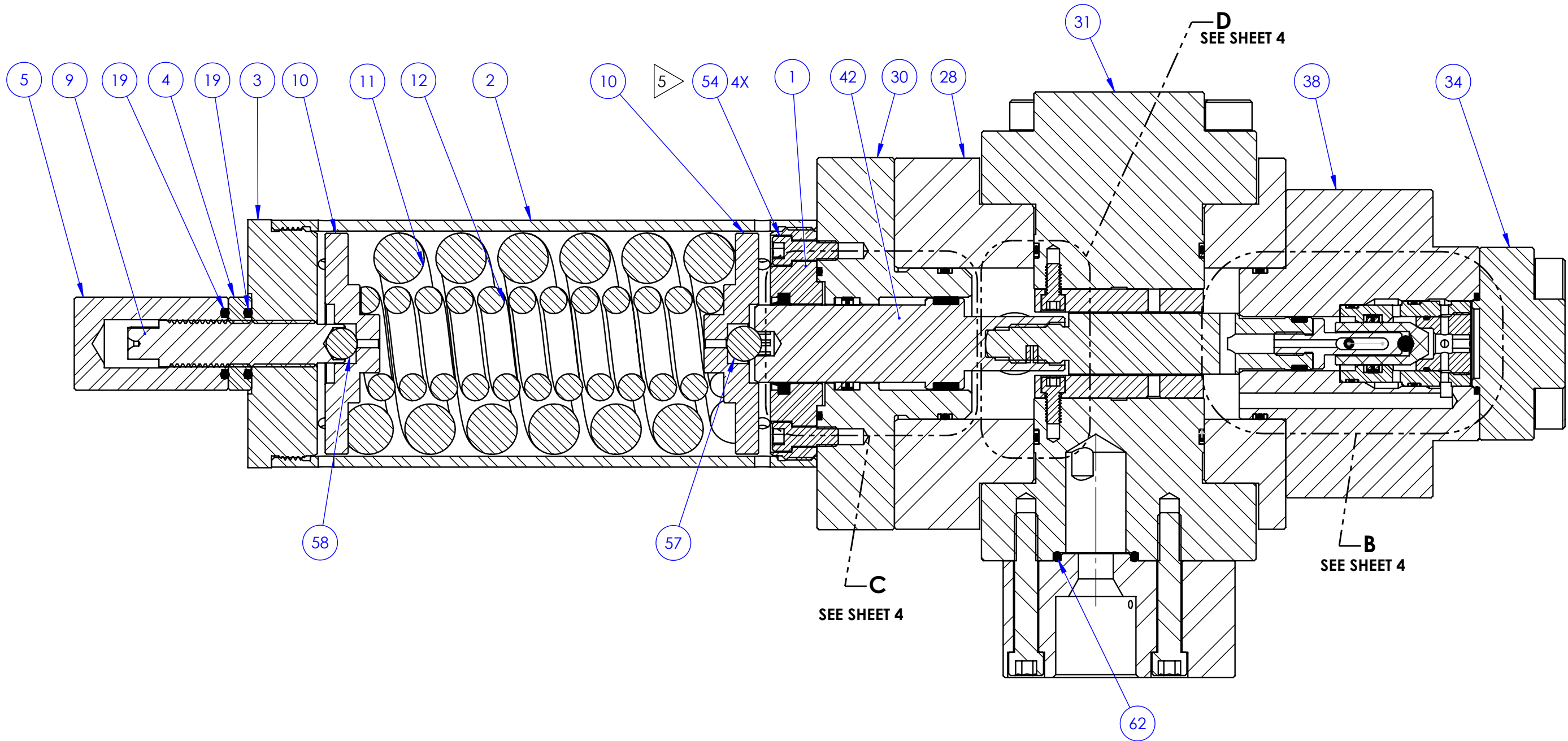
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**SECTION A-A  
ROTATED 90°**

A

A

		
SIZE <b>B</b>	DWG NO <b>29239</b>	REV <b>B</b>
SCALE 1:8	SolidWorks	SHEET 3 OF 5

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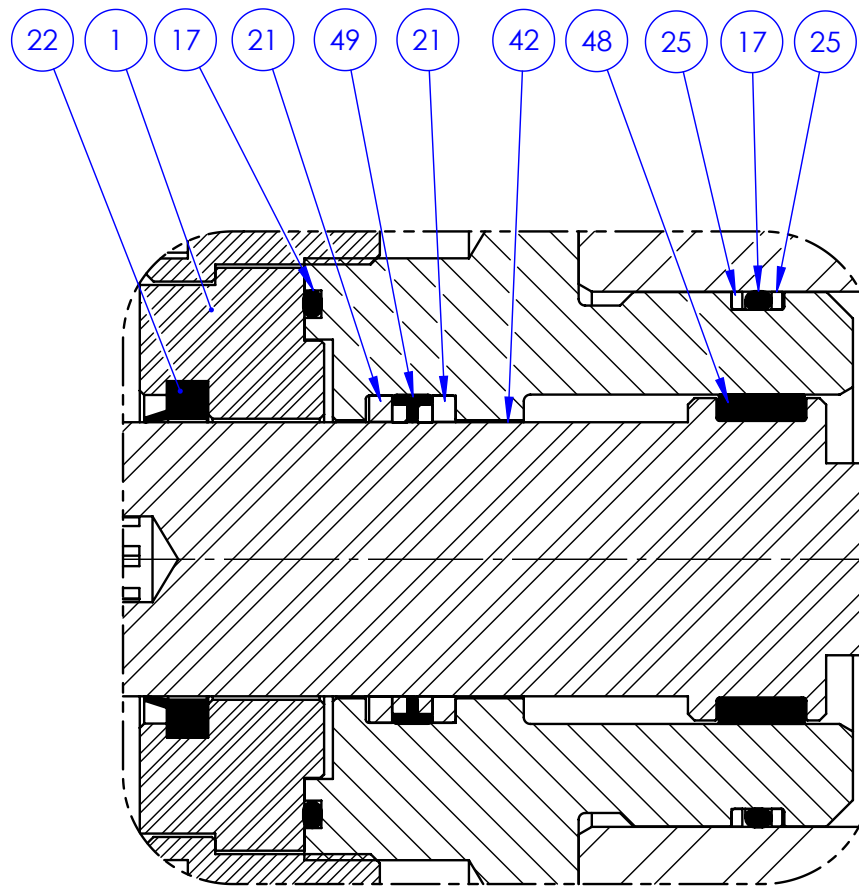
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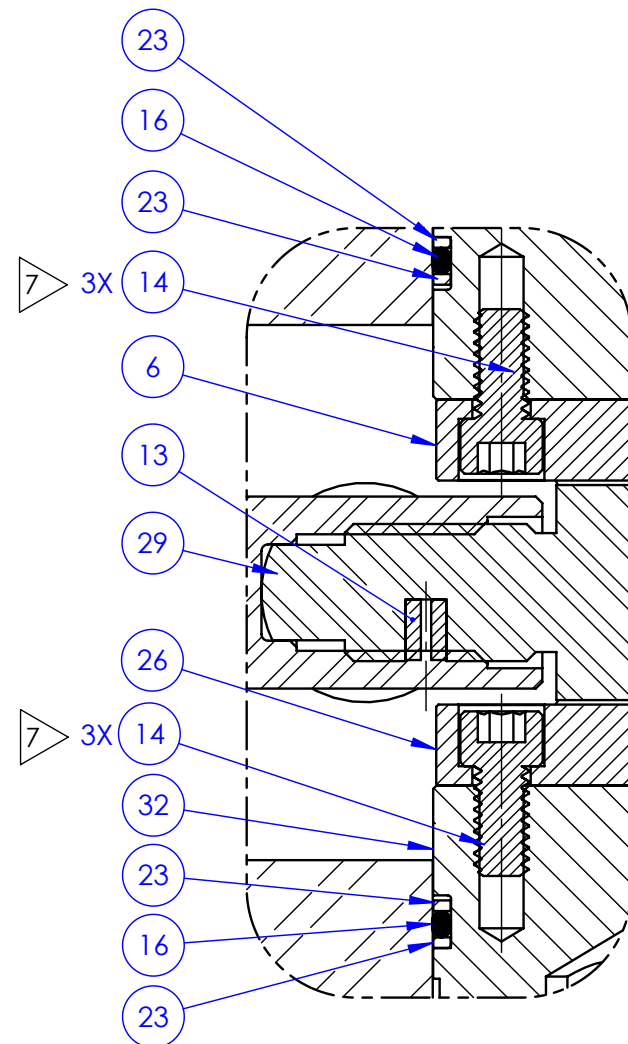
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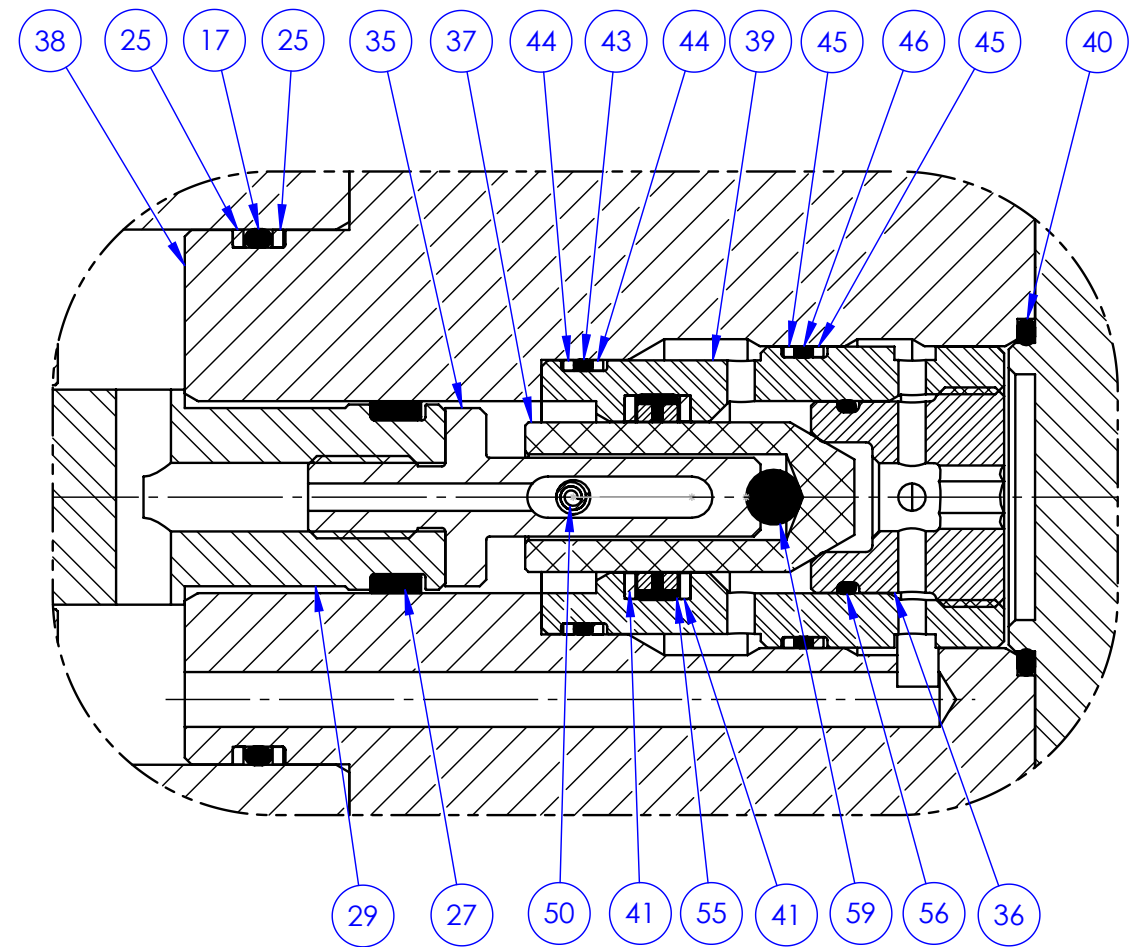
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DETAIL C



DETAIL D



DETAIL B

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**Gilmore**

**ENGINEERING**

SIZE

DWG NO

REV

**B**

**29239**

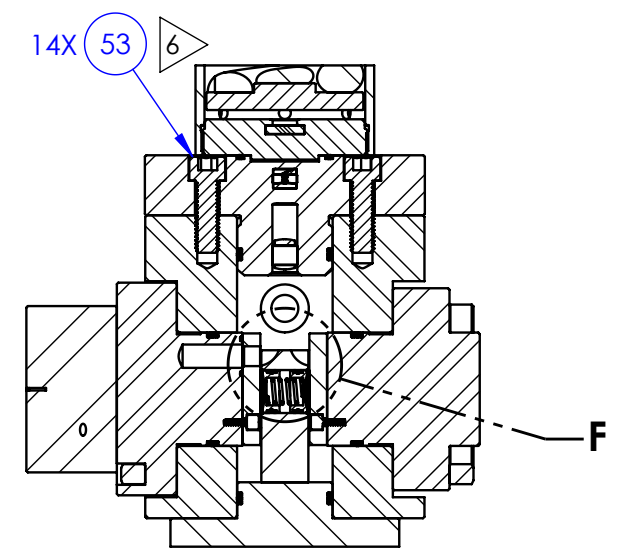
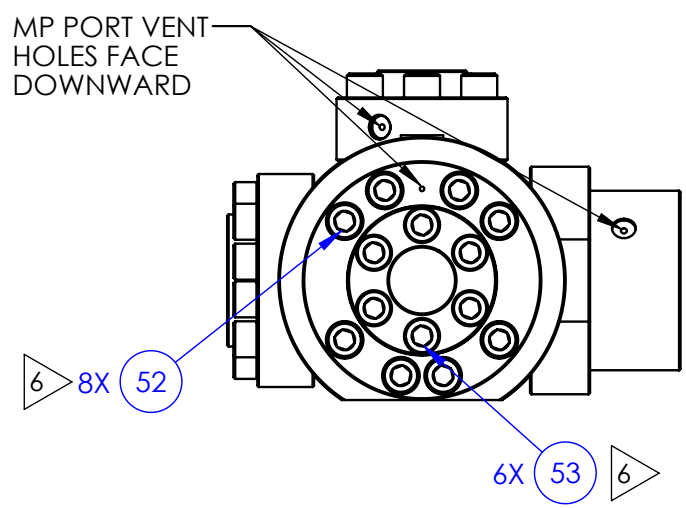
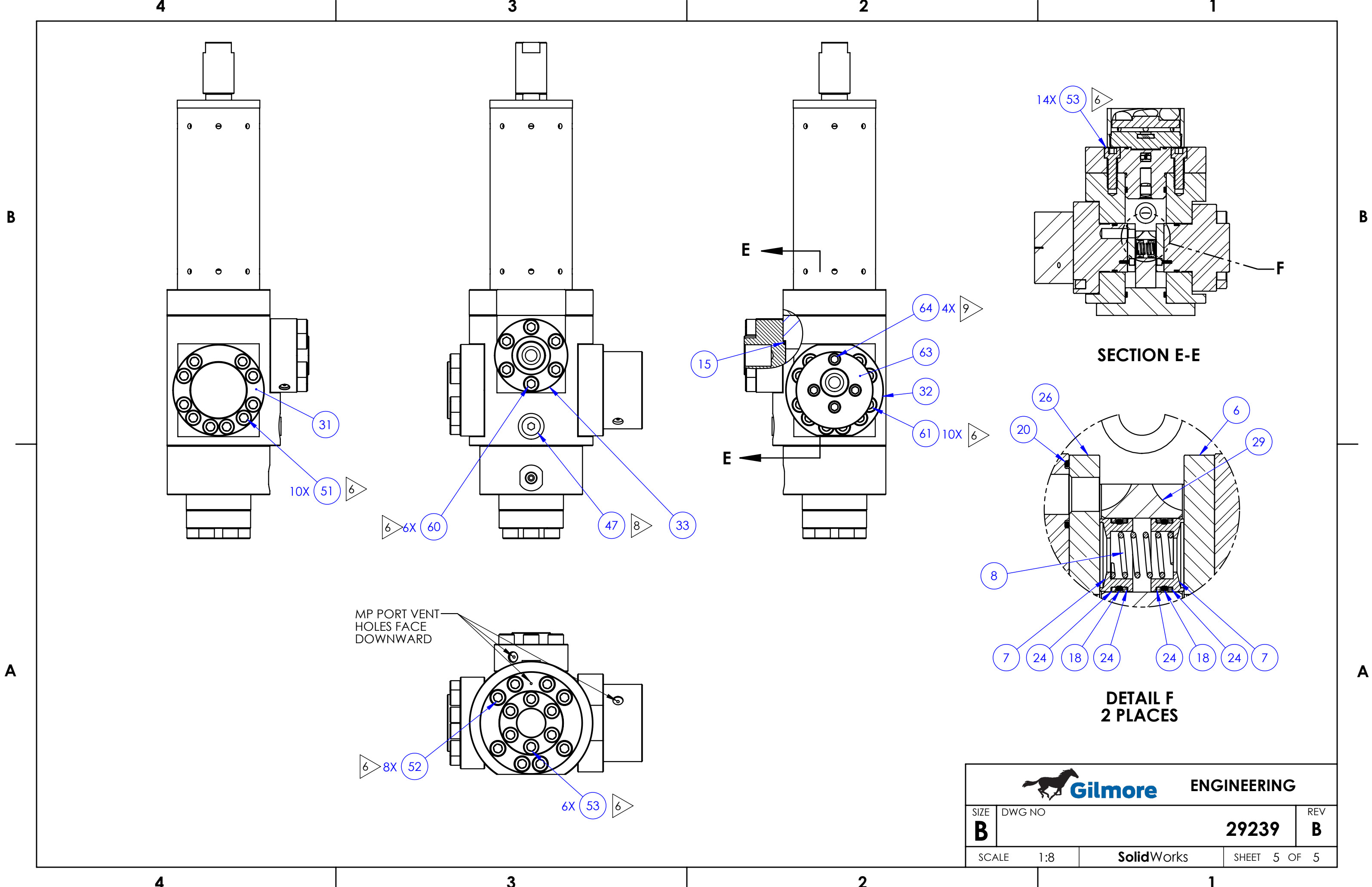
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SCALE

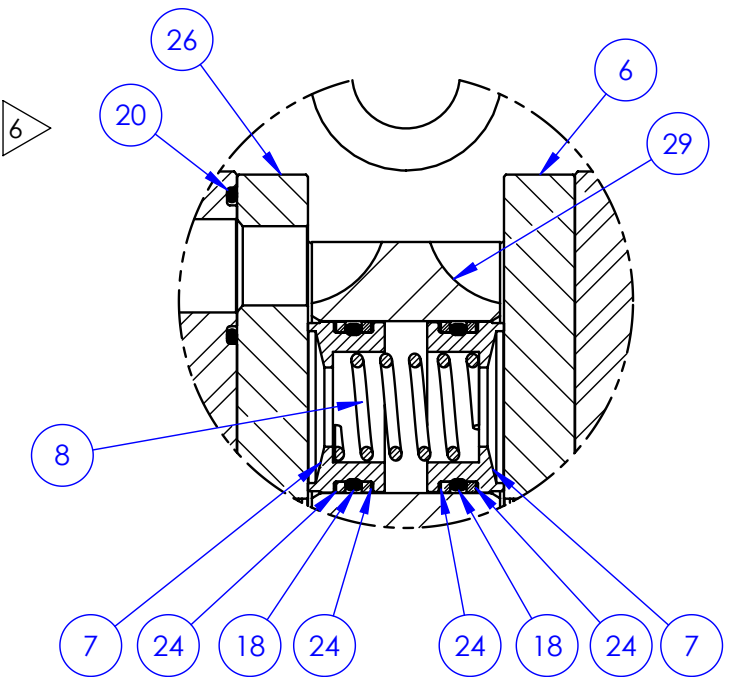
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**SolidWorks**

SHEET 4 OF 5



SECTION E-E



DETAIL F  
2 PLACES

SIZE <b>B</b>	DWG NO <b>29239</b>	REV <b>B</b>
SCALE 1:8	SolidWorks	SHEET 5 OF 5

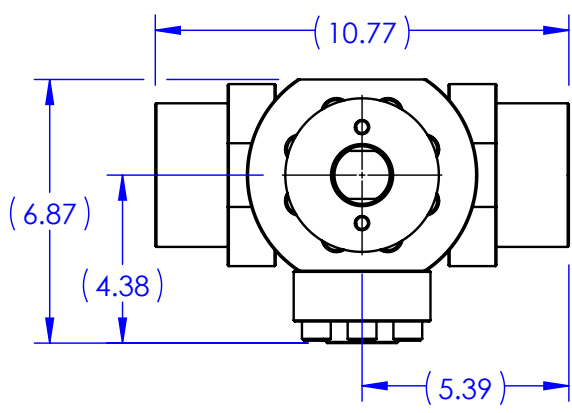


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**PRESSURE DATA**

SUPPLY PRESSURE: 10,000 PSI  
 REGULATED PRESSURE: 5,500 - 3,000 PSI  
 VENT PRESSURE: 5,500 PSI  
 GAUGE PRESSURE: 5,500 PSI

**FLOW DATA**

DEADBAND DECREASE @ 10 KSI = 800 ± 200 PSI  
 DECREASE @ 7.5 KSI = 600 ± 200 PSI  
 DEADBAND INCREASE @ 10 KSI = 1000 ± 200 PSI  
 INCREASE @ 7.5 KSI = 1000 ± 200 PSI

Cv SUPPLY: 7 (CALC)  
 Cv VENT: 1 (CALC)  
 TYPICAL HIGH DEMAND SYSTEM FLOW RATE: 130-170 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS**

INLET: 1" MP  
 REGULATED OUTLET: 1" MP  
 VENT: 3/8" MP  
 GAGE: 1/2" SAE

**GENERAL DATA**

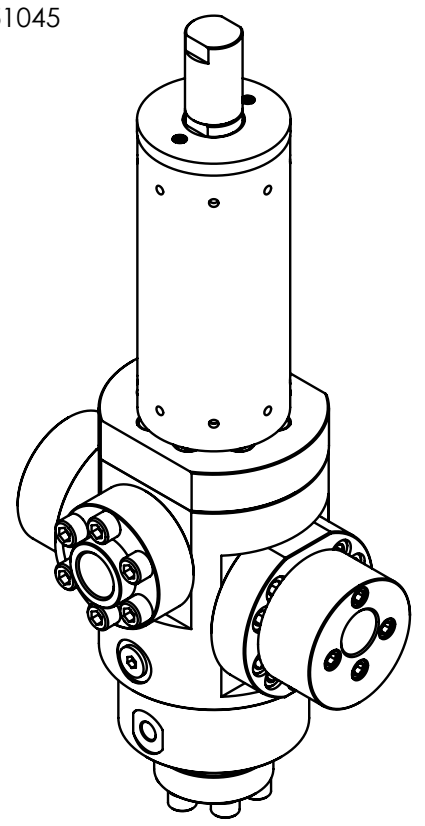
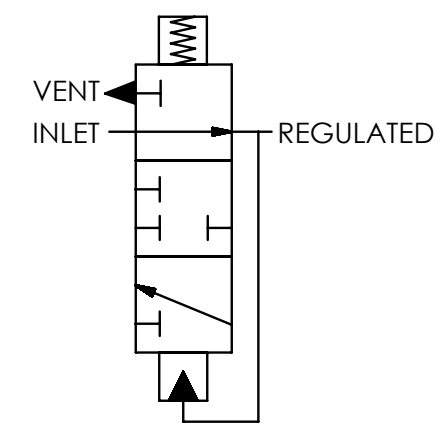
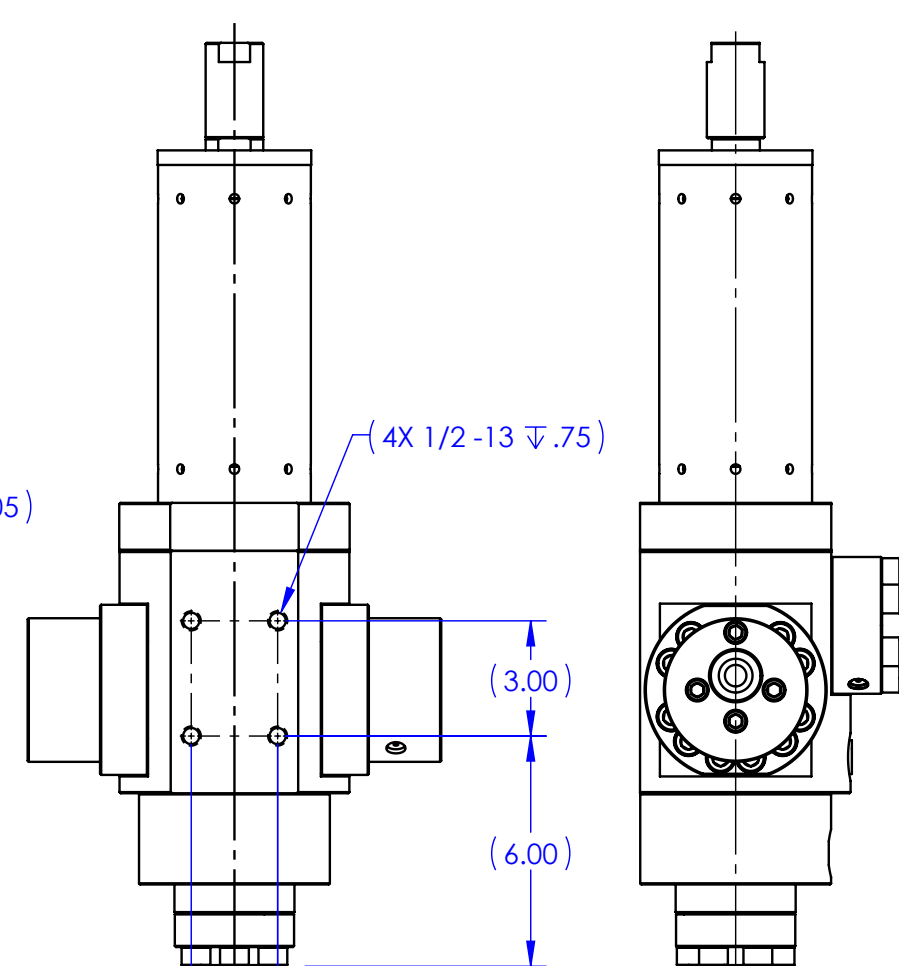
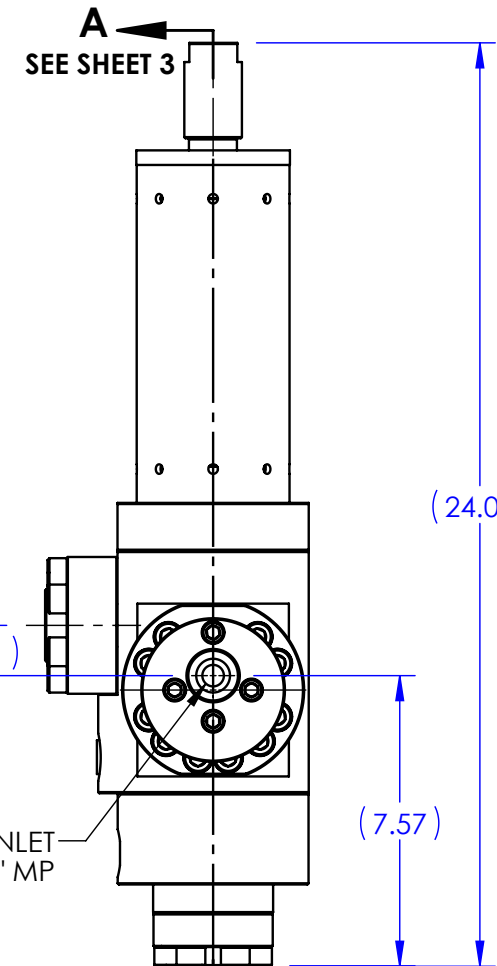
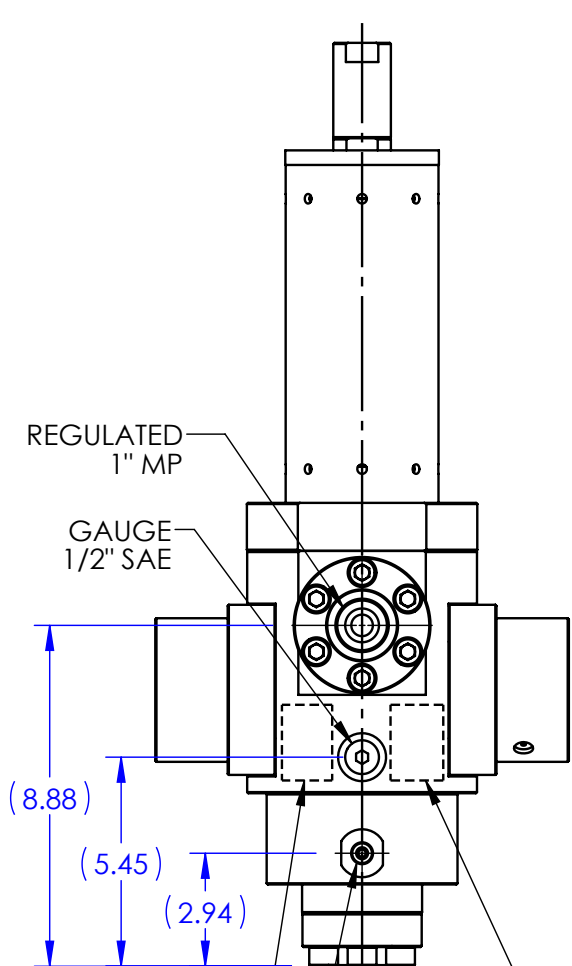
TEMP RANGE: 32°F TO 150°F  
 APPROX WEIGHT: 112 LBS  
 ONE ADJUSTMENT TURN EQUALS  
 △ 700 PSI SETPOINT CHANGE

**NOTES:**

- 1 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 2. REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT WITH SUPPLY PRESENT
- 3. X IN THE BOM INDICATES PARTS IN REPAIR KIT 29240 RK AND SEAL KIT 29240 SK.
- 4 ASSEMBLY PROCEDURE: 50397  
 STANDARD FAT PROCEDURE: 50398  
 EXTENDED FAT PROCEDURE: 50399  
 SERVICE MANUAL: 51045
- 5 TORQUE TO 10 FT/LB
- 6 TORQUE TO 50 FT/LB
- 7 TORQUE TO 5 FT/LB
- 8 TORQUE TO 40 FT/LB
- 9 TORQUE TO 20 FT/LB
- 10 ALL MANUFACTURED ITEMS ARE PASSIVATED.

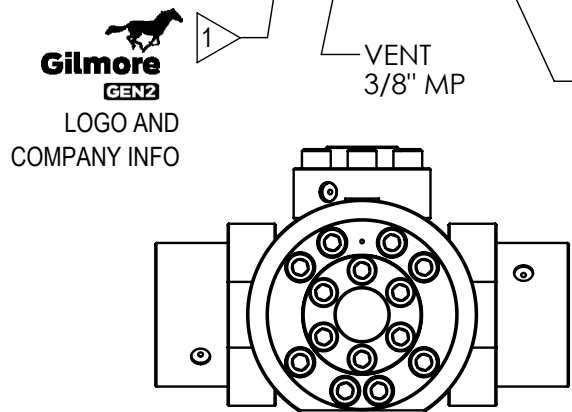
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29240  
 VER (AX VERSION #)  
 (SERIAL NUMBER)  
 10,000 PSI  
 PATENT: 9,657,850 & 10,739,796  
 (DATE OF MFG)  
 SEE SHOP TRAVELER  
 FOR ADDITIONAL  
 INFO REQUIRED

**SCHEMATIC**

U.S. PATENT 9,657,850 & 10,739,796

THIRD ANGLE PROJECTION	MATERIAL: SEE BOM	APPROVAL		
	ESTIMATED WEIGHT: 112 LBS	DRAWN BY JB	DATE 3/23/2023	
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.	CONDITION:	DRAFT CHECKED BY <i>RV</i>	DATE 3/28/23	
	TREATMENT:	ENGR. REVIEW BY <i>AJP</i>	DATE 3/28/23	
	PROCEDURE NUMBER:	ENGR. APPROVED BY <i>VP</i>	DATE 3/29/23	
		MFG. APPROVE BY <i>VP</i>	DATE 3/29/23	SIZE <b>B</b> DWG NO <b>29240</b> REV <b>A</b>
		ECO NUMBER 024876	DATE 3/21/2023	SCALE 1:8 SolidWorks SHEET 1 OF 5

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## BILL OF MATERIALS

## BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	192384	ADAPTER, SPRING HOUSING	A276 TP S21800 (NITRONIC 60)	1		
2	177586	HOUSING, SPRING	A511 MT 316/316L	1		
3	219621	CAP, SPRING HOUSING	A276 UNS S21800 (NITRONIC 60)	1		
4	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
5	219619	CAP, LOCK, .75 NC	A276 TP 316 (316SS)	1		
6	238965	ADAPTER, 1" MP, FLANGE, REGULATOR, GEN 2, 10K	A276 TP 316(316 SS)	2		
7	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE/NICKEL	4	X	
8	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X	
9	219620	SCREW, ADJUSTING, .75 NC	F593 GR2 (T316)	1		
10	193757	PLATE, SPRING	A276 TP 316	2		
11	192847	SPRING, COMPRESSION	AMS5670 (X-750) AMS 5667 (X-750) AMS 5699 (X-750)	1		
12	13125	SPRING, COMPRESSION	INCONEL X750	1		
13	154797	PELLET, NYLON	NYLON	1	X	X
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LG	A593 T316	6	X	X
15	18100-103K1	O-RING	HNBR	1	X	X
16	18100-051K1	O-RING	HNBR	2	X	X
17	18100-082K1	O-RING	HNBR	3	X	X
18	18100-026K1	O-RING	HNBR	4	X	X
19	18100-113K1	O-RING	HNBR	2	X	X
20	18100-009K1	O-RING	HNBR	4	X	X
21	193354	WEARBAND, 1-1/4"	DELIN AF	2	X	X
22	192385	WIPER, D-STYLE, 1-1/4" OD PLUNGER	POLYURETHANE	1	X	X
23	195435	RING, BACKUP	PEEK	4	X	X
24	195437	RING, BACKUP	PEEK	8	X	X
25	154659	RING, BACKUP	PEEK	4	X	X
26	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE/NICKEL	2	X	
27	161776	WEAR BAND, SEAL CARRIER	DELIN AF	1	X	X
28	204649	BODY	A564 TP 630	1		
29	204659	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1		
30	231939	GUIDE, PLUNGER, 1-1/2"	A276 TP 316 (316 SS)	1		
31	18224-019	SHCS, 3/8 - 16 UNC - 2-1/4" LG	A453 GR 660	8		
32	238935	FLANGE, 1" MP INLET, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	2		
33	238940	FLANGE, OUTLET, 1" MP, VALVE, REGULATOR, GEN 2, 10K	A276 TP 316 (316 SS)	1		
34	204651	COVER, VENT VALVE	A276 TP 316 (316 SS)	1		

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
35	204663	LIFTER, VENT VALVE	A564 TP 630 (17-4 PH)	1		
36	236163	SEAT, VENT VALVE	30% CARBON FILLED PEEK	1	X	X
37	204665	POPPET, VENT VALVE	A276 UNS S21800	1	X	X
38	238934	BODY, VENT VALVE, REGULATOR, GEN 2, 10K, 3/8" MP	A276 TP 316 (316 SS)	1		
39	204667	SPACER, VENT VALVE	A276 S21800	1		
40	18100-090K1	O-RING	HNBR	1	X	X
41	204669	RING, BACKUP	PEEK	2	X	X
42	231940	PLUNGER, 1-1/2"	A276 TP S21800 (NITRONIC 60)	1		
43	18100-012K1	O-RING	HNBR	1	X	X
44	204670	RING, BACKUP	PEEK	2	X	X
45	204671	RING, BACKUP	PEEK	2	X	X
46	18100-002K1	O-RING	HNBR	1	X	X
47	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X	X
48	192473	WEAR BAND, PLUNGER	DELIN AF	1	X	X
49	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
50	204666	PIN, SPRIOL, .156" OD, .625" LG	STAINLESS STEEL T420 (UNS S42000)	1	X	X
51	18100-110K1	O-RING	HNBR	2	X	X
52	18224-030	SHCS, 1/2-13 UNC X 2-1/2" LG	A453 GR660	8		
53	18224-005	SHCS 0.500-13 UNC X 1.50 LG	A453 GR660	14		
54	18224-045	SCHS, 5/16-18 UNC X 3/4" LG	A453 GR 660	4		
55	18108-509	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
56	18100-007K1	ORING	HNBR	1	X	X
57	18800-043	BALL, 9/16" DIA	A276 TP 316	1		
58	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
59	18800-021	BALL, 1/4" DIA.	NITRILE	1	X	X
60	18224-017	HEX-SHCS 1/2-13 UNC X 2 LG	DUPLEX	6		
61	18224-028	SHCS, 1/2-13 UNC X 1-1/4" LG	A453 GR 660	20		


**Gilmore**
**ENGINEERING**

SIZE	DWG NO	REV
<b>B</b>	<b>29240</b>	<b>A</b>
SCALE	1:8	SHEET 2 OF 5
SolidWorks		

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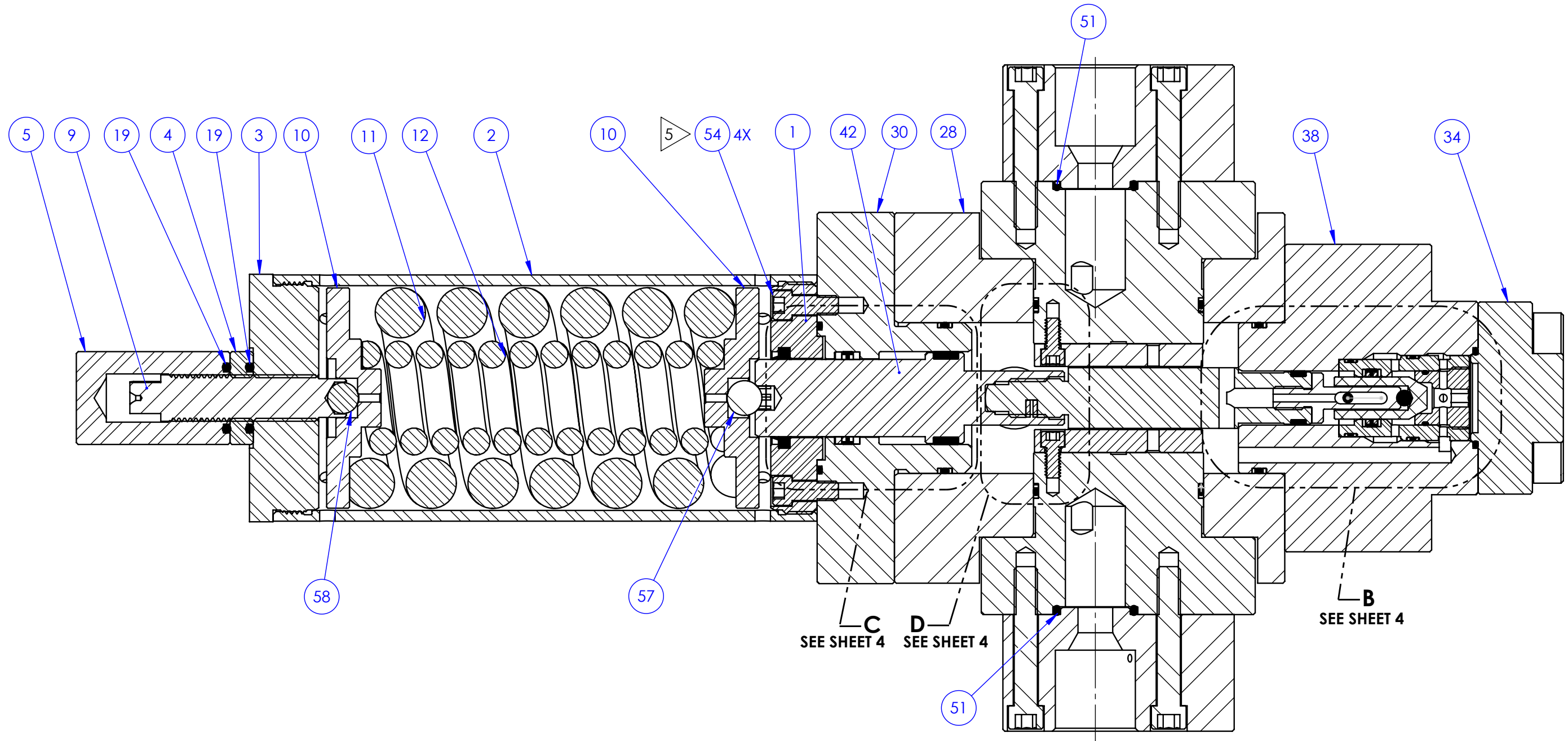
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SECTION A-A  
ROTATED 90°

C  
SEE SHEET 4

D  
SEE SHEET 4

B  
SEE SHEET 4

A

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ENGINEERING

SIZE

DWG NO

REV

**B**

**29240**

**A**

SCALE

1:8

SolidWorks

SHEET 3 OF 5

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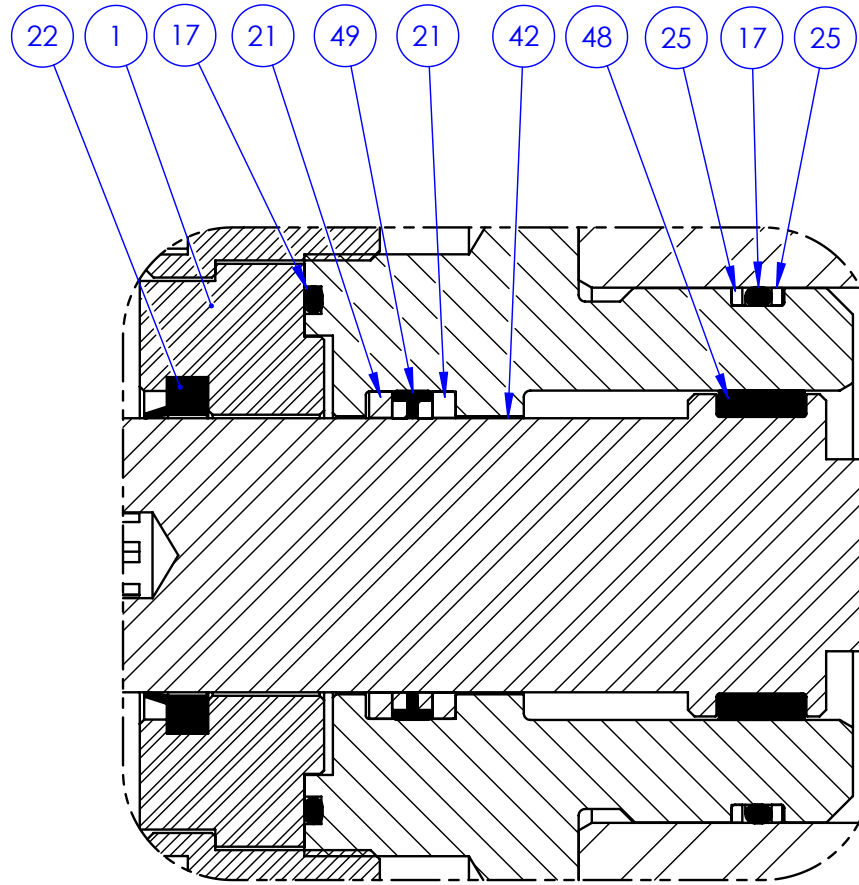
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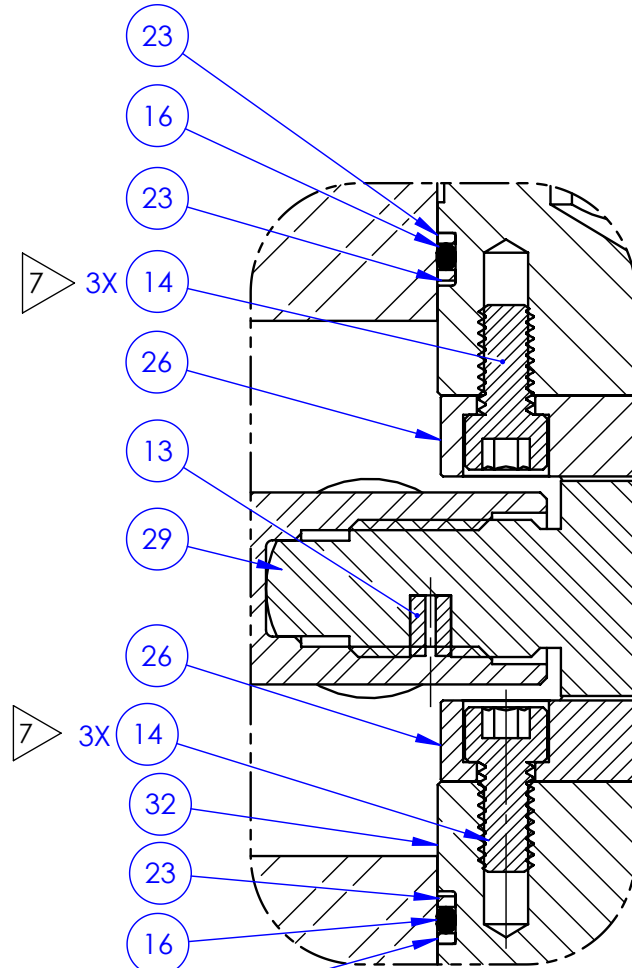
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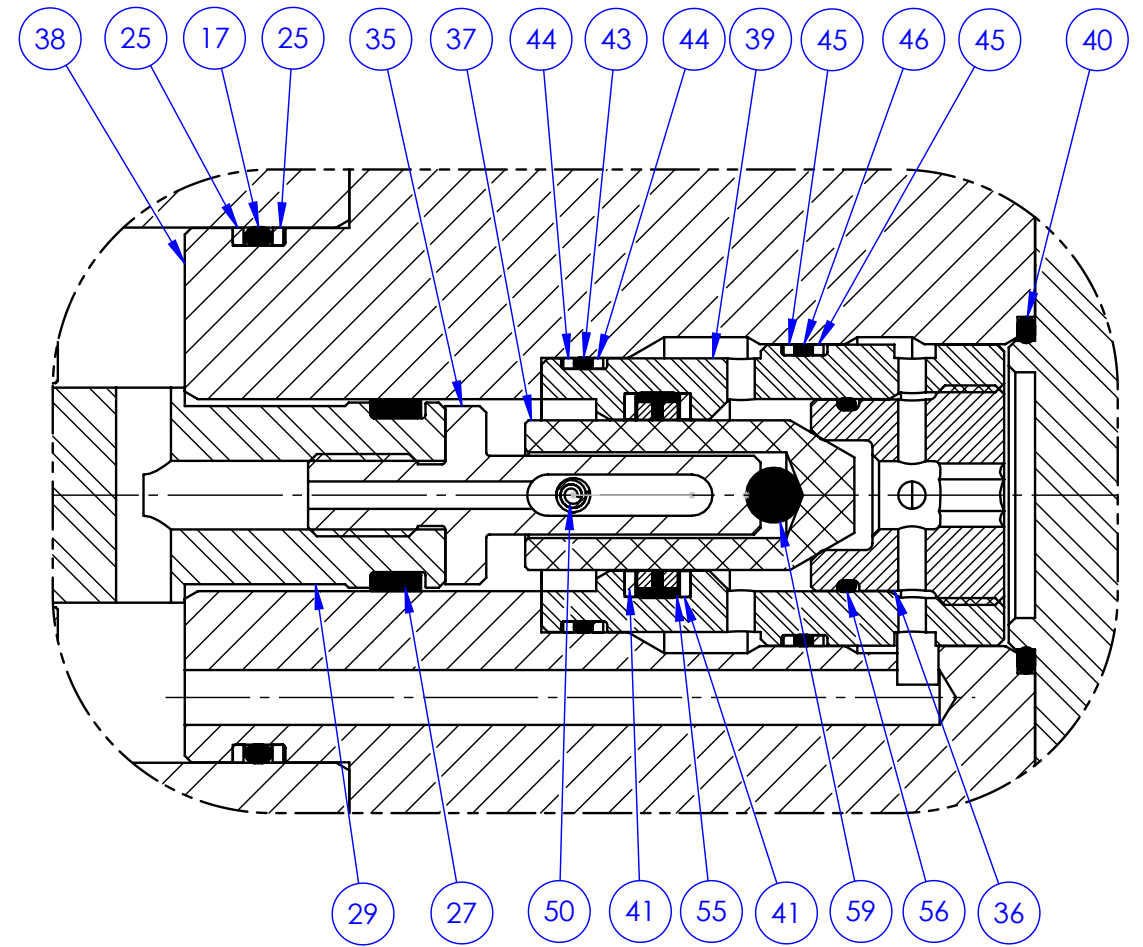
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DETAIL C



DETAIL D



DETAIL B

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ENGINEERING

SIZE

DWG NO

REV

**B**

**29240**

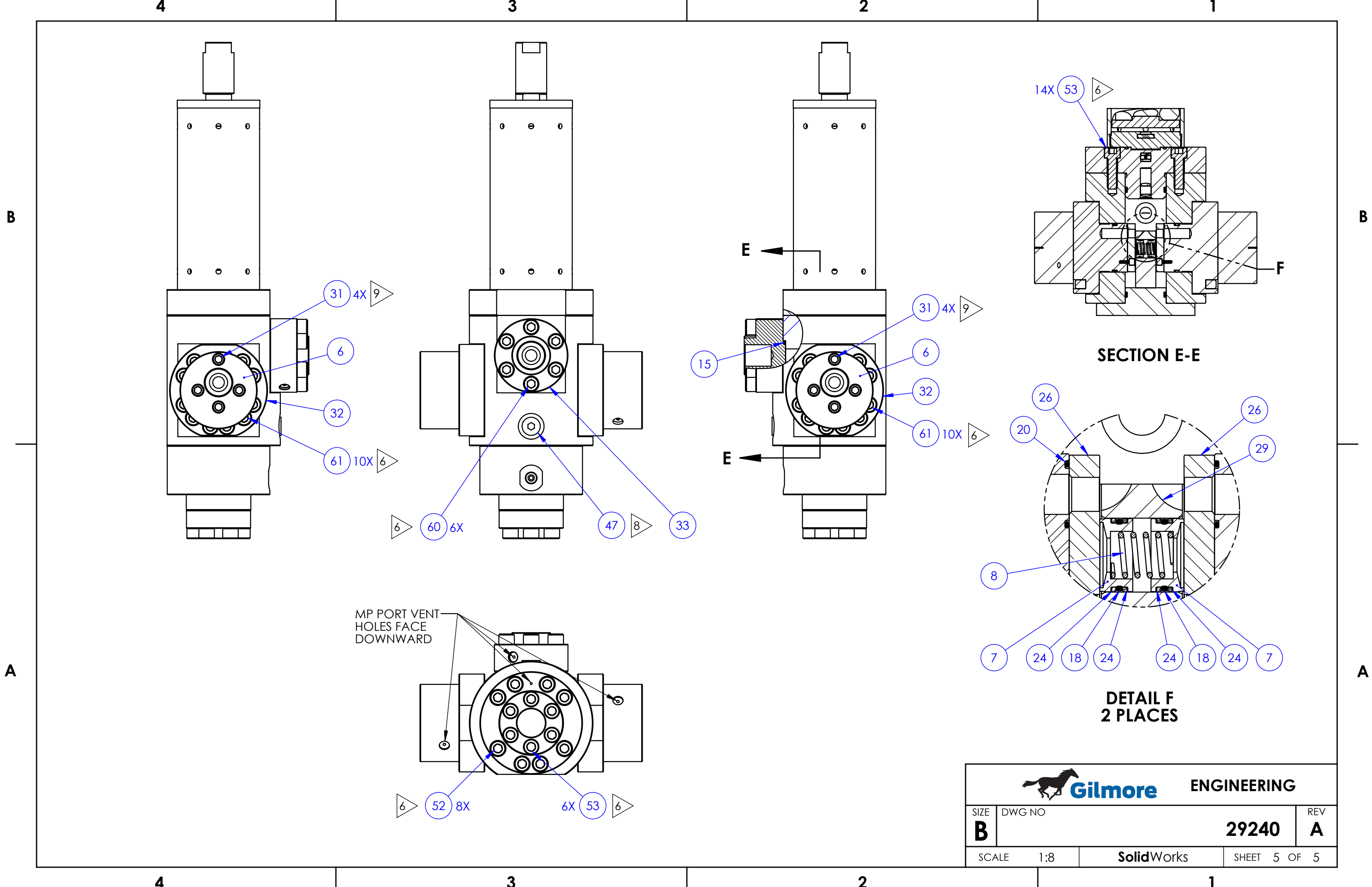
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SCALE

1:8

SolidWorks

SHEET 4 OF 5



MP PORT VENT  
HOLES FACE  
DOWNWARD

**SECTION E-E**

**DETAIL F  
2 PLACES**

SIZE <b>B</b>	DWG NO <b>29240</b>	REV <b>A</b>
SCALE 1:8	SolidWorks	SHEET 5 OF 5