

Product Information Bulletin

1/4" GEN 2 Variable Pilot Valve Product Line

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
001	06/21/2018	Document No: 150-062118-001	AP	SS
002	11-14-2019	Update Table 1	AP	SS
003	11-06-2020	Update to Template	SD	GM

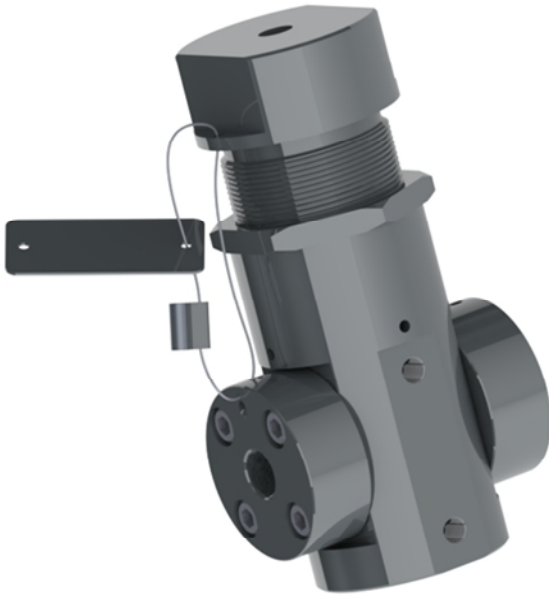
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Gilmore@proserv.com

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1231 Lumpkin Road
Houston, TX 77043

1/4" GEN 2 Variable Pilot Valve Product Line

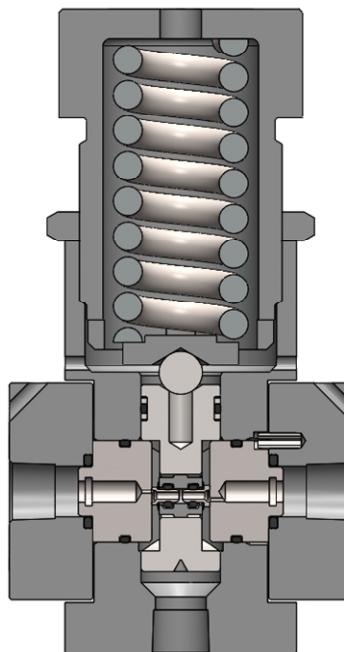


Proserv Gilmore Valve announces the new 1/4" GEN 2 Variable Pilot Valve product line used to enable accurate and adjustable sequencing of hydraulically controlled DCVs in drilling or production control systems. The Variable Pilot Valve will pressurize or vent a pilot, actuator, or cylinder at a specified pilot pressure, and subsequently reset with low dead band. With an identical footprint as the legacy Variable Pilot Valve, the new product line is a drop-in replacement. The 1/4" GEN 2 Variable Pilot Valve is field repairable.

Features and Benefits:

- Extrusion proof Tungsten Carbide seat design
- CRA spring housing materials with integral adjustment stop
- Low dead band operation
- Wire tag provided for security
- Provision for panel mounting
- T316 body and flange material
- Separately piloted version also available

Figure 1. PN 29045: 1/4" NPT Variable Pilot Valve, 800-1600 psi Set Point, Combined Pilot



Proserv Gilmore Valve has exceeded API 16D requirements by qualifying the 1/4" Variable Pilot Valve designs with multiple endurance qualification tests to 2500 cycles at maximum flow conditions to mimic customer applications.

Please note that sales of all legacy 1/4" Variable Pilot Valve part numbers listed below will be discontinued June 21st, 2019, as a result of the new Gilmore 1/4" Variable Pilot Valve product line availability. The new Proserv Gilmore 1/4" Variable Pilot Valves are now available for purchase as drop-in replacements for the legacy 1/4" Variable Pilot Valves.

Gilmore will continue to support legacy 1/4" Variable Pilot Valves after they are discontinued:

- Gilmore will continue providing repair kits and seal kits in support of discontinued 1/4" Variable Pilot Valves.
- Gilmore Aftermarket will continue to support discontinued legacy products with factory failure analysis and repair services.

Table 1. Legacy and New 1/4" Variable Pilot Valve Part Numbers:

Item	Legacy Valve Description	Legacy Valve PN	Legacy Repair Kit PN	New Valve Description	New Valve PN	New Repair Kit PN
1	Valve, Variable Pilot, 1/4" NPT, N.C., Stop Ring, Combined Pilot, Set Point Range 800-1600 psi	25005-1	25005-1 RK	Valve, Variable Pilot, 1/4" NPT, N.C., Combined Pilot, Set Point Range 800-1600 psi	29045	29045 RK
2	Valve, Variable Pilot, 1/4" NPT, N.C., Stop Ring, Combined Pilot, Set Point Range 1600-3300 psi	25005-2	25005-2 RK	Valve, Variable Pilot, 1/4" NPT, N.C., Combined Pilot, Set Point Range 1600-3300 psi	29046	29046 RK
3	Valve, Variable Pilot, 1/4" NPT, N.C., Stop Ring, Combined Pilot, Set Point Range 1600-3300 psi	25005-4	25005-4 RK	Valve, Variable Pilot, 1/4" NPT, N.C., Combined Pilot, Set Point Range 1600-3300 psi	29046	29046 RK
4	Valve, Variable Pilot, 1/4" SAE, N.C., Stop Ring, Combined Pilot, Set Point Range 1600-3300 psi	25014	25014 RK	Valve, Variable Pilot, 1/4" SAE, N.C., Combined Pilot, Set Point Range 1600-3300 psi	29051	29051 RK
5	Valve, Variable Pilot, 1/4" SAE, N.C., Bronze Cap, Stop Ring, Combined Pilot, Set Point Range 1600-3300 psi	25014-1	25014 RK	Valve, Variable Pilot, 1/4" SAE, N.C., Combined Pilot, Set Point Range 1600-3300 psi	29051	29051 RK
6	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., High Drag, Stop Ring, Separate Pilot, Max Set Point 2600 psi	25015-0.1	25015-0.1 RK	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., High Drag, Separate Pilot, Set Point Range 1600-3300 psi	29047	29047 RK
7	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.O., Separate Pilot, Max Set Point 2600 psi	25018	25018 RK	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.O., Separate Pilot, Set Point Range 1600-3300 psi	29050	29050 RK
8	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., High Drag, Stop Ring, Separate Pilot, Max Set Point 1200 psi	28315	28315 RK	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., High Drag, Separate Pilot, Set Point Range 800-1600 psi	29084	29084 RK
9	N/A	N/A	N/A	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., High Drag, Separate Pilot, Elgiloy Spring Set Point Range 1600-3300 psi	29047-1	29047-1 RK

10	N/A	N/A	N/A	Valve, Variable Pilot, 1/4" NPT, N.O., Combined Pilot, Set Point Range 800-1600 psi	29048	29048 RK
11	N/A	N/A	N/A	Valve, Variable Pilot, 1/4" NPT, N.O., Combined Pilot, Set Point Range 1600-3300 psi	29049	29049 RK
12	N/A	N/A	N/A	Valve, Variable Pilot, 1/4" SAE, N.C., Separate Pilot, Set Point Range 1600-3300 psi	29052	29052 RK
13	Valve, Variable Pilot, 1/4" SAE x 1/2" SAE, N.C., Separate Pilot, Max Set Point 2600 psi	25015	25015-RK	Valve, Variable Pilot, NC, 3 Way, Combined Pilot, 1/4" SAE In, 1/4" SAE Out, 800-1600 PSI	29125	29125 RK

The following legacy 1/4" Variable Pilot Valves will be discontinued June 21st, 2019. If a new 1/4" Variable Pilot Valve part number is not listed below for a specific legacy part number, please contact Gilmore Customer Service to request a quotation for a new part number.

Table 2. Legacy Variable Pilot Valve Part Numbers

Item	Legacy Description	Legacy Valve PN	Legacy Repair Kit PN	New Valve Description	New Valve PN	New Repair Kit PN
1	Valve, Variable Pilot, 1/4" SAE x 1/4" NPT, N.O., Separate Pilot, Set Point Range 5000-10000 psi	25017	25017 RK	N/A	N/A	N/A
2	Valve, Variable Pilot, 1/4" SAE x 1/4" NPT, N.C., Separate Pilot, Set Point Range 5000-10000 psi	25027	25027 RK	N/A	N/A	N/A

Please contact Gilmore Customer Service to request drawings and quotations for these Variable Pilot Valves at Gilmore@proserv.com.

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29045 RK, AND SEAL KIT 29045 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18 & 19) AND CAP (ITEM 2)

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
D	ECO 019242	CMC 7-23-20	DM 7/23/20	AJP 7/23/20

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 800 - 1,600 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 800 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" NPTF
FUNCTION PORT: 1/4" NPTF
VENT PORT: 1/4" NPTF

FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

APPROX WEIGHT: 4.9 LBS
TEMP RANGE: 32 °F TO 150 °F
FIELD SERVICEABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).

SEE SHEET 2 A

LOGO AND COMPANY INFO 3

(2.00) HEX

(ADJUSTS FROM 5.25 TO 5.88)

6 4X 11

(1.42)

A

(.95) FLATS

(1.91) FLATS

29045
VER (AX VERSION #)
(SERIAL NUMBER)
5000 PSI
(DATE OF MFG)

SEE SHOP TRAVELER FOR ADDITIONAL INFO REQUIRED

3

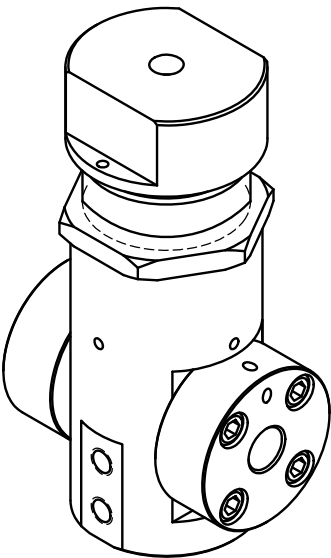
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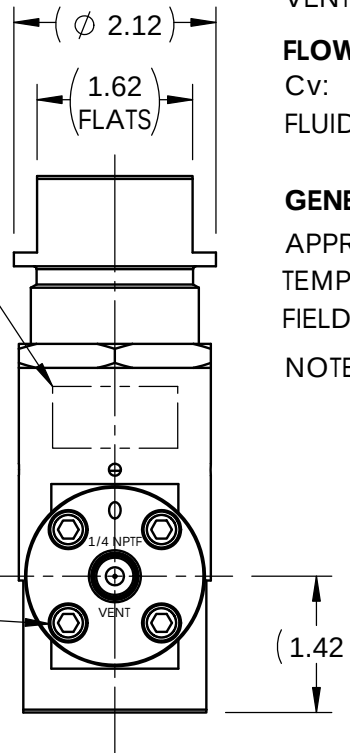
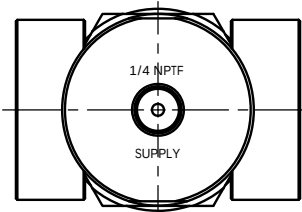
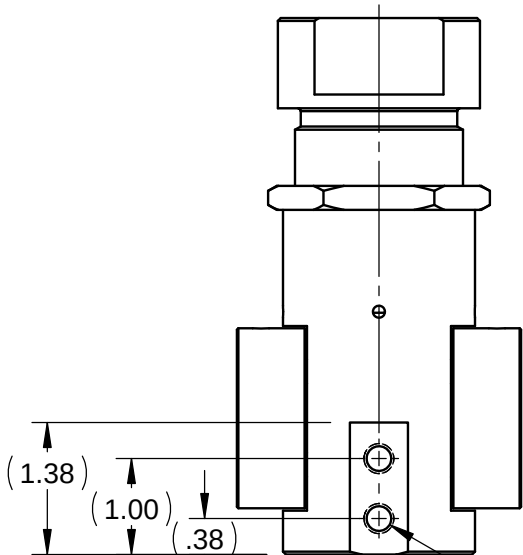
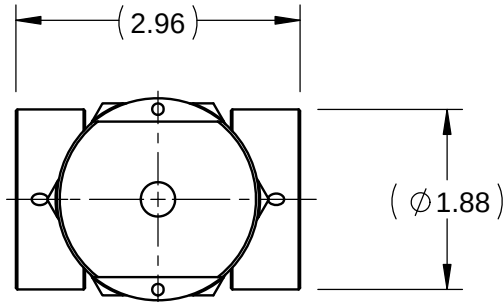
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FUNCTION SUPPLY VENT

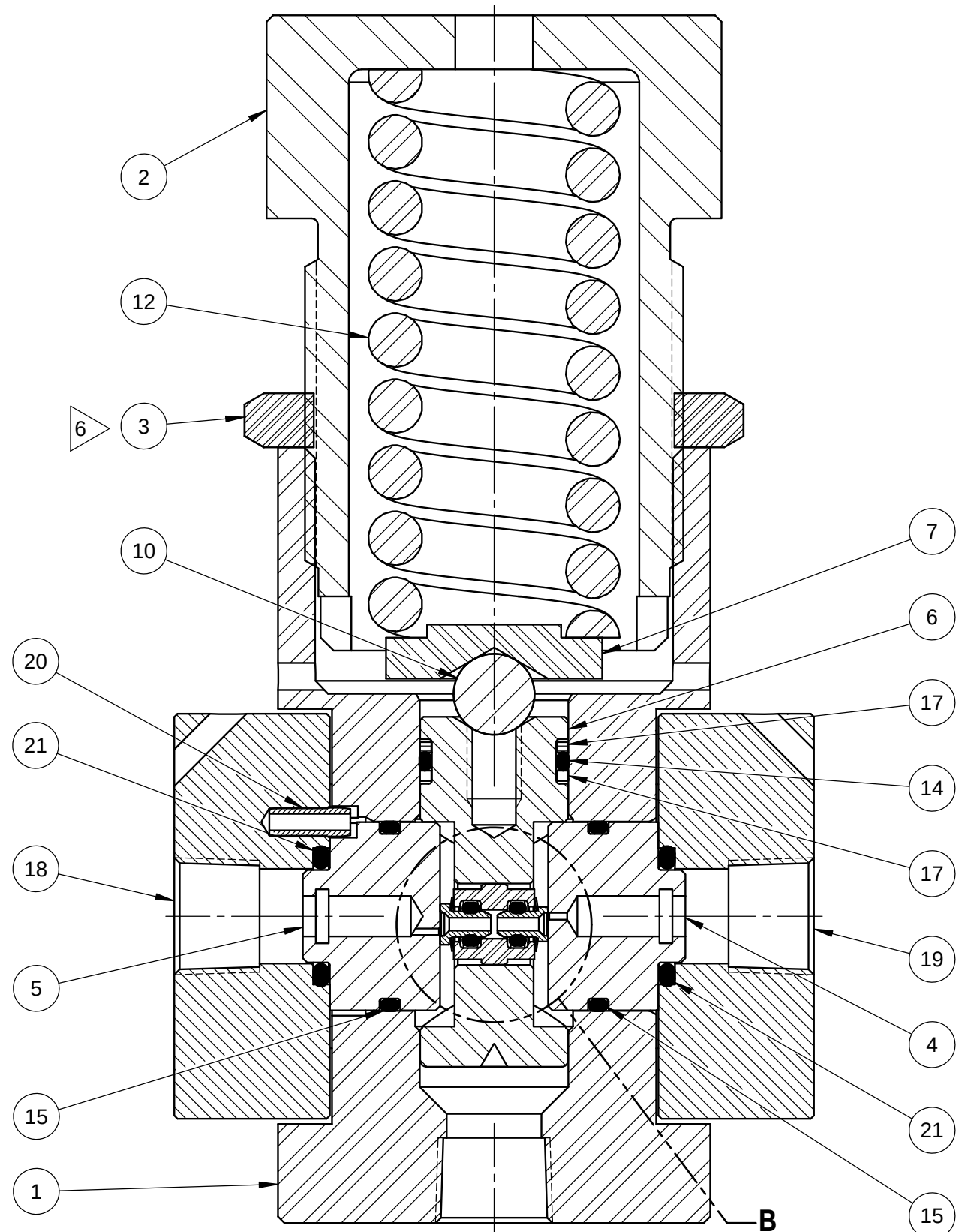
SCHEMATIC



MARK TAG ACCORDING TO SALES ORDER REQUIREMENTS



MATERIAL: REFER TO INDIV BOM ITEMS		DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 /  3) CORADIAL FEATURES SHALL BE  WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 ENGINEERING	
CONDITION:			DRAWN BY CY	DATE 02/22/18	VALVE, VARIABLE PILOT, NC, 3 WAY, COMBINED PILOT, 1/4" NPTF IN, 1/4" NPTF OUT, 800-1600 PSI	
TREATMENT:			CHECKED BY JOP	DATE 02/22/18		
PROCEDURE NUMBER: 			ENGINEER AJP	DATE 02/22/18		
			ERN NUMBER ERN 02164	DATE 12-28-17		
		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.		SIZE B	DWG NO 29045	REV D
				SCALE 1:2	SolidWorks	SHEET 1 OF 3



SECTION A-A

—B
SEE SHEET 3

	BILL OF MATERIALS						
5	ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
	1	135129	BODY, 1/4" NPT, NC AND NO	A276 TP 316 (316SS)	1		
	2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
	3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
1	4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
1	5	135117	PLATE, SEAL, NC FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
1	6	135130	CONTAINER, SEAL, COMBINED PILOT	A276 TP S21800 (NITRONIC 60)	1		
D	7	12024	SPRING DISK	A276 TP 316 (316 SS)	1		
	8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1		
	9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1		
	10	18800-007	BALL	A276 TP 316	1		
	11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
	12	135135	SPRING COMPRESSION	UNS N07750 (INCONEL X750)	1		
	13	21089-004	SPRING, SEAL	X-750	2		
	14	18100-022K1	O-RING	HNBR	1	X	X
	15	18100-007K1	ORING	HNBR	2	X	X
	16	18100-014K1	O-RING	HNBR	2		
	17	18110-013T	BACKUP RING	TEFLON	2	X	X
	18	135136	FLANGE, 1/4" NPT, FUNCTION	A276 TP 316	1		
	19	174309	FLANGE, 1/4" NPT, VENT	A276 TP 316	1		
	20	18504-003	SPRING PIN	TP 316	1	X	
	21	18100-058K1	O-RING	HNBR	2	X	X
	22	134371	CAGE, SEAL	A276 TP 316 (316 SS)	1		
8	23	28538	WIRE TAG KIT	SST	1		



ENGINEERING

SIZE	DWG NO
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REV

B

29045

D

SCALE

3:2

SolidWorks

SHEET 2 OF 3

4

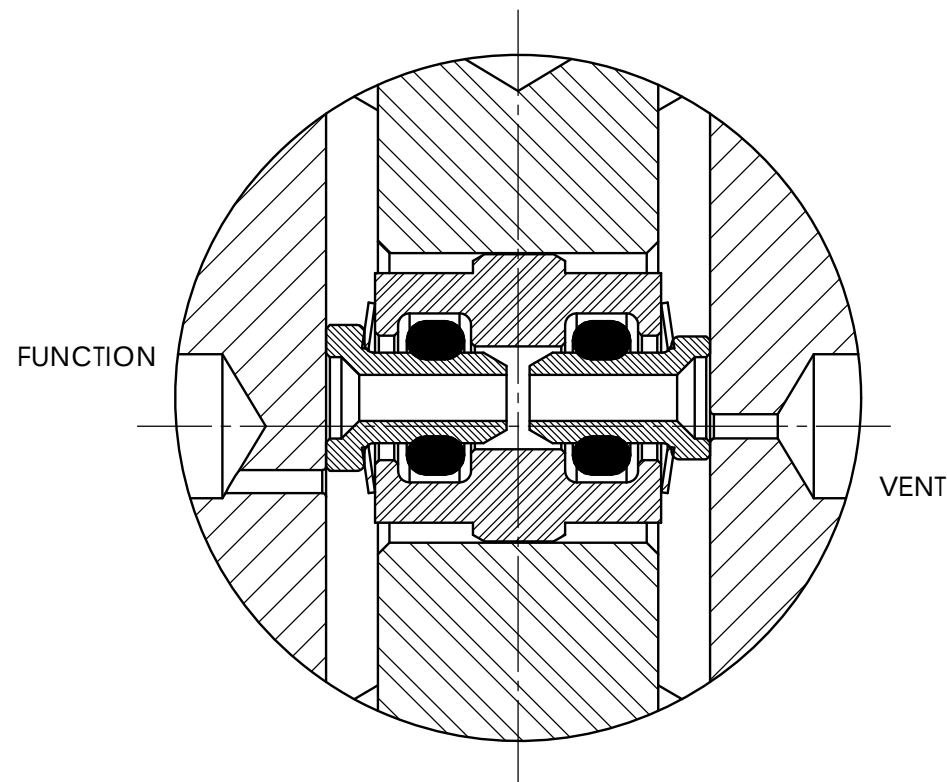
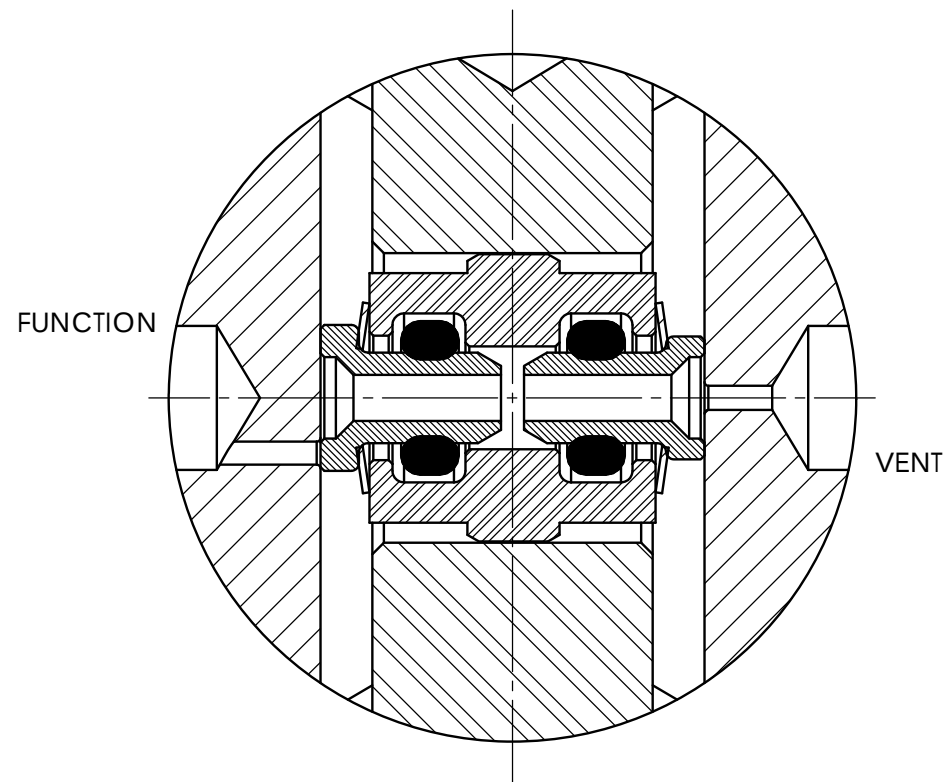
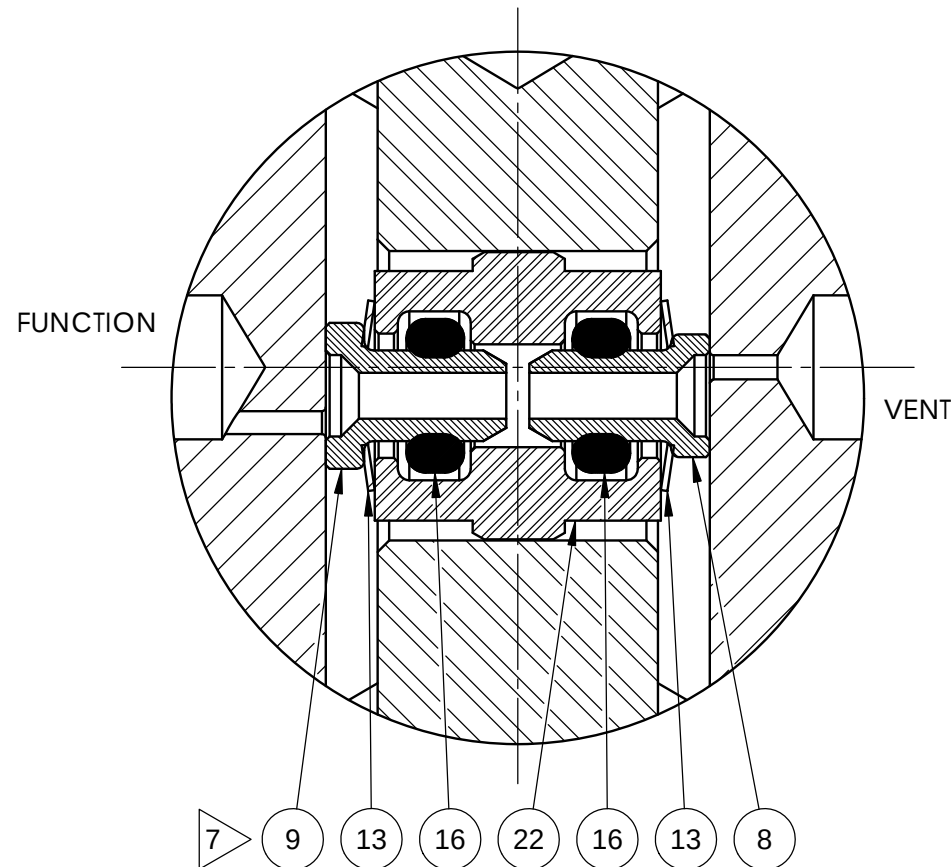
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DETAIL B
CLOSED

DETAIL B
MID POSITION

DETAIL B
OPEN

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ENGINEERING

SIZE B	DWG NO 29045	REV D
SCALE 4:1	SolidWorks	SHEET 3 OF 3

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29046 RK, AND SEAL KIT 29046 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT
SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 22) BETWEEN HOLES PROVIDED IN
FLANGE (ITEM 18) AND CAP (ITEM 2)

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 015021	SEP 24/19	CY 3-1-19	APR 3/11/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1,600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" NPT
FUNCTION PORT: 1/4" NPT
VENT PORT: 1/4" NPT

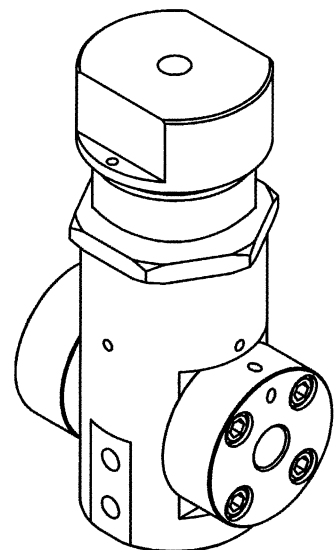
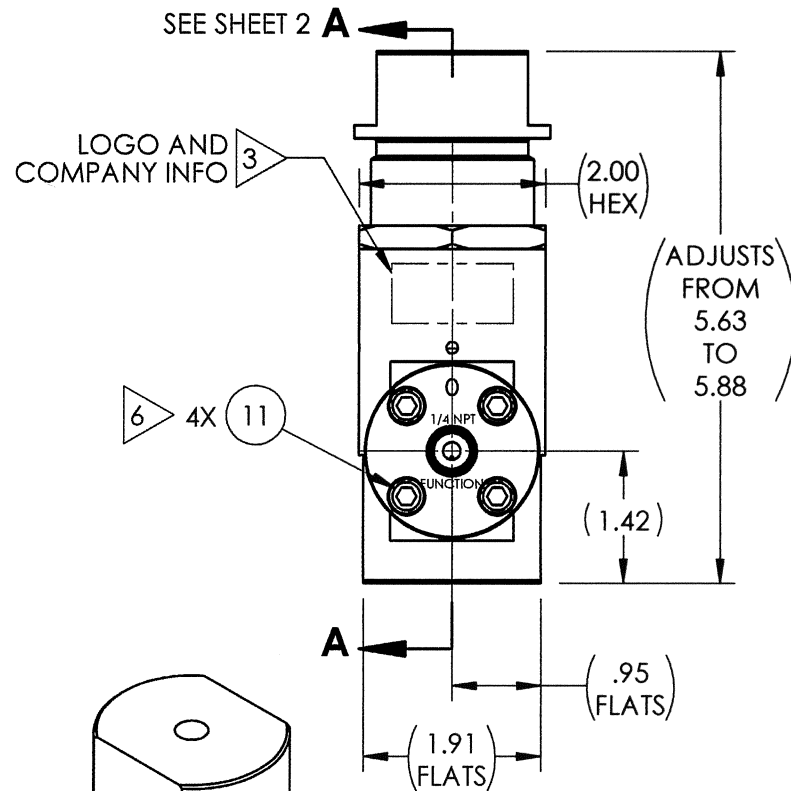
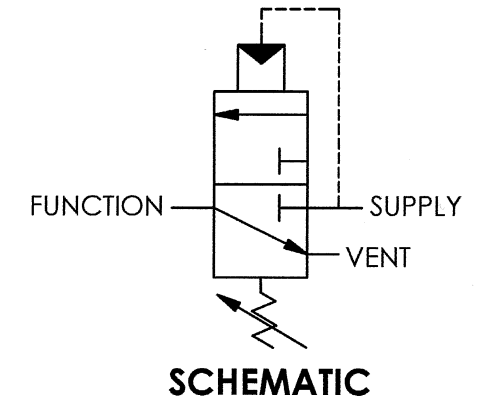
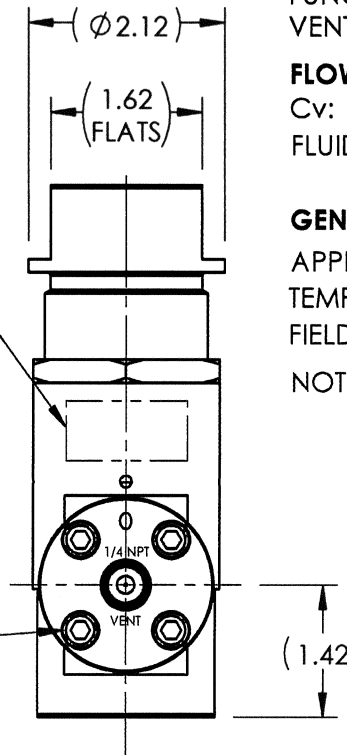
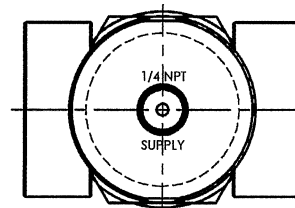
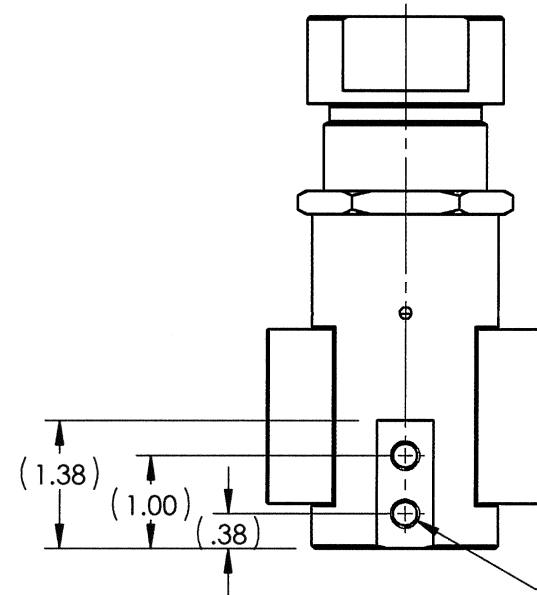
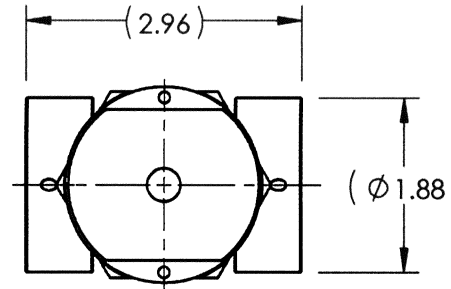
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

APPROX WEIGHT: 5.2 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND
VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING
RELATIVELY SMALL PILOT CIRCUIT VOLUMES
(I.E. OUNCES).



MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 3) CORADIAL FEATURES SHALL BE © WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		proserv Gilmore	
		DRAWN BY CY	DATE 03/22/18		
CONDITION:		CHECKED BY JOP	DATE 03/22/18	VALVE, VARIABLE PILOT, NC, 3 WAY, COMBINED PILOT, 1/4" NPT IN, 1/4" NPT OUT, 1600 - 3300 PSI	
TREATMENT:		ENGINEER AJP	DATE 03/22/18		
PROCEDURE NUMBER:		ERN NUMBER ERN 02164	DATE 5/10/16	SIZE B	REV B
		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.		SCALE 1:2	SHEET 1 OF 3

4

3

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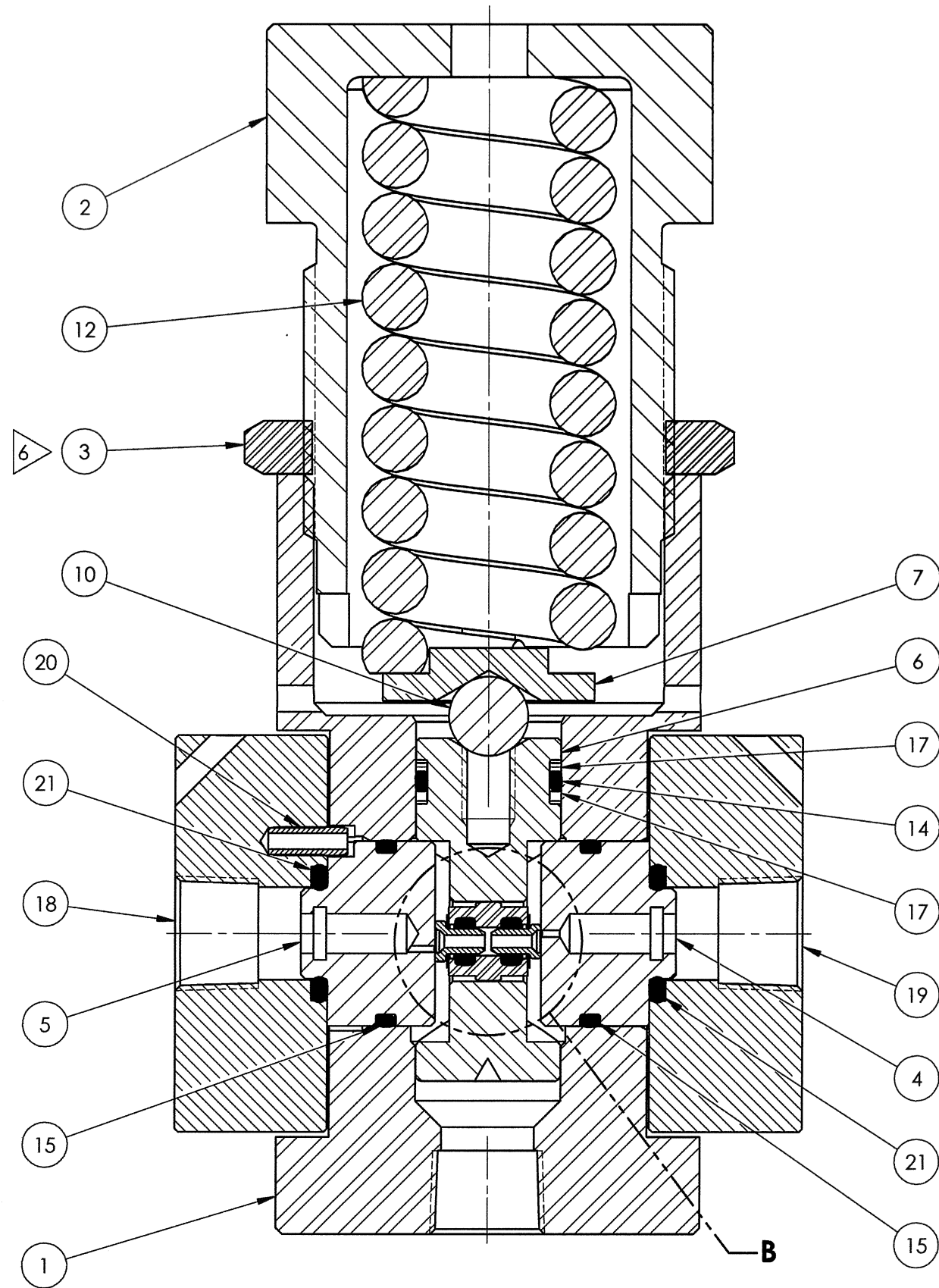
1

B

B

A

A



SECTION A-A

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	135129	BODY, 1/4" NPT, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
5	135117	PLATE, SEAL, NC FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
6	135130	CONTAINER, SEAL, COMBINED PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	UNS N07750 (INCONEL X750)	1		
13	21089-004	SPRING, SEAL	X-750	2	X	X
14	18100-022K1	O-RING	HNBR	1	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	2	X	X
18	135136	FLANGE, 1/4" NPT, FUNCTION	A276 TP 316	1		
19	174309	FLANGE, 1/4" NPT, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316	1	X	X
23	28538	WIRE TAG KIT	SST	1		

proserv | Gilmore

SIZE B	DWG NO 29046	REV B
SCALE 3:2	SolidWorks	SHEET 2 OF 3

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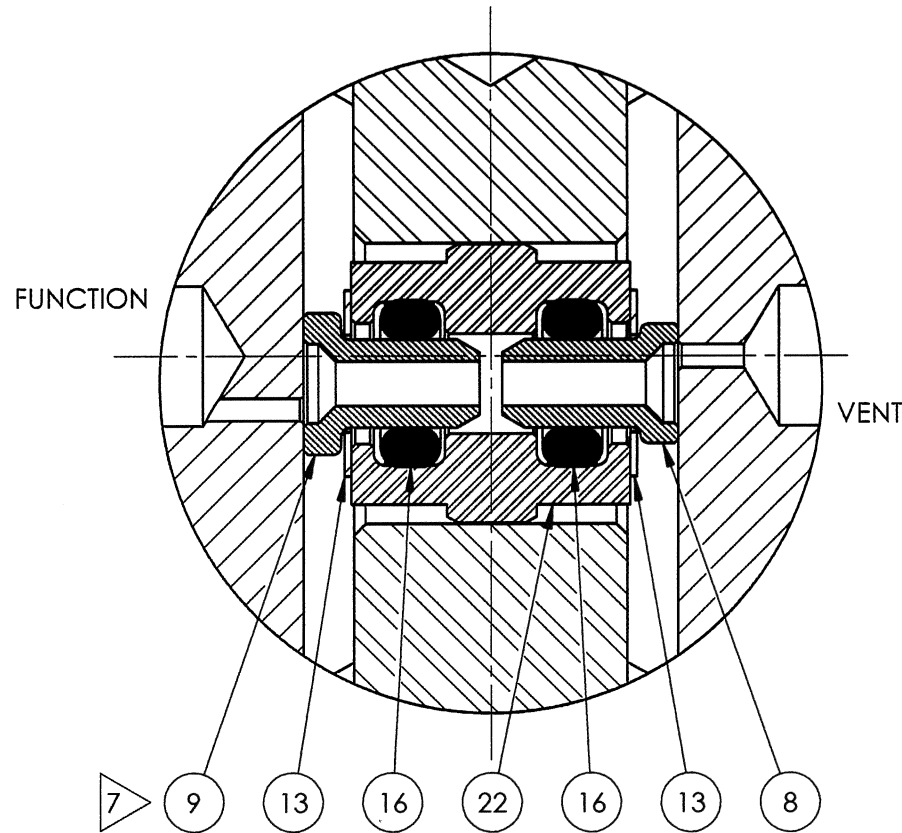
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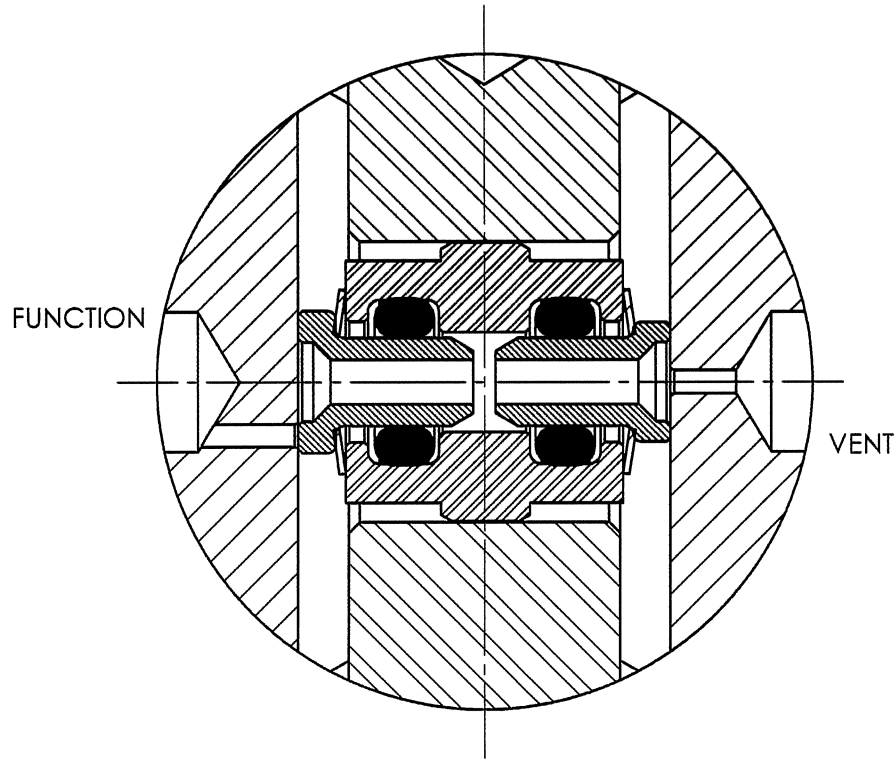
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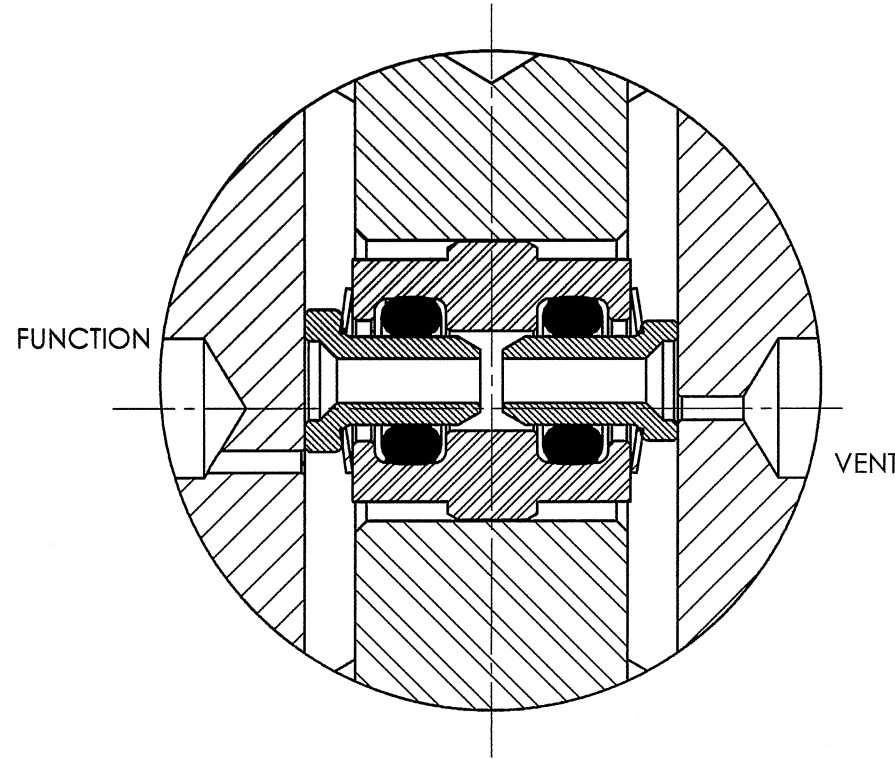
B



DETAIL B
CLOSED



DETAIL B
MID POSITION



DETAIL B
OPEN

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proserv 			
SIZE B	DWG NO 29046	REV B	
SCALE 4:1	SolidWorks	SHEET 3 OF 3	

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29047 RK, AND SEAL KIT 29047 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18 & 19) AND CAP (ITEM 2)

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
D	ECO 017554	<i>[Signature]</i> 11/9/19	<i>[Signature]</i> 11-8-19	<i>[Signature]</i> 11/11/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 225 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1,600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" SAE
FUNCTION PORT: 1/4" SAE
VENT PORT: 1/4" SAE
PILOT PORT: 1/2" SAE (D)

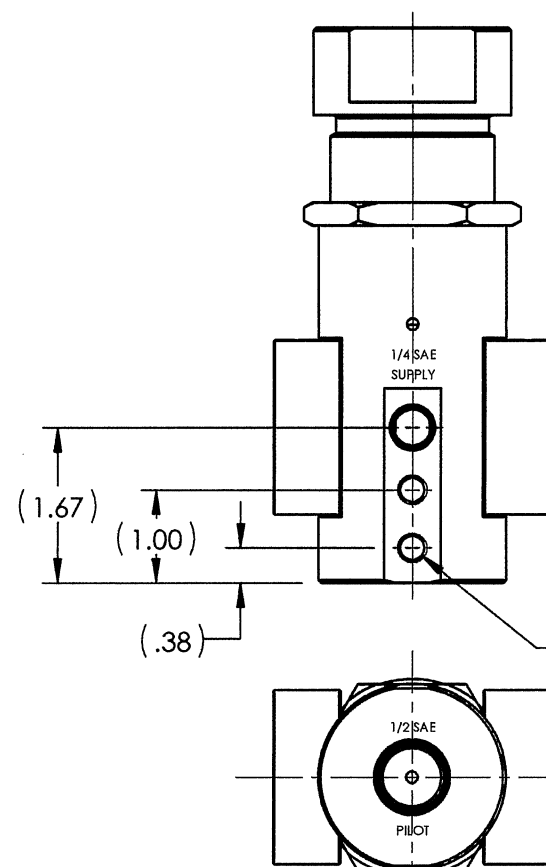
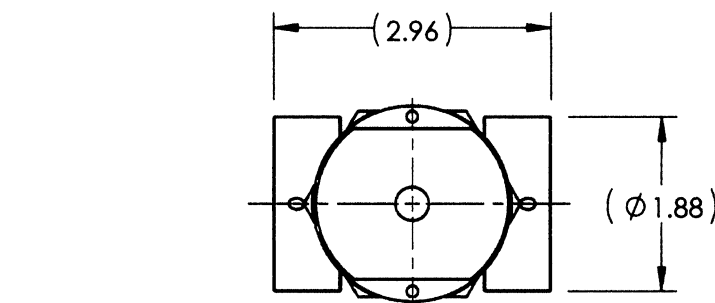
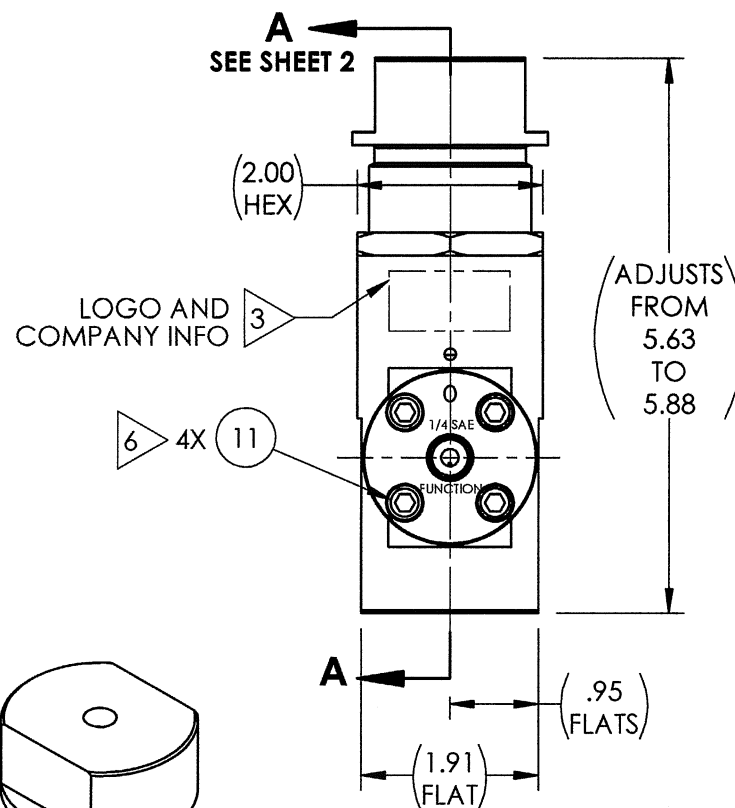
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

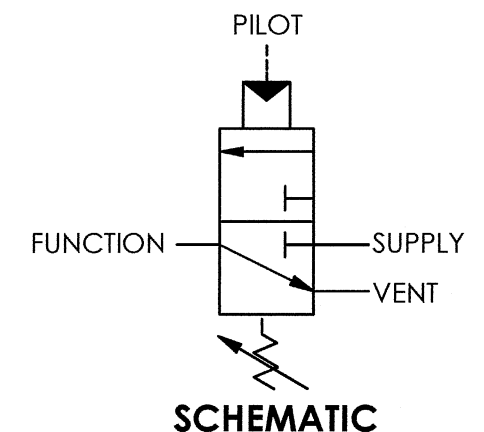
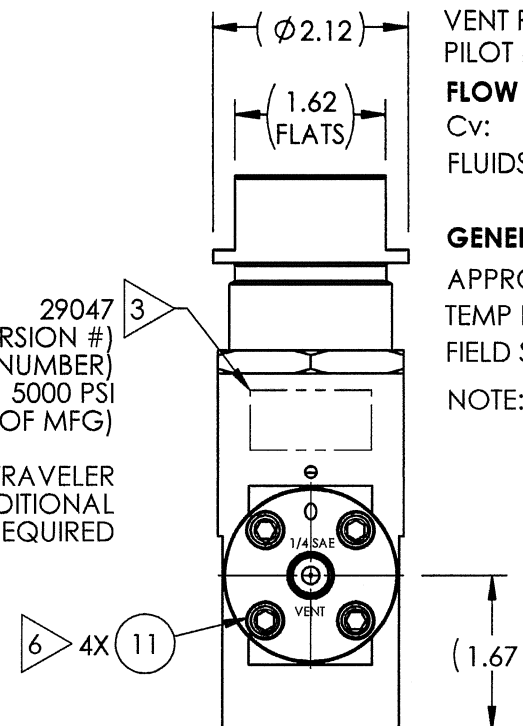
GENERAL DATA

APPROX WEIGHT: 5.2 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).



29047
VER (AX VERSION #)
(SERIAL NUMBER)
5000 PSI
(DATE OF MFG)
SEE SHOP TRAVELER
FOR ADDITIONAL
INFO REQUIRED



MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 3) CORADIAL FEATURES SHALL BE  WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 Gilmore a proserv company	ENGINEERING	
CONDITION:		DRAWN BY CY	DATE 03/22/18			
TREATMENT:		CHECKED BY JOP	DATE 03/22/18	VALVE, VARIABLE PILOT, NC, 3 WAY, SEPARATE PILOT, 1/4 SAE IN, 1/4 SAE OUT, 1/2 SAE PILOT, 1600-3300 PSI, HD		
		ENGINEER AJP	DATE 03/22/18			
		ERN NUMBER ERN 02164	DATE 1-2-18			
PROCEDURE NUMBER: 		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.			SIZE B	DWG NO 29047
				SCALE 1:2	SolidWorks	SHEET 1 OF 3

4

3

2

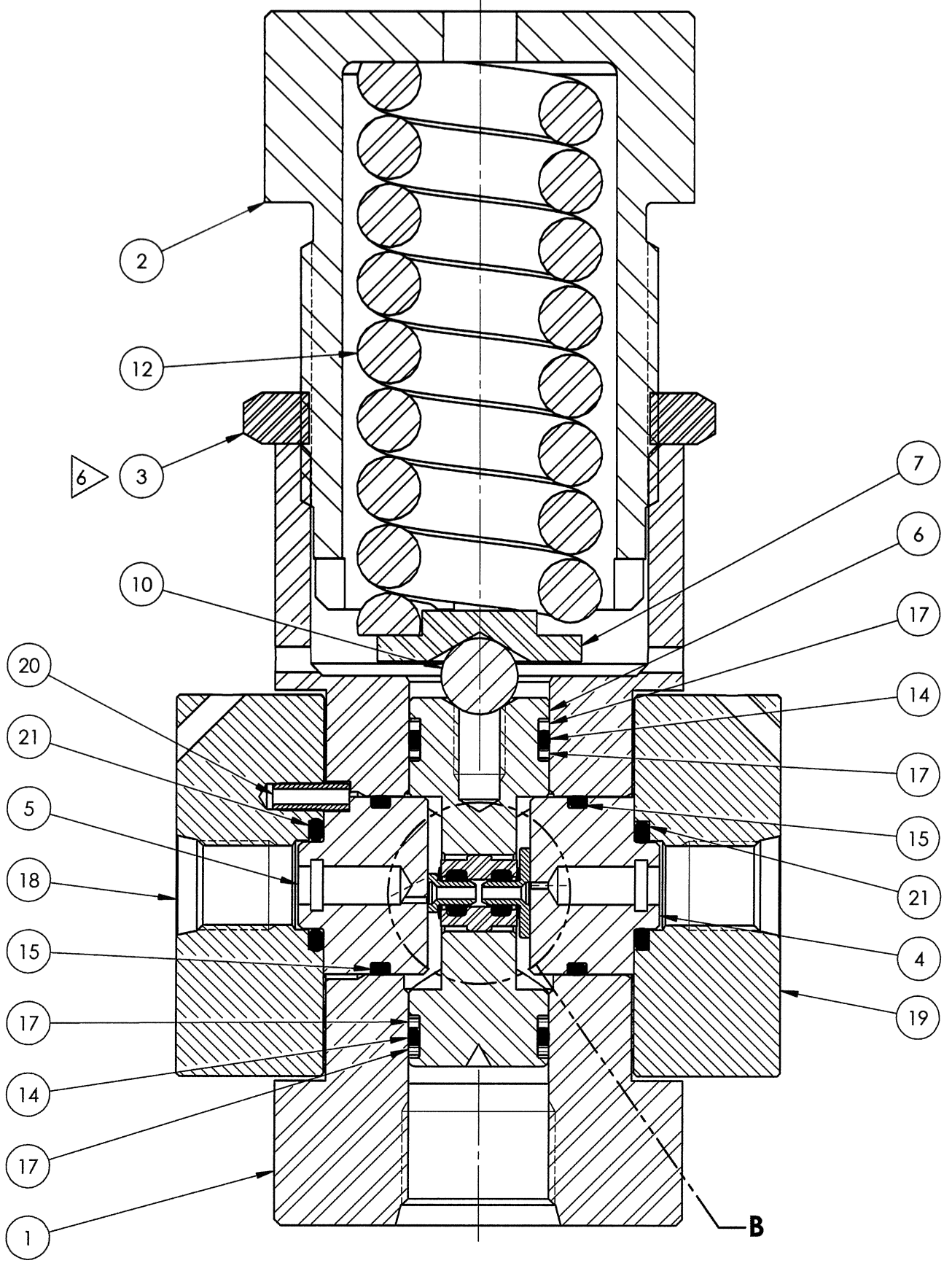
1

B

B

A

A



SECTION A-A

4

3

2

1

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	135465	BODY, 1/2" SAE, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
5	135117	PLATE, SEAL, NC FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
6	134370	CONTAINER, SEAL, SEPARATE PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135119	SEAL, VENT, HIGH DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	INCONEL X-750	1		
13	21089-004	SPRING, SEAL	X-750	2	X	X
14	18100-022K1	O-RING	HNBR	2	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	4	X	X
18	170323	FLANGE, 1/4" SAE, FUNCTION	A276 TP 316	1		
19	174308	FLANGE, 1/4" SAE, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316 (316 SS)	1	X	X
23	28538	WIRE TAG KIT	SST	1		



ENGINEERING

SIZE B	DWG NO 29047	REV D
SCALE 3:2	SolidWorks	SHEET 2 OF 3

4

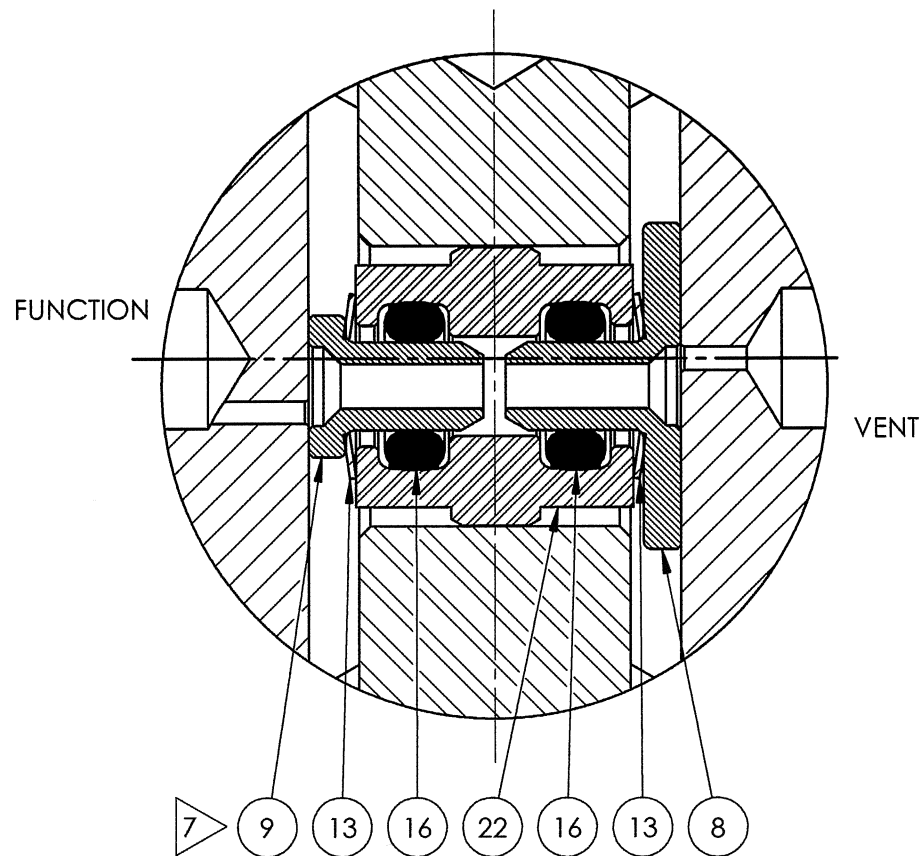
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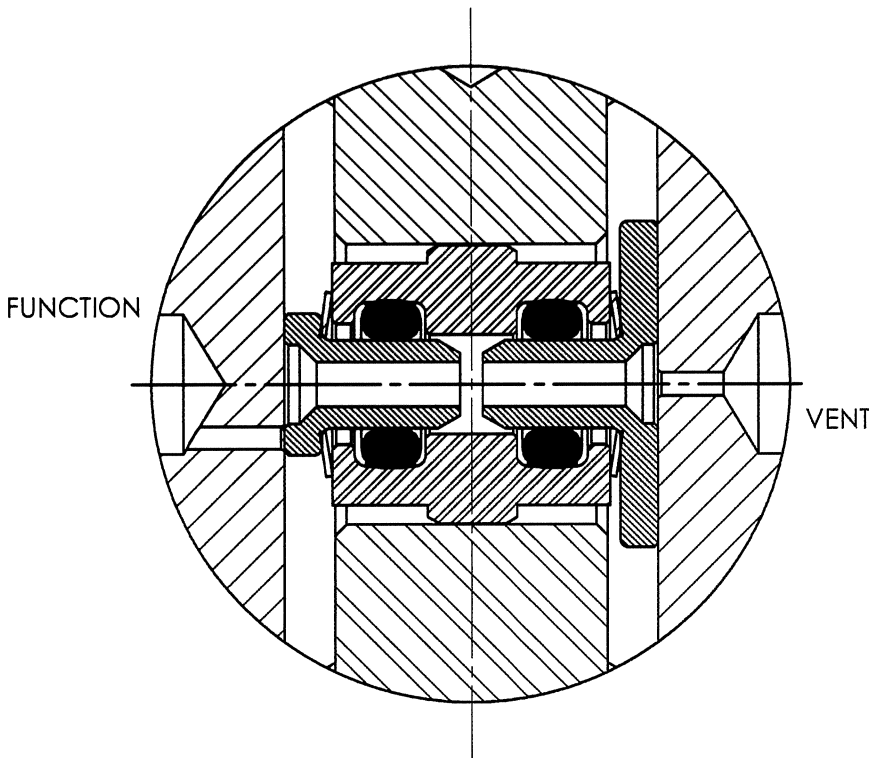
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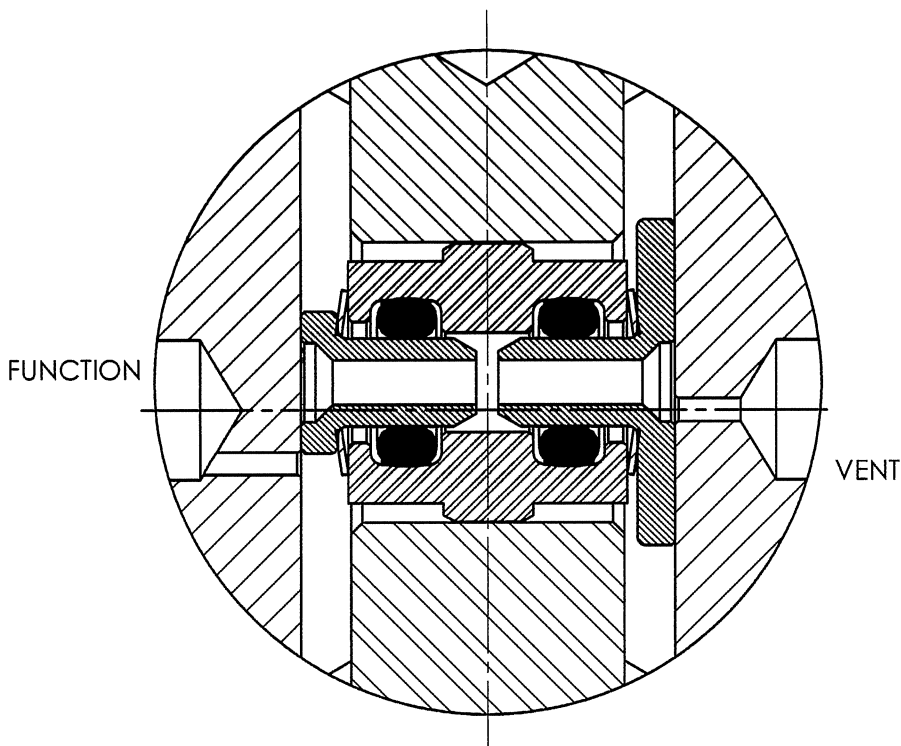
B



DETAIL B
CLOSED



DETAIL B
MID POSITION



DETAIL B
OPEN

A

A

4

3

2

1

 Gilmore a proserv company		ENGINEERING	
SIZE B	DWG NO 29047	REV D	
SCALE 4:1	SolidWorks	SHEET 3 OF 3	

REVISIONS

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
2. "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29048 RK, AND SEAL KIT 29048 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT
SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN
FLANGE (ITEM 18 &19) AND CAP (ITEM 2)

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
D	ECO 019242	<i>Cmcf</i> 7-23-20	<i>DM</i> 7/23/20	<i>AOP</i> 7/23/20

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 800 - 1,600 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 800 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" NPTF
FUNCTION PORT: 1/4" NPTF
VENT PORT: 1/4" NPTF

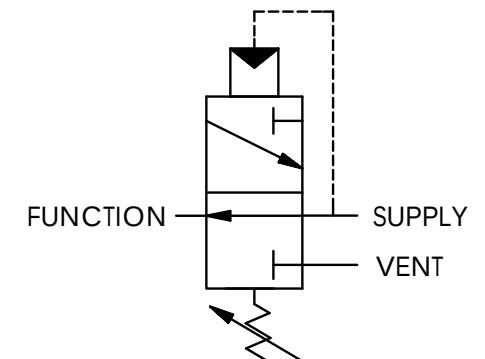
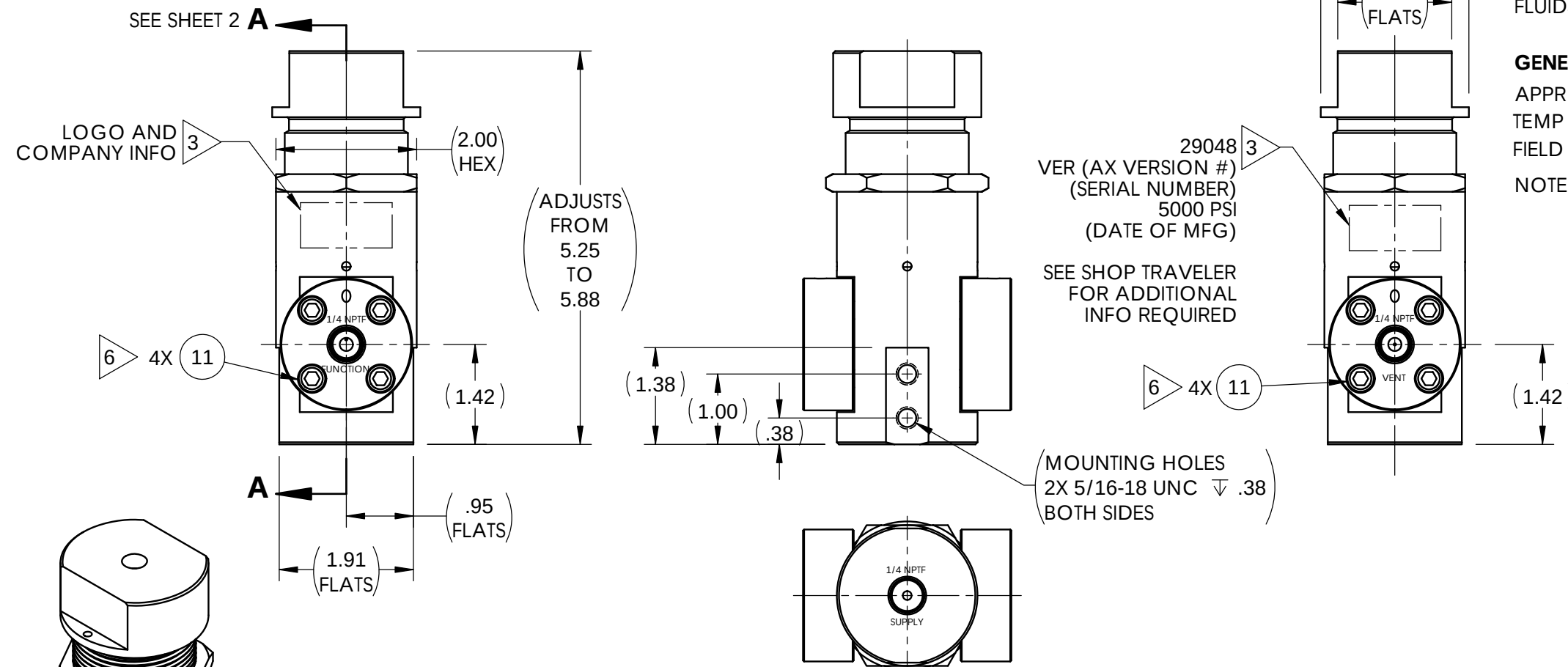
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

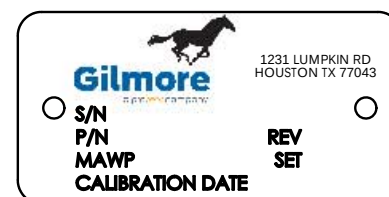
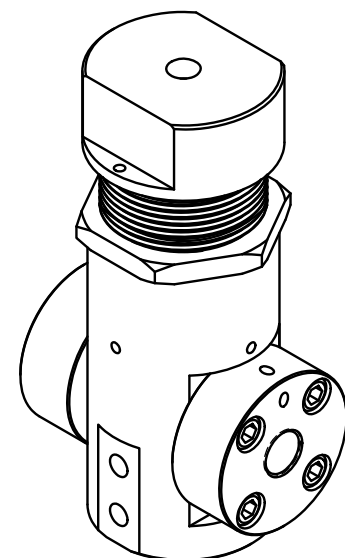
GENERAL DATA

APPROX WEIGHT: 4.9 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICEABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS). RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).

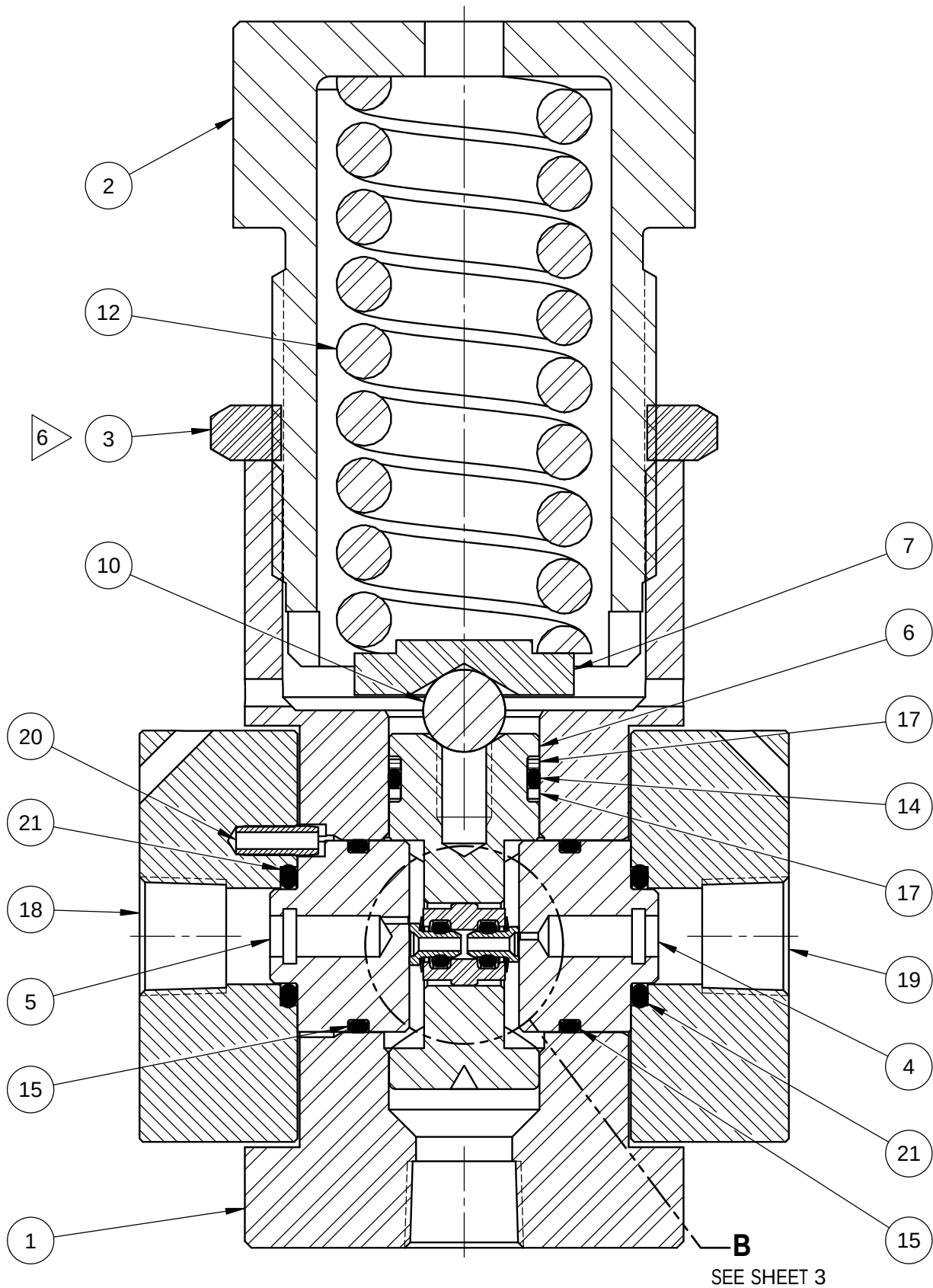


SCHEMATIC



MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED:	APPROVAL		 ENGINEERING		
CONDITION:	1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5°	DRAWN BY CY	DATE 03/22/18	VALVE, VARIABLE PILOT, NO, 3 WAY, COMBINED PILOT, 1/4" NPTF IN, 1/4" NPTF OUT, 800 - 1,600 PSI		
TREATMENT:	2) SURFACE TEXTURE: 63 ✓	CHECKED BY JOP	DATE 03/22/18			
	3) CORADIAL FEATURES SHALL BE ☉ WITHIN .010	ENGINEER AJP	DATE 03/22/18			
	4) BREAK SHARP EDGES .010	ERN NUMBER ERN 02164	DATE 12-28-17			
PROCEDURE NUMBER: 4	5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	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.		SIZE B	DWG NO 29048	REV D
				SCALE 1:2	SolidWorks	SHEET 1 OF 3



SECTION A-A

5	BILL OF MATERIALS							
	ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK	
	1	135129	BODY, 1/4" NPT, NC AND NO	A276 TP 316 (316SS)	1			
	2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1			
	3	12023-1	NUT, LOCK, HEX	A276 TP 316	1			
1	4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X		
1	5	174318	PLATE, SEAL, NO FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X		
1	6	135130	CONTAINER, SEAL, COMBINED PILOT	A276 TP S21800 (NITRONIC 60)	1			
D	7	12024	SPRING DISK	A276 TP 316 (316 SS)	1			
	8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X	
	9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X	
	10	18800-007	BALL	A276 TP 316	1			
	11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8			
	12	135135	SPRING COMPRESSION	UNS N07750 (INCONEL X750)	1			
	13	21089-004	SPRING, SEAL	X-750	2	X	X	
	14	18100-022K1	O-RING	HNBR	1	X	X	
	15	18100-007K1	ORING	HNBR	2	X	X	
	16	18100-014K1	O-RING	HNBR	2	X	X	
	17	18110-013T	BACKUP RING	TEFLON	2	X	X	
	18	135136	FLANGE, 1/4" NPT, FUNCTION	A276 TP 316	1			
	19	174309	FLANGE, 1/4" NPT, VENT	A276 TP 316	1			
	20	18504-003	SPRING PIN	TP 316	1	X		
	21	18100-058K1	O-RING	HNBR	2	X	X	
	22	134371	CAGE, SEAL	A276 TP 316 (316 SS)	1	X	X	
	8	23	28538	WIRE TAG KIT	SST	1		

				ENGINEERING			
SIZE B	DWG NO 29048					REV D	
SCALE 3:2		SolidWorks			SHEET 2 OF 3		

4

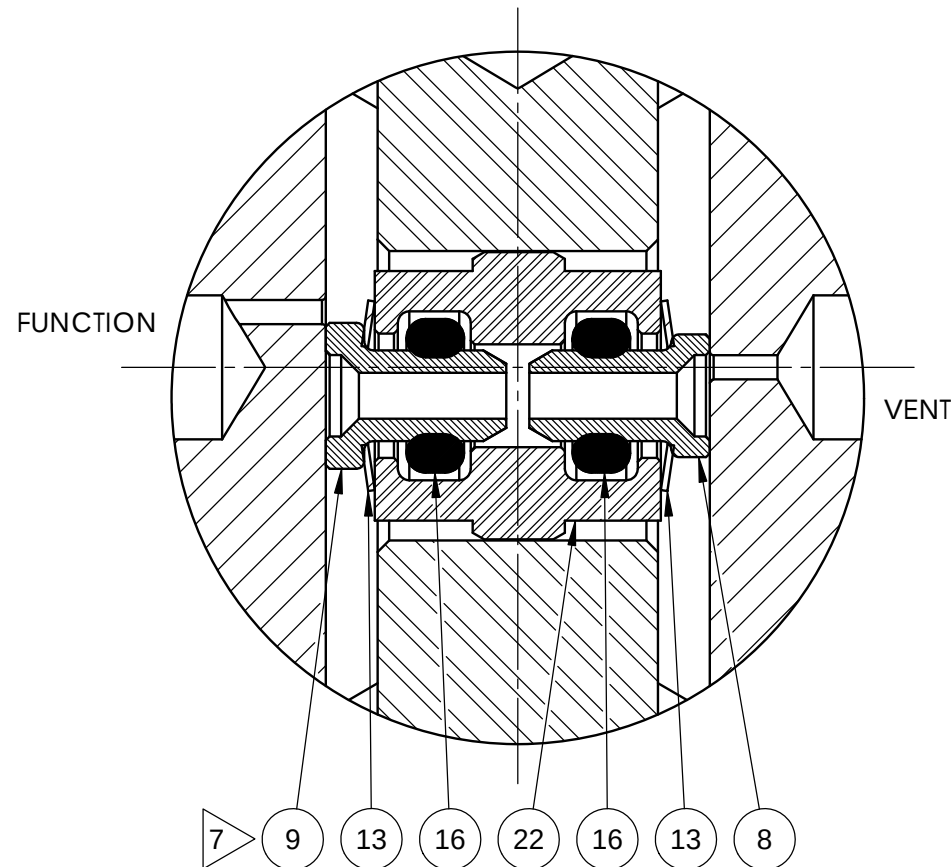
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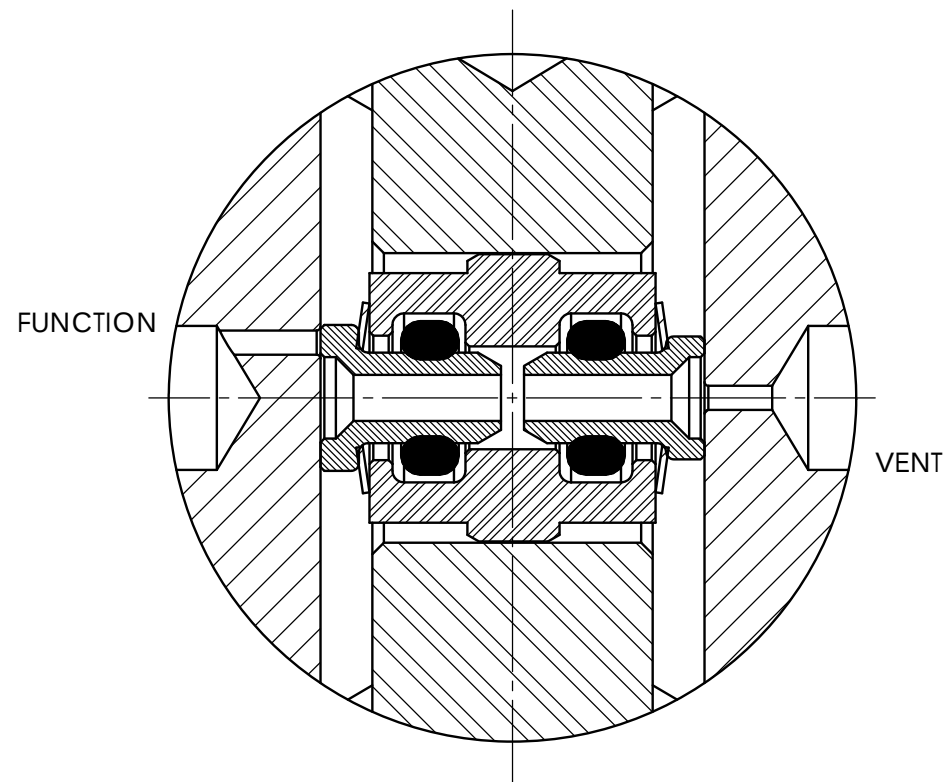
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B

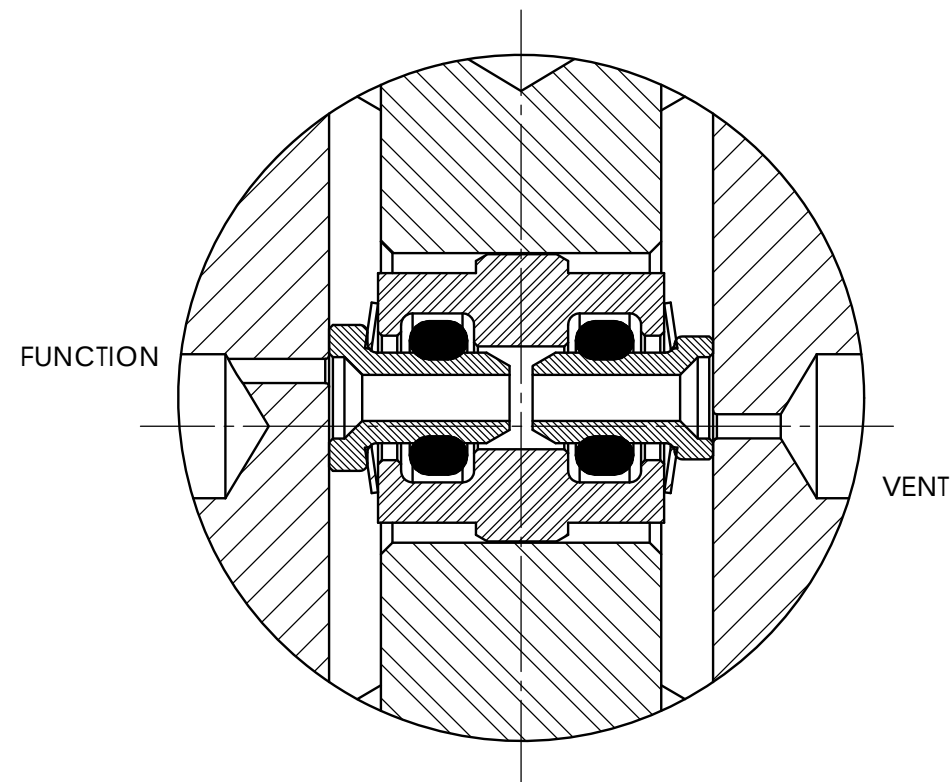
B



DETAIL B
OPEN



DETAIL B
MID POSITION



DETAIL B
CLOSED

A

A

4

3

2

1



ENGINEERING

SIZE B	DWG NO 29048	REV D
SCALE 4:1	SolidWorks	SHEET 3 OF 3

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
2. "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29049 RK, AND SEAL KIT 29049 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 22) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18) AND CAP (ITEM 2)

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 015021	JOP 2/19/19	CY 3-1-19	AJP 3/11/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1,600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" NPT
FUNCTION PORT: 1/4" NPT
VENT PORT: 1/4" NPT

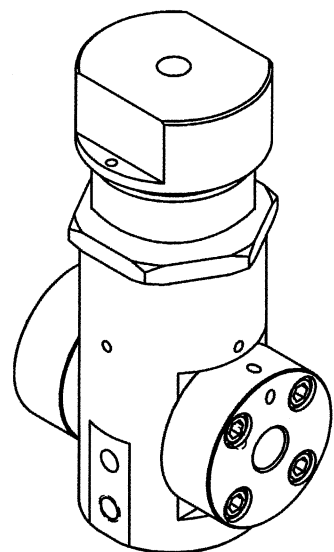
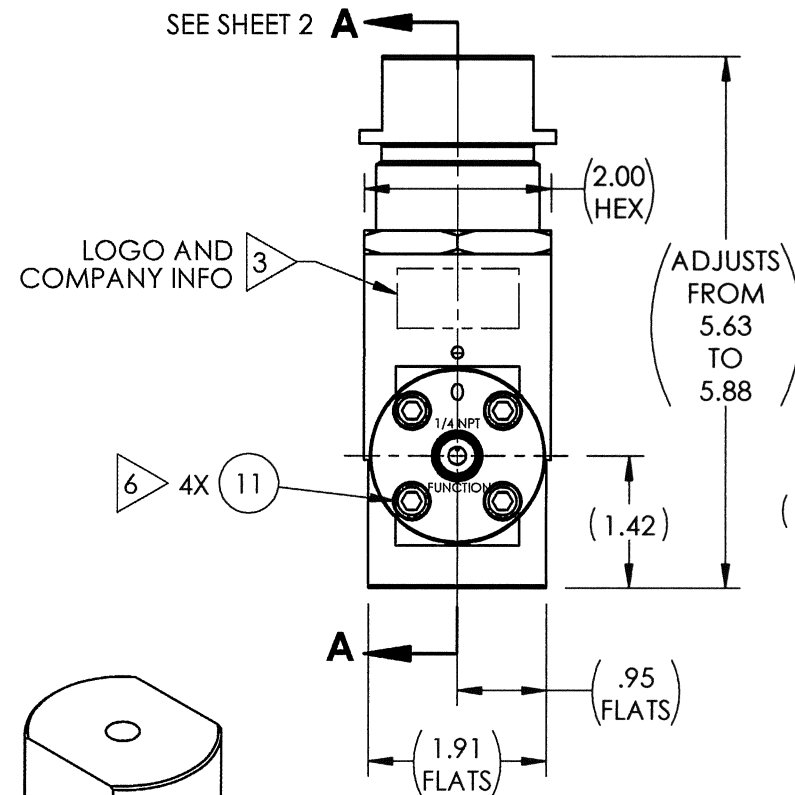
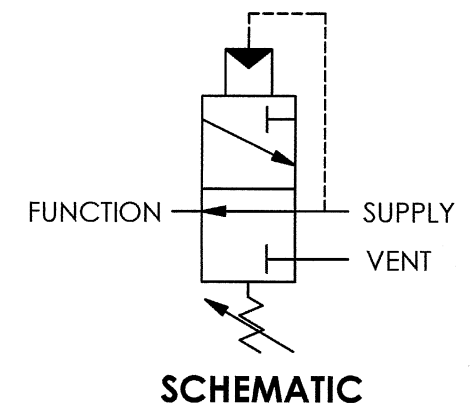
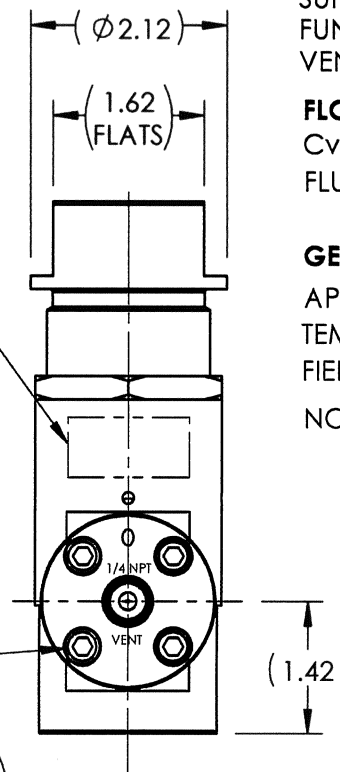
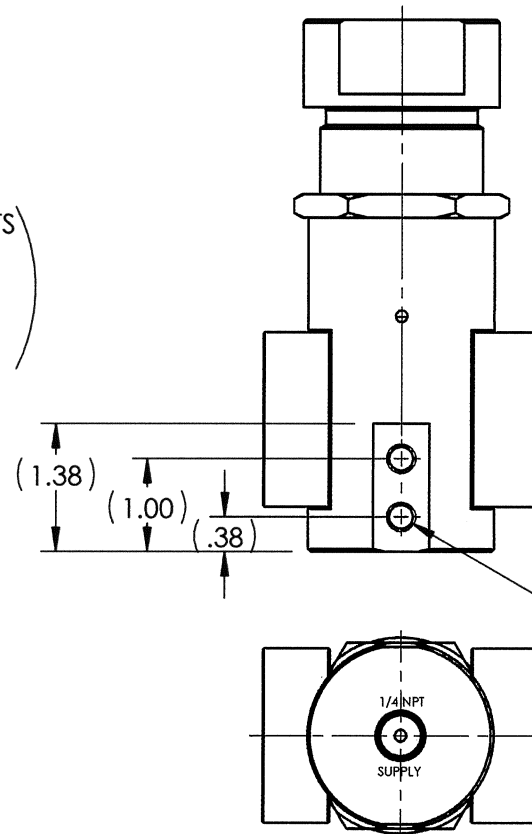
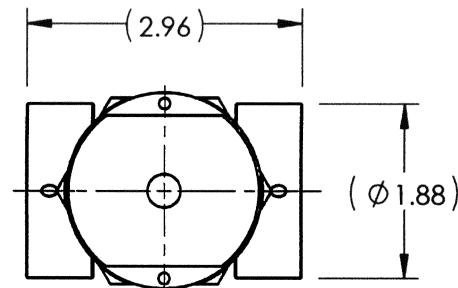
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

APPROX WEIGHT: 5 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).



MARK TAG ACCORDING TO SALES ORDER REQUIREMENTS

MATERIAL:
REFER TO INDIV
BOM ITEMS

CONDITION:

TREATMENT:

PROCEDURE NUMBER:

DIMENSIONS AND TOLERANCES ARE
IN INCHES PER ASME Y14.5M-1994.
UNLESS OTHERWISE SPECIFIED:

- 1) TOLERANCES: .X: ±.1
.XX: ±.01
.XXX: ±.005
ANGLES: ±.5°
- 2) SURFACE TEXTURE: 63
- 3) CORADIAL FEATURES SHALL BE ©
WITHIN .010
- 4) BREAK SHARP EDGES .010
- 5) INTERNAL RADII SHALL BE .016 MAX
- 6) DRILL POINTS OPTIONAL WHEN SHOWN
UNSPECIFIED, ALL DRILL POINT ANGLES
SHALL BE BETWEEN 90°-140°

APPROVAL	
DRAWN BY	DATE
CY	03/22/18
CHECKED BY	DATE
JOP	03/22/18
ENGINEER	DATE
AJP	03/22/18
ERN NUMBER	DATE
ERN 02164	5/10/16

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.

pro/serv Gilmore	
VALVE, VARIABLE PILOT, NO, 3 WAY, COMBINED PILOT, 1/4" NPT IN, 1/4" NPT OUT, 1600 - 3300 PSI,	
SIZE B	DWG NO 29049
SCALE 1:2	SHEET 1 OF 3
SolidWorks	REV B

4

3

2

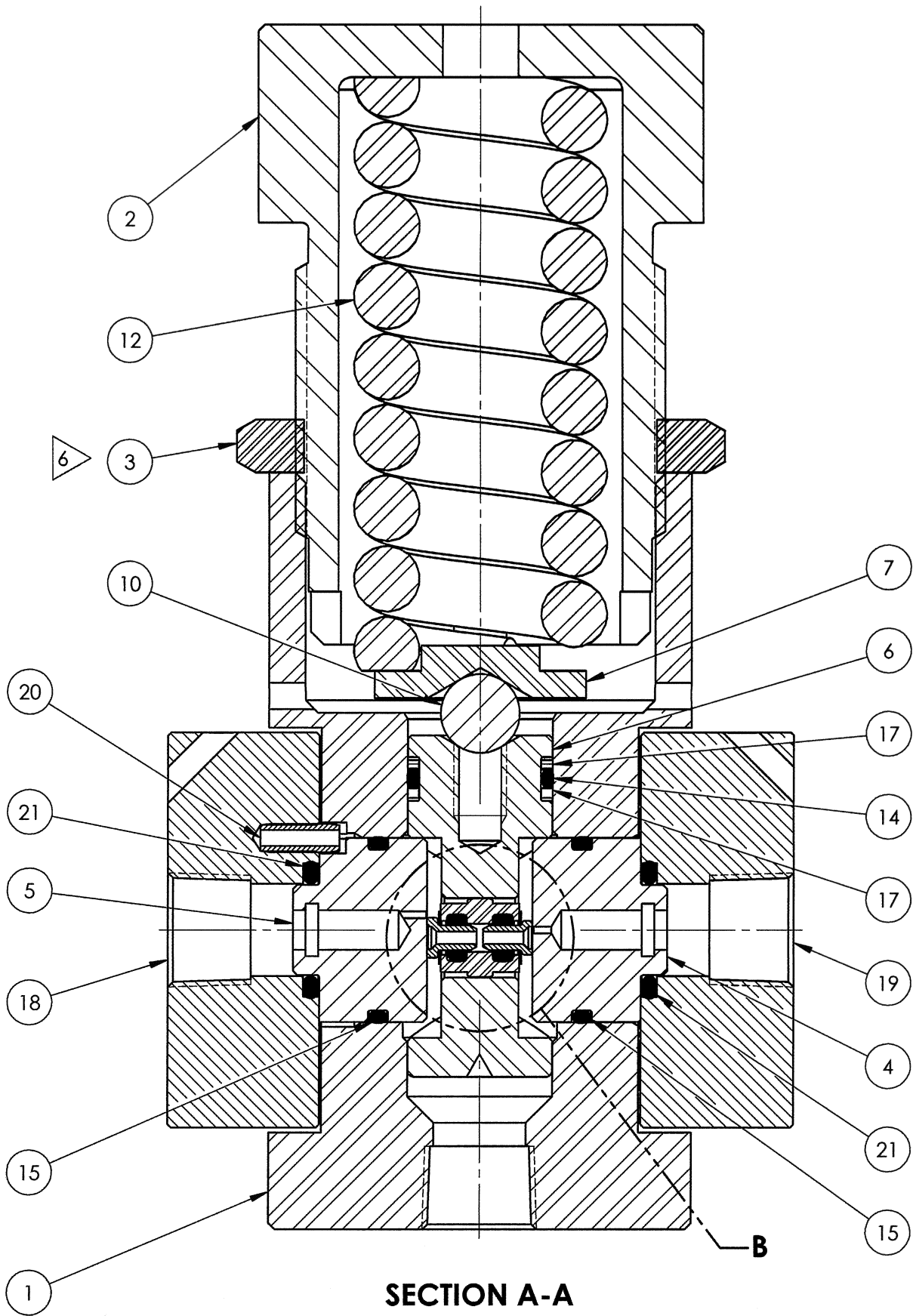
1

B

B

A

A



SECTION A-A

4

3

2

1

5

1

1

1

B

B

B

B

8

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	135129	BODY, 1/4" NPT, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
5	174318	PLATE, SEAL, NO FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
6	135130	CONTAINER, SEAL, COMBINED PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	UNS N07750 (INCONEL X750)	1		
13	21089-004	SPRING, SEAL	X-750	2	X	X
14	18100-022K1	O-RING	HNBR	1	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	2	X	X
18	135136	FLANGE, 1/4" NPT, FUNCTION	A276 TP 316	1		
19	174309	FLANGE, 1/4" NPT, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316	1	X	X
23	28538	WIRE TAG KIT	SST	1		

proserv | Gilmore

SIZE	DWG NO	REV
B	29049	B
SCALE	3:2	SHEET 2 OF 3
SolidWorks		

4

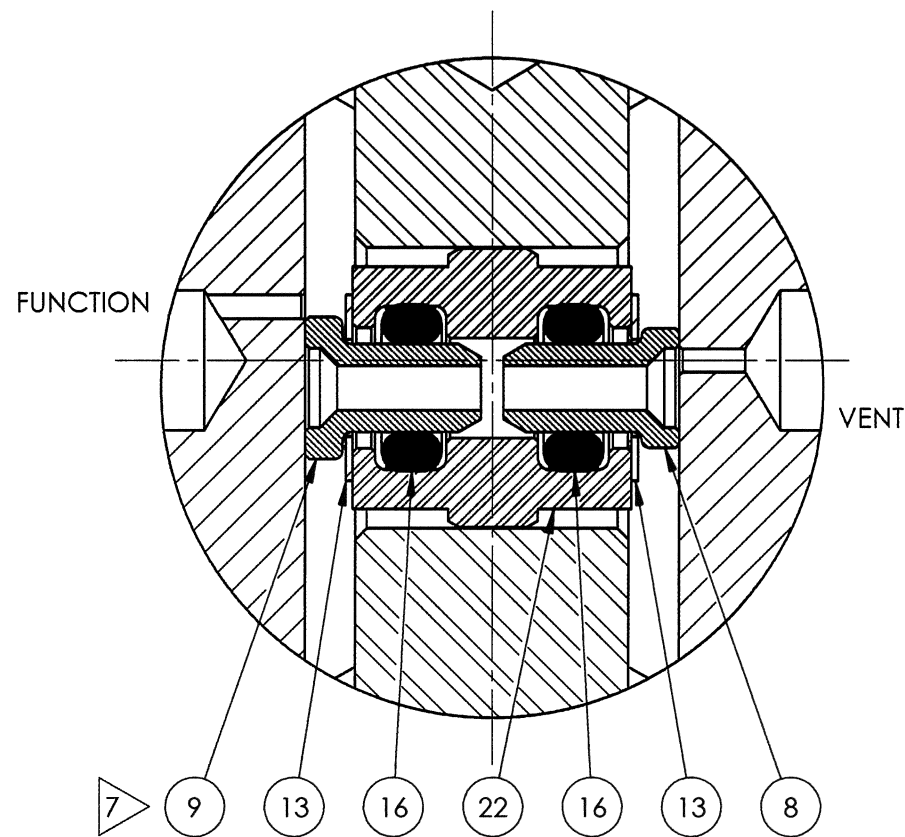
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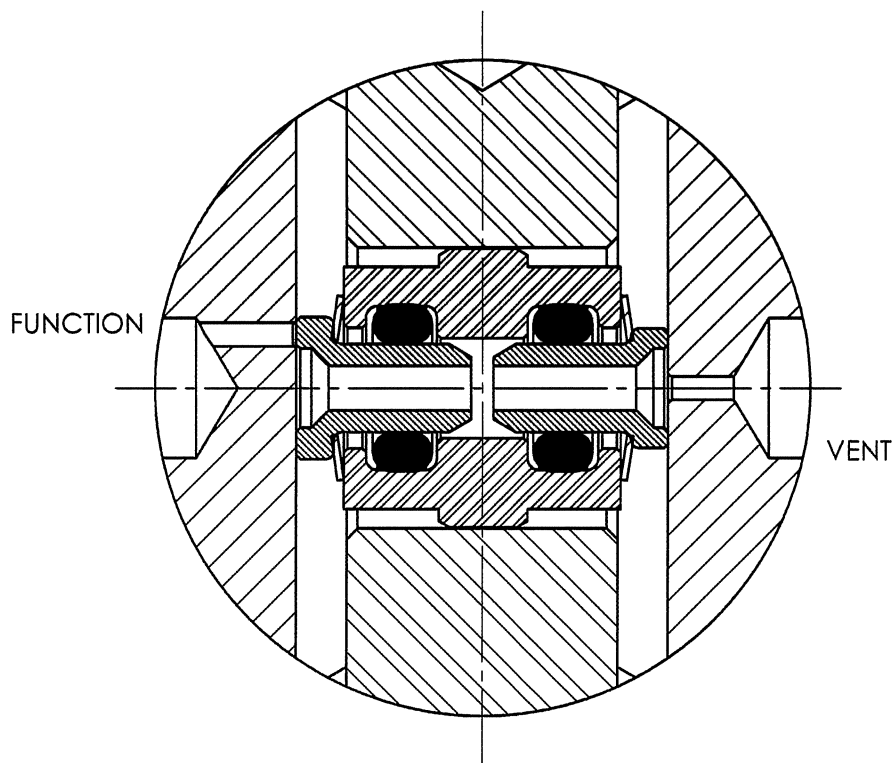
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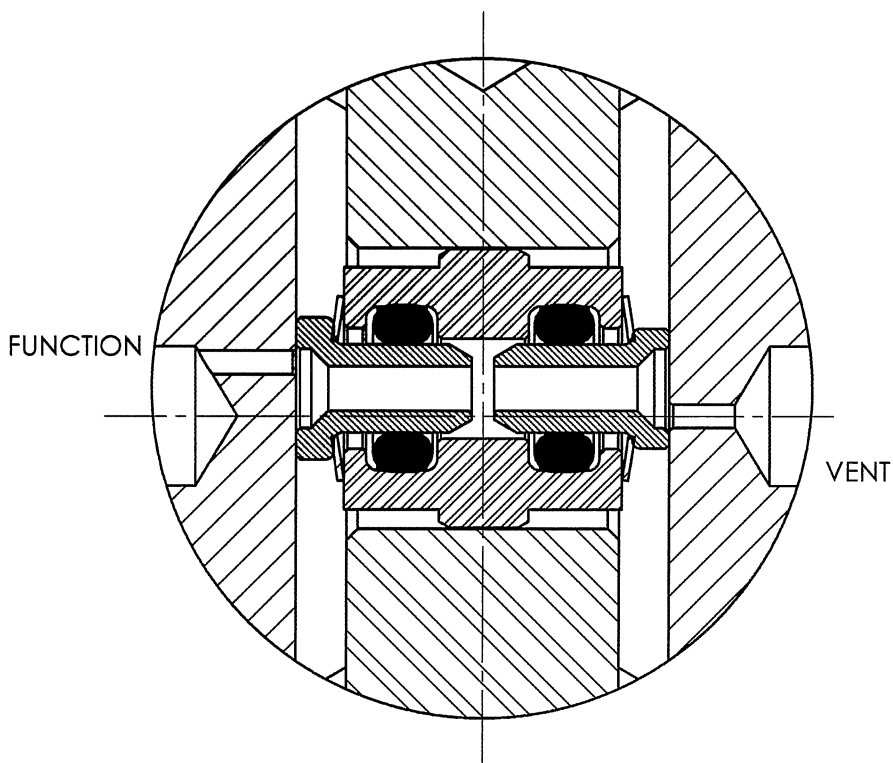
B



DETAIL B
OPEN



DETAIL B
MID POSITION



DETAIL B
CLOSED

A

A

4

3

2

1

proserv 			
SIZE B	DWG NO 29049	REV B	
SCALE 4:1	SolidWorks	SHEET 3 OF 3	

NOTES:

- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29050 RK, AND SEAL KIT 29050 SK.
- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- ALL MANUFACTURED ITEMS ARE PASSIVATED
- TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18 & 19) AND CAP (ITEM 2)

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
C	ECO 017609	<i>[Signature]</i> 11/14/19	<i>[Signature]</i> 04/11-14-19	<i>[Signature]</i> 11/18/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 225 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1,600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" SAE
FUNCTION PORT: 1/4" SAE
VENT PORT: 1/4" SAE
PILOT PORT: 1/2" SAE

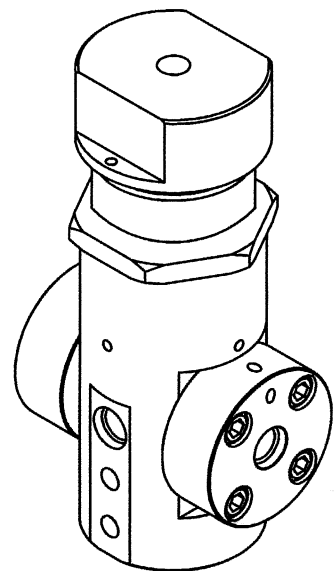
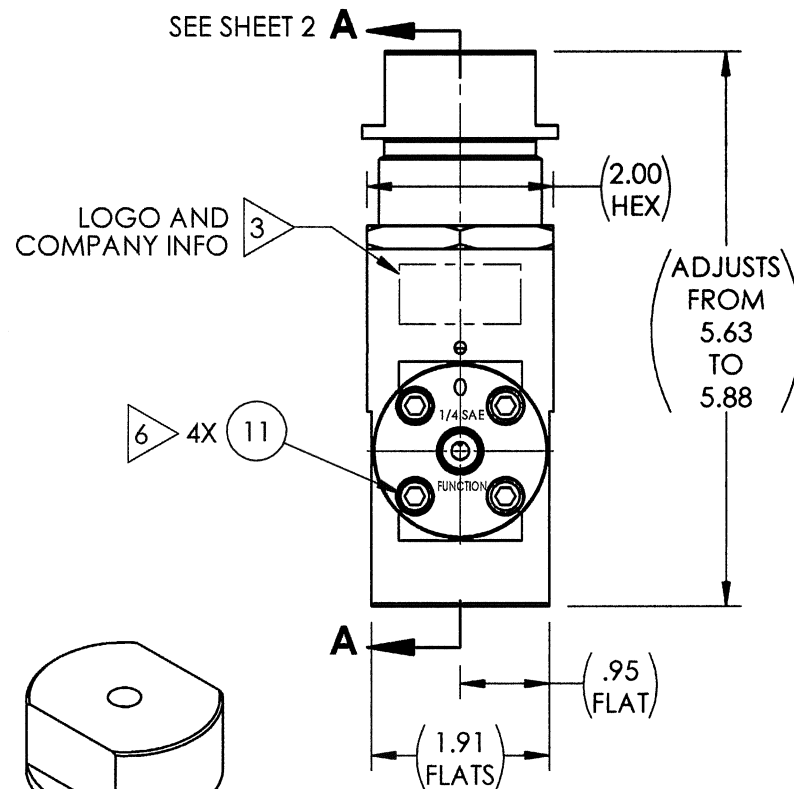
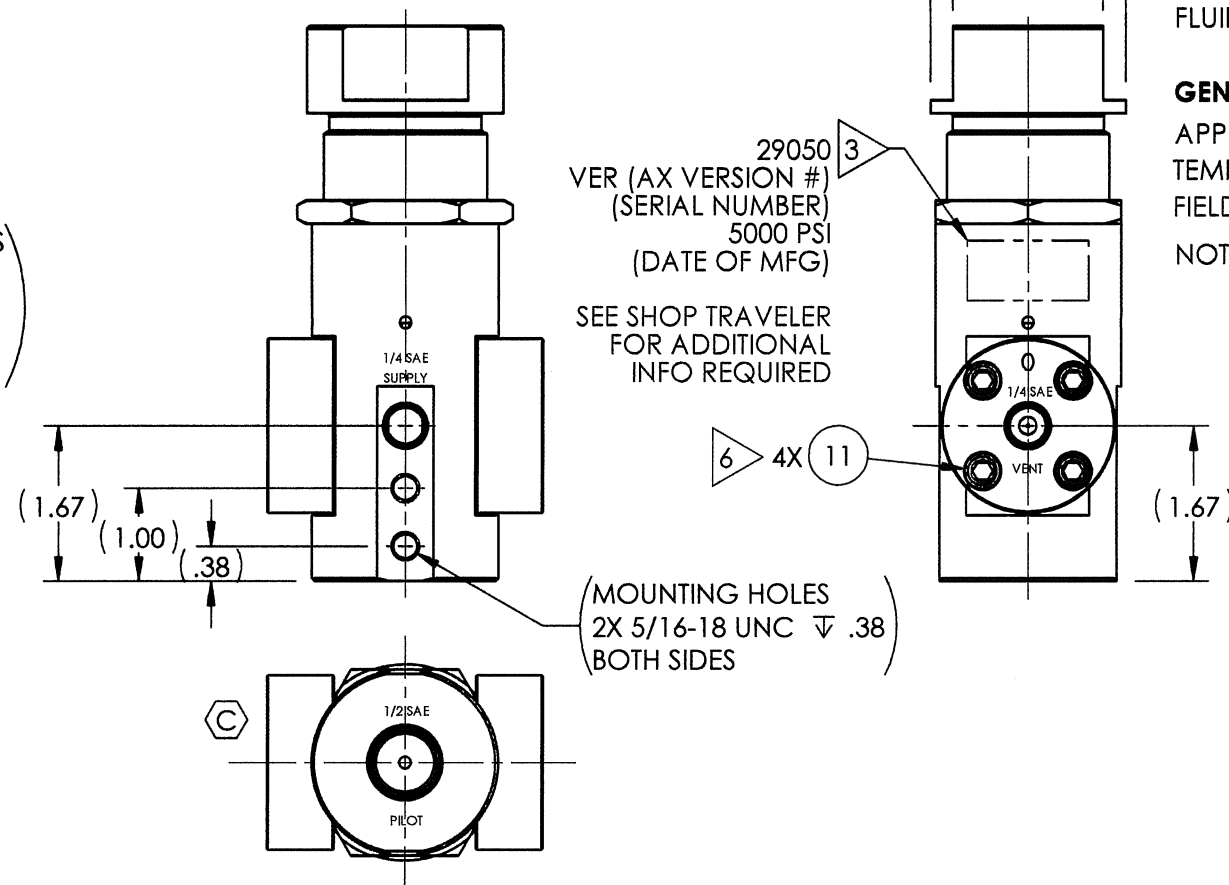
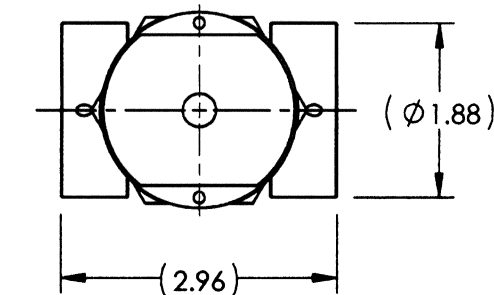
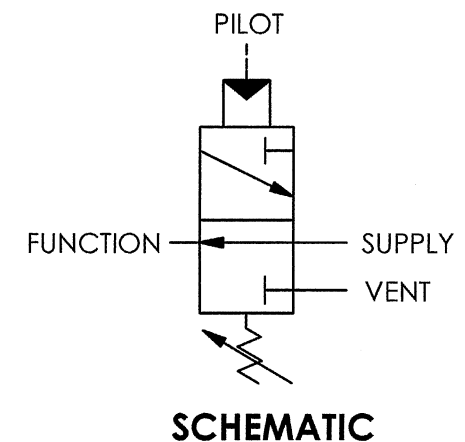
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

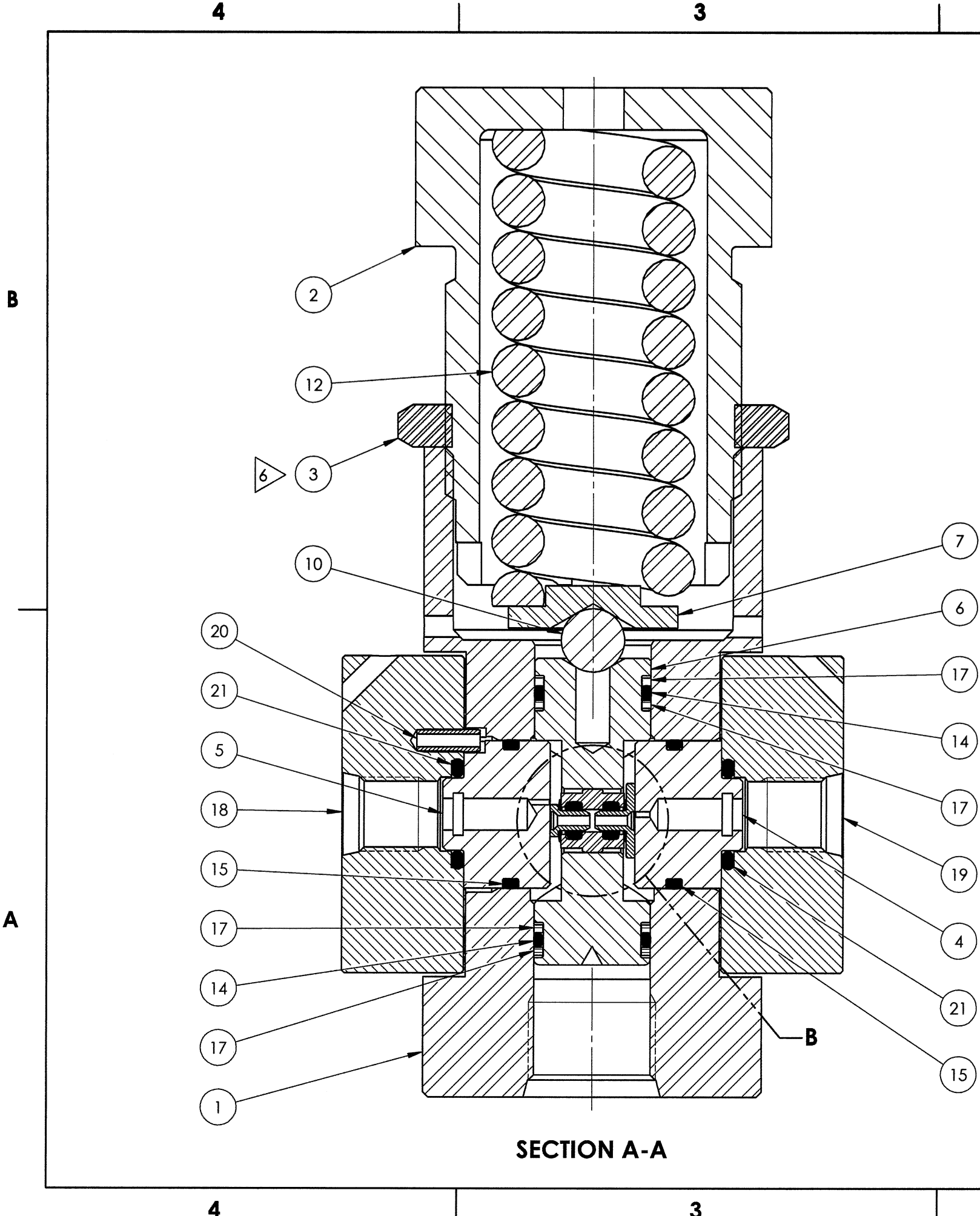
APPROX WEIGHT: 4.9 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICEABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).



3 MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 ✓ 3) CORADIAL FEATURES SHALL BE ☉ WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 Gilmore a praxair company		ENGINEERING	
CONDITION:		DRAWN BY CY	DATE 03/22/18	VALVE, VARIABLE PILOT, NO, 3 WAY, SEPARATE PILOT, 1/4 SAE IN, 1/4 SAE OUT, 1/2 SAE PILOT, 1600-3300 PSI, HD			
TREATMENT:		CHECKED BY JOP	DATE 03/22/18				
		ENGINEER AJP	DATE 03/22/18				
		ERN NUMBER ERN 02164	DATE 1-2-18				
PROCEDURE NUMBER: 4	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.				SIZE B	DWG NO 29050	REV C
				SCALE 1:2	SolidWorks		SHEET 1 OF 3



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	135465	BODY, 1/2" SAE, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE	1	X	
5	174318	PLATE, SEAL, NO FUNCTION	TUNGSTEN CARBIDE	1	X	
6	134370	CONTAINER, SEAL, SEPARATE PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135119	SEAL, VENT, HIGH DRAG	TUNGSTEN CARBIDE	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	INCONEL X-750	1		
13	21089-004	SPRING, SEAL	INCONEL X-750	2	X	X
14	18100-022K1	O-RING	HNBR	2	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	4	X	X
18	170323	FLANGE, 1/4" SAE, FUNCTION	A276 TP 316	1		
19	174308	FLANGE, 1/4" SAE, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316	1	X	X
23	28538	WIRE TAG KIT	SST	1		

**Gilmore** ENGINEERING
a proserv company

SIZE B	DWG NO 29050	REV C
SCALE 3:2	SolidWorks	SHEET 2 OF 3

4

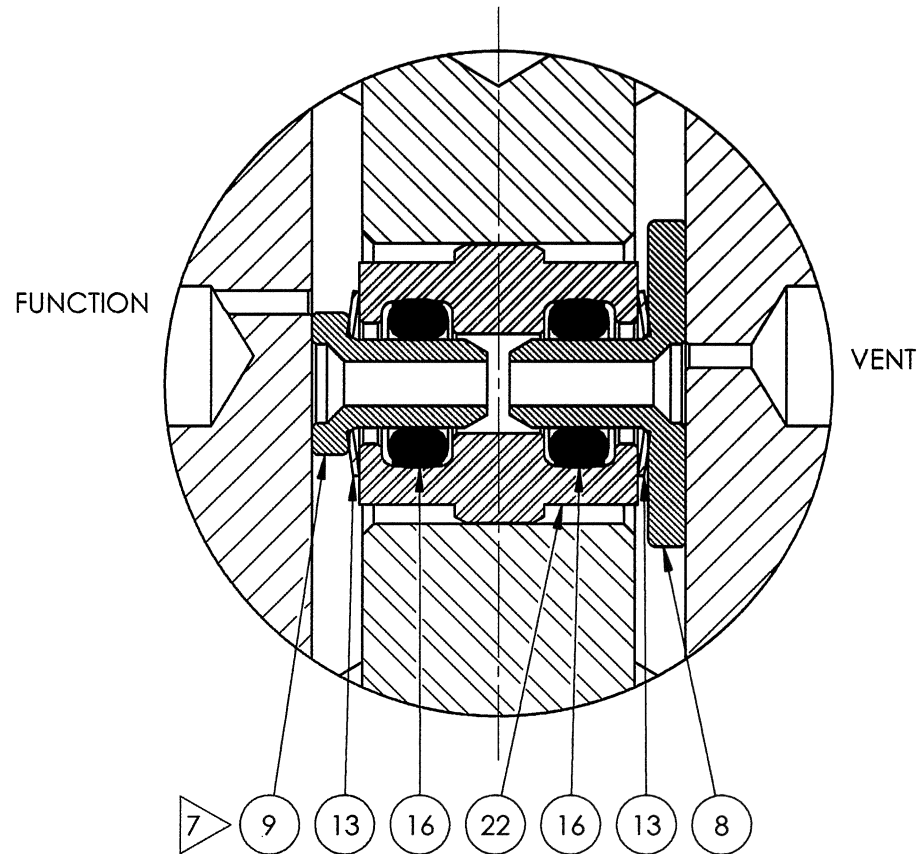
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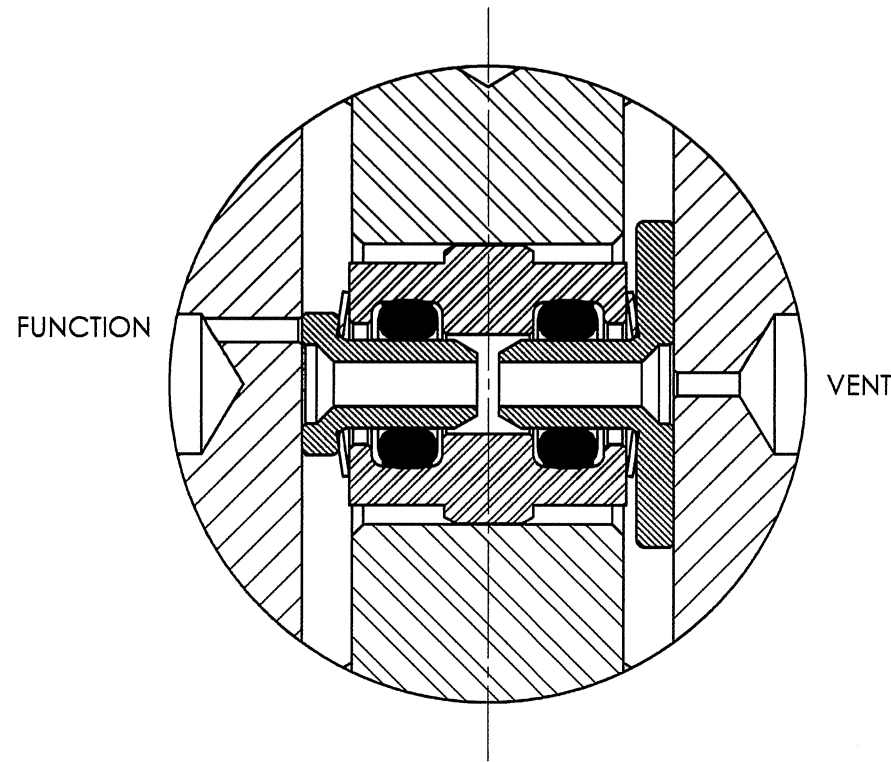
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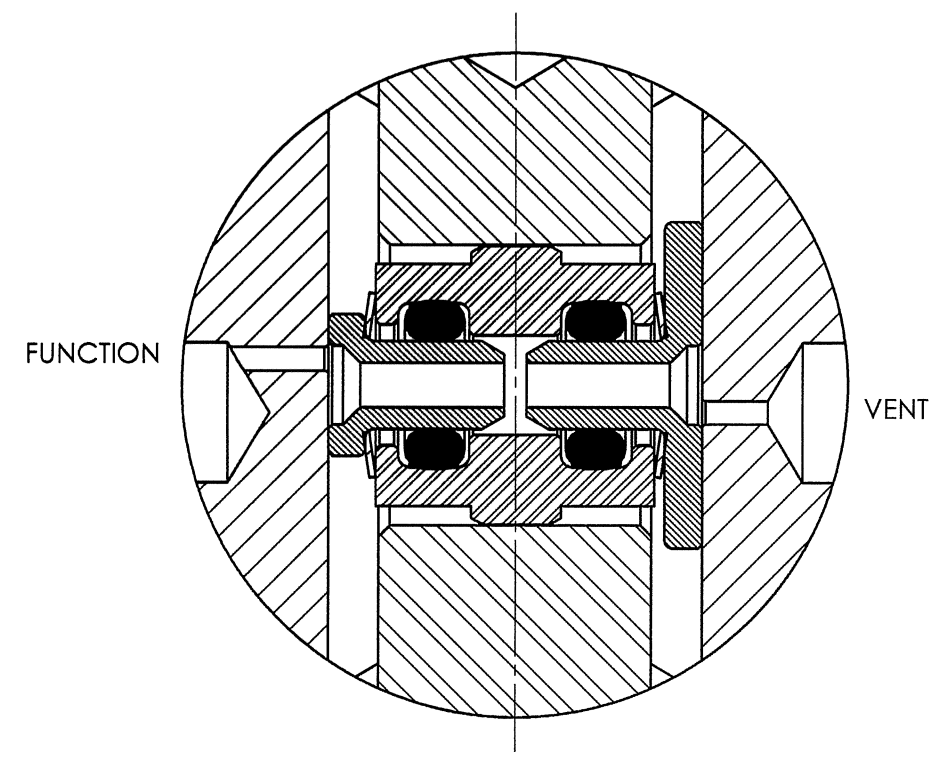
B



DETAIL B
OPEN



DETAIL B
MID POSITION



DETAIL B
CLOSED

A

A

4

3

2

1

		Gilmore a proserv company		ENGINEERING	
SIZE B	DWG NO	29050		REV C	
SCALE	4:1	SolidWorks		SHEET 3 OF 3	

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29051 RK, AND SEAL KIT 29051 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT
SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 22) BETWEEN HOLES PROVIDED IN
FLANGE (ITEM 18) AND CAP (ITEM 2)

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 015021	2/19/19	ay 3-1-19	AJP 3/11/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1,600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" SAE
FUNCTION PORT: 1/4" SAE
VENT PORT: 1/4" SAE

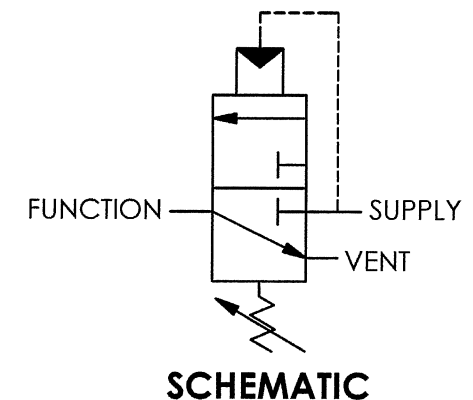
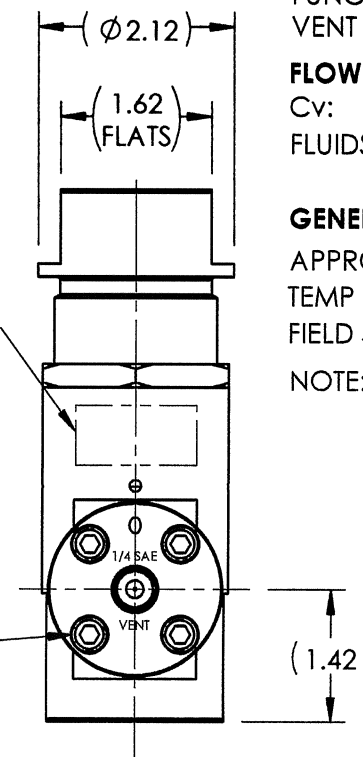
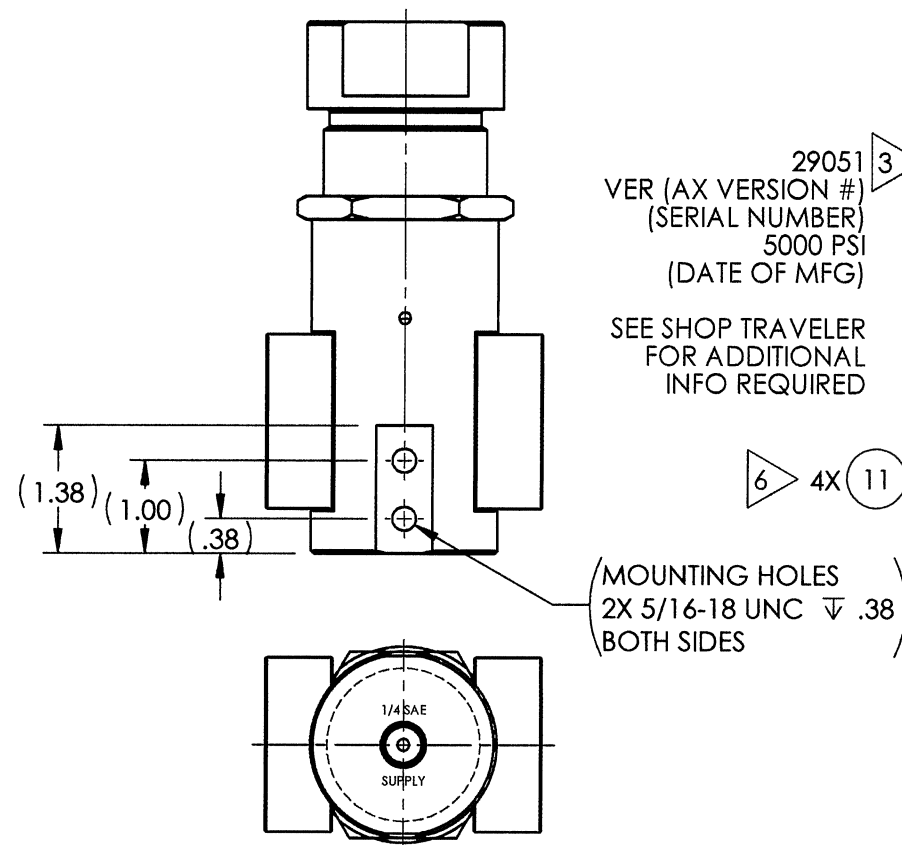
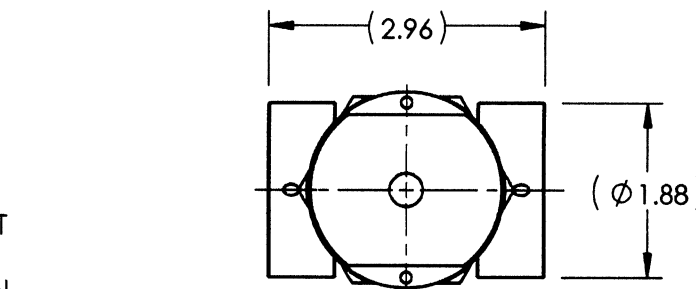
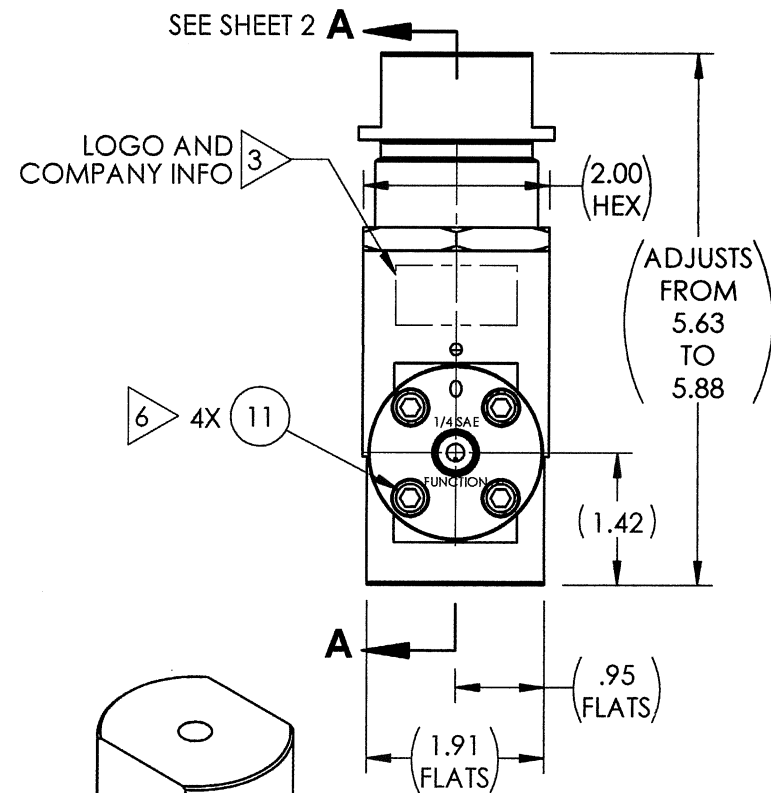
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

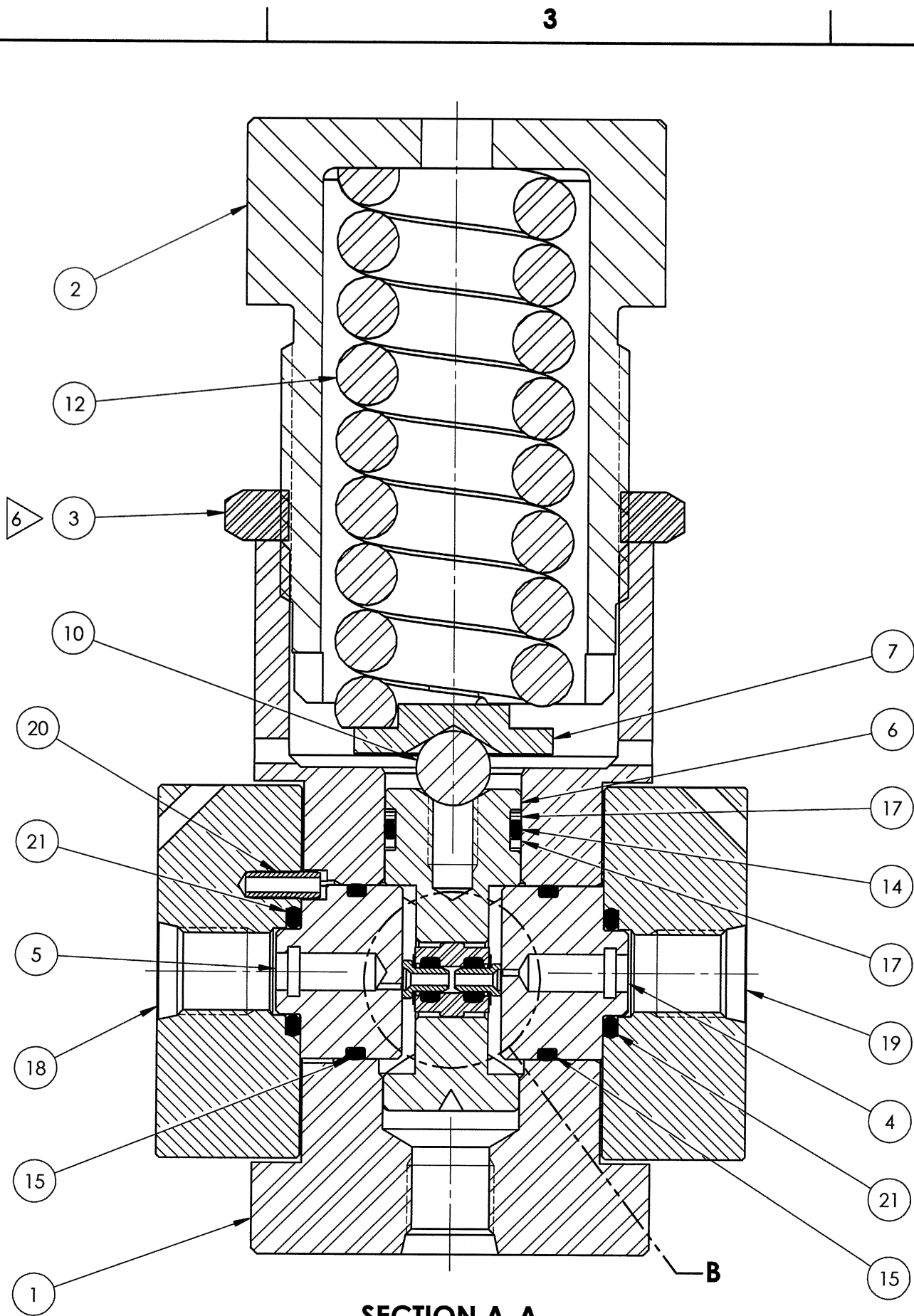
APPROX WEIGHT: 5.2 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND
VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING
RELATIVELY SMALL PILOT CIRCUIT VOLUMES
(I.E. OUNCES).



MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63/ 3) CORADIAL FEATURES SHALL BE © WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		proserv Gilmore		
		DRAWN BY CY	DATE 03/22/18			
CONDITION:		CHECKED BY JOP	DATE 03/22/18	VALVE, VARIABLE PILOT, NC, 3 WAY, COMBINED PILOT, 1/4" SAE IN, 1/4" SAE OUT, 1600 - 3300 PSI		
TREATMENT:		ENGINEER AJP	DATE 03/22/18			
PROCEDURE NUMBER:		ERN NUMBER ERN 02164	DATE 1-31-18	SIZE B	DWG NO 29051	REV B
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.				SCALE 1:2	SolidWorks	SHEET 1 OF 3



SECTION A-A

BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	172300	BODY, 1/4" SAE, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
5	135117	PLATE, SEAL, NC FUNCTION	TUNGSTEN CARBIDE 8 - 10% NICKEL	1	X	
6	135130	CONTAINER, SEAL, COMBINED PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE 8-10% NICKEL	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	UNS N07750 (INCONEL X750)	1		
13	21089-004	SPRING, SEAL	X-750	2	X	X
14	18100-022K1	O-RING	HNBR	1	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	2	X	X
18	170323	FLANGE, 1/4" SAE, FUNCTION	A276 TP 316	1		
19	174308	FLANGE, 1/4" SAE, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316	1	X	X
23	28538	WIRE TAG KIT	SST	1		

proserv

Gilmore

SIZE

DWG NO

REV

B

29051

B

SCALE

3:2

SolidWorks

SHEET 2 OF 3

4

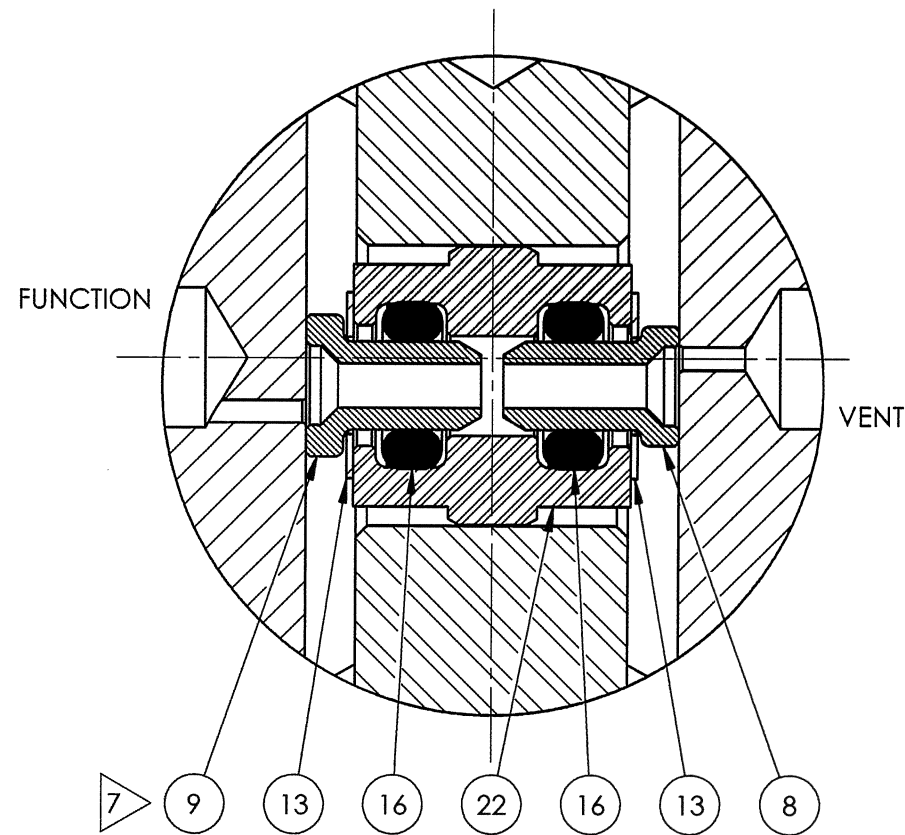
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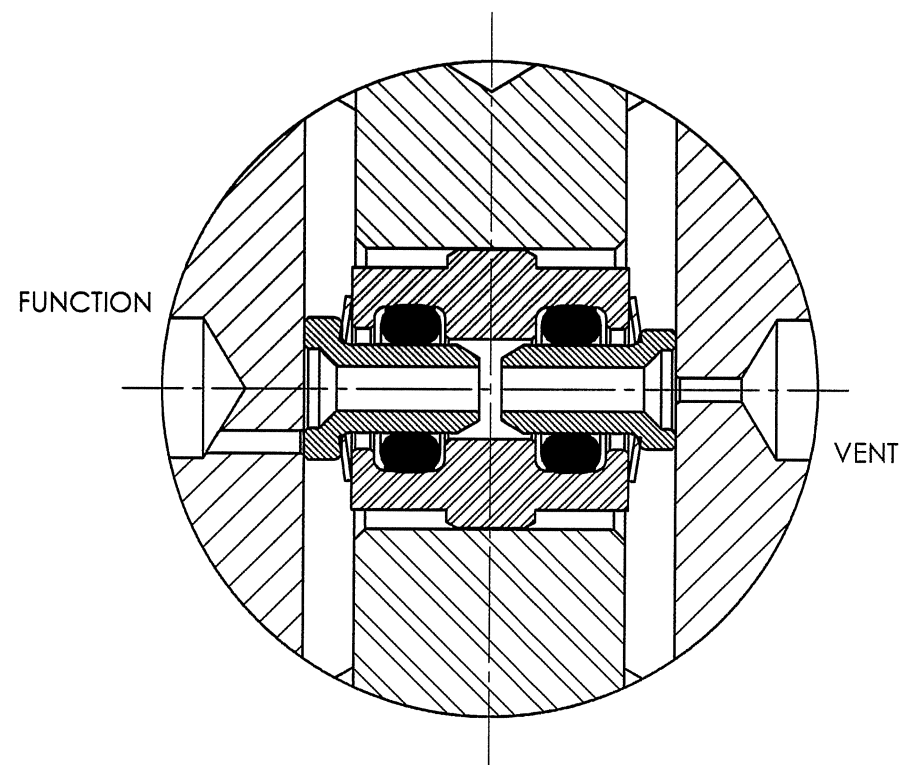
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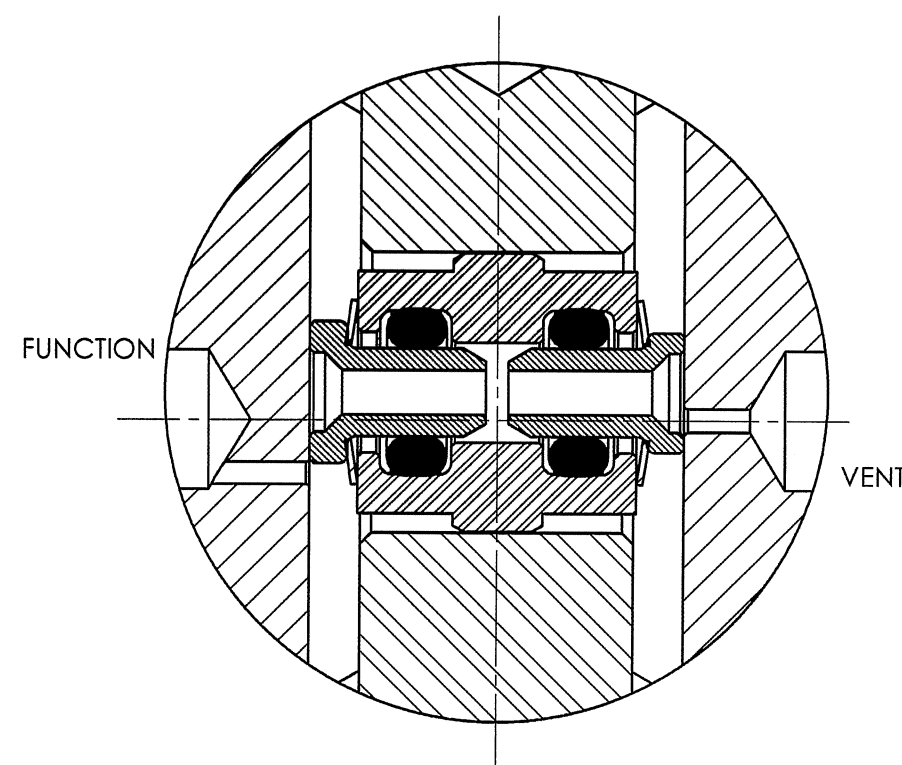
B



DETAIL B
CLOSED



DETAIL B
MID POSITION



DETAIL B
OPEN

A

A

4

3

2

1

proserv 			
SIZE B	DWG NO 29051	REV B	
SCALE 4:1	SolidWorks	SHEET 3 OF 3	

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29052 RK, AND SEAL KIT 29052 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18 & 19) AND CAP (ITEM 2)

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
C	ECO 017609	<i>[Signature]</i> 11/14/19	<i>[Signature]</i> 11-14-19	<i>[Signature]</i> 11/18/19

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 1,600 - 3,300 PSI
DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY IN HW443 FLUID
MINIMUM WORKING PRESSURE: 1600 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" SAE
FUNCTION PORT: 1/4" SAE
VENT PORT: 1/4" SAE
PILOT PORT: 1/2" SAE 

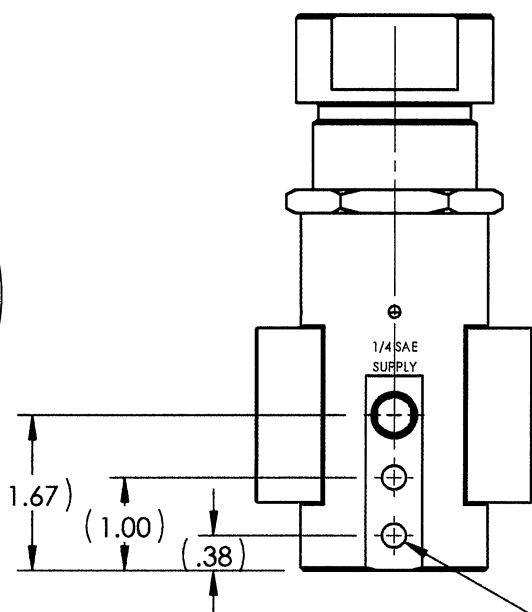
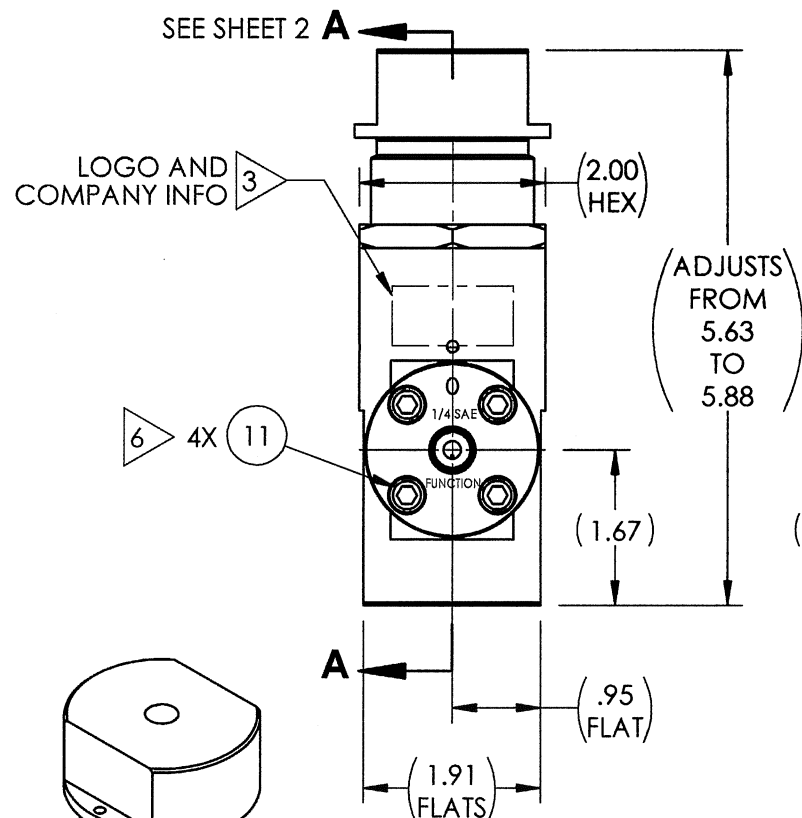
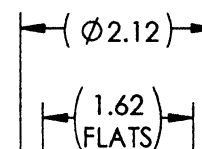
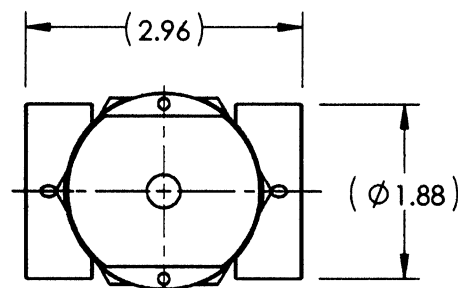
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

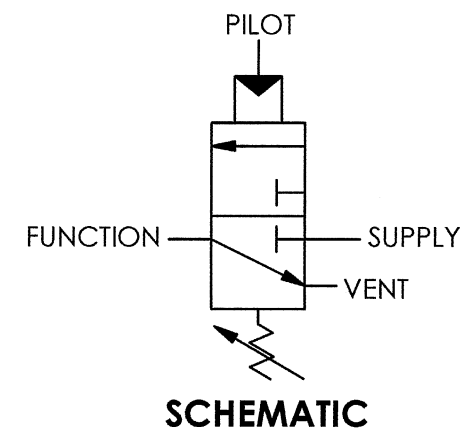
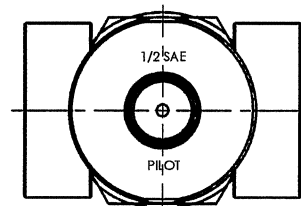
APPROX WEIGHT: 5.2 LBS
TEMP RANGE: 32°F TO 150°F
FIELD SERVICEABLE

NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).



29052
VER (AX VERSION #)
(SERIAL NUMBER)
5000 PSI
(DATE OF MFG)
SEE SHOP TRAVELER
FOR ADDITIONAL
INFO REQUIRED

(MOUNTING HOLES
4X 5/16-18 UNC ∇ .38
BOTH SIDES)



MARK TAG ACCORDING TO
SALES ORDER REQUIREMENTS

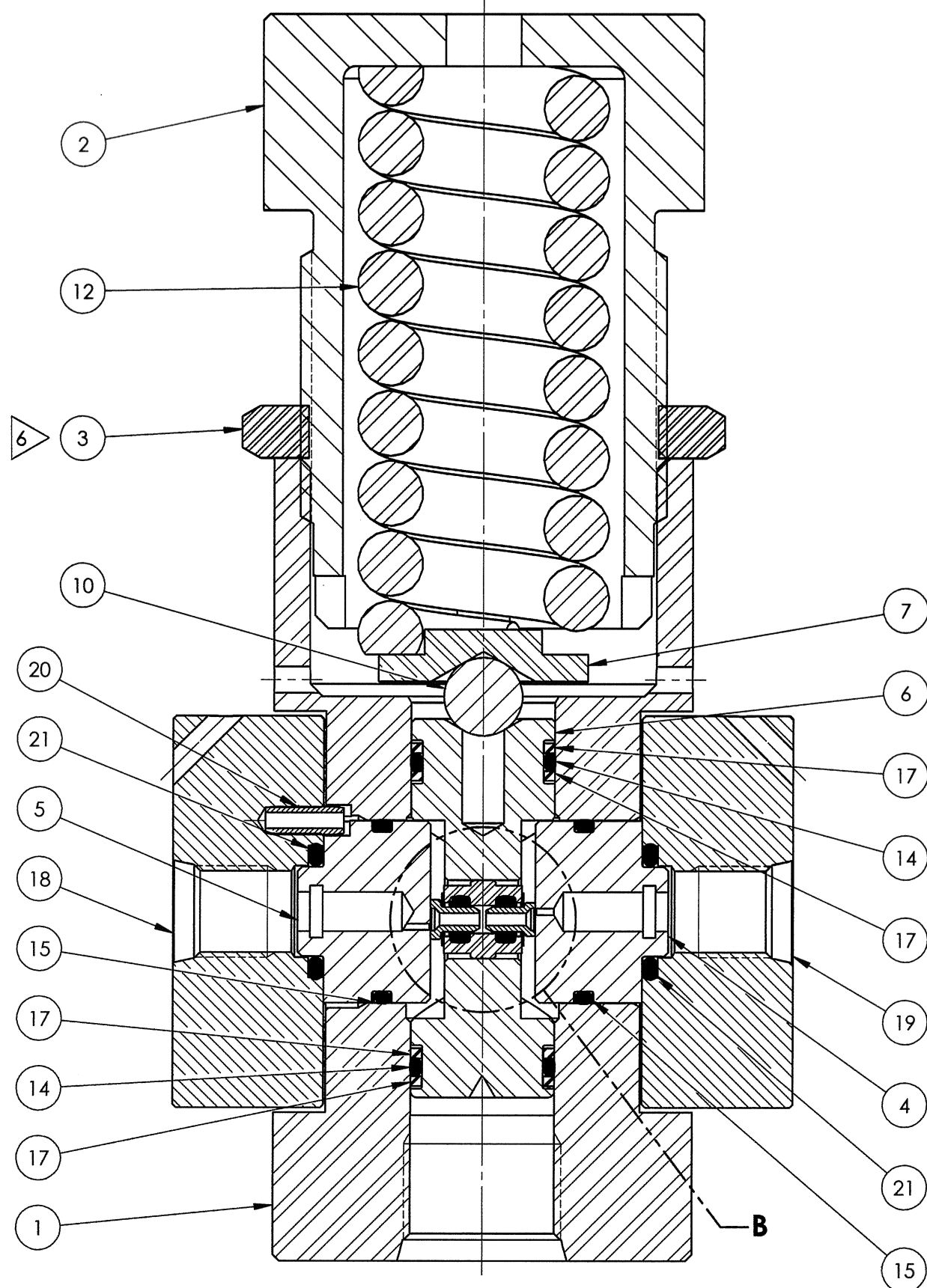
MATERIAL: REFER TO INDIV BOM ITEMS		DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 ✓ 3) CORADIAL FEATURES SHALL BE ☉ WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 Gilmore ENGINEERING a proserv company			
CONDITION:			DRAWN BY CY	DATE 03/22/18	VALVE, VARIABLE PILOT, NC, 3 WAY, SEPARATE PILOT, 1/4" SAE IN, 1/4" SAE OUT, 1600 - 3300 PSI			
			CHECKED BY JOP	DATE 03/22/18				
			ENGINEER AJP	DATE 03/22/18				
TREATMENT:			ERN NUMBER ERN 02164	DATE 1-31-2018	SIZE B	DWG NO 29052	REV C	
PROCEDURE NUMBER:		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.				SCALE 1:2	SolidWorks	SHEET 1 OF 3

4

3

2

1



SECTION A-A

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	135465	BODY, 1/2" SAE, NC AND NO	A276 TP 316	1		
2	135115	CAP, ADJUSTING, STOP RING	A276 TP S21800 (NITRONIC 60)	1		
3	12023-1	NUT, LOCK, HEX	A276 TP 316	1		
4	135116	PLATE, SEAL, VENT	TUNGSTEN CARBIDE	1	X	
5	135117	PLATE, SEAL, NC FUNCTION	TUNGSTEN CARBIDE	1	X	
6	134370	CONTAINER, SEAL, SEPARATE PILOT	A276 TP S21800 (NITRONIC 60)	1		
7	13030	SPRING DISK	A276 TP 316	1		
8	135133	SEAL, VENT, STD DRAG	TUNGSTEN CARBIDE	1	X	X
9	135120	SEAL, FUNCTION	TUNGSTEN CARBIDE	1	X	X
10	18800-007	BALL	A276 TP 316	1		
11	18224-087	SHCS, 1/4-20 UNC x .875 LG	A-286	8		
12	12116	SPRING COMPRESSION	INCONEL X-750	1		
13	21089-004	SPRING, SEAL	INCONEL X-750	2	X	X
14	18100-022K1	O-RING	HNBR	2	X	X
15	18100-007K1	ORING	HNBR	2	X	X
16	18100-014K1	O-RING	HNBR	2	X	X
17	18110-013T	BACKUP RING	TEFLON	4	X	X
18	170323	FLANGE, 1/4" SAE, FUNCTION	A276 TP 316	1		
19	174308	FLANGE, 1/4" SAE, VENT	A276 TP 316	1		
20	18504-003	SPRING PIN	TP 316	1	X	
21	18100-058K1	O-RING	HNBR	2	X	X
22	134371	CAGE, SEAL	A276 TP 316	1	X	X
23	28538	WIRE TAG KIT	SST	1		

**Gilmore**
a proserv company**ENGINEERING**SIZE
B

DWG NO

29052REV
C

SCALE 3:2

SolidWorks

SHEET 2 OF 3

4

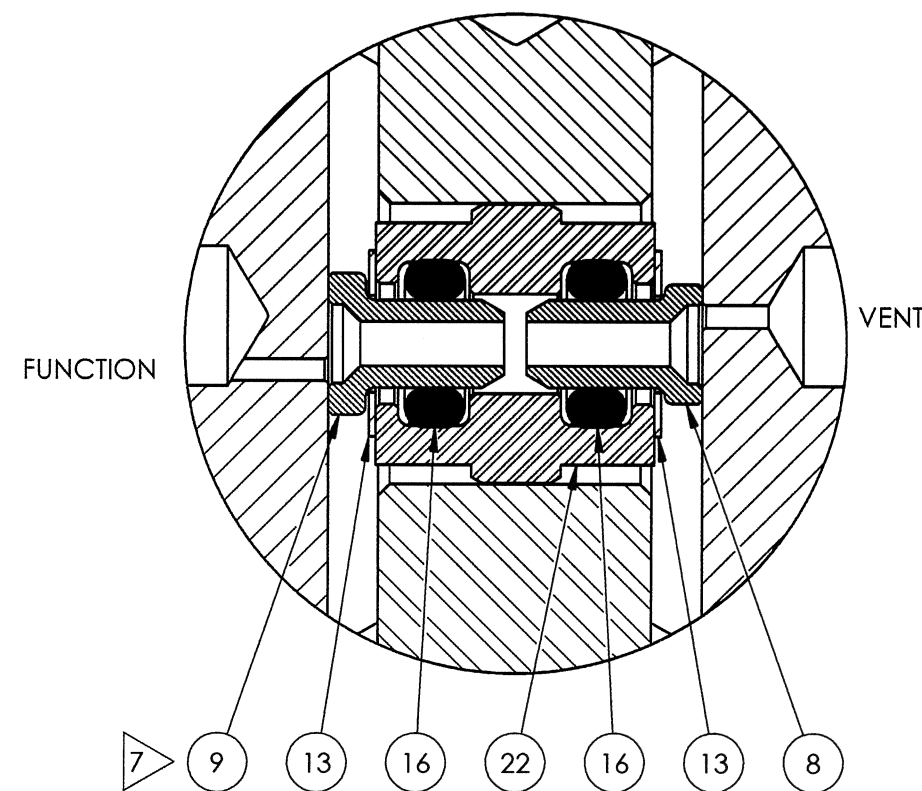
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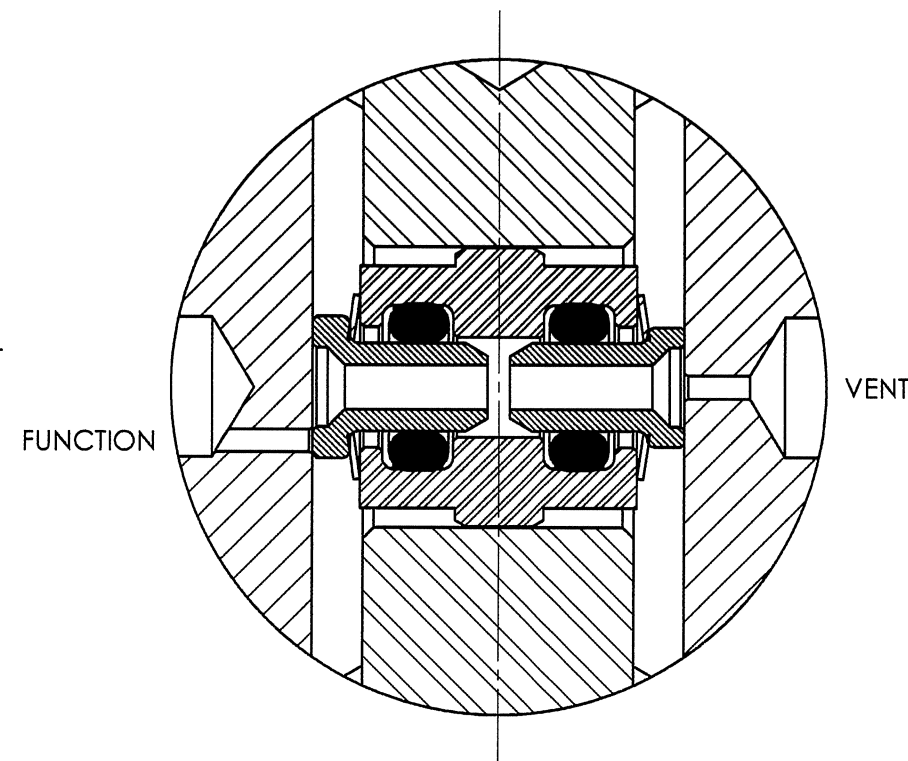
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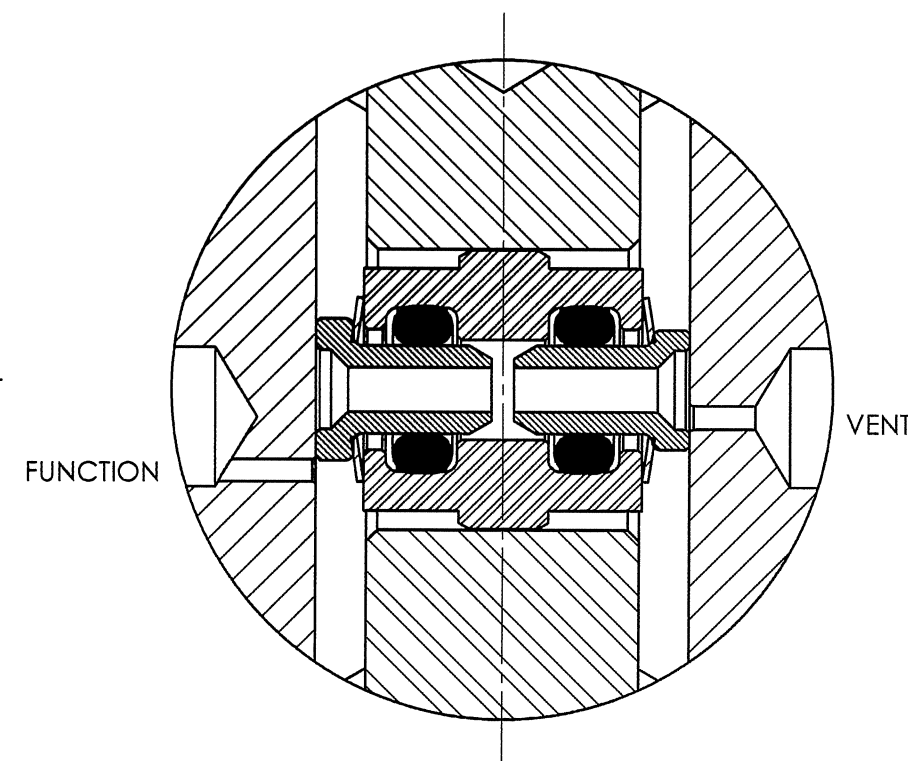
B



DETAIL B
CLOSED



DETAIL B
MID POSITION



DETAIL B
OPEN

A

A

4

3

2

1

 Gilmore a proserv company		ENGINEERING	
SIZE B	DWG NO 29052	REV C	
SCALE 4:1	SolidWorks	SHEET 3 OF 3	

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON COMPONENT DRAWING.
- 2 "X" IN THE BOM DEPICTS PARTS IN REPAIR KIT 29125 RK, AND SEAL KIT 29125 SK.
- 3 MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 4 ASSEMBLY PROCEDURE: 50206
STANDARD FAT PROCEDURE: 50208
EXTENDED FAT PROCEDURE: 50207
SERVICE MANUAL: 51020
- 5 ALL MANUFACTURED ITEMS ARE PASSIVATED
- 6 TORQUE CAPSCREW (ITEM 11) TO 10 FT/LBS.
TORQUE LOCKNUT (ITEM 3) TO 30 FT/LBS.
- 7 SMALL ITEMS SHOWN IN DETAIL B ARE SUPPLIED AS CAGE KIT SUBASSEMBLY WITHIN REPAIR KIT AND SEAL KIT
- 8 CRIMP WIRE TAG KIT (ITEM 23) BETWEEN HOLES PROVIDED IN FLANGE (ITEM 18 & 19) AND CAP (ITEM 2)

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 019242	CMY 7-23-20	AM 7/23/20	AJP 7/23/20

PRESSURE DATA

VALVE MAWP: 5,000 PSI
PILOT SET RANGE: 800 - 1,600 PSI

DEADBAND: 125 +/- 50 PSI AT 5,000 PSI SUPPLY
IN HW443 FLUID

MINIMUM WORKING PRESSURE: 800 PSI
MAXIMUM FLOW RATE: 1 GPM

PORTS

SUPPLY PORT: 1/4" SAE
FUNCTION PORT: 1/4" SAE
VENT PORT: 1/4" SAE

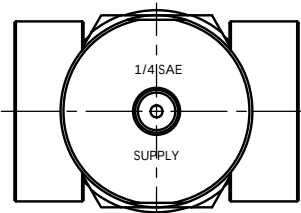
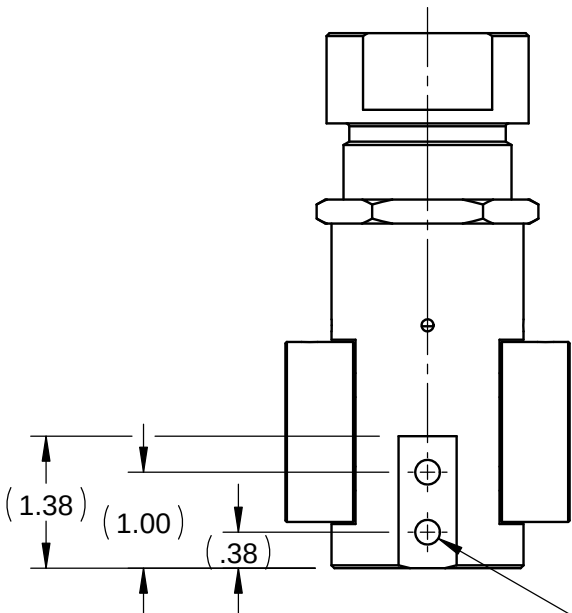
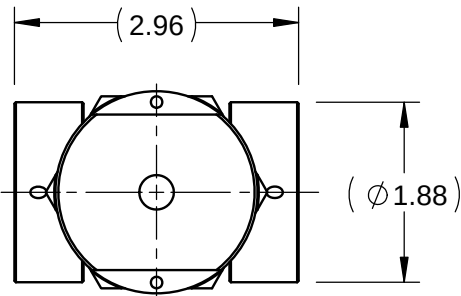
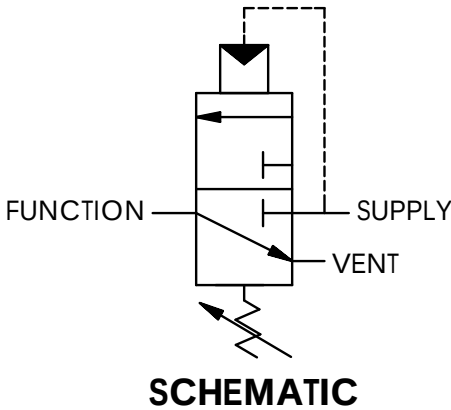
FLOW DATA

Cv: .02 (CALC)
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

GENERAL DATA

APPROX WEIGHT: 5 LBS
TEMP RANGE: 32 °F TO 150 °F
FIELD SERVICEABLE

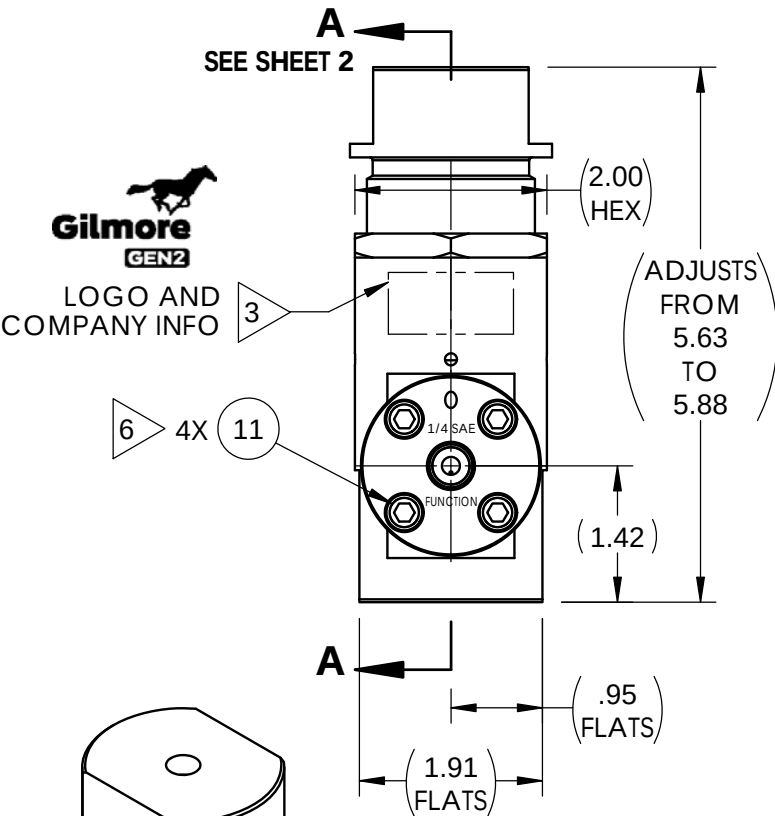
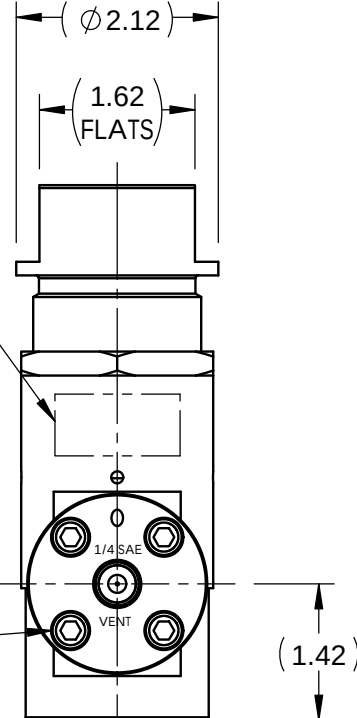
NOTE: NOT RECOMMENDED FOR PRESSURIZING AND VENTING LARGE SYSTEM VOLUMES (I.E. GALLONS).
RECOMMENDED FOR PRESSURIZING AND VENTING RELATIVELY SMALL PILOT CIRCUIT VOLUMES (I.E. OUNCES).



29125 3
VER (AX VERSION #)
(SERIAL NUMBER)
5000 PSI
(DATE OF MFG)
SEE SHOP TRAVELER
FOR ADDITIONAL
INFO REQUIRED

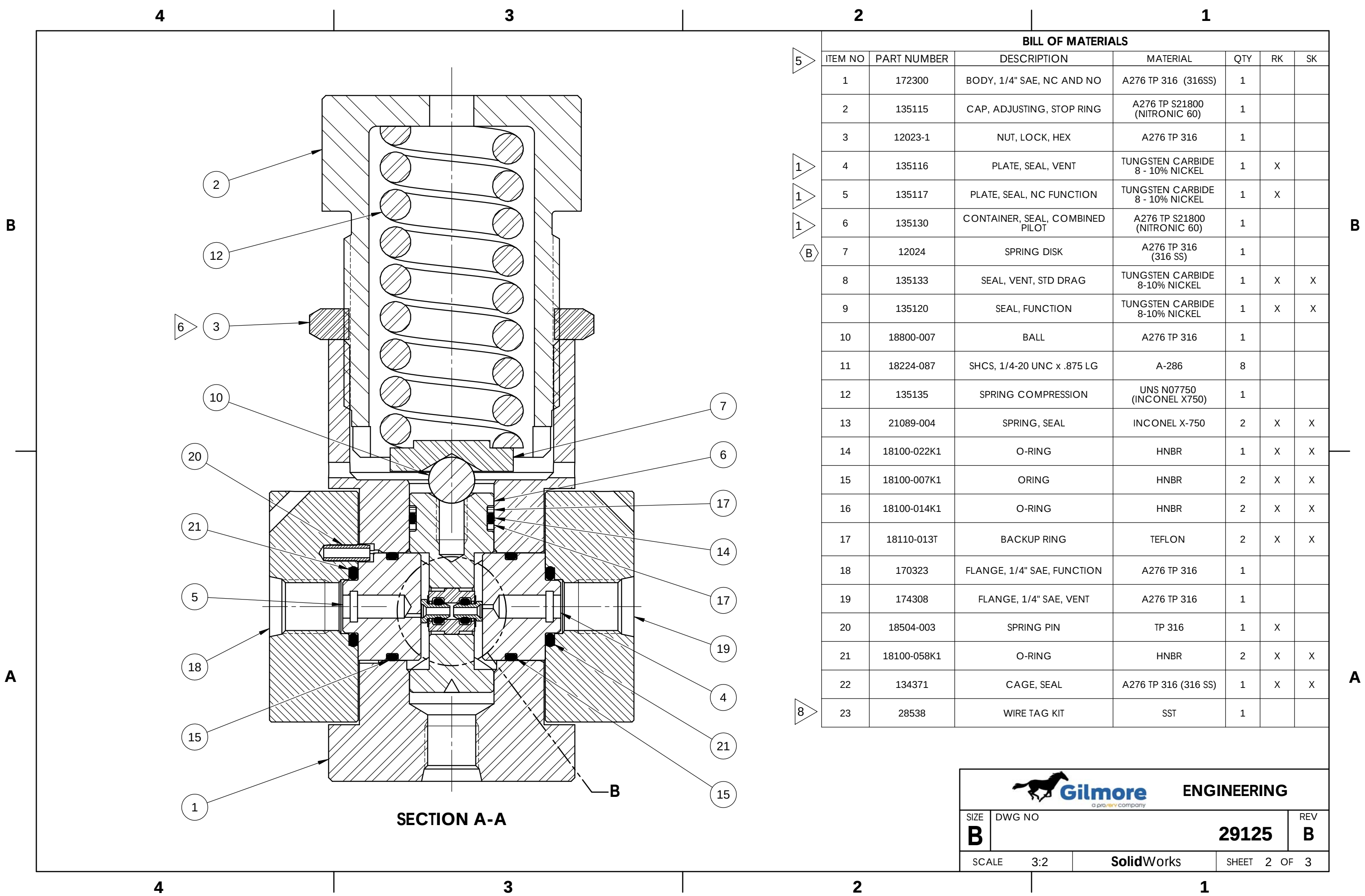
(MOUNTING HOLES
2X 5/16-18 UNC ∇ .38
BOTH SIDES)

6 4X 11



3 MARK TAG ACCORDING TO SALES ORDER REQUIREMENTS

MATERIAL: REFER TO INDIV BOM ITEMS		DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63 3) CORADIAL FEATURES SHALL BE WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°		APPROVAL DRAWN BY JOP DATE 5-4-20 CHECKED BY CMY DATE 5-4-20 ENGINEER AJP DATE 5-5-20 ERN NUMBER ERN 02406 DATE 05/04/20 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.		Gilmore ENGINEERING a proserv company	
CONDITION:		TREATMENT:		PROCEDURE NUMBER: 4		VALVE, VARIABLE PILOT, GEN 2, NC, 3 WAY, COMBINED PILOT, 1/4" SAE IN, 1/4" SAE OUT, 800-1600 PSI	
SIZE B		DWG NO 29125		REV B		SCALE 1:2 SolidWorks SHEET 1 OF 3	



4

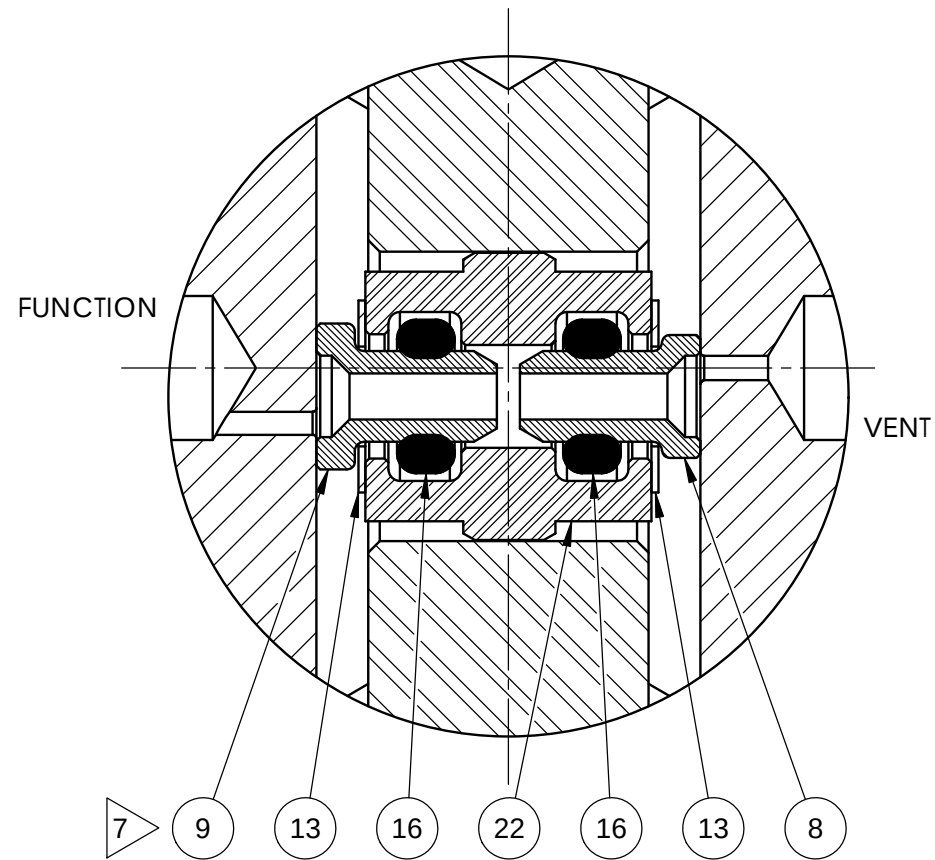
3

2

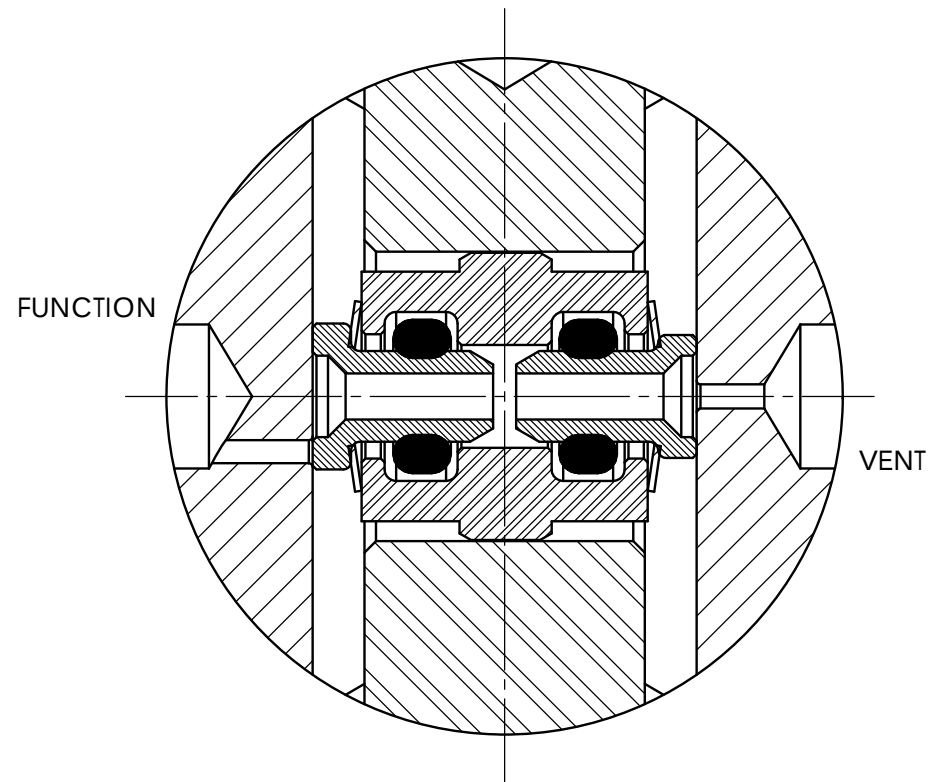
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B

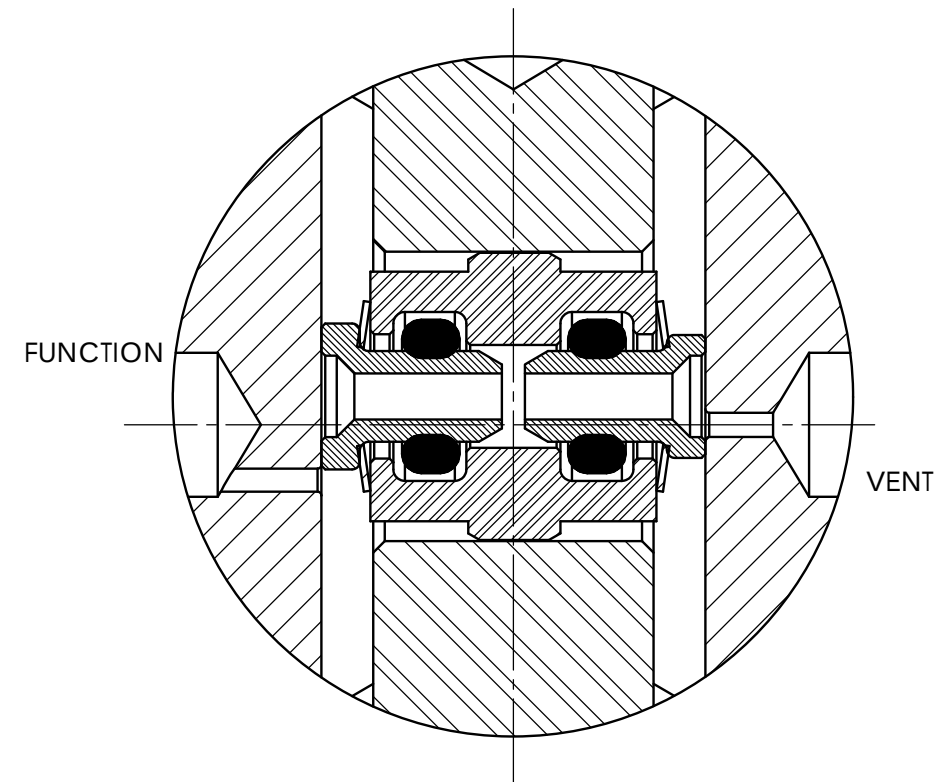
B



DETAIL B
CLOSED



DETAIL B
MID POSITION



DETAIL B
OPEN

A

A

4

3

2

1



ENGINEERING

SIZE B	DWG NO 29125	REV B
SCALE 4:1	SolidWorks	SHEET 3 OF 3