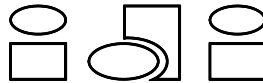
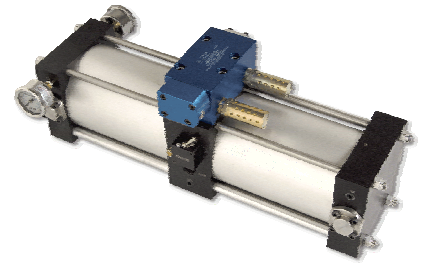


AA-160 Air Amplifier

INSTALLATION, OPERATION & MAINTENANCE MANUAL



INTERFACE DEVICES, INC. 230 Depot Road, Milford, CT 06460
Ph: (203) 878-4648, Fx: (203) 882-0885, E-mail: info@interfacedevices.com
www.interfacedevices.com

**IMPORTANT! FILE THIS MANUAL IN A SAFE PLACE FOR FUTURE SERVICE & PARTS NEEDS
ALWAYS REFERENCE THE SERIAL NUMBER FOR SERVICE & PARTS REQUESTS**

Pump Serial Number:

Pump Model Code:

Sold to:

Purchase Order:

Contact

End User:

Order Date:

STATEMENT OF WARRANTY

INTERFACE DEVICES, INC. (hereafter, the factory) warrants its products to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of shipment from the factory. Any defect discovered after the warranty period has expired will be deemed to be outside the above coverage. No goods claimed to be under warranty shall be accepted for return unless authorized by the factory beforehand.

Upon discovery of a defect (other than freight damage) or a shortage of an item received in the original factory container, the purchaser shall, within (10) calendar days, deliver notice of the defect or shortage. Damaged freight claims must be placed with the freight carrier and will not be honored by the factory. If after due investigation of a claim of defect or shortage is found valid, the factory, at its sole discretion, may discharge its entire obligations to the purchaser by either repair or replacement of the defective product or component and for shortages by furnishing a replacement of the missing quantity (FOB, factory).

This express warrantee supersedes and is in lieu of all other remedies and warranties, including the implied warranties of merchantability and fitness for a particular purpose, and liability for negligence. IN NO EVENT SHALL THE FACTORY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL LOSSES, EXPENSES OR DAMAGES INCLUDING DAMAGES FOR PERSONAL INJURY OR COMMERCIAL LOSS.

AA-160 2:1 AIR AMPLIFIER

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1.0 INSTALLATION

1.1 MOUNTING:

The amplifier comes standard with a foot mounting bracket (four 1/4 inch fasteners required).

The unit may be mounted vertically (wall mount) or horizontally (floor mount).

1.2 CONNECTIONS:

Connect a regulated and filtered air supply to the 1/2 NPT "AIR IN" port on the pump (1/2 NPT, or larger size filter/regulator and plumbing. NO Lubricator Is required).

Connect your high pressure circuit to the 1/2 NPT "AIR OUT" port on the pump.

1.3 STARTUP:

Starting with the external air regulator backed-out all the way, slowly increase the pressure by turning the regulator knob clockwise. The pump will start to cycle while regulated pressure flows directly through the pump to the circuit.

The pump will stall when circuit pressure reaches 2 times the regulated pressure. The pump will maintain this pressure even if there is some circuit leakage. At this time check for and fix any circuit leaks since this only causes unnecessary air consumption and wear and tear on the pump.

2.0 MAINTAINENCE:

2.1 ROUTINE MAINTAINENCE:

The only routine maintenance required is to re-grease the main air spool (item 9), the pilot piston O-ring (item 10) and the T-seals (items 7) every 6 months. Refer to the enclosed 4-way cycling valve assembly drawing.

2.2 RECOMMENDED SPARE PARTS*

QTY	PART NUMBER	DESCRIPTION
1	11461	Air Reciprocation Valve
1	DSK-AA160	Dynamic Seal Kit
1	SSK-AA160	Static Seal Kit
3	10017	2-Way Air Valve Assembly

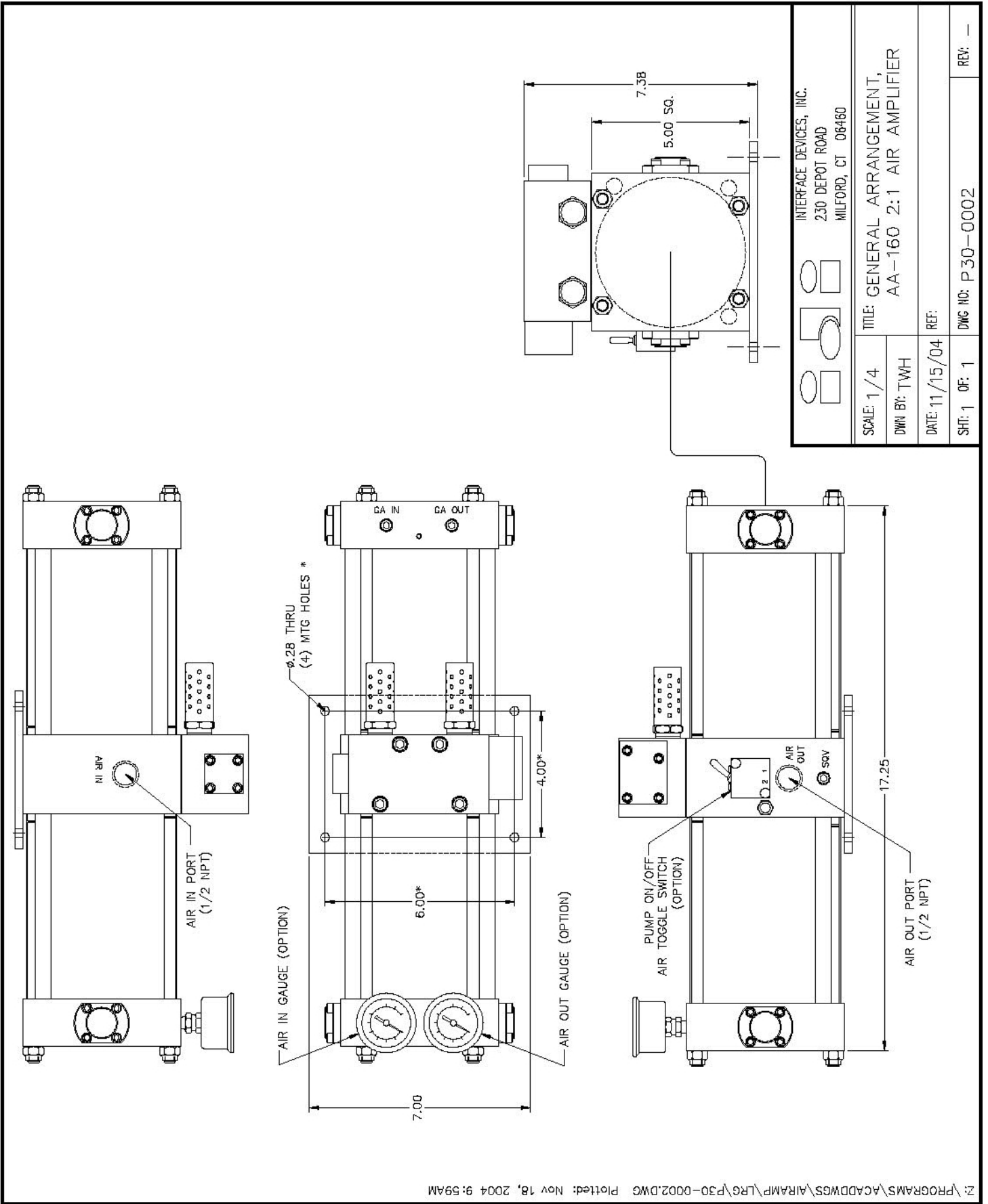
*Consult your local distributor or IDI for current price and delivery.

2.3 TROUBLESHOOTING GUIDE:

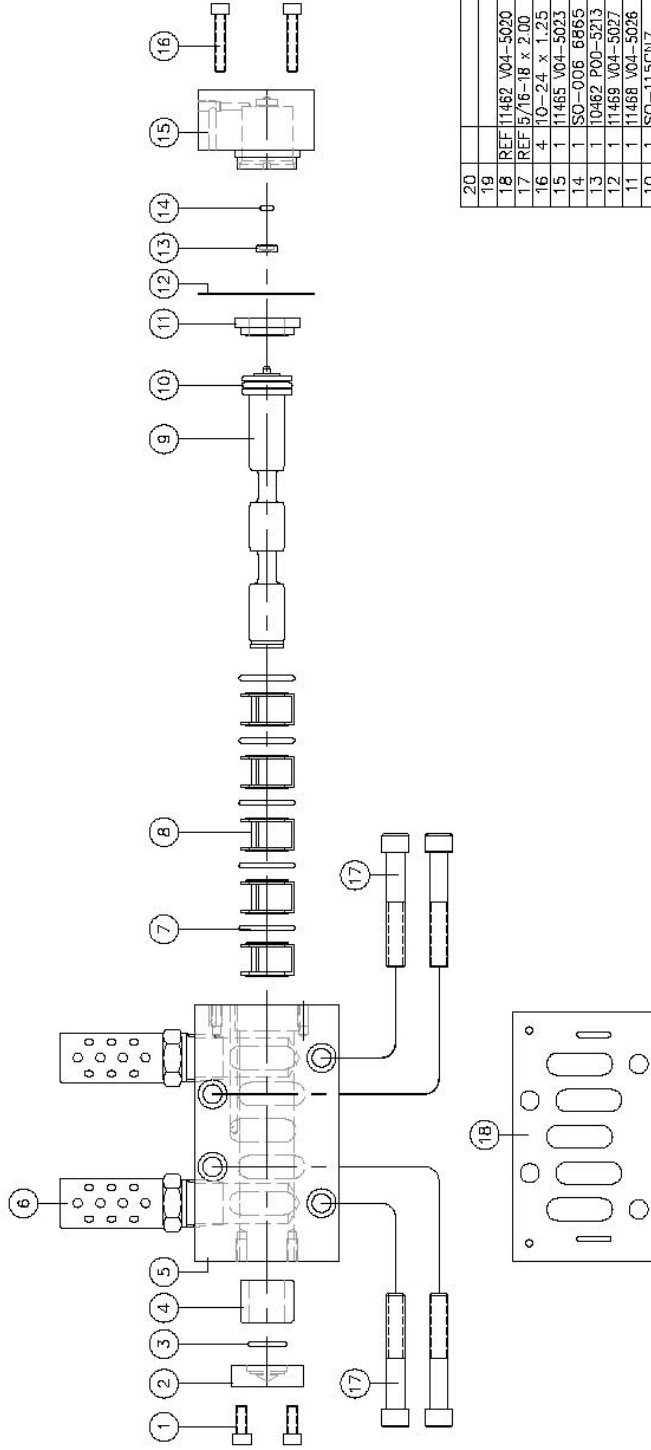
AA-160, 2:1 AIR AMPLIFIER TROUBLESHOOTING GUIDE
 (Refer to enclosed Exploded View Drawings)

SYMPTOM	PROBABLE CAUSE(S)	REMEDY
Pump will not cycle. No pressure at output.	No air supply to pump. Pump air regulator supply set too low.	Look for and fix. Increase setting.
Pump will not cycle with regulated pressure at output.	Four-way Air reciprocating valve spool stuck at mid-position. After trying remedy above, spool still sticks:	Disconnect/Reconnect air supply (Re-sets air spool to end position.) Disassemble air valve assembly Inspect for contamination or mechanical bind. Repair or replace, lubricate seals with water-proof grease.
Pump makes one cycle, then stops.	Faulty item 24 "2-way air valve" (Broken, leaks or contaminated).	Repair or replace.
Pump cycles constantly when "dead-headed".	External leak at pump or downstream high pressure circuit. Stuck open or contaminated item 6 "Check Valve" cartridge (4 places). Internal leak in pump.	Look for and correct. Clean or replace. Note valve orientation at assembly. Check all dynamic and static seals and gaskets. Replace if necessary.

For further assistance call INTERFACE DEVICES, INC. at 203/878-4648.



REV	DESCRIPTION	BY	DATE
A	ITEM 7 QTY WAS 6; ITEM 18 WAS 10-24 X 1.00	WHL	12/29/02



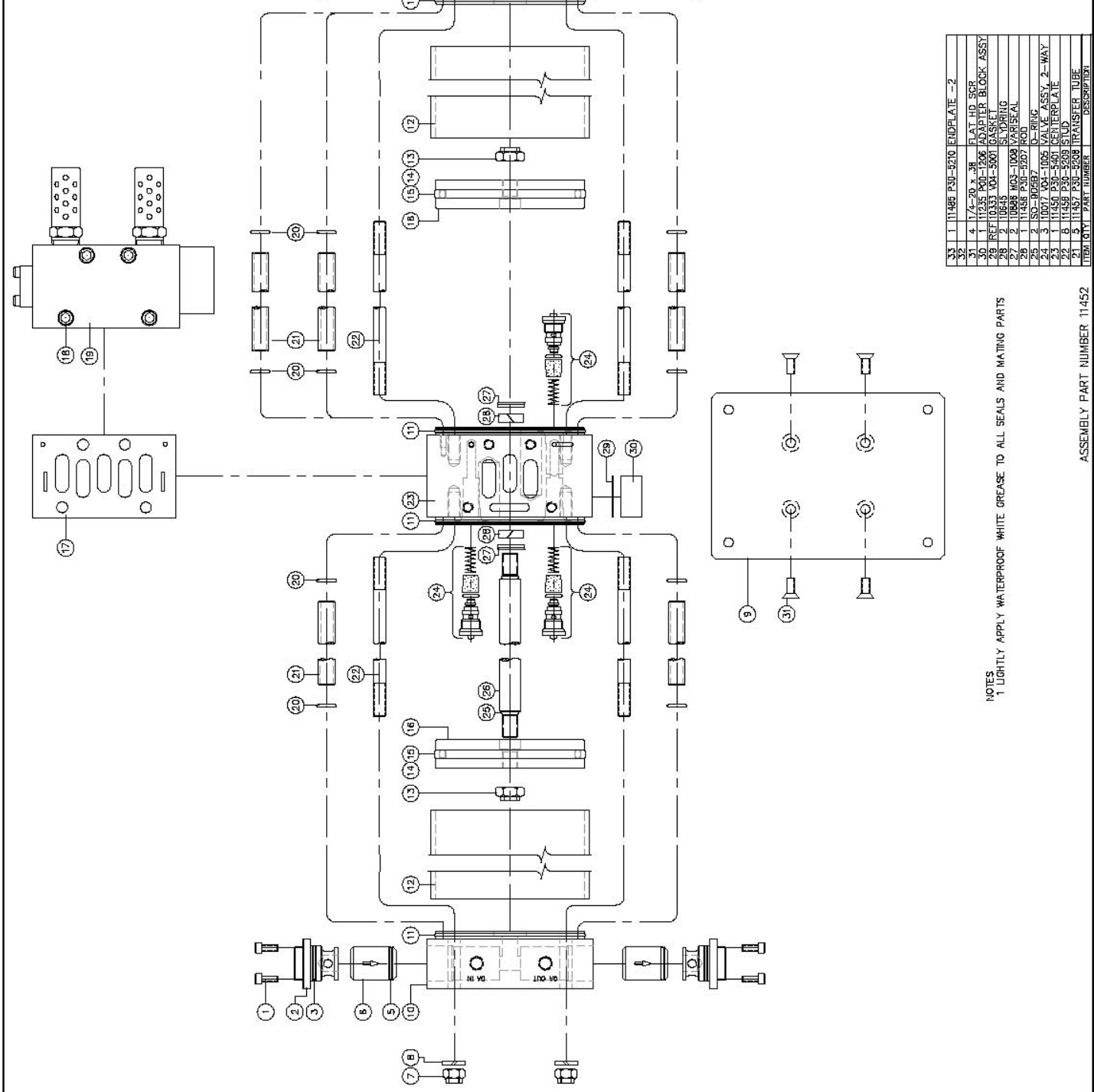
NOTES
 1 APPLY WATERPROOF WHITE GREASE TO ALL SEALS
 AND MOVING PARTS AT ASSEMBLY

20			
19			
18	REF 11462 V04-5020	GASKET	
17	REF 5/16-18 x 2.00	SOC HD CAP SCR	
16	4 10-24 x 1.25	SOC HD CAP SCR	
15	1 11465 V04-5023	SPOOL CAP	
14	1 SO-006	68665 O-RING	
13	1 10462 P00-5213	RETAINER, O-RING	
12	1 11469 V04-5027	GASKET	
11	1 11468 V04-5026	SPACER, SHORT	
10	1 SO-115CN7	O-RING	
9	1 11464 V04-5022	SPOOL	
8	5	CAGE	
7	5 A712B-200	TEE SEAL	
6	2 1042B	MUFFLER, 1/2 NPT	
5	1 11463 V04-5021	BODY	
4	1 11467 V04-5025	SPACER, LONG	
3	2 SO-015B7	O-RING	
2	1 11465 V04-5023	SPOOL CAP	
1	4 10-24 x .50	SOC HD CAP SCR	

ITEM QTY	PART NUMBER	DESCRIPTION
INTERFACE DEVICES, INC. 230 DEPOT ROAD MILFORD, CT 06460		
SCALE: 1/2	TITLE: ASSEMBLY, ISO-3 VALVE (APO, 4 WAY, 5 PORT, 2 POS)	
DWG BY: WHJ	REF:	
DATE: 7/12/04	REF:	
SHEET: 1 OF 1	DWG NO: V04-100B	REV: A

ASSEMBLY PART NUMBER: 11461

REV	DESCRIPTION	DATE	BY
A	ADD ONE LAYER V.V. INSULATOR UNDER ITEM 10 UNIFORM. ITEM IS WASH AND PAINT. LAY BASES. COILS OF A 502 SOLDER ITEM 33	04/11/03	MM
B	REPLACED WARE PARTS TO TOP SURFACE. ITEM 11 WAS 10-24 X .62. ITEM 12 WAS 10-24 X .62. ITEM 13 WAS 10-24 X .62. ITEM 14 WAS 10-24 X .62. ITEM 15 WAS 10-24 X .62. ITEM 16 WAS 10-24 X .62. ITEM 17 WAS 10-24 X .62. ITEM 18 WAS 10-24 X .62. ITEM 19 WAS 10-24 X .62. ITEM 20 WAS 10-24 X .62. ITEM 21 WAS 10-24 X .62. ITEM 22 WAS 10-24 X .62. ITEM 23 WAS 10-24 X .62. ITEM 24 WAS 10-24 X .62. ITEM 25 WAS 10-24 X .62. ITEM 26 WAS 10-24 X .62. ITEM 27 WAS 10-24 X .62. ITEM 28 WAS 10-24 X .62. ITEM 29 WAS 10-24 X .62. ITEM 30 WAS 10-24 X .62. ITEM 31 WAS 10-24 X .62. ITEM 32 WAS 10-24 X .62. ITEM 33 WAS 10-24 X .62.	04/11/03	MM
C	REPLACED WARE PARTS TO TOP SURFACE. ITEM 11 WAS 10-24 X .62. ITEM 12 WAS 10-24 X .62. ITEM 13 WAS 10-24 X .62. ITEM 14 WAS 10-24 X .62. ITEM 15 WAS 10-24 X .62. ITEM 16 WAS 10-24 X .62. ITEM 17 WAS 10-24 X .62. ITEM 18 WAS 10-24 X .62. ITEM 19 WAS 10-24 X .62. ITEM 20 WAS 10-24 X .62. ITEM 21 WAS 10-24 X .62. ITEM 22 WAS 10-24 X .62. ITEM 23 WAS 10-24 X .62. ITEM 24 WAS 10-24 X .62. ITEM 25 WAS 10-24 X .62. ITEM 26 WAS 10-24 X .62. ITEM 27 WAS 10-24 X .62. ITEM 28 WAS 10-24 X .62. ITEM 29 WAS 10-24 X .62. ITEM 30 WAS 10-24 X .62. ITEM 31 WAS 10-24 X .62. ITEM 32 WAS 10-24 X .62. ITEM 33 WAS 10-24 X .62.	04/12/03	MM



20	SO-01487	O-RING
10	SO-01487	O-RING
8	11453	PO-5204 RETAINER, CHECK V.V
4	11453	PO-5204 RETAINER, CHECK V.V
18	10-24 X .62	SDC HD CAP SCR
17	11462	VAL-5200 GASKET
16	11455	POC-5206 PISTON
2	11487	GLYPHERING
15	2	11487
14	SO-34487	O-RING
2	SO-34487	O-RING
12	11454	VAL-5206 VALVE
11	11454	VAL-5206 VALVE
4	SO-04657	O-RING
10	11487	PO-5203 ENDPLATE -1
9	11459	POC-5B02 MOUNTING BRACKET
8	3/8	LOCKWASHER
7	3/8	LOCKWASHER
6	10-24 X .62	SDC HD CAP SCR
5	SO-02087	O-RING
4	SO-02087	O-RING
3	SO-02187	O-RING
2	11453	POC-5204 RETAINER, CHECK V.V
1	10-24 X .62	SDC HD CAP SCR

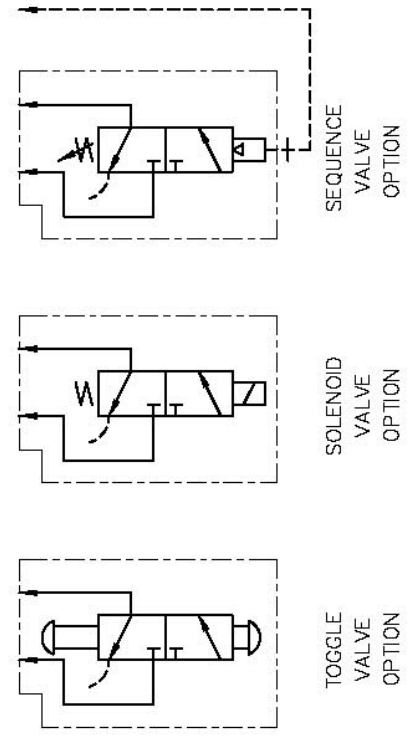
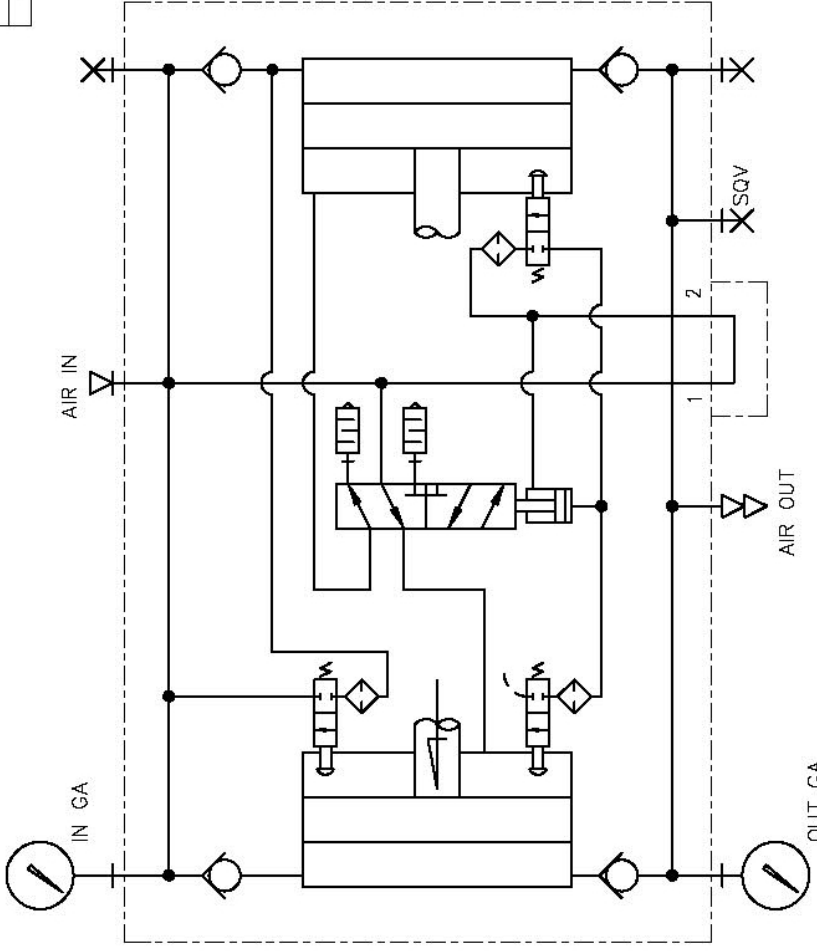
ITEM	QTY	PART NUMBER	DESCRIPTION
33	1	11488	P30-5270 ENDPLATE -2
32	1	11488	P30-5270 ENDPLATE -2
31	4	1/4-20 X .38	FLAT HD SCR
30	1	11235	PO-1206 ADAPTER BLOCK ASSY
29	REF	10333	VAL-5001 GASKET
28	2	10645	SLDRING
27	2	10645	SLDRING
26	1	10645	SLDRING
25	1	10645	SLDRING
24	3	10071	VAL-1005 VALVE ASSY, 2-WAY
23	1	11450	P30-5401 CENTERPLATE
22	8	11459	P30-5209 SLID
21	5	11457	P30-5209 TRANSFER TUBE

NOTES
 1 LIGHTLY APPLY WATERPROOF WHITE GREASE TO ALL SEALS AND MATING PARTS

ASSEMBLY PART NUMBER 11452

REV. C

REV	DESCRIPTION	BY	DATE
-	-	-	-



INTERFACE DEVICES, INC.
 230 DEPOT ROAD
 MILFORD, CT 06460

SCALE: N/A	TITLE: PNEUMATIC SCHEMATIC, AA-160 2:1 AIR AMPLIFIER
DWN BY: TWH	REF: UNBAL AIR SPOOL
DATE: 6/17/04	DWG NO: P.30-4002
SHT: 1 OF: 1	REV: -