

GA-54 Gas Amplifier

INSTALLATION, OPERATION & MAINTENANCE MANUAL



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**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: _____

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 warranty 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.**

GA-54 GAS 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 CLEAN AND FILTERED shop air (**150 psi maximum**) to the 3/8" NPT "AIR IN" port on the pump. NO Air Regulator or Lubricator is required.

Connect your source media to be pumped to BOTH the 1/4 NPT "IN" ports on the pump, located in each end cap of the pump.

Connect your destination media pressure circuit to the 3/8 NPT "2P" port on the pump, located in the center section of the pump..

1.3 STARTUP:

Note: With the source media supply turned on, it will free-flow through the pump to the destination port, with a slight pressure drop due to the cracking pressure of the internal check valves.

Starting with the pump mounted air regulator backed-out all the way, slowly increase the pressure by turning the regulator knob clockwise. The pump will start to cycle building pressure of destination media as it does so.

The pump will stall when circuit pressure reaches the sum of the regulated drive pressure and the inlet media 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	10072	Air Reciprocation Valve
1	DSK-GA54	Dynamic Seal Kit
1	SSK-GA54	Static Seal Kit
3	10017	2-Way Air Valve Assembly

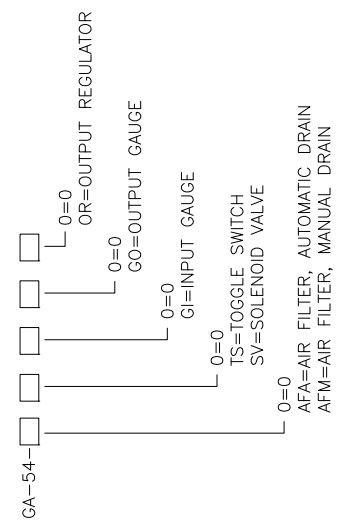
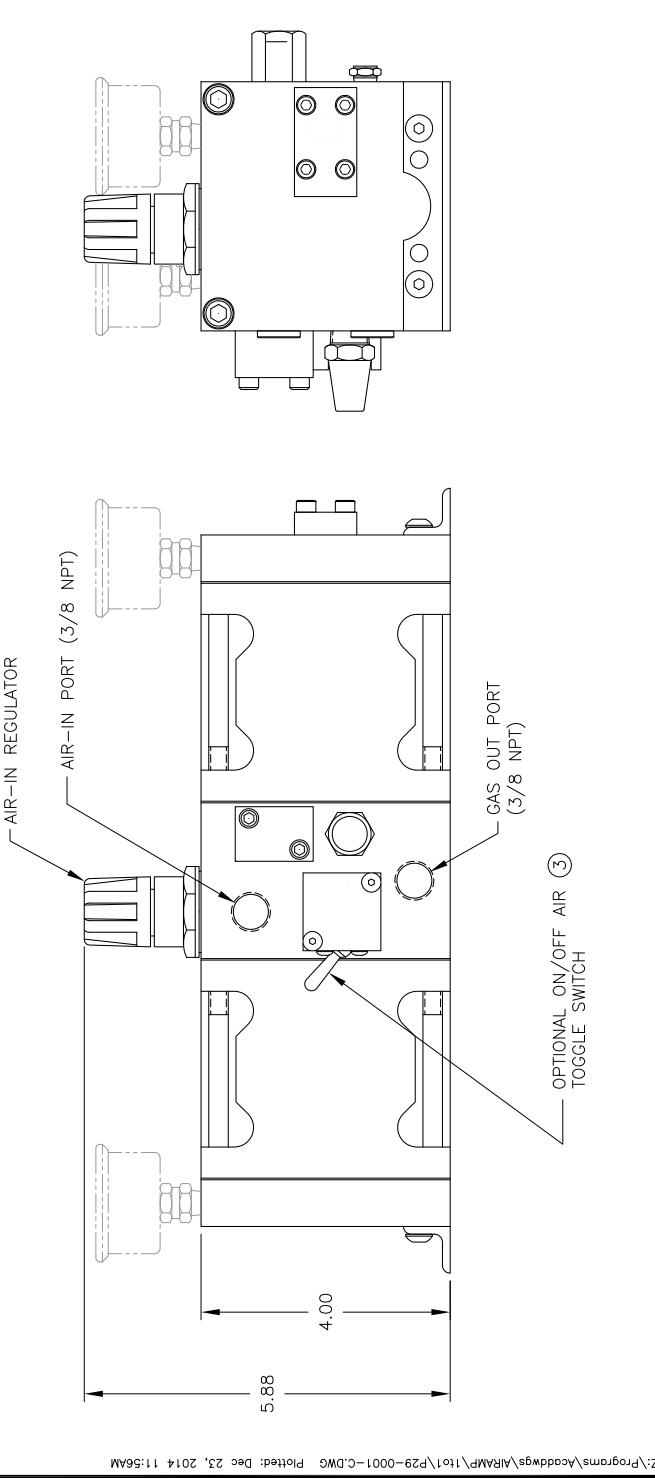
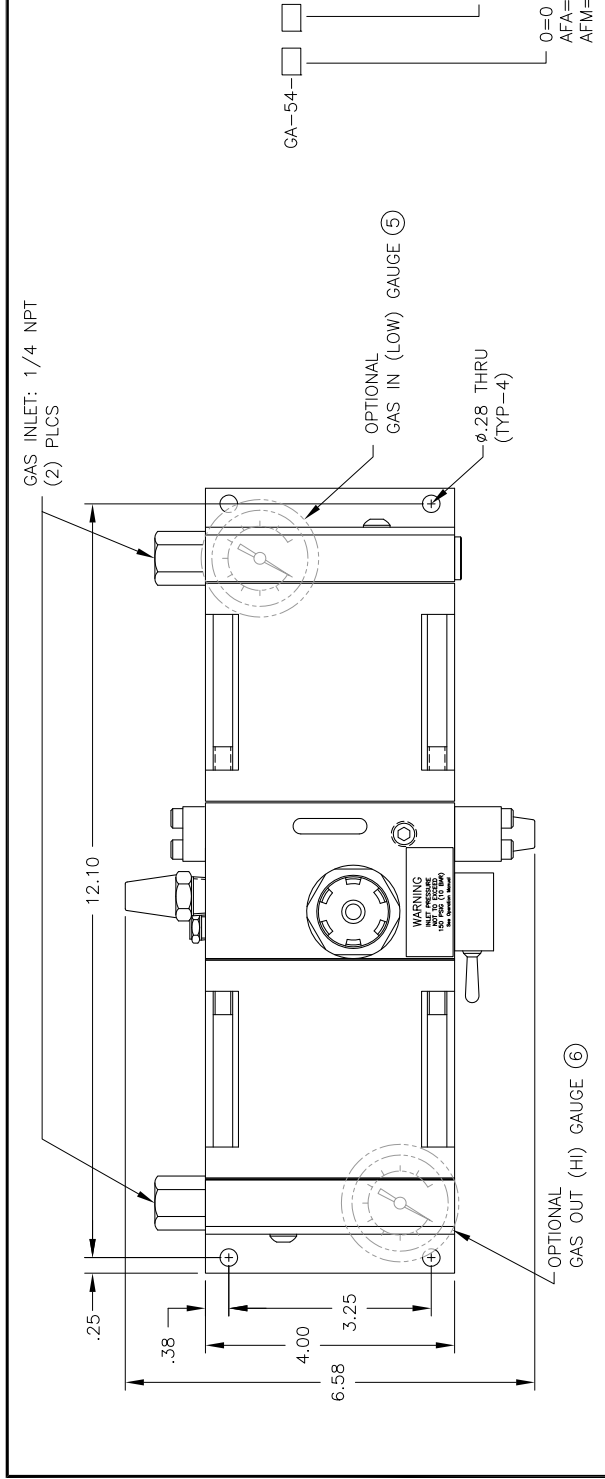
*Consult your local distributor or IDI for current price and delivery.

2.3 TROUBLESHOOTING GUIDE:

GA-54, GAS AMPLIFIER TROUBLESHOOTING GUIDE
(Refer to enclosed Exploded View Drawings)

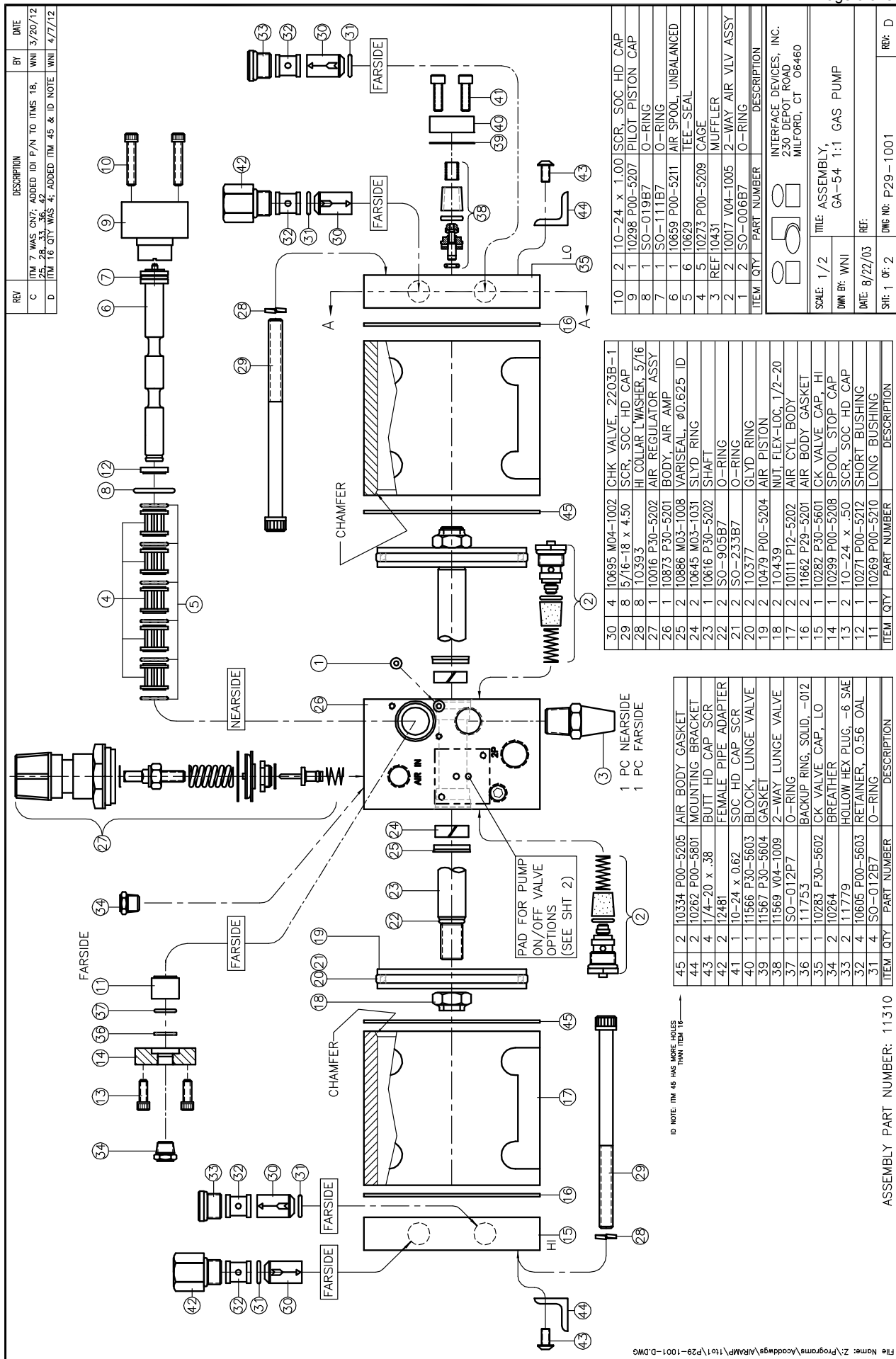
SYMPTOM	PROBABLE CAUSE(S)	REMEDY
Pump will not cycle. No pressure at output.	No air supply to pump. Pump air regulator supply set too low.	Look for and fix. Increase setting.
Pump will not cycle with regulated pressure at output.	Four-way Air reciprocating valve spool stuck at mid-position. After trying 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 "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 "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.

REV	DESCRIPTION	BY	DATE
A	PICTURE CHANGE, WHEELERS GAS INLET PORTS MOVED TO FAR SIDE; ADDED AIR REGULATOR GAUGE	WNI	1/4/06
B	PICTURE CHANGE, GAUGES WERE 1/4 NPT	WNI	12/7/12
C	ADDED MODEL CODES & BOM	WNI	12/19/14



ITEM	QTY	PART NUMBER	DESCRIPTION
7	1	11998	OUTPUT REGULATOR 10-250 PSI, 1/2 NPT
6	1	10349 M03-1010	GAUGE, 300 PSI LIQ FILLED
5	1	10349 M03-1010	GAUGE, 160 PSI DRY
4	1	11919 V04-1003	SOL AIR VALVE, 220VAC
		11838 V04-1003	SOL AIR VALVE, 110VAC
		11837 V04-1003	SOL AIR VALVE, 24VDC
3	1	10449 V04-1002	MAN TOGGLE SWITCH
2	1	10100 P00-5206	BLOCK ASSY, ADAPTER
1	1	11196 M04-1022	AIR FILTER, MAN DR
		12051 M04-1022	AIR FILTER, AUTO DR

SCALE	TITLE
1/2	GENERAL ARRANGEMENT, DA GAS PUMP
DWN BY: TWH	REF:
DATE: 8/6/03	REF:
SH: 1 OF: 1	DWG NO: P29-0001
	REV: C



REV	DESCRIPTION	BY	DATE
C	ITEM 7 WAS ON7; ADDED IDI P/N TO THIS 18; 25, 28, 33, 36, 42	WNI	3/20/12
D	ITEM 16 QTY WAS 4; ADDED ITEM 45 & ID NOTE	WNI	4/7/12

ITEM	QTY	PART NUMBER	DESCRIPTION
10	2	10-24 x 1.00	SCR, SOC HD CAP
9	1	10298 P00-5207	PILOT PISTON CAP
8	1	SO-019B7	O-RING
7	1	SO-111B7	O-RING
6	1	10659 P00-5211	AIR SPOOL, UNBALANCED
5	6	10679	TEF-SEAL
4	5	10273 P00-5209	CAGE
3	REF	10451	MUFFLER
2	2	10017 V04-1005	2-WAY AIR VLV ASSY
1	2	SO-006B7	O-RING

ITEM	QTY	PART NUMBER	DESCRIPTION
30	4	10695 M04-1002	CHK VALVE, 2203B-1
29	8	5/16-18 x 4.30	SCR, SOC HD CAP
28	8	10393	HI COLLAR L WASHER, 5/16
27	1	10016 P30-5202	AIR REGULATOR ASSY
26	1	10873 P30-5201	BODY, AIR AMP
25	2	10886 M03-1008	VARISEAL, Ø0.625 ID
24	2	10645 M03-1031	SLYD RING
23	1	10616 P30-5202	SHAFT
22	2	SO-905B7	O-RING
21	2	SO-233B7	O-RING
20	2	10377	GLYD RING
19	2	10479 P00-5204	AIR PISTON
18	2	10439	NUT, FLEX-LOG, 1/2-20
17	2	10111 P12-5202	AIR CYL BODY
16	2	11662 P29-5201	AIR BODY GASKET
15	1	10282 P30-5601	CK VALVE CAP, HI
14	1	10289 P00-5208	SPOOL STOP CAP
13	2	10-24 x .50	SCR, SOC HD CAP
12	1	10271 P00-5212	SHORT BUSHING
11	1	10269 P00-5210	LONG BUSHING

ID NOTE: ITEM 45 HAS MORE HOLES THAN ITEM 18

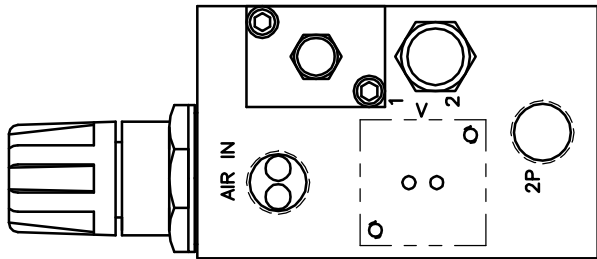
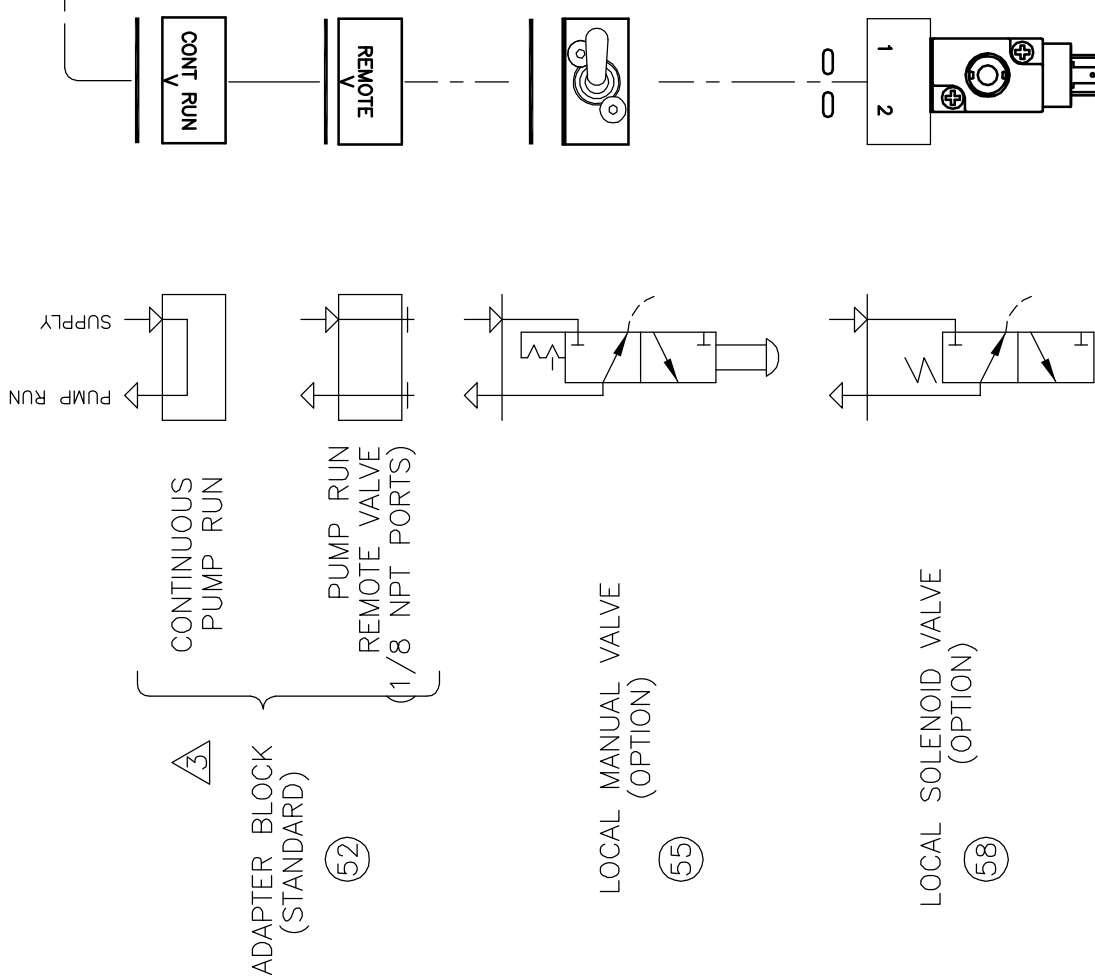
ITEM	QTY	PART NUMBER	DESCRIPTION
45	2	10334 P00-5205	AIR BODY GASKET
44	2	10262 P00-5801	MOUNTING BRACKET
43	4	1/4-20 x .38	BUTT HD CAP SCR
42	2	12481	FEMALE PIPE ADAPTER
41	1	10-24 x 0.62	SOC HD CAP SCR
40	1	11566 P30-5603	BLOCK, LUNGE VALVE
39	1	11567 P30-5604	GASKET
38	1	11569 V04-1009	2-WAY LUNGE VALVE
37	1	SO-012P7	O-RING
36	1	11753	BACKUP RING, SOLID, -012
35	1	10283 P30-5602	CK VALVE CAP, LO
34	2	10264	BREATHER
33	2	11179	HOLLOW HEX PLUG, -6 SAE
32	4	10605 P00-5603	RETAINER, 0.56 OAL
31	4	SO-012B7	O-RING

TITLE: ASSEMBLY, GA-54 1:1 GAS PUMP	
DRAWN BY: WNI	
DATE: 8/22/03	
REF:	
SHEET: 1 OF 2	
DWG NO: P29-1001	
REV: D	

ASSEMBLY PART NUMBER: 11310

NOTES

- 1 PORT 3 IS COMMON TO PORT 2.
CONNECT PORT 3 TO REMOTE AIR PILOT OPERATED HYDRAULIC RELEASE VALVE
- 2 MOUNTING SCREWS AND GASKET/O-RINGS ARE FURNISHED FOR EACH OPTION
- ③ ROTATE ADAPTER BLOCK TO MATCH "V" STAMPED ON AIR CAP FOR THE DESIRED FUNCTION

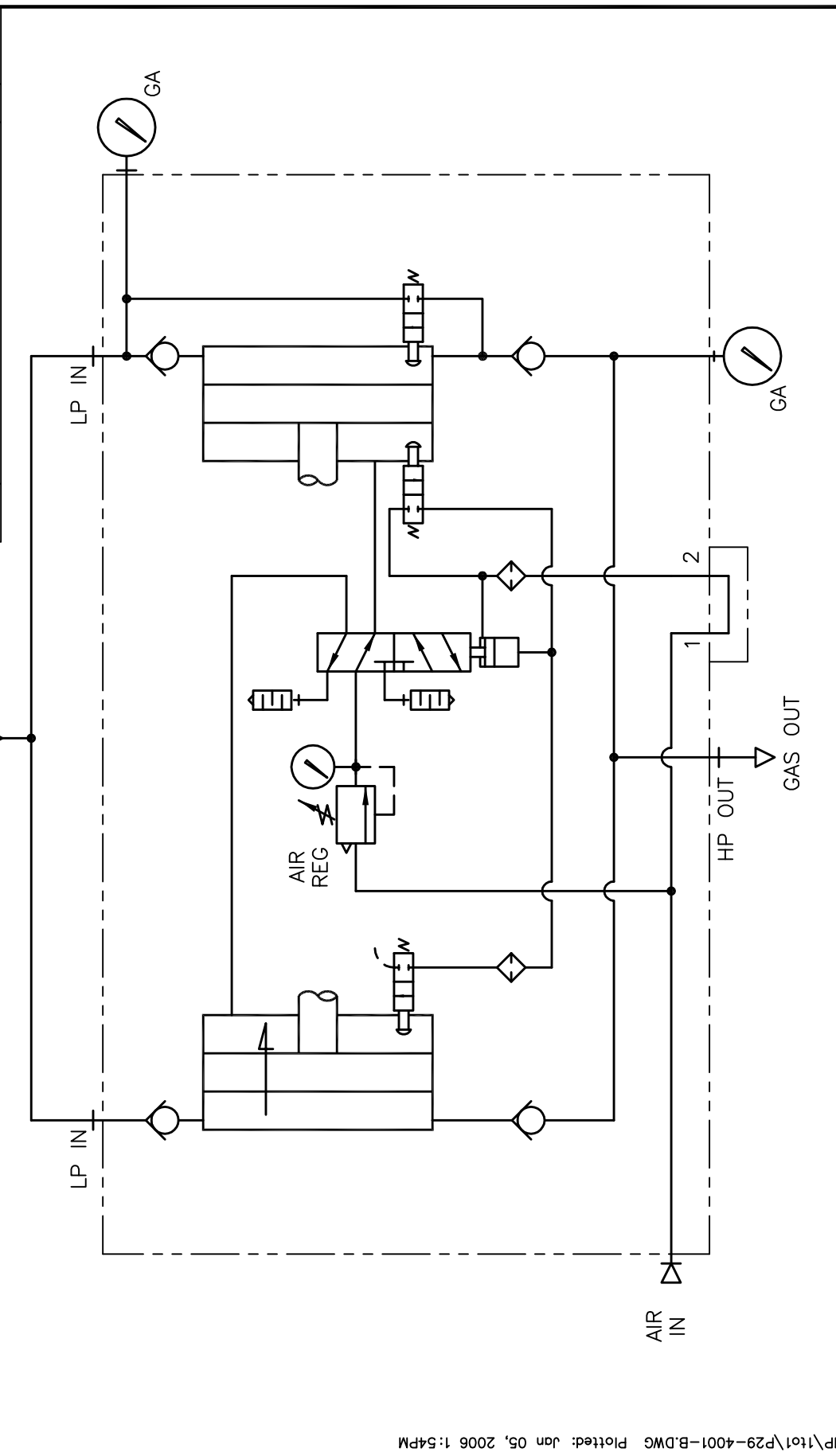


VOLTAGE	ITEM 58 P/N
24 VDC	11837 V04-1003
120 VAC	11838 V04-1003
240 VAC	11919 V04-1003

ITEM	QTY	PART NUMBER	DESCRIPTION
59			
58	REF	SEE CHART	SOL AIR VALVE ASSY
57			
56			
55	REF	10449 V04-1002	MAN TOGGLE SWITCH ASSY
54			
52	REF	11235 P00-1206	BLOCK ASSY, ADAPTER

ITEM	QTY	PART NUMBER	DESCRIPTION
			INTERFACE DEVICES, INC.
			230 DEPOT ROAD
			MILFORD, CT 06460
SCALE: HALF		TITLE: ASSEMBLY, GA-54 GAS PUMP	
DWN BY: WNI		REF:	
DATE: 8/22/03		DWG NO: P29-1001	
SHT: 2 OF 2		REV: D	

REV	DESCRIPTION	BY	DATE
A	MOVE GAUGE, LABEL LP & HP PORTS	TWH	11/6/03
B	ADDED "LUNGE VALVE"; REGULATOR GAUGE; NOTES: GAS IN/GAS OUT WAS NITROGEN IN/NITROGEN OUT	WNI	1/5/06



NOTE:
1 GAUGES SHOWN ARE OPTIONAL COMPONENTS

		INTERFACE DEVICES, INC. 230 DEPOT ROAD MILFORD, CT 06460	
SCALE: N/A	TITLE: SCHEMATIC, 1:1 AIR DRIVEN GAS AMPLIFIER		
DWN BY: TWH	DATE: 10/24/03	REF:	
SHT: 1	OF: 1	DWG NO: P29-4001	REV: B