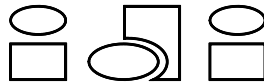


# OB-30 OXYGEN BOOSTER

## 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**

**Safety instructions specifically pertaining to this unit appear throughout this manual highlighted by these signal words **\*\* Warning\*\*** and **\*\*Caution\*\*** to denote different levels of hazard.**

**Warning:** denotes practices, which if not carefully followed, could result in property damage, **SERIOUS** personal injury and /or **DEATH**

**Caution:** denotes practices which if not carefully followed, could result in minor personal injury or damage to equipment.

**OB-30 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.

**\*\*WARNING\*\***  
**Limitation of Liability**

There is an inherent risk associated with pressurized oxygen systems. Failure to follow the Manual's instructions or other safety procedures increases the risk of an ignition source being introduced into the oxygen flow stream that could result in a fire, explosion, property damage, serious personal injury or death. In addition to following the OB-30 safety precautions, remember to take appropriate safety measures with all components in the oxygen system. In no event shall Interface Devices, Inc. be held liable for any property damage, injury or death in the event the OB-30 booster is NOT installed, operated or maintained in strict accordance with this manual and other published oxygen service guidelines.

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## 1.0 General Description

- 80 psi drive pressure produces 2,200 psi oxygen pressure.
- Shop air powered for use in and around the hanger.



*Designed for Maximum Safety:*

- Oxygen wetted components are principally brass – the best material for oxygen service far surpassing stainless steel for oxygen service
- Other materials are optimized for oxygen service
- All Oxygen wetted parts have been cleaned per Spec. ARP 1176

*Features:*

- No inlet air valve, air regulator or air lubricator required.
- Dual 10 micron filters, one each for oxygen in and out.
- Integrated circuit design. No external tubing and fittings to leak.
- Integral cut-in and cut-out pressure switches. Pump will not run if oxygen-in pressure is below 250 psi or oxygen-out pressure is above 2,400 psi.
- Polymeric seals and bearings for long life and high efficiency.
- Totally sparkless operation.
- Twin rod seals  
with vent between to atmosphere prevents air/oxygen migration
- Integral subplate mounted air regulator with pump on/off air toggle switch
- Allows bottle pressure to be used down below 300 psi.
- May be nitrogen powered for remote operation

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## 1.1 Optional equipment available to enhance unit

- 1) Three bottle Oxygen or Oxygen service cart.
  - Low center of gravity for safe maneuvering.
  - Booster Mount and fire extinguisher are optional.
- 2) Cart mount and protection guard for Oxygen or Oxygen Booster.
  - Mounts to the front of virtually any cart.

**\*\* Warning \*\***

**To Avoid Serious Injury, Property Damage or Death**

1. **Never** operate the OB-30 unattended
2. **Always** have a properly rated and charged fire extinguisher close at hand
3. **Do not** use on **LOW PRESSURE** aircraft systems.  
This is an **UNREGULATED OXYGEN SOURCE** equal to supply bottle pressure.  
The use of a supply bottle pressure regulator is required with this unit.
4. **Do not** use to boost air or any gas other than Oxygen.
5. **Do not** exceed 2,200 PSIG inlet Pressure.
6. All Components used in the oxygen system or Shop air system shall be clean, dry and free of all contamination. Per Spec. ARP 1176
7. Servicing and/ or maintenance of Oxygen systems shall be done by trained and qualified personnel using approved procedures.
8. All components in conjunction with the OB-30 booster shall comply with NFPA – 53 “Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched Atmospheres” - 2004 Edition and SAE Spec. ARP 1532, “Aircraft Oxygen System Lines, Fabrication, Test and Installation”

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## 2.0 Specifications / Features

Dimensions: 14" long, 9.4" high and 8.9" wide.  
Weight: 42 lbs complete.

Input & Output Hoses required: Stainless steel/Teflon® -4 rated to 3,000 psi.  
Booster output Rating = 2,200 psig.  
Oxygen Booster Ratio: 30:1.

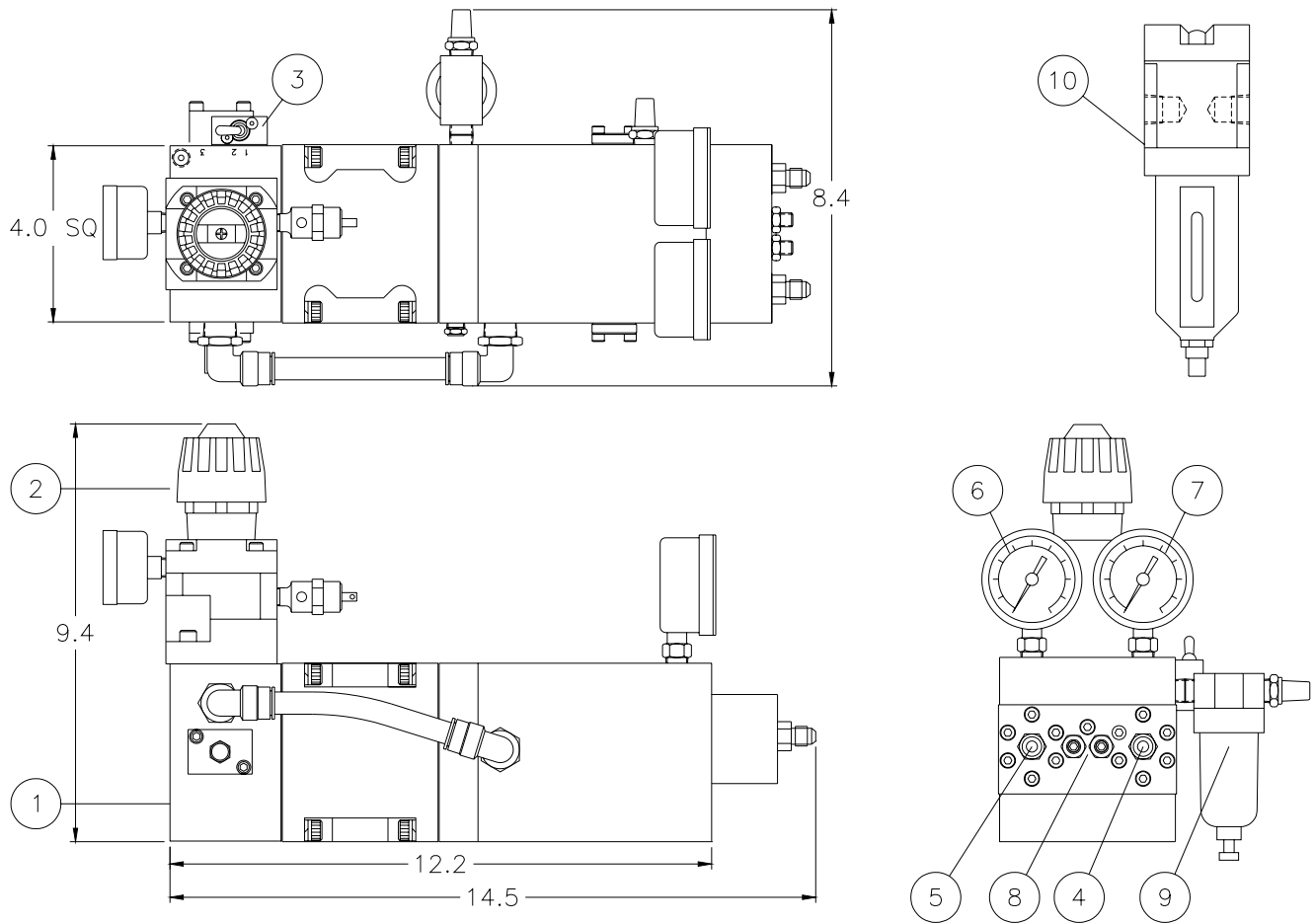


Fig 1a

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## **2.1 Component Description** (Refer to Fig. 1a. for component location.)

1. Air or Nitrogen inlet Port (1/2 npt).
2. Air Regulator & Gauge.  
(Sets O2 Boost Pressure: 80 PSIG air in = 2,200 +psi oxygen out).
3. Pump On / Off Air Toggle Switch.
4. Oxygen Out Port –4 JIC Fitting 2,200 psig Max.
5. Oxygen In Port –4 JIC Fitting 2,200 psig Max.
6. Oxygen In (Supercharge) Pressure Gauge.
7. Oxygen Out Pressure Gauge.
8. Cut in/cut out pressure switches (factory preset).
9. Air Vent Filter.
10. Coalescing Inlet Filter (Shipped Loose)

**Application:** Fill aircraft oxygen system, or similar operations that require high pressure Oxygen.

## **3.0 Preparation for use**

**\*\* Caution \*\***

It is mandatory that this instruction manual be read, understood and followed by all persons operating this high- pressure oxygen booster.

## **3.1 Safety Instructions**

- 3.1.1 General: Information presented in this manual and on various labels, tags and plates on the unit pertains to equipment design, installation, operation maintenance and trouble shooting which should be read, understood and followed for safe and effective use of this equipment.
- 3.1.2 Safety: The operation, maintenance, and trouble shooting of this high pressure Oxygen Booster requires practices and procedures which ensure personal operator safety and the safety of others. Therefore, this equipment is to be operated and maintained only by qualified persons in accordance with this manual and all applicable local codes.

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Safety instructions specifically pertaining to this unit appear throughout this manual highlighted by these signal words **\*\* Warning\*\*** and **Caution \*\*** to denote different levels of hazard.

**Warning:** denotes practices, which if not carefully followed, could result in property damage, **SERIOUS** personal injury and /or **DEATH**

**Caution:** denotes practices which if not carefully followed, could result in minor personal injury or damage to this equipment.

3.1.3 Training: Read through this entire manual prior to any Oxygen booster operation. All personnel using this Oxygen Booster should understand and follow this manual and receive training. We encourage our customers to call Interface Devices, Inc to discuss any operating or testing requirements. All operators of the OB-30 should be familiar with high pressure oxygen service per the NFPA-53 publication: "Oxygen System Recommended Practices and Materials"

## 3.2 General Safety Precautions

3.2.1 Pressures: Gasses under pressure are a potential hazard in the form of stored energy. Accidents can occur when this energy is improperly handled. Be sure that all equipment used is compatible and designed to control the pressures encountered.

3.2.2 Velocity: Oxygen flowing at a high velocity in a piping system can propel any foreign material particles with such force that the impact friction can raise the particles temperature to a possible ignition point. It is therefore imperative that a high degree of cleanliness be maintained in the oxygen system at all times and instructions for initializing oxygen flow be closely followed.

3.2.3 Oxygen: Oxygen is an oxidizing gas, chemically stable, and non-flammable but will, combined with other elements support combustion.

**\*\* Warning \*\***

High oxygen concentrations can accelerate the combustion of flammable materials up to and including explosion.

It is important to understand that spontaneous combustion of organic materials such as oil can occur in oxygen rich atmospheres.

3.2.4 Lubrication: The use of lubrication in an Oxygen system should be kept to a minimum. The OB-30 itself requires no lubrication. An air line lubricator is not to be used.

**\*\* Warning \*\***

Only lubricants compatible with high pressure oxygen systems shall be used.

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No lubricant shall be applied in any area that will come into direct contact with Oxygen during normal use.

### **3.3 Assembly:**

- 3.3.1 Although the Oxygen Booster is inspected prior to shipping, it could be damaged during shipping. Therefore, it should be carefully unpacked and placed on a clean level surface for inspection.
- 3.3.2 The bottom of the booster is furnished with three ¼-20 by ½” deep tapped holes for mounting to a bracket or cart.
- 3.3.2 Customer installed parts (Oxygen components must be in accordance with NFPA-53):
  - 1. Two stainless steel/PTFE -4 hoses rated to 3,000 psi working pressure.
  - 2. Aircraft pressurization attachment fitting.
  - 3. Coalescing inlet air filter rated to 125 psi at 40 SCFM (Shipped loose)
  - 4. Oxygen Shut-off valve (mounted away from the booster)
- 3.3.3 Remove protective caps from “O<sub>2</sub> in” and “O<sub>2</sub> out” fittings.
- 3.3.4 With oxygen supply regulator closed, connect both -4 Hoses to the Oxygen in and out fittings on the booster.

**\*\* Caution \*\***

The customer supplied oxygen supply must be complete with shutoff valves, pressure gauges, pressure regulators and Stratoflex® -4 hose. All components must be rated for 3,000 psi working pressure and conform to NFPA-53 Guidelines.

- 3.3.5 Attach aircraft pressurization fitting to the far end of the -4 hose coming from the oxygen out hose.
- 3.3.6 Check all components for integrity. If all is well, you are ready to use the OB 30.

### **4.0 Operation:**

**\*\* Warning \*\***

Always inspect unit before use, damaged, contaminated or oily equipment should never be used.

### **4.1 Preparation for Operation**

- 4.1.1 Be sure all valves and controls are in the closed position.



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- 4.1.2 Decrease item 2 (fig 1a) inlet pressure regulator to minimum pressure setting.
- 4.1.3 Inspect all connections for contaminants before installation and tightening. Remove any foreign materials. Be sure all oxygen components are clean per SAE specifications and comply with NFPA-53 publication: “Oxygen System Recommended Practices and Materials”.
- 4.1.4 Connect the output of the gas supply bottle to the gas inlet connection of the Oxygen Booster (See figure 1a).
- 4.1.5 Decrease the gas supply bottle or shop supply gas regulator to the minimum pressure setting.
- 4.1.6 Connect the oxygen fill line loosely to the aircraft and purge line by SLOWLY cracking open gas supply bottle shutoff valve and adjusting the supply bottle pressure to a low flow setting.

**\*\* Warning \*\***

Be sure fill line is secured prior to purging the unit. This will prevent the hose from whipping about if too much O<sub>2</sub> is allowed to flow through the unit.

- 4.1.7 Tighten the O<sub>2</sub> fill line connection at the aircraft.
- 4.1.8 The high pressure O<sub>2</sub>. Booster is ready to charge an aircraft O<sub>2</sub> System.

## **4.2 Charging the Aircraft Oxygen System**

- 4.2.1 After the oxygen booster has been properly connected, slowly and fully open the O<sub>2</sub> supply bottle shut off valve. Adjust the gas supply bottle pressure regulator to the required Aircraft O<sub>2</sub> system pressure. Wait until the bottle pressure and the aircraft system pressure are equal.
- 4.2.2 **Note: If the bottle pressure is lower than the required aircraft oxygen system pressure, be careful not to over adjust the supply bottle pressure regulator once the maximum supply bottle pressure has been achieved. Increasing the oxygen pressure regulator beyond this point will not increase output, and may damage the regulator spring.**
- 4.2.3 Adjust the booster’s air pressure regulator to attain a pressure slightly lower than the final required O<sub>2</sub> pressure (divide this oxygen pressure by 30 to find the initially required regulated air pressure setting). Example: 2,200 psi final pressure minus 100 psi equals 2,100 psi, divided by 30 equals 70 psi regulated air pressure.

**Note: If the ambient temperature at the time of oxygen system recharging is above or below 70 degrees Farenheite, refer to Table 1 to determine the correct final pressure.**

- 4.2.4 Turn on the booster’s “pump run” toggle switch to “on” to further pressurize aircraft oxygen system. Note: Because the Oxygen Booster pump operates at a theoretical ratio, actual boosted

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oxygen pressures may vary slightly due to different physical conditions. The oxygen outlet pressure gauge will show the aircraft system pressure developed by the oxygen booster. When the set pressure that has been achieved (i.e.: booster stops pumping), increase the pressure of the air regulator to obtain the required final aircraft system pressure. Turn off the booster's air toggle switch when the booster has stopped running.

## **4.3 Disconnecting Oxygen Booster From Aircraft**

- 4.3.1 Close the oxygen bottle shut off valve.
- 4.3.2 Decrease both the air inlet pressure regulator and the oxygen supply bottle pressure regulator to their respective minimum settings.
- 4.3.3 Disconnect booster's air (or nitrogen) supply line.
- 4.3.4 Slowly loosen, bleed down, and disconnect oxygen hose at the aircraft. Disconnect the supply hose.
- 4.3.5 Cap both hoses to prevent contamination.

## **5.0 Maintenance**

**\*\* Warning \*\***

**Maintenance should be undertaken by qualified personnel only.**

The operation, maintenance and troubleshooting of this high pressure Oxygen Booster system requires practices and procedures which ensure personal operator safety and the safety of others. Therefore, this equipment is to be operated and maintained only by qualified persons in accordance with this manual and all applicable codes.

## **5.1 General**

- 5.1.1 All maintenance performed on this high pressure Oxygen Booster shall be conducted in accordance with all applicable codes governing the handling, operation, installation and trouble shooting for high pressure gas operation. Maintenance is to only be done by qualified persons.
- 5.1.2 All maintenance personnel must be familiar with the cautions and warnings associated with high pressure gas systems as outlined in sections 3.1 and 3.2 of this manual prior to performing any maintenance on this unit.

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- 5.1.3 Air Spool Lubrication. **The only preventative maintenance task for the pump is to re-grease the air spool assembly every 6 months regardless of usage rate. Christo-Lube MCG-111 grease should be used for this task. Refer to assembly drawing in the Drawings section of this manual when performing this task.**
- 5.1.4 The oxygen pressure gauges on this unit should be inspected and calibrated annually to  $\pm 3/2/3$  % of span (ASME B40.1 Grade B), to maintain and ensure accuracy.

## 5.2 Storage

- 5.2.1 Store the unit in a clean, dry and secure area when not in use.
- 5.2.2 Be sure all hoses are capped and the unit is covered with a lint free covering for the duration of unit storage to ensure complete O<sub>2</sub> system cleanliness for future aircraft system recharging.

## 5.3 Recertification

- 5.3.1 The OB-30 should be regularly inspected especially after periods of non-use. If after conducting your OB-30 inspection you believe it may have been compromised with suspect components or sub optimal operational or maintenance practices it can be returned to for a complete inspection, cleaning and recertification. Recertification is also strongly recommended for any OB-30 that has been in service for two years or longer since its last factory certification.

## 6.0 Oxygen System Specification Information

For more information concerning specific SAE Aircraft Oxygen Equipment Specification, contact:

Society of Automotive Engineers  
400 Commonwealth Drive  
Warrendale , PA 15096-0001 USA  
Tel: +1 724 776 4841

For more information concerning specific Oxygen System Recommended Practices and Materials contact:

National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169-7471 USA  
Tel: +1 617 770-3000

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## 7.0 Trouble Shooting:

**\*\* Warning \*\***

Troubleshooting should be undertaken by qualified personnel only.

### Troubleshooting Chart

Symptom	Probable Cause	Remedy
Pump will not cycle (Only regulated oxygen Pressure at out put.)	No air supply to pump  Pump regulator set too low  Four way air reciprocating valve spool stuck at mid position	Look for and fix  Increase setting  Disconnect/ reconnect air supply (resets air spool to end position) If spool still sticks, manually push spool to far end with probe through hole in "spool stop cap". If stuck or requires excessive force, disassemble air valve assembly. Inspect for contamination or mechanical bind. Repair or replace, lubricate seals with Christo-Lube MCG-111 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 down stream high pressure circuit  Contaminated or stuck open check valve cartridge  Internal leak in pump	Look for and correct  Clean or replace  Check all dynamic and static seals and gaskets

For further assistance, call Interface Devices at 203-878-4648.

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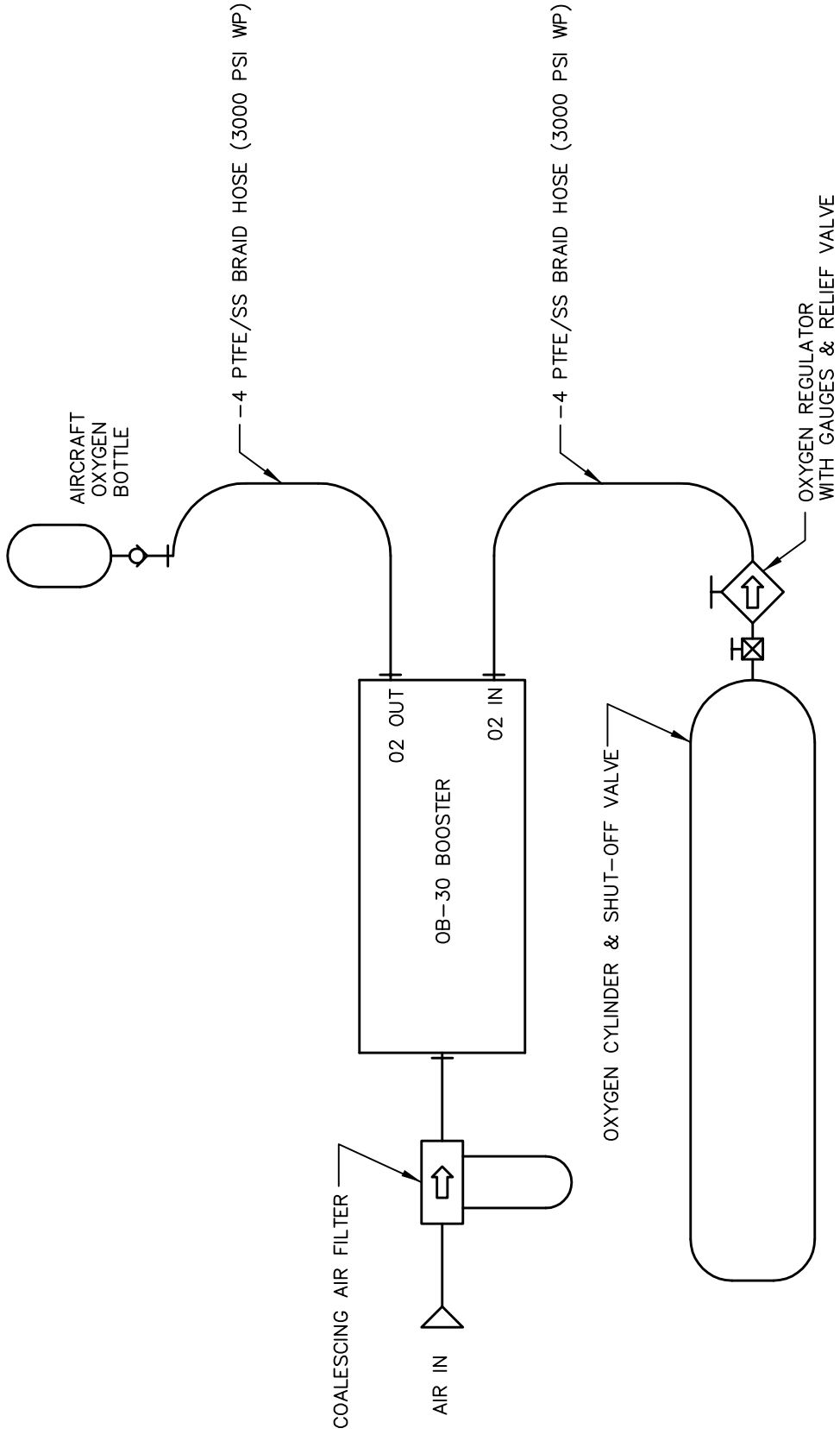
Table 1.  
Temperature/Pressure Correction

At Temperature Degrees F	Fill to Working Pressure x Figure Below
110°	1.1000
105°	1.0875
100°	1.0750
95°	1.0625
90°	1.0500
85°	1.0375
80°	1.0250
75°	1.0125
70°	1.0000
65°	0.9875
60°	0.9750
55°	0.9625
50°	0.9500
45°	0.9375
40°	0.9250

**Example:** Ambient Temp. = 90° F, Working pressure is 1800 PSIG

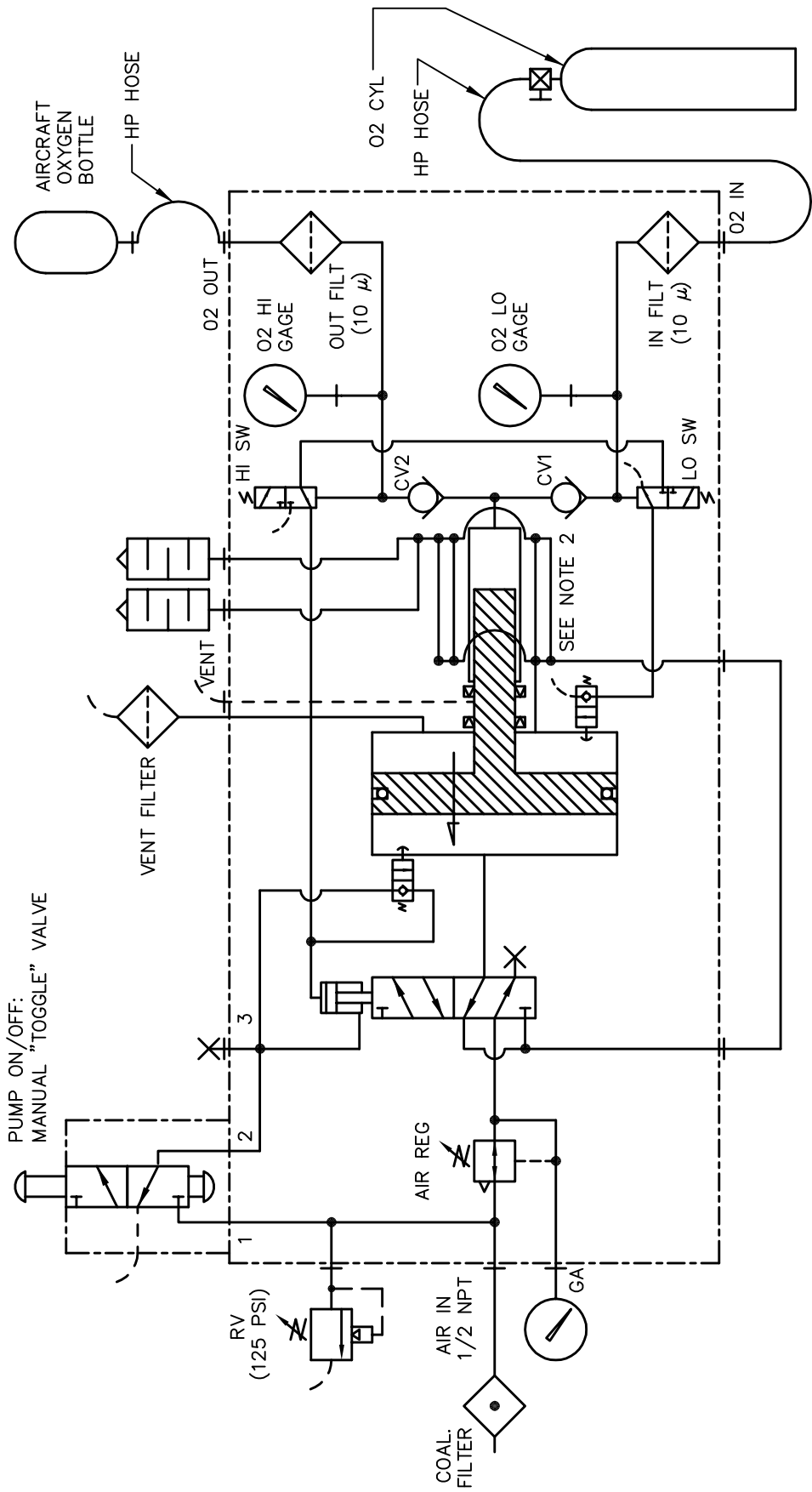
Charge Pressure = 1800 PSIG \* 1.0500 = 1890 PSIG

REV	DESCRIPTION	BY	DATE
-	-	-	-



		INTERFACE DEVICES, INC. 230 DEPOT ROAD MILFORD, CT 06460	
SCALE: N/A	TITLE:	BLOCK DIAGRAM	
DWN BY: TWH		PNEUMATIC & OXYGEN SETUP	
DATE: 3.31.05	REF:		
SHT: 1 OF: 1	DWG NO:	BD-OB30	REV:

REV	DESCRIPTION	BY	DATE
A	ADDED OPTIONAL COALESCING FILTER	WNI	9/29/06
B	FILTER RATING WAS 5u	WNI	2/21/07

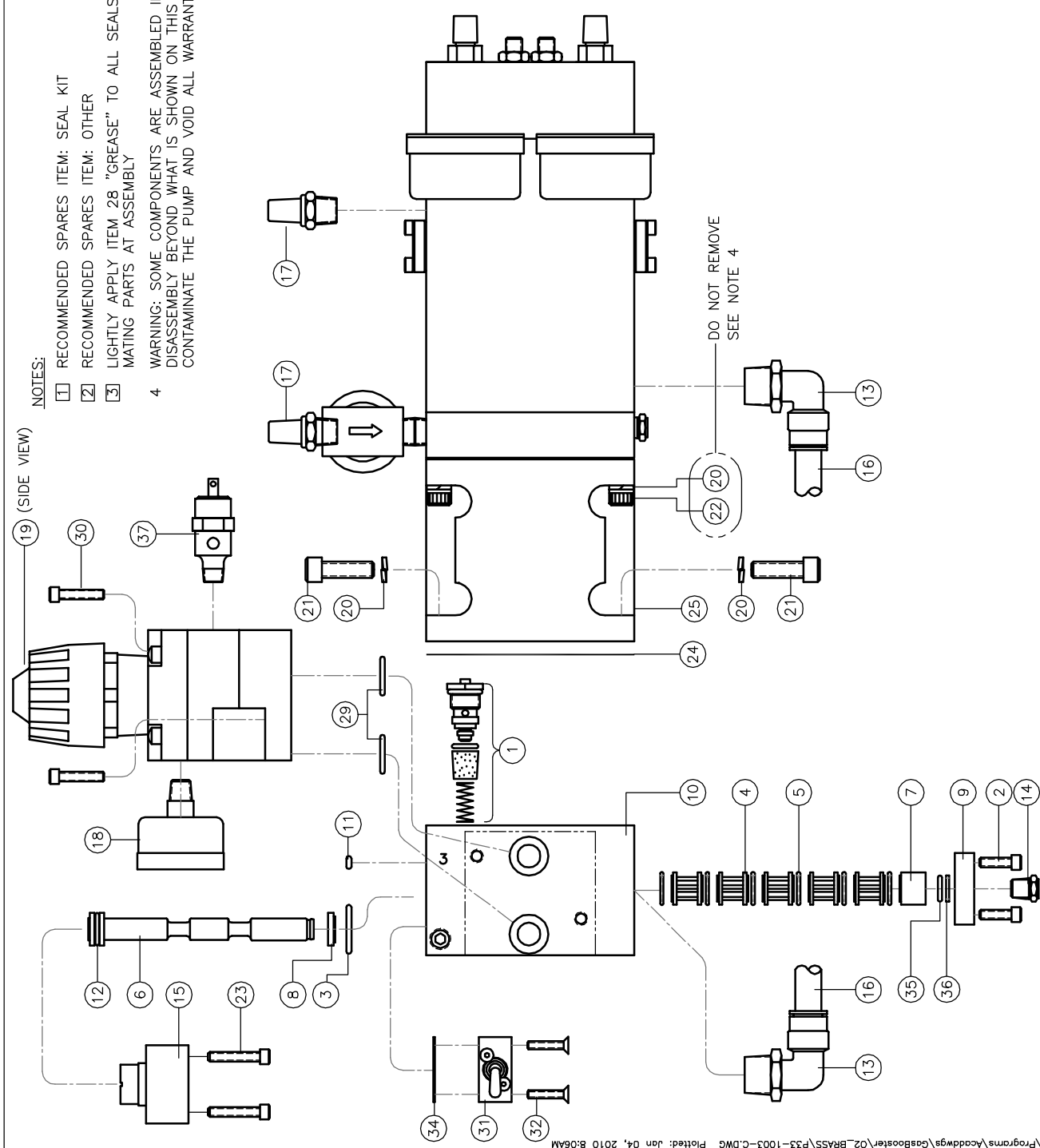


		INTERFACE DEVICES, INC. 230 DEPOT ROAD MILFORD, CT 06460
SCALE: FULL	TITLE: PNEUMATIC SCHEMATIC, 33:1 SA O2 BOOSTER	
DWN BY: TWH	REF:	
DATE: 3/14/01	DWG NO: P33-4002	
SHT: 1 OF: 1	REV: B	

- NOTES:
- "LO SW" OPENS ABOVE 250 PSI OXYGEN-IN PRESSURE (PUMP ON)
  - "HI SW" CLOSSES ABOVE 2200 PSI OXYGEN-OUT PRESSURE (PUMP OFF)
  - COLD EXHAUST AIR IS ROUTED AROUND HI PRESSURE OXYGEN BORE FOR COOLING
- SOME COMPONENTS SHOWN ON THIS SCHEMATIC ARE OPTIONAL AND SPECIFIED SEPARATELY

REV	DESCRIPTION	BY	DATE
A	28 WAS "WATERPROOF GREASE"; PICTURE CHANGES; ADDED ITEM 93	WNI 10/11/05	
B	ITEM 76 QTY WAS 2; ADDED ITEM 94	WNI 11/21/06	
C	DELETED ITEM 91 (11633); ITEM 90 MATL. WAS VITON, NOW PTFE	WNI 12/31/08	

- NOTES:
- 1 RECOMMENDED SPARES ITEM: SEAL KIT
  - 2 RECOMMENDED SPARES ITEM: OTHER
  - 3 LIGHTLY APPLY ITEM 28 "GREASE" TO ALL SEALS AND MATING PARTS AT ASSEMBLY
  - 4 WARNING: SOME COMPONENTS ARE ASSEMBLED IN A "CLEAN" ROOM. DISASSEMBLY BEYOND WHAT IS SHOWN ON THIS SHEET WILL CONTAMINATE THE PUMP AND VOID ALL WARRANTIES



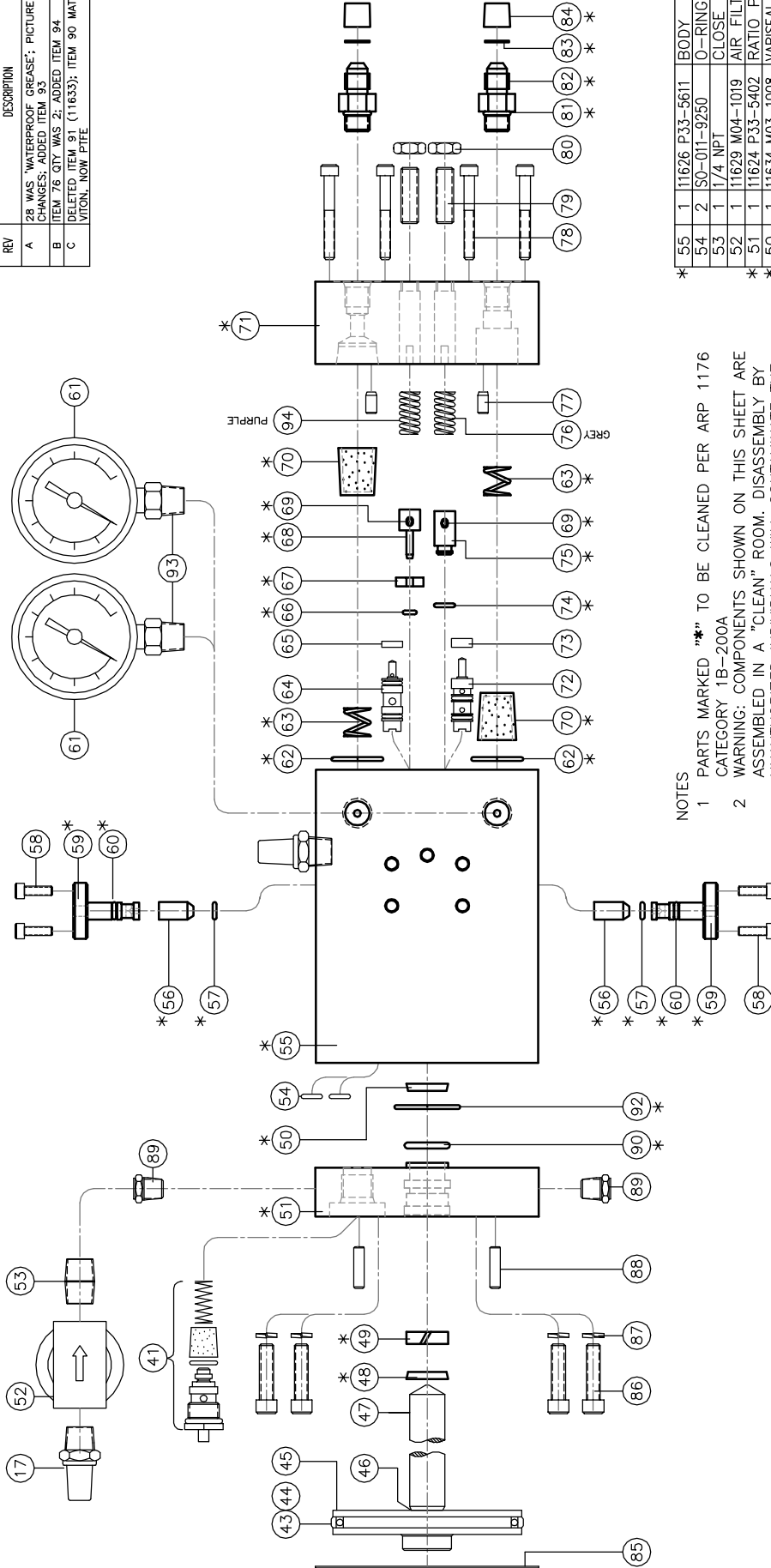
40			
39			
38			
37	1	11236 M04-1006	RELIEF VALVE, 1/8 NPT
36	1	-012	TEFLON BACKUP RING
35	1	SO-012 6865	O-RING
34	1	10333 V04-5001	GASKET, TOGGLE VLV
33			
32	2	M4 x 20	SCREW, FLAT HD
31	1	10743 V04-1001	VALVE, 3-W, TOGGLE
30	2	1/4-20 x .88	SCREW, SOC HD, CAP
29	2	SO-016B7	O-RING
28	A/R	MCG111	CHRISTO-LUBE GREASE
27			
26			
25	1	10111 P12-5202	BODY, AIR CYLINDER
24	1	10334 P00-5205	GASKET, AIR BODY
23	2	10-24 x 1.00	SCREW, SOC HD, CAP
22	4	5/16-18 x 2.00	SCREW, SOC HD, CAP
21	4	5/16-18 x 1.00	SCREW, SOC HD, CAP
20	8	5/16 HI COLLAR	LOCK WASHER
19	1	10015 P12-1202	AIR REG ASSY
18	1	10342	AIR GAUGE (0-160 PSI)
17	3	10429	MUFFLER, 1/4 NPT
16	5	NYLON N2	TUBING, Ø.50
15	1	10298 P00-5207	PILOT CAP
14	1	10264	BREATHER, 1/8 NPT
13	2	6520-08-08	FITTING
12	1	SO-111CN7	O-RING
11	1	SO-006CN7	O-RING
10	1	10004 P12-5201	AIR CAP HOUSING
9	1	10299 P00-5208	SPOOL CAP
8	1	10271 P00-5212	BUSHING, SHORT
7	1	10269 P00-5210	BUSHING, LONG
6	1	10942 P33-5201	AIR SPOOL
5	6	10629	TFE SEAL
4	5	10273 P00-5209	CAGE
3	1	SO-019B7	O-RING
2	2	10-24 x .62	SCREW, SOC HD, CAP
1	1	10017 V04-1005	2-WAY AIR VLV ASSY

ITEM	QTY	PART NUMBER	DESCRIPTION
INTERFACE DEVICES, INC. 230 DEPOT ROAD MILFORD, CT 06460			
SCALE:	1/2	TITLE:	O2 BOOSTER,
DWG. BY:	WNI	BILL OF MATERIALS	
DATE:	8/15/05	REF:	UNBALANCED AIR SPOOL
SHEET:	1 OF 2	DWG. NO.:	P.33-1003
			REF: C

ASSEMBLY PART NUMBER: 11631



REV	DESCRIPTION	BY	DATE
A	28 WAS WATERPROOF GREASE; PICTURE CHANGES; ADDED ITEM 93	WNI	10/11/05
B	ITEM 76 QTY WAS 2; ADDED ITEM 94	WNI	11/21/06
C	DELETED ITEM 91 (11633); ITEM 90 MATL. WAS VITON, NOW PTFE	WNI	12/31/08



NOTES

- 1 PARTS MARKED "\*" TO BE CLEANED PER ARP 1176 CATEGORY 1B-200A
- 2 WARNING: COMPONENTS SHOWN ON THIS SHEET ARE ASSEMBLED IN A "CLEAN" ROOM. DISASSEMBLY BY UNAUTHORIZED INDIVIDUALS WILL CONTAMINATE THE PUMP AND VOID ALL WARRANTIES

ITEM	QTY	PART NUMBER	DESCRIPTION
55	1	11626 P33-5611	BODY
54	2	SO-011-9250	O-RING, BUINA
53	1	1/4 NPT	CLOSE NIPPLE, BRASS
52	1	11629 M04-1019	AIR FILTER
51	1	11624 P33-5402	RATIO PLATE
50	1	11634 M03-1008	VARISEAL (SLANT COIL)
49	1	11637 M03-1031	ROD BEARING
48	1	10886 M03-1008	VARISEAL (CANTILEVER)
47	1	11625 P33-5502	PISTON ROD
46	1	SO-902B7	O-RING
45	1	11167 P09-5201	AIR PISTON, -2 SAE
44	1	10377	GLYDE RING
43	1	SO-233B7	O-RING
42	1	5/16-24	FLEXLOC JAM NUT
41	1	11635 V04-1010	2-WAY AIR VLV ASSY
40	1	11635 V04-1010	2-WAY AIR VLV ASSY
39	1	11635 V04-1010	2-WAY AIR VLV ASSY
38	1	11635 V04-1010	2-WAY AIR VLV ASSY
37	1	11635 V04-1010	2-WAY AIR VLV ASSY
36	1	11635 V04-1010	2-WAY AIR VLV ASSY
35	1	11635 V04-1010	2-WAY AIR VLV ASSY
34	1	11635 V04-1010	2-WAY AIR VLV ASSY
33	1	11635 V04-1010	2-WAY AIR VLV ASSY
32	1	11635 V04-1010	2-WAY AIR VLV ASSY
31	1	11635 V04-1010	2-WAY AIR VLV ASSY
30	1	11635 V04-1010	2-WAY AIR VLV ASSY
29	1	11635 V04-1010	2-WAY AIR VLV ASSY
28	1	11635 V04-1010	2-WAY AIR VLV ASSY
27	1	11635 V04-1010	2-WAY AIR VLV ASSY
26	1	11635 V04-1010	2-WAY AIR VLV ASSY
25	1	11635 V04-1010	2-WAY AIR VLV ASSY
24	1	11635 V04-1010	2-WAY AIR VLV ASSY
23	1	11635 V04-1010	2-WAY AIR VLV ASSY
22	1	11635 V04-1010	2-WAY AIR VLV ASSY
21	1	11635 V04-1010	2-WAY AIR VLV ASSY
20	1	11635 V04-1010	2-WAY AIR VLV ASSY
19	1	11635 V04-1010	2-WAY AIR VLV ASSY
18	1	11635 V04-1010	2-WAY AIR VLV ASSY
17	1	11635 V04-1010	2-WAY AIR VLV ASSY
16	1	11635 V04-1010	2-WAY AIR VLV ASSY
15	1	11635 V04-1010	2-WAY AIR VLV ASSY
14	1	11635 V04-1010	2-WAY AIR VLV ASSY
13	1	11635 V04-1010	2-WAY AIR VLV ASSY
12	1	11635 V04-1010	2-WAY AIR VLV ASSY
11	1	11635 V04-1010	2-WAY AIR VLV ASSY
10	1	11635 V04-1010	2-WAY AIR VLV ASSY
9	1	11635 V04-1010	2-WAY AIR VLV ASSY
8	1	11635 V04-1010	2-WAY AIR VLV ASSY
7	1	11635 V04-1010	2-WAY AIR VLV ASSY
6	1	11635 V04-1010	2-WAY AIR VLV ASSY
5	1	11635 V04-1010	2-WAY AIR VLV ASSY
4	1	11635 V04-1010	2-WAY AIR VLV ASSY
3	1	11635 V04-1010	2-WAY AIR VLV ASSY
2	1	11635 V04-1010	2-WAY AIR VLV ASSY
1	1	11635 V04-1010	2-WAY AIR VLV ASSY

ITEM	QTY	PART NUMBER	DESCRIPTION
70	2	11592 M04-1018	FILTER, 10m
69	2	Ø3/32 x .88	SPRING PIN, SS
68	1	10488 P33-5606	HI PISTON
67	1	10609 P33-5610	RETAINER
66	1	SO-006V7	O-RING, VITON
65	1	10608 P33-5607	RETAINER (.109")
64	1	10451	VALVE, 3-W, NC
63	2	11630 M01-1001	SPRING, BRASS
62	2	SO-019V7	O-RING, VITON
61	2	10348 M04-1005	GAUGE, 1/4NPT, BRASS, 3K
60	2	SO-008V7	O-RING, VITON
59	2	11628 P33-5613	PLUG, CV RETAINER
58	8	8-36 NF x .75	SHCS
57	2	SO-008V7	O-RING, VITON
56	2	11632 M04-1002	CHK VALVE (2201D-18-5)

ITEM	QTY	PART NUMBER	DESCRIPTION
85	1	10334 P00-5205	GASKET, AIR BODY
84	2	ASC-4	CAP
83	2	Ø4.38 x .062	TEFLON DISK
82	2	4F50X-SS	ST THD CONNECTOR
81	2	SO-904V9	O-RING, VITON
80	2	5/16-24	HEX JAM NUT, SS
79	2	5/16-24 x 1.00	SET SCR, SS
78	13	10-24 x 1.50	SHCS, SS
77	2	3/16Ø x .38	DOWEL PIN, SS
76	1	11736 M01-1002	SPRING, MW (GREY)
75	1	10529 P33-5608	LO PISTON
74	1	SO-010V7	O-RING, VITON
73	1	10610 P33-5609	RETAINER
72	1	10693	VALVE, 3-W, NO
71	1	11627 P33-5612	MANIFOLD

ITEM	QTY	PART NUMBER	DESCRIPTION
94	1	11737 M01-1002	SPRING, MW (PURPLE)
93	A/R	MIL-T-27730A	TEFLON TAPE
92	1	SO-023V7	O-RING, VITON
90	1	SO-114PTE	O-RING, TEFLON
89	2	10264	BREATHER, 1/8 NPT
88	2	Ø3/16 x .75	DOWEL PIN, SS
87	4	1/4 HI COLLAR	LOCK WASHER, SS
86	4	1/4-20 x 1.00	SHCS, SS

SCALE: 1/2  
 TITLE: O2 BOOSTER,  
 BILL OF MATERIALS  
 DWN BY: WNI  
 DATE: 8/15/05  
 REF: UNBALANCED AIR SPOOL  
 SHF: 2 OF: 2  
 DWG NO: P.33-1003  
 REF: C