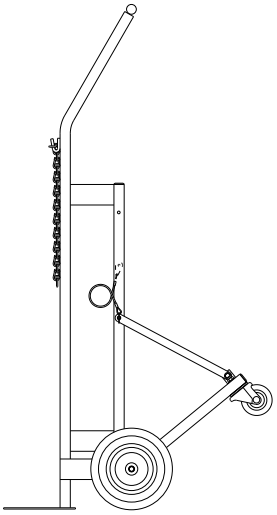
Operation & Service Manual



Model: 20-4518-9000
Low Pressure
Oxygen Test Cart

03/2011 – Rev. 01

Includes Illustrated Parts List

For Spare Parts, Operations & Service Manuals or Service Needs
Scan the QR code or visit Tronair.com/aftermarket

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REVISION	DATE	TEXT AFFECTED
01	03/2011	Original release

Model: 20-4518-9000
Low Pressure Oxygen Test Cart

This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., its suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.

1.0 GENERAL DESCRIPTION

The Tronair Low Pressure Oxygen Test Cart delivers low pressure regulated gas from a single supply source to test the aircraft oxygen system.

2.0 SPECIFICATIONS

Cart:

Height:	49-3/16 in (48.7 cm)
Length:	26-3/16 in (66.5 cm)
Width:	17-3/8 in (44 cm)
Weight:	62 lbs (28 kg)
Finish:	Powder Coat

Regulator:

Length	6.25 in (15.9 cm)	
Width	9.25 in (23.5 cm)	
Height	5.5 in (14 cm)	
Weight:	10 lbs (4.5 kg)	
Maximum Pressures:	Inlet:	2500 psi (172 bar)
	Outlet:	200 psi (13.8 bar)
Bottle Connections:	CGA-580 fittings	
Output Hoses:	#4 x 15 foot (4.6 m) with JIC fittings	

Temperature Range:

- 0º to 200ºF (17.7º to 93.3º C)

3.0 FEATURES

- Easy loading
- Use with all standard 9" diameter bottles

4.0 PREPARATION FOR USE

This cart is shipped fully assembled and is ready for supply bottle installation.

CAUTION!

Only use 9 in (22.9 cm) diameter bottles for which this unit was designed.

The low pressure regulator system has been thoroughly cleaned, inspected, and tested prior to packaging and shipment. After opening the shipping container and removing the regulator, inspect it thoroughly for shipping damage.

The equipment should be kept clean, dry, and free from contaminants. It is imperative that all installation, inspection, maintenance, testing, and servicing of system components be done by trained and qualified personnel using approved procedures.

5.0 SAFETY

The operation, maintenance, and trouble shooting of this low pressure regulator requires practices and procedures which ensure personal 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.

Safety instructions specifically pertaining to this regulator appear throughout this manual highlighted by the signal words **WARNING** and **CAUTION** which identify different levels of hazard.
Reference Figure 1 - Component Identification.

WARNING!

Denote practices which if not carefully followed, could result in serious injury and/or death

CAUTION!

Denote practices which if not carefully followed, could result in minor personal injury or damage to this equipment.

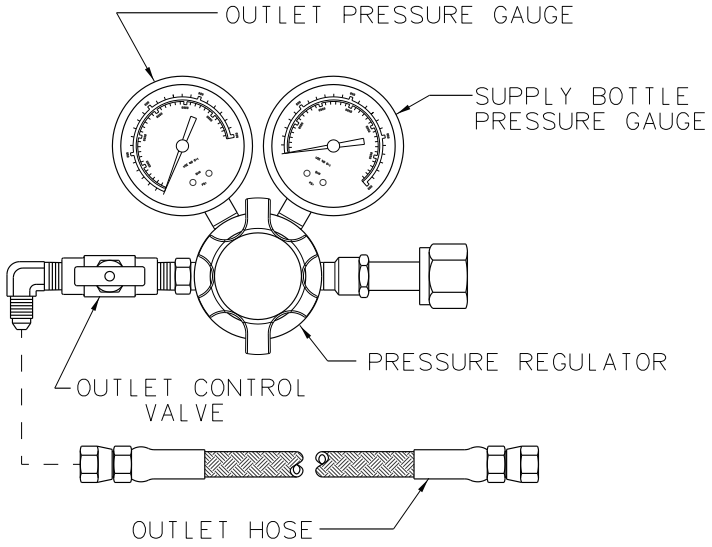


FIGURE 1 - Component Identification

WARNING!

TO AVOID SERIOUS INJURY OR DEATH OBSERVE THE FOLLOWING:

1. **All components used in the system must be clean, dry, and free of all contamination per SAE SPEC AIR 1176.**
2. **DO NOT exceed 2500 psi (172 bar) inlet pressure.**
3. **Servicing and maintenance of the system should only be done by trained and qualified personnel using approved procedures.**
4. **It is mandatory that this instruction manual be read and understood by all persons operating this unit.**

General: Information presented in this manual pertains to equipment specifications, installation, operation, maintenance, and trouble shooting which should be read, understood, and followed for the safe and effective use of this equipment.

Training: Read this entire manual prior to operation of the unit. All personnel using low pressure regulator should understand and follow this manual and receive training. Tronair encourages our customers to call Tronair to discuss any operating or testing requirements at: 419-866-6301 or 800-426-6301.

5.0 SAFETY *(continued)*

5.1 GENERAL SAFETY REQUIREMENTS

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.

1. Always ground the system to be serviced and the servicing equipment before connecting the filler adapter.
2. Close the supply bottle manual shutoff valve.
3. Ensure that all aircraft electrical power is off. Do not operate electrical switches, or connect or disconnect ground power generators during the charging operation.
4. Do not service the system if fueling or other flammable fluid servicing is in process.
5. Do not charge the system too fast. Rapid charging can create a dangerous overheating condition.

6.0 OPERATION

WARNING!

If there are any differences between the following instructions and the aircraft If maintenance manual, the aircraft maintenance manual will take precedence.

1. Close outlet control valve and back off pressure regulator.
2. Connect outlet hose loosely to aircraft service fitting.

WARNING!

Be sure outlet hose is engaged sufficiently prior to purging in order to prevent disengagement and whipping of hose end.

3. Slowly open the bottle control valve and adjust the pressure regulator to approximately 75 psi (5.2 bar).
4. Slowly open outlet control valve sufficiently to purge hose. Close outlet control valve.
5. Securely tighten outlet hose fitting at aircraft.
6. Adjust pressure regulator to desired pressure.
7. Open outlet control valve to service aircraft in accordance with aircraft maintenance recommendations.
8. After aircraft service completion, close supply bottle shutoff valve.
9. Close outlet control valve and back off pressure regulator.
10. Bleed down outlet hose by slowly loosening outlet hose fitting at aircraft. Disconnect and properly store outlet hose.

7.0 MAINTENANCE

All maintenance performed on this unit shall be conducted in accordance with all applicable codes governing the handling, operation, installation and trouble shooting for low pressure gas operation. Maintenance is only to be done by qualified persons.

- Inspect for broken or worn components.
- The gauges on this unit should be inspected and calibrated annually to ANSI grade B accuracy, to maintain and ensure accuracy.
- Inspect output hose prior to each use for signs of cracking or kinking, replace as necessary.

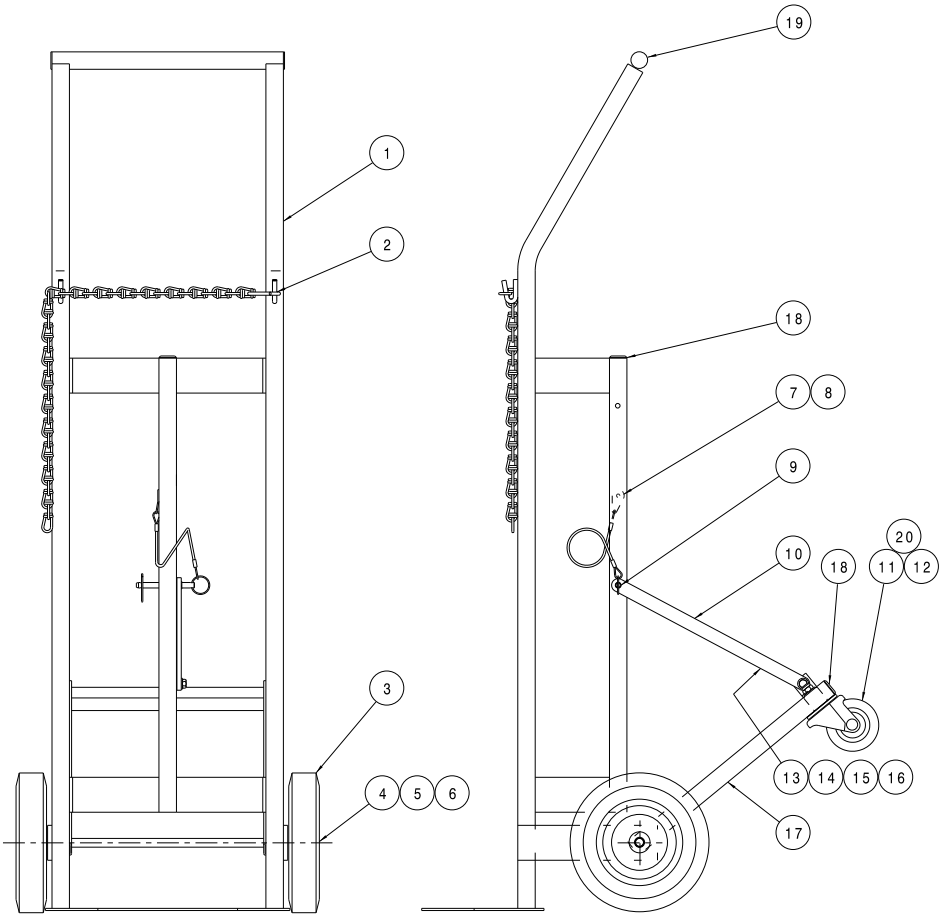
8.0 STORAGE

Store the unit in a clean, dry area when not in use.

Be sure that all openings are capped and the unit is covered with a lint free covering for the duration of the unit storage to ensure complete oxygen system cleanliness for future aircraft system recharging.

Parts List

****When ordering replacement parts/kits, please specify model, serial number and color of your unit.****



ITEM	PART NUMBER	DESCRIPTION	QTY
1	Z-7571-01	Weldment, Cart Frame	1
2	H-1024-01*30.0	Chain, Double Loop 2/0	1
3	U-1001-01	Wheel, 8”	2
4	G-1250-1090N	Flatwasher, ½ narrow	6
5	R-1990	Rod, Axle	1
6	G-1301-02	Pin, Cotter 1/8 x 1” long	2
7	H-1026*12.0	Assembly, Lanyard	1
8	G-1351-04	Rivet, 1/8 Open End Steel	1
9	G-1449-22	Pin, Shear	1
10	J-3363-01	Plate, Adjustment	1
11	G-1203-1070	Elastic, Jamnut 3/8 - 16	2
12	U-1104	Caster, Swivwel	2
13	G-1100-105503	Bolt, Hex Head Grade 5, ¼ - 28 x ¾ " long	1
14	G-1250-1050N	Flatwasher, ¼ narrow	1
15	TR375-05*00.28	TBG, SST 0.38 OD x 0.49 W	1
16	G-1203-1055	Elastic, Jamnut ¼ - 28	4
17	Z-5424-01	Weldment, Caster Frame	1
18	H-1143	Cap, End	3
19	H-2589	Cap, Tube End	2
20	G-1250-1070N	Flatwasher, 3/8 narrow	2

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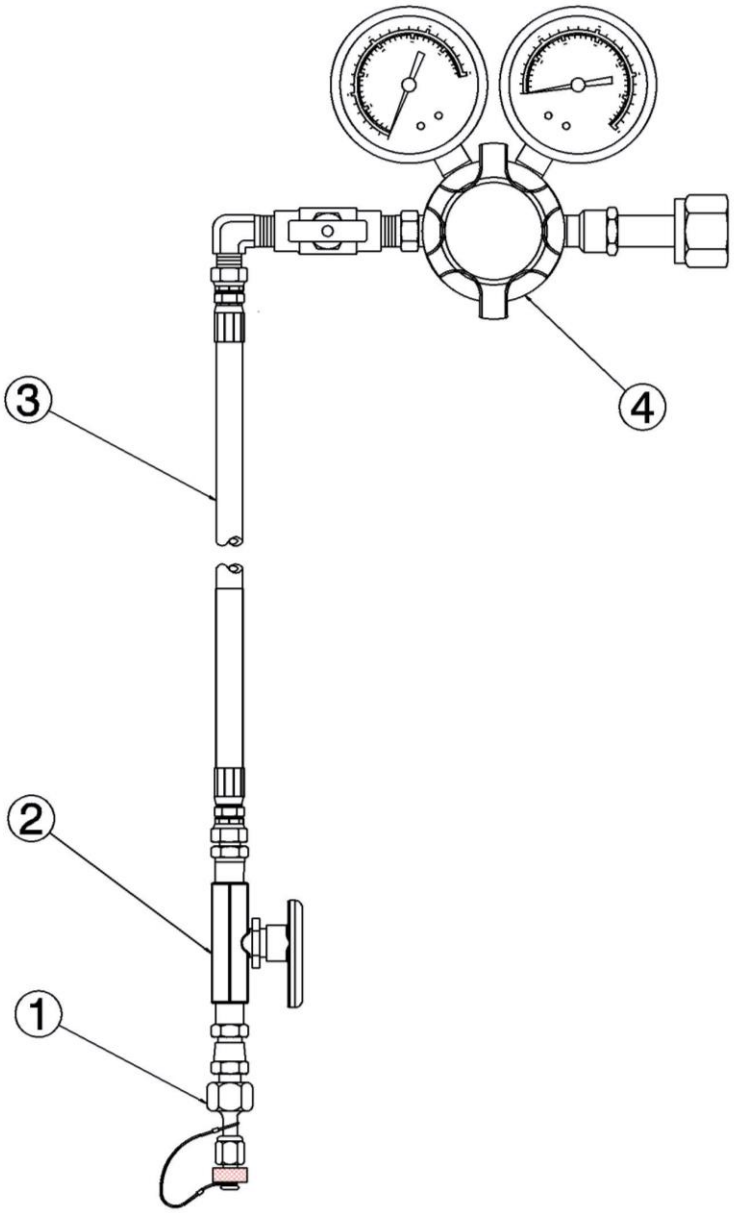

ITEM	PART NUMBER	DESCRIPTION	QTY
1	PC-1006	Connector, Oxygen Fill	1
2	HC-2243	Valve, Shut-Off	1
3	TF-1043-14*180.0	Assembly, Hose	1
4	PC-1148	Regulator, Low Pressure	1