



INSTALLATION, OPERATION & MAINTENANCE MANUAL NITROGEN POWER RESERVE UNITS



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1 Introduction

1.1 *Company Background*

Automation Technology was founded in 1995 as a manufacturer of pneumatic and hydraulic valve actuators. With products in a wide range of applications such as petrochemical, pipelines, refineries, pulp and paper, agriculture, pharmaceutical, municipalities, mining, power plants and marine transportation, ATI has succeeded in becoming a global leader in automation technology.

1.2 *Scope*

This manual is intended to assist those who are involved with the installation, operation and maintenance of the ATI Nitrogen Power Reserve Units. This manual should be reviewed and thoroughly understood PRIOR to installing, operating or providing maintenance on the device. For questions or clarifications, contact ATI at +1 (713) 934-0171, or US Toll Free (800) 924-8037.

1.3 *Applicable Product*

This manual is strictly intended for the ATI Nitrogen Power Reserve Units. Failure to read and comply with installation, operation and maintenance instructions may result in bodily injury or equipment damage and will void the manufacturer's warranty.



2 Warning Statement

THIS MANUAL DOES NOT CLAIM TO ADDRESS ALL SAFETY FACTORS ASSOCIATED WITH ATI PRODUCTS. IT IS THE RESPONSIBILITY OF THE USER TO ENSURE PROPER SAFETY. ALWAYS TAKE NECESSARY PRECAUTIONS AND UTILIZE PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) WHEN DEALING WITH COMPRESSED GAS, PRESSURIZED HYDRAULIC FLUID, PINCH POINTS, AND ELECTRICITY.

VALVE, ACTUATOR, AND OTHER SKID-MOUNTED EQUIPMENT MUST BE RIGGED AND LIFTED SEPARATELY, NEVER AT THE SAME TIME. BEFORE RIGGING, ENSURE THE CRANE/HOIST/RIGGING HARDWARE LIFTING CAPACITY CAN SAFELY ACCOMMODATE THE DESIRED LOAD.

ACTUATORS AND VALVES COME INTO CONTACT WITH CAUSTIC GASES AND FLUIDS IN MANY APPLICATIONS. AS A RESULT, ALL TOXIC OR FLAMMABLE FUMES MUST BE VENTED AND LIQUIDS MOVED TO A SAFE LOCATION. THIS WILL HELP PREVENT PERSONNEL INJURY. THE INSTANTANEOUS RELEASE OF PRESSURE AND VENTING CAN PRODUCE NOISES DUE TO THE DISCHARGE AT SONIC VELOCITY. IT IS THE USER'S RESPONSIBILITY TO UTILIZE APPROPRIATE PROTECTION AGAINST HEARING DAMAGE TO ANY AND ALL NEAR THE ACTUATOR.

WARNING LABELS AND TAGS LOCATED ON THE PRODUCTS ARE MADE OF METAL FOILS THAT VARY IN THICKNESS. BECAUSE THE METAL TAGS HAVE SHARP EDGES, PERSONNEL INSTALLING, HANDLING, OR WORKING AROUND THE TAGS SHOULD PROTECT AGAINST CUTS OR INJURY.

PROPER INSTALLATION OF THE PRODUCT IS CRITICAL TO PERFORMANCE AND SAFETY. DUE TO THE MANY VARIATIONS OF ACTUATORS, VALVES, AND RELATED CONTROLS, THE FOLLOWING ARE GENERAL INSTRUCTIONS. EACH TECHNICIAN FOLLOWING THESE INSTRUCTIONS MUST BE COMPETENT, TRAINED, AND HAVE A WORKING KNOWLEDGE OF VALVES, VALVE ACTUATORS AND ACTUATOR CONTROLS.

FOLLOWING THE ABOVE INSTRUCTIONS WILL HELP IN PREVENTING PERSONAL INJURY, PROPERTY DAMAGE, AND DAMAGE TO THE PRODUCT.



3 Handling & Storage

3.1 Receiving the Product

Proper care and precautions should be taken when unloading and handling the product, especially when rigging and lifting. Before attempting any lift, ensure that the unit is safely disconnected from all shipping supports and any surrounding equipment.

- Check that the unit has not been damaged during transport.
- Check that the model, serial number and performance data on the data-plate match those in the order acknowledgement, test certificate and delivery note.
- Check that the fitted accessories comply with those listed in the order acknowledgement and the delivery note.

3.2 Storage and Preservation

ATI products leave the factory in excellent working condition and with an excellent finish (these conditions are guaranteed by an individual inspection certificate). To maintain these characteristics until the product is installed, it is necessary to take appropriate measures during the storage period.

- Make sure that plugs are fitted in the air connections and in the cable entries. The plastic plugs, which close the inlets, do not have a weatherproof function. They are only a means of protection against the entry of foreign matter during transport. If long-term storage is necessary, especially if the storage is outdoors, the plastic protection plugs must be replaced by metal plugs, which guarantee a complete weatherproof protection
- In case of long-term storage, it is advisable to keep the products in a dry place or to provide at least some means of weather protection. If possible, it is advisable to periodically purge the control circuits with filtered, dehydrated and lubricated air or with dry nitrogen; after such operations all threaded connections should be carefully plugged.

4 Product Description

4.1 General Description

ATI nitrogen power reserve units are utilized to operate direct high-pressure gas or gas-over-oil actuators when other power sources, such as pipeline gas pressure, are unavailable. ATI uses D.O.T. compliant high-pressure nitrogen bottles with a manifold that provides a reliable back-up gas supply for any actuator operating condition.

Power units are made-to-order for each customer's actuation requirements. Typical units have 4 or 8 nitrogen bottles, and other combinations are available based upon the reserve volume of gas required to achieve the specified output pressure.

All necessary regulators, gauges, and control valves are provided to ensure nitrogen is supplied at the specified operating conditions. Relief valve protection is provided along with low-pressure sensing and alarm feedback. The units are supplied in sturdy, ventilated all-metal cages



with a provision for padlocks.

On customer request, ATI can supply alternative control systems to meet specific application requirements.

4.2 Product Operation

The unit is intended to supply a steady output pressure without the necessity of action by the operator. After initial set-up and adjustment of regulators, the only routine action will be the refilling of nitrogen storage tanks that become depleted.

Refer to the drawings in Appendix A and Appendix B for the references in the below subsections 4.2.1 through 4.2.2. For example, A.4 refers to Appendix A, Item #4.

4.2.1 Monitoring Storage Tank Pressure

The unit is equipped with a pressure switch (A.4) at the manifold (Appendix A) of the storage tanks. Wiring to this switch is at the nipple and conduit body (B. 21-23). This pressure switch is intended to trigger the operator to refill storage tanks.

The pressure of the storage tanks can be visually monitored by the reference gauge A.16.

4.2.2 Refilling Storage Tanks

The unit is equipped with a port for refilling storage tanks. The connection for refill is B.18. To start filling, open the CGA valve (A.1). When filling is complete, close the CGA valve before disconnecting the fill line.

IMPORTANT: Every precaution must be taken to ensure that solid or liquid contaminants that may be present in pneumatic fill lines and pipework are removed before connection and pressurization, to avoid possible damages or other loss of performance to the product.

As an alternative to refilling storage tanks, depleted nitrogen tank can be replaced by filled tanks. To do so, close all tank valves, depressurize the manifold, and remove connection hoses from the nitrogen tanks that are to be replaced. Remove the bottle clamps (B.43), replace the tank(s), replace the clamps and return connections to their original state.

5 Installation Instructions

The unit should be installed on a flat, stable base, preferably concrete, with the nitrogen tanks in an upright position as shown in Appendix B.

5.1.1 Connection to Actuator or Volume Tank

The output pressure connection for the unit is shown in Appendix B, items 18-19.



6 Preparation for Start-up

6.1 *Pneumatic Connections*

Pneumatic connection for the output pressure from the unit is shown in Appendix B, items 18-19. This connection may feed directly to an actuator, or if required to increase flow volume, this connection may feed an intermediate volume tank that powers the actuator.

IMPORTANT: Every precaution must be taken to ensure that solid or liquid contaminants that may be present in the pneumatic fill lines are removed before connection and refill, to avoid possible damages or other loss of performance to the unit.

The inside of the pipes used for the connections must be cleaned before use. Wash them with suitable substances and blow through them with air or nitrogen. The ends of the tubes must be de-burred and cleaned.

Once the connections are completed, operate the actuator and check that it functions correctly, that the operation times meet the plant requirements and that there are no leakages in the pneumatic connections.

6.1.1 Setting Output Pressure

The output pressure for the unit is regulated by the settings of pressure regulators, refer to Appendix A, item 10. The manifold uses 2 regulators in sequence to stage the pressure reduction from the nitrogen tanks. The regulated output pressure can be visually monitored by the reference gauge, Appendix A, item 17.

6.2 *Electrical Connections*

Connect the signal lines to the pressure switch at the conduit connection shown in Appendix B, items 21-23.

For electrical connections, use components (cable glands, cables, hoses, conduits), that meet the requirements and codes applicable to the site specifications (mechanical protection and/or explosion-proof protection).

Screw the cable glands tightly into the threaded inlets, so as to guarantee the weatherproof and explosion-proof protection (when applicable).

Insert the connection cables into the electrical enclosures through the cable glands and connect the cable wires to the terminals according to the applicable wiring diagram.

If conduits are used, it is advisable to carry out the connection to the electrical enclosures by inserting flexible conduit so as not to cause anomalous stress on the housing cable entries.

Replace the plastic plugs of the unused enclosure entries with metal ones, to guarantee perfect weatherproof tightness and to comply with the explosion-proof protection codes (where applicable).

After the connections are completed, check that the controls and signals work properly.

6.3 Start-up

During the start-up of the unit, proceed as follows:

- 1) Check that the pressure and quality of the power supply are as prescribed (refer to gauge shown in Appendix A, item 16). Check that the feed voltage values of the electric components (pressure switch, Appendix A, item 4) is as prescribed.
- 2) Check that the actuator controls supplied by the Nitrogen Power Reserve Unit are working properly (remote control, local control, emergency controls).
- 3) Check that the required remote signals (valve position, air pressure, etc.) are correct.
- 4) Check that the setting of the actuator control unit components, (pressure regulator, pressure switches, flow control valves, etc.) meet the site requirements.
- 5) Check that there are no leaks in the pneumatic (or hydraulic) connections.
- 6) In accordance with the applicable painting specifications, repair any paint-coat that has been damaged during transport, storage or assembly.

7 Maintenance

7.1 Warning

IMPORTANT: Before carrying out any maintenance operation, it is necessary to isolate pneumatic feed lines and exhaust all pressure from the actuator and all control manifolds and vessels, to ensure safety of maintenance staff.

7.2 Routine Maintenance

ATI products are designed to work for long periods in the severest conditions with no need for maintenance. However, it is advisable to periodically check the unit as follows:

- 1) Check that the actuator(s) connected to this Nitrogen Power Reserve Unit will operate within the required operating times. If the actuator operation is infrequent, carry out a few opening and closing operations with all existing controls (remote control, local control, emergency controls, etc.), if plant conditions allow.
- 2) Check that the signal from the pressure switch is correct. Close all nitrogen storage tanks, then slowly open the CGA valve (Appendix A, Item 1) to depressurize the manifold. Monitor the reference gauge (Appendix A, item 16) and confirm that the switch signal is triggered at an appropriate pressure.
- 3) Check the paint-coat of the unit. If some areas are damaged, repair the paint-coat according to the applicable specification.
- 4) Check that there are no leaks in the pneumatic and hydraulic connections.

8 Terms and Conditions/Warranty

Except as otherwise expressly agreed to in writing by an authorized representative of Automation Technology, LLC. (hereinafter "ATI"), the following terms and conditions (these "Terms and Conditions") shall apply to all offers for the purchase or sale of products manufactured or supplied by ATI under brand names including, but not limited to "ATI", "Gevalco", etc.

A. CONDITIONAL ACCEPTANCE; REJECTION OF PURCHASER TERMS – All orders and acknowledgements of Purchaser shall constitute only consent to these Terms and Conditions and a representation that Purchaser is solvent. All quotations and offers of sale by ATI are expressly limited to these Terms and Conditions and are subject to written acceptance by ATI. Any such acceptance by ATI is expressly conditioned upon assent of Purchaser to these Terms and Conditions, and ATI hereby expressly objects to and rejects as material alterations to these Terms and Conditions any terms or conditions of Purchaser, whether contained in Purchaser's order, acknowledgement or otherwise, that are different from or in addition to these Terms and Conditions.

B. PRICES - ATI quotations are valid for thirty (30) days from date of issuance, unless otherwise stated by ATI in writing, and are subject to withdrawal or change at any time prior to acceptance by ATI. Prices are ex works, in United States Dollars, and firm for thirty (30) days from date of ATI's written acceptance of Purchaser's order and an unconditional authorization for the immediate manufacture based on customer supplied information. If for any reason authorization does not commence within such thirty (30) days, prices in effect at the time of release for manufacture will apply, unless otherwise stated in writing. All sales, use, excise, value-added, import, export and other taxes, duties, customs and the like (collectively "Taxes") are the responsibility of Purchaser and will be added to the price to the extent that ATI pays on Purchaser's behalf or is required by law to pay in connection with the sale. ATI reserves the right to invoice and be paid for any Tax at the time of shipment or any time thereafter. All orders are subject to laws and regulations that are in effect and that become effective prior to delivery. Typographical or clerical errors in quotations, orders and acknowledgements are subject to correction by ATI. Prices do not include installation or any other service, unless so stated expressly in the quotation or ATI's order acknowledgement. Prices include one (1) copy of any applicable manuals. Any additional manuals or other printed materials requested by Purchaser are subject to additional cost, to be quoted at or near the time that such materials are requested by Purchaser.

C. PAYMENT - Payment from Purchaser is due within thirty (30) days from date of first invoice, unless otherwise stated on ATI's quotation or order acknowledgement. For international orders, ATI reserves the right to require, before commencing filling the order, security in the form of a letter of credit or the like, in a form and from a bank or guarantor acceptable to ATI. Subject to any applicable usury law that would void or render invalid or unenforceable this sentence, in which case the specified rate will be deemed to be reduced to the maximum allowed by law, simple interest at the rate of 1.5 percent per month will apply to balances unpaid within 30 days from date of first invoice. ATI will invoice upon making available for shipment. ATI reserves the right to payment and Purchaser will be responsible for any cost associated with storage of products or delay in making products available for pickup that occurs at the request of Purchaser.

D. FORCE MAJEURE – In no event shall ATI be liable for non-delivery or delay in delivery, or for failure or delay in the performance of any obligation contained herein, that arises directly or indirectly from acts of God, unforeseeable circumstances, acts (including delays or failure to act) of any governmental authority (de jure or de facto), war (declared or undeclared), terrorism, riot, revolution, priorities, fires, floods, weather, strikes, labor disputes, sabotage, epidemics, factory shutdowns or alterations, embargoes, delays or shortages in transportation, delay in obtaining or procuring or inability to obtain or procure labor, materials or manufacturing facilities, delay in obtaining or inability to obtain timely instructions or information from the Purchaser, or any other cause or circumstance of any other kind beyond ATI's reasonable control. The foregoing provision shall apply even though such causes or circumstances may occur after ATI's performance has been delayed for other causes or circumstances.

E. SHIPPING – (a) Products are sold ex works. Risk of loss is the responsibility of and title transfers to Purchaser once products are made available at Seller's facility for pickup by Purchaser or its carrier.

(b) Acknowledged ship dates represent the estimated date of availability for pickup, rather than actual shipment or delivery at destination for which Purchaser is responsible. All indicated shipping dates are estimates, based on prompt receipt of all necessary information from Buyer necessary to process the order. ATI will use its best reasonable efforts to make products available for pickup by such dates, but there is no guarantee to do so. Indicated time periods for pickup availability are estimated from the latest to occur of: 1) ATI's acceptance of Purchaser's order, 2) ATI's receipt of valve dimensional information, if applicable, 3) ATI's receipt of Purchaser supplied components required to manufacture or supply the products, if applicable, or 4) ATI's receipt of drawings approved by Purchaser. Products ordered on an "in stock" basis are subject to prior sale to other customers. Acknowledged ship dates are subject to changes caused by additions to or modification of the original order agreed to by both Purchaser and ATI.



(c) Under no circumstances shall ATI have any liability whatsoever for loss of use or for any indirect or consequential damages as a result of delayed delivery.

(d) Purchaser is responsible for payment of carrier and all other shipping costs and for making all arrangements necessary for pickup, transport, export, import and delivery to Purchaser's destination. Without prejudice to any express rights of ATI and obligations of Purchaser, Purchaser consents in advance to ATI shipping collect any products that Purchaser fails to pick up, and Purchaser will remain responsible for all associated pickup, transport, export, import and delivery costs, including any unknown to ATI or Purchaser at the time of shipment.

F. DESIGN - Due to continuous product development, ATI reserves the right to modify designs, materials and specifications without prior notice.

G. CANCELLATION - Orders acknowledged by ATI are not subject to cancellation or suspension except with the advance written consent of ATI and upon terms which will compensate ATI for and indemnify ATI from and against loss or damage occasioned by such cancellation or suspension, including without limitation for all costs and expenses already incurred or commitments made by ATI in connection with the processing, purchasing, handling, and fabrication of equipment for the order and a reasonable profit thereon. ATI's determination of such termination charges shall be conclusive.

H. INSPECTION - Final inspection and acceptance of products must be made at ATI's facility and shall constitute a waiver by Purchaser of any claim for loss or damage, except for latent defects not reasonably discoverable by such inspection. Purchaser's representative may inspect products during normal business hours and must do so in a manner that does not interfere with ATI operations.

I. ATI WARRANTY; EXCLUSIVE PURCHASER REMEDY – All products manufactured by ATI are warranted against defects in material and workmanship for a period of two (2) years after the date that the products were made available for pickup by Purchaser. ATI's warranty excludes any defects resulting from improper or abnormal shipping, operation or maintenance. Purchaser must immediately, and in no event later than thirty (30) days after becoming aware of a suspected defect, notify ATI in writing of any such suspected defect. Within a reasonable time following ATI's receipt of such notice, investigation and confirmation of a defect, ATI will have the right and the obligation, in its sole discretion, to repair at no cost to Purchaser such defect or replace the defective product or component thereof with a non-defective product or component thereof. Repair or component replacement by non-ATI authorized agents WILL VOID all remaining warranty on the product. Products purchased by ATI from a third party for resale to Buyer ("Resale Products") shall carry only the warranty extended by the original manufacturer. ATI's repair or replacement obligations under this Paragraph I do not extend to any labor or other loss or damage occasioned by, incidental to, or in consequence of any such defect. Purchaser's sole and exclusive remedy and ATI's obligation and liability for breach of warranty are expressly limited to such repair or replacement. Goods repaired or replaced during the warranty period shall be in warranty for the remainder of the original warranty or ninety (90) days, whichever is longer. All other remedies of Purchaser are hereby expressly excluded. THE WARRANTY CONTAINED IN THIS PARAGRAPH I IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY ATI WITH RESPECT TO ITS PRODUCTS AND SUPERSEDES AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE, ALL OF WHICH ARE HEREBY EXPRESSLY DISCLAIMED. Purchaser acknowledges and agrees that ATI Manuals, printed materials and any other documentation do not constitute warranties of any kind, including with respect to quality or performance. Purchaser is expected to determine the suitability of ATI products for ordinary and Purchaser's particular purposes.

J. EXCLUSION OF CONSEQUENTIAL DAMAGES; LIMITATION OF DIRECT DAMAGES - ATI shall not be liable for and Purchaser shall have no right to recover from ATI for any indirect, special or consequential damages, even if ATI has actual notice of any special circumstances from which any such damages might arise. Moreover, subject to Paragraph I which would completely bar any such recovery of direct damages if ATI honors its warranty, in no event shall any recovery of direct damages against ATI exceed the amount of the order price attributable to the portion of the product or products that is determined to have caused any alleged loss, damage or injury that is compensable under these Terms and Conditions and not remedied by ATI.

K. RETURNS – No product may be returned for credit or adjustment without written permission and tagging instruction from ATI. Upon receipt of approved returns, any handling/restocking charges and/or cost to recondition for resale, will be the responsibility of Purchaser.

L. GOVERNING LAW; VENUE AND JURISDICTION - All sales of products by ATI and any disputes arising out of or related to such sales or products or these Terms and Conditions shall be governed by, and these Terms and Conditions shall be construed in accordance with, the laws of the State of Texas, without regard to its conflicts of law principles that would apply the law of another jurisdiction. The United Nations Convention on Contracts for the International Sale of Goods is expressly disclaimed by and excluded from these Terms and Conditions. ATI's offer of sale may only be accepted in Harris County, Texas and any resulting contract is performable in whole or in part in Harris County, Texas. Venue for any litigation arising out of such sale, products or contract shall be proper in the state or federal district courts of Houston, Harris County, Texas, U.S.A., to the exclusive jurisdictions of which Purchaser hereby expressly submits.



M. **NON-WAIVER** – Any waiver by ATI of any breach of any of these Terms and Conditions must be set forth in a writing signed by an authorized representative of ATI and shall not constitute a waiver of or otherwise prejudice ATI’s right to demand strict performance of any other term or condition of these Terms and Conditions.

N. **REMEDIES CUMULATIVE** – ATI’s remedies pursuant to these Terms and Conditions and applicable law are cumulative in nature and election or pursuit of any such remedy shall not prohibit ATI from electing or pursuing any other such remedy.

O. **SEVERABILITY** – In the event that any provision or portion of any provision of these Terms and Conditions is held void, invalid or unenforceable, such void, invalid or unenforceable provision or portion thereof shall be deemed severed from these Terms and Conditions, and the balance of these Terms and Conditions shall remain in full force and effect.

P. **EXPORT / IMPORT** - Buyer agrees that all applicable import and export control laws, regulations, orders, and requirements, including without limitations those of the United States will apply to the receipt and use of the Goods and Services provided by ATI. In no event shall Buyer use, transfer, release, import, export, re-export Goods in violation of such applicable laws, regulations, orders, or requirements.

Q. **BUYER SUPPLIED DATA** – To the extent that Seller has relied upon any specification, information, representation of operating conditions or other data or information supplied by Buyer to ATI, in the selection, or design of the Goods and the preparation of ATI’s quotation, and in the event that actual operating conditions or other data differ from those represented by Buyer and relied on by ATI, any warranties or other provisions contained herein are null and void. To the degree such data errors cause re-design or re-manufacture of the Goods, Buyer shall be responsible for additional costs incurred by ATI.

9 Revision Record

Rev #	Issue Date	Description	Reviewed By & Date	Approved By & Date
A	5/29/2015	Initial Release	EBW/DAR 5/29/2015	DPL 5/29/2015

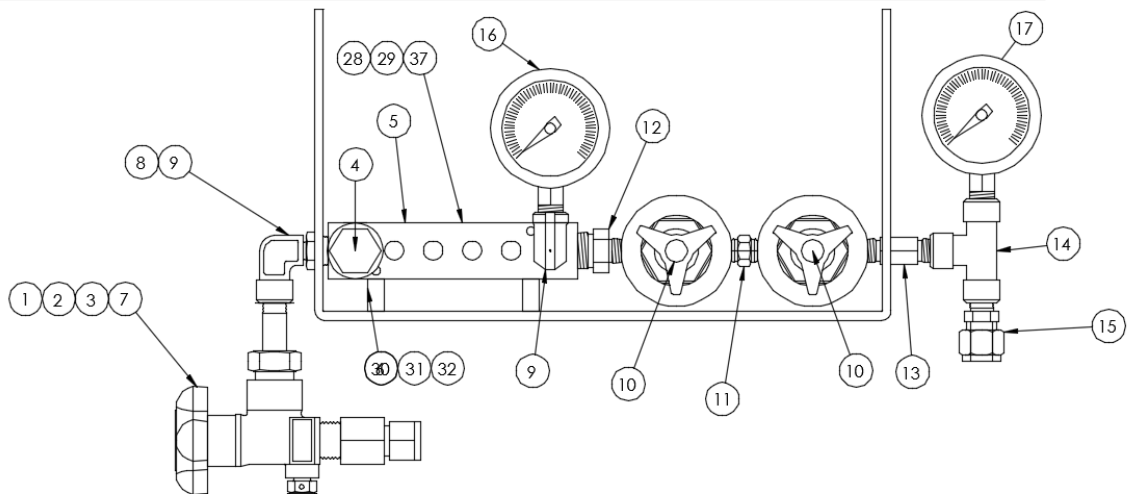


APPENDIX A

MANIFOLD PARTS LIST & SECTIONAL DRAWING

FROM 24672 REV. D

BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
1	1	NITROGEN CGA VALVE
2	1	NITROGEN BOTTLE NUT
3	1	NITROGEN BOTTLE NIPPLE
4	1	PRESSURE SWITCH
5	1	MANIFOLD
6	2	SPACER (MADE FROM 3/8" TUBING)
7	1	1/2" TUBE X 3/4" NPT FEMALE CONNECTOR
8	1	3/8" NPT X 1/4" NPT REDUCING BUSHING
9	2	1/4" NPT STREET ELBOW
10	2	REGULATOR 150 PSIG MAX OUTLET
11	1	1/4" NPT HEX NIPPLE
12	1	3/8" NPT X 1/4" NPT HEX REDUCING NIPPLE
13	1	1/4" NPT X 2.00" LG HEX NIPPLE
14	1	1/4" FEMALE TEE
15	1	1/2" TUBE X 1/4" NPT MALE CONNECTOR
16	1	GAUGE 0-3000 PSI 2 1/2" DIAMETER
17	1	GAUGE 0-300 PSI 2 1/2" DIAMETER
29	4	STAINLESS STEEL HOSE
30	4	1/4" TUBE X 1/4" NPT MALE CONNECTOR
31	2	SOCKET HEAD CAP SCREW 10-24 X 2.50" LG.
32	2	HEX NUT 10-24
33	2	LOCKWASHER # 10
38	4	FLUSH PLUG



APPENDIX B

CAGE PARTS LIST & SECTIONAL DRAWING

FROM 26323 REV. C

BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
2	4	NITROGEN BOTTLE NUT
3	4	NITROGEN BOTTLE NIPPLE
18	2	1/2" TUBE X 1/2" NPT MALE CONNECTOR
19	1	1/2" NPT STREET TEE
20	1	1/2" NPT RELIEF VALVE
21	1	1/2" X 2.00" LG NIPPLE
22	1	1/2" MALE/FEMALE CONDUIT UNION
23	1	CONDUIT BODY
24	1	1/2" MALE CONDUIT CONNECTOR
25	-	1/2" LIQUID TITE CONDUIT
26	1	1/2" CONDUIT COUPLING
27	4	1/4" TUBE X 1/4" NPT FEMALE CONNECTOR
28		NITROGEN CYLINDERS
34		UNISTRUT NUT
35		1/2" TUBING
36		ALL THREAD
37		WING NUT
39		TAG
40		POP RIVETS
41	1	90° CONDUIT CONNECTOR
42		4 BOTTLE CABINET
43		BOTTLE CLAMP



