

# 750G4

# OPERATING INSTRUCTIONS

## PRESSURE CONTROL MANIFOLD

1/07

REGULATED OUTPUT PRESSURE GAUGE

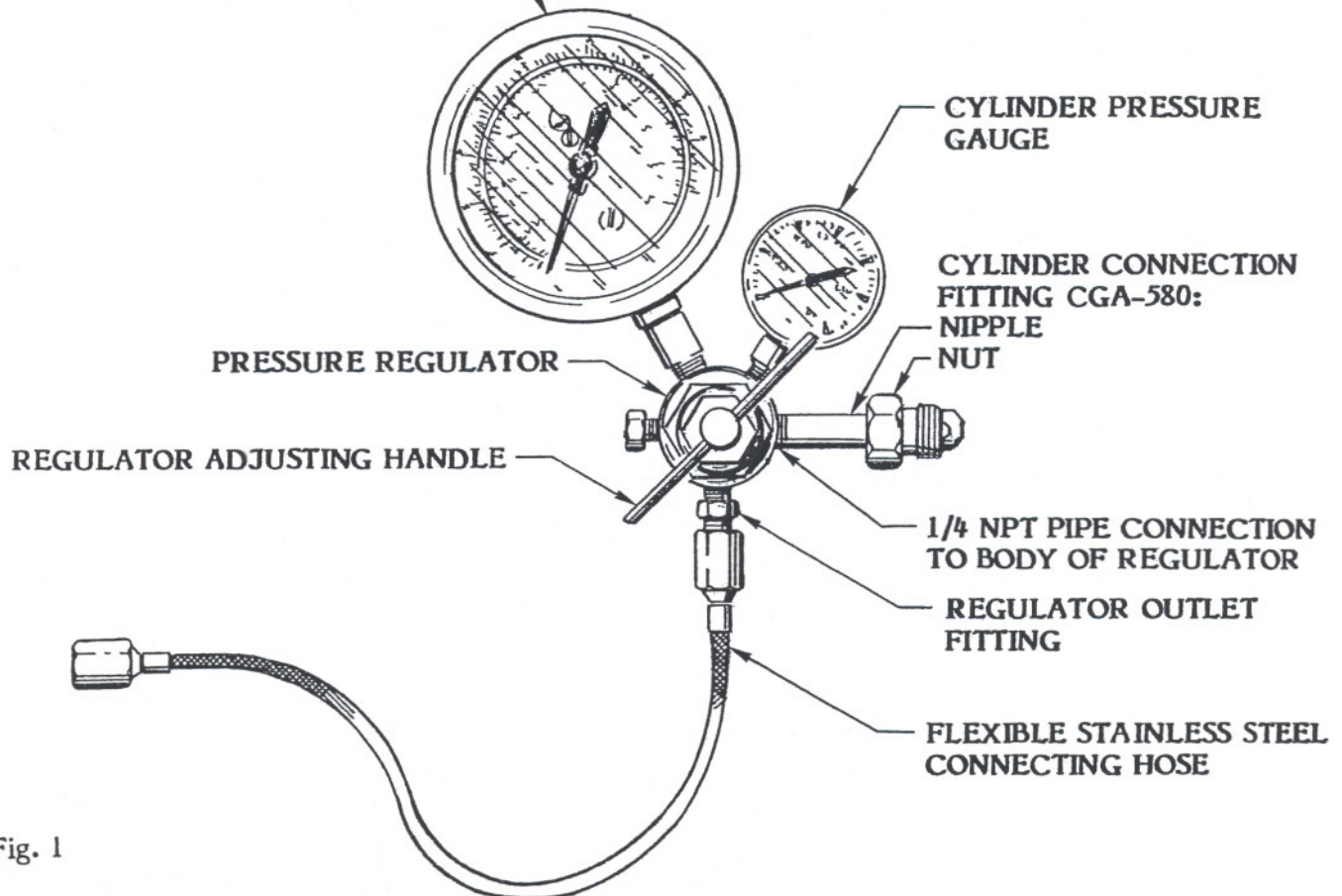


Fig. 1

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The Model No. 750G4 Manifold is supplied completely assembled and tested and ready for mounting on the cylinder of compressed nitrogen or air.

Fig. 1 on the front page shows the various parts of the manifold and you should acquaint yourself with these.

There are certain hazards associated with high pressure gas in cylinders and you must observe the following procedure to assure safe operation.

## CYLINDER CARE

Secure cylinders to a wall, post or cart so they will not tip or fall.

Inspect the cylinder valves for damaged threads, dirt, dust, oil or grease. Remove dust, dirt and other foreign matter with a clean cloth. No oil or grease should be present.

Crack open the cylinder valve for an instant and close quickly. This will blow out any foreign matter that may be inside the valve port.

**CAUTION:** If the cylinder valve is opened too much and the cylinder is not secured, the cylinder may tip over due to the force of escaping gas. Do not stand in front of the valve port.

## REGULATOR CARE AND GENERAL USE

Inspect the regulator for damaged threads, dirt, dust, oil or grease. Remove dust, dirt and other foreign matter with a clean cloth. No oil or grease should be present. Any mechanical damage must be corrected before use.

Attach the Manifold to the Cylinder Valve and tighten securely with a wrench. The fitting on the regulator for attachment to the cylinder of compressed gas is designated as CGA-580. This is an American National Standard cylinder connection to fit cylinders of compressed nitrogen. The thread size which fits the cylinder is designated as .950"-14NGO Right Hand Male.

The Cylinder Connection Fitting is attached to the body of the regulator with a United

States Standard 1/4" NPT Pipe Thread. If you live outside the United States and cylinder gas with connections in accordance with U.S. standards are not available, the CGA-580 fitting can be replaced with one that fits your local standards. To do so, the nipple is removed from the body of the regulator and replacement made with the new fitting.

Before opening the Cylinder Valve, turn the Regulator Adjusting Handle counterclockwise until the adjusting spring pressure is released.

Stand to the side of the cylinder opposite the regulator when opening the Cylinder Valve, keeping the cylinder between you and the regulator. Never stand in front of, or behind a regulator. CAREFULLY and SLOWLY open the Cylinder Valve until the cylinder pressure is indicated on the Cylinder Pressure Gauge.

Open the Cylinder Valve completely to seal the valve packing. Connect outlet of regulator to the apparatus to be supplied by the regulator.

Keep the Cylinder Valve closed at all times, except when the cylinder is in use. When you are finished using the apparatus, close the Cylinder Valve, then open the valve on the apparatus to allow all pressure to drain from the regulator, then release all tension on the Regulator Adjusting Handle by turning counterclockwise until the handle turns freely.

## CHECKING FOR LEAKS

It is desirable to correct any leakage at the connections of the manifold system to avoid frequent replacement of the cylinder of compressed nitrogen.

Leakage at the joint between the Cylinder Valve and the Pressure Regulator can be checked by first turning the Regulator Adjusting Handle counterclockwise until the spring pressure is released and the handle turns freely. The Cylinder Valve is then opened momentarily until the cylinder pressure registers on the Cylinder Pressure Gauge, and then the Cylinder Valve is closed securely. If there is a leak, the pressure as registered on the Cylinder Pressure Gauge will drop.

Leakage at other joints can be checked with

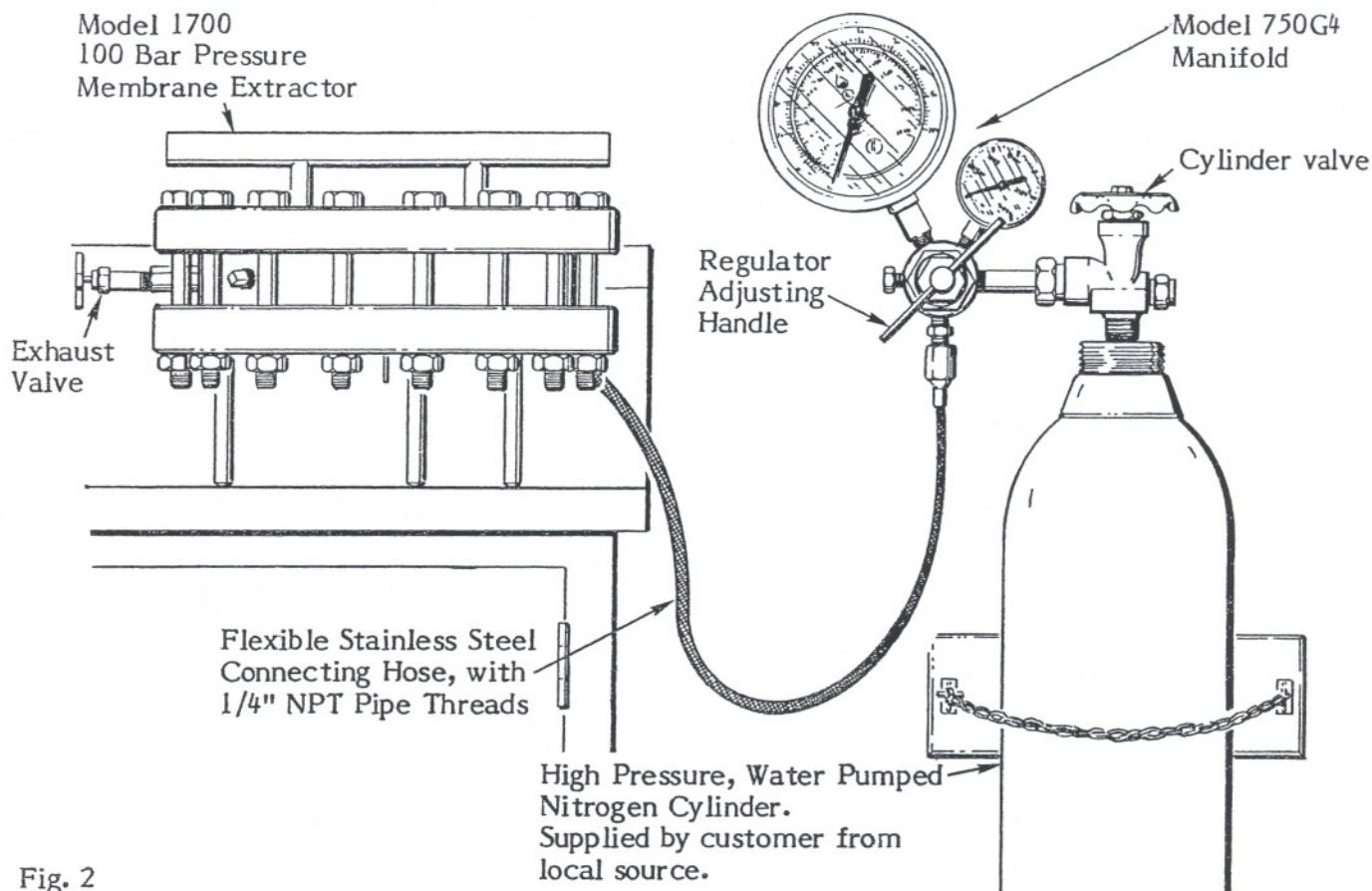


Fig. 2

**LABORATORY SETUP FOR MODEL 1700 100 BAR EXTRACTOR OPERATING FROM CYLINDER OF NITROGEN AS A PRESSURE SOURCE WITH THE MODEL 750G4 MANIFOLD USED FOR PRESSURE REGULATOR.**

a soap solution after pressure is applied to the system.

If leakage is detected, the joints should be more securely tightened and/or examined for foreign matter at the sealing surface, and proper application of pipe sealing material.

**SETTING UP FOR USE WITH MODEL 1700 EXTRACTOR**

The Model 750G4 Manifold was designed to supply regulated pressure to the Model 1700 100 Bar Pressure Membrane Extractor. Fig. 2, above, shows a typical laboratory setup for this manifold and points out the various operating parts.

Because of the high pressures used in the operation of the Model 1700 Extractor, the Flexible Stainless Steel Connecting Hose is directly coupled between the extractor and the manifold regulator. Teflon pipe sealing tape or pipe dope should be applied to the male inlet fitting of the Model 1700 Extractor and then the connecting hose

should be screwed firmly in place with a wrench. The male Regulator Outlet Fitting should then also be coated with sealing tape or pipe dope and the other end of the connecting hose screwed firmly to the fitting and tightened with a wrench.

After connecting the hose, the Manifold is mounted on the cylinder of compressed nitrogen as indicted on page 2.

**MAKING A RUN**

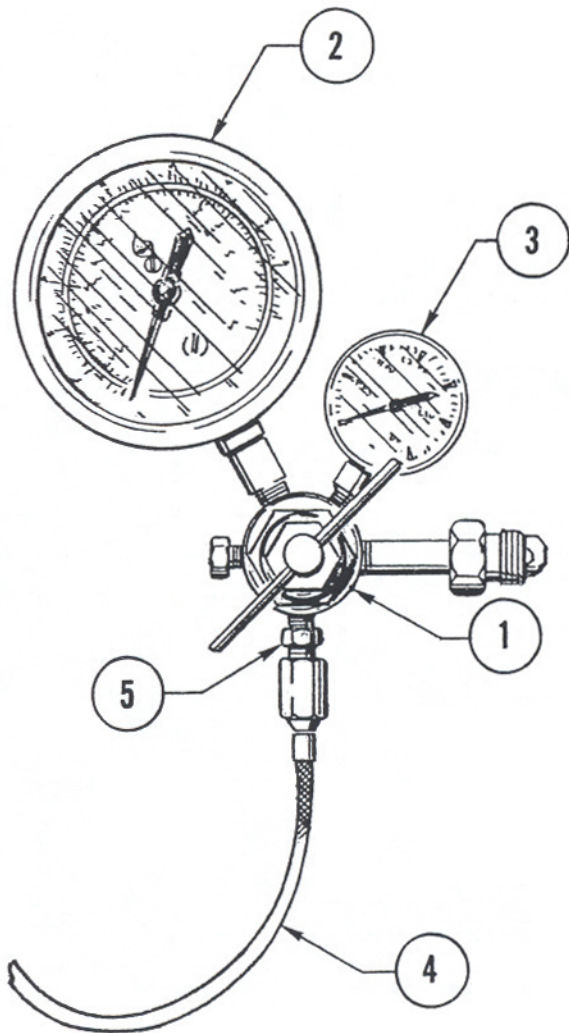
After soil samples have been mounted in the extractor and the extractor has been closed and sealed, the gas pressure can be applied. Before opening the Cylinder Valve, be sure the Regulator Adjusting Handle has been turned counterclockwise until the adjusting spring pressure is released. When the Cylinder Valve is opened the pressure in the cylinder will be indicated on the small Cylinder Pressure Gauge on the right side of the regulator.

You can now turn the Regulator Adjusting Handle clockwise to build up pressure in the extractor. The pressure in the extractor will be indicated on the large Regulated Output Pressure Gauge on the left side of the regulator. After building up the pressure in the extractor to the desired level, no further adjustment is made and the regulator will maintain the set pressure level.

In the event more pressure was applied in the extractor than desired, the excess pressure is released by opening the Exhaust Valve on the

extractor, and readjusting the Regulator Adjusting Handle.

At the end of a run, the Cylinder Valve is closed first. Then the pressure in the system is exhausted by carefully opening the Exhaust Valve on the extractor. The Regulator Adjusting Handle is then turned counter-clockwise until the spring pressure is released and the handle turns freely. The extractor can then be opened to process the soil samples.



# PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	767P2000G1	Tank Regulator, 2000 psi. w/CGA Fitting
2	780P1500	Test Gauge, 0-1500 psi.
3	781P3000	Pressure Gauge, 0-3000 psi.
4	3031L36	Flexible High Pressure Hose
5	MBL001-020	1/4 NPT Male Connector