FASTORQ®

SPIN-TORQ®

MODEL 603A POWER UNIT

OPERATION & MAINTENANCE MANUAL

KEEP FOR YOUR RECORDS

TABLE OF CONTENTS

INTRODUCTION

The Auto-Torq 603A is a super high speed linear displacement double acting plunger pump, driven by a 6 HP reciprocating air motor to provide 10 GPM maximum oil flow at no load and 4 GPM at 1500 PSI. Maximum output pressure is 3000 PSI.

The unique feature of this system is the ability to utilize hydraulic power from an alternative source such as the tong circuit of the drilling rig to operate and control the Spin-Torq torque wrench.

The air is regulated and water is removed from the air with a one piece filter/regulator. Oil is let into the air stream from a lubricator. The proper treatment of the air extends the life of the pump. The hydraulic oil is filtered through a 10 micron filter before it returns to the 2 gallon reservoir. The oil can be checked using the sight and temperature gauge. The unit has 2 hydraulic pressure gauges. A 2-1/2" gauge indicates the "stall pressure when the "set" button is depressed. This preset pressure will also be indicated on the 4" gauge when the wrench reaches stall.

The 603A can be operated from up to 25 ft. away using the remote control hoses and the 25 ft. hydraulic hoses. Additional lengths of twin-line hydraulic hoses can be added for extended reach. The entire unit is mounted on a two wheel hand cart, and weighs 155 lbs.

UNIT SPECIFICATIONS

Air Input Required	150 CFM @ 100 PSI
Air Input Hose	1” Diameter
Hydraulic Output	6.6 GPM Max. @ 500 PSI 2.25 GPM Min. @ 3000 PSI
Reservoir Capacity	2.5 Gallons
Length	18.5 Inches
Width	19.5 Inches
Height	50 Inches
Weight with oil	155 Pounds

USING ALTERNATIVE HYDRAULIC INPUT POWER

Air Input Required	50 CFM @ 90 PSI
Hydraulic Input Flow Maximum Minimum	 20 GPM @ 3000 PSI 3 GPM @ 2500 PSI

SAFETY

CAUTION

Always wear safety goggles or safety glasses and protective gloves when operating this equipment.

Never position yourself over a pressurized hydraulic tool.

Any repair work or trouble-shooting must be done by personnel familiar with this equipment.

Use proper gauges and equipment when trouble-shooting.

WARNING

Do not allow the hydraulic hoses to kink, twist, curl or bend so tightly that the oil flow within the hose is blocked or reduced. Never attempt to grasp a leaking hose under pressure with your hands.

Never pressurize the system with uncovered couplings. Always have the power unit connected to the hydraulic hose or a blanking plug.

Always insure that all quick disconnect couplings are properly coupled before pressurization.

Never exceed the rated operating pressure of the tool being used**.**

Important Note: Read and follow all instructions to avoid the risk of personal injury and/or property.

ASSEMBLY & PRE-OPERATION PROCEDURES

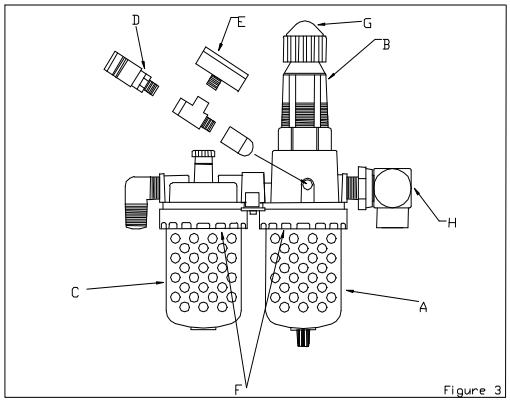
1. Stand the power unit upright.
2. Check filter/regulator and lubricator for fluid level. Lubricator should be full of oil and filter/regulator free of water. Fill the FRL lubricator with 10W motor oil or light spindle oil 80-120 SSU.
3. Hook up the remote control pendant:
    a. Black banded hose to the black coded quick disconnect on the filter regulator.
    b. Blue hose connects to blue coded quick disconnect on the control valve assembly.
    c. Red hose connects to red coded quick disconnect on the control valve assembly.
    d. Gray hose connects to gray coded quick disconnect on the control valve assembly.
4. Check hydraulic oil level. Maintain fluid level near the top of the tank.
5. Check air supply hoses. The hoses should be clean and free of debris; such as water or dirt.
6. Connect a 1” diameter air supply hose at the air inlet connection on the filter regulator.
7. Check the air pressure on the filter regulator gauge. Adjust the air pressure to 100 PSI, if necessary, with the following steps:
    a. If the air pressure is greater than 100 PSI, turn the knob on top of the regulator counter clockwise until the gauge reads 100 PSI.
    b. If the air pressure is less than 100 PSI, turn the knob on the top of the regulator clockwise until the pressure reaches 100 PSI.
8. Check the quick connect fittings on the hydraulic hoses and tool being operated. They should be clean and free of debris before connection.
9. Bleed air from the power unit hydraulic system with the following steps:
    a. Connect hoses to quick connect fittings on the pump.
    b. Connect the free ends of the hydraulic hoses together.
    c. Start the power unit by pressing the advance button on the remote control and allow to cycle.
    d. Disconnect the free ends of the hoses.
10. Connect the free hose ends to the hydraulic tool being used.

OPERATING INSTRUCTIONS

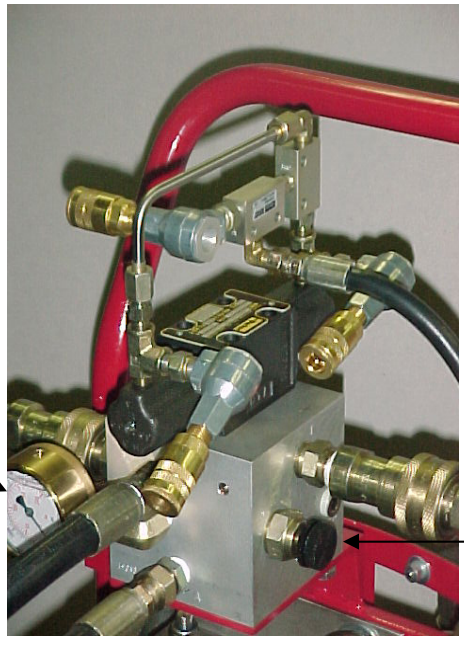
1. Choose the desired pressure setting from the “Torque vs. Pressure” chart.
2. Press the “Set” button on the control pendant and hold it down while turning the pressure adjustment knob until the desired pressure setting is indicated on the 2-1/2” gauge.
3. Place the Spin-Torq wrench on the nut to be tightened and press either the “Forward” or “Reverse” button to actuate the wrench.
4. Continue to rotate the wrench until it reaches a stall condition.
5. Press the other button on the control pendant to reverse the Spin-Torq motor and release it from it’s reaction point.

NEVER EXCEED THE MAXIMUM PRESSURE

SHOWN ON THE TORQUE CHART.



Filter/Regulator/Lubricator



Pressure Gauge

Pressure Adjustment Knob

MAINTENANCE

1. Minimize exposure to salt water. If the unit is exposed to salt water, wash down the entire unit and the hoses to remove the salt.
2. Keep lubricator filled with oil.
3. Drain water from the regulator.
4. Check hoses for breaks, cuts or abrasions.
5. Check for air leaks when the remote air valve is in the central (neutral) position. No air should escape from the system.
6. Repair or replace any leaking hose or hose fittings.
7. Change the hydraulic oil filter element every 100 hours of operation.

STORAGE

* Always store the power unit in the upright position.
* Wash down the unit prior to storing it.
* Roll up the hoses neatly.

TROUBLE-SHOOTING GUIDE

Problem	Possible Causes	Possible Solutions
Oil leaking from quick disconnect	*Quick disconnect not tightened enough*	Tighten the quick disconnect
Pump runs but does not operate the tool	*Air in the system*	Bleed the air from the system using the instructions found in the “Assembly & Preparations section
	Insufficient hydraulic pressure	Make sure that all components of the unit are working properly
	Quick disconnects not connected properly	Check all quick disconnects
Hydraulic quick disconnects are impossible to connect	*Pressure in the hose*	Bleed pressure in the hose by loosening one quick disconnect
Hydraulic oil heats up (too hot to be touched with bare skin)	*The oil may be contaminated*	Change oil using ISO32
The air motor doesn’t run or the hydraulic pressure does not build up to rated level	*Oil level low*	Check oil level and refill
	Insufficient air pressure	Increase air pressure
	Improper air supply hose	Check that a 1” air supply is being used
	Filter full of water	Check and drain water from filter
	Air leaks in system	Check for air leaks and replace or seal necessary items

LIMITED WARRANTY

Fastorq Bolting Systems warrants its products against defects in workmanship and materials for 180 days from date of delivery to customer. Warranty does not cover ordinary wear and tear, abuse, misuse, overloading or altered products.

REPAIR AND SERVICE

Fastorq Bolting Systems shall provide complete and prompt service on all of its products.

HELP AND ASSISTANCE

Fastorq Bolting Systems provides technical support and assistance to all of its customers any time, any day. Help is available through a toll free number, a fax number, mail or E-mail. Please call us when you have a question or need assistance. *See contact information on the back cover of this manual.*