OPERATOR MANUAL

HYDRA-SUPREME FLUID SCRUBBING SYSTEM

MODEL 810-064

SLAC MACHINERY EQUIPMENT APPLICATION

INTRODUCTION:

HTI Filtration fluid scrubbing systems are high performance industrial filters designed to remove particulate, oxidized oil and water from hydraulic and lubricating fluid systems. Model 810-064 is specifically designed for cleaning the combination lubricating/hydraulic oil in SLAC can body makers where the fluid flow is provided by the main equipment pumping system. Manufactured from durable, corrosion resistant materials, it is designed for constant, uninterrupted use without immediate supervision. This system will assure the required high degree of fluid purity with an absolute minimum of maintenance and service requirements.

SYSTEM OPERATION:

The fluid scrubbing system utilizes a patented cellulose element to clean the working fluid of accumulated debris. The cleaning process utilizes three interlocking processes to remove solid particulate, varnish and water from the oil. By combining barrier filtration, chromatographic separation and absorption, all three of the listed contaminants can be removed from the oil simultaneously and efficiently. As the filter traps the contaminants, it builds up resistance and the pressure rises. At 60-65 PSI, the pressure switch activates to alert the operator of the need for filter replacement.

The proper function of the filter depends on the correct placement of the inlet and return lines, the correct flow volume, delivery, and pressure. The transfer lines should pull fluid from the reservoir and return it to a location at least 24" away from the inlet port to prevent recirculating the same oil over and over. Combining smooth delivery with the proper flow volume assures high trapping efficiency and long element life. Under normal conditions, your 800-026 element should last 1-2 months before requiring changeout. The filtration efficiency begins to drop off sharply as the pressure rises above 60-65 PSI and the filter element may begin shedding debris back into the oil above 70 PSI.

SYSTEM PRESSURE:

Pressure readings will vary with the viscosity of the oil used, the operating temperature of the reservoir, and the amount of debris absorbed by the filter.

Typical start-up pressures using 750 SUS/ ISO 150 oil at 100^0 -120^0F is 12-18 PSI.

Typical change out point is 60-65 PSI or a 50-PSI increase in original operating pressure but not to exceed 75 PSI.

Filter pressure is controlled by a non-adjustable, external valve that is factory set to open at 60-65 PSI and go into complete bypass at 80-PSI maximum. *Do not tamper with the valve assembly.*

Under no circumstance should your unit ever exceed 80 PSI. Should this occur, shut down the system and contact the HTI Filtration Technical Service Department at 719-490-8800 or email sales@htifiltration.com for assistance.

SYSTEM LOCATION:

Set the filtration system on a solid, level surface. Allow a minimum of 24" of frontal clearance for service access. Filter system should be kept free of moisture and under 140^o F.

PLUMBING:

The suction and return ports utilize 1/2", 37 deg JIC hose fittings. A maximum hose length of 8' is recommended as is the use of sealing caulk or tape on all threaded fittings.

Ball valves can be installed on both hose connections for easy shut-off during installation, adjustment or service.

INITIAL START-UP PROCEDURE

Upon completion of the hydraulic connections and pressure switch cable, the filtration system is ready for start-up. The pressure relief valve is factory set for a maximum pressure of 90 PSI. If your unit exceeds this level during any phase of operation, turn it off immediately and contact HTI Filtration for instructions.

Open all valves on the inlet and return lines.

Crack open the bleed valve on the top of the canister.

Turn on the system pump or open the access valve

Close the bleed valve as oil starts to flow from it.

Confirm that the start-up pressure is between 12-20 PSI at 100 -120 F.

Check for fluid leaks before leaving the area.

Field Adjustment of Pressure Switch

Before changing any settings on an HTI System run the filter until the oil is at the normal operating temperature (typically between 90-100°F). To do this field adjustment function you will need a valve on the outlet line from the filter so you can create backpressure.

1. Turn filter system on to let oil into the canister while venting the air through the bleed cock on the canister lid.

2. As soon as fluid flows from bleed cock, close and secure.

3. Allow filter system to run to flush any cold oil out of the filter and bring entire system up to operating temperature. Note the operating pressure of the filter.

4. Slowly close the outlet valve until the pressure reaches 60 PSI/ 4 BAR

5. Remove the cover pressure switch and adjust it by rotating the SET ring until LED illuminates. The RESET ring should be set 5 PSI below the level of the SET ring. Place the cover back on the switch.

***NOTE**: Do not attempt to reduce or increase the operating pressure by adjusting or replacing the pressure relief valve. This safety devise has been set and locked into place at the factory.*

FILTER ELEMENT REPLACEMENT

Step 1: Turn off flow to the Filter System. It is not necessary to turn off the bodymaker to service the filter.

Step 2: Open the drain cock on the bottom of the canister, and then open the bleed cock on the top of the lid. The drain hose can be used to direct the draining oil to a receptacle. Drained oil can later be used to refill the canister.

Step 3: Remove the canister clamp ring and lift off the canister lid.

Step 4: Examine the canister "O" ring for cracks and wear spots. If the canister lid seal was leaking, or if the "O" ring shows signs of wear, replace the ring.

Step 5: Unscrew the "T" handle assembly that holds the filter in place by rotating the handle in a counterclockwise motion. The cup seal on the handle assembly should be smooth and free of rough spots or tears. Replacement seals are available.

Step 6: Slice open the end of the plastic bag holding the new element. Remove the new element and set in a clean area. Lift used element off of center post

Step 7: Slide new filter over the center post. Make sure the wire lifting bale is at the top and the black O-ring is at the bottom. Secure the element with the "T" handle by screwing it back into the center tube with a clockwise motion until it seats.

Step 8: Close drain cock and refill canister with oil.

Step 9: Put the "O" ring back on the canister lip, replace lid, clamp and tighten.

Step 10: Start the pump motor and allow air to bleed out through bleed cock on top of canister. Close bleed cock when fluid starts to come out. Wipe off unit and check for leaks.

HTI Filtration Inc.

7716 Gary Watson Pt. • Colorado Springs, CO 80915 • 719.490.8800 • sales@htifiltration.com

May 11, 2021

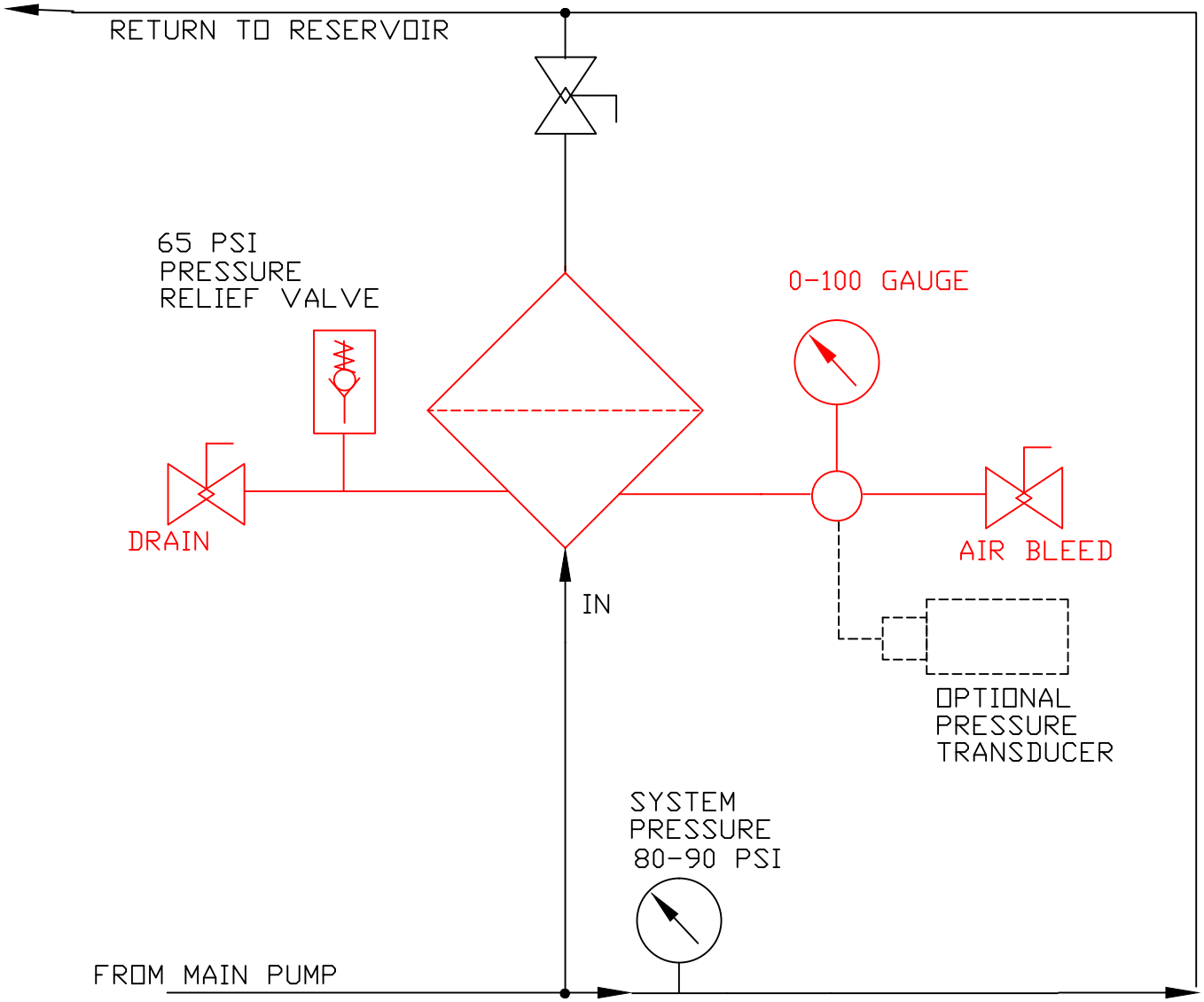
Product Safety Bulletin

Lid Clamp Tightening Instructions
HTI Part # 540-010 & 540-012

HTI Filtration continuously monitors our products in the field to improve our equipment capabilities and safety. We have been informed that some canisters are developing leaks at the lid seal area after being in service for several years. After consulting with the canister manufacturer, it has been determined that this can be caused by overtightening the stamped steel 2-piece lid clamps, HTI Part # 540-012.
To prevent distortion of the canister body and lid flanges, please follow the following torque specifications for the older 540-012 lid clamps and the newer 540-010 V-Band clamps.

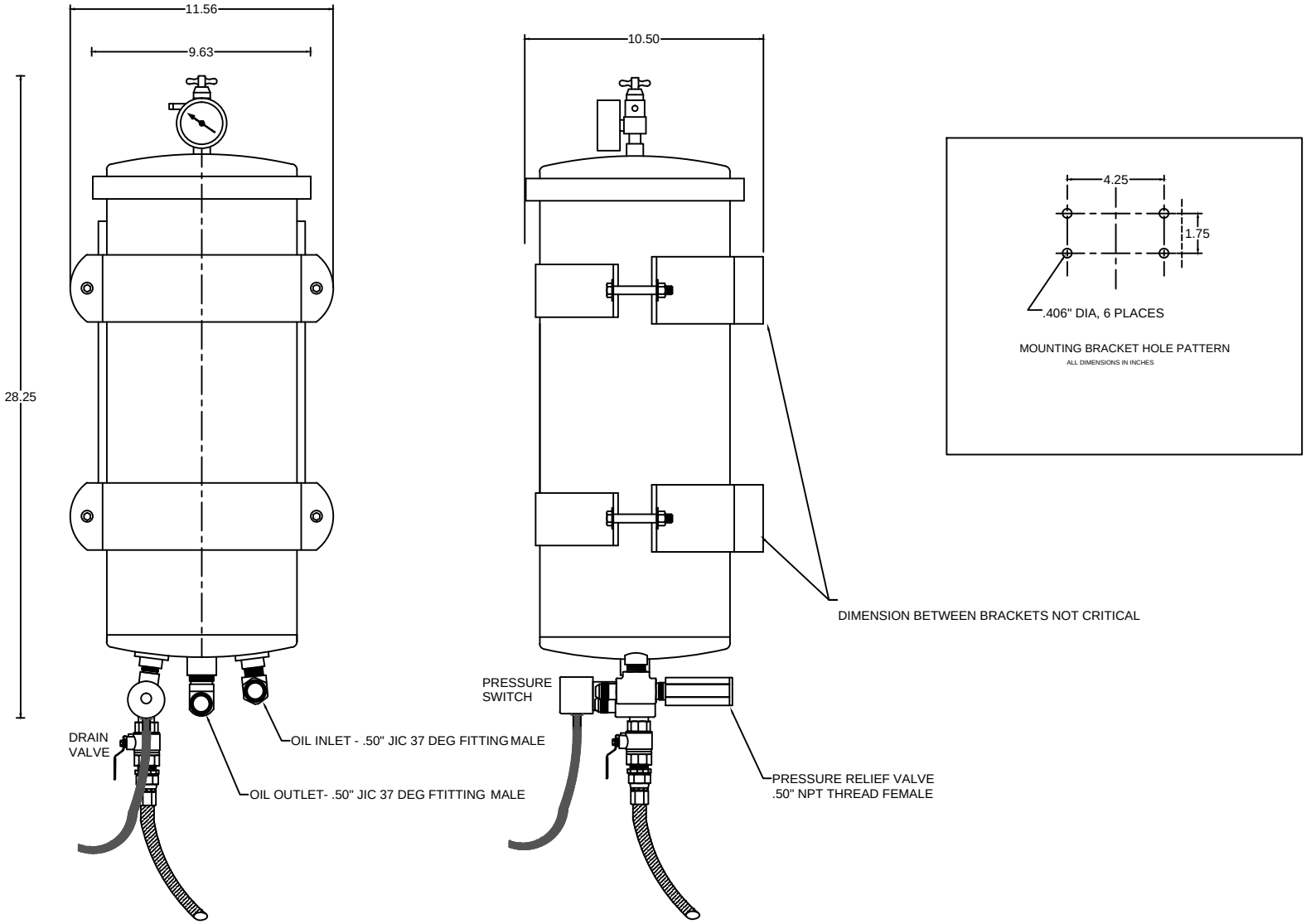
540-012 – Alternate tightening: from one side to the other until clamps are fully nested into each other and you have achieved an even pull down of the cover. DO NOT OVER TIGHTEN.

540-010 – Hand tighten to a maximum of 30 Ft L\Lbs.



ITEMS IN RED PROVIDED BY HTI
ITEMS IN BLACK PROVIDED BY CLIENT

DWG. TITLE: 810-064 FLOW DIAGRAM				HTI FILTRATION	810-064 FS
PROJECT DESCRIPTION: HYDRA SUPREME HYDRAULIC FILTER				7716 Gary Watson Pt. Colorado Springs CO 80915	A | 01-99-16 | SP | SP — REV. | DATE: | DRWN BY | CHKD BY | DESCRIPTION
JOB NO. —	DRAWING NO. 810-064 FS	REVISION A	CUST. CONTR. NO. —		CUSTOMER —



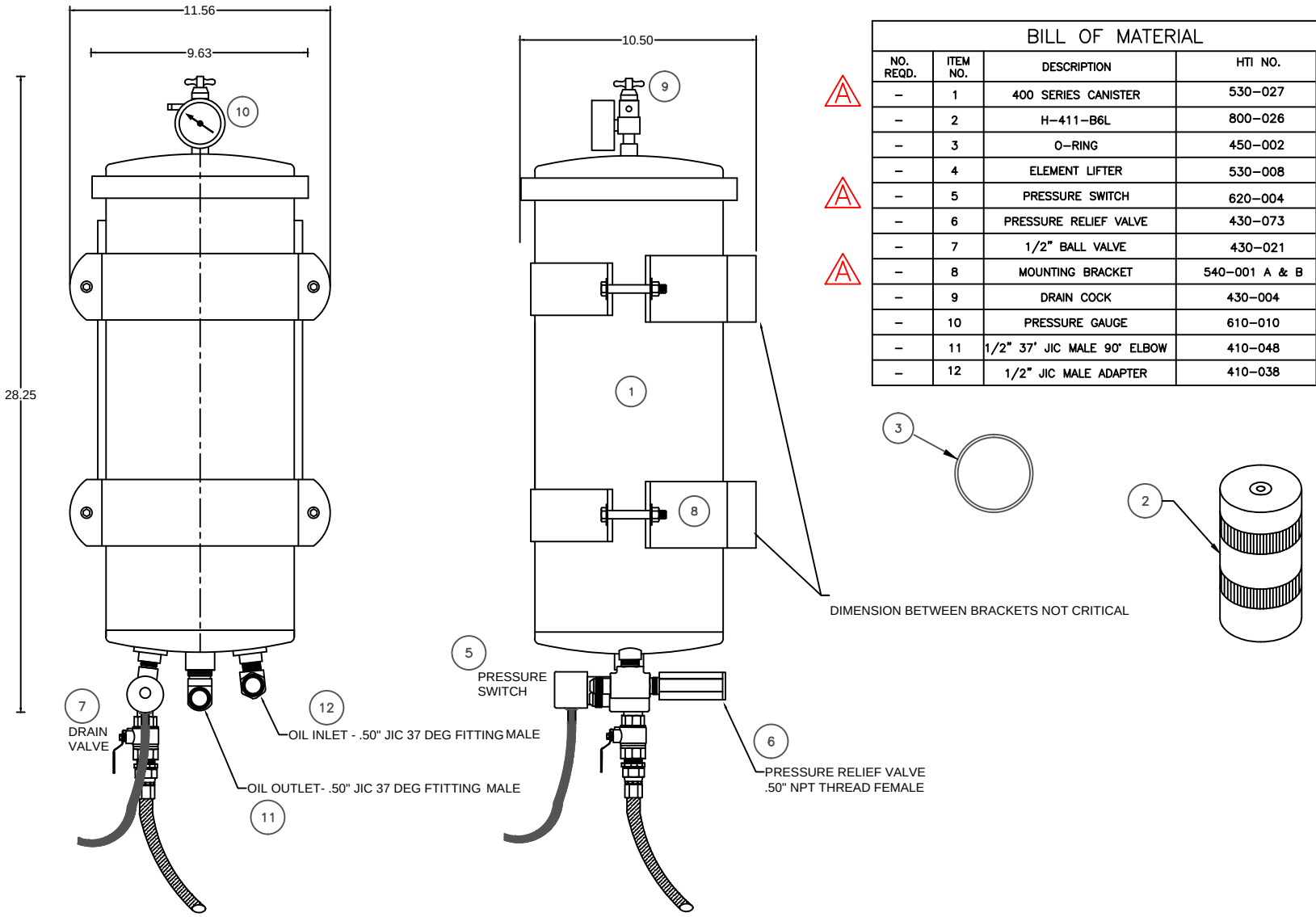
DWG. TITLE: 810–064 OIL FILTER 1.0 GPM	HTI INC	810–064 BUTZ OIL FILTER	
PROJECT DESCRIPTION: SLAC OIL FILTER	7716 Gary Watson Pt. Colorado Springs CO 80915	0 / 12/09/15 / SP / SP / ORIGINAL ISSUE	
		REV. / DATE: / DRWN BY / CHKD BY / DESCRIPTION	
JOB NO.: – / DRAWING NO.: 810–064 / REVISION: 0		CUSTOMER: BUTZ FLOW POWER	

TROUBLESHOOTING GUIDE

HTI Filtration Model 810-064

Please note: All pressure readings are to be taken with the system at normal operating temperatures.

SYMPTOM	CAUSE	CORRECTIVE ACTION
ERRATIC FLOW RATE, BUBBLES IN OIL STREAM	AIR LEAK IN INLET FITTING	CHECK FITTINGS FOR TIGHTNESS AND INTEGRITY
	CUT OR PINCHED FEED HOSE	VISUALLY CHECK INLET HOSE FOR DEFECTS
	LOW FLUID LEVEL	CHECK FLUID LEVEL IN RESERVOIR
LOW FLOW RATE WITH LOW PRESSURE	OIL LEAKING OUT OF SYSTEM	CHECK FOR LEAKS IN PLUMBING
INSUFFICIENT MOTOR POWER	CHECK FOR PROPER PUMP VOLTAGE AND ROTATION	
	OIL BYPASSING THROUGH RELIEF VALVE	TURN SYSTEM OFF TO RESEAT RELIEF VALVE
LOW FLOW RATE WITH HIGH PRESSURE	LOADED FILTER	REPLACE FILTER ELEMENT
	RESTRICTED OUTLET LINES	CHECK AND CLEAR RETURN LINES
EXCESSIVE PRESSURE	RELIEF VALVE NOT OPENING	REPLACE VALVE
SHORT FILTER LIFE	EXCESSIVE WATER IN OIL	BLEED OFF WATER IN RESERVOIR, FIX LEAK
	EXCESSIVE SLUDGE IN OIL	CLEAN OUT RESERVOIR
LEAK AT LID CLAMP	CUT OR ERODED SEAL	REPLACE AS NEEDED
WARNING LIGHT COMES ON BELOW 60 PSI OR ABOVE 65 PSI	PRESSURE SWITCH SET WRONG	RESET PRESSURE SWITCH



BILL OF MATERIAL

NO. REQD.	ITEM NO.	DESCRIPTION	HTI NO.	
–	1	400 SERIES CANISTER	530–027	
–	2	H–411–B6L	800–026	
–	3	O–RING	450–002	
–	4	ELEMENT LIFTER	530–008	
–	5	PRESSURE SWITCH	620–004	
–	6	PRESSURE RELIEF VALVE	430–073	
–	7	1/2" BALL VALVE	430–021	
–	8	MOUNTING BRACKET	540–001 A & B	
–	9	DRAIN COCK	430–004	
–	10	PRESSURE GAUGE	610–010	
–	11	1/2" 37° JIC MALE 90° ELBOW	410–048	
–	12	1/2" JIC MALE ADAPTER	410–038	

DWG. TITLE

810–064 OIL FILTER 1.5 GPM

PROJECT DESCRIPTION

BUTZ HYDRAULIC FILTER

JOB NO.	DRAWING NO.	REVISION
–	810–064 PL	A

HTI
INC

7716 Gary Watson Pt.
Colorado Springs
CO 80915

810–064

REV.	DATE:	DRWN BY	CHKD BY	DESCRIPTION
A	05/01/19	SP	SP	AMEND PART #'S
0	12/09/15	SP	SP	ORIGINAL ISSUE

CUSTOMER

BUTZ FLOW POWER

HTI FILTRATION

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STANDARD WARRANTY

This filter system was inspected before shipment from our plant. To the original purchaser of this system, HTI Filtration warrants its products free from defects in material and workmanship for a period of one (1) year from date of purchase.

HTI Filtration makes no other express warranty and excludes (and buyer waives) any and all implied warranties including, without limitation to, implied warranties in connection with the design, sale, merchantability or fitness of the goods for any particular use or purpose.

In order for any claim under this warranty to be valid, HTI Filtration must receive notice in writing from the buyer within a reasonable time period, not to exceed thirty (30) calendar days after any defect is discovered. The claim must include a detailed report of the conditions of use at the time of discovery of defect. Parts which fail or become defective during the warranty period (except as a result of freezing, melting, improper installation, use or care), shall be replaced or repaired at HTI Filtration's option at no charge within 90 days of the receipt of the defective part, barring unforeseen delays. HTI Filtration shall in no event be responsible for the repairs made by others without the express written permission and consent of HTI Filtration.

To obtain warranty replacement or repairs, defective components or parts should be returned, freight prepaid, to place of purchase or nearest authorized service center. HTI Filtration shall not be responsible for cartage, removal and/or reinstallation labor or any other such costs incurred in obtaining warranty replacements. In no event shall HTI Filtration be responsible for any incidental or consequential damage, whether foreseeable or not and whether or not such damage occurs, or is discovered before or after repair or replacement.

The forgoing warranty does not apply to wear components, seals or filtration elements.

This warranty extends only to the original buyer and HTI Filtration makes no other warranty, expressed or implied, to other persons or entities. If buyer makes any warranty or representation inconsistent with or in addition to the warranty stated hereinabove, the buyer shall, at their own expense, defend and hold HTI Filtration harmless from any claim thereon of any nature whatsoever.