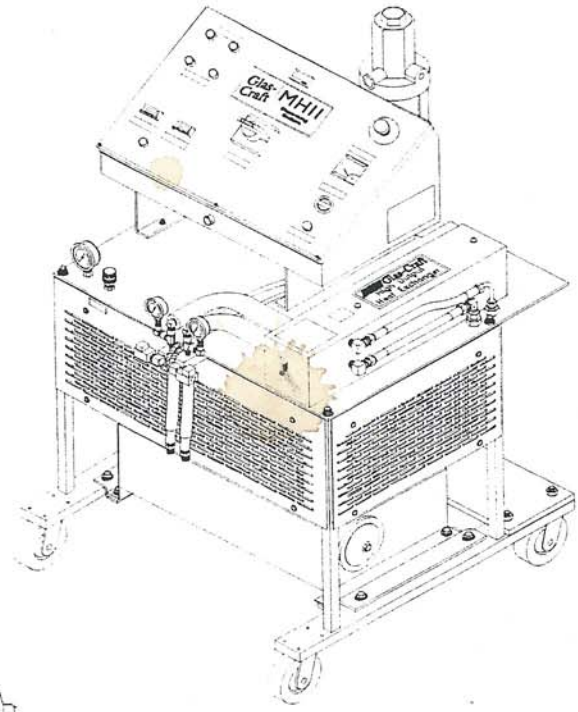
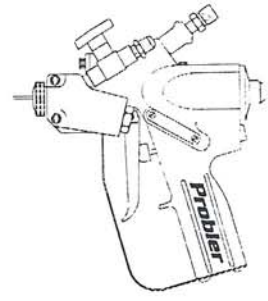
PARTS LIST



MH II

Dispensing System



Glas-Craft, Inc.

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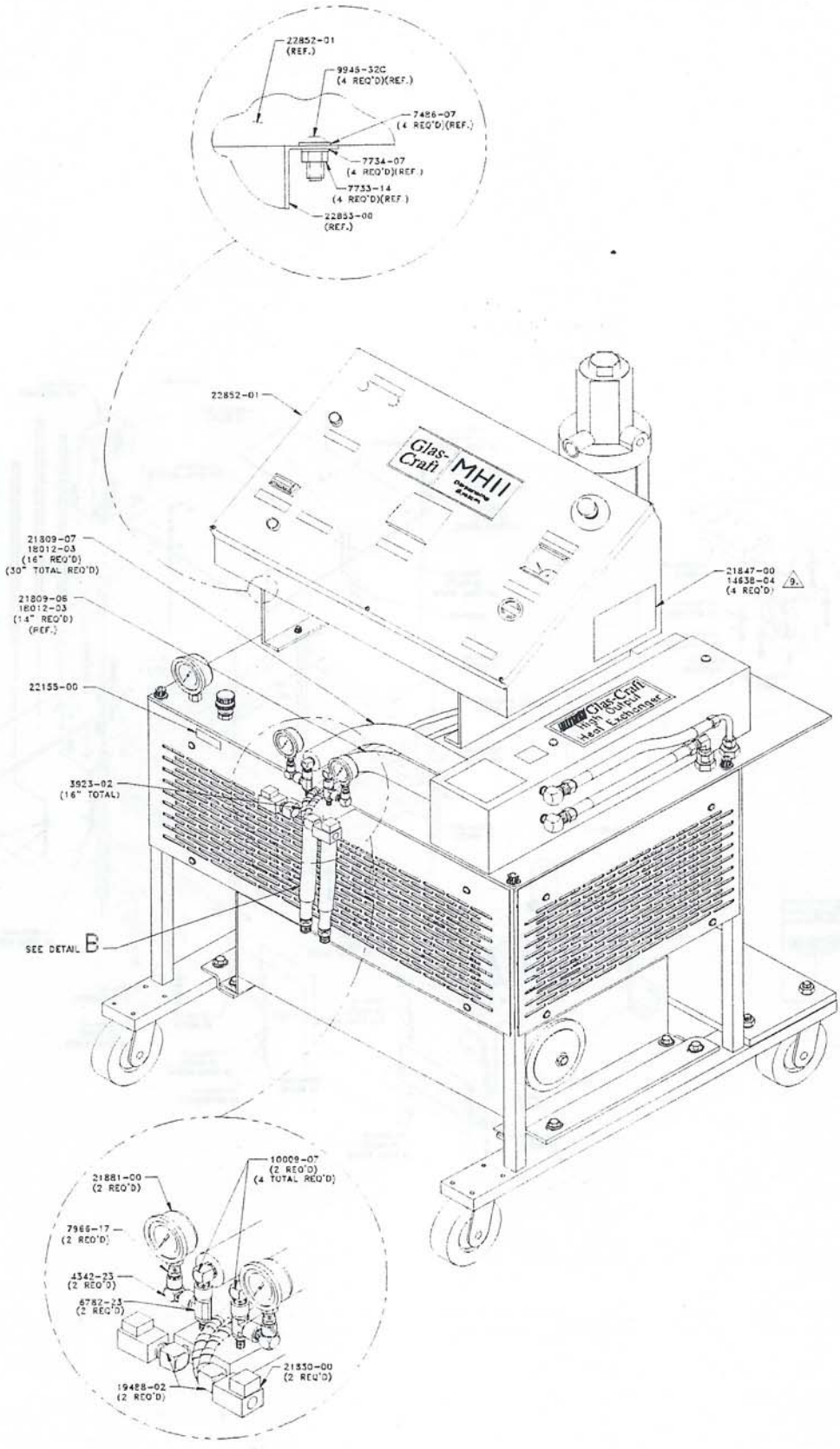
Web www.glascraft.com

An ISO 9001 Approved Company

Specialized Dispensing Equipment and Technology

CE CERTIFIED

22850-01 MH II SYSTEM ASSEMBLY



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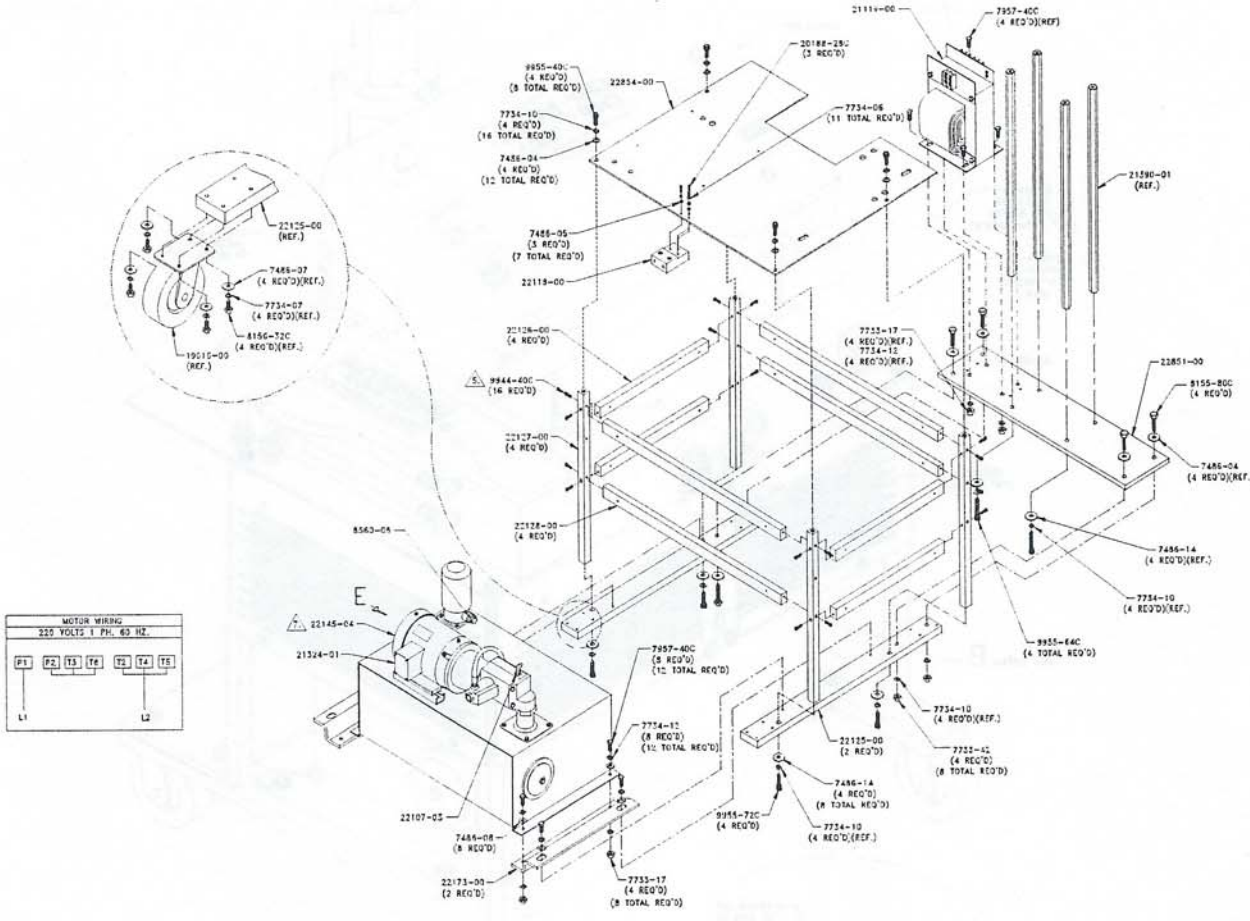

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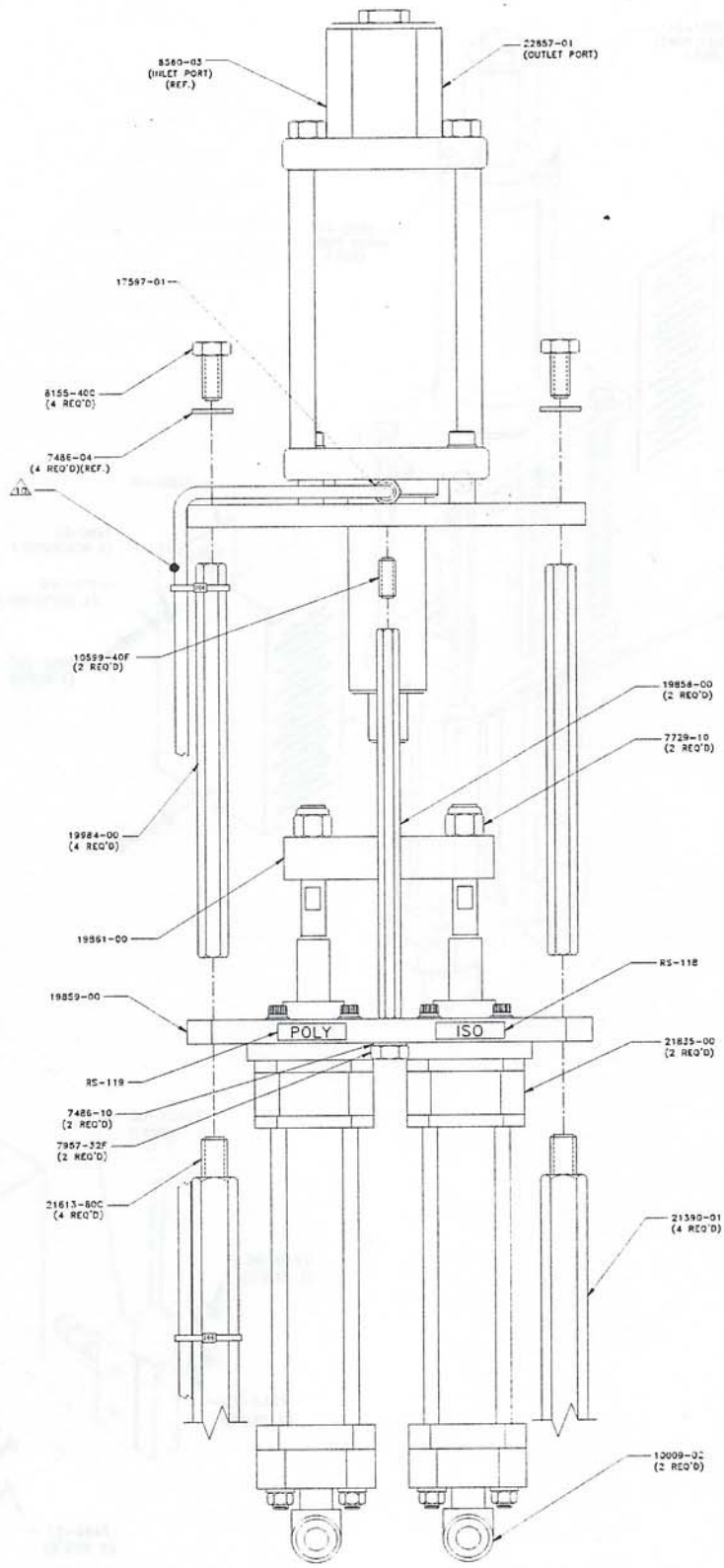

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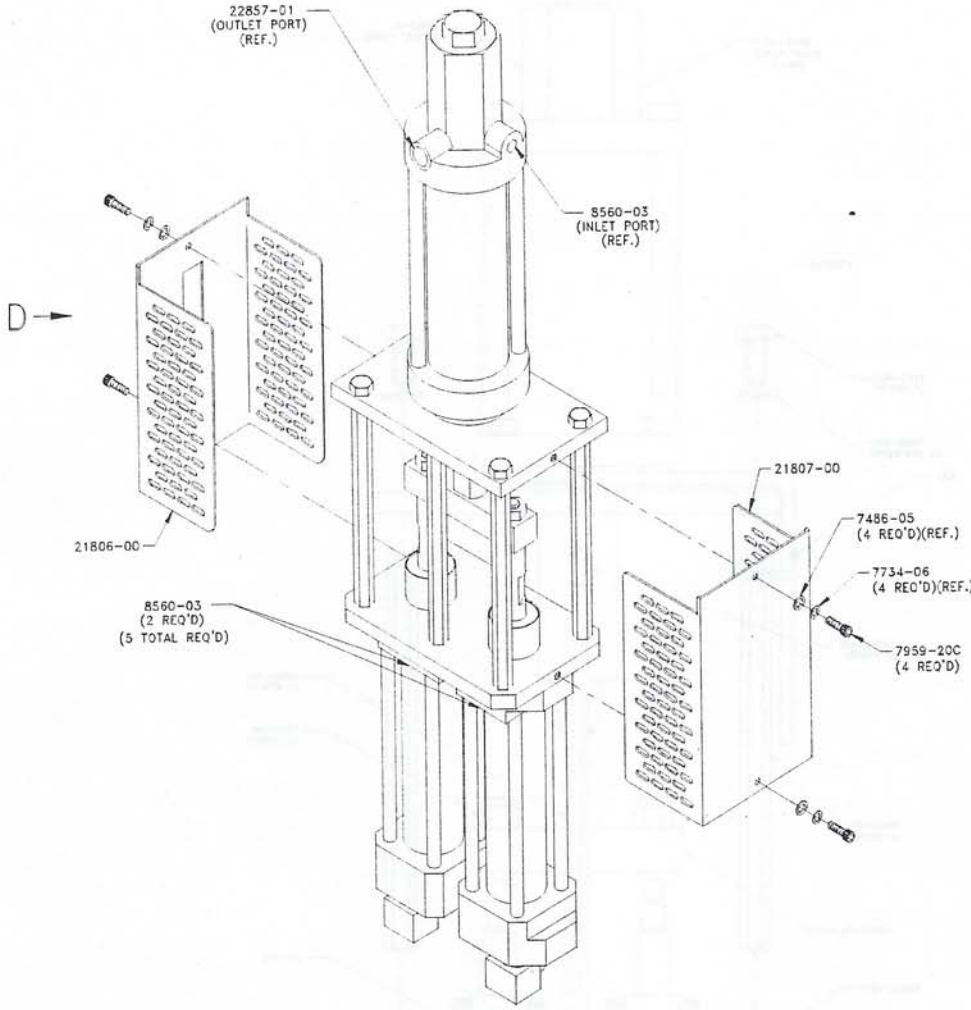
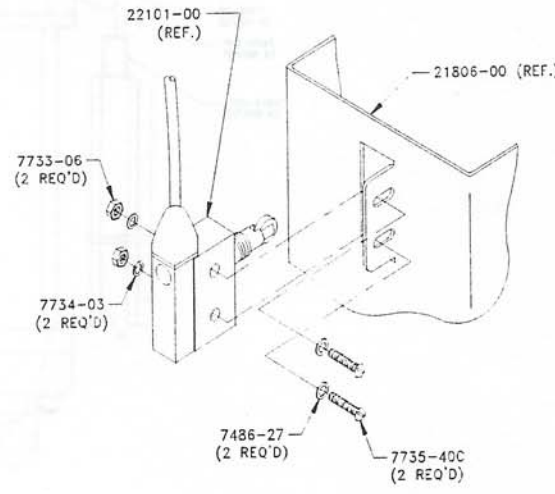
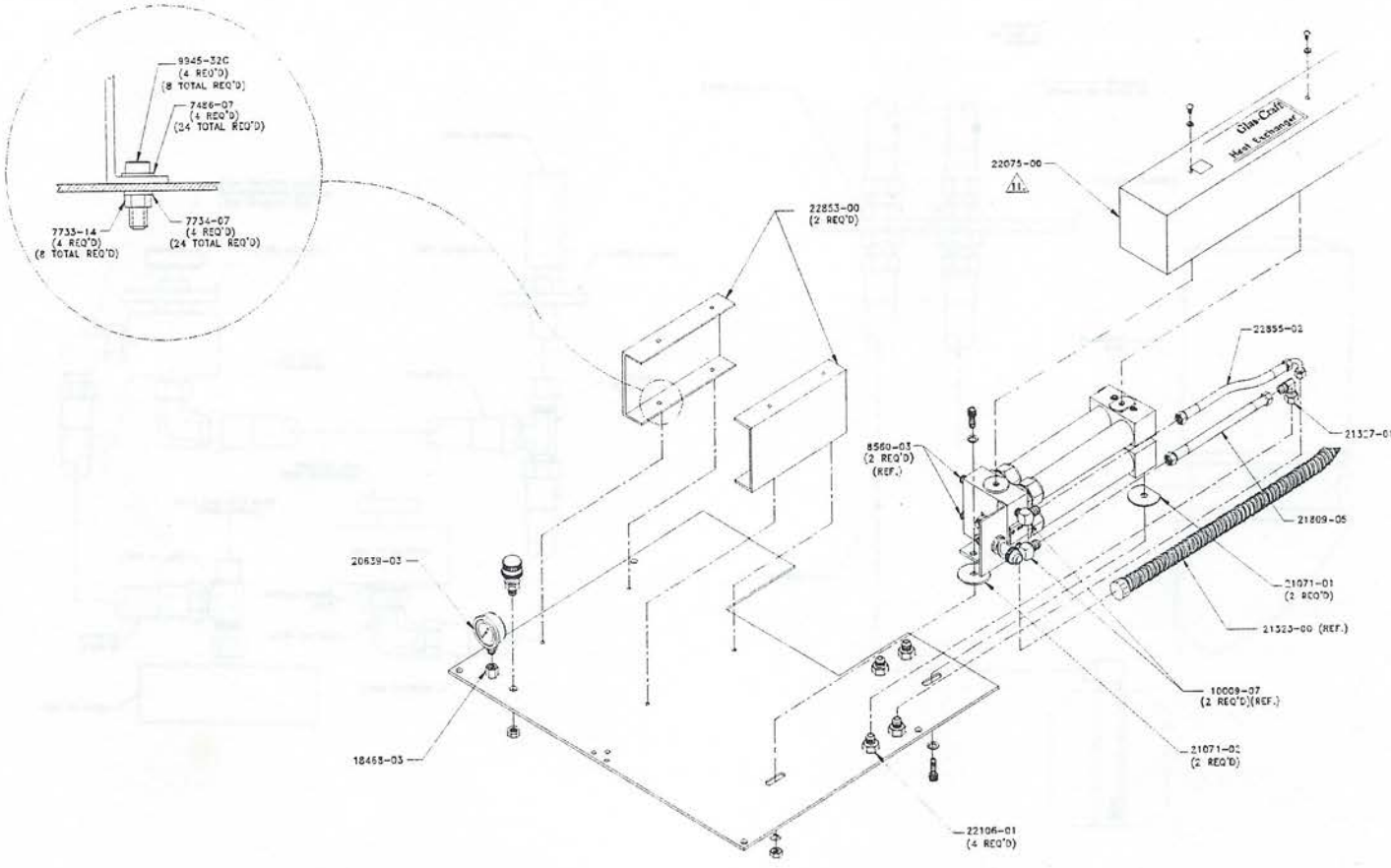




VIEW D

22850-01 MH II ASSEMBLY



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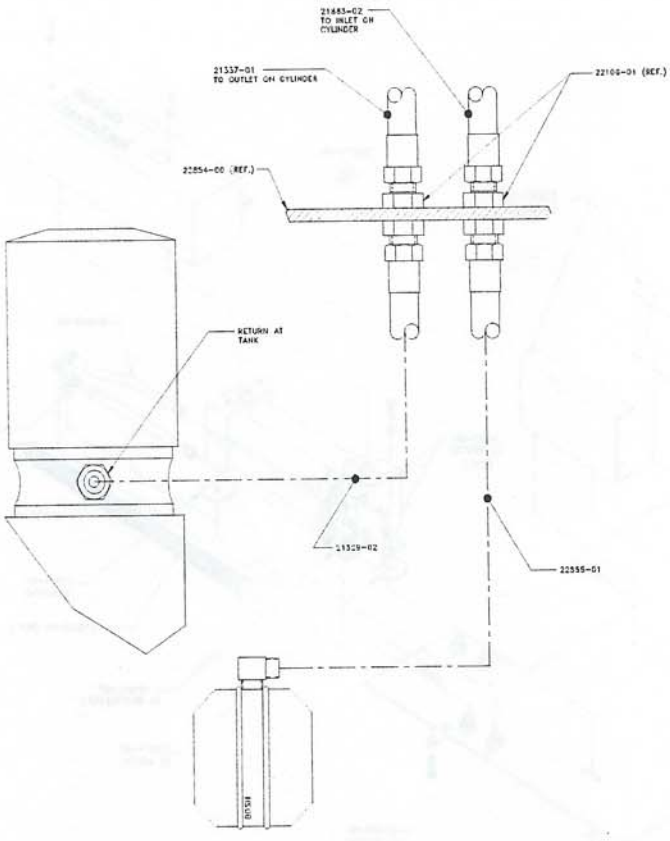

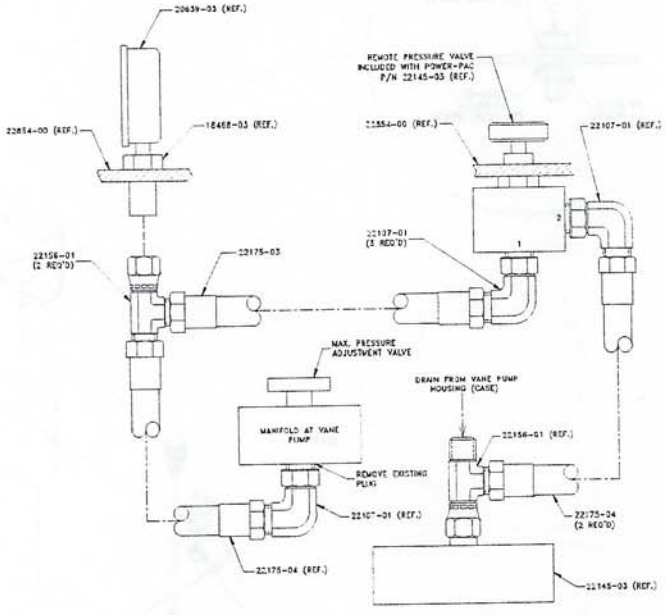

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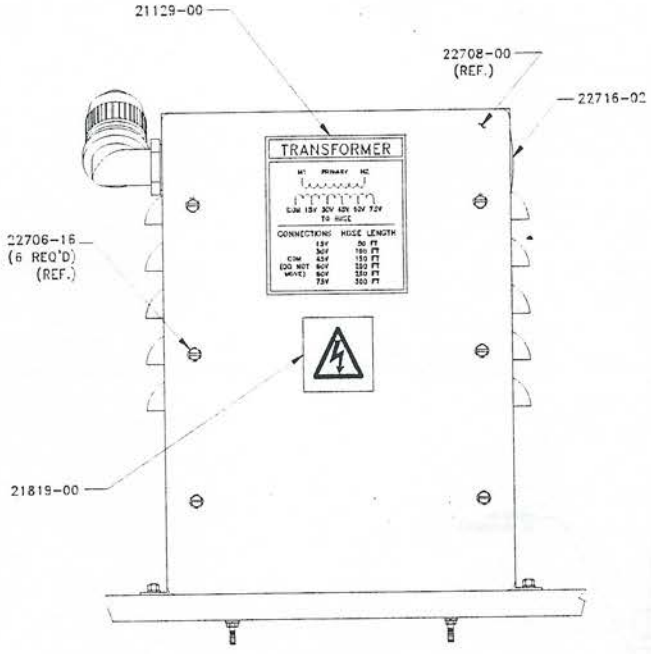
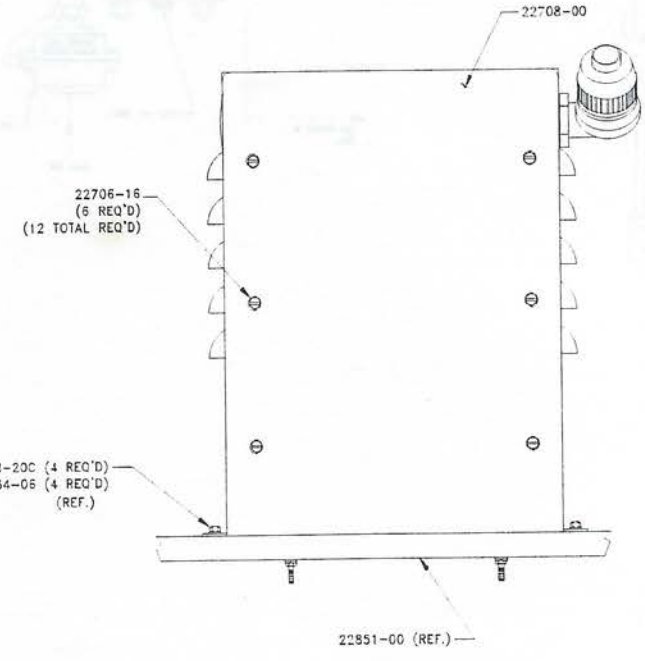
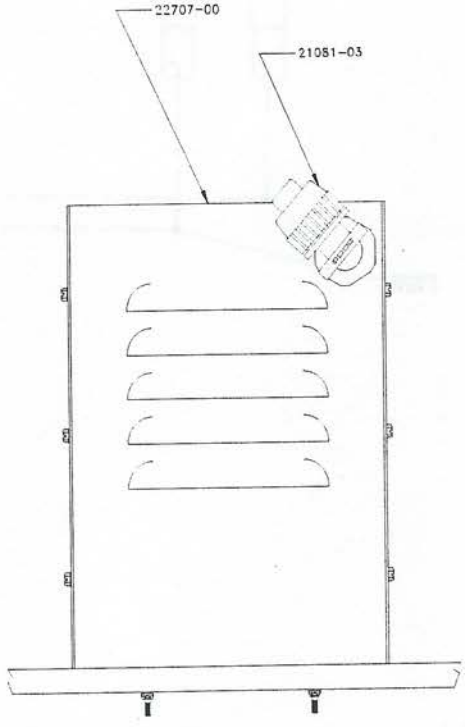
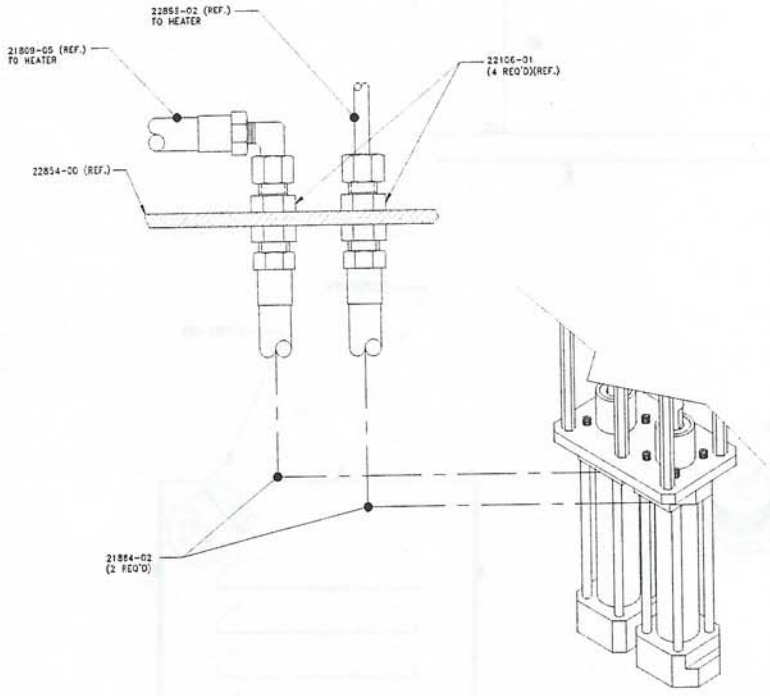


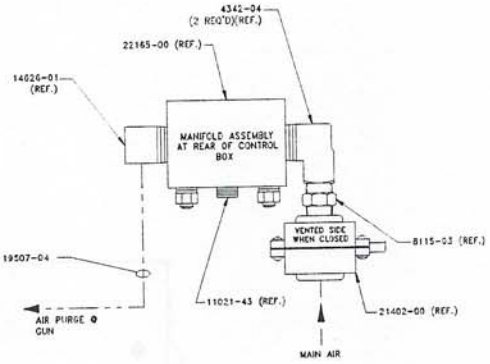




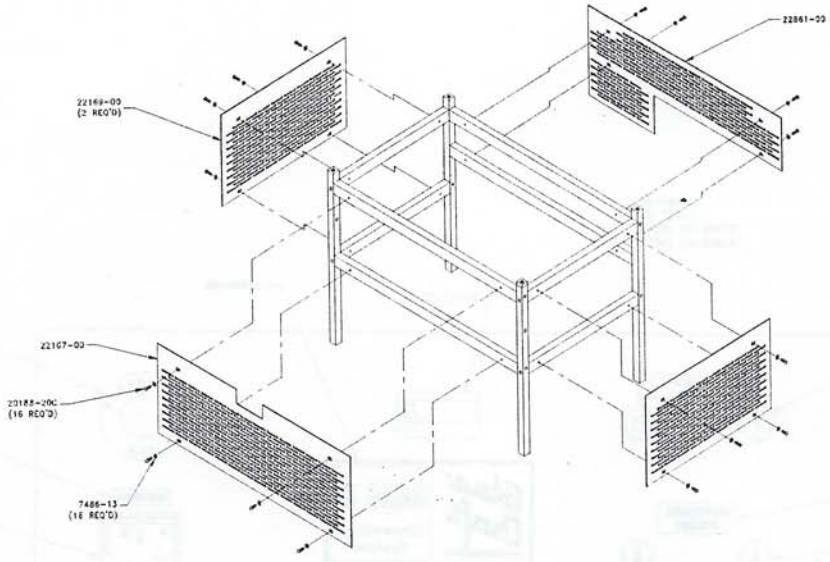
VIEW G

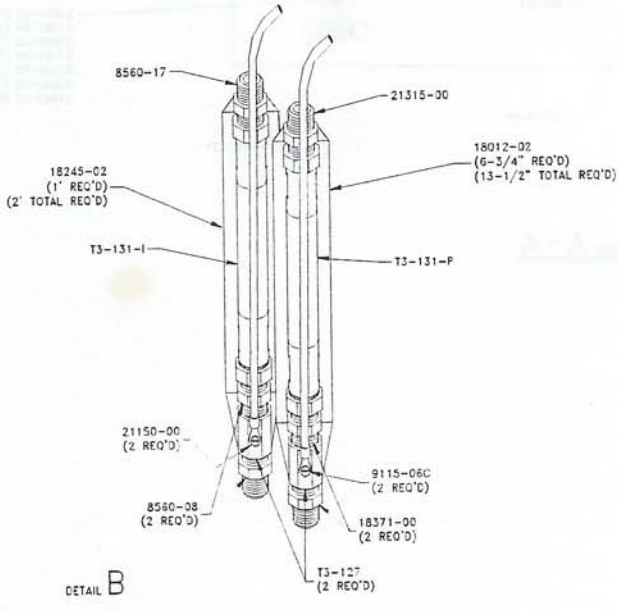
22850-01 MH II ASSEMBLY



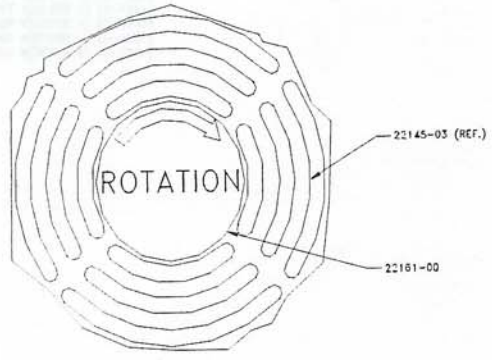


22850-XX MH II ASSEMBLY



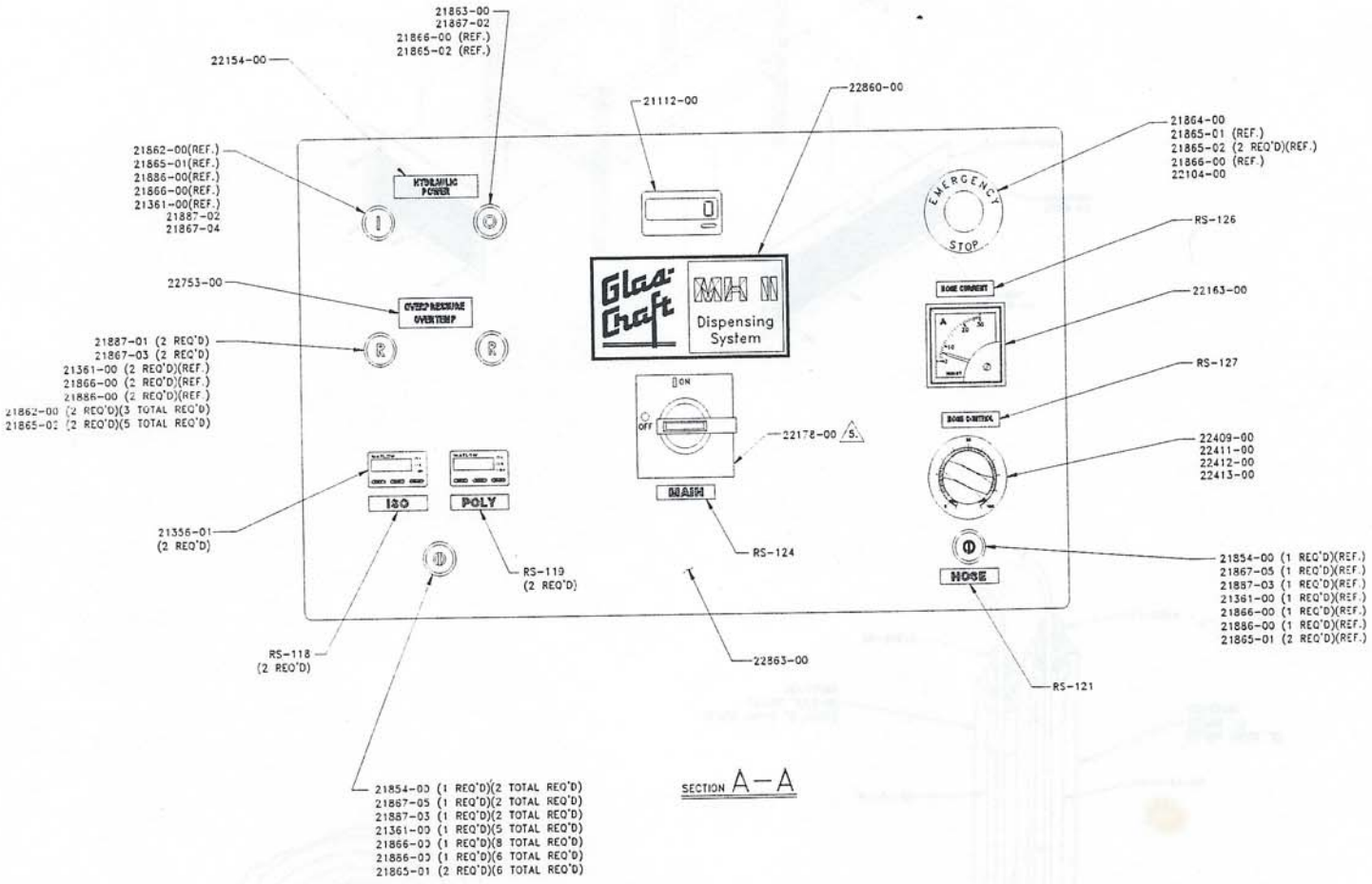


DETAIL B



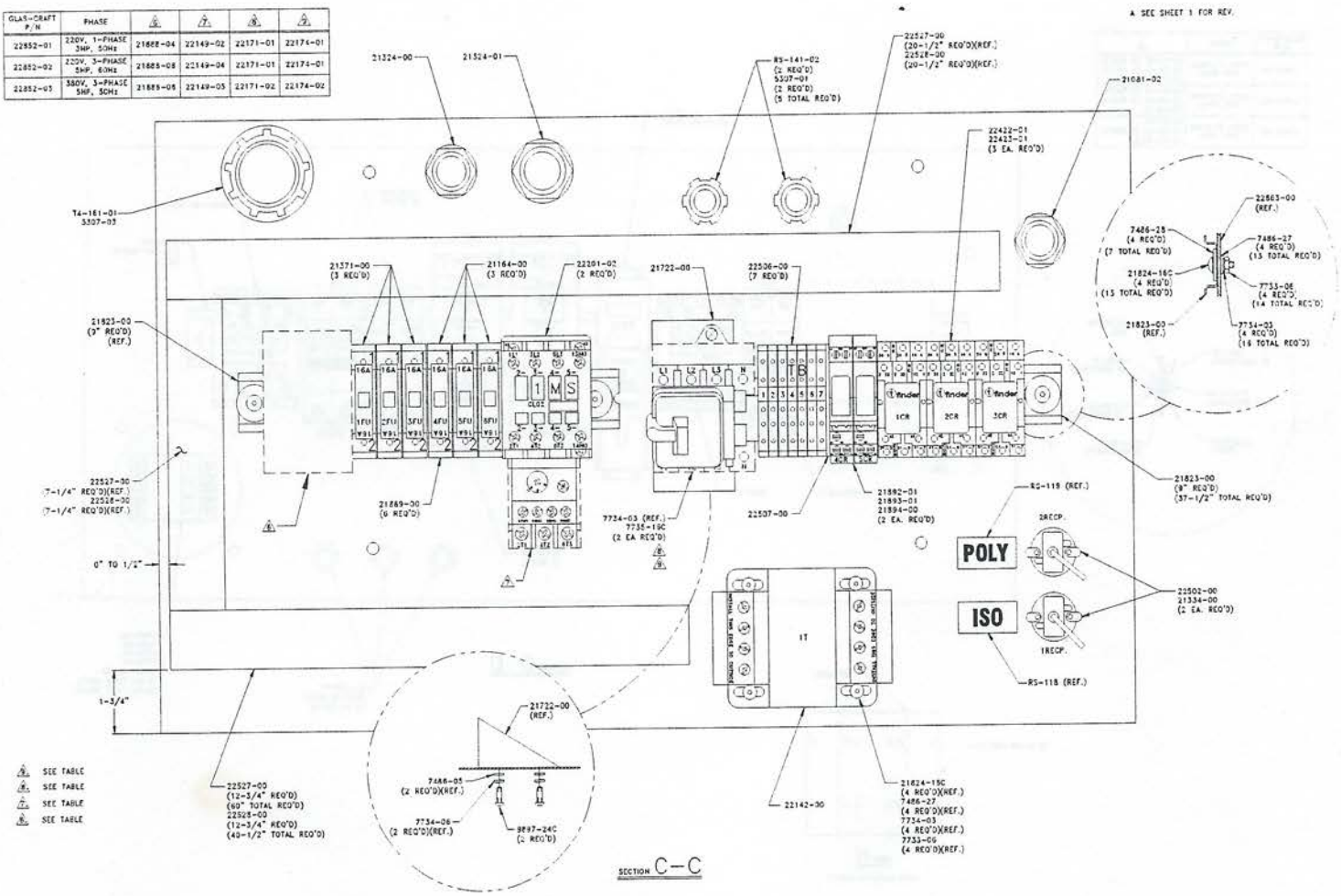
DETAIL E

22852-XX MH II CONTROL BOX ASSEMBLY



22852-XX MH II CONTROL BOX DETAILS

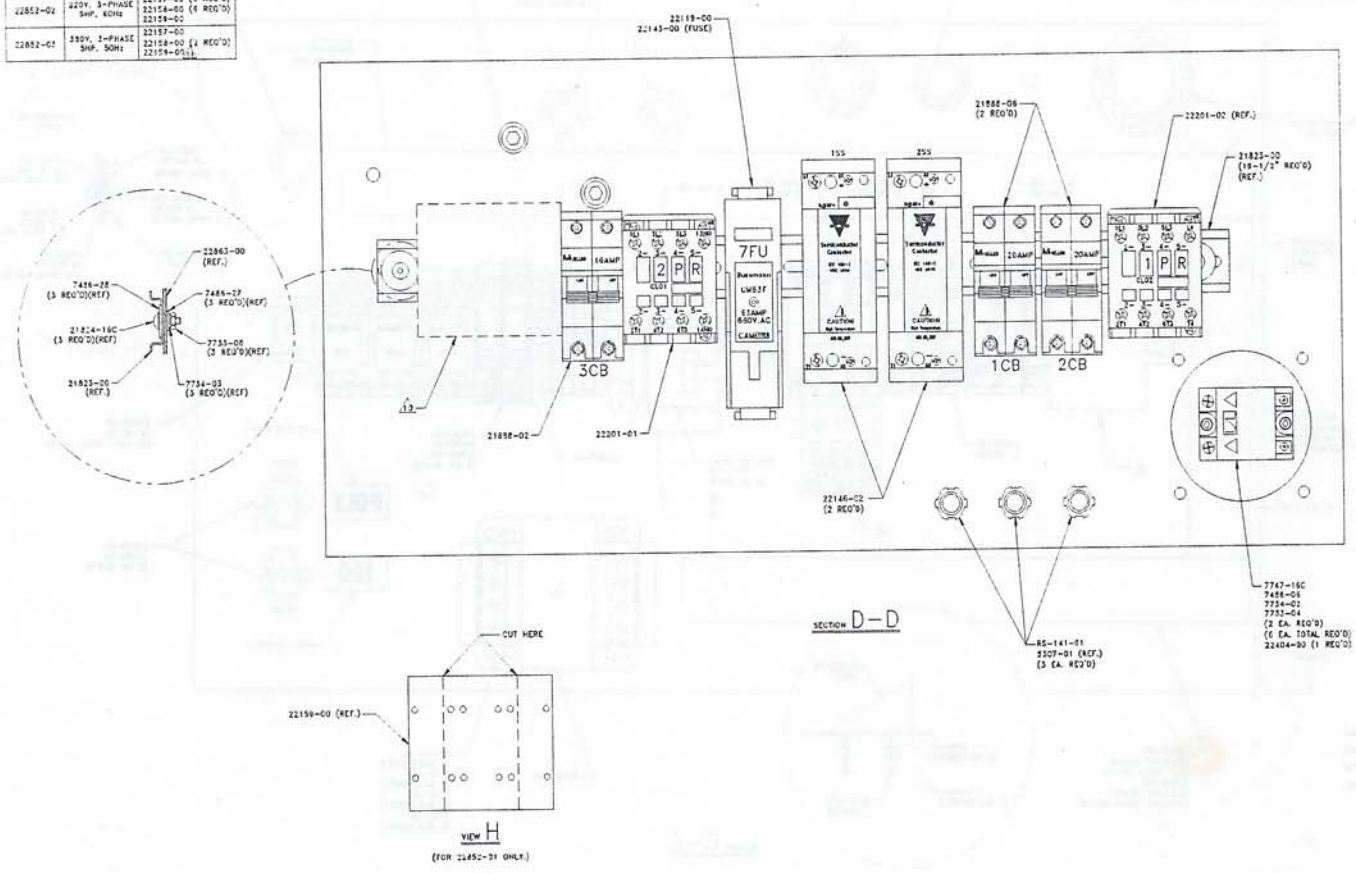
GLAS-CRAFT P/N	PHASE	4	1	3	2
22852-01	220V, 1-PHASE 3HP, 50Hz	21882-04	22149-02	22171-01	22174-01
22852-02	220V, 3-PHASE 5HP, 60Hz	21883-05	22149-04	22171-01	22174-01
22852-03	380V, 3-PHASE 5HP, 50Hz	21889-05	22149-05	22171-02	22174-02



4. SEE TABLE
5. SEE TABLE
7. SEE TABLE
8. SEE TABLE

22852-XX MH II CONTROL BOX DETAILS

GLAS-CRAFT P/N	PHASE	13
22852-01	220V, 1-PHASE 3HP, 50Hz	22157-00 (2 REQ'D) 22154-00 (4 REQ'D) 22159-00
22852-02	220V, 3-PHASE 5HP, 60Hz	22157-00 (3 REQ'D) 22154-00 (5 REQ'D) 22159-00
22852-03	380V, 3-PHASE 5HP, 50Hz	22157-00 22154-00 (4 REQ'D) 22159-00

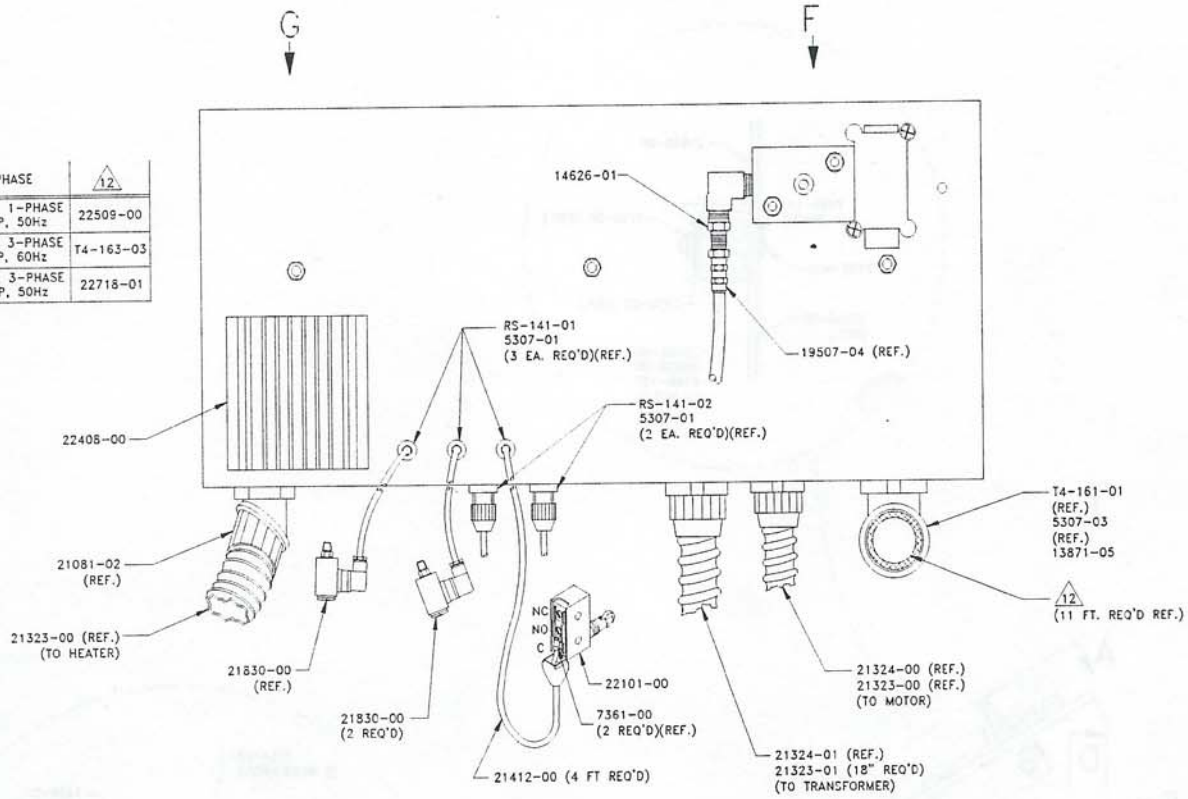


SECTION D-D

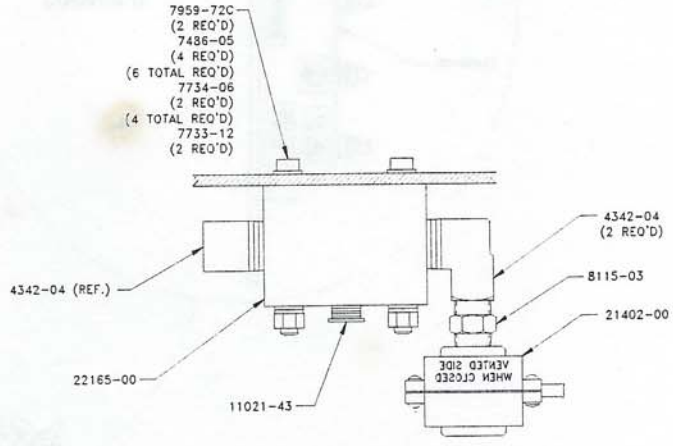
VIEW H
(FOR 22852-01 ONLY.)

22852-XX MH II CONTROL BOX DETAILS

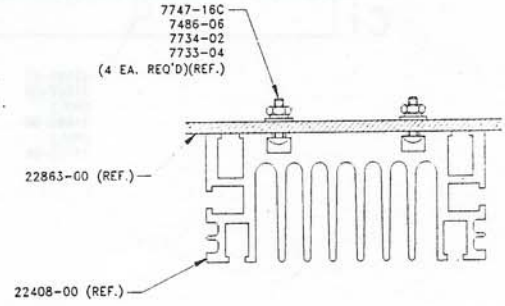
GLAS-CRAFT P/N	PHASE	△12.
22852-01	220V, 1-PHASE 3HP, 50Hz	22509-00
22852-02	220V, 3-PHASE 5HP, 60Hz	T4-163-03
22852-03	380V, 3-PHASE 5HP, 50Hz	22718-01



VIEW E

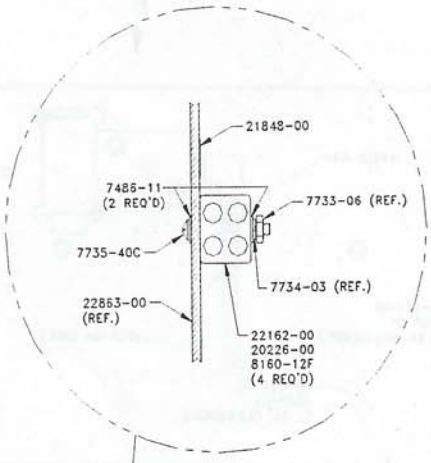


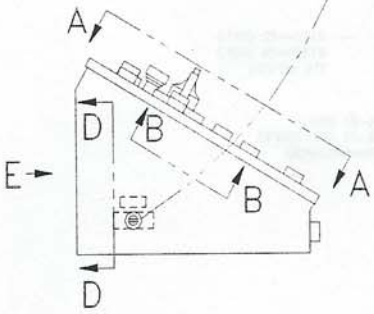
VIEW F

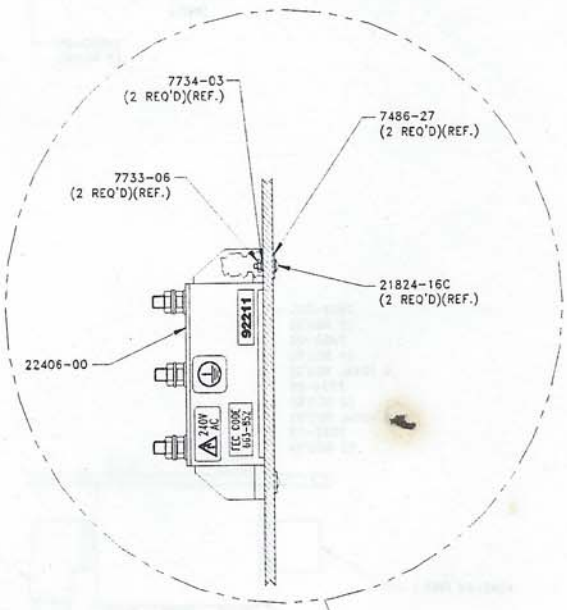


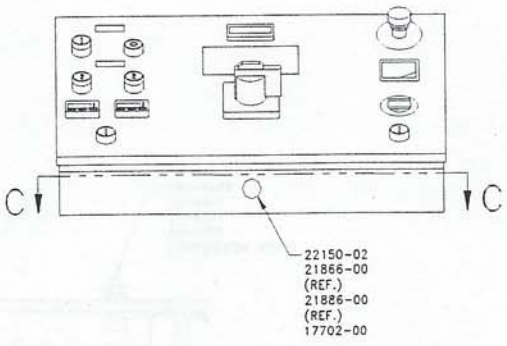
VIEW G

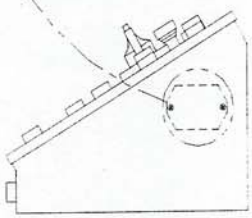
22852-XX MH II CONTROL BOX DETAILS











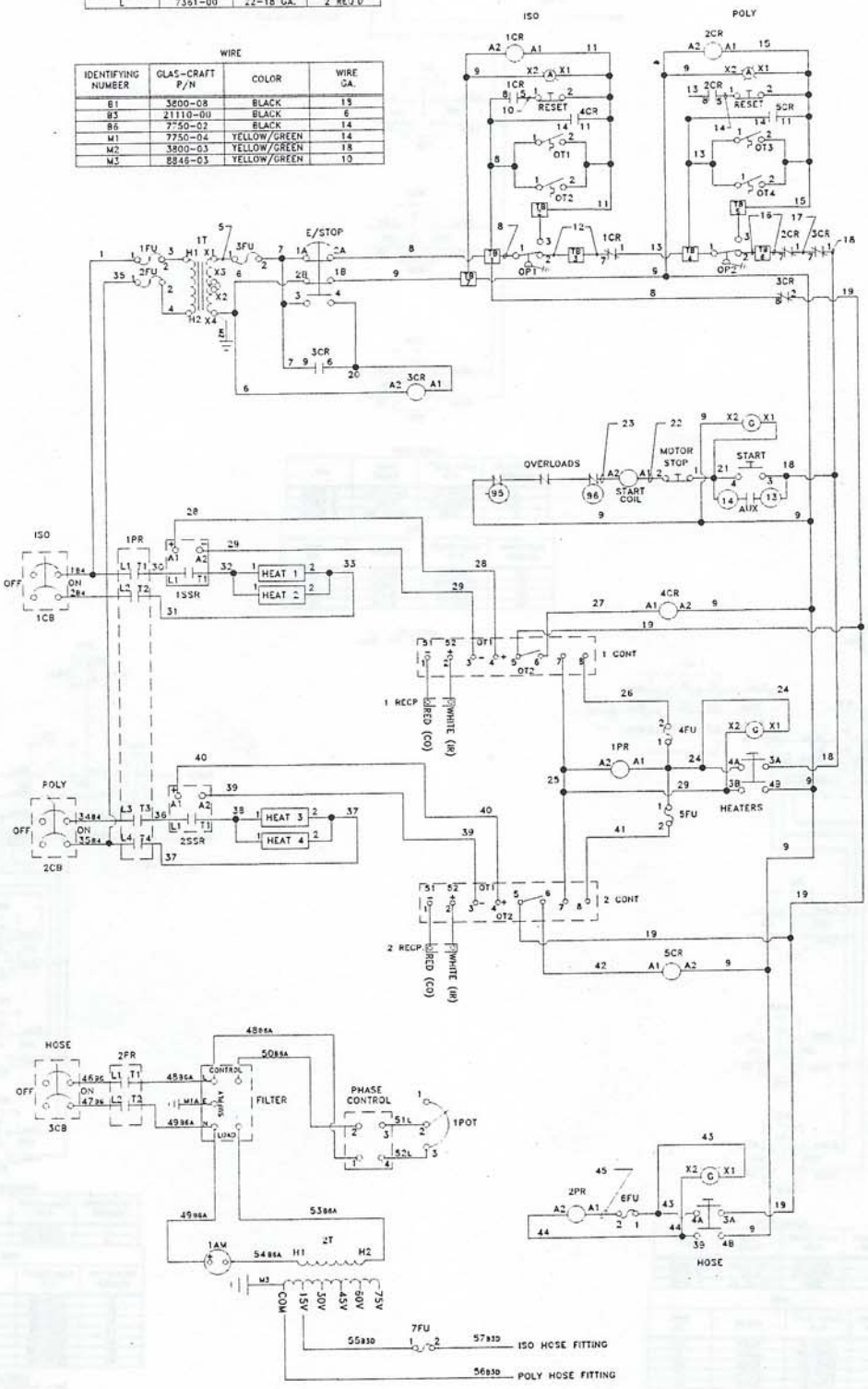
22852-XX MH II SYSTEM SCHEMATIC

CONNECTORS

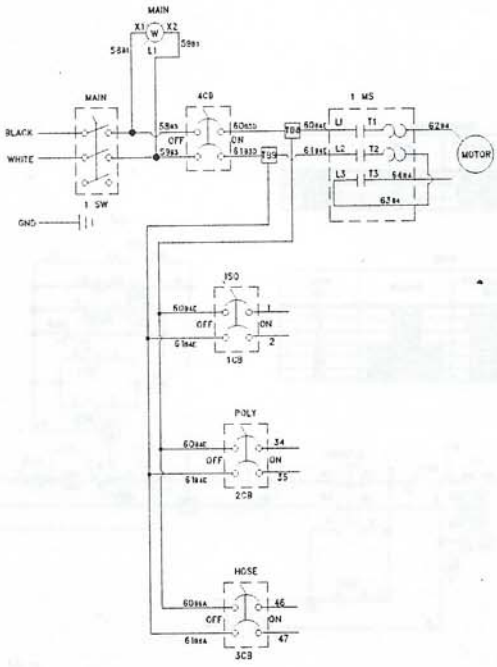
IDENTIFYING NUMBER	GLAS-CRAFT P/N	WIRE RANGE	QTY.
A	6663-00	16-14 GA.	13 REQ'D
O	21150-00	6 GA.	4 REQ'D
L	7361-00	22-18 GA.	2 REQ'D

WIRE

IDENTIFYING NUMBER	GLAS-CRAFT P/N	COLOR	WIRE GA.
B1	3800-08	BLACK	18
B3	21110-00	BLACK	6
B6	7750-02	BLACK	14
M1	7750-04	YELLOW/GREEN	14
M2	3800-03	YELLOW/GREEN	18
M3	8846-03	YELLOW/GREEN	10



22852-XX MH II SCHEMATIC VARIATIONS



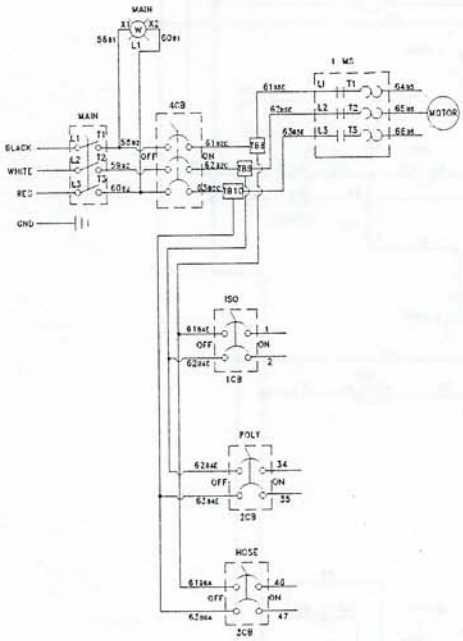
CONNECTORS

IDENTIFYING NUMBER	GLAS-CRAFT P/N	WIRE RANGE	QTY.
A	6663-00	16-14 GA.	2 REQ'D
D	21150-00	8 GA.	2 REQ'D
E	3201	10-12 GA.	6 REQ'D

WIRE

IDENTIFYING NUMBER	GLAS-CRAFT P/N	COLOR	WIRE GA.
B1	3600-08	BLACK	18
B3	21110-00	BLACK	8
B4	8846-08	BLACK	10
B6	7750-02	BLACK	14

22852-01
220V, 1-PHASE, 3HP, 50Hz



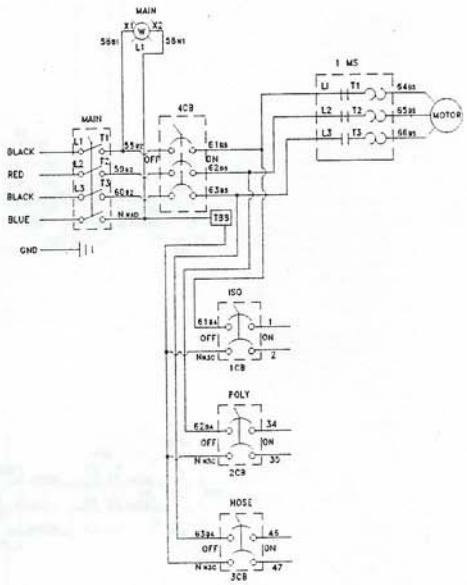
CONNECTORS

IDENTIFYING NUMBER	GLAS-CRAFT P/N	WIRE RANGE	QTY.
A	6663-00	16-14 GA.	2 REQ'D
C	19510-01	8 GA.	3 REQ'D
E	3201	10-12 GA.	7 REQ'D

WIRE

IDENTIFYING NUMBER	GLAS-CRAFT P/N	COLOR	WIRE GA.
B1	3600-08	BLACK	18
B2	17681-08	BLACK	8
B4	8846-08	BLACK	10
B5	8847-08	BLACK	12
B6	7750-02	BLACK	14

22852-02
220V, 3-PHASE, 5HP, 60Hz



CONNECTORS

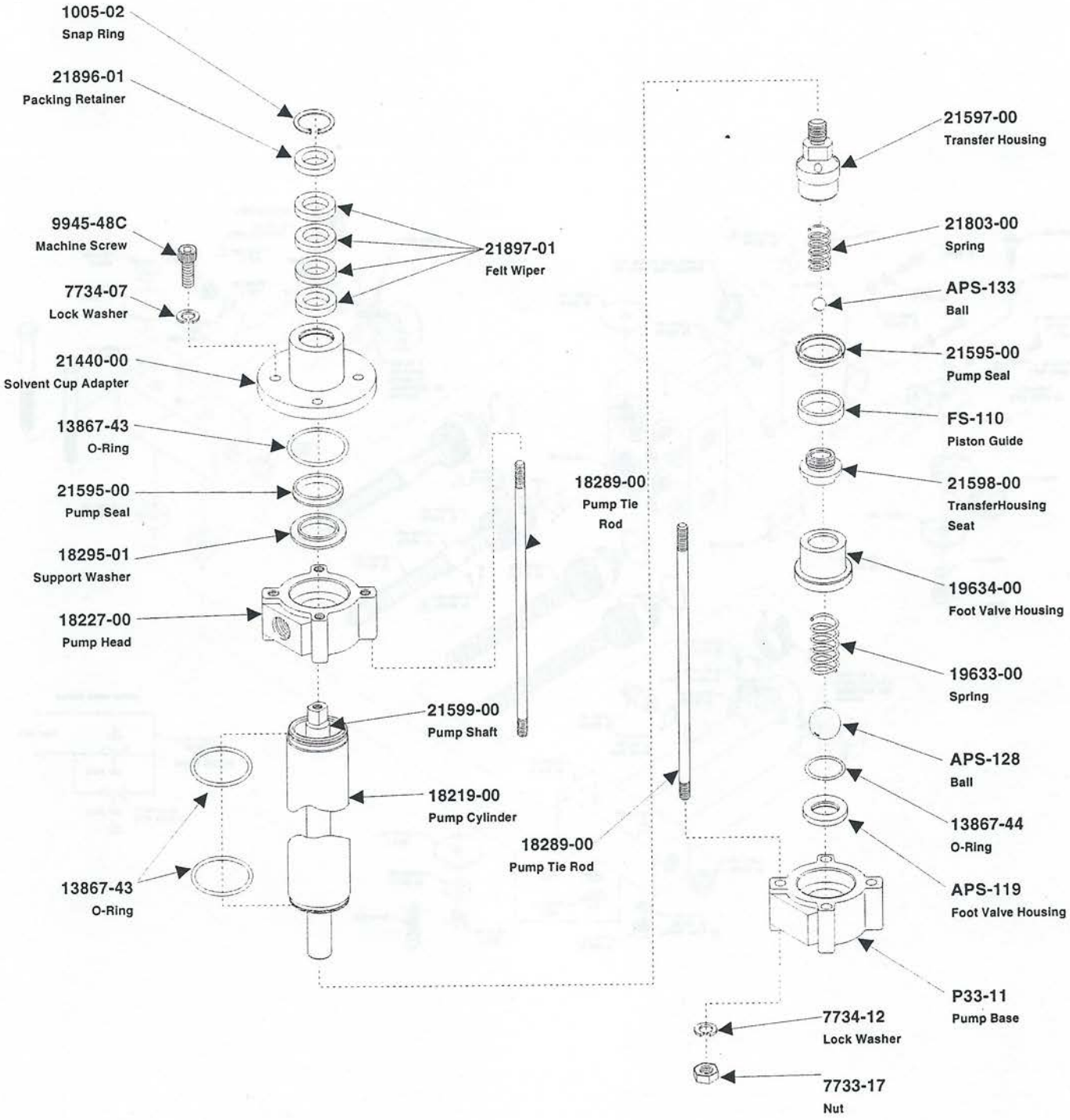
IDENTIFYING NUMBER	GLAS-CRAFT P/N	WIRE RANGE	QTY.
C	19510-01	8 GA.	3 REQ'D
D	21150-00	6 GA.	1 REQ'D

WIRE

IDENTIFYING NUMBER	GLAS-CRAFT P/N	COLOR	WIRE GA.
B1	3600-08	BLACK	18
B2	17681-08	BLACK	8
B4	8846-08	BLACK	10
B5	8847-08	BLACK	12
N1	22166-18	BLUE	18
N3	22166-08	BLUE	08
N4	22166-06	BLUE	06

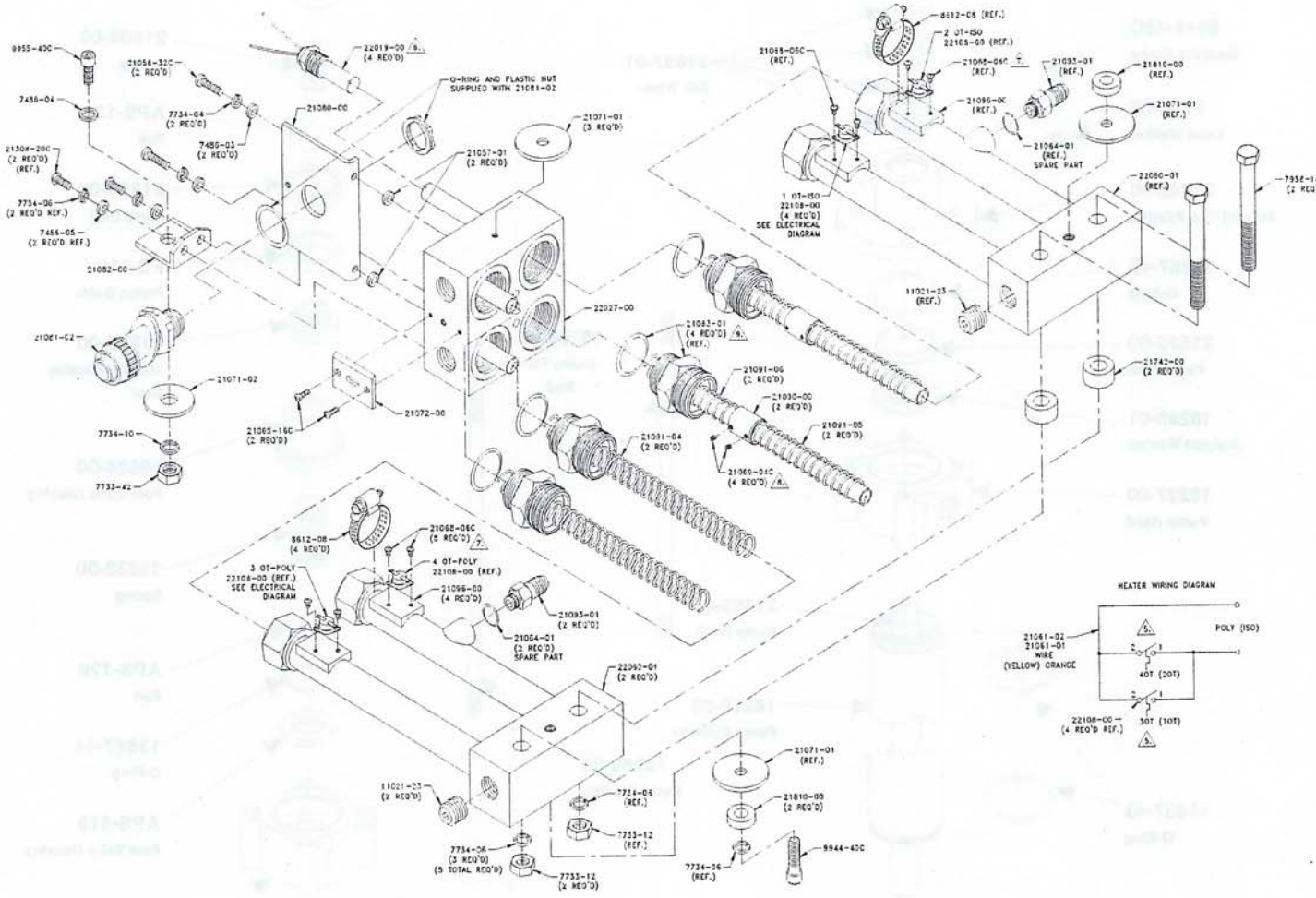
22852-03
380V, 3-PHASE, 5HP, 50Hz

21835-00 FLUID SECTION ASSEMBLY

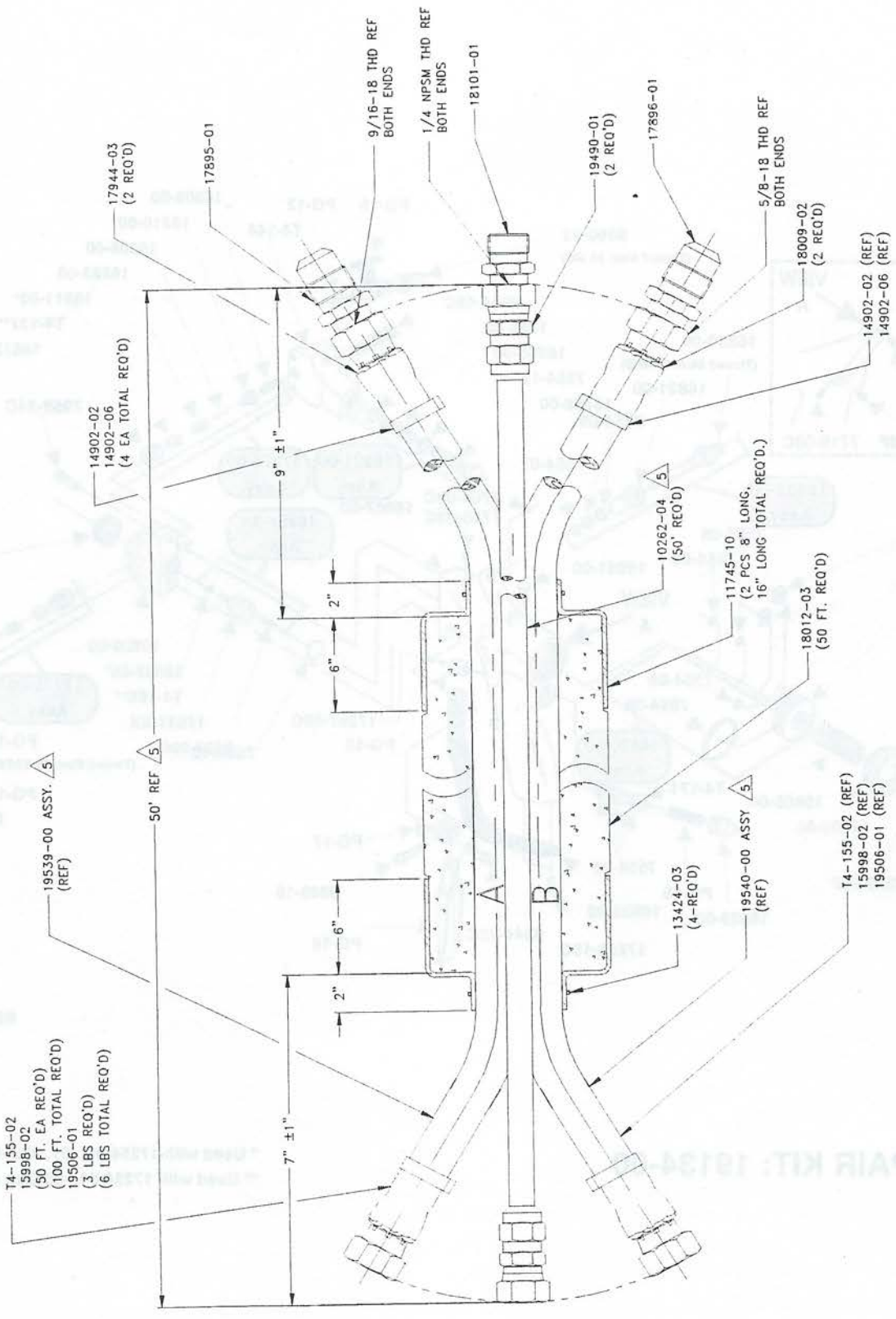


REPAIR KIT: 21845-00

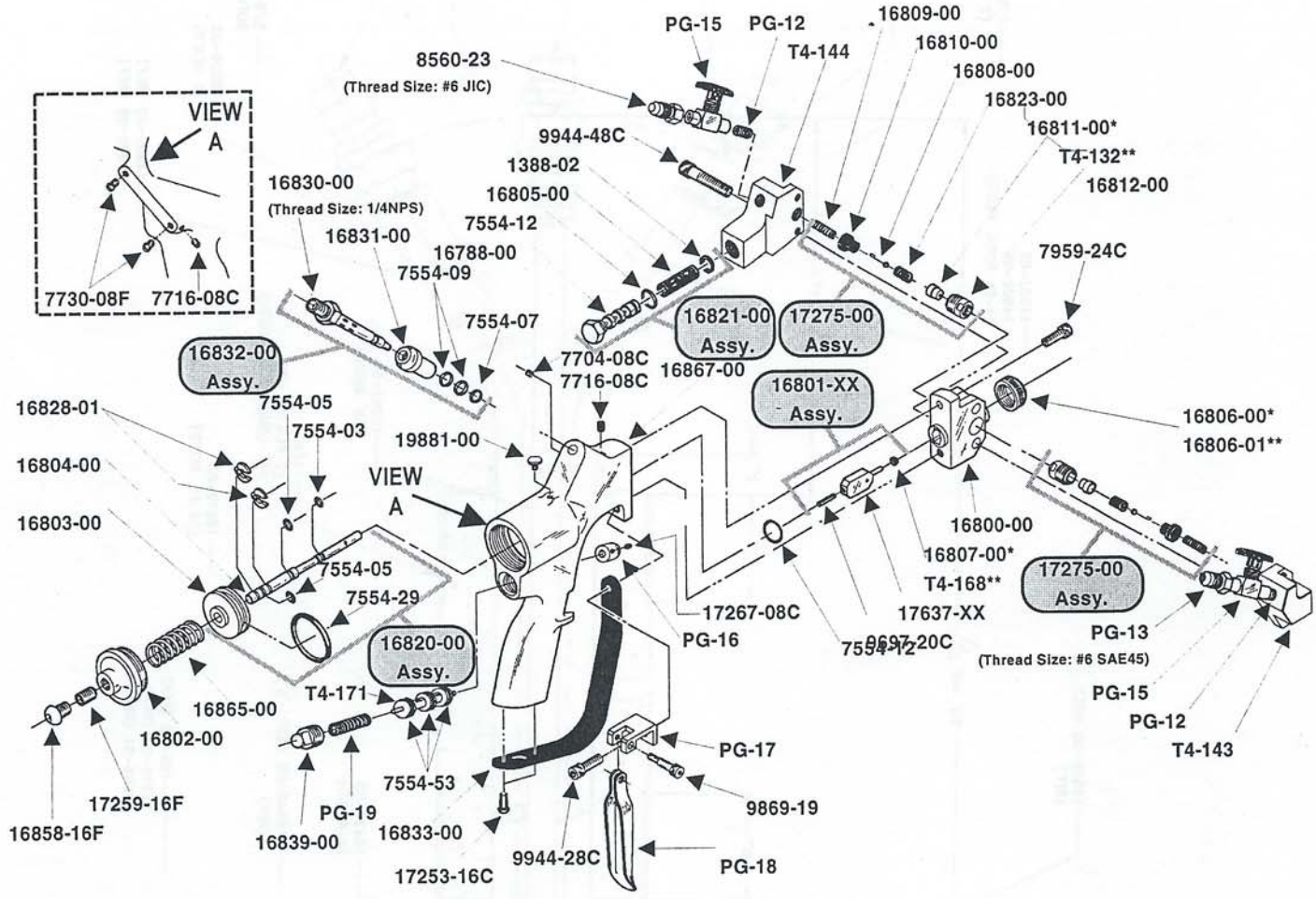
22075-00 DUAL HEAT EXCHANGER ASSEMBLY



19524-00 MANUAL HOSE ASSEMBLY



17254-02 PROBLER SPRAY GUN



REVISED 1/97

REPAIR KIT: 19134-00

* Used with 17254-00, -01, -02, -03 Gun Assembly

** Used with 17254-04, -05 Gun Assembly

INSPECTION REPORT

Glas-Craft®

FOAM EQUIPMENT

☐ Micro	☐ Maxi	☐ Mini II
☐ Mini III	☐ MX	☐ MX II
☐ MH	☐ MH II	☐ Mongoose

Part No. _____ Inspected By _____

Serial No. _____ Inspection Date ___/___/___

☐ NEW ☐ REPAIR ☐ RETURN

VISUAL INSPECTION

	N/A	Accept	Reject		N/A	Accept	Reject
Appearance	☐	☐	☐	Fluid Filters	☐	☐	☐
Visual Leakage	☐	☐	☐	Power Cord	☐	☐	☐

FUNCTIONAL TESTS

	N/A	Accept	Reject
Smoothness of Pump Operation	☐	☐	☐
Pump Output Pressure	☐	☐	☐
Pump Dead-Head Pressure	☐	☐	☐
Electrical Wiring & Connections	☐	☐	☐
Electrical Control Functions	☐	☐	☐
Heater Operation	☐	☐	☐
Air Connections	☐	☐	☐
Over Pressure Sensors	☐	☐	☐

☐ Service Manual ☐ Literature

Quality and Performance...
GENUINE GLAS-CRAFT

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E-MAIL gciad@glascraft.com

GC-1267
REVISED MAY 2000

OPERATOR'S MANUAL 67254

INCLUDING: SPECIFICATIONS, SERVICE KIT, GENERAL INFORMATION, PARTS, TROUBLESHOOTING

RELEASED: 12-21-06
REVISED: 10-22-09
(REV. H)

2.062 SQ." MOTOR
65 - 1200 P.S.I. RANGE

67254 HYDRAULIC POWER MOTOR

READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- **637315 Pump Rebuild Kit.** Includes the necessary soft parts for normal service of the entire pump.

SPECIFICATIONS

Model	67254
Type	Hydraulic Operated Power Motor
Motor Size	2.062 sq." (13.3 sq. cm)
Stroke	4" (101.6 mm)
Hydraulic Inlet ⁘ (female)	3/8 - 18 N.P.T.F. - 1
Hydraulic Outlet ⁙ (female)	1/2 - 14 N.P.T.F. - 2
Pump Construction	Carbon Steel
Height Dimension "A"	18-1/16" (458 mm)
Dimension "B"	14-3/8" (365 mm)
Dimension "C" (weep hole)	1/8 - 27 N.P.T.
Motor Diameter	5-1/8" (130 mm)
Maximum Temperature limit	130° F (54° C)
Mounting Bracket available	93351-1
Weight	20.3 lbs (9.20 kgs)

PERFORMANCE

Inlet Pressure Range	65 - 1200 p.s.i. (4.5 - 82.8 bar)
Required H-power @ 50 c.p.m.	3.2 @ 1200 (82.8 bar)
Hydraulic Flow required @ 50 c.p.m.	4.9 g.p.m. (18.5 l.p.m.)
Maximum Thrust Generated	2474 lbs
Maximum rec'd Cycles / Minute	50
Noise Level	N/A

GENERAL DESCRIPTION

The 2.062 square inch hydraulic motor is a general purpose power unit and is used on many ARO Industrial 2-ball, 4-ball and Chop-Check pumps. It utilizes tie rod type construction for serviceability and connects to the various lower pump ends by tie rods.

Due to frictional losses in the system, a greater horsepower is required to run the motor. Power supplies generating less than shown as required in the Performance Specifications above will work with the motor but at a reduced pressure or cycle rate.

PUMP DATA

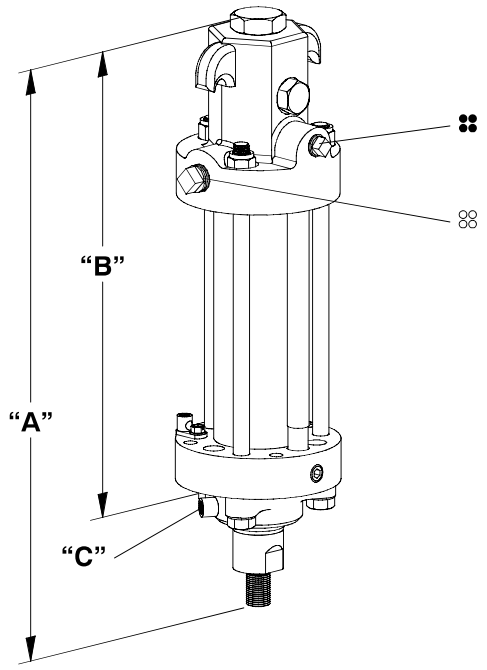


Figure 1

OPERATING AND SAFETY PRECAUTIONS

⚠WARNING READ THE GENERAL INFORMATION MANUAL INCLUDED FOR ADDITIONAL OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

⚠WARNING EXCESSIVE MATERIAL PRESSURE. Can cause equipment failure resulting in severe injury or property damage. Do not exceed the maximum material pressure of any component in the system.

⚠WARNING A pressure relief valve must be used to prevent over pressurization of the system and possible component rupture.

⚠WARNING Excessive hydraulic oil temperature can cause fire. Unit rated for operation up to 130° F (54° C). Be sure return lines are sized larger than supply lines and similarly pressure rated.

INGERSOLL RAND COMPANY LTD
P.O. BOX 151 • ONE ARO CENTER • BRYAN, OHIO 43506-0151
(800) 276-4658 • FAX (800) 266-7016

CCN 99892556

ARO

Ingersoll Rand
Industrial Technologies

HYDRAULIC MOTOR PARTS LIST / 67254

Item	Description (size)	Qty	Part No.
1	Top Plug	(1)	94549
✓ 2	"O" Ring (3/32" x 1-3/16" o.d.)	(1)	Y330-120
✓ 3	Nut (1/4" - 28)	(3)	94794
4a	Spool	(1)	94551
4b	Sleeve	(1)	94552
✓ 5	Ball (0.3750" diameter)	(2)	Y16-12
✓ 6	Plug Spring	(2)	96611
✓ 7	"O" Ring (3/32" x 11/16" o.d.)	(2)	Y330-112
8	Trip Plug	(2)	94550
9	Cylinder Head	(1)	94547
✓ 10	"O" Ring (3/32" x 2-5/16" o.d.)	(2)	Y330-138
11	Sleeve Washer	(1)	94553
12	Retaining Ring	(1)	Y147-18
13	"O" Ring (3/32" x 1-3/4" o.d.)	(3)	Y330-129
14	Piston Screw	(1)	94555
15	Piston	(1)	94556
✓ 16	Wear Ring	(1)	94571
✓ 17	"O" Ring (0.210" x 2.360" o.d.)	(1)	94570
18	Trip Rod	(1)	95249
19	Trip Washer	(2)	94560
20	Trip Spring	(1)	94558
21	"O" Ring (1/16" x 1-5/8" o.d.)	(1)	Y325-29
22	Piston Rod	(1)	94561
23	Cylinder Tube	(1)	94564
24	"O" Ring (3/32" x 1-3/8" o.d.)	(1)	Y330-123
25	Piston Rod Adaptor	(1)	95248
26	Motor Base	(1)	94548
27	Pipe Plug (1/4 - 18 N.P.T.F.)	(1)	Y227-3-L
✓ 28	Polypack Rod Seal	(1)	94566
29	Bushing	(1)	94568
✓ 30	Wiper	(1)	94567
31	Bushing Retainer	(1)	94569
✓ 32	"O" Ring (1/16" x 5/8" o.d.)	(2)	Y330-14
✓ 33	Back-up Ring	(2)	Y118-14
34	Hydraulic Tube	(1)	94563
35	Washer (33/64" i.d. x 7/8" o.d. x 1/16")	(6)	F15-27-C
36	Bolt (1/2" - 20 x 11-1/2")	(3)	94046-3
37	Nut (1/2" - 20)	(3)	Y108-28-C
38	Spacer	(1)	94788
39	Ground Lug	(1)	93004
40	Self-Tapping Screw (1/4" - 14 x 1/2")	(1)	Y334-104-C
41	Pipe Plug (3/8 - 18 N.P.T.)	(1)	Y17-12-C
42	Pipe Plug (1/2 - 14 N.P.T.)	(1)	Y17-13-C
	Temperature Label (not shown)	(1)	94574
	Cap Screw (5/8" - 18 x 3")(not shown)	(3)	95250
	Spacer (not shown)	(3)	95251
	Plate (not shown)	(1)	95252
	Male Elbow (1/4" o.d. tube)(not shown)	(1)	59756-56
✓	Included in Service Kit		637315

OPERATING AND SAFETY PRECAUTIONS

⚠WARNING Never service or disassemble the unit or unit components without relieving hydraulic system pressure first. The high pressures involved could cause serious injury.

NOTE: If this pump was purchased separately (not part of a system), consult your sales representative for compatible dispensing accessories which will best match the application. All accessories must be able to withstand the maximum pressure developed by the pump. Replacement warning label is available upon request, pn \ 94576.

INSTALLATION

Use only flexible tubing for inlet and outlet porting to hydraulic source to prevent wear of components.

Be sure return lines are sized larger than supply lines and similarly pressure rated.

Inspect the system hoses frequently for wear or damage and if necessary replace them immediately. Never plug hose leaks with your finger, tape or any similar devices.

SERVICE

NOTE: The 67254 hydraulic motor will contain about one pint of hydraulic fluid. Drain this fluid before attempting any disassembly.

NOTE: Do not disassemble this motor except in a clean area. Any dust or dirt contamination of this assembly will shorten the service life of this motor and other system components.

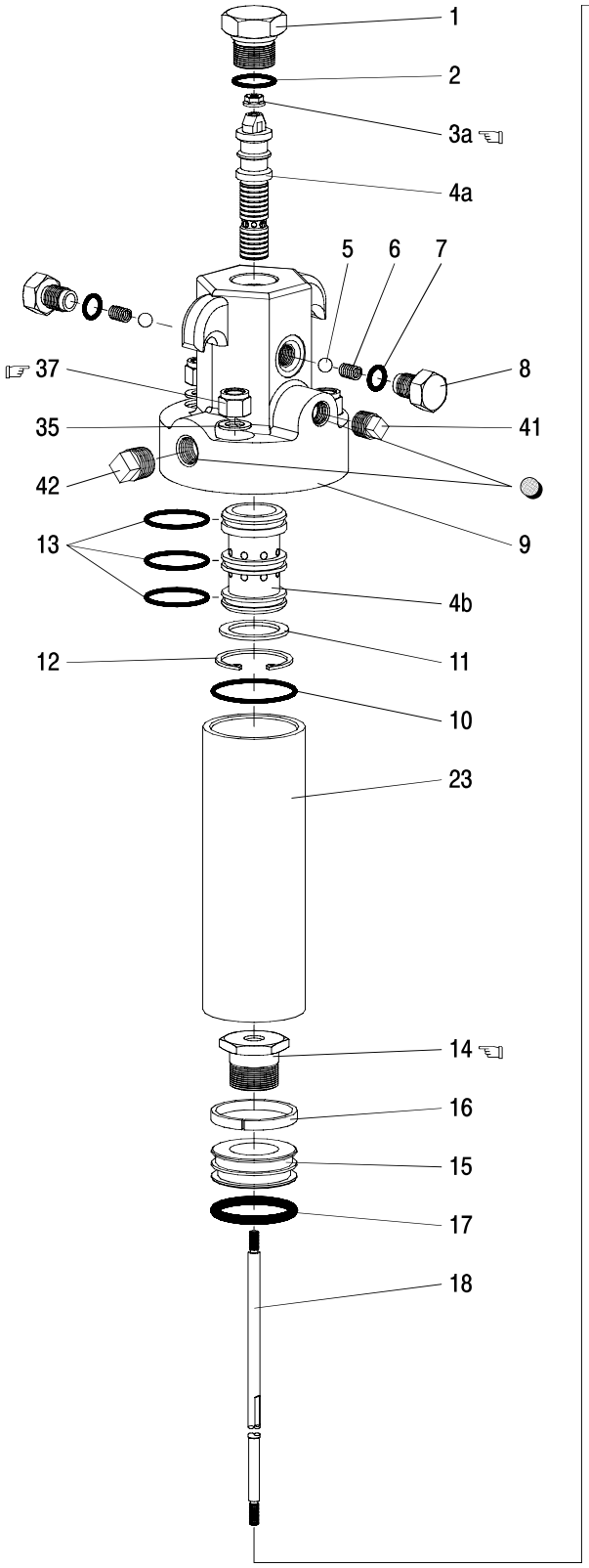
NOTE: All power supply pumps should have a ten micron filter on the return line and a 100 mesh filter on the inlet. Failure to maintain filters will shorten service life of this motor and other system components.

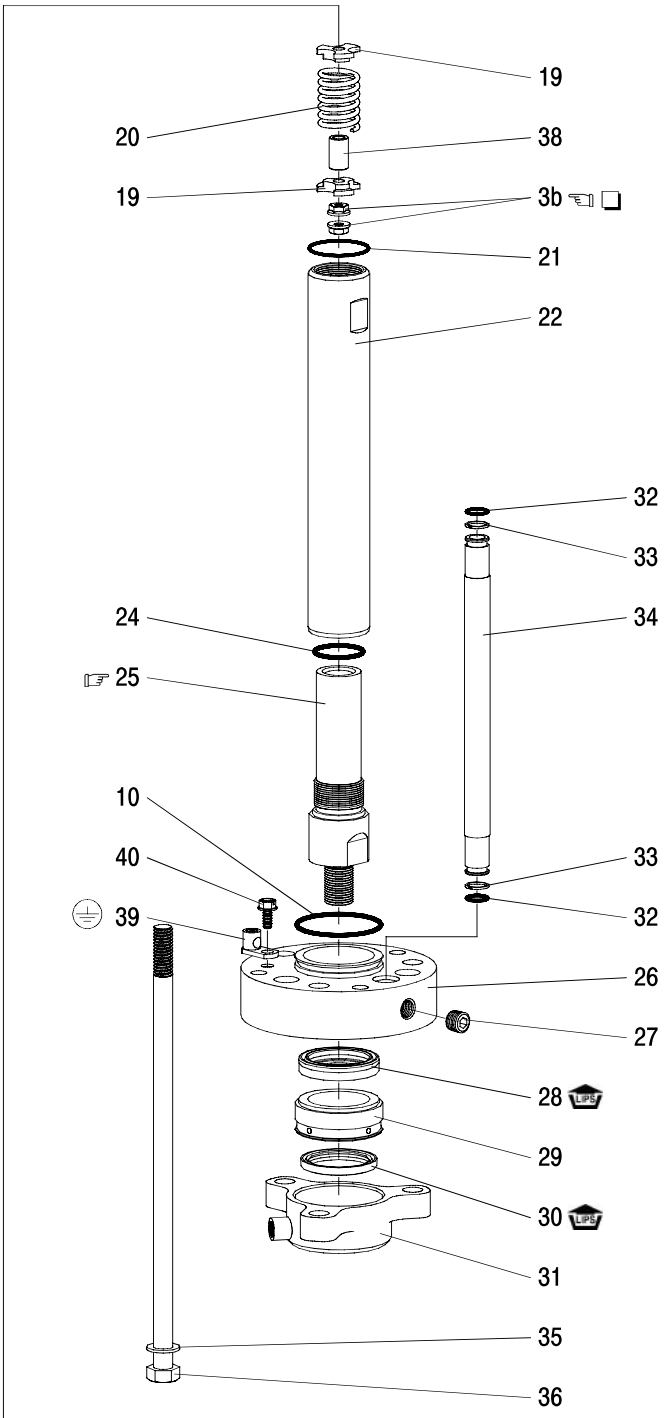
DISASSEMBLY / REASSEMBLY

DISASSEMBLY

All threads are right hand. Refer to figure 2 (page 3). These procedures are for the installation of repair kit parts. Disconnect power supply and relieve all system pressure prior to servicing. Carefully remove the parts, inspect parts for damage, nicks or excessive wear and determine if any parts will need replacement.

1. Remove (1) top plug and remove (2) "O" ring.
2. Remove (8) trip plug and remove (5) ball, (6) plug spring and (7) "O" ring.
3. Move piston rod to the fully retracted position and pull (4a) spool out of (4b) sleeve through the top.
4. Using the flats on (18) trip rod, remove and discard (3a) nut. **DO NOT REUSE.** The trip rod wrench flats are only accessible thru the port holes that retain the (8) trip plug. This will require a narrow width open-end wrench. **Note: Be very careful when removing the spool from the valve. The finish of this part is critical for proper motor performance. Any nicks, scratches or dirt may damage the set.**
5. Remove (37) tie rod nuts and (35) washers.
6. Slide (31) bushing retainer, (29) bushing and (30) wiper off (22) piston rod and (25) piston rod adaptor.
7. Clamp (9) cylinder head and remove (26) motor base by tapping with a soft hammer, then remove (10) "O" ring and (28) Polypack rod seal.
8. Remove (34) hydraulic tube from (9) cylinder head and remove (32) "O" rings and (33) back-up rings.
9. Remove (22) piston rod assembly and cylinder from (9) cylinder head and remove (10) "O" ring.
10. Separate (22, 17, 21, 16, 15, 14) piston rod assembly from (23) cylinder.
11. Remove (17) "O" ring and (16) wear ring from (15) piston.
12. If further disassembly is required, such as removal of (22) piston rod, (4) valve assembly, or (38, 20, 19, 18) shifter assembly, see next section (order "O" rings separately).





TORQUE REQUIREMENTS
(3a), (3b) 90 - 110 in. lbs (10.2 - 12.4 Nm).
(14), (25) 100 - 120 ft lbs (135.6 - 162.7 Nm).
(37) 44 - 56 ft lbs (59.7 - 75.9 Nm).

❑ See reassembly instruction step #5.
Apply Loctite® 571 pipe thread sealant or equivalent.

Figure 2

DISASSEMBLY / REASSEMBLY (continued)

Removal of (4) Sleeve and Spool Assembly.

13. Remove (12) retaining ring and (11) sleeve washer from (9) cylinder head. Push the sleeve carefully down through the (9) cylinder head using a soft faced tool.
    Note: The finish of the upper face of the sleeve is critical for intended operation. Any nicks or scratches may damage the entire (4) assembly.

Removal of (22) Piston Rod.

14. Place the (22, 21, 17, 16, 15, 14) piston rod assembly in a vertical position with the (25) piston rod adaptor in a heavy vise.
    Note: Never clamp on the (22) piston rod.
15. Grip the flats on the (14) piston screw and unthread.
16. Remove (21) "O" ring from (22) piston rod.
17. Remove the (18, 19, 20, 38) trip rod assembly.
18. Using the flats on the (18) rod, remove and discard the two (3b) nuts. **DO NOT REUSE.**

REASSEMBLY

Thoroughly clean and lubricate all seals. Replace all soft parts with new ones included in the repair kit.

1. Install (28) rod seal and (10) "O" ring into (26) motor base.
2. Install (30) wiper into (31) bushing retainer and slip in (29) bushing.
3. Slide (25, 22) piston rod assembly into (26) motor base and retainer assembly from #2 from above.
4. Insert (21) "O" ring onto (22) piston rod and place (15) piston on it.
5. Assemble (19) retainer, (20) trip spring, (38) spacer and (19) retainer to trip rod, securing with one (3b) nut. **NOTE: Orient the two (3b) nuts such that the flanges are facing each other.** NOTE: (3b) nut to be hand tight. While holding (18) trip rod on flats, assemble (3b) nut to (18) trip rod and tighten to 90 - 110 in. lbs (10.2 - 12.4 Nm).
6. Place (18, 19, 20, 38, 3b) shifter assembly into (22) piston rod and thread (14) piston screw into (22) piston rod.
7. Torque (14) piston screw to 100 - 120 ft lb (135.6 - 162.7) with (25) piston rod adaptor in a heavy vise.
8. Put (17) "O" ring and (16) wear ring on (15) piston.
9. Push (22) piston rod to fully extended position and place (23) cylinder tube over the piston assembly.
10. Seat the (23) cylinder tube onto the motor base. Note: Petroleum jelly is recommended for ease of assembly on all "O" rings and inside the cylinder.
11. Replace the three (13) "O" rings on (4b) valve sleeve.
12. Push (4b) valve sleeve / spool set straight into (9) cylinder head.
13. Place (11) sleeve washer behind (4b) valve sleeve and retain this with (12) retaining ring.
14. Put two (33) back-up rings and two (32) "O" rings onto (34) hydraulic tube with back-up rings on the hydraulic tube first.
15. Push tube assembly (34, 33, 32) into (26) motor base.
16. Place (10) "O" ring on (9) cylinder head, lower (9) cylinder head onto the (23) cylinder tube and (34) hydraulic tube with the (18) trip rod through the center of the valve.
17. Feed (36) bolts and (35) washers through (31) bushing retainer and apply (35) washers and (37) nuts to the bolts. Tighten fastener alternately and apply 44 - 56 ft lb (59.7 - 75.9 Nm). Note: Must alternately rundown fasteners to prevent cutting the (10) "O" rings.
18. Move piston to retracted position.
19. Pull (18) trip rod through the head and place the (4a) spool on the trip rod. Using the (3a) nut and the trip rod flats, tighten the (3a) nut to 90 - 110 in. lb (10.2 - 12.4 Nm).
20. Carefully push the spool / trip rod into the sleeve, creating the (4) valve.
21. Place (2) "O" ring on (1) top plug and tighten in (9) cylinder head.
22. Place (7) "O" ring on (8) trip plug. Place (5) ball in (9) cylinder head and (6) plug spring in (8) trip plug.
23. Thread the (8) trip plug into the (9) cylinder head.

TROUBLE SHOOTING

If the pump will not cycle or will not deliver material.

- Be certain to check for non-pump problems including kinked, restrictive or plugged inlet / outlet hose or dispensing device. Depressurize the pump system and clean out any obstructions in the inlet / outlet material lines.
- Check all seals, including track gaskets.
- Check direction of "U" cup lips.

Motor is running beyond recommended temperature operating conditions.

- Hydraulic oil cooling system is not working.
- Piston seals are worn, replace seals.

Leakage from weep hole in retainer.

- Detection of rod seal wear, when the amount this exceeds 5 cc / day, replace wiper and rod seal.
- Preventive maintenance issue, consult your factory for recommendations.

Motor stalls at fully retracted or extended position.

- Insufficient pressure to motor (65 p.s.i. / 4.5 bar minimum).
- Springs need to be replaced.
- Valve is damaged, service hydraulic motor.

TYPICAL CROSS SECTION

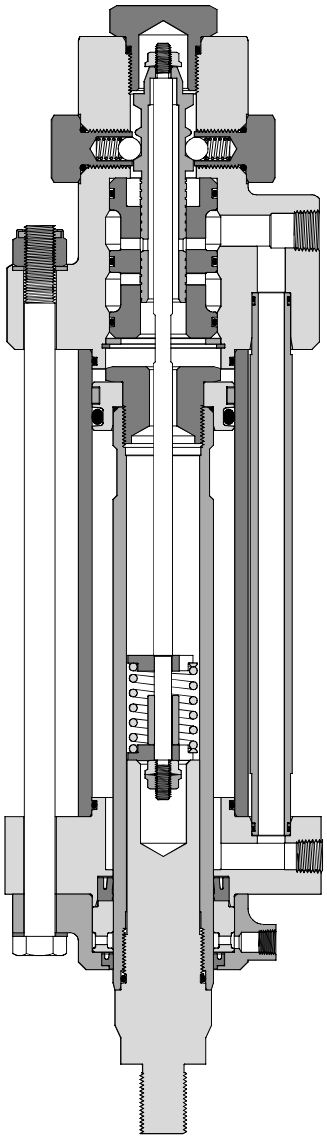


Figure 3