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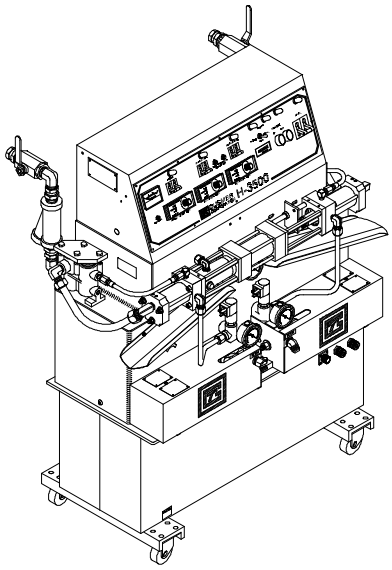
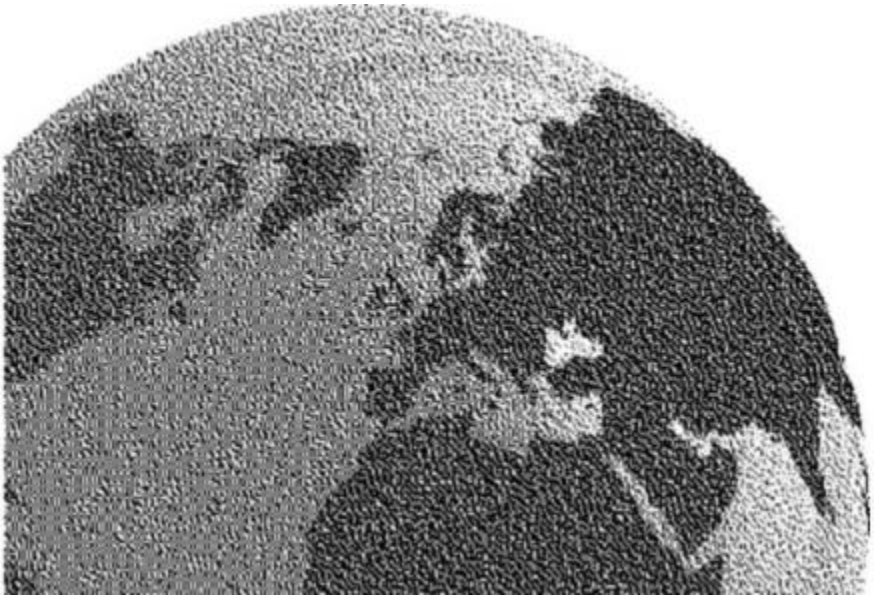


Model H-3500 Proportioning Unit

Parts Identification Manual 15942-ID-35



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GUSMER CORPORATION ®

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NOTICE:

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WARRANTY

GUSMER provides a limited warranty to the original purchaser (Customer) of GUSMER manufactured parts and equipment (Product) against any defects in material or workmanship for a period of one year from the date of shipment from GUSMER facilities.

In the event Product is suspected to be defective in material or workmanship, it must be returned to GUSMER, freight prepaid. If Product is found to be defective in material or workmanship, as determined solely by GUSMER, GUSMER will issue full credit to Customer for the freight charges incurred in returning the defective Product, and either credit will be issued for the replacement cost of the Product or a replacement part will be forwarded no-charge, freight prepaid to Customer.

This warranty shall not apply to Product GUSMER finds to be defective resulting from: installation, use, maintenance, or procedures not accomplished in accordance with our instructions; normal wear; accident; negligence; alterations not authorized in writing by GUSMER; or Product used in conjunction with any other manufacturer's pumping or proportioning equipment. Further, the terms and conditions of this warranty shall not apply to services or repairs made to Product by any third party not authorized in writing by GUSMER. For such Product, a written estimate will be submitted to Customer at a nominal service charge, itemizing the cost for repair. Disposition of Product will be done in accordance with the terms stated on the written estimate.

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H-3500 ASSEMBLY (STANDARD)

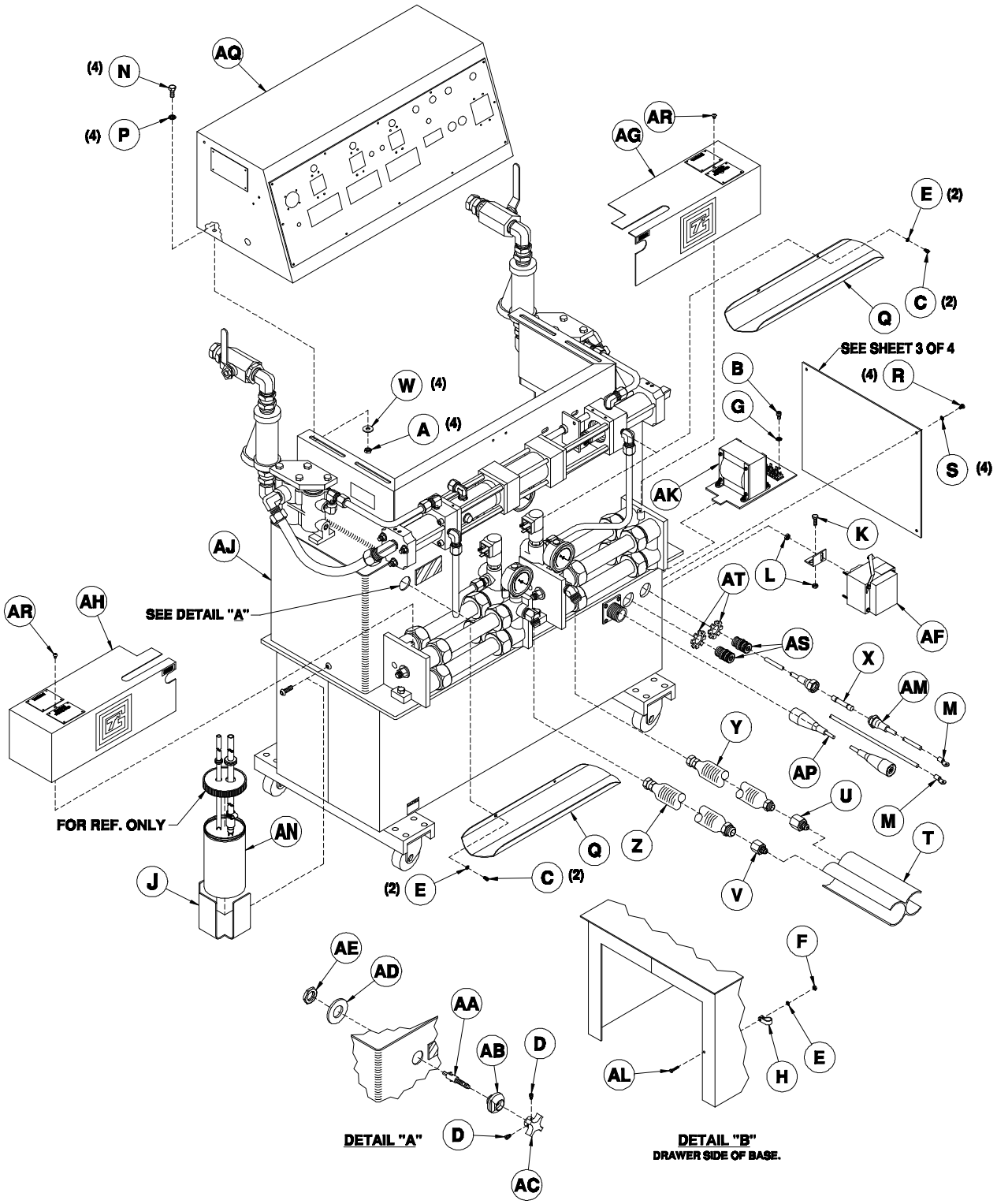


Figure 1. H-3500 Assembly (Part No. 15000-SIZE-35), Exploded View, Sheet 1 of 4

TABLE 1. H-3500 ASSEMBLY (PART NO. 15000-SIZE-35), PARTS, SHEET 1 OF 4

Reference Letter	Part No.	Description	Qty
A	370-1	Hex Nut	4
B	371	Socket Head Cap Screw	1
C	379-2	Socket Head Cap Screw	4
D	555-3	Socket Head Set Screw	2
E	651A-10	Lockwasher	5
F	651A-9	Hex Nut	1
G	665-4	Lockwasher	1
H	681A	Cable Clamp	1
J	1486A	Lube Reservoir Bracket	1
K	1645-2	Hex Head Cap Screw	1
L	1645-3	Hex Locknut	2
M	1650-19	Stud Ring	2
N	1701-4	Hex Head Cap Screw	4
P	1701-5	Internal Lockwasher	4
Q	1702-8	Service Pan	2
R	4605-3	Pan Head Machine Screw	4
S	4702-7-4	Internal Lockwasher	4
T	5204	Electrical Isolator	1
U	5253A	R-Hose Adapter	1
V	5254A	A-Hose Adapter	1
W	5829-7	Flat Washer	4
X	6690-24-14	50 Amp Fuse	1
Y	14270-1/2-1	1/2 X 2 R Isolation Hose	1
Z	142701/2-2	1/2 X 2 A Isolation Hose	1
AA	14556	Compensator Shaft Asy	1
AB	14557	Retainer	1
AC	14558	Knob (Includes D)	1
AD	14559	Washer	1
AE	14560	Hex Nut	1
AF	15276	Transformer Asy (See Sheet 4)	1
AG	15311	R-Preheater Cover	1
AH	15361	A-Preheater Cover	1
AJ	15500-SIZE-35	Center & Base Assembly	1
AK	15501-23	Transformer Plate Asy	1
AL	15501-23-3	Flat Head Cap Screws	1
AM	15501-28	Hose Conn. Lead w/Fuse Holder.	1
AN	15586	Lube Reservoir	1
AP	20207-3	TSU Extension Adapter	1
AQ	See Console Asy	Electrical Console	1
AR	OP482-1-5	Button Head Cap Screw	2
AS	OP482-17-1	Bushing	2
AT	OP482-17-2	Locknut	2

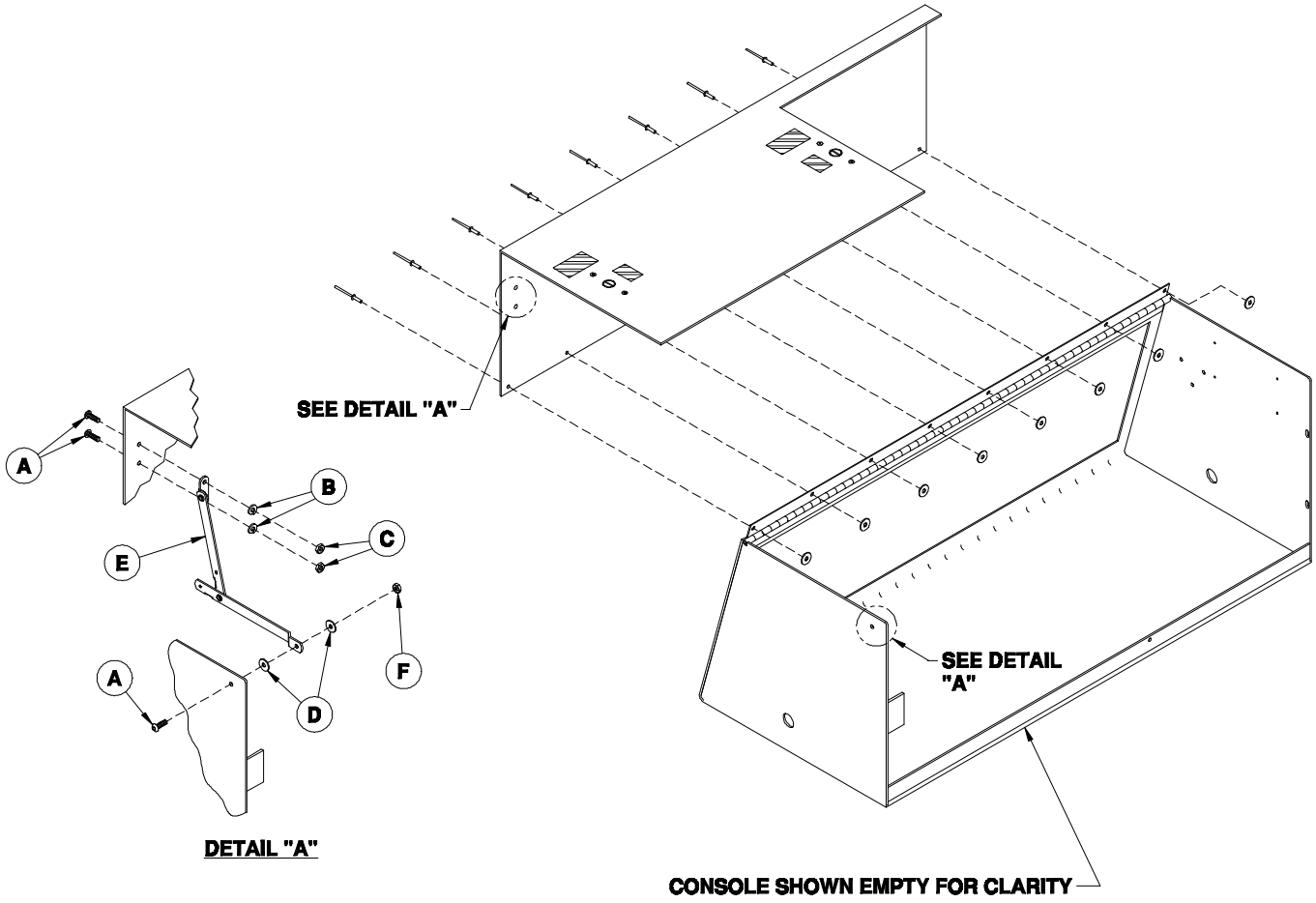


Figure 2. H-3500 Assembly (Part No. 15000-SIZE-35), Exploded View, Sheet 2 of 4

TABLE 2. H-3500 ASSEMBLY (PART NO. 15000-SIZE-35), PARTS, SHEET 2 OF 4

Reference Letter	Part No.	Description	Qty
A	1404A	Button Head Cap Screw	3
B	1701-15-8	Lockwasher	2
C	1701-15-9	Hex Nut	2
D	4805-5	Flat Washer	2
E	11650-2	10" Lid Support	1
F	11650-3	Lock Nut	1

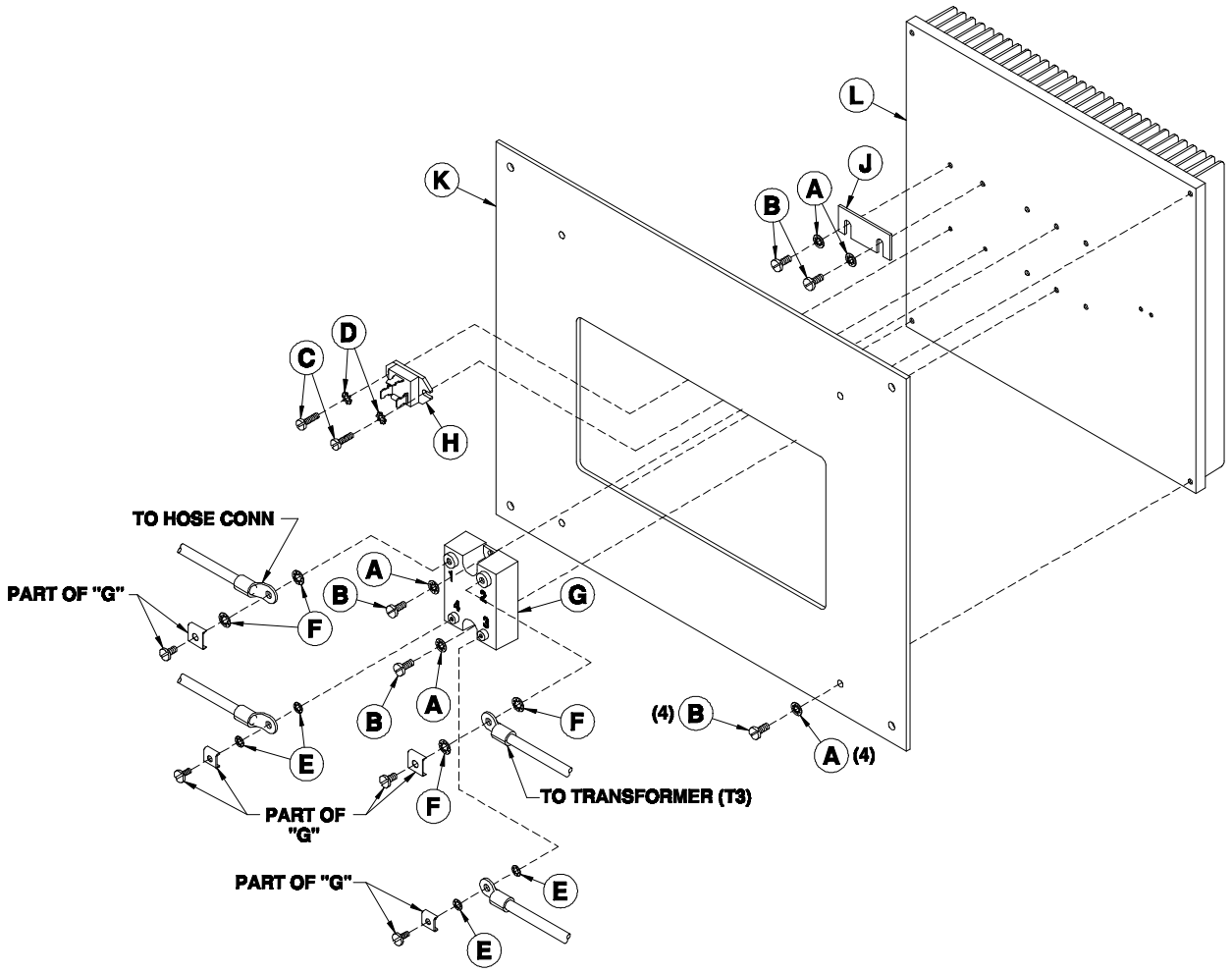
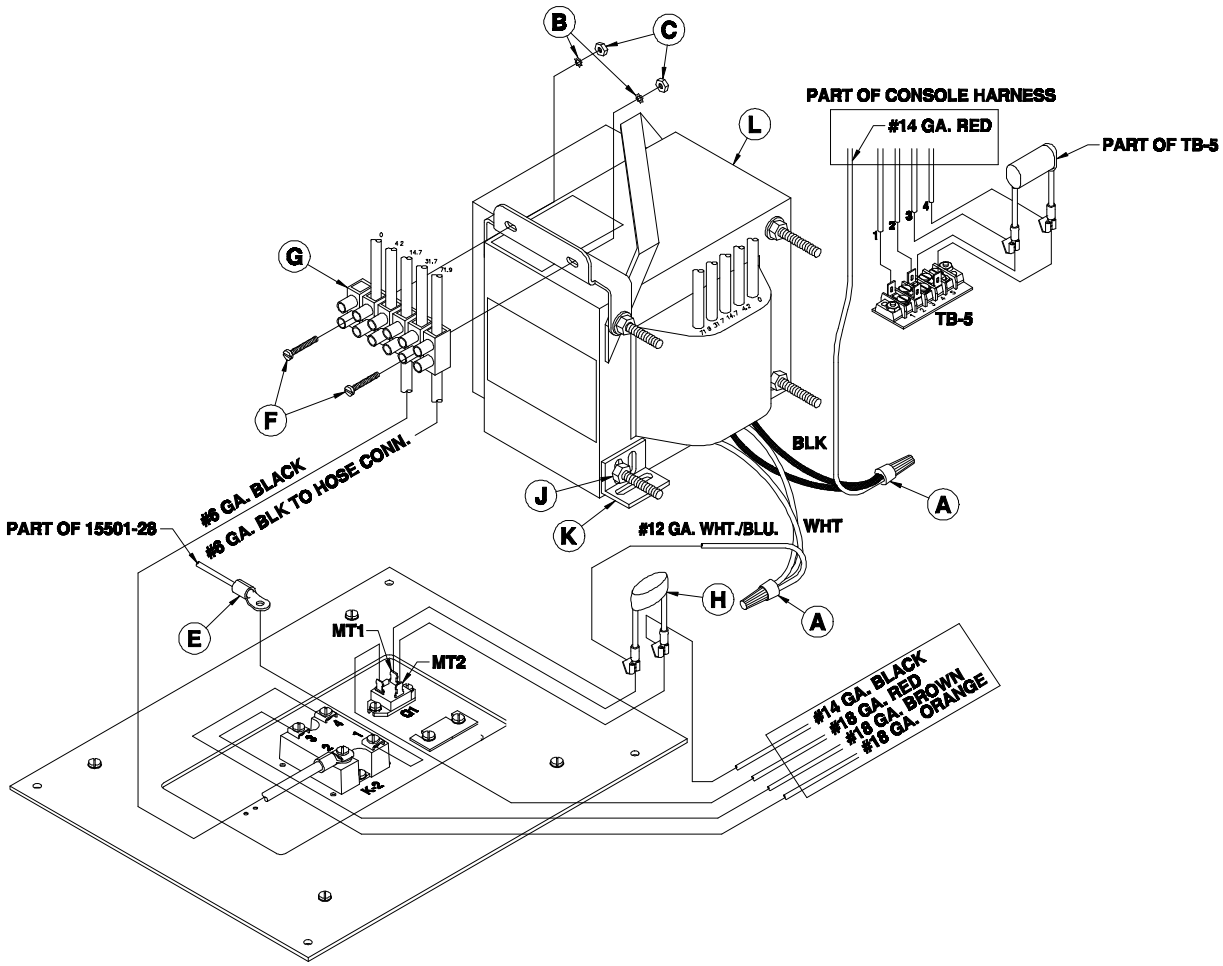


Figure 3. H-3500 Assembly (Part No. 15000-SIZE-35), Exploded View, Sheet 3 of 4

TABLE 3. H-3500-ASSEMBLY (PART NO. 15000-SIZE-35), PARTS, SHEET 3 OF 4

Reference Letter	Part No.	Description	Qty
A	651A-10	Lockwasher	8
B	651A-8	Pan Head Machine Screw	8
C	655-2	Pan Head Machine Screw	2
D	655-4	Lockwasher	2
E	1601-3	Internal Lockwasher	4
F	4702-7-4	Internal Lockwasher	4
G	6690-1-7	Power Cube 80 AMP	1
H	6690-8-7	Triac	1
J	14667	Terminal Jumper	1
K	15501-21-1	Door Frame	1
L	15501-21-2	Heat Sink	1
Not Shown	15300-34	Heat Sink Compound	A/R



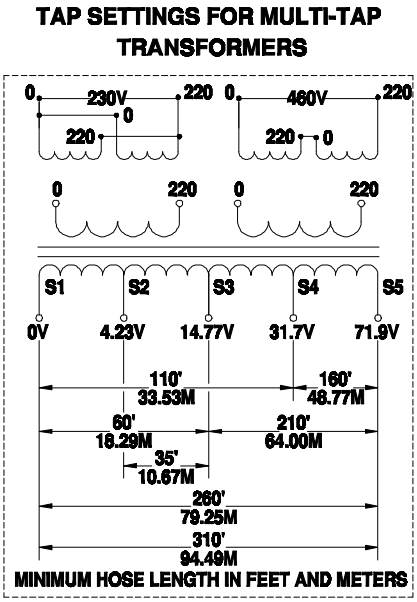


Figure 4. H-3500 Assembly (Part No. 15000-SIZE-35), Exploded View, Sheet 4 of 4

TABLE 4. H-3500 ASSEMBLY (PART NO. 15000-SIZE-35), PARTS, SHEET 4 OF 4

Reference Letter	Part No.	Description	Qty
A	363A	Insulating Wire Nut	A/R
B	651A-10	Lockwasher	2
C	651A-9	Hex Nut	2
E	1650-19	Stud Ring	1
F	2014	Round head Machine Screws	2
G	6690-20-5-6	Terminal Block	1
H	6690-21-2	Quencharc	1
J	1645-3	Hex Locknut	1
K	5615A-2	Transformer Bracket	1
L	15276	Transformer Asy (Includes B, C, F, G, J, K)	1

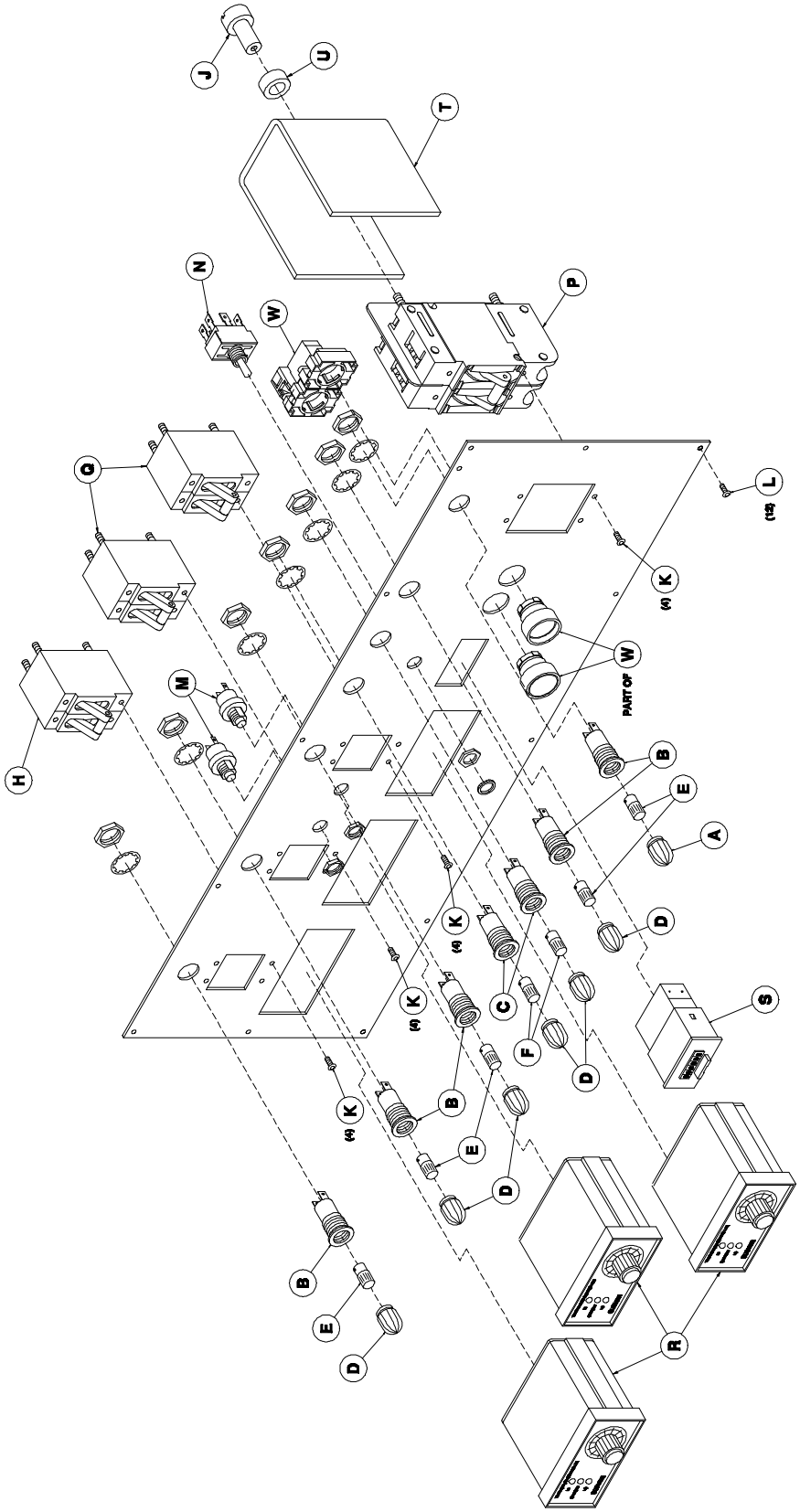


Figure 5. Electric Console (Standard), Exploded View, Sheet 1 of 2

TABLE 5. ELECTRIC CONSOLE (STANDARD), PARTS, SHEET 1 OF 2

Reference Letter	Part No.	Description	Qty
A	656	White Lens	1
B	657A	Neon Light Base	5
C	658A	Incandescent Light Base	2
D	660	Amber Lens	6
E	661	Neon Bulb	5
F	662A	Incandescent Bulb	2
H	692-1-20	20 AMP Circuit Breaker	1
J	5657B	CB Shield Fastener	1
K	6113-10	Button Head Cap Screw (3 Phase Only) Button Head Cap Screw (1 Phase Only)	16 18
L	6113-8	Button Head Cap Screw	12
M	6651-9	Push-button Switch	2
N	6690-16-6	Toggle Switch	1
P	6690-25-3 5601A-1	110 Amp Circuit Breaker (1 Phase only 70 Amp Circuit Breaker (3 Phase only)	1 1
Q	6690-25-4	50 AMP Circuit Breaker	2
R	6690-26-9	Temperature Controller	3
S	9651-6-2	Counter	1
T	15662 5656B	Shield (1 Phase only) Shield (3 Phase only)	1 1
U	15663	Spacer (1 Phase only)	1
W	50602-1	Push-button Switch 10A	1

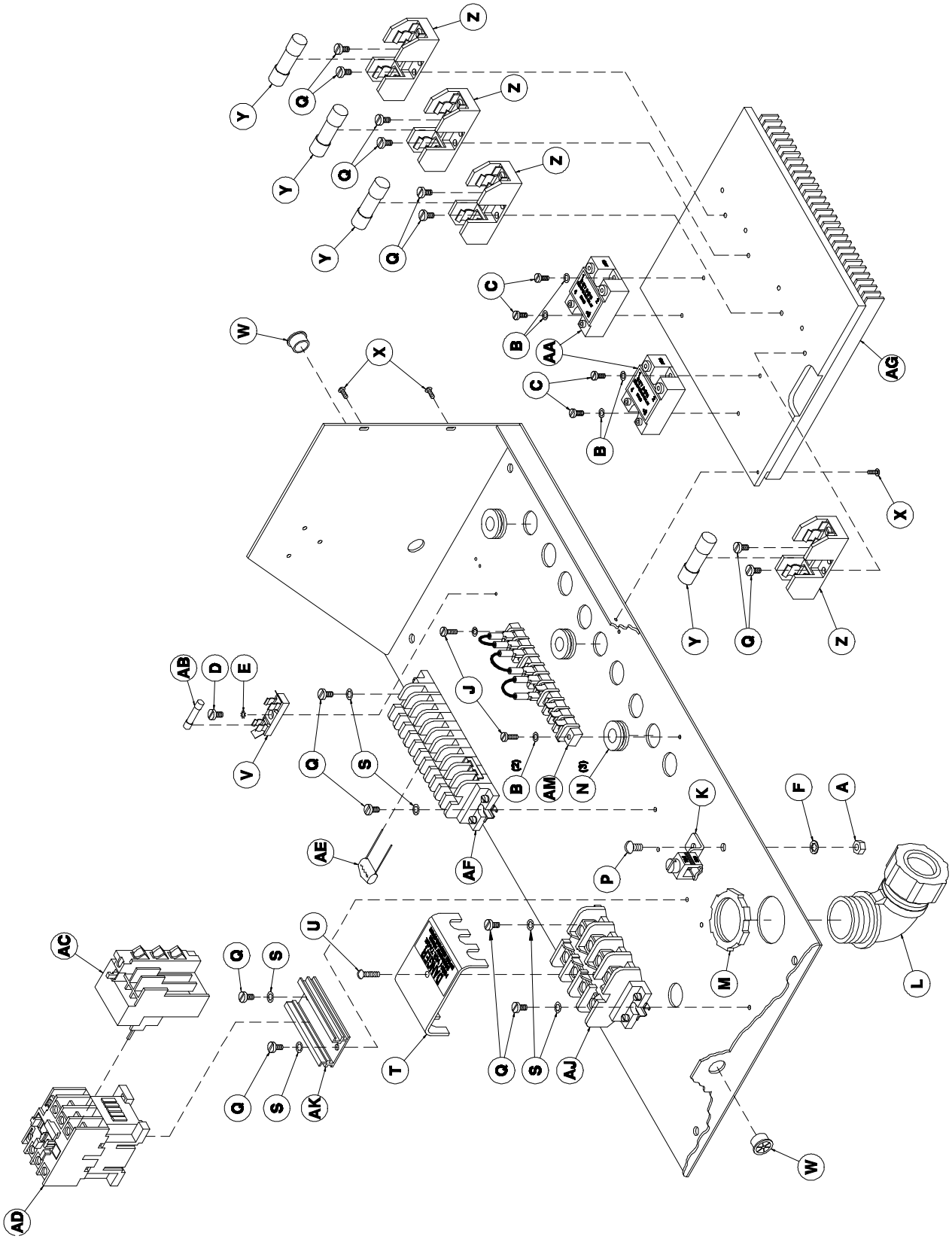


Figure 6. Electric Console (Standard), Exploded View, Sheet 2 of 2

TABLE 6. ELECTRIC CONSOLE (STANDARD), PARTS SHEET 2 OF 2

Reference Letter	Part No.	Description	Qty
A	385-4	Hex Nut	1
B	651A-10	Lockwasher	6
C	651A-8	Pan Head Machine Screw	4
D	655-2	Pan Head Machine Screw	1
E	655-4	Lockwasher	1
F	665-4	Lockwasher	1
J	689-2	Pan Head Machine Screw	2
K	1645-1	Terminal Lug	1
L	1646-1	Conduit Elbow	1
M	1646-2	Locknut	1
N	1701-16	Grommet	3
P	4605-10	Round Head Machine Screw	1
Q	4605-3	Pan Head Machine Screw	14
S	4702-7-4	Internal Lockwasher	6
T	5612B-2	Terminal Guard	1
U	5612B-3	Nylon Screw	1
V	5653B	Fuse Holder	1
W	5703D-10	Bushing	2
X	6113-10	Button Head Cap Screw	3
Y	6651-5	30 AMP Fuse	4
Z	6651-6	30 AMP Fuse Block	4
AA	6690-1-5	Power Cube 50 AMP	2
AB	6690-24-3	8 AMP Fuse	1
AC	6690-27-10 6690-27-8 6690-27-11	Overload Relay (1x220 V, 5HP) Overload Relay (3x220 V, 5HP) Overload Relay (3x380 V, 5HP)	1 1 1
AD	6690-27-7	Power Contactor 50/60 HZ	1
AE	6690-21-1	Quencharc	1
AF	15651	Main Terminal Block Asy	1
AG	15652	Heat Sink	1
AJ	15655	Main Power Term Block Asy	1
AK	15656	Mounting Track	1
AM	15661	Auxiliary Terminal Block	1

H-3500 ASSEMBLY (INDIVIDUAL HOSE TEMPERATURE CONTROL)

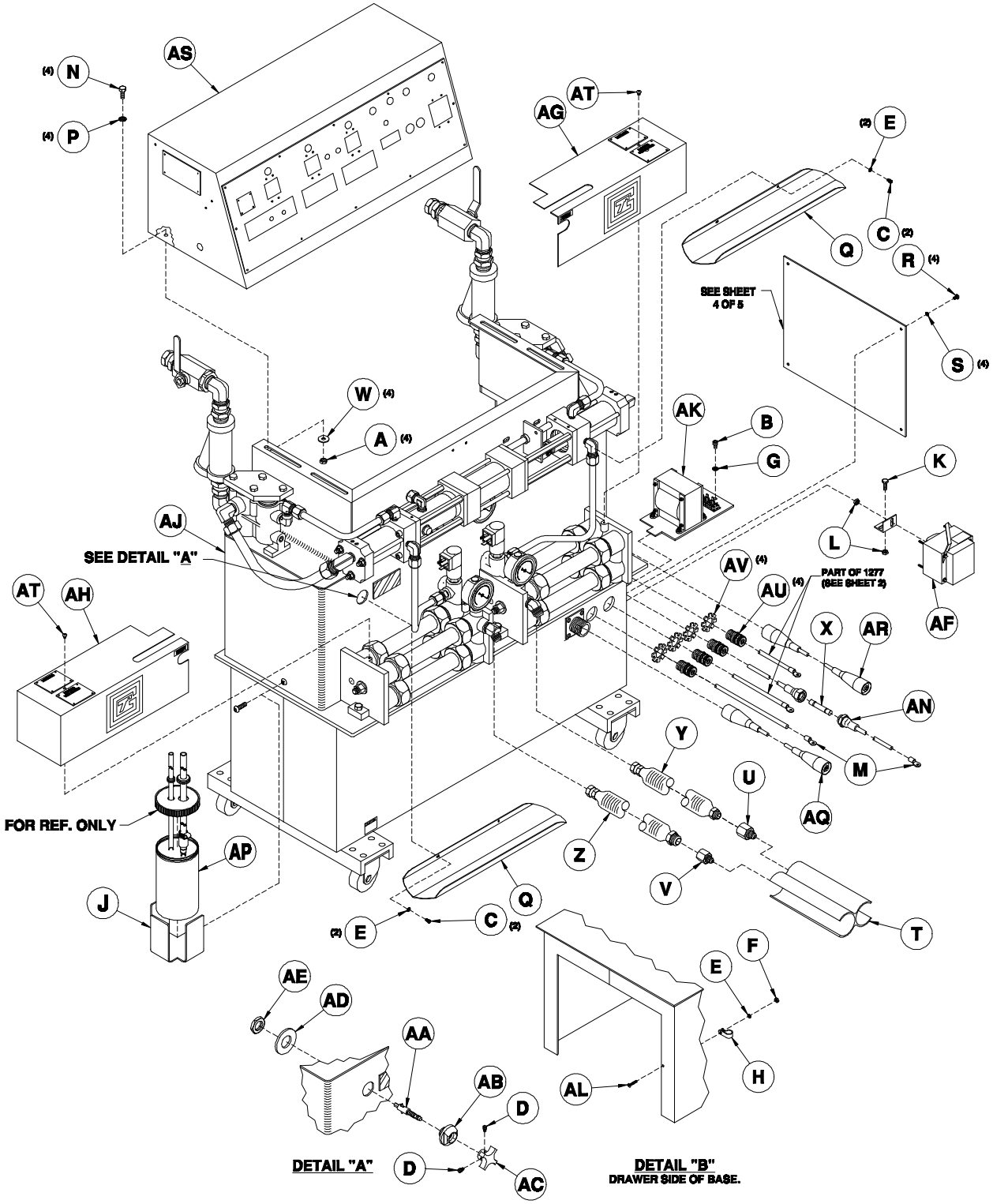


Figure 7. H-3500 Assembly (Part No. 15000-SIZE-35-IHTC), Exploded View, Sheet 1of 5

TABLE 7. H-3500 ASSEMBLY (PART NO.15000-SIZE-35-IHTC), PARTS, SHEET 1 OF 5

Reference Letter	Part No.	Description	Qty
A	370-1	Hex Nut	4
B	371	Socket Head Cap Screw	1
C	379-2	Socket Head Cap Screw	4
D	555-3	Socket Head Set Screw	2
E	651A-10	Lockwasher	5
F	651A-9	Hex Nut	1
G	665-4	Lockwasher	1
H	681A	Cable Clamp	1
J	1486A	Lube Reservoir Bracket	1
K	1645-2	Hex Head Cap Screw	1
L	1645-3	Hex Locknut	2
M	1650-19	Stud Ring	2
N	1701-4	Hex Head Cap Screw	4
P	1701-5	Internal Lockwasher	4
Q	1702-8	Service Pan	2
R	4605-3	Pan Head Machine Screw	4
S	4702-7-4	Internal Lockwasher	4
T	5204	Electrical Isolator	1
U	5253A	R-Hose Adapter	1
V	5254A	A-Hose Adapter	1
W	5829-7	Flat Washer	4
X	6690-24-14	50 Amp Fuse	1
Y	14270-1/2-1	1/2 X 2 R-Isolation Hose	1
Z	14270-1/2-2	1/2 X 2 A-Isolation Hose	1
AA	14556	Compensator Shaft Asy	1
AB	14557	Retainer	1
AC	14558	Knob (Includes D)	1
AD	14559	Washer	1
AE	14560	Hex Nut	1
AF	15276	Transformer Asy (See Sheet 5)	1
AG	15311	R-Preheater Cover	1
AH	15361	A-Preheater Cover	1
AJ	15500-SIZE-35-IHTC	Center & Base Asy	1
AK	15501-23	Transformer Plate Asy	1
AL	15501-23-3	Flat Head Cap Screws	1
AN	15501-28	Hose Conn. Lead W/Fuse Holder	1
AP	15586	Lube Bottle	1
AQ	20207-3	TSU Extension Adapter	1
AR	20207-3-IHTC	TSU Extension Adapter	1
AS	See Console Asy	Electrical Console	1
AT	OP482-1-5	Button Head Cap Screw	2
AU	OP482-17-1	Bushing	4
AV	OP482-17-2	Locknut	4

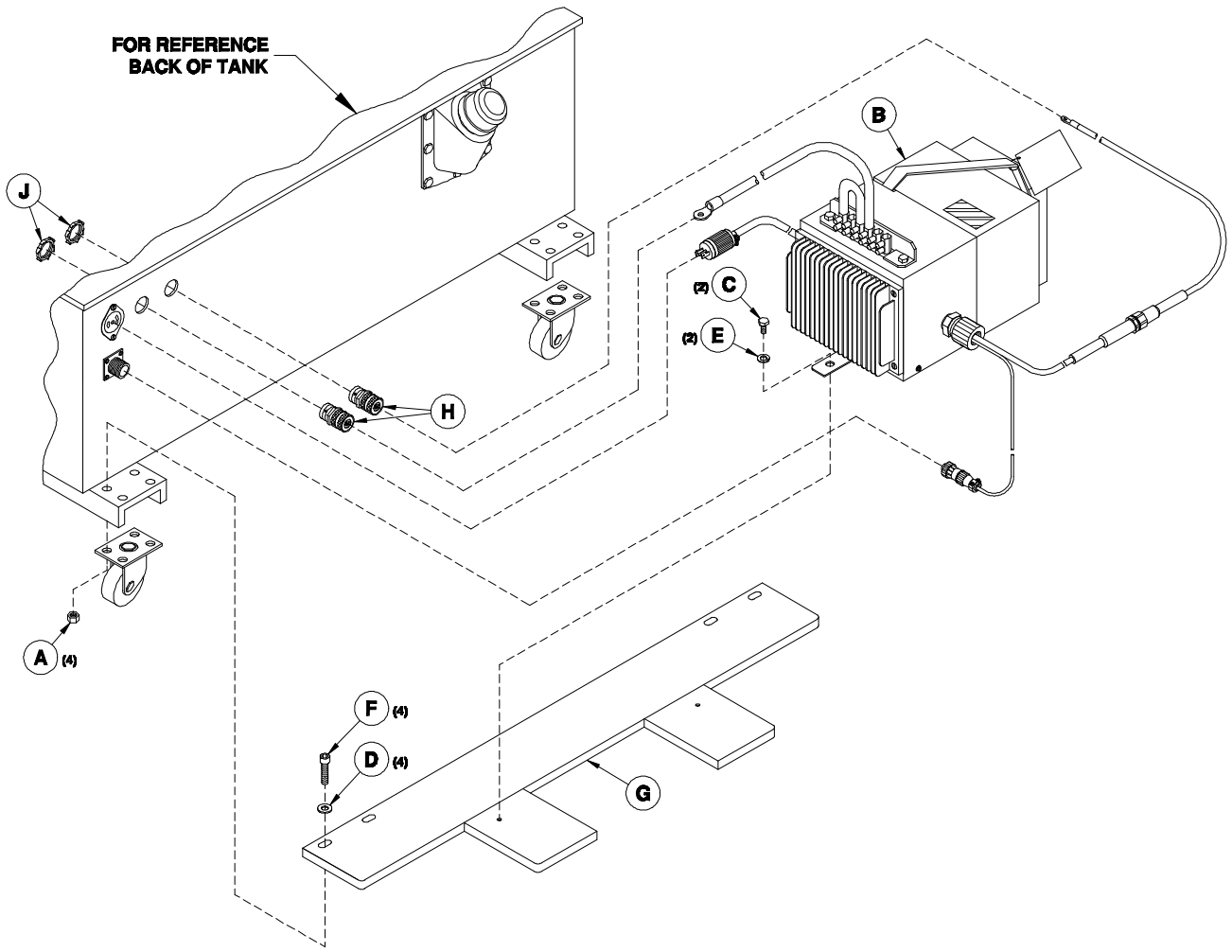


Figure 8. H-3500 Assembly (Part No. 15000-SIZE-35-IHTC), Exploded View, Sheet 2 of 5

TABLE 8. H-3500 ASSEMBLY (PART NO. 15000-SIZE-35-IHTC), PARTS, SHEET 2 OF 5

Reference Letter	Part No.	Description	Qty
A	370-1	Hex Nut	4
B	1277	Power Pack	1
C	1654-2	Hex Head Cap Screw	2
D	5829-7	Flat Washer	4
E	9758	Lockwasher	2
F	14409	Socket Head Cap Screw	4
G	15501-23-DT	Transformer Plate Asy	1
H	OP482-17-1	Bushing	2
J	OP482-17-2	Locknut	2

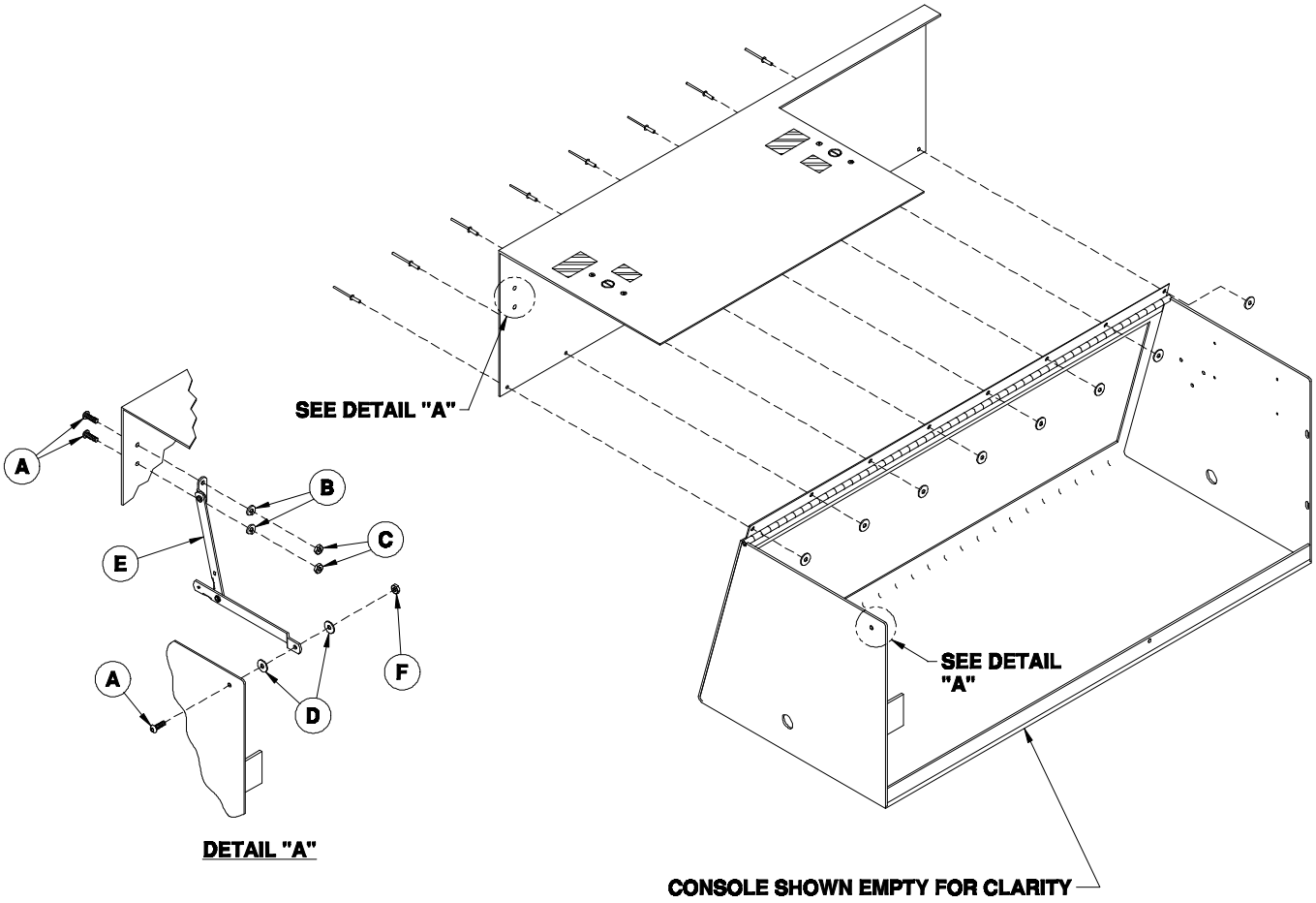


Figure 9. H-3500 Assembly (Part No. 15000-SIZE-35-IHTC), Exploded View, Sheet 3 of 5

TABLE 9. H-3500 ASSEMBLY (PART NO. 15000-SIZE-35-IHTC), PARTS, SHEET 3 OF 5

Reference Letter	Part No.	Description	Qty
A	1404A	Button Head Cap Screw	3
B	1701-15-8	Lockwasher	2
C	1701-15-9	Hex Nut	2
D	4805-5	Flat Washer	2
E	11650-2	10" Lid Support	1
F	11650-3	Lock Nut	1

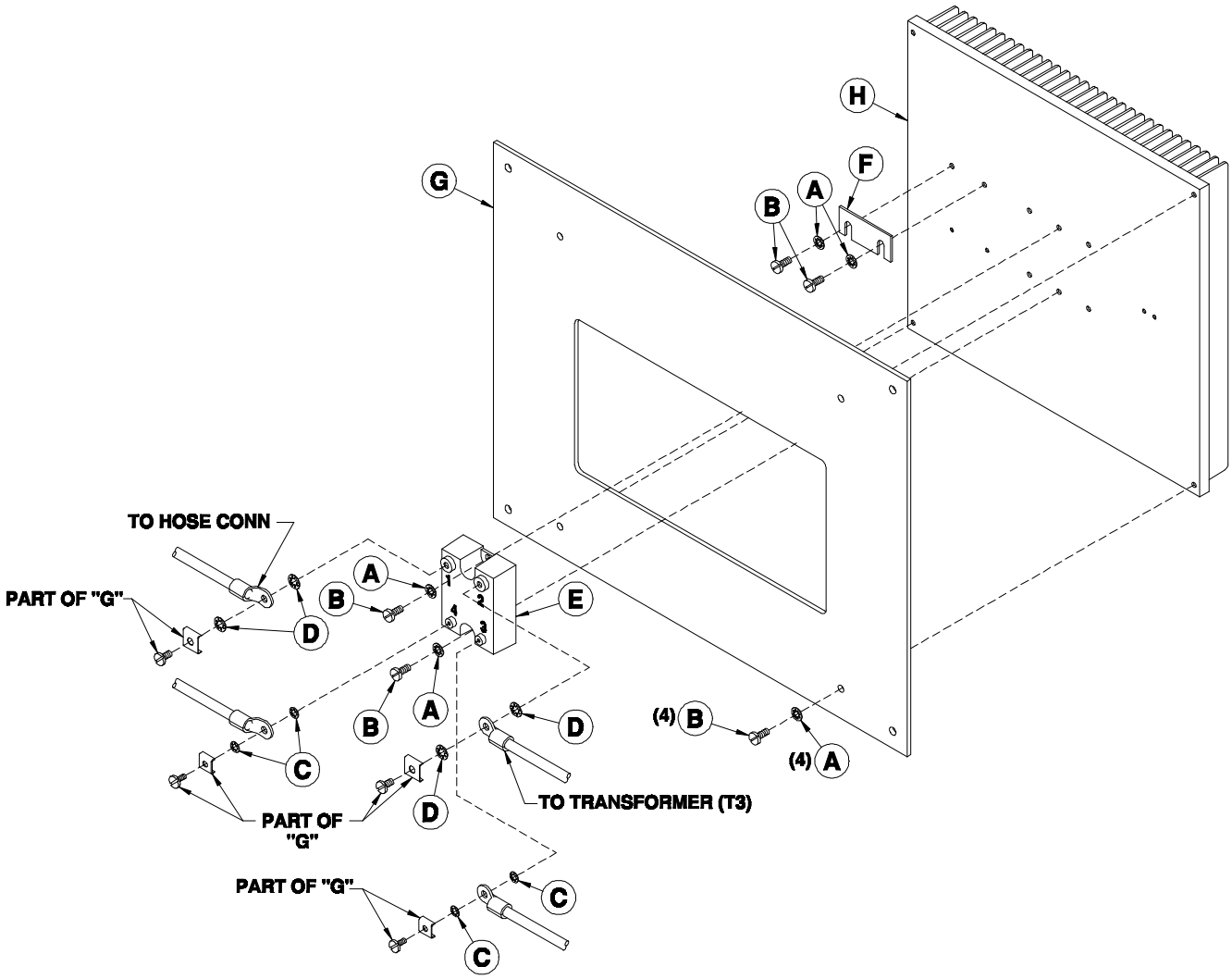


Figure 10. H-3500 Assembly (Part No. 15000-SIZE-35-IHTC), Exploded View, Sheet 4 of 5

TABLE 10. H-3500-ASSEMBLY (PART NO. 15000-SIZE-35-IHTC), PARTS, SHEET 4 OF 5

Reference Letter	Part No.	Description	Qty
A	651A-10	Lockwasher	8
B	651A-8	Pan Head Machine Screw	8
C	1601-3	Internal Lockwasher	4
D	4702-7-4	Internal Lockwasher	4
E	6690-1-7	Power Cube 80 AMP	1
F	14667	Terminal Jumper	1
G	15501-21-1	Door Frame	1
H	15501-21-2	Heat Sink	1
Not Shown	15300-34	Heat Sink Compound	A/R

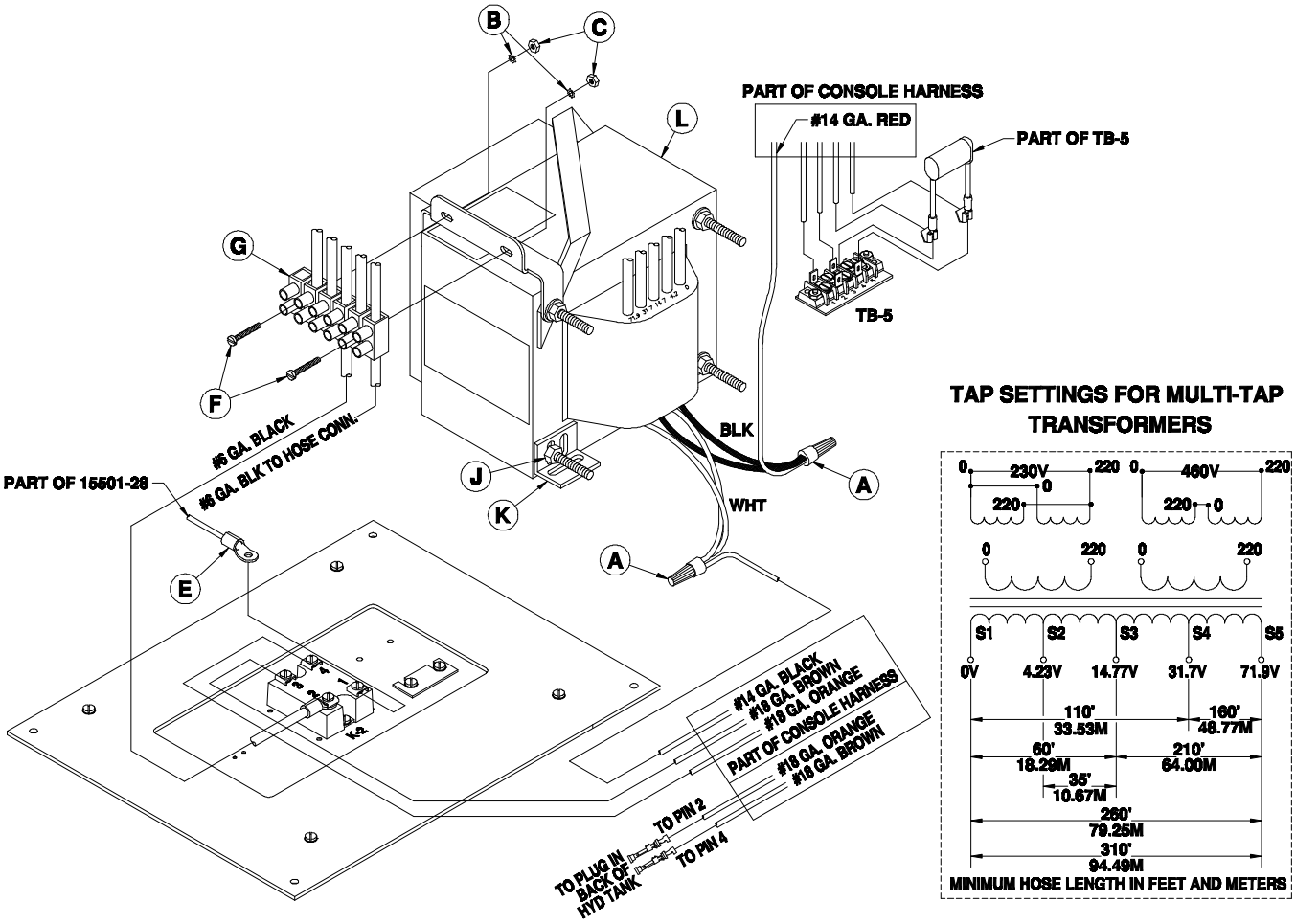


Figure 11. H-3500 Assembly (Part No. 15000-SIZE-35-IHTC), Exploded View, Sheet 5 of 5

TABLE 11. H-3500-ASSEMBLY (PART NO. 15000-SIZE-35-IHTC), PARTS, SHEET 5 OF 5

Reference Letter	Part No.	Description	Qty
A	363A	Insulating Wire Nut	A/R
B	651A-10	Lockwasher	2
C	651A-9	Hex Nut	2
E	1650-19	Stud Ring	1
F	2014	Round Head Machine Screws	2
G	6690-20-5-6	Terminal Block	1
J	1645-3	Hex Locknut	1
K	5615A-2	Transformer Bracket	1
L	15276	Transformer Asy (Includes B, C, E, F, G, J, K)	1

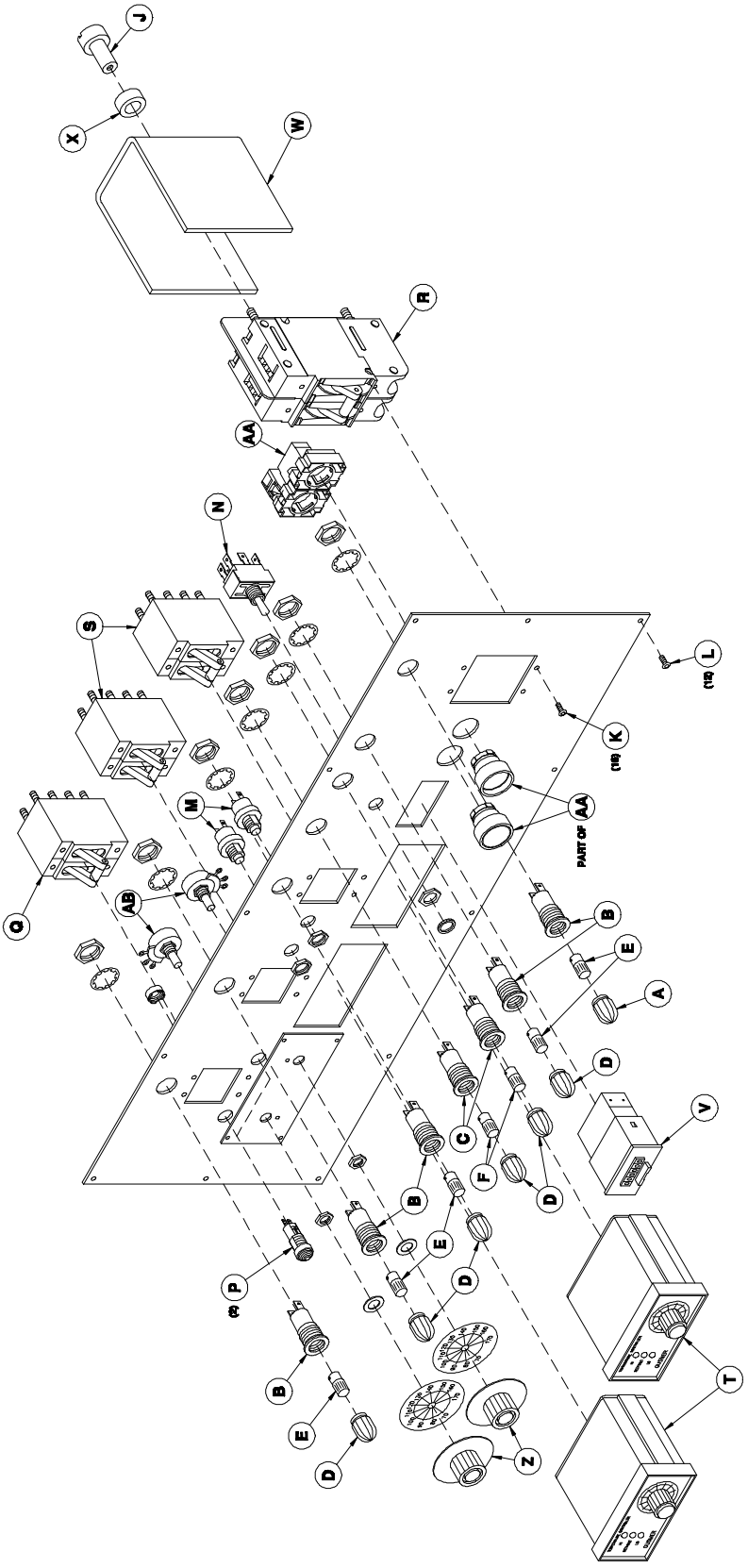


Figure 12. Electric Console (IHTC), Exploded View, Sheet 1 of 2

TABLE 12. ELECTRIC CONSOLE (IHTC), PARTS, SHEET 1 OF 2

Reference Letter	Part No.	Description	Qty
A	656	White Lens	1
B	657A	Neon Light Base	5
C	658A	Incandescent Light Base	2
D	660	Amber Lens	6
E	661	Neon Bulb	5
F	662A	Incandescent Bulb	2
J	5657B	CB Shield Fastener	1
K	6113-10 6113-10	Button Head Cap Screw (1 Phase ONLY) Button Head Cap Screw (3 Phase ONLY)	16 18
L	6113-8	Button Head Cap Screw	12
M	6651-9	Push-button Switch	2
N	6690-16-6	Toggle Switch	1
P	6690-19-10-2	Green Lamp	2
Q	6690-25-1	50 AMP Circuit Breaker	1
R	6690-25-3 5601A-1	110 AMP Circuit Breaker (1 Phase ONLY) 70 Amp Circuit Breaker (3 Phase ONLY)	1 1
S	6690-25-4	Circuit Breaker	2
T	6690-26-9	Temperature Controller	2
V	9651-6-2	Counter	1
W	15662 5656B	Shield (1 Phase ONLY) Shield (3 Phase ONLY)	1 1
X	15663	Spacer (1 Phase ONLY)	1
Z	17650-4	Knob	2
AA	50602-1	Push-button Switch 10A	1
AB	6690-5-14	Potentiometer	2

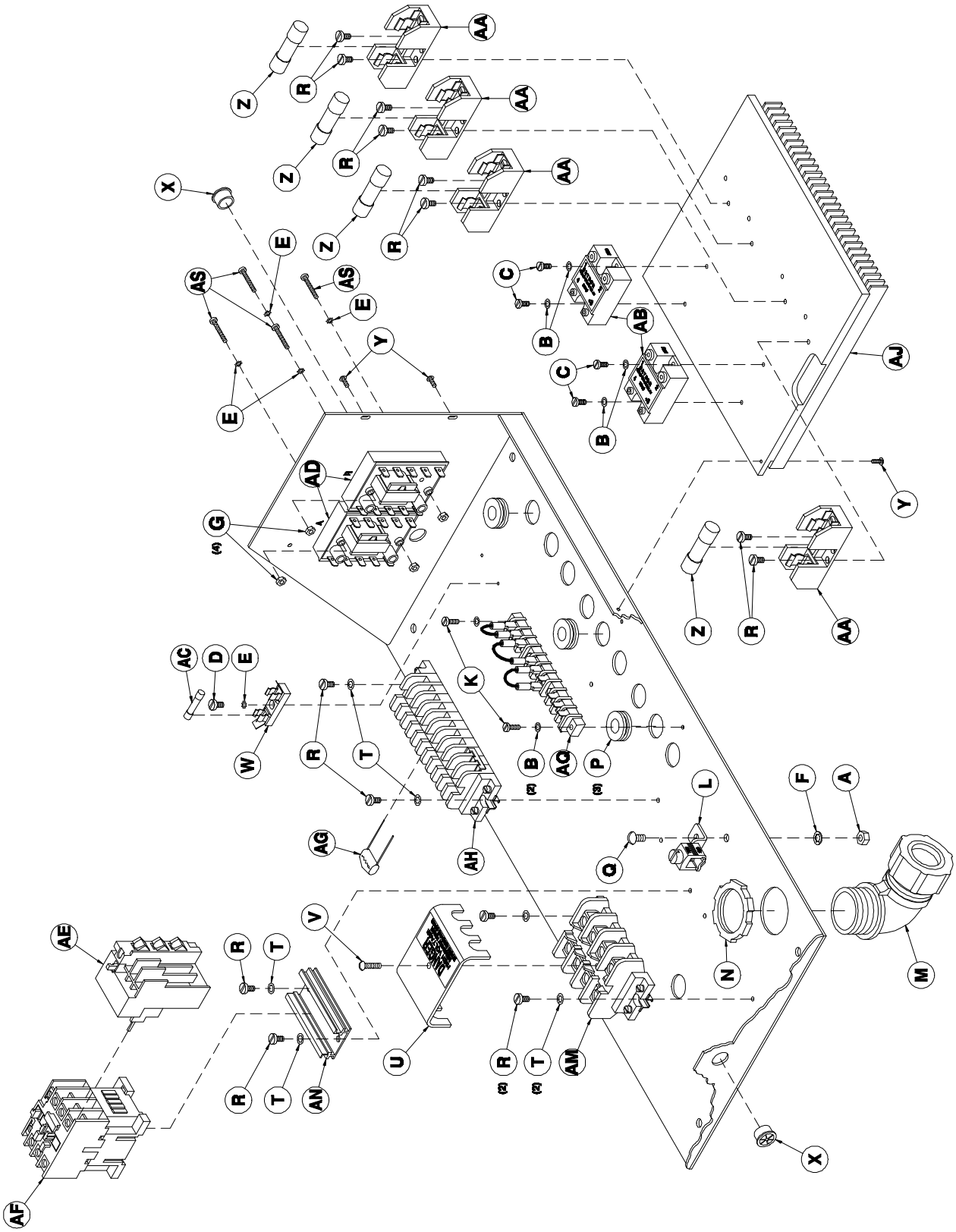


Figure 13. Electric Console (IHTC), Exploded View, Sheet 2 of 2

TABLE 13. ELECTRIC CONSOLE (IHTC), PARTS, SHEET 2 OF 2

Reference Letter	Part No.	Description	Qty
A	385-4	Hex Nut	1
B	651A-10	Lockwasher	6
C	651A-8	Pan Head Machine Screw	4
D	655-2	Pan Head Machine Screw	1
E	655-4	Lockwasher	5
F	665-4	Lockwasher	1
G	668-3	Hex Nut	4
K	689-2	Pan Head Machine Screw	2
L	1645-1	Terminal Lug	1
M	1646-1	Conduit Elbow	1
N	1646-2	Locknut	1
P	1701-16	Grommet	3
Q	4605-10	Round Head Machine Screw	1
R	4605-3	Pan Head Machine Screw	14
T	4702-7-4	Internal Lockwasher	6
U	5612B-2	Terminal Guard	1
V	5612B-3	Nylon Screw	1
W	5653B	Fuse Holder	1
X	5703D-10	Bushing	2
Y	6113-10	Button Head Cap Screw	3
Z	6651-5	30 AMP Fuse	4
AA	6651-6	30 AMP Fuse Block	4
AB	6690-1-5	Power Cube 50 AMP	2
AC	6690-24-3	8 AMP Fuse	1
AD	6690-26-10	Controller (Includes Potentiometer)	2
AE	6690-27-10 6690-27-8 6690-27-11	Overload Relay 32A (1 X 220V) Overload Relay (3X220 V) Overload Relay (3x380 V)	1 1 1
AF	6690-27-7	Power Contactor 50/60 HZ	1
AG	6690-21-1	Quencharc	1
AH	15651	Main Terminal Block Asy	1
AJ	15652	Heat Sink	1
AM	15655	Main Power Term Block Asy	1
AN	15656	Mounting Track	1
AQ	15661	Auxiliary Terminal Block	1
AS	OP482-6-2	Pan Head Machine Screw	4

CENTER AND BASE ASSEMBLY

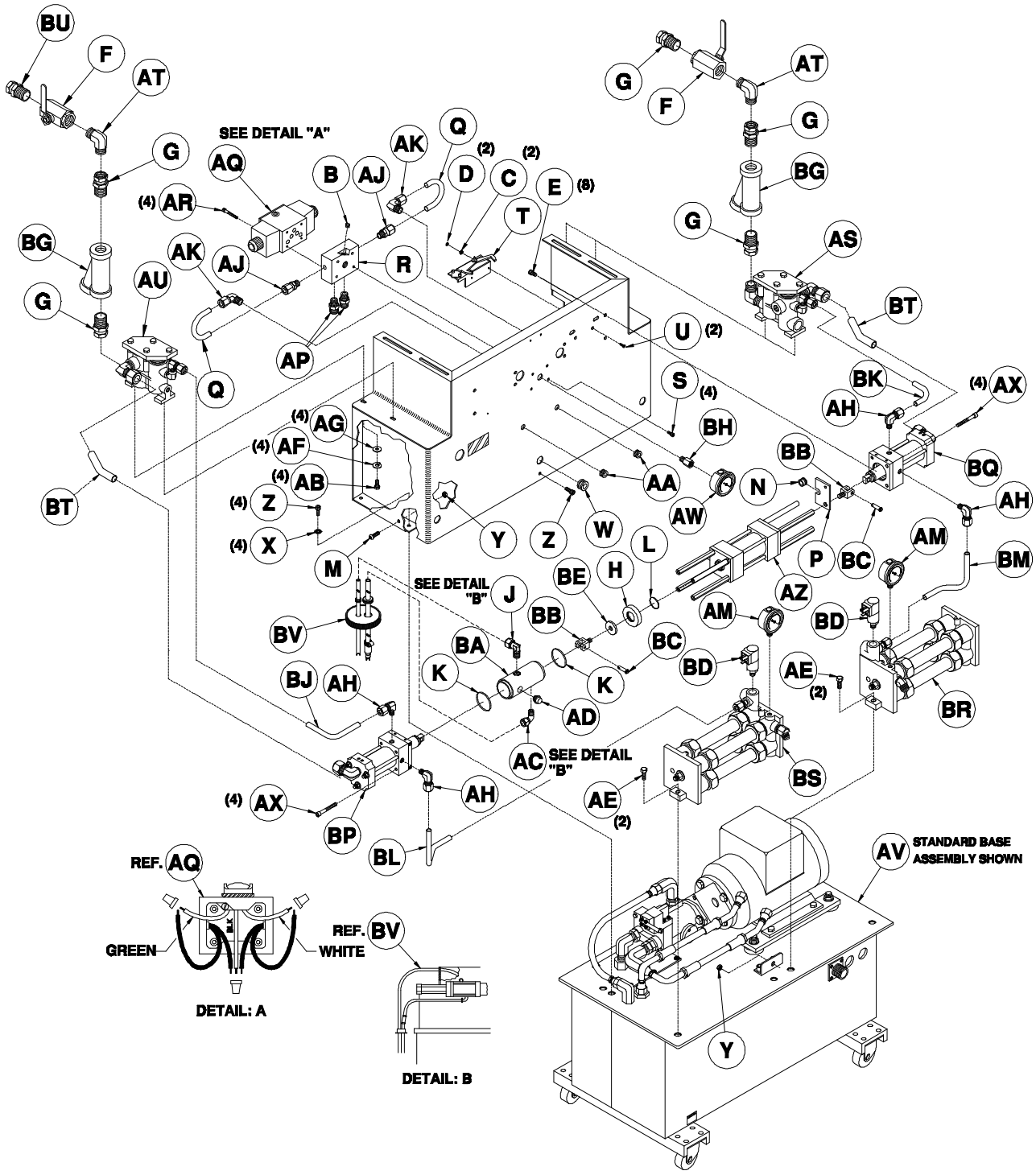


Figure 14. Center and Base Assembly (Part No. 15500-SIZE-35), Exploded View

TABLE 14. CENTER AND BASE ASSEMBLY (PART NO. 15500-SIZE-35), PARTS

Reference Letter	Part No.	Description	Qty
B	576	Pipe Plug	1
C	651A-10	Lockwasher	2
D	651A-9	Hex Nut	2
E	1315A	Socket Head Cap Screw	8
F	1433A-1	Ball Valve	2
G	1433A-3	Swivel Union	5
H	1484-2	Lube Cylinder Adapter Plate	1
J	1484-3	Male Elbow	1
K	1484-5	O-Ring	2
L	1484-6	O-Ring	1
M	1486A-3	Button Head Cap Screw	1
N	1501-7-2	Bronze Bushing	1
P	1501A-7-1	Activator Plate	1
Q	1503	Connection Tube Asy (Includes AJ & AK)	2
R	1504-1	Direct Valve Manifold	1
S	1504A-4	Socket Head Cap Screw (NYLOC)	4
T	1521	Reversing Switch Asy	1
U	1521-1-2	Flat Head Cap Screw	2
W	1701-16	Grommet	1
X	1701-5	Internal Lockwasher	4
Y	1701-6A	Locknut	2
Z	1701-9	Socket Head Cap Screw	5
AA	1702-11	Grommet	2
AB	5428-8-2	Hex Head Cap Screw	4
AC	5484-3	Lube Hose Fitting	1
AD	5484A-4	Polyethylene Pipe Plug	1
AE	5494	Hex Head Cap Screw	4
AF	5504-3	Helical Lockwasher	4
AG	5829-7	Flat Washer	4
AH	6306-102	Tube Elbow	4
AJ	6306-26	Tube Nipple	2
AK	6306-27	Tube Elbow	2
AM	6314-13	0-3000 PSI Liquid Fill GA	2
AP	14534	Hose Nipple	2
AQ	14549	Directional Valve	1
AR	14553	Socket Cap Screw-NYLOC	4
AS	15428-35	Resin Pump Base Asy	1
AT	15428-5	Male Elbow	2
AU	15478-35	Iso Pump Base Asy	1
AV	15501-SIZE-35	Base Asy	1
AW	15502	0-2000 PSI Liquid Fill Gauge	1
AX	15504	Socket Head Cap Screw	8
AZ	15511	Hydraulic Cylinder W/Spacers	1
BA	15513	Iso Lube Cylinder	1
BB	15514	Hydraulic Cylinder Clevis	2
BC	15515	Clevis Pin Assembly	2
BD	15516-3700	Pressure Switch	2

Reference Letter	Part No.	Description	Qty
BE	15517	Baffle	1
BG	15520	Strainer	2
BH	15521	Bushing	1
BJ	15522-1	A-Pump Base / Pump Tube	1
BK	15523-1	R-Pump Base / Pump Tube	1
BL	15524-1	A-Pump Base / Preheater Tube	1
BM	15525-1	R-Pump Base / Preheater Tube	1
BP	60400-SIZE	Resin Prop Pump Assembly	1
BQ	60450-SIZE	Iso Prop Pump Assembly	1
BR	15310-35	R-Basic Preheater	1
BS	15360-35	A-Basic Preheater	1
BT	15518	Inlet Tube	2
BU	OP156-33	Swivel Union	1
BV	15585	Lube Reservoir Hose Assembly	
Not Shown	14549-1	Directional Valve Coil	1

BASE ASSEMBLY

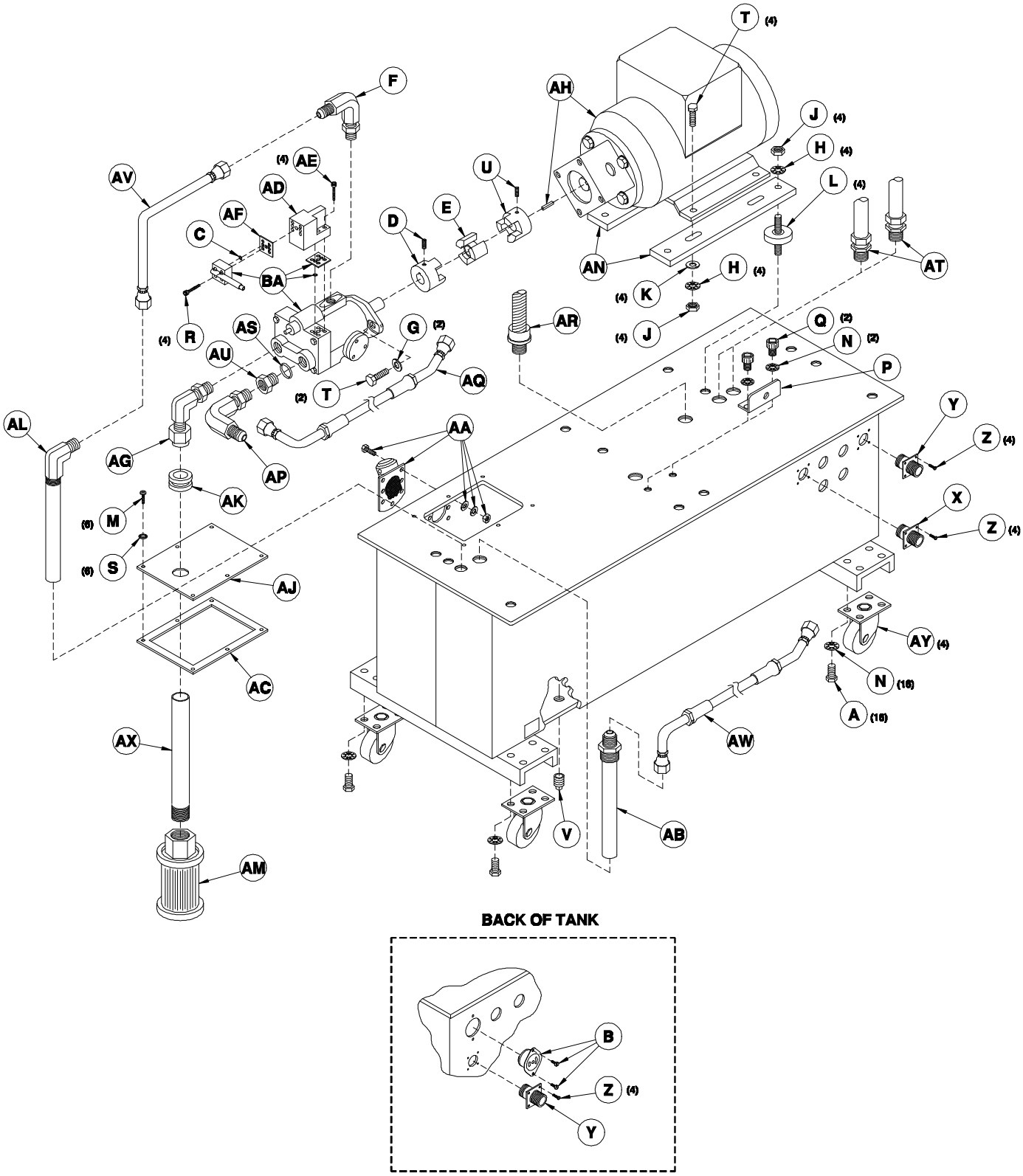


Figure 15. Base Assembly (Part No.15501-SIZE-35), Exploded View (IHTC Assembly Shown)

TABLE 15. BASE ASSEMBLY (PART NO. 15501-SIZE-35), PARTS

Ref. Letter	Part No.	Description	Qty
A	370	Hex Head Cap Screw	16
B	670A-1	Socket (IHTC ONLY)	1
C	1413-40/24	O-Ring	1
D	1513-1	Shaft Coupling	1
E	1513-3	Alignment Spider	1
F	1514-10	Hose Elbow	1
G	1514-3	Lockwasher	2
H	1514-7	Internal Lockwasher	8
J	1514-8	Hex Nut	8
K	1516A-3	Washer	4
L	1518	Motor Mount	4
M	1701-15-7	Binder Head Machine Screw	6
N	1701-5	Lockwasher	18
P	1701-8	Mounting Bracket	1
Q	1701-9	Socket Head Cap Screw	2
R	1808	Socket Head Cap Screw	4
S	4702-7-4	Internal Lockwasher	6
T	5494	Hex Head Cap Screw	6
U	5513-2	Shaft Coupling	1
V	5701-6	Reservoir Drain Plug	1
X	6690-13-2-11-4	CKT MA Pin Housing	1
Y	6690-13-2-11-41	CKT MA Pin Housing(IHTC ONLY)	2
Z	9651-4 9651-4	Button Head Cap Screw (Std Machine ONLY) Button Head Cap Screw (IHTC Machine ONLY)	4 8
AA	14501-1	HYD-Oil Filler	1
AB	14501-13	HYD Reservoir Return Tube	1
AC	14501-3	Reservoir Cover Plate Gasket	1
AD	14501-31-1	Compensator Manifold	1
AE	14501-31-2	Socket Head Cap Screw	4
AF	14501-31-3	Gasket	1
AG	14502	O-Ring Elbow	1
AH	15501-10 15501-18	Electric Motor (3 Phase Only) Electric Motor (1 Phase Only)	1 1
AJ	15501-12	Reservoir Cover Plate	1
AK	15501-13	Rubber Grommet	1
AL	15501-14	1/2 TBE 90 HYD Res Return	1
AM	15501-15	Cartridge Strainer	1
AN	15501-16	Motor Bar	2
AP	15501-17	O-Ring Elbow	1
AQ	15501-19	P-Port Hose	1
AR	15501-20	TSU Harness	1
AS	15501-22	O-Ring	1
AT	15501-27 15501-27	Transformer Conduit Asy (Std Machine ONLY) Transformer Conduit Asy (IHTC Machine ONLY)	1 2
AU	15501-3	O-Ring Adapter	1
AV	15501-5	Bleed Hose	1
AW	15501-6	T Port Hose	1
AX	15501-8	Suction Tube	1
AY	15701-2	Swivel Castor	4
BA	15501-1	Hydraulic Pump Asy (Includes C, R, AD, AE, & AF)	1

TRANSFORMER PLATE ASSEMBLY

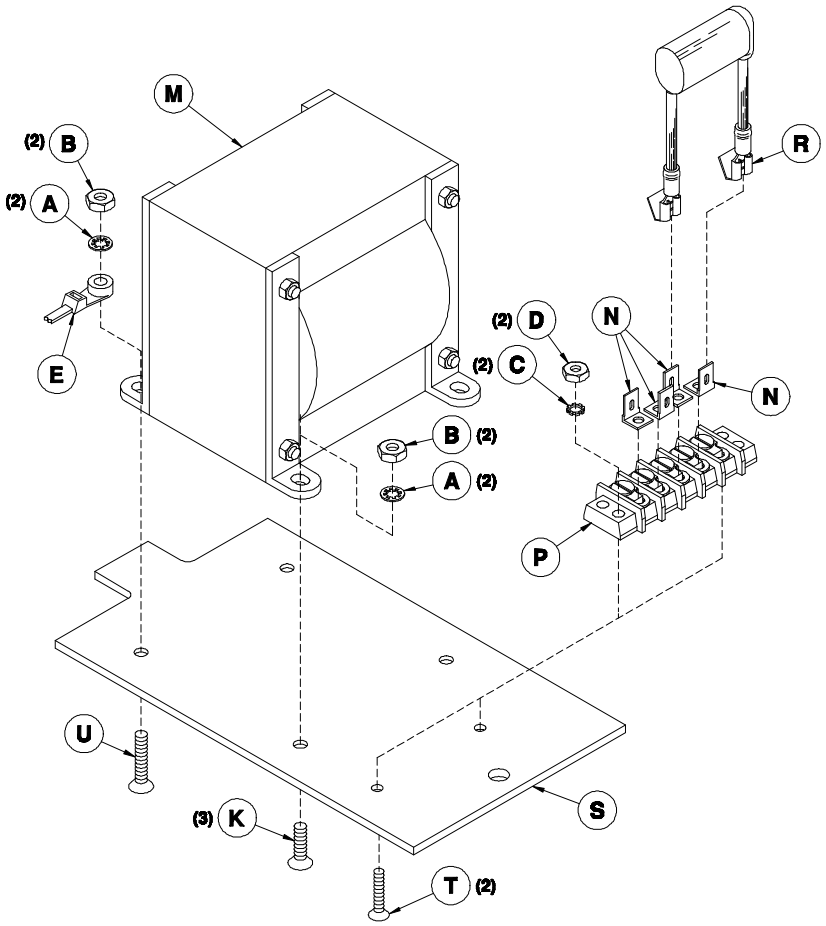


Figure 16. Transformer Plate Assembly (Part No. 15501-23), Exploded View

TABLE 16. TRANSFORMER PLATE ASSEMBLY (PART NO. 15501-23), PARTS

Reference Letter	Part No.	Description	Qty
A	651A-10	Lockwasher	4
B	651A-9	Hex Nut	4
C	655-4	Lockwasher	2
D	668-3	Hex Nut	2
E	683-1	Cable Tie	1
K	1521-1-2	Flat Head Cap Screw	3
M	5611-1	Transformer	1
N	6690-20-2-9	Male Tab	4
P	6690-20-4-5	Terminal Block	1
R	6690-21-2	Quencharc W/Lugs	1
S	15501-23-1	Transformer Plate	1
T	15501-23-2	Flat Head Cap Screw	2
U	15501-23-3	Flat Head Cap Screw	1

REVERSING SWITCH ASSEMBLY

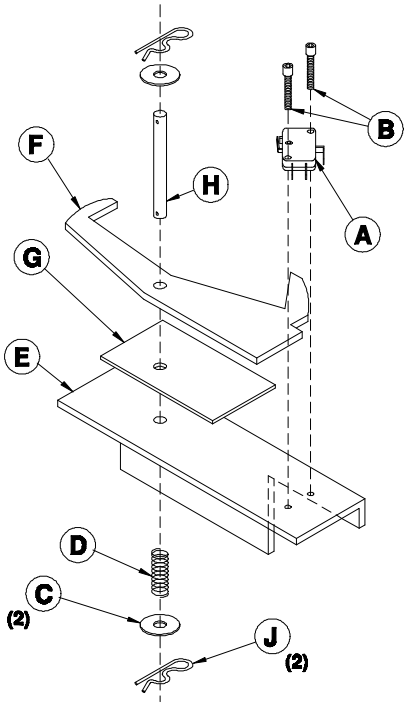


Figure 17. Reversing Switch Assembly (Part No. 1521), Exploded View

TABLE 17. REVERSING SWITCH ASSEMBLY (PART NO. 1521), PARTS

Reference Letter	Part No.	Description	Qty
A	578A	Reversing Switch	1
B	578A-1	Socket Head Cap Screw	2
C	579-4	Flat Washer	2
D	579-5	Spring	1
E	1521-1-1	Reversing Switch Bracket	1
F	1521-2-1	Rocker Arm	1
G	1521-2-2	Rocker Arm Slide Pad	1
H	1521-2-3	Rocker Arm Pin	1
J	1521-2-6	Hitch Pin	2

LUBE RESERVOIR HOSE ASSEMBLY

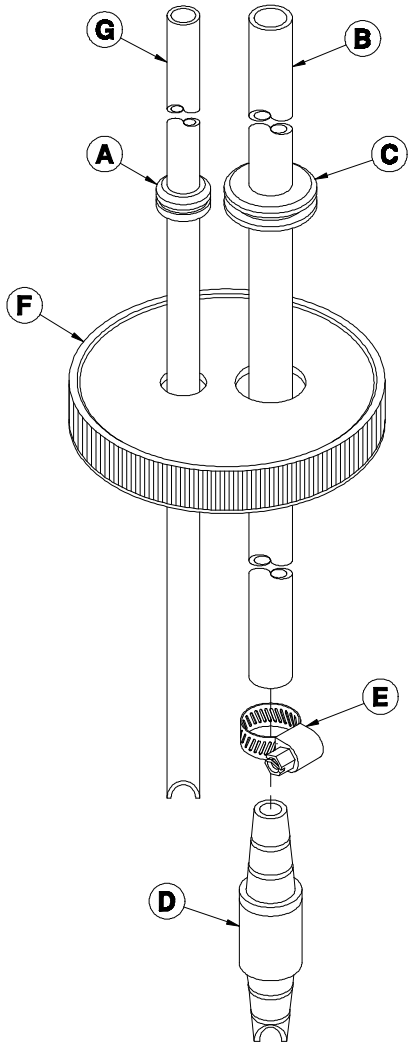


Figure 18. Lube Reservoir Hose Assembly (Part No. 15585), Exploded View

TABLE 18. LUBE RESERVOIR HOSE ASSEMBLY, (PART NO. 15585), PARTS LIST

Reference Letter	Part No.	Description	Qty
A	1275-1-2	Rubber Grommet	1
B	1485A-7	Supply Line	1
C	1701-16	13/16 OD Grommet	1
D	5485-6	Lube Reservoir Check Valve	1
E	5485-7-2	Hose Clamp	1
F	15585-1	Lube Bottle-Modified	1
G	15585-2	Return Line	1

HYDRAULIC CYLINDER ASSEMBLY

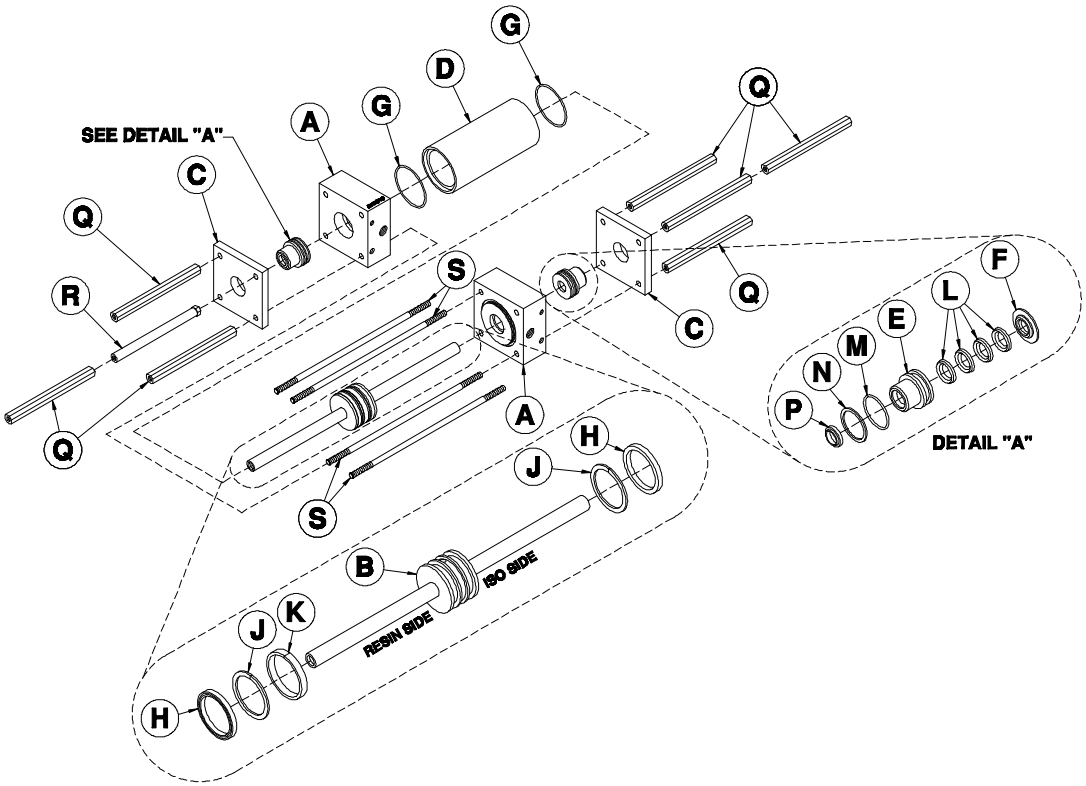


Figure 19. Hydraulic Cylinder Assembly (Part No. 15511), Exploded View

TABLE 19. HYDRAULIC CYLINDER ASSEMBLY (PART NO. 15511), PARTS

Reference Letter	Part No.	Description	Qty
A	1501B-10-1	Port Block	2
B	1501B-10-10	Piston Assembly	1
C	1501B-10-2	Retainer Plate	2
D	1501B-10-4	Cylinder Body	1
E	1501B-10-5	Rod Bushing	2
F	1501B-10-6	Shaft Seal Expander	2
G	1501B-11-1	O-Ring	2
H	1501B-11-2	U-Cup	2
J	1501B-11-3	Back-Up Ring	2
K	1501B-11-4	Teflon Glass Wear Ring	1
L	1501B-11-5	V-Ring	8
M	1501B-11-6	O-Ring	2
N	1501B-11-7	Back-Up Ring	2
P	1501B-11-8	Rod Wiper	2
Q	15511-1	Prop. Pump Spacer	7
R	15511-2	Reversing Switch Pump Spacer	1
S	15511-3	Hydraulic. Cylinder Tie Rod	4

PROPORTIONING PUMP ASSEMBLY
80 SIZE PUMP

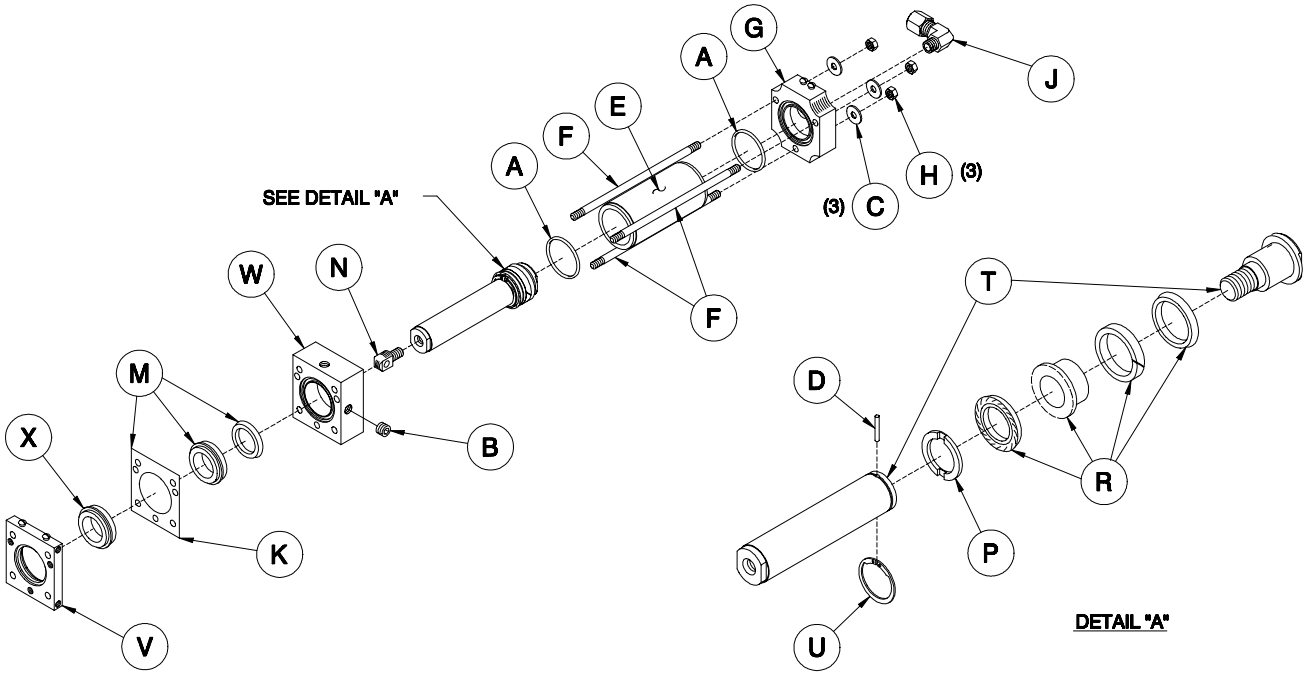


Figure 20. Proportioning Pump Assembly (Part No. 60400-80/60450-80), Exploded View

TABLE 20. PROPORTIONING PUMP ASSEMBLY (PART NO. 60400-80/60450-80), PARTS

Reference Letter	Part No.	Description	Qty
A	135-133-90	O-Ring	2
B	576	Pipe Plug	1
C	5829-7	Flat Washer	3
D	14556-4	Dowel Pin	1
E	15401-80	Pump Cylinder	1
F	15427	Pump Tie Rod	3
G	15435-120	Inlet Flange	1
H	15438	Flange Nut	3
J	15441	Tube Elbow	1
K	15444-3	Gasket	1
M	60444-80-LP	Lip Seal Set (Includes K)	1
N	15829-10	Pump Clevis	1
P	35410-80	Piston Support Washer	1
R	35443-80-LP	Lip Seal Set	1
T	60421-80-PKG	Piston Rod W/ Head (Includes D & U)	1
U	60421-3-80	Retainer Ring	1
V	60497	Packing Retainer Flange	1
W	15436-80 15486-80	Outlet Pump Flange (Resin Pump ONLY) Outlet Pump Flange (Iso Pump ONLY)	1 1
X	60446-1-80	Flange Adapter Ring	1

30, 44, 48, AND 90 SIZE PUMPS

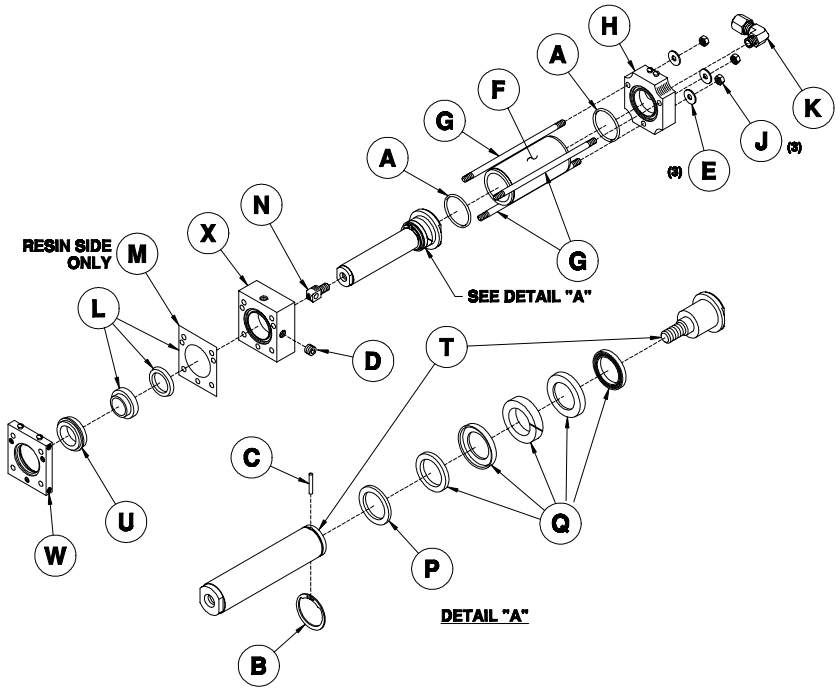


Figure 21. Proportioning Pump Assembly (Part No. 60400-SIZE/60450-SIZE), Exploded View

TABLE 21. PROPORTIONING PUMP ASSEMBLY (PART NO. 60400-SIZE/60450-SIZE), PARTS

Reference Letter	Part No.	Description	Qty
A	135-133-90	O-Ring	2
***B**	See Schedule	Tru Arc	1
***C**	See Schedule	Dowel Pin	1
D	576	Pipe Plug	1
E	5829-7	Flat Washer	3
***F**	See Schedule	Pump Cylinder	1
G	15427	Pump Tie Rod	3
H	15435-120	Inlet Flange	1
J	15438	Flange Nut	3
K	15441	Tube Elbow	1
***L**	See Schedule	Cylinder Lip Seal Set (Includes M)	1
M	15444-3	Gasket	1
***N**	See Schedule	Pump Clevis	1
***P**	See Schedule	Piston Support Washer	1
***Q**	See Schedule	Piston Cup Seal Set	1
***T**	See Schedule	Piston Rod W/ Head (Includes B & C)	1
***U**	See Schedule	Flange Adapter Ring	1
W	60497	Packing Retainer Flange	1
***X**	See Schedule	A-Outlet Pump Flange R-Outlet Pump Flange	1 1

***Scheduling of Parts are on succeeding pages.**

TABLE 22. PROPORTIONING PUMP ASSEMBLY (PART NO. 60400-SIZE/60450-SIZE), SCHEDULING OF PARTS

Reference Letter	Pump Size			
	30	44	48	90
B	151-08-062	151-00-078	151-00-081	151-08-112
C	160-093-0500	160-125-0625	160-125-0625	14556-4
F	15401-30	15401-44	15401-48	15401-90
L	60444-30-LP	60444-44-LP	60444-48-LP	60444-90-LP
N	15440-40	15440-40	15440-40	15829-10
P	60410-30	60410-44	60410-48	60410-90
Q	60443-30-CP	60443-44-CP	60443-48-CP	60443-90-CP
T	60421-30 PKG	60421-44 PKG	60421-48 PKG	60421-90 PKG
U	60446-1-30	60446-1-44	60446-1-48	60446-1-90
X	15436-30	15436-44	15436-48	15436-96

40, 60, 104, AND 120 SIZE PUMPS

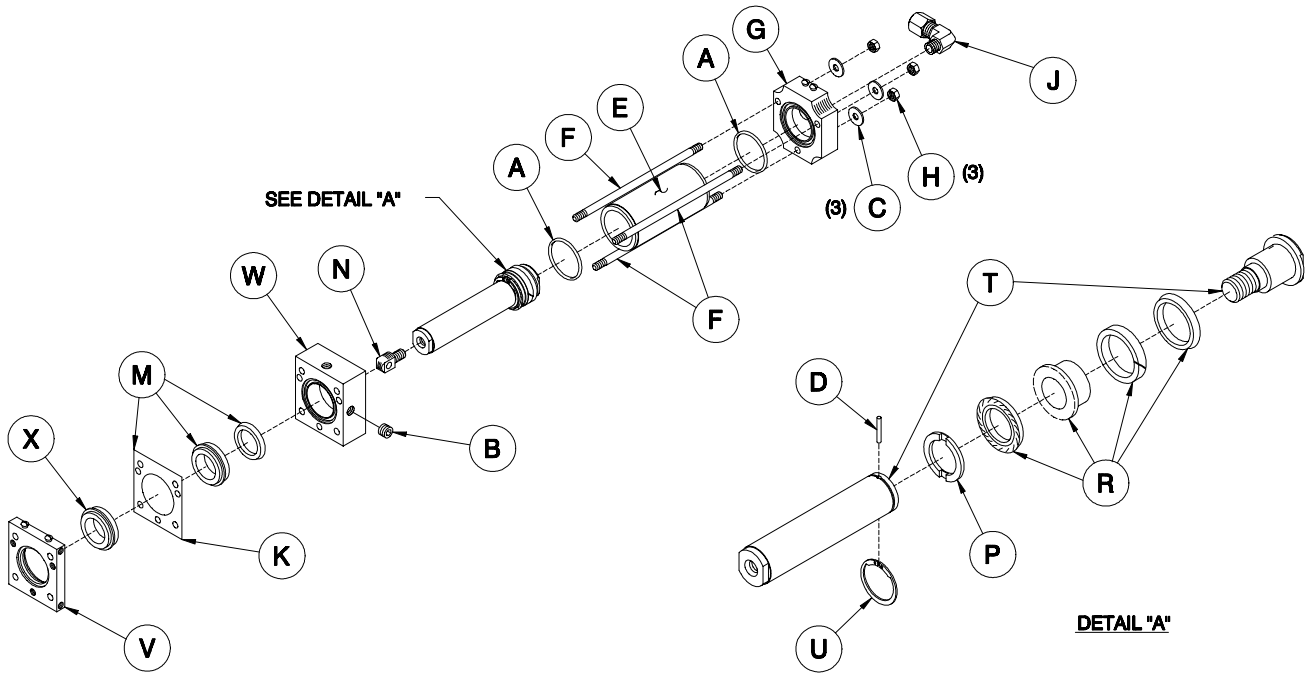


Figure 22. Proportioning Pump Assembly (Part No. 60400-SIZE/60450-SIZE), Exploded View

TABLE 23. PROPORTIONING PUMP ASSEMBLY (PART NO. 60400-SIZE/60450-SIZE), PARTS

Reference Letter	Part No.	Description	Qty
A	135-133-90	O-Ring	2
B	576	Pipe Plug	1
C	5829-7	Flat Washer	3
***D**	See Schedule	Dowel Pin	1
***E**	See Schedule	Pump Cylinder	1
F	15427	Pump Tie Rod	3
G	15435-120	Inlet Flange	1
H	15438	Flange Nut	3
J	15441	Tube Elbow	1
K	15444-3	Gasket	1
***M**	See Schedule	Lip Seal Set (Includes K)	1
***N**	See Schedule	Pump Clevis	1
***P**	See Schedule	Piston Support Washer	1
***R**	See Schedule	Lip Seal Set	1
***T**	See Schedule	Piston Rod W/ Head (Includes D & U)	1
***U**	See Schedule	Retainer Ring	1
V	60497	Packing Retainer Flange	1
***W**	See Schedule See Schedule	Outlet Pump Flange (Resin Pump ONLY) Outlet Pump Flange (Iso Pump ONLY)	1 1
***X**	See Schedule	Flange Adapter Ring	1

*Scheduling of Parts are on succeeding pages.

TABLE 24. PROPORTIONING PUMP ASSEMBLY (PART NO. 60400-SIZE/60450-SIZE), SCHEDULING OF PARTS

Reference Letter	Pump Size			
	40	60	104	120
D	160-125-0625	160-125-0750	160-125-1000	160-125-1000
E	15401-40	15401-60	15401-104	15401-120
M	60444-40-LP	60444-60-LP	60444-104-LP	15546-120
N	15440-40	15829-10	15829-10	15829-10
P	35410-40	35410-60	35410-104	35410-120
R	35443-40-LP	35443-60-LP	35443-104-LP	35443-120-LP
T	60421-40 PKG	60421-60-PKG	35421-104-PKG	35421-120-PKG
U	151-08-075	151-08-112	151-08-112	60421-3-120
W	15436-40 15486-40	15436-60 15486-60	15436-104 15486-104	15436-120 15486-120
X	60446-1-40	60446-1-60	60446-1-104	Not Applicable

TABLE 25. COUNTER ASSEMBLY CYCLES TO PROPORTIONING PUMP RATIO RELATIONSHIP

Pump Ratio *	Number of Cycles Required to Dispense Approximately	
	1 lb. (.5 kg) of Mixed Material **	1 Gal (3.8 l) of Mixed material **
50-50	1.6 cycles	16 cycles
52-48	1.7 cycles	16 1/2 cycles
53.5-46.5	1.7 cycles	17 cycles
55.5-44.5	1.8 cycles	18 cycles
57.5-42.5	1.9 cycles	18 1/2 cycles
60-40	1.8 cycles	19 1/2 cycles
66.7-33.3	2.2 cycles	21 1/2 cycles
71-29	2.3 cycles	23 cycles
73.2-26.8	2.4 cycles	23 1/2 cycles
75-25	2.4 cycles	24 cycles
80-20	2.6 cycles	26 cycles
83.3-16.7	2.7 cycles	27 cycles

*** Based on use of size #120 Pump in calculating ratio for all combinations.**
**** Provided that hoses and gun is filled with chemical components.**

TABLE 26. VARIOUS PROPORTIONING PUMP SPECIFICATIONS

Pump Size	Cross-Sectional Area		Ratio with #120 Pump
	square inches	mm^2	
120	1.20	774.2	50-50
112	1.12	722.6	52-48
104	1.04	671.0	53.5-46.5
96	.96	619.3	55.5-44.5
88	.88	567.7	57.5-42.5
80	.80	516.1	60-40
60	.60	387.1	66.7-33.3
48	.48	309.7	71-29
44	.44	283.9	73.2-26.8
40	.40	258.1	75-25
30	.30	193.6	80-20
24	.24	154.9	83.3-16.7

*** Standard Pump Size #80**

PUMP BASE ASSEMBLY

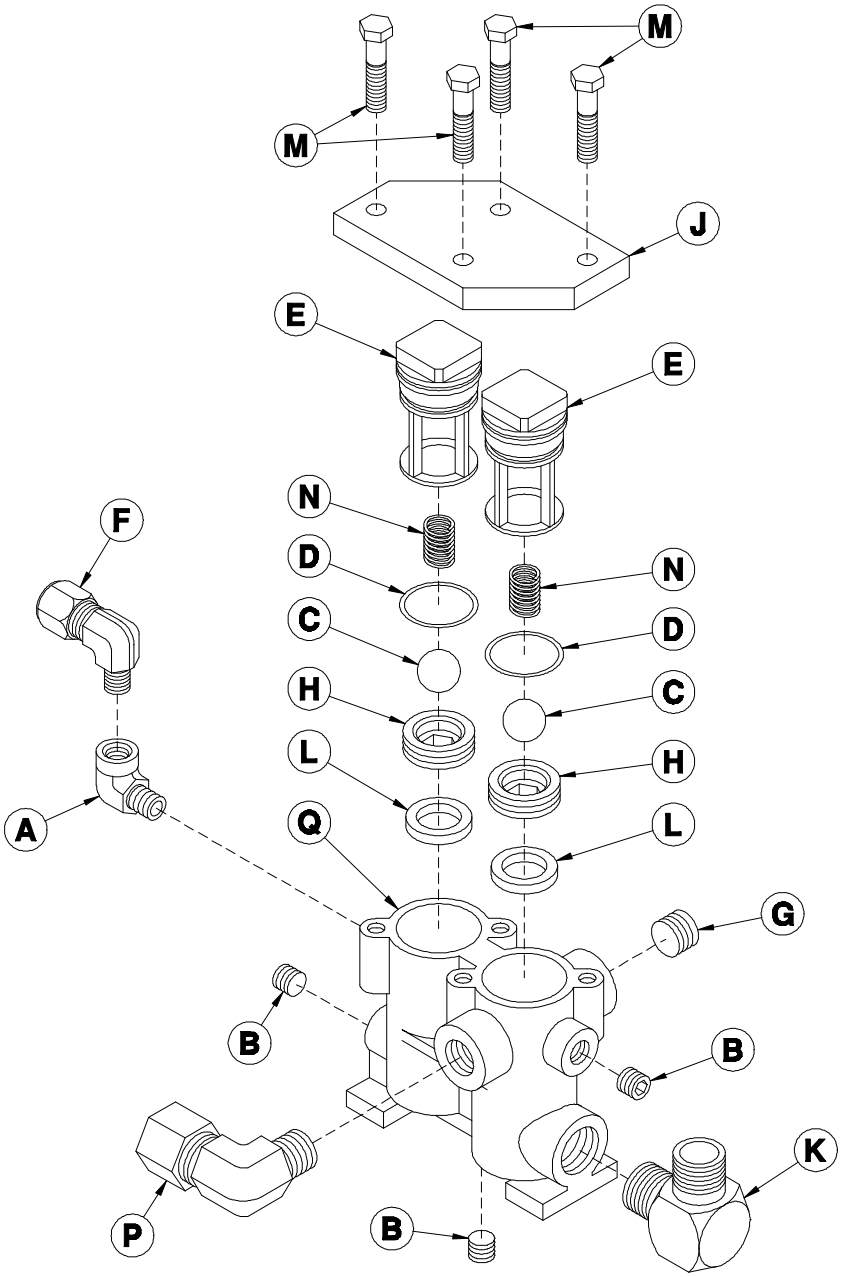


FIGURE 23. PUMP BASE ASSEMBLY (PART NO. 15428-35/15478-35), EXPLODED VIEW

TABLE 27. PUMP BASE ASSEMBLY (PART NO. 15428-35/15478-35), PARTS

Reference Letter	Part No.	Description	Qty
A	375B-2	Street Elbow	1
B	576	Pipe Plug	3
C	5428-5	Valve Ball	2
D	5428-6-3	O-Ring	2
E	5428A-7-1	Ball Guide	2
F	6306-102	Tube Elbow	1
G	6404-1	Pipe Plug	1
H	15428-3	Valve Ball Seat	2
J	15428-4	Valve Cover Bracket	1
K	15428-5	Male Elbow	1
L	15428-7	Seat Seal	2
M	15428-8	Hex Head Cap Screw	4
N	15428-9	Spring	2
P	15441	Tube Elbow	1
Q	15428-1 15478-1	R-Valve Block (includes B & G) A-Valve Block (includes B & G)	1 1

PRIMARY HEATER

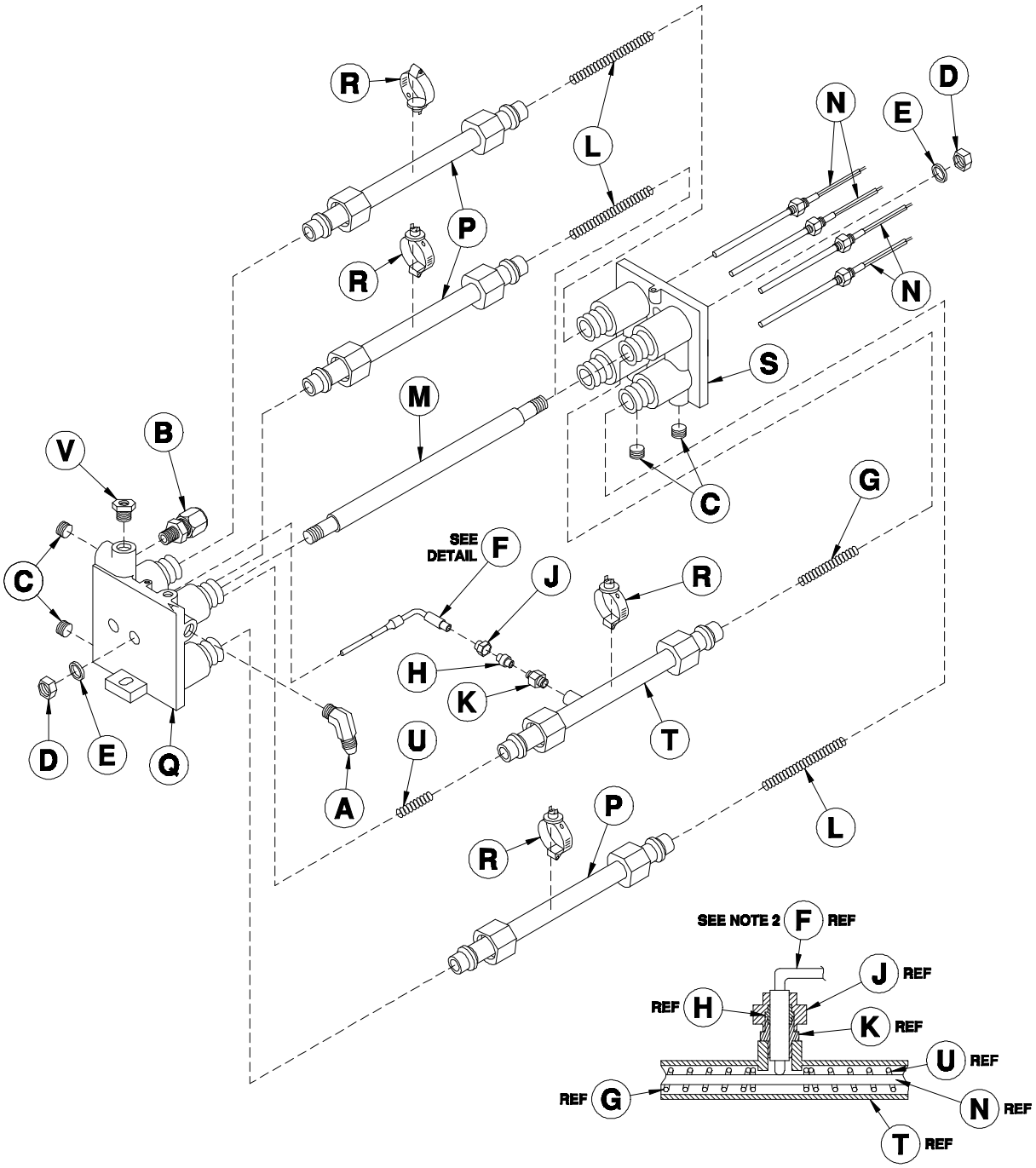


Figure 24. Primary Heater (Part No. 15310A/15360A), Exploded View

TABLE 28. PRIMARY HEATER (PART NO. 15310A/15360A), PARTS

Reference Letter	Part No.	Description	Qty
A	5330-4 5380-4	Hose Elbow (Resin ONLY) Hose Elbow (Iso ONLY)	1 1
B	6306-64	Tube Nipple	1
C	6404-1	Pipe Plug	4
D	14300-11	Hex Nut	2
E	14300-12	Flat Washer	2
F	15300-25-1	Thermocouple Kit (Includes K & L)	1
G	15300-29	Spring	1
H	15300-30-1	Ferrule	1
J	15300-30-2	Tube Nut	1
K	15300-30-3	1/4 Tube Body	1
L	15300-37	Spring	3
M	15300-5	Tie Rod	1
N	15300-8	Heating Element 1500W	4
P	15310-1	Heat Exchanger	3
Q	15310-2 15360-2	R-Preheater Flange A-Preheater Flange	1 1
R	15310-3	Thermostat	4
S	15310-4	Preheater Flange	1
T	26304	Heat Exchanger	1
U	26305	Spring	1
V	OP202-6	Bushing	1
Not Shown	15311	R-Preheater Cover	1
Not Shown	15361	A-Preheater Cover	1
Not Shown	OP482-1-5	Button Head Cap Screw (To Secure Cover)Automatic Hose Heat	1

TABLE 29. RESISTANCE FROM OPERATIONAL HEATING ELEMENTS

Number of Operational Elements	Resistance in Ohms (Ω) 6000 Watt Heater
4	8
3	11
2	16
1	32

AUTOMATIC HOSE HEAT POWER PACK

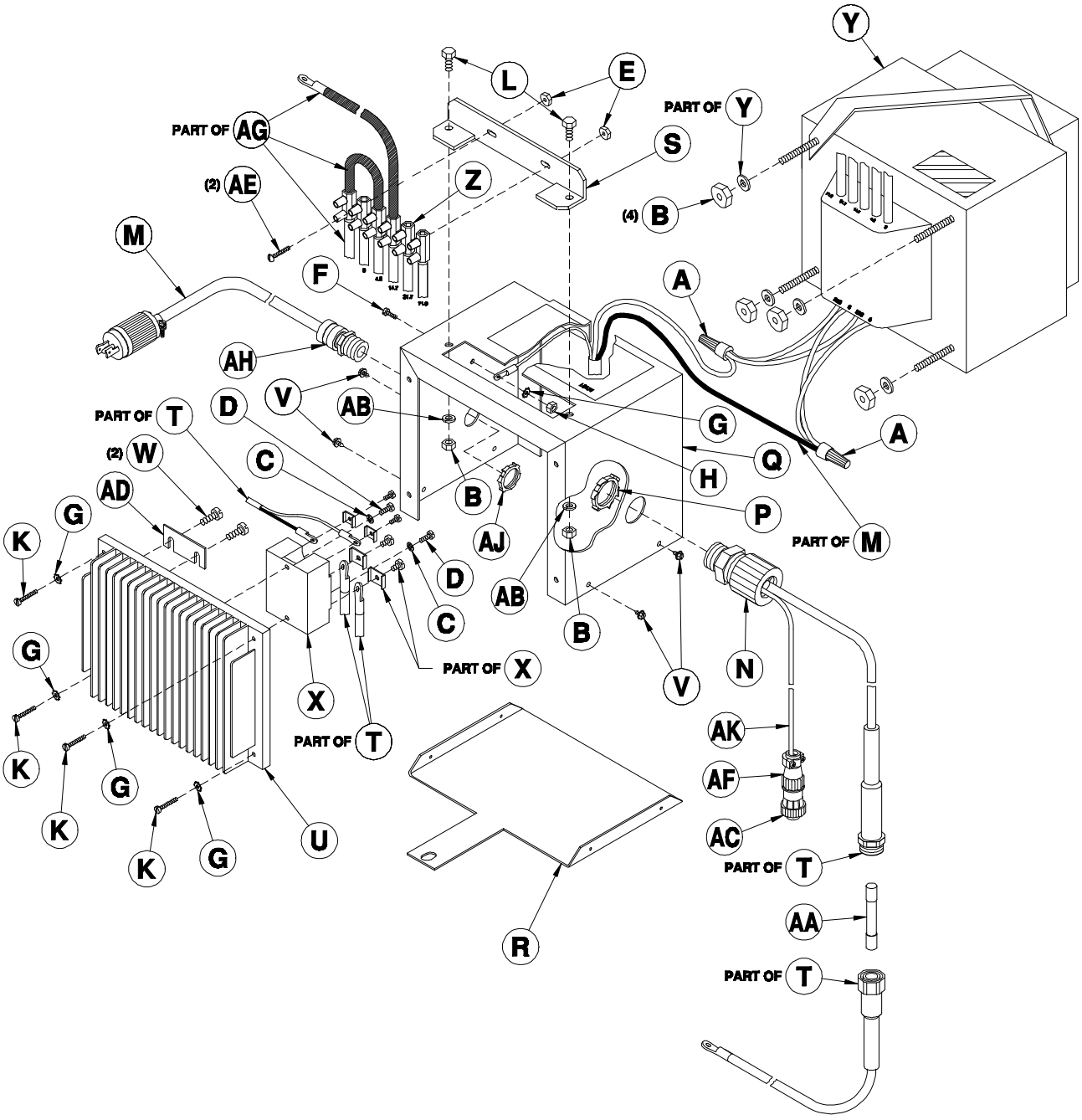


Figure 25. Automatic Hose Heat Power Pack (Part No. 1277), Exploded View

TABLE 30. AUTOMATIC HOSE HEAT POWER PACK (PART NO. 1277), PARTS

Reference Letter	Part No.	Description	Qty
A	363A	Insulating Wire Nut	2
B	385-4	Hex Nut	6
C	651A-10	Lockwasher	2
D	651A-8	Pan Head Machine Screw	2
E	651A-9	Hex Nut	2
F	655-2	Pan Head Machine Screw	1
G	655-4	Lockwasher	5
H	668-3	Hex Nut	1
K	698-3	Pan Head Machine Screw	4
L	760-3	Hex Head Cap Screw	2
M	1275B-2	Input (Power) Wire Harness	1
N	1275C-1-2-1	Strain Relief	1
P	1275C-1-2-2	Locknut	1
Q	1277-1	Transformer Cover Box	1
R	1277-2	Bottom Cover	1
S	1277-4	Terminal Block Mtg. Bracket.	1
T	15501-28	Hose Conn. Lead w/Fuse Holder.	1
U	1278-2	Heat Sink	1
V	1615C-4	Sheet Metal Screw	4
W	4605-3	Pan Head Machine Screw	2
X	6690-1-7	Power Cube 80 AMP	1
Y	6690-15-5	Transformer	1
Z	6690-20-5-6	Terminal Block	1
AA	6690-24-14	50 AMP Fuse	2
AB	9758	Lockwasher	2
AC	6690-13-3-11-41	4 CKT Ma Pin Plug	1
AD	14667	Terminal Jumper	1
AE	60302	Round Head Machine Screw	2
AF	6690-13-4-11	Cable Housing	1
AG	14501-5	Hose Conn. Lead Hrn	1
AH	OP482-17-1	Bushing	1
AJ	OP482-17-2	Locknut	1
AK	1277-8-1	Machine To Transformer Harness (includes AC, AF)	1

OPTIONAL EQUIPMENT

HOSE EQUIPMENT

TABLE 31. DUAL HEATED HOSE ASSEMBLIES GENERALLY USED WITH AN H-3500:

Part #	Description
14250	1/4 Gun Hose W/ Scuff Jacket
14230-50-TC	3/8 x 50 HP Hose Asy
14235-50-TC	1/2 x 50 LV Hose Asy

TABLE 32. ACCESSORIES:

Part #	Description
20206-12/12	Temperature Sensing Unit

TABLE 33. FITTINGS TO ADAPT 3/8" HOSE TO 1/2" HOSE:

Part #	Description
5253A	Resin Hose Adapter
5254A	Iso Hose Adapter

AUXILIARY PUMP RETRO-FIT KIT

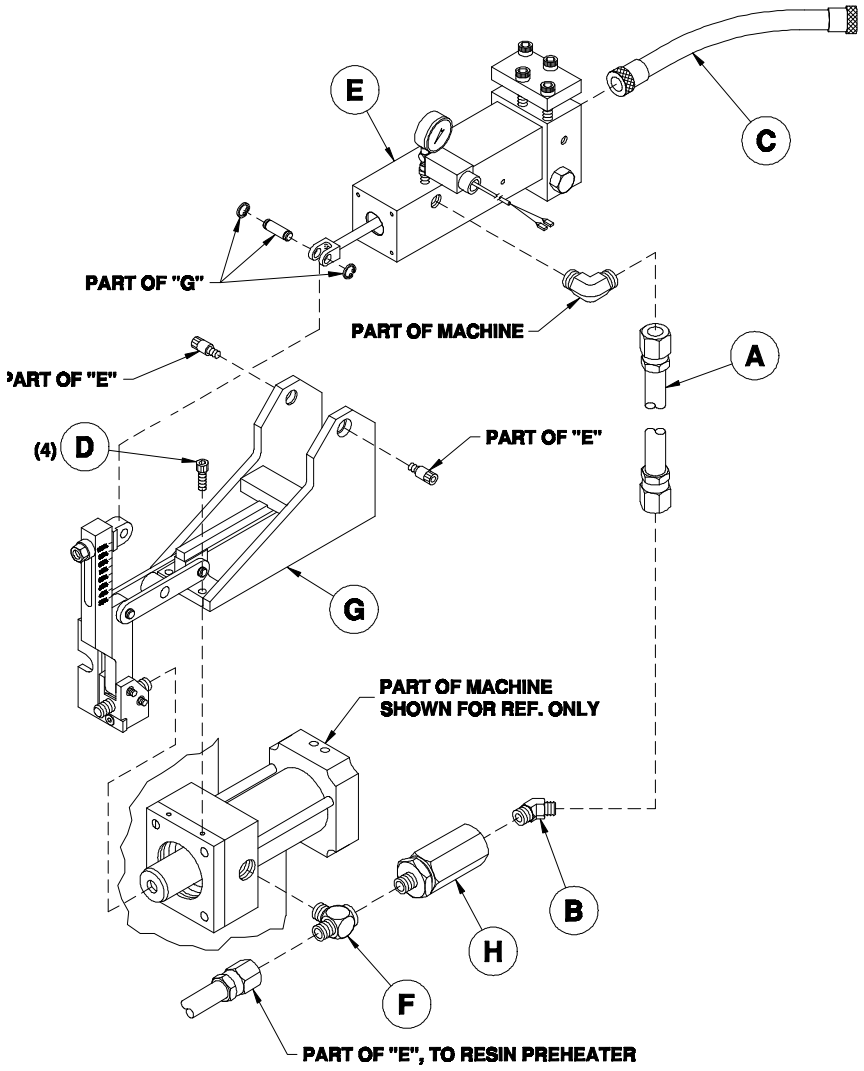


Figure 26. Auxiliary Pump Retro-Fit Kit (Part No. 15840-SIZE), Exploded View

TABLE 34. AUXILIARY PUMP RETRO-FIT KIT (PART NO. 15840-SIZE), PARTS

Reference Letter	Part No.	Description	Qty
A	1327	Interconnect Hose	1
B	465	Hose Elbow	1
C	828	Material Supply Hose	1
D	5512-8	Socket Head Cap Screw	4
E	15800A-SIZE	Aux. Prop. Pump Asy	1
F	15821	Pipe & Hose Tee	1
G	15828	Pump Mounting Asy	1
H	15851	Check Valve	1
Not Shown	15841	Loctite (Sample Tube)	1

AUXILIARY PUMP MOUNTING ASSEMBLY

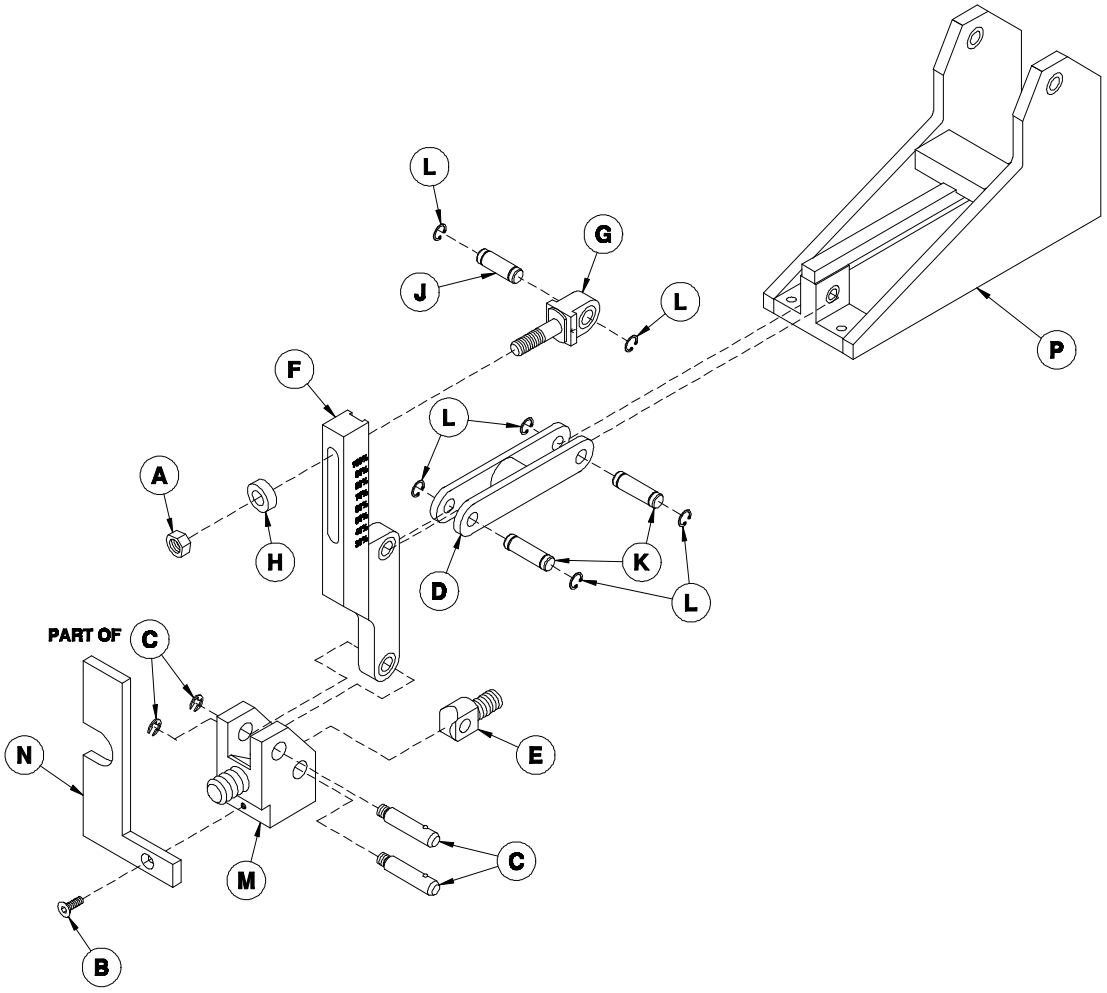


Figure 27. Auxiliary Pump Mounting Assembly (Part No. 15828), Exploded View

TABLE 35. AUXILIARY PUMP MOUNTING ASSEMBLY (PART NO. 15828), PARTS

Reference Letter	Part No.	Description	Qty
A	370	Hex Nut	1
B	1521-1-2	Flat Head Cap Screw	1
C	15515	Clevis Pin	2
D	15829-1	Idler Link	1
E	15829-10	Pump Clevis	1
F	15829-2	Drive Arm	1
G	15829-3	Adjustable Pivot	1
H	15829-4	Washer	1
J	15829-5	Yoke Pin	1
K	15829-6	Pivot Pin	2
L	15829-7	Tru Arc	5
M	15829-8	Hydraulic Cylinder Clevis	1
N	15829-9	Reversing Plate	1
P	15830	Main Bracket Assembly	1

AUXILIARY PROPORTIONING PUMP ASSEMBLY
15 SIZE PUMP

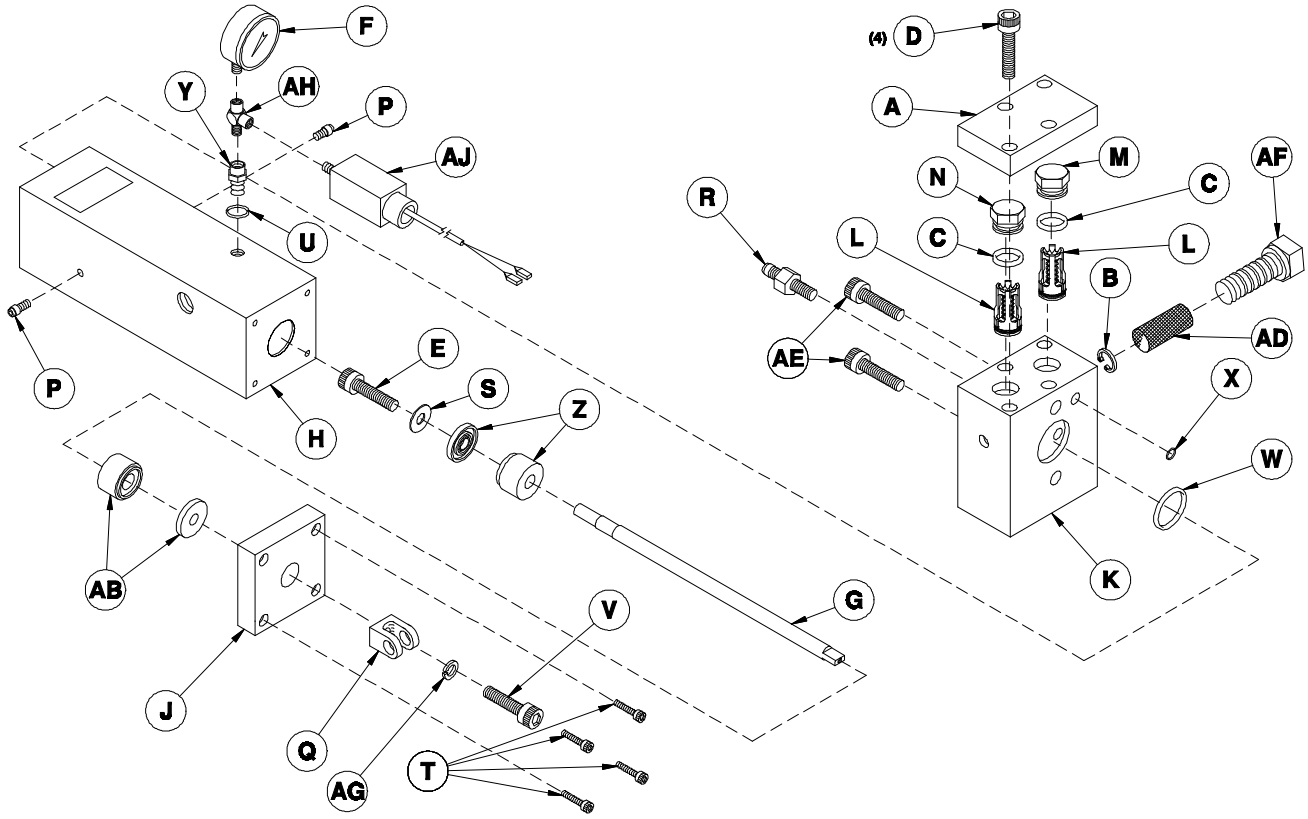


Figure 28. Auxiliary Pump Assembly (Part No. 15800A-15), Exploded View

TABLE 36. AUXILIARY PUMP ASSEMBLY (PART NO. 15800A-15), PARTS

Reference Letter	Part No.	Description	Qty
A	15813	Valve Cover Bracket	1
B	461	Snap Ring	1
C	15805-2	O-Ring	2
D	352A-1	Socket Head Cap Screw	4
E	12124	Socket Head Cap Screw-NYLOC	1
F	15503	0-3000 PSI Liquid Fill Gauge	1
G	15801-15	Piston Rod	1
H	15802-15	Pump Cylinder Block	1
J	15803-15	Pump Flange	1
K	15804A	Pump Base	1
L	15805-S	Check Valve	2
M	15806	Inlet Valve Cover	1
N	15807	Outlet Valve Cover	1
P	15808	Pivot	2
Q	15809-1/4	Yoke	1
R	15810	Hose Nipple	1
S	15812-15	Packing Retainer Washer	1
T	4406-16	Socket Head Cap Screw	4

Reference Letter	Part No.	Description	Qty
U	807	O-Ring	1
V	5512-8	Socket Head Cap Screw	1
W	9403-N	O-Ring-Neoprene	1
X	9405-N	O-Ring-Neoprene	1
Y	9412	Tube Adapter	1
Z	9443-15	Piston Seal Set	1
AB	9444-15	Cylinder Seal Set	1
AD	9462	Pump Screen	1
AE	9463	Socket Head Cap Screw	2
AF	9464	Screen Screw	1
AG	9758	Lockwasher	1
AH	6465	Pipe Tee	1
AJ	15516-2200	Pressure Switch	1

AUXILIARY PROPORTIONING PUMP ASSEMBLY 10, 24, AND 30 SIZE PUMPS

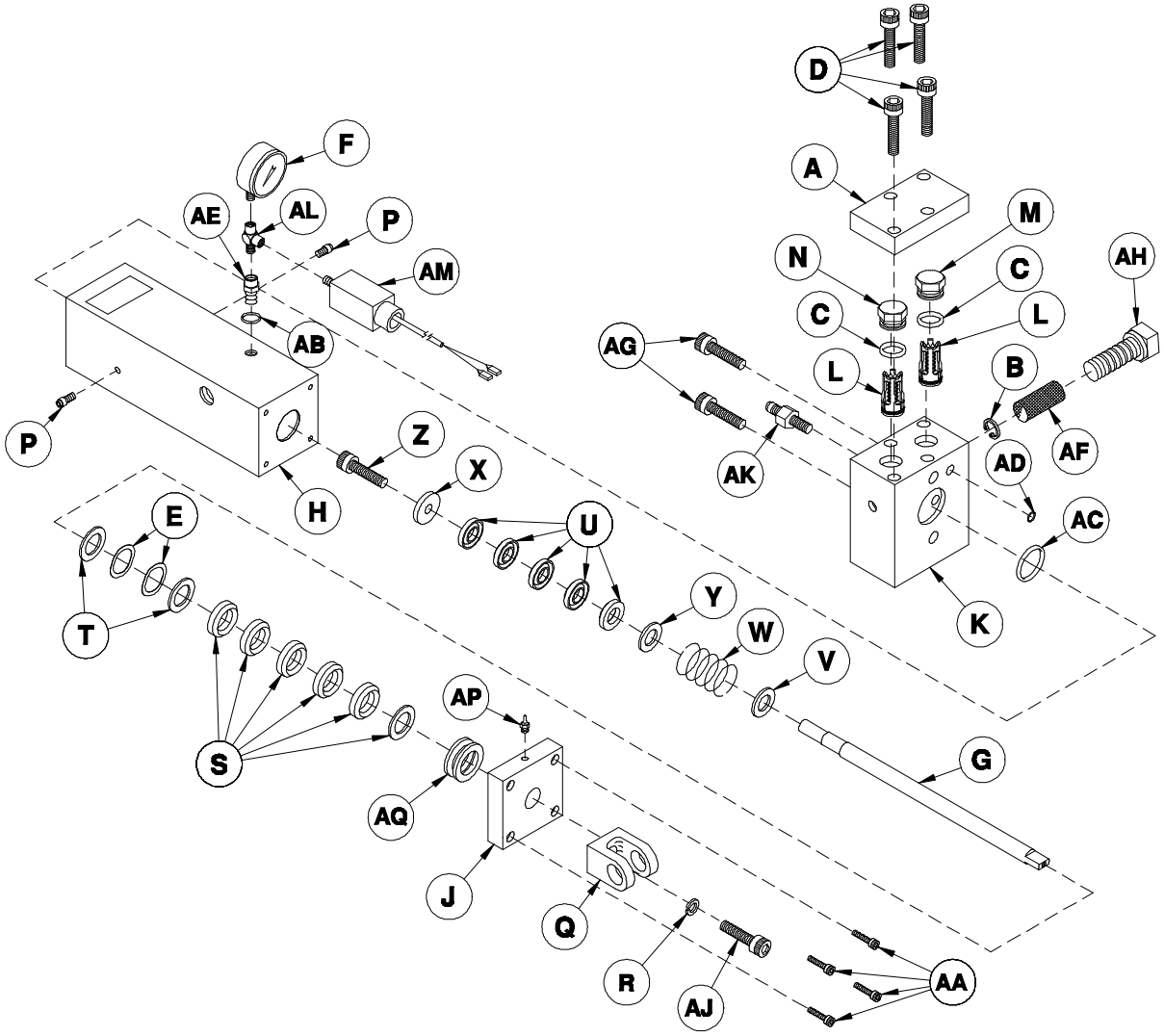


Figure 29. Auxiliary Proportioning Pump Assembly (Part No. 15800A-SIZE), Exploded View

TABLE 37. AUXILIARY PROPORTIONING PUMP ASSEMBLY (PART NO. 15800A-SIZE), PARTS

Reference Letter	Part No.	Description	Qty
A	15813	Valve Cover Bracket	1
B	461	Snap Ring	1
C	15805-2	O-Ring	2
D	352A-1	Socket Head Cap Screw	4
E	See Schedule	Wave Spring	2
F	15503	0-3000 PSI Liquid Fill Gauge	1
G	See Schedule	Piston Rod	1
H	See Schedule	Pump Cylinder Block	1
J	See Schedule	Pump Flange	1
K	15804A	Pump Base	1

Reference Letter	Part No.	Description	Qty
L	15805-S	Check Valve	2
M	15806	Inlet Valve Cover	1
N	15807	Outlet Valve Cover	1
P	15808	Pivot	2
Q	See Schedule	Yoke	1
R	See Schedule	Lockwasher	1
S	See Schedule	Packing Set	1
T	See Schedule	Packing Support Washer	2
U	See Schedule	Packing Set	1
V	See Schedule	Spring Retainer Washer	1
W	See Schedule	Conical Spring	1
X	See Schedule	Packing Retainer Washer	1
Y	See Schedule	Packing Support Washer	1
Z	See Schedule	Socket Head Cap Screw	1
AA	4406-16	Socket Head Cap Screw	4
AB	807	O-Ring	1
AC	9403-N	O-Ring	1
AD	9405-N	O-Ring	1
AE	9412	Pressure Gauge Adapter	1
AF	9462	Pump Screen	1
AG	9463	Socket Head Cap Screw	2
AH	9464	Screen Screw	1
AJ	See Schedule	Socket Head Cap Screw	1
AK	15810	Hose Nipple	1
AL	6465	Pipe Tee	1
AM	15516-2200	Pressure Switch	1

TABLE 38. PUMP SIZE (PART NO. 15800A-SIZE), SCHEDULING OF PARTS

Reference Letter	Pump Size		
	10	24	30
E	1417-24	9404-24	1417-48
G	15801-10	9451-24	9451-30
H	15802-10	15802-24	15802030
J	15803-10	9410-24	9410-30
Q	15809-10	15809-1/4	15809-1/4
R	1707-15-8	9758	9758
S	15811	476-24	476-30
T	1812	9477-24	9477-30
U	1812	478-24	476-19
V	1814	482-24	482-30
W	1815	481-24	481-30
X	1816	9488-24	9488-30
Y	1817	479-24	479-30
Z	1818	9480	9480
AJ	OP219-4	5512-8	5512-8

ELECTRICAL SCHEMATIC DIAGRAMS

STANDARD HOSE TEMPERATURE CONTROL

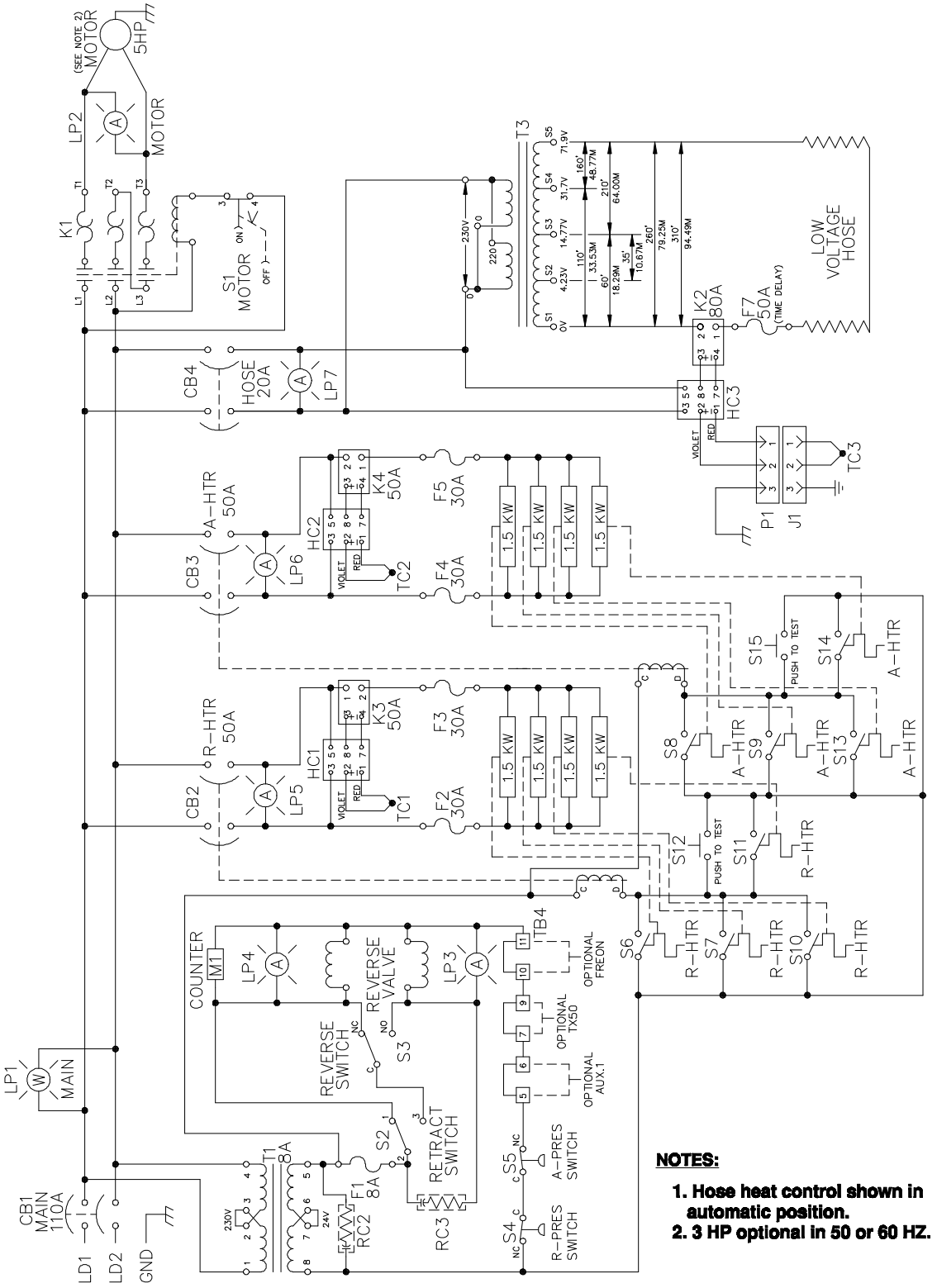
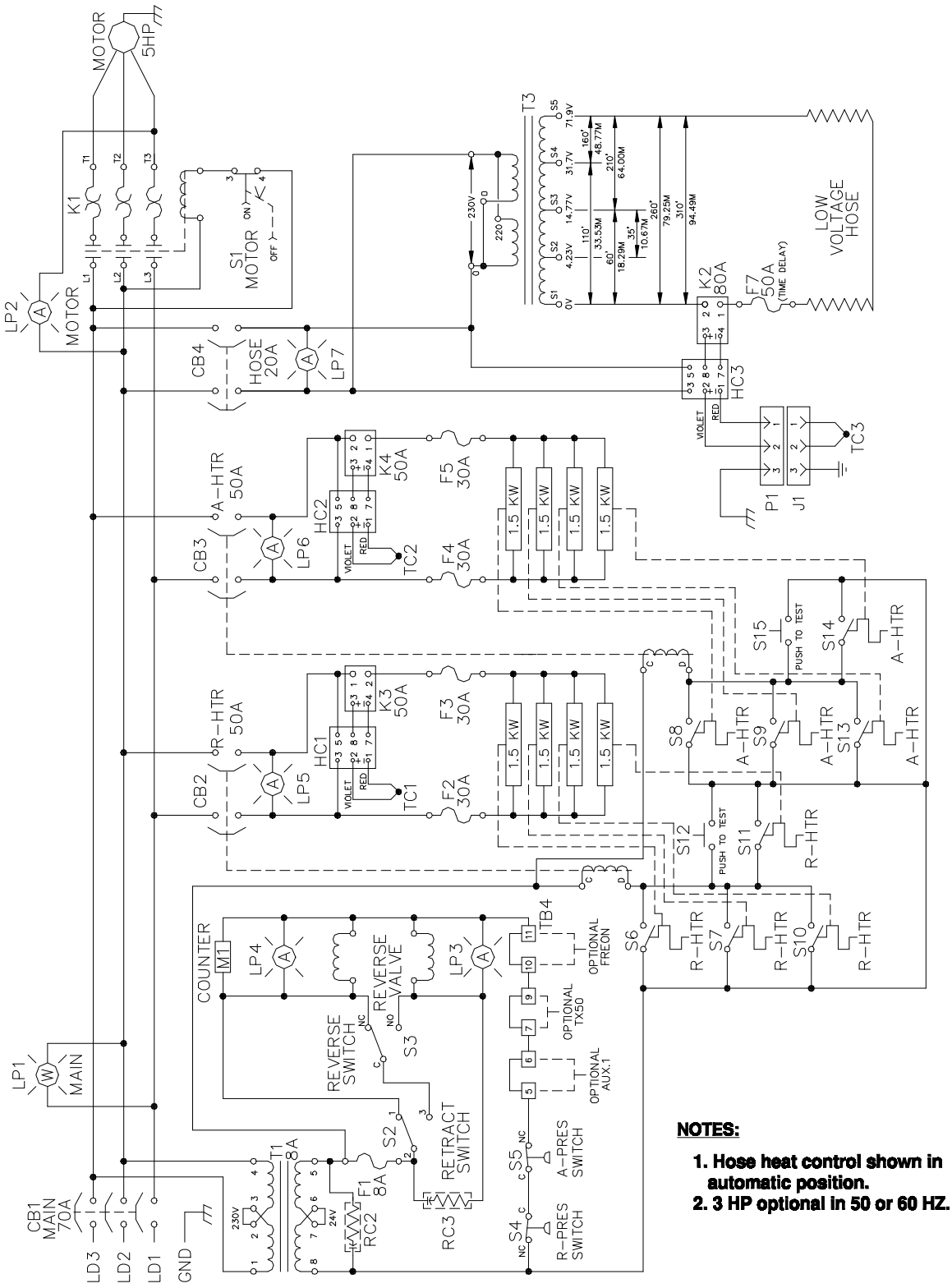


Figure 30. H-3500 Single Transformer, 220V Single Phase



NOTES:

1. **Hose heat control shown in automatic position.**
2. **3 HP optional in 50 or 60 HZ.**

Figure 31. H-3500 Single Transformer, 220V Three Phase

Figure 32. H-3500 Single Transformer, 380V Three Phase

TABLE 39. ELECTRICAL SCHEMATIC DIAGRAMS, PARTS

Reference Letter	Part No.	Description
CBI	6690-25-3 5601A-1	110 AMP Circuit Breaker (1 Phase) 70 AMP Circuit Breaker (3 Phase)
CB2,CB3	6690-25-4	50 AMP Circuit Breaker
CB4	692-1-20	20 AMP Circuit Breaker
F1	6690-24-3	8 AMP Fuse
F2, F3, F4, F5	6651-5	30 AMP Fuse
F7	6690-24-14	50 AMP Fuse
HC1, HC2, HC3	6690-26-9	Temperature Controller
K	6690-27-7 6690-27-10 6690-27-8 6690-27-11	Power Contactor 50/60 HZ Overload Relay 30A (5HP,1PH) Overload Relay 17.5A (5HP, 3PH) Overload Relay 9.5A (5HP 3 x 380V)
K2	6690-1-7	Power Cube 80 AMP
K3, K4	6690-1-5	Power Cube 50 AMP
M1	9651-6-2	Counter
RC2	6690-21-2	Quencharc w/Lugs
RC3	6690-21-1	Quencharc
S1	50602-1	Push-button Switch 10A
S2	16690-6-6	Toggle Switch
S3	1521-3	Reversing Switch
S4, S5	15516-2200	Pressure Switch
S6,S7,S8,S9,S10, S11,S13,S14	15310-3-1	Thermostat
S12, S15	6651-9	Push-button Switch
T1	5611-1	Transformer
T3	15276	Transformer
TC1, TC2	15300-25	Thermocouple
TC3	20206-12/12	Temperature Sensor

INDIVIDUAL HOSE TEMPERATURE CONTROL (IHTC)

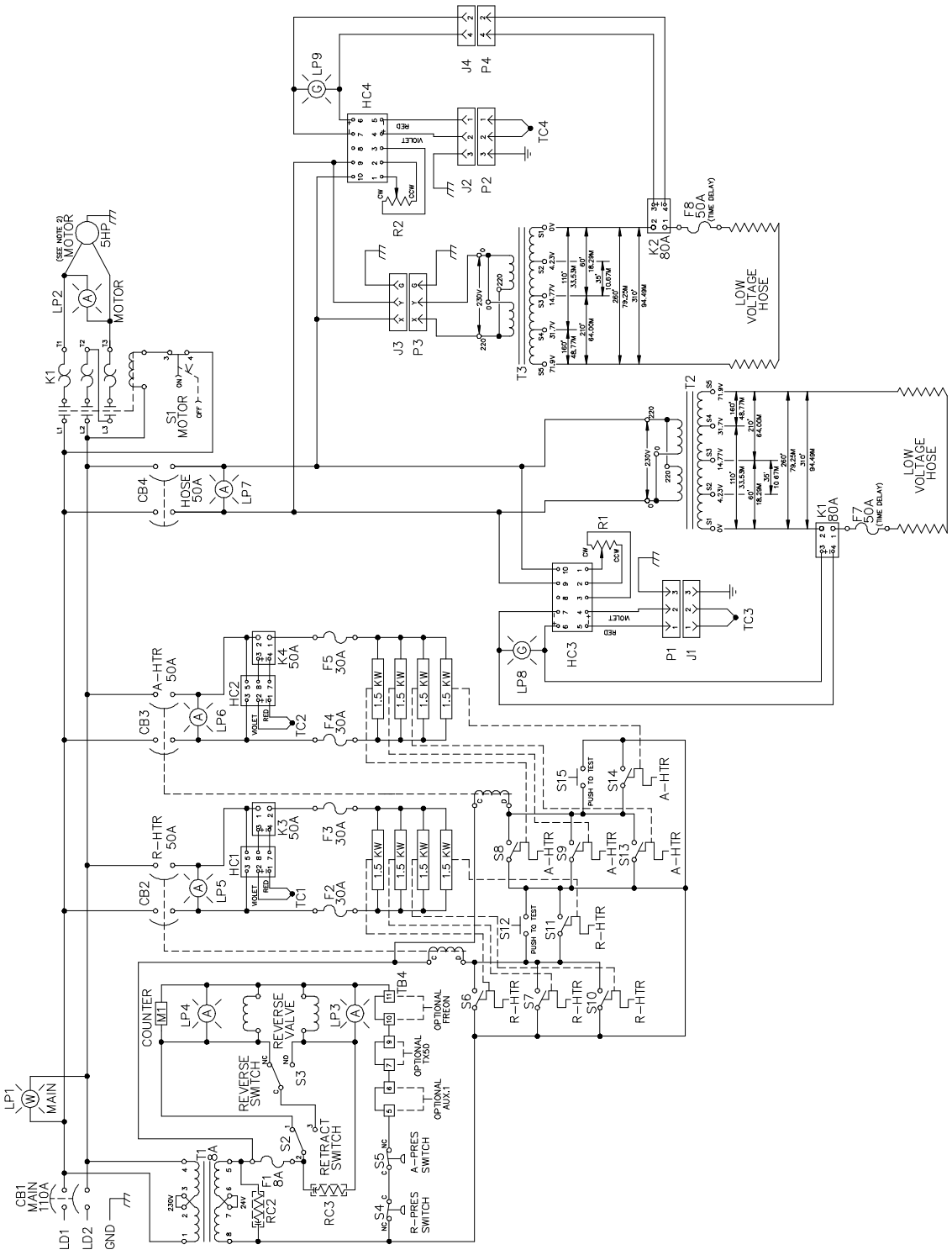


Figure 33. H-3500 Dual Transformer, 220V Single Phase

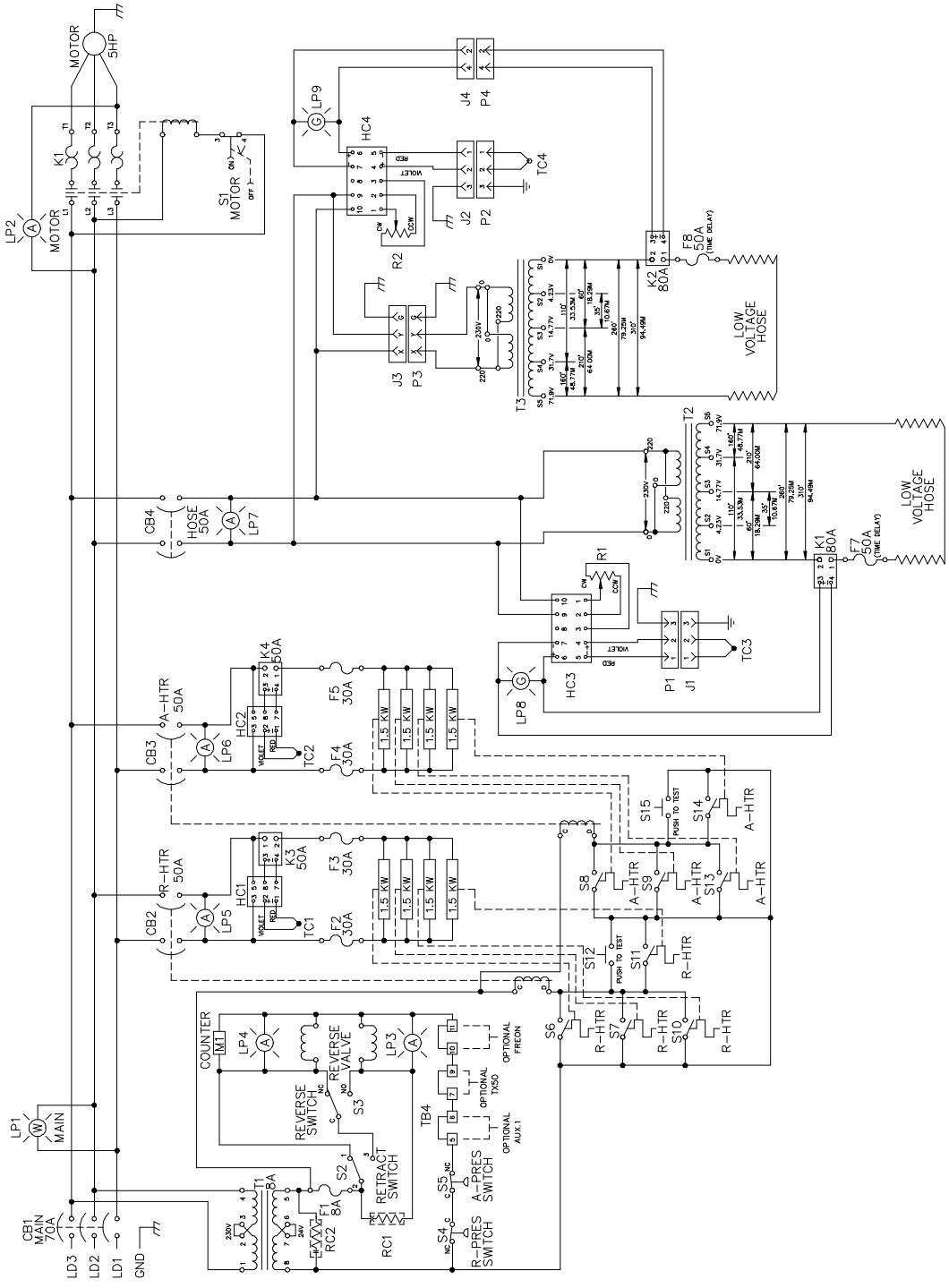


Figure 34. H-3500 Dual Transformer, 220V Three Phase

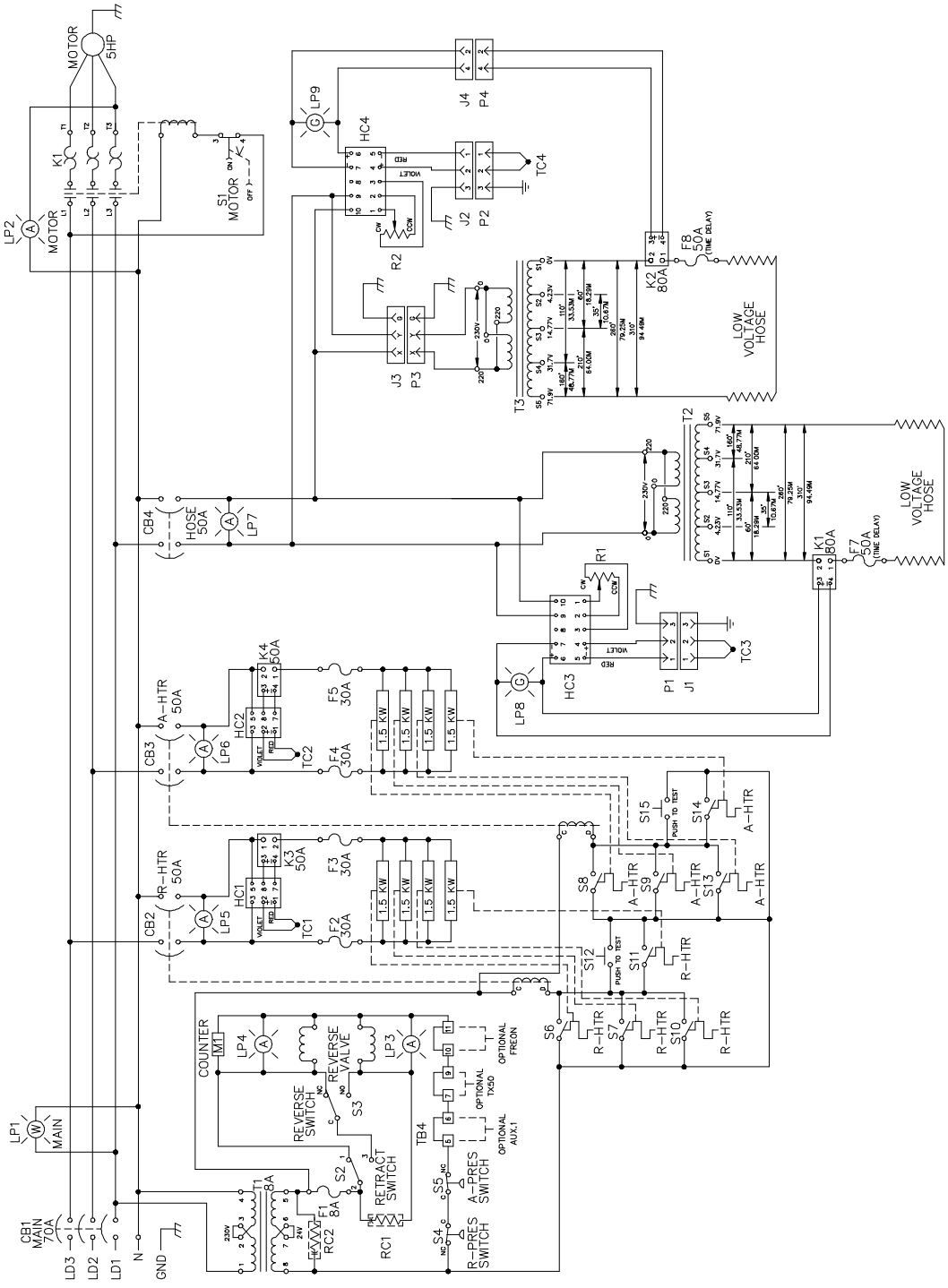


Figure 35. H-3500 Dual Transformer, 380V Three Phase

TABLE 40. ELECTRICAL SCHEMATIC DIAGRAMS, PARTS

Reference Number	Part No.	Description
CBI	6690-25-3	110 AMP Circuit Breaker (1 Phase)
	5601A-1	70 AMP Circuit Breaker (3 Phase)
CB2,CB3	6690-25-4	50 AMP Circuit Breaker
CB4	6690-25-1	50 AMP Circuit Breaker
F1	6690-24-3	8 AMP Fuse
F2, F3, F4, F5	6651-5	30 AMP Fuse
F7,F8	6690-24-14	50 AMP Fuse
HC1, HC2	6690-26-9	Temperature Controller
HC3,HC4	6690-26-10	Controller
K	6690-27-7	Power Contactor 50/60 HZ
	6690-27-10	Overload Relay 30A (5HP,1PH)
	6690-27-8	Overload Relay 17.5A (5HP, 3PH)
	6690-27-11	Overload Relay 9.5A (5HP 3 x 380V)
K1,K2	6690-1-7	Power Cube 80 AMP
K3, K4	6690-1-5	Power Cube 50 AMP
LP8,LP9	6690-19-10-2	Green Lamp
M1	9651-6-2	Counter
R1,R2	6690-5-14	Potentiometer
RC2	6690-21-2	Quencharc W/Lugs
RC3	6690-21-1	Quencharc
S1	50602-1	Push-button Switch 10A
S2	6690-16-6	Toggle Switch
S3	1521-3	Reversing Switch
S4, S5	15516-2200	Pressure Switch
S6, S7, S8, S9, S10, S11 S13, S14	15310-3-1	Thermostat
S12, S15	6651-9	Push-button Switch
T1	5611-1	Transformer
T2	9651-6-9	Transformer
T3	15276	Transformer
TC1, TC2	15300-25	Thermocouple
TC3,TC4	20206-12/12	Temperature Sensor