

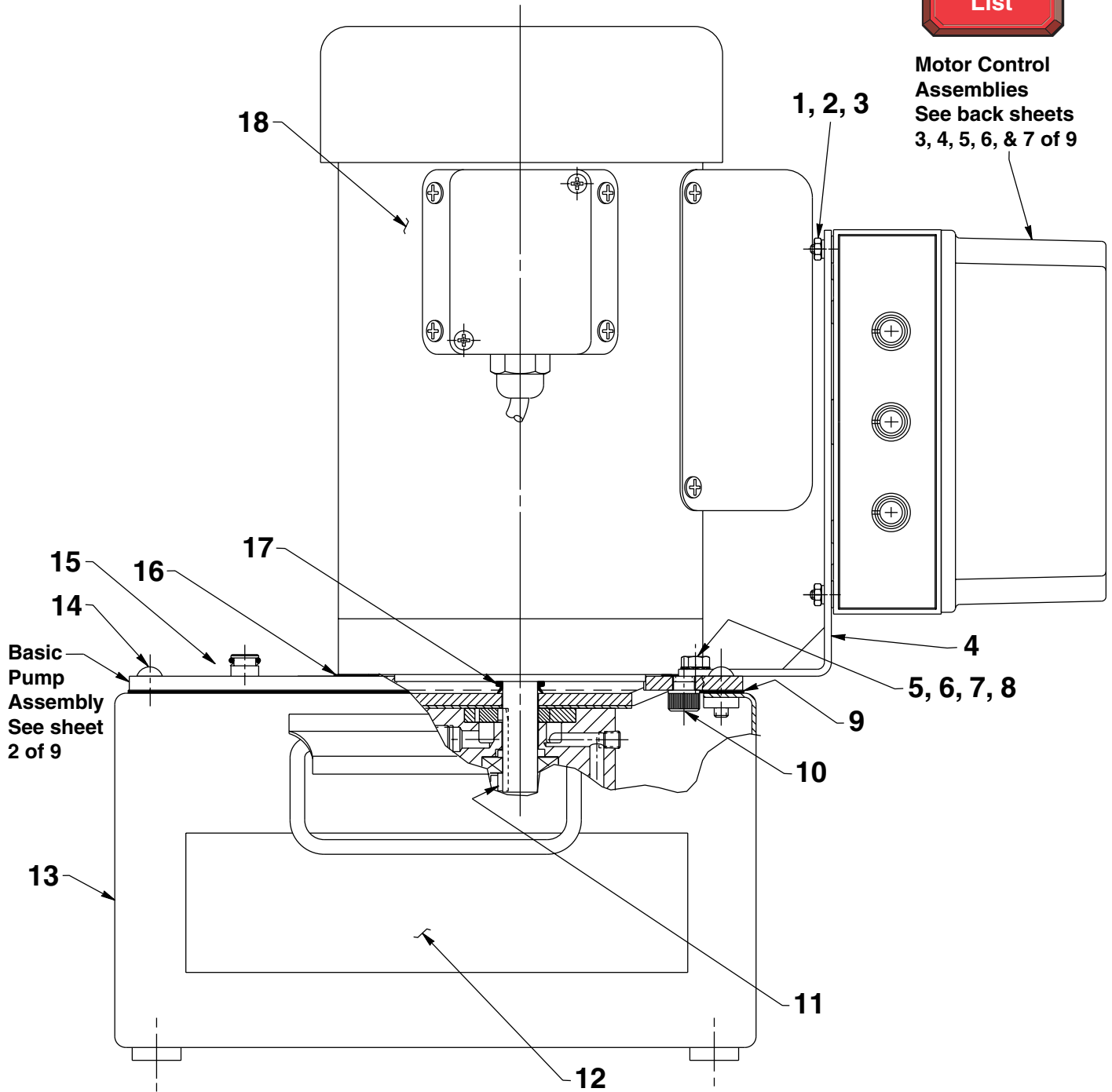
Parts List for:

PE462-E110	PE462S-E220
PE462-E220	PE464-E110
PE462A-E220	PE464-E220
PE462S-E110	PE464S-E220

MODEL B ELECTRIC HYDRAULIC PUMP



Motor Control
Assemblies
See back sheets
3, 4, 5, 6, & 7 of 9



Item No.	Part No.	No. Req'd	Description
1	253508	4	Soc. Hd. Screw (8-32 x 7/8)
2	10241	4	Lockwasher (.33 x .20)
3	10196	4	Hex Nut (8-32)
4	59396BK2	1	Mounting Bracket
5	10009	2	Cap Screw (1/4-20 x 3/4; Torque to 60/80 in. lbs.)
6	11351	2	External Tooth Washer (.50 x .26)
7	10245	2	Lockwasher (.49 x .26)
8	10199	2	Hex Nut (1/4-20)
9	40164	1	Reservoir Gasket
10	10464	4	Soc. Hd. Screw (3/8-16 x 3/4; Torque to 90/100 in. lbs.)
11	214097	1	Key
12	309219	2	Trade Name Decal
13	64026OR9	1	Reservoir
14	10177	10	Rnd. Hd. Screw (1/4-20 x 3/4)

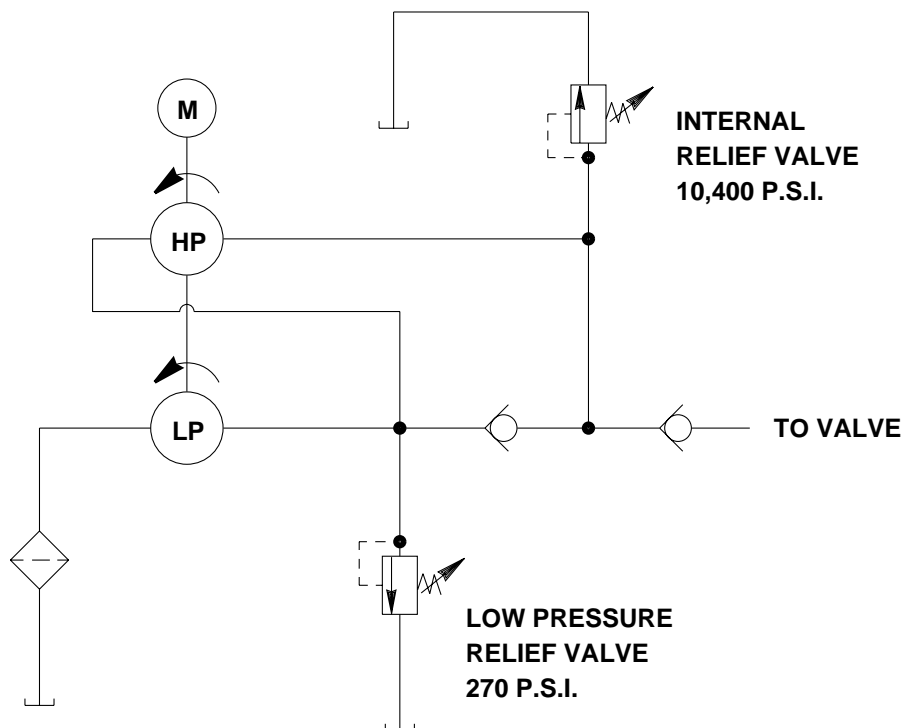
Item No.	Part No.	No. Req'd	Description
15	9584	1	Single-acting Valve (For PE462-E110 & PE462-E220; See Form No. 101239)
	9610	1	3-way Automatic Valve (For PE462A-E220; See Form No. 101200)
	9500	1	4-way Tandem Ctr Manual Valve (For PE464-E110 & PE464-E220; See Form No. 100623)
	421451	1	3-way 220V. Solenoid Valve (For PE462S-E220; See Form No. 101803)
	421547	1	3-way 115V. Solenoid Valve (For PE462S-E110; See Form No. 101803)
	66206-220	1	4-way 230V. Solenoid Valve (For PE464S-E220; See Form No. 108066)
16	307425	1	Motor Base Gasket
17	213674	1	V-ring (.79 x .55 x .22 L)
18	58684	1	Electric Motor (110/220V 50 Hz.)



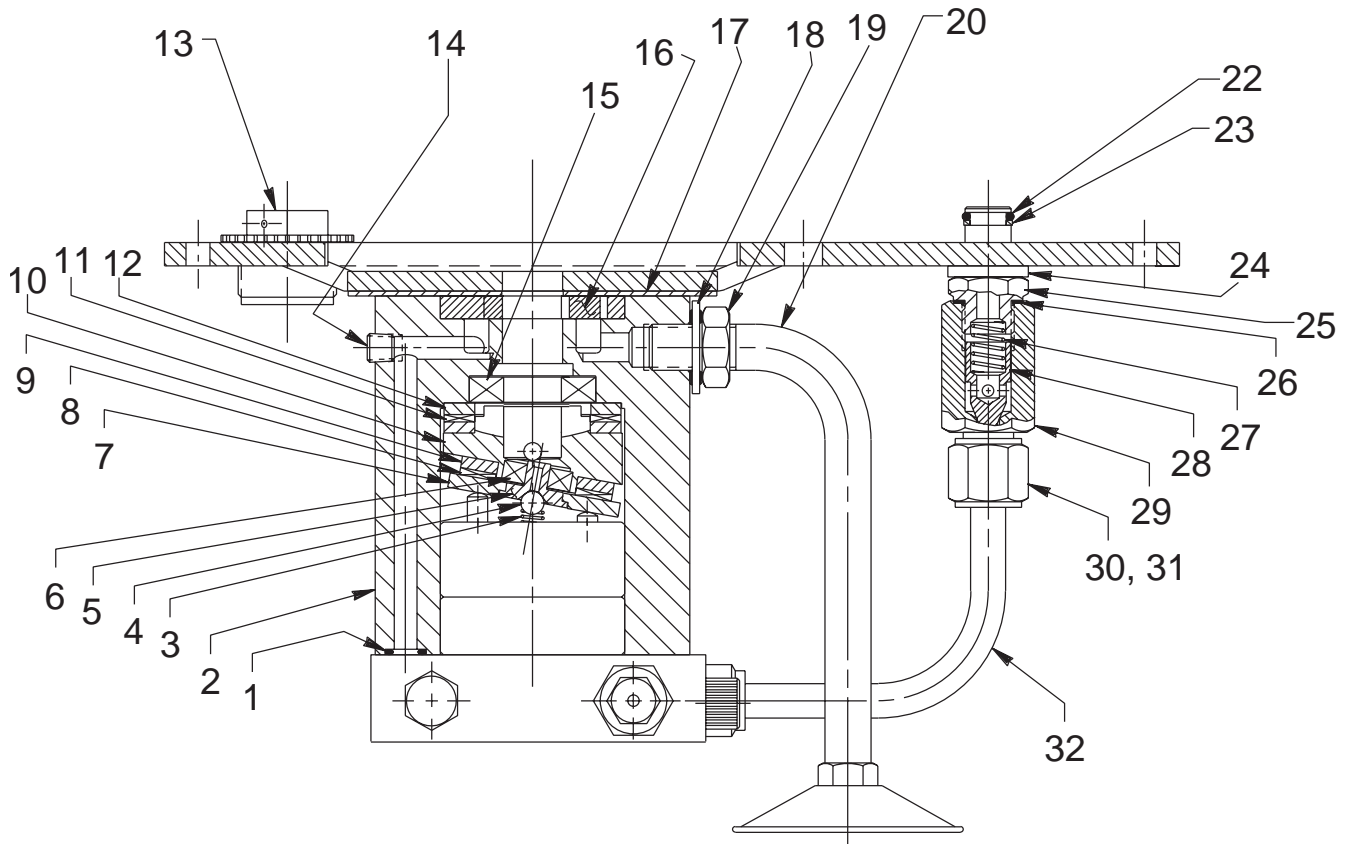
PARTS INCLUDED BUT NOT SHOWN

16797	1	90° Elbow Fitting	} For PE464S-E220
200609	1	Drain Tube	
9689	1	Reducer Connector	

HYDRAULIC SCHEMATIC

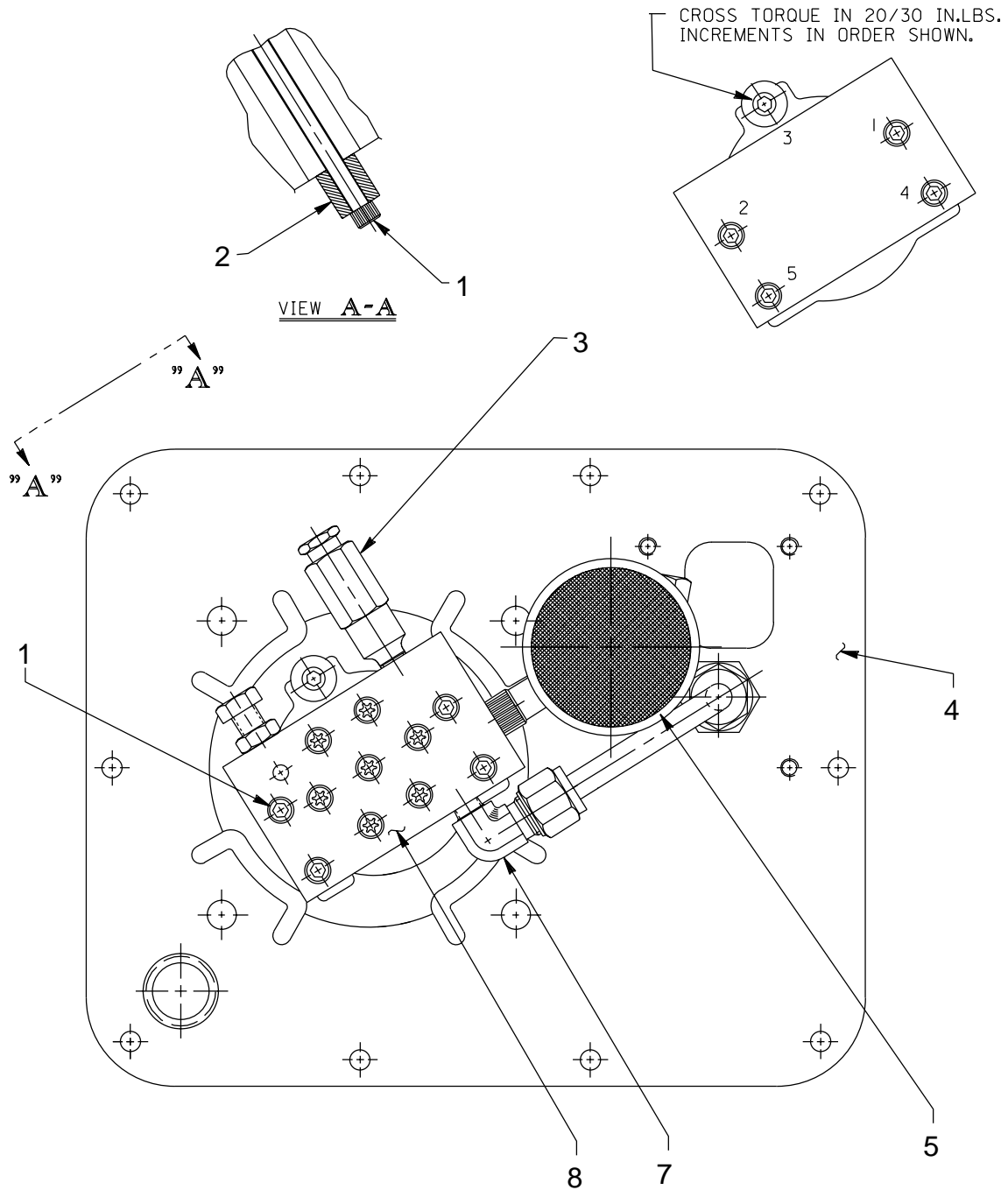


BASIC PUMP ASSEMBLY - SIDE VIEW



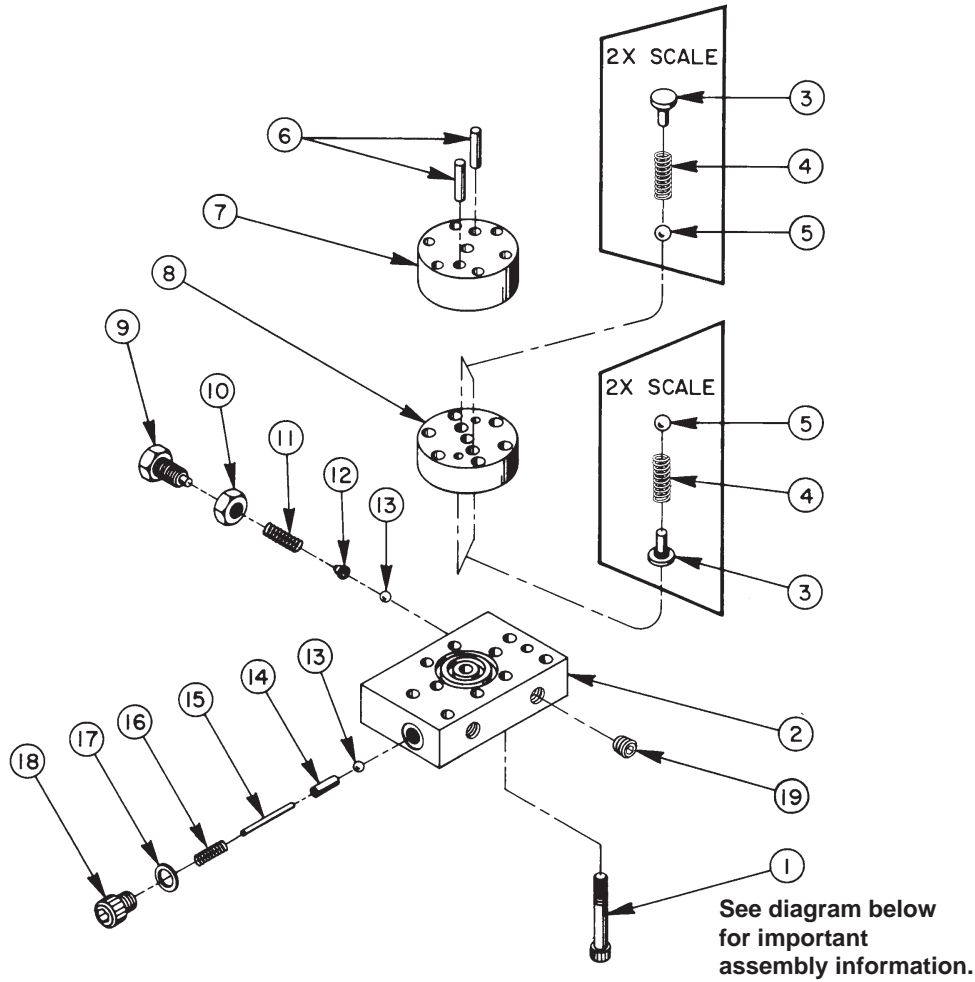
Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	10267	1	O-ring (7/16 x 5/16 x 1/16)	20	213686	1	Intake Tube
2	52883	1	Pump Body	22	10268	1	O-ring (1/2 x 3/8 x 1/16)
3	16320	1	Compression Spring (1/4 O.D. x 3/4 Lg.)	23	11863	1	Backup Washer (1/2 x 3/8 x 1/16)
4	10375	1	Steel Ball (1/4 dia.)	24	21484	1	Washer
5	23547	1	Top Plate Bearing	25	214762	1	Valve Connector (Note: The torque between the valve connector and the cover plate shall be 30 ft. lbs. max. The torque between the valve connector and the check valve body shall be 40-50 ft. lbs.)
6	11814	1	Ball Bearing	26	10261	1	Copper Washer (3/4 x 19/32 x 1/32)
7	23548	1	Top Plate	27	10425	1	Compression Spring (3/8 O.D. x 3/4 Lg.)
8	15431	1	Needle Thrust Bearing	28	20771	1	Poppet
9	15432	1	Needle Thrust Bearing Race	29	201879	1	Check Valve Body
10	35271	1	Angle Plate	30	10430	1	Tube Sleeve
11	11228	1	Needle Thrust Bearing	31	10431	1	Tube Nut
12	11227	2	Needle Thrust Bearing Race	32	307459	1	Oil Line Tube
13	213706	1	Filler Cap				
14	11084	1	Pipe Plug (1/16 NPTF)				
15	15695	1	Ball Bearing				
16	15693	1	Gerotor Set				
17	307296	1	Wear Plate				
18	213709	1	Washer Seal (Turn on - Do not push on)				
19	10390	1	Nut (1/2-20 UNF)				

BASIC PUMP ASSEMBLY - BOTTOM VIEW



Item No.	Part No.	No. Req'd	Description
1	15642	5	Cap Screw (1/4-20 x 5" Lg.; Torque to 55/65 in. lbs.)
2	214720	1	Spacer
3	21278	1	Relief Valve (Set at 10,100/10,700 PSI)
4	421162BK2	1	Cover Plate
5	29682	1	Strainer
7	10475	1	90° Elbow
8	36922	1	High Pressure Pump Assembly (See sheet 3 of 9)

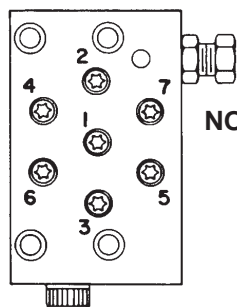
HIGH PRESSURE PUMP ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	*16747	7	Torx Drive Cap Screw (1/4-28 x 1-3/4 Lg.; See diagram below)
2	*36912	1	Pump End Plate
3	*24549	4	Valve Guide
4	*10445	4	Compression Spring (5/32 O.D. x 3/4 Lg.)
5	*12223	4	Steel Ball (3/16 dia.)
6	*20775	2	Piston
7	*41006	1	Pump Barrel
8	*41007	1	Valve Head
9	200797	1	Adjusting Screw
10	10386	1	Jam Nut (3/8-24)

Item No.	Part No.	No. Req'd	Description
11	15691	1	Compression Spring (1/4 O.D. x 5/8 Lg.)
12	200796	1	Adapter, Spring & Ball
13	10375	2	Steel Ball (1/4 dia.)
14	201998	1	Sleeve
15	12571	1	Roll Pin (1/8 dia. x 1-3/8 Lg.)
16	14431	1	Compression Spring (.197 O.D. x 3/4 Lg.)
17	12042	1	Copper Washer (9/16 x 3/8 x 1/32 thk.)
18	29690	1	Cap Screw (Torque to 180 in. lbs.)
19	10427	1	Pipe Plug (1/8 NPTF)

BOLT TIGHTENING SEQUENCE



NOTE: Assemble in sequence shown. Lubricate under head on threads. Torque to 170 in. lbs.

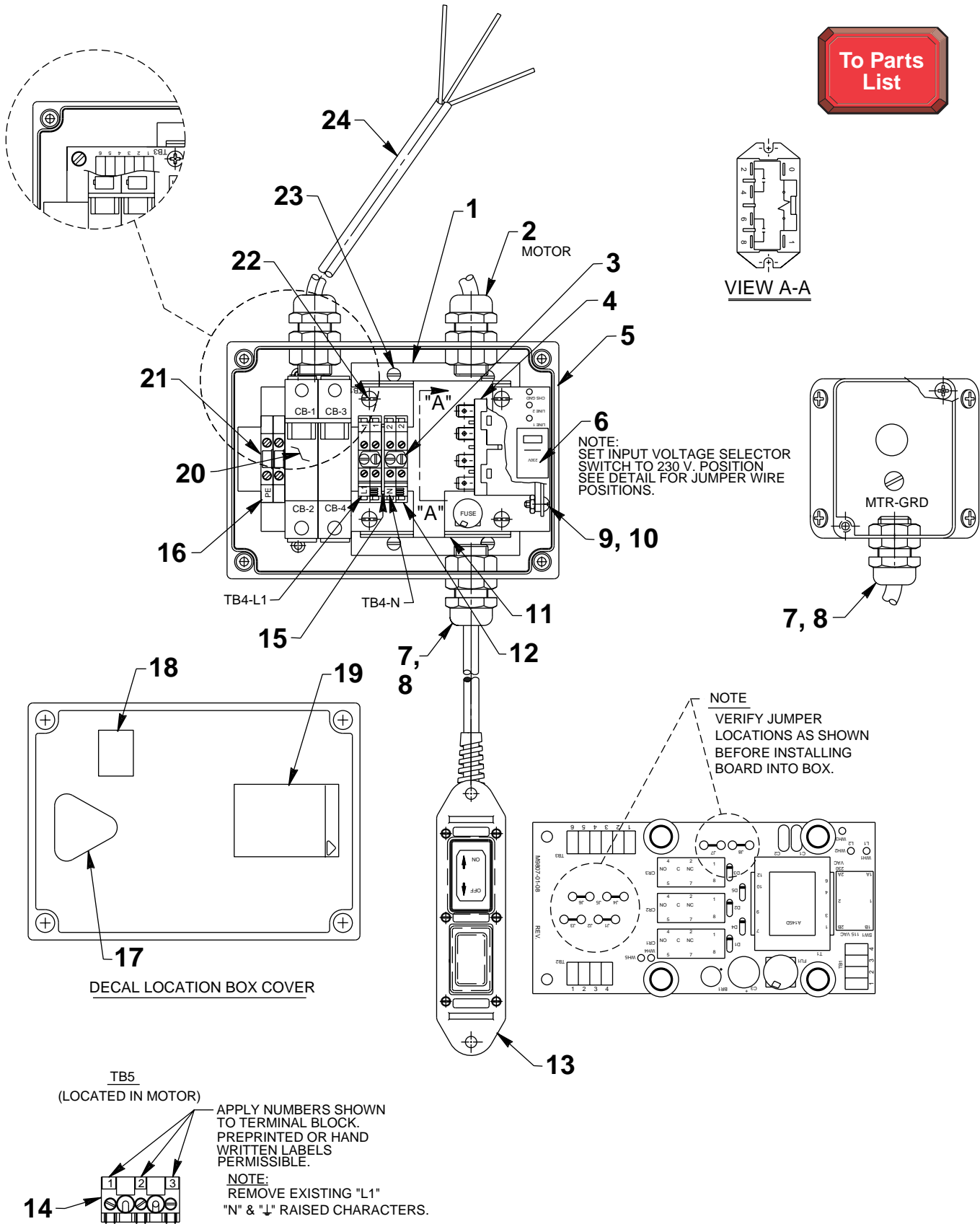
Item No.	Part No.	No. Req'd	Description
1	351588	1	Mounting Plate
2	251879	2'	Cable (1.5MM/3 HAR)
3	251845	2	Center 2 Pole Jumper
4	360001	1	Relay (120 Volt)
5	59036	1	Control Box
6	421898	1	Circuit Board
7	216666	3	Strain Relief Bushing
8	216680	3	Conduit Locknut
9	10447	2	Rnd. Hd. Screw (8-32 x 5/16)
10	10196	2	Hex Nut (8-32)
11	421608WH2	1	Mounting Bracket
12	251840	4	Terminal Block
13	251881	1	Hand Control (See back sheet 8 of 9)
14	251550	2	Terminal Block
15	251842	1	End Barrier
16	252241	8'	Cable (4.0MM/3 HAR)
17	252387	1	Strain Relief Bushing
18	360002-25	1	Circuit Breaker (25 AMP)
19	251898	1	CE Electrical Warning Decal
20	350988	1	CE Decal
21	251762	1	Warning Decal
22	251852	7	Marker Card
23	251841	2	Grounding Terminal Block
24	12409	4	Rnd. Hd. Screw (8/32 x 5/8)
25	252253	4	Pan Hd. Screw (8-32 x 3/8)



MOTOR CONTROL ASSEMBLY

220 V., 50 Hz.; For PE462-E220, PE462A-E220, & PE464-E220

To Parts List



Item No.	Part No.	No. Req'd	Description
1	351588	1	Mounting Plate
2	251879	2'	Cable (1.5MM/3 HAR)
3	251845	2	Center 2 Pole Jumper
4	421663	1	Relay (240 Volt)
5	59036	1	Control Box
6	421898	1	Circuit Board
7	216666	4	Strain Relief Bushing
8	216680	4	Conduit Locknut
9	10447	2	Rnd. Hd. Screw (8-32 x 5/16)
10	10196	2	Hex Nut (8-32)
11	421608WH2	1	Mounting Bracket
12	251840	4	Terminal Block
13	251881	1	Hand Control (See back sheet 8 of 9)
14	251550	1	Terminal Block
15	251842	1	End Barrier
16	251852	7	Marker Card
17	251898	1	CE Electrical Warning Decal
18	350988	1	CE Decal
19	251762	1	Warning Decal
20	360002-13	1	Circuit Breaker (13 AMP)
21	251841	2	Grounding Terminal Block
22	12409	4	Rnd. Hd. Screw (8/32 x 5/8)
23	252253	4	Pan Hd. Screw (8-32 x 3/8)
24	251879	8'	Cable (1.5MM/3 HAR)

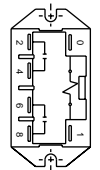


Item No.	Part No.	No. Req'd	Description
1	351588	1	Mounting Plate
2	251879	2'	Cable (1.5MM/3 HAR)
3	251845	2	Center 2 Pole Jumper
4	360001	1	Relay (120 Volt)
5	59036	1	Control Box
6	421898	1	Circuit Board
7	216666	4	Strain Relief Bushing
8	216680	5	Conduit Locknut
9	10447	2	Rnd. Hd. Screw (8-32 x 5/16)
10	10196	2	Hex Nut (8-32)
11	421608WH2	1	Mounting Bracket
12	251840	4	Terminal Block
13	252508	1	Hand Control (See sheet 9 of 9)
14	251550	2	Terminal Block
15	351130	1	Terminal Block
16	216667	1	Strain Relief Bushing
17	251879	33"	Cable (1.5MM/3 HAR)
18	251842	1	End Barrier
19	360002-25	1	Circuit Breaker (25 AMP)
20	252241	8'	Cable (4.0MM/3 HAR)
21	252387	1	Strain Relief Bushing
22	251762	1	Warning Decal
23	350988	1	CE Decal
24	251898	1	CE Electrical Warning Decal
25	251852	7	Marker Card
26	251841	2	Grounding Terminal Block
27	12409	4	Rnd. Hd. Screw (8/32 x 5/8)
28	252253	4	Pan Hd. Screw (8-32 x 3/8)

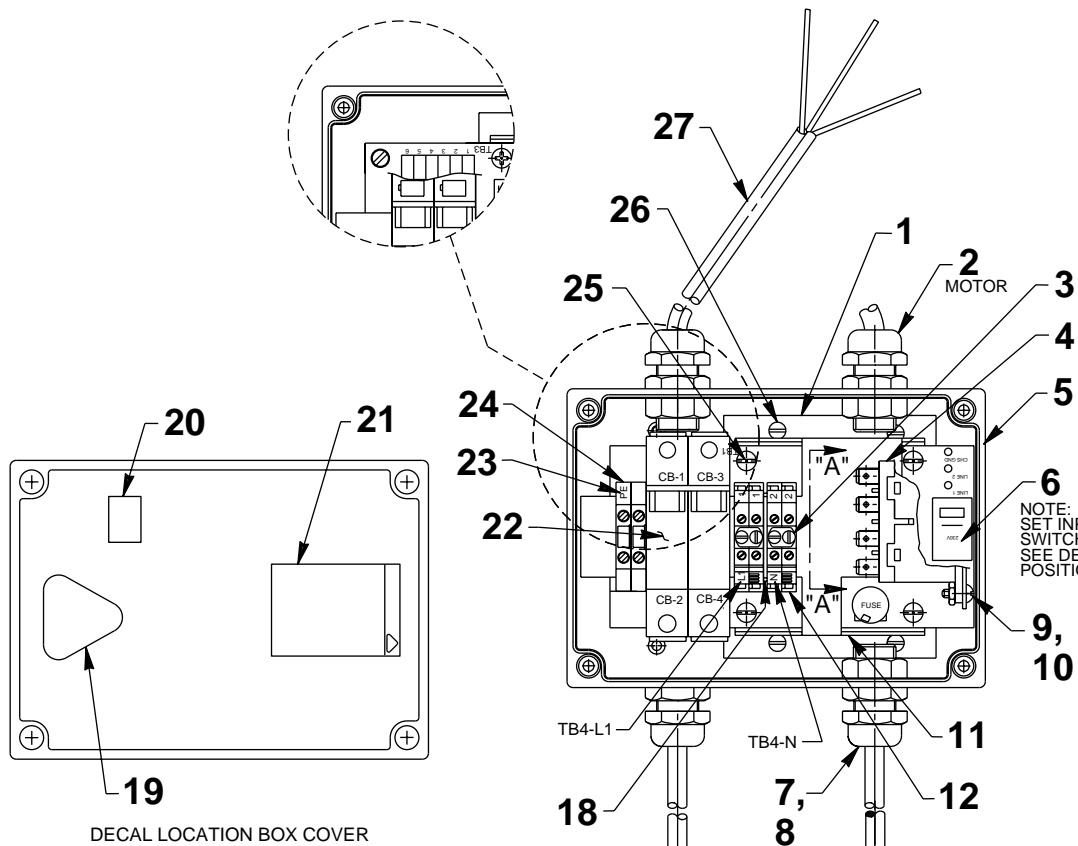


MOTOR CONTROL ASSEMBLY

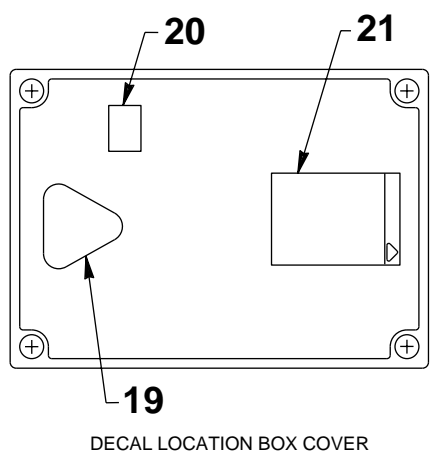
220 V., 50 Hz.; For PE462S-E220



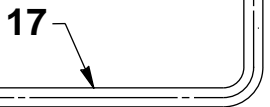
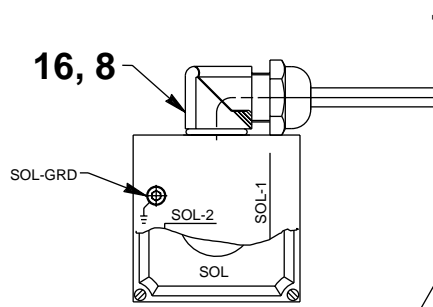
VIEW A-A



NOTE:
SET INPUT VOLTAGE SELECTOR
SWITCH TO 230 V. POSITION
SEE DETAIL FOR JUMPER WIRE
POSITIONS.



DECAL LOCATION BOX COVER



TB5
(LOCATED IN MOTOR)

APPLY NUMBERS SHOWN
TO TERMINAL BLOCK.
PREPRINTED OR HAND
WRITTEN LABELS
PERMISSIBLE.

NOTE:
REMOVE EXISTING "L1"
"N" & "↓" RAISED CHARACTERS.

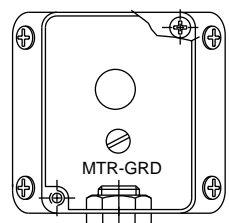


TB6
(LOCATED IN SOLENOID)

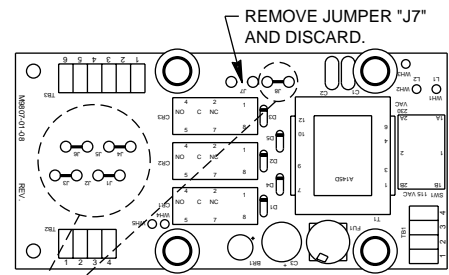
APPLY NUMBERS SHOWN
TO TERMINAL BLOCK.
PREPRINTED OR HAND
WRITTEN LABELS
PERMISSIBLE.



CUT A SEGMENT OF 2
POLES FROM A 12 POLE
STRIP AS CLOSE AS
POSSIBLE FOR BEST FIT
IN SOLENOID HOUSING.



7,
8



REMOVE JUMPER "J7"
AND DISCARD.

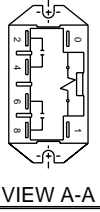
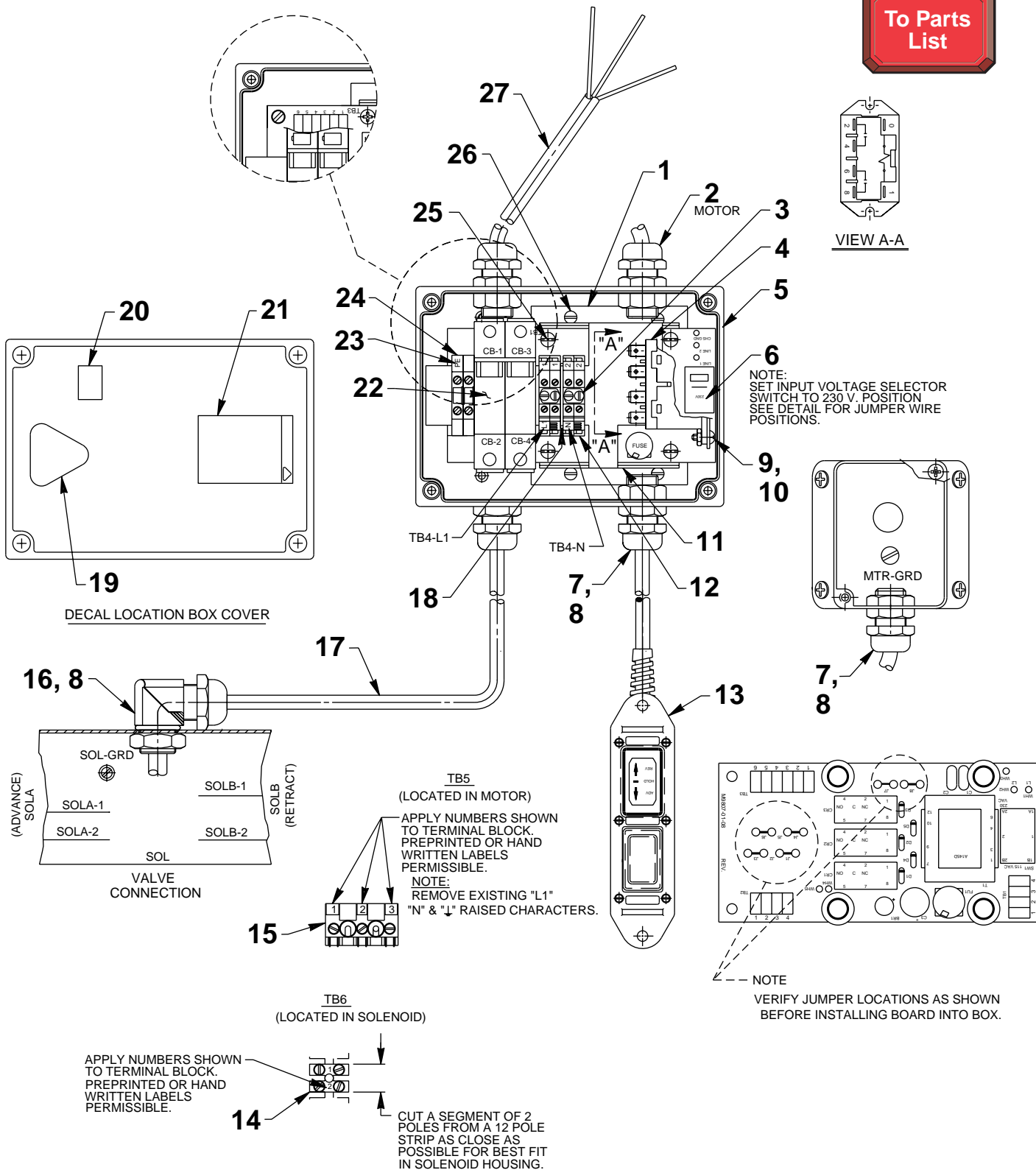
NOTE
VERIFY JUMPER LOCATIONS AS SHOWN
BEFORE INSTALLING BOARD
INTO BOX.

Item No.	Part No.	No. Req'd	Description
1	351588	1	Mounting Plate
2	251879	2'	Cable (1.5MM/3 HAR)
3	251845	2	Center 2 Pole Jumper
4	421663	1	Relay (240 Volt)
5	59036	1	Control Box
6	421898	1	Circuit Board
7	216666	5	Strain Relief Bushing
8	216680	6	Conduit Locknut
9	10447	2	Rnd. Hd. Screw (8-32 x 5/16)
10	10196	2	Hex Nut (8-32)
11	421608WH2	1	Mounting Bracket
12	251840	4	Terminal Block
13	252508	1	Hand Control (See sheet 9 of 9)
14	351130	1	Terminal Block
15	251550	1	Terminal Block
16	216667	1	Strain Relief Bushing
17	251879	33"	Cable (1.5MM/3 HAR)
18	251842	1	End Barrier
19	251898	1	CE Electrical Warning Decal
20	350988	1	CE Decal
21	251762	1	Warning Decal
22	360002-6	1	Circuit Breaker (6 AMP)
23	251852	7	Marker Card
24	251841	2	Grounding Terminal Block
25	12409	4	Rnd. Hd. Screw (8/32 x 5/8)
26	252253	4	Pan Hd. Screw (8-32 x 3/8)
27	251879	8'	Cable (1.5MM/3 HAR)

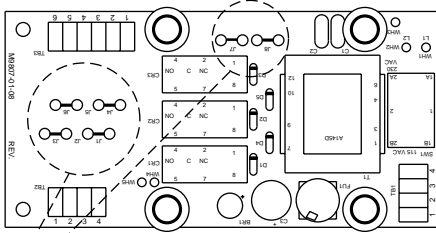
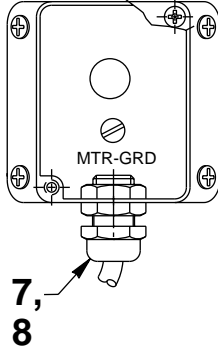


MOTOR CONTROL ASSEMBLY

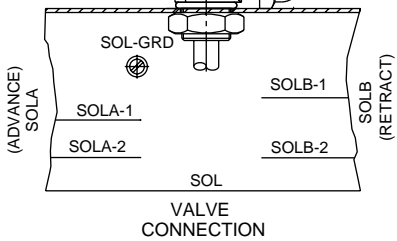
220 V., 50 Hz.; For PE464S-E220



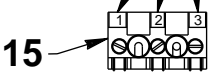
NOTE:
SET INPUT VOLTAGE SELECTOR SWITCH TO 230 V. POSITION
SEE DETAIL FOR JUMPER WIRE POSITIONS.



NOTE
VERIFY JUMPER LOCATIONS AS SHOWN BEFORE INSTALLING BOARD INTO BOX.

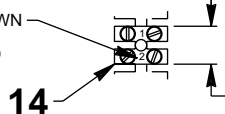


TB5
(LOCATED IN MOTOR)
APPLY NUMBERS SHOWN TO TERMINAL BLOCK. PREPRINTED OR HAND WRITTEN LABELS PERMISSIBLE.
NOTE:
REMOVE EXISTING "L1" "N" & "↓" RAISED CHARACTERS.



TB6
(LOCATED IN SOLENOID)

APPLY NUMBERS SHOWN TO TERMINAL BLOCK. PREPRINTED OR HAND WRITTEN LABELS PERMISSIBLE.



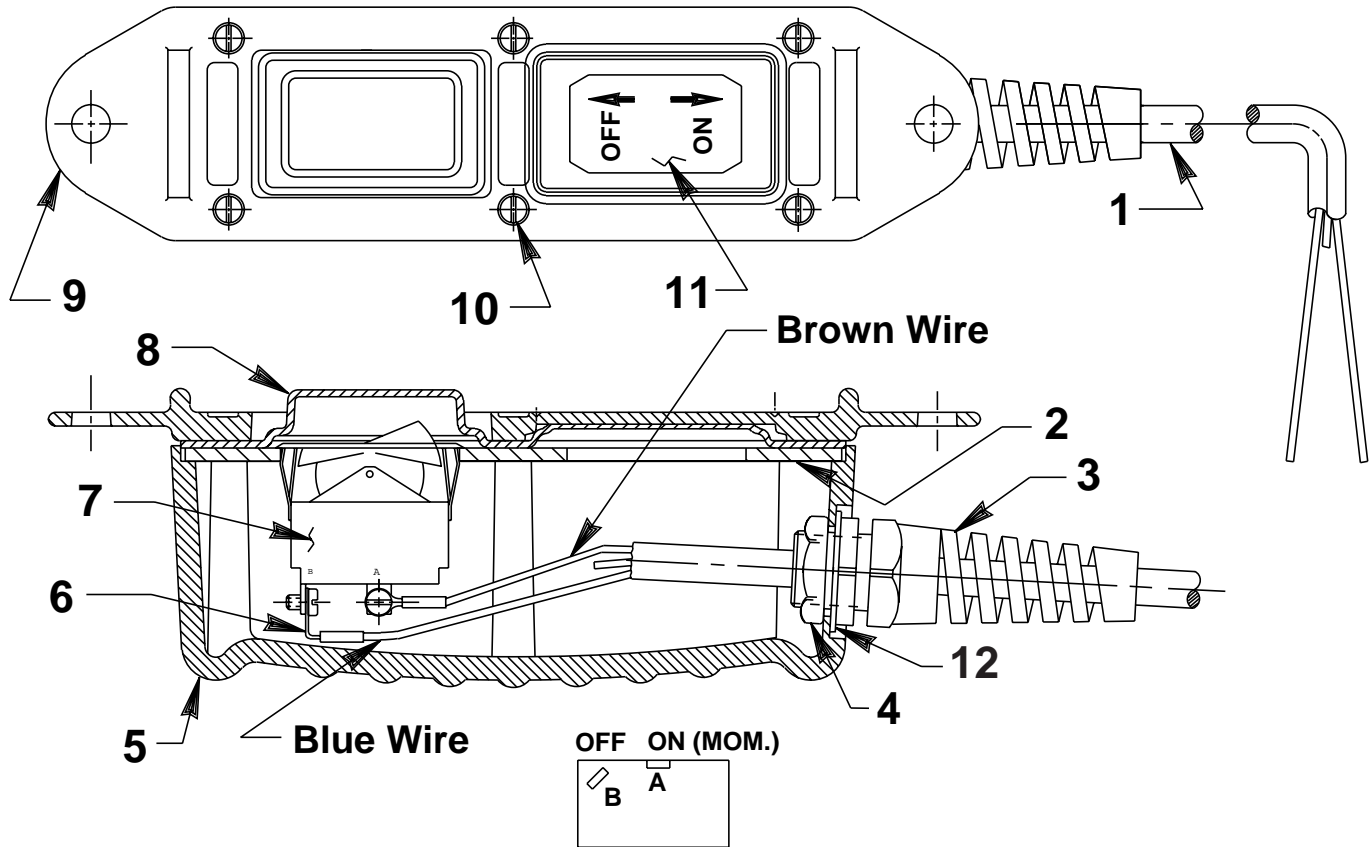
CUT A SEGMENT OF 2 POLES FROM A 12 POLE STRIP AS CLOSE AS POSSIBLE FOR BEST FIT IN SOLENOID HOUSING.

Item No.	Part No.	No. Req'd	Description
1	351588	1	Mounting Plate
2	251879	2'	Cable (1.5MM/3 HAR)
3	251845	2	Center 2 Pole Jumper
4	421663	1	Relay (240 Volt)
5	59036	1	Control Box
6	421898	1	Circuit Board
7	216666	5	Strain Relief Bushing
8	216680	6	Conduit Locknut
9	10447	2	Rnd. Hd. Screw (8-32 x 5/16)
10	10196	2	Hex Nut (8-32)
11	421608WH2	1	Mounting Bracket
12	251840	4	Terminal Block
13	252508	1	Hand Control (See sheet 9 of 9)
14	351130	1	Terminal Block
15	251550	1	Terminal Block
16	216667	1	Strain Relief Bushing
17	251864	28"	Cable (1.5MM/5 HAR)
18	251842	1	End Barrier
19	251898	1	CE Electrical Warning Decal
20	350988	1	CE Decal
21	251762	1	Warning Decal
22	360002-13	1	Circuit Breaker (13 AMP)
23	251852	7	Marker Card
24	251841	2	Grounding Terminal Block
25	12409	4	Rnd. Hd. Screw (8/32 x 5/8)
26	252253	4	Pan Hd. Screw (8-32 x 3/8)
27	251879	8'	Cable (1.5MM/3 HAR)



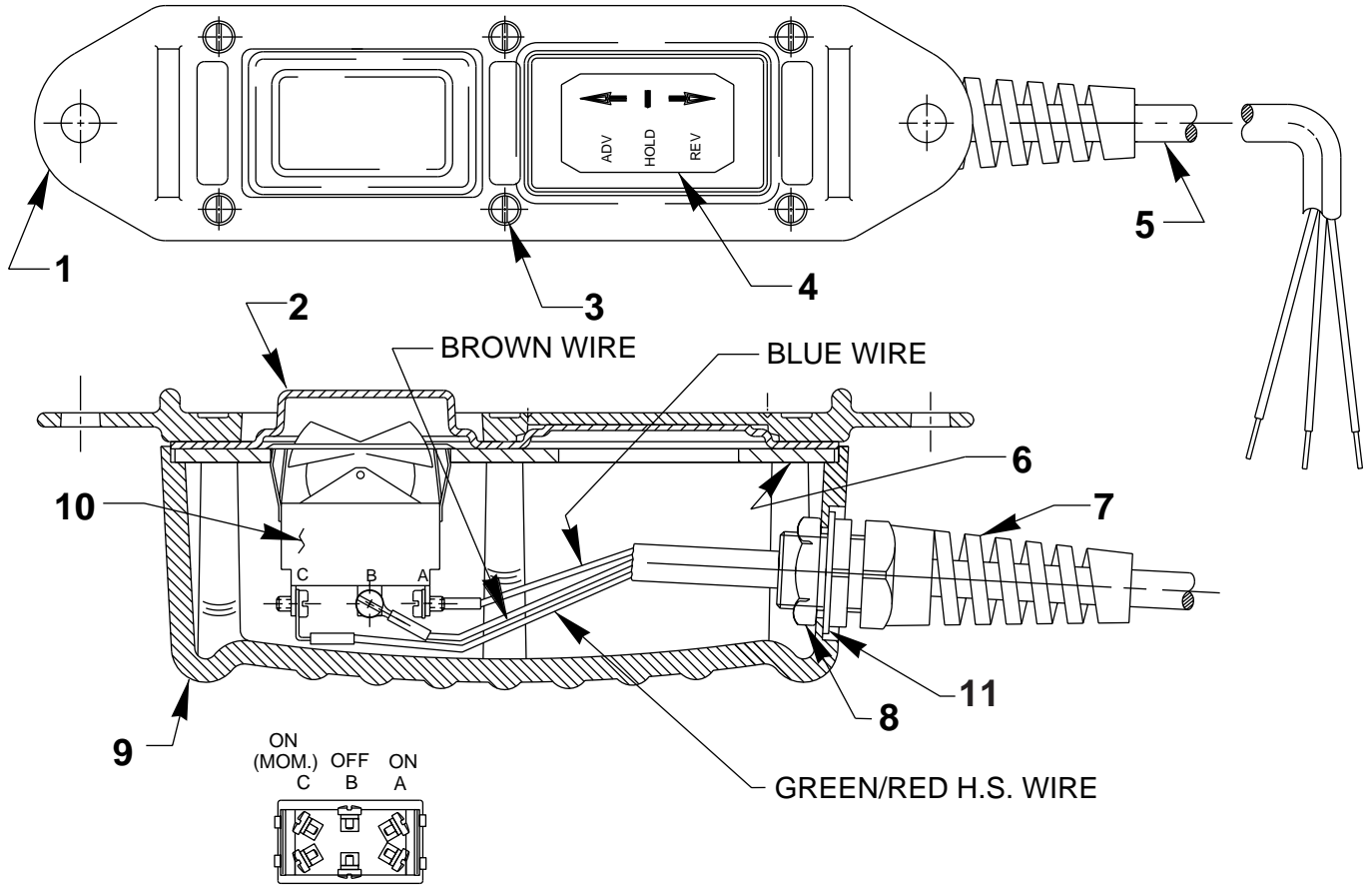
Note: Shaded areas reflect last revision(s) made to this form.

#251881 REMOTE HAND SWITCH ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	251879	10 ft.	Electrical Cable (14/3)
2	420050-3	1	Switch Mounting Plate
3	251818	1	Strain Relief Connector
4	251802	1	Locknut (3/4-16 UNF)
5	420050-4	1	Switch Housing
6	10525	2	Ring Terminal
7	16772	1	Rocker Switch
8	420050-2	1	Gasket
9	420050-1	1	Cover
10	250248	6	Screw (4-24 x 3/4 Lg.)
11	202763	1	Decal
12	253607	1	Rubber Gasket

#252508 REMOTE HAND SWITCH ASSEMBLY



Item No.	Part No.	No. Req'd	Description
1	420050-1	1	Plastic Cover
2	420050-2	1	Remote Hand Switch Gasket
3	250248	6	Tapping Screw (4-24 X 3/4 Lg.)
4	202776	1	Label Controls Decal
5	251879	10 ft.	Cable (1.5 mm/3 HAR)
6	420050-3	1	Switch Mounting Plate

Item No.	Part No.	No. Req'd	Description
7	251818	1	Strain Relief Bushing
8	251802	1	Hex Lock Nut (Torque to 30/35 in. lbs.)
9	420050-4	1	Switch Housing
10	16774	1	Rocker Switch
11	253607	1	Rubber Gasket