



HYDRAULIC POWER UNIT
PARTS LIST & OPERATOR'S
MANUAL

MODEL
CB20E-XL

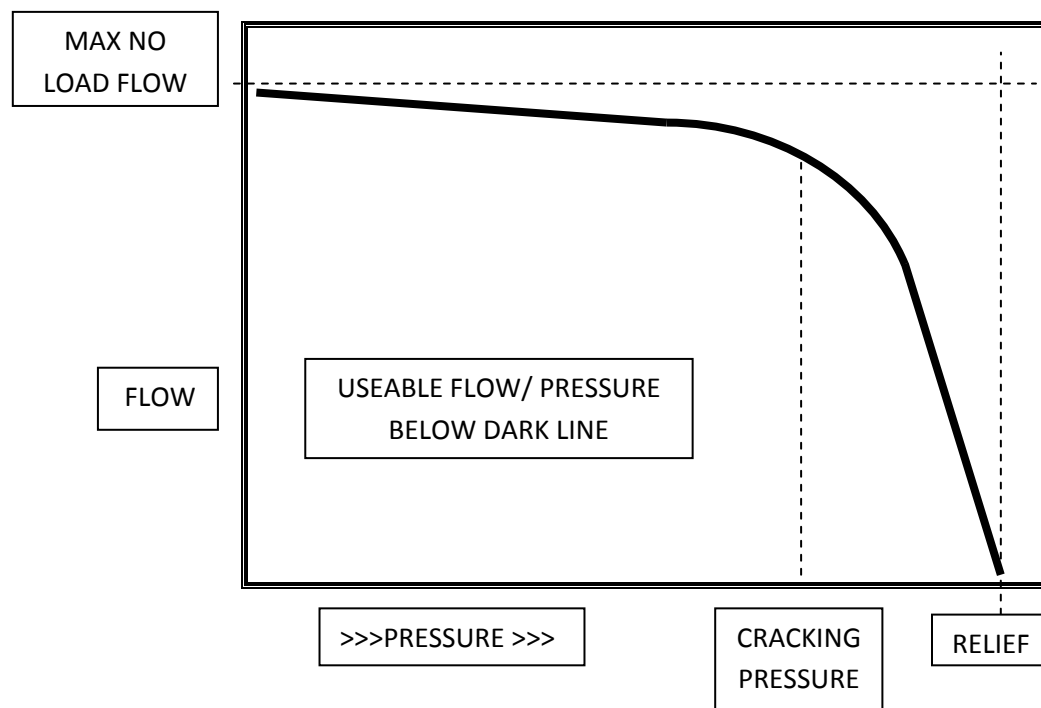
September 2019

Part #1801372

CB POWER PACK FLOW AND PRESSURE RATING

| CB POWER PACK MODEL | MAXIMUM <u>NO</u> <u>LOAD</u> FLOW GPM/LPM | RELIEF SETTING PSI/BAR |
|---------------------|--|------------------------------|
| 15 Electric | 12.75 / 48.2 | 2100 / 145 |
| 18 Briggs Vanguard | 11.6 / 43.9 | 2850 / 196.5 |
| 20 Electric | 14.9 / 56.4 | 2400 / 165.5 |
| 21 Honda | 14.1 / 53.2 | 2600 / 179.3 |
| 30 Electric | 20.4 / 77.2 | 2300 / 158.6 |
| 35 Briggs Vanguard | 17.2 / 65.1 | 3000 / 206.9 |

Maximum no load flow is based on pump and motor manufacturer's specifications for pump displacement and no load RPM. Relief is set to insure gas engines cannot reach their stall torque and electric motors will not exceed the recommended current limit.

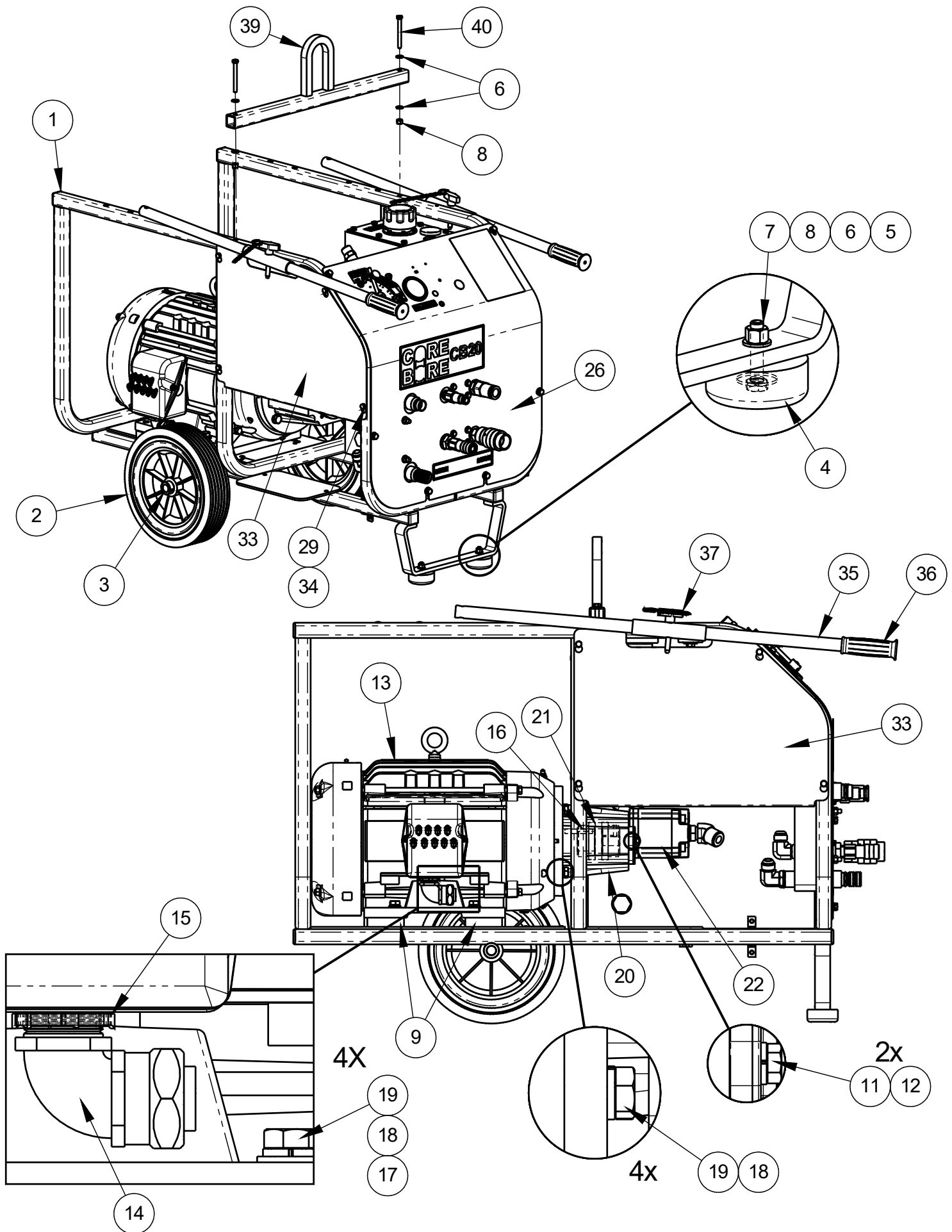


Flow decreases as engine/motor RPM drops under load. Relief valves begin to open and shunt flow to tank at 75-80% of the relief setting (cracking pressure). This further reduces flow to the tool. At relief, all flow is directed to tank.

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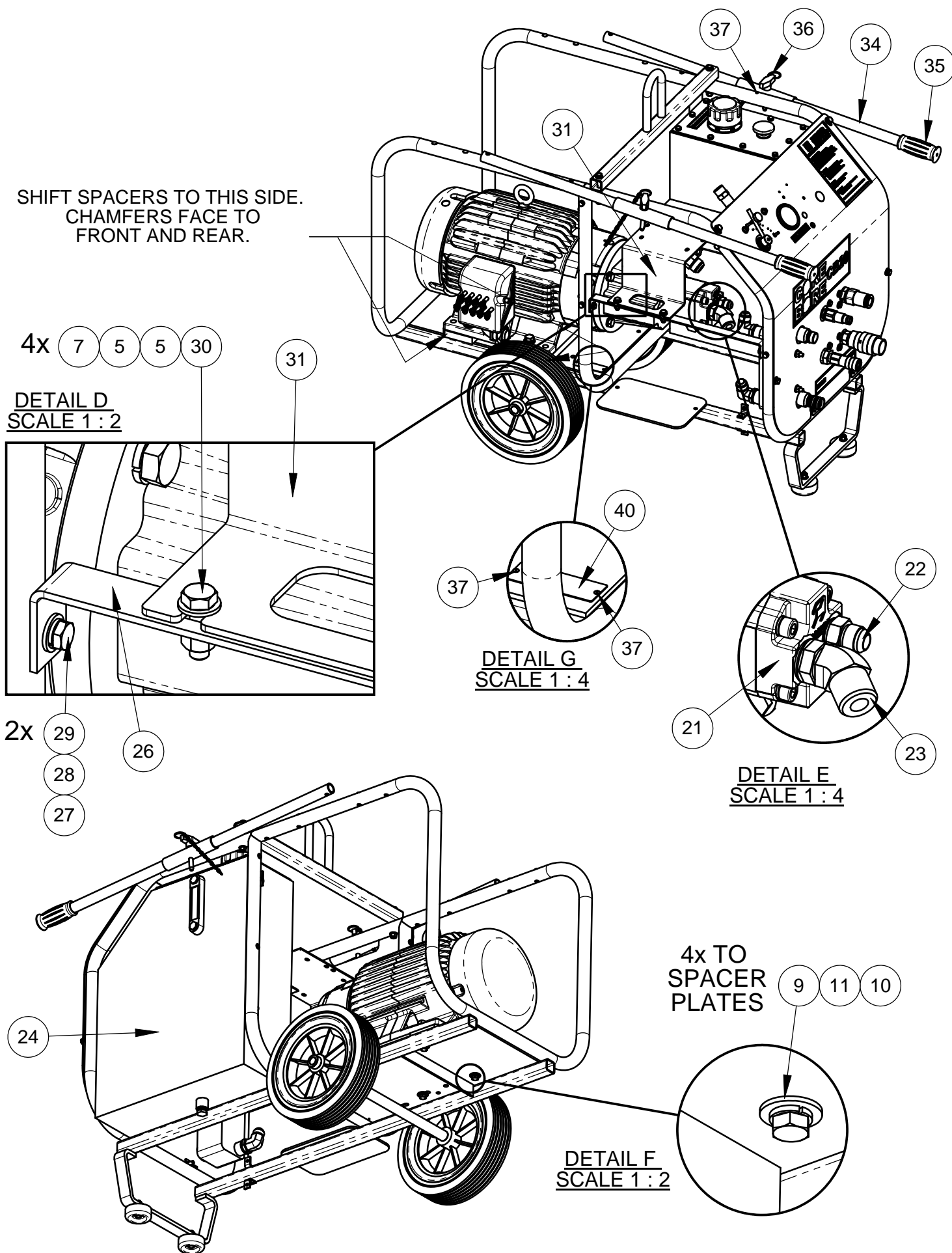
4646175 CB20 HYDRAULIC POWER SUPPLY 230/460 VOLT



4646175 CB20 HYDRAULIC POWER SUPPLY 230/460 VOLT

| BOM Table | | | |
|-----------|----------|------|--|
| ITEM | PART NO. | QTY. | DESCRIPTION |
| 1 | 4646156 | 1 | CB-XL Frame Assembly |
| 2 | 2400643 | 2 | Wheel, 12 x 2-5/8 x 3/4" |
| 3 | 2400615 | 2 | Set Collar, 3/4" |
| 4 | 2501767 | 2 | Rubber Bumper |
| 5 | 2901103 | 2 | Fender Washer, 5/16" x 1" |
| 6 | 2900022 | 14 | Flat Washer, 5/16" SAE |
| 7 | 2900508 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1-1/2" |
| 8 | 2900039 | 8 | Lock Nut, 5/16-18 Nylon |
| 9 | 4646172 | 2 | Spacer Plate, CB20 |
| 10 | 2900473 | 4 | Flat Washer, 3/8" USS |
| 11 | 2900005 | 6 | Cap Screw, Hex Hd., 3/8-16 x 1" |
| 12 | 2900006 | 6 | Lock Washer, 3/8" Split |
| 13 | 4645005 | 1 | Electric Motor, 20 hp, 3 Ph., 230/460V |
| 14 | 2800312 | 1 | Connector, 1" Sealtite Elbow |
| 15 | 2800193 | 1 | Lock Nut, 1" |
| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
| 20 | 2400309 | 1 | Pump Mount |
| 21 | 2400321 | 1 | Flex Coupling, 3/4 - 1-5/8" |
| 22 | 2600569 | 1 | Pump, 1.0 CI, 2 Bolt SAE |
| 23 | 3202079 | 1 | 5/8" O-Ring - 5/8" MJIC |
| 24 | 3201881 | 1 | 1" MJIC - 3/4" MOR, 45 Deg. |
| 25 | 4646173 | 1 | Hydraulic Tank Assembly |
| 26 | 4646171 | 1 | Panel Assembly, CB20 |
| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
| 35 | 4646006 | 2 | Handle |
| 36 | 2500636 | 2 | Handle Grip |
| 37 | 2900257 | 2 | Lock Pin, T Handle, 3/8" |
| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

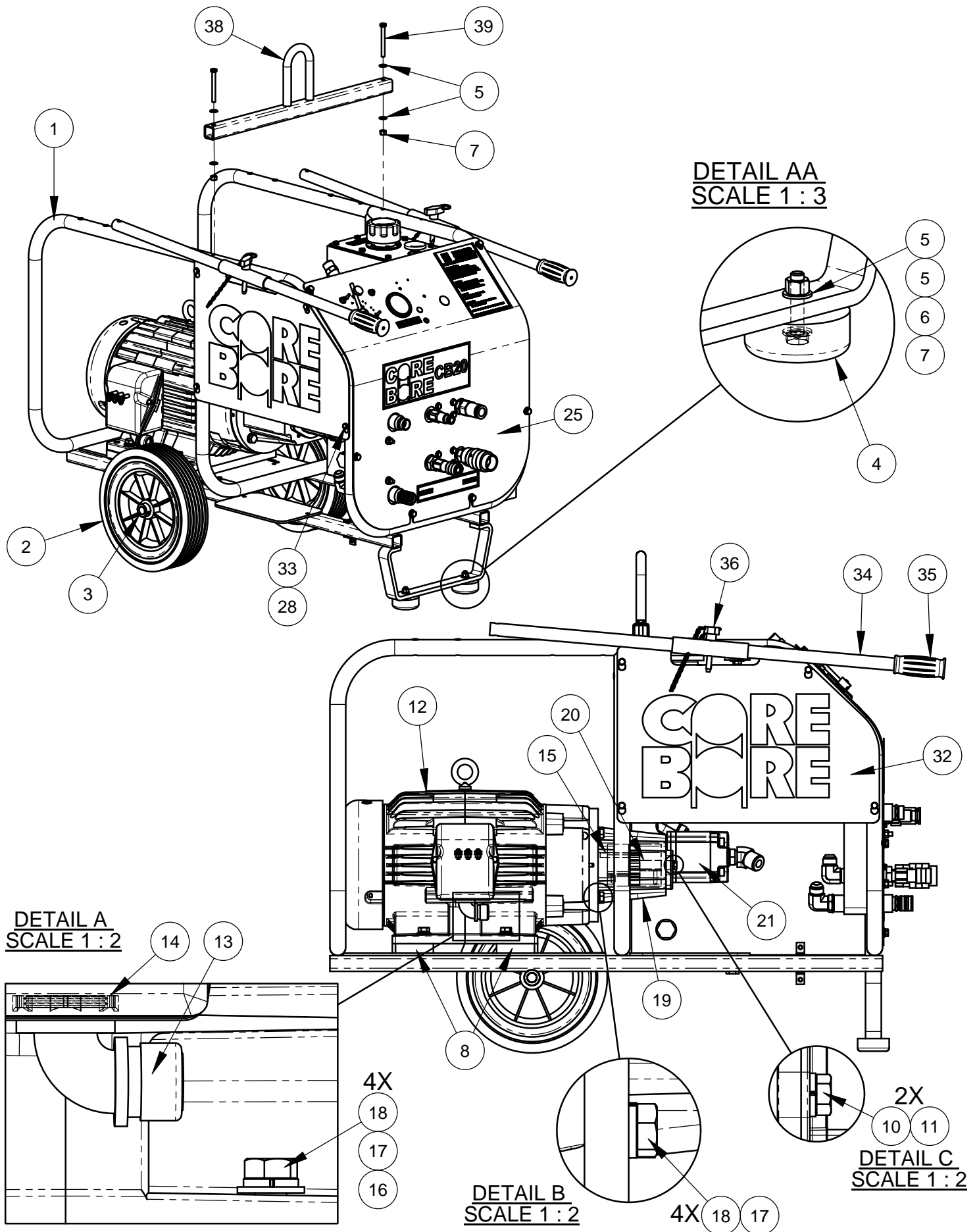
4646175 CB20 HYDRAULIC POWER SUPPLY 230/460 VOLT



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| 5 | 2901103 | 2 | Fender Washer, 5/16" x 1" |
| 6 | 2900022 | 14 | Flat Washer, 5/16" SAE |
| 7 | 2900508 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1-1/2" |
| 8 | 2900039 | 8 | Lock Nut, 5/16-18 Nylon |
| 9 | 4646172 | 2 | Spacer Plate, CB20 |
| 10 | 2900473 | 4 | Flat Washer, 3/8" USS |
| 11 | 2900005 | 6 | Cap Screw, Hex Hd., 3/8-16 x 1" |
| 12 | 2900006 | 6 | Lock Washer, 3/8" Split |
| 13 | 4645005 | 1 | Electric Motor, 20 hp, 3 Ph., 230/460V |
| 14 | 2800312 | 1 | Connector, 1" Sealtite Elbow |
| 15 | 2800193 | 1 | Lock Nut, 1" |
| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
| 20 | 2400309 | 1 | Pump Mount |
| 21 | 2400321 | 1 | Flex Coupling, 3/4 - 1-5/8" |
| 22 | 2600569 | 1 | Pump, 1.0 CI, 2 Bolt SAE |
| 23 | 3202079 | 1 | 5/8" O-Ring - 5/8" MJIC |
| 24 | 3201881 | 1 | 1" MJIC - 3/4" MOR, 45 Deg. |
| 25 | 4646173 | 1 | Hydraulic Tank Assembly |
| 26 | 4646171 | 1 | Panel Assembly, CB20 |
| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
| 35 | 4646006 | 2 | Handle |
| 36 | 2500636 | 2 | Handle Grip |
| 37 | 2900257 | 2 | Lock Pin, T Handle, 3/8" |
| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

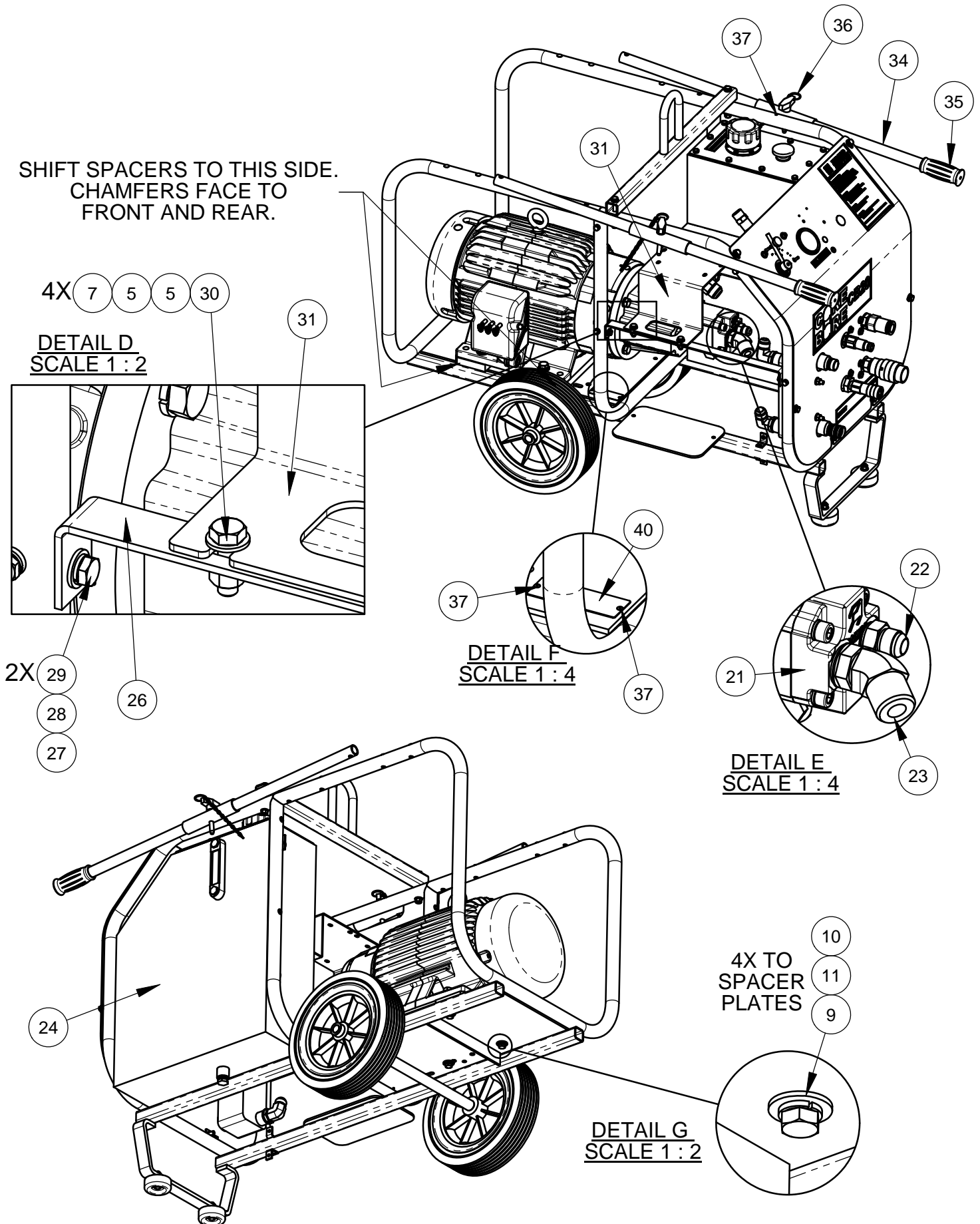
4646183 CB 20 HYDRAULIC POWER SUPPLY 190/380 VOLT



4646183 CB20 HYDRAULIC POWER SUPPLY 190/380 VOLT

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|---|
| 1 | 4646156 | 1 | CB-XL Frame Assembly |
| 2 | 2400643 | 2 | Wheel, 12 x 2-5/8 x 3/4" |
| 3 | 2400615 | 2 | Set Collar, 3/4" |
| 4 | 2501767 | 2 | Rubber Bumper |
| 5 | 2901103 | 2 | Fender Washer, 5/16" x 1" |
| 6 | 2900022 | 14 | Flat Washer, 5/16" SAE |
| 7 | 2900508 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1-1/2" |
| 8 | 2900039 | 8 | Lock Nut, 5/16-18 Nylon |
| 9 | 4646172 | 2 | Spacer Plate, CB20 |
| 10 | 2900473 | 4 | Flat Washer, 3/8" USS |
| 11 | 2900005 | 6 | Cap Screw, Hex Hd., 3/8-16 x 1" |
| 12 | 2900006 | 6 | Lock Washer, 3/8" Split |
| 13 | 4646186 | 1 | Elec. Motor, 20HP, Short Shaft, W/Terminals |
| 14 | 2800695 | 1 | Cord Grip, 5/8-3/4", 90 Deg. |
| 15 | 2800193 | 1 | Lock Nut, 1" |
| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
| 20 | 2400309 | 1 | Pump Mount |
| 21 | 2400321 | 1 | Flex Coupling, 3/4 - 1-5/8" |
| 22 | 2600569 | 1 | Pump, 1.0 CI, 2 Bolt SAE |
| 23 | 3202079 | 1 | 5/8" O-Ring - 5/8" MJIC |
| 24 | 3201881 | 1 | 1" MJIC - 3/4" MOR, 45 Deg. |
| 25 | 4646173 | 1 | Hydraulic Tank Assembly |
| 26 | 4646171 | 1 | Panel Assembly, CB20 |
| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
| 35 | 4646006 | 2 | Handle |
| 36 | 2500636 | 2 | Handle Grip |
| 37 | 2900257 | 2 | Lock Pin, T Handle, 3/8" |
| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

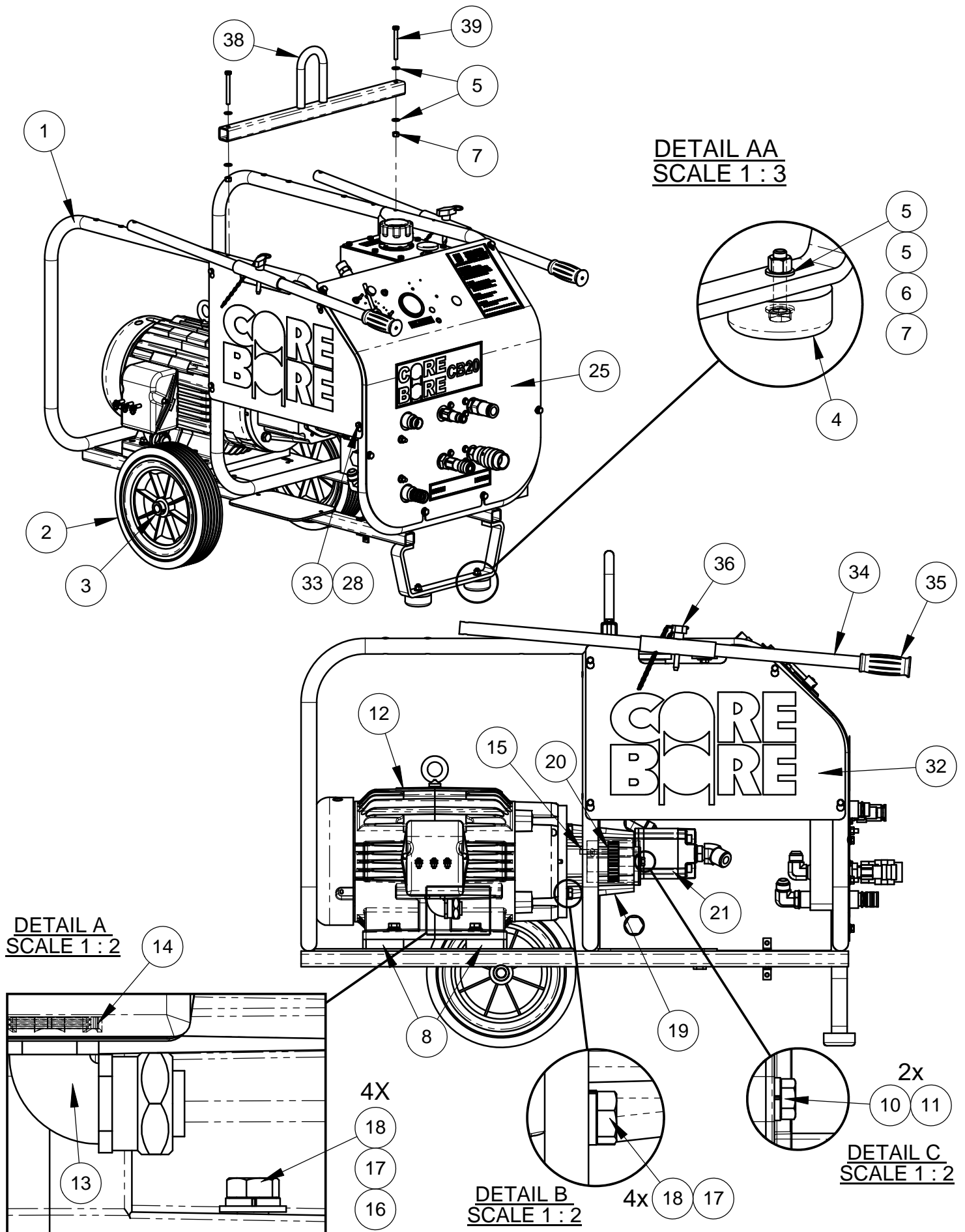
4646183 CB20 HYDRAULIC POWER SUPPLY 190/380 VOLT



4646183 CB20 HYDRAULIC POWER SUPPLY 190/380 VOLT

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|---|
| 1 | 4646156 | 1 | CB-XL Frame Assembly |
| 2 | 2400643 | 2 | Wheel, 12 x 2-5/8 x 3/4" |
| 3 | 2400615 | 2 | Set Collar, 3/4" |
| 4 | 2501767 | 2 | Rubber Bumper |
| 5 | 2901103 | 2 | Fender Washer, 5/16" x 1" |
| 6 | 2900022 | 14 | Flat Washer, 5/16" SAE |
| 7 | 2900508 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1-1/2" |
| 8 | 2900039 | 8 | Lock Nut, 5/16-18 Nylon |
| 9 | 4646172 | 2 | Spacer Plate, CB20 |
| 10 | 2900473 | 4 | Flat Washer, 3/8" USS |
| 11 | 2900005 | 6 | Cap Screw, Hex Hd., 3/8-16 x 1" |
| 12 | 2900006 | 6 | Lock Washer, 3/8" Split |
| 13 | 4646186 | 1 | Elec. Motor, 20HP, Short Shaft, W/Terminals |
| 14 | 2800695 | 1 | Cord Grip, 5/8-3/4", 90 Deg. |
| 15 | 2800193 | 1 | Lock Nut, 1" |
| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
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| 21 | 2400321 | 1 | Flex Coupling, 3/4 - 1-5/8" |
| 22 | 2600569 | 1 | Pump, 1.0 CI, 2 Bolt SAE |
| 23 | 3202079 | 1 | 5/8" O-Ring - 5/8" MJIC |
| 24 | 3201881 | 1 | 1" MJIC - 3/4" MOR, 45 Deg. |
| 25 | 4646173 | 1 | Hydraulic Tank Assembly |
| 26 | 4646171 | 1 | Panel Assembly, CB20 |
| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
| 35 | 4646006 | 2 | Handle |
| 36 | 2500636 | 2 | Handle Grip |
| 37 | 2900257 | 2 | Lock Pin, T Handle, 3/8" |
| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

4646178 CB20 HYDRAULIC POWER SUPPLY 575 VOLT



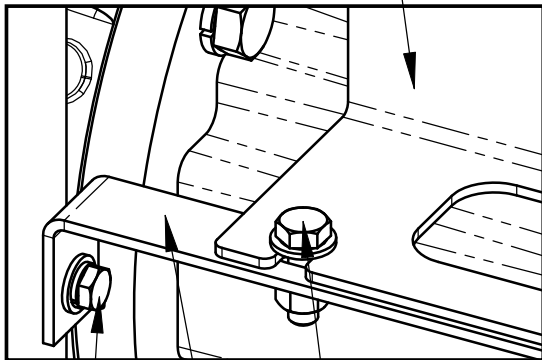
4646178 CB20 HYDRAULIC POWER SUPPLY 575 VOLT

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------------------|
| 1 | 4646156 | 1 | CB-XL Frame Assembly |
| 2 | 2400643 | 2 | Wheel, 12 x 2-5/8 x 3/4" |
| 3 | 2400615 | 2 | Set Collar, 3/4" |
| 4 | 2501767 | 2 | Rubber Bumper |
| 5 | 2901103 | 2 | Fender Washer, 5/16" x 1" |
| 6 | 2900022 | 14 | Flat Washer, 5/16" SAE |
| 7 | 2900508 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1-1/2" |
| 8 | 2900039 | 8 | Lock Nut, 5/16-18 Nylon |
| 9 | 4646172 | 2 | Spacer Plate, CB20 |
| 10 | 2900473 | 4 | Flat Washer, 3/8" USS |
| 11 | 2900005 | 6 | Cap Screw, Hex Hd., 3/8-16 x 1" |
| 12 | 2900006 | 6 | Lock Washer, 3/8" Split |
| 13 | 4645025 | 1 | Electric Motor, 20HP, W/ Terminals |
| 14 | 2800312 | 1 | Connector, 1" Sealtite Elbow |
| 15 | 2800193 | 1 | Lock Nut, 1" |
| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
| 20 | 2400309 | 1 | Pump Mount |
| 21 | 2400321 | 1 | Flex Coupling, 3/4 - 1-5/8" |
| 22 | 2600569 | 1 | Pump, 1.0 CI, 2 Bolt SAE |
| 23 | 3202079 | 1 | 5/8" O-Ring - 5/8" MJIC |
| 24 | 3201881 | 1 | 1" MJIC - 3/4" MOR, 45 Deg. |
| 25 | 4646173 | 1 | Hydraulic Tank Assembly |
| 26 | 4646171 | 1 | Panel Assembly, CB20 |
| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
| 35 | 4646006 | 2 | Handle |
| 36 | 2500636 | 2 | Handle Grip |
| 37 | 2900257 | 2 | Lock Pin, T Handle, 3/8" |
| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

4646178 CB20 HYDRAULIC POWER SUPPLY 575 VOLT

SHIFT SPACERS TO THIS SIDE.
CHAMFERS FACE TO
FRONT AND REAR.

DETAIL D
SCALE 1 : 2



2X

29

28

27

26

4X

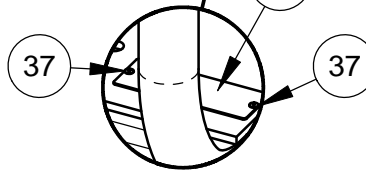
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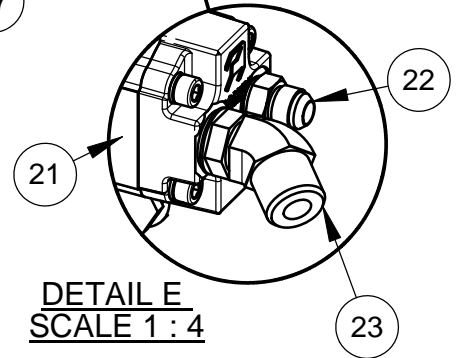
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DETAIL F
SCALE 1 : 4



DETAIL E
SCALE 1 : 4



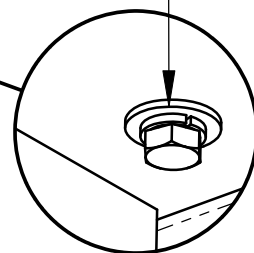
DETAIL G
SCALE 1 : 2

4X TO
SPACER
PLATES

10

11

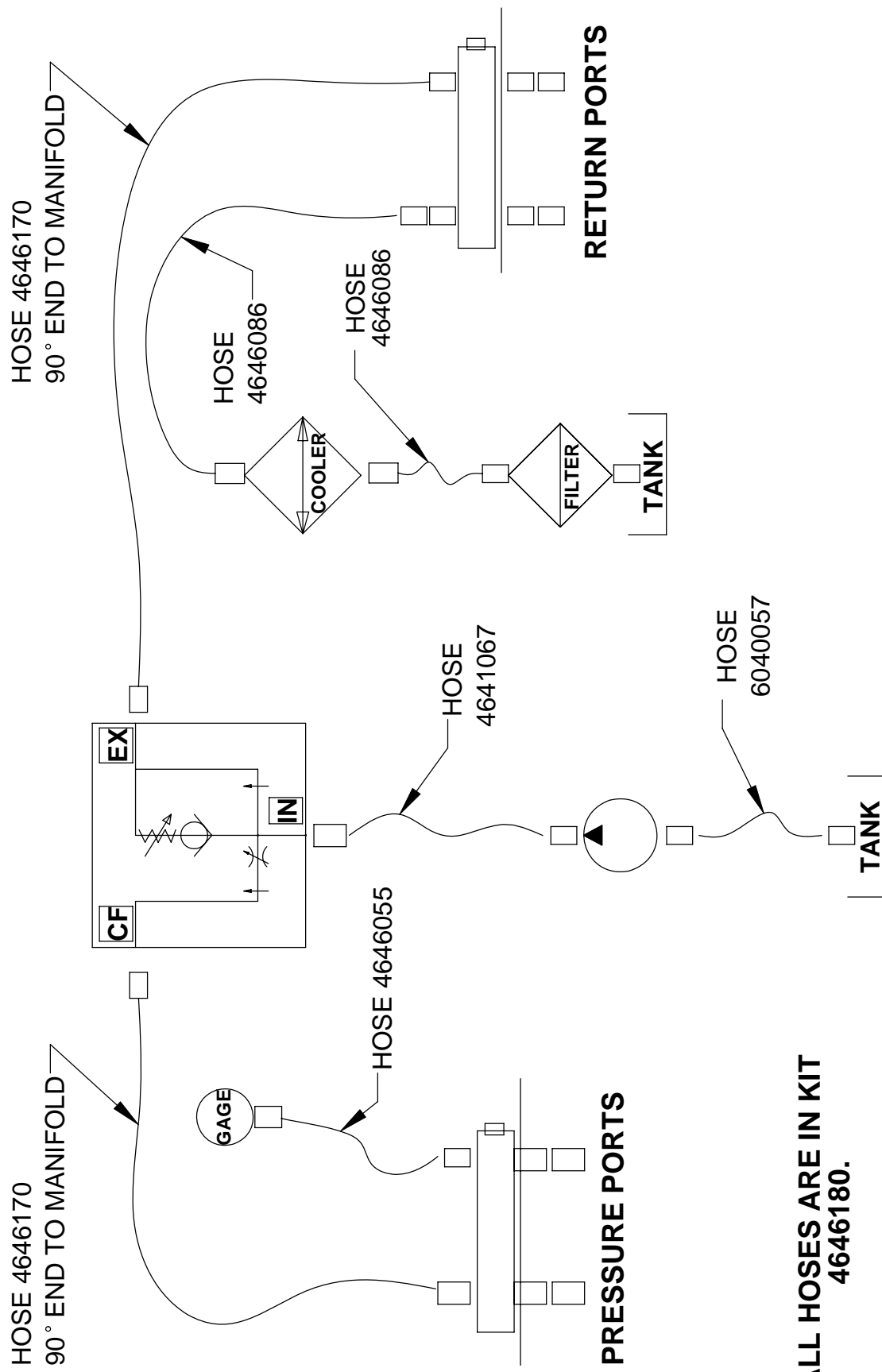
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4646178 CB20 HYDRAULIC POWER SUPPLY 575 VOLT

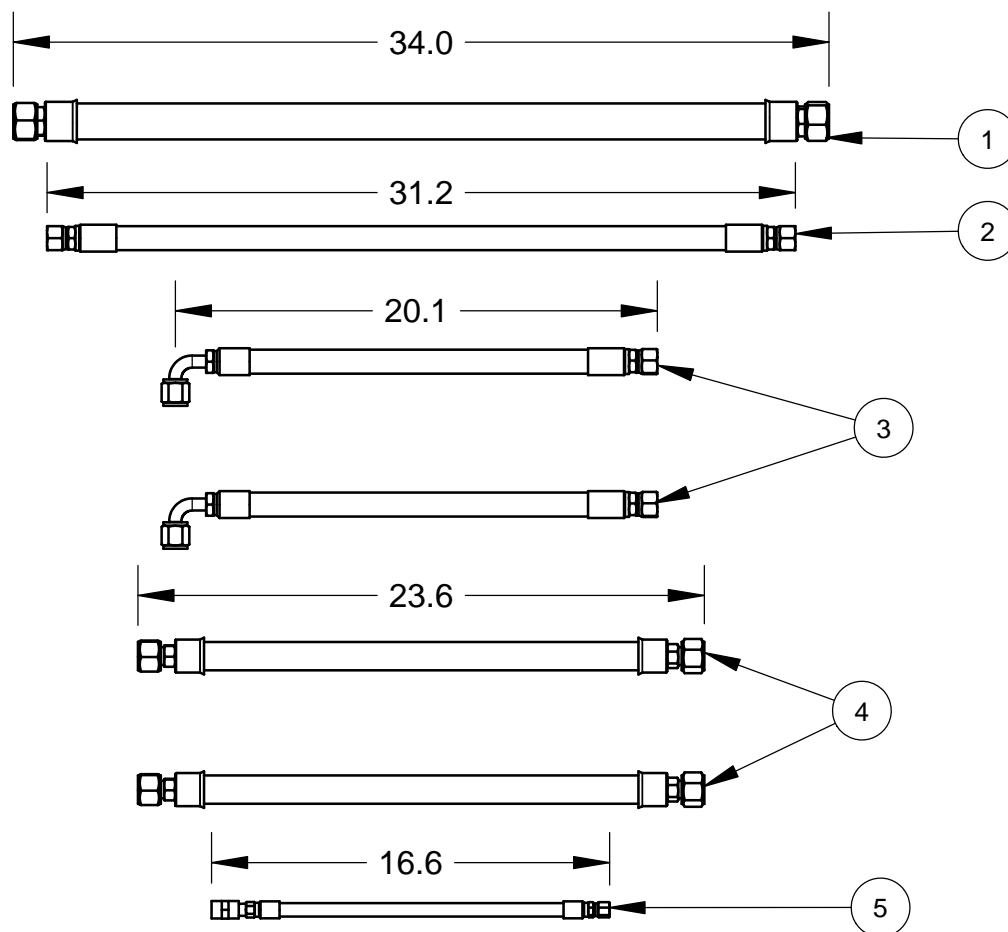
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| 14 | 2800312 | 1 | Connector, 1" Sealtite Elbow |
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| 16 | 6047959 | 1 | Key, 3/8" Sq. x 2-1/4" |
| 17 | 2900058 | 4 | Flat Washer, 1/2" SAE |
| 18 | 2900084 | 8 | Lock Washer, 1/2" Split |
| 19 | 2900499 | 8 | Cap Screw, Hex Hd., 1/2-13 x 1-1/2" |
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| 27 | 4646035 | 1 | Fuel Tank Support |
| 28 | 2900009 | 2 | Flat Washer, 1/4" SAE |
| 29 | 2900024 | 6 | Lock Washer, 1/4" Split |
| 30 | 2900008 | 2 | Cap Screw, Hex Hd., 1/4-20 x 1" |
| 31 | 2900138 | 4 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 32 | 4641098 | 1 | Starter Box Platform |
| 33 | 4646049 | 1 | Side Panel |
| 34 | 2900144 | 4 | Cap Screw, Hex Hd., 1/4-20 x 3/4" |
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| 38 | 2900053 | 4 | Rivet, 3/32" Dia. |
| 39 | 4646003 | 1 | Lifting Bar |
| 40 | 2900248 | 2 | Cap Screw, Hex Hd., 5/16-18 x 3" |
| 41 | 1800169 | 1 | Serial Number Plate, US |
| 42 | 4646180 | 1 | Hose Kit, CB20XL, CB35XL |

CB20 HYDRAULIC SCHEMATIC



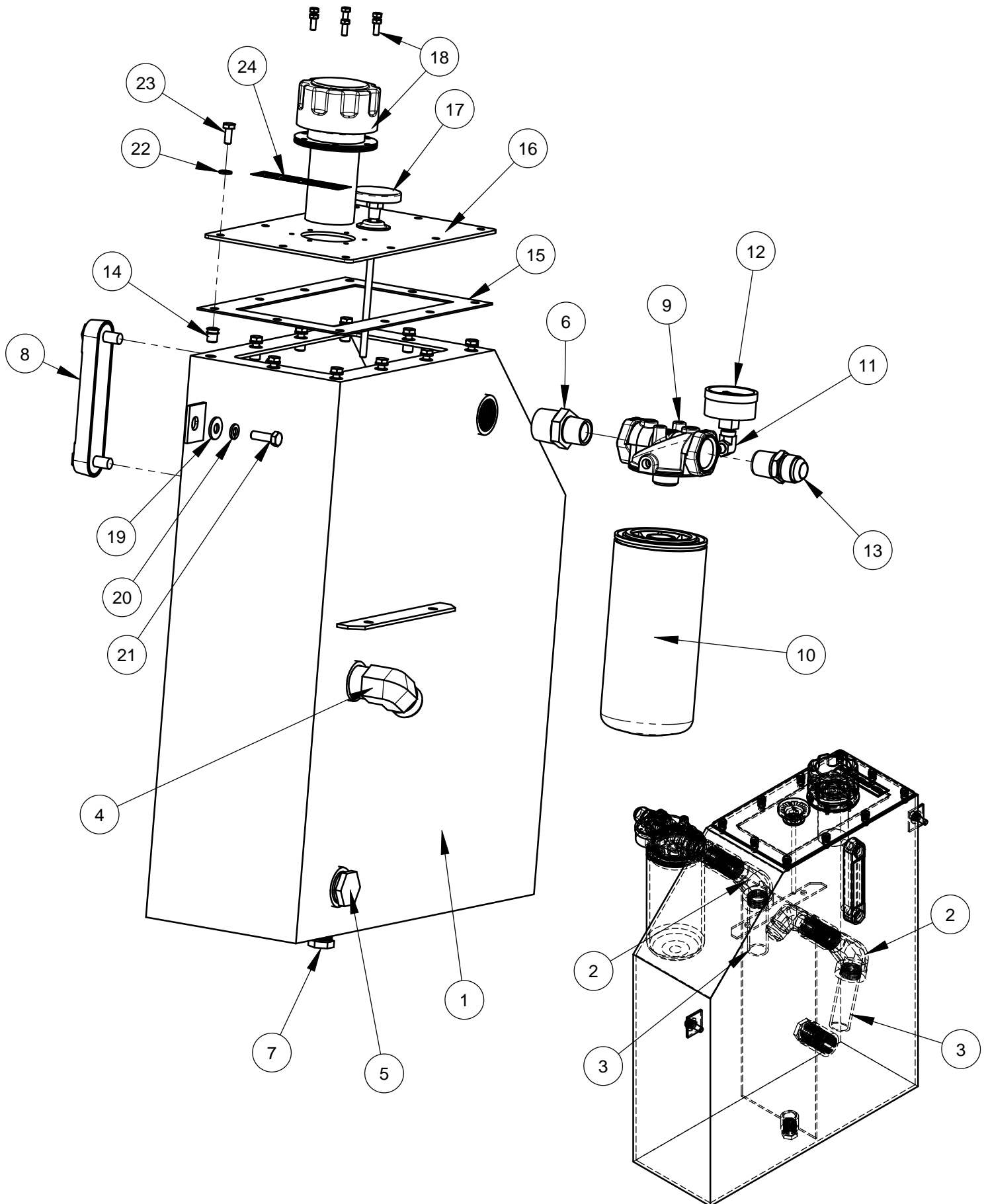
**ALL HOSES ARE IN KIT
4646180.**

4646180 CB20XL HOSE KIT

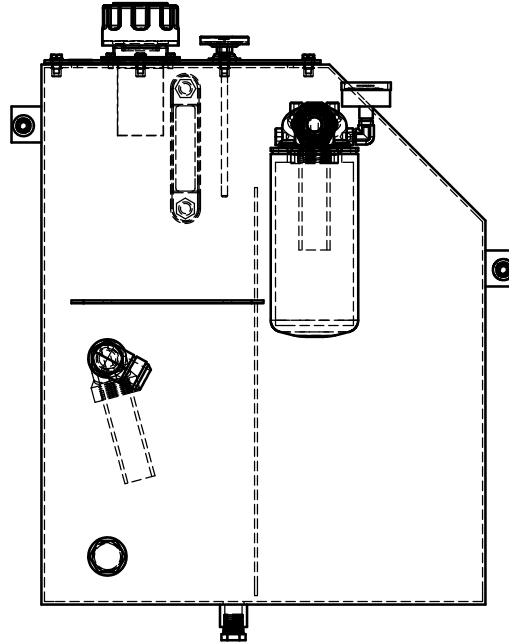


| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--|
| 1 | 6040057 | 1 | Hose Assy., 1 x 34" |
| | 3202317 | 2 | Fitting, 1" FJIC to 1" Hose Barb |
| | 3205619 | 2 | Crimp Shell, #16 |
| 2 | 4641067 | 1 | Hose Assy., 5/8" x 31-1/4" |
| | 3202075 | 2 | 5/8"FJICS x 5/8" Parkrimp Hose End Fitting |
| 3 | 4646170 | 2 | Hose Assy., 5/8" x 20" |
| | 3201883 | 1 | 5/8" FJIC Parkrimp, 90 Deg. |
| | 3202075 | 1 | 5/8"FJICS x 5/8" Parkrimp Hose End Fitting |
| 4 | 4646086 | 2 | Hose Assembly, 3/4" x 23.6" |
| | 3201989 | 2 | Fitting, 3/4" F.JIC to 3/4" Hose Barb |
| | 3202708 | 2 | Crimp Shell, #12 |
| 5 | 4646055 | 1 | Hose Assembly, 1/4" x 16.6" |
| | 3200128 | 1 | Fitting, 1/4" F. JIC to 1/4" Hose Crimp |
| | 3200145 | 1 | 1/4 MPT - 1/4 Hose Crimp |
| | 3201110 | 1 | Coupling, 1/4" NPT |

4646173 HYDRAULIC TANK ASSEMBLY

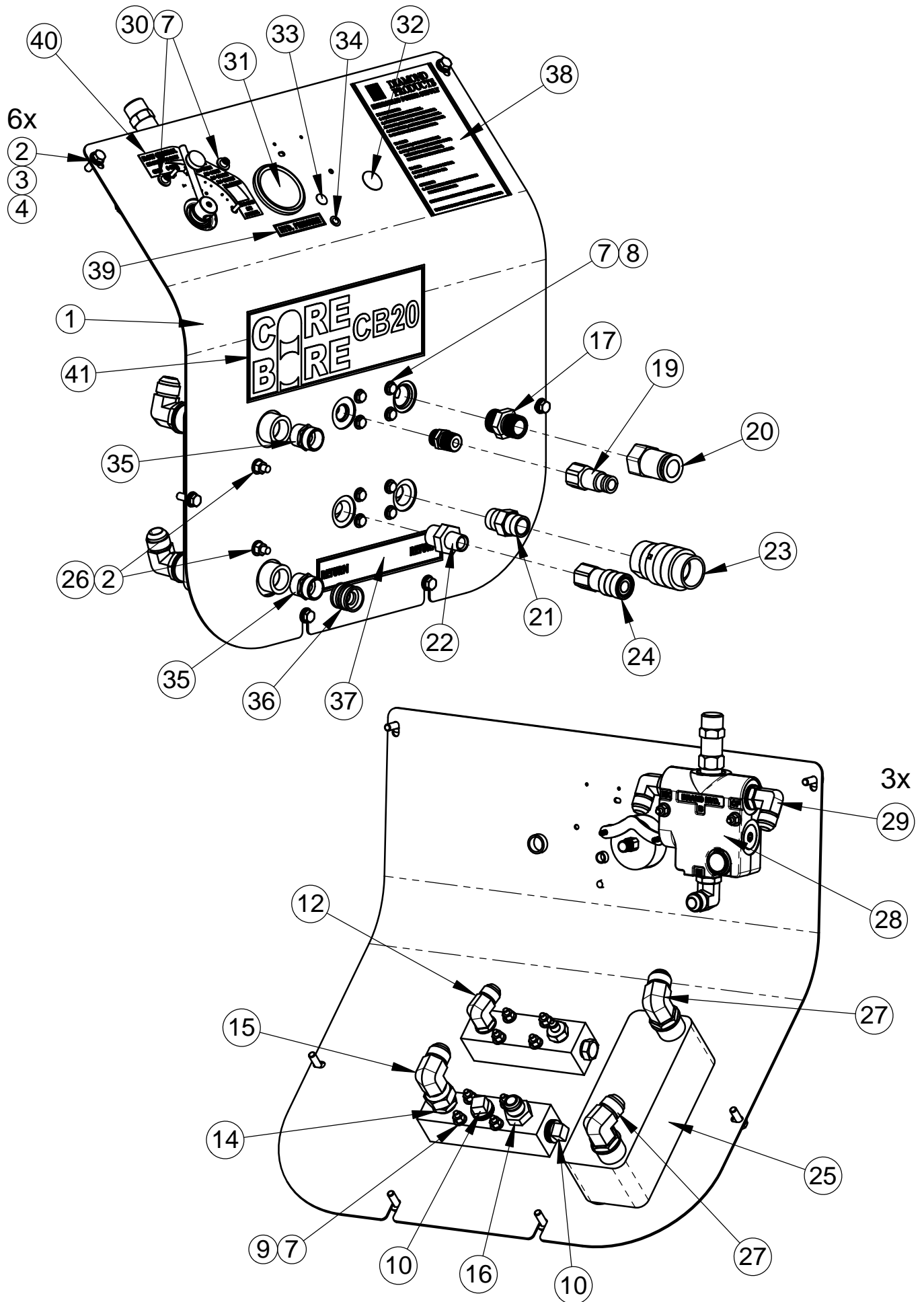


4646173 HYDRAULIC TANK ASSEMBLY



| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------------------|
| 1 | 4640120 | 1 | Hydraulic Tank Weldment |
| 2 | 3200409 | 2 | Street Elbow, 1" NPT |
| 3 | 3200427 | 2 | Nipple, 1" NPT x 4", Schedule 40 |
| 4 | 3200289 | 1 | Elbow, 1" M. Pipe to 1" M. JIC |
| 5 | 3200288 | 1 | Plug, 1" NPT |
| 6 | 3200431 | 1 | Nipple, 1"MPT - 3/4" MPT |
| 7 | 3200160 | 1 | Plug, 1/2-14 NPT |
| 8 | 2400166 | 1 | Sight Gauge, Liquid Level |
| 9 | 2703290 | 1 | Filter Head, 3/4" NPT |
| 10 | 3201175 | 1 | Hydraulic Filter Element |
| 11 | 3200156 | 1 | Street Elbow, 1/8" NPT |
| 12 | 3200502 | 1 | Gauge, Hydraulic Pressure |
| 13 | 3200097 | 1 | Adapter, 3/4" M. JIC to 3/4" M. Pipe |
| 14 | 2900441 | 10 | Rivet Nut, 1/4-20 Round |
| 15 | 4646083 | 1 | Gasket, Hyd Tank |
| 16 | 4640121 | 1 | Cover, Hydraulic Tank |
| 17 | 2800459 | 1 | Thermometer, 2", 0 - 200 F |
| 18 | 2401305 | 1 | Filler/Breather Cap (Top Mount) |
| | 2900339 | 6 | Cap Screw, Hex Hd., M5 x 12mm |
| 19 | 2900567 | 2 | Flat Washer, 5/16" USS |
| 20 | 2900031 | 2 | Lock Washer, 5/16" Split |
| 21 | 2900138 | 2 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 22 | 2900024 | 10 | Lock Washer, 1/4" Split |
| 23 | 2900023 | 10 | Cap Screw, Hex Hd., 1/4-20 x 5/8" |
| 24 | 1800535 | 1 | Decal, "Hydraulic Fluid Only" |

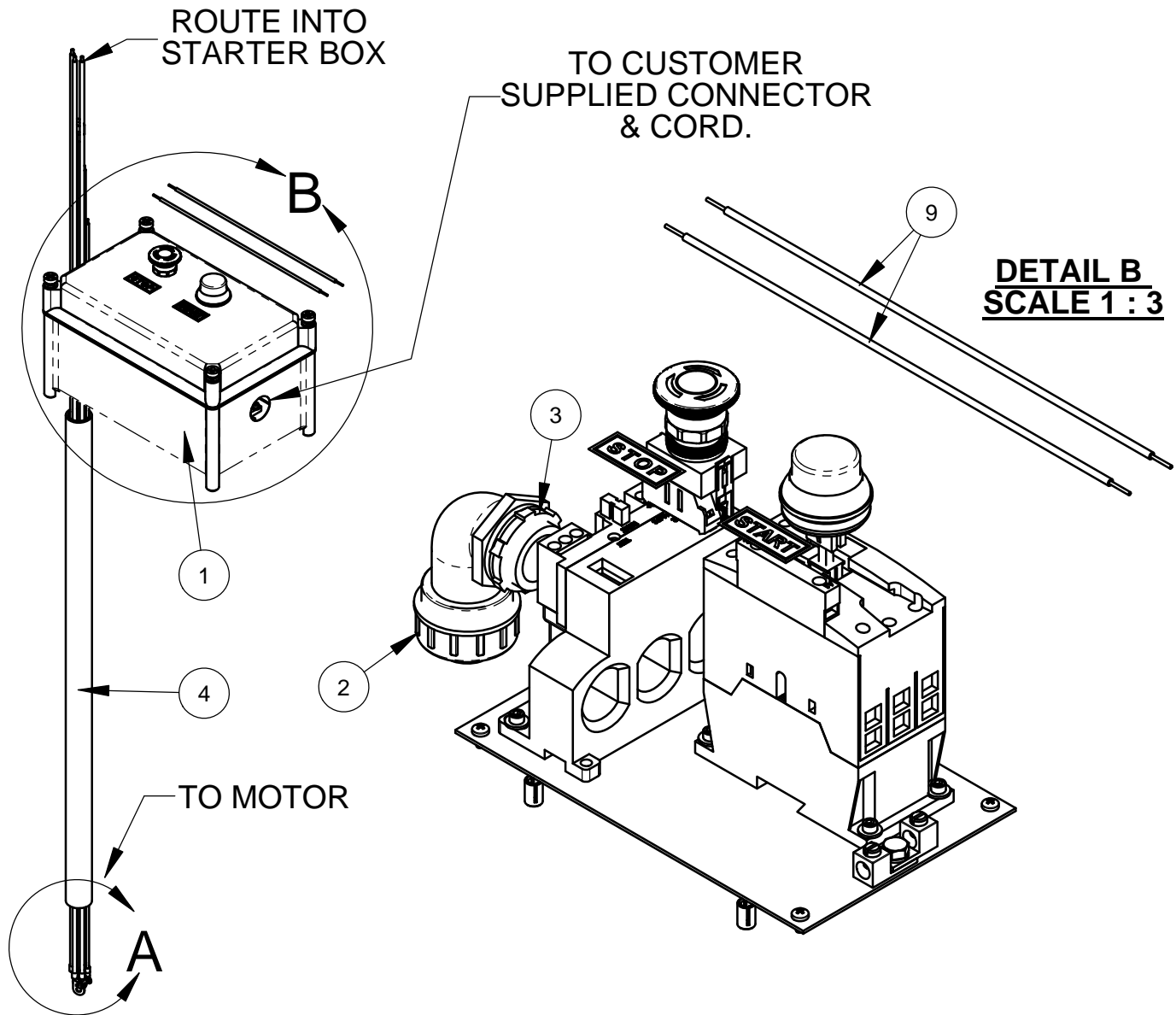
4646171 CB20 XL PANEL ASSEMBLY



4646171 CB20 XL PANEL ASSEMBLY

| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|---|
| 1 | 4646141 | 1 | Instrument Panel |
| 2 | 2900022 | 8 | Flat Washer, 5/16" SAE |
| 3 | 2900031 | 6 | Lock Washer, 5/16" Split |
| 4 | 2900138 | 6 | Cap Screw, Hex Hd., 5/16-18 x 1" |
| 5 | 4646102 | 1 | Manifold, SAE O-Ring |
| 6 | 4646101 | 1 | Manifold, 3/4 NPT |
| 7 | 2900009 | 20 | Flat Washer, 1/4" SAE |
| 8 | 2901001 | 8 | Cap Screw, Hex Hd., 1/4-20 x 2-1/2" |
| 9 | 2900010 | 10 | Lock Nut, 1/4-20 Nylon |
| 10 | 3200479 | 2 | Plug, 3/4" NPT Square Head |
| 11 | 3201434 | 1 | Plug, 1/2" SAE O-Ring Hex |
| 12 | 3205671 | 1 | 1/2" O-Ring - 5/8" MJIC, 90 Deg. |
| 13 | 3201291 | 1 | Adapter, 1/2"M.O-Ring to 1/4" MJIC |
| 14 | 3200097 | 1 | Adapter, 3/4" M. JIC to 3/4" M. Pipe |
| 15 | 3200417 | 1 | Elbow, 3/4" F. JIC to 3/4" M. JIC |
| 16 | 3200082 | 1 | 5/8" MJIC TO 3/4" MPT |
| 17 | 3200330 | 1 | Adapter, 3/4" M. Pipe to 3/4" O-Ring |
| 18 | 3200371 | 1 | Adaptor, 1/2" MPT to 1/2" O-Ring |
| 19 | 3200105 | 1 | Nipple, 1/2" Q.D. |
| 20 | 3200101 | 1 | Nipple, 3/4" Quick Disconnect |
| 21 | 3200137 | 1 | Hex Nipple, 3/4" NPT |
| 22 | 3200383 | 1 | Nipple, Hex, 3/4" MPT TO 1/2" MPT |
| 23 | 3200100 | 1 | Coupler, 3/4" Quick Disconnect |
| 24 | 3200104 | 1 | Coupler, 1/2" Q.D. |
| 25 | 2400307 | 1 | Heat Exchanger |
| 26 | 2900303 | 2 | Lock Nut, M8-1.25 Nylon Insert |
| 27 | 3200400 | 2 | Elbow, 3/4" O-Ring to 3/4" Male JIC |
| 28 | 3201654 | 1 | Valve, Flow Control |
| 29 | 3202061 | 3 | Fitting, 5/8" MORB x 5/8" MJIC x 90 DEG |
| 30 | 2900245 | 2 | Cap Screw, Soc. Hd., 1/4-20 x 2-5/8" |
| 31 | 3200250 | 1 | Gauge, Hydraulic, 3000 PSI |
| 32 | 2500549 | 1 | Plug, 7/8" Hole |
| 33 | 2500204 | 1 | Plug, 1/2" Hole |
| 34 | 2503749 | 1 | Plug, 5/16" Hole (Tapered) |
| 35 | 3201659 | 2 | Fitting, 3/4" M. Pipe to 3/4" M. Garden |
| 36 | 3200177 | 1 | Fitting, 3/4" F. Garden Union Swivel |
| 37 | 1800536 | 1 | "Return" Decal |
| 38 | 1800941 | 1 | Decal, Hydraulic Power Supply |
| 39 | 1800531 | 1 | "Hyd. Pressure" Decal |
| 40 | 1801849 | 1 | Decal, CB20 Flow Control |
| 41 | 1801367 | 1 | Decal, Core Bore CB20 |

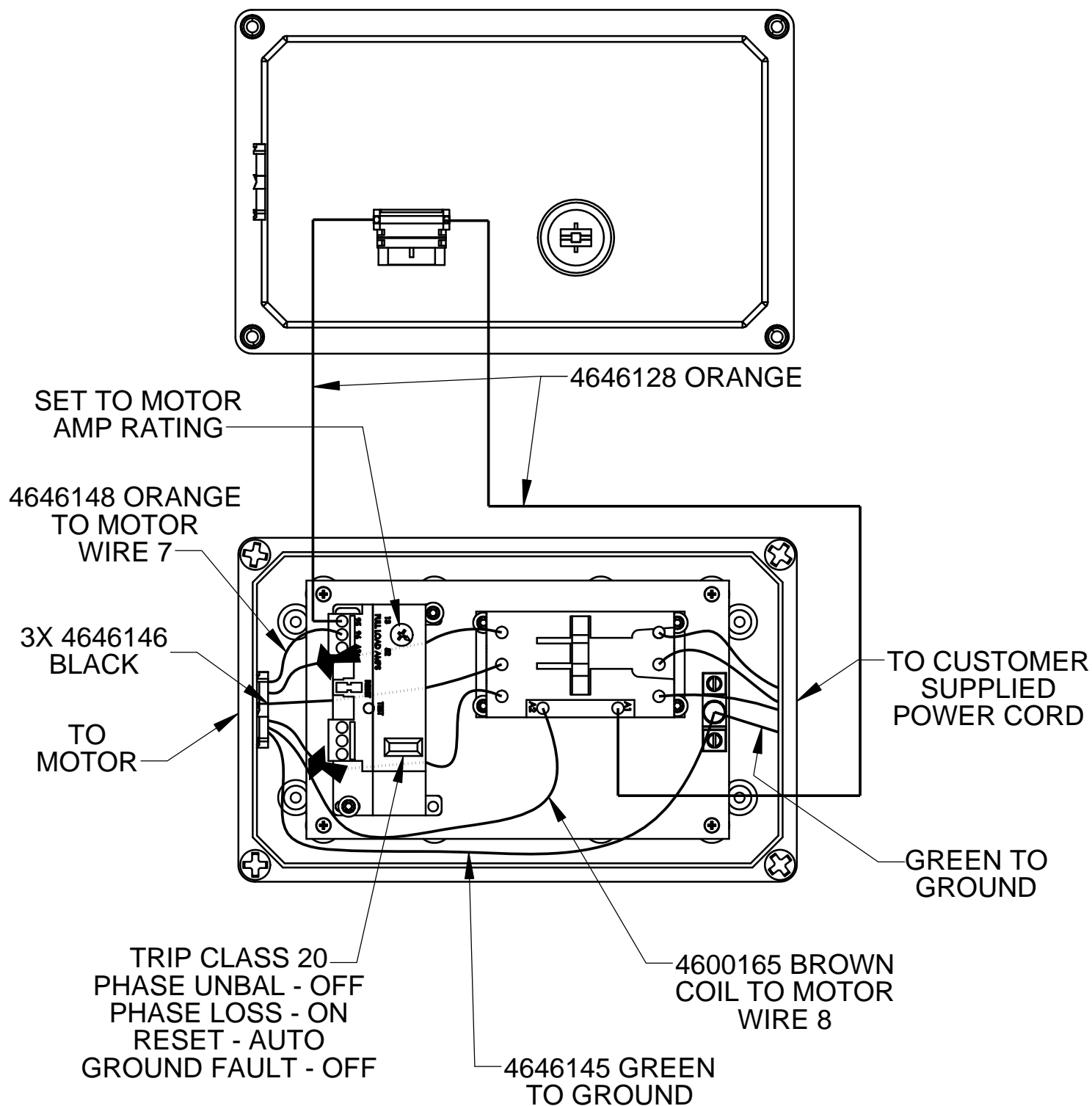
4646032 STARTER BOX ASSEMBLY 208 - 460 VOLT



| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|-------------------------------------|
| 1 | 4600276 | 1 | Starter Box, 230-460V |
| 2 | 2800898 | 1 | Connector, 1", Sealtite, 90 Deg. |
| 3 | 2800193 | 1 | Lock Nut, 1" |
| 4 | 4646144 | 1 | Conduit, Seal Tite, 1" x 29" |
| 5 | 4646145 | 1 | Wire Assy., 6 Gage, Green, 50" |
| 6 | 4646146 | 3 | Wire Assy., 8 Gage, Black, 55" |
| 7 | 4600165 | 1 | Wire Assy., 14 Gage, Brown, 48-1/2" |
| 8 | 4646148 | 1 | Wire Assy., 14 Gage, Orange, 45" |
| 9 | 4646128 | 2 | Wire, 14 Gage, Orange, 12" |

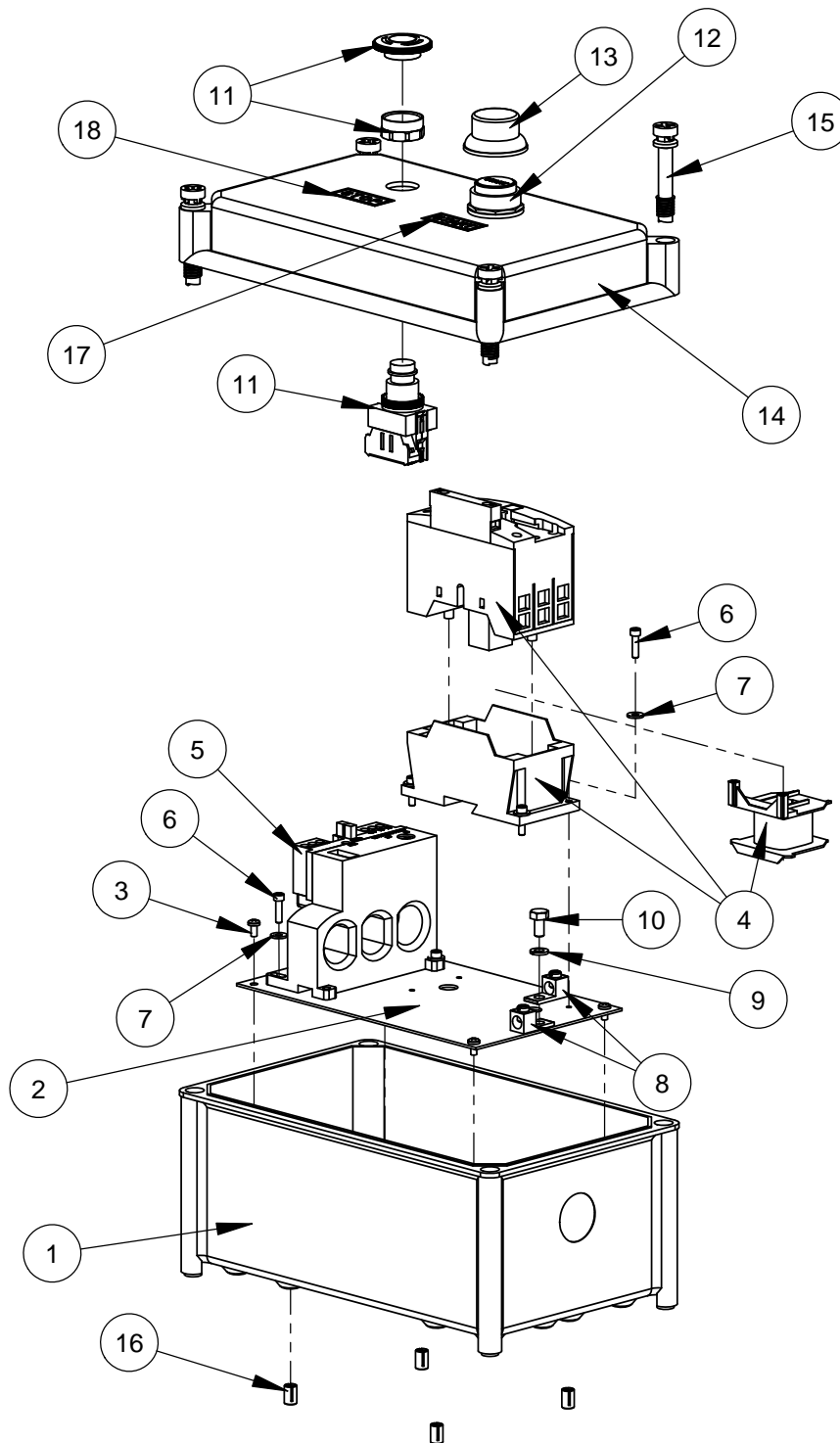
4646032 STARTER BOX ASSEMBLY 208 - 460 VOLT

SEE ALSO SCHEMATIC ON MOTOR NAME PLATE.



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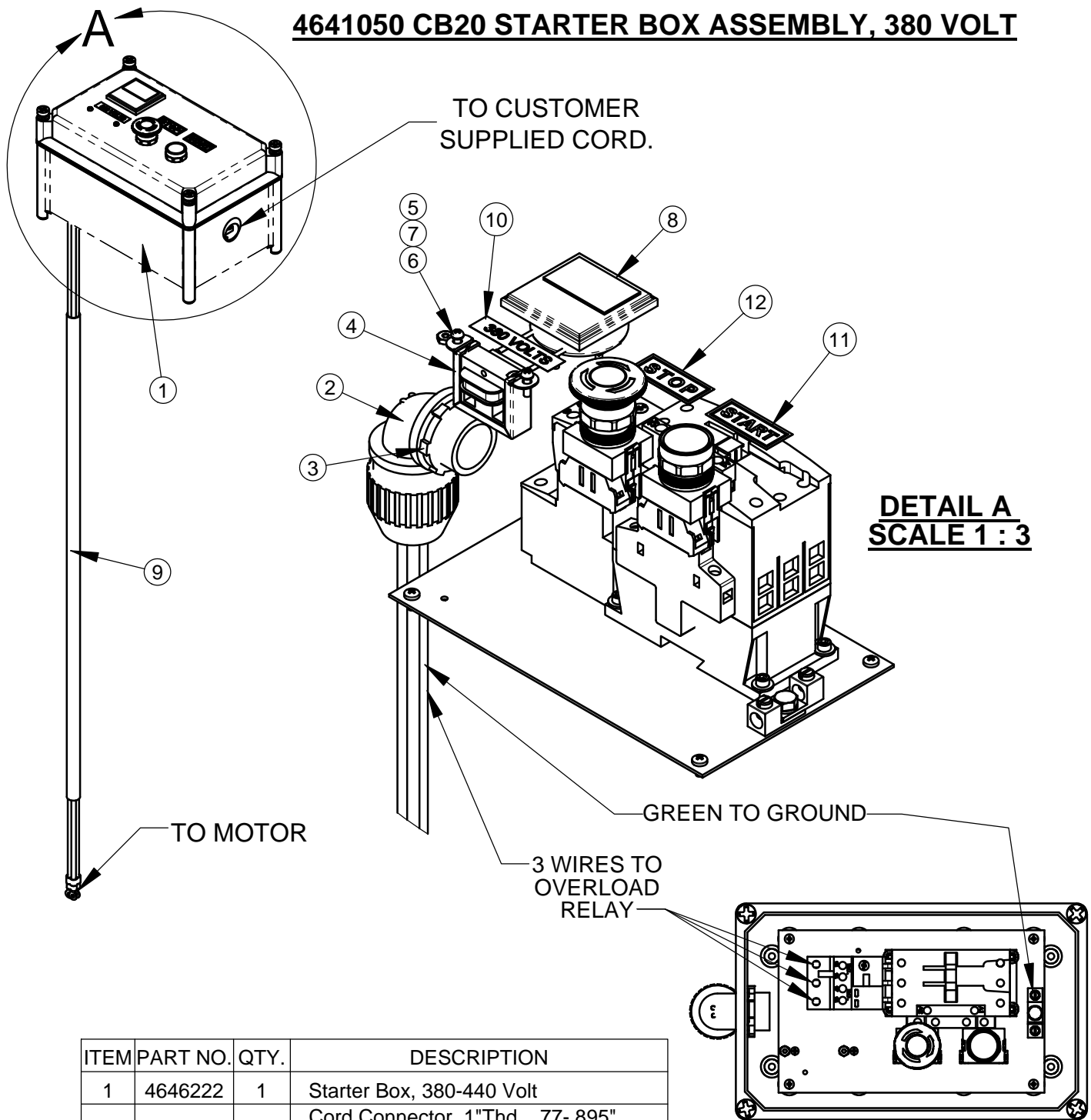
4600276 STARTER BOX 230 - 460 VOLT



| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------------------|
| 1 | 6040300G | 1 | Electrical Box Base |
| 2 | 6040598 | 1 | Sub-plate |
| 3 | 2900676 | 4 | Machine Screw, Pan Hd., M4-0.7 x 8mm |
| 4 | 2801704 | 1 | Contactor, 220-240V (includes coil) |
| | 2801265 | 1 | Replacement Coil, 220-240V |
| 5 | 2800899 | 1 | Overload Relay, 13-52 Amp |
| 6 | 2901827 | 6 | Cap Screw, Soc. Hd., #8-32 x 5/8" |
| 7 | 2901437 | 6 | Flat Washer, #10 |
| 8 | 2800315 | 2 | Grounding Lug |
| 9 | 2900024 | 1 | Lock Washer, 1/4" Split |

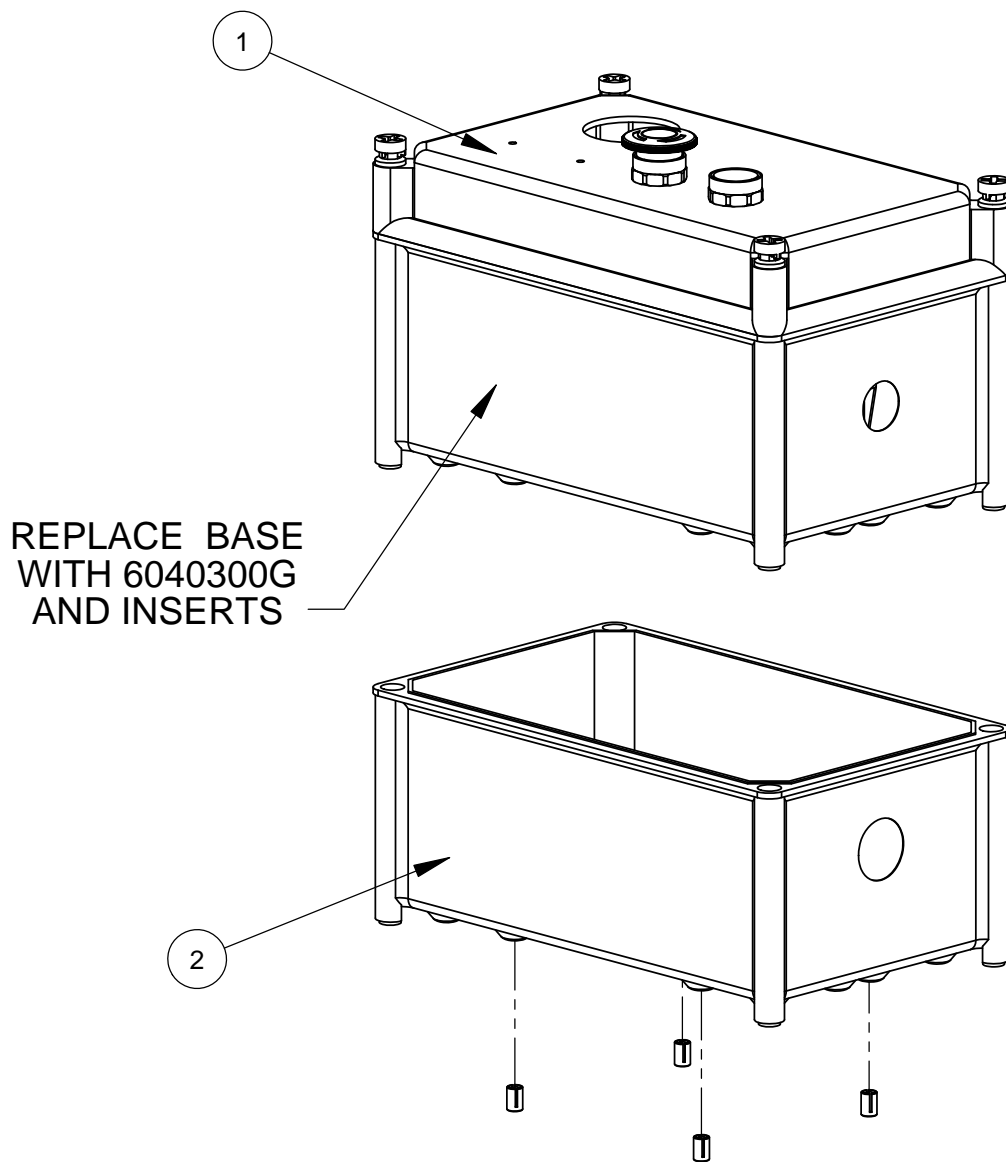
| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|-----------------------------------|
| 10 | 2901891 | 1 | Cap Screw, Hex Hd., 1/4-28 x 1/2" |
| 11 | 2801636 | 1 | E-Stop Switch, 600V, NC |
| 12 | 4600166 | 1 | Start Switch |
| 13 | 2800222 | 1 | Clear Protective Boot |
| 14 | 6048339 | 1 | Cover, Electric Box, 2 Hole |
| 15 | 2701414 | 4 | Fastener, Electrical Box Top |
| 16 | 2901332 | 4 | 1/4-20 Threaded Insert |
| 17 | 1801638 | 1 | Decal, Start |
| 18 | 1801639 | 1 | Decal, Stop |

4641050 CB20 STARTER BOX ASSEMBLY, 380 VOLT



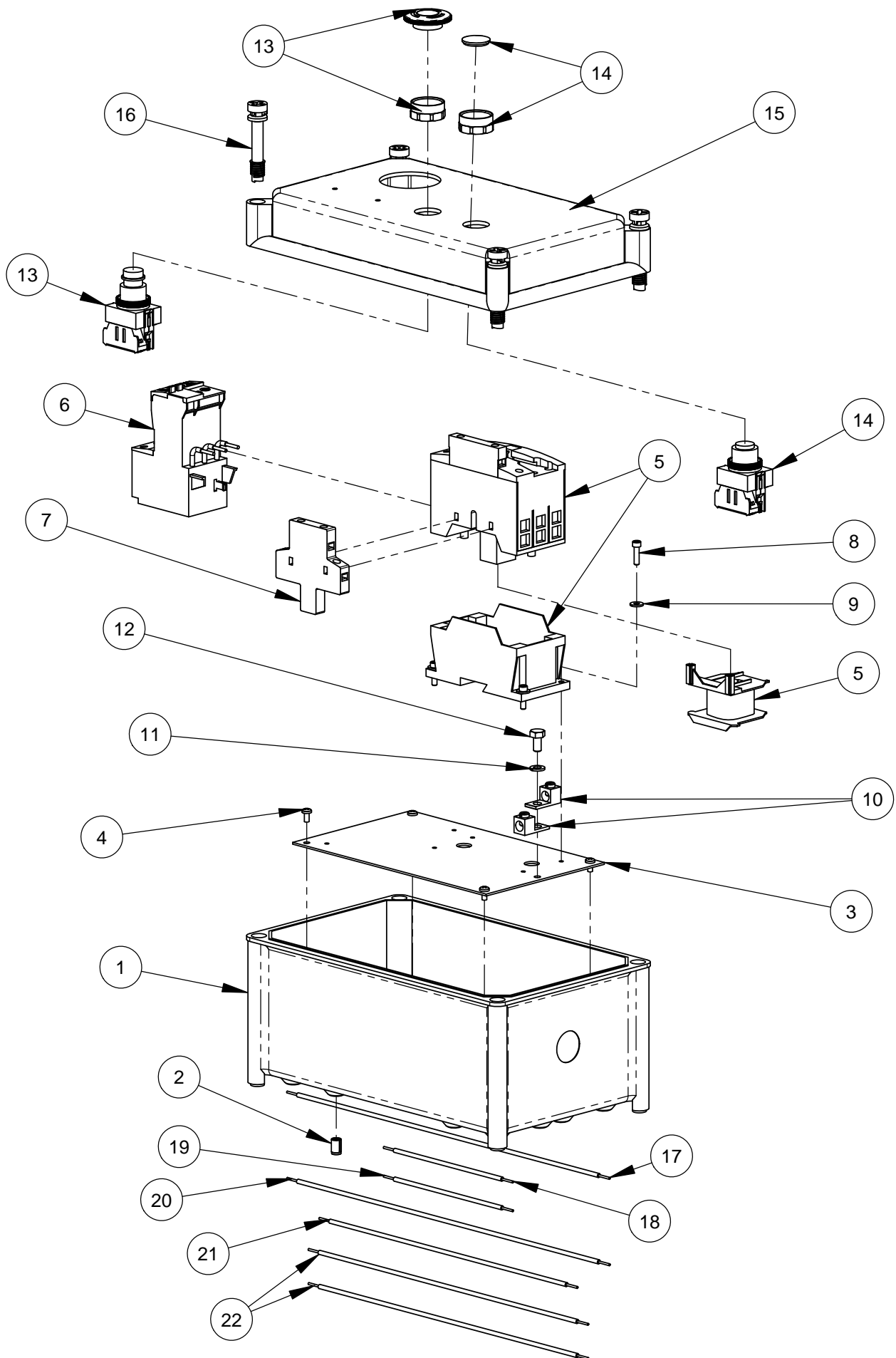
| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--|
| 1 | 4646222 | 1 | Starter Box, 380-440 Volt |
| 2 | 2800897 | 1 | Cord Connector, 1"Thd., .77-.895" Cord, 90 Deg. |
| 3 | 2800193 | 1 | Lock Nut, 1" |
| 4 | 2800085 | 1 | AC Current Transformer |
| 5 | 2900092 | 2 | Lock Washer, #6 Split |
| 6 | 2900090 | 2 | Machine Screw, Rd. Hd., #6-32 x 1/2" |
| 7 | 2900091 | 2 | Hex Nut, #6-32 |
| 8 | 2800253 | 1 | Amp Meter w/ Bracket, 0-40 AC |
| 9 | 4645035 | 1 | Cable Assy., 8 Ga., 4 Wire x 50" |
| 10 | 1801067 | 1 | Voltage Label, 380V |
| 11 | 1801638 | 1 | Decal, Start |
| 12 | 1801639 | 1 | Decal, Stop |

4646222 STARTER BOX, 380 - 440 VOLT

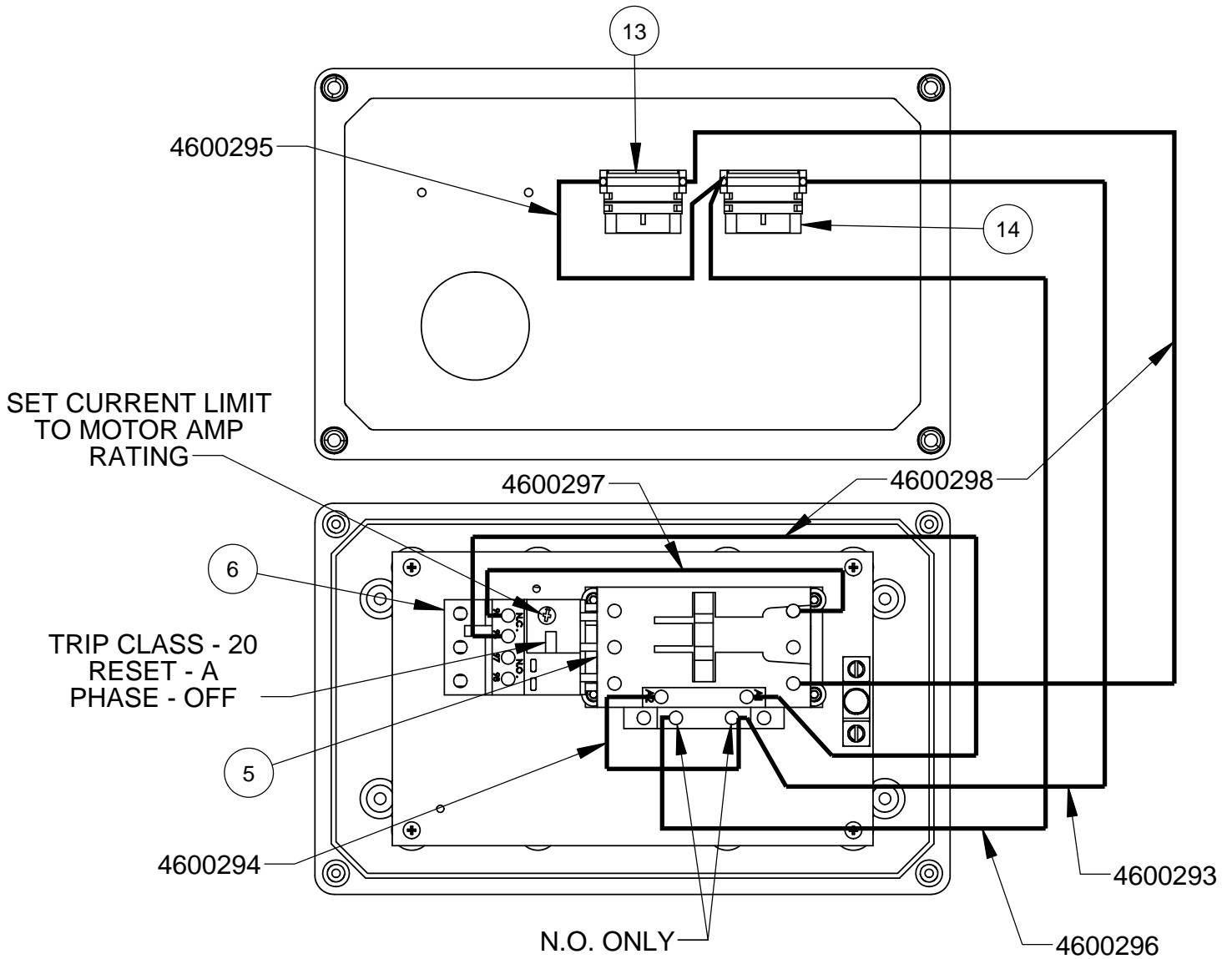


| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|------------------------|
| 1 | 2801269 | 1 | Starter Box, 380-440V |
| 2 | 6040300G | 1 | Electrical Box Base |
| 3 | 2901332 | 4 | 1/4-20 Threaded Insert |

2801269 STARTER BOX, 380-440 VOLT

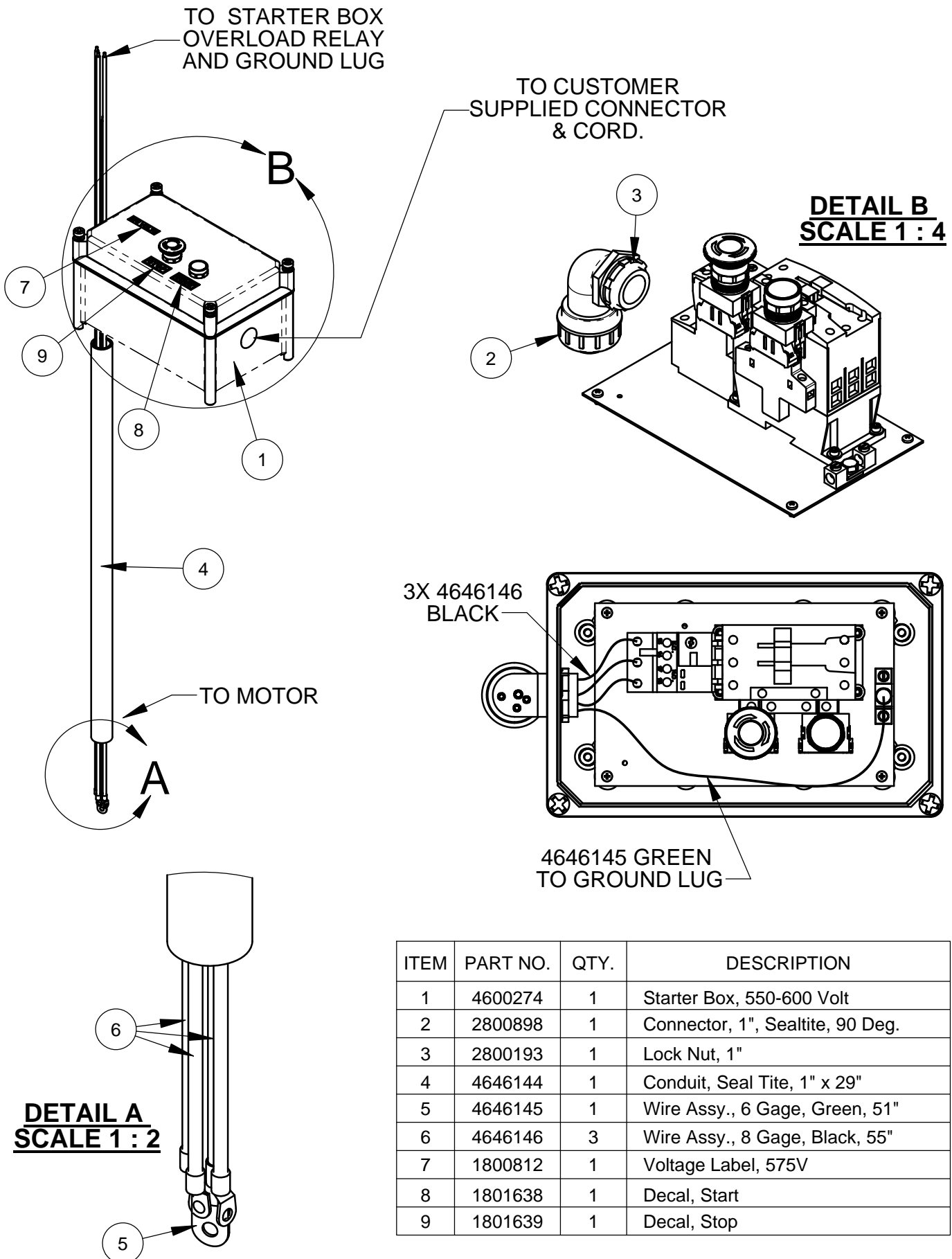


2801269 STARTER BOX, 380-440 VOLT

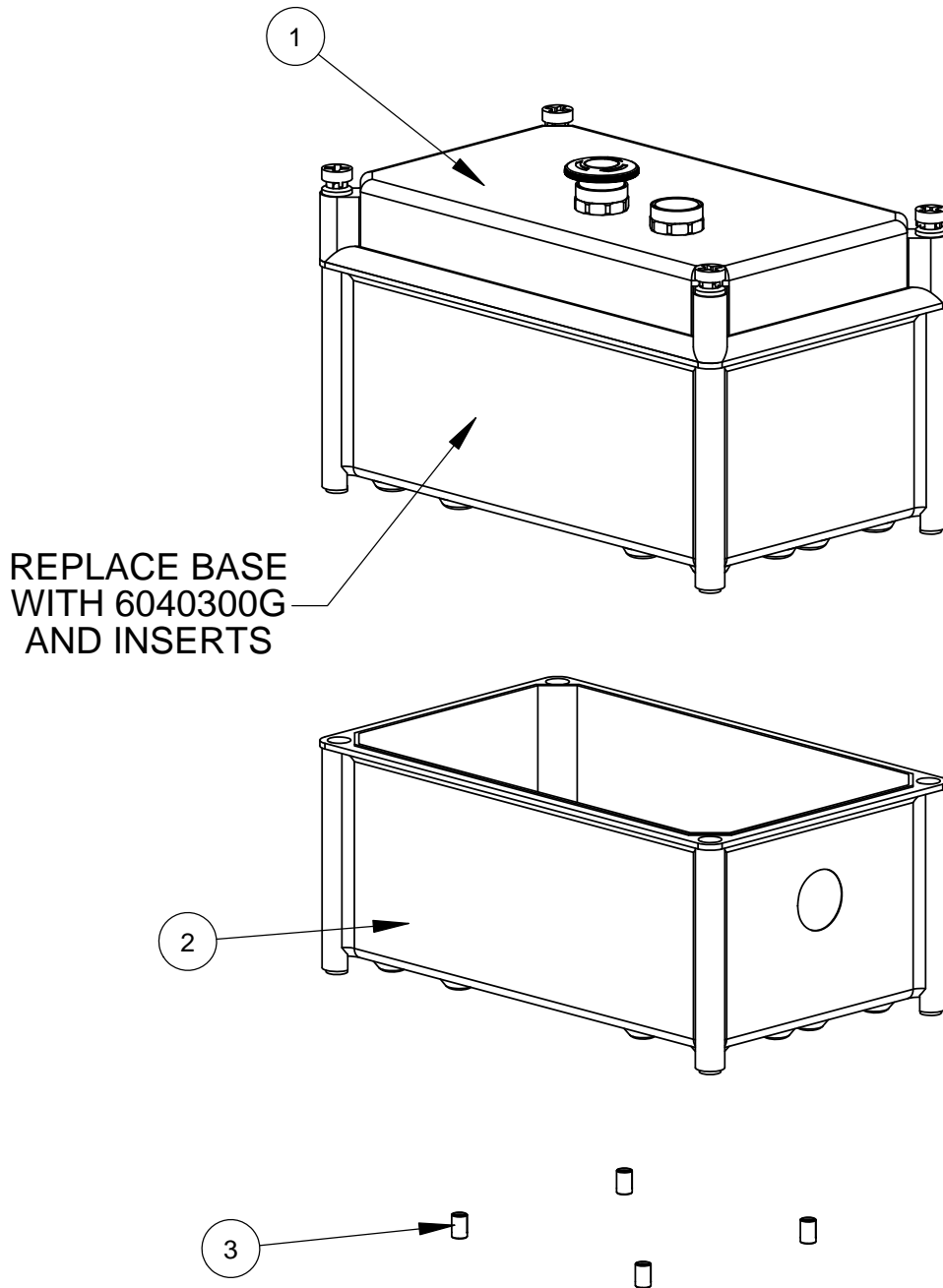


| ITEM | PART NO. | QTY. | DESCRIPTION | ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------------------|------|----------|------|-----------------------------------|
| 1 | 6040300D | 1 | Starter Box Base | 11 | 2900024 | 1 | Lock Washer, 1/4" Split |
| 2 | 2901588 | 4 | M6-1.0 Threaded Insert | 12 | 2901891 | 1 | Cap Screw, Hex Hd., 1/4-28 x 1/2" |
| 3 | 6040598 | 1 | Sub-plate | 13 | 2801636 | 1 | E-Stop Switch, 600V, NC |
| 4 | 2900676 | 4 | Machine Screw, Pan Hd., M4-0.7 x 8mm | 14 | 2801639 | 1 | Pushbutton, N.O., 600V |
| 5 | 2801708 | 1 | Contactor, 380-440V (includes coil) | 15 | 6048293 | 1 | Starter Box Cover |
| | 2801268 | 1 | Replacement Coil, 380-440V | 16 | 2701414 | 4 | Fastener, Electrical Box Top |
| 6 | 2801699 | 1 | Overload Relay, 9-45 AMP | 17 | 4600293 | 1 | Wire, 14 Gage, Yellow, 15" |
| 7 | 2801676 | 1 | Auxiliary Contacts, 1NO-NC | 18 | 4600294 | 1 | Wire, 14 Gage, Yellow, 6" |
| 8 | 2901827 | 4 | Cap Screw, Soc. Hd., #8-32 x 5/8" | 19 | 4600295 | 1 | Wire, 14 Gage, Black, 6" |
| 9 | 2901437 | 4 | Flat Washer, #10 | 20 | 4600296 | 1 | Wire, 14 Gage, Black, 15" |
| 10 | 2800315 | 2 | Grounding Lug | 21 | 4600297 | 1 | Wire, 14 Gage, Red, 12" |
| | | | | 22 | 4600298 | 2 | Wire, 14 Gage, Red, 13" |

4646074 STARTER BOX ASSEMBLY, 550-600 VOLT

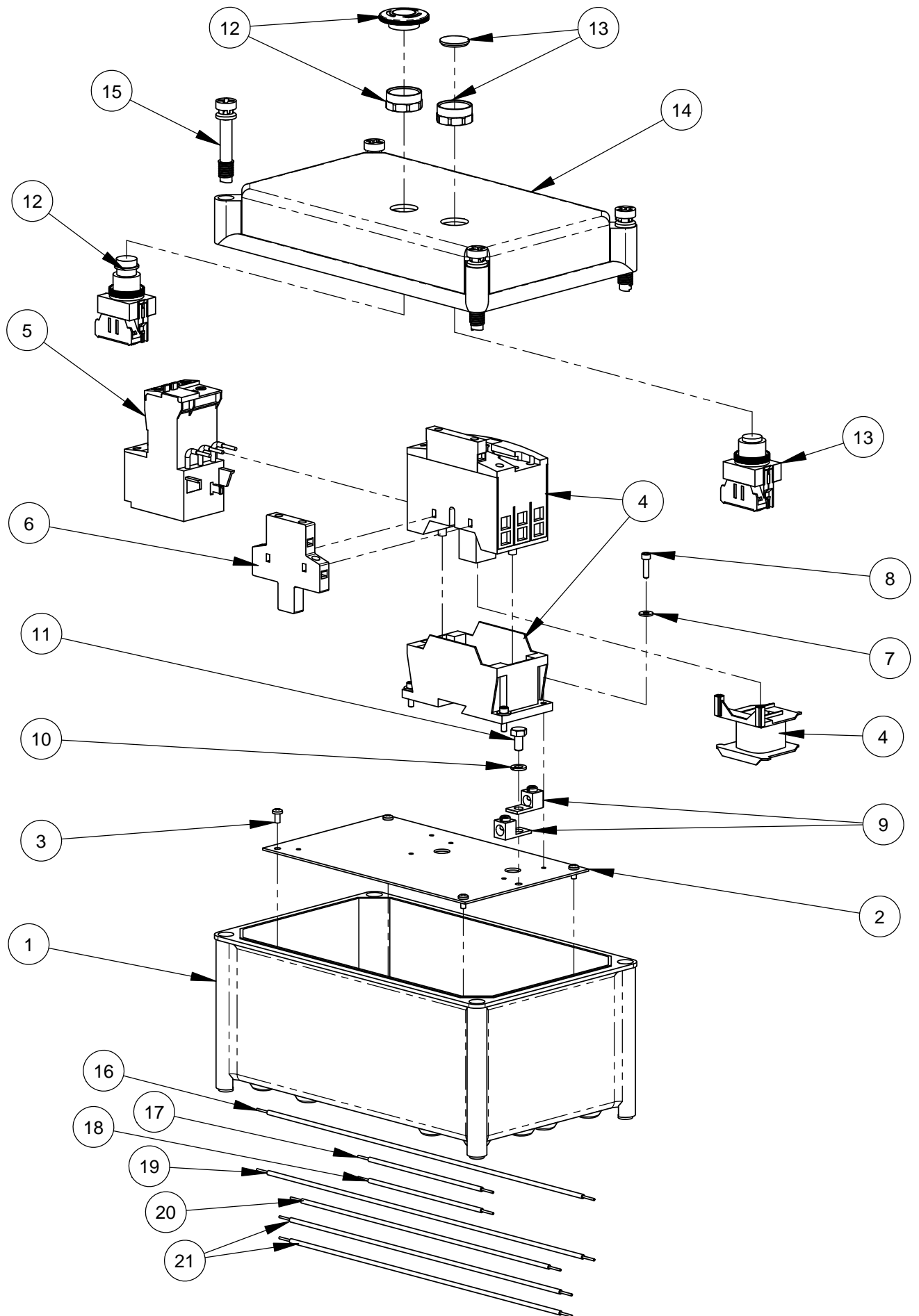


4600274 STARTER BOX, 550-600 VOLT

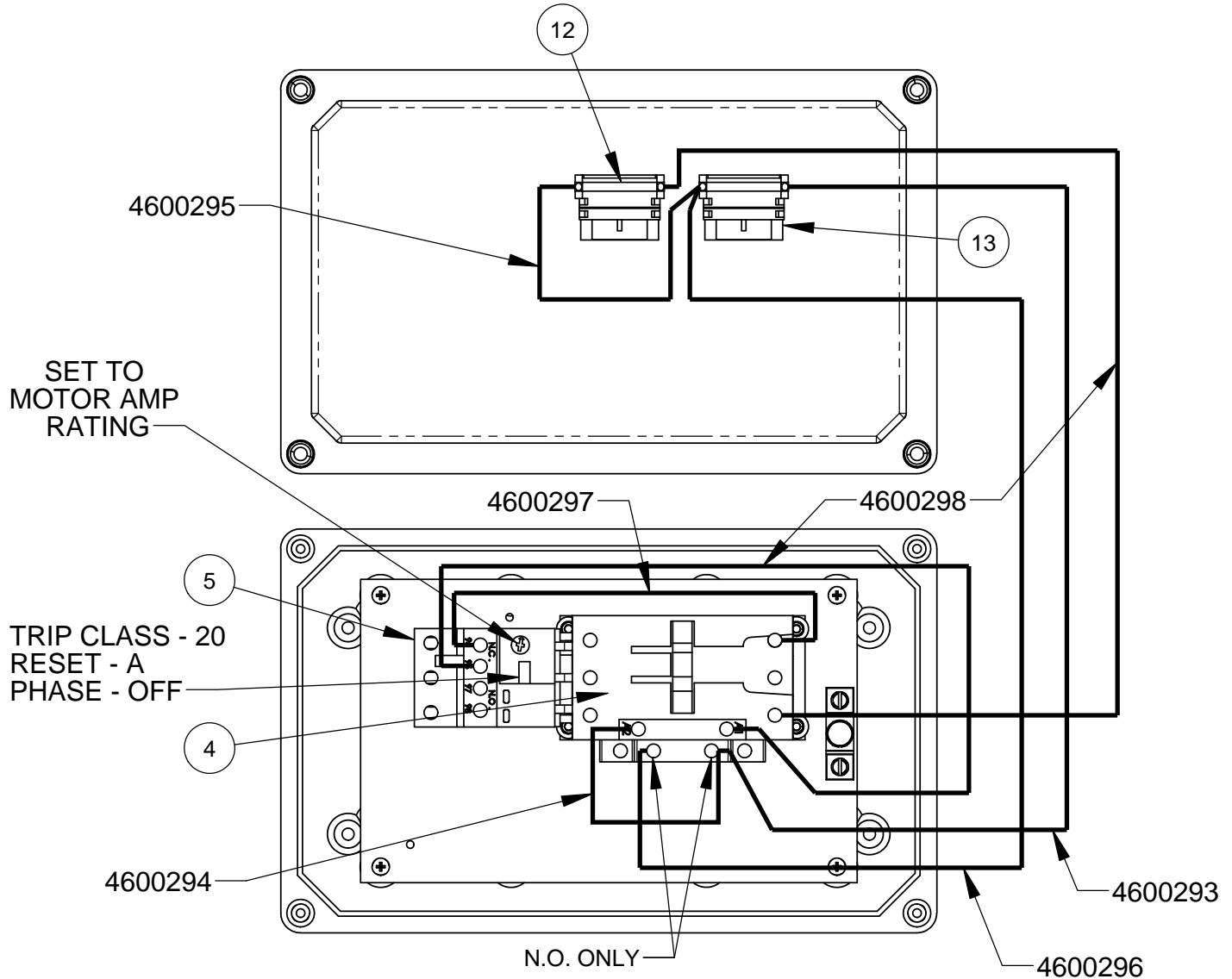


| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|------------------------|
| 1 | 2801033 | 1 | Starter Box, 550-600V |
| 2 | 6040300G | 1 | Electrical Box Base |
| 3 | 2901332 | 4 | 1/4-20 Threaded Insert |

2801033 STARTER BOX, 550-600 VOLT

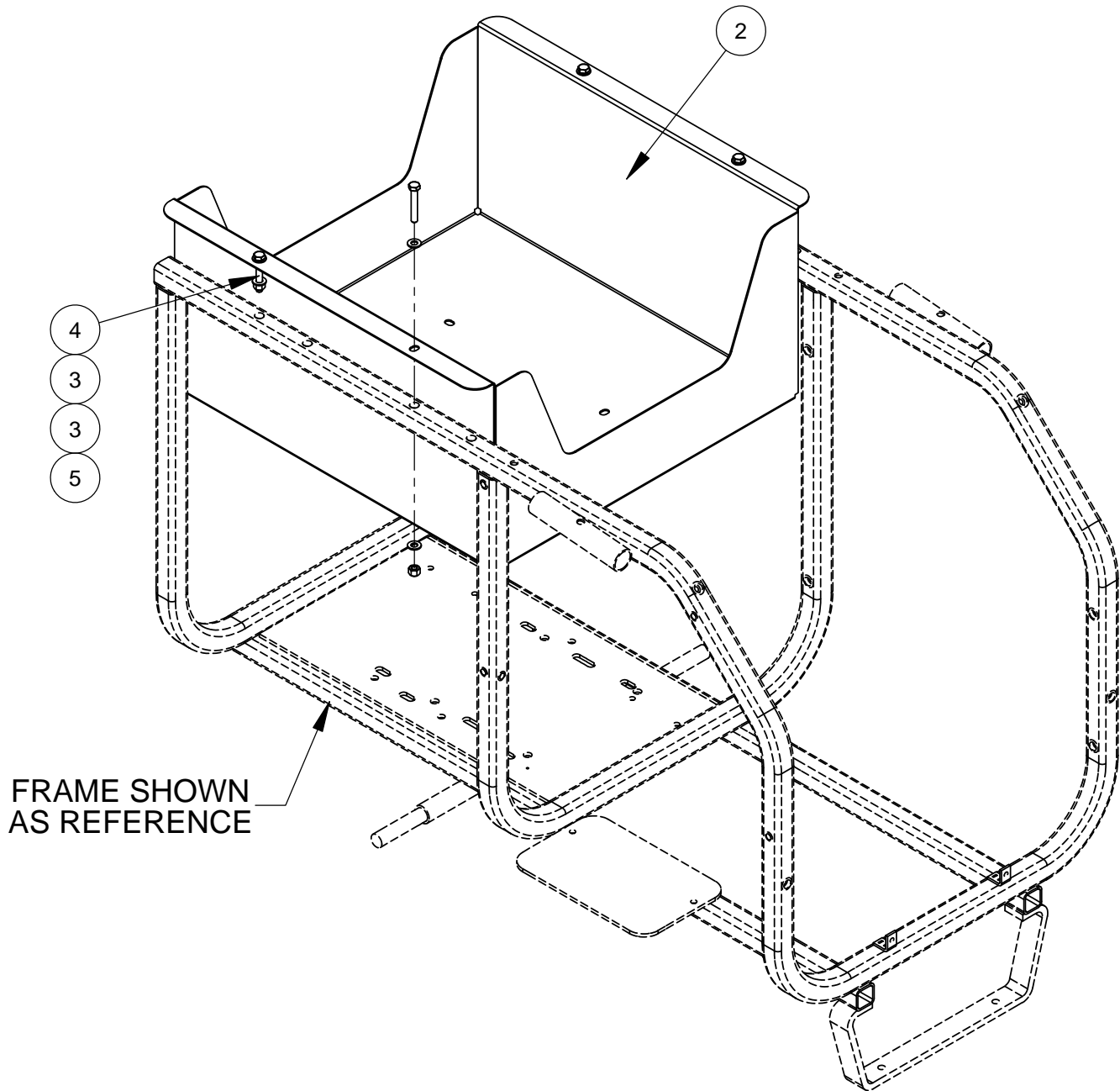


2801033 STARTER BOX, 550-600 VOLT

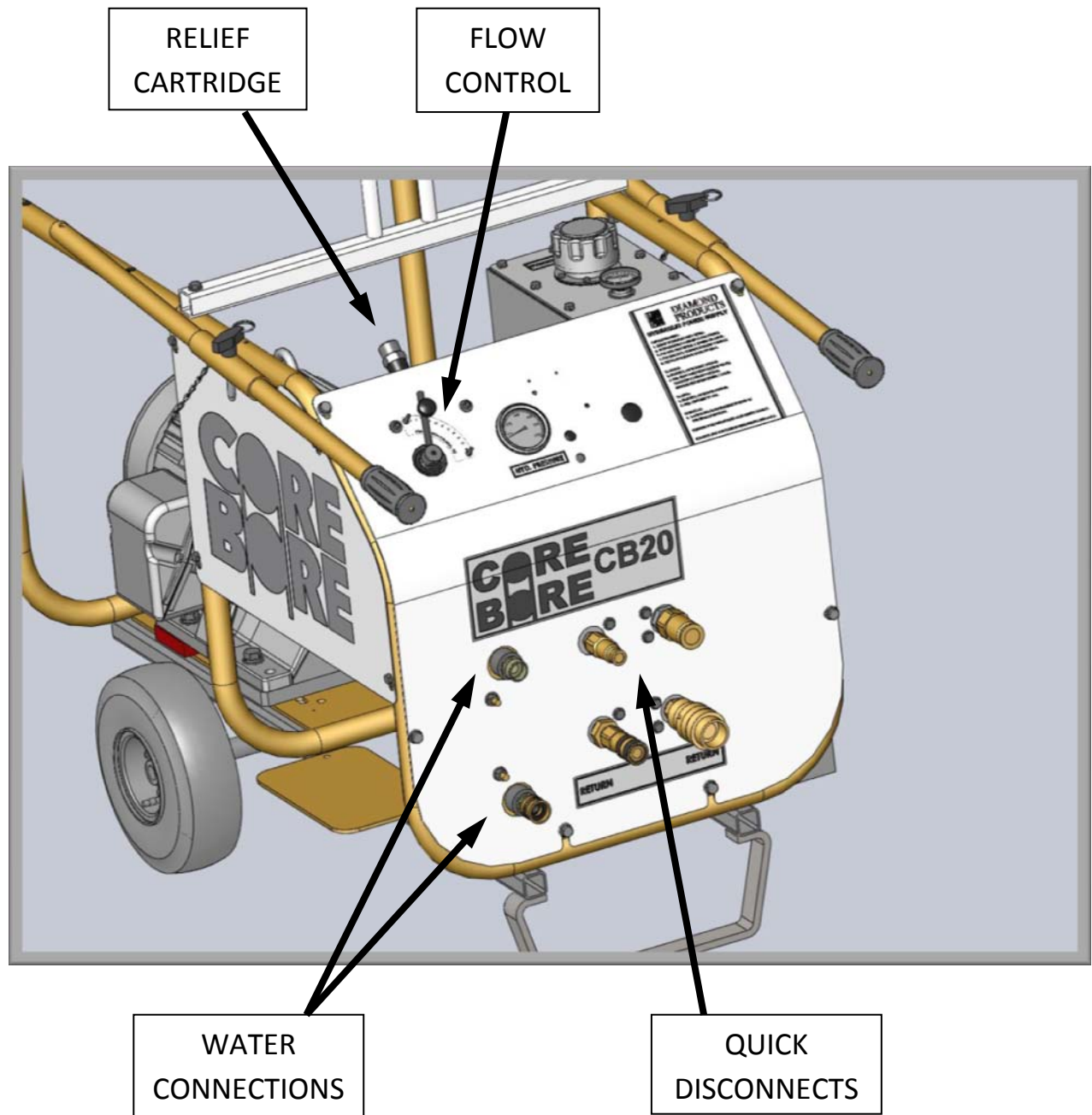


| ITEM | PART NO. | QTY. | DESCRIPTION | ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|--------------------------------------|------|----------|------|-----------------------------------|
| 1 | 2702419 | 1 | Electrical Box (Base) | 11 | 2901891 | 1 | Cap Screw, Hex Hd., 1/4-28 x 1/2" |
| 2 | 6040598 | 1 | Sub-plate | 12 | 2801636 | 1 | E-Stop Switch, 600V, NC |
| 3 | 2900676 | 4 | Machine Screw, Pan Hd., M4-0.7 x 8mm | 13 | 2801639 | 1 | Pushbutton, N.O., 600V |
| 4 | 2801709 | 1 | Contactor, 550-600V (includes coil) | 14 | 6048296 | 1 | Electric Box Cover, 2 Hole |
| | 2801267 | 1 | Replacement Coil, 550-600V | 15 | 2701414 | 4 | Fastener, Electrical Box Top |
| 5 | 2801699 | 1 | Overload Relay, 9-45 AMP | 16 | 4600293 | 1 | Wire, 14 Gage, Yellow, 15" |
| 6 | 2801676 | 1 | Auxiliary Contacts, 1NO-NC | 17 | 4600294 | 1 | Wire, 14 Gage, Yellow, 6" |
| 7 | 2901437 | 4 | Flat Washer, #10 | 18 | 4600295 | 1 | Wire, 14 Gage, Black, 6" |
| 8 | 2901827 | 4 | Cap Screw, Soc. Hd., #8-32 x 5/8" | 19 | 4600296 | 1 | Wire, 14 Gage, Black, 15" |
| 9 | 2800315 | 2 | Grounding Lug | 20 | 4600297 | 1 | Wire, 14 Gage, Red, 12" |
| 10 | 2900024 | 1 | Lock Washer, 1/4" Split | 21 | 4600298 | 2 | Wire, 14 Gage, Red, 13" |

4400262 TOOL TRAY OPTION, ELECTRIC UNITS



| ITEM | PART NO. | QTY. | DESCRIPTION |
|------|----------|------|----------------------------------|
| 1 | 4646156 | 1 | CB-XL Frame Assembly |
| 2 | 4400207 | 1 | Tool Tray |
| 3 | 2900022 | 8 | Flat Washer, 5/16" SAE |
| 4 | 2900494 | 4 | Cap Screw, Hex Hd., 5/16-18 x 2" |
| 5 | 2900039 | 4 | Lock Nut, 5/16-18 Nylon |



GENERAL SAFETY PRECAUTIONS

WARNING: Do not operate power unit without reading this entire manual and the engine operation manual first. Keep manuals with power unit at all times for reference.

This manual describes the operating procedures, care, maintenance, adjustments, and safety precautions for proper use of this machine. This equipment is intended for industrial applications by experienced operators. It is to be operated in conformance with applicable federal, state, and local codes or regulations pertaining to safety, air pollution, noise, etc.

Tool operators and maintenance personnel must always comply with the safety precautions given in this manual and on the stickers and tags attached to the equipment.

These safety precautions are given for your safety. Review them carefully before operating the tool and before performing general maintenance or repairs.

Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations.

In addition to this manual, read and understand safety and operating instructions in the Engine Operation Manual furnished with the Power Unit in addition to this manual.

- Establish a training program for all operators to ensure safe operation.
- Do not operate the power unit unless thoroughly trained or under the supervision of an instructor.
- Do not inspect or clean the power unit while it is running.
- Always use hoses and fittings rated at a minimum 2500 p.s.i. (172 bar) with a 4 to 1 safety factor for pressure lines.
- Be sure all hose connections are tight.
- Make sure all hoses are connected for correct flow direction to and from the tool being used.
- Do not inspect hoses and fittings for leaks by using bare hands. "Pin-hole" pressure leaks can penetrate the skin.
- Do not operate a damaged or improperly adjusted power unit.
- Never wear loose clothing that can get entangled in the working parts of the power unit.
- Keep all parts of your body away from the working parts of the power unit.
- Always wear appropriate safety equipment such as goggles, ear protection, head protection and safety shoes. Certain tools used in conjunction with the power unit may require other safety equipment such as breathing filters.

- Do not operate the power unit if a gasoline odor is present.
- Do not use flammable solvents around the power unit motor.
- Allow the engine to cool before storing the unit in an enclosed area.
- To avoid personal injury or equipment damage, all tool repair, maintenance and service must only be performed by authorized and properly trained personnel.

DANGER: Improper use or alteration of this equipment may be extremely hazardous.

SAFETY SYMBOLS

Safety symbols are used to emphasize actions which could result in a life-threatening situation, bodily injury, or damage to equipment.

Always observe safety symbols. They are included for your safety and for the protection of the tool.

! DANGER !

This safety symbol may appear on the tool. It is used to alert the operator of an action that could place him/her or others in a life threatening situation.

!WARNING: !

This safety symbol appears in these instructions to identify an action that could cause bodily injury to the operator or to other threatening situation.

! IMPORTANT!

This safety symbol appears in these instructions to identify an action or condition that could result in damage to the tool or other equipment.

DESCRIPTION AND SPECIFICATIONS

Pump: Gear, pump rotation is clockwise (motor is CCW).

Maximum GPM: 15 GPM (56.7L/M) 230/460/575 Volt
12.5 GPM (47.5L/M) 380 Volt

Hydraulic Fluid Tank Capacity: 11 gallons (41.6Liters)

Hose Couplings: Bruning quick disconnect, 3/4 inch & 1/2 inch

Relief Pressure: Factory set at 2400 PSI /165.5 Bar (at valve outlet port). Adjustable to 750 PSI, Current limited to 2400 psi.

Motor: Baldor 20 hp, 3450 RPM, 3 Phase, 60 Hz, C-Face, 230/460/575 Volt.
Baldor 20 hp, 2920 RPM, 3 Phase, 50 Hz, C-Face, 380 Volt.

This unit is compatible with most hydraulically driven sawing and drilling components. The system may not be compatible with components of some manufacturers.

The power unit was inspected and operated before shipment and should not require any additional adjustments prior to its initial use.

Hydraulic Fluid: The reservoir of the hydraulic power unit must be full prior to start-up. The use of high quality petroleum based hydraulic oil with the following properties is recommended:

- Anti-wear
- Low foaming
- Rust and oxidation inhibitors
- Wide temperature range
- Fluid viscosity: 8-1000 Centistokes (52-4600 SUS). The unit is shipped with an ISO 46 Viscosity grade (8Cs/52SUS @ 212F/100C and 46Cs/210SUS @ 104F/40C).

The oil must be kept free of contamination to avoid damage to system components. The strainer in the fill cap must always be in place when adding oil. Quick disconnects must be cleaned before connections are made.

Control Valve: The pressure compensated flow control valve on this unit allows full flow control

Flow settings are: 0-2, all flow routed to tank; 2-10, adjustable range.

Relief pressure can be adjusted by removing the cap at the top of the main control and using an Allen wrench to adjust

the relief cartridge. The relief can be set as low as 750 psi; do not exceed 2400 psi. To adjust, the flow control must be set at 10 and no tool should be attached. This will force all flow over relief. Securely replace the cap as oil seepage will occur through the relief cartridge. The relief is factory set and should rarely need adjustment.

Hydraulic Oil Cooler: The power unit is equipped with a brazed plate style oil cooler. Water should be passed through the cooler before being used for dust control or blade & bit cooling. Some tools will automatically shut off water flow when not actively cutting, drilling, etc. This may result in higher oil temperatures if the power unit continues to run without cooling water.

IMPORTANT: If there is a risk of frost the water must be drained from the cooler to prevent damage by freezing.

HOSES: Large diameters and short lengths are preferred and offer the highest system efficiency. If one is operating 50 ft (15.2M) from the power source, there is also a 50 ft (15.2M) return for a 100 ft (30.5M) total hose length. With 15 GPM and oil at 100 deg. F (37.8C), this could result in a 400 psi (27.5 Bar) pressure loss with ½” hose and a 140 psi (9.6 Bar) loss with 5/8” hose. Pressure loss will change dramatically with oil temperature.

OPERATING INSTRUCTIONS

Operator Responsibilities

It is the operator's responsibility to use this unit and any attached tools under safe working conditions and to follow proper safety procedures for themselves, co-workers, observers, and the public at large. The operator must be aware of the machine's capabilities and limitations and follow the safety precautions in each section of this manual. Periodic maintenance is required, in accordance with the instructions herein, to promote safe and reliable operations.

WARNING: Keep bystanders out of the immediate work area.

Wear approved:

- Safety glasses
- Ear protection
- Hard hat
- Gloves
- Safety shoes
- Any other protective equipment required for compliance with standard safety practices or federal, state, and local codes and regulations

Hose Connections: It is best to connect the hoses to the unit before starting as even very low residual pressure can make hose installation more difficult. Push couplings together until you hear it click. Turn locking ring of coupling to the secured position.

Starting Procedure:

- Be certain the unit is plugged into the proper voltage.
- Set the flow control valve to zero.
- Be certain the stop button has been pulled out.
- Press the start button on top of the starter box.

Heating Cold Oil: Forcing the oil over relief will quickly increase the oil temperature. With no tool connected to the unit, move the valve setting toward 10. This will force an increasing percentage of oil over relief. Heat cold oil to room temperature or ~100F/38C maximum. Cold oil greatly increases pressure loss in hoses and fittings and may affect tool operation.

Maintaining Oil Temperature: With an ample water supply and the radiator, it is unlikely overheating will be an issue except in the most extreme ambient temperatures. To force high oil temperatures down, run the unit with the flow control set to zero. This unloads the unit yet circulates oil through the cooling system. The rate of cooling will depend on the ambient temperature and how much water is being passed through the cooler.

Some control valves at the external tool may create backpressure and heat even when off. It is best to set the flow control to zero or shut the power unit down to avoid heating and conserve energy.

IMPORTANT: Monitor the thermometer at the top of the hydraulic tank. Maximum recommended oil temperature is 180 degrees Fahrenheit (82 deg C).

Shutting Down:

- Shift the flow control valve to zero to unload the system.
- Press the stop button on top of the starter box.

OPERATING DRIVEN EQUIPMENT

The operator must know the hydraulic requirements and limitations of the driven equipment and the appropriate adjustments must be made on the controls. The introduction of other control devices may cause system heating or may render the system inoperative.

IMPORTANT: This power unit is equipped with a positive displacement gear pump. All tools must be equipped with a control valve that allows flow directly to return ports when not in use. Blocking oil flow or abruptly disconnecting the tool can send flow over relief and potentially overheat the system.

Instructions supplied with the driven equipment must be followed to ensure correct connection and operation of each individual piece of equipment. Equipment supplied by Diamond Products will be capable of being connected correctly and will be compatible with this power unit, providing neither has been modified from original factory configuration. With equipment of other manufacturers, it will be necessary to determine the following:

- Correct direction of flow through the equipment.
- Correct pressure and flow required by the equipment.
- Compatibility of any valves or circuitry and quick disconnects. Some hand-held equipment uses a trigger control, which is operated frequently. These valves must be of the open center type for correct operation.

IMPORTANT: The quick disconnects must be clean when connecting hoses and devices. Failure to thoroughly clean may result in contamination and premature failure of system or tool components.

MAINTENANCE INSTRUCTIONS

- Oil Filter: change the filter when indicated by the gage at the filter.
- Oil Change: establishing an oil analysis program is the preferred method of determining oil condition and when to change it. If the oil is kept clean, dry, and operated at moderate temperatures, it can last for several years. With no analysis program an oil change every 200 hours is recommended. See the section Hydraulic Fluid for specifications. A ½" pipe thread oil drain port is at the bottom of the hydraulic tank.
- Inspect hoses, couplings, and fittings daily for leaks, tighten as required. Clean quick disconnects frequently. Replace any leaking or defective components immediately.
- Check hydraulic oil level daily. Fill tank to upper end of sight tube with unit off.
- Grease the wheel bearings annually.

TROUBLESHOOTING

| PROBLEM | POSSIBLE SOLUTIONS |
|--|--|
| Motor will not start. | 1) Pull out stop button on starter box. 2) Press Reset button on starter box. 3) Confirm proper voltage. |
| Running with no flow. | The motor may be running backwards. Reverse any two of the 3 power wires coming into the starter box. |
| | |
| System builds high pressure with flow control valve set to zero. | Contamination may have plugged an orifice in the CF port of the flow valve. Detach the valve from the front panel and remove the fitting from the CF port. A .015" orifice should be visible at the bottom of the port. Push a fine wire through the orifice and re-install. |

Keep this manual and the engine manual readily available at all times for reference.

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EQUIPMENT AND PARTS WARRANTY

Diamond Products warrants all equipment manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to Customer.

The responsibility of Diamond Products under this Warranty is limited to replacement or repair of defective parts at Diamond Products' Elyria, Ohio factory, or at a point designated by it, of such parts as shall appear to us upon inspection at such parts, to have been defective in material or workmanship, with expense for transportation and labor borne by Customer.

In no event shall Diamond Products be liable for consequential or incidental damages arising out of the failure of any Product to operate properly.

Integral units such as engines, electric motors, batteries, transmissions, etc., are excluded from this Warranty and are subject to the prime manufacturer's warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED.



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