



PARTS MANUAL

5000 Series II Jacking System

Pump Unit S/N: F20400F

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SERVICE • RELIABILITY • INNOVATION

Introduction

This parts manual contains assembly illustrations of the Akkerman 5000 Series II Jacking System. The 5000 Series II Jacking System includes the 5000 Series II Pump Unit, Skids, and Yokes. The illustrations in this manual are intended to show typical construction of various parts. In some instances, the details of parts illustrated may not exactly represent their actual appearance, but will help to identify parts performing the same functions. Additional copies of this manual may be purchased from the Akkerman Aftermarket Support Department, or downloaded from the Akkerman web site at www.akkerman.com.

The 5000 Series II Pump Unit cylinders extend to advance the TBM and pipe along the skid base against the thrust yoke. The yoke provides a 360 degree surface to minimize point pressure on jacking pipes and transfer thrust from the pump unit to the pipe. The skid serves as the foundation for the pump unit, yoke, haul unit, TBM and pipe, and transfers thrust to the reaction block.

LOCATING PARTS

This parts manual is organized into 13 sections to help you locate parts information quickly. The first page of each section lists the assemblies within the section.

An Alphabetical Index, Section 12, is provided to help you find the page number of a specific assembly. If a part number is known, the Numerical Index, Section 13, can also be utilized to find the page number of the assembly.

USE GENUINE AKKERMAN PARTS

The use of parts other than genuine Akkerman parts, could affect the efficient performance of the Jacking System. ALWAYS use genuine Akkerman parts.

PARTS ORDERING

To order fast, accurate, and reliable parts service, call (800) 533-0386, (507) 567-2261, or fax (507) 567-2605, and provide the following information.

1. Model Number
2. Serial Number
3. Part Number, Description, and Quantity
4. Shipping Preference

MEASUREMENTS

The unit of measure in this manual is in inches unless indicated otherwise.

HARDWARE SPECIFICATION

All Akkerman products are assembled with SAE Grade 8 bolts, nuts, and washers. ALWAYS use matched fastener hardware when replacing or repairing the unit.

If you find any errors in this manual or have suggestions for improvement, please let us know. Email your comments via the Akkerman web site (Contact Us web page), or mail your suggestions to: Akkerman Inc., ATTN: Technical Publications, 58256 266th Street, Brownsdale, MN, 55918.

Akkerman Inc. reserves the right to improve its product without notice or obligation.



5000 Series II Pump Unit

NOTES



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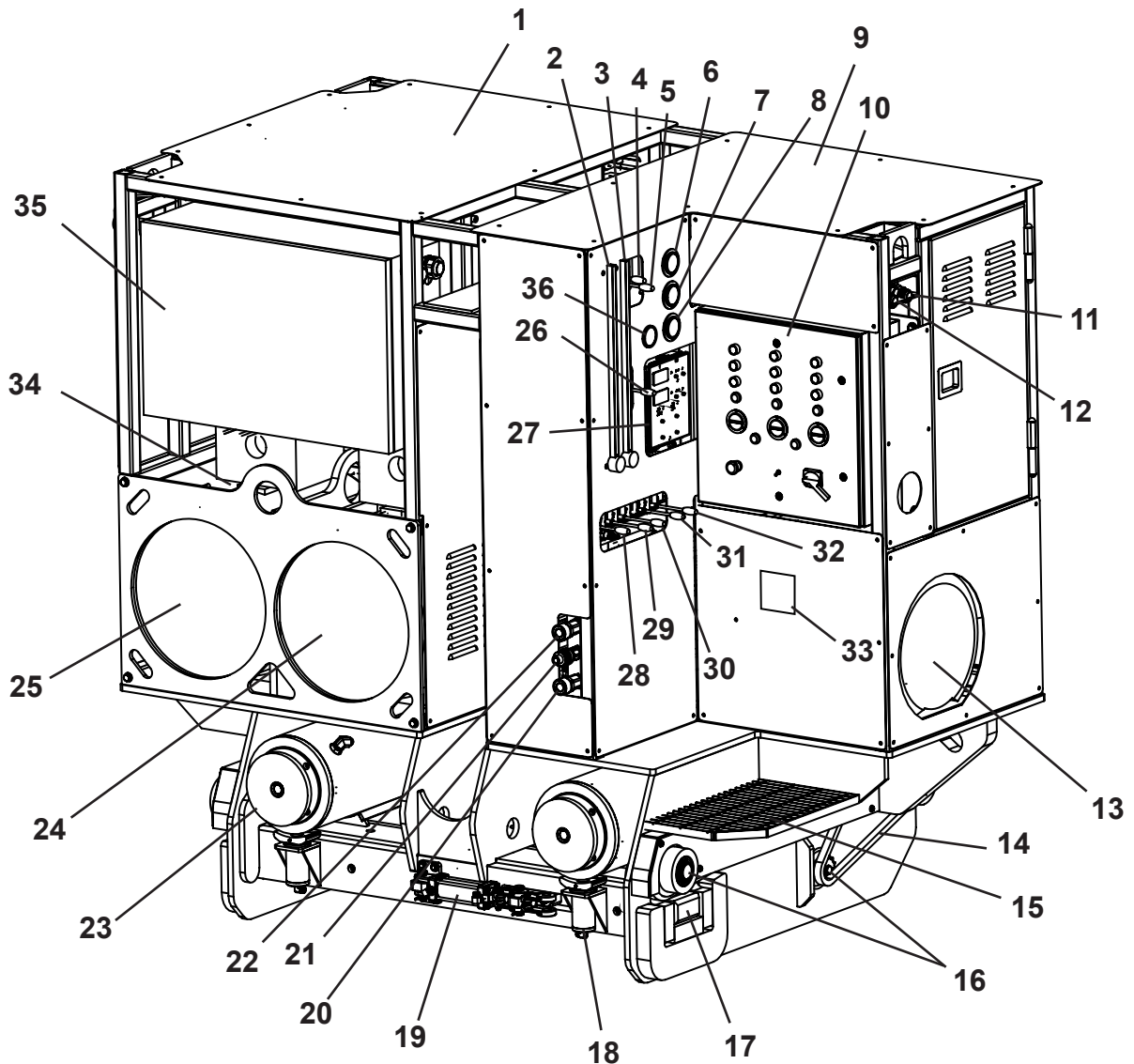
NOTES



General Information

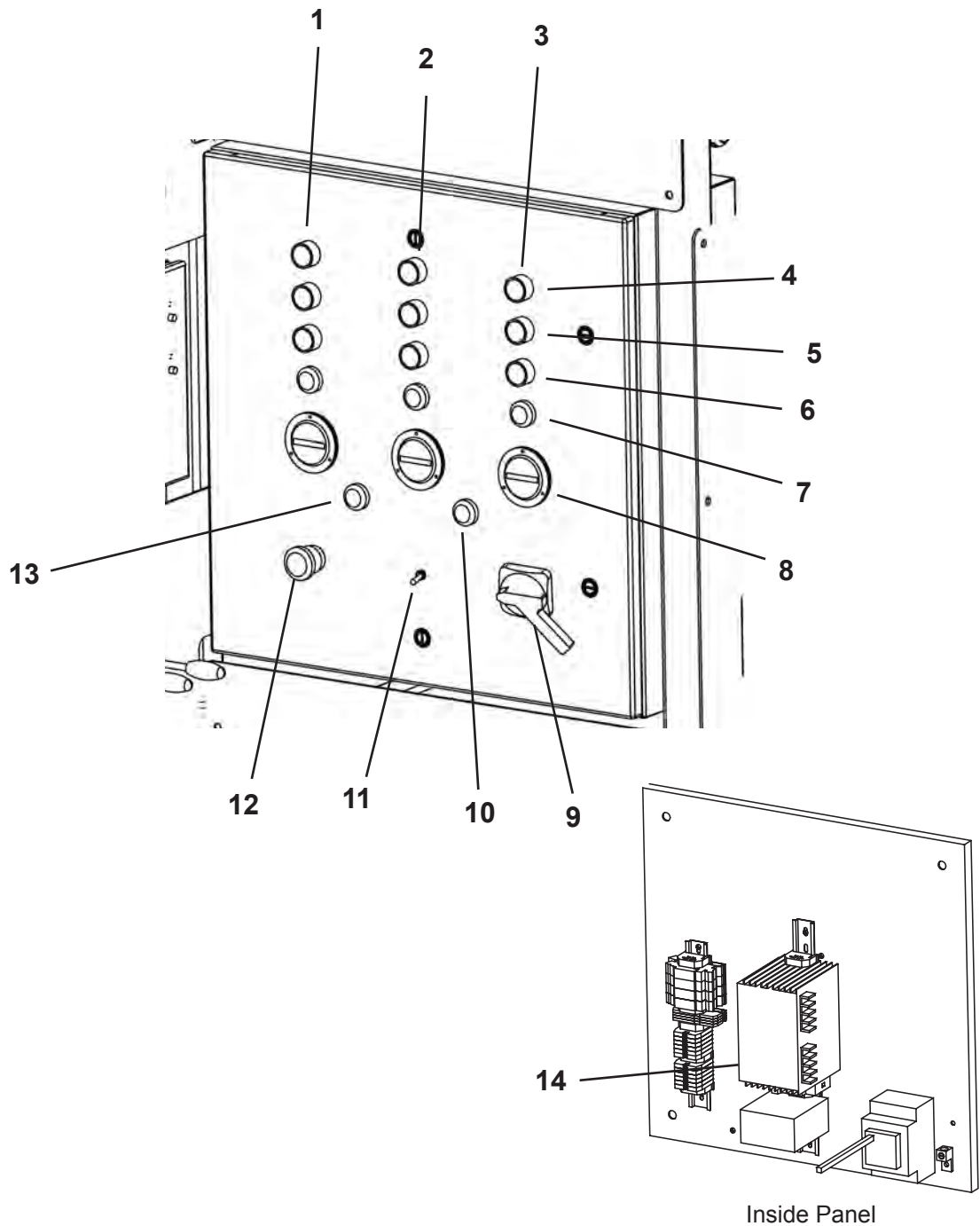
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5000 SERIES II PUMP UNIT (SN F20400F-01)



- | | |
|---|--|
| 1. Boring Head & Auxiliary System Reservoir | 19. Skid Lock Cylinder |
| 2. Boring Head Hyd Level/Temperature Gauge | 20. IJS Return Hose Connection |
| 3. Jacking Hyd Level/Temperature Gauge | 21. IJS Supply Hose Connection |
| 4. Auxiliary Supply Control 30 & 60 Gal. | 22. Boring Head Tank Fill |
| 5. Boring Head Supply Control 30 Gal. & Boring Head Cooling Control 60 Gal. | 23. Cylinder, 200 Ton Ram |
| 6. Auxiliary Pressure Gauge | 24. Auxiliary 100 HP Motor |
| 7. Boring Head Pressure Gauge | 25. Boring Head 100 HP Motor |
| 8. Jacking Pressure Gauge | 26. Boring Head Supply Control 30/60 Gal. |
| 9. Jacking System Reservoir | 27. Tank Temperature/Level & Skid Lock Indicator Panel |
| 10. Motor Control Panel | 28. Ram Lift Cylinder/ Jacking Cooling Pump Control |
| 11. Boring Head Supply Pressure OUT - Main | 29. Travel (Pump Unit Drive) Control |
| 12. Boring Head Supply Pressure OUT - Auxiliary | 30. Skid Lock Cylinder Control |
| 13. Jacking Circuit 50 HP Motor | 31. IJS Cylinder Control |
| 14. Drive Chain | 32. Main Ram Jacking Cylinder Control |
| 15. Operator Platform | 33. Remote E-Stop Connection Access |
| 16. Drive Assembly | 34. Tunnel Power Connection |
| 17. Skid Lock | 35. Main Power Panel |
| 18. Ram Lift Cylinder | 36. Primary Boring Head Return Filter Indicator |

5000 SERIES II - MOTOR CONTROL PANEL (SN F20400F-01)

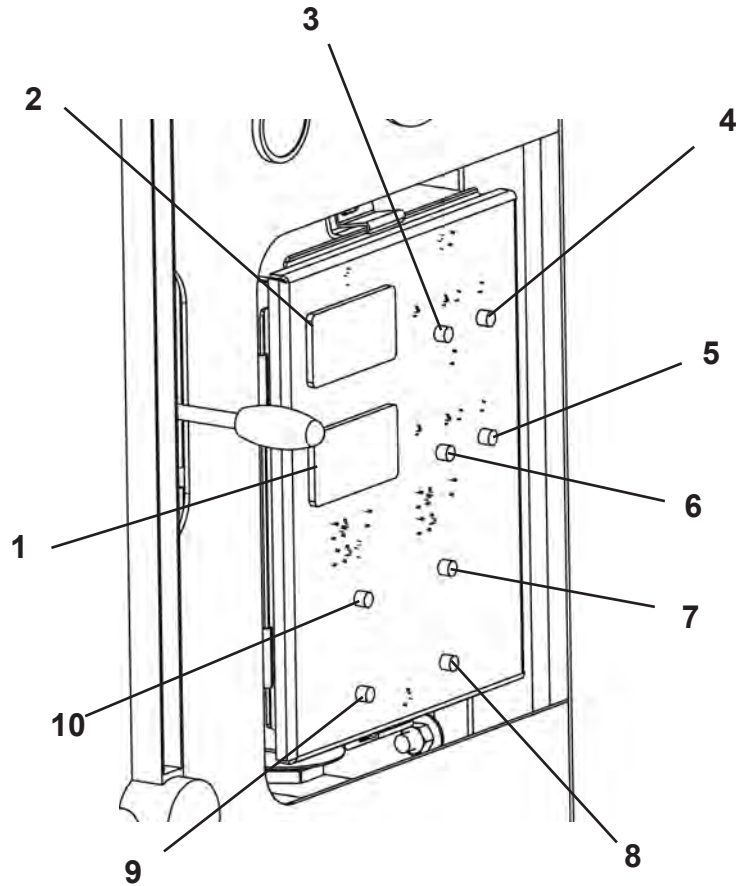


- 1. Jacking Motor Controls
- 2. Boring Head Motor Controls
- 3. Auxiliary Motor Controls
- 4. Start Button (Green)
- 5. Stop Button (Red)
- 6. Motor Overload Reset Button *
- 7. Breaker Tripped Light

- 8. Hourmeter
- 9. Tunnel Power Switch
- 10. Tunnel Power On Light
- 11. Light Switch
- 12. Emergency Stop
- 13. Phase Error Light
- 14. 24V Power Supply

* Used only if equipped with soft start accessory.

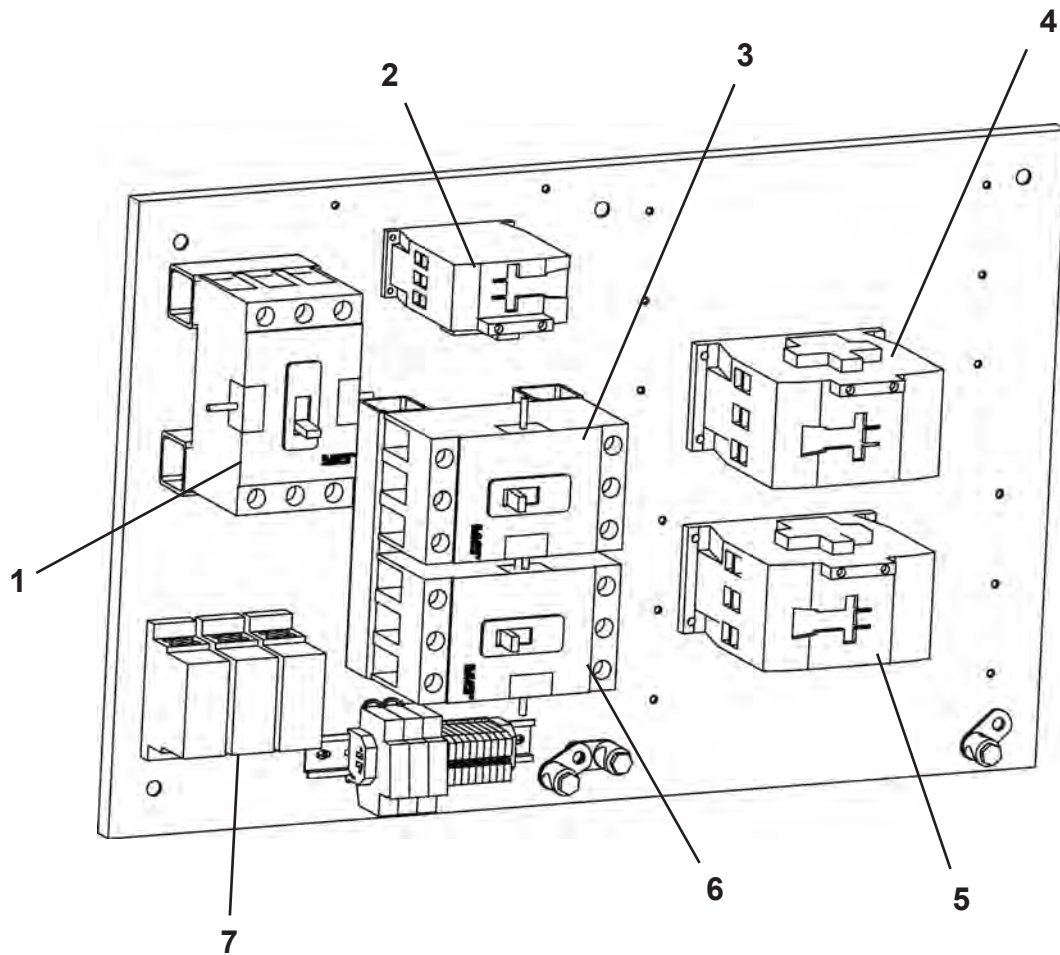
5000 SERIES II - TANK TEMP & SKID LOCK INDICATOR PANEL (SN F20400F-01)



- 1. Boring Head Hydraulic Reservoir Temperature
- 2. Jacking Hydraulic Reservoir Temperature
- 3. Jacking Reservoir Low Oil Level Light
- 4. Jacking Reservoir Empty Oil Level Light
- 5. Boring Head Reservoir Empty Oil Level Light

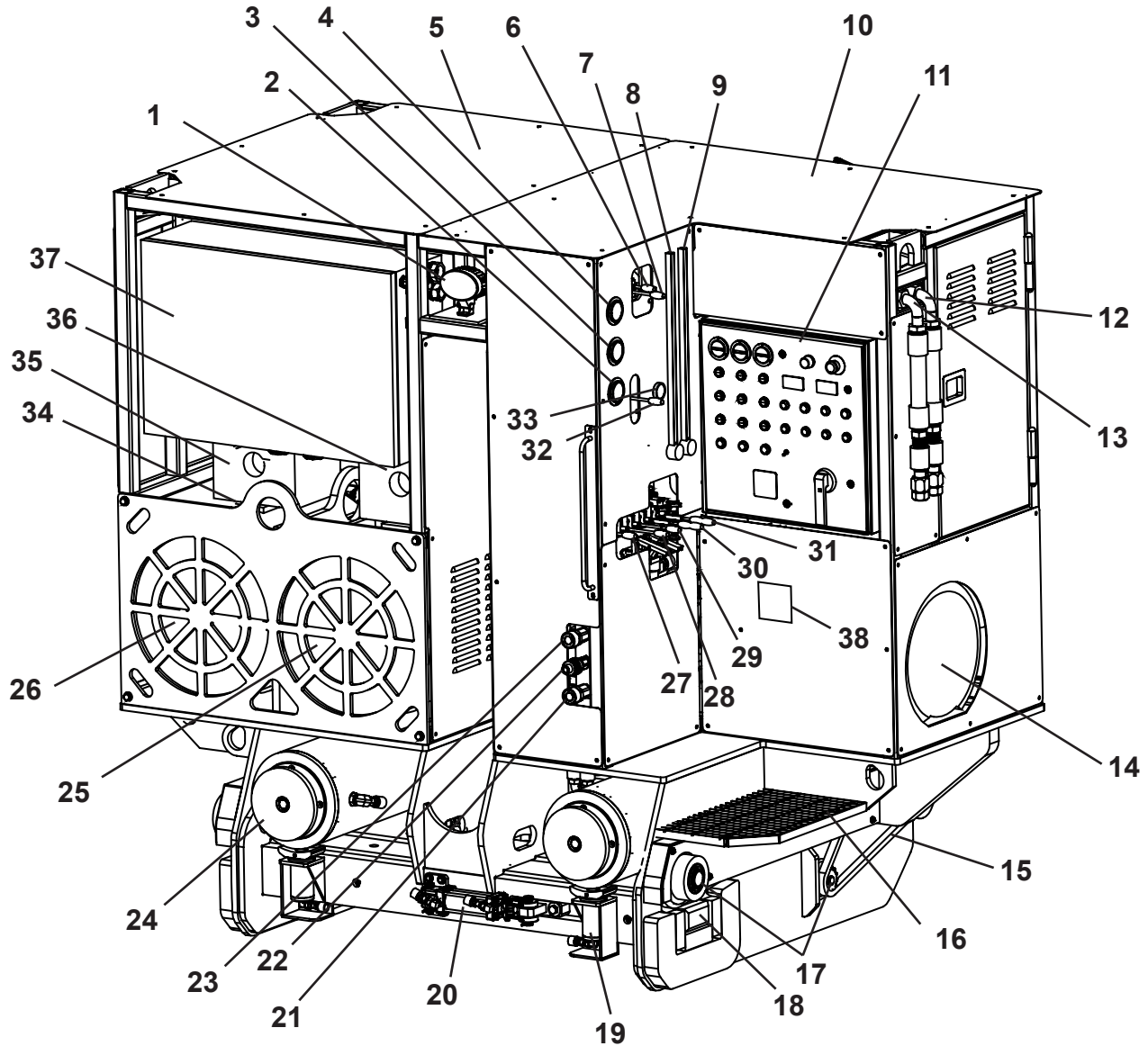
- 6. Boring Head Reservoir Low Oil Level Light
- 7. Skid Lock Cylinder Extend (Locked) - Right
- 8. Skid Lock Cylinder Retract (Unlocked) - Right
- 9. Skid Lock Cylinder Retract - (Unlocked) - Left
- 10. Skid Lock Cylinder Extend (Locked) - Left

5000 SERIES II - MAIN POWER PANEL (SN F20400F-01)



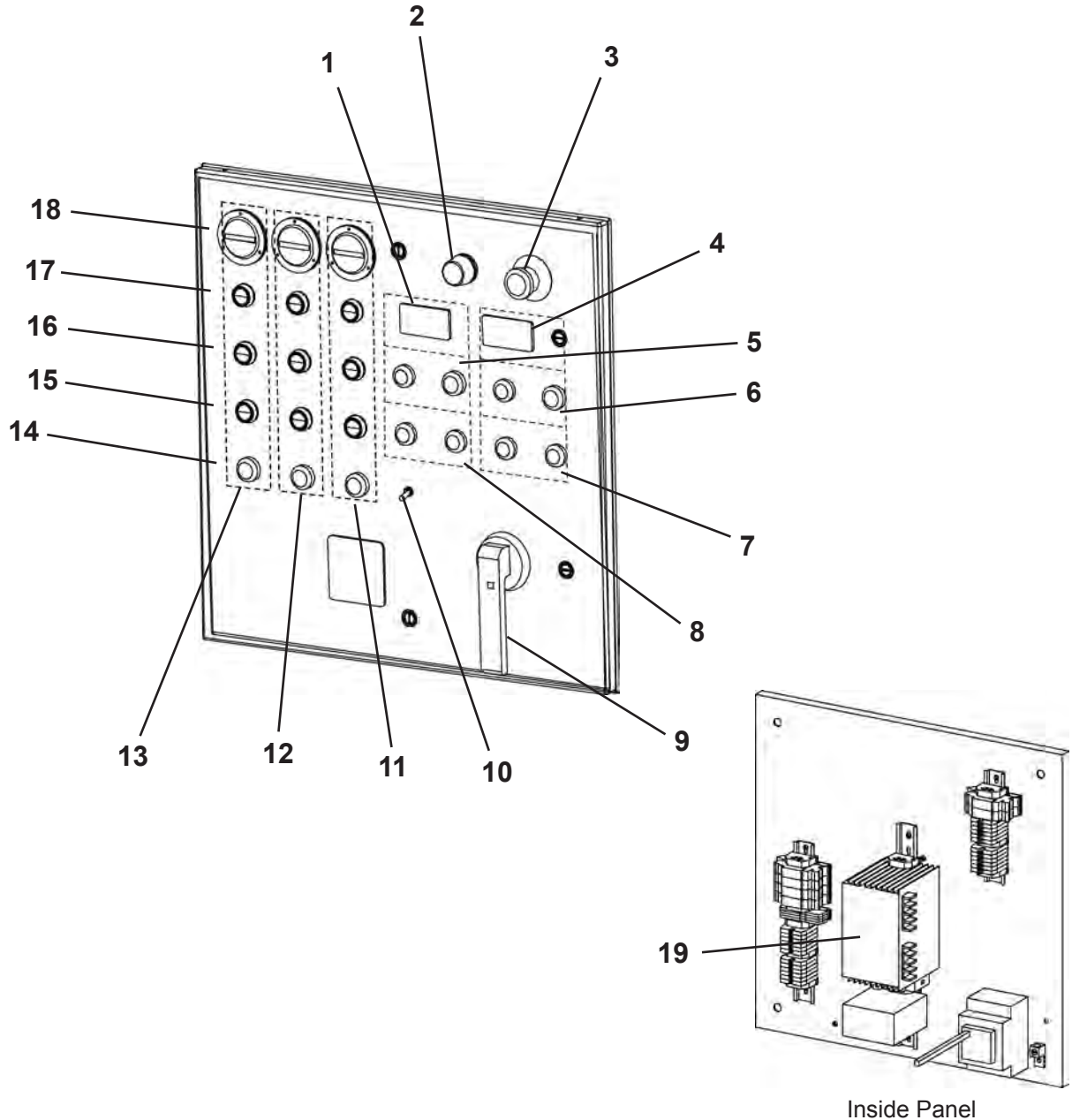
1. Jacking Motor Breaker With Overload Relay
2. Jacking Motor Contactor
3. Auxiliary Motor Breaker With Overload Relay
4. Auxiliary Motor Contactor
5. Boring Head Motor Contactor
6. Boring Head Motor Breaker With Overload Relay
7. Power Distribution Block

5000 SERIES II PUMP UNIT (SN F20400F-02 & AFTER)



- | | |
|---|--|
| 1. Light | 20. Skid Lock Cylinder |
| 2. Jacking Pressure Gauge | 21. IJS Return Hose Connection |
| 3. Boring Head Pressure Gauge | 22. IJS Supply Hose Connection |
| 4. Auxiliary Pressure Gauge | 23. Boring Head Tank Fill |
| 5. Boring Head & Auxiliary System Reservoir | 24. Cylinder, 200 Ton Ram |
| 6. Auxiliary Supply Control 30 & 60 Gal. | 25. Auxiliary 100 HP Motor |
| 7. Boring Head Supply Control 30 Gal. & Boring Head Cooling Control 60 Gal. | 26. Boring Head 100 HP Motor |
| 8. Boring Head Hydraulic Level | 27. Ram Lift Cylinder / Jacking Cooling Pump Control |
| 9. Jacking Hydraulic Level | 28. Skid Lock Cylinder Control |
| 10. Jacking System Reservoir | 29. Travel (Pump Unit Drive) Control |
| 11. Control Panel | 30. IJS Cylinder Control |
| 12. Boring Head Supply Pressure OUT - Main | 31. Main Ram Jacking Cylinder Control |
| 13. Boring Head Supply Pressure OUT - Auxiliary | 32. Boring Head Supply Control 30/60 Gal. |
| 14. Jacking Circuit 50 HP Motor | 33. Primary Boring Head Return Filter Indicator |
| 15. Drive Chain | 34. Tunnel Power Connection (for TBM Series II) |
| 16. Operator Platform | 35. Boring Head Supply (Pump 1) |
| 17. Drive Assembly | 36. Auxiliary Supply (Pump 2) |
| 18. Skid Lock | 37. Main Power Panel |
| 19. Ram Lift Cylinder | 38. Remote E-Stop Connection Access |

5000 SERIES II - CONTROL PANEL (SN F20400F-02 & AFTER)



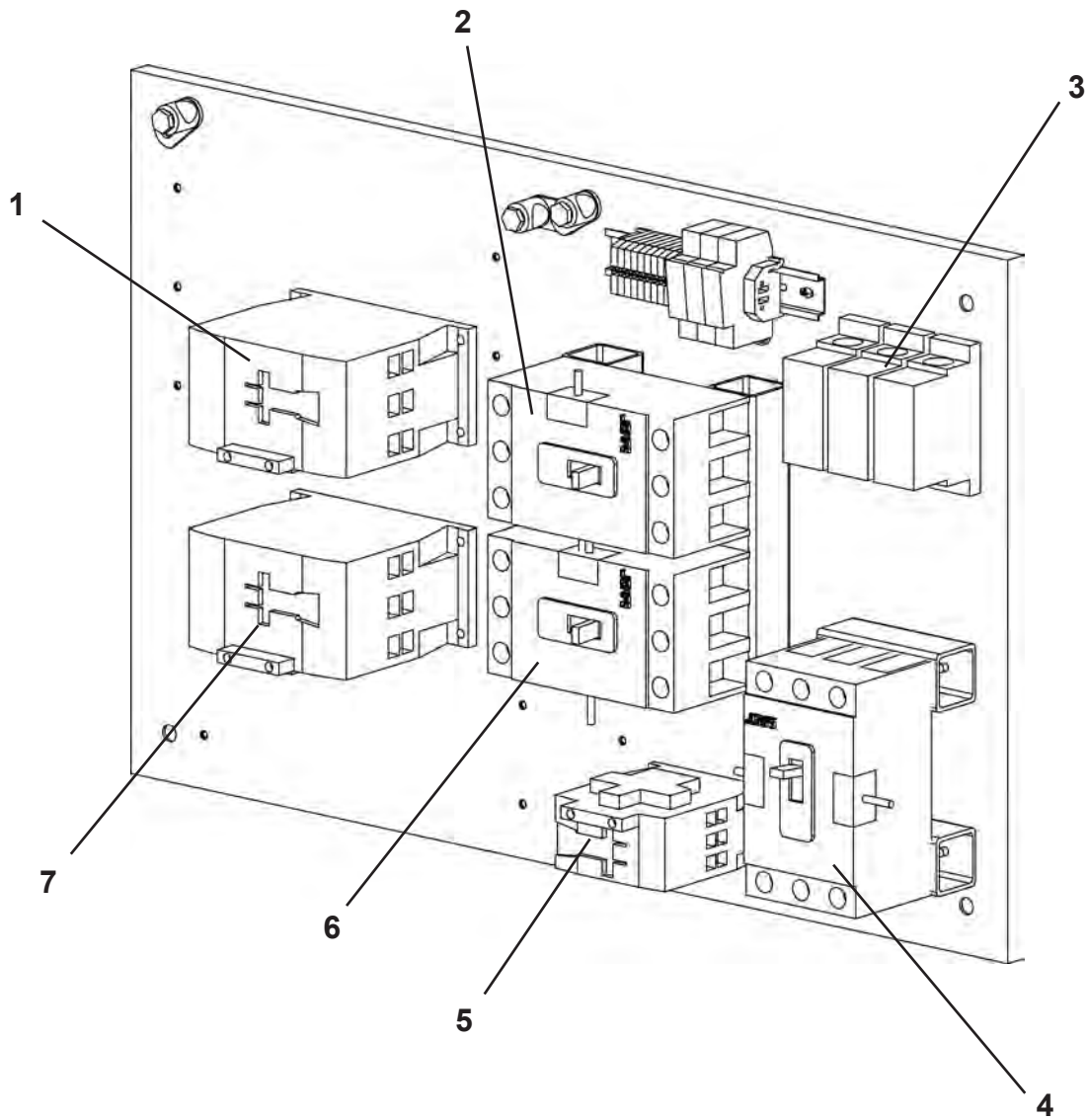
- | | |
|---|-----------------------------------|
| 1. Boring Head Hydraulic Tank Temp | 10. Light Switch |
| 2. Tunnel Power On Light | 11. Jacking Motor Controls* |
| 3. Emergency Stop | 12. Auxiliary Motor Controls* |
| 4. Jacking Hydraulic Tank Temp | 13. Boring Head Motor Controls* |
| 5. Boring Head Tank Low/Empty Oil Level Indicator | 14. Breaker Tripped Light |
| 6. Jacking Tank Low/Empty Oil Level Indicator | 15. Motor Overload Reset Button** |
| 7. Skid Lock Left Unlocked/Locked Indicator* | 16. Stop Button (Red) |
| 8. Skid Lock Right Unlocked/Locked Indicator* | 17. Start Button (Green) |
| 9. Tunnel Power Switch | 18. Hourmeter |
| | 19. 24V Power Supply |

* The skid lock indicators and motor control locations represent SN F20400F-03 & After.

The specific indicators and motor controls for SN F20400F02 are reoriented on the control panel.

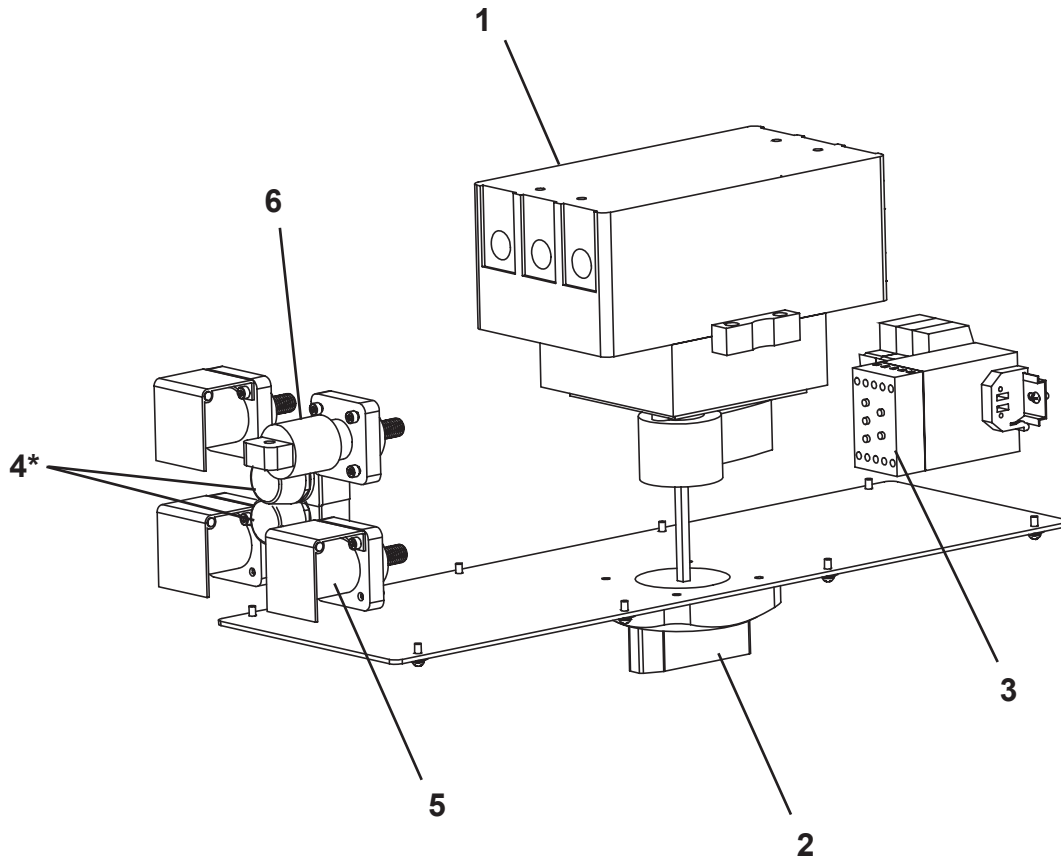
** Used only if equipped with soft start accessory.

5000 SERIES II - MAIN POWER PANEL (SN F20400F-02 & AFTER)



1. Boring Head Motor Contactor
2. Boring Head Motor Breaker With Overload Relay
3. Power Distribution Block
4. Jacking Motor Breaker With Overload Relay
5. Jacking Motor Contactor
6. Auxiliary Motor Breaker With Overload Relay
7. Auxiliary Motor Contactor

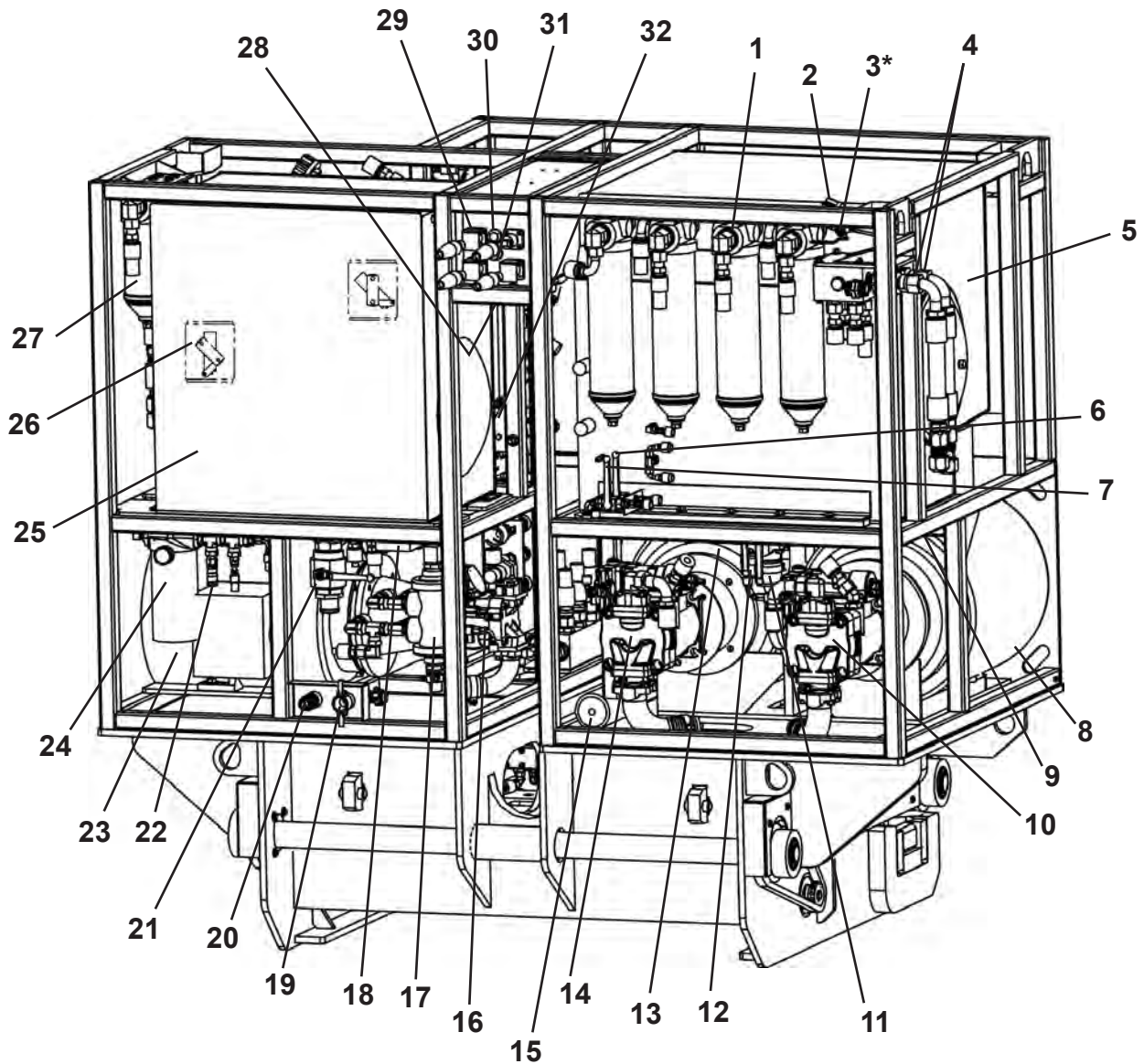
5000 SERIES II - MAIN DISCONNECT ELECTRICAL BOX



1. Main Breaker 400A
2. Main Power Disconnect Switch
3. Phase Detector 480V
4. Phase Error Light*
5. Electrical Power Cable Cam Lock Connections
6. Ground Cable Cam Lock Connection

* SN F20400F-01 is equipped with one red light,
SN F20400F-02 and after is equipped with one
red light and one green light.

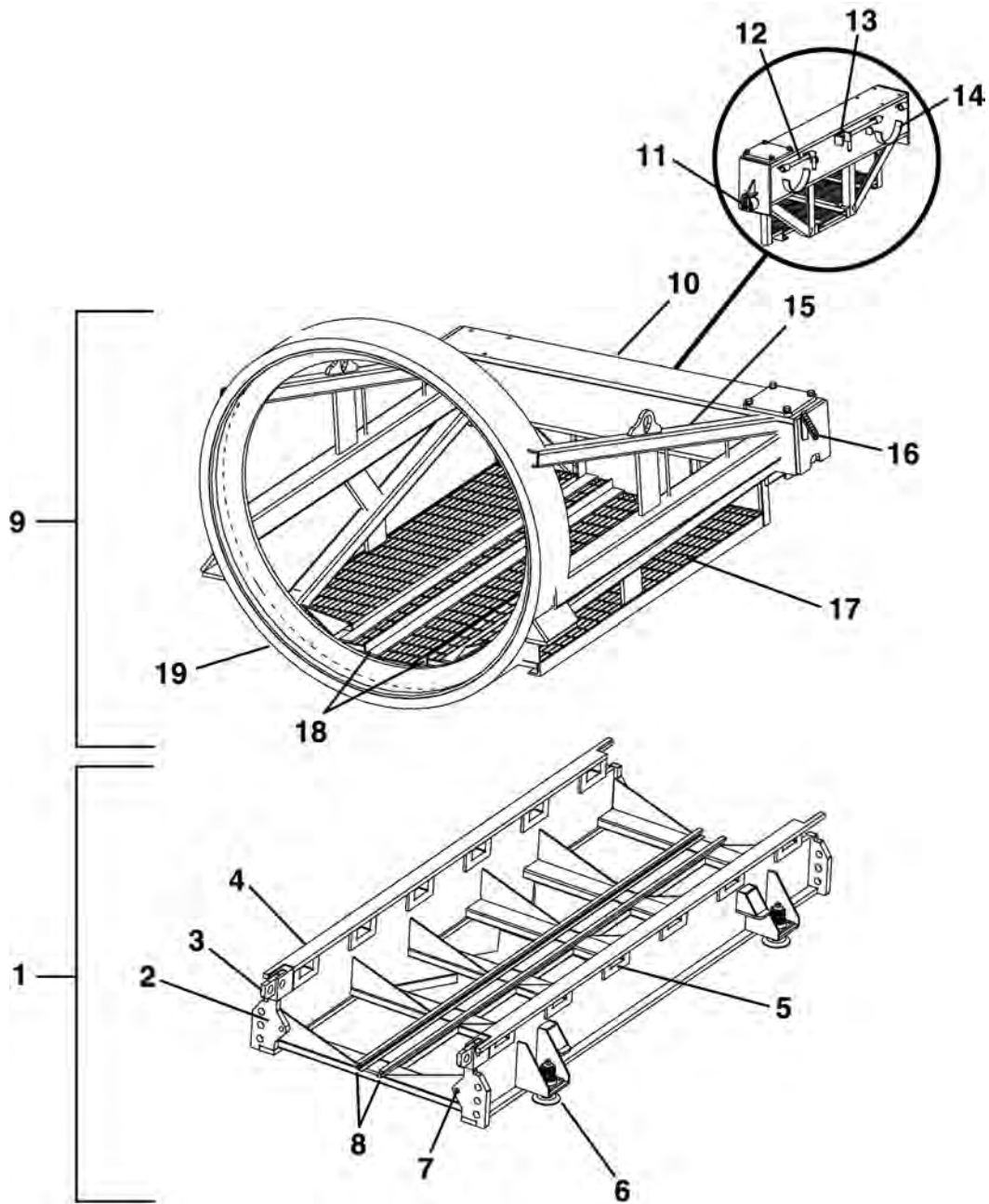
5000 SERIES II - REAR COMPONENTS



- | | |
|---------------------------------------|---|
| 1. Boring Head Return Filters (4) | 17. Jacking System Heat Exchanger |
| 2. Tank Breather | 18. Jacking System Tank Drain Valve |
| 3. Tank Vent Valve* | 19. Heat Exchanger Water Supply Fitting |
| 4. Boring Head Supply Return | 20. Heat Exchanger Water Discharge Fitting |
| 5. Boring Head Supply Reservoir | 21. Jacking System Shutoff Valve |
| 6. Auxiliary Supply Bleed Off Valve | 22. Jacking Tank Fill Connection |
| 7. Boring Head Supply Bleed Off Valve | 23. Jacking System 50 HP Motor |
| 8. Boring Head 100 HP Motor | 24. Jacking Fill Tank Filter |
| 9. Boring Head Tank Drain Valve | 25. Jacking System Reservoir |
| 10. Boring Head Supply Pump | 26. Cable Clamp Holders |
| 11. Boring Head Supply Shutoff Valve | 27. Jacking/IJS Return Filters |
| 12. Auxiliary Supply Shutoff Valve | 28. Main Power Switch |
| 13. Auxiliary Supply 100 HP Motor | 29. Electrical Power Cable Cam Lock Connections |
| 14. Auxiliary Supply Pump | 30. Phase Error Light - Green (SN F20400F-02 & After) |
| 15. Transfer Pump | 31. Phase Error Light - Red |
| 16. Jacking System Pump | 32. Boring Head Heat Exchanger |

* SN F20400F-01 through 3 only.

SKID & YOKE



- | | |
|----------------------------|----------------------------|
| 1. Skid | 11. Yoke Wheel |
| 2. Skid Base | 12. Yoke Retaining Pin |
| 3. Skid Split Bar | 13. Ram Retaining Pin Stop |
| 4. Side Skid Base Assembly | 14. Ram Cradle |
| 5. Skid Pocket | 15. Yoke Ring Support |
| 6. Leveling Assembly | 16. IJS Line Holder |
| 7. Skid Locator Pin | 17. Floor |
| 8. Rail | 18. Rail (for Haul Unit) |
| 9. Yoke | 19. Yoke Ring |
| 10. Dual Ram Yoke, Rear | |

NOTES

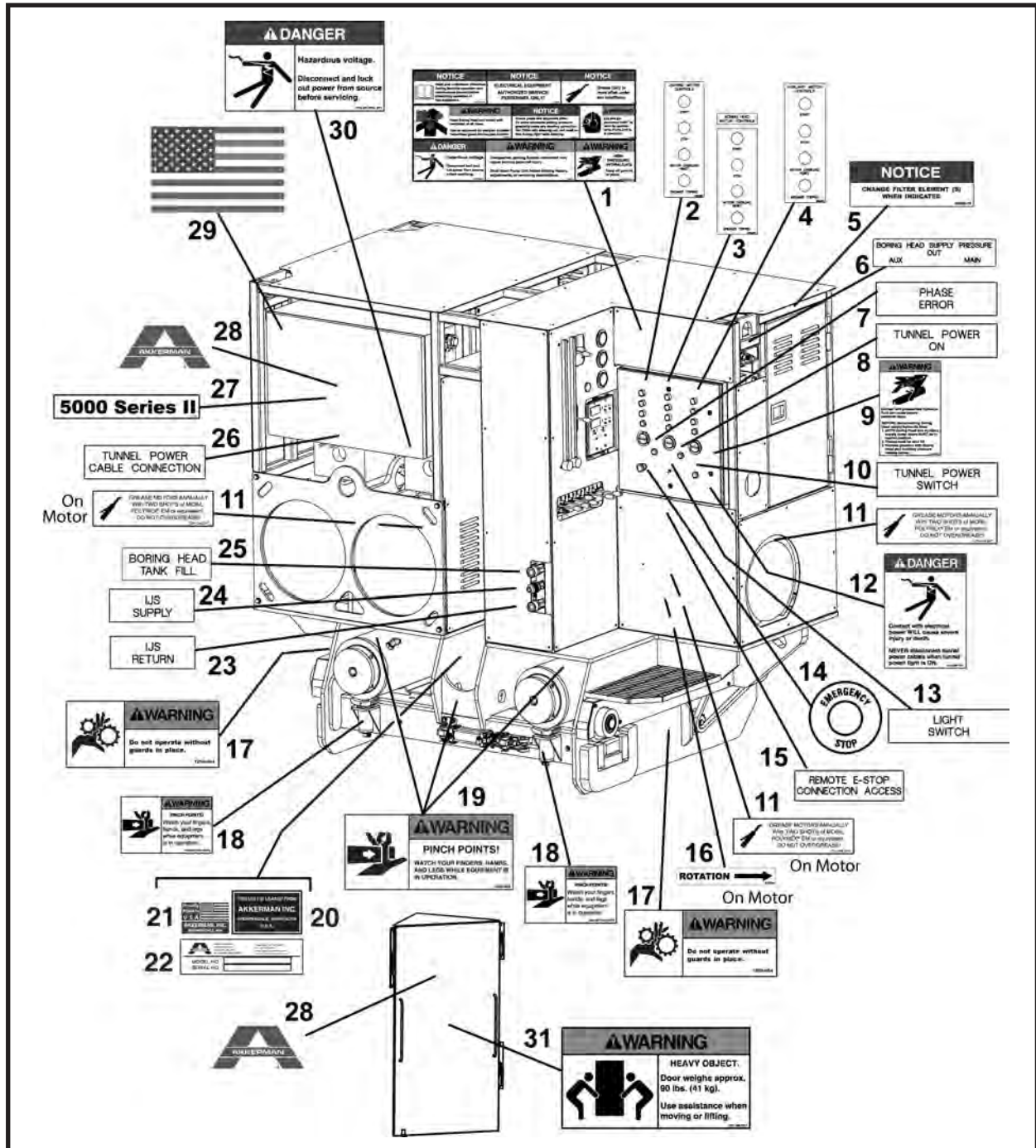


Decals

5000 Series II Pump Unit (SN F20400F-01)	
Front Decals	2
Front Operation Panel Decals	4
5000 Series II Pump Unit (SN F20400F-02)	
Front Decals	6
5000 Series II Pump Unit (SN F20400F-03 & After)	
Front Decals	8
5000 Series II Pump Unit (All Units)	
Rear With Panels Decals	10
Rear Without Panels Decals	11
Skid Decals	12
Yoke Decals	13

5000 Series II FRONT DECALS

5000 Series II (SN F20400F-01)



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1250-582	DECAL, Notice, Warning, Danger
2	1	1251-327B	PLATE, Jacking Motor Controls
3	1	1251-327C	PLATE, Boring Head Motor Controls
4	1	1251-327A	PLATE, Auxiliary Motor Controls
5	1	40000-16	DECAL, Notice Change Filter Element
6	1	1251-329O	PLATE, Boring Head Supply Pressure
7	1	1251-327D	PLATE, Phase Error
8	1	1251-327F	PLATE, Tunnel Power On
9	1	1251-348	DECAL, Warning Pressurized Hydraulic Fluid
10	1	1251-327G	PLATE, Tunnel Power Switch

5000 Series II FRONT DECALS

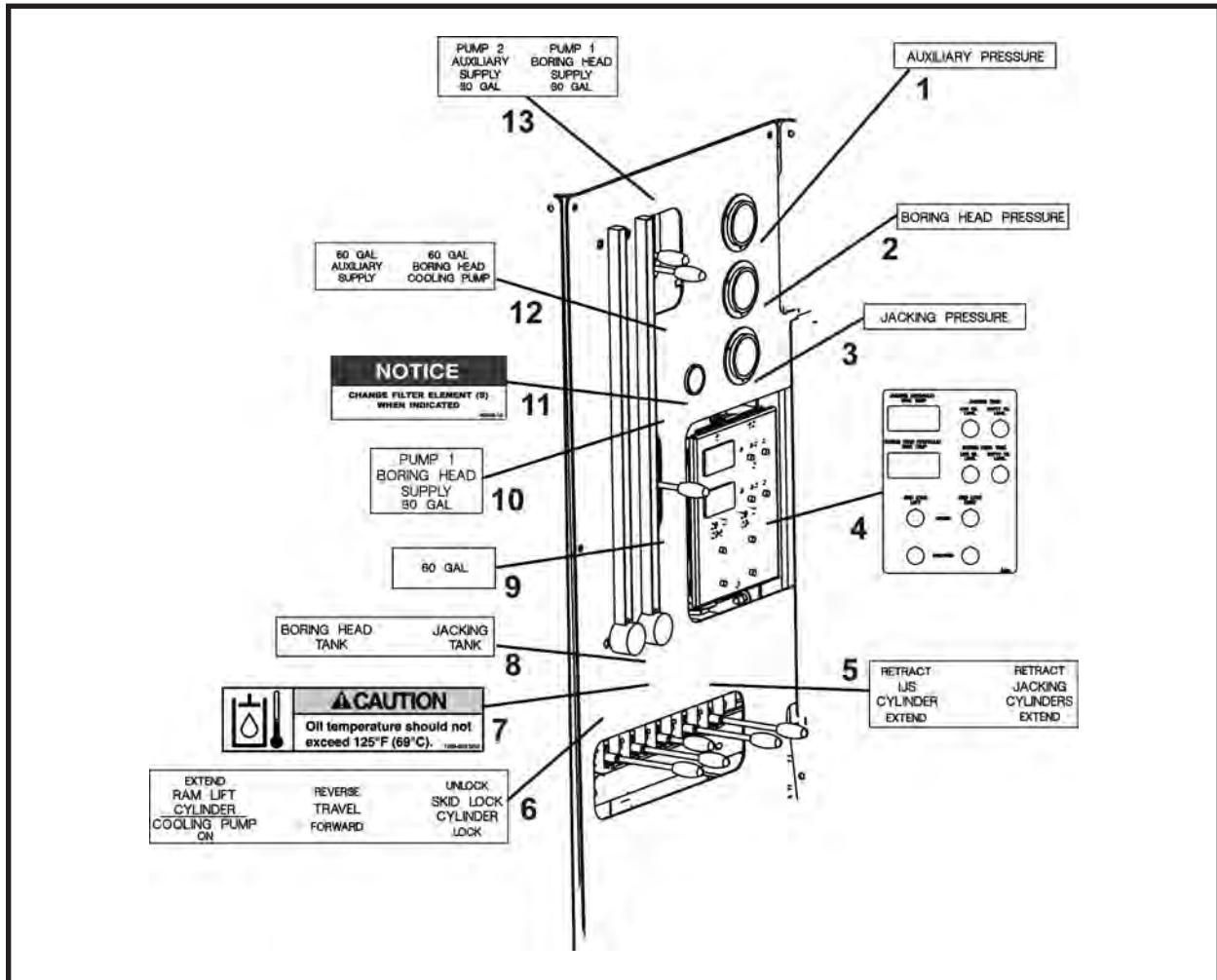
5000 Series II (SN F20400F-01)

ITEM	QTY	PART NO.	DESCRIPTION
11	3	1251-349	DECAL, Grease Motors Annually
12	1	1251-365	DECAL, Danger, Electrical Contact
13	1	1251-327E	PLATE, Light Switch
14	1	P0310-474F	DECAL, Emergency Stop
15	1	1251-327I	PLATE, Remote E-Stop Connection
16	1	*3-700R	DECAL, Rotation Right
17	2	1250-004	DECAL, Warning Keep Guards In Place
18	2	1250-562	DECAL, Warning Pinch Points
19	3	1250-480	DECAL, Warning Pinch Points
20*	1	1250-098	DECAL, Lease
21	1	1250-544	DECAL, Proudly Made In USA
22	1	REF	PLATE, Serial Number
23	1	1251-329N	PLATE, IJS Return
24	1	1251-329M	PLATE, IJS Supply
25	1	1251-329L	PLATE, Boring Head Tank Fill
26	1	1251-927H	PLATE, Tunnel Power Cable Connection
27	1	1251-323	DECAL, 5000 Series II
28	2	1251-245	DECAL, Akkerman X-Large
29	1	1250-559	DECAL, USA Flag, Medium
30	1	1250-385	DECAL, Danger Hazardous Voltage
31	1	1251-389	DECAL, Warning, Heavy Object

* Note: Decal used only on leased equipment.

5000 Series II FRONT OPERATION PANEL DECALS

5000 Series II (SN F20400F-01)

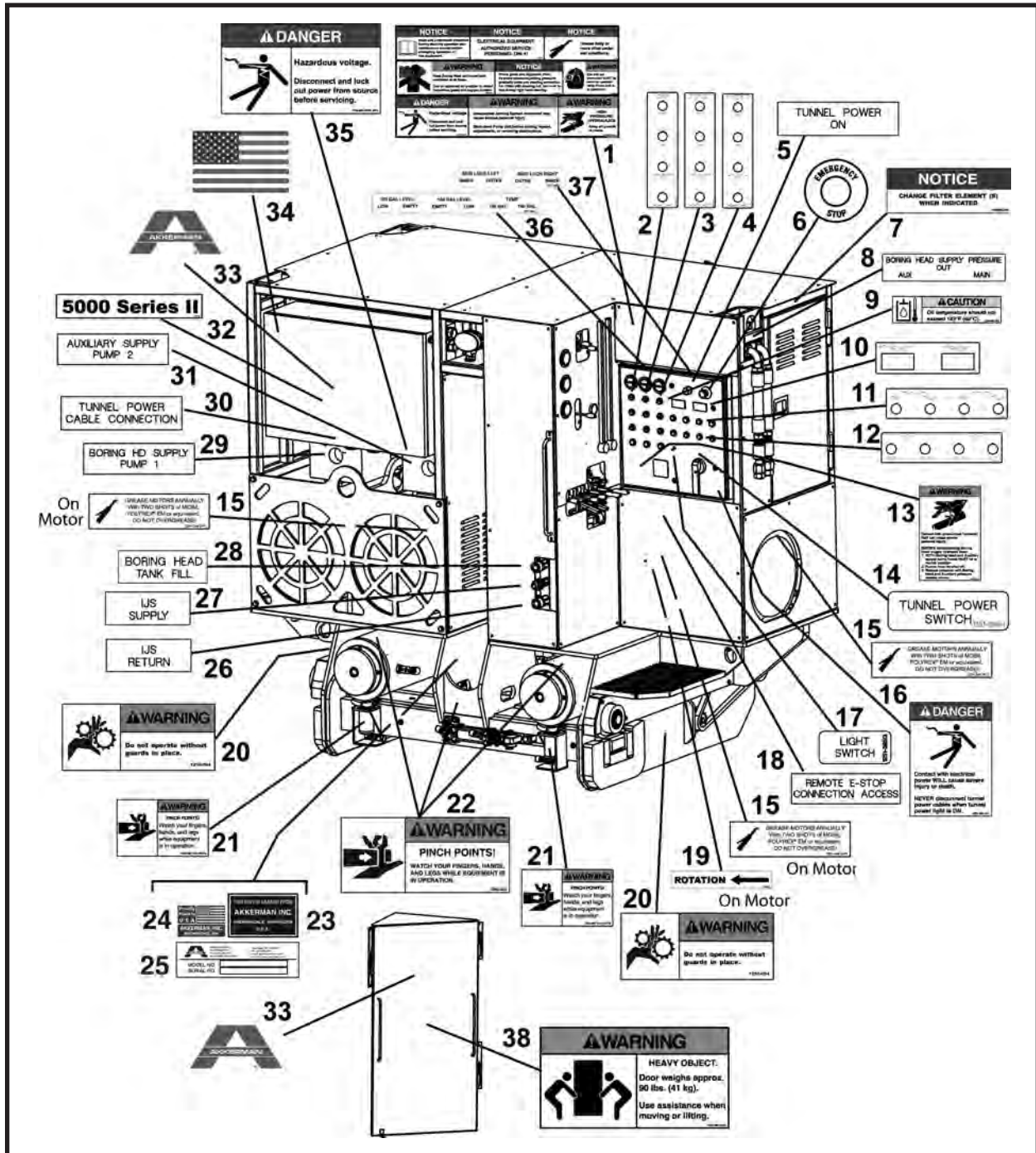


ITEM	QTY	PART NO.	DESCRIPTION
1	1	1251-329C	PLATE, Auxiliary Pressure
2	1	1251-329D	PLATE, Boring Head Pressure
3	1	1251-329E	PLATE, Jacking Pressure
4	1	1251-328	PLATE, Oil Temp & Skid Lock Indicator
5	1	1251-329G	PLATE, IJS & Jacking Cylinders
6	1	1251-329F	PLATE, Ram Lift - Travel - Skid Lock
7	1	1250-005	DECAL, Caution, Oil Temp Not To Exceed 125
8	1	1251-329H	PLATE, Boring Head Tank & Jacking Tank
9	1	1251-329J	PLATE, 60 Gal
10	1	1251-329I	PLATE, Pump 1 Boring Head Supply 30 Gal
11	1	40000-16	DECAL, Change Filter Element
12	1	1251-329B	PLATE, 60 Gal Auxiliary Supply / 60 Gal Boring Head Cooling Pump
13	1	1251-329A	PLATE, Pump 2 Auxiliary Supply 30 Gal / Pump 1 Boring Head Supply 30 Gal

NOTES

5000 Series II FRONT DECALS

5000 Series II (SN F20400F-02)



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1250-582	DECAL, Notice, Warning, Danger
2	1	1251-395A	PLATE, Jacking Motor Controls
3	1	1251-395B	PLATE, Boring Head Motor Controls Pump 1
4	1	1251-395C	PLATE, Auxiliary Motor Controls Pump 2
5	1	1251-395I	PLATE, Tunnel Power On
6	1	P0310-474F	DECAL, Emergency Stop
7	1	40000-16	DECAL, Notice, Change Filter Element
8	1	1251-329O	PLATE, Boring Head Supply Pressure
9	1	1250-005	DECAL, Caution, Oil Temp Not To Exceed 125
10	1	1251-395D	PLATE, Boring Head & Jacking Tank Oil Temp

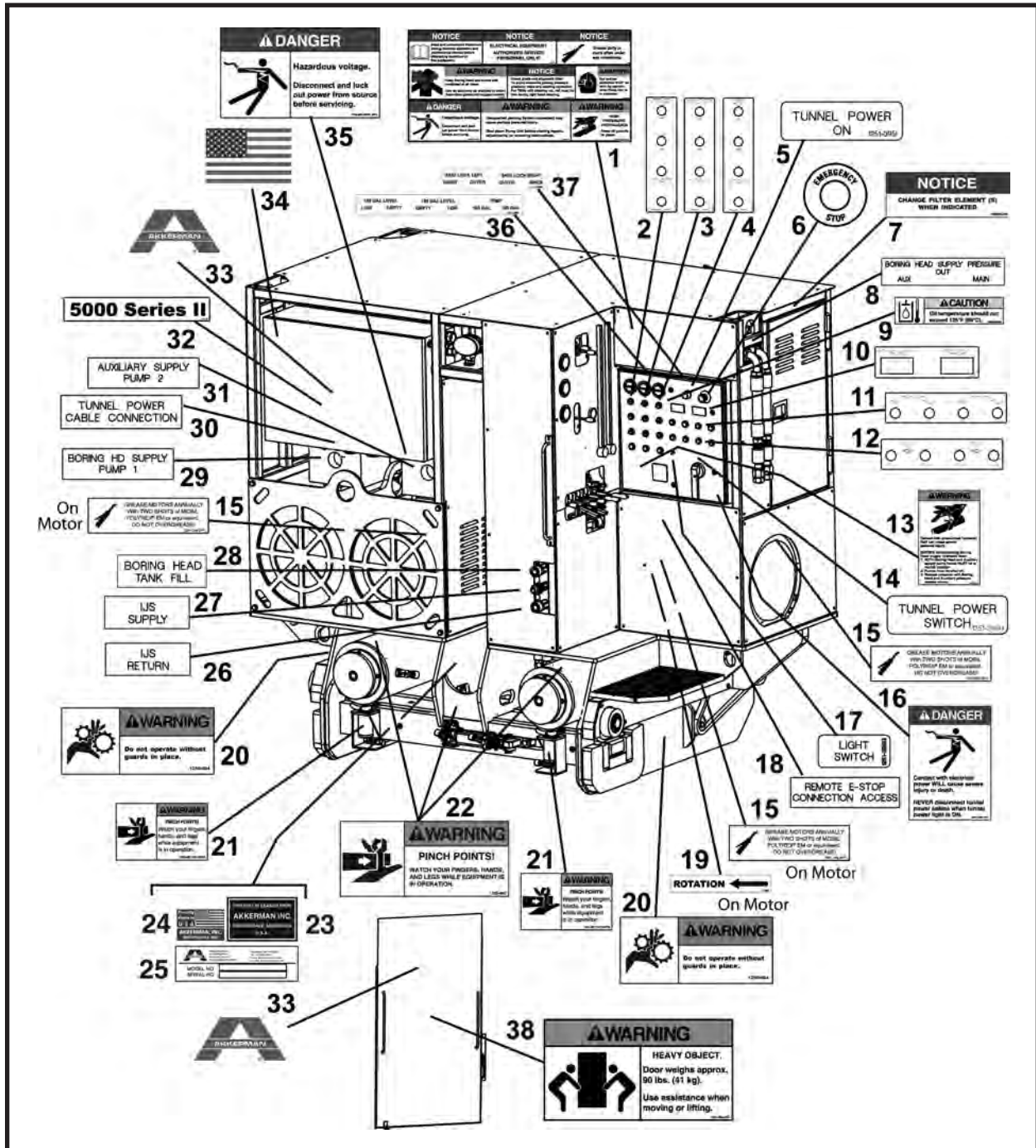
5000 Series II FRONT DECALS
5000 Series II (SN F20400F-02)

ITEM	QTY	PART NO.	DESCRIPTION
11	1	1251-395E	PLATE, Boring Head & Jacking Tank Level Indicator
12	1	1251-395F	PLATE, Skid Lock Indicator
13	1	1251-348	DECAL, Warning, Pressurized Hydraulic Fluid
14	1	1251-395H	PLATE, Tunnel Power Switch
15	3	1251-349	DECAL, Grease Motors Annually
16	1	1251-365	DECAL, Danger, Electrical Contact
17	1	1251-395G	PLATE, Light Switch
18	1	1251-327I	PLATE, Remote E-Stop Connection
19	1	3-700L	DECAL, Rotation Left
20	2	1250-004	DECAL, Warning, Keep Guards In Place
21	2	1250-562	DECAL, Warning, Pinch Points
22	3	1250-480	DECAL, Warning, Pinch Points
23*	1	1250-098	DECAL, Lease
24	1	1250-544	DECAL, Proudly Made In USA
25	1	REF	PLATE, Serial Number
26	1	1251-329N	PLATE, IJS Return
27	1	1251-329M	PLATE, IJS Supply
28	1	1251-329L	PLATE, Boring Head Tank Fill
29	1	1251-327J	PLATE, Boring Head Supply Pump 1
30	1	1251-327H	PLATE, Tunnel Power Cable Connection
31	1	1251-327K	PLATE, Auxiliary Supply Pump 2
32	1	1251-323	DECAL, 5000 Series II
33	2	1251-245	DECAL, Akkerman X-Large
34	1	1250-559	DECAL, USA Flag, Medium
35	1	1250-385	DECAL, Danger, Hazardous Voltage
36	1	1251-399A	DECAL, Oil Tank Level/Temp Connectors
37	1	1251-399B	DECAL, Skid Lock Connectors
38	1	1251-389	DECAL, Warning, Heavy Object

* Note: Decal used only on leased equipment.

5000 Series II FRONT DECALS

5000 Series II (SN F20400F-03 & After)



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1250-582	DECAL, Notice, Warning, Danger
2	1	1251-395B	PLATE, Boring Head Motor Controls Pump 1
3	1	1251-395C	PLATE, Auxiliary Motor Controls Pump 2
4	1	1251-395A	PLATE, Jacking Motor Controls
5	1	1251-395I	PLATE, Tunnel Power On
6	1	P0310-474F	DECAL, Emergency Stop
7	1	40000-16	DECAL, Notice, Change Filter Element
8	1	1251-3290	PLATE, Boring Head Supply Pressure
9	1	1250-005	DECAL, Caution, Oil Temp Not To Exceed 125
10	1	1251-395D	PLATE, Boring Head & Jacking Tank Oil Temp
11	1	1251-395E	PLATE, Boring Head & Jacking Tank Level Indicator

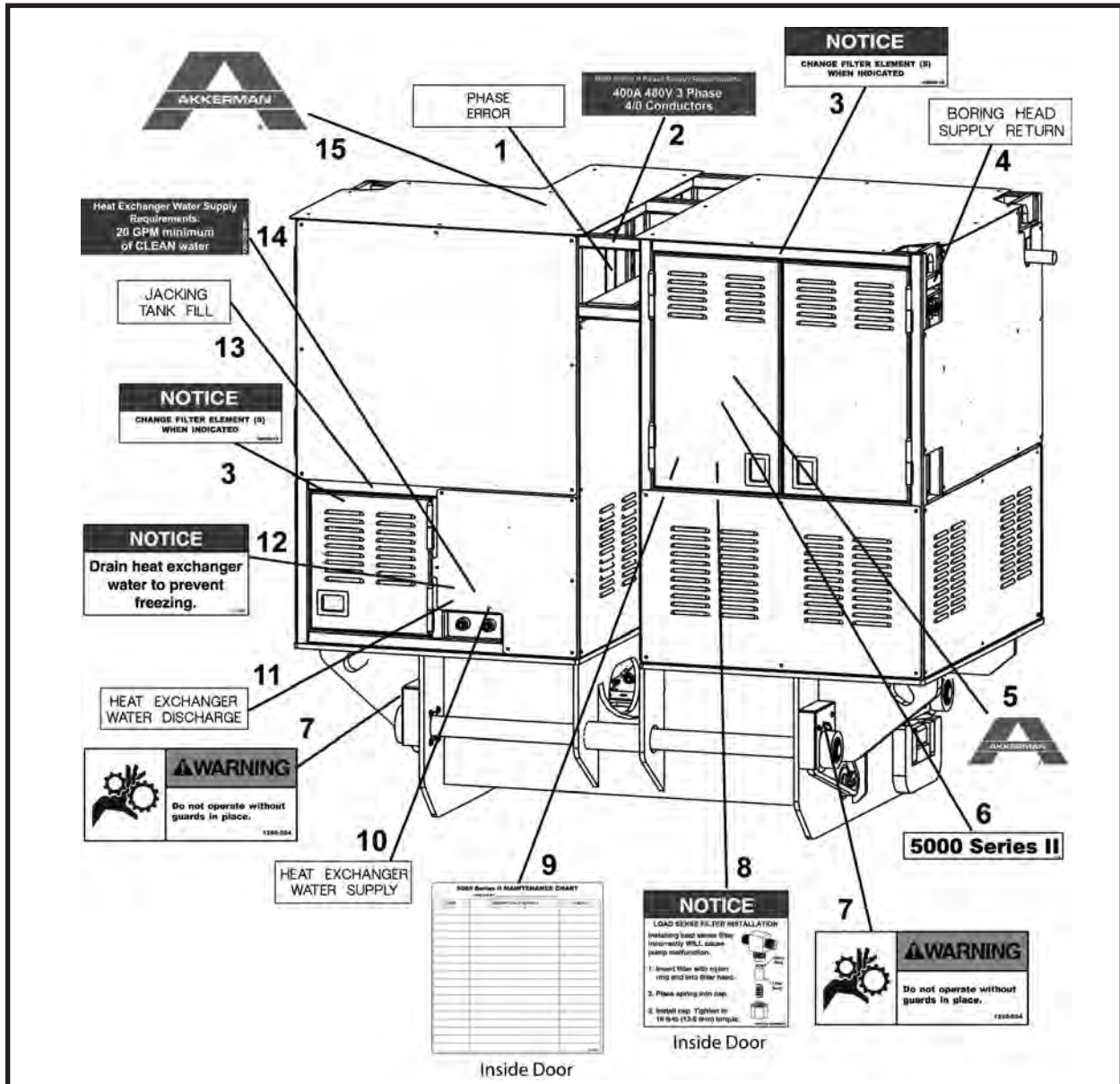
5000 Series II FRONT DECALS
5000 Series II (SN F20400F-03 & After)

ITEM	QTY	PART NO.	DESCRIPTION
12	1	1251-395J	PLATE, Skid Lock Indicator
13	1	1251-348	DECAL, Warning, Pressurized Hydraulic Fluid
14	1	1251-395H	PLATE, Tunnel Power Switch
15	3	1251-349	DECAL, Grease Motors Annually
16	1	1251-365	DECAL, Danger, Electrical Contact
17	1	1251-395G	PLATE, Light Switch
18	1	1251-327I	PLATE, Remote E-Stop Connection
19	1	3-700L	DECAL, Rotation Left
20	2	1250-004	DECAL, Warning, Keep Guards In Place
21	2	1250-562	DECAL, Warning, Pinch Points
22	3	1250-480	DECAL, Warning, Pinch Points
23*	1	1250-098	DECAL, Lease
24	1	1250-544	DECAL, Proudly Made In USA
25	1	REF	PLATE, Serial Number
26	1	1251-329N	PLATE, IJS Return
27	1	1251-329M	PLATE, IJS Supply
28	1	1251-329L	PLATE, Boring Head Tank Fill
29	1	1251-327J	PLATE, Boring Head Supply Pump 1
30	1	1251-327H	PLATE, Tunnel Power Cable Connection
31	1	1251-327K	PLATE, Auxiliary Supply Pump 2
32	1	1251-323	DECAL, 5000 Series II
33	2	1251-245	DECAL, Akkerman X-Large
34	1	1250-559	DECAL, USA Flag, Medium
35	1	1250-385	DECAL, Danger, Hazardous Voltage
36	1	1251-399A	DECAL, Oil Tank Level/Temp Connectors
37	1	1251-399C	DECAL, Skid Lock Connectors
38	1	1251-389	DECAL, Warning, Heavy Object

* Note: Decal used only on leased equipment.

5000 Series II REAR WITH PANELS DECALS

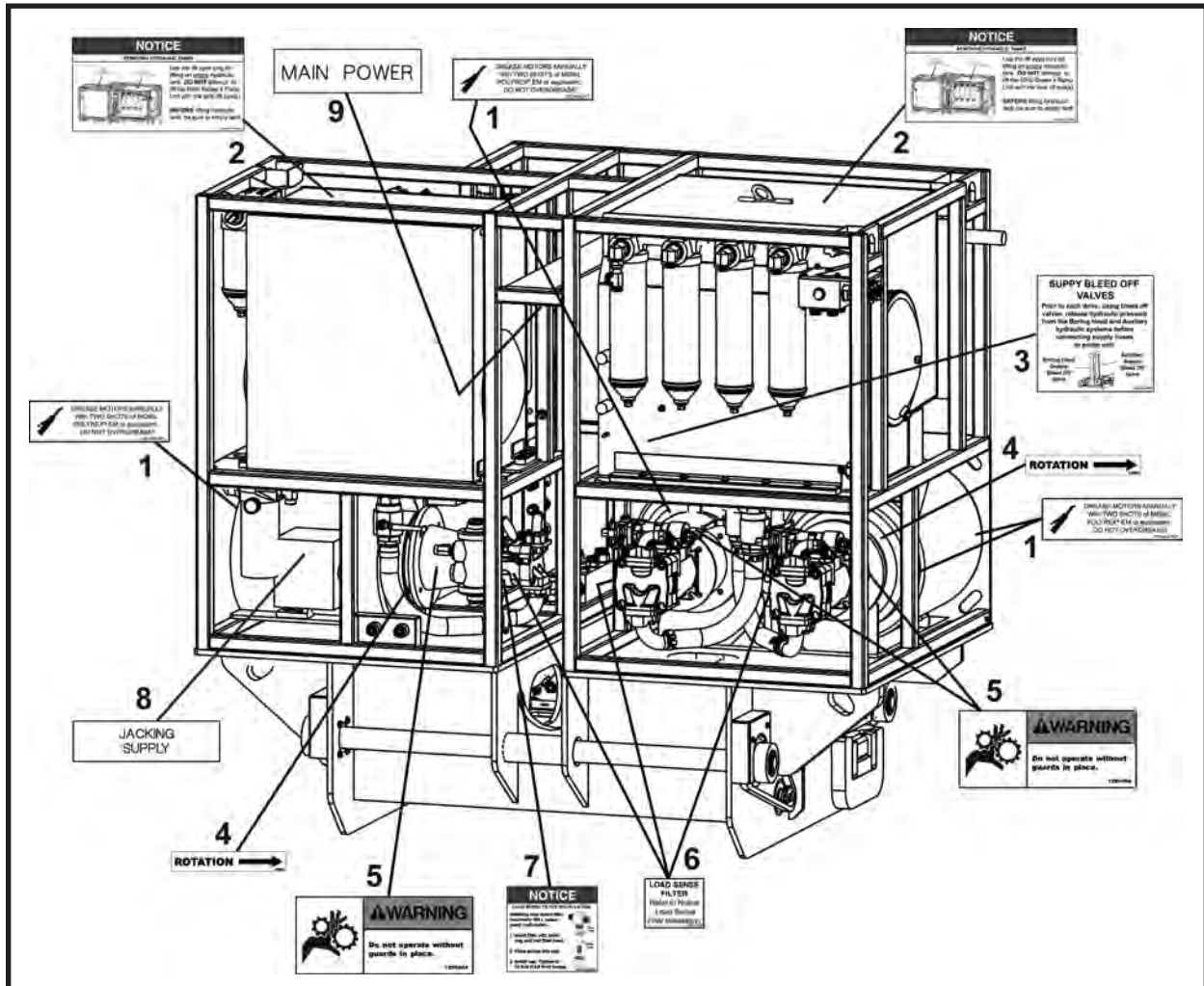
5000 Series II



ITEM	QTY	PART NO.	DESCRIPTION
1	1	1251-327D	PLATE, Phase Error
2	1	1251-351	DECAL, Power Supply Requirements
3	2	40000-16	DECAL, Notice, Change Filter Element
4	1	1251-329P	PLATE, Boring Head Supply Return
5	1	1251-245	DECAL, Akkerman X-Large
6	1	1251-323	DECAL, 5000 Series II
7	2	1250-004	DECAL, Warning, Keep Guards In Place
8	1	1250-872	DECAL, Notice, Load Sense Filter Installation
9	1	1251-350	DECAL, Maintenance Chart
10	1	1251-329R	PLATE, Heat Exchanger Water Supply
11	1	1251-329Q	PLATE, Heat Exchanger Water Discharge
12	1	17-700	DECAL, Notice, Drain Heat Exchanger
13	1	1251-329S	PLATE, Jacking Tank Fill
14	1	1251-352	DECAL, Heat Exchanger Water Supply
15	1	1251-272	DECAL, Akkerman Jumbo

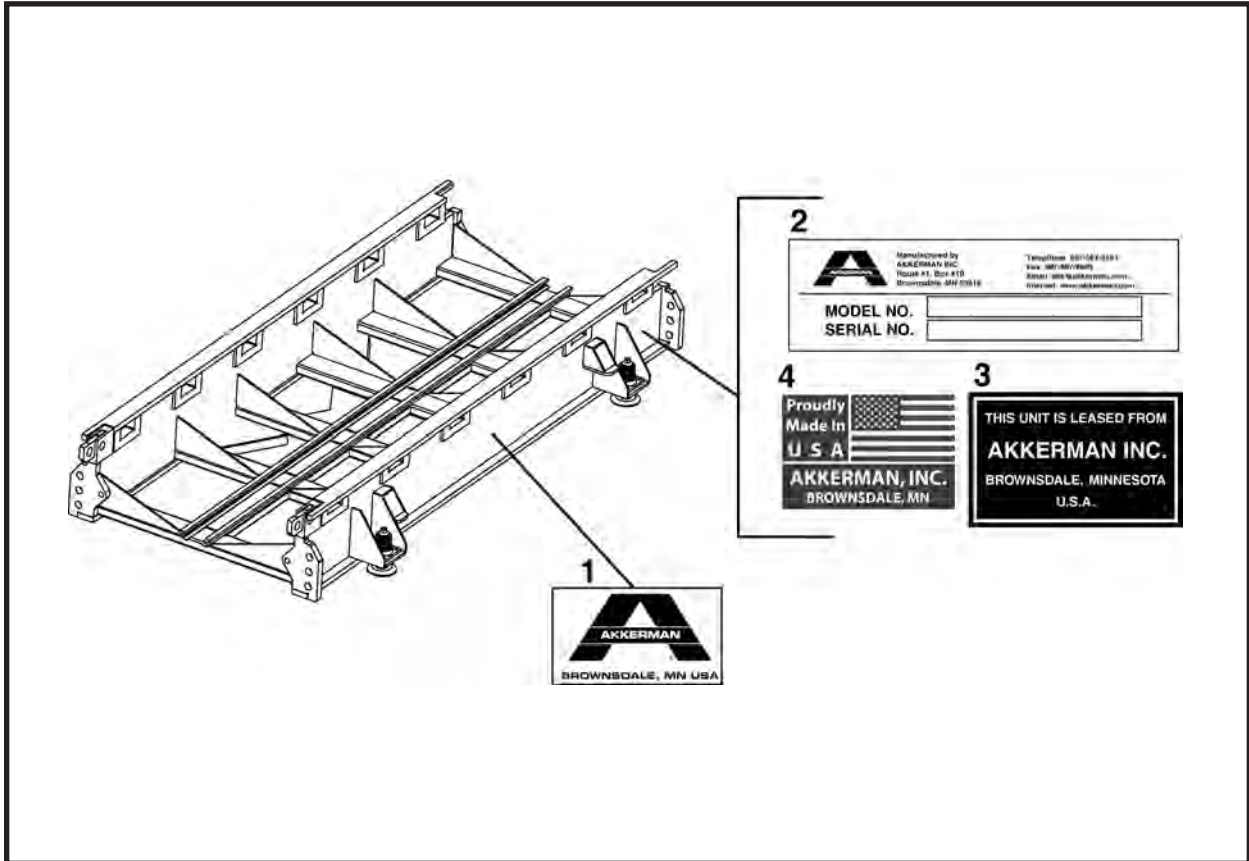
5000 Series II REAR WITHOUT PANELS DECALS

5000 Series II



ITEM	QTY	PART NO.	DESCRIPTION
1	3	1251-349	DECAL, Grease Motors Annually
2	2	1251-359	DECAL, Notice, Remove Hydraulic Tank
3	1	1251-364	DECAL, Supply Bleed Off Valves
4	1	3-700R	DECAL, Rotation Right
5	3	1250-004	DECAL, Keep Guards In Place
6	3	1251-353	DECAL, Load Sense Filters
7	1	1250-872	DECAL, Notice, Load Sense Filter Installation
8	1	1251-327L	PLATE, Jacking Supply
9	1	1251-329K	PLATE, Main Power

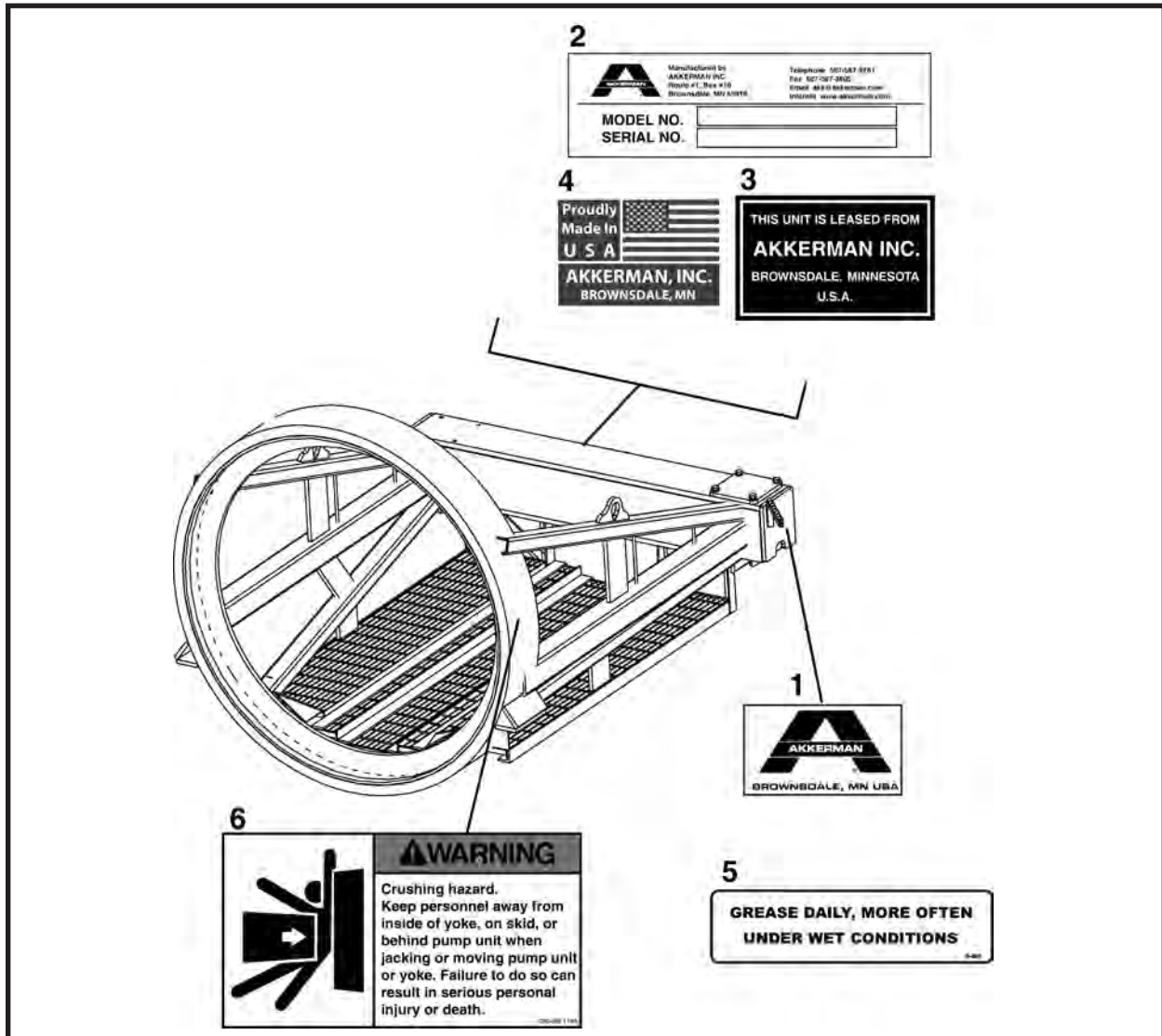
SKID DECALS



ITEM	QTY	PART NO.	DESCRIPTION
1	2	1250-548	DECAL, Akkerman, XLarge
2	1	REF	PLATE, Serial Number
3*	1	1250-098	DECAL, Lease
4	1	1250-544	DECAL, Made in USA

* Note: Decal used only on leased equipment.

YOKE DECALS



ITEM	QTY	PART NO.	DESCRIPTION
1	2	1251-246	DECAL, Akkerman, Large
2	1	REF	PLATE, Serial Number
3*	1	1250-098	DECAL, Lease
4	1	1250-544	DECAL, Made in USA
5	2	4-480	DECAL, Grease Daily
6	2	1250-002	DECAL, Warning, Contact

* Note: Decal used only on leased equipment.

NOTES

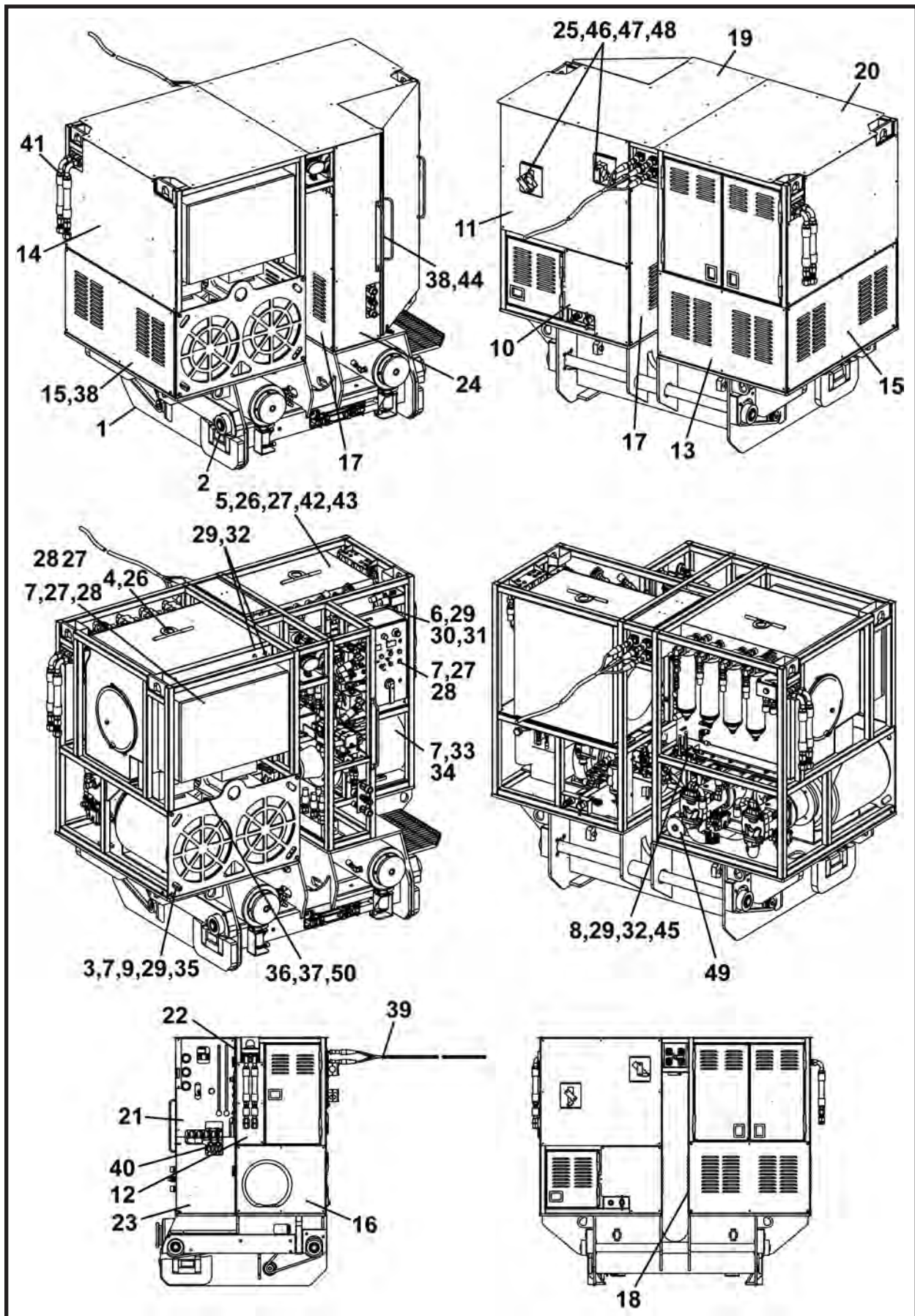


Structurals

5000 Pump Unit	
5000 Series II Pump Unit Assembly, F20400F.....	2
5000 Series II Pump Unit Weldment, 020392A	4
Base Assembly, 020421A	6
160 Gallon Hydraulic Tank, 020404A	8
100 Gallon Hydraulic Tank, 021126A	9
Adjustable Speed Control Assembly, 021122A	10
Skid	
Skid Assembly	11
Skid Mounting Assembly, 017300A	12
Skid Riser Assembly, F08297F00	13
Skid Extension, F17006F00	14
Skid Winch Drive Assembly, 022855A	15
Yoke	
360, 420/48SC, 480, 540	16
600, 660, 720, 780, 840	17

5000 SERIES II PUMP UNIT ASSEMBLY, F20400F

5000 Series II PUMP UNIT



5000 SERIES II PUMP UNIT ASSEMBLY, F20400F
5000 Series II PUMP UNIT

0		F20400F	5000 SERIES II PUMP UNIT ASSEMBLY
1*	1	020392A	WELDMENT, 5000 Series II Pump Unit
2*	1	020421A	ASSEMBLY, Base
3	1	020360A	CRADLE, Motor
4*	1	020404A	TANK, 160 Gal Hyd
5*	1	021126A	TANK, 100 Gal Hyd
6	1	020493P	MOUNT, Electrical Box, Small
7**	1	020365A	ELECTRICAL
8***	1	020366A	HYDRAULIC
9	44	P0253-134	TRIM, Rubber Edge
10	1	020376P	PANEL, 100 gal rear bottom
11	1	030686A	PANEL, 100 Gal Rear Top
12	1	020373P	PANEL, 100 Gal Right Top
13	1	020385P	PANEL, 160 Gal Rear
14	1	020383P	PANEL, 160 Gal Left Top
15	1	020384P	PANEL, 160 Gal Left Bottom
16	1	020374P	PANEL, 100 Gal Right Bottom
17	1	020372P	PANEL, 100 Gal Inside
18	1	020382P	PANEL, 160 Gal Inside
19	1	020371P	PANEL, 100 Gal Top
20	1	020381P	PANEL, 160 Gal Top
21	1	020377P	PANEL, Operator Front
22	1	020378P	PANEL, Operator Right Top
23	1	021159P	PANEL, Operator Bottom
24	1	020380P	PANEL, 100 gal front
25	2	P0059-074	CLAMP, Vibration
26	1040 QT	P0126-001	OIL, Hydraulic
27	24	P0040-006	WASHER, Hardened Flat 3/8
28	8	P0001-06-002	BOLT, Hex 3/8 UNC x .5
29	21	P0040-008	WASHER, Hardened Flat 1/2
30	4	P0003-08-000	NUT, Hex 1/2
31	4	P0001-08-014	BOLT, Hex 1/2 UNC x 3.5
32	13	P0001-08-004	BOLT, 1/2 UNC x 1
33	4	P0040-010	WASHER, Hardened Flat 5/8
34	4	P0001-10-006	BOLT, Hex 5/8 UNC x 1.5
35	4	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
36	8	P0040-012	WASHER, Hardened Flat 3/4
37	8	P0001-12-008	BOLT, 3/4 UNC x 2
38	102	P0035-002	TAP, Hex Washer/Head 5/16 x .75
39**	REF	F20623F	CABLE, Starter
40*	2	021122A	CONTROL, Adj Speed Control
41***	1	021130A	KIT, Hose
42	8	P0001-06-005	BOLT, Hex 3/8 UNC x 1.25
43	8	P0013-06a-000	NUT, Nylock 3/8
44	1	030662A	HANDLE, Grab
45	1	020625A	MOUNT, Supply Bleed-Off Valve
46	2	030634P	LOCK, Cable Hanger
47	2	P0001-04-003	BOLT, Hex 1/4 UNC x .75
48	2	P0013-04-000	NUT, Nylock 1/4
49****	1	020624A	PUMP, Transfer
50	4	021186P	ROD, Threaded

* Refer to this section for parts information.

** Refer to Section 5, Electrical for parts information.

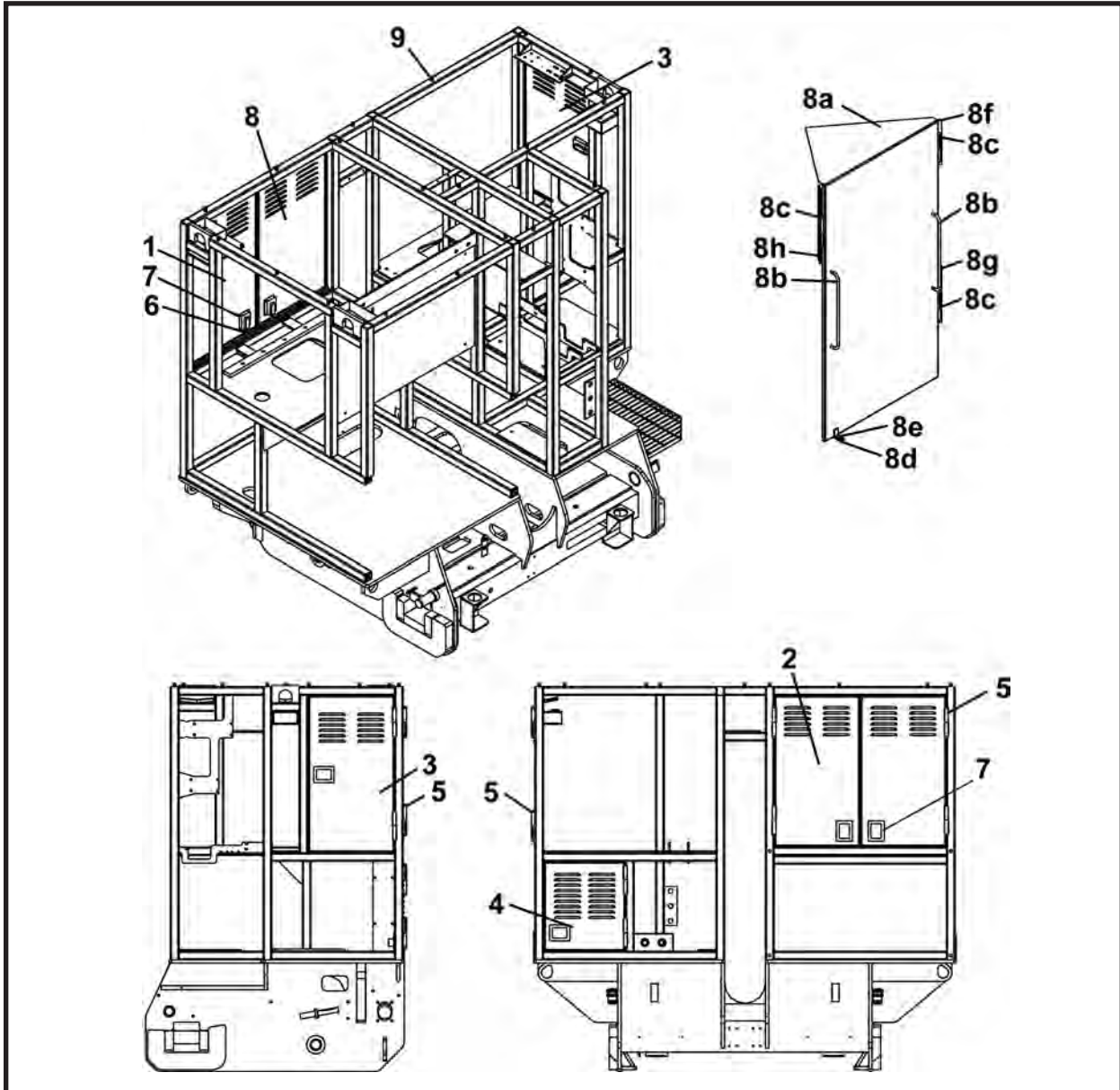
*** Refer to Section 6, Hydraulics, 100 Gallon Hydraulic Assembly, 020393A and the 160 Gallon Hydraulic Assembly, 020394A for parts information.

**** Refer to Section 6, Hydraulics for parts information.

QT - Quart

5000 SERIES II PUMP UNIT WELDMENT, 020392A

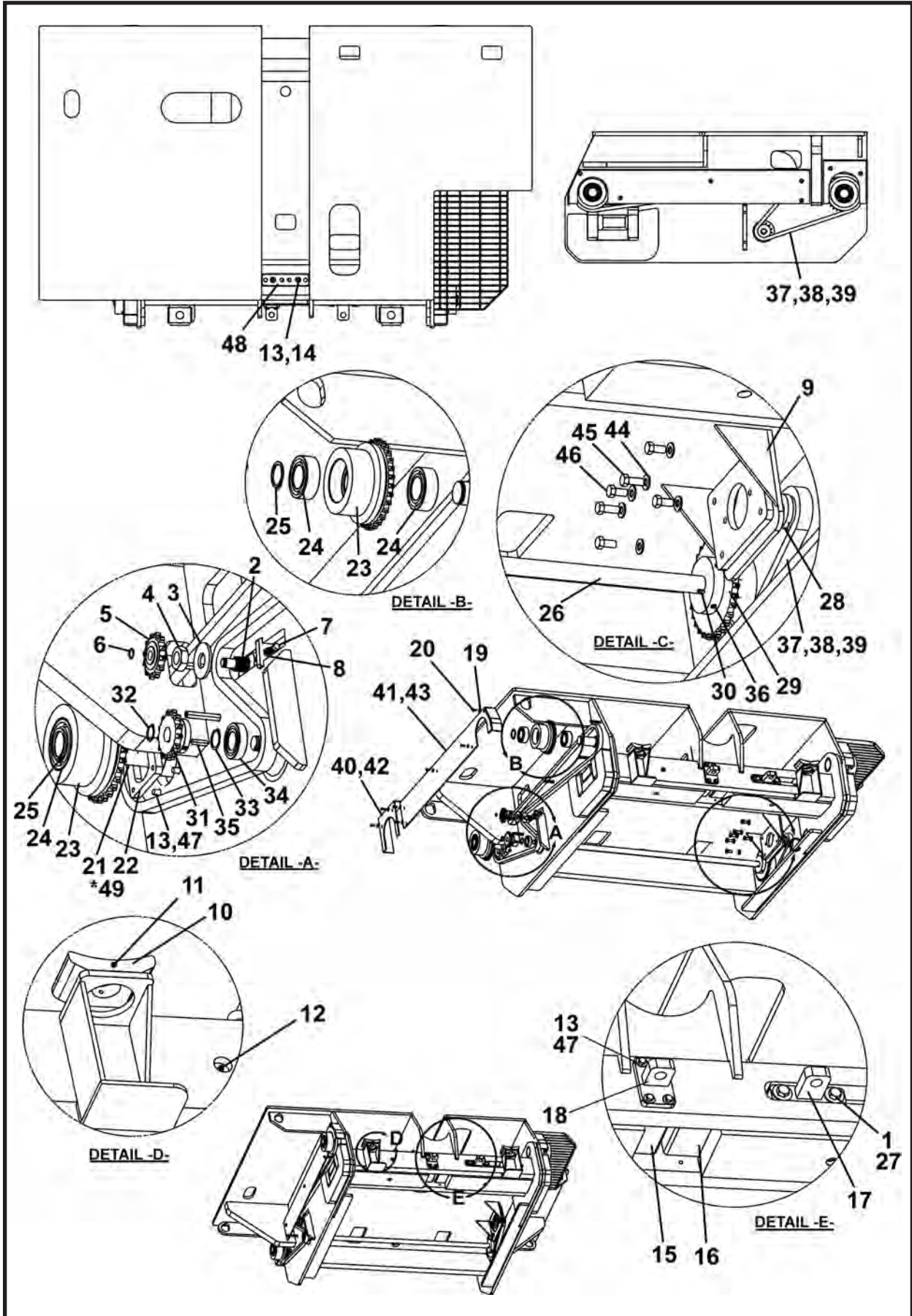
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	020392A	5000 Series II PUMP UNIT WELDMENT
1	1	020386P	DOOR, 160 Gal Hinged RH
2	1	020387P	DOOR, 160 Gal Hinged LH
3	1	020388P	DOOR, 100 Gal Hinged
4	1	020389P	DOOR, Filter Hinged
5	8	P0052-008	HINGE
6	4	028359P00	LATCH CATCH, Door Frame
7	4	P0059-021	LATCH, Lock Key
8	1	021140A	ENCLOSURE, Panel (Includes items 8a - 8h)
8a	1	021136P	DOOR
8b	2	030664P	HANDLE
8c	3	021137P	HINGE
8d	1	021138P	LATCH
8e	1	021139P	LATCH, Loop
8f	1	021142P	MOUNT, Hinge
8g	1	021143P	MOUNT, Hinge
8h	1	021144P	MOUNT, Latch Side
9	19	P0012-37-000	SPACER, Threaded

NOTES

BASE ASSEMBLY, 020421A
5000 Series II PUMP UNIT

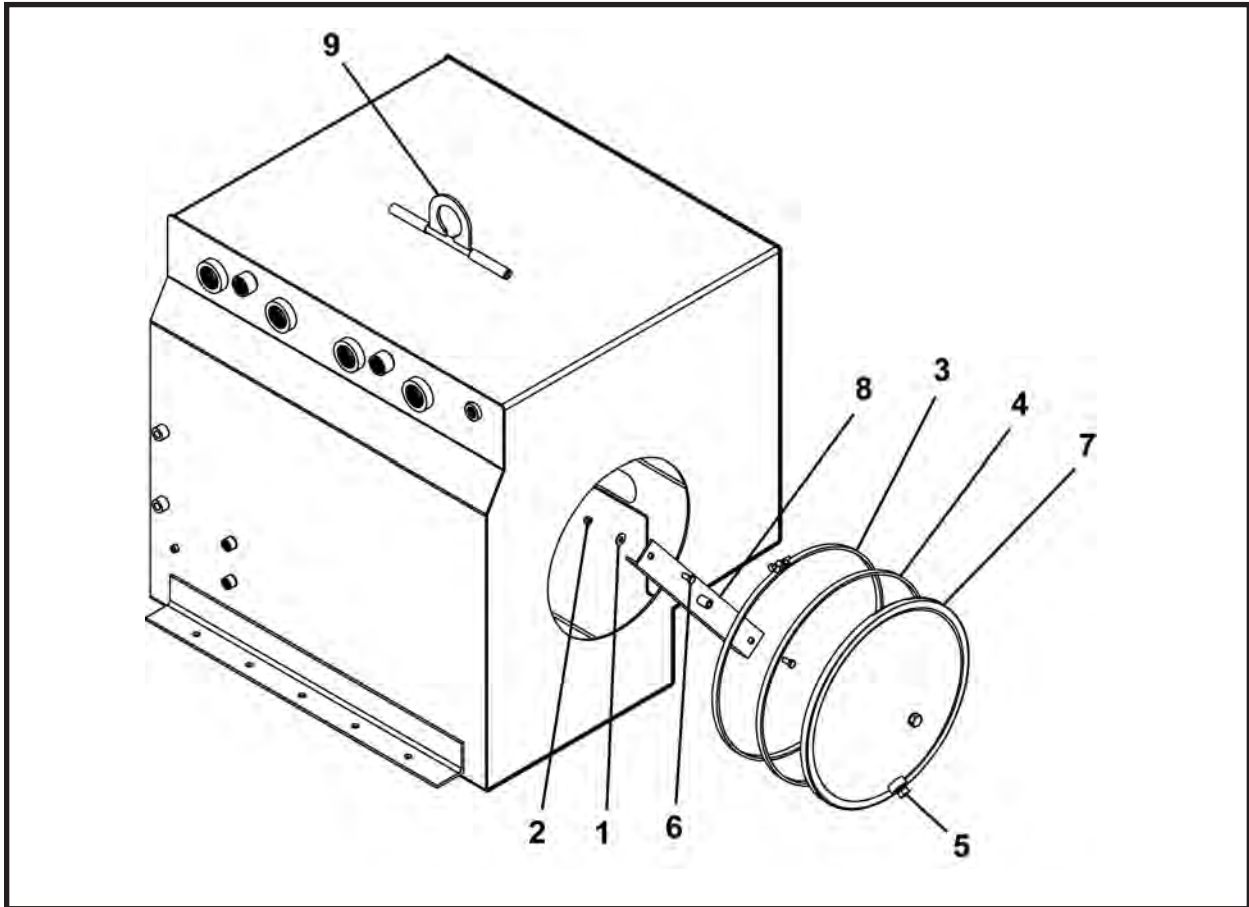


BASE ASSEMBLY, 020421A
5000 Series II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
0	1	020421A	BASE ASSEMBLY
1	4	P0001-10-012	BOLT, Hex 5/8 UNC x 3
2	2	020461P	SHAFT, Chain Tensioner
3	2	P0040-016	WASHER, Hardened Flat 1
4	2	P0008-16-000	NUT, Hex Jam 1 UNF
5	2	P0072-026	SPROCKET, Idler
6	2	P0077-007	SNAP RING, External
7	2	P0034-06-012	SCREW, Sq. Head Set 3/8 UNC x 3
8	2	P0007-06-000	NUT, Jam 3/8 UNC
9	1	021117P	MOUNT, Hyd Motor
10	2	020458P	PAD, Ram Lift
11	4	P0033-04-012	SCREW, Sq. Head Set 1/4 UNC x .75
12	8	P0063-001	FITTING, Grease - Straight
13	18	P0040-006	WASHER, Hardened Flat 3/8
14	2	P0001-06-003	BOLT, Hex 3/8 UNC x .75
15	1	021101P	BAR, Pump Unit Dog-Right
16	1	021102P	BAR, Pump Unit Dog-Left
17	2	020449A	CLEVIS, Rod
18	2	020446A	CLEVIS, Cylinder
19	14	P0040-004	WASHER, Hardened Flat 1/4
20	14	P0001-04-003	BOLT, Hex 1/4 UNC x .75
21	1	020455P	SHAFT, Rear Driven
22	2	020457P	PLATE, Rear Driven Axle
23	4	021103P	WHEEL, Pump Unit Drive
24	8	P0065-005	BEARING
25	4	P0077-054	SNAP RING, External
26	1	020456P	SHAFT, Front Drive
27	4	P0040-010	WASHER, Hardened Flat 5/8
28	1	P0071-001	SPROCKET
29	1	006267P00	SPROCKET
30	1	021115P	KEY, Square 1/4 x 2
31	2	P0071-013	SPROCKET
32	2	P0077-013	SNAP RING, External
33	2	P0077-017	SNAP RING, External
34	2	P0065-260	BEARING, Ball
35	3	021114P	KEY, Square 1/4 x 1.25
36	4	P0033-06-016	SCREW, Sq. Head Set 3/8 UNC x 1
37	321	P0078-002	CHAIN
38	3	P0078-005	LINK, Half
39	3	P0078-008	LINK, Master
40	1	021107A	GUARD, RH Rear
41	1	021105A	GUARD, RH Front
42	1	021108A	GUARD, LH Rear
43	1	021106A	GUARD, LH Front
44	6	P0040-008	WASHER, Hardened Flat 1/2
45	2	P0001-08-005	BOLT, Hex 1/2 UNC x 1.25
46	4	P0001-08-004	BOLT, Hex 1\2 UNC x 1
47	16	P0001-06-005	BOLT, Hex 3/8 UNC x 1.25
48	1	020460P	PLATE, Prox Sensor Mounting
49*	4	021149P	SHIM

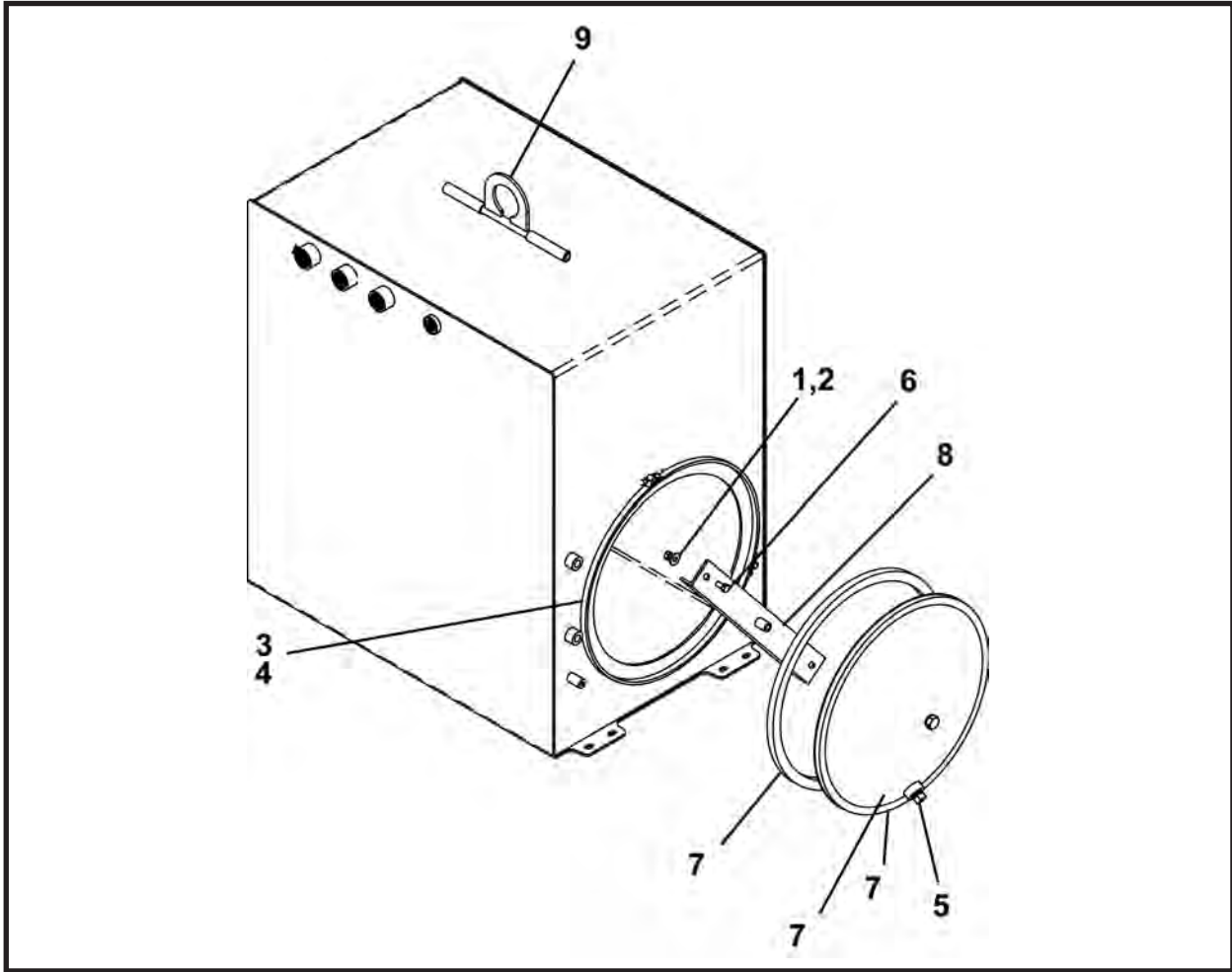
* Use item 49 to shim a minimum of .060" gap between items 21 and 22.

160 GALLON HYDRAULIC TANK, 020404A
5000 Series II PUMP UNIT



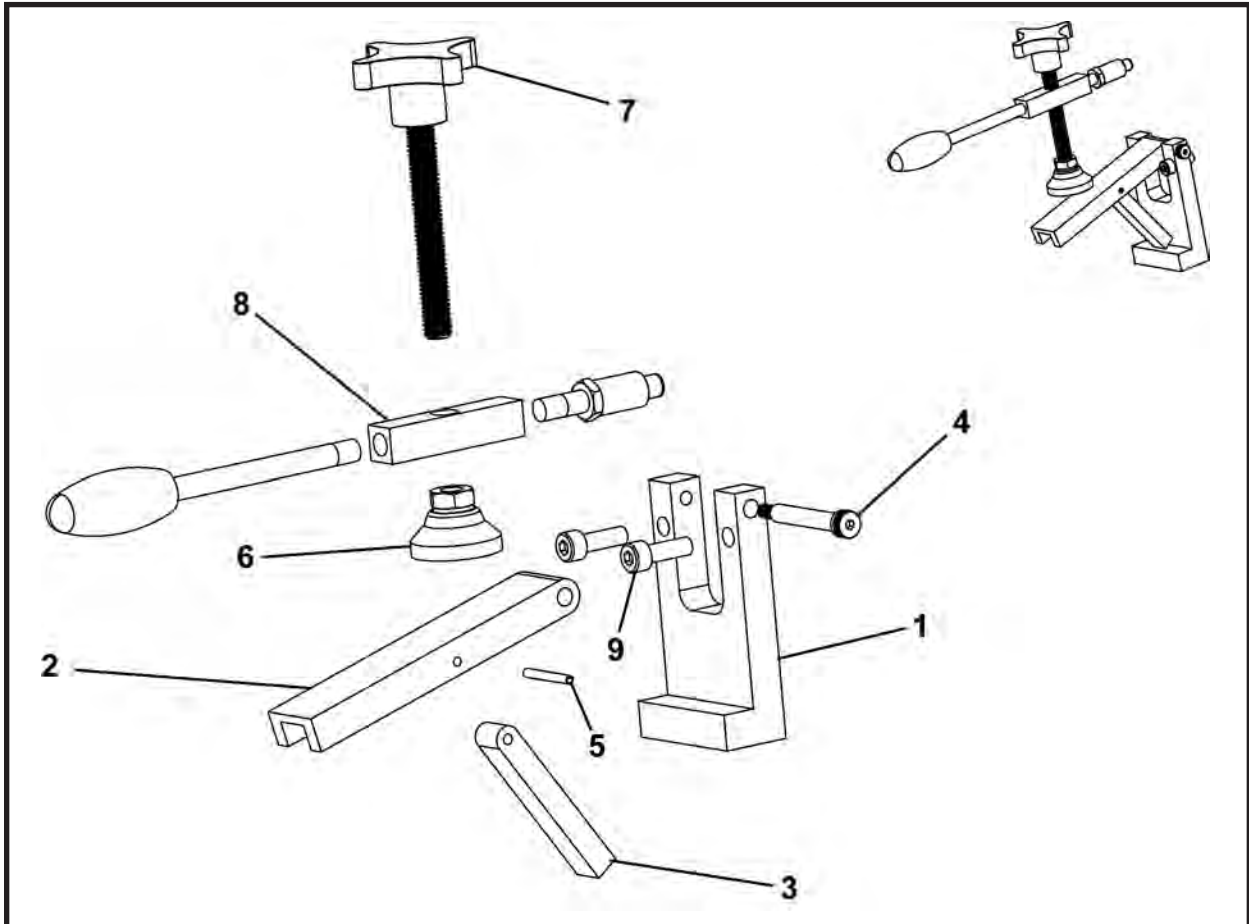
ITEM	QTY	PART NO.	DESCRIPTION
0	1	020404A	160 GALLON HYDRAULIC TANK
1	2	P0040-006	WASHER, Hardened Flat 3/8
2	2	P0003-06-000	NUT, Hex 3/8
3	1	P0201-224	CLAMP
4	1	P0201-218	CLAMP
5	1	P0416-004	PLUG, Sq. Head
6	2	P0001-06-003	BOLT, Hex 3/8 UNC x .75
7	1	P0308-105	COVER
8	1	P0308-104	BRACKET, End Cover
9	1	024575A	LIFT EYE, Hinged

100 GALLON HYDRAULIC TANK, 021126A
5000 Series II PUMP UNIT



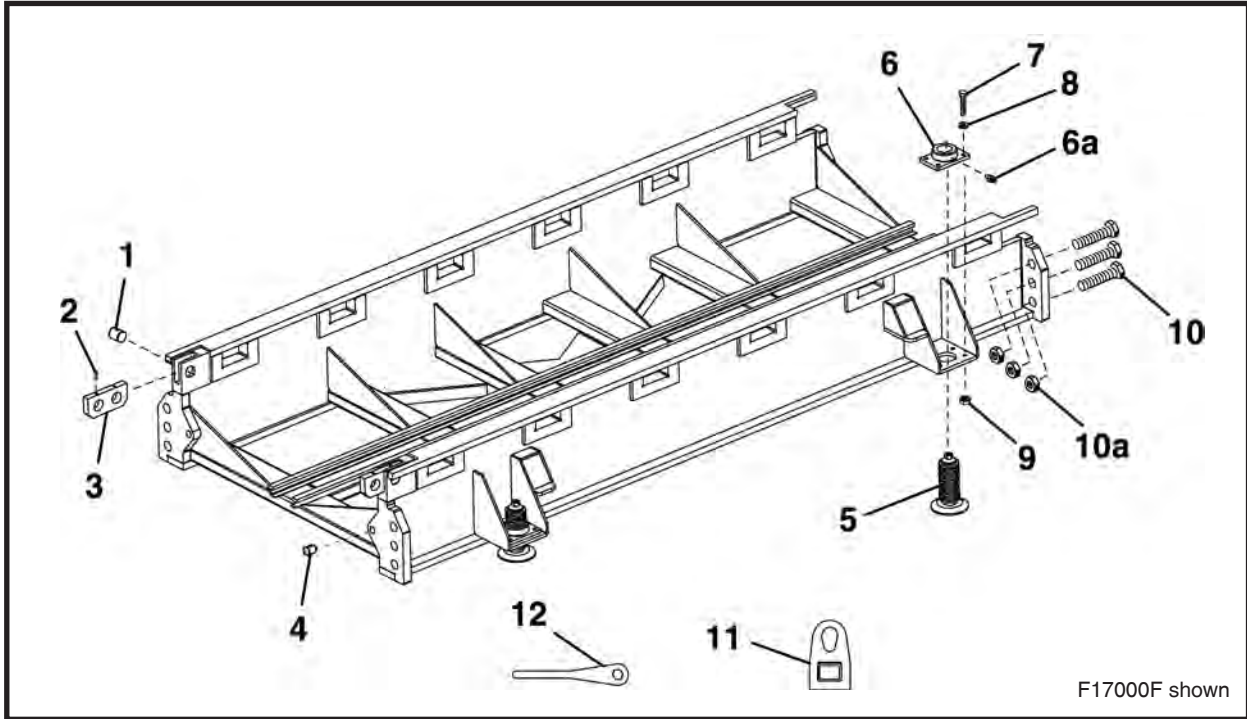
ITEM	QTY	PART NO.	DESCRIPTION
0	1	021126A	100 GALLON HYDRAULIC TANK
1	2	P0040-006	WASHER, Hardened Flat 3/8
2	2	P0003-06-000	NUT, Hex 3/8
3	1	P0201-224	CLAMP
4	1	P0201-218	CLAMP
5	1	P0416-004	PLUG, Sq. Head
6	2	P0001-06-003	BOLT, Hex 3/8 UNC x .75
7	1	P0308-105	COVER
8	1	P0308-104	BRACKET, End Cover
9	1	024575A	LIFT EYE, Hinged

ADJUSTABLE SPEED CONTROL ASSEMBLY, 021122A
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	021122A	ADJUSTABLE SPEED CONTROL ASSEMBLY
1	1	021119P	BRACE, Frame Mount
2	1	021120P	BASE, Frame Mount
3	1	021121P	SUPPORT, Frame Mount
4	1	P0030S-04-006S	BOLT, Shoulder SS 1/4 x 1.5
5	1	P0049S-042	PIN, Spring SS
6	1	P0059-072	MOUNT, Swivel Leveling
7	1	P0059-073	KNOB, Threaded Stud
8	1	021118P	MOUNT, Handle
9	2	P0031-04-003	SCREW, Socket Head Cap 1/4 UNC x .75

SKID ASSEMBLY



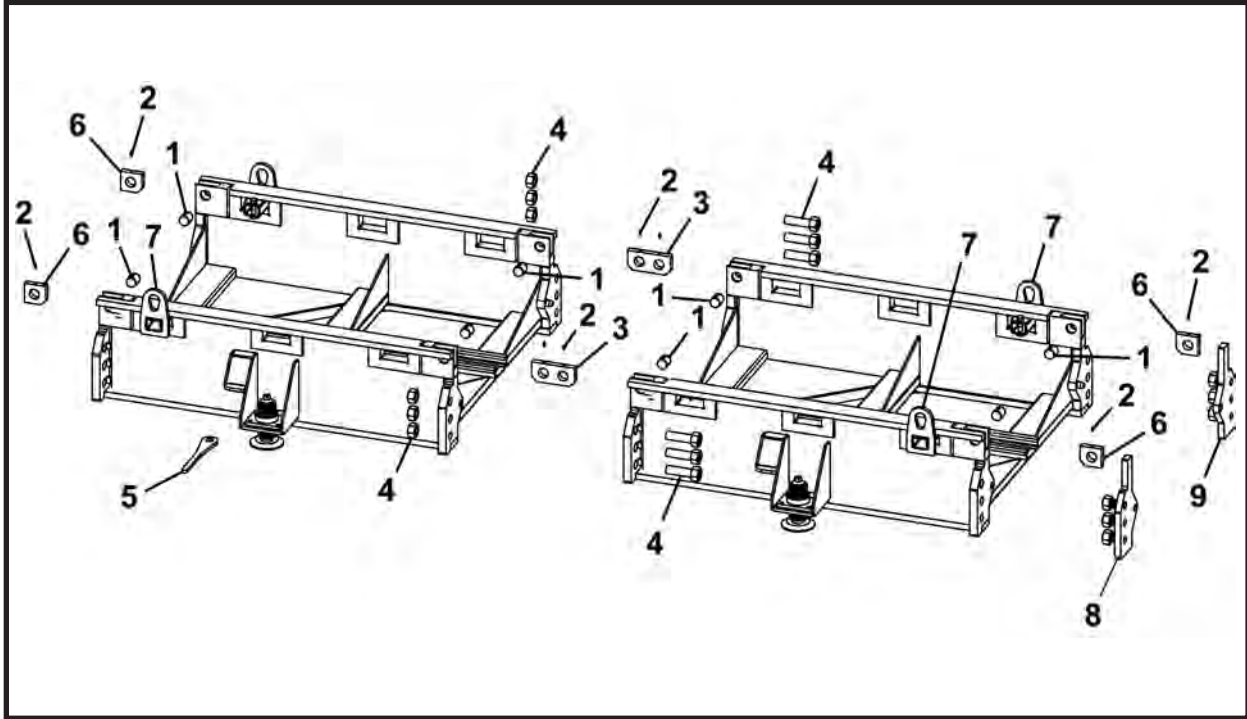
ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	F17000F00	SKID ASSEMBLY, 15 Foot
0.2	1	F17004F00	SKID ASSEMBLY, 7.5 Foot
0.3	1	F17007F00	SKID ASSEMBLY, 22.5 Foot
1*	4	017050P01	SKID SPLIT PIN
2*	4	P0033-06-016	SET SCREW, Socket 3/8 UNC x 1
3*	2	017048P01	SKID SPLIT BAR
4	2	017188P00	SKID LOCATOR PIN
5.1	4	005175A00	LEVELING SCREW ASSEMBLY (F17000F)
5.2	2	005175A00	LEVELING SCREW ASSEMBLY (F17004F)
5.3	6	005175A00	LEVELING SCREW ASSEMBLY (F17007F)
6.1	4	005177A00	LEVELING NUT ASSEMBLY (F17000F) (includes item 6a)
6.2	2	005177A00	LEVELING NUT ASSEMBLY (F17004F) (includes item 6a)
6.3	6	005177A00	LEVELING NUT ASSEMBLY (F17007F) (includes item 6a)
6a	1 per assembly	P0063-001	FITTING, Grease 1/4 UNF
7.1	16	P0001-12-010	BOLT, 3/4 UNC x 2.5 (F17000F)
7.2	8	P0001-12-010	BOLT, 3/4 UNC x 2.5 (F17004F)
7.3	24	P0001-12-010	BOLT, 3/4 UNC x 2.5 (F17007F)
8.1	16	P0045-012	WASHER, Lock 3/4 (F17000F)
8.2	8	P0045-012	WASHER, Lock 3/4 (F17004F)
8.3	24	P0045-012	WASHER, Lock 3/4 (F17007F)
9.1	16	P0003-12-000	NUT, 3/4 (F17000F)
9.2	8	P0003-12-000	NUT, 3/4 (F17004F)
9.3	24	P0003-12-000	NUT, 3/4 (F17007F)
10*	6	006911A00	SKID BOLT ASSEMBLY (includes 10a)
10a*	6	P0005-32-000	NUT, Hardened
11.1*	4	009815A00	LIFT EYE ASSEMBLY (F17000F & F17007F) (includes items 11a & 11b)
11.2*	2	009815A00	LIFT EYE ASSEMBLY (F17004F) (includes items 11a & 11b)
11a**	1 per assembly	P0001-16-016	BOLT, 1 UNC x 4
11b**	1 per assembly	P0003-16-000	NUT, 1
12	1	001563P00	WRENCH, Skid Assembly

* Items included in 017300A, Skid Mounting Assembly. Refer to this section for parts information.

** Not Shown

NOTE: Skid Riser Assembly, F08297F00 is designed for F17007F00 skid. Refer to this section.

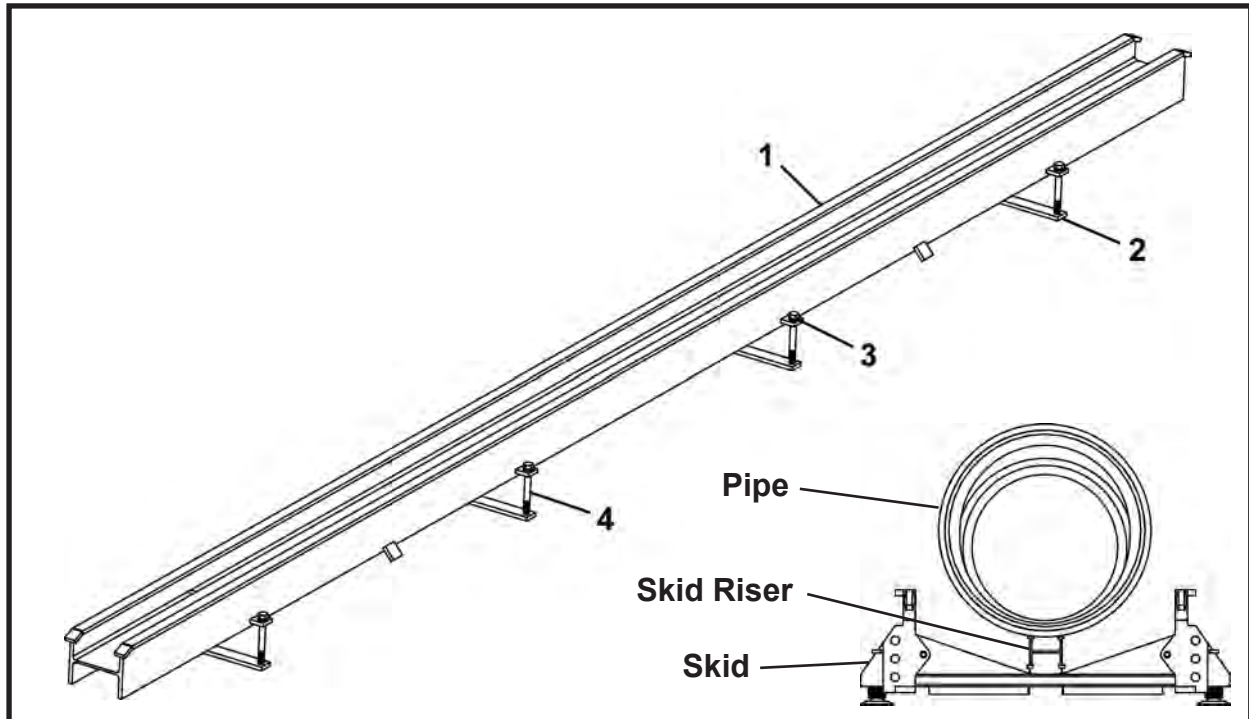
SKID MOUNTING ASSEMBLY, 017300A



ITEM	QTY	PART NO.	DESCRIPTION
0	-	017300A	SKID MOUNTING ASSEMBLY
1	8	017050P01	PIN, Skid Split
2	8	P0033-06-016	SCREW, Socket Head Cap 3/8 UNC x 1
3	2	017048P01	BAR, Skid Split
4	6	006911A00	SKID BOLT ASSEMBLY
5	1	001563P00	WRENCH, Skid
6	4	017301P	PLATE, Skid Pocket
7	4	009815A00	LIFT EYE
8	1	017017A00	THRUST PLATE ADAPTER ASSEMBLY
9	1	017018A00	THRUST PLATE ADAPTER ASSEMBLY

Note: Quantities may change per job requirements.

SKID RISER ASSEMBLY, F08297F00
22.5 SKID ASSEMBLY

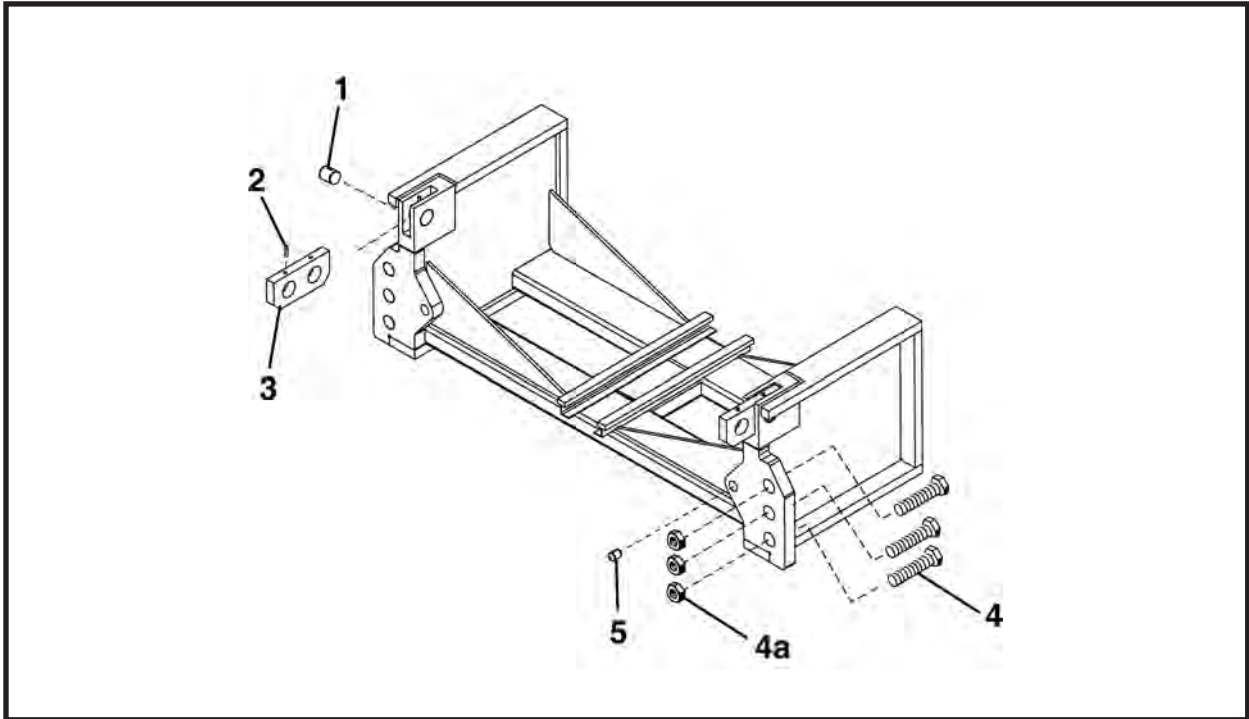


ITEM	QTY	PART NO.	DESCRIPTION
0	1	F08297F00	SKID RISER ASSEMBLY 20'
1	1	008257A	SKID RISER
2	4	008227P	BAR, Mounting
3	8	P0045-012	WASHER, Lock 3/4
4	8	P0001-12-028	BOLT, 3/4 UNC x 7

Note:

The F08297F00 skid riser (designed for the F17007F00 22.5 Skid) is used for the 360, 48SC and 420 Tunnel Boring Machines to support the smaller pipes for thrusting near the 5000 Pump Unit cylinder centers. The yokes for these TBMs are designed to work with this skid riser.

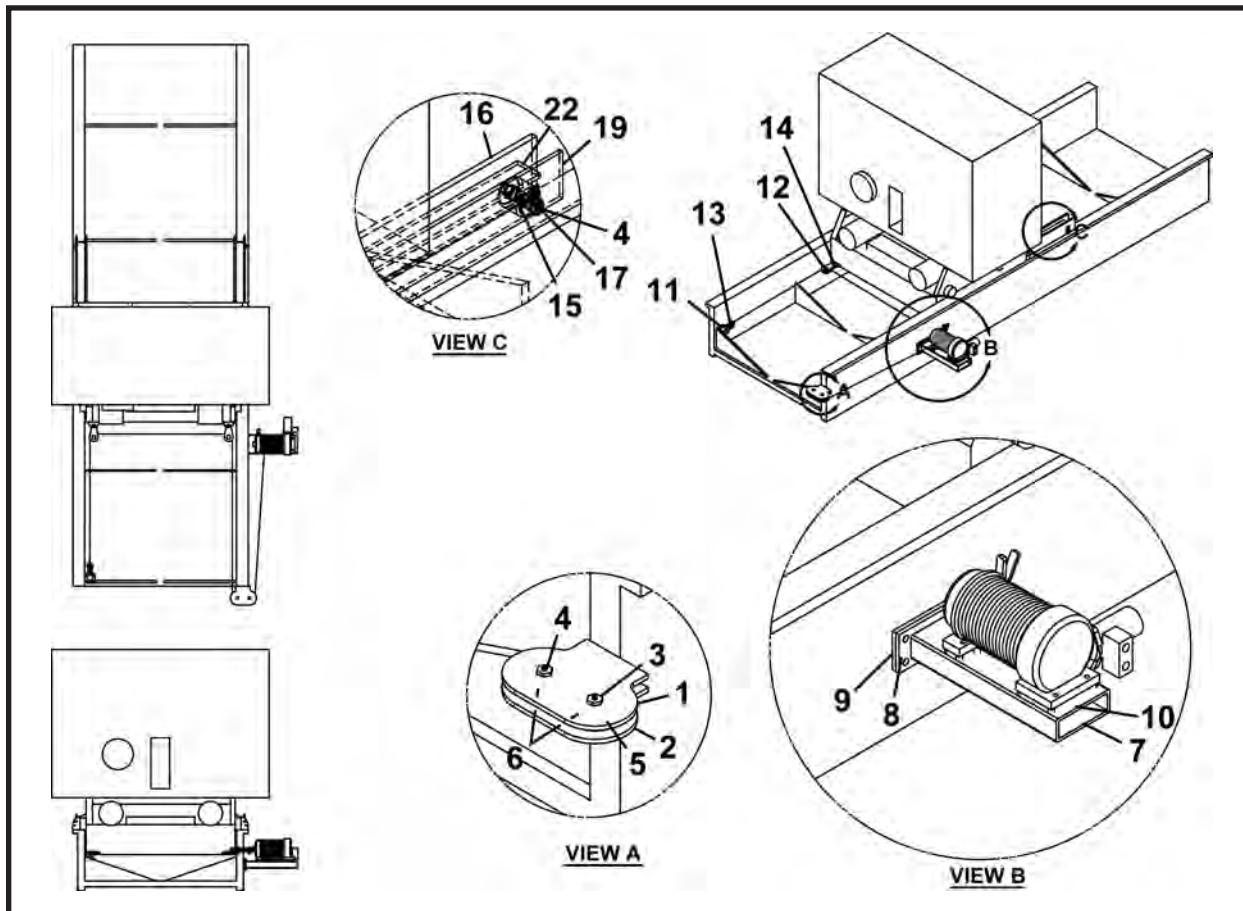
SKID EXTENSION, F17006F00



ITEM	QTY	PART NO.	DESCRIPTION
0	1	F17006F00	SKID EXTENSION, 2.5 Foot
1*	2	017050P00	SKID SPLIT PIN
2*	2	P0033-06-016	SET SCREW, Socket 3/8-16 UNC x 1
3*	2	017048P00	SKID SPLIT BAR
4*	6	006911A00	SKID BOLT ASSEMBLY (includes 4a)
4a*	6	P0005-32-000	NUT, Hardened
5	1	017188P00	PIN, Skid Locator

* Items included in 017300A, Skid Mounting Assembly. Refer to this section for parts information.

SKID WINCH DRIVE ASSEMBLY, 022855A



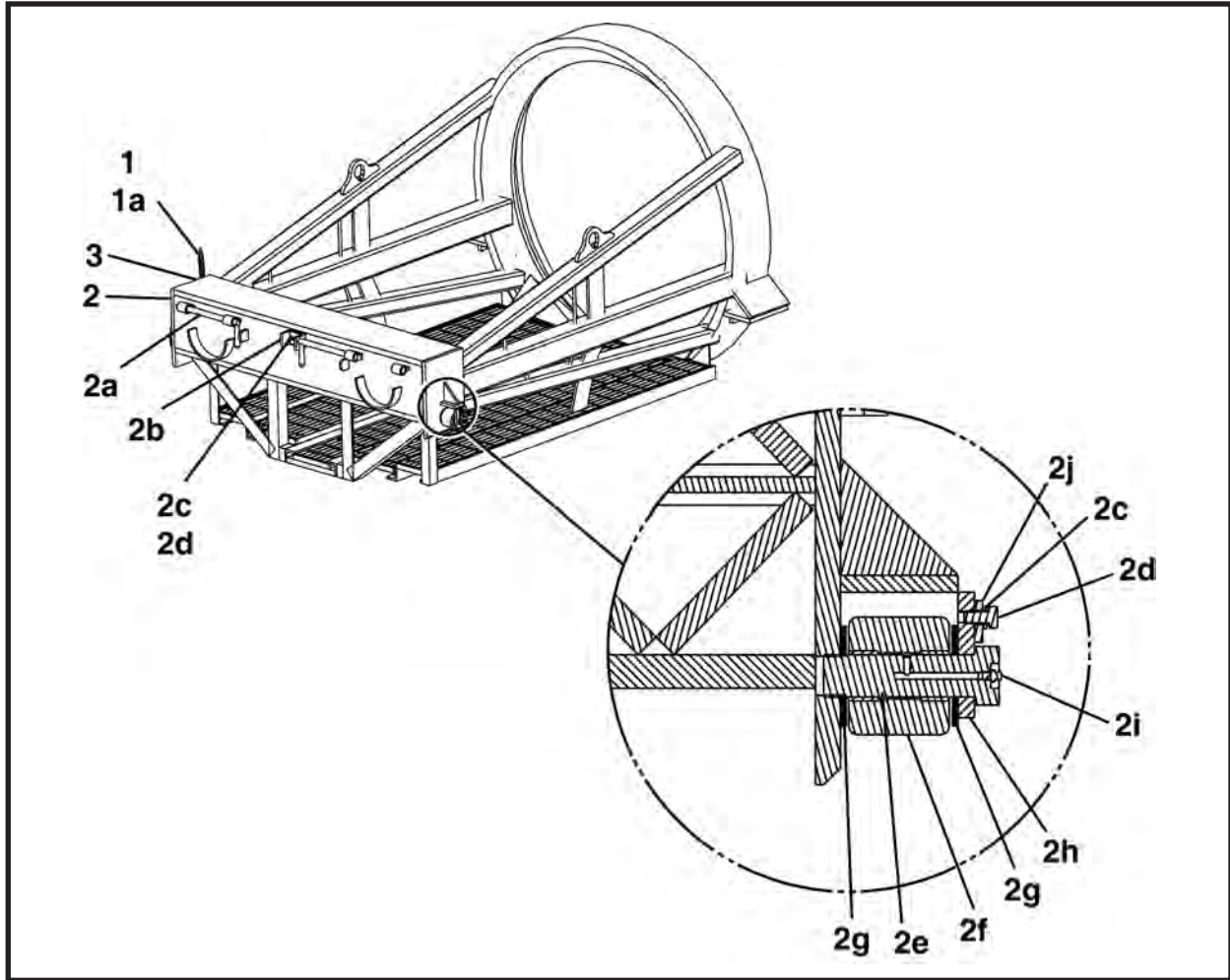
ITEM	QTY	PART NO.	DESCRIPTION
0	1	022855A	SKID WINCH DRIVE ASSEMBLY
1	1	022859P	PLATE, Sheave Support Top
2	1	022860P	PLATE, Sheave Support Bottom
3	2	002124P00	BOLT, Conveyor Lift
4	4	P0063-001	FITTING, Grease
5	2	025323A	PULLEY ASSEMBLY
6	2	P0007-12-000	NUT, Jam 3/4 UNC
7	1	022856P	TUBE, Winch Support
8	1	022857P	PLATE
9	1	022858P	PLATE, Winch Support Bolt
10	1	A12998P	PLATE, Winch Mount
11	1	003529P02	LIFT EYE
12	2	P0098-062	BLOCK, Cross Bolt Snatch
13	1	P0091-002	SHACKLE
14	2	A12997P0	MOUNT, Shackle
15	2	025802A00	WHEEL
16	2	022863P	PLATE, Inner
17	2	005363P00	SHAFT, Roller
18*	2	005364P00	BAR
19	2	022862P	PLATE, Outer
20*	2	P0001-06-004	BOLT, 3/8 UNC x 1
21*	4	P0040-020	WASHER, Hardened 1-1/4
22	2	022864P	PLATE, Spacer

* Not Shown

NOTE:

The skid winch drive is used on uphill drives with more than a 4% grade.

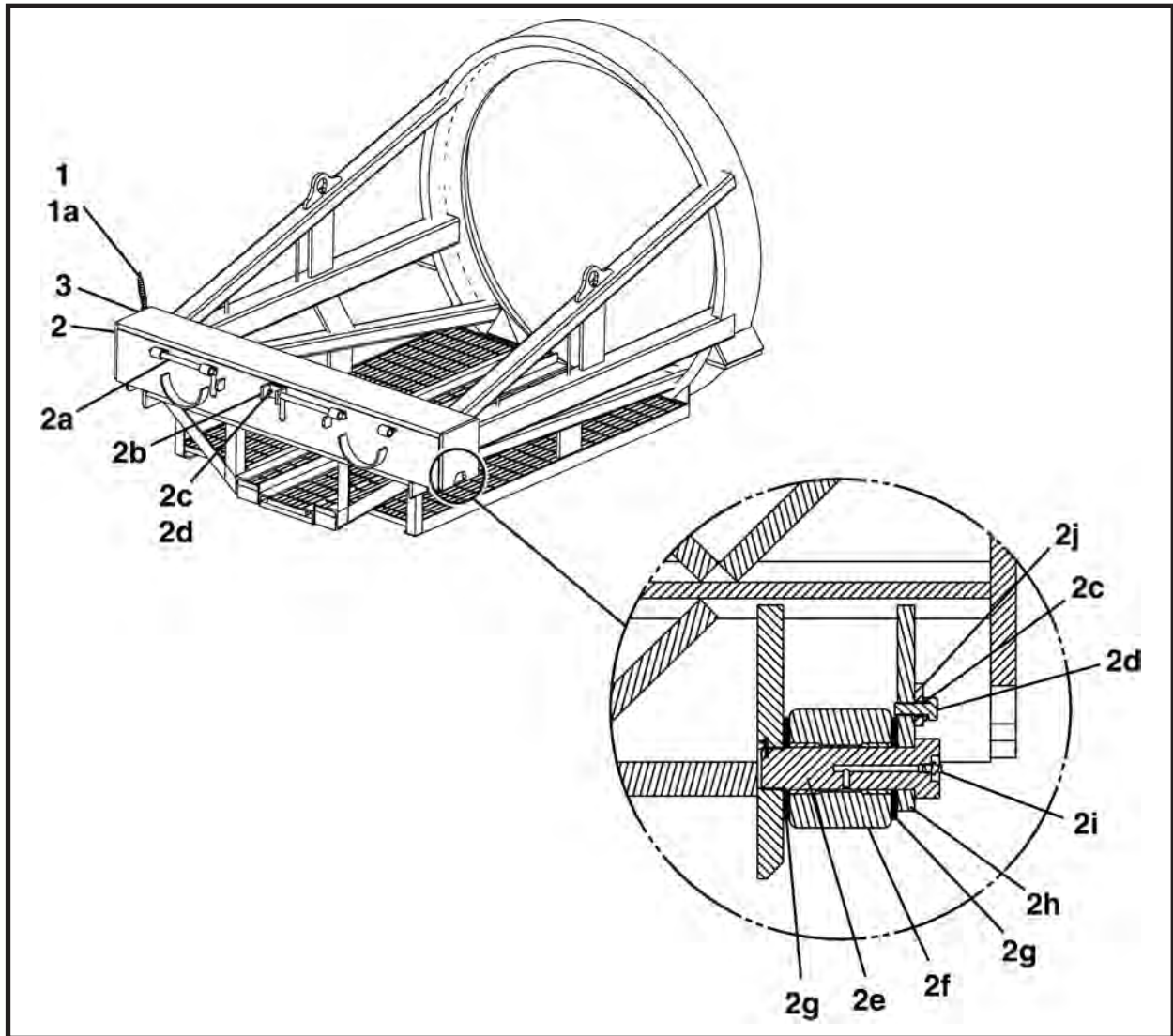
YOKE ASSEMBLY
360 - 420/48SC - 480 - 540



ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	F05646F00	360 DUAL RAM YOKE, 44 OD
0.2	1	F05647F00	420/48SC DUAL RAM YOKE, 52.5 OD
0.3	1	F29220F	420/48SC EXTENDED DUAL RAM YOKE, 52.5 OD
0.4	1	F05648F00	480 DUAL RAM YOKE, 58 OD
0.5	1	F29200F	480 EXTENDED DUAL RAM YOKE, 58 OD
0.6	1	F05649F00	540 DUAL RAM YOKE, 65 OD
0.7	1	F05655F	540 EXTENDED DUAL RAM YOKE, 65 OD
1	1	002027A00	7 STAGE LINE HOLDER (includes item 1a)
1a	1	002030P00	PIN, Line Holder
2	1	005353A00	DUAL RAM YOKE BAR (Includes items 2a - 2j)
2a	2	001795A00	PIN, Yoke Retaining
2b	1	005360P00	RAM RETAINING PIN STOP
2c	4	P0045-006	WASHER, Lock 3/8
2d	4	P0001-06-003	BOLT, 3/8 UNC x .75
2e	2	005363P00	SHAFT, Roller
2f	2	025802A00	WHEEL, Yoke
2g	4	P0040-020	WASHER, Hardened 1-1/4
2h	2	005362P00	PLATE, Roller Shaft
2i	2	P0063-001	FITTING, Grease
2j	2	005364P00	BAR
3	1	002159P00	HOLDER, Yoke Line

YOKE ASSEMBLY

600 - 660 - 720 - 780 - 840



ITEM	QTY	PART NO.	DESCRIPTION
0.1	1	F05650F00	600 DUAL RAM YOKE, 72 OD
0.2	1	F29225F	600 EXTENDED DUAL RAM YOKE, 72 OD
0.3	1	F05478F00	660 DUAL RAM YOKE, 79 OD
0.4	1	F29375F	660 EXTENDED DUAL RAM YOKE, 79 OD
0.5	1	F05651F00	720 DUAL RAM YOKE, 86 OD
0.6	1	F29235F00	720 EXTENDED DUAL RAM YOKE, 86 OD
0.7	1	F05652F00	780 DUAL RAM YOKE, 93 OD
0.8	1	F05653F00	840 EXTENDED DUAL RAM YOKE, 100 OD
1	1	002027A00	7 STAGE LINE HOLDER (includes item 1a)
1a	1	002030P00	PIN, Line Holder
2	1	005353A00	DUAL RAM YOKE BAR (Includes items 2a - 2j)
2a	2	001795A00	PIN, Yoke Retaining
2b	1	005360P00	RAM RETAINING PIN STOP
2c	4	P0045-006	WASHER, Lock 3/8
2d	4	P0001-06-003	BOLT, 3/8 UNC x .75
2e	2	005363P00	SHAFT, Roller
2f	2	025802A00	WHEEL, Yoke
2g	4	P0040-020	WASHER, Hardened 1-1/4
2h	2	005362P00	PLATE, Roller Shaft
2i	2	P0063-001	FITTING, Grease
2j	2	005364P00	BAR
3	1	002159P00	HOLDER, Yoke Line

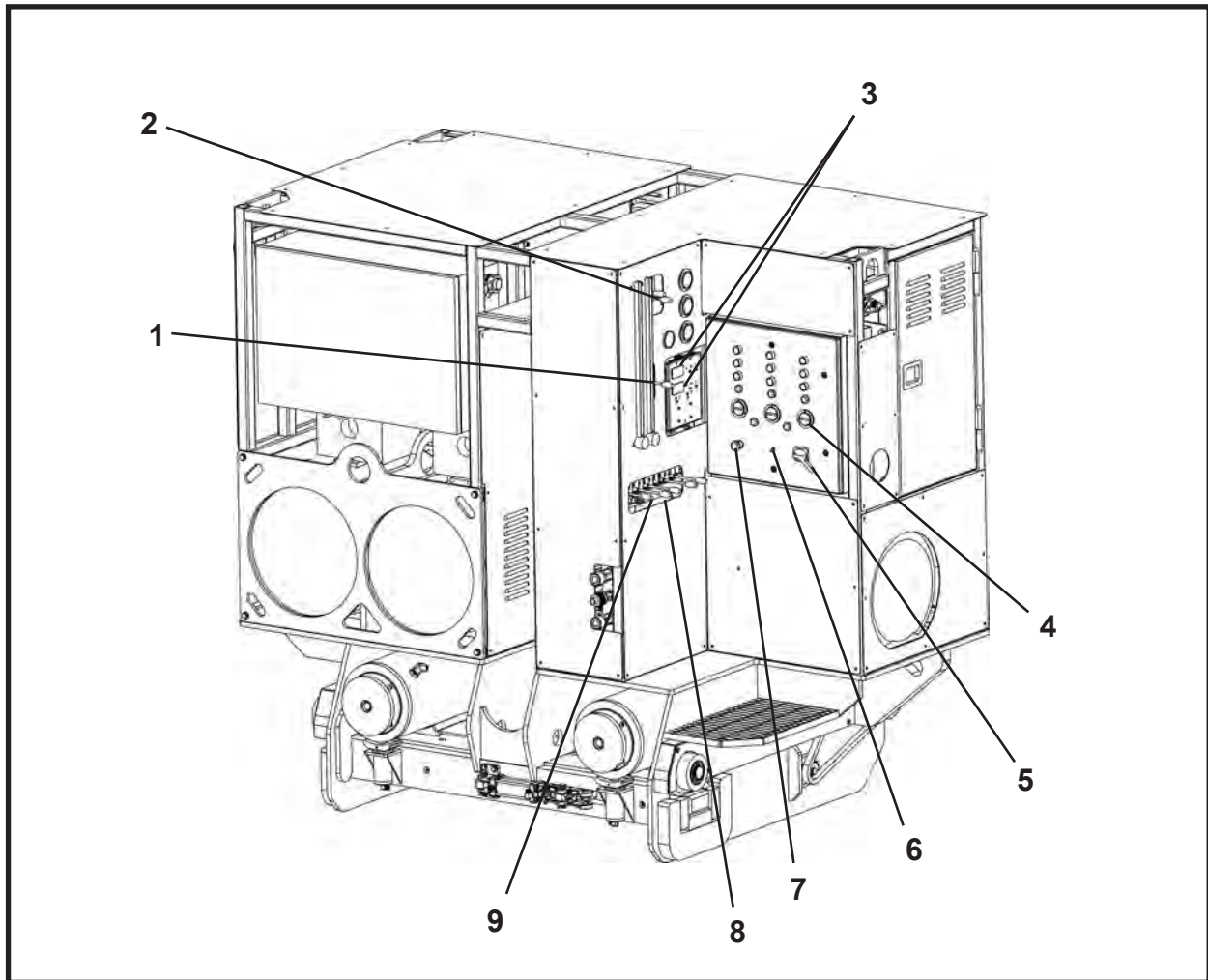
NOTES



Operator Controls

5000 Series II Pump Unit	
Operator Controls (SN F20400F-01)	2
Operator Controls (SN F20400F-02 & After)	3
Adjustable Speed Control Assembly, 021122A	4

OPERATOR CONTROLS
5000 Series II PUMP UNIT (SN F20400F-01)

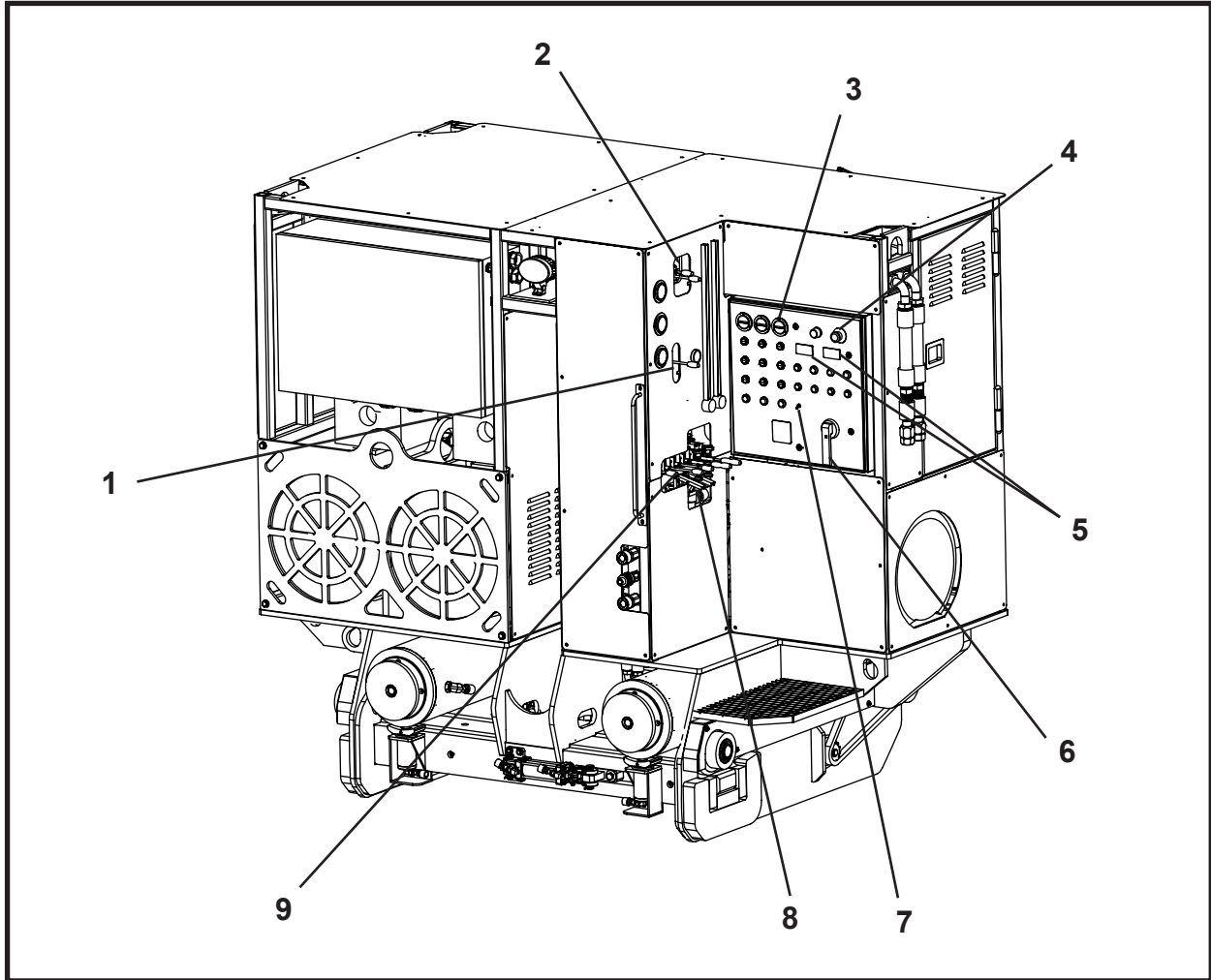


ITEM	QTY	PART NO.	DESCRIPTION
1*	1	P0302-685	BORING HEAD VALVE
2*	1	P0302-684	AUXILIARY BORING HEAD VALVE
3	2	P0251-445	METER, Temperature
4	3	P0251-410	HOURMETER
5	1	P0251-482	HANDLE & SHAFT BREAKER
6	1	P0056-147	SWITCH, Toggle
7	1	-	E-STOP (Includes items 7a - 7e)
7a	1	P0310-420F	E-STOP, Illuminated Pushbutton
7b	1	P0251-563	LIGHT, White LED Pilot
7c	1	P0310-474F	DECAL, Emergency Stop
7d	1	P0310-419F	LATCH, Mounting
7e	3	P0056-122F	BLOCK, Contact
8**	1	021122A	ADJUSTABLE SPEED CONTROL ASSEMBLY
9*	1	P0302-684	JACKING VALVE

* Refer to Section 7, Valves for parts breakdown.

** Refer to this section for parts breakdown.

OPERATOR CONTROLS
5000 Series II PUMP UNIT (SN F20400F-02 & After)

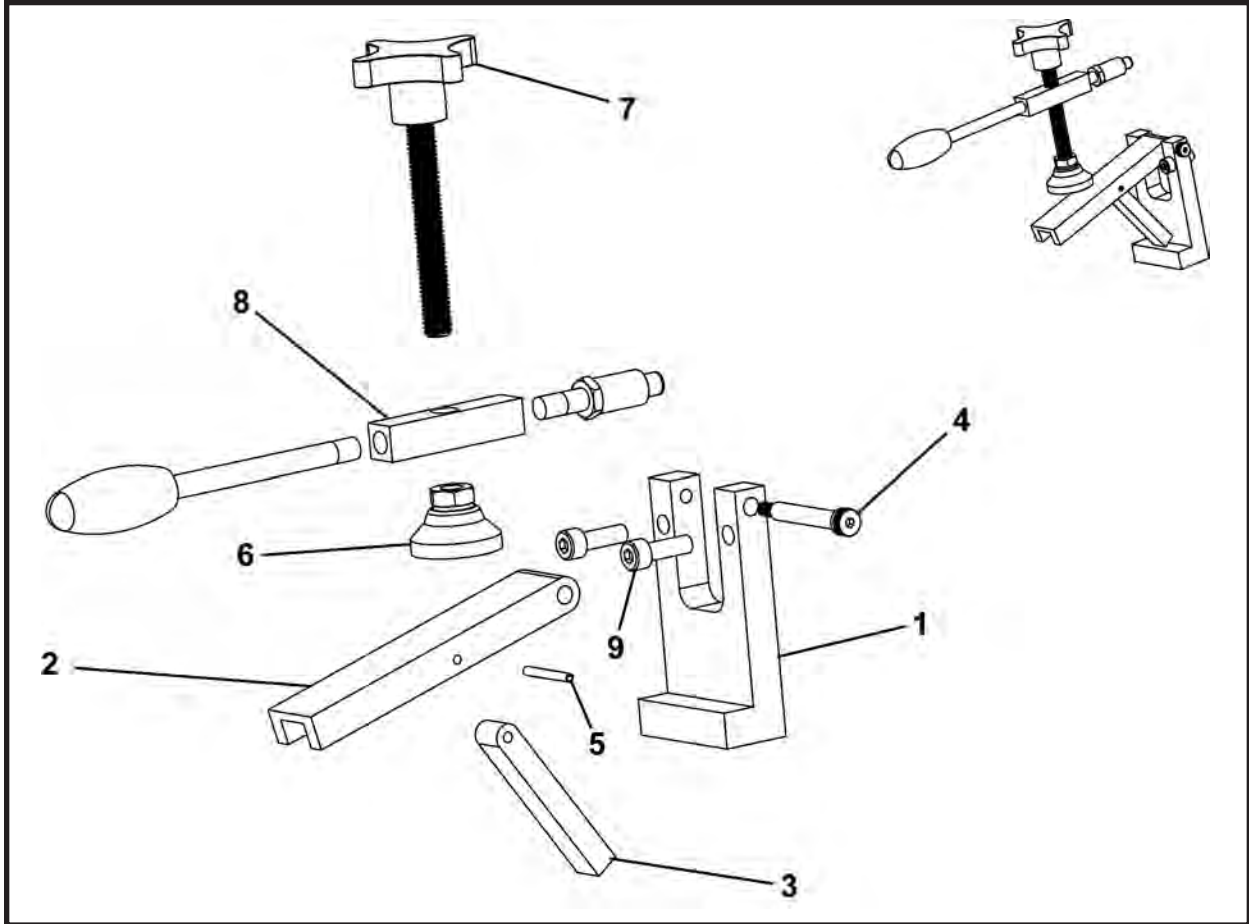


ITEM	QTY	PART NO.	DESCRIPTION
1*	1	P0302-685	BORING HEAD VALVE
2*	1	P0302-684	AUXILIARY BORING HEAD VALVE
3	3	P0251-410	HOURMETER
4	1	-	E-STOP (Includes items 4a - 4e)
4a	1	P0310-420F	E-STOP, Illuminated Pushbutton
4b	1	P0251-563	LIGHT, White LED Pilot
4c	1	P0310-474F	DECAL, Emergency Stop
4d	1	P0310-419F	LATCH, Mounting
4e	3	P0056-122F	BLOCK, Contact
5	2	P0251-445	METER, Temperature
6	1	P0251-482	HANDLE & SHAFT BREAKER
7	1	P0056-147	SWITCH, Toggle
8**	1	021122A	ADJUSTABLE SPEED CONTROL ASSEMBLY
9*	1	P0302-684	JACKING VALVE

* Refer to Section 7, Valves for parts breakdown.

** Refer to this section for parts breakdown.

ADJUSTABLE SPEED CONTROL ASSEMBLY, 021122A
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	021122A	ADJUSTABLE SPEED CONTROL ASSEMBLY
1	1	021119P	BRACE, Frame Mount
2	1	021120P	BASE, Frame Mount
3	1	021121P	SUPPORT, Frame Mount
4	1	P0030S-04-006S	BOLT, Shoulder SS 1/4 x 1.5
5	1	P0049S-042	PIN, Spring SS
6	1	P0059-072	MOUNT, Swivel Leveling
7	1	P0059-073	KNOB, Threaded Stud
8	1	021118P	MOUNT, Handle
9	2	P0031-04-003	SCREW, Socket Head Cap 1/4 UNC x .75

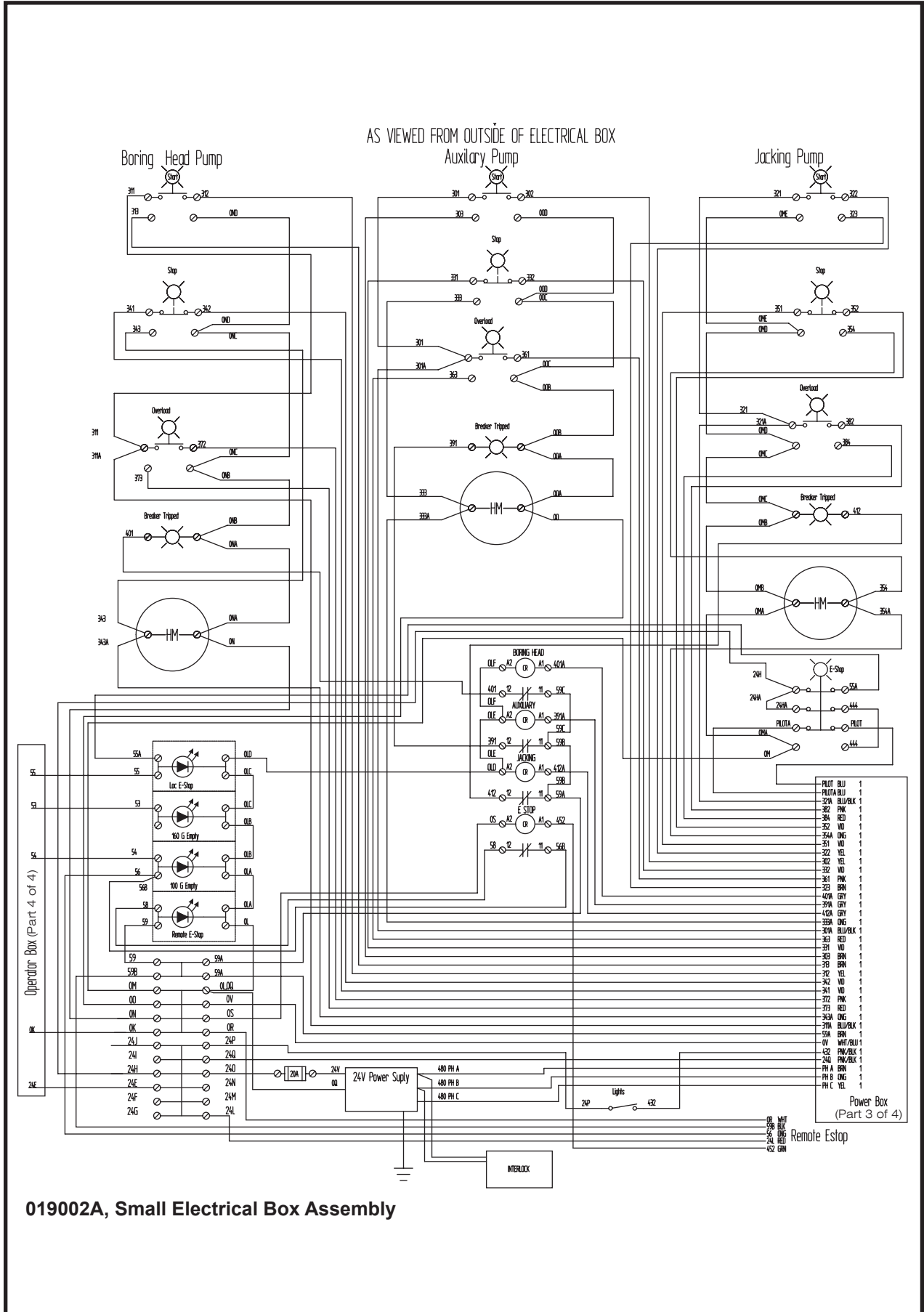


Electrical

5000 Series II Pump Unit	
Electrical Schematic, 020365A	2
Electrical System, 020365A	6
Large Electrical Box Assembly, 019001A	8
Large Panel Assembly, 019012A	9
Operators Box Assembly (SN F20400F-01), 019003A	10
Electrical Panel Assembly (SN F20400F-01), 019006A	11
Small Electrical Box Assembly (SN F20400F-01), 019002A	12
Small Electrical Box Assembly (SN F20400F-02 & After), 019002A	13
Small Panel Assembly (SN F20400F-01), 019009A	14
Small Panel Assembly (SN F20400F-02 & After), 019009A	15
Electrical Disconnect Box Assembly, 019019A	16
E-Stop Electrical Box Assembly, 019023A	18

ELECTRICAL SCHEMATIC (Part 1 of 4), 020365A

5000 Series II PUMP UNIT



019002A, Small Electrical Box Assembly

ELECTRICAL SCHEMATIC (Part 2 of 4), 020365A

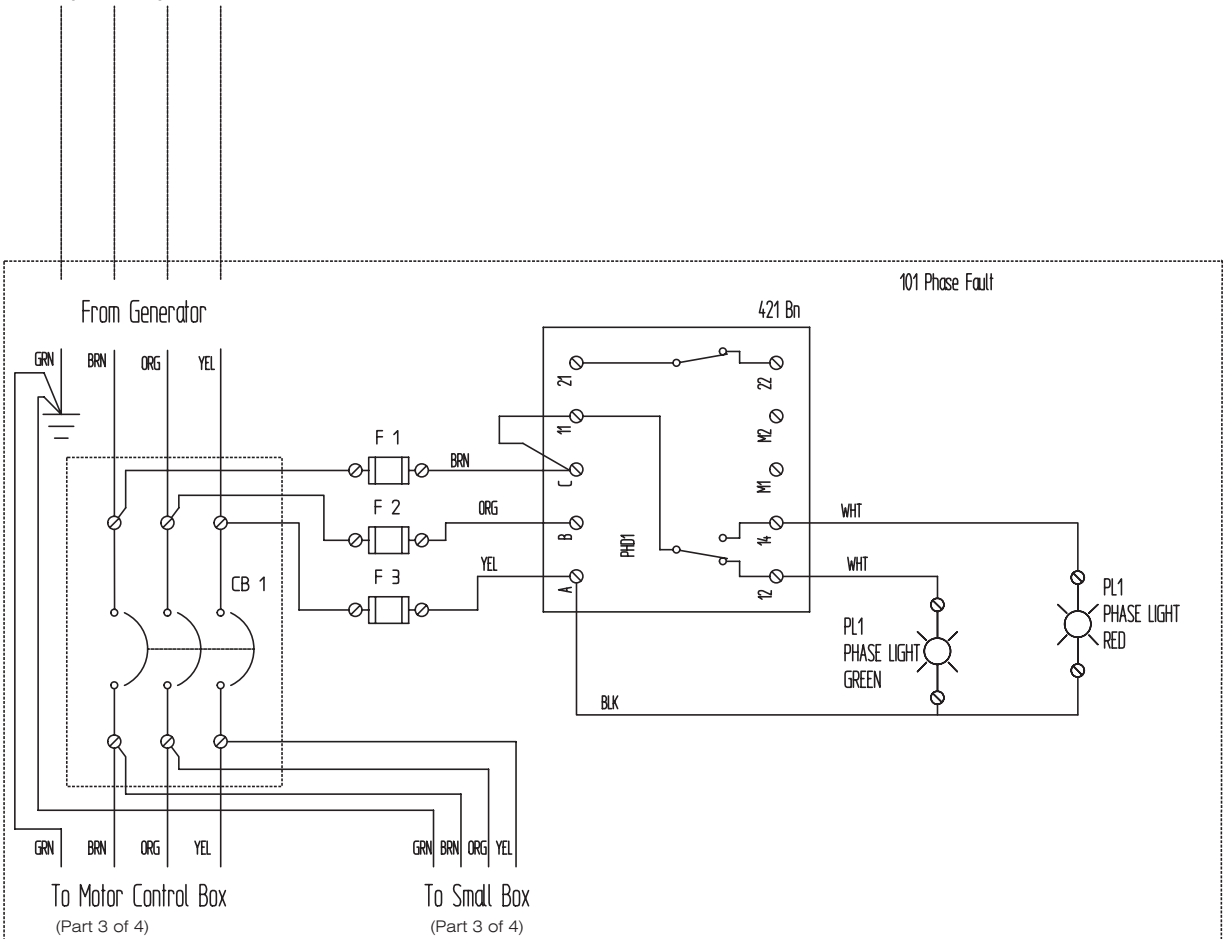
5000 Series II PUMP UNIT

CB1	P0251-429	400A Main Breaker
F1 - F3	P0310-473B	Fuse holder
	P0310-954	1A Fuse
PHD1	P0251-443	Phase Detector
PH1	P0251-463	Pilot Light
	P0251-464	Pilot Light Lens

- REFERENCE -

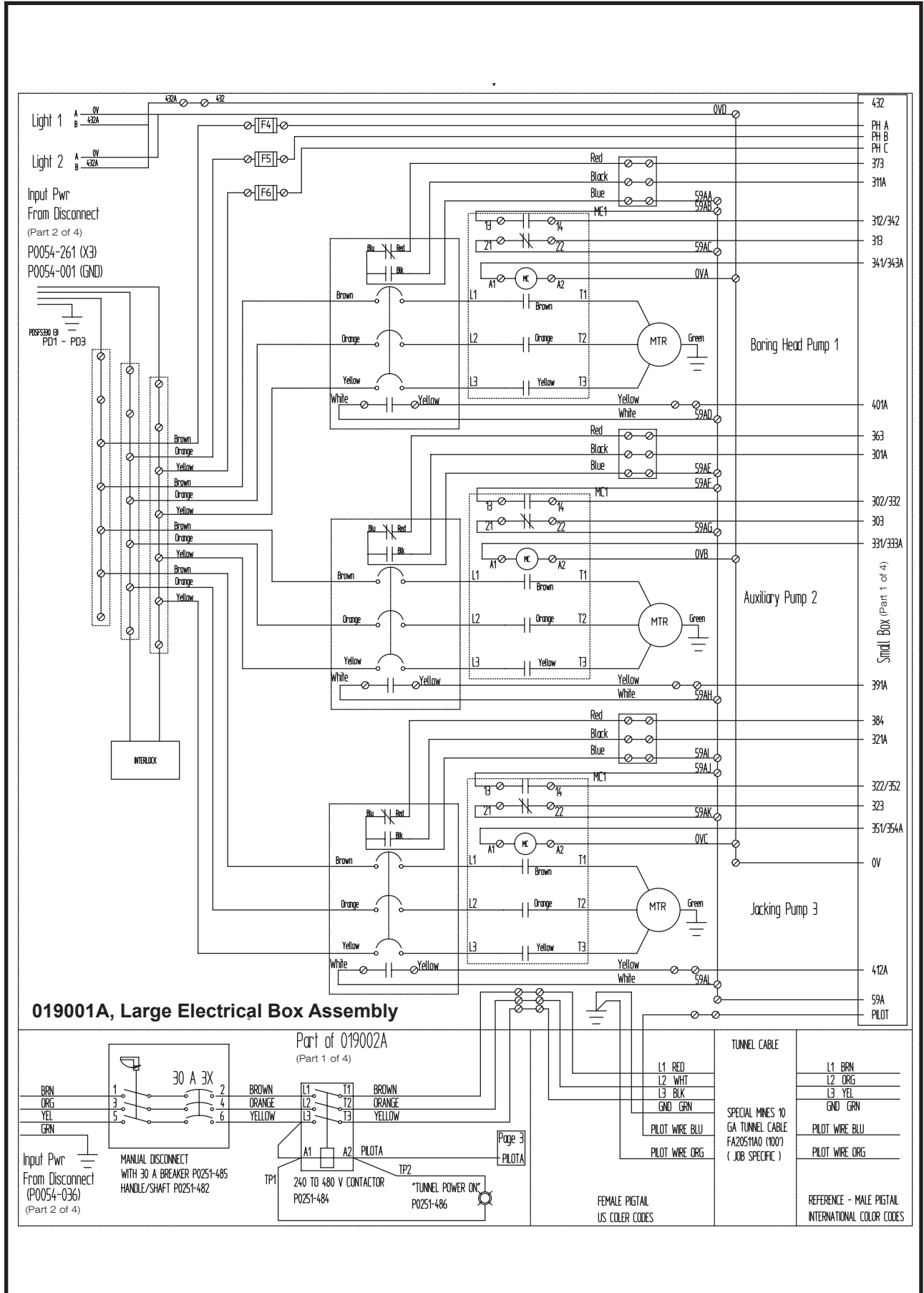
F20623F

STARTER CABLE



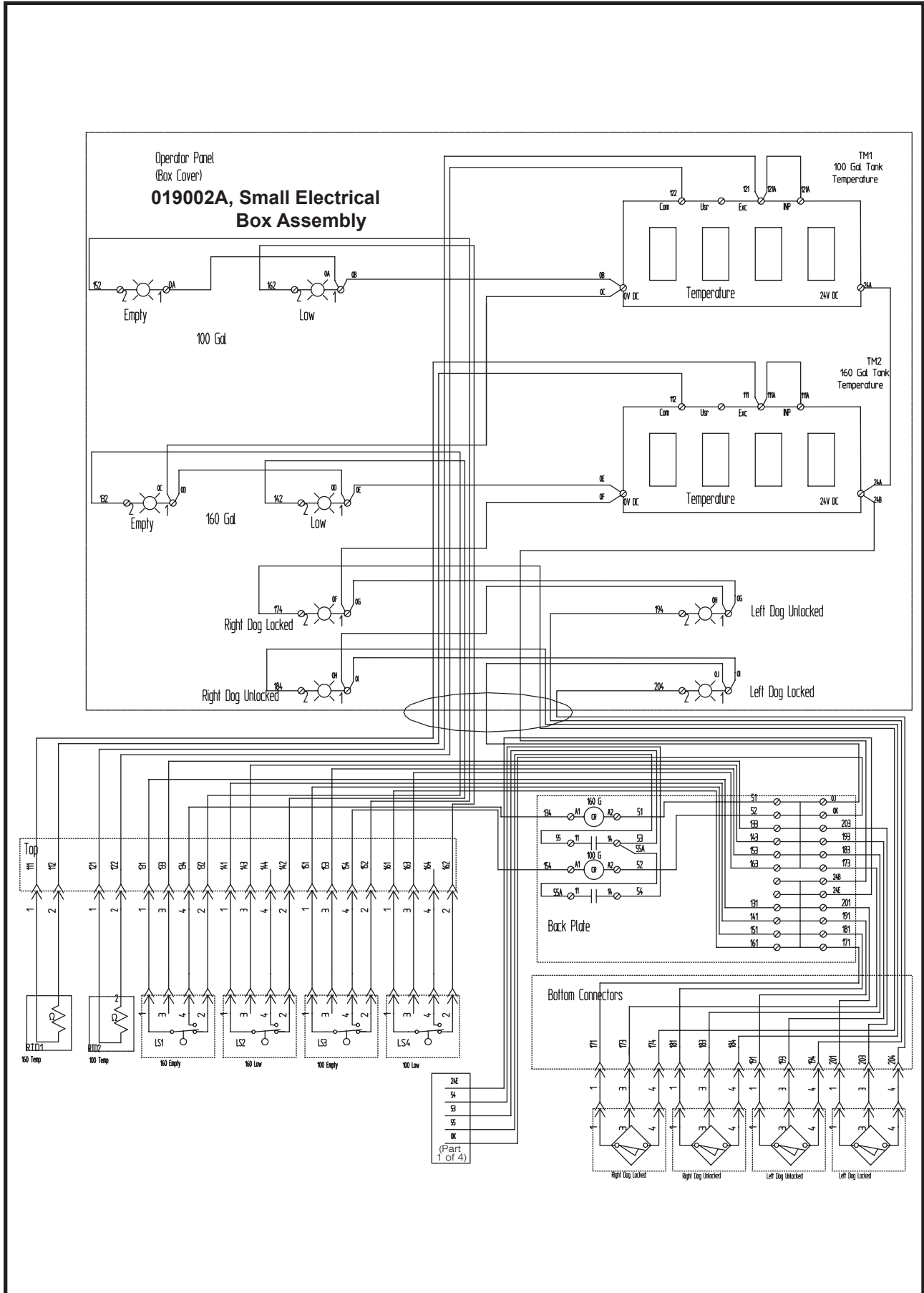
019019A, Electrical Disconnect Box Assembly

ELECTRICAL SCHEMATIC (Part 3 of 4), 020365A 5000 Series II PUMP UNIT



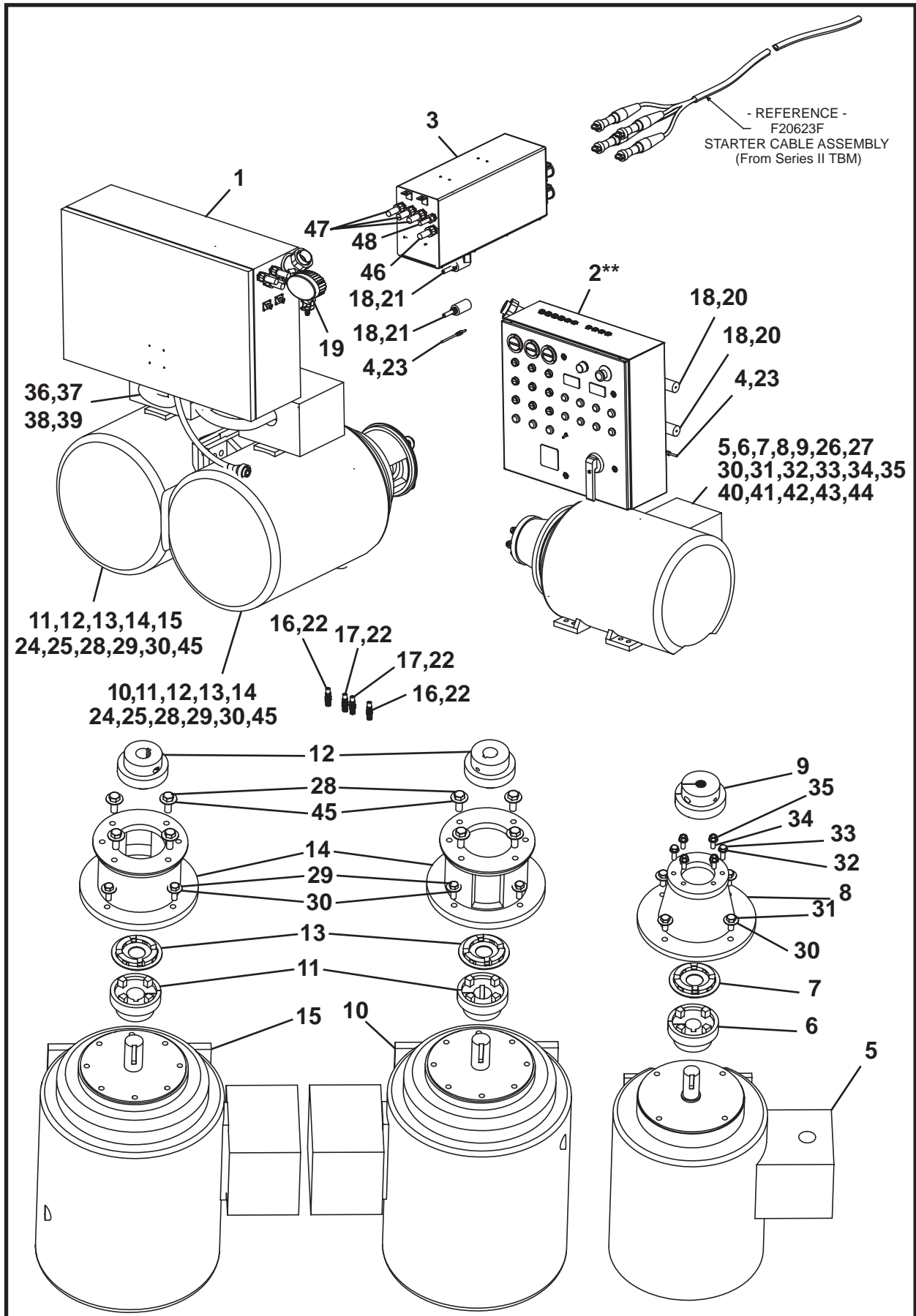
ELECTRICAL SCHEMATIC (Part 4 of 4), 020365A

5000 Series II PUMP UNIT



ELECTRICAL SYSTEM, 020365A

5000 Series II PUMP UNIT



ELECTRICAL SYSTEM, 020365A

5000 Series II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
0	1	020365A	ELECTRICAL SYSTEM
1*	1	019001A	LARGE ELECTRICAL BOX ASSEMBLY
2*	1	**019002A	SMALL ELECTRICAL BOX ASSEMBLY
3*	1	019019A	ELECTRICAL DISCONNECT BOX ASSEMBLY
4	2	019047A	CABLE ASSEMBLY
5***	1	P0251-406	MOTOR, 50 HP (Jacking)
6.1	1	P0305-201	COUPLING (SN F20400F-01)
6.2	1	P0305-177	COUPLING (SN F20400F-02 & After)
7.1	1	P0305-112D	INSERT (SN F20400F-01)
7.2	1	P0305-182	INSERT (SN F20400F-02 & After)
8	1	P0305-168	ADAPTER, Pump/Motor
9.1	1	P0305-176	COUPLING (SN F20400F-01)
9.2	1	P0305-132A	COUPLER (SN F20400F-02 & After)
10***	1	P0251-405	MOTOR, 100 HP RH (Auxiliary)
11	2	P0305-112A	COUPLER
12	2	P0305-118B	COUPLING
13	2	P0305-112D	INSERT
14	2	P0305-199	MOUNT, PUMP
15***	1	P0251-404	MOTOR, 100HP LH (Boring Head)
16	2	P0054-567	SWITCH, Proximity
17	2	P0251-455	SWITCH, Proximity
18	4	P0251-440	SWITCH, Liquid Level
19	1	019026A-010	ASSY, CABLE-LIGHT (Includes item 19a)
19a	1	P0251-438	LIGHT, LED Flood
20	2	P0054-570	CABLE 3'
21	2	P0054-571	CABLE 6'
22	4	P0054-573	CABLE 8'
23	2	P0054-403	CABLE, Micro 6'
24	2	P0311-108	STRAIN RELIEF
25	2	P0311-084	BUSHING, Reducer
26	1	P0311-072	CONNECTOR
27	1	P0311-055	BUSHING, Reducer
28	8	P0001-12-008	BOLT, Hex 3/4 UNC x 2
29	8	P0001-10-007	BOLT, Hex 5/8 UNC x 1.75
30	12	P0040-010	WASHER, Hardened Flat 5/8
31	4	P0001-10-006	BOLT, Hex 5/8 UNC x 1.5
32	6	P0040-008	WASHER, Hardened Flat 1/2
33	2	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
34	4	P0025-002A	STUD, 1/2 UNC x 1.75
35	4	P0003-08-000	NUT, 1/2
36	240 LI	P0054-015	CABLE
37	6	P0055-060	LUG, Copper 3/8"
38	6	P0027-025	BOLT, Brass Hex 5/16 UNC x .5
39	6	P0027-005	NUT, Brass 5/16
40	160 LI	P0054-035	CABLE,
41	3	P0055-052	STUD, Copper 5/16
42	3	P0055-046A	LUG, 1/4
43	3	P0027-018	BOLT, Hex 1/4 UNC x .5
44	3	P0027-004	NUT, Brass 1/4
45	8	P0040-012	WASHER, Hardened Flat 3/4
46	114 LI	P0054-036	CORD
47	180 LI	P0054-261	WIRE
48	96 LI	P0054-001	CABLE

* Refer to this section for parts information.

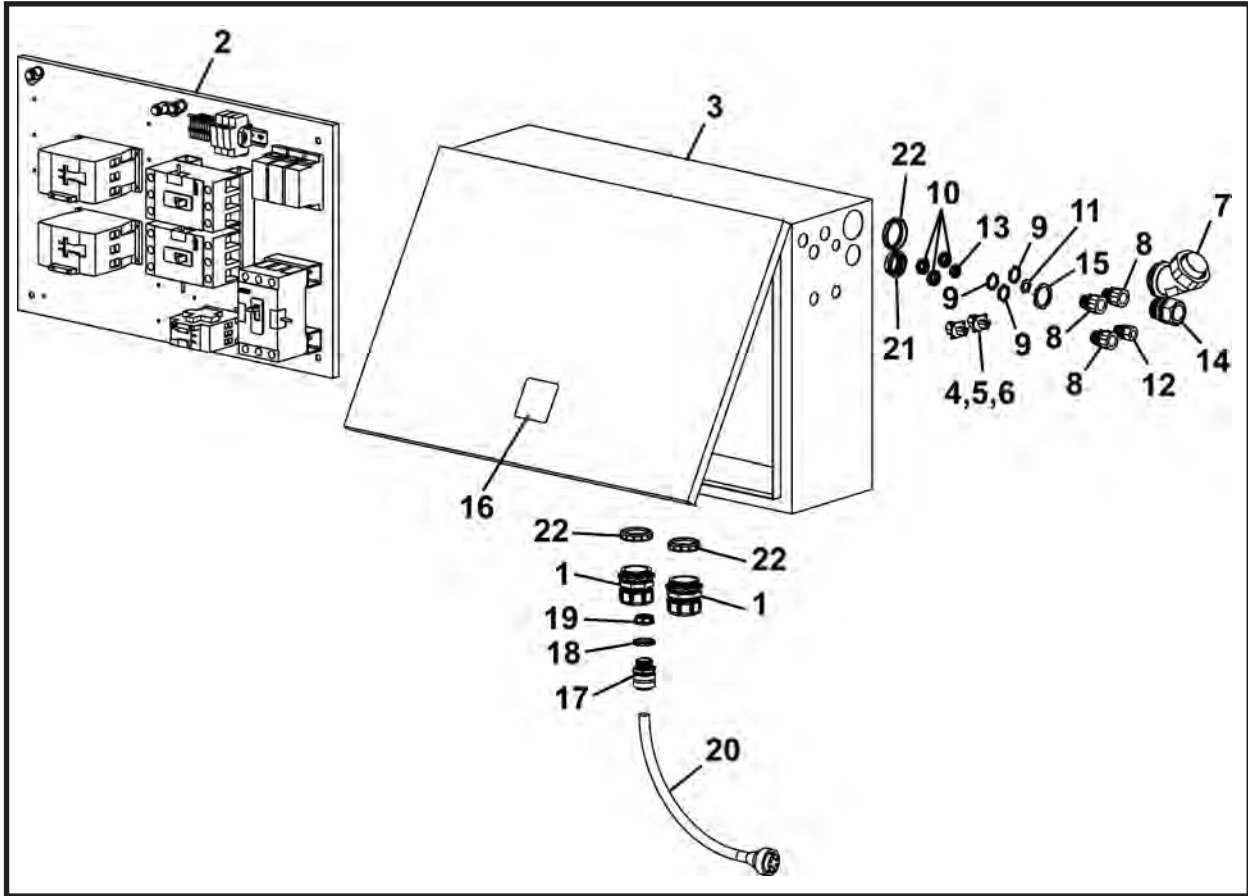
** For SN F20400F-01, refer to Operators Box Assembly, 019003A and Small Electrical Box Assembly, 019002A in this section.

*** Refer to section 8, Motors for parts information.

LI - Linear Inch

Note: Use Starter Cable Assembly, F20623F to connect Series II TBM to 5000 Series II Pump Unit Electrical Disconnect Box Assembly, 019019A (refer to this section for parts information).

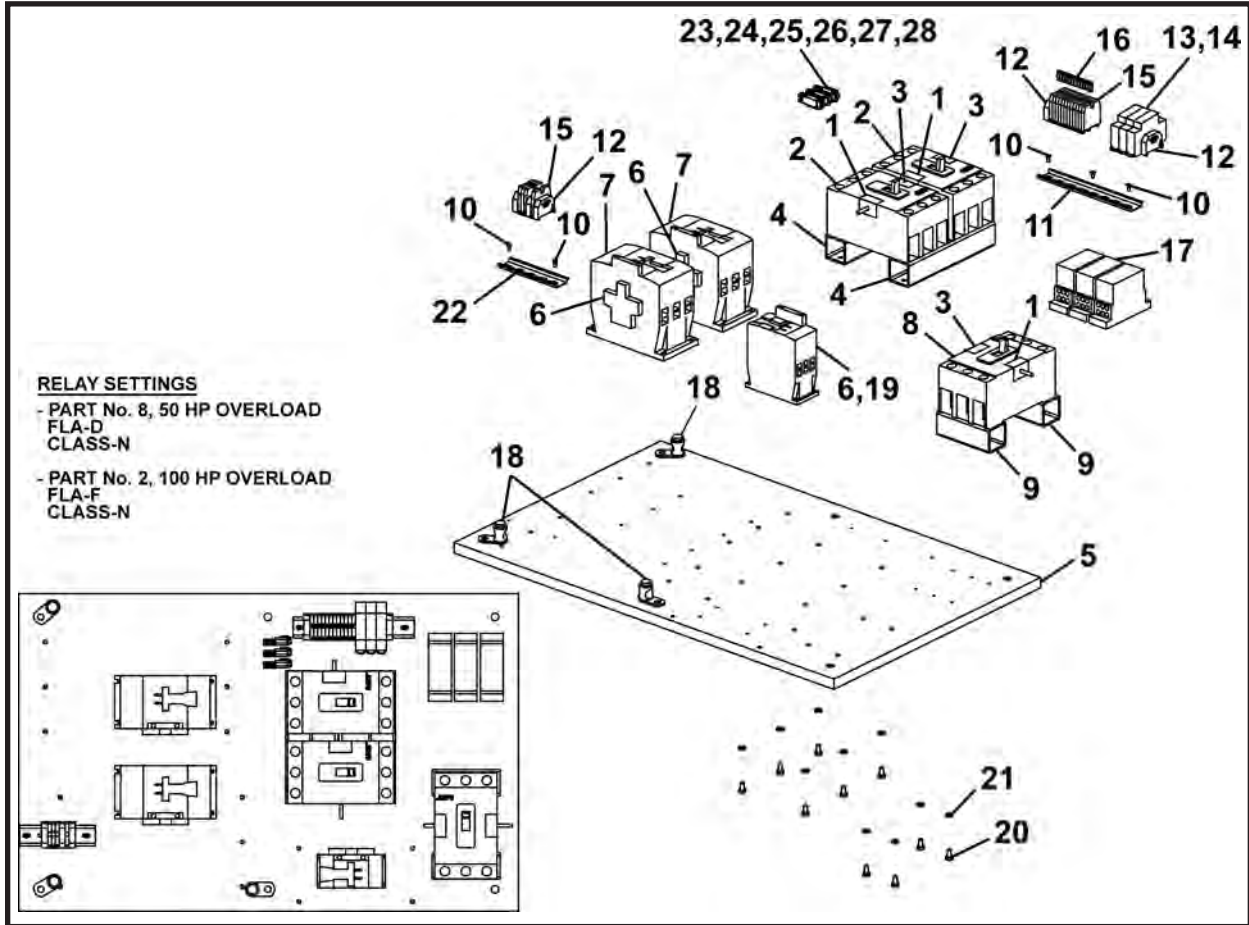
LARGE ELECTRICAL BOX ASSEMBLY, 019001A
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019001A	LARGE ELECTRICAL BOX ASSEMBLY
1	2	P0311-108	STRAIN RELIEF
2*	1	019012A	ASSEMBLY, Large Panel
3	1	019010P	BOX, Large Electrical
4	2	P0054-575	CONNECTOR, Flanged
5	2	P0054-576	WEDGE, Connector
6	6	P0313-007	PIN
7	1	P0311-132	CONNECTOR, 45 Deg
8	3	P0311-120	STRAIN RELIEF
9	3	P0311-019	NUT, Lock 3/4
10	3	P0311-033	BUSHING
11	1	P0311-018	NUT, 1/2" Lock
12	1	P0311-040	CONNECTOR
13	1	P0311-032	BUSHING
14	1	P0311-072	CONNECTOR
15	1	P0311-021	NUT, Lock 1-1/4
16	1	P0251-457	INTERLOCK, 460V Electrical
17	1	P0311-112	CORD GRIP 1" NPT, .875-1.0 ID
18	1	P0311-020	NUT, Lock 1
19	1	P0311-034	BUSHING
20	1	P0054-067F	CABLE
21	1	P0311-035	BUSHING
22	3	P0311-053	BUSHING

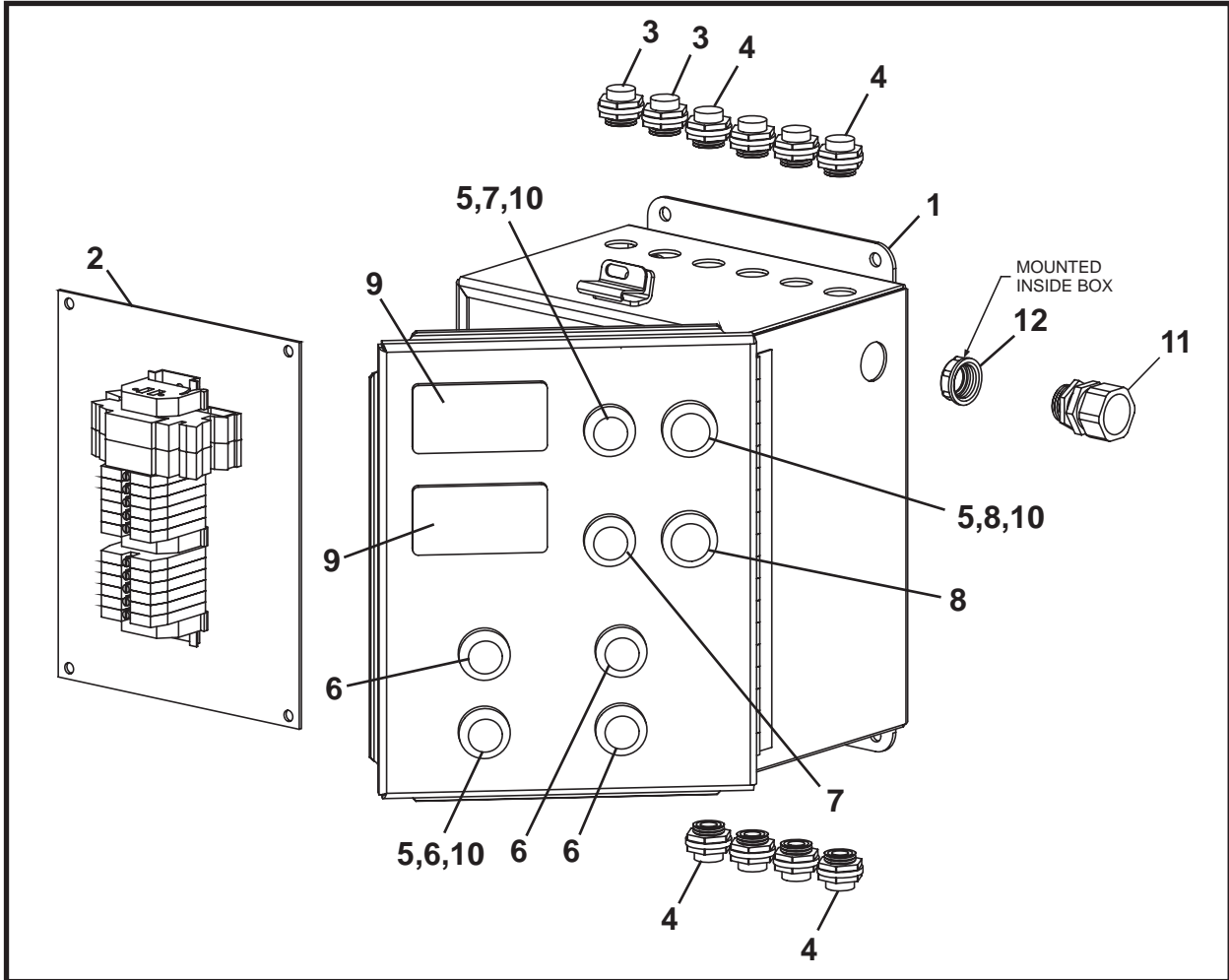
* Refer to this section for parts information.

LARGE PANEL ASSEMBLY, 019012A
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019012A	LARGE PANEL ASSEMBLY
1	3	P0251-436	CONTACT, Overload Auxiliary
2	2	P0251-434	BREAKER, 100 HP Feeder
3	3	P0251-437	SHUNT TRIP
4	2	019014P	TUBE, Spacer
5	1	019011P	PANEL, Electrical
6	3	P0251-432	CONTACT, Auxiliary
7	2	P0251-431	CONTACTOR, 100 HP (Boring Head/Auxiliary Motor Contactor)
8	1	P0251-435	BREAKER, 50 HP Feeder
9	2	019013P	TUBE, Spacer
10	5	P0020-83-022	SCREW, Truss Head 8-32 x .375
11	1	P0310-503-008	DIN RAIL 8
12	5	P0310-571	HOLDER, Fuse
13	3	P0310-473B	HOLDER, Fuse
14	3	P0310-953	FUSE, 5 Amp Time Delay
15	16	P0310-500	BLOCK, Terminal
16	1	P0310-573	JUMPERS, Terminal Strip
17	3	P0251-441	BLOCK, Power Distribution
18	3	P0311-036	CLAMP, Ground
19	1	P0251-433	CONTACTOR, 50 HP (Jacking Motor Contactor)
20	10	P0001-04-002	BOLT, Hex 1/4 UNC x .5
21	10	P0045-004	WASHER, Lock 1/4
22	1	P0310-503-005	DIN RAIL 5
23	3	P0313-074	RECEPTACLE
24	3	P0313-074A	WEDGELOCK, Receptacle
25	3	P0313-073	PLUG
26	3	P0313-073A	WEDGELOCK, Plug
27	9	P0313-078	PIN
28	9	P0313-077	SOCKET

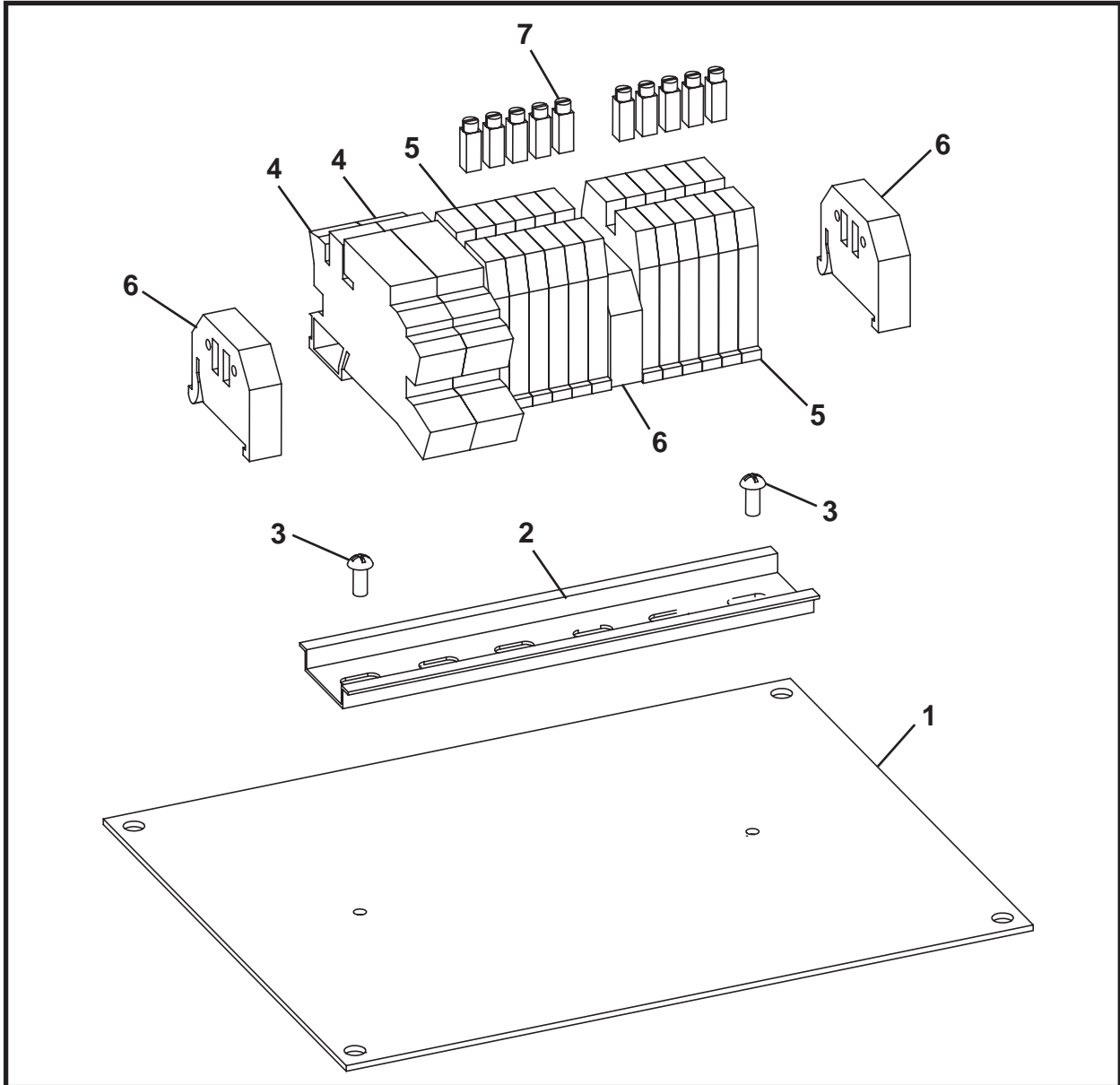
OPERATORS BOX ASSEMBLY, 019003A
5000 Series II PUMP UNIT (SN: F20400F-01 Only)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019003A	OPERATORS BOX ASSEMBLY
1	1	019004P	BOX, Operator
2*	1	019006A	PANEL, Electrical
3	2	P0054-580	RECEPTACLE, Micro
4	8	P0054-574	RECEPTACLE, Micro
5	8	P0056-131F	LATCH, Mounting
6	4	P0251-439	LIGHT, Green Indicator
7	2	P0056-149	LIGHT, Yellow Pilot
8	2	P0056-129F	LIGHT, Red Pilot
9	2	P0251-445	METER, Temperature
10	8	P0251-171	MODULE, LED
11	1	P0311-005	CONNECTOR
12	1	P0311-032	BUSHING, Insulating 1/2

* Refer to this section for parts information.

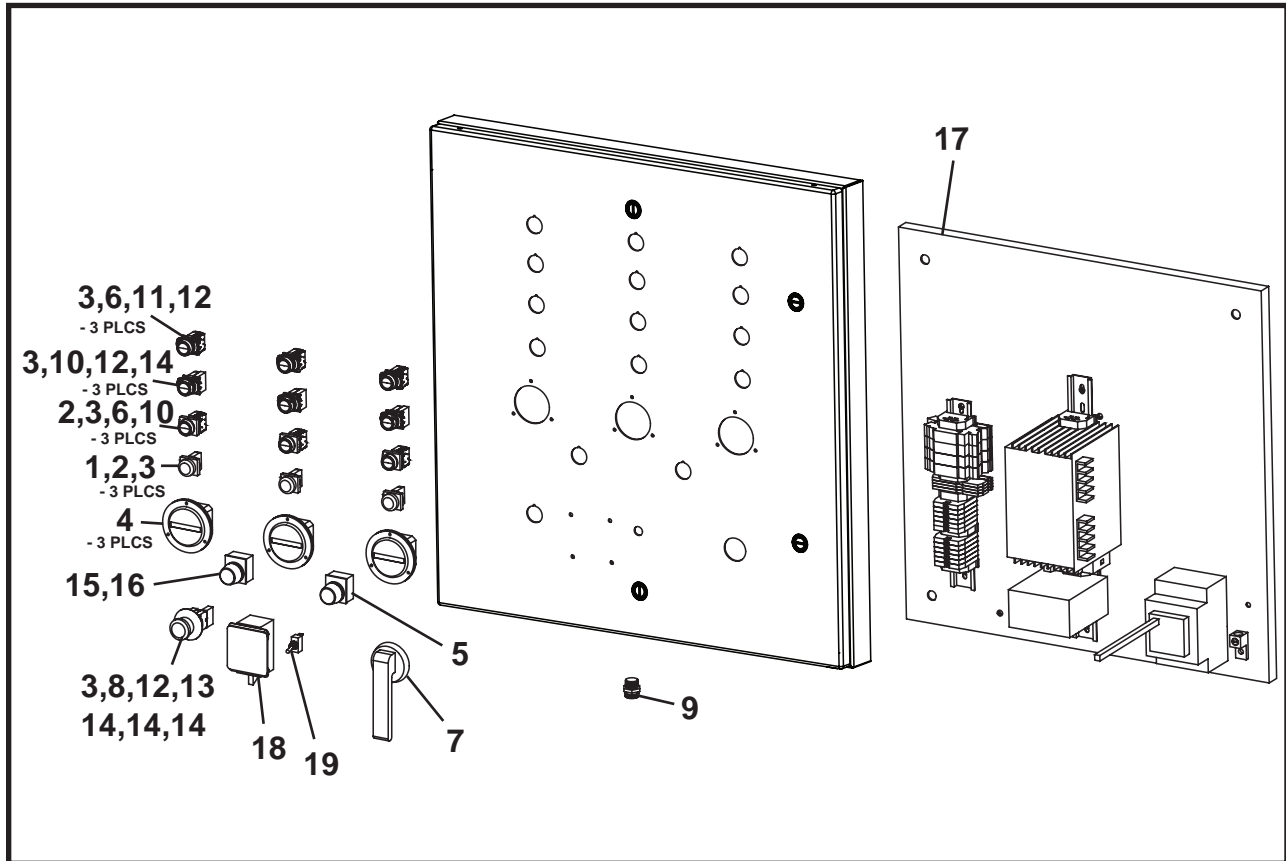
ELECTRICAL PANEL ASSEMBLY, 019006A
5000 Series II PUMP UNIT (SN: F20400F-01 Only)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019006A	ELECTRICAL PANEL ASSEMBLY
1	1	019005P	PANEL, Operator
2	1	P0310-503-006	DIN RAIL - 6
3	2	P0020-83-022	SCREW, Truss Head 8-32 x .375
4	2	P0251-409	RELAY, Contactor
5	12	P0310-500	BLOCK, Terminal
6	3	P0310-571	HOLDER, Fuse
7	1	P0310-573	JUMPER, Terminal Strip

SMALL ELECTRICAL BOX ASSEMBLY, 019002A

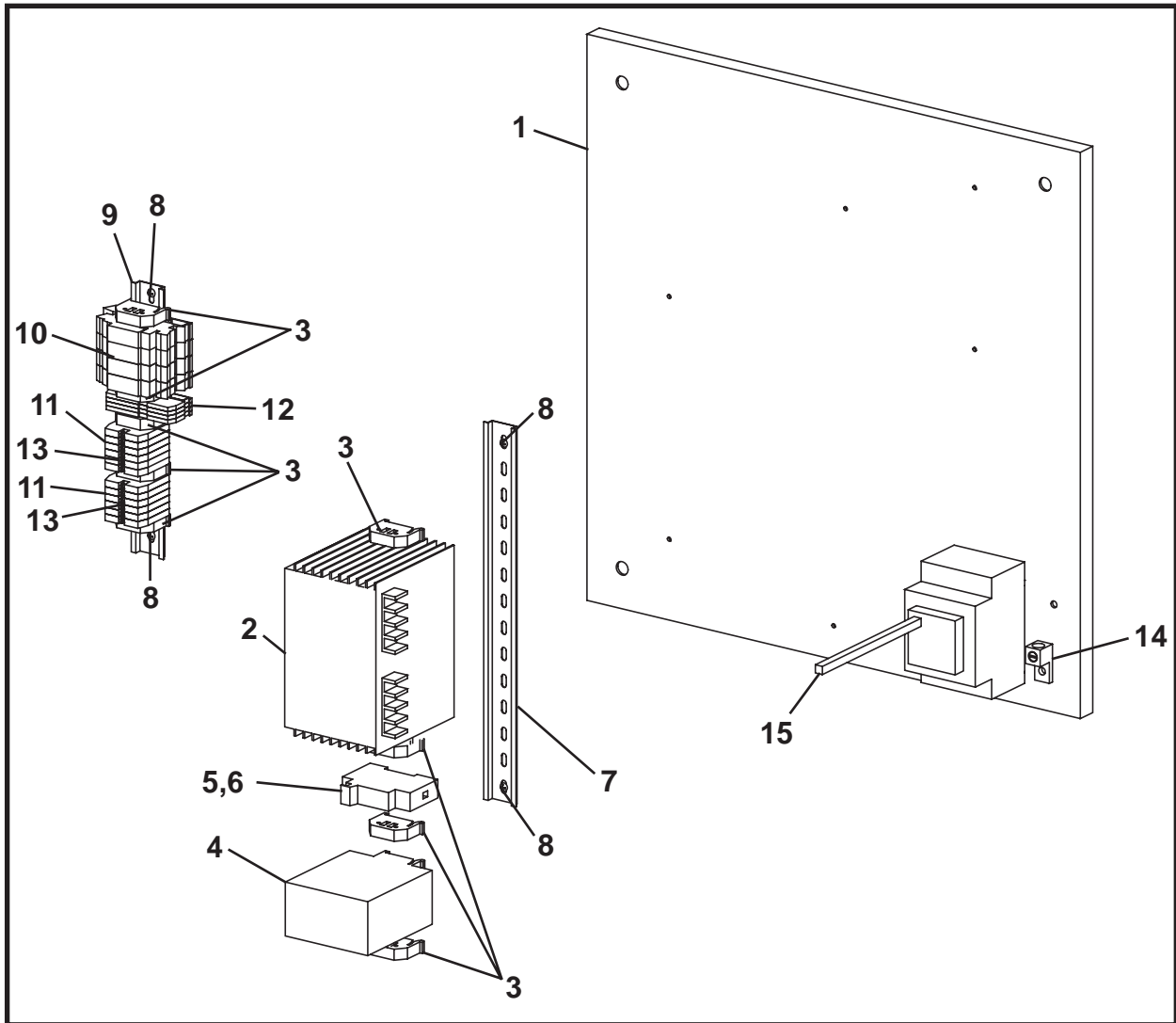
5000 Series II PUMP UNIT (SN: F20400F-01)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019002A	SMALL ELECTRICAL BOX ASSEMBLY
1	3	P0056-129F	LIGHT, Red Pilot
2	6	P0056-131F	LATCH, Mounting
3	13	P0251-563	LIGHT, White LED Pilot
4	3	P0251-410	HOURMETER
5	1	P0251-486	LIGHT, Red Indicator
6	6	P0056-121F	CONTACT
7	1	P0251-482	HANDLE & SHAFT BREAKER
8	1	P0310-474F	DECAL, Emergency Stop
9	1	P0054-073B	RECEPTACLE, Mini
10	6	P0310-412F	SWITCH, Illuminated Pushbutton, Amber
11	3	P0310-411F	SWITCH, Illuminated Pushbutton
12	7	P0310-419F	LATCH, Mounting
13	1	P0310-420F	E-STOP, Illuminated Pushbutton
14	6	P0056-122F	BLOCK, Contact
15	1	P0251-463	LIGHT, Red Pilot
16	1	P0251-464	LENS, Plastic Red
17	1	019009A	ASSEMBLY, Panel-Small
18	1	P0251-457	INTERLOCK, Electrical 460V
19	1	P0056-147	SWITCH, Toggle

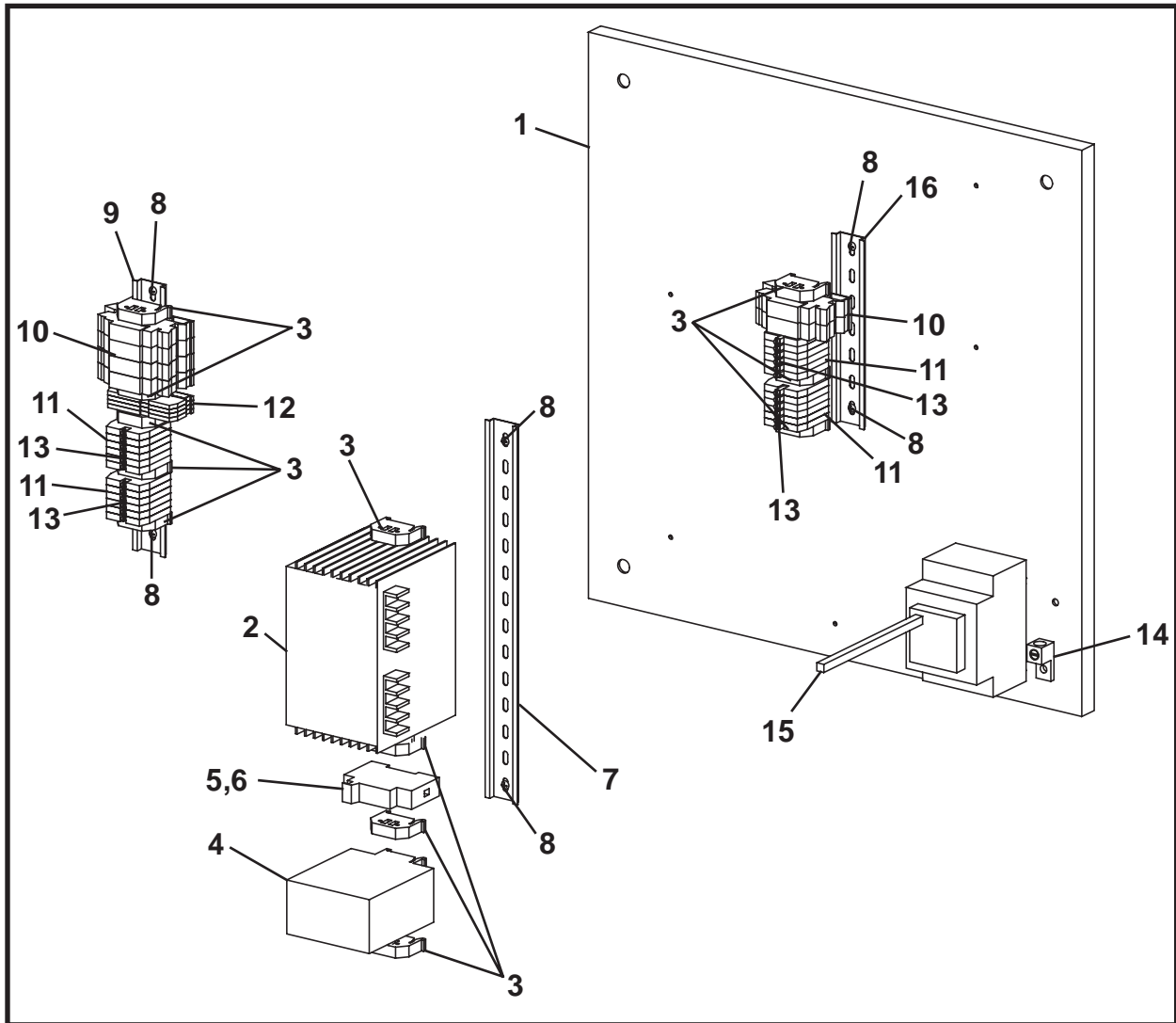
SMALL PANEL ASSEMBLY, 019009A

5000 Series II PUMP UNIT (SN F20400F-01)



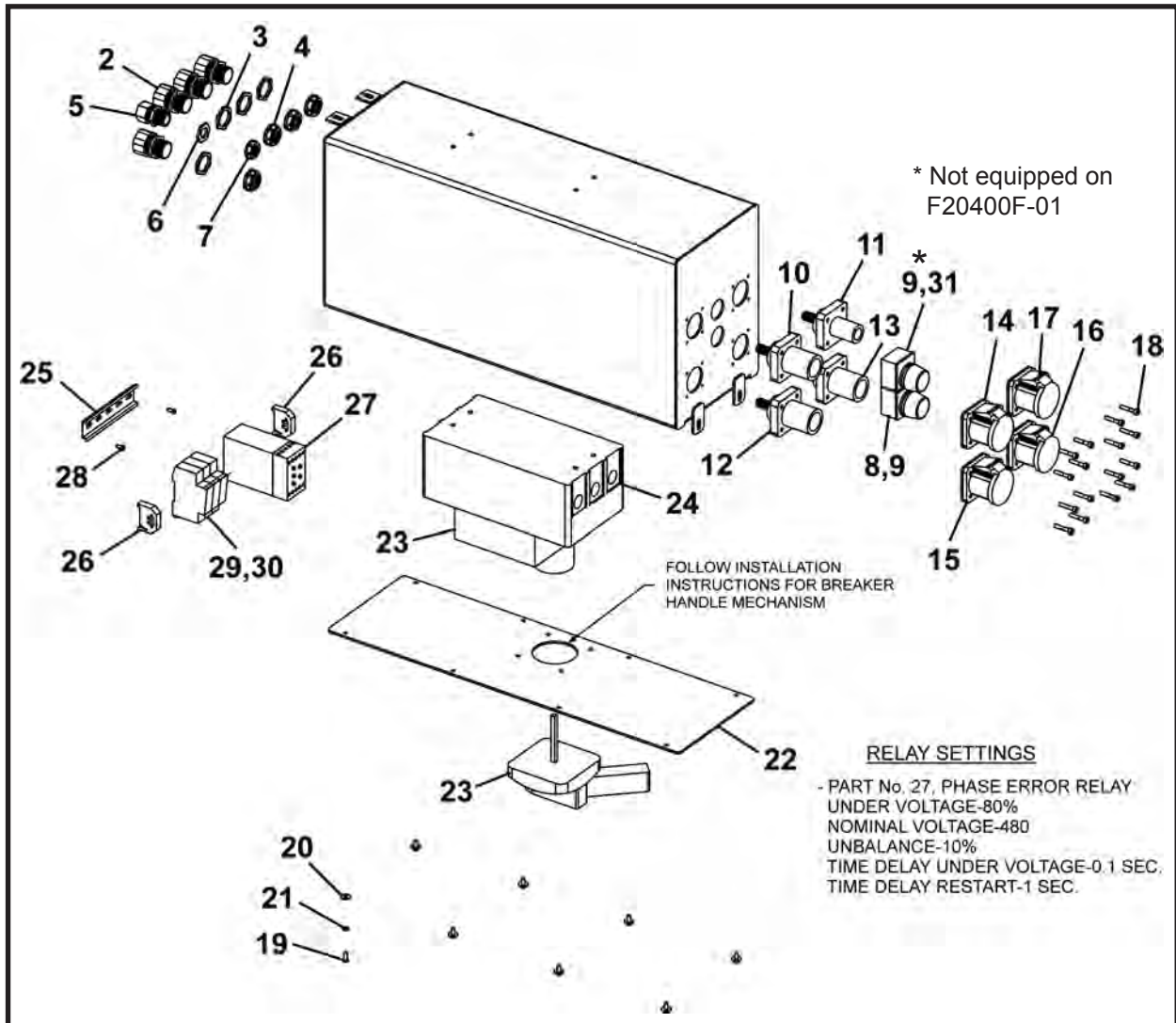
ITEM	QTY	PART NO.	DESCRIPTION
0	1	019009A	SMALL PANEL ASSEMBLY
1	1	019008P	PANEL, Electrical-Small
2	1	P0251-442	POWER SUPPLY 24V 480W
3	9	P0310-571	HOLDER, Fuse
4	1	P0251-484	CONTACTOR
5	1	P0310-473B	HOLDER, Midget Fuse
6	1	P0251-386	FUSE, 20 AMP
7	1	P0310-503-014	DIN RAIL - 14
8	4	P0020-83-022	SCREW, Truss Head 8-32 x .375
9	1	P0310-503-010	DIN RAIL - 10
10	4	P0251-409	RELAY, Contactor
11	12	P0310-500	BLOCK, Terminal
12	4	P0251-444	INDICATOR, Terminal Block LED
13	1	P0310-573	JUMPER, Terminal Strip
14	1	P0055-157	LUGS
15	1	P0251-481	BREAKER W/LUGS

SMALL PANEL ASSEMBLY, 019009A
5000 Series II PUMP UNIT (SN F20400F-02 & After)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019009A	SMALL PANEL ASSEMBLY
1	1	019008P	PANEL, Electrical-Small
2	1	P0251-442	POWER SUPPLY 24V 480W
3	12	P0310-571	HOLDER, Fuse
4	1	P0251-484	CONTACTOR
5	1	P0310-473B	HOLDER, Midget Fuse
6	1	P0251-386	FUSE, 20 AMP
7	1	P0310-503-014	DIN RAIL - 14
8	6	P0020-83-022	SCREW, Truss Head 8-32 x .375
9	1	P0310-503-010	DIN RAIL - 10
10	6	P0251-409	RELAY, Contactor
11	24	P0310-500	BLOCK, Terminal
12	4	P0251-444	INDICATOR, Terminal Block LED
13	3	P0310-573	JUMPER, Terminal Strip
14	1	P0055-157	LUGS
15	1	P0251-481	BREAKER W/LUGS
16	1	P0310-503-007	DIN RAIL - 7

ELECTRICAL DISCONNECT BOX ASSEMBLY, 019019A
5000 Series II PUMP UNIT



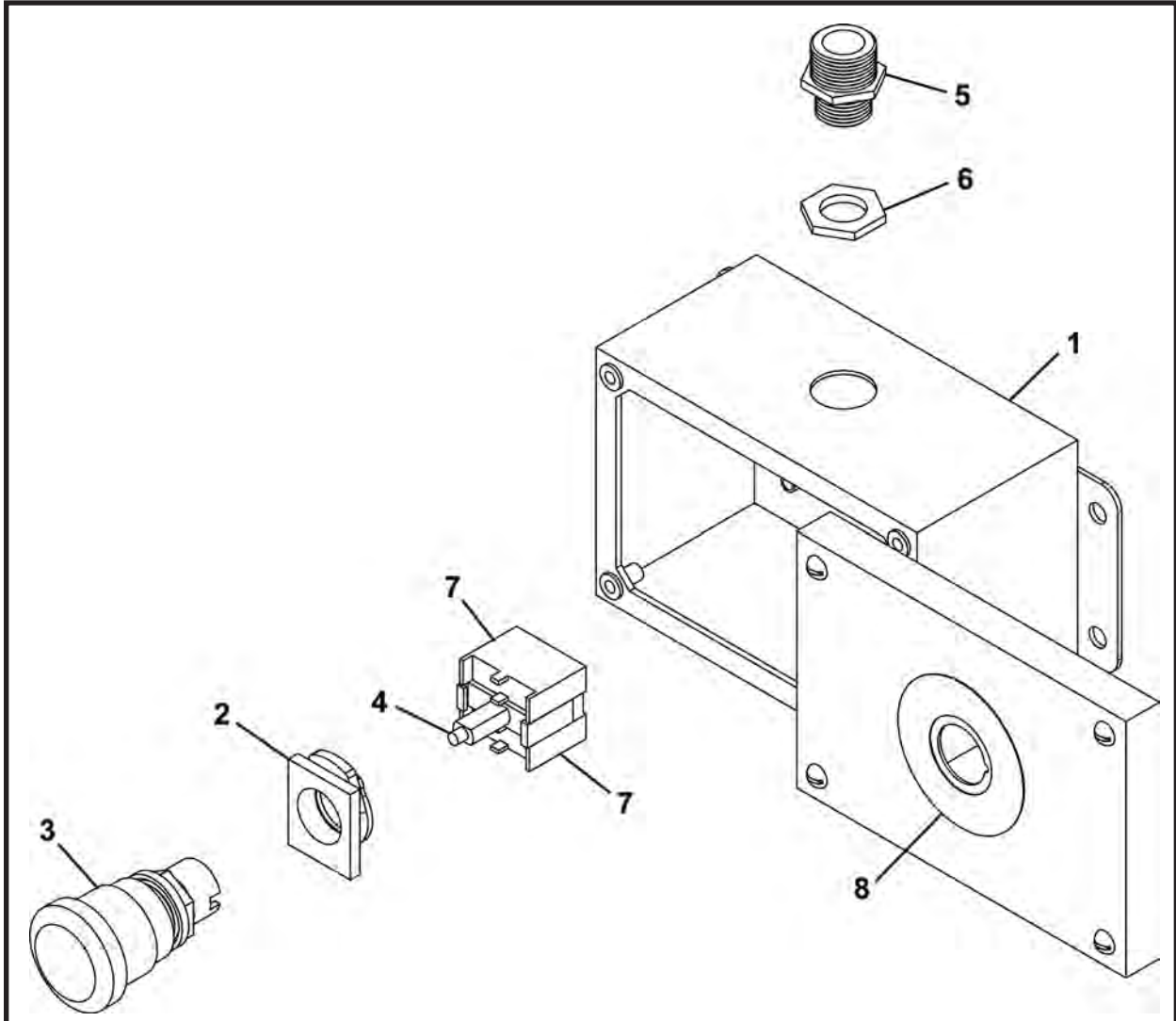
ITEM	QTY	PART NO.	DESCRIPTION
0	1	019019A	ELECTRICAL DISCONNECT BOX ASSEMBLY
1	1	019031P	BOX, Cam Lok
2	4	P0311-120	STRAIN RELIEF 3/4
3	4	P0311-019	NUT, Lock 3/4
4	4	P0311-033	BUSHING, Insulating
5	1	P0311-040	CONNECTOR, Strain Relief
6	1	P0311-018	NUT, Lock 1/2
7	1	P0311-032	BUSHING, Insulating
8	1	P0251-464	LENS, Plastic Red
9	2	P0251-463	LIGHT, Red Pilot
10	1	P0054-602	MOUNT, Brown Female Panel
11	1	P0054-376	MOUNT, Green Female Panel
12	1	P0054-603	MOUNT, Orange Female Panel
13	1	P0054-604	MOUNT, Yellow Female Panel
14	1	P0054-605	COVER, Brown
15	1	P0054-606	COVER, Orange
16	1	P0054-607	COVER, Yellow
17	1	P0054-621	COVER, Green
18	16	P0031-02-004A	SCREW, Socket Head Cap 10-32 x 1
19	8	P0017-10-324	SCREW, Machine 10-32 x .5
20	8	P0040-002	WASHER #10

* Not equipped on F20400F-01.

ELECTRICAL DISCONNECT BOX ASSEMBLY, 019019A
5000 Series II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
21	8	P0045-002	WASHER, Lock #10
22	1	019034P	COVER
23	1	P0251-430	MECHANISM, Breaker Handle
24	1	P0251-429	BREAKER, 400 AMP
25	1	P0310-503-005	DIN RAIL - 5.0
26	2	P0310-571	HOLDER, Fuse
27	1	P0251-443	PHASE DETECTOR 480V
28	2	P0020-83-022	SCREW, Truss Head 8-32 x .375
29	3	P0310-473B	HOLDER, Midget Fuse
30	3	P0310-954	FUSE, Time Delay 1.4 AMP
31	1	P0251-514	LENS, Green Plastic

E-STOP ELECTRICAL BOX ASSEMBLY, 019023A
5000 Series II PUMP UNIT & Series II TBM



ITEM	QTY	PART NO.	DESCRIPTION
0	1	019023A	E-STOP ELECTRICAL BOX
1	1	019024P	BOX, Electrical
2	1	P0310-419F	MOUNT, Latch
3	1	P0310-420F	SWITCH, Illuminated E-Stop Pushbutton
4	1	P0251-171	MODULE, LED
5	1	P0054-073A	RECEPTACLE, Mini
6	1	P0311-018	NUT, Lock 1/2
7	2	P0056-122F	BLOCK, Contact
8	1	P0310-474F	DECAL, Emergency Stop

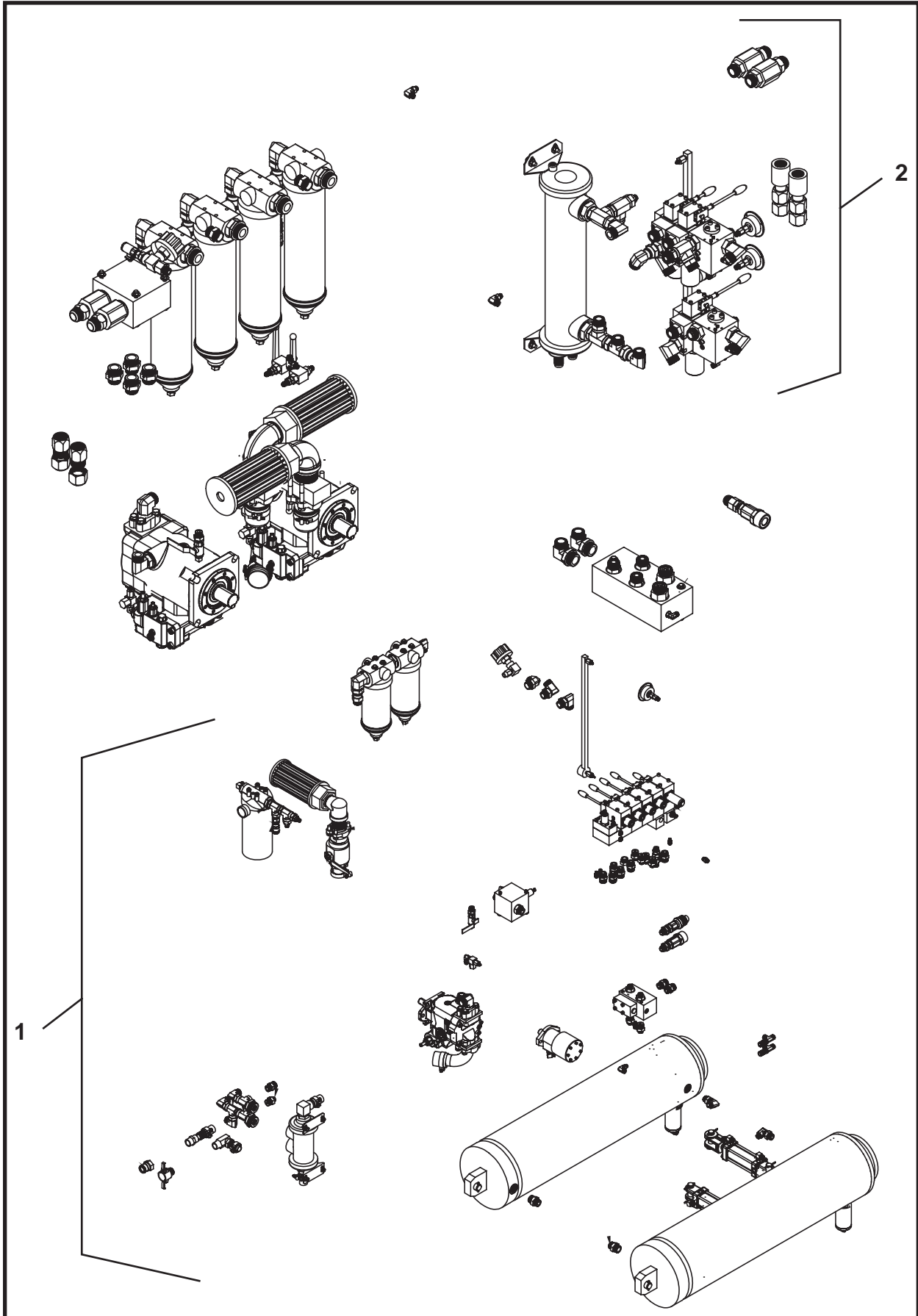


Hydraulics

5000 Series II Pump Unit	
5000 Series II Pump Unit Hydraulics, 020366A	2
100 Gallon Hydraulic Assembly, 020393A	4
160 Gallon Hydraulic Assembly, 020394A	8
Transfer Pump Assembly, 020624A	12

5000 SERIES II PUMP UNIT HYDRAULICS, 020366A

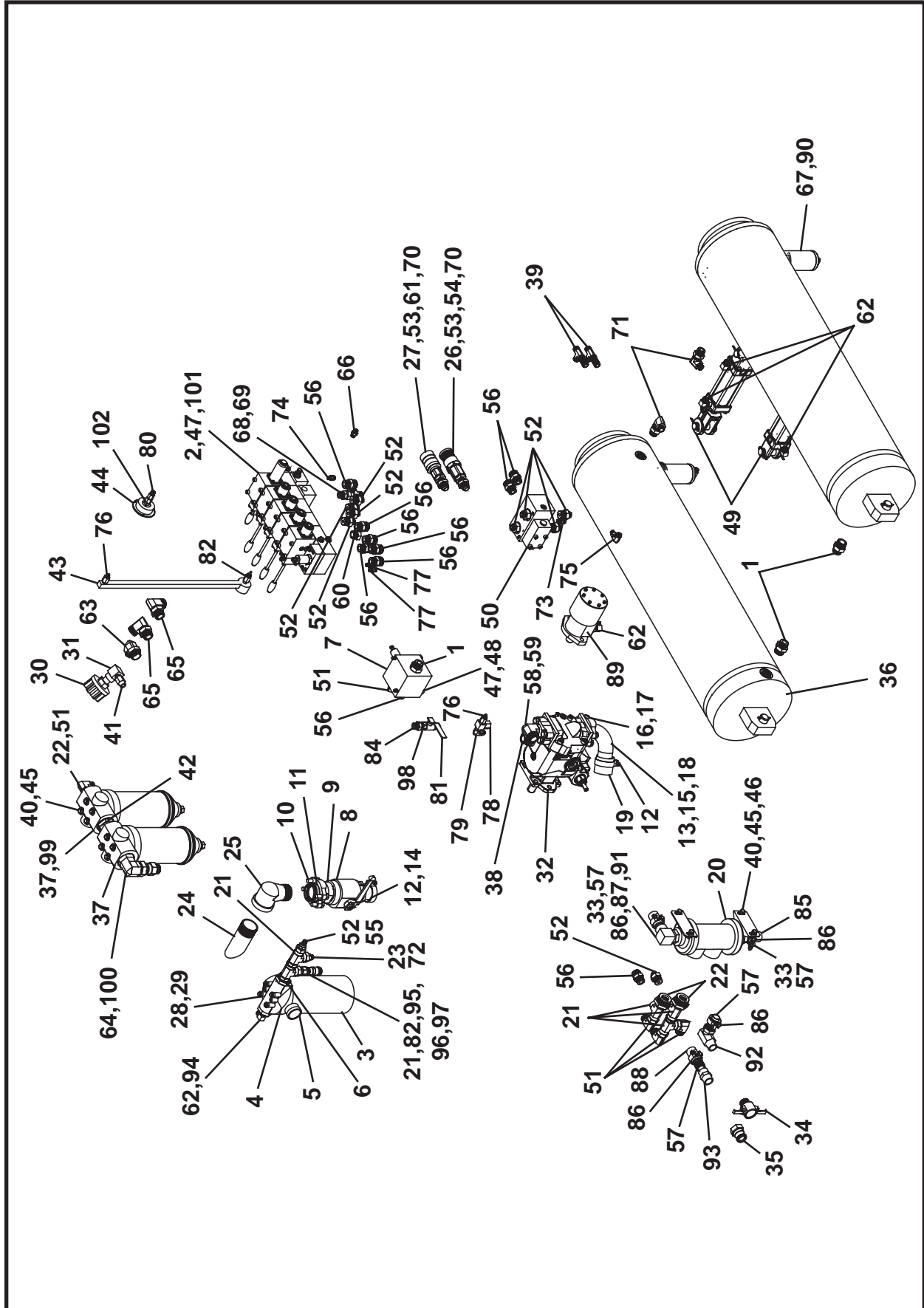
5000 SERIES II PUMP UNIT



5000 SERIES II PUMP UNIT HYDRAULICS, 020366A
5000 SERIES II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
0	1	020366A	5000 SERIES II PUMP UNIT HYDRAULICS
1	1	020393A	100 GALLON HYDRAULIC ASSEMBLY
2	1	020394A	160 GALLON HYDRAULIC ASSEMBLY

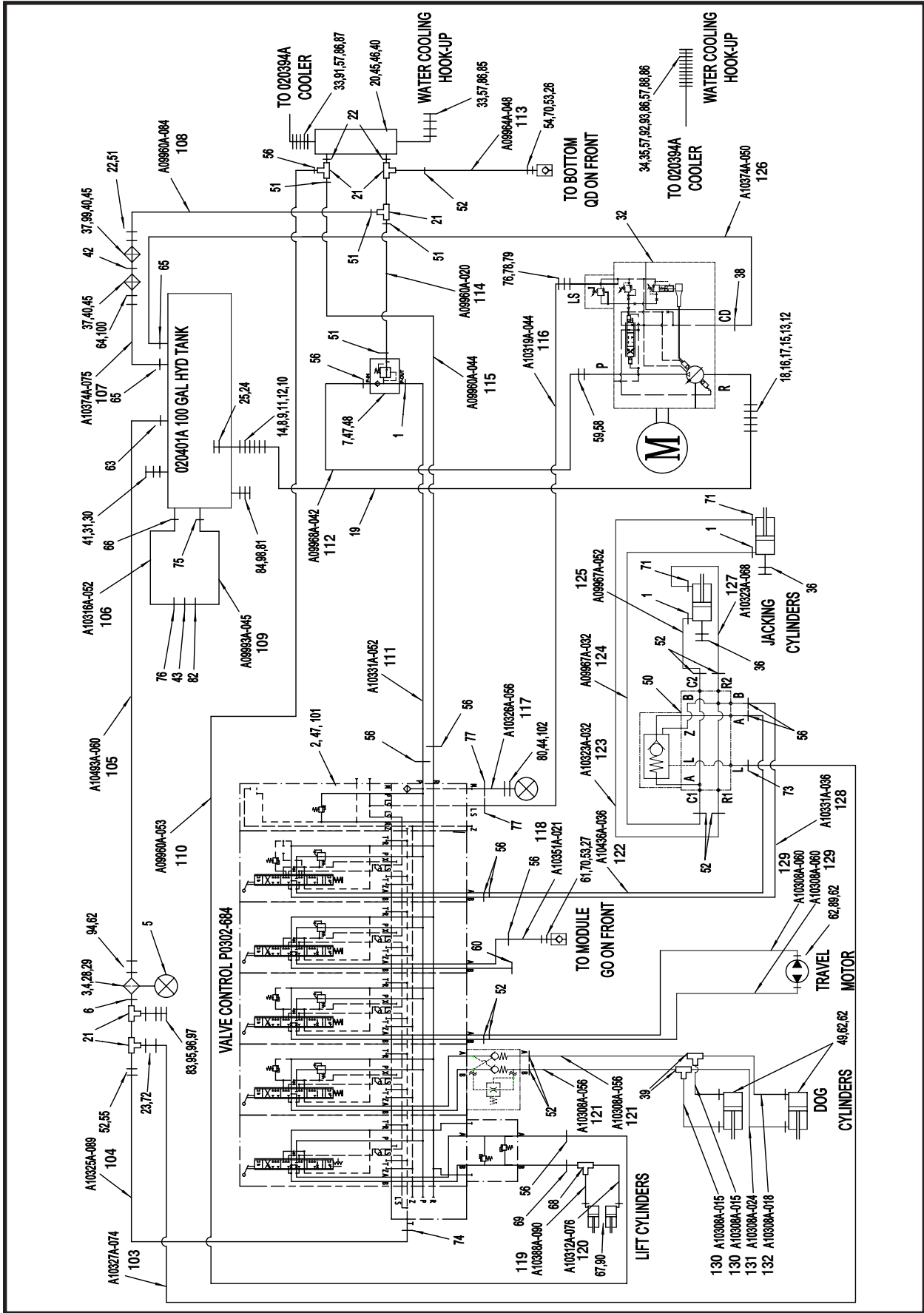
100 GALLON HYDRAULIC ASSEMBLY, 020393A
5000 Series II PUMP UNIT



100 GALLON HYDRAULIC ASSEMBLY, 020393A
5000 Series II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
0	1	020393A	100 GALLON HYDRAULIC ASSEMBLY
1	3	P0300-378	FITTING, 12MFOR-16MB
2*	1	P0302-684	VALVE, Jacking
3	1	P0309-172	ELEMENT, Filter
4	1	P0309-144B	ASSEMBLY, Filter Head
5	1	P0301-105	GAUGE, Filter Indicator
6	1	P0300-658	FITTING, 20MB-12FB
7	1	P0302-690	ASSEMBLY, Manifold
8	1	P0302-434	VALVE, ORB Suction Ball
9	1	P0300-444	ORING, 32OR
10	1	P0300-443	SEAL, 32CFHS
11	1	A42606P	FITTING, 2" Ball Valve
12	2	P0201-180	CLAMP, T-Bolt
13	1	P0300-460	ORING, 32FLOR
14	1	P0220-224	INSERT, 32-32MB
15	1	P0220-210	FITTING, 90 Degree
16	4	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
17	4	P0040-008	WASHER, Hardened Flat 1/2
18	1	P0300-518	FLANGE
19	1	P0201-159-030	HOSE, 2 x 30
20	1	P0093-029	HEAT EXCHANGER
21	5	P0300-536	FITTING, 12MB-12FB-12FB
22	3	P0300-678	FITTING, 24MB-12FB
23	1	P0300-677	FITTING, 12MB-6FB
24	1	A40799P	PIPE, Return
25	1	P0412-008A	ELBOW, 90 Degree
26	1	P0100-065A	PLUG, Aluminum 3/4
27	1	P0100-066A	CAP, Aluminum 3/4
28	4	P0001-04-003	BOLT, Hex 1/4 UNC x .75
29	4	P0040-004	WASHER, Hardened Flat 1/4
30	1	P0308-102	BREATHER
31	1	P0300-088	FITTING, 08MP-12FP90
32.1**	1	P0303-349	PUMP, Jacking (SN F20400F-01 only)
32.2**	1	P0303-366	PUMP, Jacking (SN F20400F-02 & After)
33	2	P0300-001	FITTING, 20MP-16FPS
34	1	P0100-023	LOCK, Cam
35	1	P0100-024	LOCK, Cam
36***	2	021134A	CYLINDER ASSEMBLY (Jacking)
37	2	P0309-202	FILTER ASSEMBLY w/40 PSI BYPASS
38	1	P0300-319	FITTING, 16MFOR-16MB
39	2	P0300-303	FITTING, 08MFOR-08MFOR-BKHD-08MFOR
40	12	P0040-006	WASHER, Hardened Flat 3/8
41	1	P0300-167	FITTING, 10MB-08FP
42	1	P0300-472	FITTING, 24MB-24MB
43	1	P0301-152	GAUGE, Level
44	1	P0301-146	GAUGE, 6000 PSI
45	12	P0001-06-004	BOLT, Hex 3/8 UNC x 1
46	4	P0003-06-000	NUT, Hex 3/8
47	8	P0040-005	WASHER, Hardened Flat 5/16
48	2	P0001-05-019	BOLT, Hex 5/16 UNC x 4.75
49***	2	P0307-216	CYLINDER ASSEMBLY (Latching/Dogging)
50	1	P0302-691	MANIFOLD ASSEMBLY
51	5	P0300-372	FITTING, 12MFOR-12MB90
52	10	P0300-375	FITTING, 08MFOR-12MB
53	2	P0300-330	FITTING, 12MJ-12MJBKHD
54	1	P0100-065	COUPLER, Female
55	1	P0300-395	FITTING, 08FFOR-04MFOR
56	10	P0300-329	FITTING, 12MFOR-12MB
57	4	P0423-124	ADAPTER, Hose
58	1	P0300-778	ELBOW, FF1804-20-20
59	1	P0300-420	MOUNT, Flange 20SF XO
60	1	P0300-145	PLUG, 12MB-PLUG
61	1	P0100-066	COUPLER, Male
62	7	P0300-316	FITTING, 08MFOR-08MB90
63	1	P0300-632	FITTING, 12MFOR-16MB90
64	1	P0300-808	FITTING, 20MFFOR-24MB90
65	2	P0300-371	FITTING, 16MFOR-16MB90
66	1	P0300-310	FITTING, 04MFOR-06MB
67	2	P0300-770	FITTING, 06MFFOR-04MP90

100 GALLON HYDRAULIC ASSEMBLY, 020393A 5000 Series II PUMP UNIT

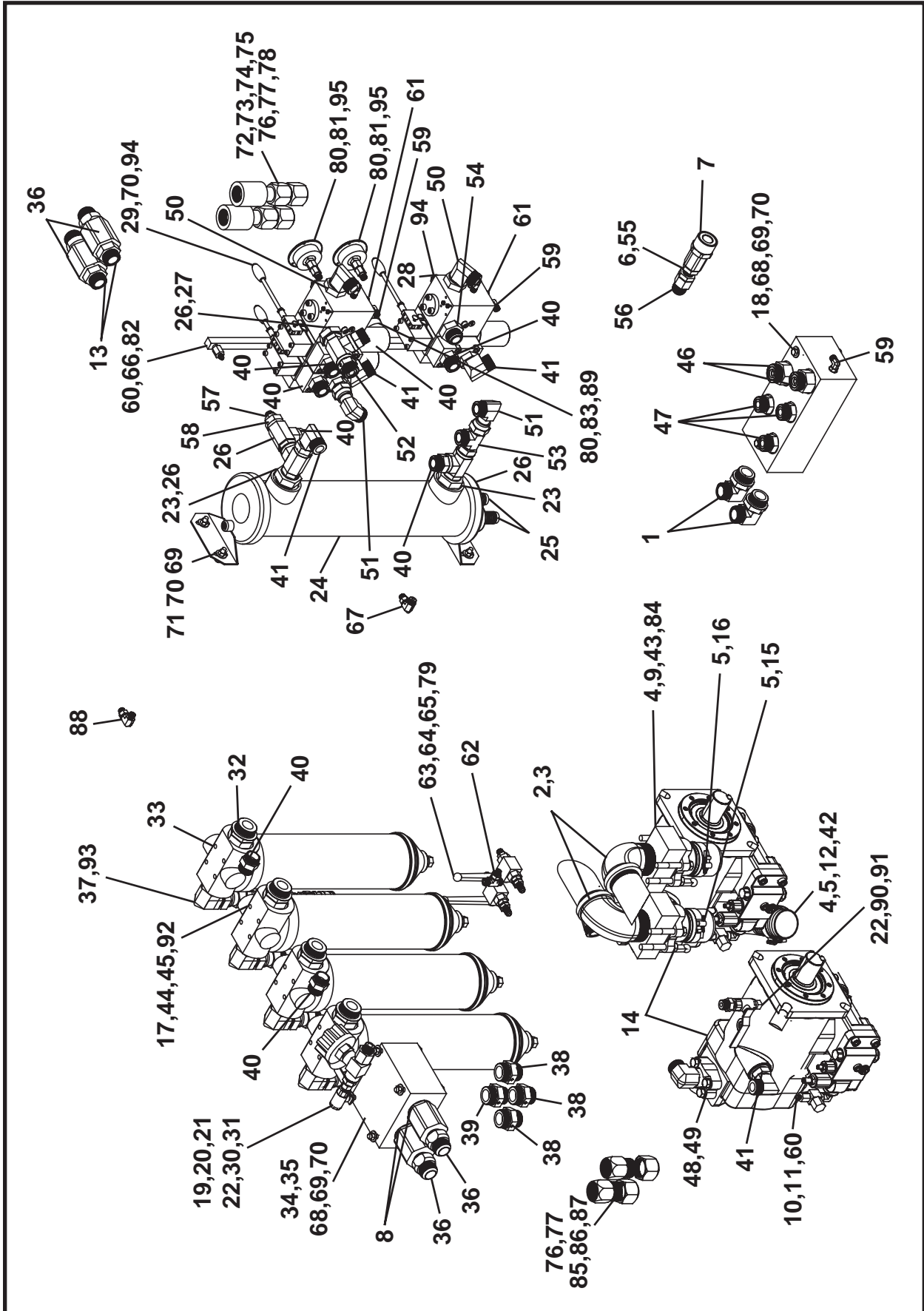


**100 GALLON HYDRAULIC ASSEMBLY, 020393A
5000 Series II PUMP UNIT**

ITEM	QTY	PART NO.	DESCRIPTION
68	1	P0300-318	FITTING, 08MFOR-08FFORX-08MFOR
69	1	P0300-300	FITTING, 08MFOR-10MB
70	2	P0300-324	ORING
71	2	P0300-373	FITTING, 08MFOR-12MB90
72	1	P0300-724	FITTING, 06MFFOR-06MBSPP
73	1	P0300-735	FITTING, 06MFFOR-04MB
74	1	P0300-809	FITTING, 04MFOR-04MBSPP
75	1	P0300-355	FITTING, 06MFOR-06MB90
76	2	P0300-268	FITTING, 04MJ-04FP
77	2	P0300-362	FITTING, 04MFOR-04MB
78	1	P0309-203	FILTER
79	1	P0300-528	FITTING, 06MB-04FP90
80	1	P0300-594	FITTING, 4FB-4MFFOR
81	1	P0416-003	PLUG, Square Head 1/2
82	1	P0300-784	FITTING, 06MJ-04FP STR
83	1	P0300-332	ORING
84	1	P0300-222	FITTING, 10MB-08MP
85	1	P0201-238-012	HOSE, 1 x 12
86	4	P0201-205	T CLAMP
87	1	P0201-238-032	HOSE, 1 x 32
88	1	P0201-238-054	HOSE, 1 x 54
89****	1	P0304-100	MOTOR (Travel)
90***	2	006011A02	CYLINDER ASSEMBLY, Ram Lift
91	1	P0300-057	FITTING, 16MP-16FP90
92	1	P0300-005	FITTING, 16MP-16FPZ90
93	1	P0300-013	FITTING, 16MP-16MP
94	1	P0300-675	FITTING, 20MB-8FB
95	1	P0300-565	FITTING, 12MORB-08FORB
96	1	P0100-088	COUPLER, Quick
97	1	P0300-241	FITTING, 08MJ-08MB
98	1	P0302-185	VALVE, Ball
99	1	P0309-202B	ELEMENT, Filter
100	1	P0300-630	FITTING, 20FFOR-16MFOR
101	6	PM08A-1.25-020	BOLT, Hex PM08A-1.25-020
102	1	P0300-187	FITTING, 04MB-04FP
103^	1	A10327A-074	HOSE ASSEMBLY 1/4 x 74
104^	1	A10325A-089	HOSE ASSEMBLY 1/4 x 89
105^	1	A10493A-060	HOSE ASSEMBLY 1/2 x 60
106^	1	A10316A-052	HOSE ASSEMBLY 1/4 x 52
107^	1	A10374A-075	HOSE ASSEMBLY 1 x 75
108^	1	A09960A-084	HOSE ASSEMBLY 3/4 x 84
109^	1	A09993A-045	HOSE ASSEMBLY 3/8 x 45
110^	1	A09960A-053	HOSE ASSEMBLY 3/4 x 53
111^	1	A10331A-052	HOSE ASSEMBLY 3/4 x 52
112^	1	A09968A-042	HOSE ASSEMBLY 3/4 x 42
113^	1	A09964A-048	HOSE ASSEMBLY 1/2 x 48
114^	1	A09960A-020	HOSE ASSEMBLY 3/4 x 20
115^	1	A09960A-044	HOSE ASSEMBLY 3/4 x 44
116^	1	A10319A-044	HOSE ASSEMBLY 1/4 x 44
117^	1	A10326A-056	HOSE ASSEMBLY 1/4 x 56
118^	1	A10351A-021	HOSE ASSEMBLY 3/4 x 21
119^	1	A10388A-090	HOSE ASSEMBLY 3/8 x 90
120^	1	A10312A-076	HOSE ASSEMBLY 3/8 x 76
121^	2	A10308A-056	HOSE ASSEMBLY 3/8 x 56
122^	1	A10436A-036	HOSE ASSEMBLY 3/4 x 36
123^	1	A10323A-032	HOSE ASSEMBLY 1/2 x 32
124^	1	A09967A-032	HOSE ASSEMBLY 1/2 x 32
125^	1	A09967A-052	HOSE ASSEMBLY 1/2 x 52
126^	1	A10374A-050	HOSE ASSEMBLY 1 x 50
127^	1	A10323A-068	HOSE ASSEMBLY 1/2 x 68
128^	1	A10331A-036	HOSE ASSEMBLY 3/4 x 36
129^	2	A10308A-060	HOSE ASSEMBLY 3/8 x 60
130^	2	A10308A-015	HOSE ASSEMBLY 3/8 x 15
131^	2	A10308A-024	HOSE ASSEMBLY 3/8 x 60
132^	1	A10308A-018	HOSE ASSEMBLY 3/8 x 18

* Refer to section 7, Valves for parts information. **Refer to section 9, Pumps for parts information. *** Refer to section 10, Cylinders for parts information. **** Refer to section 8, Motors for parts information. ^ Included in Hose Kit, 021130A

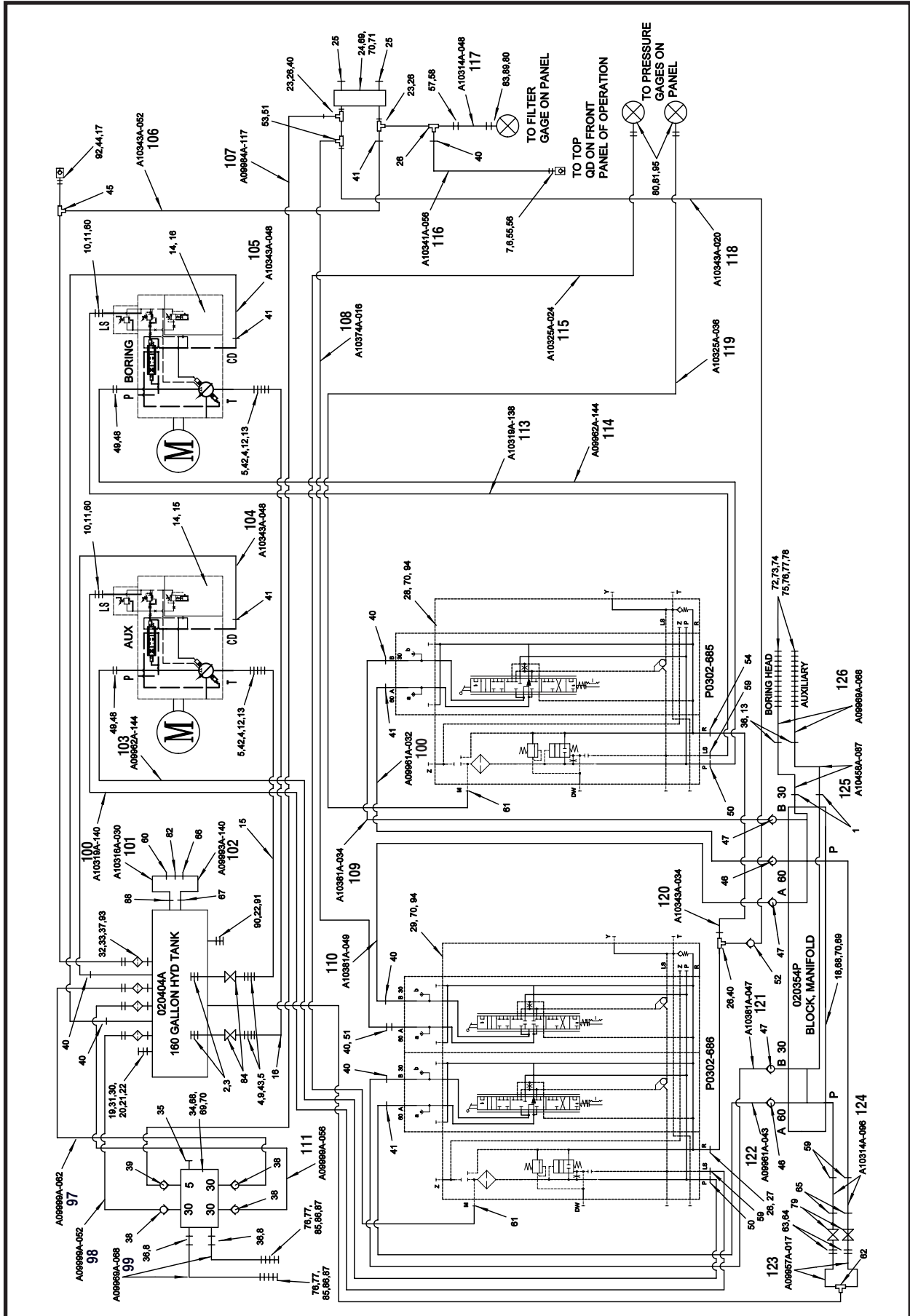
160 GALLON HYDRAULIC ASSEMBLY, 020394A
5000 Series II PUMP UNIT



160 GALLON HYDRAULIC ASSEMBLY, 020394A
5000 Series II PUMP UNIT

ITEM	QTY	PART NO.	DESCRIPTION
0	1	020394A	160 GALLON HYDRAULIC ASSEMBLY
1	2	P0300-620	FITTING, 20MFOR-20MB90
2	2	P0412-009	ELBOW
3	2	A40769P	PIPE, Return
4	4	P0100-059	FLANGE
5	4	P0201-228	CLAMP, T-Bolt
6	1	P0300-324	ORING
7	1	P0100-097	COUPLING, Female
8	2	P0300-783	FITTING, 20MJ-20MB
9	8	P0001-08-014	BOLT, Hex 1/2 UNC x 3.5
10	1	P0300-528	FITTING, 06MB-04FP90
11	2	P0309-203	FILTER
12	8	P0001-08-006	BOLT, Hex 1/2 UNC x 1.5
13	8	P0045-008	WASHER, Lock 1/2
14*	2	P0303-348	PUMP (Boring Head & Auxiliary)
15	1	P0201-225-026	HOSE, 2-1/2 x 26
16	1	P0201-225-027	HOSE, 2 1/2 x 27
17	1	P0100-088	COUPLER, Female Quick
18	1	020354P	BLOCK, Manifold
19	1	P0300-655	FITTING, 10MORB-12FP
20	1	P0300-012	FITTING, 12MP-08FPS
21	1	P0300-048	FITTING, 08MP-08MP
22	2	P0302-185	VALVE, Ball 1/2
23	2	P0300-553	FITTING, 24MB-16FB
24	1	P0093-028	HEAT EXCHANGER
25	2	P0423-124	ADAPTER, Hose
26	4	P0300-537	FITTING, 16MB-16FB-16FB
27	1	P0300-380	20MB-16FB
28**	1	P0302-685	VALVE, Boring Head
29**	1	P0302-732	VALVE, Auxiliary Boring Head
30	1	P0308-102	BREATHER, Mini
31	1	P0300-019	FITTING, 12MP-12FP-12FP
32	4	P0300-472	FITTING, 24MB-24MB
33	4	P0309-201	FILTER ASSEMBLY w/40 PSI Bypass
34	1	020370P	BLOCK, Manifold
35	1	P0300-145	PLUG, 12MB-PLUG
36	4	P0300-591	SWIVEL, Inline 1-1/4
37	4	P0300-808	FITTING, 20MFFOR-24MB90
38	3	P0302-717	VALVE, Check 30 PSI
39	1	P0302-716	VALVE, Check 5 PSI
40	9	P0300-319	FITTING, 16MFOR-16MB
41	5	P0300-371	FITTING, 16MFOR-16MB90
42	2	P0303-340	BARB, Hose 90
43	2	P0423-129	ADAPTER, Barb To Split Flange Head
44	1	P0300-401	FITTING, 08MB-08FFORX
45	1	P0300-328	FITTING, 16MFOR-16FFORX-16MFOR
46	2	P0302-683	VALVE, Check
47	3	P0302-682	VALVE, Check
48	2	P0300-778	FITTING, FF1804-20-20
49	2	P0300-420	ORING, 20SFXO
50	2	P0300-450	FITTING, 16MFOR-20MB90
51	2	P0300-668	FITTING, 16MFFOR-16FFORX90
52	1	P0302-694	VALVE, Check
53	1	P0300-419	FITTING, 16MFOR-16MB-16MFOR
54	1	P0300-374	FITTING, 16MFOR-20MB
55	1	P0300-330	FITTING, 12MJ-12MJBKHD
56	1	P0300-656	FITTING, 12FJ-16MJ
57	1	P0300-634	FITTING, 06MFOR-10MB
58	1	P0300-396	FITTING, 16MB-10FB
59	4	P0300-427	FITTING, 04MFOR-04MB90
60	3	P0300-268	FITTING, 04MJ-04FP
61	2	P0300-362	FITTING, 04MFOR-04MB
62	1	P0300-376	FITTING, 06MFOR-06MFOR-06MB
63	2	P0300-331	FITTING, 06MJ-06MJBKHD
64	2	P0300-333	ORING, 06OR
65	2	P0300-356	FITTING, 06MFOR-06MB

160 GALLON HYDRAULIC ASSEMBLY, 020394A 5000 Series II PUMP UNIT



160 GALLON HYDRAULIC ASSEMBLY, 020394A
5000 Series II PUMP UNIT

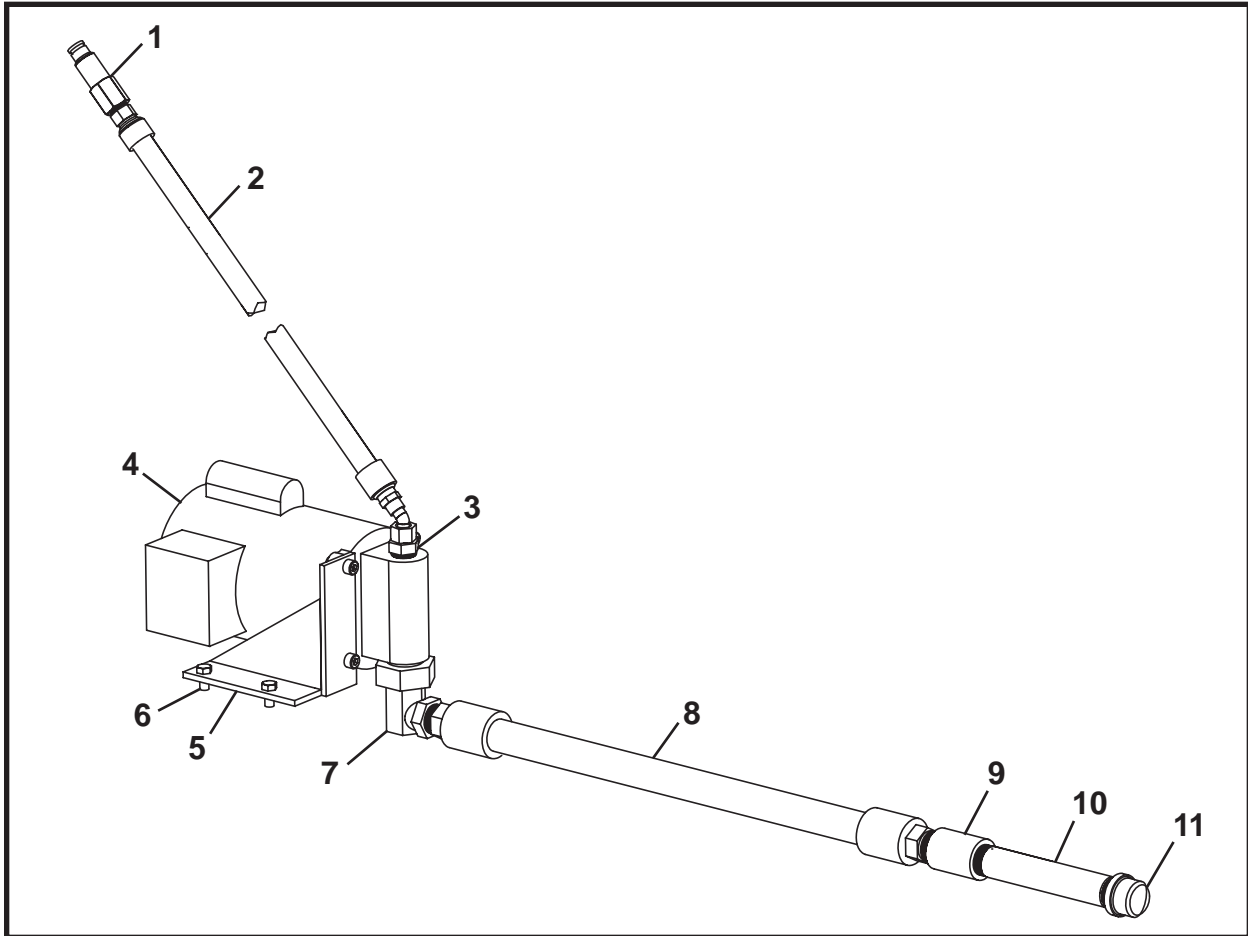
ITEM	QTY	PART NO.	DESCRIPTION
66	1	P0300-784	FITTING, 06MJ-04FP
67	1	P0300-355	FITTING, 06MFOR-06MB90
68	6	P0001-06-020	BOLT, Hex 3/8 UNC x 5
69	10	P0003-06-000	NUT, 3/8
70	24	P0040-006	WASHER, Hardened Flat 3/8
71	4	P0001-06-005	BOLT, 3/8 UNC x 1.25
72	2	004901P01	COUPLER
73	2	004899P00	UNION, Coupler
74	2	P0421-012	COUPLER, Reducer 1-1/4 x 1
75	2	008146P00	CAP
76	4	P0085-123	ORING
77	4	P0084-123	RING, Backup
78	2	007087P00	PLUG, Rubber 1/2
79	2	P0302-638	VALVE, High Pressure Ball 3/8
80	3	P0300-594	FITTING, 4FB-4MFFOR
81	2	P0301-146	GAUGE, 6000 PSI
82	1	P0301-152	GAUGE, Level
83	1	P0301-153	GAUGE, Indicator
84	2	P0302-711	VALVE, Butterfly
85	2	007086P00	PLUGS, Rubber 1/2
86	2	007002P02	CAP, Coupler 1-1/4
87	2	005348P00	COUPLER, Female 1-1/4
88	1	P0300-311	FITTING, 04MFFOR-06MB90
89	1	P0300-787	FITTING, 04MB-02FPX
90	1	P0416-003	PLUG, Square Head 1/2
91	1	P0300-222	FITTING, 10MB-08MP
92	1	P0300-631	FITTING, 16FFOR-08MFFOR
93	4	P0300-630	FITTING, 20FFOR-16MFOR
94	8	PM10A-1.50-020	BOLT, Hex M10x1.50x20 10.9
95	2	P0300-187	FITTING, 04MB-04FP
96	2	P0300-810	FITTING, FF6403-20-20
97***	1	A09999A-062	HOSE ASSEMBLY 1 x 62
98***	1	A09999A-052	HOSE ASSEMBLY 1 x 52
99***	2	A09969A-068	HOSE ASSEMBLY 1-1/4 x 68
100***	1	A10319A-140	HOSE ASSEMBLY 1/4 x 140
101***	1	A10316A-030	HOSE ASSEMBLY 1/4 x 30
102***	1	A09993A-140	HOSE ASSEMBLY 3/8 x 140
103***	1	A09962A-144	HOSE ASSEMBLY 1 x 144
104***	1	A10343A-048	HOSE ASSEMBLY 1 x 48
105***	1	A10343A-048	HOSE ASSEMBLY 1 x 48
106***	1	A10343A-052	HOSE ASSEMBLY 1 x 52
107***	1	A09984A-117	HOSE ASSEMBLY 1 x 117
108***	1	A10374A-016	HOSE ASSEMBLY 1 x 16
109***	1	A10381A-034	HOSE ASSEMBLY 1 x 34
110***	1	A10381A-049	HOSE ASSEMBLY 1 x 48
111***	1	A09999A-056	HOSE ASSEMBLY 1 x 56
112***	1	A09961A-032	HOSE ASSEMBLY 1 x 32
113***	1	A10319A-138	HOSE ASSEMBLY 1/4 x 138
114***	1	A09962A-144	HOSE ASSEMBLY 1 x 144
115***	1	A10325A-024	HOSE ASSEMBLY 1/4 x 24
116***	1	A10341A-056	HOSE ASSEMBLY 1 x 56
117***	1	A10314A-048	HOSE ASSEMBLY 1/4 x 48
118***	1	A10343A-020	HOSE ASSEMBLY 1 x 20
119***	1	A10325A-036	HOSE ASSEMBLY 1/4 x 36
120***	1	A10343A-034	HOSE ASSEMBLY 1 x 34
121***	1	A10381A-047	HOSE ASSEMBLY 1 x 47
122***	1	A09961A-043	HOSE ASSEMBLY 1 x 43
123***	2	A09957A-017	HOSE ASSEMBLY 3/8 x 17
124***	2	A10314A-096	HOSE ASSEMBLY 1/4 x 96
125***	2	A10458A-087	HOSE ASSEMBLY 1-1/4 x 87
126***	2	A09969A-068	HOSE ASSEMBLY 1-1/4 x 68

* Refer to section 9, Pumps for parts information.

** Refer to section 7, Valves for parts information.

*** Included in Hose Kit, 021130A

TRANSFER PUMP ASSEMBLY, 020624A
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	020624A	TRANSFER PUMP ASSEMBLY
1	1	P0100-089	COUPLER, Male Quick
2	1	A09985A-100	HOSE ASSEMBLY, 1/2 x 100
3	1	P0300-636	FITTING, 08MFOR-12MP
4*	1	P0303-363	PUMP, Oil Transfer
5	1	020628A	MOUNT, Pump
6	2	P0001-06-003	BOLT, Hex 3/8 UNC x .75
7	1	P0300-005	FITTING, 16MP-16FPZ90
8	1	A09986A-096	HOSE ASSEMBLY, 1 x 96
9	1	P0400-005	COUPLING, Pipe
10	1	030058P	PIPE, 1
11	1	P0417-005	CAP, Pipe

* Refer to section 9, Pumps for parts information.



Valves

5000 Series II Pump Unit

Jacking Valve, P0302-684

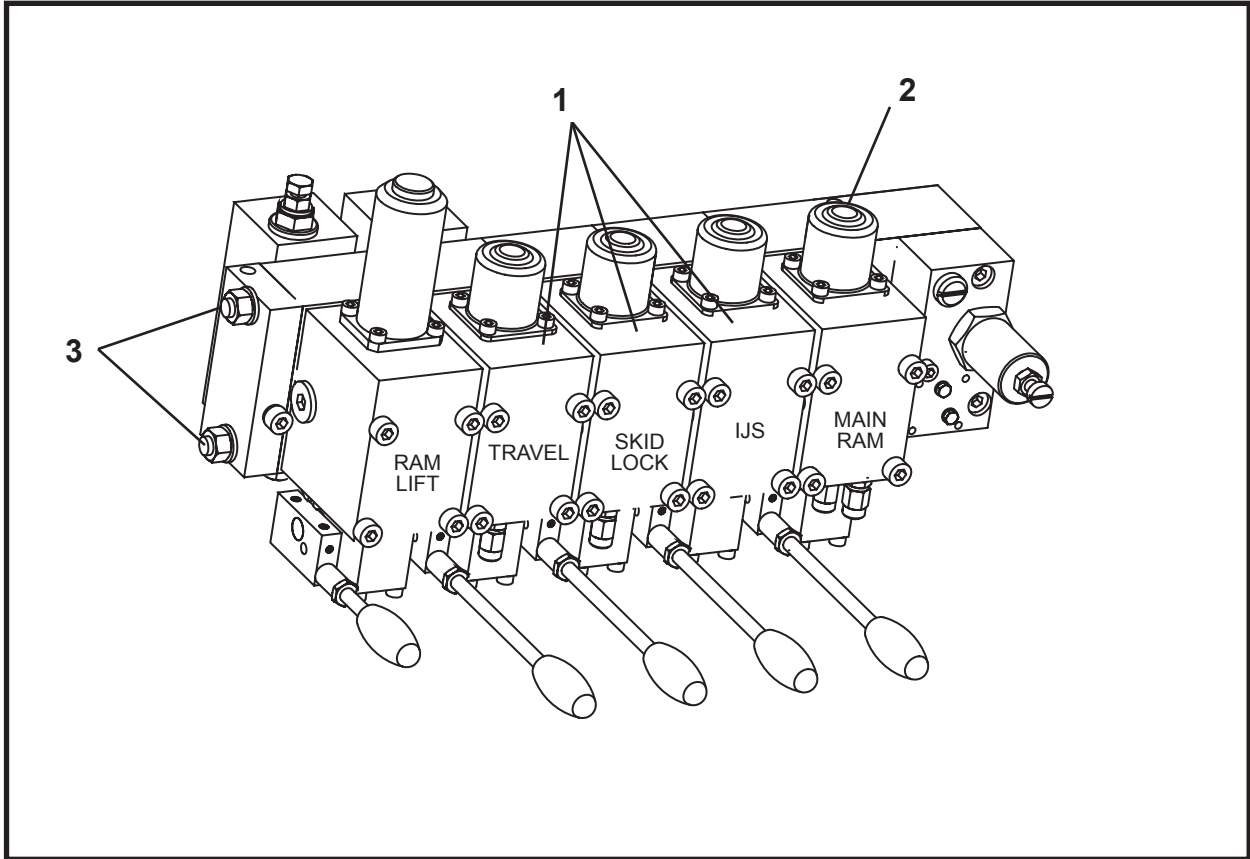
SN F20400F-01 2

SN F20400F-02 & After 3

Boring Head Valve, P0302-685 4

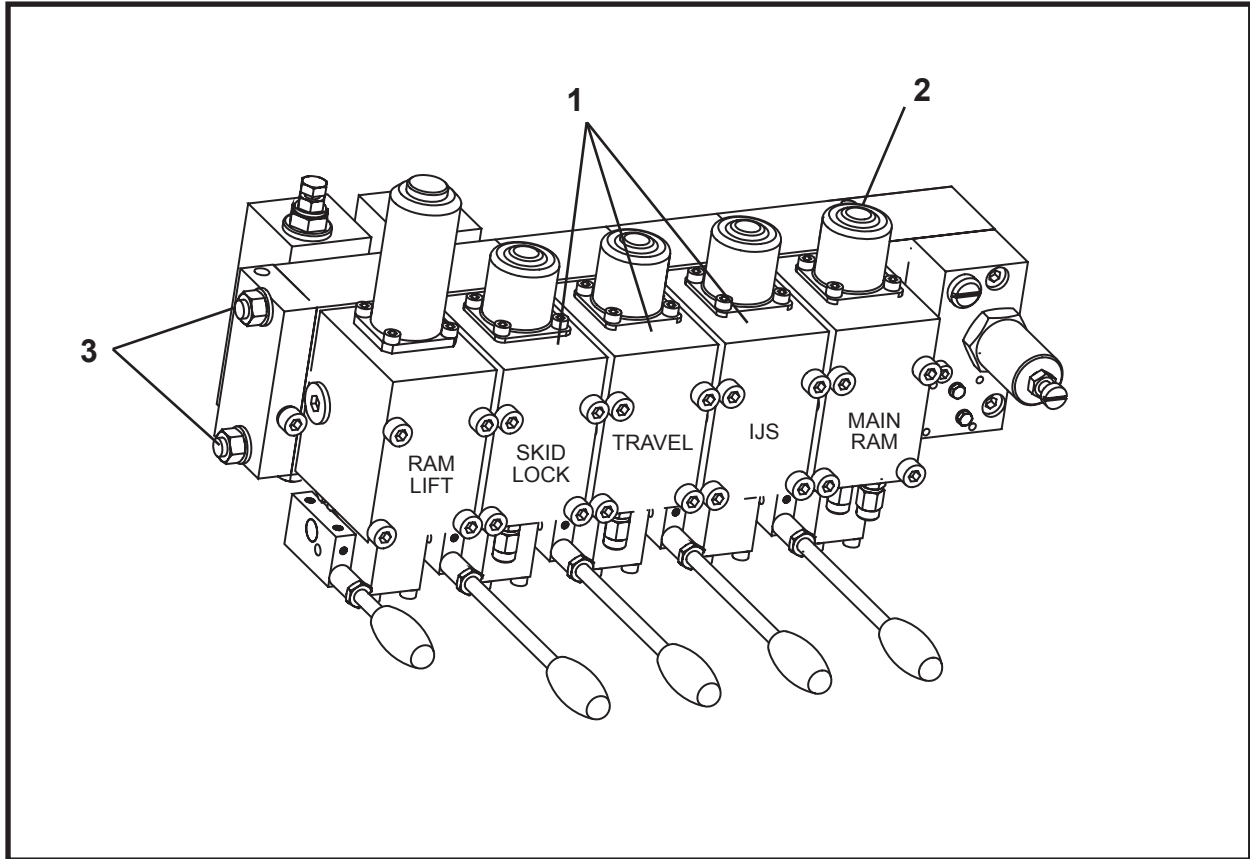
Auxiliary Boring Head Valve, P0302-732 5

JACKING VALVE, P0302-684
5000 Series II PUMP UNIT (SN F20400F-01)



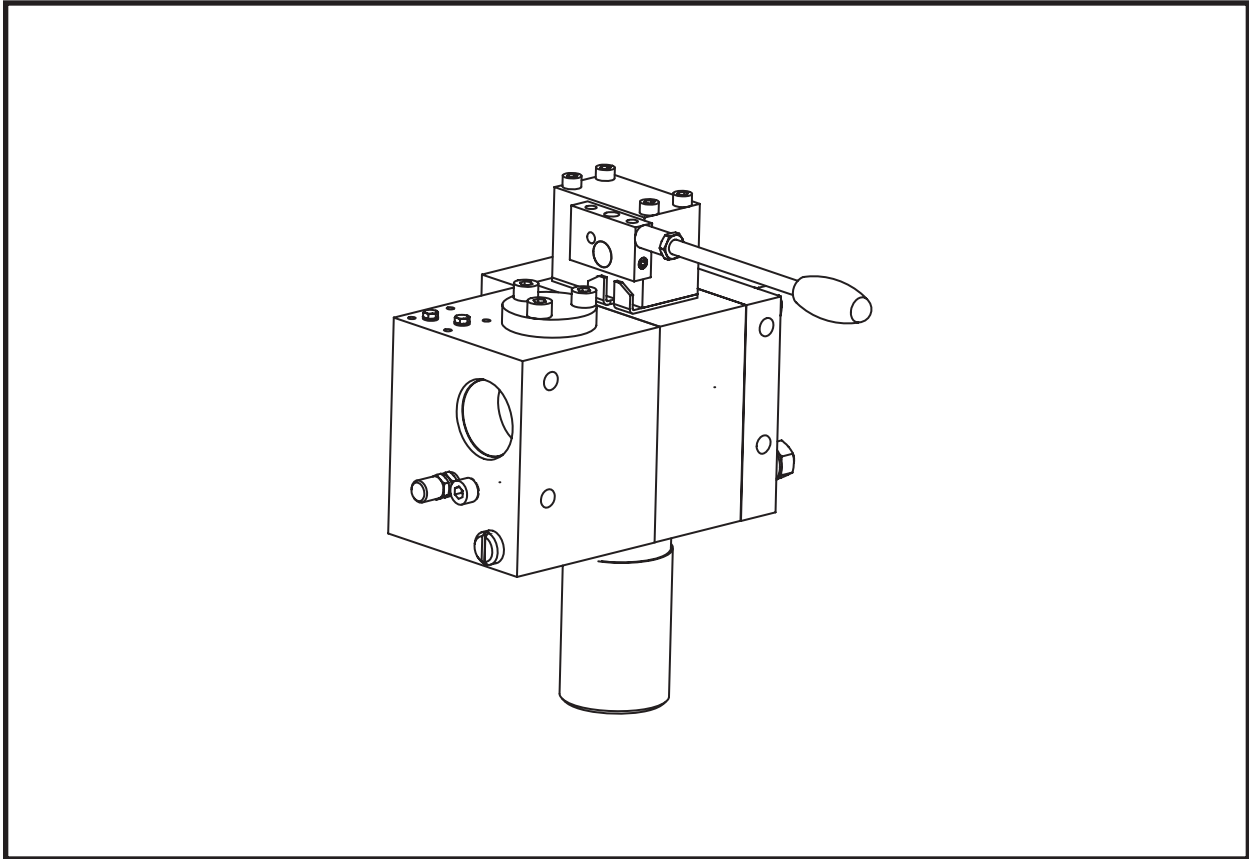
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-684	JACKING VALVE
1	3	P0302-684B	VALVE SECTION
2	1	P0302-700A	SPOOL, Jacking
3	1	P0302-684G	KIT, Tie Rod

JACKING VALVE, P0302-684
5000 Series II PUMP UNIT (SN F20400F-02 & After)



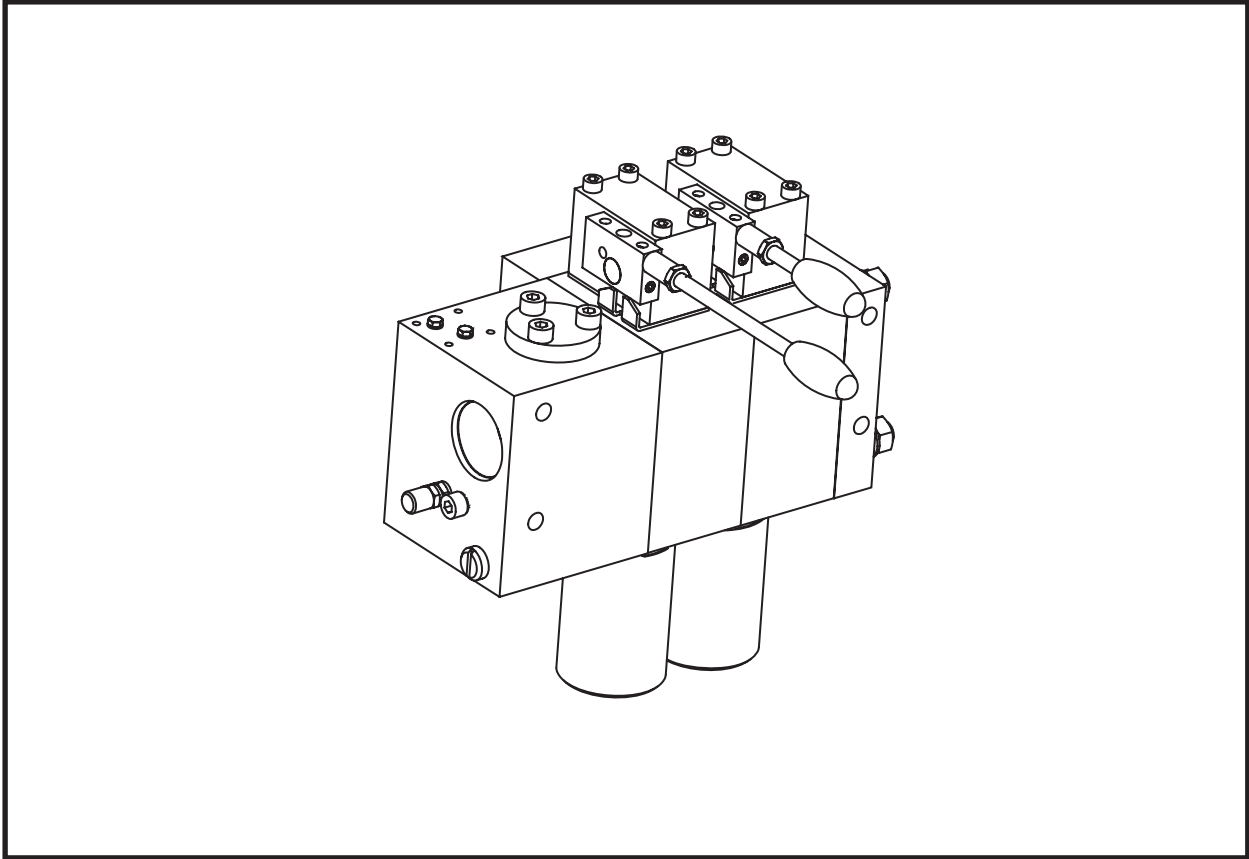
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-684	JACKING VALVE
1	3	P0302-684B	VALVE SECTION
2	1	P0302-700A	SPOOL, Jacking
3	1	P0302-684G	KIT, Tie Rod

BORING HEAD VALVE, P0302-685
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-685	BORING HEAD VALVE

AUXILIARY BORING HEAD VALVE, P0302-732
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0302-732	AUXILIARY BORING HEAD VALVE

NOTES

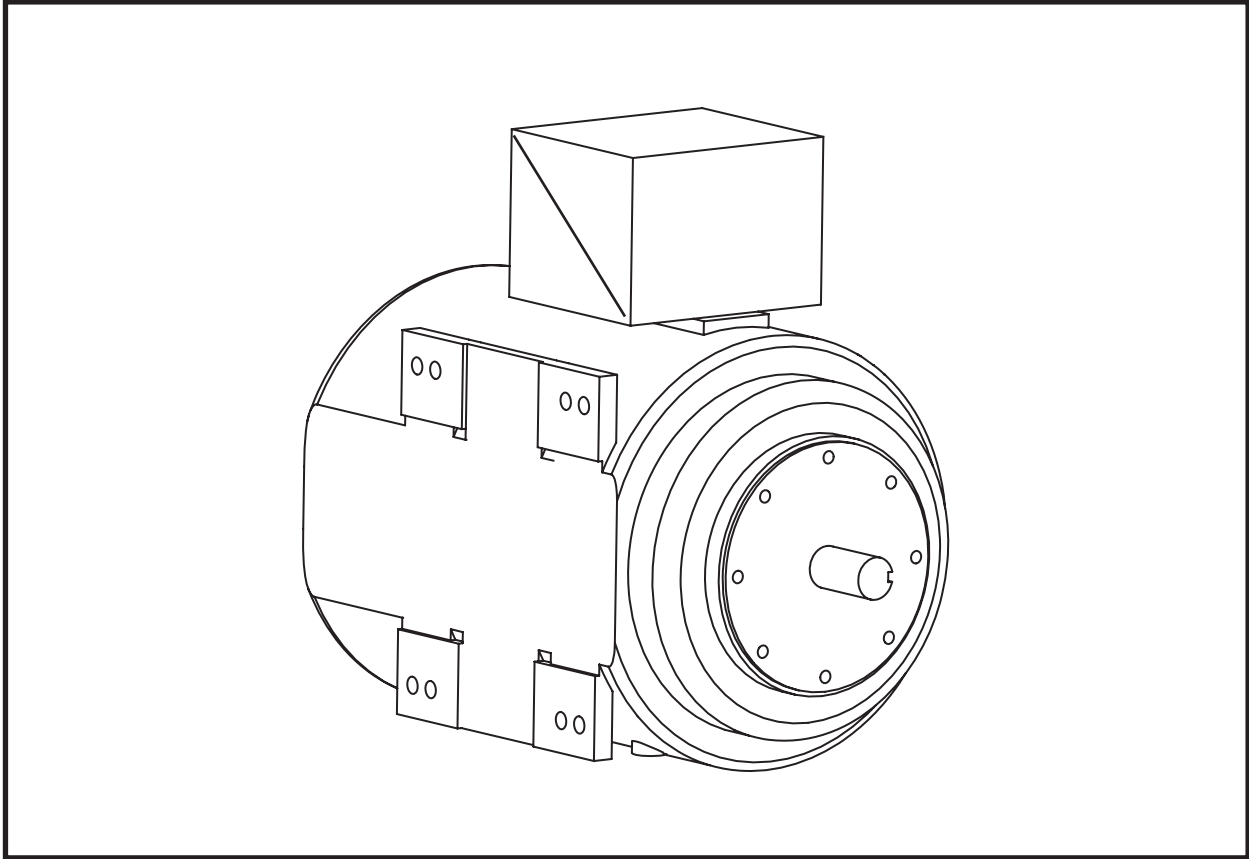


Motors

5000 Series II Pump Unit

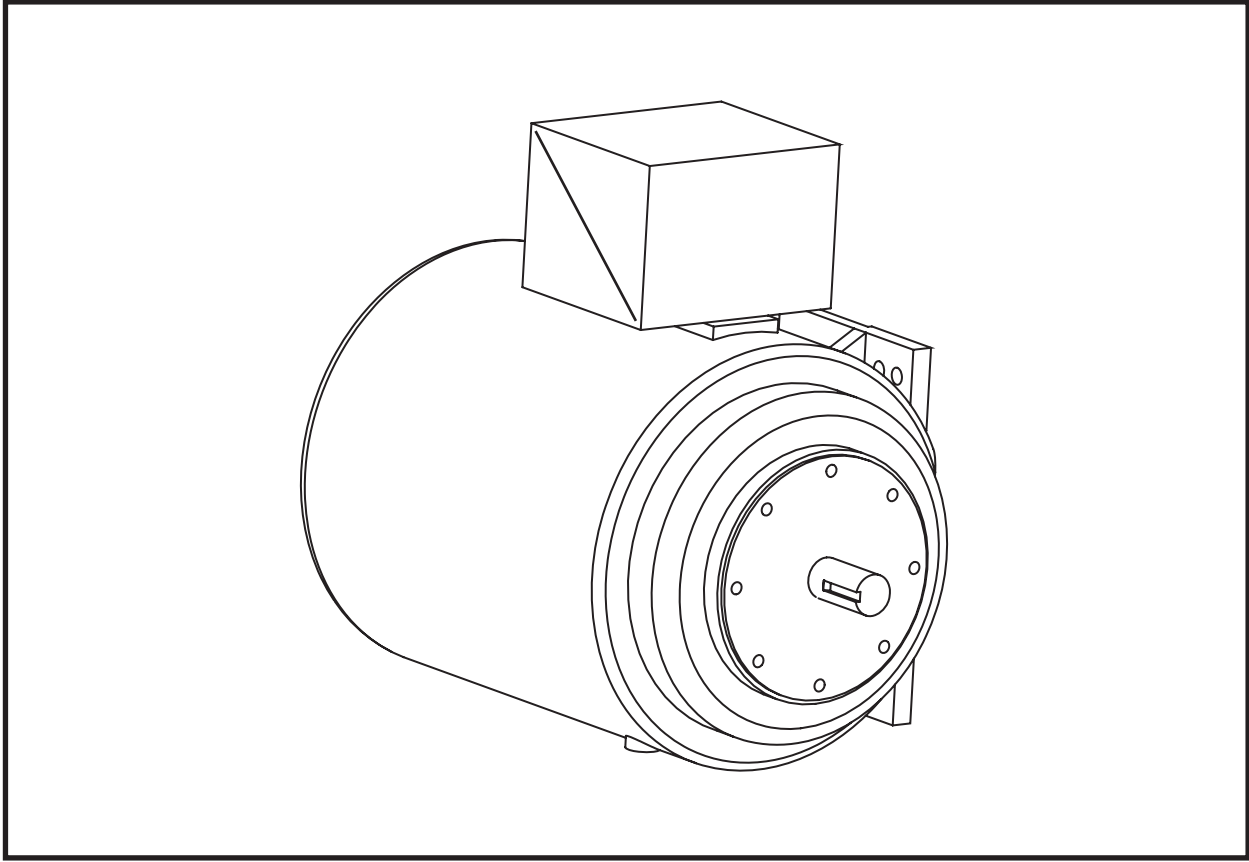
Electric Motor (Boring Head) 100HP, P0251-404	2
Electric Motor (Auxiliary) 100HP, P0251-405	3
Electric Motor (Jacking) 50 HP, P0251-406	4
Hydraulic Motor (Travel) P0304-100	5

BORING HEAD 100 HP MOTOR, P0251-404
5000 Series II PUMP UNIT



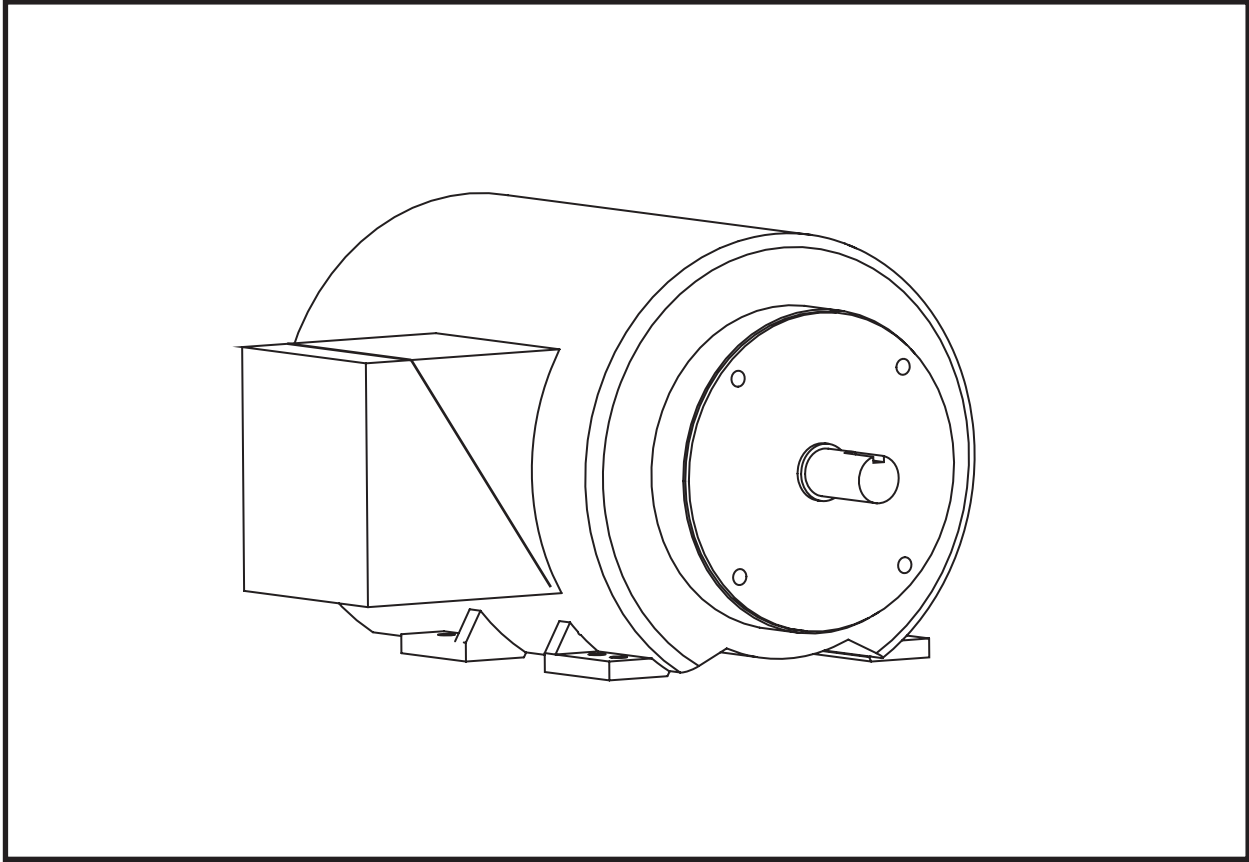
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0251-404	BORING HEAD 100 HP MOTOR
1	1	P0251-404A	BASE
2	1	P0251-404B	COVER
3	1	P0251-404C	GASKET, Box
4	1	P0251-404D	GASKET, Cover

AUXILIARY BORING HEAD 100 HP MOTOR, P0251-405
5000 Series II PUMP UNIT



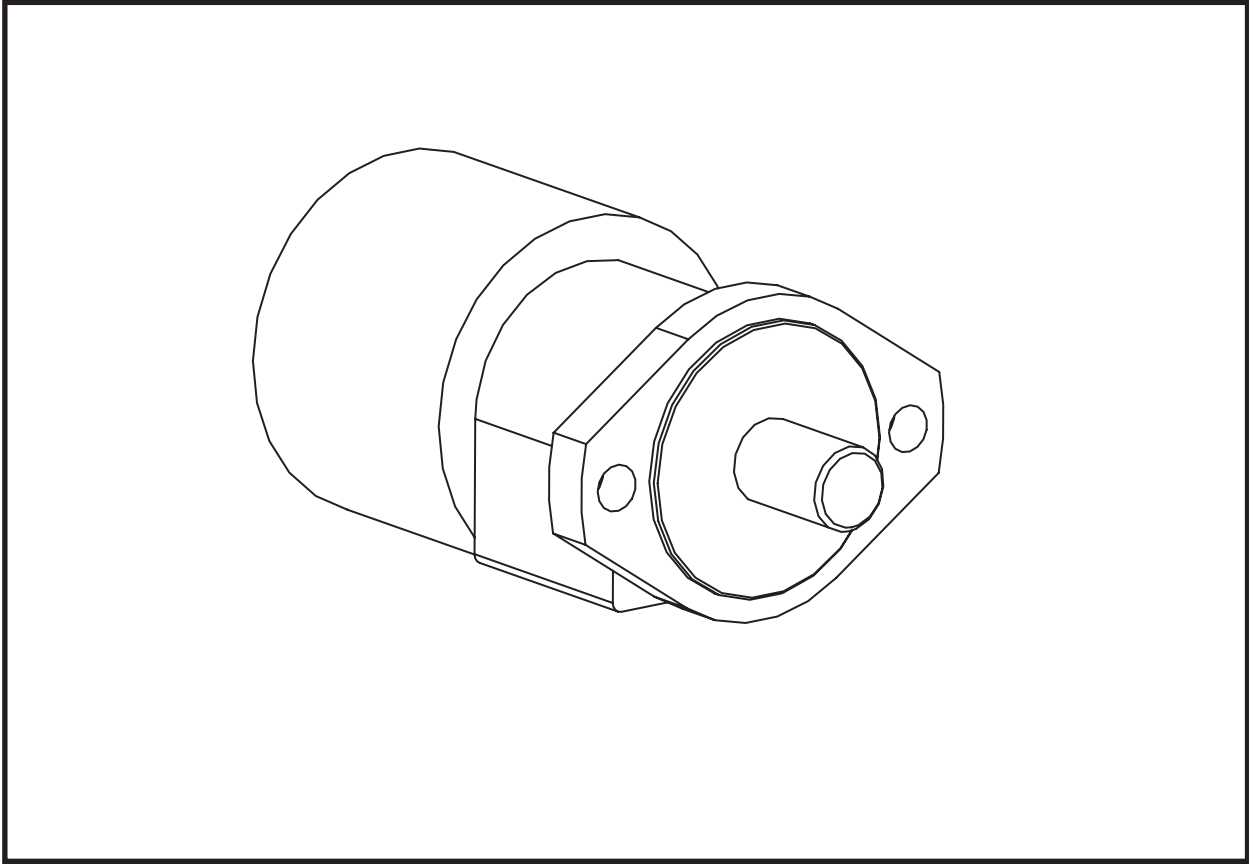
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0251-405	AUXILIARY BORING HEAD 100 HP MOTOR
1	1	P0251-404A	BASE
2	1	P0251-404B	COVER
3	1	P0251-404C	GASKET, Box
4	1	P0251-404D	GASKET, Cover

JACKING 50 HP MOTOR, P0251-406
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0251-406	JACKING 50 HP MOTOR

MOTOR, HYDRAULIC, P0304-100
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0304-100	MOTOR, Hydraulic

NOTES

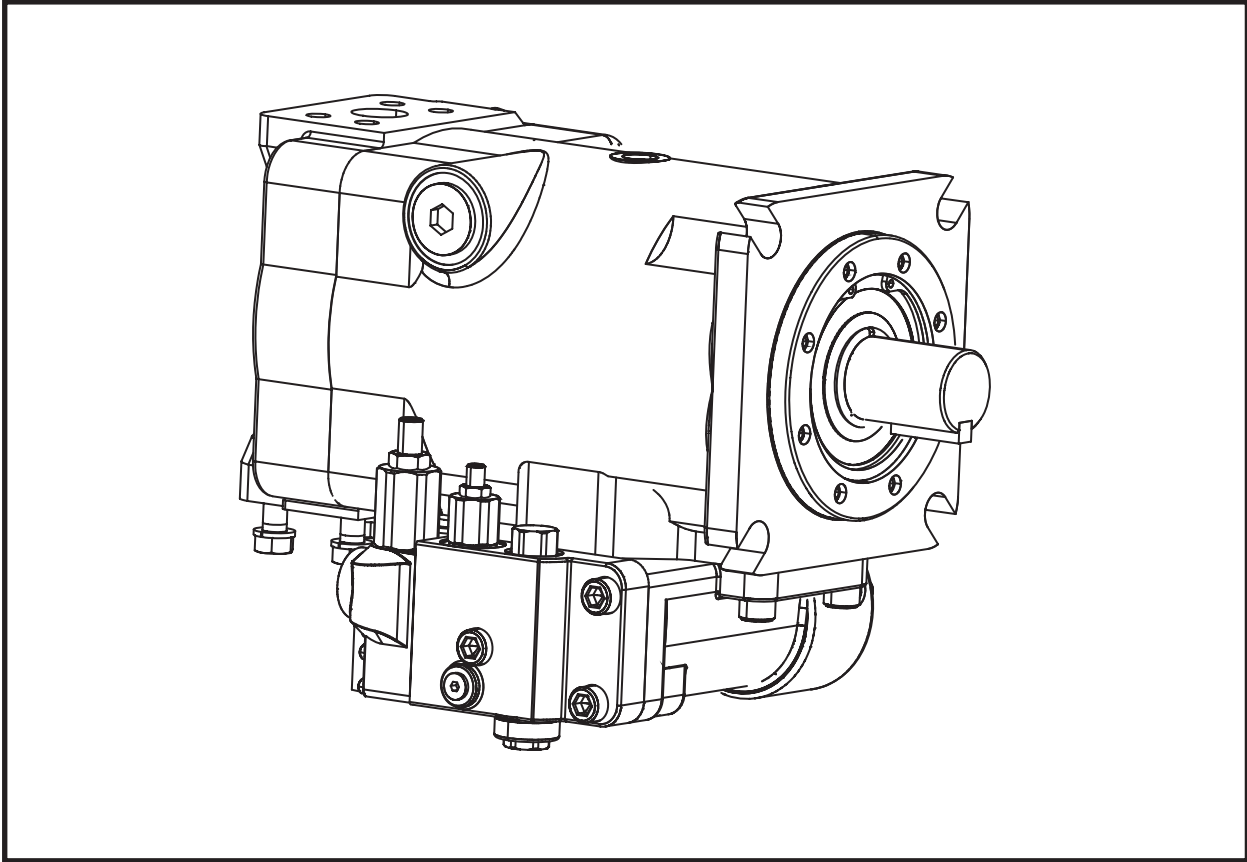


Pumps

5000 Series II Pump Unit

Boring Head/Auxiliary Pump, P0303-348.....	2
Jacking Pump, P0303-349 (SN F20400F-01)	4
Jacking Pump, P0303-366 (SN F20400F-02 & After)	5
Oil Transfer Pump, P0303-363	6

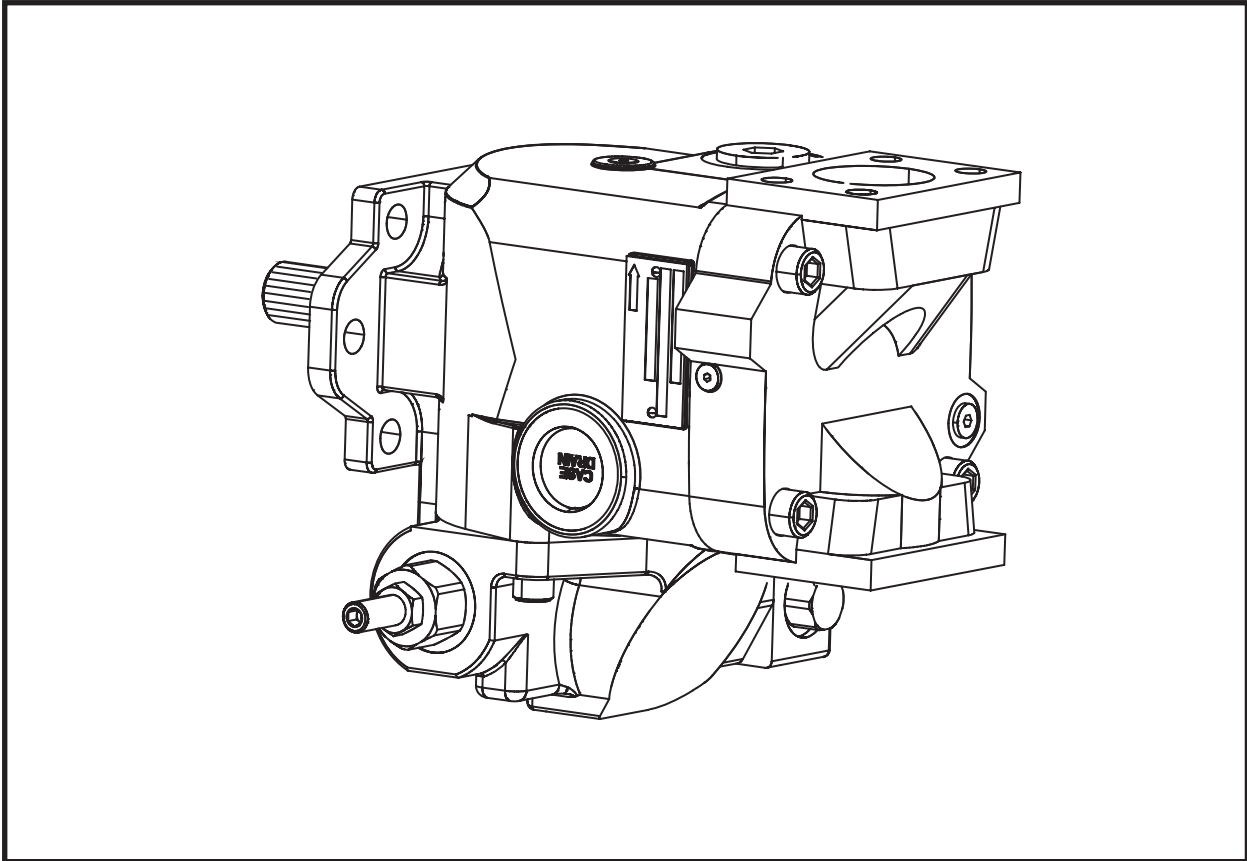
BORING HEAD / AUXILIARY PUMP, P0303-348
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0303-348	BORING HEAD/AUXILIARY PUMP

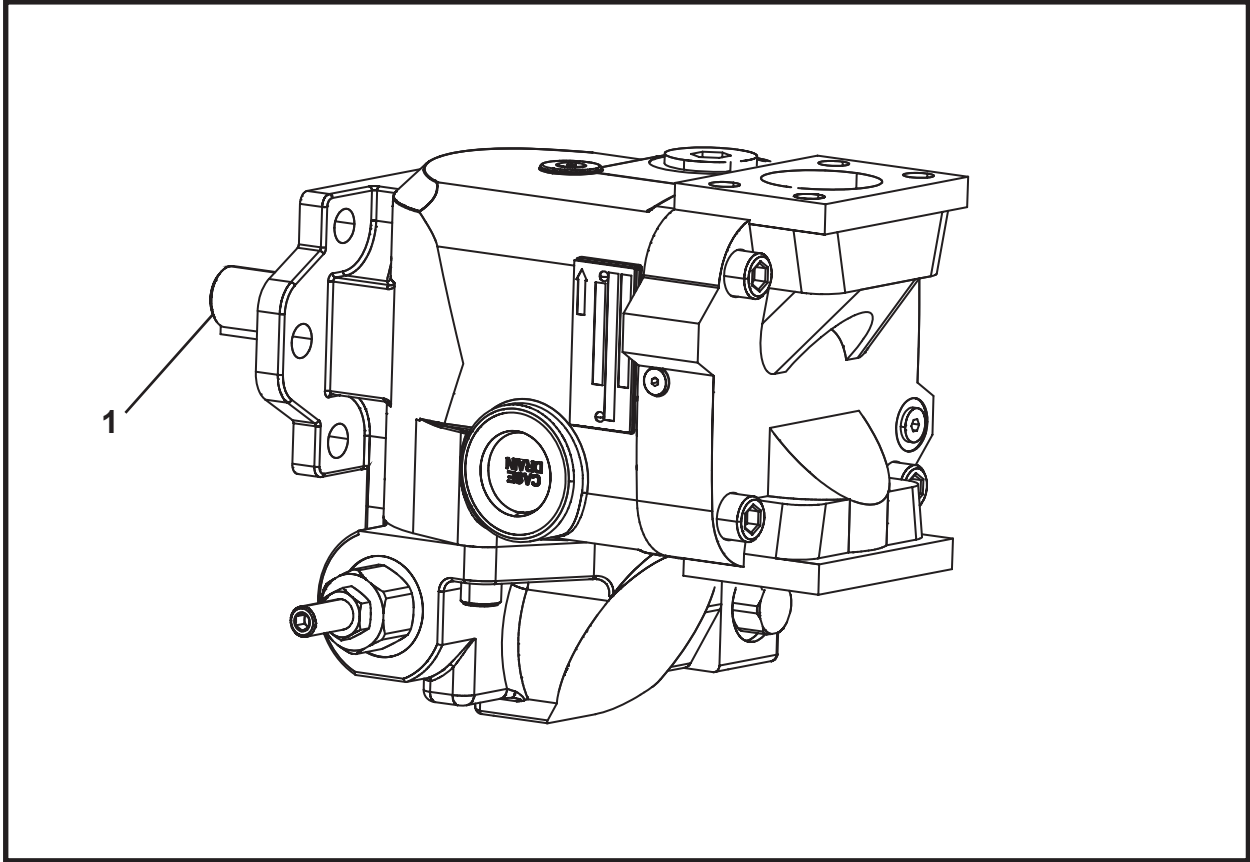
NOTES

JACKING PUMP, P0303-349
5000 Series II PUMP UNIT (SN F20400F-01)



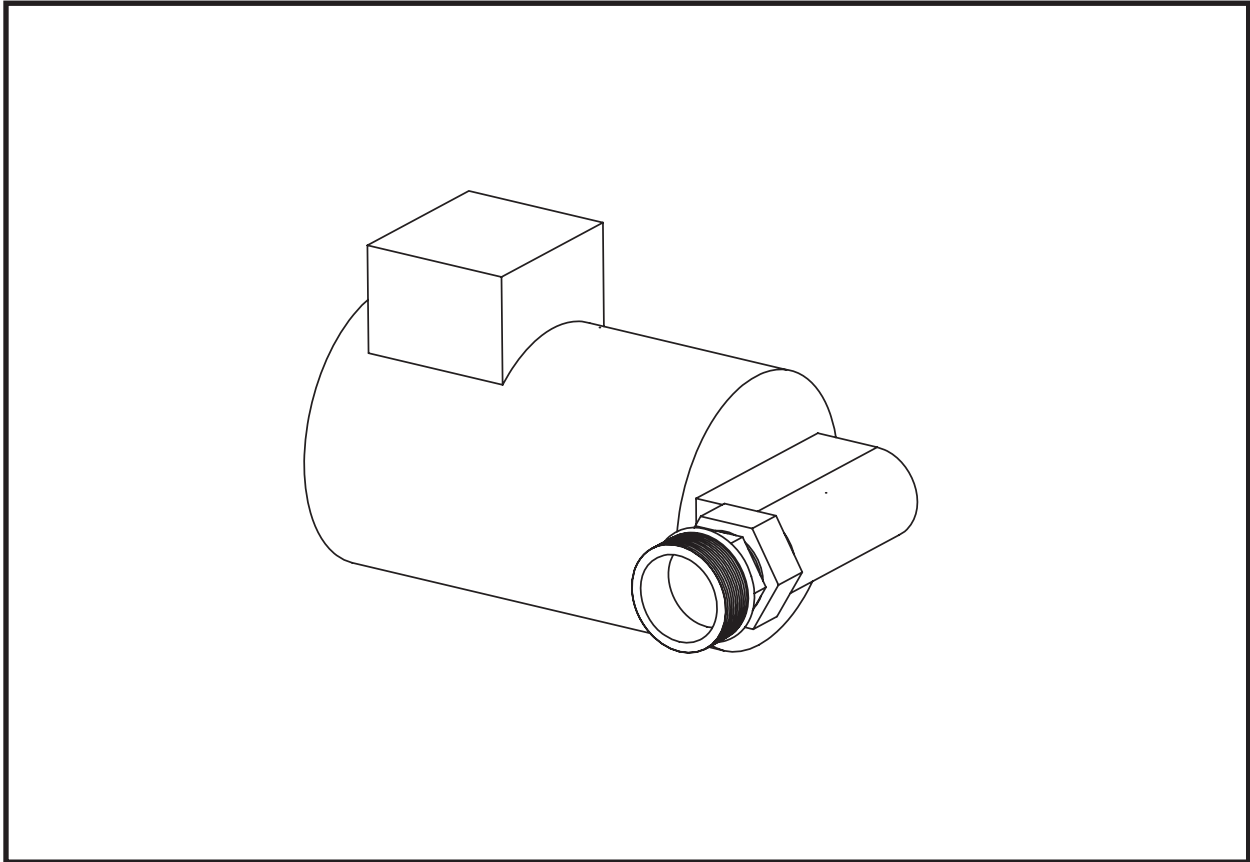
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0303-349	JACKING PUMP

JACKING PUMP, P0303-366
5000 Series II PUMP UNIT (SN F20400F-02 & After)



ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0303-366	JACKING PUMP
1	1	P0303-366A	SHAFT, Keyed

OIL TRANSFER PUMP, P0303-363
5000 Series II PUMP UNIT



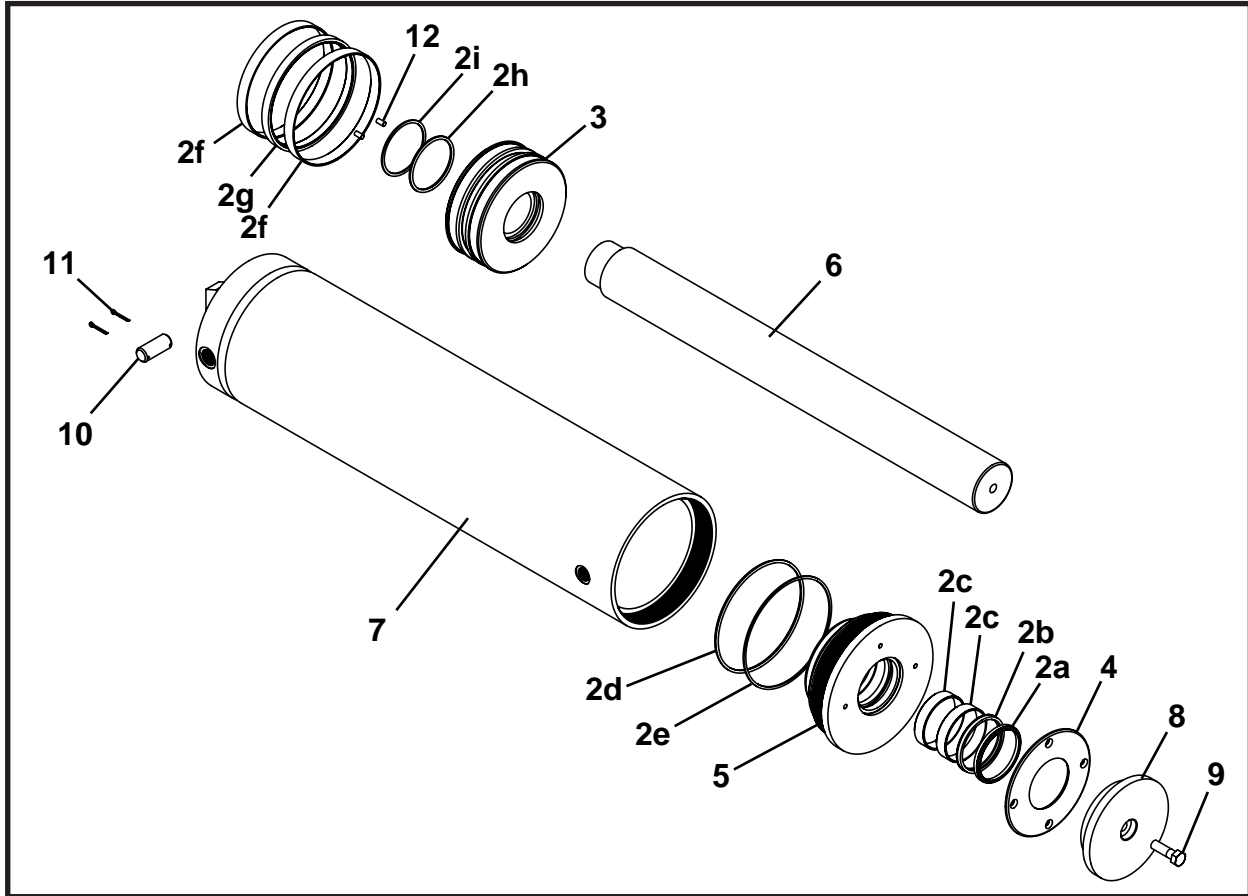
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0303-363	OIL TRANSFER PUMP



Cylinders

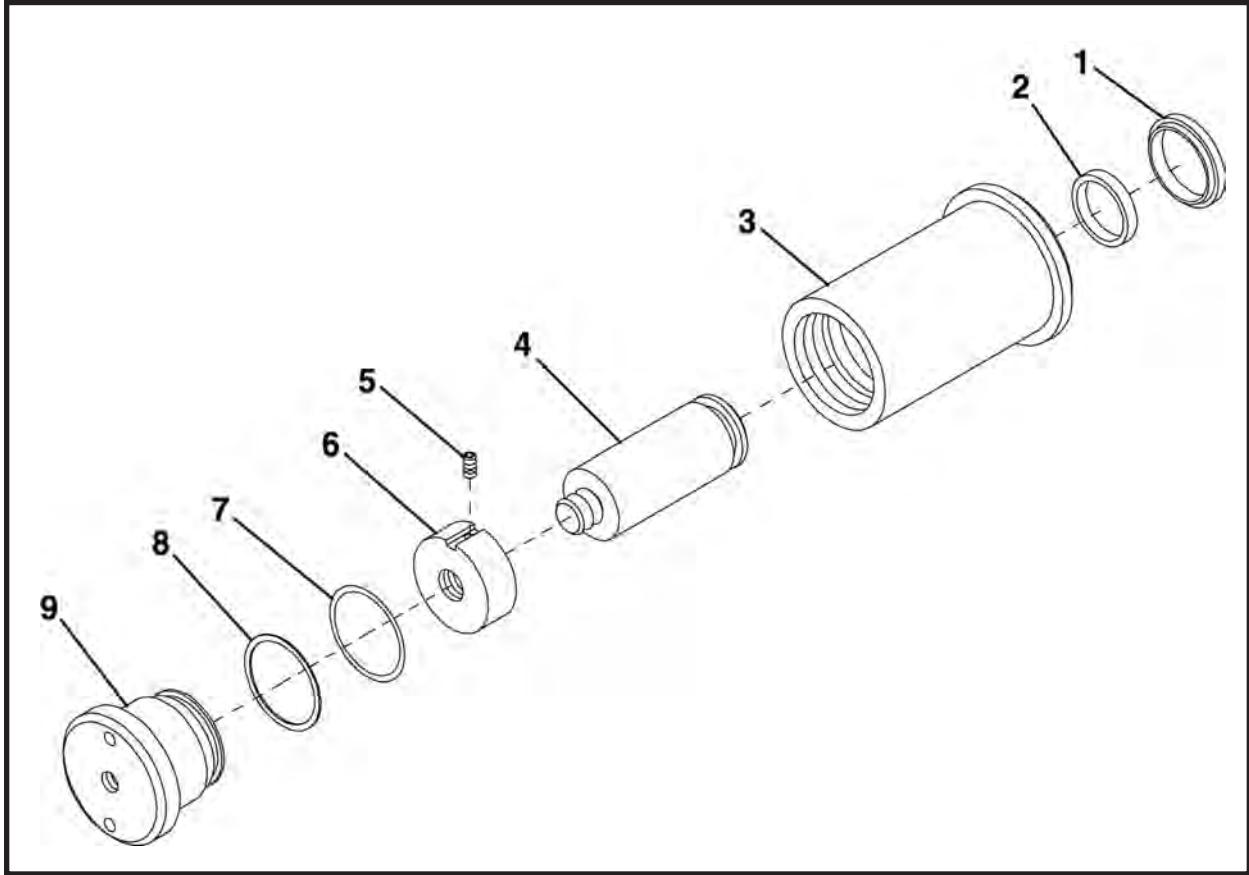
5000 Series II Pump Unit	
200 Ton Cylinder Assembly, 021134A	2
Ram Lift Cylinder Assembly, 006011A02	3
Latching (Dogging) Cylinder Assembly, P0307-216	4

CYLINDER ASSEMBLY 200 TON, 021134A
5000 Series II PUMP UNIT



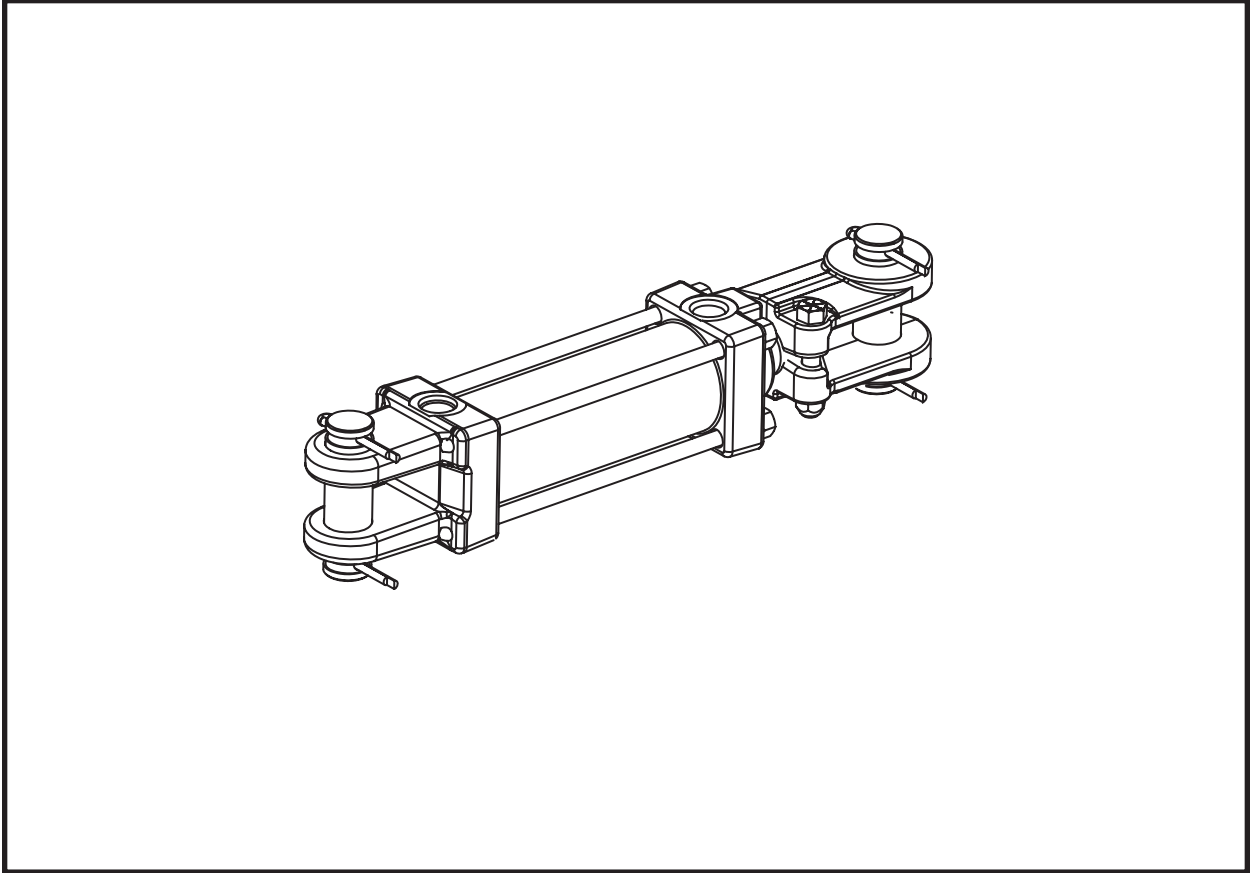
ITEM	QTY	PART NO.	DESCRIPTION
0	1	021134A	200 TON CYLINDER ASSEMBLY
1	1	021133A	ASSEMBLY, 200 Ton Ram
2	1	P0307-219	SEAL KIT (Includes items 2a - 2i)
2a	1	P0307-219A	WIPER
2b	1	P0307-219B	SEAL, Rod
2c	2	P0307-219C	WEAR RING
2d	1	P0307-219D	ORING
2e	1	P0307-219E	BACKUP RING
2f	2	P0307-219F	WEAR RING
2g	1	P0307-219G	SEAL
2h	1	P0307-219H	ORING
2i	1	P0307-219I	BACKUP RING
3	1	P0307-220	PISTON
4	1	P0307-221	RETAINER
5	1	P0307-222	GLAND
6	1	P0307-223	ROD
7	1	P0307-224	BARREL
8	1	002923P00	CAP, Pump Unit Ram
9	1	P0001-12-010	BOLT, Hex 3/4 UNC x 2.5
10	1	020314P	PIN
11	2	P0048-035	PIN, Cotter
12	2	P0033-06-012	SCREW, Socket Head Hex 3/8 UNC x .75

RAM LIFT CYLINDER ASSEMBLY, 006011A02
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
0	1	006011A02	RAM LIFT CYLINDER ASSEMBLY
1	1	P0087-002	WIPER
2	1	P0086-002	POLYSEAL
3	1	006015P01	BARREL
4	1	006012P02	ROD
5	1	P0033-04-008	SET SCREW, Socket Head, 1/4 UNC x .5
6	1	008279P00	PISTON
7	1	P0085-224	O-RING
8	1	P0084-224	BACKUP RING
9	1	006248P00	BASE

LATCHING (DOGGING) CYLINDER ASSEMBLY, P0307-216
5000 Series II PUMP UNIT



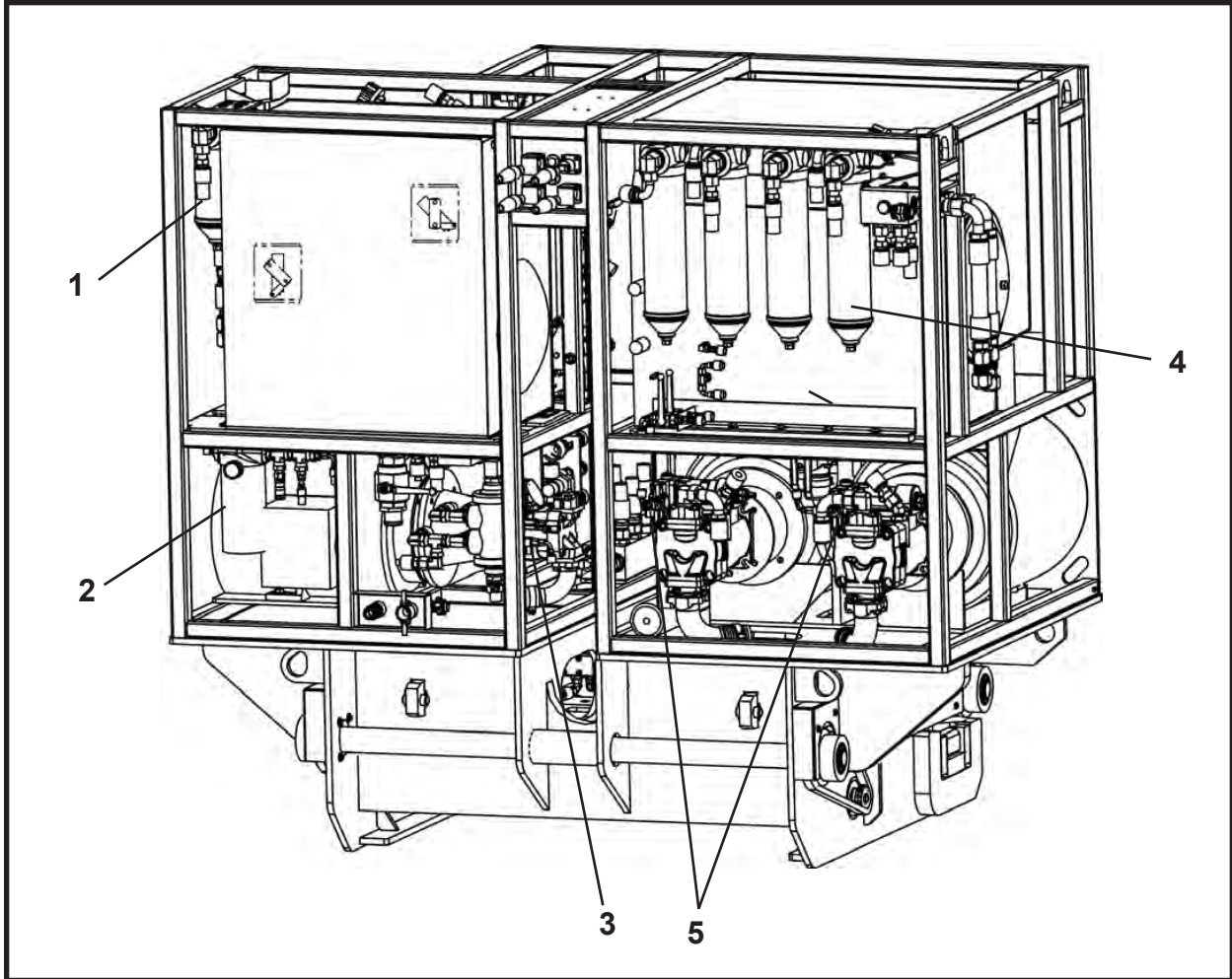
ITEM	QTY	PART NO.	DESCRIPTION
0	1	P0307-216	LATCHING (Dogging) CYLINDER ASSEMBLY



Miscellaneous

Filters 2

FILTERS
5000 Series II PUMP UNIT



ITEM	QTY	PART NO.	DESCRIPTION
1	2	P0309-202B	ELEMENT, Filter (Jacking/IJS Return Filters)
2	1	P0309-172	ELEMENT, Filter (Jacking Fill Tank Filter)
3	1	P0309-203	ELEMENT, Filter (Jacking System Load Sense Filter)
4	4	P0309-201A	ELEMENT, Filter (Boring Head Return Filters)
5	2	P0309-203	ELEMENT, Filter (Boring Head System Load Sense Filters)



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