

E20 Motor

Safety, Operation, Maintenance & Parts Manual

1996 LT30	rev. F4 - F6.01
1996 LT40	rev. F5 - F7.01
1996 LT30HD	rev. F8 - F9.01
1996 LT40HD	rev. F8 - F9.01



Safety is our #1 concern! Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

February 1996

Form #663

CAUTION!

The electric motor which operates the saw blade is capable of developing horsepower up to two or more times the horsepower listed on the motor nameplate. While the mill design allows for using this increased horsepower intermittently while sawing, it is possible in very aggressive cutting to overload the motor. Aggressive sawing for long periods may cause excessive heat buildup. An internal thermal protection device has been installed to ensure no damage to the motor can result from this overloading. This device shuts off the motor when its internal operating temperature becomes too hot. The motor will operate normally again after it cools (approximately 20 to 30 minutes).

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SECTION 1 SAFETY & GENERAL INFORMATION



This symbol calls your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions. This symbol accompanies a signal word. The word **DANGER** refers to hazards that can cause death or serious, irreversible personal injury. The word **WARNING** suggests a safety hazard that can cause personal injury. **CAUTION** refers to hazards that can cause damage to the equipment or property only.

Read and observe all safety instructions before operating this equipment! Read the manufacturer's operation manual and observe any additional safety instructions including dangers, warnings, and cautions applicable to the specific make and model you have purchased.

1.1 Battery Handling



WARNING! Batteries can explode when charging or boosting. Always wear eye protection.

WARNING! Keep cigarettes, flames or sparks away from battery.

WARNING! Charge the battery in a well-ventilated area. Do not attempt to charge a frozen battery.



CAUTION! Place a rag over battery vent holes when handling to avoid electrolyte squirting from holes.

1 Safety & General Information

Electric Sawmill Wiring

1.2 Electric Sawmill Wiring

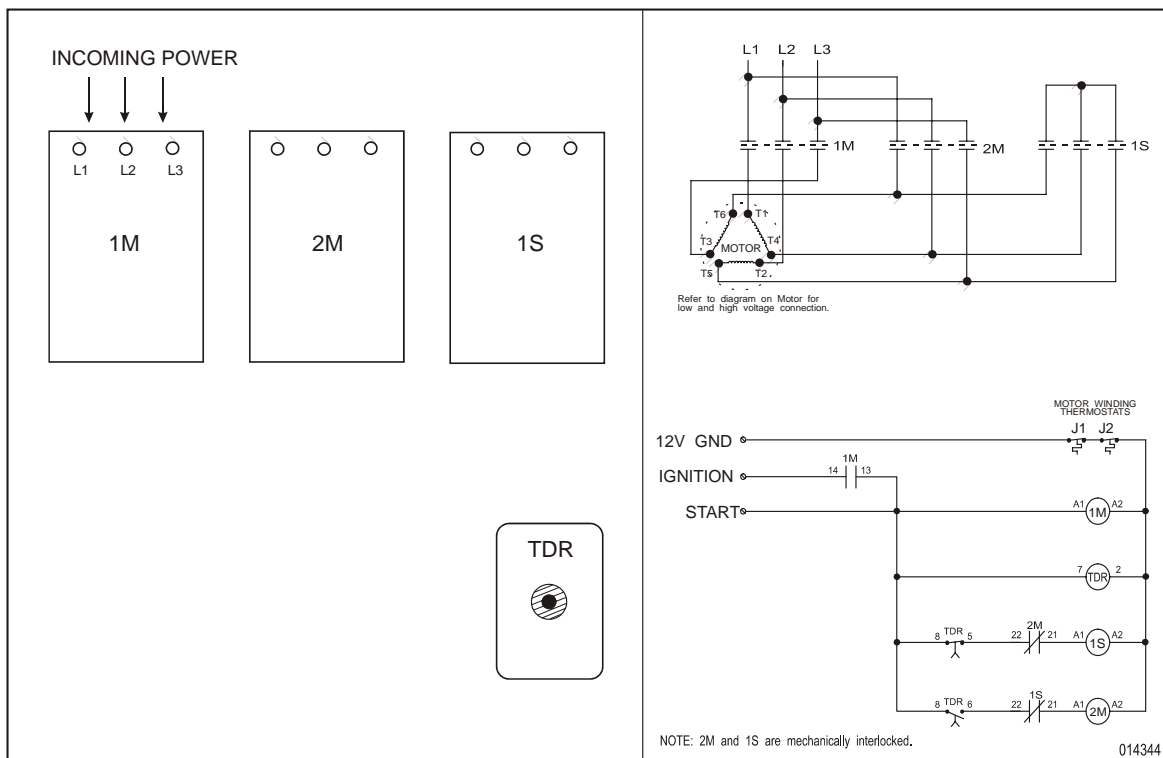
DANGER! Make sure all electrical installation, service and/or maintenance work is performed by a qualified electrician and is in accordance with applicable electrical codes.

CAUTION! The sawmill motor is pre-wired for 460 volt, 60 Hz or 575 volt, 60 Hz power supplies. If you plan to use another type of power supply, you will need to rewire the motor.

See **Figure 1-1**. The wiring diagram and component layout for the Wye-Delta starter control is shown.

See **Figure 1-2**. See the wiring diagram to rewire the motor.

CAUTION! Sawmills equipped with 575 volt configurations should NOT be rewired for other power supplies.



3H0147B

FIG. 1-1

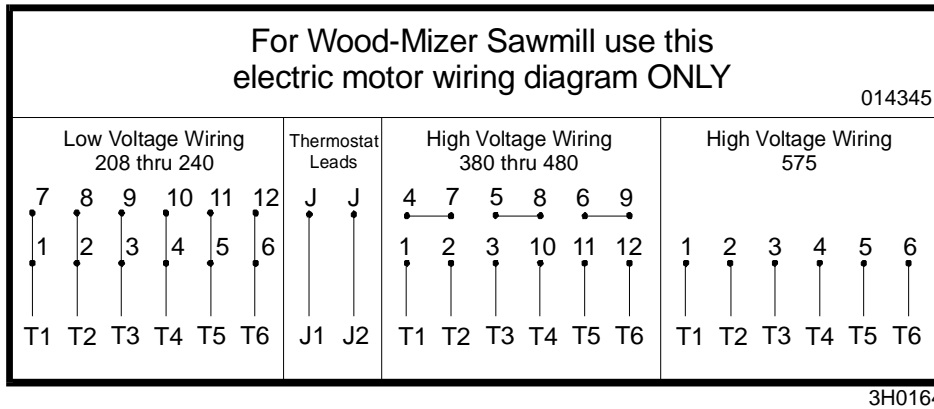


FIG. 1-2

See Table 1-1. Install a fused disconnect switch within sight of the machine. Typical minimum switch, fuse, and wire sizes for use with various operating voltages is shown. Do all installation in accordance with local electrical codes. Fuses are sized for short-circuit protection only. The motor is configured with internal thermostats for overload protection. If an overload condition does occur, the thermostats shut the motor down and the motor cannot be restarted until it cools to a safe operating temperature.

3-Phase Volts	Fuse Disconnect	Time Delay Fuse	Suggested Wire Size
208 VAC	100 Amps	80 Amps	3AWG up to 100'
220 VAC	100 Amps	80 Amps	3AWG up to 100'
240 VAC	100 Amps	80 Amps	3AWG up to 100'
380 VAC	60 Amps	40 Amps	6AWG up to 50'
415 VAC	60 Amps	40 Amps	6AWG up to 50'
440 VAC	60 Amps	40 Amps	6AWG up to 50'
480 VAC	60 Amps	40 Amps	6AWG up to 50'
575 VAC	30 Amps	30 Amps	6AWG up to 50'

TABLE 1-1

Make sure the power cords are free to travel the length of the machine. An overhead boom system to keep the cords off of the floor is recommended.

1

Safety & General Information

Electric Sawmill Wiring

The electrical starter box must be kept dust-free. Disconnect and lock out all electrical power. Then, clean inside of box of any dust or wood chips. Do this on a regular schedule. Close and securely fasten the starter box door when finished; do not operate or store with starter box door open.



DANGER! Hazardous voltage inside the disconnect box, starter box, and at the electric motor can cause shock, burns, or death. Disconnect and lock out power supply before servicing! Keep all electrical component covers closed and securely fastened during mill operation.

The time-delay relay in the electrical starter box should be set between 2-3 seconds. The time-delay relay does the automatic switching of the motor windings from Wye to Delta configurations.

1.3 Phase Converter

The Roto-Phase is a rotary 3-phase converter. It generates 3-phase power from a single phase.



CAUTION! This section contains service requirements for using the Roto-Phase with the Wood-Mizer sawmill only. If you plan on running additional equipment with the Roto-Phase, call the manufacturer for recommended specifications.

Inspect the phase converter for damage or missing parts upon receipt. If a part is damaged or missing, call ARCO at **1-800-428-4370**.

CAUTION! Make sure the Roto-Phase is installed in accordance with the National Electric Code, city and local codes. A properly sized magnetic starter is recommended for the Roto-Phase.

Mount the phase converter in a dry location. It may be mounted either horizontally or vertically. Avoid moisture and chemicals whenever possible.

See Table 1-2. Service requirements for the 230 volt phase converter (as used for the Wood-Mizer sawmill only) are shown below. Install the phase converter in accordance with ARCO installation data and local electrical codes.

MAIN	ROTO-PHASE			WIRE
Disconnect	Fused Disconnect	Time Delay Fuse	Output of Roto-Phase	To Roto-Phase
200 AMP	100 AMP	100 AMP	80 AMP	2 AWG or larger

TABLE 1-2

After installation, test the sawmill for proper motor rotation. If rotation is incorrect, switch the left two legs of incoming power to the sawmill's starter box. (The right leg is the manufactured leg of the phase converter and should not be used for any single phase loads.)

With the main disconnect on, start the phase converter with the magnetic starter button. Let the phase converter come up to speed. Switch on the sawmill's disconnect box.



WARNING! The sawmill's electrical starter should only be switched on after the phase converter is up to speed. Do not attempt to operate the sawmill without the phase converter operating properly.

1 Safety & General Information

Phase Converter

See Figure 1-3. The Roto-Phase wiring diagram is shown below. Additional drawings and information from the manufacturer are supplied with the unit.

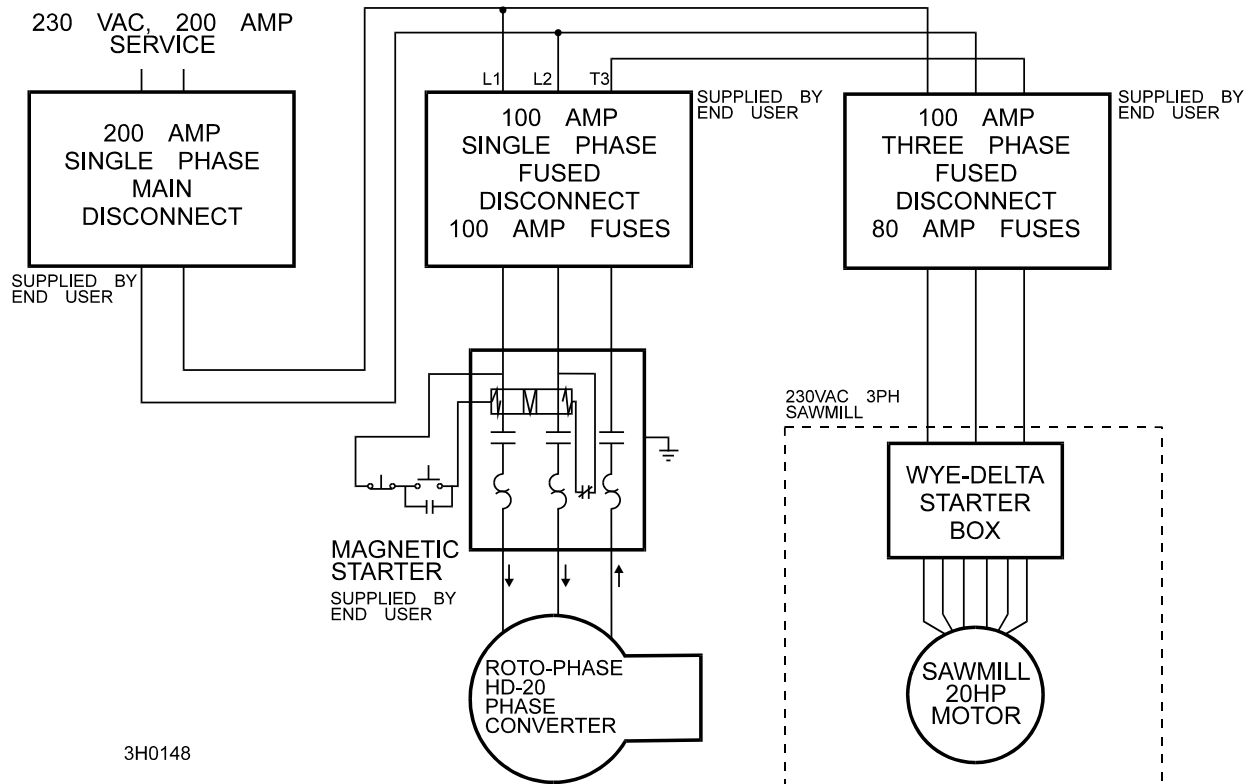




FIG. 1-3

SECTION 2 OPERATION



2.1 Starting The Motor

 **DANGER!** Do not start the motor when the clutch/brake lever is in the engaged (down) position. Always be sure the blade is disengaged and all persons are away from the blade before starting the motor.

 **WARNING!** Make sure the carriage fwd/rev switch is in the neutral position before turning the key switch to the ON or ACC position. This will prevent unintended carriage movement.

Engine Control Lights

See Figure 2-1. The following indicator lights are located on the sawmill control panel.

-  *Alternator Charge Indicator:* Lights up if the alternator is not charging the battery.
-  *Key Switch Indicator:* Lights up when the key is in either the ON or ACC (#1 or #3) position.

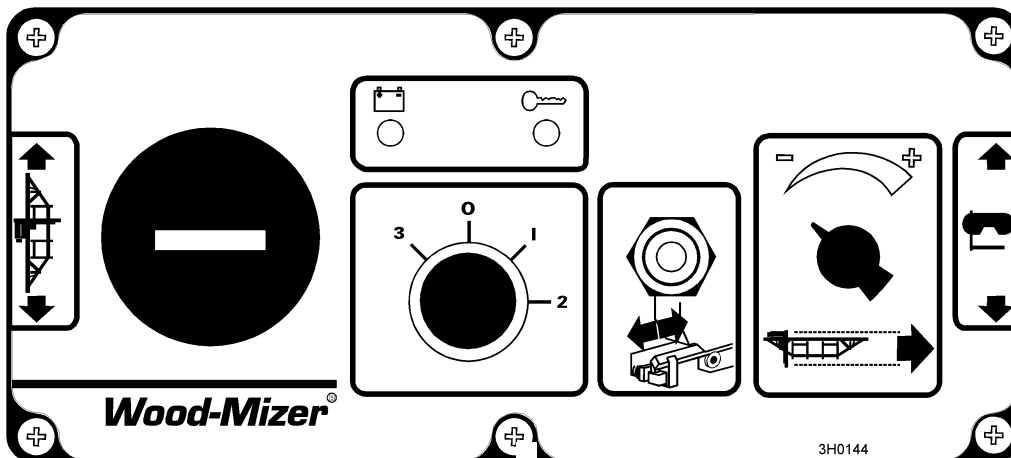


FIG. 2-1

Motor Start

Turn the key switch to the START (#2) position and release.

Motor Shutoff

Turn the key switch to the OFF (#0) position.

SECTION 3 MAINTENANCE



This symbol identifies the interval (hours of operation) which each maintenance procedure should be performed. "AR" signifies maintenance procedures which should be performed as required.

3.1 Battery



Check the battery electrolyte level every 50 hours of operation. See manufacturer's manual for instructions.



WARNING! Batteries contain explosive gases. Always wear eye protection and keep face away when charging or boosting battery. Charge battery in well-ventilated area. Keep battery away from hot or burning materials. Avoid spilling electrolyte when handling.

3.2 Alternator Belt

Adjust the alternator belt as needed. Check the alternator belt for tension and wear when battery is not charging properly or when the alternator belt is squealing.

Remove the engine belt pulley guard and alternator guard.

To tighten the belt, loosen the adjustment bolt and lock washer. Pivot the alternator until the belt has 3/16" (5 mm) deflection with a 15 lb. deflection force. Retighten the adjustment bolt.

See Figure 3-1.

Illustration Not Available
At Time of Publication

FIG. 3-1

3.3 Drive Belt Adjustment

50

See Figure 3-2. Check the drive belt tension after the first 20 hours, and every 50 hours thereafter. The drive belt should have 7/16" (11 mm) deflection with a 15 lb. deflection force. Always be sure to check the drive belt support after adjusting drive belt tension.

See Figure 3-3. To adjust drive belt tension, remove the two belt covers located underneath the engine. Loosen the turnbuckle jam nuts. Turn the turnbuckle counterclockwise (as viewed from the top) to tighten the belts, clockwise to loosen the belts. Retighten the jam nuts. Replace the belt covers.

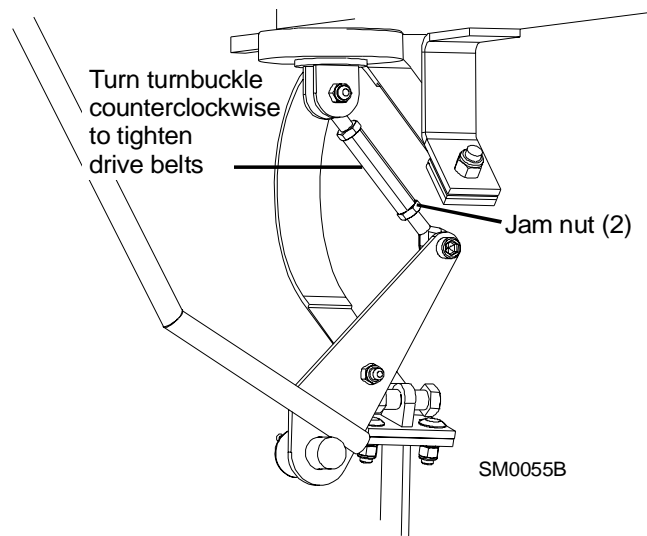


FIG. 3-3

AR

Periodically check all belts for wear. Replace any damaged or worn belts as needed.

AR

Adjust the drive belt support as needed. The drive belt support is designed to extend belt life. The spider bracket should be adjusted to NOT touch the drive belt when the clutch handle is engaged (down position), AND to hold the drive belt away from the engine pulley when the clutch handle is disengaged (up position).



DANGER! Do not for any reason adjust the drive belt support with the motor running. Always stop the motor before reaching or looking into the drive belt area.

See Figure 3-4. To adjust the drive belt support:

1. Make sure the motor is not running. Loosen the adjustment bolt.

3**Maintenance***Drive Belt Adjustment*

2. Position the bracket so that the prong is close to, but does not touch, the drive belt with the clutch handle engaged.
3. Retighten the adjustment bolt.

Illustration Not Available
At Time of Publication

FIG. 3-4

SECTION 4 REPLACEMENT PARTS

4.1 How To Use The Parts List

- Use the table of contents or the index to locate the assembly that contains the part you need.
- Go to the appropriate section and locate the part in the illustration.
- Use the number pointing to the part to locate the correct part number and description in the table.
- Parts shown indented under another part are included with that part.
- Parts marked with a diamond (◆) are only available in the assembly listed above the part.

See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond (◆) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond (◆) indicates M06666 is not available except in subassembly K05555.

4.2 Sample Assembly				
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	SAMPLE ASSEMBLY, COMPLETE (INCLUDES ALL INDENTED PARTS BELOW)	A01111	1	
4	Sample Part	F02222-22	1	
	Sample Subassembly (Includes All Indented Parts Below)	A03333	1	
5	Sample Part (◆ Indicates Part Is Only Available With A03333)	S04444-4	1	◆
	Sample Subassembly (Includes All Indented Parts Below)	K05555	1	
6	Sample Part (◆ Indicates Part Is Only Available With K05555)	M06666	2	◆
7	Sample Part	F07777-77	1	

To Order Parts:

- From the continental U.S., call **1-800-525-8100** to order parts. Have your customer number, vehicle identification number, and part numbers ready when you call.
- From other international locations, contact the Wood-Mizer distributor in your area for parts.

4

Replacement Parts

Motor Starter/Water Bottle Assembly

4.3 Motor Starter/Water Bottle Assembly				
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
	STARTER ASSEMBLY, 20HP 3-PHASE 50/60HZ 3450RPM ELECTRIC MOTOR	014180	1	
1	Box, Electric Motor Starter Enclosure	W11738	1	◆
2	Latch, Starter Box Door	P20048	1	
3	Screw, 1/4-20 X 1/2" Button Head Socket	F05005-62	2	
4	Nut, 1/4-20 Hex Self-Locking	F05010-9	10	
5	Connector, 1" Nylon	E20444	2	
6	Conduit, 1" Maxi-Flex	R01627	5.7 Ft.	
7	Plug, AS075 OilTite Painted	024250 ¹	1	
8	Connector, SR507 Cord	E20456	1	
9	Ring, 1/2" Sealing	E20460	1	
10	Nut, 1/2" #141 Lock	E20461	1	◆
11	Decal, Y-Delta E20/E25 Electric Wiring	014344	1	
12	Panel, Starter Box Component Mounting	S10212	1	
13	Contact, 65Amp 480Volt 3Phase 12VDC Coil	023169	3	
14	Interlock, Mechanical for LP1D65	023171	1	
15	Diode, Suppression Module D40-D80	023360	3	
16	Timer Kit, 12V Y-Delta Replacement	050826 ²	1	
17	Socket, 8-pin Relay Sq-D #00605 Class 8501 Type NR52B	E10216	1	
	TRAY ASSEMBLY, FUEL TANK/WATER BOTTLE	A11685	1	
18	Tray, Fuel Tank/Water Bottle	S11684	1	◆
	Strap, 15" Rubber	P07461	1	
19	Strap, 20" Rubber	P11668	2	
	Strap, 24" Rubber (not used on electric assembly)	P11258	2	
20	Bolt, 1/4-20 X 1" Carriage Head	F05005-34	5	
21	Nut, 1/4-20 Hex Lock	F05010-21	5	
	Clamp, 1/2" EMT Hose	P07584	3	
	Bolt, 1/4-20 x 1/2" Carriage Head	F05005-33	2	
	Nut, 1/4-20 Self-Locking	F05010-9	2	
	Washer, 1/4" SAE Flat	F05011-11	3	
22	BOTTLE, 5 GALLON WATER	P04357	1	
23	Cap, 5 Gallon Water Bottle	P09088	1	
24	VALVE, WATER FLOW	014100	1	
25	FITTING, 5/8" THREAD TO 3/8" HOSE BARB	014113	1	
26	HOSE, PLASTIC WATER LUBE	R01885	6.5 Ft	
	WASHER, 3/8" FLAT	F05011-3	4	
	NUT, 3/8-16 2-WAY SELF-LOCKING	F05010-10	4	
	BOLT, 3/8-16 X 2 3/4" HEX HEAD	F05007-29	4	

¹ Replaces E20570 unpainted plug.

² Replacement Kit 050826 replaces Timer 023170 supplied prior to 9/02. Kit includes new polarized timer and instructions on how to change wiring to accept the new timer.

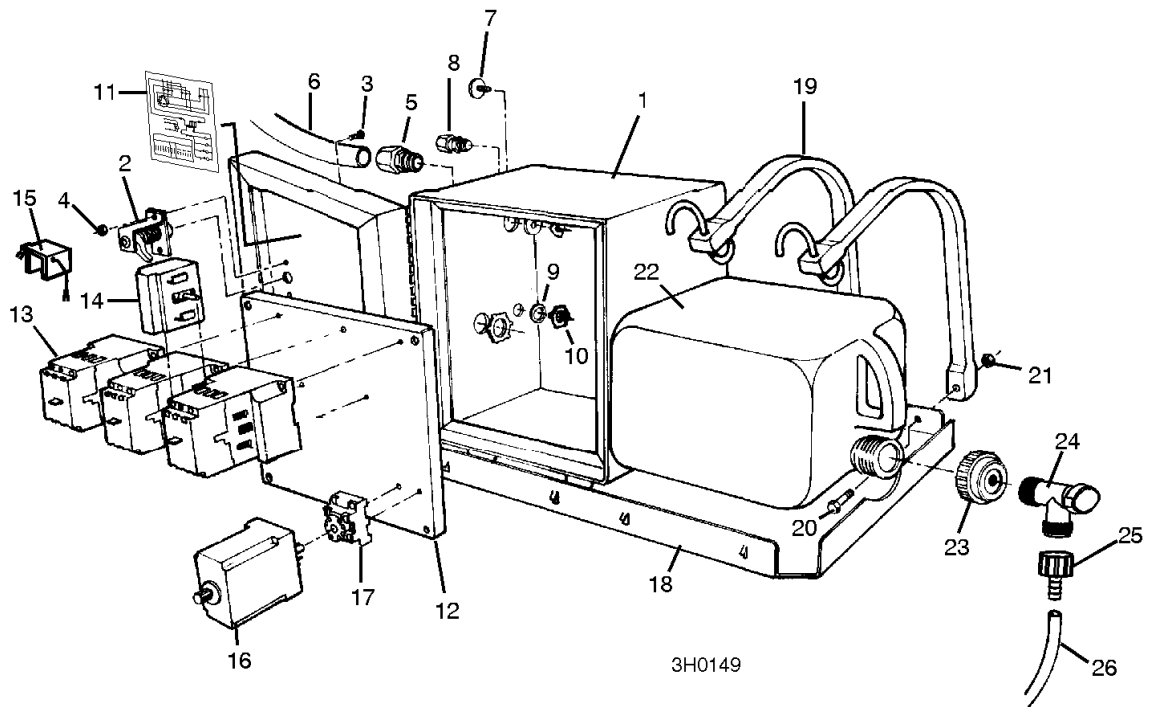


FIG. 4-1

4

Replacement Parts

Motor Assembly

4.4 Motor Assembly				
REF	DESCRIPTION (◆ Indicates Parts Available In Assemblies Only)	PART #	QTY.	
1	MOTOR ASSEMBLY, 220/380/415-440V	014091	1	
2	PULLEY, 3-GROOVE MOTOR	014084	1	
3	BUSHING, 1 5/8" P1	014009	1	
4	BUSHING. RUBBER	P05032	2	
5	BUSHING, MOTOR MOUNT SPACER	S12410-W	1	
6	BELT, 3BX72 DRIVE	014085	1	
7	PLATE, ELECTRIC MOTOR	014059	1	
	BUSHING ASSEMBLY, MOTOR MOUNT PIVOT	A04127 ¹	2	◆
8	Bushing, Rubber Motor Mount Pivot	P05041	1	◆
9	Spacer, Motor Mount Pivot	P12164	1	
10	CLAMP, MOTOR MOUNT	014031	3	
11	PIN WELDMENT, MOTOR MOUNT PIVOT	014154	1	
12	ALTERNATOR, 105A 12V	050287 ²	1	
	WIRE ASSEMBLY, 61/105 AMP ALTERNATOR PLUG	015969	1	
	BRACE, ALTERNATOR	W12761	1	
13	NUT, 3/8-16 HEX NYLON LOCK	F05010-10	1	
14	BOLT, 3/8-16 X 5 1/2" HEX HEAD FULL THREAD	F05007-34	1	
15	BOLT, M8 X 1 1/4" X 1" HEX HEAD FULL THREAD	F5004-40	2	
16	WASHER, 5/16" SAE FLAT	F05011-17	1	
17	WASHER, 5/16" SPLIT LOCK	F05011-13	2	
18	PULLEY, 1979452 DELCO ALTERNATOR	P03806	1	
19	BELT, A30 ALTERNATOR	P11628	1	
	BRACKET ASSEMBLY, DRIVE BELT	014122	1	
	BOLT, 1/2-13 X 2" HEX HEAD	F05008-76	4	
	WASHER, 1/2" SAE FLAT	F05011-2	8	
	NUT, 1/2-13 HEX LOCK	F05010-3	4	
	BRACKET, ALTERNATOR MOUNTING	014230 ²	1	
	GUARD, ALTERNATOR	014227	1	

¹ A04127 no longer available. Purchase individual component parts P12164 and P05041 or upgrade to aluminum bushing assembly 016380.

² 105A Alternator 050287 replaces 61A alternator P03804 originally supplied (no longer available from vendor). Requires replacement of mounting bracket (014230). Existing brackets can be modified to accept 105A alternator by grinding enough material (approx. 1/16" - 1/8") from the bottom of the mounting plates to clear the larger alternator body.

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At Time of Publication

FIG. 4-2

SECTION 5 ELECTRICAL INFORMATION

5.1 Electrical Symbol Diagram, E20 Super LT30/LT40

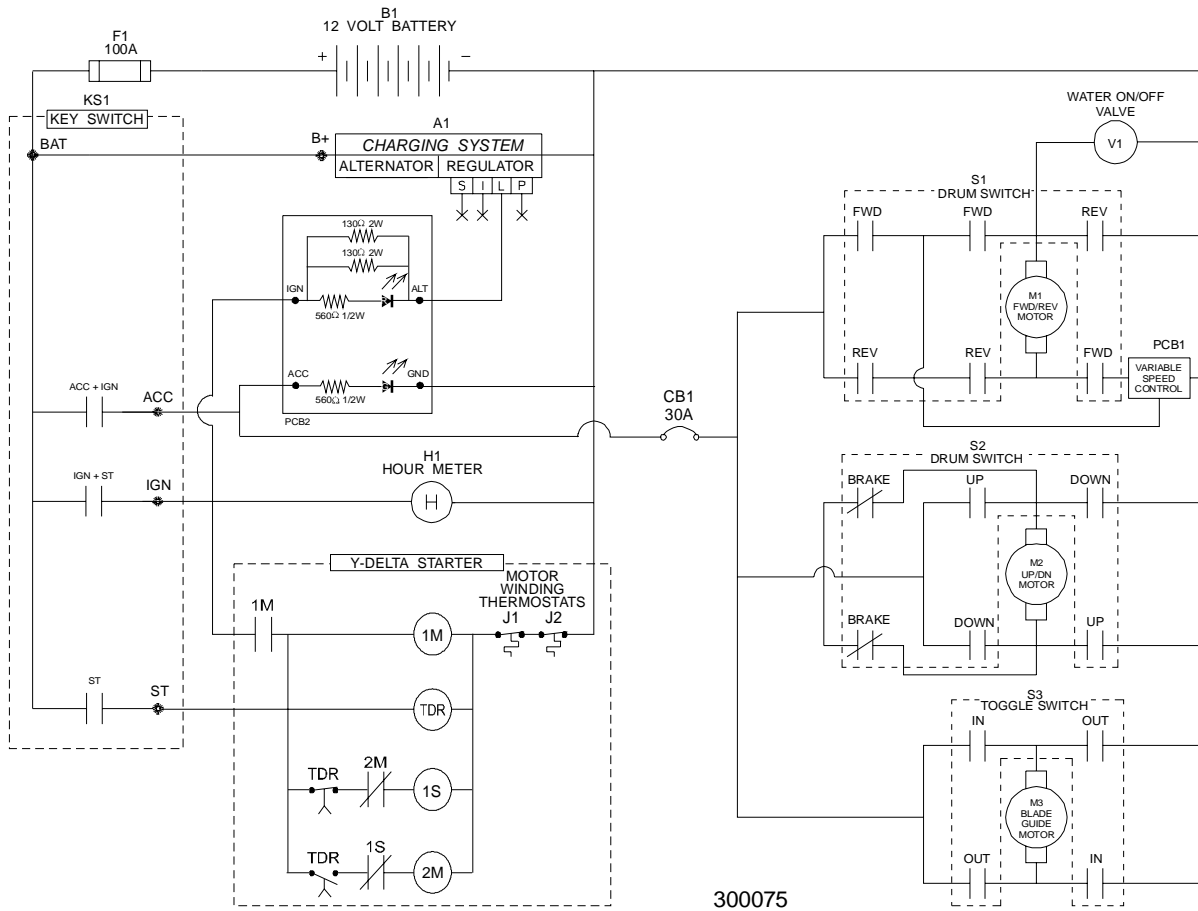
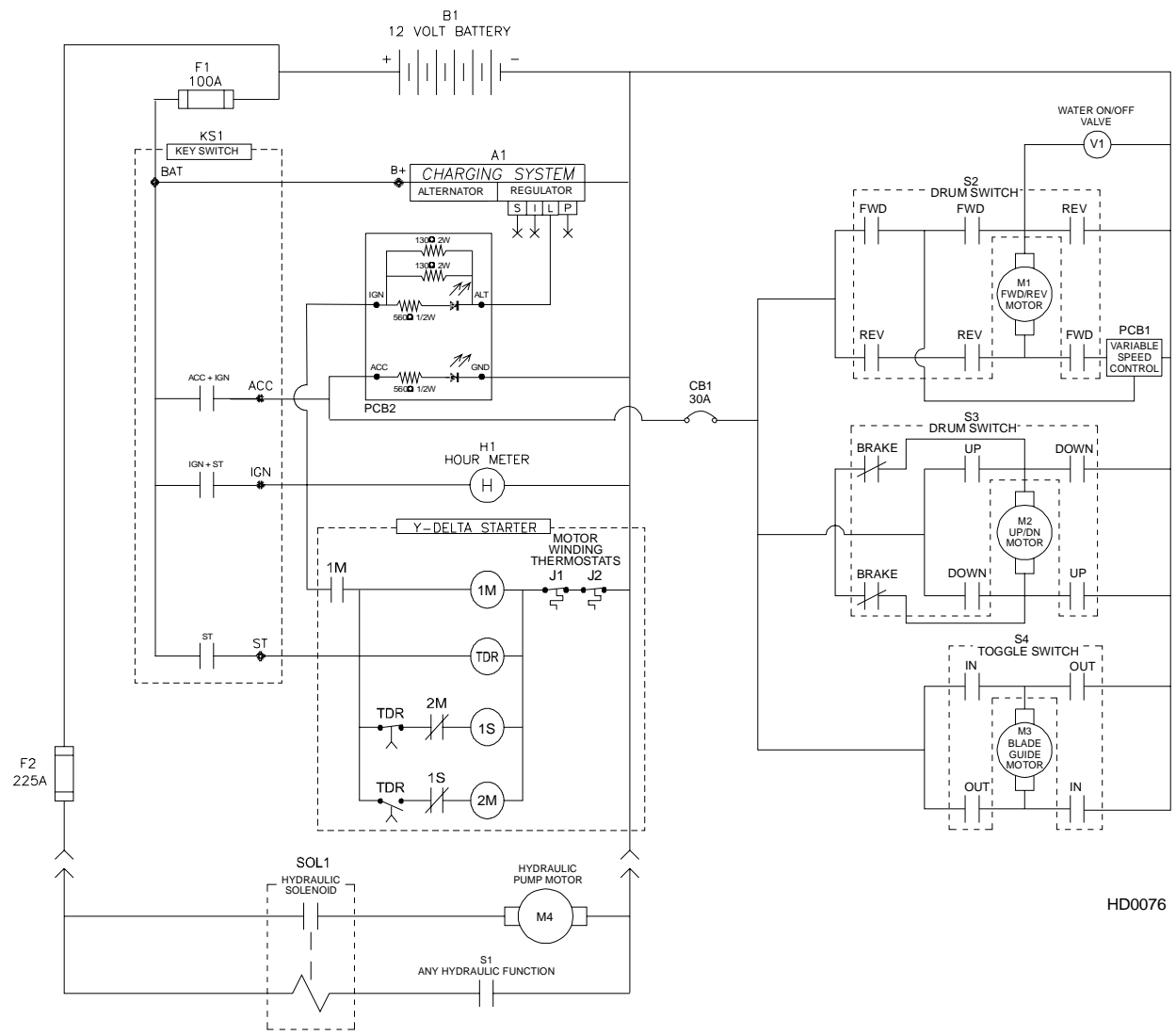


FIG. 5-1

5.2 Electrical Symbol Diagram, E20 Super LT30HD/LT40HD



HD0076

FIG. 5-2

5.3 Electrical Components, E20 Super LT30/LT40

Component	Manufacturer Part No.	Manufacturer	Wood-Mizer Part No.	Description
A1	CS-130	Delco-Remy	050287 ¹	Alternator, 12 Volt, 105 Amp Maximum
B1	524MFD	Deka	P09725-1	Battery, 12 Volt LT30/40 (See Section 5.5)
CB1	30128-30	Cole-Hersee	E20486	Circuit Breaker, 30 Amp, 12 Volt, For Power Feed Motor, Auto Reset
F1	RL-100	Gould	P11549	Fuse Link, 100 Amp, 250 Volt For Main + 12 Volt Starter, Alternator
H1	T40 Series	ENM Corp.	P09631	Hour Meter, 12 Volt, Low Power T40 Series
KS1	121801	General	P04350	Key Switch, 4-position (Accessory, Off, Ignition, Start)
M1	1149-001	Current App.	006747 ²	Motor, 12 Volt Power Feed
M2	1149-001	Current App.	006747 ³	Motor, 12 Volt Up/Down
M3	P09698-1	Klauber	A10365	Motor, 12 Volt Blade Guide Arm 53:1 Gear
PCB1	024495	Wood-Mizer	024495 ⁴	Circuit Board, Power Feed
PCB2	023041	Wood-Mizer	023041	Board, LED Circuit (U.S.)
S2	2601-AF2-S12	Square D	E20440	Drum Switch, Up/Down Motor
S3	1121-0004	McGill	P10006	Toggle Switch, Blade Guide In/Out Motor
V1	S24C-6V 12VDC	Atkomatic Valve Co.	016280 ⁵	Valve, Waterlube Solenoid

¹ 105A Alternator 050287 replaces 61A alternator P03804 originally supplied (no longer available from vendor). Requires replacement of mounting bracket (014230). Existing brackets can be modified to accept 105A alternator by grinding enough material (approx. 1/16" - 1/8") from the bottom of the mounting plates to clear the larger alternator body.

² Motor 006747 replaced 014359 supplied until 11/08. .25HP motor directly replaces .49HP motor P04140 (Owosso #PR-4P07Q). Requires two rubber boots (P03807) to protect external motor terminals.

³ Motor 006747 replaced P04140 and Service Kit A07974 supplied until 5/09 (Replacement requires new Mount Bracket 014073).

⁴ Replaces A20428 originally supplied before 4/99. New assembly includes LED indicator lights for easier troubleshooting. Modularized components and surface mount technology improve durability and power capability.

⁵ Valve kit 016280 replaces 014165 solenoid valve, F05004-74 4mm x 12 screws and F05011-57 4mm lock washers originally supplied. 014165 valve no longer available. New valve 016140 requires #10 mounting hardware.

5.4 Electrical Components, E20 Super LT30HD/LT40HD

Component	Mfg. Part No.	Manufacturer	Wood-Mizer Part No.	Description
A1	CS-130	Delco-Remy	050287 ¹	Alternator, 12 Volt, 105 Amp Maximum
B1	DP24M ²	Deka	P09853-1	Battery, 12 Volt LT30/40 (See Section 5.6)
CB1	30128-30	Cole-Hersee	E20486	Circuit Breaker, 30 Amp, 12 Volt, For Power Feed Motor, Auto Reset
F1	RL-100	Gould	P11549	Fuse Link, 100 Amp, 250 Volt For Main + 12 Volt Starter, Alternator
F2	RL-225	Gould	P11550	Fuse Link, 225 Amp, 250 Volt For Hydraulic +12 Volt Circuit
H1	T40 Series	ENM Corp.	P09631	Hour Meter, 12 Volt, Low Power T40 Series
KS1	121801	General	P04350	Key Switch, 4-position (Accessory, Off, Ignition, Start)
M1	1149-001	Current App.	006747 ³	Motor, 12 Volt Power Feed
M2	1149-001	Current App.	006747 ⁴	Motor, 12 Volt Up/Down
M3	P09698-1	Klauber	A10365	Motor, 12 Volt Blade Guide Arm 53:1 Gear
M4	08714	Monarch Hyd.	052807 ⁵	Motor, 12 Volt Hydraulic Pump
PCB1	024495	Wood-Mizer	024495 ⁶	Circuit Board, Power Feed
PCB2	023041	Wood-Mizer	023041	Board, LED Circuit (U.S.)
S1	024198	Wood-Mizer	024198 ⁷	Switch, Hydraulic Pump Levers
S2	2601-AF2-S11	Square D	E20439	Drum Switch, (U.S.), Power Feed Fwd/Reverse Motor
S3	2601-AF2-S12	Square D	E20440	Drum Switch, Up/Down Motor
S4	1121-0004	McGill	P10006	Toggle Switch, Blade Guide In/Out Motor
SOL1	586-902	Stancor	016371 ⁸	Solenoid, 200 Amp Hydraulic Pump Motor
V1	S24C-6V 12VDC	Atkomatic Valve Co.	016280 ⁹	Valve, Waterlube Solenoid

¹ 105A Alternator 050287 replaces 61A alternator P03804 originally supplied (no longer available from vendor). Requires replacement of mounting bracket (014230). Existing brackets can be modified to accept 105A alternator by grinding enough material (approx. 1/16" - 1/8") from the bottom of the mounting plates to clear the larger alternator body.

² Replaces 8T24 originally supplied.

³ Motor 006747 replaced 014359 supplied until 11/08. .25HP motor directly replaces .49HP motor P04140 (Owosso #PR-4P07Q). Requires two rubber boots (P03807) to protect external motor terminals.

⁴ Motor 006747 replaced P04140 and Service Kit A07974 supplied until 5/09 (Replacement requires new Mount Bracket 014073).

⁵ Bosch motor P09955 replaced by vendor with Iskra motor 1/06. Brush kit P09585 no longer available to service Bosch motor. Replace motor using kit 052807 ([See Form #1578](#) for applicable discount information). Use Brush Kit 038682 to service Iskra motor.

⁶ Replaces A20428 originally supplied before 4/99. New assembly includes LED indicator lights for easier troubleshooting. Modularized components and surface mount technology improve durability and power capability.

⁷ Saleable service assembly created which includes 014765 3-wire switch and crimped terminals (7/97). 014765 3-wire switch directly replaces P12735 2-wire switch (4/97).

⁸ Solenoid Kit 016371 replaces Solenoid 015470. Kit includes solenoid and replacement instructions. If replacing original P09595 100 amp solenoid, order retrofit kit 015783.

⁹ Valve kit 016280 replaces 014165 solenoid valve, F05004-74 4mm x 12 screws and F05011-57 4mm lock washers originally supplied. 014165 valve no longer available. New valve 016140 requires #10 mounting hardware.

5.5 Battery Specifications, E20 Super LT30/LT40

Group No.	Type No.	Performance Level		Approximate Weight	Maximum Overall Dimensions		
		Cranking Performance	Reserve Capacity	Wet	Length	Width	Height
24	524MFD	535CC	90	35.5 lb. (16.1 kg)	10.25 in. (260 mm)	6.75 in. (171 mm)	9.0 in. (229 mm)

TABLE 5-1

5 **Electrical Information**
Battery Specifications, E20 Super LT30HD/LT40HD

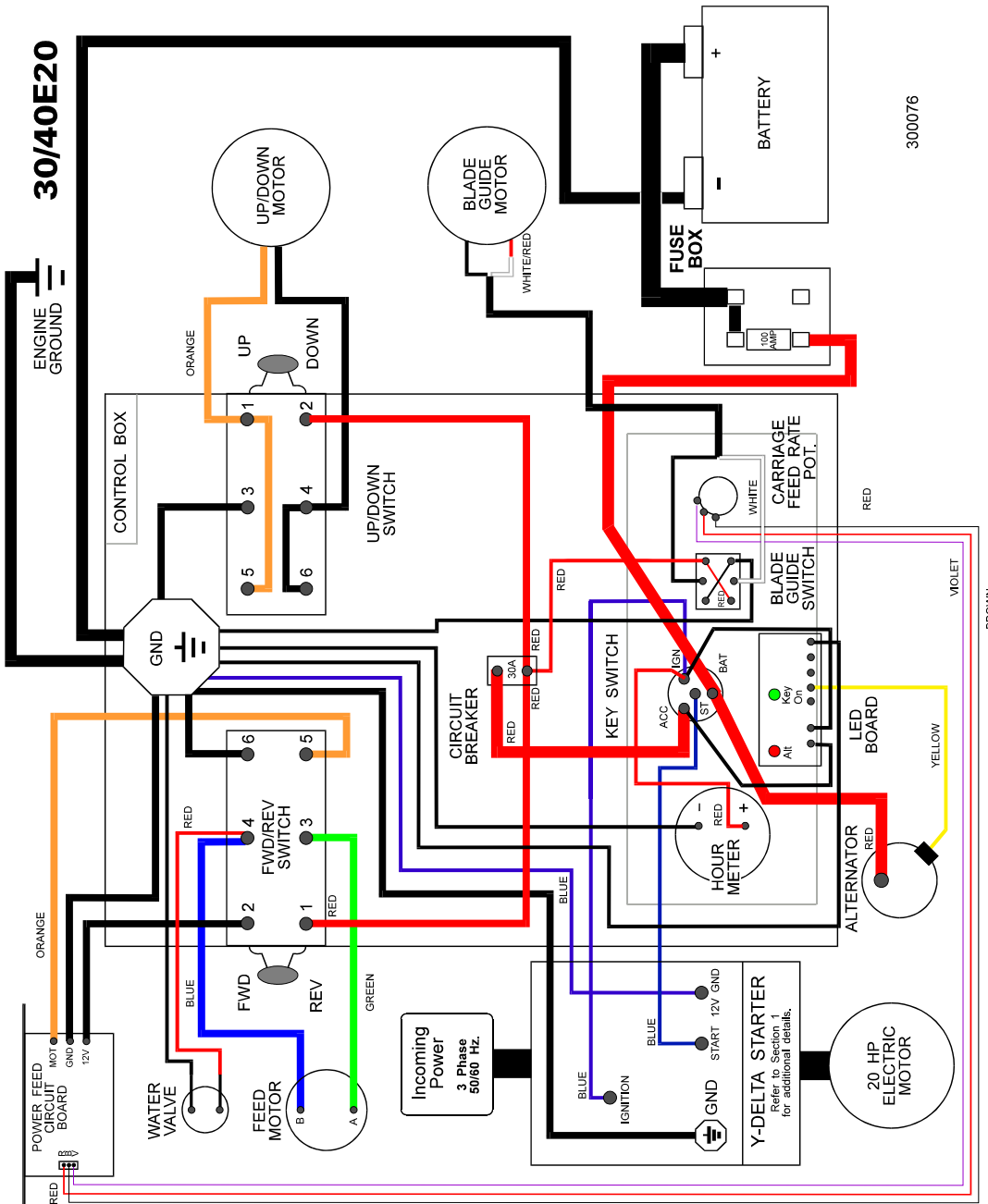
5.6 Battery Specifications, E20 Super LT30HD/LT40HD

Group No.	Type No.	Performance Level		Approximate Weight	Maximum Overall Dimensions		
		Cranking Performance	Reserve Capacity	Wet	Length	Width	Height
24	DP24M ¹	515CC	---	39.0 lb. (17.7 kg)	10.75 in. (273 mm)	6.75 in. (171 mm)	9.875 in. (251 mm)

TABLE 5-2

¹ Replaces 8T24 originally supplied.

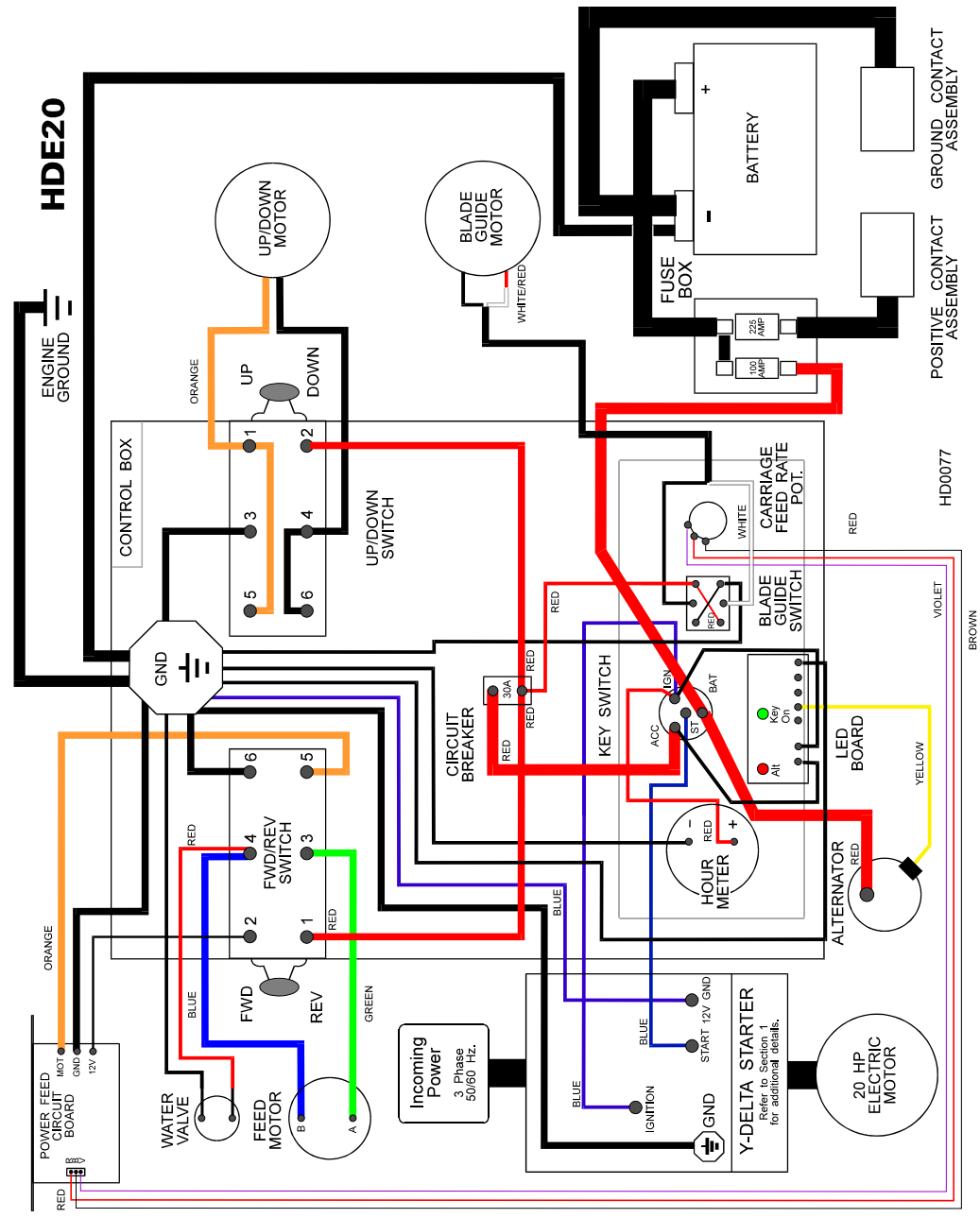
5.7 Wiring Diagram, E20 Super LT30/LT40



NOTE: Black Wires Not Labeled With Color Designations

FIG. 5-3

5.8 Wiring Diagram, E20 Super LT30HD/LT40HD



NOTE: Black Wires Not Labeled With Color Designations

FIG. 5-4

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