

# **DANIELS FOOD EQUIPMENT**

## **DMX QUAD ACTION 200 MIXER**



### **OPERATORS MANUAL - PARTS LIST**

PLEASE READ THIS MANUAL INCLUDING ALL SAFETY INSTRUCTIONS BEFORE ATTEMPTING TO OPERATE THIS MACHINE. PROPER GUARDS AND SAFETY DEVICES ARE INSTALLED FOR YOUR SAFETY. DO NOT OPERATE THIS MACHINE UNLESS ALL GUARDS ARE IN PLACE.

#### **DANIELS FOOD EQUIPMENT**

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# SAFETY INSTRUCTIONS



- **WARNING** to all purchasers, operators and operations supervisors: make certain every person who is to operate the DMX QUAD ACTION MIXER has read this manual before attempting to operate machine. It is the responsibility of the owner to assure that this machine is used properly and safely. Have all operators sign the signature page found at the end of this manual.
- Failure to read and adhere to the following important instructions could result in serious bodily injury.
- Read this manual completely before operating the DANIELS FOOD EQUIPMENT DMX QUAD ACTION MIXER. Additional manuals as well as replacement safety labels are available from DANIELS FOOD EQUIPMENT.
- **DANGER:** Do not operate or work around this machine with loose fitting clothing. It could become entangled in the machine.
- Remain alert to the hazards posed by the function of this equipment, particularly the rotating mixing paddles.
- Never try to manually stop the mixer. Always wait until the machine has completely stopped before switching the forward and reverse switch.
- Failure to properly ground this machine could result in electrical shock. Only a qualified electrician, who is familiar with the appropriate electric codes, should provide the proper electrical connection.
- Do not alter or modify this DMX QUAD ACTION MIXER in any way from its original form. Allow only an authorized installer to service your machine.
- Always turn off the machine when it is not in use.
- Unplug the machine from the power source before removing the hood cover for maintenance or making adjustments to the machine.
- Always operate on a level surface, with all four casters locked.

- Keep small children and unauthorized personnel away from machine.
- Keep excessive amounts of water away from the control panel.
- Do not overload the hopper.
- Never run machine with guards removed.
- Keep hands, clothing and other foreign objects away from moving parts at all times.
- At any time an operator suspects that an interlock or safety device is not functioning properly, the operation should be terminated. Unplug the machine and call an authorized dealer to inspect and repair the machine.
- Failure to follow these safety instructions could result in **SERIOUS PERSONAL INJURY.**

## OPERATION

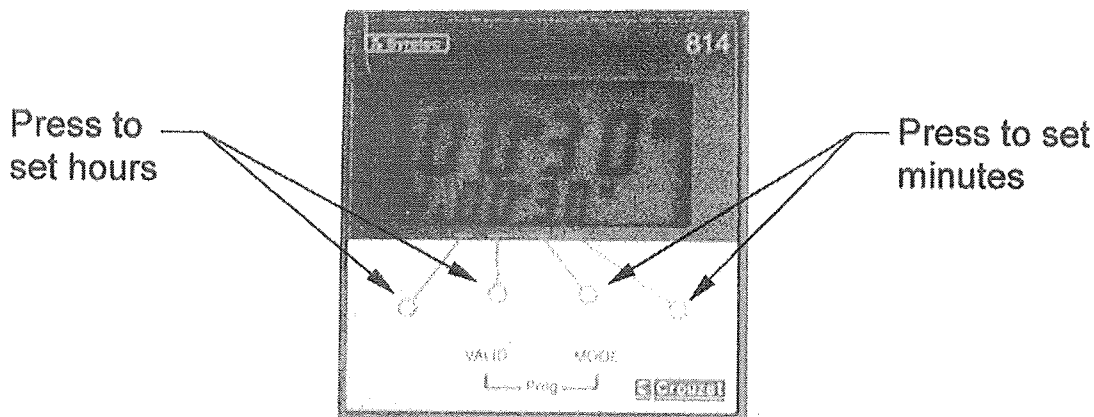
DMX QUAD ACTION MIXERS produce a four-way mixing action. The general movement of product is to the right or left depending on which position the "forward" or "reverse" switch is set. This action results in a minimum of temperature increase and less mastication of the product for a given mixing cycle time. All mixing is accomplished with the hopper opening facing upward. (The hopper is tilted downward when discharging the mixed product).



**WARNING:** Never bypass the hopper cover safety switches; these switches are positioned on the DMX QUAD ACTION MIXER for the safety of anyone working in the area of the machine. If for any reason the hopper cover or safety switches require adjustment or replacement, contact your local authorized installer immediately.

### OPERATING PROCEDURE

1. Open the hopper cover and add the product to be mixed. **DO NOT OVERLOAD THE HOPPER.** Overloading will cause the hopper cover to lift during mixing. Ingredients such as spices and flavorings, etc. should be thoroughly mixed with fluids and then added to the product in the hopper. Close hopper cover.
2. Set the timer to the desired amount of time you wish the product to be mixed (10 minutes or less is an average mix cycle time, although some products may vary). To set the time, press any or all of the four buttons located under the time display. Each press of the button under the display will increase that time unit by one. The timer comes pre-programmed from the factory to display time in hours and minutes.



3. Move selector switch to either "FORWARD" or "REVERSE". Turn timer on/off switch to the "ON" position to begin mixing action.

NOTE: Product that has a stiff consistency may require more reverse direction mixing than a more liquid product. This will have to be determined by the operator to suit requirements.

4. When the mixing cycle is complete, place timer on/off switch to the "OFF" position. Open the hopper cover and secure with the safety lock. The final mixed product can now be discharged by tilting the hopper forward. A side lever is used to release the hopper and position it in several "tilt" down positions depending on how quickly it is desired to remove the product from the hopper.



The hopper cover will open when the hopper is tilted forward. If it is necessary to rotate the paddles to discharge the mix, place timer on/off switch in "ON" position and hold down the two safety switches (one switch with each hand). **BE SURE NO ONE ELSE IS THE MACHINE AREA AND NO OBJECTS WILL INTERFERE WITH THE MACHINE WHEN PERFORMING THIS OPERATION.**

## CLEANING



### ROTATING MIXING PADDLE

#### TO AVOID SERIOUS PERSONAL INJURY:

**ALWAYS** unplug from power source before cleaning or removing panels.

**ONLY** use recommended cleaning equipment, materials and procedures.

**NEVER** spray water or other liquid substances directly at motor, power controls or any other electrical components.

**ALWAYS** thoroughly clean equipment at least daily.



**DO NOT** use harsh chemicals, scouring pads, or cleansers. Ordinary liquid detergent for manual dish or pot/pan washing may be used. Avoid dishwasher machine detergent as that contains chemicals that will cause brown "rusty" stains, as will chlorine bleach and similar products if allowed to stand in or on the machine for any length of time.

#### CLEANING PROCEDURE

1. Unplug machine from power source.
2. Remove paddle pin, paddle shaft and paddle blades. Refer to the PADDLE REMOVAL section.
3. Clean and sanitize the mixing paddle and paddle pin.

**NOTE:** Sanitize only with a USDA, FDA approved sanitizer.

4. Remove the clean out plug from the bottom of the hopper using the supplied wrench.

5. Rinse the hopper with warm water, clean with hot water and detergent, then sanitize.
6. DO NOT use scouring pads or abrasive cleaners that might scratch and impair the transparency of the clear hopper cover.
7. Wipe down outside of machine cabinet and hopper. Do not spray water directly on electrical controls.
8. Apply food grade grease to paddle pin and reinstall mixing paddles and pin.



# PADDLE REMOVAL

**CAUTION: UNPLUG FROM POWER SOURCE BEFORE CLEANING OR REMOVING PADDLE SHAFTS**

1. Jog mixer paddle shafts until the paddle support tab is located on the top of the drive hub and rotated slightly toward the front of machine (figure 1 top view). Be sure to unplug machine from power source before proceeding.
2. To remove the paddle pin, first lift the paddle pin lock and then slide the paddle pin until it is out of the inside paddle shaft hub, but still supporting the outside paddle blade assembly (figure 2).
3. Remove the inside paddle shaft by sliding the paddle shaft toward the paddle pin side of the hopper and then lifting up. The inside paddle shaft assembly may need to be tilted at an angle while lifting out to allow the drive coupler to be released from the drive hub (figure 3).
4. Tilt the hopper to an 11 o'clock position and do not lock it in place (this allows you to adjust the position of the hopper while removing the paddle blade assembly). Remove the outside paddle blade assembly by lifting up and out from the hopper (figure 4).

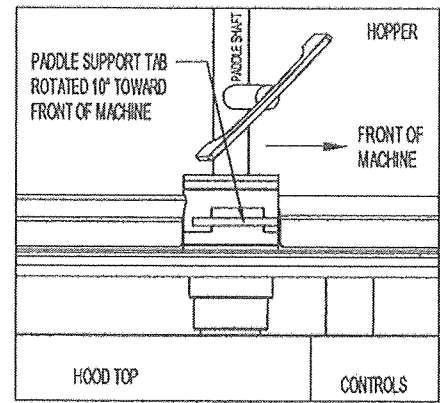


FIGURE 1

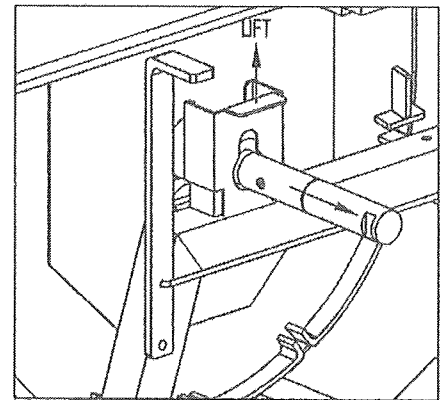


FIGURE 2

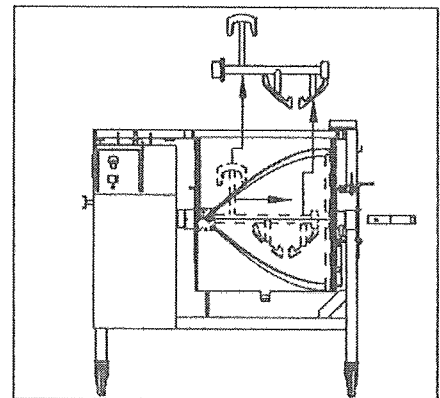


FIGURE 3

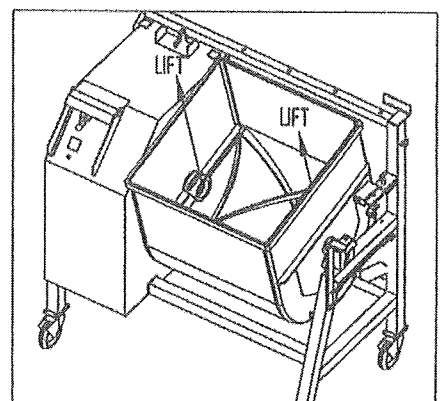
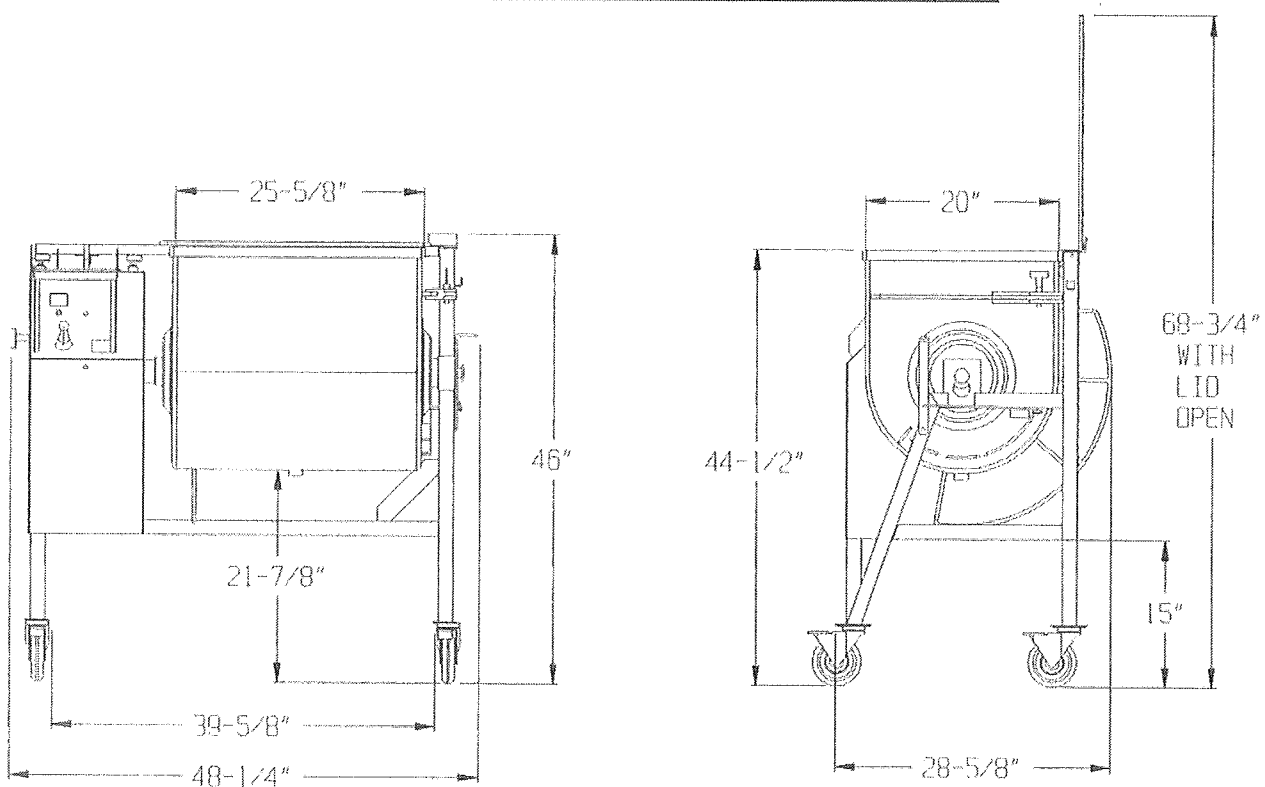


FIGURE 4

# DMX QUAD 200 SPECIFICATIONS



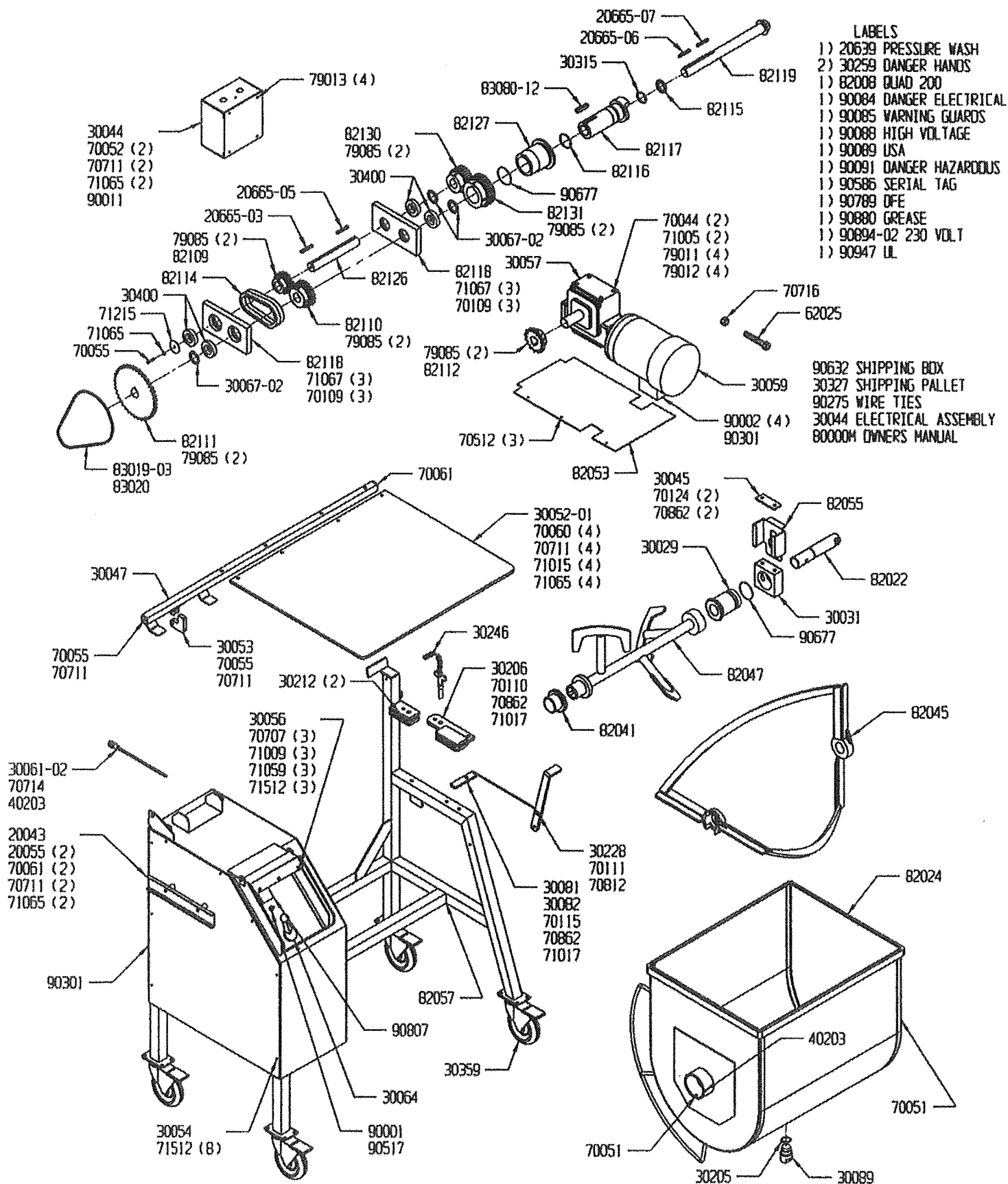
<b>MOTOR:</b>	<b>STANDARD: 1-1/2 HP, 3 PH, 230 V, 60 Hz, 5.0 AMP</b> <b>OPTIONAL: 1-1/2 HP, 3 PH, 208/460 V, 60 Hz, 5.2/2.5 AMP</b> <b>OPTIONAL: 2 HP, 1 PH, 115 V, 60 Hz, 20 AMP</b> <b>OPTIONAL: 2 HP, 1 PH, 230 V, 60 Hz, 10 AMP</b>
<b>PADDLE RPM:</b>	<b>INNER: 24 RPM    OUTER: 22-1/2 RPM</b>
<b>TIMER:</b>	<b>LED READOUT – HOURS / MINUTES</b>
<b>DIRECTIONAL CONTROL:</b>	<b>FORWARD – STOP – REVERSE</b>
<b>HOPPER CAPACITY:</b>	<b>200 LBS</b>
<b>HOPPER CONSTRUCTION:</b>	<b>12 GA STAINLESS STEEL, 110° DUMPING, REMOVABLE PADDLE, CLEANOUT DRAIN, TRANSPARENT COVER WITH SAFETY LOCKOUT</b>
<b>FRAME:</b>	<b>11 GA STAINLESS STEEL TUBING, OPEN UNDER HOPPER FOR EASY DUMPING, LOCKING SWIVEL CASTERS</b>
<b>DUMP HEIGHT:</b>	<b>16-1/4"</b>
<b>WEIGHT:</b>	<b>395 LBS</b>
<b>SHIPPING INFO:</b>	<b>445 LBS, 52" X 32" X 48" HIGH</b>

\* OPTIONAL  
 \*\* NOT SHOWN

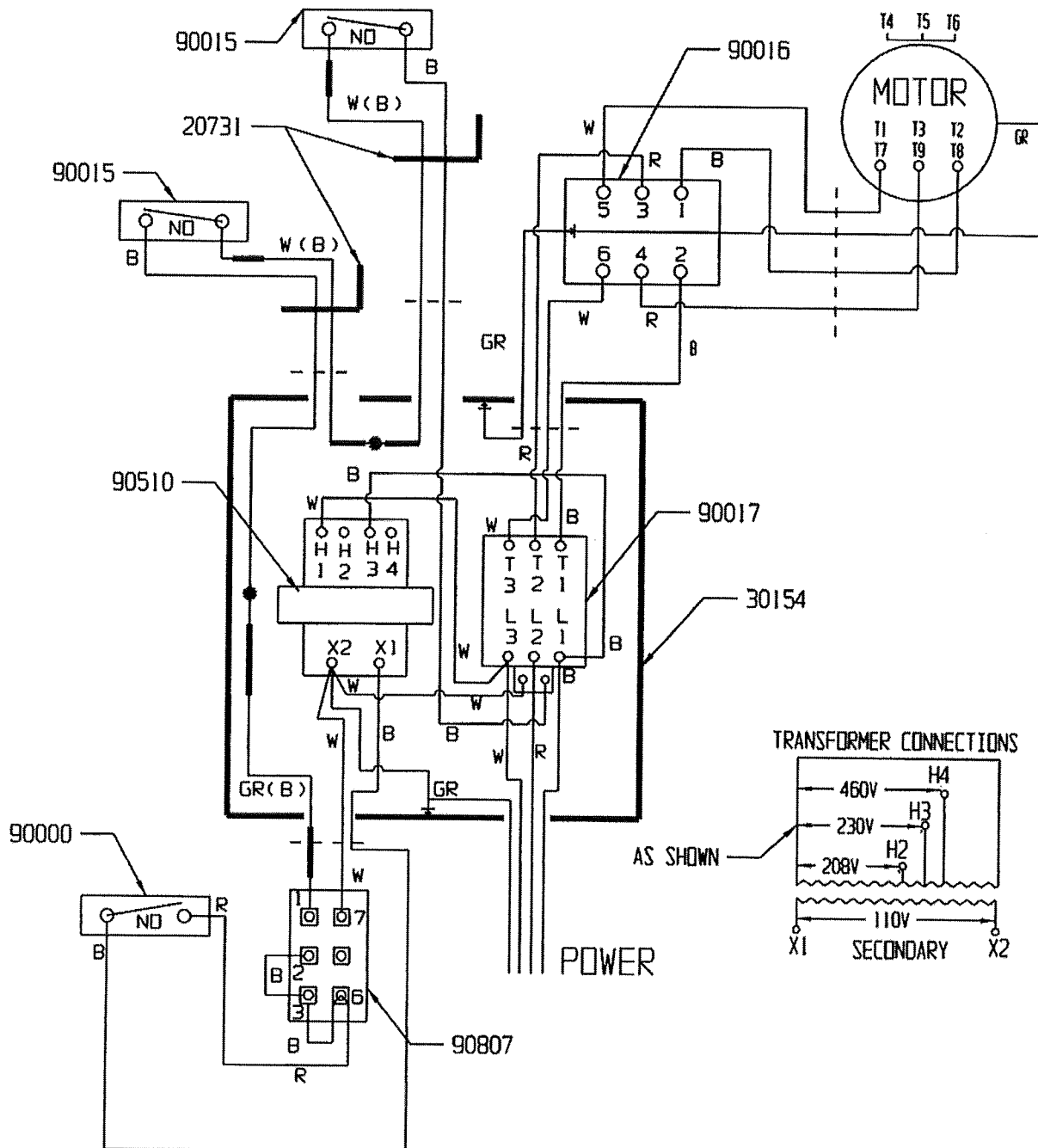
## DMX QUAD 200 PARTS LIST

PART #	DESCRIPTION	QTY	PART #	DESCRIPTION	QTY
20043	HANDLE	1	71059	LW #10 SS	3
20055	HANDLE SPACER	2	71065	5/16 LOCK WASHER SS.(LW15S)	9
20639	DO NOT PRESSURE WASH LABEL	1	71067	3/8" SS LW	6
20665-03	1-1/2" X 1/4 SQ KEY	1	71215	5/16 X 1-1/2" FLAT WASHER SS	1
20665-05	2-1/8" X 1/4 SQ KEY	1	71512	10-24 X 1/2" SS TSL-SLOTTED	14
20665-06	1-1/4" X 1/4 SQ KEY	1	**79008	5/16X1-1/2 HEX LAG SCREW	4
20665-07	1-5/8" X 1/4 SQ KEY	1	79011	1/2 FLAT WASHER ZINC	4
30029	HOPPER BUSHING	1	79012	33626 1/2 LW ZINC PLATED	4
*30029-01	HOPPER BUSHING W/O-RING	1	79013	10-16 X 3/4 TEKHH ZINC 318	4
30031	NYLON BEARING	1	79085	81939 5/16-18 X 1/2 SET SCREW	12
30044	J-BOX ASS'Y	1	80000M	OWNERS MANUAL	1
30045	BEARING SUPPORT PLATE	1	**82008	200 QUAD LABEL	1
30047	COVER SUPT XMNT	1	82022	PADDLE PIN ASS'Y	1
30052-01	3/8"X 24"X 28" HOPPER COVER	1	82024	HOPPER XMNT.	1
30053	COVER LOCK NYLON	1	82041	PADDLE BUSHING	1
30054	ACCESS COVER	1	82045	PADDLE BLADE XMNT.	1
30056	1/4"X9"X10" CONTROL COVER	1	82047	PADDLE SHAFT XMNT.	1
30057	924 GEAR BOX 30T01	1	82053	SAFETY PLATE	1
30059	110125 1-1/2HP 3PH MOTOR	1	82055	PADDLE PIN LOCK	1
30061-02	GREASE TUBE XMNT (9-1/4")	1	82057	HOOD TO FRAME XMNT	1
30064	PLACARD FWD/OFF/REV	1	*82076	GRATED METAL LID	1
30067-02	SPACER	3	*82077	METAL LID	1
*30073	TEE HANDLE FOR PADDLE PIN	1	*82080	FRAME EXTENSION 10"	1
30081	BUSHINGS	1	82109	SPROCKET 16 TOOTH # D40	1
30082	MIX SPRING P# CB 08 167 S-	1	82110	SPROCKET 20 TOOTH # D40	1
30089	DRAIN PLUG	1	82111	SPROCKET 36 TOOTH # 50	1
30205	O-RING #214 9452K34 DRAIN	1	82112	SPROCKET 15 TOOTH # 50	1
30206	POS HOPPER STOP ASS'Y	1	82114	#D40 ENDLESS CHAIN, 32 PITCH	1
30212	POS LOCK SUPPORT	2	82115	1-1/4" I.D. X 1/8" SHIM	1
30228	LATCH HANDLE ASS'Y	1	82116	O-RING 2-1/4" O.D. X 1/8" THICK	1
30246	LOCK PIN XMNT	1	82117	OUTSIDE DRIVE SHAFT	1
**30259	DANGER KEEP HANDS OUT DECAL	2	82118	BEARING BLOCK	2
30315	1-1/4" I.D. X 3/16" O-RING	1	82119	CENTER DRIVE SHAFT XMNT	1
**30327	WOODEN SHIPPING PALLET	1	82126	COUNTER SHAFT	1
30359	CASTER BOX SUB-ASS'Y	1	82127	DRIVE SIDE BUSHING	1
30400	ROLLER BEARING	4	82130	MACHINED 30 TOOTH GEAR	1
*30406	1-1/2 HP 1 PH 208/220V MOTOR	1	82131	MACHINED 40 TOOTH GEAR	1
40203	58763 GREASE ZERK	2	83019-03	CHAIN 30" # 50	1
62025	ADJUSTING BOLT	1	83020	CONNECTING LINK # 50	1
70044	1/2-13 X 1-1/4" SS BOLT	2	83080-12	3/8" KEY 2-1/8" LONG	1
70051	5/16-18 X 1/2 HCS SS BOLT	2	90001	SEL SSAN103 BOOT-TOGGLE SW	1
70052	5/16-18 X 5/8 HCS SS BOLT	2	90002	ORANGE WIRE NUT 30-273	4
70055	5/16-18 X 1 HCS SS BOLT	3	90011	FORK TERMINAL 69145K216	1
70060	5/16 X 1-3/4 BOLT	4	**90084	DANGER DECAL (ELECTRICAL)	1
70061	5/16-18 X 2 HCS SS BOLT	3	**90085	WARNING DECAL LEXAN WH/BLK	1
70109	3/8-16 X 1-1/2 HCS SS BOLT	6	**90088	HIGH VOLTAGE/ELECTRICAL D	1
70110	3/8-16 X 1-3/4 HCS SS BOLT	1	**90089	MADE IN USA DECAL	1
70111	3/8-16 X 2 HCS-SS BOLT	1	**90091	DANGER DECAL (HAZARDOUS)	1
70115	3/8-16 X 3 HCS-SS BOLT	1	**90275	WIRE TIES 6-1/2" 7130K41	2
70124	3/8-16 X 5 1/2 HCS SS	2	90301	6624 3/4" ROMEX CONNECTOR	2
70707	10-24 NC HXMACH NUT SS	3	90517	TIMER (ON/OFF PLACARD)	1
70711	5/16-18 SS HEX NUT (HN19S)	10	**90586	ALUM LABELS/SN,V,C,HP,DIST	1
70714	1/2-13 SS NUT	1	**90632	52X32X43 SHIPPING BOX	1
70716	5/8-11 SS FHN NUT	1	90677	O-RING	2
70812	3/8-16 JAM NUT SS	1	**90789	DFE LOGO LABEL	1
70862	3/8-16 NYLOCK NUT SS	4	90807	CROUZET TIMER 88857005	1
71005	1/2-13 X 1-1/4" CAP BOLT	2	**90880	DECAL-GREASE EVERY 10 HRS	1
71009	#10 SS FLAT WASHER	3	90894-02	230 VOLT LABEL	1
71015	5/16 X 3/4 SS FW SML	4	90947	UL LABEL	1
71017	3/8 X 7/8 SS FLAT WASHER	2			

# DMX QUAD 200 PARTS IDENTIFICATION



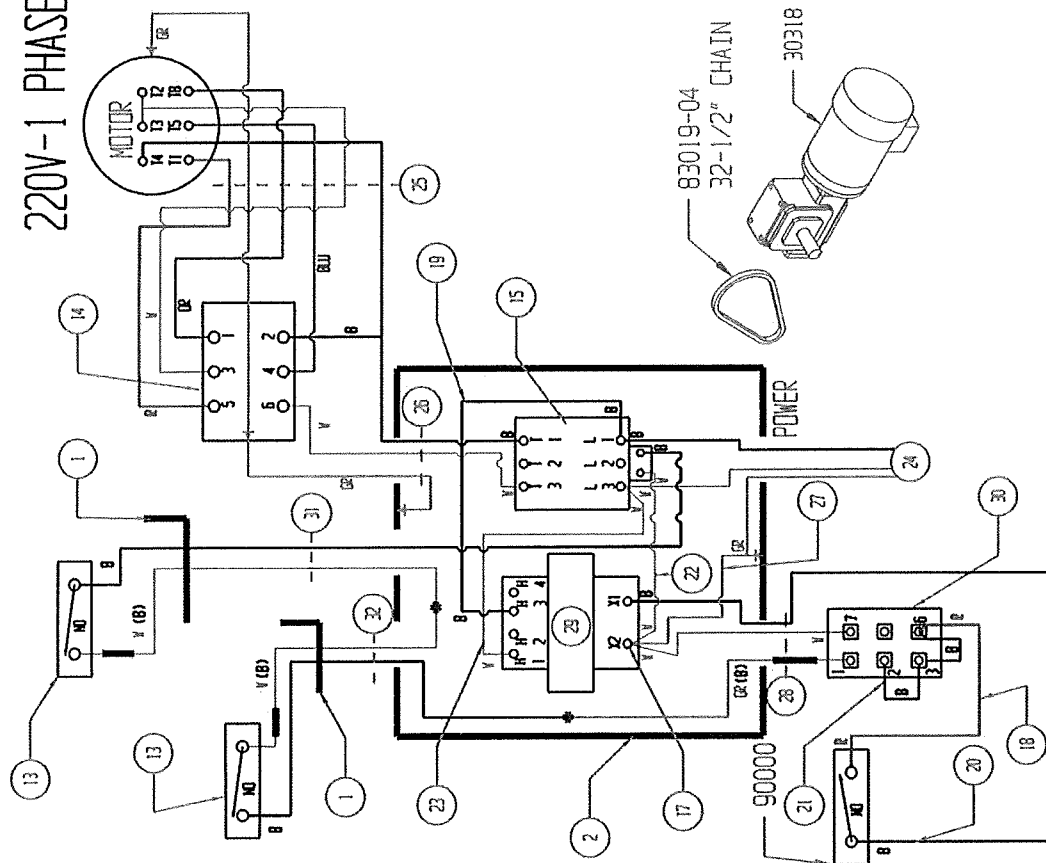
# DMX QUAD 200 ELECTRICAL SCHEMATIC



PART NO	DESCRIPTION
20731	CORD HOLDER
30154	ELECTRICAL BOX
90000	TIMER SWITCH
90015	MICROSWITCH
90016	FWD-OFF-REV SWITCH
90017	CONTACTOR
90510	TRANSFORMER
90807	TIMER

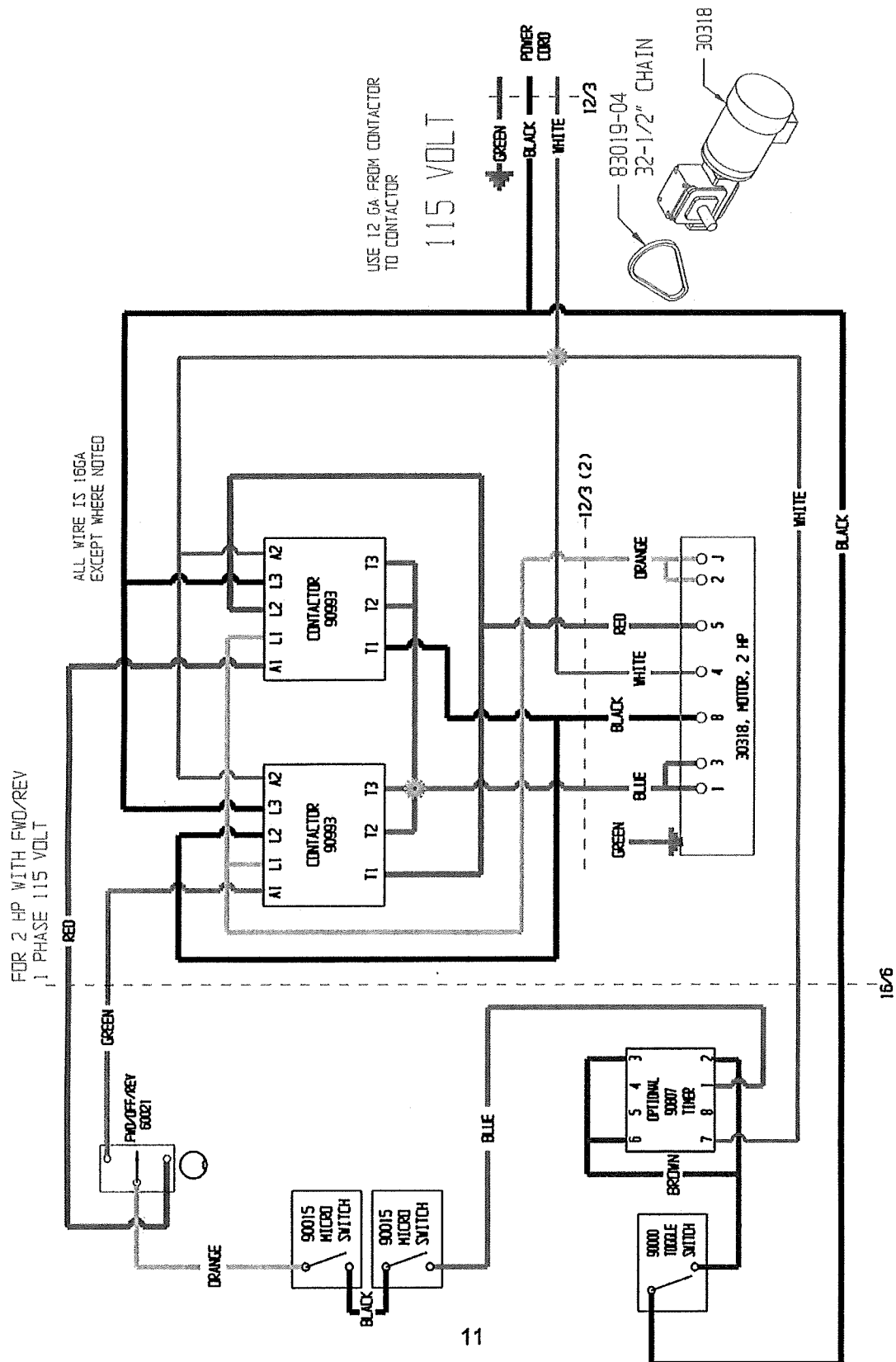
# DMX QUAD 200 ELECTRICAL SCHEMATIC

## 220V-1 PHASE (OPTIONAL)

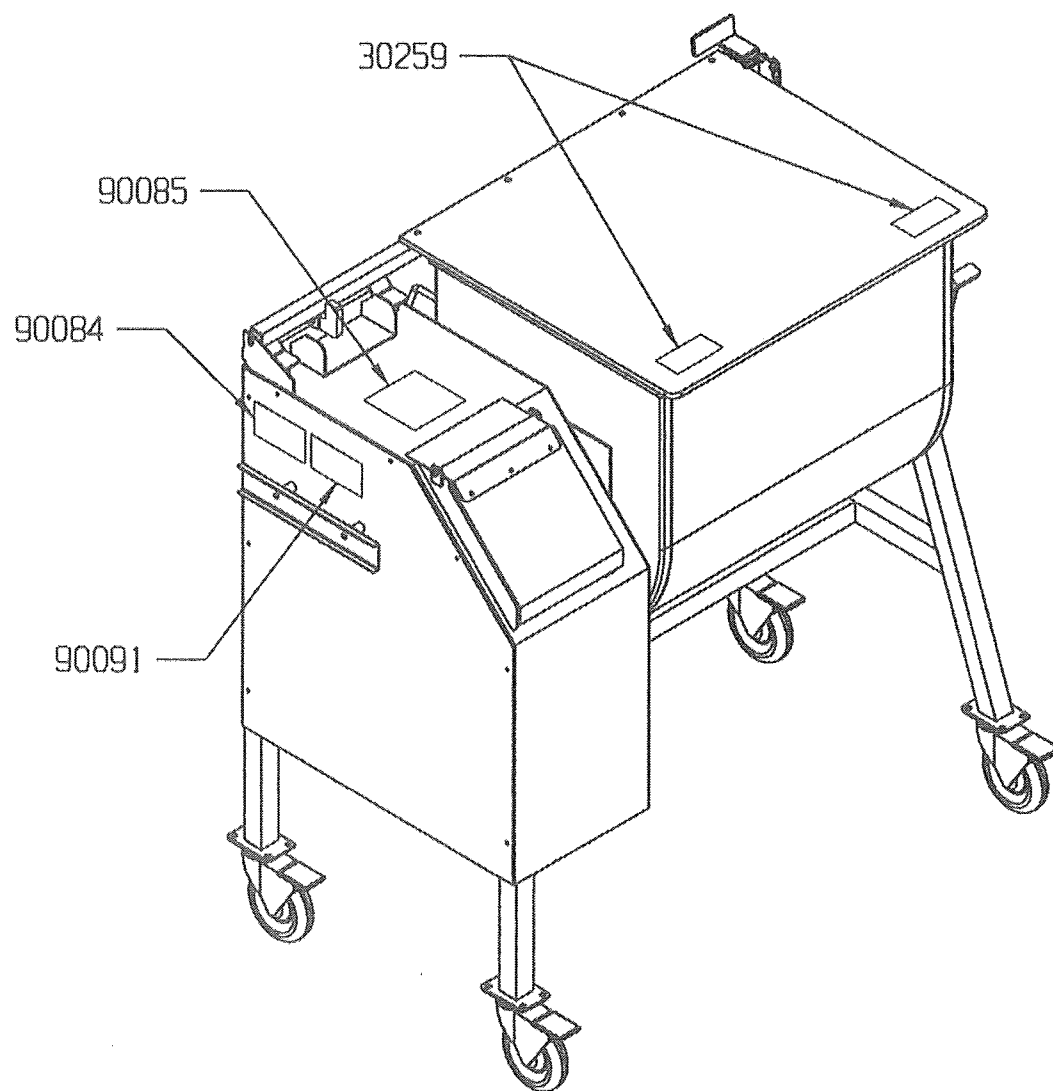


ITEM	PART No.	DESCRIPTION	QTY
1	20731	ELECT. CAB. CONN. MFG. BKT.	2
2	30154	ELECTRICAL BOX	1
3	30155	ELECTRICAL BOX COVER	1
4	70708	10-32 FINE SS NUT	5
5	71618	10-32 x 3/4 FINE SS	2
6	71971	F3L MS 10-24 x 3/4 ZP	6
7	74020	#10-24 HEX NUT ZP	6
8	90002	DRAINAGE WIRE NUT	2
9	90005	INSUL. SPACE FEMALE	6
10	90008	RING TERMINAL	3
11	90010	MIN-INSUL. SPACE	4
12	90011	FORK SPACE	6
13	90015	MICROSWITCH 2/PART ORDER	2
14	90016	ON SWITCH FMI	1
15	90017	30A. POLE UNIT	1
16	90027	CARD HOLDER	9
17	90049	DOUBLE TERMINAL	1
18	90051	16 GA RED 9", 90005 ONE END.	1
19	90052	16 GA BLACK 9", 90011 ONE END.	1
20	90052	16 GA BLACK 9", 90005 ONE END.	1
21	90052	16 GA BLACK 6"	1
22	90052	16 GA WHITE 8", 90010 BOTH ENDS.	1
23	90054	16 GA WHITE 8", 90011 ONE END.	1
24	90056	14/3 1/2", STRIP ONE END 5" 90008	1
25	90056	ON GREEN, STRIP OTHER END 1-1/2"	1
26	90276	16/6 1/4" LONG, STRIP BOTH ENDS 4"	1
27	90056	14/3 1/2" LONG, STRIP BOTH ENDS 4", 90011 ON ONE	1
28	90056	END OF GREEN WIRE, 90008 ON OTHER END OF GREEN WIRE.	1
29	90057	16 GA GREEN 7", 90011 ONE END, 90008 ON OTHER	1
30	90076	16/3 1/2" LONG, STRIP BOTH ENDS 4", COVER BOTH GREEN ENDS	1
31	90076	W/8, 90010 ON WHITE & 90011 ON BLACK ON ONE END.	1
32	90510	MULTI TRANS	1
33	90077	CRUISE SOCKET	1
34	90603	16/2 1/4" LONG, STRIP ONE END 4" COVER WHITE W/8, 90005 ON	1
35	90603	WHITE & BLACK, STRIP OTHER END 8" COVER WHITE W/8	1
36	90603	16/2 1/4" LONG, STRIP ONE END 4" COVER WHITE W/8, 90005 ON WHITE	1
37	90603	& BLACK, STRIP OTHER END 8" COVER WHITE W/8, 90010 ON BLACK	1
38	90000	TABLE SWITCH	1

## DMX QUAD 200 ELECTRICAL SCHEMATIC



# SAFETY LABEL PLACEMENT





## SAFETY LABEL IDENTIFICATION

### **WARNING**

**DO NOT OPERATE  
WITHOUT GUARDS**

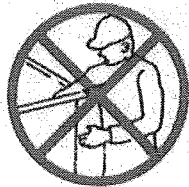
**READ OPERATOR'S MANUAL  
BEFORE RUNNING MACHINE**

**UNPLUG MACHINE BEFORE  
CLEANING OR ADJUSTING**

**KEEP HANDS AWAY FROM  
MOVING PARTS**

**90085**

**CAUTION  
KEEP HANDS  
OUT OF  
HOPPER**



**30259**

### **DANGER**

**HAZARDOUS MOVING PARTS  
DISCONNECT INCOMING POWER  
BEFORE OPENING  
DOORS OR PANELS**

**90091**

### **DANGER**

**ELECTRICAL HAZARD  
DISCONNECT INCOMING  
POWER SUPPLY BEFORE  
OPENING DOORS OR PANELS**

**90084**

# **MAINTENANCE SCHEDULE**

The below maintenance schedule should serve as a guide to get the most out of your machine, operated under normal conditions. If machine is operated under more severe conditions, i.e. continuous, maximum loaded, unconventional environments, etc. the following items should be performed at shorter intervals.

## **EVERY 10 HOURS**

1. **Grease drive gears.** Locate grease zerk in back of machine and add one pump of grease.

## **EVERY 3 MONTHS**

1. **Clean and oil chain.** Disconnect machine from power source and remove hood access panel. Thoroughly clean chain by wiping with a towel or rag. Do not pressure wash with water or damage to components inside hood can result. Oil chain with new oil or commercially available chain lube. Replace access cover.
2. **Check and adjust chain tension** if necessary. With power disconnected and hood access panel removed, apply pressure to the center of the chain. If excess chain movement is detected, increase chain tension by loosening the four gearbox mounting bolts and turn adjusting plate bolt until adequate tension is obtained. Avoid excessive chain tension as this will shorten chain/sprocket life. Tighten gearbox mounting bolts and replace access cover.
3. **Grease hopper bushing.** Disconnect machine from power source. Locate grease zerk on hopper bushing nearest the drive end and add one or two pumps of grease.

## **EVERY 6 MONTHS**

1. **Check gearbox oil level.** Disconnect machine from power source and remove hood access panel. Remove the middle plug on back side of gearbox (top plug is the vent, bottom plug is drain, middle plug is the fill/level plug). Gear lube should be level with threads. If low, fill with Mobil SCH 629 Synthetic Gear Lube or equivalent. Replace fill plug and access cover.
2. **Check all hardware for tightness.** Disconnect machine from power source and remove hood access panel. Ensure all bolts, nuts, and set screws are present and properly torqued. Replace access cover.

## **EVERY 5000 HRS or 2 YEARS**

1. **Change gearbox oil.** Disconnect machine from power source and remove hood access cover. Remove the bottom plug on end of gearbox (top plug is the vent, bottom plug is drain, middle plug is the fill/level plug). Drain and properly dispose of gearbox oil. Replace drain plug. Remove fill plug and fill with Mobil SCH 629 Synthetic Gear Lube or equivalent until gear lube is level with threads. Replace fill plug and access cover.

# OPERATORS SIGNATURE PAGE

**WARNING!**

READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE SIGNING BELOW  
MY SIGNATURE BELOW ATTESTS THAT I HAVE COMPLETELY READ AND UNDERSTAND THIS  
MANUAL. I REALIZE THAT IF OPERATED CARELESSLY, THIS MACHINE MAY CAUSE SERIOUS  
INJURY TO OTHERS AND MYSELF.

NAME (PRINT)

SIGNATURE

DATE
