



**MAXI-LITE  
ML 15/ML 20  
SERIES  
LIGHT TOWER  
OPERATOR'S MANUAL**

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**ML 15/ML 20 SERIES**

Part No. 103407

**For Parts and Updates visit Allmand on the Web at [www.allmand.com](http://www.allmand.com)**

# INSPECTION CHECK LIST

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## FOR PREPARING THE MAXI-LITE ML 15/ML 20 FOR DELIVERY OR RENTAL

The **MAXI-LITE ML 15/ML 20** require service as well as proper operation in order to provide the performance and safety it has been designed for. Never deliver or put a machine into service with known defects or missing instructions or decals. Always instruct the customer in the proper operation and safety procedures as described in the operator's manual. Always provide the manual with the equipment for proper and safe operation.

### CHECK LIST:

- Visually inspect the equipment to ensure that all instructions and decals are in place and legible.
- Inspect the tower latch and knob assembly which locks the tower in the vertical position for proper operation
- Check the hitch assembly and safety tow chains
- Check the outriggers and jacks to make sure they operate properly
- Inspect the light assemblies for damage and test for proper operation
- Inspect the electrical wiring for signs of damage
- Check the ground rod cable and the ground lug. Make sure they are clean, undamaged, and functional.
- Inspect the tires to ensure good condition and proper inflation
- Check oil, fuel, coolant levels, and hydraulic fluid levels.
- Check to make sure the operator's manual is with the equipment.
- Inspect the machine physically for damage and repair if necessary.

**NOTE:** See appropriate section of manual for scheduled maintenance intervals.

**After completing the inspection check list, operate the tower through a complete operation cycle, following the operating instructions in the operator's manual.**



### **WARNING**

**NEVER ALLOW ANYONE TO OPERATE THE EQUIPMENT WITHOUT  
PROPER TRAINING!**

**ALWAYS READ THE INSTRUCTIONS FIRST!**

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# INTRODUCTION

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- This manual provides the information necessary for the safe operation of the Allmand Bros., Inc., **MAXI-LITE ML 15/ML 20** light tower.
- The **MAXI-LITE ML 15/ML 20** standard tower configuration is operated with two manual crank winches or single electric winch used to erect, extend, and lower the tower.
- Specific operating instructions and specifications are contained in this publication to familiarize the operator and maintenance personnel with the correct and safe procedures necessary to maintain and operate the equipment.

**Take time to read this book thoroughly.** If you are uncertain about any of the information presented in the manual, contact the factory or your dealer for clarification before operation.

## SAFETY SYMBOLS

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The purpose of the **SAFETY INFORMATION SYMBOL** shown below is to attract your special attention to safety related information contained in the text.



FAILURE TO UNDERSTAND AND COMPLY WITH SAFETY RELATED INFORMATIONAL INSTRUCTIONS MAY RESULT IN INJURY TO OPERATOR OR OTHERS. IF YOU DO NOT UNDERSTAND ANY PART OF THIS INFORMATION CONTACT YOUR DEALER FOR CLARIFICATION PRIOR TO OPERATING EQUIPMENT.

## NOTE

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The word **NOTE** is used to bring your attention to supplementary information in relation to various aspects of proper operation and maintenance.

**NOTE:** Keep this manual accessible during operation to provide convenient reference.

**NOTE:** Any reference in this manual to **LEFT** or **RIGHT** shall be determined by looking at the trailer from the rear.

# SAFETY AND WARNING DECALS

## SAFETY WARNING

ALWAYS REPLACE ANY SAFETY AND INSTRUCTION DECALS THAT BECOME DAMAGED, PAINTED, OR OTHERWISE ILLEGIBLE.

Refer to these representations of the safety warning decals used on the MAXI-LITE ML 15/ML 20 to insure correct ordering if replacing becomes necessary.

**OPERATING INSTRUCTIONS**  
Read and understand Operator's Manual before operating machine.

**BEFORE STARTING:**

1. Visually inspect machine for leaks or damage.
2. Make sure battery connections are clean and tight.
3. Check engine oil level (see manual).
4. Check fuel supply (see manual).
5. Check air cleaner, seals, hoses and clamps (see manual).

**STARTING:**

1. Turn off all circuit breakers.
2. Turn switch to Preheat position, hold until the glow plug lamp goes out.
3. Turn switch to start position until the engine starts. Release key as soon as the engine starts.
4. If engine fails to start, repeat cycle.

**NOTE** Do not crank for more than 10 seconds without allowing starter to cool for 30 seconds.

**STOPPING:**

1. Turn lights off with circuit breakers.
2. Unplug external leads.
3. Turn ON/OFF toggle switch to down (OFF) position.

**CAUTION**

MAKE SURE GROUND ROD IS PUT AWAY AND JACKS, OUTTRIGGERS AND MAST ARE FULLY RETRACTED AND LOCKED INTO PLACE BEFORE TOWING.

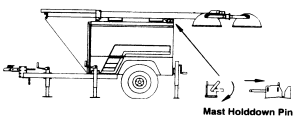
D-249

**PART NO. 090249**  
Location: Inside left hand door panel.

**LIFTING INSTRUCTIONS**

**CAUTION**

A MINIMUM OF 2 TONS LIFTING CAPACITY IS REQUIRED TO LIFT THIS MACHINE!



Mast Holddown Pin

**BEFORE LIFTING:**

1. Make sure the mast holddown pin (shown above) is fully inserted and secure to lock the mast in place.
2. Unplug all external equipment and move it a safe distance away.
3. Clear the machine of all loose objects.

**WARNING!**

Lifting heavy equipment is a dangerous activity. Do not allow personnel on or near the machine and keep all bystanders a safe distance away. Failure to follow these instructions could result in severe injury or death.

D-264

**PART NO. 090264**  
Location: Inside left hand door panel.

ERECT MAST & RAISE LIGHTS					
UP ↑	1. <b>REMOVE GROUND ROD AND JACKS.</b> 	2. <b>CONNECT WINDING ROD AND GEAR WITH START.</b> 	3. <b>CHARGE LOCK PIN IN PLAY SWING LAYER.</b> 	4. <b>TURN ON ELECTRIC WIND SWITCH UP TO RAISE MAST TO VERTICAL.</b> 	5. <b>TURN WIND OPERATING SWITCH AND RETURN TO STOP.</b> 
DOWN ↓	1. <b>LOWER MAST TO PLUMP POSITION.</b> 	2. <b>REMOVE WINDING ROD FROM VERTICAL POSITION.</b> 	3. <b>DISCONNECT GEAR FROM WINDING ROD.</b> 	4. <b>TURN OFF ELECTRIC WIND SWITCH AND RETURN TO STOP.</b> 	5. <b>REMOVE GROUND ROD FROM MACHINE. RETRACT WINDING ROD TO PLUMP POSITION.</b> 

D-259

**PART NO. D-259**  
Location: Inside left hand door panel. Manual winch model only.

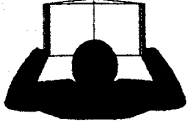
ERECT MAST & RAISE LIGHTS					
UP ↑	1. <b>REMOVE WINDING ROD FROM OUTTRIGGER AND GEAR. TRUCKER WITH REAR STRAP AND JACKS.</b> 	2. <b>CONNECT WINDING ROD AND GEAR WITH START.</b> 	3. <b>CHARGE LOCK PIN IN PLAY SWING LAYER.</b> 	4. <b>TURN ON ELECTRIC WIND SWITCH UP TO RAISE MAST TO VERTICAL.</b> 	5. <b>TURN WIND OPERATING SWITCH AND RETURN TO STOP.</b> 
DOWN ↓	1. <b>RETAIN WINDING ROD WITH REAR STRAP AND JACKS TO PLUMP UP TRUCKER.</b> 	2. <b>OPERATE ELECTRIC WIND SWITCH DOWN TO LOWER MAST. LOCKER MUST BE VERTICAL.</b> 	3. <b>CHARGE LOCK PIN IN PLAY SWING LAYER.</b> 	4. <b>TURN OFF ELECTRIC WIND SWITCH AND RETURN TO STOP.</b> 	5. <b>REMOVE GROUND ROD FROM MACHINE. RETRACT WINDING ROD TO PLUMP POSITION.</b> 

D-262

**PART NO. D-262**  
Location: Inside left hand door panel. Electric winch model only.

# SAFETY AND WARNING DECALS

**! WARNING**

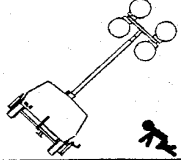


To Prevent Serious Injury or Death:

- Avoid unsafe operation or maintenance.
- Do not operate or work on this machine without reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual. D-158

**PART NO. D-158**  
Location: AC control panel

**! WARNING**

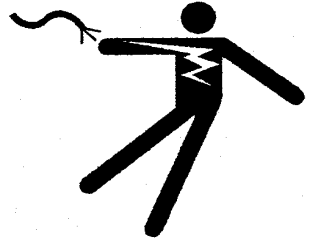


OVERHEAD HAZARD TO PREVENT SERIOUS INJURY OR DEATH:

- DO NOT RAISE, LOWER OR USE LIGHT TOWER UNLESS ALL OUTRIGGERS AND JACKS ARE POSITIONED ON FIRM GROUND.
- LEVEL TRAILER BEFORE USE. D-166

**PART NO. D-166**  
Location: inside left hand door panel

**! DANGER**



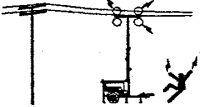
ELECTRIC SHOCK HAZARD

Failure to use ground rod could cause severe injury or death.

- Drive ground rod into earth and attach ground wire to grounding lug on front of trailer. D-163

**PART NO. D-163**  
Location: On left side wheel well

**! DANGER**



ELECTRICAL SHOCK HAZARD Will Cause Severe Injury or Death

Do not position light tower under electric power lines. D-165


**PART NO. D-165**  
Location: Inside left hand door panel

**WARNING**

FAILURE TO TURN OFF LIGHTS BEFORE STOPPING ENGINE MAY RESULT IN GENERATOR DAMAGE AND VOID WARRANTY. D-084

**PART NO. D-084**  
Location: AC control panel

**! DANGER**



HAZARDOUS VOLTAGE

To prevent serious injury or death from electrocution:


- Do not enter electrical compartment while engine is running.
- Close cover before operating.
- Keep components in good repair. D-162

**PART NO. D-162**  
Location: On left front ABS panel

**GROUNDING LUG**

**PART NO. D-133**  
Location: On left side panel below ground lug

**! WARNING**



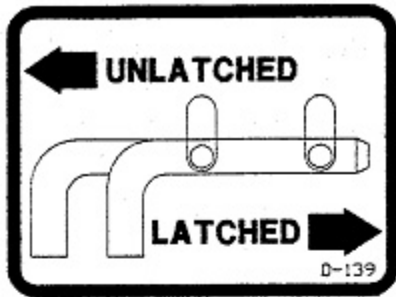
COMBUSTIBLE GAS

Can Cause Severe Burns or Blindness.

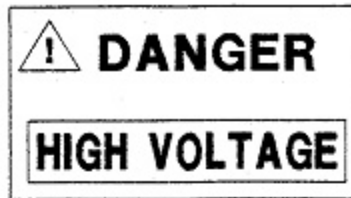
- Keep sparks and open flame away from batteries. D-159

**PART NO. D-159**  
Location: On right hand wheel well

# SAFETY AND WARNING DECALS



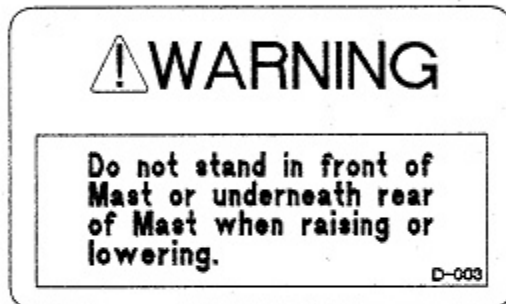
PART NO. D-139  
Location: On rear panel under the rear tower support.



PART NO. D-002  
Location: Light bar cover



PART NO. D-263  
Location: Inside left hand door panel



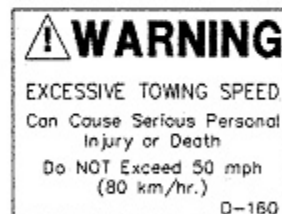
PART NO. D-003  
Location: Inside left hand door panel



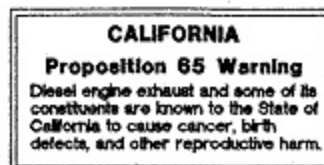
PART NO. D-152  
Location: Inside left hand door panel



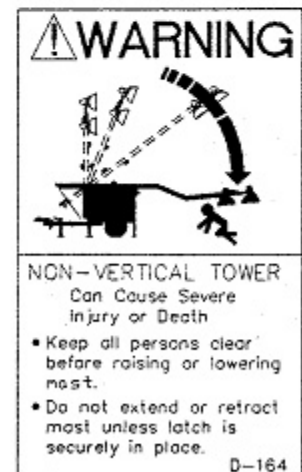
PART NO. D-005  
Location: Inside left hand door panel



PART NO. D-160  
Location: On pintle hitch



PART NO. D-179  
Location: Inside left hand door panel



PART NO. D-164  
Location: On mast pivot section

# MANUAL WINCH MAST OPERATION

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## DESCRIPTION OF OPERATION

The **MAXI-LITE ML 15/ML 20** tower assembly consists of a three section telescoping mast which can be raised and extended by operating two hand crank winches. One winch, mounted with the handle extending through the side of the trailer frame, raises and lowers the mast from the horizontal towing position, the vertical position, and back. The second winch mounted on the tower extends the telescopic sections.

The three section mast assembly can be rotated from the ground by loosening a knob and rotating the entire assembly 360° to aim the lights as necessary.

## SAFETY WARNING

- ALWAYS CHECK FOR OVERHEAD OBSTRUCTIONS BEFORE RAISING AND LOWERING MAST. ALLOW 35' CLEARANCE. AVOID ALL OVERHEAD ELECTRICAL WIRES.
- TO PREVENT INSTABILITY AND HELP ENSURE SAFE OPERATION, ALWAYS PROVIDE PROPER GROUND SUPPORT BEFORE RAISING MAST.
- BEFORE RAISING MAST, VISUALLY INSPECT EQUIPMENT FOR DAMAGE OR WEAR. FAMILIARIZE YOURSELF WITH THE LOCATION AND FUNCTION OF ALL OPERATING PARTS BY STUDYING THIS MANUAL. OBSERVE ALL CAUTION DECALS LOCATED ON EQUIPMENT

***NOTE: The latch locks the mast in the vertical position and disengages the sections allowing the tower assembly to be rotated to position the lights.***

## TO ERECT MAST AND RAISE LIGHTS

1. Extend both side outrigger jacks, rear jack and tongue jack to stabilize and level the trailer.

***NOTE: Jacks should be placed only on firm footing.***



## SAFETY WARNING

- WHEN EXTENDING REAR JACK, WATCH TO ENSURE YOU ARE CLEAR OF THE OVERHANGING ENDS OF THE MAST BEFORE YOU STAND UP.
  - THE SUPPLEMENTAL GROUND ROD IS A SAFETY DEVICE THAT MAY REDUCE THE CHANCE OF PERSONAL INJURY FROM STRAY ELECTRICAL CURRENT. Therefore, Allmand recommends using the ground rod. However, it is the user's responsibility to determine the requirements and/or applicability of local, state, or national electrical code which governs the use of the ground rod.
2. Attach the ground rod to the grounding lug, and drive the ground rod fully for adequate electrical ground, as required by local, state, or national code.
  3. Release the pin that secures the mast to the rear mast support.
  4. Operate the hand crank on the side of the trailer to raise the mast from horizontal to vertical.
  5. Turn black knob counterclockwise and engage latch in strike plate. Retighten black knob.
  6. Operate the hand crank winch on the tower clockwise to raise the lights vertically.
  7. To rotate the lights, release the black knob and turn the tower assembly with the handles provided.
  8. To turn on lights, flip the breaker switches to the up position. (SEE FIG. 1)



# MANUAL WINCH MAST OPERATION



## SAFETY WARNING

- IF THE TOWER CANNOT BE ROTATED AFTER LOOSENING THE BLACK KNOB, CHECK TO ASSURE THE LOWER LATCH IS ENGAGED IN THE STRIKE PLATE. THIS DOUBLE LATCH FEATURE PREVENTS THE TOWER FROM BEING ROTATED IF THE LATCH IS NOT ENGAGED.



## SAFETY WARNING

VISUALLY INSPECT EQUIPMENT FOR DAMAGE BEFORE OPERATING. ALLOW ADEQUATE CLEARANCE AROUND TRAILER FOR TOWER AND INSURE THAT NO PERSONS ARE STANDING IN FRONT OF OR BEHIND UNIT WHEN LOWERING.

## TO LOWER MAST AND LIGHTS

1. Turn off lights.
2. Release black knob and rotate tower until winch handle points to the front of the trailer and retighten knob.
3. Operate hand crank winch on tower counterclockwise to lower the lights to the lowest vertical position
4. Operate hand crank winch on side of trailer clockwise to take up any cable slack.
5. Turn the black knob counterclockwise and lift to release the latch from the strike plate. Retighten the knob with the latch disengaged from the strike plate.

6. Operate the hand crank on the side of the trailer counterclockwise to fold the mast down into the towing position.

**NOTE: Sufficient load (75 lb. min ) must be applied to the cable to overcome internal resistance and operate the brake properly. Insufficient load will not turn the reel thus continual turning without sufficient load will remove the winch handle from the shaft.**

7. Secure light cords into hook on the rear tower support for towing.
8. Secure pin locking mast to rear tower support.
9. Remove ground rod from earth. Disconnect wire from ground lug and secure in trailer
10. Raise jacks and rear stand, retract outriggers and secure for towing

**NOTE: Ensure the detent pins are properly engaged in the outriggers before towing.**

**NOTE: Visually inspect the flood light mounting yokes for loose hardware. This could prevent a broken fixture during towing.**

# STRONG ARM ELECTRIC WINCH MAST OPERATION

## DESCRIPTION OF OPERATION

The **MAXI-LITE ML 15/ML 20** tower assembly consists of a three section telescoping mast which can be raised and extended by operating a single electric winch mounted inside the enclosure. A single three position toggle switch mounted on the control panel is used to raise and lower the mast. The winch and cable are protected by an integral clutch and a circuit breaker. The clutch is designed to slip when the mast reaches full extension. The circuit breaker is a safeguard for the clutch. If the clutch is misadjusted or inoperative the circuit breaker should trip to protect the system from overload. The electric winch operates off the 120 volt circuit breaker along with 120 volt receptacle thus requiring **that the 120 volt circuit breaker switch must be on to operate the winch.**

The three section mast assembly can be rotated from the ground by loosening a knob and rotating the entire assembly 360° to aim the lights as necessary.



## SAFETY WARNING!

- **ALWAYS CHECK FOR OVERHEAD OBSTRUCTIONS BEFORE RAISING AND LOWERING MAST. ALLOW 35' CLEARANCE. AVOID ALL OVERHEAD ELECTRICAL WIRES.**
- **TO PREVENT INSTABILITY AND HELP ENSURE SAFE OPERATION, ALWAYS PROVIDE PROPER GROUND SUPPORT BEFORE RAISING MAST.**

***NOTE: The latch locks the mast in the vertical position and disengages the sections allowing the tower assembly to be rotated to position the lights***

**BEFORE RAISING MAST, VISUALLY INSPECT EQUIPMENT FOR DAMAGE OR WEAR. FAMILIARIZE YOURSELF WITH THE LOCATION AND FUNCTION OF ALL OPERATING PARTS BY STUDYING THIS MANUAL. OBSERVE ALL CAUTION DECALS LOCATED ON EQUIPMENT**

## TO ERECT MAST AND RAISE LIGHTS

1. Extend both side outrigger jacks, rear jack and tongue jack to stabilize and level the trailer.

***NOTE: Jacks should be placed only on firm footing.***

- **WHEN EXTENDING REAR JACK, WATCH TO ENSURE YOU ARE CLEAR OF THE OVERHANGING ENDS OF THE MAST BEFORE YOU STAND UP.**
  - **THE SUPPLEMENTAL GROUND ROD IS A SAFETY DEVICE THAT MAY REDUCE THE CHANCE OF PERSONAL INJURY FROM STRAY ELECTRICAL CURRENT. Therefore, Allmand recommends using the ground rod. However, it is the user's responsibility to determine the requirements and/or applicability of local, state, or national electrical code which governs the use of the ground rod.**
2. Attach the ground rod to the grounding lug, and drive the ground rod fully for adequate electrical ground, as required by local, state, or national code.
  3. Release the pin that secures the mast to the rear mast support.
  4. Operate the hand crank on the side of the trailer to raise the mast from horizontal to vertical.
  5. Turn black knob counterclockwise and engage latch in strike plate. Retighten black knob.
  6. Operate the hand crank winch on the tower clockwise to raise the lights vertically.
  7. To rotate the lights, release the black knob and turn the tower assembly with the handles provided.
  8. To turn on lights, flip the breaker switches to the up position. (SEE FIG. 1)

# STRONG ARM ELECTRIC WINCH MAST OPERATION

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## SAFETY WARNING

- IF THE TOWER CANNOT BE ROTATED AFTER LOOSENING THE BLACK KNOB, CHECK TO ASSURE THE LOWER LATCH IS ENGAGED IN THE STRIKE PLATE. THIS DOUBLE LATCH FEATURE PREVENTS THE TOWER FROM BEING ROTATED IF THE LATCH IS NOT ENGAGED.



## SAFETY WARNING

VISUALLY INSPECT EQUIPMENT FOR DAMAGE BEFORE OPERATING. ALLOW ADEQUATE CLEARANCE AROUND TRAILER FOR TOWER AND INSURE THAT NO PERSONS ARE STANDING IN FRONT OF OR BEHIND UNIT WHEN LOWERING.

## TO LOWER MAST AND LIGHTS

1. Turn off lights.
2. Release black knob and rotate tower until winch handle points to the front of the trailer and retighten knob.
3. Operate hand crank winch on tower counterclockwise to lower the lights to the lowest vertical position
4. Operate hand crank winch on side of trailer clockwise to take up any cable slack.
5. Turn the black knob counterclockwise and lift to release the latch from the strike plate. Retighten the knob with the latch disengaged from the strike plate.

6. Operate the hand crank on the side of the trailer counterclockwise to fold the mast down into the towing position.

**NOTE: Sufficient load (75 lb. min ) must be applied to the cable to overcome internal resistance and operate the brake properly. Insufficient load will not turn the reel thus continual turning without sufficient load will remove the winch handle from the shaft.**

7. Secure light cords into hook on the rear tower support for towing.
8. Secure pin locking mast to rear tower support.
9. Remove ground rod from earth. Disconnect wire from ground lug and secure in trailer
10. Raise jacks and rear stand, retract outriggers and secure for towing

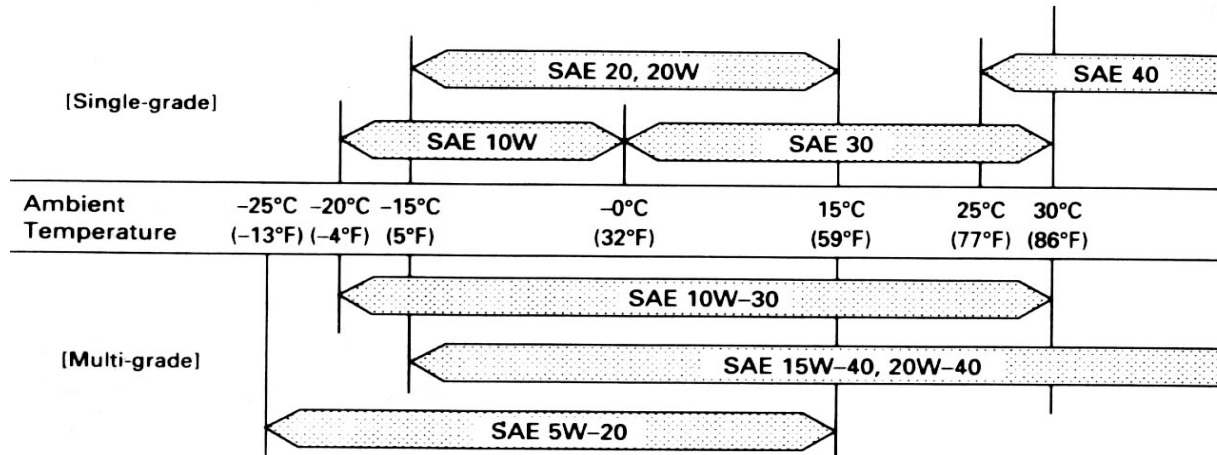
**NOTE: Ensure the detent pins are properly engaged in the outriggers before towing.**

**NOTE: Visually inspect the flood light mounting yokes for loose hardware. This could prevent a broken fixture during towing.**

# SPECIFICATIONS

## LUBRICATING OIL REQUIREMENTS

### ENGINE OIL VISCOSITY GRADE – AMBIENT TEMPERATURE



See the *KUBOTA V2203 or V2003T Engine Operators Handbook* or the *ISUZU Engine Operators Handbook* for further information on oil and fuel requirements.

## TOWING INSTRUCTIONS

**Before towing the MAXI-LITE the trailer should be inspected visually to insure that the following operations have been completed.**

1. Hitch is securely attached to towing vehicle (safety chain secure).
2. All outriggers and jacks are retracted and secured.
3. Tower is lowered and the rear tower support pin is in place.
4. Light fixtures are positioned for transport.
5. Doors are closed and secure.
6. Check for adequate tire pressure.
7. Taillights are connected and operating (if equipped).
8. Ground rod is removed from ground and secured in the trailer.

## GROUND ROD INSTRUCTIONS

1. Remove ground rod stowed inside the left door (attached to the lower frame).
2. Unroll the electrical wire lead from the ground rod.
3. Attach the ground rod lead to the grounding lug located near the ballast compartment.
4. Drive the ground rod a minimum of 2 1/2 FT into the earth for adequate electrical grounding. If this is not possible consult your local qualified electrician.
5. **AFTER SHUTDOWN OF THE ENGINE:**  
Remove the ground rod from the earth, remove the lead from the trailer ground lug, and store ground rod inside left door.

## BEFORE STARTING

1. Fill the engine with the right grade of lubricating oil (see pg. 19) and to correct level (check dipstick).
2. Ensure there is an adequate supply of fuel.
3. Ensure **that the air cleaner is firmly attached**, the air canister seals and the hose clamps are properly sealed. Air cleaner element should be checked and replaced if necessary.
4. Install the ground rod.

## DESCRIPTION OF OPERATION

By depressing the start assist switch, the fuel solenoid is energized. The solenoid plunger is drawn into the coil and activates the fuel control linkage to RUN position. When the engine starts, adequate engine oil pressure at the oil pressure switch will maintain the solenoid in the energized position. The start assist switch can be released as soon as the engine starts. A 10A inline fuse protects the solenoid from electrical damage.

## LOW OIL PRESSURE SHUTOFF SYSTEM

Should a low oil pressure condition occur (less than 5 PSI), the pressure sending unit breaks the circuit between the battery and the fuel solenoid, allowing the spring load to immediately move the fuel control to the shutoff position.

## HIGH COOLANT TEMPERATURE SHUTOFF SYSTEM

Should a high coolant temperature condition occur, the temperature sending unit breaks the circuit between the battery and the fuel solenoid, allowing the spring load to immediately move the fuel control to the shutoff position.

## STARTING/STOPPING INSTRUCTIONS

### STARTING THE KUBOTA AND ISUZU ENGINES

**NOTE: The Kubota and the Isuzu engines includes a glow plug cold start system controlled by the ignition switch on the control panel. Glow plugs are not needed on a warm engine or if the ambient temperature is above 50 F. Do not use starting fluid or ether.**

1. Turn the ignition switch to the **PREHEAT** position and hold until the glow plug lamp goes out.
2. Turn the ignition switch to the Start position until the engine starts. Release key as soon as the engine starts.
3. If engine fails to start it may be necessary to cycle the glow plugs again.

**NOTE: To prevent equipment damage, DO NOT hold ignition switch for more than 10 seconds in the start position. If the engine does not start in 10 seconds, wait 30 seconds and try the start sequence again. Do not run the cell motor for more than 20 seconds continuously. Limit engine cranking to 3 attempts with a 2 minute cool-down between each. After 3 attempts allow to cool to ambient temperature.**

### STOPPING THE KUBOTA AND ISUZU ENGINES

1. Turn the ignition switch to the OFF position. This breaks the circuit between the battery and the fuel solenoid, allowing the spring load to immediately move the fuel control to the shutoff position.
2. Disconnect the ground rod.

# MODEL AND SERIAL NUMBERING SYSTEM

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## SERIAL NUMBER LOCATION

**Trailer:** All MAXI-LITE ML 15/ML 20 models have a serial number plate located just below the rear tower support on the rear panel.

**Generator:** Plate attached to the side of the generator housing.

**Engine:** Plate attached to the engine.

### **KUBOTA V2203 and V2003T:**

Left side, between  
manifold and starter.

**ISUZU 4LE1 :** Upper right front corner  
behind injector pump

## DESCRIPTION OF MODELS AND OPTIONS

The MAXI-LITE ML 15/ML 20 light tower uses four 1000 Watt Metal Halide lamps with the exclusive Allmand SHO lighting system to produce a total of 334,204 lumens (83,551 lumens per fixture). Optional reflective visors and 6-light units are available. The lights are mounted on either a manual winch or electric winch tower. The manual tower is operated by two hand crank winches. One winch, mounted on the trailer frame, erects the mast from the horizontal towing position to vertical. The second winch, mounted on the tower, extends the mast vertically to the desired height. The second tower is operated by a 120V electric winch located inside the trailer housing. The electric winch erects the mast from horizontal to vertical and by releasing a lock handle extends the mast vertically to the desired height. The tower power cords are available as either straight cord or a cord reel. Inside fixture storage is offered for the 4-light option.

The heavy duty trailer shell has 12 gauge doors and roof panels. The shell houses the 15" wheels and tires inside the side panels. The front panels are rust proof ABS plastic. The MAXI-LITE ML 15/ML 20 light tower is powered by either one of two Kubota water cooled diesel engines, the V2003T or the V2203, or an Isuzu water cooled 4LE1 diesel engine. Each engine mounts to either the 15KW or 20KW generator. The trailer houses a 50 gallon poly fuel tank and an optional sound attenuation package.

## **ELECTRICAL**

Hard wired electrical circuits  
Easily serviceable componentized ballast assemblies.  
Ground rod.  
Hour meter.  
Voltmeter (optional)  
External 120V and 240V outlets (optional).

## **FLOOD LIGHT ASSEMBLY**

Four or six 1000 watt lamp fixtures sealed for all weather use. Lamps can be either the SHO 1000 fixture, 1250 watt fixture or PowerLite fixture.

**SHO 1000 FIXTURE** - BT-37 lamp, Metal Halide, Laboratory rated life is 10,000 hours.

Lumen rating: 110,000  
Warm-up time: 2-4 minutes  
Restart time: 10-15 minutes

**POWERLITE FIXTURE** - BT-56 1000 watt Multi-Vapor lamp, Metal Halide, Laboratory rated life is 12,000 hours.

Lumen rating: 110,000  
Warm-up time: 2-4 minutes  
Restart time: 10-15 minutes

**POWERLITE FIXTURE** - E-25 1000 watt High Pressure Sodium lamp (often referred to as H.P.S), Laboratory rated life is 24,000 hours.

Lumen rating: 140,000  
Warm-up time: 4-6 minutes  
Restart time: 1 minute

**NOTE:** A trailer equipped with Metal Halide lights and a trailer equipped with High Pressure Sodium lights use different ballasts and starters. Therefore, it is not advisable to interchange bulb types.

## **MAST**

Three-section steel tube mast, which extends to 30 feet. The mast is extended with either two manual winches or one Dutton-Lainson electric winch. The assembly includes self-lubricating nylon guide rollers and 360° rotating light bar.

## **TRAILER**

The complete generator is housed in a lockable enclosure with the frame fabricated from heavy gauge steel mounted on a two-wheel, leaf spring axle.

The design enables the trailer to contain the outriggers in a simple compact position.

When the mast is in the operating position it is located in the middle of a four point outrigger system for optimum balance and stability. This system was engineered to allow the light plant to remain operational in sustained winds of 65 MPH with the mast extended to full height and the outriggers in position.

The design includes an adjustable-height reversible hitch, which includes a 2" ball and pintle hook hitch.

## **STABILIZERS**

Four (4) point outrigger design. with tower center mounted between two (2) retractable side outriggers, tongue and rear jack.

# SPECIFICATIONS

---

## MAXI-LITE ML 15/ML 20 DIMENSIONS

Height lowered:	6'6" (1.98 m)
Height extended:	30' (9.14 m)
Length:	14'9" (4.49 m)
Width:	6'4" (1.92 m)
Outrigger width:	11'6" (3.5 m)
Trailer:	Structural steel frame Leaf spring axle
Wheels & tires:	15"

## FUEL AND LUBRICATING OIL

The temperatures mentioned in the table are the ambient temperatures at the time the engine is started.

However, if the running ambient temperatures are much higher than the starting temperatures, a compromise must be made and a higher viscosity oil used (provided starting is satisfactory). Multigrade oils overcome the problem, provided they have a suitable specification.

## DOMESTIC SHIPPING WEIGHT

Fixtures:	15 lbs. ea. = 60 lbs.
Trailer with mast:	2,220 lbs. (1007 kg)
Total weight:	2,280 lbs. (1034.2 kg)



# SPECIFICATIONS

## KUBOTA V2203 ENGINE

Kubota V2203, indirect injection 4Cylinder

Displacement: 134.1 cu. (2.2 L)  
Bore: 3.43 in. (87 mm)  
Stroke: 3.64 in. (92.4 mm)  
Power output: 31.2 @ 1800 rpm  
Power output derating: 3.0% for every 1000 ft.  
altitude (305 m)  
above 360 ft.  
Ambient temp: 1% per 10°F (5.6°C) above 77°F (25°C)  
Fuel: Diesel  
Starting: Glow plugs needed below 45 F. 12V electric  
Oil sump capacity (excluding filter): 10 US qt. (9.5 L)

**Low oil pressure shutdown, high engine temp. shutdown, and glow plug cold start assist are standard.**

## KUBOTA V2003T ENGINE

Kubota V2003T, indirect injection 4 Cylinder

Displacement: 121.9 cu. (1999cc)  
Bore: 3.27 in. (83 mm)  
Stroke: 3.64 in. (92.4 mm)  
Power output: 36.1 @ 1800 rpm  
Power output derating: 3.0% for every 1000 ft.  
altitude (305 m)  
above 360 ft.  
Ambient temp: 1% per 10°F (5.6°C) above 77°F (25°C)  
Fuel: Diesel  
Starting: Glow plugs needed below 45 F. 12V electric  
Oil sump capacity (excluding filter): Fill to correct level

**Low oil pressure shutdown, high engine temp. shutdown, and glow plug cold start assist are standard.**

## ISUZU 4LE1 ENGINE

Isuzu 4LE1, Indirect injection 4 Cylinder

Displacement: 133 cu. in. (2179 cc)  
Bore: 85 mm  
Stroke: 96 mm  
Power output: 3 9 BHP@ 1800 RPM  
Power output derating: 3.5% for every 1000 ft  
altitude (305 m) above sea level  
Fuel: Diesel  
Oil sump capacity: Fill to correct level  
Starting: 12 volt electric  
Air Inlet Temp: 1% per 10°F (5.6C) above 77° F (25°C)

**Low oil pressure shutdown, high engine temp. shutdown, and glow plug cold start assist are standard.**

# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIGURE 1**

**FIG. 1. A.C. CONTROL PANEL  
(KUBOTA AND ISUZU)**

1. Switch, Circuit Breaker (Lights 1 through 4)
2. Switch, Circuit Breaker (240V Receptacle)
3. Switch, Circuit Breaker (120V Receptacles)

**FIGURE 2**

**FIG. 2. D.C. CONTROL PANEL (KUBOTA ONLY)**

4. Voltmeter (optional)  
Indicates charging circuit voltage
5. Hour Meter  
Shows total elapsed hours of engine operation.
6. Momentary Contact Switch (Electric Winch Model)  
Lift up to raise and extend the tower.  
Press down to lower and fold the tower.
7. Ignition ON/OFF Switch
8. Start Assist Switch  
Push to activate fuel solenoid and glow plug prior to and while depressing start switch.
9. Start Switch  
Push to start.
10. 1.5 AMP Circuit Breaker (Electric Winch Model)



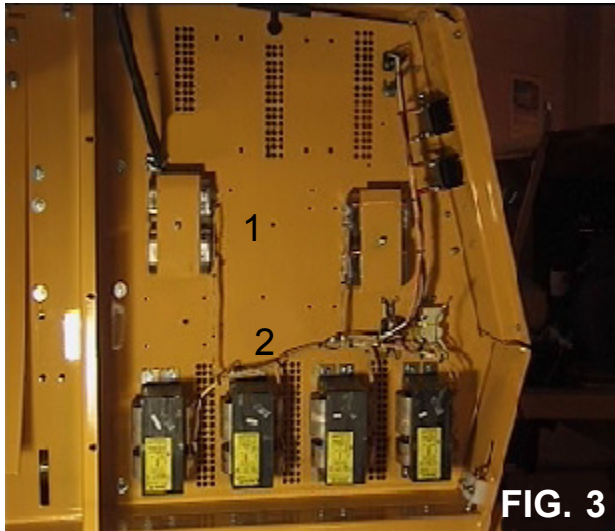
**FIGURE 2A**

**FIG. 2A D.C. CONTROL PANEL  
(ISUZU ONLY)**

- 4A. Hour Meter
- 5A. Glow Plug Indicator
- 6A. Water Temp Indicator
- 7A. Charge Indicator
- 8A. Oil Pressure Indicator
- 9A. Start Switch

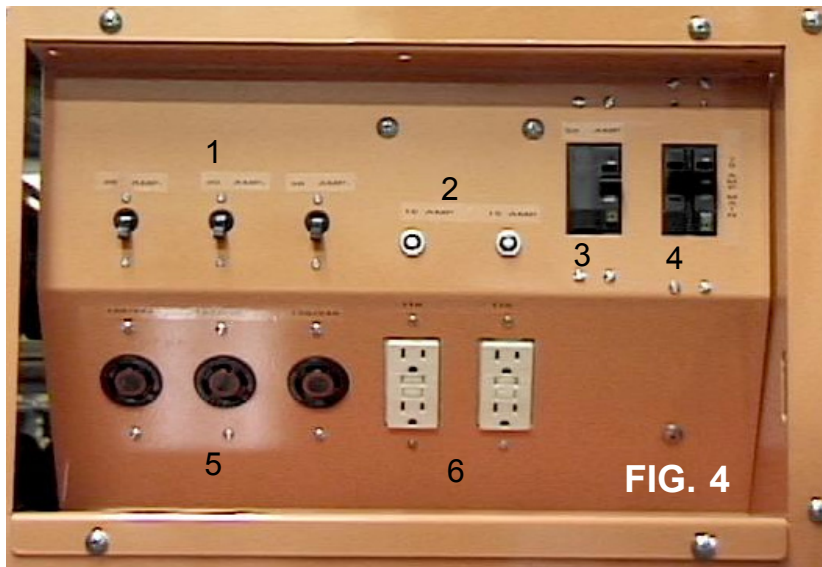
# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 3 BALLAST PANEL**

1. Ballast, Capacitors 1 through 4
2. Ballast, Transformers 1 through 4



**FIG. 4 CONVENIENCE PANEL**

1. 30 Amp Breakers
2. 15 Amp Breakers
3. 50 Amp Breaker
4. 70 or 100 Amp Breaker
5. 120/240 volt Receptacles
6. 110/120 Volt Outlet Receptacles (Ground fault)

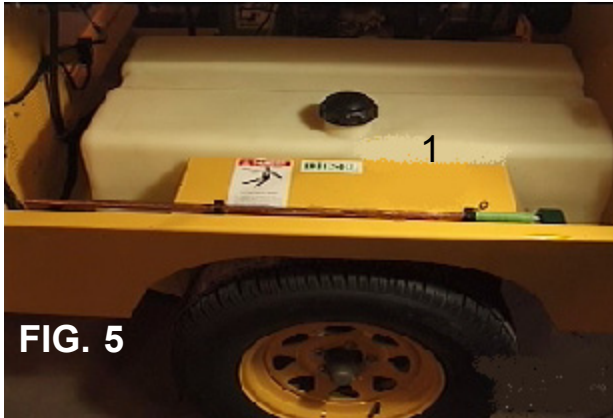


## **SAFETY WARNING**

**FAILURE TO UNDERSTAND AND COMPLY WITH SAFETY RELATED INFORMATION AND INSTRUCTIONS MAY RESULT IN INJURY TO THE OPERATOR OR OTHERS. IF YOU DO NOT UNDERSTAND ANY PART OF THIS CONTACT YOUR DEALER FOR CLARIFICATION PRIOR TO OPERATING EQUIPMENT**

# CONTROLS AND COMPONENTS

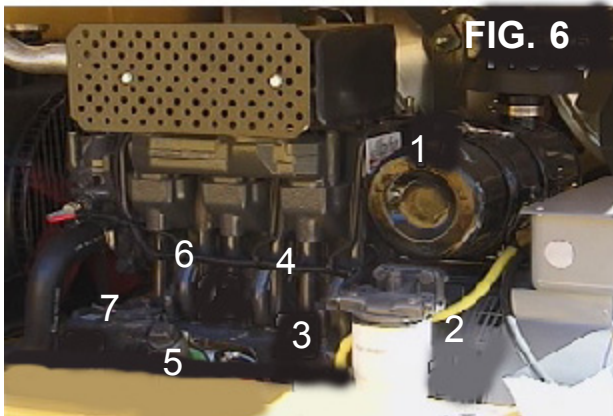
**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 5 GROUND ROD**

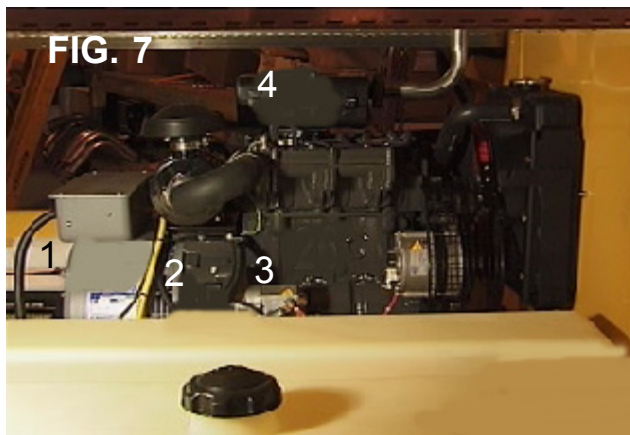
1. Ground Rod

**Ground rod** should be attached to grounding lug with wire provided and ground rod and then driven fully into the earth for adequate electrical ground, as required by local, state, or national electrical code.



**FIG. 6 ENGINE (Left Side)**

1. Air Cleaner
2. Fuel Filter
3. Fuel Lift Pump
4. Fuse (10 Amp)
5. Oil Fill
6. Stop Solenoid
7. Oil Filter



**FIG. 7 ENGINE (Right Side)**

1. Fuel Return Line
2. Fuel Suction Line
3. Starter
4. Glow Plugs

# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



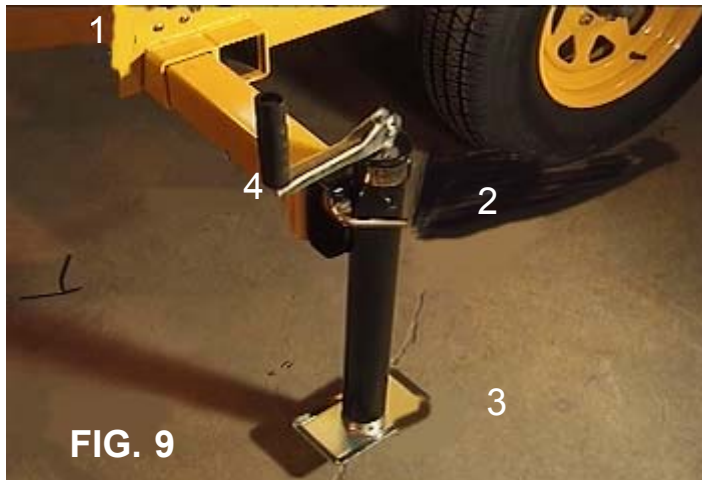
**FIG. 8 REAR JACK**

1. Rear Jack



## SAFETY WARNING

**WHEN EXTENDING REAR JACK, WATCH TO INSURE YOU ARE CLEAR OF THE OVERHANGING ENDS OF THE MAST BEFORE YOU STAND UP.**



**FIG. 9 OUTRIGGER JACK**

1. Pin --Retains outrigger in retracted position for towing
2. Jack Pin--Pull to allow jack to rotate
3. Outrigger Jack
4. Jack Handle--Crank handle to raise and lower foot of jack to level trailer

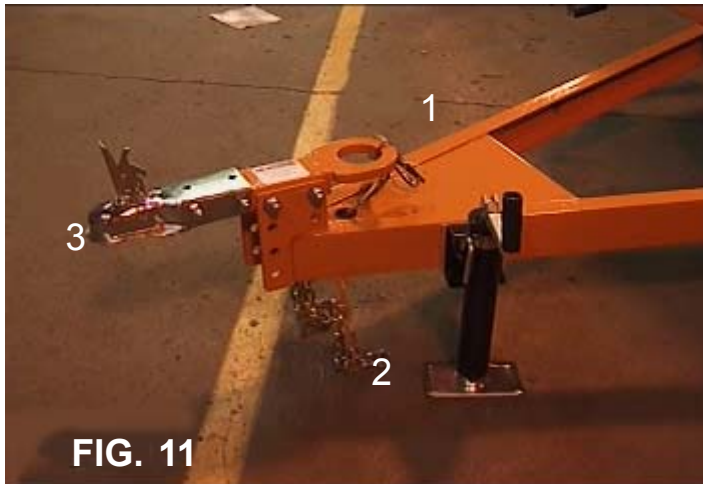


**FIG. 10 REAR TOWER SUPPORT**

1. Pin--Locks tower into rear tower support
2. Rear Tower Support

# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 11 TONGUE ASSEMBLY**

1. Taillight Wiring Harness
2. Safety Tow Chains
3. Reversible Hitch (2" Ball and Hitch)



**FIG. 12 FORKLIFT POCKETS**

1. Forklift Pockets
2. Lifting Eye

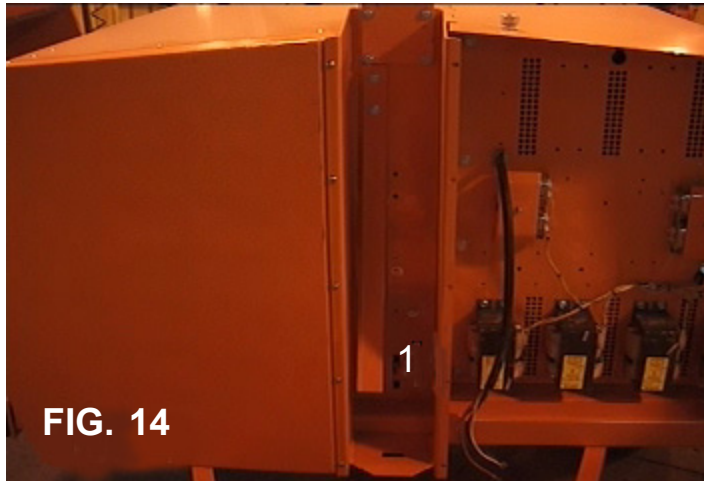


**FIG. 13 DOOR PROP**

1. Door Prop--Locks Door Panel in Position

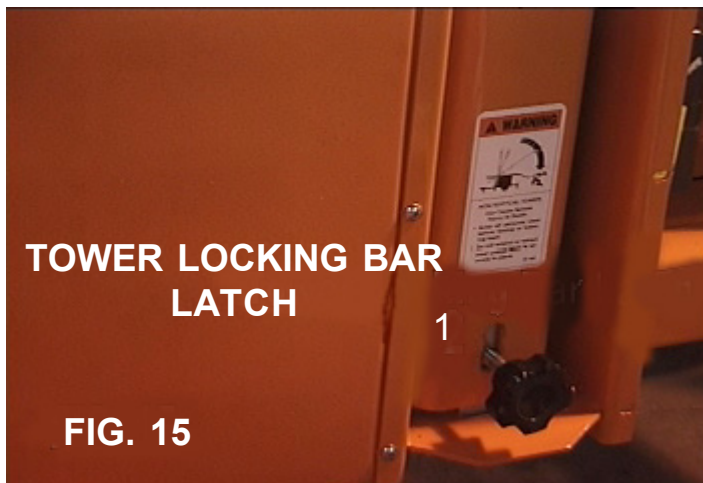
# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 14 KICKOUT SPRING**

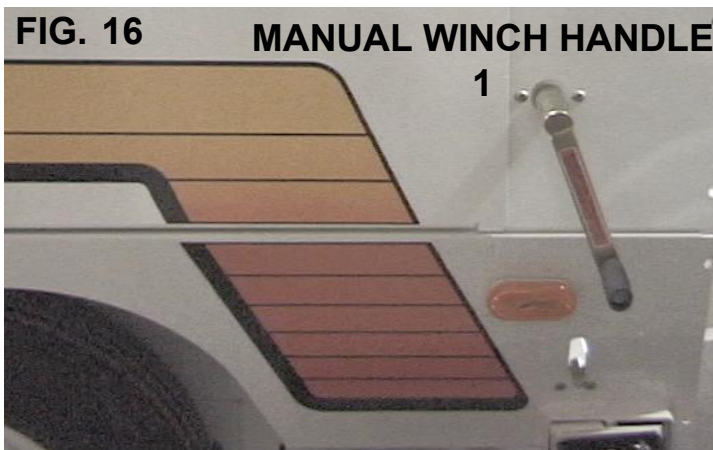
1. Kickout Spring--Tilts mast off center when folding mast down



**FIG. 15 TOWER LOCKING BAR LATCH**

1. Mast Locking Bar Latch --Locks mast in vertical position and allows tower to rotate.

**NOTE:** Tower must be positioned with the two black triangles on the tower assembly, near the mast handles, pointing at each other. Then the locking bar can be released from the strike plate allowing the tower to rotate toward horizontal towing position.

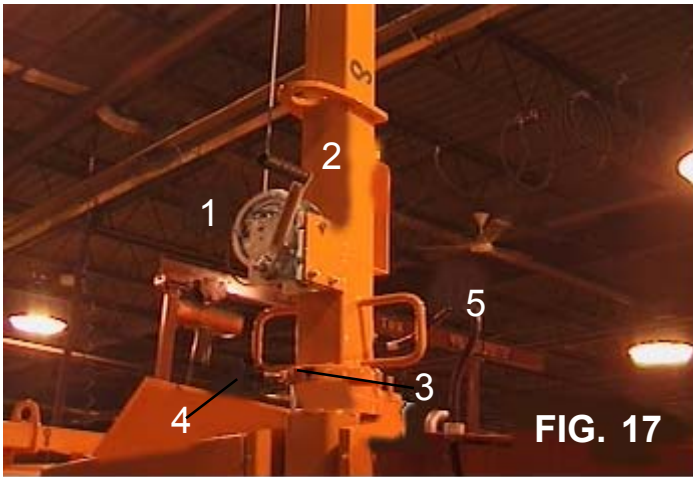


**FIG. 16 MANUAL WINCH HANDLE**

1. Winch Handle--Use to raise and fold mast.

# CONTROLS AND COMPONENTS

**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 17 TOWER CONTROLS**

1. Manual Winch—Use to extend and lower mast..
2. Tower Winch Handle
3. Alignment Arrows—Must be aligned to unlock the tower.
4. Lock Knob—Locks tower in position.
5. Mast Handles—Use to rotate tower and lights.



**FIG. 18 Cord Reel**

1. Cord reel —Available on either Electric or Manual winch models



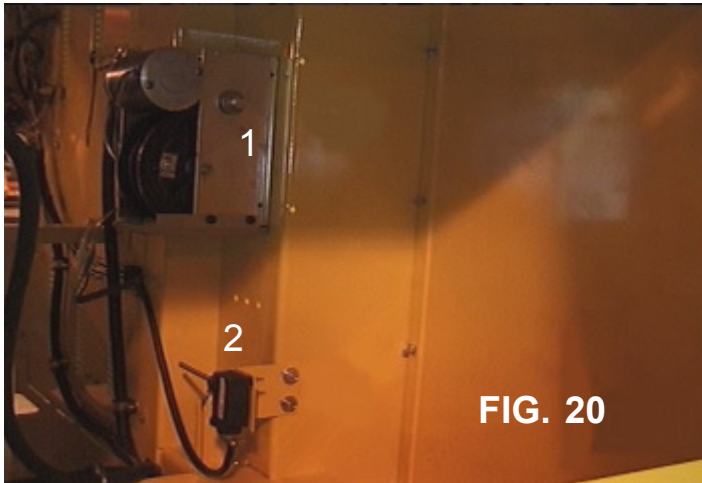
**FIG. 19 LAMP CONNECTORS**

1. Lamp Connector Lead—For quick connecting/disconnecting of the lamp fixtures



# CONTROLS AND COMPONENTS

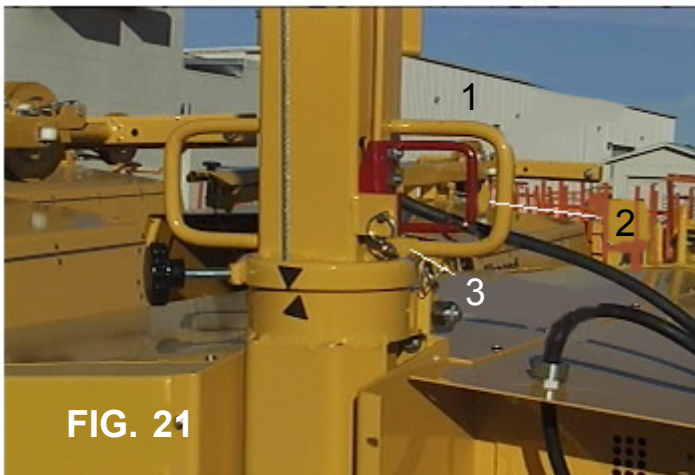
**NOTE:** COMPONENTS SHOWN ARE STANDARD. PICTURES MAY VARY WITH DIFFERENT OPTIONS.



**FIG. 20 Electric Winch**

1. Dutton-Lainson Strong Arm Winch—Used to raise and extend, lower and fold mast.
2. Slack Limit Switch—Shuts off winch when cable slack is sensed by sensor arm.

**NOTE:** See pages 10-11, Strong Arm Electric Winch Mast Operation, for correct operating procedures.



**FIG. 21 Electric Mast**

1. Mast Handle—Use to rotate mast.
2. Lock Handle—Pull to unlock tower sections when raising tower.
3. Lock Pin—Prevents accidental release of lock when rotating mast.

# ROUTINE MAINTENANCE SCHEDULE

## ISUZU 4LE1

### INSPECTION, MAINTENANCE, AND LUBRICATION SCHEDULE

Check condition of the steel cable and make sure it is properly secured.

**LUBRICATION GREASE SPECIFICATIONS:**

N.G.L.I. consistency #2, high temperature anti-friction bearing lubricating grease.

Service intervals shown below have been established for operation under normal conditions. Where equipment is operated under severe conditions (very dusty, extreme heat or cold, etc.) affected items should be serviced more frequently.

INTERVAL	ITEM	PROCEDURE
Daily or 10 Hr.	Fuel level	Check and fill as necessary
	Lubricating oil	Check level and condition
	Oil Pressure Warning Lamp	
50 Hr.	All 10 Hr. items	As above
	Air Cleaner	Service as required. Service requirements may be accelerated
	Engine Oil	Check engine oil and replace if necessary
	Engine Generator assembly	Check for fuel and lubricating oil leaks
250 Hr.	All 50 Hr. items	As above
	Engine oil system	Drain lubricating oil, flush out system, renew filter element and refill with correct grade and type oil
	Coolant	Check level and condition
500 Hr.	All 250 hr. Items	As Above
	Fuel Filter	Replace with new
	Oil Filter Element	Replace with new
750 Hr.	Engine oil system	Drain lubricating oil, flush out system, renew filter element and refill with correct grade and type oil
	Fan belt	Check tension and condition
	Radiator	Clean out fins with water or air
1000 hr. or yearly	All 750 Hr. Items	As above
	Engine Valves	Adjust clearance
	Cable pulley at the bottom of the front mast support	Remove, clean, and grease
	Cable pulleys on mast	Inspect for wear. Clean and lubricate
	Axle wheel bearings	Clean and repack
	Fuel System	Clean sediment from tank, replace filter element

# ROUTINE MAINTENANCE SCHEDULE

## KUBOTA V2203 and V2003T

### INSPECTION, MAINTENANCE, AND LUBRICATION SCHEDULE

Check condition of the steel cable and make sure it is properly secured.

#### LUBRICATION GREASE SPECIFICATIONS:

N.G.L.I. consistency #2, high temperature anti-friction bearing lubricating grease.

Service intervals shown below have been established for operation under normal conditions. Where equipment is operated under severe conditions (very dusty, extreme heat or cold, etc.) affected items should be serviced more frequently.

INTERVAL	ITEM	PROCEDURE
Daily or 10 Hr.	Fuel level	Check and fill as necessary
	Lubricating oil	Check level and condition
100 Hr.	All 10 Hr. items	As above
	Air Cleaner	Service as required. Service requirements may be accelerated
	Battery	Check level of electrolyte
	Engine Generator assembly	Check for fuel and lubricating oil leaks
200 Hr.	All 100 Hr. items	As above
	Engine lubricating oil system	Drain lubricating oil, flush out system, renew filter element and refill with correct grade and type oil
	Coolant	Check level and condition
400 Hr.	Fuel Filter	Replace with new.
500 Hr.	All 200 Hr. Items	As above
	Fan belt	Check tension and condition
	Radiator	Clean out fins with water or air
1000 hr. or yearly	All 500 Hr. Items	As above
	Engine Valves	Adjust clearance

# TROUBLESHOOTING



## SAFETY WARNING

### DANGER!

**HIGH VOLTAGE!** DO NOT ATTEMPT TO TEST AND REPAIR GENERATOR AND BALLAST ELECTRICAL SYSTEMS UNLESS YOU UNDERSTAND AND ARE QUALIFIED TO WORK ON SUCH SYSTEMS.

When one lamp does not light, **TURN OFF THE GENERATOR** and test the lamp by switching leads with a lamp that **DOES** light. **DO NOT WEAR JEWELRY WHILE WORKING WITH ELECTRICITY!** If the following procedures do not solve your problem, have the circuit tested by a licensed electrician. **DO NOT** attempt to test generator voltage or ballast electrical systems unless you are a qualified electrician. Consult the factory for voltage specifications and test procedures

PROBLEM	POSSIBLE CAUSE
ONE OR MORE LIGHTS DO NOT LIGHT UP.	1. Circuit breakers in the outlet box are not turned on or have tripped.
	2. Lamps are not allowed time to cool after last being lit. You must allow 15 minutes between the time the lights are shut off and the time they are restarted.
	3. The lam or lamps are burned out or broken.
	4. One or more of the lamps are not screwed in securely.
	5. Plug and socket at light bar not securely pushed together and locked.
	6. The temperature of the ballast is below –20 degrees F. the efficiency of the capacitors in the ballast is not enough to ignite the lamps. For operations where the temperatures of the ballasts falls below –20 degrees F. some means of warming the ballast must be used.
	7. Low electrical system voltage.
	8. A loose connection in the back of the lamp socket in the lamp holder.
	9. A circuit breaker or breakers are defective.
	10. A loose connection on the terminal board.
	11. The engine and generator are not running up to speed (1800 RPM)
	12. A wrong style replacement lamp (requiring a different ballast) has been installed.
	13. Too much power is being drawn from the auxiliary outlets.
	14. Capacitor or transformer have failed.
	15. Corrosion has occurred on the lamp bases.



**MAXI-LITE  
ML 15/ML 20  
SERIES  
LIGHT TOWER  
PARTS MANUAL**

**ALLMAND BROS. INC  
P.O. BOX 888  
HOLDREGE, NE 68945**

**PHONE: 308/995-4495, 1-800/562-1373  
ALLMAND FAX: 308/995-5887  
ALLMAND PARTS FAX: 308/995-4883**



**ML 15/ML 20 SERIES**

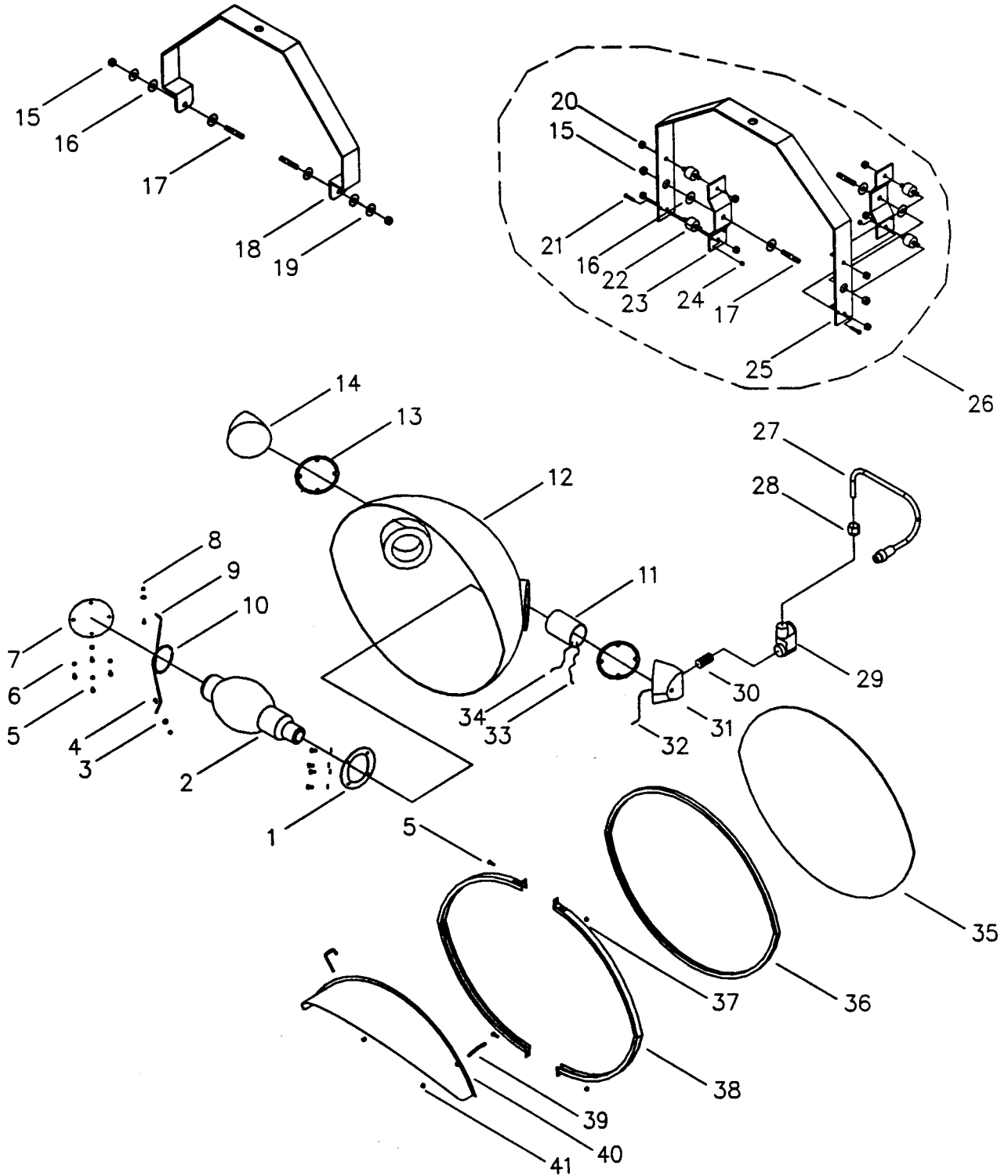
**For Parts and Updates visit Allmand on the Web at [www.allmand.com](http://www.allmand.com)**



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# SHO 1000 METALLIC VAPOR LAMP SHO 1000 HIGH PRESSURE SODIUM LAMP





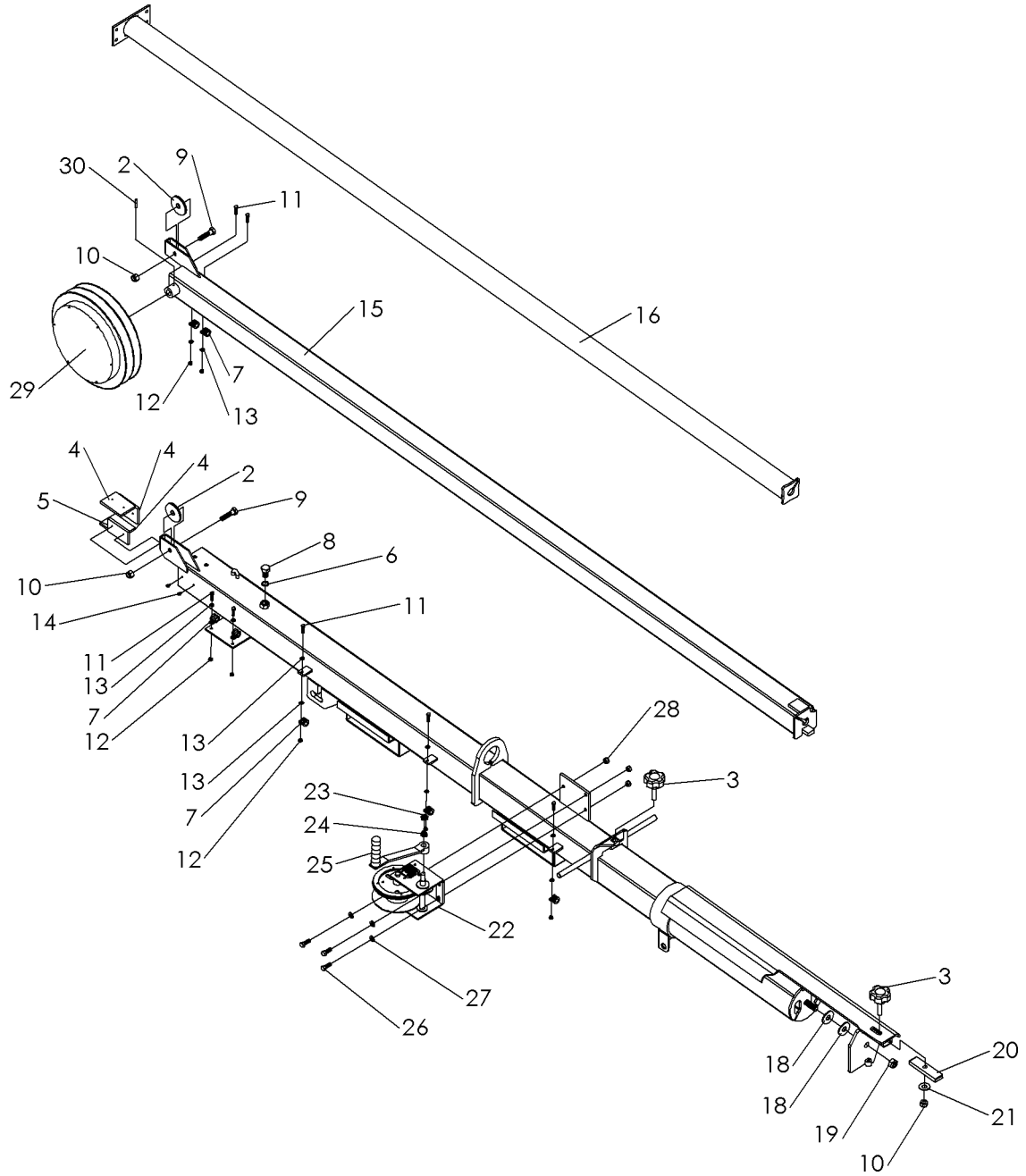
**SHO 1000 METALLIC VAPOR LAMP  
SHO 1000 HIGH PRESSURE SODIUM LAMP**

**A-1B**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
NS		610250	LAMP HOLDER ASS'Y WITH YOKE AND LAMP (SOLID MT.) (REM. FIXTURES)
NS		610265	LAMP HOLDER ASS'Y WITH YOKE AND LAMP (SOLID MT.) (HPS)
NS		610255	LAMP HOLDER ASSEMBLY W/YOKE, LAMP AND CUSHIONS (CUSHION MT.)
NS		610253	LAMP HOLDER ASSEMBLY W/YOKE, LAMP AND CUSHIONS (CUSHION MT.) (HPS)
NS		650144	LAMP HOLDER ASSEMBLY WITH YOKE AND LAMP
NS		610263	LAMP HOLDER ASSEMBLY WITH NO YOKE, NO LAMP,s HPS
1	1	610208	ALUMINUM RING
2	1	610211	LAMP BT-37
2A	1	610218	LAMP 1000W SHO ED37 (HPS)
3	2	**	#8 WASHER (STAINLESS STEEL)
4	2	**	#8-32 NC X 1/2 HEX HEAD BOLT (STAINLESS STEEL)
5	8	041028	#10-24 NC X 1/2 HEX HEAD BOLT (STAINLESS STEEL)15
6	8	043017	#10 INTERNAL TOOTH WASHER
7	1	610207	ALUMINUM PLATE
8	2	044013	#8 -32 NC NYLON INSERT NUT (STAINLESS STEEL)
9	1	610209	LAMP TIP SUPPORT
NS	1	650250	LAMP TIP SUPPORT (HIGH PRESSURE SODIUM)
10	1	610210	LAMP TIP SUPPORT TUBE
11	1	610212	CERAMIC SOCKET
12	1	610201	REFLECTOR
13	2	610213	END HOUSING GASKET
14	1	610206	RH SOLID END CASTING
15	2	044037	3/8 - 24 NF NYLON INSERT NUT
16	4	047019	.75 OD x.385 ID x.20 NYLON WASHER
17	2	045142	3/8 - 24 NF X 3/8 - 16 NC X 2" STUD
18	1	680493	SOLID MOUNT YOKE
19	2	047016	3/8 SAE WASHER
20		044031	5/16-18 KEPS NUT
21	2	041035	#10 - 24 NC X 1 1/4 ROUND HEAD BOLT
22	4	610260	RUBBER SHOCK MOUNT SHO 1000
23	2	610235	SHO CUSHION MOUNT PLATE
24	2	044018	10-24 NYLON LOCK NUT
25	1	610234	SHO 1000 CUSHION MOUNT YOKE
26		610236	SHO 1000 CUSHION MOUNT YOKE ASSEMBLY
27		310434	16/3 PORTABLE CORD 66
28	1	510007	1/2-CORD GRIP
29	1	610214	1/2" ENTRANCE ELBOW
30	1	610215	1/2 CONDUIT NIPPLE
31	1	610205	LH SOCKET END CASTING
32	1	**	GREEN HEAT TEMP WIRE
33	1	**	BLACK HEAT TEMP WIRE
34	1	**	WHITE HEAT TEMP WIRE
35	1	610203	LENS
36	1	610217	LENS GASKET (SILICONE)
37	2	044019	#10-24 NYLON INSERT NUT (STAINLESS)
38	1	610202	LENS CHANNEL SET
39	2	045070	#10-24 NC SQ BD HOOK BOLT (W/VISOR)
40	1	610017	SHO 1000 LIGHT VISOR (OPTIONAL)
41	2	044016	#10-24 NC KEPS NUT

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
01-White                      02-Gloss Black                      03-Gray  
04-Allmand Yellow                      05-Orange                      06-Allmand Gold  
09-Flat Black                      10-High temp Black                      11-Red



# MANUAL WINCH TOWER ASSEMBLY

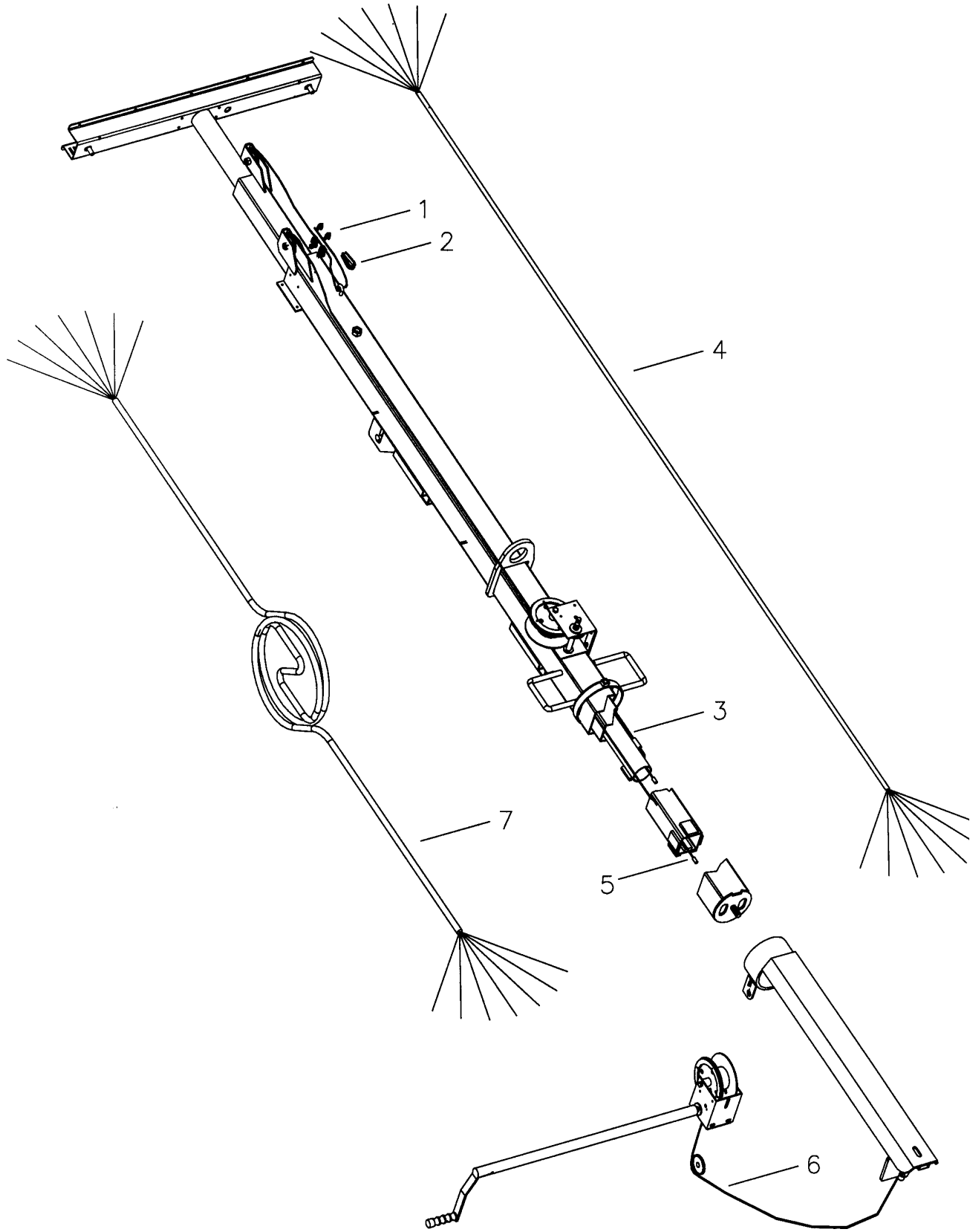
B-1B

NO	REQ'D	PART NO	DESCRIPTION
1	1	680102*	4" MANUAL WINCH TOWER WELDMENT
2	2	320110	3" PULLEY W/BUSHING
3	2	620550	1/2 - 13 NC X 2 1/8 LOCKING KNOB
4	3	650110	.312 TOWER PAD
5	1	352280	PLASTIC TOWER PAD
6	1	043100	5/8 INTERNAL TOOTH LOCK WASHER
7	8	310212	#8 CUSHION CLAMP
8	1	046242	5/8 - 11 NC X 1 GRADE 5 BOLT
9	2	046200	1/2 - 13 NC X 2 1/4 GRADE 5 BOLT
10	3	044048	1/2 -13 NC NYLON INSERT NUT
11	8	046015	1/4 - 20 NC X 1" GRADE 5 HEX BOLT
12	8	044023	1/4 - 20 NC NYLON INSERT NUT
13	14	047009	1/4" FLATWASHER STAINLESS STEEL
14	8	041023	#10 X 3/8 SELF-TAPPING PLASTIC SCREW
15	1	680180*	3" TOWER WELDMENT MANUAL WINCH
16	1	352017*	2-5/8" MANUAL TOWER WELDMENT FOR REM. LIGHT BAR
17	1	620511	WELDMENT, TOWER SUPPORT
18	2	047030	5/8 FLAT WASHER (with painted tower)
	1	047030	5/8 FLAT WASHER (with galvanized tower)
19	1	044053	5/8 - 11 NC NYLON INSERT NUT
20	1	650145	MAST LOCKING BAR
21	1	047025	1/2" PLATED FLAT WASHER
22	1	610531	DLB 1200 BRAKE WINCH - PLATED
23	1		1/2" NUT (SUPPLIED WITH WINCH)
24	1		WINCH SPRING (SUPPLIED WITH WINCH)
25	1	712032	HANDLE FOR DLB 1200 - 7"
26	3	046110	3/8 - 16 NC X 1 GRADE 5 BOLT
27	3	047010	5/16" FLAT WASHER
28	3	044038	3/8 -16 NC NYLON INSERT NUT
29	1	320410	CORD REEL (OPTIONAL)
30	1	320453	3/16" X 1-3/4" ROLL PIN

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White                      02-Gloss Black                      03-Gray  
 04-Allmand Yellow                      05-Orange                      06-Allmand Gold  
 09-Flat Black                      10-High temp Black                      11-Red

# MANUAL WINCH TOWER CABLE ROUTING



<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	2	620084	WIRE ROPE CLIP 3/16"
2	1	045040	WIRE ROPE THIMBLE, 1/4"
3	1	620076	STEEL CABLE 3/16- X 11'
4	1	650140	MAST WIRING - 14/7 X 324" (STRAIGHT CORD)
5	1	650133	STEEL CABLE 3/16" X 17' 9"
6	1	320185	STEEL CABLE 3/16" X 10'
7	1	352016	MAST WIRING 16/8 X 344" (CORD REEL 4 LIGHT)
	1	352083	MAST WIRING 16/10 X 344" (CORD REEL 6 LIGHT)
		680209*	MANUAL WINCH TOWER (4 Light) Complete W/Light Bar Assy
		680210*	MANUAL CORD REEL TOWER (4 Light) Complete W/Light Bar Assy
		680213*	MANUAL WINCH TOWER (6 Light) Complete W/Light Bar Assy
		680214*	MANUAL CORD REEL TOWER (6 Light) Complete W/Light Bar Assy

**INSTRUCTIONS FOR REPLACING STEEL CABLES.**

**3/16 X 11'**

REMOVE THE CUSHION CLAMPS AND MAST WIRING FROM 3" MAST SECTION.  
 REMOVE THE WIRE ROPE CLIPS AT TOP END OF THE 4" MAST SECTION.  
 REMOVE THE 3" PULLEY AT THE END OF THE 3" MAST SECTION.  
 REMOVE THE 2 5/8" ROUND MAST SECTION.  
 REMOVE ALL BROKEN AND FRAYED CABLE.  
 REPLACE NEW CABLE THROUGH SLOT AND EYELET IN THE ROUND MAST SECTION.  
 REPLACE 2 5/8" ROUND MAST SECTION IN THE 3" MAST SECTION.  
 ROUTE CABLE THROUGH PULLEY BRACKETS AND INSTALL 3" PULLEY.  
 WITH ALL SECTIONS PUSHED TOGETHER TIGHT, INSERT CABLE THROUGH HALF-LINK AND REINSTALL WIRE ROPE CLIPS.  
 REINSTALL CUSHION CLAMPS AND MAST WIRING ON THE 3" MAST SECTION.

**3/16 X 17' 9"**

REMOVE MAST WIRING FROM BALLAST COMPARTMENT (SEE ELECTRICAL SCHEMATIC)  
 REMOVE THE CUSHION CLAMPS AND MAST WIRING FROM 4" MAST SECTION.  
 REMOVE STOP BOLT AND WASHER.  
 REMOVE 4 TOWER PADS AND 3" PULLEY AT THE END OF THE 4" MAST SECTION.  
 REMOVE THE 2 5/8" ROUND AND 3" MAST SECTIONS TOGETHER.  
 REMOVE ALL BROKEN AND FRAYED CABLE.  
 REPLACE NEW CABLE THROUGH SLOT AND EYELET IN THE 3" MAST SECTION AND THROUGH PULLEY BRACKETS.  
 REPLACE 2 5/8" ROUND AND 3" MAST SECTIONS.  
 REPLACE 3" PULLEY AND 4 TOWER PADS.  
 ATTACH CABLE TO WINCH AND WIND IN CLOCKWISE DIRECTION UNTIL ALL SLACK IS OUT.  
 REPLACE STOP BOLT AND WASHER.  
 REPLACE CUSHION CLAMPS AND MAST WIRING ON 4" MAST SECTION.  
 REPLACE MAST WIRING IN BALLAST COMPARTMENT. (SEE ELECTRICAL SCHEMATIC)

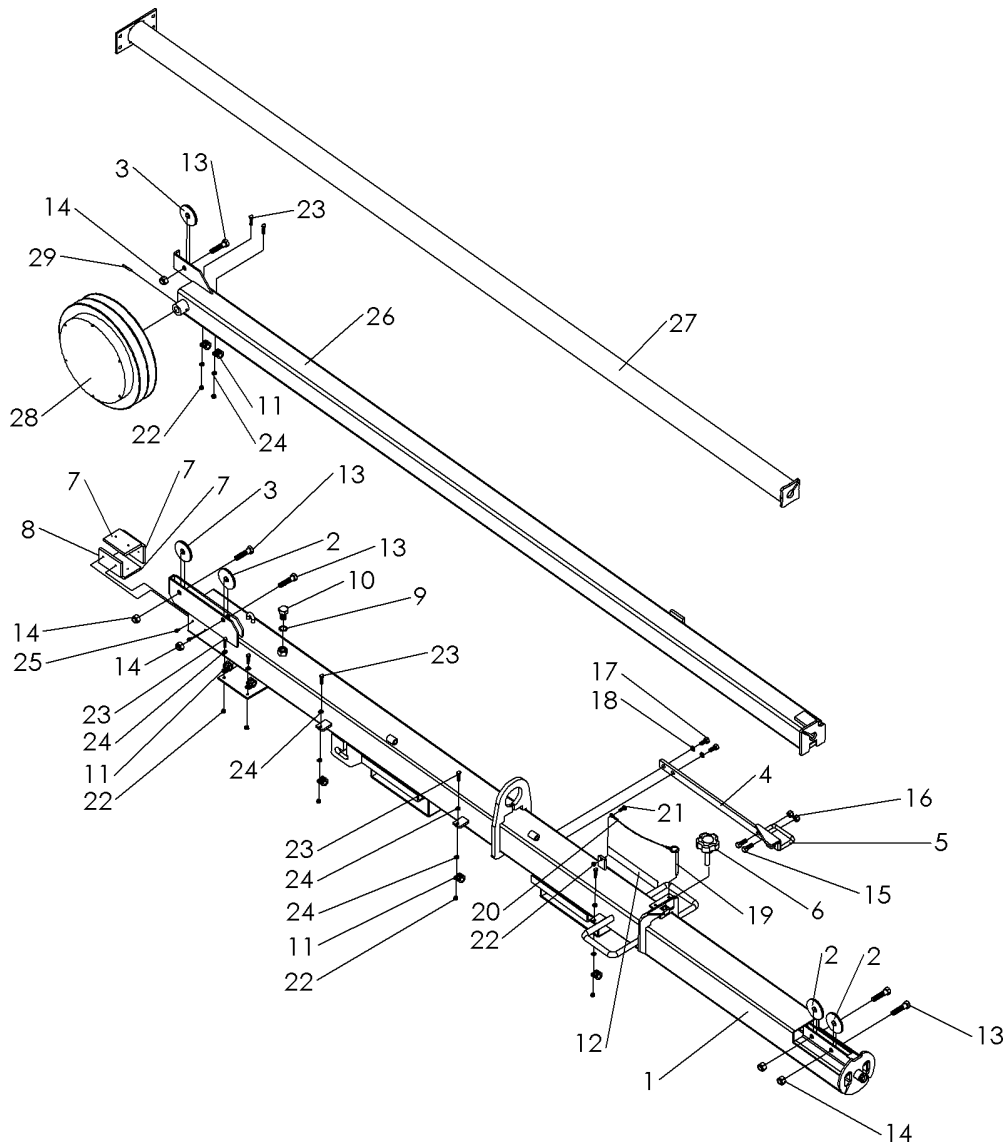
**3/16 X 10'**

REMOVE ALL BROKEN AND FRAYED CABLE.  
 FEED NEW CABLE THROUGH EYELET IN MAST PIVOT SECTION.  
 FEED THROUGH PULLEY BRACKETS AND AROUND PULLEY IN FRONT UPRIGHTS.  
 ATTACH CABLE TO WINCH AND WIND IN CLOCKWISE DIRECTION UNTIL ALL SLACK IS OUT.

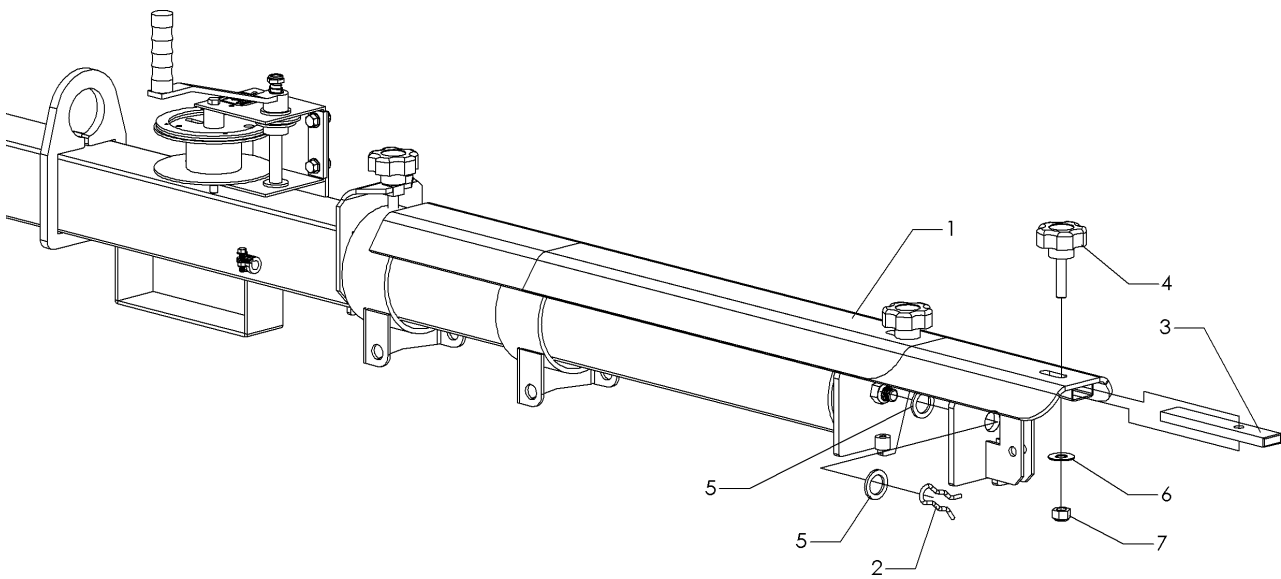
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate c  
 01-White 02-  
 04-Allmand Yellow 05-  
 09-Flat Black 10-

# ELECTRIC WINCH TOWER ASSEMBLY



## ELECTRIC WINCH MAST PIVOT SECTION ASSEMBLY



# ELECTRIC WINCH TOWER ASSEMBLY

B-3B

NO	REQ'D	PART NO	DESCRIPTION
1	1	680184*	WELDMENT, 4" TOWER, ELECTRIC
2	3	320112	2 1/2" PULLEY W/BUSHING
3	2	320110	3" PULLEY
4	1	620579	LOCK SPRING
5	1	620577	LOCK HANDLE
6	1	620550	LOCKING KNOB 1/2 - 13 NC X 2 1/8"
7	2	650110	PLASTIC TOWER PAD, .312
8	1	352280	PLASTIC TOWER PAD 5/16 SHORT
9	1	043100	5/8 INTERNAL TOOTH LOCK WASHER
10	1	046242	5/8 - 11 NC X 1 GRADE 5 BOLT
11	8	022022	#8 CUSHION CLAMP
12	1	090309	SPRING LATCH RELEASE DECAL
13	5	046200	1/2 - 13 NC X 2 1/4 GRADE 5 BOLT
14	5	044048	1/2 - 13 NC NYLON INSERT NUT
15	2	046110	3/8 - 16 NC X 1 GRADE 5 BOLT
16	2	044080	3/8 - 16 NC TOPLOCK NUT
17	2	046105	3/8 - 16 NC X 3/4 GRADE 5 BOLT
18	2	043070	3/8 INTERNAL TOOTH LOCK WASHER
19	1	046438	1/4" X 3" QUICK RELEASE PIN
20	1	712061	STEEL LANYARD
21	4	046010	1/4 - 20 NC X 3/4 GRADE 5 BOLT
22	9	044023	1/4 - 20 NC NYLON INSERT NUT
23	8	046015	1/4 - 20 NC X 1" GRADE 5 BOLT
24	14	047009	1/4" SS FLAT WASHER
25	8	041023	#10 X 3/8 SELF TAPPING PLASTIC SCREW
26	1	680185*	3" ELECTRIC WINCH TOWER WELDMENT
27	1	352050*	REMOVEABLE LIGHT BAR 2 5/8" ROUND TOWER WELDMENT
28	1	320410*	CORD REEL (used on cord reel towers only)
29	1	320453	3/16 X 1 3/4 ROLL PIN (used on cord reel towers only)

# ELECTRIC WINCH MAST PIVOT SECTION ASSEMBLY

NO	REQ'D	PART NO	DESCRIPTION
1	1	620570*	TOWER SUPPORT WELDMENT, ELECTRIC WINCH
2	1	620545	3/4 PLATED HAIRPIN CLIP
3	1	352168	MAST LOCKING BAR, ELECTRIC WINCH
4	1	620550	LOCKING KNOB 1/2 - 13 NC X 2 1/8"
5	2	047055	1" NARROW RIM PLATED MACHINE BUSHING
6	1	047025	1/2" PLATED FLAT WASHER
7	1	044048	1/2 - 13 NC NYLON INSERT NUT

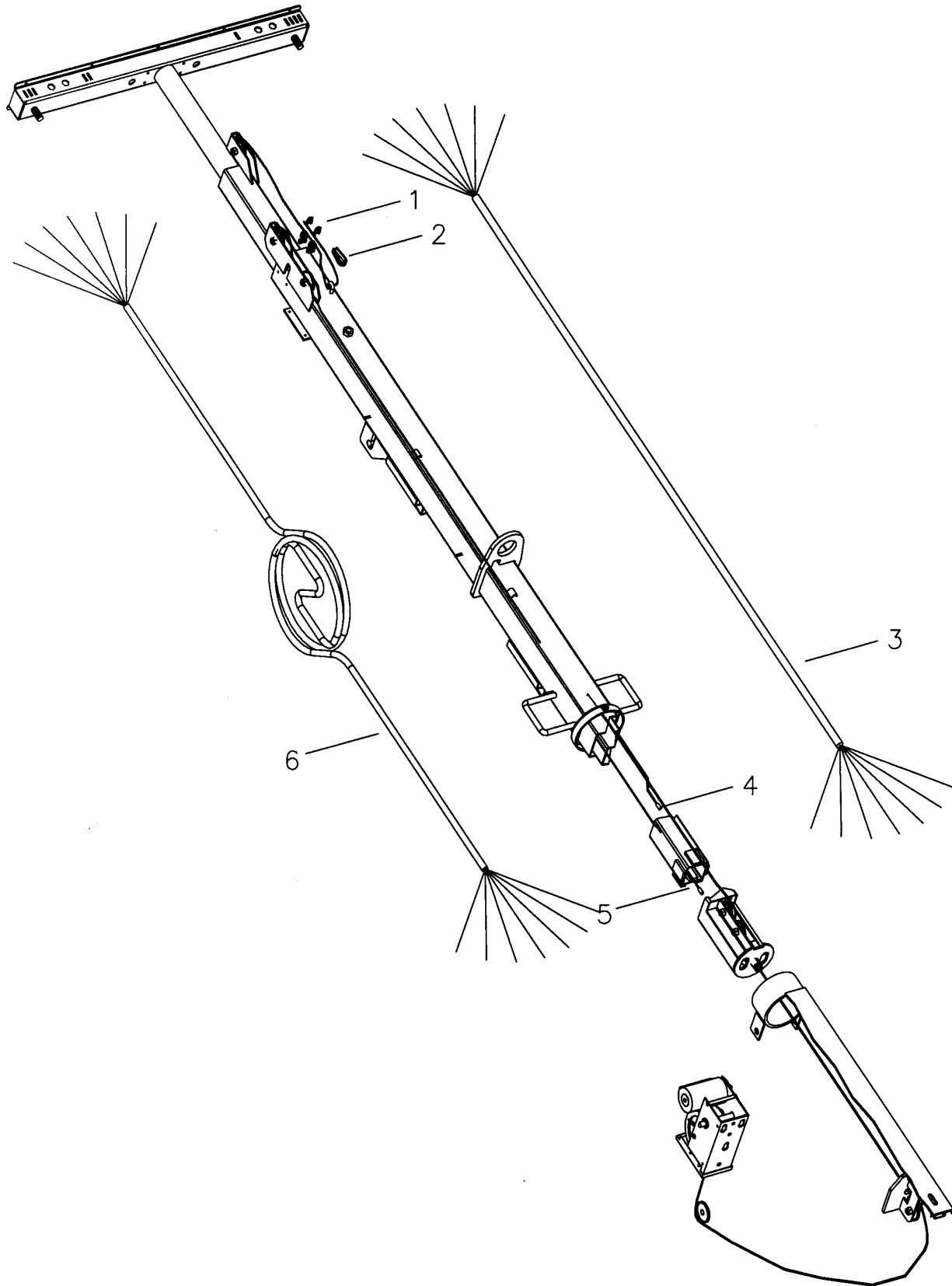
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

LEGEND: NS= Not Shown  
\*\* =Purchase locally

# ELECTRIC WINCH TOWER CABLE ROUTING





NO	REQ'D	PART NO	DESCRIPTION
1	2	620084	WIRE ROPE CLIP 3/16
2	1	045040	WIRE ROPE THIMBLE, 1/4
3	1	620525	MAST WIRING - 14/7 X 324" (4-LIGHT STRAIGHT CORD)
		352094	MAST WIRING - 16/10 X 324" (6-LIGHT STRAIGHT CORD)
4	1	320185	STEEL CABLE 3/16" X 10'
5	1	352054	STEEL CABLE 7/32" X 26'
6	1	352016	MAST WIRING 16/8 X 344" (cord reel 4 light)
	1	352083	MAST WIRING 16/10 X 344" (cord reel 6 light)
		680533	MAST WIRING - 16/10 X 326" (4-LIGHT CORD REEL 3 PHASE)
NS		680204*	ELECTRIC ST. CORD TOWER (4 Light) Complete W/Light Bar Assy
		680203*	ELECTRIC CORD REEL TOWER (4 Light) Complete W/Light Bar Assy
		680207*	ELECTRIC ST. CORD TOWER (6 Light) Complete W/Light Bar Assy
		680208*	ELECTRIC CORD REEL TOWER (6 Light) Complete W/Light Bar Assy

INSTRUCTIONS FOR REPLACING STEEL CABLES.

3/16 X 10'

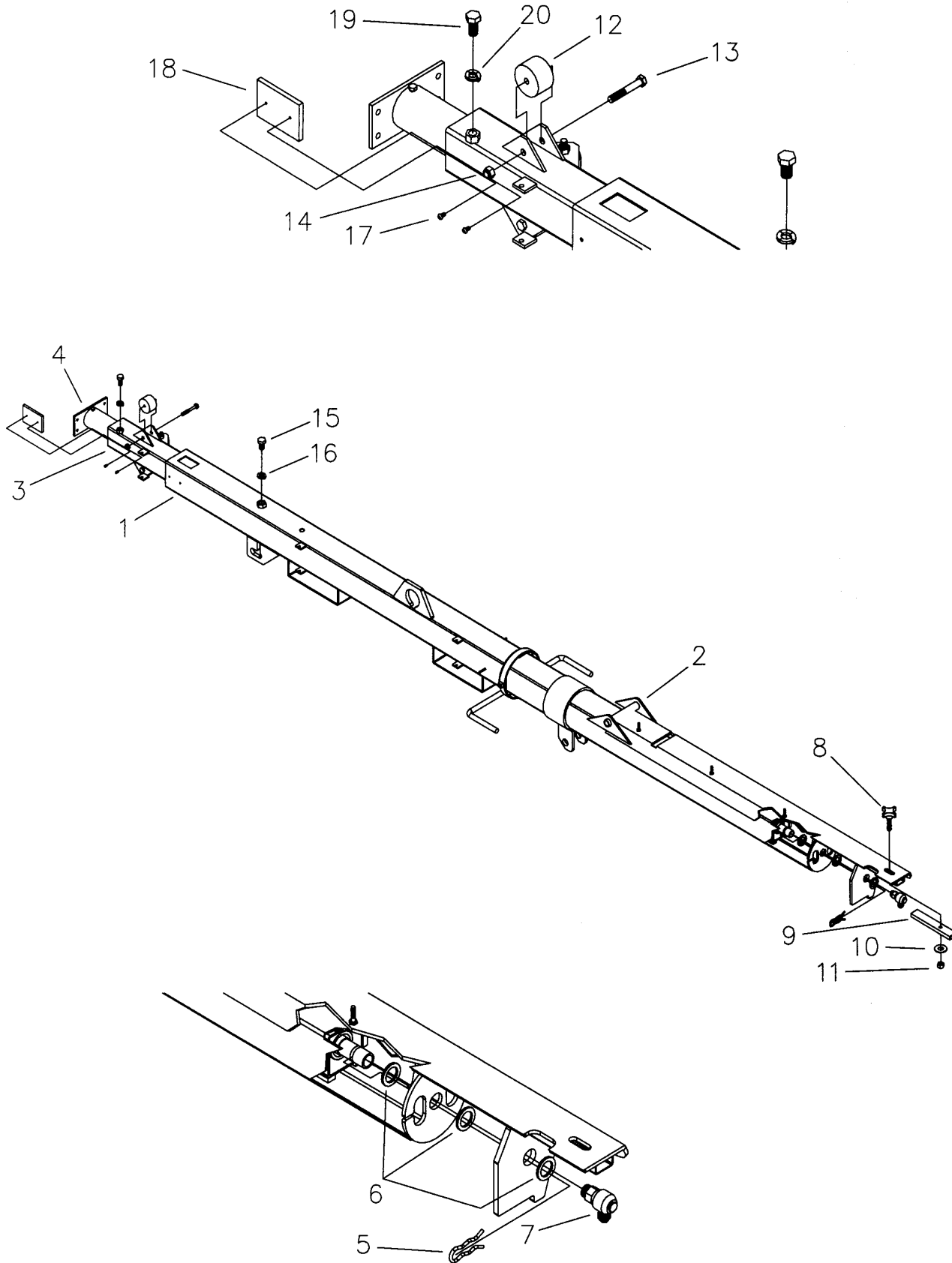
- REMOVE THE CUSHION CLAMPS AND MAST WRING FROM 3" MAST SECTION.
- REMOVE LIGHT BAR BY REMOVING 4 NUTS ON BAR AND LAY BAR ON GROUND.
- REMOVE THE WIRE ROPE CLIPS AT TOP END OF THE 4" MAST SECTION.
- REMOVE THE 3" PULLEY AT THE END OF THE 3" MAST SECTION.
- REMOVE THE 2 5/8" ROUND MAST SECTION.
- REMOVE ALL BROKEN AND FRAYED CABLE.
- REPLACE NEW CABLE THROUGH SLOT AND EYELET IN THE ROUND MAST SECTION.
- REPLACE: 2 5/8" ROUND MAST SECTION IN THE 3" MAST SECTION.
- ROUTE CABLE THROUGH PULLEY BRACKETS AND INSTALL 3" PULLEY.
- WITH ALL SECTIONS PUSHED TOGETHER TIGHT, INSERT CABLE THROUGH HALF-LINK AND REINSTALL WIRE ROPE CLIPS.
- REINSTALL CUSHION CLAMPS AND MAST WIRING ON THE 3" MAST SECTION.

7 /32 X 26'

- REMOVE CABLE FROM WINCH.
- REMOVE MAST WIRING FROM BALLAST COMPARTMENT (SEE ELECTRICAL SCHEMATIC)
- REMOVE TOWER ASSEMBLY FROM TRAILER.
- REMOVE STOP BOLT AND WASHER.
- REMOVE 4 NYLON ROLLERS AND 3" PULLEY AT TOP END OF 3" SQUARE SECTION.
- REMOVE THE 2 5/8" ROUND AND 3" MAST SECTIONS TOGETHER.
- REMOVE 2 1/2" PULLEY FROM END OF 4- SECTION.
- REMOVE ALL BROKEN AND FRAYED CABLE.
- REPLACE NEW CABLE THROUGH SLOT AND EYELET IN THE 3" MAST SECTION AND THROUGH PULLEY BRACKETS.
- REPLACE 2 5/8- ROUND AND 3" MAST SECTIONS.
- REPLACE 3" PULLEY AND 4 NYLON ROLLERS.
- REPLACE STOP BOLT AND WASHER.
- RUN NEW CABLE ON OUTSIDE OF 4" SECTION.
- REPLACE 2 1/2" PULLEY.
- REPLACE TOWER ASSEMBLY ON TRAILER.
- REPLACE MAST WIRING IN BALLAST COMPARTMENT. (SEE ELECTRICAL SCHEMATIC)
- RUN NEW CABLE THROUGH PULLEY BRACKETS IN FRONT OF TRAILER.
- ATTACH CABLE TO ELECTRIC WINCH.
- WIND IN CLOCKWISE DIRECTION UNTIL ALL SLACK IS OUT.

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White                      02-Gloss Black                      03-Gray  
 04-Allmand Yellow                      05-Orange                      06-Allmand Gold  
 09-Flat Black                      10-High temp Black                      11-Red



# HYDRAULIC TOWER ASSEMBLY

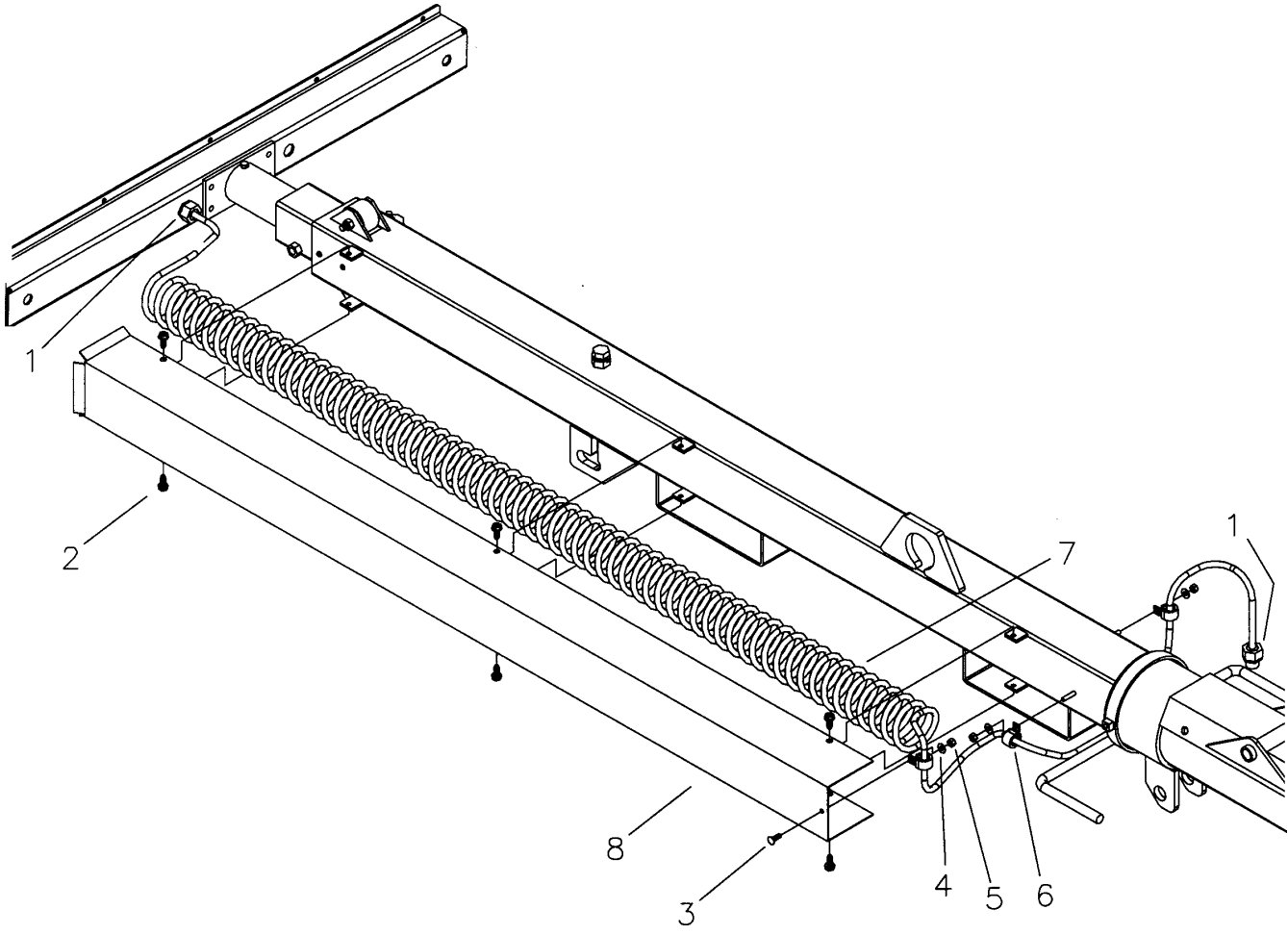
B-5B

NO	REQ'D	PART NO	DESCRIPTION
1	1	352222	4" HYDRAULIC TOWER, COIL CORD
2	1	352198	HYDRAULIC TOWER BACKBONE
3	1	352216	3" HYDRAULIC TOWER
4	1	352206	HYDRAULIC TOWER TELESCOPIC CYLINDER
5	1	620545	HAIRPIN CLAMP
6	3	FW055	1" NARROW MACHINE BUSHING
7	1	352209	HYDRAULIC SWIVEL FITTING
8	1	620550	LOCKING KNOB 1/2-13 NC x 2"
9	1	352168	MAST LOCKING BAR
10	1	**	5/8 FLAT WASHER
11	1	**	1/2-13 NC NYLON INSERT NUT
12	3	FP010	2" NYLON ROLLER
13	3	**	3/8-16 NC x 2-1/2 GRADE 5 BOLT
14	3	**	3/8-16 NC NYLON INSERT NUT
15	1	**	5/8-11 NC x 1" GRADE 5 BOLT
16	1	**	5/8 SPLIT LOCK WASHER
17	2	MS023	#10 x 3/8 SELF-TAPPING PLASTIC SCREW
18	1	650110	PLASTIC TOWER PAD, 5/16
19	1	**	1/2-13 x 1" GRADE 8 BOLT
20	1	**	1/2" SPLIT LOCK WASHER

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

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04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red



# HYDRAULIC TOWER COIL CORD ASSEMBLY

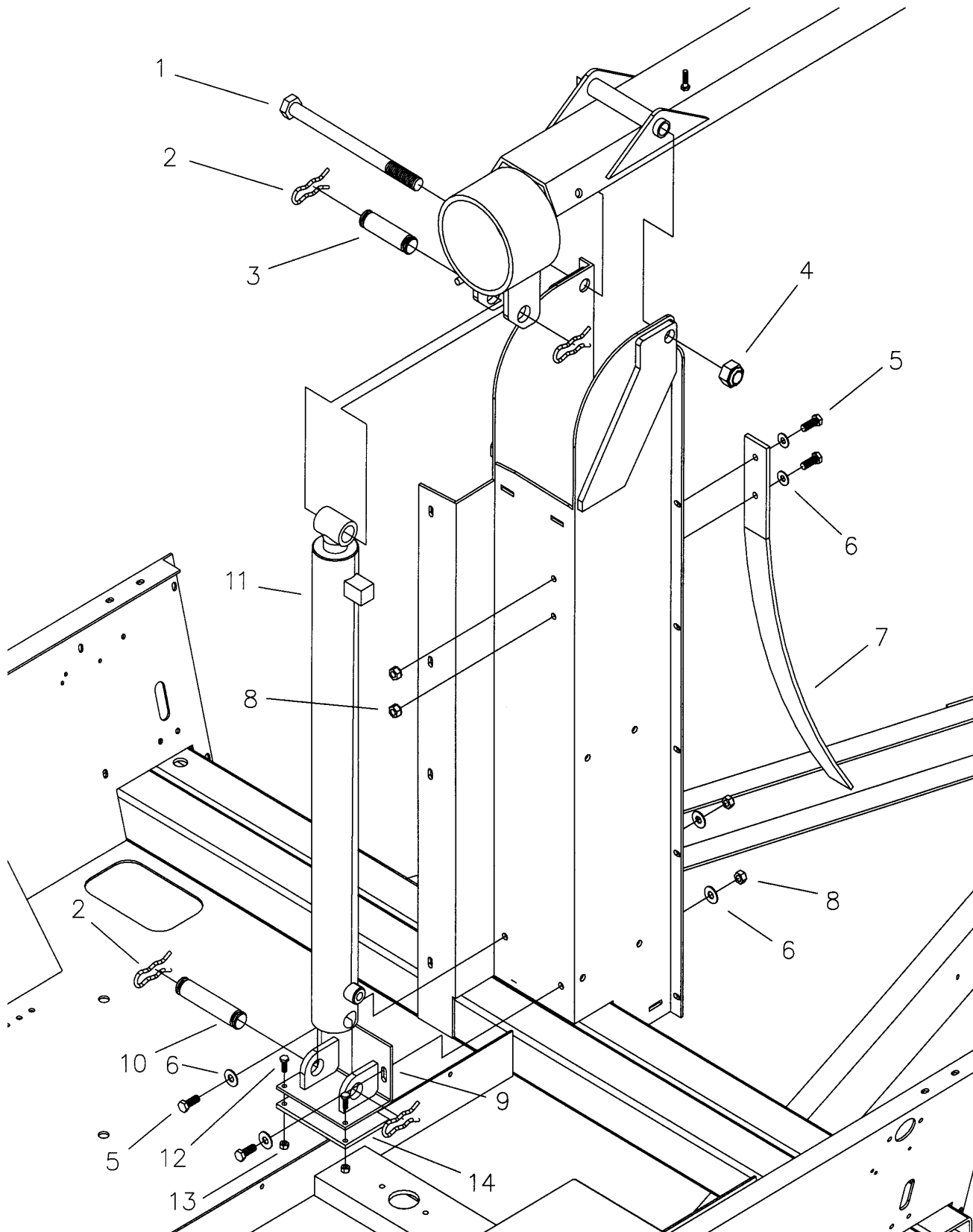
B-6B

NO	REQ'D	PART NO	DESCRIPTION
1	2	310032	CORD GRIP
1A	2	EL039	1/2" BUSHING
2	6	**	5/16-18 NC x 3/4 SELF-TAPPING SCREW
3	1	MS050	1/4-20 NC x 3/4 TRUSS HEAD SCREW
4	3	**	1/4 FLAT WASHER
5	3	**	1/4-20 NC HEX NUT
6	3	EL022	#8 CUSHION CLAMP
7	1	320126	COIL CORD 16/8
8	1	352224	TUNNEL, COIL CORD, HYDRAULIC TOWER

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red



**NO REQ'D PART NO DESCRIPTION**

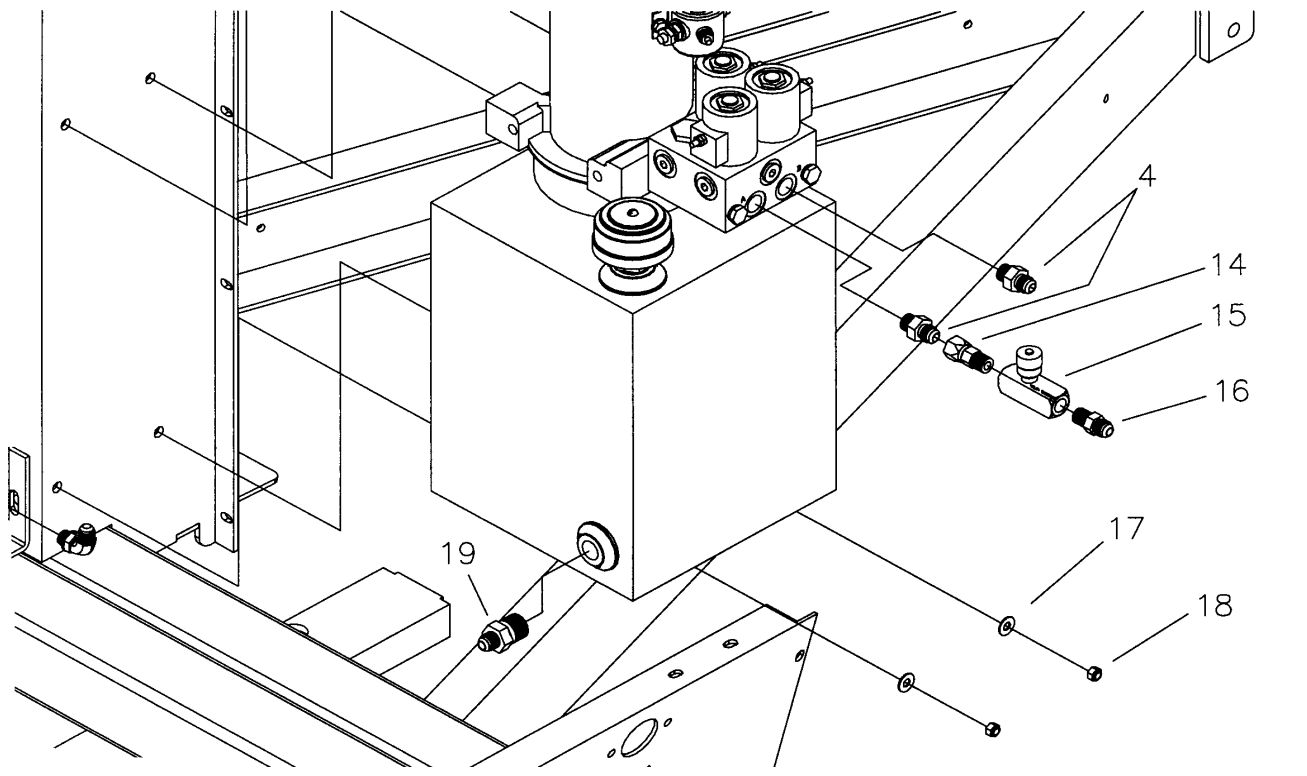
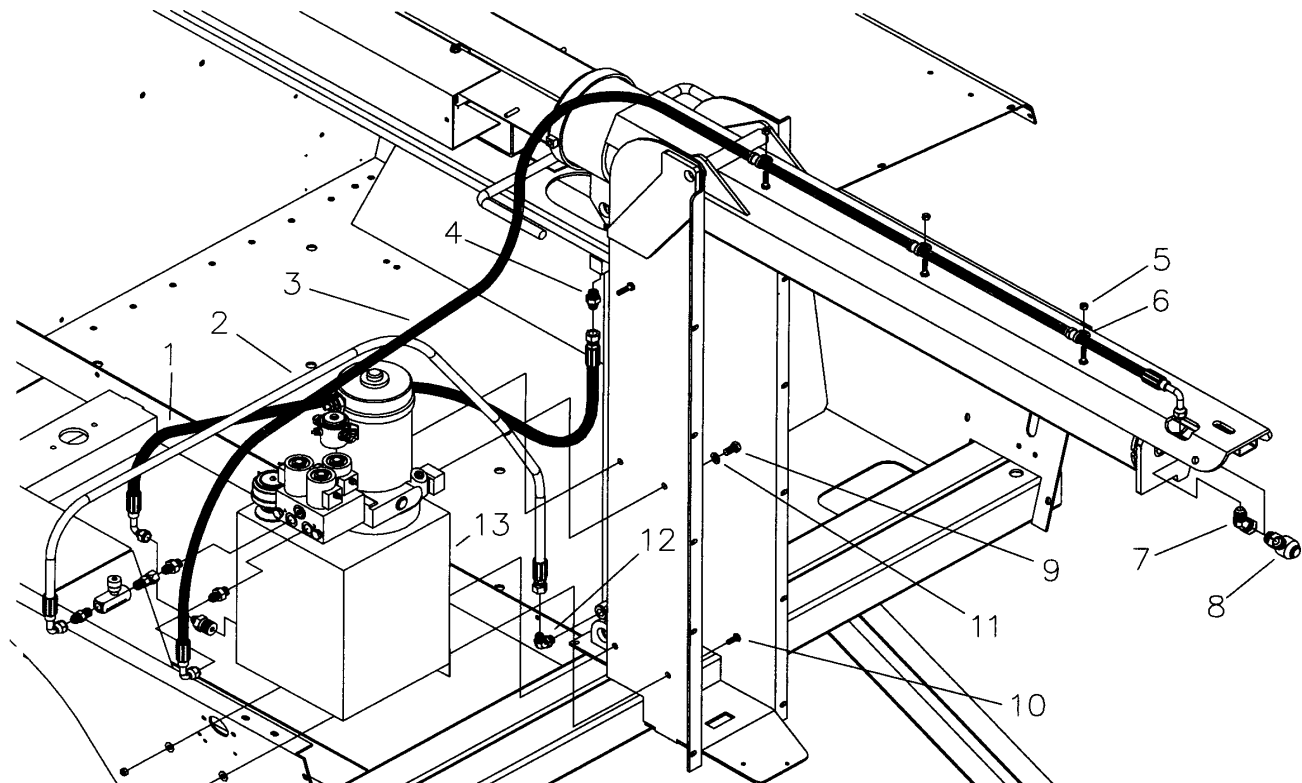
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1	1	**	3/4-10 NC x 10" GRADE 5 BOLT
2	4	620545	HAIRPIN RETAINER
3	1	352392	STAND-UP CYLINDER PIVOT PIN, UPPER
4	1	**	3/4-10 NC NYLON INSERT NUT
5	4	**	3/8-16 NC x I GRADE 5 BOLT
6	6	**	5/16 FLAT WASHER
7	1	650330	TOWER KICK-OUT SPRING
8	4	**	3/8-16 NC NYLON INSERT NUT
9	1	352219	STAND-UP CYLINDER FRAME MOUNT
10	1	352393	STAND-UP CYLINDER PIVOT PIN, LOWER
11	1	352207	TOWER STAND-UP CYLINDER
12	2	**	1/4-20 NC x 3/4 GRADE 5 BOLT
13	2	**	1/4-20 NC x 3/4 HEX NUT
14	*	352225	STAND-UP CYLINDER SHIM PLATE, 1/4"
NS	*	352226	STAND-UP CYLINDER SHIM PLATE, 7 GAUGE
NS	*	352227	STAND-UP CYLINDER SHIM PLATE, 10 GAUGE
NS	*	352228	STAND-UP CYLINDER SHIM PLATE, 12 GAUGE
NS	*	352229	STAND-UP CYLINDER SHIM PLATE, 14 GAUGE
NS	*	352230	STAND-UP CYLINDER SHIM PLATE, 16 GAUGE

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 04-Allmand Yellow            05-Orange  
 09-Flat Black                10-High temp Black

03-Gray  
 06-Allmand Gold  
 11-Red





NO	REQ'D	PART NO	DESCRIPTION
1	1	352212	HYDRAULIC HOSE ASSEMBLY 6M3K-6FJX-6FJX902-24"
2	1	352211	HYDRAULIC HOSE ASSEMBLY 6M3K-6FJX-6FJX90S-38"
3	1	352210	HYDRAULIC HOSE ASSEMBLY 6M3K-6FJX90S-6C28FJX90M-87"-30°
4	3	320076	HYDRAULIC FITTING, 6F50X-S
5	3		1/4-20 NC NYLON INSERT NUT
6	3	310212	HOSE CLAMP
7	1	352259	HYDRAULIC FITTING, 8V6X-S
8	1	352209	HYDRAULIC FITTING, SWIVEL 90°
9	2	**	3/8-16 NC x 3/4 GRADE 5 BOLT
10	2	**	1/4-20 NC x 1" TRUSS HEAD BOLT
11	2	**	3/8 SPLIT LOCKWASHER
12	1	920692	HYDRAULIC FITTING, 6C50X-S
13	1	352208	HYDRAULIC POWER UNIT
	3	320545	SOLENOID COIL
	2	320555	CARTRIDGE, UP
	1	320560	CARTRIDGE, DOWN
14	1	352260	HYDRAULIC FITTING, STRAIGHT SWIVEL, 6F6X-S
15	1	320087	FLOW CONTROL VALVE
16	1	920823	HYDRAULIC FITTING, 6FTX-S
17	2	**	1/4 FLAT WASHER
18	2	**	1/4-20 NC NYLON INSERT NUT
19	1	920666	HYDRAULIC FITTING, 6-8FTX-S

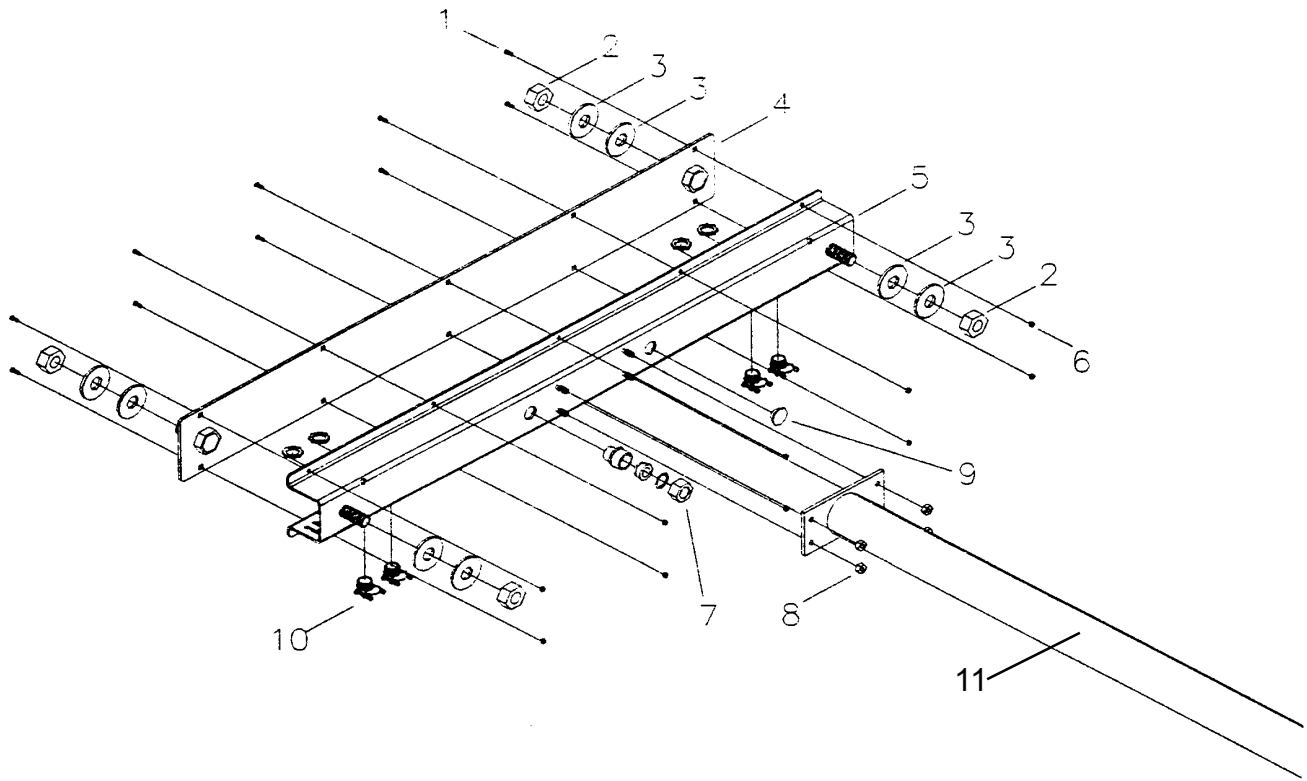
LEGEND: NS= Not Shown  
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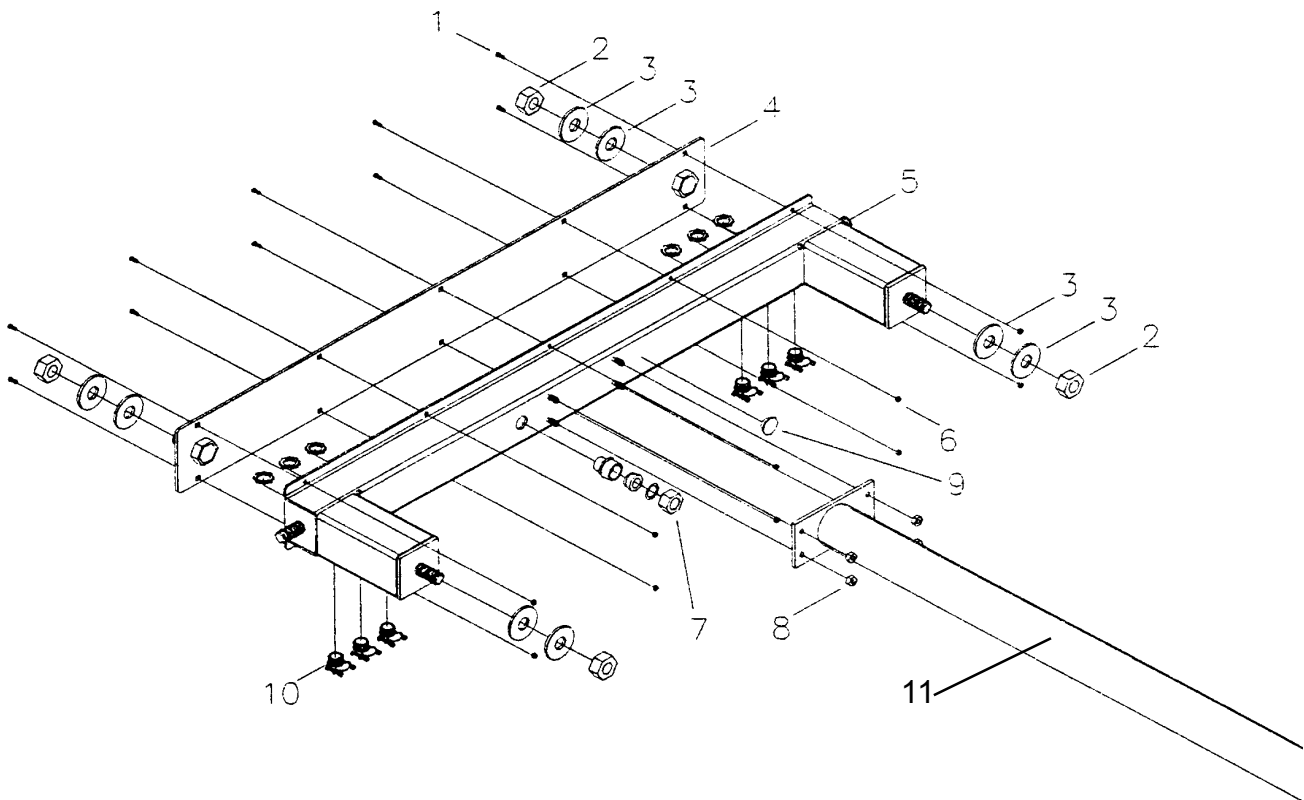
B-9A

### 4-LIGHT REMOVABLE LIGHT BAR ASSEMBLY



B-10A

### 6-LIGHT REMOVABLE LIGHT BAR ASSEMBLY



# 4-LIGHT REMOVABLE LIGHT BAR ASSEMBLY

B-9B

NO	REQ'D	PART NO	DESCRIPTION
		352042*	LIGHT BAR ASSEMBLY, 4-LIGHT
1	10	**	1/4 - 20 NC X 1/2 CARRIAGE BOLT
2	4	**	3/4 - 10 NC NYLON INSERT NUT
3	8	**	3/4 FLAT WASHER
4	1	620537*	LIGHT BAR COVER PLATE
5	1	650319*	LIGHT BAR FRAME ONLY
6	10	**	1/4 - 20 NC KEPS NUT
7	1	310033	CORD GRIP NUT - METAL
7A	1	022039	1/2" BUSHING
8	4	**	5/16 - 18 NC KEPS NUT
9	1	711029	LOCKING HOLE PLUG
10	4	310414	LAMP CONNECTOR, FEMALE
11	1	325017*	2 5/8 ROUND TOWER SECTION (Manual removeable light bar)
	1	352050*	2 5/8 ROUND TOWER SECTION (Electric removeable light bar)

# 6-LIGHT REMOVABLE LIGHT BAR ASSEMBLY

B-10B

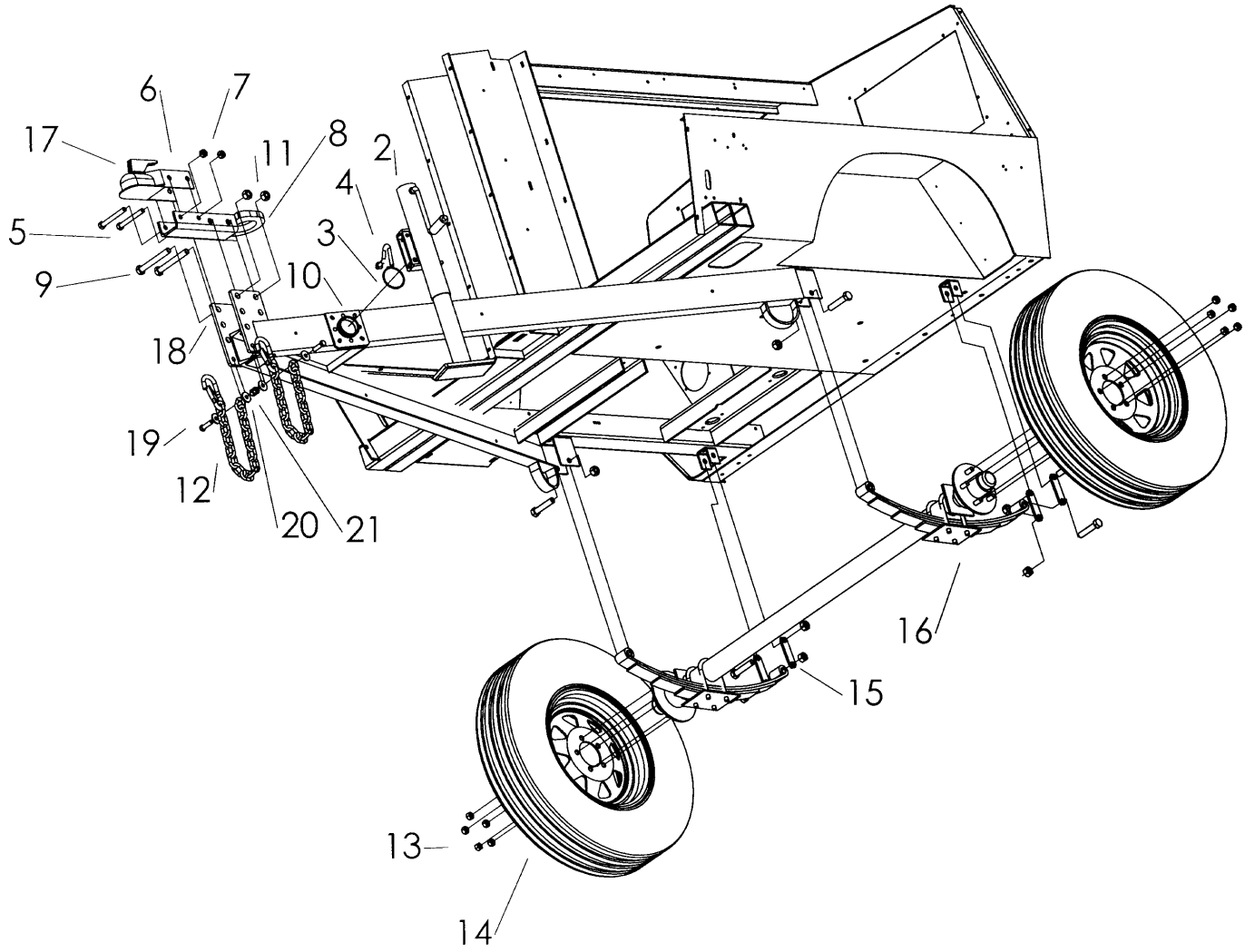
NO	REQ'D	PART NO	DESCRIPTION
		352045*	LIGHT BAR ASSEMBLY, 6-LIGHT
1	10	**	1/4 - 20 NC X 1/2 CARRIAGE BOLT
2	4	**	3/4 - 10 NC NYLON INSERT NUT
3	8	**	3/4 FLAT WASHER
4	1	352031*	LIGHT BAR COVER PLATE
5	1	352030*	LIGHT BAR FRAME ONLY
6	10	**	1/4 - 20 NC KEPS NUT
7	1	310033	CORD GRIP NUT - METAL
7A	1	022039	1/2" BUSHING
8	4	**	5/16 - 18 NC KEPS NUT
9	1	711029	LOCKING HOLE PLUG
10	6	310414	LAMP CONNECTOR, FEMALE
11	1	325017*	2 5/8 ROUND TOWER SECTION (Manual removeable light bar)
	1	352050*	2 5/8 ROUND TOWER SECTION (Electric removeable light bar)

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

# AXLE ASSEMBLY, HITCH ASSEMBLY AND TONGUE JACK



# AXLE ASSEMBLY, HITCH ASSEMBLY AND TONGUE JACK

C-1B

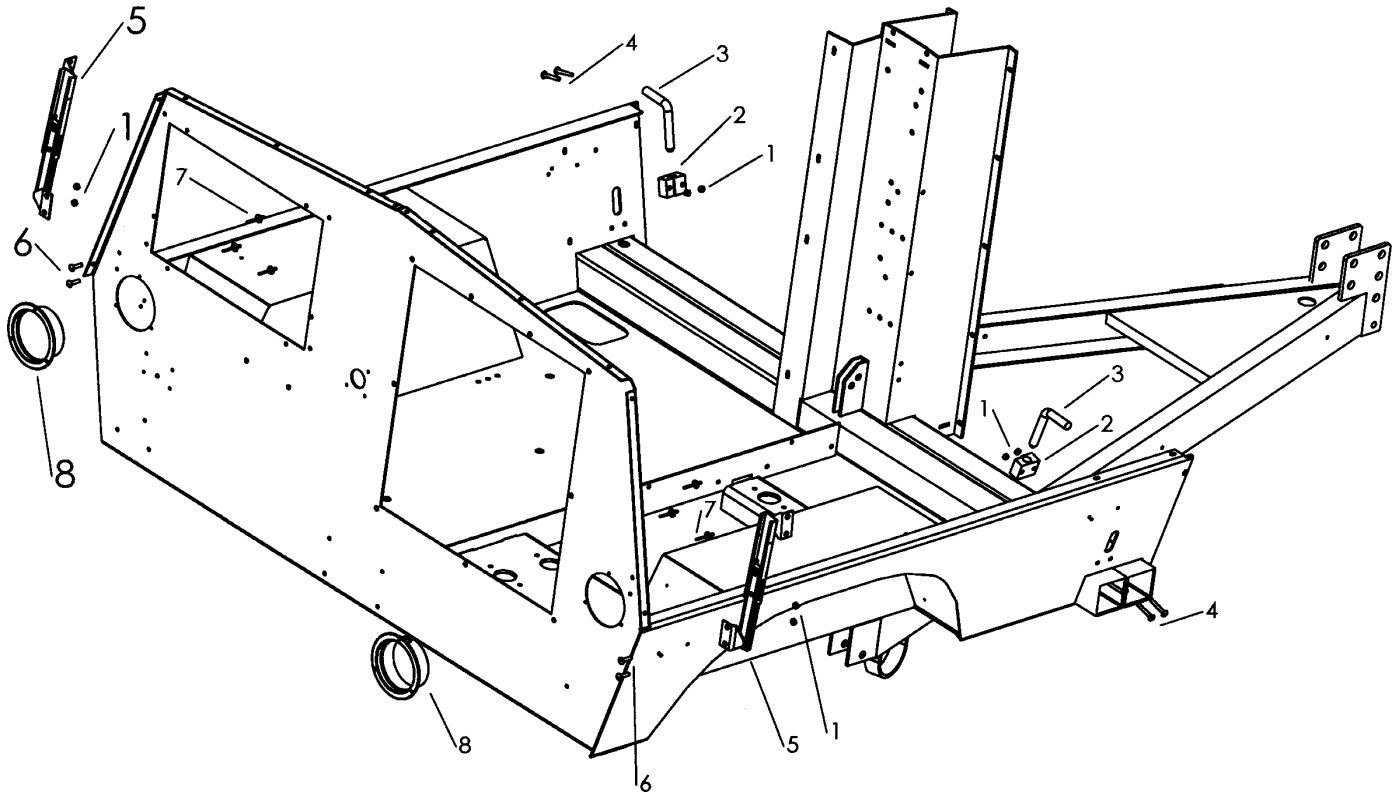
NO	REQ'D	PART NO	DESCRIPTION
2	1	650235	SIDE CRANK JACK, SNAP RING (SHOWN)
	1	680558	SIDE CRANK JACK, TUBE MOUNT (NOT SHOWN)
	1	680879	TOP CRANK JACK, TUBE MOUNT (NOT SHOWN)
	1	330013	JACK LOCK PIN (USE WITH 680558 and 680879)
3	1	330014	JACK SNAP RING 2 5/16 XT (USE WITH 650235)
4		330012A	JACK HOLE PIN KIT
5	2	046220	1/2 - 13 NC X 4 GRADE 5 BOLT
6	1	712021	BALL COUPLER ONLY
7	2	044062	1/2 - 13 NC TOPLOCK NUT
8	1	712540*	PINTLE HITCH WELDMENT
9	2	046250	5/8 - 11 NC X 5 GRADE 5 BOLT
10		330009	JACK MOUNTING BRACKET W/SNAP RING
11	2	044061	5/8 - 11 NC TOPLOCK NUT
12		049040	SAFETY CHAIN SET
13	10	044099	AXLE LUG NUT
14	2	680124*	WHEEL & TIRE 15" SILVER MOD
		032020	TIRE P225/75R15
		032075	TIRE VALVE STEM
15	1	032025	AXLE MOUNTING HARDWARE KIT
16	1	352021	AXLE 3000 LB. 56"/44"
17		712021	2" BALL COUPLING KIT
18		712552	HITCH PLATE, ONE EACH
19	2	046160	7/16-14NC X 1 1/2" GRADE 5 BOLT
20	4	047016	3/8 FLAT WASHER
21	2	044043	7/16-14NC NYLON LOCK NUT
NS		600770*	REVERSIBLE HITCH ASSY.
NS		330007	HUB W/RACES
NS		330005	BEARING SET
NS		330004	HUB W/RACES AND BEARING SET

LEGEND: NS= Not Shown  
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# TAILLIGHTS, DOOR PROPS AND OUTRIGGER LOCKS



# TAILLIGHTS, DOOR PROPS AND OUTRIGGER LOCKS

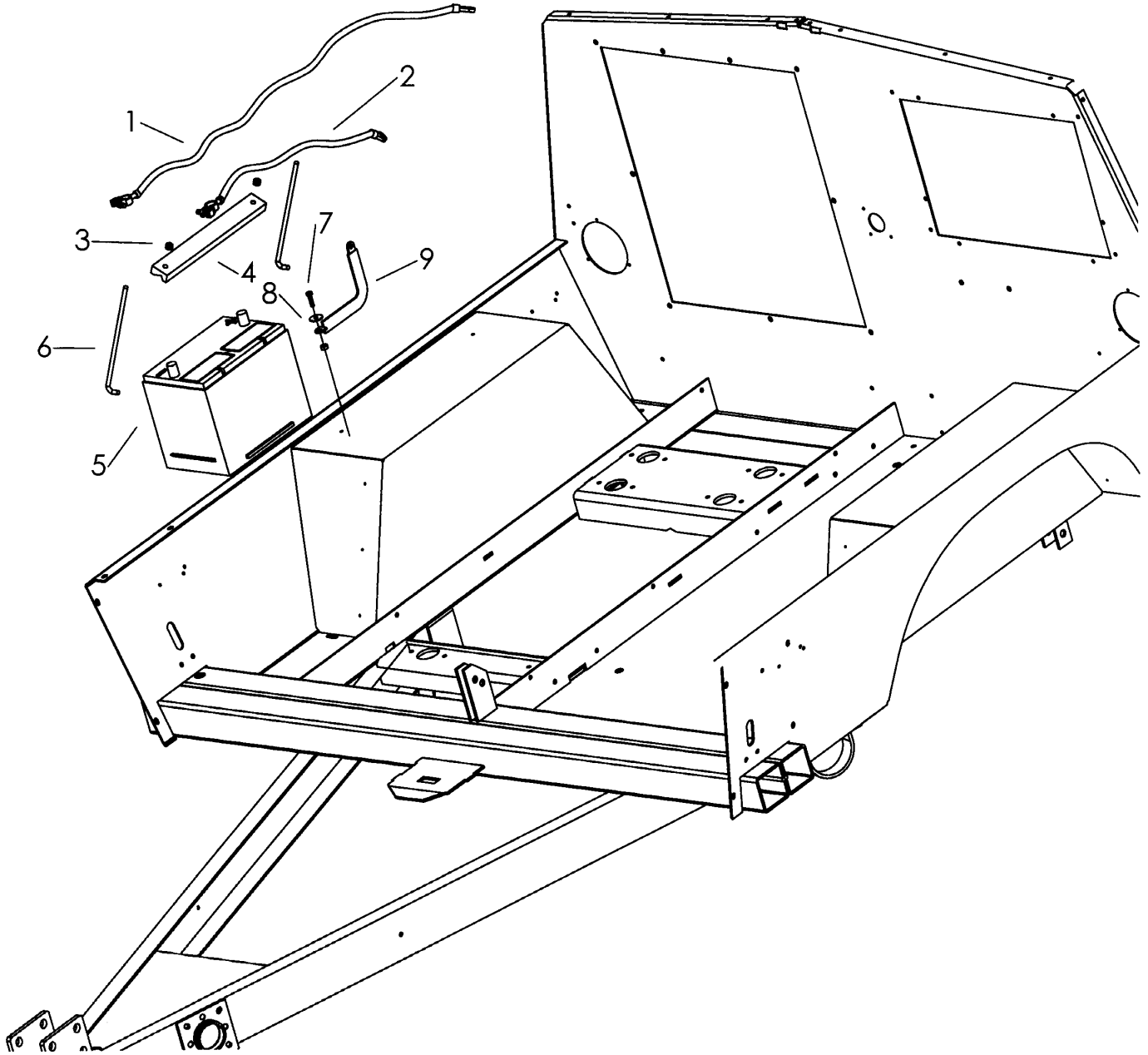
C-2B

NO	REQ'D	PART NO	DESCRIPTION
1	8	044023	1/4-20 NC NYLON INSERT NUT
2	2	330430	OUTRIGGER PIN BLOCK
3	2	330455	OUTRIGGER PIN
4	4	041053	1/4 - 20 NC X 1 3/4 SS SCREW
5	2	352057	TELESCOPIC PROP
6	4	041080	1/4 - 20 NC X 1 SS SCREW
7	6	045113	3/16 ALUMINUM RIVETS
8	2	650129	TAILLIGHT
		352037	TAILLIGHT WIRING HARNESS
		680190	TAILLIGHT ASSEMBLY

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

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# BATTERY, CABLES, AND GROUND STRAP

C-3B

NO	REQ'D	PART NO	DESCRIPTION
1	1	027010	21" BATTERY CABLE
2	1	027010	21" BATTERY CABLE
3	2	044033	5/16 - 18 NC NYLON INSERT NUT
4	1	340017	NYLON BATTERY HOLD DOWN
5	1	024002	12 VOLT BATTERY
	1	024003	12 VOLT BATTERY (ARCTIC SPL. ONLY)
6	2	433507	J-BOLT 5/16 X 11"
7	1	046015	1/4-18 NC X 1 BOLT W/ KEPS NUT
8	2	047005	1/4 FLAT WASHER
9	1	340105	GROUND STRAP

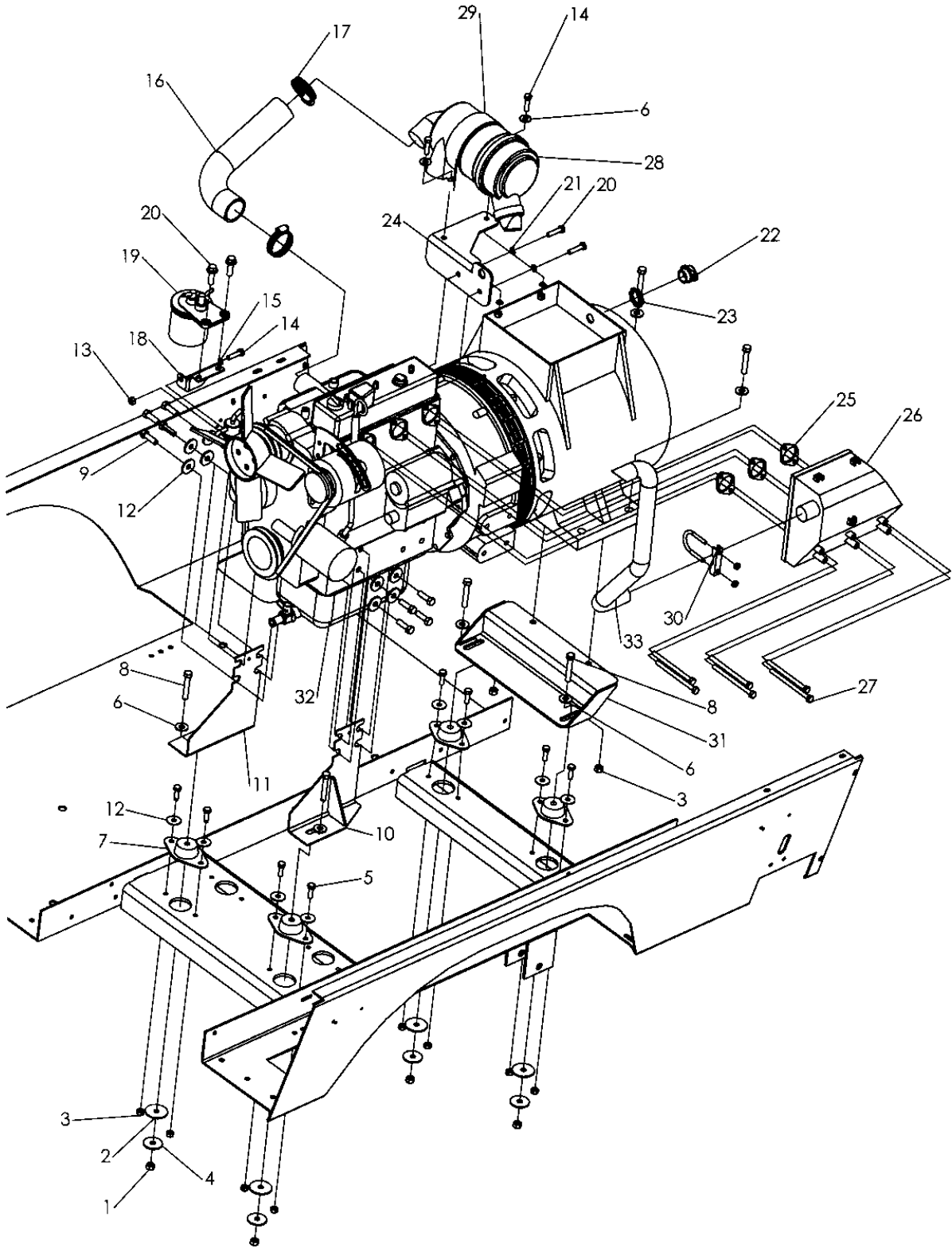
LEGEND: NS= Not Shown  
\*\* =Purchase locally

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04-Allmand Yellow  
09-Flat Black

02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red



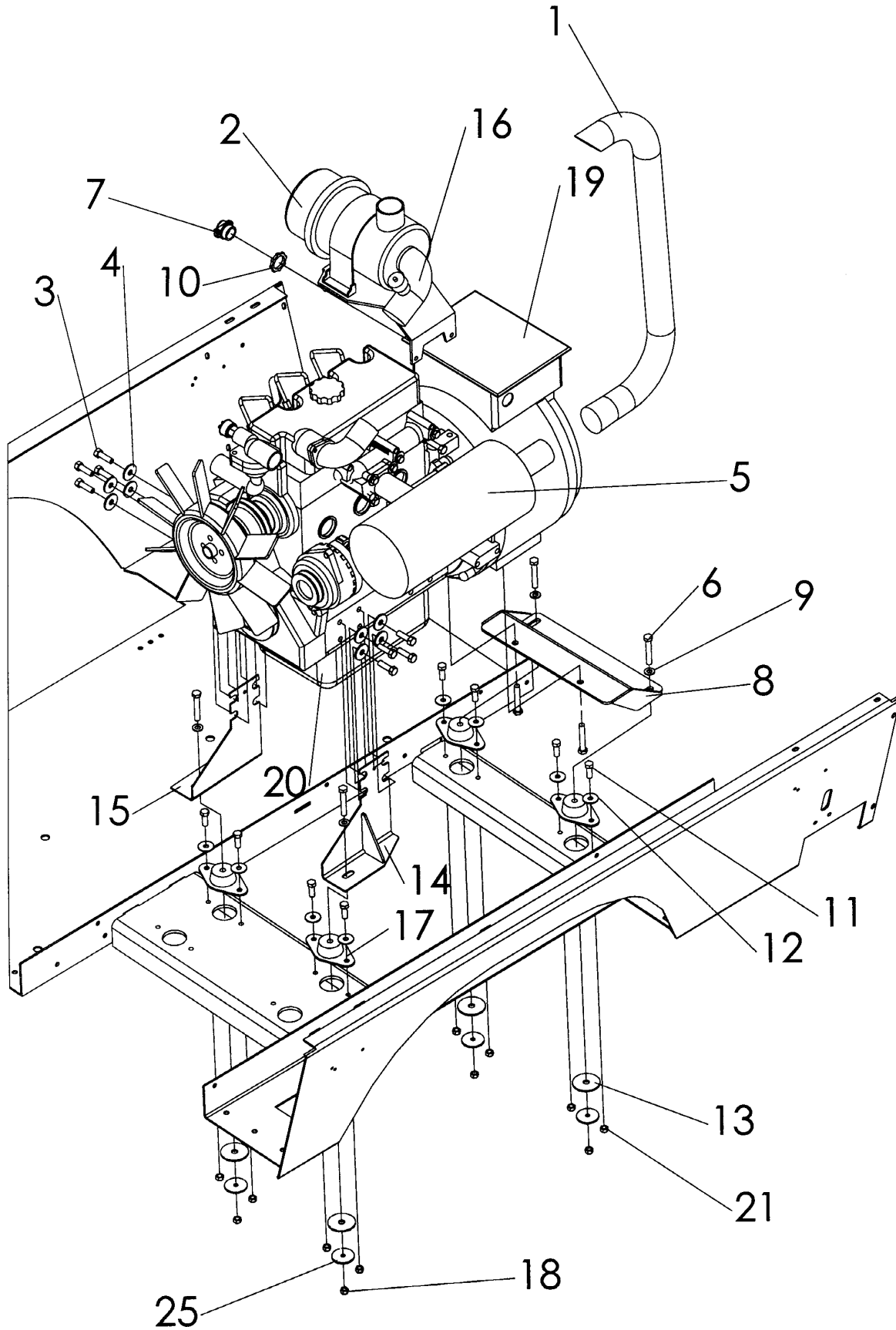
<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	4	044038	3/8 - 16 NC NYLON INSERT NUT
2	4	640565	ENGINE MOUNT WASHER
3	8	044033	5/16 - 18 NC NYLON INSERT NUT
4	4	650260	SNUBBING WASHER
5	8	046050	5/16 - 18 NC X 1 GRADE 5 BOLT
6	6	047015	3/8 FLAT WASHER
7	4	848997	RUBBER ENGINE MOUNTS
8	6	046132	3/8 - 16 NC X 2 1/4 GRADE 5 BOLT
9	9	042038	10mm X 20mm X 1.25 GRADE 8.8 BOLT
10	1	640238*	ENGINE MOUNT BRACE, RIGHT
11	1	640237*	ENGINE MOUNT BRACE, LEFT
12	12	047016	3/8 SAE FLAT WASHER
13	3	044031	5/16 - 18 NC KEPS NUT
14	3	046055	5/16 - 18 NC X 1-1/4 GRADE 5 BOLT
15	3	043060	5/16 INTERNAL TOOTH LOCK WASHER
16	1	650272	AIR INTAKE HOSE
17	2	045038	HOSE CLAMP #32
18	1	@@@	FUEL FILTER MOUNTING PLATE
19	1	920745	KUBOTA FUEL FILTER
20	4	042027	8mm X 20mm X 1.25 GRADE 8.8 BOLT
21	2	043055	5/16 SPLIT LOCK WASHER
22	1	022025	2-SCREW ROMEX CLAMP 3/4
23	1	022036	3/4" STEEL LOCK NUT
24	1	650291	AIR CLEANER MOUNT PLATE
25	3	650234	EXHAUST MANIFOLD MOUNT GASKET
26	1	352139	KUBOTA BOX MUFFLER KIT
27	6	046080	5/16 - 18 NC X 4-1/4 GRADE 5 BOLT
28	1	650262	AIR CLEANER RADIAL SEAL
29	2	650263	AIR CLEANER BAND CLAMP
30	1	313086	MUFFLER CLAMP
31	1	680241	GENERATOR MOUNT PLATE
32	1	350350	ENGINE KUBOTA V1903
		350355	ENGINE KUBOTA V2203
		350352	ENGINE KUBOTA V2003T
33	1	352140	EXHAUST PIPE, KUBOTA
34	1	350351	GENERATOR 15 KW

@@@ =See Kubota Dealer

NOTE: Exhaust pipe, muffler, and air cleaners used may differ from illustration depending on engine used.

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

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 01-White                      02-Gloss Black                      03-Gray  
 04-Allmand Yellow                      05-Orange                      06-Allmand Gold  
 09-Flat Black                      10-High temp Black                      11-Red



# ISUZU 4LE ENGINE/GENERATOR SET

C-4D

NO	REQ'D	PART NO	DESCRIPTION
1	1	680298	EXHAUST PIPE, ISUZU
2	1	@@@	AIR CLEANER
3	8	042038	10MM X 20MM X 1.25 GRADE 8.8 BOLT
4	8	047016	3/8 SAE FLAT WASHER
5	1	680427	MUFFLER, ISUZU
		650234	MUFFLER GASKET
6	6	046132	3/8 - 16 NC X 2 1/4 GRADE 5 BOLT
7	1	022025	CLAMP, 2 SCREW ROMEX 3/4"
8	1	680254	GENERATOR MOUNT PLATE, ISUZU
		680504	GENERATOR MOUNT PLATE, ISUZU/NEWAGE 3 PHASE
		680531	GENERATOR MOUNT PLATE, ISUZU/MARATHON 3 PHASE
9	6	047015	3/8 FLAT WASHER
10	1	022036	3/4" STEEL LOCK NUT
11	8	046050	5/16 - 18 NC X 1 GRADE 5 BOLT
12	8	047010	5/16 FLAT WASHER
13	4	640565	ENGINE MOUNT WASHER
14	1	680301	ENGINE MOUNT, RIGHT
15	1	680302	ENGINE MOUNT, LEFT
16	1	650272	AIR INTAKE HOSE, ISUZU
17	4	650259	RUBBER ENGINE MOUNTS
18	4	044038	3/8 - 16 NC NYLON INSERT NUT
19	1	350357	GENERATOR, MARATHON 15KW
		350356	GENERATOR, MARATHON 20KW
		350358	GENERATOR, NEWAGE 20 KW 3 PHASE
		680867	GENERATOR, MARATHON 20 KW 3 PHASE
20	1	680275	ENGINE, ISUZU 4LE
21	8	044033	5/16 - 18 NC NYLON INSERT NUT
22	4	650260	SNUBBING WASHER
NS		680331	AIR FILTER (PRIMARY)
NS		680332	AIR FILTER (SECONDARY)
NS		650221	OIL FILTER
NS		650220	FUEL FILTER

@@@ =See Isuzu Dealer

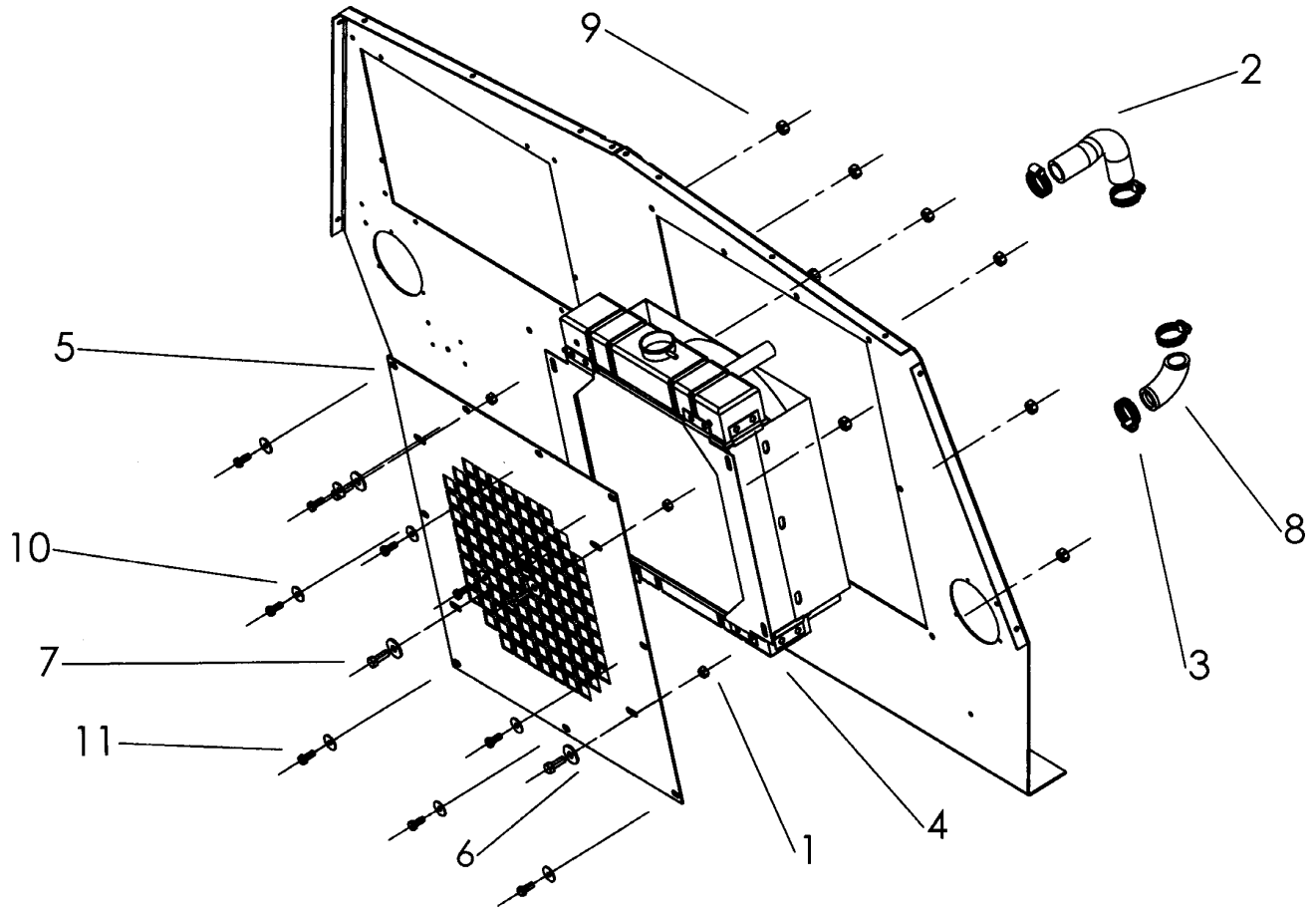
NOTE: Exhaust pipe, muffler, and air cleaners used may differ from illustration depending on engine used.

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

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# KUBOTA RADIATOR AND MOUNTING PLATE



# KUBOTA RADIATOR AND MOUNTING PLATE

C-5B

NO	REQ'D	PART NO	DESCRIPTION
1	4	044036	3/8 - 16 NC KEPS NUT
2	1	@@@	UPPER RADIATOR HOSE
3	4	045035	#20 HOSE CLAMP
4	1	650107	KUBOTA RADIATOR
5	1	680122*	KUBOTA/PERKINS RADIATOR MOUNT PLATE
6	4	047015	3/8 FLAT WASHER
7	4	046110	3/8 - 16 NC X 1 GRADE 5 BOLT
8	1	@@@	LOWER RADIATOR HOSE
9	9	044031	5/16 - 18 NC KEPS NUT
10	9	047005	1/4 FLAT WASHER
11	9	046045	5/16 - 18 NC X 3/4 GRADE 5 BOLT

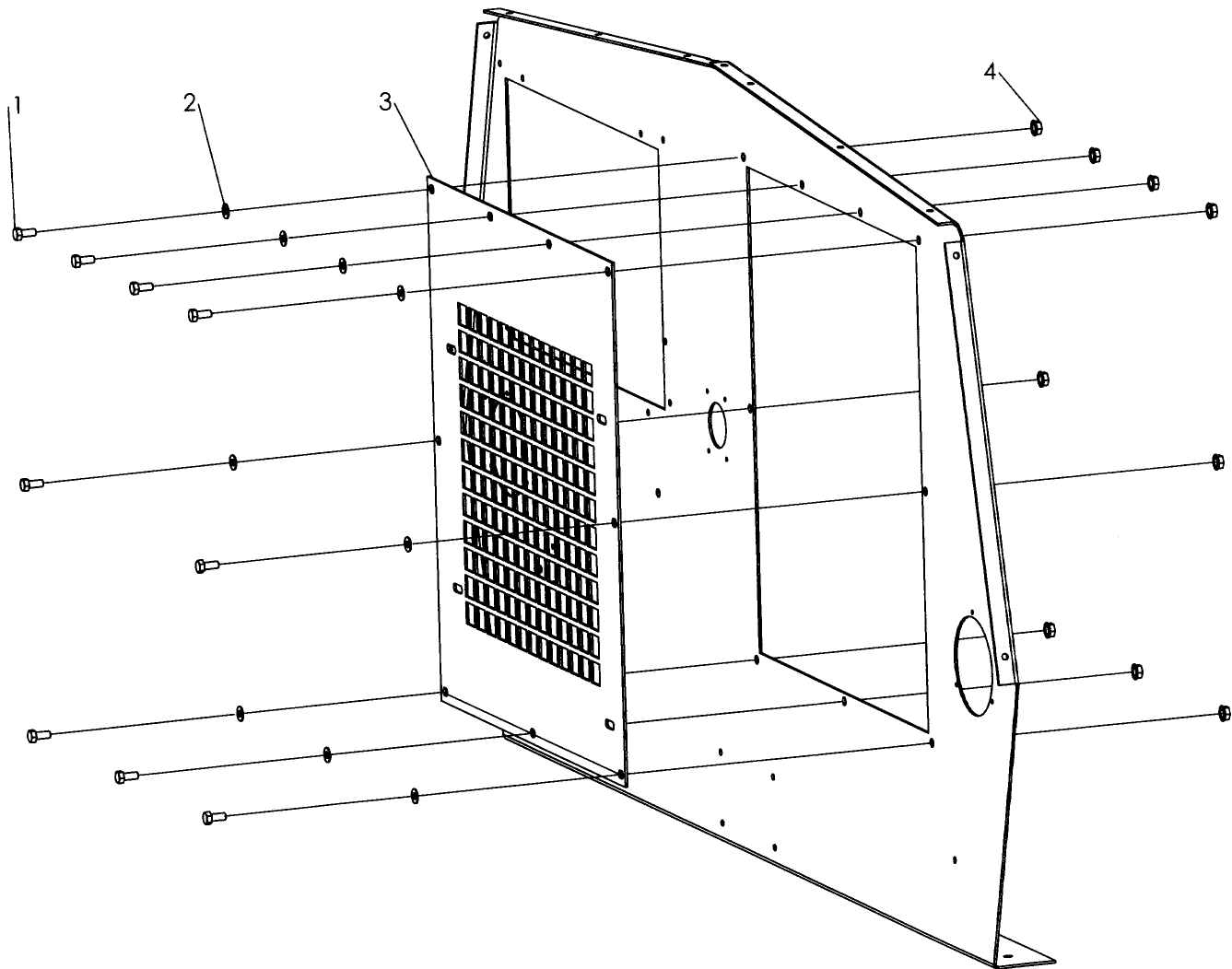
@@@ = Contact local Kubota Dealer

LEGEND: NS= Not Shown  
\*\* =Purchase locally

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05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red





# ISUZU RADIATOR MOUNTING PLATE

C-5D

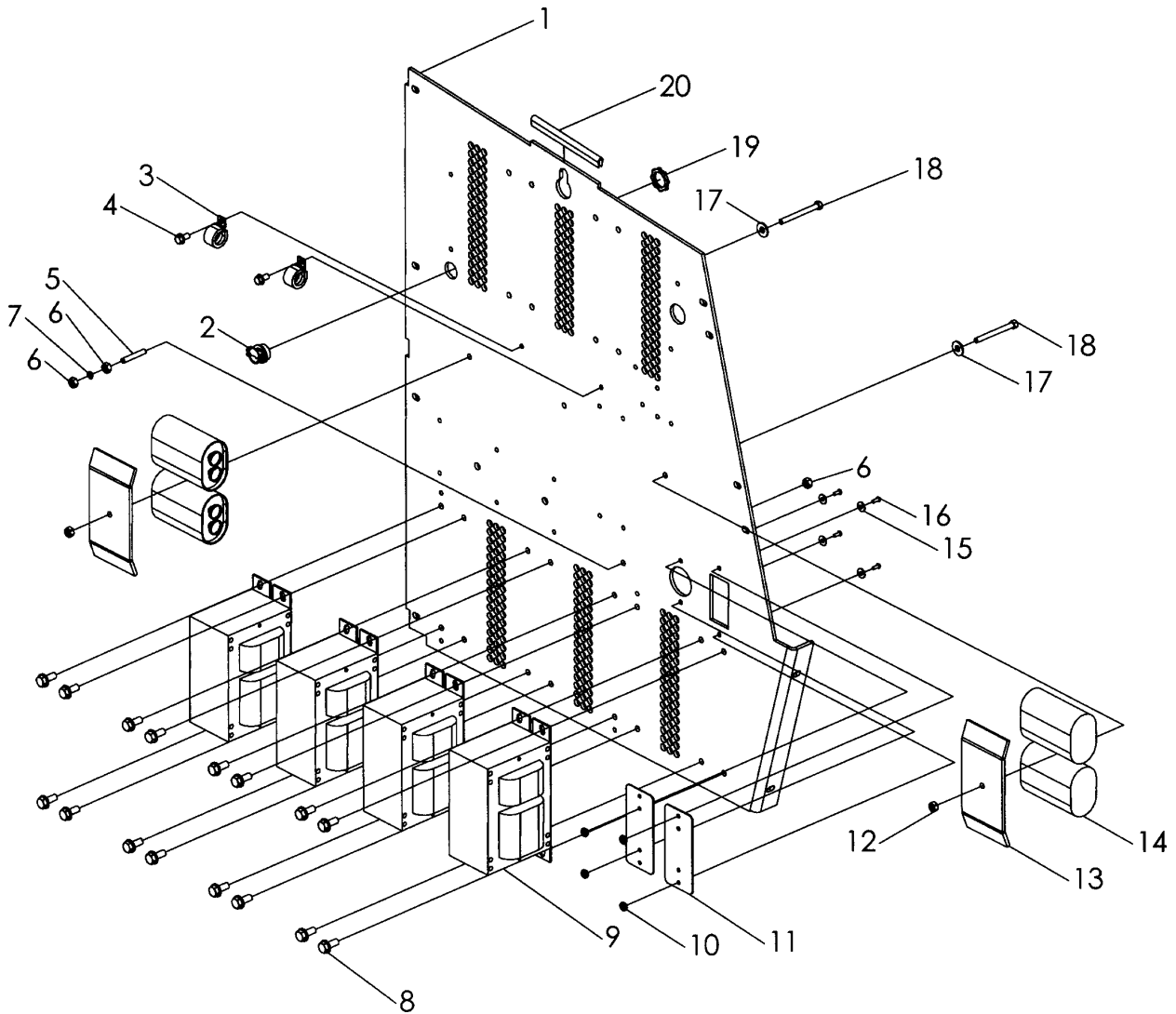
NO	REQ'D	PART NO	DESCRIPTION
1	9	046045	5/16 - 18 NC X 3/4 GRADE 5 BOLT
2	9	047005	1/4 FLAT WASHER
3	9	680294*	ISUZU RADIATOR MOUNT PLATE
4	9	044031	5/16 - 18 NC KEPS NUT

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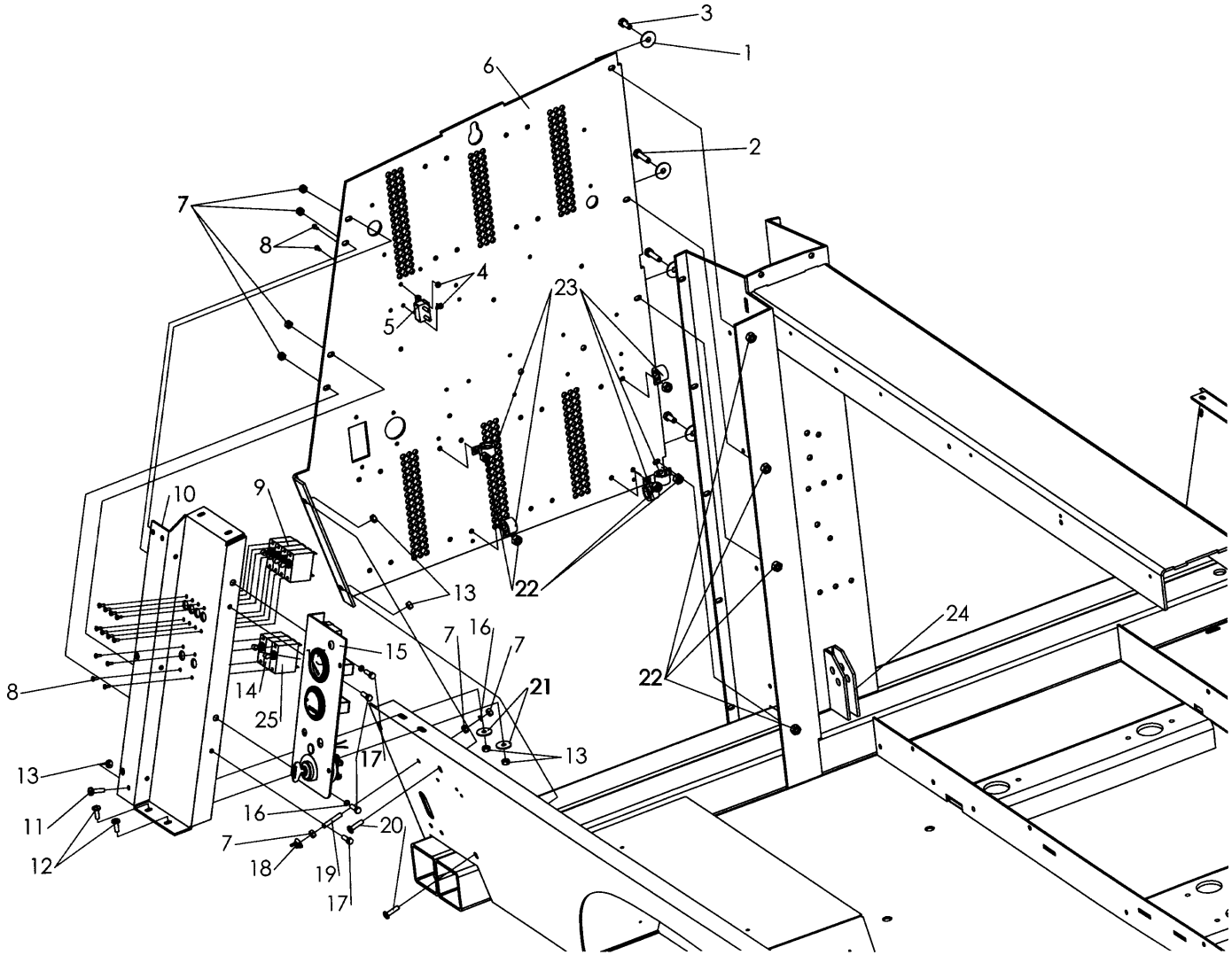
# 4-LIGHT BALLAST ASSEMBLY

C-6B

NO	REQ'D	PART NO	DESCRIPTION
		310118	HPS TRANSFORMER, CAPACITOR, AND STARTER
		310119	HPS CAPACITOR AND STARTER ONLY
1	1	680119*	BALLAST PANEL, ONLY
2	1	022025	2-SCREW ROMEX CLAMP, 3/4
3	2	**	7/8 CUSHION CLAMP
4	2	**	1/4 - 20 NC SELF TAPPING SCREW
5	1	**	1/4 - 20 NC X 1 1/2 STUD BOLT
6	3	044021	1/4 - 20 NC KEPS NUT
7	1	043050	1/4 INTERNAL TOOTH LOCK WASHER
8	16	041075	5/16 - 18 NC SELF-TAPPING SCREW
9	4	310124	TRANSFORMER ONLY
10	4	044004	#6 - 32 NC KEPS NUT
NS	1	330490	RECEPTACLE 240V. 15A (6KW ONLY)
11	4	650367	OUTLET COVER
12	2	044024	1/4 - 20 NC NYLON INSERT NUT
13	2	610570-03	DUAL CAPACITOR MOUNTING CLAMP
14	4	310115	CAPACITOR ONLY, 24 UF
NS		310391	CAPACITOR ONLY, 28 UF
15	4	047009	#8 FLAT WASHER SS
16	4	041017	#6-32 NC X 3/8 ROUND HEAD SCREW
17	2	047005	1/4 FLAT WASHER
NS	1	711029	7/8 HOLE PLUG (MANUAL WINCH)
18	1	046036	1/4-20 X 2-1/2 GRADE 5 BOLT
19	1	022036	STEEL LOCK NUT, 3/4
20	1	030054	RUBBER EDGE TRIM 3/16 X 5" LONG

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# 4-LIGHT AC GAUGE PANEL ASSEMBLY

C-7B

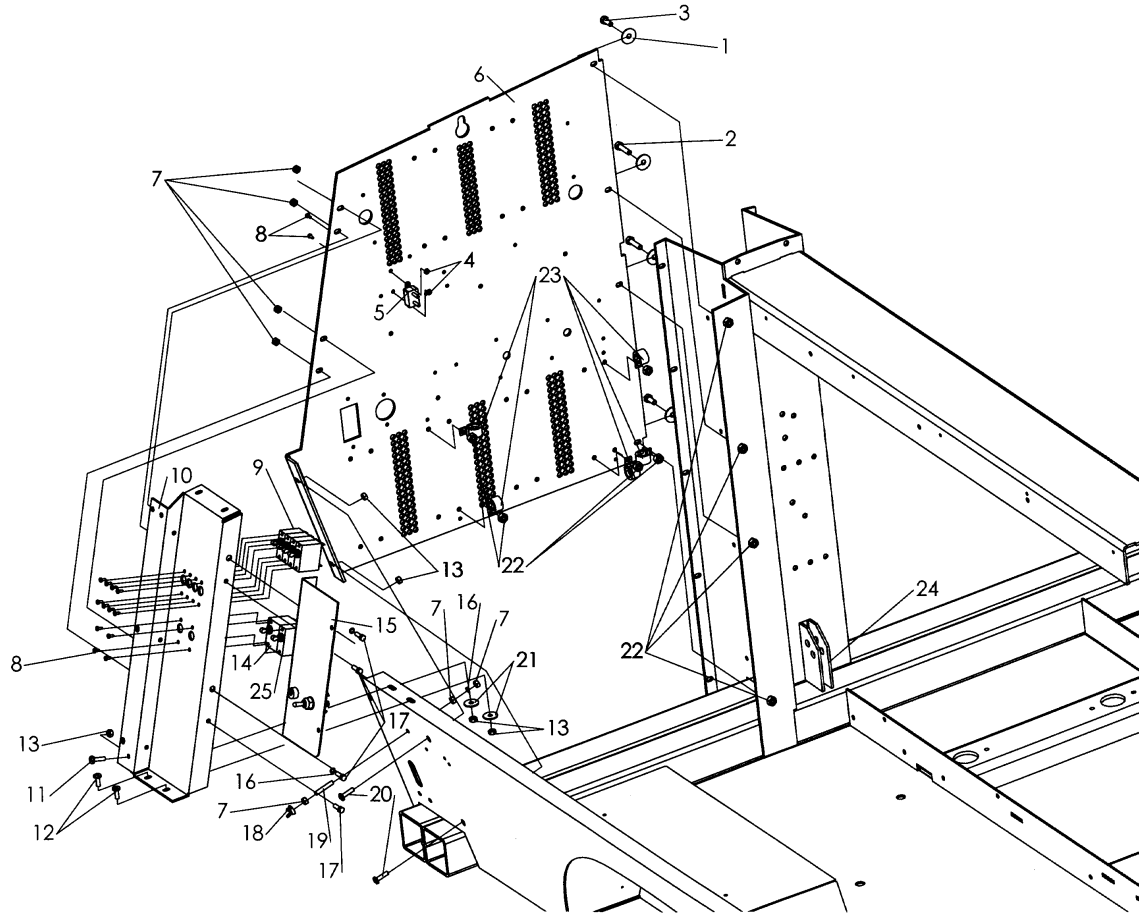
NO	REQ'D	PART NO	DESCRIPTION
1	4	047010	5/16 FLAT WASHER
2	2	046055	5/16 - 18 NC X 1 1/4 GRADE 5 BOLT
3	2	046045	5/16 - 18 NC X 3/4 GRADE 5 BOLT
4	2	044004	#6 - 32 NC KEPS NUT
5	1	650139	30 AMP CIRCUIT BREAKER, KUBOTA ONLY
6	1	680119*	BALLAST PANEL, ONLY
7	7	043021	1/4-20 NC KEPS NUT
8	14	041017	#6-32 NC X 3/8 ROUND HEAD SCREW
9	4	330458	CIRCUIT BREAKER SWITCH, 15 AMP SP
10	1	680118*	LEFT QUARTER PANEL 4-LIGHT
11	1	041250	1/4 - 20 NC X 1/2 ROUND HEAD NYLON SCREW
12	2	041050	1/4 - 20 NC X 3/4 SCREW
13	3	044023	1/4 - 20 NC NYLON INSERT NUT
14	1	330459	CIRCUIT BREAKER SWITCH , 15 AMP DP (6KW ONLY)
	1	330453	CARLING SWITCH 20 AMP SP (8KW ONLY)
15	1	680123*	KUBOTA DC GAUGE PANEL
16	3	043050	1/4 INTERNAL TOOTH LOCK WASHER
17	4	046015	1/4 - 20 NC X 1 GRADE 5 BOLT
18	1	330494	1/4 - 20 NC WING NUT
19	1	**	1/4 - 20 NC X 1 1/2 STUD
20	2	041080	1/4 - 20 NC X 1 SCREW
21	2	047008	1/4 STAINLESS STEEL FLAT WASHER
22	9	044031	5/16 - 18 NC KEPS NUT
23	5	022024	3/4" CUSHION CLAMP WITH 3/8 HOLE
24	1	352000	PULLEY BRACKET (NOTE: USE LOWER HOLE FOR MANUAL WINCH AND UPPER HOLE FOR ELECTRIC WINCH)
25	1	330458	CARLING SWITCH, 15 AMP DP (6KW ONLY)
	1	330456	CARLING SWITCH, 30AMP DP (8KW ONLY)

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

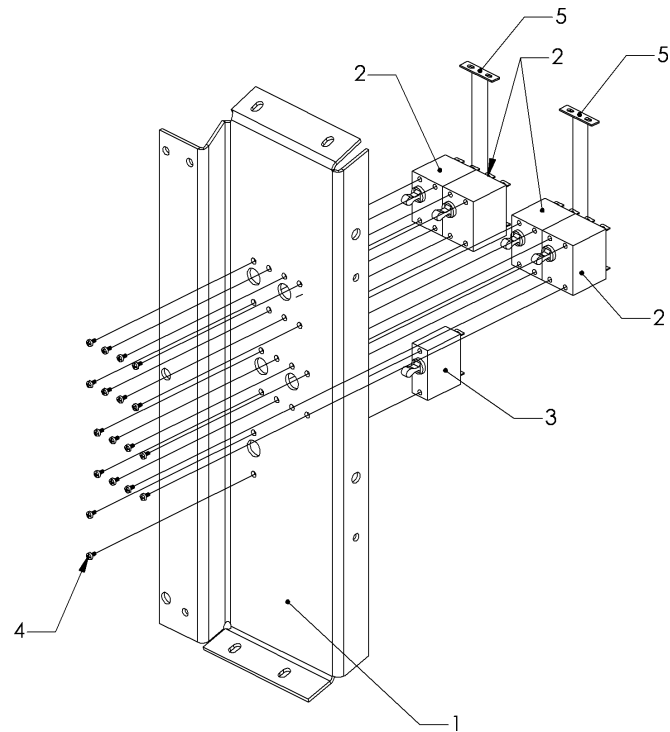
\* Use these codes to designate color needed:

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04-Allmand Yellow	05-Orange	06-Allmand Gold
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# ISUZU 4-LIGHT AC GAUGE PANEL ASSEMBLY



# ISUZU 4-LIGHT AC GAUGE PANEL ASSEMBLY (3 PHASE)



# ISUZU 4-LIGHT AC GAUGE PANEL ASSEMBLY

C-7D

NO	REQ'D	PART NO	DESCRIPTION
1	4	047010	5/16 FLAT WASHER
2	2	046055	5/16 - 18 NC X 1 1/4 GRADE 5 BOLT
3	2	046045	5/16 - 18 NC X 3/4 GRADE 5 BOLT
4	2	044004	#6 - 32 NC KEPS NUT
5	1	650139	30 AMP CIRCUIT BREAKER, KUBOTA ONLY
6	1	680119*	BALLAST PANEL, ONLY
7	7	043021	1/4-20 NC KEPS NUT
8	14	041017	#6-32 NC X 3/8 ROUND HEAD SCREW
9	4	330458	CIRCUIT BREAKER SWITCH, 15 AMP SP
10	1	352177*	LEFT QUARTER PANEL 4-LIGHT
11	1	041250	1/4 - 20 NC X 1/2 ROUND HEAD NYLON SCREW
12	2	041050	1/4 - 20 NC X 3/4 SCREW
13	3	044023	1/4 - 20 NC NYLON INSERT NUT
14	1	330459	CIRCUIT BREAKER SWITCH , 15 AMP DP (6KW ONLY)
	1	330453	CARLING SWITCH 20 AMP SP (8KW ONLY)
15	1	680365*	ISUZU DC GAUGE PANEL
16	3	043050	1/4 INTERNAL TOOTH LOCK WASHER
17	4	046015	1/4 - 20 NC X 1 GRADE 5 BOLT
18	1	330494	1/4 - 20 NC WING NUT
19	1	**	1/4 - 20 NC X 1 1/2 STUD
20	2	041080	1/4 - 20 NC X 1 SCREW
21	2	047008	1/4 STAINLESS STEEL FLAT WASHER
22	9	044031	5/16 - 18 NC KEPS NUT
23	5	022024	3/4" CUSHION CLAMP WITH 3/8 HOLE
24	1	352000	PULLEY BRACKET (NOTE: USE LOWER HOLE FOR MANUAL WINCH AND UPPER HOLE FOR ELECTRIC WINCH)
25	1	330458	CARLING SWITCH, 15 AMP DP (6KW ONLY)
	1	330456	CARLING SWITCH, 30AMP DP (8KW ONLY)

# ISUZU 4-LIGHT AC GAUGE PANEL ASSEMBLY (3 PHASE)

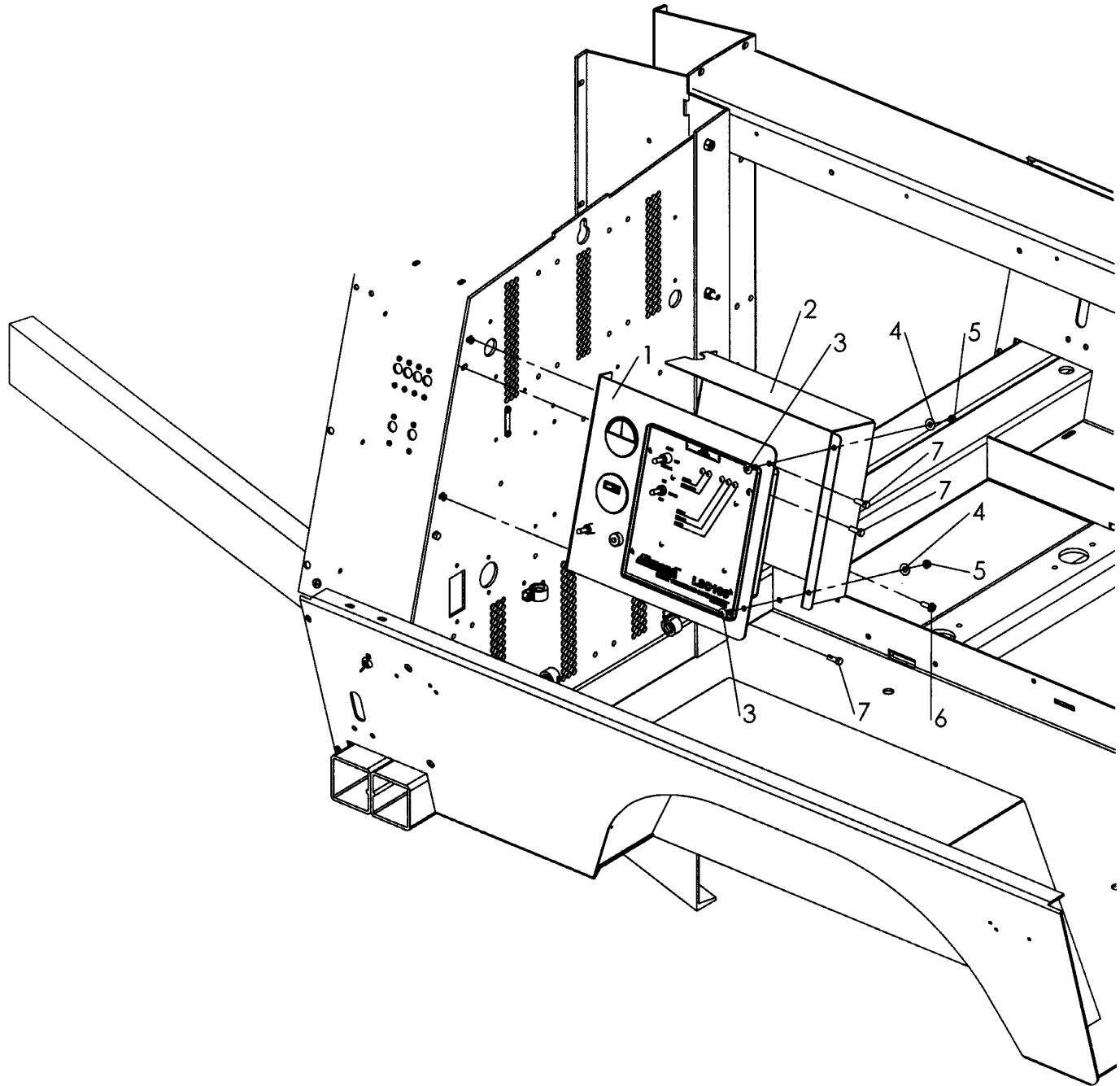
C-7D2

NO	REQ'D	PART NO	DESCRIPTION
1	1	352177	LEFT FRONT QUARTER PANEL
2	4	330459	15 AMP DPST CIRCUIT BREAKER
3	1	330458	15 AMP SPST CIRCUIT BREAKER
4	18	041018	#6 - 32 X 1/4" PHILLIPS HEAD MACHINE SCREW
5	2	620560	BUSS BAR

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

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 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red

# 4-LIGHT AC GAUGE PANEL AND LSC 100 LIGHT SEQUENCE COMMANDER CONTROLLER PANEL ASSEMBLY





**4-LIGHT AC GAUGE PANEL AND LSC 100** **C-7F**  
**LIGHT SEQUENCE COMMANDER CONTROLLER PANEL ASSEMBLY**

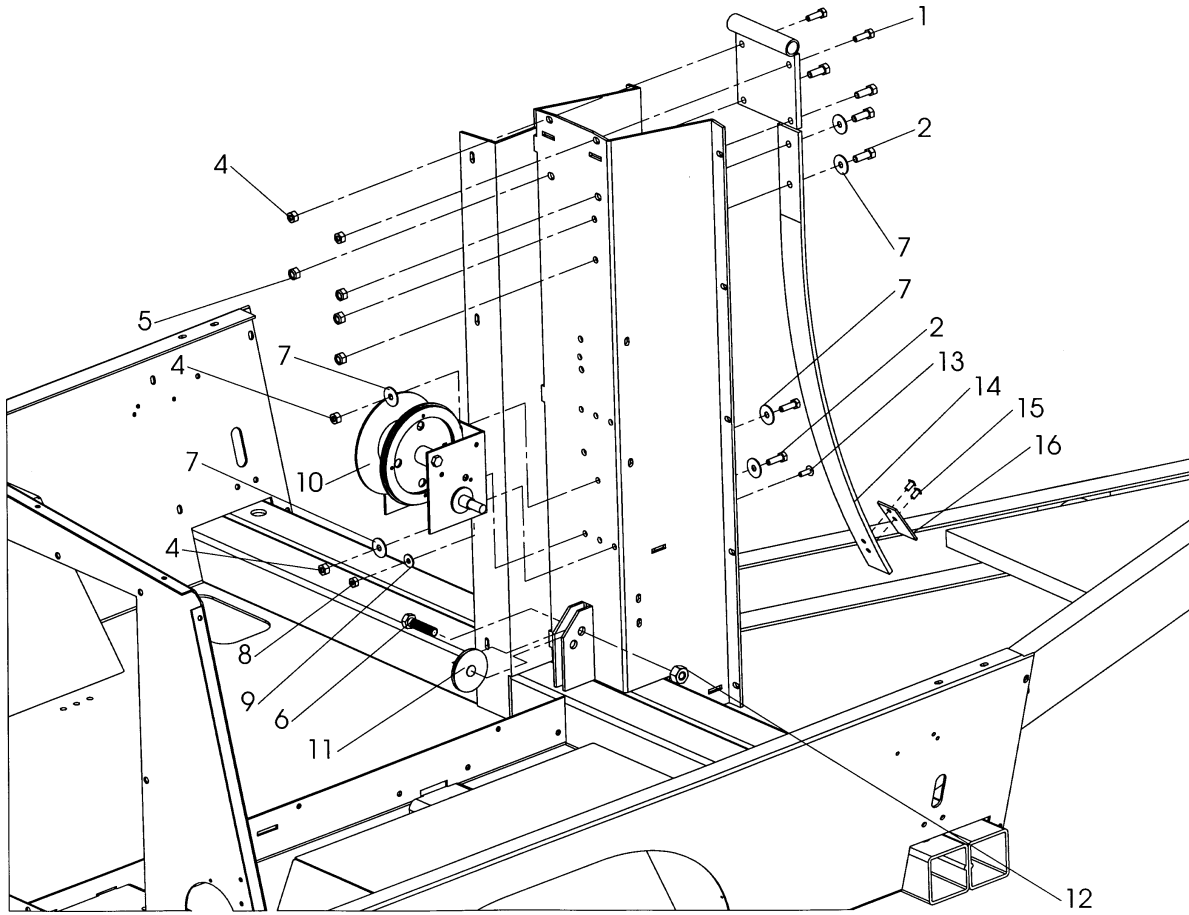
<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	1	680391	LSC 100 CONTROL PANEL ASSEMBLY (STANDARD)
		680392	PANEL FOR ELECTRIC OR HYDRAULIC TOWERS (OPTIONAL)
2	1	650715	LSC 100 COVER BACK
3	2	041050	1/4 - 20 NC X 3/4 ROUND HEAD SCREW
4	2	047005	1/4" FLAT WASHER
5	2	044021	1/4" KEPS NUT
6	1	041070	1/4 - 20 NC X 3/4 MACHINE SCREW
7	3	046010	1/4 - 20 NC X 3/4 HEX BOLT

LEGEND:      NS= Not Shown  
                  \*\* =Purchase locally

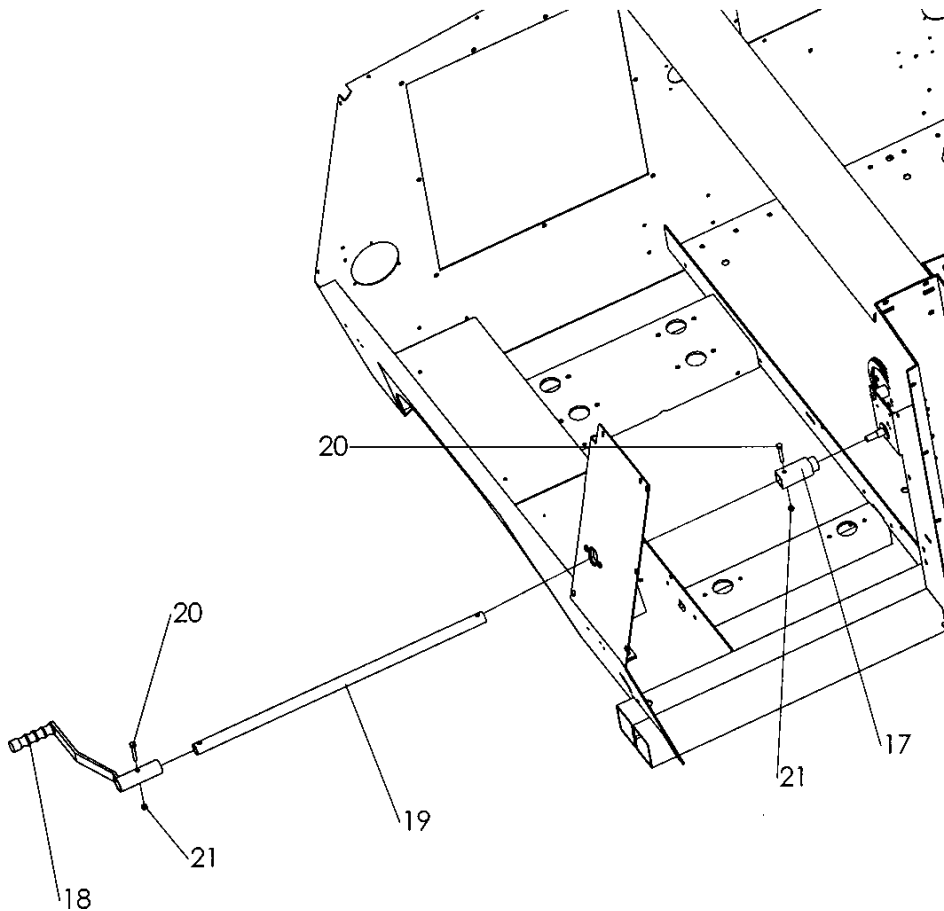
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# MANUAL WINCH AND TOWER SUPPORT ASSEMBLY



## C-8A2



<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	4	046050	5/16 - 18 NC X 1 GRADE 5 BOLT
2	4	046110	3/8 - 16 NC X 1 GRADE 5 BOLT
3	1	680111*	TOWER PIVOT WELDMENT
4	4	044031	5/16 - 18 NC KEPS NUT
5	4	044036	3/8 - 16 NC KEPS NUT
6	1	046200	1/2 - 13 NC X 2 1/4 GRADE 5 BOLT
7	6	047010	5/16 FLAT WASHER
8	4	044021	1/4 - 20 NC KEPS NUT
9	1	047005	1/4 FLAT WASHER
10	1	352482	WINCH, PLATED 2500 LBS
11	1	320112	2 1/2 PULLEY W/BUSHING
12	1	044048	1/2 - 13 NC NYLON INSERT NUT
13	1	041050	1/4 - 20 NC X 3/4 SS TRUSS HEAD BOLT
14	1	630555*	TOWER KICK OUT SPRING
15	2	045118	1/4" RIVET
16	1	650621	KICKOUT SPRING PAD
NS	1	352022	ONE PIECE WINCH HANDLE (BEFORE 2/2004)

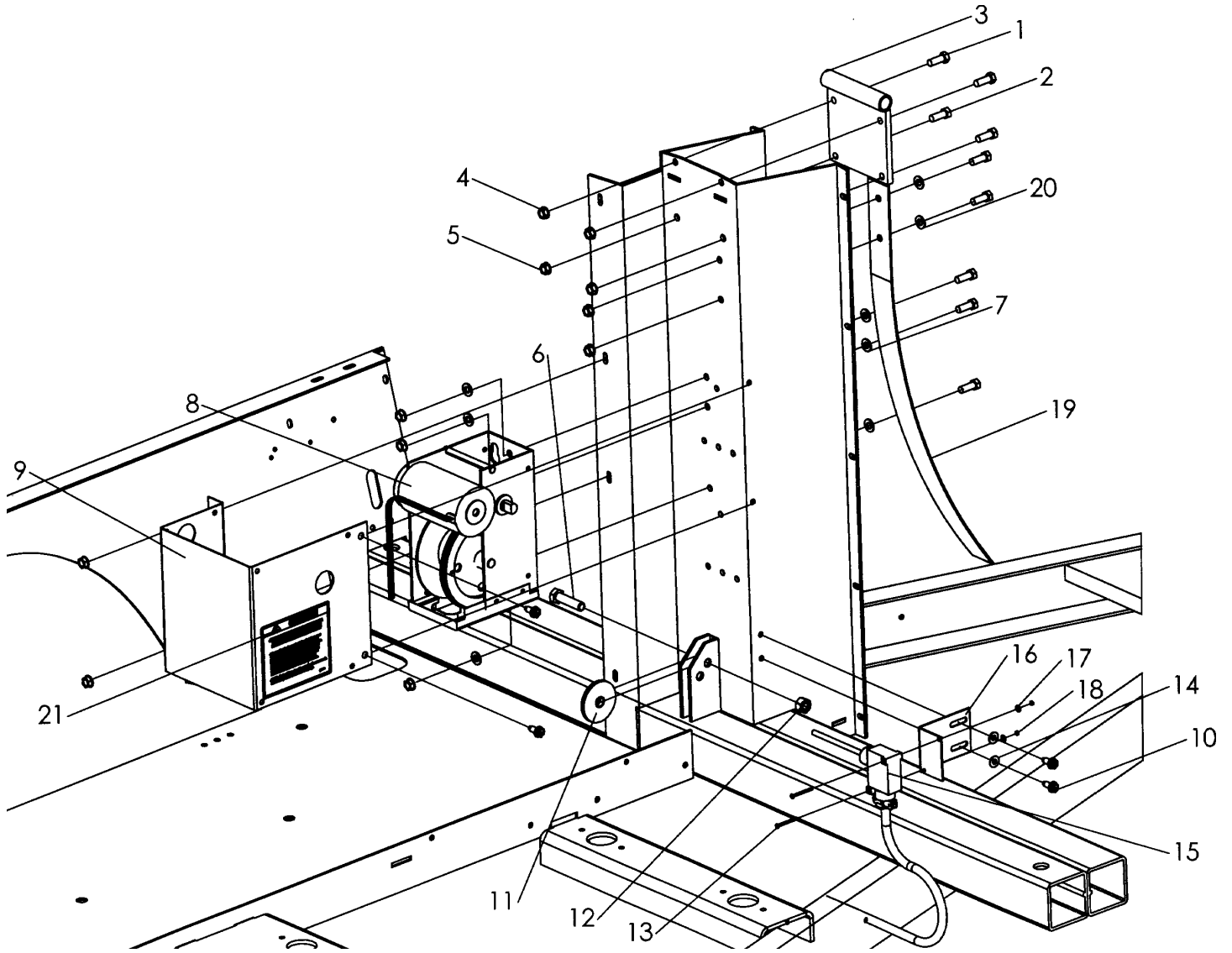
**C-8B2**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
	1		THREE PIECE WINCH HANDLE ASSEMBLY (AFTER 2/2004) INCLUDES:
17	1	660144	DRIVE HUB
18	1	650470	WINCH HANDLE
19	1	680474	15/20 KW WINCH HANDLE EXTENSION TUBE
20	2	650108	14-20 NC x 1-3/4" GRADE 5 HEX BOLT
21	2	044023	1/4-20 NC NYLON INSERT NUT

LEGEND: NS= Not Shown  
\*\* =Purchase locally

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 01-White                      02-Gloss Black                      03-Gray  
 04-Allmand Yellow                      05-Orange                      06-Allmand Gold  
 09-Flat Black                      10-High temp Black                      11-Red

# ELECTRIC WINCH, SLACK LIMIT SWITCH, AND TOWER SUPPORT



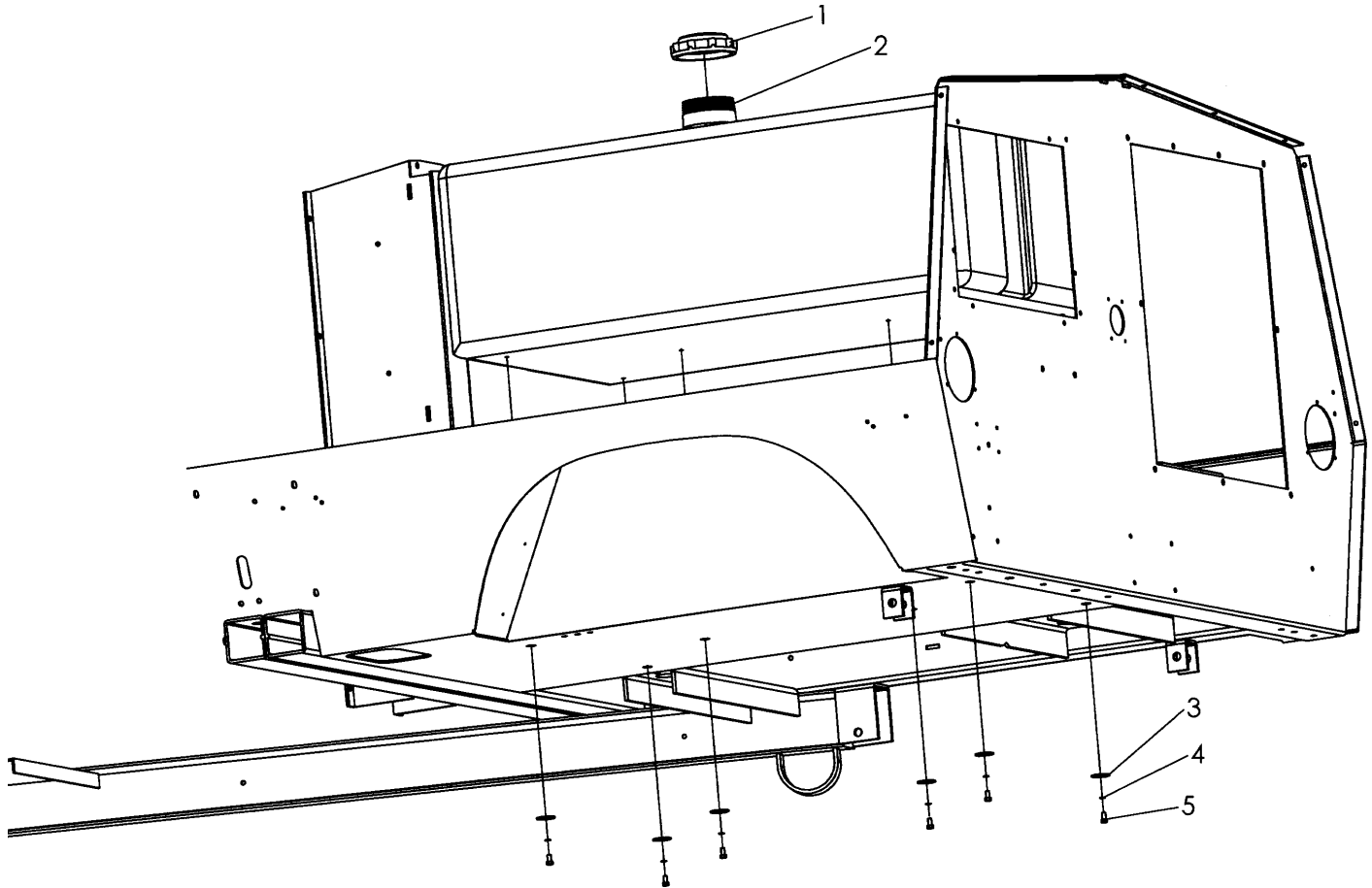
<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	2	046050	5/16 -18 NC X 1 GRADE 5 BOLT
2	7	046110	3/8 - 16 NC X 1 GRADE 5 BOLT
3	1	680111*	TOWER PIVOT WELDMENT
4	4	044031	5/16 - 18 NC KEPS NUT
5	7	044036	3/8 -16 NC KEPS NUT
6	1	046200	1/2 - 13 NC X 2 1/4 GRADE 5 BOLT
7	6	047015	3/8 FLAT WASHER
8	1	630157	STRONGARM ELECTRIC WINCH
		352478	EMERGENCY WINCH HANDLE
9	1	680142*	STRONGARM WINCH COVER
10	4	041075	5/16 - 18 NC SELF TAPPING SCREW
11	1	320112	2 1/2 PULLEY W/BUSHING
12	1	044048	1/2 - 13 NC NYLON INSERT NUT
13	2	041007	#6 - 32 NC X 1 1/2 ROUND HEAD SCREW
14	2	047005	1/4 FLAT WASHER
15	1	466093	SLACK LIMIT SWITCH
16	1	352056*	SLACK LIMIT SWITCH MOUNT BRACKET
17	2	047047	#6 FLAT WASHER
18	2	044004	#6 - 32 NC HEX NUT
19	1	352089*	TOWER KICK OUT SPRING
20	2	047010	5/16 FLAT WASHER
21	1	090232	DECAL-CORRECT WINCH OPERATION
A.S.(NS) 1		352151	OPTIONAL WORKLIGHT
A.S.(NS) 1		352146	WORKLIGHT MOUNTING BRACKET

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

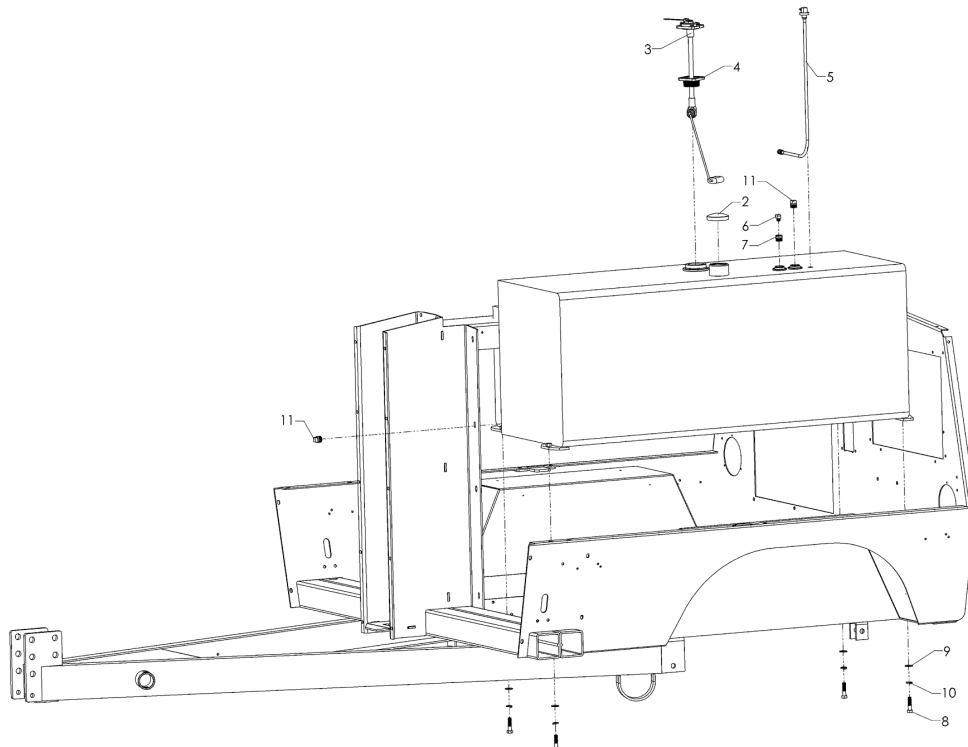
\* Use these codes to designate color needed:

- |                   |                    |                 |
|-------------------|--------------------|-----------------|
| 01-White          | 02-Gloss Black     | 03-Gray         |
| 04-Allmand Yellow | 05-Orange          | 06-Allmand Gold |
| 09-Flat Black     | 10-High temp Black | 11-Red          |

50 GALLON FUEL TANK ASSEMBLY



70 GALLON FUEL TANK ASSEMBLY



# FUEL TANK ASSEMBLY

C-9B

## 50 GALLON FUEL TANK ASSEMBLY

NO	REQ'D	PART NO	DESCRIPTION
1	1	340441	FUEL TANK FILLER CAP
2	1	340440	FUEL TANK, 50 GALLON
3	6	047007	1/4 X 1 1/4 FENDER WASHER
4	6	043050	1/4 INTERNAL TOOTH LOCK WASHER
5	6	046005	1/4 - 20 NC X 1/2 GRADE 5 BOLT

## 70 GALLON FUEL TANK ASSEMBLY

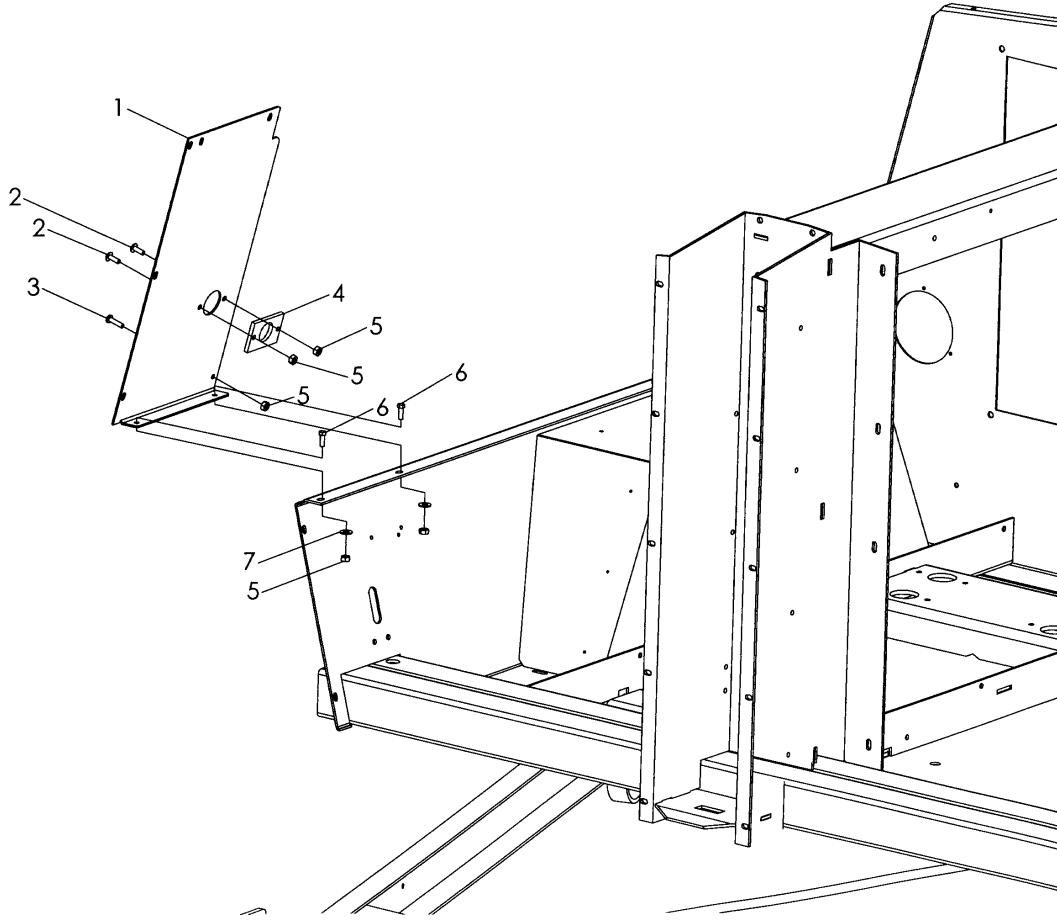
C-9B2

NO	REQ'D	PART NO	DESCRIPTION
1	1	100024	70 GALLON FUEL TANK
2	1	100380	FUEL TANK CAP 2.25" NECK BEFORE 1/08
	1	100854	FUEL TANK CAP 4.3" NECK AFTER 1/08
3	1	100025	FUEL LEVEL GAUGE/SENDER
4	1	848967	GAUGE ADAPTER
5	1	340025	FUEL SUCTION TUBE ASSEMBLY
6	1	930151	90° 1/8 NPT X 5/16" HOSE FITTING
7	1	100358	3/8 NPT X 1/8 NPT REDUCING BUSHING
8	4	046120	3/8-16 X 1 1/2" GR 5 HEX BOLT
9	4	047010	5/16" PLATED FLAT WASHER
10	4	043065	3/8" SPLIT LOCK WASHER
11	2	**	3/8" NPT PIPE PLUG

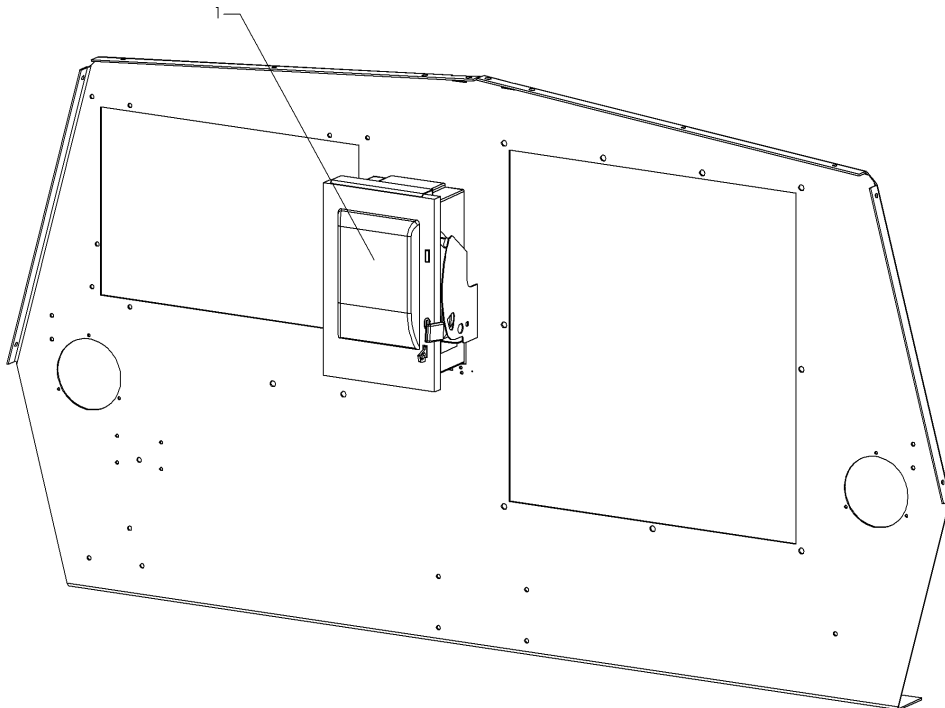
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red



240V REAR PANEL WITH DISCONNECT





# RIGHT QUARTER PANEL ASSEMBLY

C-10B

NO	REQ'D	PART NO	DESCRIPTION
1	1	680256*	RIGHT QUARTER PANEL
		680512*	RIGHT QUARTER PANEL (After Sept. 2005)
2	2	041050	1/4 - 20 NC X 3/4 SCREW
3	1	041250	1/4 - 20 NC X 1 ROUND HEAD NYLON SCREW
4	1	630547	WINCH HANDLE NYLON BLOCK
5	5	044023	1/4 -20 NC NYLON INSERT NUT
6	2	041250	1/4 - 20 NC X 3/4 GRADE 5 BOLT
7	2	047008	1/4 STAINLESS STEEL FLAT WASHER

# 240V REAR PANEL WITH DISCONNECT

C-10D

NO	REQ'D	PART NO	DESCRIPTION
1	1	352398	SAFETY SWITCH

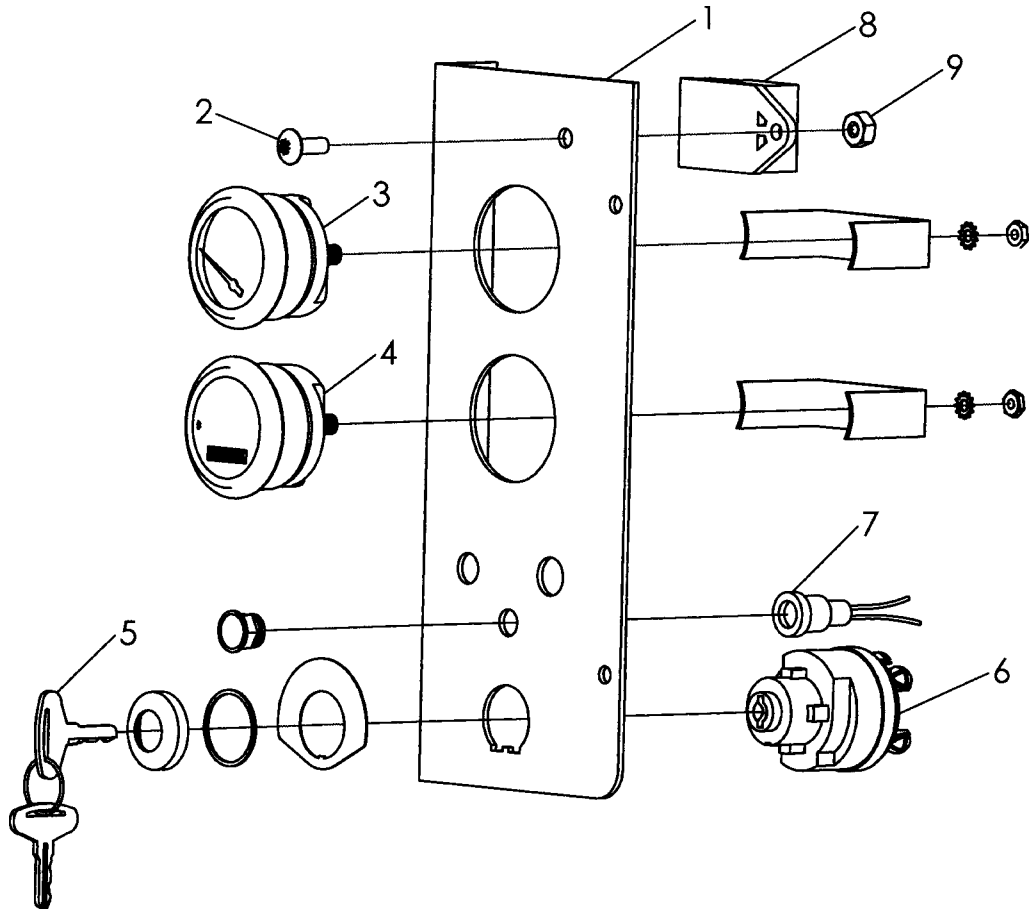
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
02-Gloss Black  
04-Allmand Yellow  
05-Orange  
09-Flat Black  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red

# KUBOTA ENGINE DC GAUGE PANEL ASSEMBLY



# KUBOTA ENGINE DC GAUGE PANEL ASSEMBLY

C-11B

NO	REQ'D	PART NO	DESCRIPTION
1	1	680123*	KUBOTA DC GAUGE PANEL
2	1	041078	1/4 - 20 NC X 1/2 TRUSS HEAD SCREW
3	1	340413	VOLT METER
4	1	340014	HOUR METER, 12 VOLT
5	1	920474	IGNITION KEY (KUBOTA)
6	1	920475	KUBOTA KEY SWITCH W/2 KEYS
7	1	@@@	GLOW PLUG LAMP (KUBOTA)
8	1	@@@	GLOW LAMP TIMER (KUBOTA)
9	1	044021	1/4 - 20 NC KEPS NUT

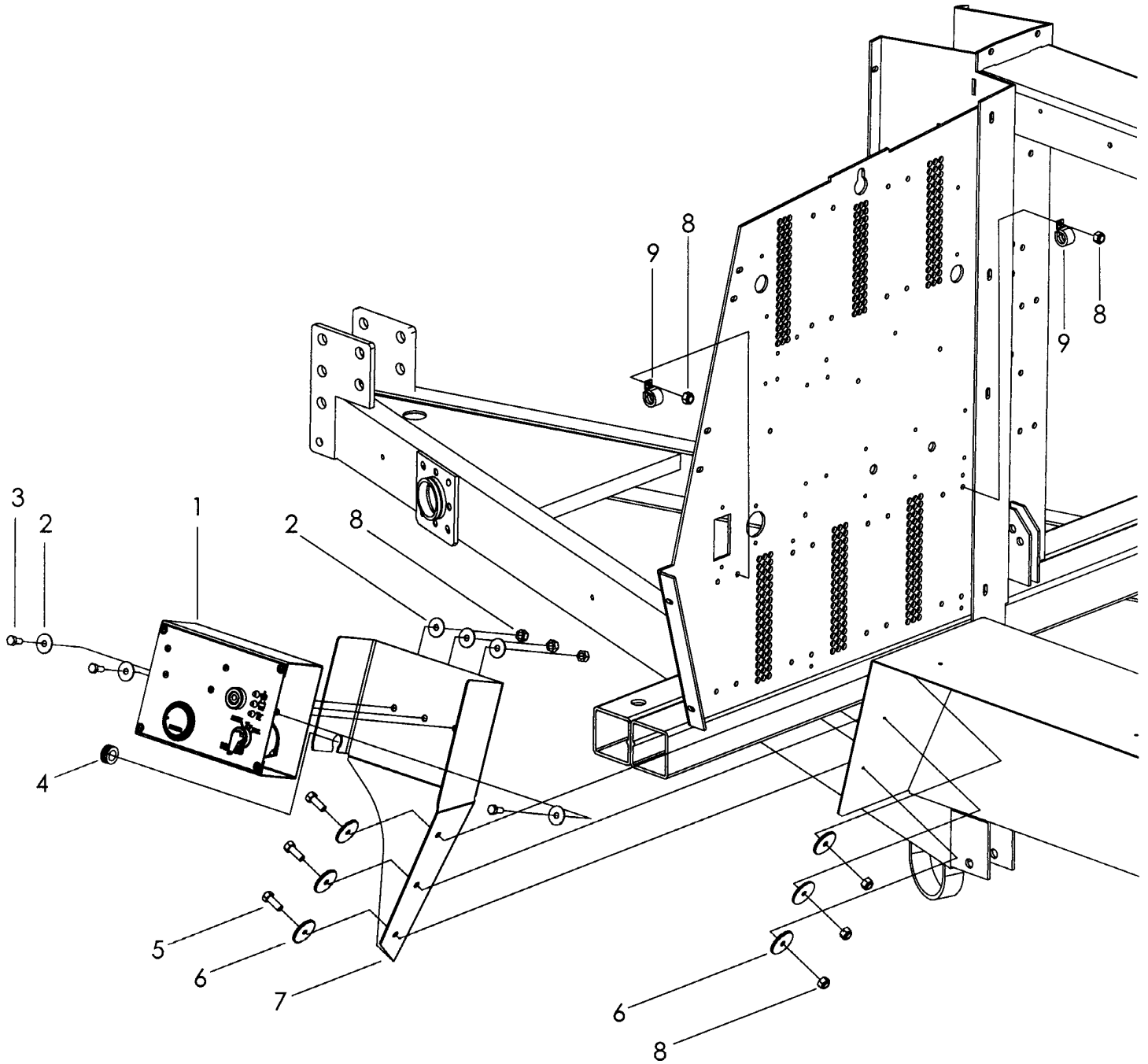
@@@ = See local Kubota Dealer

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

# ISUZU ENGINE DC GAUGE PANEL ASSEMBLY



# ISUZU ENGINE DC GAUGE PANEL ASSEMBLY

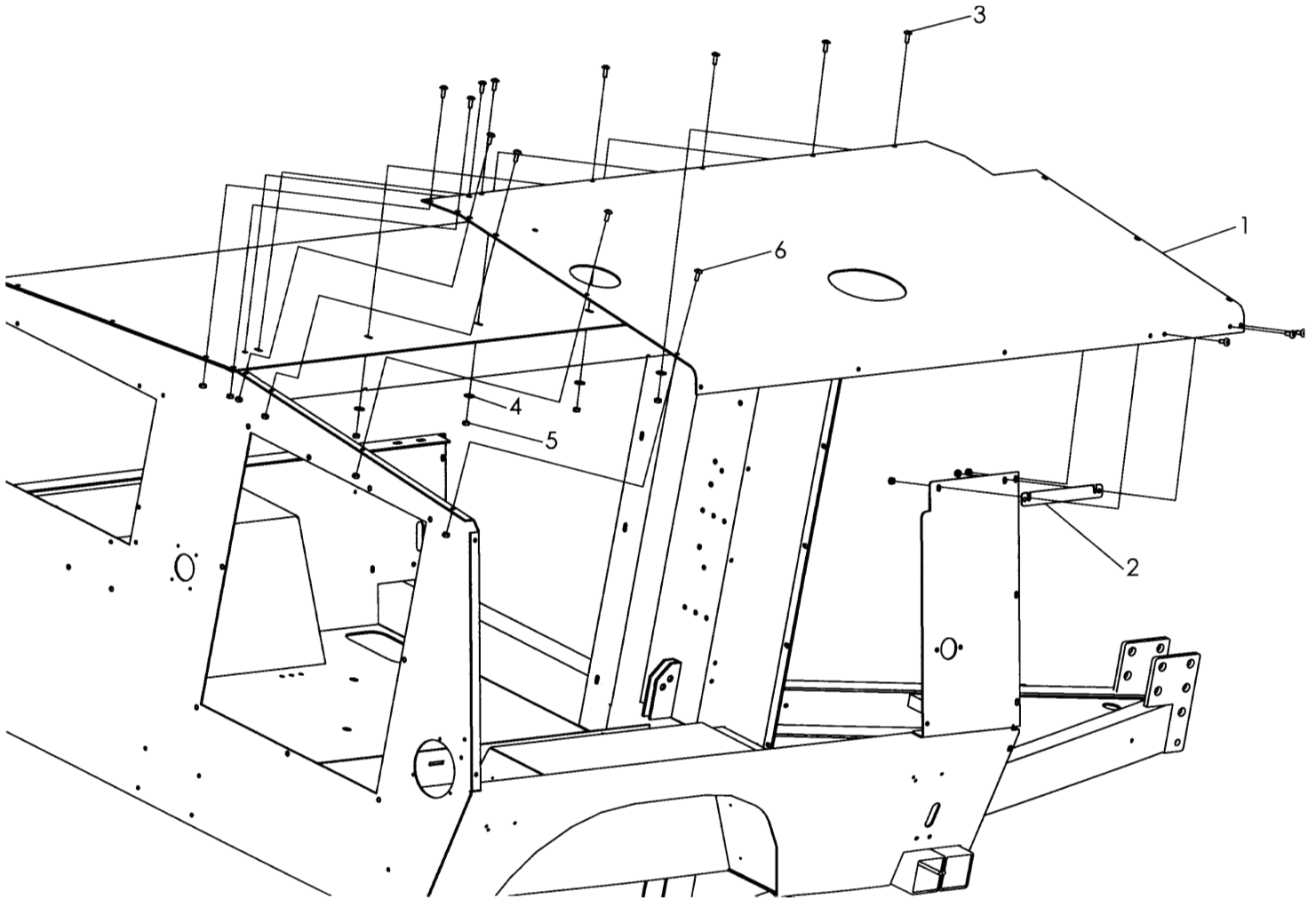
C-11D

NO	REQ'D	PART NO	DESCRIPTION
1	1	CF	ISUZU CONTROL BOX
		922004	IGNITION SWITCH KIT ISUZU
		340014	HOUR METER
		800233	ISUZU CONTROL BOX COVER
		921433	RESISTANCE CONTROL
	2	921434	PILOT LAMP RED
	1	921435	PILOT LAMP AMBER
2	6	047010	5/16 FLAT WASHER
3	3	046045	5/16-18 MC X 3/4 GRADE 5 BOLT
4	1	711028	7/8 GROMMET
5	3	046050	5/16-18 NC X 1 GRADE 5 BOLT
6	6	650260	2" O.D. X .451 I.D. WASHER
7	1	680266	ISUZU CONTROL BOX COVER
8	8	044033	5/16-18 NC NYLON INSERT NUT
9	2	310212	5/8 CUSHION CLAMP

CF = Contact Allmand for Further Info

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White  
 02-Gloss Black  
 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red



# RIGHT ROOF PANEL ASSEMBLY

C-12B

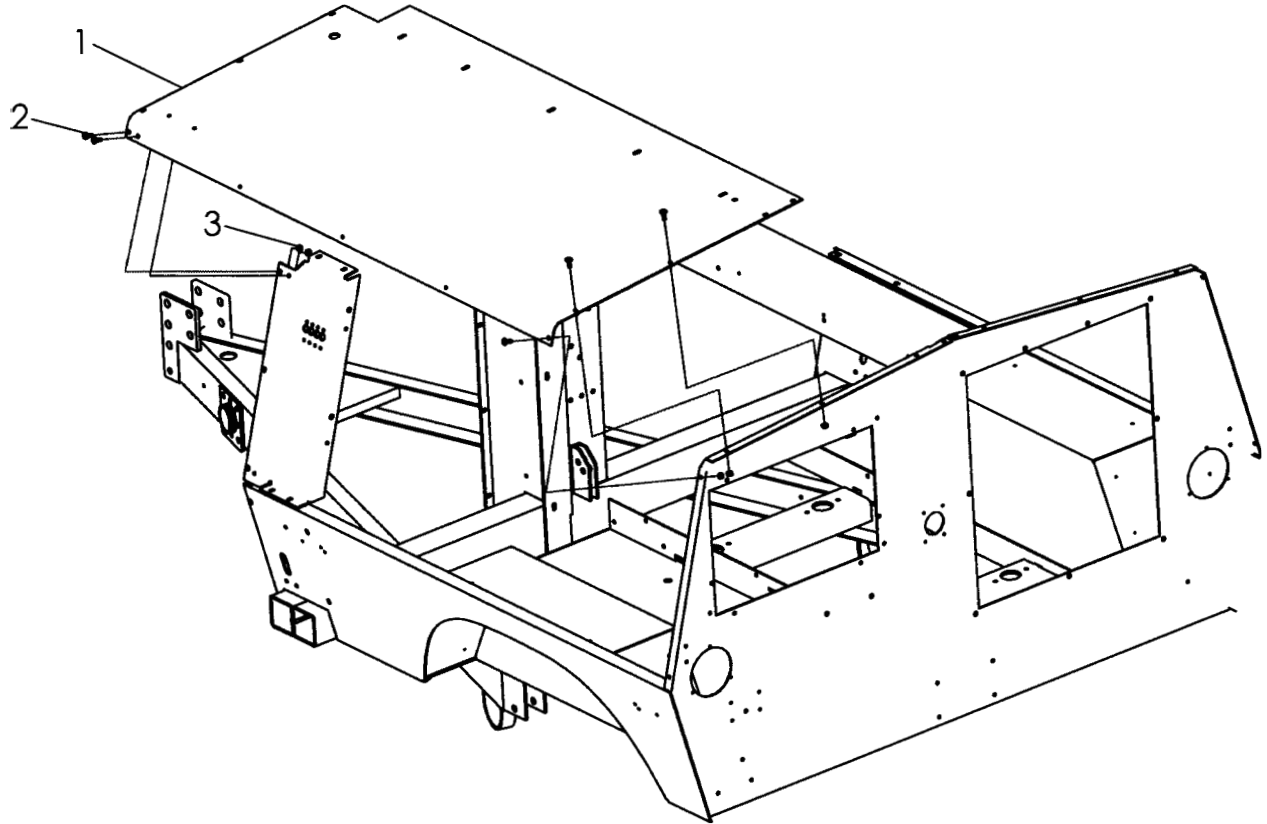
NO	REQ'D	PART NO	DESCRIPTION
1	1	680271*	RIGHT ROOF PANEL (Isuzu 4LE)
		680255*	RIGHT ROOF PANEL (Kubota 2003T)
		680327*	RIGHT ROOF PANEL (Kubota 2203/1903)
		680498*	RIGHT ROOF PANEL (Hydraulic Tower)
2	1	680341	ROOF PANEL SHIM
3	11	041050	1/4 - 20 NC X 3/4 TRUSS HEAD SCREW
4	5	047009	1/4 FLAT WASHER
5	15	044023	1/4-20 NC NYLON INSERT NUT
6	4	041078	1/4 - 20 NC X 1/2TRUSS HEAD SCREW

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
02-Gloss Black  
04-Allmand Yellow  
05-Orange  
09-Flat Black  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red





# LEFT ROOF PANEL ASSEMBLY

C-12D

NO	REQ'D	PART NO	DESCRIPTION
1	1	680106*	LEFT ROOF PANEL
		652372*	LEFT ROOF PANEL (Hydraulic Tower)
2	5	041078	1/4 - 20 NC X 1/2 TRUSS HEAD SCREW
3	5	044023	1/4-20 NC NYLON INSERT NUT

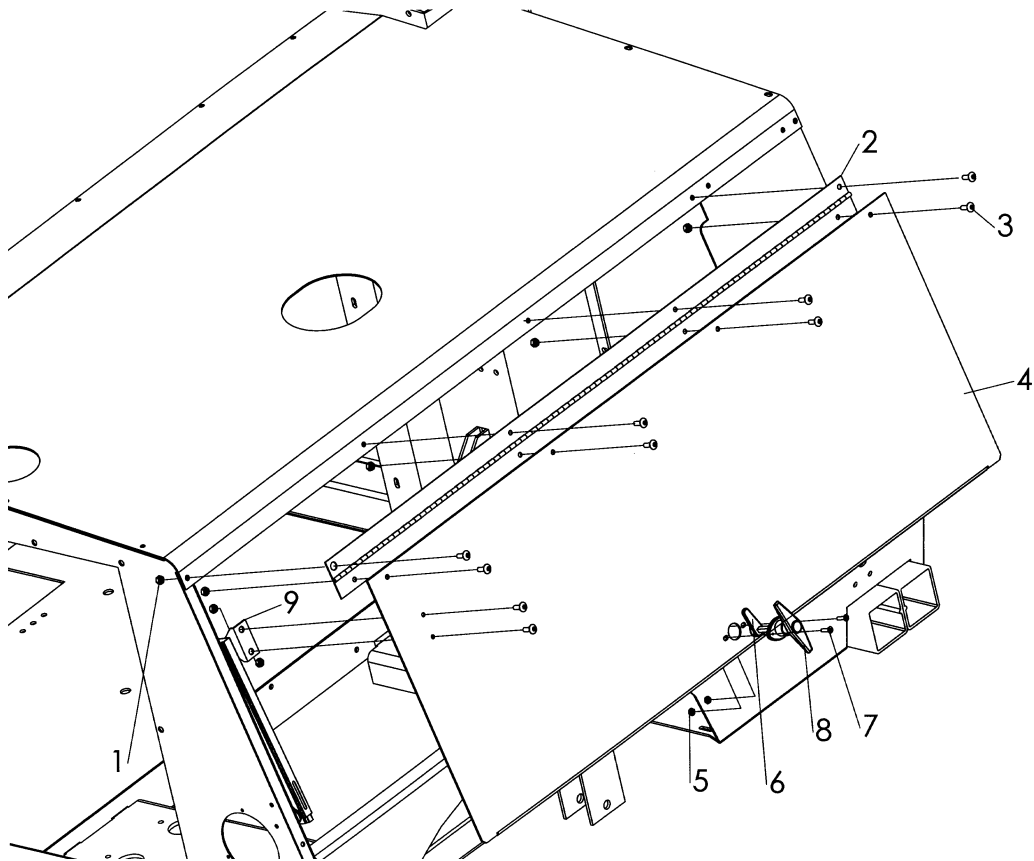
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

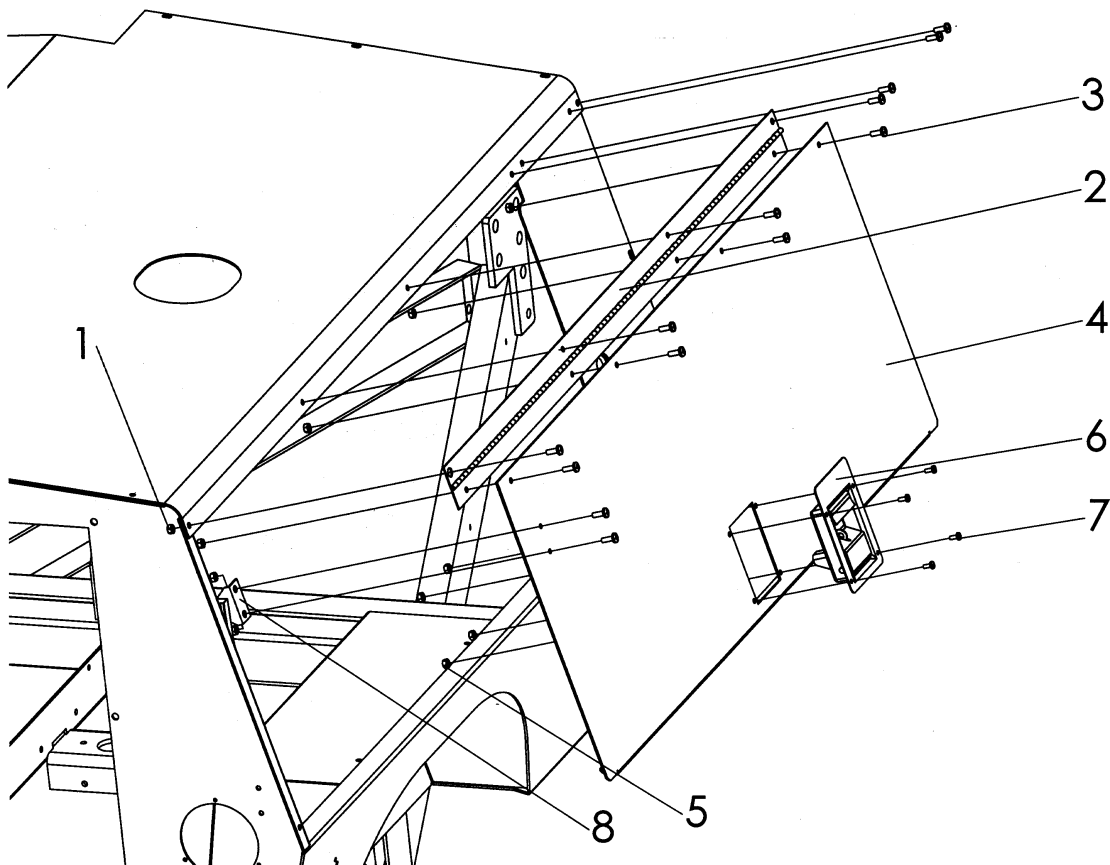
01-White  
02-Gloss Black  
04-Allmand Yellow  
05-Orange  
09-Flat Black  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red

### RIGHT DOOR PANEL ASSEMBLY



### RIGHT DOOR PANEL ASSEMBLY (SLAM LATCH MODEL)



# RIGHT DOOR PANEL ASSEMBLY

C-13B

NO	REQ'D	PART NO	DESCRIPTION
1	13	044023	1/4 - 20 NC NYLON INSERT NUT
2	1	680258	DOOR HINGE
3	13	041047	1/4 - 20 NC X 3/4 SCREW
4	1	680109*	RIGHT DOOR PANEL
NS	1	680114*	LEFT DOOR PANEL
5	4	044016	#10 - 24 NC KEPS NUT
6	2	650132	LATCH CAM, W/SQUARE HEAD SET SCREW
7	4	041026	#10 - 24 NC X 3/4 FLAT HEAD SCREW
8	2	650131	LOCKING T-HANDLE
9	2	352057	TELESCOPIC PROP

# RIGHT DOOR PANEL ASSEMBLY(SLAM LATCH MODEL) (After S/N 0023MXL04)

C-13B2

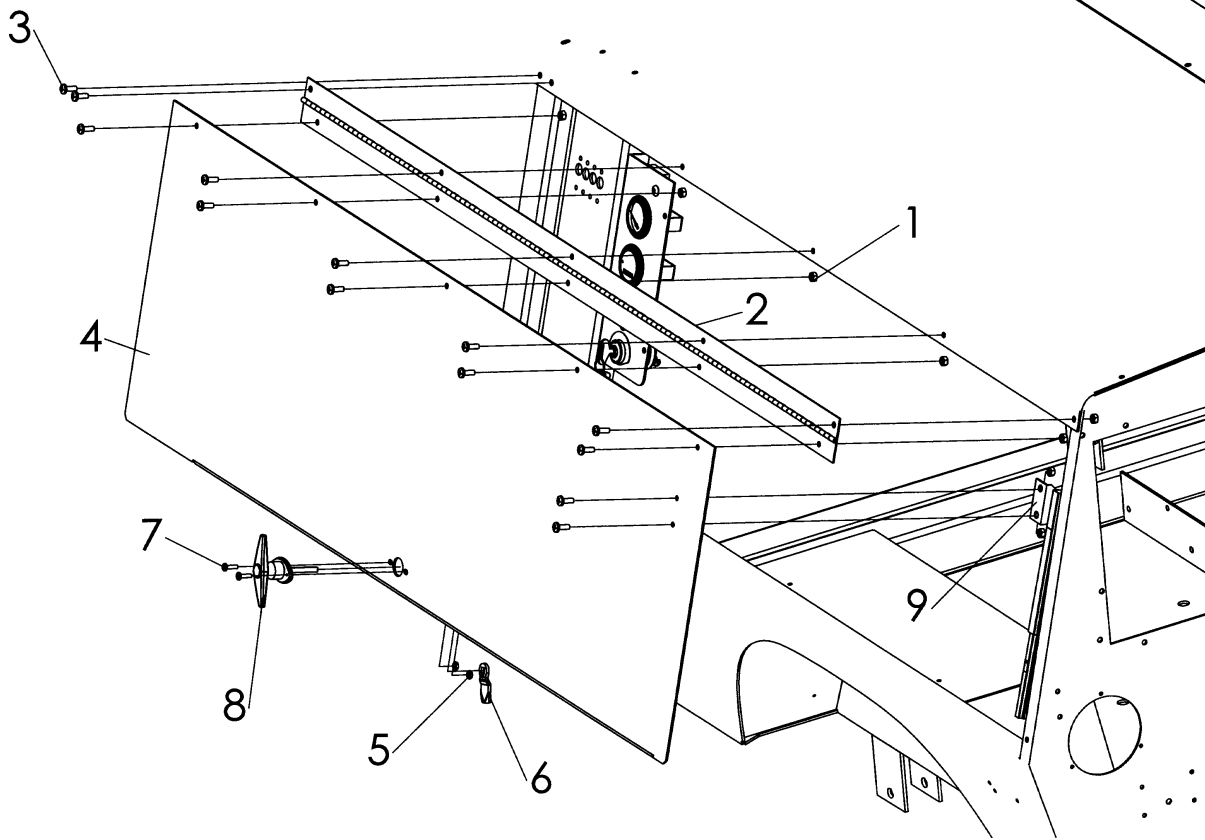
NO	REQ'D	PART NO	DESCRIPTION
1	13	044023	1/4 - 20 NC NYLON INSERT NUT
2	1	680258	DOOR HINGE
3	13	041047	1/4 - 20 NC X 3/4 SCREW
4	1	680443*	RIGHT SLAM LATCH DOOR PANEL
5	4	044016	#10 - 24 NC KEPS NUT
6	1	680459	SLAM LATCH
NS	1	680470	STRIKER
7	4	041026	#10 - 24 NC X 3/4 FLAT HEAD SCREW
8	2	352057	TELESCOPIC PROP
NS		680471	SLAM LATCH RETRO KIT

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
01-White  
02-Gloss Black  
03-Gray  
04-Allmand Yellow  
05-Orange  
06-Allmand Gold  
09-Flat Black  
10-High temp Black  
11-Red

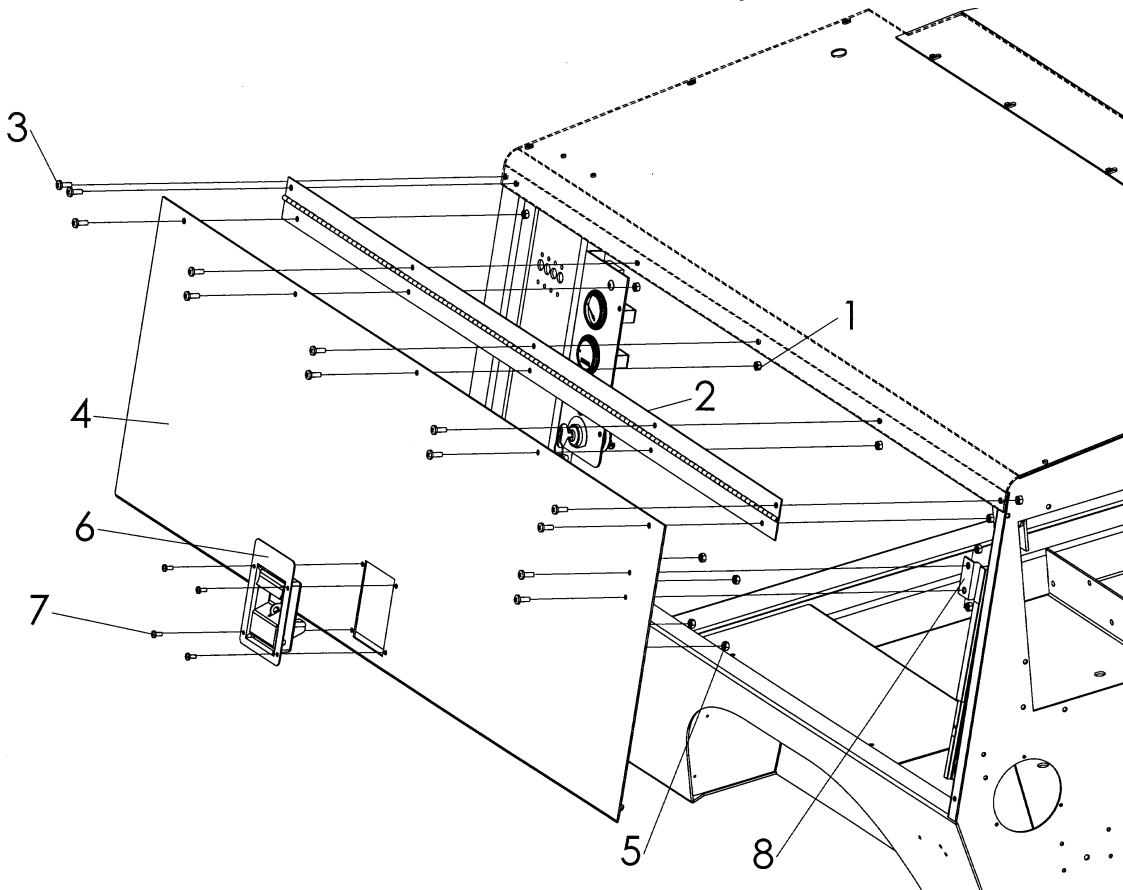
C-13C

# LEFT DOOR PANEL ASSEMBLY



C-13C2

# LEFT DOOR PANEL ASSEMBLY (SLAM LATCH MODEL)



# LEFT DOOR PANEL ASSEMBLY

C-13D

NO	REQ'D	PART NO	DESCRIPTION
1	13	044023	1/4 - 20 NC NYLON INSERT NUT
2	1	352023	DOOR HINGE
3	13	041047	1/4 - 20 NC X 3/4 SCREW
4	1	680114*	LEFT DOOR PANEL
5	2	044016	#10 - 24 NC KEPS NUT
6	1	650132	LATCH CAM
7	2	041026	#10 - 24 NC X 3/4 FLAT HEAD SCREW
8	1	650131	LOCKING T-HANDLE
9	1	352057	TELESCOPIC PROP

# LEFT DOOR PANEL ASSEMBLY(SLAM LATCH MODEL) (After S/N 0023MXL04)

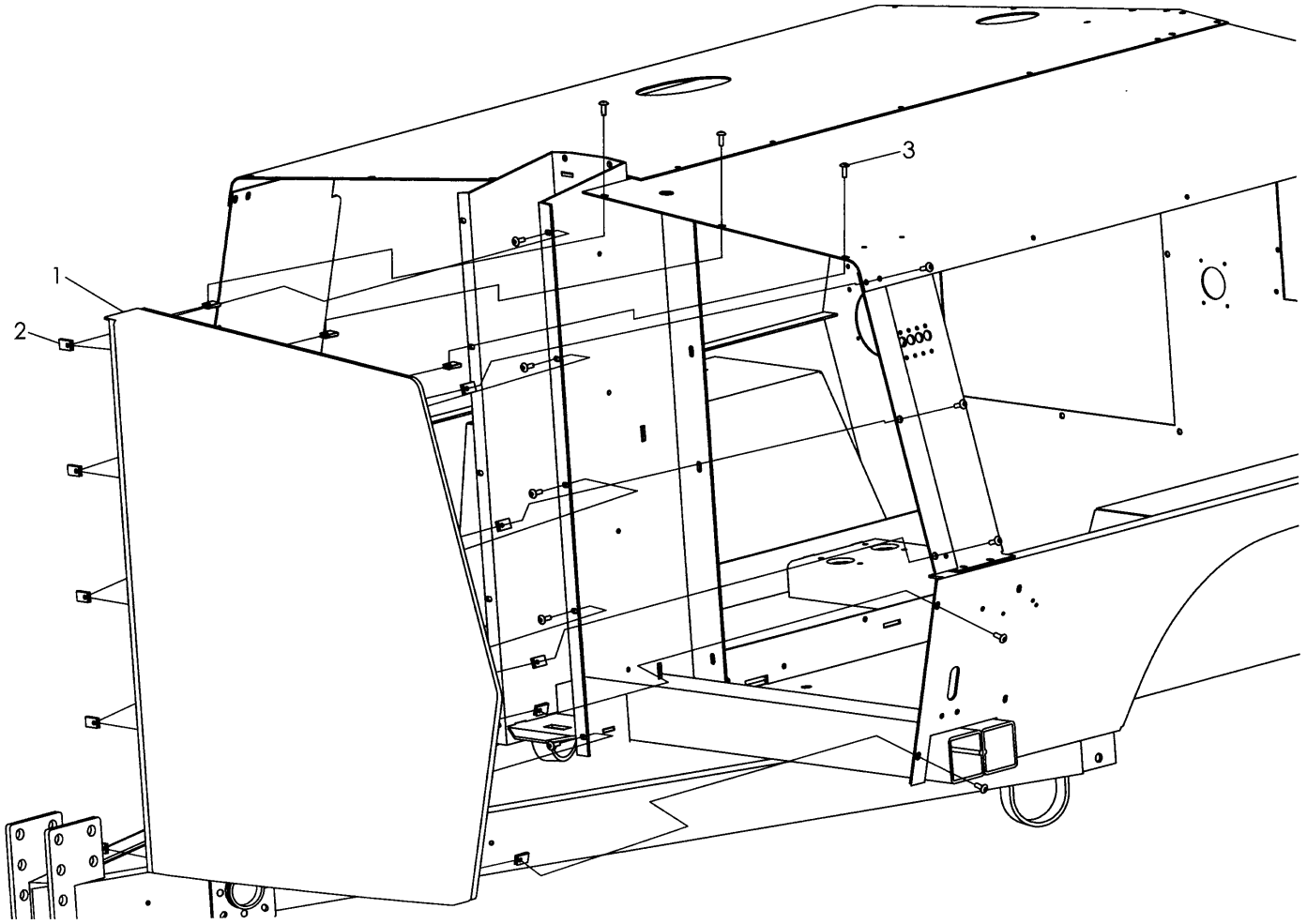
C-13D2

NO	REQ'D	PART NO	DESCRIPTION
1	13	044023	1/4 - 20 NC NYLON INSERT NUT
2	1	680258	DOOR HINGE
3	13	041047	1/4 - 20 NC X 3/4 SCREW
4	1	680444*	LEFT SLAM LATCH DOOR PANEL
5	4	044016	#10 - 24 NC KEPS NUT
6	1	680459	SLAM LATCH
NS	1	680470	STRIKER
7	4	041026	#10 - 24 NC X 3/4 FLAT HEAD SCREW
8	2	352057	TELESCOPIC PROP
NS		680471	SLAM LATCH RETRO KIT

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
01-White  
02-Gloss Black  
03-Gray  
04-Allmand Yellow  
05-Orange  
06-Allmand Gold  
09-Flat Black  
10-High temp Black  
11-Red

# LEFT FRONT PANEL ASSEMBLY



# LEFT FRONT PANEL ASSEMBLY

C-14B

NO	REQ'D	PART NO	DESCRIPTION
1	1	680104-09	LEFT FRONT ABS PANEL (BLACK)
	1	680441*	LEFT FRONT PANEL (METAL)
2	13	045216	TINNERMAN FASTENER
3	13	041078	1/4 - 20 NC X 1/2" TRUSS HEAD SCREW

LEGEND: NS= Not Shown  
\*\* =Purchase locally

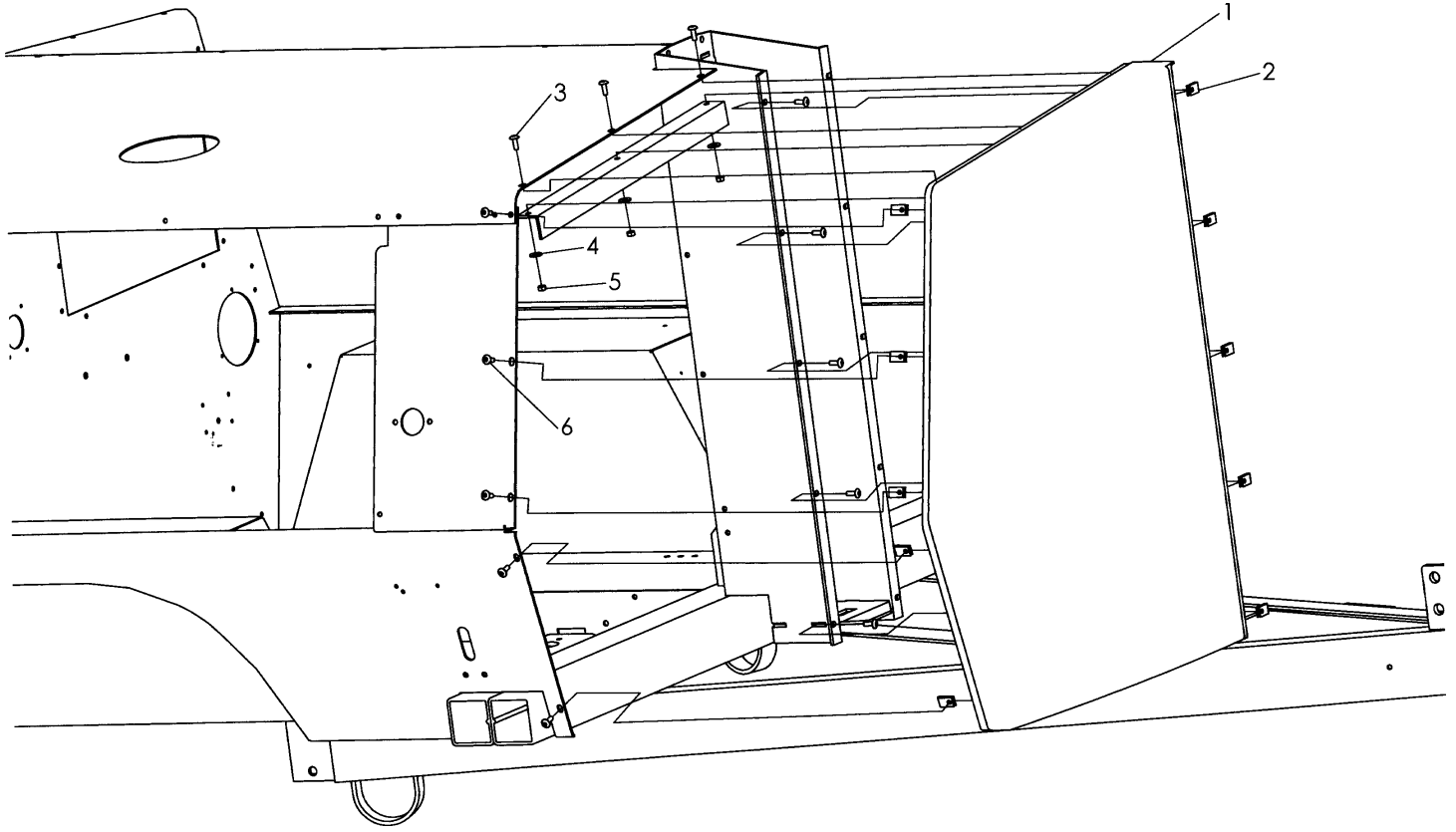
\* Use these codes to designate color needed:

01-White  
04-Allmand Yellow  
09-Flat Black

02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red

# RIGHT FRONT PANEL ASSEMBLY





# RIGHT FRONT PANEL ASSEMBLY

C-14D

NO	REQ'D	PART NO	DESCRIPTION
1	1	680103-09	RIGHT FRONT ABS PANEL (BLACK)
	1	680440*	RIGHT FRONT PANEL (METAL)
2	10	045216	TINNERMAN FASTENER
3	4	041050	1/4 - 20 NC X 3/4" TRUSS HEAD SCREW
4	3	044005	1/4" FLAT WASHER
5	3	044023	1/4 - 20 NC NYLON INSERT NUT
6	9	041078	1/4 - 20 NC X 3/4" TRUSS HEAD SCREW

LEGEND: NS= Not Shown  
\*\* =Purchase locally

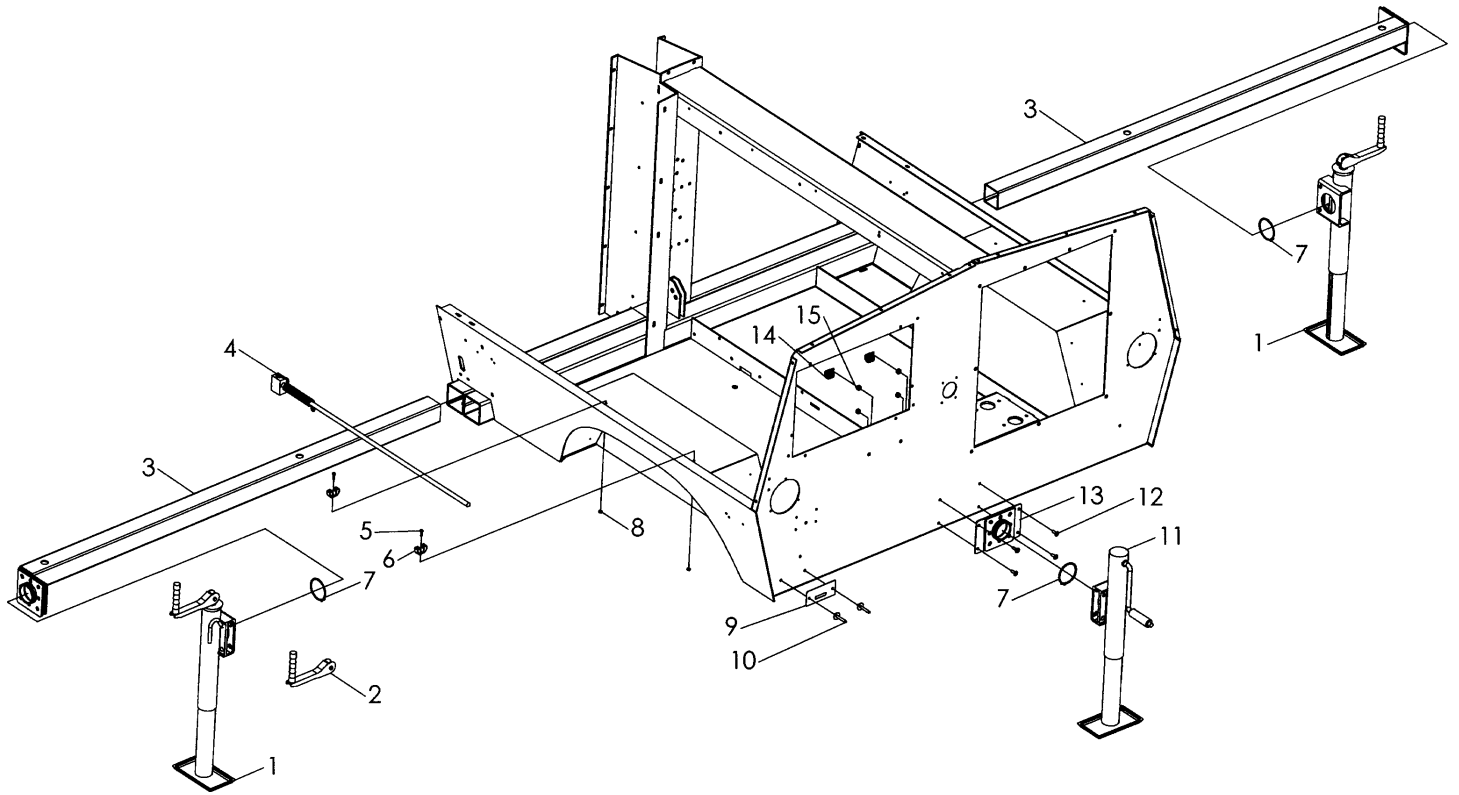
\* Use these codes to designate color needed:

01-White  
04-Allmand Yellow  
09-Flat Black

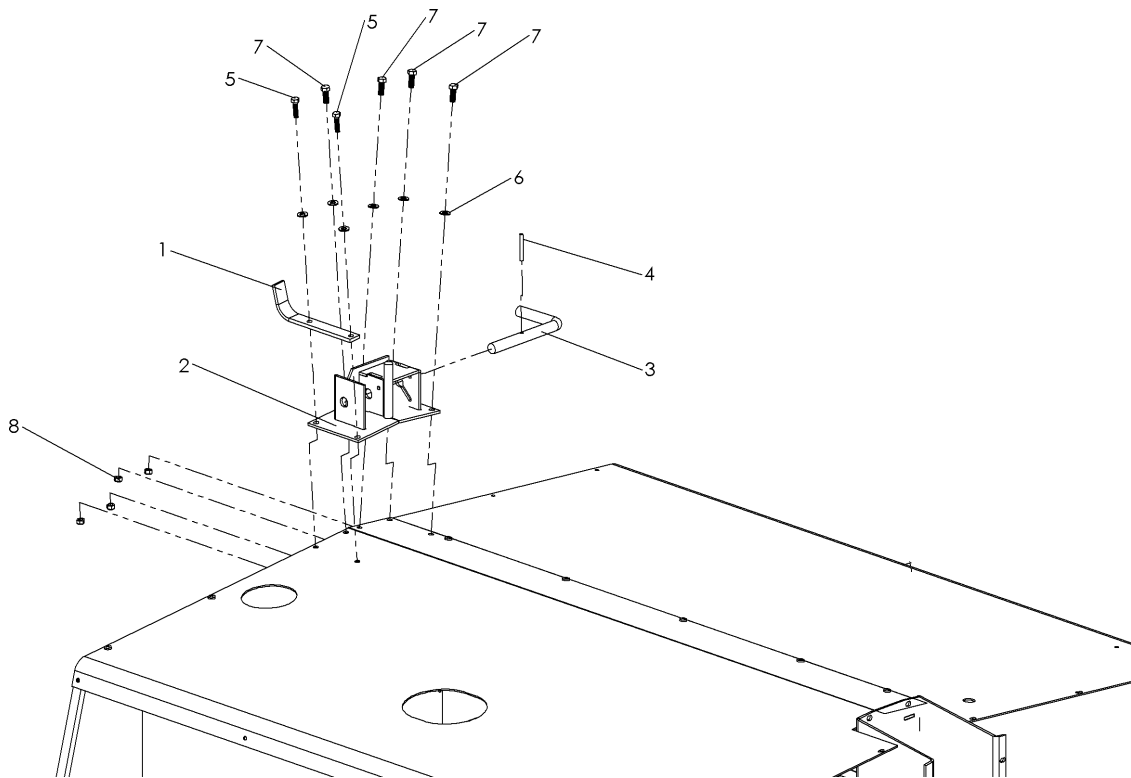
02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red

# OUTRIGGERS AND REAR JACK MOUNT ASSEMBLY



# REAR TOWER SUPPORT ASSEMBLY



# OUTRIGGERS AND REAR JACK MOUNT ASSEMBLY

C-15B

NO	REQ'D	PART NO	DESCRIPTION
1	2	330010	LONG JACK
2		330012	REPLACEMENT HANDLE
3	1	680113*	LEFT/RIGHT OUTRIGGER
4	1	340058	GROUND ROD
5	2	041025	#10 - 24 NC X 1/2 SCREW
6	2	330481	GROUND ROD CLIP
7	3	330014	JACK SNAP RING 2 5/16 XT
8	2	044016	#10 - 24 NC KEPS NUT
9	1		SERIAL NUMBER PLATE
10	4	045108	BLIND RIVET
11	1	352072	SWIVEL MOUNT JACK WITH SIDE CRANK
12	4	041080	1/4 - 20 NC X 1 SCREW
13	1	680112*	REAR JACK MOUNT WELDMENT
14	2	**	#4 CUSHION CLAMP
15	4	044023	1/4 - 20 NC NYLON INSERT NUT

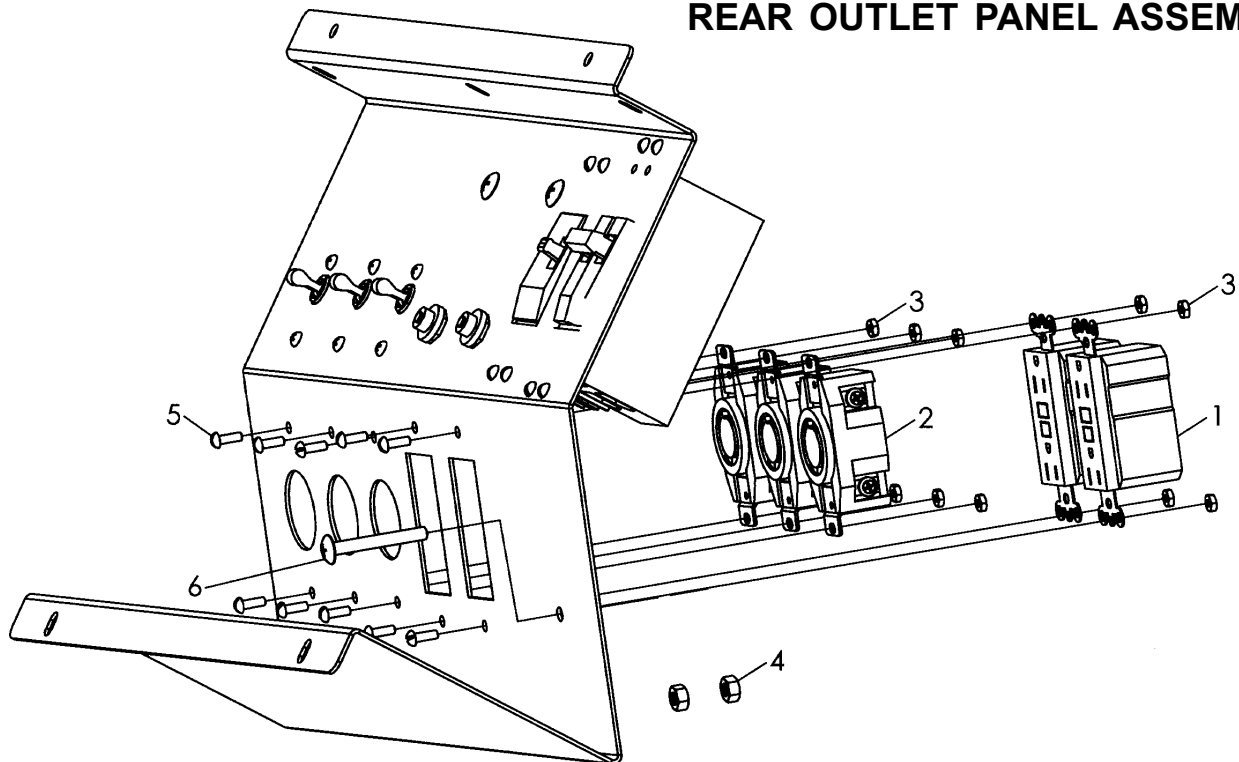
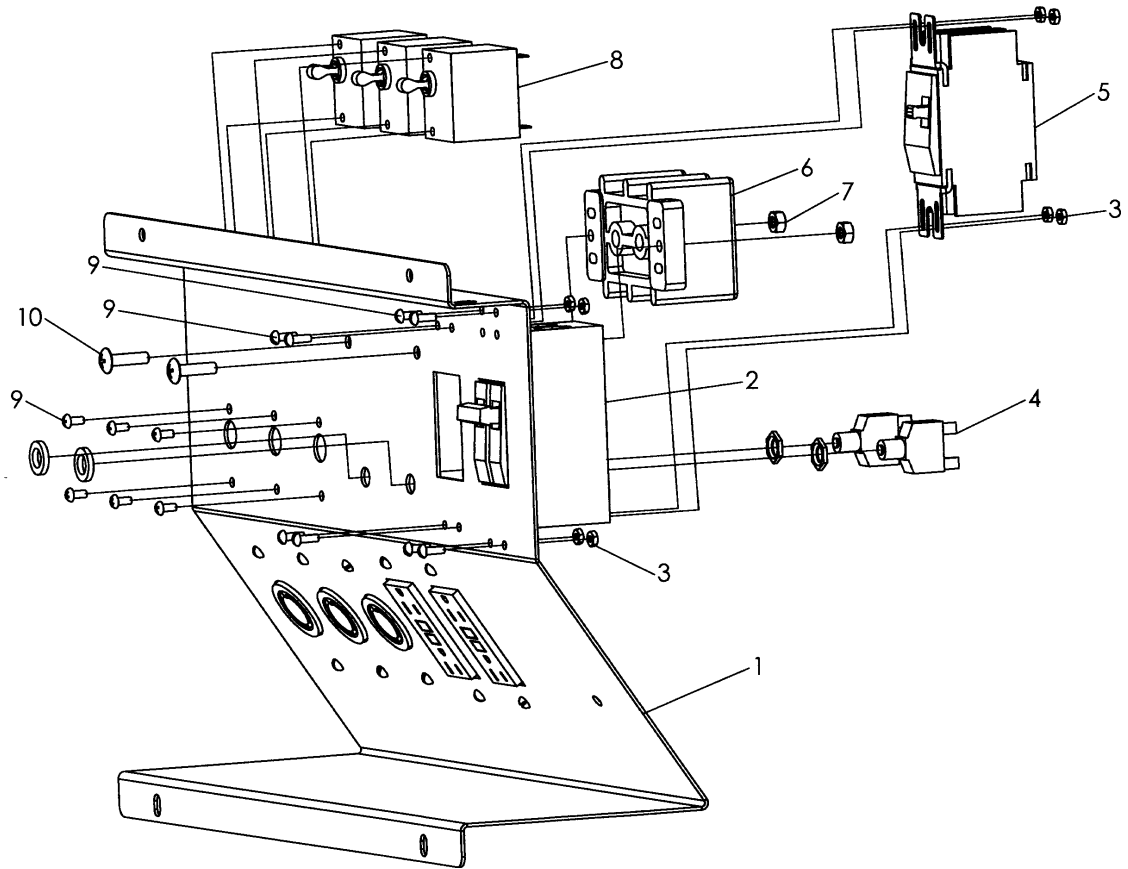
# REAR TOWER SUPPORT ASSEMBLY

C-15D

NO	REQ'D	PART NO	DESCRIPTION
1	1	680105	CORD HOLDER
2	1	680110	REAR TOWER SUPPORT WELDMENT
		680540	REAR TOWER SUPPORT WELDMENT EXTENDED (optional)
3	1	330450	REAR TOWER SUPPORT PIN
4	1	045156	ROLL PIN, 1/4 X 2" PLATED
5	2	046055	BOLT, 5/16-18 X 1-1/4 GR 5
6	6	047010	5/16" FLAT WASHER
7	4	046050	5/16-18 X 1" HEX HEAD BOLT
8	6	044033	5/16-18 NYLON INSERT NUT
9	10	041050	1/4-20 X 3/4" TRUSS HEAD BOLT

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
01-White  
02-Gloss Black  
03-Gray  
04-Allmand Yellow  
05-Orange  
06-Allmand Gold  
09-Flat Black  
10-High temp Black  
11-Red



**REAR OUTLET PANEL ASSEMBLY****C-16B**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	1	680277	OUTLET PANEL
2	1	353300	100 AMP 2 POLE BREAKER (20 KW)
	1	353280	70 AMP 2 POLE BREAKER (15 KW)
3	8	044003	#8-32 NC KEPS NUT
4	2	650138	20 AMP CIRCUIT BREAKER
5	1	352175	50 AMP CIRCUIT BREAKER
6	1	350360	POWER DISTRIBUTION BLOCK
7	2	044021	1/4-20 NC KEPS NUT
8	3	330456	30 AMP DOUBLE POLE SWITCH
9	14	041013	#8-32 NC X 1/2 MACHINE SCREW
10	2	041080	1/4 - 20 NC X 1 TRUSS HEAD SCREW
NS	1	680367	75/100 CIRCUIT BREAKER HOLE COVER (NON-CSA ONLY)

**REAR OUTLET PANEL ASSEMBLY****C-16B2**

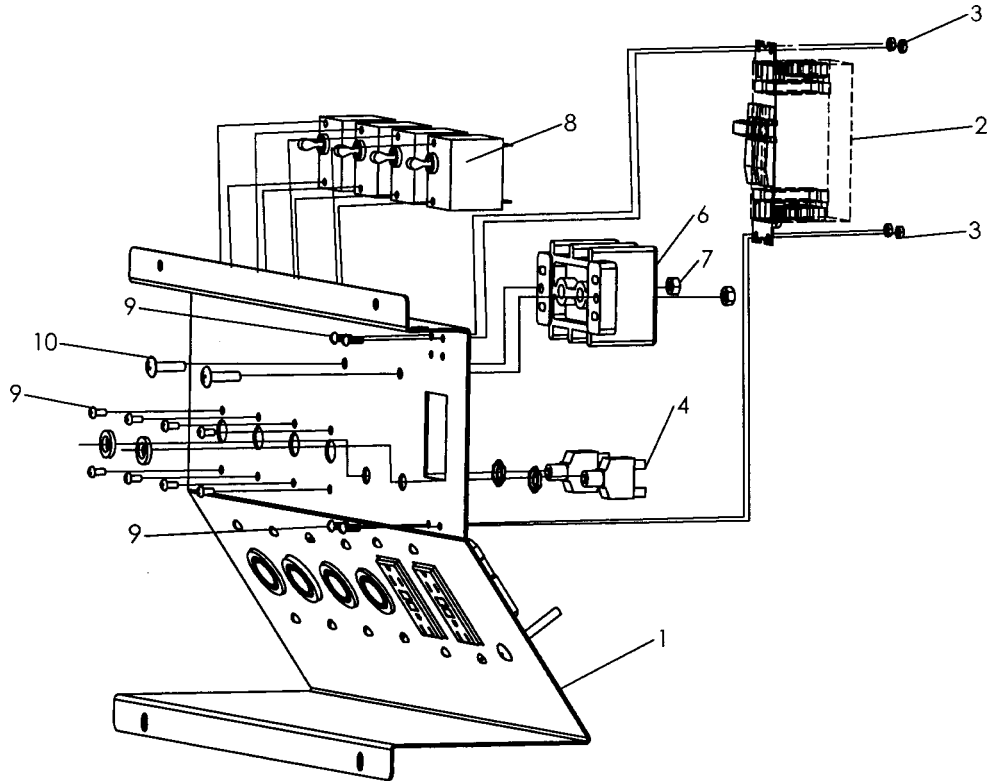
<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	2	330499	20 AMP GFCI RECEPTACLE
2	3	653102	240 VOLT TWISTLOCK RECEPTACLE
3	10	044003	#8-32 NC KEPS NUT
4	2	044021	1/4-20 NC KEPS NUT
5	10	041023	#8-32 NC X 1/2 ROUND HEAD SCREW
6	1	041053	1/4 - 20 NC X 1-3/4 TRUSS HEAD SCREW

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

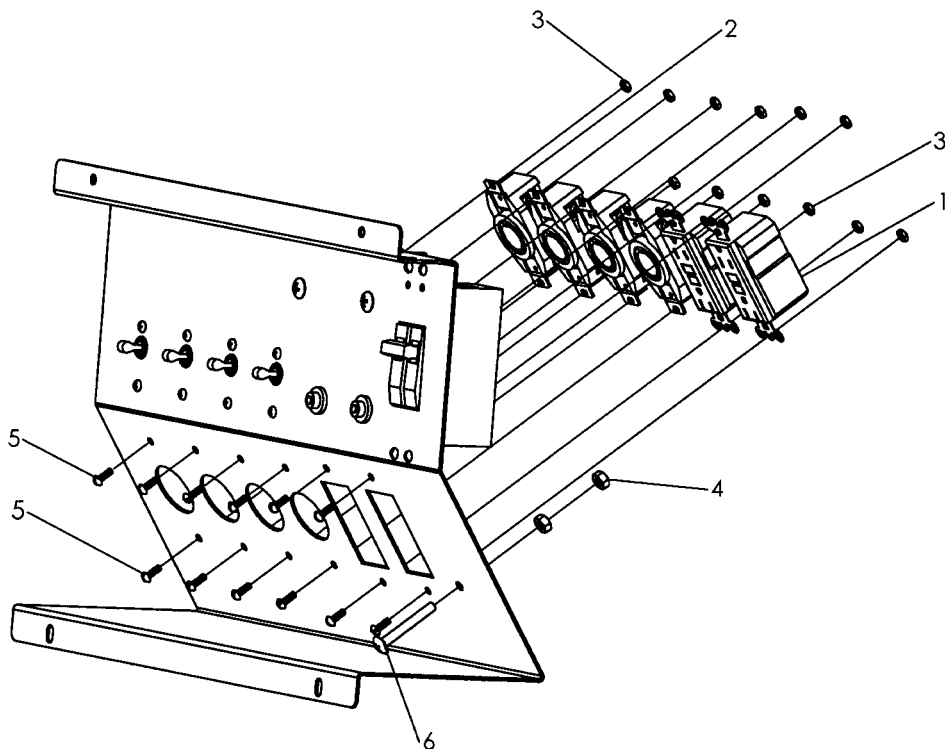
\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

### REAR OUTLET PANEL ASSEMBLY (CANADIAN)



### REAR OUTLET PANEL ASSEMBLY (CANADIAN)



**REAR OUTLET PANEL ASSEMBLY (CANADIAN)****C-16B3**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	1	680442	OUTLET PANEL WITH 4-30 AMP RECEPTACLES
2	1	353301	90 AMP 2 POLE BREAKER (20 KW)
	1	353280	70 AMP 2 POLE BREAKER (15 KW)
3	4	044003	#8-32 NC KEPS NUT
4	2	650138	20 AMP CIRCUIT BREAKER
6	1	350360	POWER DISTRIBUTION BLOCK
7	2	044021	1/4-20 NC KEPS NUT
8	4	330456	30 AMP DOUBLE POLE SWITCH
9	12	041013	#8-32 NC X 1/2 MACHINE SCREW
10	2	041080	1/4 - 20 NC X 1 TRUSS HEAD SCREW

**REAR OUTLET PANEL ASSEMBLY (CANADIAN)****C-16B4**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	2	330499	20 AMP GFCI RECEPTACLE
2	4	653102	240 VOLT TWISTLOCK RECEPTACLE
3	12	044003	#8-32 NC KEPS NUT
4	2	044021	1/4-20 NC KEPS NUT
5	12	041023	#8-32 NC X 1/2 ROUND HEAD SCREW
6	1	041053	1/4 - 20 NC X 1-3/4 TRUSS HEAD SCREW

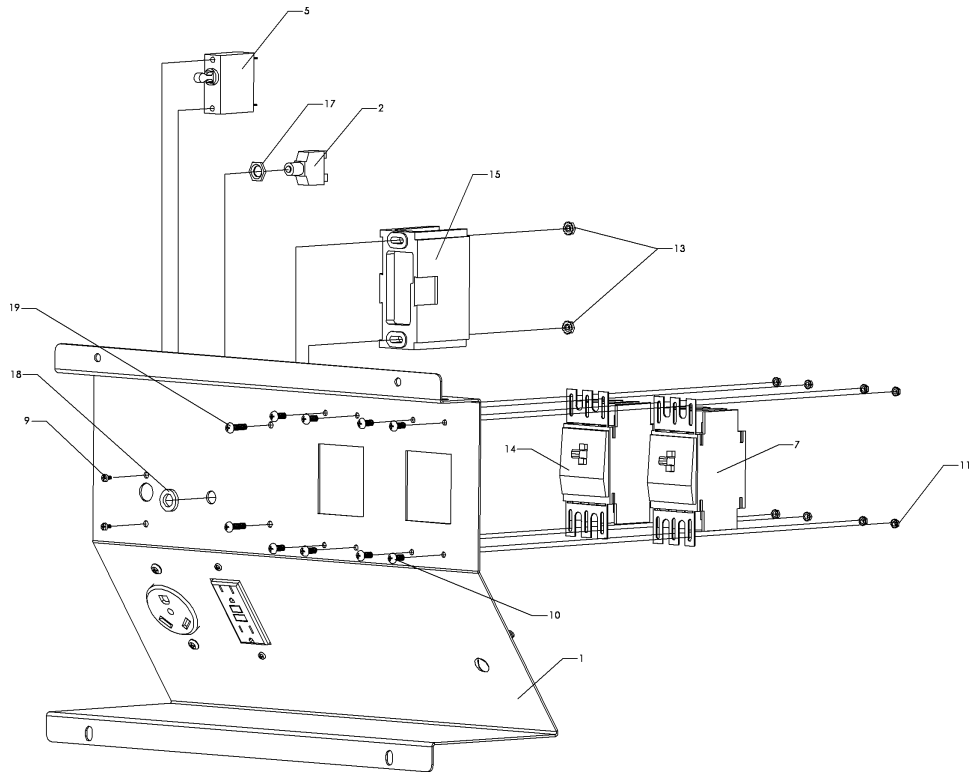
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

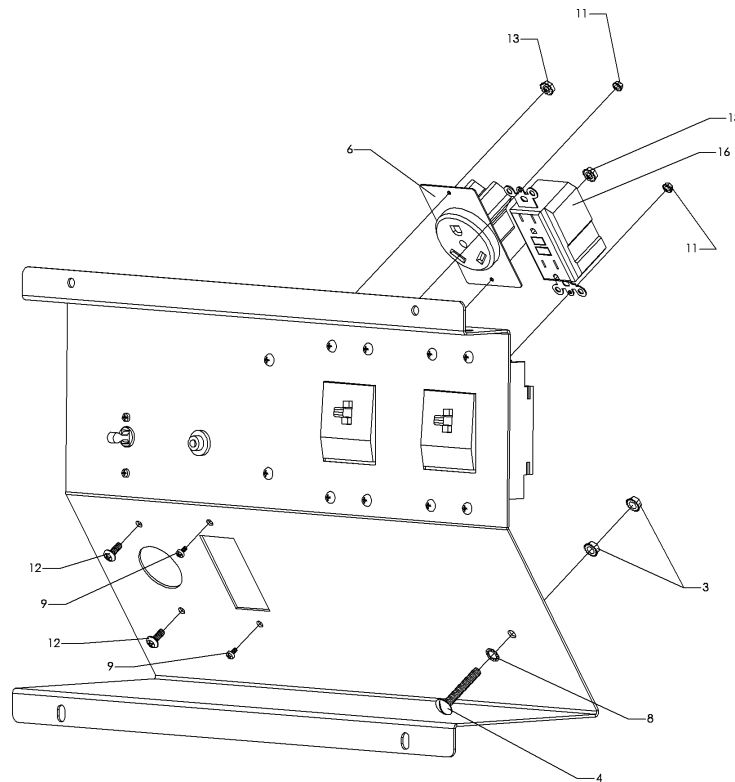
C-16A5

### REAR OUTLET PANEL ASSEMBLY (3 PHASE 240 Volt)



C-16A6

### REAR OUTLET PANEL ASSEMBLY (3 PHASE 240 Volt)





**REAR OUTLET PANEL ASSEMBLY (3 PHASE 240 Volt)****C-16B5**

NO	REQ'D	PART NO	DESCRIPTION
1	1	680869	3 PHASE 240V REAR OUTLET PANEL
2	1	650138	20 A PUSH BUTTON CIRCUIT BREAKER
3	2	044021	1/4-20 NC PLATED KEPS NUT
4	1	041053	1/4 - 20 NC X 1-3/4 PHILLIPS TRUSS HEAD SCREW
5	3	330472	30 AMP SINGLE POLE SWITCH
6	1	680815	125V 30A OUTLET
7	1	022235	60A 3 POLE CIRCUIT BREAKER
8	1	043050	1/4" INTERNAL TOOTH LOCKWASHER
9	4	041018	#6-32 NC X 1/4" PHILLIPS HEAD MACHINE SCREW
10	8	041013	#8-32 NC X 1/2" MACHINE SCREW
11	10	044003	#8-32 NC KEPS NUT
12	2	041021	#10-24 NC X 1/2" ROUND HEAD MACHINE SCREW
13	4	044016	#10-24 NC PLATED KEPS NUT
14	1	022236	50 AMP 3 POLE CIRCUIT BREAKER
15	1	352397	SINGLE POLE POWER DISTRIBUTION BLOCK
16	1	330499	20A GFCI RECEPTACLE
17	1		BACKING NUT(INCLUDED WITH 650138)
18	1		PLASTIC NUT(INCLUDED WITH 650138)
19	2	041027	#10-24 NC X 3/4" PHILLIPS HEAD MACHINE SCREW

**REAR OUTLET PANEL ASSEMBLY (3 PHASE 240 Volt)****C-16B6**

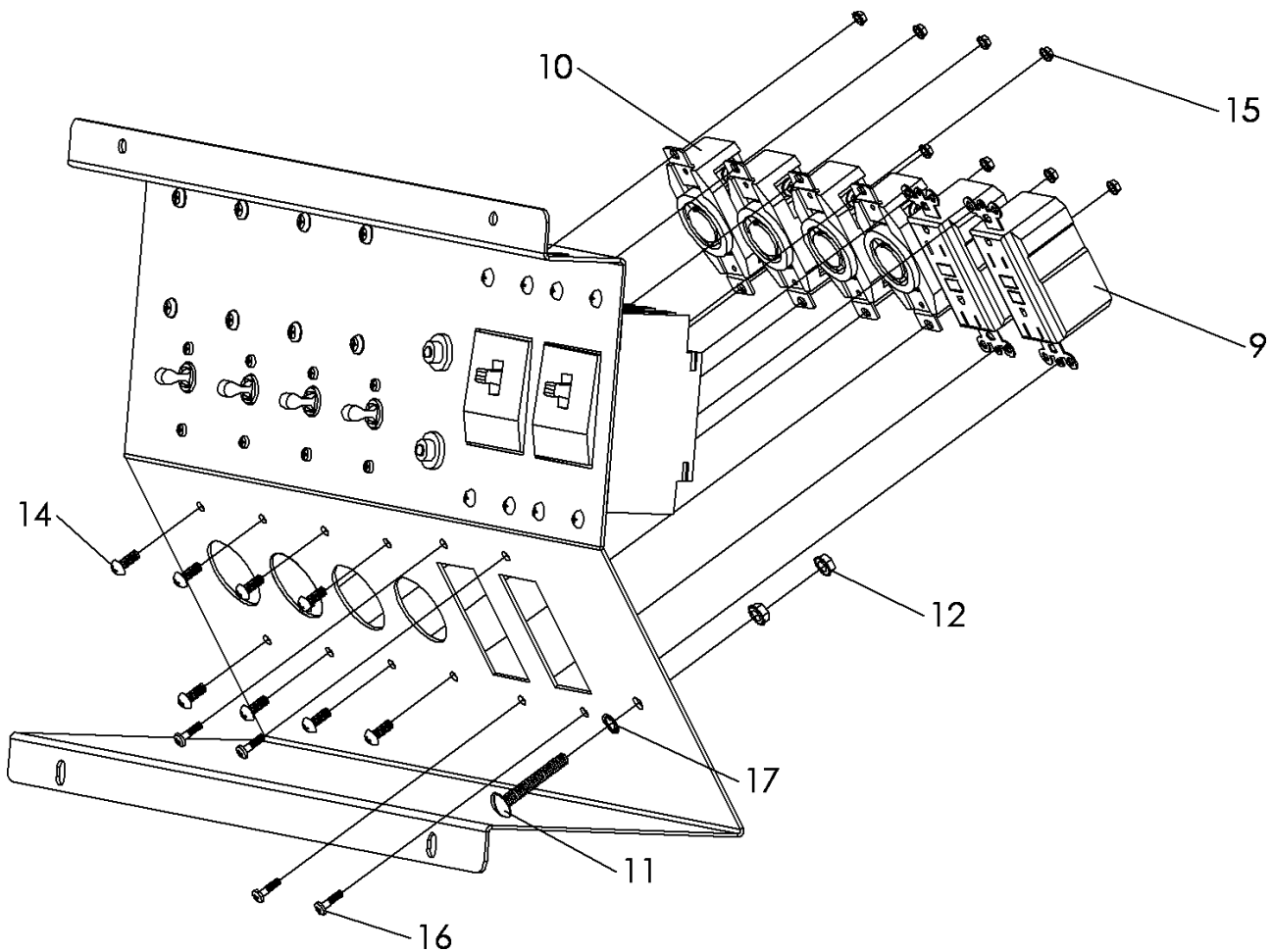
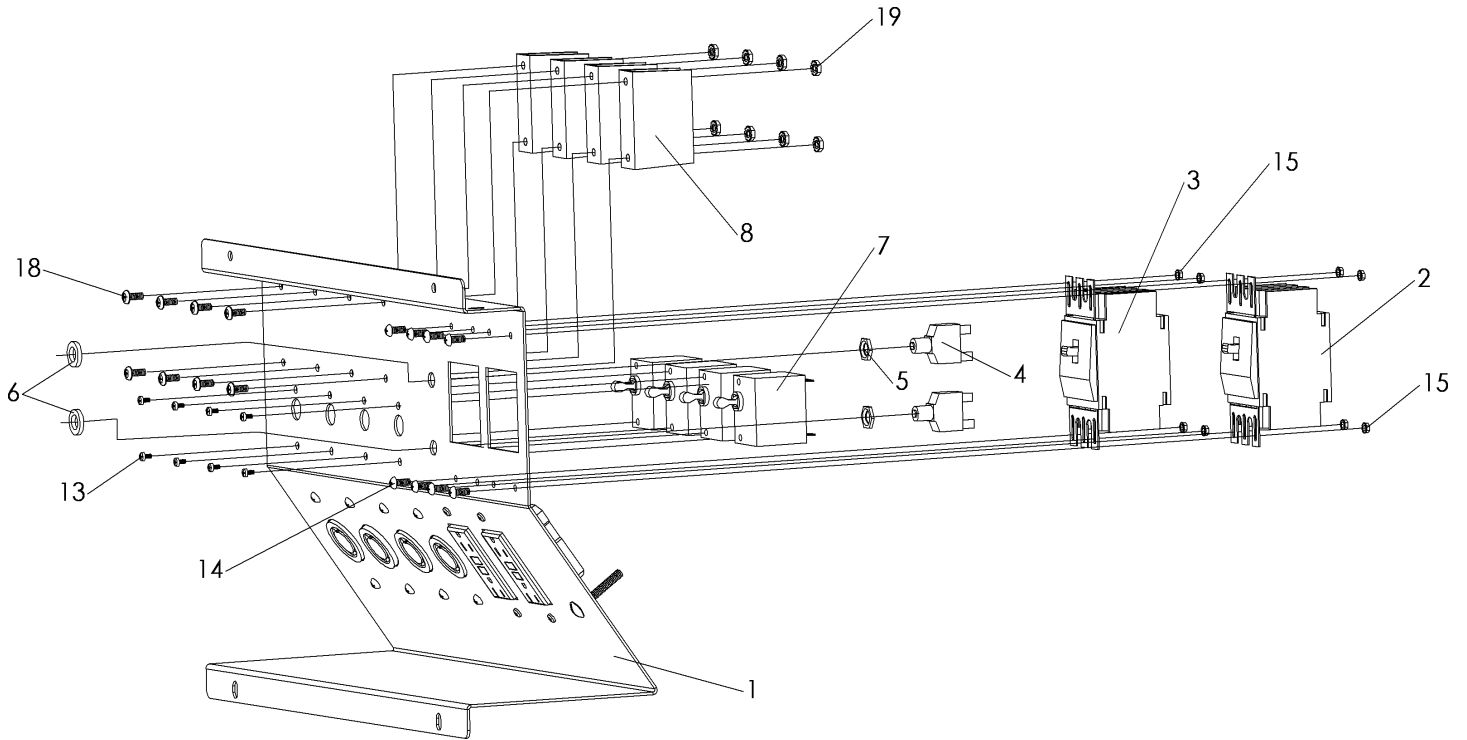
NO	REQ'D	PART NO	DESCRIPTION
1	1	680869	3 PHASE 240V REAR OUTLET PANEL
2	1	650138	20 A PUSH BUTTON CIRCUIT BREAKER
3	2	044021	1/4-20 NC PLATED KEPS NUT
4	1	041053	1/4 - 20 NC X 1-3/4 PHILLIPS TRUSS HEAD SCREW
5	3	330472	30 AMP SINGLE POLE SWITCH
6	1	680815	125V 30A OUTLET
7	1	022235	60A 3 POLE CIRCUIT BREAKER
8	1	043050	1/4" INTERNAL TOOTH LOCKWASHER
9	4	041018	#6-32 NC X 1/4" PHILLIPS HEAD MACHINE SCREW
10	8	041013	#8-32 NC X 1/2" MACHINE SCREW
11	10	044003	#8-32 NC KEPS NUT
12	2	041021	#10-24 NC X 1/2" ROUND HEAD MACHINE SCREW
13	4	044016	#10-24 NC PLATED KEPS NUT
14	1	022236	50 AMP 3 POLE CIRCUIT BREAKER
15	1	352397	SINGLE POLE POWER DISTRIBUTION BLOCK
16	1	330499	20A GFCI RECEPTACLE
17	1		BACKING NUT(INCLUDED WITH 650138)
18	1		PLASTIC NUT(INCLUDED WITH 650138)
19	2	041027	#10-24 NC X 3/4" PHILLIPS HEAD MACHINE SCREW

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White  
 02-Gloss Black  
 04-Allmand Yellow  
 05-Orange  
 09-Flat Black  
 10-High temp Black

03-Gray  
 06-Allmand Gold  
 11-Red

# REAR OUTLET PANEL ASSEMBLY (3 PHASE 208 Volt)



# REAR OUTLET PANEL ASSEMBLY (3 PHASE 208 Volt)

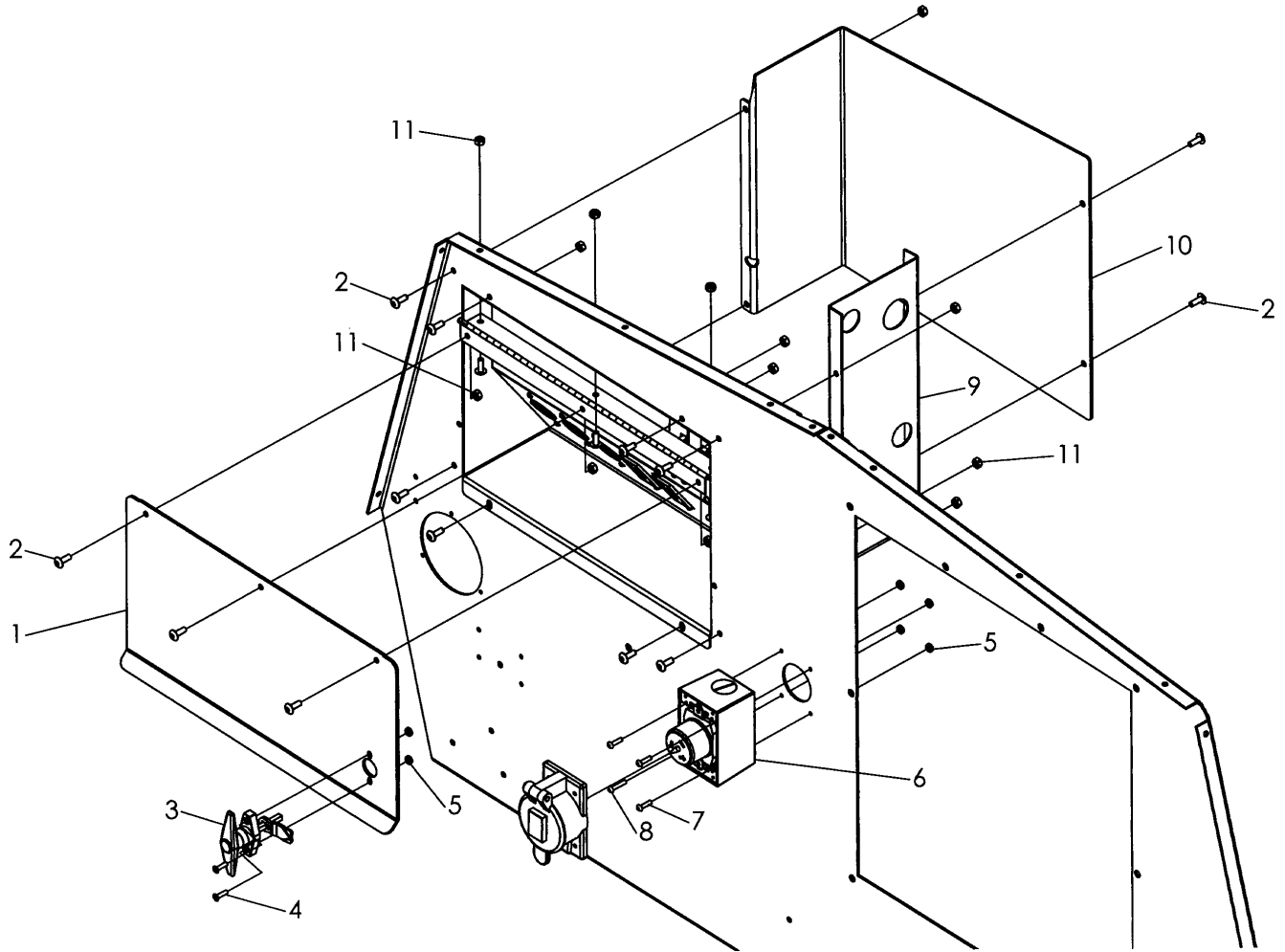
C-16B7

NO	REQ'D	PART NO	DESCRIPTION
1	1	680568	3 PHASE 208V REAR OUTLET PANEL
2	1	022235	60A 3 POLE CIRCUIT BREAKER
3	1	022236	50 AMP 3 POLE CIRCUIT BREAKER
4	2	650138	20 AMP CIRCUIT BREAKER
5	2		BACKING NUT(INCLUDED WITH 650105)
6	2		PLASTIC NUT(INCLUDED WITH 650105)
7	4	330456	30A DPST CIRCUIT BREAKER
8	4	352397	POWER DISTRIBUTION BLOCK
9	2	330499	20 AMP 120V GFCI RECEPTACLE
10	4	653102	30A 125-250V GFCI OUTLET
11	1	041053	1/4 - 20 NC X 1-3/4" PHILLIPS TRUSS HEAD SCREW
12	2	044021	1/4-20 NC PLATED KEPS NUT
13	8	041018	#6-32 NC X 1/4" PHILLIPS HEAD MACHINE SCREW
14	16	041013	#8-32 NC X 1/2" MACHINE SCREW
15	16	044003	#8-32 NC KEPS NUT
16	4		#6-32 NC X 3/4" SCREW (SUPPLIED WITH GFCI)
17	1	043050	1/4" INTERNAL TOOTH LOCKWASHER
18	8	041021	#10-24 NC X 1/2" ROUND HEAD MACHINE SCREW
19	8	044016	#10-24 NC PLATED KEPS NUT

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White  
 02-Gloss Black  
 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red

# REAR DOOR AND PANEL ASSEMBLY



# REAR DOOR AND PANEL ASSEMBLY

C-17B

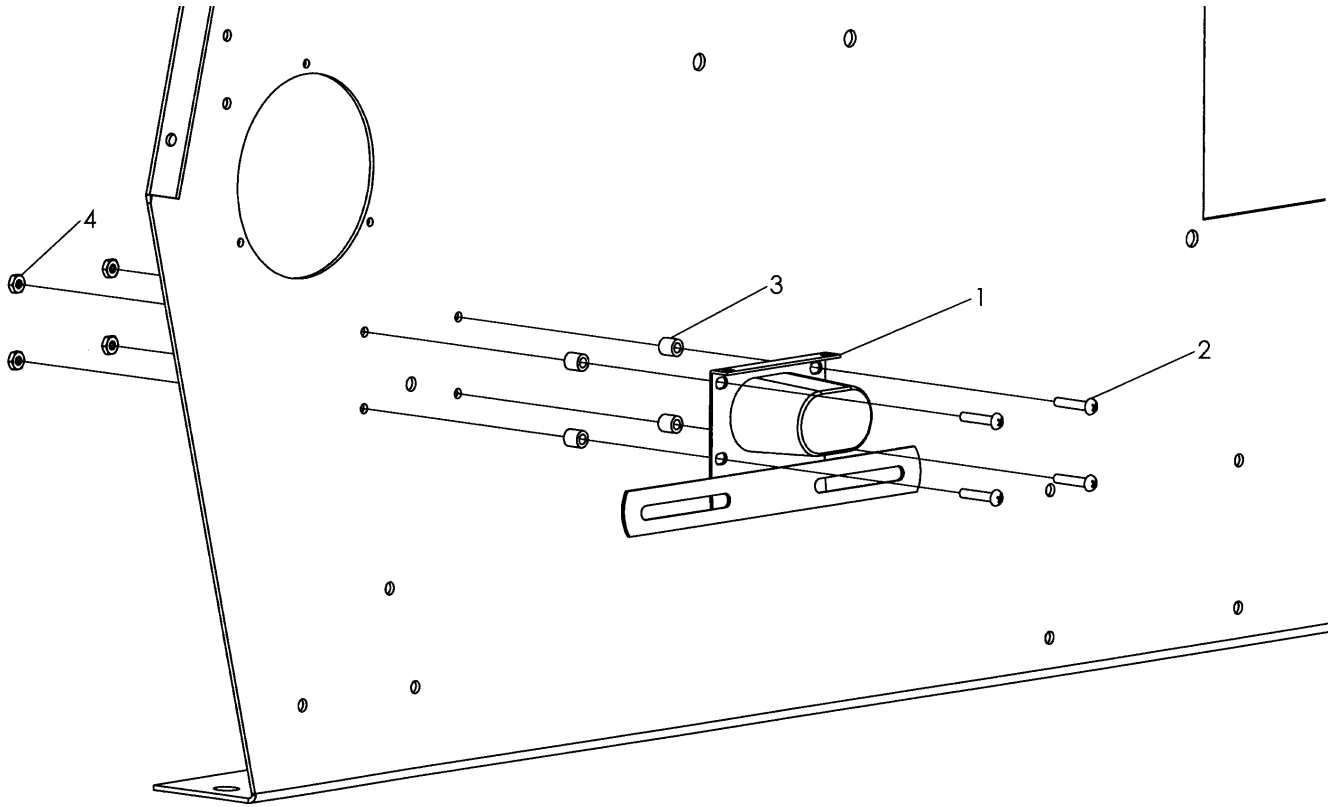
NO	REQ'D	PART NO	DESCRIPTION
1	1	680293*	OUTLET DOOR PANEL
2	13	041050	1/4-20 NC X 3/4" TRUSS HEAD SCREW
3	1	650131	T HANDLE ASSEMBLY
4	2	041026	#10 - 24 NC X 3/4 FLAT HEAD SCREW
5	6	044016	#10 - 24 KEPS NUT
6	1	680360	50 AMP REAR OUTLET ASSEMBLY (CSA) (OPTIONAL)
		352171	50 AMP REAR OUTLET ONLY (DOMESTIC) (OPTIONAL)
		352171C	50 AMP REAR OUTLET ONLY (CSA) (OPTIONAL)
7	3	041027	#10 - 24 NC X 3/4 ROUND HEAD SCREW
8	1	041030	#10 - 24 NC X 1" ROUND HEAD SCREW
9	1	680511*	SMALL OUTLET PANEL COVER
10	1	680278*	LARGE OUTLET PANEL COVER
11	11	044021	1/4-20 NC KEPS NUT
12	1	353045	DOOR HINGE
NS	1	680454*	50 AMP OUTLET HOLE COVER PANEL

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

# LICENSE PLATE HOLDER ASSEMBLY



# LICENSE PLATE HOLDER ASSEMBLY

C-17D

NO	REQ'D	PART NO	DESCRIPTION
1	1	032035	LICENSE PLATE HOLDER
2	4	041030	#10 - 24 NC X 1" MACHINE SCREW
3	4	022180	SPACER
4	4	044016	#10 - 24 KEPS NUT

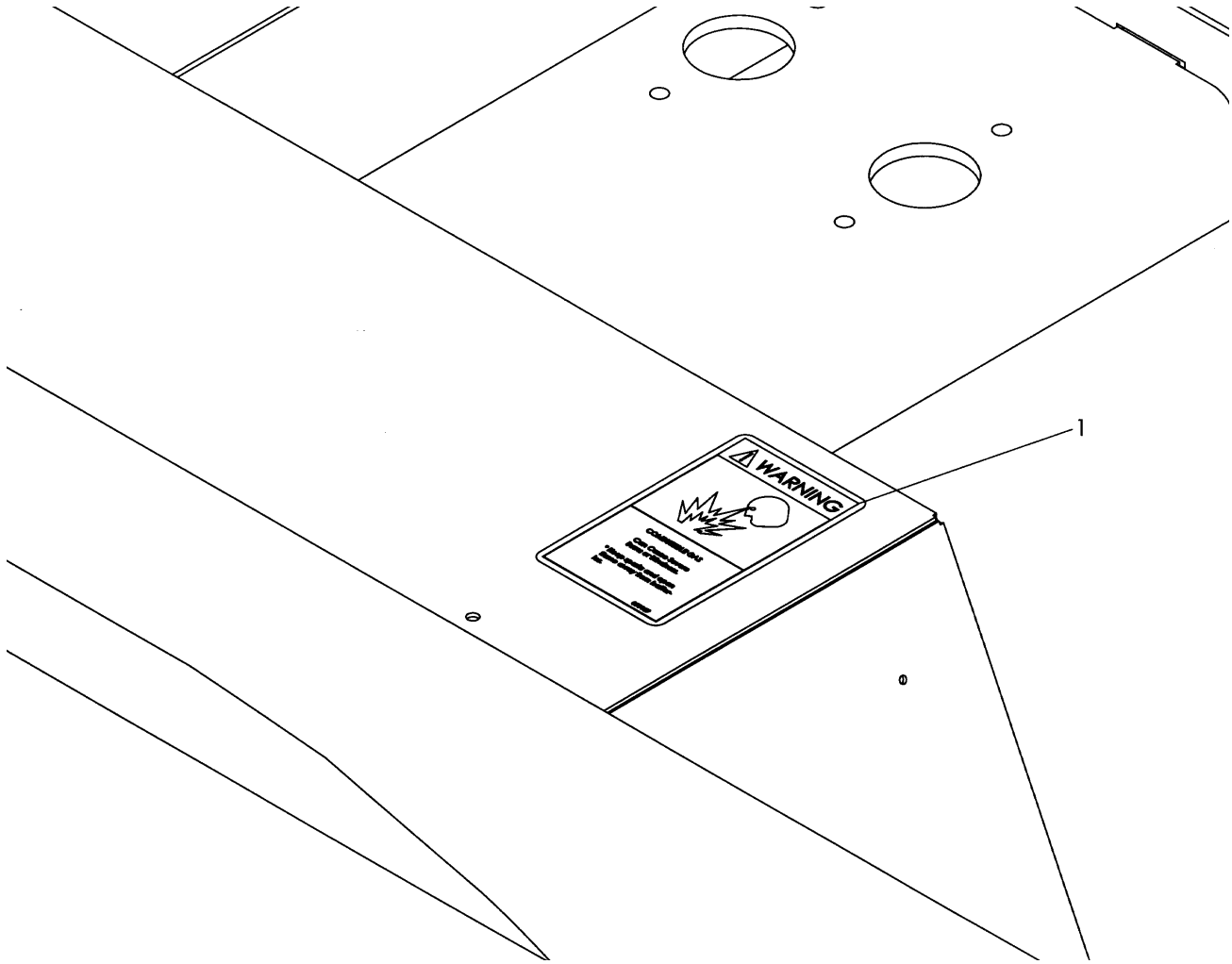
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
04-Allmand Yellow  
09-Flat Black

02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red





# DECAL PLACEMENT

D-1B

NO	REQ'D	PART NO	DESCRIPTION
1	1	090159	DECAL-WARNING COMBUSTIBLE GAS

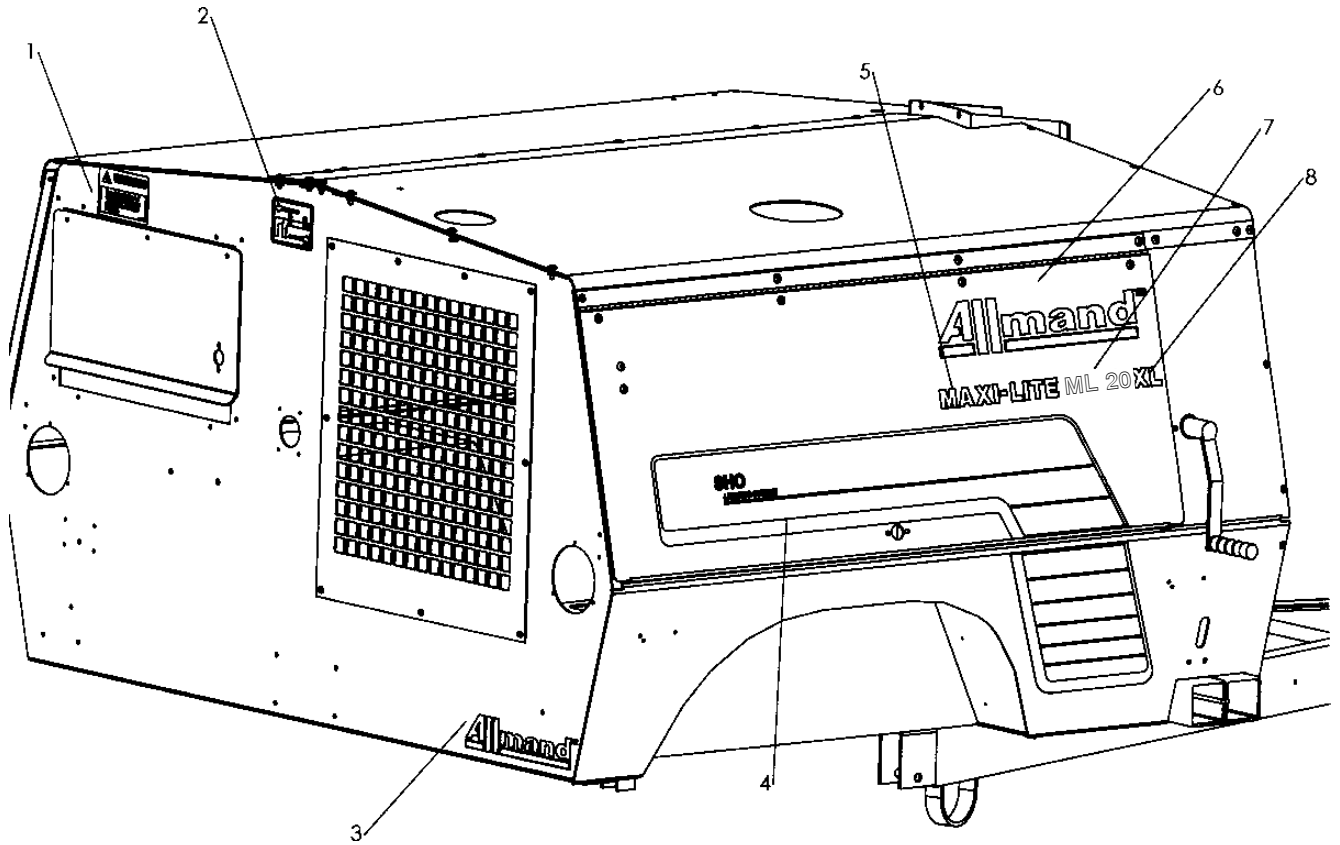
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
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09-Flat Black

02-Gloss Black  
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10-High temp Black

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11-Red



# DECAL PLACEMENT

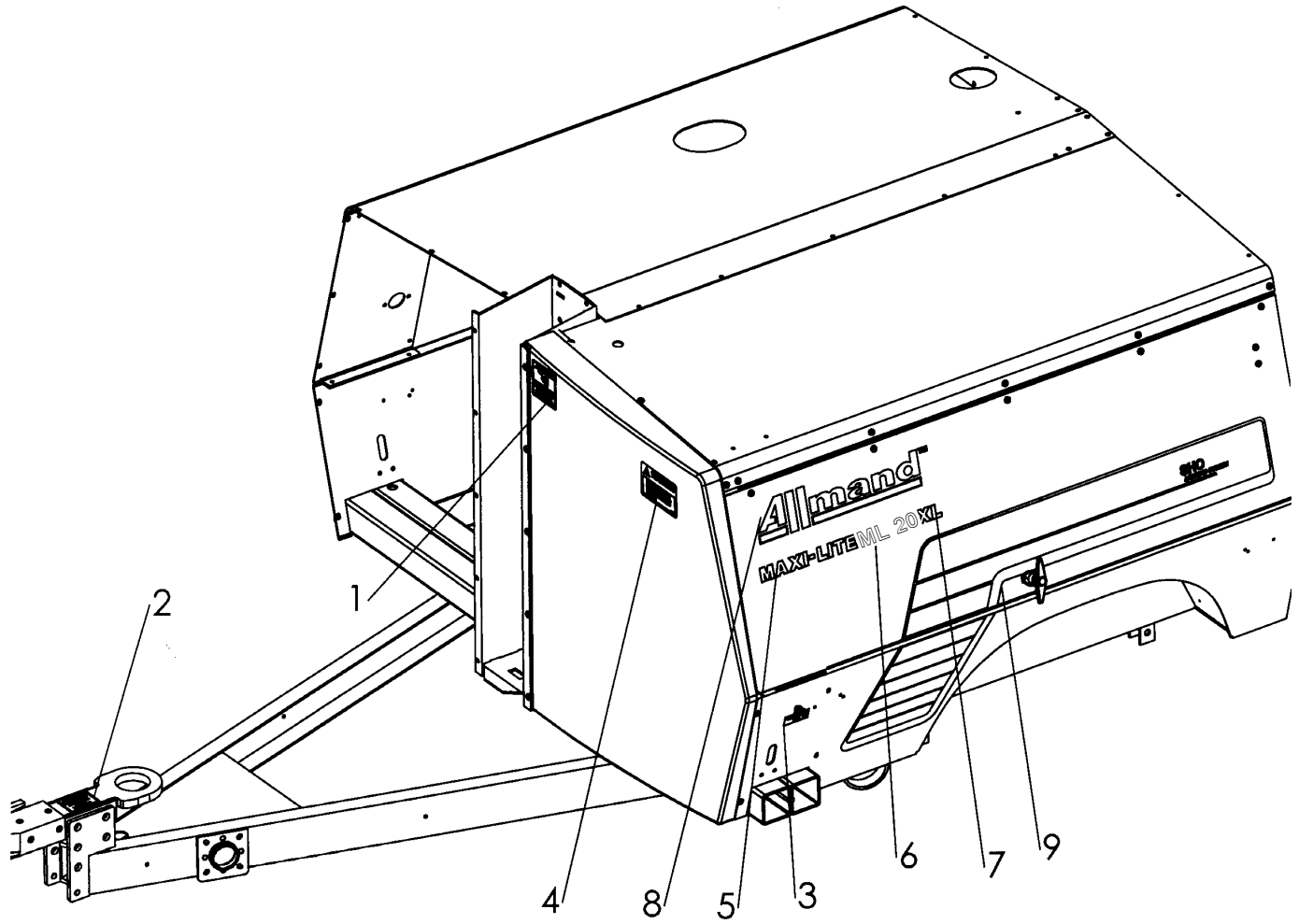
D-2B

NO	REQ'D	PART NO	DESCRIPTION
1	1	090003	DECAL - DO NOT STAND
2	1	090139	DECAL - UNLATCHED/LATCHED
3	1	090269	DECAL - ALLMAND YELLOW TO ORANGE 11.75"
4	1	352026	DECAL - GRADATION STRIPE SET
5	2	090255	DECAL - MAXI-LITE
6	2	090256	DECAL - ALLMAND, YELLOW TO ORANGE
7	2	090493	DECAL - ML 20
NS		090492	DECAL - ML 15
8	2	090267	DECAL - XL
NS	1	090065	DECAL - ARCTIC SPECIAL
NS	1	090164	DECAL - WARNING NON-VERTICAL
NS	1	090161	DECAL - MOVING PART HAZARD

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red



# DECAL PLACEMENT

D-3B

NO	REQ'D	PART NO	DESCRIPTION
1	1	090162	DECAL - DANGER HAZARDOUS VOLTAGE
2	1	090160	DECAL - WARNING EXCESSIVE TOW SPEED
3	1	090133	DECAL - GROUND LUG
4	1	090003	DECAL - DO NOT STAND
5	2	090255	DECAL - MAXI-LITE
6	2	090493	DECAL - ML 20
NS		090492	DECAL - ML 15
7	2	090267	DECAL - XL
NS	2	090065	DECAL - ARCTIC SPECIAL
8	2	090256	ALLMAND, YELLOW TO ORANGE DECAL
9	1	352026	DECAL - GRADATION STRIPE SET

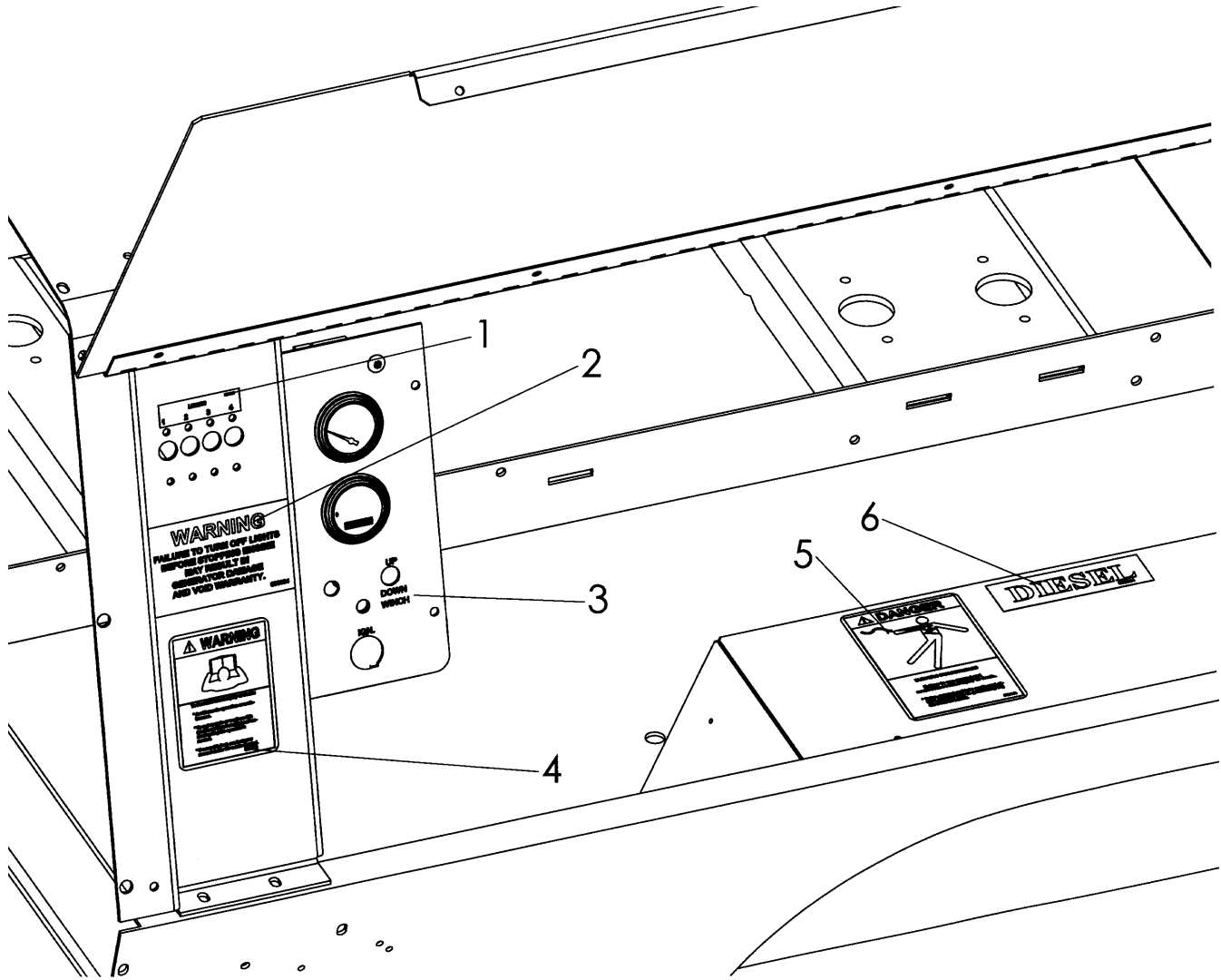
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
04-Allmand Yellow  
09-Flat Black

02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red



# DECAL PLACEMENT

D-4B

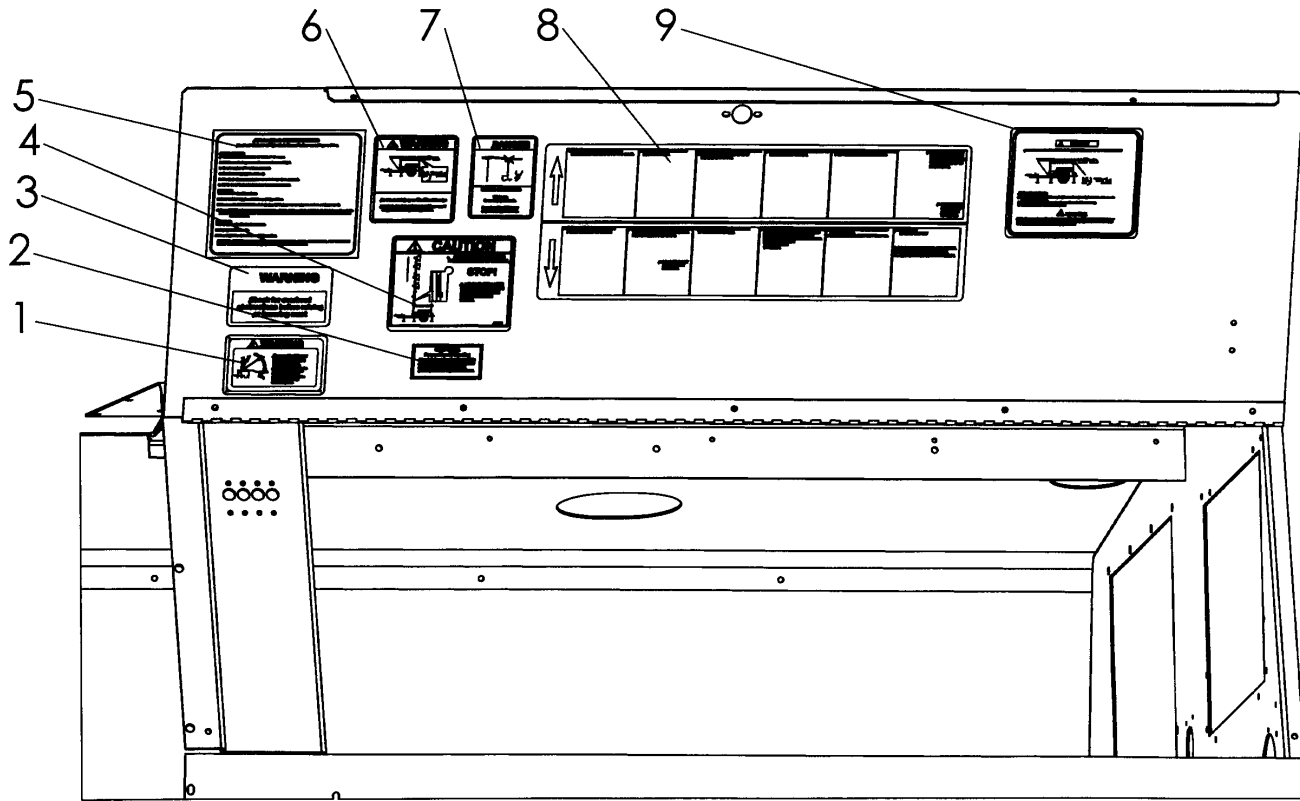
NO	REQ'D	PART NO	DESCRIPTION
1	1	090169	DECAL - LIGHTS 1,2,3,4 (4-LIGHT OPTION)
NS	1	090282	DECAL - LIGHTS 1,2,3,4 ,5,6 (6-LIGHT OPTION)
2	1	090084	DECAL - WARNING FAILURE TO TURN OFF LIGHTS
3	1	090261	DECAL - IGNITION START, ELECTRIC WINCH
4	1	090158	DECAL - WARNING OPERATORS MANUAL
5	1	090163	DECAL - DANGER ELECTRIC SHOCK
6	1	090034	DECAL-DIESEL

LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

01-White  
02-Gloss Black  
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05-Orange  
09-Flat Black  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red





# DECAL PLACEMENT

D-5B

NO	REQ'D	PART NO	DESCRIPTION
1	1	090152	DECAL - NON-VERTICAL TOWER
2	1	090005	DECAL - CHECK FOR OVERHEAD OBSTRUCTIONS
3	1	090179	DECAL - PROPOSITION 65, DIESEL
4	1	090205	DECAL - CAUTION, RED LATCH (ELECTRIC WINCH)
5	1	090151	DECAL - OPERATING INSTRUCTIONS
6	1	090263	DECAL - WARNING, PULL PIN
7	1	090165	DECAL - DANGER, ELECTRIC SHOCK
8	1	090262	DECAL - PICTORIAL OPERATOR, ELECTRIC WINCH
		090259	DECAL - PICTORIAL OPERATOR, MANUAL WINCH
9	1	090264	DECAL - LIFT INSTRUCTIONS

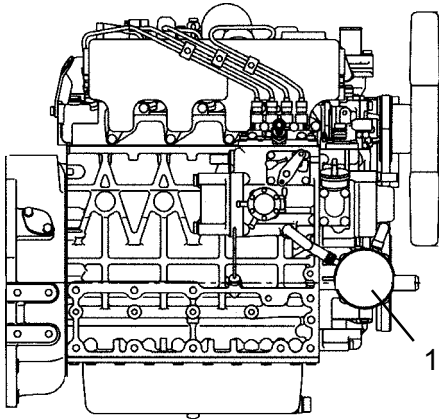
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:

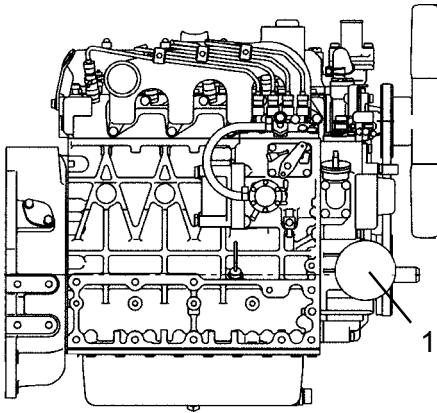
01-White  
04-Allmand Yellow  
09-Flat Black

02-Gloss Black  
05-Orange  
10-High temp Black

03-Gray  
06-Allmand Gold  
11-Red



**V2003T**



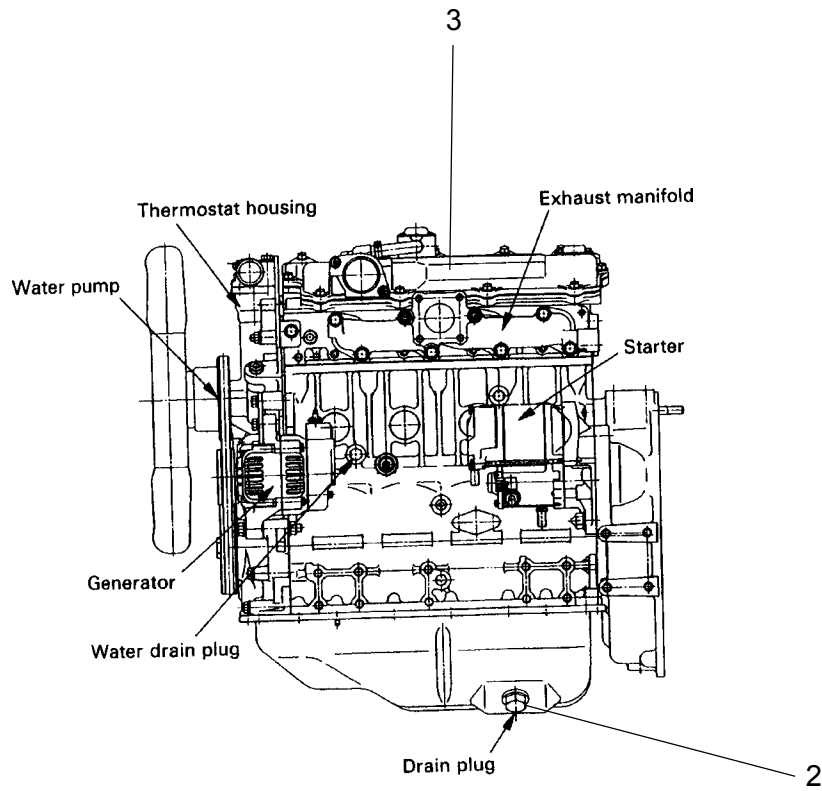
**V2203**

<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	1	350365	OIL FILTER, V1903, V2203, V2003T ENGINES
NS	1	350366	FUEL FILTER, V1903, V2203, V2003T ENGINES
NS	1	081016	FUEL LINE (1/4" FUEL LINE 72")
NS	1	081005	RETURN LINE (NYLON HOSE 80")
NS	1	081018	FUEL LINE (5/16" FUEL LINE 14")
NS	1	081018	FUEL LINE (5/16" FUEL LINE 10")
NS	1	@@@	TOP RADIATOR HOSE
NS	1	@@@	BOTTOM RADIATOR HOSE
NS	1	340105	GROUND STRAP
NS	1	@@@	RADIATOR
NS	1	680826	HIGH TEMPERATURE SWITCH
NS	1	350367	AIR CLEANER ELEMENT ONLY
NS	1	@@@	AIR CLEANER/FILTER ELEMENT ASSEMBLY
NS	1	680237*	ENGINE MOUNT BRACE (LEFT) (2203 AND 2003T)
NS	1	680238*	ENGINE MOUNT BRACE (RIGHT) (2203 AND 2003T)
NS	1	340301	OIL PRESSURE SWITCH
NS		680139	FUEL SOLENOID, KUBOTA 4 CYL

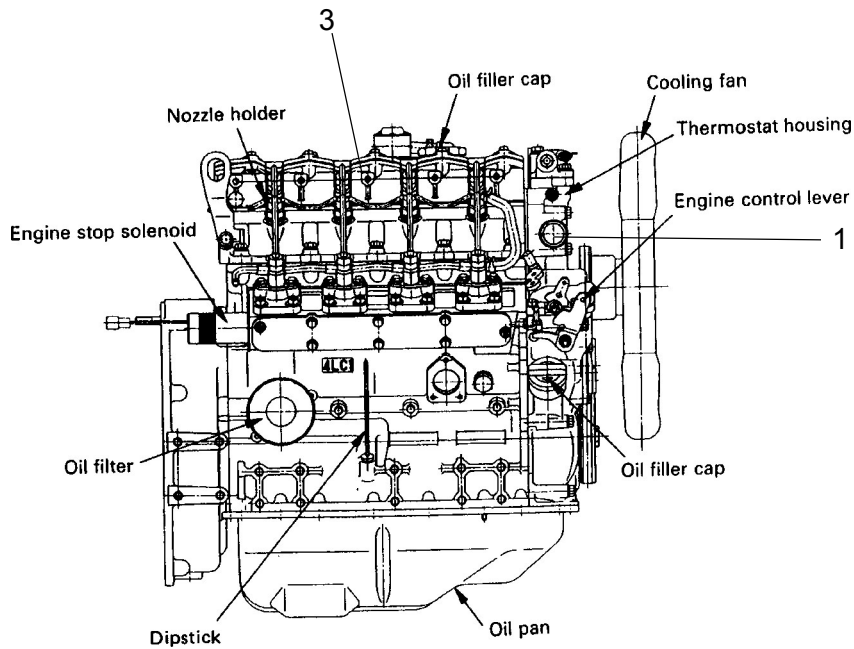
@@@ = See local Kubota Dealer

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White  
 02-Gloss Black  
 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red



*Note:  
Engine details may  
vary depending on the  
specifications.*

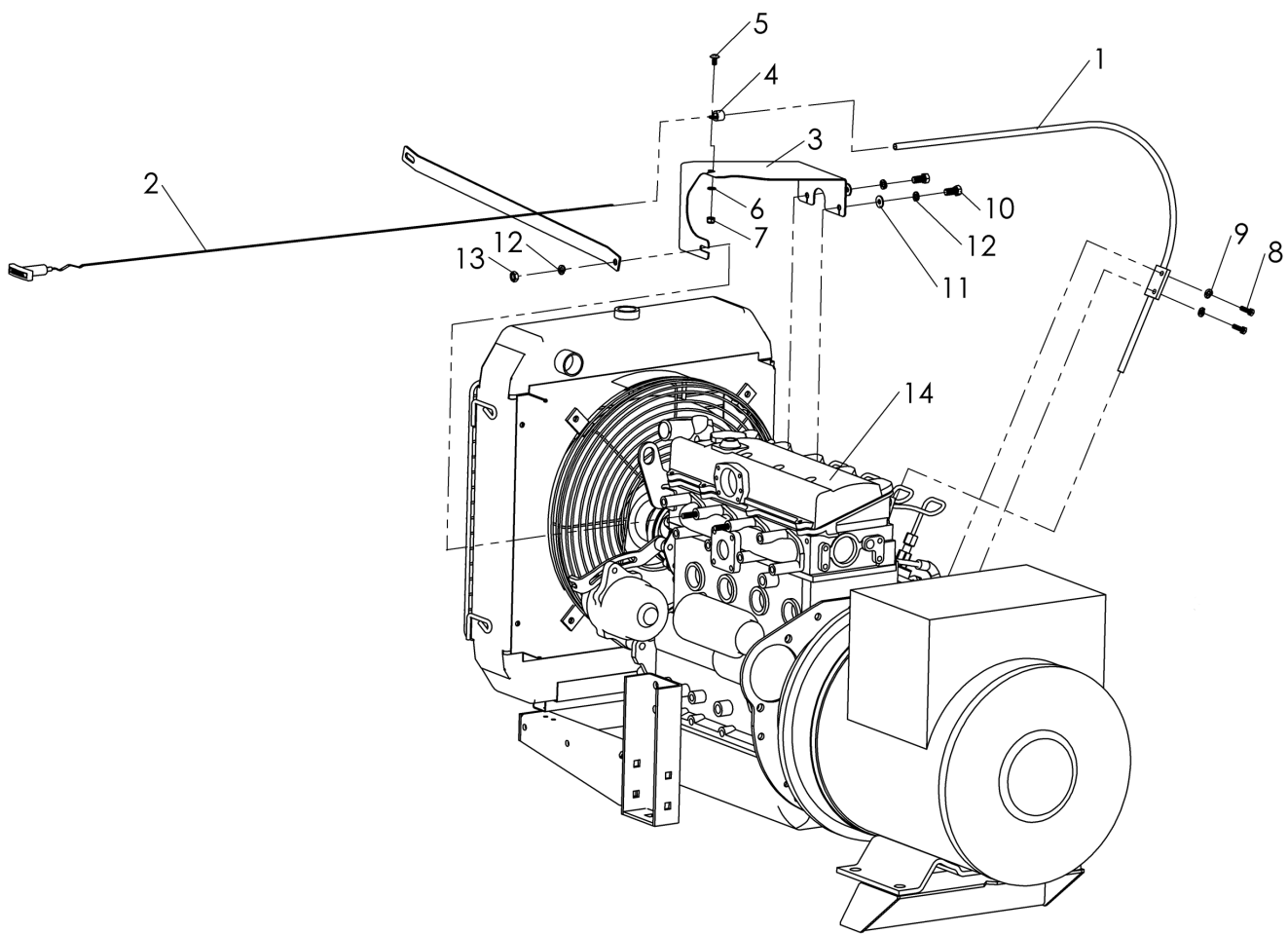


<b>NO</b>	<b>REQ'D</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	1	@@@@ 680334	HIGH TEMPERATURE SWITCH 205° (2 PRONG) HIGH TEMPERATURE SWITCH 230° (3 PRONG)
2	1	@@@@	OIL DRAIN PLUG
3	1	680275	ISUZU 4L31 ENGINE ONLY (COMPLETE)
NS	1	@@@@	AIR CLEANER DUST CAP
NS	1	@@@@	AIR CLEANER
NS	1	@@@@	AIR INTAKE HOSE
NS	1	@@@@	OIL PRESSURE SWITCH
NS	1	@@@@	UPPER RADIATOR HOSE
NS	1	@@@@	RADIATOR
NS	52"	081005	NYLON RETURN LINE
NS	20"	081016	1/4 FUEL LINE
NS	1	@@@@	MUFFLER GASKET
NS	1	680331	AIR CLEANER ELEMENT (PRIMARY)
NS	1	680332	AIR CLEANER ELEMENT (SECONDARY)
NS	1	650221	OIL FILTER
NS	1	650220	FUEL FILTER

LEGEND: NS= Not Shown  
 \*\* =Purchase locally  
 @@@@ = See local ISUZU Dealer

\* Use these codes to designate color needed:  
 01-White  
 02-Gloss Black  
 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red

# Isuzu 4LE Extended Dipstick



**NO REQ'D PART NO DESCRIPTION**

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**Isuzu 4LE Extended Dipstick**

**E-3B**

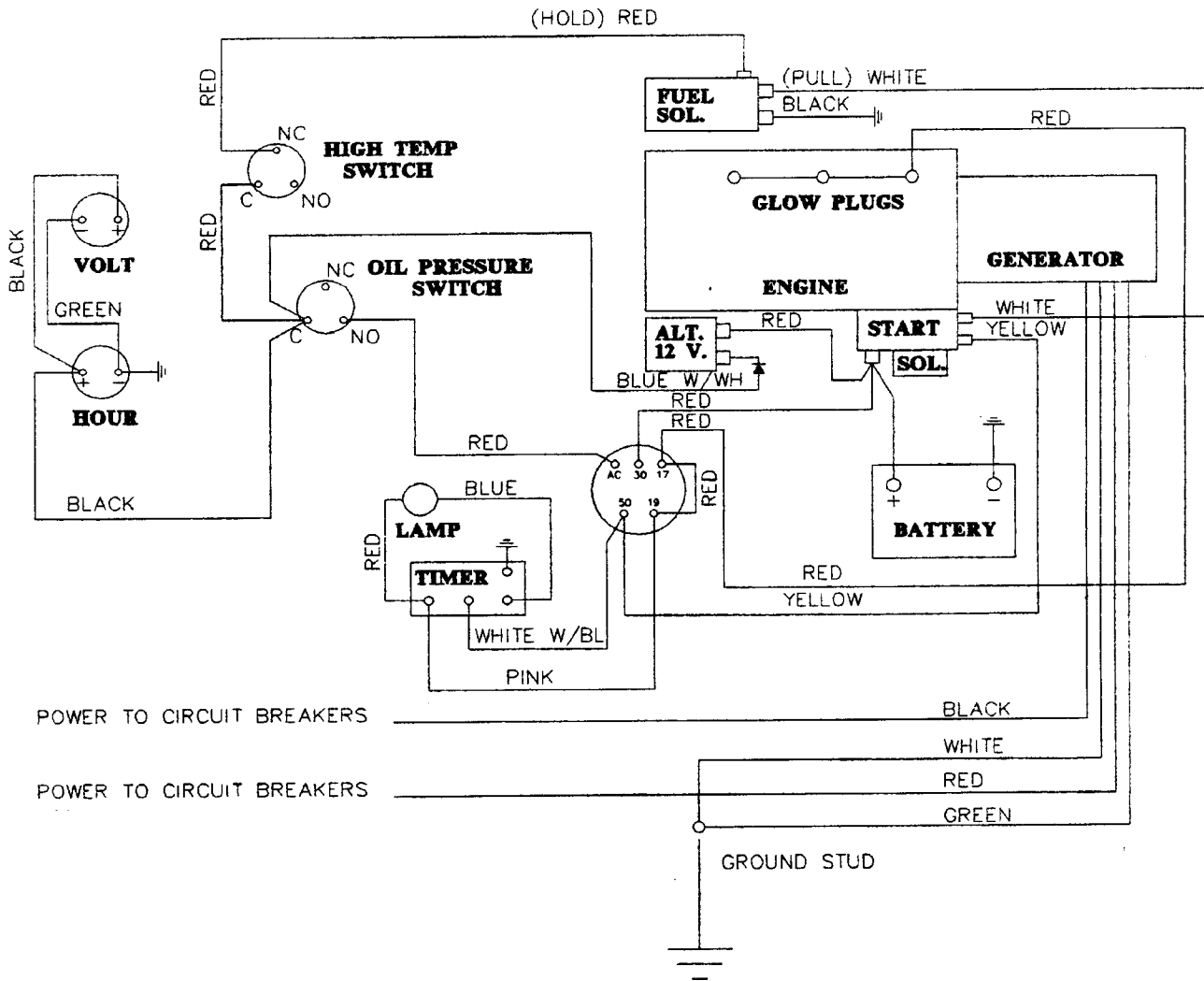
1	1	100606	ISUZU EXTENDED DIPSTICK TUBE
2	1	100605	ISUZU EXTENDED DIPSTICK
3	1	100340	ISUZU 4LE EXTENDED DIPSTICK BRACKET
4	1	022016	# 6 CUSHION CLAMP, 1/4" HOLE
5	1	041078	1/4-20 x 1/2" PLATED PHILIPS TRUSS HEAD SCREW
6	1	047009	1/4" SS FLAT WASHER
7	1	044023	NUT 1/4-20 NYLOC HEX PLATED
8	2	100710	6MM - 1.00 X 20MM HEX SCREW
9	2	043020	1/4" PLATED SPLIT LOCK WASHER
10	2	042027	M8 - 1.25 x 16mm HEX BOLT
11	2	047005	1/4" PLATED FLAT WASHER
12	3	043055	5/16" PLATED SPLIT LOCK WASHER
13	1	042082	8MM - 1.25 HEX NUT
14	1	680275	ISUZU 4LE ENGINE

LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
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 05-Orange  
 06-Allmand Gold  
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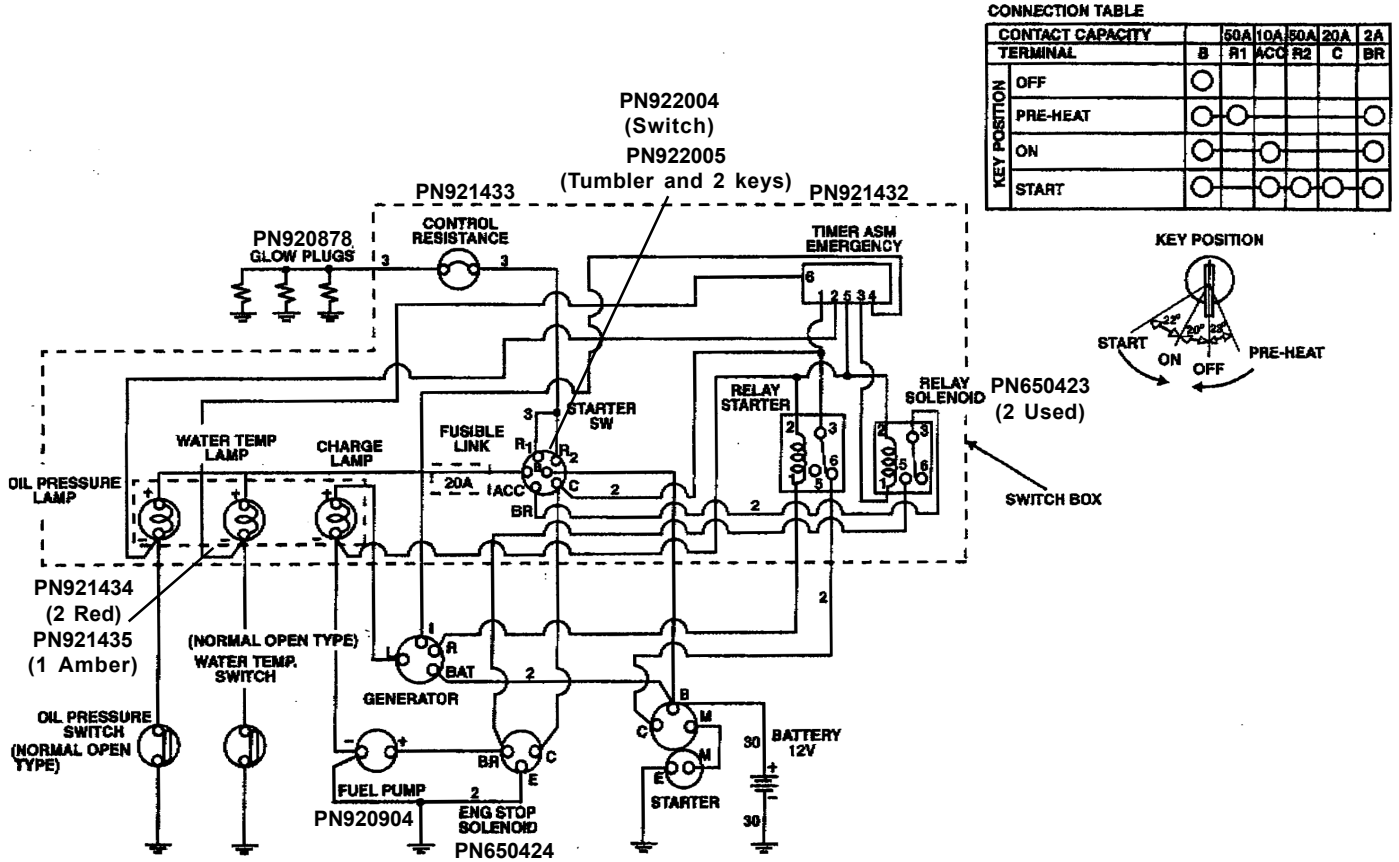
# ELECTRICAL DIAGRAMS

## KUBOTA ENGINE/GENERATOR SET





ISUZU 4LE1 ENGINE



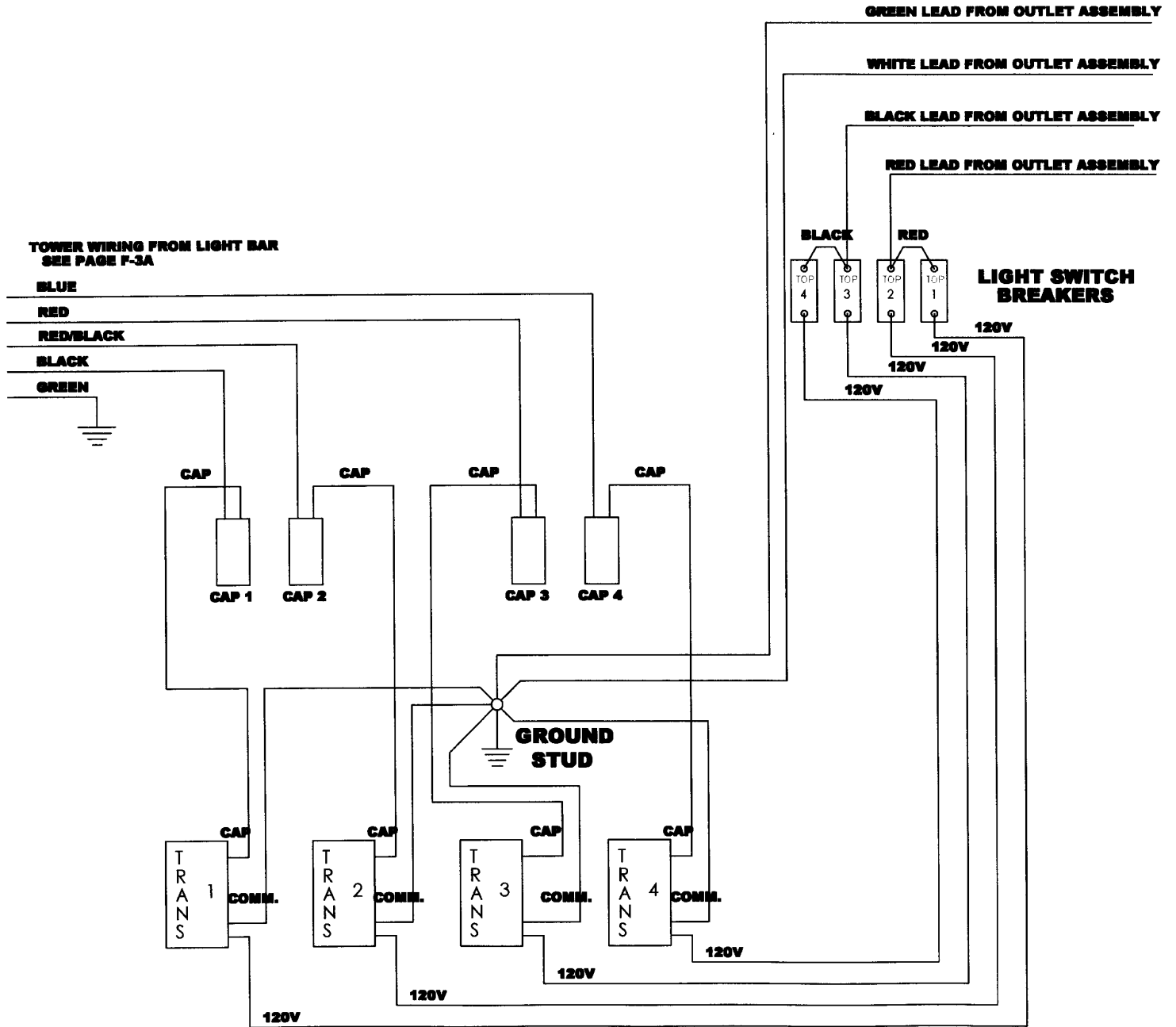
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:

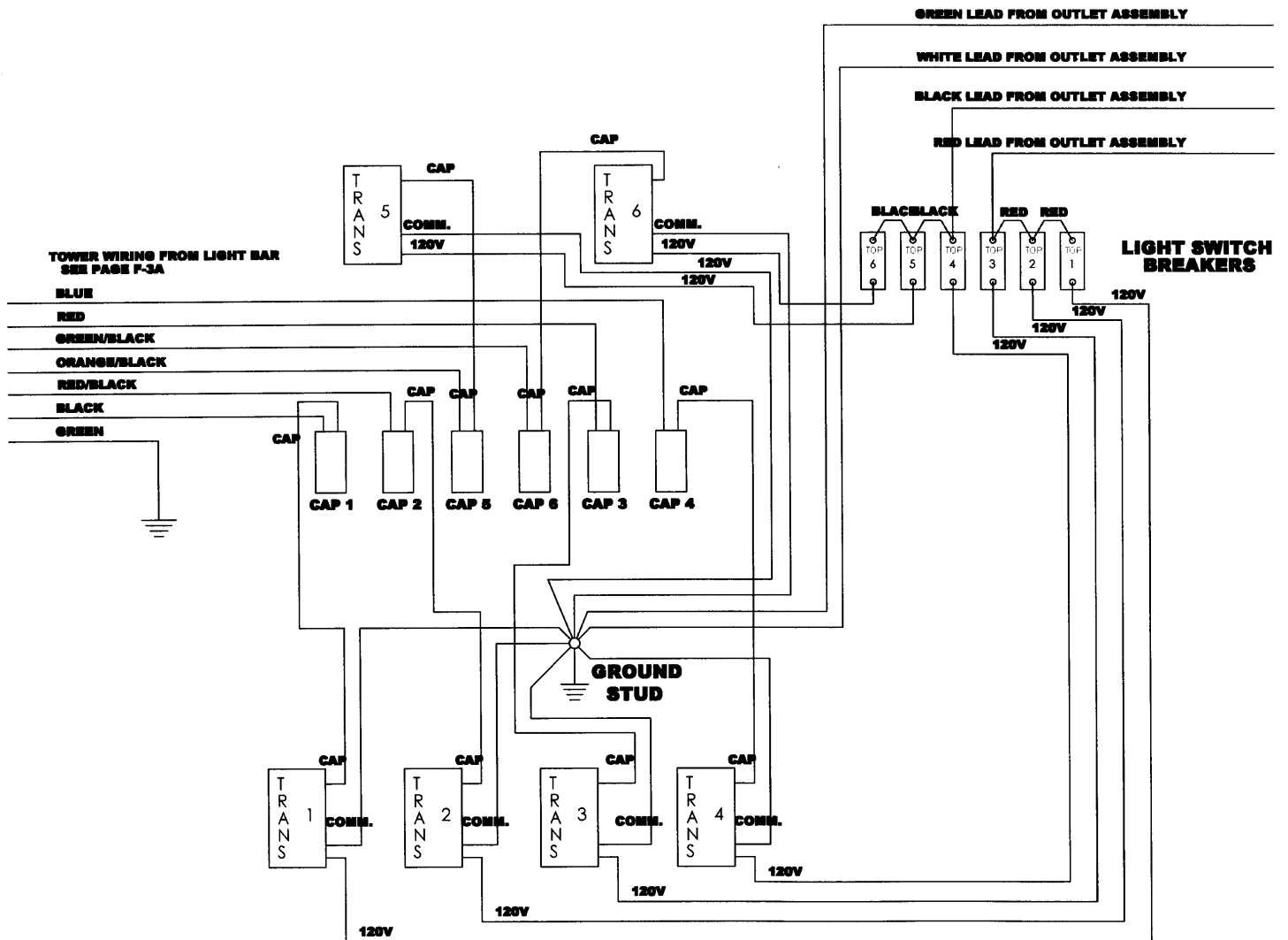
01-White	02-Gloss Black	03-Gray
04-Allmand Yellow	05-Orange	06-Allmand Gold
09-Flat Black	10-High temp Black	11-Red

# ELECTRICAL DIAGRAMS

## BALLAST ASSEMBLY, 4-LIGHT CSA



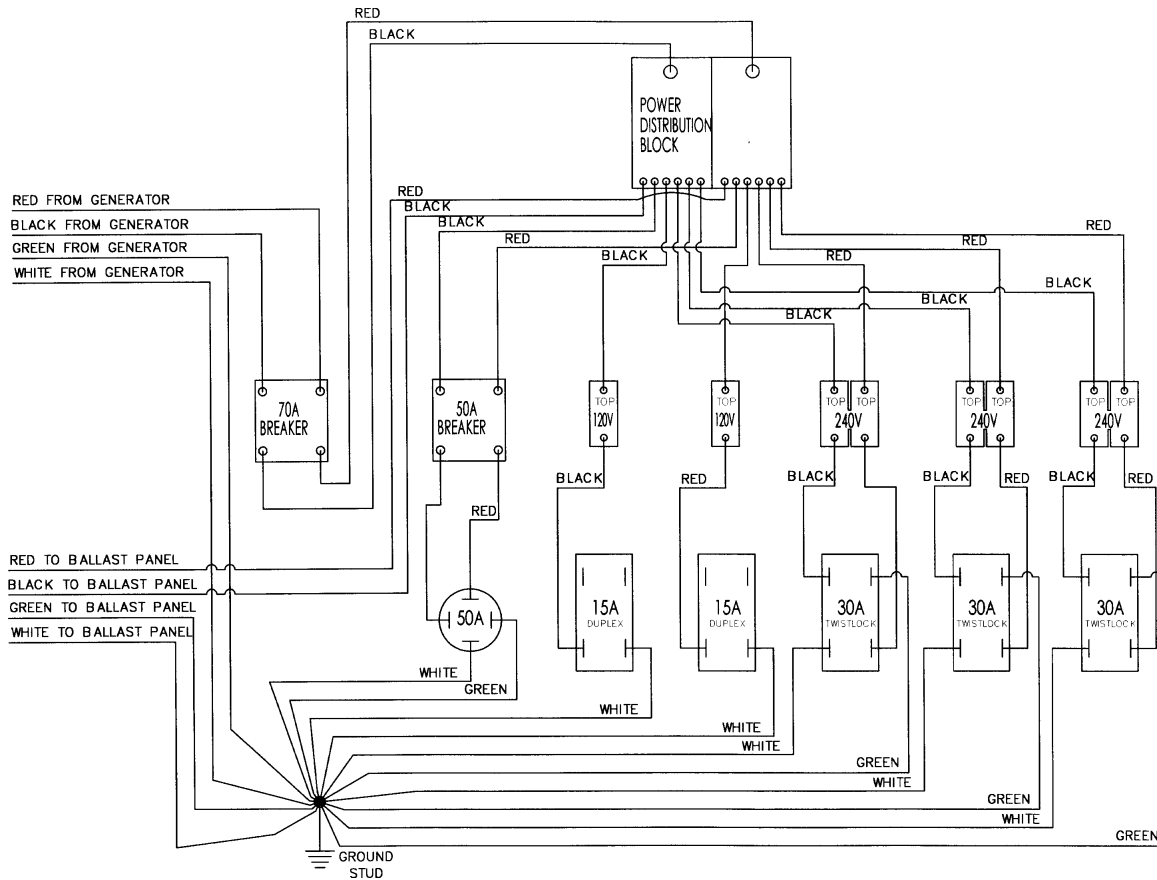
BALLAST ASSEMBLY, 6-LIGHT CSA



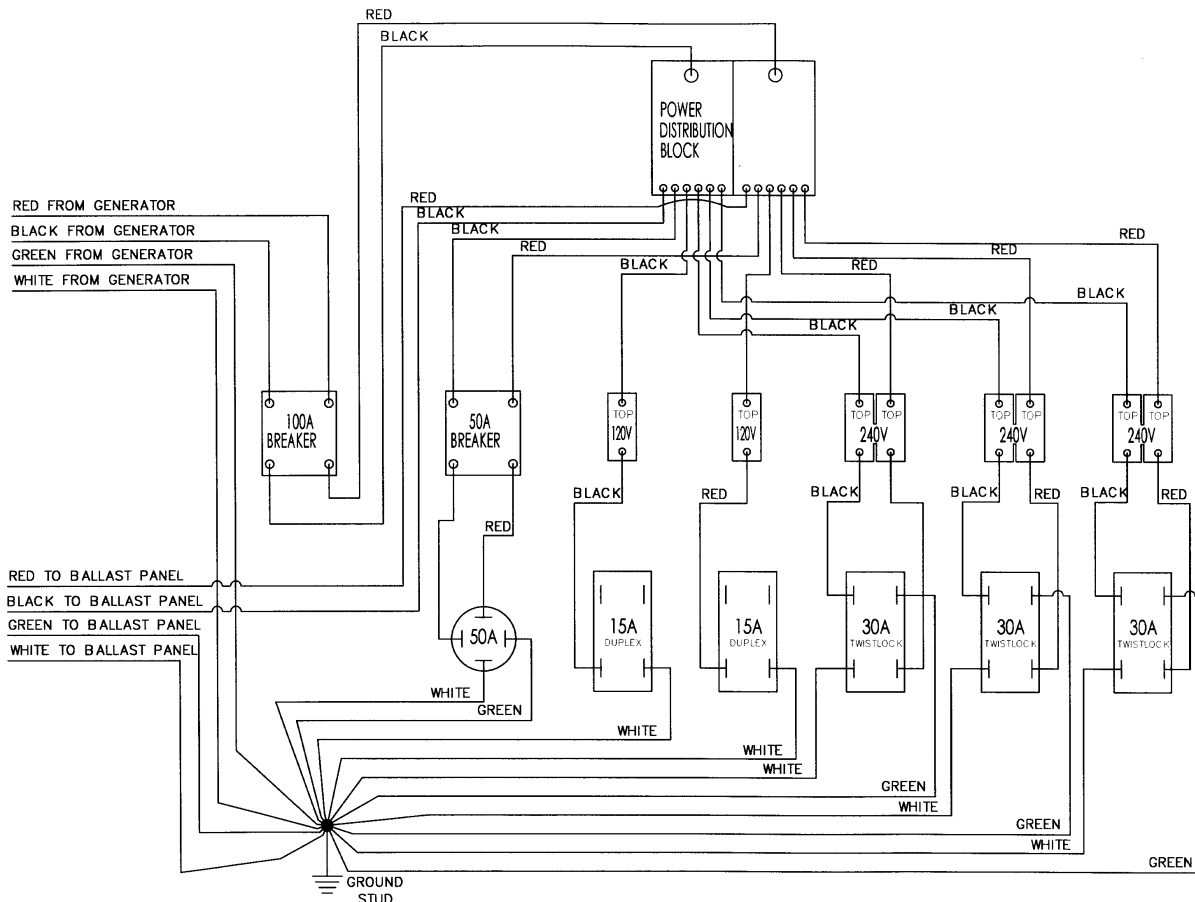
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

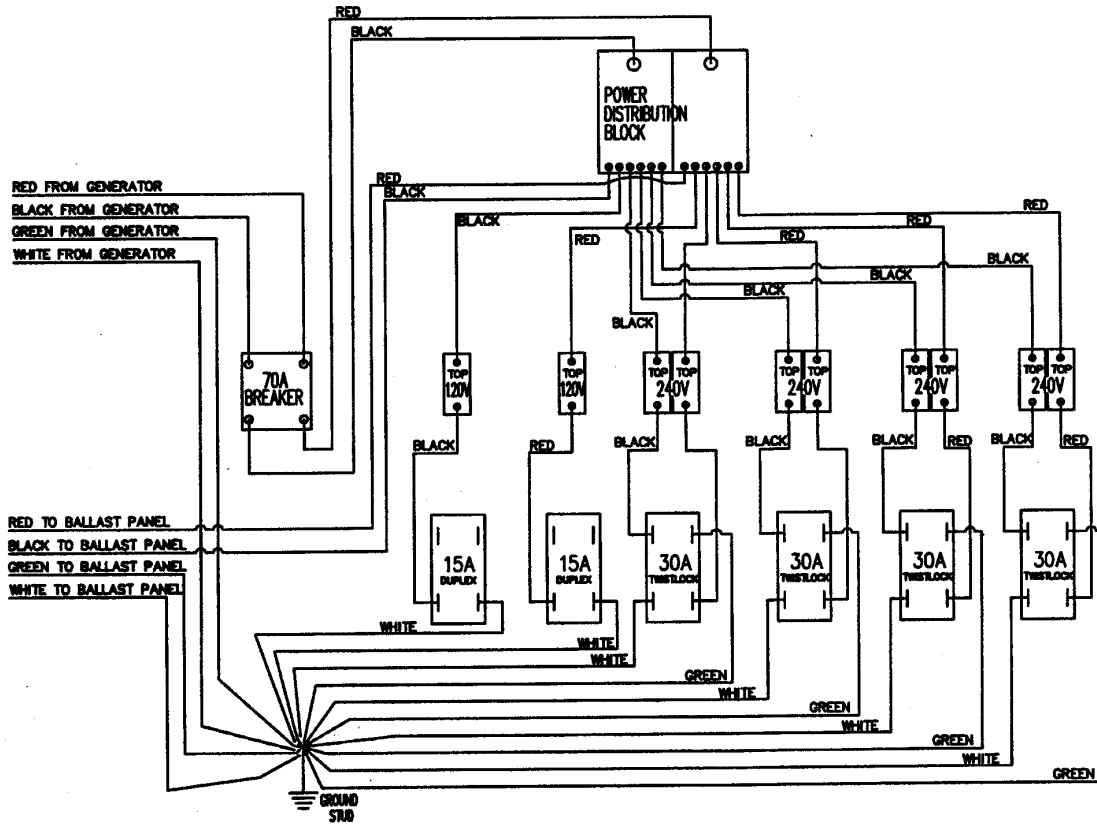
\* Use these codes to designate color needed:  
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 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red

# OUTLET ASSEMBLY 15KW WITH EXTRA 50A RECEPTACLE

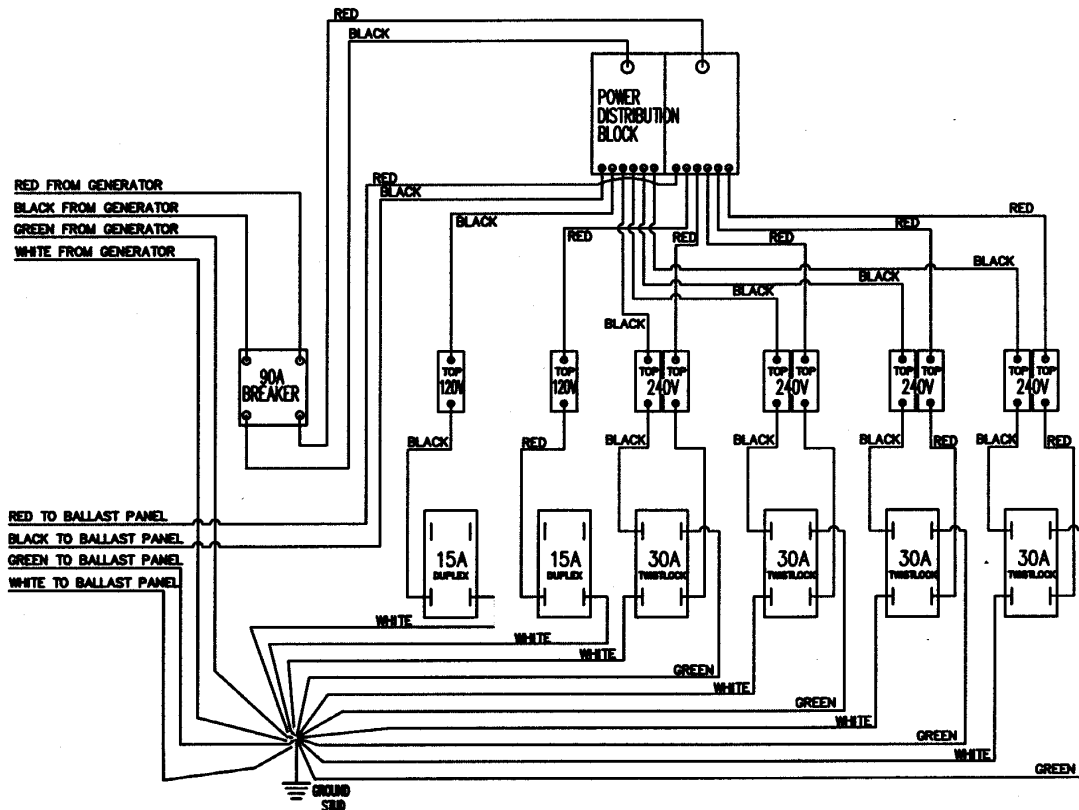


# OUTLET ASSEMBLY 20KW WITH EXTRA 50A RECEPTACLE





OUTLET ASSEMBLY CSA 20KW WITH FOUR 30A RECEPTACLES

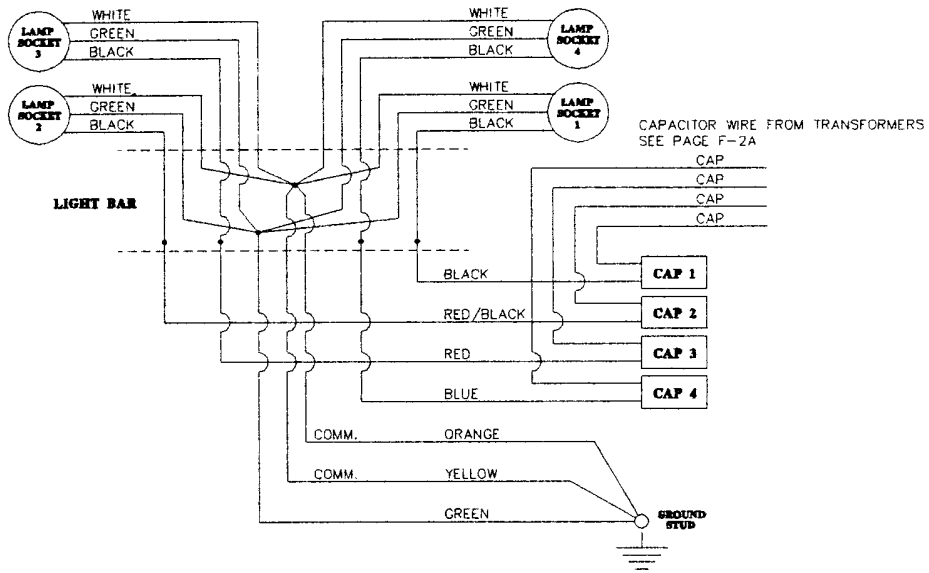


LEGEND: NS= Not Shown  
\*\* =Purchase locally

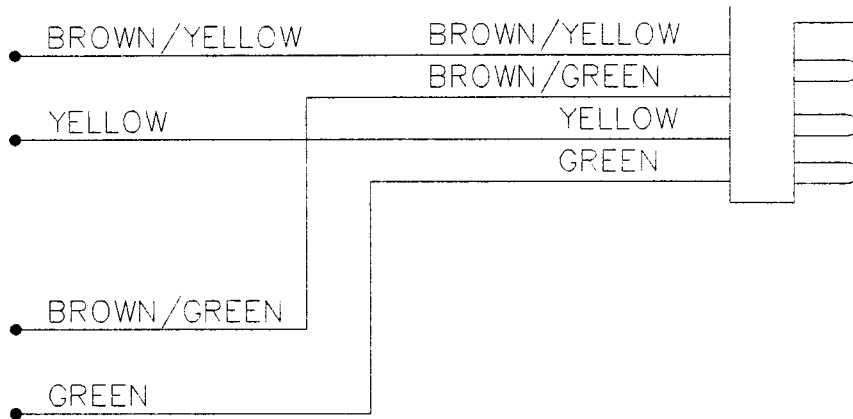
\* Use these codes to designate color needed:  
01-White  
02-Gloss Black  
03-Gray  
04-Allmand Yellow  
05-Orange  
06-Allmand Gold  
09-Flat Black  
10-High temp Black  
11-Red

03-Gray  
06-Allmand Gold  
11-Red

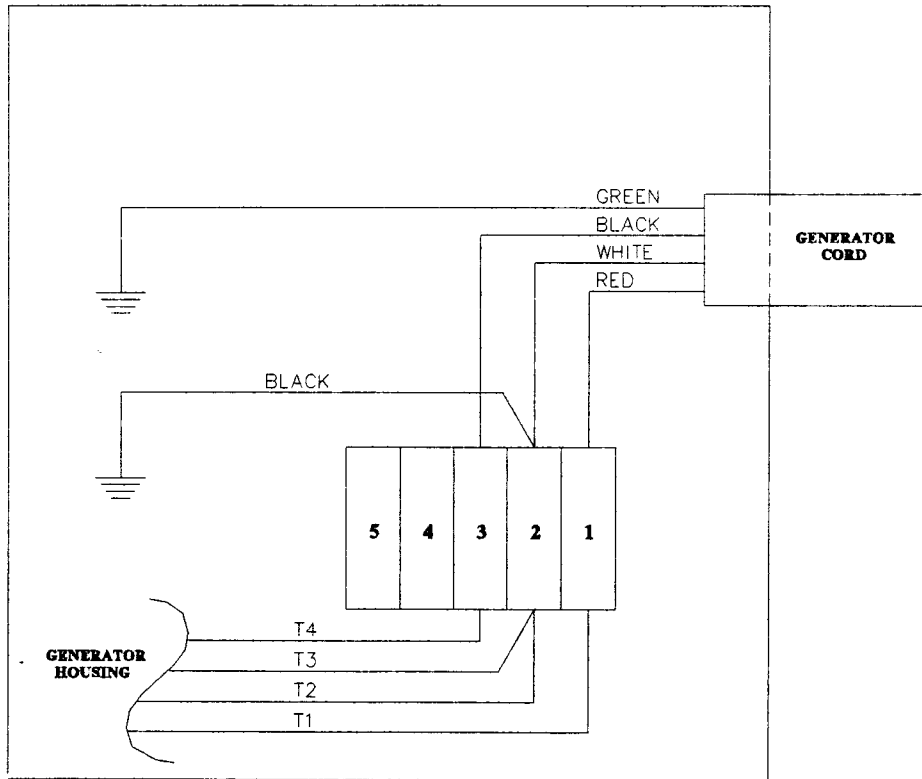
LAMP SOCKET/BALLAST COMPARTMENT WIRING, 4-LIGHT



352037 TAILLIGHT WIRING HARNESS



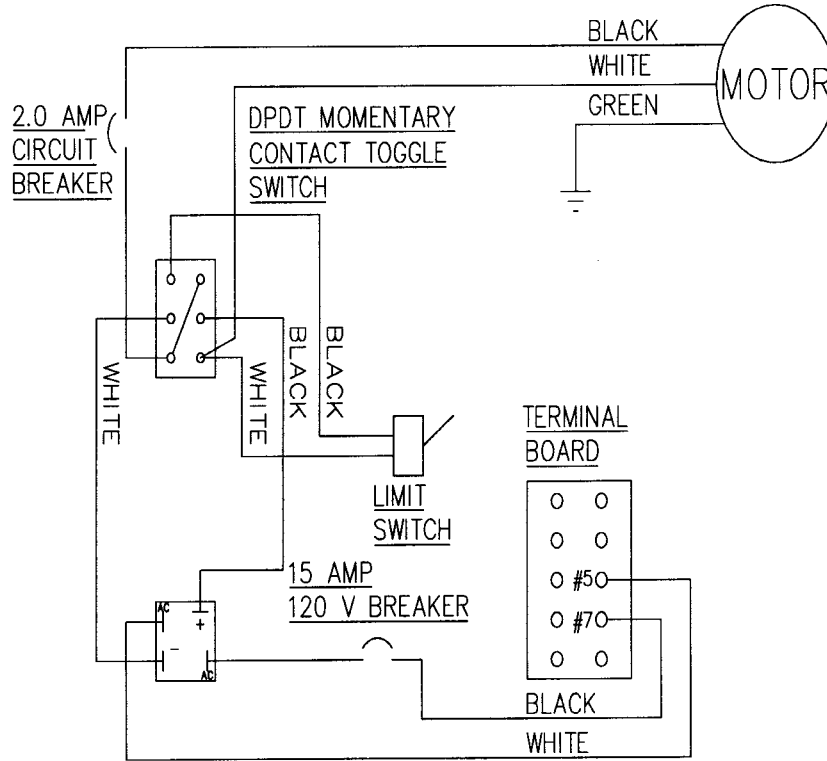
MARATHON GENERATOR ELECTRICAL BOX WIRING



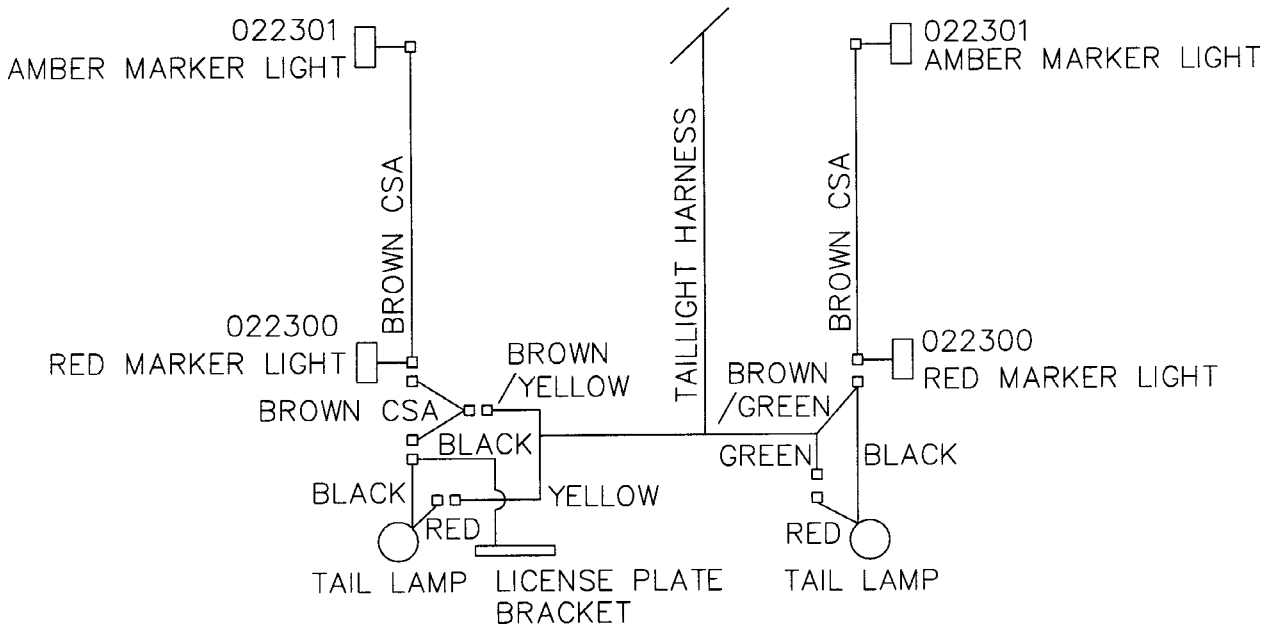
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White  
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 04-Allmand Yellow  
 05-Orange  
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 11-Red

DUTTON-LAINSON STRONG ARM WINCH SCHEMATIC

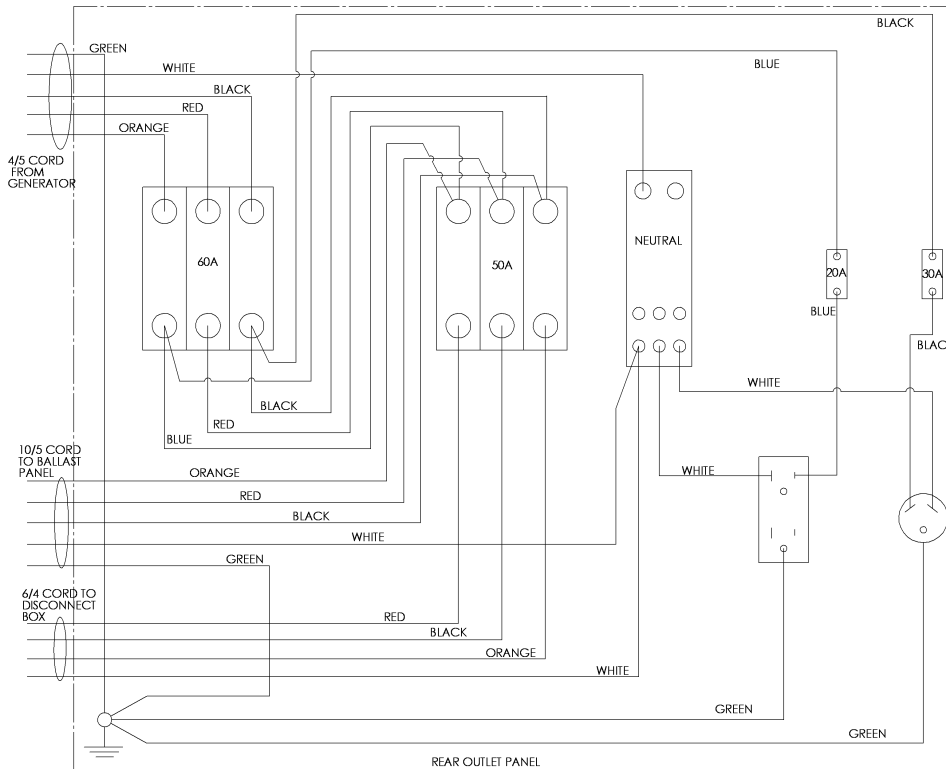
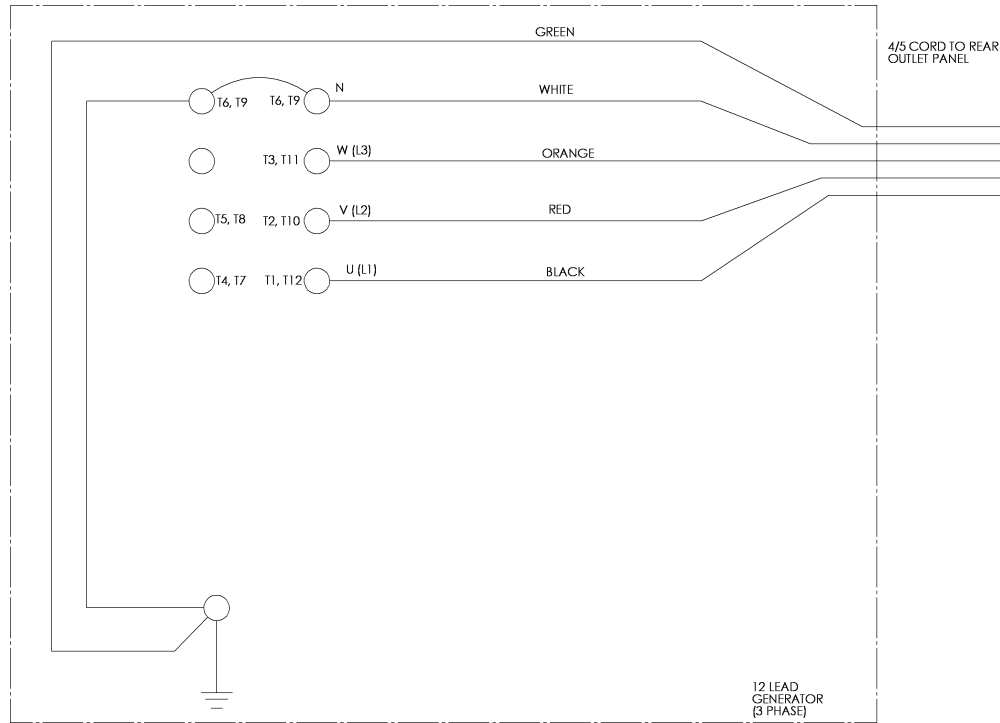


CSA TAILLIGHT WIRING WITH MARKER LIGHTS





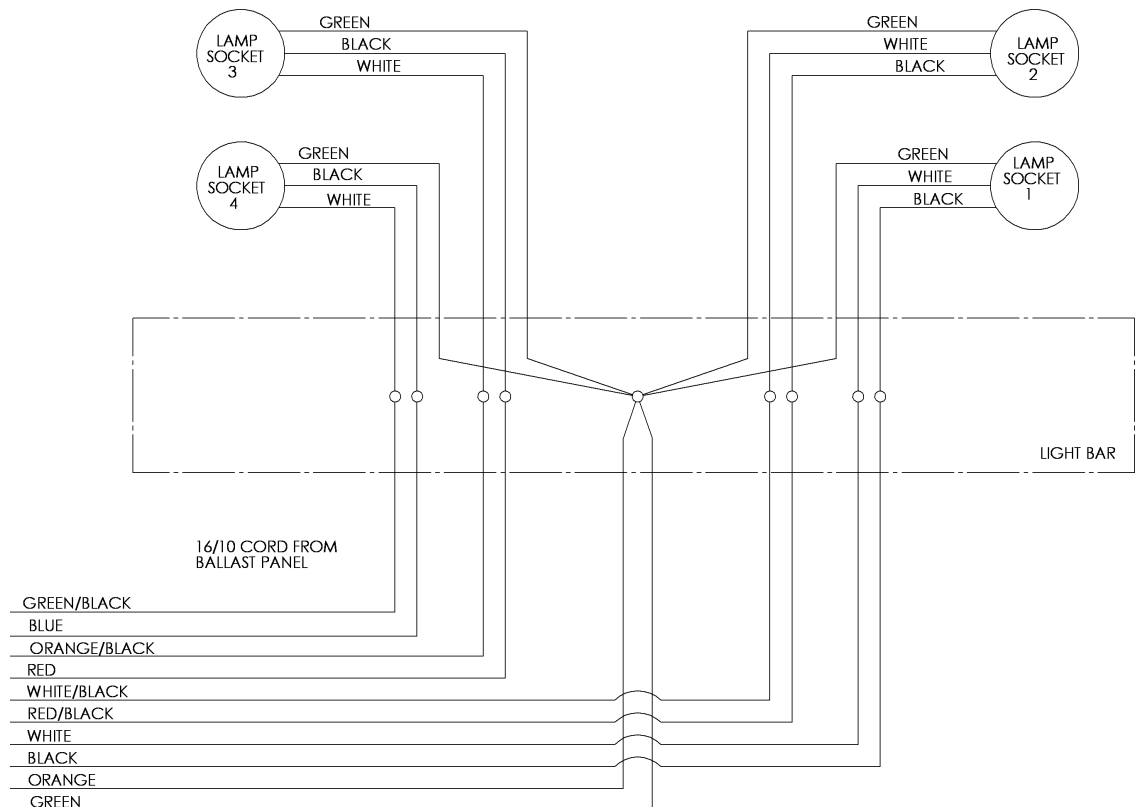
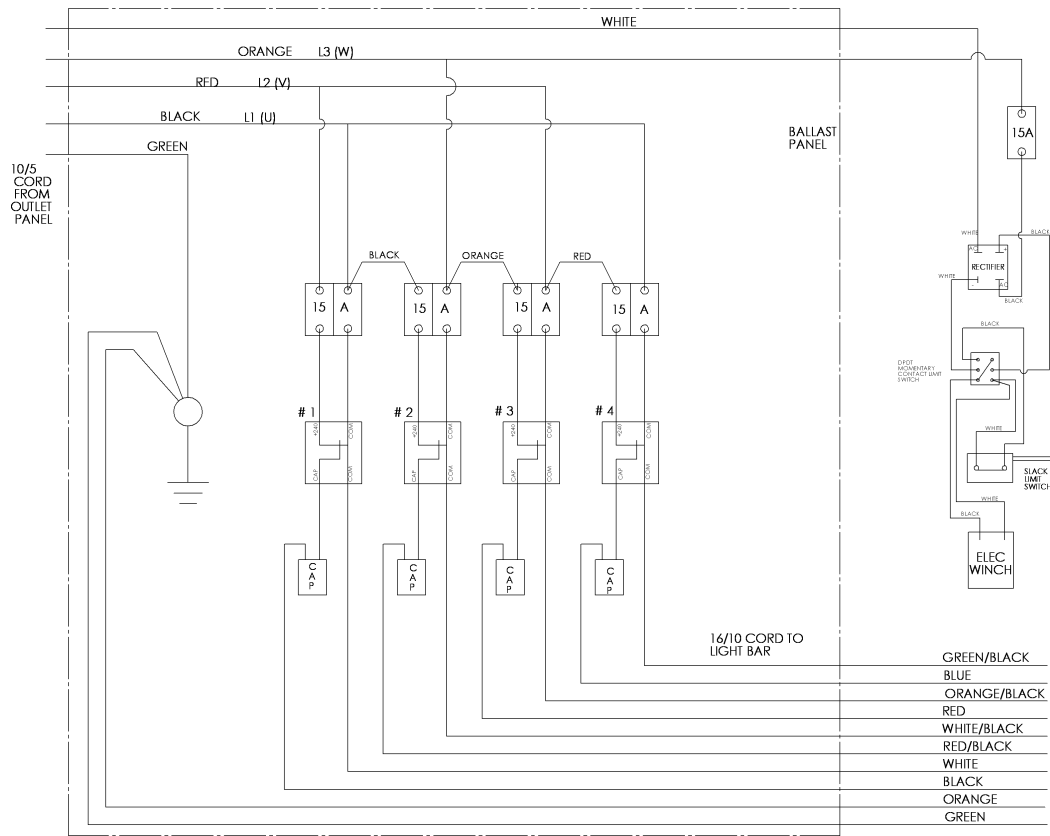
**240 Volt 3 Phase Electric Winch 4 Light Wiring Diagrams**



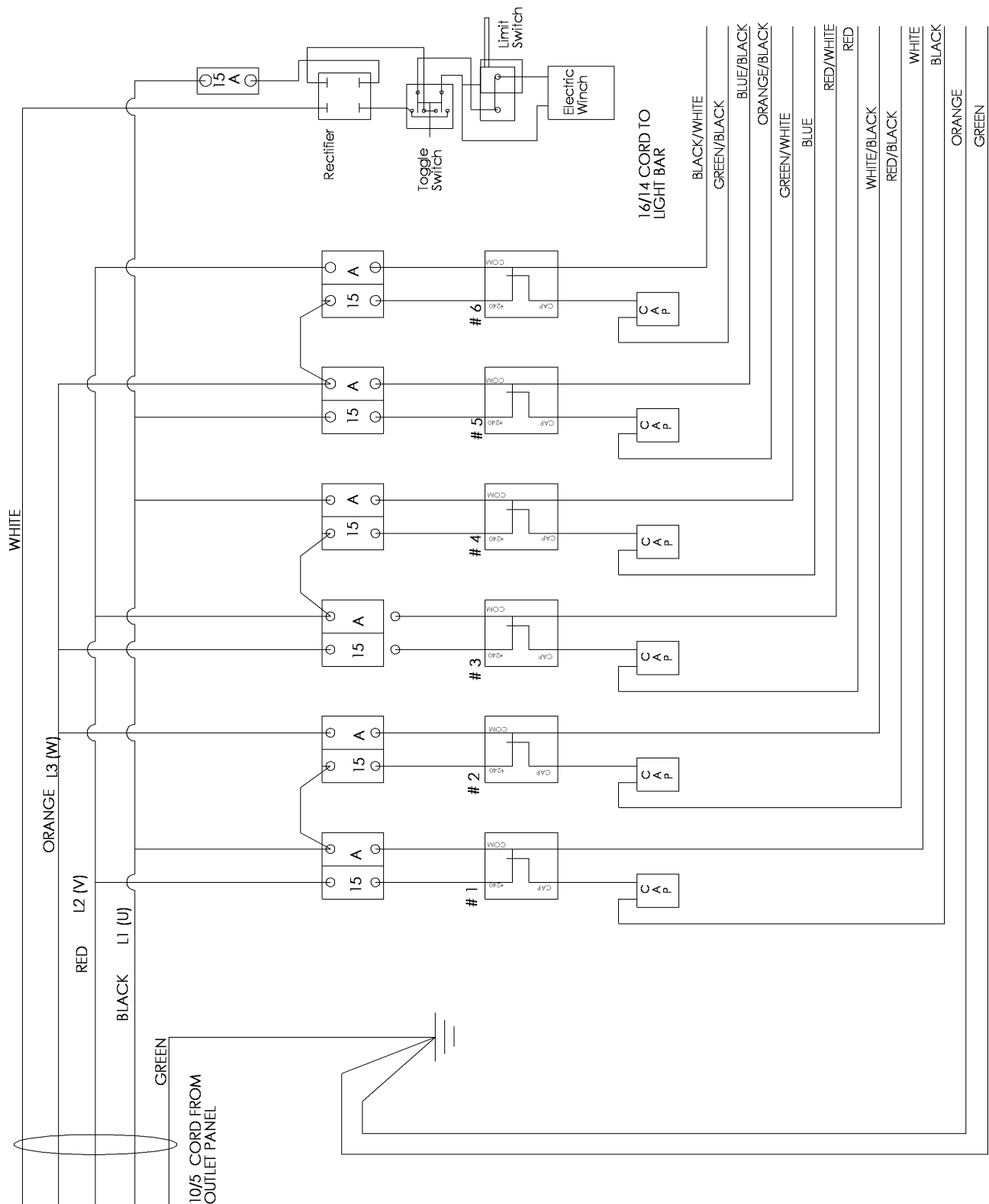
LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
01-White  
02-Gloss Black  
03-Gray  
04-Allmand Yellow  
05-Orange  
06-Allmand Gold  
09-Flat Black  
10-High temp Black  
11-Red

240 Volt 3 Phase Electric Winch 4 Light Wiring Diagram



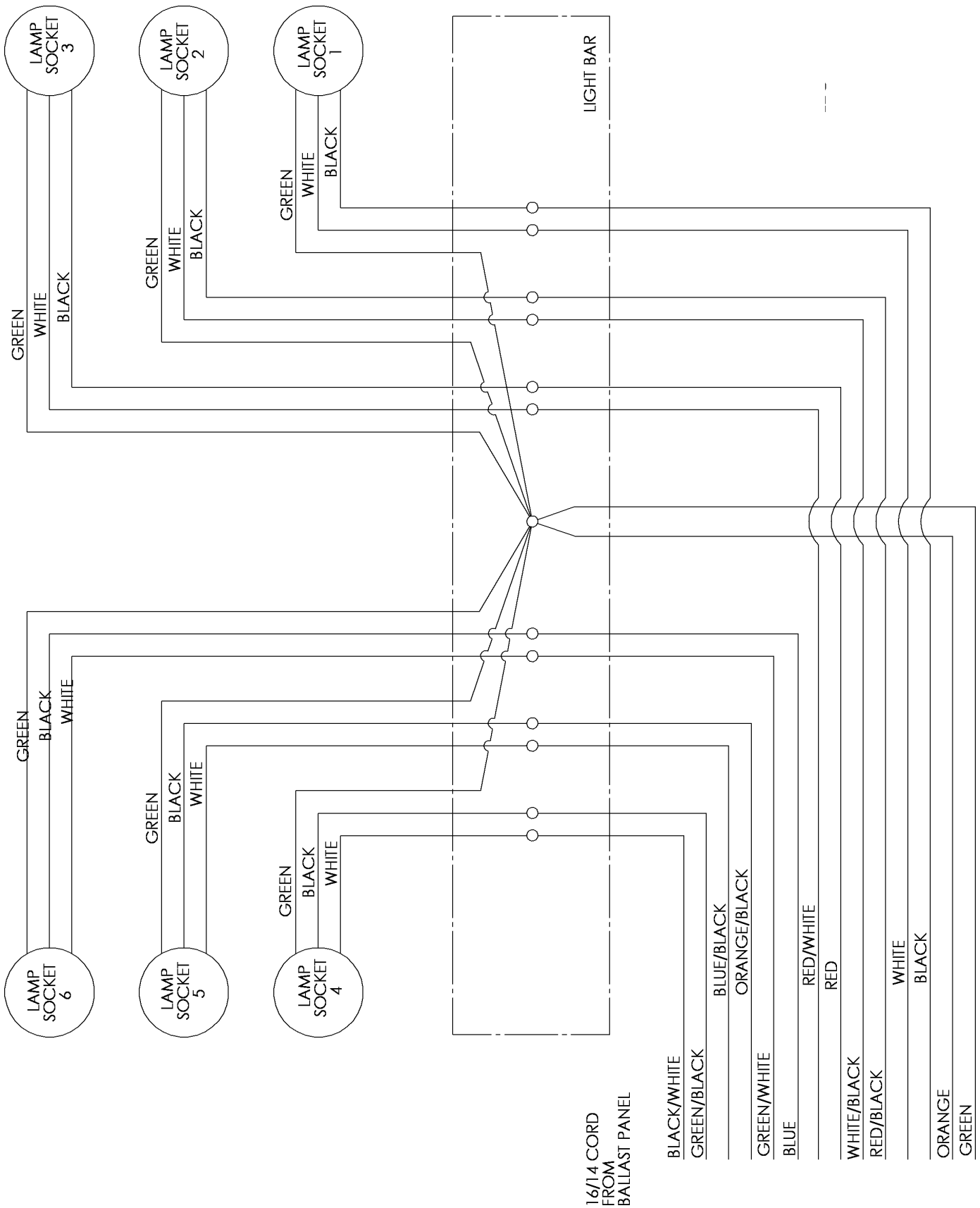
**240 Volt 3 Phase Electric Winch 6 Light Ballast Panel Wiring Diagram**



LEGEND: NS= Not Shown  
\*\* =Purchase locally

\* Use these codes to designate color needed:  
 01-White                      02-Gloss Black                      03-Gray  
 04-Allmand Yellow              05-Orange                      06-Allmand Gold  
 09-Flat Black                      10-High temp Black                      11-Red

240 Volt 3 Phase Electric Winch 6 Light Light Bar Wiring Diagram

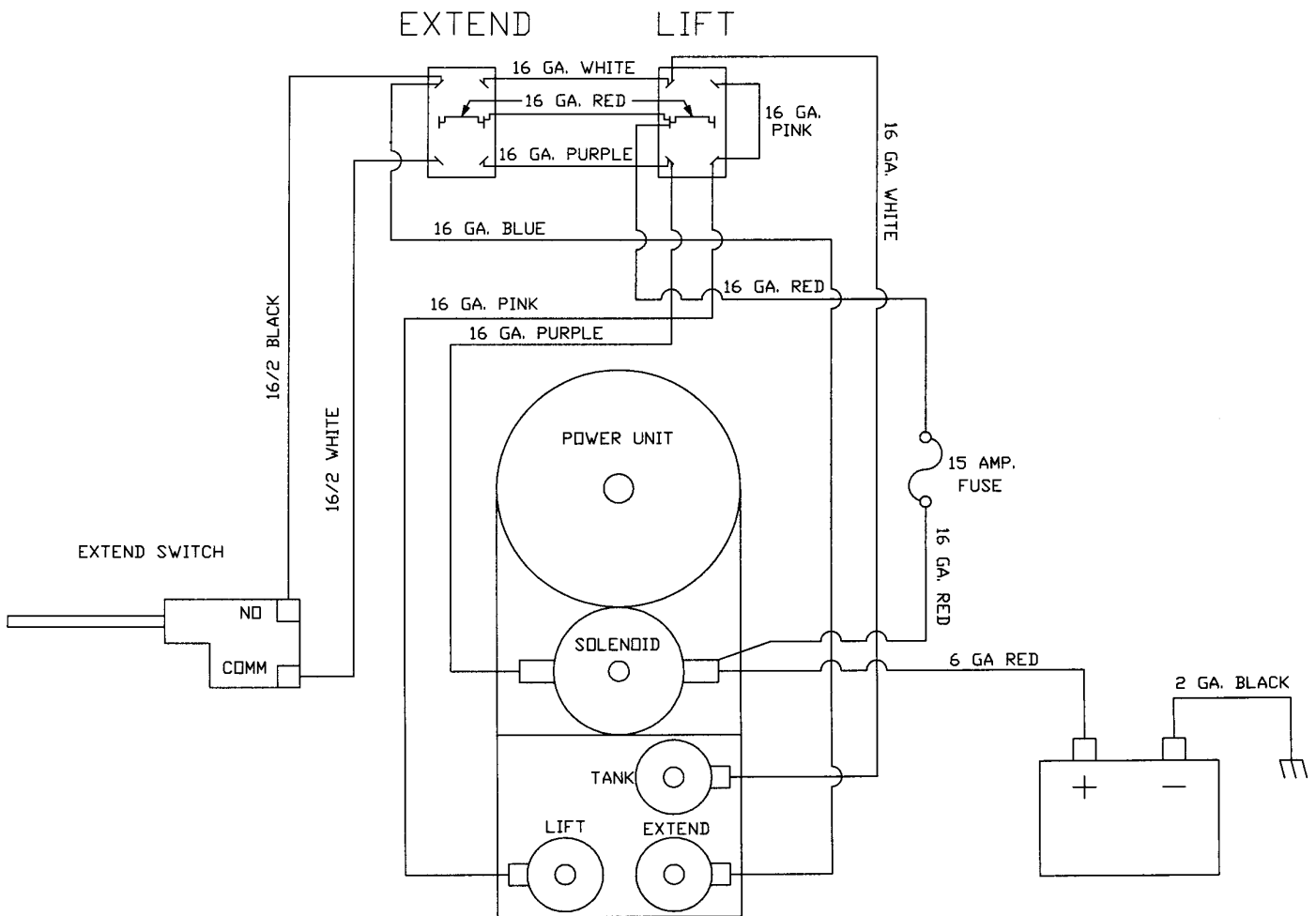


# ELECTRICAL DIAGRAMS

## ELECTRICAL SCHEMATIC (HYDRAULIC SYSTEM)

F-9A

### ELECTRICAL SCHEMATIC (HYDRAULIC SYSTEM)



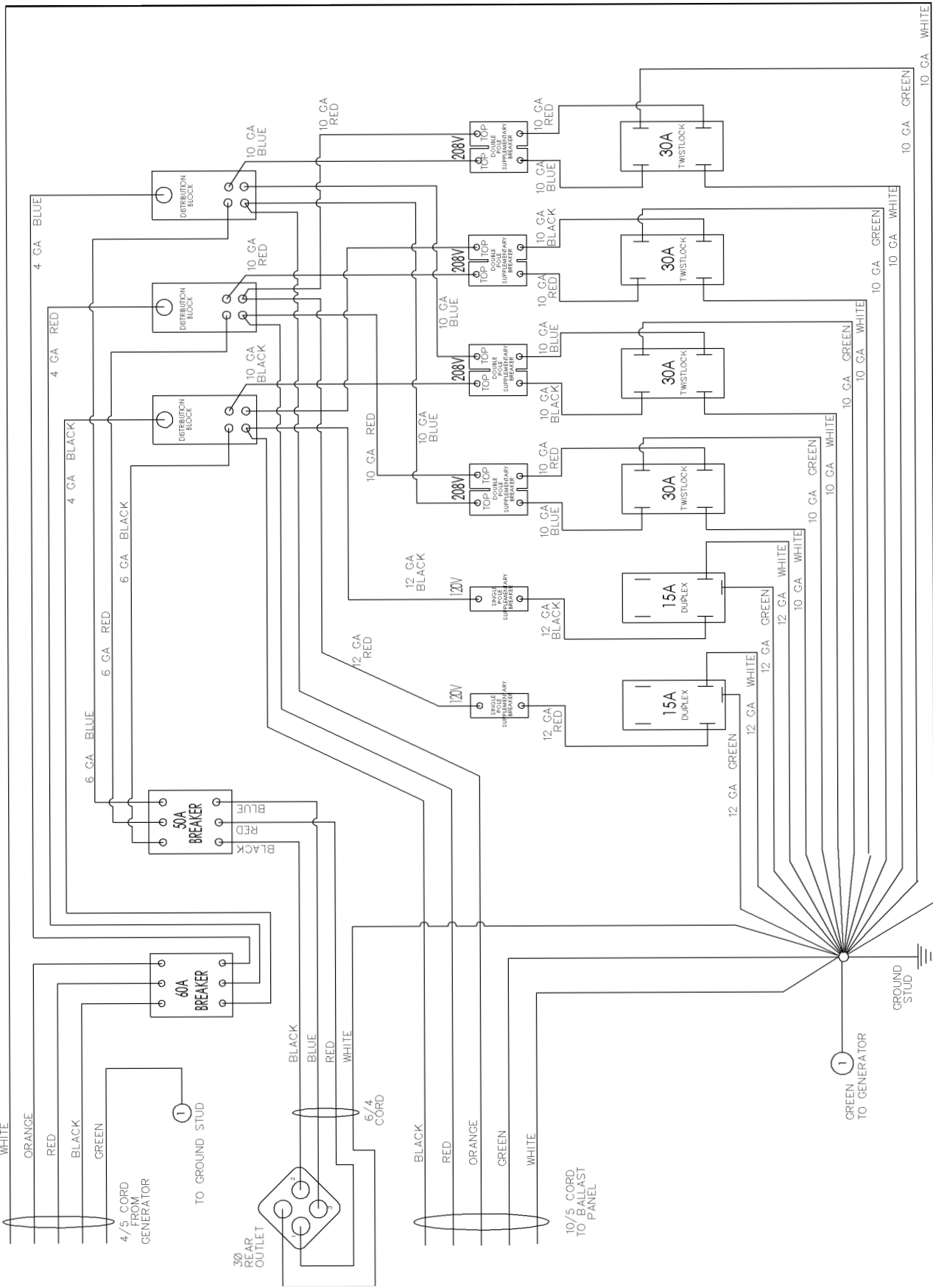
LEGEND: NS= Not Shown  
 \*\* =Purchase locally

\* Use these codes to designate color needed:  
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 03-Gray  
 04-Allmand Yellow  
 05-Orange  
 06-Allmand Gold  
 09-Flat Black  
 10-High temp Black  
 11-Red

03-Gray  
 06-Allmand Gold  
 11-Red

208 Volt 3 Phase Outlet Panel Wiring Diagram

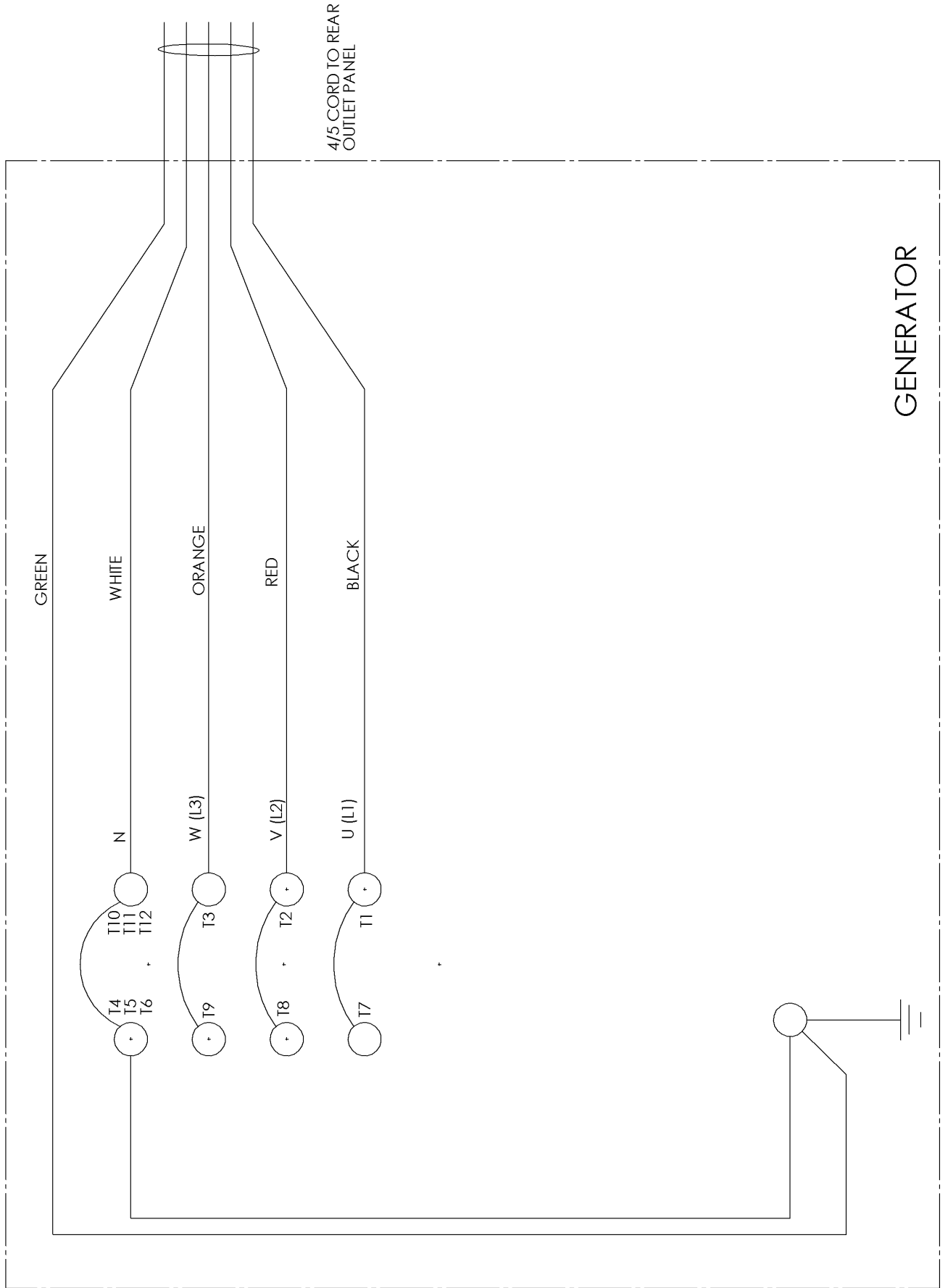
F-10A



# ELECTRICAL DIAGRAMS

## 208 Volt 3 Phase Generator Wiring Diagram

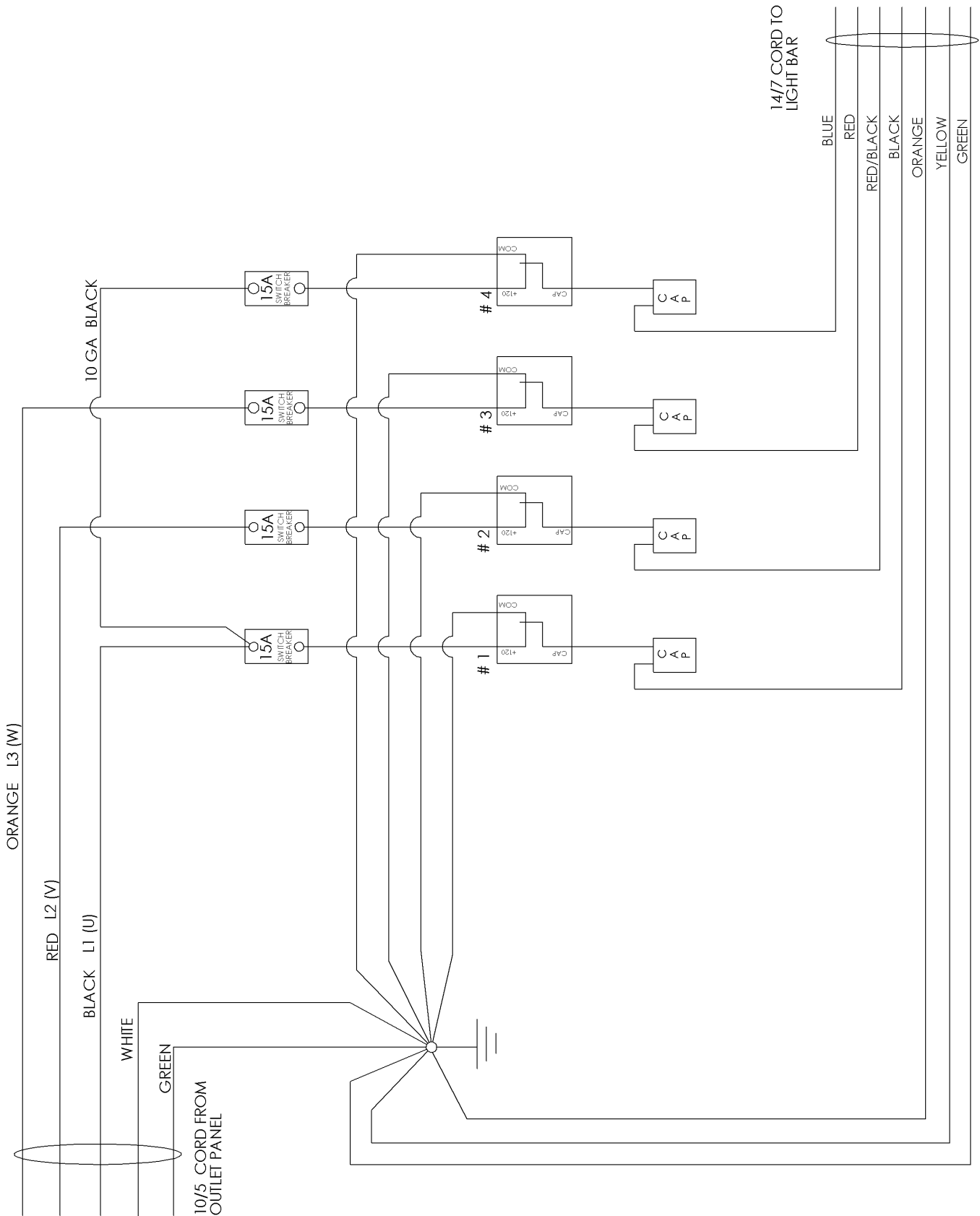
F11A



# ELECTRICAL DIAGRAMS

F-12A

## 208 Volt 3 Phase 4 Light Manual Winch Ballast Panel Wiring Diagram

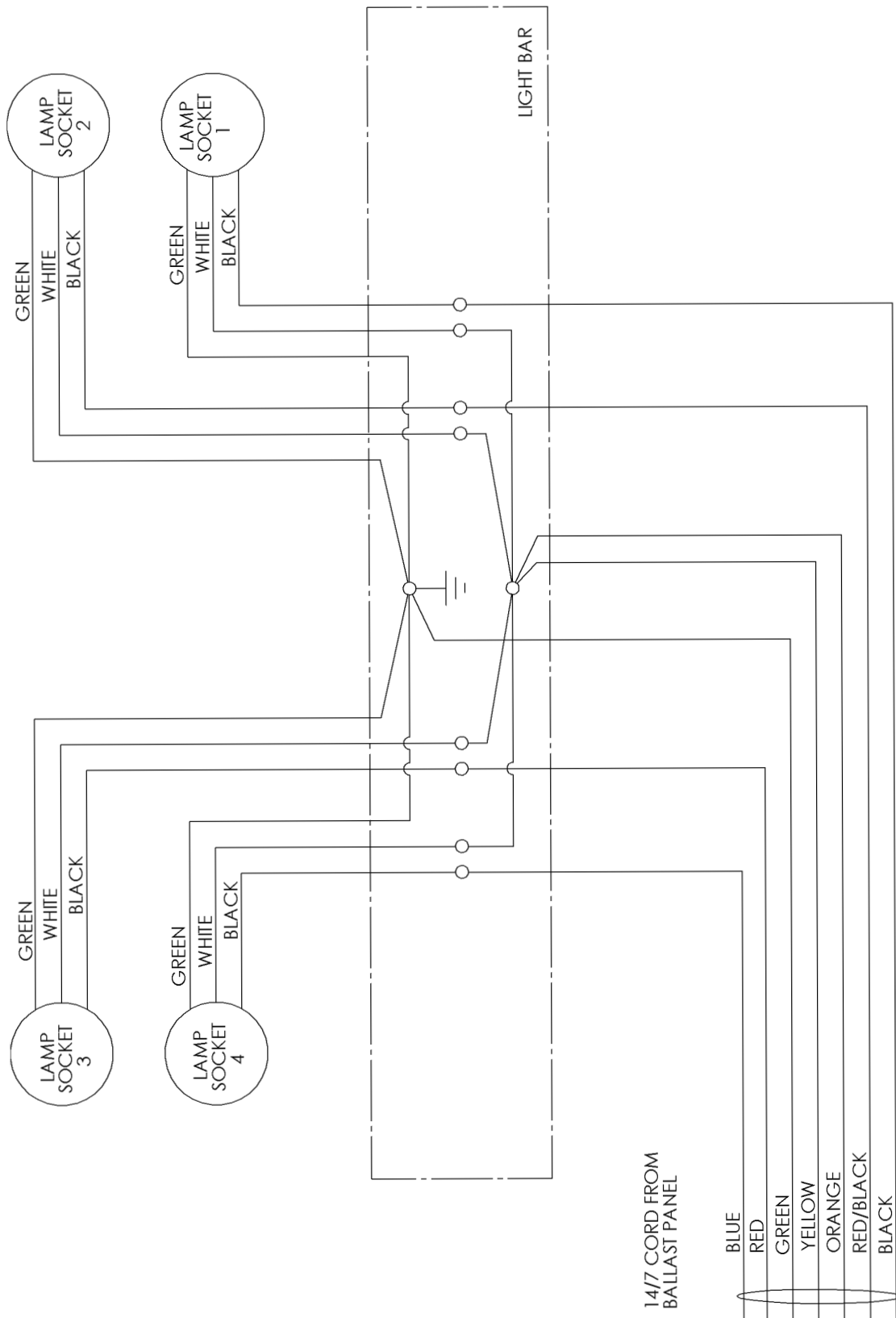




# ELECTRICAL DIAGRAMS

F-13A

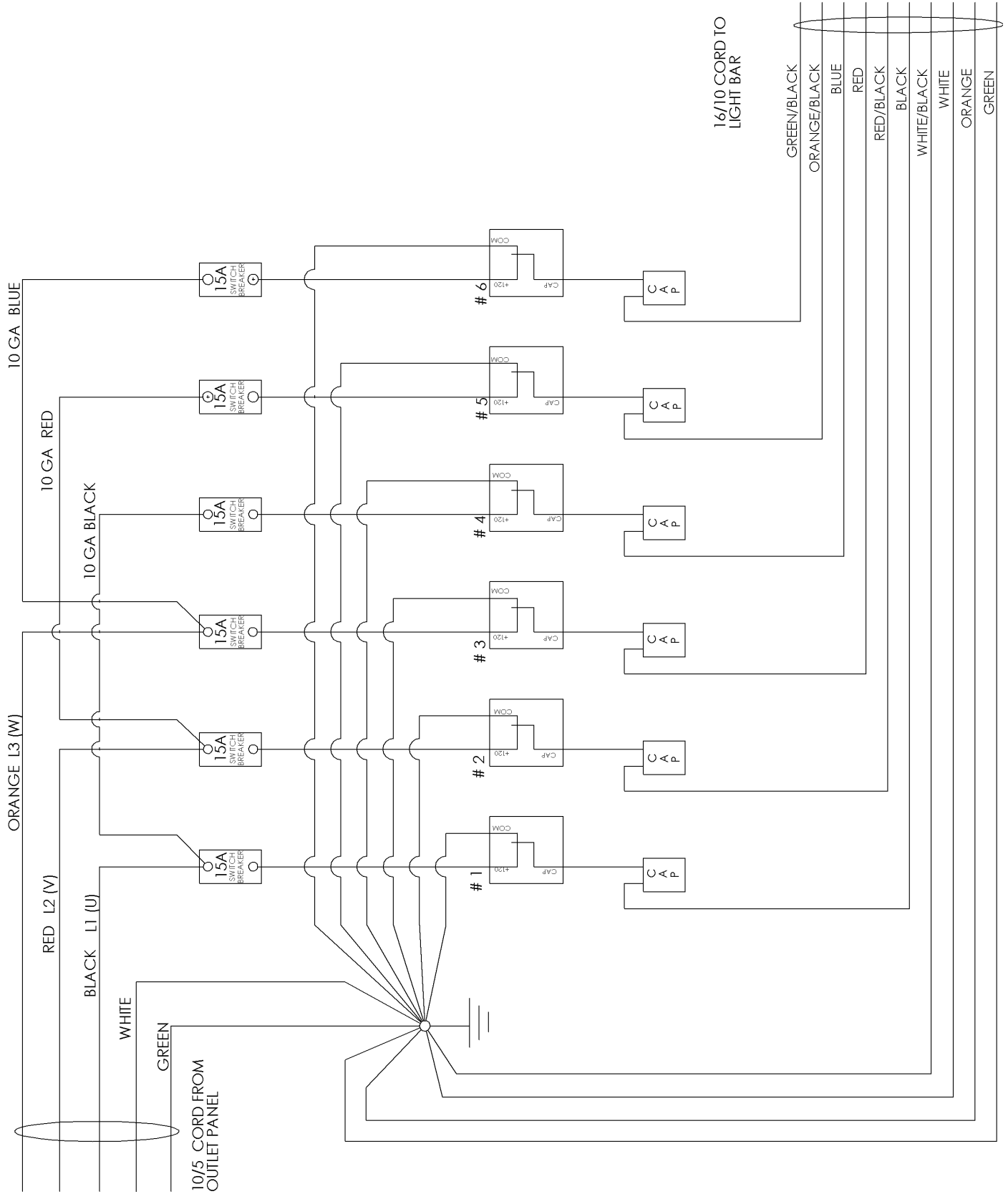
## 208 Volt 3 Phase 4 Light Manual Winch Light Bar Wiring Diagram



# ELECTRICAL DIAGRAMS

F-14A

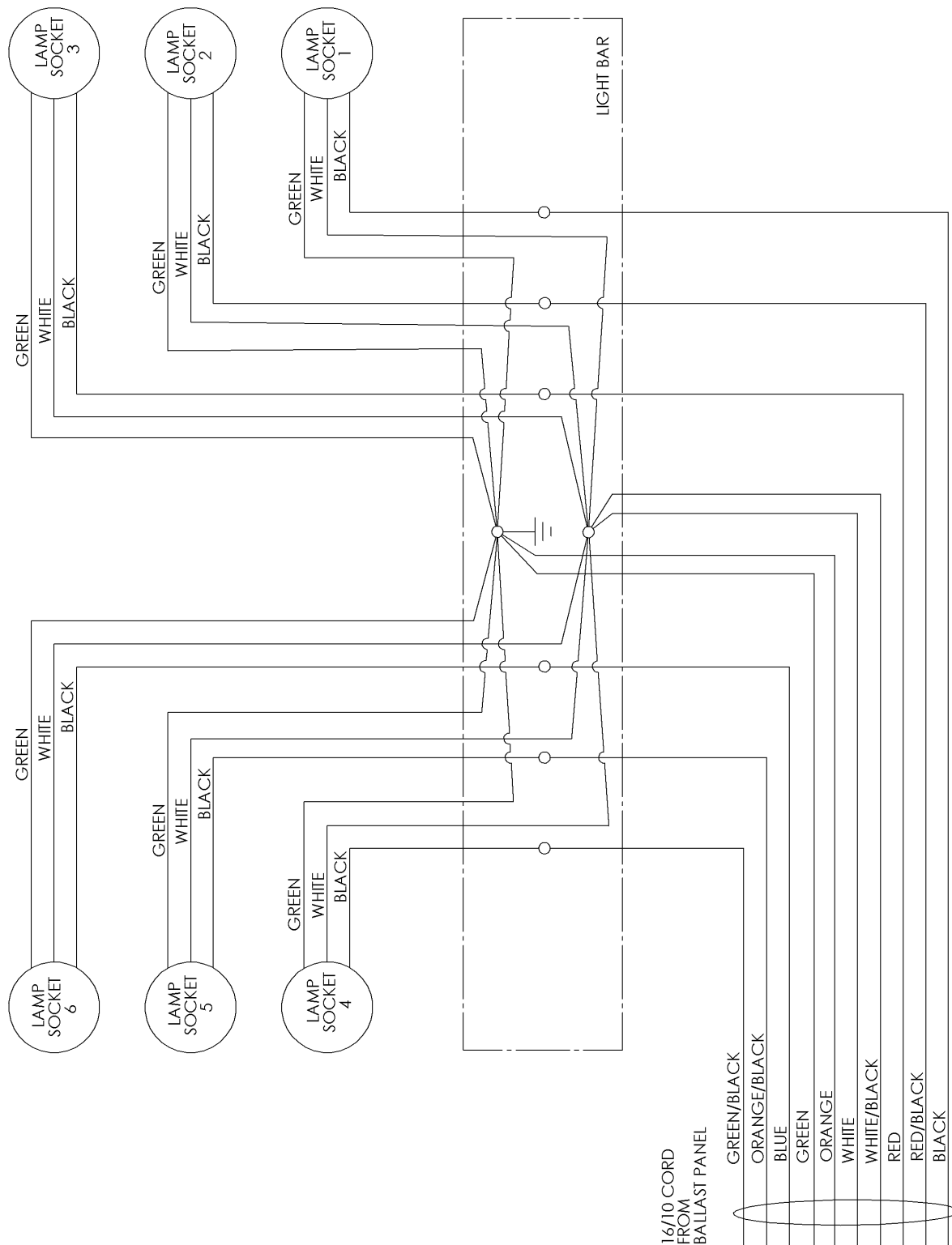
## 208 Volt 3 Phase 6 Light Manual Winch Ballast Panel Wiring Diagram



# ELECTRICAL DIAGRAMS

F-15A

## 208 Volt 3 Phase 6 Light Manual Winch Light Bar Wiring Diagram



16/10 CORD  
FROM  
BALLAST PANEL

- GREEN/BLACK
- ORANGE/BLACK
- BLUE
- GREEN
- ORANGE
- WHITE
- WHITE/BLACK
- RED
- RED/BLACK
- BLACK

\* Use these codes to designate color needed:

- |                   |                    |
|-------------------|--------------------|
| 01-White          | 06-Allmand Gold    |
| 02-Gloss Black    | 09-Flat Black      |
| 03-Gray           | 10-High temp Black |
| 04-Allmand Yellow | 11-Red             |
| 05-Orange         |                    |

**LIMITED WARRANTY**

**ALLMAND LIGHTING SYSTEMS  
LIMITED WARRANTY  
UNITED STATES and U.S. TERRITORIES**

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR PURPOSE, AND ANY EXCEPTIONS ARE DESCRIBED IN THE PUBLISHED LIMITED WARRANTY ADDENDUM, AVAILABLE UPON REQUEST.**

**COMPONENTS, SUB-ASSEMBLIES, AND DEVICES MANUFACTURED BY OTHER MANUFACTURERS ARE NOT COVERED BY THIS WARRANTY. ALL WARRANTY INFORMATION FROM SUCH OTHER MANUFACTURERS IS PROVIDED WITHIN OR ACCOMPANY THESE GOODS.**

Subject to the foregoing, the manufacturer, Allmand Bros. Inc., hereby warrants all equipment manufactured by Allmand Bros. Inc. to be free from defects in material and workmanship for a period of (1) year after delivery to the original purchaser. Additionally, Allmand Bros. Inc. hereby warrants all replacement parts supplied by Allmand Bros. Inc. to be free from defects in material and workmanship for a period of 90 days after date of invoice. Delivery shall be deemed for the purposes of this warranty to have occurred no later than five days following the date of sale agreement or invoice unless the purchase agreement or invoice specifically states a later delivery date in which case such delivery date shall control. The original purchaser shall be deemed to be a person who places the goods or products in actual use, and any person holding such goods solely for wholesale or retail sale purposes shall not constitute an original purchaser. PROVIDED, any leasing of these goods or other use beyond normal demonstration of same shall be deemed to be in use by an original purchaser and all warranty periods shall commence at the time of such use. During the warranty period any defective goods or parts hereof shall be repaired or replaced at manufacturer's discretion. In the event it is necessary to return such goods or parts to the factory, all transportation charges shall be prepaid. The manufacturer shall in no event pay mileage expenses, but will warrant outbound ground freight.

The obligations of the manufacturer is solely to repair or replace defective goods or parts or to refund the cost of the same if it is determined by the manufacturer that repair or replacement will not return the goods to proper working order or utility. **THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND MANUFACTURER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES. THE OBLIGATIONS OF THE MANUFACTURER HEREUNDER SHALL IN NO WAY EXCEED THE PRICE OF THE EQUIPMENT OR PART UPON WHICH SUCH LIABILITY IS BASED.**

The warranty shall not extend to tires, lamps, batteries, or parts that have been altered, changed, damaged, or improperly installed, repaired, operated or maintained. Provided, this exclusion shall not apply to installations, repairs or other work done at the manufacturer's plant or under direct manufacturer's supervision. The Operator's Manual, to the extent covered therein, is deemed to set forth the proper procedures for operation, repair, installation, and maintenance of these goods.

**No representative, dealer or distributor of the company is authorized to make any changes or exceptions to this warranty unless expressly authorized in writing from the manufacturer. All warranty claims must be filed within forty-five (45) days of the failure.**

ALLMAND BROS. INC., 1502 W 4<sup>TH</sup> AVENUE, P.O. BOX 888, HOLDREGE, NE 68949 (308) 995-4495

# Maxi-Lite ML 15/ML 20

\* Use these codes to designate color needed:

01-White	06-Allmand Gold
02-Gloss Black	09-Flat Black
03-Gray	10-High temp Black
04-Allmand Yellow	11-Red
05-Orange	