



NIGHT-LITE PRO
V SERIES
VERTICAL TOWER
OPERATOR'S MANUAL

Part No. 103403

ALLMAND BROS. INC
P.O. BOX 888
HOLDREGE, NE 68949

PHONE: 308/995-4495, 1-800/562-1373

ALLMAND FAX: 308/995-5887

ALLMAND PARTS FAX: 308/995-4883

AllmandTM NIGHT-LITE SERIES

INSPECTION CHECK LIST

FOR PREPARING THE NIGHT-LITE PROV SERIES FOR DELIVERY OR RENTAL

The NIGHT-LITE PRO V SERIES requires 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, pulleys, and cables 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!

TABLE OF CONTENTS

INSPECTION CHECK LIST	2
TABLE OF CONTENTS	3
INTRODUCTION	4
SAFETY SYMBOL INFORMATION	4
SAFETY AND WARNING DECALS	5-6
ELECTRIC WINCH MAST OPERATION	7-9
HYDRAULIC LIFT MAST OPERATION	10-12
VERTICAL TOWER ADJUSTMENTS	13
MANUAL WINCH MAST OPERATION	14
SPECIFICATIONS.....	15-17
STARTING INSTRUCTIONS	18-19
SERIAL NUMBER LOCATIONS	19-20
CONTROLS AND COMPONENTS	22-31
ROUTINE MAINTENANCE SCHEDULE	32
TROUBLESHOOTING	33
LIMITED WARRANTY	34

INTRODUCTION

- This manual provides the information necessary for the safe operation of the Allmand Bros., Inc., NIGHT-LITE PRO V Series light tower.
- The NIGHT-LITE PRO vertical tower configuration is operated with a single electric winch, a manual winch, or a hydraulic cylinder to raise 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

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

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.

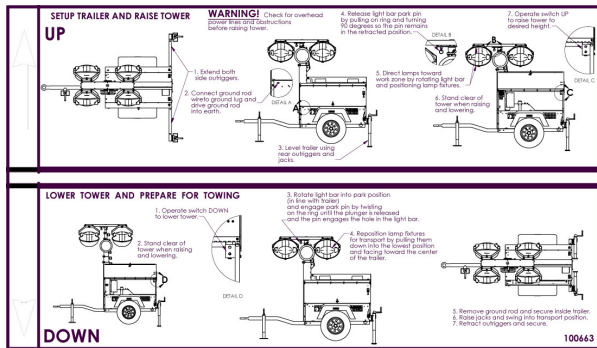
SAFETY AND WARNING DECALS



SAFETY WARNING

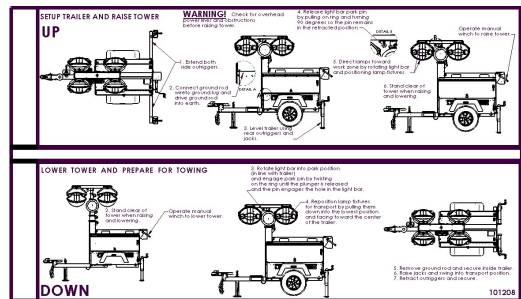
ALWAYS REPLACE ANY SAFETY AND INSTRUCTION DECALS THAT BECOME DAMAGED, PAINTED, OR OTHERWISE ILLEGIBLE.

Refer to these representations of the safety warning decals used on the NIGHT-LITE to insure correct ordering if replacing becomes necessary.



100663

ELECTRIC AND/OR HYDRAULIC WINCH VERTICAL TOWER OPERATING INSTRUCTIONS

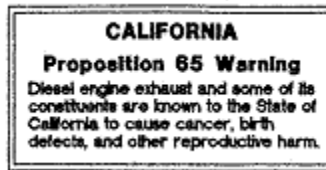


101208

MANUAL WINCH VERTICAL TOWER OPERATING INSTRUCTIONS



PART NO. 101404
Location: On left, front and right side of tower section 1.



PART NO. 090179
Location: Inside left hand door panel.



PART NO. 090002
Location: Light bar cover.



PART NO. 090160
Location: On pintle hitch.

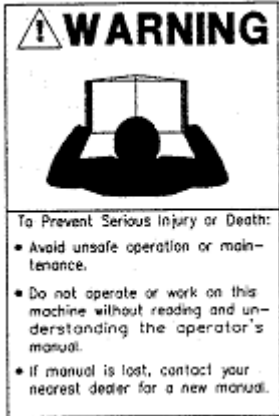


PART NO. 090005
Location: Inside left hand door panel.



PART NO. 090161
Location: Right hand side of electric winch cover.

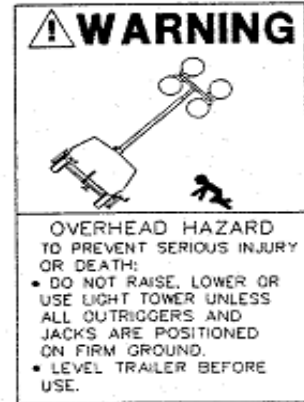
SAFETY AND WARNING DECALS



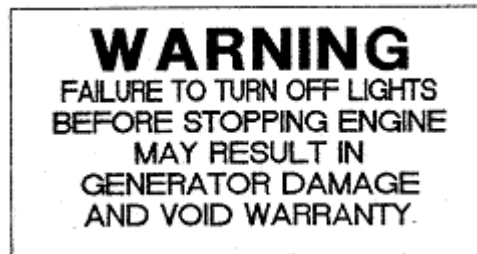
PART NO. 090158
Location: Inside left hand door panel.



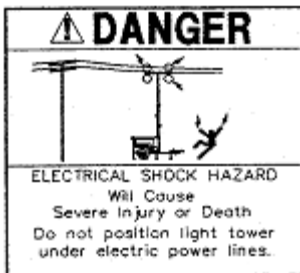
PART NO. 090159
Location: Above battery on tower support inside enclosure.



PART NO. 090166
Location: Side panel on manual winch models.



PART NO. 090084
Location: AC control panel.



PART NO. 090165
Location: Inside left hand door panel.



PART NO. 090162
Location: On ballast access cover.



PART NO. 090133
Location: Inside left hand panel below ground lug.



PART NO. 090474
Location: Right side panel on manual winch models.



PART NO. 090163
Location: Inside left hand door panel.



PART NO. 100247
Location: Inside left hand door panel above winch switch.

ELECTRIC WINCH VERTICAL MAST OPERATION

DESCRIPTION OF OPERATION

The Allmand NIGHT-LITE V Series tower assembly consists of a seven section telescoping mast which can be extended by operating a single electric winch mounted inside the enclosure. 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 light bar assembly can be rotated into position by releasing the light bar park pin. To release the park pin, pull the ring and turn it 90 degrees so that the pin remains in the retracted position. The light bar is designed to rotate with enough resistance so that the bar will stay in the desired position once the operator has directed the lights on the work zone. if the light bar rotates too easily or does not stay in position, remove the cap plug from the center of the light bar cover and tighten the nut to achieve the desired resistance and replace the cap plug.



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

TO SET UP TOWER 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!

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. Start engine and switch electric winch switch to ON.
4. While the tower is still in the down position, position the light bar and lamps so they are aimed at the work zone and tilted at the approximate angle to get maximum coverage once the tower is raised.
5. Stand clear of the tower when raising and lowering the lights.

ELECTRIC WINCH VERTICAL MAST OPERATION

6. Operate the electric winch switch to the “up” position to raise tower to the desired height.
7. If lights need to be adjusted for better lighting of the work zone after raising the tower, lower the tower using the “down” switch position and make desired adjustments to the light bar and light fixtures. Raise the tower into position. Repeat this step if necessary.



SAFETY WARNING!

VISUALLY INSPECT EQUIPMENT FOR DAMAGE BEFORE OPERATING. ALLOW ADEQUATE CLEARANCE AROUND TRAILER FOR TOWER AND INSURE THAT NO PERSONS ARE STANDING IN UNDER THE LIGHTS WHEN LOWERING.

TO LOWER TOWER AND LIGHTS

1. Turn off lights.
2. Operate the electric winch switch in the down position to lower the lights to the lowest vertical position.
3. Stop engine.
4. Rotate the light bar into the transport park position (in line with trailer) and engage the park pin by twisting on the park pin ring until the plunger is released and the pin engages the hole in the light bar.
5. Reposition the lamp fixtures for transport by pulling them down into the lowest position and face the fixtures toward the center of the trailer.
6. Remove ground rod from earth. Disconnect wire from ground lug and secure in trailer
7. Raise jacks and rear stand, retract outriggers and secure for towing

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

AUXILIARY HANDLE

An emergency crank handle is provided

1. Remove the electrical power from the winch. (Switch Electric Winch Switch to OFF)
2. Insert the handle so that it completely engages with the driveshaft. The handle can be cranked in either direction with the clutch in the engaged position.
3. Always remove the handle from the winch after use.

ELECTRIC WINCH ADJUSTMENT

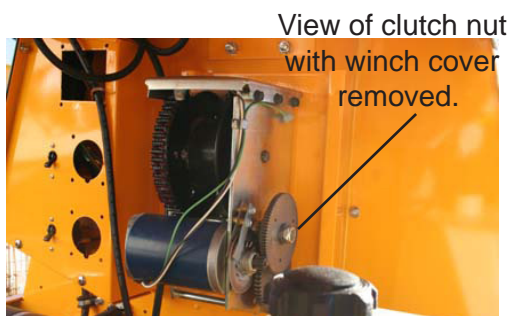
ELECTRIC WINCH CLUTCH SETTING PROCEDURE

PURPOSE

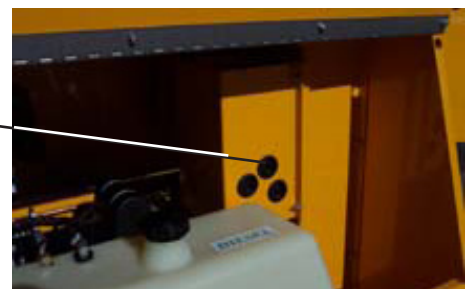
1. Adjustment of the winch clutch nut is necessary to limit the power of the winch. The clutch nut must be tight enough to prevent clutch slippage when raising the tower and loose enough so that the clutch does slip if the tower should come in contact with some overhead obstruction or be extended past the upper limit switch which would cause the tower to stop against the dead stop bolt.
2. The clutch nut torque value is approximately 28 to 30 in lbs. (DO NOT OVER TIGHTEN)
NOTE: The nut may seem loose when it is properly set. DO NOT ADJUST; further tightening may cause cable failure.

INSTRUCTIONS FOR SETTING THE CLUTCH UNDER FIELD CONDITIONS WITHOUT A TORQUE WRENCH

1. Loosen clutch nut approximately $\frac{1}{2}$ turn.
2. Stand clear of the tower when raising or lowering tower.
3. Start engine and operate the winch in the up direction. The winch should run but the tower should not move. (At this time the clutch nut should be loose enough to let the clutch slip, if not, back off the clutch nut just enough so the clutch does slip).
4. Start the clutch nut setting procedure by making a slight tightening adjustment until the tower starts to rise.
5. The tower may again stall even while the winch continues to run. If so, lower the tower and make another slight adjustment to the clutch nut, by tightening in the clockwise direction approximately 10 to 20 degrees.
6. Repeat the previous step until the tower reaches full elevation without stalling. Do not make large adjustments to the clutch nut as it would be easy to over tighten the nut.
7. Run the tower up and down at least 5 times to ensure consistent full elevation.
8. The clutch is a serviceable part and may require slight adjustments periodically.



Remove this plastic plug to access clutch nut.



HYDRAULIC LIFT VERTICAL MAST OPERATION

DESCRIPTION OF OPERATION

The Allmand NIGHT-LITE V Series hydraulic lift tower assembly consists of a seven section telescoping mast which can be extended by operating a single hydraulic cylinder. The light bar assembly can be rotated into position by releasing the light bar park pin. To release the park pin, pull the ring and turn it 90 degrees so that the pin remains in the retracted position. The light bar is designed to rotate with enough resistance so that the bar will stay in the desired position once the operator has directed the lights on the work zone. If the light bar rotates too easily or does not stay in position, remove the cap plug from the center of the light bar cover and tighten the nut to achieve the desired resistance and replace the cap plug.



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

TO SET UP TOWER 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!

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. Start engine. (NOTE: Tower may be raised and lowered as needed without engine running.)
4. While the tower is still in the down position, position the light bar and lamps so they are aimed at the work zone and tilted at the approximate angle to get maximum coverage once the tower is raised.
5. Stand clear of the tower when raising and lowering the lights.

HYDRAULIC LIFT VERTICAL MAST OPERATION

6. Operate the hydraulic lift switch to the “up” position to raise tower to the desired height.
7. If lights need to be adjusted for better lighting of the work zone after raising the tower, lower the tower using the “down” switch position and make desired adjustments to the light bar and light fixtures. Raise the tower into position. Repeat this step if necessary.
5. Reposition the lamp fixtures for transport by pulling them down into the lowest position and face the fixtures toward the center of the trailer.
6. Remove ground rod from earth. Disconnect wire from ground lug and secure in trailer
7. Raise jacks and rear stand, retract outriggers and secure for towing

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



SAFETY WARNING!

VISUALLY INSPECT EQUIPMENT FOR DAMAGE BEFORE OPERATING. ALLOW ADEQUATE CLEARANCE AROUND TRAILER FOR TOWER AND INSURE THAT NO PERSONS ARE STANDING IN UNDER THE LIGHTS WHEN LOWERING.

TO LOWER TOWER AND LIGHTS

1. Turn off lights.
2. Operate the hydraulic lift switch in the down position to lower the lights to the lowest vertical position. When tower reaches the bottom, run switch for three additional seconds to ensure that the tower is at it's lowest possible position.
3. Stop engine.
4. Rotate the light bar into the transport park position (in line with trailer) and engage the park pin by twisting on the park pin ring until the plunger is released and the pin engages the hole in the light bar.

HYDRAULIC TOWER POWER UNIT

POWER UNIT INSTALLATION & START UP PROCEDURE

Fill the reservoir with automatic transmission fluid or any clean hydraulic fluid having a viscosity index that is suitable for the climatic conditions in which the unit will be operated. Recommended operating temperature range is +20° F to +180° F.

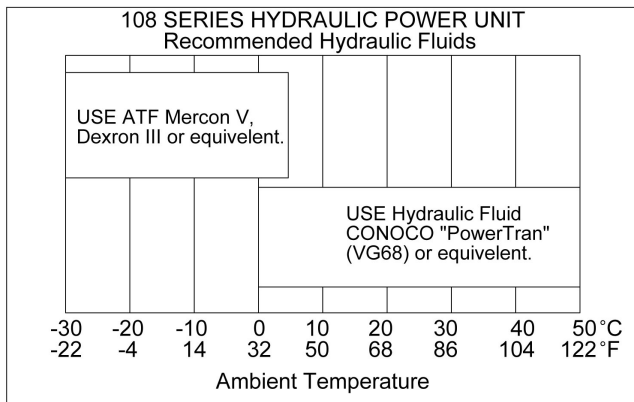


GENERAL START UP INSTRUCTIONS

NOTE: The ports are marked on the casting 'UP' and 'DN'. When facing the power unit with the motor up, plug the right hand, or 'DN' port. Jog the motor until oil flows from the left hand, or 'UP' port. If oil does not flow from the 'UP' port, reverse the wire leads on the motor, and repeat. The pump is now primed. Connect the hose (or tubing) to the 'UP' port and tighten. Connect the other hose end to the blind end of a fully retracted hydraulic cylinder. With the hose fitting loose, operate the power unit until oil (and no air) bleeds from the fitting. Tighten the fitting. Refill the reservoir.



HYDRAULIC FLUID SPEC CHART



Note: For extreme cold conditions, use MOBIL Aero HFA (VG10) or equivalent hydraulic fluid.

MANUAL WINCH VERTICAL MAST OPERATION

DESCRIPTION OF OPERATION



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

TO ERECT MAST AND RAISE LIGHTS

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

NOTE: Jacks should be placed only on firm footing.



SAFETY WARNING

- 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. While the tower is still in the down position, position the light bar and lamps so they are aimed at the work zone and tilted at the approximate angle to get maximum coverage once the tower is raised.
4. Stand clear of the tower when raising and lowering the lights.
5. To turn on lights, flip the breaker switches to the up position. (SEE FIG. 1)
6. Operate the hand crank to raise tower to the desired height.
7. If lights need to be adjusted for better lighting of the work zone after raising the tower, lower the tower and make desired adjustments to the light bar and light fixtures. Raise the tower into position. Repeat this step if necessary.

TO LOWER TOWER AND LIGHTS

1. Turn off lights.
2. Operate the hand crank to lower the lights to the lowest vertical position.
3. Stop engine.
4. Rotate the light bar into the transport park position (in line with trailer) and engage the park pin by twisting on the park pin ring until the plunger is released and the pin engages the hole in the light bar.
5. Reposition the lamp fixtures for transport by pulling them down into the lowest position and face the fixtures toward the center of the trailer.
6. Remove ground rod from earth. Disconnect wire from ground lug and secure in trailer
7. 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.

OVERALL DIMENSIONS

- Weight 1800 LBS
- Length 9' 5" (2.90 m)
- Height lowered 7' (2.13 m)
- Height extended 25' (7.62 m)
- Width (outriggers retracted) 4' 6" (1.372 m)
- Width (outriggers extended) 7' 9" (2.36 m)
- Wheels and tires 13"

SPECIFICATIONS

ENGINE SPECIFICATIONS

MODEL	KUBOTA D1105	LOMBARDINI LDW 1003	CAT C1.1
TYPE	Water cooled 4-cycle diesel	Water cooled 4-cycle diesel	Water cooled 4-cycle diesel
BORE	2.99" (76 mm)	2.96" (75 mm)	3.03" (77 mm)
STROKE	2.90" (73.6 mm)	3.05" (77.6 mm)	3.19" (81 mm)
DISPLACEMENT	61.1 cu. In (1002 cc)	62.6 cu. In (1028 cc)	69 cu. In (110 cc)
POWER @ 1800RPM	13.6 HP (11.4kw)	13.4 HP (11.2kw)	14.3 HP (11.9kw) non derate
POWER OUTPUT DERATING	3% per 1000 ft above 360 ft. 1% per 10° above 77° F	3% per 1000 ft above 360 ft. 1% per 10° above 77° F	3% per 1000 ft above 360 ft. 1% per 10° above 77° F
FUEL SYSTEM	Indirect injected diesel	Indirect injected diesel	Cassette type fuel injected diesel
STARTING SYSTEM	12 volt DC	12 volt DC	12 volt DC
COMPRESSION RATIO	22:1	22.8:1	22:1
WEIGHT	205 lbs (93 kg)	191 lbs (87 kg)	191 lbs (87 kg)
OIL CAPACITY	5.4 qt. (5.1 L)	2.5 qt. (2.4 L)	3.9 qt. (3.7 L)
LUBRICATION	Forced lubrication by pump	Forced lubrication by pump	Forced lubrication by pump
OIL FILTRATION	Cartridge type	Cartridge type	Cartridge type
COOLING SYSTEM	Pressurized radiator, forced circulation with water pump	Pressurized radiator, forced circulation with water pump	Pressurized radiator, forced circulation with water pump

- Low oil pressure and high engine temperature shut-downs are standard equipment. Both The Kubota, CAT, and Lombardini diesel are equipped with glow plug cold start assist as standard equipment.

NOTE: See the appropriate section of this manual for cold weather starting instructions or consult the Operators Manual for your particular engine application.

Horsepower ratings are established in accordance with Society of Automotive Engineers Small Engine Test Code- J1349 GROSS.

SPECIFICATIONS

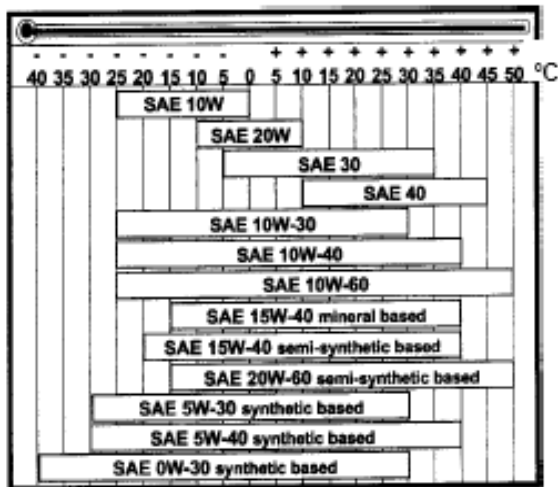
GENERATOR

- 7.5 kw and 8 kw models available
- 60 hz and 50 hz models available

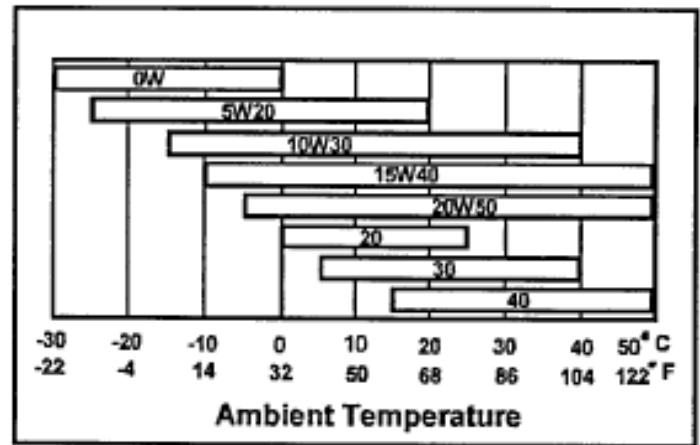
FUEL REQUIREMENTS

Use a clean No. 2 Diesel fuel oil (SAE J313 JUN87) according to ASTM D975. Do not use alternative fuel, because its quality is unknown or it may be inferior in quality, and kerosene, which is very low in cetane rating, adversely effects the engine. Refer to the Kubota, CAT, or Isuzu Operators Manual for more detailed fuel requirements.

LOMBARDINI LUBRICATION CHART



CAT LUBRICATION CHART



KUBOTA LUBRICATION CHART

above 77°F (25°C)	SAE30 or SAE10W-30 SAE10W-40
32°F (0°C) to 77°F (25°C)	SAE20 or SAE10W-30 SAE10W-40
below 32°F (0°C)	SAE10W or SAE10W-30 SAE10W-40

TRAILER

The engine-generator set is housed in a bunded two wheel trailer fabricated from heavy gauge steel. The design enables the trailer to contain the outriggers in a simple, compact position.

MAST

When the mast is in the operating position it is located in the middle of a three point outrigger system for optimum balance and stability.

The mast consists of seven fabricated steel sections that telescope to 25 ft and UHMW plastic guide pads to provide smooth operation and reduced friction. The mast sections are extended with either a manual or electric winch, or hydraulic pump. The electric winch design includes limit switches that turn the winch off when the mast reaches full extension or is fully retracted.

STABILIZERS

The three point outrigger design consists of two retractable side outriggers and a tongue jack.

FLOOD LIGHT ASSEMBLY

The flood light assembly consists of four 1250 watt lamp fixtures sealed for all weather use.

SHO 1250 fixture - Metal Halide Lamp

- Lumen rating: 150,000 initial lumens
- Warm up time: 2-4 minutes
- Restart time: 10-15 minutes

TOWING INSTRUCTIONS

Before towing the Night-Lite Pro the trailer should be inspected visually to insure that the following operations have been completed:

1. Hitch is securely attached to the towing vehicle
2. All outriggers and jacks are retracted and secured.
3. Light fixtures are positioned for transport.
4. Doors are closed and secure.
5. Check for adequate tire pressure.
6. Tail lights are connected and operational.
7. Ground rod is removed from ground and secured in trailer.

STARTING INSTRUCTIONS

BEFORE STARTING:

1. Fill the engine with the right grade of lubricating oil (refer to the proper page of this manual or the Kubota, CAT, or Lombardini diesel operators manual for oil specifications)
2. Ensure there is an adequate supply of diesel fuel.
3. Ensure that the air cleaner is firmly attached and air cleaner seals and hose clamps are properly sealed. Air cleaner element should be checked and replaced if necessary.

STARTING ENGINE

NOTE: The Kubota diesel engine includes a glow plug cold start system controlled by the yellow preheat button on the control panel. Glow plugs are not needed on a warm engine or if the ambient temperature is above 50 degrees F. The CAT C1.1 and Lombardini LDW 1003 diesel engines include 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 degrees F.

COLD WEATHER STARTING: KUBOTA (for temperatures below 32° F/ 0° C)

1. Turn the on-off switch to the ON position.
2. Press the yellow PREHEAT button for 5 seconds (10 seconds below 23° F maximum 20 seconds continuous).
3. Press the green START button to crank engine until the engine starts.
4. If engine fails to start, it may be necessary to recycle the PREHEAT and Start steps #2 and #3 above

COLD WEATHER STARTING: LOMBARDINI LDW 1003 (for temperatures below 32° F/ 0° C)

1. Turn the key switch to the PREHEAT position, hold until the glow plug indicator lamp goes out, then release switch.
2. Turn the key switch to the START position and the engine should start. Release the key immediately when the engine starts. If engine fails to start it may be necessary to cycle the glow plugs again (see chart below)

COLD WEATHER STARTING CAT C1.1 (for temperatures below 32° F/ 0° C)

1. If the engine is cold, turn the key switch counterclockwise to the “preheat” position until the glow plug indicator turns red. CAUTION: Never heat glow plugs more than 30 seconds or damage to the glow plugs may occur.
2. Turn the key switch to the “start” position and start the engine immediately once the indicator turns red.

AMBIENT TEMPERATURE	PREHEATING TIME	
	Ordinary Heat Type	With Glow Plug Timer
Above 50°F (10°C)	NO NEED	Automatic preheating is made for about 6 seconds when starter switch key is turned to preheating position.
50°F (10°C) to 23°F (-5°C)	Approx 5 seconds	
Below 23°F (-5°C)	Approx 10 seconds	
Limit of continuous use	20 to 30 seconds	

NOTE: Do not operate starter for more than 10 seconds without allowing 30 seconds to pass between starting attempts. Possible starter damage could result from excessive heat caused by cranking too long.

NOTE: If the engine develops sufficient speed to disengage the starter but does not keep running (a false start), the engine rotation must be allowed to come to a complete stop before attempting to restart the engine. If starter is engaged while the flywheel is rotating, the starter pinion and flywheel ring gear may clash, resulting in damage to the starter or flywheel ring gear.

NOTE: If the starter does not turn the engine over, stop cranking immediately. Do not make further attempts to start the engine until the condition is corrected. See your local Kubota, CAT, or Lombardini Engine Service Dealer for trouble analysis.

STARTING INSTRUCTIONS and SERIAL NUMBER LOCATIONS

FOR A WARM ENGINE (Kubota, CAT, and Lombardini engines)

- Follow the same procedure as described for cold weather starting, skipping step 1 (step 2 for Kubota). Use of the glow plugs is not recommended when engine is warm .

LOW OIL PRESSURE SHUT-OFF SYSTEM

Should a low oil pressure condition occur, the oil 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 shut-off position.

HIGH COOLANT TEMPERATURE SHUT-OFF 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 shut-off position.

STOPPING THE ENGINE

To stop the engine 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 control to the shut-off position

SERIAL NUMBER LOCATION

Trailer: All NIGHT-LITE PRO series trailers have a serial number plate attached to the rear tower support below the tower lock. (See illustration)



SERIAL NUMBER LOCATIONS

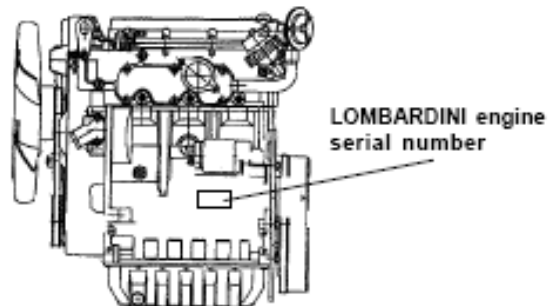
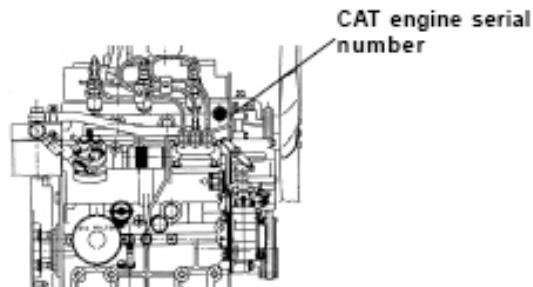
SERIAL NUMBER LOCATION

Generator: The generator has a plate attached to the side of the housing.

Engine : The KUBOTA engine has the serial number stamped on the engine block just below the exhaust manifold. (see illustration below)

The CAT engines have the serial number stamped on the right side of the engine block just ahead of the first cylinder. (see illustration below)

The LOMBARDINI engine has the serial num-



CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 1. CONTROL PANEL (Kubota)

1. Breaker Switch
Controls lights 1 and 2
2. Breaker Switch
Controls lights 3 and 4
3. Electric Winch On/Off Switch
4. Control Panel (see close up below)

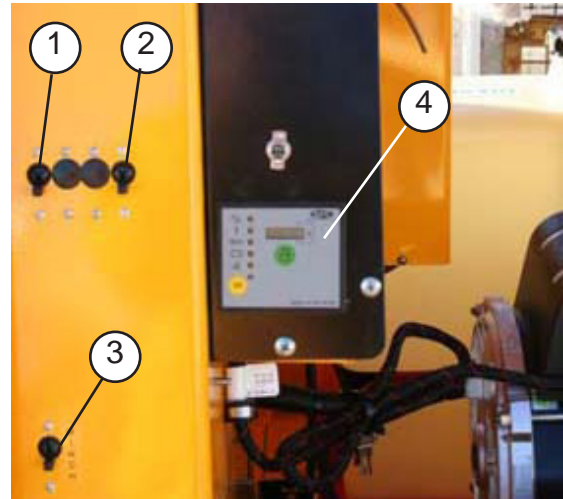


Fig. 1 Control Panel

FIG. 1a. CONTROL PANEL (Kubota) CLOSE UP

1. Ignition On switch
Must be in ON position to start engine
 2. Engine Start Button
- NOTE: Release button as soon as engine fires.
3. Glow Plug Preheat Button
 4. Engine Function Indicator Lights come on when there is a fault.
 5. Hour Meter shows the total elapsed hours of engine operation

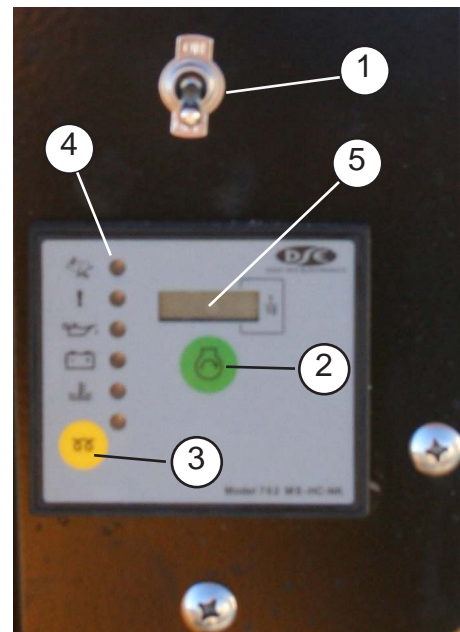


Fig. 1a Control Panel Close Up

FIG. 1b. CONTROL PANEL (CAT)

1. Breaker Switch
Controls lights 1 and 2
2. Breaker Switch
Controls lights 3 and 4
3. Hour Meter
4. Key Switch
5. Glow Plug Indicator

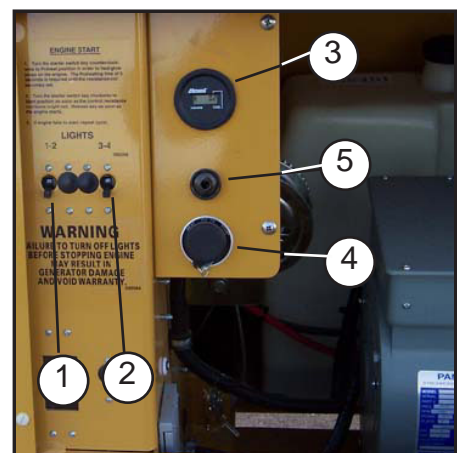


FIG. 1a (CAT)

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 1c. A.C./D.C.CONTROL PANEL (Lombardini)

1. Breaker Switch
Controls lights 1 and 2
2. Breaker Switch
Controls lights 3 and 4
3. Hour Meter
Shows the total elapsed hours of engine operation.
4. Key Switch
Turn key clockwise one click to activate the glow plugs.
5. Glow Plug Lamp

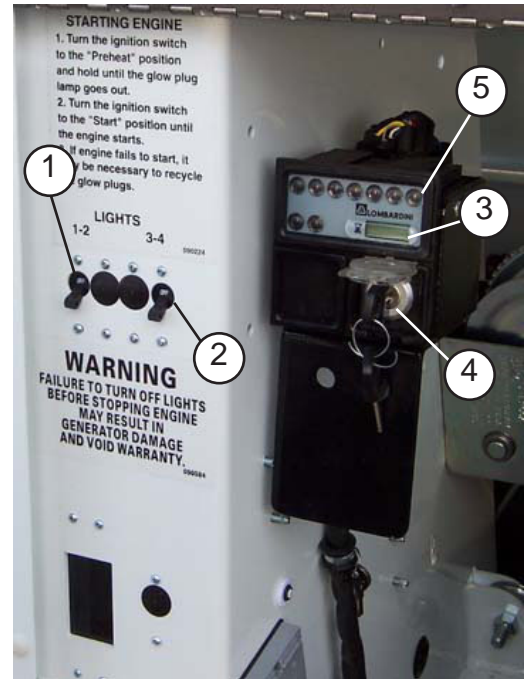


FIG. 1b (Lombardini)

NOTE: Release key as soon as the engine fires.

FIG. 2. Winch Switch and Breaker (Electric Winch Model)

1. Breaker (5 Amp)
2. Electric Winch Up/Down Switch
Controls raising and lowering of tower

(Hydraulic Lift Model)

1. Breaker (5 Amp)(not used)
2. Hydraulic Lift Up/Down Switch

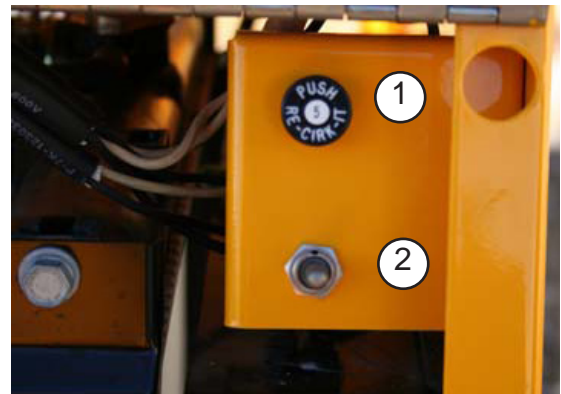


Fig. 2 Winch Switch and Breaker

FIG. 3. BALLAST PANEL

1. Transformer (lights 1 thru 4)
2. Capacitors (lights 1 thru 4)

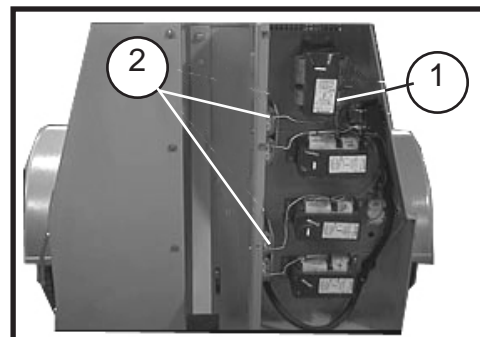


FIG. 3

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 4. GROUND ROD LOCATION

1. 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.

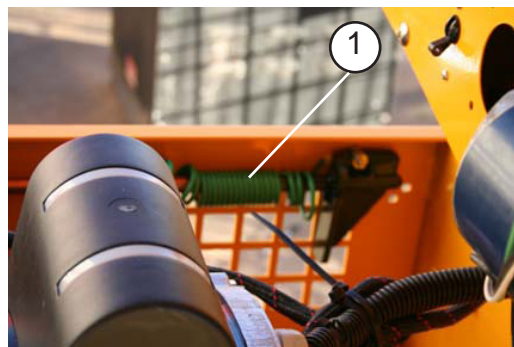


FIG. 4

FIG. 5A ENGINE COMPONENT IDENTIFICATION (KUBOTA)

1. Water temp switch
2. Alternator
3. Starter
4. Air cleaner
5. Oil Pressure Switch

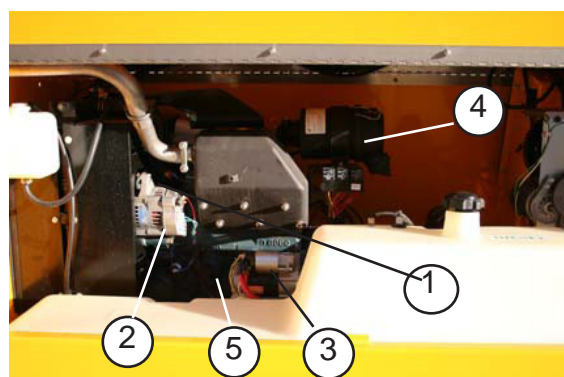


FIG. 5A

FIG. 5B. ENGINE COMPONENT IDENTIFICATION (KUBOTA)

1. **Oil fill**
2. Glow plugs
3. Fuel solenoid
4. **Fuel filter**
5. **Oil filter**

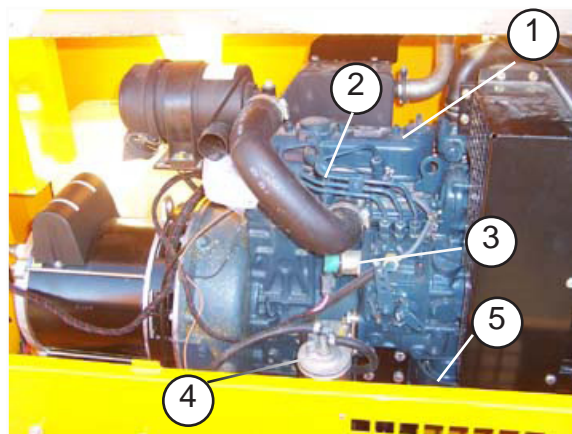


FIG. 5B

FIG. 5C. ENGINE COMPONENT IDENTIFICATION (KUBOTA)

1. **Fuel filter**
2. Electric fuel pump

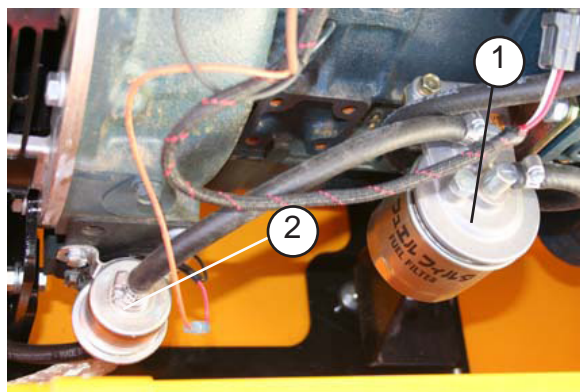


FIG. 5C

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 6A ENGINE COMPONENT IDENTIFICATION (KUBOTA)

1. Water temp switch
2. Alternator
3. Starter
4. Air cleaner

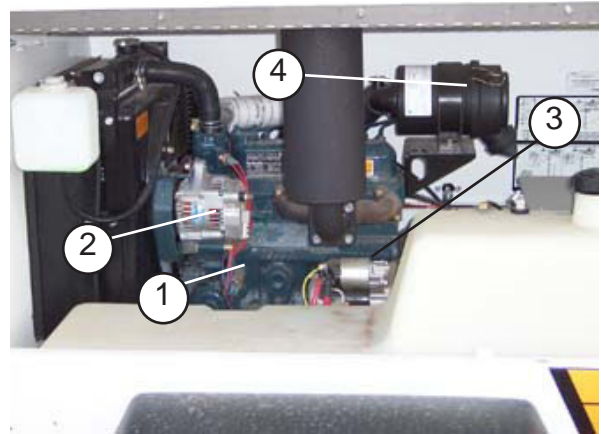


FIG. 6A

FIG. 6B ENGINE COMPONENT IDENTIFICATION (CAT)

1. Water temp switch
2. Alternator
3. Starter
4. Air cleaner

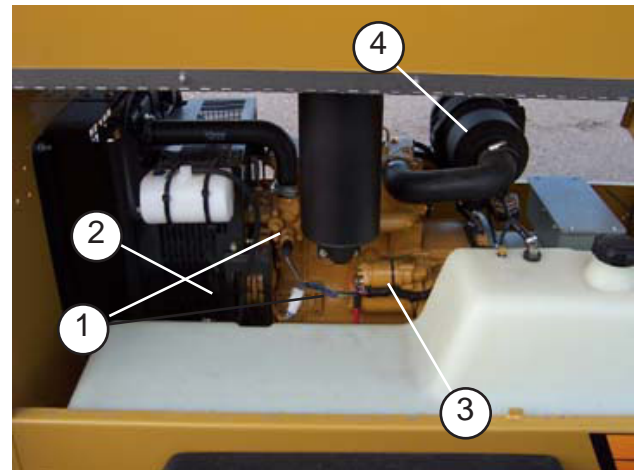


FIG. 6B

FIG. 6C ENGINE COMPONENT IDENTIFICATION (LOMBARDINI)

1. Muffler
2. Alternator
3. Oil Filter
4. Air cleaner (not shown)

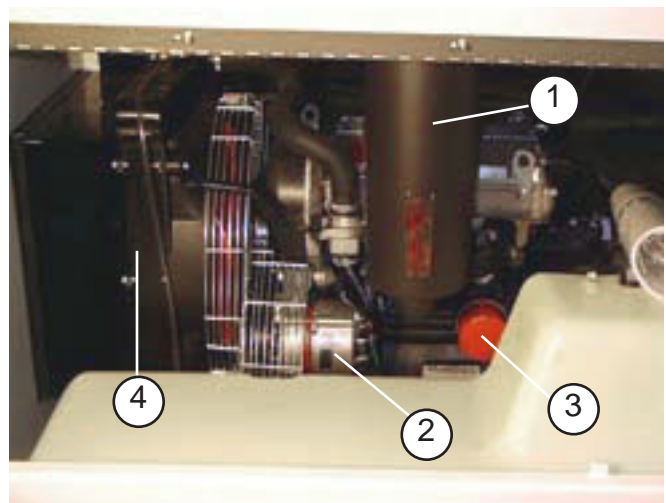


FIG. 6C

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 7A. ENGINE COMPONENT IDENTIFICATION (KUBOTA cont'd)

1. Oil fill
2. Glow plugs
3. Fuel solenoid
4. Electric Fuel Pump
5. Fuel filter
6. Oil filter

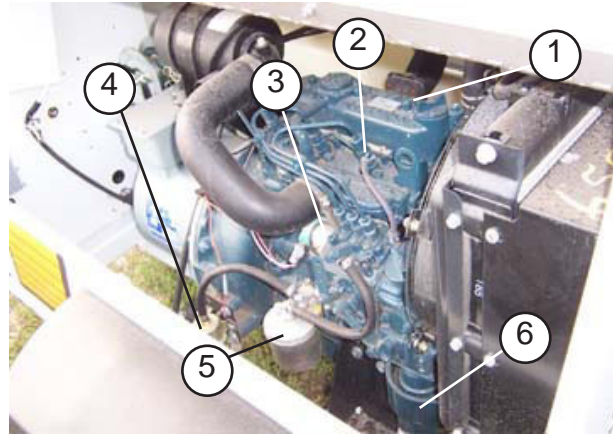


FIG. 7A

FIG. 7B. ENGINE COMPONENT IDENTIFICATION (CAT cont'd)

1. Oil fill
2. Glow plugs
3. Fuel solenoid
4. Fuel pump
5. Fuel filter
6. Oil filter

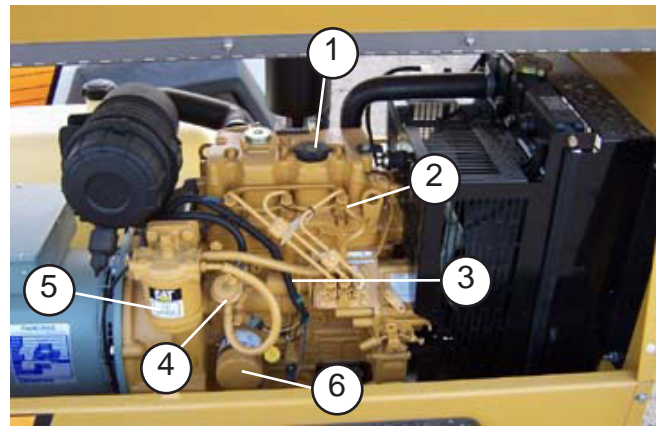


FIG. 7B

FIG. 7C. ENGINE COMPONENT IDENTIFICATION (LOMBARDINI cont'd)

1. Air Cleaner
2. Starter
3. Fuel pump
4. Fuel filter
5. Cooling Fan

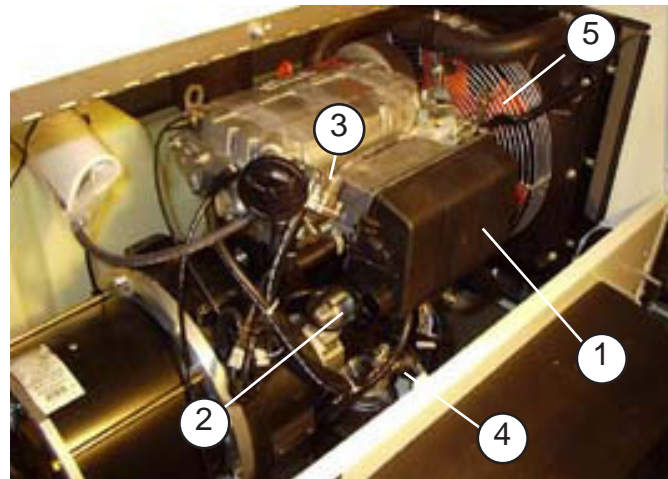


FIG. 7C

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 8a. REMOTE OIL DRAIN LOCATION

1. Remote oil drain valve (Kubota)
Open illustrated valve (1) in engine oil pan to drain oil from engine.

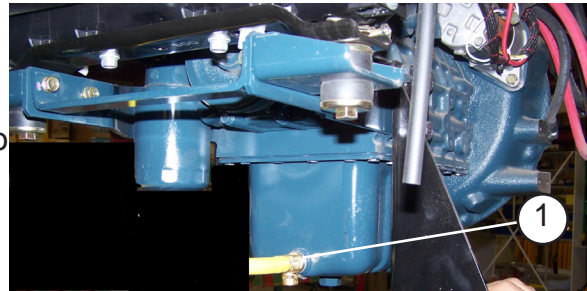


FIG. 8a

FIG. 8b. REMOTE OIL DRAIN LOCATION

1. Remote oil drain valve (CAT)
Open illustrated valve (1) in engine oil pan to drain oil from engine.

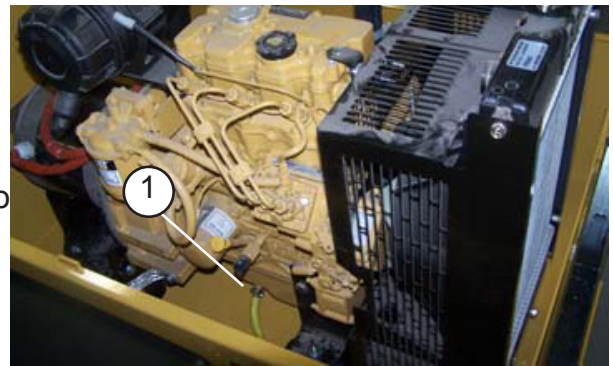


FIG. 8b

FIG. 8c. REMOTE OIL DRAIN LOCATION

1. Remote oil drain valve (Lombardini)
Open illustrated valve in engine oil pan to drain oil from engine.

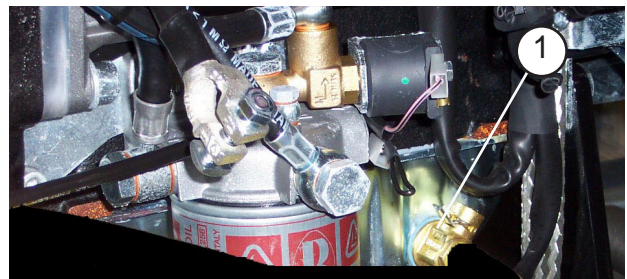


FIG. 8c

FIG. 8d. REMOTE OIL DRAIN LOCATION

1. Remote oil drain (all models)
Remove cap to drain engine oil



FIG. 8d

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 8 REAR PANEL

1. Rear Panel
2. Serial Number Tag
3. Exhaust Outlet

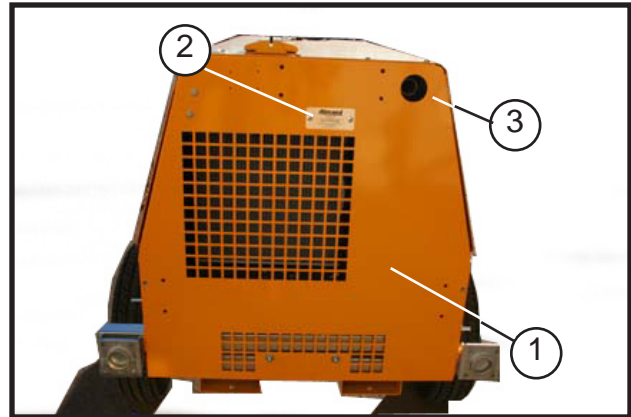


FIG. 8

FIG. 9. REAR OUTRIGGERS

1. Jack Handle
Crank handle to raise or lower foot of jack to level trailer
2. Jack Pin
Pull to allow jack to rotate
3. Outrigger Storage Latch
Retains outriggers while in the stored or travel mode

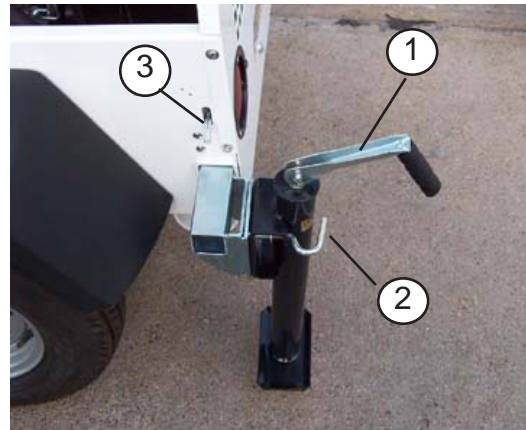


FIG. 9



SAFETY WARNING

Be sure outrigger jack and outriggers are securely latched before towing.

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 10 POSITIVE DOOR LATCH

1. Positive door latch
Locks door in the open position

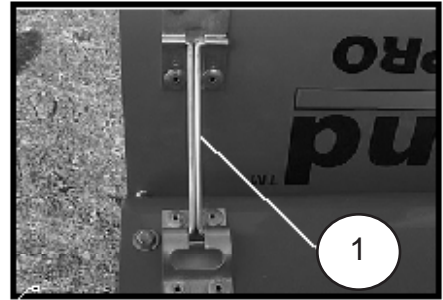


FIG. 10

FIG. 11 MANUAL WINCH

1. Manual Winch— *Used to raise and lower vertical mast (shown with safety cover)*
2. Manual Winch Handle

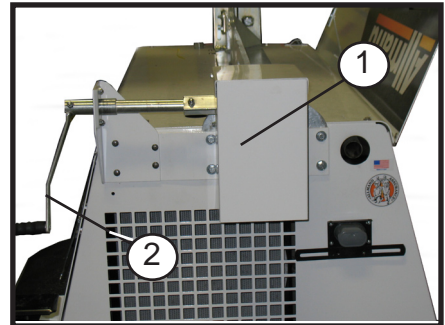


FIG. 11

FIG. 11a MANUAL WINCH

1. Manual Winch— *Used to raise and lower vertical mast (shown with safety cover)*
2. Manual Winch Handle

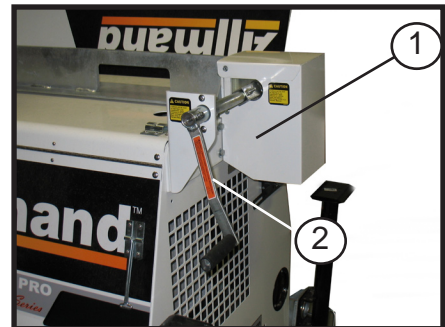


FIG. 11a

FIG. 11b-11c HYDRAULIC TOWER

1. Hydraulic Pump —*Used to raise and lower hydraulic lift vertical mast*
2. Hydraulic Cylinder— *Used to raise and lower hydraulic lift vertical mast*

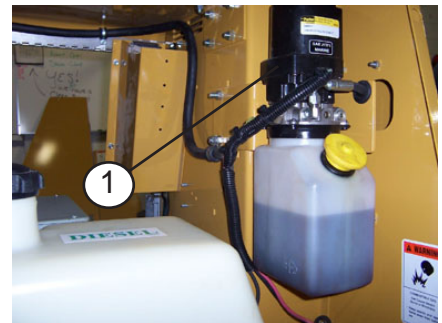
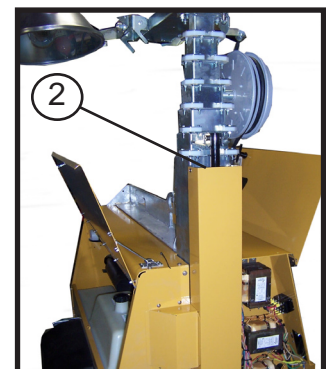


FIG. 11b

FIG. 11c



CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW
NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 12 ELECTRIC WINCH

1. Electric Winch —Used to raise and lower vertical mast (shown without safety cover for clarity)
2. Breaker Switches for outlets

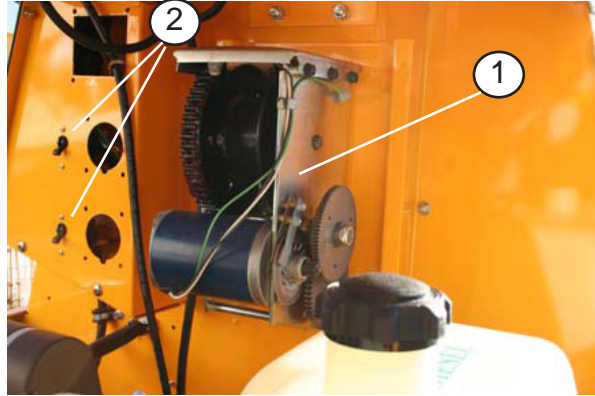


FIG. 12

FIG. 12a. ELECTRIC WINCH

1. Safety Cover Installed (Left side view)

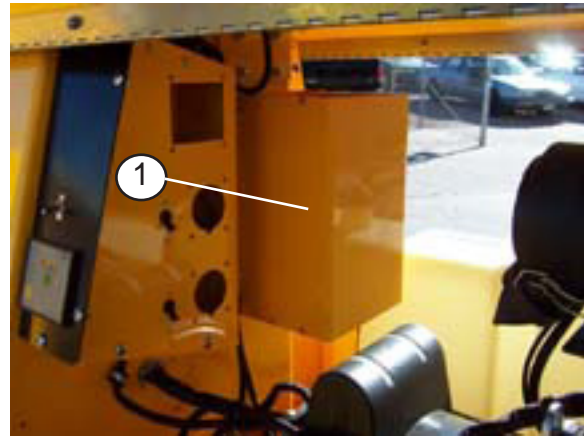


FIG. 12a

FIG. 12b. ELECTRIC WINCH

1. Safety Cover Installed (right sideview)

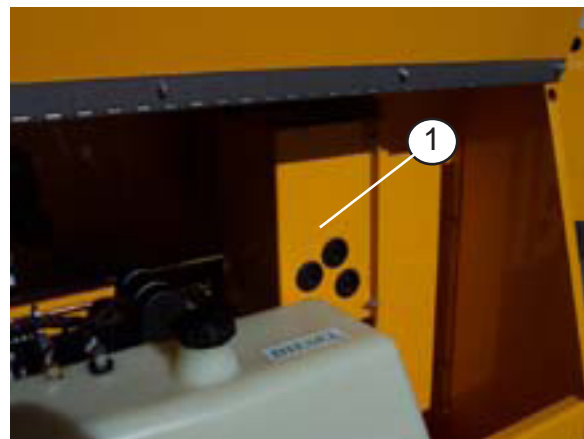


FIG. 12b

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 13. Electric Relay Assembly
1. Relays (Kubota Only)

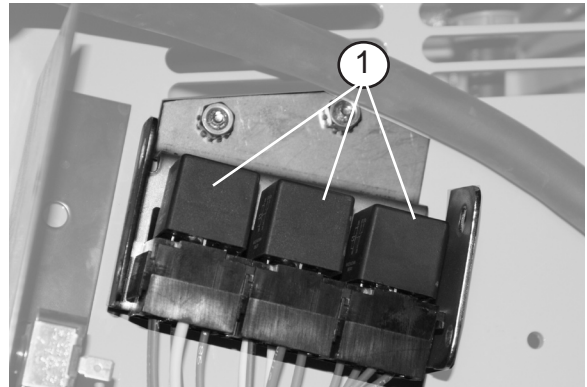


FIG. 13

FIG. 14. Tower Cord Reel Location
1. Cord Reel



FIG. 14

FIG. 15. LIFTING ATTACHMENT POINTS
1. Forklift Lifting Pockets
Used to lift light tower using forklift to ease loading and unloading



FIG. 15

CONTROLS AND COMPONENTS

NOTE: PHOTOGRAPHS MAY SHOW NON-STANDARD EQUIPMENT AND OPTIONS

FIG. 16 Vertical Tower

- 1. Seven Section Vertical Tower
- 2. Light Mounting Locations --Mount lights here for use during operation
- 3. Light connector sockets (optional) — attach light leads to light bar at these female receptacles when provided

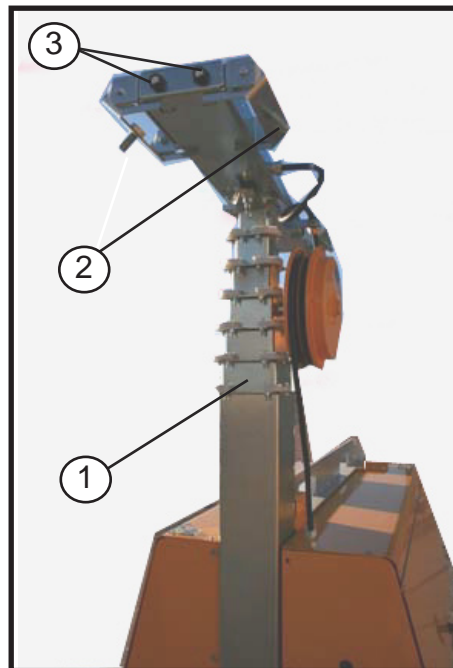


FIG. 16

FIG. 17 and 17a Light Bar and Mounting Locations

- 1. Light Bar
- 2. Light mounting locations —Mount lights here for use during operation
- 3. Light connector sockets (optional) —attach light leads to light bar at these female receptacles when provided

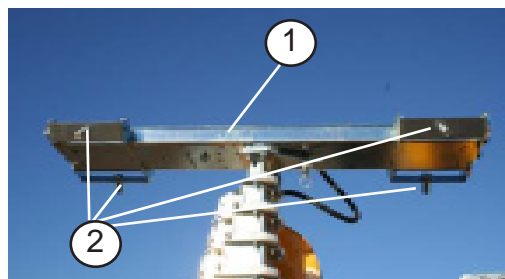


FIG. 17

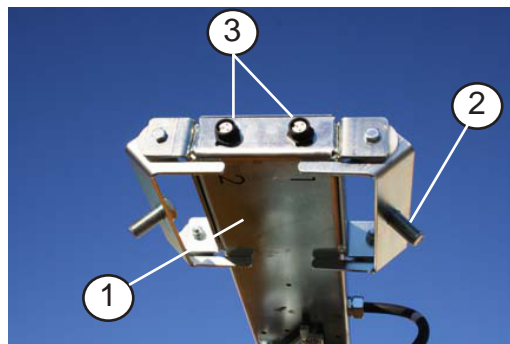


FIG. 17a

FIG. 18 Tower Limit Switch Assembly (Electric Only)

- 1. Tower Limit Switch
- 2. Tower Limit Switch Housing

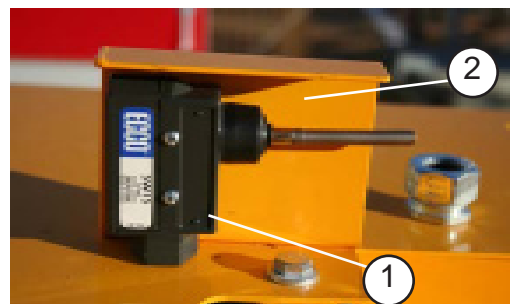


FIG. 18

ROUTINE MAINTENANCE

KUBOTA D905, D1105, CAT C1.1, and LOMBARDINI LDW 1003

INSPECTION AND LUBRICATION SCHEDULE

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

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.

KUBOTA

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.
400 Hr.	Coolant	Check level and condition
	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
	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

CAT ONLY

Interval	Item
Every Day or every 8 hours	First Service - (20/50 hours)
Every 100 hours or 3 months	Every 200 hours or 6 months
	Every 400 hours or 12 months
Every 800 hours or 18 months	Check level of coolant (Top up with coolant only)
	Check concentration of coolant
●	Renew Coolant (FILL SLOWLY, ENSURE CORRECT QUANTITY IS USED)
	Check engine lubricating oil level
●	Renew engine oil (FILL SLOWLY, ENSURE CORRECT QUANTITY IS USED)
	Renew engine oil filter
●	Drain water from fuel filter and pre-filter
	Renew fuel filter canister (N.B. Air vent screws on filter and fuel pump)
●	Check tension of alternator drive belt
	Check alternator drive belt for wear
●	Renew alternator drive belt
	Check and adjust idle speed
●	Tighten cylinder head
	Check and adjust valve clearances
●	Check electrical systems
	Check all nuts/bolts for tightness
●	Check injectors for performance
	Clean air filter (earlier check may be necessary)
●	Renew air filter element
	Check and correct any leaks or engine damage

LOMBARDINI ONLY

MAINTENANCE OPERATION	MAINTENANCE INTERVAL						
	10 hours or DAILY	50 hours	125 hours	250 hours	500 hours	1000 hours	2500 hours
OIL LEVEL CHECK (D)	.						
COOLANT LEVEL CHECK (D)	.						
FAN/ ALTERNATOR BELT INSPECTION (+)	.						
AIR FILTER ELEMENT CHECK (DRY TYPE) (*)	see note						
AIR FILTER CHECK (OIL BATH TYPE) (**)	.						
RADIATOR CORE INSPECTION (⊙)	.						
FLUID LEAK INSPECTION- GENERAL (+)	.						
SAFETY GUARD INSPECTION (+)	.						
OIL REPLACEMENT- INITIAL ONLY-(see RECOMMENDED OIL TYPE)	.	.					
OIL FILTER REPLACEMENT - INITIAL ONLY	.	.					
OIL REPLACEMENT- (see RECOMMENDED OIL TYPE)			.				
OIL FILTER REPLACEMENT				.			
FUEL FILTER REPLACEMENT				.			
COOLANT HOSE INSPECTION				.			
FAN/ ALTERNATOR BELT TENSION ADJUSTMENT				.			
VALVE ADJUSTMENT					.		
FAN/ ALTERNATOR BELT REPLACEMENT					.		
FUEL INJECTION SYSTEM ADJUSTMENT					.		
CLEAN FUEL TANK (⊙)						.	
COOLANT REPLACEMENT (***)							.
REPLACE TIMING BELT							.

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.

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 lamp 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.

For engine and generator troubleshooting, see engine and generator manuals or contact your dealer.



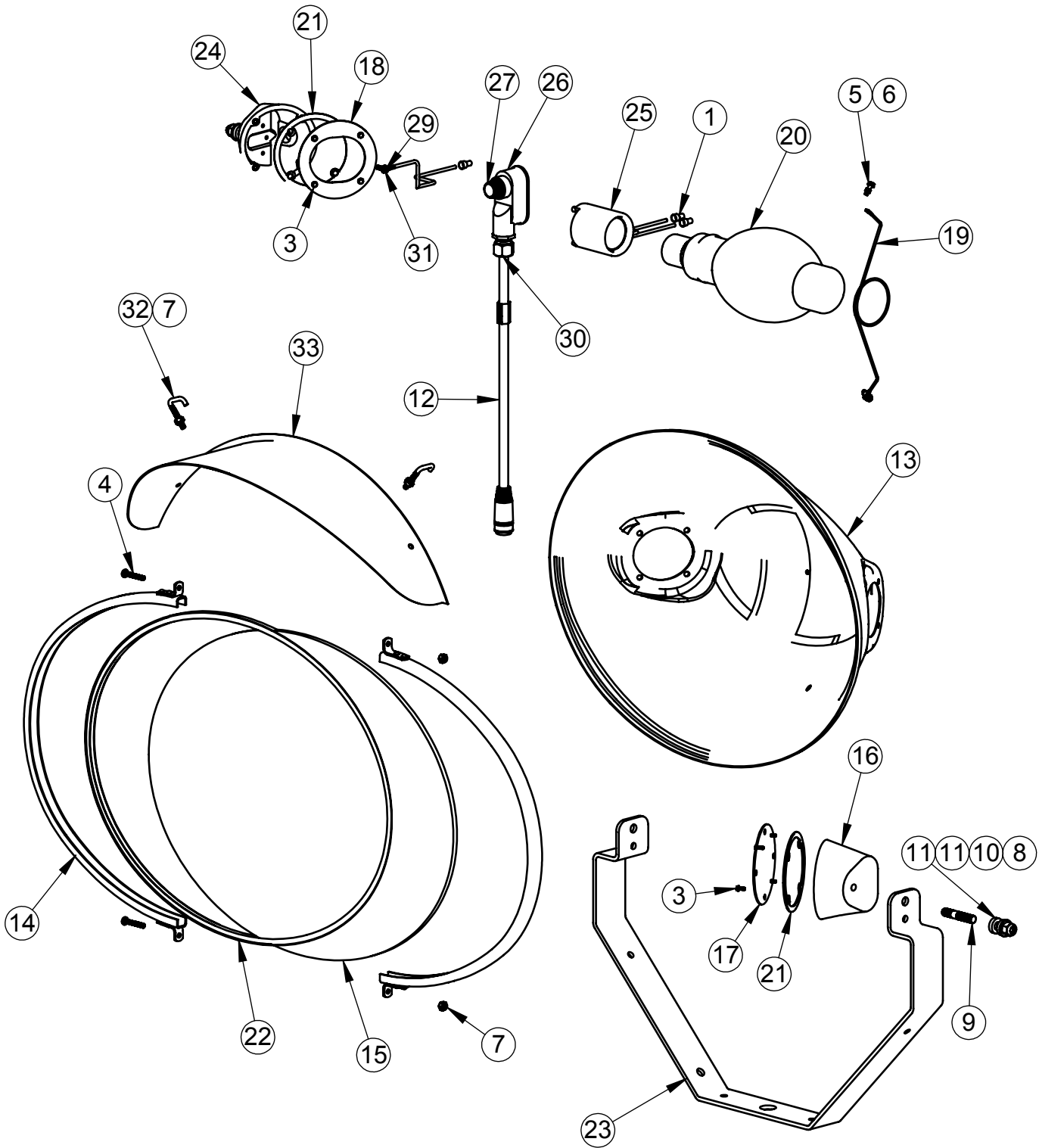
**NIGHT-LITE PRO
PARTS MANUAL
VERTICAL TOWER
MODEL**

**ALLMAND BROS. INC
P.O. BOX 888
HOLDREGE, NE 68949**

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

AllmandTM NIGHT-LITE PRO SERIES

NIGHT-LITE PRO V-SERIES DOMESTIC SHO 1000 LAMPHOLDER



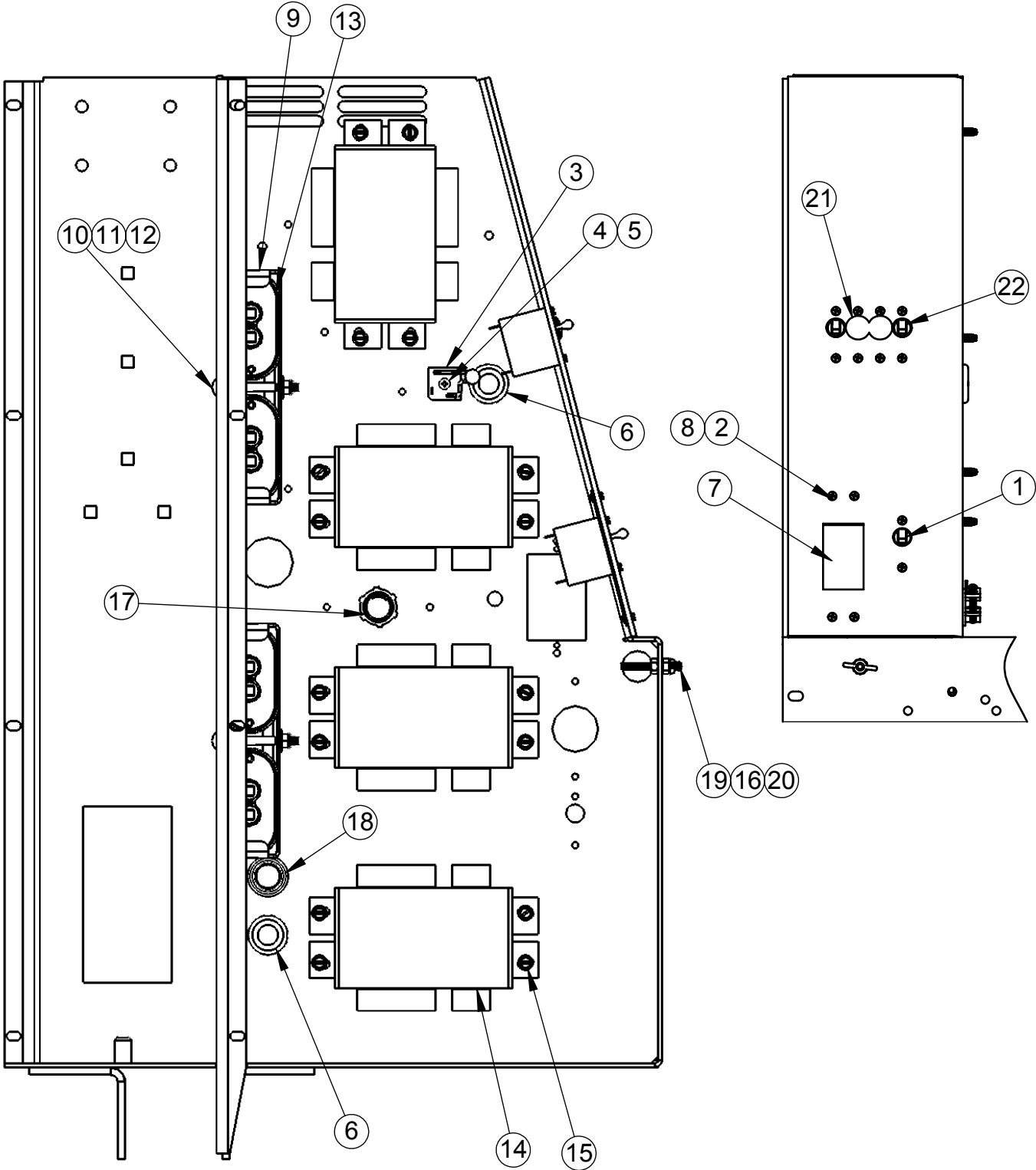
NIGHT-LITE PRO V-SERIES DOMESTIC SHO 1000 LAMPHOLDER

NO.	QTY.	PART NO.	DESCRIPTION
1	3	022060	WIRE CAP SMALL
2	1	610210	FIBERGLASS TUBE X 12"
3	8	041028	10-24 X 1/2 HEX MACH SCREW
4	2	041036	10-24 X 1 1/4 SS RHMSPH
5	2	041200	8-32 X 1/2 HEX MACH SCREW
6	2	044013	NUT #8-32 NYLOC HEX SS
7	4	044019	10-24 NYLOC NUT
8	2	044037	3/8-24 NYLOC NUT
9	2	045142	STUD 3/8-24 X 3/8-16 X 2"
10	2	047016	3/8 SAE FLAT WASHER
11	4	047019	3/4 OD X .385 ID NYLON BUSHING
12	1	310434	MALE CONNECTOR CABLE (OPTION)
13	1	610201	REFLECTOR
14	2	610202	LENS CHANNEL
15	1	610203	LENS
16	1	610206	END CAP
17	1	610207	INTERIOR COVER PLATE
18	1	610208	INTERIOR COVER PLATE
19	1	610209	LAMP SUPPORT TIP
20	1	610221	LAMP 1000W BT37(MH)
21	2	610213	GASKET
22	1	610217	SILICONE GASKET
23	1	680493	YOKE MOUNT
24	1	610205	END CAP
25	1	610212	CERAMIC SOCKET
26	1	610214	ELBOW
27	1	610215	NIPPLE
28	1	020113	14 AWG GREEN 6"
29	1	022155	#10 ELEC. RING
30	1	510007	1/2 DIA CORD GRIP
31	1	041257	10-32 GROUND SCREW
32	2	045070	#10-24 HOOK SQ BD BOLT
33	1	610017	SAF-T VISOR

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES CE

BALLAST PANEL



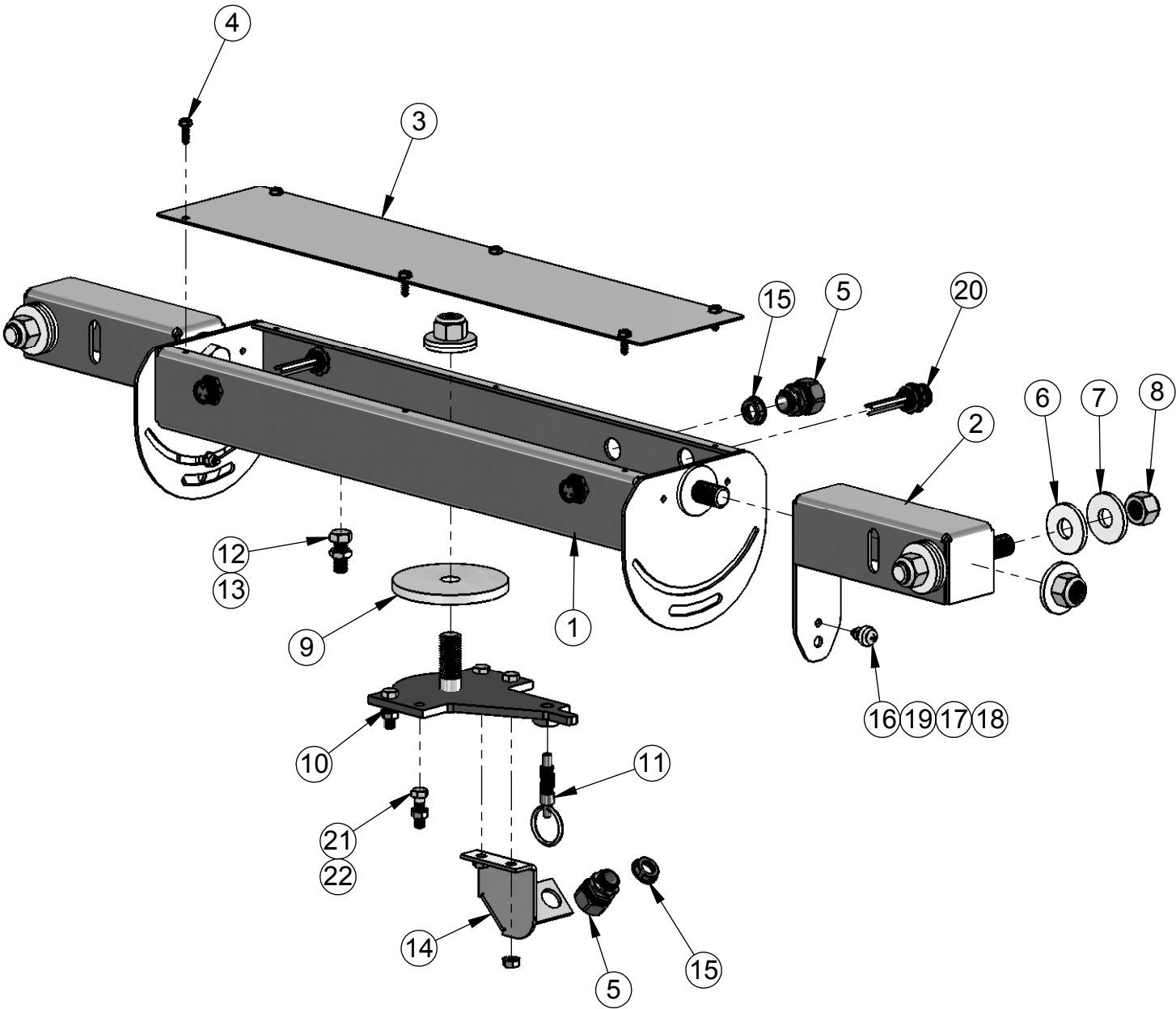
NIGHT-LITE PRO V-SERIES CE

BALLAST PANEL

NO.	QTY.	PART NO.	DESCRIPTION
1	1	650151	15 AMP SPST CIRCUIT BREAKER
2	14	041017	6-32 X 3/8 MACH SCREW PLT
3	1	630157A	DIODE BRIDGE
4	1	041027	10-24 x 3/4" PHILIPS HEAD MS
5	1	044016	10-24 KEPS NUT
6	2	330463	RUBBER GROMMET
7	1	651243P	BREAKER COVER PLATE
8	6	044004	6-32 KEPS NUT
9	2	100392P	CLAMP CAPACITOR (HPS)
10	2	100718	1/4-20 x 2 1/4 CARR BOLT
11	2	047008	1/4" FLAT WASHER SS
12	2	044023	1/4-20 NYLOCK NUT
13	4	100329	CAPACITOR 28 uF (HD 1250W)
14	4	100328	BALLAST 1250W 60 Hz W/28uF CAPACITOR(HD)
15	16	041070	1/4-20x3/4 TAP SCREW
16	1	330494	1/4-20 WING NUT
17	1	022025	2-SCREW ROMEX CLAMP, 3/4"
18	1	064025	1 1/16" PLASTIC PLUG
19	1	045004	1/4-20 X 2" STUD
20	2	044021	1/4-20 KEPS NUT
21	2	433329	5/8" PLASTIC PLUG
22	2	650127	25 AMP SPST CIRCUIT BREAKER

NIGHT-LITE PRO V-SERIES DOMESTIC LIGHT BAR

2/4/2010



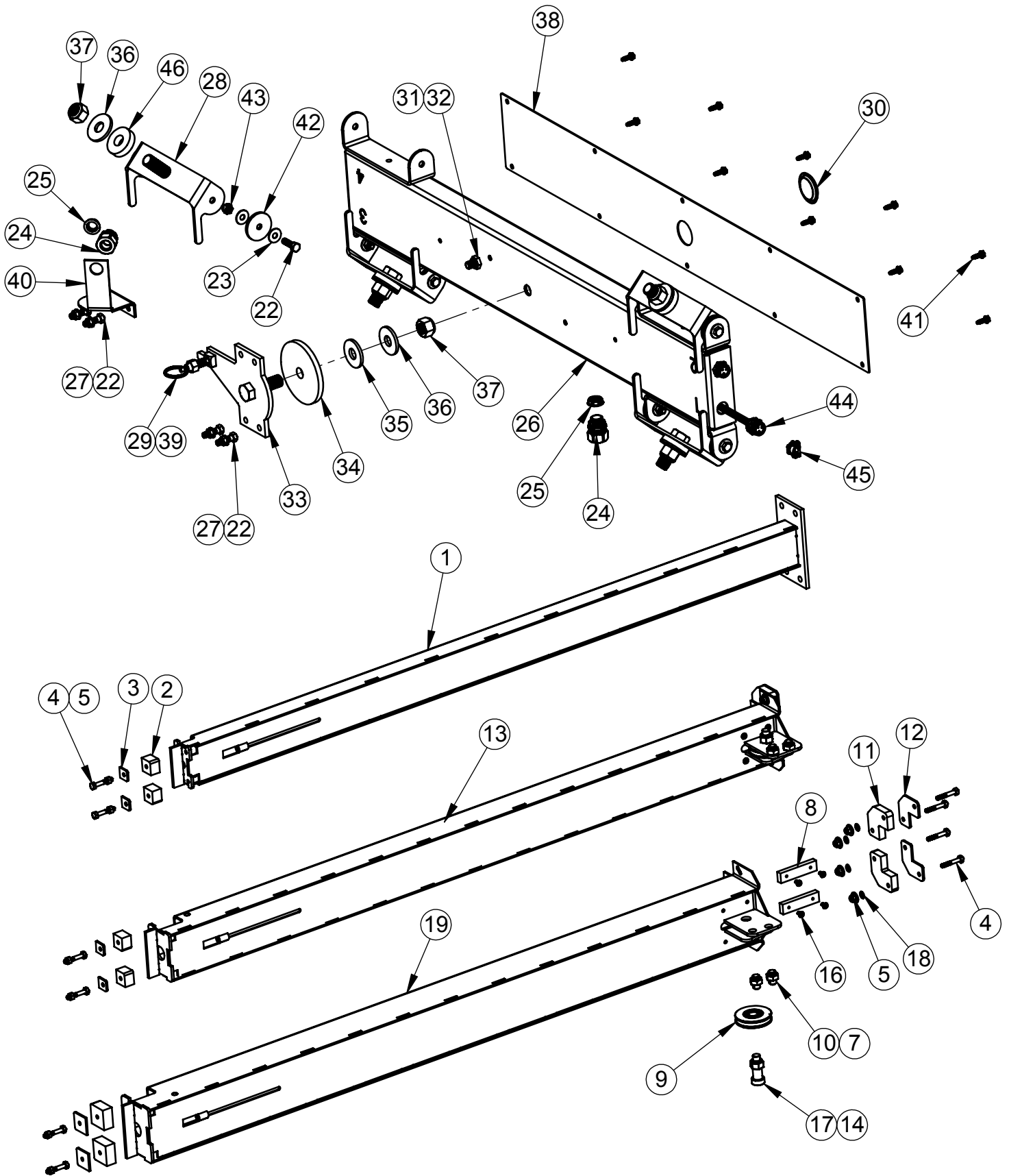
NIGHT-LIGHT PRO V-SERIES DOMESTIC LIGHT BAR

2/4/2010

NO.	QTY.	PART NO.	DESCRIPTION
1	1	101930P	LIGHT BAR
2	2	101931P	LAMP MOUNT
3	1	101929P	COVER
4	6	041070	1/4-20 X 3/4 SMSHH TP F
5	2	330031	1/2 CORD GRIP
6	7	650550	.785 X 2 HDPE WASHER
7	7	047035	3/4 FLAT WASHER PLTD
8	7	044121	3/4-10 NYLOCK SS
9	1	100147	UHMW BEARING
10	1	100143P	ROTATION MOUNT
11	1	100148	LATCH ASSY
12	1	046180	1/2-13 X 1 1/4 HHCS GR 5
13	1	100643	1/2-13 NYLOCK
14	1	100154P	TOWER CORD BRACKET
15	2	022415	BUSHING THREADED
16	2	041080	1/4 - 20 X 1 THCS
17	2	047070	1/4 FW SS
18	2	044023	1/4-20 NYLOCK NUT
19	2	047019	3/4 OD X .385 ID NYLON BUSHING
20	4	310414	FEMALE QD CONNECTOR
21	4	046115	3/8-16 X 1 1/4 HHCS
22	4	044036	3/8-16 KEPS NUT

NIGHT-LITE PRO V-SERIES DOMESTIC

100399 UPPER SECTIONS



NIGHT-LITE PRO V-SERIES DOMESTIC

100399 UPPER SECTIONS

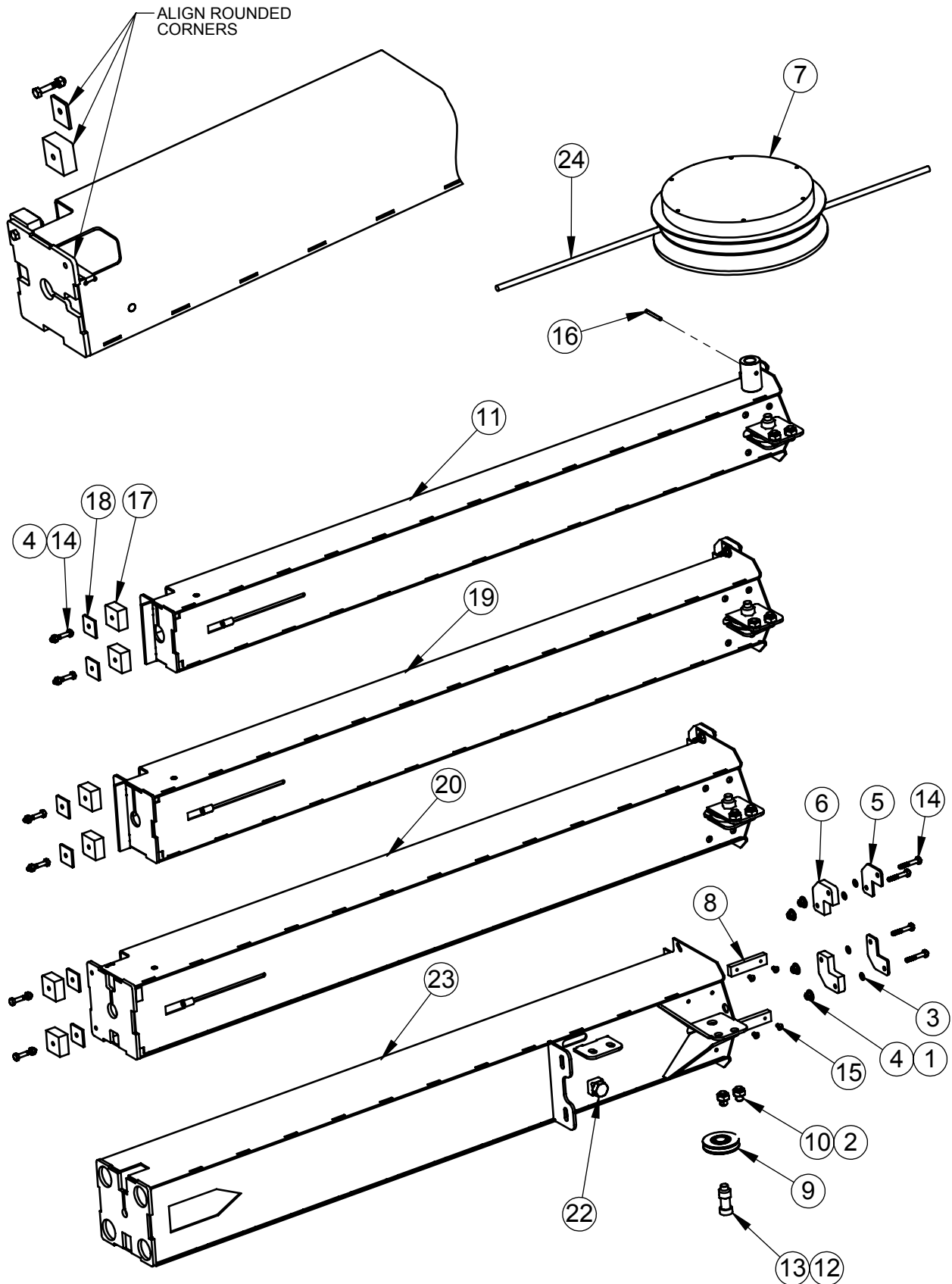
NO.	QTY.	PART NO.	DESCRIPTION
1	1	100085	SEC 7
2	4	100178	UHMW 3/4 X 1" SQ WEAR BLK
3	4	100179-15	1" WEAR BLK CVR
4	13	046025	1/4-20 X 1 1/2" HEX BOLT
5	14	044023	1/4-20 NYLOCK NUT
6	8	047005	1/4 FLAT WASHER
7	4	044096	1/2-20 HEX NUT PL
8	4	100062	SPACER, 3/8" UHMW
9	2	100160	2 1/2" PULLEY
10	4	100071	3/16 CABLE BOLT
11	4	100088	BLOCK, CORNER FRICTION
12	4	100089-15	COVER, CORNER BLOCK
13	1	100080-15	SEC 6
14	2	044048	NUT NYLOCK 1/2-13 HEX PL
15	1	100149	CABLE ASSY.
16	8	041023	#10 X 3/8 PLS
17	2	100642	5/8 X 1 SHOULDER BOLT
18	8	043060	3/8 INT STAR WASHER
19	1	100075-15	SEC 5
20	2	100094	UHMW 1 1/2" WEAR BLK
21	2	100095-15	1 1/2" WEAR BLK CVR
22	12	046115	3/8-16 X 1 1/4 HHCS
23	16	047015	3/8 FLAT WASHER
24	2	330031	1/2" CORD GRIP
25	2	022415	BUSHING THREADED
26	1	100113-15	WELD LIGHT BAR
27	4	044036	3/8-16 KEPS NUT
28	4	100157-15	WELD, LIMITER BKT
29	1	100148	LATCH ASSY
30	1	680878	CAPLUG 1 3/4"
31	1	046180	1/2-13 X 1 1/4 HHCS GR 5
32	1	100643	1/2-13 NYLOCK JAMB NUT
33	1	100143-15	WELD, ROTATION MOUNT
34	1	100147	UHMW BEARING
35	1	650550	.785 X 2" HDPE WASHER
36	5	047035	3/4 FLAT WASHER (PLATED)
37	5	044121	3/4-10 NYLOCK SS HEX NUT
38	1	100106-15	LIGHT BAR COVER
39	1	044045	1/2-13 PL HEX HUT
40	1	100154-15	BRACKET
41	10	041070	1/4-20x3/4 TAP SCREW
42	8	100673	.385 X 2 X 3/16 PC WASHER
43	8	044038	3/8-16 NYLON INSERT NUT
44	4	310414	CONNECTOR, FEMALE QD
45	4	022020	2 SCREW CLAMP, 3/8"
46	4	101813	WASHER

B-1B

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

100399 LOWER SECTIONS



NIGHT-LITE PRO V-SERIES DOMESTIC

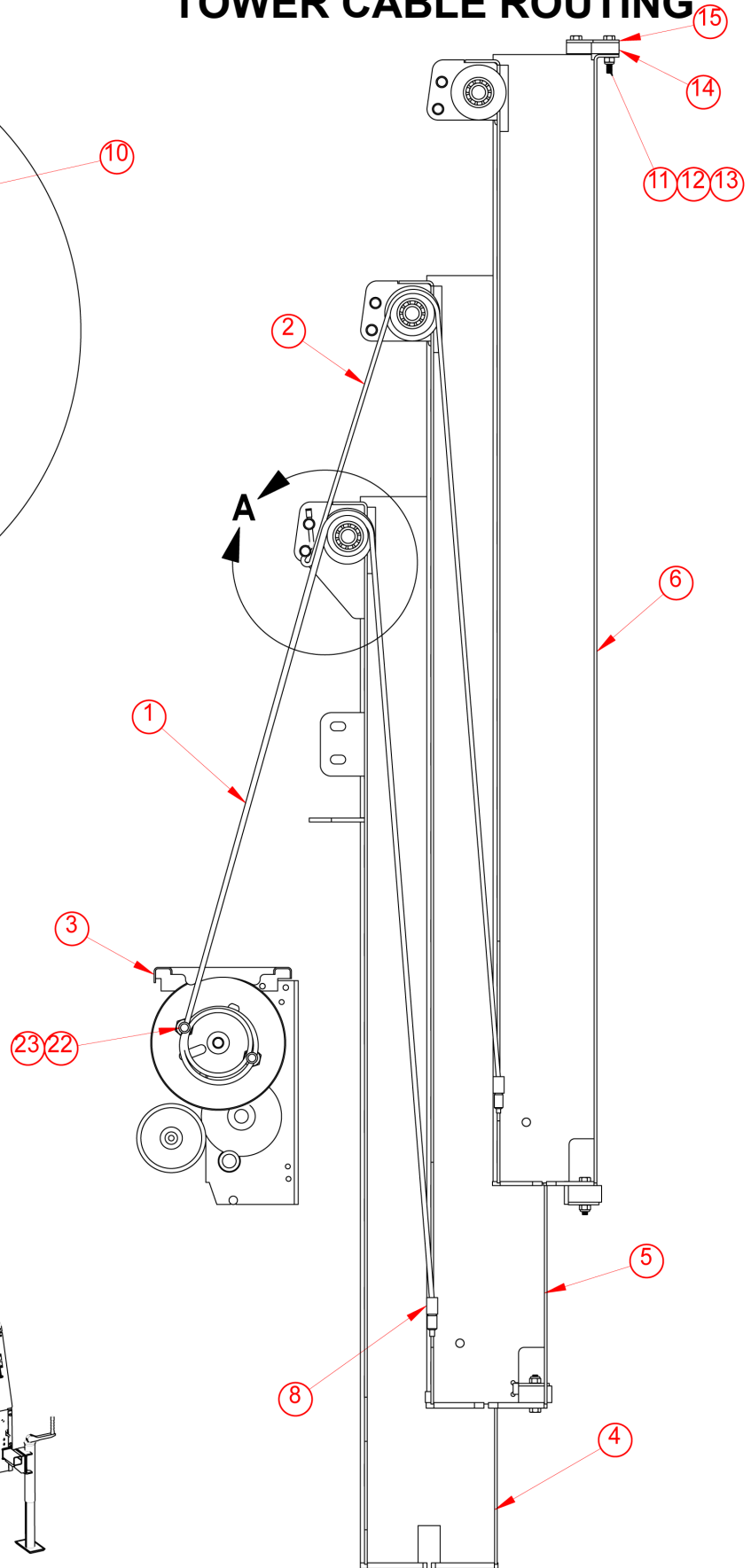
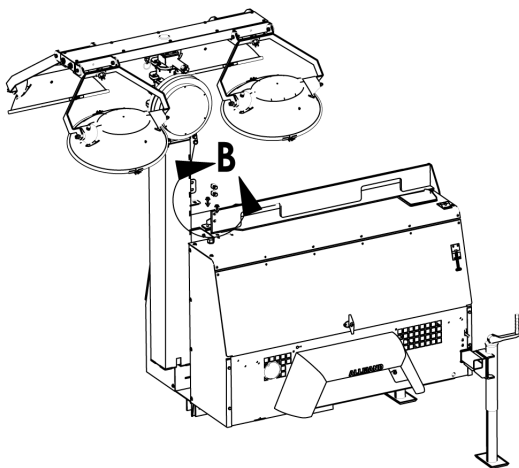
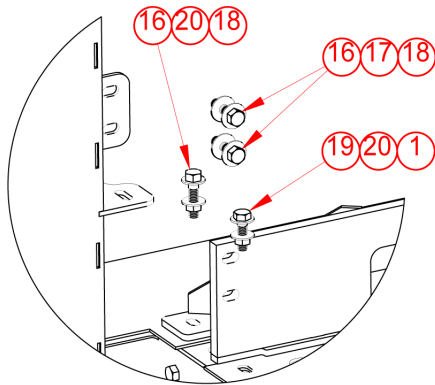
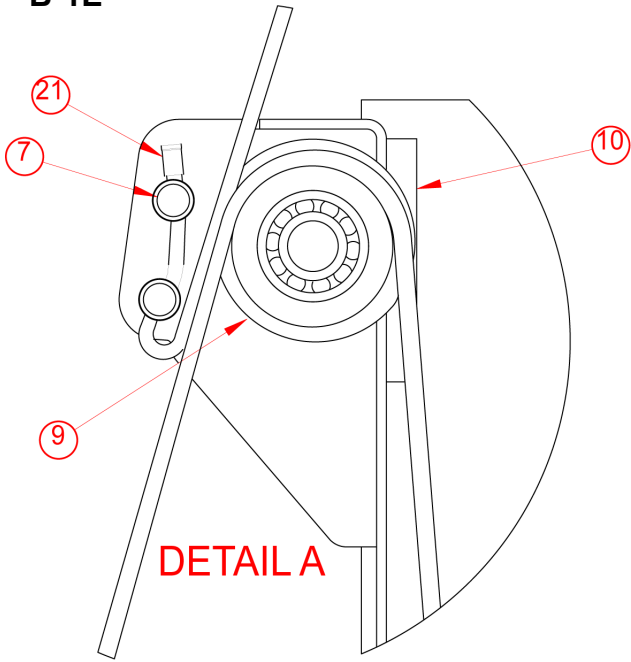
100399 LOWER SECTIONS

NO.	QTY.	PART NO.	DESCRIPTION
1	16	047005	1/4 FLAT WASHER
2	8	044096	1/2-20 HEX NUT PL
3	16	043060	3/8 INT STAR WASHER
4	22	044023	1/4-20 NYLOCK NUT
5	8	100089-15	COVER, CORNER BLOCK
6	8	100088	BLOCK, CORNER FRICTION
7	1	320410P	CORD REEL
8	6	100062	SPACER, 3/8" UHMW
9	4	100160	2 1/2" PULLEY
10	8	100071	3/16 CABLE BOLT
11	1	100070-15	SEC 4
12	4	044048	NUT NYLOCK 1/2-13 HEX PL
13	4	100642	5/8 X 1 SHOULDER BOLT
14	22	046025	1/4-20 X 1 1/2" HEX BOLT
15	16	041023	#10 X 3/8 PLS
16	1	320453	3/16 X 1 3/4" ROLL PIN
17	6	100094	UHMW 1 1/2" WEAR BLK
18	6	100095-15	1 1/2" WEAR BLK CVR
19	1	100060-15	WELD, SEC 3
20	1	100055-15	SEC 2
21	1	043100	5/8 INT LOCK WASHER
22	1	046242	5/8-11 X 1" GR 5 HEX BOLT
23	1	100081-15	SEC 1
24	1	100687	VERTICAL TOWER CORD 16/8 X 310"

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

NIGHT-LITE PRO V SERIES TOWER CABLE ROUTING

B-1E



NIGHT-LITE PRO V SERIES TOWER CABLE ROUTING

NO	PART NO	DESCRIPTION
1	100150	7/32" CABLE
2	100149	3/16" CABLE
3	100146	ASSY, ELEC WINCH
4	100081-15	TOWER SECTION 1
5	100055-15	TOWER SECTION 2
6	100060-15	TOWER SECTION 3
7	100071	1/2-20 CABLE BOLT (USE WITH 3/16 CABLE ONLY)
8	N/A	CABLE ANCHOR
9	100160	2 1/2" PULLEY
10	100062	SPACER, 3/8" UHMW
NS	041023	#10 X 3/8" PLS
11	046025	1/4-20 x 1 1/2" HEX BOLT
12	043060	3/8" INTERNAL TOOTH WASHER
13	044023	1/4-20 NYLOCK NUT
14	100088	CORNER FRICTION BLOCK
15	100089-15	CORNER BLOCK COVER
16	046120	3/8-16 X 1 1/2 HEX BOLT
17	047015	3/8 FLAT WASHER
18	044036	3/8-16 KEPS NUT
19	046115	3/8-16 X 1 1/4 HEX BOLT
20	047010	5/16 FLAT WASHERS
21	022150	SPLICE CAP(use with cables 100149 and 100150 above)
22	100993	1/2-13 CABLE BOLT(USE WITH 7/32 CABLE ONLY)
23	044045	1/2-13 NUT

B-1F

INSTRUCTIONS FOR REPLACING STEEL CABLES

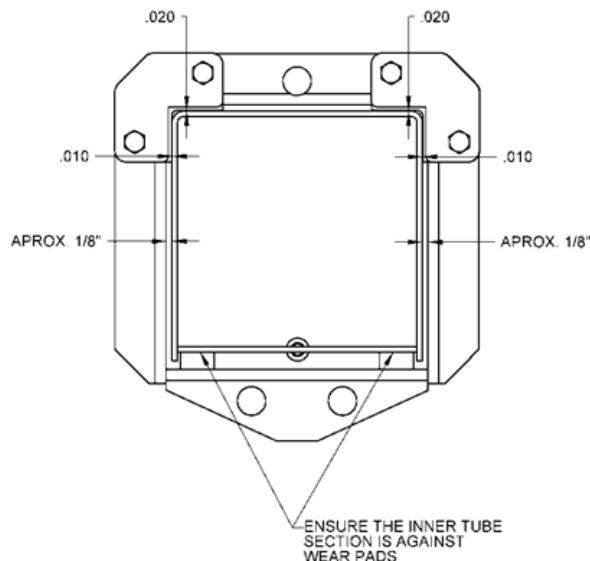
1. REMOVE VERTICAL TOWER WIRING FROM THE LIGHT BAR ASSEMBLY(NOT SHOWN) AND THE TRAILER (BEHIND THE LEFT FRONT PANEL).
2. REMOVE 7/32 CABLE(ITEM 1) FROM WINCH BY LOOSENING ITEMS 22 AND 23
3. REMOVE ENTIRE VERTICAL TOWER FROM TRAILER BY REMOVING BOLTS, NUTS, AND WASHERS (ITEMS 16,17,18,19, AND 20) AND LIFTING OFF OF THE STUD ON THE TRAILER FRAME (REFER TO DEATAIL B)
4. REMOVE THE STEEL CABLE FROM THE CABLE BOLTS (ITEM 7).
5. REMOVE THE #10 SCREWS (NOT SHOWN) AND THE UHMW SPACERS (ITEM 10).
6. REMOVE CORNER FRICTION BLOCKS (ITEM 14) BY REMOVING BOLTS (ITEM 11), NUTS (ITEM 13), WASHER (ITEM 12), AND COVER (ITEM 15)
7. SLIDE OUT THE SECTION WITH THE CABLE THAT IS BEING REPLACED
8. PULL THE STEEL CABLE THROUGH THE CABLE ANCHOR (ITEM 8).
9. RUN THE NEW STEEL CABLE THROUGH THE CABLE ANCHOR (ITEM 8)UNTIL THE STOP ON THE CABLE IS SEATED.
10. INSERT THE TOWER SECTION WITH THE CABLE INTO POSITON.
11. ATTACH THE UHMW SPACERS (ITEM 10) WITH THE #10 SCREWS.
12. ATTACH CORNER FRICTION BLOCKS (ITEM 14) USING BOLTS (ITEM 11),NUTS (ITEM 13), WASHER (ITEM 12), AND COVER (ITEM 15) **(Refer to page B-1G for adjust ment procedures**
13. ATTACH THE CABLE BOLTS TO THE CABLE AND TOWER SECTION. BEFORE TIGHT ENING THE CABLE BOLTS, REMOVE ANY SLACK FROM THE STEEL CABLE. **TIGHTEN CABLE BOLTS TO 20-25 ft/lbs.**
14. **CRIMP ON SPLICE CAPS (ITEM 21) TO THE END OF THE CABLE.**
15. ATTACH ENTIRE VERTICAL TOWER TO THE TRAILER USING BOLTS, NUTS, AND WASHERS (ITEMS 16,17,18,19, AND 20).
16. ATTACH THE 7/32 CABLE (ITEM 1) TO WINCH WI
17. ATTACH THE VERTICAL TOWER WIRING

NIGHT-LITE PRO V SERIES

B-1G

VERTICAL TOWER CORNER FRICTION BLOCK ADJUSTMENT

1. Make sure the corner friction block cover plate is on top of the UHMW (plastic) corner friction block and a 3/8 internal star washer is between the friction block and the friction block mounting flange of the tower. This washer is necessary to insure a grip between the friction block and the metal flange of the tower.
2. Use 1/8" spacers to center the inside tower in the middle of the outside tower. SEE ILLUSTRATION.
3. Using a .010" shim and .020" shim for spacers, place a .010" shim between the friction block and the inner tower section sides. SEE ILLUSTRATION.
4. Make sure the inner tower is against the 3/8" thick UHMW blocks mounted inside the outer tower and use the .020" shim to set the friction block distance from the inner tower section. SEE ILLUSTRATION.
5. Tighten the 1/4-20 nuts. And continue to set all corner friction blocks on all sections using this procedure.



NIGHT-LITE PRO V SERIES

B-1H

ELECTRIC WINCH CLUTCH SETTING PROCEDURE

PURPOSE

1. Adjustment of the winch clutch nut is necessary to limit the power of the winch. The clutch nut must be tight enough to prevent clutch slippage when raising the tower and loose enough so that the clutch does slip if the tower should come in contact with some overhead obstruction or be extended past the upper limit switch which would cause the tower to stop against the dead stop bolt.
2. The clutch nut requires a torque value of approximately 28 to 30 in lbs. **(DO NOT OVER TIGHTEN)** **NOTE:** The nut may seem loose when it is properly set. **DO NOT ADJUST;** further tightening may cause cable failure.

SETTING THE CLUTCH UNDER FIELD CONDITIONS

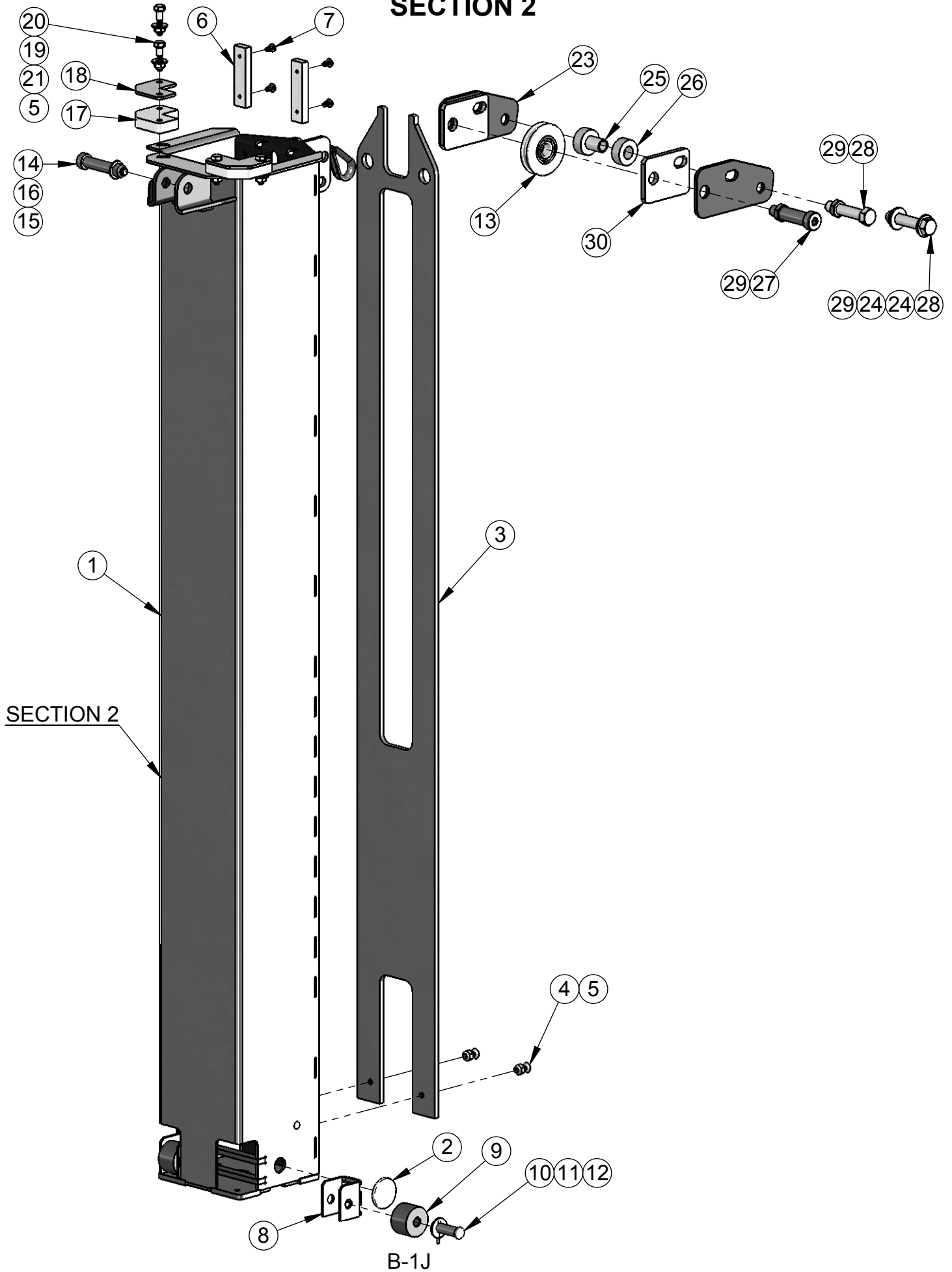
1. Loosen clutch nut approximately $\frac{1}{2}$ turn.
2. Stand clear of the tower when raising or lowering tower.
3. Start engine and operate the winch in the up direction. The winch should run but the tower should not move. **(At this time the clutch nut should be loose enough to let the clutch slip, if not, back off the clutch nut just enough so the clutch does slip).**
4. Start the clutch nut setting procedure by making a slight tightening adjustment until the tower starts to rise.
5. The tower may again stall even while the winch continues to run. If so, lower the tower and make another slight adjustment to the clutch nut, by tightening in the clockwise direction approximately 10 to 20 degrees.
6. Repeat the previous step until the tower reaches full elevation without stalling. Do not make large adjustments to the clutch nut as it would be easy to over tighten the nut.
7. Run the tower up and down at least 5 times to ensure consistent full elevation.
8. The clutch is a serviceable part and may require slight adjustments periodically.

WHEN ORDERING, SPECIFY COLOR WANTED
ON PART NUMBERS CONTAINING THE
LETTER P

NIGHT-LITE PRO-V SERIES DOMESTIC

5/14/2010

SECTION 2



NIGHT-LITE PRO V-SERIES DOMESTIC HYDRAULIC TOWER SECTIONS

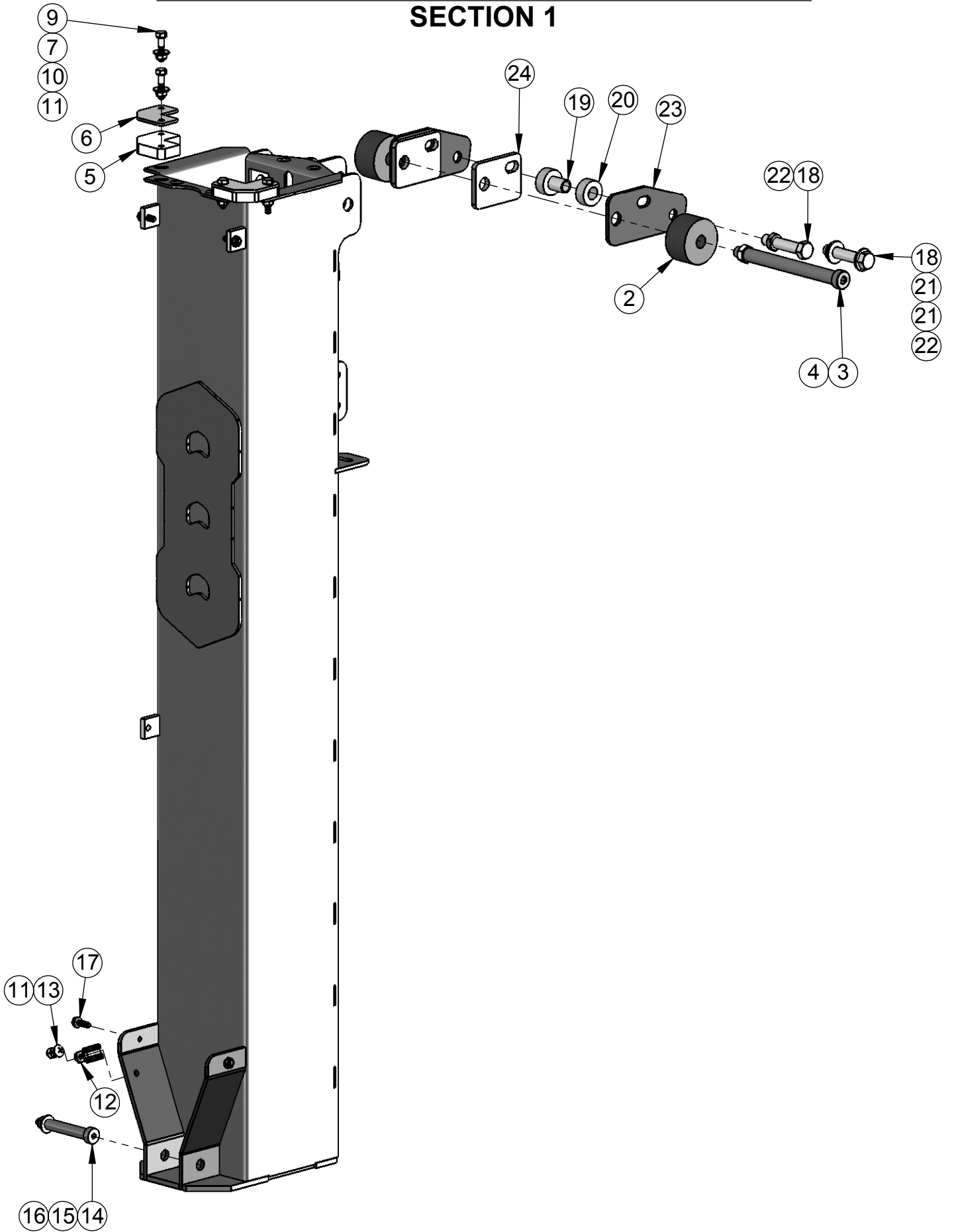
NO.	QTY.	PART NO.	DESCRIPTION
1	1	101035P	SECTION2
2	2	101626	FRICTION PLUG
3	1	100204P	SECTION 2 ROLLER PLATE
4	2	041047	1/4-20 X 3/4 PH CSK
5	6	044023	1/4-20 NYLOCK NUT
6	2	100062	3/8 UHMW SPACER
7	4	041023	#10 X 3/8 PLS
8	2	101374P	BEARING CASE
9	2	101380	COMPOSITE ROLLER
10	2	101377	CLEVIS PIN 7/16 X 1 1/2
11	2	047015	3/8 FLAT WASHER
12	2	045044	COTTER PIN
13	1	100160	2 1/2" PULLEY
14	1	101378	1/2 X 2 SH BOLT
15	1	044038	3/8-16 NYLOCK NUT PL
16	1	047010	5/16 FLAT WASHER
17	2	100088	CORNER FRICTION BLOCK
18	2	100089P	CORNER BLOCK COVER
19	4	043060	3/8 INT STAR WASHER
20	4	046020	1/4-20 X 1 1/4 HEX BOLT GR5
21	4	047005	1/4 FLAT WASHER
22	1	045040	1/4 CABLE THIMBLE
23	2	102270P	CABLE BRACKET
24	2	047025	1/2 FLAT WASHER
25	1	102273	LONG SPACER
26	2	102271	PLASTIC SPACER
27	1	102365	5/8 X 1 SHOULDER BOLT
28	2	046205	1/2-13 X 2 1/2 HEX BOLT GR5
29	3	100643	1/2-13 NYLOCK
30	2	102269P	SPACER BRACKET

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

5/14/2010

SECTION 1



NIGHT-LITE PRO V-SERIES DOMESTIC

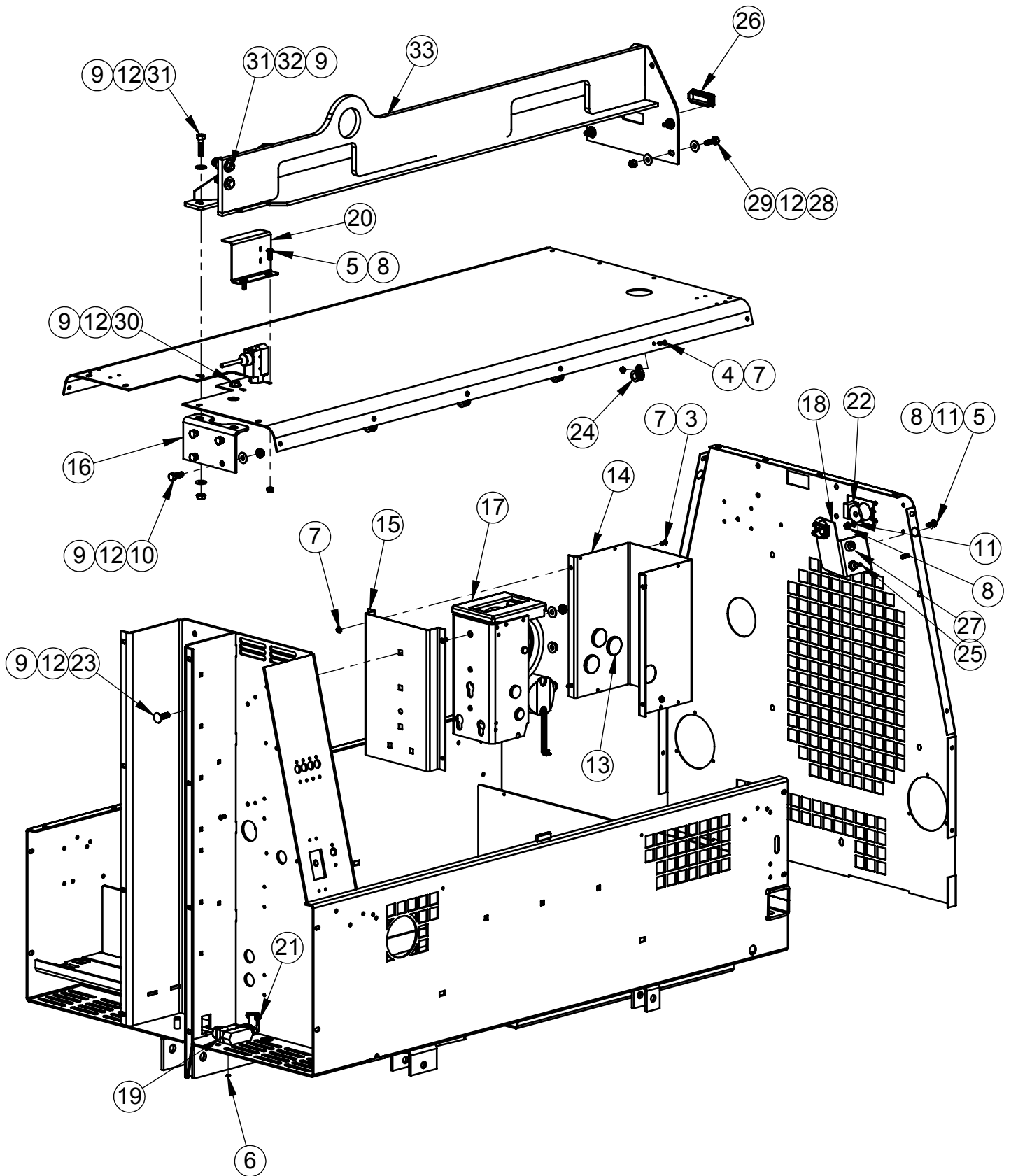
5/14/2010

SECTION 1

NO.	QTY.	PART NO.	DESCRIPTION
1	1	101034P	SECTION 1
2	2	100203	ROLLER
3	1	100202	5/8 X 6 SS SH BOLT
4	1	044096	1/2-20 HEX NUT PL
5	2	100088	CORNER FRICTION BLOCK
6	2	100089P	CORNER BLOCK COVER
7	4	043060	3/8 INT STAR WASHER
8	1	046025	1/4-20 X 1 1/2 HEX BOLT
9	3	046020	1/4-20 X 1 1/4 GR5 HEX BOLT
10	4	047005	1/4 FLAT WASHER
11	5	044023	1/4-20 NYLOCK NUT
12	1	310212	#10 CUSHION CLAMP
13	1	041050	1/4-20 X 3/4 TRUSS BOLT
14	1	101379	1/2 X 2.75 SH BOLT
15	1	047010	5/16 FLAT WASHER
16	1	044038	3/8-16 NYLOCK NUT PL
17	4	041070	1/4-20 X 3/4 SMSHH TP F
18	2	046205	1/2-13 X 2 1/2 HEX BOLT GR5 PL
19	1	102273	LONG SPACER
20	2	102271	PLASTIC SPACER
21	2	047025	1/2" FLAT WASHER
22	2	100643	1/2-13 NYLOCK
23	2	102270P	CABLE BRACKET
24	2	102269P	SPACER BRACKET

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC ELECTRIC WINCH



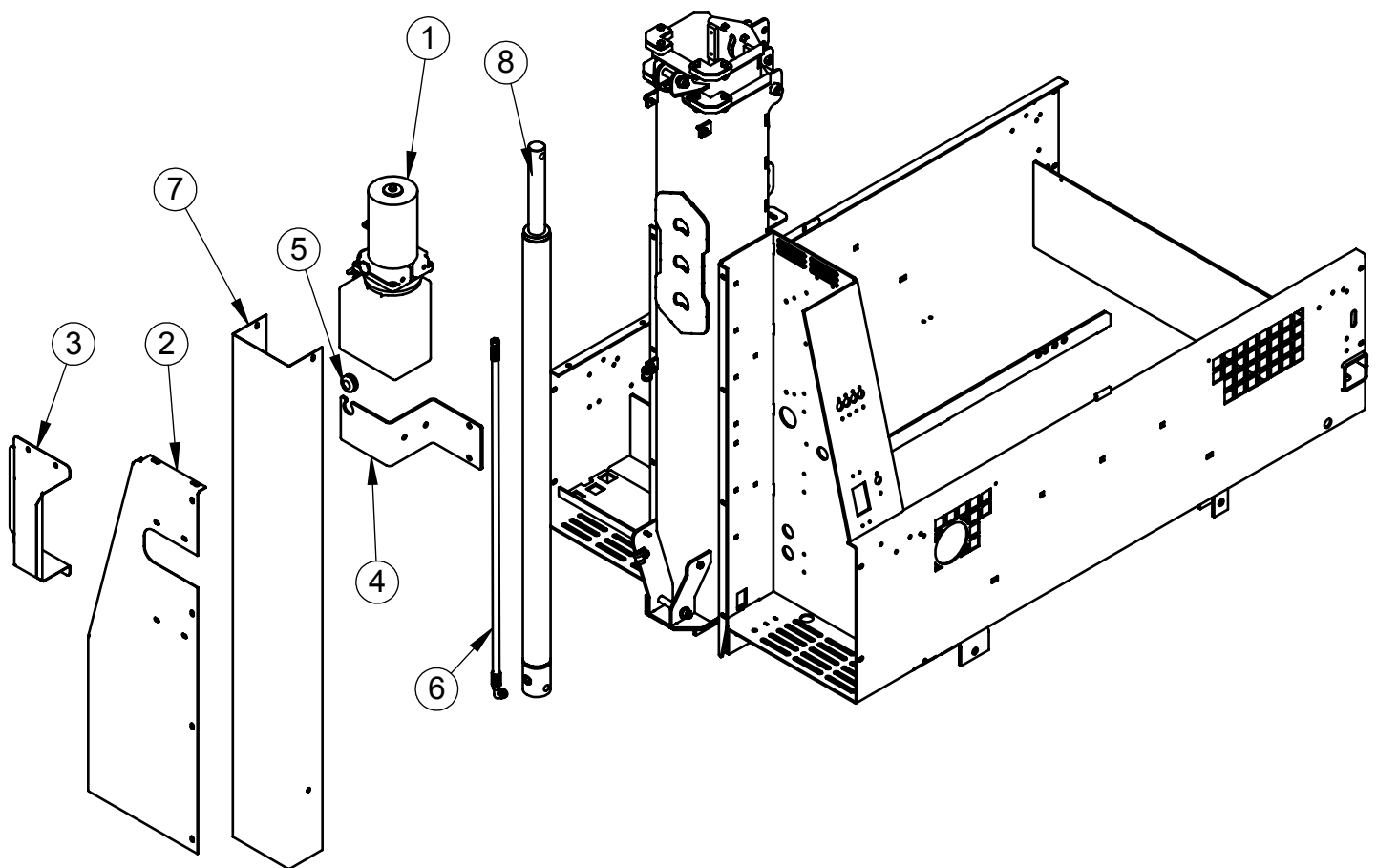
NIGHT-LITE PRO V-SERIES DOMESTIC ELECTRIC WINCH

NO.	QTY.	PART NO.	DESCRIPTION
1	1	101382	SWITCH BOOT
2	1	022025	2-SCREW ROMEX CLAMP, 3/4"
3	4	041024	RHMS 10-24 X .5
4	4	041027	10-24 x 3/4" PHILIPS HEAD MS
5	4	041050	1/4-20 X 3/4 TRUSS BOLT
6	2	044004	6-32 KEPS NUT
7	8	044016	10-24 KEPS NUT
8	4	044021	1/4-20 KEPS NUT
9	11	044036	3/8-16 KEPS NUT
10	4	046110	3/8-16 X 1" HHCS GR5 PLATED
11	2	043050	WASHER LOCK
12	19	047010	5/16 FLAT WASHER
13	3	064035	1 1/2" CAPLUG
14	1	100109P	COVER, ELEC WINCH
15	1	100110P	BASE, ELEC WINCH COVER
16	1	100123P	BRACKET, TOWER ANGLE
17	1	100146	ASSY, ELEC WINCH
18	1	100158P	SWITCH BRACKET
19	2	100164	SWITCH - TWR LIMIT
20	1	100165P	LIMIT SW MT & COVER
21	1	100641	90 DEGREE FLEXCON
22	1	100662	ALARM TWR VERTICAL
23	3	100670	3/8-16 X 1 1/4 CARR BOLT
24	4	310212	#10 CUSHION CLAMP
25	1	310544	SWITCH MOMENTARY DPDT
26	1	101222	RECT POLY PLUG
27	1	100610	CIRCUIT BREAKER 5 AMP
28	4	044031	5/16 -18 KEPTS NUT
29	4	046050	BOLT CS 5/16-18 X 1 HEX GR5 PL
30	1	046115	3/8-16 X 1 1/4 HHCS
31	3	046120	3/8-16 X 1 1/2 HEX BOLT
32	4	047015	3/8 FLAT WASHER
33	1	100118-15	WELD, LIFT BAR

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

HYDRAULIC TOWER

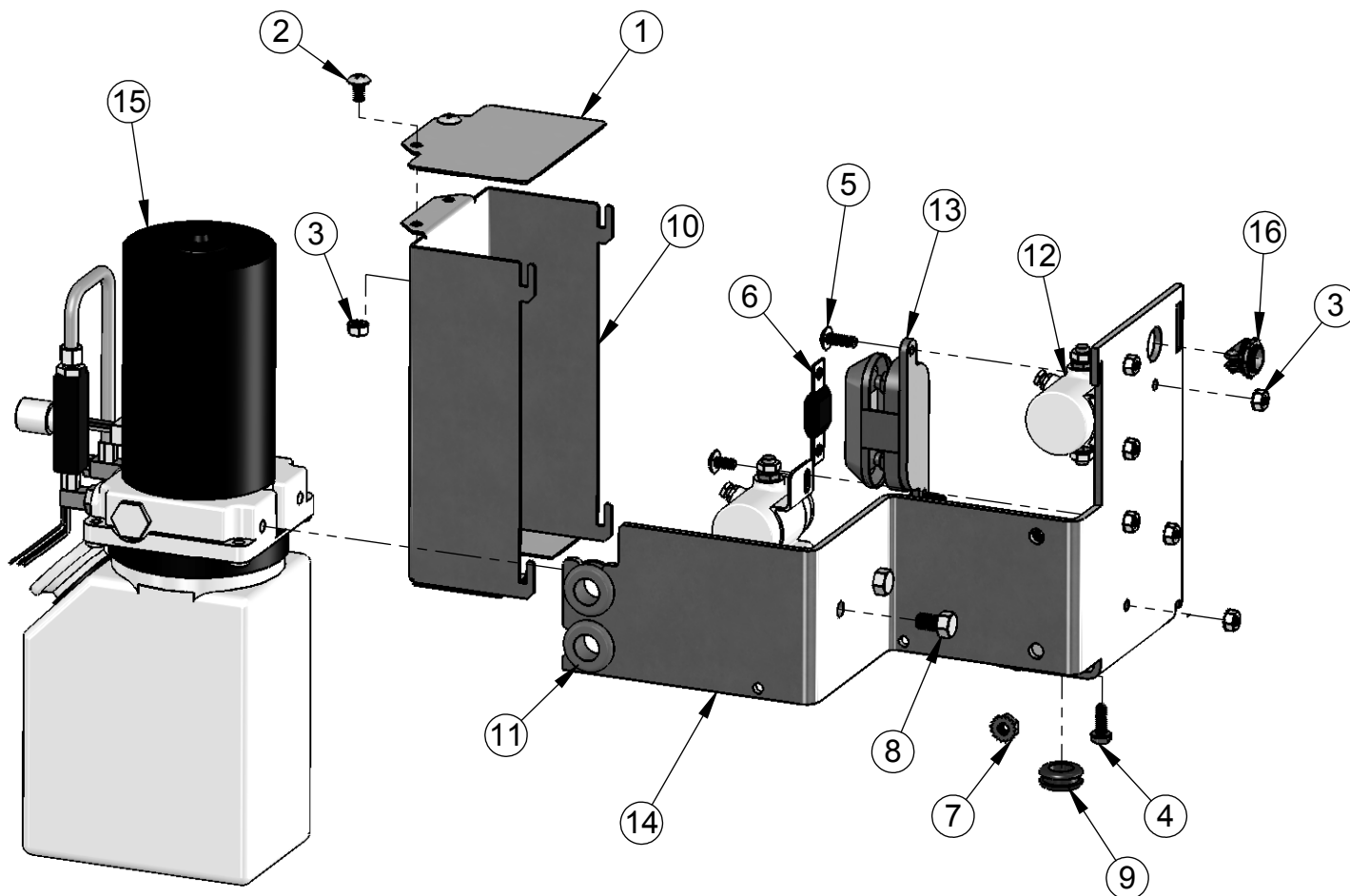


NIGHT-LITE PRO V-SERIES DOMESTIC HYDRAULIC TOWER

NO.	QTY.	PART NO.	DESCRIPTION
1	1	101383	HYD POWER UNIT
2	1	100132P	PANEL RIGHT FRONT
3	1	101328P	HOSE SHIELD
4	1	101327P	PUMP MOUNTING BKT
5	1	330463	RUBBER GROMMET
6	1	101356	HOSE, HYDRAULIC
7	1	101041P	HYD CYL COVER
8	1	101375P	CYLINDER, VERT TOWER

NIGHT-LITE PRO V-SERIES DOMESTIC 100242 HYDRAULIC PUMP

5/13/2010



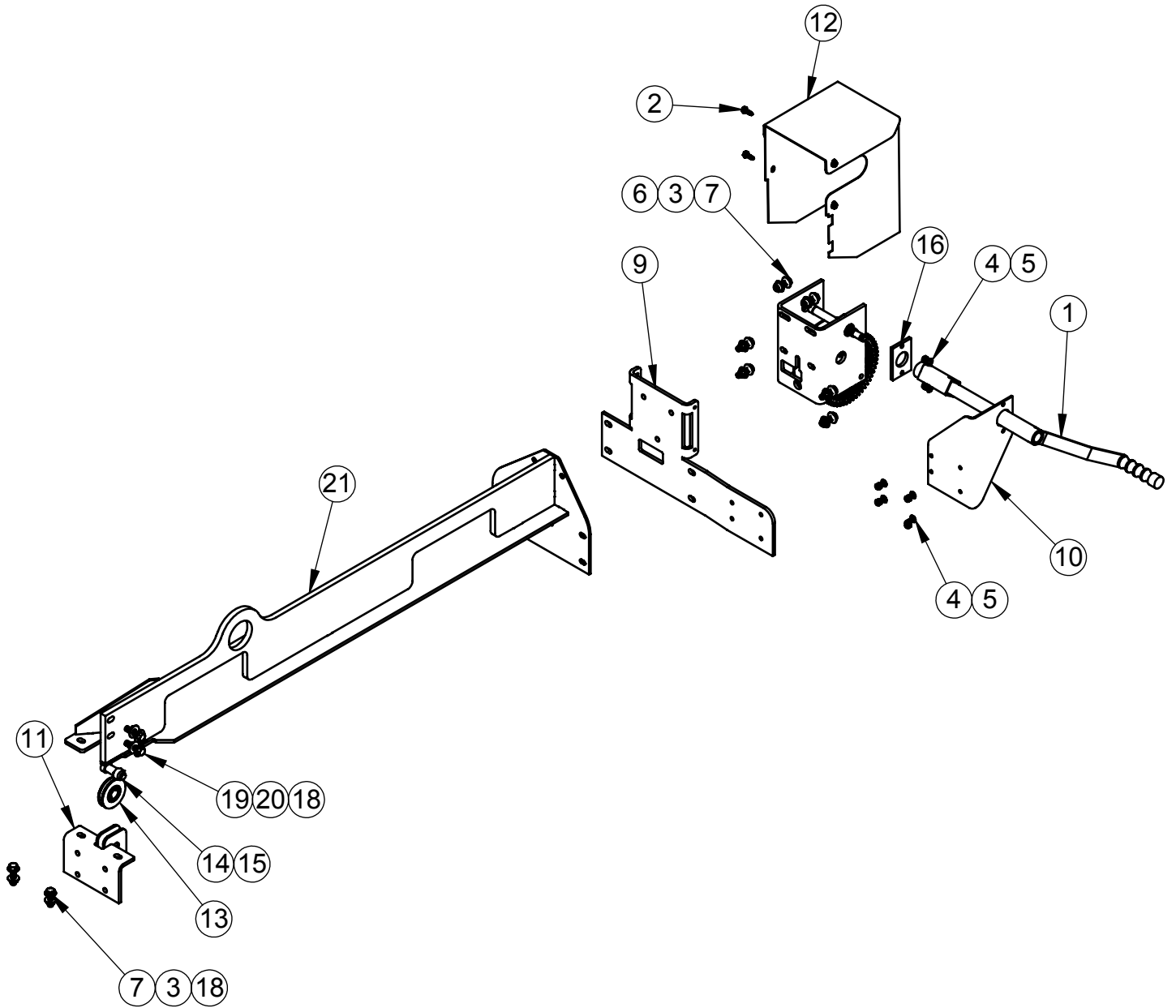
NO.	QTY.	PART NO.	DESCRIPTION
1	1	101914P	LID
2	6	041078	1/4-20 X 1/2 PH TRUSS SCREW
3	8	044021	1/4-20 KEPS NUT
4	2	041070	1/4-20 x 3/4 SMSHH TP F
5	2	041050	1/4-20 X 3/4 TRUSS BOLT
6	1	100234	125A FUSE LINK
7	2	044036	3/8-16 KEPS NUT
8	2	101384	3/8 - 16 x 5/8" GRADE 5 HEX BOLT
9	1	711028	7/8 RUBBER GROMMET
10	1	100250P	RELAY / FUSE COVER
11	2	330463	RUBBER GROMMET
12	2	100236	12 VDC RELAY
13	1	100235	FUSE HOLDER
14	1	100241P	PUMP MT BKT
15	1	101383	HYD POWER UNIT
16	1	022020	2 SCREW CLAMP, 3/8"

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

BLANK PAGE

NIGHT-LITE PRO V-SERIES DOMESTIC

MANUAL WINCH

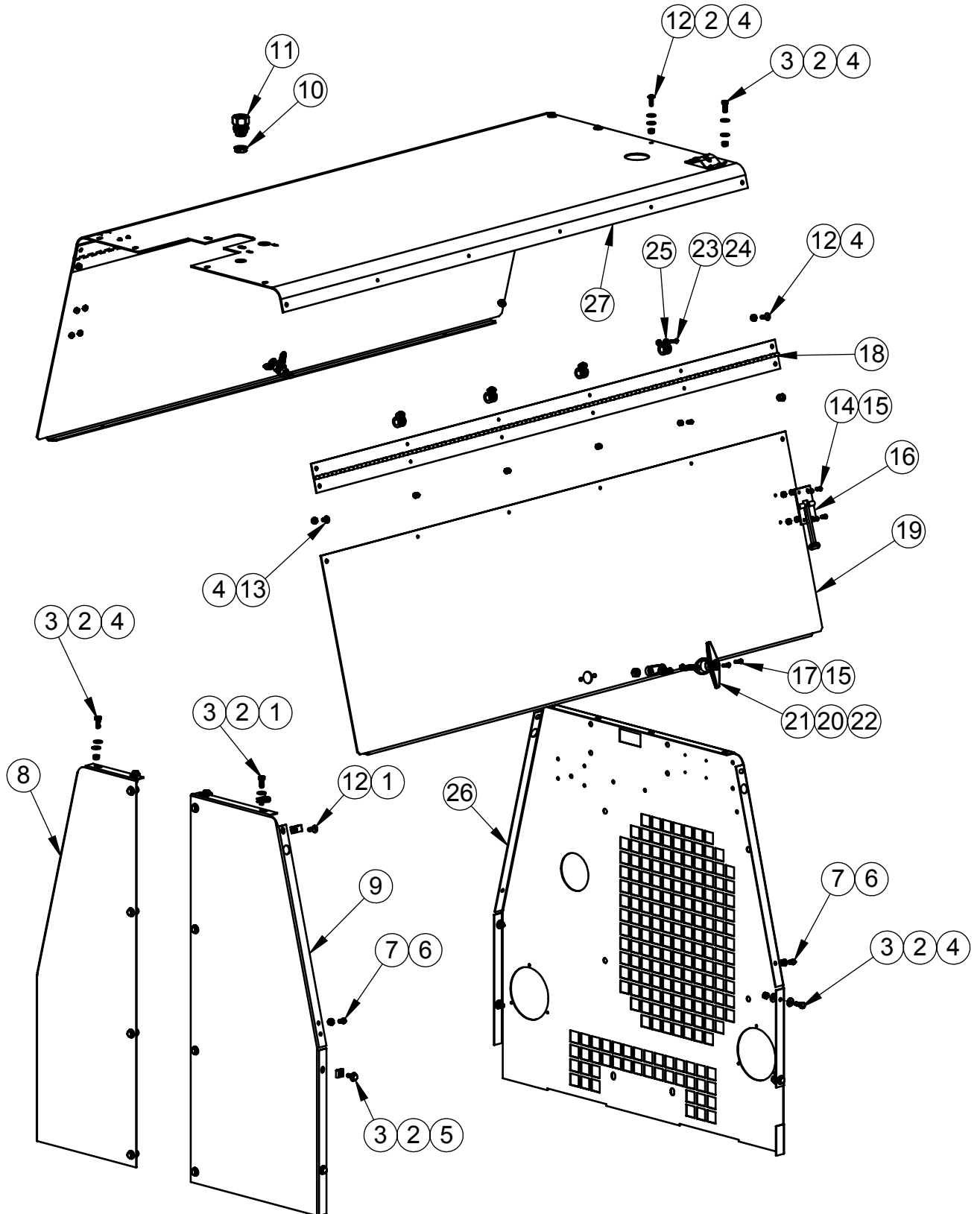


NIGHT-LITE PRO V-SERIES DOMESTIC MANUAL WINCH

NO.	QTY.	PART NO.	DESCRIPTION
1	1	650136	HANDLE EXTENDED WINCH KIT
2	4	041070	1/4-20x3/4 TAP SCREW
3	16	047010	5/16 FLAT WASHER
4	6	041050	1/4-20 X 3/4 TRUSS BOLT
5	6	044023	1/4-20 NYLOCK NUT
6	2	044038	3/8-16 NYLON INSERT NUT
7	7	046115	3/8-16 X 1 1/4 HHCS
8	1	100145	WINCH, DLB 2500A
9	1	101013	BRACKET
10	1	101008	SUPPORT BKT
11	1	101012P	WELD, PULLEY BKT
12	1	101010P	WELD WINCH COVER
13	1	100160	2 1/2" PULLEY
14	1	100642	5/8 X 1 SHOULDER BOLT
15	1	044048	NUT NYLOCK 1/2-13 HEX PL
16	1	650106	GUIDE BLOCK
17	4	044031	5/16 -18 KEPTS NUT
18	4	044036	3/8-16 KEPS NUT
19	3	046120	3/8-16 X 1 1/2 HEX BOLT
20	4	047015	3/8 FLAT WASHER
21	1	100118-15	WELD, LIFT BAR

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC PANELS



NIGHT-LITE PRO V-SERIES DOMESTIC

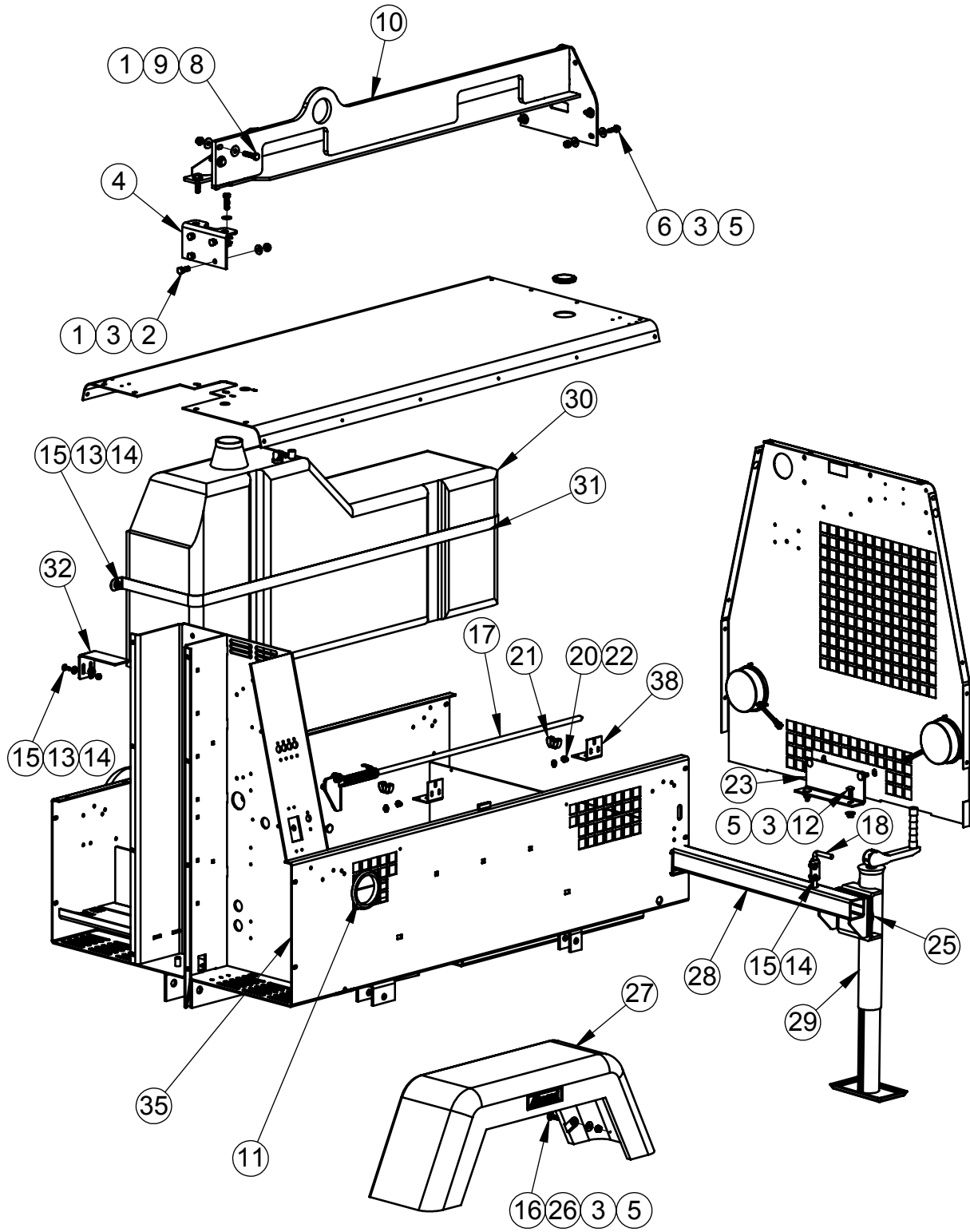
PANELS

12-08-2010

NO.	QTY.	PART NO.	DESCRIPTION
1	7	044106	1/4 TINNERMAN NUT
2	40	047008	1/4" FLAT WASHER SS
3	22	046010	1/4-20 X 3/4 HEX BOLT SS
4	23	044023	1/4-20 NYLOCK NUT
5	2	045216	1/4-20 TINNERMAN NUT
6	4	044021	1/4-20 KEPS NUT
7	4	041250	SCREW, NYLON, 1/4-20 X 1/2
8	1	650206P	PANEL RIGHT FRONT
9	1	650207P	PANEL LEFT FRONT
10	1	022415	BUSHING THREADED
11	1	310033	1/2" CORD GRIP
12	6	041050	1/4-20 X 3/4 TRUSS BOLT
13	4	041078	1/4-20 X 1/2 PH TRUSS SCREW
14	28	041024	RHMS 10-24 X .5
15	32	044019	10-24 NYLOC NUT
16	2	660170	DOOR HOLDER
17	4	041026	10-24 X 3/4 SL-FHMS
18	2	650211	HINGE
19	2	100126P	DOOR PANEL
20	4	044042	3/8-24 PLATED NUT
21	2	650131	DOOR LOCK ASSEMBLY
22	2	650132	DOOR LATCH CAM
23	4	041027	10-24 x 3/4" PHILIPS HEAD MS
24	4	044016	10-24 KEPS NUT
25	4	310212	#10 CUSHION CLAMP
26	1	100690P	REAR PANEL-CAT
NS	1	100704P	REAR PANEL-KUBOTA
NS	1	100692P	REAR PANEL-LOMBARDINI
NS	1	100691P	ROOF PANEL-KUBOTA
NS	1	100696P	ROOF PANEL-LOMBARDINI
27	1	100689P	PANEL, ROOF-CAT

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC FRAME COMPONENTS



NIGHT-LITE PRO V-SERIES DOMESTIC

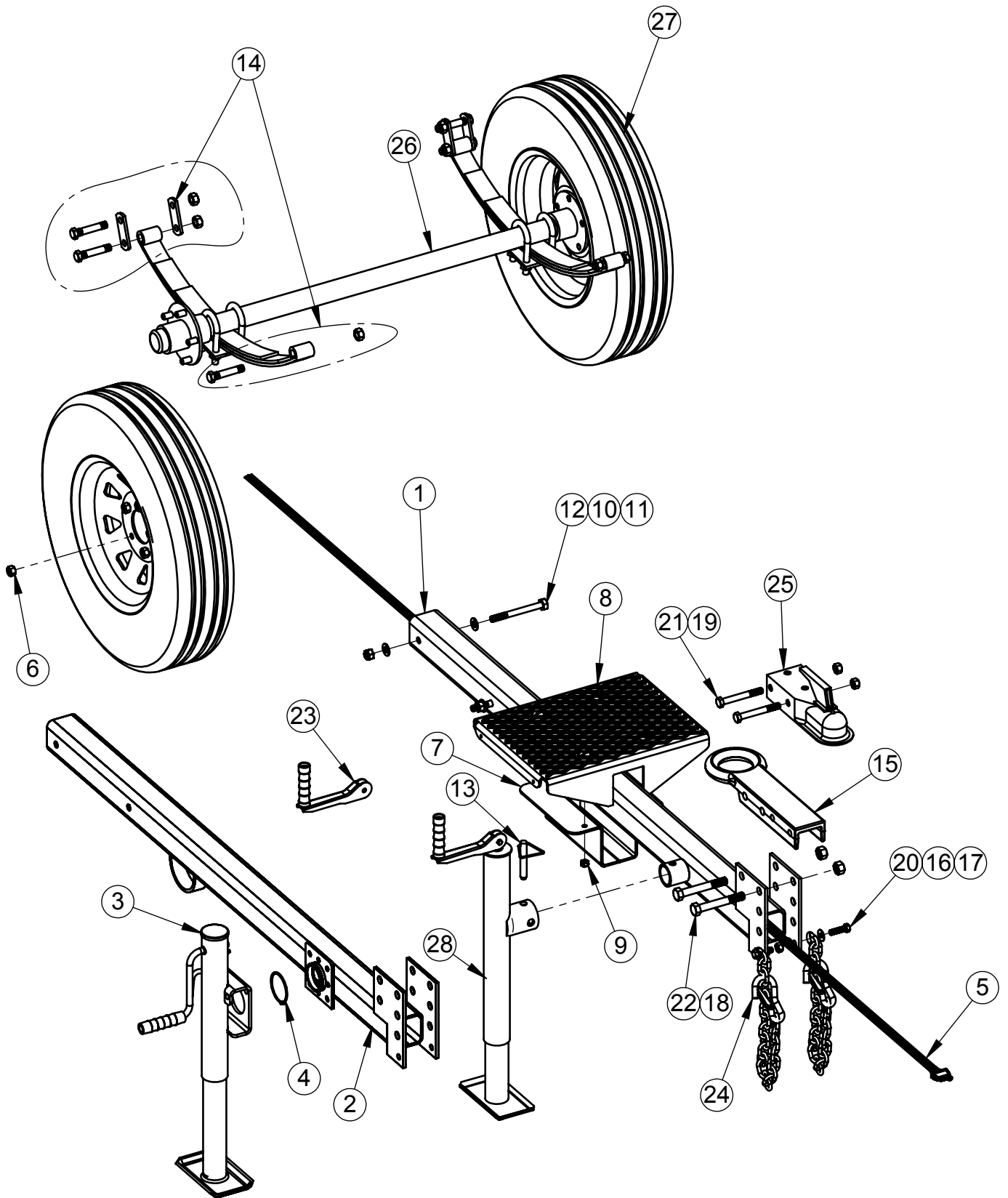
FRAME COMPONENTS

NO.	QTY.	PART NO.	DESCRIPTION
1	8	044036	3/8-16 KEPS NUT
2	4	046110	3/8-16 X 1" HHCS GR5 PLATED
3	30	047010	5/16 FLAT WASHER
4	1	100123P	BRACKET, TOWER ANGLE
5	18	044031	5/16 -18 KEPTS NUT
6	4	046050	BOLT CS 5/16-18 X 1 HEX GR5 PL
7	1	046115	3/8-16 X 1 1/4 HHCS
8	3	046120	3/8-16 X 1 1/2 HEX BOLT
9	4	047015	3/8 FLAT WASHER
10	1	100118-15	WELD, LIFT BAR
11	1	100917	GROMMET 3" ID
12	4	053020	5/16-18 X 1" CARR BOLT
13	8	047008	1/4" FLAT WASHER SS
14	8	044023	1/4-20 NYLOCK NUT
15	8	041050	1/4-20 X 3/4 TRUSS BOLT
16	10	053022	5/16-18 X 1 1/4 CARR BOLT
17	1	340058	GROUND ROD
18	1	650722	SPRING PIN L/R
19	1	650723	RIGHT RETENTION PIN
20	4	041024	RHMS 10-24 X .5
21	2	330481	GROUND ROD CLIP
22	4	044016	10-24 KEPS NUT
23	1	100153P	REAR ANGLE BKT
24	2	041075	5/16 - 18 x 3/4 SELF TAPPING SCREW
25	2	330014	RING, JACK RETAINING SNAP
26	4	100644	RUBBER WASHER
27	2	650297	FENDER
28	2	650115-15	OUTRIGGER
29	2	330010	JACK, TOP CRANK SIDE MOUNT
30	1	650108	TANK, PRO, 30 GAL
31	1	100136P	STRAP, FUEL TANK
32	1	100167P	BATTERY HOLD DOWN
33	1	100704P	REAR PANEL
34	1	100689P	PANEL, ROOF
35	1	100693P	DOMESTIC TRAILER
36	1	640555	PLUG 2"
37	2	047003	#10 SAE FLAT WASHER
38	2	680507P	BRACKET

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

TONGUE-AXLE



NIGHT-LITE PRO V-SERIES DOMESTIC TONGUE-AXLE

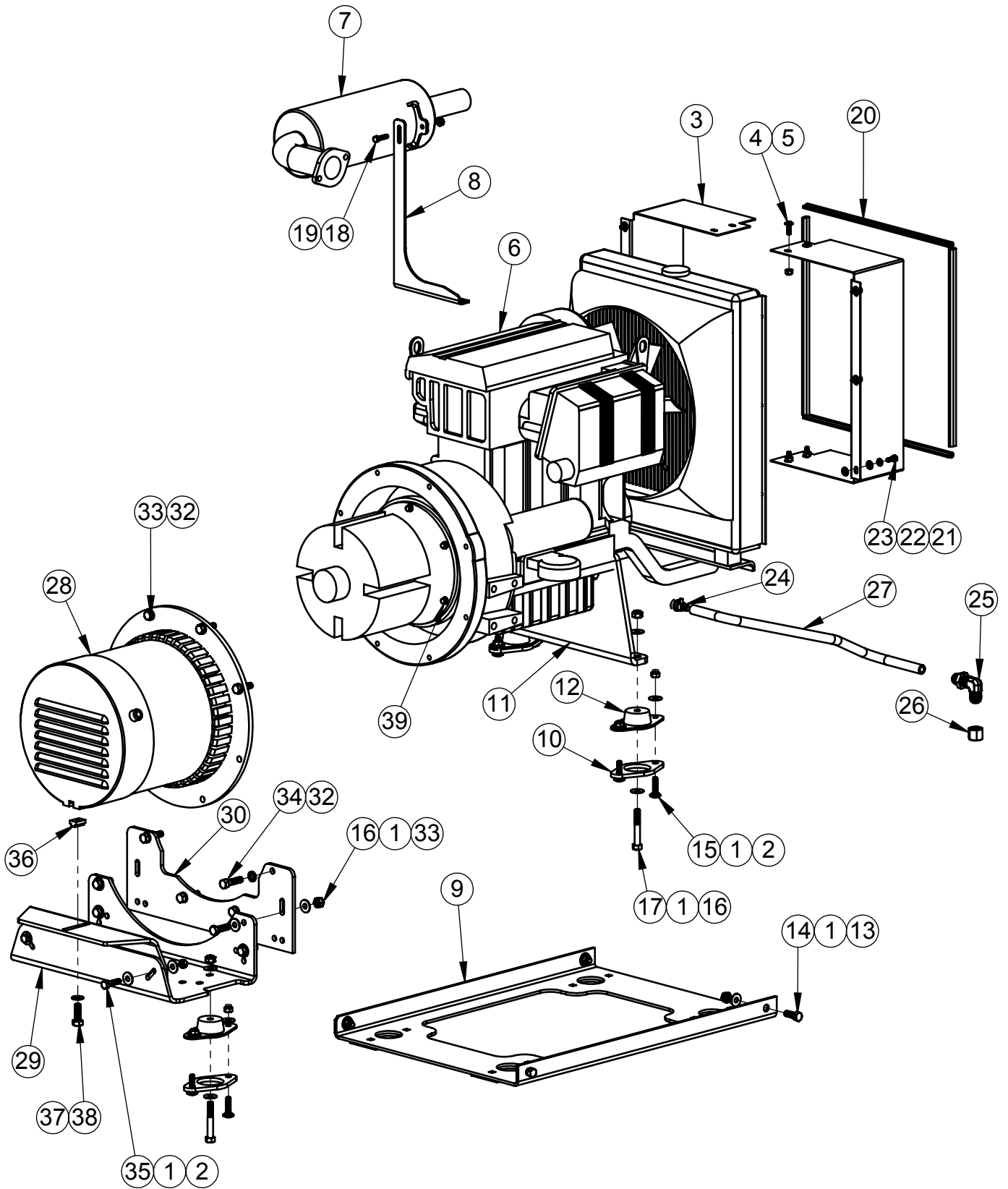
NO.	QTY.	PART NO.	DESCRIPTION
1	1	651225P	TONGUE ONLY, TUBE MOUNT
2	2	650398P	TONGUE ONLY, SNAP RING MOUNT
3	1	650235	JACK SIDE CRANK
4	1	330014	RING, JACK RETAINING SNAP
5	1	101351	TAILLIGHT HARNESS
6	10	032048	1/2-13 LUG NUT
7	2	101050	ATTACHMENT BRACKET
8	1	101051	PLATFORM
9	4	044038	3/8-16 NYLON INSERT NUT
10	1	047025	1/2" FLAT WASHER
11	2	044048	NUT NYLOCK 1/2-13 HEX PL
12	2	046230	BOLT CS 1/2-13 X 5 HEX GR5 PL
13	1	330013	PIN, LOCK, TUBE MOUNT
14	1	032026	KIT, ALXE MOUNT (SHORT SHACKLE)
15	1	712540	CASTING, PINTLE
16	4	047015	3/8 FLAT WASHER
17	2	044043	7/16-14 NYLOCK NUT
18	2	044061	5/8-11 LOCK NUT
19	2	044062	1/2-13 LOCK NUT
20	2	046160	7/16-14 X 1 1/2 HEX BOLT
21	2	046220	1/2-13 X 4" HEX BOLT
22	2	046250	5/8-11 X 4 1/2 HEX BOLT
23	1	330012A	JACK HANDLE REPLACEMENT
24	2	049040	SAFETY CHAIN
25	1	712021	BALL COUPLER 2"
26	1	650100	AXLE PRO W/ LEAF SPRINGS AND HUBS
27	2	650387-13	WHEEL-TIRE ASSEMBLY, 13"
28	1	680879	TOP CRANK JACK, TUBE MOUNT

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING,SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

LOMBARDINI

11/10/10



NIGHT-LITE PRO V-SERIES DOMESTIC

LOMBARDINI

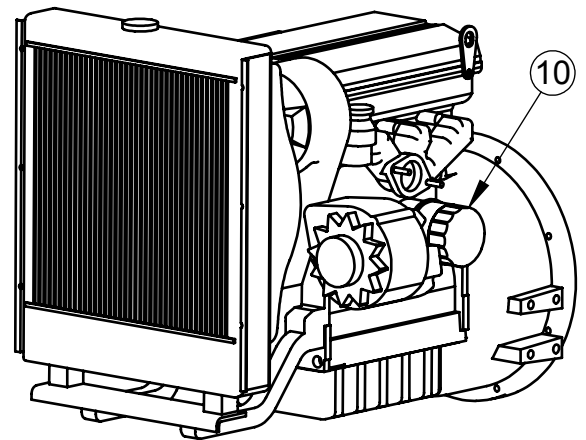
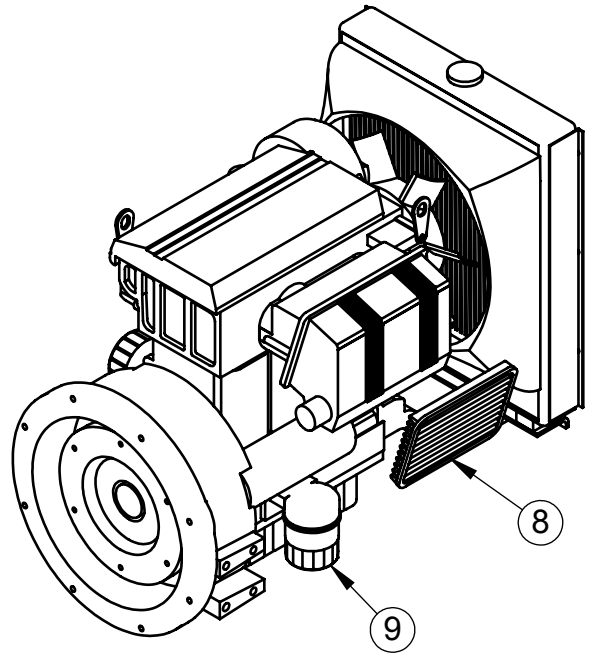
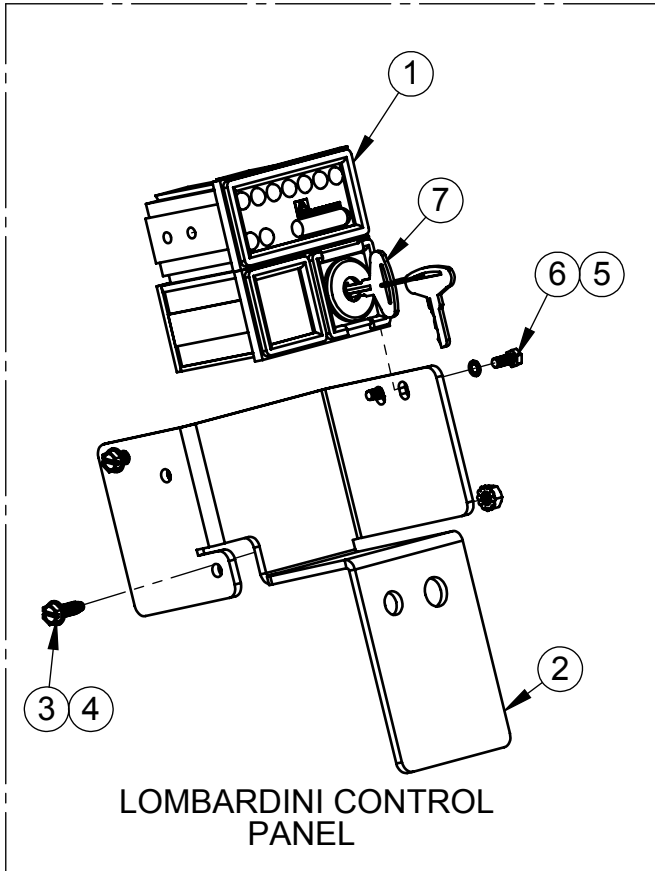
11/10/10

NO.	QTY.	PART NO.	DESCRIPTION
1	32	047010	5/16 FLAT WASHER
2	10	044039	5/16 - 18 LOCK NUT
3	2	650567P	SHROUD, RADIATOR LEFT/RIGHT
4	4	041050	1/4-20 X 3/4 TRUSS BOLT
5	4	044023	1/4-20 NYLOCK NUT
6	1	650830	LOMBARDINI LDW 1003 W/HOUR METER
7	1	100984	LOMBARDINI MUFFLER
8	1	100707P	MUFFLER BRACKET
9	1	100129P	WELD, ENGINE PLATE
10	4	100152P	ENG. MT SPACER
11	1	650562P	ENGINE MOUNT LDW 1003
12	4	650259	RUBBER ENG MT - 120 LB
13	4	044036	3/8-16 KEPS NUT
14	4	046110	3/8-16 X 1" HHCS GR5 PLATED
15	8	053020	5/16-18 X 1 CARR BOLT
16	8	044038	3/8-16 NYLON INSERT NUT
17	4	046134	3/8-16 X 2 1/2 GR 8 HEX BOLT
18	1	046015	1/4-20 X 1 HEX BOLT
19	1	044021	1/4-20 KEPS NUT
20	1	030052	TRIMLOCK
21	12	047070	WASHER, FLAT 1/4" SS
22	6	043020	1/4" SPLIT LOCK WASHER
23	6	042019	6mm X 1.0 X 16mm GR 8.8 HEX BOLT
24	1	100901	LOMBARDINI FUMOTO VALVE
25	1	100601	JIC 90 DEG FITTING
26	1	100602	JIC CAP
27	1	081017	3/8" YEL HOSE 20"
28	1	100349	MECC ALTE GENERATOR 6KW 50 HZ
29	1	100352P	BOTTOM PLATE
30	1	100353P	TOP PLATE
31	1	100354P	BACK PLATE
32	8	043065	3/8 SPLIT LOCK WASHER
33	8	046115	3/8-16 X 1 1/4 HHCS
34	4	046120	3/8-16 X 1 1/2 HEX BOLT
35	2	046055	5/16-18 X 1 1/4 HHCS
36	1	100614	5/16-18 T-SLOT NUT
37	1	047016	3/8 SAE FLAT WASHER
38	1	046045	5/16-18 X 3/4 HEX BOLT GR5 PLTD
39	6	046041	5/16 - 18 X 1/2" 12 PT FLANGE HEAD BOLT

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

LOMBARDINI CONTROLS



NIGHT-LITE PRO V-SERIES DOMESTIC

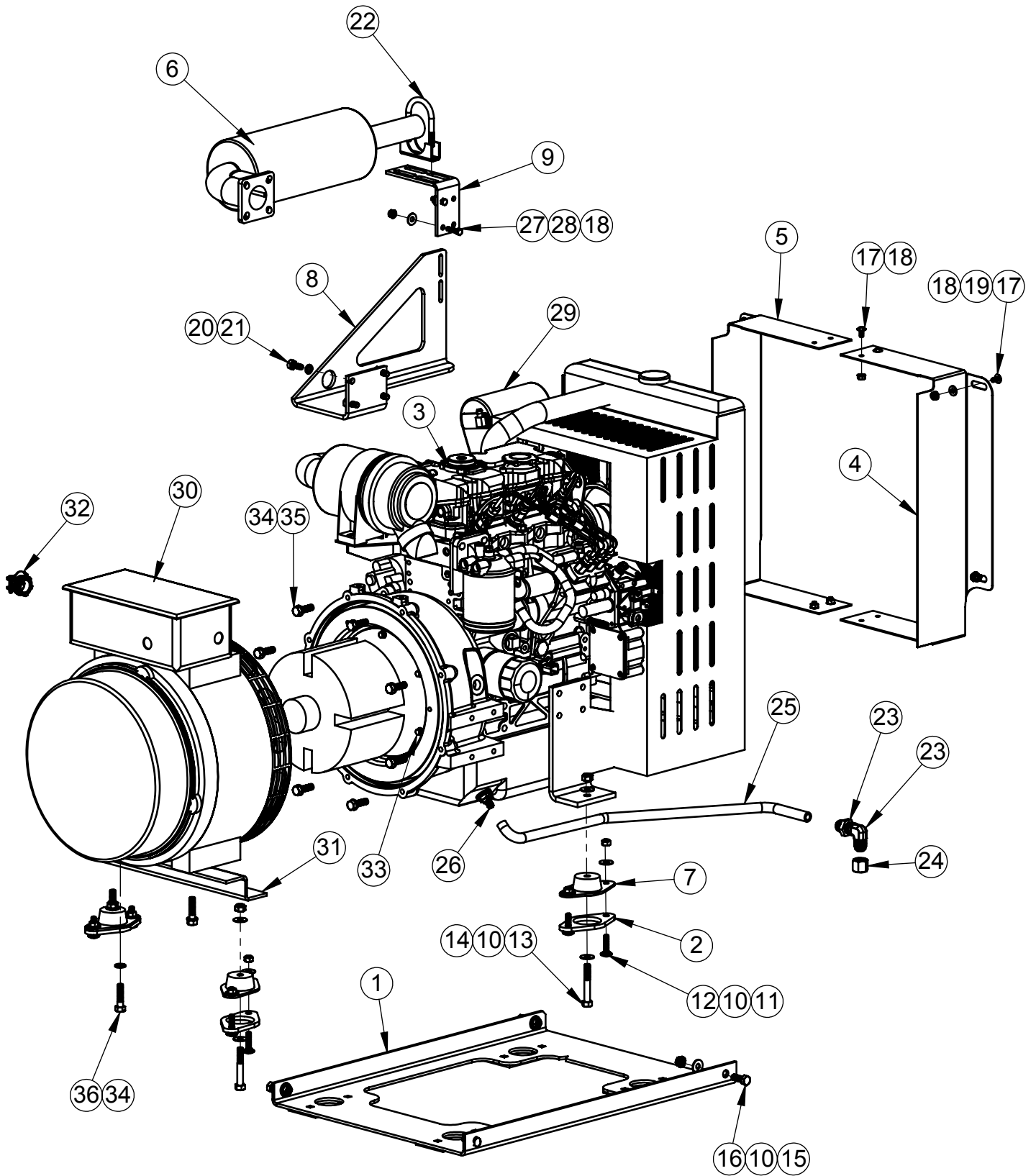
LOMBARDINI CONTROLS

NO.	QTY.	PART NO.	DESCRIPTION
1	1	650831	LOMBARDINI CONTROL W/HOUR METER
2	1	650761P	LOMBARDINI CONTROL
3	2	041070	1/4-20x3/4 TAP SCREW
4	3	044021	1/4-20 KEPS NUT
5	2	043015	#10 INT TOOTH LOCK WASHER
6	2	046426	5mm X .8 X 12mm HEX BOLT
7	1	650833	KEY SINGLE SIDE IGNITION
8	1	650012	LOMBARDINI AIR FILTER
9	1	650010	LOMBARDINI FUEL FILTER
10	1	650011	LOMBARDINI OIL FILTER
NS	1	713098	BATTERY CABLE BLACK NEGATIVE
NS	1	027031	BATTERY CABLE RED POSITIVE
NS	1	340105	GROUND STRAP
NS	1	081016	1/4" BLACK FUEL LINE 24"
NS	1	689503	1/4" BLACK FUEL LINE 55"

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOM

CAT



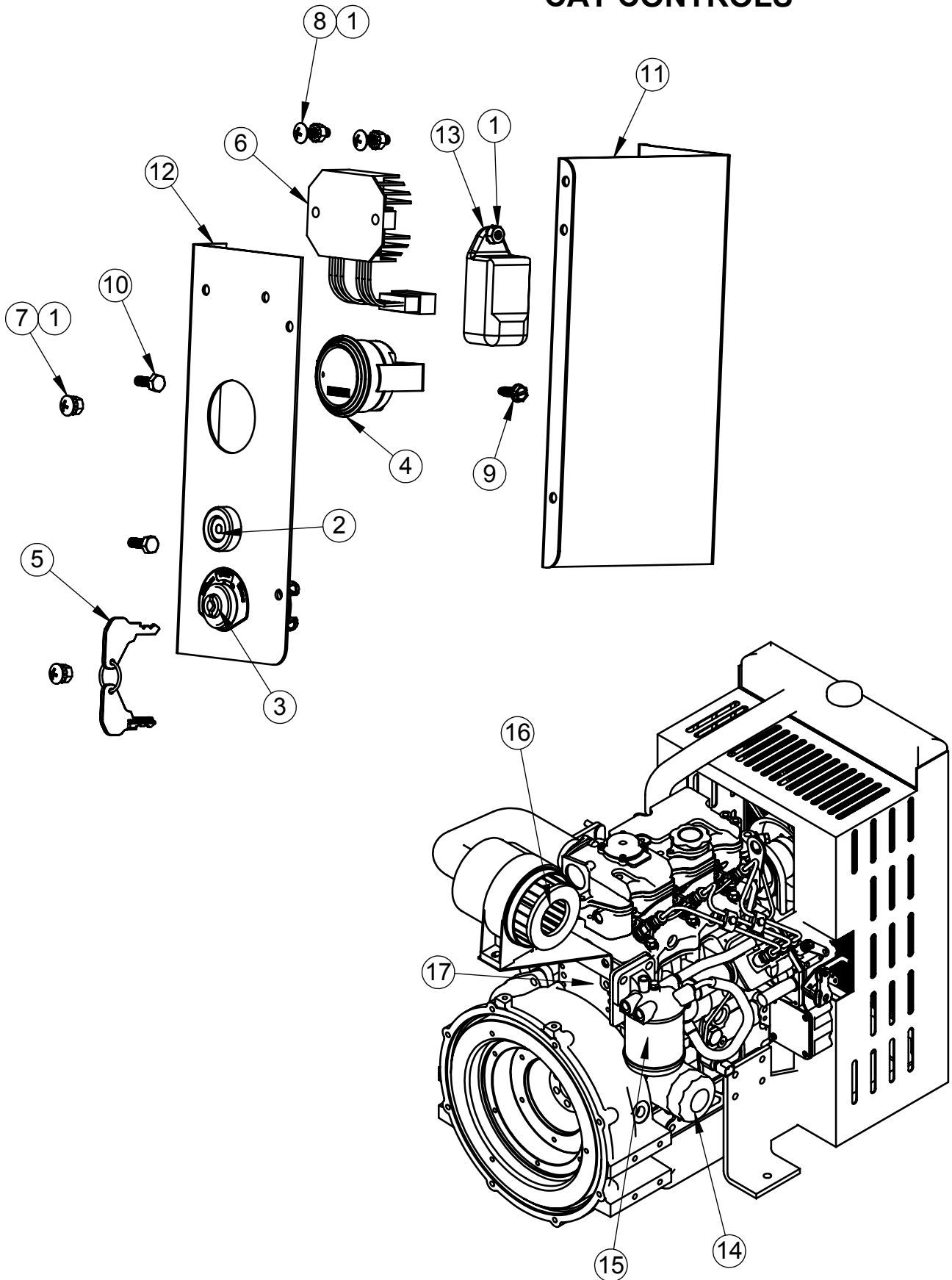
NIGHT-LITE PRO V-SERIES DOMESTIC

CAT

NO.	QTY.	PART NO.	DESCRIPTION
1	1	100699	WELD, ENGINE PLATE
2	4	100152P	ENG. MT SPACER
3	1	352236	CAT 3011C 8 KW HH-249
4	1	100702P	RADIATOR SHROUD
5	1	100700P	RADIATOR SHROUD
6	1	101082	NETT MUFFLER
7	4	650259	RUBBER ENG MT - 120 LB
8	1	100705P	CAT MUFFLER BKT
9	1	100706P	MUFFLER BRACKET
10	20	047010	5/16 FLAT WASHER
11	8	044039	5/16 -18 LOCK NUT
12	8	053020	5/16-18 X 1 CARR BOLT
13	4	046134	3/8-16 X 2 1/2 GR 8 HEX BOLT
14	4	044038	3/8-16 NYLON INSERT NUT
15	4	044036	3/8-16 KEPS NUT
16	4	046110	3/8-16 X 1" HHCS GR5 PLATED
17	8	041078	1/4-20 X 1/2 PH TRUSS SCREW
18	10	044021	1/4-20 KEPS NUT
19	4	044015	1/4 FLAT WASHER
20	4	043055	5/16 SPLIT LOCK WASHER
21	4	042027	8mm X 1.25 X 16mm GR 10.9 HEX BOLT
22	1	340111	1 1/2" CLAMP MUFFLER
23	1	100601	JIC 90 DEG FITTING
24	1	100602	JIC CAP
25	1	081017	3/8" YELLOW HOSE 24"
26	1	651193	CAT FUMOTO VALVE
27	2	046015	1/4-20 X 1 HEX BOLT
28	2	047005	1/4 FLAT WASHER
29	1	920472	RECOVERY TANK W/PLUG
30	1	101075	8KW 60 HZ MARATHON GEN 201CSA
31	1	651012P	MOUNT, GENERATOR, CAT
32	1	022025	2-SCREW ROMEX CLAMP, 3/4"
33	6	046041	5/16 - 18 X 1/2"
34	10	043065	3/8 SPLIT LOCK WASHER
35	8	046115	3/8-16 X 1 1/4 HHCS
36	2	046120	3/8-16 X 1 1/2 HEX BOLT

NIGHT-LITE PRO V-SERIES DOMESTIC

CAT CONTROLS



NIGHT-LITE PRO V-SERIES DOMESTIC

CAT CONTROLS

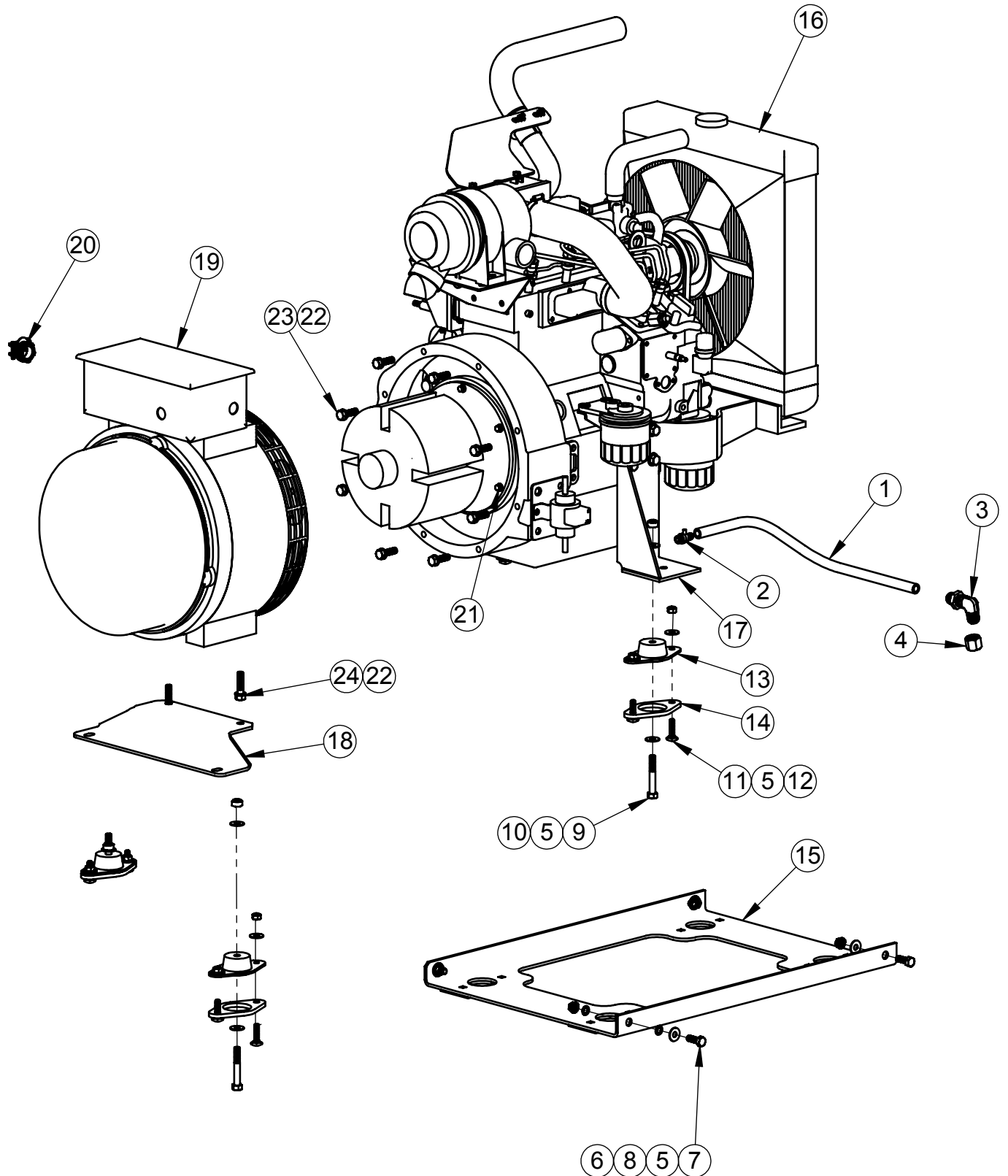
NO.	QTY.	PART NO.	DESCRIPTION
1	7	044021	1/4-20 KEPS NUT
2	1	921433	GLOW PLUG LAMP
3	1	650306	CAT SWITCH W/ 2 KEYS
4	1	340014	HOUR METER CAT
5	1	650307	CAT SINGLE KEY
6	1	650446	VOLTAGE REGULATOR
7	2	041078	1/4-20 X 1/2 PH TRUSS SCREW
8	2	041080	1/4-20 X 1" TRUSS SCREW
9	1	041070	1/4-20 X 3/4 TAP SCREW
10	2	046010	1/4-20 X 3/4 HEX BOLT SS
11	1	650363P	COVER PANEL GAUGE
12	1	101913P	GAUGE PANEL
13	1	650302	AUTO SHUTDOWN TIMER
14	1	*****	CAT OIL FILTER
15	1	*****	CAT FUEL FILTER
16	1	*****	CAT AIR FILTER ELEMENT
17	1	352236	CAT 3011C 8kw HH-249

***** INDICATES PURCHASE THESE PARTS FROM YOUR LOCAL CAT DEALER.

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOMESTIC

KUBOTA



NIGHT-LITE PRO V-SERIES DOMESTIC

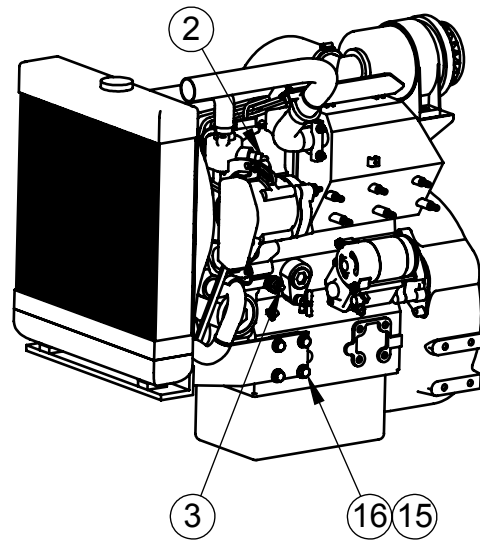
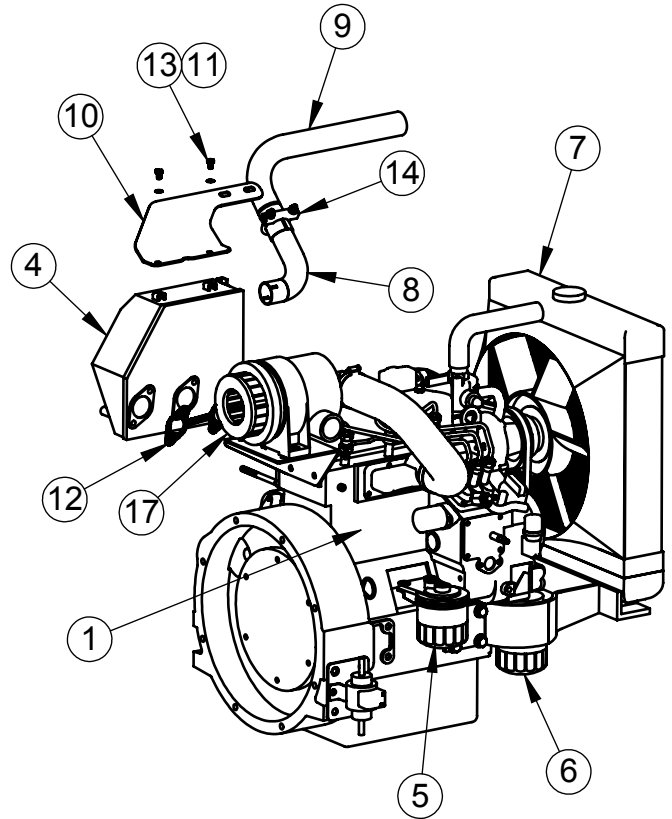
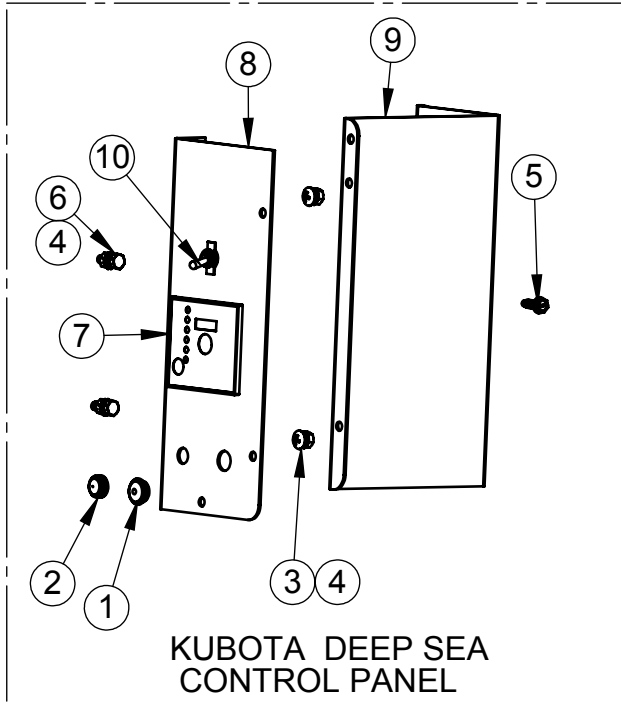
KUBOTA

NO.	QTY.	PART NO.	DESCRIPTION
1	1	081017	3/8 YELLOW HOSE X 18"
2	1	848299	KUBOTA FUMOTO VALVE
3	1	100601	JIC 90 DEG FITTING
4	1	100602	JIC CAP
5	20	047010	5/16 FLAT WASHER
6	4	044036	3/8-16 KEPS NUT
7	4	046110	3/8-16 X 1" HHCS GR5 PLATED
8	2	043070	3/8 INTERNAL TOOTH LOCK WASHER
9	4	046134	3/8-16 X 2 1/2 GR 8 HEX BOLT
10	4	044038	3/8-16 NYLON INSERT NUT
11	8	053020	5/16-18 X 1 CARR BOLT
12	8	044039	5/16 - 18 LOCK NUT
13	4	650259	RUBBER ENG MT - 120 LB
14	4	100152P	ENG. MT SPACER
15	1	100129P	WELD, ENGINE PLATE
16	1	100989	KUBOTA 1105
17	2	651201P	905-1105 KUBOTA ENGINE MOUNT
18	1	651202P	OFFSET GENERATOR PLATE
19	1	101075	8KW 60 HZ MARATHON GEN 201CSA
20	1	022025	2-SCREW ROMEX CLAMP, 3/4"
21	6	046041	5/16 - 18 X 1/2"
22	10	043065	3/8 SPLIT LOCK WASHER
23	8	046115	3/8-16 X 1 1/4 HHCS
24	2	046120	3/8-16 X 1 1/2 HEX BOLT
NS	1	640158	CAPACITOR 25uf

LEGEND:
NS=NOT SHOWN
WHEN ORDERING, SPECIFY THE
COLOR WANTED ON PARTS
CONTAINING THE LETTER "P"

NIGHT-LITE PRO V-SERIES DOM

KUBOTA CONTROLS



NIGHT-LITE PRO V-SERIES DOMESTIC

KUBOTA CONTROLS

KUBOTA DEEP SEA CONTROL PANEL

NO.	QTY.	PART NO.	DESCRIPTION
1	1	433329	5/8" PLASTIC PLUG
2	1	433328	1/2" PLASTIC PLUG
3	2	041078	1/4-20 X 1/2 PH TRUSS SCREW
4	4	044021	1/4-20 KEPS NUT
5	1	041070	1/4-20x3/4 TAP SCREW
6	2	046010	1/4-20 X 3/4 HEX BOLT SS
7	1	101065	DEEP SEA CONTROLLER
8	1	100957P	GAUGE PANEL, DEEP
9	1	650363P	COVER PANEL GUAGE
10	1	340009	SWITCH 15 AMP SPST

KUBOTA ENGINE PARTS

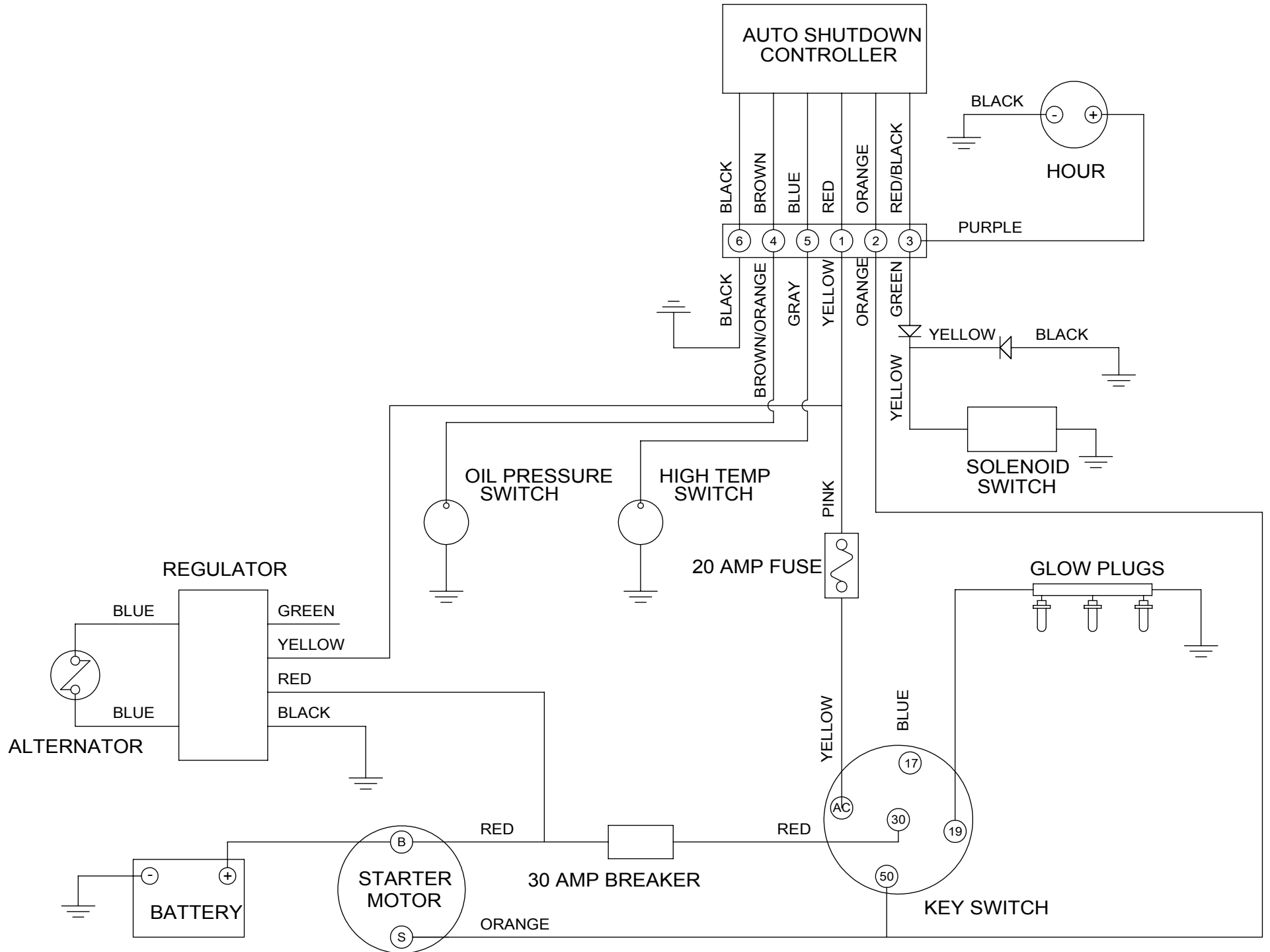
NO.	QTY.	PART NO.	DESCRIPTION
1	1	100991	KUBOTA D1105 50Hz W/DEEPSEA PANEL, BOX MUFFLER
2	1	340302	HIGH TEMP SWITCH KUBOTA
3	1	340301	OIL PRESSURE SWITCH KUBOTA
4	1	352139	KUBOTA BOX MUFFLER
5	1	920745	KUBOTA FUEL FILTER
6	1	920743	KUBOTA OIL FILTER
7	1	650001	RADIATOR KUBOTA
8	1	653113	ARC GEN EXHAUST
9	1	653114	ARC GEN REAR
10	1	651233P	BOX MUFFLER REAR
11	2	043050	WASHER LOCK
12	1	352135	EXHAUST GASKET KUBOTA
13	2	042018	6mm X 10mm HEX BOLT GR 8.8
14	2	713086	CLAMP 1 3/8" MUFFLER
15	8	047016	3/8 SAE FLAT WASHER
16	8	042038	10mm X 1.25 x20mm GR 8.8 HEX BOLT
17	1	650290	AIR FILTER ELEMENT KUBOTA

LEGEND:
 NS=NOT SHOWN
 WHEN ORDERING, SPECIFY THE
 COLOR WANTED ON PARTS
 CONTAINING THE LETTER "P"

NIGHT - LITE PRO V SERIES

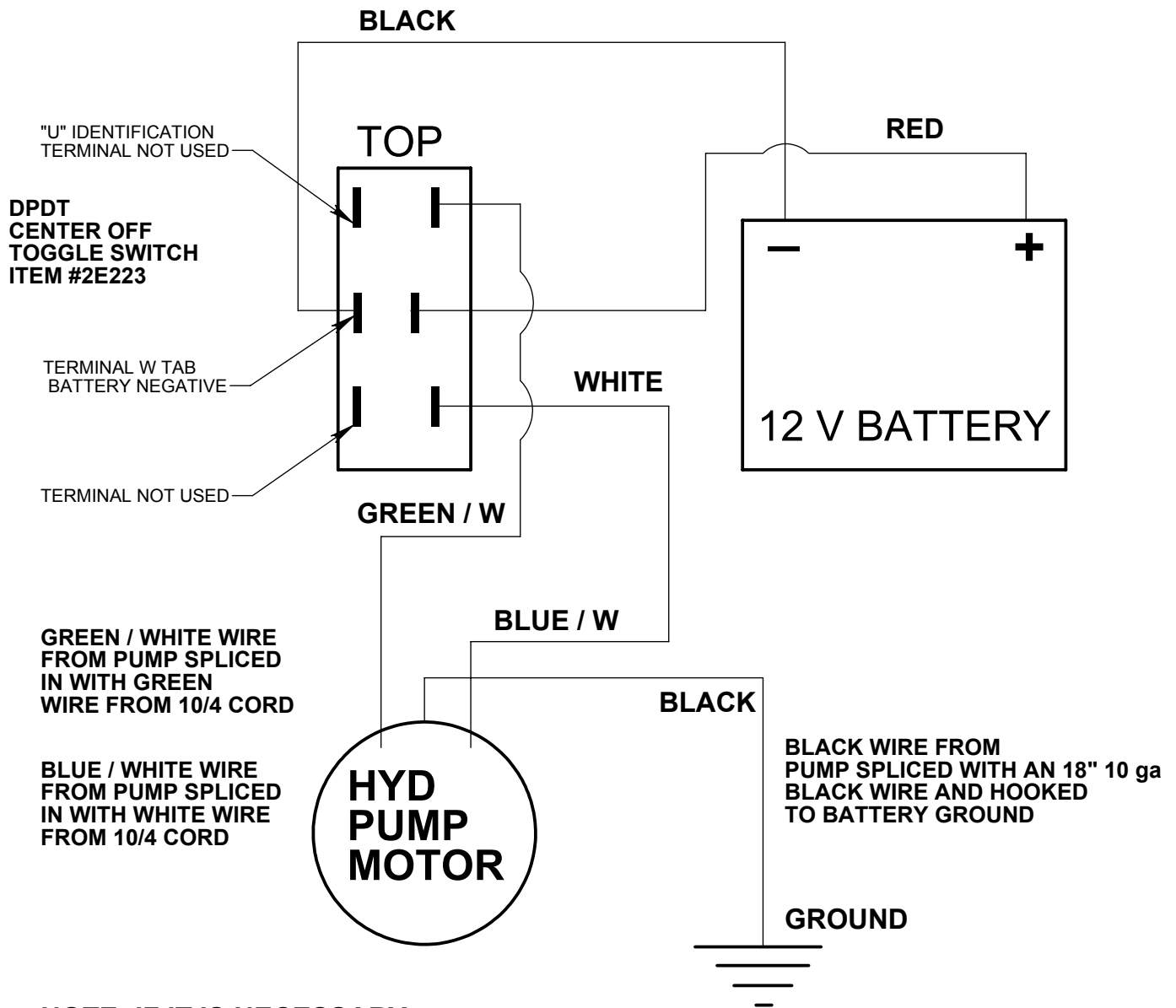
REQ'D	PART NO	DESCRIPTION
1	090165	DECAL - DANGER ELECTRIC SHOCK
1	090034	DECAL - DIESEL
1	090166	DECAL - WARNING OVERHEAD HAZARD
2	090276	NIGHT-LITE DECAL
1	090159	DECAL - WARNING COMBUSTIBLE GAS
1	090160	DECAL - WARNING EXCESS TOW
1	090133	DECAL - GROUND LUG
1	090158	DECAL - WARNING OPERATOR'S MANUAL
1	090084	DECAL - WARNING SHUT OFF LIGHTS
2	090278	PRO SERIES DECAL
1	090288	STARTING ENGINE, ISUZU & PERKINS
1	090224	STARTING ENIGINE, LOMBARDINI AND KUBOTA WITH KEY SWITCH
1	100663	DECAL - ELECTRICAL WINCH PICTORAL
1	090163	DECAL - DANGER ELECTRIC SHOCK
1	090226	DECAL - WARNING ROLL OVER PROTECTION
2	090002	DECAL - DANGER HIGH VOLTAGE
2	090256	LARGE ALLMAND DOOR DECAL
1	090161	DECAL - MOVING PART HAZARD
1	090465	DECAL - ALLMAND.COM
1	090385	DECAL - FLAG
1	090322	DECAL - ALLMAND ASSURANCE
3	101404	DECAL - WARNING DO NOT STAND
1	090306	DECAL - WINCH-UP/ DOWN
1	100994	DECAL - ELECTRIC WINCH CLUTCH NUT ADJUSTMENTS
1	090179	DECAL - PROPOSITION 65 DIESEL
1	090162	DECAL - HAZARDOUS VOLTAGE
1	090474	DECAL - MANUAL WINCH-ICY CONDITIONS
3	090005	DECAL - WARNING-CHECK FOR OVERHEAD OBSTRUCTIONS
1	100664	DECAL - STARTING ENGINE KUBOTA WITH DEEP SEA CONTROL PANEL
1	101076	DECAL - BUNDED TRAILER
1	101208	DECAL - MANUAL WINCH PICTORAL
	101216	DECAL KIT V SERIES DOMESTIC
1	100247	DECAL - LOWER TOWER TO LOWEST POSITION

CAT C1.1 ENGINE WIRING HARNESS



NIGHT-LITE PRO V-SERIES

V-SERIES HYDRAULIC WIRING SCHEMATIC 9/15/08



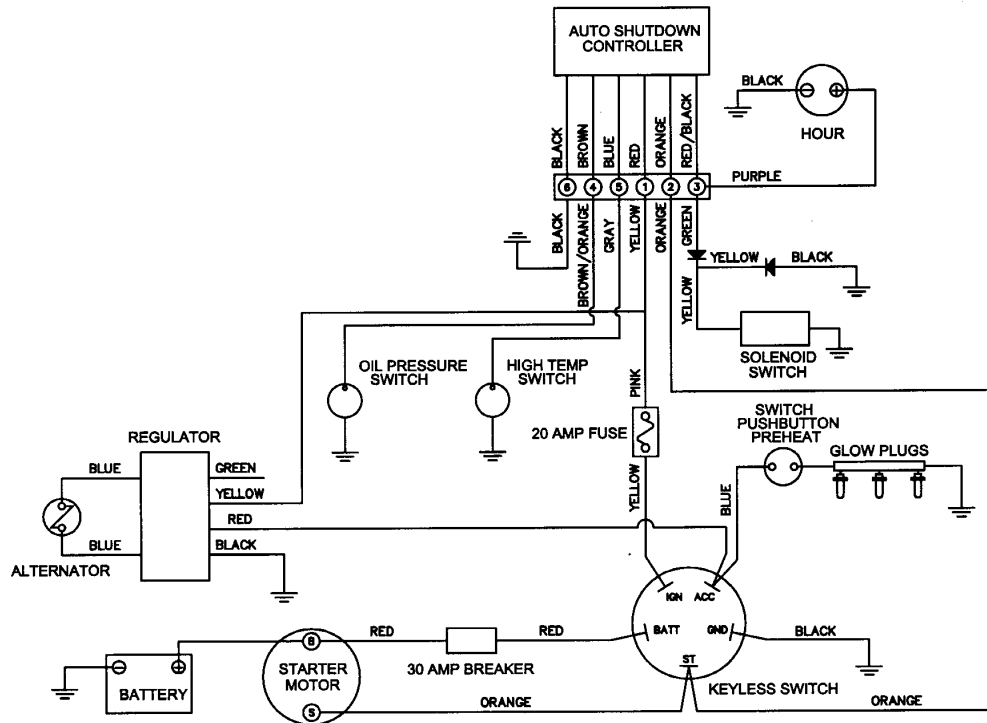
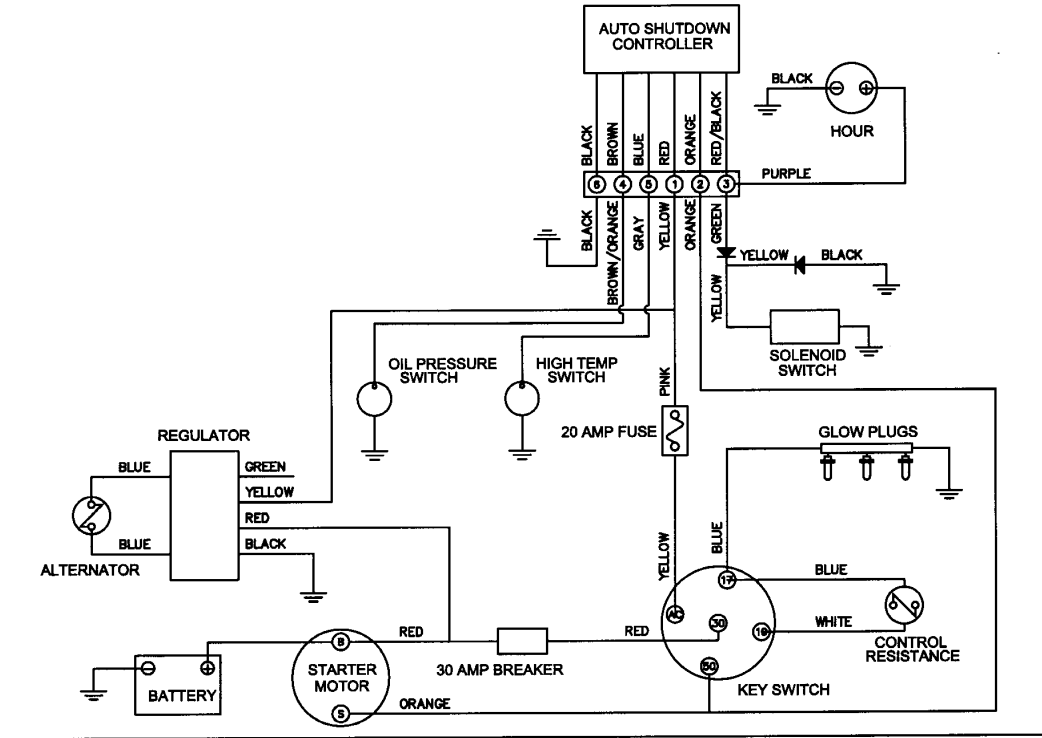
NOTE: IF IT IS NECESSARY TO REVERSE PUMP DIRECTION, SWITCH BLUE/W & GREEN/W WIRE ON SWITCH.

NOTE: SPDT SWITCH MAY BE USED IN THIS APPLIATION.

NIGHT-LITE PRO V SERIES ELECTRICAL DIAGRAMS

CAT C1.1 Engine Wiring Schematic

F-2A



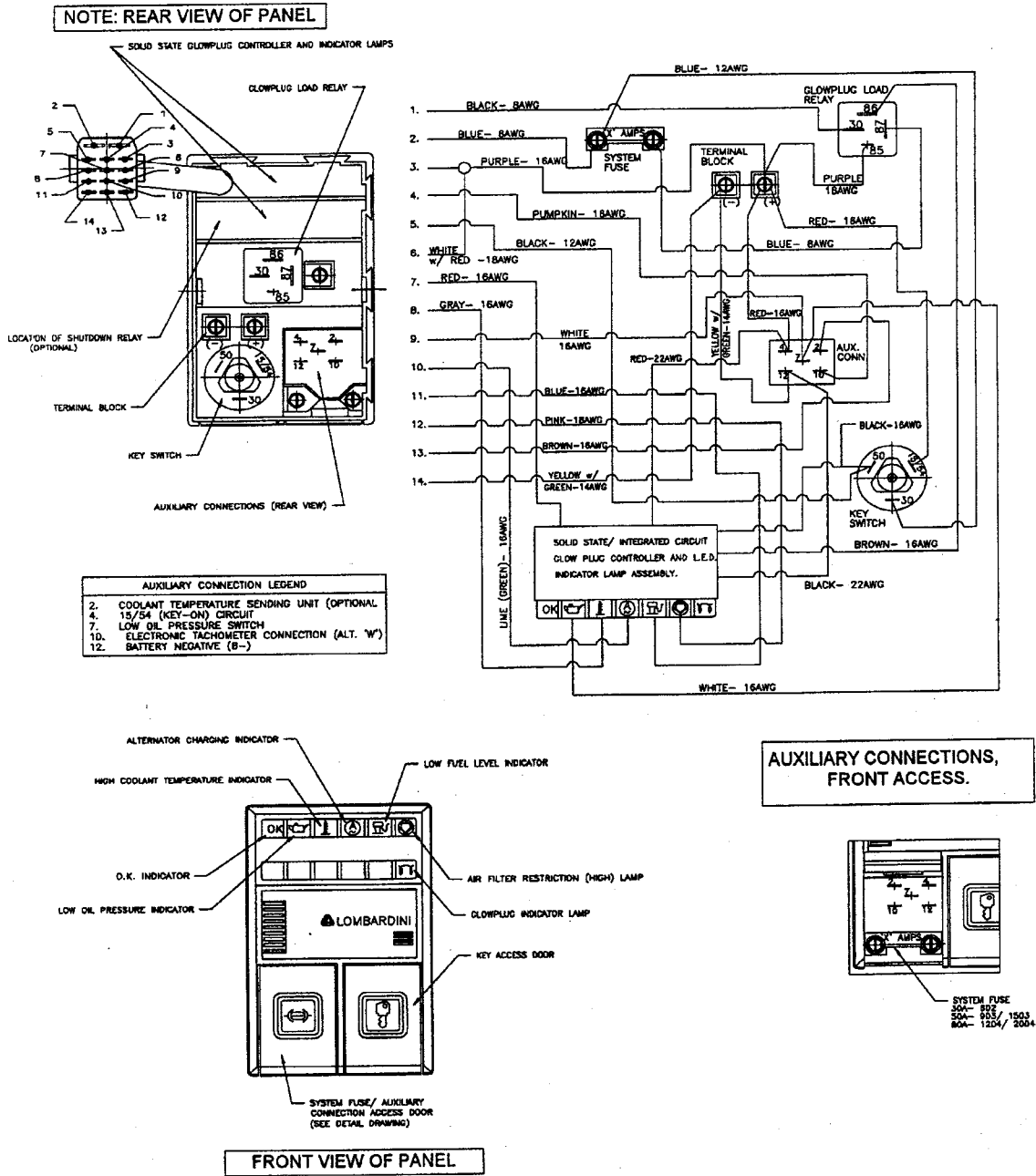
WHEN ORDERING, SPECIFY COLOR WANTED
ON PART NUMBERS CONTAINING THE
LETTER P

NIGHT-LITE PRO V SERIES

ELECTRICAL DIAGRAMS

F-3A

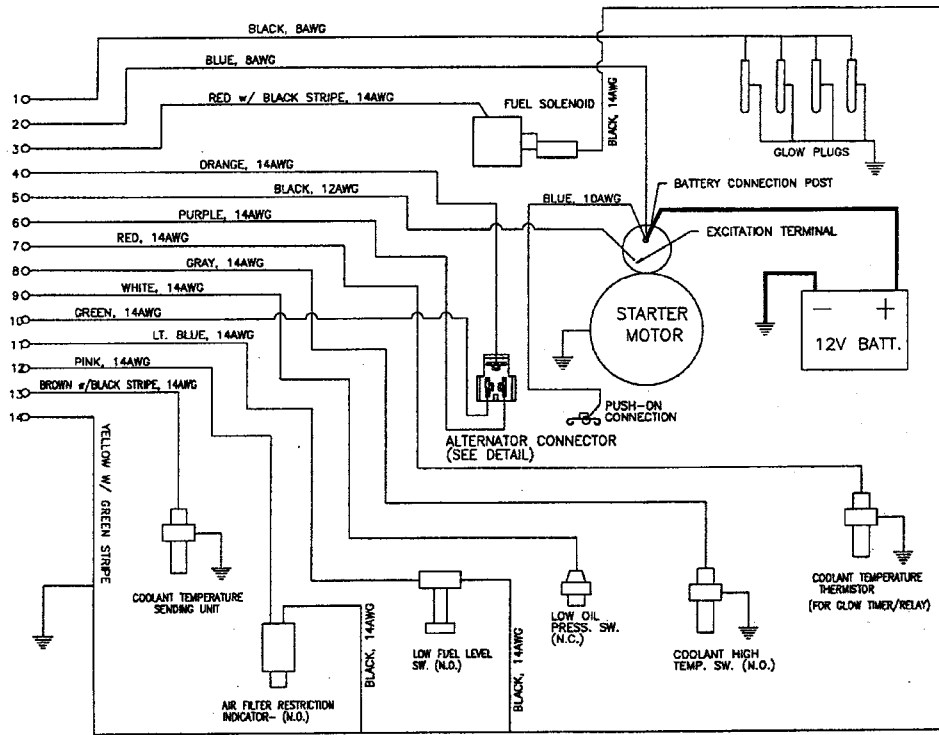
LOMBARDINI LDW 1003 WIRING DIAGRAM



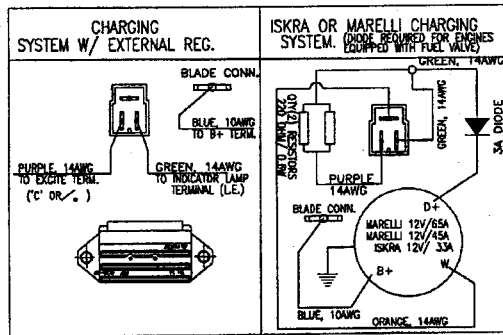
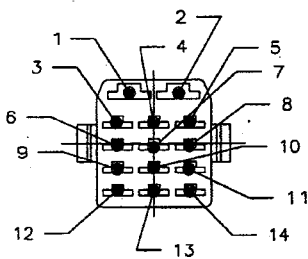
NIGHT-LITE PRO V SERIES ELECTRICAL DIAGRAMS

F-4A

LOMBARDINI LDW 1003 WIRING DIAGRAM



Connector Key

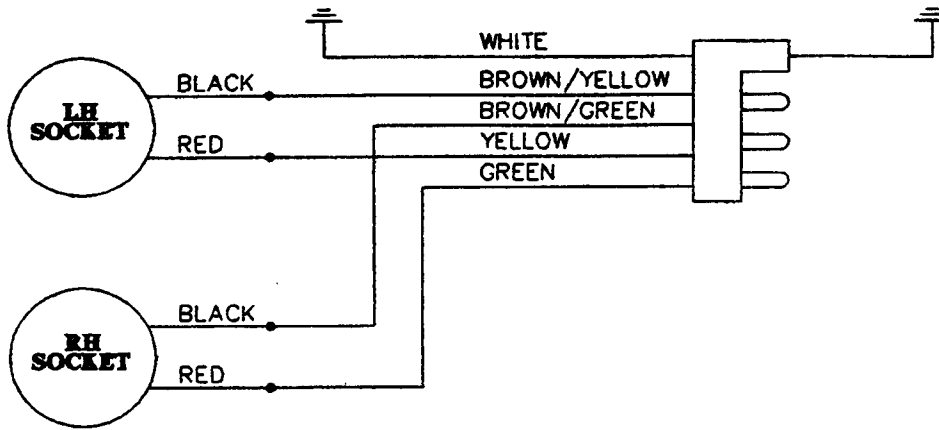


WHEN ORDERING, SPECIFY COLOR WANTED
ON PART NUMBERS CONTAINING THE
LETTER P

NIGHT-LITE PRO V SERIES ELECTRICAL DIAGRAMS

F-5A

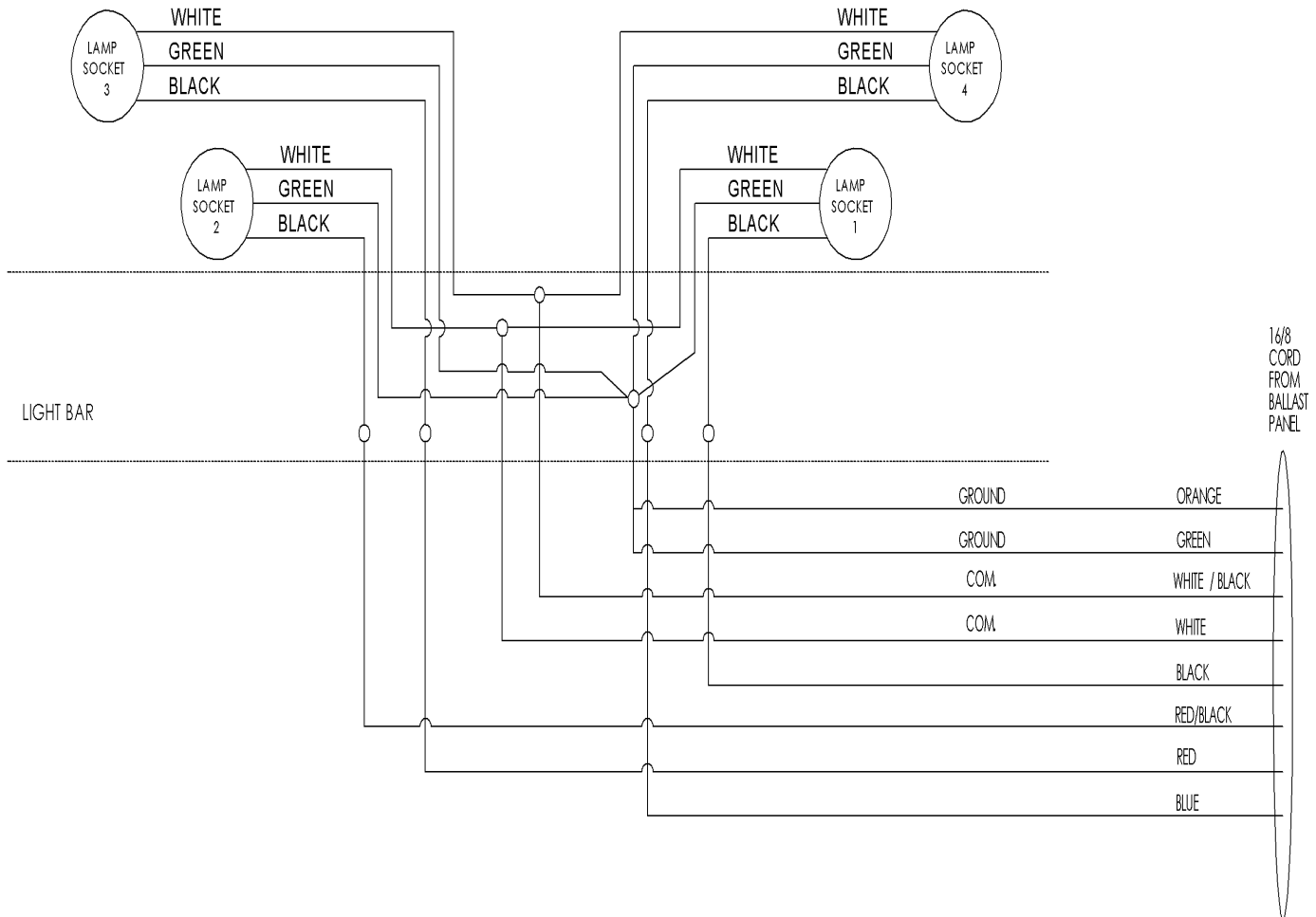
TAIL LAMP WIRING SCHEMATIC



LAMP SOCKET/TERMINAL BOARD WIRE SCHEMATIC

V-SERIES PRO 240 VOLT
LIGHT BAR WIRING 16-8 1250 WATT

DOMESTIC & CSA NEW 7/24/08

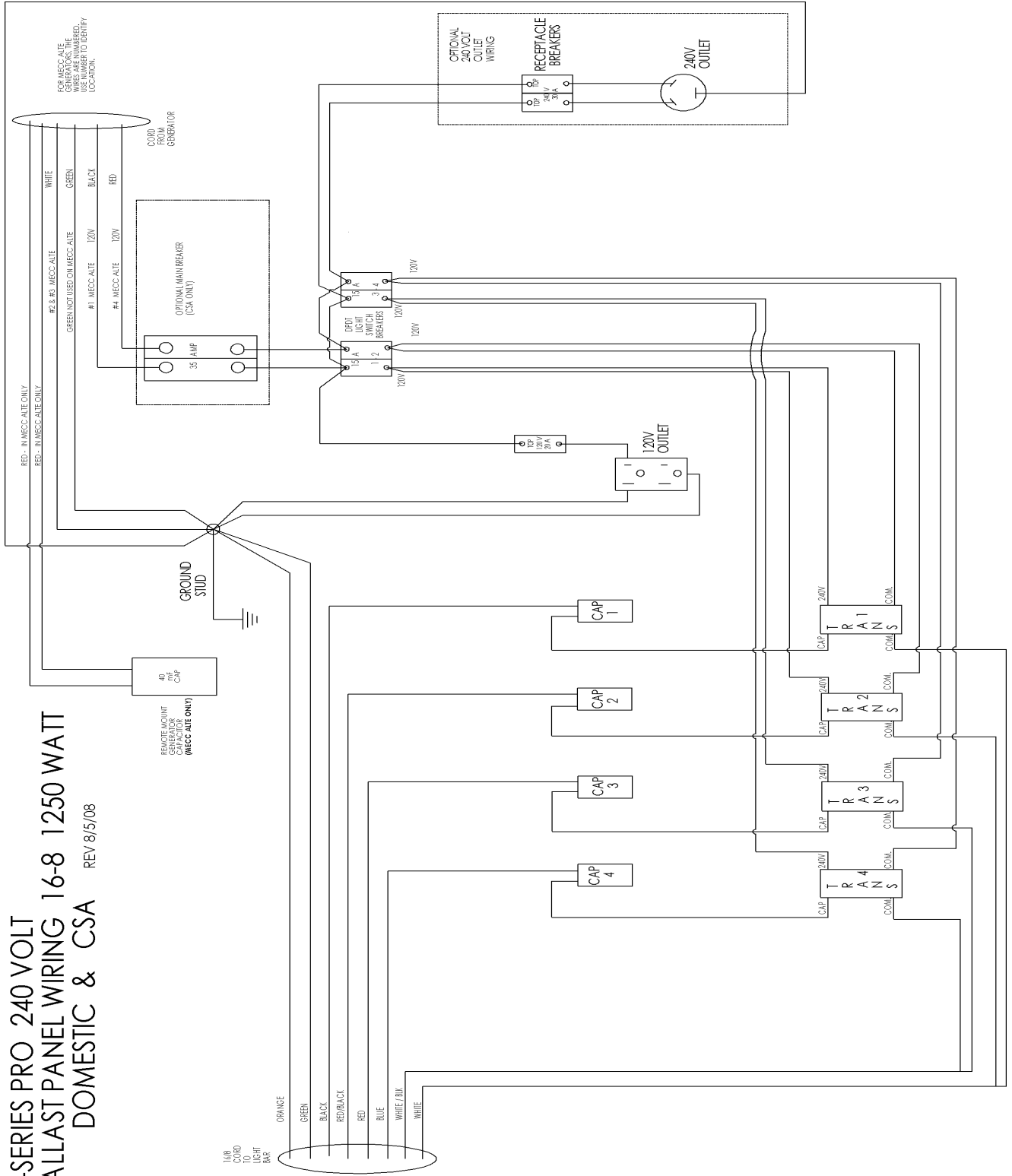


NIGHT-LITE PRO V SERIES

ELECTRICAL DIAGRAMS

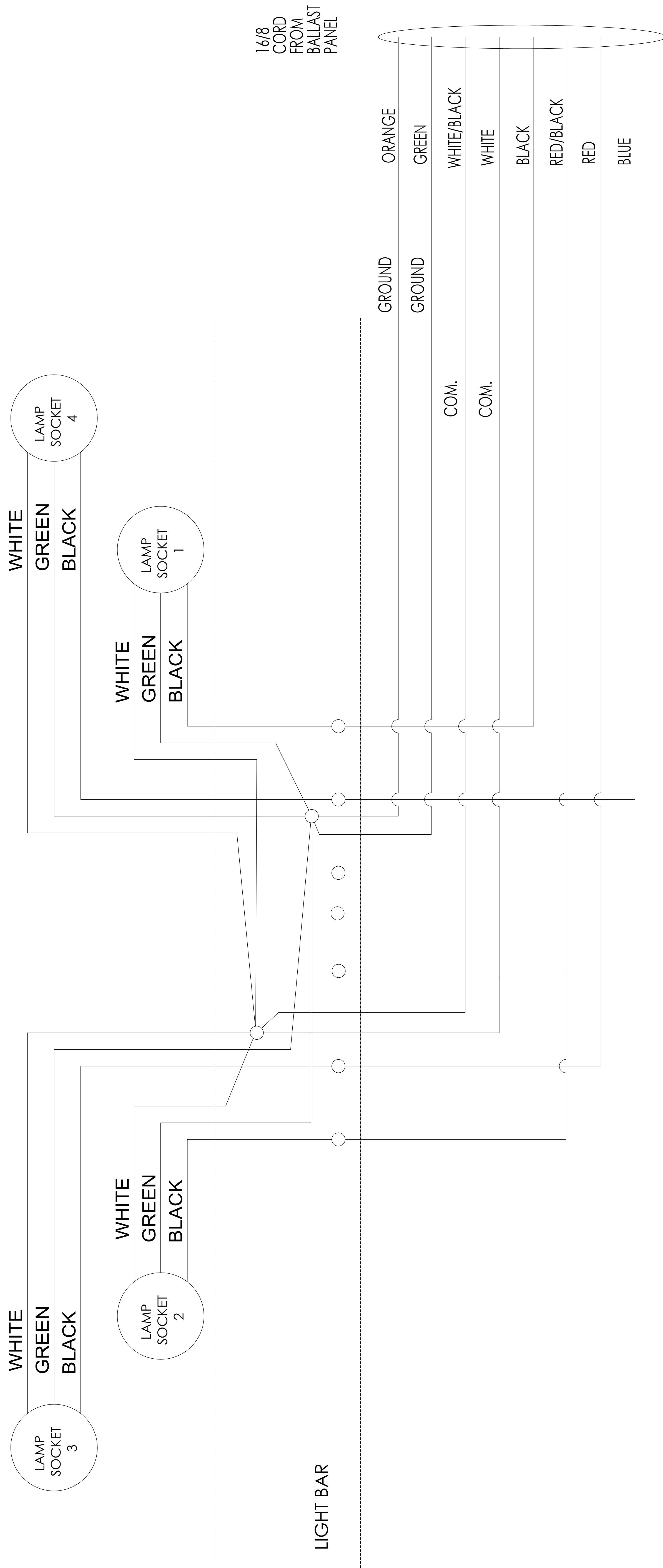
F-6A

SHO-HD LIGHTING SYSTEM 240 VOLT WIRING SCHEMATIC



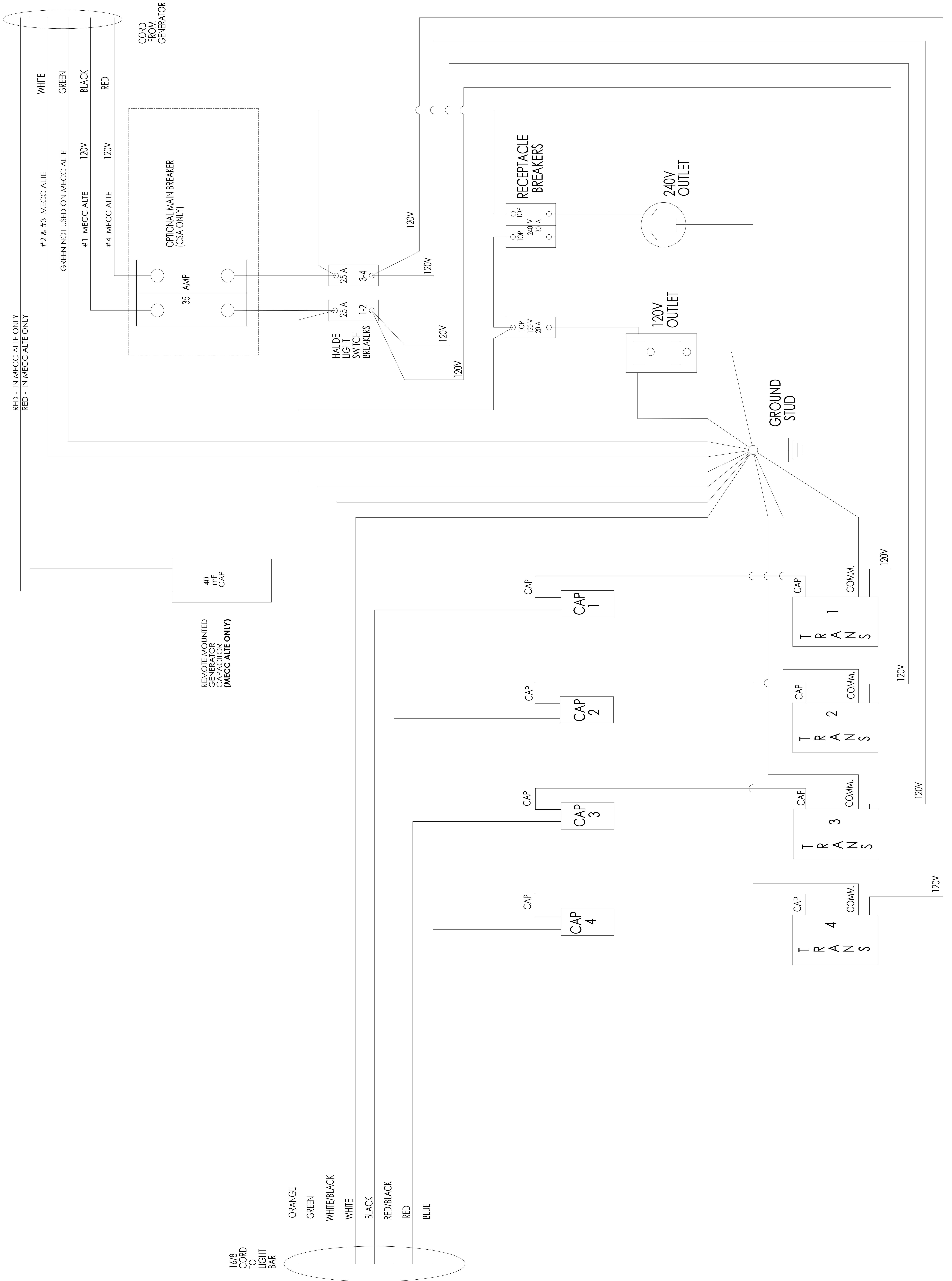
WHEN ORDERING, SPECIFY COLOR WANTED ON PART NUMBERS CONTAINING THE LETTER P

NIGHT-LIGHT V-SERIES PRO 120V LIGHT BAR WIRING 16-8 DOMESTIC & CSA 6-16-10



NIGHT-LITE PRO V SERIES BALLAST PANEL WIRING 16/8 120V DOMESTIC & CSA 6-16-10

F-8A



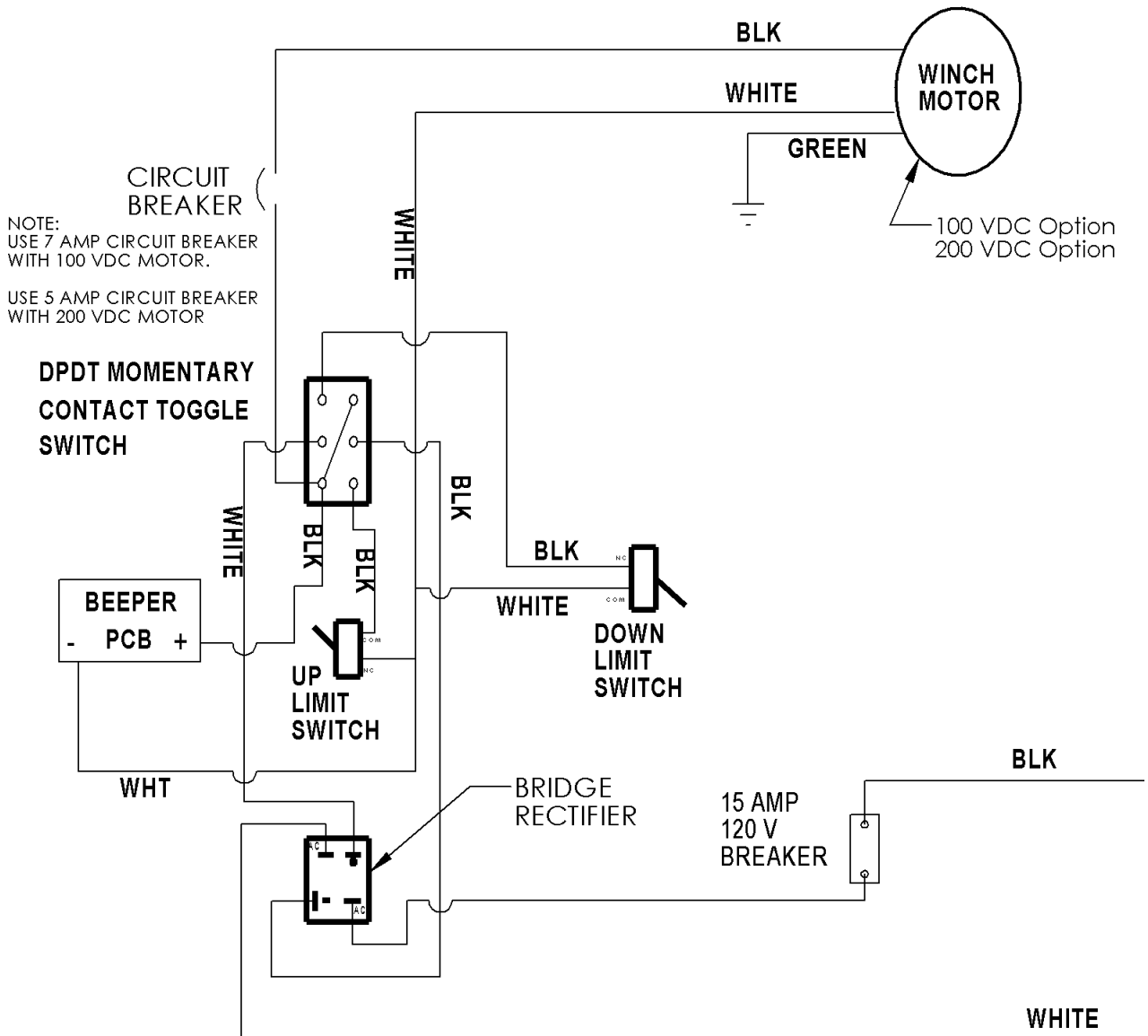
FOR MECC ALITE
OR MECC ALITE
WIRING ONLY, THE
WIRE NUMBERED,
USE NUMBER TO IDENTIFY
LOCATION.

NIGHT-LITE PRO V SERIES ELECTRICAL DIAGRAMS

F-9A

REVISED 7-24-08

DUTTON-LAINSON SA9000 WINCH SCHEMATIC
FOR USE ON VERTICAL TOWER TRAILER.





LIMITED WARRANTY

Allmand Bros. Inc.
PO Box 888
1502 West 4th Ave
Holdrege, NE 68949
800-562-1373 / 308-995-4495

Fax 308-995-5887 / www.allmand.com

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 ACCOMPANIES THESE GOODS.

Subject to the foregoing, the manufacturer, Allmand Bros. Inc., hereby warrants all light towers manufactured by Allmand Bros. Inc. after April 1, 2008 to be free from defects in material and workmanship for a period of (2) years after delivery to the original purchaser. The first year warranty would include parts and labor. The second year warranty would be limited to parts manufactured by Allmand Bros. Inc. and components warranted by the original equipment manufacturer for more than 12 months. 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 manufacturer shall in no event be responsible for down time and or lost revenue.

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 thirty (30) days of the failure.