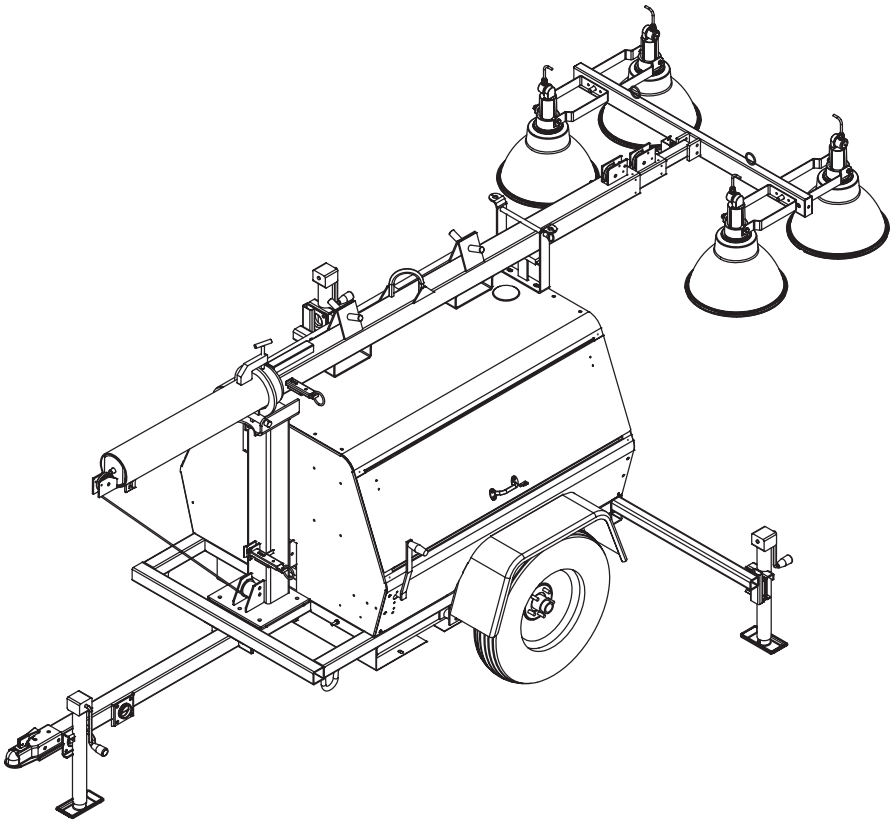
TEREX

OPERATOR/SERVICE & PARTS MANUAL

Series AL4000D2
Light Tower

PART NUMBER 833002
REVISION A
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TO THE OPERATOR

DO NOT ATTEMPT TO SETUP, OPERATE, OR WORK ON THE LIGHT TOWER UNLESS YOU HAVE READ AND STUDIED THIS MANUAL AND THE ENGINE AND GENERATOR MANUALS CAREFULLY. READING THESE MANUALS WILL TEACH YOU HOW TO SAFELY SETUP, OPERATE, AND PROPERLY MAINTAIN THE TOWER AND ITS COMPONENTS.

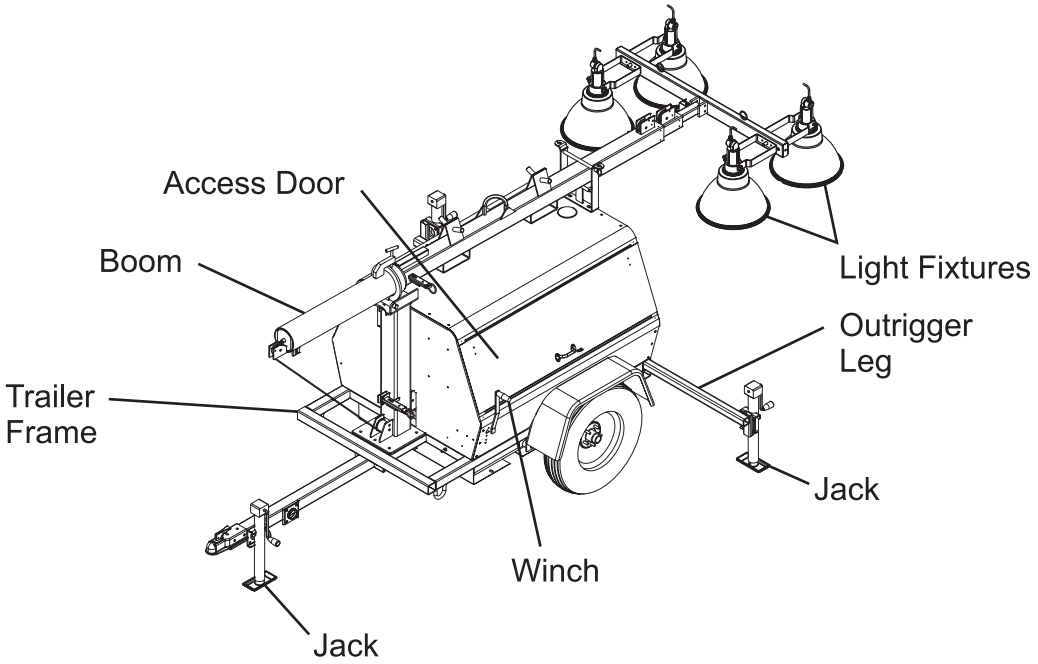
REMEMBER THAT YOU ARE THE KEY TO SAFETY. GOOD SAFETY PRACTICES NOT ONLY PROTECT YOU, BUT ALSO THOSE WORKING AROUND YOU. MAKE THIS MANUAL A WORKING PART OF YOUR SAFETY PROGRAM.

An operator should never use drugs, alcohol or any other substance which can change his alertness or coordination.

Do not work on this equipment when mentally or physically fatigued.

This manual is compiled from information available and current at time of approval for printing. Terex reserves the right to improve its products without giving prior notice or incurring any obligation.

If this manual becomes lost, order a new one from Terex so future operation and maintenance personnel may read these instructions.



SAFETY ALERT SYMBOLS



MEANS:
ATTENTION! BE ALERT!
YOUR SAFETY IS INVOLVED

THIS SAFETY SYMBOL IS USED FOR IMPORTANT SAFETY MESSAGES. WHEN YOU SEE THIS SYMBOL, FOLLOW THE SAFETY MESSAGE TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE.

UNDERSTANDING SIGNAL WORDS

A signal word - **DANGER, WARNING** or **CAUTION** is used with the safety alert symbol.

⚠ DANGER

DANGER Identifies the hazard or unsafe practice that will result in severe injury or death.

⚠ WARNING

WARNING Identifies the hazard or unsafe practice that could result in severe injury or death.

⚠ CAUTION

CAUTION Identifies the hazard or unsafe practice that could result in minor injury or property damage.

NOTICE

NOTICE Identifies important installation, operation or maintenance information.

GENERAL SAFETY

⚠WARNING **DO NOT OPERATE THE AL4000 LIGHT TOWER WITHOUT READING THIS OPERATOR'S MANUAL.**

DO NOT WORK ON OR OPERATE THE LIGHT TOWER WHILE UNDER THE INFLUENCE OF PERFORMANCE IMPAIRING DRUGS OR ALCOHOL.



SAFETY ALERT SYMBOL

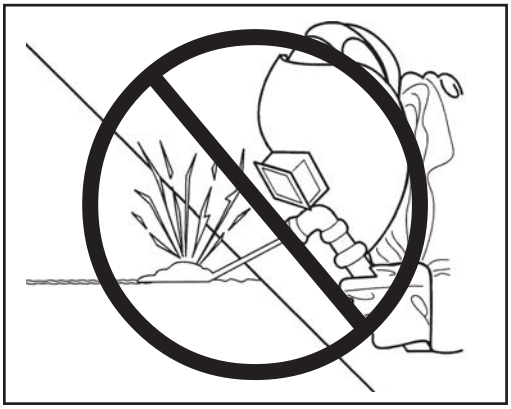
Stop and take time to read ALL Safety alert messages. Follow the safety messages to avoid personal injury or property damage.



ACCIDENT PREVENTION

Use protective clothing and safety equipment. Always wear approved safety equipment such as gloves, safety boots, safety hard hat, goggles, ear protection, and dust masks when necessary.

Wear protective clothing that is snug and belted where required.



UNAUTHORIZED WELDING

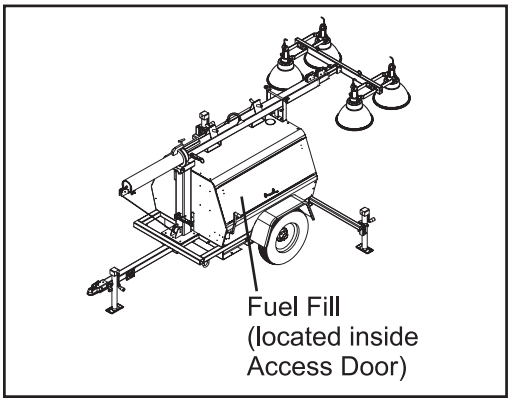
⚠WARNING **UNAUTHORIZED WELDING CAN CAUSE STRUCTURAL FAILURE OR PERSONAL INJURY.**

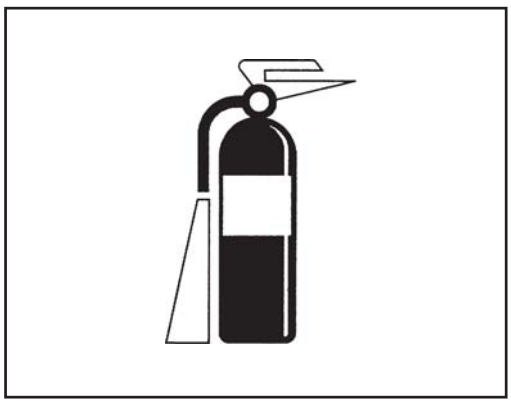
DO NOT weld on any structural member.

Any unauthorized welding or repair procedure will void the warranty.

GENERAL SAFETY







⚠WARNING **FUELING**

ALWAYS handle fuel with care. It is highly flammable.

ALWAYS stop engine before refueling. Fill fuel tank outdoors.

Be sure the fuel supply has a positive shut-off valve**.**

DO NOT replace fuel lines with materials different from those supplied as original equipment.

⚠CAUTION **FIRES CAN CAUSE SEVERE PERSONAL INJURY OR MACHINE DAMAGE.**

Prevent fires by keeping the light tower and its surrounding area clean.

DO NOT refuel while smoking or when near open flame or sparks.

DO NOT refuel the engine when it is hot. Allow to cool for several minutes before refueling.

DO NOT spill fuel inside the engine compartment.

If fuel has leaked, wipe it up and have leak repaired before next use.

Have a fire extinguisher nearby. Be sure the extinguisher is properly maintained and be familiar with its use. Extinguishers rated ABC by the NFPA are appropriate for all applications.

GENERAL SAFETY

⚠WARNING **EXHAUST GASES ARE TOXIC. DO NOT USE INDOORS UNLESS PROPERLY VENTILATED OR AN EXHAUST SCRUBBER IS USED.**

Check exhaust system regularly for leaks and ensure that the exhaust manifolds are secure and not warped.

Make sure the unit is well ventilated.

⚠WARNING **ELECTRICAL SAFETY**

This equipment utilizes high voltage circuits. Always exercise extreme caution when trouble shooting or repairing any electrical circuit.

The electrical circuits in this light tower complete their paths back to the generator within the equipment. The neutral conductor at the generator is bonded to the equipment frame. Ground wires within the system are also bonded to the equipment frame.

Always ground the unit when possible. **Consult local electrical codes for grounding instructions.**

A grounding lug has been added to the trailer frame for your convenience.

Disconnect electrical power and turn off engine before removing protective covers on high voltage electrical enclosures.

Beware of a cut or damaged power cord. Have a qualified electrician replace immediately.

When troubleshooting indicates a malfunction in the high voltage AC system, pass the task to a qualified and trained electrician.

⚠WARNING **DO NOT TOUCH HOT PARTS**

The exhaust manifold and tail pipe are very hot. Parts of the engine are also hot. Use protective gloves when handling hot parts.

The light fixtures become very hot during operations. To avoid burns, always allow any fixture to cool before handling.

GENERAL SAFETY

⚠WARNING BATTERY HAZARDS

Lead acid batteries can be dangerous. The sulfuric acid in the battery can cause severe skin and eye burns. The hydrogen gas emitted during charging can explode if an arc or flame is present.

DO NOT smoke while servicing the battery.

DO NOT allow tools to touch battery terminals and create an arc.

Disconnect the negative terminal of the battery when working on the engine or other parts to prevent accidental arcing. Disconnect the negative cable at the end away from the battery.

DO NOT remove the vent caps when charging the battery.

Always wear eye protection when servicing the battery.

If acid gets on skin or eyes, immediately flush under running water and obtain medical attention.

⚠WARNING METAL HALIDE LAMPS PRODUCE SHORTWAVE ULTRAVIOLET RADIATION AND CAN CAUSE SERIOUS SKIN AND EYE BURNS OR INFLAMMATION IF THE OUTER ENVELOPE OF THE LAMP IS BROKEN OR PUNCTURED.

DO NOT use where people will remain close to the lamps for more than a few minutes unless adequate shielding or other safety precautions are used.

⚠WARNING KEEP ALL BODY PARTS AND CLOTHING AWAY FROM MOVING PARTS

Loose jackets, shirts, sleeves, and especially neckties should not be worn while working on or running the unit.

Only remove guards or protective devices from unit temporarily to gain access for maintenance. Always replace guards immediately after servicing. Never remove guards while unit is operating.

Keep your hands away from moving parts, particularly clear of the radiator fan and alternator belts when the engine is running.

GENERAL SAFETY

⚠CAUTION **BEWARE OF TRAFFIC HAZARDS**

Stand clear of traffic when starting or checking the unit along the road.

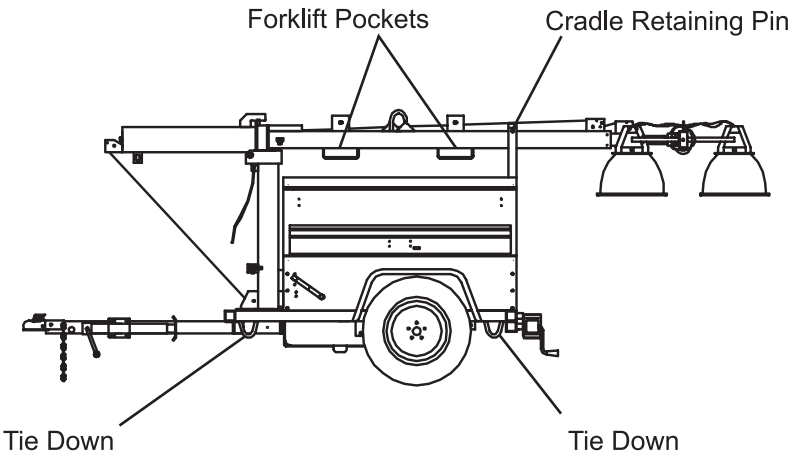
Check the fuel tank, oil pan, and fuel and oil lines for leaks that would spill fuel or oil on the road.

Check fasteners and mounting brackets periodically to insure all are tight and nothing is in danger of falling off during transit.

⚠CAUTION **Be careful when lifting. Never suspend any other equipment from the shipping tie downs.**

Use the lifting eye or forklift pockets on the tower for lifting the trailer and tower assembly only (with tower and cabinet).

Make sure any tie-downs at the bottom of the trailer are released, and the cradle retaining pin is inserted and secured, prior to lifting.



⚠WARNING **NEVER CLIMB ON TOP OF THE CABINET AND/OR TOWER WHEN ERECTED OR RETRACTED.**

RECEIPT OF DELIVERY CHECKLIST

The tower will be serviced, tested and ready for operation upon delivery. Terex recommends the following checks:

- ☐ Insure there is no freight handling damage which should be charged against the carrier.
- ☐ Make sure the telescoping boom is secure.
- ☐ Make sure the crosshead assembly is secure.
- ☐ Check the front and rear jacks for security and proper operation.
- ☐ Check the outriggers for security and proper operation.
- ☐ Check that the tires are not damaged, under inflated or that any lugs are loose.
- ☐ Check the engine/generator for obvious damage, loose connections, or leaks.
- ☐ Check the control panel for damage or loose connections.
- ☐ Check the boom wires for obvious damage or loose connections.
- ☐ Check the light fixtures for damage to the lamps, lenses, reflector or etc.
- ☐ Check the winches, cables and pulleys for damage and proper operation.
- ☐ Check the exhaust system for damage.
- ☐ Check all fluid levels; battery, radiator, and engine oils.
- ☐ Insure manuals are in the pocket provided inside the unit.

TRANSPORT & TOWING

1. Using the front leveling jack, securely attach the light tower to the transporting vehicle.

2. Insure that the coupler is properly secured to the towing vehicle and attach the safety chains.

⚠WARNING **ALWAYS USE THE PROPER TRAILER HITCH AND SAFETY CHAINS. OBEY ALL LOCAL OR STATE D.O.T. LAWS WHEN TOWING A LIGHT TOWER.**

⚠WARNING **FAILURE TO PROPERLY SECURE THE TRAILER TO THE TOWING VEHICLE MAY RESULT IN SERIOUS INJURY OR DEATH.**

3. Retract and rotate the front leveling jack into its stowed position.

4. Check the tires for proper inflation (32psi) and verify the lug nuts are tight.

5. Position all outriggers and jacks into the stowed or travel position.

6. Verify that the fixtures are secure and ready for transport.

7. Secure all loose locking pins and retainers.

8. Make sure all doors are closed and tightly locked.

9. Remove tire chocks.

⚠CAUTION **Towing of a Terex light tower is approved with the light fixtures in place on the crosshead assembly for all off road terrain and highway towing as long as the following speed limits are followed:**

Highway towing - 60 MPH max
Off road towing - 10 MPH max

Severe damage may occur from excessive speeds. Damage created by abuse will void the manufacturer's warranty.

SETUP

A. Move the light tower to desired location keeping the following in mind:

1. The light tower should not be placed where those working under the light are either:
   a. Forced to look into the light regularly.
   b. Forced to work with their backs to the light (shadows will block the light from the work area).

2. The area where the tower is positioned should be relatively level for safe and proper operation of the unit.

3. The light tower should be located on the same level or on ground higher than the work area.

B. Use tire chocks in front of and behind each tire whenever possible. Always use tire chocks on an incline.

C. Disconnect the towing chain.

D. Unhitch from the towing vehicle as follows:

1. Rotate the tongue jack into position (90 degrees), release the hitch pin and raise the tongue off the towing vehicle.

E. Level the trailer, using the jacks as follows:

1. Extend the front outriggers until the outrigger pins lock into place. Rotate the jack on each outrigger into vertical position and lock into place.

2. Rotate the rear jack and lock into the vertical position.

3. Start at the highest jack position. Rotate the jack handle until the jack foot touches the ground.

4. Raise the other jacks to level trailer.

⚠WARNING **OUTRIGGERS ARE NOT DESIGNED TO LIFT THE TIRES OFF THE GROUND.**

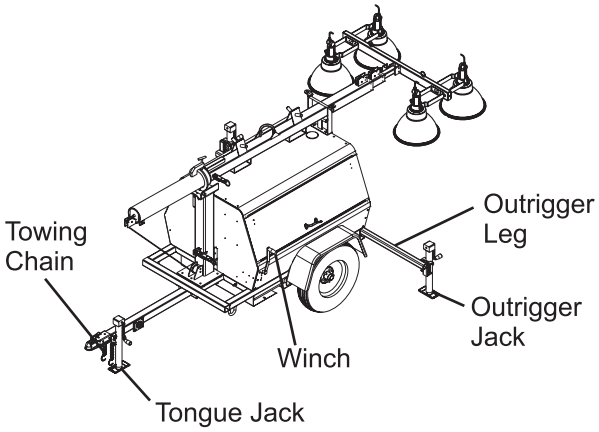
⚠CAUTION **Insure that all jacks are down to prevent the tower from tipping over backwards when raised.**

⚠WARNING **NEVER ATTEMPT TO MOVE THE TOWER WHILE THE LEVELLING JACK ARE DOWN. SERIOUS MACHINE DAMAGE WILL RESULT.**

SETUP

F. When applicable, drive grounding rod into earth. (Grounding rod not included)

1. Drive the rod into the ground and secure the grounding wire to the lug located on the trailer frame.



G. When applicable, install the floodlights on the crossarm.

1. Remove the light fixtures from their packing boxes and install them on the crossarm with the lens facing the ground.

2. The cord on the fixture should be on the side closest to the trailer so the cord entry is beneath the fixture when the tower is raised (this reduces moisture problems and insures the water weep hole in the fixture is down).

3. Set the vertical aim for each light fixture by adjusting the light fixtures and tightening the lower bolt.

NOTICE **Never adjust fixtures with power on.**

4. Set the spread between the fixtures horizontally by adjusting the fixtures and tightening the mounting nut.

5. The light fixtures may be left on the unit when towed around the job site.

6. Plug each fixture into the receptacles provided. Plug into the numbered receptacles in a clockwise rotation starting at the upper or 1:00 o'clock position. This makes trouble shooting easy without lowering the tower.

⚠CAUTION **If Tungsten Halogen lamps are used, the cord must be routed and secured away from the fixture. Failure to do so may result in cord burn-through and short circuit due to the high fixture temperature.**

SETUP

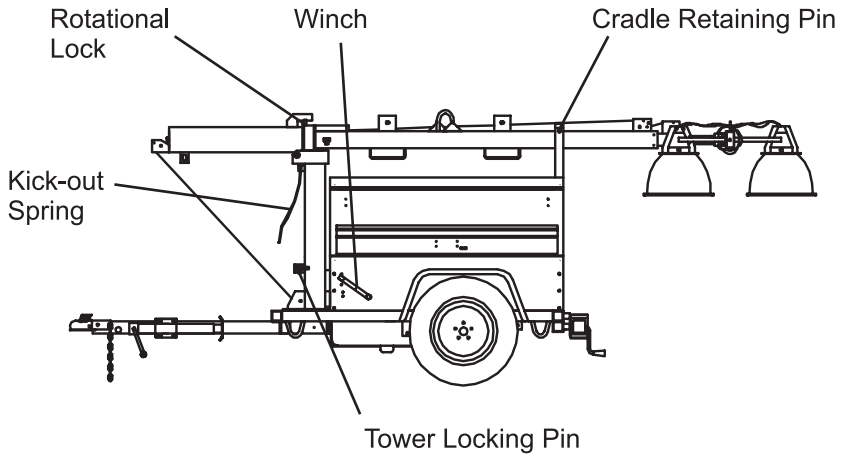
H. Raising the tower as follows:

1. Remove the tower travel locking pin from the cradle at the rear of the cabinet.
2. Remove the tower locking pin from the tower base. Using the lower pivot winch, raise the tower to the vertical position. Reinsert the tower locking pin into the tower base.

⚠CAUTION **If there is any difficulty in tilting the boom vertically, check the tailhook and hook. The tailhook may need to be released.**

⚠WARNING **BEWARE OF PINCH POINTS WHEN ERECTING OR STOWING THE TELESCOPING TOWER. A LOSS OF DIGITS OR LIMBS MAY RESULT FROM UNSAFE PRACTICES.**

⚠CAUTION **Do not attempt to lean the tower down when it is extended. Serious damage may occur.**



⚠WARNING **WHEN RAISING THE BOOM, MAKE SURE THE BOOM WIRING DOES NOT BECOME ENTANGLED.**

SETUP

WARNING **THE AUTOMATIC BRAKE MUST BE WORKING ON THE TELESCOPING WINCH. THE WINCH SHOULD NOT ALLOW THE TOWER TO DROP DOWN WHEN THE HANDLE IS RELEASED.**

WARNING **UNDER NO CIRCUMSTANCES SHOULD THE LIGHT TOWER BE MOVED WHEN THE BOOM IS IN A VERTICAL POSITION.**

3. Release the tower rotational lock and adjust the lights to the desired area. Once positioned correctly, retighten the rotational lock.

OPERATING INSTRUCTIONS

⚠WARNING **READ ALL DIRECTIONS IN MANUAL CAREFULLY BEFORE OPERATING EQUIPMENT**

⚠WARNING **DO NOT RAISE TOWER IN THE VICINITY OF OVERHEAD POWER LINES!**

1. Move Light Tower to desired location keeping the following in mind:

A. The light tower should not be placed where those working under the light are either:

1. Forced to look into the light regularly.
2. Forced to work with their backs to the light (shadows will block the light from the work area).

B. The area where the tower is positioned should be relatively level.

C. The light tower should be located on the same level or on ground higher than the area being lighted (higher light mounting heights reduce the shadow length).

D. Unit should be level to insure smooth trouble-free tower telescoping. Tower may not telescope down properly when unit is not level.

2. Unhitch from the towing vehicle as follows:

A. Engage the trailer braking system, especially if trailer is not on level ground. **CAUTION:** If electrical or manual braking system is not supplied, chock the wheels instead.

B. Swing the tongue jack into position and raise the tongue off the towing vehicle.

3. Level the trailer, using the jacks as follows:

A. Extend the rear outriggers until the springs lock into place. Swing the jack on each outrigger into vertical position.

B. Start at the highest jack position. Rotate the jack handle until the jack foot touches the ground.

C. Raise the other jacks to level trailer **⚠WARNING** ensure that the rear jacks are down to prevent the tower from tipping over backwards when raised.

4. Drive grounding rod into earth.

OPERATING INSTRUCTIONS

5. Install the floodlights on the crossarm:

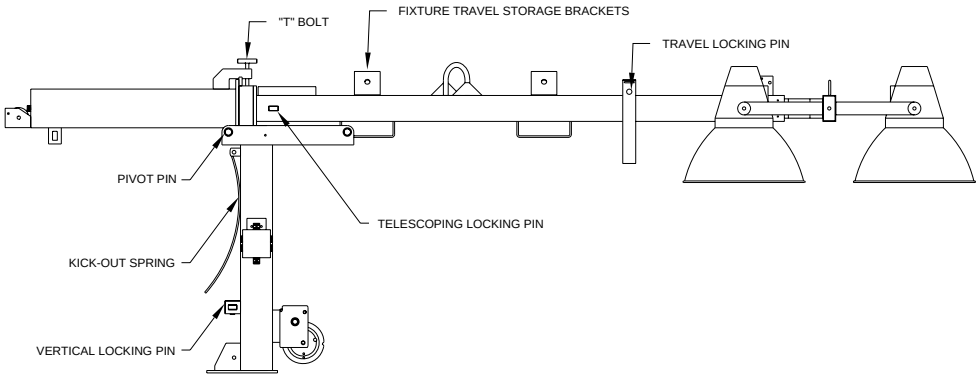
A. Remove the light fixtures from the tower by rotating the wingnuts to free the lights. Install them on the cross arm studs with the lens facing the ground.

B. The cord on the fixture should be on the side closest to the trailer so the cord entry is beneath the fixture when the tower is raised (this reduces moisture problems and insures the water weep hole in the fixture is down).

C. Set the vertical aim for each light fixture by adjusting the light fixtures and tightening the T-handle located on the fixture.

D. Set the spread between the light fixtures horizontal aiming by adjusting the fixtures and tightening the wing nut.

E. The unit may be transported with the light fixtures mounted on the crossarm if they are pointed toward the ground.



6. Raising the tower (refer to drawing above):

A. Remove the tower travel-locking pin from the cradle at the rear of the cabinet.

B. Aim the fixtures, both horizontally and vertically, to the estimated angles that will light the work area.

C. Using the winch, raise the tower to the vertical position. The tower-locking pin at the base of the pivot post will lock automatically and you will hear it “snap” into place. Insert manual pin into locking device.

D. Release the tension on the cable by backing the winch off slightly and pull the telescoping locking pin on the galvanized tower section. Hold this out while turning the winch to raise the tower. After the tower has telescoped slightly, the locking pin can be released. Raise the tower to the desired height.

⚠CAUTION **DO NOT ATTEMPT TO LEAN THE TOWER DOWN BELOW 45° WHEN IT IS EXTENDED-SERIOUS DAMAGE MAY OCCUR!**

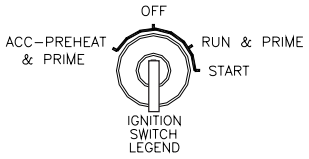
OPERATING INSTRUCTIONS

7. Start the Engine/Generator Set

A. Ensure the circuit breakers are turned “OFF”. This prevents the engine from starting under load and prevents electrical equipment from being subjected to improper voltage and frequency.

B. Check the oil, fuel, and coolant levels. If the fuel tank is empty, it may be necessary to bleed the fuel line after filling the tank (see engine instruction book for procedure).

C. Turn the ignition switch to the “ACC” position (see diagram below). Press the preheat push-button for a **maximum of 20 SECONDS**. Do not engage the preheat button longer than the time specified or damage may occur.



D. Turn the ignition switch to the “START” position to engage the engine. After the engine starts, release the switch so that it returns to the “RUN” position. Let the engine come up to speed and stabilize (review the engine operating procedures in the manufacturers handbook). Note: If engine will not start, leave switch in run position for additional 10-20 seconds to completely prime the fuel system. Then repeat step “C” and start engine.

E. Turn on the main circuit breaker.

8. Turn on the floodlights:

A. Turn the circuit breakers “ON” and ensure all lamps come on. Allow a minimum of two (2) minutes for lamps to reach full luminance.

B. If required, rotate the tower to aim the lights as desired. Tighten the tower rotating locking bolt.

C. Adjust the tower vertically and adjust lighting direction of individual fixtures if required.

9. Turn off the floodlights:

OPERATING INSTRUCTIONS

A. Turn light circuit breakers off.

B. Turn engine switch to “OFF” to shut down the engine.

⚠CAUTION **DO NOT SHUT DOWN ENGINE PRIOR TO TURNING LIGHTS OFF.**

⚠CAUTION **ALLOW LAMPS TO COOL AT LEAST TEN (10) MINUTES BEFORE MOVING THE TOWER TO AVOID BREAKING LAMPS.**

10. Lowering the tower to traveling position:

A. Using the winch, telescope the tower down to its fully retracted position until the telescoping locking pin snaps into place.

B. **⚠CAUTION** Ensure that the telescoping locking pin locks before pulling the vertical lock pin at the bottom of the pivot post. This insures the tower is completely lowered and cannot be damaged by telescoping out while in the travel position.

C. Loosen rotating lock.

D. Rotate the tower so that the groove in the galvanized ring at the pivot is pointing to the rear of the trailer to enable the tower to be lowered into the travel position.

E. Tighten rotating lock.

F. Pull the vertical locking-pin at the base of the pivot post (the kick-out spring should provide sufficient pressure to start the tower pivoting over).

G. Let out on the winch cable to lower the tower into the cradle.

H. Insert the rear tower horizontal travel-locking pin into the cradle.

OPERATING INSTRUCTIONS

11. Relocating light tower to new location:

A. Ensure that tower has been properly lowered (see section 10) and locking pins are engaged.

B. Ensure all fixtures are pointed toward the ground, or mounted on the fixture storage brackets on the lower tower section.

C. **⚠CAUTION** All jacks must be raised and all outriggers locked into travel position.

D. Ensure that the coupler is properly secured to the towing vehicle and safety chains are attached (if supplied). Release any manual braking mechanism (if supplied).

E. Do not tow at excessive speeds (60 mph – 100-kmh maximum) as the weight of the light tower can cause loss of vehicle control, especially under emergency stopping conditions. The standard trailer has no towing brakes; therefore allow extra distance for stopping.

12. Use of light tower auxiliary power:

A. One (1) 30amp/240v Twist-Lock and (1) 20 amp/120v duplex receptacles with GFI are provided for auxiliary power.

B. Total auxiliary power cannot exceed main circuit breaker rating. Each lamp operating consumes 9.2 amps @ 120 vac.

C. Before plugging in auxiliary power cords, feed them up through the trailer frame and attach to receptacles. Close the cabinet doors to protect control panel and other components from weather (see Miscellaneous Specifications and Routine Maintenance section for power control details).

MAINTENANCE

MINIMUM MAINTENANCE PROCEDURES:

The following maintenance intervals are only suggested by Terex. You should always check your engine owner's manual for specific information. Should you find any discrepancies between the Terex Manual and the Engine Manufacturer's Manual always follow the Engine Manufacturer's Manual.

Twice Daily:

-Check the crankcase oil and fill as required.

Daily:

-Check the engine and generator for any loose bolts, connections, and fittings.
-Check the coolant levels and fill as required.

Note: Use a 50% solution of water and antifreeze for the engine coolant.

Weekly:

-Check the air cleaner and clean as required.
-Inspect the radiator fins for damage or clogging.

Bi-weekly:

-Check the engine oil quality and change as required.

Bi-Monthly or every 250 hours:

-Change the engine crankcase oil.

Six months or every 500 hours:

-Replace the oil filter.
-Check valve clearances (consult Manufacturer's Manual)
-Check electrical components and clean as required.
-Check electrical wiring for chafing, wear and replace as needed.

Yearly or every 1,000 hours:

-Clean or replace the fuel filter.
-Clean or replace the fuel pump strainer, if equipped.
-Check the head and manifold bolts for tightness.
-Clean or replace the air filter.

MAINTENANCE

CLEANING:

The Light Tower employs various electronic controls that may be damaged by liquid spray washing or high pressure washing. Follow these procedures to prevent any damage to these components.

⚠WARNING **DO NOT SPRAY WATER INTO THE UNIT WHILE IT IS RUNNING. THIS MAY RESULT IN INJURY OR DEATH BY ELECTRIC SHOCK.**

Exterior Cleaning:

1. The exterior housing may be washed by most conventional cleaners and methods.

2. The exterior housing may be waxed using any conventional automotive wax.

Interior Cleaning:

1. Using a damp cloth covered with a mild soap, carefully clean around any electric controls, generator, and thermostats.

Light Fixture Cleaning:

1. The light fixtures and bulbs may be cleaned using any window cleaner.

⚠WARNING **THE LIGHT FIXTURES ARE VERY HOT, ALLOW TO COOL BEFORE PERFORMING ANY CLEANING TO THE FIXTURE, BULBS OR LENSES.**

MAINTENANCE

MANUAL WINCH

Maintain a light film of automotive-type grease on the pinion, drum gear, and the O.D. of the drum bearing at all times. Keep the ratchet pawl pivot, pinion shaft bushings, and pinion threads lubri cated with automotive engine oil at all times. Before each use, check the brake friction discs for wear. If less than 1/16" thick, cracked, or broken, replace **IMMEDIATELY.** Ratchet pawl should "click" when tower is raised, and not when it is lowered. Always be alert for any fraying of ca-bles, and replace any damaged cables **IMMEDIATELY.** Never stand under any object lifted by the winch.

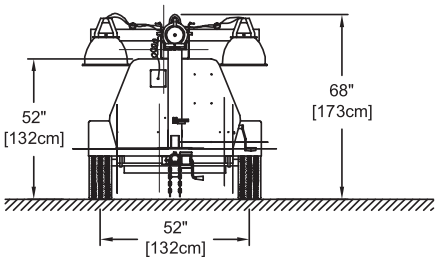
ELECTRIC WINCH

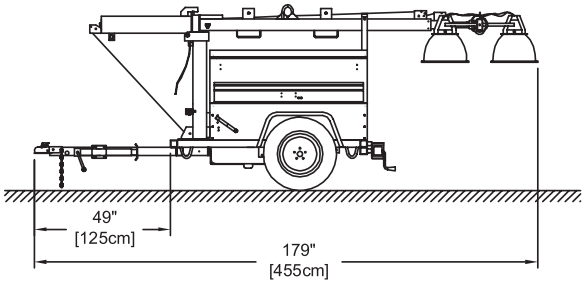
The electric winch is permanently sealed and does not need any periodic lubrication.
Always be alert for any fraying of cables, and replace any damaged cables **IMMEDIATELY.**
Never stand under any object lifted by the winch.

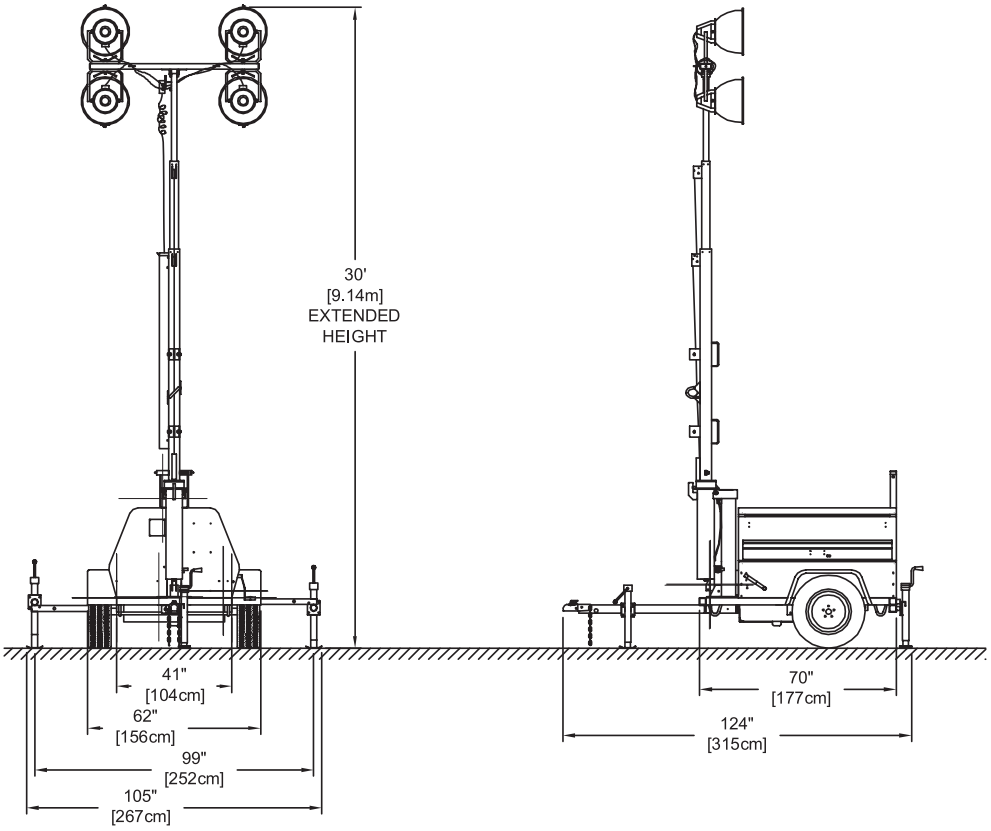
NOISE LEVEL

Mean SPL (sound pressure level) hemispherically at 7 meters:	**63dBA**
Sound Power Level (63 dBA + 20 log d + 7.8):	**90.0 LWA re 1 pW**
D = 7 meters	

SPECIFICATIONS & DIMENSIONS







SPECIFICATIONS & DIMENSIONS

TEREX Amida model AL4000 series light tower provides mobile, trailer mounted floodlighting for nighttime maintenance, construction, mining, and emergency work. It consists of a trailer with a diesel powered 6 kW 60Hz (50 Hz units available) generator, and a 30 foot cable actuated tower with four (4) 1000 watt floodlight fixtures. It is ideally suited for heavy-duty use and is built to meet the following specification:

DIMENSIONS

Overall length, travel position w/fixtures & tongue	179”	(4547 mm)
Overall length, tower vertical w/tongue & jacks	124”	(3150 mm)
Trailer frame length	70”	(1778 mm)
Overall height, floodlighting position	30’	(9114 mm)
Overall height, travel position	68”	(1727 mm)
Overall width with fenders	62”	(1575 mm)
Overall width with outriggers pulled out	105”	(2667 mm)
Trailer frame width	41”	(1041 mm)
Tongue length	49”	(1245 mm)
Wheel size	15”	(381mm)
Axle Rating	3500 lb.	(1588 kg)
Tongue weight travel position	100 lb.	(45.4 kg)
Total weight no fuel	2050 lb.	(930 kg)
Fuel Capacity	30 gal.	(114 kg)
Unit weight with full fuel tank	2250 lb.	(1020 kg)
Max Highway Speed	60 mph	(97 kmh)

NOISE LEVEL

Mean SPL (sound pressure level) hemispherically at 7 meters: **63dBA**
Sound Power Level (63 dBA + 20 log d + 7.8): **90.0 LWA re 1 pW**
D = 7 meters

⚠WARNING **DO NOT USE TOWER IN WIND SPEEDS ABOVE 62 MPH (100 KMH).**

This section details specifications and maintenance not covered in the operators and trouble-shooting sections of this manual and the AL4000 specification sheets.

BRAKE SYSTEM

Electrical or mechanical brakes are not standard equipment on the AL4000. Contact your dealer or the factory for option information.

TORQUE SPECIFICATIONS

MISCELLANEOUS SPECIFICATIONS

The Amida AL4000 light tower is built to NEC standards.

FASTENER TORQUE SPECIFICATIONS

All fasteners should be torqued to the following specifications in lb-ft (lb-in):

SAE FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

SIZE	THREAD	Grade 5				Grade 8				A574 High Strength Black Oxide Bolts	
		LUBED		DRY		LUBED		DRY		LUBED	
		in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
1/4	20	100	11.3	80	9	140	15.8	110	12.4	130	14.7
	28	90	10.1	120	13.5	120	13.5	160	18	140	15.8
		LUBED		DRY		LUBED		DRY		LUBED	
		ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
5/16	18	13	17.6	17	23	18	24	25	33.9	21	28.4
	24	14	19	19	25.7	20	27.1	27	36.6	24	32.5
3/8	16	23	31.2	31	42	33	44.7	44	59.6	38	51.5
	24	26	35.2	35	47.4	37	50.1	49	66.4	43	58.3
7/16	14	37	50.1	49	66.4	50	67.8	70	94.7	61	82.7
	20	41	55.5	55	74.5	60	81.3	80	108.4	68	92.1
1/2	13	57	77.3	75	101.6	80	108.4	110	149	93	126
	20	64	86.7	85	115	90	122	120	162	105	142
9/16	12	80	108.4	110	149	120	162	150	203	130	176
	18	90	122	120	162	130	176	170	230	140	189
5/8	11	110	149	150	203	160	217	210	284	180	244
	18	130	176	170	230	180	244	240	325	200	271
3/4	10	200	271	270	366	280	379	380	515	320	433
	16	220	298	300	406	310	420	420	569	350	474
7/8	9	320	433	430	583	450	610	610	827	510	691
	14	350	474	470	637	500	678	670	908	560	759
1	8	480	650	640	867	680	922	910	1233	770	1044
	12	530	718	710	962	750	1016	990	1342	840	1139
1.125	7	590	800	790	1071	970	1315	1290	1749	1090	1477
	12	670	908	890	1206	1080	1464	1440	1952	1220	1654
1.25	7	840	1138	1120	1518	1360	1844	1820	2467	1530	2074
	12	930	1260	1240	1681	1510	2047	2010	2725	1700	2304
1.5	6	1460	1979	1950	2643	2370	3213	3160	4284	2670	3620
	12	1640	2223	2190	2969	2670	3620	3560	4826	3000	4067

METRIC FASTENER TORQUE CHART

• This chart is to be used as a guide only unless noted elsewhere in this manual •

Size	Class 4.6				Class 8.8				Class 10.9				Class 12.9			
(mm)	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
5	16	1.8	21	2.4	41	4.63	54	6.18	58	6.63	78	8.84	68	7.75	91	10.3
6	19	3.05	36	4.07	69	7.87	93	10.5	100	11.3	132	15	116	13.2	155	17.6
7	45	5.12	60	6.83	116	13.2	155	17.6	167	18.9	223	25.2	1.95	22.1	260	29.4
	LUBED		DRY		LUBED		DRY		LUBED		DRY		LUBED		DRY	
	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs	Nm
8	5.4	7.41	7.2	9.88	14	19.1	18.8	25.5	20.1	27.3	26.9	36.5	23.6	32	31.4	42.6
10	10.8	14.7	14.4	19.6	27.9	37.8	37.2	50.5	39.9	54.1	53.2	72.2	46.7	63.3	62.3	84.4
12	18.9	25.6	25.1	34.1	48.6	66	64.9	88	69.7	94.5	92.2	125	81	110	108	147
14	30.1	40.8	40	54.3	77.4	105	103	140	110	150	147	200	129	175	172	234
16	46.9	63.6	62.5	84.8	125	170	166	226	173	235	230	313	202	274	269	365
18	64.5	87.5	86.2	117	171	233	229	311	238	323	317	430	278	377	371	503
20	91	124	121	165	243	330	325	441	337	458	450	610	394	535	525	713
22	124	169	166	225	331	450	442	600	458	622	612	830	536	727	715	970
24	157	214	210	285	420	570	562	762	583	791	778	1055	682	925	909	1233

* An anti-seize lubricant MUST be used on all stainless steel hardware.

TROUBLESHOOTING

The engine and generator are set at the factory. These units are tested and set to 1800 RPM at 60 HZ for proper operation in the field. These units should never require additional adjustments in the field. Adjustments should only be made by a qualified service technician, otherwise the manufacturer's warranty may become void.

TROUBLE	POSSIBLE CAUSE	REMEDY
1.Boom will not rise to the operating position.	a.Yoke pin is in place	a.Remove yoke pin
	b.Defective cable or pulley	b.Have a trained mechanic examine and repair as needed
	c.Defective winch	c.Have a trained mechanic examine and replace as needed
2.Boom will not telescope.	a.Defective winch	a.Have a trained mechanic examine and replace as needed
	b.Broken cable or pulley	b.Have a trained mechanic examine and replace as needed
	c.Telescope lock pin closed	c.Open telescope lock pin
3.Engine will not turn over	a.Dead battery	a.Check the battery voltage or loose cables
	b.Engine has seized due to loss of fluids	b.Have a trained mechanic examine and repair as needed
4.Engine turns over but will not start	a.Empty fuel tank	a.Fill tank with #2 diesel fuel
	b.Clogged fuel lines or filter	b.Check and clean the fuel system as needed
	c.Leaking fuel lines or a loss of prime	c.Replace any leaking fuel lines and tighten connections
	d.Heater elements burned out	d.Replace heater elements
	e.Fuel line solenoid is not open	e.Replace fuel line solenoid
5.Engine runs rough	a.Clogged or leaking fuel system	a.Replace fuel lines, tighten all connections, inspect the pickup tube and inspect the fuel filter
	b.Clogged exhaust system	b.Clear the exhaust system
	c.Clogged air filter	c.Clear air filter
	d.Clogged or stuck fuel injectors	d.Have a trained mechanic examine
	e.Valve clearances are out of adjustment or the valve spring may be damaged	e.Have a trained mechanic examine
	f.Defective governor or fuel pump	f.Have a trained mechanic examine

TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
6.Engine runs but produces a dense smoke	a.Crankcase oil level is too high	a.Drain oil to its proper level
	b.Low compression	b.Have a trained mechanic inspect for broken or seized rings. Inspect valve clearances
7.Engine overheats	a.Blocked cooling air intakes	a.Inspect the front and rear intakes and clear as needed
	b.Low coolant levels	b.Replace the coolant with a 50% water/coolant solution
	c.Radiator fins have become clogged	c.Clear the radiator fins
	d.Fan belt is loose	d.Tighten fan belt
8.Engine runs but the battery voltage is low	a.Alternator has failed	a.Have a trained mechanic inspect the alternator
9.Engine runs but the lights will not operate	a.Circuit breakers are tripped	a.Reset the circuit breaker
	b.Loose connections in the wiring system	b.Have a trained electrician inspect the ballast box wiring system
	c.Burned out bulb	c.Replace the bulbs as needed
	d.Defective capacitor (Leroy Somers Generator)	d.Have a trained electrician inspect the capacitor
	e.Defective AC generator	e.Have a trained electrician inspect the generator
	f.Engine speed is too low	f.Have a trained mechanic inspect the engine speed and reset to 1800rpm @ 60hz
	g.Defective ballast and capacitors	g.Have a trained electrician inspect the ballast and capacitors
10.Unusual noise coming from the generator	a.The generator has a defective bearing or damaged fan blade	a.Have a trained electrician inspect the generator
11.Lamp will not start	a.Lamp loose in socket	a.Inspect lamp base to see if there is arcing at center contact button. Tighten lamp. Check socket for damage. Replace if needed.
	b.Floodlight plugs not tight	b.Check plug and receptacle. Tighten if needed. Make sure power is off.
	c.Defective ballast	c.Interchange ballast plugs. If lamp starts, replace ballast. Check for swollen capacitors, charred wiring, core and coil, or other signs of excessive heat.
	d.Low voltage	d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load. Increase supply voltage or remove external load.

TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
11.Lamp will not start	e.Improper ballast	e.The ballast name plate data should agree with the line voltage and lamp used. If not, replace the ballast.
	f.Lamp has been operating; cool down time insufficient	f.Switch off breaker and allow lamp to cool.
12.Lamp starts slowly (arc does not strike when switch is first turned on	a.Defective lamp	a.Lamp may glow for an extended period of time. Replace after checking voltage and ballast
13.Circuit breaker trips on lamp startup	a.Short circuit or ground	a.Check wiring against diagram. inspect for shorts or ground. Fix as needed.
14.Lamp light output low	a.Normal lamp depreciation	a.Replace lamp
	b.Dirty lamp or fixture	b.Clean lamp and fixture
	c.Defective ballast	c.Interchange ballast plugs. If lamp starts, replace ballast. Check for swollen capacitors, charred wiring, core and coil, or other signs of excessive heat.
	d.Wrong voltage	d.Check line voltage at ballast input. Voltage should be within 10% of rating when operating at normal load. Check wiring connections for voltage loss. Check socket contact point.
	e.Improper ballast	e.Check ballast name plate against lamp data
15.Lamp colors different	a.Normal lamp depreciation	a.Replace lamp
	b.Dirty lamp or fixture	b.Clean lamp and fixture
	c.Wrong lamp	c.Check data on lamps and replace as needed.
16.Arc tube discolored or swollen	a.Over voltage from power supply	a.Check voltage at ballast, for current or voltage surges, for shorted capacitors and replace as needed
	b.Improper ballast	b.Check ballast name plate against lamp data
17.Short lamp life	a.Lamp damaged	a.Check for outer bulb cracks, cracks where lamp meets base, and for broken arc tube or loose metal parts. Replace as needed.
	b.Improper ballast	b.Check ballast name plate against lamp data
18.Lamp flickers or goes out-intermittent or cycling	a.Improper Ballast	a.Check ballast name plate against lamp data
	b.New lamp	b.Under certain conditions new lamps may "cycle". Usually after 3 tries to start at 30 to 60 second intervals, lamp will stabilize and operate normal

TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
18.Lamp flickers or goes out-intermittent or cycling	c.Defective lamp	c.Replace lamp
	d.High spike ballast	d.Ballast produces high spike current. Measure with oscilloscope. Replace ballast as required.

⚠WARNING **IF YOU FEEL AN ELECTRIC SHOCK AT ANY TIME WHILE OPERATING THIS UNIT, SHUT IT DOWN IMMEDIATELY! HAVE THE UNIT INSPECTED BY A TRAINED ELECTRICIAN.**

LIGHT FIXTURE TROUBLESHOOTING

⚠ DANGER **DO NOT OPEN FIXTURES WHILE LIGHT CIRCUIT BREAKER IS "ON". ALLOW LAMP TO COOL BEFORE TOUCHING.**

TAKE EXTRA PRECAUTIONS WHEN TROUBLESHOOTING ELECTRICAL PROBLEMS

A. Only use a voltmeter with two well-insulated pin probes rated for 600 volts.

B. Treat all conductors as potentially hot.

C. Proceed through circuits systematically, operating only one section at a time.

D. Before disconnecting ballast, turn off circuit breaker and wait 30 seconds for capacitor to discharge.

E. If all the lights are out and all the ballasts are receiving power, suspect burned out power cable.

LIGHT FIXTURE TROUBLESHOOTING

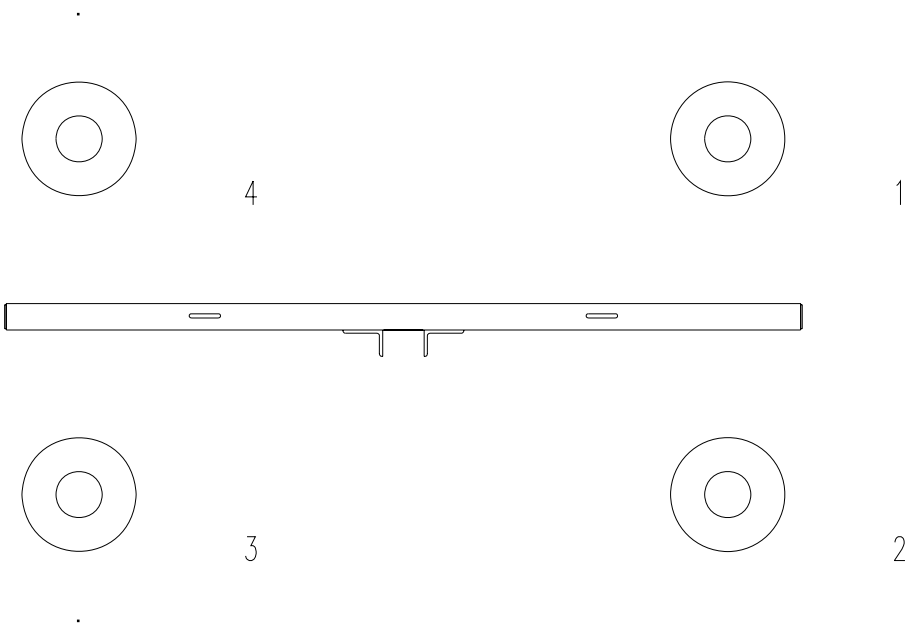
TRACEABLE NUMBERED WIRING SYSTEM (Using plug-in ballasts to troubleshoot)

When troubleshooting the preceeding problems, minimize down time by following the traceable numbered wiring system, always follow these steps:

STEP1: Ensure all ballasts, which are numbered, are plugged into lead wires with corresponding numbers.

STEP 2: Looking at the lights from the glass side and following the diagram below, plug each fixture into the appropriately numbered plug at the top of the tower.

By adhering to the traceable numbered wiring system, troubleshooting, fixture aiming, and fixture control will follow a standard predictable pattern.



WARRANTY

WARRANTY PROCEDURE

The specific language of this warranty will determine TEREX LIGHT CONSTRUCTION's obligation in connection with its product. The information presented below should be used as a general guide for implementation of policy. In the event of a component failure during the warranty period it should be repaired as soon as possible, preferably at an authorized TEREX LIGHT CONSTRUCTION service center. If component is manufactured by a company other than TEREX LIGHT CONSTRUCTION, such as Deutz, Honda, Isuzu, Kubota, Leroy Somer, Lister Petter, Lombardini, Wisconsin, etc., the applicant should pursue repair and/or reimbursement through that manufacturer, and its dealer/distributor network.

To file a claim with TEREX LIGHT CONSTRUCTION, an APPLICATION FOR WARRANTY ADJUSTMENT (AWA) form must be completed in it's entirety. Return the completed form within fourteen days of the repair to:

ATTENTION: WARRANTY
TEREX LIGHT CONSTRUCTION
590 Huey Road
Rock Hill Industrial Park
Rock Hill, SC 29730

TEREX LIGHT CONSTRUCTION will review the AWA form. Should we desire to inspect the defective parts, we will issue you a return authorization for the defective parts. After inspecting the defective part(s), and it is determined that warranty is due, we will then, at the discretion of TEREX LIGHT CONSTRUCTION , credit the applicants account or send replacement parts.

TEREX LIGHT CONSTRUCTION warranty reimbursements:

1. $40.00 for each hour's labor we allow toward a repair.
2. Distributors cost of parts not more than the price currently available from TEREX LIGHT CONSTRUCTION.
3. One way surface freight charges on parts returned to TEREX LIGHT CONSTRUCTION.

Many repairs are assigned a predetermined labor schedule which is an average time in which a skilled technician should be able to make a repair. TEREX LIGHT CONSTRUCTION will reimburse not to exceed the predetermined number of hours for a particular repair.

TEREX LIGHT CONSTRUCTION does not reimburse for:

1. Travel, travel time, nor travel labor.
2. Mileage.
3. Excessive diagnostic time.
4. Repairs of defects, malfunctions, or failures resulting from accidents, abuse, misuse, modifications, alterations, improper servicing or lack of performance of required maintenance service.
5. Repairs where defective parts were not shipped back when requested by TEREX LIGHT CONSTRUCTION.
6. Regular maintenance such as parts or labor for oil changes, filter changes or filters.
7. Repairs where defective parts were not received by TEREX LIGHT CONSTRUCTION after TEREX LIGHT CONSTRUCTION issued a return authorization.

TEREX Light Construction
P.O.Box 3147• Rock Hill, S.C. 29731 USA • Phone 803-324-3011 • Fax 803-366-1101

TEREX

WARRANTY

TEREX LIGHT CONSTRUCTION
P.O. Box 3147
Rock Hill, S.C. 29732

MANUFACTURER'S LIMITED WARRANTY

TEREX LIGHT CONSTRUCTION ("TLC") warrants to the original purchaser that such equipment, accessories, parts and other products manufactured by TLC will be free from defects in workmanship and material for a period of one (1) year after the date of first delivery or for two thousand (2,000) hours of use, whichever comes first; provided that Buyer sends TLC notice of such defect within thirty (30) days of its discovery. Should defects be discovered, the Buyer must clearly establish that (I) the equipment, parts, etc. have been properly installed and set up, maintained and operated within the limits of rated and normal usage and (II) the defect did not result in any manner from the intentional or negligent action or inaction of Buyer. Buyer must also return the defective item or items to TLC, Rock Hill, SC for inspection at TLC's request. If Buyer cannot establish that conditions (I) and (II) have been met, then this warranty shall not cover the alleged defect. Failure to give notice of defect within such period shall be a waiver of this Warranty and any assistance rendered thereafter shall not extend or revive it. THIS WARRANTY IS LIMITED TO THE BUYER AND IS NOT ASSIGNABLE OR OTHERWISE TRANSFERABLE.

TLC MAKES NO WARRANTY WITH RESPECT TO PARTS, COMPONENTS, EQUIPMENT AND ACCESSORIES NOT MANUFACTURED BY TLC SUCH AS FIXTURES, BALLASTS, ENGINES, HYDRAULIC PUMPS, FUEL PUMPS, ALTERNATORS, GENERATORS, WINCHES, TIRES AND ELECTRICAL COMPONENTS. Accessories, assemblies and components included in products of TLC, which are not manufactured by TLC, are subject only to the warranty of their respective manufacturers. TLC makes no other warranty, express or implied, and makes no warranty of merchantability or fitness for any particular purpose. This warranty shall not cover misuse, alteration, abuse, negligence, accident, acts of God, sabotage or any item in which serial numbers have been altered, defaced or removed, but shall be limited to repair or replacement of those parts which, upon inspection by TLC, appear to have been defective in material or workmanship.

TLC's liability and Buyer's sole and exclusive remedy for a failure of goods to perform as warranted and/or for any and all other claims arising out of the purchase and use of the goods, including negligence on the part of TLC, shall be limited to the repair or replacement of defective parts returned, transportation prepaid to TLC. TLC shall in no event be liable for incidental or consequential or other damages or losses resulting from a breach of warranty such as, but not by way of limitation, labor costs, loss of profits, loss of use of other than equipment, third party repairs, personal injury, emotional or mental distress, improper performance of work, penalties of any kind, loss of service of personnel, or any other damages or losses which may be experienced by the Buyer.

A product warranty certificate must be filled out in its entirety and returned to TLC in order to process any warranty claims submitted.

THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS OF ANY PRODUCT OR GOODS FOR A PARTICULAR PURPOSE) AND ALL OTHER OBLIGATIONS OR LIABILITIES ON TLC'S PART, AND TLC NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR TLC ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF TLC'S PRODUCTS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

SERIAL NUMBER RECORD

TEREX LIGHT CONSTRUCTION

PORTABLE LIGHT TOWER
OPERATION AND SERVICE MANUAL

This Operation and Service Manual contains information pertaining to the operation and maintenance of your Terex Light Tower. We suggest that you read this manual carefully prior to operating the tower. This manual should be retained and referred to for operation, maintenance, and ordering parts. When ordering parts, PLEASE INCLUDE THE MODEL AND SERIAL NUMBER located on the nameplate of the tower.

For major repair and service or other information, contact your local Terex dealer or write to:

Terex Light Construction
P.O. Box 3147
590 Huey Road
Rock Hill, SC 29730
Telephone: (803) 324-3011
FAX: (803) 366-1101

When returning parts for credit please contact the factory for Return of Goods Authorization.

Terex Model Number _____ Serial Number _____

Engine Model Number _____ Serial Number _____

Generator Model Number _____ Serial Number _____

Sold to: _____ Ship to: _____

_____ _____

_____ _____

Options: _____ Production Date: _____

_____ Work Order Number _____

_____ Shipping Date _____

_____ In Service Date _____

_____

_____

When this unit left the factory the engine was filled with engine oil grade _____

MODEL NUMBER IDENTIFICATION

IMPORTANT

WHEN REQUESTING TECHNICAL HELP AND ORDERING REPLACEMENT PARTS THE MODEL AND SERIAL NUMBER ARE NECESSARY.

REFER TO THE TEREX SERIAL NUMBER TAG ON THE UNIT FOR CORRECT MODEL NUMBER AND SERIAL NUMBER.

MODEL NUMBER IDENTIFICATION

Sample:

Light Tower Product Line **AL4 060 D 2 4 MH**
MH CE

Tower Series

AL4000 (AL4) = 30 Foot Basic Tower with winch in cabinet

AL5000 (AL5) = 30 Foot Basic Tow er with in-cabinet light storage and door insulation

LT7000 (LT7) = 30 Foot Deluxe Hydraulic Tower w/optional Acoustic Enclosure and Complete Instrumentation

kW Rating
(060 is 6.0 kW)

Diesel (D)

2nd Generation

Number of Lights

Type of Lights
HPS = High Pressure Sodium
MH = Metal Halide
TH = Tungsten Halogen

RECOMENDED ENGINE OIL & FUEL

KUBOTA D1105 DIESEL ENGINE

Engine oil should be MIL-L-2104C or have properties of API classification of CD grades or higher. Change the type of engine oil according to the ambient operating temperature:

Above 77°F (25°C)	SAE 30
32°F to 77°F (0 to 25°C)	SAE 20
Below 32°F (0°)	SAE 10W SAE 10W-30

****Use #2 diesel fuel.****

NOTES:

1. The temperatures in the table are the ambient temperatures at the time when the engine is started. If the running ambient temperatures are much higher than the starting temperatures, a compromise must be struck and a higher viscosity oil used. Multi-grade oils overcome the problem, provided they possess a suitable specification.

2. MIL-L-2104B or MIL-L-2104C or API CD must also be used if the sulfur content of the fuel exceeds 0.5%.

3. Always use a reputable brand of diesel fuel. The sulfur content should be below 0.5% (higher sulfur content would require more frequent oil changes). Observe strict cleanliness when filling the fuel tank.

4. Check the engine oil level before starting the engine or more than five minutes after it has been stopped. Remove the dipstick, wipe clean, reinsert it, take it out again, and check the oil level. If the oil level is too low, remove the oil filler cap and add new oil until the FULL line on the dipstick is reached.

WIRE ROPE REPLACEMENT

CRITERIA FOR REPLACEMENT OF WIRE ROPE – TEREX LIGHT TOWERS

The wire ropes used to raise and lower the masts on a TEREX Light Tower are probably some of the most important mechanical parts used in day-to-day operation of the machinery. It is therefore very important that the cables be inspected on a frequent basis (once a month) for wear and tear, and immediately in the event of possible damage due to operator error in using the winch, or possible damage from other equipment.

NORMAL WEAR AND TEAR

When used properly, the wire ropes should give years of trouble-free service, depending on how often the masts are raised and lowered. The rule of thumb at TEREX is that if the tower is **raised and lowered an average of once per day**, that the cables **should be replaced every two years of service**.

NORMAL INSPECTION

The wire ropes are constructed of 7 strands of 19 plow steel wires each twisted together, and then the assembly galvanized to resist corrosion. Using a wadded-up cloth or heavy leather gloves (to avoid being pricked by a broken wire), run a hand up and down a length of the cable. If any exterior wires are broken, they will lift up from main body of the cable and become visible. For any given 1 foot of cable length; if there are 4 or more wires each, on any 2 or more strands broken, the suspect rope **should be replaced immediately**.

DAMAGE INSPECTION

If any nicks (partial strand cut through), kinks (permanent bends), or weld spatter on the cable (from field service) are observed, the suspect wire rope **should be changed immediately.** If there is a crushed spot somewhere on the wire rope, it should be **replaced only** if the width of the crushed spot exceeds 1-1/4 times the nominal diameter of the cable (5/16” on a 1/4” cable, and 7/32” on a 3/16” cable), or if there are broken wires at the point of damage.

WIRE ROPE REPLACEMENT

BROKEN CABLE REPLACEMENT PROCEDURE

1. PREPARATION

1.1 Collapse tower to where mast is retracted, then pivot tower to horizontal position.
1.2 Remove the tower from the trailer and place it on a work surface such as two saw horses.

2. REMOVING TOP CABLE AND TOP MAST SECTION

2.1 Tie middle section and large section together by wrapping band, cable, chain, or rope around the sheave brackets on these two sections. This insures that the middle section stays inside the large section during removal of the small section.
2.2 Remove or lock the telescope lock pin open. This is the pin that locks the three sections together during travel.
2.3 Drill out the aluminum pop rivets holding the plastic guides at the top of the middle section. Using a screwdriver, remove these guides.
2.4 Remove the clevis pin anchoring the cable to the top of the middle section and remove the clevis pin and the sheave from the middle section.
2.5 Pass the free end of the cable through the sheave slot between the middle and small section, and out of the top of the tower. Pull the cable and the small section completely out of the middle section together. Be sure to keep the cable tight; if slack accumulates it is most difficult to remove.
2.6 Unfasten the cable by removing the bolt at the base of the small section.

3. REINSTALLING THE SMALL SECTION

3.1 Fasten new cable to the base of the small section.
3.2 Reversing the procedure described in steps 2.1 through 2.5, reinstall the small section.
3.3 Reinstall the plastic guides with new pop rivets. New plastic guides should be used, but the old guides can be used if their mounting position is shifted to the point where new holes can be drilled in the tower section to provide a good fit when installing new pop rivets.

4. REMOVING THE LOWER CABLE AND MIDDLE TOWER SECTION

4.1 Remove or lock open the telescope lock pin if not previously done in step 2.2.
4.2 Drill out the aluminum pop rivets holding the plastic guides at the top of the large section. Using a screwdriver, remove these guides.
4.3 Remove the cable from winch drum.
4.4 Remove the sheave clevis pin and the sheave from the top of the large section.
4.5 If the old cable is not frayed between the winch and the bottom mast pulley, attach a flexible “fish wire” or “snake” (wire, rope cord, etc.) to the end of the cable to be used to thread the new cable through the lower tower and pulleys. This can be done by “untwisting” the cable and inserting the wire or cord into the middle of the cable and thus letting the cable twist back tightly around the fish wire. If the old cable is frayed, cut off the frayed portion and proceed as above and then remove tower and cable as instructed in section 4.6.

4.6 Pass the free end of the cable through the sheave slot between the large and middle sections and out of the top of the tower. Pull the cable and the middle section completely out of the large section altogether. Be sure to keep the cable tight, if slack accumulates it is most difficult to remove.

4.7 If the fish wire doesn't work, it is necessary to remove the square mast section from the round mast section. Remove the pivot pin from the pivot post and lift the mast from the pivot post and place the assembly on a work surface. Remove the hex nut from the bottom of the round section, remove the "T" bolt at the top of the round section, and pull the square mast assembly out of the round section, and proceed as instructed in section 4.6.

4.8 Unfasten the cable by removing the bolt at the base of the middle section.

5. REINSTALLING THE LOWER CABLE AND MIDDLE SECTION

5.1 If the "fish wire" worked, attach the cable to the fish wire and pull through the pulleys and the round section.

5.2 If the square tower section was removed from the round section, thread the cable through the pulleys at the bottom of the large section and out of the tubular stud. Reinstall the large square section into the round section. Install the "T" locking bolt, and the hex nut on the bottom of the round section. The hex-locking nut should be tightened and then backed off approximately one-half turn or until the tower rotates freely.

5.3 Fasten the new cable to the base of the middle section.

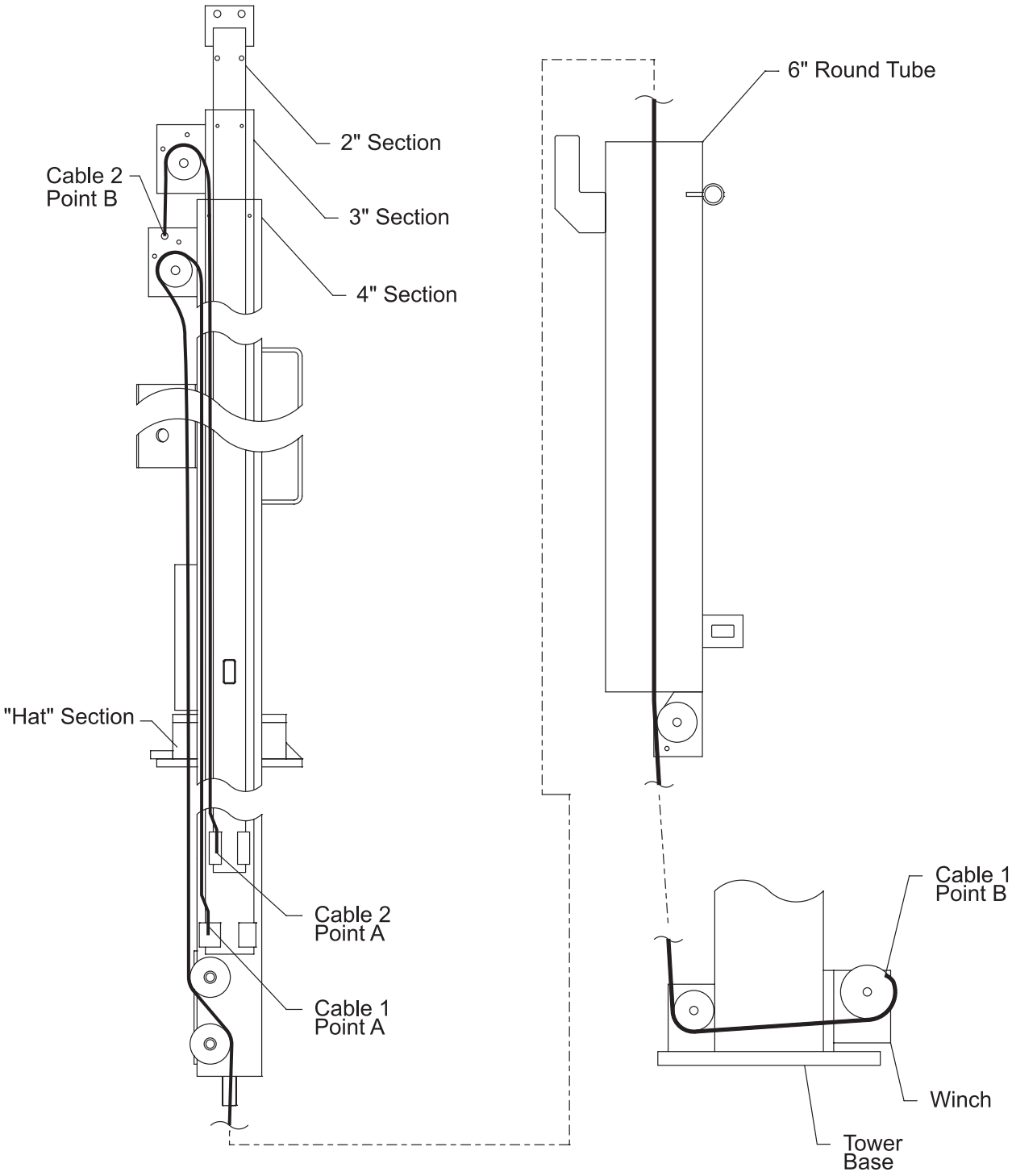
5.4 Reversing the procedures detailed in sections 4.4 through 4.7, reinstall the middle section.

5.5 Fasten the new cable to the winch drum.

5.6 Reinstall the plastic shims as described in section 3.3.

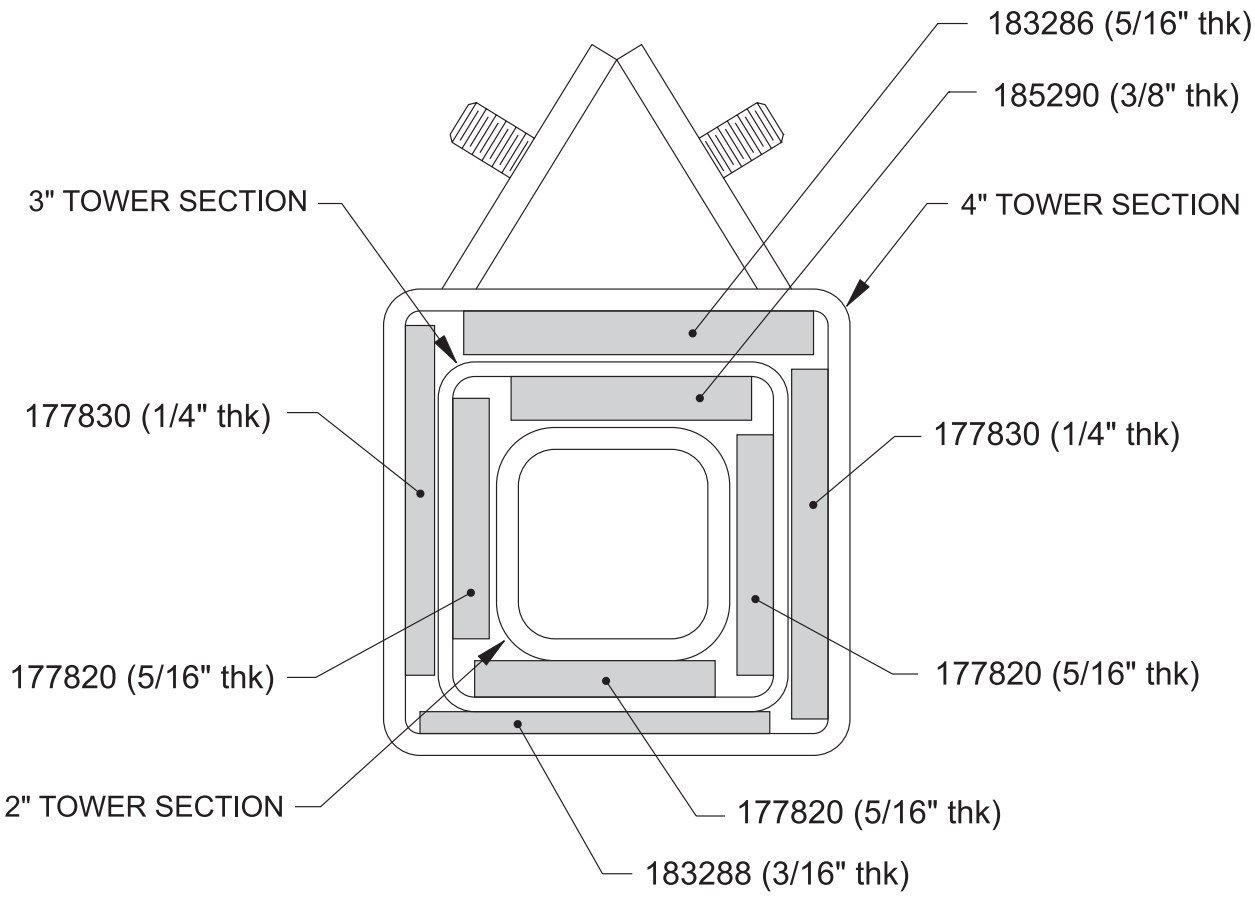
WIRE ROPE REPLACEMENT

Cable Replacement Diagram



WIRE ROPE REPLACEMENT

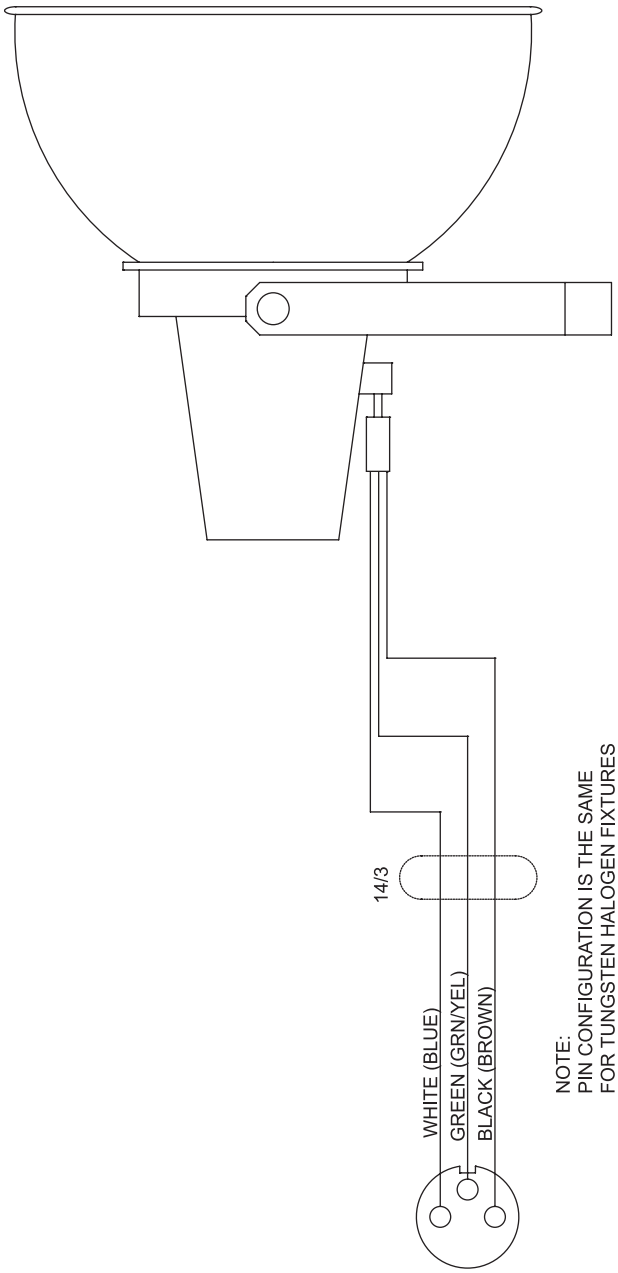
Tower Shim Placement



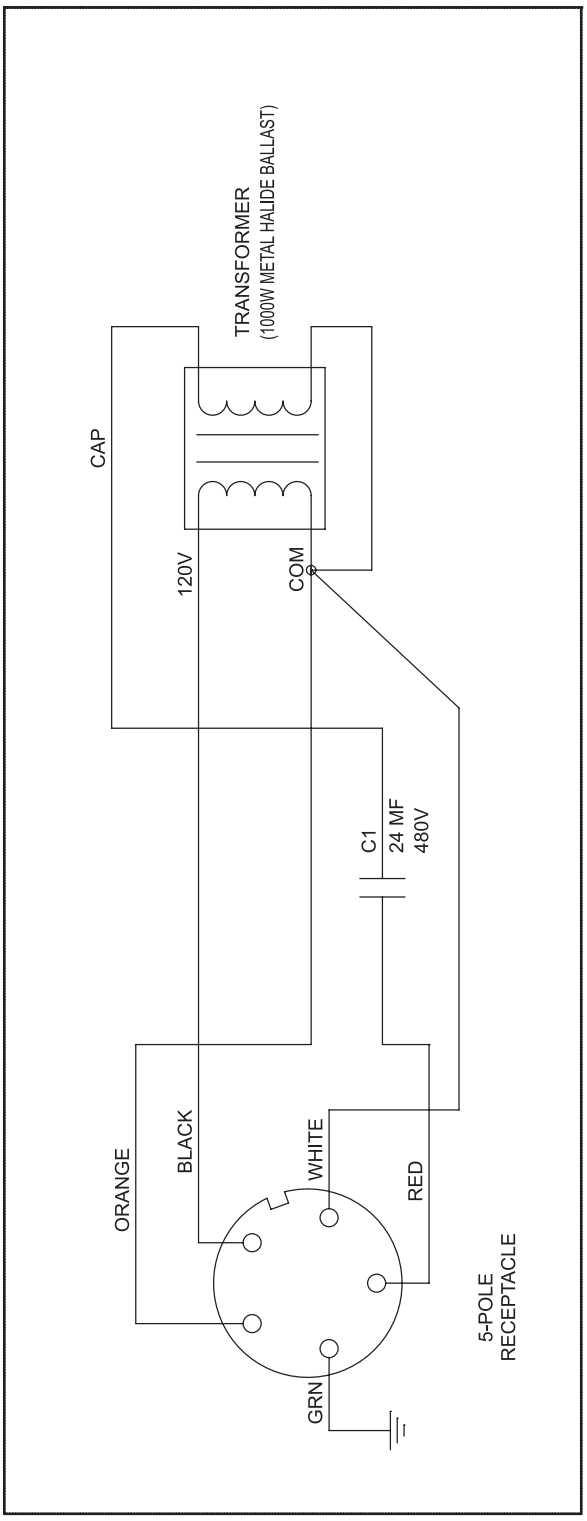
SHIM PLACEMENT(as viewed from crossarm end)

Wiring Diagrams Section

Fixture Wiring Diagram

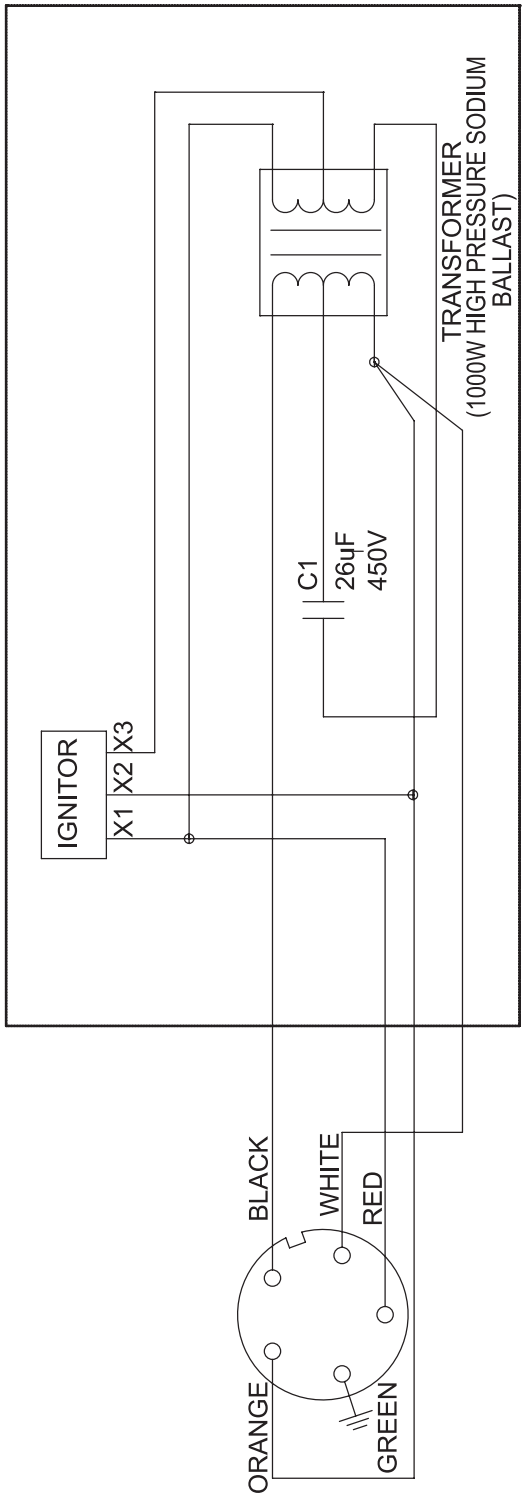


1000MH Ballast Diagram



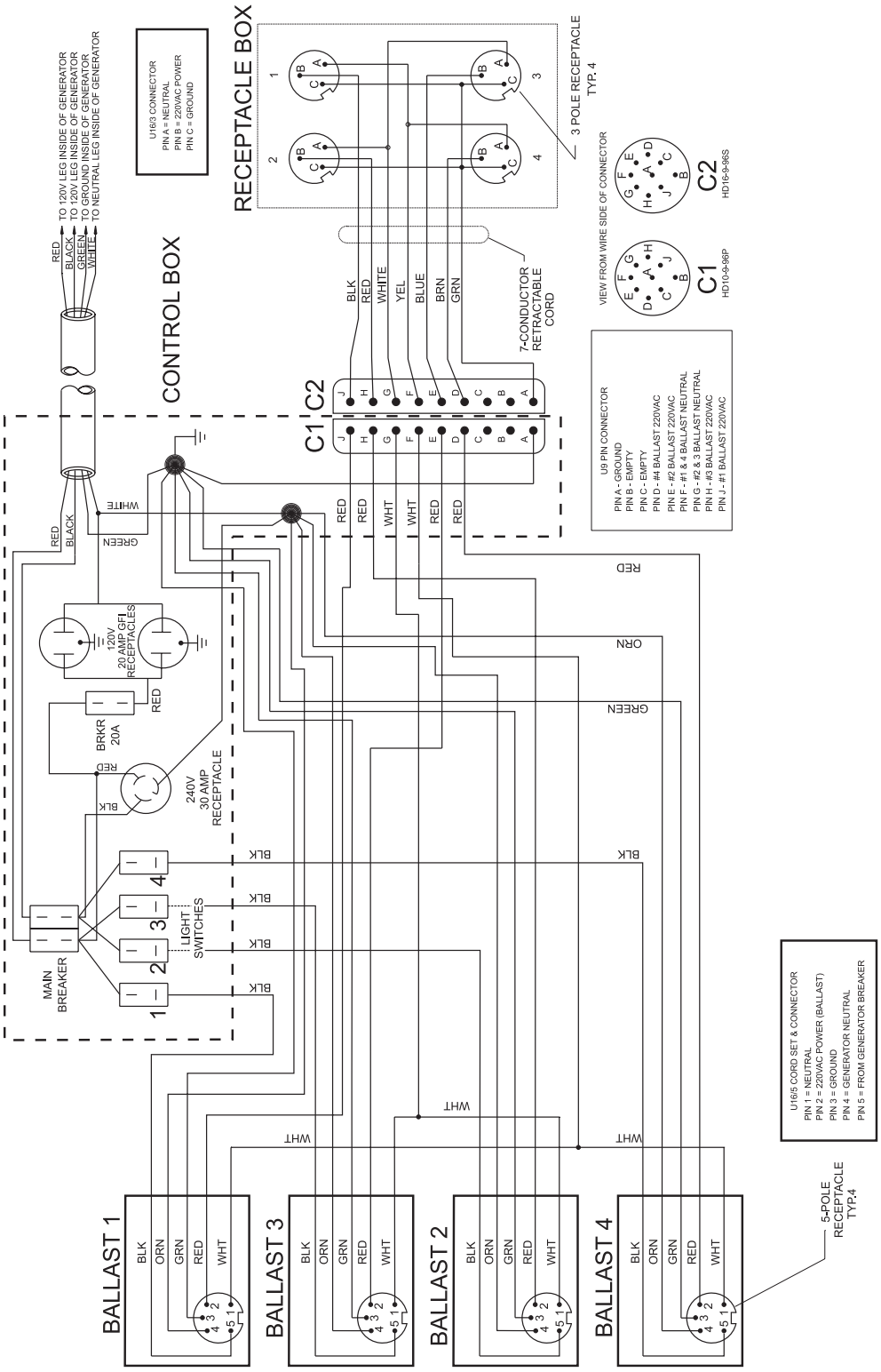
COLOR	CIRCUIT
BLACK	INPUT 120V
WHITE	INPUT COMMON
RED	LAMP HOT
ORANGE	LAMP COMMON
GREEN	GROUND

1000HPS Ballast Diagram

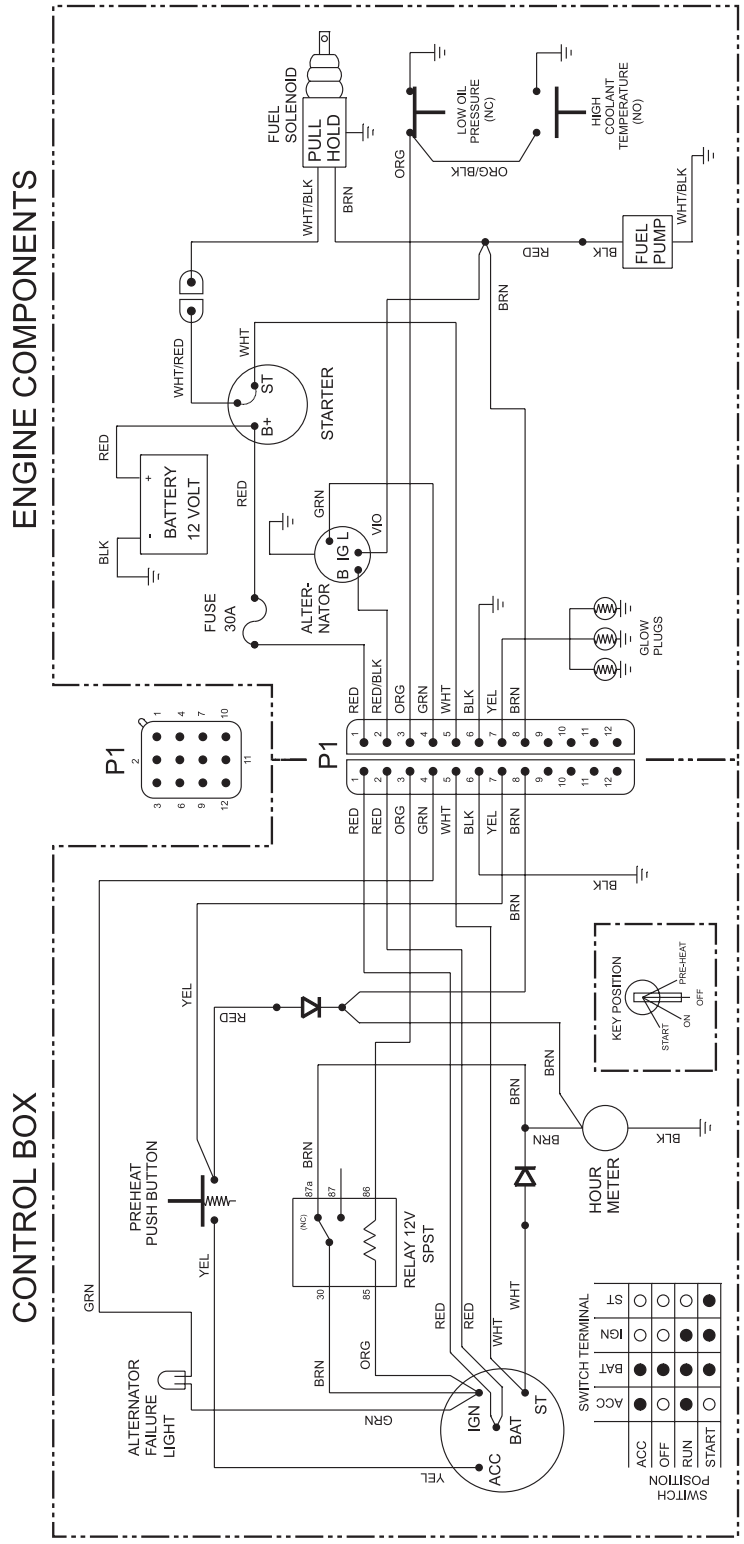


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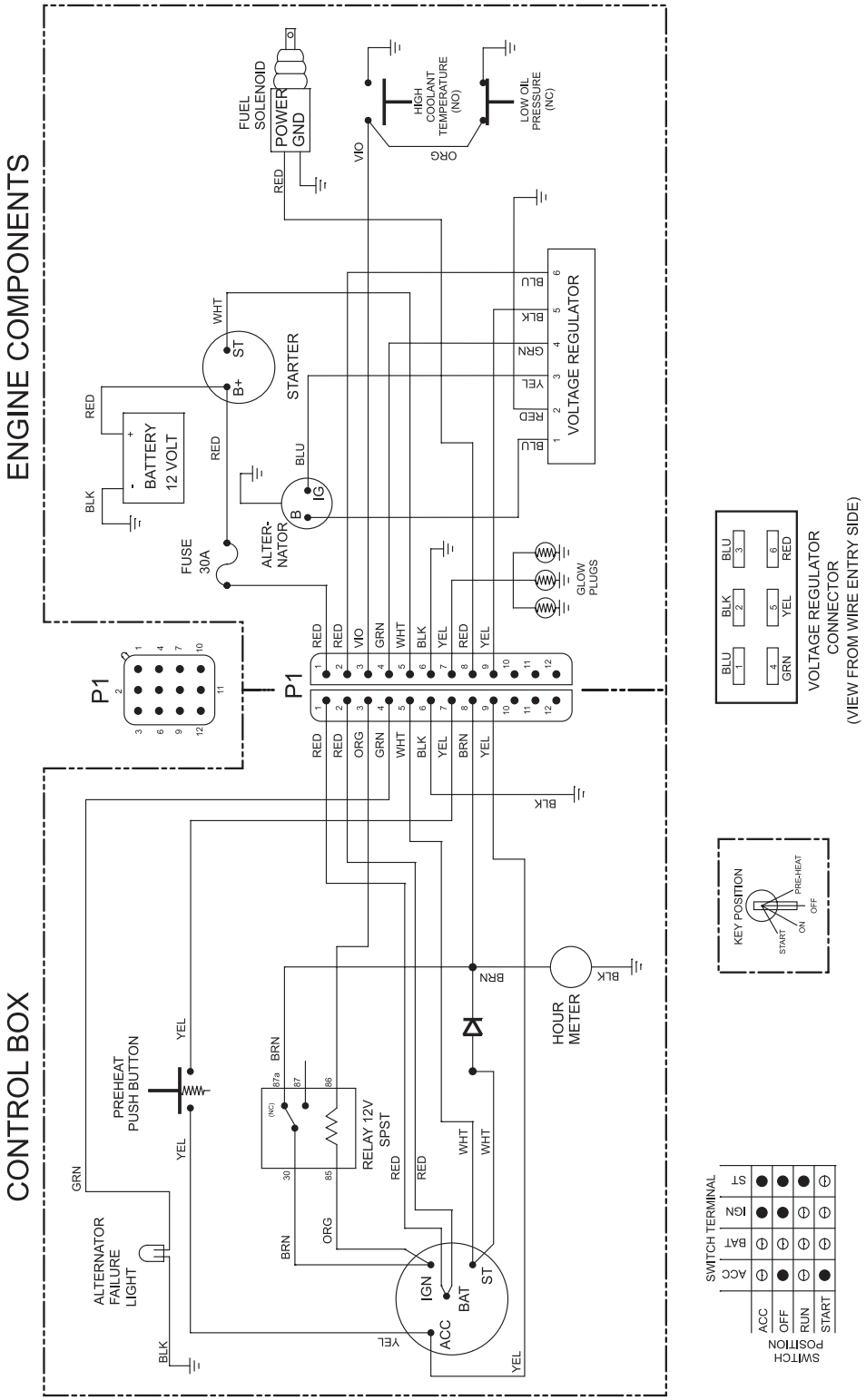
AC Wiring For A Light Tower Diagram



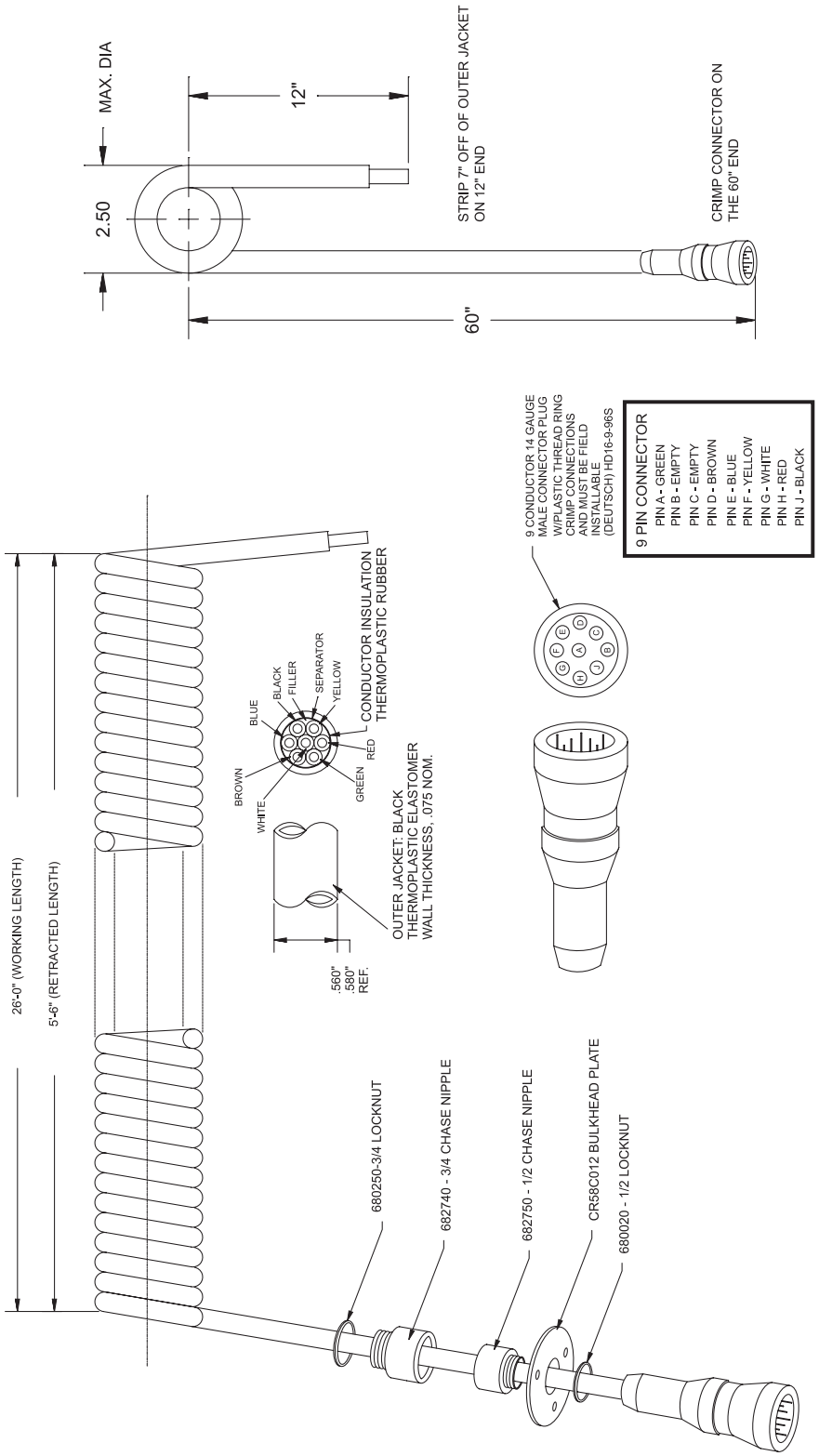
DC Engine Wiring Diagram



AC Light Tower Wiring Diagram - Perkins



Consolidated Coil Cord With Plug End



Parts Catalog Section

GENERAL INFORMATION-PARTS MANUAL

INTRODUCTION

This manual contains parts ordering information for the Terex AL 4000 light tower.

IDENTIFICATION of PARTS

All parts are identified with a part number and brief description. If there are multiple quantities of the part required, the quantity required will be shown along with part number and description. If no quantity is given it is assumed that there is only one part required.

NOTES and DESIGNATIONS

This manual is compiled from information available and current at time of approval for printing. Terex reserves the right to improve its product without notice to follow its policy of constantly striving to manufacture a better product.

ILLUSTRATIONS

The illustrations in this manual are intended to show typical construction of the various parts. In some instances the shapes or details of the parts illustrated may not exactly represent their actual appearance. However, they will serve to show the servicing methods explained or help to identify parts performing the same function.

PARTS ORDERING INFORMATION

IMPORTANT

When a part fails and needs to be replaced, only use equivalent parts of equal performance and strength.

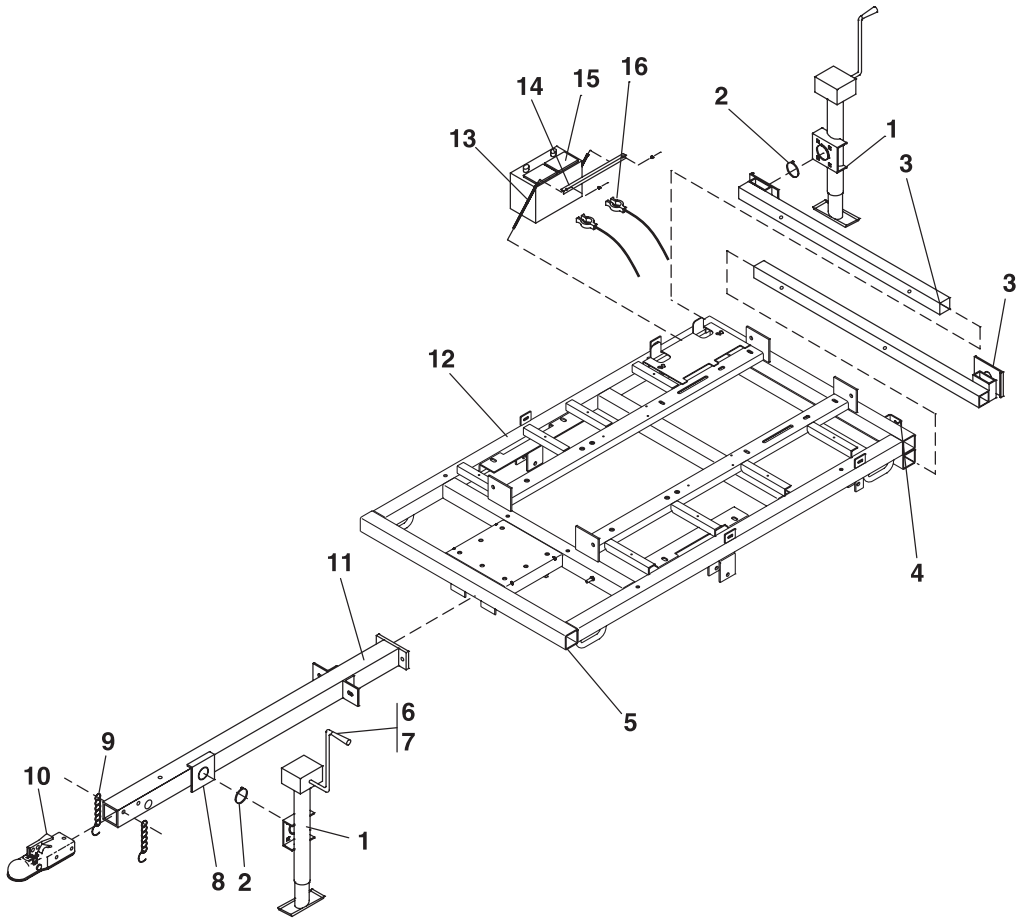
Contact your local Terex dealer for parts and service.

When ordering parts for a specific unit, follow the instructions listed below. By doing so, you will be assured of receiving the correct part in the shortest period of time.

1. Send your order to the nearest Terex distributor in your area.
2. Give the light tower model and serial number.
3. Write the quantity required, part number, and description of the parts wanted.
4. Give the specific shipping instructions, to whom and where parts are to be shipped, also whether shipment is to go parcel post, express freight, or truck, prepaid or collect. We want your order to reach you as quickly and as economically as possible.
5. Confirm all telephone orders in writing via main or fax confirmation.

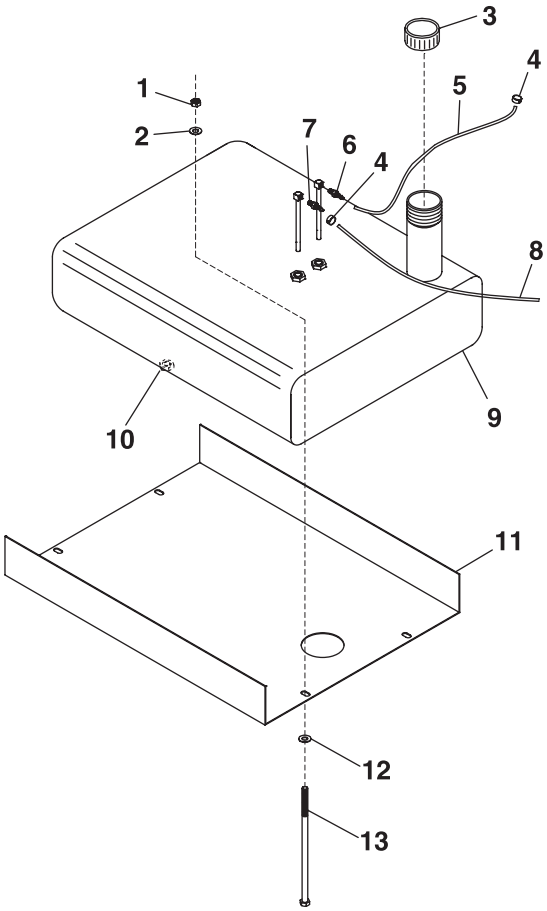
PART NUMBERS AND PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

TRAILER FRAME/TONGUE/OUTRIGGERS



ITEM #	PART #	DESCRIPTION	QTY.
1	841430	JACK SIDEWIND LONG 3KLB	3
2	840222	JACK SNAP RING	3
3	114480	OUTRIGGER 2X2X42	2
4	109150	KIT: OUTRIGGER PLUNGER PIN KIT	2
5	721051	CAPLUG,TUBE PLUG 2 1/2	4
6	834219	HANDLE (ARM)FOR JACK, HAMMERBLOW	3
7	834204	HANDLE (ARM)FOR JACK, FULTON	3
8	840221	JACK BRACKET SWIVEL	1
9	111936	CHAIN SAFETY 3000LB 3/8X30 W/"S"-HOOK	2
10	840120	COUPLER 2" BOLT ON	1
11	124470	TONGUE WITH JACK BRACKET	1
12	124410	TRAILER FRAME 41X70 WITHOUT AXLE	1
13	182330	BATTERY HOLD DOWN ROD	2
14	174170	BATTERY HOLD DOWN ANGLE	1
15	160110	BATTERY WET 12V GR24 525 CCA STD-DUTY LEAD ACID	1
16	160270	BATTERY CABLE SET	1

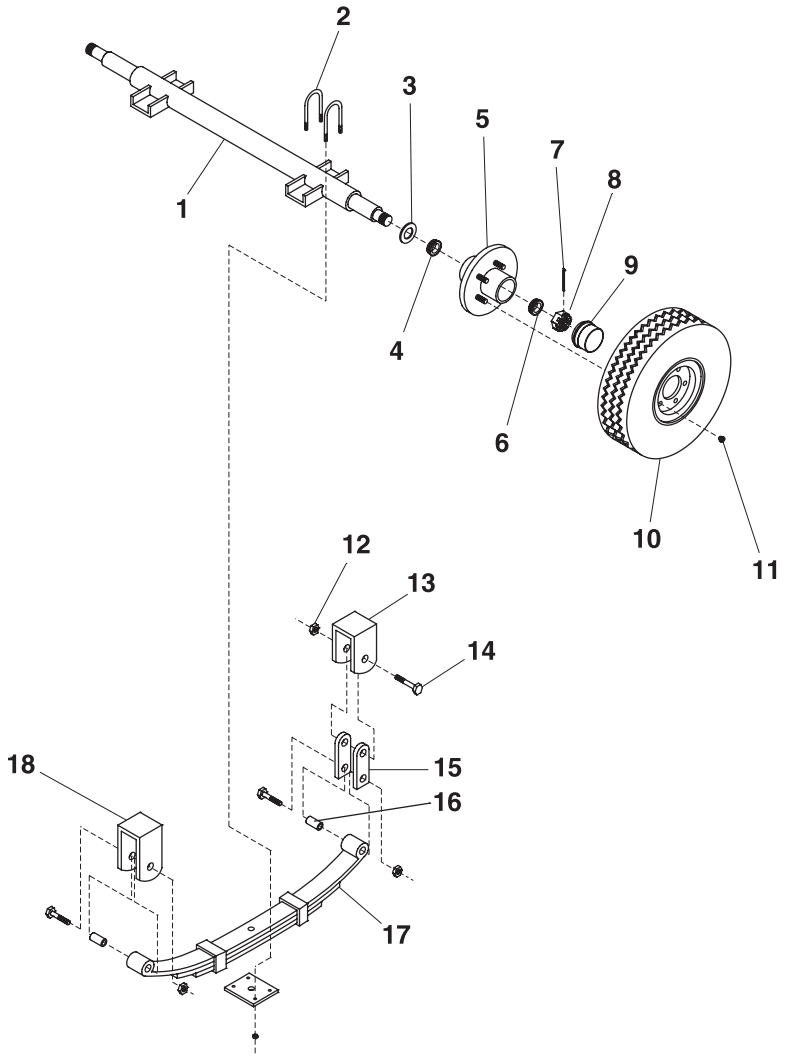
FUEL TANK

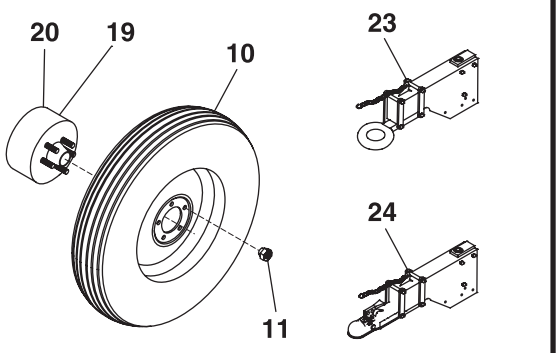


ITEM #	PART #	DESCRIPTION	QTY.
1	990200	NUT LOCK NYLON INSERT 1/2-13NC GR 2	4
2	990210	WASHER FLAT 1/2	8
3	742240-1	TANK CAP NO-GAUGE	1
4	792750	CLAMP 7/16 TO 25/32	2
5	890795	HOSE,FUEL 5/16 ID	AR
6	898590	HOSE FITTING,PIPE/BARB	1
7	891560	HOSE FITTING,PIPE/BARB	1
8	890785	HOSE,FUEL 1/8 ID	AR
9	742220	TANK FUEL 30GAL	1
10	109505	KIT: FUEL TANK DRAIN PLUG REPLACEMENT	1
11	188630	FUEL TANK PAN	1
12	990210	WASHER FLAT 1/2	8
13	994650	SCREW,1/2-13NCX10 HHC GRADE2	4

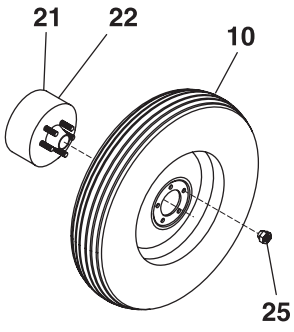
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AXLE ASSEMBLY





Hydraulic Surge Brake Option

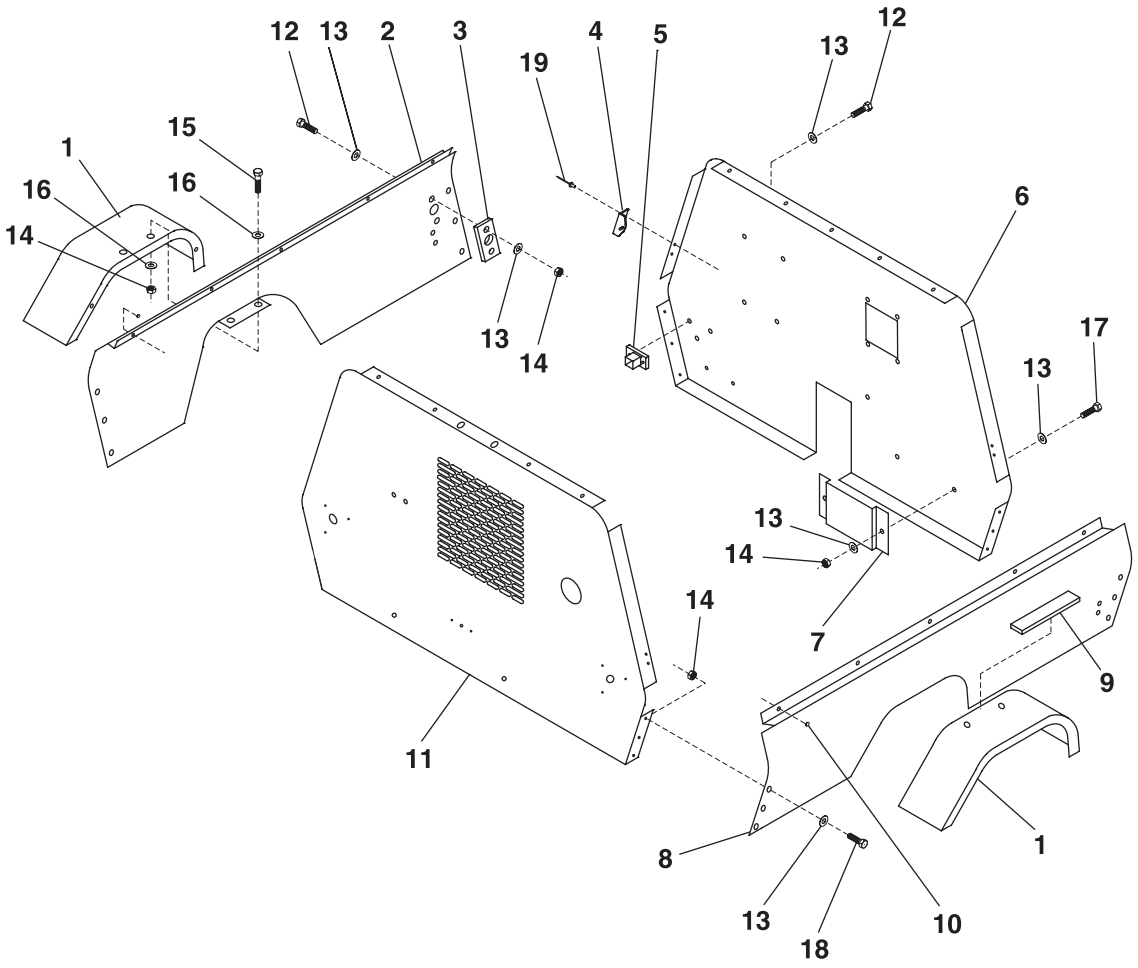


Electric Brake Option

ITEM #	PART #	DESCRIPTION	QTY.
1	841050	AXLE 3500LB 38.5 SPRING CENTER	1
2	834267	U-BOLT KIT - 3500#	2
3	834229	SEAL, HYDRAULIC	2
4	834226	INNER BEARING	2
5	834220	HUB ASSY HT1000 3500LB	2
6	834227	OUTER BEARING	2
7	834225	SEAL,GREASE	2
8	834250	SPINDLE NUT	2
9	834228	GREASE CAP	2
10	841060	TIRE & WHEEL MOUNTED P205/75-15 LOAD B2	2
11	840376	AXLE WHEEL NUT	10
12	840395	AXLE SPRING NUT	6
13	840392	AXLE REAR HANGER	2
14	840394	AXLE SPRING BOLT	6
15	841473	AXLE SHACKLE	2
16	834246	SPRING EYE BUSHING	4
17	834211	SPRING FOR AXLE 4-LEAF	2
18	841051	AXLE FRONT HANGER	2
19	841855	AXLE HUB,HYD. & PARK BRAKE,L/H	1
20	841860	AXLE HUB,HYD. & PARK BRAKE,R/H	1
21	841870	AXLE HUB,ELECTRIC&PARK BRAKE,LH	1
22	841875	AXLE HUB,ELECTRIC&PARK BRAKE,RH	1
23	841220	COUPLER,SURGE 3"RING	1
24	841500	COUPLER,SURGE,2"BALL	1
25	840396	AXLE WHEEL NUT	10

TEREX

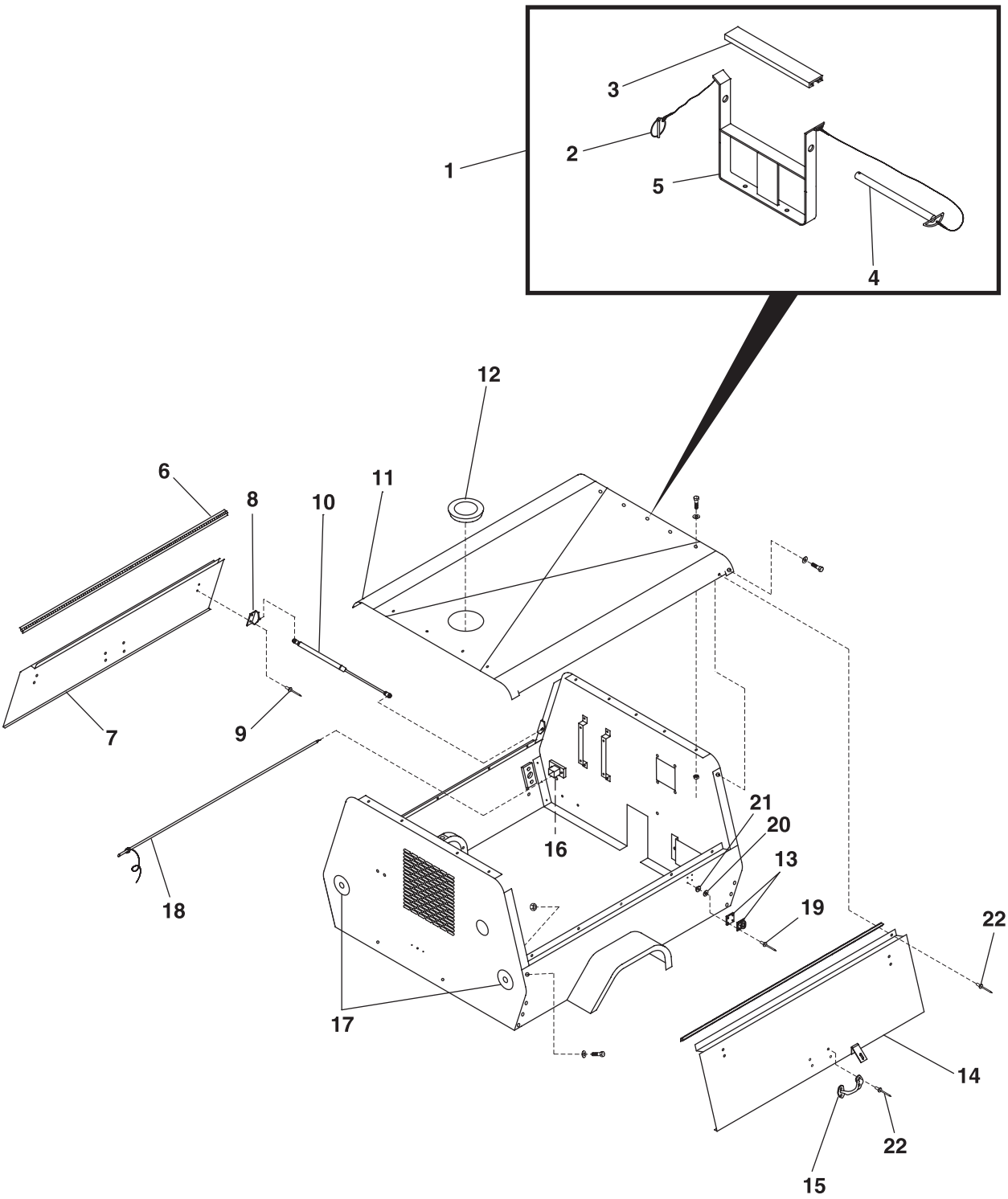
CABINET ASSEMBLY



ITEM #	PART #	DESCRIPTION	QTY.
1	123490	FENDER WITH SKIRT	2
2	188570	CABINET SIDE PANEL ROADSIDE	1
3	184150	WINCH HANDLE BUSHING	1
4	796432	GAS SPRING SHORT BRACKET WITH BALL	8
5	124420	GROUND ROD STORAGE TUBE	1
6	188530-2	CABINET FRONT PANEL	1
7	176370	LITERATURE RACK	1
8	188580	CABINET SIDE PANEL CURBSIDE	1
9	930950	WEATHERSTRIP ADHESIVE	AR
10	791840	BUMPER RUBBER	4
11	124430	CABINET REAR PANEL	1
12	994130	SCREW,1/4-20NCX1	4
13	993850	WASHER FLAT 1/4	37
14	990150	NUT LOCK NYLON INSERT 1/4-20NC GR 2 ZP	18
15	993440	SCREW 1/4-20NCX3/4	8
16	990340	WASHER FLAT 1/4	16
17	993421	SCREW,1/4-20NCX3/4	2
18	995810	SCREW,1/4-20NCX5/8,HWH	27
19	992040	RIVET POP 3/16X.602	16

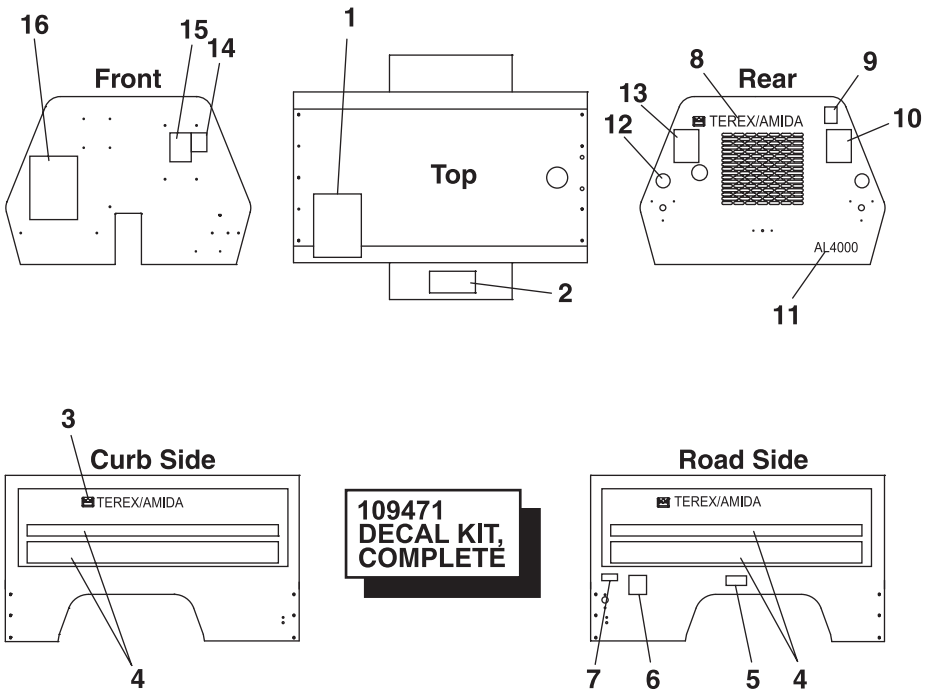
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CABINET ASSEMBLY (TOP & DOORS)



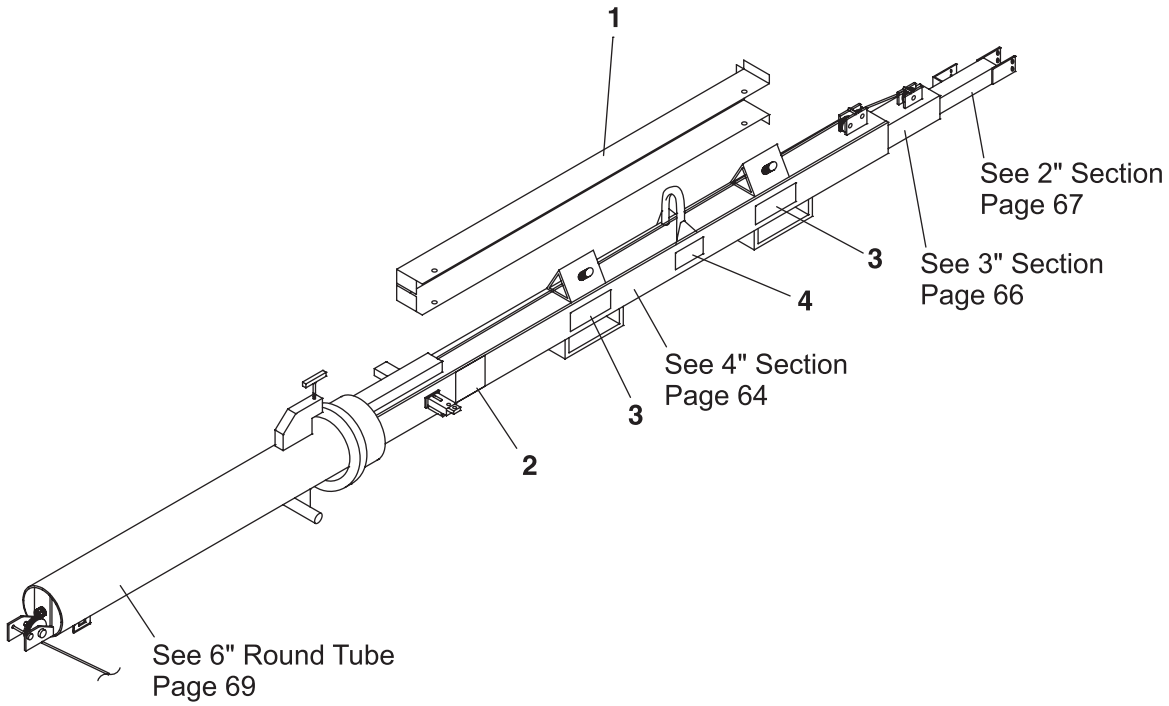
ITEM #	PART #	DESCRIPTION	QTY.
1	116180	REAR TOWER SUPPORT, COMPLETE ASSEMBLY	1
2	790540	PIN QUICK1/4X1.75 ZP	1
3	720220	BUMPER REAR TOWER SUPPORT	1
4	123680	PIN W/RING 3/4X11	1
5	124460	REAR TOWER SUPPORT	1
6	796610	HINGE PIANO 1.5X51.75	2
7	188560	CABINET DOOR PANEL	1
8	796432	GAS SPRING SHORT BRACKET WITH BALL	8
9	992040	RIVET POP 3/16X.602	16
10	796436	GAS SPRING 16", 60 LB.	4
11	188550-2	CABINET TOP PANEL	1
12	794940	PLUG PLASTIC	1
13	189796	HASP,CABINET DOOR,	2
14	188560	CABINET DOOR PANEL	1
15	790940	HANDLE 5.75 CHROME PLATED	2
16	124420	GROUND ROD STORAGE TUBE	1
17	176380	COVER PLATE,CABINET	2
18	113399	GROUND ROD LT.TWR.	1
19	995050	SCREW,#10-32NFX3/4	4
20	R980300	WASHER,FLAT,#10	4
21	995420	NUT,LOCK NYLON INSERT #10-32 HX M/S JAM	4
22	990670	RIVET POP 3/16X1/2	36

CABINET DECALS



ITEM #	PART #	DESCRIPTION	QTY.
1	850091	DECAL: DANGER CRUSH HAZARD	1
2	851640	DECAL: TOWER OPERATING INSTRUCTIONS	1
3	853296	DECAL: TEREX-AMIDA RED AND BLACK 5X29.5	2
4	853312	DECAL: STRIPING RED/BLACK	2
5	850155	DECAL: NO.2 DIESEL FUEL ONLY	1
6	850107	DECAL-CAUTION,WINCHLOCK SYSTEM	1
7	853640	DECAL: "CAUTION",WINCH ROTATION	1
8	853291	DECAL: TEREX-AMIDA RED AND BLACK 2.75X16	1
9	CU51A112	DECAL: DANGER HOT EXHAUST	1
10	850093	DECAL: DO NOT STAND BEHIND TOWER	1
11	853301	DECAL: AL4000 BLACK 2.2X9.5	1
12	841710	RED REFLECTOR	2
13	850092	DECAL: DANGER FALLING BOOM	1
14	853070	DECAL: CAUTION READ MANUAL	1
15	851860	DECAL: DANGER! ELECTRIC SHOCK HAZARD	1
16	852410	DECAL: OPERATING INSTRUCTIONS	1

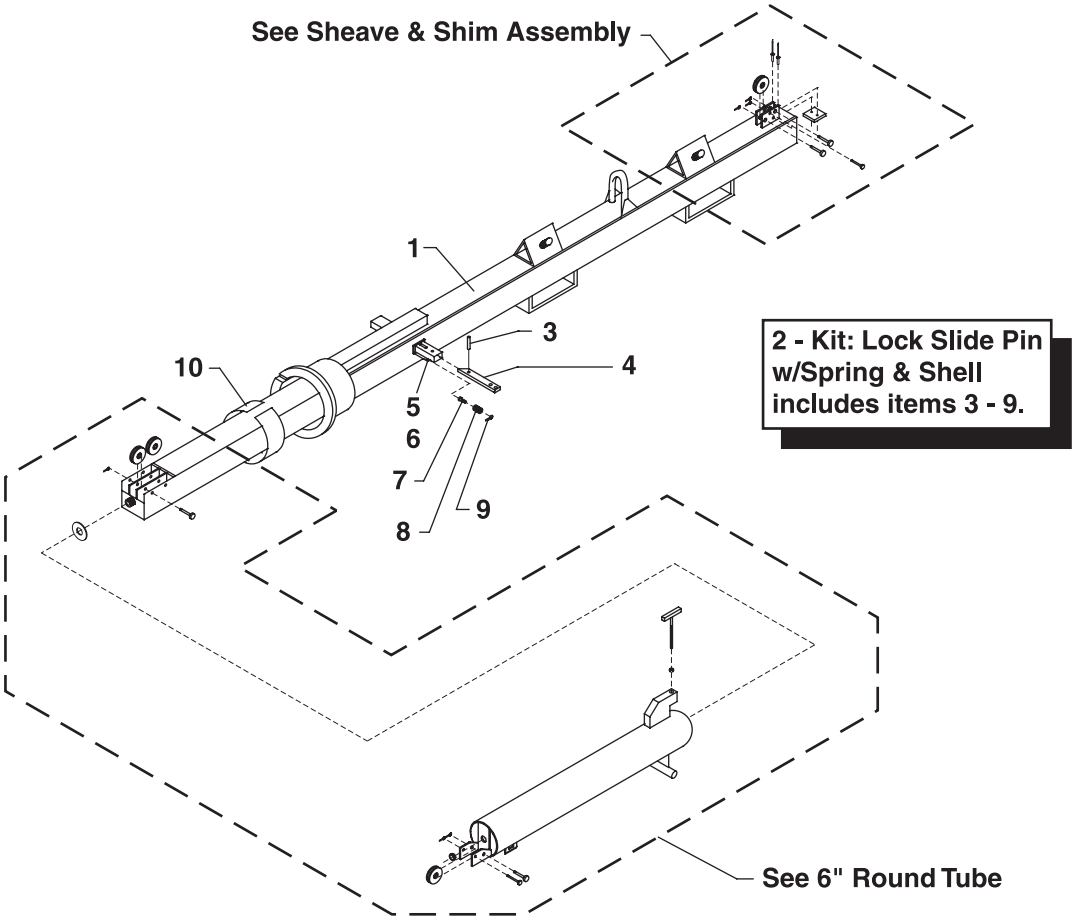
TOWER ASSEMBLY



ITEM #	PART #	DESCRIPTION	QTY.
1	113080	COIL CORD SLEEVE	1
2	851545	DECAL: DANGER DO NOT RAISE TOWER IN VICINITY	1
3	R850475	DECAL: WARNING FORKS	2
4	851550	DECAL: LIFT MACHINE HERE	1

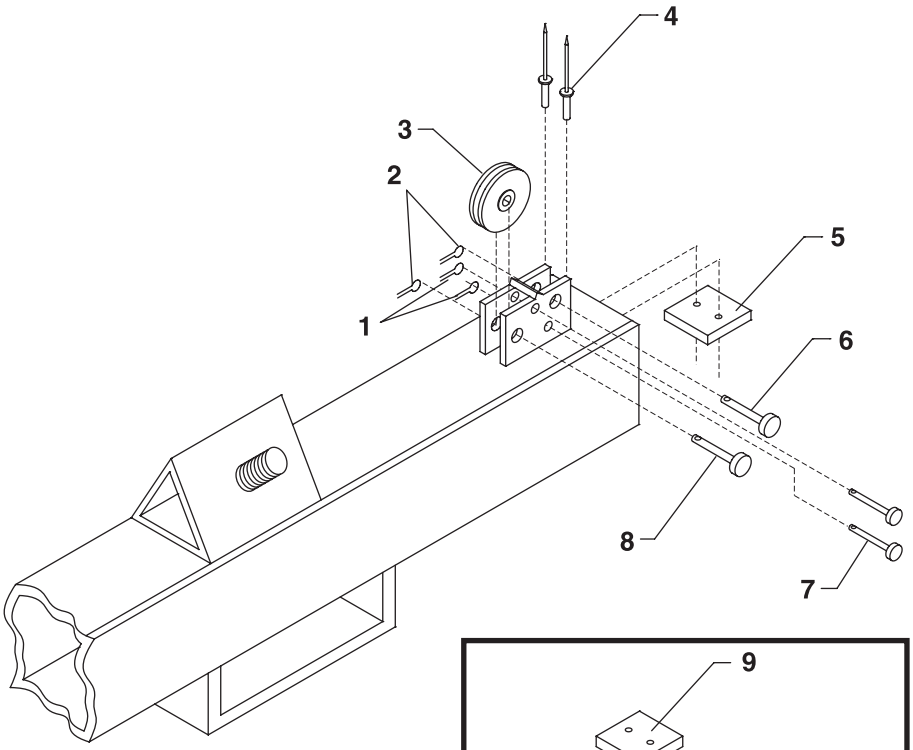
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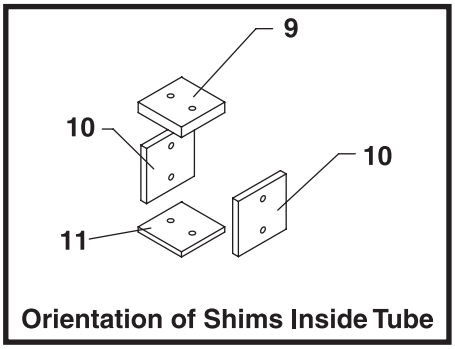
4” INCH TOWER SECTION



ITEM #	PART #	DESCRIPTION	QTY.
1	124540	4" SECTION 30'TOWER	1
2	109516	KIT:LOCK SLIDE PIN W/ SPRING & SHELL includes 3-9	1
3	990660	ROLL PIN 1/4 X1-5/8	1
4	113362	PIN,LOCK SLIDE,WITH RING includes 10-13	1
5	171635	LOCK PIN SHELL	1
6	171640	LOCK SPRING SHELL	1
7	980340	SCREW,5/16-18NCX1/2 HHCS, GR 2, ZP	1
8	790710	SPRING COIL 1/2 X2.25	1
9	990650	COTTER PIN 1/8X1 SS	1
10	177810	SHIM 3/16X2X19-3/4	1

4” TOWER SECTION (UPPER SHEAVE & SHIM)



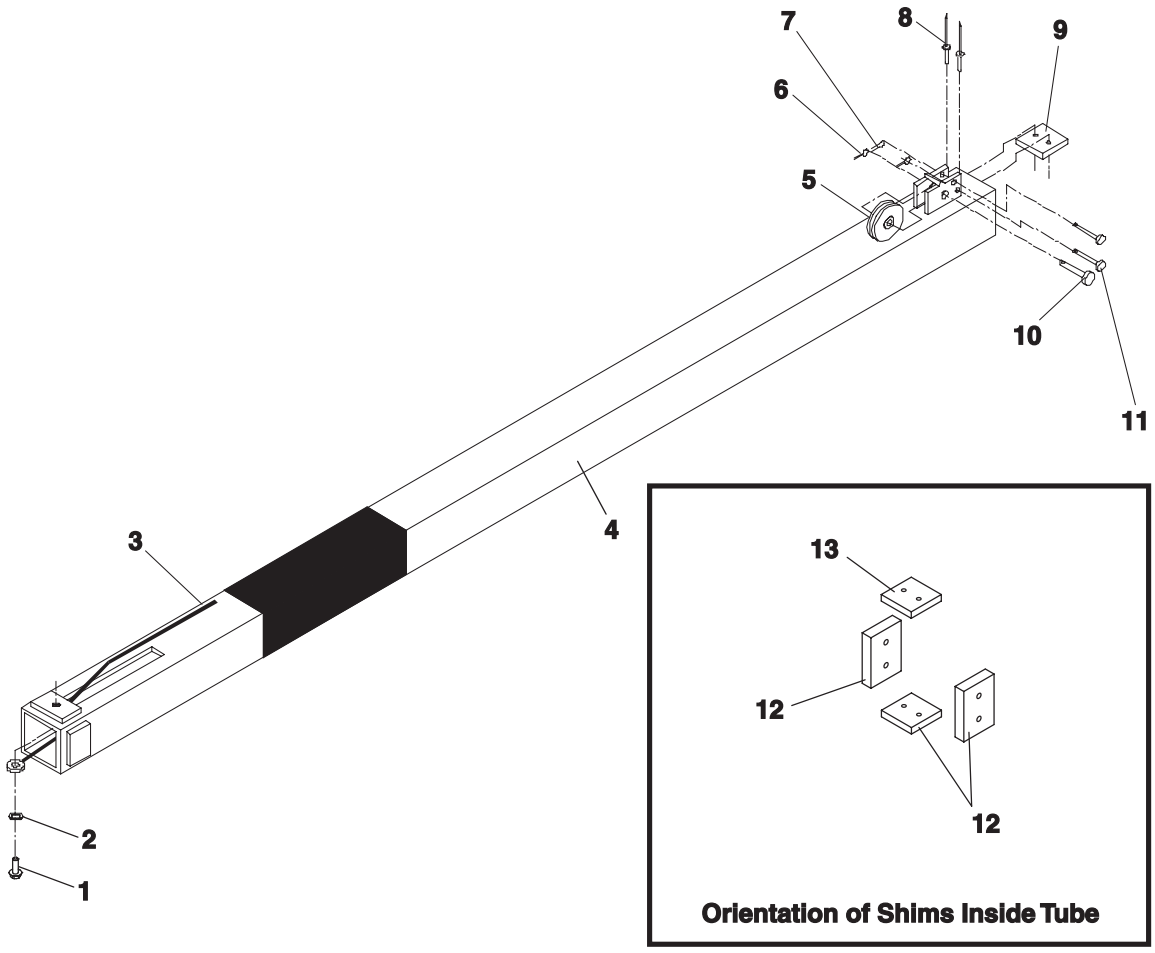


Orientation of Shims Inside Tube

ITEM #	PART #	DESCRIPTION	QTY.
1	994920	COTTER PIN 3/32X3/4 SS	2
2	990650	COTTER PIN 1/8X1 SS	2
3	188760	SHEAVE 3-1/8 X1 1/4 CABLE	2
4	990670	RIVET POP 3/16X1/2 S/S BLIND RIVET	8
5	183286	SHIM 5/16X2X3-3/16	1
6	995780	CLEVIS PIN STAINLESS STEEL 3/8 X2	1
7	992765	CLEVIS PIN STAINLESS STEEL 1/2 X2	1
8	995790	CLEVIS PIN STAINLESS STEEL 1/4 X2	2
9	183286	SHIM 5/16X2X3-3/16	1
10	177830	SHIM 1/4X2X3-3/16	2
11	183288	SHIM 3/16X2X3-3/16	1

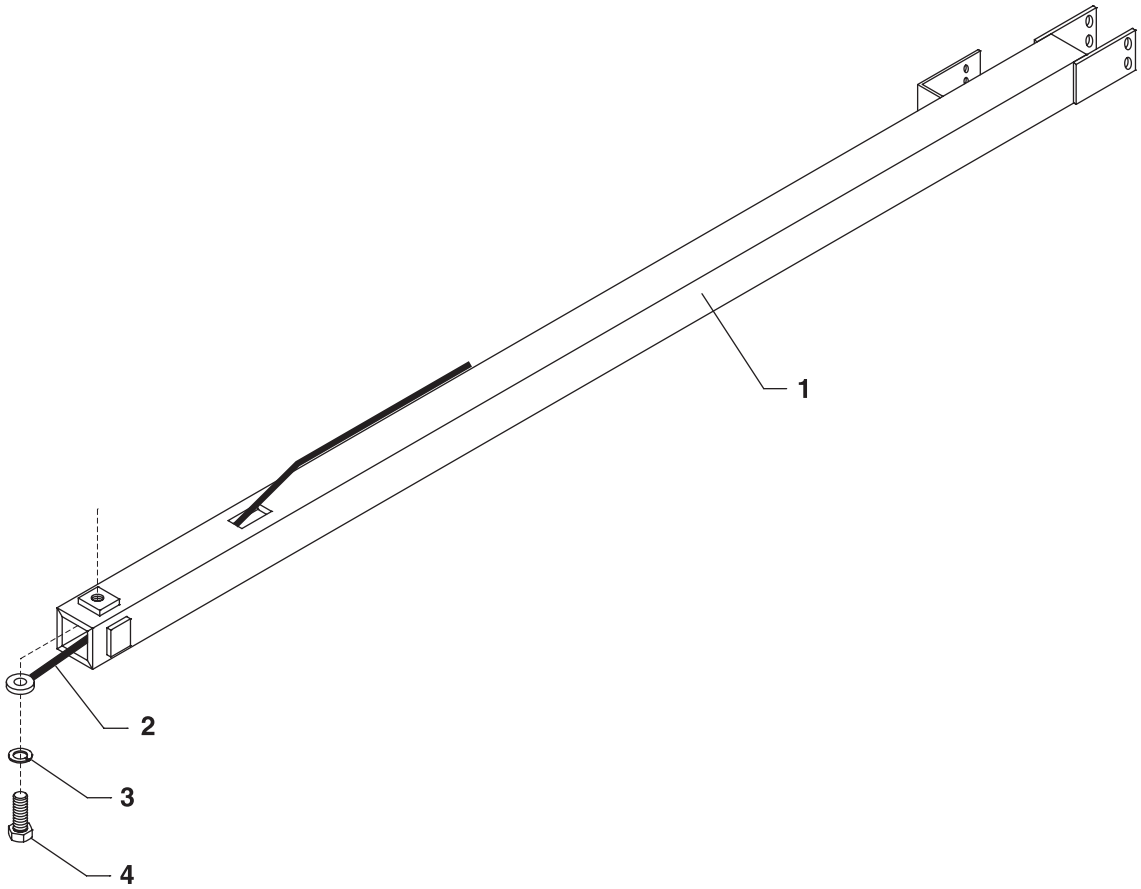
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3” INCH TOWER SECTION



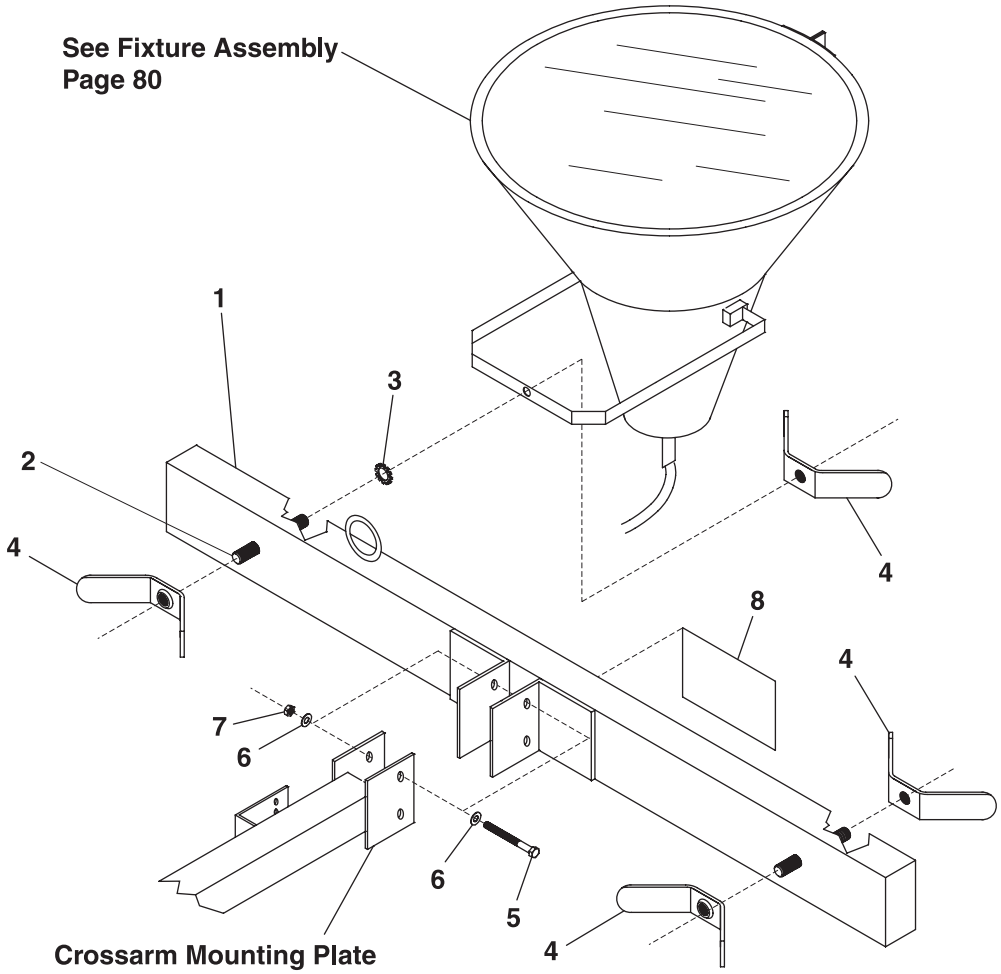
ITEM #	PART #	DECSCRIPTION	QTY.
1	996230	SCREW,3/8-16NCX7/8	1
2	990470	WASHER LOCK 3/8	1
3	109065	KIT: CABLE ASSEMBLY LOWER 1/4 CABLE	1
4	124550	3 SECTION 30'TOWER	1
5	188760	SHEAVE 3-1/8 X1 1/4 CABLE	1
6	990650	COTTER PIN 1/8X1 SS	1
7	994920	COTTER PIN 3/32X3/4 SS	2
8	990670	RIVET POP 3/16X1/2 S/S BLIND RIVET	8
9	185290	SHIM 3/8X2X2-1/4	1
10	992765	CLEVIS PIN STAINLESS STEEL 1/2 X2	1
11	995790	CLEVIS PIN STAINLESS STEEL 1/4 X2	2
12	177820	SHIM 5/16X2X2-1/4	3
13	185290	SHIM 3/8X2X2-1/4	1

2” INCH TOWER SECTION



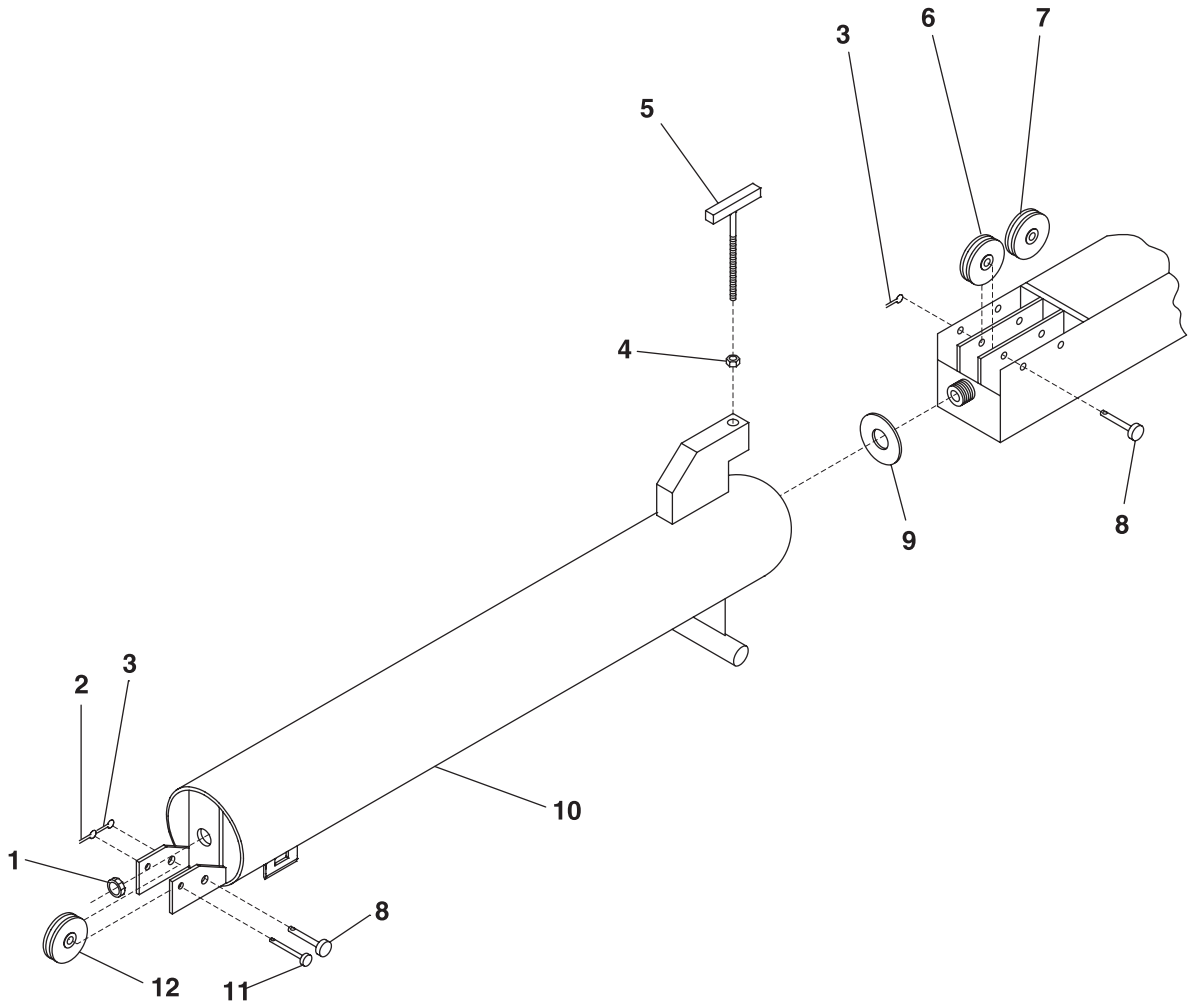
ITEM #	PART #	DESCRIPTION	QTY.
1	124560	2 SECTION 30'TOWER	1
2	109070	KIT: CABLE ASSEMBLY UPPER	1
3	990470	WASHER LOCK 3/8	1
4	996230	SCREW,3/8-16NCX7/8 HHC,GR 8 ZP	1

TOWER CROSSARM FIXTURE



ITEM #	PART #	DESCRIPTION	QTY.
1	113040	CROSSARM 4-LIGHT	1
2	191781	STUD,3/4X10NCX4-3/4	4
3	990880	WASHER LOCK STAR 3/4 EXT.TOOTH	4
4	123080	FIXTURE MOUNTING WING NUT	4
5	994460	SCREW,3/8-16NCX4-1/2"	2
6	990080	WASHER FLAT 3/8	4
7	990170	NUT LOCK NYLON INSERT 3/8-16NC GR 2 ZPN	2
8	851760	DECAL: DANGER HIGH VOLTAGE....	1

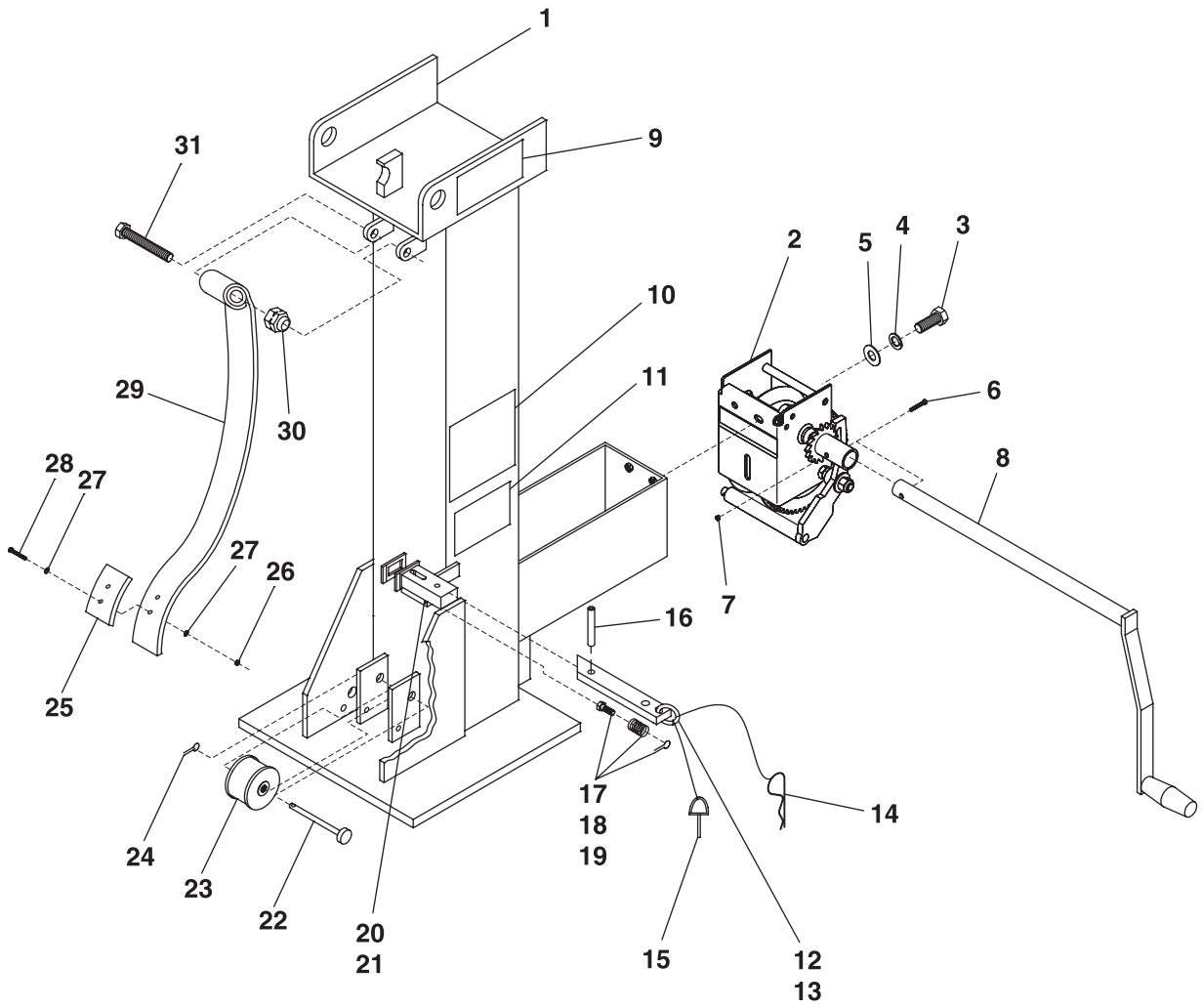
6” INCH ROUND TUBE



ITEM #	PART#	DESCRIPTION	QTY.
1	990620	NUT LOCK NYLON INSERT 7/8-14NF HALF JAM	1
2	994920	COTTER PIN 3/32 X 3/4 SS	1
3	990650	COTTER PIN 1/8 X 1 SS	1
4	995190	NUT,LOCK NYLON INSERT 1/2-20NF HALF NUT	1
5	990610	BOLT TEE 1/2-20NF 4-1/2 LG	1
6	188770	SHEAVE 2-13/16 X 1-1/4 CABLE	1
7	188760	SHEAVE 3-1/8 X 1-1/4 CABLE	1
8	992765	CLEVIS PIN STAINLESS STEEL 1/2 X 2	2
9	179850	BUSHING 2.5OD X 13/16	1
10	124530	6" ROUND TUBE	1
11	995790	CLEVIS PIN STAINLESS STEEL 1/4 X 2	1
12	188760	SHEAVE 3-1/8 X 1-1/4 CABLE	1

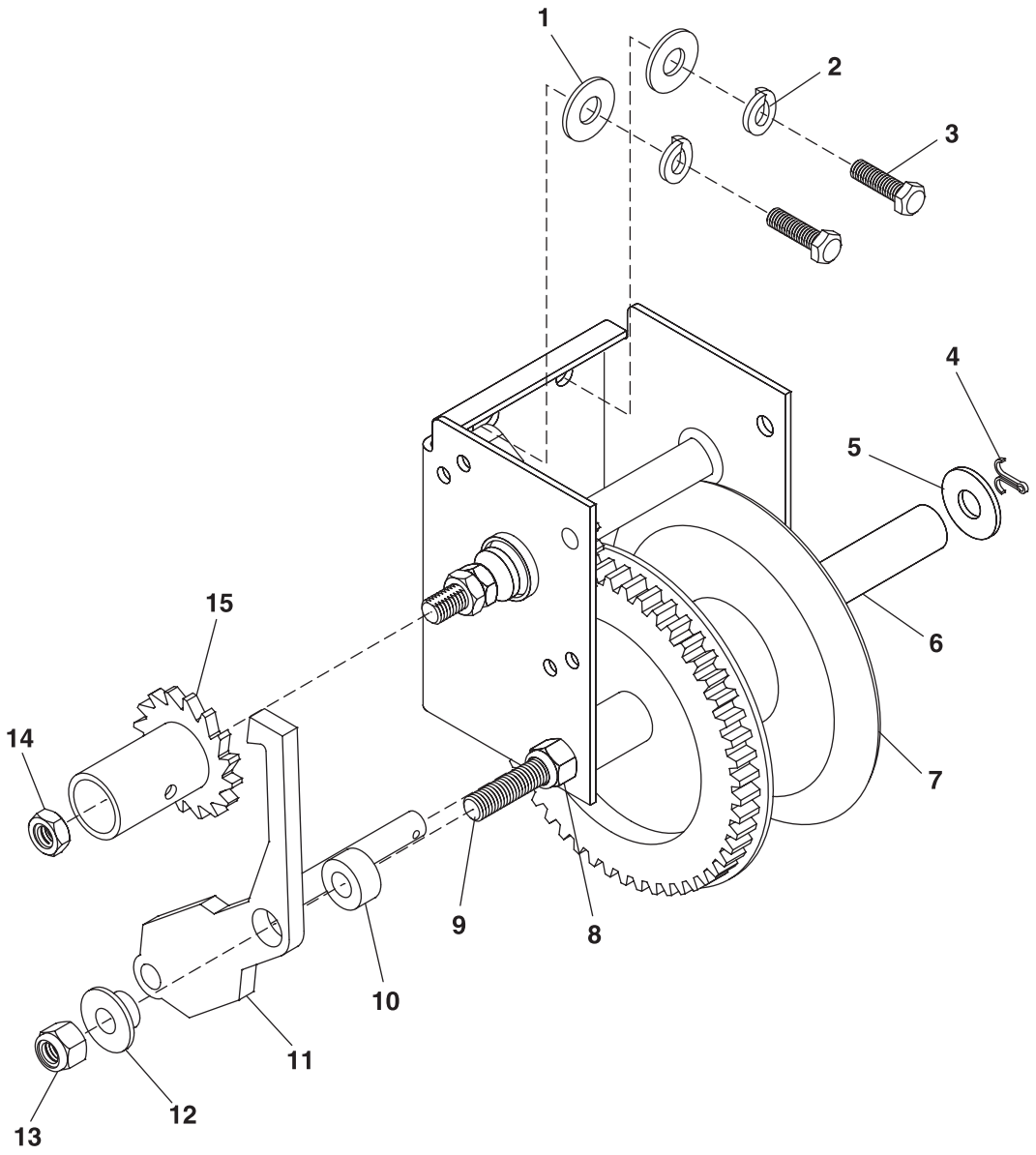
TEREX

TOWER BASE ASSEMBLY



ITEM #	PART #	DESCRIPTION	QTY.
1	124490	TOWER BASE	1
2		REFER TO WINCH DRAWING ON NEXT PAGE	
3	981450	SCREW,3/8-16NCX1-1/2	2
4	990470	WASHER LOCK 3/8	2
5	990080	WASHER FLAT 3/8	2
6	990140	SCREW 1/4-20NCX2	1
7	990150	NUT LOCK NYLON INSERT 1/4-20NC GR 2 ZP	1
8	124480	WINCH HANDLE W/TUBE	1
9	853670	DECAL: CRUSH AREA	1
10	850090	DECAL: CAUTION STAND CLEAR OF TOWER.	1
11	850105	DECAL: DANGER DO NOT PULL THE VERTICAL	1
12	109517	KIT:LOCK SLIDE PIN includes items 13-21	1
13	113362	PIN,LOCK SLIDE includes items 14-15	1
14	990760	PIN BRIDGE .0915 X 1-7/8 S/S	1
15	120640	PIN W/RING 5/16 X 1-5/8	1
16	990660	ROLL PIN 1/4 X1-5/8	1
17	980340	SCREW,5/16-18NCX1/2	1
18	790710	SPRING COIL 1/2 X2.25	1
19	990650	COTTER PIN 1/8X1 SS	1
20	171636	LOCK PIN SHELL	1
21	171640	LOCK SPRING SHELL	1
22	995760	CLEVIS PIN STAINLESS STEEL 1/2 X3-1/2	1
23	184510	SHEAVE SPOOL 3 X 2-1/2	1
24	990650	COTTER PIN 1/8X1 SS	1
25	186360	BUMPER PAD	1
26	995420	NUT,LOCK NYLON INSERT #10-32 HX M/S JAM	2
27	R980300	WASHER,FLAT,#10	4
28	995050	SCREW,#10-32NFX3/4 LOW HD SHCS ZINC	2
29	193750	SPRING LEAF CUSTOM KICKOUT	1
30	990200	NUT LOCK NYLON INSERT 1/2-13NC GR 2 ZPIN	1
31	981920	SCREW 1/2-13NCX3 HHC GR 8 Y-ZINC	1

WINCH LOCK ASSEMBLY

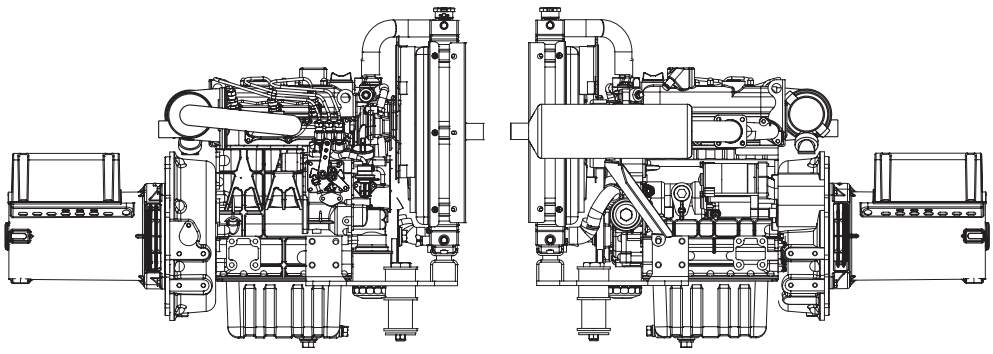


109485 WINCH SAFETY-LOC SYSTEM
(INCLUDES NEW WINCH) - 4 thru 13 & 15

109486 WINCH SAFETY-LOC SYSTEM
(DOES NOT INCLUDE NEW WINCH) - 3 thru 6, 8 thru 12 & 15

ITEM #	PART #	DESCRIPTION	QTY.
1	990080	WASHER FLAT 3/8	2
2	990470	WASHER LOCK 3/8	2
3	981450	SCREW, 3/8-16NC X 1-1/2 HHCS,GR 5	2
4	990650	COTTER PIN 1/8 X 1 SS	1
5	980480	WASHER, FLAT, C816L, S/S, 1/2 F/W 7/8 OD	1
6	124858	ROLLER WEAR BUSHING	1
7	740050-1	KIT: WINCH & SOCKET	1
8	990200	NUT LOCK NYLON INSERT 1/2-13NC GR 2 ZPIN	1
9	996050	BOLT, 1/2-13NC X 7-1/2 HHC, GRADE 5, ZP	1
10	124857	SPACER .5 ID 1.25 OD	1
11	124855	RATCHET ARM	1
12	124856	BUSHING FLANGE 1.25 OD .5 ID	1
13	990200	NUT LOCK NYLON INSERT 1/2-13NC GR 2 ZPIN	1
14	NPN	NUT, 1/2-13, NYLON LOCK, HALF THICK, PART OF 740050-1	1
15	124860	HANDLE SOCKET RATCHETING	1
16	109485	KIT:SAFETY-LOC SYSTEM (with winch) includes items 4-13,15	1
17	109486	KIT:SAFETY-LOC SYSTEM includes items 3-6,8-12,15	1

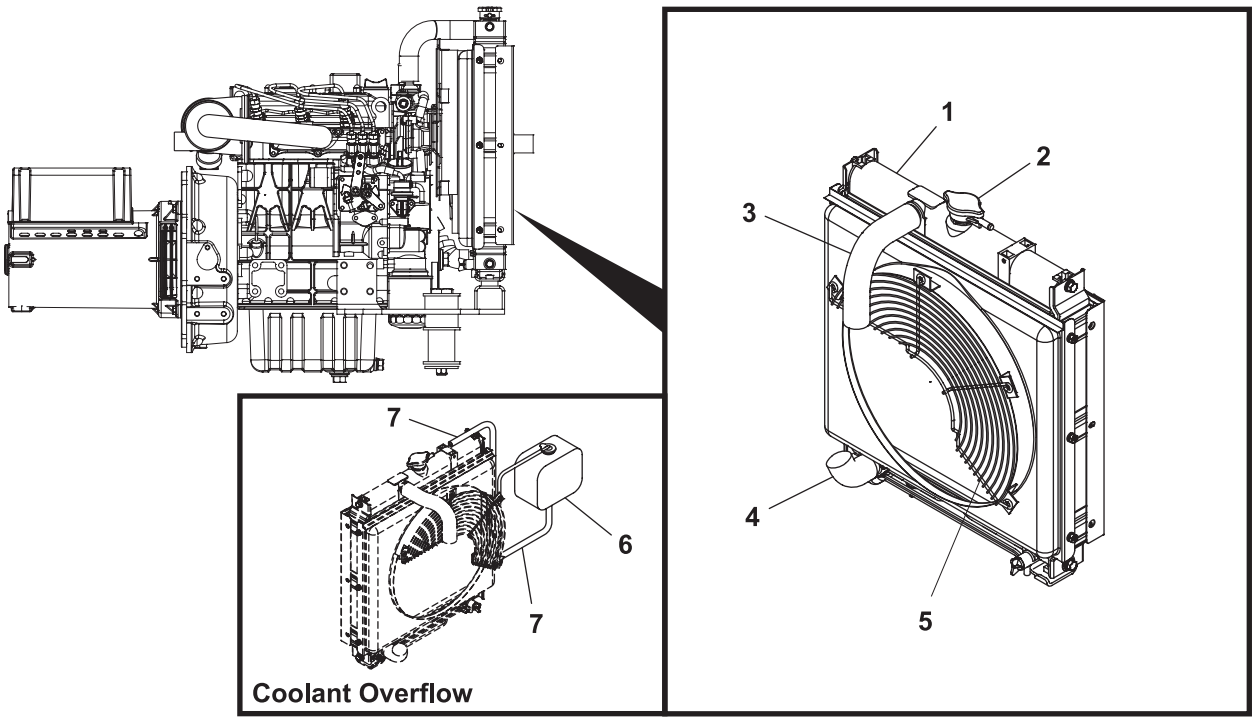
ENGINE/GENSET ASSEMBLY



All items listed are service parts that Terex stocks. Additional engine parts breakdowns are available through the Service and Parts Manual provided with your unit.

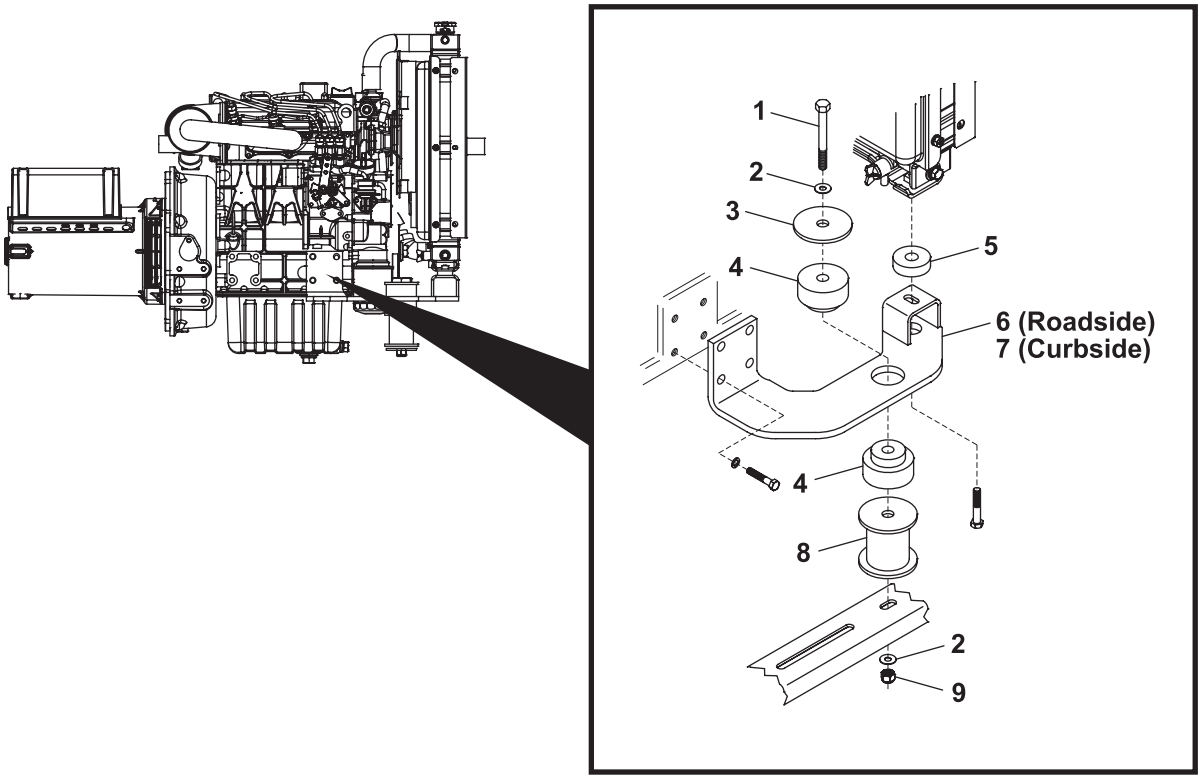
ITEM #	PART #	DESCRIPTION	QTY.
REF	732205PP	KUBOTA D1105 ENGINE POWERPACK BUILD EBG2	1
	839190	LOW OIL PRESSURE SWITCH	1
	741140	HIGH TEMPERATURE SWITCH	1
	866125	AIR CLEANER ASSEMBLY	1
	866126	AIR CLEANER BODY	1
	866127	AIR CLEANER ELEMENT	1
	866128	AIR CLEANER COVER	1
	866129	AIR CLEANER VALVE	1
	866050	OIL FILTER	1
	740620	FUEL FILTER, IN-LINE, 5/16	1
	839107	FUEL FILTER ASSEMBLY	1
	839200	ELEMENT	1
	865223	FUEL PUMP	1
	866101	STARTER	1
	866090	ALTERNATOR	1
	866044	2 WIRE STOP SOLENOID	1
	839209	V-BELT	1
	839261	WATER PUMP	1
	839134	FAN, PUSHER	1
	839154	OIL DIPSTICK	1
	865276	MUFFLER	1

RADIATOR ASSEMBLY



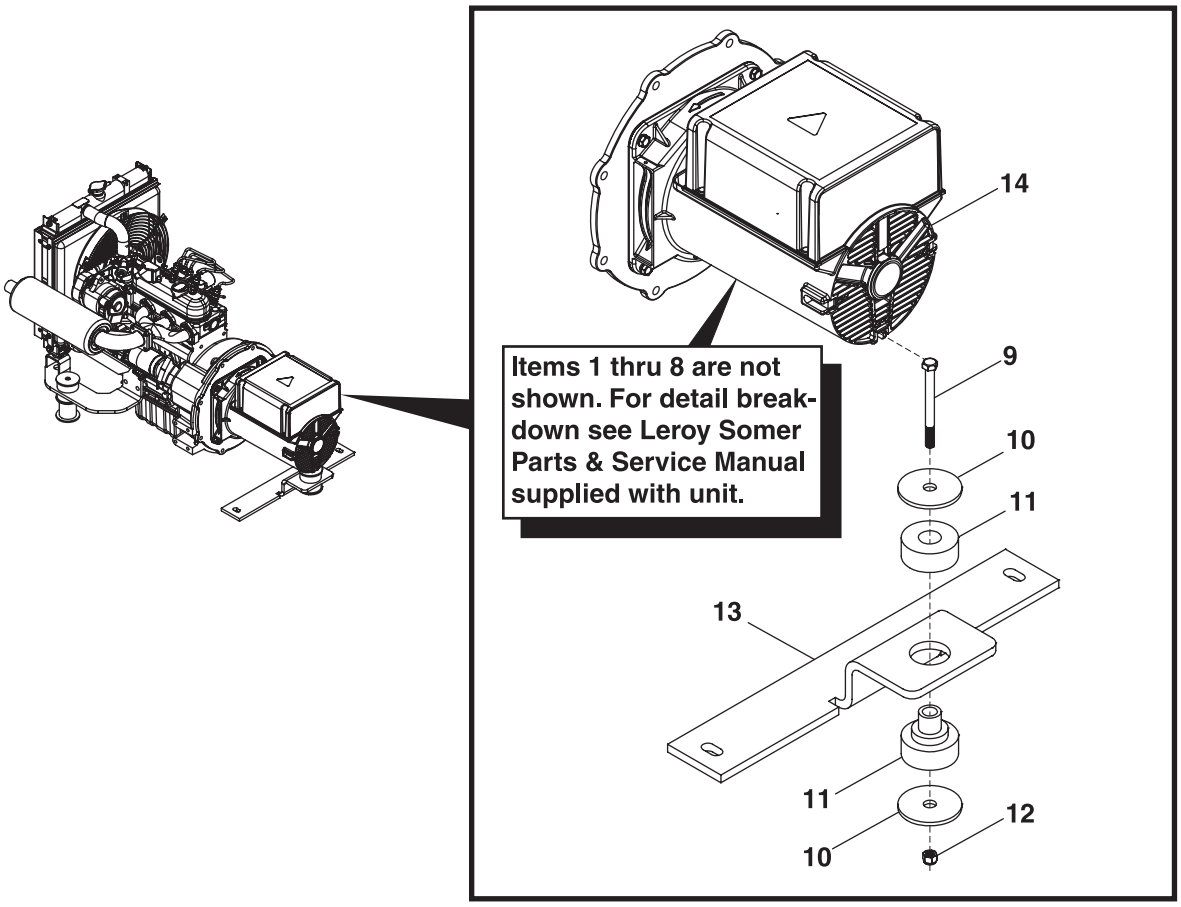
ITEM #	PARTS #	DESCRIPTION	QTY.
1	866114	RADIATOR	1
2	866120	CAP FOR RADIATOR	1
3	839109	HOSE, TOP	1
4	839110	HOSE, BOTTOM	1
5	866113	FAN GUARD	1
6	865307	COOLANT RECOVERY TANK	1
7	890790	HOSE FUEL 1/4X1/2 200#	AR

RADIATOR MOUNTING BRACKET



ITEM #	PART #	DESCRIPTION	QTY.
1	995380	SCREW, 1/2-13NC X 6-1/2 HHC, GRADE 5, ZP	2
2	990210	WASHER FLAT 1/2	4
3	990415	WASHER, FLAT SNUBBER	2
4	740925	VIBRATION MOUNT, 30 DUR	2
5	740770	VIBRATION MOUNT 35 LB	2
6	124015	ENG.FT/RAD SUPPORT ROADSIDE, D1105/LSA36 (shown)	1
7	124016	ENG.FT/RAD SUPPORT CURBSIDE D1105/LSA36 (not shown)	1
8	124025	ENGINE RISER, 2.75" HIGH FOR 1/2" BOLT	2
9	990200	NUT LOCK NYLON INSERT 1/2-13NC GR 2 ZPIN	2

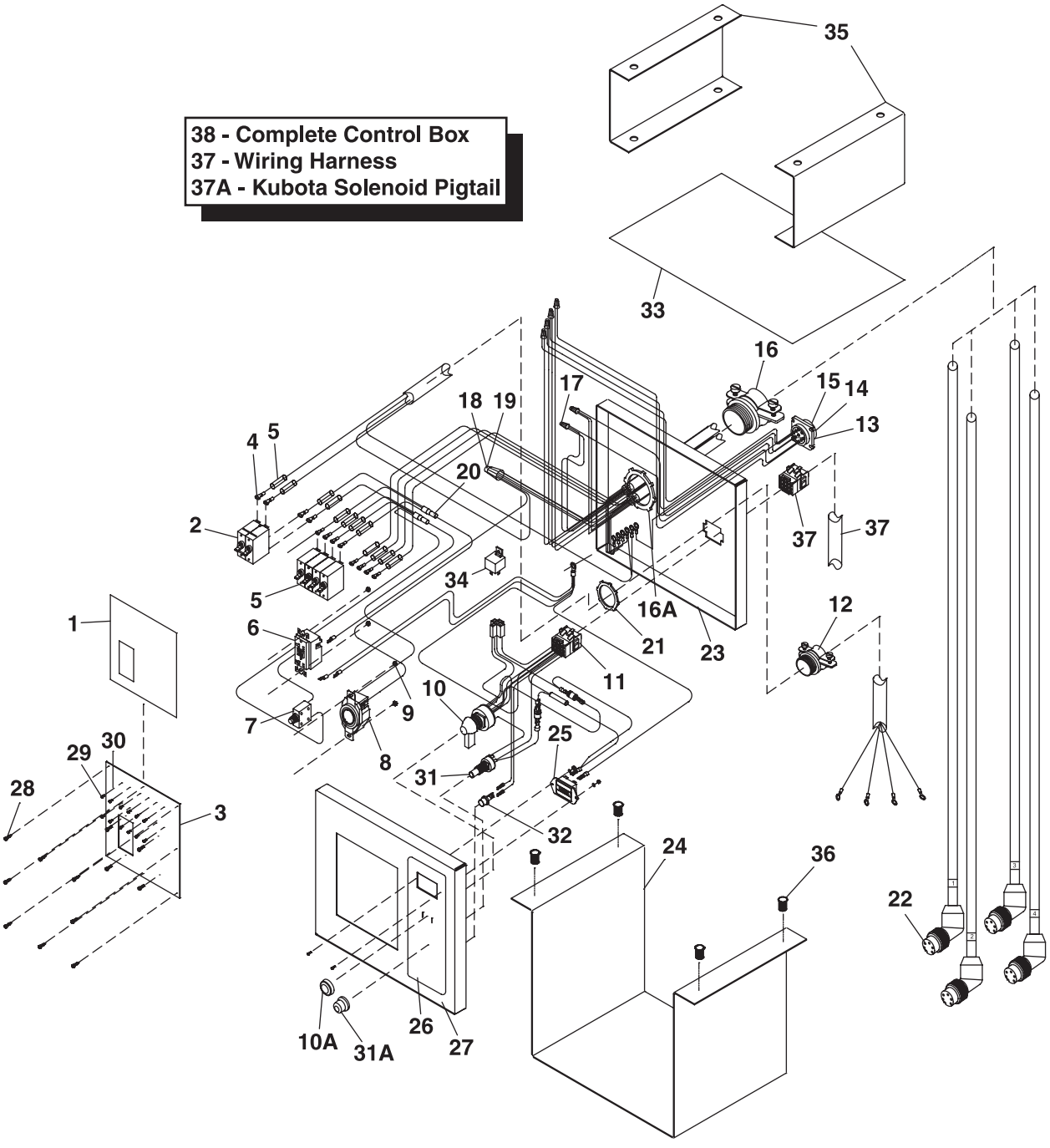
GENERATOR MOUNTING BAR



ITEM #	PART #	DESCRIPTION	QTY.
1	836704	NDE BEARING	1
2	836705	DIODE KIT (includes 2 diodes)	1
3	836706	ROTOR BOLT (8 X 245)	1
4	836707	TOP COVER	1
5	836708	END CAP	1
6	836709	FAN	1
7	836710	TERMINAL BLOCK	1
8	836711	CAPACITOR, 22.5mf, (two per unit required)	2
9	996290	SCREW, M10X1.5X90MM HHC, GRADE 8.8, ZP	1
10	990415	WASHER, FLAT SNUBBER	2
11	740925	VIBRATION MOUNT, 30 DUR	3
12	996496	NUT LOCK NYLON INSERT M10 X 1.5 HEX ZP	1
13	189344	GENERATOR MOUNT BAR	1
14	630905	GENERATOR L-S 6KW 120/240 C106 SAE5 LSA36	1

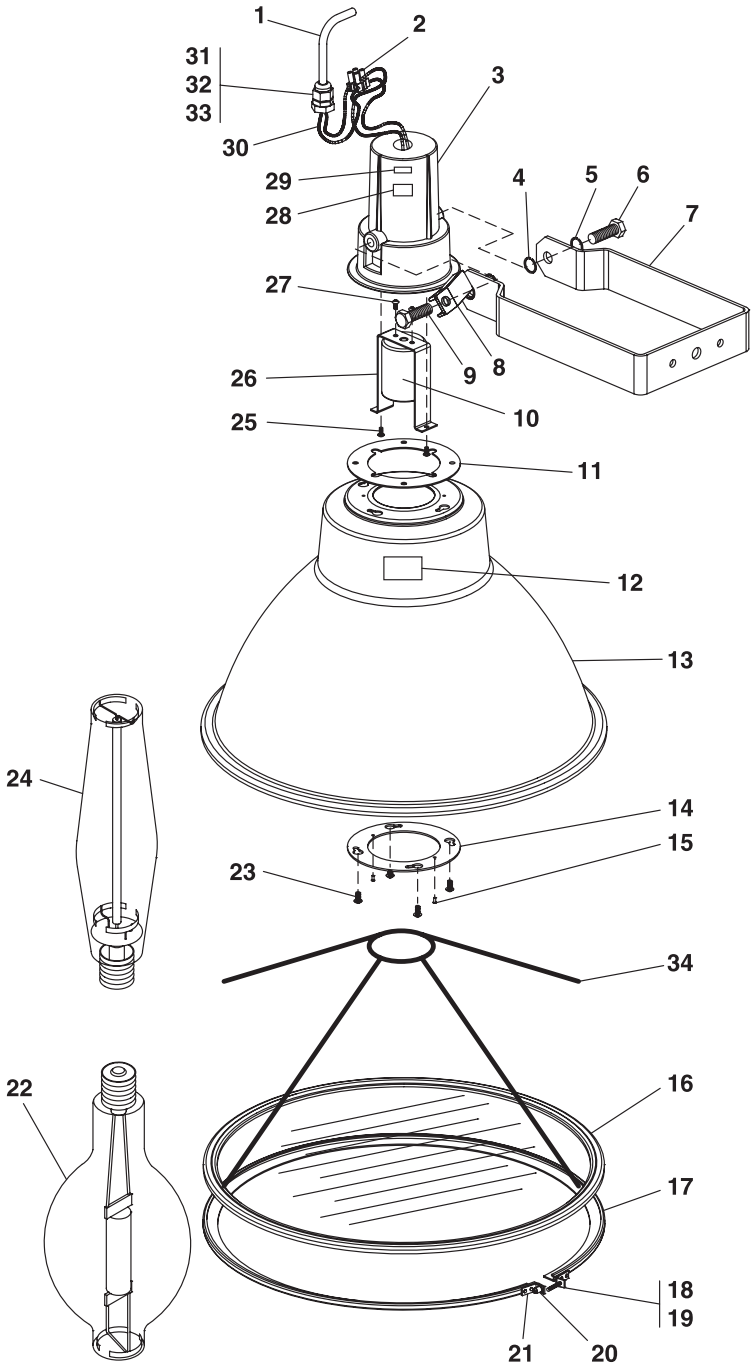
TEREX

ELECTRICAL CONTROL BOX ASSEMBLY



ITEM #	PART #	DESCRIPTION	QTY.
1	853294	DECAL: AL/RL CONTROL BOX AC "POWER & LIGHT"	1
2	683680	BREAKER 2P 30A 240V	1
3	186546	CONTROL BOX,FACE PLATE	1
4	709133	TERMINAL,RING	2
5	683870	BREAKER 1P 15A 277VAC	4
6	684640	RECEPTACLE 20A 120V DUPLEX W/GFI	1
7	683970	BREAKER MINI 1P 20A	1
8	684450	RECEPTACLE 30A 240V	1
9	C54100600	NUT, NYLOCK, 8-32 ZINC	5
10	684380	SWITCH, IGNITION LEVER OPERATED	1
10A		included with item 10	
11	116765	WIRE HARNESS,DC ENGINE	1
12	680030	CONNECTOR,2 SCREW,3/4"	1
13	685672	CONNECTOR 9P,FEMALE	1
14	685674	SOCKETS, FEMALE	9
15	800003	CONNECTOR WITH WIRES (includes 13 and 14)	1
16	686220	CONNECTOR,2 SCREW,1.25	1
16A		included with item 16	
17	709032	TERMINAL,CLOSED END	2
18	680060	WRAP CAP	1
19	680290	CRIMP SLEEVE	1
20	116770	WIRE HARNESS	1
21	680250	LOCKNUT, CONDUIT 3/4"	1
22	663890	CORD SET FEMALE 6FT 5P	4
23	186542	CONTROL BOX,REAR PANEL	1
24	186540	CONTROL BOX BODY	1
25	260361	HOURMETER, DIGITAL	1
26	853289	DECAL: AL/RL CONTROL BOX DC "ENGINE CONTROLS"	1
27	186544	CONTROL BOX,FRONT PANEL	1
28	996340	SCREW,#10-16X3/4 PH ZP	12
29	995300	SCREW,#6-32X1/4 PAN HD	12
30	994420	WASHER,LOCK,#6	12
31	R660010	SWITCH PUSH-BUTTON	1
31A		included with item 31	
32	682715	LIGHT INDICATOR 12V RED	1
33	186543	CONTROL BOX,TOP PANEL	1
34	R661490	RELAY 12V DC 30A	1
35	186548	BRACKET, E-BOX HANGER	2
36	993310	NUTSERT,1/4-20UNC	8
37	116820	WIRING HARNESS, FROM ENGINE	1
37A	800004	KUBOTA SOLENOID PIGTAIL	1
38	116805	COMPLETE ELECTRICAL CONTROL BOX, includes 1-36	1

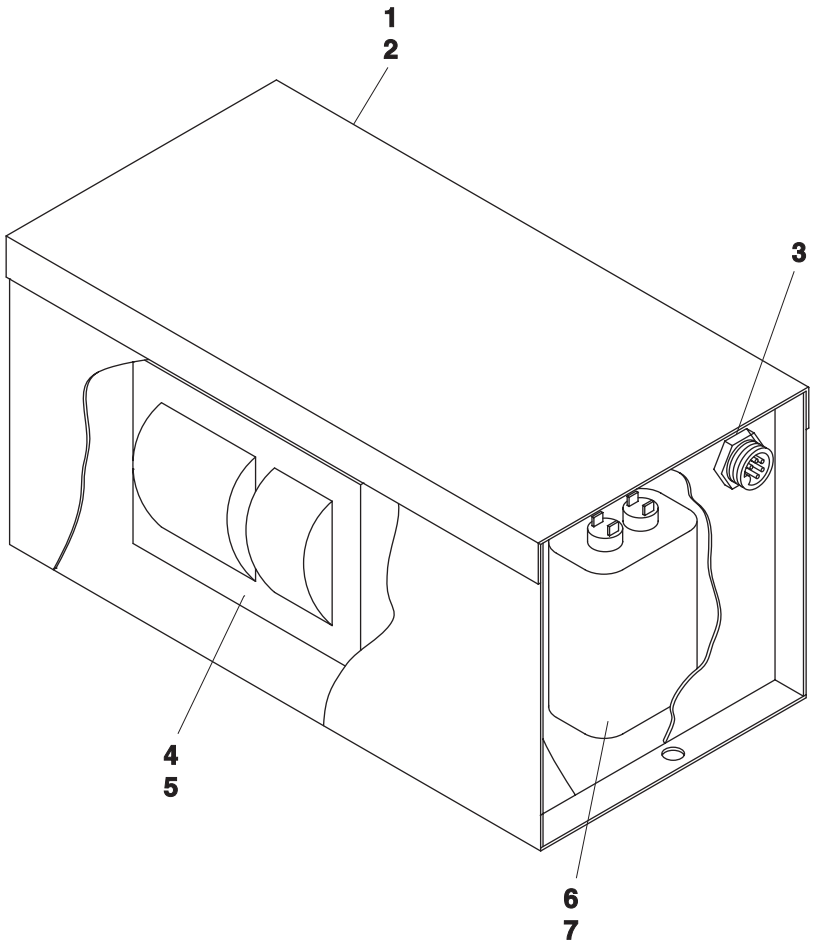
MH/HPS LIGHT FIXTURE ASSEMBLY



NOTE:
FOR COMPLETE MH ASSEMBLY
ORDER PART# C41100720

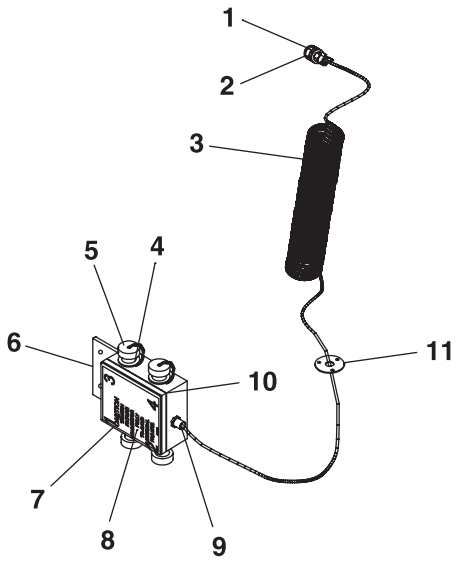
ITEM #	PART #	DESCRIPTION	QTY.
1	663850	CORD SET MALE 5FT. 3P	1
2	709034	TERMINAL STRIP, 2P	2
3	833567	CASTING FOR NEW FIXTURE	1
4	995970	WASHER LOCK STAR 1/2	2
5	991650	WASHER LOCK 1/2	2
6	990810	SCREW 1/2-13NCX1-1/2 HHC GR 2 ZP	2
7	833566	TRUNION	1
8	833573	T-HANDLE	1
9	981640	SCREW 1/2-13NCX1-1/4 HHC GRADE 5	1
10	833569	GASKET FOR REFLECTOR	1
11	833564	SOCKET BASE-MOGUL	1
12	833585	LABEL, FIXTURE CSA APPROVED	1
13	833568	REFLECTOR	1
14	833570	RING,REINFORCING FOR REFLECTOR	1
15	990675	RIVET POP 1/8X.390 GR-1/4-5/16	2
16	833524	LENS W/ GASKET	1
17	833543	CLAMP;LENS TO REFLECTOR	1
18	833574	SCREW,8-32X1" HH SLOT	1
19	833581	WASHER, FIBER FOR BAND	1
20	833578	NUTSERT FOR BAND,8-32 X 1/4	1
21	NPN	included with item 17	1
22	160071	LAMP MH 1000W	1
23	833571	SCREW,10-24X5/8	4
24	160140	LAMP HPS 1000W	1
25	833565	SCREW 8-32X3/8 PH	2
26	833563	SOCKET BRACKET	1
27	833577	SCREW,8-32X5/8	2
28	833584	LABEL,105C CORD RATING	1
29	833583	LABEL,WET LOCATION	1
30	833582	FIBERGLASS WIRE SLEEVE	1
31	683950	GASKET 1/2 S/R CONN	1
32	680020	LOCKNUT CONDUIT 1/2	1
33	682470	CONNECTOR STRAINRELIEF	1
34	120102	LAMP SUPPORT	2
35	C41100720	COMPLETE FIXTURE ASSEMBLY (Includes items 1-34)	1

BALLAST ASSEMBLY



ITEM #	PART #	DESCRIPTION	QTY.
1	114355	BALLAST BOX MH	1
2	114895	BALLAST BOX HPS	1
3	663860	CONNECTOR,5P,MALE	1
4	160030	MH TRANSFORMER AND CAPACITOR	1
5	160040	HPS TRANSFORMER AND CAPACITOR	1
6	160032	CAPACITOR ONLY 24uF MH 60Hz	1
7	160042	CAPACITOR ONLY 24uF HPS 60Hz	1

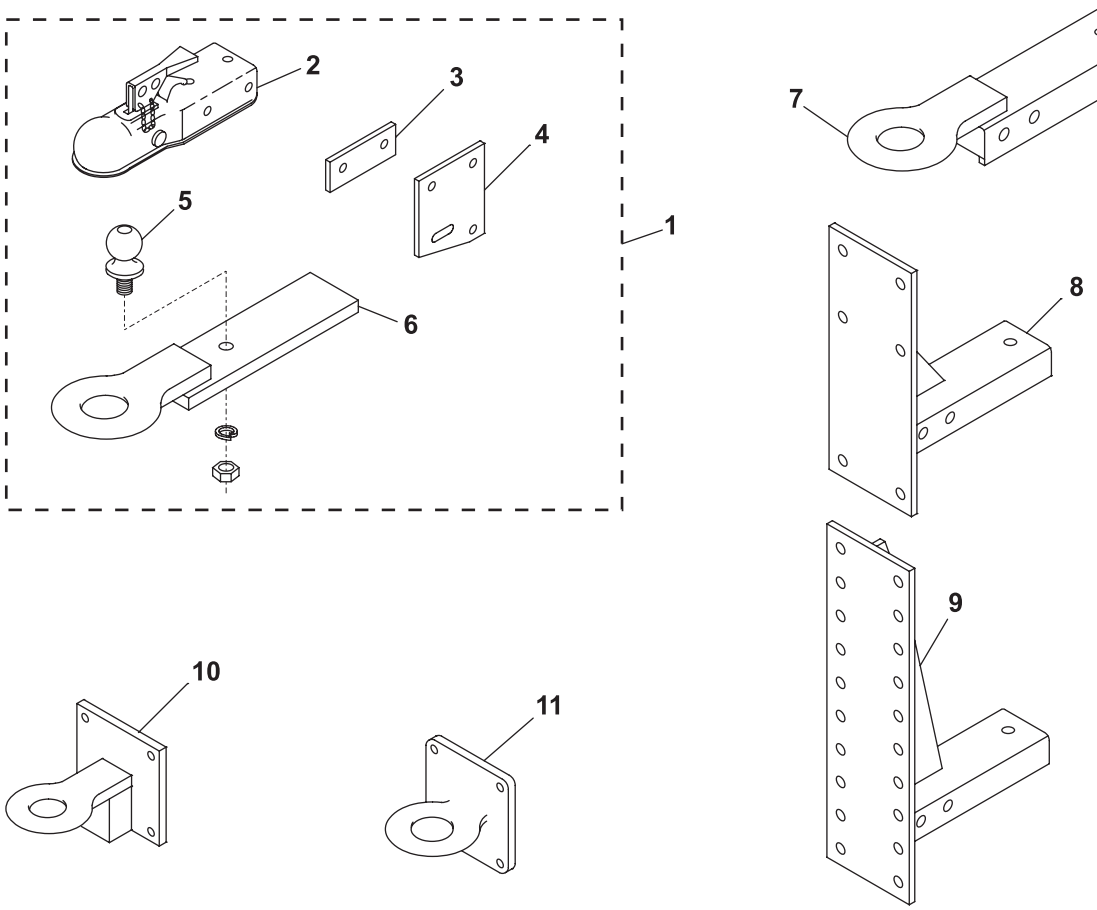
COIL CORD & JUNCTION BOX



12 - Junction Box, Complete with Coil Cord Includes items 1 - 11.
13 - Coil Cord Assembly Includes items 1, 2 & 3.

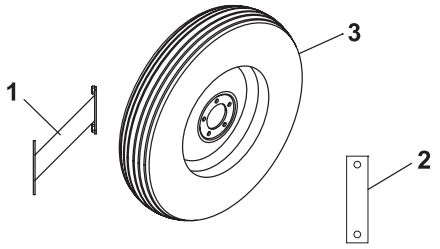
ITEM #	PART #	DESCRIPTION	QTY.
1	685673	PIN, MALE	9
2	685671	CONNECTOR 9P,MALE	1
3	660287	CORD RETRACT 14/7	1
4	663870	CONNECTOR 3P FEMALE	4
5	663880	DUST CAP W/CHAIN	4
6	C48300108	JUNCTION BOX	1
7	680190	BOX COVER 2GANG W/GASKET	1
8	852800	DECAL: CAUTION TIGHTEN FIXTURE CONNECTOR	1
9	680080	GRIP-HUBBLE	1
10	720440	WEATHERSTRIP ADHESIVE	AR
11	CR58C012	COIL CORD BULKHEAD	1
12	112555	JUNCTION BOX, COMPLETE WITH COIL CORD includes 1-11	1
13	112575	COIL CORD ASSEMBLY (Includes items 1, 2 and 3)	1

TRAILER HITCHES

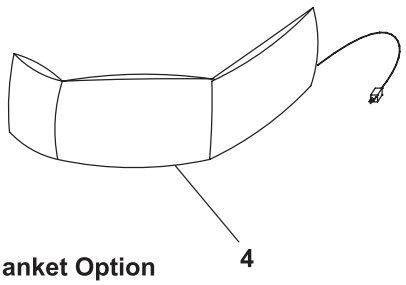


ITEM #	PART #	DESCRIPTION	QTY.
1	940000	KIT: COMBO HITCH, includes items 2-6	1
2	840120	COUPLER, 2", BOLT ON	1
3	176336	COMBO HITCH SIDE SPACER	2
4	176335	COMBO HITCH SIDE PLATE	2
5	840470	BALL, 2"	1
6	121572	COMBO HITCH RING, 16" LONG	1
7	213770	RING HITCH BOLT-ON, 2-1/2 ID	1
8	124450	ADJUSTABLE HEIGHT HITCH, 24"	1
9	221580	ADJUSTABLE HEIGHT HITCH, 18" TO 36"	1
10	211410	RING HITCH FOR ADJ. HEIGHT HITCH, 2 1/2" ID	1
11	841200	RING HITCH FOR ADJ. HEIGHT HITCH, 3" ID	1

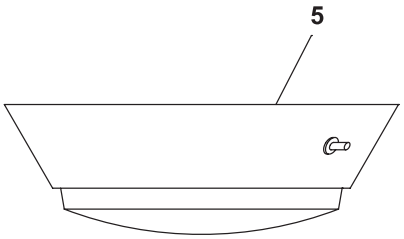
AL4000 OPTIONS



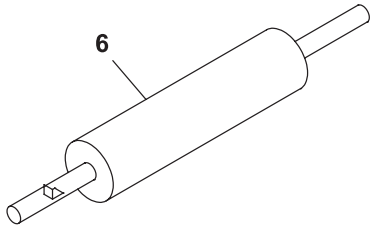
Tire Mount Option



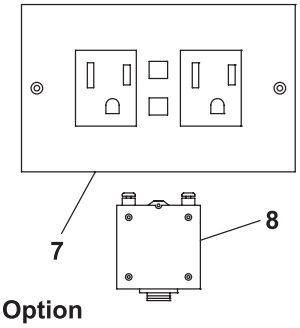
Battery Blanket Option



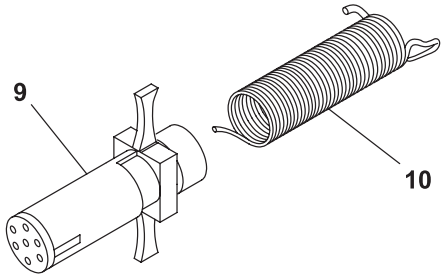
Dome Light Option



Fuel Heater Option



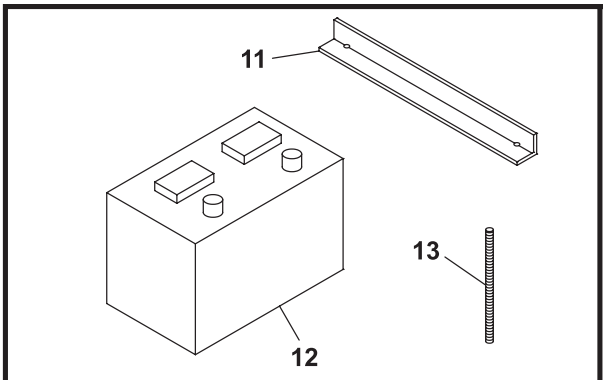
Extra GFI Option



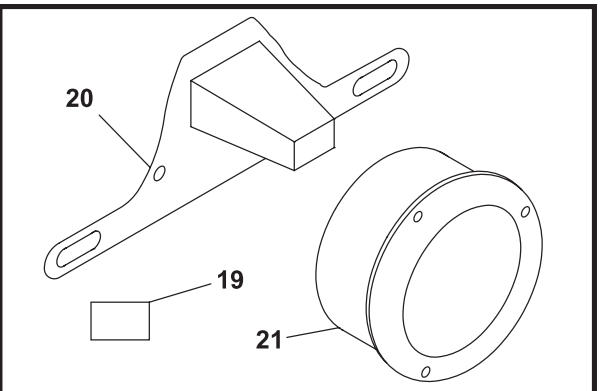
7 Pin Plug Option

ITEM #	PARTS #	DESCRIPTION	QTY.
1	124310	SPARE TIRE MOUNT 5-LUG WHEEL	1
2	188070	CLAMP,SPARE TIRE BRKT,TONGUE MNT.	2
3	841060	TIRE & WHEEL MOUNTED P205/75-15 LOAD-B	1
4	160530	BATTERY BLANKET THERMO 284-4001 36"LG	1
5	684030	LIGHT DOME WITH SWITCH	1
6	741690	FUEL LINE HEATER, DIESEL,12V,150W	1
7	684640	RECEPTACLE 20A 120V DUPLEX W/GFI	1
8	683970	BREAKER MINI 1P 20A	1
9	663400	CONNECTOR TAIL LIGHT 7 POLE	1
10	663405	CONNECTOR,TAIL LIGHT,7 POLE CABLE GUARD	1

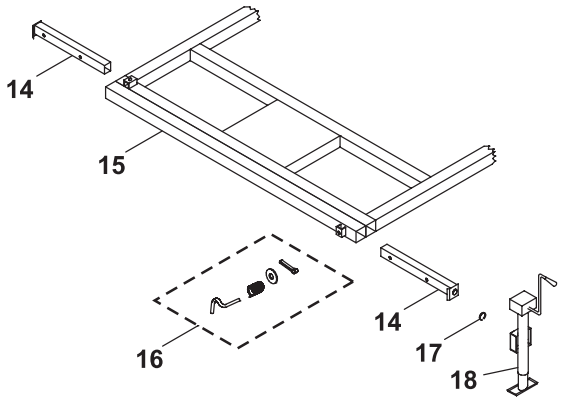
AL4000 OPTIONS (CONTINUED)



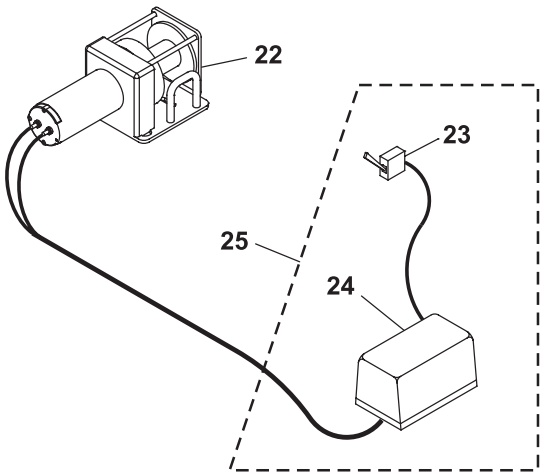
Battery 700 Amp Option



Stop, Tail, Turn and Tag Light Option



Four Outriggers and Jacks Option



Electric Winch, 12 V DC Option

ITEM #	PARTS #	DESCRIPTION	QTY.
11	174170	BATTERY HOLDOWN ANGLE 14.50	1
12	161085	BATTERY, WET, 12V GR24, 700 AMP HEAVY-DUTY L/A	1
13	182331	BATTERY HOLD-DOWN ROD,1/4X11-1/4	2
14	110040	OUTRIGGER 2X2X30	2
15	124412	TRAILER FRAME,41X70, FOR EXTRA OUTRIGGERS	1
16	109150	KIT: OUTRIGGER PLUNGER PIN ASSY	2
17	840222	JACK SNAP RING	2
18	841430	JACK SIDEWIND LONG 3000 LB	2
19	663525	LIGHT,SIDE MARKER, AMBER	2
20	663520	LIGHT LICENSE TAG W/BRKT	1
21	663840	LIGHT TRAILER RECESSED, STOP, TURN, TAIL	2
22	160992	WINCH W/O CABLE	1
23	663780	SWITCH TOGGLE 1P 2T MOMENTARY 20ADC	1
24	160993	WINCH SOLENOID PACKAGE	1
25	113583	WINCH SWITCH WITH SOLENOID (includes items 23 and 24)	1