

**EFFECTIVE SERIAL NO. 370152-001-AM-2-00**

# **OWNERS MANUAL ECONO-TON III**

**REVISION 2/2000**

PART NO. 999956

**SERIAL NO.** \_\_\_\_\_

## **AUTO CRANE COMPANY**

PO BOX 580697, TULSA, OK 74158-0697

4707 N. MINGO ROAD, TULSA, OK 74117

PHONE (918) 836-0463

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**!! DISTRIBUTORS !!**

**PROTECT YOUR CUSTOMER'S WARRANTY!  
SUBMIT DELIVERY REPORT WITHIN 15 DAYS.**

Mail to: Auto Crane Company  
P.O. Box 580697  
Tulsa, OK 74158-0697

Or Fax to: 918/834-5979

Protect your customers warranty - Submit within 15 days from delivery date.



**AUTO CRANE COMPANY**

**DISTRIBUTOR  
DELIVERY REPORT**

DISTRIBUTOR _____		OWNER _____	
ADDRESS _____		CITY/STATE _____	
CITY/STATE/ZIP _____		BUSINESS _____	
MODEL #	SERIAL #	DATE DELIVERED	UNIT DESTINATION

**IMPORTANT: ATTACH SIGNED COPY OF CUSTOMER INVOICE / DELIVERY RECEIPT**

AC-109 REPORT AUTHORIZED BY: \_\_\_\_\_

**\* REGISTER ONE UNIT ONLY PER CARD \***

# ***WARNINGS - READ THIS PAGE!***

**WARNING!** Federal law (49 cfr part 571) requires that the Final Stage Manufacturer of a vehicle certify that the vehicle complies with all applicable federal regulations. Any modifications performed on the vehicle prior to the final stage are also considered intermediate stage manufacturing and must be certified as to compliance. The installer of this crane and body is considered one of the manufacturers of the vehicle. As such a manufacturer, the installer is responsible for compliance with all applicable federal and state regulations, and is required to certify that the vehicle is in compliance.

**WARNING!** It is the further responsibility of the installer to comply with the OSHA Truck Crane Stability Requirements as specified by 29 CFR part 1910.180 (C) (1).

**WARNING! NEVER OPERATE THE CRANE NEAR ELECTRICAL POWER LINES!** Death or serious injury will result from boom, line, or load contacting electric lines. Do not use crane within 10 feet (3.05m) of electric power lines carrying up to 50,000 volts. One foot additional clearance is required for every additional 30,000 volts or less.

**WARNING! NEVER .....**

- v **EXCEED** load chart capacities (centerline of rotation to hoist hook).
- v un-reel last 5 wraps of cable from drum!
- v wrap cable around load!
- v attempt to lift or drag a load from the side! The boom can fail far below its rated capacity.
- v weld, modify, or use unauthorized components on any Auto Crane unit! This will void any warranty or liability. Also failure of the crane may result.
- v place a chain link on the tip of the hook and try to lift a load!
- v use a sling bar or anything larger than the hook throat that could prevent the hook latch from closing, thus negating the safety feature!
- v hold on any pendant Select Switch that will cause unsafe operating conditions!

**WARNING!** In using a hook with latch, **ALWAYS** make sure that the hook throat is closed before lifting a load! Proper attention and common sense applied to the use of the hoist hook and various slings will prevent possible damage to material being hoisted and may prevent injury to personnel.

**WARNING!** Failure to correctly plumb and wire crane can cause inadvertent operation and damage to crane and/or personnel!

**WARNING!** Auto Crane Company remote controlled cranes are not designed or intended to be used for any applications involving the lifting or moving of personnel.

**WARNING! ALWAYS** operate the crane in compliance with the load capacity chart. **Do not use** the overload shutdown device to determine maximum rated loads, if your crane is equipped with this type of device.

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# ***INTRODUCTION***

## ***ECONO-TON III***

Auto Crane products are designed to provide many years of safe, trouble-free, dependable service when properly used and maintained.

To assist you in obtaining the best service from your crane and to avoid untimely crane and/or vehicle failure, this manual provides the following operating and service instructions. It is **specifically recommended** that all operating and service personnel consider this manual as mandatory material for reading and study before operating or servicing Auto crane products. It is **highly recommended** that crane owners, equipment managers and supervisors also read this manual.

Auto Crane has incorporated several safety features in the Econo-Ton III series for your protection. The material and electrical systems were designed to minimize weight and lengthen durability.

For your convenience the overall dimensions of the Econo-Ton III series crane are on the General Dimension Drawing. Maximum turning radius is shown on the drawing as a distance from the center line of the crane rotation to the outside edge of the winch and on the power rotation model, the outside edge of the rotation motor .

Remember, the crane adds weight to the vehicle. Adding weight may change the driving and riding characteristics of the vehicle unless the appropriate overload spring(s) are installed on the truck. The payload of the vehicle is reduced by the weight of the crane. The operator should exercise care when loading the vehicle. Distributing the payload on the vehicle evenly will greatly improve the driving and riding characteristics of the vehicle.

The Econo-Ton III series cranes are attached directly to your 12 volt truck electrical system. The power cable and retaining clips are included with the crane. A typical power cable mounting and hookup is shown on page 2-5.0.0. The performance of your new crane depends on the truck electrical system. The use of the low maintenance battery is not recommended for use on any Auto Crane product. The recommended alternator and battery that will give the longest life with the most useful duty cycle is a 60 amp. alternator with a 120 minute reserve capacity, deep cycle battery. These specifications should be considered minimum.

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**Auto Crane Company issues a limited warranty certificate with each unit sold. See last page for warranty policy.**

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It has always been Auto Crane Company policy to handle all warranty claims we receive as promptly as

possible. If a warranty claim involves discrepant material or workmanship, Auto Crane will take immediate corrective action. It is understandable that Auto Crane company cannot assume responsibility of liability when it is obvious that our products have been abused, mis-used, overloaded or otherwise damaged by inexperienced persons trying to operate the equipment without reading the manual.

***Auto Crane will not assume responsibility or liability for any modifications or changes made to unit, or installation of component parts done without authorization.***

Auto Crane maintains a strong distributor network and a knowledgeable Customer Service Department. In most cases, an equipment problem is solved via phone conversation with our customer service department. The customer service department also has the ability to bring a local distributor, a regional sales manager, or a factory serviceman into the solution of an equipment problem. If, through no fault of Auto crane company, it is necessary to send an experienced factory serviceman on a field service call, the rates stated in the Auto Crane Distributor's Flat Rate Manual will apply.

Auto Crane Company's extensive Research and Development Program allow our customers to use the best equipment on the market. Our Engineering Staff and our knowledgeable sales people, are always available to our customers in solving crane and winch-type application problems. When in doubt, call the Auto Crane factory.

### **DISTRIBUTOR ASSISTANCE:**

Should you require any assistance not given in this manual, we recommend that you consult your nearest Auto Crane Distributor. Our distributors sell authorized parts and have service departments that can solve almost any needed repair.

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***NOTE: THIS MANUAL SHOULD REMAIN WITH THE CRANE AT ALL TIMES.***

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This manual does not cover all maintenance, operating, or repair instructions pertinent to all possible situations. If you require additional information, please contact the **Auto Crane Company** at the following telephone number: **(918) 836-0463**. The information contained in the manual is in effect at the time of this printing. Auto Crane Company reserves the right to update this material without notice or obligation.

# **--- IMPORTANT ---**

## **OPERATING PRACTICES & WARNINGS**

1. Make certain the vehicle meets minimum chassis requirements. (These requirements do not guarantee unit stability)
2. Make certain the crane is installed per factory specifications. Contact your local Distributor or the Auto Crane factory if any questions arise.
3. Keep the vehicle in as level a position as possible while loading or unloading.
4. **ALWAYS** set the vehicle emergency brake before beginning crane operations.
5. **ALWAYS** use outriggers from vehicle to the ground during crane operation. Make sure they are firmly positioned on solid footings.
6. All load ratings are based on crane capacity, **NOT** truck/crane stability.
7. Keep objects and personnel clear of crane path during operation.
8. Keep hoist cable pulled tight at all times.
9. **REMEMBER**, in lifting a heavy load, the weight can create enough tipping momentum to overturn the vehicle.
10. **ALWAYS** keep load as close to ground as possible.
11. Oil gears as required.
12. Periodic adjustment of hoist worm brake may be required (see automatic safety brake drawing in this manual).
13. Hydraulic hoses need to be inspected frequently for signs of deterioration, and be replaced as required.
14. The hoist hook is an important item that an operator should consider and use properly. It should be checked on a daily basis for distortion or cracks.
15. **ALWAYS** store outriggers before road travel.
16. **WARNING! NEVER OPERATE THE CRANE NEAR ELECTRICAL POWER LINES!** Death or serious injury will result from boom, line, or load contacting electric lines. Do not use crane within 10 feet (3.05m) of electric power lines carrying up to 50,000 volts. One foot additional clearance is required for every additional 30,000 volts or less.
17. **WARNING! NEVER EXCEED** load chart capacities (centerline of rotation to hoist hook).
18. **WARNING! NEVER** un-reel last 5 wraps of cable from drum!
19. **WARNING! NEVER** wrap cable around load!
20. **WARNING! NEVER** attempt to lift or drag a load from the side! The boom can fail far below its rated capacity.
21. **WARNING! NEVER** weld, modify, or use unauthorized components on any Auto Crane unit! This will void any warranty or liability. Also failure of the crane may result.
22. **WARNING! NEVER** place a chain link on the tip of the hook and try to lift a load!
23. **WARNING! NEVER** use a sling bar or anything larger than the hook throat that could prevent the hook latch from closing, thus negating the safety feature!
24. **WARNING!** In using a hook with latch, **ALWAYS** insure that the hook throat is closed before lifting a load! Proper attention and common sense applied to the use of the hoist hook and various slings will prevent possible damage to material being hoisted and may prevent injury to personnel.
25. **WARNING! NEVER** hold any pendant Select Switch on that will cause unsafe operating conditions!

## **WARNING!**

**Auto Crane Company remote controlled, stiff boom cranes are not designed or intended to be used for any applications involving the lifting or moving of personnel.**

## ***--- IMPORTANT --- OPERATION OF UNIT***

26. Make sure this manual has been thoroughly read by all crane operating personnel and supervisors.
27. A routine inspection of the crane should be mandatory before each operating day. Any defects should be corrected immediately.
28. At a job site the vehicle should be positioned so that the crane can adequately reach the load within the rated capacity (centerline of rotation to hoist hook).
29. Keep the vehicle as level as possible during operation.
30. For electric cranes, **engage emergency brake** and leave ignition on with transmission in neutral (or in park for automatic transmissions). Activate any crane power switches. For Auto Crane units requiring battery and hydraulic operation, **engage emergency brake**, place gear selector in neutral, press clutch, activate PTO, release clutch and after hydraulic fluid is warm, set throttle control to proper engine speed.
31. Always use outriggers from the truck to the ground. Be sure these are firm and adequately positioned. When rotating, **keep load as low to the ground as possible**.
32. Remove pendant control from cab or storage area. On smaller units, plug pendant into receptacle on crane. On larger units, remove pendant control from guard and unwrap cable from boom. Do not operate crane until cable is unwound completely. On all cranes, detach hook from dead man. Crane is now ready for operation.
33. Always boom up before rotating so the boom will clear the required boom support.
34. When extending the boom, always maintain clearance between the boom crown and the traveling block or hoist hook.
35. Always observe safe and practical operation to avoid possible accidents. Refer to Safety Tips and Precautions.
36. After completing lifting operations, return the boom to stowed position on the boom support. Avoid unneeded pressure on the boom support.
37. Store pendant control on proper location (in cab or on crane).
38. Return outriggers to stowed position. Make sure they are pinned in place or jacklegs are returned to compartment.
39. Check work area for any tools or equipment not stored.
40. Release throttle control, depress clutch and disengage PTO. Deactivate any crane power switches.
41. Report any unusual occurrence during crane operation that may indicate required maintenance or repair.
42. **NEVER** use two cranes to support a load too large for either crane.
43. Spray all electrical equipment with special corrosion resistant coating. This eliminates rust or corrosion due to melting and freezing action of condensation.

## ***OPERATION OF OUTRIGGERS***

For hydraulic outriggers:

1. Shift crane/outrigger control valve to "outrigger" position.
2. While operating the outrigger control valves (located on the outrigger cylinders) simultaneously operate the boom-up control switch. This will allow the hydraulic system to build pressure.
3. After outriggers are positioned, return crane/outrigger selector to "crane" position.
4. Crane is now ready to operate.

For manual outriggers:

1. Pull lock pins to release jack leg or drop down outrigger and move to outermost lock position.
2. Make sure lock pins are reinstalled properly.
3. Lower outrigger pad to firm ground and adjust foot to take out slack.
4. Crane is now ready to operate.

# MAINTENANCE OF BATTERIES

Maintenance of Auto Crane unit batteries differs very little from the generally prescribed maintenance of any lead acid battery. All batteries must be kept *properly charged, properly filled with water, and relatively clean.*

## Keep Properly Charged

Many things affect the proper charge to a battery, such as:

- 1 Regulator settings
- 2 Proper tightness of belts on the alternator or generator
- 3 Good, clean connections of all cables and wires at the following places:
  - A. Battery
  - B. Regulator
  - C. Starting motor
  - D. Alternator or generator
  - E. Ground connections (most important)

It is of extreme importance to keep the battery as fully charged as possible without overcharging, especially when vehicles are left outside for extended periods in extremely cold climates. A battery *can* freeze. Freezing points for various specific gravities of acid are as follows:

Specific Gravity (Corrected to 80°F)	Freezing Temp. Degrees F.
1.280	-90°F
1.250	-62°F
1.200	-16°F
1.150	5°F
1.100	19°F

As shown, a half-charged battery (about 1.200 specific gravity) cannot stand for any length of time at 20°F or it will freeze.

The *main reason* for keeping the battery as fully charged as possible without over-charging is to ensure that power is available even though the vehicle has been standing for some time.

## Keep Properly Filled with Water

The battery should *always* be properly filled with water. If the electrolyte level is allowed to fall below the top of the plates, the results become threefold:

- 1 The exposed portion of the plate will become sulfated.
- 2 The portion of the plate exposed is not usable.
- 3 That portion of the acid remaining becomes more concentrated and may cause more rapid deterioration of the remaining parts of the battery.

## Keep A Relatively Clean Battery

The battery should be kept clean. Batteries filled with acid and which are not in use self-discharge to a limited degree because of the nature of the materials within the battery. If dirt is allowed to collect on the top of the battery (and this dirt absorbs moisture) and electrical path can be set up between the various terminals of the battery and the ground. Once such a path has been established, the self-discharge of the battery is accelerated. This also accelerates corrosion of the battery cables at the terminals.

## Periodic Maintenance is Needed

A definite program of periodic maintenance of all batteries should be conducted on a regular basis. Periodic maintenance includes:

- 1 Checking belts for tightness on the charging equipment
- 2 Checking battery electrolyte levels
- 3 Checking cables for good connections
- 4 Cleaning where corrosion is apparent

When corrosion is cleaned off, the cable terminals and battery terminals should be coated with a light coating of petroleum jelly before they are replaced. When terminals are cleaned, the top of the battery should be cleaned with a mild solution of soda water.



# ***MAINTENANCE OF BATTERIES***

## **Low Maintenance Batteries (Maintenance Free)**

**Low maintenance batteries should not be used on Auto Cranes or trucks equipped with Auto Cranes. The batteries are not designed for "deep" discharge.**

## **Testing Your Battery**

If the condition of the battery is in question, it should be removed from the vehicle, taken to the shop, and allowed to reach room temperature. It should then be recharged until specific gravity readings taken at one-half hour intervals. If the specific gravity readings are fairly uniform, the battery should be checked with a high rate tester. Use the tester in accordance with the manufacturer's instructions. The high rate tester is the best method to test a questionable battery.

If, after charging, it is noted that the specific gravity reading of one cell is 30 points less than any of the other cells, it may be assumed that the cell is bad and that the battery should be replaced. If all cells are uniform but not up to full charge, a low rate of charge

should be attempted for an extended time. This usually will recover a badly sulfated battery.

## **Replacing a Battery**

If it is necessary to replace a battery, and a dry charge battery is used, the following procedure applies:

- 1 Fill the battery with electrolyte of the proper specific gravity.
- 2 Place the battery on charge according to the manufacturer's instructions.

It is essential that the second step above be followed to ensure that the battery going on the vehicle is fully charged.

It is also very important that the battery hold-downs be checked periodically to ensure that the batteries are properly positioned to avoid vibration problems, breakage of cables or terminals. Care must be taken to avoid cracking or breaking containers or covers by tightening hold-down fixtures excessively. They also must not be so loose that breakage results from a hold-down that is too loose.

# ***LIFE OF WIRE LINE***

So many variable factors can cause the deterioration of wire line cable that it is not possible to determine a definite life expectancy. Some of these factors are:

- **Load being handled.**
- **Corrosive conditions.**
- **Maintenance of the unit:**
  - Keep the sheaves turning freely.
  - Maintain tension on cable to insure proper spooling.
  - Avoid kinks in cable.
  - Avoid abrasive action and contact with sharp corner.
- **Frequency of use.**

Auto Crane units, up to 2,400 pound ratings use 3/16 inch diameter galvanized pre-formed 7 x 19 aircraft cable. This cable has a working strength, when new, of 4,200 pounds. It is recommended when 1,200 pound loads are exceeded to use a two part line with a traveling block. This will ensure a 3.5 to 1 safety factor when the cable is new.

Keeping the above factor of safety in mind and knowing the kind of loads that will be handled, the user can determine by inspection of the cable as to when it should be replaced.

**Items to look for while inspecting the cables are:**

- Broken strands.
- Kinks and flattened sections.
- Corrosion and abrasion.

# ***WIRE LINE LUBRICATION***

**Lubrication of the wire line serves two important purposes:**

- Prevent corrosion.
- Reduce wear due to flexing and abrasion caused by contact with the sheaves, rollers, and cable on the drum.

## **Preparation**

Remove rust and foreign matter with a wire brush and wipe clean. Be sure cable is dry.

## **Application**

Method 1: Dip a brush into a light weight motor oil and apply. In some cases, dip a rag or a piece of sheepskin into the lubricant and swab the lubricant on to the rope.

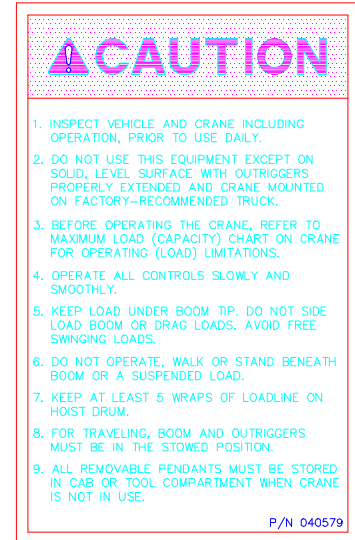
Method 2: Apply a heavier lubricant such as a grease gun lubricant with hands while wearing leather gloves. (Leather gloves give greater protection and less penetration of the grease than canvas gloves.)

# ***SAFETY DECAL SECTION***

## ***ECONO-TON III***

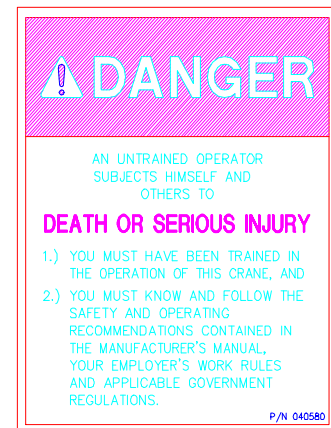
<b>PART NO.:</b>	<b>040579</b>
<b>DECAL:</b>	<b>OPERATION INSTRUCTIONS</b>
<b>FUNCTION:</b>	<b>To inform the operator of the proper procedure to follow for safe operation of the crane.</b>
<b>USED ON:</b>	<b>Econo-Ton III &amp; All Cranes</b>
<b>QUANTITY:</b>	<b>2</b>
<b>PLACEMENT:</b>	<b>Pedestal, Back Side</b>

**FIG. 1.**



<b>PART NO.:</b>	<b>040580</b>
<b>DECAL:</b>	<b>OPERATOR TRAINING</b>
<b>FUNCTION:</b>	<b>To inform the operator of the need to receive proper training before using the crane.</b>
<b>USED ON:</b>	<b>Econo-Ton III &amp; All Cranes</b>
<b>QUANTITY:</b>	<b>1</b>
<b>PLACEMENT:</b>	<b>Pedestal, Back Side</b>

**FIG. 2.**



# ***SAFETY DECAL SECTION***

## ***ECONO-TON III***

<b>PART NO.:</b>	<b>040630</b>
<b>DECAL:</b>	<b>STAY CLEAR OF LOAD</b>
<b>FUNCTION:</b>	To inform the operator of the hazzard of proximity or contact with the crane load during operation.
<b>USED ON:</b>	Econo-Ton III & All cranes
<b>QUANTITY:</b>	2
<b>PLACEMENT:</b>	Side of Traveling Block



**FIG. 3.**

# ASSEMBLY & INSTALLATION INSTRUCTIONS

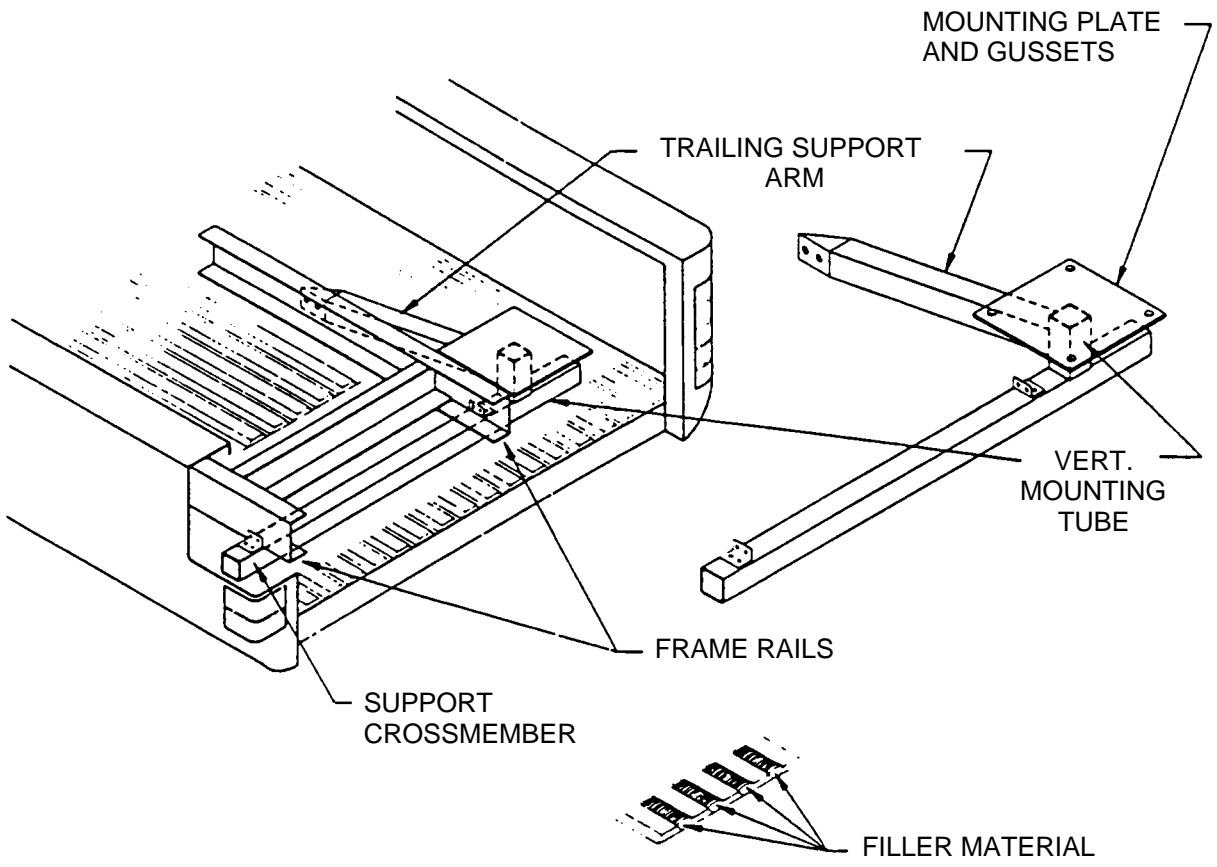
## ECONO-TON III SERIES

The Econo-Ton III cranes are shipped in one major assembly. The following is a suggested method for installation of the Econo-Ton III crane:

- 1 Remove the crane from the packing crate and locate on the truck bed in the desired position, checking for proper clearance.
- 2 If the floor is made of wood, it may be desirable to install a 3/8" plate approximately six to eight inches larger than the base plate on top of the wooden deck. If the floor is heavy metal and ribbed, no metal plate will be required under the crane base plate. Fillers should be installed to level the ribbed floor if required. The crane may now be placed in position and the base plate may be used as a template to drill the mounting holes through the truck bed and additional plates if used. Refer to Pages 2-4.0.0 and 2-4.1.0 for a typical installation.
- 3 Each truck has its own unique mounting difficulties. The mount and additional bracing should be constructed so the combined crane load of 5000 ft lbs and a vertical load of 1000 lbs will be directed over the largest area possible. Install a brace which crosses both frame rails and is bolted to the frame as shown in the drawing. This brace may be square tubing and should extend out to both sides of the truck and may be used as pocket for an outrigger, stabilizer, or jack leg holder. Add others structural members as required, including the back-up assembly which has been pre-drilled to match the crane mounting holes. Bolt the crane in place.
- 4 Route the long cable (power cable) under the truck and to the positive pole on the starter solenoid. Tie the power cables with insulated straps to the truck frame and other members as required. Avoid the area of the exhaust system when routing the cable.
- 5 Pin boom in working position.
- 6 Attach the removable pendant control cable and test the crane for power functions.
- 7 With jack legs or outriggers installed, pick up a load of 1000 pounds and manually rotate this load approximately 180° to insure that the crane is sufficiently supported and correctly installed. Further reinforcement of the truck bed may be added if required.
- 8 Store boom during travel. See page 2-6.0.0 for illustration.
- 9 ALWAYS remove pendant when traveling.

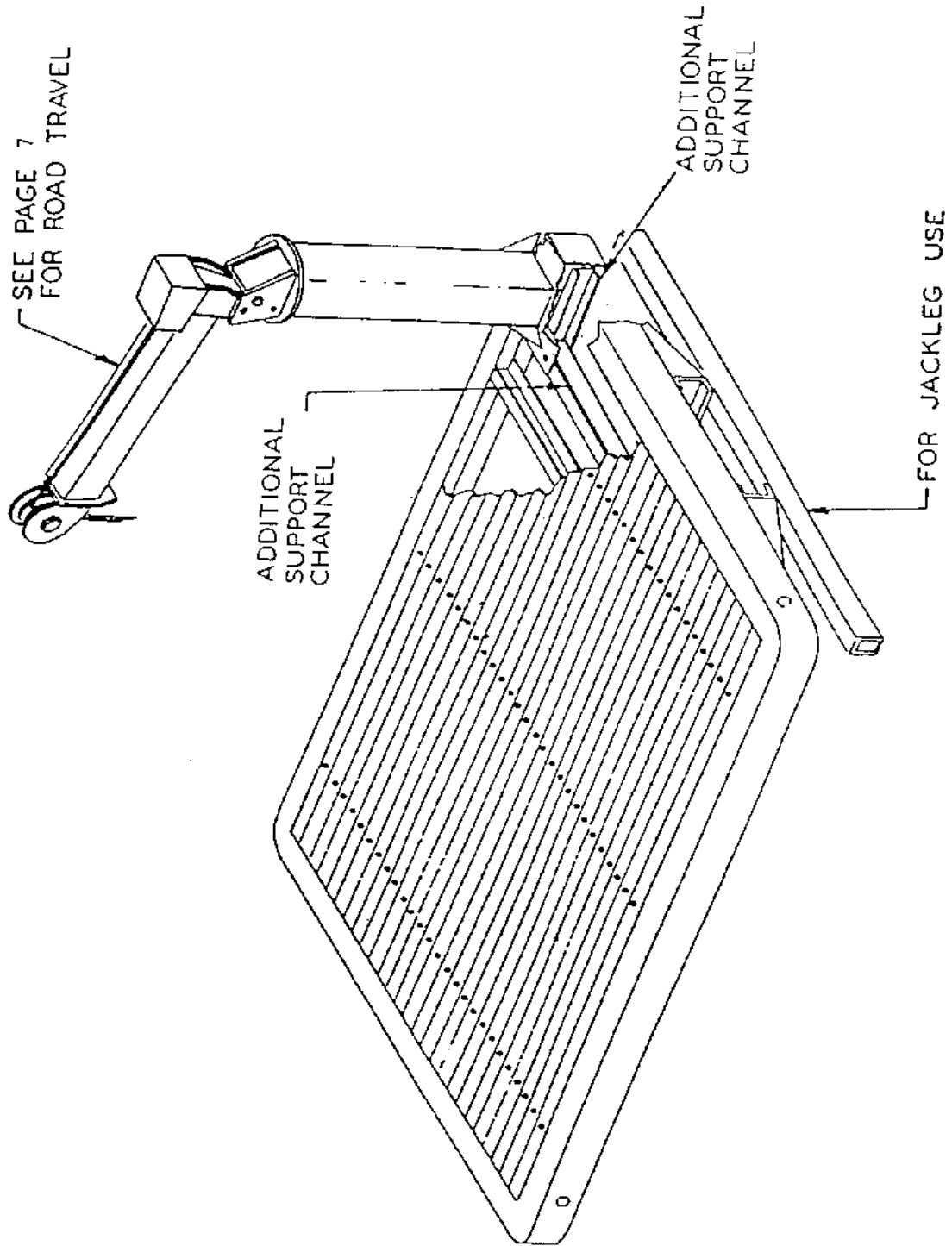
# ***INSTALLATION INSTRUCTIONS***

## ***ECONO-TON III***



# INSTALLATION INSTRUCTIONS

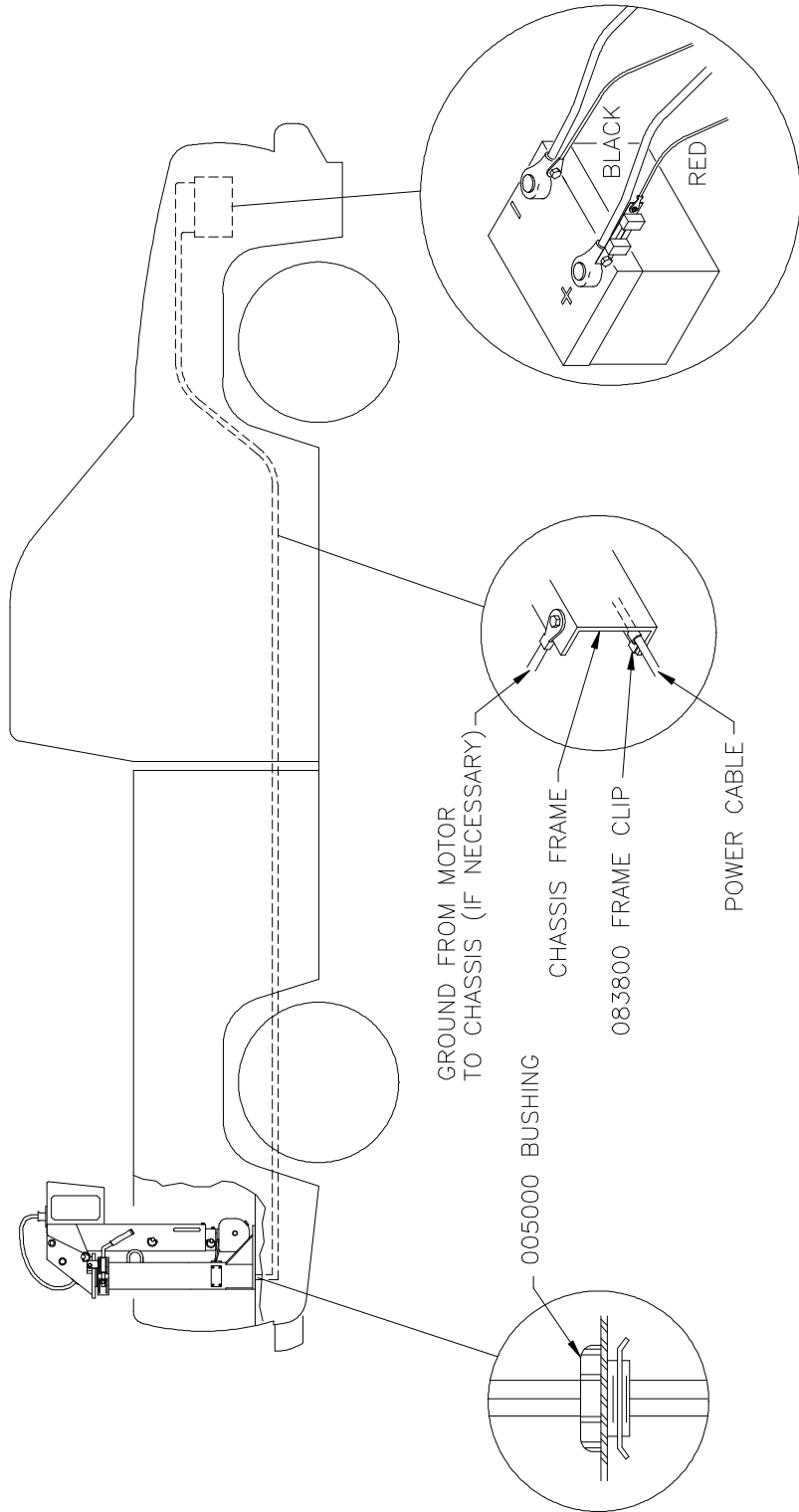
## ECONO-TON III FLATBED



# INSTALLATION BATTERY

## ECONO-TON III

1. DRILL 13/16 HOLE IN FLOOR OF TRUCK BED. INSTALL CABLE AND BUSHING WHICH IS FURNISHED WITH CRANE, AS SHOWN. WRAP ELECTRICAL TAPE AROUND CABLE SO IT WILL BE SNUG IN THE BUSHING.
2. RUN RED POWER CABLE TO POSITIVE BATTERY TERMINAL. CONNECT BLACK CABLE TO NEGATIVE BATTERY TERMINAL OR SUITABLE CHASSIS GROUND POINT. LOCATE CABLES SO THAT THEY WILL BE PROTECTED. AVOID SHARP EDGES. USE THE NO. 083800 FRAME CLIPS PROVIDED TO HOLD CABLES SECURELY IN PLACE.
3. IF THE BATTERY IS GROUNDED TO THE ENGINE IT MAY BE NECESSARY TO ADD AN ADDITIONAL GROUND CABLE FROM THE ENGINE TO THE CHASSIS FRAME TO OBTAIN MAXIMUM POWER AT CRANE.

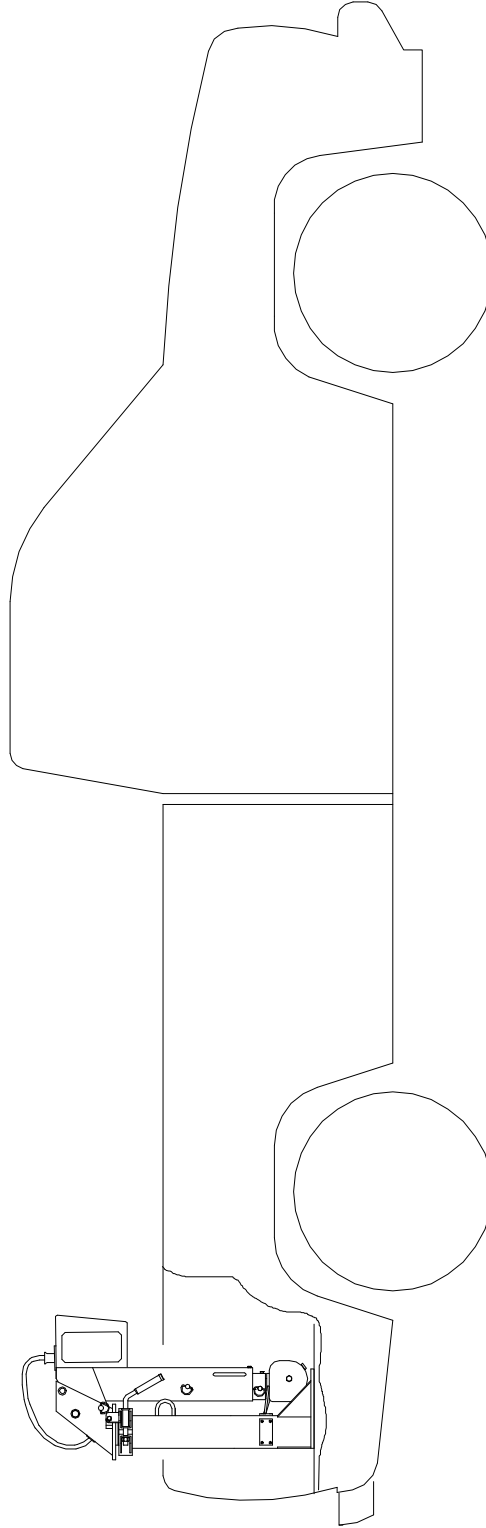




## ***BOOM STOWAGE ECONO-TON III***

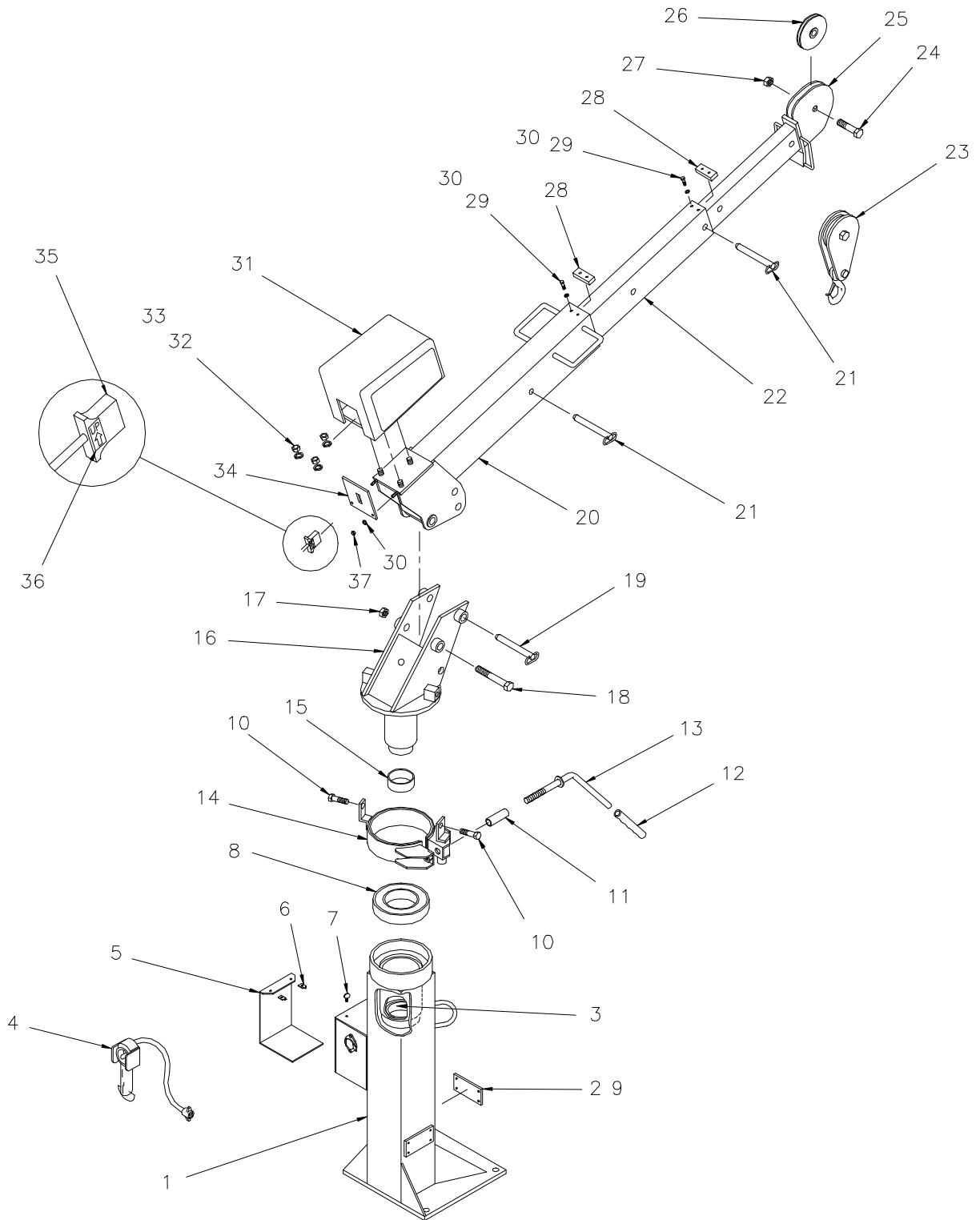
### IMPORTANT!

ALWAYS TRAVEL WITH THE BOOM STOWED  
IN THE FOLDED POSITION, AND THE  
ROTATION BRAKE SET.



# ECONO-TON III

## P/N 370152



***ECONO-TON III***  
***P/N 370152***

<u>ITEM</u>	<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	1	370153	PEDESTAL WELDMENT (SEE NOTE 1)
2	2	371050	BUMP PAD
3	1	370033	BEARING
4	1	370191	PEDANT ASSEMBLY
5	1	371014	FRONT PANEL RELAY COVER
6	2	371079	NUT CLIP ON
7	2	371080	THUMBSCREW
8	1	330192	BEARING
9	8	371085	POP-RIVIT
10	2	011608	SCREW HX HD 1/2NC X 2
11	1	371084	SPACER BRAKE
12	1	272055	HANDLE GRIP
13	1	371048	BRAKE HANDLE
14	1	370156	BRAKE BAND ASSEMBLY
15	1	370034	BEARING RACE
16	1	371056	QUILL ASSEMBLY (SEE NOTE 2)
17	1	018600	NUT HX 3/4NF
18	1	014302	SCREW HX HD 3/4NF X 7
19	1	371044	LOCK PIN
20	1	370162	LOWER BOOM WELDMENT
21	2	371002	LOCK PIN
22	1	370164	MID BOOM
23	1	100300	TRAVELING BLOCK
24	1	012200	SCREW HX HD 5/8NF X 1 3/4
25	1	370166	UPPER BOOM WELDMENT
26	1	227401	SHEAVE ASSEMBLY
27	1	018100	NUT HX LK 5/8NF
28	2	371036	EXTENSION LOCK PAD
29	4	005901	SCREW HX HD 1/4NC X 1/2
30	6	020200	WASHER SP LK 1/4
31	1	370170	WINCH
32	3	017701	NUT HX 1/2NC
33	3	021500	WASHER SP LK 1/2

***ECONO-TON III***  
***P/N 370152***

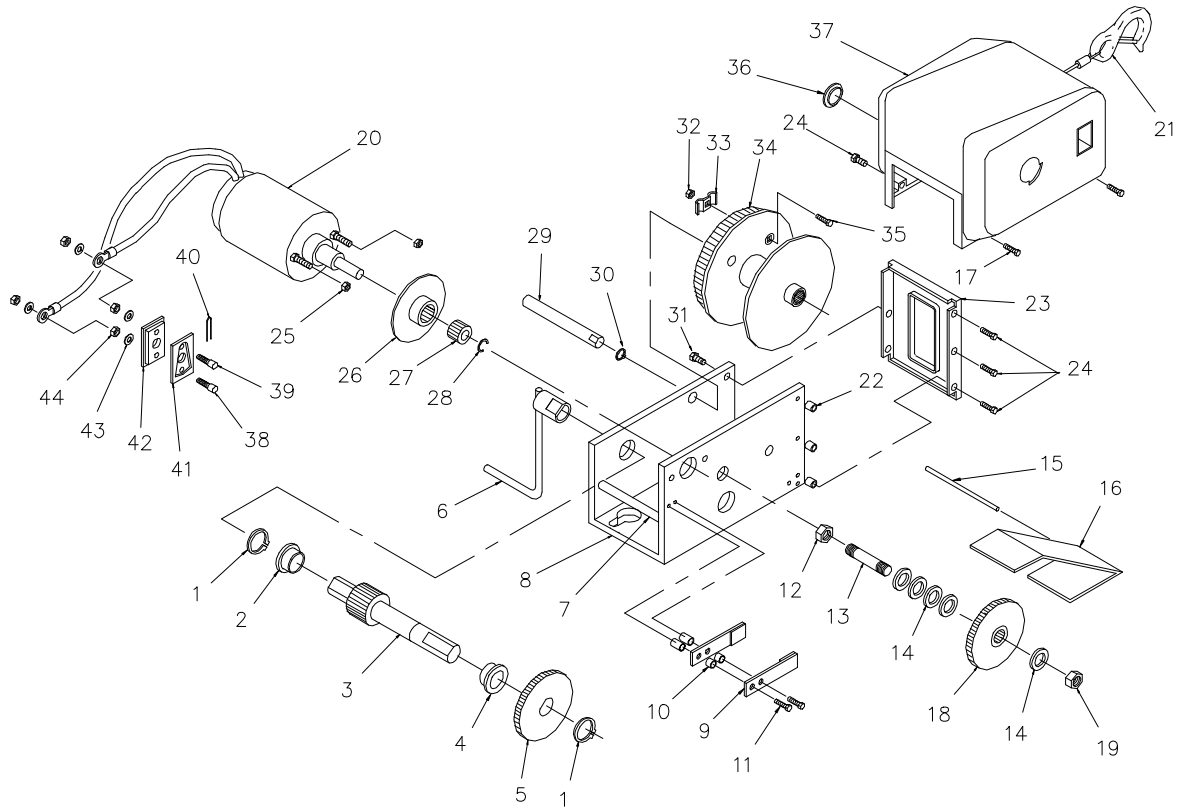
<u>ITEM</u>	<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
34	1	371077	COVER PLATE WINCH
35	1	370180	POWER CONNECTOR PLUG
36	1	371045	DECAL
37	2	015900	NUT HX 1/4NC

**NOTES:**

1. PEDESTAL COMES WITH BEARING 370033 INSTALLED
2. QUILL ASSEMBLY COMES WITH BEARING RACE 370034 INSTALLED

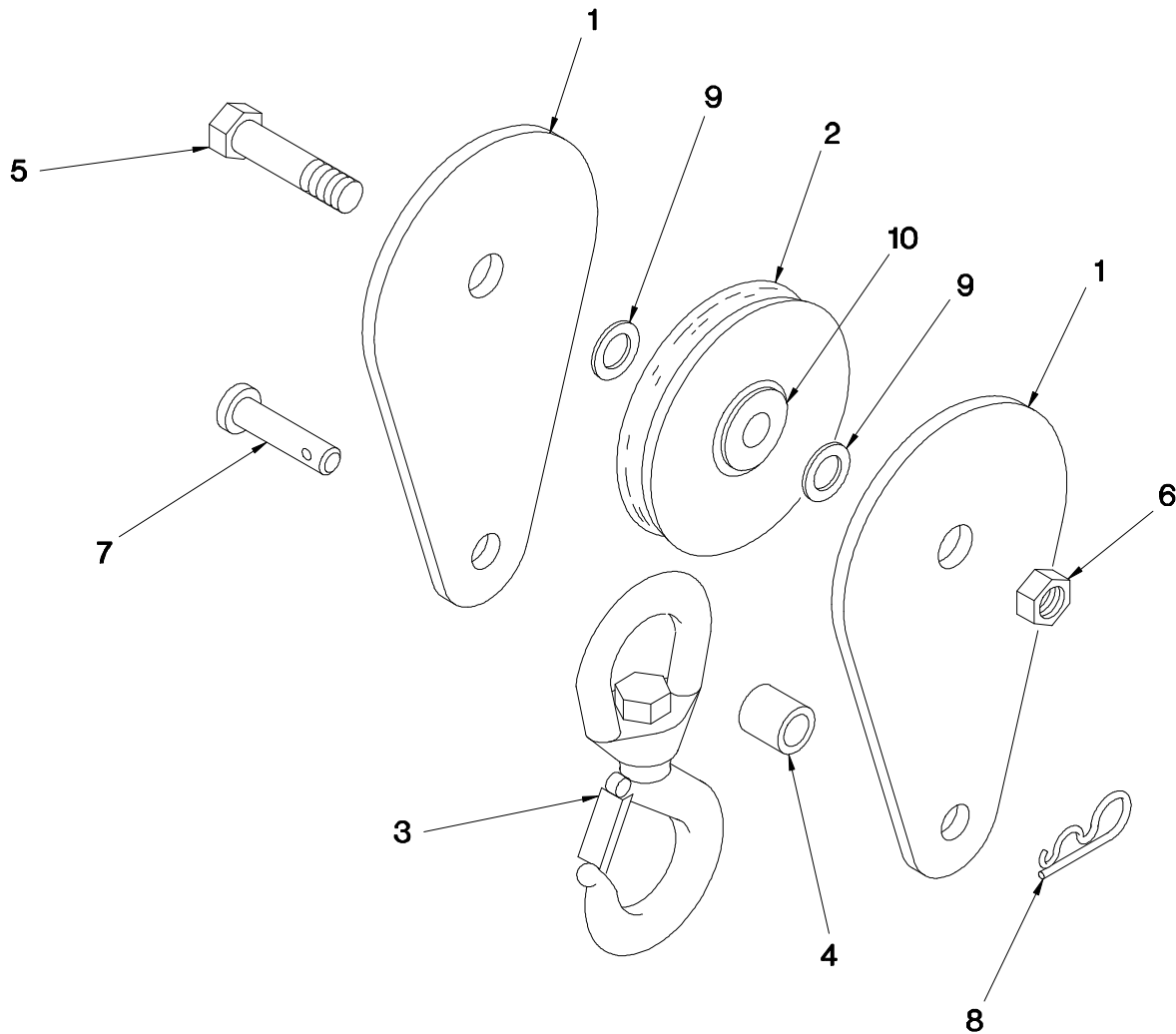
# WINCH ASSEMBLY

P/N: 370170



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	2	272152	RETAINING RING	23	1	370500	FRONT PLATE
2	1	272153	BUSHING	24	5	005500	SCREW, 1/4-20 X 5/8
3	1	370450	DRIVE SHAFT ASSEMBLY	25	2	330022	LOCKNUT, 10-32
4	1	370467	BUSHING	26	1	370458	BRAKE DISC ASSEMBLY
5	1	370451	56T GEAR	27	1	272170	MOTOR PINION
6	1	272155	HANDLE ASSEMBLY	28	1	272171	"E" RING
7	1	370454	BASE SPACER	29	1	370459	REEL SHAFT
8	1	370172	BASE	30	1	370460	RETAINING RING
9	2	272434	BRAKE SPRING ASSEMBLY	31	1	272175	SCREW, 1/4-20 X 1/2
10	1	370173	BRAKE SPRING SPACER	32	1	272179	HEX NUT 1/4-20
11	2	272437	SELF TAP. SCREW 10-32 X 1"	33	1	272180	ROPE CLAMP
12	1	330011	LOCKNUT 7/16-20	34	1	370177	REEL ASSEMBLY
13	1	330012	CLUTCH STUD	35	1	370178	CARRIAGE BOLT
14	5	272502	WASHER	36	1	272508	COVER PLUG
15	1	370174	LEVEL WIND PIN	37	1	370179	COVER
16	1	330019	LEVEL WIND	38	1	370502	BOTTOM CONTACT STUD
17	2	370462	SCREW 1/4-20 X 7/8	39	1	370503	TOP CONTACT STUD
18	1	370175	GEAR ASSEMBLY	40	1	370504	HOUSING SHUNT
19	1	330018	LOCKNUT 1/2-20	41	1	370505	POCKET PLATE, TOP
20	1	370176	MOTOR ASSEMBLY	42	1	370506	POCKET PLATE BOTTOM
21	1	330028	CABLE AND HOOK, 3/16 X 25'	43	4	370507	LOCKWASHER, #8
22	3	370457	FRONT PLATE SPACER	44	4	370508	HEX NUT #8-32

# TRAVELING BLOCK ASSEMBLY



<u>ITEM</u>	<u>QUANTITY</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	2	100303	SIDE PLATE
2	1	200909	SHEAVE ASSEMBLY
3	1	100309	SWIVEL HOOK
4	1	340317	PIPE 1/2 X 2
5	1	013507	SCREW HX 5/8-18 X 2
6	1	018100	NUT HX HLF LK 5/8-18
7	1	330634	PIN
8	2	360124	HITCH PIN
9	1	330100	FLAT WASHER
10	1	200100	BEARING (COMES WITH SHEAVE ASSEMBLY)

# ***MAINTENANCE***

## ***ECONO-TON III***

### **LUBRICATION OF THE ECONO-TON III**

Most bearings on the winch are factory sealed and cannot be greased. Lube winch gear once a month.

The only other place to lube this crane is at the bushings in the base (P/N 272406) of this unit. Wipe a small amount of grease (bearing type) on these bushings or stem that fits into these bushings once a month, depending on use, maybe more often.

### **BRAKE ADJUSTMENT - WINCH**

The brake on this unit consists of two springs with pads on the ends, which rub the brake disc (P/N 272434) on end of the shaft coming out of the motor. This drum works free one way. Then when you hoist down, it works to hold the speed and load. There is no real adjustment of this brake. If you try to bend the springs too much, they will break. These winches come with the brake already installed.

### **CHANGE CABLE**

To change cable, hoist down to the end of the old cable on the drum. There is a small carriage bolt and clamp; loosen the bolt in the clamp to remove the cable. Replace with a new cable passed underneath the clamp. Tighten the bolt securely and re-spool the cable on the drum; maintain a light tension on the cable so the cable will spool properly.

### **LOWER QUILL BEARING**

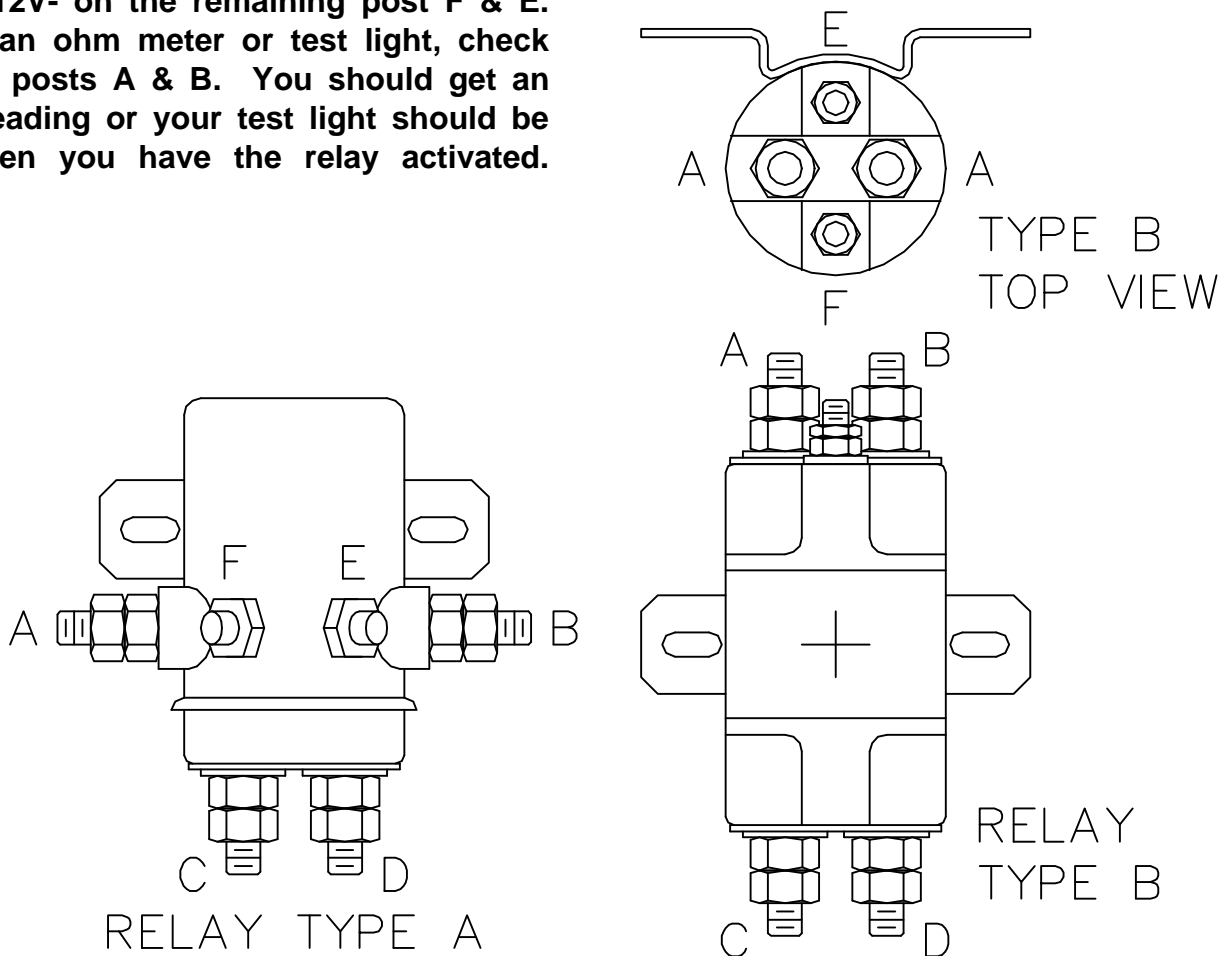
If lower quill bearing (P/N 370033) is to be replaced, press until existing bearing drops to the bottom of pedestal. Press new bearing in until the edge of the bearing is even with the machined edge in the pedestal quill.

# RELAY CHECKING PROCEDURE

**NOTE:** *The following procedure is performed with relays completely disconnected from all wires on motor circuits and ground wires. These circuits can give you false readings sometimes*

Checking a relay on this or any Auto Crane product is done in the same way, but there may be a difference in physical appearance of the relay. Shown below are two types of relays used by Auto Crane. Our relays are normally closed across the bottom posts C & D and normally open across the A & B posts. When activated, they will open across C & D and close across A & B. To activate these relays, use 12V positive and 12V negative wires and place them on posts F & E. You may place 12V+ on post F or E as long as you place 12V- on the remaining post F & E. Using an ohm meter or test light, check across posts A & B. You should get an ohm reading or your test light should be on when you have the relay activated.

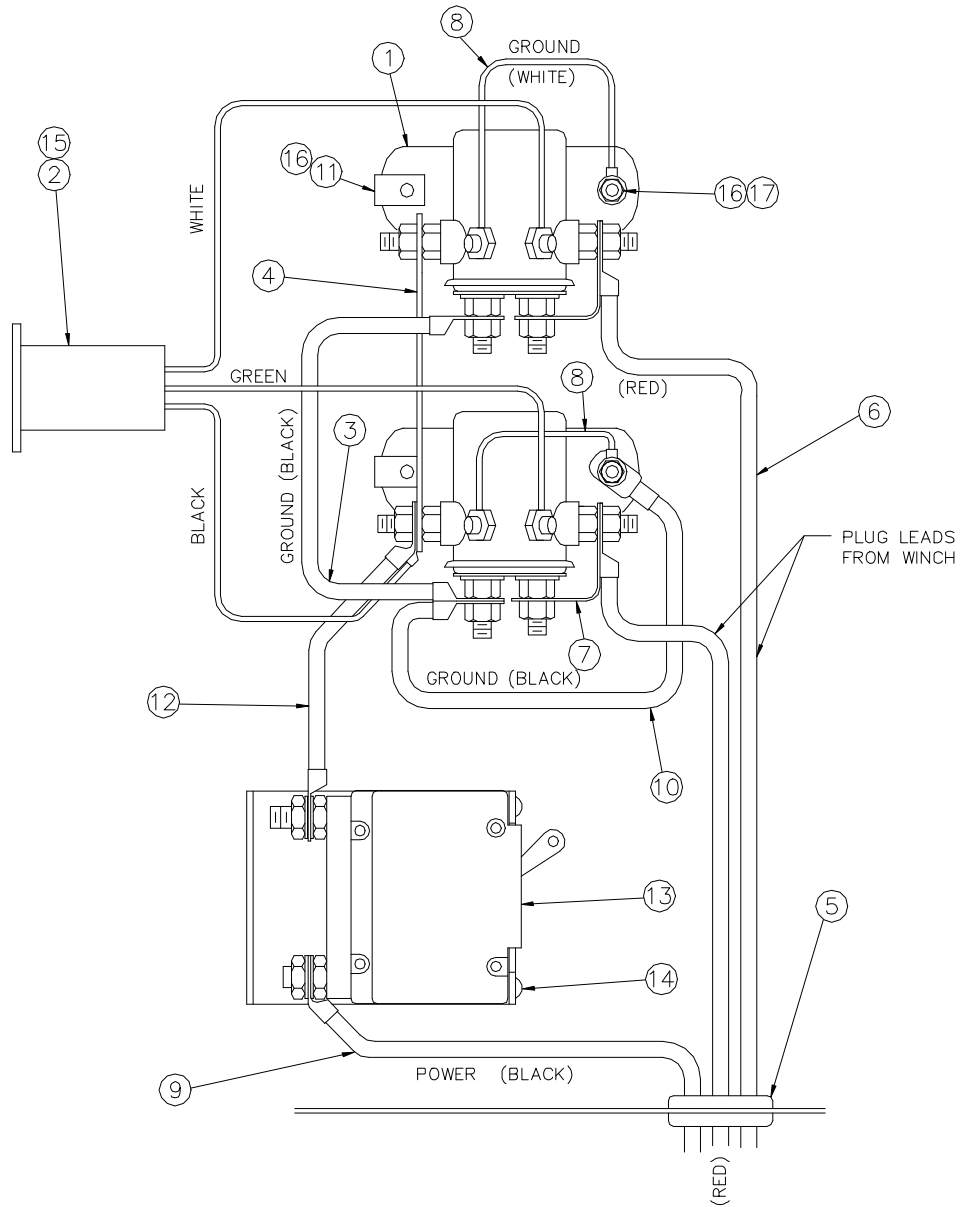
With the relay still activated, check across posts C & D. You should have no ohm reading or test light at this point with relay activated. (At this point, disconnect 12V+ and 12V- from posts F & E. This should let relay return to its normal position. Using your ohm meter or test light again, check the relay across posts A & B. If relay is working correctly, you should have no reading at all. Then check across posts C & D. You should have an ohm reading or test light should be on. If you get the above results, relay is okay. If you get any variation in the above explanation on the relay you are checking, check the relay again. If it still shows a difference, the relay is bad and should be replaced.





# WIRING DIAGRAM

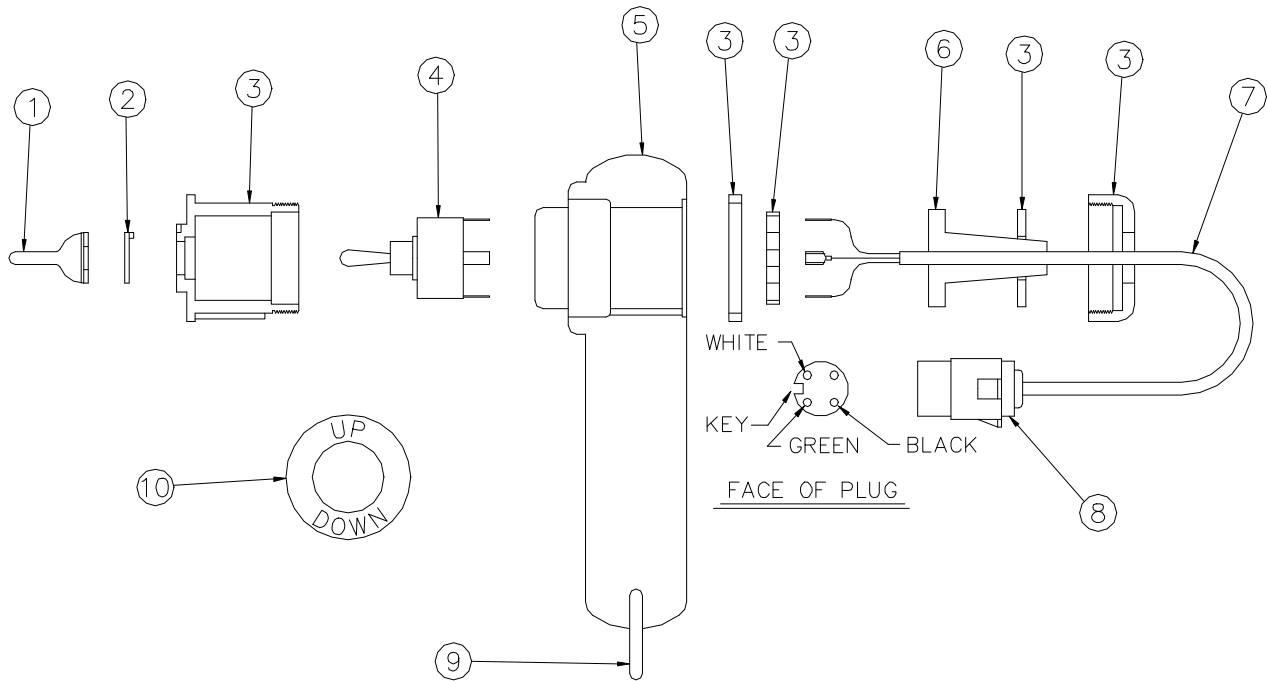
## P/N: 371015



ITEM	QTY.	PART NO.	DESCRIPTION	ITEM	QTY.	PART NO.	DESCRIPTION
1	2	330033	RELAY	10	1	600303	CONDUCTOR
2	1	370187	RECEPTACLE	11	2	370189	SPEED CLIP
3	1	600304	CONDUCTOR	12	1	622304	CONDUCTOR
4	1	370190	CONDUCTOR	13	1	371069	CIRCUIT BREAKER
5	1	371024	GROMMET	14	2	371076	SCREW, RD. HD. M3 X 1/4
6	1	370180	PLUG (WINCH)	15	2	330038	SCREW, SELF DRILL #10 X 3/4
7	2	658300	CONDUCTOR	16	4	370192	SCREW, RD. HD. 1/4-NC X 3/4
8	2	659904	CONDUCTOR	17	2	015900	NUT, HX. 1/4-NC
9	1	371034	CONDUCTOR				

# **PENDANT ASSEMBLY**

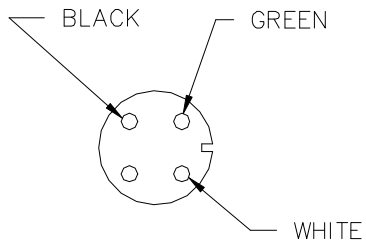
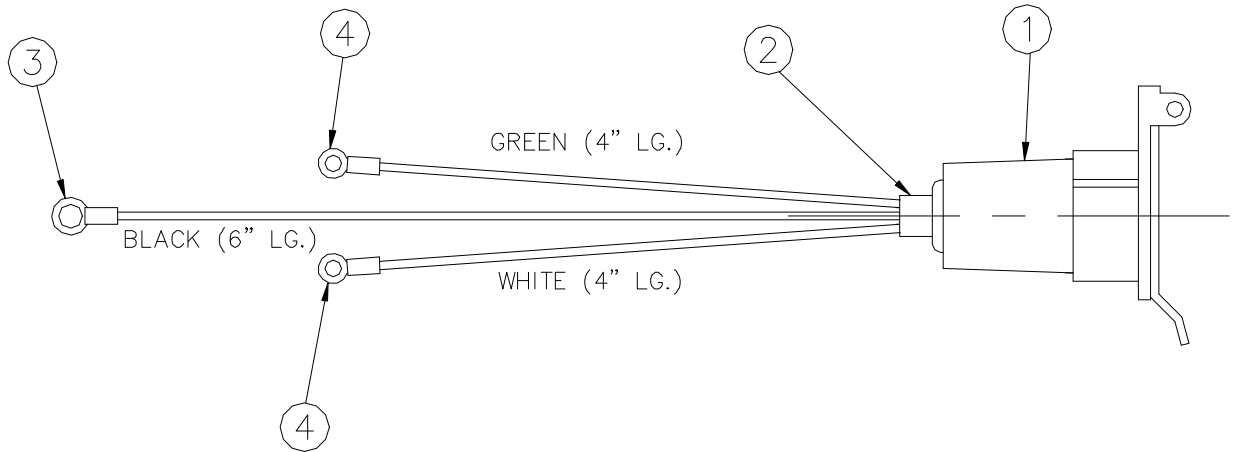
## **P/N 370191**



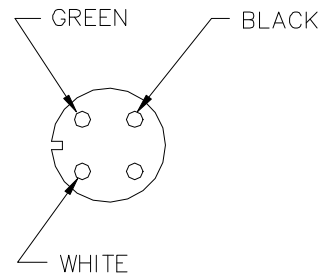
<b>ITEM</b>	<b>QUANTITY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	1	640300	BOOT TOGGLE
2	1	675281	TANG WASHER
3	1	675206	HOUSING KIT
4	1	675202	TOGGLE SWITCH
5	1	675201	HOUSING SWITCH
6	1	675261	SEAL
7	1	370194	POWER CORD
8	1	630903-001	PLUG
9	1	370193	"D" RING
10	1	370201	DECAL SWITCH POSITION

# **RECEPTACLE ASSEMBLY**

## **P/N 370187**



BACK OF PLUG

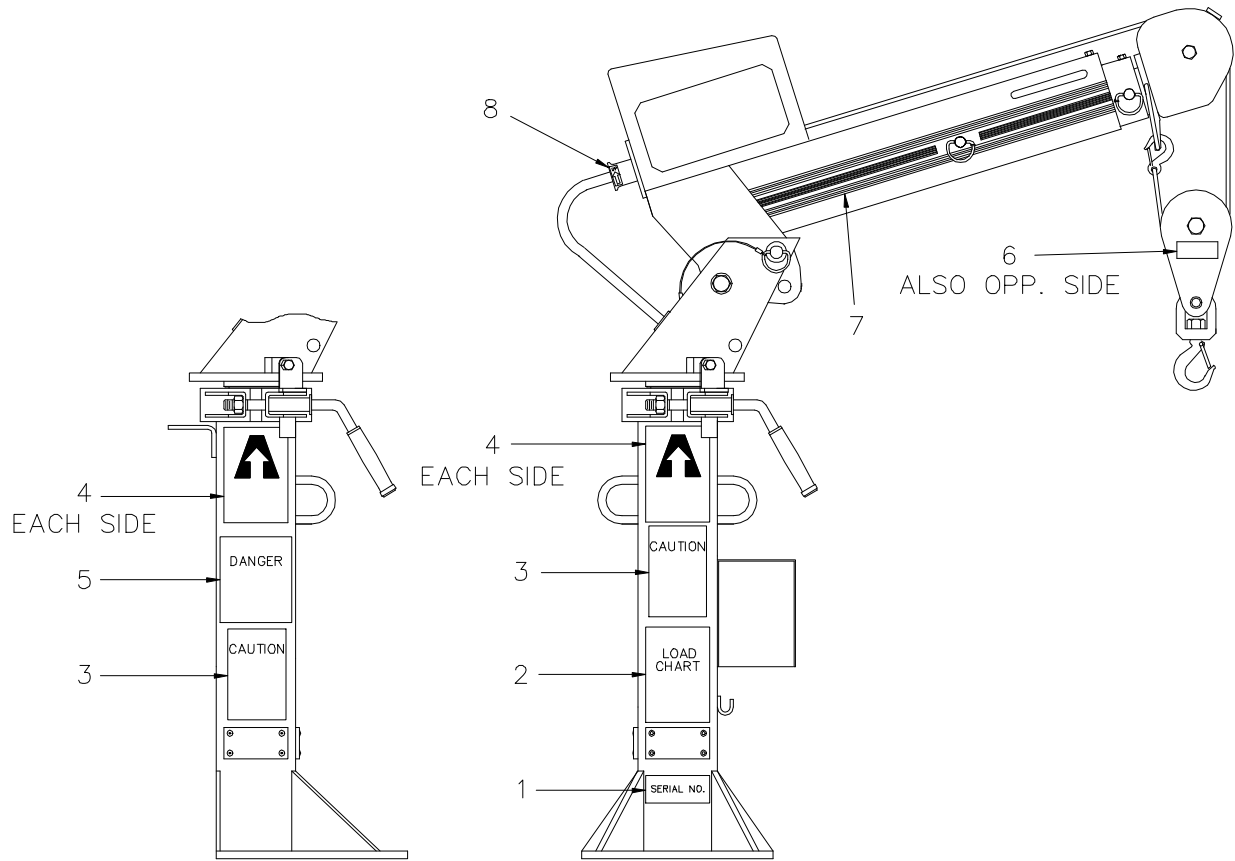


FACE OF PLUG

<b>ITEM</b>	<b>QUANTITY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
1	1	630902-001	RECEPTACLE
2	1	800628	CONDUCTOR (16/3 SJO)
3	1	000501	CONDUCTOR
4	2	000300	CONDUCTOR

# DECAL KIT *ECONO-TON III*

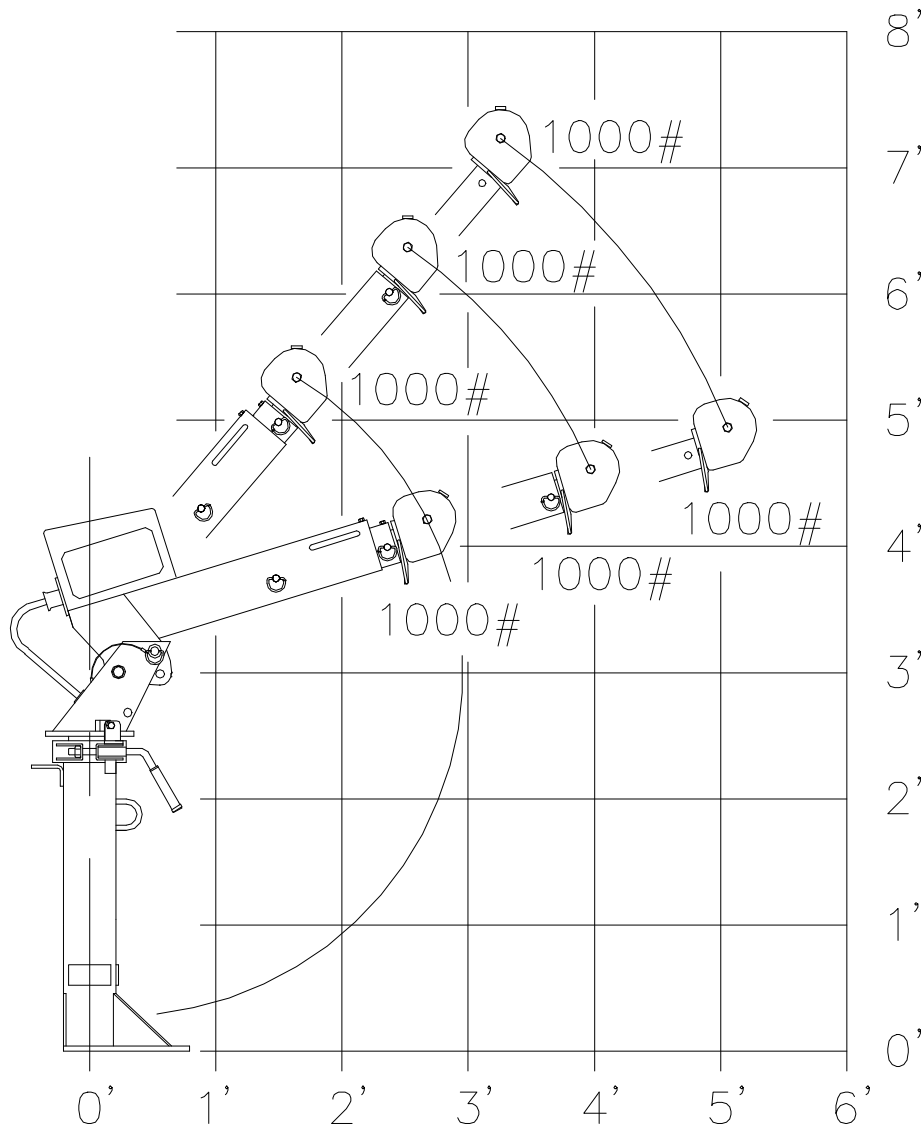
## P/N 370157



ITEM	QUANTITY	PART NUMBER	DESCRIPTION
1	1	330622	DECAL SERIAL NO.
2	1	370158	DECAL CHART
3	2	040579	DECAL CAUTION
4	4	040619	DECAL AUTO CRANE
5	1	040580	DECAL DANGER
6	2	040630	DECAL DANGER
7	2	040620	DECAL STRIPING
8	2	371045	DECAL UP

**LOAD CHART ECONO-TON III**  
**P/N 370158**

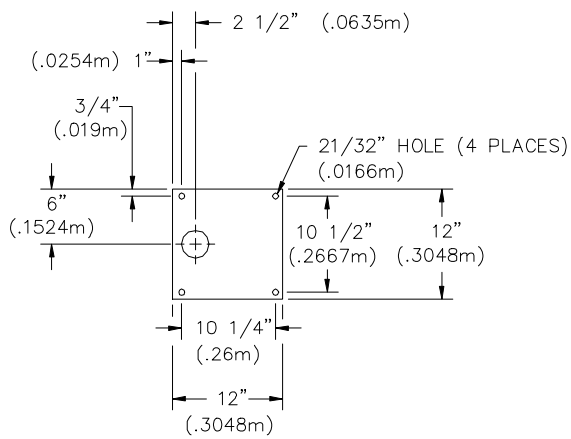
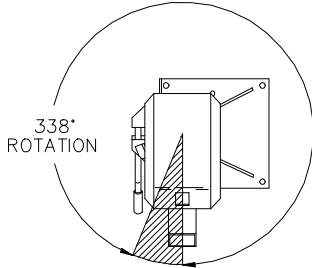
# ECONO - III



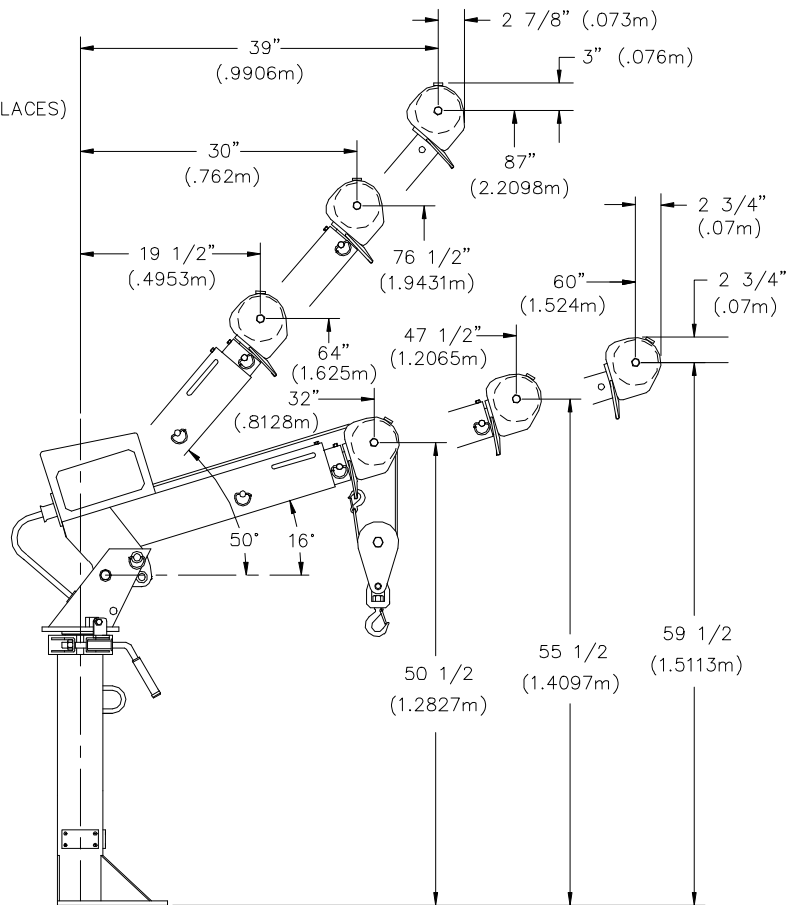
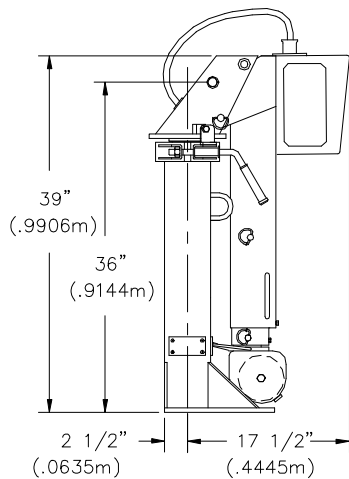
0-500# SINGLE LINE  
500#-1000# DOUBLE LINE

P\N 370158

# GENERAL DIMENSIONS *ECONO-TON III* A/W-152



BASE PATTERN





## **AUTO CRANE COMPANY**

P. O. BOX 581510 • TULSA, OKLAHOMA 74158

# Limited Warranty

Auto Crane will warranty to consumer for a period of twelve months from date of purchase that each new Auto Crane product it sells will be free under normal use and service, from defects in material and workmanship. Date of purchase will be honored as either date of purchase by distributor or his date of sale of the product as substantiated by Distributor Delivery Report.

Obligation of Auto Crane under this warranty is limited to replacement or repair of parts that appear to manufacturer after review and / or inspection to be defective. This warranty does not obligate Auto Crane to bear the cost of labor or transportation charges in connection with the replacement or repair of defective parts. Responsibility for customer's claims arising from misapplication, abuse, misuse or alteration of equipment or parts lies with the distributor or user and no warranty obligation is assumed in the circumstances by Auto Crane.

Auto Crane will in no event be liable for any consequential damages or contingent liabilities arising out of the failure of any Auto Crane product or parts to operate properly.

Auto Crane makes no warranty in respect to component accessories, same being subject to the warranties of their respective manufacturers.

If field service, at the request of buyer, is rendered and fault is found not to be with Auto Crane's product, the buyer shall pay the time and expense of the field representative. Claims for service labor or other expenses that have been incurred by the buyer without approval or authorization of Auto Crane will not be accepted.

AUTO CRANE COMPANY IS UNDER NO OBLIGATION TO EXTEND THIS WARRANTY TO ANY CUSTOMER FOR WHICH AN AUTO CRANE WARRANTY REGISTRATION CARD HAS NOT BEEN COMPLETED AND MAILED TO AUTO CRANE COMPANY WITHIN FIFTEEN (15) DAYS AFTER DATE OF PURCHASE.