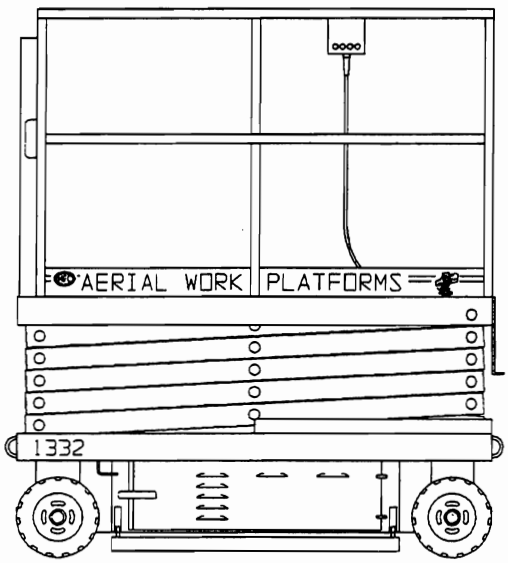
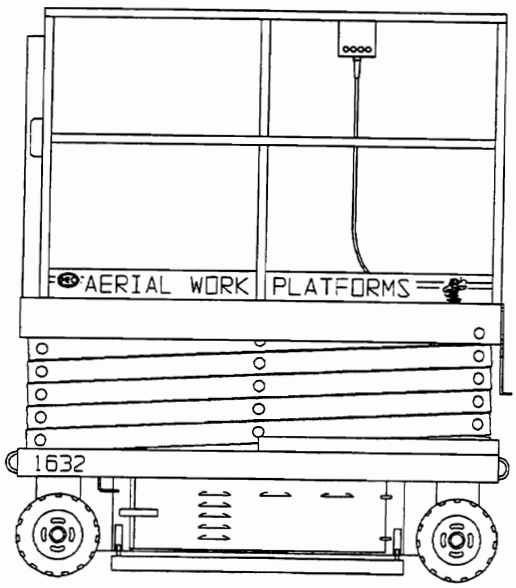
Dyna-Mite
Series
1332, 1632





Mayville Engineering Company, Inc.
An Employee Owned Company

Aerial Work Platforms

210 Corporate Drive • Beaver Dam, WI 53916
920-887-2518 • 1-800-387-4575
Fax 920-887-2480 Sales
Fax 920-887-2479 Service/Parts

www.mayvl.com

Parts & Service Manual

Part Number 7215

TABLE OF CONTENTS

⚠WARNING

DO NOT perform preliminary installations, operate, service, replace, adjust or maintain equipment on this machine until you have *thoroughly* read and understood the Safety section of this manual, and have read and understood all the sections of this manual that apply to the job you are doing on this machine.

Failing to heed all warnings posted on this machine and written in this manual, could cause death, serious injury or property damage.

1. SAFETY

USE OF NOTES, CAUTIONS, AND WARNINGS

NOTE - Additional information to further explain instructions.

CAUTION - Failure to follow instruction could cause damage to equipment.

WARNING - Failure to follow instruction could cause death, personal injury and property damage.

DANGER - Failure to follow instruction will cause death, personal injury and property damage.

GENERAL OPERATING RULES, SAFETY AND LIMITATIONS

MEC designs [mec]DYNA-MITE work platforms to be safe and reliable. They are rugged and maneuverable but must be used only for purposes and ways intended. That is to raise personnel and tools to overhead work areas.

Respect your machine; do not neglect or misuse it.

Inspect machine before using. **Do not** use machine if it is not working properly in any way.

Check job site for unsafe working conditions. **Do not** operate on uneven or soft terrain. **Do not** raise platform if machine is on an incline.

Use machine only for purposes for which it was designed.

Never take chances. Do not use machine if your physical condition is uncertain in any way.

Do not exceed the load capacity of platform.

Do not enter or exit platform while in motion.

An operator of any type of work platform is subject to certain hazards that cannot be protected by mechanical means. It is therefore essential that operators be competent, careful, physically and mentally fit and thoroughly trained in safe operation of this machine.

> **⚠ DANGER**
>
> **DO NOT operate machine near power lines. Platform and enclosures are *not* insulated.**
>
> **Failure to follow this warning will cause death or personal injury.**

OPERATOR QUALIFICATIONS

[mec]DYNA-MITE is to be operated and maintained by qualified personnel only!

To qualify for operation and maintenance of this unit, an individual must read and thoroughly understand this manual. If a proposed operator or maintenance man fails to understand any segment of this manual, his Supervisor can clarify the misunderstanding through written correspondence or a phone call to:

Mayville Engineering Company
Aerial Work Platforms
Division of Mayville Engineering Co., Inc.
715 South Street
Mayville, Wisconsin 53050
#414-387-4500

SAFETY FEATURES

1. **Automatic Parking Brake**
   The automatic parking brake is a spring actuated system. The brake is released during drive by hydraulic pressure built up in the drive circuit. A brake valve is used to maintain release during drive and an orifice is used to control the braking function.

2. **Emergency Stop**
   The emergency stop is located on the control console. Depress red knob as indicated and all functions of machine will be de-energized. Pull up on knob to reactivate circuits (Figure 1).

3. **Emergency Down**
   The emergency down control is located in center of lower beam weldment above the front axle. Pull handle on cable to allow platform to descend back to the stowed position (Figure 2).

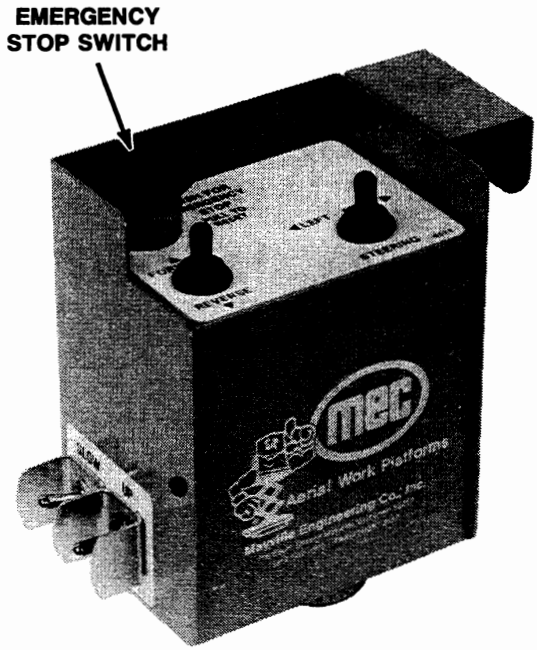


Figure 1. Control Console Emergency Stop Switch.

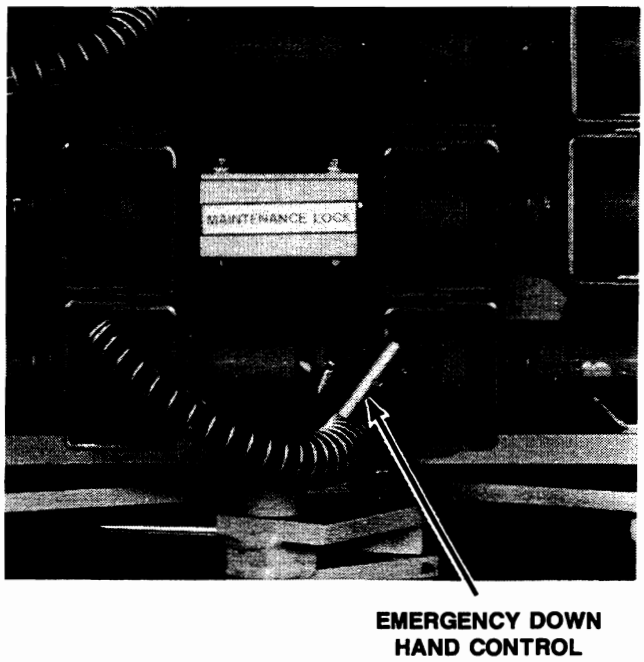


Figure 2. Emergency Down Control.

MAINTENANCE LOCKS

⚠ WARNING

MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.

Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury. Whenever possible, perform maintenance through floorboards with the platform fully lowered or from the outside of the base.

FOLLOW MAINTENANCE LOCKS PROCEDURE!

1. Remove load from platform.

2. Raise platform as high as necessary to engage maintenance locks.

3. Maintenance locks are located at the front and rear of the unit between the inside beam assemblies. With machine raised part way, lift maintenance locks and lower machine so that pivot pins are resting on maintenance locks (Figure 3).

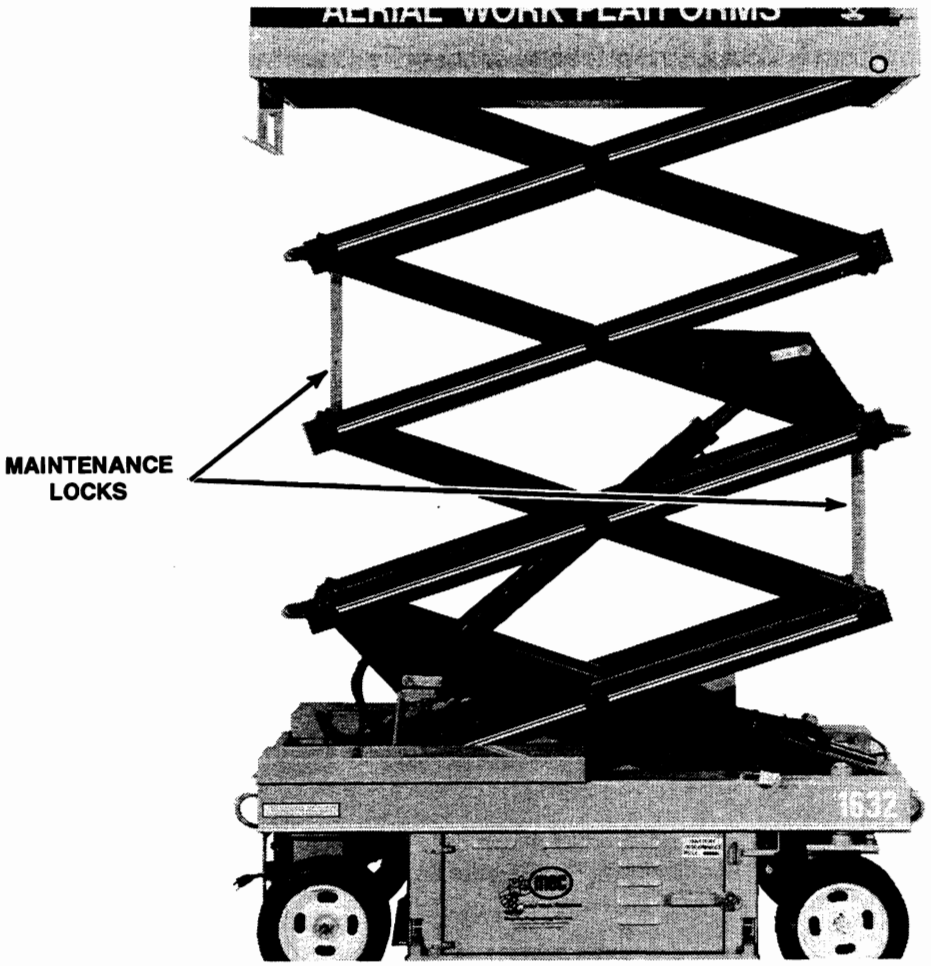


Figure 3. Positioning Maintenance Locks.

⚠WARNING

DO NOT SERVICE EXTENDED OR PARTIALLY EXTENDED MACHINE UNTIL THE ABOVE PROCEDURE IS FOLLOWED.

2. INTRODUCTION

DESCRIPTION

[mec]DYNA-MITE aerial work platforms are electrically driven, hydraulically operated units. The platform is raised and lowered by a scissors mechanism. All units are steered by a hydraulic cylinder, which is controlled from the control console on the platform. Emergency lowering and auxiliary lift controls are located at the base of the machine.

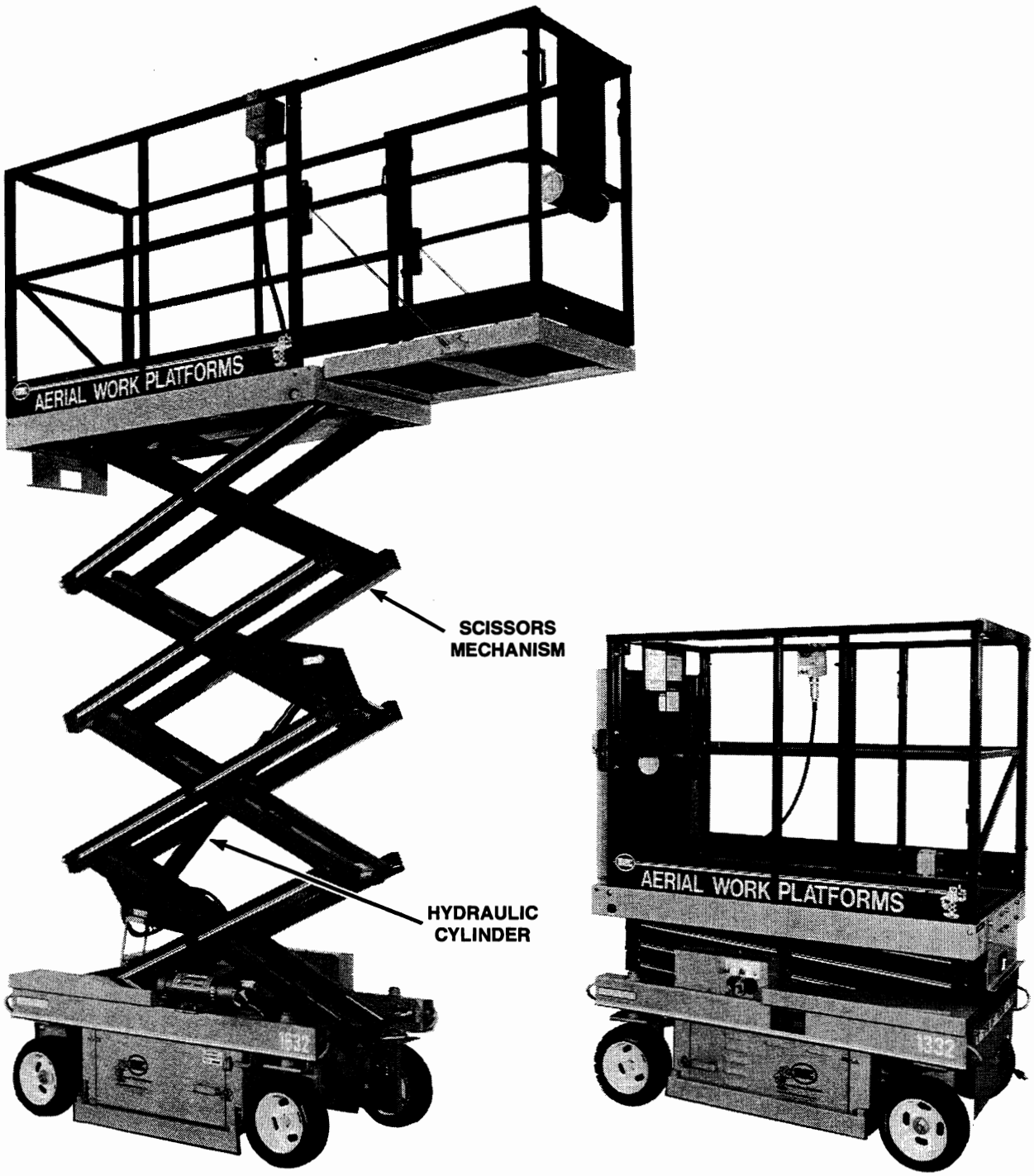


Figure 4. [mec]DYNA-MITE Aerial Work Platforms.

mecDYNA-MITE SPECIFICATIONS

Through our constant efforts to improve our products, specifications may change without notice.

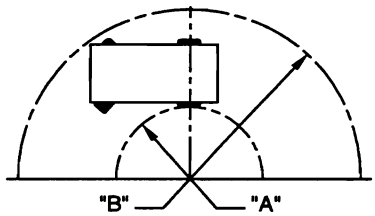
MODEL NO.	PLAT. HT.	WORK HT.	STOW HT.	LIFT CAP.	POWER	O/A LENGTH	O/A WIDTH	GRND. CLEAR	INSIDE TURN RAD. "A"	OUTSIDE TURN RAD. "B"	WEIGHT*
1332	13'	19'	34.5"	600#	24vdc	66"	32"	3.5"	19"	74"	1990#
	(3.96m)	(5.79m)	(.87m)	(272kg)	Batt.	(1.67m)	(.81m)	(8.9cm)	(.48m)	(1.88m)	(902.6kg)
1632	16'4"	22'4"	36"	500#	24vdc	66"	32"	3.5"	19"	74"	2390#
	(4.96m)	(6.79m)	(.91m)	(227kg)	Batt.	(1.67cm)	(.81m)	(8.9cm)	(.48m)	(1.88m)	(1084kg)

* mecDYNA-MITE weight: Add 100 lb. (45.4 kg) to unit weight for the shipping skid.

Hydraulic Reservoir Capacity - 2.5 gallons STD. 10W. Hydraulic oil, nondetergent.

Lift Time - 18 seconds
Descent Time - 25 seconds

Tire Size - Model 1332 13" diameter, 4.5" wide
Model 1632 13" diameter, 4.5" wide



Turn radius

Torque Specs

Hydraulic Valve: Valve to manifold (cartridge) - 12 ft. lbs.
Valve nut to valve - 5 in. lbs.

Hydraulic Drive Motor: 300 ft. lbs. then next slot on castle nut and install cotter pin.

Rear Axle: 140 ft. lbs. then closest slot on castle nut and install cotter pin. Do not back up.

Bolts	Grade 2	Grade 5	Grade 8
1/4-20	49 in. lbs.	76 in. lbs.	9 ft. lbs.
5/16-18	8 ft. lbs.	13 ft. lbs.	18 ft. lbs.
3/8-16	15 ft. lbs.	23 ft. lbs.	33 ft. lbs.
7/16-14	24 ft. lbs.	37 ft. lbs.	52 ft. lbs.
1/2-13	37 ft. lbs.	57 ft. lbs.	80 ft. lbs.

Grade markings for capscrews grades 2, 5, and 8 are based on SAE J429. Markings may be raised or depressed (manufacturer's option).
ANY BOLT REPLACEMENT SHOULD BE OF THE SAME GRADE OR GREATER THAN ORIGINAL BOLT.
ANY QUESTIONS, CALL FACTORY FOR VERIFICATION.

3. OPERATION

⚠WARNING

Before operating this machine, operator MUST carefully read the Safety section at the beginning of this manual. Failure to follow safety precautions may result in death or serious injury.

PRELIMINARY INSTALLATIONS

1. Remove all packing materials and inspect for possible damage during shipment. **Report any damage immediately to the person delivering the equipment.**

2. If side railings are not installed, install side railings in sockets on each side of the platform, using rubber mallet, or hammer and block of wood to force fit if necessary. Bolt front and rear rails to the sides with bolts provided. Check that entry gate swings freely.

NOTE

To install extending platform, refer to the Extending Platform illustrations in the Parts Catalog in this manual, pages 39 and 40.

Make sure carrying capacity warning decal provided states correct capacity for your machine and install to front rail (Figure 5).

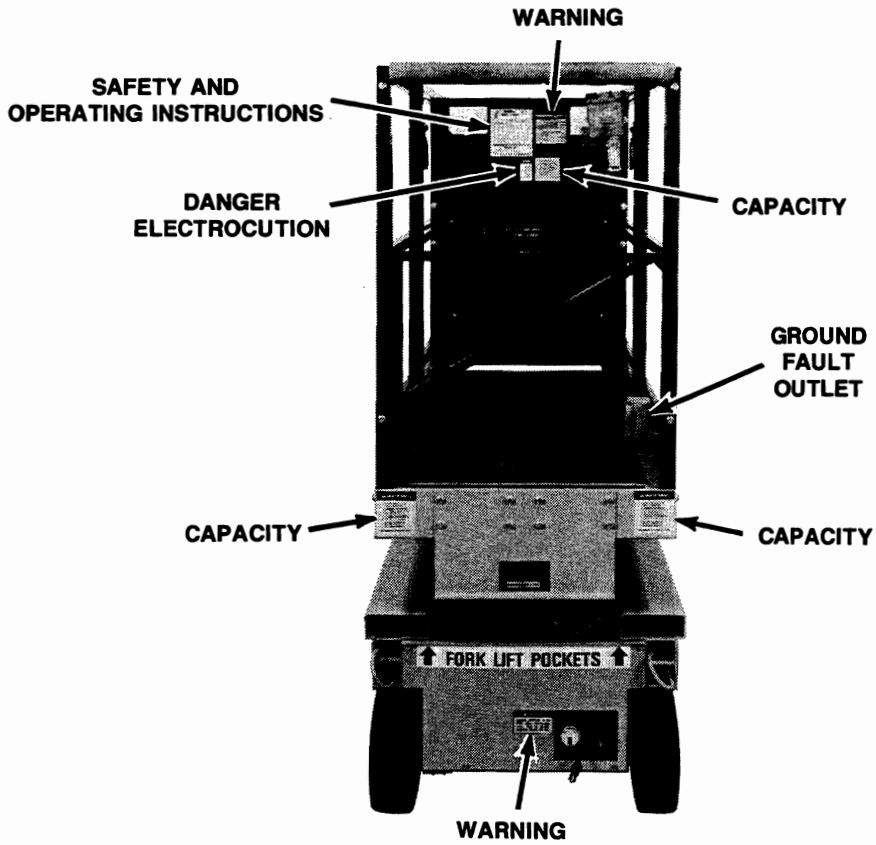


Figure 5. Platform Railings and Warning Decals.

3. If not assembled before shipment, connect cable to control console provided and install console on platform railing. Pull emergency stop button up if it has been pushed down (Figure 7).

4. If wheels have not been installed, install them.

5. Turn **KEY** switch on lower control station to **ON** (Figure 6).

6. To check oil level in hydraulic reservoir.

   a. Inspect machine for hydraulic oil leaks. Do not use the machine until leaks are serviced.
   b. Using the **UP/DOWN** switch on the lower control station (Figure 6), raise platform high enough to engage maintenance locks (Figure 3).

      Move the **UP/DOWN** switch to the **UP** position to raise. To stop platform movement, release the switch.

      Move the **UP/DOWN** switch to the **DOWN** position to lower. To stop platform movement, release the switch.

⚠ WARNING

MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.

Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury.

FOLLOW MAINTENANCE LOCKS PROCEDURE ON PAGE 3 OF THIS MANUAL.

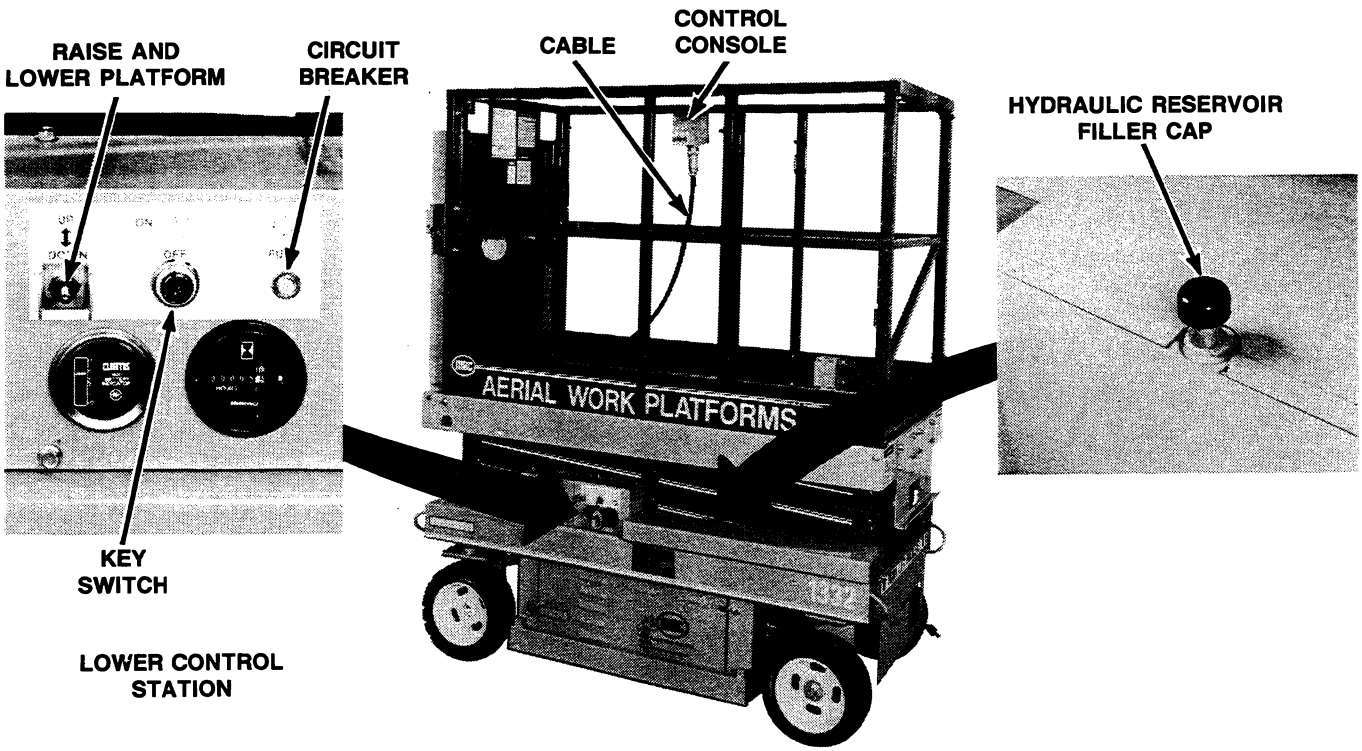


Figure 6. Controls.

c. Lower platform so that maintenance locks are resting on pivot pins. Remove filler cap and check fluid level on gauge. Fill to proper level. (Figure 6)
d. Replace filler cap.
e. Raise platform slightly and retract maintenance locks.

⚠ WARNING

Never inspect hydraulic hoses with hands. Escaping fluids under pressure can cause serious injury. Use a piece of cardboard or other material to inspect for leaks. Escaping fluid under pressure can be invisible and can penetrate the skin and cause serious injury.

If any fluid is injected into your skin, see a doctor at once! Injected fluid must be surgically removed by a doctor familiar with this type of injury or gangrene may result.

CONTROLS IDENTIFICATION

NOTE

Standard and optional controls for all ᵐᵉᶜDYNA-MITE models are identified and described below. Not all controls may be on your machine.

1. **Lower Control Station (Figure 6):**

This station is used for initial start-up of the machine and for raising and lowering the platform.
a. **Key Switch.** When turned to the **ON** position, this switch supplies electric power to the machine.
b. **UP/DOWN Switch.** This toggle switch raises or lowers the platform at the lower control station.

2. **Platform Control Console (Figure 7A and 7B):**

This console allows control of the machine from the platform.

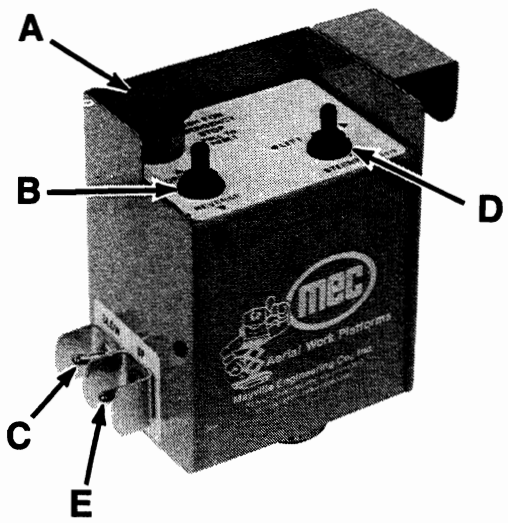


Figure 7A. Control Console.

A. EMERGENCY STOP Switch.
This switch cuts all power to the machine when it is pushed down. Power will remain off until the switch is pulled up.

B. FORWARD/REVERSE DRIVE Switch.
Controls the forward and reverse travel of the machine.

C. SLOW/FAST Switch.
Controls travel speed.

D. STEERING Switch.
Controls the direction in which the machine is steered.

E. UP/DOWN Switch.
Used to raise and lower the platform.

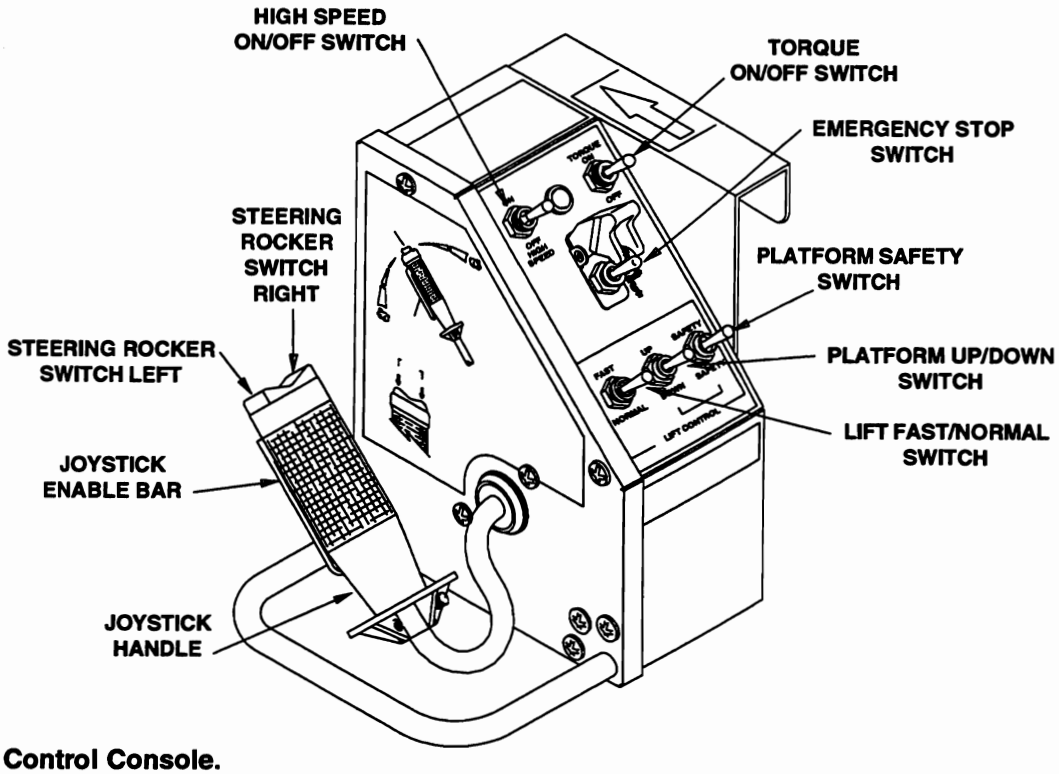


Figure 7B. Control Console.

OPERATING INSTRUCTIONS

1. **Turn key switch ON (lower control station).**

2. **Raise/Lower Platform From Base**

   a. Move the **UP/DOWN** switch to the **UP** position to raise. To stop platform movement, release switch.
   b. Move the **UP/DOWN** switch to the **DOWN** position to lower. To stop platform movement, release the switch.

3. **Move Machine With Control Console (Figure 7)**

   a. **To travel (forward or reverse):**
   Move the **FORWARD/REVERSE** switch in the desired direction.
   b. **To steer (left or right):**
   Move the **STEERING** switch in the desired **LEFT** or **RIGHT** direction.

4. **Traveling Speeds (Figure 7)**

   a. **Slow speed - 1 mph**
   Position **SLOW/FAST** switch to the **SLOW** position. Move the **FORWARD/REVERSE** switch in the desired direction.

NOTE

The machine will only operate in slow speed when the platform is raised above four feet.

   b. **Fast speed - 2 mph**
   Position **SLOW/FAST** switch to the **FAST** position. Move the **FORWARD/REVERSE** switch in the desired direction. (Not available if platform is raised above four feet.)

5. **Extending Platform (Figure 8)**

a. **To extend platform**

(1) Pull up on platform deck latch. Then lower the platform deck by pushing it forward.
(2) Lift front lock handles and push rail assembly forward to full extension.
(3) Engage rear lock handles to secure platform in extended position.

⚠WARNING

Do not use extending platform without railings fully extended.

b. **To retract platform**

(1) Lift rear lock handles and pull rail assembly to stowed position.
(2) Lock rail assembly in place with front lock handles.

NOTE

Rail assembly must be fully retracted and locked before extending platform can be retracted.

(3) Retract platform deck by pulling either support cable. Latch will engage automatically.

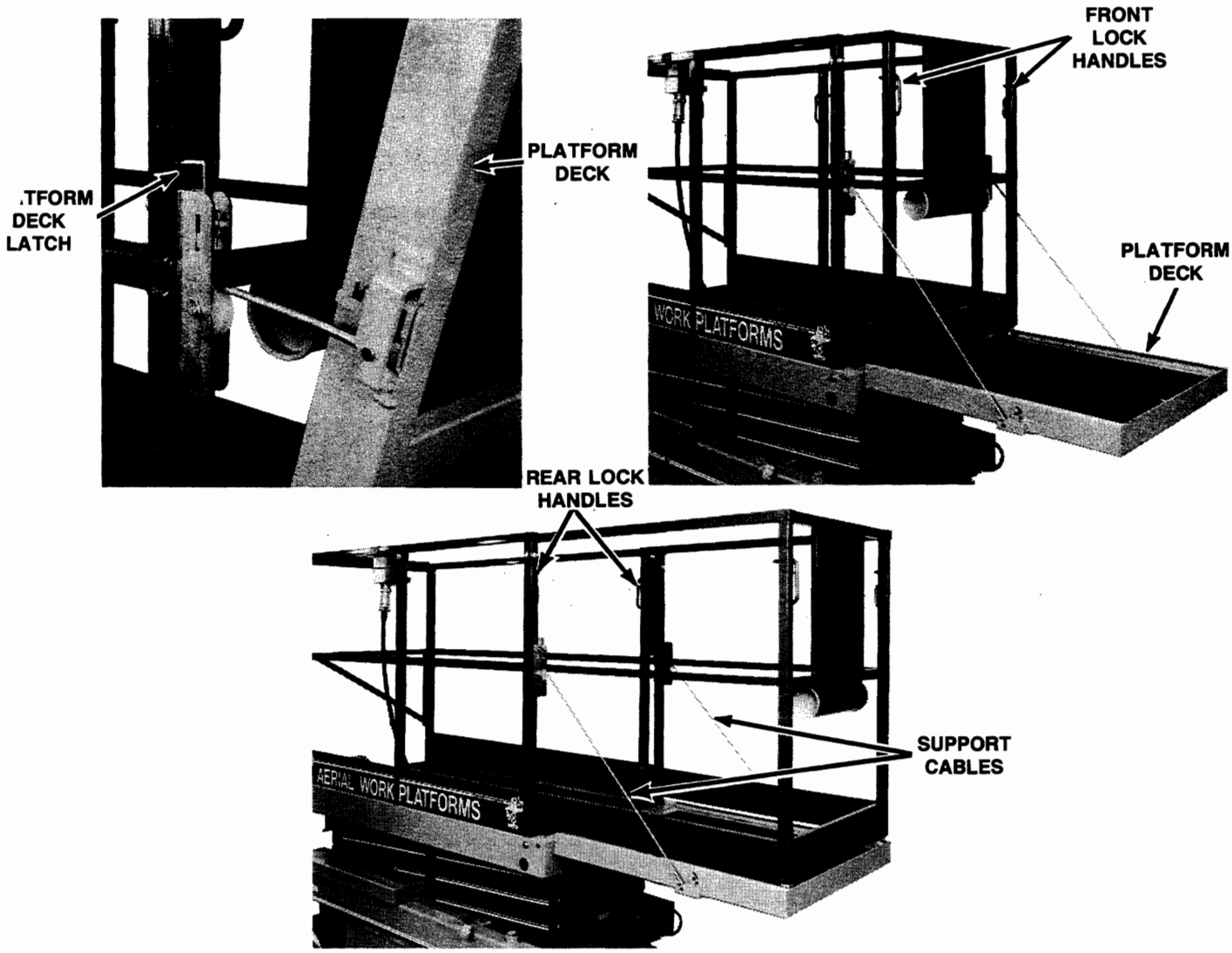


Figure 8. Extending Platform.

4. MAINTENANCE

INSPECTION AND LUBRICATION

1. **Structural Inspection**

   a. Check machine for bent structural members. (Beams, main frame, platform, pivot pins, etc.) Machines which have been overloaded could have bent members and fatigued pivot pins. Replace all bent members and pins to insure a safe operating machine.
   b. Check bushings in scissor beams for broken or cracked welds. Replace beams if bushing welds are cracked or bushings elongated.

2. **Lubrication**

> **⚠ WARNING**
>
> **All pivot areas of scissors and lift cylinder must be checked for wear. A loud scraping noise means the D.U. bearings are damaged and need replacing. Failure to do so will result in extensive damage to structural members and bushings which would create a hazardous condition and could result in injury or death to personnel.**

   a. The ᵐᵉᶜDYNA-MITE series scissor lift is almost lubrication free. All pivot pins or rollers come with D.U. bearings which do not require any kind of lubrication.
   b. The only areas that need lubrication are the steering cylinder on both pivot pins, brake linkage, steering pivot areas, stabilizer actuator pivot areas, extended platform pivot areas, and rear axle.
   c. Remove rear wheels and grease spindles yearly.

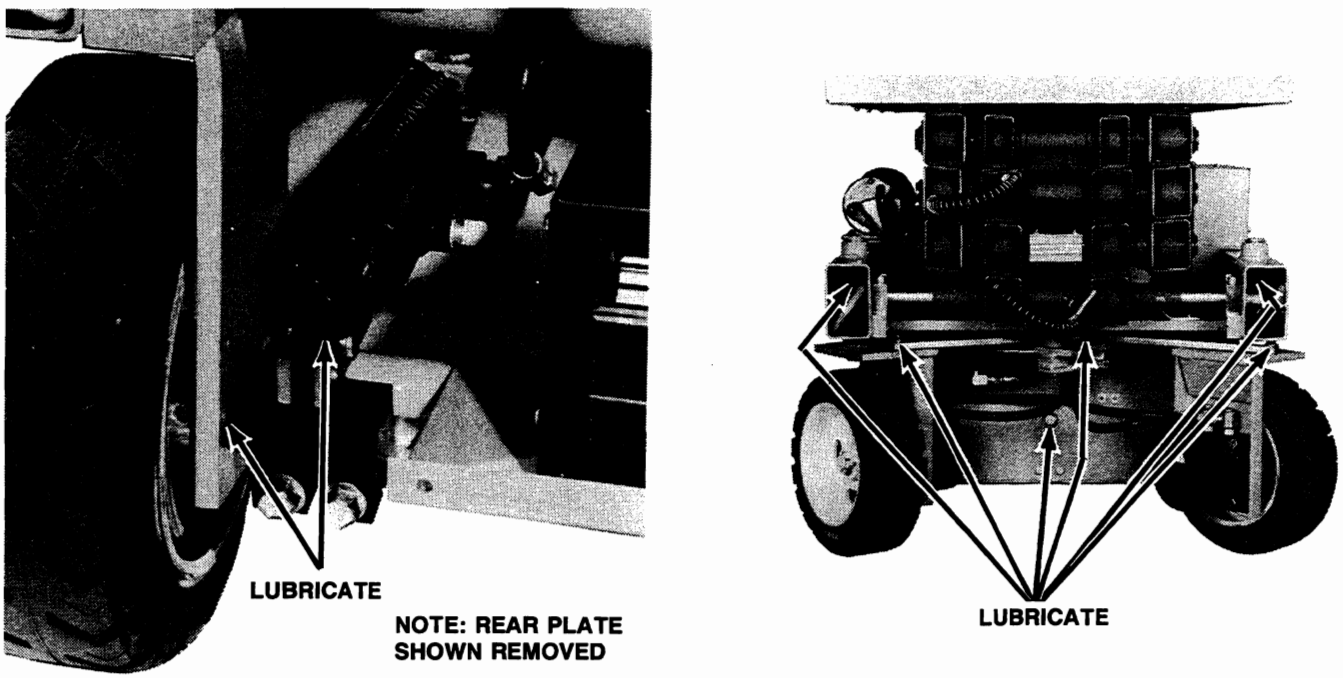


Figure 9. Lubrication of Brake Linkage and Steering.

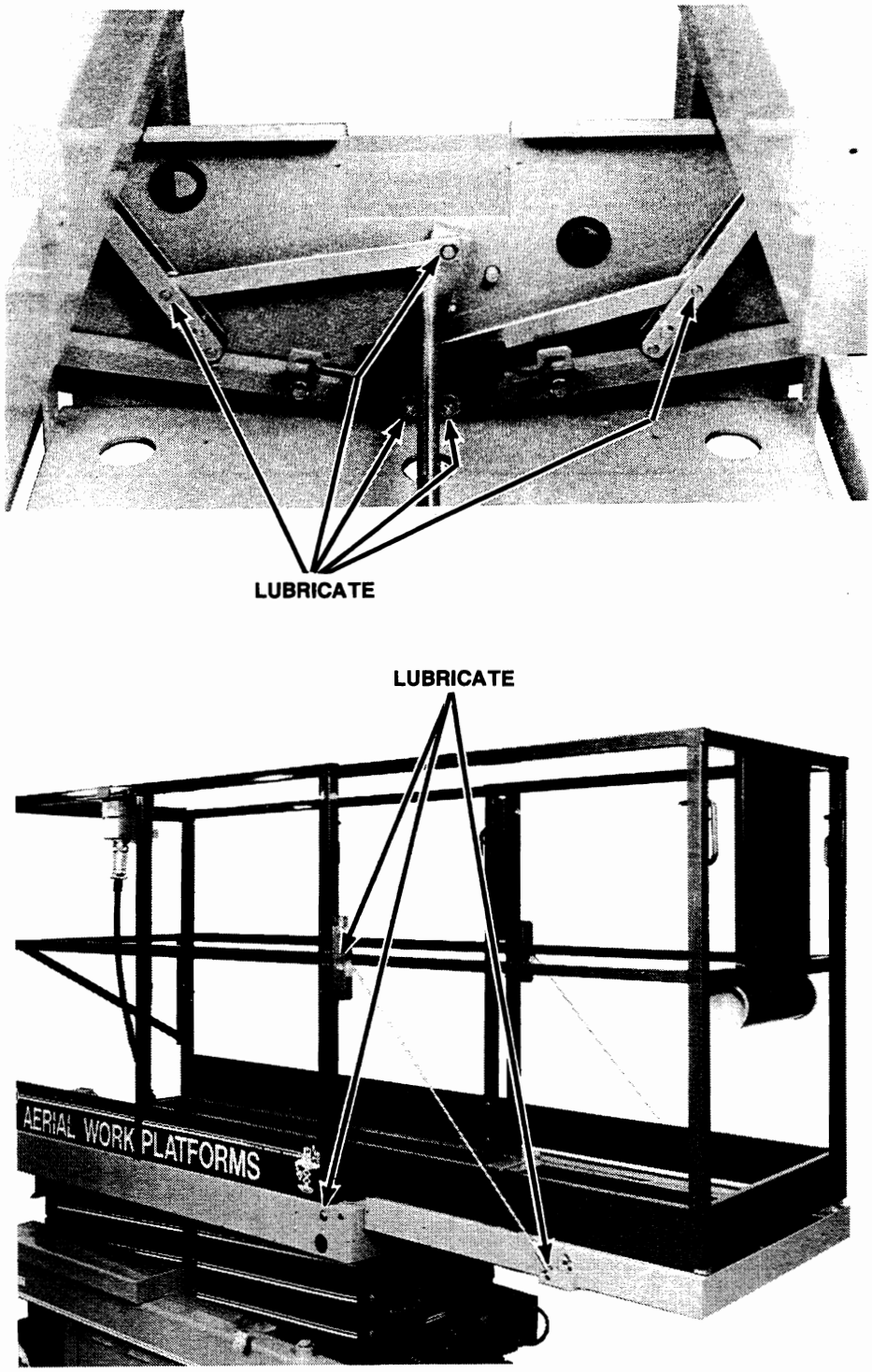


Figure 10. Lubrication of Stabilizer and Platform Pivots.

COMPONENT	TIME INTERVAL			
	DAILY	WEEKLY	6 MONTHS	1 YEAR
BATTERY				
1. Check Wiring	X			X
2. Check Fluid Level	X			X
3. Clean Battery Connections		X		X
4. Coat Terminals		X		X
Hydraulic System				
1. Check for Leaks	X			X
2. Check Fluid Level		X		X
3. Inspect Commutator and Brushes			X	X
4. Check Hoses	X			X
5. Check Fittings		X		X
6. Oil Filter (Replace)				X
Scissor System				
1. Check for Damage	X			X
Drive and Lift Mechanism				
1. Oil Steering Pivot Points		X		X
2. Oil Brake Pivot Points		X		X
3. Oil Stabilizer Actuator		X		X
4. Oil Extended Platform Pivots		X		X
5. Grease Rear Axle Spindles				X
Main Frame				
1. Check Structure		X		X
2. Check Pivot Pins				X
3. Check All Fasteners	X			X
Control System				
1. Check Terminal and Plugs		X		X
2. Check Cords		X		X
Safety Decals*				
1. Check if missing Add if necessary	X			X
2. Check if legible Replace if necessary	X			X
Platform				
1. Entry Gate	X			X
2. Railing Secure in Pockets	X			X
3. All Fasteners Secure	X			X

*See page 36 for safety decals and locations.

Table 3A. Inspection and Lubrication Schedule.

⚠ WARNING

ELECTRIC SERIES MACHINES SPECIAL MAINTENANCE CONCERNS

To minimize the risk of fire, electric shock or explosion, the following maintenance procedures and inspections are particularly important for electrically powered machines:

1. **Keep machine clear of lubricants and other combustible material.**
2. **Inspect wiring regularly for frayed or deteriorated insulation. Immediately replace or repair a wire harness, or individual wire, that has frayed or deteriorated insulation.**
3. **Check brakes at the recommended intervals, and make adjustments when required.**

Battery
1. Check Wiring
2. Check Fluid Level

Hydraulic System
1. Check for Leaks
2. Check Hoses

Scissor System
1. Check for Damage
2. Check Snap Rings

Platform
1. Entry Gate
2. Pivot Bar and Roller
3. Railings Secure in Pockets
4. Safety Decals

Keep log as follows:
1. Inspect components
2. Check boxes if components OK
   or
   Make repairs
3. Initial boxes

Key:
B = Battery
H = Hydraulic System
S = Scissor System
P = Platform

MONTH																													
DAY						7						14						21						28					
INIT.																													
B-1																													
2																													
H-1																													
2																													
S-1																													
2																													
P-1																													
2																													
3																													
4																													
5																													
MONTH																													
DAY						7						14						21						28					
INIT.																													
B-1																													
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H-1																													
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MONTH																													
DAY						7						14						21						28					
INIT.																													
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5																													

Table 3B. Inspection and Lubrication Daily Log.

COMPONENT	Check and Initial Every 15 Hours of USE, or Weekly													
MONTH														
DAY														
INITIAL														
Battery														
1. Clean Battery														
2. Coat Terminals														
Hydraulic System														
1. Check Fluid Level														
2. Inspect Commutator and Brushes*	Date Last Checked _____													
3. Check Fittings														
Scissor System														
1. Check for Damage														
Drive and Lift Mechanism														
1. Stabilizer Actuator														
2. Extended Platform Pivots														
3. Check All Fasteners														
Main Frame														
1. Check Structure														
Control System														
1. Check Terminals and Plugs														
2. Check Cords														

* Check every 6 months.

Table 3C. Inspection and Lubrication Weekly Log.

SERVICING, REPLACEMENT & ADJUSTMENTS

This section contains three basic maintenance functions:

SERVICING describes items to be checked and serviced when necessary, on a daily basis, or prior to using the unit after it has been out of service for a period of time.

REPLACEMENT describes the proper method for removal and installation of replaceable components in case of failure. (Replacement batteries must weigh 61# or greater.)

ADJUSTMENT describes any adjustments necessary to ensure proper operation of the unit or adjustments required after the replacement of components, if necessary.

NOTE

CAPSCREW REPLACEMENT: Any replacement capscrew should be of same grade or greater than original. Any questions, call the factory for verification.

Grade markings for Capscrews grades 2, 5 and 8 are based on SAE J429. Markings may be raised or depressed (Manufacturer's option.

1. **Batteries**

⚠ WARNING

NEVER SMOKE OR USE OTHER COMBUSTIBLES NEAR BATTERY WHILE SERVICING BATTERY OR OTHER COMPONENTS. PROVIDE PLENTY OF VENTILATION. PRESENCE OF HYDROGEN FUMES COULD LEAD TO EXPLOSION!

mecDYNA-MITE series is supplied with heavy-duty deep-cycle batteries. The care and maintenance of your batteries has much to do with how well your mecDYNA-MITE functions. Battery wiring and water level should be checked daily. After using continuously for a period of time, it is recommended that the batteries be brought to a full charge as soon as possible. If the batteries are allowed to remain discharged, the lead plates will harden and become sulfated. This will shorten their life as much as over-charging. In this sulfated condition the battery fails to deliver its rated capacity or come up to a full charge. Several long, slow charges and fast discharges are then necessary to correct the sulfation and hardened plates. It is recommended that once a month the batteries be given an equalizing charge of 25% over the regular charge. The equalizing charge must always be given at a low rate to eliminate excessive gassing. Whenever battery temperature reaches 125° F (51° C), the charging rate should be reduced or the battery taken off charge and allowed to cool to room temperature.

Do not overfill. When the cells are over filled, the battery fluid will expand as it becomes warm from charging and fluid will seep out. Each time this happens the solution is weakened by adding water and loss of ampere hour capacity will result. Do not run the batteries dead, put batteries on charge when approximately 80% discharged. (Hydrometer reading of 1.500 at 80° F or 26.6° C.)

⚠ WARNING

NEVER SMOKE OR USE OTHER COMBUSTIBLES NEAR BATTERY. MAKE SURE THERE IS PLENTY OF VENTILATION. HYDROGEN FUMES COULD LEAD TO EXPLOSION.

a. **Changing Batteries.** The ᵐᵉᶜDYNA-MITE has four removable batteries. Be sure to change all when a new power supply is needed.

b. **To Change Batteries**
   (1) Lower platform completely.
   (2) Disconnect power supply to the batteries by pulling out disconnect switch handle.
   (3) Remove linch pin. Manually push stabilizer down and hold it down while swinging battery tray out.
   (4) Disconnect battery cables from battery posts (Figure 12).
   (5) Remove battery hold-down.
   (6) Remove old batteries.
   (7) Install new batteries in reverse order. (Replacement batteries must weigh 61# or greater.)

c. **Checking and Filling Batteries** (Every 15 hours of use or when recharging)
   (1) Lower platform completely.
   (2) Open battery tray door.
   (3) If there is any dirt or corrosion on batteries, wash with solution of 5 teaspoons baking soda per quart of warm water, and flush with clear water.
   (4) Remove battery caps and check fluid.
   (5) Fill, if needed, as follows:
      (a) Before charging, fluid must be above plates in battery.
      (b) After charging, fill to split ring.

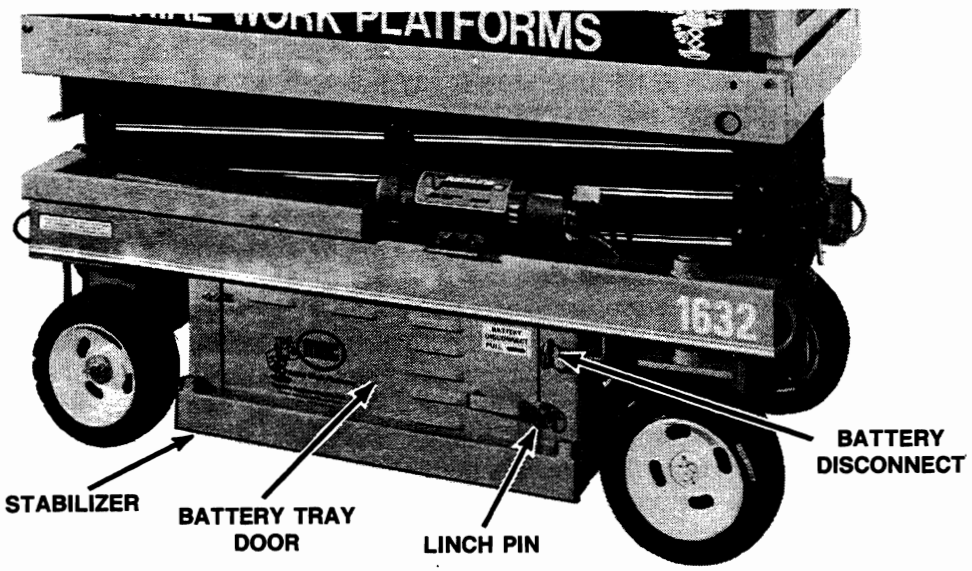


Figure 11. Open Battery Tray.

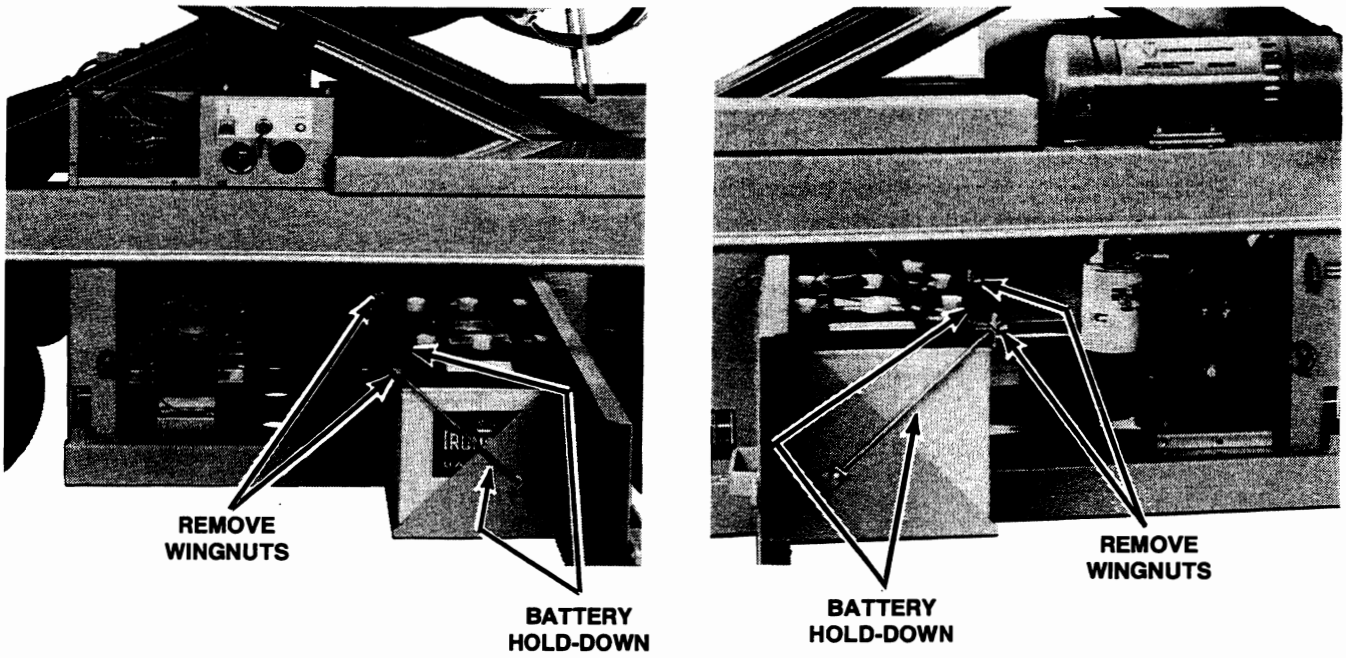


Figure 12. Remove Batteries.

⚠ CAUTION

Do not overfill. Fluid will expand as it becomes warm from charging and seep out of the battery. When water is then added, the solution is weakened and a loss of ampere hour capacity results.

Never add acid to battery. The solution is at its proper strength when the battery is manufactured. Use distilled water and keep fluid up to proper level. When required, water should be added to battery *after* charging, unless water level is below the top of the plates.

(6) Coat terminals with petroleum jelly, or equivalent.

d. **Charging Notes**

(1) The surrounding temperature has a great effect on the power reserve in a battery.

(a) A battery 100% charged at 80° F (26.6° C):
— drops to 65% at 32° F (0° C).
— drops to 40% at 0° F (–18° C).

(b) A battery 46% charged at 80° F (26.6° C):
— drops to 32% at 31° F (–.6° C).
— drops to 21% at 0° F (–18° C).

(2) When battery temperature reaches 125° F (51° C), battery should be taken off charge and cooled to room temperature or the charging rate should be lowered.

(3) Battery should be brought to full charge as soon as possible after continuous use. (Hydrometer reading of 1.265 at 80° F or 26.6° C.)
Lead plates in discharged batteries become hardened and sulfated. The battery eventually will not deliver its rated capacity or come up to a full charge. If this happens, several long slow charges must be given at low rate to avoid gassing.

e. **Charging**

> **⚠WARNING**
>
> **Charge battery in an open well ventilated area free of flame, smoking, spark or fire.**

(1) Perform steps (1) through (3) of Battery Charge Procedure (step b.).
(2) Remove caps, check fluid level and, if needed, fill to cover plates.
(3) Reinstall caps before charging.
(4) Plug charger into 120 VAC, 60 Hz power source.
(5) Turn timer clockwise to **ON** position.
(6) Charge until D.C. AMPERES meter reads near zero (0). (Charger will turn off automatically when timer runs out.)
(7) Unplug charger.
(8) Check that fluid level is up to split rings and reinstall caps.

2. **Hydraulic System**

a. **Hydraulic System Bleeding**
The hydraulic system is self-bleeding. After the system has been drained, such as during the replacement of a hydraulic system component, actuate the platform full up and down for six cycles and recheck the reservoir fluid level between each cycle. Fill as required.

b. **Spin-On Oil Filter Replacement**
The spin-on oil filter in the hydraulic system should be changed yearly. Replace with filter (part #6156) only (Figure 13).

c. **Hydraulic Pump Motor Servicing**
Common maintenance on DC motors is brush replacement. It is recommended that brushes be checked and replaced if necessary, along with commutator inspection, approximately every six months. The time interval will greatly vary depending on how the machine is being used and the condition of the battery. It is to your advantage to keep the batteries fully charged and in top condition to eliminate service problems in general, and to extend the life of the motor and brushes. (See Battery Servicing.)

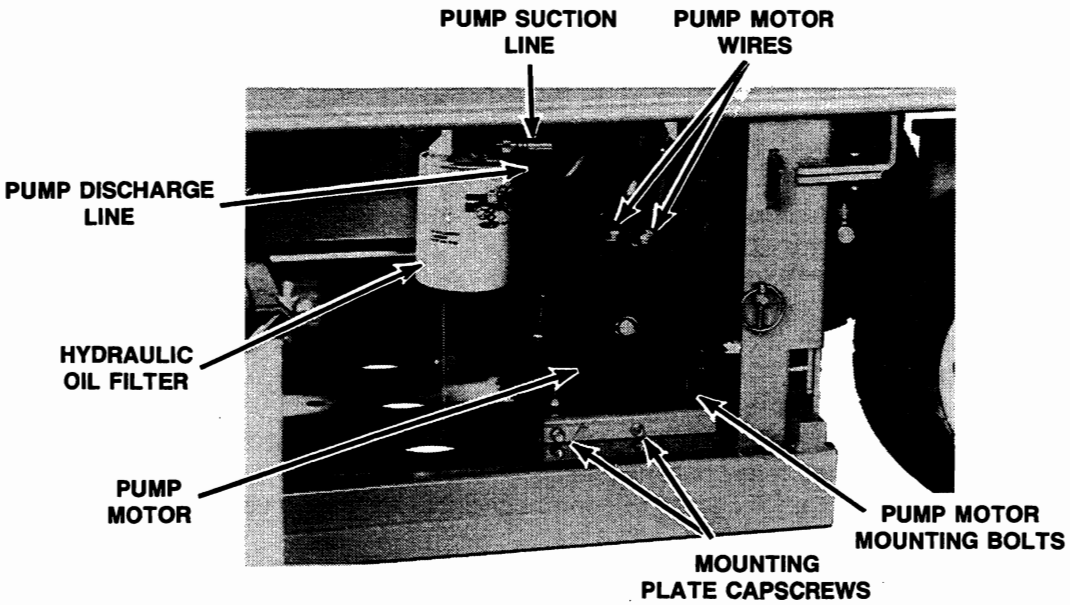


Figure 13. Hydraulic Oil Filter and Pump.

d. **Check and Fill Hydraulic Reservoir**
   (1) Lower platform completely.
   (2) Remove load from platform.
   (3) Raise platform high enough to engage maintenance locks. (See Figure 3)

> **⚠ WARNING**
>
> **MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.**
>
> **Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury.**
>
> **FOLLOW MAINTENANCE LOCKS PROCEDURE ON PAGE 3 OF THIS MANUAL.**

   (4) Lower platform so that maintenance locks rest on pivot pins.
   (5) Remove filler cap and check fluid level in reservoir (Figure 14).
   (6) Fill to proper level.
   (7) Replace cap.
   (8) Raise platform slightly and disengage maintenance locks.

e. **Hydraulic Pump and Motor Replacement**
   (1) Lower platform completely.
   (2) Remove load from platform.
   (3) Raise platform high enough to engage maintenance locks. (See page 3)
   (4) Lower platform so that maintenance locks rest on pivot pins.
   (5) Disconnect batteries by pulling battery disconnect handle out (Figure 11).
   (6) Remove both cover plates.
   (7) Remove mounting plate capscrews and remove pump assembly.
   (8) Tag and remove wires from pump motor terminals.
   (9) Remove hydraulic hoses from pump.

NOTE

In the preceding step, the high pressure hydraulic line may still be under pressure and fluid will squirt out when line is disconnected. Do not reuse fluid, as it may become contaminated.

   (10) Install pump motor by reversing above procedure.
   (11) Raise platform slightly and disengage maintenance locks.

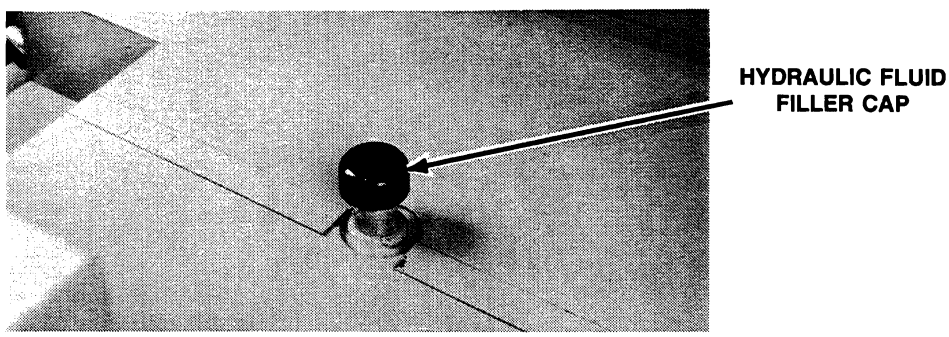


Figure 14. Hydraulic Oil Fill Cap.

3. **Slow-Speed Switch Adjustment**
   a. Raise platform approximately four (4) feet.
   b. Loosen switch mounting screws and adjust switch in or out to activate circuit (Figure 15). The slow-speed valve will then be energized when platform reaches a height of four (4) feet, limiting machine travel to slow speed.

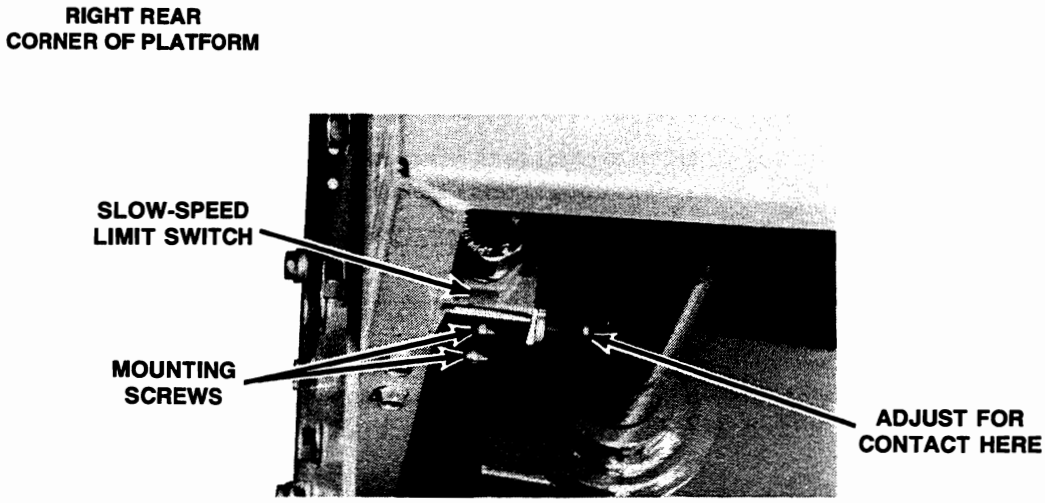


Figure 15. Slow Speed Adjustment Switch.

4. **Brake Adjustment**
   a. Turn key switch off.
   b. Install a jumper wire between terminals 1 and 3 on lower control box terminal strip.
   c. Turn key switch on. Hydraulic pump motor should start up and brake cylinder should extend, releasing the brakes. The brakes must remain released through the remainder of the adjustment procedure.
   d. Measure clearance between brake shoes and wheel drums (Figure 16).
   e. The clearance dimension should be 0.062 inch on each wheel to achieve proper braking action.
   f. If an adjustment is necessary, loosen adjustment block bolts (Figure 16) and rotate brake actuating shaft to establish a 0.062 inch clearance. Tighten adjustment block bolts.
   g. Turn key switch off and remove jumper wire installed in step b above.
   h. Operate machine in forward direction and note braking action when **FORWARD/REVERSE** switch is released.
   i. If brakes set too soon in the deceleration cycle, the brake shoe gap should be increased slightly. If braking time is excessive, close the brake shoe gap slightly. Use the procedure outlined in steps a through f above to correct the braking action.

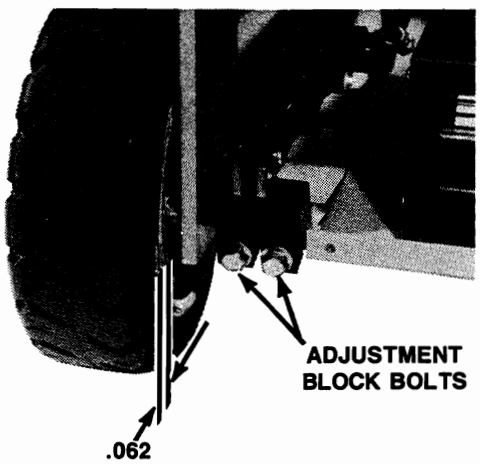


Figure 16. Brake Adjustment.

5. **Hydraulic Lift Cylinder Replacement**

⚠ WARNING

MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.

Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury.

FOLLOW MAINTENANCE LOCKS PROCEDURE ON PAGE 3 OF THIS MANUAL.

a. Raise platform.
b. Engage maintenance locks (Figure 3).
c. Lower platform until beam assemblies touch maintenance locks.
d. Remove cylinder pin retainer plates on both sides of cylinder mounting (top and bottom) (Figure 17).
e. Wrap a self-tightening strap around center of the cylinder.
f. With a lifting device apply upward pressure.
g. Remove low-pressure hose and high-pressure hose from lower end of cylinder.
h. Remove top cylinder pin and bottom cylinder pin.
i. Raise cylinder up and out of machine.
j. Replace cylinder and reassemble in reverse order.
k. Bleed air from system by raising and lowering platform 6 times.
l. Recheck fluid level in down position.

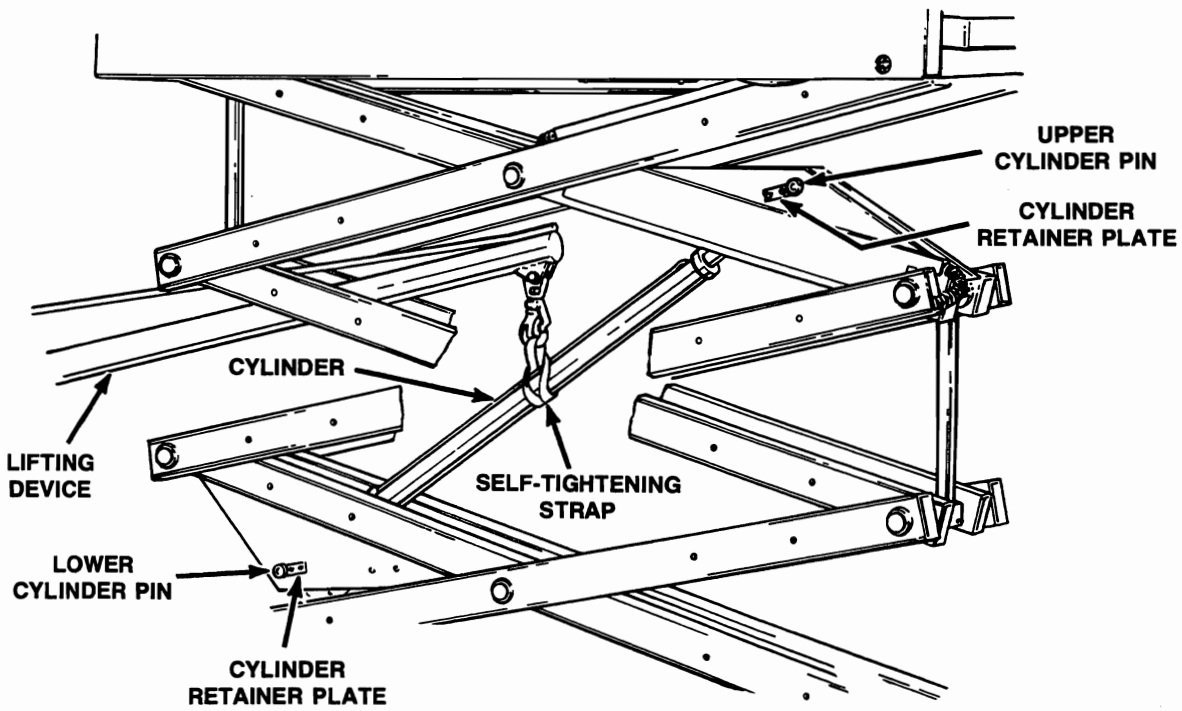


Figure 17. Removing Lift Cylinder Pins and Retainers.

6. **Outer Beams and Inner Beam Assembly Replacement**

NOTE

1) **Beam replacement must be done only by factory authorized persons.**
2) **When replacing damaged or worn scissor lift beams, care must be taken to assemble beams so that outer beam washer reinforcements face toward inner beam assemblies.**
3) **One outer beam and one inner beam on each side are made of 8 ga. steel. All others are made of 10 ga. steel. Use care to avoid interchanging beams of different thicknesses.**

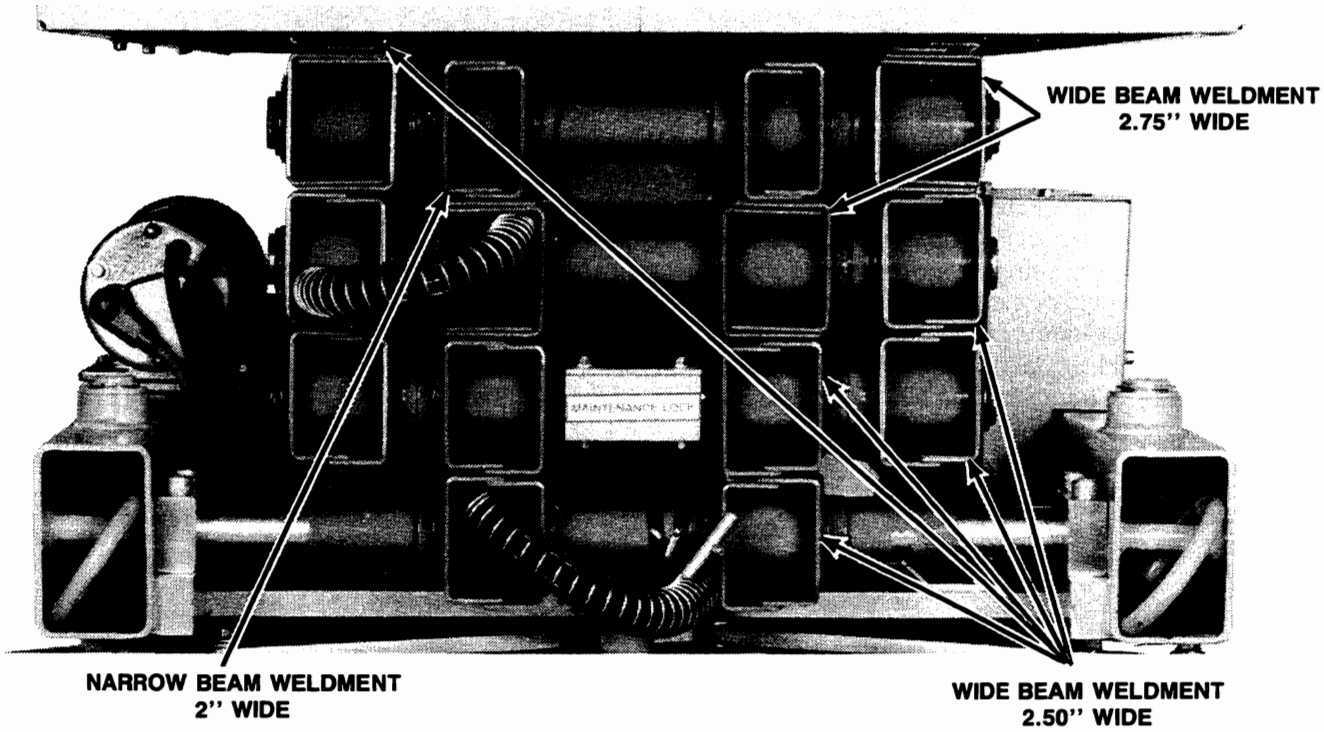


Figure 18. Beam Placement.

7. **Automatic Stabilizers**

a. The two limit switches (inner and outer) associated with the stabilizers form an interlock circuit to prevent the platform from being raised above approximately 4 feet unless the stabilizers are fully down.
b. The inner switch (Figure 19) is wired normally open. It is closed (actuated) by the stabilizer mechanism when the stabilizers reach the fully lowered position.
c. The outer switch (Figure 20) is wired normally open. If properly adjusted, it is held closed by the adjacent scissor beam until the platform reaches a height of 4 feet. When the adjacent scissor beam clears the switch roller, the switch contacts open.
d. If the inner switch had not closed (step b) before the outer switch opens (step c), the circuit to the up valve coil will be broken. The platform can then be raised no further.
e. If the inner switch has not actuated when the stabilizers are fully down, loosen switch mounting bolts and move switch (Figure 19) towards the stabilizer linkage until actuation occurs.
f. The outer limit switch bracket has slotted mounting holes (Figure 20). It must be adjusted in the mounting slots such that the switch roller contact with the scissor beam is sufficient to close the switch contacts, without undue downward force being applied to the roller as the scissor beam moves down onto the roller. Adjustment must be made by "trial and error" until the prescribed conditions are met.

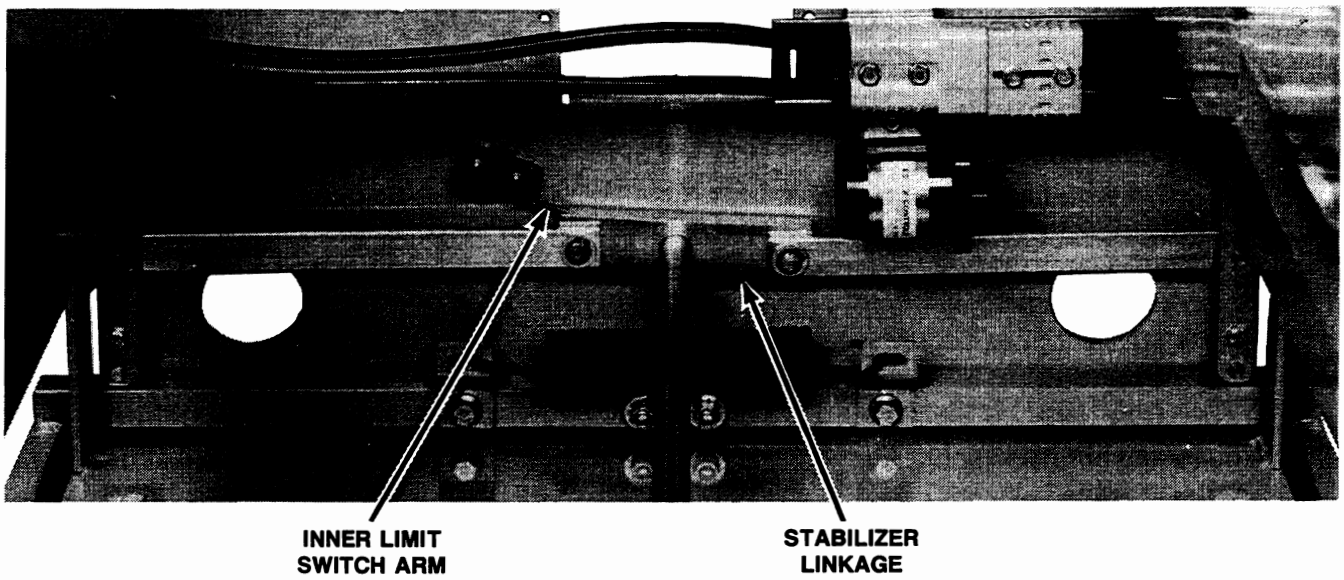


Figure 19. Inner Limit Switch Adjustment.

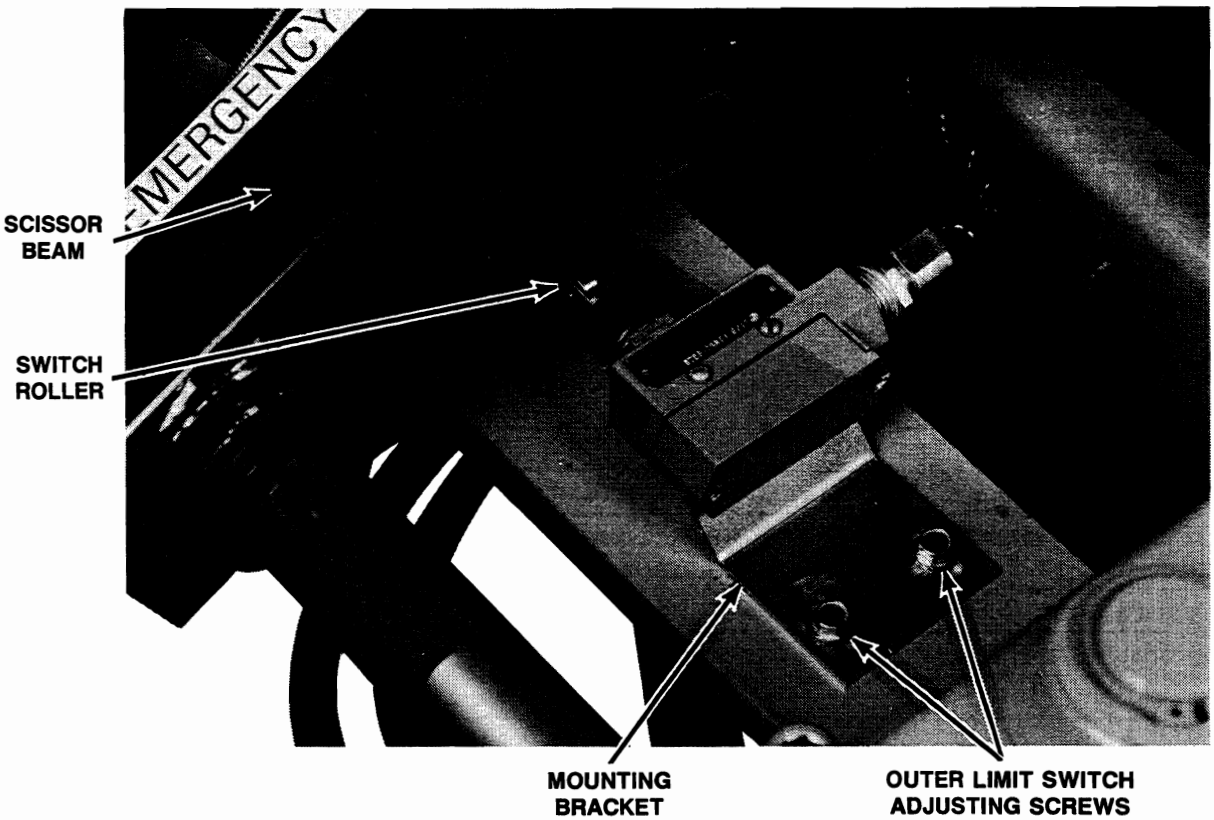


Figure 20. Outer Limit Switch Adjustment.

5. TROUBLESHOOTING

⚠ WARNING

MAINTENANCE LOCKS MUST BE INSTALLED when maintaining or servicing machine with platform fully or partially extended.

Working through beams on scissors lifting device creates a hazardous situation which could cause death or personal injury.

FOLLOW MAINTENANCE LOCKS PROCEDURE ON PAGE 3 OF THIS MANUAL.

No LIFT motion (pump not operating).

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Open circuit breaker.	1. Reset.
2. Blown ground fuse.	1. Check fuse and replace if necessary.
3. Dead battery or battery disconnect open.	1. Check and charge battery as directed in Maintenance section. Check battery disconnect.
4. Defective emergency stop switch.	1. Replace switch.
5. Defective **KEY** switch.	1. Replace **KEY** switch.
6. Defective **UP/DOWN** switch.	1. Replace **UP/DOWN** switch.
7. Open diode between Terminal #4 and #6.	1. Replace diode.
8. Worn pump motor brushes.	1. Replace brushes and springs.
9. Shorted pump motor armature.	1. Replace pump motor.
10. Defective motor contactor.	1. Replace contactor.

No LIFT motion (pump operating).

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Hydraulic fluid level low.	1. Add fluid (see Maintenance section).
2. Pump cavitation caused by improper fluid for temperature conditions.	1. Drain reservoir and bleed system. Use only recommended type fluids (see Maintenance section).
3. Obstruction under stabilizers.	1. Remove obstruction.
4. Misadjusted or defective stabilizer switches.	1. Adjust or replace switches.
5. Defective up valve or coil.	1. Replace up valve or coil.
6. Defective down valve.	1. Replace down valve.
7. Electrical wire loose or broken in circuit.	1. Refer to electrical schematic for wire numbers.
8. Open or defective emergency down valve.	1. Replace valve and/or cable.

Lift speed slow or erratic.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Weak battery.	1. Charge battery (see Maintenance section).
2. Loose connections in electrical circuitry.	1. Perform visual inspection and ensure all connections are secure.
3. Momentary short in wiring.	1. Refer to electrical schematic.
4. Bent structural members.	1. Replace damaged structural members as necessary. This must be done by factory authorized personnel only.
5. Restriction in hydraulic hose.	1. Replace hydraulic hose.
6. Defective or jammed seals in hydraulic lift cylinder.	1. Replace hydraulic cylinder.
7. Gear or gear cavity worn or damaged.	1. Replace pump (see Maintenance section).
8. Worn brushes in pump motor.	1. Replace brushes.
9. Defective valves.	1. Check V1 on cylinder and manifold. 2. Check V5 on cylinder.
10. Loose intake hose or oil filter.	1. Tighten connection or filter.

Lowering speed slow.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Flow control (FC1) out of adjustment.	1. Adjust (see Maintenance section).
2. Friction in structural members.	1. Check for damaged members and cracked welds (see Maintenance section). 2. Replace damaged structural members. This is to be done by factory authorized personnel only.
3. Obstruction in hydraulic hose.	1. Replace hose.
4. Defective down valve.	1. Replace valve.

Unit will not lower.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Down signal not applied to down valve coil.	1. Check circuit breaker. 2. Check fuse. 3. Check battery charge. 4. Check electrical circuitry. Refer to electrical schematic.
2. Defective down valve coil.	1. Replace coil.
3. Defective down valve.	1. Replace valve.

Unit creeps down.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective down valve.	1. Replace valve.
2. Defective emergency down valve.	1. Replace valve.
3. Damaged seal in lift cylinder.	1. Replace hydraulic cylinder (see Maintenance section).

Drive function inoperative (hydraulic pump not operating).

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective **FORWARD/REVERSE** switch.	1. Replace switch.
2. Open diode between Terminals #3 and #6.	1. Replace diode.
3. Defective electrical circuitry.	1. Refer to electrical schematic.
4. Defective pump motor contactor.	1. Replace contactor.

Drive function inoperative in both directions (hydraulic pump operating).

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective **FORWARD/REVERSE** switch.	1. Replace switch.
2. Defective drive valve or coil.	1. Replace drive valve or coil.
3. Defective electrical circuitry.	1. Refer to electrical schematic.
4. Low battery.	1. Charge battery.
5. Defective counter balance valve (CBV1).	1. Replace valve.
6. Decel valve (V6) or coil defective.	1. Replace valve or coil.
7. Defective hydraulic motor.	1. Replace drive motor.
8. Brakes not releasing.	1. See "Brake does not release" Troubleshooting topic.

No motion in one drive direction only.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective forward/reverse switch.	1. Replace switch.
2. Defective forward/reverse valve or valve coil.	1. Replace defective valve or coil.
3. Defective electrical circuitry.	1. Refer to electrical schematic.

Machine travels in fast speed when platform is above 4 feet.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Misadjusted or defective **SLOW SPEED** switch.	1. Adjust or replace switch.
2. Defective electrical circuitry.	1. Refer to electrical schematic.
3. Defective slow speed valve or coil.	1. Replace valve or coil.
4. Defective priority flow control valve (PFC1).	1. Replace valve.

Brake does not release.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective brake valve or coil.	1. Replace valve or coil.
2. Brakes misadjusted.	1. Adjust brake (see Maintenance section).
3. Defective brake cylinder.	1. Replace cylinder.
4. Contamination lodged in brake orifice.	1. Remove contamination.
5. Counterbalance valve (CBV1) misadjusted or defective.	1. Adjust valve for correct back pressure. 2. Replace valve.

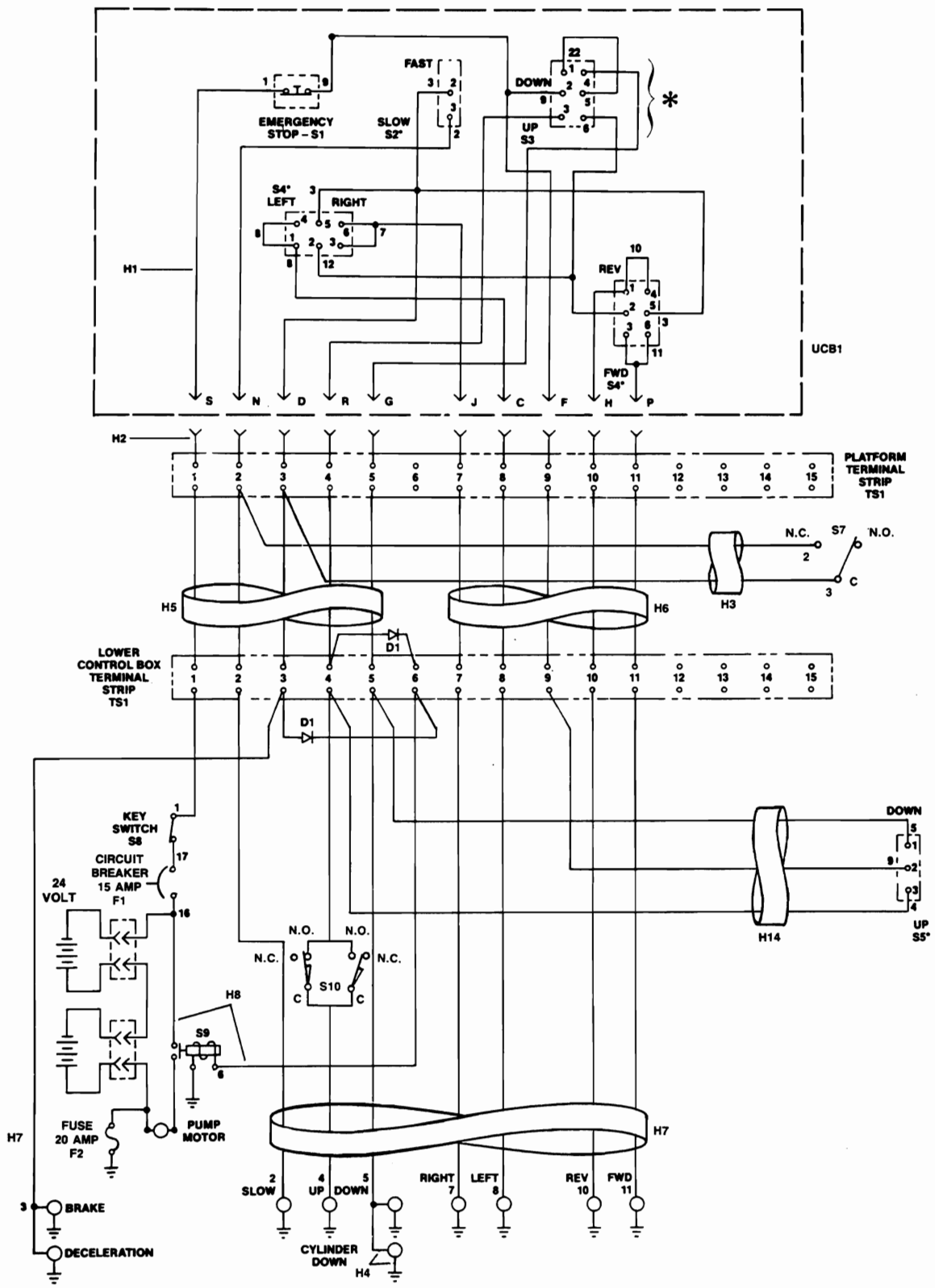
Brake does not set.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Misadjusted brakes.	1. Adjust brake (see Maintenance section).
2. Defective brake valve.	1. Replace.
3. Defective electrical circuitry.	1. Refer to electrical schematic.
4. Damaged or missing brake spring.	1. Replace spring.

Steering inoperative.

POSSIBLE CAUSES	REPAIR PROCEDURES
1. Defective steering switch.	1. Replace switch.
2. Defective electrical circuitry.	1. Refer to electrical schematic.
3. Defective steering valve or coil.	1. Replace steering valve or coil.
4. Defective steering cylinder.	1. Replace steering cylinder.
5. Defective crossover relief valve.	1. Replace valve.
6. Binding in linkage or pivot points.	1. Free up and lubricate.
7. Plugged orifice.	1. Clean or replace orifice.

ELECTRICAL WIRING DIAGRAM
mecDYNA-MITE Models 1332 & 1632



* **NOTE: Switch wiring as seen from the rear of switch.**

Up/Down Switch at Upper Control Box - Contacts Made With Toggle at Keyway Position 1-2, 4-5 - Center Position 1-2, 5-6 - Opposite Keyway 2-3, 5-6

Figure 21. Electrical Wiring Diagram.

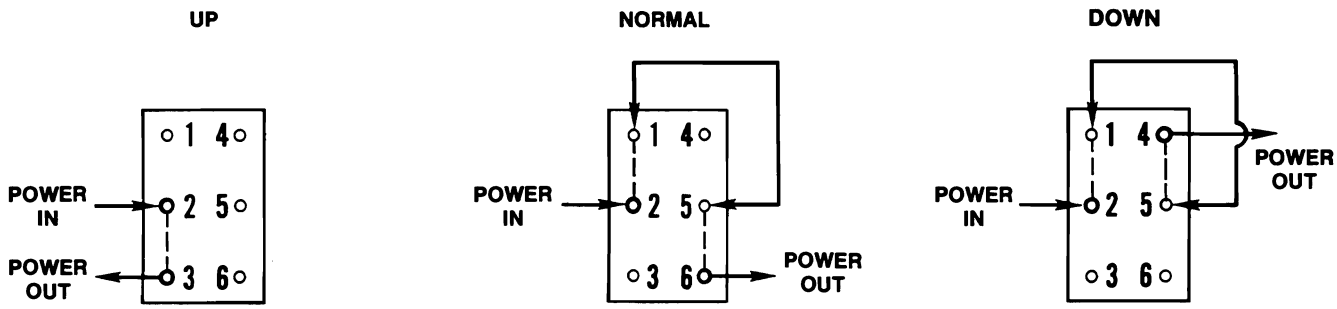
Symbol Identification for Figure 21.
[mec]DYNA-MITE Models 1332 & 1632

Qty.	Symbol	Description	Part No.
2	D1	Diode Assembly	6070
1	F1	Circuit Breaker, 15 Amp	7235
1	F2	Fuse, 20 Amp	7275
	H1	Harness, Control Box	6828
1	H2	Harness, To Control Box	5983
1	H3	Harness, Slow Speed & Stab.	7269
1	H4	Harness, Down Valve	7268
	H5	Harness, Nos. 1, 2, 3, 4, 5	
1		Model 1332	7225
1		Model 1632	7267
	H6	Harness, Nos. 7, 8, 9, 10, 11	
1		Model 1332	7266
1		Model 1632	7226
1	H7	Harness, Component Tray	6805
1	H8	Harness, Crossover, #6, 16	7243
1	H14	Harness, Component Tray	7244
1	S1	Switch, Emergency Stop	7800

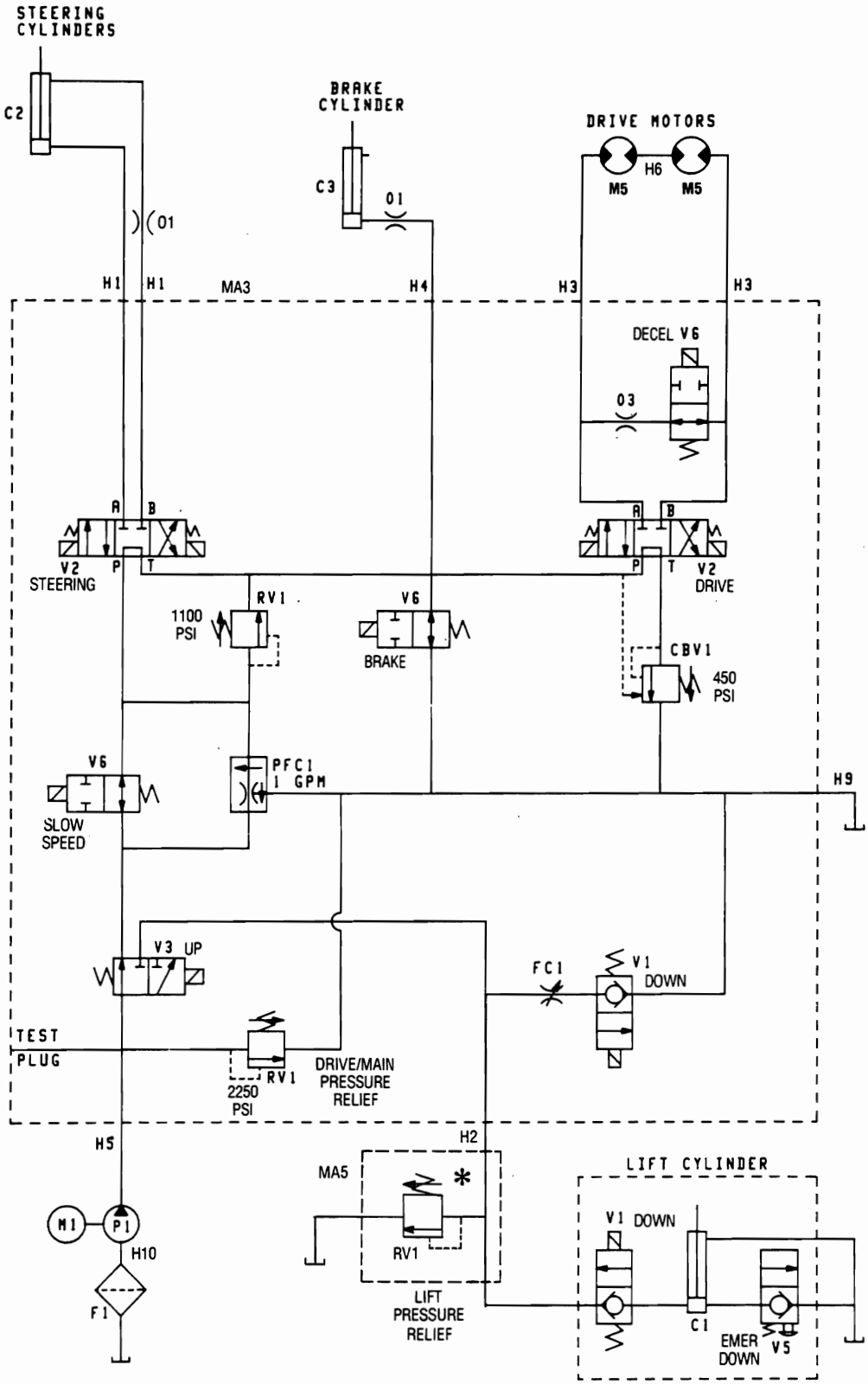
Qty.	Symbol	Description	Part No.
1	S2	Switch, Slow/Fast	5630
1	S3	Switch, Up/Down	5979
2	S4	Switch, Steering, Fwd./Rev.	5694
1	S5	Switch, Lower, Up/Down	5230
1	S7	Switch, Slow Sp. Limit	6715
1	S8	Switch, Key	5936
Ser.		Key Only	6117
1	S9	Contactor, Motor Start	5967
	S10	Switch Limit Stabilizers	
1		Top - Outer	7647
1		Bottom - Inner	5369
2	TS1	Terminal Strip	5991
1	UCB1	Upper Control Box	2107

Ser. = Service Usage

* S3 - Up Switch Diagram



HYDRAULIC SCHEMATIC
mecDYNA-MITE Models 1332 & 1632



*** NOTE: Refer to symbol chart for setting drive valve.**
Refer to symbol chart for lift valve.

Figure 22. Hydraulic Schematic.

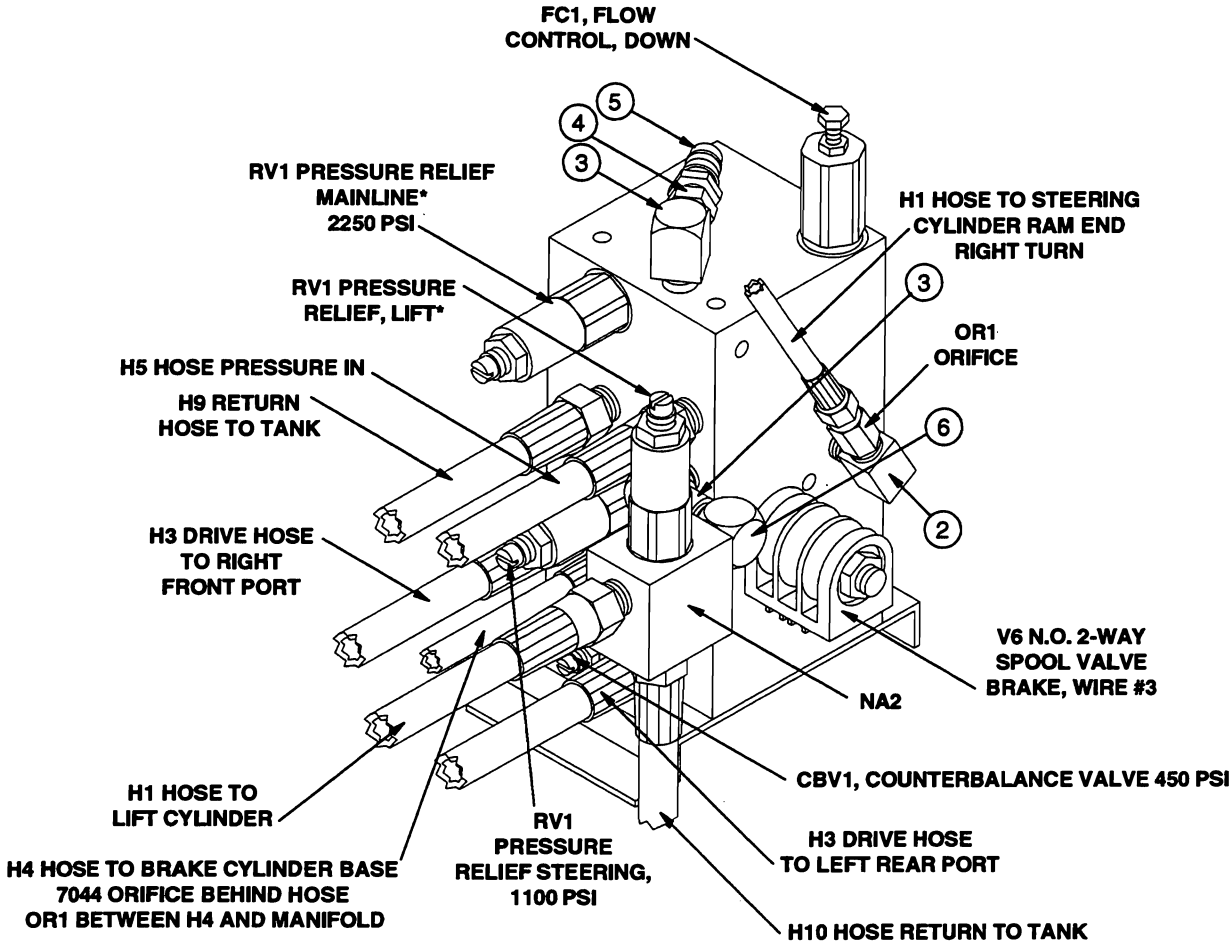
Symbol Identification for Figures 22, 23 and 24.
mecDYNA-MITE Models 1332 & 1632

Qty.	Sym.	Description	Part No.
1	CBV-1	Valve, Counterbalance	6712
Ser.		Seal Kit	6806
1	FC1	Valve, Flow Control	5963
Ser.		Seal Kit	5475
	H1	Hose, Steering	
1		Clevis End	5705
1		Hose End	7066
1	H2	Hose, Lift	6351
Ser.		"O" Ring Kit, Special Swivel End	6675
2	H3	Hose, Drive	7006
1	H4	Hose, Brake	6718
1	H5	Hose, Pump to Manifold	6429
1	H9	Hose, Return	6225
1	H10	Hose, Return	5995
1	MA1	Manifold, Primary	3239
1	MA2	Manifold, Lift Release	11260
2	OR1	Orifice, Fitting, Extender, 0.046"	7044
Opt.	OR2	Orifice, Fitting, Extender, 0.036"	6107
1	OR3	Orifice, Brass, Decel.	2974
1	PFC1	Valve, Priority Flow Control (Standard) 0.75 GPM	7238
Opt.		Valve, Priority Flow Control (Special) 0.5 GPM	6189
Ser.		Seal Kit	5475

Qty.	Sym.	Description	Part No.
3	RV1	Valve, Relief	6316
Ser.		Seal Kit	5475
2	V1	Valve, 2-Way N.C., Poppet	6973
Ser.		Seal Kit	5475
2	V2	Valve, 4-Way, 3-Pos, Tandem	7976
Ser.		Seal Kit	6161
1	V3	Valve, 3-Way, 2-Pos	6976
Ser.		Seal Kit	5476
3	V6	Valve, 2-Way, N.O. Spool	6975
Ser.		Seal Kit	5475
1	1	Plate, Mounting	11189
2	2	Elbow, Street, 1/4", HP	5106
2	3	Elbow, Street, 3/8", HP	5472
1	4	Nipple, Reducing, 1/4" x 3/8", HP	7305
1	5	Quick Disconnect, Male	7297
1	6	Elbow, 90°, 3/8 NPTF	7255
9	7	Coil, 24VDC (w/Diode)	6163
4	8	Bolt, 1/4-20 x 3/4", Taptite (Not Shown)	5723
1	9	Bolt, 1/4-20 x 1/2", Taptite (Not Shown)	6455

Ser. = Service Usage

Model	Pressure Release Lift Valve Setting	Lift Capacity
1332	1,350 PSI	600#
1632	1,850 PSI	500#
	Pressure Release Drive Valve Setting	
1332	2,250 PSI	
1632	2,250 PSI	



*See chart on page 33 for proper setting.

Figure 23.

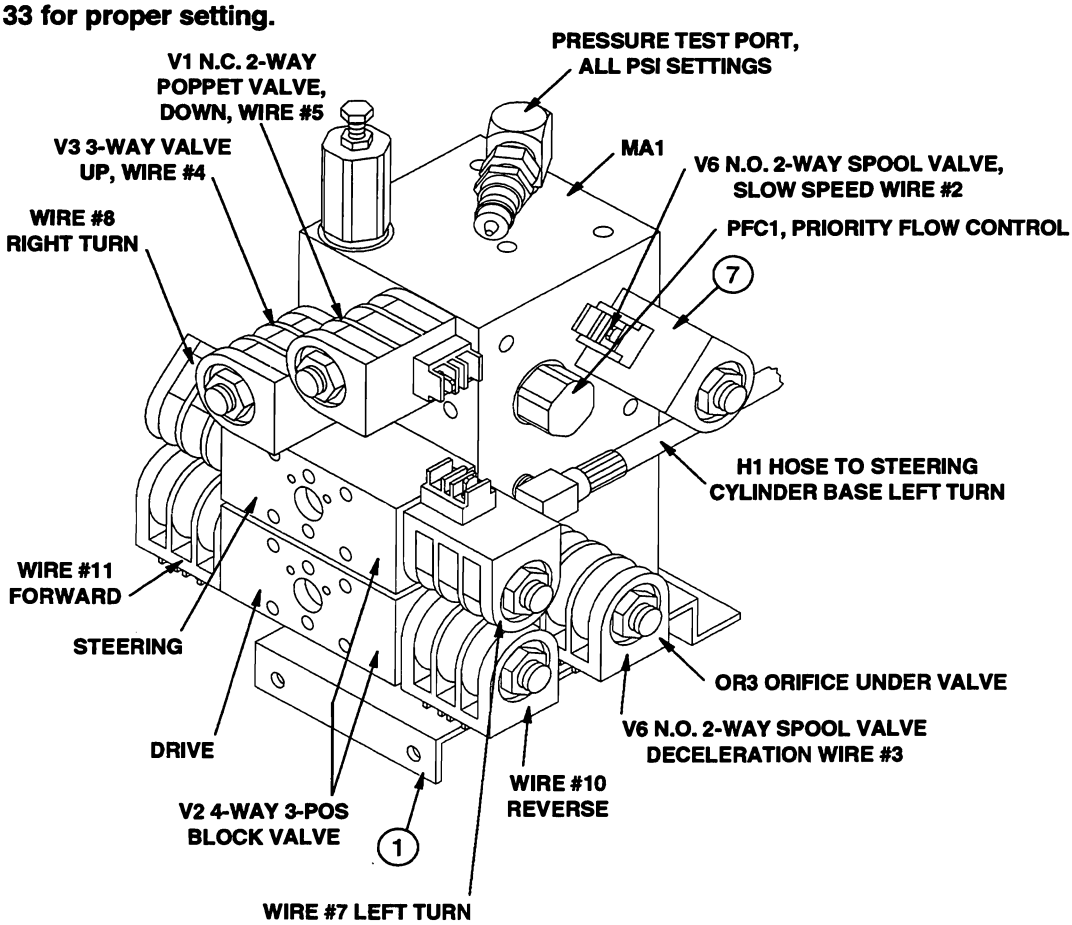


Figure 24.

6. PARTS CATALOG

IMPORTANT REPLACEMENT PART NOTES

1. **Capscrews**

   ANY BOLT REPLACEMENT SHOULD BE OF THE SAME GRADE OR GREATER THAN ORIGINAL BOLT. ANY QUESTIONS, CALL FACTORY FOR VERIFICATION.

   Grade markings for capscrews grades 2, 5, and 8 are based on SAE J429. Markings may be raised or depressed (manufacturer's option).

2. **Battery**

   Replacement battery MUST WEIGH AT LEAST 61 POUNDS to maintain the stability factor of the machine.

3. **Tires**

   Tires on [mec]DYNA-MITE machines must be replaced with manufacturer's replacement tires to maintain stability factor of the machine. Torque front wheel motor nuts to 300-400 ft. pounds of torque.

TIRES ON MEC AERIAL WORK PLATFORM MACHINES MUST BE REPLACED WITH MANUFACTURER'S REPLACEMENT TIRES SEE SERVICE MANUAL FOR PROPER INSTALLATION OF REPLACEMENT TIRES.

7270

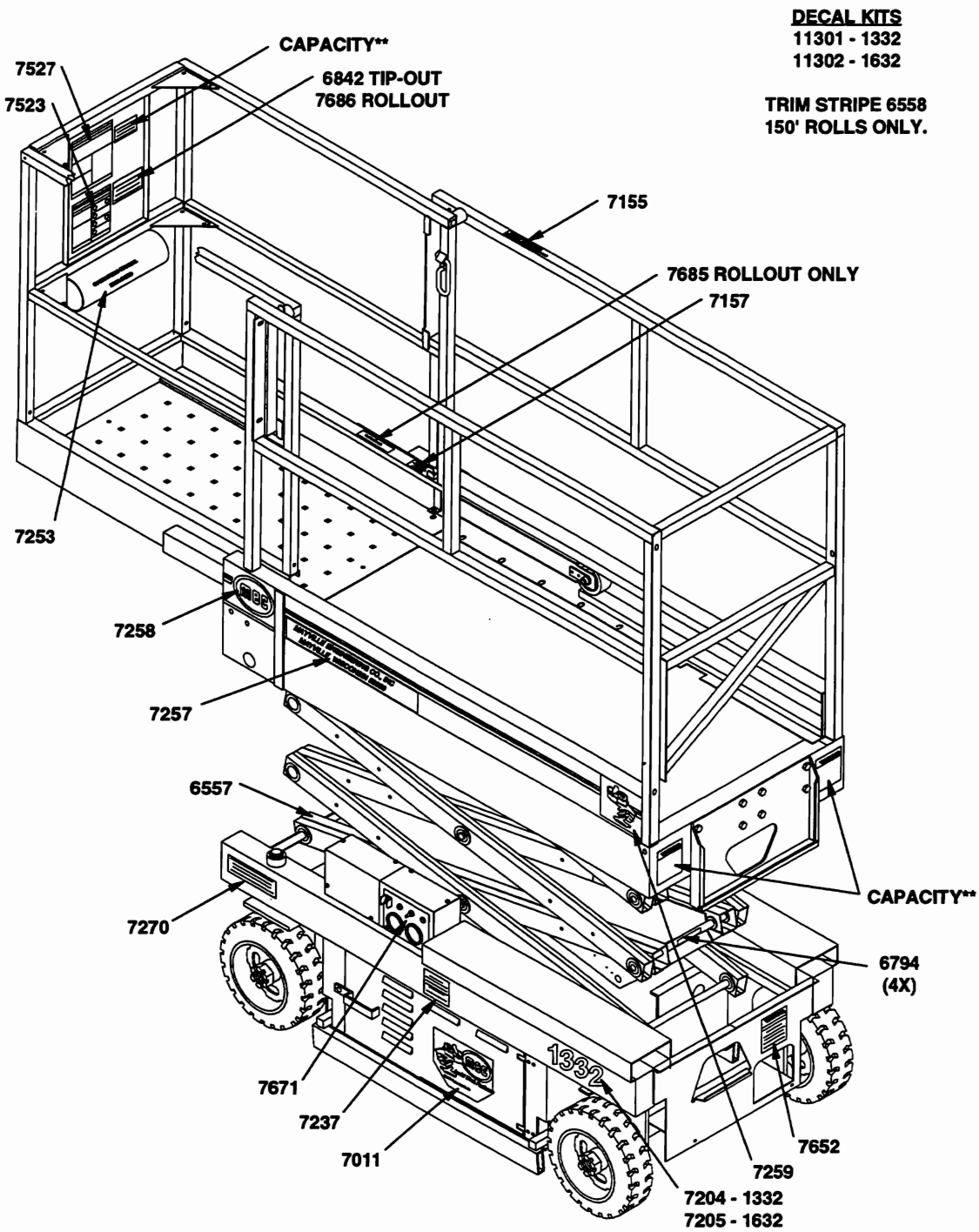
4. **Decals and Labels**

   All decals and labels are furnished at no charge. Refer to the following part numbers when requesting decals. See next page for proper location of specific safety decals.

Part No.	Description	Side Railing
11301	1332 Decal Kit	7257
11302	1632 Decal Kit	7258
		7259

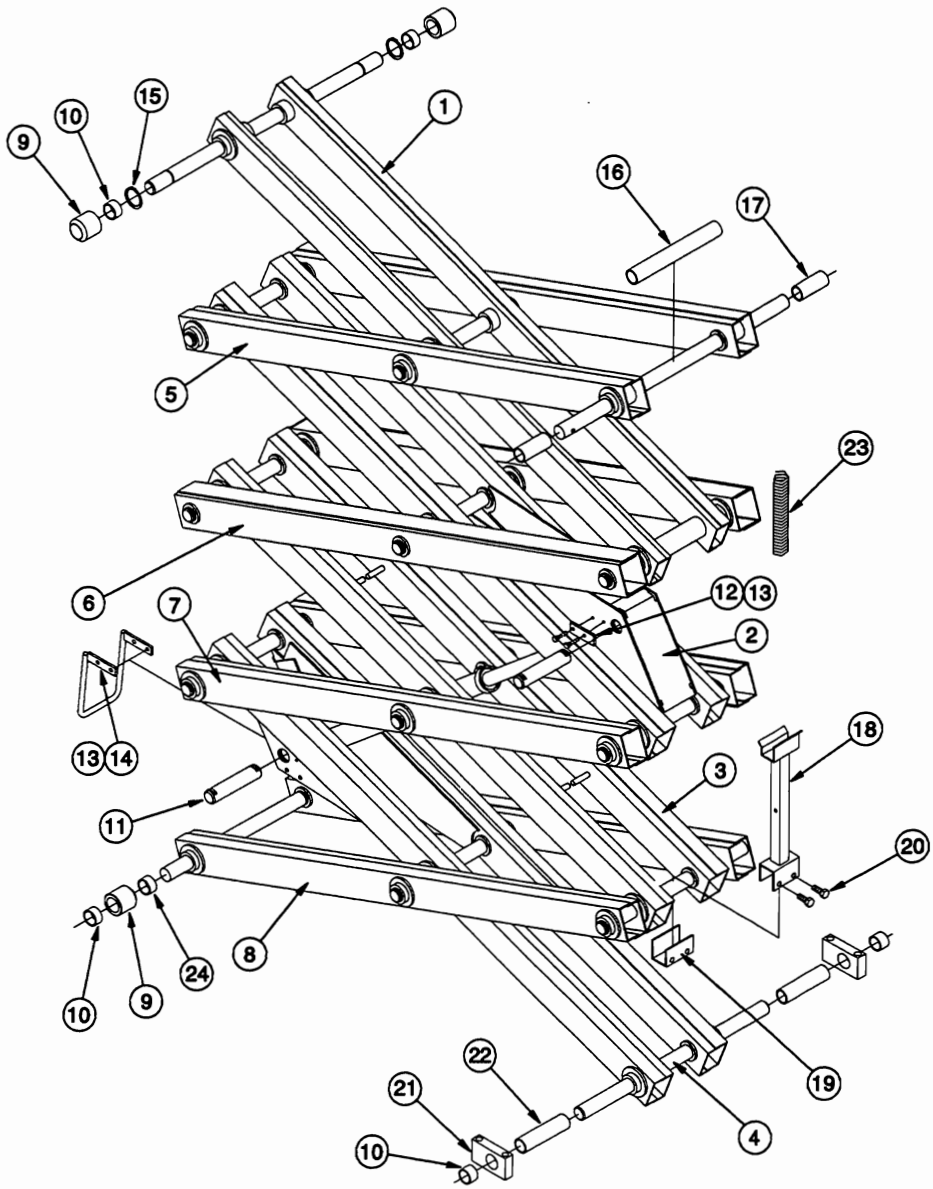
NOTE

When servicing machine check to see if decals shown in diagram are in place and legible. If not, they must be added or replaced.



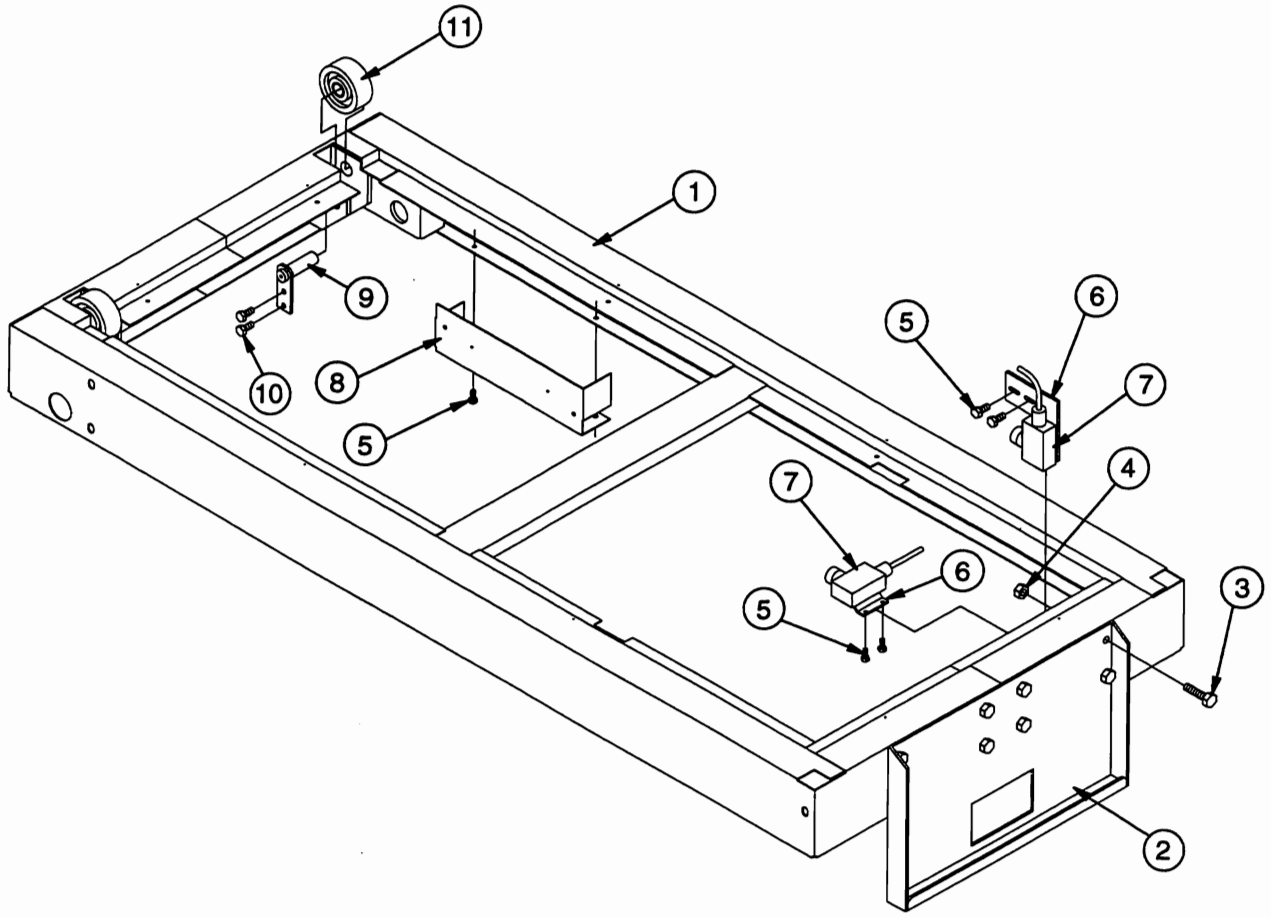
** Model	Capacity Decal Part No.	Qty.
1332	7210	3
1632	7207	3

Figure 25. Decal Locations.



Item	Qty.	Description	1332 Part Number	1632 Part Number
1	1	Upper Inner Beam Weldment	-	11059
2	1	Inner Upper Beam Weldment	11103	11015
3	1	Middle Inner Beam Weldment	11014	11014
4	1	Lower Inner Beam Weldment	11016	11016
5	2	Narrow Outer Beam Weldment	-	11001
6	2	Outer Wide Beam Weldment	11061	11061
7	2	Narrow Outer Beam Weldment	11001	11001
8	2	Narrow Outer Beam Weldment	11001	11001
9	4	Roller, w/Bearing	4424	4424
10	10	Bearing 22DU16	7074	7074
11	2	Pin, Cylinder Lift	11006	11006
12	4	Retainer, Cylinder Pin	4423	4423
13		Bolt, Hex Hd, 1/4-20 x 3/4"	5723	5723
14	1	Actuator, Stabilizer	11143	11143
15	18	Ring, Retaining, 1-3/8"	6875	6875
16	1	Spacer, Tube, Long	11289	11289
17	2	Spacer, Tube, Short	11290	11290
18	2	Maintenance Lock	11182	11182
19	2	Lower Bracket, Maintenance Lock	11185	11185
20	4	Bolt, Hex Hd, 1/4-20 x 1/2"	6455	6455
21	2	Mounting Block, Scissors	11080	11080
22	2	Spacer, Front	11304	11304
23	4	Spring, Protective	3353	3353
24	2	Spacer, Base Roller	11036	11036

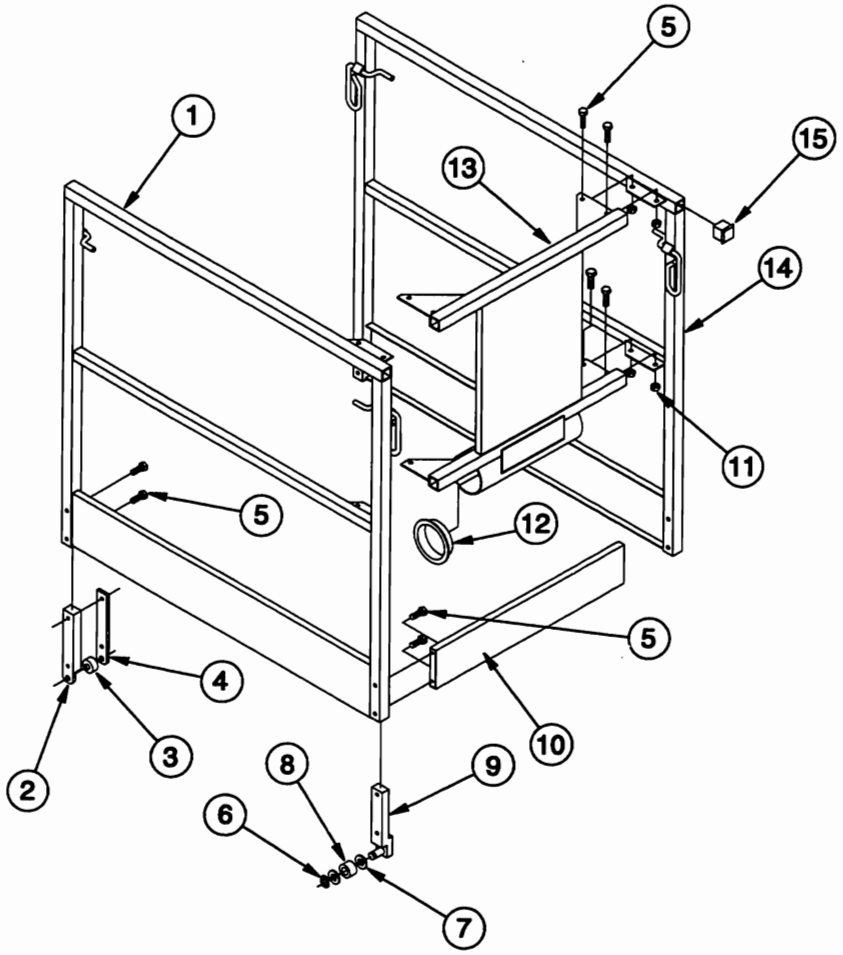
Figure 26. Lift Scissor System.



ART-248

Item	Qty.	Description	1332 Part Number	1632 Part Number
1	1	Platform Weldment (Standard)	11254	11216
	1	Platform Board (Standard) (Not Shown)	7149	7149
1	1	Platform Weldment (Rollout)	11356	11332
	1	Platform Board (Rollout) (Not Shown)	7537	7537
2	1	Step, Rear	4899	4899
3	8	Bolt, Hex Hd, 3/8-16 x 3/4, Gr-5	6432	6432
4	8	Nut, 3/8-16, Gr-5	5039	5039
5	4	Bolt, 1/4-20 x 3/4, Taptite, Gr-5	5723	5723
6	1	Bracket, Limit Switch	4593	11087
7	1	Switch, Limit, Slow Speed	6715	6715
	1	Cord Grip	6456	6456
	1	Harness, Slow Speed	7269	7269
	2	Screw, Mach, 6-32 x 1 1/2	7684	7684
8	1	Terminal Box, Upper (See Page 53)		
9	2	Pivot Weldment	11337	11337
	2	Fitting, Grease	5432	5432
10	4	Bolt, 1/4-20 x 1/2, Taptite, Gr-5	6455	6455
11	2	Roller, 3 1/4 x 1 1/2 Wide	7465	7465

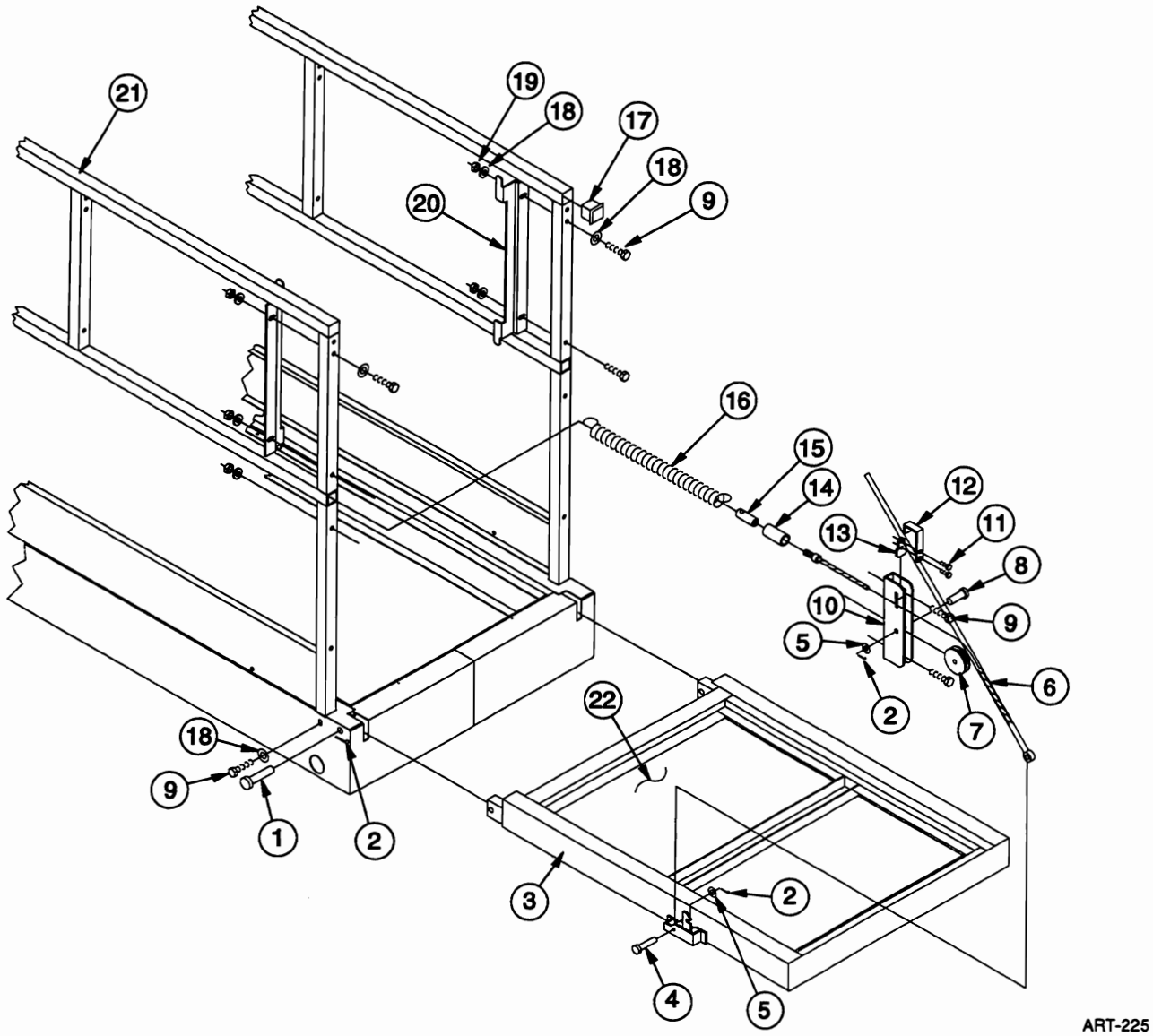
Figure 27. Platforms.



ART-194

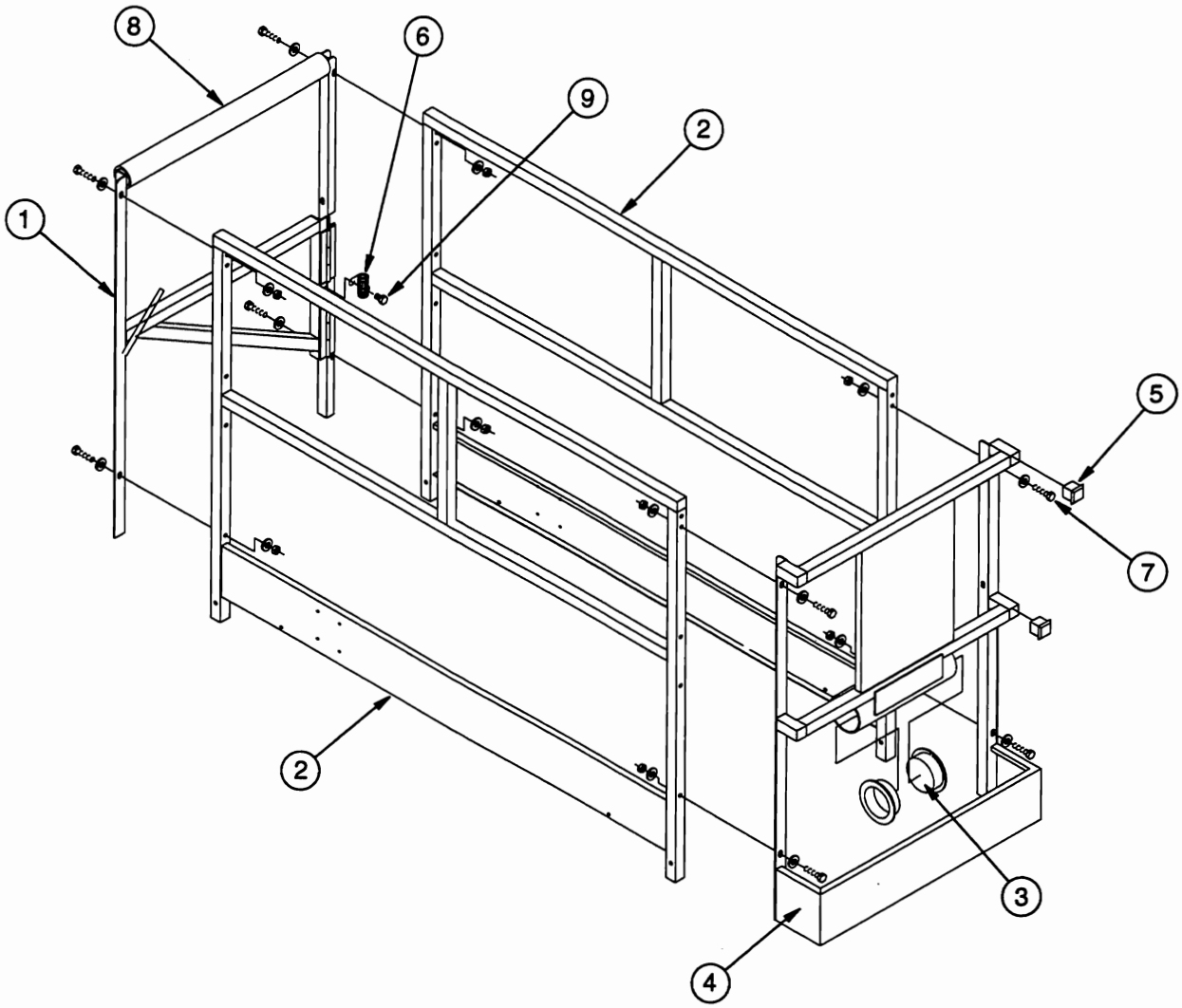
Item	Qty.	Description	Part Number
1	1	Rail, RH Side, Extending Platform	11262
2	2	Bracket, Sliding Rail	3301
3	2	Roller, Sliding Rail	3291
4	2	Bracket, Sliding Rail	3302
5	16	Bolt, 1/4-20 x 3/4, Taptite, Gr-5	5723
6	2	Ring, Retaining, 1/2"	5736
7	4	Washer, Flat	7031
8	2	Roller	4542
9	2	Bracket, Roller, Extending Platform	11281
10	1	Panel, Kick	11273
11	8	Nut, Keps, 1/4-20	5276
12	1	Cap Assembly, Manual Tube	3788
13	1	Front Rail / With Manual Tube	11263
	Ser.	Manual Tube (Req. 1-3788 and 1-7253)	11323
14	1	Rail, LH Side, Extending Platform	11261
15	4	Caplug, 1 1/4", Sq Tube	6823
	Ser.	Extending Platform Kit	11414

Figure 28. Extending Platform Railing Assembly.



Item	Qty.	Description	Part Number
1	2	Pin, Clevis, 1/2" x 2 3/4"	7233
2	6	Pin, Cotter, 1/8" x 1"	5920
3	1	Weldment, Extending Platform	11219
4	2	Pin, Clevis, 5/16" x 3 1/8"	7163
5	4	Washer, Flat, 5/16"	5217
6	2	Cable Assembly	7232
7	2	Pulley, Retraction Cable	2747
8	2	Pin, Clevis, .312" x 1.25"	6450
9	6	Bolt, Hex Cap, 3/8-16 x 2", Gr-5	6434
10	2	Base, Pulley	11249
11	2	Bolt, 1/4-20 x 1/2" Taptite, Gr-5	6455
12	1	Lever, Release	11248
13	1	Bracket, Mounting, Release Lever	11247
14	2	Block, Attaching	11299
15	2	Pin, Spring Connecting	3366
16	2	Spring	7240
17	2	Caplug, 1 1/4", Sq Tube	6823
18	10	Washer, Flat	5355
19	6	Nut, Hex, Keps, 3/8-16	5039
20	2	Bracket, Stop	3344
21	1	Weldment, Side Rail	11209
22	1	Floor Board	7242
23	6	Screw, Self Tap, FH 1/4 x 1 1/4, Gr-5 (Not Shown)	5213
	Ser.	Extending Platform Kit	11414

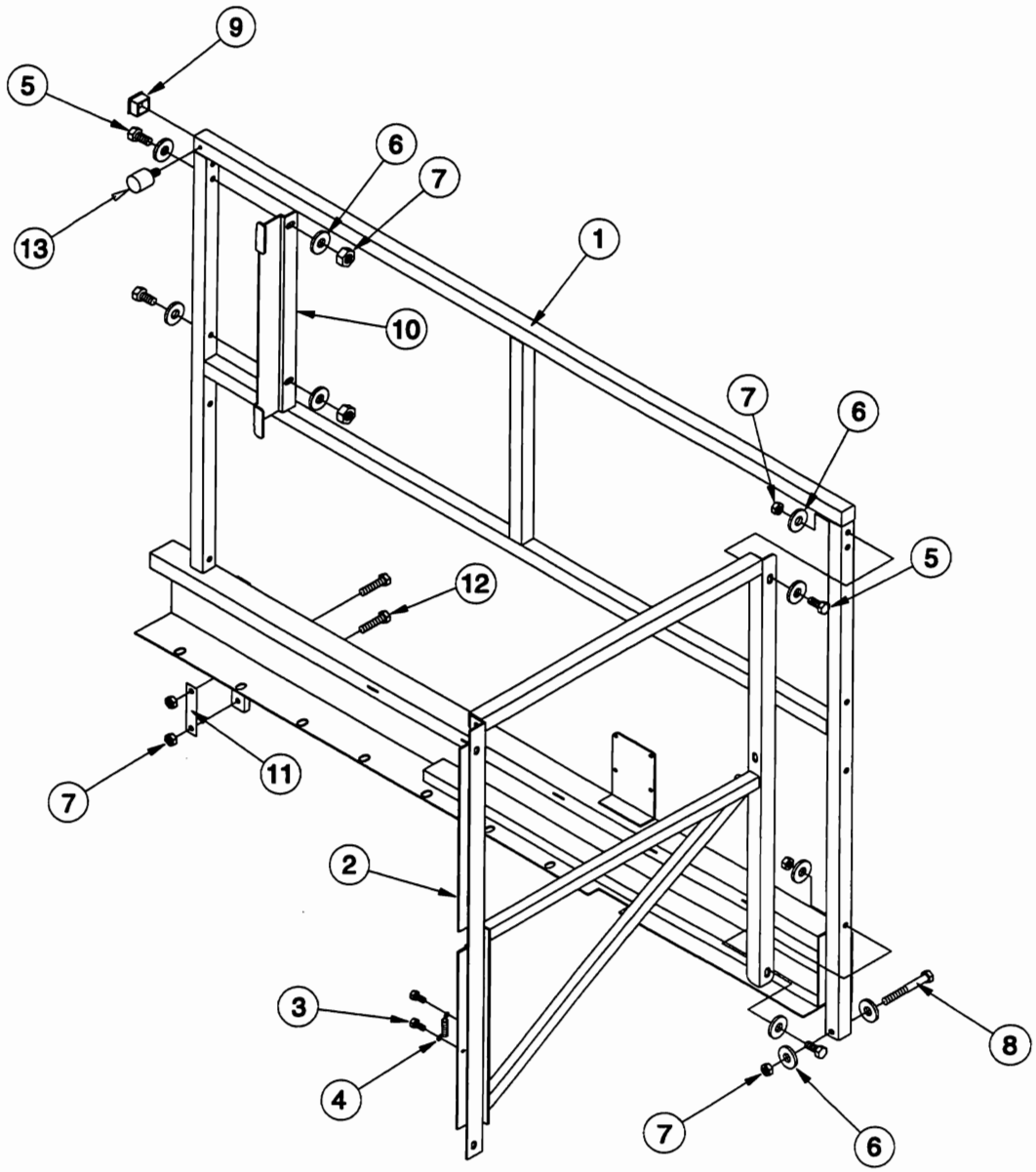
Figure 29. Extending Platform.



ART-205

Item	Qty.	Description	Part Number
1	1	Gate, Rear	11361
2	2	Rail, Side	11209
3	1	Cover Assembly, Manual Tube	3788
4	1	Rail, Front	11194
5	4	Caplug, 1 1/4", Sq Tube	6823
6	1	Spring, Gate	7153
7	8	Bolt, Hex Cap, 3/8-16 x 20, Gr-5	6434
8	1	Cover, Rail Pad	7048
9	2	Bolt, 1/4-20 x 1/2", Taptite, Gr-5	6455

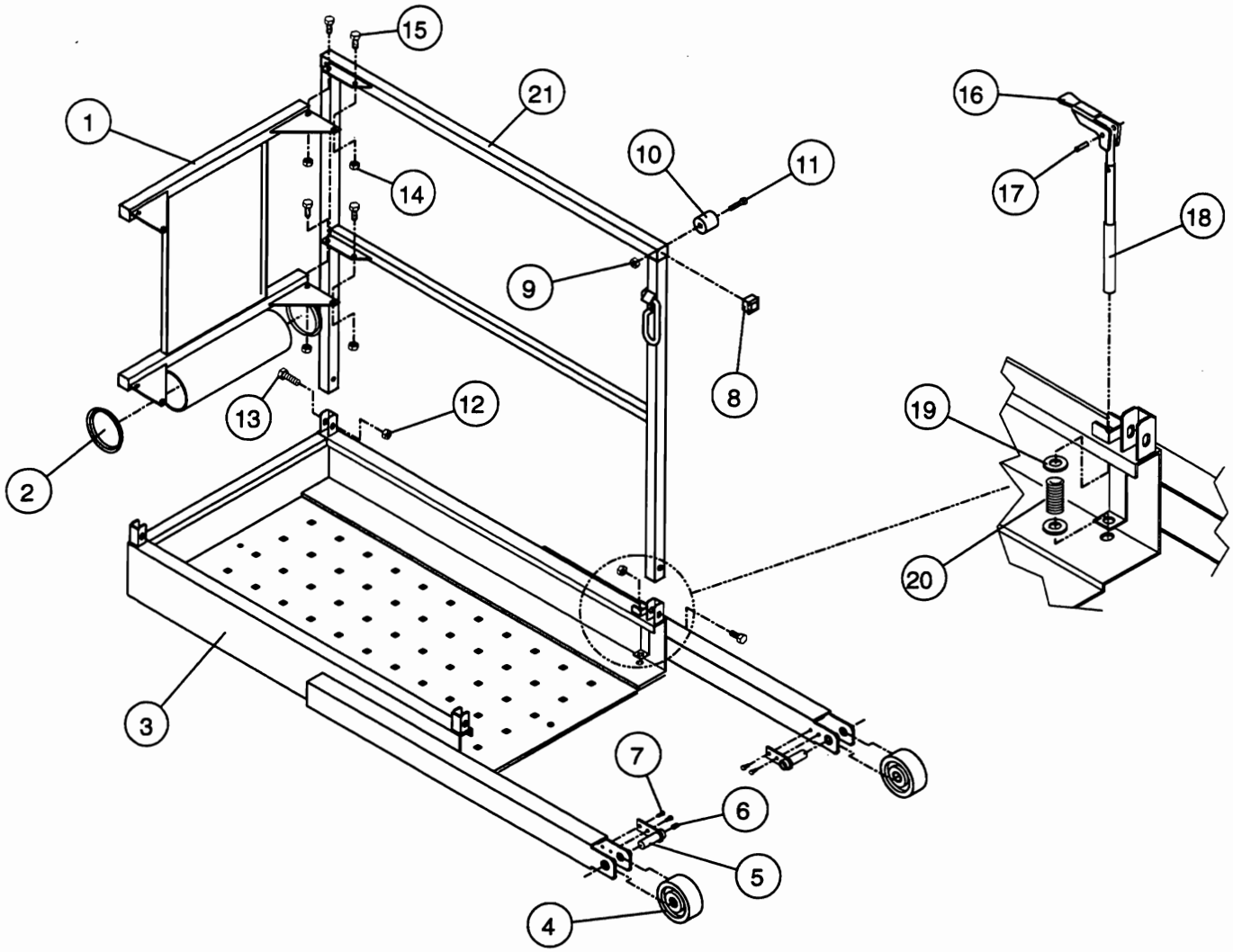
Figure 30. Railing Assembly Standard Platform.



ART-116

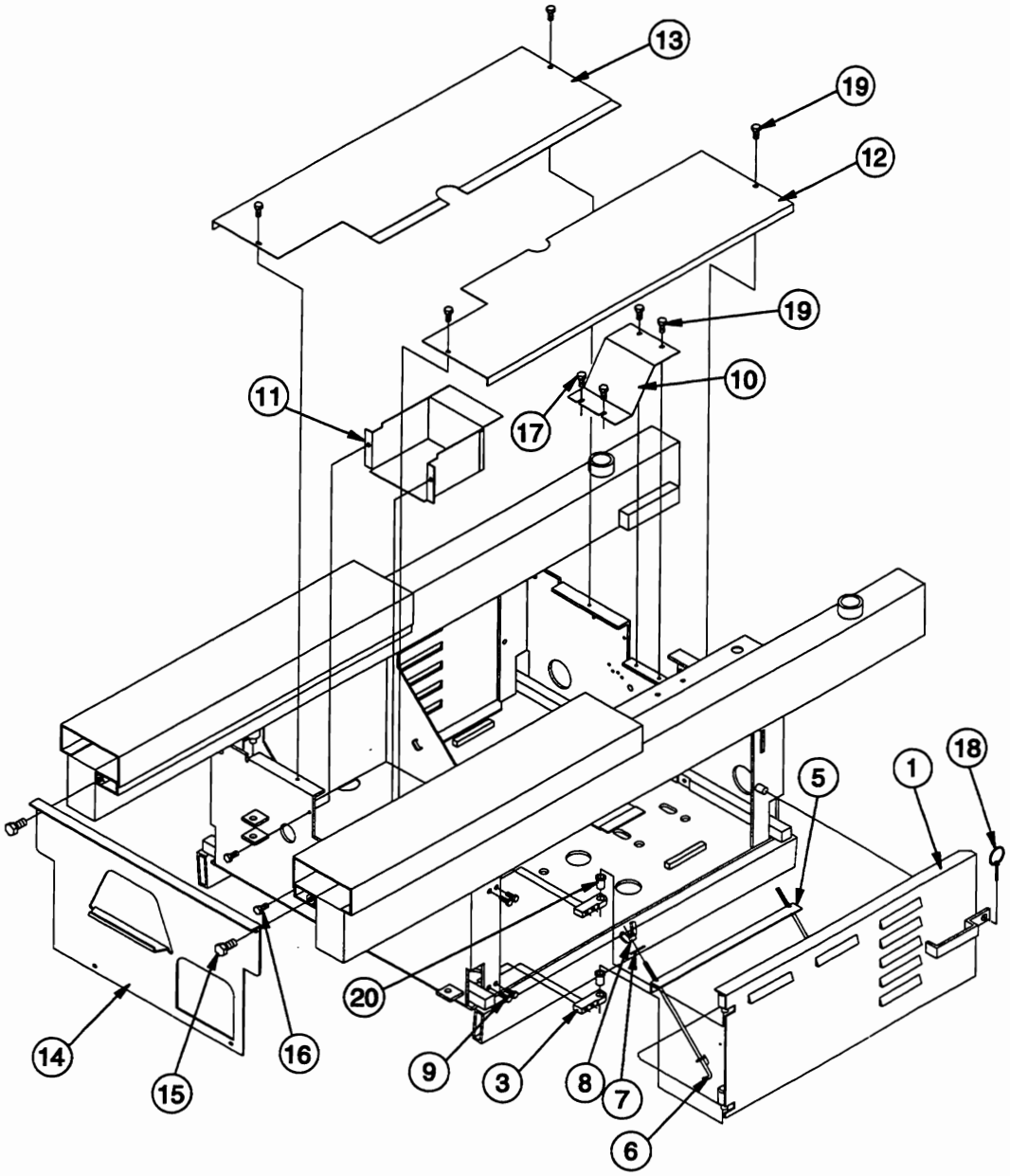
Item	Qty.	Description	Part Number
1	1	Side Rail, RH	11340
	1	Side Rail, LH (Not Shown)	11341
2	1	Gate, Rear	11361
3	2	Bolt, 1/4-20 x 1/2", Taptite, Gr-5	6455
4	1	Spring, Gate	7153
5	8	Bolt, Hex Cap, 3/8-16 x 2", Gr-5	6434
6	20	Washer, Flat, 3/8"	5355
7	14	Nut, Keps, 3/8-16	5039
8	2	Bolt, Hex Cap, 3/8-16 x 3 1/4", Gr-5	6777
9	4	Caplug, 1 1/4" Sq	6823
10	2	Bracket, Stop	11369
11	2	Shim	11426
12	4	Bolt, Hex Cap, 3/8-16 x 1 3/4", Gr-5	5756
13	2	Spacer	11372
	2	Nut (Not Shown)	5276
	1	Rail Pad (Not Shown)	7048

Figure 31. Platform and Railings With Rollout.



Item	Qty.	Decsription	Part Number
1	1	Front Rail, With Manual Tube	11354
2	2	Cover Assembly, Manual Tube	3788
	Ser.	Manual Tube (Req 1-3788 and 1-7253)	11323
3	1	Platform, Rollout	11325
4	2	Roller, 1 1/2" x 4"	7393
5	2	Pivot Weldment	11370
6	2	Fitting, Grease	5432
7	4	Bolt, 1/4-20 x 1/2", Taptite, Gr-5	6455
8	4	Caplug, 1-1/4 Square Tube	6823
9	2	Nut, Locking, 1/4-20	6461
10	2	Spacer	11372
11	2	Bolt, 1/4-20 x 1 1/2", Gr-5	6029
12	4	Nut, Keps, 3/8-16	5039
13	4	Bolt, 3/8-16 x 1 3/4", Gr-5	5756
14	8	Nut, Hex, 1/4-20	5276
15	8	Bolt, 1/4-20 x 3/4", Taptite, Gr-5	5723
16	1	Lock Lever	10476
17	1	Pin, Roll	1008096
18	1	Pin, Lock, Extending Platform	11376
19	2	Washer, Flat	5355
20	1	Spring, Deck Lock	7408
21	1	Rail, RH, Extending, Platform	11351
22	1	Rail, LH, Extending, Platform (Not Shown)	11352

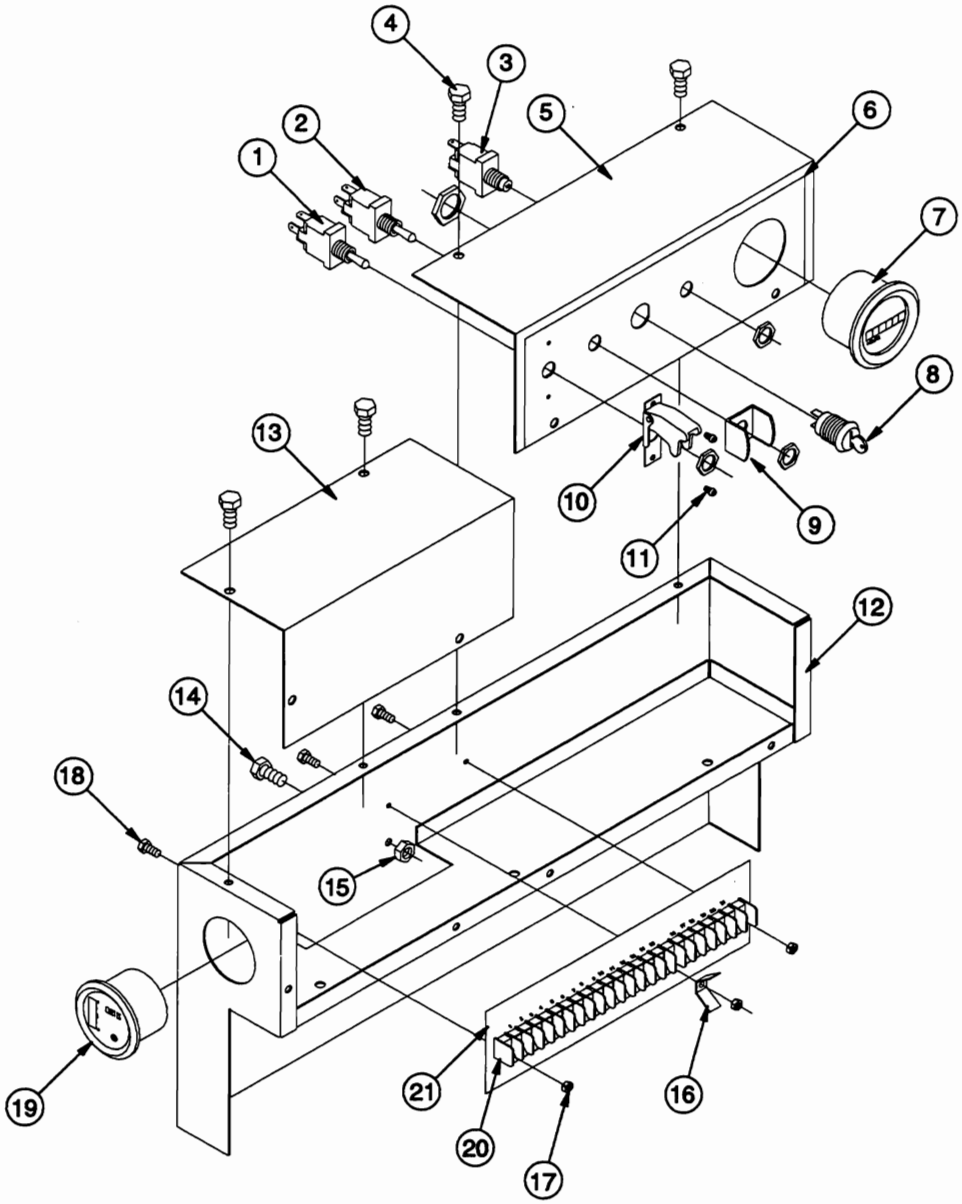
Figure 32. Rollout Extending Platforms and Railings.



ART 235

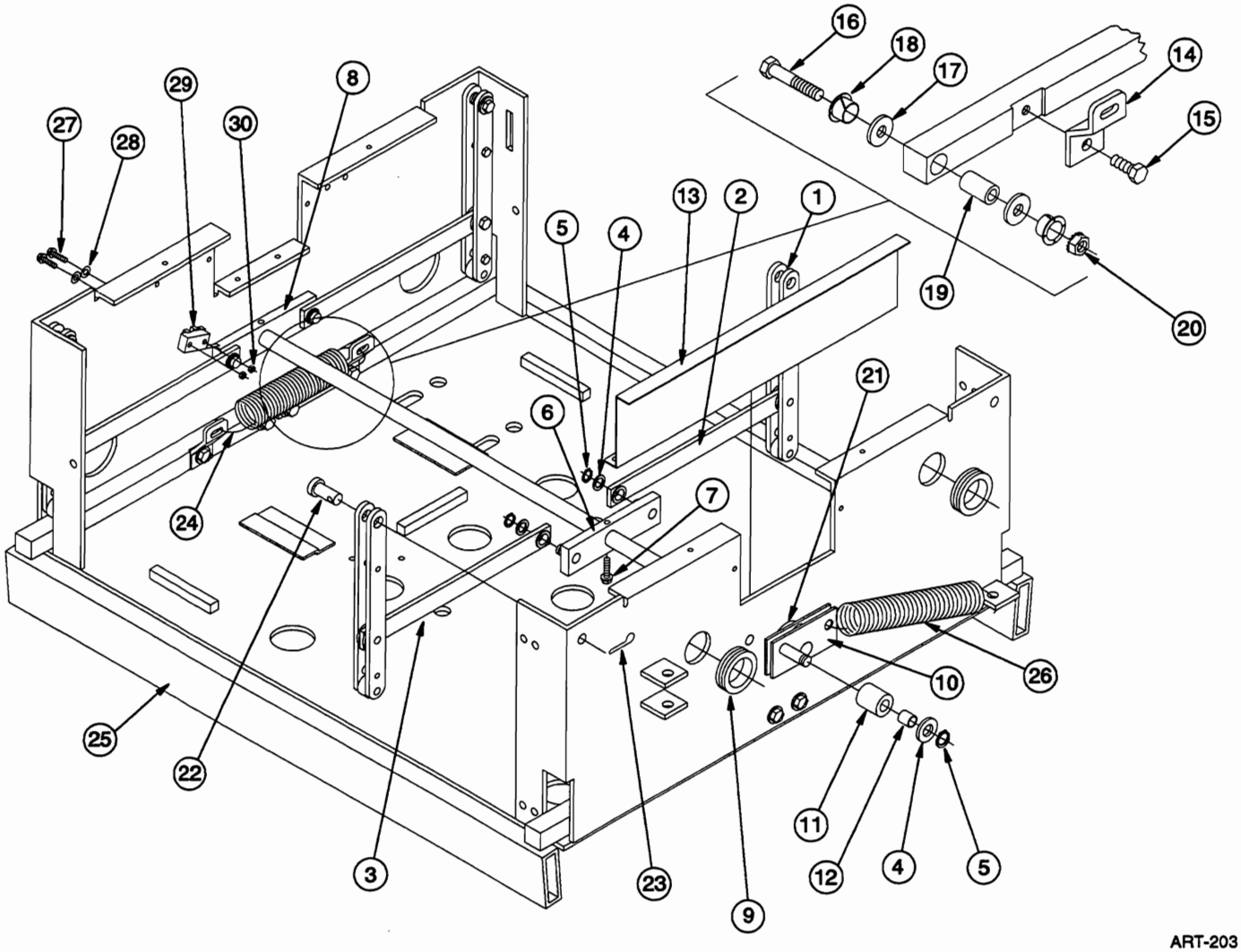
Item	Qty.	Description	Part Number
1	1	Door, RH	11144
2	1	Door, LH (Hidden)	11138
3	2	Hinge, RH	11146R
4	2	Hinge, LH (Hidden)	11146L
5	2	Hold Down, Battery	4528
6	4	Rod, Battery Hold Down	2987
7	4	Washer	6431
8	4	Nut, Wing, 1/4-20	6110
9	8	Bolt, Hex Hd, 5/16-18 x 1", Gr-5	5204
10	1	Cover	11175
11	1	Cover and End Panel	11222
12	1	Cover, Component Tray, RH	11225
13	1	Cover, Component Tray, LH	11226
14	1	Cover, Base Step	11107
15	2	Bolt, Flg Hd, 3/8-16 x 3/4", Gr-5	6432
16	4	Bolt, 1/4-20 x 1/2", Taptite, Gr-5	6455
17	2	Bolt, Hex Hd, 1/4-20 x 1 1/2", Gr-5	6029
18	2	Pin, Lynch, 1/4"	6751
19	6	Bolt, 1/4-20 x 3/4", Taptite, Gr-5	5723
20	4	Bearing, Flanged, 08FDU08	7014

Figure 33. Panel Assembly.



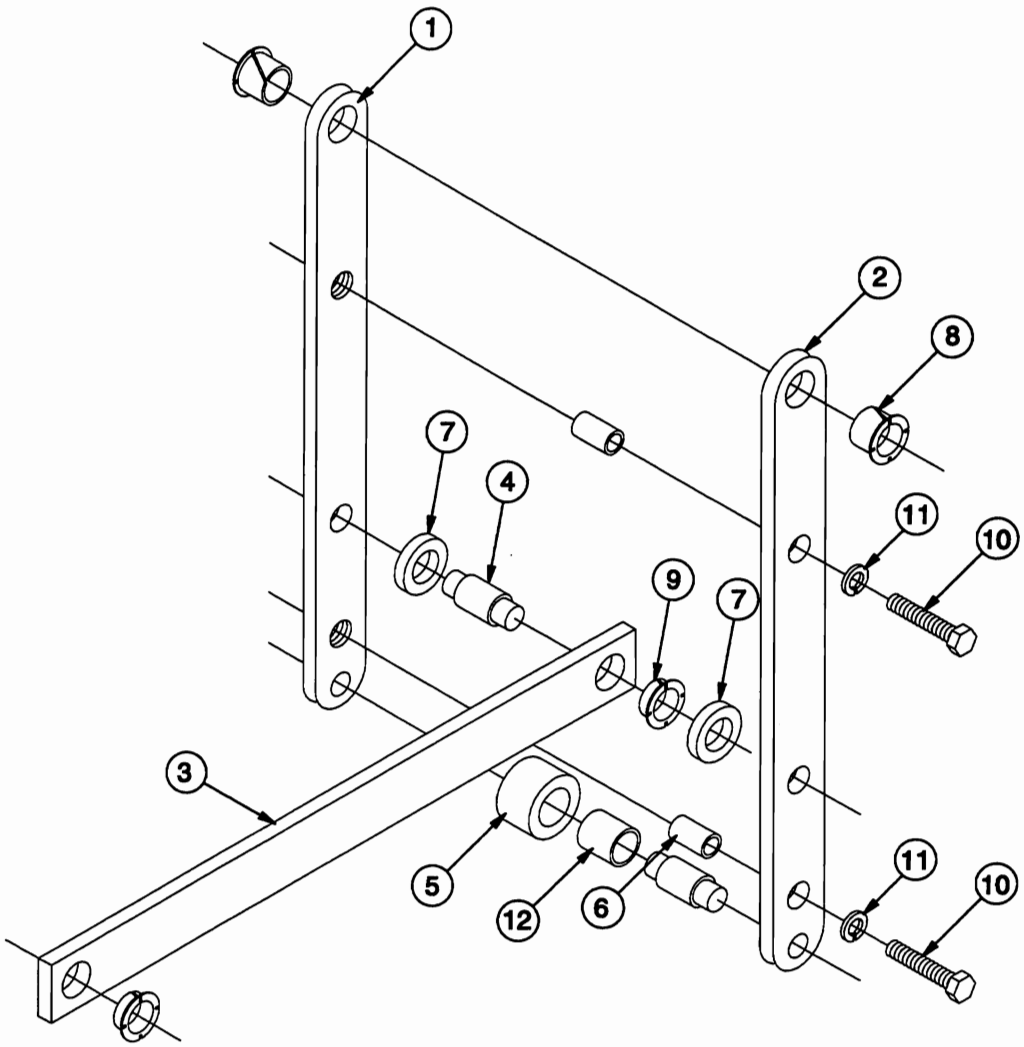
Item	Qty.	Description	1332 Part Number	1632 Part Number
1	1	Switch	5630	5630
2	1	Switch	5230	5230
3	1	Circuit Breaker, 15 Amp	7235	7577
4	8	Bolt, Hex Hd, 1/4-20 x 1/2", Taptite, Gr-5	6455	6455
5	1	Cover, Control Box, RH	11417	11417
6	1	Decal	7671	7671
7	Opt	Hourmeter	6857	6857
8	1	Key Switch	5936	5936
9	1	Guard, Switch	1313	1313
10	1	Guard, Switch, Emergency Stop	7622	7622
11	2	Screw, 6-32 x 1/4", Taptite	5978	5978
12	1	Control Box Weldment	11418	11418
13	1	Cover, Control Box, LH	11419	11419
14	1	Bolt, Hex, 1/4-20 x 3/4", Taptite, Gr-5	5723	5723
15	1	Nut, Hex, 1/4-20	5276	5276
16	1	Tab, Male, Double Connector, 45°	7876	-
17	3	Screw, Mach, 6-32 x 1"	5363	5363
18	3	Nut, Keps, 6-32	5364	5364
19	Opt	Gauge, Battery Fuel	7099	7099
20	1	Terminal Strip (Req 1-7970)	6947	6947
21	1	Backing, 1-22	7970	7970
22	2	Diode Assembly (Not Shown)	6070	6070
23	1	Harness, Control Station (Not Shown)	6764	6764

Figure 34. Lower Control Station.



Item	Qty.	Decription	Part Number
1	4	Stabilizer, Sub Assembly	
2	2	Swing Arm, Short	11126
3	2	Swing Arm, Long	11127
4	5	Washer, Thrust	7031
5	5	Ring, Retaining, 1/2" Ext	5736
6	1	Stabilizer Pivot Bar, Rear	11128
7		Bolt, Hex Hd, 5/16-18 x 1", Gr-5	5204
8	1	Stabilizer Pivot Bar, Front	11129
9	2	Grommet	5863
10	1	Actuator, Stabilizer	11147
11	1	Roller, W/Bearing	4541
12	2	Bearing, O8DUO	6700
13	1	Shield, Battery Cables	11393
14	4	Bracket, Spring Retracting	11136
15		Bolt, Flange Hd, 3/8-16 x 3/4", Gr-5	6432
16		Bolt, Hex Hd, 3/8-16 x 2", Gr-5	6434
17		Washer, Roller	11177
18		Bearing, Nyliner, 5/8 ID x 7/16 Lg	7202
19	4	Spacer	11181
20		Nut, Keps, 3/8-16	5039
21	2	Bearing, Bronze, Oil Lite	7260
22	4	Pin, Clevis, 1/2" x 2"	7229
23	4	Pin, Cotter, 1/8" x 1"	5920
24	2	Spring	5941
25	2	Stabilizer Bar	11137
26	1	Spring	4655
27	2	Screw, 6-32 x 1 1/4"	7231
28	2	Washer	4773
29	1	Switch, Limit	5369
30	2	Nut, 6-32	5364

Figure 35. Stabilizer Mechanism.

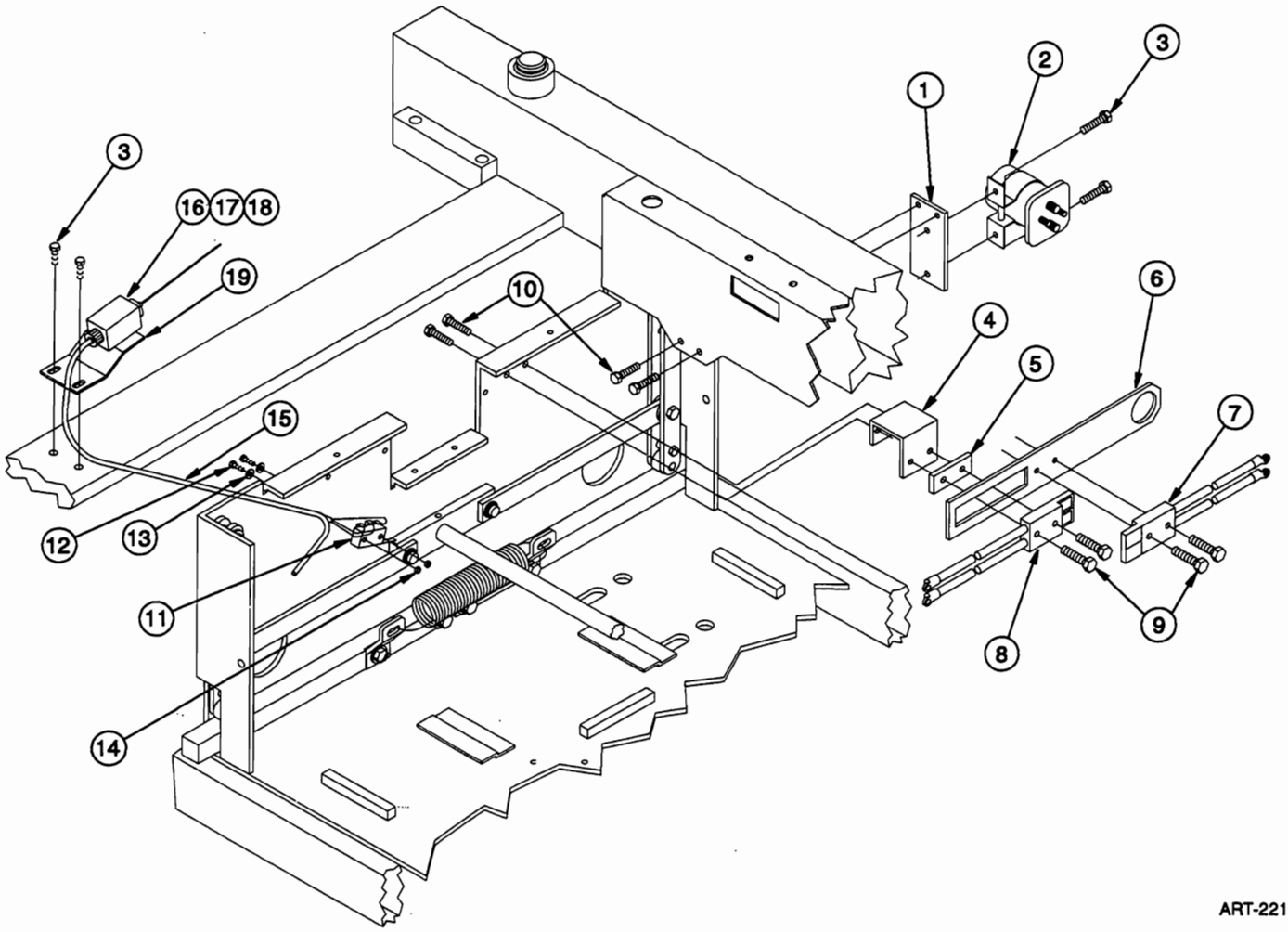


ART-233

Before disassembling, note position of bolts relative to center of unit.
Note length of Item #3.

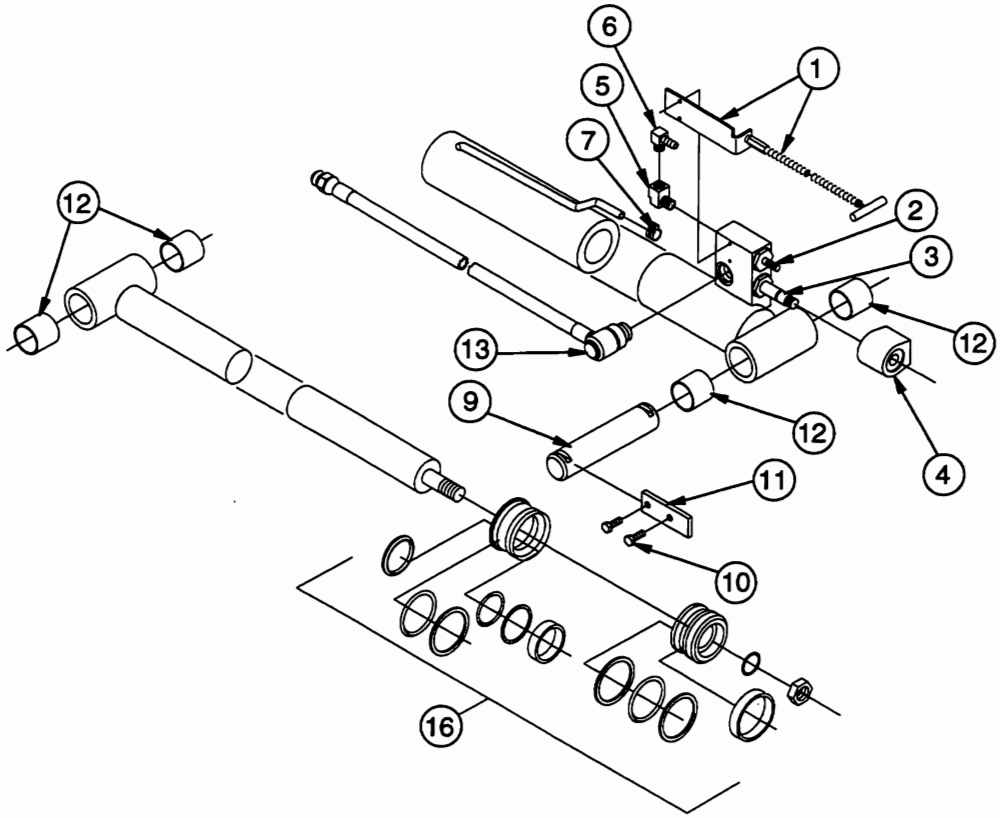
Item	Qty.	Description	Part Number
1	4	Outer Roller Bar	11125
2	4	Inner Roller Bar	11124
3	2	Swing Arm	See Item 2 or 3, Figure 35.
4	8	Spacer Pin	11120
5	4	Roller	4542
6	8	Spacer Tube	11119
7	8	Spacer, Washer	11176
8	8	Bearing, Nyliner, 1/2 ID 1/2 Lg	7200
9	8	Bearing, Nyliner, 1/2 ID 7/32 Lg	7220
10	8	Bolt, Hex Hd, 1/4-20 x 1 1/4, Gr-5	5988
11	8	Washer, Split Lock, 1/4	5277
12	4	Bearing, 08DU10	6700

Figure 36. Stabilizer Subassembly.



Item	Qty.	Description	Part Number
1	1	Plate, Contactor	11408
2	1	Contactor, 24 VDC	5967
3	4	Bolt, Hex, 1/4-20 x 1/2"	6455
4	1	Bracket, Battery Disconnect	11407
5	1	Spacer, Disconnect	4591
6	1	Slide Bracket, Disconnect	4592
7	1	Connector Cable Assembly	6687
8	1	Connector Cable Assembly	7218
9	4	Bolt, Hex, 1/4-20 x 1 1/2"	6029
10	4	Bolt, Hex, 1/4-20 x 3/4"	5723
11	1	Micro Switch B2-2RW80-D5	5369
12	2	Screw, 6-32 x 1 1/4"	7231
13	2	Washer	4773
14	2	Nut, 6-32	5364
15	1	Wire Harness	7244
16	1	Switch, Limit, Whisker	7647
17	1	Cord Connector, Liquid Tight	7594
18	1	Harness, Slow Speed Limit	7269
19	1	Bracket, Lower Limit Switch	11188

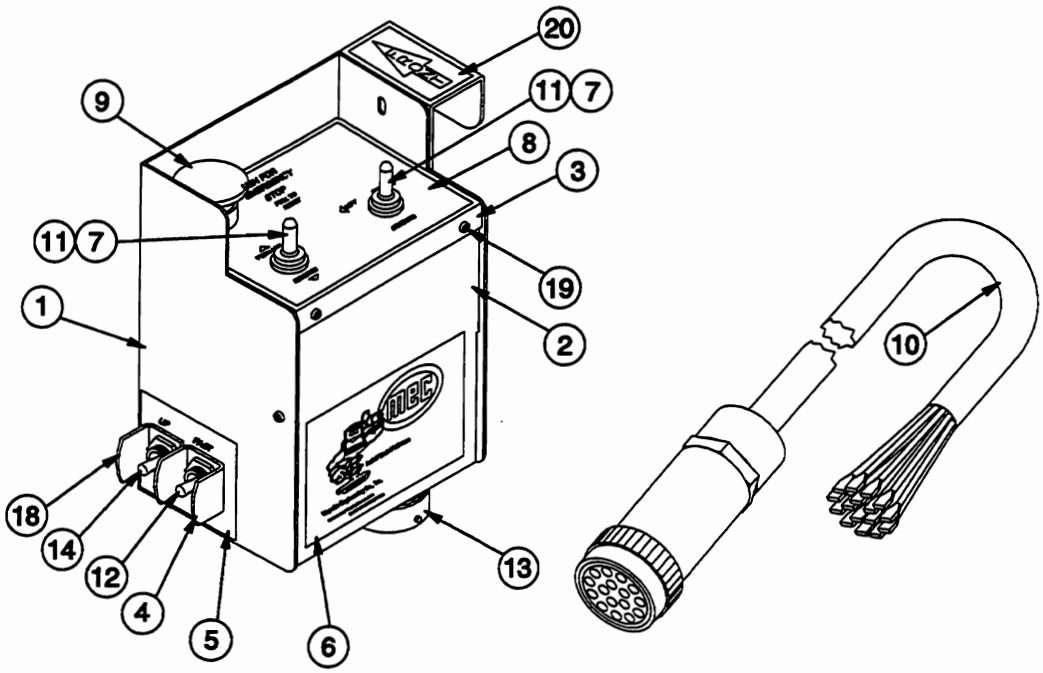
Figure 37. Battery Disconnect and Contactor Assembly and Stabilizer Rear Limit Switch.



ART 236

Item	Qty.	Description	1332 Part Number	1632 Part Number
1	1	Emergency Down Assembly	11217	11217
	2	Screw, Self Tap, 8-32 x 3/8" (Not Shown)	5385	5385
2	1	Valve, Manual Pull	5435	5435
3	1	Valve, N.C., Poppet, 2-Way	6973	6973
4	1	Coil, 24V, Double Spade	7833	7186
5	1	Elbow, Street, 1/4 MF	5122	5122
6	1	Elbow, 90°, Brass, 5/16 Bayonet	6727	6727
7	2	Clamp, Hose, 5/8" O.D.	7788	7788
8	2	Hose, 5/8", Low PSI, Vent and Return*	6458	6458
	*	Each hose is approximately 9 feet long. Order in 1 foot increments.		
9	2	Pin, Cylinder	11006	11006
10	8	Screw, Hx Roll Form, 1/4-20 x 3/4"	5723	5723
11	4	Retainer, Cyl - Pin	4423	4423
12	4	Bearing, 22DU28	7196	7196
13	1	Hose (w/90° Swivel)	6351	6351
14	Ser.	O-Ring Kit, Special Swivel	6675	6675
15	1	Cylinder, Lift, w/Bearings	11420	11420
16	Ser.	Seal Kit, 2 1/2 Cyl	7078	7078
17		Harness, Down Valve (Not Shown)	7268	7832

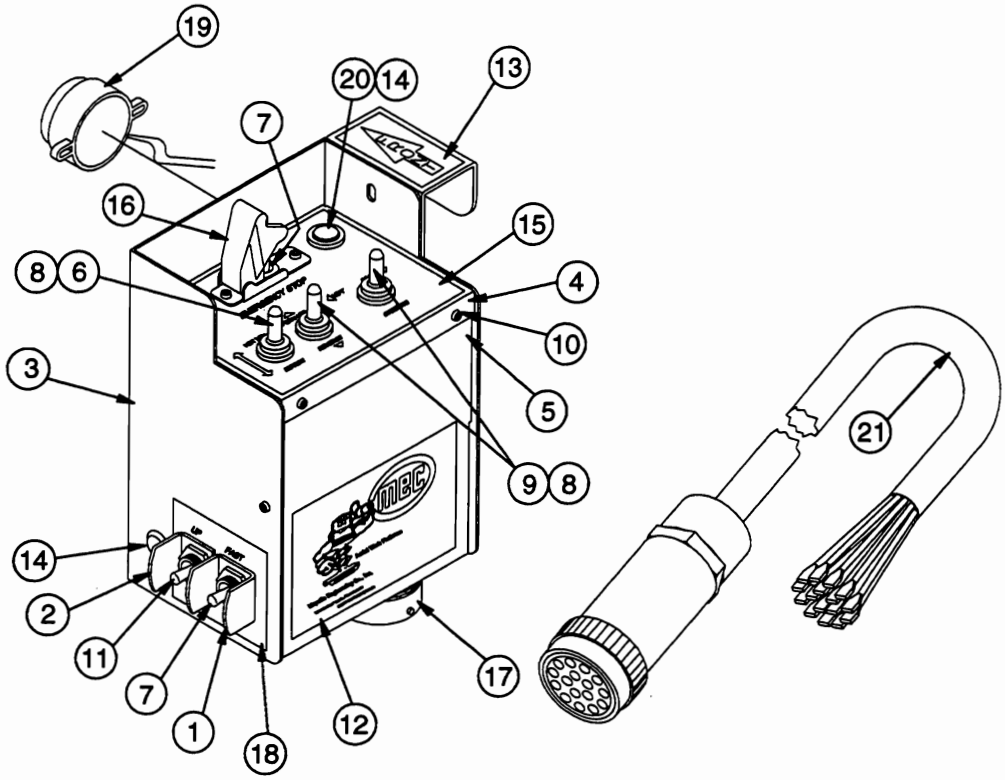
Figure 38. Lift Cylinder.



ART-239

Item	Qty.	Description	Part Number
		Control Box Assembly (Standard Series)	2107
1	1	Wrapper Weldment	2089
2	1	Panel, Front and Bottom	2095
3	1	Cover	2094
4	2	Switch Guard	1313
5	1	Decal, Control Box Side	6572
6	1	Decal, Control Box Front	6839
7	3	Boot, Toggle	5692
8	1	Decal, Control Box Top	6573
9	1	Switch, Emergency Stop	7800
10	1	Harness, Upper Control Cord	5983
11	2	Switch, DP, DT, SR Toggle	5694
12	1	Switch, DP, DT, SR 2-Way Interlock Toggle	5979
13	1	Harness, Control Box w/Connector	5982
14	1	Switch, SP, ST Toggle	5630
15	1	Switch, SP, DT 2-Position Toggle	N/A
16	1	Switch, SP, DT, SR Toggle	N/A
17	1	Harness, Hi-Torque Wire Set	N/A
18	1	Switch Guard, End	4171
19	8	Screw, 6-32 x 1/4	5978
20	1	Decal, Front Arrow	7156

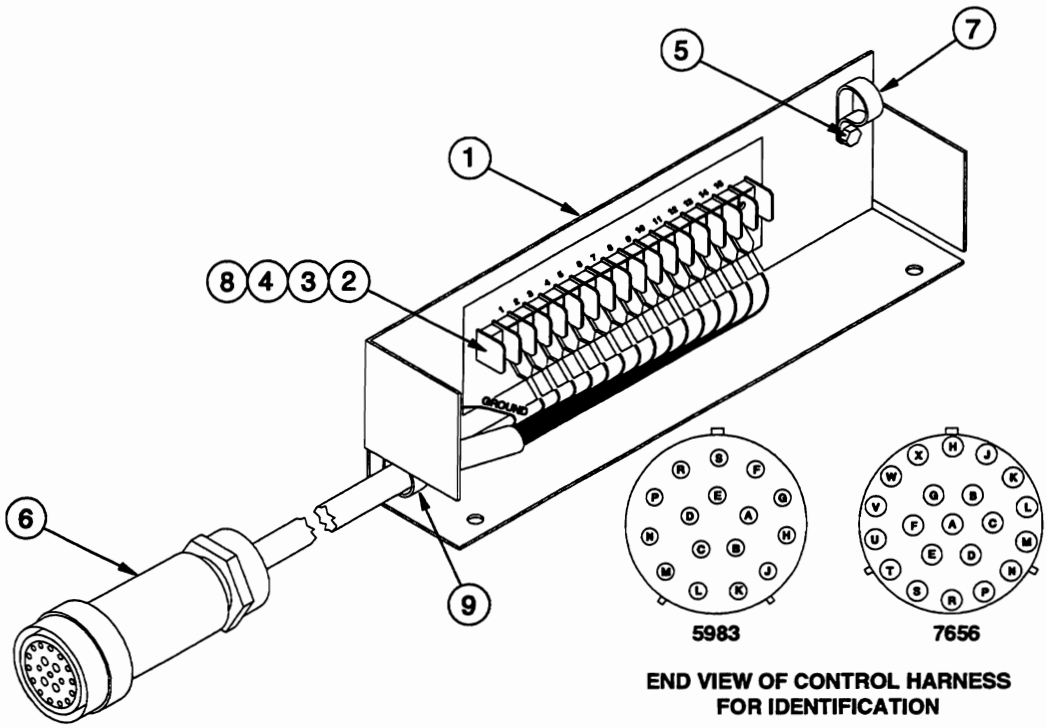
Figure 39. Control Box Assembly (Standard Series).



ART-240

Item	Qty.	Description	Part Number
		Control Box Assembly with Motion Switch (Standard Series)	4940
1	1	Switch Guard	1313
2	1	Switch Guard End	4171
3	1	Wrapper Weldment w/Hook	4268
4	1	Cover Panel	4269
5	1	Front and Bottom Panel	4271
6	1	Switch, SP, DT, SR Toggle	5230
7	2	Switch, SP, ST Toggle	5630
8	3	Toggle Boot	5692
9	2	Switch, DP, DT, SR Toggle	5694
10	10	Screw, 6-32 x .250 Taptite	5978
11	1	Switch, DP, DT 2-Way Interlock SR	5979
12	1	Decal, Logo, Aerial Platforms	6839
13	1	Decal, Front Arrow	7156
14	1	Hole Plug	7579
15	1	Decal, Control Box Top	7620
16	1	Emergency Stop Flip Cap	7622
17	1	Harness, Control Box w/Cannon Plug	7657
18	1	Decal, Control Box Side	7659
19	Opt	Alarm, Tilt Sensor	7553
20	Opt	Light, Indicator Tilt Sensor	7806
21		Upper Control Harness DM	7656
22	1	Bolt, 1/4 x 3/8 Ground (Not Shown)	5926
23	1	Nut, 1/4 x 20 Ground (Not Shown)	5276

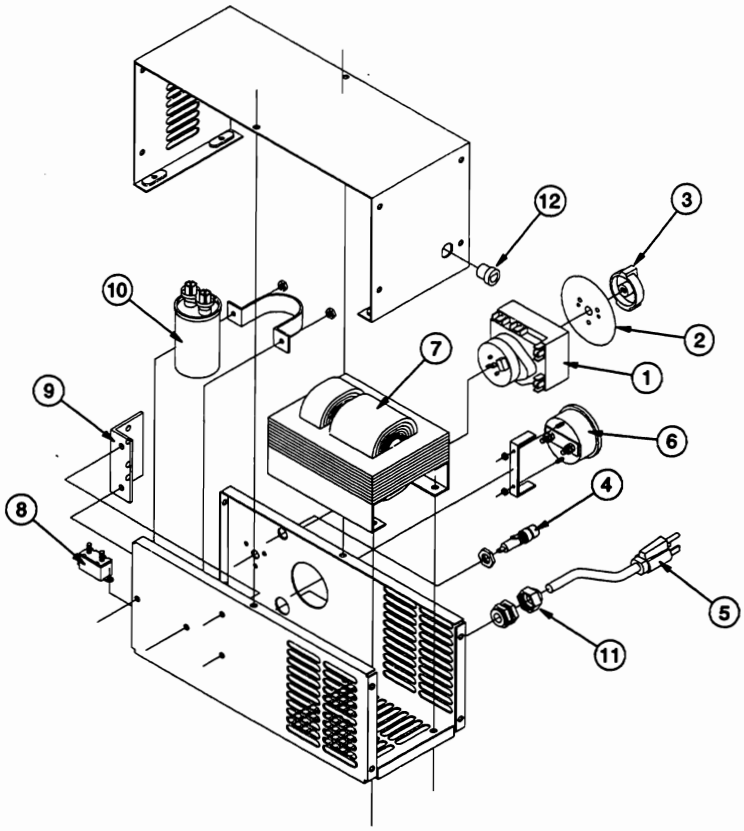
Figure 40. Control Box Assembly with Motion Switch (Standard Series).



ART-234

Item	Qty.	Description	Part Number
1	1	Terminal Box	3214
2	2	Screw, Mach, 6-32 x 1", Gr-5	5363
3	2	Nut, Keps, 6-32	5364
4	1	Terminal Block (Req 1-7817)	5991
	1	Strip, Backing, 15 PST	7817
5	2	Bolt, 1/4-20 x 1/2", Taptite, Gr-5	6455
6	1	Upper Control Harness, D.M.	7656*
7	1	Cable Clamp, 1"	6964
8	1	Tab, Double Spade, 45°	7876
9	1	Cable Clamp, 9/16"	7794
*		Part No. is for machines built after 1-1-92. Machines built before that date order Part No. 5983.	

Figure 41. Platform Terminal Box.



ART-165

Item	Qty.	Description	Part Number
	1	Charger, 24V, 60 Hz, 120VAC	6995
1	1	Timer	5642
2	1	Timer Dial Plate	5643
3	1	Knob, Timer	5556
4	1	Fuse Holder	6527
	1	Fuse, 15 Amp	6526
5	1	Cord Assembly, AC Input	5649
6	1	Ammeter	5554
7	1	Transformer	6157
8	1	Circuit Breaker, DC	6522
9	1	Rectifier, Diode Assembly	5553
10	1	Condenser	6158
11	1	AC Strain Relief	7594
12	1	DC Strain Relief	6033

Figure 42. Battery Charger.

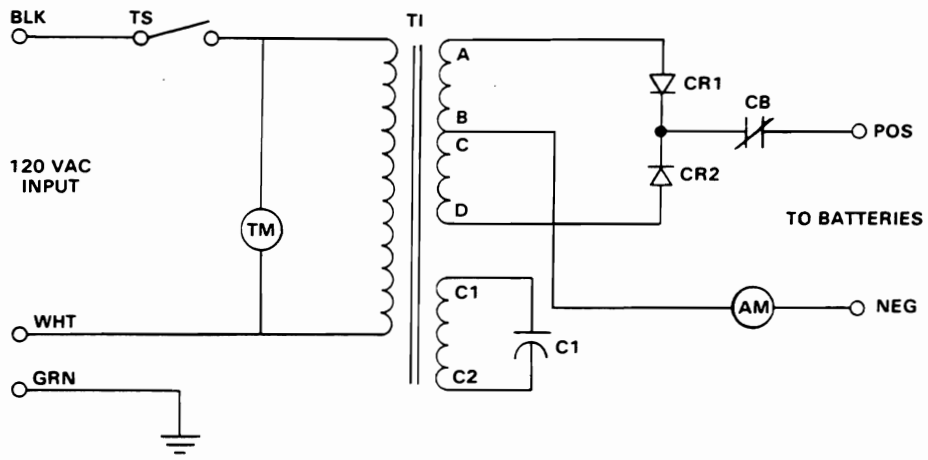
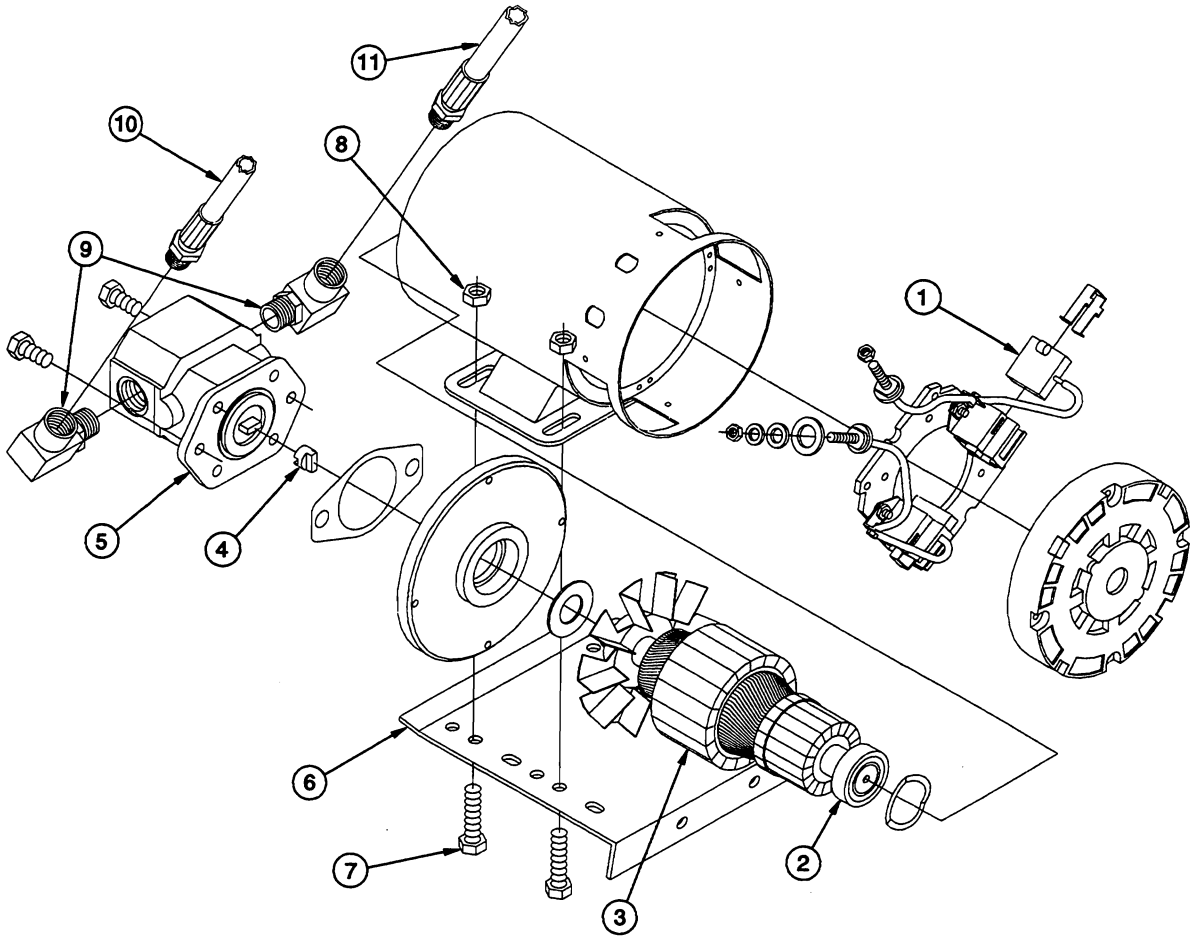


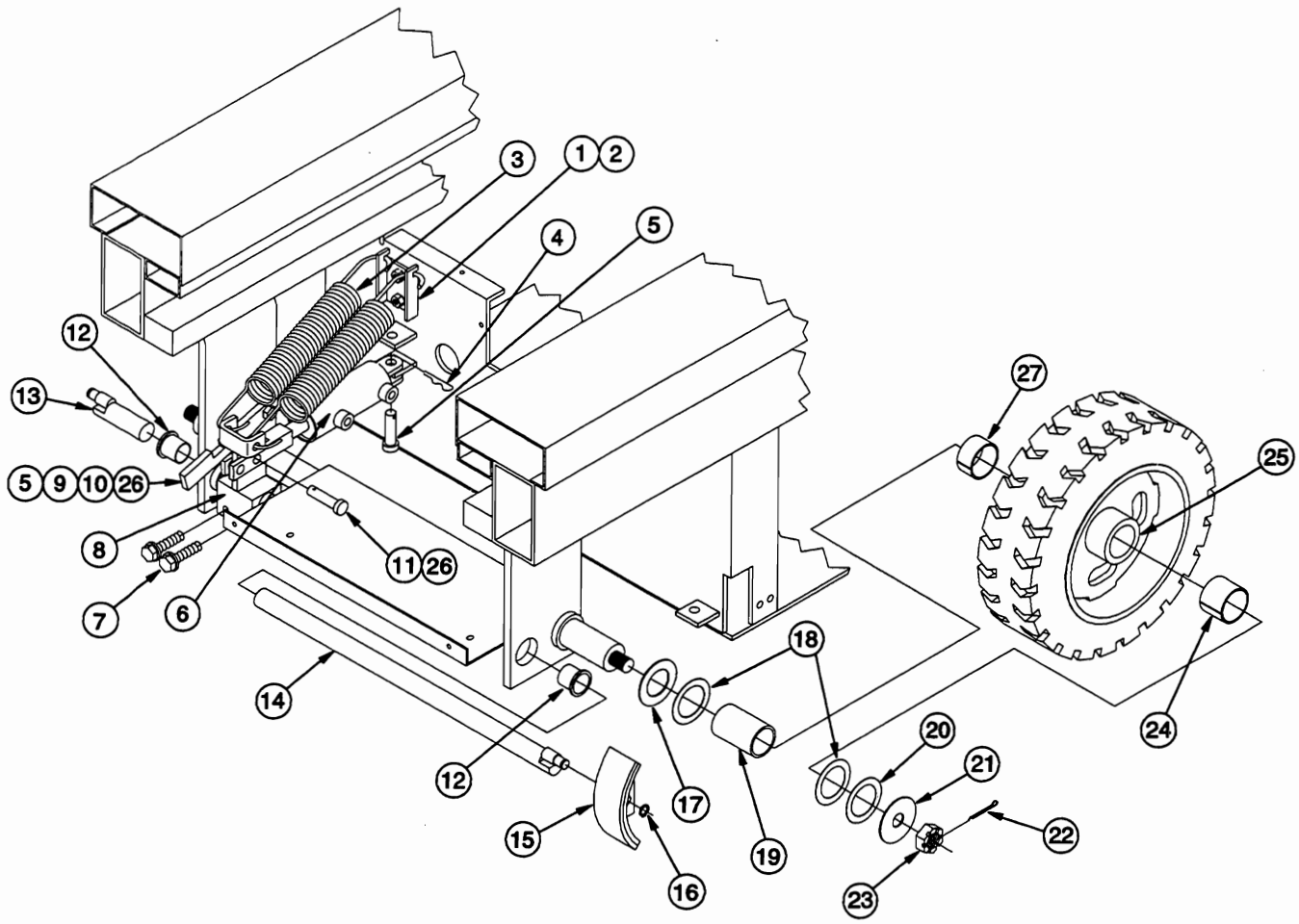
Figure 43. Battery Charger Wiring Diagram.



Item	Qty.	Description	Part Number
		Motor, 24VDC	6194
		Motor, 24 VDC (EE)	7169
1	1	Brush and Spring Kit (Leeson)	4041*
	1	Brush and Spring Kit (Ohio)	7027*
2	2	Bearing (6203)	5856
3	1	Armature (Leeson)	6371*
	1	Armature (Ohio)	7028*
4	1	Coupler (Barnes Pump)	6314*
	1	Coupler (Fenner Pump)	8002*
5	1	Pump	6994
6	1	Mounting Plate (Not Shown)	11190
7	4	Bolt, 5/16-18 x 1", Gr-5	5204
8	4	Nut, 5/16-18	5005
9	2	Elbow, 90° SAE	6724
10	1	Hose	6429
11	1	Hose	5995

*Specify Manufacturer when ordering.

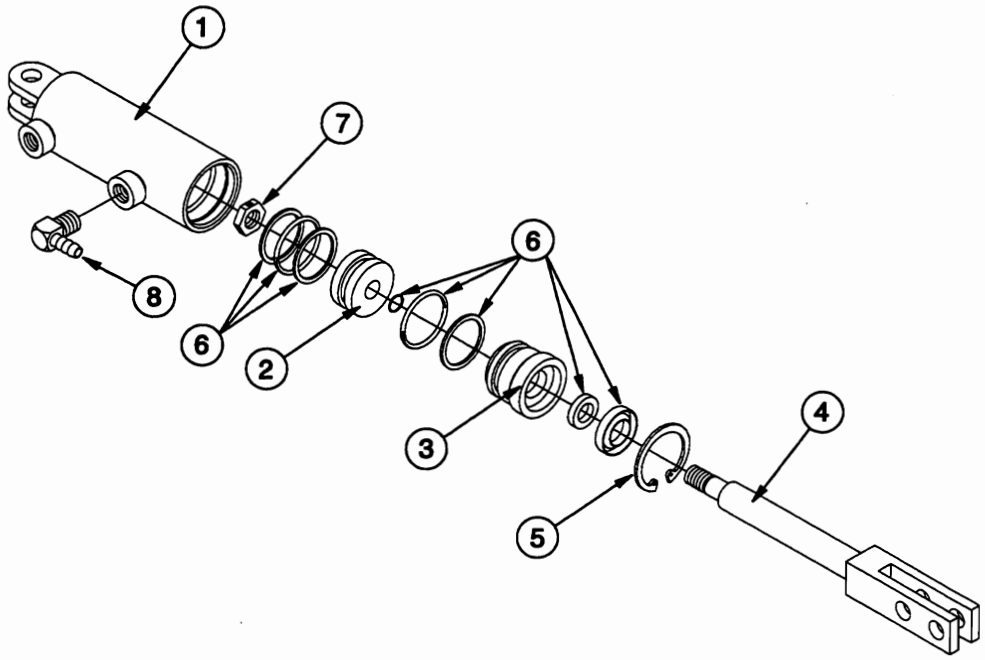
Figure 44. Motor and Pump Assembly.



ART-217

Item	Qty.	Description		Part Number
1	1	Bracket, Spring Weldment		11452
2	2	Bolt, Hex 5/16 x 1"		5204
3	2	Spring, Brake		11451
4	1	Hair Pin, Cotter, 3/8 Shaft		6808
5	2	Pin, Clevis, 1/2 x 1 1/4"		5710
6	1	Brake Cylinder (See Figure 46)		2483
7	2	Bolt, Hex, 1/2-13 x 1 3/4"		5215
8	1	Actuator, Brake		11454
9	1	Bracket, Brake Lockout		11315
10	2	Bushing, 1/2" x 7/8" x 0.074"		7031
11	1	Clevis Pin, Brake Lockout		7325
12	2	Bearing, Flanged		5866
13	1	Brake Rod, Short, LH		11101
14	1	Brake Rod, Long, RH		11077
15	2	Brake Pad		2270
16	2	Ring, Retaining, 1/2" Shaft		5736
17	2	Washer, Stainless, Inner		3809
18	4	Washer, Nylatron		3802
19	2	Bushing, Spanner		11425
20	2	Washer, Stainless, Outer		3808
21	2	Washer, Zinc, Outer		1836
22	2	Nut, Hex, Slotted, 3/4-16		5737
23	2	Pin, Cotter, 3/16" x 1 1/2"		5738
24	2	Bearing DU 28DU24		7897
25	AR	Rear Wheel, Standard	use on S/N 8400257 and higher	11400
	AR	Rear Wheel, Non-Marking	use on S/N 8500443 and higher	11401
26	2	Pin, Cotter, 1/8" x 1"		5920
27	2	Bearing DU 28DU16		7896

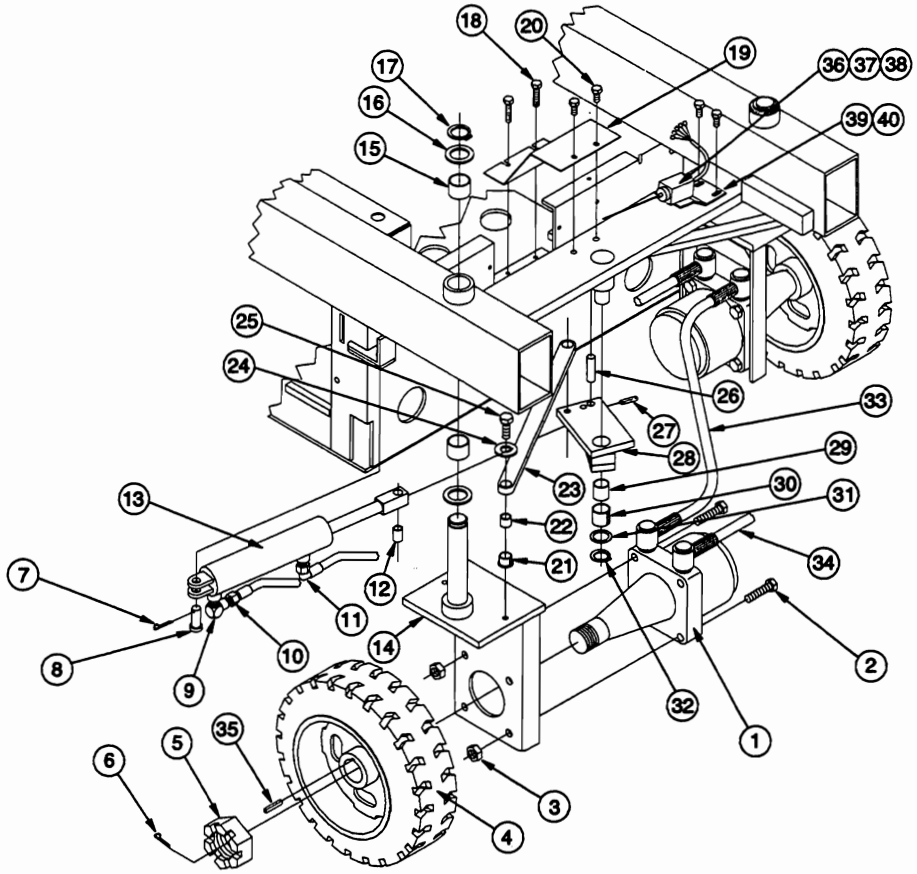
Figure 45. Rear Axle and Brake Components.



ART-164

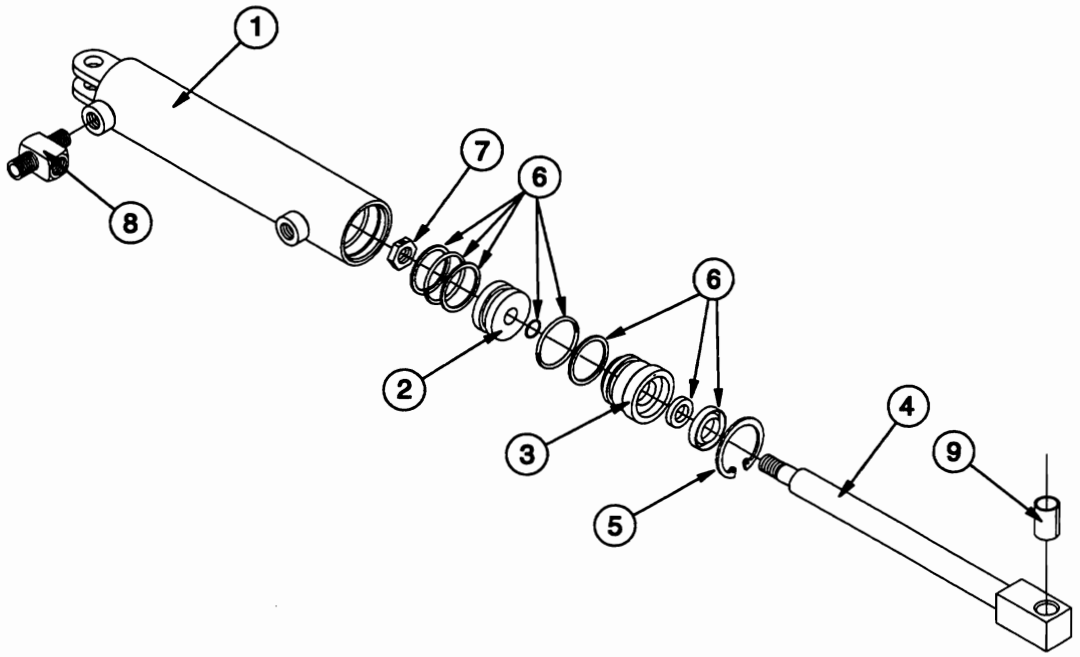
Item	Qty.	Description	Part Number
1	1	Cylinder, Brake	2485
2	1	Piston	2494
3	1	Head	2493
4	1	Rod, Brake Cylinder, w/Bearing	2504
5	1	Ring, Retaining, Internal	6337
6	1	Seal Kit	5947
7	1	Nut, Hex Locking, 2-Way, 1/2-20	6338
8	1	Elbow, 90° Bayonet, 5/16"	6727

Figure 46. Brake Cylinder.



Item	Qty.	Description	Part Number
1	2	Motor, Hydraulic Drive	7190P
2	8	Bolt, Hex Hd, 1/2-13 x 2 1/2", Gr-5	6435
3	8	Nut, Hex, 1/2-13	5033
4	2	Wheel, Front	11074
5	2	Nut, Drive Motor	6986
6	2	Pin, Cotter, 1/8" x 1 1/2"	5787
7	1	Pin, Cotter, 1/8" x 1"	5920
8	1	Pin, Clevis, 1/2" x 1 1/4"	5710
9	1	Fitting, Elbow Street, 1/4"	5106
10	1	Hose, Steering	5705
11	1	Hose, Steering	7066
12	1	Bearing 08DU12	7019
13	1	Cylinder, Steering (See Figure 48)	11179
14	2	Bracket, Wheel	11076
15	4	Bearing 20DU16	5874
16	4	Washer, Thrust	2389
17	2	Ring, Retaining, H.D. 1 1/4	5419
18	2	Bolt, 1/4-20 x 1 1/2	6029
19	1	Cover	11175
20	2	Bolt, 1/4-20 x 3/4"	5723
21	4	Bearing, Flanged 10FDU08	7230
22	4	Spacer, Roller	11178
23	2	Arm, Steering (w/Bearing)	11154
24	4	Washer, Roller	11177
25	4	Bolt, Hex Hd, 3/8-16 x 1 1/4"	5417
26	1	Pin, Pivot, Tie Rod	3184
27	1	Pin, Roll	6416
28	1	Plate, Steering Pivot, (w/Bearing)	11121
29	1	Bearing 16DU16	6543
30	1	Bearing 16DU12	7092
31	1	Washer, Cam Thrust	5901
32	1	Ring, Retaining, 1"	5918
33	1	Hose, Crossover	5996
34	2	Hose, Drive	7006
35	2	Key, Wheel Motor	7128
36	1	Switch, Limit Whisker, Slow Speed	7647
37	1	Cord Connector, Liquid Tight	7594
38	1	Harness, Slow Speed Limit Switch	7244
39	1	Bracket, Limit Switch	11188
40	2	Bolt, 1/4-20 x 1/2"	6455

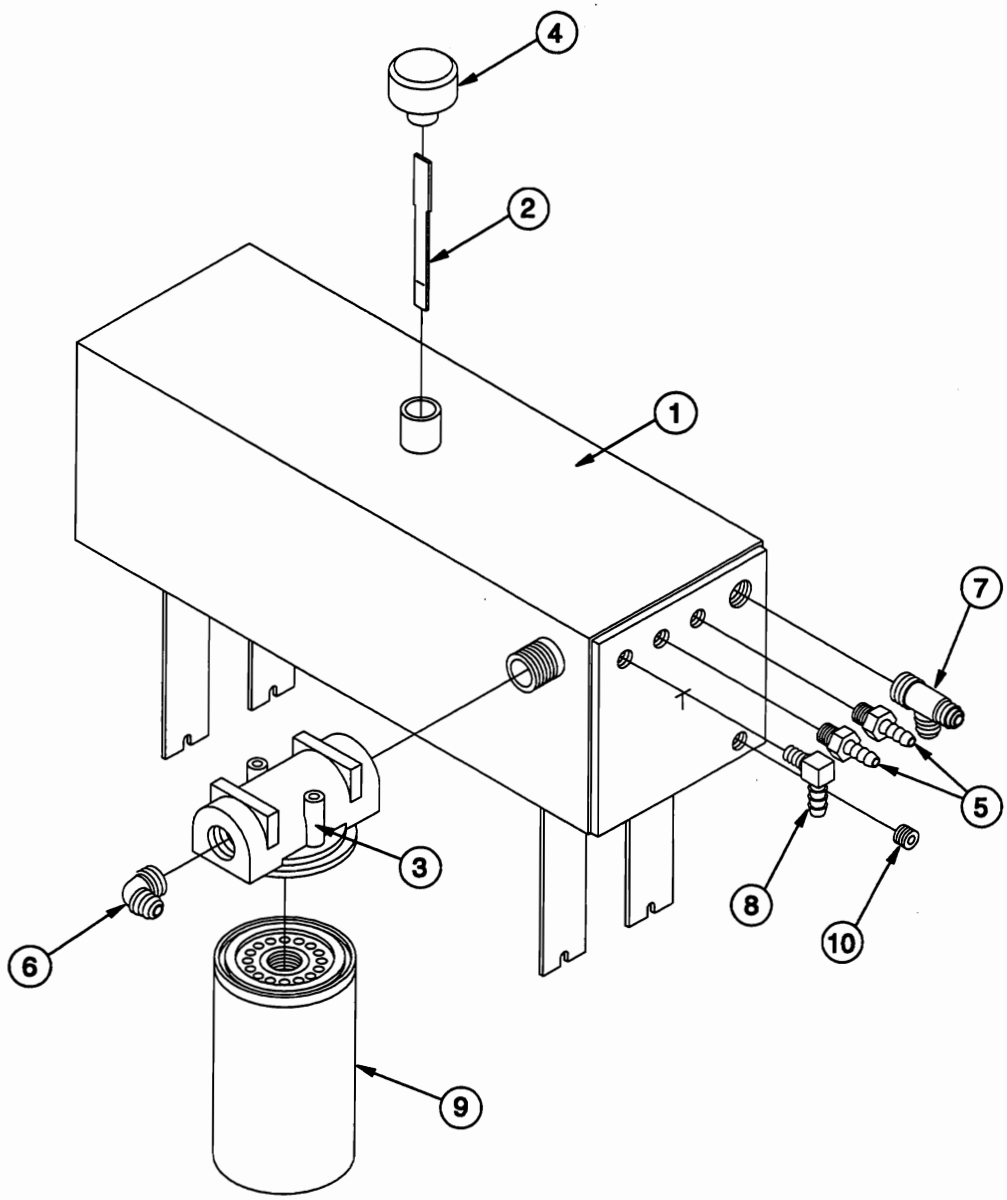
Figure 47. Front Axle Components.



ART-166

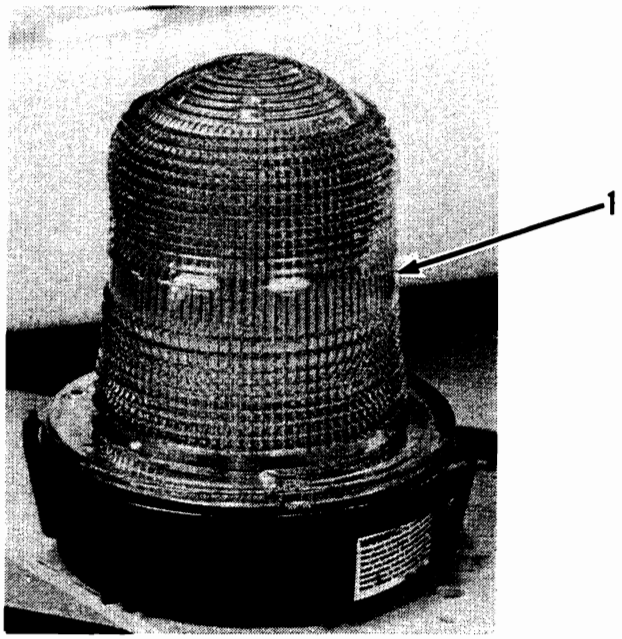
Item	Qty.	Description	Part Number
		Steering Assembly	11179
1	1	Cylinder, Steering	11104
2	1	Piston	2494
3	1	Head	2493
4	1	Rod, Steering Cylinder, w/Bearing	2837
5	1	Ring, Retaining, Internal	6337
6	1	Seal Kit	5947
7	1	Nut, Hex Locking, 2-Way, 1/2-20	6338
8	1	Elbow, Street, 1/4"	5106
9	1	Bearing, 08DU12	7019

Figure 48. Steering Cylinder.



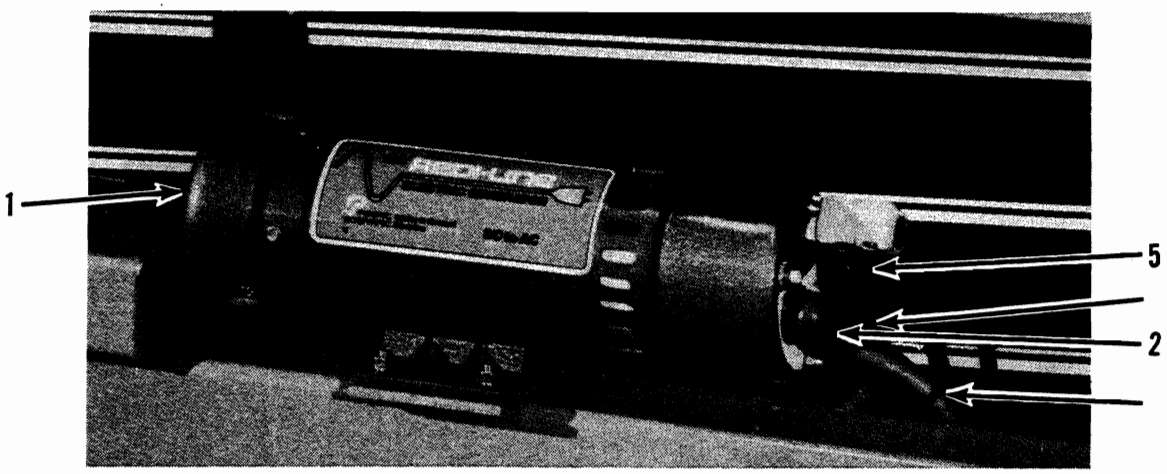
Item	Qty.	Description	Part Number
1	1	Reservoir Weldment	11203
2	1	Fluid Gauge	2882
3	1	Filter Head	5969
4	1	Breather Cap	6284
5	2	Fitting, NPTF, Bayonet, 5/16" x 1/4"	6459
6	1	Elbow, 1/2" x 1/2" NPT	6510
7	1	Fitting, Tee, 1/2" x 1/2" x 1/2" NPT	6511
8	1	Elbow, 5/16", Bayonet	6727
9	1	Cartridge, Oil Filter	6156
10	1	Plug, Drain	

Figure 49. Hydraulic Reservoir and Filter.



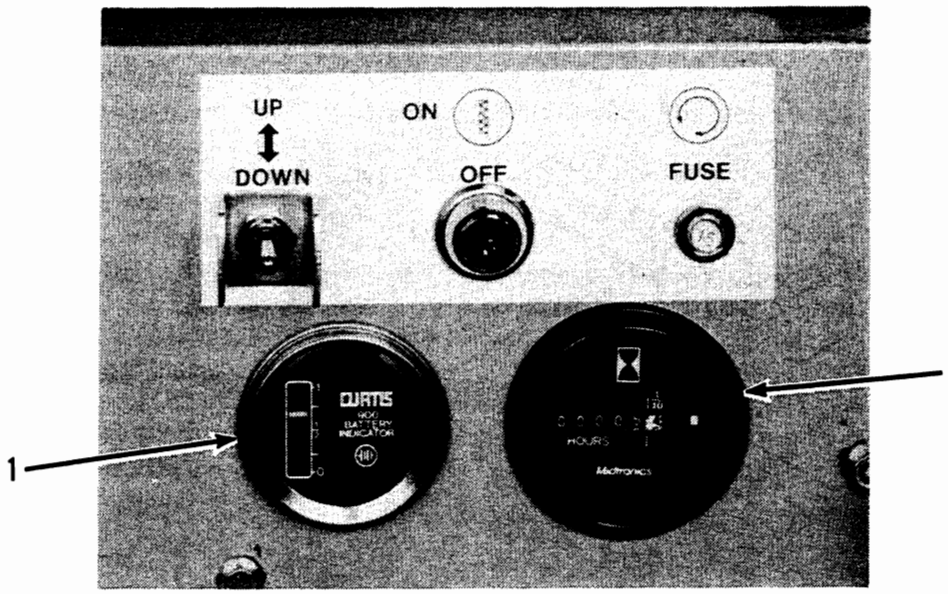
Item	Part No.	Description
1	7105	Flashing Light - 24V

Figure 50. Options.



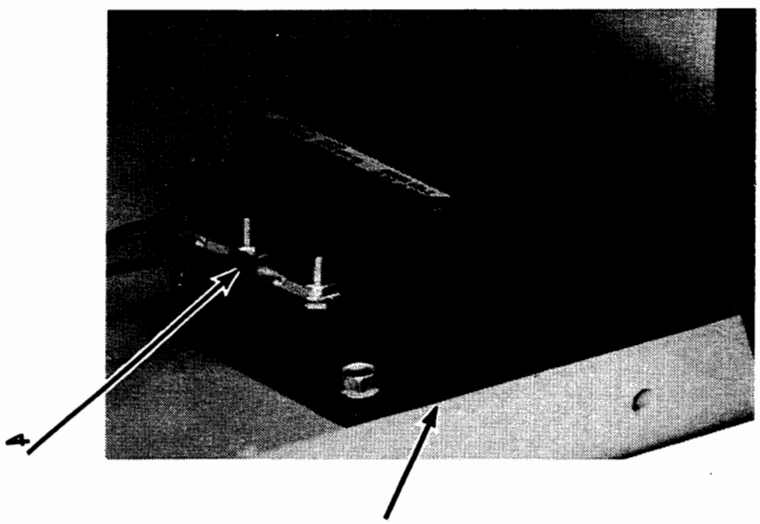
Item	1332 Part No.	1632 Part No.	Description
1	7103	7103	DC-AC Converter (24 Volt)
	4724	4724	Mounting Plate, Converter
	7116	7116	Cap Screw, .312"-16 x 1.25"
	5204	5204	Cap Screw, .312"-16 x 1"
	5005	5005	Nut, .312"-16
2	7110	7110	Boot, Red
	7130	7130	Ceramic Capacitor .1 Mfd.
3	7265	7265	Cable, Positive (Red)
4	7264	7264	Cable, Negative (Black)
5	7109	7109	Boot, Black

Figure 51. Options.



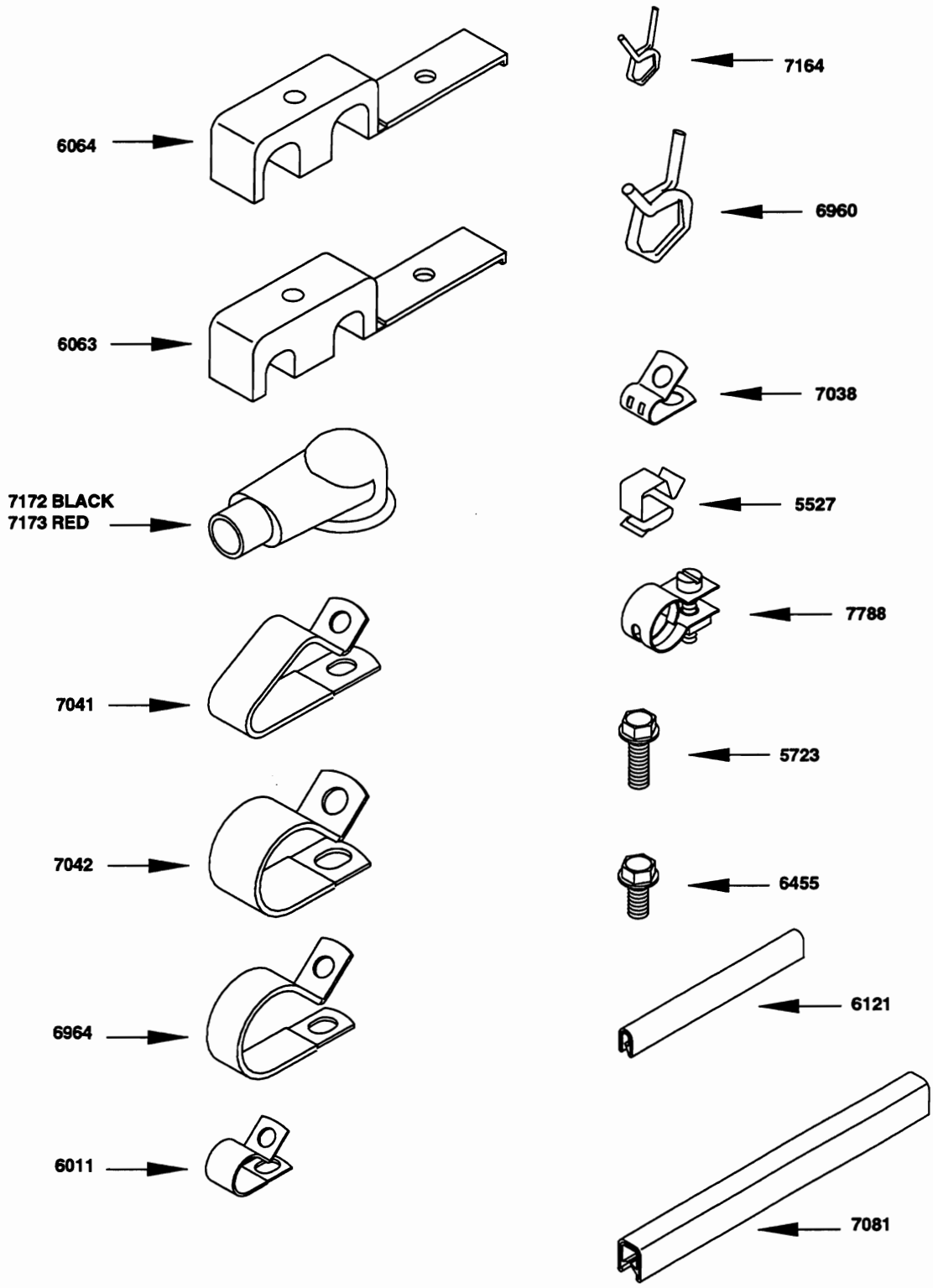
Item	Part No.	Description
1	7099	Battery Fuel Gauge
2	6857	Hour Meter

Figure 52. Options.



Item	Part No.	Description
1	7102	Motion Alarm - 12-48V
2	6070	Diode

Figure 53. Options.



ART-171

Figure 54. Clamps, Fasteners and Trim.

NOTES

NOTES

Limited Owner Warranty

Mayville Engineering Company, Inc. (MEC) warrants its equipment to the original purchaser against defects in material and/or workmanship under normal use and service for one (1) year from date of registered sale or date the unit left the factory if not registered.

MEC further warrants the structural weldments of the main frame and scissor arms as defined in MEC's current Warranty Policy & Procedures, to be free from defects in material or workmanship for five (5) years from date of registered sale or date unit left the factory if not registered. Excluded from such warranty is the battery(s) which carries a ninety (90) day warranty from described purchase date and prorated thereafter up to one (1) year.

Warranty claims within such warranty period shall be limited to repair or replacement, at MEC's option, of the defective part in question and labor to perform the necessary repair or replacement based on MEC's then current flat rate, provided the defective part in question is shipped prepaid to MEC and is found upon inspection by MEC to be defective in material and/or workmanship.

Mayville Engineering Company, Inc. shall not be liable for any consequential, incidental or contingent damages whatsoever. Use of other than factory authorized parts; misuse, improper maintenance, or modification of the equipment voids this warranty.

The foregoing warranty is exclusive and in lieu of all other warranties, express or implied. All such other warranties, including implied warranties of merchantability and of fitness for a particular purpose, are hereby excluded.

No Dealer, Sales Representative, or other person purporting to act on behalf of MEC is authorized to alter the terms of this warranty, or in any manner assume on behalf of MEC any liability or obligation which exceeds MEC's obligations under this warranty.

Aerial Work Platforms

Mayville Engineering Company, Inc.

An Employee Owned Company
210 Corporate Drive • P.O. Box 990 • Beaver Dam, WI 53916-0990 USA
PH: 920-887-2518 • FX: 920-887-2480
E-mail: awp@mayvl.com • Web: www.mayvl.com