




# Operator's Manual

**SST-37/40-EIH**


## ***Aerial Device***


SERIAL NUMBER

MANUAL PART NUMBER

 PLEASE NOTE THE ANSI A92.2 STANDARD AND THE MANUAL OF RESPONSIBILITIES CONTAINS RECENTLY UPDATED INFORMATION. DEALERS, OWNERS, USERS, OPERATORS, LESSORS AND LESSEES MUST ADHERE TO THESE UPDATED STANDARDS.

### **ATTENTION:**

 DO NOT ATTEMPT TO OPERATE THIS VERSALIFT UNTIL YOU HAVE READ AND UNDERSTOOD ALL INFORMATION IN BOTH OPERATOR'S AND SERVICE MANUALS, PROVIDED WITH EACH VERSALIFT.

 THIS MANUAL CONTAINS CONFIDENTIAL INFORMATION AND IS THE SOLE PROPERTY OF TIME MANUFACTURING CO. CONTENTS ARE NOT TO BE DISCLOSED, COPIED, OR REPRODUCED IN ANY MANNER WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF TIME MANUFACTURING CO.



Time Manufacturing Co. 7601 Imperial Drive P.O. Box 20368 Waco, Texas 76702 Phone: 254-399-2100 Fax: 254-751-0775

*Time Manufacturing Co. reserves the right to improve the design or change specifications at any time without notice.*





## OWNER'S WARRANTY

The **Versalift** Aerial Platform Lift is engineered and designed to perform as stated on published specifications. Only quality material and workmanship are used in the manufacture of this product. With proper installation, regular maintenance, and periodic repair service, the equipment will provide excellent service.

Those parts of the **Versalift** that are manufactured by **Time Manufacturing Company** are warranted for one full year from date of purchase. Structural components will carry a lifetime warranty for defects in material and workmanship which existed at the time of initial delivery, wear components are not covered by this statement. This warranty is issued only to the original purchaser and promises that **Time Manufacturing Company** manufactured products are free from defects in material and factory workmanship when properly installed, serviced, and operated under normal conditions, according to the manufacturer's instructions.

Manufacturer's obligation under this warranty is limited to correcting without charge at its factory any part or parts thereof which shall be returned to its factory or one of its Authorized Service Stations, transportation charges prepaid, within one year after being put into service by the original user, and which upon examination shall disclose to the Manufacturer's satisfaction to have been originally defective. Correction of such defects by repair to, or supplying of replacements for defective parts, shall constitute fulfillment of all obligations to original user.

This warranty shall not apply to any of the Manufacturer's products which must be replaced because of normal wear, which have been subject to misuses, negligence or accident, or which shall have been repaired or altered outside of the Manufacturer's factory (unless authorized by the Manufacturer in writing), products which have not been maintained and operated in accordance with Time Manufacturing Company's operators, maintenance manuals and bulletins, products which are repaired without using original Time Manufacturing Company parts. This limited warranty does not cover transportation fees and/or consumables used for the repair. Products or parts manufactured by others are covered only by such warranties as are extended to TIME MANUFACTURING CO. by its suppliers.

Manufacturer shall not be liable for loss, damage, or expense directly or indirectly from the use of its product or from any cause.

The above warranty supersedes and is in lieu of all other warranties, expressed or implied, and of all other liabilities or obligations on part of Manufacturer. No person, agent, or dealer is authorized to give any warranties on behalf of the Manufacturer or to assume for the Manufacturer any other liability in connection with any of its products unless made in writing and signed by an officer of the Manufacturer.





# TABLE OF CONTENTS

<b>Introduction</b>	<b>Section 1</b>
Manual Structure .....	1-1
Additional Manual Features .....	1-1
Nomenclature .....	1-2
<b>Responsibilities / Safety</b>	<b>Section 2</b>
Responsibilities of Dealers, Owners, Users, Operators, Lessors and Lessees .....	2-1
Decals .....	2-2
Think Safety .....	2-6
What is Insulated and What is not Insulated .....	2-9
Additional Safety Considerations .....	2-10
<b>Specifications</b>	<b>Section 3</b>
General Specifications .....	3-1
Option Specifications .....	3-2
Dimensional Specifications .....	3-5
Vehicle Specifications .....	3-11
<b>Operation</b>	<b>Section 4</b>
Positioning the Versalift for Operation .....	4-1
Aerial Lift Operations .....	4-2
Cab Control Operation .....	4-4
Ground Control Operation .....	4-4
Lower Control Operation .....	4-6
Upper Control Operation .....	4-6
Storing the Aerial Lift .....	4-8
Lift Eye Operation (optional) .....	4-9
<b>Emergency Operation</b>	<b>Section 5</b>
<b>Daily Visual Inspection</b>	<b>Section 6</b>



# INTRODUCTION

The **Versalift** aerial device has been designed and engineered to conveniently place personnel at work stations above the ground. This aerial device, as manufactured, meets or exceeds all applicable ANSI A92.2. Full controls at the platform and complete freedom of boom movements make the **Versalift** a truly flexible and functional work platform.

**NOTE: As the aerial device users, you must read, understand, and follow the instructions in this manual and other manuals supplied with this aerial lift unit.**

This manual is furnished to provide practical and essential information for efficient operation of the **Versalift** aerial device. Proper operation of this aerial lift is the responsibility of the operator and requires a thorough understanding of its capabilities. Personnel responsible for the operation of the aerial lift must be familiar with and understand this manual.

THIS MANUAL CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.

In addition to, dealers, owners, operators, renters, lessors and lessees are required to comply with the requirements of the applicable section or sections found in ANSI A92.2.

**NOTE: For additional safety information and required responsibilities, refer to the accompanying EMI Safety Manual and Manual of Responsibilities.**

Detailed information for the maintenance inspection and service of the **Versalift** aerial device can be found in the accompanying Service Manual. Should further installation information be required, contact your local **Versalift** dealer or **Time Manufacturing Company**.

**⚠ DANGER: THIS EQUIPMENT SHOULD BE OPERATED AND SERVICED ONLY BY COMPETENT PERSONNEL FAMILIAR WITH GOOD SAFETY PRACTICES. THIS INSTRUCTION IS WRITTEN FOR SUCH PERSONNEL AND IS NOT INTENDED AS A SUBSTITUTE FOR ADEQUATE TRAINING AND EXPERIENCE IN SAFE PROCEDURES FOR THIS TYPE OF EQUIPMENT.**

**⚠ DANGER: READ AND UNDERSTAND THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS AERIAL DEVICE.**

The manual identifies all the controls and their locations and describes how the controls function.

Routine preventive maintenance is very important in maintaining reliable aerial lift service. A preventive maintenance schedule is provided and must be understood and followed by all operators.

**⚠ DANGER: THIS IS NOT MAINTENANCE FREE EQUIPMENT.**

**NOTICE: THIS MANUAL IS A PERMANENT PART OF THE VERSALIFT AERIAL DEVICE AND MUST REMAIN WITH THE UNIT ALWAYS.**

**Time Manufacturing Company** reserves the right to improve the design or specifications at any time without any obligation to incorporate new features into products previously sold.

## MANUAL STRUCTURE

This manual is divided into six, numbered chapters. The first number in the page number at the bottom of each page identifies the chapter number. Chapter tabs, with titles printed on them, allow easy location of the desired subject.

## ADDITIONAL MANUAL FEATURES

**Danger, caution, and warning** notes are indented, bold faced, and separated from the regular text to emphasize their importance and the need for attention.

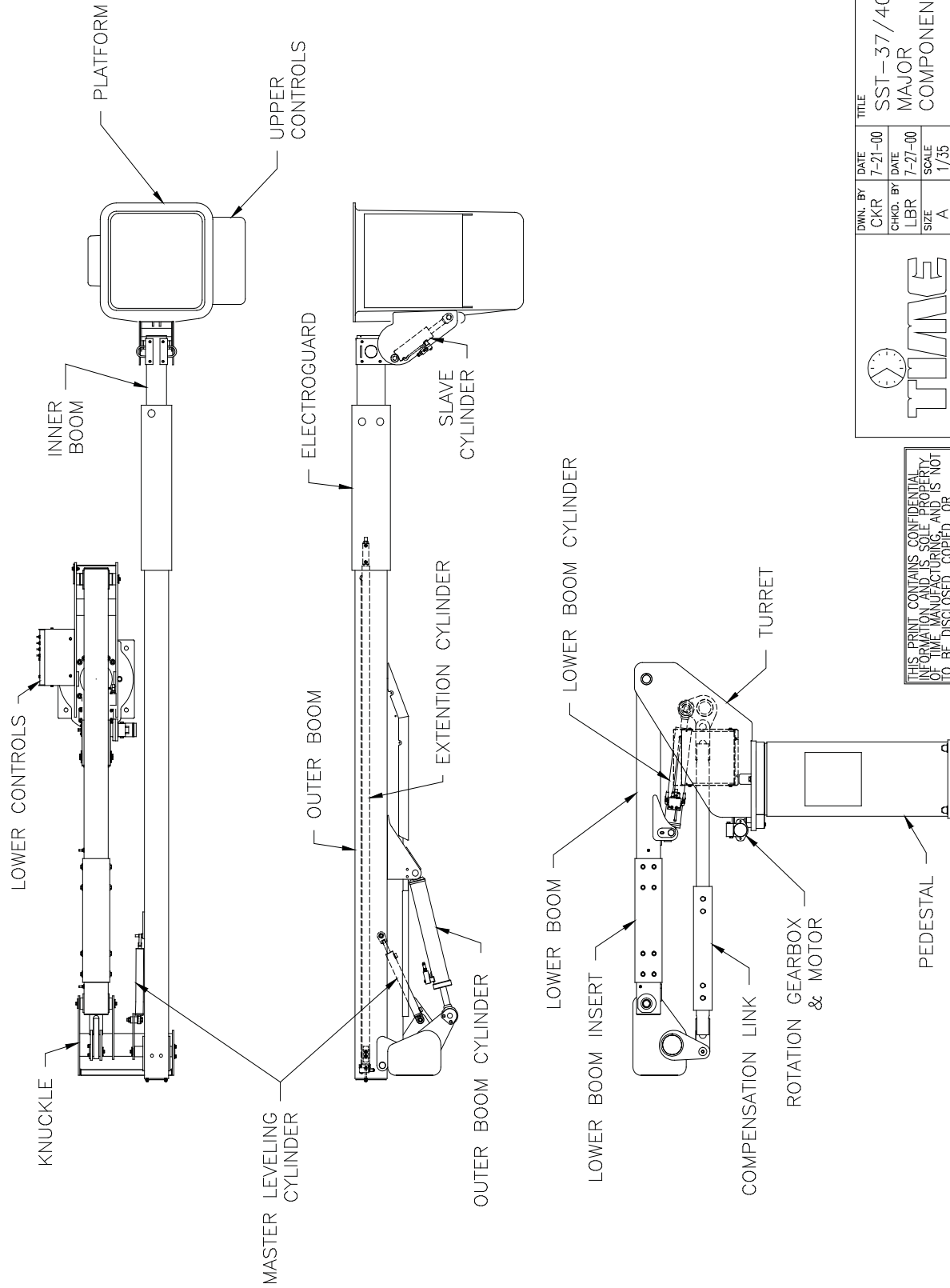
English measurements are followed by equivalent metric measurements in parenthesis.

Non-critical units of measure are usually rounded-off to the nearest whole unit.

Notes referring the reader to related information in the manual indicate the chapter or a section of a chapter, not to a single page. The reader may need to scan a few pages to find the needed information.

# INTRODUCTION

REV. ERCN NO.	DESCRIPTION	BY	APPR.	DATE
51471	FIRST RELEASE	CKR	SRS	8-8-00



THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE REPRODUCED, COPIED, REPRODUCED, OR EXPOSED WITHOUT THE WRITTEN PERMISSION OF TIME MANUFACTURING.

DWN. BY	DATE	TITLE
CKR	7-21-00	SST-37/40-EIH
CHKD. BY	DATE	MAJOR COMPONENTS
LBR	7-27-00	
SIZE	SCALE	
A	1/35	
SHEET	1 OF 1	DWG. NO. 28182-1


TIME MANUFACTURING COMPANY  
WACO TEXAS





# RESPONSIBILITIES

(for Dealers, Owners, Users, Operator, Lessors and Lessees)


 **DANGER: FAILURE TO COMPLY WITH YOUR REQUIRED RESPONSIBILITIES IN THE USE AND OPERATION OF THE AERIAL DEVICE COULD RESULT IN DEATH OR SERIOUS INJURY.**

## IMPORTANT

You are required by **ANSI/SIA A92.2** to read and understand **YOUR RESPONSIBILITIES** before you use or operate the Aerial Device. It is your responsibility and your employer's responsibility to identify and comply with applicable codes, standards, and regulations.

The operation of any aerial device is subject to certain **HAZARDS** that can be protected against only by the exercise of **INTELLIGENCE, CARE AND COMMON SENSE**. It is essential to have **COMPETENT, CAREFUL PERSONNEL, TRAINED** in the **INTENDED USE, SAFE OPERATION, MAINTENANCE AND SERVICE** of this type of equipment.

The **USER** and **OPERATOR MUST MAKE DECISIONS** on the maintenance, use and operation of the Aerial Device with due consideration for the fact that the **SAFETY OF THE OPERATOR AND OTHER PERSONNEL** is dependent on those decisions. **FAILURE TO COMPLY** with your **REQUIRED RESPONSIBILITIES** in the use and operation of the Aerial Device could result in **DEATH OR SERIOUS INJURY**.

 **DANGER: READ AND UNDERSTAND THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS AERIAL DEVICE.**

# SAFETY

Only properly trained operators are qualified to operate the **Versalift** aerial lift. Operator training shall include complete instruction and understanding of the manufacturer's manuals, employer's work rules, and all related governmental regulations. Prior to operation from the platform the machine must be operating properly, must have been installed properly, inspected, and maintained in accordance with the manufacturer's instructions. All safety signs, guards, and covers must be in place and in proper condition.

**! DANGER: AN UNTRAINED OR CARELESS OPERATOR SUBJECTS HIM/HERSELF AND OTHERS TO DEATH OR SERIOUS INJURY.**

Throughout this manual there are **danger, warning, and caution** notes that emphasize the possible hazards when operating the **Versalift**. It is the responsibility of the operator to become familiar with the contents of this manual.

Two of the main risks associated with operating an aerial lift:

- (1) Electrocution caused by operating too close to power lines.
- (2) Injuries caused by falling as a result of equipment failure or the operator performing an unsafe or unstable maneuver.

No manual can address every conceivable operating hazard. Therefore, the prevention of accidents is greatly dependent upon good judgement and common sense of the operator.

It is the responsibility of the operator to use the **Versalift** only when it has been installed and maintained in accordance with the manufacturer's manuals. The preventive maintenance program outlined in this manual and the Service manual must be followed.

It is extremely important for the operator to be thoroughly familiar with the **Versalift** aerial device. Study the information in this manual and the **Versalift** controls until both are completely mastered. Then go to a large, open area to practice using the aerial lift.

Decals are installed at numerous locations on the aerial lift to warn personnel of the potential hazards during the use and operation of the aerial lift. It is important that the operator and ground personnel read and understand the information on the decals. If any decals are defaced, illegible or lost, they must be replaced. Refer to the "Decal Placement" illustration in this manual for a complete listing and

the locations of the decals. For your convenience these decals are pictured on the following pages as a quick reference for reviewing safety concerns and for providing part numbers when ordering replacements.

## DECALS

All the warning and instruction decals, and their respective part numbers, on the **Versalift** aerial device are included below and on the following pages. The decals are not shown at actual size.

**VERSALIFT AERIAL DEVICE**

**VERSALIFT**

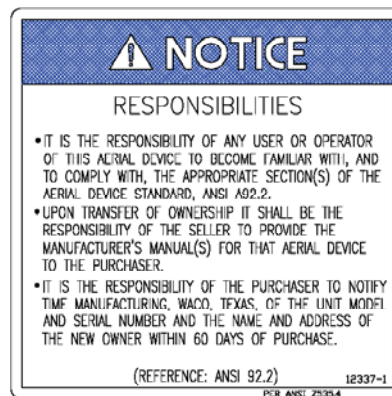
TIME MANUFACTURING COMPANY PO BOX 20984 WACO, TEXAS 76702 www.versalift.com	Model <input type="text"/> Serial number <input type="text"/> Date mfg'd <input type="text"/> Number of platforms <input type="text"/> Capacity per platform (See manual and decals for specific capacity) <input type="text"/> Platform height <input type="text"/> The boom is insulated <input type="checkbox"/> Yes <input type="checkbox"/> No Chassis insulating system <input type="checkbox"/> Yes <input type="checkbox"/> No Equipped with high electrical resistance upper controls <input type="checkbox"/> Yes <input type="checkbox"/> No Configured for electrical work rubber gloving <input type="checkbox"/> Yes <input type="checkbox"/> No Unit equipped for material handling <input type="checkbox"/> Yes <input type="checkbox"/> No Outriggers are required for stability <input type="checkbox"/> Yes <input type="checkbox"/> No	Electrical system voltage <input type="text"/> Vdc Lbs <input type="text"/> Kg <input type="text"/> Ft <input type="text"/> M <input type="text"/> Hydraulic system operating pressure <input type="text"/> Psi Dielectric category <input type="text"/> Rated line voltage <input type="text"/> Date of Qualification test <input type="text"/> Date of Stability test <input type="text"/> Installed by <input type="text"/>
--	---	--

**OPERATING INSTRUCTIONS** Before operating this unit, read and understand all operating and safety information in manual and all information on this placard.

1. Always park vehicle as nearly level as possible.
2. When working on a slope, drive into or back into position.
3. Do not operate this unit on a slope without proper vehicle stability. Refer to the Operator's manual or fixed decals for stability requirements.
4. Inspect this device for visible defects or loose objects.
5. Inspect insulating boom and other insulating material for cleanliness, if applicable.
6. Set vehicle parking brakes and chock wheels.
7. Engage hydraulic power source.
8. Extend outriggers, if so equipped, to a solid footing.
9. Raise booms sufficiently to clear obstructions on truck before rotating.
10. Operate all hydraulic controls smoothly and avoid quick reversal.
11. Inspect and service unit per instructions in Service and Installation Manual.

Ambient operating temperature range -40°F to 120°F (-40°C to 49°C) This unit complies with ANSI A92.2 and GSA G225

1006486-1 & 1006487-1 (DATA BACKING)



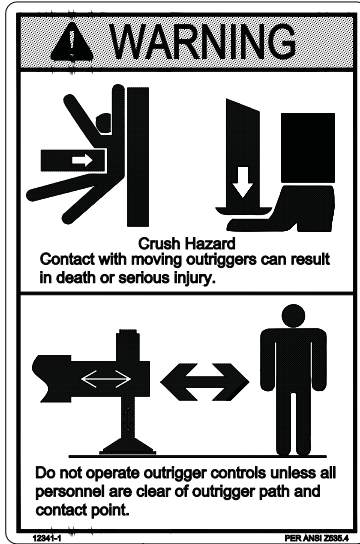
12337-1



7584-1

RESPONSIBILITIES / SAFETY

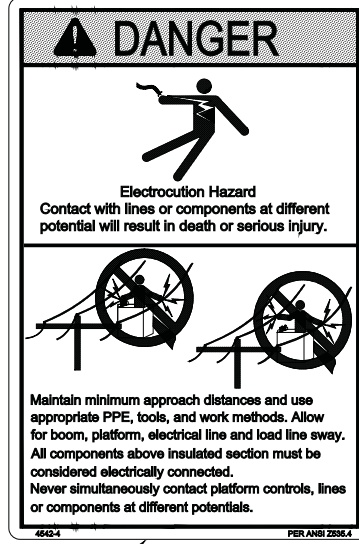




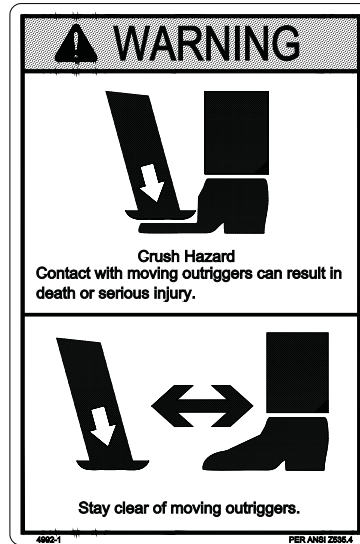
12341-1



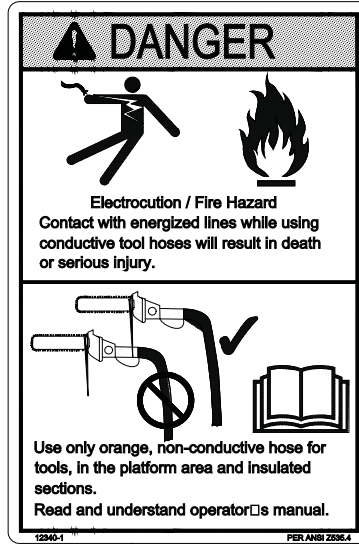
14014-1



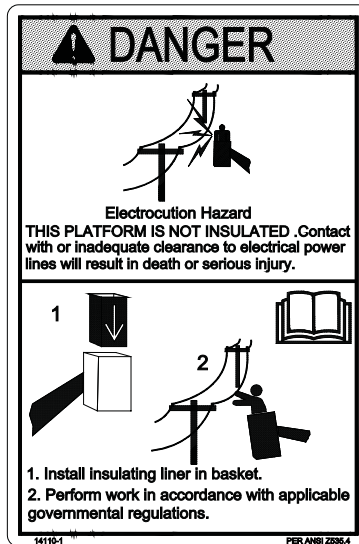
4542-4



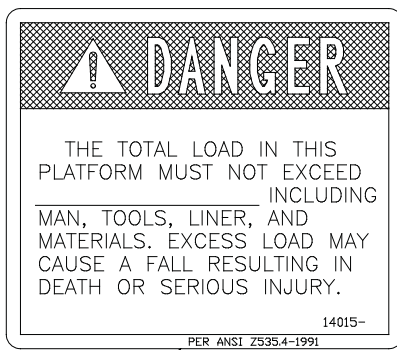
4992-1



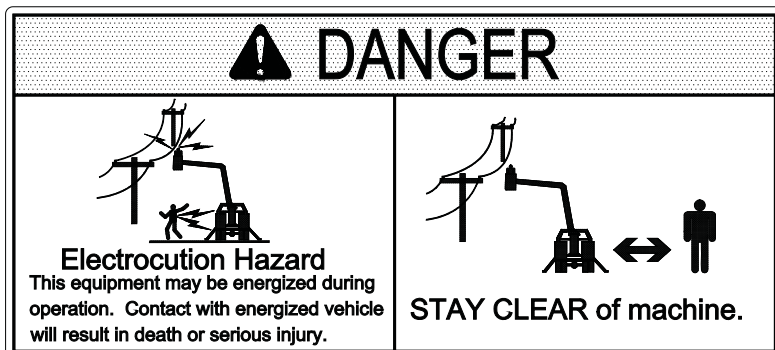
12340-1



14110-1



14015-X



4542-2



**⚠ DANGER**


FAILURE TO OBEY THE FOLLOWING WILL RESULT IN DEATH OR SERIOUS INJURY

- FOR STATIONARY OPERATION, TRUCK MUST BE SECURELY PARKED, DRIVELINE DISENGAGED, AND AERIAL DEVICE PROPERLY STABILIZED PRIOR TO OPERATION.
- TO AVOID TIP-OVER, OUTRIGGERS (WHEN SO EQUIPPED) MUST BE PROPERLY EXTENDED TO A SOLID LEVEL SURFACE.
- OPERATE ALL CONTROLS SLOWLY FOR A SMOOTH PLATFORM MOTION. MAKE SURE CONTROLS ARE RETURNED TO NEUTRAL AFTER DESIRED OPERATION.
- CREW MUST USE PROPER PERSONAL AND OTHER PROTECTIVE EQUIPMENT.
- NEVER LOAD BEYOND RATED CAPACITY.
- NEVER OPERATE AERIAL DEVICE WITH PERSONNEL UNDER BOOM OR LOAD.
- NEVER MOVE THE TRUCK UNTIL THE BOOMS AND OUTRIGGERS ARE PROPERLY STOWED AND SECURED.
- REFER TO THE OPERATOR'S MANUAL FOR COMPLETE INSTRUCTIONS. IF IT IS MISSING, OBTAIN A NEW ONE FROM TIME MANUFACTURING, P.O. BOX 20368, WACO, TX., 76702


4542-5  
PER ANSI Z535.4-1991

4542-5

**⚠ WARNING**



Improper operation or maintenance of this equipment can result in death or serious injury.



Read and understand operator's manual, all safety signs, and capacity charts before using or maintaining machine. If you do not understand the information in the manuals, consult your supervisor, the owner or the manufacturer. It is the user's responsibility to follow manufacturer's instructions on machine operation, service and application, and observe pertinent laws and regulations.

4542-12  
PER ANSI Z535.4

4542-12

**⚠ DANGER**

ELECTROCUTION HAZARD


FAILURE TO OBEY THE FOLLOWING WILL RESULT IN DEATH OR SERIOUS INJURY

THE UPPER CONTROLS DO NOT PROVIDE PROTECTION IN THE EVENT OF ELECTRICAL CONTACT AND ARE NOT A SUBSTITUTE FOR MINIMUM APPROACH DISTANCES, COVER-UPS, RUBBER GLOVES AND OTHER PERSONAL PROTECTIVE EQUIPMENT.

33974-1  
PER ANSI Z535.4-1991

33974-1

**⚠ DANGER**



**Crushing Hazard**

Boom latch may move at any time.

Moving boom latch can cause serious injury.

Keep hands and fingers clear of boom latch.

20719-1  
PER ANSI Z535.4

20719-1

**⚠ DANGER**


IMPROPER HOLDING VALVE ADJUSTMENT WILL RESULT IN DEATH OR SERIOUS INJURY

1. LOOSENING HOLDING VALVE WITH BOOMS ELEVATED WILL CAUSE UNCONTROLLED BOOM MOVEMENT, DEATH OR SERIOUS INJURY MAY OCCUR.
2. REFER TO SERVICE MANUAL BEFORE PERFORMING HOLDING VALVE MAINTENANCE.

7500-1  
PER ANSI Z535.4-1991

7500-1

**⚠ DANGER**



**Electrocution Hazard**

Death or serious injury may result if chassis becomes energized.

Do not operate the aerial device while creating a path to the ground.

35409-1  
PER ANSI Z535.4

35409-1

**⚠ CAUTION**

- ALWAYS LOWER THE LOWER BOOM FULLY BEFORE STOWING THE UPPER BOOM.

13144-1

13144-1

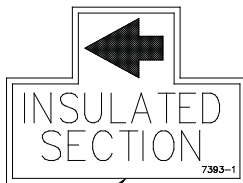




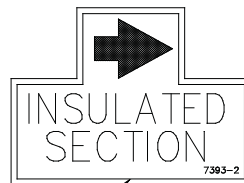
7031-1



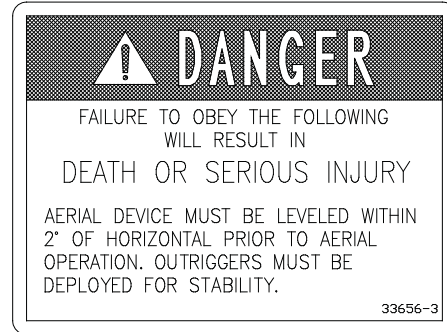
5098-1



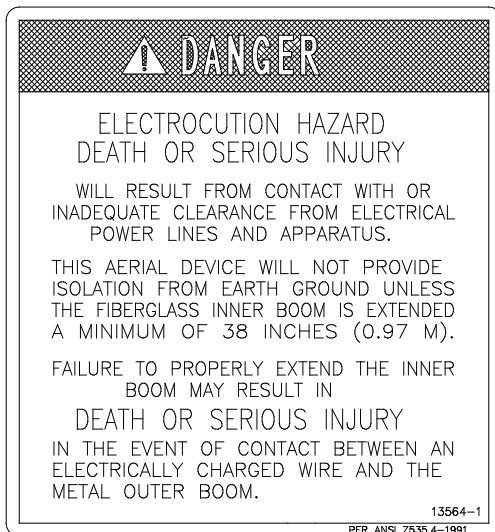
7393-1



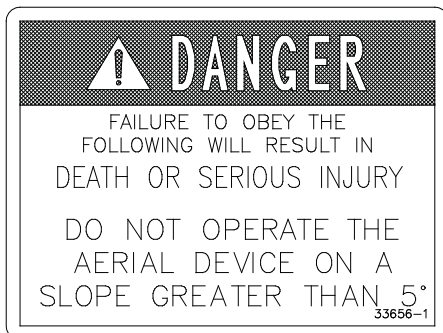
7393-2



33656-3



13564-1 W/O OUTER BOOM ELECTROGUARD

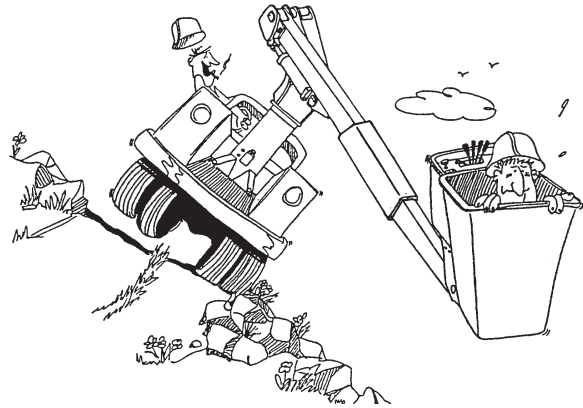


33656-1

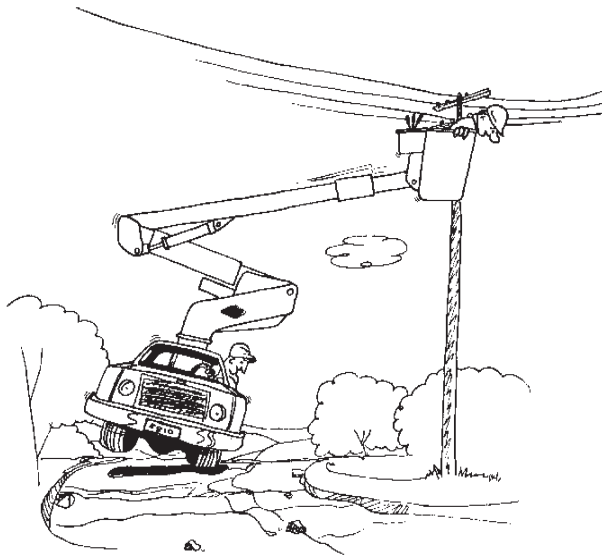
A safe attitude is very important to you, the operator. Practice anticipating accidents and operating hazards. Then determine a corrective course of action to respond to the situation. This habit will sharpen your safety awareness, quicken your reaction time, and prevent many accidents.

## THINK SAFETY

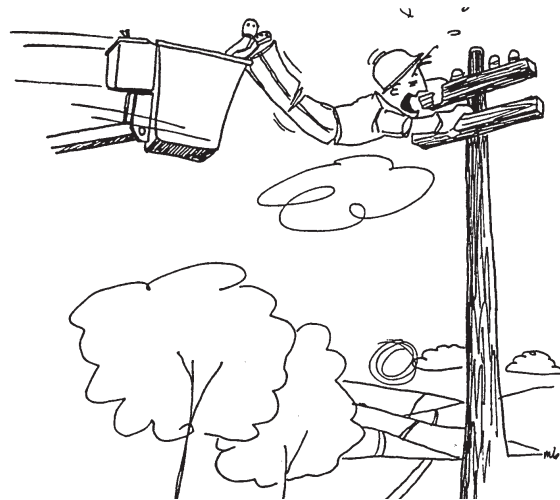
The following sketches illustrate some of the unsafe situations that might occur during the use or operation of the **Versalift**. Some of these safety problems are very basic and as a result are often taken for granted.



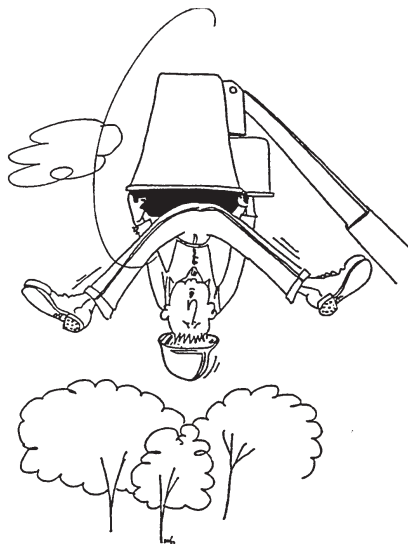
**Don't park the truck on a hill unless absolutely necessary. When the truck is parked on a slope, take the special precautions defined in Chapter 4, "Operation".**



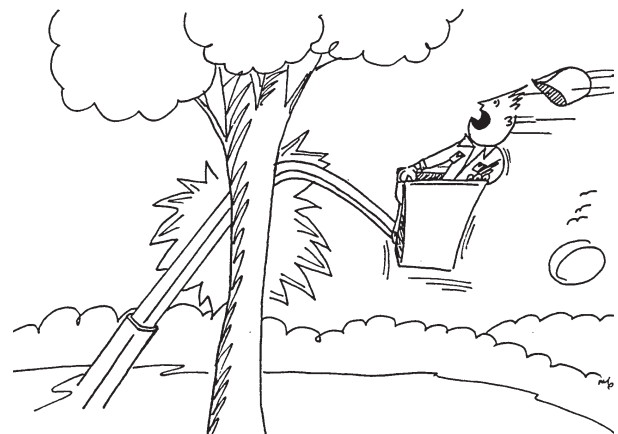
**Always engage the outriggers, and maintain the correct tire pressure to increase vehicle stability.**



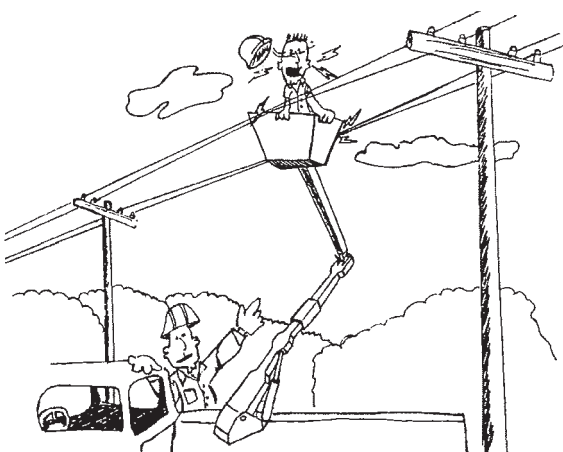
**Remember to set the parking brake and chock the truck's wheels.**



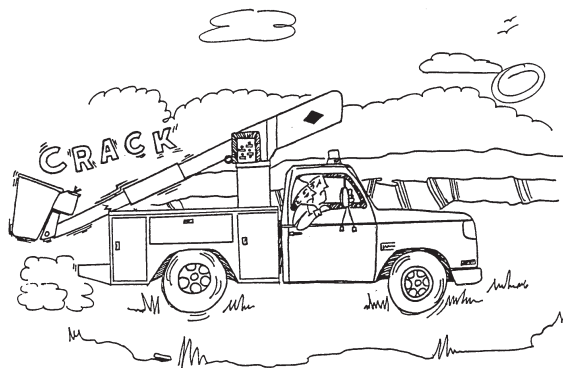
**Always wear a personnel restraint system attached to the lanyard anchor.**



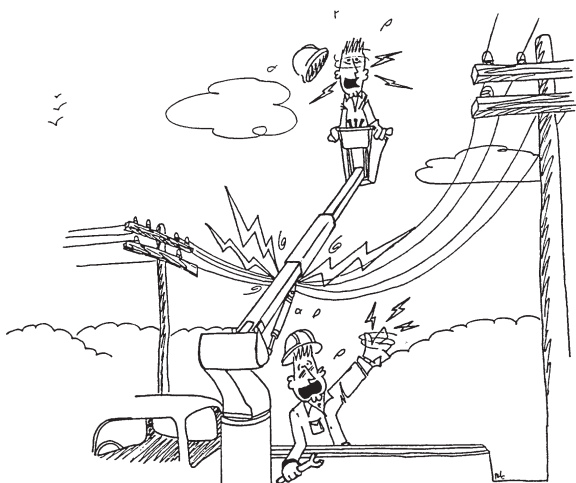
**Watch the booms to make sure they clear the truck and other obstructions.**



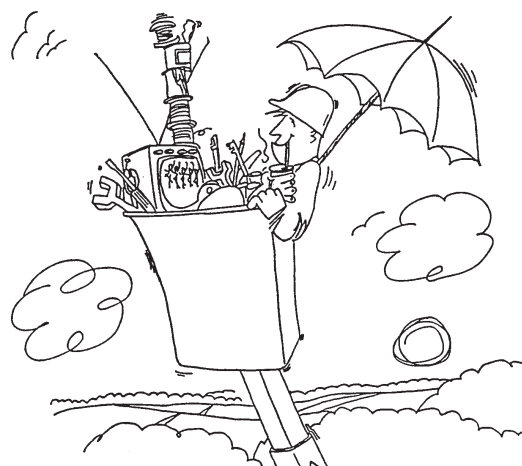
Maintain safe clearances from electrical power lines and apparatus. The aerial lift does not provide protection from contact or proximity to an electrically charged conductor and another conductor.



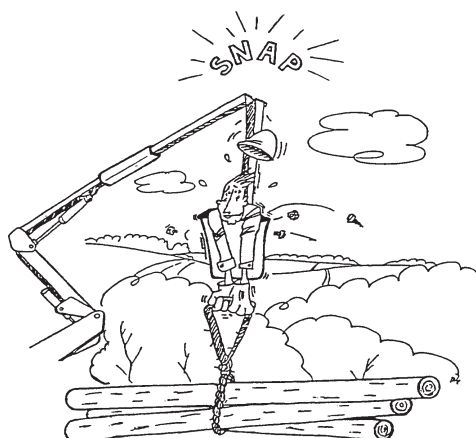
Stow the booms securely before moving the truck.



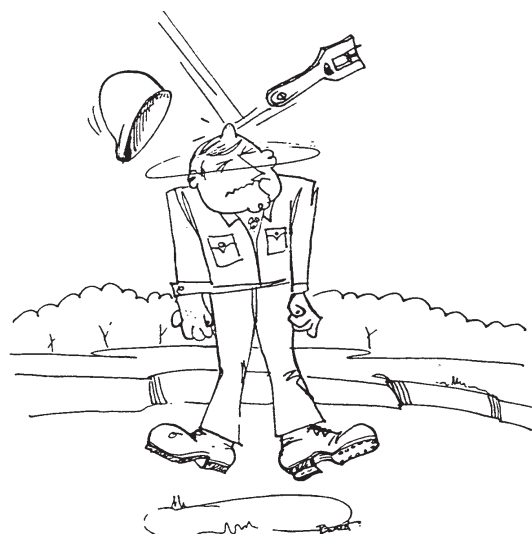
Never allow anyone on the ground to touch the unit when the lift is being used to work on or near electrical lines.



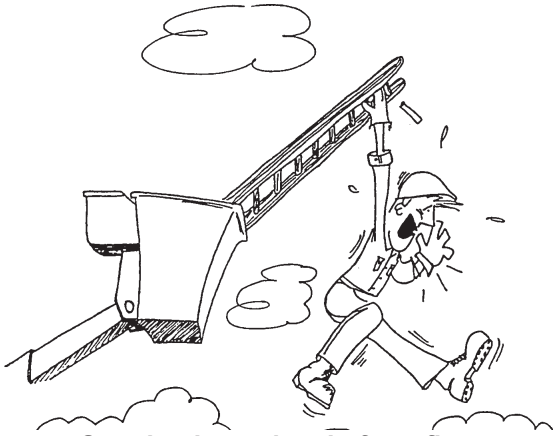
Whenever tools or equipment are included with the operator in the platform the combined weight must not exceed the rated load capacity.



Never use the VERSALIFT as a crane



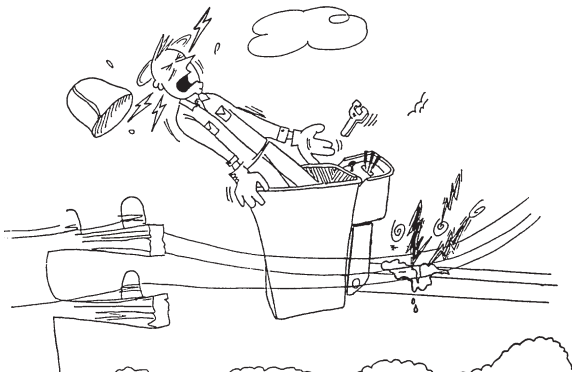
Avoid dropping tools. Use a hand line to raise or lower tools to/from the platform.



**Stand only on the platform floor.**



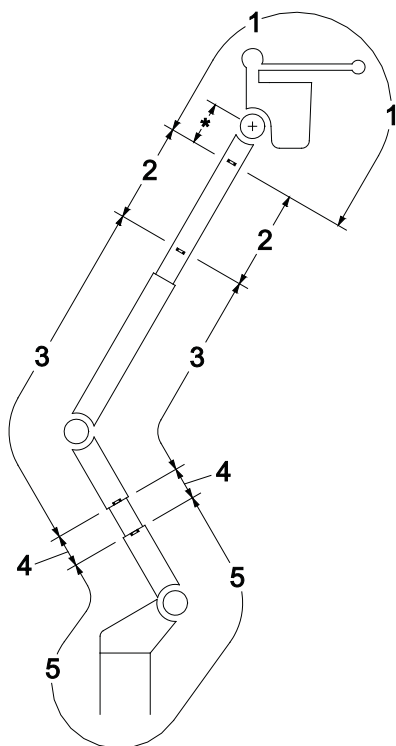
**Don't climb out of a raised platform onto poles, etc.**



**Keep the fiberglass booms clean and dry. Foreign substances on the booms conduct electricity.**



## What Is Insulated and What Is Not Insulated Articulated/Telescopic and Articulated Models



**Area 1 - Boom Tip Area - NOT INSULATED**

**Area 2 - Upper Boom Insulating Section**

**Area 3 - Intermediate Structure - NOT INSULATED**

**Area 4 - Lower Boom Insulating Section**

**Area 5 - Lower Structure - NOT INSULATED**

**Area 1, Boom Tip Area** – The boom tip area does not provide insulation. This area includes everything past the insulated section decal\* on the upper boom. This includes the upper end of the boom, platform support, platform(s), controls, and the jib/winch/rope (when so equipped).

All components at the boom tip area must be considered to be conductive and electrically connected, even with an insulated liner in place. Any contact with a ground and a phase or between two phase conductors will create a hazard of serious personal injury or death. Contact between an energized conductor and any part of the boom tip will energize the entire boom tip.

When working near an energized conductor, ground conductor, or other grounded objects, the operator must use the proper safety equipment (such as rubber gloves, covers, hot sticks, etc.), maintain safe approach distances, and follow company work practices.

**Area 2, Upper Boom Insulation Section** – This section provides insulation\*\* between the boom tip area and earth ground when clean and properly maintained. On some configurations, it is necessary to extend the boom until the insulated section decal is visible.

**Area 3, Intermediate Structure** – This section does not provide insulation. This area includes the lower steel portion of the upper boom, knuckle, and the steel upper portion of the lower boom and compensation link (when applicable).

**Area 4, Lower Boom Insulating Section** – (When so equipped) This section provides insulation\*\* between the intermediate structure (Area 3) and the vehicle when clean and properly maintained.

**Area 5, Lower Structure** – This area does not provide insulation. This area includes the steel lower portion of the lower boom and compensation link (when applicable), turret, lower controls, pedestal, and the vehicle.

\* On VST and T-Series models not supplied with an upper insulated section decal, the insulated section begins 11 inches below the center of the platform pivot.

\*\* Insulation properties are defined by ANSI A92.2

## ADDITIONAL SAFETY CONSIDERATIONS

1. Report any unusual occurrence during the operation of the aerial lift that may require repair or adjustment.
2. Keep the work space in the truck bed clean and neat.
3. Avoid parking on soft surfaces. Soft surfaces may suddenly collapse, shift, or sink beneath the truck's weight.
4. There is no insulating value in the fiberglass platform without a platform liner.
5. No attempt should be made to clean, oil, or adjust a machine while the machine is in motion.
6. If an aerial lift has set idle for an extended period (i.e. overnight) or has been recently serviced, cycle the aerial-lift through its full range of motion several times. This procedure will force any trapped air out of the hydraulic system. Do not operate the lift from the platform until this process is completed. Air trapped in the hydraulic oil can cause lift movements to be erratic and unpredictable.
7. Don't operate any part of the unit (platform, booms, outriggers, etc.) outside the work-site barricades into the traffic lanes. Set up adequate cones or barricades to mark the boundaries of the work-site to alert motorists and pedestrians.
8. Only qualified mechanics are authorized to service the aerial lift.
9. Avoid contacting a spray mist produced by a high pressure hydraulic leak. This spray or mist can puncture or become embedded beneath the skin or contaminate the eyes. These conditions require immediate medical attention.
10. Hydraulic oil is flammable. Avoid any contact between hydraulic oil and sources of high heat or open flames.
11. Bodily contact with hot hydraulic oil can cause serious burns which require immediate medical attention.

# SPECIFICATIONS

## SST-EIH GENERAL SPECIFICATIONS

**Note:** Specifications on units may vary or change without prior notifications due to option selections.

This section includes a brief description of each of the major (standard) components.

**PLATFORM** - The fiberglass platform is 24 in. x 24 in. x 42 in. (0.61 m x 0.61 m x 1.07 m) deep with an inside and outside step for easy access. The platform capacity is 300 lbs. (136 kg).

**SINGLE STICK PLATFORM CONTROL** - The Unitol single-stick control consists of a multi-jointed handle which operates the control valve. A safety trigger located on the underside of the single stick handle will not allow boom movement until it is depressed. The control valve is full pressure and full flow. The operator can feather between the three control movements to provide multi-function boom action. An emergency stop control is provided.

**INDIVIDUAL LOWER CONTROLS** - Individual full-pressure controls at the turret actuate all boom functions. The lower control station is equipped with a selector valve to override the upper controls.

**HYDRAULIC PLATFORM LEVELING** - Platform leveling is controlled by a master and slave cylinder arrangement. The platform leveling system can be activated from the upper controls to adjust platform leveling, tilt the platform for cleaning, or to ease the removal of an injured operator.

**PERSONNEL RESTRAINT SYSTEM** - A safety belt or harness and a lanyard are required and can be supplied by Time Manufacturing Company at an additional cost. Consult applicable work practices and regulations to choose between a safety belt and a harness. The anchor for the lanyard is attached to the upper platform support.

**OUTER/INNER BOOM ASSEMBLY**- The outer/inner boom assembly includes an outer boom, telescopic inner boom, extension system, and hose assemblies. The outer boom consists of a 6 in. x 8 in. (150 mm x 200 mm) steel section and a 7.5 in. x 9.5 in. (190 mm x 240 mm) fiberglass section (Electroguard) that maintains a 42 in. (1.08 m) insulation gap with the inner boom fully retracted. The 5 in. x 7 in. (130 mm x 180 mm) rectangular fiberglass inner boom is housed within the outer boom. The extension system consists of a hydraulic cylinder, two holding valves, and a hose carrier housed entirely within the boom assembly. The hoses routed through the outer/inner boom assembly are non-conductive and fully

contained within the boom assembly.

The outer/inner boom assembly articulates from 14° below horizontal to 74° above horizontal. Actuated by a double acting cylinder with a holding valve, the outer/inner boom assembly is offset to one side to provide easy access to the platform. A molded rubber boom-support cradle supports the boom when stowed, without the need for a tie-down strap.

**COMPENSATED LOWER BOOM** - The lower boom consists of a 6 in. (150 mm) square steel section. A double acting cylinder with dual holding valves allows the SST-37 lower boom to articulate from 7° below horizontal to vertical for a total travel of 97°. The SST-40 lower boom articulates from 5° below horizontal to vertical for a total travel of 95°. A compensation link forms a parallelogram linkage to maintain the outer/inner boom assembly at a constant angle to the turret.

**PINS** - Pins are high-strength alloy steel which are chrome plated for a hard finish and corrosion resistance. Pins are bolted in place with a welded pin tab at one end and a pin cap at the other for redundant retention.

**CYLINDERS** - Both the outer and lower boom cylinders are a threaded end-cap design. The lower boom and extension cylinders are equipped with two holding valves to prevent down creep and to lock the booms in position in the event of hose failure. The outer boom cylinder is equipped with one holding valve.

**TURRET** - The turret wings are 1/2 in. (13 mm) thick steel plate. A steel tube is welded between the turret wings to support the boom cylinder and provide rigidity. The turret plate is machined flat to support the rotation bearing. A bearing cover is provided to prevent foreign material from interfering with lift rotation.

**ROTATION** - Rotation is 370°, non-continuous with a mechanical stop. Continuous, unrestricted rotation is available as an option (see option descriptions). Rotation is accomplished by a hydraulically driven worm and spur gear set acting on a shear-ball rotation bearing. The critical bolts holding the turret to the rotation bearing and the bearing to the pedestal are grade 8 hex head cap screws. These critical bolts are marked with a torque seal indicator to provide a quick means to inspect for relative movement. A slotted adjustment is provided for pinion and rotation gear clearances. An external hex drive is provided for manual rotation in case of hydraulic failure.

**PEDESTAL** - The pedestal is a round shape with an access opening on both sides. The 12 gallon (45 l) hydraulic reservoir is built integral to the pedestal. A 100-mesh suction screen and 10-micron return line filter are located inside the pedestal. The top plate is 1-1/4 in. (32 mm) thick and machined flat to support the rotation bearing.

**LUBRICATION** - Non-lube bearings are used at all points of motion. The rotation bearing is the only component that requires periodic lubrication.

**PAINTING** - The complete unit is primed and painted prior to assembly. The standard color is white urethane.

**HYDRAULIC OIL RESERVOIR** - Designed as an integral part of the pedestal, the reservoir has an anti-splash baffle and easy to read fluid level gages. The oil capacity of the reservoir is 12 gallons (45 l), which is sufficient for a 5 GPM (19 lpm) hydraulic tool circuit.

**HYDRAULIC SYSTEM** - The open-center hydraulic system operates at 3 gpm (11.4 lpm) at 2250 psi (158 kg/cm<sup>2</sup>). The pump draws oil through a 100-mesh suction screen. A 10-micron return line filter with bypass valve is included. Fluid level gages are furnished for checking fluid level. Hydraulic oil is not included. This system can be driven by the chassis-engine accessory belt or by the chassis transmission power-take-off.

**HOSES AND FITTINGS** - The hoses routed through the booms are high pressure and non-conductive with swaged hose end fittings. Nylon sleeves are installed over hoses at points of movement. Reusable fittings can be installed if a hose is damaged.

**ENGINE START/STOP AND MASTER CONTROL** - The start/stop circuit has been designed so that the lift cannot be operated unless the truck ignition key is in the "run" position and the master switch is "on." This feature makes it difficult for unauthorized individuals to operate the lift when the truck is locked. An air cylinder at the platform and a toggle switch at the turret are provided to actuate the engine start/stop control.

**ELECTRICAL INSULATION SPECIFICATIONS** - The outer/inner boom assembly is tested and certified for electrical work at 46 KV and below in accordance with ANSI A92.2 requirements. Aerial devices may be designed and configured for gloving work and tool methods at 46KV and below. The outer/inner boom assembly is fully insulated even in a retracted position.

**OUTRIGGER BOOM INTERLOCK SYSTEM** - The outrigger/boom interlock system is a feature designed to prevent the lift from being operated until the outriggers contact the ground. The interlock also prevents the outriggers from being retracted before the lower boom is properly stored.

**SLOPE INDICATORS** - Slope indicators are required on Versalift units and supplied by Time Manufacturing Co. Slope indicators shall be installed to indicate the level of rotation bearing relative to the ground.

**MANUALS** - Two Operator's Manuals and two Service Manuals, one Manual of Responsibilities and one EMI Safety Manual are included with each aerial lift.

## SST-EIH OPTION SPECIFICATIONS

Below is a brief description of some of the available options for the aerial lift.

**INDEPENDENT H-FRAME OUTRIGGERS**- Outriggers are shear-plate mounted to the frame and are equipped with pilot operated check valves, internal thermal relief valves and separate controls. The outriggers furnish 90 1/2 in. (2.3 m) of spread and a maximum of 9 in. (.23 m) of penetration with 15 in. (.38 m) of ground clearance. Outrigger legs are shipped loose to accommodate various frame heights and body widths. Outrigger pivot feet are standard.

**INDEPENDENT A-FRAME OUTRIGGERS**- Outriggers are shear-plate mounted to the frame and are equipped with pilot operated check valves, internal thermal relief valves and separate controls. At maximum extension, the outriggers furnish 125 3/4 in. (3.19 m) of spread and 9 in. (229 mm) of penetration. They have 17 in. (432 mm) of ground clearance based on 36 in. (0.91 m) or 31 in. (0.79 m) frame height. Outrigger pivot feet are standard.

**TORSION BAR** - Over frame and under frame torsion bars are available and add to the stability of the vehicle. All Stable Ride torsion bars include rubber bushings at all points of movement and do not require lubrication. Ballast may be required with the use of torsion bars.

**TALLER AND SHORTER PEDESTALS** - Pedestals 6 in. (152 mm) taller or 6 in. (152 mm) shorter are available.

**CONTINUOUS ROTATION** - Rotation is continuous

and unrestricted in either direction. An electric and hydraulic collector ring assembly provides a path for hydraulic oil and electric signals from the pedestal to turret.

**LEVELING CONTROL AT LOWER CONTROLS** - The platform leveling system can be activated from the lower controls to adjust platform leveling, tilt the platform for clean out, or to ease the removal of an injured operator.

**BACKUP PUMP** - An auxiliary hydraulic pump designed to bring the booms down in case the main hydraulic source fails. This system consists of a hydraulic pump driven by a 12V DC motor, which is powered by the truck engine battery. The system is connected in parallel with the main pump and is designed for non-continuous operation. An air cylinder at the platform and a toggle switch at the pedestal energize this system. When used with continuous rotation, an additional pass in the collector assembly is usually required.

**EMERGENCY LOWERING** - This system consists of a needle valve attached to the outside of the platform. When opened slowly, the boom will lower to ground safely.

**HYDRAULIC TOOL CIRCUIT AT THE PLATFORM** - This system is designed to use open-center hydraulic tools. The tool circuit provides 5 gpm (19 lpm) at 2250 psi (158 kg/cm<sup>2</sup>). The two speed manual throttle advance is required.

**HYDRAULIC TOOL POWER AT THE GROUND CONTROLS** - This system is designed to use open-center hydraulic tools. The tool circuit provides 5 gpm (19 lpm) at 2250 psi (158 kg/cm<sup>2</sup>). The two speed manual throttle advance is required.

**30 GALLON, AUXILIARY HYDRAULIC RESERVOIR** - The reservoir is designed to be bed mounted and includes a 100-mesh suction screen and 10-micron return line filter.

**LIFT EYE** - Mounted to the outer boom, which allows lifting loads up to 500 lbs. (227 kg) with the platform empty and the inner boom retracted.

**EXTRA CONTROL CIRCUIT FROM THE PLATFORM TO THE PEDESTAL** - Consists of an additional air cylinder at the platform and an airline to the turret which actuates a pressure switch. An additional pass in the collector assembly is usually required.

**TWO-SPEED MANUAL THROTTLE CONTROL**

- This system provides for aerial lift operation at efficient, economical engine idle speeds or faster engine speeds for hydraulic tool operation. An air cylinder at the platform and a toggle switch at the turret energize the manual throttle control. An additional pass in the collector assembly is usually required.

**UNITROL 4-FUNCTION CONTROL** - The 4-Axis controller option is a full pressure control. Located at the platform, the 4-axis control consists of a single handle control which, through linkage, actuates the interlock section and four individual boom function valves.

**TRUGUARD** - This advanced upper controls isolation system provides 4" of electrical isolation from the entire upper controls, including the control dash panel. This system also includes a protective shield which helps prevent environmental and work related contaminants from making direct contact with the isolating surfaces.

**THE UPPER CONTROLS DO NOT PROVIDE PROTECTION IN THE EVENT OF ELECTRICAL CONTACT AND ARE NOT A SUBSTITUTE FOR MINIMUM APPROACH DISTANCES, COVER-UPS, RUBBER GLOVES AND OTHER PERSONAL PROTECTIVE EQUIPMENT.**

**PLATFORM VARIATIONS** - The standard platform is a 24 in. x 24 in. x 42 in. (.61 m x .61 m x 1.07 m) closed platform with an inside and outside step.

A 24 in. x 30 in. x 42 in. (.61 m x .76 m x 1.07 m) closed platform with side access step is available.

A 24 in. x 42 in. x 42 in. (.61 m x .1.07 m x 1.07 m) closed platform with side access step is also available, at reduced platform capacities of 400 lbs max. (181 kg.) with fixed platform, and 350 lbs max. (159 kg.) with rotating platform.

**PLATFORM LINERS AND VINYL COVERS** - The 50 KV rated liners and soft vinyl covers are available for all platform variations listed above.

**CAPACITY VARIATIONS** - 300 lbs. (136 kg) is standard platform capacity. Higher capacities are available but will affect stability. With a fixed platform, the maximum available platform capacity is 450 lbs. (204 kg). With the rotating platform, the maximum available platform capacity is 400 lbs. (181 kg).

**ROTATING PLATFORM** - Provides 180° hydraulic platform rotation. 400 lbs. (181 kg.) platform capacity

is available with this option.

**CHASSIS INSULATION SYSTEM (Lower Boom Insert)** - The fiberglass insert provides a insulation gap of 12 in. (305 mm) on the unit. The insert is mounted on the steel boom sections, then adhesive is pumped in under pressure to fill all voids. A fiberglass section in the compensation link maintains the 12 in. insulation gap in all boom positions. A stainless steel stud is provided at each end of the insert to shunt the system during electrical testing. The insert is tested per ANSI A92.2.

**CATEGORY D DIELECTRIC TESTING AND CERTIFICATION** – Testing and certification for ANSI A92.2 Category D are available. These aerial devices which are designed and manufactured for work in which the insulating system is not considered as primary insulation, but secondary. These aerial devices are NOT designed for gloving work methods. They are rated at voltage of 46kv.

**AUTOMATIC BOOM LATCH** – The automatic boom latch is designed to automatically restrain the upper boom in the cradle when stowed and automatically release the boom when the lift is operated. The latch is actuated by a hydraulic cylinder and includes a manual over-ride to open the latch without hydraulic power.



## SST-37-EIH DIMENSIONAL SPECIFICATIONS

Horizontal Reach .....	27 ft 9 in. (8.5 m)
Standard Platform Capacity .....	300 lbs. (136 kg)
Maximum Platform Capacity .....	450 lbs. (204 kg)
Outer Boom Lift Eye Capacity .....	500 lbs. (227 kg)
Height to Bottom of Platform .....	37 ft. 0 in (11.3 m)
Working Height .....	42 ft. 0 in (12.8 m)
Stowed Travel Height .....	10 ft. 4 in (3.15 m)
Weight of Lift without oil and mounting hardware .....	2230 lbs. (1012 kg)

### Hydraulic System

Operating Pressure .....	2250 PSI (158 kg/cm <sup>2</sup> )
Flow Rate .....	3 GPM (11 lpm)
Filtration .....	10 micron return 100 mesh suction
System Type .....	Open center

### Boom Action

Inner-Boom .....	116 in (2.9 m) Extension
Outer-Boom .....	-14° to +74°
Outer-Boom (With Ground-Access Option) .....	-20° to +75°
Lower-Boom .....	-7° to vertical

### Insulation Gap

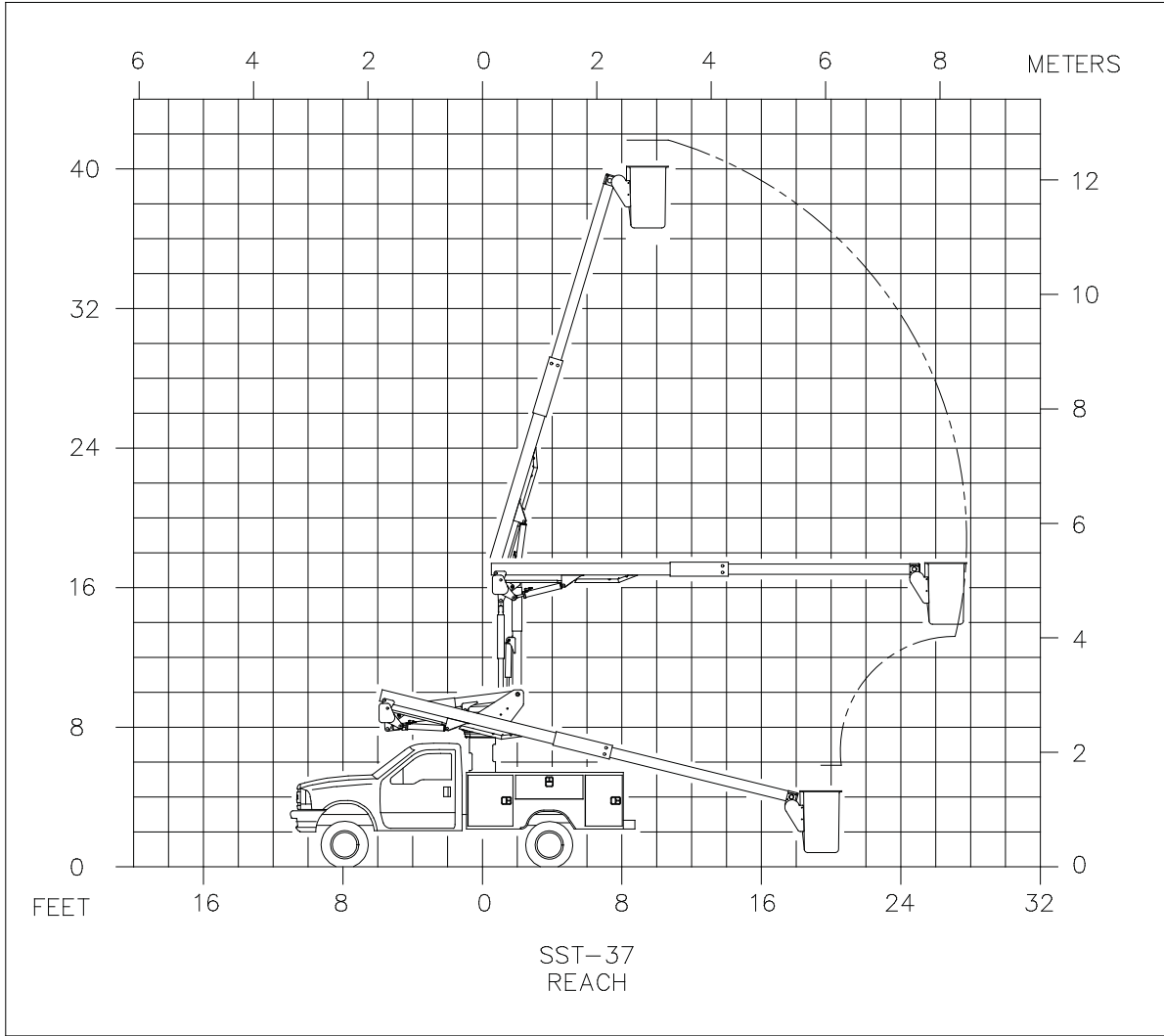
Upper Boom fully retracted .....	42 in. (1.07 m)
Lower Boom Insert (optional) .....	12 in. (0.3 m)
Upper Boom fully retracted w/o Electroguard .....	10 in. (0.25 m)

Ambient Temperature Range for Structural Integrity .....

-40°F (-40°C) to 125°F (52°C)
-------------------------------

### Notes:

1. All dimensions and angles are nominal, based on 40 in. (1.02m) frame height.
2. The total load in the platform including operator, liner, tools, etc. Must not exceed the maximum platform capacity.



DWG. NO.	REV.
28125-1	-

**SST-37-EIH  
Platform Travel**

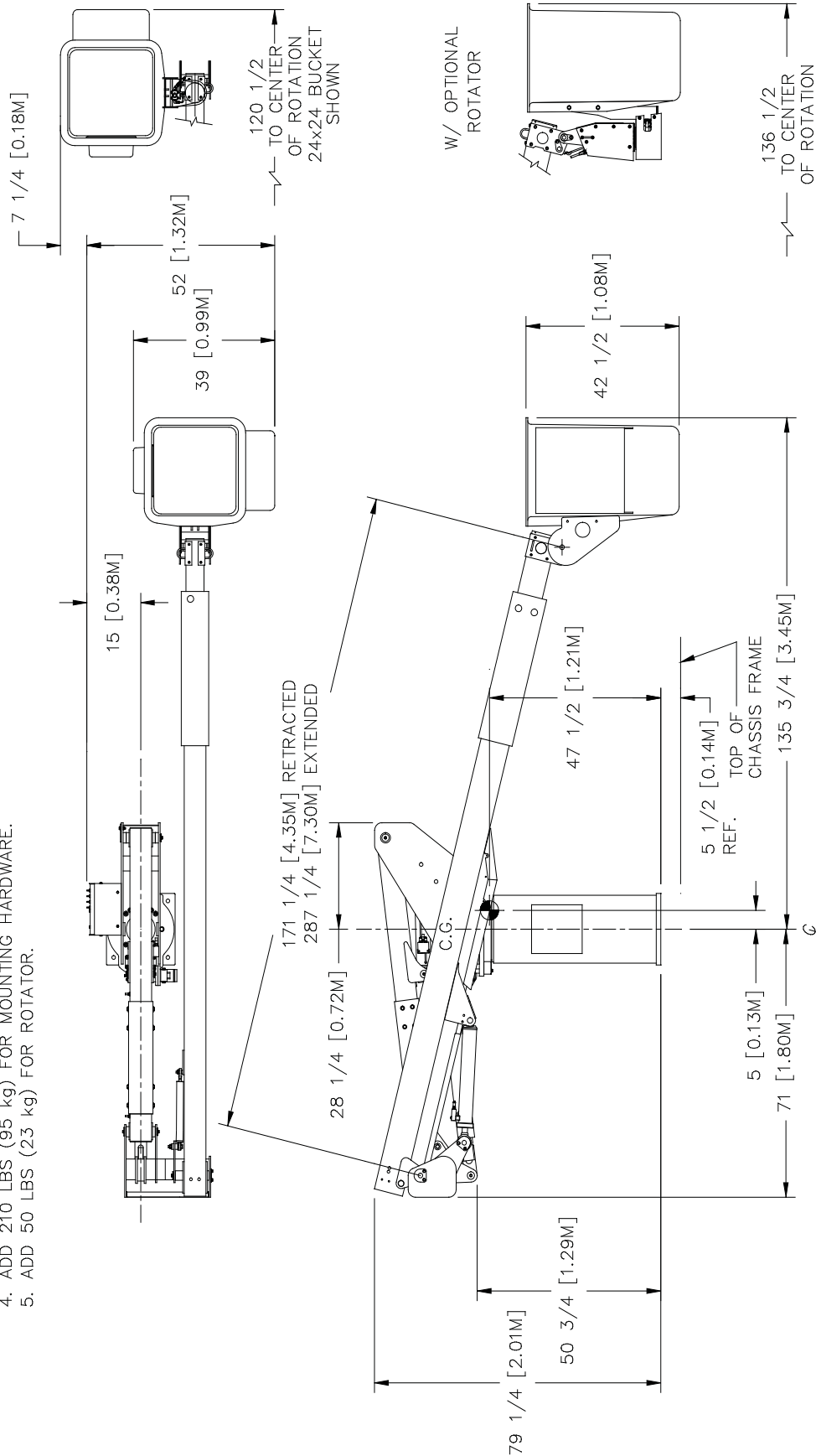
**SPECIFICATIONS**





REV.

- NOTE: 1. ALL DIMENSIONS ARE IN INCHES WITH METRIC EQUIVALENTS IN METERS.  
 2. WEIGHT OF LIFT = 2230 LBS (1010 kg) W/O OIL AND MOUNTING HARDWARE.  
 3. ADD 88 LBS (40 kg) FOR 12 GALLONS (46 L) OF HYDRAULIC OIL.  
 4. ADD 210 LBS (95 kg) FOR MOUNTING HARDWARE.  
 5. ADD 50 LBS (23 kg) FOR ROTATOR.



ROTATION

UNLESS OTHERWISE NOTED:  
 DECIMALS  
 TOLERANCES: ± 1/16  
 ANGLES: ± .03  
 .XX ± .005  
 .XXX ± .005  
 MACHINED SURFACE FINISHES= 125/  
 PROJECTION OF VIEWS  
 ALL DIMENSIONS ARE IN INCHES  
 THIS PRINT CONTAINS CONFIDENTIAL  
 INFORMATION. ANY REPRODUCTION  
 OF THIS MANUFACTURING AND IS NOT  
 TO BE DISCLOSED, COPIED, OR  
 REPRODUCED WITHOUT EXPRESSED  
 PERMISSION OF TIME MANUFACTURING.

	MANUFACTURING COMPANY WACO TEXAS
MATERIAL	---
FINISH	---

DWN. BY	DATE	TITLE
LBR	3-10-00	SST-37-EIH OVERALL
SIZE	A	SCALE
EST WT #	MANUAL	1/40
SHEET	1 OF 2	DWG. NO.
		28128-DWG

**SPECIFICATIONS**



## SST-40-EIH DIMENSIONAL SPECIFICATIONS

Horizontal Reach .....	27 ft 9 in. (8.5 m)
Standard Platform Capacity .....	300 lbs. (136 kg)
Maximum Platform Capacity .....	450 lbs. (204 kg)
Outer Boom Lift Eye Capacity .....	500 lbs. (227 kg)
Height to Bottom of Platform .....	40 ft. 0 in (12.2 m)
Working Height .....	45 ft. 0 in (13.7 m)
Stowed Travel Height .....	10 ft. 4 in (3.15 m)
Weight of Lift without oil and mounting hardware .....	2335 lbs. (1059 kg)

### Hydraulic System

Operating Pressure .....	2250 PSI (158 kg/cm <sup>2</sup> )
Flow Rate .....	3 GPM (11 lpm)
Filtration .....	10 micron return 100 mesh suction
System Type .....	Open center

### Boom Action

Inner-Boom .....	116 in (2.9 m) Extension
Outer-Boom .....	-14° to +74°
Lower-Boom .....	-5° to vertical

### Insulation Gap

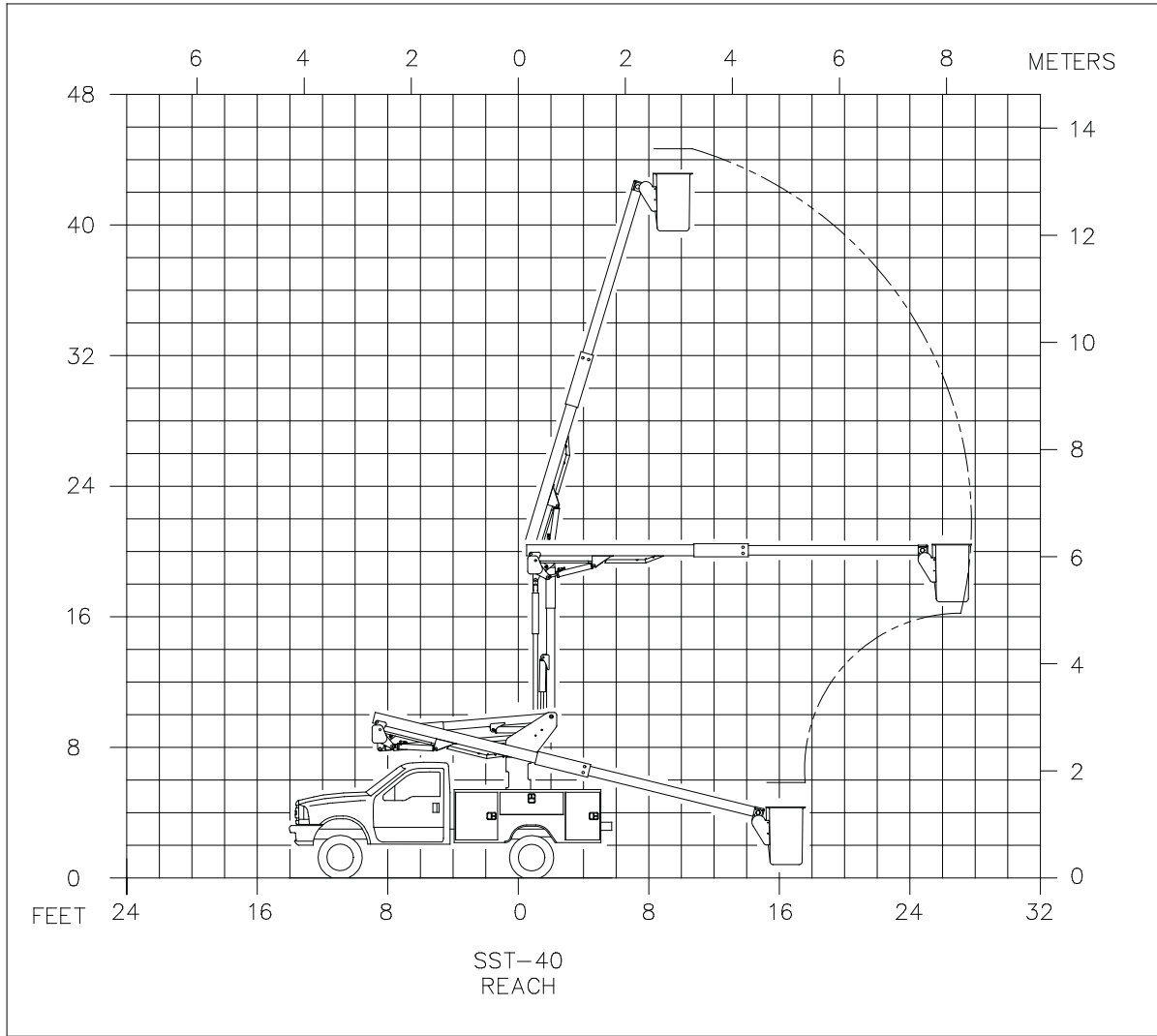
Upper Boom fully retracted .....	42 in. (1.07 m)
Lower Boom Insert (optional) .....	12 in. (0.3 m)
Upper Boom fully retracted w/o Electroguard .....	10 in. (0.25 m)

Ambient Temperature Range for Structural Integrity ..... -40°F (-40°C) to 125°F (52°C)

### Notes:

1. All dimensions and angles are nominal, based on 40 in. (1.02m) frame height.
2. The total load in the platform including operator, liner, tools, etc. Must not exceed the maximum platform capacity.

SPECIFICATIONS

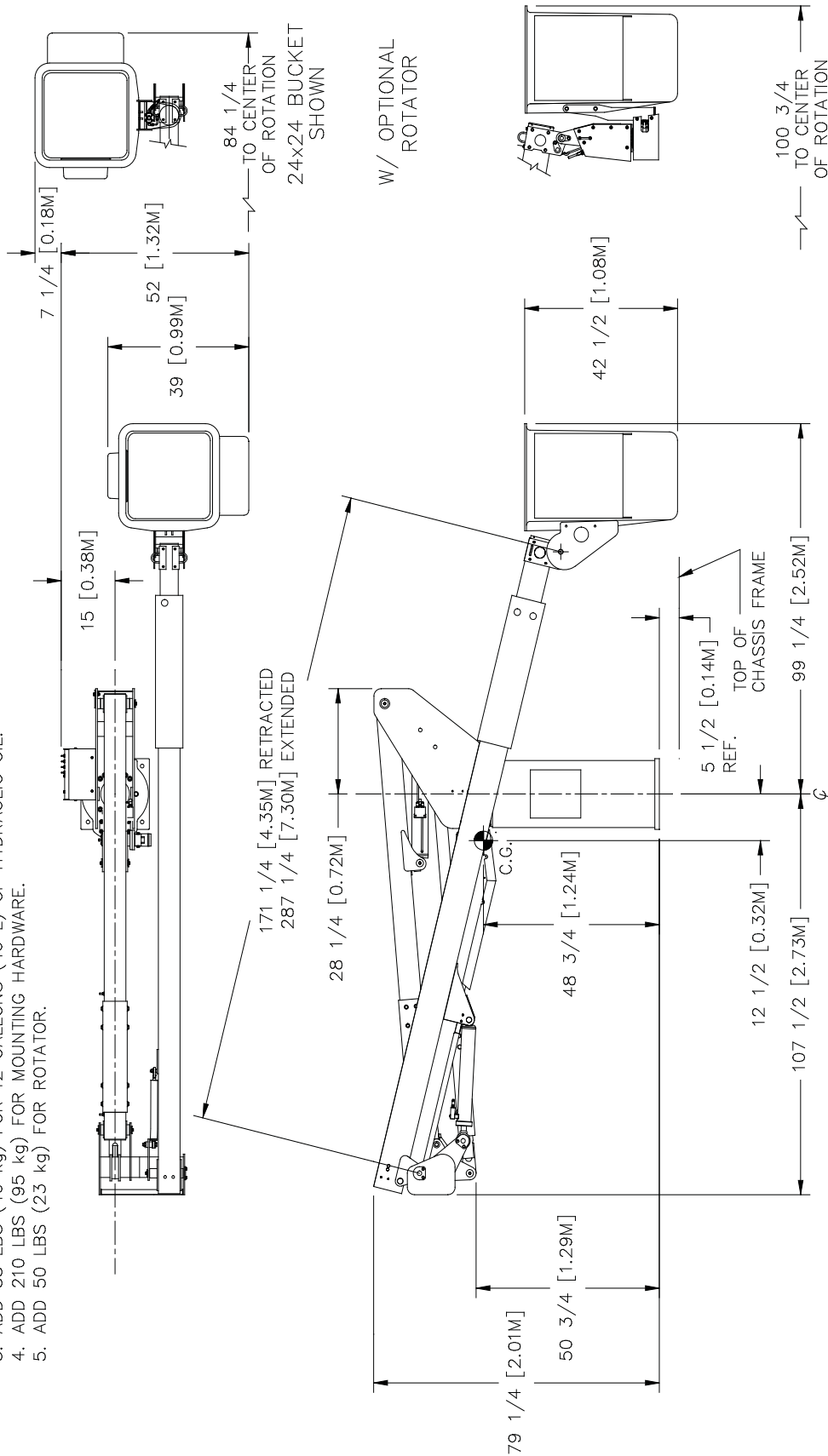


DWG. NO.	REV.
28124-1	-

**SST-40-EIH  
Platform Travel**

# SPECIFICATIONS

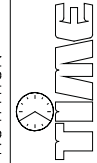
- NOTE: 1. ALL DIMENSIONS ARE IN INCHES WITH METRIC EQUIVALENTS IN METERS.  
 2. WEIGHT OF LIFT = 2335 LBS (1060 kg) W/O OIL AND MOUNTING HARDWARE.  
 3. ADD 88 LBS (40 kg) FOR 12 GALLONS (46 L) OF HYDRAULIC OIL.  
 4. ADD 210 LBS (95 kg) FOR MOUNTING HARDWARE.  
 5. ADD 50 LBS (23 kg) FOR ROTATOR.



ROTATION

UNLESS OTHERWISE NOTED:  
 TOLERANCES: DECIMALS  
 FRACTIONS: 1/16 ± .03  
 ANGLES: .X ± .005  
 .XXX ± .005  
 MACHINED SURFACE FINISHES= 125/  
 PROJECTION OF VIEWS (FIRST ANGLE)  
 ALL DIMENSIONS ARE IN INCHES

THIS PRINT CONTAINS CONFIDENTIAL  
 INFORMATION AND IS SOLE PROPERTY  
 OF TIME MANUFACTURING AND IS NOT  
 TO BE REPRODUCED, COPIED, OR  
 REPRODUCED WITHOUT EXPRESSED  
 PERMISSION OF TIME MANUFACTURING.



MANUFACTURING  
 COMPANY  
 WACO TEXAS

DWN. BY: LBR  
 DATE: 3-10-00  
 SCALE: A  
 EST WT #: 1/41  
 MANUAL: —

TITLE: SST-40-EIH  
 OVERALL

DWG. NO.

28130-DWG

SHEET  
 1 OF 2



## SST-37-EIH VEHICLE SPECIFICATIONS

### Recommended Chassis Mounting:

Frame Section Modulus (per frame rail).....	9.25 in. <sup>3</sup> (152 cm <sup>3</sup> )
Frame Resisting Bending Moment (per frame rail).....	333,000 in.-lbs. (37,600 N-m)
Cab to Rear Axle Dimension .....	60 in. (1.52 m)

### With Torsion Bars (Front and Rear)

Platform Capacity (Fixed Platform)	Platform Capacity (Rotating Platform)	Recommended GVWR	Approximate Curb Weight for Stability
300 lbs. (136 kg)	-----	14,500 lbs. (6575 kg) 5,000 lbs. (2270 kg) (Front) 10,000 lbs. (4535kg) (Rear)	10,500 lbs. (4760kg)
350 lbs. (160 kg)	300 lbs. (136 kg)	14,500 lbs. (6575 kg) 5,000 lbs. (2270 kg) (Front) 10,000 lbs. (4535 kg) (Rear)	12,000 lbs. (5443kg)
400 lbs. (181 kg)	350 lbs. (160 kg)	17,500 lbs. (7935 kg) 6,000 lbs.(2720 kg) (Front) 13,500 lbs. (6120 kg) (Rear)	12,000 lbs. (5443kg) 13,860 lbs. (6287 kg) (GM-4500 Chassis)
450 lbs. (204 kg)	400 lbs. (181 kg)	17,500 lbs. (7935 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	13,100 lbs. (5942 kg)

### With H-Frame or A-Frame Outriggers (Mounted behind cab)

Platform Capacity (Fixed Platform)	Platform Capacity (Rotating Platform)	GVWR	Approximate Curb Weight for Stability
Up to 400 lbs. (181 kg)	Up to 350 lbs. (160 kg)	14,500 lbs. (6575 kg) 5,000 lbs. (2270 kg) (Front) 10,000 lbs. (4535) (Rear)	10,500 lbs. (4763kg)
450 lbs. (204 kg)	400 lbs. (181 kg)	17,500 lbs. (7935 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	13,100 lbs. (5942 kg)

### Notes:

- Actual GVWR and GAWR'S should be based on the weight and weight distribution of the chassis, body, lift, ballast (if required), and accessories, plus the desired payload.
- Curb weight for stability will vary based on rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.

## SST-40-EIH VEHICLE SPECIFICATIONS

### Recommended Chassis Mounting:

Frame Section Modulus (per frame rail).....	9.25 in. <sup>3</sup> (152 cm <sup>3</sup> )
Frame Resisting Bending Moment (per frame rail).....	333,000 in.-lbs. (37,600 N-m)
Cab to Rear Axle Dimension .....	60 in. (1.52 m)

### With Torsion Bars (Front and Rear)

Platform Capacity (Fixed Platform)	Platform Capacity (Rotating Platform)	Recommended GVWR	Approximate Curb Weight for Stability
300 lbs. (136 kg)	-----	14,500 lbs. (6575 kg) 5,000 lbs. (2270 kg) (Front) 10,000 lbs. (4535kg) (Rear)	11,000 lbs. (4990 kg)
350 lbs. (160 kg)	300 lbs. (136 kg)	17,500 lbs. (7935 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	11,500 lbs. (5216 kg)
400 lbs. (181 kg)	350 lbs. (160 kg)	17,500 lbs. (7935 kg) 6,000 lbs.(2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	12,500 lbs. (5670kg) 14,780 lbs. (6704 kg) (GM-4500 Chassis)
450 lbs. (204 kg)	400 lbs. (181 kg)	17,500 lbs. (7935 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	13,100 lbs. (5942 kg)

### With H-Frame or A-frame and H-frame Outriggers (Mounted behind cab)

Platform Capacity (Fixed Platform)	Platform Capacity (Rotating Platform)	GVWR	Approximate Curb Weight for Stability
Up to 400 lbs. (181 kg)	Up to 350 lbs. (160 kg)	17,500 lbs. (7938 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	12,500 lbs. (5670kg)
450 lbs. (204 kg)	400 lbs. (181 kg)	17,500 lbs. (7935 kg) 6,000 lbs. (2722 kg) (Front) 13,500 lbs. (6124 kg) (Rear)	13,100 lbs. (5942 kg)

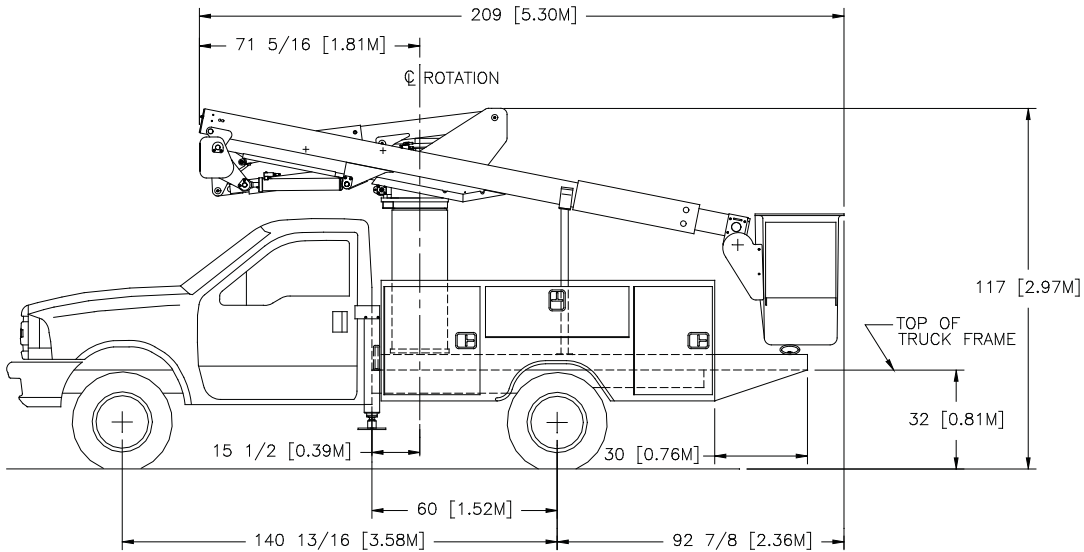
### Notes:

- Actual GVWR and GAWR'S should be based on the weight and weight distribution of the chassis, body, lift, ballast (if required), and accessories, plus the desired payload.
- Curb weight for stability will vary based on rated platform capacity, mounting configuration, frame stiffness, and stability test requirements.

SPECIFICATIONS



REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
⑧	58506	NEW TITLE BLOCK, ADDED FOR REFERENCE ONLY NOTE.	DJH	MG	JC	07/09/10

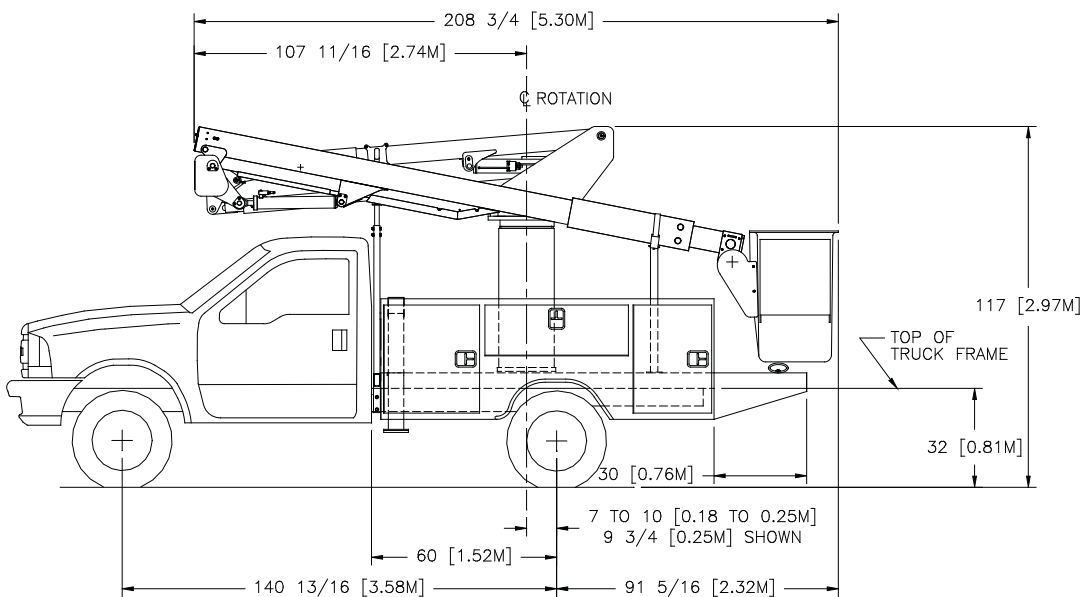


FOR REFERENCE ONLY

SHOWN WITH OPTIONAL H-FRAME OUTRIGGERS.

<small>UNLESS OTHERWISE NOTED: TOLERANCES: DECIMALS FRACTIONS ± 1/16 .XX ± .03 ANGLES ± .1 .XXX ± .005 MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS = 1st ALL DIMENSIONS ARE IN INCHES</small> <small>THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.</small>		MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
			CKR	05-12-00	SST-37-EIH
			SIZE	SCALE	OUTLINE
			A	1/40	
MATERIAL	EST WT #	MANUAL	SHEET	DWG. NO.	
FINISH	1 OF 1	—	1 OF 1	28141-1	

REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
⑧	58506	NEW TITLE BLOCK, ADDED FOR REFERENCE ONLY NOTE.	DJH	MG	JC	07/09/10



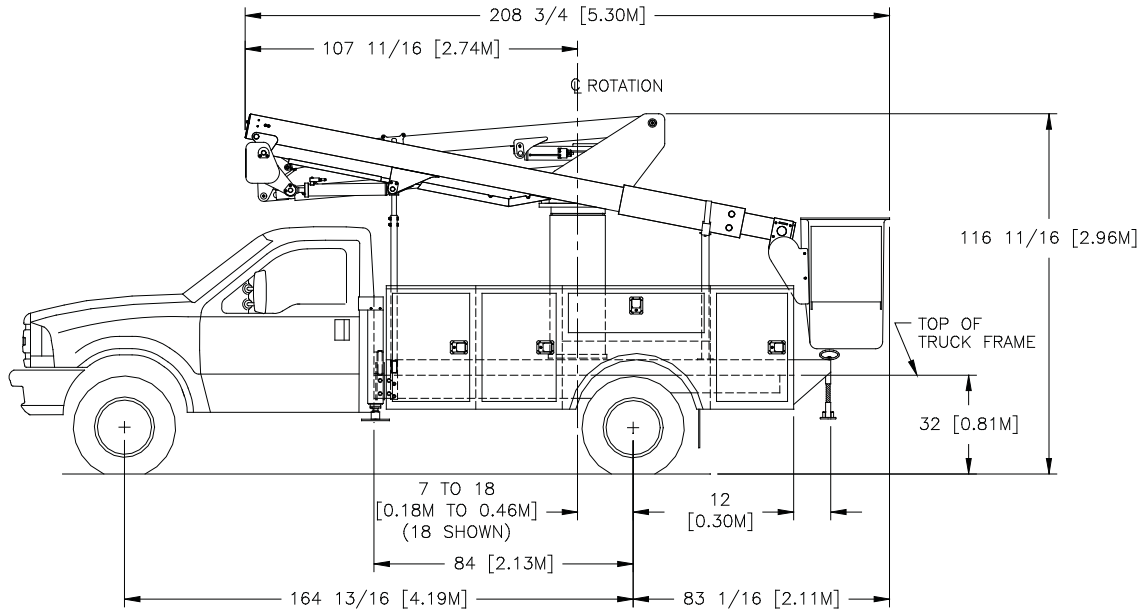
FOR REFERENCE ONLY

SHOWN WITH A-FRAME OUTRIGGERS.

<small>UNLESS OTHERWISE NOTED: TOLERANCES: DECIMALS FRACTIONS ± 1/16 .XX ± .03 ANGLES ± .1 .XXX ± .005 MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS = 1st ALL DIMENSIONS ARE IN INCHES</small> <small>THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.</small>		MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
			CKR	05-12-00	SST-40-EIH
			SIZE	SCALE	OUTLINE
			A	1/40	
MATERIAL	EST WT #	MANUAL	SHEET	DWG. NO.	
FINISH	1 OF 1	—	1 OF 1	28142-1	



REV.	ERCN NO.	DESCRIPTION	BY	CHKD.	APPR.	DATE
01	58506	NEW TITLE BLOCK. ADDED FOR REFERENCE ONLY NOTE.	DJH	MG	JC	07/09/10



FOR REFERENCE ONLY

SHOWN WITH H-FRAME OUTRIGGERS.

UNLESS OTHERWISE NOTED:  
 TOLERANCES: DECIMALS  
 FRACTIONS: ± 1/16  
 ANGLES: ± 1' X ± .03  
 MACHINED SURFACE FINISHES: ± .005  
 PROJECTION OF VIEWS: 1ST ANGLE  
 ALL DIMENSIONS ARE IN INCHES

THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF TIME MANUFACTURING, AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.

**TIME** MANUFACTURING COMPANY  
 WACO TEXAS

DWN. BY	DATE
LBR	03-15-01
SIZE	SCALE
A	1/40
EST WT #	MANUAL
—	—
SHEET	DWG. NO.
1 OF 1	28245-DWG

SST-40-EIH  
 OUTLINE  
 (84" C.A.)

SPECIFICATIONS





# OPERATION

This chapter provides operators and ground crew with recommended aerial lift operating procedures, descriptions and detailed operating information about the controls at each control station. Operators and ground crews are responsible for knowing and applying this information to job site situations.

Only properly trained operators are qualified to operate the **Versalift** aerial lift. Operator training shall include complete instruction and understanding of the manufacturer's manuals, employer's work rules, and all related governmental regulations. Prior to operation from the platform the machine must be operating properly, must have been installed properly, inspected, and maintained in accordance with the manufacturer's instructions. All safety signs, guards, and covers must be in place and in proper condition.

**! DANGER: AN UNTRAINED OR CARELESS OPERATOR SUBJECTS HIM/HERSELF AND OTHERS TO DEATH OR SERIOUS INJURY.**

It is the responsibility of the operator and ground crew to make certain that the identification, operation, and instructional decals are not lost, damaged, or illegible. If these conditions exist the decals must be replaced before lift operation. Refer to the Decal Placement illustration in Section 6 of this manual for decal location and parts listing.

**PRIOR TO OPERATING THE AERIAL LIFT, REFER TO "DAILY VISUAL INSPECTION", SECTION 6 OF THIS MANUAL. DAILY VISUAL INSPECTION MUST BE PERFORMED BEFORE OPERATING THE LIFT.**

## POSITIONING THE VERSALIFT FOR OPERATION

This section describes proper positioning of the Versalift aerial lift so that it will be as stable and useful as possible. The information in this section includes orientation of the truck at the work site, a checklist of responsibilities before leaving the truck cab, and requirements after leaving the truck cab.

**ORIENTING THE TRUCK AT THE WORK SITE -** Be sure to park the truck on firm level ground. Do not operate the Versalift unit on a slope greater than 5 degrees (1 foot rise in 12 feet) on units not equipped with outriggers. On units with outriggers, aerial device must be leveled within 2° of horizontal

prior to operation. Refer to slope indicators provided on the chassis to show whether the aerial device is positioned within limits permitted. Slope reduces the vehicle's stability and places additional stress on the lift and components. Maintaining the correct tire pressure and engaging the outriggers (if so equipped) contribute to vehicle stability. Refer to the subtitle "Outriggers" in this section for further details on engaging the outriggers. If there is any doubt about vehicle stability under any condition, do not operate the lift.

**! DANGER: NEVER OPERATE THE LIFT ON A SLOPE GREATER THAN 5°. WITHOUT PROPER STABILITY THE UNIT MAY TIP RESULTING IN DEATH OR SERIOUS INJURY.**

## RESPONSIBILITIES BEFORE LEAVING THE TRUCK CAB

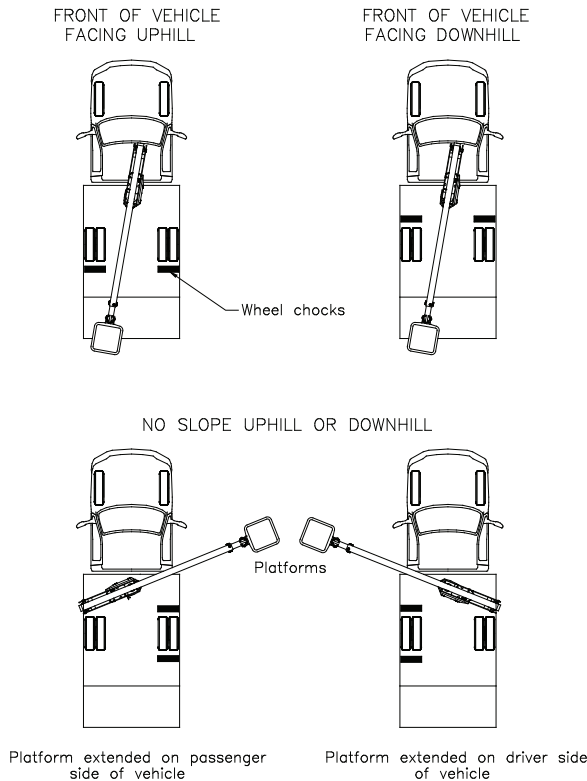
- Perform the following steps in preparing to operate the aerial-lift. It is assumed that the truck engine is still running.

1. Set the parking brake and the brake lock (if so equipped).
2. Shift the truck transmission into neutral (manual transmission) or park (automatic transmission).
3. Turn on the warning light flashers.
4. Depress the clutch and engage the PTO, if so equipped.
5. Activate the master control with the toggle switch on the truck dashboard. A red light next to the toggle switch on the dashboard indicates when the master control system is energized. The truck ignition must be on unless equipped with an auxiliary engine.

## REQUIREMENTS AFTER LEAVING THE TRUCK CAB:

1. Check wind and weather conditions. Do not operate the platform if wind gust exceeds 30 mph (48 km/hr) or if there is a threat of electrical storm.
2. After leaving the cab chock the wheels. This is extremely important because the brake systems on some larger trucks have a critical weakness. They may be engaged by locking the drive shaft behind the transmission. If the weight is reduced from one of the rear wheels,

by the position of the lift, the truck differential can allow the truck to roll. Refer to Figure 4.1 diagram for proper way of chocking the wheels.



**Wheel Chocking Diagram**  
Figure 4.1

**⚠ DANGER: NEVER OPERATE THE LIFT WITHOUT SETTING THE PARKING BRAKE AND CHOCKING THE WHEELS. A ROLLING TRUCK MAY CAUSE AN ACCIDENT RESULTING IN DEATH OR SERIOUS INJURY.**

3. Set up adequate cones or barricades to mark the boundaries of the work site and alert pedestrians and motorists. Never work outside the boundaries.

**OUTRIGGERS (If equipped)** - To operate the outriggers see "Outrigger Controls" in this section.

**⚠ DANGER: NEVER OPERATE WITHOUT EXTENDING THE OUTRIGGERS (IF EQUIPPED). WITHOUT PROPER OUTRIGGER EXTENSION THE UNIT MAY TIP RESULTING IN DEATH OR SERIOUS INJURY.**

After the truck has been properly parked on level

ground, and the outriggers have a clear path to the ground, lower all the outriggers until they firmly contact the ground. When the ground is too soft for the outriggers to be effective, place outrigger pads on the ground to increase the bearing area.

If the truck is parked on sloping ground so that one side of the truck is lower than the other side, extend the low-side outrigger first so that firm contact is made with the ground. This will avoid tilting the truck even more to the low side when the high-side outrigger is lowered.

If one or both outriggers (of a pair) are not fully extended, the outrigger spread is reduced (A-Frame outriggers only). This reduces the stability of the aerial lift. For example, when an outrigger rests on a curb the outrigger spread is reduced.

The stability of the truck depends on the unit's gross weight, firmness and slope of the ground, weight in the platform, tire pressure, and outrigger spread. These factors are widely variable and caution must be used when determining the stability of the unit. If, under any condition, there is doubt about vehicle stability do not operate the lift.

## AERIAL LIFT OPERATIONS

This section emphasizes overall operating practices for aerial lift operations. This information is presented in the order of probable use while operating first from the ground, then from the platform and close to energized conductors.

### Start Up Procedures When Operating From the Ground:

Position the truck as described in this section.

In extremely cold weather allow the aerial lift to idle a few minutes before engaging a load. Further consideration of cold weather operation is addressed in Service Procedures Section of Service Manual, "Hydraulic Oil Recommendation".

*Caution:* if an aerial device has set idle for an extended length of time (i.e. overnight) operate it from the lower controls through its full range of motion several times before an operator enters the platform. This procedure confirms that the lift is operating properly and purges any air that may have become entrapped in the hydraulic system. Select lower control operation with the lower control selector switch. Refer to the diagrams of lower controls in this section. Always disengage the boom tie down

OPERATION



before initiating any lift movements.

If there is any kind of malfunction during this test run, shut down the unit immediately. Do not operate the lift again until the problem has been corrected by the service department.

Operate each lift function from the lower controls by constantly holding the 3-position selector valve control handle in the lower controls position while slowly moving the appropriate control handle in the desired direction, as indicated by the decal until motion begins. The rotation, boom raise, lower, extend and retract movements, however, are mechanically limited.

**⚠ DANGER: NEVER REVERSE OR STOP THE DIRECTION OF LIFT TRAVEL SUDDENLY AND AVOID REACHING THE END OF BOOM RANGE AT EXCESSIVE SPEEDS. STRUCTURAL DAMAGE OR INSTABILITY MAY RESULT CAUSING DEATH OR SERIOUS INJURY.**

**Operating Procedures At The Platform:**

Complete the start-up procedure from the ground before selecting the upper controls with the 3-position control selector. In order to operate the lift from the platform, select the upper controls with the 3-position selector lever at the lower control station. Verify that the upper-boom tie-down strap is disengaged. Using the step(s) provided, carefully enter the platform. Safety regulations require the operator be secured with a personnel restraint system to the lift. The lanyard shall be attached to the safety belt/harness and the other end connected to an anchor located on the inner boom. The safety belt must be rotated so that the lanyard connection is centered on the back of the operator.

**⚠ DANGER: NEVER OPERATE ANY AERIAL EQUIPMENT WITHOUT WEARING AN APPROVED PERSONNEL RESTRAINT SYSTEM ATTACHED TO THE LANYARD ANCHOR. FAILURE TO SECURE THE SAFETY BELT AND LANYARD MAY RESULT IN DEATH OR SERIOUS INJURY IN THE EVENT OF A FALL FROM THE PLATFORM.**

Before operating the lift, the operator should study, "Upper Control Operation" in this section.

**Operating Where Electrical Hazards Are Present:**

It is imperative that the aerial device operator understand the dangers associated with operating near electrical hazards. Due to the work involved, the ordinary uses of aerial lift often place the operator, others in the platform, and ground crew in the vicinity of electrical lines and equipment where grave danger exists. These dangers can only be avoided by the constant care of an operator who is aware of these dangers, knows the limitations of the aerial-lift and its insulating sections, and knows how to protect her/himself and the crew from these dangers.

**⚠ DANGER: ALL COMPONENTS IN THE PLATFORM AREA, INCLUDING THE CONTROLS, JIB POLE, COVERS, ETC. SHALL BE CONSIDERED ELECTRICALLY CONNECTED, AND NOT INSULATED OR ISOLATED. THESE COMPONENTS MAY CONDUCT ELECTRICITY RESULTING IN DEATH OR SERIOUS INJURY.**

The unit provides as standard an outer boom fiberglass section (Electroguard) that maintains a 42 in insulation gap even when the inner boom is fully retracted. Aerial devices with the delete Electroguard option will not provide isolation from earth ground unless the fiberglass inner boom is extended a minimum of 38 inches.

**⚠ DANGER: IF THIS AERIAL LIFT IS NOT EQUIPPED WITH AN ELECTROGUARD, THE INNER BOOM PROVIDES NO INSULATING VALUE UNTIL THE INNER BOOM IS EXTENDED AT LEAST 38 INCHES. DEATH OR SERIOUS INJURY MAY RESULT IF THE INNER BOOM IS NOT PROPERLY EXTENDED BEFORE COMING IN CLOSE PROXIMITY TO ENERGIZED CONDUCTORS.**

The insulation capabilities of this aerial lift are defined by the rated line voltage on the ANSI A92.2 data plate. Although the Versalift provides insulated booms, no aerial lift can provide protection from contact with or proximity to an electrically charged power line when you are in contact with, or in proximity to another power line. Maintain safe clearances from electrical power lines in accordance with applicable government regulations. Make certain to allow clearance for boom, platform, and electrical line sway and deflection.

**⚠ DANGER: CONTACT WITH, OR INADEQUATE CLEARANCE FROM, ELECTRICAL**



## **POWER LINES AND APPARATUS WILL CAUSE DEATH OR SERIOUS INJURY.**

The accumulation of dirt and moisture on insulated booms degrades the insulation. Be sure the booms are clean and dry. Remember that the inside of a boom may be wet even when the outside is dry. Any equipment which bridges between the platform and the ground voids the insulation and must be avoided when working near areas of electrical hazard.

**⚠ DANGER: EQUIPMENT WHICH BRIDGES BETWEEN THE PLATFORM AND GROUND RENDERS THE INSULATION USELESS AND MAY RESULT IN DEATH OR SERIOUS INJURY IN THE EVENT OF AN ELECTRIC SHOCK.**

**⚠ DANGER: GIVE WARNING AND NEVER ALLOW ANYONE ON THE GROUND TO TOUCH THE UNIT WHEN THE LIFT IS BEING USED TO WORK ON OR NEAR ELECTRICAL LINES. IF THE UNIT BECOMES ENERGIZED DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT WITH THE UNIT.**

**⚠ DANGER: CONTACT BETWEEN AN ELECTRICALLY CHARGED WIRE AND A METAL PART OF THE BOOM MAY CAUSE THE WIRE TO BURN THROUGH, LETTING THE TWO WIRE ENDS FALL TOWARD THE GROUND. THIS WILL CAUSE DEATH OR SERIOUS INJURY TO INDIVIDUALS ON THE GROUND.**

As previously stated, it is the responsibility of the operator and the ground crew to know and understand the capabilities and limitations of the aerial lift and hazards associated with operation near electric lines or components. In addition they must apply this knowledge to situations that arise on the job for safe and efficient operation.

### **CAB CONTROL OPERATION**

The cab controls include the master control, the engine start/stop control, and the PTO shifter.

**MASTER CONTROL (Standard)** - The master control consists of a toggle switch and a light mounted on the dashboard of the truck. The toggle switch is used to energize or de-energize the start/

stop system and the throttle control options. When the light is lit the toggle switch is energizing these systems.

**ENGINE START/STOP (Standard)** - The engine start/stop is a push button control that is usually mounted on the dashboard of the truck. The system is activated by pushing and holding the button momentarily to “start” the engine. If the engine does not crank then the start/stop button may require a second push to get the latching relay into the “start” position so the truck engine will turn over. Then to turn the engine off press the start/stop button again. This feature is especially convenient when the lift is being operated from the lower (turret) controls.

**⚠ DANGER: THE TRUCK TRANSMISSION MUST BE IN NEUTRAL OR PARK BEFORE USING THE ENGINE START/STOP. STARTING THE ENGINE WITH THE TRUCK IN GEAR WILL CAUSE MOVEMENT WHICH MAY CAUSE DEATH OR SERIOUS INJURY TO THE OPERATOR OR ANYONE IN THE PATH OF THE TRUCK.**

**POWER-TAKE-OFF(PTO) (If So Equipped.)** - The power-take-off is a gearbox used to transmit power from the truck transmission to the hydraulic pump, providing hydraulic oil for the aerial lift functions. The PTO control consists of a toggle switch and a red light mounted in the truck dashboard. When the red (PTO) indicator is lighted the PTO is activated. The operator must never drive the truck with the PTO engaged.

**⚠ CAUTION: DRIVING WITH THE PTO ENGAGED MAY DAMAGE THE TRANSMISSION, PUMP, AND/OR THE PTO.**

To engage the PTO properly refer to the operating instructions located in the PTO manufacturer’s owner manual. If the PTO control is not responding properly or if the manufacturer’s operating decals are not posted in the cab (near the control) notify the appropriate personnel for correction.

### **GROUND CONTROL OPERATION**

The Versalift ground controls may include one or more of the following controls: outrigger, outrigger/boom interlock, and tool power. Ground controls are usually mounted on panels in the rear bumper of the truck or below the deck. Descriptions and

operating procedures for these controls are given in the following text.

**OUTRIGGER OPERATION** - The outriggers (if so equipped) should always be extended to provide stability for the aerial lift. The outrigger controls consist of a control selector and a control valve as shown, Figure 4.2.

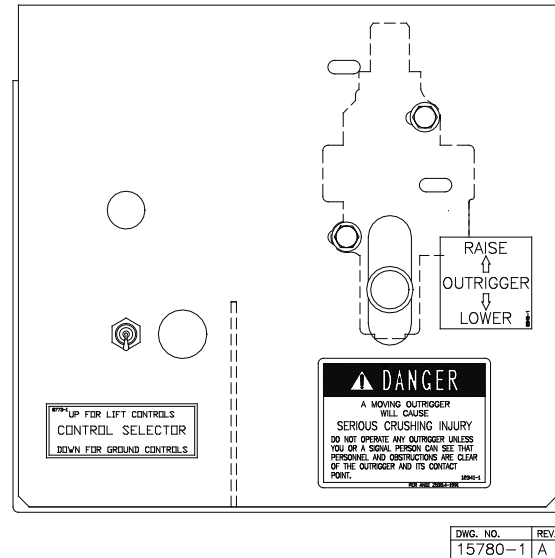
**CONTROL SELECTOR AND OUTRIGGER/BOOM INTERLOCK** - The outrigger/boom interlock is a feature designed to prevent the lift from being operated until the outriggers are properly extended. The interlock also prevents the outriggers from being retracted before the lift is properly stored. This option is particularly useful in keeping unauthorized personnel from operating the outriggers while an operator is working aloft.

**Note:** *The operation of an outrigger interlocking device(s) does not assure aerial device stability. It serves only to remind the operator that the outriggers have not been deployed.*

The controls for operating the outrigger/boom interlock include a detented control selector and a control valve. These controls are usually mounted in the ground control panel similar to the arrangement shown in Figure 4.3. ANSI A92.2 standards require that the outrigger control valve be located where the operator can watch each outrigger raise and lower as the control valve lever is activated.

**Lowering the Outriggers With an Outrigger/Boom Interlock System:** To lower the outriggers select “ground controls” with the control selector. Then operate the outriggers as described previously. Select “lift controls” with the control selector in order to begin operating the booms.

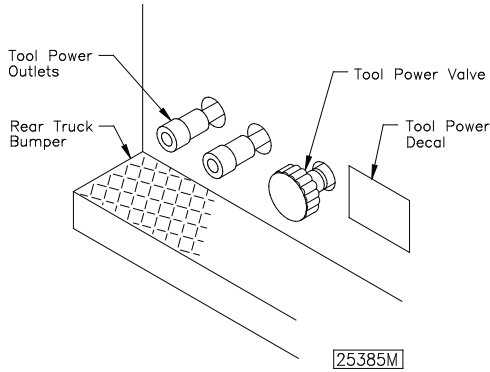
**Retracting the Outriggers With an Outrigger/Boom Interlock System:** The booms must be stowed before the interlock system will allow the outriggers to be retracted. Stow the booms as described in this section, “Storing the Aerial Lift”. Select “ground controls” with the detented control selector. Then raise the outriggers as described previously.



**Ground Control Panel With Outrigger/Boom Interlock System**  
Figure 4.2

**HYDRAULIC TOOL OPERATION AT THE GROUND (Optional)** - Select ground controls at the lift/ground control selector then connect the hydraulic tool hoses to the tool power outlets (quick-disconnect couplings). Activate the tool-power valve by pulling the tool power valve knob “out”. The other aerial lift controls will not respond while the hydraulic tools are being operated. To disconnect the hydraulic tools, the tool-power valve must be turned “off” so that the pressure in the system is relieved. This is done by pushing the tool-power valve knob “in”. Then the tool hoses can be disconnected safely and easily from the tool power outlets (quick-disconnect couplings). The tool-power controls are shown in Figure 4.3.

**⚠ WARNING: FAILURE TO RELIEVE PRESSURE TO THE TOOL PORTS BEFORE CONNECTING OR DISCONNECTING THE HYDRAULIC TOOL HOSES MAY RESULT IN A HIGH PRESSURE HYDRAULIC OIL SPRAY. THIS SPRAY OR MIST CAN PUNCTURE OR BECOME EMBEDDED BENEATH THE SKIN OR CONTAMINATE THE EYES. THESE CONDITIONS REQUIRE IMMEDIATE MEDICAL ATTENTION.**

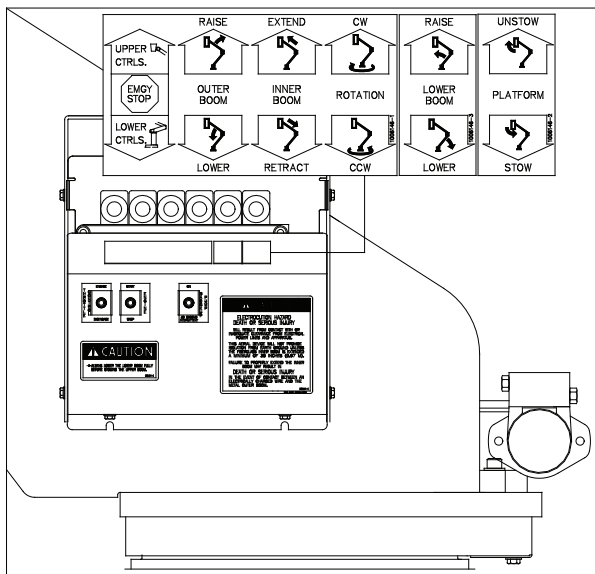


**Tool Power Controls**  
Figure 4.3

## LOWER CONTROL OPERATION

**⚠ DANGER: DEATH OR SERIOUS INJURY MAY RESULT IF CHASSIS BECOMES ENERGIZED. DO NOT OPERATE THE AERIAL DEVICE WHILE CREATING A PATH TO THE GROUND.**

The objective of this section is to help the operator identify and understand the operation of the lower controls. The lower controls at the turret are arranged as shown in Figure 4.4. The hand-held remote control (optional) is shown in Figure 4.5. A description of each control and method of operation is given on the following pages.



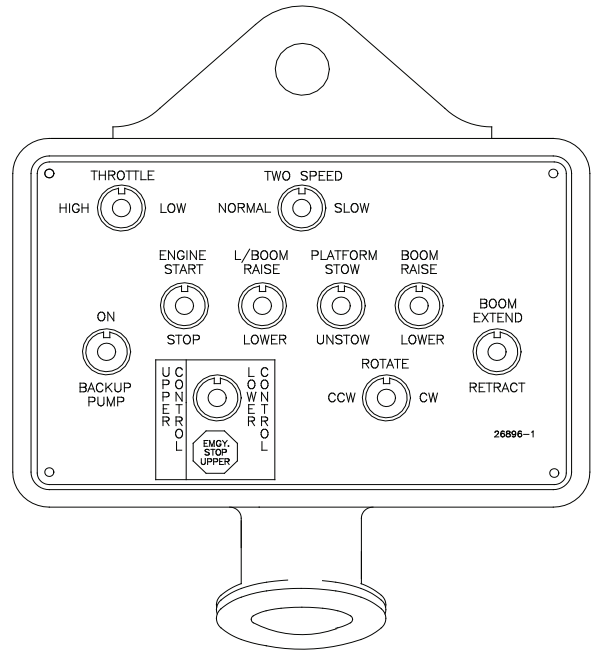
**Lower Controls at Turret**  
Figure 4.4

**CONTROL SELECTOR LEVER** - This control selects operation of the aerial lift from the upper

controls or the lower controls. Also this control serves as the emergency stop for the upper controls.

**BOOM CONTROL LEVERS** - These levers operate the outer boom, inner boom, rotation, and lower boom.

**PLATFORM LEVELING CONTROL (Optional)** - This control activates the hydraulic platform leveling to stow, unstow, or level the platform.



**Hand Held Remote Lower Control (Optional)**  
Figure 4.5

**CONTROL SWITCHES** - The hand held remote lower control consist of a series of spring loaded toggle switches and a control selector switch which also serves as the emergency stop for the upper controls. Moving the control switch in the direction of the arrow, with the control selector in the "lower" position, causes the aerial lift to move in the corresponding direction. Lift movement stops as the control switch is released and returns to the neutral position.

See "Upper Control Operation" in this section for operation of the start/stop control, emergency power control, and the throttle control.

## UPPER CONTROL OPERATION

The objective of this section is to help the operator identify and understand the operation of the controls at the platform. Refer to Figure 4.6 to clarify the information in the text of this section.

OPERATION

**UNITROL 3 OR 4-AXIS CONTROLS** - This multi-jointed handle operates the valve spools and enables the operator to control all lift movements.

Lift operations are selected by depressing the safety trigger while actuating the single stick control handle. Slowly move the single stick lever in the desired direction until motion begins. Further movement of the handle in the same direction will increase the speed of the motion. To stop a lift movement, move the single-stick lever back to the neutral position and release the trigger. Releasing the safety trigger in any position except neutral will cause the selector valve to slam shut and stop lift travel with an abrupt jerking motion resulting in unnecessary loads and stresses.

To operate two or more functions at the same time, position the single-stick handle anywhere in an area between the separate paths of the desired functions.

**EMERGENCY STOP CONTROL** - This control stops all of the lift functions and the hydraulic tools. Push the control "IN" to stop, pull the control "OUT" to operate the lift or tools.

**LOCKING CONTROL LEVERS** - The locking control levers operate the platform leveling, lower boom, and platform rotation. To operate, pull up on the locking collar and move the lever as indicated by the decal.

**ENGINE START/STOP CONTROL** - To start the engine: Push and hold the start/stop control until the engine starts. If the engine does not crank, repeat the operation.

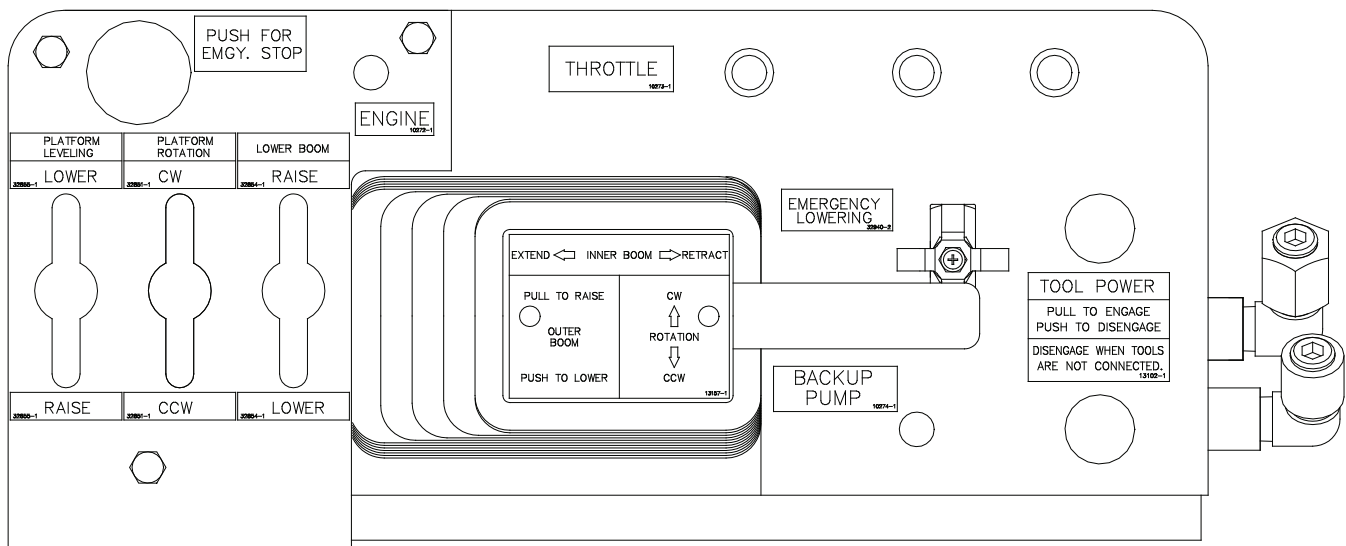
To stop the engine: Push and release the start/stop control.

**⚠ DANGER: THE TRUCK TRANSMISSION MUST BE IN NEUTRAL OR PARK BEFORE USING THE ENGINE START/STOP. STARTING THE TRUCK IN GEAR WILL CAUSE MOVEMENT WHICH MAY CAUSE DEATH OR SERIOUS INJURY TO THE OPERATOR IN THE LIFT OR ANYONE IN THE PATH OF THE TRUCK.**

**TOOL POWER CONTROL (Optional)** - This control engages and disengages the hydraulic tool power. To operate, push to engage tool power, pull to disengage. Always disengage the tool power before connecting or disconnecting the hydraulic tool hoses.

**⚠ WARNING: FAILURE TO RELIEVE PRESSURE TO THE TOOL PORTS BEFORE CONNECTING OR DISCONNECTING THE HYDRAULIC TOOL HOSES MAY RESULT IN A HIGH PRESSURE HYDRAULIC OIL SPRAY. THIS SPRAY OR MIST CAN PUNCTURE OR BECOME EMBEDDED BENEATH THE SKIN OR CONTAMINATE THE EYES. THESE CONDITIONS REQUIRE IMMEDIATE MEDICAL ATTENTION.**

**BACKUP PUMP CONTROL (Optional)** - This control activates the backup pump if the main power source fails. To activate the backup pump, push and hold the backup pump control. Then operate the lift



**3-Axis Upper Controls Shown (For Reference Only)  
(4-Axis Upper Controls Similar)  
Figure 4.6**

functions, release the control to deactivate backup pump. **Do not operate the backup pump for more than 30 seconds continuously.**

**THROTTLE CONTROL (Optional)** - This control increases the engine speed to provide more oil flow to hydraulic tools. Push and release the throttle control to increase the engine speed. Push and release again to return to idle.

**EMERGENCY LOWERING (Optional)** - If the aerial lift's main power source fails, the emergency lowering control can be used to lower the lift. A needle valve is located outside the platform. To operate the needle valve, slowly open by turning counter-clockwise to lower the boom. Once the boom is lowered, close the valve by turning clockwise.

## STORING THE AERIAL LIFT

When storing the aerial lift for road travel retract the inner boom completely. Rotate the outer/inner boom assembly until it is centered over the boom rest. Always stow the lower boom before lowering the outer/inner boom assembly onto the boom rest. Release the outer/inner boom control lever as soon as there is firm contact with the boom rest pad.

**CAUTION: FAILURE TO STOW THE LOWER BOOM BEFORE DESCENDING THE OUTER/INNER BOOM ASSEMBLY ON TO THE BOOM REST WILL STRESS THE COMPONENTS AND MAY CAUSE DAMAGE TO THE AERIAL LIFT.**

**DANGER: ALWAYS WATCH FOR PERSONNEL AND OBSTRUCTIONS WHEN STORING THE AERIAL LIFT. A CRUSHING INJURY TO PERSONNEL OR DAMAGE TO THE UNIT CAN OCCUR.**

To complete the storing procedure secure the outer/inner boom assembly with the tie down strap and remove the wheel chocks. Turn the electrical control system off and disengage the PTO pump drive (when applicable).

**CAUTION: TO PREVENT DAMAGE TO THE UNIT DO NOT DRIVE THE TRUCK UNTIL THE AERIAL LIFT IS STORED AND THE OUTER BOOM IS SECURED WITH THE BOOM TIE DOWN STRAP.**

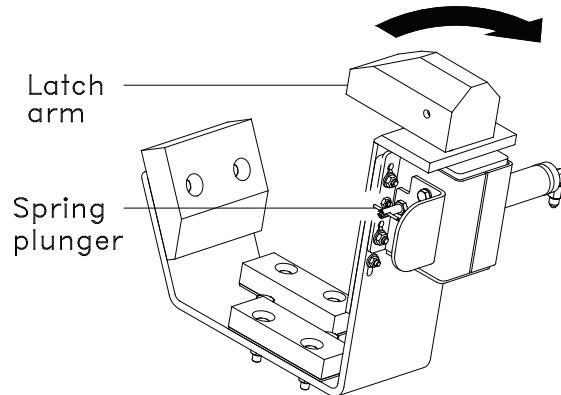
**CAUTION: DRIVING WITH THE PTO ENGAGED MAY DAMAGE THE TRANSMISSION, PUMP, AND THE PTO.**

**AUTO BOOM LATCH (Optional)** – The automatic boom latch is designed to open automatically when the lift is operated. Stay clear of the latch as it may move at any time depending on the hydraulic system pressure.

**Manual over-ride** – In case of hydraulic system failure, the auto boom latch may be operated manually.

Over-ride Procedure:

1. **Danger** – Make sure the hydraulic power source is off.
2. Release the spring plunger by rotating the “T” handle.
3. Manually rotate the latch arm 90° clockwise until it snaps and is held by the spring plunger.



To Release Over-ride:

1. **Caution** – The latch is spring loaded. Keep fingers clear to prevent pinching.
2. Slightly rotate the latch arm clockwise to remove the load from the spring plunger.
3. While holding the latch arm, pull the spring plunger out and rotate the “T” handle to lock the spring plunger in the “out” position.
4. Carefully allow the latch arm to rotate counter-clockwise under spring power until it stops.



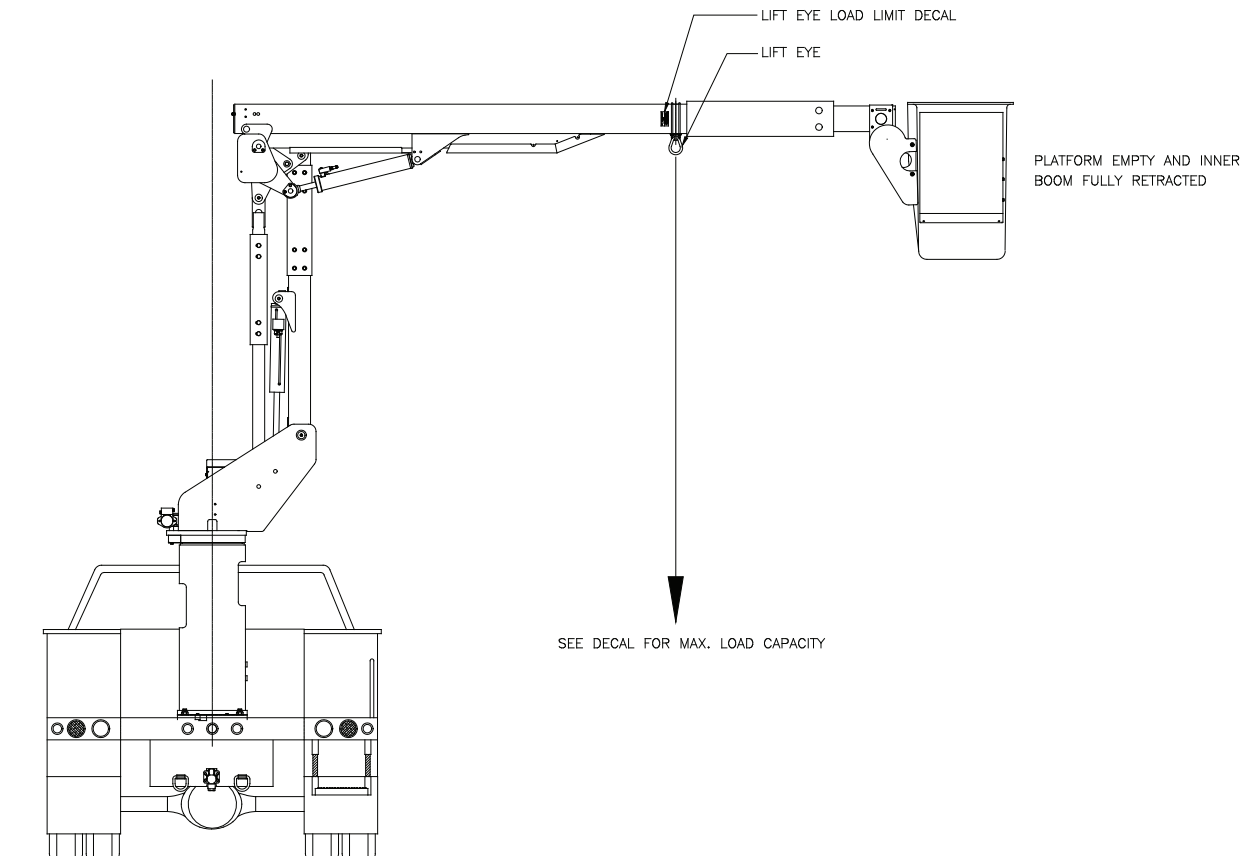
It is preferred that the platform be stored in the upright position, preferably with a platform rest under it to avoid high pressure spikes in the slave cylinder when roading the unit. A platform rest is required if the unit is equipped with a platform rotator.

**⚠ DANGER: NEVER EXCEED THE RATED LOAD CAPACITY OF THE AERIAL LIFT. STRUCTURAL DAMAGE OR INSTABILITY CAN RESULT CAUSING DEATH OR SERIOUS INJURY.**

### LIFT EYE OPERATION (OPTIONAL)

**OUTER BOOM LIFTING EYE** - This aerial lift is designed primarily as a personnel lift. The optional lifting eye has been designed to accommodate limited material handling.

**LIFT EYE OPERATING PROCEDURES:** Always extend the outriggers (if so equipped) and fully retract the inner boom when using the boom lifting eye. Boom movements should be smooth to avoid swinging the load. Do not exceed the load limits stated on the decal beside the lifting eye (500 lbs. max). Do not drag the load with the lifting eye. This is a bad practice and subjects the unit to damaging side loads. When lifting loads, position the outer boom directly over the load before lifting. The platform should be empty when lifting loads. **The platform must not be used for material handling.** The platform was designed to lift personnel only.



**SST Lift Eye Option  
Figure 4.7**



# EMERGENCY OPERATION

EMERGENCY OPERATION

Emergency operation may be required if an operator is injured or the hydraulic system malfunctions. This chapter describes the controls and features designed to accommodate emergency operation and to describe some procedures for responding to emergency situations. In an emergency, the first priority is always the safety of the personnel. Before attempts are made to rescue personnel, make sure the unit has not become electrically energized. Identifying the problem and initiating emergency procedures promptly helps minimize or possibly prevents injuries. It is important to follow standard work practices and safety regulations.

**⚠ DANGER:** *BEFORE ATTEMPTING TO RESCUE PERSONNEL ON THE AERIAL LIFT, ALWAYS MAKE SURE THAT THE TRUCK AND THE AERIAL LIFT HAVE NOT BECOME ELECTRICALLY ENERGIZED. CONTACT MADE BY RESCUERS FROM THE GROUND WITH AN ENERGIZED UNIT WILL CAUSE DEATH OR SERIOUS INJURY.*

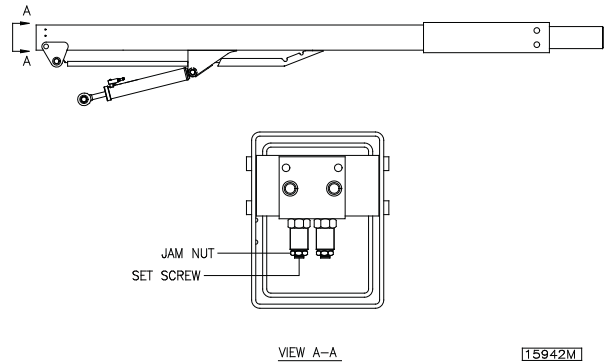
**CONTROL SELECTOR (Platform Override)** - If a situation requires operation from the lower controls, the upper controls may be overridden through the use of the selector handle. Move the selector handle in the "lower" position and move the desired control handle to allow operation from the lower controls. This renders the upper controls inoperable.

**HOLDING VALVES** - If all the hydraulic power sources become inoperable the booms can be lowered using the set screw on the holding valve located at the cylinders. The boom will drift down as the hydraulic oil passes through the holding valve. The speed of the boom's descent will increase as the set screw is turned clockwise. Manual adjustment of the setscrew on the holding valve can only be used in lowering the boom. When the holding valve setscrew is used to lower the boom, replacement of the holding valve is required before further use.

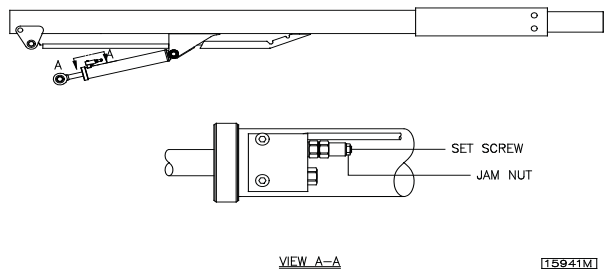
**⚠ DANGER:** *MAKE CERTAIN ALL BODY PARTS ARE CLEAR OF THE PATH OF BOOM TRAVEL BEFORE ATTEMPTING TO LOWER THE BOOM USING THE SETSCREW ON THE HOLDING VALVE. FAILING TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.*

To retract the inner boom, lower the outer boom, or lower the lower boom, carefully loosen the jamnut

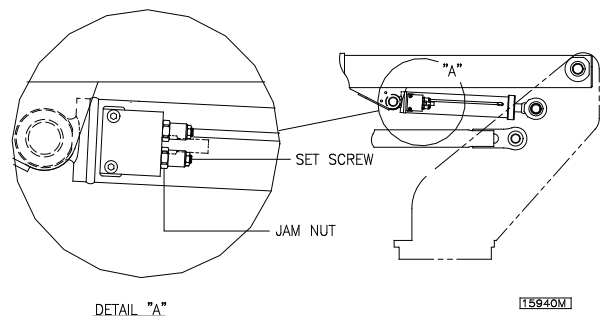
(counter-clockwise), with a 9/16 in. wrench, on the appropriate holding valve as shown in the following figures. Slowly turn the setscrew clockwise (using 5/32 in. hex) until movement begins. To stop boom movement, turn the setscrew counterclockwise.



**Holding Valve Lowering Procedure  
(Extension Cylinder)  
Figure 5.1**

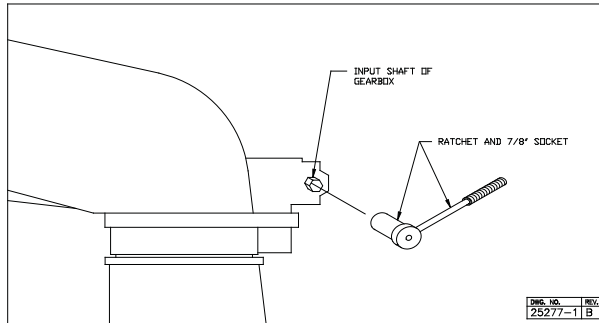


**Holding Valve Lowering Procedure  
(Outer Boom Cylinder)  
Figure 5.2**



**Holding Valve Lowering Procedure  
(Lower Boom Cylinder)  
Figure 5.3**

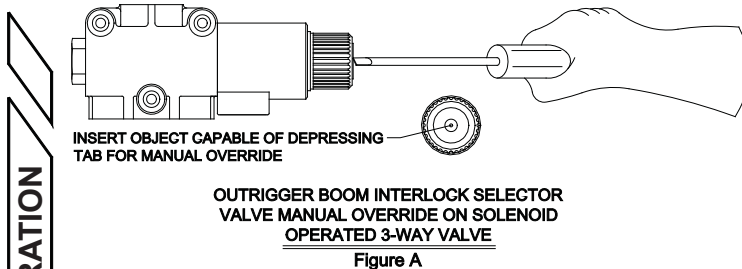
**MANUAL ROTATION** - If all the hydraulic power sources becomes inoperable, the lift rotation system can be operated manually. Use the hex socket extension on the gearbox input shaft to manually align the boom with the cradle. Actuating the lower rotation control will reduce the effort required for rotation of the aerial lift. See Figure 5.4.



**Manual Rotation**  
**Figure 5.4**

**OUTRIGGER BOOM INTERLOCK MANUAL OVERRIDE** – In the event of diverter valve failure, and the lift becomes inoperable with an operator aloft, the outrigger boom interlock selector can be overridden to lower the booms and return the operator to the ground. To activate the manual override, locate the solenoid operated 3-way valve, usually in the pedestal. On the end of the valve, there is a small tab (Fig. A) which can be pressed with a small screwdriver, capscrew, etc. With this tab pressed down, hydraulic flow will be diverted from the outriggers to the lift. Another operator can then operate the lower controls to lower the booms.

**WARNING: USE OF MANUAL OVERRIDE TO OPERATE THE LIFT WITHOUT THE OUTRIGGERS DEPLOYED CAN RESULT IN SERIOUS INJURY OR DEATH.**



**Outrigger Boom Interlock Manual Rotation**  
**Figure 5.5**

**ENGINE START/STOP CONTROL (Standard)** - The engine start/stop control can be used for emergency operation in the event the prime power source (truck engine, auxiliary generator, etc.) stalls or dies. To restore lift operation use the engine start/stop control to crank the engine and attempt to stow the booms at the same time. **Crank the engine intermittently at 30 second intervals to conserve the battery. Use the backup pump rather than the engine start/stop control, if it is installed.** The engine start/stop control is operated by a three-position toggle

switch at the lower controls and an air cylinder at the upper controls for a hydraulically leveled unit, and a lever on gravity leveled lift.

**DANGER: THE TRUCK TRANSMISSION MUST BE IN NEUTRAL OR PARK BEFORE USING THE ENGINE START/STOP. STARTING THE TRUCK IN GEAR WILL CAUSE MOVEMENT WHICH MAY CAUSE DEATH OR SERIOUS INJURY TO THE OPERATOR IN THE LIFT OR ANYONE IN THE PATH OF THE TRUCK.**

**RECOMMENDED EMERGENCY PROCEDURES:**

**INJURED OR INCAPACITATED OPERATOR** - If the operator is unable to operate the aerial lift, determine if any damage has occurred to make the lift inoperable. If the aerial lift is operable and the situation allows safe operation from the lower controls, move the platform away from the danger and into the shortest clear path to get the operator on the ground. See “Control Selector”, at the beginning of this section, for specific instructions on overriding the upper controls. If the aerial lift is not operable, use another aerial lift to rescue the operator from the platform or consider one of the other emergency procedures in this chapter.

**HYDRAULIC LINE FAILURE** - Hydraulic line failure during aerial lift operation presents numerous hazards. Be aware that hydraulic oil mist caused by a leak or hydraulic line failure is conductive even though a non-conductive oil is used.

**DANGER: AVOID HIGH PRESSURE HYDRAULIC OIL SPRAY. THIS SPRAY OR MIST CAN PUNCTURE OR BECOME EMBEDDED BENEATH THE SKIN OR CONTAMINATE THE EYES. THESE CONDITIONS REQUIRE IMMEDIATE MEDICAL ATTENTION.**

A hydraulic line leak can create a vacuum in a closed line; the ‘vacuum’ is conductive. Furthermore, most hydraulic oils are flammable. Another danger to personnel is bodily contact with hot oil. The operator and the ground crew must be alert for these hazards to avoid injury.

**DANGER: AVOID ANY CONTACT BETWEEN HYDRAULIC OIL AND SOURCES OF HIGH HEAT OR OPEN FLAMES. DEATH OR SERIOUS INJURY MAY RESULT FROM A FIRE.**

**EMERGENCY OPERATION**



**⚠ WARNING: CONTACT WITH HOT HYDRAULIC OIL MAY CAUSE SERIOUS BURNS WHICH REQUIRE IMMEDIATE MEDICAL ATTENTION.**

A quick response to hydraulic line failure is important, if the operator is to be safely removed from the platform. The examples below describe some emergency operating procedures to follow for some specific types of hydraulic line failures.

1. The aerial lift design uses holding valves to lock the position of the cylinders in the event of a complete hydraulic line failure. This safety feature prevents the booms from dropping. The holding valve set screw and manual rotation described earlier in this chapter can be used to lower the booms.
2. If there is a continuous loss of hydraulic oil from the aerial lift, operate the hydraulic power source only while attempting to stow the aerial lift to conserve the hydraulic oil. If operation of any aerial lift function is not possible, then use the holding valve set screw and the manual rotation procedure described earlier in this chapter.

**ENGINE FAILURE** - If the prime power source fails the backup pump (option) can be used for emergency operation. If this system is not installed, use the engine start/stop control to crank the engine, as previously explained. If this is not adequate, the holding valve set screws and manual rotation must be used.

**HYDRAULIC PUMP FAILURE** - If the primary hydraulic pump fails use the backup pump, if so equipped. If this feature is not installed, the holding valve set screws and manual rotation must be used.

#### **RESPONSIBILITIES AFTER EMERGENCY OPERATION:**

After any emergency situation it is the responsibility of the operator to make sure the aerial lift is repaired and adjusted by the service department before it is used again.

If an equipment defect is suspected, do **not** allow anyone to operate the aerial lift or enter the platform until the problem is corrected.

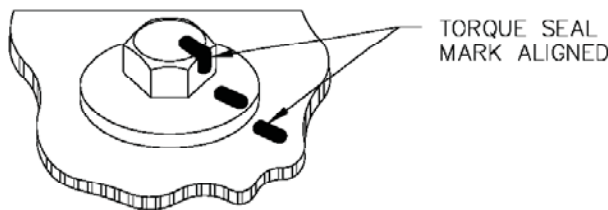


# DAILY VISUAL INSPECTION

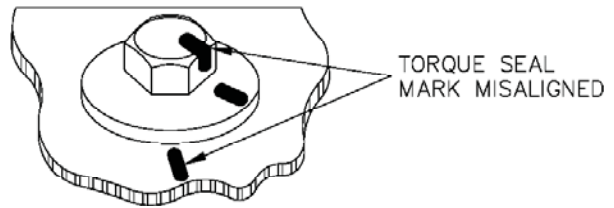
This aerial lift is designed to provide years of reliable service with minimum maintenance. A routine preventive maintenance program will assure extended aerial lift service. The operator is responsible for detecting maintenance problems during the daily visual inspection, reporting the need for adjustments or repairs, verifying that maintenance is performed at the suggested intervals, and determining if the aerial lift is in a good, safe operating condition. The importance of accurate maintenance records cannot be over emphasized. In order to judge the condition of the aerial lift, the operator needs to be familiar with the maintenance records of the aerial lift. Refer to the "Maintenance Checklist" in Service procedures Section of the Service Manual for the suggested interval inspection information. The actual repair or adjustment must be done by a qualified aerial lift mechanic.

Every day the equipment must be given a thorough visual inspection to detect problems before they become serious. During this inspection the operator shall look for anything out of the ordinary that might indicate a problem. Particular attention must be paid to the following items. The Daily Visual Inspection Checklist included in this section must be followed.

**BOLTS** - Critical fasteners are identified on the "Critical Fasteners" drawing in this section. All major sections of the **Versalift** are bolted together and it is vital that these bolts remain tight. Visually inspect all the bolts for signs of relative movement. Pay particular attention to the load supporting bolts (rotation bearing bolts, pedestal/subframe mounting bolts, platform rotator bolts). Critical bolts are Torque-Seal marked to provide a quick means of detecting any turning. Do not use the lift if the Torque-Seal mark between the bolt head and mounting surface, are not in alignment. Refer to Maintenance and Inspection Schedule in Service Procedures Section of the Service Manual for recommended torque procedures and torque chart specifications. Refer to Figure 6.1 and 6.2 for Torque-Seal mark conditions.



**Torque-Seal Mark In Acceptable Condition**  
Figure 6.1



**Torque-Seal Mark In Misalignment Condition**  
Figure 6.2

**WELDS** - Refer to the "Critical Welds" drawing in this section. All the welds should be inspected for signs of fatigue. Rust and hairline cracks on a weld indicate weld fatigue.

**HYDRAULIC LINES** - Hydraulic lines should be inspected for loose connections and frayed jackets. Carefully examine the hoses, especially any portion of hose subject to flexing and particularly the hoses at the platform.

**OIL LEAKS** - Oil leaking onto the truck floor or the ground is sign of an impending problem. A hydraulic leak will create a slippery surface which is potentially hazardous. Hydraulic leaks must be repaired by qualified service personnel and the unit must be cleaned of excess hydraulic oil. If a hydraulic leak is not repaired the oil in the reservoir will be depleted and pump damage may occur.

**ELECTRICAL SYSTEM** - Inspect electrical system for damaged components. Check for bare electrical wires and remove any trash or debris from around electrical components. Repair all damaged wires and secure any loose electrical components or wires.

**VEHICLE TIRES** - Check tires for the correct inflation and for damage. Low pressure or damaged tires are unsafe while driving the vehicle or operating the lift.

**LOOSE OBJECTS** - Inspect the booms for loose objects (tools, spare parts, etc.) that might fall when the booms are elevated.

**HYDRAULIC OIL LEVEL** - The hydraulic fluid level can be easily checked by monitoring the oil level through the sight gages. The two sight gages are mounted, one several inches above the other, on the pedestal. The hydraulic oil level should be just above the bottom of the top sight gage at full capacity (12 gallons or 45 liters)

**CONTROLS** - Operate all the lift controls through the full range of motion to verify the controls are functioning properly.

**LEVELING SYSTEM** - Inspect the master cylinder,

slave cylinder, hoses, and fittings for damage, wear, or foreign objects which may prevent proper operation. Refer to Parts & Assemblies Section of the *SST-37/40-EIH Service Manual* for these components.

**DECALS** - Identification, operational, and instructional decals are installed at numerous locations on the **Versalift**. These decals must be replaced if they become lost, damaged, or illegible. Refer to the “Decal Placement” illustration in this section.

**FIBERGLASS BOOMS** - Inspect the fiberglass outer/ inner boom and the lower boom for an accumulation of dirt that can impair the insulating value of the fiberglass. The fiberglass outer surface of the booms should be cleaned daily with a lint free cloth. If the fiberglass sections require a more thorough cleaning, refer to Service Procedure Section “Care of Fiberglass Booms” of the SST-37/40-EIH Service and Installation Manual. Check for any structural damage in the fiberglass, such as cracks or gouges. If these conditions exist, they must be repaired by qualified personnel.

**PLATFORM** - Inspect the platform for cracks in the mounting ribs, floor, and flange around the top. If these conditions exist they must be repaired by qualified personnel before operation.

**SLOPE INDICATORS** - The indicators are installed at several locations on the Versalift chassis. Check that indicators are in place and not damaged. Refer to slope indicator installation in the Service Manual.

**SAFETY DEVICES** - Check visual and audible safety devices for proper operation.

**COVERS** - Inspect all covers to make sure they are in place, secure, and in good condition.

DAILY VISUAL INSPECTION



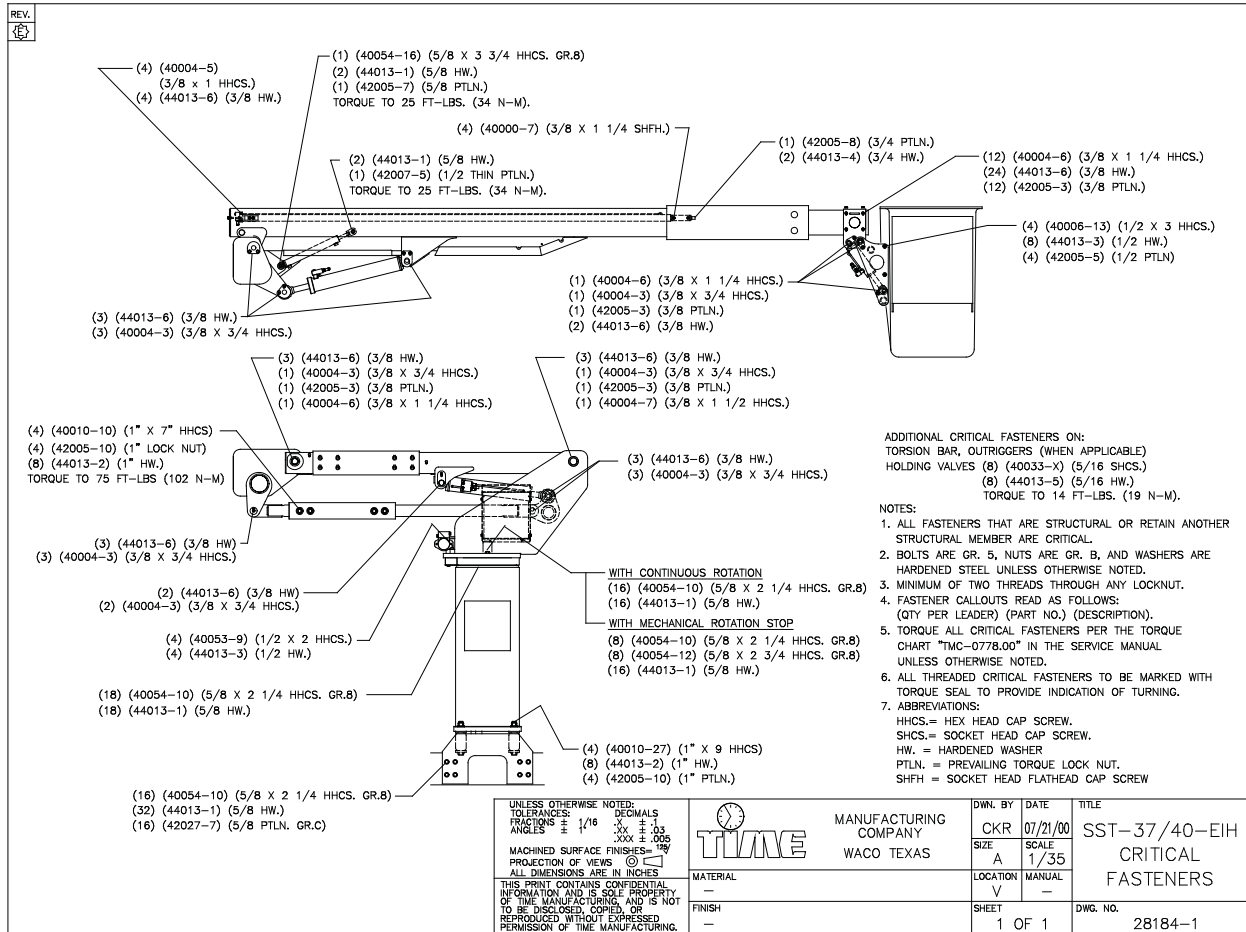
**DAILY VISUAL MAINTENANCE AND INSPECTION CHECKLIST AND RECORD**  
**VERSALIFT SST-37/40-EIH SERIAL NO. \_\_\_\_\_ VEHICLE NO. \_\_\_\_\_**

**DAILY VISUAL INSPECTION**

Fill in date and initial boxes when each check is made. Refer to Daily Visual Inspection in this section for complete description of checks. Additional copies of this form may be obtained from **Time Manufacturing Company**.

DAY	SUN	MON	TUE	WED	THU	FRI	SAT
DATE							
INSPECT BOOMS FOR TRASH & DEBRIS							
CRITICAL FASTENERS							
CRITICAL WELDS							
HYDRAULIC LINES - FRAYED JACKETS							
OIL LEAKS - LOOSE CONNECTIONS							
ELECTRICAL SYSTEM							
VEHICLE TIRES							
LOOSE OBJECTS							
HYDRAULIC OIL LEVEL							
CONTROLS							
LEVELING SYSTEM							
DECALS							
FIBERGLASS BOOMS							
FIBERGLASS PLATFORM							
SLOPE INDICATORS							
SAFETY DEVICES							
COVERS							
NOTES:							



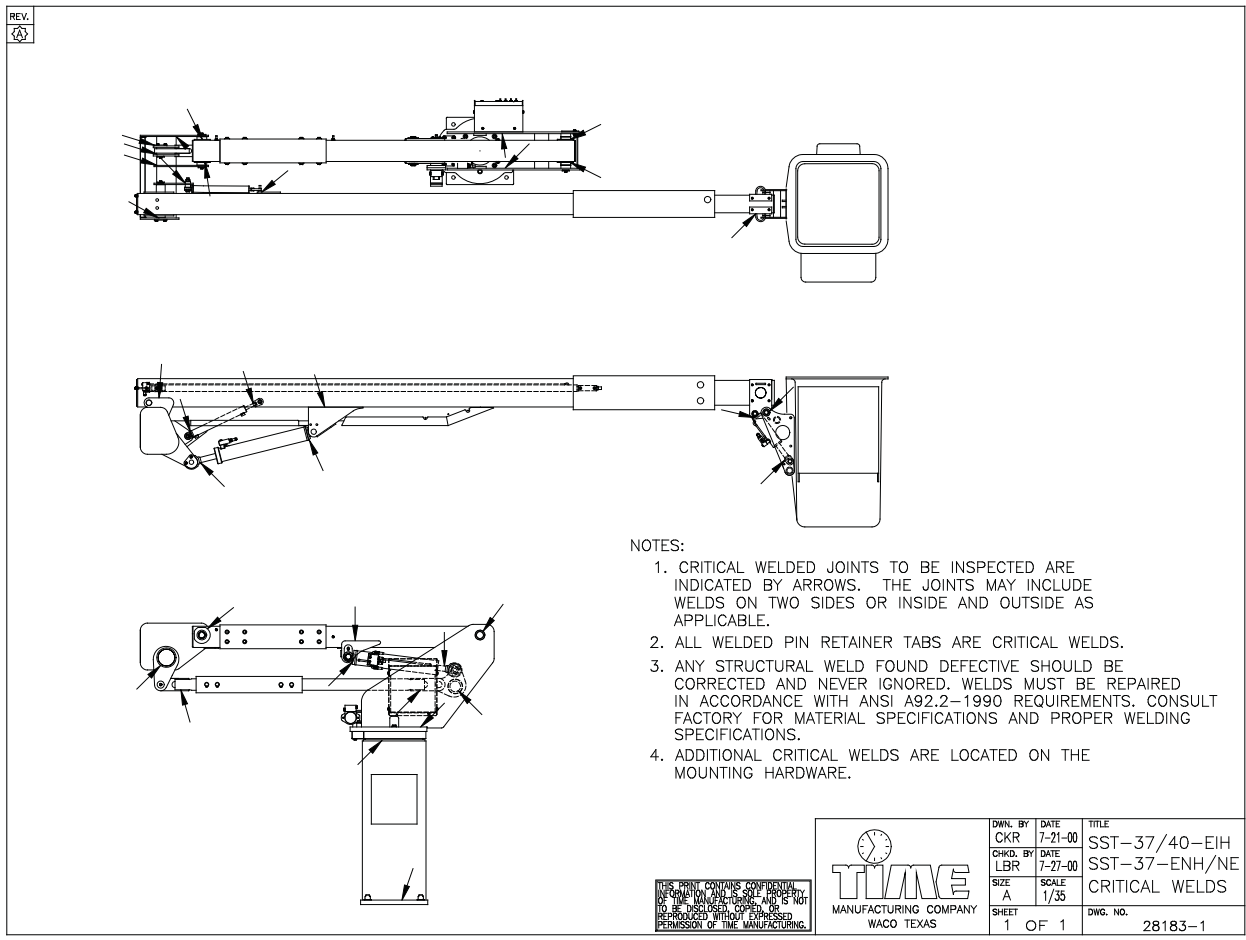


ADDITIONAL CRITICAL FASTENERS ON:  
 TORSION BAR, OUTRIGGERS (WHEN APPLICABLE)  
 HOLDING VALVES (8) (40033-X) (5/16 SHCS.)  
 (8) (44013-5) (5/16 HW.)  
 TORQUE TO 14 FT.-LBS. (19 N-M).

NOTES:  
 1. ALL FASTENERS THAT ARE STRUCTURAL OR RETAIN ANOTHER STRUCTURAL MEMBER ARE CRITICAL.  
 2. BOLTS ARE GR. 5, NUTS ARE GR. B, AND WASHERS ARE HARDENED STEEL UNLESS OTHERWISE NOTED.  
 3. MINIMUM OF TWO THREADS THROUGH ANY LOCKNUT.  
 4. FASTENER CALLOUTS READ AS FOLLOWS: (QTY PER LEADER) (PART NO.) (DESCRIPTION).  
 5. TORQUE ALL CRITICAL FASTENERS PER THE TORQUE CHART "TMC-0778.00" IN THE SERVICE MANUAL UNLESS OTHERWISE NOTED.  
 6. ALL THREADED CRITICAL FASTENERS TO BE MARKED WITH TORQUE SEAL TO PROVIDE INDICATION OF TURNING.  
 7. ABBREVIATIONS:  
 HHCS. = HEX HEAD CAP SCREW.  
 SHCS. = SOCKET HEAD CAP SCREW.  
 HW. = HARDENED WASHER  
 PTLN. = PREVAILING TORQUE LOCK NUT.  
 SHFH. = SOCKET HEAD FLATHEAD CAP SCREW

UNLESS OTHERWISE NOTED: TOLERANCES: FRACTIONS ± 1/16 DECIMALS ± .01 ANGLES ± .03 MACHINED SURFACE FINISHES = 125 PROJECTION OF VIEWS (P) ALL DIMENSIONS ARE IN INCHES		TIME MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
THIS PRINT CONTAINS CONFIDENTIAL INFORMATION AND IS SOLE PROPERTY OF THE MANUFACTURING COMPANY AND IS NOT TO BE DISCLOSED, COPIED, OR REPRODUCED WITHOUT EXPRESSED PERMISSION OF TIME MANUFACTURING.			CKR	07/21/00	SST-37/40-EIH CRITICAL FASTENERS
MATERIAL	FINISH	SIZE	SCALE	LOCATION	MANUAL
---	---	A	1/35	V	---
SHEET			1 OF 1	DWG. NO. 28184-1	

DAILY VISUAL INSPECTION



NOTES:  
 1. CRITICAL WELDED JOINTS TO BE INSPECTED ARE INDICATED BY ARROWS. THE JOINTS MAY INCLUDE WELDS ON TWO SIDES OR INSIDE AND OUTSIDE AS APPLICABLE.  
 2. ALL WELDED PIN RETAINER TABS ARE CRITICAL WELDS.  
 3. ANY STRUCTURAL WELD FOUND DEFECTIVE SHOULD BE CORRECTED AND NEVER IGNORED. WELDS MUST BE REPAIRED IN ACCORDANCE WITH ANSI A92.2-1990 REQUIREMENTS. CONSULT FACTORY FOR MATERIAL SPECIFICATIONS AND PROPER WELDING SPECIFICATIONS.  
 4. ADDITIONAL CRITICAL WELDS ARE LOCATED ON THE MOUNTING HARDWARE.

TIME MANUFACTURING COMPANY WACO TEXAS	DWN. BY	DATE	TITLE
	CKR	7-21-00	SST-37/40-EIH
SHEET	CHKD. BY	DATE	TITLE
	LBR	7-27-00	SST-37-ENH/NE CRITICAL WELDS
SIZE		SCALE	DWG. NO.
A		1/35	28183-1
SHEET			1 OF 1



