



National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

**VEHICLE MOUNTED WORK PLATFORM
OPERATIONS SAFETY REQUIREMENTS**

**ENVIRONMENTAL TEST FACILITY BRANCH
STRUCTURAL AND ENVIRONMENTAL TEST DIVISION
TEST LABORATORY
ENGINEERING DIRECTORATE**

**This Procedure Describes
Safety Critical Operations**

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**VEHICLE MOUNTED WORK PLATFORM
OPERATIONS SAFETY REQUIREMENTS**

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Vehicle Mounted Work Platform Operators: Signature by an operator indicates the operator has read the procedure, understands the operator responsibilities, and understands the hazards associated with operation of this work platform.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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Vehicle Mounted Work Platform Operations Safety Requirements	ET24-ManLift-SOP-001	Revision: Baseline
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Release Date: <u>5 / 2 / 2005</u>	Marshall Space Flight Center Specification/Document Change Instruction	Page 1 of 1 <hr/>
	Spec. / Doc. No. <u>ET24-ManLift-SOP-001</u>	Copy No.:
Change No./Date	Replacement Page Instructions	
5-2-2005	Initial issue for the ET24 organization. Supersedes MSOP-FA-ETF-412	

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1.0 GENERAL INFORMATION

1.1 PURPOSE

This document describes safety requirements for the operation of vehicle-mounted elevating and rotating work platform (lift-a-loft) used by Environmental Test Facility personnel in MSFC Buildings 4612, 4619 and 4620.

1.2 SCOPE

The procedures and practices outlined in this document are to be followed in the operation of the vehicle-mounted elevating and rotating work platform. Test operations at the ETF are conducted in accordance with ET24-ETF-OWI-001.

1.3 APPLICABLE DOCUMENTS

NASA-STD 8719.9	Standard for Lifting Devices and Equipment NPR 8715.3 NASA Safety Manual
MPR 8715.1	Marshall Safety, Health, and Environmental (SHE) Program
MWI 3410.1	Personnel Certification Program
ET24-ETF-OWI-001	Environmental Test Facility (ETF) Test Operations
ED26 (02-01)	Memorandum for Record, Safety Assessment for the ETF (soon to issued as an ET24 memo, number unknown)

1.4 SAFETY

All test personnel working in this facility shall be familiar with the safety documents listed above, and shall report any safety hazards or unsafe practices to the 4619 Building Manager Assistant or an ET24 Branch Chief.

In addition to the above safety precautions, all personnel involved in facilities using cryogenics should be aware of the possibility of freeze burns by contact with cold surfaces or liquids. All personnel involved in handling of cryogenics or when making repairs/modifications to cryogenic facilities must wear protective clothing, eye protection and gloves. In the event of a cryogenics spill, line ruptures, or similar emergencies, personnel must first be sure that there is no possibility of asphyxiation due to oxygen displacement.

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Before entering the area, use a portable oxygen monitor to verify the area is safe.

ET24 Safety Assessment, Memorandum of Record ED26 (02-01) (soon to issued as an ET24 memo, number unknown), lists procedures, personal protective equipment (PPE) requirements, and job hazard analysis (JHAs) for hazards associated with operation of the man lift. Operators must review the safety assessment to determine the JHAs and PPE that applies to equipment being checked. Implement the risk mitigation methods listed in the JHAs and use the required PPE to minimize risk from potential hazards during man lift operations.

1.5 EMERGENCY TELEPHONE NUMBERS

In case of an emergency, call **911**, including the following types of emergencies;

Medical	911
Ambulance	911
Fire	911
Security	911
Chemical Spills	911

Other numbers that can be used to obtain information about emergencies, security, facility repairs and safety are;

Medical Center	544-2390
Security	544-4357
Safety	544-0046
Utilities	544-3919
Other Assistance	544-4357 (4-HELP)

1.6 RESPONSIBILITIES

Supervisor: Ensures only certified vehicle mounted work platform operators operate vehicle mounted work platforms and that all safety requirements for performing vehicle mounted work platforms are followed.

Vehicle Mounted Work Platform Operators: Responsible for the safe operation of vehicle mounted work platforms. Operators may refuse to operate a vehicle mounted work platform they believe is unsafe until the concerns are addressed.

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2.0 WORK PLATFORM OPERATION

2.1 PRE-OPERATIONS CHECKOUT

- 2.1.1 Each day the work platform is operated, the operator shall first complete applicable parts of MSFC Form 4329, *Aerial Lift Pre-Start Inspection Checklist*. Maintain the completed Forms 4329 for at least 30 days. Completed Forms 4329 are kept in the ETF Control Room, Building 4619 Room 168. Blank Forms *MSFC* 4329 should be available in the control room, in the ETF Library, at MSFC online forms at <http://starbase.msfc.nasa.gov:8000/forms/forms.taf> or a copy of Attachment A may be used. Before working from the elevating-rotating work platform, the operator shall test all the controls to verify proper operation of the work platform. During this test, the platform shall be elevated no more than necessary. Any discrepancies are to be reported to the 4619 Building Manager Assistant or an ET24 Branch Chief to obtain maintenance as required. The work platform shall not be used until necessary repairs are made and MSFC Form 4329 is completed.
- 2.1.2 Before use, the operator shall survey the area for applicable hazards such as overhead obstructions and high voltage conductors, debris, bumps, and loose obstructions, drop-offs and holes, ditches, obstructed path of travel, unstable footing, and other possible hazardous conditions. The operator shall establish appropriate safety zones before initiating operations where applicable.
- 2.1.3 Tools and other objects shall be carried in canvas bags or by other methods that free both hands and do not present a snagging hazard. Alternate methods of tool delivery besides work platforms should be investigated.
- 2.1.4 All accidents involving personnel, building structures and equipment shall be reported to the Branch Chief.
- 2.2 Operator discipline shall be maintained at all times. There shall be no eating, drinking, or rowdiness, etc., during operations.
- 2.3 Personnel shall keep all parts of the body, tools, and equipment inside the work platform periphery during raising, lowering and travel operations.
- 2.4 A body harness and a lanyard attached to the work platform (not hooked to itself) shall be worn by personnel in the basket at all times. Personnel in the basket shall not attach the lanyard to adjacent structures or equipment.

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- 2.5 Personnel in the basket shall stand firmly on the floor of the work platform. Personnel in the basket shall not sit or climb on the basket. Planks, ladders or other devices that alter the work position shall not be used on the work platform.
- 2.6 Load and operational limits set by the manufacturer of the work platform shall not be exceeded. Refer to the nameplate data for load and operational limits.
- 2.7 The brakes shall be set before personnel operate from the work platform. Wheel chocks shall be installed before using the work platform on an incline.
- 2.8 The work platform shall not be elevated near suspended overhead electrical cables.
- 2.9 The work platform shall have both upper controls at the basket and lower controls accessible by personnel on the ground. Lower controls shall provide capability for overriding upper controls. Lower controls shall not be operated when personnel are in the lift basket, except with permission of personnel in the lift basket, or in case of an emergency.
- 2.10 “Climbers” shall not be worn while performing work from the lift basket.
- 2.11 The work platform shall not be used in a wind above 20 knots (23 mph, 37 km/hr) steady state or if gusts exceed 25 knots (29 mph, 46 km/hr). Weather information may be obtained from the Internet. One uniform resource locator (URL) that can be used for local weather information is <http://www.weather.com/weather/local/USAL0287>.

3.0 EMERGENCY SHUTDOWN

- 3.1 An operator on the ground shall override the basket controls if the person in the basket becomes incapable of operating the work platform.
- 3.2 The operator shall push in the emergency shutoff-switch if the work platform malfunctions. The person(s) in the basket shall be immediately removed from the basket by ladder or other approved lift device. The work platform shall be tagged to prevent use until it is successfully repaired.

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Attachment A to Vehicle Mounted Work Platform Operations Safety Requirements	ET24-ManLift-SOP-001	Revision: Baseline
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Attachment A

AERIAL LIFT PRE-START INSPECTIONS CHECKLIST			
Lift ID #: _____		Date: _____	Shift: _____
Hour Meter Reading Start: _____		End: _____	Hours for Shift: _____
COMPONENTS	SERVICE REQUIRED	PASS	FAIL
Emergency Power Motor/Pump	Check Operation		
Air Filter	Check Condition		
Engine Oil	Check Oil Level		
Fuel Leaks	Visually Inspect (Hoses, Connections)		
Fuel Tank Cap	Visually Inspect (Installation)		
Engine Coolant	Check Fluid Level		
Engine Fuel Level	Check Fuel Gauge		
Bolts and Fasteners	Visually Inspect (Looseness)		
Platform Gravity Gate	Visually Inspect		
Slide Pads	Visually Inspect		
Structural Damage Welds	Visually Inspect		
Tires and Wheels	Visually Inspect		
Battery Fluid Level	Check Fluid Level		
Battery Terminals	Visually Inspect (Corrosion)		
Charging System	Visually Inspect (Belt, Gauge)		
Control Switches	Visually Inspect (Operation)		
Wiring Harnesses	Visually Inspect (Installation, Condition)		
Hydraulic Leaks	Visually Inspect		
Hydraulic Oil	Check Fluid Level		
***Placards, Markings and Control Markings	Visually Inspect (Clearly Visible)		
Outriggers, Stabilizers	Visually Inspect (Operation)		
OPERATORS INITIALS			
<p style="margin: 0;">Failure items are to be reported and corrected prior to use.</p> <p style="margin: 0;">***Information to be clearly displayed on Aerial Lifts</p> <ol style="list-style-type: none"> 1. Warnings, cautions, or restrictions for use. 2. Make, model, serial number and manufacturer's name/address. 3. Rated work load, including rated number of occupants. 4. Maximum platform height. 5. Maximum travel height (if not equal to maximum platform height). 6. Nominal Voltage ratings if battery powered. 7. Notice to study Operating Manual prior to using equipment. 8. Notice of required inspections (Annual, Frequent - 3 months or 150 hours). 9. Alternative configuration to include rated work load of each configuration. 10. Statement whether or not the platform is electrically insulated and protection level. 			

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