

# AERIAL PLATFORM PROGRAM

Department of Environmental Health & Safety

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# **I. EMERGENCY AND ASSISTANCE TELEPHONE NUMBERS**

**FIRE - RESCUE - EMERGENCY MEDICAL SERVICE: 911**

At the emergency blue-light and yellow phones located around campus, press the emergency button to be connected to the University Police who can contact 911 for you, or dial 911 on the keypad to be connected directly to the 911 Center. Give the dispatcher all of the requested information.

<b>FOR OTHER EMERGENCIES (Contact the TUPD):</b>	<b>(410) 704-4444</b>
<b>Department of Environmental Health and Safety (EHS)</b>	<b>(410) 704-2949</b>
<b>University Health Center</b>	<b>(410) 704-2466</b>
<b>Dept. of Facilities Management - Work Control Center</b>	<b>(410) 704-2484</b>

## **II. PURPOSE:**

To outline the safe operating procedures of aerial platforms or a combination of such devices when used to elevate associates to job-sites or for the purpose of maintenance activities above ground and to prevent serious accidents from occurring while they operate these devices. These devices are commonly called:

- A. Boom lifts
- B. Scissor lifts
- C. Push-around lifts
- D. Trailer-mounted boom lifts

This procedure applies to the above devices owned or leased by Towson University, which are operated by TU employees.

## **III. DEFINITIONS:**

**Aerial Platform** - A mobile or manually propelled device or vehicle-mounted device that has an adjustable position platform, supported from ground level by a structure or vehicle.

**Authorized Personnel** – Individuals certified to operate an aerial platform and assigned to perform a specific type of duty or duties at a specific location or locations at a work site.

**Base** - The relevant contact points of the aerial platform that form the stability fulcrum (e.g., wheels, casters, outriggers, stabilizers, etc.)

**Chassis** - The integral part of the aerial platform that provides mobility and support for the elevating assembly.

**Competent Person** - An individual who, because of training and experience, is capable of identifying hazardous or dangerous conditions in powered platform installations and of training associates to identify such conditions.

**Configuration** - All positions in which an aerial platform or any part thereof can be placed within its intended operating limits.

**Elevating Assembly** - The mechanisms used to position the platform relative to the aerial platform chassis.

**Familiarization** – Providing information regarding the control functions and safety devices for the aerial platform(s) to a qualified person or operator who controls the movement of the aerial platform(s) being delivered.

General Training – Instruction to enable the trainee to become a qualified person regarding the task to be performed, including knowledge regarding potential hazards.

Guardrail System - A vertical barrier intended to prevent associates from falling to lower levels.

Hazardous Location - Any location that contains, or has the potential to contain, an explosive or flammable atmosphere as defined in ANSI/NFPA 505.

Instability - the quality or state of being unstable, likely to tip over.

Insulated Platform - A platform designed and tested to meet the specific electrical insulation ratings consistent with the manufacturer's identification plate.

Interlock - A control or mechanism that, under specific conditions, automatically allows or prevents the operation of another control or mechanism.

Lanyard - a flexible line or rope, wire rope, or strap, which is used to secure the body belt or body harness to a deceleration device, lifeline or anchorage.

Modification/Modified - to make a change(s), temporary or permanent, to an aerial platform that affects the operation, stability, safety factors, rated load or safety of the aerial platform in any way.

Operator - A qualified person who controls the movement of the aerial platform.

Outriggers - Devices that increase the stability of the aerial platform and that are capable of lifting and leveling the aerial platform.

Platform - the portion of the aerial platform intended to be occupied by individuals with their necessary tools and materials.

Platform Height - The vertical distance measured from the floor of the platform to the surface upon which the machine is supported.

Qualified Person - An individual who by reason of knowledge, experience, and training is certified and familiar with the operation to be performed and the hazards involved.

Rated Work Load - the designed carrying capacity of the aerial platform as specified by the manufacturer.

Shall - The word "shall" is to be understood as mandatory.

Stability - The quality, state of being stable, firmly anchored, not likely to tip over.

Stabilizers - Devices that increase the stability of the aerial platform but are not capable of lifting or leveling the aerial platform.

## **IV. OPERATION OF AERIAL PLATFORMS:**

### **1. RESPONSIBILITIES:**

- a) Each TU Department that owns/operates an aerial platform shall ensure that the necessary training is acquired by all individuals performing maintenance or inspections on, working on or operating aerial platforms/lifts or any combination of such devices.
- b) Each TU Department that owns/operates an aerial platform shall appoint a Supervisor(s) to serve as a Competent/Qualified Person(s), to ensure training for this/these position(s), and to ensure that pre-start, frequent and annual inspections are performed. The name(s) of the Supervisor(s) shall be forwarded to EHS.

- c) The Supervisor(s) shall ensure that all individuals who operate aerial platforms/lifts are provided general training on the class of equipment to be used and certified to perform the duties assigned. The supervisor shall use the general training record attached as Appendix F of this program as verification of training.
- d) The supervisor shall document that the employee receives familiarization instruction on the particular make and model lift for which the employee will operate. The supervisor shall use the familiarization training record attached as Appendix G of this program as verification of instruction.
- e) All training records shall be forward to EHS for retention.
- f) Individuals shall not operate any aerial platform/lift without having been properly trained on the details of this procedure and the operating manual of the specific model aerial platform/lift.

## **2. SAFETY REQUIREMENTS:**

- a) **ONLY AUTHORIZED** (those who have been properly trained and certified) individuals shall operate an aerial platform/lift, extensible boom platform, aerial ladders, articulating boom platforms, vertical towers, ladder trucks, tower trucks, or any combination of such devices.
- b) All operators and workers who are to perform work from any aerial lift shall be trained on this procedure and on the operating manual of the specific device which is to be operated or work performed from.
- c) Individuals who are scheduled to perform routine maintenance, inspections, or to repair any aerial lift shall have received training or possess appropriate knowledge on this procedure and on the operating manual of the specific device **PRIOR** to performing any work on that device.

Note: Operating and maintenance manuals should be obtained from the manufacturer of the aerial platform

- d) A copy of the operating manual, maintenance manual, and the log of inspections shall be kept with each aerial platform. These documents are considered an integral part of the aerial platform and are vital to communicate necessary safety information to users and operators.
- e) **NO** aerial platform shall be modified or altered without the modifications or alterations being approved and certified in writing by the manufacture. Records of all approved modifications and alterations, including written authorization from the manufacturer for the modification or alteration, shall be kept with the aerial platform as part of the operating and maintenance manual. The altering or disabling of interlocks or other safety devices is prohibited.
- f) **ALL MANUFACTURER'S SAFETY BULLETINS** shall be complied with as received from the manufacturer or dealer. Copies of these bulletins shall be kept with the aerial platform as part of the operating and maintenance manuals.

## **3. INSPECTIONS:**

- a) **FREQUENT AND ANNUAL INSPECTIONS** shall be performed by a trained individual.
- b) Frequent inspections shall be made every three months or 150 hours of operating time (whichever comes first) on all TU aerial platforms.
- c) An inspection shall be made prior to use if the aerial platform has been out of service for a period longer than three months.
- d) These frequent inspections shall be made by a person qualified (trained) as a mechanic on the specific make and model of the aerial platform.

NOTE: The frequent inspection can be a part of a service contract on the aerial platform and/or can be performed by a manufacturer's representative.

- e) The frequent inspection shall include all items specified by the manufacturer for a frequent inspection and shall include, but not be limited to the following (See Appendix C):
  - 1. All functions and their control for speed(s), smoothness, and limits of motion.
  - 2. Emergency lowering mechanism.
  - 3. All chain and cable mechanisms for adjustment and worn or damaged parts.
  - 4. All emergency and safety devices.
  - 5. Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant, as specified by the manufacturer.
  - 6. Visual inspection of structural components and other critical components, such as fasteners, pins, shafts, and locking devices.
  - 7. Placards, warnings, and control markings.
  - 8. Items specified by the manufacturer.
  - 9. Correction of all malfunctions and problems identified and further inspection, if necessary, shall be performed before the aerial platform is returned to service.
  - 10. Written documentation of all quarterly inspections shall be kept with the aerial platform and a copy forwarded to EHS.
  
- f) A person qualified on the specific make and model of the aerial platform shall make annual inspections. The inspection shall include all items specified by the manufacturer for an annual inspection. NOTE: The annual inspection can be a part of a service contract on the aerial platform and/or can be performed by a manufacturer's representative.
  
- g) Aerial platforms that are not in proper operating condition shall be removed from service until repaired. A warning tag stating "DO NOT USE" shall be attached to the control panel of the aerial platform. Notify EHS.
  
- h) Written records of all inspections shall include the deficiencies found, corrective action taken, the date of the inspection and the date of the corrective action along with the name of the person(s) performing the inspection and the corrective action. Written records shall be kept with the aerial platform as part of the operating and maintenance manual.
  
- i) PRE-START INSPECTION - Before use each day or at the beginning of each shift, the Supervisor shall visually inspect the aerial platform and conduct a functional test (a check list shall be utilized for this purpose – See Appendix B) including but not limited to the following:
  - 1. Operating and emergency controls.
  - 2. Safety devices.
  - 3. Personal protective devices including fall protection.
  - 4. Air, hydraulic, and fuel system leaks.
  - 5. Cables and wiring harness.

6. Loose and missing parts.
7. Tires and wheels.
8. Placards, warnings, and control markings.
9. Outriggers, stabilizers, and other structures.
10. Guardrail system.
11. Items specified by the manufacturer.

#### **4. MAINTENANCE:**

- a) A preventive maintenance program shall be established for each aerial platform in use at the university, by the maintenance supervisor responsible, in accordance with the manufacturer's recommendations.
- b) **REPLACEMENT PARTS** - When parts or components are replaced, they shall be identical or equivalent to the original aerial platform parts or components.
- c) **MAINTENANCE SAFETY PRECAUTIONS** - Before adjustments and/or repairs are started on an aerial platform, the following precautions shall be taken as applicable:
  1. The platform shall be lowered to the full down position, if possible, or otherwise secured by blocking and cribbing to prevent dropping.
  2. All controls shall be in the "off" position and all operating features secured from inadvertent motion by brakes, blocks, or other means.
  3. The equipment shall be stopped, de-energized and "Locked Out" to prevent inadvertent starting.
  4. Hydraulic oil pressure shall be relieved from all hydraulic circuits before loosening or removing hydraulic components.
  5. Safety props or latches shall be installed where applicable as described by the manufacturer.
  6. Any additional precautions specified by the manufacturer shall be followed.

#### **5. BEFORE OPERATION** - Before authorizing an individual to operate an aerial platform the supervisor shall:

- a) Ensure that everyone who will be working on the aerial platform has been properly trained on this procedure, the operating manual of the particular type of aerial platform to be used, and that this training has been properly documented.
- b) Determine that the manufacturer, within the scope of the intended applications, defines the purpose for which the aerial platform is to be used.
- c) Provide approved fall protection devices and other safety gear for all individuals who will be working on the platform (if applicable). The JLG lift, Genie Lifts and Upright Airlift do not require a harness and lanyard, however, appropriate guardrails shall be in place at all times to provide fall protection.
- d) Check the area in which the aerial platform is to be used for possible hazards such as, but not limited to:

1. Drop-offs or holes.
2. Bumps or floor obstructions.
3. Debris.
4. Overhead obstructions and high voltage conductors.
5. Hazardous locations.
6. Inadequate surface and support to withstand all load forces imposed by the aerial platform in all operating configurations.
7. Wind and weather conditions (if outside).
  - a. ISO standards recommend a maximum wind force (wind gusts) of 28 miles per hour.
8. Other possible unsafe conditions.
9. Presence of unauthorized persons.

**6. DURING OPERATION** - The aerial platform shall be operated in accordance with this procedure.

- a) The supervisor shall direct the operator to ensure the following before each elevation of the platform:
  - 1) That the aerial platform is operated on a surface within the limits specified by the manufacturer.
  - 2) That the outriggers, stabilizers, extendable axles, or other stabilizing methods are used as required by the manufacturer.
  - 3) That guardrails are installed and access gates or openings are closed per manufacturer's instructions.
  - 4) That the load and its distribution on the platform and any platform extension are in accordance with the manufacturers rated capacity for that specific configuration.
  - 5) That there is adequate clearance from overhead obstructions.
  - 6) That the minimum safe approach distances (MSAD) to energized power lines and parts are maintained. See Appendix H. (Ref. ANSI/SIA A92.6-1999.)
  - 7) That all safety precautions defined in this procedure and the Operating and Maintenance Manual for the particular model of aerial platform being used are followed during the operation of the aerial platform.
  - 8) That all individuals maintain a firm footing, with both feet, on the platform floor while working thereon. The use of planks, ladders, or any other device on the aerial platform for achieving additional height or reach is prohibited.
  - 9) Special precautions shall be taken when other moving equipment or vehicles are present to comply with local ordinances or safety standards established for the workplace. Warnings such as but not limited to: flags, roped off areas, flashing lights, and barricades shall be used.
- b) **REPORTING PROBLEMS OR MALFUNCTIONS** - The operator shall immediately report any problems or malfunctions that become evident during operation of the aerial platform to the supervisor.



Any problems or malfunctions that affect the safety or operation of the aerial platform shall be repaired prior to use of the aerial platform. Notify EHS.

- c) ENTANGLEMENT - Care shall be taken to prevent rope, electric cords, hoses, etc., from becoming entangled in the aerial platform.
- d) CAPACITY LIMITATION - Aerial platform rated capacities shall not be exceeded when loads are transferred to the platform at any height.
- e) WORK AREA - The operator shall ensure that the area surrounding the aerial platform is clear of personnel and equipment before lowering the platform.
- f) BATTERY CHARGING - Batteries shall be charged in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.
- g) PLATFORM POSITIONING - The aerial platform shall not be positioned against another object to steady the platform.
- h) MIS-USE AS A CRANE - The aerial platform shall not be used as a crane.
- i) OPERATING AREA - The aerial platform shall not be operated from a position on trucks, trailers, railway cars, floating vessels, scaffolds, or similar equipment, unless the application is approved in writing by the manufacturer.
- j) TRAVEL CONDITIONS - Under all travel conditions, the operator shall limit travel speed according to conditions of ground surface, congestion, visibility, slope, locations of personnel, and other factors causing hazards of collision or injury to personnel.
- k) UNAUTHORIZED USE - Means shall be used to protect against use by unauthorized person(s).
- l) SHUTDOWN OF THE AERIAL PLATFORM - The operator shall cease operation of the aerial platform in case of any suspected malfunctions, any hazard, or potentially unsafe condition that may be encountered. The aerial platform and/or the work area shall then be inspected and any malfunction or problem shall be corrected before further operation of the platform. SHUTDOWN OF THE AERIAL PLATFORM - The operator shall cease operation of the aerial platform in case of any suspected malfunctions, any hazard, or potentially unsafe condition that may be encountered. The aerial platform and/or the work area shall then be inspected and any malfunction or problem shall be corrected before further operation of the platform.

## **7. TRAINING:**

- a) All individuals who perform the functions of operators or maintenance on any aerial platform equipment shall have received both general training and familiarization for the type of unit being operated.
- b) Training will be assigned virtually through Vector Solutions SafeColleges found at the following URL: <https://towsonehs-md.safecolleges.com/training/home>. Workers shall request training by emailing [safety@towson.edu](mailto:safety@towson.edu) or by calling the Environmental Health & Safety (EHS) office at 410-704-2949.
- c) General training covers topics applicable to most aerial work platform equipment. This training will provide the individual with the requisite knowledge and skills necessary for performing inspections, the universal applications; limitations and operation of aerial work platform equipment, including recognition and avoidance of hazards associated with their use.
- d) General training will be performed by a competent person as determined by the term “competent person” in the definitions section.
- e) General training will include but is not limited to the following:

- 1) Regulations and standards associated with aerial work platform equipment.
  - 2) General equipment components.
  - 3) The proper selection of the aerial work platform equipment for the job at hand.
  - 4) Safe use of the equipment.
  - 5) Factors affecting stability.
  - 6) Operator warnings and instructions.
  - 7) The purpose and use of manuals.
  - 8) Recognition and avoidance of hazards.
  - 9) The need to perform workplace inspections.
  - 10) Personal protective equipment.
  - 11) Pre-start inspections.
  - 12) The application and understanding of typical options that are likely associated with larger machines such as:
    - i. Outriggers and stabilizers
    - ii. Extendable axles
    - iii. Envelope management systems
    - iv. Load-moment devices
    - v. Dual capacity
  - 13) The actual operation of the aerial work platform equipment “under the direction of a qualified person”.
  - 14) The need of the trainee to operate the aerial platform(s) for a sufficient period of time to demonstrate proficiency in the actual operation and of all functions of the aerial platform.
- f) For each model the employee is to operate, inspect or maintain, the employee will receive familiarization for that unit.
- g) Familiarization will include as a minimum the following:
- 1) The location of the weather resistant compartment for storing the operator’s manual.
  - 2) The purpose and function of all controls.
  - 3) Safety devices and operating characteristics specific to that aerial platform unit.
- h) Familiarization can be performed by a competent person.
- i) The trainee will be required to read or be instructed on and understand the manufacturer’s operating instructions, maintenance manual and safety rules.
- j) In addition, individuals shall be instructed in performing frequent inspections (every three months or 150 hours of operation, whichever occurs first), and pre-start inspections of all aerial platforms maintained by TU.

- k) Upon completion of both general training and familiarization, the operator trainee shall operate the aerial platform in an area free of obstructions under the direction of the qualified person for a time sufficient to determine that the trainee displays proficiency in knowledge and actual operation of the aerial platform.
- l) The trainer, in consultation with the supervisor (competent person), unless they are the same, shall agree that this individual is suited for aerial platform operation.
- m) Only properly trained and authorized individuals shall be permitted to operate any aerial platform.
- n) Only properly trained individuals shall be permitted to perform inspections and required maintenance of aerial platforms.
- o) Additional familiarization shall be conducted whenever a new model aerial platform is acquired or rented by TU.
- p) Additional general training will be required when an individual demonstrates less than proficiency in the operation or maintenance of aerial platforms.

## **8. Records Retention:**

- a) The supervisor shall ensure that for each individual who operates; performs inspections; and/or repairs on aerial work platform equipment, there is a written record for that individual which verifies that the employee has received general training. A blank copy of the training verification form can be found in Appendix F as “*General Training for Aerial Platform Equipment*”. This form serves as a record of general training. The appropriate fields must be completed by the supervisor or trainer. These include:
  - 1) Name of trainee and TU ID#
  - 2) Date of training
  - 3) Name of trainer
  - 4) The trainer’s affiliation
  - 5) Signature of trainee
- b) The supervisor shall ensure there is a record of familiarization for every unit that each employee has received instruction. A blank copy of the familiarization record form can be found in Appendix F as “*Aerial Platform Equipment Familiarization*”. This form serves as a record of instruction for that unit. The appropriate fields must be completed by the supervisor or trainer. These include:
  - 1) Name of trainee and TU ID#
  - 2) Date of instruction
  - 3) Name of trainer
  - 4) The trainer’s affiliation
  - 5) Manufacturer, model and serial number of the unit
  - 6) Signature of trainee
- c) The supervisor shall maintain a copy of all training and familiarization records. Copies shall be sent to the department of EHS.
- d) The following records shall be maintained for a minimum of five (5) years by the Department/Supervisor (copies shall be provided to EHS):
  - 1) Written records of the frequent and annual inspections on each aerial platform owned or rented by TU (if rented for a period of time to require frequent or annual inspection, e.g. 150 hours operation or three months). These records shall include the date of the inspection, model and serial number of the aerial platform, name and affiliation of the person performing the inspection, any deficiencies found, and the corrective action recommended.
  - 2) Written records of all repairs accomplished on each aerial platform owned or rented by TU, including the date of the repair, a description of the work accomplished, the work order

number, model and serial number of the aerial platform, and the identification of the person(s) performing the work.

- 3) Written records of inspections, repairs, modifications, alterations, and statements of manufacturer's approval for any modifications and alterations shall be maintained for five (5) years after sale or other disposition of the aerial platform.

## APPENDIX A

### OSHA Regulations & ANSI Guidelines

**LINK:** [29CFR1910.67](http://www.osha-slc.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9732)

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=9732](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9732)

**LINK:** [29CFR1926.453](http://www.osha-slc.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10754)

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10754](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10754)

**LINK:** Resource for training: <http://www.liftupright.org/>

**NOTE:** The following guidelines can be used as references. They are not available online.

- ANSI A92.2 Vehicle-mounted Elevating and Rotating Aerial Devices
- ANSI A92.3 Manually Propelled Elevating Aerial Platforms
- ANSI A92.5 Boom-supported Elevating Work Platforms
- ANSI A92.6 Self-Propelled Elevating Work Platforms (The ANSI/SIA A92.6-2006 (R2014))

## **APPENDIX B**

### **PRE-START INSPECTION CHECKLIST**

## AERIAL PLATFORM PRE-START INSPECTION CHECKLIST

### Scene Shop – AWP Super Series Genie Lift

AERIAL PLATFORM TYPE	AERIAL PLATFORM SERIAL #	BUILDING/LOCATION

**BEFORE USE EACH DAY OR AT THE BEGINNING OF EACH SHIFT, THE SUPERVISOR SHALL VISUALLY INSPECT THE AERIAL PLATFORM AND CONDUCT A FUNCTIONAL TEST INCLUDING BUT NOT LIMITED TO THE FOLLOWING:**

ITEM	PRESENT	NOT PRESENT	N/A
OPERATOR'S, SAFETY & RESPONSIBILITIES MANUALS ARE COMPLETE, LEGIBLE & STORED ON PLATFORM			
ALL DECALS LEGIBLE & IN PLACE			
BATTERY FLUID (Check leaks and proper fluid level. Add distilled water if needed.)			
HYDRAULIC OIL (Check for leaks & proper oil level. Add oil if needed.)			

**CHECK THE FOLLOWING COMPONENTS OR AREAS FOR DAMAGE, MODIFICATIONS & IMPROPERLY INSTALLED OR MISSING PARTS:**

OK	POOR
<input type="checkbox"/> Electrical components, wiring & electrical cables	<input type="checkbox"/> Nuts, bolts & other Fasteners
<input type="checkbox"/> Hydraulic power unit, hoses, fitting & cylinder	<input type="checkbox"/> Mast columns & counterweight
<input type="checkbox"/> Platform entry mid-rail or gate	<input type="checkbox"/> Breather Cap
<input type="checkbox"/> Sequencing cables & pulleys	<input type="checkbox"/> Outriggers, leveling jacks & footpads
<input type="checkbox"/> Lifting chains & Idler wheels	<input type="checkbox"/> Adjustable glide pads

ITEM	OK	NEED SERVICE	N/A
CHECK ENTIRE MACHINE FOR DENTS, DAMAGE, CORROSION, OXIDATION, CRACKS IN WELDS or STRUCTURAL COMPONENTS			
INSPECT & CLEAN BATTERY TERMINALS & ALL BATTERY CABLE CONNECTIONS (Wear protective clothing, eyewear, etc.)			
BE SURE THAT ALL STRUCTURAL & OTHER CRITICAL COMPONENTS ARE PRESENT & ALL ASSOCIATED FASTENERS & PINS ARE IN PLACE & PROPERLY TIGHTENED			
<b>FUNCTION TESTS</b>	<b>FUNCTIONAL</b>	<b>NON-FUNCTIONAL</b>	<b>N/A</b>
TEST EMERGENCY STOP BUTTON			
TEST OUTRIGGER INTERLOCK			
TEST AUXILIARY PLATFORM LOWERING MECHANISM			
TEST MANUAL LOWERING MECHANISM			
TIRES AND WHEELS			
CHECK THE AREA IN WHICH THE AERIAL PLATFORM IS TO BE USED FOR POSSIBLE HAZARDS SUCH AS, BUT NOT LIMITED TO: Drop-offs or holes, bumps or floor obstructions, debris, overhead obstructions and high voltage conductors, hazardous locations, inadequate surface and support to withstand all load forces imposed by the aerial platform in all operating configurations, wind and weather conditions (if outside), other possible unsafe conditions, presence of unauthorized persons.			

**ANY AERIAL PLATFORM FOUND DEFECTIVE SHALL BE TAGGED OUT OF SERVICE IMMEDIATELY (i.e., not used) UNTIL SUCH TIME IT IS REPAIRED.**

**Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## AERIAL PLATFORM PRE-START INSPECTION CHECKLIST

### Music Department – AWP Super Series Genie Lift

AERIAL PLATFORM TYPE	AERIAL PLATFORM SERIAL #	BUILDING/LOCATION

**BEFORE USE EACH DAY OR AT THE BEGINNING OF EACH SHIFT, THE SUPERVISOR SHALL VISUALLY INSPECT THE AERIAL PLATFORM AND CONDUCT A FUNCTIONAL TEST INCLUDING BUT NOT LIMITED TO THE FOLLOWING:**

ITEM	PRESENT	NOT PRESENT	N/A
OPERATOR'S, SAFETY & RESPONSIBILITIES MANUALS ARE COMPLETE, LEGIBLE & STORED ON PLATFORM			
ALL DECALS LEGIBLE & IN PLACE			
BATTERY FLUID (Check leaks and proper fluid level. Add distilled water if needed.)			
HYDRAULIC OIL (Check for leaks & proper oil level. Add oil if needed.)			

**CHECK THE FOLLOWING COMPONENTS OR AREAS FOR DAMAGE, MODIFICATIONS & IMPROPERLY INSTALLED OR MISSING PARTS:**

OK POOR	OK POOR
<input type="checkbox"/> <input type="checkbox"/> Electrical components, wiring & electrical cables	<input type="checkbox"/> <input type="checkbox"/> Nuts, bolts & other Fasteners
<input type="checkbox"/> <input type="checkbox"/> Hydraulic power unit, hoses, fitting & cylinder	<input type="checkbox"/> <input type="checkbox"/> Mast columns & counterweight
<input type="checkbox"/> <input type="checkbox"/> Platform entry mid-rail or gate	<input type="checkbox"/> <input type="checkbox"/> Breather Cap
<input type="checkbox"/> <input type="checkbox"/> Sequencing cables & pulleys	<input type="checkbox"/> <input type="checkbox"/> Outriggers, leveling jacks & footpads
<input type="checkbox"/> <input type="checkbox"/> Lifting chains & Idler wheels	<input type="checkbox"/> <input type="checkbox"/> Adjustable glide pads

ITEM	OK	NEED SERVICE	N/A
CHECK ENTIRE MACHINE FOR DENTS, DAMAGE, CORROSION, OXIDATION, CRACKS IN WELDS or STRUCTURAL COMPONENTS			
INSPECT & CLEAN BATTERY TERMINALS & ALL BATTERY CABLE CONNECTIONS (Wear protective clothing, eyewear, etc.)			
BE SURE THAT ALL STRUCTURAL & OTHER CRITICAL COMPONENTS ARE PRESENT & ALL ASSOCIATED FASTENERS & PINS ARE IN PLACE & PROPERLY TIGHTENED			
<b>FUNCTION TESTS</b>	<b>FUNCTIONAL</b>	<b>NON-FUNCTIONAL</b>	<b>N/A</b>
TEST EMERGENCY STOP BUTTON			
TEST OUTRIGGER INTERLOCK			
TEST AUXILIARY PLATFORM LOWERING MECHANISM			
TEST MANUAL LOWERING MECHANISM			
TIRES AND WHEELS			
CHECK THE AREA IN WHICH THE AERIAL PLATFORM IS TO BE USED FOR POSSIBLE HAZARDS SUCH AS, BUT NOT LIMITED TO: Drop-offs or holes, bumps or floor obstructions, debris, overhead obstructions and high voltage conductors, hazardous locations, inadequate surface and support to withstand all load forces imposed by the aerial platform in all operating configurations, wind and weather conditions (if outside), other possible unsafe conditions, presence of unauthorized persons.			

**ANY AERIAL PLATFORM FOUND DEFECTIVE SHALL BE TAGGED OUT OF SERVICE IMMEDIATELY (i.e., not used) UNTIL SUCH TIME IT IS REPAIRED.**

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_



# JLG LIFT

## Pre-Op Inspection Checklist Towson Center

Date: \_\_\_\_\_ Operator: \_\_\_\_\_

Begin the “Walk-Around Inspection” at item #1, as noted on the diagram in the manual.  
Continue to the right (counterclockwise viewed from the top) checking each item in sequence for the conditions listed.

X	#	TASK
<b>WORKPLACE INSPECTION</b>		
	1	Check floor surfaces for holes, bumps, level and other hazards.
	2	Check overhead for wires, beams and other hazards.
<b>MACHINE INSPECTION</b>		
	1	<b>Platform controls:</b> Properly secured; No visible damage. Placards secure and legible.
	2	<b>Steer Cylinder and Linkage:</b> Properly secured; No visible damage.
	3	<b>Safety Prop</b> – Properly secured; No visible damage.
	4	<b>Scissor Arms &amp; Sliding Wear Pads:</b> Properly secured; No visible damage.
	5	<b>Wheel &amp; Tire Assembly (Left Front):</b> Properly secured; No visible damage; No loose or missing lug nuts.
	6	<b>Drive Cutout Switch:</b> Properly secured; No visible damage.
	7	<b>Compartment Cover &amp; Latches:</b> Properly secured; No visible damage.
	8	<b>Ground Controls:</b> No visible damage; switches operable; Placards legible.
	9	<b>Hydraulic Reservoir:</b> No visible damage; No leaks or missing parks; Breather cap secure.
	10	<b>Hydraulic Filter:</b> Properly secured; No visible damage; No leaks.
	11	<b>Motor/Pump Unit:</b> Properly secured; No visible Damage; No leaks.
	12	<b>Pothole Protection System:</b> No visible damage; Support broilers, limit switches & links properly secured.
	13	<b>Hour meter:</b> No visible damage.
	14	<b>Wire Installation:</b> Properly secured; No visible damage.
	15	<b>Control Valve Installation:</b> Properly secured; No visible damage; No leaks.
	16	<b>Wheel &amp; Tire Assembly (Left Rear):</b> Properly secured; No visible damage; No loose or missing lug nuts.
	17	<b>Drive Motor (Left Rear):</b> Properly secured; No visible damage; No leaks.
	18	<b>Scissor Arms &amp; Sliding Wear Pads:</b> Properly secured; No visible damage.
	19	<b>Handle for Manual Descent Pump:</b> No visible damage.
	20	<b>Manual Descent Pump:</b> Properly secured; No visible damage; No leaks; Functions properly.
	21	<b>Break Cylinder:</b> Properly secured; No visible damage; No leaks.
	22	<b>Ladder:</b> Properly secured; No visible damage.
	23	<b>Scissor Arms &amp; Sliding Wear Pads:</b> Properly secured; No visible damage.

X	#	TASK
	24	<b>Drive Motor (Right Rear):</b> Properly secured; No visible damage; No leaks.
	25	<b>Wheel &amp; Tire Assembly (Right Rear):</b> Properly secured; No visible damage; No loose or missing lug nuts.
	26	<b>Lift Cylinder:</b> Properly secured; No visible damage; No leaks.
	27	<b>Tilt Switch:</b> Properly secured; No visible damage; No loose or broken wiring.
	28	<b>Battery Installation:</b> Proper electrolyte level; Cables secure; No damage or corrosion.
	29	<b>Pothole Protection System:</b> Support Bar, Rollers, Limit Switches & Links properly secured; No visible damage or loose parts.
	30	<b>Battery Charger:</b> Properly secured; No visible damage.
	31	<b>Compartment Cover &amp; Latches:</b> Properly secured; No visible damage.
	32	<b>Wheel &amp; Tire Assembly (Right Front):</b> Properly secured; No visible damage; No loose or missing lug nuts.
	33	<b>Handrail Installation:</b> All railings securely in place; No visible damage; Chain in proper working order.
	34	<b>Platform Assembly:</b> No loose or missing parts, No visible damage; Platform Deck Extension works properly.
	35	<b>Scissor Arms &amp; Sliding Wear Pads:</b> Properly secured; No visible damage.
	36	<b>Valves, Valve Fittings, Hosing &amp; Tubing:</b> Properly secured; No loose or missing parts; No visible damage; No leaks.
	37	<b>Overall Cleanliness:</b> Check all standing surfaces for oil, fuel & hydraulic oil spillage & foreign objects. Ensure overall cleanliness.
	38	<b>Placards:</b> Keep all information & placards clean & unobstructed.
	39	<b>Operators &amp; Safety Manual:</b> Copy kept in manual storage box.
	40	<b>Machine Log:</b> Ensure machine operating log is maintained.
	41	<p><b>Functional Check Completed:</b> Operate lift and ensure it is functioning properly before using.</p> <ul style="list-style-type: none"> <li>• ALL FUNCTIONS AND THEIR CONTROL FOR SPEED(S), SMOOTHNESS AND LIMITS OF MOTION</li> <li>• EMERGENCY LOWERING MECHANISM (Manual Lowering Mechanism)</li> <li>• ALL CHAIN AND CABLE MECHANISMS FOR ADJUSTMENT AND WORN OR DAMAGED PARTS</li> <li>• ALL EMERGENCY AND SAFETY DEVICES</li> </ul>

Comments:

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## **APPENDIX C**

### **FREQUENT INSPECTION CHECKLISTS**

## AERIAL PLATFORM FREQUENT INSPECTION FORM

Only a person qualified (trained) on this model of Aerial Platform shall perform inspections. Inspections shall be made every three (3) months or 150 Hours of operating time or prior to use if the Aerial Platform has been out of service for a period longer than three (3) months.

The inspection shall include all the items specified by the manufacturer and shall include, but not limited be limited to the following.

**ANY AERIAL PLATFORM FOUND DEFECTIVE SHALL BE TAGGED OUT OF SERVICE IMMEDIATELY (i.e., not used) UNTIL SUCH TIME IT IS REPAIRED.**

DEFECT	NO DEFECT	N/A	ITEMS INSPECTED
			ALL FUNCTIONS AND THEIR CONTROL FOR SPEED(S), SMOOTHNESS AND LIMITS OF MOTION
			EMERGENCY LOWERING MECHANISM (Manual Lowering Mechanism)
			ALL CHAIN AND CABLE MECHANISMS FOR ADJUSTMENT AND WORN OR DAMAGED PARTS
			ALL EMERGENCY AND SAFETY DEVICES
			LUBRICATION OF ALL MOVING PARTS
			FILTER ELEMENTS
			HYDRAULIC OIL, ENGINE OIL, AND COOLANT
			STRUCTURAL AND OTHER CRITICAL COMPONENTS, SUCH AS FASTENERS, PINS, SHAFTS, AND LOCKING DEVICES.
			DC MODEL – CHECK BATTERY WATER
			PLACARDS, WARNINGS, AND CONTROL MARKINGS.
			ITEMS SPECIFIED BY THE MANUFACTURER (IF ANY, LIST THEM):

**CORRECTION OF ALL MALFUNCTIONS AND PROBLEMS IDENTIFIED AND FURTHER INSPECTION, IF NECESSARY, SHALL BE PERFORMED BEFORE THE AERIAL PLATFORM IS RETURNED TO SERVICE**

AERIAL PLATFORM TYPE	SERIAL/IDENTIFICATION NUMBER	LOCATION (BLDG./ROOM)

**NOTE: ONE FORM MAY BE USED TO RECORD UP TO 4 INSPECTIONS OF SAFE AERIAL PLATFORMS. EACH DEFECTIVE AERIAL PLATFORM MUST BE RECORDED ON A SEPARATE SHEET.**

**SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_**

## APPENDIX D

### LIST OF AERIAL PLATFORMS AND SUPERVISORS

<b>Department-Supervisor</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model #</b>	<b>Serial #</b>	<b>Location</b>
Theater- Tony Rosas	AWP	Genie	AWP-20S AC	AWP02-24097	Center for the Arts Scene Shop
Theater- Tony Rosas	IWP	Genie	IWP-25S DC	4000-3498	Center for the Arts Scene Shop
Theater- Tony Rosas	Scissor Lift	Sky Jack	SJ III 3226	27002 695	Center for the Arts Scene Shop
FM- Dave Steuernagle	AWP	Genie	GR-20	39176	Center for Liberal Arts penthouse A
Campus Rec- Ashley Sanders	AWP	JLG	30AM	0900028043	Burdick Hall Room 135A
Music- John Spivey	AWP	Genie	AWP-30S AC	AWP06-53565	Center for the Arts room 4052
Theater- Paul Shapanus	AWP	MEC	24D	7501513	Stephens Hall Theatre
Facilities – John Kaczynski	AWP	Genie	GR-20	38106	Center for the Arts room 3043TC
Facilities- Herb Hollidge	AWP	JLG	3246E2	020009695	Cow Pen
Facilities- Herb Hollidge	AWP	Genie	GR-20	16462	SECU room 117
Facilities- Herb Hollidge	AWP	Genie	GR-20	38087	SECU storage room
Facilities- Herb Hollidge	AWP	Genie	AWP-25S	AWP10-68101	SECU air handling room 117
Facilities- Herb Hollidge	Scissors Lift	Teupen	LEO18GT	141957	TC outside storage shed
Facilities	Bucket Truck Aerial Lift	Versalift	ET32NF01	EA110001	General Services Building
Facilities- Tom Durange	AWP	Genie	GR-20	21453	West Village room 111
Facilities- Tom Durange	AWP	Genie	GR-20	21454	4 <sup>th</sup> floor storage by ballroom A
Art	AWP	Ballemore	BL-315	BL-5511	Gallery

## **APPENDIX E**

### **TRAINING SIGN-IN SHEETS**

# GENERAL TRAINING FOR AERIAL PLATFORM EQUIPMENT

Name of Employee :(Print)\_\_\_\_\_ Employee's TU ID#\_\_\_\_\_

On this day (insert date)\_\_\_\_\_ I received training on the selection, use, maintenance, hazards and inspection process of aerial work platform equipment.

Training was conducted by: (Name of trainer)\_\_\_\_\_ of (Affiliation of trainer)\_\_\_\_\_ on the following information:

- 1) Regulations and standards associated with aerial work platform equipment.
- 2) General equipment components.
- 3) The proper selection of the aerial work platform equipment for the job at hand.
- 4) Safe use of the equipment.
- 5) Factors affecting stability.
- 6) Operator warnings and instructions.
- 7) The purpose and use of manuals.
- 8) Recognition and avoidance of hazards.
- 9) The need to perform workplace inspections.
- 10) Personal protective equipment.
- 11) Pre-start inspections.
- 12) The application and understanding of typical options that are likely associated with larger machines such as:
  - i. Outriggers and stabilizers
  - ii. Extendable axles
  - iii. Envelope management systems
  - iv. Load-moment devices
  - v. Dual capacity
- 13) The actual operation of the aerial work platform equipment "under the direction of a qualified person".
- 14) The need of the trainee to operate the aerial platform(s) for a sufficient period of time to demonstrate proficiency in the actual operation and of all functions of the aerial platform.

Employee's signature:\_\_\_\_\_ Department:\_\_\_\_\_

This information is collected for documentation purposes only. Failure to provide this data may result in the improper identification of the individual participating in the activity. This information may be inspected, amended, or corrected by contacting the Department of Environmental Health & Safety. This information is generally not available for public inspection. It will be shared only with other departments at Towson University, the University System of MD, the State of Maryland, the U.S. federal government, and with other entities permitted by law and/or as authorized by you.

# AERIAL PLATFORM EQUIPMENT FAMILIARIZATION

Name of Employee :(Print) \_\_\_\_\_ Employee's TU ID# \_\_\_\_\_

On this day (insert date) \_\_\_\_\_ I received instruction for the following equipment:

AWP-Manufacturer	Model # of AWP	Serial # of AWP

Instructions were provided by: (Name of trainer) \_\_\_\_\_  
 of (Affiliation of trainer) \_\_\_\_\_ on the following information:

- 1) The location of the weather resistant compartment for storing the operator's manual.
- 2) The purpose and function of all controls.
- 3) Safety devices and operating characteristics specific to that aerial platform unit.
- 4) An explanation of all decals, warnings and instructions displayed on the aerial platform
- 5) Determination that the purpose for which the aerial platform is to be used is within the scope of the intended application defined by the manufacturer
- 6) An explanation on the contents of the manufacturer's operating instructions and user's safety rules

Employee's signature: \_\_\_\_\_ Department: \_\_\_\_\_

This information is collected for documentation purposes only. Failure to provide this data may result in the improper identification of the individual participating in the activity. This information may be inspected, amended, or corrected by contacting the Department of Environmental Health & Safety. This information is generally not available for public inspection. It will be shared only with other departments at Towson University, the University System of MD, the State of Maryland, the U.S. federal government, and with other entities permitted by law and/or as authorized by you.



## APPENDIX F

### MINIMUM SAFE APPROACH DISTANCES (MSAD)

To energized (exposed or insulated) power lines and parts.

Voltage Range (phase to phase)	Minimum safe approach distance	
	(Feet)	(meters)
0 to 300V	Avoid Contact	
Over 300V to 50KV	10	3.05
Over 50KV to 200KV	15	4.60
Over 200KV to 350KV	20	6.10
Over 350KV to 500KV	25	7.62
Over 500KV to 750KV	35	10.67
Over 750KV to 1000KV	45	13.72

Adopted from ANSI A92.6-1999