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High Reach Truck

Vehicle Management Codes: C250, C251, C602

QUALIFICATION TRAINING PACKAGE

CONTENTS

SECTION 1—OVERVIEW 3
1.1. Overview 3

SECTION 2—RESPONSIBILITIES 3
2.1. Responsibilities. 3

SECTION 3—INTRODUCTION 4
3.1. Objectives. 4
3.2. Desired Learning Outcomes. 4
3.3. Lesson Duration. 4
3.4. Instructional References. 5
3.5. Instructional Training Aids and Equipment. 6

SECTION 4—TRAINEE PREPARATION 6
4.1. Licensing Requirements. 6
4.2. Required Reading. 6

SECTION 5—KNOWLEDGE LECTURE AND EVALUATION 7
5.1. Overview of Training and Requirements. 7
5.2. Vehicle Inspection. 8
5.3. Vehicle Safety and Equipment. 13
5.4. Driving Safety and Precautions. 14
5.5. Vehicle Operation. 17

SECTION 6—EXPLANATION AND DEMONSTRATION 25
6.1. Instructor's Preparation. 25
6.2. Safety Procedures and Equipment. 25
6.3. Operator Maintenance Demonstration 26
6.4. Operation Demonstration. 26

SECTION 7—TRAINEE PERFORMANCE AND EVALUATION 28
7.1. Trainee Performance. 28
7.2. Performance Evaluation. 30

Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION 34
Attachment 2—VEHICLE INSPECTION GUIDE 35
Attachment 3—PERFORMANCE TEST 39
Attachment 4—SEVEN-STEP INSPECTION PROCESS 43

Section 1—OVERVIEW

1.1. Overview.

1.1.1. Send comments and suggested improvements on Air Force (AF) Form 847, *Recommendation for Change of Publication* through Air Force Installation and Mission Support Center (AFIMSC) functional managers via e-mail at AFIMSC.IZSL.VehicleOps@us.af.mil.

1.1.2. How to use this plan:

1.1.2.1. Instructor:

1.1.2.1.1. Provide overview of training, **Section 2** and **Section 3**.

1.1.2.1.2. Instructor's lesson plan for trainee preparation, give classroom lecture, **Section 4**.

1.1.2.1.3. Instructor's lesson plan for knowledge exam, **Section 5**.

1.1.2.1.4. Instructor's lesson plan for demonstration, **Section 6**.

1.1.2.2. Trainee:

1.1.2.2.1. Reads this entire lesson plan prior to starting lecture.

1.1.2.2.2. Follows along with lecture using this lesson plan and its attachments.

1.1.2.2.3. Uses **Attachment 2** and **Attachment 4** as guides for vehicle inspection.

1.1.2.2.4. Takes performance test.

Section 2—RESPONSIBILITIES

2.1. Responsibilities.

2.1.1. The trainee shall:

2.1.1.1. Ensure the trainer explains the Air Force Qualification Training Plan (AFQTP) process and the trainee's responsibilities.

2.1.1.2. The trainee should ask questions if he or she does not understand the objectives for each unit.

2.1.1.3. Review missed questions with the trainer.

2.1.2. Instructor shall:

2.1.2.1. Review the AFQTP with the trainee.

2.1.2.2. Conduct knowledge training with the trainee using the AFQTP.

2.1.2.3. Sign-off the task(s).

2.1.3. The Certifier shall:

2.1.3.1. Evaluate the Airman's task performance without assistance.

2.1.3.2. Sign-off the task(s).

Section 3—INTRODUCTION

3.1. Objectives.

3.1.1. Given lectures, demonstrations, hands-on driving session, and a performance and written test, trainees will be able to perform operator's inspection and complete the performance test with zero instructor assists.

3.1.1.1. Train and qualify each trainee in safe operation and preventive maintenance of the various high reach trucks.

3.1.1.2. This training will ensure the trainee becomes a qualified high reach truck operator; an operator who has the knowledge and skills to operate a high reach truck in a safe and professional manner.

3.2. Desired Learning Outcomes.

3.2.1. Understand the safety precautions to be followed before-, during-, and after- operation of the high reach truck.

3.2.2. Understand the purpose of the high reach truck and its role in the mission.

3.2.3. Know the proper operator maintenance procedures of the high reach truck, in accordance with (IAW) applicable technical orders (TOs) and use of AF Form 1800, *Operator's Inspection Guide and Trouble Report*.

3.2.4. Be completely familiar with the safety features of the line truck.

3.2.5. Safely and proficiently operate the high reach truck.

3.3. Lesson Duration.

3.3.1. Recommended instructional and hands on training time is 25 hours:

Figure 3.1. Recommended Training Time for Training Activities.

Training Activity	Training Time
Trainee's Preparation	2 Hours
Instructor's Lecture	2 Hours
Trainee's Written Evaluation	1 Hour
Instructor's Demonstration	3 Hours
Trainee's Personal Experience (to build confidence and proficiency) ▪ Perform Operator Maintenance ▪ Operate the Vehicle	15 Hours
Trainee's Performance Evaluation	2 Hours

Note: This is a recommended time; training time may be more or less depending how quickly a trainee learns new tasks.

3.4. Instructional References.

3.4.1. Risk Management (RM) and Safety Principles.

3.4.2. Applicable TOs or Manufacturer's Operator's Manual (see Vehicle Management for TO number for vehicle being used in training) to include T.O. 35D34-3-11.

3.4.3. Air Force Manual (AFMAN) 24-306, *Operation of Air Force Government Motor Vehicles*.

3.4.4. AF Form 1800.

3.4.5. AFI 24-302, *Vehicle Management*.

3.5. Instructional Training Aids and Equipment.

3.5.1. High Reach Truck Lesson Plan.

3.5.2. High Reach Truck.

3.5.3. Any additional applicable TO or Manufacturer's Operator's Manual.

3.5.4. Pintle Hook Lesson Plan.

3.5.5. AF Form 1800.

3.5.6. Suitable training area.

Section 4—TRAINEE PREPARATION

4.1. Licensing Requirements.

4.1.1. Trainee must have in his/her possession a valid state driver's license.

4.1.2. AF Form 171, *Request for Driver's Training and Addition to U.S. Government Driver's License* IAW AFI 24-301, *Ground Transportation*.

4.1.3. Applicable local licensing jurisdiction requirements.

4.2. Required Reading.

4.2.1. Read this entire lesson plan.

4.2.2. Pintle Hook Lesson Plan.

4.2.3. Read AFMAN 24-306.

4.2.4. Read Manufacturer's Operator's Manual for the vehicle being trained on.

Section 5—KNOWLEDGE LECTURE AND EVALUATION

5.1. Overview of Training and Requirements.

5.1.1. Training objectives:

5.1.1.1. Given lectures, demonstrations, hands-on driving session, and a performance test, trainees will be able to perform operator's inspection and complete the performance test with zero instructor assists.

5.1.1.2. Train and qualify each trainee in safe operation and preventive maintenance of the various high reach trucks.

5.1.1.3. This training will ensure the trainee becomes a qualified high reach—an operator who has the knowledge and skills to operate the high reach in a safe and professional manner.

5.1.2. Desired learning outcomes:

5.1.2.1. Understand the safety precautions to be followed before-, during-, and after-operation of the high reach trucks.

5.1.2.2. Be completely familiar with the safety features of the high reach truck.

5.1.2.3. Safely and proficiently operate the high reach truck.

5.1.2.4. Understand the purpose of the high reach truck and its role in the mission.

5.1.2.4.1. The purpose of the high reach truck is to act as a prime mover for the movement of material.

5.1.2.4.2. The aerial platform is intended to lift personnel and associated equipment for service work on aircraft. The aerial platform may be used for other conveniences.

5.1.2.4.3. Role in the mission (Unit/Base/Community (during natural disasters)/Air Force).

5.1.3. High reach truck design description.

5.1.3.1. The high reach truck is used to elevate one or two persons to a height of 30-100 feet and over. The fiber glass boom allows the operator to work on both secondary and primary voltages by isolating the operator from the ground. (Work one line or conductor at a time). A wench and hydraulic tools port are available between the two buckets.

5.1.3.2. The design of a high reach truck varies depending on the vehicle manufacturer. Refer to the manufacturer's operator's manual for additional information on the specific high reach truck being operated.

5.1.3.3. High reach truck main components:

5.1.3.3.1. Pony motor.

5.1.3.3.2. Basket.

5.1.3.3.3. Boom.

5.1.3.3.4. Outriggers.

5.1.4. Vehicle specifications. The operator should be familiar with specifications, including the vehicle's dimensions, weight, drive train information, fluid types, rated loads and capabilities. See vehicle data plate and/or manufacturer's operator's manual for specifications.

5.2. Vehicle Inspection.

5.2.1. Pre-trip vehicle inspection test. Use **Attachment 2** as a walk-around guide along with AF Form 1800.

5.2.2. A Seven-Step Inspection Method will help ensure the inspection is the same each time it is conducted, and that nothing is left out. See **Attachment 4** for the Seven-Step Inspection Method.

5.2.3. Types of Vehicle Inspection. If discrepancies are found the operator must report them to Vehicle Control Official (VCO) the supervisor, and/or vehicle maintenance:

5.2.3.1. The following items must be corrected before continued service:

5.2.3.1.1. Tires, brakes, steering mechanisms.

5.2.3.1.2. Operating levers controlling power transmission, hoisting, dumping, and tripping.

5.2.3.1.3. Warning lights - turn signals, brake lights, emergency and rotating flashers, headlights, reflectors and clearance lights (unless the vehicle or equipment is not used during hours of darkness and restrictions are identified by a decal).

5.2.3.1.4. Windshield wipers and defrosters (when weather conditions require use).

5.2.3.2. Pre-trip inspection – find items/problems that could cause accident or breakdown.

5.2.3.2.1. Vehicle maintenance to authorize continued use for all other maintenance discrepancies.

5.2.3.2.2. Cleanliness/damage/missing items.

5.2.3.2.3. Leaks (fuel/oil/coolant/hydraulic/air).

5.2.3.2.4. Fluid Levels; ensure level is within limits:

5.2.3.2.4.1. Engine oil.

5.2.3.2.4.2. Brake fluid.

5.2.3.2.4.3. Transmission fluid.

5.2.3.2.4.4. Antifreeze.

5.2.3.2.4.5. Hydraulic fluid.

5.2.3.2.5. Battery; security, fluid, damage, and corrosion.

5.2.3.2.6. All wheel rims (cracks, splits, etc.); check for loose or missing lug nuts.

5.2.3.2.7. All tires.

5.2.3.2.7.1. Proper inflation.

5.2.3.2.7.2. Tread to include depth.

5.2.3.2.7.3. Cuts and abrasions.

5.2.3.2.8. Drive belts; tension, and fraying.

5.2.3.2.9. Hydraulic hoses cylinders (damage/leaks).

5.2.3.2.10. Air restriction gauge.

5.2.3.2.11. Carriage.

5.2.3.2.12. All hoses and wiring.

5.2.3.2.13. Sirens.

5.2.3.2.14. Warning devices.

5.2.3.2.15. Heater/defroster.

5.2.3.2.16. Exhaust system.

5.2.3.2.17. Wiring/lights/reflectors (interior and exterior).

5.2.3.2.18. Mirrors.

5.2.3.2.19. Windshield and windshield wipers/washers.

5.2.3.2.20. Doors.

5.2.3.2.21. Windows.

5.2.3.2.22. Seatbelts.

5.2.3.2.23. Fire extinguisher.

5.2.3.2.24. Towing connection.

5.2.3.2.25. Markings—check visibility.

5.2.3.2.26. Horn operation.

5.2.3.2.27. Brake and accelerator covers.

5.2.3.2.28. Air tanks.

5.2.3.2.29. Cold weather aids.

5.2.3.2.30. Outrigger arm pins.

5.2.3.2.31. Outrigger arm frame.

5.2.3.2.32. Rotation bearing.

5.2.3.2.33. Rotation gearbox.

5.2.3.2.34. Lower boom pin.

5.2.3.2.35. Lower boom cylinder mounting pins.

5.2.3.2.36. Lower boom telescope cylinder and rollers.

5.2.3.2.37. Atmospheric vent valves.

5.2.3.2.38. Upper boom cylinder mounting pins.

5.2.3.2.39. Upper boom telescope cylinder and rollers.

5.2.3.2.40. Elbow area and linkages.

5.2.3.2.41. Leveling systems.

5.2.3.2.42. Platform leveling cylinder pins.

5.2.3.2.43. Platform pins.

5.2.3.2.44. Platform mounting bracket.

5.2.3.2.45. Platform mounting fasteners.

5.2.3.2.46. Platform structure.

5.2.3.2.47. Winch gearbox.

5.2.3.2.48. Winch line and material handling attachment.

5.2.3.2.49. Personal fall protection system.

5.2.3.2.50. Covers.

5.2.3.2.51. Sub-base attachment to the carrier.

5.2.3.2.52. Outrigger cylinders.

5.2.3.3. During-operation.

5.2.3.3.1. All gauges and warning lights for proper operations.

5.2.3.3.1.1. Warning lights.

5.2.3.3.1.2. Gauges.

5.2.3.3.1.3. Indicators.

5.2.3.3.2. Controls for proper operations.

5.2.3.3.2.1. Steering wheel.

5.2.3.3.2.2. Gear selector lever.

5.2.3.3.2.3. Parking brake control.

5.2.3.3.2.4. Direction control lever.

5.2.3.3.2.5. Hydraulic levers.

5.2.3.3.2.6. Accelerator control pedal.

5.2.3.3.2.7. Ignition switch.

5.2.3.3.2.8. Power take-off (PTO).

5.2.3.3.2.9. Service brakes.

5.2.3.3.2.10. Selector switch.

5.2.3.3.3. Unusual noises.

5.2.3.3.4. Listen for exhaust and air leaks. Listen for any unusual sounds.

5.2.3.3.5. Stay alert for any unusual smells or odors.

5.2.3.3.6. Stay alert for any abnormal vibrations or handling problems.

5.2.3.4. After-trip inspection and report.

5.2.3.4.1. Ensure vehicle and components are cleaned.

5.2.3.4.2. Equipment is properly stowed.

5.2.3.4.3. Refueled.

5.2.3.4.4. Parked.

5.2.3.4.5. Apply brakes.

5.2.3.4.6. Place transmission in neutral (park for an automatic).

5.2.3.4.7. Document any discrepancy on AF Form 1800.

5.2.3.4.8. Sign off AF Form 1800 to signify accomplishment of inspection.

5.3. Vehicle Safety and Equipment.

5.3.1. Safety clothing and equipment:

5.3.1.1. Safety steel-toed boots must be worn.

5.3.1.2. Fall protection equipment must be worn IAW AFI 91-203.

5.3.1.3. Hearing protection must be worn.

5.3.1.4. A hard hat must be worn.

5.3.1.5. First aid kit.

5.3.1.6. Traffic cones.

5.3.1.7. Reflective belts/vests during low visibility and hours of darkness.

5.3.1.8. Gloves, when applicable.

5.3.1.9. Raingear, cold weather gear, etc.

5.3.1.10. Tire gauge.

5.3.1.11. Fire extinguisher.

5.3.1.12. AF Form 1800. **Note:** A separate AF Form 1800 will be used for the tractor and the trailer, respectively.

5.3.2. Hazards and human factors to the environment:

5.3.2.1. Types of mishaps include:

5.3.2.1.1. Dropped property.

5.3.2.1.2. Bruises, head injuries, cuts, and lacerations to personnel.

5.3.2.1.3. Burns from bleed air.

5.3.2.1.4. Glycol in contact with clothing or personnel.

5.3.2.2. Common operator mishaps are due to:

5.3.2.2.1. Jerky stops and starts.

5.3.2.2.2. Failure to give proper signals when turning.

5.3.2.2.3. Traveling too fast and turning too sharply.

5.3.2.2.4. Turning too wide on corners; cutting corners too sharply.

5.3.2.2.5. Failure to release parking brake before traveling.

5.3.2.2.6. Failure to lower and secure boom. Never drive the high reach truck without fully lowering and securing the boom. Failure to do so can result in boom swing causing damage to the vehicle and/or the surrounding area, personal injury and/or death.

5.3.2.2.7. Failure to chalk truck at aircraft.

5.3.2.2.8. Failure to use a spotter in difficult areas/situations.

5.3.2.2.9. Not ensuring the condor transmission is in neutral.

5.3.2.2.10. Failure to ensure that aircraft preps are complete prior to approaching the aircraft with the truck.

5.4. Driving Safety and Precautions.

5.4.1. The unit is designed and manufactured with many features intended to reduce the likelihood of an accident. Pay special attention to all safety alerts throughout the manufacturer's operator's manual and on the vehicle itself.

5.4.2. All platform occupants must be trained and use approved fall protection IAW AFI 91-203.

5.4.3. The platform door, if provided, must be securely latched. Inspect the latch daily.

5.4.4. The secondary platform door restraint must be latched on platforms equipped with doors.

5.4.5. Do not sit/stand on the platform edge or on other devices. Never allow riders on the exterior of the vehicle.

5.4.6. Safe operation of the high reach truck is the responsibility of the operator. Drive carefully at all times. Exercise caution at cross aisles, hangars and entering shop areas. Sound the horn for safety.

5.4.7. The operator and all passengers must wear seatbelts when the vehicle is in operation.

5.4.8. Observe flight line traffic rules.

5.4.9. Steering. Keep both hands on wheel, except when operating hydraulic controls. Avoid turning on inclines. Watch tail swing.

5.4.10. Spotter safety. Do not approach the aircraft without a spotter. Always use a spotter while backing. The operator must maintain visual contact with the spotter at all times. If visual contact is lost, the operator must stop the vehicle immediately. See AFMAN 24-306 for additional spotter safety guidance and the AF standard spotter hand signals.

5.4.11. Keep loads within the rated capacity of the high reach platform. Secure the load before moving the vehicle. Know the capacity of the platform. The platform capacity is the total weight of the personnel, material, tools, etc. that may be lifted by the unit.

5.4.12. Overhead clearance. Ensure sufficient headroom under overhead installations, lights, pipes, sprinkler system, overpass, etc.

5.4.13. Never place the vehicle in motion with the outriggers down.

5.4.14. Never place the vehicle in motion without securing the boom.

5.4.15. Do not stand or pass under the elevated portion of any condor.

5.4.16. Speed Limits:

5.4.16.1. On the flight line: 10 miles per hour (mph).

5.4.16.2. Within 50 ft. of an aircraft: 5 mph.

5.4.16.3. All other areas: Obey all posted speed limits.

5.4.16.4. Always turn-off the engine while refueling.

5.4.16.5. Always ground the high reach truck while working on overhead lines

5.4.17. When driving during hours of darkness, always turn on lights.

5.4.18. Always face in the direction of travel.

5.4.19. Never operate the boom at more than 5 degree side slope and 15 degree uphill slope. When extending the boom or column, the white stripe on the inner boom/column indicates the maximum extension.

5.4.20. Do not operate the bucket when winds are excess of 25 mph.

5.4.21. Unattended condor:

5.4.21.1. Boom/basket will be fully lowered.

5.4.21.2. Controls shall be neutralized.

5.4.21.3. Power shall be shut off.

5.4.21.4. Brakes set.

5.4.21.5. Wheels chocked if parked on an incline or on a flight line.

5.4.22. Condor shall not be used for opening or closing hanging doors.

5.4.23. Tire changing procedures. In the event that the vehicle should have a flat or damaged tire, the trainee must know how to safely and properly change the tire. The correct procedures to follow are below:

5.4.23.1. Ensure the following tools/equipment are used while changing the damaged/flat tire:

5.4.23.1.1. Vehicle jack w/jack handle.

5.4.23.1.2. Lug wrench.

5.4.23.1.3. Jack stand.

5.4.23.1.4. Wheel chocks.

5.4.23.1.5. Hand/eye/hearing protection.

5.4.23.1.6. Steel toed boots.

5.4.23.2. Ensure the vehicle is seated on a level surface.

5.4.23.3. Chock the adjacent drive wheel.

5.4.23.4. Locate the solid part of the vehicle's frame.

5.4.23.5. Place the vehicle jack under the vehicle's frame as close as possible that it will not impede tire removal and/or replacement.

5.4.23.6. Raise the vehicle with the jack until the vehicle's weight is supported on the jack but the tire is still in contact with the ground.

5.4.23.7. Loosen, do NOT remove, lug nuts.

5.4.23.8. Jack vehicle up until the tire clears the ground with no more than an extra inch to allow replacement of tire.

5.4.23.9. Place jack stand under frame of the vehicle to support the vehicle in case the jack's hydraulics should leak and/or fail.

5.4.23.10. Remove the vehicle's lug nuts.

5.4.23.11. Remove the vehicle's flat/damaged tire.

Note: If the inside dual tire is flat and/or damaged you must remove the separation ring and remove the inside wheel studs (if equipped) to remove the damaged/flat tire.

5.4.23.12. Place the replacement tire into the vehicle's axle.

5.4.23.13. Replace the vehicle's lug nuts (to hand tightness).

5.4.23.14. Jack the vehicle up and remove the jack stand.

5.4.23.15. Lower the vehicle until it makes contact with the ground.

5.4.23.16. Tighten the vehicle's lug nuts in a star pattern.

Note: As soon as possible, take the vehicle to vehicle maintenance to have the wheels torqued to the manufacturer's specifications.

5.5. Vehicle Operation.

5.5.1. Starting the engine.

5.5.1.1. Insert the key into the starting switch.

5.5.1.2. Place the automatic transmission level in park.

5.5.1.3. Set the parking brake.

5.5.1.4. Turn starting switch to ON position and wait until the orange light goes out, signifying that the glow plug has warmed up.

5.5.1.5. Observe the gauges – performing operational checks.

5.5.1.6. Depress accelerator halfway to the floor and hold in that position.

Note: Park the unit on a firm surface before operating the unit. Use the wheel chocks and parking brakes. Use of outriggers is mandatory. Use outrigger pads on all unpaved surfaces.

5.5.2. Positioning the truck.

5.5.2.1. Use spotters while backing.

5.5.2.2. Maximum side slope of 5°.

5.5.2.3. Maximum ascending slope of 15°.

5.5.2.4. Maximum descending slope of 15°.

5.5.2.5. Start on the hard surface.

5.5.2.6. Do not lift rear tires off the ground while setting the outriggers.

5.5.2.7. Boom and outriggers must be in the stowed position while the truck is in motion.

5.5.3. Operation of boom controls and PTO.

5.5.3.1. From the bucket.

5.5.3.2. From the turret.

5.5.3.3. Limitations: Maximum capacity of the bucket and wench, emergency hydraulic pump time limits, positioning the truck on a slope, maximum voltage boom and platform will withstand. See manufacturer's operator's manual.

5.5.4. Downhill operation.

5.5.4.1. Always descend hills with extreme care, relying primary on the engine braking effect to control vehicle speed.

5.5.4.2. Observe the following precautions:

5.5.4.2.1. Never coast downhill.

5.5.4.2.2. Service brakes alone should not be used to control speed on major downgrades.

5.5.4.2.3. Brakes will fade from overuse.

5.5.4.2.4. Downhill speed is controlled by removing one's foot from the accelerator pedal and putting the transmission/rear axle in reduced gear.

5.5.4.2.5. Do NOT attempt to gear down if the engine has reached maximum speed (revolutions per minute (rpm)) in any gear range since it will be impossible to shift into a lower gear and could result in possible vehicle runaway, property damage, personal injury, or death.

5.5.5. Split brake system.

5.5.5.1. The truck is equipped with a split brake system.

5.5.5.2. The purpose of this split system is to provide a means of stopping the vehicle should a failure occur in either the primary or secondary brake system. In the event air pressure loss occurs in one system, the remaining system continues to provide braking action.

5.5.5.3. Even though there will be enough braking capability for emergency stopping, the vehicle must not be operated when a failure in indicated, as there is no means of replenishing air pressure

5.5.5.4. If vehicle has been parked for an extended period in cold weather, always check to be sure all wheels are rolling free (brakes are not frozen) when starting out. Always clean accumulated ice and snow from brake linkage.

5.5.5.5. Never operate the vehicle when insufficient air pressure (less the 70 pounds per square inch (psi)) is indicated for either system since the volume of air required to stop the vehicle may be greater than that available.

5.5.6. Brake application.

5.5.6.1. Rapid successive brake applications and release sometimes referred to as fanning or pumping the pedal, should be avoided. This is an inefficient way of slowing or stopping a vehicle and inefficient use of air pressure.

5.5.7. Parking.

5.5.7.1. Parking brake.

5.5.7.1.1. All vehicles with air brakes are equipped with spring brake chambers for parking. The parking system is operated manually by a single valve, which in the case of a tractor also controls the parking system on the trailer.

5.5.7.1.2. The purpose of this brake is to hold the vehicle in a parked position and to assist in bringing it to an emergency stop. The parking brake should not be used to stop the vehicle during normal driving.

5.5.7.1.3. To apply the parking brake, pull out control. To release the parking brake, push in control.

5.5.7.1.4. If air pressure is reduced to approximately 20 psi to 45 psi in both the primary and secondary systems, the parking brake control will automatically apply.

5.5.7.1.5. It should be noted that upon loss of air pressure partial spring brake application will occur prior to automatic application of the control valve

5.5.7.1.6. To release, recharge system to 70 psi and push parking brake control.

5.5.7.2. Parking brake indicator light.

5.5.7.2.1. The park brake indicator is operated in conjunction with the parking brake. With the key on and the park brake set, the park light will illuminate. If the light does not illuminated with the park brake set, the indicator may be defective.

5.5.7.2.2. Warning – Driving with the parking brakes applied can lead to excessive heat buildup, resulting in possible property damage, personnel injury, and possible death.

5.5.7.3. When parking on the flightline, always leave the key in the ignition.

5.5.7.4. When parking off the flightline, never leave the key in the ignition.

5.5.8. Reservoir moisture draining.

5.5.8.1. Moisture taken in with the air through the compressor inlet valves collects in the reservoirs and necessitates draining each reservoir.

5.5.8.1.1. Daily in cold weather.

5.5.8.1.2. Once a week in warm weather.

5.5.8.2. This is done by opening the drain cock located either on the bottom of the tank or in the end of the tank. If the drain cock is opened in the end of the tank, there must be some air pressure in the system to assure proper drainage. Be sure to close the drain cocks after all moisture has been expelled.

5.5.8.3. On vehicles so equipped, the reservoir automatic drain valve ejects moisture and contaminants from the reservoir in which it is connected. It operates automatically and requires no manual assistance or control lines from other sources. The reservoir should be drained and the valve should be examined periodically to ensure that the drain passage is not obstructed.

5.5.9. Aerial Lifts.

5.5.9.1. Aerial lifts are electrically isolated buckets, which are often referred to as insulated buckets. Aerial lifts must be constructed to meet ANSI/SIA A92.2., *Vehicle-Mounted Elevating and Rotating Work Platforms.*

5.5.9.2. Operation of aerial lift equipment near energized electrical facilities. Qualified electrical workers may operate aerial lift equipment between the approach distances and the working distances given in **Figure 5.1**, if all of the following conditions are met.

Figure 5.1. Qualified Worker Minimum Working Distances.

Nominal System Voltage Range	Flash Protection Boundary	Limited Approach Boundary		Minimum Working Distance (2) (3) Includes Standard Inadvertent Movement Adder		Prohibited Approach Boundary Includes Reduced Inadverten Movemen Adder
	From Phase to Phase Voltage	Exposed Movable Conductor	Exposed Fixed Circuit Part	Phase to Phase (4)	Phase to Ground (5)	
50 V to 300 V	(1)	10ft 0in	3ft 6in	Avoid contact		Avoid conta
>300 V to 750 V	(1)	10ft 0in	3ft 6in	1ft 0in	1ft 0in	0ft 1in
>750 V to 15 kV	(1)	10ft 0in	5ft 0in	2ft 3in	2ft 2in	0ft 7in
>15 kV to 36 kV	(1)	10ft 0in	6ft 0in	2ft 10in	2ft 7in	0ft 10in
>36 kV to 46 kV	(1)	10ft 0in	8ft 0in	2ft 10in	2ft 10 in	1ft 5in
>46 kV to 69 kV	(1)	15ft 0in	12ft 0in	5ft 0in	5ft 0in	3ft 6in

5.5.9.3. A job safety analysis (JSA) / job hazard analysis (JHA) has been completed.

5.5.9.4. The activity is being performed under the direct supervision of a designated person who is trained and competent in this type of work.

5.5.9.5. The distances between energized parts and the aerial lift equipment is monitored while the aerial lift equipment is being moved and or repositioned

5.5.9.6. The aerial lift equipment is grounded.

5.5.9.7. No one, other than necessary workers, is within 3 meters (10 feet) of the equipment during its operation. Workers are to perform their work while on the equipment, not from a position on the ground.

5.5.9.8. Types of aerial lifts:

5.5.9.8.1. Extendable boom platforms.

5.5.9.8.2. Aerial ladders.

5.5.9.8.3. Articulating boom platforms.

5.5.9.8.4. Vertical towers.

5.5.9.8.5. A combination of any of the above.

5.5.9.9. Manufacturers.

5.5.9.9.1. Aerial equipment can be made of metal, wood, fiberglass-reinforced plastic, or other materials. They can be powered or manually operated. The device is considered to be an aerial lift whether or not it is capable of rotating about a substantially vertical axis. Aerial lifts must not be "field modified" unless such modification is certified acceptable by the manufacturer.

5.5.9.10. OSHA Aerial Lift Rules. OSHA mandates the following rules:

5.5.9.10.1. Secure aerial ladders in the lower traveling positions by the locking device on top of the truck cab and the manually operated device at the base of the ladder, before the truck is moved for highway travel.

5.5.9.10.2. Lift controls must be tested each day prior to use if the lift is to be used that day, to determine if the controls are in safe working condition. Lift controls must be tested on a monthly basis when not in use.

5.5.9.10.3. Only trained/authorized persons may operate an aerial lift.

5.5.9.10.4. Wire rope should not be used on the boom sections of line trucks or on bucket trucks because it can conduct electricity. Wire rope may be used on side winches that do not come in contact with live lines.

5.5.9.10.5. Do not belt off to an adjacent pole, structure, or equipment while working from an aerial lift.

5.5.9.10.6. Stand firmly on the floor of the bucket and do not sit or climb on the edge of the bucket or use planks, ladders, or other devices for a work position.

5.5.9.10.7. Wear a body harness and a lanyard attached to the boom or bucket while working from an aerial lift.

5.5.9.10.8. Do not exceed the manufacturer's boom and bucket load limits.

5.5.9.10.9. Set the brakes and position outriggers on pads or a solid surface. Install wheel chocks before using an aerial lift on an incline.

5.5.9.10.10. Do not move an aerial lift truck when the boom is elevated in a working position with workers in the bucket.

5.5.9.10.11. Articulating boom and extensible boom platforms, primarily designed as personnel carriers, usually have both platform (upper) and lower controls. Upper controls must be in or beside the platform within easy reach of the operator. Lower controls must provide for overriding the upper controls. Controls must be plainly marked as to their function. Lower level controls must not be operated unless permission has been obtained from the worker in the lift, except in case of emergency.

5.5.9.10.12. The insulated portion of an aerial lift must not be altered in any manner that might reduce its insulating value.

5.5.9.10.13. Inspect the boom before moving an aerial lift for travel. See that equipment is properly cradled and outriggers are in the stowed position.

5.5.9.10.14. Insulated Buckets. An insulated bucket of an aerial lift is provided with an insulated bucket liner.

5.5.9.10.14.1. Tools and other equipment carried in the bucket must be stowed carefully to avoid damaging the insulated bucket liner.

5.5.9.10.14.2. Insulated buckets must be subjected to an arm current (dielectric) test. This test consists of placing the insulated bucket in contact with an energized source equal to the voltage to be worked upon for a minimum 3-minute period.

5.5.9.10.14.2.1. The leakage current must not exceed one microampere per kilovolt of nominal line-to-line voltage. Arm current (dielectric) tests must be accomplished every six months or when changed conditions indicate a need for additional tests, such as mechanical alteration of the vehicle through maintenance procedures.

5.5.9.10.14.2.2. Keep a record of all tests. Work operations must be suspended immediately upon any indication of a malfunction in the equipment.

5.5.10. Pintle Hook Operations. See the Pintle Hook Lesson Plan for additional information.

5.5.10.1. After inserting the towing eye into the pintle hook, ensure the upper jaw is closed and the latch manual unlock device it properly aligned.

5.5.10.2. Once connection is made, do not step over the tow bar.

5.5.10.3. Cotter/safety pin usage: Before inserting the safety pin, pry the end of the pin open by hand to the necessary extent, so that when compressed for installation into the locking device there is enough tension to keep the safety pin from vibrating free.

5.5.10.4. MS type quick release pin: Before inserting the safety pin, ensure ball locks are present and not excessively worn, and that the push button is secure in the pin body and the button moves freely.

5.5.10.5. After the safety pin is installed, pull up on the latch (manual unlock device) to ensure the upper jaw will not open and the pintle assembly is locked (beware of equipment with spring loaded tow bars). If the manual locking device is not properly secured, spring loaded tow bars or tow bars under pressure can come out of the pintle hook and cause injury and/ or damage.

5.5.10.6. When towing a trailer, federal safety regulations require one or more safety devices to prevent the towed equipment from breaking loose of the tow vehicle. The use of safety chains is mandatory.

5.5.10.7. Attach safety chains to vehicle towing eyes. If towing eyes are not available, secure chains around the towing vehicle's frame. If the frame is inaccessible, wrapping the chains around the bumper is acceptable, but only as a last resort.

5.5.10.8. If electrical hook-ups are available, make appropriate connections and check for proper operation of electrical devices on trailer.

5.5.10.9. If trailer brake airlines are available, make appropriate connections and test system before moving the vehicle.

5.5.10.10. With spotter, clear a line of travel. Pull the vehicle forward while spotter ensures equipment is properly attached.

5.5.10.11. Additional checks should be made at each work or rest location.

5.5.10.12. After towing a short distance (one half mile), stop and check the pintle hook locking device and safety chains.

5.5.10.13. Ensure towing vehicle is properly stopped and in PARK or NEUTRAL with parking brake set.

5.5.10.14. Ensure the towed equipment's integral brake system, if equipped, is set.

5.5.10.15. Remove safety pin and unlock pintle latch (manual unlock device).

5.5.10.16. Open pintle and remove towing eye, properly stowing the towing eye.

Section 6—EXPLANATION AND DEMONSTRATION

6.1. Instructor's Preparation.

6.1.1. Establish a training location.

6.1.2. Obtain appropriate vehicle operator's manual.

6.1.3. Schedule/reserve a vehicle.

6.1.4. Ensure trainee completes AF Form 171.

6.2. Safety Procedures and Equipment.

6.2.1. The following safety items should be followed by both the instructor and trainee.

6.2.1.1. Chock wheel (if required) when high reach truck is parked.

6.2.1.2. Remove all jewelry and identification tags.

6.2.1.3. Personal protective equipment and equipment items.

6.2.1.3.1. Safety steel-toed boots must be worn.

6.2.1.3.2. Gloves will be worn during cargo loading and unloading.

6.2.1.3.3. Harness must be worn.

6.2.1.3.4. Hearing protection must be worn.

6.2.1.3.5. A hard hat must be worn.

6.2.1.3.6. First aid kit.

6.2.1.3.7. Warning triangles.

6.2.1.3.8. Raingear, cold weather gear, etc.

6.2.1.3.9. Reflective belt during hours of reduced visibility or on the flightline.

6.2.1.4. The trainer and the trainee should walk-around the vehicle to become familiar all warning labels and signs.

6.2.1.5. Ensure trainee wears seat belts.

6.2.1.6. Properly adjust driver's seat and all mirrors, if available.

6.2.1.7. Throughout demonstration, practice high reach truck safety.

6.2.2. Practice basic RM process during demonstration:

6.2.2.1. Identify hazards.

6.2.2.2. Assess hazards.

6.2.2.3. Develop controls and make decisions.

6.2.2.4. Implement controls.

6.2.2.5. Supervise and evaluate.

6.3. Operator Maintenance Demonstration.

6.3.1. With trainee, accomplish vehicle inspection using AF Form 1800. The vehicle inspection will follow the seven-step method as described in **Attachment 4**. An inspection guide (**Attachment 2**) can be used to ensure all areas of the tractor and trailer are covered in addition to the "Operation Demonstration" guidelines provided below.

6.3.2. There are certain maintenance functions operators are required to perform. They are:

6.3.2.1. Maintain all fluid and fuel levels.

6.3.2.2. Cleaning the vehicle.

6.3.2.3. Maintaining tire air pressure.

6.3.2.4. Checking all lights and electrical systems on the vehicle.

6.3.2.5. Daily inspection/signing the AF Form 1800.

6.3.2.6. Air brake systems inspection.

6.4. Operation Demonstration.

6.4.1. Throughout demonstration:

6.4.1.1. Allow for questions.

6.4.1.2. Repeat demonstrations as needed.

6.4.2. For all high reach trucks, within the training area, demonstrate and explain the following. **Note:** Use information contained on the data plate and/or the operator's manual:

6.4.2.1. Specific high reach capacities: Explain parking brake as they apply to the high reach truck being used.

6.4.2.2. High reach truck controls.

6.4.2.3. Point out the items to be inspected during operations.

6.4.3. Demonstrate the following high reach truck operations (use spotter when backing).

6.4.3.1. Forward.

6.4.3.2. Stop.

6.4.3.3. Backing.

6.4.3.4. Parking.

6.4.4. High reach operations demonstration.

6.4.4.1. Go over the capabilities of the condor.

6.4.4.2. Explain air brakes as they apply to the condor being used.

6.4.4.3. Brake pedal.

6.4.4.4. Proper use of boom operation.

6.4.4.5. Transmission gearshift levers.

6.4.4.6. Show the operations of hydraulic control levers.

6.4.4.6.1. Lift/lower control lever.

6.4.4.6.1.1. Standard condor reach.

6.4.4.6.1.2. Boom condor reach.

6.4.4.6.1.3. Outriggers.

6.4.4.6.2. Tilt control lever.

6.4.4.6.3. Other control as equipped.

6.4.5. Show trainee the after operation inspection and report.

6.4.5.1. Ensure vehicle is cleaned.

6.4.5.2. Refuel vehicle.

6.4.5.3. Following manufacturer's shut-down procedures.

6.4.5.4. Park.

6.4.5.4.1. Apply brakes.

6.4.5.4.2. Place transmission in neutral (park or an automatic).

6.4.5.5. Perform a walk-around inspection.

6.4.5.6. Annotate any discrepancies found on AF Form 1800.

6.4.6. Conclude by allowing time for questions and any requested re-demonstrations.

Section 7—TRAINEE PERFORMANCE AND EVALUATION

7.1. Trainee Performance.

7.1.1. Instructor will:

7.1.1.1. Ensure safety at all times. **Note:** Stop training when safety items are violated. Proceed only when the trainee fully understands how to avoid repeating the safety infraction(s).

7.1.1.1.1. Chock wheel (if required) when the high reach truck is parked.

7.1.1.1.2. Remove all jewelry and identification tags.

Note: If available, mark vehicle with magnetic sign indicating "Driver-in-Training" or "Trainee Operator."

7.1.1.2. Personal protective equipment and other items:

7.1.1.2.1. Safety steel-toed boots must be worn.

7.1.1.2.2. Gloves will be worn during cargo loading and unloading.

7.1.1.2.3. First aid kit.

7.1.1.2.4. Reflective belt during hours of reduced visibility or on the flightline.

7.1.1.2.5. Raingear, cold weather gear, etc.

7.1.1.2.6. Hearing protection.

7.1.1.2.7. Harness (when applicable).

7.1.1.2.8. Leather gloves (when applicable)

7.1.1.3. Pay particular attention to the cautions and warnings listed in the operator's manual.

7.1.1.4. Ensure trainee wears seat belts.

7.1.1.5. Properly adjust driver’s seat and all mirrors.

7.1.1.6. High reach truck safety items/procedures.

7.1.1.7. Ensure the driver is aware of driving situations he/she is to perform.

7.1.1.8. Conduct during/after-action reviews with the trainee (demonstration may need to be re-accomplished).

7.1.2. Trainee Performance.

7.1.2.1. Conduct operator maintenance (have trainee explain items being inspected). **Note:** Allow trainee to use **Attachment 2** as a guide while performing inspection.

7.1.2.1.1. Backing. Serve as the trainee’s spotter, or if available, have another trainee be the spotter.

7.1.2.1.2. Continue until trainee can show proficiency in operating.

7.1.2.2. Have trainee practice the high reach truck operations listed below (use spotter when backing) until they can safely and efficiently perform.

7.1.2.3. Establish a road course and operate the high reach truck until trainee performs safely and efficiently, the course should include the following:

7.1.2.3.1. Forward.

7.1.2.3.2. Stop.

7.1.2.3.3. Backing.

7.1.2.3.4. Parking.

7.1.2.3.5. High reach operations demonstration.

7.1.2.3.5.1. Go over the capabilities of the condor.

7.1.2.3.5.2. Explain air brakes as they apply to the condor being used.

7.1.2.3.5.3. Brake pedal.

7.1.2.3.5.4. Proper use of boom operation.

7.1.2.3.5.5. Transmission gearshift levers.

7.1.2.3.6. Show the operations of hydraulic control levers.

7.1.2.3.6.1. Lift/lower control lever.

7.1.2.3.6.2. Standard condor reach.

7.1.2.3.6.3. Boom condor reach.

7.1.2.3.6.4. Outriggers.

7.1.2.3.6.5. Tilt control lever.

7.1.2.3.6.6. Other control as equipped.

7.1.2.4. Perform after-operation inspection.

7.1.2.4.1. Ensure vehicle cleaned.

7.1.2.4.2. Cargo straps and chains are properly stowed.

7.1.2.4.3. Refueled.

7.1.2.4.4. Following manufacturer’s shut-down procedures.

7.1.2.4.5. Park.

7.1.2.4.6. Apply brakes.

7.1.2.4.7. Place transmission in neutral (park or an automatic).

7.1.2.5. Perform a walk-around inspection.

7.1.2.6. Report any discrepancies found on AF Form 1800.

7.2. Performance Evaluation.

7.2.1. Trainee will perform performance evaluation found in **Attachment 3**.

7.2.1.1. Instructor and trainee will review **Attachment 3**.

7.2.1.2. Instructor will answer trainee's questions.

Note: If available, mark vehicle with magnetic sign indicating "Driver-in-Training" or "Trainee Operator".

7.2.2. Instructor will:

7.2.2.1. Ensure safety at all times.

7.2.2.1.1. Place wheel chocks (if required) when high reach truck is parked,

7.2.2.1.2. Remove all jewelry and identification tags.

7.2.2.2. Personal protective equipment and other items.

7.2.2.2.1. Safety steel-toed boots must be worn.

7.2.2.2.2. Gloves will be worn during cargo loading and unloading.

7.2.2.2.3. First aid kit.

7.2.2.2.4. Reflective belt during hours of reduced visibility or on the flightline.

7.2.2.3. Pay particular attention to the cautions and warnings listed in the operator's manual.

7.2.2.4. Ensure trainee wears seat belts.

7.2.2.5. Properly adjust driver's seat and all mirrors (if available).

7.2.2.6. High reach truck safety items/procedures.

7.2.3. Explain driving techniques.

7.2.4. Establish a road course that will have the following: (if the course does not have one of the following, then the trainee should be able to explain the correct driving techniques).

7.2.4.1. Forward.

7.2.4.2. Stop.

7.2.4.3. Backing.

7.2.4.4. Parking.

7.2.4.5. High reach operations demonstration.

7.2.4.5.1. Go over the capabilities of the condor.

7.2.4.5.2. Explain air brakes as they apply to the condor being used.

7.2.4.5.3. Brake pedal.

7.2.4.5.4. Proper use of boom operation.

7.2.4.5.5. Transmission gearshift levers.

7.2.4.6. Show the operations of hydraulic control levers.

7.2.4.6.1. Lift/lower control lever.

7.2.4.6.2. Standard condor reach.

7.2.4.6.3. Boom condor reach.

7.2.4.6.4. Outriggers.

7.2.4.6.5. Tilt control lever.

7.2.4.6.6. Other control as equipped.

7.2.5. Ensure the driver is aware of driving situations.

7.2.6. Conduct after-action reviews with the trainee.

7.2.7. Trainee is not allowed any instructor assists to pass performance evaluation.

7.2.8. Evaluation checklist provided in **Attachment 3**.

7.2.9. Retraining; retrain No-Go's.

7.2.9.1. Re-demonstrate “No-Go” items.

7.2.9.2. Have trainee re-perform until they show proficiency in operating, critique weaknesses as observed.

7.2.9.3. Re-evaluate.

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References
AFI 24-301, *Ground Transportation*, 1 November 2018
AFI 24-302, *Vehicle Management*, 26 June 2012
AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 June 2012
AFMAN 24-306, Operation of Air Force Government Motor *Vehicles*, 9 December 2016
AMCI 24-101 Vol. 10, *Military Airlift – Fleet Service*, 27 April 2016

Adopted Forms
AF Form 171, *Request for Driver's Training and Addition to U.S. Government Driver's License*, 1 November 2018
AF Form 847, *Recommendation for Change of Publication*
AF Form 1800, *Operator's Inspection Guide and Trouble Report*

Abbreviations and Acronyms
AF—Air Force
AFI—Air Force Instruction
AFIMSC—Air Force Installation and Mission Support Center
AFMAN—Air Force Manual
AFQTP—Air Force Qualification Training Plan
IAW—In Accordance With
JHA—Job Hazard Analysis
JSA—Job Safety Analysis
MPH—Miles per Hour
RM—Risk Management
RPM—Revolutions per Minute
OSHA—Occupational Safety and Health Administration
PSI—Pounds per Square Inch
PTO—Power Take-Off
TO—Technical Order
VCO—Vehicle Control Official

Attachment 2

HIGH REACH TRUCK INSPECTION GUIDE

GENERAL

STEP 1. VEHICLE OVERVIEW

☐ Paperwork
- AF Form 1800
- Discrepancy Correction Complete (VM Annotation)

☐ Vehicle Approach
- Damage
- Vehicle Leaning
- Fresh Leakage of Fluids
- Hazards Surrounding Vehicle

INTERNAL

STEP 2. ENGINE COMPARTMENT

☐ Leaks/hoses/Electrical Wiring Insulation
☐ Oil Level
☐ Coolant Level
☐ Brake Fluid
☐ Antifreeze
☐ Hydraulic Fluid
☐ Windshield Washer Fluid
☐ Battery Fluid Level, Connections & Tie downs
☐ Automatic Transmission Fluid Level
☐ Engine Compartment Belts

STEP 3. ENGINE START/CAB CHECK (LEFT/FRONT/RIGHT)

☐ Safe Start
☐ Gauges
- Oil Pressure Gauge
- Air Pressure Gauge
- Temperature Gauge (Coolant/Engine Oil)
- Ammeter/Voltmeter

☐ Warning Lights & Buzzers
☐ Mirrors & Windshield
☐ Wipers/Washers
☐ Emergency & Safety Equipment
- Properly Charged & Rated Fire Extinguisher
- Optional (Chains/Tire Changing Equip, Emergency Phone List)

☐ **3B** – Lights/Reflectors/Reflector Tape Condition (Front/Sides/Rear)
(Dash Indicators for:)

- Left Turn Signal
- Right Turn Signal
- Four-Way Emergency Flashers
- High Beam Headlight
- Headlights
- Taillights
- Backing Lights
- Brake Lights
- Red Reflectors & Amber Reflectors
- Reflective Tape Condition

☐ Horn
☐ Heater/Defroster
☐ Brakes

- Parking Brake Check
- Hydraulic Brake Check
- Air Brake Check (if equipped)
- Service Brake Check
- Safety Belt

(TURN-OFF ENGINE/TURN-ON HEADLIGHTS *LOW BEAM* AND FOUR-WAY FLASHERS)

STEP 4. WALK-AROUND INSPECTION

☐ **4A** – Steering

- Steering Box/Hoses
- Steering Linkages

☐ **4B** – Suspension

- Springs/Air/Torque
- Mounts
- Shock Absorbers

☐ **4C** – Brakes

- Slack Adjustors & Pushrods
- Brake Chambers
- Brake Hoses/Lines
- Drum Brake
- Brake Linings

☐ **4D** – Wheels

- Rims
- Tires

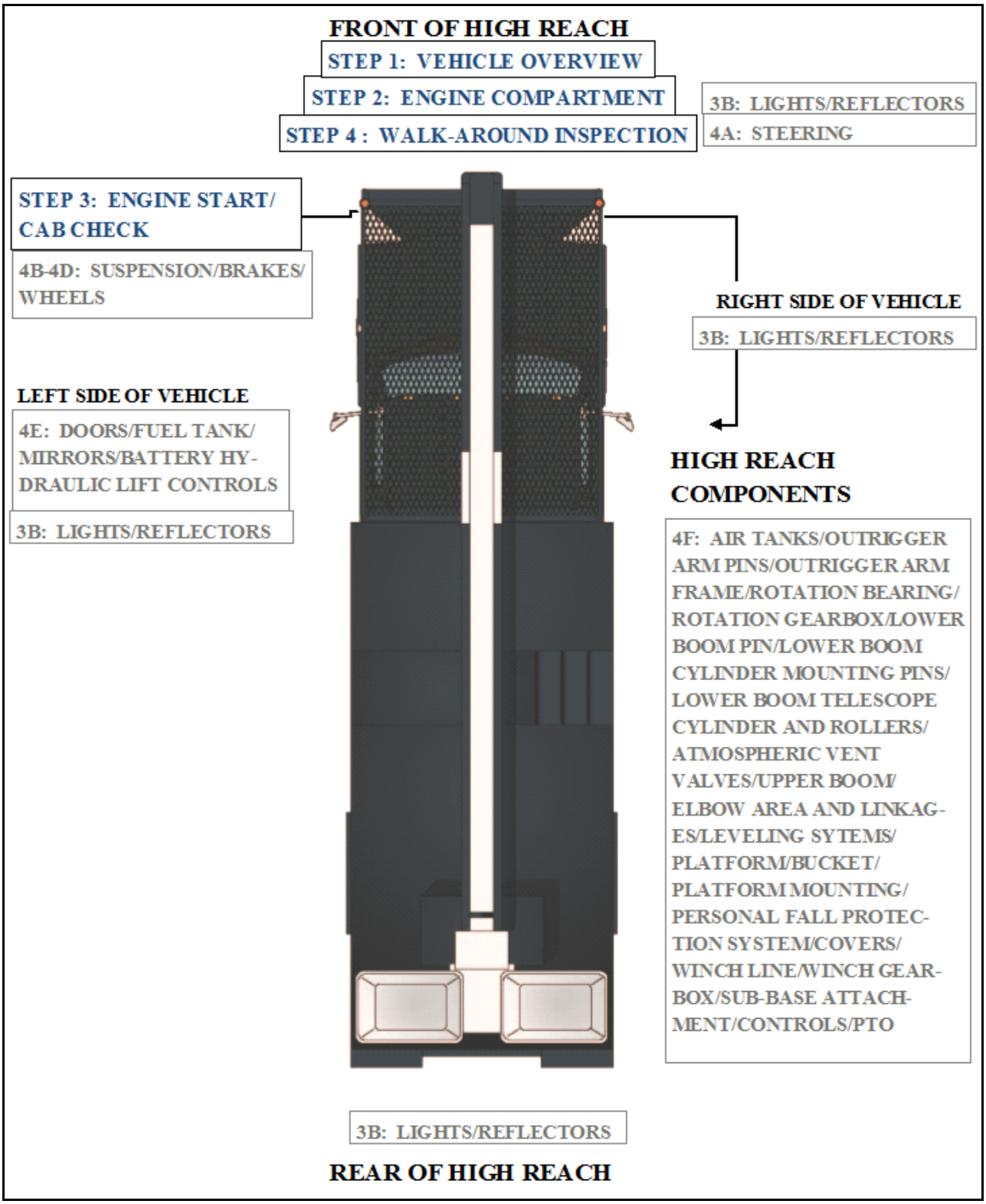
SIDE OF VEHICLE

- ☐ **4E** – Doors
- ☐ **4E** – Mirrors
- ☐ **4E** – Fuel Tank
- ☐ **4E** – Hydraulic Lift Controls

SPECIAL COMPONENTS

- ☐ **4F** – Air Tanks
- ☐ **4F** – Outriggers
- ☐ **4F** – Rotation
- ☐ **4F** – Lower Boom
- ☐ **4F** – Upper Boom
- ☐ **4F** – Atmospheric Vent Valves
- ☐ **4F** – Leveling Systems
- ☐ **4F** – Platform/Bucket/Mounting
- ☐ **4F** – Fall Protection System
- ☐ **4F** – Winch Line/Gearbox
- ☐ **4F** – Controls
- ☐ **4F** – Power Take-off

Figure A2.1. High Reach Truck Inspection Guide.



Attachment 3

PERFORMANCE TEST

A3.1. Desired Learning Outcome.

A3.1.1. Understand the safety precautions to be followed before-, during-, and after-operation of the high reach truck.

A3.1.2. Understand the purpose of the high reach truck and their role in the mission.

A3.1.3. Know the proper operator maintenance procedures of the high reach truck, IAW applicable technical orders and use of AF Form 1800.

A3.1.4. Safely and proficiently operate the high reach truck.

A3.2. Instructions. Before beginning the performance test, the trainer will brief the trainee on the scenario the trainee will need to accomplish. He/she will be given additional directions and instructions as needed to proceed through the scenario.

A3.3. Scoring.

A3.3.1. The trainer examiner will be scoring on High Reach truck operations and also the general safe driving practices. The examiner will give directions and instructions to the trainee in sufficient time for to execute a driving maneuver. He/she will not be asked to drive in an unsafe manner.

A3.3.2. The examiner will be making various marks on the performance test checklist. This does not necessarily mean the trainee have done anything wrong. It is in the best interest to concentrate on the operation of the high reach truck. The trainer will explain the test results to the trainee at the conclusion of the performance test.

A3.3.3. Tasks being graded are listed on the following page; the trainee will be required to successfully pass all items.

A3.3.4. The instructor will stop the test at any time safe high reach truck operations are not being followed or as deemed necessary for safety concerns.

Figure A3.1. Performance Test Checklist:

PERFORMANCE TEST			
Trainees Name:		**Date:**	
Event	**Go**	**No Go**	**Notes**
1. PRE, DURING, AND POST- OPERATION INSPECTION			
1.1. Operator has required Personal Protective Equipment.			
1.2. Follows general pattern of pre-trip checklist.			
1.3. Performs brake component check			
1.4. Signs AF Form 1800 to signify accomplishment of complete inspection.			
1.5. Cleans windshield, windows, mirrors, lights and reflectors			
1.6. Continues during operations inspection checks.			
1.7. Knows use of tools, emergency devices, tire chains, fire extinguishers, etc.			
1.8. Performs post trip inspection and reports malfunctions to Vehicle Management.			
1.9. Understands all gauges, switches, levers and buttons.			
Event	**Go**	**No Go**	**Notes**
2. ON-ROAD DRIVING TEST			
2.1. General - safety belt is used; obeys all traffic signs, signals, and laws; completes test without an accident or moving violation.			
2.2. Forward – Obeys speed limits. Drives the bucket truck correctly and safely. Maintains proper following distance, does not cut off other drivers, does not cross the yellow centerline.			
2.3. Stopping - decelerates smoothly, brakes evenly, changes gears as necessary; brings vehicle to a full stop without coasting.			

Event:	Go	No Go	Notes
3. BACKING/PARKING:			
3.1. Backing			
Positions truck properly.			
Inspects truck before backing.			
Post guide before backing and uses spotters properly.			
Uses mirrors properly.			
Avoids blind side backing.			
Controls speed.			
3.2. Parking.			
Checks traffic position before parking.			
Secures truck properly.			
Parks legally and safely.			
Pulls completely off pavement when possible.			
Knows proper use of emergency warning devices.			
Uses emergency warning devices.			
Event:	**Go**	**No Go**	**Notes**
4. HIGH REACH OPERATIONS:			
4.1. Vehicle Set-up Boom Operations.			
Vehicle placement.			
Vehicle set-up on slopes (outriggers).			
Water removal from buckets.			
Power take-off (PTO).			
Boom controls. From the bucket/From the turret.			
Safety equipment.			
Do not operate the boom in winds in excess of 25 mph.			
4.2. Hydraulic Equipment Attachment.			
Stick saws.			
Crimpers.			
Drills.			
4.3. Stowing Boom Making Ready to Move the Vehicle.			
Tools removed from bucket.			
Bucket covers installed.			
Boom strapped down.			
Outriggers completely stowed.			
All material and equipment secured on the bed of the truck.			
Close and latch all bin doors.			

CERTIFIER COMMENTS:

Attachment 4

SEVEN-STEP INSPECTION PROCESS

Figure A4.1. Seven-Step Inspection Process.

Seven-Step Inspection Process	
Step	**Procedure**
1. Vehicle Overview	• Review the AF Form 1800. o Ensure any discrepancy has been corrected. o Vehicle Management annotated the discrepancy was completed. o Approaching the vehicle. ▪ Damage or vehicle leaning to one side. ▪ Fresh leakage of fluids. ▪ Hazards around vehicle.
2. Check Engine Compartment	• **Note:** Check that the parking brakes are on and/or wheels chocked. The operator may have to raise the hood, tilt the cab (secure loose things so they don't fall and break something), or open the engine compartment door. • Check the following: o Engine oil level. o Coolant level in radiator; condition of hoses. o Power steering fluid level; hose condition (if so equipped). o Windshield washer fluid level. o Battery fluid level, connections and tie-downs (battery may be located elsewhere). o Automatic transmission fluid level (may require engine to be running). o Check belts for tightness and excessive wear (alternator, water pump, air compressor)--learn how much "give" the belts should have when adjusted right. o Leaks in the engine compartment (fuel, coolant, oil, power steering fluid, hydraulic fluid, battery fluid).

	Cracked, worn electrical wiring insulation.
3. Start Engine and Inspect Inside the Cab (Get in and Start Engine)	• Make sure parking brake is on. • Put gearshift in neutral (or park if automatic). Start engine; listen for unusual noises. • If equipped, check the Anti-lock Braking System (ABS) indicator lights. Light on dash should come on and then turn-off. If it stays on the ABS is not working properly. • Look at the gauges. o Oil pressure. Should come up to normal within seconds after engine is started. o Air pressure. Pressure should build from 50 to 90 psi within 3 minutes. Build air pressure to governor cut-out (usually around 120 – 140 psi. Know the vehicle's requirements. o Ammeter and/or voltmeter. Should be in normal range(s). o Coolant temperature. Should begin gradual rise to normal operating range. o Engine oil temperature. Should begin gradual rise to normal operating range. o Warning lights and buzzers. Oil, coolant, charging circuit warning, and antilock brake system lights should go out right away. o Check Condition of Controls. Check all of the following for looseness, sticking, damage, or improper setting: ▪ Steering wheel. ▪ Clutch. ▪ Accelerator (gas pedal). ▪ Brake controls. ▪ Foot brake. ▪ Parking brake. ▪ Transmission controls. ▪ Interaxle differential lock (if vehicle has one). ▪ Horn(s).

	▪ Windshield wiper/washer. ▪ Lights. ▪ Headlights. ▪ Dimmer switch. ▪ Turn signal. ▪ Four-way flashers. ▪ Parking – clearance – identification – marker switch (switches). • Check mirrors and windshield. o Inspect mirrors and windshield for cracks, dirt, illegal stickers, or other obstructions to seeing clearly. Clean and adjust as necessary. • Check emergency equipment. o Check for safety equipment: ▪ Spare electrical fuses (unless vehicle has circuit breakers). ▪ Three red reflective triangles, 6 fuses or 3 liquid burning flares. ▪ Properly charged and rated fire extinguisher. Check for optional items such as: ▪ Chains (where winter conditions require). ▪ Tire changing equipment. ▪ List of emergency phone numbers Accident reporting kit (packet). o Check safety belt. Check that the safety belt is securely mounted, adjusts; latches properly and is not ripped or frayed.
4. Turn-off Engine	• Make sure the parking brake is set, turn-off the engine, and take the key with. • Turn-on headlights (low beams) and four-way emergency flashers, and get out of the vehicle.

5. Do Walk-Around Inspection	• General. o Go to front of vehicle and check that low beams are on and both of the four-way flashers are working. o Push dimmer switch and check that high beams work. o Turn-off headlights and four-way emergency flashers. o Turn-on parking, clearance, side-marker, and identification lights. o Turn-on right turn signal, and start walk-around inspection. o Walk around and inspect. ▪ Clean all lights, reflectors, and glass as while doing the walk-around inspection. • Left front side. o Driver's door glass should be clean. o Door latches or locks should work properly. • Left front wheel. o Condition of wheel and rim--missing, bent, broken studs, clamps, lugs, or any signs of misalignment. o Condition of tires--properly inflated, valve stem and cap OK, no serious cuts, bulges, or tread wear. o Use wrench to test rust-streaked lug nuts, indicating looseness. o Hub oil level OK, no leaks. Left front suspension. o Condition of spring, spring hangers, shackles. o U-bolts. o Shock absorber condition. • Left front brake. o Condition of brake drum or disc. o Condition of hoses. • Front. o Condition of front axle. Condition of steering system. o No loose, worn, bent, damaged or missing parts. o Mustgrab steering mechanism to test for looseness. o Condition of windshield.

	o Check for damage and clean if dirty. o Check windshield wiper arms for proper spring tension. o Check wiper blades for damage, "stiff" rubber, and securement. o Lights and reflectors. o Parking, clearance, and identification lights clean, operating, and proper color (amber at front). o Reflectors clean and proper color (amber at front). o Right front turn signal light clean, operating, and proper color (amber or white on signals facing forward). • Right side. o Right front: check all items as done on left front. o Primary and secondary safety cab locks engaged (if cab-over-engine design). o Right fuel tank(s). o Securely mounted, not damaged, or leaking. Fuel crossover line secure. o Tank(s) contain enough fuel. Cap(s) on and secure. o Condition of visible parts. Rear of engine--not leaking. Transmission--not leaking. o Exhaust system--secure, not leaking, not touching wires, fuel, or air-lines. o Frame and cross members--no bends or cracks. o Spare tire carrier or rack not damaged (if so equipped). o Spare tire and/or wheel securely mounted in rack. o Spare tire and wheel adequate (proper size, properly inflated). o Cargo securement (trucks). o Cargo properly blocked, braced, tied, chained, etc. Header board adequate, secure (if required). o Side boards, stakes strong enough, free of damage, properly set in place (if so equipped). • Right rear.

	o Condition of wheels and rims--no missing, bent, or broken spacers, studs, clamps, or lugs. o Condition of tires--properly inflated, valve stems and caps OK, no serious cuts, bulges, tread wear, tires not rubbing each other, and nothing stuck between them. o Tires same type, e.g., not mixed radial and bias types. o Tires evenly matched (same sizes). Wheel bearing/seals not leaking. o Suspension. o Condition of spring(s), spring hangers, shackles, and u-bolts. o Axle secure. o Powered axle(s) not leaking lube (gear oil). Condition of torque rod arms, bushings. o Condition of shock absorber(s). o If retractable axle equipped, check condition of lift mechanism. If air powered, check for leaks. o Condition of air ride components. o Brakes. o Brake adjustment. o Condition of brake drum(s) or discs. o Condition of hoses--look for any wear due to rubbing. o Lights and reflectors. o Side-marker lights clean, operating, and proper color (red at rear, others amber). o Side-marker reflectors clean and proper color (red at rear, others amber). • Rear. o Lights and reflectors. o Rear clearance and identification lights clean, operating, and proper color (red at rear). o Reflectors clean and proper color (red at rear). o Taillights clean, operating, and proper color (red at rear).

	o Right rear turn signal operating, and proper color (red, yellow, or amber at rear). o License plate(s) present, clean, and secured. o Splash guards present, not damaged, properly fastened, not dragging on ground, or rubbing tires. o End gates free of damage, properly secured in stake sockets. o Rear doors securely closed, latched/locked. • Left side. o Check all items as done on right side, plus: o Battery (batteries) (if not mounted in engine compartment). o Battery box (boxes) securely mounted to vehicle. Box has secure cover. o Battery (batteries) secured against movement. Battery (batteries) not broken or leaking. o Fluid in battery (batteries) at proper level (except maintenance-free type). o Cell caps present and securely tightened (except maintenance-free type). o Vents in cell caps free of foreign material (except maintenance-free type).
6. Check Signal Lights	• Get in and turn-off all lights. • Turn-on stop lights (apply trailer hand brake or have a helper put on the brake pedal). • Turn-on left turn signal lights. • Get out and check lights. • Left front turn signal light clean, operating and proper color (amber or white on signals facing the front). • Left rear turn signal light and both stop lights clean operating, and proper color (red, yellow, or amber). • Get in vehicle. o Turn-off lights not needed for driving.

	o Check for all required papers, trip manifests, permits, etc. o Secure all loose articles in cab (they might interfere with operation of the controls or hit the operator in a crash). o Start the engine.
7. Start the Engine and Check Test for Hydraulic Leaks	• Test for hydraulic leaks. o If the vehicle has hydraulic brakes, pump the brake pedal three times. o Then apply firm pressure to the pedal and hold for 5 seconds. o The pedal should not move. If it does, there may be a leak or other problem. • Brake system. • Test parking brake. o Fasten safety belt. o Set parking brake (power unit only). Place vehicle into a low gear. o Gently pull forward against parking brake to make sure the parking brake holds. o If it doesn't hold vehicle, it is faulty; get it fixed. • Test service brake stopping action. o Go about 5 miles per hour. o Push brake pedal firmly. o "Pulling" to one side or the other can mean brake trouble. o Any unusual brake pedal "feel" or delayed stopping action can mean trouble. o If the trainee finds anything unsafe during the Vehicle inspection, get it fixed. Federal and state laws forbid operating an unsafe vehicle. • Check vehicle operation regularly: o Instruments. o Air pressure gauge (if the vehicle has air brakes). Temperature gauges. o Pressure gauges. Ammeter/voltmeter. o Mirrors. o Tires.

	o If the trainee sees, hears, smells, or feels anything that might mean trouble, he/she should check it out. • Safety inspection. • Document any discrepancy on AF Form 1800. Sign-off AF Form 1800 to signify accomplishment of inspection.