

# WP 05-WH1403

Revision 5

## 3-Ton Electric Forklift 41-H-009

Technical Procedure

EFFECTIVE DATE: 12/04/09

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APPROVED FOR USE

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## INTRODUCTION<sup>1, 2, 3</sup>

This procedure provides guidance for operating the 3-Ton Electric Forklift, 41-H-009, at the Waste Isolation Pilot Plant (WIPP).

Performance of this procedure generates the following record(s), as applicable:

- Equipment Logbook.

## REFERENCES

### BASELINE DOCUMENTS

- Title 40 *Code of Federal Regulations* (CFR) §264.15, General Inspection Requirements
- DOE Standard 1090-2007, *Hoisting and Rigging*
- Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit No. NM48901388-TSDF issued by New Mexico Environment Department
- 41-H-009, CLARK Operator's Manual
- WP 04-AD3011, Equipment Lockout/Tagout

### REFERENCED DOCUMENTS

- WP 04-IM1000, Issues Management Processing of WIPP Forms
- WP 05-WH1101, Surface Transuranic Mixed Waste Handling Area Inspections

## PRECAUTIONS AND LIMITATIONS

- Preoperational Checks are required prior to operating forklift on each shift.
- Only those individuals qualified as a Waste Handling Technician/Engineer (WHT/WHE), or trainees operating under the direct supervision of a qualified WHT/WHE, are authorized to perform the waste handling activities specified in this procedure.
- The rated load carrying capacities of the forklift, listed below, **MUST NOT** be exceeded:
  - Forks: 5,700 lbs at 24-inch load center
  - Drum handler: 4,000 lb at 60-inch load center

- When operating forklift, the operator must remain aware of overhead obstacles (i.e., doors, crane pendants, etc.) at all times.
- To prevent personnel injury, the operator must keep hands, feet, and other body parts inside Forklift Operators Designated Area at all times.
- Carrying passengers is prohibited.
- During load movements that impair the Forklift Operator's view a Spotter shall be utilized.
- Decreased speeds are required in icy or wet conditions, and when turning corners.
- Airlock doors must be in the OPEN position prior to entering/exiting with mobile equipment.
- Only one piece of mobile equipment at a time may be in the airlock and it must be centered in the airlock when entering/exiting airlock doors.
- If forklift battery charge indicator is in the red band, a battery charge is required before use.
- If forklift battery charge indicator indicates battery is at full charge, additional charging may cause damage to the battery or charger.
- Except in emergency situations, the charger must be allowed to complete a charge cycle.
- Forklift battery should have an equalizing charge performed once every two weeks.

## **PREREQUISITE ACTIONS**

- 1.0 If a required inspection goes delinquent, perform the following:
  - 1.1 Immediately notify Site Environmental Compliance (SEC) of the delinquent inspection.
  - 1.2 Schedule and complete the inspection.
  - 1.3 Document the following in a letter to SEC within five working days:
    - Schedule for inspection
    - Reason(s) why the inspection was not performed

- Any measures taken to offset negative impacts resulting from not performing the inspection
  - Actions to prevent further delinquencies
- 1.4 SEC, **GO TO** WP 04-IM1000, and ensure a WIPP Form, EA04IM1000-1-0, is initiated.
- 2.0 If forklift battery is charged and still on the battery charger, perform the following to disconnect forklift from charger:
- 2.1 Ensure battery charger is **OFF**.
- 2.2 Disconnect battery charger power cable from battery power plugs.
- 2.3 Connect battery power plugs to forklift power plugs.
- 2.4 Record the name of the person removing the forklift from the charger, the date, and time it was removed in the Equipment Logbook.
- 3.0 Review Equipment Logbook for outstanding deficiencies and Action Requests (ARs).
- 4.0 WHE, review Equipment Logs on a weekly basis, generally the last day of the work week.

## PERFORMANCE

### 1.0 PREOPERATIONAL CHECKS

- 1.1 Prior to forklift operation at beginning of each shift, complete Attachment 1, 3-Ton Electric Forklift 41-H-009 Preoperational Checks.

### 2.0 FORKLIFT OPERATION

- 2.1 Sit in seat and fasten seat belt.
- 2.2 Ensure the following controls are in **NEUTRAL**:
- Directional control lever
  - Hoist control lever
  - Tilt control lever
  - Fork position lever
  - Side shift lever
- 2.3 Press service brake pedal.
- 2.4 To start forklift, turn key to **ON**.

2.5 Commence forklift operation as follows:

- Release parking brake.
- Select direction of travel.
- Raise forks 6 to 10 inches above the floor.

2.6 Release service brake pedal.

2.7 Press accelerator pedal to move forklift.

2.8 Operate the appropriate controls for moving and stacking loads.

2.9 If forklift indicates a low battery warning during forklift operation, place load in a safe condition and discontinue use of the forklift until battery is charged.

### 3.0 FORKLIFT SHUTDOWN

3.1 Perform the following to park forklift:

- Place forks flat on floor.
- Set parking brake.
- Shift Directional Control Lever to **NEUTRAL**.
- Turn key to **OFF** position.

3.2 If battery requires charging, **GO TO** Section 4.0.

### 4.0 BATTERY CHARGING

4.1 Ensure battery charger is **OFF**.

4.2 Disconnect battery power plugs from forklift.

4.3 Connect battery power plugs to battery charger power plugs.

4.4 If performing equalizing charge, then press EQUALIZING BATTERY CHARGE button on battery charger.

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#### **NOTE**

Charger automatically starts after short (approximately 30 seconds) delay.

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4.5 Ensure CHARGE IN PROGRESS light on battery charger illuminates.

4.6 Record in the Equipment Logbook, the name of the person placing the forklift on charge, date and time the charge was initiated, and the type of charge performed (Normal or Equalizing).

Attachment 1 - 3-Ton Electric Forklift 41-H-009 Preoperational Checks

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
1.	General Condition Checks	<b>NO</b> damage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> loose parts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> excessive oil leaks on forklift or floor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> trash.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Ground strap attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Tires/Wheels/ Brakes	Tires are in good condition; <b>NOT</b> excessively worn or cracked.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		All accessible wheel lugs installed <b>AND</b> hand tight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Brake pedal has approximately 2 to 3 inches of free play - readily felt by hand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Brake pedal is <b>NOT</b> springy or spongy and does <b>NOT</b> stick or bind when pressed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Parking brake does <b>NOT</b> bind when set or released.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Battery Compartment	Free of acid spills/leaks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> loose or missing caps or cables.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Fire Extinguisher	In place (mounting intact) and seal intact.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**NOTE**

The hydraulic system reservoir level is checked with the forks or attachments lowered to the floor.

5.	Hydraulic System	Reservoir level is/at or above the ADD mark.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> excessive leaks from hoses, couplings, or fittings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Upright and Lift Chains	<b>NO</b> obvious wear, damage, or missing parts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>NO</b> slack or broken chains.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Forklift Attachments	<b>NO</b> obvious cracks, breaks, bends, twists, or wear.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Forks are correctly installed and locked in the proper position.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 1 - 3-Ton Electric Forklift 41-H-009 Preoperational Checks

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
8.	Forklift Start/ Operating Checks	Sit in seat, check that the seat belt is in good condition and fasten the seat belt.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Adjust seat to provide easy access to all controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Ensure seat locking mechanism locks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Adjust steering wheel tilt for easy access to all controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Directional control lever is in NEUTRAL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Hoist control lever is in NEUTRAL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Tilt control lever is in NEUTRAL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Fork position lever is in NEUTRAL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Side shift lever is in NEUTRAL.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Press service brake pedal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Turn key <b>ON</b> to start forklift.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Immediately investigate any unusual noises.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Battery charge indicator shows adequate charge for operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Horn sounds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Front lights illuminate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Back lights illuminate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Hoist control raises and lowers forks/attachment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Tilt control tilts forks/attachment forward and backward.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Side shift control operates forks left and right.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Fork position control operates forks in and out.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 1 - 3-Ton Electric Forklift 41-H-009 Preoperational Checks

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
9.	Brakes/ Operating Checks	Raise forks 6-10 inches above the floor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Engage the parking brake.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Release service brake pedal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Attempt to move forklift forward and backward ensuring forklift does <b>NOT</b> move in either direction, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Release the parking brake.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Using directional control lever, select a direction to travel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Press the accelerator pedal and move forklift.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Forklift steering operates smoothly and does <b>NOT</b> pull to the right or the left.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Brakes are in good condition and do <b>NOT</b> drag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Backup alarm is operational while moving in reverse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Check that seat brake engages when operator raises from seat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Brake lights illuminate, when pedal is pushed, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Stop forklift.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Set parking brake.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(Drum Handling Attachment)	<b>NO</b> obvious cracks, Breaks, Bends, Twists, or wear exists.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Install Drum Handling Attachment on forks.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Safety Chain is installed around the load backrest.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10.	Communicate/ Document Forklift Status	Initiate ARs to address any deficiencies that cannot be corrected by Waste Handling Operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Notify WHE of the operational status of the forklift and any deficiencies and status of each. (e.g., deficiencies corrected & ARs generated.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 1 - 3-Ton Electric Forklift 41-H-009 Preoperational Checks

	INSPECTION	CRITERIA	SAT	N/A	UNSAT
11.	Record in the Equipment Logbook:	Deficiencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Addition of oil, water, or other fluids; including amount added.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Corrective Actions taken (i.e., outstanding/newly generated ARs).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Forklift hour meter reading.			
		If forklift attachments are used, record equipment number and status of Preoperational Check as Satisfactory or Unsatisfactory; per appropriate procedure for each attachment used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Enter date, time, and signature to document performance of Preoperational Checks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		If applicable, complete appropriate sections of WP 05-WH1101, Attachment 5, Preoperational Waste Handling Mode Checklist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>