

WP 05-WH1402

Revision 11

13-Ton Electric Forklifts

Technical Procedure

EFFECTIVE DATE: 03/09/11

Mark Dziamski
APPROVED FOR USE

TABLE OF CONTENTS

CHANGE HISTORY SUMMARY 3

INTRODUCTION..... 4

REFERENCES..... 4

PRECAUTIONS AND LIMITATIONS 5

PREREQUISITE ACTIONS..... 6

PERFORMANCE 7

1.0 PREOPERATIONAL CHECKS..... 7

2.0 FORKLIFT OPERATION 7

3.0 FORKLIFT SHUTDOWN 8

4.0 BATTERY CHARGING..... 8

Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks 9

CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
11	03/09/11	<p>Revised Records Statement</p> <p>Added PROD-271 to Baseline Documents</p> <p>Added the 41-H-012D,E, Hoist Lift Truck Operators manual to the Baseline Documents</p> <p>Added new Steps 3.2, 4.4, and 4.5.1 to 4.5.3</p> <p>Switched bullets 3 and 4 in Step 3.1 under the Performance section</p> <p>Moved #2 to #4 on Attachment 1</p> <p>Added new Note above #5 on Attachment 1</p> <p>Added a new criteria to #5 on Attachment 1</p> <p>Removed 1st and 3rd criteria on #9 on Attachment 1</p> <p>Removed 1st criteria on #11 on Attachment 1</p> <p>Removed all check boxes on Attachment 1</p>

INTRODUCTION ^{1, 2, 3}

This procedure provides guidance for operating the 13-ton electric forklifts at the Waste Isolation Pilot Plant (WIPP).

Performance of this procedure generates the following record(s), as applicable. Any records generated are handled in accordance with departmental Records Inventory and Disposition Schedules.

- Equipment Logbook

REFERENCES

BASELINE DOCUMENTS

- Title 40 *Code of Federal Regulations* (CFR) §264.15, "General Inspection Requirements"
- DOE Standard, 1090-2007, *Hoisting & Rigging*
- Hazardous Waste Facility Permit, Waste Isolation Pilot Plant, Permit No. NM48901388-TSDF, issued by the New Mexico Environment Department
- DOE/WIPP 02-3183, *CH Packaging Program Guidance*
- DOE/WIPP 02-3184, *CH Packaging Operations Manual*
- DOE/WIPP 02-3185, *CH Packaging Maintenance Manual*
- 41-H-012, Auto Lift Operators Manual
- 41-H-012C, Hoist Lift Truck Operators Manual
- 41-H-012D,E, Hoist Lift Truck Operators Manual
- WP 04-AD3011, Equipment Lockout/Tagout
- PROD-271, CH Waste Handling Electric Forklift Operations

REFERENCED DOCUMENTS

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

- EA04IM1000-1-0, WIPP Form

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 waste handling activities specified in this procedure.
- The rated load carrying capacity (26,000 lb at 54-inch load center) of the forklift **MUST NOT** be exceeded.
- 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.
- When handling Contact Handled (CH) Waste Package(s), the operator **MUST NOT** operate with the package against the fork backs.
- 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 capacity, additional charging may cause damage to the battery or charger.
- Except in emergency situations, the charger must be allowed to complete a charge cycle.

- If applicable, upon illumination of the red battery charge warning light, forklift hydraulics will shut down within 5 minutes.
- Forklift battery (41-H-012A, B, C) should have an equalizing charge performed once every two weeks, based on the Preventative Maintenance schedule.

PREREQUISITE ACTIONS

- 1.0 **IF** Emergency Stop Control is engaged,
THEN contact WHE.
- 2.0 If a required inspection goes delinquent, perform the following:
 - 2.1 Immediately notify Site Environmental Compliance (SEC) of the delinquent inspection.
 - 2.2 Schedule and complete the inspection.
 - 2.3 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
 - 2.4 SEC, **GO TO** WP 04-IM1000 and ensure EA04IM1000-1-0, WIPP Form, is initiated.
- 3.0 If forklift battery is charged and still on the battery charger, perform the following to disconnect forklift from charger:
 - 3.1 Ensure battery charger is **OFF**.
 - 3.2 For 41-H-012D&E ensure the LED screen displays Charge Complete.
 - 3.3 Disconnect battery charger power cable from battery power plugs.
 - 3.4 Connect battery power plugs to forklift power plugs.
 - 3.5 Record the name of the person removing the forklift from the charger, the date, and time it was removed in the Equipment Logbook.

- 4.0 Review Equipment Logbook for outstanding deficiencies and Action Requests (ARs).
- 5.0 WHE, review Equipment Logbook 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, follow Attachment 1, 13-Ton Electric Forklifts 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, if applicable.
 - 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.
- Shift directional control lever to **NEUTRAL**.
- Set parking brake, if applicable.
Turn key to **OFF** position

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

4.0 BATTERY CHARGING

NOTE

When battery power plugs are connected to battery charger cables, there will be a few seconds delay and charger will begin charging.

4.1 For 41-H-012A,B,C; ensure battery charger is in **OFF** position.

4.2 Disconnect battery power plugs from forklift.

4.3 Connect battery power plugs to connectors on battery charger cable.

NOTE

The charging system for 41-H-012 D, E performs an equalizing charge automatically as needed. No additional operator action is required.

4.4 For 41-H012D,E; the LED screen will display "battery connected.

4.5 **IF** performing equalizing charge on 41-H-012A,B,C,
THEN press **EQUALIZING BATTERY CHARGE** button on battery charger.

4.6 Ensure battery charger is in **ON** position.

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

Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks

NOTE

When inspecting for fluid leaks (i.e., battery compartment, hydraulic lines), excessive leaks are indicated by visible flow of fluid or abnormal loss of the indicated fluid.

	INSPECTION	CRITERIA
NOTE For 41-H012D,E the grounding strap is underneath the forklift.		
1.	General Condition Checks	<p>NO damage.</p> <p>NO loose parts.</p> <p>NO excessive oil leaks on forklift or floor.</p> <p>NO trash.</p> <p>Grounding strap attached.</p> <p>Tires are in good condition; NOT excessively worn or cracked.</p> <p>All accessible wheel lugs installed.</p>
2.	Battery Compartment	<p>Free of acid spills/leaks.</p> <p>NO loose or missing caps or cables.</p>
3.	Fire Extinguisher	In place (mounting intact) and seal intact.
4.	Brakes	<p>Brake pedal is not springy or spongy and does NOT stick or bind when pressed.</p> <p>Brake pedal has approximately 2 to 3 inches of free play – readily felt by hand.</p> <p>Parking brake does NOT bind when set or released. (If applicable.)</p>
5.	Forks, Upright and Lift Chains	<p>Forks are correctly installed and locked in the proper position.</p> <p>NO obvious wear, damage, or missing parts.</p> <p>NO slack or broken chains.</p> <p>NO obvious cracks, breaks, bends, twists, or abnormal wear.</p>
6.	Forklift Start/ Operating Checks	<p>Sit in seat, check that the seat belt is in good condition and fasten the seat belt.</p> <p>Adjust seat to provide easy access to all controls.</p> <p>Ensure seat locking mechanism locks.</p> <p>Adjust steering wheel tilt for easy access to all controls. (If applicable)</p> <p>Directional control lever is in NEUTRAL.</p> <p>Hoist control lever is in NEUTRAL.</p>

Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks

	INSPECTION	CRITERIA
		<p>Tilt control lever is in NEUTRAL.</p> <p>Fork position lever is in NEUTRAL.</p> <p>Side shift lever is in NEUTRAL.</p> <p>Press service brake pedal.</p> <p>Turn key ON to start forklift.</p> <p>Immediately investigate any unusual noises.</p> <p>Battery charge indicator shows adequate charger for operation.</p> <p>Horn sounds.</p> <p>Front lights illuminate.</p> <p>Back lights illuminate.</p> <p>Hoist control raises and lowers forks.</p> <p>Tilt control tilts forks forward and backward.</p> <p>Side shift control operates forks left and right.</p> <p>Fork position control operates forks in and out.</p> <p>Raise forks 6-10 inches above the floor.</p>
7.	Brakes/ Operating Checks	<p>Engage service brake pedal.</p> <p>Release the parking brake, if applicable.</p> <p>Using directional control lever, select a direction to travel.</p> <p>Press the accelerator pedal and move forklift.</p> <p>Forklift steering operates smoothly and does NOT pull to the right or the left.</p> <p>Brakes are in good condition and do NOT drag.</p> <p>Backup alarm is operational while moving in reverse.</p> <p>Check that seat brake engages when operator rises from seat.</p> <p>Brake lights illuminate, when pedal is pushed. (If applicable)</p> <p>Stop forklift. Shift directional control level to neutral.</p> <p>Set parking brake, if applicable. Turn key to the OFF position.</p>

Attachment 1 – 13-Ton Electric Forklifts Preoperational Checks

	INSPECTION	CRITERIA
NOTE		
The hydraulic system reservoir level is checked on the 41-H-012-D,E when the oil is at operating temperature, the carriage is lowered and the forks are level on the ground, and the Key is OFF. If more hydraulic oil is added than the "FULL" level, the hydraulic oil will leak from the breather during operation. Hydraulic level needs to be above the "ADD" mark. IF hydraulic oil is below the "ADD" mark then contact the WHE.		
NOTE		
The hydraulic system reservoir level is checked on with the 41-H-012,A,B,C with the forks lowered to the floor, together, and tilted all the way back.		
8.	Hydraulic System	<p>Ensure safety latch located left hand side of the seating compartment is properly engaged, if applicable.</p> <p>Reservoir level is above the ADD mark.</p> <p>NO excessive leaks from hoses, couplings, or fittings.</p>
9.	Record in the Equipment Logbook:	<p>Corrective Actions taken (i.e., outstanding/newly generated ARs).</p> <p>Forklift hour meter reading.</p> <p>Enter date, time, and signature to document performance of Preoperational Checks.</p> <p>If applicable, complete appropriate sections of WP 05-WH1101, Attachment 5, Preoperational Waste Handling Mode Checklist.</p>
10.	Communicate/ Document Forklift Status	Notify WHE of the operational status of the forklift and any deficiencies and status of each. (e.g., deficiencies corrected & ARs generated.)