

Author	Status	Effective Date
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## 1.0 Purpose

To ensure that all personnel perform Forklift Operations correctly, consistently, and safely to achieve a quality outcome through uniform performance. Any deviations from the procedures could affect the safety of our employees or the integrity of our products.

## 2.0 Scope

This procedure will cover the types of forklifts Gemini utilizes along with forklift operating requirements implemented to keep our pedestrians and forklift drivers safe. It is applicable to every employee that has had sufficient forklift training and is authorized to operate a Gemini forklift.

## 3.0 Safety / PPE



**\*Absolutely NO Electronic Devices in the Hazardous Environments. (Production, Fill-Off, TWP Room)**

**\*Absolutely NO use of headphones, ear buds, etc. inside the Warehouse and/or Hazardous Environments.**

## 4.0 Forklift Operating Procedures

### 4.1 Training

The term forklift refers to a motorized, power-driven vehicle used to carry, push, pull, lift, stack, or tier material. This definition generally includes vehicles that are commonly referred to as high lift trucks, counterbalanced trucks, cantilever trucks, rider trucks, forklift trucks, high lift platform trucks; low lift trucks, low lift platform trucks; motorized hand trucks; narrow aisle rider trucks; high lift order picker rider trucks; and counterbalanced front/side loader lift trucks. Forklift operators must be trained before independently operating a forklift, and complete refresher training every three years, or sooner if warranted. Initial forklift training consists of three parts: Formal Instruction, Practical Training, Evaluation of Operator Performance. For additional details of Gemini's Forklift Training Program, contact the EHS Department.

### 4.2 Responsibilities

#### 4.2.1 Supervisors/EHS Coordinator

1. Conduct practical training and operator performance evaluations, or designate one or more qualified individuals with appropriate knowledge, training, and experience to perform this function.
2. Ensure that all employees under their direction who are designated to operate a forklift are trained, evaluated, and certified prior to independent operation of the equipment.
3. Ensure that certification is kept current (e.g., re-evaluation/driving test and refresher training, as applicable).
4. Maintain training records. It is recommended that records be maintained for six year or until such time as an employee is no longer assigned to operate a forklift.
5. Notify EHS of accidents and near-misses involving forklift operation.
6. Ensure that forklifts and attachments are appropriate for the use conditions and maintained in safe operating condition. Immediately remove defective equipment from service until repaired or replaced.
7. To the extent feasible, reduce operational hazards presented by use location and loads.

#### 4.2.2 Employees

1. Complete all components of training at the required intervals.
2. Conduct pre-operational inspections prior to start of each shift (see Attachment A).



- 4.3.2 All newly acquired forklifts should meet the design and construction requirements of the relevant American National Standards Institute standard (Part II, ANSI B56.1), and should bear a label or other identifying mark indicating approval by a nationally recognized testing laboratory. Every effort should be made to replace equipment that does not meet ANSI requirements.
- 4.3.3 Modifications to forklifts are not allowed without express written approval from the manufacturer, authorized representative, or qualified EHS Department.
- 4.3.4 Forklifts must have the correct designation (D, DS, DY, E, ES, EE, EX, G, GS, LP, or LPS) for the location of operation, rated for the intended loads, used with approved attachments, and compatible with operating surface load limits.
- 4.3.5 Passengers are not permitted on or in the forklift or load. Operators must not put any part of their body (e.g., fingers, arms, or legs) between the uprights of the mast, or beyond the contour of the forklift.
- 4.3.6 Pedestrians always have the right-of-way.

#### 4.4 Types of Gemini Forklifts

Gemini utilizes 3 different designations of forklifts. EE, E, and LP. It is important to understand what each of these designations mean and what areas of the Gemini facility each one is authorized to be used in. Below is an outline defining each designation and identifying authorized areas for use.

##### 4.4.1 EE Rating

An EE rating means that any electrical component that creates a spark is enclosed, such as the motors and contactors. **Authorized Areas: Entire facility**

##### 4.4.2 E Rating

Type E covers electric trucks having minimum acceptable safeguards against inherent fire and electrical shock hazards. This rating only covers normal design and construction.

**Authorized Areas: Anywhere outside of Class I Division I rated (Production and Fill-off environments) rooms.**

##### 4.4.3 LP Rating

Type LP lifts are internal combustion engines fueled by liquified propane.

**Authorized Areas: Outdoors only.**

#### 4.5 Before Operating a Forklift

- 4.5.1 Only trained personnel with current authorization are allowed to operate forklifts.

- 4.5.2 The operator must be familiar with and adhere to all recommendations and warnings provided by the manufacturer regarding the vehicle and all attachments.
- 4.5.3 The operator must conduct a visual inspection of the forklift and attachments at the start of each shift. Employees may not operate an unsafe forklift at any time. Deficiencies should be reported to the designated person or supervisor. Operators should also inspect the work area and remove debris or obstacles prior to operating a forklift. Operators should take note of other hazards in the area of operation, such as slick or uneven surfaces, inclines, etc.
- 4.5.4 Operators must wear seatbelts on all such equipped trucks.
- 4.5.5 Horseplay is prohibited.
- 4.5.6 Hands and shoes should be dry and clean to minimize the risk of slips and falls while entering, dismounting, or operating a forklift.
- 4.5.7 Fueling and/or charging operations must be conducted in the designated safe manner and location.
- 4.6 Picking up a Load with a Forklift
- 4.6.1 Do not exceed the safe load capacity of a forklift at any time. The rated load limit shall be decreased as necessary to account for load sizes. Do not counterweight a forklift to increase its lifting capacity.

For symmetrical loads, the center of gravity is at the middle of the load in terms of the load's length, width, and height. The rated capacity of a forklift is generally based on a load that simulates a cube, measuring 48" in all directions with the center of gravity in the middle (24"). The rated capacity of the vehicle must be decreased to accommodate loads that are not symmetrical or exceed the rated load center. Failure to account for load variations with respect to the rated capacity of the FORKLIFT increases risk of tipover, loss of steering control, and instability of the load.

If available, use the manufacturer's instructions for reducing load capacities. In the absence of such instruction, follow the procedure described below.

*Divide the rated load center by the actual load center and multiply by the stated capacity. For example, consider a forklift with a rated capacity of 5,000 pounds at a 24" (48" cube) load center that will be used to move a load with an actual load center of 28" (56" cube). The estimated load capacity is reduced to 4,285 pounds.*

$$(24/28)(5000) = 4,285$$

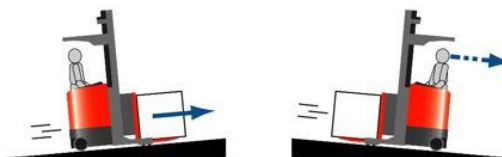
### Figure 2: Load Rating Reduction

- 4.6.2 Compensate for loads with an off-center point of gravity. Position the load such that the distance from the front wheels to the load center is minimized, and the heaviest portion of the load is closest to the mast.
- 4.6.3 Position the load in a way that will shorten the load center distance.

- 4.6.4 Approach the load squarely and position the forks under the load as far as possible. Lift the load before moving the vehicle but lift only the minimum amount necessary to safely maneuver. Do not lift a load with one fork.
- 4.6.5 No load should be moved unless it is safe and secure.
- 4.6.6 When unloading trucks or trailers, the brakes on the vehicle must be set (locked) and the wheels chocked.
- 4.6.7 No person is permitted to stand or walk under elevated forks.

#### 4.7 Moving a Load with a Forklift

- 4.7.1 Forklifts should be driven on the right side of the road or aisle-way and operated at a safe speed with due regard for traffic and conditions (slippery surfaces, obstructed vision, cross aisles, etc.).
- 4.7.2 Operators should avoid making jerky starts, quick turns, or sudden stops. The operator is not permitted to use reverse as a brake.
- 4.7.3 The operator must look in the direction of travel and their view should not be obstructed by the load. The operator should turn and drive facing away from the load when their view is blocked.
- 4.7.4 Operators must not drive toward any person who is in front of a fixed object or wall.
- 4.7.5 At blind intersections, the operator should: **STOP, SOUND THE HORN, LOOK BOTH WAYS, PROCEED SLOWLY.**
- 4.7.6 Operators may not overtake and pass another forklift traveling in the same direction, at intersections, blind spots, or hazardous locations.
- 4.7.7 The forks should not be operated while the forklift is traveling and kept as low as possible when traveling (whether loaded or unloaded). The load should be kept level or slightly cradled (tilted back).
- 4.7.8 When traveling on slopes, keep the heavy end uphill. On a downgrade, the forklift should be driven in reverse, and the forks raised only enough to clear the surface.



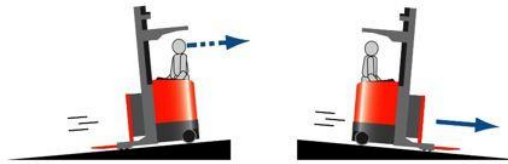
- 4.7.9 Use extra care when handling long lengths of bar stock, pipe, or other materials.
- 4.7.10 Compressed gas cylinders must be moved only with special pallets designed for

this purpose.

4.7.11 Operators must cross railroad tracks diagonally whenever possible.

4.7.12 If using a service elevator with a forklift, the operator must: verify that the elevator capacity can support the weight of the lift truck plus the load; confirm that the dimensions of the elevator (width and height) are sufficient to accommodate the forklift and load; approach the elevator slowly and stop at a safe distance before entering, then proceed slowly and squarely; shut off the motor and apply the brakes while on the elevator.

4.7.13 If operating on ramps or loading docks, verify that the dockboard is secure and of adequate capacity; proceed slowly when approaching or leaving; do not turn or park on a ramp or dockboard, and keep the forks downgrade.



#### 4.8 Parking a Forklift

4.8.1 Forklifts must be safely parked in the designated area when not in use. The controls must be neutralized, power shut off, brakes set, key removed, and the forks secured in the lowest position, flat on the surface, and not obstructing walkways or aisles.

4.8.2 A forklift may not be left on an incline unless it is safely parked and the wheels blocked.

4.8.3 Forklifts may not be parked in areas that will block exits, stairways, fire extinguishers or any other emergency equipment.

#### 4.9 Lifting People with a Forklift

4.9.1 A forklift may not be used to elevate a platform or pallet with persons on it, except work platforms specifically designed and marked for this purpose.

4.9.2 Work platforms must have standard guard rails and toe boards; and must be securely fastened to the forks. Personal fall protection (e.g., full body harness, self-retracting lifeline (SRL), etc.) is required.

4.9.3 The forklift may be used only to raise and lower a person- it shall not travel with a person on the platform. Order pickers designed to raise and lower the operator while in motion are exempt.

#### 4.10 Safe Fueling/Charging

In all cases, follow all manufacturer's instructions. The precautions stated are general in nature. Persons must be authorized by their supervisor to conduct re-fueling/re-charging operations.

##### 4.10.1 Battery Charging/Maintenance

1. Set the parking brake when servicing.
2. Use a battery stand and puller if the battery is to be removed.
3. Ensure that the battery is secured when installed in the vehicle.
4. Keep metal objects away from the battery.
5. Keep open flames away from the battery. Use a flashlight to check fluid level. Do not smoke in battery charging areas.
6. Keep battery caps on and the vent holes clear.
7. Battery charging areas should be mechanically ventilated and equipped with a means of flushing and neutralizing spills as well as a plumbed eye wash station.
8. Wear a face shield, goggles, apron, and rubber gloves when servicing the battery.
9. In the event that battery acid contacts the skin, flush the affected area with water for 15 minutes and seek medical attention as necessary. In the event that battery acid contacts the eye, flush the eye for 15 minutes with water and seek medical attention.

##### 4.10.2 Battery Charging using a Pigtail-style Cord

1. Set the parking brake while servicing.
2. Both the truck and the charger should be turned off when connecting or disconnecting the charging cord.
3. Do not service the battery when it is being charged.
4. Keep open flames away from the battery. Do not smoke in battery charging areas.
5. Only qualified and experienced personnel should perform maintenance, remove or repair batteries.
6. No additional personal protective equipment nor an eyewash station is required in the charging area if the battery is only serviced by an outside vendor.

##### 4.10.3 Procedures for changing propane cylinders

1. Wear eye protection and thermal gloves.



2. Close the valve on the cylinder.
3. Run the engine until it stops. This ensures that the connection hose is empty.
4. Shut off the engine. Engage the parking brake.
5. Open the connecting nut. **DO NOT** use metal tools.
6. Disconnect the hose.
7. Disconnect the holding straps.
8. Remove the empty cylinder.
9. Replace with a full cylinder in the proper position.
10. Connect the holding straps.
11. Tighten the connecting nut (wiggle hose).
12. Open the valve on the cylinder slowly and check for leaks. Use solution of soap and water. **Smell – listen – look.**
13. Slowly open the valve to its fully open position.
14. Secure the hose in an inward and downward direction.
15. Secure the cylinder.
16. Start the engine and resume operation.

## 5.0 References

Reference	Title
1	None