

## *Potential Hazard Review*

### Chemical Hazards

- Inhalation: Inflammation of the lungs, respiratory failure, death

### Physical Hazards

- Slips/fall: Bruise, contusion, sprain, strain, fracture from fall and impact
- Striking against: Laceration, puncture, abrasion
- Caught in/on/between: amputation, broken bone, collision, crush
- Electrical: Shock, burn, cardiac arrest, death

### Ergonomic Hazards

- Awkward postures: Stress on joints and spine, cumulative trauma disorder
- Vibration: Swelling, inflammation

## *Personal Protective Equipment*

- Steel-toed shoes/boots

## *Related Safe Work Practices*

- Vehicle Operation

## *Authority*

- CCR Title 8 Section 3650(t), 3664, 3668

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This SWP is dedicated to helping you avoid an injury or illness from known hazards. You are advised to follow these recommendations, read and follow this SWP and any related SWPs, complete any required or recommended training, and to obtain advice from a Qualified Person if you have any questions.

A Qualified Person is a person **designated** by the employer; and by reason of **training**, experience, or instruction who has demonstrated the ability to perform safely all assigned duties; and, when required is properly licensed in accordance with federal, state, or local laws and regulations.

All tasks require that you:

- Use the equipment in accordance with the guidelines set forth by the manufacturer. This includes following all signs and labels, and reviewing any manufacturer's operating manuals.
  - If the instructions provided in the operating manual conflict with this SWP, then follow the instructions in the manual. The manufacturer's instructions prevail over this SWP.
- Review the safety data sheets (SDSs) for each chemical.
- Be trained on this SWP and those listed above as related. Training on SWPs must be completed before initial assignment. It is recommended you complete refresher training every two years.

## **BEFORE**

1. Only drivers that have successfully completed training and testing according to 8 CCR 3668, and have been authorized by their Supervisor can operate forklifts. That section requires:
  - a. Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and evaluation of the operator's performance in the workplace.
  - b. All operator training and evaluation shall be conducted by persons who have the knowledge, training and experience to train forklift operators and evaluate their competence.
  - c. Forklift operators shall receive initial training in the following topics, except in topics which the employer can demonstrate are not applicable to the safe operation of the truck in the employer's workplace.
    - Operating instructions, warnings, and precautions for the types of forklift the operator will be authorized to operate;
    - Differences between the forklift and the automobile;
    - Forklift controls and instrumentation: where they are located, what they do, and how they work;
    - Engine or motor operation;
    - Steering and maneuvering;
    - Visibility (including restrictions due to loading);
    - Fork and attachment adaptation, operation, and use limitations;
    - Vehicle capacity;
    - Vehicle stability;

- Any vehicle inspection and maintenance that the operator will be required to perform;
  - Refueling and/or charging and recharging of batteries;
  - Operating limitations;
  - Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.
  - Surface conditions where the vehicle will be operated;
  - Composition of loads to be carried and load stability;
  - Load manipulation, stacking, and unstacking;
  - Pedestrian traffic in areas where the vehicle will be operated;
  - Narrow aisles and other restricted places where the vehicle will be operated;
  - Hazardous (classified) locations where the vehicle will be operated;
  - Ramps and other sloped surfaces that could affect the vehicle's stability;
  - Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a build-up of carbon monoxide or diesel exhaust;
  - Other unique or potentially hazardous conditions in the workplace that could affect safe operation.
- d. Refresher training, including an evaluation of the effectiveness of that training, shall be conducted to ensure that the operator has the knowledge and skills needed to operate the forklift safely when:
- The operator has been observed to operate the vehicle in an unsafe manner;
  - The operator has been involved in an accident or near-miss incident;
  - The operator has received an evaluation that reveals that the operator is not operating the forklift safely;
  - The operator is assigned to drive a different type of forklift; or
  - A condition in the workplace changes in a manner that could affect safe operation of the forklift.
- e. An evaluation of each forklift operator's performance shall be conducted at least once every three years.
- f. The employer shall certify that each operator has been trained and evaluated as required. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.
2. Forklifts shall be operated within the manufacturer's specifications.

3. Employees that work in close proximity to forklifts subject to the hazard of crushing injuries from forklifts or falling objects must wear steel-toed shoes<sup>1</sup>.
4. Ensure forklifts and other equipment have ample room to operate safely in the area. People walking should have designated walkways. Develop a notification system when one forklift operator takes over for another.
5. Operators must conduct an inspection prior to operating any forklift, once per shift. If found to be unsafe, immediately report that condition to your supervisor, and remove the forklift from use until made safe. The following must be checked:

<b><u>VISUAL CHECKS</u></b>	<b><u>OPERATIONAL CHECKS</u></b>
✓ Engine oil level	✓ Horn
✓ Radiator water and coolant level	✓ Steering
✓ Fuel level	✓ Breaks
✓ Damage and leaks	✓ Parking break
✓ Tire condition	✓ Hydraulic controls
✓ Head and tail lights	✓ Backup alarm
✓ Warning lights	
✓ Operational hours meter	
✓ Other gages and instruments	

6. Battery operated forklifts will be inspected (and stored) in a well-ventilated area with no sources of ignition present.
7. Operators will ensure that the load is well secured and properly balanced before moving.
  - a. Extreme care shall be taken when tilting loads. Tilting forward with the load engaged shall be prohibited except when picking up a load.
  - b. Elevated loads shall not be tilted forward except when the load is being deposited onto a storage rack or equivalent.
  - c. When stacking or tiering, backward tilt shall be limited to that necessary to stabilize the load.
  - d. The load engaging device shall be placed in such a manner that the load will be securely held or supported.
  - e. Special precautions shall be taken in the securing and handling of loads by forklifts equipped with attachments, and during the operation of these forklifts after the loads have been removed.
8. Operators will not do the following:
  - a. Overload the forklift in excess of its rated capacity.
  - b. Move an unstable load.

<sup>1</sup> Recommended by J Jamali of Enviro Safetech on 10/1/18 in an email, due to case law (8/2018)

- c. Load or unload from an unblocked truck or trailer.
  - d. Operate a forklift within one tire width from an edge (i.e., platform, dock, truck or trailer bed, etc.).
  - e. If loads are lifted by two or more forklifts working in unison, the total weight of the load shall not exceed the combined rated lifting capacity of all forklifts involved.
9. Operators should pay particular attention to the integrity of pallets.
10. When provided by the manufacturer, an operator restraint system such as a seat belt shall be used.

## **DURING**

11. Driving on grades:
- a. The forklift will be driven forward when traveling up ramps or other grades, and will be driven in reverse on downgrades.
  - b. Grades shall be ascended or descended slowly.
  - c. When ascending or descending grades in excess of 10 percent, loaded forklifts shall be driven with the load upgrade.
  - d. On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
  - e. Motorized hand and hand/rider forklifts shall be operated on all grades with the load engaging means downgrade.
12. The operator shall look in the direction of travel and keep a clear view of the path of travel. Operators shall look in the direction of travel and shall not move a vehicle until certain that all persons are in the clear.
13. Always operate a forklift at a safe speed. Maximum speed limit within buildings and on docks is 5 miles per hour (mph). Maximum speed limit in a storage yard is 10 mph or as posted.
14. Always maintain a safe distance from other vehicles and keep the forklift under positive control at all times.
- a. A safe distance may be considered approximately 3 forklift lengths or 3 seconds apart and shall not pass another forklift at intersections, blind spots, or dangerous locations.
  - b. Forklifts shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the forklift and object.
15. Forks shall be carried as low as possible to clear the ground or floor during travel

16. Prior to leaving the forklift unattended (operator out of sight of, or within 25 feet of the forklift), the operator shall:
  - a. Lower the forks.
  - b. Shut off the engine.
  - c. Set the brakes (or block the wheels).

The exception to this is that the forks may be in the raised position for loading and unloading if the forks are raised no more than 42 inches above the level where the operator and loaders are standing, if the power is shut off, controls placed in neutral and the brakes set. If on an incline, the wheels shall be blocked.

17. The operator will slow down and sound the horn when backing up, before proceeding at cross aisles, or when vision is obstructed by doors, corners, etc.
18. Forklifts will not be operated in poorly lit areas or at night, unless equipped with head lights, taillights and backup lights.
19. When a forklift is in operation, arms or legs shall not be placed between the mast up right, or outside the operator's area.
20. Forklifts shall be fueled with the engine off.
21. Truck and trailer wheels must be blocked to prevent movement before driving a forklift on or off such vehicles.
22. Operate forklifts only in well ventilated areas. Operation in enclosed areas can result in the generation of large quantities of carbon monoxide, a dangerous and potentially lethal gas.
23. If pallets must be removed from a truck or a trailer, first ask the truck driver to move the load to the edge of the vehicle so that the load will not have to be dragged or moved by R&P personnel.
24. If the truck driver cannot accommodate your request, then to move or drag a pallet, use **ONLY** a chain that is properly rated for the weight of the load being moved.
25. Other employees who may be in the area either directing the forklift or helping the driver must maintain a distance from the forklift of at least 10 feet, and must remain visible to the driver as often as is possible.<sup>2</sup>
26. The following practices are **prohibited**:

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<sup>2</sup> RPD Industrial Investigation, EHS Case #2932 (DOI 9/29/05)

- a. Stunt driving and horseplay.
- b. Riding on the forks.
- c. Transportation of a second passenger unless a second permanent seat and seat belt has been installed and is used.
- d. Use of the forks as an elevated platform, unless specifically designed for such use.
- e. Use of material or personnel as counterweights to keep the forklift rear wheels on the ground.
- f. Standing, passing, or working under loaded or empty forks unless effectively blocked to prevent it from falling.
- g. Placing any part of your body outside the running lines or between mast uprights or other parts of the forklift where shear or crushing hazards exist.
- h. Overloading, moving an unstable load, or loading/unloading from an unblocked truck or trailer.
- i. Operating the forklift if it has a fuel system leak.
- j. Operating the forklift on floors, sidewalk doors, or platforms that will not safely support the loaded vehicle.

## **AFTER**

27. Return forklift to proper storage area.
28. For propane powered forklifts, be sure to turn the feed line to the "off" position.
29. Fill out any request for service or operating problems repair request.
30. If a serious problem develops with your equipment, ensure that equipment is not used by another person and take it out of service.

**For any questions, please contact EHS at 415-831-2780.**

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## References:

1. Laborer/forklift Operator Dies When Crushed by a Forklift Driven by a Co-worker in California, CDC NIOSH investigation 99CA005
2. A Hispanic Female Laborer Was Run Over by A Forklift That Was Moving a Trash Bin In A Waste Transfer and Recycling Station, CDC NIOSH investigation 02CA008