Title:
Lift Truck Operations

1.0 INTRODUCTION

The purpose of this standard is to promote forklift safety and minimize the risk of injury to workers by specifying the operating requirements based on industry standards and best practices.

2.0 SCOPE

This Standard applies to all NB Power employees and contractors working for NB Power that are operating forklifts.

3.0 REFERENCES

CAN/CSA-B335-15	Safety standard for lift trucks
NB OHS General Regulation 91-191	New Brunswick Occupational Health and Safety Regulation 91-191 Sections 129,216 and 217:
Supply Chain procedure 4.4.5.7	Industrial Lift Truck Pre-Start Checklist Program Management Guidelines
Supply Chain procedure 4.4.3.11	Accessing Inventory Warehouses
Supply Chain procedure 4.4.3.2.1	Loading and Unloading Transport Trucks at NB Power Facilities
WELL sheet	1036 Lift Truck

4.0 TERMS AND DEFINITIONS

Approved	the classification or listing regarding fire, explosion, and/or electric shock hazard by a nationally recognized testing laboratory.
Attachment	a device other than conventional forks or load backrest extension, mounted permanently or removable on the elevating mechanism of a truck for handling the load. Note: *Common attachments are fork extensions, clamps, rotating devices, side shifters, load stabilizers, rams, and booms.*
Backrest	that portion of the carriage and forks serving to restrain the load when the load is tilted rearward or upward.
Capacity	the capacity of a truck equipped with load carriage and forks, or with attachments; specifically, the weight at a specified load center that a given truck can transport in a carry position and stack to the specified elevation of the load-engaging means. **Note:** *Capacity is used to designate the weight-handling ability of a particular truck, as equipped.*
Classification of lift trucks	a listing, by category, of lift trucks.
Competent Person	a) a person who is qualified, because of such factors as knowledge, training, and experience, to do the work assigned in a manner that will ensure the health and safety of persons and. b) a person who is knowledgeable about the provisions of the Act and the regulations that apply to the assigned work and.

	c) a person who is knowledgeable about potential or actual danger to health or safety connected with the assigned work.
Counterbalanced	The term counterbalance forklift is derived from the units design where the forklift has a heavy counterweight that off-sets the weight of the load being carried on the forks out in front
Industrial lift truck	A self- propelled vehicle used to carry, lift, stack, tier, push or pull material.
Narrow aisle lift truck	lift truck primarily intended for right-angle stacking in aisles narrower than those normally required by counterbalanced trucks of the same capacity
Rated capacity	the weight, established by the manufacturer at a required load center, that a given truck (equipped with load carriage and forks or attachments) can transport and stack to a height established by the manufacturer. **Note:** *Rated capacity is used as a means for comparing the weight-handling ability of trucks.*
Rough terrain lift truck	a wheeled-type lift truck, designed primarily as a forklift truck, that may be equipped with attachments and that is intended for operation on unimproved natural terrain as well as the disturbed terrain of construction sites.
User	a person or organization responsible for employing lift trucks. **Note:** *This may include a facility owner, an employer, a truck lessee, or a person representing an organization or business owner.*

5.0 ROLES AND RESPONSIBILITIES

5.1 Supervisor

- Ensure that all forklift operators are competent in the class of forklift they will be operating.
- Ensure employees are competent for the task being performed.

5.2 Employee

- Comply with the requirements outlined within this standard.
- Ensure you are competent in the operation of the class of lift truck.
- Work only within competencies held and advise front line supervision when additional training is required to safely execute work.
- Ensure pre-use inspection is completed and documented.
- Follow any instruction, education, and training in operating the equipment.
- Report to your supervisor any known hazards.

- Operator must familiarize themselves with the physical environment / location (loading bays, entrances and exits) and characteristics (high traffic areas) of the environment they are operating the forklift in

6.0 STANDARD

6.1 General

Industrial lift trucks (or forklifts) are designed to move materials, not people. Platforms attached to forklifts can be used to provide access to work at heights if proper steps are taken to ensure both the platform and the forklift are safely set up, used, operated, and maintained as per the manufacturer.

Safe Forklift Operation Forklift operators and employees working around these operations are at risk of hazards such as collisions, falls, tip-overs, and struck-by conditions.

Ways to prevent these hazards include:

6.1.1 Forklift Operations

- Always operate the vehicle according to the manufacturer's instructions.
- Always wear a seatbelt
- Never exceed the rated load and ensure it is stable and balanced.
- Inspect the Load: Before lifting anything, thoroughly inspect the load to ensure it is stable, undamaged, and packed properly. If a load is not secure or damaged in a way that might cause instability, it should not be lifted.
- Properly Position the Load on the Pallet: Ensure the load is evenly distributed on the pallet or skid. This is important as an uneven load can cause the forklift to tip over. It's also essential to ensure the load is securely fastened to the pallet to prevent it from collapsing while being lifted.
- Inspect the Pallets: Ensure that the pallets used are in good condition and can support the weight of the load. Broken or damaged pallets can give way under the weight, causing the load to fall.
- Do not raise or lower the load while traveling.
- Keep a safe distance from platform and ramp edges.
- Be aware of other vehicles in the work area.
- Have clear visibility of the work area and ensure you have enough clearance when raising, loading, and operating a forklift.
- Use proper footing and the handhold, if available, when entering the lift.
- Use horns at cross aisles, obstructed areas, doorways/entry areas, loading docks and around pedestrians.
- Watch for pedestrians and observe the speed limit.

- Maintain low speed when going around corners or turning

6.1.2 Safety Training

- Only trained and certified workers may operate a forklift.

6.1.3 Forklift Maintenance

- Remove from service and tag out any forklift found to be in unsafe operating condition.
- Keep forklifts in clean condition, free of excess oil and grease.
- Repair and maintain according to the manufacturer's recommendations.
- No modifications or additions that affect the capacity or safe operation of equipment will be made without the manufacturer's written approval.

6.2 Pre-Use Inspections

Operators must perform pre-start inspections by carrying out daily checks and inspections and will document on logbooks: Below are the Material Numbers listed for the corresponding forklift type.

MN-00037280 (Book Log Daily Forklift Stand on Narrow Aisle Daily Operator Checklist).
MN-00037281 (Book Log Daily Forklift Electric Pallet Mover Daily Operator Checklist).
MN-00037282 (Book Log Daily Forklift Electric Sit-Down Daily Operator Checklist).
MN-00037283 (Book Log Daily Forklift Sit-Down Internal Combustion Engine Daily Operator Checklist).
MN-00047974 (Book Log Daily Forklift Rough Terrain Daily Operator Checklist)

Some locations may use the Info link Forklift Monitoring System to complete their inspections rather than using the logbooks.

6.3 Forklift Platform

A forklift platform is securely attached to the lift truck to prevent accidental movement of the platform or tipping of the forklift.

- Forklift platforms are designed and constructed to be strong enough to safely support any likely load.
- Manufactured platforms, are set up, used, maintained, and dismantled according to the manufacturer's instructions.
- Industrial lift trucks supporting forklift platforms are on a firm flat surface to ensure the truck's stability.
- Forklift platforms must have guardrails.

- Any fall-arresting systems in use must not interfere with raising or lowering the platform.

6.4 Forklift Attachment

All lift truck attachments must be approved before installed on a lift truck. All permanent attachments are to have prior written approval from the manufacturer and installed by approved vendor.

All employees that will be using the attachment will be trained on the pre use inspection, proper installation of the device and safe operating procedures for using the device. The training will be recorded in LMS.

6.5 Traffic Management

All efforts shall be made to keep pedestrians separate from powered lift truck traffic.

- a workplace traffic assessment to determine routes for lift trucks and pedestrians.
- barriers to separate pedestrians and lift trucks at congested areas.
- designated routes for pedestrians that avoid lift truck traffic.
- clear traffic rules for lift trucks
- requiring lift trucks to stop at intersections or potentially dangerous areas before intersections, proceeding, hand or horn signals, and backup warning devices, where appropriate; and
- clear traffic rules for all pedestrians, which can include the following:
  - permitting walking only in aisles designated for pedestrians, or similar travel requirements.
  - establishing right-of-way at intersections.

6.6 Workplace Design

Overhead and side clearances (at loading docks, aisles, and storage and transfer areas, through doorways, and in rooms) shall be adequate to permit the safe operation of the lift truck.

Floors, aisles, and passageways shall be kept clear and free of hazards.

6.6.1 Ventilation

- The workplace shall be adequately ventilated to prevent the accumulation of vapours from the refuelling and operation of lift trucks (exhaust fumes).
- Ventilation shall be provided in enclosed areas where internal combustion engine lift trucks are used.
- Lift trucks that require overnight charging / battery operated often they will off-gas and should only be charged in ventilated areas.

6.6.2 Noise

- Lift trucks can contribute to the ambient sound in the work area. Consideration should be given to the sound exposure of personnel in the work area.

6.6.3 Lighting

- Visibility shall be sufficient to allow safe operation and pedestrian movement.

6.7 Ergonomics

Consider the following:

- wherever possible, the operator should maintain a forward facing (in the direction of travel) posture.
- the wrists should be maintained close to a neutral position, with the hand in line with the axis of the forearm.
- the operator should be able to view areas of primary importance without adopting awkward postures (this is particularly important if the task requires driving in reverse).
- load sizes should be limited to ensure good visibility.
- seating devices should support the back and torso without limiting free movement of the arms.
- seats should be comfortable and in good repair.
- controls and displays should be located so as not to interfere with the operator viewing the working tasks.
- adequate task lighting should be provided to minimize eye strain.
- windows should be kept clean to prevent glare, shadows, contrast, and reflections;
- operators should be able to mount and dismount the lift truck in a safe and easy manner (steps should be large and slip-resistant and hand assists should be placed in accessible locations for safe operation); and
- the layout of the facility should allow for minimal strain to the operator.

6.8 Rollover Protective Structure (ROPS), Falling Objects Protective Structures (FOPS)

- Class VII Rough Terrain Forklifts, in the event of a rollover, the rollover protective structure (ROPS) will act as a protective box around the operator and the seatbelt will keep the operator inside the box.
- Classes I, II, IV and V are designed with Falling objects protective structures (FOPS) Overhead Guard, is designed to deflect or absorb the impact of falling objects or debris.

7.0 TRAINING

- NB Power Forklift course S040
- S040R Forklift Refresher (3 years) or a documented competency check.

8.0 APPENDIX

Appendix A- Illustrations of Lift Truck types

Appendix B- Powered Industrial Lift Truck WELL

Director of Total
Health & Safety

DOCUMENT APPROVAL/REVISION RECORD

Revision #	Date	Revision Summary	Author	Reviewed By	Approved By
New	2024-05-22		R. Cook	Mike Gould Luc Bourgoin Chris Granter Nancy Legere	Roland Roy

Appendix A - Illustrations of Forklift Types

Class I - Electric motor rider trucks
Lift Code 1 - Counterbalanced rider, stand-up

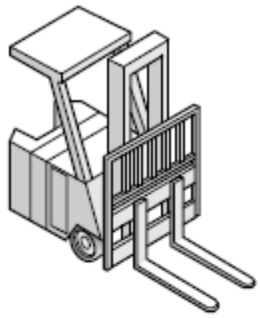

Figure B.1.1

Class I - Electric motor rider trucks
Lift Code 4 - Three wheel electric trucks, sit-down

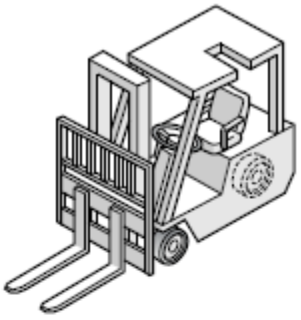

Figure B.1.2

Class I - Electric motor rider trucks
Lift Code 5 - Counterbalanced rider, cushion tire, sit-down

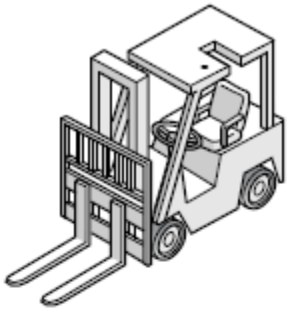

Figure B.1.3

Class I - Electric motor rider trucks
Lift Code 6 - Counterbalanced rider, pneumatic tire, sit-down

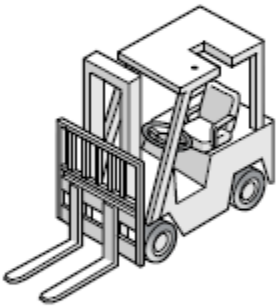

Figure B.1.4

Class II - Electric motor narrow aisle trucks
Lift Code 1 - High lift straddle

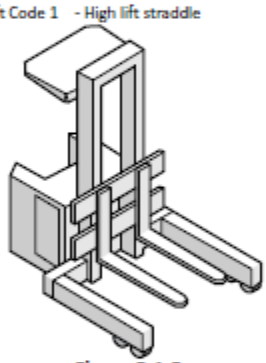

Figure B.1.5

Class II - Electric motor narrow aisle trucks
Lift Code 2 - Order picker

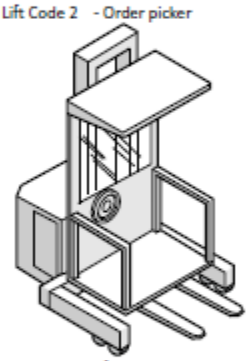

Figure B.1.6

Class II - Electric motor narrow aisle trucks
Lift Code 3 - Reach type outrigger

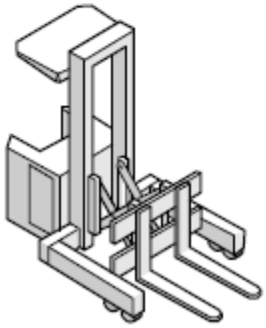

Figure B.1.7

Class II - Electric motor narrow aisle trucks
Lift Code 4 - Sideloaders: platforms

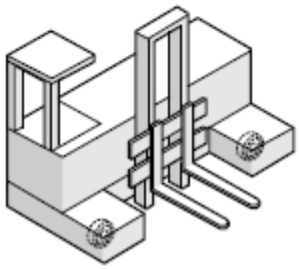

Figure B.1.8

Class II - Electric motor narrow aisle trucks
Lift Code 4 - Sideloaders: high lift pallet

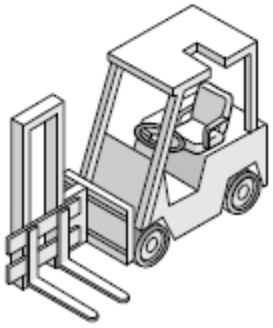

Figure B.1.9

Class II - Electric motor narrow aisle trucks
Lift Code 4 - Turret trucks

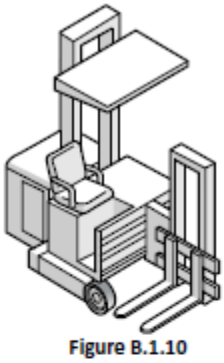

Figure B.1.10

Class II - Electric motor narrow aisle trucks
Lift Code 6 - Low lift platform

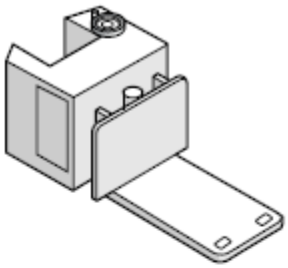

Figure B.1.11

Class II - Electric motor narrow aisle trucks
Lift Code 6 - Low lift pallet

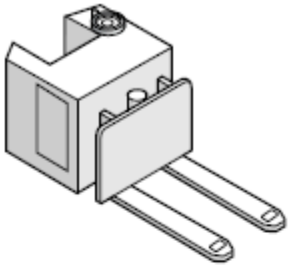

Figure B.1.12

Class III - Electric motor hand trucks
Lift Code 1 - Low lift platform

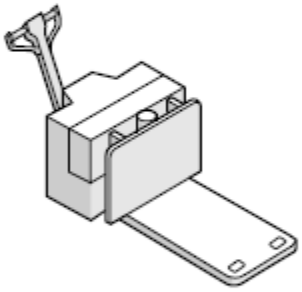

Figure B.1.13

Class III - Electric motor hand trucks
Lift Code 2 - Low lift walkie pallet

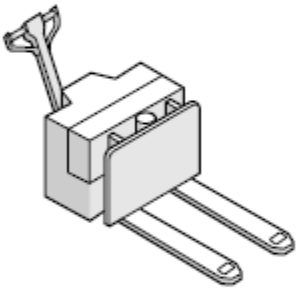

Figure B.1.14

Class III - Electric motor hand trucks
Lift Code 3 - Tractor

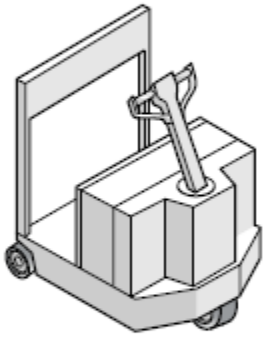

Figure B.1.15

Class III - Electric motor hand trucks
Lift Code 4 - Low lift walkie/ centre control

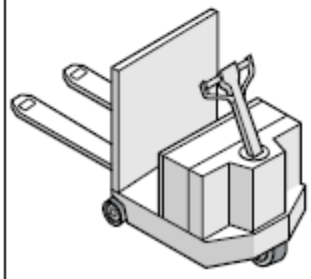

Figure B.1.16

Class III - Electric motor hand trucks
Lift Code 5 - Reach type outrigger

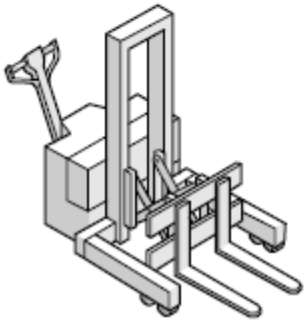

Figure B.1.17

Class III - Electric motor hand trucks
Lift Code 6 - High lift straddle

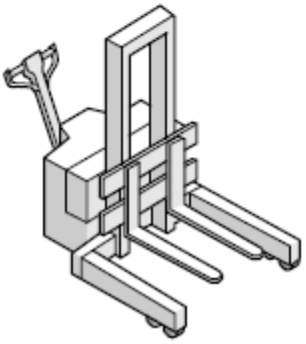

Figure B.1.18

Class III - Electric motor hand trucks
Lift Code 6 - Single face pallet

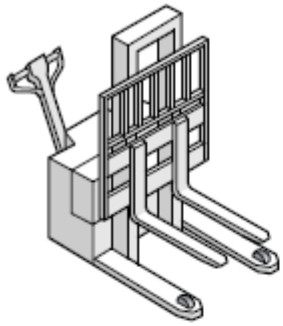

Figure B.1.19

Class III - Electric motor hand trucks
Lift Code 6 - High lift platform

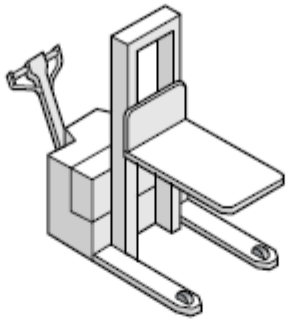

Figure B.1.20

Class III - Electric motor hand trucks
Lift Code 7 - High lift counterbalanced

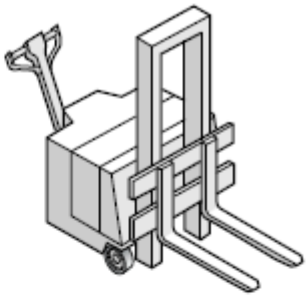

Figure B.1.21

Class III - Electric motor hand trucks
Lift Code 8 - Low lift walkie/rider pallet and end control

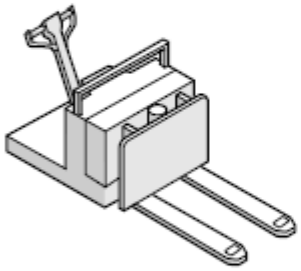

Figure B.1.22

Class IV - Internal combustion engine trucks
Lift Code 3 - Fork, counterbalanced, cushion tire

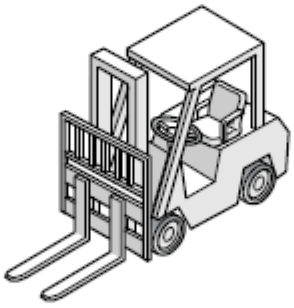

Figure B.1.23

Class V - Internal combustion engine trucks — Pneumatic tires only
Lift Code 4 - Fork, counterbalanced, pneumatic tire

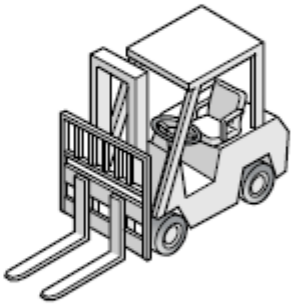

Figure B.1.24

Class VI - Electric and internal combustion engine tractors
Lift Code 1 - Sit down rider

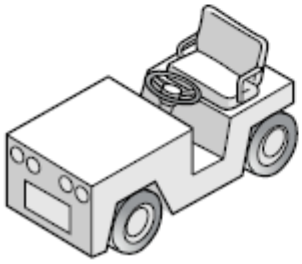

Figure B.1.25

Class VII - Rough terrain forklift trucks
Lift Code 1 - Vertical mast rough terrain fork lift truck

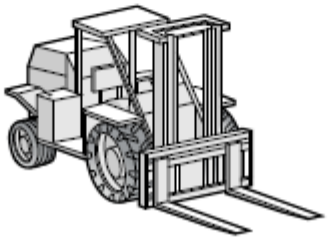

Figure B.1.26

Class VII - Rough terrain forklift trucks
Lift Code 1 - Variable reach rough terrain fork lift truck

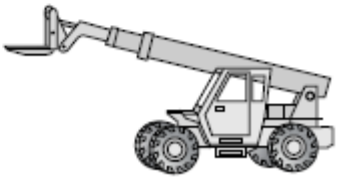

Figure B.1.27

Appendix B – Forklift WELL Sheet

Énergie NB Power

WELL Sheet #: 1036
Revision: 2022-12

Industrial Lift Truck – WELL Sheet

Date:	Operator:	Lift Truck:
Observer:		Signature:
Observer:		Signature:

Work Location:		Yes	No	N/A
1.	Equipment pre-use inspection completed and documented			
2.	Inspection items requiring attention dealt with			
3.	Seatbelt engaged			
4.	Drives at a speed that allows a safe stop			
5.	Moves the machine safely and smoothly			
6.	Looks in the direction of travel before/during movement			
7.	Sounds horn at cross aisles & blind corners			
8.	Keeps all body parts inside the cab			
9.	Handles only secure, safely arranged loads within capacity			
10.	Travels with load/lifting attachment as low as safely possible			
11.	Travels in reverse and/or uses as spotter when needed			
12.	Stacks loads straight & squarely.			
13.	Uses proper pedestrian procedures			
14.	Travels on grades correctly.			
15.	Follows correct parking/shutdown procedures			
16.	Consistently demonstrates alertness, control & safe habits			
17.	Other			

Comments:

Page 1 of 4

Énergie NB Power

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Revision: 2022-12

Industrial Lift Truck – WELL Sheet

This guide contains explanatory information related to the items listed in the Industrial Lift Truck WELL Sheet document.

This is not an exhaustive list of operational competencies but rather a quick reference checklist of some of the main operational competencies that a properly trained operator must be able to demonstrate on an ongoing basis.

1. **Equipment pre-use inspection completed & documented.** Forklift operators must complete a pre-use inspection of any unit they are assigned to operate. Such inspections include checking for loose, missing and/or damaged parts, fluid levels and/or leaks, warnings/placards and decals and finally, a check that all powered systems are functional throughout their entire operational range.

2. **Worksite inspection completed & documented.** Supervisors must ensure that any potentially hazardous items discovered during an equipment inspection are repaired or otherwise dealt with. If appropriate, the unit involved should be identified as unsafe for use, taken out of service and returned to service only when the appropriate repairs/ adjustments have been made by qualified personnel.

3. **Engages seatbelt.** The seatbelt is designed to keep the operator safely in the cab in the event of a tip over or rollover and must be worn at all times while seated in the operating position.

4. **Drives at a speed that allows a safe stop.** Regardless of the site/environmental conditions or tasks being performed, operators must always be able to stop the equipment in a safe, controlled manner.

5. **Moves the machine safely & smoothly.** The forces caused by the motion of a forklift can cause its stability to become dangerously reduced. These forces can be limited by keeping the activation speed of the machine's parts down and by making smooth and gentle turning, stopping, starting motions as well as smooth mast/boom raising, lowering and tilting movements, with or without a load.

6. **Looks in the direction of travel before/during movement.** Regardless of whether the machine is travelling in forward or reverse direction, or the boom/platform is going up or down, operators must always focus their attention in the direction of travel. Moving the wheels and/or platform over distances of even a few feet without looking in the direction of travel before moving and thereafter is unacceptable. Momentarily looking away from the direction of travel to check environmental or other concerns is acceptable in some instances, but the majority of an operator's attention should always be focused in the direction of travel.

7. **Sounds horn at cross aisles & blind corners.** The horn is not meant to be used as a device to be sounded for extended periods to clear out pedestrian and/or vehicle traffic. It is designed to be periodically sounded in order to warn others of the presence of the forklift. Operators should be aware of this and briefly sound the horn when approaching areas like cross aisles and blind corners or wherever others may be unaware of the approach of the equipment.

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8. **Keeps all body parts inside the cab.** The cab, with its overhead protective structure is designed to keep the operator protected from falling, flying and/or intruding material or debris. It can only do this when the operator keeps all his/her body parts like feet, hands, arms, legs and especially, head, under its protective structure.

9. **Handles only secure, safely arranged loads within capacity.** It is the operator's responsibility to ensure the security and integrity of loads handled by the machine. This may involve dismounting the unit to rearrange parts of loads such that their weight is evenly distributed or to secure loose and/or unstable loads such that they do not shift or come apart during transport. In addition, operators must only handle loads that are within the rated capacity of the equipment. Operating a forklift with the rear wheel off, or nearly off the ground must be strictly prohibited.

10. **Travels with load/lifting attachment as low as safely possible.** All of the forces that act on the unit and cause stability to decrease are multiplied with the elevation of the mast/boom. The higher it is lifted, the less stable the machine becomes. It is far easier to tip a forklift over when the mast/boom is elevated than when it not. Operators should be in the habit of lowering the lifting attachment as soon as reasonably possible while loading and unloading and should travel only when the mast/boom is as low as safely possible, regardless of whether a load is being handled.

11. **Travels in reverse and/or uses as spotter when needed.** When carrying tall or bulky loads that obstruct forward vision, operators should drive in reverse so they can get a clear view in the direction of travel. It is especially advisable to operate in reverse when carrying loose and/or slippery loads to prevent them from sliding off the front of the forks when braking. If operators are having trouble seeing in both forward and reverse directions while travelling, a "spotter" or signal person should be used to act as a guide and direct operators.

12. **Stacks loads straight & squarely.** Where operators are required to stack loads on top of one another, they must be able to do so in such a way as to make a reasonably straight stack with each load placed squarely on the one beneath it. Inability to do this will lead to leaning columns of product that could potentially fall over and cause injury and/or damage.

13. **Uses proper pedestrian procedures.** Implementing a policy in which pedestrians have the right of way is a sound safety practice. In most cases involving pedestrians, authorities give priority to life over machinery. However, pedestrians should be encouraged to yield the right of way to forklifts as they are often invisible to the operators who, even if they see pedestrians, are often unable to avoid them. Ideally, both should be looking out for each other and when pedestrians and forklifts encounter one another, forklift operators should stop, make eye contact with the pedestrian and motion (wave or gesture) the pedestrian to cross if it safe to do so. Pedestrians could also wave forklifts through depending on the situation. It is also advisable for pedestrians to remain within designated walkways and wear high visibility clothing when working near powered mobile equipment like forklifts.

14. **Travels on grades correctly.** When carrying a load, forklift operators must travel with the load upgrade. This means they should drive up grades forward but back down them in reverse, always keeping the load upgrade. This ensures load security and maximizes equipment traction and

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braking. When travelling with no load, it is best to keep the forks or lifting attachment downgrade and the heavy counterweigh upgrade for the same reasons as mentioned above. Elevating the mast, turning, zig-zagging or anything but straight up or down travel on grades must be avoided.

NOTE: This procedure is not to be used with powered pallet trucks (jacks). Operators must always remain upgrade of loaded or unloaded units. If this is not possible operators must position themselves off to either side of the units while downgrade of them.

15. **Follows correct parking/shutdown procedures.** When parking or leaving a machine unattended (out of sight or 25 ft/8 m or more away) operators must:
    a. Lower the lifting attachment to the floor (fork tips down).
    b. Place the transmission in neutral.
    c. Set the park brake.
    d. Shut off the power (engine or battery).
    e. Leave the steer wheel straight (so a sudden turn does not surprise the next operator).
    f. Close the propane cylinder service valve (if equipped) when leaving it for more than an hour indoors. It is a good idea to do this with the engine running until it stalls, and then shut the key off.
    g. Use proper (3-point) mounting and dismounting procedures.

16. **Consistently demonstrates alertness, control & safe habits.** Long after their training is completed, operators must be able to demonstrate safe operating skills on an ongoing basis. By regulation, those that have close calls or actual damage/injury-producing incidents must receive refresher training and re-evaluation.

17. **Other.** Any other items that may have particular importance at the worksite as they relate to forklift safety.

Comments/Notes. Any thoughts, concerns, observations, etc., as they relate to the use of the WELL Sheet.