THERMA
FORKLIFT
SAFETY TRAINING

OUR PRIORITIES:

1. SAFETY
2. QUALITY
3. SCHEDULE

"No job is so important that it may be performed without regard for safety, health and the environment."

GOLIATH/L:/SAFETY/WINWORD/FORKLIFT.DOC,*REVISION2,9/99*

SAFETY, A THERMA WAY OF LIFE:

As with all job functions at THERMA, equipment operation is an important part of the service we provide to our customers. Because the operation of powered

industrial fork lift equipment is inherently dangerous, it's important to be sure that safety is first and foremost in our minds any time we climb onto a piece of machinery.

DANGEROUS AT ANY SPEED:

Operating equipment in an unsafe manner is one of the major causes of injury and death in the construction industry. Fork lift machines account for a large number of these accidents.

1. SAFETY, 2. QUALITY, 3. SCHEDULE:

In our business our customers expect, and should receive, only the *best, most professional* work available. The safest possible methods and professionalism go hand in hand. A professional that knows how to operate a fork lift safely also knows that the **safe** operation of any piece of equipment is also the **fastest**, most professional way to work. Unsafe operations and short cuts are a sure way to increase accidents, injuries, and costs on a job. A remarkable thing occurs when safety is thought of **first**. The job is always of the best quality and is completed in the fastest, most economical way!

SAFETY IS JOB #1:

The long-standing commitment of THERMA to safety extends to certification of operators of fork lift equipment. THERMA personnel must realize that as leaders in our industry, it's imperative that we continue to lead in the field of safety.

PERSONNAL COMMITMENT:

The commitment of THERMA to safety is meaningless unless each individual is at least equal in his or her commitment. As an equipment operator you are one of the most highly visible people on any job site. Others on the job will look to you as an example of how safe or unsafe a company is. When others see you operating safely they will know that you are a professional, working for a professional company.

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SUBJECT ……SECTION

1. **RESPONSIBILITIES:** **Responsibilities** for the safe operation of these machines lie in three categories:

- **Manufacturer.**
- **Employer.**
- **Operator.**

1.1 Manufacturer: The manufacturer is required to produce a machine that meets all safety rules and regulations. The **dealer** provides a machine that is safe to operate and meets all laws, rules and regulations.

1.2 Employer: The employer provides the safest possible work site, enforces the rules and regulations covering the site and the type of work done, and makes sure that all personnel are trained for the type of work they are performing, including the operation of equipment.

1.3 Operator: The operator is responsible for the operating condition of the equipment, and insures that the operation of the equipment will not endanger personnel on and around the equipment. Before the operator uses an unfamiliar machine for the first time, he/she will read and understand the operator's manual. The operator is responsible for a pre-operation inspection of his/her equipment and the work site. When confronted with an unsafe condition or the unsafe actions of personnel on or around the equipment, the operator is to cease operations at once, and only resume when the unsafe conditions or actions are corrected.

It is a violation of company policy for any employee to operate equipment they are not certified for!

2. **TYPES OF MACHINES:** There are several different types of **powered industrial fork lifts** designed to lift materials to different work heights. These are:

- **STANDARD FORK LIFT.**
- **"GRADALL" LIFT.**
- **SPECIALIZED LIFT.**

2.1 **STANDARD FORK LIFT.** This machine is the one we visualize when we think of a fork lift. It has several distinctive characteristics:

2.1.1 Tilt-able mast assembly with lifting forks.
2.1.2 Four wheel design.
2.1.3 Rear wheel steering.
2.1.4 Driver Overhead Protection Service (OPS).
2.1.5 Automobile-like controls.
2.1.6 Conventional operator seating position.

2.1.7 Smooth, hard wheels, designed for hard surface operation.

2.2 "GRADALL"-TYPE FORK LIFT. This machine differs from the standard fork lift machines in that:

2.2.1 The Boom that supports the lifting forks allows the material handling portion of the lift to extend beyond the support chassis.

2.2.2 The forks will reach over obstructions on the working surface.

2.2.3 It has a sophisticated suspension system that allows operation on uneven ground.

2.3 SPECIALIZED FORK LIFT. These machines are very similar to the standard lift truck with these additional features:

2.3.1 They have specialized attachments for handling specific types of materials (rolled steel, pipe, barrels, etc).

2.3.2 They have characteristics that allow them to operate in unique environments (cold storage, explosive atmospheres, etc).

2.3.3 The driver position is different from the conventional seated position on standard trucks (the operator may stand or even raise up with the work platform).

2.4 SIMILARITIES. Because the basic safe operating characteristics of these machines are the same, they will be combined for the purposes of this training:

2.4.1 STANDARD FORK LIFTS and **SPECIALIZED FORK LIFTS** will be referred to as fork lifts.

2.4.2 "GRADALL"-TYPE LIFTS will be called gradalls.

3. INSPECTIONS. Prior to operating one of these machines **2 inspections** must first be conducted: **JOB SITE AND EQUIPMENT.**

3.1 JOB SITE. This inspection should take place at the **beginning of each shift**, or more often if conditions change during a shift. Operators should look for any object or condition, which will inhibit the **safe operation** of his/her machine. These include:

3.1.1 Housekeeping. The job site shall be reasonably clear of **trash** and **debris**.

3.1.2 Holes/Trenches. Any **openings** in the floor should be covered with bridge material capable of supporting 4 times the anticipated weight that may pass over it. When openings are not covered, the operator may not approach closer than 18" to the edge of the opening.

3.1.3 Floors. Inspect for bumps, obstructions, and uneven conditions that **could effect** the machine.

3.1.4 Lighting. The operator should be able to see well enough to **safely operate** his machine. OSHA Regulations State that the

minimum general lighting acceptable on construction sites is 5 foot candles. This is not much light to operate by, therefore extreme caution is needed under these conditions. “Task”, or work lighting is provided by THERMA and will be sufficient for the type of work performed.

3.1.5 Weather. Wet floors, high wind and other weather related conditions can be very **hazardous.** Always check for these conditions before operating a lift.

3.1.6 Overhead obstructions. Never move a lift when there is danger of striking an **overhead obstruction**. This can cause the machine to turn over, and/or can cause damage to the object being struck.

3.1.7 High voltage lines. The minimum clearance for high voltage lines of 50 kilovolts is 10’. Make sure you have **clearance** around all electrical lines while operating.

3.1.8 Foot traffic. Watch for people **at all times**. On some machines the driver can’t see people if they are directly behind them or are obscured with a large load. Shouted warnings such as, “Coming down!” will help make the job safer.

Note: Remember that the operator is ultimately responsible for the safe operation of their machines.

3.1.9 Any other condition of the work site that might **adversely impact** the safe operation of a fork lift will also cause the immediate halt of operations until the unsafe conditions can be eliminated or controlled.

3.2 Machine inspection. This inspection shall be conducted prior to the **start** of the shift. *Any problems or malfunctions that could affect the safe operation of the lift will be corrected prior to the operation of the lift.* The pre-shift inspection shall include:

3.2.1 Parking Brake: The parking brake must be able to **hold** the machine still on any surface the machine is capable of climbing.

3.2.2 Service Brake: Any condition of the service brake system that effects the smooth operation of the lift will be cause to immediately halt operations.

3.2.3 Hydraulics/Batteries/Fuel:

a. Leaks. Fluid levels. ***Note: Control and clean up any leaks.***

b. Corrosion. ***Note: Acid is corrosive and precautions must be taken.***

c. Cracked/split/frayed hoses.

3.2.4 Operating controls:

a. Operator controls – up, down, extend, retract, side shift, forward, backward, turns, emergency stop.

3.2.5 Chassis assembly:

a. Cracks.

b. Loose parts.
c. Suspension.
d. Tires/wheels/lug nuts.

NOTE: Tires on an axle must be of the same size and tread design, and are foam filled.

3.2.6 Lift mechanism/forks:

a. Leaks. ***Note: Control and clean up any leaks.***
b. Loose/worn parts.
c. Smooth operation.
d. Uneven forks.
e. Loose/uneven hoist chains.

3.2.7 Labels/Operating Manuals:

a. Placards.
b. Pinch points.
c. Warnings.
d. Manuals.
e. Identification plate.
f. Control markings.

3.3 Once it has been determined by job site and machine inspection that it is safe to operate the machine, proceed.

4. <u>LIFTING CAPACITIES</u>. These vehicles are designed to do one thing:

4.1 TRANSPORT MATERIALS.

4.1.1 Whether it's loading or unloading trucks, moving a stack from one spot to the next, or setting equipment in place, these machines will do it. There are some things they are **<u>not</u>** designed for:

a. Lifting/Transporting people.
b. Towing/Pulling other vehicles.
c. Opening/Closing sliding doors, particularly railroad car doors.

4.2 In order to properly lift a load the operator will first determine:

4.2.1 The weight of materials being lifted does not exceed the rated capacity of the machine.
4.2.2 The load is evenly distributed and properly secured.
4.2.3 The ground the machine will be operated on meet the requirements for that machine.
4.2.4 The machine has been inspected prior to operation on that shift.

4.3 At least one of the workers is an operator certified for the machine he/she is on.

4.4 The rated capacity may be found in the **operator's manual** and the **load capacity plate**. If either of these are missing, the machine may not be operated.

4.5 MATERIALS.

4.5.1 **Materials** that do not overload the machine when combined with **personnel** and **tools** may be lifted.

4.5.2 **Materials** that interfere with the safe operation of the machine may not be lifted.

4.5.3 **Materials** must be secured from tipping, spilling, or falling.

4.5.4 Avoid lifting **materials** on the railings.

4.5.5 Never exceed the **rated capacity** of the railings.

4.5.6 Remember that load capacities may be found in the **operator's manual** and on the **load capacity plate**.

4.5.7 "**High-Jacks**" or other equipment designed to lift material should be used for lifting **materials**.

4.5.8 Only manufacturer approved **attachments** may be used on a machine.

4.6 TOOLS.

4.6.1 **Tools** that do not overload the machine when combined with **materials** and **personnel** may be lifted.

4.6.2 **Tools** that interfere with the safe operation of the lift may not be lifted.

4.6.3 Never **throw** tools or materials up to or down from a lift.

4.6.4 Potentially **hazardous equipment** (such as gas bottles on welding rigs) must be secured prior to the operation of the machine.

4.6.5 When using **extension cords** and/or **gas hoses**, such as those used on cutting and wielding rigs, exercise extreme caution to prevent them from becoming entangled in the moving and pinching parts of the machine.

4.6.6 When using tools that throw or drop **sparks** or **hot material**, protect the lower portions of the machine that could be damaged such as batteries, hydraulic hoses, etc. ***Note: Batteries produce hydrogen gas.*** (fire blankets can be used for shielding)

4.6.7 When using tools that throw or drop sparks or hot material that could possibly cause a fire, always use a "**fire watch**" person down below.

Note: The fire watch must extend ½ hour past the last "spark" or hot work point.

4.6.8 Always check with your Foreman about "**Hot Work Permits**" on your job site.

5. FUELING. The rules for fueling are as follows:

5.1 Fuel machines in **designated** areas.

5.2 Make sure your using the **proper** fuel for your machine.

5.3 Never fuel a machine with the engine running.

5.4 Never smoke or allow open **flame** around a machine that's being refueled.

5.5 If acid or fuel gets into eyes, **rinse** thoroughly and obtain medical attention.

5.6 Gas and Diesel:

- **5.6.1** Be sure the machine is properly grounded, and no static electricity exists between the fuel filler and the tank.
- **5.6.2** **Ground** the nozzle to the fuel tank filler neck.
- **5.6.3** Avoid **sparks.**
- **5.6.4** Don't **overfill** the tank. Clean up any spills immediately.

5.7 Be sure the tank you're filling is the **fuel tank!** Many times the hydraulic tank is mistaken for the fuel tank. ***If this occurs, do not operate the machine.***

5.8 Propane:

- **5.8.1** If a machine will not be used an hour or more, **shut off** the propane tank valve.
- **5.8.2** Propane is **explosive**! Use extreme caution.
- **5.8.3** Propane can cause **frostbite.** Use proper protective equipment.
- **5.8.4** Propane gas is heavier than air and can **accumulate** in low areas.
- **5.8.5** Only trained and **authorized** personnel are allowed to refill propane tanks.
- **5.8.6** Tanks are under extreme **pressure.** A ruptured tank becomes a lethal rocket! Secure tanks when transporting them.

5.9 Battery power:

- **5.9.1** If your machine is battery powered, charge the batteries in a well **ventilated** area.
- **5.9.2** Remember that charging batteries produces **explosive** gases.
- **5.9.3** If battery acid or fuel gets on your skin or clothes, **rinse** off thoroughly at once.

6. Congratulation! By completing this training session you are well on your way to becoming a safe equipment operator. By applying what you have learned you will be doing your part to control one of the main causes of accident and death on construction sites.

7. These rules and regulations are a compilation of federal, state, and local, rules and regulations. They are considered THERMA Company policy. They are intended to insure the safest possible operation of aerial lift machines.

8. Failure to follow these policies will be cause for disciplinary action up to and including termination.

FORKLIFT/GRADALL DAILY INSPECTION CHECKLIST

To be completed DAILY by the operator or authorized person BEFORE each use.

Make:	**Model:**	**Unit#:**

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Date:							
Hour Meter Reading:							
Operator/Inspector:							

For each "Inspection Item," indicate one of the following: P=Pass F=Fail N/A=Not Applicable

INSPECTION ITEM	**M**	**T**	**W**	**Th**	**F**	**S**	**Su**	**Comments *Explain 'F'***
Labels/Operator Manual								
Chassis/Mast: Cracks, Welds, Deformation								
Seatbelt Function								
Wheels/Tires: Pressure, Cracks, Splits, Missing Lugs								
Fluid Levels/Leaks: Oil, Fuel, Water, Battery(s), Hoses								
Lights, Alarms, Horn, Backup Bell, Warning Lights								
Mirrors, Gauges								
Brakes: Operational, Parking								
Steering, Lift Controls								
Site: Holes/Drop-offs, Slopes, Grades, Uneven Surfaces								
Site: Electrical, Water, Sprinkler, Chemical Lines								
Site: Overhead Obstructions								
Equipment and site are safe for operation								

Note: Any item not checked requires the unit be taken out of service until the problem is corrected.
REPORT ALL DEFECTS TO YOUR SUPERVISOR/FOREMAN IMMEDIATLEY

General Comments: