

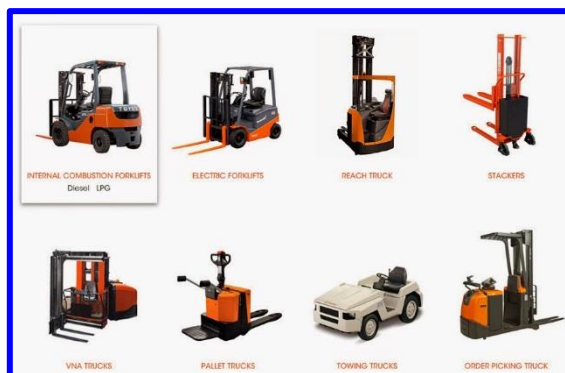
## FORKLIFT SAFETY WRITTEN PROGRAM

**Lead: John M. Seaman**  
*Campus General Safety Supervisor*

**Phone: (805)893-5288**

**E-Mail: [jseaman@ucsb.edu](mailto:jseaman@ucsb.edu)**

**Team: EH&S/General Safety**



**Description:** This program guides all aspects of the ***Forklift/Powered Lift Truck Safety Program*** for the University of California Santa Barbara (UCSB). As mandated by Cal/OSHA and other regulatory compliance codes, this program guides compliance with, and application of, all legal requirements for UC Santa Barbara departments, field stations and work/research operations that own, rent or use this type of equipment

### **EH&S RESPONSIBILITIES**

***EH&S /General Safety Staff, under the direction of the Campus General Safety Supervisor will:***

1. Develop a forklift/powered lift truck safety written program and revise it as necessary
2. Ensure that training is provided to all forklift operators as requested by their campus department
3. Maintain training records and issue certificate of training to authorized operators whom have successfully completed all phases of the required operator training
4. Provide technical support to departments and/or staff when questions arise regarding forklift safety issues, regulations, or purchase requests for forklifts
5. Maintain a tracking system for all for all forklift equipment and authorized operators

### **Training:**

EH&S/General Safety staff has developed a forklift operator safety certification program and can provide forklift operator safety training for departments, field stations and work/research operations that use these types of equipment. This program guides all aspects of the campus.

Training includes a combination of formal classroom instruction, demonstrations, “hands-on” practical exercises, written examination, and an operator skills performance evaluation. Practical exercises are performed under the supervision of experienced trainers in a controlled environment to preclude endangering the trainee or other employees. A certificate of training

and operator license will be issued upon completion of the course. To arrange for training, or obtain further information, contact the EH&S/General Safety staff at 805.893.5407.

**Note: *No individual is permitted to operate a university-owned lift prior to successfully completing this certification training program, regardless of previous experience or certification. Trainees/operators must be at least 18 years of age and hold a valid driver's license.***

## **PROCUREMENT SERVICES RESPONSIBILITIES**

**Prior to the purchase or rental of any forklift or motorized pallet jack**, the proposed purchase order must be reviewed and approved by EH&S/General Safety Staff. This is to insure that the equipment is suitable for the type of work being performed, the atmosphere in which the equipment will be operated, and that the following minimum safety equipment is present:

1. **Data Plate** – *reflecting attachments or options that have a direct effect on the lifting capacity of the equipment*
2. **Overhead Guard**
3. **Load backrest**
4. **Seatbelt**- *for sit down operated forklifts*
5. **Horn**
6. **Headlights**
7. **Audible back-up indicator**
8. **Strobe light** - *to indicate engine is running*
9. **Headlights**
10. **Emergency Brake**
11. **Speed Control** – *“Rabbit/Turtle” for motorized pallet jacks*

## **OWNER/USER DEPARTMENT RESPONSIBILITIES**

***Departments that own, lease, rent and/or otherwise operate forklifts and other types of industrial lift trucks must:***

1. Select and then purchase or rent appropriate equipment for job tasks based upon the work-environment and the completion of a job/task hazard analysis.
2. Ensure personnel are properly trained, licensed and authorized to operate the specific type(s) of owned/rented equipment, in accordance with established campus guidelines. The department must post a list of trained and authorized operators in a conspicuous location.
3. Conduct documented safety inspections and preventive maintenance of the equipment.
4. Purchase and supply all required personal protective equipment (PPE) for persons trained and authorized to operate forklifts and industrial lift trucks.

5. Assure operators adhere to specific safe-work practices whenever using these types of powered industrial equipment including use of personal protective equipment (PPE) as required.
6. Approve Contractors/Vendors to use forklift/industrial lift truck equipment on their premises, and only allow properly licensed contractor/vendor personnel to use Department-owned equipment.

**Note: Contractors/vendors must have proof of training and licensing to operate this equipment equal to or exceeding the established requirements for UCSB personnel.**

### **DEPARTMENT MANAGERS/PIs/SUPERVISORS:**

1. Ensure that the forklift being purchased includes the options listed in the Procurement Services section of this program.
2. Contact EH&S/*General Safety* so that tracking information can be updated.
3. Ensure that the operating manual has been received, made available to each forklift operator, and the operating manual is stored within the department for future reference.
4. Acquire the parts and service manuals within 60 days of the acquisition of a forklift.
5. If buying used, have an annual inspection performed prior to placing the forklift in service.
6. Arrange for the manufacturer or approved vendor to provide initial "Forklift Familiarization Training" to the department's operators. Provide EH&S/*General Safety* with documentation of Forklift Familiarization Training.
7. Ensure that all employee operators of the forklift have reviewed the forklift operator's manual.
8. Ensure the inspection and repair of the forklift:
  - a. The department shall ensure that pre-start inspections and annual inspections are being performed on the forklift.
  - b. The department who owns the forklift shall use a pre-start inspection form based upon the manufacturer's recommendations found in the operating manual that is consistent with the one found in **Appendix A**, including a location where the operator initials and dates it.
  - c. When safety related concerns have been discovered the forklift shall be taken out of service and tagged "**DO NOT OPERATE**" until the item(s) has been repaired.
9. Ensure that all forklift operators and users are trained and observe safe practices:
  - a. The department is responsible for arranging for the safety training of all new authorized forklift operators by contacting EH&S/*General Safety*.
  - b. Ensure that operators receive "forklift familiarization training" from competent operator/trainers (provided/authorized by EH&S/*General Safety*) Departments must document this training
  - c. When renting a forklift, departments shall require that the rental agency provide a demonstration of forklift operation upon delivery of the rental equipment.
  - d. Ensure that no personnel operate a forklift if they have not been trained in both, the classroom forklift training and the forklift familiarization training for that classification

of forklift. The operators must have a certification that authorizes them to operate the classification of forklift.

- e. **Ensure that no personnel be elevated by, ride upon, or be transported upon a forklift under any circumstances. Doing so will result in automatic suspension of the operator's license, certification, and authorization to operate forklifts on behalf of the University of California Santa Barbara.**
  - f. Provide flexibility for forklift operators by giving them the discretion of stopping the job if, at any time, they have concerns for their safety. It shall be the operator's discretion to terminate their work activities while using a forklift.
  - g. If selling, donating, or destroying forklifts:
    1. Prior to the donation, sale, or destruction of a forklift, the department owning said equipment shall contact EH&S/*General Safety* to ensure that appropriate steps are taken.
10. Each department shall date, sign, and retain the following records for each forklift they own:
- a. Serial number and date of purchase (this shall be kept for as long as the department owns the forklift).
  - b. Written records of the annual inspections and repairs performed. This shall include deficiencies found, corrective actions taken and the identification of the person(s) who performed the inspection and repairs.
  - c. All pre-start inspections that have been performed for each forklift used.
  - d. Training records for employees who have received the forklift familiarization training for each classification of forklift that they use.

## OPERATOR RESPONSIBILITIES

Because the forklift operator has direct control over the application and operation of a forklift, conformance to established campus safety practices is the responsibility of the forklift operator. Decisions on the use and operation of forklifts shall be made with the understanding that the safety of the operator and others nearby is dependent on using sound judgement. Forklift operators have responsibilities including the following:

1. Through the classroom forklift safety training and the forklift familiarization training, the operator is expected to know and understand the following about the forklifts they operate, prior to their initial use:
  - a. The safe operation of the forklift.
  - b. Hazardous conditions which jeopardizes safety.
  - c. All control features of the forklift.
  - d. All placard warnings.
  - e. All safety devices on the forklift.

- f. Where to locate the operator's manual.
  - g. Who is authorized/permitted to operate the forklift.
2. If the operator does not understand any of the above they shall consult with their supervisor prior to using the forklift to ensure a full understanding.
3. Perform Pre-Start Inspections:
  - a. Users shall inspect the forklift as required by their department and this program to ensure proper operation.
  - b. All users shall perform pre-start inspections on the forklift prior to each day's (or shift's) use of the forklift. Documentation of the pre-start inspections shall be performed by completing a "Forklift Pre-Start Inspection Form"
  - c. Forklifts that are not in proper operating condition shall be immediately removed from service and reported to the appropriate supervisor.
  - d. Operators shall notify their supervisor if the forklift does not safely pass inspection or if any unsafe condition is identified.
4. If, at any time, the operator is concerned for their safety, they may, at their discretion, park the forklift in accordance with established best practices and remove the keys.
5. Only *trained and authorized* employees may operate or use a forklift.

## **FORKLIFT OPERATOR SAFETY TRAINING**

All operators and users of forklifts shall attend a forklift safety training class sponsored by EH&S/General Safety staff prior to using or operating a forklift. ***Previous experience or licensing before becoming a University of California Santa Barbara employee does not qualify you to operate a forklift.***

**Contents of the classroom portion of operator training will include the following:**

- Purpose and use of manuals and where they must be located
- Authorization to operate.
- Pre-use inspection process.
- Identification of malfunctions and problems.
- Data plate information
- Factors affecting stability.
- Comparison of a forklift to an automobile.

- Purpose of placards and decals.
- Safety rules and regulations.
- Precautions for refueling / recharging
- Operator warnings and instructions
- Loading Dock and Ramp precautions
- Required Personal Protective Equipment (PPE)

### **Forklift Category Familiarization Training & Operator Skills Evaluation:**

All forklift operators shall attend “Forklift Category Familiarization Training” session that is specific to the category of forklift that they will be operating. The training shall be provided by EH&S/General Safety staff.

Upon successful completion of the classroom training, familiarization training and forklift operator skills/performance evaluation a certification card, and certificate of completion will be issued. Copies will be provided to the employee and the department.

Trained/certified operators *must be authorized to operate forklift equipment by their department prior to operation of said equipment.* Authorization must be in writing.

### **Re-training (both classroom and forklift familiarization sessions):**

Will be required of any operator that has been involved in a forklift incident, has been observed exhibiting any unsafe practices involving a forklift, or has been involved in a “near miss” incident.

## **INSPECTIONS & MAINTENANCE**

The inspection process is a critical step in preventing forklift incidents that are caused from faulty or worn out equipment. Forklifts that are not in proper operating condition shall be removed from service until the problems have been corrected by an authorized and trained maintenance technician.

### **Pre-Use Inspections**

Before each day’s use, or at the beginning of each shift that the forklift is used (whichever comes first), it shall be given a pre-use inspection. This involves both visual inspection and functional tests that includes the following criteria:

- Operating and emergency controls.
- Safety devices such as horn, seatbelt, brake lights, audible back-up alarm, and flashing/rotating beacons.
- Brake systems and steering systems.

- Hydraulic and fuel system leaks.
- Cables and wiring harness.
- Loose or missing parts.
- Tires and wheels.
- Placards, warnings, control markings and operating manual(s).
- Overhead guards and load backrests

### Removing a Forklift from Service:

Conditions such as hydraulic leaks, poor braking or steering, safety devices not functioning shall result in immediate removal of a forklift from service.

- Park the forklift in a location that does not block exits, emergency equipment, or prevent others from performing work. Shift the forklift to neutral, lower the forks, set the parking brake, turn off the ignition.
- Remove the key from the ignition, notify your supervisor and give them the key.
- Hang a “Do Not Operate” tag from the steering wheel and make a note on the forklift’s pre-start inspection sheet.



- The forklift is to remain out of service until the problems have been repaired by an authorized and trained maintenance technician.
- Upon receiving a forklift back after repairs, the forklift operator must immediately perform another pre-start inspection to verify that everything is functioning properly.

### Maintenance

All maintenance that is performed on forklifts shall be performed by trained and experienced professionals. The owning or renting department shall make arrangements with an approved vendor/contractor to provide this service.

Forklifts that are being used at a frequency of more than 200 hours of runtime per year shall have a frequent inspection performed 2 times per year. Forklifts which average fewer than 200 hours of runtime per year will have a frequent inspection that occurs 1 time per year.



These inspections shall be performed by a qualified mechanic who is authorized to perform maintenance duties and repairs on the forklift. An approved vendor shall be contracted through the department who owns the forklift. The contractor's inspection shall include all items specified by the manufacturer for a frequent inspection. Owner department will:

- maintain copies of all inspections and repairs and,
- provide them upon request to EH&S/General Safety staff for inspection

### **Battery Charging and Fueling Forklifts:**

Shall be done in an environment with adequate ventilation that is free from sparks or open flames. Where battery charging takes place, an ABC fire extinguisher shall be available within 20 feet of the charging station and these areas are to be designated "No Smoking". Locations such as a garage or exterior storage space are approved for propane cylinder storage. While changing propane cylinders, forklift operators shall wear leather gloves to protect from frostbite in the event of a propane leak.

### **Forklift Equipment Alterations/Attachments**

The forklift manufacturer must provide written approval for any attachments beyond what was available upon initial purchase of the equipment. Additional attachments are to be reflected in the forklift data plate with adjusted forklift capacity calculations.

## **FORKLIFT OPERATION BEST PRACTICES**

### **Pre-Use Best Practices**

- Obtain authorization to use or operate the forklift (certification card and written department approval).
- Always check the last pre-start inspection for any comments or notes and perform a new pre-start inspection on the forklift. Document the inspection, and place it in the reserved storage location on the forklift.
- Be familiar with the equipment owner's manual and the rated capacity of the equipment.
- When mounting a forklift always maintain three points of contact
- All sit down operated forklifts are to be equipped with a seat belt. Seat belts must be worn by operators if they are available on the equipment.

### **Operational Best Practices**

- Always keep your head, hands, and feet within the confines of the overhead guard
- Only handle loads that are within the forklift's rated capacity
- Never allow a person to stand under elevated forklift forks.



- While traveling, yield the right of way to pedestrians and ensure to use your horn at intersections and when changing directions
- Use extreme caution on grades, ramps, or inclines. Operators should travel straight up and down, keeping the load upslope.
- Distractions such as eating, drinking, smoking, talking on cell phone, texting are all prohibited while a forklift is in gear. Stop, shift to neutral, and set the parking brake prior to a answering/using cell phones or other devices.
- Do not exceed a speed of 5 Miles Per Hour when operating a forklift
- Always look in the direction of travel. This includes when traveling in reverse. If you must go forward to set down a load and your view is obstructed, use a second person as a spotter to ensure traffic is clear and to communicate to the driver how much clearance between the load and any obstructions.
- Always maintain a distance of three lift truck lengths between the forklift being operated and any other forklifts, elevated work platforms or other types of motorized equipment
- Never carry passengers nor elevate persons standing on either the forks or a pallet.
- Stunt driving or horseplay involving forklifts may result in disciplinary action and/or revocation of operator status and privileges
- When parking never block doors, emergency exits, or electrical panels
- Prior to dismounting from a forklift: (1) set the parking brake, (2) lower the forks to the ground, (3) neutralize the controls, (4) turn off the engine, and (5) remove keys from the ignition if you will be more than 25 feet away from the forklift

### **Loading Dock Best Practices**

- Be aware of loading dock drop offs and ramps to ensure that forklifts do not unexpectedly tip over the edge.
- Continue to maintain the loading dock areas during rainy or inclement weather conditions to reduce the risk of a forklift sliding off the loading dock area.
- Forklift operators have the responsibility of ensuring that truck drivers are putting their truck in park, setting the brakes, and placing a chock under the rear tires.
- Prior to driving into a trailer, check the overhead clearance as well as the condition of the dock plate and trailer floor to ensure that they will handle the weight of the forklift and the load you will be transporting.
- Functioning headlights are required when operating a forklift indoors, at night or working inside a dark trailer.

- Immediately report any forklift related incidents to your supervisor. Supervisors shall inform EH&S/General Safety staff so that an incident investigation will occur, equipment inspection may occur, and ensure that the forklift operator is retrained.

## IN THE EVENT OF A TIPOVER



# **APPENDIX A**

## **PRE-USE INSPECTION FORMS**

**UCSB FORKLIFT OPERATOR SAFETY  
 DAILY PREVENTIVE MAINTENANCE & INSPECTION REPORT  
 FOR GAS/DIESEL/LPG POWERED ENGINES**

**Forklift ID#:** \_\_\_\_\_ **Make:** \_\_\_\_\_ **Model:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Hour Meter Reading:** \_\_\_\_\_

**Certified Forklift Operator:** Complete this form, before each use. Check "OK" if the items are in good condition/operation or check the "Repair Required" box if the item is not in proper working order. **IMPORTANT:** *The forklift must not be utilized if there are any items that require repairs. Report all "Repair Required" items to your supervisor immediately.*

**Required Operator Inspection Items/Functions**

Inspection Item (Visual Check)	OK	Repair Required	Comments/Action Taken
FORKLIFT BODY (Dents)			
DATA PLATE & SAFETY DECALS (Present & Legible)			
FUEL LEVEL			
OIL LEVEL & OIL PRESSURE			
WATER LEVEL			
FAN BELT (Serviceable)			
ENGINE HOSES (No Leaks/Cuts)			
BATTERY (Clean & Serviceable)			
TIRES/WHEELS (Air Pressure/Wear/Bolts Tightened)			
HYDRAULIC HOSES (No Leaks/Cuts/Excessive Wear)			
CHAINS (Not Loose, broken, or worn ) Properly lubricated			
MAST (Serviceable) No worn, broken, or misaligned parts)			
FORKS (No Cracks at Joints) Properly Mounted & Secured			
PARKING BRAKE (Operational : Forward & Reverse)			
SERVICE BRAKES (Operational) Not loose/spongy			
STEERING (No Excessive Play)			
HYDRAULIC CONTROLS (Smooth & Continuous Operation)			
HORN (Operational)			
BACK-UP ALARM (Functioning)			
OVERHEAD CAGE Properly Mounted, No visible damage			
WARNING LIGHT (Functional)			

**INSPECTOR'S NAME (Print):** \_\_\_\_\_

(Signature): \_\_\_\_\_

**Note to Supervisors:** *It is your responsibility to ensure your operators are continually performing and documenting their pre-use inspections*

**UCSB FORKLIFT OPERATOR SAFETY  
 DAILY PREVENTIVE MAINTENANCE & INSPECTION REPORT  
 FOR BATTERY POWERED ENGINES**

Forklift ID#: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Hour Meter Reading: \_\_\_\_\_

**Certified Forklift Operator:** Complete this form, before each use. Check "OK" if the items are in good condition/operation or check the "Repair Required" box if the item is not in proper working order. **IMPORTANT:** *The forklift must not be utilized if there are any items that require repairs. Report all "Repair Required" items to your supervisor immediately!*

**Required Operator Inspection Items/Functions**

INSPECTION ITEM	OK	Repair Required	COMMENTS
FORKLIFT BODY (Dents)			
DATA PLATE & SAFETY DECALS (Present & Legible)			
BATTERY CHARGE LEVEL			
BATTERY LOAD TEST			
BATTERY PLUG CONNECTION			
BATTERY (Clean & Serviceable)			
TIRES/WHEELS (Air Pressure/Wear/Bolts Tightened)			
HYDRAULIC HOSES (No Leaks/Cuts/Excessive Wear)			
CHAINS (Not Loose, broken, or worn ) Properly lubricated			
MAST (Serviceable) No worn, broken, or misaligned parts)			
FORKS (No Cracks at Joints) Properly Mounted & Secured			
PARKING BRAKE (Operational : Forward & Reverse)			
SERVICE BRAKES (Operational) Not loose/spongy			
STEERING (No Excessive Play)			
HYDRAULIC CONTROLS (Smooth & Continuous Operation)			
HORN (Operational)			
BACK-UP ALARM (Functioning)			
OVERHEAD CAGE Properly Mounted, No visible damage			
WARNING LIGHT (Functional)			

INSPECTOR'S NAME (Print): \_\_\_\_\_

(Signature): \_\_\_\_\_

**Note to Supervisors:** *It is your responsibility to ensure your operators are continually performing and documenting their pre-use inspections*

**UCSB FORKLIFT OPERATOR SAFETY  
 DAILY PREVENTIVE MAINTENANCE & INSPECTION REPORT  
 FOR MOTORIZED/ BATTERY POWERED PALLET JACKS**

Forklift ID#: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Hour Meter Reading: \_\_\_\_\_

**Certified Motorized Pallet Jack Operator:** Complete this form, before each use. Check "OK" if the items are in good condition/operation or check the "Repair Required" box if the item is not in proper working order.

**IMPORTANT:** *The forklift must not be utilized if there are any items that require repairs. **Report all "Repair Required" items to your supervisor immediately!***

**Required Operator Inspection Items/Functions**

INSPECTION ITEM	OK	Repair Required	COMMENTS
PALLET JACK BODY (Dents)			
BATTERY CHARGE LEVEL			
BATTERY LOAD TEST			
BATTERY PLUG & CONNECTOR			
BATTERY (Clean & Serviceable)			
TIRES/ LOAD WHEELS (Serviceability/Wear/Bolts Tightened)			
HYDRAULIC HOSES (No Leaks/Cuts/Excessive Wear)			
DATA PLATE AND SAFETY DECALS (Present, Legible )			
FORKS (No Cracks at Joints)			
KEY SWITCH (Functional)			
SPEED CONTROLS (Rabbit/Turtle) (Operational)			
SERVICE BRAKES (Operational) Not loose/spongy			
STEERING (No Excessive Play)			
HYDRAULIC CONTROLS (Smooth & Continuous Operation)			
HORN (Operational)			
FORWARD/REVERSE CONTROLS (Functioning)			
WARNING LIGHT (Functional)			

INSPECTOR'S NAME (Print): \_\_\_\_\_

(Signature): \_\_\_\_\_








**Note to Supervisors:** *It is your responsibility to ensure your operators are continually performing and documenting their pre-use inspections*

# **ANNEX B**

## **FORKLIFT CLASSIFICATIONS CHART**



# LIFT TRUCK CLASSIFICATIONS CHART

<p><b>CLASS I.</b>                  ELECTRIC MOTOR COUNTER-BALANCED RIDER TRUCKS</p>		<p>These forklifts can be equipped with either cushion or pneumatic tires. The cushioned tires are designed for indoor use on smooth, dry floors. They are very versatile and are typically used where air quality factors need to be considered</p>
<p><b>CLASS II.</b>                  ELECTRIC MOTOR NARROW AISLE TRUCKS</p>		<p>These are designed for use in narrow aisles in warehouses allowing for maximum available storage space. They minimize the space occupied by the lift truck and improve speed and efficiency</p>
<p><b>CLASS III.</b>                  ELECTRIC MOTOR HAND TRUCKS</p>		<p>These are battery powered, hand-controlled lift trucks. They are lower capacity rated than sit-down lift trucks. All controls are mounted on the tiller with the tiller moved side to side to steer the truck</p>
<p><b>CLASS IV.</b>                  INTERNAL COMBUSTION COUNTER BALANCED TRUCKS (Cushion Tires)</p>		<p>Designed for use indoors on smooth dry floors. Most often used on loading docks plants &amp; warehouses where power, &amp; continuous usage are expected, and good maneuverability is important</p>
<p><b>CLASS V.</b>                  INTERNAL COMBUSTION COUNTERBALANCED TRUCK (Pneumatic Tires)</p>		<p>These trucks are most commonly used in warehouses, lumberyards, wineries, and production facilities. These lift trucks can be powered by LPG, Gasoline, or Diesel fuel.</p>
<p><b>CLASS VI.</b>                  ELECTRIC &amp; INTERNAL COMBUSTION TOW TRACTORS</p>		<p>These versatile trucks can be used in a variety of applications such as commercial aviation, and facility maintenance. They are designed for either indoor or outdoor usage</p>
<p><b>CLASS VII.</b>                  ROUGH TERRAIN FORKLIFT TRUCKS</p>		<p>Rough Terrain forklifts are fitted with large floatation tires for outdoor use on difficult surfaces. They are most commonly used on construction sites to transfer and lift building materials to various job site locations. They are also commonly used in lumber yards and auto recycling facilities</p>