

UC Merced

Forklift and Industrial Work Truck Safety Program



Table of Contents

Section	Page
1.0 PURPOSE.....	1
2.0 APPLICABILITY/SCOPE.....	1
3.0 ROLES/RESPONSIBILITIES	1
3.1 All UC Merced Staff, Faculty and Students.....	1
3.2 Departments that own/use Industrial Lift Trucks	1
3.3 Department Safety Coordinators.....	1
3.4 Industrial Lift Truck Operators	2
3.5 Truck Drivers Employed by UC Merced	2
3.6 Truck Drivers making deliveries to UC Merced	2
3.7 Contractors and Vendors using Industrial Lift Trucks on UC Merced Property	2
3.8 EH&S – (Forklift Safety Program Manager).....	2
4.0 PROGRAM REQUIREMENTS/OPERATOR PROCEDURES	3
4.1 Administrative Requirements	3
4.1.1 Procurement/Selection of Equipment Based on Evaluation of Work Area Hazards	3
4.1.2 Identification of Department Personnel Requiring Industrial Lift Truck Training.....	3
4.2 Operator Training/Licensing Procedures	3
4.2.1 Written/Classroom/Online Training.....	4
4.2.2 Written Tests.....	4
4.2.3 Hands-On/Field Training/Testing	4
4.2.4 Operator Licensing.....	4
4.2.5 Refresher Training	5
4.3 Operator Procedures	5
4.3.1 Pre-Operation Inspection	5
4.3.2 “Lift Truck Tag Out” for Repair	5
4.3.3 Safe Operating Practices	6
4.3.4 Securing the Load	6
4.3.5 Conducting the Lift/Carry	7
5.0 TRAINING REQUIREMENTS	7
5.1 All UC Merced Staff, Faculty and Students.....	7
5.2 Contractors using Industrial Lift Trucks on UC Merced property.....	7
6.0 RECORDKEEPING REQUIREMENTS.....	7
6.1 Departments that own/use Industrial Lift Trucks.....	7
6.2 Department Safety Coordinators	7
6.3 Industrial Lift Truck Operators.....	7
6.4 EH&S – (Fork-truck Safety Program Manager).....	8
6.5 EH&S Trainer.....	8
7.0 REFERENCES	8
8.0 ISSUED BY AND NEXT REVIEW DATE.....	8
9.0 ATTACHMENTS.....	8

1.0 PURPOSE

This program guides all aspects of the Industrial Lift Truck/Forklift Safety Program for the University of California at Merced (UC Merced) as mandated by Cal/OSHA and other regulatory compliance codes, this program guides departments that rent/lease/own and operate Powered Industrial Lift Trucks/Forklifts to train and license personnel who operate their equipment, conduct periodic safety inspections and preventive maintenance of the equipment, and adhere to specific safe-work practices whenever using these types of powered industrial equipment.

2.0 APPLICABILITY/SCOPE

This program applies to all UC Merced faculty, staff and students who are required or request to operate Powered Industrial Lift Trucks (forklifts), or who must oversee persons operating Powered Industrial Lift Trucks, for any portion or aspect of their research, instruction and/or work. It only applies to equipment designed to lift material and equipment that is on pallets or other 'gathered' framework devices, and move it across a surface and set it down, or place it in a storage rack. It does not apply to equipment designed to lift people to create an elevated work area/platform with two key exceptions noted below. Equipment that lifts personnel are known as "Aerial Lifts" or "Elevated Work Platforms" and regulated under the UC Merced Aerial Lift and Elevated Work Platform.

This program DOES apply to order-picker equipment where the operator of the equipment is elevated along with the forks to place or retrieve palletted materials from high-storage racks. It also applies to forklifts that have had a "personnel lifting platform" attached to the forks. In both these situations, the personnel who are elevated by the equipment must wear fall protection gear while aloft, and be trained on the requirements of the UC Merced Fall Protection Program.

3.0 ROLES/RESPONSIBILITIES

3.1 All UC Merced Staff, Faculty and Students

All UCM faculty, staff and students who are required or request to operate Forklifts/Powered Industrial Lift Trucks or who must oversee persons operating Powered Industrial Lift Trucks, must know about the requirements of this program.

3.2 Departments that own/use Industrial Lift Trucks

Departments that own, operate, or allow the operation of forklifts/powered industrial trucks at their facilities assure that all UC Merced faculty, staff, or student operators have current operator's licensure from the Office of Environment, Health and Safety (EH&S) or other legally authorized provider.

3.3 Department Safety Coordinators

Assure that all aspects of this program are implemented in their department including current operator licensure from EH&S, scheduling training/retraining as needed, and maintain equipment

inventories, program training and inspection records.

3.4 Industrial Lift Truck Operators

Operators must be trained and successfully complete "Forklift Safety Training" conducted by EH&S or other legally authorized provider in the safe operation of the specific manufacturer and model of powered industrial trucks that are rented, leased or owned by UC Merced that they will be using. Successful training results in three-year licensure to operate that specific type of equipment. Licensure must be attained for each manufacturer/model of powered industrial equipment operated, and is NOT transferable or global to a category of equipment. Training is very specific to each manufacturer and model of equipment operated by the Operator.

UC Merced EH&S and UC Merced Facilities personnel track their authorized operations. However, operators are still responsible to renew their Operator's License within 90-days of the 3-year expiration date of their license by enrolling in 'retraining' through EH&S.

3.5 Truck Drivers Employed by UC Merced

UC Merced truck drivers that have a current "Forklift Safety" license issued by EH&S may operate powered industrial trucks to load or unload their truck.

3.6 Truck Drivers making deliveries to UC Merced

Vendor truck drivers that have been trained under their company's powered industrial trucks program, have a valid Operator's License issued by their employer within the past three years, and have the UC Merced Department's permission, may operate their employer's forklifts/powering industrial trucks on UC Merced premises.

3.7 Contractors and Vendors using Industrial Lift Trucks on UC Merced Property

Contractor or Vendor employees that have been trained under their company's powered industrial trucks safety program, have a valid Operator's License issued by their employer within the past three years, and have the UC Merced Department's permission, may operate their employer's forklifts or powered industrial trucks on UC Merced premises. Whether the operator is a vendor or contractor, they may be required to show verification that they have been trained within the last three years by their employer, a legally authorized provider or UC Merced EH&S.

Contractor or Vendor employees who must use UC Merced rented/leased/owned equipment must be licensed by UC Merced EH&S to operate the UC Merced equipment. UC Merced Departments who find themselves in the position of needing to license a Contractor or Vendor to use UC Merced equipment are responsible to arrange for training and licensure of the Contractor/Vendor personnel with EH&S.

3.8 EH&S – (Forklift Safety Program Manager)

EH&S manages this program for UC Merced and is responsible for all aspects of managing and implementing this program including:

- Assures this program is updated regularly to maintain compliance with codes and regulations

as they change, or at least every three years.

- Communicates program changes, objectives and requirements to all departments impacted by this program.
- Manages online training and tracking/record-keeping of all trainees
- Develops and updates training content as needed.
- Manages program databases and records of Operator Licensure.
- Arranges for safe locations to conduct "hands on" field training.
- Conducts "hands on" field training and assessment of Operator trainees.
- Works with client departments to develop custom training for unique and "department-specific" industrial lift equipment.
- Conducts periodic program audits at client departments to assure the program is being properly implemented and followed.
- Conducts periodic "customer service" inquiries to learn how the program can be modified to better meet client department need.
- Modifies program content and procedures as needed to improve program effectiveness and ease to implement/track.

4.0 PROGRAM REQUIREMENTS/OPERATOR PROCEDURES

4.1 Administrative Requirements

The Department Management responsible for purchasing/owning the Industrial Lift Truck(s) designates the person(s) responsible for the following actions:

4.1.1 Procurement/Selection of Equipment Based on Evaluation of Work Area Hazards

The Department procures and outfits Industrial Lift Trucks that will safely operate in the Department's work environment with the anticipated maximum load capacity required. Unusual or potential hazardous locations or operations in a department's work environment are marked with appropriate warnings via signage and paint striping, or reduced through Operator training and appropriate equipment selection/maintenance.

4.1.2 Identification of Department Personnel Requiring Industrial Lift Truck Training

The Facilities Department maintains a list that specified UC Merced personnel who are allowed to operate the Department's Industrial Lift Trucks. This Operator Roster is used to identify training needs and to identify and limit equipment to safe use for UC Merced business activities. This list is updated periodically as the EH&S Department manages compliance with this program, when lifting needs and/or equipment changes, and when personnel are enrolled or leave this program.

4.2 Operator Training/Licensing Procedures

Each Operator must successfully complete Operator Safety Training prior to operating a powered

industrial truck on UC Merced property. Trainees may only operate the Industrial Lift Equipment type they have been trained on and licensed to operate, or when under the direct supervision of persons who have the knowledge, training and experience to train operators and evaluate their competence. Training is conducted in a location where such Lift-Truck operation does not endanger property, the trainee or others.

EH&S ensures that each powered industrial truck operator is competent to operate a powered industrial truck safely and in compliance with Cal/OSHA requirements, as demonstrated by the successful completion of the training and evaluation specified below. Training consists of a combination of written, classroom and/or interactive computer learning, followed by hands-on "field" training.

4.2.1 Written/Classroom/Online Training

Written, classroom or online training consists of content as outlined in [Cal/OSHA training requirements](#) for Industrial Lift Trucks, is general in nature and includes familiarization with equipment types and components, hazard assessment and mitigation, equipment inspection requirements, load positioning and securing techniques, and other requirements of this program. See [Attachment 1](#) for a diagram of forklift components. At this point in time all forklift operator training is done by trained personnel from United Rental.

4.2.2 Written Tests

A written final exam is administered demonstrating the trainee's understanding of basic Industrial Lift Truck operation and safety. Completion of this final exam with a passing grade of 70% or higher is required before the scheduling of the hands-on/field training. Records of successfully completed exams are kept by the trainer provided and are available to EH&S upon request.

4.2.3 Hands-On/Field Training/Testing

The "Hands-On" training and testing is conducted using the specific Industrial Lift Equipment for which training is occurring under the direct supervision of the EH&S trainer who has the knowledge, training and experience to train powered industrial truck operators and evaluate their competence. Field training using a Powered Industrial Lift Truck includes demonstrations performed by the trainer, practical exercises performed by the trainee and observed by the trainer, as well as evaluation of the trainee's successful performance on a standard "skills assessment" course. United Rentals currently does all of the "Hands-On" field training.

4.2.4 Operator Licensing

When the trainee successfully completes both written and hands-on testing, EH&S certifies and 'licenses' that the Operator has been trained and evaluated as required by this program and Cal/OSHA law. The license includes the following:

- The name of the Operator,
- The completion date of the training,

- The date of the evaluation,
- The identity of the person(s) performing the training or evaluation,
- The date the certification expires, and
- The types of industrial trucks the operator(s) is/are “licensed” to operate.

An Operator's License is issued by EH&S/United Rentals, is credit-card size and is valid for three years, and must be carried by the Operator whenever he/she is operating an Industrial Lift Truck on UC Merced property. Within 90 days of expiration, the EH&S, the department and the operator are responsible to schedule re-training/licensure through their Department's responsible person.

4.2.5 Refresher Training

Refresher training is conducted to ensure the Operator has the knowledge and skills needed to operate powered industrial trucks safely. Law requires that refresher training is provided every three years to the Operator or when:

- The operator has been observed to operate the equipment 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 lift truck safely.
- The operator is assigned to drive a different type of truck.
- A condition in the workplace changes in a manner that could affect safe operation of the truck.

Refresher training content is determined by the Forklift Safety Program Manager/Trainer based upon observed hazards, type of equipment, Department needs, and work requirements. If the Operator has successfully completed classroom training in the past three years, and such training is appropriate to a new truck and/or working conditions, additional classroom training is not required for the new equipment if the operator has been evaluated in a "hands-on" field training and found competent to operate the new truck or perform in the new working conditions safely.

4.3 Operator Procedures

4.3.1 Pre-Operation Inspection

At the beginning of each work shift, or prior to using an Industrial Lift Truck for a new work assignment, the Operator conducts a documented "Pre-Operation Inspection." The form is included herein as [Attachment 2](#). This inspection is specific to the type of lift equipment, and includes visual and auditory inspection of all safety and operational components of the equipment. Results of this inspection are documented on inspection checklists.

4.3.2 “Lift Truck Tag Out” for Repair

No lift truck is used until any deficiency(s) discovered during a Pre-Operation Inspection are corrected. If a hazardous deficiency is discovered during a Pre-Operation Inspection, the

Operator alerts their Supervisor of the condition, and "Tags Out" the truck from being used by controlling all ignition keys for the vehicle, and placing a "Warning Tag" on the vehicle steering wheel with the following information:

1. Person's name that has "Tagged Out" the vehicle and has the keys in their possession as well as their contact information.
2. Date vehicle was "Tagged Out".
3. Reason(s) for "Tagging Out" the vehicle including all noted deficiencies.
 - A photocopy of the completed inspection form may be taped to the steering wheel for this purpose.
4. Name and contact information for the Department's Responsible Person for implementation of this program.

No repairs are made on any industrial trucks until the vehicles and their components are blocked, tagged, locked out or otherwise made safe for repair work to commence according to application of the UC Merced Energy Isolation – Lockout-Tagout Program.

4.3.3 Safe Operating Practices

Prior to operation of a forklift, or at the beginning of each shift, each Operator must review the following:

1. Check the work area for hazards, and remove/control them prior to operation.
2. Only use a truck designed to safely work in the work-area conditions observed.
3. Review operating instructions, warnings, and precautions for the types of truck being operated.
4. Remember the differences between the lift-truck drive-train/steering and an automobile.
5. Review truck controls and instrumentation. Where are they located, what do they do, and how do they work?
6. Check engine or motor operation.
7. Assure safety systems are working properly i.e. horn, backing alarm, warning lights, etc...
8. Check steering and maneuvering as being sound and solid.
9. Familiarize yourself with visibility (including restrictions due to loading and truck components).
10. Review fork and attachment adaptation, operation, and use limitations.
11. Review vehicle capacity and vehicle stability.
12. Complete vehicle inspection and maintenance that the Operator is required to perform.
13. Check fuel and/or charging and recharging of batteries, and refuel/recharge as needed.
14. Review Lift Truck operating limitations.
15. Review other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the operator will operate.
16. Alert all persons in the work area of intended work activities and hazards.

4.3.4 Securing the Load

1. Always place the load against the backrest to help stabilize the load.

2. Always place the larger or heaviest part of the load closest to the backrest.
3. If carrying wide loads, such as lumber or steel, adjust the forks as wide as possible.
4. Use ropes or straps to secure the load as needed. But only attach to the Backrest Extension or Apron Carriage.
5. Use clamps or wood blocks to keep round objects such as pipes from rolling during transport.
6. Never have a person walk in front of the forklift to stabilize a load while the forklift is being driven.
7. Use shrink wrap or tape as needed to secure items stacked on pallets.

4.3.5 Conducting the Lift/Carry

1. Always evaluate the situation before making a lift.
2. Always pickup an object with the heaviest side against the backrest.
3. If the load is too large to see around, always drive in reverse.
4. Never allow a person to walk or stand between the Lift Truck/load and another object.
5. Always carry the load as low as possible and watch for overhead obstructions.
6. Always honk the horn at intersections, blind spots, corners, or where pedestrians are near.

5.0 TRAINING REQUIREMENTS

5.1 All UC Merced Staff, Faculty and Students

All UC Merced staff, faculty and students are informed of the basic requirements of this program with the primary knowledge that they must be trained and licensed to operate an Industrial Lift Truck prior to doing so on UC Merced property.

5.2 Contractors using Industrial Lift Trucks on UC Merced property

Contractors using Industrial Lift Trucks on UC Merced property must be aware that they must have a valid Operator's License issued by their employer within the past three years; have UC Merced's permission to operate their employer's powered industrial trucks on the UC Merced premises; must carry on their person and produce upon request verification in the form of an "Operator's License" from their employer that they have been trained within the last three years.

6.0 RECORDKEEPING REQUIREMENTS

6.1 Departments that own/use Industrial Lift Trucks

All departments that have trained powered industrial truck operators should keep a current copy of licensure on file (up to three years). For copies of licensure, please contact EH&S.

6.2 Department Safety Coordinators

No record keeping needed, but should verify that all operators have current licensure.

6.3 Industrial Lift Truck Operators

Operators that use powered industrial trucks in departments other than their own should at all times

have their “UC Merced Forklift License” in their possession.

6.4 EH&S – (Fork-truck Safety Program Manager)

EH&S maintains a training database and licensure filing system of all UC Merced powered industrial truck operators. These records and all past licensure can be accessed anytime electronically by the Department, Department Safety Coordinator, supervisor, Cal/OSHA or certified operator.

6.5 EH&S Trainer

The Powered Industrial Truck Trainer retains all on-line training tests, forms, and sign-in sheets for record keeping purposes. United Rentals is our designated training at this point in time and they keep copies of all records. However, each supervisor and Director over workers who are licensed to drive a truck must retain records for their employees. Also, EH&S maintains copies of these records for UC Merced Staff.

7.0 REFERENCES

EH&S Phone: 209-228-3347 or <http://ehs.ucmerced.edu/>

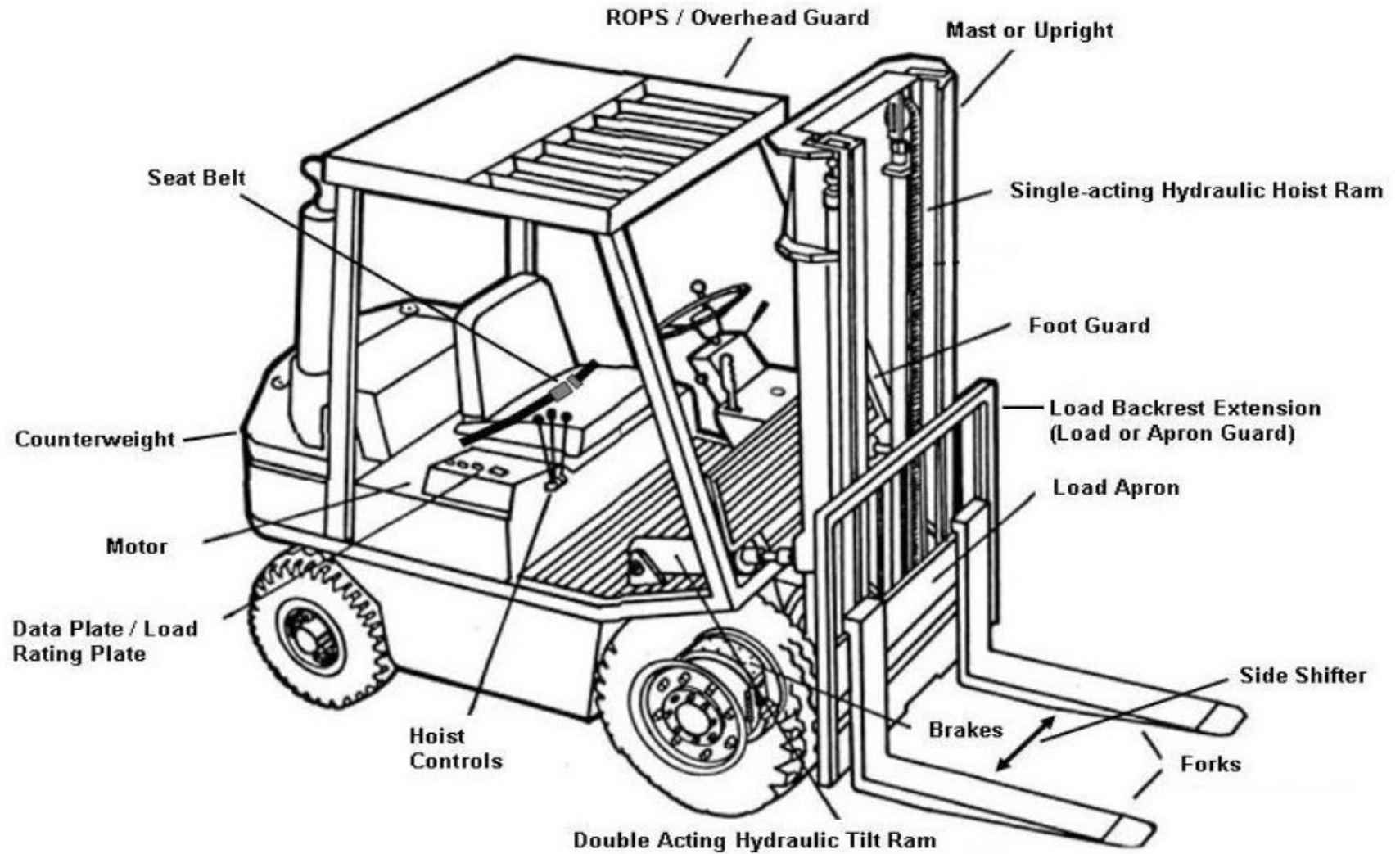
Forklift Safety Program Manager: William C. Collier, CIH, Campus Safety Officer
Phone: 209-228-3347
Email: bcollier2@ucmerced.edu

8.0 ISSUED BY AND NEXT REVIEW DATE

Issued by: William C. Collier, Campus Safety Officer
Approved by: David Ott, EH&S Director
Issue Date: March 17, 2015
Next Review Date: Three years from Issue Date

9.0 ATTACHMENTS

Attachment 1. [Forklift Components Drawing](#)
Attachment 2. [Pre-operation Inspection Checklist for Gas, LPG, or Diesel Forklifts](#)



Required Pre-operation Inspection Checklist
Operator daily checklist to be performed at the start of every shift

This page may be reproduced without permission from the copyright holder.

Note general vehicle condition; clear away all collected debris. Check for mechanical damage and loose or leaking components. Report any faults to your supervisor/s and also call FMHelp at 228-2986 or email fmhelp@ucmerced.edu.

Before starting the engine check the following:

	Status			Remarks
	OK	NO		
Walk around inspection (Visual Inspection)				
Visual inspection (warning decals, capacity plate, etc.)				
Forks/Locking Pins, Carriage, Mast				
Wheels, Tires & lug nuts (condition/pressure)				
Engine (check oil level and for leaks)			ADD	
Transmission (check oil level and for leaks)			ADD	
Engine Belts (check for adjustment/wear)				
Air Cleaner (check indicator, clean or change as required)				
Radiator (check coolant level and for leaks)			ADD	
Hydraulic Tank (check oil level and for leaks)			ADD	
Fuel Tank (secure, valve open & fuel level)			ADD	
Overhead (no damage)				
Seat Belt				

After starting the engine check the following:

Start-up Items	Status			Remarks
	OK	NO		
Engine (does it sound normal?)				
Instruments (check for normal readings)				
Exhaust System (check for leaks & excessive smoke)				
Wipers and lights (spot lights, turn signals, etc.)				
Horn and Backup Alarm (strobe lights)				
All hydraulic controls (normal operation-lift/tilt, etc.)				
Transmission and Clutch (direction and speed range)				
Breaks (parking & service breaks)				
Steering				

Note anything abnormal or in need of repair:

Operator: _____ Supervisor: _____

Vehicle Number: _____ Hour Meter Reading: _____ Date: _____

Additional Drivers in same shift: Operator: _____ Supervisor: _____
Operator: _____ Supervisor: _____