

Company Name:	Equipment Identification:
Mine Name:	Type of Equipment: Front End Loader
Date of Analysis:	Make:
	Model:
	Year:
	Use:

Loader Operator Orientation

Example materials needed to conduct Front-end Loader Job Training are as follows:

- This Job Training Outline
- Videos
 - Front-end Loader Safety (MSHA)
 - Stockpiling Safety (MSHA)
 - Berms and Haulroads (MSHA)
 - Silica Control in Equipment Cabs (NIOSH)
- Printed Materials
 - Company Policy
 - MSHA Regulation and Policy
 - OSHA Regulation and Policy
 - Operator's manual
 - Accident Reports (as applicable)

Job: Pre-Operational Inspection

The instructor will describe the machine, its purpose, the manufacturer, the model, the machines work capacities and capabilities. He will also discuss the importance of a daily self- assessment for work on each shift. Learner will describe the machine and its capabilities and capacities to the instructor. He will also describe how to do a self-assessment for work fitness.

Shift Preparation

Job Steps	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Employee assessment				
Communication between shifts				
Equipment Status (In-Service/Out-of-Service)				
Personal Protective Equipment				

Walkaround

The instructor will explain and demonstrate a walk around inspection of the end loader. This will include what and how to make checks, and the most common type of problems encountered.

The learner will conduct a walk around inspection of the loader in the presence of the instructor, point out and explain components to be checked and any necessary information about the check.

Job Steps	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Begin at right-rear corner <ul style="list-style-type: none"> • Turn master switch "OFF" • Check under machine for leaks • Check coolant level • Check engine oil level 				
Continue to left-rear corner <ul style="list-style-type: none"> • Check radiator • Check left-rear tire/wheel/lugs/lock ring 				
Continue to left center of machine <ul style="list-style-type: none"> • Check transmission site gauge • Visual check of hydraulic lines/steering cylinders • Check ladders/grab irons • Visual check of fuel tank • Check auto system lube lines or grease appropriate fittings 				
Continue to left-front of machine <ul style="list-style-type: none"> • Check under machine for leaks • Check left-front tire/wheel/lugs/lockring • Check bucket pins/linkage/hydraulic cylinders and lines/auto lube system lines or grease appropriate fittings • Check bucket wear items 				

Job Steps	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Continue to right-front of machine <ul style="list-style-type: none"> • Check right-front tire/wheel/lugs/lockring • Check bucket pins/linkage/hydraulic cylinders and lines/auto lube system lines or grease appropriate fittings • Check bucket wear items 				
Continue to right-center of machine <ul style="list-style-type: none"> • Check hydraulic oil level (sight gauge) • Check hydraulic lines/steering cylinders • Check ladders/grab irons • Check hydraulic fluid fill cap • Check auto lube system storage tank or grease appropriate fittings <ul style="list-style-type: none"> • Must climb ladder to check 				
Continue to right-rear of machine <ul style="list-style-type: none"> • Check right-rear tire/wheel/lugs/locking ring • Turn master switch "ON" 				

Outside Cab Inspection

The instructor will explain and demonstrate the method of mounting and dismounting the loader, he will also demonstrate and explain body positioning and the use of seat belts in the cab of the loader.

The learner will demonstrate mounting/dismounting.

Job Steps	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Mount machine				
Check fire extinguisher				
Check handrails				
Check/Clean Glass/Mirrors				

Inside Cab Inspection

The trainer will demonstrate and explain body positioning and the use of seat belts in the cab of the loader. The instructor will explain and demonstrate all controls of the loader. He will also describe the function of all gauges, lights, and warnings necessary on the loader. The learner will demonstrate to the instructor with the loader not running how all controls work. He will also explain all gauges and lights in the machine. He will need to be fluent on the identification of the international labeling used on the machine.

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Secure any loose items				
Housekeeping				
Adjust seat/check seat belt/fasten seat belt				
Key off – Check that all controls are set properly <ul style="list-style-type: none"> • Transmission • Park brake applied • Hydraulic controls locked out 				
Key on – Check gauges				
Check communications (CB)				
Sound Audible Warning				
Start Engine				
Monitor gauges				
Check service brakes				
Check steering				
Check park brakes on ramp				
Check lights				
Check back-up alarm /strobe				
Cycle hydraulics				
Complete Preshift Safety Checklist				
Go to work				

Job: On-Shift Operation

The trainer will demonstrate and explain the various activities of the loader, starting with moving the machine around on a flat area making starts and stops to ensure the trainee can get the machine stopped. As the learner becomes familiar with the loaders basic operating functions, the more complex functions can be demonstrated and added as this outline suggests.

Control Familiarization

Learner will demonstrate how to operate controls on the front-end loader. The learner will explain the technical aspects of the job duties as they are demonstrated.

The learner will demonstrate each activity to the trainer after a period of practice.

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Command Control Steering				
Hydraulic Controls <ul style="list-style-type: none"> • Lift/Tilt Bucket Controls • Kick-out Switches • Ride Control Switch 				
Transmission Operations				
Foot Pedal Controls				
All Hand Controls				

Maintain Communications

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2 Very Imp. 3 Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Eye contact				
Signals				
Hazard Reporting				

Demonstrate Blind Spots

The instructor will physically demonstrate blind spots and explain the importance of communication with other persons on the site.
The learner will describe blind spots and explain the importance of communication at the site

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Directly Behind Machine				
Right-Rear Corner				
Left-Rear Corner				
Right-front of Machine				

Demonstrate Machine Movement by Trainer

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Articulation <ul style="list-style-type: none"> • Release Parking Brake • Maintain Bucket Contact with Ground • Explain Pinch-points and Steering • Explain Steering Lock and Purpose 				
Forward and reverse movement <ul style="list-style-type: none"> • Explain Auto-Shift • Explain IBS Brake System (left pedal) 				
Trainee's Practice <ul style="list-style-type: none"> • Articulate Loader 				

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
<ul style="list-style-type: none"> • Move forward and reverse and articulate • Raise/lower bucket • Check all indicator gauges • Proper shut-down procedures • Provide feedback/demo 				
Loader Techniques by Trainer <ul style="list-style-type: none"> • Bucket Loading Techniques • Pick-and-carry Techniques • Truck Loading Techniques • Hopper Loading Techniques 				
Trainee's Practice <ul style="list-style-type: none"> • Bucket Loading Techniques • Pick-and-carry Techniques • Truck Loading Techniques • Hopper Loading Techniques 		3		

Field Practice

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Check gauges/indicators				
Maintain Safe Speed for Ground Conditions				

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
<ul style="list-style-type: none"> • Grade • Weather • Road • Visibility • Traffic 				
Check for Road Hazards				
Check for Highwall /Bank Hazards <ul style="list-style-type: none"> • Check berms • Check overhanging/loose material • Check for work overhead 				
Practice Defensive Driving <ul style="list-style-type: none"> • Awareness for Other Vehicles • Scan Ahead • Know/Remember Blindspots 				
Traveling on a Grade <ul style="list-style-type: none"> • Yield to Loaded Truck 				
Monitor Gauges				
Clean Windshield as necessary				
Use Signals				
Count Loads/Scale				
Accelerate Smoothly				
Obey Traffic Signs				
Fueling Equipment				
Wear Seatbelts				

Job: Post-Operational Inspection

The instructor will demonstrate end of shift activities, and reporting procedures if problems have developed with the loader or the site during the shift. He will also introduce the learner to the cross shift and encourage a few minutes of conversation at shift change.

The learner will demonstrate and explain post operation activities, including completion of any record required. .

Park Equipment

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Set park brake				
Lower bucket to ground				
Place controls in neutral condition and lock-out				
Idle Down/Cool Down Engine				
Observe gauges/Indicators				
Stop Engine/Turn Off Lights				

Dismount Machine

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Clean Out Cab • Wet Wipe or vacuum cab				
Observe Ground Conditions				
Check Ladder/Grab Irons				
Face Ladder				
Maintain 3-point contact				
Final walk-around/Turn off master switch				

Communications Changes

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
End-Loader				
Mine				

Job: Emergency Procedures/Abnormal Occurrences/Non-Routine Procedures

The instructor will demonstrate and/or explain the emergency procedures needed to recover from an emergency situation (after the learner has had the time to develop the necessary operating skills). These skills may be needed infrequently or never, but the consequences of not knowing how to respond could be catastrophic.

The learner will demonstrate and/or explain to the trainer the emergency procedures needed to recover from an emergency situation (after the learner feels comfortable with necessary operating skills). These skills may be needed infrequently or never, but the consequences of not knowing how to respond could be catastrophic.

Fire

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Stop Machine/Exit Immediately				
Turn key "OFF"/Master Switch, if possible				
Notify supervision				

Medical

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Injury/Illness • Report to Supervisor				

Critical Manfunctions

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Engine Stall/Power Loss				
React to Panel Lights				
Tire Failure				
Brake Failure				
Steering Failure				
Hydraulic Failure				
Electrical Failure				

Sudden Loss of Visibility

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Loss of visibility				

Loss of Control

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Skidding				
Submersion				
Roll Over				

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Ground Failure				

Contact with Power Lines

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Overhead				
Underground				

Other Vehicle out of Control

Job Step	Importance Narrative (Risk/Production/Maintenance)	Importance Level 1 Important 2Very Imp. 3Critical	Satisfactory/ Needs Work (Student Observation)	Procedure/Risk Resolution Notes/Comments
Other Vehicle out of Control				