

Company Name:	Equipment/Job Identification: Front-end Loader Operator
Mine Name:	Type of Equipment: Front-end Loader
Date of Analysis:	Make: Cat
	Model: 988B
	Year:
	Use: Loading/Tramming/stockpiling

Pre-Assessment:

Pre-requisites:

The materials that could be used to conduct Front-end Loader Job Training are as follows:
(These are to be shown and discussed prior to field training on the loader)

- Videos
 - Front-end Loader Safety (MSHA)
 - Stockpiling Safety (MSHA)
 - Berms and Haul roads (MSHA)
 - 988B End-Loader (Caterpillar)
 - Silica Control in Equipment Cab (NIOSH)
- Printed Materials
 - Company Policy
 - MSHA Regulations and Policy
 - Cat Operator's Manual for 988B
 - Fatal 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 (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	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 (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactor y or Needs Work	Procedure/Risk Resolution/ Notes/Comments

<p align="center">Job Steps</p>	<p align="center">Importance Narrative (Consider Safety/Production/Maintenance)</p>	<p align="center">Importance Ranking 1-Important 2-Very important 3-Critical</p>	<p align="center">Satisfactor y or Needs Work</p>	<p align="center">Procedure/Risk Resolution/ Notes/Comments</p>
<p>Begin at right-rear corner</p> <ul style="list-style-type: none"> • Turn master switch "OFF" • Check under machine for leaks 				
<p>Continue to left-rear corner</p> <ul style="list-style-type: none"> • Check radiator (cleanliness/cracks) • Check left-rear tire/wheel/lugs/lock ring 				
<p>Continue to left center of machine</p> <ul style="list-style-type: none"> • Visual check of hydraulic lines/steering cylinders • Check ladders/grab irons • Visual check of fuel tank 				
<p>Continue to left-front of machine</p> <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 • Check bucket wear items 				

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	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 • 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 <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 (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/Notes/Comments
Mount machine				
Check fire extinguisher				

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/Notes/Comments
Check handrails				
Check/Clean Glass/Mirrors				

Inside Cab Inspection

The instructor 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.

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/Notes/Comments

Job: On-Shift Operation

The instructor 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 instructor after a period of practice.

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Hydraulic Controls • Lift/Tilt Bucket Controls				
Transmission Operations				
Foot Pedal Controls				
All Hand Controls				

Maintain Communications

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Eye contact				
Signals				
Hazard Reporting				

Demonstrate Blind Spots

The instructor will 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 Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/Notes/Comments
Directly Behind Machine				
Right-Rear Corner				
Left-Rear Corner				
Right-front of Machine				

Demonstrate Machine Movement by Instructor

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	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 				
Forward and reverse movement <ul style="list-style-type: none"> • Explain the manual operation of the machine 				
Trainee's Practice <ul style="list-style-type: none"> • Articulate Loader • Move forward and reverse and articulate • Raise/lower bucket 				

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
<ul style="list-style-type: none"> • Check all indicator gauges • Proper shut-down procedures • Provide feedback/demo 				
Bucket loading techniques				
Pick and carry techniques				
Hopper Loading Techniques				
Truck Loading Techniques				
<ul style="list-style-type: none"> • Towing techniques 				
<ul style="list-style-type: none"> • Stone bay road techniques 				
Trainee's Practice <ul style="list-style-type: none"> • Bucket Loading Techniques • Pick-and-carry Techniques • Truck Loading Techniques • Hopper Loading Techniques • Stone bay road techniques 				

Field Practice

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Check gauges/indicators				
Maintain Safe Speed for Ground Conditions <ul style="list-style-type: none"> • Grade • Weather • Road • Visibility • Traffic 				
Check for Road Hazards				
Check for Highwall /Bank Hazards/ground conditions <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 on-coming operator 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 Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	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

<p>Job Steps</p>	<p>Importance Narrative (Consider Safety/Production/Maintenance)</p>	<p>Importance Ranking 1-Important 2-Very important 3-Critical</p>	<p>Satisfactory or Needs Work</p>	<p>Procedure/Risk Resolution/ Notes/Comments</p>
<p>Clean Out Cab • Wet Wipe or vacuum cab</p>				
<p>Observe Ground Conditions</p>				
<p>Check Ladder/Grab Irons</p>				
<p>Face Ladder</p>				
<p>Maintain 3-point contact</p>				
<p>Final walk-around/Turn off master switch</p>				

Communications Changes

<p>Job Steps</p>	<p>Importance Narrative (Consider Safety/Production/Maintenance)</p>	<p>Importance Ranking 1-Important 2-Very important 3-Critical</p>	<p>Satisfactory or Needs Work</p>	<p>Procedure/Risk Resolution/ Notes/Comments</p>
<p>End-Loader</p>				
<p>Mine</p>				

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

Objective: The learner will explain, and when possible, safely demonstrate the emergency procedures needed to respond to an emergency situation (after the learner feels comfortable with necessary operating skills).

Fire

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Stop Machine/Exit Immediately				
Turn key "OFF"/Master Switch, if possible				
Notify supervision				

Medical

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Injury/Illness • Report to Supervisor				

Critical Manfunctions

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importanc e Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	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

Loss of visibility				

Loss of Control

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importanc e Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Skidding				
Submersion				

Job Steps	Importance Narrative (Consider Safety/Production/Maintenance)	Importance Ranking 1-Important 2-Very important 3-Critical	Satisfactory or Needs Work	Procedure/Risk Resolution/ Notes/Comments
Roll Over				
Ground Failure				

Contact with Power Lines

Overhead				
Underground				

Other Vehicle out of Control

Other Vehicle out of Control				