

Company Name:	Equipment/Job Identification: Hand Scaler Type of Equipment: Manlift Make: Elliot and JLG Model: 59 Elliot Year: Use: Hand Scaling
Mine Name:	
Date of Analysis:	

Pre-assessment:

Pre-requisites:

Duty 1: Orientation

Objective: The learner will explain the risks involved in post-shot activities, including exposure to hazardous chemicals, mine gasses and adverse roof conditions. The learner will also be able to demonstrate and explain the proper use of safety equipment, the scaling bar and purpose of “paint and date” to designate safe areas.

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
Post-shot <ul style="list-style-type: none"> • Explain about carbon monoxide <ul style="list-style-type: none"> ○ Symptoms of exposure ○ Notify foreman of exposure • Explain about oxides of nitrogen <ul style="list-style-type: none"> ○ Symptoms of exposure ○ Notify foreman of exposure • Explain that shots have to be watered before scaling 				
Explain safety equipment <ul style="list-style-type: none"> • Explain safety harness • Safety glasses • Gloves • Hardhat 				

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"> • Cap light • Radio • Self-rescuer • Check in/out tags • First-aid Kit 				
Explain scaling bar				
Explain paint and date				
Explain Hazard Communication				
Discuss geology/black seams				

Duty 2: Pre-Shift Meeting

Objective: The learner will explain the importance of the pre-shift meeting in determining work area, type of scaling to be performed, and which machine to use. The learner will explain and interpret information received in the preshift meeting to the trainer.

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
Explain the importance of preshift meeting				
Explain how to decide which machine to use <ul style="list-style-type: none"> • Single-lift • Double-lift • Triple-lift 				

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"> • Location of machine/s 				
Explain how to determine which type of scaling <ul style="list-style-type: none"> • Gradalled • Face scaling • Pile scaling • Bottom scaling 				

Duty 3: Preshift Equipment

Objective: Learner will demonstrate how to conduct a safe and thorough pre-operational inspection of the manlift. Learner will explain other jobs steps listed, why they are conducted, any associated risk, and how to implement appropriate controls. The Elliot and JLG will require separate demonstrations and practice sessions. A separate inspection must be made for each type of manlift. A thorough pre-operational inspection includes the following duties:

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
Elliot <ul style="list-style-type: none"> • Check Fluid Levels • Physical Walkaround (outside cab) <ul style="list-style-type: none"> ○ Check Frame <ul style="list-style-type: none"> ▪ Check Hand rail/steps • Inside Cab (Engine On) <ul style="list-style-type: none"> ○ Check: <ul style="list-style-type: none"> ▪ Fire extinguisher 				

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ▪ Wipers ▪ Housekeeping ▪ Lights ▪ Seatbelts ▪ Back-up Alarm ▪ Mirrors ▪ Defroster ▪ Gauges ○ Check /set park brake • Start Pony Motor • Set legs/outriggers • Check for air/fluid leaks • Check boom/basket <ul style="list-style-type: none"> ○ Ground level <ul style="list-style-type: none"> ▪ Check movement in all directions ▪ Switch controls to basket ▪ Check hosing/guard ▪ Check boom bolts ▪ Check for welds/cracks/breakage /hoses(boom and basket) ○ Inside basket <ul style="list-style-type: none"> ▪ Wear personal protective equipment ▪ Check movement/swivel ▪ Check controls/Switch ▪ Repeat movement tests 				

<p style="text-align: center;">Job Steps</p>	<p style="text-align: center;">Importance Narrative (Consider Safety, Production, Maintenance)</p>	<p style="text-align: center;">Importance Ranking 1-Important 2-Very important 3-Critical</p>	<p style="text-align: center;">Satisfactory or Needs Work</p>	<p style="text-align: center;">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ▪ Test lights ▪ Have paint ▪ Practice good housekeeping ▪ Check foot pedal/deadman ○ Retract legs/outriggers <ul style="list-style-type: none"> ▪ Switch to ground control 				
<p>JLG Manlift</p> <ul style="list-style-type: none"> • Check Fluid Levels • Physical Walkaround <ul style="list-style-type: none"> ○ Check Frame <ul style="list-style-type: none"> ▪ Hand rail ○ Engine On <ul style="list-style-type: none"> ▪ Fire extinguisher ▪ Lights ▪ Back-up Alarm ▪ Gauges ▪ Check park brake • Check for air/fluid leaks • Check boom/basket <ul style="list-style-type: none"> ○ Ground level <ul style="list-style-type: none"> ▪ Check movement in all directions ▪ Switch controls to basket ▪ Hosing/guard ▪ Check boom bolts ▪ Check for welds/cracks/breakage /hoses(boom and 				

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> o basket) <ul style="list-style-type: none"> o Inside basket <ul style="list-style-type: none"> ▪ Wear Personal Protective Equipment ▪ Check movement/swivel ▪ Check controls/switch ▪ Repeat movement tests ▪ Test lights ▪ Have Paint ▪ Practice good housekeeping ▪ Check foot pedal/deadman 				

Duty 4: Driving Equipment

Objective: Learner will demonstrate how to operate the controls, accessories and to safely drive the manlift. Learner will also describe listed job duties, why they are conducted, any associated risk, and how to implement appropriate controls. The Elliot and JLG will require separate demonstrations and practice sessions.

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
Elliot <ul style="list-style-type: none"> ▪ Test radio ▪ Turn head lights on ▪ Follow speed limit – 15 mph ▪ Wear seatbelt ▪ Obey/follow signs ▪ Beware of oncoming traffic ▪ Show caution at corners ▪ Sound audible alarm before moving ▪ Be aware of other equipment ▪ Communicate intention to co-workers ▪ Use low gear when descending grades ▪ Monitor air pressure on brakes ▪ Explain road conditions <ul style="list-style-type: none"> ○ Winter - be aware of ice ○ Roadways and roof ▪ Explain visibility problems 				
JLG <ul style="list-style-type: none"> ▪ Insert the locking pin into boom before driving ▪ Test radio ▪ Turn head lights on ▪ Follow speed limit – 15 mph ▪ Production equipment has right-of-way ▪ Wear safety harness 				

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ▪ Obey/follow signs ▪ Beware of oncoming traffic ▪ Show caution at corners ▪ Sound audible alarm before moving ▪ Be aware of other equipment ▪ Communicate intention to co-workers ▪ Monitor air pressure on brakes ▪ Monitor road conditions <ul style="list-style-type: none"> ○ Winter - be aware of ice ○ Roadways and roof ▪ Explain visibility problems <ul style="list-style-type: none"> ▪ Explain all operating controls ▪ Explain foot pedal/deadman ▪ Discuss driving on steep grades 				

Duty 5: Set-up

Objective: Learner will demonstrate how to safely and productively set-up the manlift. Learner will explain and demonstrate each job step and why they are conducted. Learner will also identify any associated risks, and how to implement appropriate controls. The Elliot and JLG will require separate demonstrations and practice sessions.

Set-up duties include:

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<p>Elliot</p> <ul style="list-style-type: none"> • Determine set-up location ▪ Position vehicle ▪ Set park brake ▪ Start pony motor ▪ Set Legs/outriggers ▪ Check for air/fluid leaks ▪ Operate boom/basket <ul style="list-style-type: none"> • Inside basket <ul style="list-style-type: none"> ▪ Wear PPE ▪ Demonstrate movement/swivel ▪ Explain controls/switch ▪ Repeat movement test ▪ Turn on lights ▪ Have paint ▪ Practice good housekeeping ▪ Demonstrate foot pedal/deadman 				
<p>JLG</p> <ul style="list-style-type: none"> ▪ Determine set-up location ▪ Position vehicle ▪ Check for air/fluid leaks ▪ Operate boom/basket <ul style="list-style-type: none"> • Inside basket <ul style="list-style-type: none"> ▪ PPE ▪ Movement/swivel ▪ Controls/switch ▪ Repeat movement test ▪ Turn on lights ▪ Paint ▪ Housekeeping 				

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"> ▪ Foot pedal/deadman ▪ Clear around the machine 				

Duty 6: Hand Scaling

Objective: Learner will demonstrate how to safely hand scale. The learner will explain and demonstrate the methods of evaluating ground conditions through sight, sound and vibration. The learner will explain and demonstrate scaling patterns, point of completion markings, handling of the scaling bar, and other job steps as listed. The learner will explain why each listed job step is conducted. Learner will also identify any associated risks and how to implement appropriate controls. Demonstrations and practice in each type of scaling are required.

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
Don harness				
Get in basket				
Hook lanyard up				
Have radio/rescuer				
Have Paint				
Use other Personal Protective Equipment				
Prepare to scale				
Muck Pile Scaling <ul style="list-style-type: none"> • Scaling pattern depends on lay of rock <ul style="list-style-type: none"> ○ Scale Patterns 				

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ▪ Left-to-right ▪ Right-to-left ▪ Center ○ Five foot advances <ul style="list-style-type: none"> ▪ Roof, rib, advance and repeat • Do not take boom past the side outriggers (Elliot only) • Paint line (2-3 feet) where you stop scaling, enter date in front of the line 				
<p>Face scaling</p> <ul style="list-style-type: none"> • Scaling pattern depends on lay of rock <ul style="list-style-type: none"> ○ Scale Patterns <ul style="list-style-type: none"> ▪ Center ▪ Right-to-left ▪ Left-to-right ○ Five foot advances <ul style="list-style-type: none"> ▪ Roof, rib, advance and repeat • Do not take boom past the side outriggers (Elliot only) • Measure 24' from floor and paint solid line (2-3' in length); Show scaling completion by dropping down 4' and painting another line with date between two lines 				
<p>Bottom scaling</p> <ul style="list-style-type: none"> • Do not take boom past the side outriggers (Elliot only) • Scaling pattern depends on lay or rock 				

<p style="text-align: center;">Job Steps</p>	<p style="text-align: center;">Importance Narrative (Consider Safety, Production, Maintenance)</p>	<p style="text-align: center;">Importance Ranking 1-Important 2-Very important 3-Critical</p>	<p style="text-align: center;">Satisfactory or Needs Work</p>	<p style="text-align: center;">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ○ Scale Patterns <ul style="list-style-type: none"> ▪ Center ▪ Right-to-left ▪ Left-to-right ○ Five foot advances <ul style="list-style-type: none"> ▪ Roof, rib, advance and repeat ● Roof must be scaled five foot inby areas where bottom has been shot or to the face ● Draw 2-3 foot "X" with month on left of X and day on right of X indicating bottom is ready to drill 				
<p>Ledge scaling</p> <ul style="list-style-type: none"> ● Do not take boom past the side outriggers (Elliot only) ● Scaling pattern depends on lay or rock <ul style="list-style-type: none"> ○ Scale Patterns <ul style="list-style-type: none"> ▪ Center ▪ Right-to-left ▪ Left-to-right ○ Five foot advances <ul style="list-style-type: none"> ▪ Roof, rib, advance and repeat ● Roof must be scaled five foot inby areas where bottom has been shot or to the face ● Draw 2 to 3 foot line with date above 				
<p>Evaluating ground</p> <ul style="list-style-type: none"> ● Look at roof 				

<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">Satisfactory or Needs Work</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<ul style="list-style-type: none"> ○ Pockets ○ Seams ○ Cracks ○ Layers ○ Flat rock ○ Mud seams ○ Black rock ● Sounding and vibration <ul style="list-style-type: none"> ○ Drummy - bad ○ Hollow - bad ○ Ping – good ● Look for misfires <ul style="list-style-type: none"> ○ White blasting cord ○ Paint circle/date, if found ○ Report to foreman ○ Cone/mark/secure area ○ Leave the area ● Determine need for gradall work <ul style="list-style-type: none"> ○ Contact foreman ○ Contact gradall operator 				
<p>Explain Electrical Hazards</p>				
<p>Barring techniques</p> <ul style="list-style-type: none"> ● Pry down ● Pry up <ul style="list-style-type: none"> ○ Lift with legs ● Use body weight ● Wear PPE ● Change body position ● Bar outside of basket ● Hold end of bar in palm of hand ● Do not bar over the boom 				

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"> Never scale in a corner against the rib when there is no escape route from falling rock 				

Duty 7: Shutdown Procedures

Objective: Learner will demonstrate and explain shutdown procedures. Learner will also explain any associated risks and how to implement appropriate controls. The Elliot and JLG will require separate demonstrations and practice sessions.

Shutdown procedures include the following:

<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">Satisfactory or Needs Work (Student Evaluation)</p>	<p align="center">Procedure/Risk Resolution Notes/Comments</p>
<p>Elliot</p> <ul style="list-style-type: none"> • Paint date on roof where you stop scaling • Paint date on ribs at loader window height where you stop scaling • Bring boom down center of truck • Clear area around machine <ul style="list-style-type: none"> ○ Contact foreman and tell him of intent to move ○ Receive instructions from foreman • Retract legs/outriggers • Shut down pony motor 				
<p>JLG</p> <ul style="list-style-type: none"> • Paint date on roof where you stop scaling • Paint date on ribs at loader window height where you stop scaling • Bring boom down • Insert locking pin in center of boom 				

Duty 8: End of Shift Procedures

Objective: Learner will demonstrate and explain end of shift activities. The learner will demonstrate other job duties as listed and explain why they are conducted. Learner will also explain any associated risks and how to implement appropriate controls. End of shift duties include the following:

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
Parking vehicle <ul style="list-style-type: none"> • Determine parking location based on weather <ul style="list-style-type: none"> ○ Winter ○ Summer • Point wheels to rib • Apply air brakes 				
Place radio on charger				
Do tag-out				
Submit paperwork				
Communicate to foreman any hazardous conditions				

Duty 9: Abnormal/Emergency 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).

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
Lower stuck basket				
Dealing with abnormal roof				
Dealing with roof water				
Dealing with fire				