# **Articulated Rock Truck Operator Assessment**

Assessment	This document can be used:
	• For gathering evidence in a training environment,
	<ul> <li>As a competency check of knowledge on an existing worker; or</li> </ul>
	<ul> <li>As part of a summative assessment.</li> </ul>
Candidate Name	
Assessor Name	
Date of Assessment	
Summary of	☐ The candidate met all outcomes of the <b>worker assessment</b>
Assessment	The candidate has NOT met all outcomes of the worker assessment
	Gap training plan developed
Date of Reassessment	
Summary of	☐ The candidate met all outcomes of the <b>worker assessment</b>
Reassessment	The candidate has NOT met all outcomes of the worker assessment
Instructions	<ul> <li>Complete the assessment with the candidate, adding notes to justify your decisions.</li> </ul>
	• Ensure the first page of this document is completed (all fields).
	<ul> <li>Develop a gap training plan for practical deficiencies if required.</li> </ul>
	<ul> <li>Use the same form for reassessment (if applicable), only reassessing the areas where gaps exist.</li> </ul>
	<ul> <li>Conduct the competency conversation before conducting the practical assessment.</li> </ul>

**Note:** This worker assessment covers the technical components of a specific role. For general knowledge and a complete picture of a worker's competency, BC Forest Safety recommends the optional Basic Forest Worker competency profile and assessment tools that can be found at www.bcforestsafe.org.

## **Part 1 - Competency Conversation**

#### **General Instructions**

To conduct a competency conversation, ask the worker the questions in this first part of the assessment to determine if they understand the knowledge components of their role.

It is acceptable to rephrase the question in a way that the worker understands, but the worker cannot be given hints to the correct answer.

The assessment should not be used as a training opportunity; instead, any deficiencies identified in this assessment should be collected into a gap training plan and addressed with the worker later.

Important Note: Do not conduct competency conversation while operating equipment.

Assessment Instruction	S - This means that the candidate must supply all responses listed, as the knowledge is safety critical or important.
	B - This means the candidate must at a minimum verbalize the <b>bolded</b> responses, and additional responses are further proof of competence.
	P - The candidate must give a percentage of responses correctly to reasonably show competence in the area.

Locator	Questions			
	Mechanized Harvesting/Road Building			
1.1	What are nine common and	I specialty tools used on hea	avy equipment?	
	Multi-testers			
	Inspection mirrors			
	Pick up magnets			
	□ Easy outs			
	Wrenches			
	$\Box$ Taps and dies			
	□ Hammers			
	☐ Shovels			
	Drift and pry bars			
	Chisel			
	□ Files			
	☐ Jack			
	☐ Air tools			
	Impact wrenches			
	Ratchets			
	Die Grinder			
	Greaser			
	Hose press			
	Assessment Instruction: P -	9 from list		
	Assessment	Outcome met	Outcome not met	

## 1081 – Describe Tools and Equipment for Heavy Machinery

2.1	Name eight pieces of weld	ing equipment and supplies	use on heavy equipment
	Oxy acetylene cutting	g systems	
	□ Air arc		
	□ Chip hammers		
	🛛 Propane gas torch 'tig	ger torch'	
	□ Wire brush		
	Chalk		
	Tip cleaner		
	Grinder		
	🗆 Drill		
	□ Cut off saw		
	☐ Air tools		
	☐ Flux chippers		
	Grinders		
	Cutting table		
	Plasma cutter		
	Assessment Instruction: P -	8 from list	
	Assessment	Outcome met	Outcome not met
2.2	What are three types of we	Iding commonly used on he	eavy equipment?
	□ Stick		
	□ Wire feed		
	Brazing		
	Assessment Instruction: S		
	Assessment	Outcome met	Outcome not met

2.3	What PPE is mandatory when using welding equipment?			
	□ Gloves			
	Welding helmet			
	Cutting goggles	Cutting goggles		
	□ Fire-proof clothing			
	Safety glasses			
	Assessment Instruction: S			
	Assessment	Outcome met	Outcome not met	
3.1	What are common gas-pow	vered tools used on heavy e	equipment?	
	□ Cut off saw	□ Cut off saw		
	Pressure washers			
	☐ Gas or electric comp	ressors		
	Gas or diesel genera	tors		
	Plate compactor			
	Assessment Instruction: P -	4 from list		
	Assessment	Outcome met	Outcome not met	

Locator	Questions			
	Mechanized Harvesting/Road Building			
1.1	What are the major mecha maintenance and inspection	nical components or systen	ns that require	
	Engine systems			
	Hydraulic systems			
	Electrical systems			
	□ Attachments			
	Undercarriage			
	Assessment Instruction: S			
	Assessment	Outcome met	Outcome not met	
1.2	What are common sympto	ms or indicators of failure?		
	Noise			
	Vibration			
	□ Smells			
	Leaks			
	Cracks			
	Lack of power			
	Improper function			
	Exhaust colour			
	☐ Gauges			
	Warning lights			
	Assessment Instruction: P -	7 from list		
	Assessment	Outcome met	Outcome not met	
2.1	What are the three main pr	e-start procedures?		
	External visual equip	ment checks		
	☐ Fluid checks			
	Operational (in cab) of the cab of the ca	checks		
	Assessment Instruction: S			
	Assessment	Outcome met	Outcome not met	

## 1082 – Describe General Heavy Equipment Inspection and Maintenance Procedures

2.2	What are the main conside	What are the main considerations for shut down procedures?		
	Parking position			
	□ Attachments grounded			
	Cool down time			
	Maintenance log			
	Assessment Instruction: S			
	Assessment	Outcome met	Outcome not met	
2.3	What are common mainter	nance procedures on heavy	equipment?	
	Lock out or zero energy	rgy state		
	Greasing			
	$\Box$ Adding fluids and fue	l		
	Draining fuel sumps a	and water separators		
	Tightening loose hard	dware		
	Repair leaks			
	Replacing O-rings			
	Replacing hoses			
	Replacing filters			
	Bleeding air from fue	l systems		
	□ Adjust track tension			
	Adjust belt tension			
	Maintain tire pressure	e		
	Clean and maintain b	oatteries		
	Assessment Instruction: P –	10 from list		
	Assessment	Outcome met	Outcome not met	

## 1083 – Describe Heavy Equipment Mechanical Systems

Locator	Questions			
	Mechanized Harvesting/Road Building			
1.1	What are two basic components of an engine and their function?			
	Turbo charger – increases power on an engine			
	Air compressor – bui	lds up air supply		
	Cylinder head – Allow	ws air/fuel into/out of combusti	on chamber	
	Piston – creates com	pression		
	Assessment Instruction: P -	2 from list		
	Assessment	Outcome met	Outcome not met	
1.2	Name two things a driver s	should check in an engine lu	brication system	
	Oil level			
	Oil pressure			
	□ Grade of oil required			
	Assessment Instruction: P – 2 from list			
	Assessment	Outcome met	Outcome not met	
1.3	What are two components	of a cooling system and the	eir function?	
	□ Radiator – allows air and water flow to cool engine			
	□ Hoses – water to circ	culate		
	🗌 Fan – draw air into ra	adiator		
	□ Fan belts – drive the	fan		
	Assessment Instruction: P -	2 from list		
	Assessment	Outcome met	Outcome not met	
1.4	What are three component	s of a fuel system and their	function?	
	Tanks – holds fuel			
	□ Lines – deliver fuel fr	om tank to engine		
	□ Filters – removes for	eign debris from fuel		
	Pump – Deliver fuel t	o engine		
	Assessment Instruction: P -	3 from list		
	Assessment	Outcome met	Outcome not met	

1.5	•	s of air induction and exhau	ust systems and their	
	function?			
	Pre-cleaner – Takes coarse particulates from air supply			
	Air filter – Removes fine particulates from			
	$\Box$ Air to air – Delivery system of air to the turbo charged engine			
	□ After treatment (DEF	) – System that minimizes air	pollution in exhaust	
	Assessment Instruction: P -	- 3 from list		
	Assessment	Outcome met	Outcome not met	
2.1	What are three component	s of hydraulic systems inclu	uding function?	
	Pumps – pump fluid			
	Motor – propulsion or	n components		
	Cylinders – move atta	achments or implements		
	Hoses – delivers fluid or motors or cylinders			
	<ul> <li>Valves – Controls flows</li> <li>Tank and fluid level indicator – identify levels of fluids</li> </ul>			
	Assessment Instruction: P – 3 from list			
	Assessment	Outcome met	Outcome not met	
3.1	What are three component	s of a powertrain system in	cluding function?	
	Travel motor – allows	s machine/component to move	9	
	Transmissions – tran	sfer power form engine to driv	ve systems	
	Differentials – transfe	ers power from transmission to	axles	
	□ Swing gear – allows	machine to rotate		
	Final drives – drives	tracks		
	🗌 Engine – primary sou	irce of power		
	Pumps – secondary s	source of power		
	Assessment Instruction: P -	3 from list		
	Assessment	Outcome met	Outcome not met	

4.1	What are three component	s of track systems including	g function?	
	Tracks – enables ma	chine to move		
	□ Idler – allows track to rotate around			
	Sprocket – drives track to rotate around			
	$\Box$ Bottom and top (carrier) rollers – reduce friction within the undercarriage			
	system Track adjuster – keeps track tight			
	Assessment Instruction: P –	3 from list		
	Assessment	Outcome met	Outcome not met	
5.1	What are four types of bra	king systems?		
	☐ Air system			
	Hydraulic system			
	Air / hydraulic system	ı		
	Engine braking syste	m (compression, exhaust)		
	Hydrostatic system			
	Assessment Instruction: P -	4 from list		
	Assessment   Outcome met  Outcome not me			
6.1	Name three common parts of electrical systems and their function			
	□ Alternators – creates	electrical current		
	□ Starters – starts the e	engine		
	Batteries – powers th	ne starter		
	□ Fuses – fail safe for s	system		
	Solenoids – an electr	omagnetic switch		
	Switches - turns pow	er on and off		
	Assessment Instruction: P –	3 from list		
	Assessment	Outcome met	Outcome not met	
6.1	What are the two common	types of electrical systems	?	
	$\Box$ 12 V and 24 V			
	Assessment Instruction: S			
	Assessment	Outcome met	Outcome not met	

7.1	Name three types of ground engaging systems and their function				
	Blades – pushes material				
	Buckets – carries material				
	Scarifiers – digs up ground				
	Grapples – grabs logs				
	Rock hammer – breaks rocks				
	Compactors – compresses material				
	Drill hammer – drills holes in rocks				
	Assessment Instruction: P – 3 from list				
	Assessment   Outcome met  Outcome not met				

## 1077 – Describe Job Control and Engineering Basics

Locator	Questions		
Road Building			
2.1	What are common instruments used in road building?		
	Levels		
	Rotary laser		
	Pipe laser		
	Electronic measurem	ient systems	
	🗌 Chain (tight chain, sti	ring box)	
	□ Clinometers		
	□ Compass		
	Assessment Instruction: P -	6 from list	
	Assessment	Outcome met	Outcome not met
3.1	What can an operator do to	o confirm that identified slop	pe is correct?
	$\Box$ Station mark on map matches the field		
	$\Box$ Read the cross section and profiles		
	Assessment Instruction: S		
	Assessment	Outcome met	Outcome not met

3.2	How is slope expressed?				
	Percentage/degrees				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
3.3	low is slope stability maintained during road construction?				
	□ A ratio that is depend	lent on the type of material ex	cavated		
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
3.4	What are the main causes of road construction-initiated slides?				
	Over steepened fill sl	opes			
	Not maintaining wate	r control			
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
3.4	How is this risk mitigated?				
	End haul				
	Maintain original water courses				
	$\Box$ Maintain ditches and culverts concurrent with construction				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
4.1	Where are instructions on	working in proximity to utili	ties found?		
	Operational map				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
4.2	What are techniques used	to expose existing utilities?	)		
	□ Take small amounts	of material away at a time			
	Vacuum trucks				
	Clean up bucket (no	teeth)			
	□ Expose by hand				
	Assessment Instruction: P-3	from list			
	Assessment	Outcome met	Outcome not met		

## 1078 – Describe Soils and Aggregates

Locator	Questions				
	Road Building				
1.1	What are common types of	f soil?			
	Cohesive (hard pann	ed clay)			
	□ Granular (sand or gra	avel types)			
	Organic (topsoil or la	yers)			
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
1.2	What determines suitabilit	y of soil types for road cons	struction?		
	Drainage characteristics				
	Compactibility				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
1.3	Name four characteristics	of soil			
	Load bearing				
	Density				
	□ Adhesion				
	□ Shearing resistance				
	Permeability				
	Plasticity (water reter	ntion)			
	Assessment Instruction: P –	4 from list			
	Assessment	Outcome met	Outcome not met		

1.4	How are soils classified?					
	□ Texture					
	□ Structure					
	Assessment Instruction: S					
	Assessment	Outcome met	Outcome not met			
1.6	What are common sedime	nt control techniques?				
	□ Silt fences/geotextile					
	□ Hay bales					
	□ Water management					
	Sumps					
	□ Hydro seeding					
	□ French drains					
	Culvert placement					
	□ Water bar					
	Assessment Instruction: P – 6 from list					
	Assessment	Outcome met	Outcome not met			
2.1	What are types of rippable	rocks?				
	□ Shale					
	□ Rotten					
	Conglomerate					
	Assessment Instruction: S					
	Assessment	Outcome met	Outcome not met			
2.1	What are types of non-ripp	able rocks?				
	Granite					
	Limestone					
	Basalt					
	Assessment Instruction: S					
	Assessment	Outcome met	Outcome not met			

2.2	What are the characteristics of aggregates?					
	Permeability					
	Load bearing					
	Resistance to shearing	Resistance to shearing				
	Gradation					
	Plastic limit					
	Liquid limit					
	Assessment Instruction: P -	4 from list				
	Assessment	Outcome met	Outcome not met			
2.3	What are the three steps in	aggregate processing?				
	Screening					
	Crushing					
	Processing					
	Assessment Instruction: S					
	Assessment	Outcome met	Outcome not met			
2.4	What are common product	s or uses for aggregates?				
	Pit runs					
	□ Screened road base	3" minus				
	Bedding sand					
	□ Crushed road mulch					
	Asphalt aggregates					
	Drain rock					
	🗌 Chips, driveway chips	S				
	Recycled asphalt					
	Concrete sand, C 33					
	Stucco sand					
	Assessment Instruction: P -	6 from list				
	Assessment	Outcome met	Outcome not met			

3.1	What are principles of compaction in relation to effects of moisture?					
	Dry soils resistant to compaction					
	$\Box$ Water acts as lubricant to help overcome the cohesive nature of soil particles					
	Moisture increases d	ensity				
	Assessment Instruction: P -	1 from list				
	Assessment					
3.2	What types of equipment are used for compaction?					
	□ Water trucks					
	Plates					
	□ Rollers					
	□ Hoe packs					
	□ Rammers					
	□ Tamping bars					
	Dynamic compaction					
	Assessment Instruction: P -	4 from list				
	Assessment   Outcome met  Outcome not met					
3.3	What are methods to test compaction?					
	Nuclear density testir	ng				
	□ Sand cone test					
	Cone penetrometer					
	Deflectometer					
	□ Clegg impact soil tes	ter				
	□ Load testing/roll test					
	Assessment Instruction: P -	4 from list	1			
	Assessment	Outcome met	Outcome not met			

Locator	Questions				
	Road Building				
1.1	Why is public perception of	of forestry activities importa	nt?		
	□ Can result in protests	3			
	Public pressure				
	Public perception driv	ves politics			
	Assessment Instruction: P – 1 from list				
	Assessment	Outcome met	Outcome not met		
1.2	What impact on fish can ro	bad building have?			
	Effect of silt				
	Effect of water tempe	erature			
	Drainage effect				
	Effect of increased flows				
	Assessment Instruction: P – 2 from list				
	Assessment	Outcome met	Outcome not met		
2.2	What are potential sources of spills related to constructing resource roads?				
	Broken lines/mechan	ical failure			
	Refuelling				
	Fuel storage				
	Storage of other proc	lucts			
	Sewage				
	Assessment Instruction: P -	4 from list			
	Assessment	Outcome met	Outcome not met		
2.3	What can be used to reduc	e risk of petroleum spills?			
	Security				
	□ Safe storage facilities	3			
	☐ Spill kits				
	Assessment Instruction: P -	2 from list			
	Assessment	Outcome met	Outcome not met		

#### 1079 – Describe Environmental Awareness, Protection and Enhancement

## 1135 – Describe and Operate Articulated Rock Truck

Locator	Questions				
	Road Building				
1.1	Name two places that an operator can look to find information on operation capabilities, limitations and restrictions of road building equipment				
	Operator manuals				
	Standard operating p	procedures			
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
1.2	What are common hazards	s related to operating road b	uilding equipment?		
	$\Box$ Slips and falls				
	Pinch points				
	□ Roll over				
	Crush injuries				
	Other worker in work	area			
	Energized machines				
	Communication failur	re			
	Unstable soil				
	Slippery machine sur	faces			
	Equipment fire				
	Debris entering operative	ator's area			
	Logs entering cab				
	☐ Jill pokes				
	Other road users				
	Assessment Instruction: P -	10 from list			
	Assessment	Outcome met	Outcome not met		

1.2	What are common hazards related to operating an articulated rock truck?				
	Brakes –overheating, failure, excessive wear, over application, loss of air, runaway, wheels not chocked, park brake not engaged				
	Transmission – drive	☐ <b>Transmission</b> – driveline failure, retarder overheating, gear jumping, runaway			
	Articulation – topple	over, unbalanced, roll over, v	veight transfer		
	Dumping – roll over,	load jamming in box, uneven	ground		
	☐ <b>Reversing</b> – blind sp	ots, lack of vision			
	Cab torque – weight	transfer, out of square			
	Driving – roll over, b	anks, soft shoulders, steep gra	ade, speed		
	☐ Weather conditions	– ice, snow, rain			
	U Weight hazards – overloading, side heavy, uneven distribution				
	Maintenance – crusł	n by box, crush points, energiz	ed, roll over		
	Assessment Instruction: P -	2 from EACH list			
	Assessment	Outcome met	Outcome not met		
1.3	What must an ART operate	or know in relation to safe w	ork procedures?		
	$\Box$ Use of brakes and re	tarders/gear selection			
	□ Articulating				
	Dumping				
	Dumping when articut	lated			
	Reversing techniques	3			
	□ Reversing around co	rners			
	$\Box$ Reversing in the dum	ıp site			
	Road radio procedure	es			
	Road rules				
	Assessment Instruction: P -	7 from list			
	Assessment	Outcome met	Outcome not met		

2.2	What are the pros of the articulation joint in truck?				
	☐ Allows it to conform to uneven ground				
	$\Box$ Allows for sharp turns	s (more agile)			
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
2.2	How does the steering system work on an ART?				
	Strictly hydraulics, no the steering cylinders	o mechanical connections betw s	veen the steering motor and		
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
2.2	What is critical to maintain	in this steering system?			
	☐ Hydraulic oil levels				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
2.2	Describe air over hydraulics and straight hydraulic brake systems.				
	Air over hydraulics - actuators that convert air pressure to hydraulic pressure to apply the hydraulic brakes				
	Straight hydraulics - hydraulic pump is creating the pressure to apply the hydraulic brakes				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
2.2	What happens when the tr	uck's brakes are completely	v locked up?		
	□ Inability to steer				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		
2.2	What is critical to check fo	r on brake system?			
	□ Air leaks				
	Hydraulic leaks				
	Brake components (wear, damage, leaks, loose components)				
	Assessment Instruction: S				
	Assessment	Outcome met	Outcome not met		

2.3	How do you control your truck coming down a hill?						
	Using your primary brakes and supplementing with transmission retarder, engine brake, and transmission lock up						
	Assessment Instruction: S						
	Assessment   Outcome met  Outcome not met						
2.3	What causes runaway?						
	□ Retarder is over heated						
	Overheated brakes						
	Exceeding governed engine RPM						
	Assessment Instruction: S						
	Assessment						

## **Part 2 – Practical Assessment**

#### **General Instructions**

To conduct the practical assessment, monitor the worker in a variety of situations to determine if they can consistently perform the skill components of their role in a safe and effective manner. Once confident that the worker can perform the skills consistently, mark the outcome met. If the worker cannot consistently perform the skills required, add this component to the gap training plan.

Remember not to distract the operator when conducting the practical assessment.

Training and Assessment Rubric			
	<b>Skills:</b> Can complete the task but only with direct instruction and supervision, may lack consistency in application.		
Outcome Not Met	<b>Knowledge:</b> Does not understand what they are doing, or are not aware of a knowledge deficiency, or need guidance and support.		
(ONM)	<b>Attributes:</b> Displays limited or no professional attributes including being fit for work, prepared for the day, working in an organized manner, achieving work outcomes, or lacks in consistency.		
	<b>Skills:</b> Consistently completes the task using safe work practices multiple times in a variety of contexts.		
Outcome Met (OM)	<b>Knowledge:</b> Has a solid grasp of underpinning knowledge, consistently applies it, and can explain it.		
	<b>Attributes:</b> Consistently displays professional attributes including being fit for work, prepared for the day, working in and organized manner and achieving work outcomes.		

A) PREPARE FOR THE DAY	ОМ	ONM	N/A
Arrived on time			
Clothing for conditions			
<ul> <li>Layered clothing appropriate to the elements for working and transport conditions</li> </ul>			
Nutrition and water			
Adequate food for the day			
<ul> <li>Sufficient hydration for work and weather conditions</li> </ul>			
Fit for work			
<ul> <li>Candidate is physically able to do the task</li> </ul>			
3-point contact on and off machine			
Able to get up and down machine			
Able to perform simple maintenance			
Able to change attachments			
Can fit through escape hatch			
Not noticeably impaired			
<ul> <li>Candidate is not obviously physically or mentally impaired (by drugs, alcohol, personal situations, fatigue)</li> </ul>			
Knows where ERP is located			

B) PERSONAL PROTECTIVE EQUIPMENT (where applicable)	ОМ	ONM	N/A
Hard hat			
<ul> <li>CSA – less than 3 years old / ANSI – less than 5 years old</li> </ul>			
No dents/cracks, modifications			
Suspension maintained (4-point min)			
Hi-Vis			
<ul> <li>Minimum 120 square inches front and back</li> </ul>			
<ul> <li>Not faded, discoloured, torn or permanently dirty</li> </ul>			
Contrasts with the work environment			
Leg protection			
Minimum 3600/4100 FPM rating			
Kevlar not compromised or exposed			
Pants maintained and repaired (no loose tears to outer layer)			

Face/Eye protection		
Face screen free of holes		
<ul> <li>Moves freely between down and raised position</li> </ul>		
Safety glasses used when appropriate		
Hand protection		
<ul> <li>Not damaged and free of holes</li> </ul>		
Appropriate to weather conditions		
Sized correctly for hands		
Hearing protection		
Minimum 24 NRR		
Maintained and in working condition		
Footwear		
<ul> <li>Good condition including sole tread pattern</li> </ul>		
Must be laced		
Has fire extinguisher in cab		
Dust mask		
NIOSH N95 compliant		
PPE inspected and maintained		
PPE used consistently as required		

C) PRE-WORK ACTIVITIES	ОМ	ONM	N/A
Equipment manuals available			
Pre-start equipment checks			
Walk around and check for leaks			
Check for loose components			
<ul> <li>Check for cracks, loose, missing bolts</li> </ul>			
Check for damage to machine			
Obstructions			
Fluid levels			
Water / Coolant			
Hydraulic			
• Engine			
Night switch			
Check track pads (where applicable)			
Tire pressure (where applicable)			
Check for tire damage (where applicable)			
<ul> <li>Wheels and wheel nuts (where applicable)</li> </ul>			
Close air reservoir (where applicable)			
Safety equipment check			
Start-up procedures			
<ul> <li>Maintain 3-point contact on and off machine</li> </ul>			
Find key			
Check gauges			
Warning systems			
Start and warm up hydraulics			
Check transmission			
Warning lights			
Wipers			
Seatbelt			
Lock out			
Parking brake			
All controls and major systems			
Escape hatch			
Housekeeping			
Radio operational			

D) COMMUNICATION	ОМ	ONM	N/A
Attend pre-work meetings			
Ensures hazards are understood			
Communicates hazards throughout workday			
Uses signals as required			
Consistently communicates work plans			
Professional communication throughout workday			

E) ERGONOMICS	ОМ	ONM	N/A
Lifts correctly (where applicable)			
Best practice for body position while operating			
Walks safely in the bush (where applicable)			

F) COMPLETE TASKS	ОМ	ONM	N/A
Shut down procedures			
Safe parking location			
Brake on (where applicable)			
Lower boom / blade / attachments			
<ul> <li>Position for ease of access and egress</li> </ul>			
Level position for fluid checks			
Cool down before shut-down			
Walk around and general check			
Secure / lock machine			
3-point contact on and off			
Turn off night switch			
Close air reservoir access (where applicable)			

Daily maintenance tasks		
Lubrication systems		
Air intake systems		
Air system reservoir		
Fuel tank sump		
Drain air system / water separator		
Drain fuel filters / water separator		
Inspect and clean components		
Housekeeping		
Track tension (where applicable)		
Tire pressure (where applicable)		
Greasing		
Fueling		
Check for leaks		
Basic repairs		
<ul> <li>Hydraulic hoses / fittings / O-rings</li> </ul>		
Fuel / air filter		
Engine oil change		
Belt tension		
Battery terminals		
Change lights		
Repair wiring		

G) OPERATE ARTICULATED ROCK TRUCK	ОМ	ONM	N/A
Maintains 3-point contact on and off machine			
Ability to use multiple functions while operating equipment			
Monitors equipment performance while operating			

Operator functions on articulated rock truck		
Operator can lock and unlock differentials		
<ul> <li>Operator understands steering system and warning lights of steering system and how to react if there is a failure</li> </ul>		
Use of brakes and retarders		
<ul> <li>Operate within limitations of stability of an articulation joint</li> </ul>		
<ul> <li>Understands hazards of dumping (uphill, downhill, side slope)</li> </ul>		
Dumping when articulated		
<ul> <li>Reversing techniques – (backing up in increments and using alternate mirrors)</li> </ul>		
<ul> <li>Reversing in the dump site (aware of holes and obstructions)</li> </ul>		
Pre-trip inspection		
Tire and wheel inspection		
Maintenance		
Lubrication		
Fluid levels		
Maintain safety devices		
Torque converter		
<ul> <li>Speed /RPM results in keeping torque in lock up</li> </ul>		
Can identify if in torque or lock up		
When using retarder, convertor is locked up		
Lock up and engine retarders working together		

#### This is the last page of the assessment.

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