

On-Site Orientation

## **Skidder Operator**

**Ministry of Training, Colleges and  
Universities**

On-Site Orientation

## **Skidder Operator**

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This document is the property of the trainee/employee named inside and represents the official record of his/her training.

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**OPERATOR**

**PREFACE**

The Workplace Training Branch of the Ministry of Training, Colleges and Universities (MTCU) developed this equipment-specific orientation/training document, in consultation with representatives from the logging industry. It is intended to be used by employers for on-site orientation/training of their workers/trainees before registration to the on-the job training or operating the machine related to their duties.

The care and maintenance of this document is the joint responsibility of the worker/trainee and the employer. The document is an official record of a worker's/trainee's orientation/training.

Employers or designates and workers/trainees are required to attest to successful on-site machine specific orientation/training by filling their names in the appropriate lines included at the end of each skill area.

**OPERATOR**

**NOTICE/DECLARATION FOR COLLECTION OF PERSONAL INFORMATION**

1. This information is collected under the authority of the Order-In-Council Number 701/85.
2. The information is collected for the purpose of administering this modular training program within the Province of Ontario.
3. Questions regarding collection and use of this information may be directed to:

Director  
Ministry of Training, Colleges and Universities  
Service Delivery Branch  
33 Bloor St. E 2<sup>nd</sup> Floor  
Toronto, Ontario  
M7A 2S3  
416 326-5605

**OPERATOR**

**SKIDDER OPERATOR**

**NOTE**

**This guide and checklist is designed to refer employers to the most obvious and critical component in each skill area. However, since machine model and make vary greatly, the primary reference material for specific machine safety related operating requirements should be the operator's manual supplied by the manufacturer of the machine in question.**

**Employer Information:**

**Company:** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Completed On-Site Orientation Checklist: Worker and Employer/Designate Verification :**

- Identify skidder components and terminology
- Identifying hazards in the skidding area
- Verify zero energy state
- Lock out Skidder
- Conduct circle check
- Plan and organize skidding pattern
- Observe cut boundaries
- Travel with skidder
- Recognize ground conditions
- Verify tree species
- Observe machine limitations
- Observe danger zone
- Position load at landing
- Use winching equipment
- Shut Down and Immobilize Skidder
- Refuel Skidder
- Perform Minor Maintenance and Adjustments

**Worker Name (Please Print):** \_\_\_\_\_

**Worker Signature:** \_\_\_\_\_

**Date of Completion:** \_\_\_\_\_

**OPERATOR**

**Employer/Designate Name (Please print):** \_\_\_\_\_

**Employer/Designate Signature:** \_\_\_\_\_

**IDENTIFY CABLE SKIDDER COMPONENTS AND TERMINOLOGY**

**Performance Objective**

Identify skidder components and terminology, visually and verbally, as described in the operator's manual, in order to ensure safe and efficient operation and maintenance. (Employer, supervisor or trainer refer to manufacturer supplied operator's manual to provide specifics regarding each component identified)

**Guidelines for Performance Objective:**

Having an understanding of the terminology used to describe major components is a vital part of using the manufacturer supplied owner's manual effectively and ensuring that such things as safety information, maintenance schedules, machine capacities and operating directions are understood and correctly applied. Review the major (key) components from the manufacturer supplied machine owner's manual that will assist the operator in identifying the key components, knowing their location on the machine and describing their purpose. (See appropriate pages in manufacturer supplied manual for specific terminology and diagrams)

**Component Checklist:**

- Blade & hydraulic components
- Tires and Tire chains
- Cab & Operator Controls & Escape Hatch
- Doors, Steps, Handholds & Guards
- Arch & Fairlead
- Winch, Rigging, Controls
- Engine
- Transmission & drive Train
- Differential
- Fire Suppression Equipment

**OPERATOR**

**IDENTIFY HAZARDS IN THE SKIDDING AREA**

**Performance Objective**

Inspect workplace for hazardous and/or potentially hazardous conditions. Take corrective action by removing and/or addressing hazard according to legislative requirements, to ensure a safe workplace.

**Guidelines for Performance Objective:**

1. Choose a suitable landing location at the woodlot cutting site.
2. Ensure that there is no unauthorized personnel in the work area. Access to the entire area must be posted and controlled.
3. Review and identify potential hazards such as chicots, hang-ups, springpoles, etc. deal with them before any other work can begin.
4. All PPE must be worn.
5. Observe the danger zones. The only time a person may be within the danger zone is if that person is supervising or providing instruction.

**Component Checklist:**

- Choose a suitable landing location
- Ensure that there are no unauthorized personnel in the work area.
- Review potential hazards
- All PPE must be worn
- Observe the danger zones.



**OPERATOR**

**VERIFY ZERO ENERGY STATE**

**Performance Objective**

Verify zero energy state, by applying parking brake, lowering hydraulic components to the ground at rest position, turn electrical switches and engine off, according to legislative requirements and manufactures' specifications and established lockout procedures, in order to protect self and others during inspection and maintenance.

**Guidelines for Performance Objective:**

The machine must be immobilized and all moving parts de-energized before work can be performed close to the machine and its components. Most importantly all hydraulic implements and the load must be lowered (or blocked). The master switch must be in the off position.

**Component Checklist:**

- Lower attachments and the load to the rest position to manufacturer's specifications
- Apply parking brake
- Put engine in idle
- Turn engine off
- Turn master switch off
- Follow lockout procedures to do maintenance
- Ensure all moving parts have come to a complete stop prior to approaching

**OPERATOR**

**LOCK OUT SKIDDER**

**Performance Objective**

Perform lockout procedures, according to legislative requirements, established procedures, in order to protect self and others and prevent damage to equipment.

**Guidelines for Performance Objective:**

The machine must be immobilized and all moving parts de-energized before work can be performed close to the machine and its components. Most importantly apply parking brake and all hydraulic implements and the load must be lowered (or blocked). The master switch must be in the off position and follow established machine lock out procedures.

**Component Checklist:**

- Lower attachments and the load to the rest position to manufacturer's specifications
- Apply parking brake
- Put engine in idle
- Turn engine off
- Turn master switch off
- Lockout equipment according to established procedures
- Ensure all moving parts have come to a complete stop prior to approaching

**OPERATOR**

**CONDUCT CIRCLE CHECK**

**Performance Objective**

Perform visual and operational checks of attachments and moving components, according to manufacturer's specifications, in order to ensure safe and efficient operation. Ensure that all attachments and the load are lowered to the ground or in the rest position and the machine is properly shut down prior to initiating the circle check procedure. All substandard conditions and problems must be reported to the immediate supervisor. The circle check must be conducted daily.

**NOTE:** Operators must have proper out-of-the-cab PPE e.g. - safety boots laced to the top, hard hat, high visibility vest or clothing, as well as hand, hearing, and eye protection where required.

**Guidelines for Performance Objective:**

1. Cracks: Explain how to check and identify cracks and point out common locations where cracks may form (stress points). Explain that repairs must be done as soon as possible to prevent costly breakdowns and to prevent even further damage or the potential of injury to the operator and others;
2. Leaks: Point out the locations where leaks (hydraulic fluid, brake fluid, fuel, coolants) can occur. Explain that leaks can lead to further more serious problems, cause fires or damage the environment. Leaks can also cause slip & fall injury to operator and others due to fluid on machine. Explain the danger of checking for leaks where fluid is under high pressure (e.g. hydraulic fluid) and the proper method for checking.
3. Grease fittings: Identify the location (including remote connections), condition and purpose of grease fittings as described in the routine maintenance section of the owner's manual. Check to ensure they are in good condition and connected properly. Excessive grease build-up should be cleaned regularly to prevent the potential of slips & falls and fire.
4. Tires, wheels, chains: Explain the requirements for correct pressure, adequate tread, no punctures or defects, rim in good condition, cap on valve stem. Follow the manufacturer's guidelines when inflating/deflating tires. Ensure that chains are properly installed and tightened. If too loose, debris can be caught in chains and thrown out with considerable force. Watch for excessive wear, missing or damaged clevice pieces or loose parts of the chain. Also check for loose or missing wheel studs/nuts.
5. Pins and Bushings: Examine holding pins and bushings to ensure that they are not damaged and are properly engaged and in place.

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6. Check engine compartment and exhaust manifold/turbo for debris: Check and remove debris from engine compartment to reduce the potential for fire, paying particular attention to the exhaust manifold/turbo area.
7. Check fluid levels: Identify the location of site glass and/or dip stick/cap and filler locations and examine each for proper levels. Keep these areas clean of debris, spilled fluids and grease build-up. Determine and confirm the type of fluid at each filling location. Follow the manufacturer's guidelines for proper checking procedures of pressurized systems and the hazards of hot fluids. No smoking during these procedures. NOTE: When checking and identifying hydraulic hose requirements, the operator must be familiar with the type of hose fittings. (Three types - GIC, OFS and pipe thread)
8. Condition of blade, arch and winch: Check for cracks, condition of pins and cylinders, grease fittings throughout the arch, the entire blade and blade support arms. Examine the condition of the drum, winch cable, check rollers for free movement and wear, main line bells and chokers for burrs or frayed cables. Wear double palm gloves when handling cable.
9. Condition of guards, catwalks, handholds & steps: Examine all guards to ensure that they are properly installed and in good condition. Do not operate without guards installed. Check the condition of all handholds, steps and walkways to ensure that they are not damaged and free from debris, ice, snow, grease and oil.
10. Fire extinguisher and fire suppression equipment: The operator must know how to access this equipment and how to use it. It should be checked daily to ensure a proper charge, maintenance tag updated, the pin is in place and the device is properly secured in the cab. A water pack full of water and in working condition is required for fire season. For machines equipped with fire suppression system, the operator must know the location(s) of activation plungers and ensure that they are in good condition and check outlets for good condition.
11. Escape hatch: The operator must know the location of the escape hatch and check to ensure that the hatch opens and the hatch itself, the latches, hinges, handles, and pins are in good condition.
12. Seat belt: Examine the seat belt to ensure that it is in good working condition (wear, anchors, frayed, buckle works freely).
13. Lights: Turn on all lights to check that they are in good working order. Make sure the guards are in place (if equipped), and the lenses are cleaned and wiring harnesses are intact.

**OPERATOR**

14. Windows: Examine the windows to ensure they are clean and in good condition. Broken or missing windows must be reported and replaced. Make sure the wipers and wiper blades are in working order, and that window guards/screens (if equipped) are properly installed.
15. Housekeeping & loose equipment in cab: Keep all tools outside the cab or properly secured in the cab. No loose items in the cab. Keep floor clean and air conditioning/heater filters clear of materials. Aerosol containers should be secured and away from heat sources.
16. Radio communications: Check the radio to ensure that it is in good working order and equipped for channels used in your area.
17. First aid kit: Know the location, condition and required contents of the first aid kit. It should be easily accessible.
18. Spill Kit (where equipped): know the location, condition, how to use it, required contents of the spill kit. It should be easily accessible.

**Component Checklist:**

- Check for cracks and leaks
- Identify grease fittings
- Check tire condition, tire chains & wheel studs/nuts
- Check condition of pins and bushings
- Check engine compartment
- Check fluid levels
- Check condition of blade, arch and winch
- Check condition of guards, handholds and steps
- Check condition of fire extinguisher & fire suppression equipment
- Check condition of escape hatch
- Check condition of seat belt
- Check lights
- Check condition of windows
- Check housekeeping & stow any loose equipment in cab
- Check Radio Communications
- Check First Aid kit
- Check Spill Kit

**OPERATOR**

**PLAN AND ORGANIZE SKIDDING PATTERNS**

**Performance Objective**

Plan and organize a skidding pattern by observing terrain, ground conditions and machine load limitations to prevent damage to non-target species, minimize ground disturbance and facilitate safe and efficient transportation to the loading site.

**Guidelines for Performance Objective:**

1. Identify skidway location: Check with your immediate supervisor to determine skidway location and any environmental or other concerns. Be aware of any potential hazards in the immediate area (i.e. chicots, hang-ups, traffic or other equipment in the immediate area, power lines, etc.).
2. Identify travel route: Check with your immediate supervisor and/or cross shift operator regarding hazardous terrain that must be taken into consideration (i.e. rough terrain, slopes and inclines, drop off, wet areas, etc).
3. Maximize load and minimize skidding distance. Observing ground conditions and machine load limitations. Refer to your operator's manual for load capacity and machine limitations. Where possible double up trees to optimize load.
4. Minimize rutting and ground disturbances: Adjust load size to reduce site damage or determine alternate routes. Be aware of ground disturbance guidelines for your operation. If unsure check with your immediate supervisor.
5. Maintain a safe operating distance between workers and equipment: Be aware of location of cutters, other equipment in your immediate work area and other forest users. Check with your immediate supervisor and co-workers to identify appropriate danger zones for your operation.

**Component Checklist:**

- Identify skidway location
- Identify travel route (considering hills, swamps, etc.)
- Maximize your load and minimize skidding distance by observing ground conditions and machine load limitations
- Minimize rutting and ground disturbances
- Maintain a safe operating distance between workers, other forest users and equipment

**OPERATOR**

**OBSERVE CUT BOUNDARIES**

**Performance Objective**

Observe cut boundaries according to established prescriptions and regulated requirements in order to prevent entry into protected and non-allocated harvesting areas.

**Guidelines for Performance Objective:**

Operate equipment within identified boundaries: Explain boundary identification rules. (i.e. colour of ribbon, paint or other type of marking, used to identify concerns and boundaries). Observe established rules and if unsure confirm with your immediate supervisor.

**Component Checklist:**

- ❑ Operate equipment within identified boundaries

**OPERATOR**

**TRAVEL WITH SKIDDER**

**Performance Objective**

Travel with skidder by selecting appropriate speed, placing attachments in the travel position according to manufacturer's specifications, in order to protect self and others and to prevent equipment damage.

**Guidelines for Performance Objective:**

1. Restrict riders on skidders unless equipped with additional seating. Explain the hazards associated with riders not seated properly in the cab of the machine.
2. Place blade and cable in the travel position: The blade should be maintained in a position not to impede visibility and not to prevent air flow to radiator. Ensure that the cable and rigging is elevated to an appropriate height when in the travel position.
3. Select a speed appropriate to ground conditions while maintaining control of the machine. Maintain a speed and engine RPM that allows the operator to maintain full control of the machine at all times taking into consideration ground conditions, weather, etc.
4. Maintain control, travel at a safe speed and keep right while travelling on roadways or on route to landing to ensure public safety: Be aware of local traffic and observe traffic and warning signs posted within your work area. Keep speed appropriate to road condition, weather, concentration of traffic, seasonal conditions (dust) and be aware of soft shoulders.
5. Maintain communication with other equipment operators: Check to ensure your radio is in good working order and proper channel is used. Monitor the local channel for traffic. Check with your immediate supervisor for communication protocol within your work area.

**Component Checklist:**

- Disallow riders on skidders
- Place blade and cable in travel position
- Select a speed appropriate to ground conditions while maintaining control of the machine
- Maintain control, travel at a safe speed and keep right while travelling on roadways or on route to landing to ensure public safety
- Maintain communication with other equipment



**OPERATOR**

**RECOGNIZE GROUND CONDITIONS**

**Performance Objective**

Recognize ground conditions by observing changes in terrain and weather conditions that affect safety and efficient harvesting, in order to prevent equipment, environmental and regeneration damage.

**Guidelines for Performance Objective:**

1. Skidding on hills should be conducted in the direction of the slope to reduce the potential of rollover: Skid straight up and down hills where practical; maintain low centre of gravity with load. Avoid high stumps, rocks and windfalls. Discuss ground condition concerns with your immediate supervisor or the previous shift co-worker at the beginning of each shift.
2. Do not cross drainage areas: Crossing drainage causes environmental damage and can pose unsafe conditions for machine operation.
3. Minimize rutting in wet areas: Ruts can pose unsafe conditions for machine operation.
4. Seasonal concerns: Seasonal weather changes require extra caution to be exercised due to poor visibility and hidden hazards. Be aware of hidden hazards due to seasonal conditions (i.e. ditches along roadways frozen and covered with snow, culverts hidden by snow resulting in damage, hidden areas of concerns such as recently planted areas, hidden rock outcrops/cliffs, etc.). In summer conditions, heavy underbrush results in poor visibility and hides hazards such as cliffs, mining holes, etc.

**Component Checklist:**

- Skidding on hills should be conducting in the direction of the slope to reduce the potential of roll over
- Do not cross drainage areas
- Minimize rutting in wet areas
- Seasonal concerns (winter, summer) require extra caution due to poor visibility and hidden hazards

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**OPERATOR**

**VERIFY TREE SPECIES**

**Performance Objective**

Verify tree species, by using tree characteristics, in order to meet product requirements.

**Guidelines for Performance Objective:**

1. Review local tree species: Consult with your supervisor regarding species of trees dealt with in your immediate work area.
2. Review product and company requirements or guidelines: Discuss with your supervisor the product and sorting/quality requirements for your operation.

**Component Checklist:**

- Review local tree species
- Review product and company requirements or guidelines

**OPERATOR**

**OBSERVE MACHINE LIMITATIONS**

**Performance Objective**

Observe machine limitations according to manufacturer's specifications by identifying equipment load chart, recognizing conditions that affect machine capabilities such as steep terrain and height of arch in order to protect self and others and prevent equipment damage.

**Guidelines for Performance Objective:**

1. Apply the manufacturer's standards for machine capacity and limitations in determining the size of load keeping in mind ground conditions, slope and tree species.
2. Maintaining the load position as close to the machine and as low to the ground as appropriate given terrain and ground conditions. This will avoid damage to machine or prevent possible roll over.
3. While turning with load, be aware of stumps or obstacles that may cause roll over. Also be aware of tail swing of a long load when other workers and machines are nearby.

**Component Checklist:**

- Understand the load limitations of the machine according to ground conditions and tree species (maintain ground contact with four wheels at all times)
- Keep load as close to the machine and as low to the ground as possible, while observing obstructions, when placing the load in the travel position
- While turning with load be aware of stumps which may cause machine roll over

**OPERATOR**

**OBSERVE DANGER ZONE**

**Performance Objective**

Observe danger zones, according to legislative requirements and manufacturer's specifications, while pulling trees, keeping a safe distance between self, others and equipment, taking into consideration limited visibility and blind spots, in order to protect self and others and damage to equipment.

**Guidelines for Performance Objective:**

Review danger zone requirements and identify site specific hazards. Explain company policies and procedures in relation to danger zones. Consult your operator's manual for recommended danger zones for this equipment.

**Component Checklist:**

- Review danger zone requirements and identify site specific hazards

**OPERATOR**

**USE WINCHING EQUIPMENT**

**Performance Objective**

Use winching equipment according to legislative requirements and manufacturer's specifications in order to protect self and others and prevent equipment damage.

**Guidelines for Performance Objective:**

1. Ensure proper personal protective equipment is worn while handling winch cable: Workers will wear double palm gloves when handling cable. When out of the cab proper head protection, safety boots laced to the top, and high visibility clothing must be worn.
2. Position and immobilize skidder to facilitate a straight pull: The skidder is positioned with blade down and parking brake on to allow winching to be done safely in a straight line. It reduces the potential for damage to the cable and the machine. Winching from an angle can cause a roll over.
3. Ensure winch is released before dismounting: Release winch cable control to the free wheel position, allowing safe distance between machine and load to be picked up, prior to dismounting cab, using three point contact.
4. Pull cable out and choke trees: Discuss different safe methods of choking trees using proper body mechanics.
5. Maintain communication with co-workers: Establish a plan of action between all workers prior to initiating the pull. Maintain ongoing communication between workers involved using eye contact, hand signals or other means.
6. Ensure other workers are clear of the potential cable breakage and other **hazards** before engaging the winch. Establish an appropriate danger zone for the circumstances and ensure that this danger zone is maintained throughout the pull.
7. Immobilize equipment and release load, allowing slack in the cable prior to disconnecting. In all cases parking brake must be engaged, blade down, maintain a safe distance between load and machine, prior to any workers entering the danger zone. No worker shall enter the danger zone until signalled by the operator.

**OPERATOR**

**Component Checklist:**

- ❑ Ensure proper personal protective equipment is worn while handling winch cable
- ❑ Position skidder to facilitate a straight pull.
- ❑ Ensure skidder is immobilized and winch is released before dismounting
- ❑ Pull cable out and choke trees
- ❑ Maintain communications between workers and equipment
- ❑ Ensure other workers are clear of the potential cable breakage and other hazards before engaging the winch
- ❑ Immobilized all equipment and release load

**OPERATOR**

**POSITION LOAD AT LANDING**

**Performance Objective**

Position load at the landing, in a manner that protects self and others and meets safety and production requirements.

**Guidelines for Performance Objective:**

1. Approach landing or roadway with caution, driving at a reduced speed, observing other equipment, workers, other forest users and oncoming traffic, taking into consideration limited visibility and blind spots.
2. Position load taking into consideration processing requirements: For an efficient operation the load must be dropped and/or piled in a manner to facilitate the next stage of processing and optimizing available space.
3. Minimize product damage: Review with your supervisor your company's internal practice for piling wood at the landing in ways that minimize product damage.

**Component Checklist:**

- Approach landing or roadway with caution observing other equipment, people, and oncoming traffic, taking into consideration limited visibility and blind spots
- Position load taking into consideration processing requirements
- Minimise product damage

**OPERATOR**

**SHUT DOWN AND IMMOBILIZE SKIDDER**

**Performance Objective**

Shut down skidder, according to manufacturer's specifications and requirements.

**Guidelines for Performance Objective:**

1. Lower blade to the ground. Park machine on level bare mineral soil and lower blade and load while positioning cab to facilitate safe and effective dismount. Shut off master switch when completing shutdown procedure. Maintain 3-point contact during dismount.
2. Follow fire prevention procedures: Keep an appropriate distance from combustible material and other machines. Clear all debris from engine, manifold, brake, winch, radiator, and other areas of skidding equipment, to prevent fire and to spot developing problems or equipment malfunctions.

**Component Checklist:**

- Lower blade and load to the ground
- Safe dismount, maintaining 3-point contact
- Follow fire prevention procedures



**OPERATOR**

**REFUEL SKIDDER**

**Performance Objective**

Refuel skidder in a well ventilated area; shutting off engine; maintaining the area free of smoking; and preventing spills or damage to the environment; according to legislative requirements, manufacturer's specifications and recommendations.

**Guidelines for Performance Objective:**

1. Use caution when approaching fuel tank to prevent damage to the fuel tank.
2. Shutdown skidder: Follow previously noted shutdown procedures.
3. Fuelling procedures: Follow established fuelling procedures, clean thoroughly around filler cap before opening, no smoking, never leave the nozzle unattended, and properly store the hose after use.
4. Always use 3-point contact when mounting/dismounting.

**Component Checklist:**

- Use caution when approaching fuel tank
- Shut down procedures
- Fuelling procedures
- Safe mount/dismount, maintaining 3-point contact

**OPERATOR**

**PERFORM MINOR MAINTENANCE AND ADJUSTMENTS**

**Performance Objective**

Perform minor maintenance and adjustment on the skidder, after immobilizing (locking out) machine, lubricating equipment and attachment, maintaining fluid levels, ensuring replacement of belts and hoses, and checking and completing maintenance and/or deficiencies report, according to legislative requirements, manufacturer's specifications and recommendations.

**Guidelines for Performance Objectives:**

1. Shut down skidder: Immobilize machine, lower attachments and load to the ground, shut down engine, and follow lock out procedures.
2. Dismount using 3-point contact.
3. Lubricate/maintain fluid levels: following manufacturers' specifications for greasing and topping up fluid levels. It is a good opportunity to check for cracks, leaks, wear in hoses, pins and bushings. Beware of pressure in reservoirs containing hot fluids.
4. Report deficiencies: Complete report according to local procedures, perform repairs that you are qualified to do and/or report to the supervisor or mechanic or service person. Ensure that any guards removed are put back in place prior to the equipment being put back in service.

**Component Checklist**

- Shut down skidder and lock out
- Safe dismount, maintaining 3-point contact
- Lubricate/maintain fluid levels
- Report deficiencies
- Replace all guards

**NOTE: All skill areas in the Modular Training Standards book will be continuously discussed during the training process.**