

**On-Site Orientation**

**Chipper Operator**

**Ministry of Training, Colleges and  
Universities**

On-Site Orientation

## **Chipper 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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**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.

**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

**CHIPPER 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 particular machine in question.

**Employer Information:**

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

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

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

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

- Identify chipper components and terminology
- Verify zero energy state
- Conduct circle check
- Check knives and chains
- Position chipper
- Verify chipper processing system
- Perform emergency shut down procedures
- Maintain on-going communications
- Verify tree species
- Maintain chip quality
- Observe danger zone
- Feed trees
- Observe machine limitations
- Prepare chipper for transport
- Shut down and immobilize chipper
- Refuel chipper
- Perform Minor Maintenance and Adjustments

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

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

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

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

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

**IDENTIFY WHOLE TREE CHIPPER COMPONENTS AND TERMINOLOGY**

### **Performance Objective**

Identify chipper components and terminology, visually and verbally, as described in the manufacturer-supplied operator's manual, in order to ensure safe and efficient operation and maintenance.

### **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:**

- Booms, Clam and Hydraulic Cylinders
- In-feed and cage rollers
- Flail, drums and chains
- Bark pusher/conveyor
- Sliver shoot
- Anvil, disc, knives, paddles and hood
- Pipe and spout deflector
- Carriage, tires and components
- Cab and Operator Controls
- Turntable
- Engine
- Clutch (manual or air) and belts
- Beacon light (where applicable)
- Hydraulic pumps
- Fire Suppression System

**VERIFY ZERO ENERGY STATE**

**Performance Objective**

Verify zero energy state, by lowering hydraulic components to the ground or rest position, ensure disc has stopped, and turn electrical switches and engine off, according to legislative requirements and manufacturer's specifications and established lockout procedures, in order to protect self and others during inspection and maintenance.

**Guidelines for Performance Objective:**

NOTE: Check with your manufacturer supplied operator's manual and immediate supervisor regarding correct procedures to apply the step-by-step lockout and verification procedure for your operation. Machines of different model or manufacturer may have different steps and requirements. The above is essential to ensure the safety of the operator and co-workers, as well as to confirm zero energy state prior to initiating the circle check procedures and other maintenance and trouble shooting functions. 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.

**Component Checklist:**

- Lower boom to the rest position to manufacturer's specifications
- Put engine in idle
- Shut off bark remover, cage and in feed rollers and flails
- Disengage clutch (air or manual) following manufacturer's specifications
- Turn engine off
- Turn master key off
- Ensure disc has come to a complete stop and apply disc lock
- Follow established lockout procedure (always check to ensure machine is deenergized)



**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 all attachments are lowered to ground or in rest position and machine is properly shut down prior to initiating circle check procedure. All substandard conditions and problems must be reported to immediate supervisor. The circle check must be conducted at the beginning of each shift.

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. Place lockout tag on designated area(s) on machine before initiating circle check: Explain and show worker established procedures prior to starting the circle check of the machine to ensure the safety of worker(s) conducting the circle check.
2. 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 breakdown and to prevent even further damage or the potential of injury to the operator and others.
3. Leaks: Point out the locations where leaks (hydraulic fluid, brake fluid, fuel) can occur. Explain that leaks can lead to further more serious problems, cause fires or damage the environment. Leaks can also cause slip and 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.
4. 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 and falls and fire.
5. Tires, wheels: 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. Also check for loose or missing wheel lugs.
6. Engine/manifold area: Check engine compartment and exhaust manifold/turbo for debris: Check and remove debris from engine compartment to reduce the potential for fire, pay particular attention to the exhaust manifold/turbo area. 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).
7. Pins and Bushings: Examine holding pins and bushings to ensure that they are not damaged and are properly engaged and in place.

8. Check fluid levels: Identify the location of site glass and/or dip stick/cap and filler location 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.
9. Condition of booms, clam and hydraulic cylinders: Check for cracks, condition of pins (locks), and condition of cylinders (leaks), grease fittings, hoses, and bolts on turntable.
10. Condition of guards, catwalks, handholds and 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 are not damaged and free from debris, ice snow, grease and oil.
11. Infeed and flail drums must be checked for proper installation and condition. Do not operate without guards installed Ensure correct operating position of infeed and flail drums. Check position of the infeed and flail drums to determine if pins have been removed. Ensure infeed chain is free of foreign objects.
12. Fire extinguisher and fire suppression system: 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, know the location(s) of activation plungers and ensure that they are in good condition, check outlets for good repair
13. Seat belt: Examine the seat belt to ensure that it is in good working condition (wear, anchors, frayed, buckle works freely).
14. Lights and beacon: Turn on all lights to check that they are in good working order. Make sure the guards (if equipped) are in place, the lenses are cleaned and wiring harnesses are intact. Test the beacon light to ensure its operation.
15. Windows/doors: Examine the windows to ensure they are clean and in good condition. Broken or missing windows must be reported and repaired. Make sure the wipers and wiper blades are in working order, and that window guards/screens (if equipped) are properly installed. Check to ensure that the door is working properly.
16. Check to ensure machine is level: To ensure proper operation of chipper and operator comfort.
17. Check to ensure chipper disc hood is closed and secured: To prevent possible machine damage, flying debris and potential operator injury.
18. Housekeeping and 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.
19. Radio communications: Check the radio to ensure that it is in good working order and equipped for channels used in your area.

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20. First aid kit: Know the location, condition and required contents of the first aid kit. It should be easily accessible.
21. Spill Kit (where equipped): know the location, condition, how to use it, required contents of the spill kit. It should be easily accessible.

### **Component Checklists:**

- Follow established procedure to prevent inadvertent operation of machine before initiating circle check
- Check for cracks and leaks
- Identify grease fittings
- Check Tire components condition
- Check engine compartment and manifold for debris
- Condition of pins and bushings
- Check condition of seat belt
- Check lights and beacon
- Check fluid levels
- Check booms, clam and hydraulic cylinders (check for cracks and leaks)
- Check guards, handholds and steps
- Check position of infeed and flail drums, ensure operating position
- Check condition of fire extinguisher and fire suppression system
- Check condition of windows and guards
- Check to ensure machine is level
- Check that hood is closed and secured
- Check housekeeping and stow loose equipment in cab
- Check radio communication
- Check First Aid kits
- Check spill kit

**CHECK KNIVES AND CHAINS**

**Performance Objective**

Check knives and chains, visually for wear, defects, damage and adjustments, according to established procedures, in order to ensure safe and efficient equipment operation.

**Guidelines for Performance Objective:**

NOTE: Check with your operator's manual and immediate supervisor regarding correct procedures to apply the step-by-step procedure for the checking of knives and chains within your operation. The above is essential to ensure the safety of the operator and co-workers, as well as to confirm zero energy state and ensuring that the machine is safely locked out prior to checking knives and chains procedures.

**Component Checklists:**

Check knives and counter knives:

- Ensure clutch is disengaged
- Ensure disc is completely stopped before opening hood (visual check)
- Open hood and lock disc
- Shut engine(s) off
- Follow lockout **procedure**
- Determine condition of knives and counter knives and take appropriate action
- Reverse lockout procedure
- Start engine
- Close and secure hood and remove locking pin before engaging clutch
- Engage clutch, remove lockout tag and return to work

Check chains:

- Ensure bark mover is fully retracted/conveyor stopped
- Lift flail housing and front in-feed roller
- Apply locking pins
- Shut engine off
- Follow lockout procedure
- Visually check condition of chains (missing links and worn chain) and take appropriate action
- Reverse lockout procedure
- Start engine
- Lift flail housing and front infeed roller and remove locking pins
- Lower flail and infeed rollers to float position
- Engage clutch and return to work

**POSITION CHIPPER**

**Performance Objective**

Position chipper, according to terrain, ground conditions and cut-block layout, in order to ensure safe and efficient equipment operation.

**Guidelines for Performance Objective:**

1. Position machine in the best possible level and stable position. Watch out for standing timber or obstructions and hazardous trees in the swing area. Check to ensure trees in clam will clear any standing timber or obstructions at the chipper site or roadway when swinging to complete the task of feeding chipper. If hazards exist contact your immediate supervisor for assistance.
2. Be aware of road/terrain conditions that may be unstable.
3. Engage front and rear stabilizers - Engage front and rear stabilizers to level machine, using blocking if necessary to ensure stability. Check to ensure stabilizers are stable on chipper site or roadway because additional material may be required to level machine.
4. Seasonal conditions create additional hazards (icy or muddy conditions pose a hazard of sliding). Skidder may be required to pull chipper to chipping site. Follow established procedures and manufacturer-supplied operator's manual for moving chipper.
5. Position for easy access for chip trucks: Check to ensure that the discharge spout is centered in the chip van when truck is in the loading position.

**Component Checklist:**

- Position machine in the best possible level and stable position
- Be aware of road conditions which may be unstable
- Engage front and rear stabilizers to level machine. Use blocking if necessary to ensure stability
- Seasonal conditions create additional hazards (icy condition pose a hazard of sliding)
- Position for easy access for chip trucks

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**VERIFY CHIPPER PROCESSING SYSTEM**

**Performance Objective**

Verify chipper-processing system, by activating controls and visually checking feed rollers, flails and bark removers, according to established procedures, in order to ensure safe and efficient operation.

**Guidelines for Performance Objective:**

Visually ensure rollers, flails, disc and bark movers/conveyor are operating by observing from operator's cab catwalk to ensure proper operation and a high quality product. The operator must view the process from catwalk to ensure operator safety.

**Component Checklist:**

- Visually ensure rollers, flails, disc and bark movers/conveyor are operating. Observed from operator's cab catwalk

**PERFORM EMERGENCY SHUTDOWN PROCEDURES**

**Performance Objective**

Perform emergency shut down procedures, according to manufacturer's specifications and established procedures, in order to protect personnel and prevent equipment damage.

**Guidelines for Performance Objective:**

Emergency stop procedures: Reverse rollers and activate emergency stop button located in operator's cab to reduce the potential of damage to the equipment and plugging chip chute.

**Component Checklist:**

- Reverse rollers and activate emergency stop button located in operator's cab

**MAINTAIN ON-GOING COMMUNICATIONS**

**Performance Objective**

Maintain on-going communications with co-workers, using hand signals, radio/log books and /or operators daily reports, in order to ensure safe and efficient operation.

**Guidelines for Performance Objective:**

1. Engage all warning modes (flashing light, radio, communication, etc.) when out of the cab or when maintenance is being performed. This is important in order to protect the operator and co-workers from possible injury and to advise other equipment operators not to enter the danger zone surrounding the chipper.
2. Maintain log book/condition report to pass operational or maintenance information along to the next operator and to the maintenance personnel to ensure identified concerns are addressed on a daily basis by maintenance staff. (also to protect the health and safety of all workers around the chipper)
3. Use radio communication and /or hand signals to control truck traffic to minimize congestion in the work area. To ensure the safety of all workers within the chipper site during operation of chipper.

**Component Checklist:**

- Engage all warning modes (flashing light, radio communication, etc.) When out of the cab or when maintenance is being performed
- Maintain log book/condition report to pass operational or maintenance information along to the next operator and maintenance personnel.
- Use radio communication and/or hand signals to control truck traffic to minimize congestion in the work area



**VERIFY TREE SPECIES**

**Performance Objective**

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

**Guidelines for Performance Objective:**

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

**Component Checklist:**

- Review local tree species
- Review product and company requirements

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**MAINTAIN CHIP QUALITY**

**Performance Objective**

Maintain chip quality by regularly monitoring condition of knives, chains and anvil, in order to meet product requirements.

**Guidelines for Performance Objective:**

1. Conduct periodic checks of knives, counter knives and/or chains to ensure high quality of wood chips being produced.
2. Visually examine chips for fines or excessive bark. Operator must engage warning modes prior to exiting the cab to conduct quality check of chips.
3. If visual check identifies concerns, assess knife sharpness and flail chain wear or plugged bark chute. When these concerns arise, it is an indication of knife or chain problems and prompts the operator to conduct a check of the equipment to ensure high quality of chips.
4. Overlap trees when feeding to minimize long slivers and to ensure high quality of chips produced.

**Component Checklist:**

- Conduct periodic check of knives, counter knives and/or chains
- Visually check chips for fines or excessive bark
- If visual check identifies concerns, assess knife sharpness and chain wear or plugged bark chute
- Overlap trees when feeding to minimize long slivers

**OBSERVE DANGER ZONE**

**Performance Objective**

Observe danger zone and keep a safe distance between self, others and equipment. Recognize potential hazards of falling trees, flying debris, chips or movement of components during in-feeding, chipping, loading and around the debris discharge chute. Take into considering local traffic, limited visibility and blind spots according to legislative requirements and manufacturer's specifications to protect you, others and damage to the equipment.

**Guidelines for Performance Objective:**

1. Be aware of the blind spots on the machine and proceed with added caution: Operator must check blind spots on a regular basis to identify workers or equipment in possible danger.
2. Be aware of the fact that the sliver chute side of machine discharges debris at very high speed. This area remains out of bounds for any workers on foot. Skidders in this immediate area must ensure windows are kept closed. To ensure the safety of workers in the proximity of the chipper.
3. Do not overload clam to reduce the potential of falling trees and to prevent potential machine damage and possible injury to co-workers.
4. Position clam and boom away from incoming skidders during chipping operation in order to prevent the possibility of contact with other equipment or injury to co-workers.
5. Control traffic on an ongoing basis through radio communications to ensure the efficient and safe operation of the chipping process.
6. Any worker observed within the danger zone on foot will cause the chipper operator to shutdown the chipper immediately. Any personnel in the danger zone will cause this procedure to be initiated.

**Component Checklist:**

- Be aware of the blind spots on the machine and proceed with added caution
- Be aware of the fact that the sliver chute side of machine discharges debris at very high speeds. This area remains out of bounds for any workers on foot.
- Do not overload clam to reduce the potential of falling trees
- Position clam and boom away from incoming skidders during chipping operation
- Control traffic on an ongoing basis through radio communications
- Any worker on foot observed within danger zone will cause operator to shutdown chipper immediately.

**FEED TREES**

**Performance Objective**

Feed trees into machine in a uniform manner, using the required attachments, in order to ensure a continuous flow of chips and meet safety, product and quality requirement.

**Guidelines for Performance Objective:**

1. Choose trees of similar diameter when grappling wood in order to ensure optimum debarking when feeding wood into the chipper.
2. Maintain a continuous flow of wood, which is overlapped into the debarking unit in order to ensure a constant flow of wood chips and reduce the potential of wood slivers being generated.
3. Correctly deal with forked trees and problem trees that potentially could jam chipper. The operator must separate forked or deformed trees and advise his immediate supervisor to determine how these trees must be dealt with in order to avoid loss of production and damage to the machine.
4. Be aware of concerns caused by over feeding the chipper (i.e. plugged pipe, stalled engine, improper debarking) in order to reduce the potential of lost production, poor quality chips and machine damage.

**Component Checklist:**

- Choose trees of like diameter when grappling wood
- Maintain a continuous flow of wood which is overlapped into the debarking unit
- Address forked trees and problem trees which potential could jam chipper
- Be aware of concerns caused by over feeding the chipper (i.e. plugged pipe, stalled engine, improper debarking, etc.)

**OBSERVE MACHINE LIMITATIONS****Performance Objective**

Observe machine limitations according to manufactures' specifications by identifying equipment load chart, recognizing conditions that affect machine capabilities such as steep terrain, boom over extension in order to protect self and others and prevent equipment damage.

**Guidelines for Performance Objective:**

1. Understand the load limitation of the machine (i.e. Oversized wood, don't force feed, slower feeding of trees with excessive limbs, in larger wood adjust speed of infeed and reverse wood flow as necessary, etc.) To reduce the potential of lost production through plugging chute and machine damage.
2. Minimize boom over extension to maximize machine power and efficiency and to reduce the potential of machine damage.
3. Limit boom usage to its intended purpose. Avoid using the boom for alternative jobs (i.e. moving rocks, moving stumps, pushing over standing timber etc.) that may cause damage to the machine.

**Component Checklist:**

- Understand the load limitation of the machine (i.e. oversized wood, don't force feed, slower feeding of trees with excessive limbs, in large wood adjust speed of infeed and reverse wood flow as necessary, etc.)
- Minimize boom over extension to maximize machine power and efficiency
- Limit boom usage to the intended purpose

**PREPARE CHIPPER FOR TRANSPORT**

**Performance Objective**

Prepare chipper for transport, according to established procedures, in order to protect self and others and to prevent damage to equipment during transportation.

**Guidelines for Performance Objective:**

1. Adjust stabilizers to appropriate height for pick-up in order to facilitate the connection to float truck for transport.
2. Move bark mover/conveyor into the travel position in order to prevent cylinder damage to the bark mover/conveyor and potential damage to machine.
3. Fold pipe into the travel position when it could potentially hit obstructions during transport in order to avoid potential equipment damage during transport and potential injury to the operator.
4. Place booms in proper position for traveling in order to avoid potential equipment damage during transport.
5. Raise steps into travel position and secure in order to avoid potential equipment damage during transport.
6. Once fifth wheel is connected, raise and verify stabilizers ensuring that they are in the travel position, and check tires for condition (flat tires, no punctures or defects, rocks between tires, condition of rims, missing wheel lugs etc.) Follow applicable legislation, manufacturer's guidelines and company procedures when inflating/deflating tires or during the installation/removal of tires prior to transport in order to avoid potential equipment damage, possible downtime, and potential injury to workers.
7. Shut engine off when traveling in order to avoid possible damage to the chipper and loss of production due to plugged fuel lines.
8. Activate beacon light in preparation for transportation in order to ensure high visibility of the chipper during transport and to ensure public safety.

**Component Checklist:**

- ❑ Adjust stabilizers to appropriate height for pick-up
- ❑ Move debarker into the travel position
- ❑ Fold pipe into travel position when it could potentially hit obstructions during transport
- ❑ Place booms in proper position for traveling
- ❑ Raise steps into travel position and secure
- ❑ Once fifth wheel is connected raise and verify stabilizers ensuring that they are in the travel position, and check tires for condition (flat tires, rock between tires, etc.) prior to transport
- ❑ Shut engine off
- ❑ Activate beacon light in preparation for transportation

**SHUT DOWN AND IMMOBILIZE CHIPPER**

**Performance Objective**

Shut down chipper, according to manufacturer's specifications, company requirements.

**Guidelines for Performance Objective:**

1. Turn off chipper. Ensure danger zone with other workers and equipment is maintained.
2. Lower attachments to the ground. Lower boom to the ground. Lock out chipper when completing shutdown procedure. Maintain 3-point contact during dismount.

**Component Checklist:**

- Lower boom to the ground
- Turn off and lockout chipper
- Safe dismount, maintaining 3-point contact



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**REFUEL CHIPPER**

**Performance Objective**

Refuel chipper 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 with fuel truck/tank to prevent damage to equipment.
2. Shutdown chipper: Follow previously noted shutdown procedures.
3. Fuelling procedures: Follow local fuelling procedures, no smoking, never leave the nozzle unattended, and properly store the hose after use.
4. Always use 3-point contact.

**Component Checklist:**

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

**PERFORM MINOR MAINTENANCE AND ADJUSTMENTS**

**Performance Objective**

Perform minor maintenance and adjustment on the chipper, 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 Objective:**

1. Shut down chipper: Immobilize machine, lower attachments 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. It is a good opportunity to check for cracks, leaks, wear in pins and bushings.
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.

**Component Checklist:**

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