

## Stump Grinder

*This Evaluation Guide for Skills Demonstration is to be used in the evaluation of an operator for certification on the specific piece of equipment stated above. It is intended that this Guide be followed closely during an evaluation, and the operator is expected to demonstrate competency in each of the items listed. However, variances may be made in some situations when, in the opinion of an evaluator, site conditions, operational constraints or the demonstrated skill of the operator requires that an item(s) be deleted or added to ensure a comprehensive evaluation.*

1. **Performs a thorough pre-operation inspection and preventive maintenance, as needed**
    - a. Removes keys from ignition for safety
    - b. Checks that warning and safety decals are in place
    - c. States all safety warnings for machine
    - d. Engine:
      - i. Visually checks for hydraulic and oil leaks
      - ii. Checks that oil, air and hydraulic filters are in good condition
      - iii. Checks fuel, hydraulic and motor oil levels
      - iv. Checks hydraulic hoses for leaks, cracks, loose fittings
      - v. Checks that battery and cables are corrosion free and are properly secured
      - vi. Checks that the hydraulic oil reservoir is filled
      - vii. Inspects condition and tightness of belts
    - e. Frame:
      - i. Checks that the stairs are clean and secure, if applicable
      - ii. Checks pintle hook for wear and in good condition
      - iii. Checks that safety chains are present and in good condition
      - iv. Checks electrical connections are secure and brake and turning signals are functioning properly
      - v. Checks frame for weld cracks and that the frame is not bent
      - vi. Checks tires for tread depth, proper inflation and obvious defects
      - vii. Checks wheels/rims for tightness, cracks, valve stem alignment, slippage or any damaged, broken or missing parts
    - f. Checks wheel bearings
      - i. Raises machine so that wheel is off ground
      - ii. Removes dust cap
      - iii. Checks wheel for looseness or play
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- iv. Tightens nut as necessary
  - l. Checks cutting wheel
    - i. Ensures that all the carbide teeth are present
    - ii. Checks for cracks in the cutting wheel
    - iii. Checks that the teeth are in proper position
    - iv. Checks pockets for bent over teeth
    - v. Checks for proper lubrication
  - m. Rotates cutting wheel to check for proper chain tightness
  - n. Checks pillow block assembly to make sure bolts are tight and greased
  - o. Checks for presence and condition of rubber shields
  - p. Positions control bar for operation
  - q. Removes safety pin so the machine can move up and down
  - r. Removes travel pin so the machine can travel back and forth
  - s. Disconnects trailer electrical pigtail
  - t. Checks safety horn for proper operation
  - u. Uses appropriate eye, ear, face, foot and hand protection
  - v. Respiratory equipment may be needed for certain site conditions
  - w. Distinguishes when equipment should not be operated
  - x. Verifies equipment is safe to operate
2. **Positions machine for safe and efficient operation**
- a. Checks with supervisor that the area has been checked for underground utilities or lawn sprinkler systems, if applicable
  - b. Checks area for sufficient clearance and describes "Operators Zone" for the machine
  - c. Checks area for large stones and other obstructions
  - d. Positions machine in place so that it is stable
  - e. Positions machine to account for discharge direction, traveling public, etc.
  - f. Places machine in a position that allows efficient operation
3. **Uses proper procedure to start grinder**
- a. Makes sure chain oiler is in the operating position
  - b. Pulls choke out
  - c. Adjusts throttle to idle speed
  - d. Adjusts choke as necessary
  - e. Engages clutch
  - f. Puts throttle up to operating speed
  - g. Checks hydraulics by operating machine through a range of motions
4. **Operates machine to remove stump using proper procedures**
- a. Makes sure that the area of operation is clear
  - b. Lowers machine to stump
  - c. Makes initial pass to clear area in front of stump to desired depth
  - d. Manipulates hydraulic controls to grind stump in small increments
  - e. Adjusts position of machine as grinding progresses
  - f. Does not force grinding so machine stalls
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- g. Continually monitors safety of discharge area during operation
  - h. Stops grinding when desired level is reached
5. **Shuts down machine using proper procedure**
- a. Centers and raises the machine to the travel position
  - b. Retracts tongue to the travel position
  - c. Replaces travel pin in tongue
  - d. Disengages clutch
  - e. Closes chain oiler
  - f. Pulls machine away from stump
  - g. Turns off machine
  - h. Rolls up safety flaps to travel position
  - i. Replaces safety pin
  - j. Returns control bar to travel position and installs lock pin
  - k. Inspects cutting wheel for damage and lost teeth
  - l. Cleans machine as necessary
  - m. Reattaches trailer pigtail connector
6. **Completes post operational check**
- a. Greases appropriate parts of the machine
    - i. tongue
    - ii. axle points
    - iii. engine slide
    - iv. upper jackshift
    - v. outboard bearing
    - vi. cutter wheel
    - vii. chain oiler
    - viii. tail pivot and belt tightener

The below signatures indicate the operator has successfully completed the skills demonstration.

Signature of  
Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of  
Operator: \_\_\_\_\_ Date: \_\_\_\_\_

Reference: New York State Department of Transportation

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