

## HERBICIDE TRUCK

*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. Holds a valid class B Commercial Driver License with air brake endorsement, if applicable**
- 2. Holds a valid Pesticide Applicator's Certification**
- 3. Performs a thorough pre-op inspection and routine maintenance, as needed**
  - a. Removes keys from ignition for safety
  - b. Checks that parking brake is on
  - c. Checks that warning and safety decals are in place
  - d. Distinguishes when vehicle should not be operated
  - e. Verifies vehicle is safe to operate
  - f. States all safety warnings for machine
  - g. Inspects the following machine components listed below
    - i. Engine:
      - (1) Checks oil, coolant, power steering, and window washer levels and fills as needed
      - (2) Checks the radiator fins for cracks, distortion, debris and any signs of leakage
      - (3) Checks fan for presence and distortion
      - (4) Checks air restriction indicator (monometer) cleans dust valve daily
      - (5) Checks that oil and fuel filters are in good condition, secured tight, and without leaks
      - (6) Checks batteries for corrosion and to be properly secured
      - (7) Checks that shutters are not bent and are free from debris, if applicable
      - (8) Inspects condition and tightness of belts
      - (9) Checks air induction and cooling tubes for presence and tightness, if applicable
      - (10) Checks turbo charger for leaks and cracks, if applicable
      - (11) Checks air induction and cooling tubes for presence and tightness, if applicable
      - (12) Checks turbo charger for leaks and cracks, if applicable
    - ii. Steering and Suspension:

- (1) Checks springs and spring hangers for presence and damage
  - (2) Checks that shocks are properly attached, are not damaged and are not leaking
  - (3) Inspects pitman arm, drag link and tie rod ends for tightness
  - (4) Checks power steering assist cylinder, if applicable, and steering box for leaks and that it is secured to frame
  - (5) Checks tires for tread depth, proper inflation and obvious defects
  - (6) Checks wheels/rims for tightness, cracks, valve stem alignment, slippage or any damaged, broken or missing parts
  - (7) Checks wheel hub for proper lube levels
- iii. Rear Axle and Suspension
- (1) Checks springs and spring hangers for presence and damage
  - (2) Inspects drive shaft visually for damage, debris or any sign of failure
  - (3) Checks differential and wheel seals for leaks
  - (4) Checks for presence and condition of axle vent
  - (5) Checks tires for tread depth, proper inflation and obvious defects
  - (6) Checks wheels/rims for tightness, cracks, valve stem alignment, slippage or any damaged, broken or missing parts
  - (7) Checks between dual wheels for any foreign materials, misalignment or any hidden damage
  - (8) Checks fenders and mud flaps for presence and condition
- iv. Exterior
- (1) Checks fuel tank for damage or leaks and fuel levels
  - (2) Checks that lights, warning lights, and reflectors are clean and intact, properly attached, and operating correctly
  - (3) Checks exhaust system for damage or leaks
  - (4) Checks Power Take Off (PTO) system visually for leaks and any broken, damaged or missing parts
- v. Cab Interior
- (1) Enters cab using steps and grab handles for safety (3 point climbing procedure)
  - (2) Performs general safety check including unsecured objects
  - (3) Describes functions of controls
  - (4) Inspects presence and condition of seat belts and other safety equipment, including horn, charged and secured fire extinguisher, and first aid kit
  - (5) Inspects for excessive free play in the steering wheel
  - (6) Inspects for 1½ inch clutch free play (if applicable)
  - (7) Inspects for clean and undamaged glass and mirrors, working wipers/washers and heater/defroster
  - (8) Checks two-way radio for proper adjustment and operation
  - (9) Demonstrates an entire Air Brake check of the system, including how to check parking and service brakes (i.e.: low air warning - maximum air loss for service brake, automatic parking brake application)
- I. Checks for presence and condition of safety equipment
- i. emergency spill kit
  - ii. protective gloves, as required by label on product
  - iii. fire extinguisher
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- iv. respiratory protection, as required by label on product
        - v. extra labels and SDS sheets
      - m. Chemical injection system
        - i. Checks injection tanks for leaks or damage
        - ii. Checks injection tanks plumbing for leaks, tight fittings
        - iii. Visually inspects belts (2) on injection pump
        - iv. Checks fluid levels in injection pumps
      - n. Recirculation system
        - i. Checks recirculation plumbing for leaks or damage
        - ii. Checks filters (4), cleans screens if necessary
        - iii. Visually check belts (2) on 5 horse engine
      - o. Radiarc spray head
        - i. Uses proper nozzles for application
        - ii. Checks connections, nuts, bolts for tightness
        - iii. Checks that nozzles are clean and without chemical build-up
  - 4. **Describes characteristics and safety requirements of each chemical used in the program**
    - a. Health hazards and handling requirements
    - b. First aid
      - i. route of entry
      - ii. determine treatment
      - iii. application of treatment
    - c. Emergency response for spills
    - d. Mode of action for each chemical
    - e. Formulation (liquid or powder)
    - f. Volatility of chemical
    - g. Effects of pesticide to the target (total kill, partial or growth regulator)
    - h. Soil fate of pesticides
  - 5. **Identifies various types of vegetation to control and specific non-target vegetation**
    - a. Identifies various types of vegetation to control and the chemical application rate for each species
      - i. grass
      - ii. creeping vines
      - iii. woody vines
      - iv. broadleaf weeds
      - v. brush and trees
    - b. Identifies non-target species
      - i. trees
      - ii. brush
      - iii. grasses
      - iv. broadleaf weeds
  - 6. **Loads and prepares chemicals for operation**
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- a. Loads water tank
  - b. Loads and prepares chemicals without spilling
    - i. mixes chemicals, water and adjuvants for application according to manufacturer's instructions
    - ii. Loads adjuvants (dye, surfactant, drift control agents) as necessary
7. **Calibrates 440 console, 700 console and hand gun**
- a. Programs 440 console
    - i. Places injection pump in recirculation mode
    - ii. Places piston stroke adjustment at proper setting
    - iii. Determines and enters the settings for:
      - (1) swath width
      - (2) speed calibration number (unique to truck)
      - (3) meter calibration number for flow meter (unique to vehicle)
      - (4) valve calibration number
      - (5) carrier rate number (1&2)
      - (6) carrier tank volume
  - b. Programs 700 console
    - i. Primes the injection pump
    - ii. Determines the setting for the injection pump for the chemical used and application rate
    - iii. Determines and enters the settings for:
      - (1) swath width (1, 2 and 3)
      - (2) speed calibration (unique to truck)
      - (3) meter calibration (1 & 2)
      - (4) valve calibration numbers
      - (5) chemical 1 & 2 calibration
    - iv. Calibrates pumps to determine meter calibration number (takes volume measurement off pump)
  - c. Conducts self test of system
    - i. Makes adjustments (if necessary) to radiarc spray head to adjust spray pattern
      - (1) Even pattern across length of swath width
      - (2) Volume output and spray pressure in desired range
    - ii. Adjusts pattern with largest nozzle possible to minimize drift
  - d. Calibrates hand gun according to applicator's speed of walk, spray technique and other habits
    - i. On pre-measured area, runs system on hand gun while applicator sprays evenly as possible
    - ii. From console, determines chemical and carrier output per acre
    - iii. Enters appropriate settings into consoles (swath width or meter calibration numbers)
8. **Assesses environmental conditions prior to and during application**
- a. Determines if weather conditions are acceptable
    - i. no rain in forecast
    - ii. low wind speed
    - iii. no people around
  - b. Assesses soil conditions and effects of application of chemical
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- c. Drives through application area first to locate all water areas
- d. Frequently monitors weather conditions (for wind change, storm coming)

9. **Applies chemical to intended target evenly and without drift**

- a. Truck/Radiarc spraying
  - i. Directs appropriate vehicle speed for swath width (for no drift)
  - ii. Directs vehicle placement so that:
    - (1) Obstruction of traffic on roadway is minimized
    - (2) No chemical is applied on pavement
    - (3) Chemical is placed in appropriate areas (according to manufacturer's label)
  - iii. Operates equipment so that spray pattern is even and without drift
  - iv. Applies product with pattern as low to ground as possible (for particular application)
  - v. Does not allow spray to enter any water areas and keeps chemicals out of buffer zones (when required)
  - vi. Application is on target (sprays areas intended to be treated)
  - vii. Adjusts swath width continually for various terrain conditions to maintain proper spray pattern and application rate
  - viii. Monitors chemical and carrier output per acre; makes proper adjustments to maintain correct ranges
  - ix. Properly treats guiderail area to control vegetation
    - (1) Guiderail will be visible after treatment takes effect
    - (2) Vegetation does not restrict drainage
    - (3) Brush is not located in undesirable locations of right of way
    - (4) In distinguishing target areas, avoids areas such as farmlands and private property
  - x. Monitors flow indicator lights (will go out when system runs out of chemical)
  - xi. Monitors vacuum gauges (2) and pressure gauges (to make sure they are in proper ranges)
  - xii. Makes proper adjustments for obstacles, upcoming streams or water bodies
- b. Hand Gun
  - i. Moves valve to divert flow from Radiarc head to hand gun
  - ii. Makes appropriate console and pump adjustments for hand gun operation for applicator's spray habits and techniques
  - iii. Maintains even spray pattern on target with minimal drift
  - iv. Divides large areas into sections; keeps track of what has been covered; maintains even coverage
  - v. Correctly judges application rate based on visual inspection of degree of saturation of target
  - vi. Makes smooth, even movements with arm/gun during application
  - vii. Applies product within labeled rates (not over or under applied)
  - viii. Maintains awareness of flow sensor, makes sure it is operating properly

10. **Shuts down and cleans equipment**

- a. Reads application spray data from console and records time of day stopped and ending location
  - b. Flushes main spray line
    - i. Places dye in chemical line
    - ii. Flushes line until spray solution runs clear
  - c. Shuts down auxiliary engine
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- d. Drains chemical tanks back to either original containers if not contaminated, or if mixed (dry flowables), into properly labeled storage container.
  - e. Rinses tanks if applicable; if changing programs, drains tanks and washes system thoroughly with ammonia
  - f. Triple rinses containers and disposes of properly
  - g. Washes all exposed skin areas thoroughly with soap and water
  - h. Completes post operational check according to local policy
11. **Completes all appropriate records**
- a. Completes daily log for truck operations, noting unusual situations, contacts with the public/landowners, equipment breakdowns/repairs, spills, work to be done under a separate program, other miscellaneous information or comments
  - b. Correctly enters application information in log
    - i. mile marker and landmark reference in log
    - ii. time of day
    - iii. application rates
    - iv. target (plant type and location, such as guiderail, brush, parking area)

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

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

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