CLEARWATER FIRE & RESCUE TRAINING BUREAU



TRACTOR OPERATOR TASK BOOK #5

Signature	Beginning Date
08#	Hire Date
Signature	Completion date
Signature	Date
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Updated 01/09

Task Book Qualification Record Books have been developed for various certifications for different pieces of apparatus within the Clearwater Fire & Rescue Department. Each task book lists the job performance requirements (JPRs) for the specific qualification level in a format that allows a candidate to be trained and evaluated during three (3) sequential sessions. Successful performance of all tasks, as observed and recorded by a qualified and approved evaluator, will result in the candidate's eligibility to become certified to drive and operate that specific piece of apparatus.

To become certified on a specific piece of apparatus, the candidate must successfully complete the job performance requirements. The candidate for each task book must meet all the prerequisite requirements prior to beginning the task book. It is recommended that the task books be completed in order. It is also recommended that in each task book the JPR's be completed in order. Before a job performance evaluation can be taken, all requisite knowledge and skills must be satisfied.

The evaluator shall be the candidate's immediate supervisor, (Lt) and/or the supervisor (Lt) for the specific unit the candidate is training to drive and operate. The Lieutenant may choose to delegate some or all of the evaluations to the assigned Driver Operator. Ultimately the Lieutenant will have to approve the completion of the task book, as well as the candidates Assistant Chief.

The JPR evaluations are a simple pass or fail. If a candidate fails his or her evaluation, then they must receive additional training in the area he or she was deficient in. The JPR is not signed off until the candidate retests and passes. The candidate must successfully demonstrate each JPR three times in order to complete the JPR.

When all prescribed requirements have been met, the task book will be forwarded to the Clearwater Fire & Rescue Training Bureau. The task book will be filed at training, and a certificate will be issued to certify the candidate on that specific type of apparatus.

How to Evaluate Performance:

Each JPR has three corresponding boxes in which to confirm a candidate's success in a sequence. The evaluator shall indicate successful passing by the candidate of each JPR by printing their name, signing and dating in the boxes provided for that JPR. There is no time restriction between the three evaluations; however they must be completed on three separate dates. Each JPR shall be demonstrated to the evaluator and must meet the standards set forth in this document to the evaluator's expectation. It is recommended that the JPR's be completed in sequence. The three sequences for each JPR cannot be accomplished all in one day. They must have been signed off and completed on different dates.

Prerequisites for the Tractor Operator Candidate.

<u>All prerequisites must be met prior to the final approval of this</u> <u>task book</u>

- 1. Must have a 16-hour EVOC certificate, and most current refresher.
- 2. Must have completed the two week "Clearwater Fire Rescue Driver Operator School" <u>or</u> both the State's "Aerial Operations" <u>and</u> "Apparatus Operations"
- 3. Must have a through knowledge of the vehicles inventory.
- 4. Must be a certified Tiller Operator prior to initiating this task book

References for this Task Book

- 1. Clearwater Fire & Rescue Policies & Procedures
- 2. Pierce Tiller Aerial Operations & Maintenance Manual
- 3. NFPA 1002
- 4. NFPA 1500
- 5. VFIS Driver Competency Course

5.1 Morning Check: Perform the routine tests, inspections, and servicing functions specified in the following lists, given a Clearwater Fire Rescue Department Tractor Drawn Aerial, so that the operational readiness of the apparatus is verified. The candidate shall also demonstrate the proper and safe method of tilting the tractor cab to facilitate the morning check.

- Check battery
- Check belts
- Check oil
- Check lubricants
- Check fuel
- Check coolant
- Check tires and pressure, presence of foreign objects.
- Check all vehicle and emergency lights
- Check wipers
- Check tools, appliances, and equipment
- Check hydraulic system
- Check electrical system
- Check steering system
- Communications system
- Tractor & Tiller signaling devices
- Stabilizers
- Aerial ladder

Requisite Knowledge: Basic vehicle systems, maintenance procedures, daily check procedures, manufactures specifications and maintenance requirements, and ability to identify mechanical problems and potential safety hazards.

Requisite Skills: The ability to use hand tools, recognize system problems, and correct any deficiency noted according to department policies and procedures.

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5.2 Documentation: Document the routine tests, inspections, and servicing functions, given maintenance and inspection forms, and a Driver's Log Book, so that all items are checked for proper operations and deficiencies are reported.

Requisite Knowledge: Departmental requirements for documenting maintenance, understanding the importance of accurate record keeping.

Requisite Skills: The ability to complete all related departmental forms, make entries in the drivers log book, and identify more serious mechanical problems for immediate attention.

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5.3 Road Course: Drive the tractor cab of a tractor drawn aerial, given a vehicle and a predetermined route on a public way that incorporates the maneuvers and features specified in the following list that the candidate is expected to encounter during normal operations, so that the vehicle is safely operated with due regard for the safety of others, and in compliance with all applicable state and local laws, department policies and procedures. Each driving session shall incorporate at least 2 hours of actual time on the road driving sessions shall be conducted after dark so the candidate may experience night driving conditions. Proper signals shall be given to the Tractor Operator prior to the vehicle moving or changing direction

- Four left and four right turns
- A straight section of urban business street at least 1 mile in length
- One through –intersection and two intersections where a stop has to be made
- One railway crossing (if in district)
- Two curves, both left and right
- A section of limited-access highway that includes a conventional ramp entrance and exit in a section of road long enough to allow two lane changes. (US 19)

Requisite Knowledge: Vehicle specifications including the height, weight, length, and width of the apparatus. The effects of inertia on vehicle control, braking reaction time, load factors, general steering reactions, speed, and centrifugal force; applicable laws and regulations; principles of skid avoidance, night driving, negotiating intersections, railroad crossings, and bridges; identification and operation of vehicle gauges, and proper operation limits.

Requisite Skills: The ability to operate passenger restraint devices, use mirrors, maintain safe following distances, maintain control of the vehicle while accelerating, decelerating, and turning, maintain reasonable speed for road, weather, and traffic conditions, operate safely during non-emergency conditions, operate under adverse environmental or driving surface conditions, and use automotive gauges and controls.

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5.4 Alley Dock: Back a vehicle from a roadway into a restricted space on both right and left sides of the vehicle, (alley) given a Tractor Drawn Aerial Truck, and a spotter, and a restricted space 12 feet in width, and 60 feet long, requiring a 90 degree right hand turn and left hand turn from the roadway, so that the vehicle is parked within the restricted areas without having to stop or pull forward and without striking obstructions. Proper signals shall be given to the Tiller Operator prior to the vehicle moving or changing direction.

Requisite Knowledge: Vehicle dimensions, turning characteristics, mirror usage, spotter signaling, and principles of safe vehicle operation.

Requisite Skills: The ability to use the vehicles mirrors, to operate under emergency conditions, judge vehicle clearance, and operate the vehicle safely.

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5.5 Serpentine Maneuver a vehicle around obstructions on a roadway while moving forward and in reverse. Operate a fire department Tractor Drawn Aerial, given a spotter for backing, and a course with six obstructions, spaced forty feet apart, so that the vehicle is maneuvered through the obstructions without stopping to change the direction of travel and without striking the obstructions. Proper signals shall be given to the Tiller Operator prior to the vehicle moving or changing direction

Requisite Knowledge. Vehicle dimensions, turning characteristics, the effects, spotter signaling, and principles of safe vehicle operation.

Requisite Skills. The ability to use mirrors, judge vehicle clearance, and operate the vehicle safely

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5.6 Diminishing Clearance Maneuver a fire department Tractor Drawn Aerial in areas with restricted horizontal clearances, given a course that requires the operator to move through areas of restricted horizontal clearances, so that the operator accurately judges the ability of the vehicle to pass through the openings so that no obstructions are struck. The diminishing clearance course shall be 75 feet in length, at the beginning opening it shall be 12 feet in width, and gradually diminish down to 9 feet at the other end. The candidate cannot stop the vehicle as it passes through. Proper signals shall be given to the Tiller Operator prior to the vehicle moving or changing direction.

Requisite Knowledge. Vehicle dimensions, turning characteristics, spotter signaling, and principles of safe vehicle operation.

Requisite Skills: The ability to use the vehicles mirrors, judge vehicle clearance, and operate the vehicle safely.

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5.7 Proper Positioning The candidate shall demonstrate their ability to properly position the aerial apparatus for ladder deployment, given an aerial, and an incident location, description of incident, and an assignment. Proper signals shall be given to the Tiller Operator prior to the vehicle moving or changing direction

Prerequisite Knowledge: Fireground operational guidelines, capabilities and limitations of the aerial ladder related to reach, tip load, angle of inclination, effects of topography, ground, and weather conditions on safe ladder deployment and use of the aerial ladder.

Prerequisite Skills: The ability to determine the appropriate position for the apparatus based on the target and situation, perform a rapid size up of the fireground, maneuver the vehicle into position, and avoid obstacles and overhead wires.

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5.8 Aerial Stabilization The Candidate shall demonstrate how to properly stabilize the apparatus for aerial ladder deployment. Given a properly positioned aerial ladder apparatus, ensuring there is adequate room to place the outriggers, properly set the vehicles outriggers so that the power can be transferred to the aerial ladders hydraulic system, and the ladder can be safely deployed. Candidate shall incorporate the proper use of the front wheel lock, wheel chocks, ground pads, and jack pins.

Requisite Knowledge: Aerial apparatus hydraulic systems, manufactures specifications for stabilization, limitations of short jacking the outriggers, and effects of topography and ground conditions on safe stabilization.

Requisite Skills: The ability to transfer power from the vehicle's engine to the hydraulic system and operate vehicle stabilization devices. Ability to properly place the ground pads for the outriggers, use wheel chocks, and set front wheel lock.

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5.9 Raise Aerial Maneuver and position the aerial ladder from the pedestal control station, given an incident location, a situation description, and an assignment, so that the aerial ladder is properly positioned to safely accomplish the assignment. The candidate shall successfully ladder two targets designated by the evaluator.

- 1. The roof of a building
- 2. A window of a building

The ladder shall be properly positioned so that personnel can safely climb from the ladder onto/into the designated target. The elapsed time from when the ladder is lifted out of the cradle to when it is successfully placed at the target shall not exceed 2:00 minutes. The waterway shall be pinned in the Rescue position.

Requisite Knowledge: Proper calculations for weight distribution on the aerial. Appropriate control operations and specific ladder limitations. Aerial ladder hydraulic systems, hydraulic pressure gauges, gauges and controls, cable systems, communications systems, electrical systems, emergency operating systems, stabilizing systems, aerial ladder safety systems, system overrides and the hazards of using overrides, safe operational limitations of the given aerial ladder, safety procedures specific to the device, and operations near electrical hazards and overhead obstructions. Use and applications of the pinable waterway

Requisite Skills: the ability to raise, rotate, extend, and position an aerial ladder at a fire or emergency scene.

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5.10 Recognizing Ladder Limitations The candidate shall verbalize to the evaluator the safe operational limitations of the aerial ladder in the following areas.

- Angle of the chassis
- Ground conditions
- Effects of Jackknifing the vehicle
- Reach of the ladder
- Load limitations of the ladder at various angles of inclination.
- Effects of master stream operations on the ladder

Requisite Knowledge: Load limitations of the ladder at specific angles, Proper calculations for weight distribution on the aerial. Appropriate control operations and specific ladder limitations. Aerial ladder hydraulic systems, hydraulic pressure gauges, stabilizing systems, aerial ladder safety systems, system overrides and the hazards of using overrides, safe operational limitations and procedures of the given aerial ladder.

Requisite Skills: Ability to read Inclinator and Level Gauges, recognize grade differences, ability to maneuver vehicles stabilizer to achieve a level platform.

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5.11 Generator Operation The Candidate shall demonstrate properly engaging the generator to provide electrical power for lighting and power to the cord reels.

Requisite Knowledge: The mechanics of the apparatus and its operating system as well as manufactures specifications.

Requisite Skills: The understanding of and ability to engage the Power Transfer to operate the vehicle generator.

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5.12 Operate Ladder Pipe The candidate shall demonstrate the proper and safe method of flowing a master stream from the aerial ladder. Given a properly positioned aerial ladder, and a water supply, the candidate shall establish a master stream from the aerial and strike a designated target established by the evaluator (traffic cone), controlling the stream from the turntable. The candidate shall also demonstrate how to properly pin the waterway to the fly section if additional height is needed for the stream.

Requisite Knowledge: Recognize the effects that nozzle reaction has on the aerial, range of operation, and understand the flows of the various tip sizes, ability to read the flow meters and calculate total gallons flowed. Appropriate control operations and specific ladder limitations. The use and applications of the pinable waterway.

Requisite Skills: The ability to connect a water supply to the apparatus, operate the aerial while water is flowing, and operate the nozzle from a remote location such as the pedestal. The ability to change the waterway from rescue position to fly section if applicable.

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5.13 Emergency Ladder Operation The candidate shall demonstrate the ability to operate the aerial using the emergency back up power system. Given a simulated scenario of loss of power; operate the aerial using the emergency power system.

Requisite Knowledge: The vehicles back up emergency hydraulic power system and its limitations, manufactures specifications. Appropriate control operations and specific ladder limitations.

Requisite Skills: Ability to operate the vehicles hydraulic systems, aerial ladder and outrigger controls.

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5.14 Lowering the Aerial Ladder The candidate shall demonstrate the proper method of lowering the aerial ladder back into the vehicles cradle. The candidate shall ensure the aerial's nozzle is properly stowed and the tiller operator is in the correct position to serve as a spotter.

Requisite Knowledge: Proper calculations for weight distribution on the aerial. Appropriate control operations and specific ladder limitations. Aerial ladder hydraulic systems, hydraulic pressure gauges, gauges and controls, cable systems, communications systems, electrical systems, emergency operating systems, stabilizing systems, aerial ladder safety systems, system overrides and the hazards of using overrides, safe operational limitations and procedures of the given aerial ladder. Safe operations near electrical hazards and overhead obstructions.

Requisite Skills: The ability to retract, rotate, align, lower, and bed an aerial ladder at a fire or emergency scene.

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