



**ENGINEER CANDIDATE CERTIFICATION**

**TRUCK COMPANY – SERVICE AERIAL LADDERPIPE OPERATIONS**

*FOG NOZZELS: 1000 – 1250 GPM @ 80 PSI / SMOOTH BORE NOZZLES: 1 ½”, 1 ¾”, 2”*

*MAXIMUM TIME: 7:30*

TASK #	TASK
1	Wear Proper PPE <ul style="list-style-type: none"> <li>• Wear appropriate clothing and footwear for incident</li> <li>• Do not wear helmet in the cab</li> </ul>
2	Check for crew and apparatus security – seat belts <ul style="list-style-type: none"> <li>• All compartment and crew doors must be closed</li> <li>• Check for crew being seated and wearing seat belts</li> <li>• Must be done before apparatus moves</li> </ul>
3	Turn on emergency lights, including headlights (Opticom ON while driving Code 3) <ul style="list-style-type: none"> <li>• Must turn on headlights and all warning lights</li> <li>• Once Spring Brake is released, check for door and seatbelt warning lights</li> </ul>
4	Spot apparatus (turn table) in correct location for aerial operation <ul style="list-style-type: none"> <li>• Truck should be spotted at the corner of the building/objective for optimal reach</li> </ul>
5	Set both parking brake and front parking brake <b>CRITICAL ERROR</b> <ul style="list-style-type: none"> <li>• TIME STARTS</li> </ul>
6	Place road transmission into neutral <b>CRITICAL ERROR</b>
7	Engage Ladder Master device
8	Engage Ladder PTO device
9	Exit Cab <ul style="list-style-type: none"> <li>• Take helmet, portable radio, and other PPE</li> </ul>
10	Place wheel blocks on left and right front tires. <b>CRITICAL ERROR</b> <ul style="list-style-type: none"> <li>• Collapsible wheel blocks locked</li> <li>• Forward and aft of wheel; must be done before outriggers <b>CRITICAL ERROR</b></li> <li>• Wheel blocks in complete alignment with tire</li> <li>• Square to tread</li> </ul>
11	Verbalize operating grade level indicators for Slope and Grade identification prior to leveling
12	Switch hydraulic power to Stabilizer position (if equipped)
13	Turn on High Idle Switch
14	Extend outriggers <ul style="list-style-type: none"> <li>• Low side first</li> <li>• High side second</li> <li>• Do Not Short Jack <b>CRITICAL ERROR</b></li> </ul>

TASK	TASK
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15	Place outrigger plates down <b>CRITICAL ERROR</b> <ul style="list-style-type: none"> <li>• Place plates with handles facing the truck side – trip hazard</li> <li>• Lower jacks to ground, low side first, stair step lifting if needed. Jacks should be placed in center of pad.</li> </ul>
16	Raise rear wheels off ground or take the bulge out of the rear for correct stabilization <ul style="list-style-type: none"> <li>• Per Task Book and Operators Manual, the operator can either take the bulge out of the rear tires or raise the tires off the ground on level ground</li> <li>• Front tires must maintain contact at all times <b>CRITICAL ERROR</b></li> </ul>
17	Verbalize and Ensure apparatus level indicators are green for slope and grade. <b>CRITICAL ERROR</b>
18	Verbalize and Ensure all on ground indicator lights are illuminated to activate ladder power
19	Place safety pins <b>CRITICAL ERROR</b> <ul style="list-style-type: none"> <li>• Chains must be unrolled (if equipped)</li> <li>• Ensure that handled end does not come in contact with outrigger box</li> <li>• T-Handle to outside</li> </ul>
20	Switch hydraulic power to Aerial (if equipped)
21	Close outrigger control doors (if equipped)
22	Connect water source to intake: <ul style="list-style-type: none"> <li>• Spanner tight</li> <li>• Call for water to intake valve at Engine idle pressure</li> <li>• Check for Kinks/Hazards</li> </ul>
23	Bleed air from supply line, close bleeder valve when air is removed before mounting turntable.
24	Replace pedestal safety chain after mounting turn table (if equipped)
25	Ensure waterway mechanism is in the proper locked position for Ladder Pipe Operation <b>CRITICAL ERROR</b>
26	Open cover to pedestal controls
27	Monitor portable radio at all times
28	Turn volume on aerial ladder intercom up to an audible level
29	Ensure high idle is on
30	Turn on aerial ladder tracking lights
31	Issue CLEAR and AUDIBLE verbal statements prior to aerial ladder movement
32	To operate aerial controls <ul style="list-style-type: none"> <li>• Activate dead-man pedal or pull up on locking collars (if equipped)</li> <li>• Two hands are recommended</li> <li>• DO NOT override safety interlocks (if equipped) <b>CRITICAL ERROR</b></li> </ul>
33	Ensure proper placement for Ladder Pipe Operations <ul style="list-style-type: none"> <li>• One movement (Elevate, Rotate, Extend) at a time is preferred but multiple movements can be done simultaneously</li> </ul>

TASK #	TASK
34	Order of operation (may be done simultaneously): <ul style="list-style-type: none"> <li>• Elevate – 70 Degrees</li> <li>• Rotate to desired target</li> <li>• Extend to desired or directed height <ul style="list-style-type: none"> <li>• Ensure rung alignment light is on</li> <li>• Lower nozzle before charging</li> </ul> </li> </ul>
35	Charge waterway system from pedestal using Gate Valve Toggle <b>CRITICAL ERROR</b>
36	Confirm by radio with Pump Engineer initial pump pressure of 150psi
37	Verify ladder height, nozzle psi, and GPM with Pump Engineer for correct pressure
38	Ensure effectiveness of stream
39	All movement with aerial ladder must be smooth and safe <b>CRITICAL ERROR</b>
40	Notify Rater that the evolution is completed by CLEARLY CALLING "TIME" <b>CRITICAL ERROR</b>



**LADDERPIPE OPERATION INSTRUCTIONS – CRITICAL ERRORS – ANY CRITICAL ERROR CONSTITUTES A FAILURE**

**SAFETY VIOLATION – ERRORS THAT COULD CAUSE INJURY, BE LIFE THREATENING OR CAUSE PROPERTY DAMAGE**

EXAMPLES:

- Fails to set Parking Brakes and vehicle rolls after seat belt is removed from driver
- Fails to place Transmission in Neutral
- Fails to place Wheel Blocks
- Fails to place Outriggers, Outrigger Safety Pins and/or Outrigger Plates
- Fails to keep Front Tires in contact with the ground
- Short Jacking Outriggers
- Fails to ensure all Operating Level Indicators are in the green
- Fails to ensure Waterway Mechanism is in proper position (Ladderpipe Mode)
- Fails to ensure Waterway Mechanism is locked
- Fails to charge Ladder Pipe
- Fails to drain Waterway system (must open drain, leave gate valve open or open waterway switch while stowing ladder)
- Any part of the Ladder strikes building or object or rests ladder on building during any movement
- All ladder movements are to be smooth and safe
- Fails to place Waterway mechanism back in RESCUE mode
- Exceeds Maximum time
- Remove and properly stow Outrigger Safety Pins before moving
- Overrides Safety interlocks (if equipped)
- Backing apparatus without assistance

**\*\*Fails to complete Truck evolution as outlined\*\***

**\*\*\*If at any time, which could include prior to or after any portion of this evolution, the Rater determines that your actions create a hazard which may result in injury to any person, damage to property, other vehicles, or the apparatus you will be IMMEDIATELY disqualified from any certification process and asked to turn the apparatus over to the Rater\*\*\***

**LADDERPIPE SHUTDOWN PROCEDURE**

1	Properly signal for Shut Down/Pick Up <ul style="list-style-type: none"> <li>Utilize radio, voice, or hand signals to verify shut down with personnel</li> </ul>
2	Ensure supply line is disconnected and ladder pipe is drained <ul style="list-style-type: none"> <li>Open Drain valve (if equipped)</li> <li>Open Intake valve at rear of truck (if equipped)</li> <li><b>MUST REMAIN OPEN</b> while stowing ladder <b>CRITICAL ERROR</b></li> </ul>
3	Ensure Ladder is between 70-75 degrees before retracting ladder
4	Ensure Nozzle tip is raised up to clear windshield when bedding ladder
5	Retract Ladder
6	Rotate Ladder to bed position
7	Lower Ladder
8	Stop Ladder prior to bedding to visualize both sides for obstructions: <ul style="list-style-type: none"> <li>Recheck Nozzle position</li> <li>If Left/Right movements must be made at or below 20 degrees, utilize 0-20 degrees override switch on pedestal (if equipped)</li> <li>Be aware of truck body when making left/right movements below 20 degrees</li> </ul>
9	All movement with Aerial Ladder must be smooth and safe <b>CRITICAL ERROR</b>
10	Lower ladder to cradle <ul style="list-style-type: none"> <li>Load hydraulic system until audibly bypassing to verify ladder is properly bedded (1000psi on pedestal gauge)</li> </ul>
11	Turn off Aerial lighting
12	Turn off Intercom
13	Close Gate Valve Toggle
14	Close Pedestal cover
15	Ensure Waterway mechanism is stowed in RESCUE mode <b>CRITICAL ERROR</b>
16	Exit Turntable, Ensure safety chain is clipped in place (if utilized)
17	Close Drain Valve (if equipped)
18	Remove and properly stow outrigger safety pins <ul style="list-style-type: none"> <li>Must be done before moving outriggers <b>CRITICAL ERROR</b></li> </ul>
19	Stow Outriggers <ul style="list-style-type: none"> <li>Switch hydraulic power to Stabilizer position (if equipped)</li> <li>Raise and stow outriggers – High side first</li> <li>Retract outriggers until seated</li> <li>Close outrigger control doors (if equipped)</li> <li>Replace outrigger jack plates</li> </ul>

TASK #	TASK
20	In cab <ul style="list-style-type: none"> <li>• Ensure “Jacks not Nested” light is off or check Command Zone (if equipped)</li> <li>• Disengage Ladder PTO and Master devices</li> </ul>
21	Turn off all Emergency Lights <ul style="list-style-type: none"> <li>• Turn on four-way flashers</li> <li>• Shut down engine</li> </ul>
22	Secure all Equipment and Apparatus (nozzles, hose, compartment doors, etc.) <ul style="list-style-type: none"> <li>• All equipment should be returned to same compartment where it was found</li> </ul>
23	Perform safety walk around <ul style="list-style-type: none"> <li>• Verify all previous steps are completed and perform any that were missed</li> </ul>
24	Notify Rater that the apparatus is “Road Ready” <ul style="list-style-type: none"> <li>• Except for picking up wheel blocks</li> </ul>

**NOTES:**

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