



# GOLDER RANCH FIRE DISTRICT

## Engineer Practical Check Sheets

### Switch Over Water Supply

**Standards:**

NFPA 1010 Section 1002: 4.3.7, 4.3.7(B)

NFPA 1010 Section 1002: 5.2.4, 5.2.4(B)

**Task/Performance Outcome:**

The candidate shall be given the objective to flow a multiple hose line off a type 1 pumper. The hose lines must be pumped to the proper pressures and an effective fire stream is achieved in each.

**Required Personal Protective Equipment (PPE):**

Turnout pants/boots, helmet and utility gloves

**Required Equipment:**

- Type 1 pumper (with foam injection system)
- Fire nozzles
- Fire hoses

**Critical Fail Criteria:**

Failure consists of the following:

- Failure to complete any of the given tasks
- Failure to place wheel chocks prior to throttling truck
- Failure to refill on board water tank
- Cavitation of pump
- Failure to wear the required PPE
- Failure to keep accountability on the fire ground
- Failure to exit the apparatus safely and with three points of contact
- Glaring, gross errors, as documented by the evaluator
- An apparent lack of efficiency and comfort with the activity, as documented by the evaluator
- Less than 80% of available points scored

**Evolution Details:**

The candidate will be instructed to flow a single hose line using a given tank water from their given apparatus. The candidate must charge the hose lines safely and smoothly when the hose lines are ready to be charged. Once the hose line is charged with water the candidate must set the pump discharge pressure correctly. The candidate must ensure the discharge relief valve or pressure governor is set to the correct level for the highest line. The candidate must then secure a pressurized water source from a hydrant unassisted without interrupting water flow to the hose line. Once LDH connections are made to the truck and hydrant the candidate will open the hydrant and bleed all air from the line. The candidate will then perform a switch over from tank water to hydrant water without interrupting flow and manage pressure fluctuations appropriately. The candidate must begin filling the apparatus on board tank while managing proper discharge pressure.



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<b>Candidate Name:</b>	<b>Date:</b>	
<b>Initial Attack line</b>	<b>Points Available</b>	<b>Points Earned</b>
<b>Addresses Accountability.</b>	<b>CFC</b>	
Parking brake engaged.	1	
Pump engaged.	1	
Ensures that "OK to Pump" light is on.	1	
<b>Wheel Chocks placed prior to throttling up engine.</b>	<b>CFC</b>	
Tank-to-pump valve opened.	1	
Throttles truck between 1000-1200 RPM prior to operating primer.	1	
Operates Primer for a minimum of 3 seconds.	1	
Waits for line to charge before throttling up.	1	
Charges line with appropriate pressure within 10% of theoretical of the given hose line.  _____ psi	2	
Pressure relief device set for current pressure.	1	
All lines are properly charged and checked for any kinks or obstructions.	1	
All couplings are tight.	1	
All T-handles locked in position.	1	
All gauges are at the proper operating pressure.	1	
Master discharge gauge matches the highest-pressure line.	1	
The highest-pressure line is fully open.	1	
All mechanical gauges are within the normal limits.	1	
D/O does a 360 of the truck observing functions, leaks, etc.	1	
Demonstrated overall efficiency and comfort with the evolution.	3	



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Water Supply Evolution	Points Available	Points Earned
Candidate safely pulls 5" supply line off apparatus and connects to Jaffery.	1	
Makes all necessary connections to the hydrant.	1	
Opens hydrant and safely charges 5" supply line.	1	
Bleeds air from line before opening intake.	1	
No kinks or bends which would restrict optimal water flow.	1	
Transitions from tank to hydrant supply.	1	
Pressure surge/differentiation. --Less than 10 psi (3 points) --11-20 psi (1 point) --More than 20 psi (0 points)	1-3	
Water supply evolution completed safely and efficiently.	2	
Tank to pump is closed.	1	
Water supply to interior crew not disrupted at any time.	3	
<b>Begins to refill booster tank.</b>	<b>CFC</b>	
D/O has donned full PPE by this time to assume IRIC.	2	
Booster tank is topped off and Tank Fill is closed without excessive waste.	2	
Notes Static pressure (during a period of time that the line is momentarily shut down by the crew operating it).	1	
Demonstrated overall efficiency and comfort with the evolution.	3	



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Additional Attack Line	Points Available	Points Earned
Correct operating pressure for given line within 10% of theoretical of the given hose line.  _____ psi	2	
All lines are properly charged without excessive pressure (gated down lower pressure line appropriately without a major bump in pressure).	1	
All couplings are tight.	1	
All gauges are at the proper operating pressure.	1	
All handles are locked in position.	1	
Master discharge gauge matches the highest pressure line.	1	
The highest pressure line is fully open.	1	
The relief valve is set to the proper setting.	1	
Engineer does a 360 of truck observing functions, leaks, etc.	1	
All mechanical gauges are within the normal limits.	1	
Notes residual pressure.	1	
<b>Must ask candidate:</b> Knows current GPM flowing  _____ gpm	1	
Demonstrated overall efficiency and comfort with the evolution	3	
<b>Total Points (48/60)</b>	<b>60</b>	

Evaluator: \_\_\_\_\_ Total: \_\_\_\_\_/60

Circle one:

Pass/Fail on points/Fail on critical criteria

Comments \_\_\_\_\_  
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