

**BALTIMORE COUNTY FIRE RESCUE ACADEMY
ENGINE FADO SKILL CARD**

Drafting Operations

- Failure to complete all grey items and an overall of 11 total points will result in an incomplete for this skill.

SKILLS		PERFORMED	NOT PERFORMED	COMMENTS
1	Positions engine appropriately for drafting operation			
2	Sets parking brake & chocks wheel			
3	Ensure intakes, discharges & drains are closed, fittings are tightened			
4	Connect hard sleeve to pumper with strainer			
5	Place engine in pump gear			
6	Increase RPM's to about 1200			
7	Obtain Draft			
8	Flow water & maintain draft			
9	Shut line down & continue to circulate water			
10	Ask: <i>What is the maximum vertical lift?</i>			
11	Ask: <i>If you are drafting & you get no vacuum & no water what may be wrong?</i>			
12	Ask: <i>What is cavitation?</i>			
13	Ask: <i>What can be done to avoid cavitation?</i>			
13 Total possible points: 11 are required to pass **GREY ITEMS MUST BE PERFORMED**				TOTAL POINTS

Instructors and field personnel are only to intervene when issues of safety arise.

Skill Card 4 of 6

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Foam Operations- Eductor / Midgett

- Candidate will perform one operation and verbalize the other operation
- Failure to complete all grey items and an overall of 6 total points from each section will result in an incomplete for this skill.

SKILLS		PERFORMED	NOT PERFORMED	COMMENTS	
1	Apply brakes, place in pump gear, chock wheels				
2	Uses compatible nozzle & eductor				
3	Put the eductor on discharge				
4	Put hose line on eductor				
5	Insert pick-up tube into foam container				
6	Set proper foam percentage				
7	Flow water, change to foam, change back to water				
8	Ask: <i>What is the longest line you can have between the eductor & the nozzle?</i>				
9	Ask: <i>What is the pressure at the eductor?</i>				
10	Ask: Explain Backflushing procedures?				
10 Total possible points: 6 are required to pass **GREY ITEMS MUST BE PERFORMED**				TOTAL POINTS	

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FDC/Sprinkler Connection

- Evaluator will inform candidate if scenario is FDC or Sprinkler prior to start of evaluation
- Failure to complete all grey items and an overall of 3 total points will result in an incomplete for this skill.

SKILLS		PERFORMED	NOT PERFORMED	COMMENTS
1	Position apparatus within 150ft of FDC			
2	Sets parking brake & chocks wheels			
3	Check the FDC/Sprinkler connection for obstructions			
4	Attach two 3" lines to FDC/sprinkler connection and apparatus			
5	Ask: <i>How much additional pressure is needed beyond the first floor?</i>			
6	Ask: <i>What pressure do you pump a standpipe?</i>			
7	Ask: <i>What pressure do you pump a Sprinkler system?</i>			
7 Total possible points: 3 are required to pass **GREY ITEMS MUST BE PERFORMED**				TOTAL POINTS

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Transition from Tank to Hydrant Operations

- Failure to complete all grey items and an overall of 10 total points will result in failure of the skill.

SKILLS		PERFORMED	NOT PERFORMED	COMMENTS
1	Park engine 100-150ft from hydrant, use a 200 ft 1 ¾' hand line with nozzle set at: _95gpm/500gal tank@130psi _150gpm/750gal tank@170 psi _200gpm/1000gal tank@200psi			
2	Set parking brake & place engine in pump gear			
3	Set wheel chocks			
4	Place hand line in service @ designated pressure			
5	Set pressure governor so that individual discharge gauge shows appropriate pressure			
6	Hand jack LDH from engine to hydrant			
7	Connect LDH to engine & hydrant with Humat			
8	Connect ball valve to hydrant – 2 nd ball valve optional			
9	Charge LDH			
10	Change over from tank to hydrant without significant pressure change (increase or decrease)			
11	Fill tank while continuing to flow water			
12	Place a 2 nd handline in service and pump at appropriate pressure			
13	Ask: Which gauge do you use to set the pressure governor?			
14	Ask: What do you need to do if your intake pressure is higher than your discharge pressure?			
14 Total possible points: 10 are required to pass **GREY ITEMS MUST BE PERFORMED**				TOTAL POINTS

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Heavy Water Hook Up Skill Card

- Upon engine arrival, Humat is already attached to uncharged hydrant with dry LDH leading to fireground.

SKILLS		PERFORMED	NOT PERFORMED	COMMENTS
1	Connect LDH from front Humat discharge to intake on engine			
2	Connect LDH from engine discharge to Humat intake			
3	Use 1 (or 2) ball valves on hydrant			
4	Connect hose from ball valve(s) to engine intake			
5	Ask: <i>What is the purpose of heavy water hookup?</i>			
5 Total possible points: 4 are required to pass **GREY ITEMS MUST BE PERFORMED**				TOTAL POINTS

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Skill 5 of 6
BALTIMORE COUNTY FIRE RESCUE ACADEMY
Engine FADO Calculation Questions

Ask the following questions	Legacy	Pierce
What is the nozzle pressure for a smooth bore hand line?		
What is the nozzle pressure for a constant flow hand line?		
What is the nozzle pressure for a master stream fog head?		
What is the nozzle pressure for a master stream smooth bore?		
Pump a 1 3/4 hand lane, 200 ft long at 125 gpm with a constant flow.		
Pump a 1 3/4 hand lane, 200 ft long at 150 gpm with a constant flow.		
Pump a 1 3/4 hand lane, 200 ft long at 200 gpm with a constant flow.		
Pump a 2 1/2 hand line, 200 ft long with constant flow at 250 gpm.		
Pump a 2 1/2 hand line, 200 ft long with smooth bore nozzle 1 1/8 inch tip.		
What is the highest pressure you can pump LDH hose?		
Relay pump pressure is friction loss plus what pressure?		
Pump a 2 1/2 hand line, 200 ft long with a smooth bore nozzle 1 1/4 tip.		
How do you pump in tandem?		
Why use a tandem hook-up?		
What is the Pump Operator's Formula?		
15 Total possible points: 10 are required to pass		