



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-1

EVOLUTION:	Aerial Approach, Position, Engage and Stabilize Operations				
SUMMARY:	Demonstrates apparatus positioning and deployment of aerial device				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Verbalizes scene considerations, potential hazards, and necessary operational information before positioning apparatus – “6-sided direction check” 2. Positions apparatus based upon incident demands and information provided (testing department specific) 3. Apparatus position and placement is satisfactory to achieve the required target objective 4. Places transmission in neutral 5. Sets parking brake 6. Sets front wheel lock 7. Engages Aerial Electrical Master 8. Engages Aerial PTO for power transfer 9. Confirms Aerial PTO engagement 10. Reviews all gauges, indicators, and safety devices before leaving cab 11. Confirms area clearance and ground stability before stabilizer deployment 12. Stabilizes apparatus using portable stabilizer pads 13. Utilizes leveling devices to stabilize apparatus and ensures that the slope (side-to-side or lateral) and grade (front-to-back or longitudinal) inclinometers are within the green markings 14. Locks apparatus into stabilized position utilizing the stabilizer pins 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	6.2.1 & 6.2.2 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	A1				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-2

EVOLUTION:	Aerial Deployment: Raise, Rotated, Extend, and Lay-In				
SUMMARY:	Demonstrates raising, rotating, and extending arial device to designated target (Truck or Tower)				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Verbalizes scene considerations, potential hazards, and necessary operational information before positioning apparatus – “6-sided direction check” 2. Confirms that stabilizers are set and indicators/selectors are activated to allow safe aerial ladder operation 3. Raises aerial apparatus to target area in smooth and safe manner 4. Rotates aerial apparatus to target area while continually checking for hazards 5. Extends aerial apparatus to target area and monitors load-stress indicators to assure the operation is within manufacturer specifications 6. Moves the aerial device to target keeping the ladder tip clear and unsupported (a spotter is required during this step to assure operational safety and avoid apparatus damage.) 7. Activates all safety devices and assures climbing rung alignment 8. Remains at turntable control console while aerial is in operation 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	6.2.3 (NFPA 1002, 2017 Edition)				
CMCB/JPR’S:	A-2				
SOG’S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-3

EVOLUTION:	Emergency Backup Systems Operations – Manufacturer Specific				
SUMMARY:	Demonstrates operation emergency backup systems				
NOTES:	All steps are manufacturer specific. *DFD Repair Shop will determine length of time the candidate operates emergency system, or may direct verbalization over operation				
TASK STEPS:					
<ol style="list-style-type: none"> 1. Assures all mechanical locks are off and confirms ladder can safely be moved 2. Inspects Emergency Hydraulic Pump, Aerial Override Unit, Stabilizer Manual Operation Unit and explains operation 3. Locates and explains emergency overrides located at rear of apparatus above bumper 4. Locates and explains Emergency power switch 5. Locates and explains Hydraulic Diverter Override Controls 6. Locates and explains Stabilizer Manual Operation Buttons 7. Locates and explains Emergency Hydraulic Pump 8. Shows the three locations of Emergency power switches 9. Initiate Aerial Rotation Override (or explains process) * 10. Initiate operation of emergency systems to move ladder back to bedded position (or explains process)* 11. Initiate stabilizer manual operation of emergency systems to retract stabilizers (or explains process)* 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	6.2.4 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	A3				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-4

EVOLUTION:	Produce Elevated Master Stream – Aerial Device				
SUMMARY:	Demonstrates connecting to a water supply and flowing water through and elevated master stream				
NOTES:	All steps are manufacturer specific. *Host department will determine length of time the candidate operates emergency system, or may direct verbalization over operation				
TASK STEPS:					
<ol style="list-style-type: none"> 1. Obtains and connects water supply lines to aerial master stream device 2. Places the aerial into Defensive mode for Master Stream use while aerial is bedded 3. Attaches nozzle to the tip of the aerial, “First Fly Section” 4. Assures all aerial master stream device drains are closed after aerial is deployed 5. Raises aerial and rotates to specific target 6. Confirms and reports all safety locks are in place 7. Charges aerial master stream device and flows water 8. Operates monitor controls slowly and smoothly 9. Checks all gauges and meters according to department standard 10. Advises support pump operator of correct aerial intake pressure, per DFD Pump Chart 200 psi is required at the bumper of a Truck/Tower 11. Monitors water stream quality, location, flow, weather, load factors, general scene safety and reports periodically to aerial officer (Evaluator) 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	6.2.5 (NFPA 1002, 2017 Edition)				
CMCB/JPR’S:	A4				
SOG’S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-10

EVOLUTION:	Aerial Startup Procedure				
SUMMARY:	Demonstrates the ability to safely start the apparatus, activate the aerial and generator				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Enters the Cab 2. Sets parking brake 3. Turns battery and ignition on 4. Allows gauges to cycle through self test 5. Starts engine 6. Allows the gauges to run through a second test 7. Checks and records gauges on dashboard <ol style="list-style-type: none"> a. Check oil gauge – 25 psi at idle, 50 psi at high idle b. Check water temperature – 180-200 degrees F c. Check volt meter – 13.9 volts d. Check fuel gauge – above ¾ tank e. Check def gauge – above ½ tank f. Check RPM gauge – approx. 700 rpm at idle 8. Prepares apparatus for aerial deployment 9. Sets front wheel brake 10. Activate “Gen PTO” switch <ol style="list-style-type: none"> a. Checks green “Gen PTO” light activates on switch b. Checks green “Gen PTO Engaged” light activates c. Checks RPMs increase for high idle d. Gives power to auxiliary systems – flood lights, power connections, cord reels 11. Checks “Load Manager” switch is activated and green 12. Activates “Aerial Master” switch and green light is on 13. Activates “Aerial PTO” switch and green light is on 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					

CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT

ENGINEER JPR

EVOLUTION:	Aerial Shutdown Procedure
SUMMARY:	Demonstrates the ability to safely stow stabilizers, disable aerial and prepare for road use
NOTES:	
TASK STEPS:	
<ol style="list-style-type: none"> 1. Bedding the aerial and preparing for road use 2. Checks waterway drain is open and drained 3. Before operation checks the intended path of the aerial <ol style="list-style-type: none"> a. Overhead obstructions b. Personnel c. Objects on and around the apparatus that may impede the movement of the aerial 4. Reverses deployment of aerial 5. Elevate away from objective 6. Retract aerial fully <ol style="list-style-type: none"> a. Monitors pressure gauge until pressure builds 7. Rotate aerial until aligned with cradle <ol style="list-style-type: none"> a. Monitors in-line indicators on turntable b. When indicator on frame and indicator on turntable align the aerial is positioned above cradle 8. Lower aerial to cradle <ol style="list-style-type: none"> a. Checks no obstructions are beneath aerial b. Turns high idle off c. Lowers aerial to 1 foot above cradle d. Verifies aerial is properly aligned on both sides e. Bed aerial into cradle <ol style="list-style-type: none"> i. Checks “Hydraulic System Pressure” gauge reads 2000 psi ii. 2000 psi ensures ladder will remain bedded during road use 9. Stowing Stabilizers 10. Stow both turntable ladders 11. Unlock the stabilizer by manufacturers recommendations (holding valves, interlock feature, safety pins or combination of any features) 12. Ensure all personnel and equipment is clear of the stabilizers 13. Raise stabilizers 14. Stow stabilizers to their appropriate stored location 15. Inspect stabilizer panels <ol style="list-style-type: none"> a. Ensures 4 green lights of for each side – 8 total on two control panels b. Each green light off represents interlock is disengaged 	

- c. When all lights are off, power transferred from aerial to apparatus for road use
- 16. Ensure weight is transferred from stabilizers to suspension
- 17. Stows ground pads in their appropriate stored location
- 18. Ensure all tools and equipment are stowed in the proper location
- 19. Ensure all compartment doors, slide out platforms, safety bars, safety chains, etc, are stowed in their appropriate location
- 20. Enters cab and prepares apparatus for road use
- 21. Deactivates "Aerial PTO" switch and green light is off
- 22. Deactivates "Aerial Master" switch and green light is off
- 23. Deactivates "Gen PTO" switch
 - a. Checks RPMs decrease to idle, and green lights are off
- 24. Releases front wheel brake
- 25. States vehicle is ready for road use

CRITICAL FAILS:

- Did not perform steps in a safe and effective manner
- Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-12

EVOLUTION:	Truck/Tower Aerial Device Deployment for Window Rescue				
SUMMARY:					
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPRA-10 2. Prepares aerial for deployment per JPR A-1 3. Completes aerial deployment per JPR A-2 4. Ensure Placement of apparatus is appropriate for a “Window Rescue” <ol style="list-style-type: none"> a. Turntable and aerial in-line with window, when possible b. Tip of aerial even with Windowsill c. Tip of aerial is within 6-9 inches of the Windowsill 5. Check the intended path of the aerial device for obstructions “6-sided direction check” 6. Explains order of deployment <ol style="list-style-type: none"> a. Raise- the aerial device in a safe, smooth efficient operation using the correct engine speed for the application to the desired height for the Window b. Rotate- the aerial device in a smooth, and efficient operation using the correct engine speed for the application until the tip of the device is in line with the Window c. Extend-the aerial device in a safe, smooth, and efficient operation using the correct engine speed for the application slightly above the Window d. Lower-the aerial device to the objective in a safe, smooth, and efficient operation even with, and 6-9 inches from the Windowsill 7. Checks “Rung Alignment” per JPR A-2 8. Refers to aerial load chart for proper ladder and tip loads per JPR A-2 9. Clears firefighters to safely climb the aerial ladder 10. Completes aerial shutdown procedures per JPR A-11 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR’S:					

SOG'S:	
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Driver Operator Truck/Tower Performance Evaluation

A-13, Aerial Deployment for Roof Operations



DENVER FIRE DEPARTMENT
ENGINEER JPR

A-13

EVOLUTION:	Aerial Deployment for Roof Operations				
SUMMARY:					
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPR A-10 2. Prepares aerial for deployment per JPR A-1 3. Completes aerial deployment per JPR A-2 4. Check the intended path of the aerial device for obstructions “6-sided direction check” 5. Explains order of deployment 6. a. Raise- the aerial device in a safe, smooth efficient operation using the correct engine speed for the application to the desired height for the Roof 7. b. Rotate- the aerial device in a smooth, and efficient operation using the correct engine speed for the application until the tip of the device is in line with the Roof 8. c. Extend-the aerial device in a safe, smooth, and efficient operation using the correct engine speed for the application slightly above the Roof 9. d. Lower-the aerial device to the objective in a safe, smooth, and efficient operation, 12-18 inches above and extended 5 rungs passed Roofline 10. Checks “Rung Alignment” per JPR A-2 11. Refers to aerial load chart for proper ladder and tip loads JPR A-2 12. Clears firefighters to safely climb the aerial ladder 13. Completes aerial shutdown procedures per JPR A-11 					
CRITICAL FAILS:					
<ol style="list-style-type: none"> 14. Did not perform steps in a safe and effective manner 15. Interruption in fluidity of motion 					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR’S:					
SOG’S:					



**DENVER FIRE DEPARTMENT
ENGINEER JPR**

EVOLUTION:	Aerial Deployment for Window Ventilation				
SUMMARY:					
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPR A-10 2. Prepares aerial for deployment per JPR A-1 3. Completes aerial deployment per JPR A-2 4. Ensure Placement of apparatus is appropriate for “Window Ventilation” <ol style="list-style-type: none"> a. Turntable and aerial in line with the windward side of the Window, when possible b. Tip of aerial even with top of the Window c. Tip of aerial is within 6-9 inches of the side of the building 5. Check the intended path of the aerial device for obstructions “6-sided direction check” 6. Explains order of deployment <ol style="list-style-type: none"> a. Elevate- the aerial device in a safe, smooth efficient operation using the correct engine speed for the application to the desired height for the Window to be ventilated b. Rotate- the aerial device in a smooth, and efficient operation using the correct engine speed for the application until the tip of the device is in line with the windward side of the Window c. Extend-the aerial device in a safe, smooth, and efficient operation using the correct engine speed for the application slightly above the Window d. Lower-the aerial device to the objective in a safe, smooth, and efficient operation with the tip of the aerial 6-9 inches from the side of the building 7. Checks “Rung Alignment” per JPR A-2 8. Refers to aerial load chart for proper ladder and tip loads per JPR A-2 9. Clears firefighters to safely climb the aerial ladder 10. Completes aerial shutdown procedures per JPR A-11 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:	
STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

D-12

EVOLUTION:	SERPENTINE CONE COURSE				
SUMMARY:	Perform a Practical driving exercise without striking the obstructions				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. The distance between the three cones is determined vehicle length 2. Drive along the right side of a row of three cones in a serpentine manner 3. The distance between the cones is the length of the vehicle 4. Stop when the tailboard of the apparatus is even with the last (3rd) cone in the row 5. This last(3rd) cone is on the left side of the vehicle 6. Back in a serpentine manner to pass the middle (2nd) cone on the right side of the vehicle and to pass the first (1st) cone on the left side of the vehicle 7. End the maneuver at the same place where the maneuver began 8. Do not to touch any cones or let any part of the vehicle pass over the cones as the vehicle backs through the course 9. The vehicle must stay within the 35ft. boundary that is parallel to the row of cones (35ft boundary on both sides of the three cones) 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR'S:	DO6				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

D-13

EVOLUTION:	CONFINED SPACE TURNAROUND				
SUMMARY:	Perform a Practical driving exercise without leaving the course boundaries				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. The driver/ operator will be asked to turn the apparatus 180 degrees in a confined space without leaving boundaries 2. The driver/ operator enters a 12-foot opening in a 50 foot by 100-foot area, turns the apparatus 180 degrees and returns through the same 12-foot opening 3. A backer will be used for this exercise as a safety. The backer <i>will not</i> direct the driver/ operator for this task. The backer will stop the driver/ operator if they deem a safety issue 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR'S:	DO7				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

D-14

EVOLUTION:	DIMINISHING CLEARANCE				
SUMMARY:	Perform a Practical driving exercise without striking objects or leaving course.				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. This exercise measures a driver/operator's ability to steer the apparatus in a straight line, to judge distances from wheel to object, and to stop at a finish line 2. The speed at which the vehicle is driven is optional but should be fast enough to require the driver /operator to exercise quick judgement without coming to a complete stop 3. The course for this exercise is arranged by two rows of stanchions that form a lane 75 feet long. 4. The lane narrows from a width of twelve (12) inches wider than the apparatus to four (4) inches wider than the apparatus. 5. The driver/operator must maneuver the apparatus through this lane without touching stanchions 6. At point 50 feet beyond the last stanchion, the driver operator must stop with the front bumper within 6 inches of the finish line/ stanchion 7. Dimensions may be adjusted for larger vehicles 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR'S:	DO8				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

D-15

EVOLUTION:	ALLEY DOCK				
SUMMARY:	Perform a Practical driving exercise to simulate backing into an Alley dock				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. The “dock” area for this exercise is 20 ft. by 12 ft. 2. The member will be asked to pull past the simulated alley on the driver’s side (“sight side”) of your vehicle by 50 feet and then back into the test area. 3. For the initial setup, you will be required to position your vehicle to the left of a “limit” line. 4. During the backing phase of this maneuver, the “limit” line is not used for scoring, you may cross it as necessary to park. 5. The member will be instructed to bring the rear of your vehicle to a stop past the clearance line (set at 12 inches from the exercise boundary) but not beyond the exercise boundary marked by a line or row of cones. 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					
CMCB/JPR’S:	DO5				
SOG’S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-1

EVOLUTION:	Engage Pump from the Cab, Produce Stream and Water Supply Transition				
SUMMARY:	Demonstrates engaging pump, flowing water from 1 ¾” handline, and establishing a water supply				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Stops and positions the pumper suction inlet for hydrant connection (if applicable) 2. Sets parking brake, places transmission in neutral, checks dash gauges 3. Transfers power from drive train to pump drive and places transmission in correct pump gear 4. Checks dash gauges for proper indication and operation before leaving cab, confirms pump engagement 5. Inspects pump panel and gauges 6. Confirms the pressure governor is in PSI mode 7. Places transfer valve into pressure/volume (older engines with two stage pumps) <ol style="list-style-type: none"> a. “Pressure” flowing less than 70% of the pump capacity b. “Volume” flowing greater than or equal to 70% of the pump capacity 8. Opens tank to pump valve 9. Opens hand line valve, sets proper pump pressure and governor (Supply _____” hand line with _____ nozzle at _____’ long) 10. Ensures pressure governor recognizes discharge pressure and sets to that pressure 11. Monitors pump panel gauges and tank water level 12. Turns hydrant on and bleeds air from source intake 13. Transfers from tank water to external water supply 14. Acts to limit changes in discharge pressure during change over (+ or – 30 psi) 15. Maintains fire flow during change over process and refills tank *Evaluator shall close nozzle for step #14 briefly when requested 16. Checks & verbally reports the static pressure of water supply 17. Accomplishes safe and proper pump shut-down when directed 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.3 & 5.2.4 (NFPA 1002, 2017 Edition)				

CMCB/JPR'S:	P1
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-2

EVOLUTION:	Produce Additional Hand Line Using an Established Hydrant Supply				
SUMMARY:	Demonstrates opening additional hand line with an established water supply				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Reports hydrant static pressure (write pressure here: _____) 2. Confirms the pressure governor is in PSI mode 3. Places transfer valve into pressure/volume (older engines with two stage pumps) <ol style="list-style-type: none"> a. "Pressure" flowing less than 70% of the pump capacity b. "Volume" flowing greater than or equal to 70% of the pump capacity 4. Opens hand line valve and sets proper pump pressure (Supply _____" hand line with _____ nozzle at _____' long) 5. Ensures pressure governor recognizes highest discharge pressure and sets to that pressure 6. Confirms operation by flowing water from hand line 7. Reports residual pressure (write answer here: _____) 8. Determines and reports available water (write answer here: _____) 9. Monitors pump panel gauges 10. Accomplishes safe and proper pump shut-down when directed 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.4 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	P2				
SOG'S:					



**DENVER FIRE DEPARTMENT
ENGINEER JPR**

P-3

EVOLUTION:	Supply Water to a Sprinkler System Using an Established Water Supply				
SUMMARY:	Demonstrates connecting to a sprinkler system and flowing water				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms parking brake is engaged 2. Opens hydrant, reports static pressure (write answer here:) 3. Connects a minimum of two 3” supply lines from engine to FDC 4. Confirms the pressure governor is in RPM mode 5. Places transfer valve into volume (older engines with two stage pumps) 6. Slowly opens discharge valves, sets pressures to 150 psi 7. Ensures pressure governor recognizes highest discharge pressure and sets to that pressure 8. Reports residual pressure (write answer here:) 9. Monitors pump panel gauges 10. Accomplishes safe and proper pump shut-down when directed 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.7 (NFPA 1002, 2017 Edition)				
CMCB/JPR’S:	P3				
SOG’S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-4

EVOLUTION:	Supply Water to a Standpipe System Using an Established Water Supply				
SUMMARY:	Demonstrates connecting to a standpipe system and flowing water				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms parking brake is engaged 2. Connects a minimum of two 3” supply lines from engine to FDC, and utilizes a clappered Siamese on opening of FDC 3. Confirms the pressure governor is in PSI mode until a water supply is established 4. Places transfer valve into pressure (older engines with two stage pumps) 5. Charges supply lines at idle engine speed, with apparatus in pump gear 6. Lashes supply lines together with webbing (time permitting) 7. Calculates the appropriate discharge pressure for the supply hose length, FDC connection, to roof level, and interior hand line(s) to be supplied <ol style="list-style-type: none"> a. States, engineers are directed to pump to the top floor utilizing the DFD pump chart for calculations, in fire pump equipped buildings (Supply _____ 3” supply lines with FDC connection at _____’ long, _____ number of floors, and Supply _____” hand line(s) with _____ nozzle at _____’ long) 8. Slowly opens discharge valves and sets pressures per department standard 9. Ensures pressure governor recognizes highest discharge pressure and sets to that pressure 10. Receives water supply from Second-arriving Engine Company (or simulates by opening hydrant) 11. Transfers from tank water to incoming water supply, and opens tank refill valve until water tank is refilled 12. Sets pressure governor from PSI mode to RPM mode 13. Monitors pump panel gauges 14. Accomplishes safe and proper pump shut-down when directed 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.7 (NFPA 1002, 2017 Edition)				
CMCB/JPR’S:	P4				

SOG'S:	
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DENVER FIRE DEPARTMENT
ENGINEER JPR

P-5

EVOLUTION:	Produce Master Stream Using an Established Water Supply				
SUMMARY:	Demonstrates connecting to a Master Stream Device and flowing water				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms that the parking brake is engaged 2. Opens hydrant valves, reports static pressure (write pressure here: _____) 3. Confirms the pressure governor is in PSI mode 4. Places transfer valve into pressure/volume (older engines with two stage pumps) <ol style="list-style-type: none"> a. "Pressure" flowing less than 70% of the pump capacity b. "Volume" flowing greater than or equal to 70% of the pump capacity 5. Slowly opens discharge valves and sets proper pressure(s) (Supply _____ master stream with ___ X _____" hose lines and _____ tip at _____' long) 6. Ensures pressure governor recognizes discharge pressure and sets to that pressure 7. Confirms master fire stream flow 8. Reports residual pressure (write pressure here: _____) 9. Determines and reports available water (write answer here: _____) 10. Monitors pump panel gauges 11. Accomplishes safe and proper shut-down when directed 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.4 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	P5				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-6

EVOLUTION:	Operate Pumper as Source Unit in Relay Operation				
SUMMARY:	Demonstrates connecting to a water supply and flowing water as a source pumper in a relay operation				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Verbalizes proper relay / pump sequence <ol style="list-style-type: none"> a. Source Engine supplies Inline Engine(s), and Inline Engines work consecutively to supply the Attack Engine 2. Confirms parking brake and wheel chocks as required 3. Confirms the pressure governor is in RPM mode 4. Places transfer valve into volume (older engines with two stage pumps) 5. Opens hydrant and reports static pressure (write pressure here: _____) 6. Connects discharge / relay lines to pumper, a minimum of two 3” supply lines 7. Confirms next engine is ready and opens discharge valves 8. Sets relay discharge pressure as per DFD Pump Chart 9. Maintains a minimum of 20 psi intake pressure to the next Inline Engine 10. Confirms water relay and ensures pressure governor is in RPM mode 11. Reports residual pressure (write pressure here: _____) 12. Determines and reports available water (write answers here: _____) 13. Monitors pump panel gauges 14. Verbalizes correct scene to source relay / pump operations shutdown process <ol style="list-style-type: none"> a. Attack Engine disengages pump first, then Inline Engines disengage pumps consecutively towards the Source Engine, and the Source Engine disengages its pump last 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.5 (NFPA 1002, 2017 Edition)				
CMCB/JPR’S:	P6				

SOG'S:	
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DENVER FIRE DEPARTMENT
ENGINEER JPR

P-7

EVOLUTION:	Produce Fire Stream from Draft Water Source				
SUMMARY:	Demonstrates drafting water from a static water source				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms parking brake and wheel chocks as required 2. Primes pump, states inches of vacuum (max prime 30 secs) 3. Increases throttle to maintain prime as required 4. Slowly opens discharge valves 5. Produces fire stream from outlet # () as directed 6. Sets pressure relief device / governor 7. Maintains minimum of 50 psi discharge pressure 8. Monitors pump panel gauges 9. Verbalizes proper process for drafting / pump operations shut-down 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.4 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	P7				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-8

EVOLUTION:	Produce Foam Fire Stream w/ Foam-Producing Equipment				
SUMMARY:	Demonstrates flowing foam through foam-producing equipment				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms parking brake and wheel chocks as necessary 2. Selects correct percentage on foam producing equipment provided 3. Verbalizes proper GPM and discharge pressure for equipment in use 4. Verbalizes maximum length of attack line for _____ hose size 5. Determines nozzle person ready for water 6. Closes circulating valve on pump 7. Opens discharge, sets correct discharge pressure: _____ psi 8. Sets pressure relief device / governor 9. Confirms foam stream through foam-producing equipment 10. Monitors foam supply and water tank level 11. Monitors pump panel gauges 12. Completes safe and proper shutdown 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.2.6 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	P8				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-9

EVOLUTION:	Perform Routine Test, Inspections and Service Functions for Water Tank, Pumping Systems and Foam (if applicable)				
SUMMARY:	Demonstrates daily inspection of water tank, foam tank, and pumping systems				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Confirms parking brake engaged 2. Checks actual level in water tank with visual inspection through tank vent 3. Inspects foam tank for proper fill level 4. Inspects all pump panel controls and indicators to confirm all in proper working condition 5. Checks pressure governor is ready and at idle 6. Checks transfer valve is in pressure (older engine with two stage pumps) 7. Confirms all pump drains are closed 8. Open and close all valves to ensure smooth operation 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:	5.1.2 (NFPA 1002, 2017 Edition)				
CMCB/JPR'S:	P9				
SOG'S:					



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-10

EVOLUTION:	Engine Start-Up and Placing into Pump Gear Procedures				
SUMMARY:	Demonstrates the ability to safely start the apparatus, place into pump gear, activate the pressure governor, and operate the transfer valve				
NOTES:					
TASK STEPS:					
<ol style="list-style-type: none"> 1. Enters the Cab 2. Confirms parking brake set 3. Turns battery and ignition on 4. Allows gauges to cycle through self-test 5. Starts engine 6. Allows the gauges to run through a second test 7. Checks and records gauges on dashboard <ol style="list-style-type: none"> a. Check oil gauge – 25 psi at idle, 50 psi at high idle b. Check water temperature – 180-200 degrees F c. Check voltmeter – 13.9 volts d. Check fuel gauge – above ¾ tank e. Check def gauge – above ½ tank f. Check RPM gauge – approx. 700 rpm at idle 8. Places transmission into neutral and apparatus at idle 9. Checks transfer switch engages apparatus into pump gear <ol style="list-style-type: none"> a. Places transfer switch into middle position and pause b. After pause places switch into down position “Road To Pump” c. Engages truck transmission into Drive while foot on brake <ol style="list-style-type: none"> i. Checks that the speedometer reads approx. 15 mph 10. Checks green “Pump Engaged” light is on 11. Checks green “OK to Pump” light is on 12. Exits cab of apparatus 					
CRITICAL FAILS:					
<input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					
STANDARD:					

CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-11

EVOLUTION:	Monitoring Pump Panel
SUMMARY:	Demonstrates the ability to correctly operate and monitor all gauges, valves, and systems on the engine pump panel.
NOTES:	
TASK STEPS:	
<ol style="list-style-type: none">1. Inspects Pump Panel (start in top left corner, working from left to right)2. Checks water tank level<ol style="list-style-type: none">a. Checks tank reads full at 500 gallonsb. Checks for leaks3. Checks foam tank level<ol style="list-style-type: none">a. Checks tank reads full at 30 gallonsb. Checks that eductor is offc. Checks that percentage dial is in off position4. Checks gauges on engine info panel (should mirror readings inside cab)<ol style="list-style-type: none">a. Checks oil gauge – 25 psi at idle, 50 psi at high idleb. Checks water temperature – 180-200 degrees Fc. Checks volt meter – 13.9 voltsd. Checks fuel gauge – above ¾ tanke. Check RPM gauge – approx. 700 rpm at idle<ol style="list-style-type: none">i. Check warning light indicator for each gauge is off5. Checks pressure governor<ol style="list-style-type: none">a. Checks green indicator light<ol style="list-style-type: none">i. “Pump engaged”ii. “Okay to pump”iii. “Throttle ready”b. Checks digital display is operating and easy to readc. Checks pump mode<ol style="list-style-type: none">i. PSI mode<ol style="list-style-type: none">1. “Attack Engine” pumps in PSI mode2. Explains that safety features are engaged in PSI mode3. Engages pressure governor, monitors discharge pressure within (+ or - 5 psi)4. Used when supplying handlines and master streams5. Explains the pressure is regulated to 300 PSI max<ol style="list-style-type: none">a. If exceeds 300 psi for 5 seconds, psi mode will disengage, and the engine will go to idleb. Prevents water demand from overcoming the water supply and cavitating the pumpii. RPM mode<ol style="list-style-type: none">1. “Supply Engine” pumps in RPM mode2. Explains that safety features are disengaged in RPM mode3. Operates pump pressure, based on engine RPMs	

- 4. Pressure governor is disengaged
 - d. Checks light indicators are green for battery, water temperature, and oil pressure
 - e. Checks Light on side of display panel is green “Do Not Open Throttle Unless Light Is ON”
- 6. Checks switch panel
 - a. Checks “Panel Lights” switch is on
 - b. Checks “OK to Pump” light is on and green
 - c. Checks “Driver Side Floodlight” switch operates and is green when on, leave in off position, unless needed
 - d. Checks “Passenger Side Floodlight” switch operates and is green when on, leave in the off position, unless needed
- 7. Checks Engine Cooler dial is in the open position, and can rotate smoothly
- 8. Checks “Tank To Pump” gate valve and pulls to the open position
- 9. Checks “Tank Fill & Re-Circulating Line” gate valve, and pulls to the open position
- 10. Checks air primer
- 11. Checks engine is running at 1000 RPMs while priming for enhanced performance
- 12. Operates primer in “Auto Prime”, green light activates and works to maintain prime
- 13. Operates manual “Prime”
 - a. Check primer is working by sound of activation
 - b. Check primer is working by visually seeing water being discharged under engine as prime is created
- 14. Inspects “Waterous” Pump overheat warning light with push to test button
- 15. Checks Transfer valve (older engines with two stage pumps)
 - a. Frontline engines come with 1500 gpm pumps
 - b. Switch between “Pressure” mode and “Volume” mode while the engine is at idle
 - c. “Pressure”
 - i. Engine starts in pressure mode
 - ii. Pump in pressure mode when flowing less than 70% of the pump capacity (1050 total gpm)
 - d. “Volume”
 - i. Pump in volume mode when flowing greater than 70% of the pump capacity (1050 total gpm)
- 16. Records gauges with grease pencil

CRITICAL FAILS:

- Did not perform steps in a safe and effective manner
- Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-12

EVOLUTION:	Shut Down Pumping Operations and Place Apparatus Back into Service
SUMMARY:	Demonstrates the ability to shut down pumping operations and place apparatus back into Service
NOTES:	
TASK STEPS:	
<ol style="list-style-type: none">1. Checks pressure governor<ol style="list-style-type: none">a. Places pressure governor at idleb. Checks lights for “PSI” mode and “RPM” mode are off2. Checks Pump Panel (start in top left corner, working from left to right)<ol style="list-style-type: none">a. Checks water tank level is fullb. Checks foam tank level is fullc. Checks gauges on engine info panel<ol style="list-style-type: none">i. Checks oil pressure<ol style="list-style-type: none">1. 25 psi at idle, 50 psi at high idleii. Checks system for overheating<ol style="list-style-type: none">1. Water temperature 180-200 degrees Fiii. Checks volt meter<ol style="list-style-type: none">1. 13.9 voltsiv. Checks fuel gauge is above $\frac{3}{4}$ tankv. Checks RPM gauge is 700 rpm at idle3. Turns of “Panel Lights” switch off4. Places Engine cooler is in closed position5. Checks “Tank To Pump” gate valve is closed6. Checks “Tank Fill & Re-Circulating Line” gate valve is closed7. Closes all discharge valves8. Closes all intake valves9. Opens all drain valves to discharges to relieve pressure from hose lines<ol style="list-style-type: none">a. Disconnects all discharge hose lines10. Shuts down hydrant water supply11. Opens all drain and bleeder valves for intakes to relieve pressure from hose lines<ol style="list-style-type: none">a. Disconnects all intake hose lines12. Places transfer valve into pressure mode (older engines with two stage pumps)13. Closes all drain valves and bleeder valves14. Replaces all discharge and intake caps15. Enters the cab16. Fastens seat belt17. Places apparatus transmission into Neutral<ol style="list-style-type: none">a. Checks that the speedometer reads 0 mph18. Places transfer switch into middle position and pause19. After pause places switch into upper position “Pump To Road”20. Checks and records gauges on dashboard	

- a. Check oil gauge – 25 psi at idle, 50 psi at high idle
 - b. Check water temperature – 180-200 degrees F
 - c. Check volt meter – 13.9 volts
 - d. Check fuel gauge – above ¾ tank
 - e. Check def gauge – above ½ tank
 - f. Check RPM gauge – approx. 700 rpm at idle
21. Verifies gauges match reading of gauges on engine info panel
22. Completes a 360 walk-around the apparatus
- a. Checks all hose and equipment is placed back on apparatus
 - b. Checks all cabinets are closed
 - c. Checks that nothing is on bumpers or underneath apparatus
23. States, vehicle is ready for road use

CRITICAL FAILS:

- Did not perform steps in a safe and effective manner
- Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-13

EVOLUTION:	Hydrant Connection and Establishing a Water Supply
SUMMARY:	Demonstrate the ability to safely and efficiently make engine connections for water supply from a hydrant, and perform a transfer from tank to external water supply (Hydrant)
NOTES:	Size 12, Delete
TASK STEPS:	
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPR P-10 2. Drives to and positions the “Attack Engine” at hydrant 3. Places apparatus into pump gear per JPR P-10 4. Inspects Pump Panel (start in top left corner, working from left to right) per JPR P-11 <ol style="list-style-type: none"> a. Records gauges with grease pencil 5. Ensures water is flowing from one predetermined 1 ¾” handline, at the appropriate pressure 6. Chooses appropriate supply line with enough length to reach “Attack Engine” intake and hydrant outlet <ol style="list-style-type: none"> a. Uses one 5” supply line minimum 7. Connects supply lines to hydrant 8. Makes connections to appropriate intake of “Attack Engine” 9. Opens hydrant slowly <ol style="list-style-type: none"> a. Allow supply lines to completely fill, before fully opening the hydrant b. Checks for and corrects kinks in supply line 10. Opens bleeder valve for correct intake <ol style="list-style-type: none"> a. Bleed off air and close when air is no longer showing 11. Slowly opens intake valve while monitoring discharge pressure (+ or – 30 psi) <ol style="list-style-type: none"> a. Pressure governor will activate with increase of pressure from introducing water supply b. Listens and monitors engine RPMs while introducing external water supply c. Checks that RPMs decrease when pressure governor activates 12. Opens “Tank Fill & Re-Circulating Line” valve 13. Identify residual pressure <ol style="list-style-type: none"> a. Mark residual pressure with grease pencil b. 0 – 10% Static to Residual Drop = Add 3 Times current GPM Output c. 11 – 15% Static to Residual Drop = Add 2 Times current GPM Output d. 16 – 20% Static to Residual Drop = Add 1 Times current GPM Output 14. Checks gauge of handline being supplied for appropriate pressure (+ or - 5 PSI) 15. Close “Tank Fill & Re-Circulating Line” valve after tank display shows full 16. Ensures pressure governor recognizes discharge pressure and sets to that pressure <ol style="list-style-type: none"> a. Checks pressure governor is in correct mode per JPR P-11 17. Ensures Transfer valve is in appropriate mode (older engines with two stage pumps) per JPR P-11 	
CRITICAL FAILS:	
<input type="checkbox"/> Did not perform steps in a safe and effective manner	

Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-14

EVOLUTION:	Humat Valve Operation “Going To Work At The Plug”
SUMMARY:	Demonstrates the ability of connecting to a Humat Valve and boosting a “Attack Engine” pressure without interrupting Fire Attack
NOTES:	Size 12, Delete
TASK STEPS:	
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPR P-10 2. Drives to and positions the “Supply Engine” at hydrant, with humat valve connected and supplying an “Attack Engine” 3. Places apparatus into pump gear per JPR P-10 4. Inspects Pump Panel (start in top left corner, working from left to right) per JPR P-11 <ol style="list-style-type: none"> a. Records gauges with grease pencil 5. Chooses appropriate supply line with enough length to reach the “Supply Engine” intake and humat valve outlet <ol style="list-style-type: none"> a. Uses 5” hose for supply line 6. Chooses appropriate discharge line with enough length to reach humat intake from “Supply Engine” discharge <ol style="list-style-type: none"> a. Uses 3” hose for supply line to humat valve 7. Attaches 3" hose to Appropriate Discharge on engine and to the 2 1/2" connection on Humat valve intake 8. Attaches 5” hose to appropriate “Supply Engine” intake 9. Opens 5" valve on humat valve slowly <ol style="list-style-type: none"> a. Allow supply lines to completely fill, before fully opening the hydrant 10. Opens bleeder valve for correct intake <ol style="list-style-type: none"> a. Bleed off air and close when air is no longer showing 11. Opens 5” intake 12. Checks for and removes any kinks from all supply lines 13. Records residual pressure 14. Places pressure governor into “RPM Mode”- “Supply Engine” <ol style="list-style-type: none"> a. “Supply Engine” always pumps in “RPM Mode” b. Pressure governor is disengaged while in “RPM” 15. For engines with a transfer valve (older engines with two stage pumps) <ol style="list-style-type: none"> a. Ensures transfer valve is in “Volume” b. Switches between “Pressure” mode and “Volume mode while the engine is at idle c. Pump in volume mode when flowing greater than 70% of the pump capacity (1050 total gpm for a 1500gpm pump) d. “Supply Engine” always pumps in volume for full capacity of the pump 16. Calculates the appropriate discharge pressure for the supply hose length (Supply _____ 3” supply lines at _____’ long, with _____ elevation, and maintain an intake pressure of 50 psi for the “Attack Engine” being supplied) 	

17. Notifies engineer of “Attack Engine” that pressure is ready to be increased
18. Opens discharge supplying 2 ½” intake on humat valve
19. The “Attack Engine” shall receive 20-80 psi intake pressure from the “Supply Engine”
 - a. 50 psi will be the targeted intake pressure to maintain at the Attack Engine
20. Records residual pressure after “Supply Engine” increases pressure
 - a. 0 – 10% Static to Residual Drop = Add 3 Times currant GPM Output
 - b. 11 – 15% Static to Residual Drop = Add 2 Times currant GPM Output
 - c. 16 – 20% Static to Residual Drop = Add 1 Times currant GPM Output

CRITICAL FAILS:

- Did not perform steps in a safe and effective manner
- Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR’S:	
SOG’S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-15

EVOLUTION:	Tapping the Hydrant
SUMMARY:	Demonstrates the ability to effectively connect to all outlets of a Fire Hydrant with supply hose, to “Tap” or take the most amount GPM from a hydrant for water supply
NOTES:	
TASK STEPS:	
<ol style="list-style-type: none"> 1. Explains “Tapping the Hydrant” requires attaching supply hose from the two 2 ½” outlets and the one 4” outlet of the hydrant to the intakes of the “Supply Engine” <ol style="list-style-type: none"> a. The purpose of utilizing every outlet, is to “Tap” or take the most amount of GPM from a hydrant with minimal drop in “Residual Pressure” b. Is an adaptor dependent evolution, and combinations can vary depending on the inventory of the “Supply Engine” <p style="margin-left: 40px;">*For the purpose of this evolution, the most basic combination will be deployed*</p> c. Indications and Contraindications of “Tapping the Hydrant” <ol style="list-style-type: none"> i. Indications <ol style="list-style-type: none"> 1. Not involved with the Initial Fire Attack 2. Large gpm demand from Fire Attack or potential for the demand to increase (Master Stream deployment, etc...) 3. Operating as a “Supply Engine” 4. Time, gpm needed over speed of establishing water supply (defensive fire) ii. Contraindications <ol style="list-style-type: none"> 1. Part of the initial Fire Attack 2. Moderate water demand from fire attack (Hand line deployment only) 3. Operating as an “Attack Engine” 4. Time, speed in establishing the water supply over the need for gpm (offensive fire, room and contents, etc...) 2. Completes apparatus startup procedure per JPR P-10 3. Drives to and positions the “Supply Engine” at hydrant 4. Places apparatus into pump gear per JPR P-10 5. Inspects Pump Panel (start in top left corner, working from left to right) per JPR P-11 <ol style="list-style-type: none"> a. Records gauges with grease pencil 6. Connects 5” supply hose from 4” outlet of hydrant to 4” intake of the “Supply Engine” 7. Connects 2 ½” gated wye to one of the 2 ½” outlets of the hydrant 8. Connects two 3” supply lines from gated wye to Siamese adaptor on one 3” intake of the “Supply Engine” 9. Connects an additional 3” supply line from the remaining 2 1/2” outlet of the hydrant to the second 3” intake of the “Supply Engine” 10. Opens hydrant slowly <ol style="list-style-type: none"> a. Allow supply lines to completely fill, before fully opening the hydrant 	

- b. Checks for and corrects kinks in supply line
- 11. Opens bleeder valve for correct intakes
 - a. Bleeds off air and closes when air is no longer showing
- 12. Slowly opens 4” intake valve while monitoring discharge pressure (+ or – 30 psi)
 - a. Pressure governor will activate with increase of pressure from introducing water supply
 - b. Listens and monitors engine RPMs while introducing external water supply
- 13. Checks that RPMs decrease when pressure governor activates
- 14. Opens all additional intakes
- 15. Identify static pressure
 - a. Marks static pressure with grease pencil
- 16. Reports relay operation static pressure (write pressure here: _____)
- 17. Places pressure governor into “RPM Mode”- “Supply Engine” per JPR P-11
 - a. “Supply Engine” always pumps in “RPM Mode”
 - b. Pressure governor is disengaged while in “RPM”
- 18. For engines with a transfer valve (older engines with two stage pumps)
 - a. Ensures transfer valve is in “Volume”
 - b. Switches between “Pressure” mode and “Volume mode while the engine is at idle
 - c. Pump in volume mode when flowing greater than 70% of the pump capacity (1050 total gpm for a 1500gpm pump)
 - d. “Supply Engine” always pumps in volume for full capacity of the pump
- 19. Identifies residual pressure once water is flowing
 - a. Marks static pressure with grease pencil
 - b. 0 – 10% Static to Residual Drop = Add 3 Times current GPM Output
 - c. 11 – 15% Static to Residual Drop = Add 2 Times current GPM Output
 - d. 16 – 20% Static to Residual Drop = Add 1 Times current GPM Output
- 20. Reports residual pressure (write answer here: _____)
- 21. Determines and reports additional GPMs that can be supplied
(write answer here: _____)
- 22. Checks Pump Panel (start in top left corner, working from left to right) per JPR P-11
 - a. Records gauges with grease pencil
- 23. Accomplishes safe and proper shut-down when directed per JPR P-12

CRITICAL FAILS:

- 24. Did not perform steps in a safe and effective manner
- 25. Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR’S:	
SOG’S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-16

EVOLUTION:	CHANGE OVER AT HYDRANT				
SUMMARY:	Connect to a hydrant that has a single 3-inch line connected and charged, then boost the attack engine's pressure without interrupting the fire attack				
NOTES:	Attack engine has laid two 3-inch lines, one wet off the dog ear, and one dry				
TASK STEPS:					
<ul style="list-style-type: none"> <input type="checkbox"/> Spots engine for 5-inch connection at hydrant <input type="checkbox"/> Set Emergency brake and place engine into pump gear <input type="checkbox"/> Open the tank to pump valve (if not already done) <input type="checkbox"/> Attach the attack engine's dry line to a discharge <input type="checkbox"/> Set hose clamp next to wet supply line <input type="checkbox"/> Set hydrant wrench on hydrant <input type="checkbox"/> Connect 5" short section to the engine at the 5" gate valve and make sure the valve is closed and set the other end next to the hydrant with the adapter <input type="checkbox"/> Contact Engineer at attack engine and notify them that you are ready to shut the hydrant down and operate from your tank <input type="checkbox"/> Place transfer valve in VOLUME and pressure governor in RPM mode <input type="checkbox"/> Open correct discharge on YOUR engine and supply attack engine with 80-90 psi at the pump panel. <input type="checkbox"/> Shut down hydrant, connect 5" to hydrant <input type="checkbox"/> Place hose clamp on wet 3-inch line and disconnect it from the hydrant. <input type="checkbox"/> Replace 2 ½ cap <input type="checkbox"/> Open hydrant <input type="checkbox"/> Open 5" gate valve on engine <input type="checkbox"/> Attach the attack engine's 3" to your discharge and open <input type="checkbox"/> Notify the attack engine's Engineer that the changeover is complete <input type="checkbox"/> Refill tank 					
CRITICAL FAILS:					
<ul style="list-style-type: none"> <input type="checkbox"/> Did not perform steps in a safe and effective manner <input type="checkbox"/> Interruption in fluidity of motion 					
OVERALL RESULTS:					
ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					
REFERENCES:					

STANDARD:	
CMCB/JPR'S:	
SOG'S:	



DENVER FIRE DEPARTMENT
ENGINEER JPR

P-17

EVOLUTION:	Supplying an Aerial Master Stream Using an Established Water Supply
SUMMARY:	
NOTES:	
TASK STEPS:	
<ol style="list-style-type: none"> 1. Completes apparatus startup procedure per JPR P-10 2. Drives to and positions engine at rear bumper of truck/tower <ol style="list-style-type: none"> a. States maximum distance an “Attack Engine” can position from an aerial is 100ft, with (3-4) supply lines b. States 200 psi is the intake pressure to be maintained at the inlet of the Truck/Tower 3. Explains how to establish a relay operation per JPR P-6 4. Places apparatus into pump gear per JPR P-10 5. Inspects Pump Panel (start in top left corner, working from left to right) per JPR P-11 <ol style="list-style-type: none"> a. Records gauges with grease pencil 6. Opens intakes from water source, established by the relay operation 7. Identify static pressure <ol style="list-style-type: none"> a. Marks static pressure with grease pencil 8. Reports relay operation static pressure (write pressure here: _____) 9. Sets pressure governor to correct mode (PSI mode) per JPR P-11 10. Places transfer valve in “Volume” at idle (older engines with two stage pumps) per JPR P-11 11. Calculates the appropriate discharge pressure for the truck/tower being supplied (Supply Truck/Tower master stream with _____ size tip(s), with ____X_____ supply lines at _____’ long) 12. References “DFD Pump Chart” for Pump Discharge Pressures (PDP) for supply lines to a truck/tower master stream(s) 13. Opens the correct discharge valves 14. Adjust the throttle to the correct discharge pressure within (+or- 5 psi) 15. Ensures pressure governor sets to correct pressure 16. Confirms operation by flowing water from master stream 17. Identifies residual pressure <ol style="list-style-type: none"> a. Marks static pressure with grease pencil b. 0 – 10% Static to Residual Drop = Add 3 Times currant GPM Output c. 11 – 15% Static to Residual Drop = Add 2 Times currant GPM Output d. 16 – 20% Static to Residual Drop = Add 1 Times currant GPM Output 18. Reports residual pressure (write answer here: _____) 19. Determines and reports additional GPMs that can be supplied (write answer here: _____) 20. Checks Pump Panel (start in top left corner, working from left to right) per JPR P-11 <ol style="list-style-type: none"> a. Records gauges with grease pencil 21. Accomplishes safe and proper shut-down when directed per JPR P-12 	
CRITICAL FAILS:	

- Did not perform steps in a safe and effective manner
- Interruption in fluidity of motion

OVERALL RESULTS:

ROLE:	PRINT:	SIGN:	DATE:	P	F
ENGINEER:					
EVALUATOR:					

REFERENCES:

STANDARD:	
CMCB/JPR'S:	
SOG'S:	