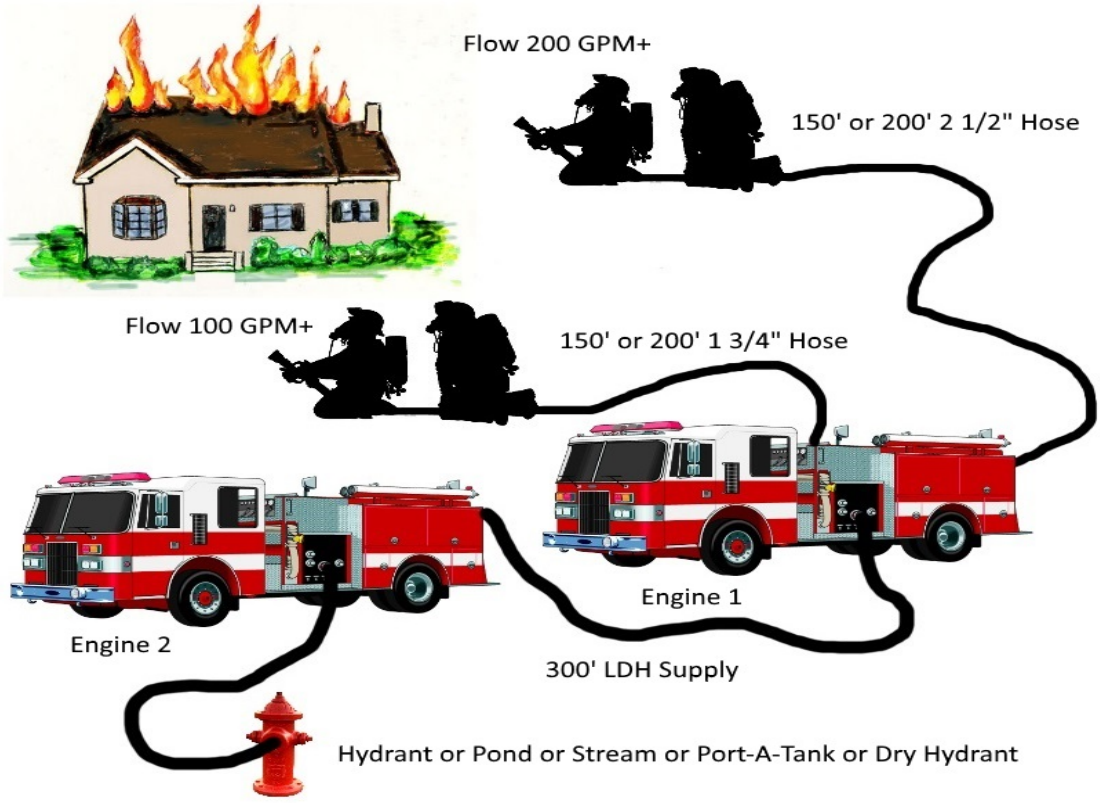
MCVFA Model Engine Company Evolution #1

2 Engines with Water Supply – 2 Hand Lines
An NFPA 1410 Evolution



Objective: To place an initial attack line (1 ¾") of minimum 150' and a backup line (2 ½") of minimum 150' in-service and flowing at least 300 GPM using units and staffing typical of personnel that ordinarily respond. A reverse lay by a second engine to water supply of 300' of LDH shall be established.

Evolution Description:

A reverse lay using two engines and one supply line with 1 attack line and 1 back-up hose line. Reverse lay of 300' of LDH from fire scene to hydrant or alternate water source. Crew shall deploy 2 hose lines capable of flowing a minimum of 300 GPM within 5 minutes from the start of the evolution (or 8 minutes if drafting). Engine shall be permitted to charge initial attack line with tank water; hydrant or static water source shall be established before back-up line is in place.

Evaluation Criteria:

All lines shall be completely deployed from hose beds.

All nozzles shall be flowing minimum GPM at appropriate pressures.

Time begins when first engine stops at simulated fire scene and sets brakes. Time ends when water is flowing at required flow/ pressure from both lines and supply line has been established. There shall be no stoppage in water flow.

RECOMMENDED MAXIMUM TIME: 5 MINUTES IF USING HYDRANT / 8 MINUTES IF DRAFTING

Reference NFPAA 1410, 2000 Edition; Training for Initial Emergency Scene Operations

MCVFA MODEL ENGINE COMPANY TRAINING EVOLUTION #1

Model Company Evolution – 2 Engines with Water Supply

PROCEDURES.

1. 1st Engine sets-up at Side Alpha of the building (or simulated building). Keep in mind positioning of additional apparatus such as aerial ladders and tenders/tankers. Also, three sides of the target address should be viewed, if possible.

2. Officer #1 sizes-up existing conditions and transmits a brief initial report.

3. Officer #1 conducts a 360 degree size-up with the Thermal Imaging Camera and gives an updated radio report.

4. Driver/Operator sets-up, stabilizes truck and engages pump. Sets out traffic cones.

5. FF #1 stretches 1 ¾" hose line (150' or 200' pre-connect).

6. Officer #1 & FF #1 flow hose line at "fire" until end of evolution. Flow 100 GPM or more.

7. 2nd Engine arrives after a 1 minute delay and reverse lays 300' of supply line to a water source (hydrant, port-a-tank, pond/stream, dry hydrant or cistern).

8. 2nd Engine Crew establishes water supply and pumps water to 1st Engine.

9. Officer #2 and FF #2 stretch 2 ½" hose line (150' or 200') from 1st Engine.

10. Officer #2 and FF #2 flow 2 ½" hose line at "fire". Flow 200 GPM or more.

11. Evolution ends when both hose lines are flowing a combined 300 GPM or more at proper pressures and with all FF in full PPE and breathing air from SCBA.

ASSIGNMENTS

1. Captain/Lieutenant 1st Engine – SCBA, Portable Radio, Hand Light and Thermal Imagining Camera - Radio Report, 360 Size Up, Staffs 1 ¾" attack hose line.

2. FF #1 – SCBA, Portable Radio, Hand Light, - Advances the 1¾" attack line.

3. Driver/Operator 1st Engine – Properly stabilizes and operates the apparatus

4. Captain/Lieutenant 2nd Engine – SCBA, Portable Radio and Hand Light – Supervises establishment of water supply, Staffs 2 ½" backup hose line.

5. Driver/Operator 2nd Engine – Properly stabilizes and operates the apparatus.

6. FF #2 – SCBA Portable Radio, Hand Light – Assists with establishing water supply, stretches and staffs 2 ½" back-up hose line.

MCVFA MODEL ENGINE COMPANY TRAINING EVOLUTION #1

Model Company Evolution – 2 Engines with Water Supply

SCORE SHEET

Infractions are counted for each person and each occurrence of the infraction. A total score of less than 0 is possible.

Safety

Points are deducted for each safety infraction.	**Pts**	**# infractions**
1. Crew seated & belted while engine in motion	10	
2. All required protective clothing worn properly	10	
3. SCBA/PASS activated and worn properly	10	
4. Crew checks for traffic when mounting and dismounting apparatus	5	
5. Vehicle operated safely (under control, park break set, etc.)	10	
6. Wheels chocked	5	
7. Engine Operator sets out traffic cones	5	
8. Running	5	
9. Other (note)	5	
10. General safety	5	
Total (point value X # of infractions)		

Procedures

Points are deducted for each infraction (failure to perform / perform properly).	**Pts**	**# infractions**
1st Engine:		
Engine spots at fire building allowing truck co. access and view 3 sides	5	
Officer sizes up existing conditions and transmits a report	5	
Officer completes 360 with TIC and transmits a report	10	
Firefighter & Officer stretch and flow 1 ¾" attack line – no "spaghetti"	10	
Personnel carry proper tools and equipment	5	
Pump engaged Pressure Governor set Proper Pressure & Flow	10	
Flood lights/scene lights activated if at night	5	
2nd Engine		
Engine/Crew reverse lays 300' of supply line from 1st Engine to Water Supply	10	
Water supply is established and water pumped to 1st Engine	10	
Firefighter & Officer stretch and flow 2 ½" backup hose from 1st Engine	5	
Personnel carry proper tools and equipment	5	
Pump engaged Pressure Governor set Proper Pressure & Flow	10	
Flood lights/scene lights activated if at night	5	
Total (point value X # of infractions)		

Total Safety Points Deducted	
Total Procedure Points Deducted	
Total Score for the exercise = (100 – Safety – Procedure)	

Recommended Time: 5 Minutes with Hydrant & 8 Minutes Drafting

A total score of less than 70 results in failure of the exercise Pass ☐ Fail ☐

Was a minimum of 300 GPM delivered? Yes/Pass ☐ Fail ☐

Were nozzle pressures & flows correct? Yes/Pass ☐ Fail ☐

Were hose layouts from the water source adequate to supply engines? Yes/Pass ☐ Fail ☐

Were hose streams operated without major interruption*? Yes/Pass ☐ Fail ☐

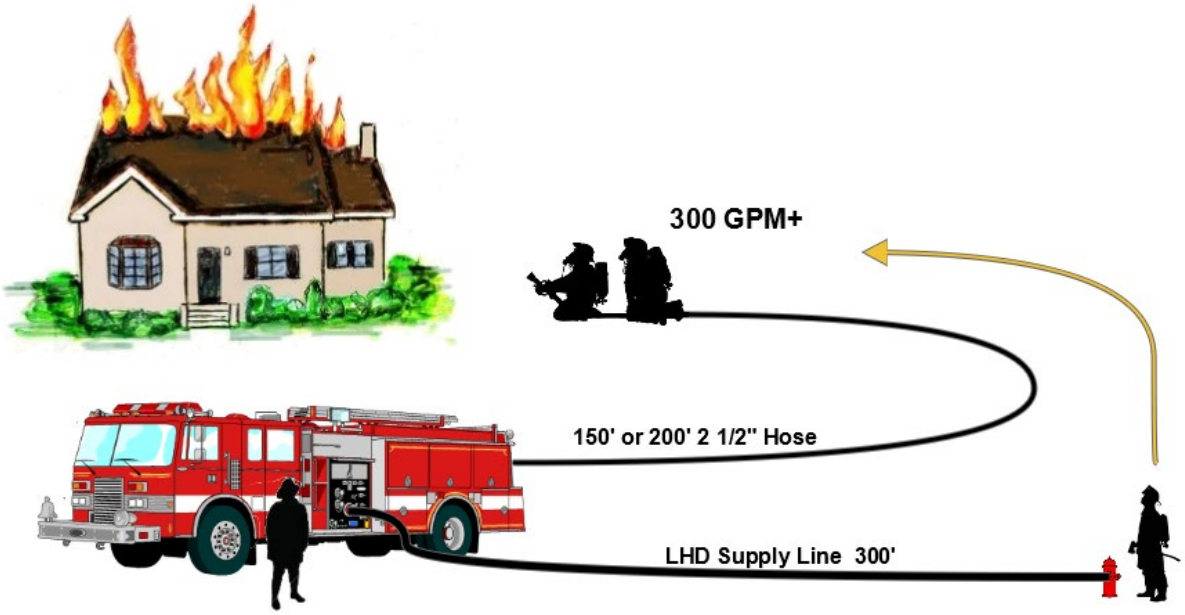
*more than 10 seconds

Date _____ Crew Members: _____

MCVFA Model Engine Company Evolution #2

Single Engine Fire Attack – Blitz Line Attack

An NFPA 1410 Evolution



Objective: To place an initial <u>exterior</u> 2 ½" attack line of a minimum 150' in-service and flowing a minimum of 300 gpm using a single engine (or engine-tanker) with staffing of the average number of personnel that ordinarily respond. A forward lay of LDH supply hose from a hydrant (if available) shall be established of a minimum 300'. (1 1/8" tip flows 300 gpm at 65psi. 1 ¼" tip flows 300 gpm at 45psi.)

<u>Evolution Description:</u>

Engine forward lays 300' into the fire from a hydrant (if available). Crew deploys a 2 ½" attack line for an exterior blitz attack flowing at least 300 gpm. Engine will charge line and flow water from its water tank while a water supply from the hydrant is being established. If there is no hydrant, the engine will limit its attack to the water it carries.

<u>Evaluation Criteria:</u>

Attack line shall be completely deployed from hose bed.
Nozzle shall be flowing at least 300 gpm at the appropriate nozzle pressure.
Time begins when the engine stops and sets its parking brake at the simulated fire and time ends when the hydrant is charged and supplying the engine, and 300 gpm has been flowed on the simulated fire for four minutes without interruption. (If there is no hydrant, time ends when the engine runs out of water.)

RECOMMENDED MAXIMUM TIME: 4 MINUTES WITH HYDRANT / 3 MINUTES WITHOUT HYDRANT.

Reference, NFPA 1410, 2000 Edition, Training for initial Emergency Scene Operations.

NVFC MODEL ENGINE COMPANY TRAINING EVOLUTION #2

Model Engine Company Evolution – Single Engine Blitz Line Attack

SCORE SHEET

PROCEDURES

1. Engine with a crew of three lays a 300' supply line from a hydrant (if available) in order to establish a water supply.

2. Engine stops at the hydrant and firefighter gets out and wraps hydrant with supply line, gathers hydrant tools and signals driver to continue.

3. Engine sets-up at the building (or simulated building) according to existing fire conditions. Keep in mind positioning of additional apparatus such as aerial ladders and tankers. Three sides of the target address should be viewed, if possible.

4. Officer sizes-up existing conditions and transmits a brief initial report in accordance with the Incident Command System.

5. Officer in SCBA stretches a 150' or 200' 2 ½" attack line to a position in front of the simulated fire, as determined by the Officer.)

6. Firefighter dresses hydrant and charges hydrant line upon signal form Driver/Operator, then moves up to don SCBA and assist with the attack line.

7. Driver/Operator connects supply line to insure continuous water supply.

8. Crew flows 300 gpm on the simulated fire until the engine runs out of tank water or for at least 30 seconds if using a hydrant.

9. All actions will be performed in a safe manner.

ASSIGNMENTS

1. Captain/Lieutenant – SCBA, Portable Radio, and Hand Light. Sizes-up fire, transmits initial radio report and stretches attack line.

2. Firefighter – SCBA, Portable Radio and Hand Light. Makes hydrant (if available) and then assists with stretching and operating attack line.

3. Driver/Operator – Properly stabilizes and operates the pumper. Lights scene if at night. Sets out traffic cones.

NVFC MODEL ENGINE COMPANY TRAINING EVOLUTION #2

Model Engine Company Evolution – Single Engine Blitz Line Attack

SCORE SHEET

Infractions are counted for each person and each occurrence of the infraction. A total score of less than 0 is possible.

Safety

Points are deducted for each infraction.	Pts	# infractions
1. Entire crew seated & belted while unit in motion	10	
2. All required protective clothing worn properly	10	
3. Crew checks for traffic when mounting and dismounting apparatus	5	
4. Hydrant FF positions safely at hydrant	5	
5. PPE used/worn properly	10	
6. SCBA/PASS worn properly	10	
7. Vehicle operated safely (under control, park break set, etc.)	10	
8. Wheels chocked	5	
9. Engine Operator fails to set out traffic cones	5	
10. Running	5	
11. Other (note)	5	
12. General safety	5	
Total (point value X # of infractions)		

Procedures

Points are deducted for each infraction.	Pts	# infractions
Engine stops 10'-15' past hydrant to lay supply line	10	
Firefighter uses proper procedure to "catch plug" & grabs all proper tools/appliances	10	
Engine spots at fire building allowing truck co. access and view 3 sides	5	
Officer sizes up existing conditions and transmits a report	10	
Crew stretches a 2 ½" hose line to position directed	10	
Pump engaged – Pressure Governor Set – Foam Engaged (if available)	5	
Correct pump pressure and flow (300 gpm)	10	
Flood lights activated if at night	5	
Supply line charged and connected and no kinks	10	
Hose line pulled correctly – no spaghetti	10	
Total (point value X # of infractions)		

Total Safety Points	
Total Procedure points	
Total Deductions (Safety + Procedure)	
Total Score for the exercise = (100 – Safety – Procedure)	

Recommended Time: 4 Minutes with Hydrant & 3 Minutes without Hydrant

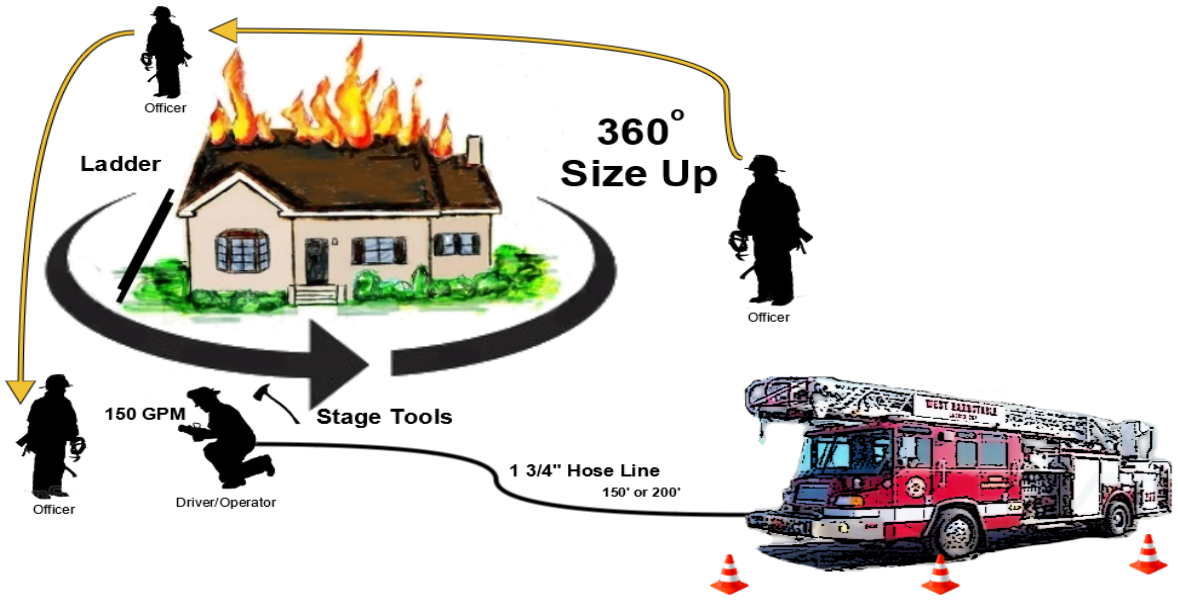
A total score of less than 70 results in failure of the exercise	Pass ☐		Fail ☐
Was a minimum of 300 GPM delivered?	Yes/Pass ☐		Fail ☐
Were nozzle pressures & flows correct?	Yes/Pass ☐		Fail ☐
Was hose layout from the hydrant adequate to supply engine?	Yes/Pass ☐	Fail ☐	NA ☐
Was hose stream operated without major interruption*?	Yes/Pass ☐		Fail ☐

*more than 10 seconds

Date: _____ Crew Members: _____

MCVFA Model Engine Company Evolution #3

Two Firefighter Attack/Transitional Attack/Unoccupied Home
An NFPA 1410 Evolution



Objective: To establish a safe & effective transitional fire attack at such times as when the first arriving apparatus is understaffed with two or three firefighters. The engine company will do a 360 size-up, stretch and charge an 1 ¾" attack line to an exterior position to knock down the fire with a 150 gpm+ flow, and stage tools and ladders, while awaiting additional resources to transition to an interior attack.

This evolution is for use when there are not civilians to be rescued on arrival.

Evolution Description:

Engine or Quint sets-up at Side Alpha of the simulated fire building. Officer gives an initial radio report. Officer does a 360 degree size-up of the building and fire. Driver sets up truck for fire attack. Officer & Driver stretch 200' 1 ¾" attack line to point of exterior fire attack & flow 150 gpm+ for 30 seconds. Officer & Driver stage tools at point of entry and raise ladder as appropriate. Officer & Driver hold fire until additional resources arrive.

Evaluation Criteria:

360 degree size-up completed.
Attack line shall be completely deployed from hose bed.
Nozzle shall be flowing at least 150 gpm at the appropriate nozzle pressure, solid or straight stream.
Time begins when the engine stops and sets its parking brake at the simulated fire and time ends when the hose line has flowed for 30 seconds. Tools & ladder staged/set properly.

RECOMMENDED MAXIMUM TIME: 4.5 Minutes

Reference, NFPA 1410, 2000 Edition, Training for initial Emergency Scene Operations

MCVFA MODEL ENGINE COMPANY TRAINING EVOLUTION #3

Model Engine Company Evolution – 2 FF Attack/Transitional Attack

PROCEDURES

1. Engine or Quint, with a crew of two, proceeds directly to the building **without** laying a supply line.

2. Engine or Quint sets-up at Side Alpha of the building. Keep in mind positioning of additional apparatus. Also, three sides of the target address should be viewed, if possible.

3. Officer sizes-up existing conditions and transmits a brief initial report. With thermal imaging camera in-hand, the Officers does a **360 walk-around of the building**, to determine location and extent of fire, life hazards, and whether to operate in rescue mode (interior attack or interior search & rescue) or in transitional mode (exterior knock-down of fire until additional resources arrive).

4. Driver sets-up truck for fire attack (chock wheels, engage pump, circulate water, turn on flood lights, pressure mode, and engage foam if available).

5. While Driver sets-up truck, Officer determines location of fire within structure and **point of exterior fire attack** (can be from the ground or over a ladder).

6. Officer and Driver both don SCBA.

7. Officer and Driver stretch hose line to point of exterior fire attack. Driver charges hose line. Officer plays a solid/straight stream of at least 150 gpm into the fire from the exterior, in accordance with best practices of transitional fire attack training. Driver adjusts pump accordingly and joins Officer to assist with hose line.

8. After fire knockdown (simulated by flowing water for 30 seconds), Officer & Driver work together to stage tools (irons & pike pole) at point of entry. Officer & Driver places ground ladder to second floor window or roof (for rescue, ventilation or escape as appropriate to circumstances). Point of entry can be over a ladder. Officer & Driver place roof ladder to a window or roof line in case needed.

9. Officer and Driver in SCBA and full protective clothing force entry (door or window) and attempt to knockdown or hold fire from point of entry (without going into the structure) until they run out of water or additional resources arrive. (Simulate exterior knockdown by flowing water a target.)

ASSIGNMENTS

1. Driver/Operator – Properly stabilizes and operates the apparatus. Dons SCBA. Assists with stretching hose, participates in initial exterior fire attack as nozzle backup and irons firefighter.

2. Company Officer – Determines placement of apparatus gives initial radio report and requests appropriate resources. Does a complete 360 degree size-up of structure with thermal imaging camera. Stages tools. Dons SCBA. Stretches hose, and participates in initial exterior fire attack as nozzle firefighter.

MCVFA MODEL ENGINE COMPANY TRAINING EVOLUTION #3

Model Engine Company Evolution – 2 FF Attack/Transitional Attack

SCORE SHEET

Infractions are counted for each person and each occurrence of the infraction. A total score of less than 0 is possible.

Safety

Points are deducted for each infraction.	Pts	# infractions
1. Vehicle Driven at a safe speed.	10	
2. Entire crew seated & belted while unit in motion	10	
3. All required PPE worn properly	10	
4. SCBA worn properly with PASS activated and properly utilized.	10	
5. Crew checks for traffic when mounting and dismounting apparatus	5	
6. Vehicle operated safely (under control, parking brake set, etc.)	10	
7. Wheels chocked	5	
8. Running	10	
9. Other (note)	5	
10. General safety	5	
Total (point value X # of infractions)		

Procedures

Points are deducted for each infraction.	Pts	# infractions
Firefighter fails to leave Personal Accountably Tag (PAT) at seating position	10	
Engine spots at fire building allowing additional truck access and view 3 sides	5	
Officer sizes up conditions, transmits report and passes or takes command	10	
Officer does 360 degree size-up and updated radio report	10	
Pump engaged, pressure governor set, (foam activated), water circulated	10	
Flood lights & Scene lights activated if at night	5	
Driver & Officer stretch hose to point of exterior fire attack & flow 150 gpm+ solid/straight stream for 30 seconds	10	
Hose line charged to flow 150 gpm+	5	
Hose line stretched correctly – no spaghetti	5	
Tools properly staged at point of entry	5	
Ladders raised and set to second floor window	5	
Total (point value X # of infractions)		

Total Safety Points	
Total Procedure points	
Total Deductions (Safety + Procedure)	
Total Score for the exercise = (100 – Safety – Procedure)	

Recommended Time: 4:30 Minutes

A total score of less than 70 results in failure of the exercise Pass ☐ Fail ☐

Was a minimum of 150 GPM delivered? Yes/Pass ☐ Fail ☐

Were nozzle pressures & flows correct? Yes/Pass ☐ Fail ☐

Were best practices of Transitional Fire Attack followed? Yes/Pass ☐ Fail ☐

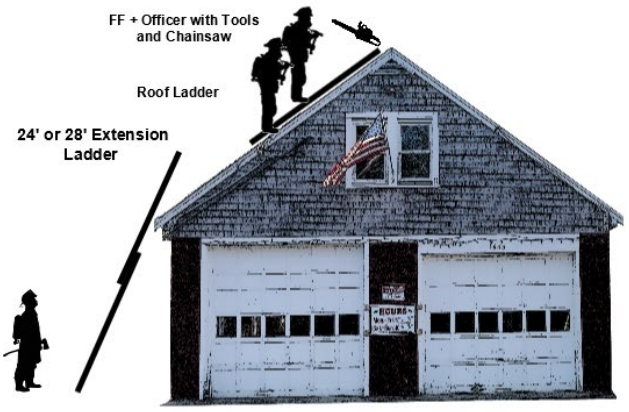
Were hose streams operated without major interruption*? Yes/Pass ☐ Fail ☐

*more than 10 seconds

Date _____ Crew Members: _____

MCVFA Model Engine Company Evolution #4

Engine Company Roof Ventilation – Typical Asphalt Shingle Roof
A NFPA 1410 Evolution



Objective: To place two firefighters with hand tools and a power saw on the roof of a one or two story structure ready to open the roof for ventilation using engine company ladders.

Evolution Description:

An engine is positioned at the simulated fire building. The engine company places its extension ladder to the roof and places its roof ladder on the roof. The company starts and tests its power saw on the ground. The company proceeds to the roof with hand tools and power tools and starts the saw on the roof. Consider wind direction when choosing the side of the roof to use.

Evaluation Criteria:

Ladders shall be properly deployed.
Saw is tested on the ground.
Proper tools are brought to the roof.
Firefighters were PPE properly and perform all actions safely.
Time begins when the engine stops at simulated fire scene and sets brakes. Time ends when a crew of two firefighters with hand tools is on the roof and the power saw is running.

RECOMMENDED MAXIMUM TIME: 4 ½ MINUTES

Reference NFPA 1410, 2015 Edition; Training for Initial Emergency Scene Operations

MCVFA Model Engine Company Evolution #4

Engine Company Roof Operations – Typical Asphalt Shingle Roof

PROCEDURES

1. Engine, with typical staffing, proceeds to simulated fire building and sets up in a location that allows for additional apparatus to access the incident. Sets brakes, sets out traffic cones, turns on flood lights, and circulates water. Keep in mind collapse zones.

2. While driver sets up engine and flood lighting (if night), company raises its extension ladder (24' or 28') to the roof line for access to the roof as directed by the company officer.

3. Engine Company then places roof ladder on the peak of the roof as directed by the company officer.

4. Firefighter starts and tests power saw on the ground, before going to the roof.

5. Firefighter and officer bring hand tools (pike pole, axe, etc. per department policy or training) and power saw to the peak of the roof over the ladders.

6. Extension ladder must be footed by a firefighter.

7. Roof team, firefighter and officer, start power saw on roof.

8. NOTE: This evolution assumes a second due or later apparatus so that there is no initial radio report or 360 size-up as part of the evolution. AND, this a good opportunity for the company officer and crew to review the types of roofs found in your community.

ASSIGNMENTS

1. Driver/Operator – Properly stabilizes and operates the apparatus. Sets out traffic cones and provides for scene lighting. Assists with raising and footing ladders as necessary.
2. Officer – Determines placement of apparatus and ladders. Assists with placement and raising of ladders. Carries hand tools to the roof.
3. Firefighter – Assists with raising and placement of ladders. Starts and tests power saw. Carries saw to roof.
4. Additional Firefighters (if available) – Assists with raising and placement of ladders and footing of ladder.

MCVFA Model Engine Company Evolution #4

Engine Company Roof Operations – Typical Asphalt Shingle Roof

SCORE SHEET

Infractions are counted for each person and each occurrence of the infraction. A total score of less than 0 is possible.

Safety

Points are deducted for each infraction.	Pts	# infractions
1. Vehicle Driven at a safe speed.	10	
2. Entire crew seated & belted while unit in motion	10	
3. All required PPE worn properly	10	
4. SCBA worn properly with PASS activated and properly utilized.	10	
5. Crew checks for traffic when mounting and dismounting apparatus	5	
6. Vehicle operated safely (under control, parking brake set, etc.)	10	
7. Wheels chocked	5	
8. Street Cones Placed	5	
9. No Running	10	
10. Other (note)	5	
11. General safety	5	
Total (point value X # of infractions)		

Procedures

Points are deducted for each infraction.	Pts	# infractions
Firefighter fails to leave Personal Accountably Tag (PAT) at seating position	10	
Correct/Safe apparatus placement	5	
Pump engaged, pressure governor set, (foam activated), water circulated	10	
Flood lights & Scene lights activated if at night	5	
24’ or 28’ extension ladder raised to roof line for roof access as directed	10	
Roof ladder placed at peak of roof as directed	5	
Power saw started and tested on ground	5	
Firefighter & Officer climb to roof peak with saw and hand tools	5	
Extension ladder is footed at all times while FFs on roof or climbing	5	
Saw started at peak of roof	5	
Total (point value X # of infractions)		

Total Safety Points	
Total Procedure points	
Total Deductions (Safety + Procedure)	
Total Score for the exercise = (100 – Safety – Procedure)	

Recommended Time: 4:30 Minutes Pass □ Fail □

A total score of less than 70 results in failure of the exercise Pass □ Fail □

Where ladders raised set properly/safely as directed Yes/Pass □ Fail □

Was the correct saw started on the ground Yes/Pass □ Fail □

Where appropriate tools taken to the roof Yes/Pass □ Fail □

Date _____ Crew Members: _____