Class “B” Apparatus Driver Course
Managing Risk

Overview

- Sleep Deprivation & The EVO
- Emotional Drivers
- Department Risk Controls
- Intersections
Sleep Deprivation & The EVO

Fatigue and Driving

- People often think that driver fatigue means falling asleep at the wheel
- Falling asleep is an extreme form of driver fatigue
- Fatigue is tiredness, weariness or exhaustion
DRIVER FATIGUE

Causes of Driver Fatigue

- Stress
- Lack of quality sleep
- Substance abuse
- Irregular work hours
- Irregular meal times/eating habits
DRIVER FATIGUE

Affects of Driver Fatigue

- Slowing reaction time
- Decreased awareness
- Impaired judgment
- Risky driving behaviors are increased
Sleep Deprivation & The EVO

Signs and Symptoms of Fatigue

- Forgetfulness
- Being fixated
- Poor decision making
- Apathy
- Slow reaction times
- Lethargy

- Moodiness
- Not communicating
- Nodding off
Sleep Deprivation & The EVO

Why is Driver Fatigue a Problem?

- Staying alert is crucial for EVO
- Fatigued drivers have slower reaction times
- Driver Fatigue can “KILL YOU”
- 12% of all fatal crashes
Sleep Deprivation & The EVO

Fatigue and other factors

- Alcohol
- Speed
- Over the counter medications
Sleep Deprivation & The EVO

What Causes Driver Fatigue?

- Sleep loss & Sleep debt
- Sleep disorders
  - Insomnia, Sleep Apnea, Narcolepsy
- Circadian Rhythms
Sleep Deprivation & The EVO

How can I improve my alertness?

- Get plenty of sleep the night before shift
- Take breaks and nap
- Get fresh air into your vehicle
- Stay hydrated
- Share the driving
- Avoid medications that make you drowsy
Managing Risk

Emotional Drivers

- Aggressive drivers/Road rage
- Response to siren
- Call type
- State of mind/Outside influences
- Shift dynamic/communication skills
Siren Audibility Factors

Weather Conditions

- The siren may be heard sooner on an overcast day
- Siren audibility tends to dissipate on clear days
- Fog will block sound from traveling at longer distances
Siren Audibility Factors

Traffic Conditions

- The siren becomes less audible with the increase of traffic
- Heavy truck or bus traffic will decrease siren effectiveness
- Large buildings may block, deflect or funnel the audibility of the siren
Siren Audibility Factors

Siren Syndrome

- The siren may effect the EVO performance
- Tunnel vision may develop
- EVO must remain calm, control speed
- Be aware that the excitement of the moment can adversely affect the EVO’S ability to concentrate
- Take deep breaths to reduce symptoms
Managing Risk

MCFRS Risk Controls

- MVA driver records screening
- MVA Flagging program
- EVOC & Class “A” & “B” Driver Courses
- Driver Training
- Remedial Training/Collision review
- Driver Refresher & Recertification Training
- Policies and Procedures
Intersection Practices

Intersections are the locations where the largest percentage of major accidents involving emergency vehicles occurs. Even with the use of warning devices, intersections pose a serious threat to the safety of both emergency service personnel as well as the general public. All emergency service organizations should adopt and practice intersection operating guidelines during all emergency responses. Standard Operating Guidelines should meet the following recommended practices at a minimum.
Intersection Practices

Controlled Intersections

- An intersection controlled by a stop sign, yield sign, yellow traffic light, or a red traffic light requires **Prudent Action** by the emergency vehicle driver. The following steps should be taken:
  - Do not rely on warning devices to clear traffic.
  - Scan the intersection for possible hazards (right turns on red, pedestrians, vehicles traveling fast etc.) as well as driver options.
Intersection Practices

- Begin to slow down well before reaching the intersection and cover the brake pedal with the driver’s foot, continue to scan in four directions (left, right, front, back).
- Change the siren cadence not less than 200 feet from the intersection.
Intersection Practices

If traffic in all lanes can not be accounted for, the driver should bring the vehicle to a complete stop. If the driver proceeds past a control device with a negative right-of-way without coming to a complete stop would be negligent.
Intersection Practices

Controlled Intersection

✔ Scan intersection for possible passing options (pass on right, left, wait, etc.) avoid using the opposing lane of traffic if at all possible.
Intersection Practices

- Establish eye contact with other vehicle drivers; have partner communicate all is clear; reconfirm all other vehicles are stopped.
- Account for traffic one lane at a time, treating each lane as a separate intersection.
Intersection Practices

Uncontrolled intersections

Any intersection without a control device (stop sign, yield, or traffic signal) in the direction of travel of the emergency vehicle or where a traffic control signal is green upon the approach of the emergency vehicle, all emergency vehicle drivers should do the following:
Intersection Practices

**Uncontrolled intersections**

- Slow down if any potential hazards are detected and cover the brake pedal with the driver’s foot.

- Change the siren cadence not less than 200 feet from the intersection.

- Avoid using the opposing lane of traffic if at all possible.
Intersection Practices

Reading the Intersection

- Traffic Lights/Traffic control devices
- Lane configuration
- Traffic flow
- Yield Area’s
- Lane of least resistance
- Obstructions/ Large vehicles
INTERSECTIONS

Eight Signs for Intersection Safety

◆ Don’t rely on warning devices to clear traffic
◆ Scan intersections for potential hazards
◆ Begin to slow down well before the intersection and cover the brake
◆ Change the siren cadence 200 ft from the intersection
INTERSECTIONS

Eight Signs for Intersection Safety

◆ Scan intersection for possible passing options, avoid using the opposing lane
◆ Stop the vehicle if you cannot account for all lanes of traffic
◆ Establish eye contact with other drivers
◆ Treat each lane of traffic as a separate intersection
INTERSECTIONS

Reading Intersections
INTERSECTIONS
INTERSECTIONS
BLIND INTERSECTIONS

IF YOU CAN’T SEE THEM, THEY CAN’T SEE YOU

Montgomery County Fire and Rescue

Class "B" Driver Course Session 4-1
Version 07-1
CASE STUDY

1822 Hours
Dark
Damp Roads
Box Alarm

University Blvd.
Georgia Ave.
West
1822 Hours
Dark
Damp Roads
Box Alarm

E51
C
C

E181
AT18-1
AT18-2
AT18-3

A23

Montgomery County Fire and Rescue
Class “B” Apparatus Drivers Course
Class “B” Driver Course Session 4-1
Version 07-1
Traffic Lanes

Traffic Travel Lanes are not created equally

12 ft.
Traffic Lanes

Traffic Travel Lanes are not created equally

9’ 8”
Traffic Lanes

Turn Lanes are often smaller in width than travel lanes.
What do you do when there is no room for your unit?
Very Little margin for error with large vehicles traveling side by side.
Angle of Departure

Use caution on sloped driveways Going in and departing
Angle of Departure

Due to the size of our Apparatus, sloped driveways pose a risk of the undercarriage dragging.

Drag Marks
Angle of Departure

The more the overhang of the body from the rear axle; the greater the risk of dragging the undercarriage.
Time - Distance

35 MPH (51.31 fps)

365.994'}
Time - Distance

35 MPH (51.31 fps)

Football Field 365.994'
Time - Distance

Perception/Reaction Time
1.6 seconds

(51.31 fps)

35 MPH

Football Field
365.994'

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Time - Distance

Perception/Reaction Time
1.6 seconds

35 MPH (51.31 fps) 82.13 Ft.

Football Field 365.994'

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Version 07-1
Time - Distance

Perception/Reaction Time
1.6 seconds

Braking Distance
(Feet)

35 MPH

(51.31 fps)

82.13 Ft.

Football Field
365.994'

Montgomery County Fire and Rescue

Class “B” Apparatus Drivers Course
Time - Distance

<table>
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Football Field 365.994'

Montgomery County Fire and Rescue

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Version 07-1
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Perception/Reaction Time
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<td>(80.53 fs) 129.06 Ft.</td>
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Perception/Reaction Time
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Montgomery County Fire and Rescue

Class “B” Driver Course Session 4-1
Version 07-1
Time - Distance

Perception/Reaction Time
1.6 seconds

Braking Distance (Feet)

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35 MPH (51.31 fps) 82.13 Ft. 51.04 Ft.

55 MPH (80.53 fps) 129.06 Ft. 126.04 Ft.

Football Field 365.994'

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Montgomery County Fire and Rescue

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Perception/Reaction Time
1.6 seconds

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<td>(80.53 ft)</td>
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Time - Distance

Perception/Reaction Time
1.6 seconds

Braking Distance (Feet)

35 MPH
(80.53 fs)

55 MPH
(117.28 fps)

80 MPH

Total Distance Travelled

133.17 Ft.
255.10 Ft.

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365.994'

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Version 07-1
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Football Field 365.994'
Show VFIS Intersection Video
Review

- Sleep Deprivation & The EVO
- Emotional Drivers
- Department Risk Controls
- Intersections