

Be Ready, Be Safe, Be Responsible

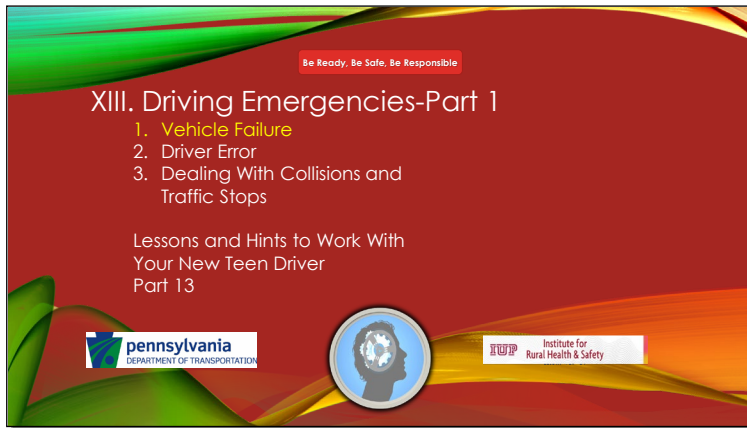
XIII. Driving Emergencies-Part 1

1. Vehicle Failure
2. Driver Error
3. Dealing With Collisions and Traffic Stops

MANUAL

Lessons and Hints to Work With
Your New Teen Driver
Part 13





| Common Driving Emergencies: | | EMERGENCY SITUATIONS |
|-----------------------------|--|---|
| 1. Vehicle Failure | <ul style="list-style-type: none"> • Brake Failure • Tire Failure (Blowout) • Steering Failure • Engine Failure (Stalling) • Accelerator Failure • Other Accessory Failure • Fire | <ul style="list-style-type: none"> • Speed • Steering • Traction • Distraction |
| 2. Driver Errors | <ul style="list-style-type: none"> • Decision Making/Judgement • Operation | 3. Collision Avoidance <ul style="list-style-type: none"> • Objects on road • Animals • Debris • Other Users • Road and Weather Conditions |

Emergency situations

Common Driving Emergencies:

1. Vehicle Failure
 - Brake Failure
 - Tire Failure
 - Steering Failure
 - Engine Failure
 - Accelerator Failure
 - Other Accessory Failure
 - Fire
2. Driver Errors
 - Decision Making/Judgement
 - Operation
 - Speed
 - Distraction
 - Steering
3. Collision Avoidance
 - Objects on road
 - Animals
 - Debris
 - Other Users
 - Road and Weather Conditions

AVOIDING EMERGENCY SITUATIONS

Vehicle Failure-One or more device or vehicle system malfunctions or fails.

Prevention:

Regular care and maintenance

- Check fluids
 - fill with correct fluid and amount
- Tire pressure and treadwear
 - fill with proper amount of air
 - replace when worn
- Attention to dash warning lights
 - Steady light means a system isn't working correctly. Should be checked
 - Flashing means a critical system malfunction that could lead to failure.

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Reacting to Driving Emergencies:

EMERGENCY SITUATIONS

1. Don't Panic !

2. Identify the Problem.

- Clues

3. Act on the Problem.

4. Be aware of vehicles behind

1. Don't Panic !

2. Identify the Problem.

- Clues

3. Act on the Problem.

4. Be Aware of Vehicles Behind

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**

Brake Failure

Causes:

- Low Brake Fluid
- Fluid leak
 - Brake lines, hoses
- Master Cylinder, Booster
- Brake Pads, Rotors

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EMERGENCY SITUATIONS

When Your Brakes Fail

Brake Failure

Identify

Brake pedal

- may go to floor
- may feel “mushy”, hard to push
- poor braking response-
 - vehicle not slowing enough for foot pressure on pedal

Dash Warning Lights

Grinding Sounds While Braking

- **Identify Problem**

Brake pedal

- may go to floor
- may feel “mushy”, hard to push
- poor braking response-
- vehicle not slowing enough for foot pressure on pedal

Dash Warning Lights

Grinding Sounds While Braking

Brake Failure-Respond **EMERGENCY SITUATIONS**

Don't Panic

- 1. Rapidly pump the brake pedal**
 - May build up pressure in system
- 2. Hand on steering wheel at 12 o'clock**
- 3. Downshift: slows the movement of car**
 - 3rd or 2nd gear if at higher speed
- 4. Apply the parking brake with steady pressure.**
 - Keep thumb on release button
 - If not, can lock the rear wheels. If the car begins to skid, release the parking brake slightly.

Emergency situations

When Your Brakes Fail

Don't Panic

1. Rapidly pump the brake pedal
 - May build up pressure in system
2. Downshift: slow the movement of car
3. Apply the parking brake with steady pressure.
 - Keep thumb on release button, or pulling release for e- brake pedal
 - Don't lock the rear wheels If the car begins to skid, release the parking brake.

EMERGENCY SITUATIONS

When Your Brakes Fail

1. **If still no brake control look for place to steer**
 - against the curb,
 - if necessary, sideswipe bushes, something soft
 - or uphill
2. **Steer into an open area, parking lot**
3. **Down shift again if able**
 - 1st gear
4. **Continue using parking brake**

Emergency situations

1. **If still no brake control, look for place to steer**
 - against the curb
 - if necessary, sideswipe something soft
 - or, uphill
2. **Steer into an open area, parking lot**
3. **Down shift again if able to 1st gear**
4. **Continue using parking brake**

EMERGENCY SITUATIONS

When Your Brakes Fail

[Brake Failure Video](#)

EMERGENCY SITUATIONS

Reacting to Driving Emergencies:

Tire Failure

Blowout- Tire bursts suddenly while driving

Causes:

- Running over object or obstacle
- Poor tire condition

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- Poor tire condition

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**
Tire Failure

Identify
Difficulty controlling or steering
Front Tires: Vehicle pulls suddenly to right or left (side of blowout).
Rear Tires: Vehicle wobbles, may also pull in direction of blowout.
May hear thumping sound

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Front Tires: Vehicle pulls suddenly to right or left (side of blowout).
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May hear thumping sound.

EMERGENCY SITUATIONS
Tire Failure-Respond

Don't Panic

1. Firm grip on steering wheel
2. Take foot off the accelerator
3. Do not brake hard-Vehicle may swerve or fish tail in direction of blowout
4. Steer smoothly, stay straight, slow gradually
5. Steer to safe area

Emergency situations
Tire Failure-Respond

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2. Take foot off the accelerator
3. Do not brake hard-Vehicle may swerve or fish tail in direction of blowout
4. Steer smoothly, stay straight, slow gradually
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Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**
Tire Failure

- [Tire Blowout Video 1](#)
- [Tire Blowout Video 2](#)

Steering Failure **EMERGENCY SITUATIONS**

Causes:

- Engine stall
- Steering fluid leaks
- Steering pump malfunctions
- Steering linkage breakdowns
- Electronics or computer malfunctions

Emergency situations

Steering Failure

Causes:

- Engine stall
- Steering fluid leaks
- Steering pump malfunctions
- Steering linkage breakdowns
- Electronics or computer malfunctions

Steering Failure **EMERGENCY SITUATIONS**

Power Steering Loss **Don't Panic**

- Identify that is not due to engine stall
 - check warning lights
 - (if it is, power brakes will have failed too)
- Firmly grasp wheel
- Steering is possible but difficult
 - depends on speed
- Steer to safe area, shut down vehicle.

Be Aware of vehicles BEHIND

Steering Failure

Power Steering Loss **Don't Panic**

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- Steering is possible but difficult
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- Be Aware of vehicles BEHIND

Steering Failure **EMERGENCY SITUATIONS**

Total Steering Loss

Causes:

Possibly Mechanical

- Steering arm or rack/pinion failure
- Steering linkage failure
- Steering column locking system failure

Steering Failure

Total Steering Loss

- Causes
- Mechanical
- Steering arm or rack/pinion failure
- Steering linkage failure

EMERGENCY SITUATIONS

Steering Failure

Total Steering Loss-Identify

- Steering wheel locks
- No steering response
- Steering is impossible

Steering Failure

Total Steering Loss-Identify

- Steering wheel locks
- No steering response
- Steering is impossible

EMERGENCY SITUATIONS

Steering Failure

Total Steering Loss **Don't Panic**

- Firmly grasp wheel
- Hazard flashers
- Bring car to safe, immediate stop
- Remain in car, stay buckled-call 911
 - explain situation, give location
 - request immediate emergency help

Be Aware of vehicles BEHIND

Steering Failure

Total Steering Loss

Don't' Panic

- Firmly grasp wheel
- Hazard flashers
- Bring car to safe, immediate stop
- Remain in car, stay buckled-call 911
- explain situation, give location
- request emergency help
- Be Aware of vehicles BEHIND

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**

Steering Failure

[Power Steering Failure Video 1](#)
[Steering Failure Video 2](#)

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**
Stalling-engine quits Engine Failure

Causes:

- **Fuel System:** No gas, moisture in gas, fuel line/filter/ pump problems, carburetor, fuel injector malfunctions, air intake
- **Sparkplugs/distributor**
- **Electrical system:** computer failure, dead battery, alternator failure, sensor failure
- **Broken belts**
- **Overheating:** low coolant
- **Catalytic converter damage**
- **Incorrect clutch/gas with manual transmission**

Emergency situations

Stalling-Vehicle engine “dies”.

- **Causes:**
- **Fuel System:** No gas, fuel line/filter problems, carburetor, fuel injector malfunctions
- **Sparkplugs/distributor**
- **Electrical system:** computer failure, dead battery, alternator failure
- **Broken belts**
- **Overheating:** low coolant
- **Incorrect clutch/gas with manual transmission**

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**
Engine Failure

Identify :

Systems fail:

- **Power brakes, power steering, some accessories**
- **Loss of power, sputtering**
- **No acceleration**

Emergency situations

Identify

Systems fail:

- **Power brakes, power steering, some accessories**
- **Loss of power, sputtering**
- **No acceleration**

Engine Failure-Respond **EMERGENCY SITUATIONS**

While moving: **Don't Panic**

- Shift to Neutral
- Cover brake
- Turn on hazard flashers
- Try restarting while moving

If it starts, shift to drive, foot to gas, proceed ahead

If not, coast to side of road -steering and braking may be difficult, but still possible if coasting.

Be Aware of vehicles BEHIND

Emergency situations

Engine Failure-Respond

While moving: Don't Panic

- Shift to Neutral
- Do not brake
- Turn on hazard flashers
- Try restarting while moving

If it starts, shift to drive

If not, move to side of road

-steering and braking may be difficult, but still possible

Engine Failure-Respond **EMERGENCY SITUATIONS**

While stopped : **Don't Panic**

- Shift to Neutral
- Turn on hazard flashers
- Try restarting

If it starts, shift to forward gear, proceed ahead

If not, stay safe inside car, call for roadside assistance, or if safely able, get car moved to side of road.

Be Aware of vehicles BEHIND

Emergency situations

Engine Failure-Respond

While stopped:

Don't Panic

- Shift to Neutral
- Turn on hazard flashers
- Try restarting

If it starts, shift to forward gear, proceed ahead

If not, stay safe inside car, call for 911, roadside assistance, or if safely able, get car moved to side of road.

Be Aware of vehicles BEHIND

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**

Accelerator Sticks

Causes :

- Broken linkage or spring
- Obstruction
 - floor mat, some other loose object
 - ice, snow

Emergency situations

Accelerator Sticks

Causes :

Broken steering linkage or spring
 Obstruction interfering with operation
 floor mat, some other loose object
 ice, snow

Reacting to Driving Emergencies: **EMERGENCY SITUATIONS**

Accelerator Sticks

Identify :

- Vehicle doesn't slow when foot is taken from accelerator
- Vehicle may speed up, engine races

Emergency situations

Accelerator Sticks

Identify :

Vehicle doesn't slow when foot is taken from accelerator
 Vehicle may speed up

Accelerator Stick-Respond **EMERGENCY SITUATIONS**

Don't panic, Keep eyes on road

Try to remove hang up with right foot

- Kick side of pedal
- Put foot underneath and pull upwards

If that doesn't work:

- Shift to Neutral
- Slow by gentle braking
- Steer to side of road
- Shut down car

Emergency situations

Accelerator Stick-Respond

Don't panic, Keep eyes on road

- Try to remove hang up with right foot
- Kick side of pedal
- Put foot underneath and pull upwards

If that doesn't work:

- Shift to Neutral
- Slow by gentle braking
- Steer to side of road
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