

SECTION 2: DRIVING SAFELY

Subsection 2.1 - Vehicle Inspection

Video Part 2A - Vehicle Inspection

Test Your Knowledge on Page 2-8

1. What is the most important reason for doing a vehicle inspection?

Safety - for yourself and for other road users

ANSWER: Paragraph 2.1.1 on Page 2-1

2. What things should you check during a trip?

Gauges

Use Senses (Look, Listen, Smell, Feel)

Critical Items

Tires, wheels, and rims

Brakes

Lights and reflectors

Brake and electrical connections to trailer

Trailer coupling devices

Cargo securement devices

ANSWER: Paragraph 2.1.2 on Page 2-1

3. Name some key steering system parts.

Wheel, Arm, Shaft, Gear Box, Pitman Arm, Drag Link, Knuckle, Spindle, Tie Rod, Hydraulic Fluid Reservoir, Cylinder

ANSWER: Figure 2.1 on Page 2-2

4. Name some suspension system defects.

Cracked/Broken Spring Hanger

Missing/Broken Leaves

Leaking Shock Absorbers

Cracked/Damaged/Missing axle positioning parts (Torque rod or arm, u-bolts, spring hangers)

Damaged and/or leaking air suspension systems

Loose/Cracked/Broken/Missing frame members

ANSWER: Paragraph 2.1.3 on Page 2-2

5. What three kinds of emergency equipment must you have?

Fire Extinguisher(s)

Electrical Fuses (unless equipped with circuit breakers)

Warning Devices for Parked Vehicles (for example, three reflective warning triangles)

ANSWER: Paragraph 2.1.3 on Page 2-3

6. What is the minimum tread depth for front tires? For other tires?

4/32" for front tires, 2/32" on other tires

ANSWER: Paragraph 2.1.3 on Page 2-2

7. Name some things you should check on the front of your vehicle during the walk around inspection.

Condition of Front Axle

Condition of Steering System

Condition of Windshield

Lights and Reflectors

ANSWER: Paragraph 2.1.5 on Page 2-6

8. What should wheel-bearing seals be checked for?

Leaks

ANSWER: Paragraph 2.1.5 on Page 2-6

9. How many red reflective triangles should you carry?

3

ANSWER: Paragraph 2.1.5 on Page 2-5

10. How do you test hydraulic brakes for leaks?

Pump X 3, Hold 5 seconds

ANSWER: Paragraph 2.1.5 on Page 2-7

11. Why put the starter switch key in your pocket during the pre-trip inspection?

So someone won't move the vehicle while you are checking underneath it

ANSWER: Paragraph 2.1.5 on Page 2-5

SECTION 2: DRIVING SAFELY

Subsection 2.2 - Basic Control of your Vehicle

Subsection 2.3 - Shifting Gears

Video Part 2B - Operating Techniques

Test Your Knowledge on Page 2-11

1. Why should you back toward the driver's side?

It's easier to see behind you in that direction

ANSWER: Paragraph 2.2.4 on Page 2-9

2. If stopped on a hill, how can you start moving without rolling back?

Partly engage the clutch before you take your right foot off the brake, use the parking brake

ANSWER: Paragraph 2.2.1 on Page 2-8

3. When backing, why is it important to use a helper?

The helper can see blind spots

ANSWER: Paragraph 2.2.4 on Page 2-9

4. What's the most important hand signal that you and the helper should agree on?

Stop

ANSWER: Paragraph 2.2.4 on Page 2-9

5. What are the two special conditions where you should downshift?

Before starting down a hill and before entering a curve

ANSWER: Paragraph 2.3.1 on Page 2-10

6. When should you downshift automatic transmissions?

Before starting down grades (hills)

ANSWER: Paragraph 2.3.3 on Page 2-10

7. Retarders keep you from skidding when the road is slippery. True or False?

False

ANSWER: Paragraph 2.3.4 on Page 2-10

8. What are the two ways to know when to shift?

Engine speed and road speed

ANSWER: Paragraph 2.3.1 on Page 2-9

SECTION 2: DRIVING SAFELY

Subsection 2.4 - Seeing

Subsection 2.5 - Communicating

Subsection 2.6 - Controlling Speed

Video Part 2B - Operating Techniques

Test Your Knowledge on Page 2-17

1. How far ahead does the manual say you should look?

12 - 15 seconds or ¼ mile at 55 M.P.H.

ANSWER: Paragraph 2.4.1 on Page 2-11

2. What are two main things to look for ahead?

Traffic and Road Conditions

ANSWER: Paragraph 2.4.1 on Page 2-11

3. What's your most important way to see the sides and rear of your vehicle?

Mirrors

ANSWER: Paragraph 2.4.2 on Page 2-11

4. What does "communicating," mean in safe driving?

Signaling your intentions

ANSWER: Paragraph 2.5.1 on Page 2-12

5. Where should your reflectors be placed when stopped on a divided highway?

10', 100', & 200' toward the approaching traffic

ANSWER: Paragraph 2.5.2 on Page 2-13

6. What three things add up to total stopping distance?

Perception Distance + Reaction Distance + Effective Stopping Distance = Total Stopping Distance

ANSWER: Paragraph 2.6.1 on Page 2-14

7. If you go twice as fast, will your stopping distance increase by two or four times?

Four times

ANSWER: Paragraph 2.6.1 on Page 2-15

8. Empty trucks have the best braking. True or False?

False - An empty vehicle has less traction

ANSWER: Paragraph 2.6.1 on Page 2-15

9. What is hydroplaning?

Waterskiing on tires - Tires lose their contact with the road and have little or no traction

ANSWER: Paragraph 2.6.2 on Page 2-15

10. What is "black ice"?

Clear ice that makes the road look wet

ANSWER: Paragraph 2.6.2 on Page 2-15

SECTION 2: DRIVING SAFELY

Subsection 2.7 - Managing Space

Subsection 2.8 - Seeing Hazards

Video Part 2B - Operating Techniques

Video Section 2C - Operating Techniques

Test Your Knowledge on Page 2-22

1. How do you find out how many seconds of following distance space you have?

Wait until the vehicle ahead passes a shadow on the road, a pavement marking, or some other clear landmark. Then count the seconds that pass until you reach the same point.

ANSWER: Paragraph 2.7.1 on Page 2-17

2. If you are driving a 30-foot vehicle at 55 mph, how many seconds of following distance should you allow?

4 seconds

ANSWER: Paragraph 2.7.1 on Page 2-17

3. You should decrease your following distance if somebody is following you too closely. True or False?

False

ANSWER: Paragraph 2.7.2 on Page 2-18

4. If you swing wide to the left before turning right, another driver may try to pass you on the right. True or False?

True

ANSWER: Paragraph 2.7.6 on Page 2-19

5. What is a hazard?

Any road condition or other road user (driver, bicyclist, pedestrian) that is a possible danger

ANSWER: Paragraph 2.8.1 on Page 2-20

6. Why make emergency plans when you see a hazard?

So that you will be prepared

ANSWER: Paragraph 2.8.1 on Page 2-20

SECTION 2: DRIVING SAFELY

Subsection 2.9 – Distracted Driving

Subsection 2.10 – Aggressive Drivers/Road Rage

Test Your Knowledge on Page 2-24

1. What are some tips to follow so you won't become a distracted driver?

Review and be familiar with all safety and usage features on any in-vehicle electronics, including your wireless or cell phone

Pre-program radio stations

Pre-load favorite CDs or cassette tapes

Clear the vehicle of any unnecessary objects

Review maps and plan route before you begin driving

Adjust all mirrors for best all-round visibility before you start your trip

Don't attempt to read or write while you drive

Avoid smoking, eating, and drinking while you drive

Don't engage in complex or emotionally intense conversations with other occupants

ANSWER: Paragraph 2.9.1 on Page 2-23

2. How do you use in-vehicle communications equipment cautiously?

If possible, turn cell phone off

Position the cell phone within easy reach

Pre-program cell phone with commonly called numbers

If you must call, find a safe place to pull off road

Hands-free devices are unsafe when moving down the road

Keep conversations short

Hang up in tricky traffic situations

Do not use equipment when approaching locations with heavy traffic, road construction, heavy pedestrian traffic, or severe weather conditions

Do not type or read messages on satellite system while driving

ANSWER: Paragraph 2.9.2 on Page 2-23

3. How do you recognize a distracted driver?

Vehicles that may drift over the lane divider lines or within their own lane

Vehicles traveling at inconsistent speeds

Drivers who are preoccupied with maps, food, cigarettes, cell phones, or other objects

Drivers who appear to be involved in conversations with their passengers

ANSWER: Paragraph 2.9.3 on Page 2-23

4. What is the difference between aggressive driving and road rage?

Aggressive driving is the act of operating a motor vehicle in a selfish, bold, or pushy manner, without regard for the rights of others.

Road rage is operating a motor vehicle with the intent of doing harm to others or physically assaulting a driver or their vehicle.

ANSWER: Paragraph 2.10.1 on Page 2-24

5. What should you do when confronted with an aggressive driver?

Make every attempt to get out of their way

Do not challenge them by speeding up or attempting to hold-your-own in your travel lane

Avoid eye contact

Ignore gestures and refuse to react to them

Report aggressive drivers to the appropriate authorities with vehicle description, license number, location, and, if possible, direction of travel

Use cell phone, safely, to call police

If aggressive driver is involved in a crash down the road, stop a safe distance from the crash scene, wait for police, and report the driving behavior that you witnessed

ANSWER: Paragraph 2.10.3 on Page 2-24

6. What are some things you can do to reduce your stress before and while you drive?

Listen to "easy listening" music

Give the drive your full attention

Be realistic about travel time - expect delays and make allowances

If you're going to be later than expected - accept the delay

Give other drivers the benefit of the doubt

Slow down and keep your following distance reasonable

Don't drive slowly in the left lane of traffic

Avoid gestures and keep hands on wheel

Be cautious and courteous and this response will become a habit

ANSWER: Paragraph 2.10.2 on Page 2-24

SECTION 2: DRIVING SAFELY

Subsection 2.11 - Driving at Night

Subsection 2.12 - Driving in Fog

Subsection 2.13 - Driving in Winter

Subsection 2.14 - Driving in Very Hot Weather

Video Part 2C - Operating Techniques

Test Your Knowledge on Page 2-29

1. You should use low beams whenever you can. True or False?

False - cuts down on the ability to see ahead

ANSWER: Paragraph 2.11.5 on Page 2-26

2. What should you do before you drive if you are drowsy?

Sleep

ANSWER: Paragraph 2.11.5 on Page 2-26

3. What effects can wet brakes cause? How can you avoid these problems?

Weak brakes, brakes apply unevenly, and brakes grab

Avoid deep water, if you can't dry them out

ANSWER: Paragraph 2.13.2 on Page 2-28

4. You should let air out of hot tires so that pressure goes back to normal. True or False?

False - The pressure will be too low when the tires cool off.

ANSWER: Paragraph 2.14.1 on Page 2-28

5. You can safely remove the radiator cap as long as the engine isn't overheated. True or False?

False - Never remove the cap from a pressurized system until the system has cooled.

ANSWER: Paragraph 2.14.1 on Page 2-28

SECTION 2: DRIVING SAFELY

Subsection 2.15 - Railroad-highway Crossings

Subsection 2.16 - Mountain Driving

Video Part 2C - Operating Techniques

Test Your Knowledge on Page 2-32

1. What factors determine your selection of a “safe” speed when going down a long, steep downgrade?

Total weight of the vehicle and cargo

Length of the grade

Steepness of the grade

Road conditions

Weather

ANSWER: Paragraph 2.16.1 on Page 2-31

2. Why should you be in the proper gear before starting down a hill?

After speed is built up, might not be able to shift and get hung up in neutral

ANSWER: Paragraph 2.16.2 on Page 2-32

3. Describe the proper braking technique when going down a long, steep downgrade.

-Apply brakes just hard enough to slow down

-When speed is reduced below “safe speed”, release brakes

-When speed has increased to “safe speed”, repeat 1 & 2

ANSWER: Paragraph 2.16.4 on Page 2-32

4. What types of vehicles can get stuck on a railroad-highway crossing?

Low slung units (lowboy, car carrier, moving van, and possum-belly livestock trailer)

Single-axle tractor pulling a long trailer with its landing gear set to accommodate a tandem-axle tractor

ANSWER: Paragraph 2.15.6 on Page 2-31

5. How long does it take for a typical tractor-trailer unit to clear a double track?

Fifteen seconds

ANSWER: Paragraph 2.15.5 on Page 2-31

SECTION 2: DRIVING SAFELY

Subsection 2.17 - Driving Emergencies

Subsection 2.18 - Antilock Braking Systems (ABS)

Subsection 2.19 - Skid Control and Recovery

Video Section 2C - Operating Techniques

Test Your Knowledge on Page 2-37

1. Stopping is not always the safest thing to do in an emergency. True or False?

True

ANSWER: Paragraph 2.17.1 on Page 2-33

2. What are some advantages of going right instead of left around an obstacle?

Won't force anyone into an opposing traffic lane and a possible head on collision

ANSWER: Paragraph 2.17.1 on Page 2-33

3. What is an "escape ramp"?

Separate road surface designed to slow vehicles

ANSWER: Paragraph 2.17.3 on Page 2-34

4. If a tire blows out, you should put the brakes on hard to stop quickly. True or False?

False

ANSWER: Paragraph 2.17.4 on Page 2-34

5. How do you know if your vehicle has antilock brakes?

Vehicle will have a yellow ABS malfunction lamp on the instrument panel

ANSWER: Paragraph 2.18.3 on Page 2-35

6. What is the proper braking technique when driving a vehicle with antilock brakes?

Brake as you would with other vehicles - use only the braking force necessary to stop safely and stay in control

Exception: Straight truck or combination with working ABS on all axles, in emergency, fully apply the brakes

ANSWER: Paragraph 2.18.6 on Page 2-36

7. How do antilock brakes help you?

Helps avoid wheel lock up and maintain control

ANSWER: Paragraph 2.18.4 on Page 2-35

SECTION 2: DRIVING SAFELY

Subsection 2.20 - Accident Procedures

Subsection 2.21 - Fires

Video Section 2D - Vehicle Safety

Test Your Knowledge on Page 2-39

1. What are some things to do at an accident scene to prevent another accident?

-Protect the area

Move your vehicle to the side of the road

Turn on flashers

Set out reflective triangles

-Notify authorities

-Care for the injured

ANSWER: Paragraph 2.20 on Page 2-37 & 2-38

2. Name two causes of tire fires.

Under-inflated tires and duals that touch

ANSWER: Paragraph 2.21.1 on Page 2-38

3. What kinds of fires is a B:C extinguisher not good for?

Wood, paper, cloth

ANSWER: Paragraph 2.21.3 on Page 2-39

4. When using your extinguisher, should you get as close as possible to the fire?

Stay as far away as possible - aim at the source or base of fire

ANSWER: Paragraph 2.21.3 on Page 2-39

5. Name some causes of vehicle fires.

Accidents, tires, electrical system, fuel, cargo

ANSWER: Paragraph 2.21.1 on Page 2-38

SECTION 2: DRIVING SAFELY

Subsection 2.22 - Alcohol, Other Drugs, and Driving

Subsection 2.23 - Staying Alert and Fit to Drive

Subsection 2.24 - Hazardous Materials Rules for All Commercial Drivers

Video Part 2D - Vehicle Safety

Test Your Knowledge on Page 2-45

1. Common medicines for colds can make you sleepy. True or False?

True

ANSWER: Paragraph 2.22.2 on Page 2-41

2. What should you do if you become sleepy while driving?

Stop to sleep

Take a nap

Avoid drugs

ANSWER: Paragraph 2.23.3 on Page 2-42

3. Coffee and a little fresh air will help a drinker sober up. True or False?

False

ANSWER: Paragraph 2.22.1 on Page 2-40

4. What is a hazardous materials placard?

Signs put on the outside of a vehicle that identify the hazard class of the cargo

ANSWER: Paragraph 2.24.3 on Page 2-44

5. Why are placards used?

To warn others of the risk and danger

ANSWER: Paragraph 2.24.2 on Page 2-43

6. What is "sleep debt"?

When you don't sleep enough and you "owe" yourself sleep

ANSWER: Paragraph 2.23.1 on Page 2-41

7. What are the danger signals of drowsy driving?

Your eyes close or go out of focus

You have trouble keeping your head up

You can't stop yawning

You have wandering, disconnected thoughts

You don't remember driving the last few miles

You drift between lanes, tailgate, or miss traffic signs

You keep jerking the truck back into the lane

You have drifted off the road and narrowly missed crashing

ANSWER: Paragraph 2.23.2 on Page 2-42

SECTION 3: TRANSPORTING CARGO SAFELY

Subsection 3.1 - Inspecting Cargo

Subsection 3.2 - Weight and Balance

Subsection 3.3 - Securing Cargo

Subsection 3.4 – Cargo Needing Special Attention

Video Part 3 - Transporting Cargo

Test Your Knowledge on Page 3-3

1. What four things related to cargo are drivers responsible for?

Inspecting your cargo

Recognizing overloads and poorly balanced weight

Knowing your cargo is properly secured and does not obscure your view ahead or to the sides

Knowing your cargo does not restrict your access to emergency equipment

ANSWER: Section 3 on Page 3-1

2. How often must you stop while on the road to check your cargo?

Within the first 50 miles after beginning a trip

After you have driven 3 hours or 150 miles

After every break you take during driving

ANSWER: Subsection 3.1 on Page 3-1

3. How is Gross Combination Weight Rating different from Gross Combination Weight?

GCWR = The maximum GVW specified by the manufacturer for a specific combination of vehicles plus its load

GCW = The total weight of a powered unit, plus trailer(s), plus the cargo

ANSWER: Paragraph 3.2.1 on Page 3-1

4. Name two situations where legal maximum weights may not be safe.

Bad weather or mountains

ANSWER: Paragraph 3.2.2 on Page 3-2

5. What can happen if you don't have enough weight on the front axle?

Poor steering

ANSWER: Paragraph 3.2.4 on Page 3-2

6. What is the minimum number of tie-downs for any flat bed load?

2

ANSWER: Paragraph 3.3.2 on Page 3-3

7. What is the minimum number of tie-downs for a 20-foot load?

2 - One tie-down for each ten feet of cargo

ANSWER: Paragraph 3.3.2 on Page 3-3

8. Name the two basic reasons for covering cargo on an open bed.

Protect people from spilled cargo

Protect the cargo from weather

ANSWER: Paragraph 3.3.4 on Page 3-3

9. What must you check before transporting a sealed load?

You can't inspect sealed loads, but you should check that you don't exceed gross weight and axle weight limits.

ANSWER: Paragraph 3.3.5 on Page 3-3

SECTION 5: AIR BRAKES

Subsection 5.1 - The Parts of an Air Brake System

Video Part 5 - Air Brakes

Test Your Knowledge on Page 5-5

1. Why must air tanks be drained?

To expel water and oil from the compressed air in the air brake system

ANSWER: Paragraph 5.1.4 on Page 5-1

2. What is a supply pressure gauge used for?

Shows how much pressure is in the air tanks

ANSWER: Paragraph 5.1.9 on Page 5-2

3. All vehicles with air brakes must have a low air pressure-warning signal. True or False?

True. A visible warning signal must come on before the air pressure in the tanks fall below 60 psi. The warning is usually a red light but could be a mechanical arm ("wig wag") that drops into your view.

ANSWER: Paragraph 5.1.11 on Page 5-3

4. What are spring brakes?

A mechanical brake activator used as an emergency and parking brake

ANSWER: Paragraph 5.1.14 on Page 5-3

5. Front wheel brakes are good under all conditions. True or False?

True

ANSWER: Paragraph 5.1.13 on Page 5-3

6. How do you know if your vehicle is equipped with antilock brakes?

The vehicle will have a yellow ABC malfunction lamp

ANSWER: Paragraph 5.1.16 on Page 5-4

SECTION 5: AIR BRAKES

Subsection 5.2 - Dual Air Brake

Subsection 5.3 - Inspecting Air Brake Systems

Video Part 5 – Air Brakes

Test Your Knowledge on Page 5-8

1. What is a dual air brake system?

A dual air brake system has two separate air brake systems, which use a single set of brake controls. Each system has its own air tanks, hoses, lines, etc. One system typically operates the regular brakes on the rear axle or axles. The other system operates the regular brakes on the front axle (and possibly one rear axle).

ANSWER: Subsection 5.2 on Page 5-6

2. What are slack adjusters?

A safety feature found on S-cam brakes that reduces brake slack

ANSWER: Paragraph 5.3.2 on Page 5-6

3. How can you check slack adjusters?

Park on level ground and chock the wheels

Release the parking brakes

Test slack adjuster for movement (1" maximum)

ANSWER: Paragraph 5.3.2 on Page 5-6

4. How can you test the low-pressure warning signal?

Shut off engine

Turn on electrical power and step on and off the brake pedal (bleed off air)

Low-pressure signal should come on before the pressure drops to less than 60 psi in the air tank

ANSWER: Paragraph 5.3.3 on Page 5-7

5. How can you check that the spring brakes come on automatically?

Park on level ground and chock the wheels

Release the parking brake

Shut off engine

Bleed off air as stated above

ANSWER: Paragraph 5.3.3 on Page 5-7

6. What are the maximum leakage rates?

Single Vehicle	2 PSI/Minute	Brake off
Single Vehicle	3 PSI/Minute	Brake on (Apply 90 psi or more)
Combo Vehicle	3 PSI/Minute	Brake off
Combo Vehicle	4 PSI/Minute	Brake on (Apply 90 psi or more)

ANSWER: Paragraph 5.3.3 on Page 5-7

SECTION 5: AIR BRAKES

Subsection 5.4 – Using Air Brakes

Video Part 5 - Air Brakes

Test Your Knowledge on Page 5-10

(This Test Your Knowledge is different from the video.)

1. Why should you be in the proper gear before starting down a hill?

To utilize the braking effect of the engine

ANSWER: Paragraph 5.4.6 on Page 5-9

2. What factors can cause brakes to fade or fail?

Excessive heat caused by using brakes too much and not relying on the engine braking effect

ANSWER: Paragraph 5.4.5 on Page 5-9

3. The use of brakes on a long, steep downgrade is only a supplement to the braking effect of the engine. True or False?

True

ANSWER: Paragraph 5.4.6 on Page 5-9

4. If you are away from your vehicle for only a short time, you do not need to use the parking brake. True or False?

False. Any time you park, use the parking brakes except if the brakes are very hot or if the brakes are very wet in freezing temperatures.

ANSWER: Paragraph 5.4.8 on Page 5-10

5. How often should you drain air tanks?

Drain air tanks at the end of each working day unless the vehicle has automatic air tank drains.

ANSWER: Paragraph 5.4.8 on Page 5-10

6. How do you brake when you drive a tractor-trailer combination with ABS?

As you always have or in other words:

Use only the braking force necessary to stop safely and stay in control

Brake the same way, regardless of whether you have ABS on the tractor, the trailer, or both

As you slow down, monitor your tractor and trailer and back off the brakes (if it is safe to do so) to stay in control

ANSWER: Paragraph 5.4.2 on Page 5-8

7. You still have normal brake functions if your ABS is not working. True or False?

True. Drive normally but get the system serviced soon.

ANSWER: Paragraph 5.4.2 on Page 5-8

SECTION 6: COMBINATION VEHICLES

Subsection 6.1 – Driving Combination Vehicles Safely

Video Part 6 – Combination Vehicles

Test Your Knowledge on Page 6-4

1. What two things are important to prevent rollover?

Keep cargo as close to the ground as possible and drive slowly around turns

ANSWER: Paragraph 6.1.1 on Page 6-1

2. When you turn suddenly while pulling doubles, which trailer is most likely to turn over?

The rear trailer is twice as likely to turn over

ANSWER: Paragraph 6.1.2 on Page 6-1

3. Why should you not use the trailer hand brake to straighten out a jackknifing trailer?

The brakes on the trailer wheels cause the skid – release so the trailer wheels will grip the road again

ANSWER: Paragraph 6.1.5 on Page 6-3

4. What is off-tracking?

When a vehicle goes around a corner and the rear wheels follow a different path than the front wheels.

ANSWER: Paragraph 6.1.6 on Page 6-3

5. When you back a trailer, you should position your vehicle so you can back in a curved path to the driver's side. True or False?

False

ANSWER: Paragraph 6.1.7 on Page 6-3

6. What type of trailers can get stuck on railroad-highway crossings?

Low slung units (lowboy, car carrier, moving van, possum-belly livestock trailer)

Single-axle tractor pulling a long trailer with its landing gear set to accommodate a tandem-axle tractor

ANSWER: Paragraph 6.1.4 on Page 6-2

SECTION 6: COMBINATION VEHICLES

Subsection 6.2 – Combination Vehicle Air Brakes

Video Part 6 – Combination Vehicles

Test Your Knowledge on Page 6-6

1. Why should you not use the trailer hand valve while driving?

The danger of making the trailer skid

ANSWER: Paragraph 6.2.1 on Page 6-4

2. Describe what the trailer air supply control does.

Push in – Supply air to trailer

Push out – Shut air off and put on trailer emergency brakes

ANSWER: Paragraph 6.2.3 on Page 6-5

3. Describe what the service line is for.

Carries air which is controlled by the foot brake or the trailer hand brake

ANSWER: Paragraph 6.2.4 on Page 6-5

4. What is the emergency air line for?

Supplies air to the trailer air tanks

Controls the emergency brakes on combination vehicles

ANSWER: Paragraph 6.2.4 on Page 6-5

5. Why should you use chocks when parking a trailer without spring brakes?

To keep the trailer from moving

ANSWER: Paragraph 6.2.1 & 6.2.8 on Page 6-4 & 6-6

6. Where are the shut-off valves?

Back of trailer

ANSWER: Paragraph 6.2.7 on Page 6-6

SECTION 6: COMBINATION VEHICLES

Subsection 6.3 - Antilock Brake Systems

Subsection 6.4 – Coupling and Uncoupling

Video Part 6 – Combination Vehicles

Test Your Knowledge on Page 6-10

1. What might happen if the trailer is too high when you try to couple?

It may not couple correctly

ANSWER: Paragraph 6.4.1 on Page 6-8

2. After coupling, how much space should be between the upper and lower fifth wheel?

None. If there is space, something is wrong (kingpin may be on top of the closed fifth wheel jaws, and trailer would come loose very easily).

ANSWER: Paragraph 6.4.1 on Page 6-9

3. You should look into the back of the fifth wheel to see if it is locked onto the kingpin. True or False?

True. Make sure the fifth wheel jaws have closed around the shank of the kingpin.

ANSWER: Paragraph 6.4.1 on Page 6-9

4. To drive you need to raise the landing gear only until it just lifts off the pavement. True or False?

False. Raise the landing gear all the way up. (Never drive with landing gear only part way up as it may catch on railroad tracks or other things.)

ANSWER: Paragraph 6.4.1 on Page 6-9

5. How do you know if your trailer is equipped with antilock brakes?

Required if built after March 1, 1998

Trailers – yellow ABS malfunction lamps on the left side

Dollies – Lamp on the left side

Vehicles before March 1, 1998 – Look under the vehicle for ECU and wheel sensor wires coming from the back of the brakes

ANSWER: Paragraph 6.3.1 on Page 6-7

SECTION 6: COMBINATION VEHICLES

Subsection 6.5 – Inspecting a Combination Vehicle

Video Part 6 – Combination Vehicles

Test Your Knowledge on Page 6-11

1. Which shut-off valves should be open and which closed?

Emergency line valve – closed

Service line valve – closed

Shut-off valves to trailers and dolly(ies) - open

ANSWER: Paragraph 6.5.2 on Page 6-11

2. How can you test that air flows to all trailers?

Use parking brake and/or chock wheels

Wait for normal air pressure, then push “trailer air supply” knob

ANSWER: Paragraph 6.5.2 on Page 6-11

3. How can you test the tractor protection valve?

Charge the trailer air brake system

Shut off engine and step on and off the brake pedal several times

ANSWER: Paragraph 6.5.2 on Page 6-11

4. How can you test the trailer emergency brakes?

Charge the trailer air brake system and check that the trailer rolls freely

Stop and pull out the trailer air supply control or place in “emergency” position

Pull gently on the trailer with tractor to check emergency brakes

ANSWER: Paragraph 6.5.2 on Page 6-11

5. How can you test the trailer service brakes?

Check for normal air pressure

Release the parking brakes

Move the vehicle forward slowly

Apply trailer brakes with the hand control

ANSWER: Paragraph 6.5.2 on Page 6-11

SECTION 7: DOUBLES AND TRIPLES

Subsections 7.1 – 7.4

Video – N/A

Test Your Knowledge on Page 7-4

1. What is a converter dolly?

A coupling device of one or two axles and a fifth wheel by which a semitrailer can be coupled to the rear of a tractor-trailer combination forming a double bottom rig.

ANSWER: Paragraph 7.2.1 on Page 7-2

2. Do converter dollies have spring brakes?

Some converter dollies have spring brakes. Converter dollies built on or after March 1, 1998, are required to have antilock brakes.

ANSWER: Paragraph 7.2.1 on Page 7-2

3. What three methods can you use to secure a second trailer before coupling?

Position Converter Dolly in Front of Second (Rear) Trailer

Connect Converter Dolly to Front Trailer

Connect Converter Dolly to Rear Trailer

ANSWER: Paragraph 7.2.1 on Page 7-2

4. How do you check to make sure trailer height is correct before coupling?

It must be slightly lower than the center of the fifth wheel, so trailer is raised slighted when dolly is pushed under.

ANSWER: Paragraph 7.2.1 on Page 7-2

5. What do you check when making a visual check of coupling?

There is no space between upper and lower fifth wheel. Locking jaws are closed on kingpin.

ANSWER: Paragraph 7.2.1 on Page 7-2

6. Why should you pull a dolly out from under a trailer before you disconnect it from the trailer in front?

The dolly tow bar may fly up, possibly causing injury, and making it very difficult to re-couple.

ANSWER: Paragraph 7.2.2 on Page 7-3

7. What should you check for when inspecting the converter dolly? The pintle hook?

Converter Dolly

No missing or damaged parts

Enough grease

Kingpin not damaged

All air and electrical lines are free from damage and no air leaks

If spare tire is carried on converter gear (dolly), make sure it's secured

Pintle Hook

Make sure pintle-eye of dolly is in place in pintle hook of trailer(s)

ANSWER: Paragraph 7.3.1 on Page 7-3

8. Should the shut-off valves on the rear of the last trailer be open or closed? On the first trailer in a set of doubles? On the middle trailer of a set of triples?

Rear of last trailer: CLOSED

First trailer in a set of doubles: OPEN

Middle trailer of a set of triples: OPEN

ANSWER: Paragraph 7.3.1 on Page 7-3

9. How can you test that air flows to all trailers?

Go to the rear of the rig. Open the emergency line shut-off valve at the rear of the last trailer. You should hear air escaping, showing the entire system is charged. Close the emergency line valve.

Open the service line valve to check that service pressure goes through all the trailers (this test assumes that the trailer handbrake or the service brake pedal is on), and then close the valve.

If you do NOT hear air escaping from both lines, check that the shut-off valves on the trailer(s) and dolly(ies) are in the OPEN position. You MUST have air all the way to the back for all the brakes to work.

ANSWER: Paragraph 7.4.1 on Page 7-4

10. How do you know if your converter dolly is equipped with antilock brakes?

Converter dollies built on or after March 1, 1998, are required to have antilock brakes. These dollies will have a yellow lamp on the left side of the dolly.

ANSWER: Paragraph 7.2.1 on Page 7-1

SECTION 8: TANK VEHICLES

Subsection 8.1 - Inspecting Tank Vehicles

Subsection 8.2 - Driving Tank Vehicles

Subsection 8.3 - Safe Driving Rules

Video Part 3 - Tanker Endorsement

Test Your Knowledge on Page 8-3

1. How are bulkheads different than baffles?

Liquid tanks are divided into sever smaller tanks by bulkheads.

Baffled liquid tanks have bulkheads in them with holes that let the liquid flow through.

ANSWER: Paragraph 8.2.3 & 8.2.4 on Page 8-2

2. Should a tank vehicle take curves, on ramps, or off ramps at the posted speed limits?

No. Take highway curves and on ramp/off ramp curves well below the posted speeds.

ANSWER: Paragraph 8.2.1 on Page 8-1

3. How are smooth bore tankers different to drive than those with baffles?

Forward-and-back surge is strong because there is nothing inside to slow down the flow of the liquid.

ANSWER: Paragraph 8.2.5 on Page 8-2

4. What three things determine how much liquid you can load?

The amount the liquid will expand in transit

The weight of the liquid

Legal weight limits

ANSWER: Paragraph 8.2.7 on Page 8-2

5. What is outage?

The amount of room left for liquids to expand

ANSWER: Paragraph 8.2.6 on Page 8-2

6. How can you control surge?

Steady pressure on the brakes - don't release too soon when stopping

Brake far in advance of a stop and increase following distance

ANSWER: Paragraph 8.3.2 on Page 8-2

7. What two reasons make special care necessary when driving tank vehicles?

High center of gravity & danger of surge

ANSWER: Paragraph 8.2.1 & 8.2.2 on Page 8-1

(NOTE: Questions 5, 6, & 7 are not on the video.)

SECTION 9: HAZARDOUS MATERIALS

Subsection 9.1 – The Intent of the Regulations

Subsection 9.2 – Hazardous Materials Transportation – Who Does What

Subsection 9.3 – Communication Rules

Video Part 7 – Hazardous Materials

Test Your Knowledge on Page 9-10

1. Shippers package in order to _____ the material.

Protect

ANSWER: Paragraph 9.1.1 on Page 9-2

2. Drivers placard their vehicle to _____ the risk.

Minimize or reduce

ANSWER: Paragraph 9.1.3 on Page 9-2

3. What three things do you need to know to decide which placards (if any) you need?

The hazard class of the materials

The amount of hazardous materials shipped

The total weight of all classes of hazardous materials in your vehicle

ANSWER: Paragraph 9.3.10 on Page 9-8

4. A hazardous materials identification number must appear on the _____ and on the _____. The identification number must also appear on cargo tanks and other bulk packaging.

Shipping paper(s)

Package

ANSWER: Paragraph 9.3.3 on Page 9-5

5. Where must you keep shipping papers describing hazardous materials?

In a pouch on the driver's door, or

In clear view within immediate reach while the seat belt is fastened while driving, or

On the driver's seat when out of the vehicle

ANSWER: Paragraph 9.3.1 on Page 9-3

SECTION 9: HAZARDOUS MATERIALS

Subsection 9.4 – Loading and Unloading

Video Part 7 – Hazardous Materials

Test Your Knowledge on Page 9-12

1. Around which hazard classes must you never smoke?

Class 1 Explosives

Class 2.1 Flammable Gas

Class 3 Flammable Liquids

Class 4 Flammable Solids

Class 5 Oxidizers

ANSWER: Paragraph 9.4.1 on Page 9-10

2. Which three hazard classes should not be loaded into a trailer that has a heater/air conditioner unit?

Class 1 Explosives

Class 2.1 Flammable Gas

Class 3 Flammable Liquids

ANSWER: Paragraph 9.4.1 on Page 9-10

3. Should the floor liner required for Division 1.1 or 1.2 materials be stainless steel?

No. The liner for Division 1.1, 1.2, or 1.3 (Class A or B Explosives) must be tight and must be either non-metallic material or non-ferrous metal.

ANSWER: Paragraph 9.4.1 on Page 9-11

4. At the shipper's dock, you're given a paper for 100 cartons of battery acid. You already have 100 pounds of dry Silver Cyanide on board. What precautions do you have to take?

Do not load Division 6.1 (Cyanides or cyanides mixtures) in the same vehicle with acids, corrosive materials, or other acidic materials which could release hydrocyanic acid.

ANSWER: Paragraph 9.4.1 on Page 9-12

5. Name a hazard class that uses transport indexes to determine the amount that can be loaded in a single vehicle.

Class 7 (Radioactive) Materials

ANSWER: Paragraph 9.4.1 on Page 9-11

SECTION 9: HAZARDOUS MATERIALS

Subsection 9.5 – Bulk Packaging Marking, Loading, and Unloading

Video Part 7 – Hazardous Materials

Test Your Knowledge on Page 9-13

1. What are cargo tanks?

Bulk packaging permanently attached to a vehicle.

ANSWER: Subsection 9.5 on Page 9-12

2. How is a portable tank different from a cargo tank?

The portable tank is not permanently attached to a vehicle.

ANSWER: Subsection 9.5 on Page 9-12

3. Your engine runs a pump used during delivery of compressed gas. Should you turn off the engine before or after unhooking hoses after delivery?

Before

ANSWER: Paragraph 9.5.4 on Page 9-13

SECTION 9: HAZARDOUS MATERIALS

Subsection 9.6 – Hazardous Materials –Driving and Parking Rules

Subsection 9.7 – Hazardous Materials - Emergencies

Video Part 7 – Hazardous Materials

Test Your Knowledge on Page 9-19

1. If your placarded trailer has dual tires, how often should you check the tires?

At the start of each trip and when you park

Each time you stop

ANSWER: Paragraph 9.6.9 on Page 9-14

2. What is a safe haven?

An approved place for parking unattended vehicles loaded with explosives

ANSWER: Paragraph 9.6.1 on Page 9-14

3. How close to the traveled part of the roadway can you park with Division 1.2 or 1.3 materials?

Never park within 5 feet of the traveled part of the road

ANSWER: Paragraph 9.6.1 on Page 9-13

4. How close can you park to a bridge, tunnel, or building with the same load?

Park 300 feet away except for short periods of time needed for vehicle operation necessities (e.g., fueling)

ANSWER: Paragraph 9.6.1 on Page 9-13

5. What type of fire extinguisher must placarded vehicles carry?

UL rating of 10 B:C or more

ANSWER: Paragraph 9.6.8 on Page 9-14

6. You're hauling 100 pounds of Division 4.3 (dangerous when wet) materials. Do you need to stop before a railroad-highway crossing?

Yes. 15 to 50 feet

ANSWER: Paragraph 9.6.12 on Page 9-15

7. At a rest area you discover your hazardous materials shipments slowly leaking from the vehicle. There is no phone around. What should you do?

Park the vehicle

Secure the area

Stay there

Send someone for help

ANSWER: Paragraph 9.7.3 on Page 9-16

8. What is the Emergency Response Guide (ERG)?

Department of Transportation's guidebook for firefighters, police, and industry workers on how to protect themselves and the public from hazardous materials

ANSWER: Paragraph 9.7.1 on Page 9-15