

Vehicle Inspections

Presented by
Frontier Supply Chain Solutions Inc.

INSPECTING THE TRUCK

Inspection Points

INSPECTION POINTS

There is no rule about how you and Rick should complete an inspection, as long as you check all the required components and systems. You should be checking for the following five characteristics:

1. All components must be properly mounted and secured
2. All nuts and bolts securing a component must be present and tight
3. Components must not be cracked, bent or broken
4. For anything made of rubber, the component should have no abrasions, bubbles, cuts or dry rot
5. For anything that has air flowing through it (hoses, pipes, etc.), there should be no leaks.

Remember! The most frequent violations found by roadside inspectors can be remembered using the acronym BLT: brakes, lights, tires. As you do your inspection, pay special attention to these components!

INSPECTING THE TRUCK

Preparing for the Inspection

PREPARING FOR THE INSPECTION

Before you begin, you and Rick must make sure that you have your permit book. Check that all permits are up to date and do the following:

- Check the vehicle identification number to verify that you are inspecting the correct vehicle.
- Make sure there is a valid registration sticker on the license plate and a valid annual inspection sticker on the driver's side window.
- Chock your wheels to prevent the vehicle from rolling.
- Put on protective equipment, such as gloves and safety glasses.

Turn off the engine and keep the keys with you as you begin. Make sure you use the safety latches on the hood so it does not fall on you - pay extra attention to this on windy days!

STEP 1: APPROACH THE VEHICLE

Your inspection should always begin as you approach the vehicle. As you approach, check the following:

- There are no hazards that may cause damage to the vehicle or be damaged by the vehicle.
- There are no visible leaks underneath the vehicle (fuel, hydraulic brake fluid, oil, power steering fluid, coolant, windshield washer fluid).
- That the vehicle is not leaning to one side. Leans can be a flat steer tire, any part of the suspension, or load shift from a fast turn or sudden stop.
- The general condition of the vehicle (including windshield, wipers, hood, grill, mirrors, lights, antennas, fairing, bumper and license plate).

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Step 1: Approach the Vehicle

STEP 2: THE ENGINE AREA

As you and Rick inspect both the driver and passenger side of the engine, you will move around the front of the vehicle. As you go, use your cloth to clean off mirrors, lamps and reflectors.

Check that the following are properly mounted and secure, and that they have no cracks, abrasions or other damage:

- Signal lights, headlamps and reflectors
- Mirrors
- Vehicle body
- Bumper area and license plate
- Grill area

The hood latches should be present and secure, and should hold the hood closed. When there is a missing or inoperative hood latch or safety cab lock, there is a defect.

Note: Combine your vehicle inspection with a C-TPAT inspection by also checking for any signs of tampering or hidden compartments.

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Step 2: The Engine Area

FLUIDS, BELTS AND HOSES

All engines are configured differently, and you and Rick may have different approaches to inspecting them. Some people start from the passenger side, and some from the driver's side. In this course, we will look at the main systems that must be checked, but the order in which you do this is up to you as a professional driver. Rick starts from the driver's side and moves to the passenger side.

First, let's review the fluids that you and Rick must check during an inspection. Make sure that all caps are tight and secure during this check.

They include the following:

- Oil
- Hydraulic brake fluid
- Power steering fluid
- Windshield washer fluid
- Coolant

As you proceed through the inspection, make sure you check all:

- Belts
- Hoses and clamps
- Wires

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Fluids, Belts and Hoses



ENGINE COMPONENTS

Let's look at the other parts of the engine area that you and Rick must inspect before heading out.

They include:

- The truck frame and inner hood
- Steering system
- Air compressor, hoses and air lines
- Radiator, air intake and water pump
- Fan
- Exhaust

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Engine Components

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Suspension and Brakes

SUSPENSION AND BRAKES

Parts of the suspension and brake systems are located throughout the vehicle, and must be checked at each location. In the engine area, you will check the suspension system and brakes around each of the steer tires.

Suspension system

Check the following on both the driver and passenger side of the vehicle:

- Leaf springs
- Air ride suspension
- Spring mounts
- U-bolts
- Shock absorbers

Brake system

As you inspect the driver and passenger sides, check the following:

- Brake drums, hoses and shoes
- Brake lining
- Slack adjuster and pushrod stroke indicators.

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Wheels, Rims and Tires

WHEELS, RIMS AND TIRES

Lastly, in the engine area, check your steer tires, along with your wheels and rims.

Tires

Remember, your tires will lose at least 2 psi per week (and more during colder months).

Check the tires on both the driver and passenger side for the following:

- Inflation
- Condition
- Depth

Wheels

Check the wheels and rims on both the driver and passenger sides of the vehicle for the following:

- Tightness of lug nuts
- Missing parts
- Signs of looseness
- Hub oil level

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Steps 3 and 7: Driver and Passenger Sides

STEPS 3 AND 7: DRIVER AND PASSENGER SIDES

The third and seventh steps in your vehicle inspection are the driver and passenger sides of the vehicle. At this point, you can turn on your vehicle lights to check whether they are operating correctly as you continue walking around your vehicle.

On each side, check that the vehicle's body is free of dents, abrasions or other damage as well as the following items:

- Mirrors and glass
- Door operation
- Grab handles and steps
- Storage compartments
- Emergency equipment
- Battery
- Fuel tanks and DEF
- Air Tanks (if applicable)

Note: During a C-TPAT inspection, you should be looking for any concealed contraband or false compartments in these locations.

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Steps 4 and 6: Cargo Area

STEPS 4 AND 6: CARGO AREA

When you inspect the left and right sides of the cargo area of your vehicle, you and Rick are inspecting the same items on each side. Check the following:

- Frame and body
- Lights and reflectors
- Placards (if hauling hazmat)

After inspecting the sides, you and Rick must inspect underneath your vehicle as well. Remember to bring your flashlight with you to get a good look at your rims and brakes. Check the following:

- Brakes
- Rims
- Cross members and frame
- Differential

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Step 5: Rear of the Vehicle

STEP 5: REAR OF THE VEHICLE

At the rear of the truck, check the following on both the right and left sides:

Lights. Check all parking lights, turn indicators and reflectors at the back of the vehicle for any cracks, damage or condensation. If you have a light above the rear license plate, check that as well. They should all be operating normally.

Dual Tires. For each tire, check condition, inflation and tread depth. Make sure there is no debris lodged between the duals and they are not rubbing. When you have spacers, make sure they are not cracked, bent, or welded.

Wheels. For each wheel, check the following:

- Tightness of lug nuts
- Any missing parts
- Signs of leaking, rust or welding
- Hub oil level

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Step 5: Rear of the Vehicle

STEP 5: REAR OF THE VEHICLE

At the rear of the truck, check the following on both the right and left sides:

Frame. Check the frame for any cracks or damage as well as missing bolts.

Mud Flaps. Check that the mud flaps are not excessively worn or torn and they hang down to at least the center of the axle. They should be securely mounted with no loose or missing nuts/bolts.

Suspension. Check for any leaks and the condition of the following:

- Shock absorbers, torque rod arms and bushings
- Springs and spring hangers
- U-bolts



REAR DOOR AREA

At the rear door area of your truck, check the following:

- Lights and reflectors. Check for cracks or damage and that lights are functioning properly.
- Frame and body. Check for any damage to the frame or body.
- Bumper. The bumper should be secure and in good condition.
- License plates. The plate should be current, in place and secure.
- Cargo securement. Check that cargo is secured correctly with the required number of tiedowns.
- Placards (if hauling hazmat). Make sure that you have the proper placards displayed on the back of your vehicle if your cargo includes hazardous materials.

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Rear Door Area

CHECKING INSIDE THE CARGO AREA

Before you head out, inspect the inside of your cargo area if you can. In some cases, you won't be able to because your vehicle is sealed (as shown). In this situation, double-check the seal is secure by pulling down on it and twisting it. Report any problems with a seal to your carrier.

Even when your vehicle is sealed, you can still look for the following on the doors themselves and within the cargo area.

On the rear doors. Look for:

- Any damage to the rear doors (on the inside and out)
- That the doors open and close properly
- That the doors latch properly

Inside the cargo area. Look for:

- Any damage to the floors or walls
- Debris and loose objects on the floor
- Proper cargo securement through blocking and bracing

Note: When you are doing a C-TPAT security inspection, check for evidence of false floors and walls inside the trailer.

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Checking Inside the Cargo Area

STEP 8: THE CAB AREA

In this step, you and Rick will inspect the interior of the cab. When you get into the cab, adjust your seat and put on your seatbelt. Make sure that both are functioning normally.

Then check the following:

- Pedals
- Gauges and controls
- Mirrors and interior lights

Note: When your vehicle has ABS, check that your ABS light comes on briefly when you start the engine. If the ABS light does not come on or stays on, there is a defect.

When your vehicle is equipped with air brakes, perform the in-cab brake tests.

Rick has already inspected the condition and operation of all his exterior lights and reflectors as he walked around his vehicle.

He has also checked the pushrod indicators for each of his air brake chambers while the brakes were released. Now, he can make a brake application with his service brake application tool and check that his brakes are within adjustment limits.

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Step 8: The Cab Area

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Topic Three Review: Inspecting the Truck

TOPIC THREE REVIEW: INSPECTING THE TRUCK

Rick has now completed the inspection of his truck. He approached the vehicle and took note of any signs of leaks, whether it was leaning to one side and the general condition of the vehicle. He then checked that the vehicle inspection sticker and the plate registration sticker were valid.

He put on protective gloves and began with the front of the vehicle, looking at the condition of lights, reflectors, mirrors, the bumper area and grill. He proceeded to then do an engine inspection and checked components on both the left and right sides of the engine. These components included fluids, belts, hoses as well as the steering, air and exhaust, suspension and cooling systems. Before continuing on, Rick turned on his lights to check that they were operating normally.

For each axle, Rick inspected the brake and suspension systems, as well as the wheels and tires. He checked the inflation, condition and tread depth of each tire and checked each wheel for secure fasteners and signs of leaks.

On the driver and passenger sides of the vehicle, Rick inspected the doors and storage compartments, as well as the steps and handholds. He inspected the air tanks, fuel tanks and battery to make sure they were secure and not leaking. He inspected the sides of the cargo area and the undercarriage, getting right underneath to check the brakes, rims and cross beams. He continued to the rear of the vehicle to check the rear door, lights, bumper and license plate.

Finally, Rick did his in-cab inspection, putting on his seat belt and checking all gauges, pedals and controls. He then applied his brakes to do a final walkaround to check that the pushrod stroke of all brakes was within adjustment limits.