

Pre-Trip Inspection Cheat Sheet For Class "A" CDL Tractor-Trailer

Keys to Pre-Trip Inspection

- When you do your inspection, point to or touch the things you are inspecting and explain what you are looking for on the outside of the vehicle.
- Once you have explained how to inspect an item that appears in several different places on the vehicle, you do not have to repeat the explanation every time you come to the item. For example there are lug nuts on every wheel. Once you have correctly explained to the examiner what you are looking for when inspecting the lug nuts, you do not have to give the examiner the same explanation every time a wheel is inspected. If an item has been explained at least once, the driver only needs to mention its name and indicate that they are inspecting it.
- You will use some phrases to describe the parts over and over again, such as "Securely mounted", "none broken or missing", etc.
- When you do the inspection you will work from the front to the rear and center out towards the outside, as well as from the top to the bottom.
- The axles make up over 50% of your test; once you know one axle you basically know them all. You simply need to know the difference between the steer, drive and trailer axles. And that is the drives have air bags and an axle seal, the trailer has a spacer between the duals and a hub oil seal. No shocks or air bags.
- Follow the list in the order it is written and it will keep you from bouncing around on the tractor and trailer. You have 30 minutes to complete your pre-trip in so just follow the list and do not add to it or take away and you will have no problems.

FRONT OF TRACTOR:

- » Check for LEAKS under the tractor.
- » LIGHTS and REFLECTORS - none missing or broken.
- » Open the HOOD.

ENGINE COMPARTMENT:

- ALTERNATOR - point at and say:
- » Securely mounted.
 - » Belt - not cracked or frayed.
 - » No more than 3/4 inch of play in belts.

WATER PUMP - point at and say:

- » Securely mounted.
- » Not leaking.
- » No more than 3/4 inch of play in belts.

HOSES/CLAMPS - point at and say:

- » Clamps are securely fastened.
- » Hoses appear to be in good condition and not leaking.

ENGINE OIL - point at dipstick and say:

- » Check dipstick, oil level should be between ADD and FULL.

COOLANT LEVEL - point at reservoir and say:

- » Check level should be between ADD and FULL.

POWER STEERING FLUID RESERVOIR - point at reservoir and say:

- » Check level should be between ADD and FULL.
- » Note that the power steering unit is gear driven.

AIR COMPRESSOR - point at and say:

- » Securely mounted, not missing any bolts.
- » Note that it is gear driven.
- » HOSES - Connection tight, not cracked or frayed.

STEERING BOX - point at and say:

- » Securely mounted.
- » No leaks.
- » HOSES - Connection tight, not cracked or frayed.

STEERING LINKAGE - Must identify and check the following parts:

- » PITMAN ARM - Securely mounted not bent or cracked.
- » CASTLE BOLT & COTTER PIN – Intact.
- » DRAG LINK - Securely mounted and not bent or cracked or worn.

STEER AXLE:

NOTE: For the most part, each axle is very much the same with very few exceptions. Therefore if you know one axle you basically know them all. Concentrate on remembering the differences between the axles. Remember you will work from the center out identifying all of the parts as you go.

STEER AXLE BRAKES & SUSPENSION - point at and say:

- » SPRING MOUNTS - Front, middle, rear securely mounted, not missing bolts, not cracked or broken, not missing any parts.
- » LEAF SPRINGS - No cracked, broken, missing or shifted leaf springs.
- » SHOCK ABSORBERS - Securely mounted and not leaking.
- » BRAKE AIR HOSE - Securely mounted and not cracked, frayed, worn.

- » BRAKE CHAMBER - Securely mounted and not cracked or dented.
- » SLACK ADJUSTER - No more than 1 inch of play at a 90-degree angle.
- » BRAKE LININGS AND DRUMS - Not cracked or broken and not excessively worn.

STEER TIRE - point at and say:

- » A.B.C.'s - Check tire for Abrasions, Bruises and Cuts on inside and outside of tire.
- » TIRE DEPTH - Check tire depth no less than 4/32 of an inch.
- » TIRE PRESSURE - Check tire pressure with a gauge.

OUTSIDE OF AXLE - point at and say:

- » RIM - No cracks or unauthorized welds make sure the rim is not bent.
- » LUG NUTS - None missing, none broken, all are tightened and no rust drippings, which would indicate, loose lug nuts.
- » HUB OIL SEAL - Securely mounted, not leaking, check oil level through the sight.

Now you are done with the front of the tractor. We start moving towards the back identifying the parts as we go. The next area is the side of the cab.

SIDE OF CAB

- » MIRROR BRACKET - Securely mounted and no missing bolts.
- » DOOR - Operates properly.
- » FUEL TANK - Securely mounted and not leaking. Make sure the cap is tight.
- » EMERGENCY EQUIPMENT - check the side box for the following items:
- » FIRE EXTINGUISHER - fully charged, and securely mounted.
- » 3 REFLECTIVE TRIANGLES
- » SPARE FUSES - one for each type of fuse you have in the truck.
- » BATTERY BOX - Securely mounted, check battery connections make sure they are tight and no corrosion. If not self-contained (maintenance free) check for proper fluid levels.

BETWEEN TRACTOR & TRAILER

- » REAR CAB LIGHT AND REFLECTORS - not broken or missing.
- » EXHAUST - Securely mounted, look for carbon soot or rust, which would indicate leaks. Exhaust system should have no cracks, holes, or severe dents.
- » CATWALK - Make sure it is solid and securely mounted.
- » DRIVE SHAFT - Securely mounted and not bent or cracked.
- » TRUCK FRAME - Not bent, no unauthorized drills or welds, no loose or missing cross members.
- » AIR & ELECTRICAL LINES - Securely mounted at both the tractor and trailer. Make sure hoses are in good condition, no holes or not worn.
- » TRAILER HEADER BOARD - (that is the front of the trailer) No holes or missing rivets, cracks, bulges or holes.
- » LIGHTS AND REFLECTORS - On front of trailer, none missing or broken.

FRONT DRIVE AXLE ON TRACTOR:

NOTE: Remember we start at the center and work our way out towards the outside edge. That way you are not bouncing around and missing items. Identify each item as you work your way out.

BRAKES & SUSPENSION - point at and say:

- » BRAKE AIR HOSES - Securely mounted and not cracked, frayed or worn.
- » BRAKE CHAMBER - Securely mounted and not cracked or dented.
- » SLACK ADJUSTER - No more than 1 inch of play at a 90-degree angle.
- » SHOCK ABSORBERS - Securely mounted and not leaking.
- » AIR BAGS - Securely mounted and not leaking. Note: Air bags are on the drive axles of the tractor only.
- » SPRING MOUNTS - Front, middle, and rear, securely mounted, not missing bolts, not cracked or broken, not missing any parts.

- » TORQUE BAR - Securely mounted, not bent or broken, and not missing any parts.
- » LEAF SPRINGS - No cracked, broken, missing or shifted leaf springs.
- » BRAKE LININGS AND DRUMS - Not cracked or broken and not excessively worn.

TIRES - Both Inner and Outer - point at and say:

- » A.B.C.'s - Check tire for Abrasions, Bruises and Cuts on both inside and outside of tires.
- » TIRE DEPTH - Check tire depth, on both tires it should be no less than 2/32nd of an inch.
- » TIRE PRESSURE - Check tire pressure both tires with a gauge.
- » Check for debris between tires

OUTSIDE OF AXLE - point at and say:

- » OUTER RIM - No cracks or unauthorized welds and make sure the rim is not bent.
- » LUG NUTS - None missing, none broken, all tightened and no rust drippings.
- » AXLE SEAL - Securely mounted, not leaking.

*** Now repeat the same steps on the rear axle.

Then start on the fifth wheel assembly. Do the side of the fifth wheel first while you are there. Then go to the back of the fifth wheel.

FIFTH WHEEL AREA:

- » APRON - Not cracked or broken.
- » FIFTH WHEEL PLATFORM - Not cracked, broken or bent. No space between the platform and the apron (no gap).
- » RELEASE ARM - Properly stowed.
- » SAFETY LATCH - Properly engaged.
- » LOCKING PINS - Fully extended (locked). (This is only on sliding fifth wheels).

- » MOUNTING NG BOLTS - None missing, none broken.
- » KINGPIN - Not bent.
- » LOCKING JAWS - Properly locked around the king pin

REAR OF TRACTOR:

- » LIGHTS & REFLECTORS - None missing, none broken.
- » SPLASH GUARDS - Securely mounted, not missing.

TRAILER BODY:

- » LANDING GEAR - Fully raised, has no missing parts, crank handle is secure, and support frame and landing pads are not damaged.
- » FRAME UNDER THE TRAILER - (check at front) no cracked missing or loose cross members. No signs of holes or cracks in trailer floor.
- » LIGHTS & REFLECTORS - None missing, none broken (on side of trailer).
- » FRAME UNDER THE TRAILER - check at middle of trailer like you did at front.

SLIDING TRAILER TANDEM:

- » FRAME OF TANDEM ASSEMBLY - Not cracked or bent.
- » RELEASE ARM - Properly stowed.
- » SAFETY PIN - Properly engaged. (Not all trailers have this).
- » LOCKING PINS - Properly (fully) locked and secured.

TRAILER AXLES:

NOTE: Remember we start from the center and work our way out towards the outside edge that way you are not bouncing around and missing items. Identify each part as you work your way out.

FRONT TRAILER AXLE: remember work from center out.

BRAKES & SUSPENSION - point at and say:

- » BRAKE AIR HOSES - Securely mounted, and not cracked, frayed or worn.
- » BRAKE CHAMBER - Securely mounted, not cracked or dented.
- » SLACK ADJUSTER - No more than 1 inch of play at a 90 degree angle.
- » TORQUE BAR - Securely mounted, not bent or broken, and not missing any parts.
- » SPRING MOUNT - Front, middle, and rear securely mounted, not missing bolts, not cracked or broken, not missing any parts.
- » LEAF SPRINGS - No cracked, broken, missing, or shifted leaf springs.
- » BRAKE LININGS AND DRUMS - Not cracked broken or excessively worn.

TIRES – Both Inner and Outer - point at and say:

- » A.B.C.'s - Check tire for Abrasions, Bruises and Cuts on both inside and outside of tire.
- » TREAD DEPTH BOTH TIRES - Check tread depth of tire, should be no less than 2/32nd of an inch.
- » TIRE PRESSURE BOTH TIRES - Check tire pressure with a gauge.
- » CHECK BETWEEN TIRES - Check between tires for debris and condition of spacers it should not be bent, damaged and no holes or rusted through.

OUTSIDE OF AXLE - point at and say:

- » OUTER RIM - No cracks and no unauthorized welds, make sure the rim is not bent.
- » LUG NUTS - None missing, none broken, all are tightened and no rust drippings.
- » HUB OIL SEAL - Securely mounted, not leaking, check the oil level through the sight glass.

*** Now repeat the same steps on the rear axle.

SIDE AND REAR OF TRAILER:

- » SIDE DOOR TIES - Securely mounted and not missing.
- » DOORS - All locks, hinges, ties, securely mounted and operational and doors are in good condition.
- » SPLASH GUARDS - Securely mounted and not missing.
- » LIGHTS AND REFLECTORS - None missing, none broken.

Now you are done with the outside of the truck the next thing you will do is close the hood, and then do the in cab inspection and air brake test.

NOTE: Failure to perform the air brake test will result in an automatic failure for the pre-trip test!

IN CAB INSPECTION:

- » Close the HOOD

With the TRUCK OFF check the following:

- » SEAT BELT - Securely mounted, properly extends and retracts, latches properly.
- » CITY HORN - Check to make sure it is operational.
- » AIR HORN - Check to make sure it is operational.
- » MIRRORS - Adjusted to your vision.
- » WINDSHIELD - No cracks and no obstructions.
- » CLUTCH - Check for proper tension and free play, then depress the clutch.
- » START TRUCK - Clutch in, check for neutral, parking brakes ON.

NOTE: When you start the truck up the clutch must be pushed in and make sure the transmission is in neutral, and the parking brakes are set.

With the TRUCK ON check the following:

- » OIL PRESSURE GAUGE - Must rise within 5 seconds or you have to shut the truck off.

- » WATER TEMPERATURE GAUGE - Check to see if water is rising to proper temperature.
- » VOLTMETER - Between 12 and 15 volts.
- » AIR PRESSURE GAUGE - Check to see if air pressure is rising to proper level between 90 - 125 psi.
- » STEERING WHEEL - Check for proper play no more than 2 inches on a 20 inch wheel.
- » HEATER & DEFROSTER - Check to make sure they are operational.
- » WINDSHIELD WIPERS/FLUID - Check to make sure wipers are operational and in good condition, and the washer has fluid in it and is operational.

NOTE: The next items you will check the lights; ask the examiner if he/she would assist you in performing this test.

LIGHTS:

- » BRAKE LIGHTS - Check rear of tractor and rear of trailer.
- » HEADLIGHTS - Operational, check both low and high beams and indicator light on dash. Also at this time make sure your dash lights are working.
- » PARKING LIGHTS - Make sure all are operational on both the tractor and trailer.
- » MARKER LIGHTS - All are operational, on front of tractor, front, sides and rear of trailer.
- » TURN SIGNALS - Check LEFT turn signal on the front and rear of tractor, side and rear of trailer; also check the indicator light on the dash.
- » Check RIGHT turn signal on the front and rear of the tractor, side and rear of trailer; also check the indicator light on the dash.
- » 4 WAY / HAZARDS - Make sure all are operational, on both front and rear of tractor, and the sides and rear of trailer, also check the indicator lights on the dash.

TRACTOR PARKING BRAKE TEST:

(With engine still running)

Purpose is to ensure the tractor parking brake will hold even if the force of the engine is pushing against it.

NOTE: When testing the tractor parking brake do not let the clutch out completely. Do the test in 2nd gear and ease the clutch out until you feel it start to pull against the brakes.

- » Push IN the TRAILER AIR SUPPLY (red) valve, this releases the trailer brakes. Leave the TRACTOR PARKING BRAKE (yellow) valve OUT.
- » Push in the clutch and put the transmission in second gear.
- » Slowly release the clutch until you feel the tension of the engine pulling against the TRACTOR PARKING BRAKE.... Does the unit stay in place?
- » Push the clutch in again, leave the tractor in gear and shut off the engine by turning the key to the left.
- » After the engine has stopped running turn the key back to the right you will need the electric on for the rest of the tests.

Keys to the Brake Tests

- When testing the tractor parking brake do not let the clutch out completely. Do the test in 2nd gear and ease the clutch out until you feel it start to pull against the brakes.
- You MUST shut the tractor OFF for the other 3 tests. If you leave the unit on the compressor would automatically keep the air pressure built up and you could never force it to loose pressure.
- After you turn the tractor off for the brake tests turn the key back on right away, that way you will not forget to turn it back on. You will need the electrical system to be on in order to do the Emergency Warning Test.
- When checking the spring brakes you have to push in on the yellow valve on the dash, when you do this make sure the red one does not pop out on you, make sure they are both depressed.
- When you are pumping / fanning the brakes down on the spring brake test sometimes the valves do not pop out together if this happens DO NOT pull out on the 2nd valve, just continue to pump the brakes down until they both pop.

REMEMBER: Failure to perform any of the 3 air brake tests correctly will result in an automatic failure for the pre-trip test.

AIR BRAKE TESTS:

(Truck OFF, electric ON, truck in gear.)

AIR LOSS TEST - The purpose of this test is to make sure you do not have any air leaks.

- » Turn on the electric by turn the key to the right and make sure the unit is still in gear.
- » Push IN the TRACTOR PARKING BRAKE (yellow) valve. You now have no brakes engaged on either the tractor or the trailer. The fact that you are in gear is what keeps the truck from moving. Make sure the red valve stays IN.
- » Push lightly on the brake pedal. Wait a few seconds for the initial air loss then hold the brake pedal down for 1 minute, watch the air gauge to see if you loose pressure. You should not loose more than 4 psi in 1 minute. If you do there is a problem (an air leak).

EMERGENCY WARNING TEST - The purpose of this test is to make sure that the emergency warning light & buzzer are working properly.

- » Begin fanning / pumping the brakes by pushing down and releasing the brake pedal. This will cause the system to loose air.
- » Watch the air pressure gauge to see if the LOW AIR PRESSURE WARNING LIGHT comes on. You should also hear the LOW AIR PRESSURE BUZZER they should come on before or at (but no lower than) 60 psi.

EMERGENCY / SPRING BRAKE TEST - The purpose of this test is to make sure your emergency spring brakes will engage properly in the event of an air loss.

- » Continue fanning the brakes forcing the system to loose more pressure.
- » Watch the air pressure gauge and both the red and yellow valves, around 20 to 45 psi the emergency spring brakes should come on forcing the valves to pop out.
- » Once both valves have popped out press in the clutch, put the transmission in neutral and start the truck back up. Build the air back up to the proper level of between 90 to 125 psi.