

Pre-Trip Inspection

My pre-trip begins as I approach the vehicle. I am looking for leaks, leaning one way or the other (which may indicate a low tire or bad suspension).

Hint: Start at the bottom and work your way up.

License plate – Secure, clean and up to date.

Bumper – Secure, not cracked, bent or broken.

Grill – Secure, not cracked, bent or broken and free of debris.

Headlights - Secure, not cracked, and clean.

Fender mirrors - Secure, not cracked, bent or broken and clean (grab mirrors on both sides).

Marker lights – (at top of tractor) Secure, not cracked, all present and not broken.

Open the hood

****Passenger side****.

Oil dipstick – Must be at safe operating level.

Oil fill tube - Secure, not cracked, bent or broken and does not leak.

Turbo - Secure, not cracked, bent or broken and not leaking.

Alternator - Secure, not cracked, bent or broken.

Alternator wires – Secure, (BBCCFTC) not burnt, broke, cut, cracked, frayed, taped or corroded.

Alternator belts – Secure, not cut, broke, frayed, no more than 1/2” play and none missing.

Water pump - Secure, not cracked, bent or broken and not leaking.

Radiator & radiator hoses - Secure, not cracked, bent or broken and not leaking. Clamps are secure and tight.

Antifreeze level – If equipped with a sight glass, check to make sure it is at a safe operating level. If not – remove radiator cap (when fluid is cold) and check for safe operating level.

Fan shroud - Secure, not cracked, bent or broken.

Fan blades - Secure, not cracked, bent or broken and none missing.

Frame – Secure, not cracked, bent or broken, and no man-made welds.

Drivers side

Water pump - Secure, not cracked, bent or broken and not leaking.

Fan blade belts - Secure, not cut, broke, frayed, no more than 1/2” play and none missing.

Power steering reservoir - Secure, not cracked, bent or broken and not leaking. Fluid is at proper level.

Air compressor and air lines - Secure, not cracked, bent or broken and not leaking.

Starter - Secure, not cracked, bent or broken. Wires are not (BBCCFTC) not burnt, broke, cut, cracked, frayed, taped or corroded.

Frame – Secure, not cracked, bent or broken, and no man-made welds.

Steering

Steering wheel shaft - Secure, straight, not cracked, bent or broken.

U-joints - Secure, not cracked, bent or broken, and properly greased.

Steering gear box - Secure, not cracked, bent or broken and not leaking.

Pittman arm, drag link, steering knuckle, and tie rod – Secure, not cracked, bent or broken and not leaking.

Front Suspension

Spring hangers - Secure, not cracked, bent or broken.

Springs - Secure, straight, no more than 25% cracked or broken, none missing.

U-bolts and saddle – Secured to axle, not cracked, bent or broken.

Shocks - Secure, not cracked, bent or broken and not leaking.

Brakes

Air lines to brake chamber – Secure to frame and brake chamber, not cracked, bent or broken and not leaking.

Brake chamber and clamp - Secure, not cracked, bent or broken and not leaking, and all bolts are tight.

Push rod slack adjuster – Secure with a pin and cotter pin, not cracked, bent or broken. No more than 1" of play in slack adjuster.

S-cam shaft to s-cam roller - Secure, not cracked, bent or broken.

Brake shoes - Secure, not cracked, bent or broken. No less than 1/4" of wear left on pads. Free of oil, grease, and debris.

Brake drum - Secure, not cracked, bent or broken. Is round, no excessive wear, no man made welds. Free of oil, grease, and debris.

Steer tires

Same size, same type. Cannot be recapped or regrooved. Tread depth should be no less than 4/32" in all major grooves. Should not have any tread separation, cuts, cupping or bulging anywhere on tire.

Valve stem - Secure, straight, not cracked, bent, broken or leaking. All valve caps are present and tight. Tire pressure should be between 100 – 110 PSI checked cold and with a tire gauge **only**.

Rim

Rim - Secure, not cracked, bent or broken, is round and no man-made welds

Lug nuts – Secure, none missing, and appear to be tight. On aluminum rims look for white powder, on steel rims look for rust, which would indicate a loose lug nut. If loose, tighten with a lug wrench.

Hub - Secure, not cracked, broken or leaking. All bolts are present and appear to be tight. If there is a sight glass make sure the oil is at its proper level. Otherwise, open cap and make sure there is at least 1” of 90 weight gear lube.

Fuel tank

Secure to frame, with no less than 2 metal bands with rubber backing to prevent against excessive wear and corrosion. It is not cracked, broken or leaking.

Fuel cap – Secure, with a soft pliable rubber seal, not cracked, bent, broken or leaking.

Steps - Secure, not cracked, bent or broken. No sign of excessive wear, free of oil, grease, and debris.

Windshield washer reservoir - Secure, not cracked, bent or broken and not leaking. Fluid is at proper level.

Drive Shafts

Secure, straight, not cracked, bent or broken.

U-joints - Secure, not cracked, bent or broken, and properly greased.

Frame

Secure, not cracked, bent or broken, and no man-made welds. Air tank and relay valve – secure, not cracked, bent or broken and not leaking.

Catwalk and steps

Secure, straight, not cracked, bent or broken. All bolts are present and tight, no excessive wear, free of oil, grease, and debris.

Battery box

Secure, straight, not cracked, bent or broken. No excessive wear, free of oil, grease, and debris.

Batteries - Secure, not cracked, broken or leaking. All wires and connectors are not (BBCCFTC) not burnt, broke, cut, cracked, frayed, taped or corroded. Batteries that are not maintenance free must be checked by removing caps and checking fluid level.

Air and electrical lines (point to or grab while explaining).

Air lines – Properly hung, not dragging on catwalk. Secure to tractor, not cut, cracked, bent, broken or leaking.

Glad hands – Secure to trailer in the locked position. Not cracked, bent, broken or leaking.

Seals – Soft pliable rubber grommets. Not cut, cracked, broken or leaking.

Electrical line – Secure to tractor and trailer with 7 pins, 7 receivers with safety latch in position. They are not (BCCFTC) not burnt, broke, cut, cracked, frayed, taped or corroded.

Suspension – drive tires

Spring hangers – Secure to frame, not cracked, bent or broken.

Springs - Secure, straight, no more than 25% cracked or broken, none missing.

U-bolts and saddle – Secured to axle, not cracked, bent or broken.

Shocks - Secure, not cracked, bent or broken and not leaking.

Air bags – Secure, not cracked, bent, broken or leaking.

Brakes – drive tires

Air lines to brake chamber – Secure to frame and brake chamber, not cracked, bent or broken and not leaking.

Brake chamber and clamp - Secure, not cracked, bent, broken or leaking, and all bolts are present and tight.

Push rod slack adjuster – Secure with a pin and cotter pin, not cracked, bent or broken.

No more than 1” of play in slack adjuster.

S-cam shaft to s-cam roller - Secure, not cracked, bent or broken.

Brake shoes - Secure, not cracked, bent or broken. No less than ¼” of wear left on pads. Free of oil, grease, and debris.

Brake drum - Secure, not cracked, bent or broken. Is round, no excessive wear, no man made welds. Free of oil, grease, and debris.

Drive tires

Same size, same type. Can be recapped or regrooved. Tread depth should be no less than 2/32” in all major grooves. No tread separation, cuts, cupping or bulging anywhere on tire.

Valve stem - Secure, straight, not cracked, bent, broken or leaking. All valve caps are present and tight. Tire pressure should be between 100 – 110 PSI checked cold with a tire gauge or thumper. No more than 3” between duals, free of debris.

Rim

Rim - Secure, not cracked, bent or broken, is round and no man-made welds

Lug nuts – Secure, none missing, and appear to be tight. On aluminum rims look for white powder, on steel rims look for rust, which would indicate a loose lug nut. If loose, tighten with a lug wrench.

Hub - Secure, not cracked, broken or leaking. All bolts are present and appear to be tight. If there is a sight glass make sure the oil is at its proper level. Otherwise, open cap and make sure there is at least 1” of 90 weight gear lube

5th wheel – coupling system

5th wheel platform – Secure to frame, not cracked, bent or broken. All bolts present and tight. No man made welds.

5th wheel – Secure to platform, not cracked, bent or broken, no man-made welds.

Properly greased. No light between 5th wheel and trailer apron.

Trailer apron – Secured to trailer, not cracked, bent or broken.

King pin - Secured to apron, not cracked, bent or broken.

Locking jaw – Secured around king pin shank, not cracked, bent or broken.

Locking arm - Secured in locked position, not cracked, bent or broken.

Mud flaps

Secure, not broken or missing. Are at proper height

Trailer (driver's side)

Landing gear & braces – Secure, not cracked, bent or broken.

Landing gear pads - Secure, not cracked, bent or broken. Free of debris and in the up position. Handle is secured in the stowed position.

D.O.T. reflective tape – Secure and clean. Not excessively worn.

Cross members - Secure, not cracked, bent or broken and none missing. No more than 1 rivet or bolt missing per cross member. If more than 1 missing it indicates a weak floor.

1st trailer axle suspension

Rocker arm hanger - Secure, not cracked, bent or broken.

Rocker arm - Secure, not cracked, bent or broken.

Shocks - Secure, not cracked, bent, broken or leaking.

Air bags - Secure, not cracked, bent, broken or leaking.

Tandem

Tandem slide rail - Secure, not cracked, bent or broken. Holes are round, not excessively worn. Pin is secure in hole, not cracked, bent or broken.

Locking handle – Secured in locked position, not cracked, bent or broken.

Brakes – 1st trailer axle

Air lines and relay valves - Secure, not cracked, bent, broken, or leaking. Air lines must be at least 18” off the ground.

Air lines to brake chamber – Secure to frame and brake chamber, not cracked, bent or broken and not leaking.

Brake chamber and clamp - Secure, not cracked, bent, broken or leaking, and all bolts are present and tight.

Push rod slack adjuster – Secure with a pin and cotter pin, not cracked, bent or broken. No more than 1” of play in slack adjuster.

S-cam shaft to s-cam roller - Secure, not cracked, bent or broken.

Brake shoes - Secure, not cracked, bent or broken. No less than 1/4” of wear left on pads. Free of oil, grease, and debris.

Brake drum - Secure, not cracked, bent or broken. Is round, no excessive wear, no man made welds. Free of oil, grease, and debris.

Tires – 1st trailer axle

Same size, same type. Can be recapped or regrooved. Tread depth should be no less than 2/32” in all major grooves. Should not have any tread separation, cuts, cupping or bulging anywhere on tire.

Valve stem - Secure, straight, not cracked, bent, broken or leaking. All valve caps are present and tight. Tire pressure should be between 100 – 110 PSI checked cold with a tire gauge or tire thumper. No more than 3” between duals, free of debris.

2nd trailer axle suspension

Rocker arm hanger - Secure, not cracked, bent or broken.

Rocker arm - Secure, not cracked, bent or broken.

Shocks - Secure, not cracked, bent, broken or leaking.

Air bags - Secure, not cracked, bent, broken or leaking.

Brakes – 2nd trailer axle

Air lines and relay valves - Secure, not cracked, bent, broken, or leaking. Air lines must be at least 18” off the ground.

Air lines to brake chamber – Secure to frame and brake chamber, not cracked, bent or broken and not leaking.

Brake chamber and clamp - Secure, not cracked, bent, broken or leaking, and all bolts are present and tight.

Push rod slack adjuster – Secured with a pin and cotter pin, not cracked, bent or broken. No more than 1” of play in slack adjuster.

S-cam shaft to s-cam roller - Secure, not cracked, bent or broken.

Brake shoes - Secure, not cracked, bent or broken. No less than 1/4” of wear left on pads. Free of oil, grease, and debris.

Brake drum - Secure, not cracked, bent or broken. Is round, no excessive wear, no man made welds. Free of oil, grease, and debris.

Tires – 2nd trailer axle

Same size, same type. Can be recapped or regrooved. Tread depth should be no less than 2/32” in all major grooves. Should not have any tread separation, cuts, cupping or bulging anywhere on tire.

Valve stem - Secure, straight, not cracked, bent, broken or leaking. All valve caps are present and tight. Tire pressure should be between 100 – 110 PSI checked cold and with a tire gauge or tire thumper. No more than 3” between duals, free of debris.

Mud flaps

Secure, not broken or missing. Are at proper height.

Rear of trailer

D.O.T. bumper - Secure, not cracked, bent or broken. Not excessively worn.

D.O.T. reflective tape – Secure and clean. Not excessively worn.

License plate - Secure, clean, up to date.

License plate light - Secure, not cracked, bent or broken.

All tail lights - Secure, not cracked, or broken. Are red in color.

Doors and door hinges - Secure, not cracked, bent or broken. All bolts are present and tight.

Locking handle and rods - Secure, not cracked, bent or broken.

Locking latch – Secured in the locked position. Not cracked, bent or broken.

Door seals – Secure and seal properly.

Header board – secure and not excessively damaged.

Trailer (passenger side)

Same – Except for:

Exhaust - Secure, not cracked, bent, broken or leaking..

Bulkhead - Secure and not excessively damaged.

******Close and latch hood******

Lights (check in this order)

No key:

Low beams and running lights turned on – Walk around truck and trailer and confirm all are in working order. This includes the license plate light.

Turn signals – Signal each direction, and walk around truck and trailer and confirm all are in working order.

Hazards (4 way) – Turn on hazards and walk around truck and trailer and confirm all are in working order.

Brake lights – Ask examiner to watch brake lights. Watch for confirmation in side mirror that they worked.

Key in on position (don't start)

High beams – Turn on and walk around truck and trailer and confirm all are in working order.

In cab inspection

10lb ABC fire extinguisher - Fully charged, secured inside cab.

Red reflective triangles – 3 triangles, not cracked, bent, broken, secured inside cab.

Replacement fuses – 1 fuse for every major fuse in truck, unless the truck is equipped with circuit breakers.

Safety belt – Secured, not cut, frayed or broken. In good working order and latches properly.

Dashboard – Clean, and free of debris.

Windshield - Secure, not cracked or broken. No more than a 1” crack is permitted.

Clean and free of debris.

Windshield seal - Secure, not cracked or broken and not leaking.

Wiper arms - Secure, not cracked, bent or broken. Work properly (demonstrate this) and free of debris.

Wiper blades – Secure, not excessively worn, and in contact with windshield.

Windshield washer – Works properly (demonstrate this).

Mirrors – Secure, not cracked, bent or broken. Clean and properly adjusted for **ME**.

Doors and door latches - Secure, not bent or broken. Not excessively worn and latches properly.

Door seal - Secure, not cut, cracked, bent or broken and does not leak.

Steering wheel – Secured to steering column. Not cut, cracked, bent or broken. No more than 10 degrees or 2” of free play in a 20” steering wheel

Foot pedals – Properly grooved, free of grease, oil, and debris. Free of obstructions.

Clutch must have 1” – 2” of free play and travels to the floor with no obstruction.

Horns (city and air) – Work properly (demonstrate this).

Gear shifter - Secure, straight, not cracked, bent or broken. Range selector (t-bar) works properly (demonstrate this).

******you may now start the truck******

Gauges – Work properly (point to each gauge, explain what it is and show that it is illuminated.)

Heater, defroster, and blower – Work properly (demonstrate this.)

Brake check

Tractor parking brake – Yellow knob out, red knob in. Put truck in low gear and tug.

Trailer parking brake - Red knob out, yellow knob in. Put truck in low gear and tug.

Tractor and trailer service brakes – Drive 3 – 5 mph, apply foot brake without touching the steering wheel. If it pulls to one side or the other, it would indicate a possible brake adjustment, tire, or suspension problem, and it would need to be serviced.

Air down

******Shut off tractor & pull key out******

Check the wheels.

Get back in cab.

Release brakes (red and yellow knobs in)

After initial air loss of 10 – 15 psi, you should lose no more than 3 psi per minute.

Apply pressure to foot service brake. After initial loss of 10 – 15 psi, you should lose no more than 4 psi per minute.

******key in on position (don't start tractor)******

Check warning light and buzzer by fanning down the foot service brake. When pressure reaches 60 psi, a warning light and buzzer should come on indicating that you are losing air.

******Turn key off******

Continue to fan brakes down to 20 – 40 psi where both knobs should pop out indicating that you are out of air and your spring brakes are set (red knob pops out first so you can maintain control of the tractor).

Air recovery

******Start tractor******

Compressor should recover 10 – 15 psi per minute at 1000 rpm.

Between 90 -100 psi is the cut in.

Between 120 – 125 psi is the cut out.

If the air compressor continues to run past 125 psi the emergency relief valve will pop off at 150 psi to protect the air system.