

VEHICLE INSPECTION ADDITIONAL STUDY GUIDE

Anti-lock Brake System (ABS) Check	<ul style="list-style-type: none">-When starting the engine, the driver checks the dashboard to ensure the ABS lighting indicator illuminates and then promptly turns off. If the ABS lighting indicator remains illuminated the ABS is NOT functioning properly and needs to be serviced.-For combination vehicles only, check the ABS light on the rear driver's side of the trailer. If the ABS light remains illuminated the ABS is NOT functioning properly and needs to be serviced.
Air Brake Check (Air Brake-Equipped Vehicles Only)	<p>The proper procedures for the air brake check are as follows:</p> <ul style="list-style-type: none">- (1) With the air pressure built up, driver shuts off the engine, chocks the wheels if necessary, releases the parking brake (all vehicles), and the tractor protection valve (combination vehicle) and fully applies the foot brake. The driver then holds the foot brake for one minute after stabilization of the air gauge. S/he then checks the air gauge to see that the air pressure drops no more than three pounds in one minute (single vehicle) or four pounds in one minute (combination vehicle) and listens for air leaks.- (2) Without re-starting the engine, driver turns the key to the 'on' or 'battery charge' position. Next, s/he begins fanning off the air pressure by rapidly applying and releasing the foot brake. Low- air warning devices (buzzer, light, flag) should activate before air pressure drops below 60 psi or level specified by manufacture.- (3) Driver continues to fan off the air pressure. At approximately 40 psi on a tractor-trailer combination vehicle (or level specified by manufacture), the tractor protection valve and parking brake valve should close (pop out). On other combination vehicle types and single vehicle types, the parking brake valve should close (pop out).
Air Compressor (Belt)	<ul style="list-style-type: none">-Identifies belt that drives air compressor.-With engine off, driver points to or touches air compressor.-Mentions that the compressor is securely mounted and not leaking.-With engine off, driver points to, touches, or presses the belt to test that it is snug.-Notes that the belt is not frayed, has no visible cracks, loose fibers, or signs of wear. Pushes belt with hand, and if it deflects more than ½ to ¾ of an inch, driver observes that slippage is probably excessive.
Air/Electric Connectors	<ul style="list-style-type: none">-Checks that trailer air connectors are sealed and in good condition.-Checks fittings out of truck and trailer.-Checks all connections from truck and trailer.-Checks that glad hands are locked in place and free of damage.-Checks that trailer electrical plug is firmly seated and locked in place on both truck and trailer.
Air/Electric Lines	<ul style="list-style-type: none">-Air and electrical lines are not tangled, crimped or pinched, or being dragged against tractor parts.-Checks that air hoses, electrical lines, and electrical line insulation are not cut, cracked, chafed, spliced, taped, or worn (steel braid/electrical conductor should not show through).
Air Gauge	<ul style="list-style-type: none">-Checks that the air gauge is working properly and that the air compressor builds the air pressure to governor cut-out at roughly 120-140 psi or as specified by manufacture.
Alternator (belt)	<ul style="list-style-type: none">-Identifies belt that drives alternator or generator.-With the engine off, points to, touches, or presses belt to see that the belt is snug.-Notes that the belt is not frayed, has no visible cracks, loose fibers, or signs of wear. Pushes belt with hand and if it deflects more than ½ to ¾ of an inch, driver observes that slippage is probably excessive.-With the engine off, driver points to or touches alternator.-Mentions that alternator is securely mounted and that all wires are securely fastened.
Ammeter/Voltmeter	<ul style="list-style-type: none">-With engine running and the key in the "on" position, checks that gauge(s) show alternator or generator is charging or warning light is 'off'. Needle will jump and flutter, then indicate charge.
Axle Seals	<ul style="list-style-type: none">-Makes sure there are no cracks or distortions in wheel/axle mounting, and there are no signs of leaking lubricants.-If the axle has a sight glass, driver checks that oil level is adequate.
Brake Chamber	<ul style="list-style-type: none">-Sees that brake chambers are not leaking, cracked or dented, and are mounted securely.-Makes sure there are no loose or missing clamps.
Brake Drum/Linings/Rotors/Disks	<ul style="list-style-type: none">-Checks brake drums or rotors for cracks, dents, or holes. Also checks for loose or missing bolts. Checks that brake linings or disk pads (where visible) are not worn dangerously thin.-Checks brake drum and linings for contaminants such as grease, oil, etc.
Brake Hoses/Lines	<ul style="list-style-type: none">-Checks that hoses or lines can supply air or hydraulic fluid to brakes.-Checks for cracked, worn, or frayed hoses, and that all couplings and fittings are secure and not leaking.

Catwalk / Steps	-Checks that catwalk and steps are solid, securely bolted to tractor frame, and clear of loose objects.
Coolant Level	-Looks at sight glass on radiator or coolant reservoir; adequate level will show in sight glass. If no sight glass is available, the driver should describe what s/he would look for after removing radiator cap.
Door(s) and mirrors	-Checks that door(s) are not damaged and that they open and close properly. -Checks door window for damage and excessive dirt (buses). -Hinges should be secure with seals intact. -Checks mirrors for proper adjustment. -Checks that all internal and external mirrors and mirror brackets are securely mounted, not damaged, and free of excessive dirt.
Doors Secure (Baggage)	-Checks that baggage and all other exterior compartment doors are not damaged, operate properly, and latch securely.
Doors/Ties/Lifts	-Checks that doors and hinges are not damaged and that they open, close, and latch properly. -Checks that ties, straps, chains, and binders are secure. -If equipped with a cargo lift, looks for leaking, damaged, or missing parts and explains how it should be checked for correct operation. -Lift must be fully retracted and latched securely.
Drive Shaft	-Sees that drive shaft is not bent, twisted, or cracked. -Checks that u-joints appear to be secure and free of foreign objects.
Emergency Equipment (Includes Emergency kit and body fluid clean up kit when vehicle is a school bus)	-Checks for three red reflective triangles. -Checks for a properly charged and properly rated fire extinguisher. -Checks for spare electrical fuses (if used) or identifies circuit breakers. -Checks for emergency kit/body fluid cleanup kit when vehicle is a school bus.
Emergency Exit(s)	-Checks any one emergency exit-warning devices. -Points out and describes how all other emergency exits operate. -Demonstrates that at least one emergency exit operates smoothly, closes securely, and is not damaged. Must confirm that the exit works properly. -Release handle can be operated properly both from inside and outside the vehicle.
Exhaust System	-Checks exhaust system is connected tightly, mounted securely, and there are no loose clamps. -Checks exhaust system for damage and signs of leaking (rust or carbon soot). Exhaust system should have no cracks, holes, or severe dents.
Fifth-Wheel Skid Plate	-Checks fifth wheel skid plate for proper lubrication. -Checks that fifth wheel skid plate is securely mounted to the platform and that all bolts and pins are secure and not missing.
Frame	-Checks for cracks or bends in longitudinal frame members. -Checks for loose, cracked, bent, broken, or missing cross members. -Looks for signs of breaks or holes in box or trailer floor. (SPECIAL NOTE): Cracks in members are most likely to appear midway between points of attachment to vehicle assemblies (i.e., half way between tractor cab and rear tractor wheels).
Frame and Tandem Release	-If equipped, makes sure the locking pins are locked in place and release arm is secured.
Fuel Tank/Cap/Leaks	-Checks that tank(s) are secure. Checks that fuel cap(s) are tight. Checks for leaks from fuel tank(s) and fuel caps. (SPECIAL NOTE): Signs of spillage from over filling a fuel tank are not to be treated as a fuel leak.
Header Board or Bulkhead	-If equipped, checks the header board or bulkhead to see that it is secure, free of damage, and strong enough to contain cargo. -If equipped, the canvas or tarp carrier must be mounted and fastened securely. -On enclosed trailers, checks the front area for signs of damage (i.e., cracks, bulges, holes, or missing rivets).
Heater/Defroster	-Describes how the heater(s) and defroster(s) work.
Hitch Release Lever	-Checks to see that the hitch release lever is in place and secure.
Horn(s)	-Checks that air horn and/or electric horn(s) work.
Hub Oil Seal	-Sees that hub oil/grease seals are not leaking, and if a sight glass is present, that the oil level is adequate.
Hydraulic Brake Check	-With the key off, pumps the brake pedal three times, and then holds it down for five seconds. The brake pedal should not move (depress) during the five seconds. -If equipped with a hydraulic brake reserve (backup) system, with the key off, depresses the brake pedal and listens for the sound of the reserve system electric motor.

Kingpin/Apron/Gap	<ul style="list-style-type: none"> -Explains that locking jaw holds kingpin in place. -Makes sure the visible part of the apron is not bent, cracked, or broken. -Checks that the trailer is laying flat on the fifth wheel skid plate (no gap). -Checks for kingpin lock.
Landing Gear	<ul style="list-style-type: none"> -Checks that landing gear is fully raised, has no missing parts, crank handle is secure, and the support frame and landing pads are not damaged. -If power operated, checks for air or hydraulic leaks.
Leaks/Hoses (Engine Compartment)	<ul style="list-style-type: none"> -Looks for puddles or dripping fluids on the ground under the engine or the underside of the engine and transmission. -Inspects engine hoses for condition and leaks.
Lighting Indicators	<ul style="list-style-type: none"> -Checks that (dash) indicators for turn signals, flashers, and headlight high beams illuminate when corresponding lights are turned on.
Lights and reflectors condition (Front)	<ul style="list-style-type: none"> -Checks that all lights (e.g., headlights [high and low beams], turn signals, clearance, identification, flashers) on front of vehicle are clean and none are missing or broken.
Lights Operation Check (Front)	<ul style="list-style-type: none"> -Checks that all lights (e.g., headlights [high and low beams], turn signals, flashers, and headlight high beams) illuminate when corresponding lights are turned on.
Lights/Reflectors / Reflector Tape condition (Sides and Rear)	<ul style="list-style-type: none"> -Checks that reflectors are clean, none are missing or broken, and they are of proper color (red on rear, amber elsewhere). -Checks that clearance lights are clean, not broken, and of proper color. (red on rear, amber elsewhere). -Checks that rear running lights (tail) are clean, not broken, and are of proper color. (Rear running lights [tail] must be checked separately from signal, 4-way flasher, and brake lights.)
Lights Operations Check (Sides and Rear)	<ul style="list-style-type: none"> -Checks that clearance lights are in proper working order. -Checks that rear running lights (tail) are in proper working order. -Checks that each turn signal and 4-way flasher light works. -Checks that brake lights come “on” when brakes are applied and turn “off” when brakes are released.
Locking Jaws or Lever	<ul style="list-style-type: none"> -Checks that fifth wheel locking jaws or lever are secured around the kingpin. (SPECIAL NOTE): On other types of coupling systems (i.e., ball hitch, pintle hook, drawbar/eye, etc.), driver inspects the locking mechanism for missing or broken parts and security. If present, safety cables or chains must be secure and free of kinks and excessive slack.
Lug Nuts	<ul style="list-style-type: none"> -Checks that all lug nuts are present. -Checks that lugs are not loose (rust trails around nuts). -Checks that there are no cracks radiating from lug bolt holes or distortion of the bolt holes.
Mirrors / Student Mirrors	<ul style="list-style-type: none"> -Checks for proper adjustment. -Checks that all internal and external mirrors and mirror brackets are not damaged and are mounted securely with no loose fittings. -Checks that visibility is not impaired due to dirty mirrors.
Mounting Bolts	<ul style="list-style-type: none"> -Checks for loose or missing brackets, clamps, bolts, or nuts. -Checks that both fifth wheel and sliding mounting appear solidly attached in place. -Checks for loose or missing mounting bolts and for broken welds for pintle hook or other type of hitch mount, and tongue/draw-bar assembly, to insure that they are solidly attached in place. (SPECIAL NOTE): On other types of coupling systems (i.e., ball hitch, draw-bar/eye, etc.), driver inspects all couplings components and mounting brackets for missing or broken parts.
Oil Level	<ul style="list-style-type: none"> -Checks oil level while engine is off. -Indicates where dipstick is located. -Checks that oil level is above the refill mark, in a safe operation range.
Oil Pressure Gauge	<ul style="list-style-type: none"> -With the key in the “on” position and the engine running, checks that oil pressure is building to “normal”. -The gauge shows increasing or “normal” oil pressure or warning light goes off.
Parking Brake	<ul style="list-style-type: none"> -With parking brake engaged (trailer brakes released on combination vehicles), checks that parking brake will hold vehicle by gently trying to pull forward with parking brake on. -With the parking brake released and the trailer parking brake engaged (combination vehicles only), checks that the trailer parking brake will hold vehicle by gently trying to pull forward with the trailer parking brake on.
Passenger Entry/Lift	<ul style="list-style-type: none"> -Checks that the entry door is not damaged, operates smoothly, and closes securely. -Checks that hand rails are secure and the step light is working, if equipped. -Checks that entry steps are clear with the treads not loose or worn excessively. -If equipped with a handicap lift, looks for leaking, damaged, or missing parts and explains how lift should be checked for correct operation. Lift must be fully retracted and latched securely.

Pintle Hook	-Checks the pintle hook for cracks or breaks and excessive wear.
Platform Base (Fifth Wheel)	-Checks for cracks or breaks in the platform structure, which supports the fifth wheel skid plate. -Checks that platform is securely mounted to frame or sliding assembly.
Power Steering Fluid/Belt	-With the engine stopped, checks the dipstick and sees where the fluid level is relative to the refill mark or checks sight glass. Level must be above refill mark. -Identifies belt that drives power steering unit. -With engine off, driver points to, touches, or presses belt to test that it is snug. -Notes that the belt is not frayed, no visible cracks, loose fibers, or signs of wear. Pushes belt with hand, and if it deflects more than ½ to ¾ of an inch, driver observes that slippage is probably excessive.
Release Arm and Safety Latch	-Checks that the release arm is secure and all the way in. -If equipped with safety latch, checks that the release arm is in the engaged position and the safety latch is in place.
Rims	-Checks for damaged or bent rims. -Rims should not have welding repairs. -Checks for rust trails that may indicate rim is loose on wheel.
Safe Start	-Depresses clutch before turning on the starter. Keeps depressed until engine reaches idling speed. -On an automatic transmission, places the gear selector in the “park” or “neutral” position. -On a standard transmission, places gearshift in “neutral”.
Safety Belt	-Checks for properly secured, mounted, and adjusted safety belt. Safety belt should not be ripped or frayed.
Safety Devices	-Checks to make sure the latch is secured and locked in place, cotter pin is not missing, is in place and not damaged. -Safety chains are hooked and crisscrossed, free of kinks and excessive slack, cotter pins to hooks are in place and hooks are secured with hooks pointing in an outward position. -If trailer is equipped with electric brakes, checks that breakaway chains or cables with battery back up are not missing or damaged. (SPECIAL NOTE): On other types of coupling systems (i.e., ball hitch, draw-bar/eye, etc.), driver inspects the locking mechanism for missing or broken parts and security. If present, safety cables or chains must be secure and free of kinks and excessive slack.
School Bus Lights (front & back)	-Checks that strobe light (if equipped) is operational and is not broken. -Checks that alternately flashing amber lights (if equipped) are operational and not broken. -Checks that alternately flashing red lights, on both front and rear of vehicle, are operational and not broken.
Seating	-Checks that there are no broken seat frames and that the seats are firmly attached to floor. -Confirms that the cushions are securely attached to the seat frames.
Service Brake Check	-Driver pulls forward at 5 mph, applies service brake to check that brakes are working properly and to see if the vehicle pulls to one side or the other.
Slack Adjuster and Pushrod	-Checks that slack adjuster is securely mounted. -Checks slack adjuster and pushrod for bent, broken, loose, or missing parts. -If brakes were released and when pulled by hand, push rod should not move more than approximately one inch for manual brakes and 1 ½ inch for self-adjusting brakes.
Sliding Fifth Wheel Locking Pins (Clearance)	-If equipped, looks for loose or missing pins in the slide mechanism of the sliding fifth wheel. If air powered, checks for leaks. -Makes sure locking pins are fully engaged. -Checks that the fifth wheel is positioned properly so the tractor frame will clear the landing gear during turns.
Sliding Pintle	-If equipped, checks that the sliding pintle is secured with no loose or missing nuts or bolts and cotter pin is in place.
Spacers or Budd Spacing	-If equipped, checks that spacers are not bent, damaged, or rusted through. -Checks disc (Budd) wheels for even spacing, damage, and foreign objects.
Splash Guards	-If equipped, checks that splash guards or mud flaps are not damaged and are mounted securely.
Spring/Air Bags/Shocks	-Looks for missing, shifted, cracked, or broken leaf springs. -Looks for broken or distorted coil springs. -Checks air ride suspension for damage and leaks. -Confirms that shock absorbers are secure and not leaking.

Spring / Air Mounts and Torque Arm	<ul style="list-style-type: none"> -Checks that spring attachments (brackets, bolts, bushings) are in place. -Checks for cracked or broken spring hangers. -Checks for missing or damaged bushings. -Checks air bag mounts (bolts) are in place and not damaged. -If vehicle is equipped with torsion bars, torque arms, or other types of suspension components, checks that they are not damaged and are mounted securely.
Steering Box/Hoses	<ul style="list-style-type: none"> -Checks that the steering box is securely mounted and not leaking. -Looks for any missing nuts and bolts. -Checks for power steering fluid leaks or damage to power steering hoses.
Steering Linkage	<ul style="list-style-type: none"> -Checks that connecting links, arms, and rods from the steering box to the wheel are not worn or cracked. -Checks that joints and socket are not worn or loose. -Checks for loose or missing nuts, bolts, or cotter pins.
Stop Arm / Safety Arm	<ul style="list-style-type: none"> -Checks the stop arm to see that it is mounted securely to the vehicle frame. -Checks for loose fittings and damage. -Checks that stop arm extends fully when operated. -Checks that stop arm lights are operational. -If equipped, checks that safety arm is securely mounted and functions properly in conjunction with stop arm.
Temperature Gauge	<ul style="list-style-type: none"> -With key on and engine running, ensures the temperature gauge is operational. -Temperature should begin to climb to the "normal" operating range or temperature light should be off.
Tires	<ul style="list-style-type: none"> -Tread depth: Checks for minimum tread depth (4/32 on steering axle tires, 2/32 on all other tires). -Tire condition: Checks that tread is evenly worn and looks for cuts or other damage to tread or sidewalls. Also, makes sure that valve caps and stem are not missing, broken, or damaged. -Tire inflation: Checks for proper inflation by using a tire gauge.
Tongue/Draw-bar	<ul style="list-style-type: none"> -Checks that the tongue/draw-bar is not bent or twisted and checks for broken welds and stress cracks. -Checks that the tongue/draw-bar eye is not worn excessively.
Tongue Storage Area	<ul style="list-style-type: none"> -Checks that the storage area is solid and secured to the tongue; cargo in the storage area i.e., chains, binders etc., are secure.
U-Bolts	<ul style="list-style-type: none"> -Checks for broken, missing, or loose bolts (including U-bolts).
Water Pump (Belt)	<ul style="list-style-type: none"> -Correctly identifies water pump. -Confirms that water pump is mounted properly and not loose. -Identifies belt that drives water pump. -With engine off, points to, touches, or presses belt to test that it is snug. -Notes that the belt is not frayed and there are no visible cracks, loose fibers, or signs of wear. Pushes belt with hand, and if it deflects more than ½ to ¾ of an inch, driver observes that slippage is probably excessive.
Windshield and Mirrors	<ul style="list-style-type: none"> -Checks windshield to make sure it is clear and has no obstructions or damage to the glass. -Checks mirrors for proper adjustment.
Wipers/Washers	<ul style="list-style-type: none"> -Checks that wiper arms and blades are secure, not damaged, and operate smoothly. -If equipped, checks for windshield washer fluid and that windshield washers operate correctly.