

ROADMASTER DRIVERS SCHOOL

PRE-TRIP INSPECTION STUDY GUIDE

Remove Keys From Ignition

FRONT OF VEHICLE

- A. **Tractor Clearance Lights:** Should be amber in color not cracked or missing, make sure that they are secure, mounted properly and are clean.
- B. **Windshield:** Properly mounted, no cracks, clean, no illegal stickers or any obstructions that would get into your view.
- C. **Wiper Arms & Blades:** Check for worn rubber on blades, make sure the blades are secure on wiper arm.
- D. **Mirror Brackets:** Make sure that they are not loose or missing any nuts.
- E. **Head Lamps:** Make sure they are clear, clean, no cracks, not missing and securely mounted.
- F. **Turn Signals:** Amber in color, not cracked, not missing and securely mounted.
- G. **No Leaks:** No fluid leaks under the engine compartment or puddles on the ground.

ENGINE COMPARTMENT

- A. **Engine Oil:** Check dipstick to see where oil level is, must be between the add and fill mark.
- B. **Exhaust System:** Visible parts are securely mounted, no cracks, holes or severe dents and not rubbing against any part of the vehicle. (Engine to stack and muffler)
- C. **Alternator:** Belts are not cracked, frayed and has no loose fibers or show signs of wear. Push belt with your hand to check the deflection, should be no more than 1/2" to 3/4" play.
- D. **Water Pump:** Belt is not cracked or frayed and has no loose fibers or signs of wear. Push the belt with your hand to check the deflection, should be no more than 1/2" to 3/4" play. Water pump may be gear driven, if so, drive appears to be functioning and is not leaking.
- E. **Coolant Level:** Look at the sight glass or reservoir to see the level, make sure it's between maximum and minimum.
- F. **Power Steering:** Check the dipstick level must be between the add and full mark. If power steering unit is belt driven must check belt for no more than 1/2" to 3/4" deflection, no cracks fraying or loose fibers on belt. If gear driven check to see if appears to be functioning and not leaking.
- G. **Air Compressor:** Belt isn't cracked or frayed and has no loose fibers. Push the belt with your hand to check deflection, should be no more than 1/2" to 3/4" play. The compressor may be gear driven, if so make sure the drive appears to be working properly and there are no signs of audible leaks.
- H. **Steering Box/Hoses:** Must be securely mounted, look for missing nuts and bolts and cotterpins, no leaks. Check the power steering hoses for loose fibers, cracks or leaks.
- I. **Steering Linkage:** Connecting arms and rods are securely mounted, not bent, cracked or worn, joints and sockets aren't loose and the crown nuts and cotter keys are in place and secure.

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FRONT SUSPENSION

- A. **Spring Mounts:** Securely mounted, not cracked or broken, no missing or loose bolts (including u-bolts). Check for broken, loose or missing axle mounting parts. **Front and Rear mounts must be checked**
- B. **Springs:** No cracked, broken or missing leaves, properly aligned.
- C. **Shock Absorbers:** Securely mounted at the top and bottom, no damage and not leaking.

FRONT BRAKE AREA

- A. **Air Hoses:** No cracks, worn or frayed hoses, securely mounted at both ends.
- B. **Brake Chamber:** Not dented or cracked, securely mounted and not leaking.
- C. **Slack Adjuster:** Check for broken, loose or missing parts. When pulled by hand brake rod should not move more than approximately 1 inch. Slack adjuster is securely mounted.
- D. **Brake Drum:** No cracks, dents or holes, no loose or missing bolts. Brake lining must have adequate thickness, not worn dangerously thin (approx 1/4" pad thickness) no evidence of grease or oil on drum.

FRONT WHEEL AND TIRE

- A. **Rim:** Not bent or cracked, no welding repairs and obvious that it is not loose.
- B. **Tires:** No cuts, bubbles or abrasions to the tire side walls or tread. The tread depth must be at least 4/32" minimum. **Check the tire inflation with a pressure gauge**, valve caps and stem must not be bent, missing or leaking. No recaps on the steering axle and tires must match.
- C. **Lug Nuts:** All are present, not loose, no cracks from the lug bolt holes, no distortion of bolt holes, look for rust trails around the lugs, this would also indicate they were loose.
- D. **Hub Oil Seal:** Check to see that the seal is not leaking and if there is a sight glass present, check that the oil level is adequate.

DRIVERS DOOR AREA

- A. **Door:** Door operates properly, hinges are securely mounted and not bent or cracked, window works properly.
- B. **Fuel Tank:** Fuel tank is securely mounted, fuel cap is tight and has a seal, no damage to the tank and there are no fuel leaks.
- C. **Safety Equipment:** Properly rated and charged and secured fire extinguisher, 3 reflective triangles, spare fuses for every fuse type in truck if so equipped. Check for properly secured, mounted and adjusted safety belt.
- D. **Wiper Fluid:** (if equipped) checks wiper fluid reservoir has sufficient fluid

PRE-TRIP INSPECTION STUDY GUIDE

REAR OF TRACTOR

- A. **Driveshaft:** Shaft is not bent or cracked, couplings appear to be secure.
- B. **Catwalk:** Securely mounted to the frame, solid and free of loose objects.
- C. **Frame:** No cracks, bends, illegal welds or holes in frame, no missing cross members.
- D. **Air & Electrical Lines:** Connections are sealed and in good condition. Glad hands are free of cracks or missing pieces and there are no audible leaks. Lines are not dragging on the frame or catwalk. Make sure the electrical line has no bare wires showing with no evidence of taping.
- E. **Lights and Reflectors:** Check lenses for any cracks, they are clean and secure. (You will check your brake lights, tail lights, turn signals and 4-way flashers later)

REAR SUSPENSION

- A. **Spring Mounts:** Securely mounted, not cracked or broken. No missing or loose bolts (including u-bolts) **Front and rear spring mounts must be checked**
- B. **Springs:** No cracked, bent or broken leaves none missing, and properly aligned.
- C. **Torsion Bar:** (If equipped) Bar is not cracked, bent, broken or missing.
- D. **Shock Absorber:** Properly mounted at the top and bottom, not damaged or leaking.
- E. **Airbag Mounts:** Not cracked or broken, securely mounted. (If equipped)
- F. **Airbags:** Properly mounted, no cracks, bubbles or leaks and are properly inflated. Air lines are not cracked, frayed or leaking.

SECOND SET OF DRIVERS MUST BE CHECKED SAME WAY

REAR BRAKE AREA

- A. **Air Hoses:** No cracks, worn or frayed hoses, securely mounted at both ends. If dual (maxi brake) both hoses must be checked the same way, hoses are not leaking.
- B. **Brake Chamber:** Usually a dual brake chamber known as a maxi-brake, front chamber is your service chamber and rear chamber operates the spring brakes. Check both chambers for dents, cracks, leaks and that they are securely mounted
- C. **Slack Adjuster:** On a double brake chamber the slack adjuster should not be **LESS** than a 90 degree angle when brakes are applied, brakes released there should be no more than 1" play when pulled out. Check for any broke, loose or missing parts and securely mounted.
- D. **Brake Drum:** No cracks, dents, holes, no loose or missing bolts. Brake lining must have adequate thickness (1/4"), not worn dangerously thin.

BRAKE SYSTEM ON THE SECOND SET OF DRIVES MUST BE CHECKED THE SAME AS THE FIRST SET

PRE-TRIP INSPECTION STUDY GUIDE

REAR WHEEL AND TIRE AREA

- A. **Rims:** Not bent or cracked, no welding repairs and obvious that is not loose.
- B. **Tires:** No cuts, bubbles or abrasions to the tire side walls or tread. Tread depth must be at least 2/32" minimum. Check tire inflation with an air pressure gauge. Valve caps and stems must not be bent or missing, not leaking. (Both must be checked the same way)
- C. **Lug Nuts:** All are present, not loose, no cracks from lug bolt holes, no distortions to bolt holes. Look for rust trails around lugs, this also indicates evidence of looseness.
- D. **Spacers:** Check that dual wheels are evenly separated and the tires are not touching each other. (if equipped)
- E. **Axle Seals:** Securely mounted, no cracks or distortions to plate. Bolts secure and not leaking
- F. **Splash Guards:** Check splash guards or mud flaps are not damaged (tears, missing chunks) and are mounted securely.
- G. **Battery Box:** Checks that batteries are secure, connections are tight & all caps are present. Battery connections should not show signs of excessive corrosion. Box and cover securely mounted.

YOU MUST CHECK THE SECOND SET OF DRIVE TIRES AND WHEELS AS YOU DID THE FIRST SET, ALL PARTS MUST BE MENTIONED AGAIN

FIFTH WHEEL AREA

- A. **Mounting Bolts:** Look for loose or missing bolts on the brackets, look for cracks on the brackets and should be securely mounted.
- B. **Locking Pins:** Look for loose, cracked or missing locking pins, if air activated check for leaks and cracks in line. Make sure locking pin is fully engaged. Check position of fifth wheel so the landing gear won't hit the tractor in turns.
- C. **Release Arm:** Check the release arm is in the locked position.
- D. **Safety Latch/Locking Jaws:** Check that the fifth wheel locking jaws are securely locked and safety latch engaged.
- E. **Platform:** Check for cracks or breaks in the platform structure.

FRONT OF TRAILER

- A. **Air/Electrical Lines:** Glad-hands and electrical connections are free of damage and locked in place. (should have already checked lines as part of tractor)
- B. **Header Panel/Trailer:** Securely mounted, free of holes, dents, cracks and strong enough to hold cargo in the event of a panic stop.
- C. **Lights and Reflectors:** Lights are clean, not broken or missing, securely mounted & work. Reflectors are clean, not broken or missing and proper color and securely mounted.

UNDER THE TRAILER

- A. Trailer Apron:** Check that the apron lies flat on the fifth wheel skid plate, no visible parts of the apron are bent, cracked or broken.
- B. Kingpin:** Check the pin does not appear to be bent or cracked.
- C. Landing Gear:** Check landing gear is fully raised, no missing parts and the supports are not bent or cracked & there are no missing or loose bolts. Crank handle is present and secure.
- D. Frame:** Check frame has no cracks or bends, no loose, cracked, bent or missing cross members and no holes in the floor.

DRIVERS SIDE OF THE TRAILER

- A. Lights & Reflectors:** Reflectors are clean, none missing or broken and are the proper color.
Clearance lights are clean, not broken, proper color and work.
- B. Side of the trailer:** Check the side of the trailer for any cuts, holes or major dents.

TRAILER SUSPENSION

- A. Spring Mounts:** Securely mounted, not cracked or broken, no missing or loose bolts (including u-bolts) **FRONT AND REAR SPRING MOUNTS MUST BE CHECKED**
- B. Springs:** No cracked, bent or broken leaves, properly aligned.
- C. Tandem Release Arm/Locking Pin:** Make sure locking pin is locked into place and release handle is secure.

YOU MUST CHECK THE 2ND SET OF TANDEM THE SAME WAY, ALL PARTS MUST BE MENTIONED AGAIN

TRAILER BRAKE AREA

- A. Air Hoses:** No cracks, worn or frayed hoses, securely mounted at both ends. There may be two hoses if equipped with a maxi-brake chamber, both hoses are to be checked the same way
- B. Brake Chamber:** This is usually a double brake chamber (maxi-brake) front chamber is the service chamber & the rear operates the spring brakes. Check both for dents, cracks, securely mounted and not leaking.
- C. Slack Adjuster:** On double brake chamber slack adjuster should not be less than a 90 degree angle when brakes are applied, if brakes are released there should be no more than 1" play when slack adjuster is pulled. Check for no broke, loose or missing parts & securely mounted
- D. Brake Drum:** No cracks, dents or holes, no loose or missing bolts. Brake lining must have adequate thickness (1/4") not worn dangerously thin.

YOU MUST CHECK THE BRAKE SYSTEM THE SAME WAY ON THE 2ND SET OF TANDEM AS YOU CHECK THE FIRST SET

TRAILER REAR WHEEL AND TIRES

- A. **Rims:** Not bent or cracked, no welding repairs and obvious that it's loose.
- B. **Tires:** No cuts, bubbles or abrasions to sidewalls or tread, tread depth must be at least 2/32" minimum. Check tire inflation with a pressure gauge, valve caps and stems must not be bent or missing or leaking. (both must be checked the same way)
- C. **Lug nuts:** All are present, not loose, no cracks or distortions from lug bolt holes, look for rust trails around lugs, this will indicate that they are loose.
- D. **Spacers:** Check that dual wheels are evenly separated and the tires are not touching each other and the spacer is not cracked, rusted thru or bent. (If equipped)
- E. **Hub Oil Seal:** Check to see that the seal is not leaking and if there is a sight glass present check oil level is adequate.

YOU MUST CHECK THE SECOND SET OF WHEELS AND TIRES AS YOU DID THE FIRST SET, ALL PARTS MUST BE MENTIONED AGAIN

REAR OF THE TRAILER

- A. **Doors/Latches:** All hinges and locking devices are properly secured and have no missing or loose bolts, the seal around the door is in tack and not torn and doors close properly.
- B. **Lights/reflectors:** All lights, reflectors and marker lights must be securely mounted, not cracked or broken and clean. All lights such as brake, turn, tail and 4-ways must work. Proper color, brake lights reflectors, marker lights must be red on rear.
- C. **Splash Guards:** Checks splash guards or mud flaps are not damaged (tears or missing chunks) They are mounted securely.

INSIDE THE CAB

- A. **Mirrors:** Properly aligned, clean, not cracked or broken.
- B. **Windshield:** No obstructions to the drivers view, not cracked or major chips.

ENGINE START UP

INSERT KEY AND START ENGINE

- A. **Clutch and Gearshift:** When starting engine gearshift must be in **neutral**, depress clutch to floor until engine reaches idle speed, **slowly** release clutch
- B. **Oil Pressure:** Should be building to normal range (30-60 psi)
- C. **Ammeter:** Is charging between 12-15 volts
- D. **Temperature Gauge:** Make sure gauge is working and climbing to normal range, or light goes off
- E. **Wipers:** Turn switch and make sure wipers work and, if so equipped, that wiper fluid works
- F. **Heater/Defroster:** Turn each one on and make sure they work
- G. **Steering Play:** **2" play on a 20" wheel - (less than 5-10 degrees)** with the **engine running** for power steering can turn wheel from right to left until you feel wheel react to steering
- H. **Horn:** checks both city and air horn work
- I. **Seatbelt:** Check that seat belt is not damaged and latches and unlatches

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PARKING BRAKE CHECK

- A. **Tractor Parking Brake:** **Red Button In/Yellow Button Out** Put tractor in 1st gear and gently pull forward to make sure parking brake is holding.

AIR BRAKE CHECK

Build air to governor cut off at 100-125 psi
Shut engine down and turn key to the on position

- A. **Leak Check:** **RED AND YELLOW BUTTON MUST BE PUSHED IN**
Apply pressure to brake pedal and hold for 1 minute. Should not lose more than 4 PSI in 1 min for a combination vehicle.
- B. **Low Pressure Warnings:** Pump brake pedal and warning light and/or buzzer should activate between 60-65 PSI.
- C. **Emergency Brakes Apply:** Continue pumping brake pedal and between 45-20 PSI both **Red and Yellow** buttons will pop out.

LIGHT CHECK

- A. **Lighting Indicators:** Check the lighting indicators on the dash, high beams, turn signals, 4 ways
- B. **Head Lights:** Check high and low beam lights
- C. **Directional Lights:** Left and Right on the front, side and rear of the tractor and the side and rear of the trailer
- D. **Marker and Clearance:** Tractor front, sides and top Trailer top front, top and bottom on the sides and top and bottom on the rear
- E. **Parking Lights:** All parking lights on tractor and trailer
- F. **Brake Lights:** Rear of tractor and rear of trailer

YOU MUST GET OUT AND CHECK ALL LIGHTS, YOU MAY ASK THE EXAMINER TO ASSIST YOU

THIS WILL COMPLETE YOUR PRE-TRIP INSPECTION

NOTES