



PREVENTION MAINTENANCE CHECKLIST FOR TRACTORS, TRUCKS, AND AUTOMOBILES

Farm Machinery Fact Sheet FM-21

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Systematic sequence for inspection—GASOLINE AND DIESEL

(Check when done) **UNDER THE HOOD**

- ___ 1. Locate operator's manual for vehicle.
- ___ 2. Fuel, oil, and exhaust leaks—Inspect.
- ___ 3. Oil and fuel lines—Examine for chafing and kinks.
- ___ 4. Automatic transmission—Inspect oil level; also, standard transmission.
- ___ 5. Radiator core, water pump, cylinder head, block, heater, hoses and connections. Inspect for leaks.
- ___ 6. Power steering pump reservoir—Check fluid level, inspect for leaks, add if required.
- ___ 7. Inspect all belts, condition and adjustment.
- ___ 8. Electrical connections and mounting bolts of starter, generator, alternator—Tighten.
- ___ 9. Generator commutator and brushes—Inspect.
- ___ 10. Alternator, generator and regulator—Test and adjust with voltmeter.
- ___ 11. Steering gear housing—Inspect lubricant level.
- ___ 12. Steering gear housing bolts—Tighten.
- ___ 13. Clutch and/or brake master cylinder Inspect fluid level—add?
- ___ 14. Battery—Remove cables, clean terminals, reinstall cables, coat with petroleum jelly.
___ POS ___ NEG Posts
- ___ 15. Battery—Test cells specific gravity with hydrometer.
Cells ___1 ___2 ___3 ___4 ___5 ___6
- ___ 16. Battery—Examine level of each cell, add distilled water if required.
- ___ 17. Radiator—Inspect coolant level and add water or antifreeze solution if required.
- ___ 18. Radiator coolant—Inspect for signs of oil or combustion leakage.
- ___ 19. Cooling system—Pressure test.
- ___ 20. Engine oil—Inspect level. Change if at change period or add.
- ___ 21. Air cleaner—Clean.
- ___ 22. Air compressor—Adjust, cut in ___psi; cut out ___psi; tighten mounting.

Gas only

- ___ 23. Crankcase breather and oil filler cap air cleaner—Clean and/or replace.
- ___ 24. Fuel filter—Clean or replace (replace paper element always).
- ___ 25. Carburetor air cleaner—Clean or replace.
- ___ 26. Spark plugs—Remove, inspect, clean or replace and gap. Torque with new gaskets.
- ___ 27. Distributor—Inspect contacts for corrosion and cap for cracks. Inspect wiring condition and points, inspect rotor for burning/cracks.
- ___ 28. Cylinder compression—Test and record:
Dry 1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8
Wet 1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8
- ___ 29. Manifolds—Inspect for leaks, tighten nuts, with engine at normal operating temperature.
- ___ 30. Cylinder head bolts—Torque.
- ___ 31. Positive crankcase ventilator valve—Remove, clean or replace.
- ___ 32. Valves—Run engine at proper idle, inspect overhead system and, adjust valve lash if required.
- ___ 33. Valve cover gasket—Replace.
- ___ 34. Carburetor—Adjust idle mixture and RPM.
- ___ 35. Ignition timing—Set with light.
- ___ 36. Use tachometer and record top engine RPM.

Diesel only

- ___ 37. Radiator shutters—Inspect to see they are open before starting engine and close as air pressure builds up after starting engine.
- ___ 38. Shutter-stat—Lubricate.
- ___ 39. With engine operating at proper temperature—Tighten exhaust manifold and exhaust pipe flange nuts. Tighten air inlet system hose clamps. Inspect for leaks.
- ___ 40. Air box drains and crankcase breather tubes—With engine running, see that they are open.
- ___ 41. Primary and/or secondary fuel filters—Open petcock and drain water.
- ___ 42. Fuel return line—Disconnect at tank or other convenient place. Run engine at ___ RPM. Fuel return should be approx. ___ quarts per minute. Observe fuel for appearance of air bubbles or gases.
- ___ 43. Primary fuel filter—Clean. Secondary fuel filter—Replace if at change period.
- ___ 44. Engine and oil cooler lines—Inspect for leaks.
- ___ 45. High pressure lines and clamps—Inspect, tighten or replace.
- ___ 46. Fuel jumper lines—Tighten if required.
- ___ 47. Valves—Inspect for proper clearance. (LASH.)
- ___ 48. Injector nozzles—Inspect and clean as required, set cracking pressure.
- ___ 49. Injectors—Check and adjust for proper height setting. Inspect overhead system and adjust rack.
- ___ 50. Air cleaners—Clean and refill reservoir with engine oil.
- ___ 51. Emergency stop control—Test with engine off.
- ___ 52. Throttle, accelerator, shut-off and choke controls—Test operations.
- ___ 53. High idle speed setting—Test and record ___ RPM. Low idle speed setting and record ___ RPM.

- ____ 54. Check on a dynamometer.
PTO RPM's ____ High Idle ____ Rated ____ Horsepower

WALK-AROUND

- ____ 1. Front sheet metal, paint and bumper—Inspect for appearance/accident.
- ____ 2. Front lights and directional signals—Inspect.
- ____ 3. Left front tire—Inspect for cuts or unusual wear, torque wheel nuts.
- ____ 4. Left-hand side of cab—Inspect for appearance and condition.
- ____ 5. Left-side door hinges and latch—Lubricate, adjust if necessary. Window regulators and vents—Test operation.
- ____ 6. Fuel tank mountings—Tighten if required.
- ____ 7. Battery—Examine box cover clamps; inspect level of each cell.
- ____ 8. Left-side of body and frame—Inspect for appearance and condition.
- ____ 9. Left-rear tires—Examine for cuts or signs of unusual wear. Torque wheel and axle flange nuts.
- ____ 10. Fifth-wheel mountings—Tighten if required.
- ____ 11. Rear of vehicle—Inspect for appearance and condition.
- ____ 12. Cab sheet metal—Inspect for appearance and condition.
- ____ 13. Right rear tires—Examine for cuts or signs of unusual wear. Torque wheel and axle flange nuts.
- ____ 14. Right side of body and frame—Inspect for appearance and condition.
- ____ 15. Right side door hinges and latch—Lubricate, adjust if necessary. Window regulators and vents—test operation.
- ____ 16. Right front tire—Examine for cuts or unusual wear. Torque wheel nuts.
- ____ 17. Front ball joints—Inspect on both wheels for excessive looseness.
- ____ 18. Front kingpins and bearings—Inspect on both wheels for looseness.
- ____ 19. Front brake linings, anchors, locks, wheel cylinders and drums—Inspect, blow out drums and shoes. Lubricate shoe anchors and cams—wedge-type brakes, clean and lubricate actuating components.
- ____ 20. Front wheel bearings—Clean, repack and adjust for both front wheels. Replace grease retainer.
- ____ 21. Rear brake linings, anchors, locks, wheel cylinders and drums—Inspect. Blow out drums and shoes, lubricate shoe anchors and cams; wedge-type brakes—clean and lubricate actuating components. Adjust as required.
- ____ 22. Wedge-type brake systems—Remove brake drums, clean and lubricate adjusting components.
- ____ 23. Rear wheel bearings—Clean, repack and adjust. Replace grease retainer.
- ____ 24. Front wheel caster and camber—Inspect to see that it is within specifications.
- ____ 25. Toe-in—Adjust as required.

UNDER VEHICLE

- ____ 1. Chassis—Lubricate according to correct lubricating chart.
- ____ 2. Front tires—Examine for cuts or unusual wear.
- ____ 3. Front springs—Inspect for shackle looseness and wear. Inspect leaves for breakage and misalignment.
- ____ 4. Pitman and steering arms, drag link and tie rod—Inspect.
- ____ 5. Power steering cylinder—Inspect for leaks.

- ___ 6. Propeller shaft—Inspect, including all brackets, flanges, hangers and center bearings.
- ___ 7. Rear springs—Inspect for loose or worn shackles, broken or misaligned leaves.
- ___ 8. Engine oil—Replace oil, filter element and gasket at change period.
- ___ 9. Engine pan gasket, front and rear crankshaft seals—Inspect.
- ___ 10. Engine mounts—Inspect for deterioration or looseness.
- ___ 11. Clutch controls—Examine for any abnormal condition. Inspect clearance and adjustment.
- ___ 12. Front U-bolts—Tighten to specifications.
- ___ 13. Transmission—Inspect for leaks. Inspect the lubricant level. Add?
- ___ 14. Automatic transmission cooler lines—Inspect for leakage.
- ___ 15. Automatic transmission linkage—Adjust.
- ___ 16. Transmission support and strut rod—Adjust if required.
- ___ 17. Driveline-type parking brake—Inspect lining condition and adjust.
- ___ 18. Auxiliary or transfer case—Inspect for leaks. See that breathers are not restricted. Tighten rear bearing retainer bolts.
- ___ 19. Transmission; auxiliary or transfer case linkage pivot points—Lubricate.
- ___ 20. Center bearing, brackets, U-joints and flanges—Tighten as required.
- ___ 21. Rear axle—Inspect lubricant level, add if required. Clean breather.
- ___ 22. Rear axle differential housing—Inspect for lubricant leakage and pinion bearings for looseness. See that axle breather is free of dirt.
- ___ 23. Rear tires—Examine for cuts and unusual wear.
- ___ 24. Rear axle carrier housing and pinion cage bolts—Tighten.
- ___ 25. Rear U-bolts—Tighten to specifications.
- ___ 26. Air brake valve clevis pin—Lubricate.
- ___ 27. Brake hoses, lines, valves, chambers, etc.—Inspect for leaks. Examine cross shaft, cables, linkage for abnormal wear.
- ___ 28. Air tanks—Drain.
- ___ 29. Frames and crossmembers—Examine.
- ___ 30. Exhaust pipe, muffler, tailpipe and hanger brackets—Inspect.
- ___ 31. Cab hold-down-bolt insulators—Inspect, tighten bolts if required.
- ___ 32. Body mounts—Tighten if required.

CAB/DRIVER ITEMS

- ___ 1. Cab interior—Inspect for appearance and condition.
- ___ 2. Seat adjustment—Operate. Inspect seat cushions.
- ___ 3. Window regulators and wing vents—Operate.
- ___ 4. Mirrors—Inspect for cracks, discoloration and tightness.
- ___ 5. All lights, horn, tell-tale lights and dash instruments—Test.
- ___ 6. Wipers—Inspect for correct operation and wear. Adjust, repair or replace as necessary.
- ___ 7. Washers—Operate.
- ___ 8. Radio; heater and directional signals—Operate.
- ___ 9. Steering wheel—Inspect steering gear play.
- ___ 10. Service brake pedal—Test for action and adequate reserve.
- ___ 11. Parking brake—Test for action and adequate reserve.
- ___ 12. Transmission lever—Shift through all gear positions.
- ___ 13. Clutch pedal—Test for action and adequate free play.
- ___ 14. Fire extinguisher—Inspect for leakage and secure mounting.

- _____ 15. Fire extinguisher—Refill or recharge if needed.
- _____ 16. Tools—See that those regularly assigned are in the vehicle.
- _____ 17. Engine emergency stop—Test with engine off.
- _____ 18. Throttle and accelerator controls—Test for binding.
- _____ 19. Choke—Test for binding.
- _____ 20. Seat belts—Securely anchored and in good condition.

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