

# NCFCA SPRING TUNE-UP DAY

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Here are some maintenance items you can perform to help keep your travels Safe and hassle free this summer:

## Under the Hood:



Cooling System/Radiator: **CAUTION: avoid working on a hot cooling system**  
**WAIT FOR IT TO COOL DOWN!**

- *Inspect radiator tanks for cracks/leaks, carefully clean & straighten cooling fins, OPTIONAL: Add nylon window screen between radiator and front support to keep bugs out.*
- *Check radiator hoses and overflow hose for crack/bulges/softness or brittleness, replace if needed.*
- *Check clamps on radiator hoses and overflow hose for wear, tighten/replace.*
- *Check/Replace the often overlooked radiator cap, it may not look bad but it may not allow the correct pressure needed for system to operate correctly.*
- *Check coolant level, don't overfill & use correct coolant.*
- *Check heater/by-pass hoses softness/bulges and clamps, Replace/Tighten.*
- *Check/Replace Thermostat on a regular basis*



Engine:

- *Change/Check oil level and replace oil/Filter at recommend intervals, usually 3000 miles.*
- *Check/Repair for any Oil/Coolant leaks near gasket surfaces, this could save you headaches down the road, clean engine regularly.*
- *Check/Repair engine vacuum leaks, common places: Carburetor/Intake manifold gaskets, Transmission shift modulator line, power brakes, carburetor throttle shafts.*
- *Inspect/Replace points and condenser or switch to Electronic Ignition, Adjust Gap/Dwell/Air Gap to specifications.*
- *Inspect/Replace Spark Plugs/Wire, adjust gap to specifications. NOTE: You can learn a lot about the condition of your engine by looking at your spark plugs!*
- *Check/Clean/Replace air cleaner assembly housing and air filter as Recommended/As needed, this can increase MPG!*
- *Check/Replace motor mounts, bad motor mounts cause vibrations and can leave you stranded on the side of the road when they break!*
- *Check/Replace/Adjust your Falcons Fan/Generator/Alternator/Power Steering/Air Conditioning Belts inspect them for Cracks/Stretch. NOTE: When adjusting them don't over tighten; this puts stress on water pumps, and other accessories bearings.*

Engine Timing & Carburetor Adjustments:

- Check Initial Timing with a timing light @ specified engine RPM at harmonic balancer, disconnect vacuum advance and plug (Timing marks on balancers can sometimes be off) or if adjusting by ear, just before audible pre-ignition occurs. Adjustments are made by loosening the Distributor and turning it to advance/retard timing. **NOTE:** A stretch timing chain or worn timing gear set can retard timing.
- Adjust idle compensation screws in/out and using a Vacuum Gauge; you want to achieve the highest vacuum reading you can get on gauge or until RPM's start to drop if adjusting by ear.
- Adjust engine RPM using Tachometer and adjust throttle stop on carburetor to specified RPM.
- **NOTE:** You may have to go back and check all of the above adjustments to reach a balanced adjustment to specifications.

Master Cylinder/Brake Light Switch:

- Check Master Brake fluid level and add correct type, don't over fill. **NOTE:** Low brake fluid can mean a lot of things, worn or out of adjustment brake pads/shoe and leaks make the correct repairs and then add brake fluid, brake fluid takes paint off!
- Check/Replace Brake light switch (some years of Falcons use a hydraulic pressure switch and other use a mechanical pressure switch to activate rear stop lights) Adjust Mechanical pressure switch if needed. **CAUTION:** if you replace a Hydraulic pressure stop switch you must bleed your brake system!
- Check/Tighten Brake line fittings and bleed brakes.

Battery/Tray: **CAUTION: Wear safety goggles and Disconnect battery terminals when working with Batteries, using caution around acid & Vapors – Explosive hydrogen Gas!**

- Check/Clean/Replace outside of battery with baking soda to remove dirt and acid, look for bulged/cracked case.
- Check/Clean/Replace battery Terminals/Cables with baking soda to remove dirt and acid, replace if cracked, corroded or insulation is missing.
- Check/Fill water level in each cell to cover plates, don't over fill.
- Lift Battery out of tray and Check/Clean/Replace with baking soda to neutralize acid.
- Replace steel battery terminal bolt with Stainless Steel one, and use felt terminal washers under cable terminals.

Starter/Solenoid/Voltage Regulator/Electrical Wiring: **CAUTION: Disconnect the negative battery terminal when working on electrical System.**

- Check/Replace worn, cracked wiring/cables.
- Clean/Tighten connections.

**In Trunk:**

Fuel Tank, Filler Hose & Vent Line: The trunk floor is the top of the fuel tank in Falcon Sedans.

- Inspect fuel tank for damage, rust and leaks.
- Check filler hose and vent hose for cracks or brittleness, replace if needed.
- Check clamps on filler hose and vent hose and tighten/replace.
- Inspect fuel tank vent line for damage/kinks and use compressed air to clear obstruction in line. **CAUTION:** avoid using a hot light near fuel or fuel system.

Electrical Wiring: Check tail lamp wires & sockets and other wiring harness for damage and route them to reduce the chance that items in trunk will damage them.

Rear Quarter Panel area & Covers: Remove rear quarter panel covers, check for wet spots and corrosion, Vacuum dirt, leaves, crud from this area. Check drain plugs if you're lucky to still have them and not body filler. **NOTE:** This is where rear quarter panel rust starts most of the time.

Trunk Rubber Seal/Gaskets: Check tail lamp housing Gaskets and trunk lid seal for cracks/damage, water and dust can enter car there.

**Under the Car:**

Raise the car and support the car with jack stands, make sure it will not teeter off and fall on you before you get under it.

Front Suspension, inspect for wear, damage and leaks. Check and grease ball joints, tie rod ends, check idler arm, pitman arm, strut rod bushings, coil spring seat bushings, steering gear, control arm bushings and shocks for leaks and operation.

Rear Axle and Suspension, Check rear axle for gasket leaks and grease level make repairs and fill to proper level if needed.

- Inspect rear leaf springs for cracks, broken center bolts and clamps.
- Inspect leaf spring front eye end rear shackle bushing and replace foot long shackles or flat leaf springs.
- Check shock absorbers for leaks and wear and finally check axle vent hose.

Unit-body, Check for rust, loose under coating, missing or damaged seals and floor pan plugs, clear loose debris like dirt, leaves and under coating from rocker panels, rear quarter panels and other drain or vent holes. Caution: severe depression and anxiety can sometimes follow inspecting the unit-body for damage for rust.

Fuel Tank, Fuel Hose, Sender Unit, Check fuel tank for wet spots and corrosion. Check rubber fuel hose for cracks and clamps for tightness. Inspect metal fuel lines for kink and rust. Check/Clean sender unit connection. **CAUTION:** avoid using a hot light near fuel or fuel system.

**Disk and(or) Drum Brakes:**

- Master Cylinder, check brake fluid level, if fluid level is low you could have a leak in the system. Refill to proper level with recommended brake fluid, don't mix types of fluid. Check for leaks inside car, under the dash and under the hood.
- Brake lines and Hoses, Check condition of lines for rust and leaks, check hoses for leaks.
- Parking Brake Cables, check to make sure you have them and that they move freely and operate properly. Replace if missing, stretched or frozen.
- Wheel Cylinders and Brake Shoes/Pads, Hardware and Wheel Bearings, this is a lot of work removing all the wheels and tires but it makes it easier to see leaking brake cylinders, and rear axle seals. Check the wear and condition of brake linings, drum/rotor surfaces, parking brake cables, self adjusters and brake hardware.

**Drive Shaft and Transmission:**

- Manual Transmission, check for leaks, check gearbox lubricant level and condition or change lube(30,000 miles or 3 years), check clutch and shift linkage and adjust if needed.
- Automatic Transmission, Check condition of fluid and vacuum lines for rust and leaks, check hoses for leaks. Check for leaks at torque converter, pan, speedometer cable and tail shaft housing seal and replace if needed. Check transmission fluid level and condition at dipstick (under the hood) fluid should be clear red in color, replace if dark brown or smells burnt. Replace filter (30,000 miles or 3 yrs).
- Adjust Neutral Safety switch C4 & AOD
- Drive shaft, check u-joints for binding, grease or replace. Clean dirt or rust from drive shaft and check if balance weights are still attached.

These are just a few simple maintenance items to follow that will help keep your travels in your old or new car safe and enjoyable this summer, these same things can be checked in the fall also before putting your old car away for the winter also.