



MG TC SAFETY CHECK

Prepared by Mike Goodman for the TC Motoring Guild

This TC safety check is designed to be a relatively quick once over to detect obvious problems on your TC. No disassembly is required but it is necessary to have access to the under carriage. Before check is done questioning the owner about any unusual noises, loose-

ness or particular concerns will aid in zeroing in on problem areas. As you go through the items just check GOOD or BAD. If item is bad then comment on findings or fix to the problem. If the comment section is too small jsut overflow onto the reverse side of the page.

9/10/05

ENGINE

	GOOD	BAD	COMMENTS
Radiator	<input type="checkbox"/>	<input type="checkbox"/>	_____
Water pump	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hoses.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lower branch pipe	<input type="checkbox"/>	<input type="checkbox"/>	_____
Freeze plugs (8)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear head plate.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Water elbow (under thermostat)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fan belt.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Oil lines and oil filter	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gaskets.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Motor mounts	<input type="checkbox"/>	<input type="checkbox"/>	_____
Flex fuel lines	<input type="checkbox"/>	<input type="checkbox"/>	_____
Solid fuel lines	<input type="checkbox"/>	<input type="checkbox"/>	_____
Carburetors.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fuel pump	<input type="checkbox"/>	<input type="checkbox"/>	_____
Cables (starter choke & slow running control).	<input type="checkbox"/>	<input type="checkbox"/>	_____

CHASSIS

	GOOD	BAD	COMMENTS
Frame	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front springs	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front spring bolt	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front spring bushings	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear springs	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear spring bushings.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear spring to differential mount bracket.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear spring to mount bolts.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front shocks	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front shock links.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear shocks	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear shock links	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear shock bracket.	<input type="checkbox"/>	<input type="checkbox"/>	_____

FRONT SUSPENSION

	GOOD	BAD	COMMENTS
King pins	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front hubs	<input type="checkbox"/>	<input type="checkbox"/>	_____
Front axle to spring bolts	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tie rod & draglink ball joint ends	<input type="checkbox"/>	<input type="checkbox"/>	_____
Steering box & pitman arm	<input type="checkbox"/>	<input type="checkbox"/>	_____
Exhaust.	<input type="checkbox"/>	<input type="checkbox"/>	_____

DRIVE TRAIN COMPONENTS

	GOOD	BAD	COMMENTS
Bell housing	<input type="checkbox"/>	<input type="checkbox"/>	_____
Clutch arm	<input type="checkbox"/>	<input type="checkbox"/>	_____
Clutch chain	<input type="checkbox"/>	<input type="checkbox"/>	_____
Transmission mounts.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear transmission casting	<input type="checkbox"/>	<input type="checkbox"/>	_____
Differential.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Oil level	<input type="checkbox"/>	<input type="checkbox"/>	_____
Drive shaft	<input type="checkbox"/>	<input type="checkbox"/>	_____
Rear axle shaft hub assembly	<input type="checkbox"/>	<input type="checkbox"/>	_____

BRAKES

	GOOD	BAD	COMMENTS
Hoses.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hand brake cables	<input type="checkbox"/>	<input type="checkbox"/>	_____
Master cylinder	<input type="checkbox"/>	<input type="checkbox"/>	_____
Brake pipes.	<input type="checkbox"/>	<input type="checkbox"/>	_____

ELECTRICAL

	GOOD	BAD	COMMENTS
Generator & pulley.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Starter & switch	<input type="checkbox"/>	<input type="checkbox"/>	_____
Battery & cables	<input type="checkbox"/>	<input type="checkbox"/>	_____
Frame to transmission ground cable	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wire harness	<input type="checkbox"/>	<input type="checkbox"/>	_____
Distributor	<input type="checkbox"/>	<input type="checkbox"/>	_____
Spark plug wires	<input type="checkbox"/>	<input type="checkbox"/>	_____
Lights	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wiper motor and horn	<input type="checkbox"/>	<input type="checkbox"/>	_____

MISCELLANEOUS

	GOOD	BAD	COMMENTS
Fuel tank	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wire wheels & tires	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wiper blades	<input type="checkbox"/>	<input type="checkbox"/>	_____
Body	<input type="checkbox"/>	<input type="checkbox"/>	_____
Check all fluid levels.	<input type="checkbox"/>	<input type="checkbox"/>	_____
Windscreen and mirrors	<input type="checkbox"/>	<input type="checkbox"/>	_____

ENGINE

Radiator – Check fluid level, signs of leakage at seams, clogged or bent fins, loose over flow tube, O-ring in radiator cap. Check condition of coolant. Is it rusty in color?

Water pump – Check for leakage and shaft play.

Hoses – Check condition of large hose at top of radiator for cracks, soft spots, signs of leakage and clamp condition. Do same for three smaller hoses attached to lower branch pipe.

Lower branch pipe – Look for signs of rust and leakage. Rust may indicate thinning of pipe wall

Freeze plugs – Look for signs of leakage and rust. There are 6 smaller diameter plugs plus two large diameter (one behind exhaust manifold and one at back of block).

Rear head plate – Look for leakage or rust on this rectangular plate bolted at the back of the head. They do rust out like freeze plugs.

Water elbow (under thermostat) – We are talking about the large aluminum elbow below the thermostat. These are famous for eroding away due to dielectric action. Look for flaky white corrosion and markings from leaking coolant.

Fan belt – Is belt free of cracks, fraying or oil contamination? Is it adjusted properly?

Oil lines and oil filter – If oil filter is not tight against bracket and block the old steel oil lines to it will wiggle and then crack. Check tightness and evidence of oil leakage. Don't forget to inspect the oil line running up to the head and also the flex line leading to the oil pressure gauge.

Gaskets – Looking for evidence of leakage at all gasket edges.

Motor mounts – Rubber should be solid and in decent condition. Also look for any cracking of metal mounting plate to engine.

Flex fuel lines – If hoses are the old blue line hoses then replace. Look for signs of leakage and deterioration. They should be flexible and not brittle. Connections should be tight.

Solid fuel lines – Is line securely fastened down? Any evidence of leakage? Are connections tight.

Carburetors – Check fuel bowl for looseness. Look for evidence of leakage. Is there slop in the throttle shafts? Are overflow pipes secured?

Fuel pump – Is pump secured tightly? Any evidence of leakage

Cables (starter, choke, & slow running control)
- Are cable housing ends fastened and are cable ends attached securely. Are cables frayed, kinked or worn through?

CHASSIS

Frame - Look for cracks behind dumb iron at front. While not as common look for cracks on frame at both ends of boxed section. Scuttle support brackets are also frequent breaking points.

Front & rears springs - Look for broken springs, proper spring clips and wear points at ends of spring leaves.

Front spring bolt - This should show signs of lubrication. Is there excessive play between bolt and spring eye?

Front & rear spring bushings - Are rubber shackle bushings tight and not deteriorated?

Rear spring to differential mount bracket - The lower pad of the bracket tends to flex and crack. Inspect carefully for cracks.

Rear spring to mount bolts - Inspect the 8 bolts (four on each side) that hold the differential bracket to the springs for stretching or breaking.

Front & rear shocks - Look for signs of leakage. Mounting bolts should be tight. There should be a spacer or bumper mount bracket between the front shocks and frame.

Front & rear shock links - Is the rubber in good shape? Are links fully inserted into rubber mounts? Are mount pins tight to spring perch?

Rear shock bracket - Inspect rear cross member that shocks mount to for tightness and cracks.

FRONT SUSPENSION

King pins - Check for looseness by rocking front wheel. Placing a finger on joint between axle and steering knuckle will indicate if play evident (not to be confuse with wheel bearing play).

Front hubs - Placing a finger between brake backing plate and drum will tell you if there is play here. A very little bit is normal but excess play is bad.

Front axle to spring bolts - Inspect the 8 bolts (four on each side) that hold the front axle to the springs for stretching or breaking. There should be double nuts on each bolt.

Tie rod & drag link ball joint ends - Check for looseness in the ball ends (They are spring loaded and the springs break.). Note that of the 4 tie rod ends, the one connecting to the pitman arm is different and assembled different. This one joint hangs below the ball. Use of the wrong joint here can be disastrous. All cotter pins must be in place.

Steering box & pitman arm - Make sure all mounting bolts especially the large bolt at the frame bracket are tight. Grab pitman arm attached to the steering box. There should be no movement fore and aft. If there is, steering box is worn and must be overhauled. Pitman arms can crack. Inspect so you don't have a sudden loss of steering. Cracks are not always visible so if in doubt have it professionally inspected. Pitman arm should be secured with a grade 8 bolt with an aerotight (all metal) self-locking nut or castellated nuts with cotter key (8 mm or 5/16" diameter). Torque to 33 ft. lbs. Replace bolt and nut if it is at all questionable. Turn steering wheel. Observe play in relation to steering arm movement. If excess play or binding is present adjust with shims.

Exhaust - Check flex section in the front pipe between the engine and the chassis for cracks. Check mounts at muffler to chassis, bracket from head pipe to bell housing and rear of tail pipe to chassis mounting.

DRIVE TRAIN COMPONENTS

Bell housing - Check for cracks where release shaft enters or cracking.

Clutch arm - Check for looseness caused by worn bushing.

Clutch chain - Check for link wear and adjustment.

Transmission mounts - Check for deterioration and that all fasteners are present.

Rear transmission casting - This aluminum casting is weak and breaks. Check for cracks.

Differential - Check for any cracking or leaks.

Check straps over differential should be secure.

Oil level - Fluid level should be measured to bottom of opening on right side of casting. Using the fill opening (on the left side) to measure level will overflow differential and leakage past hubs to the brakes.

Drive shaft - Check U-joints for wear and play.

Securing bolts to differential flange should be of grade 8 - aircraft quality with either self locking nuts or castellated nuts with cotter keys.

Rear axle shaft hub assembly - Grab rear wheel to check for play. Play will indicate need of shims or new bearings.

BRAKES

Hoses - Check hoses for wear, brittleness, cracks and leakage.

Hand brake cables - Check that they are routed properly and travel freely.

Master cylinder - Check for leaks. Is heat shield in place? Is it mounted securely?

Brake pipes - Solid pipes should be firmly clipped to frame to avoid wear and work hardening.

ELECTRICAL

Generator & pulley - Grasp pulley and wiggle to check front bearing. Check old aluminum pulleys for excessive wear.

Starter & switch - Starter should be secure. Switch lever should be clear of exhaust.

Battery & cables - Battery terminals should be free of corrosion. Cable insulation should be intact. Battery should be mounted firmly in box.

Frame to transmission

ground cable - Ensure that the ground cable is in place, in tact and secured at both ends.

Wire harness - Harness should be fastened securely and free of worn insulation and stray, and dangling wires.

Distributor - Upper body should be tight to the base. A ground wire should be attached between the distributor clamp bolt and the generator bracket. Spark plug wires

Spark plug wires - Check condition of wire insulation. Check terminal ends to make sure they are secure.

Lights - Test all lights to ensure bulbs are functional. Don't forget both high and low beams.

Wiper motor and horn - check both for proper operation and secure mounting.

MISCELLANEOUS

Fuel tank - Look for evidence of leaking.

Wire wheels & tires - Check tread depth, loose or broken spokes and inflation.

Wiper blades - Check rubber on blade for integrity. Note condition of rubber securing retainer.

Body - Check door latches for loose or missing screws. Check wings, windscreen for looseness or missing mounting hardware. Look over sheet metal for stress cracks.

Check all fluid levels - Oil and water are most obvious but don't forget: transmission, master cylinder, and carburetor dampeners. Check to make sure rear generator bushing felt is oil soaked.

Windscreen and mirrors - Check for damage, cleanliness and adjustment.