SERVICE BULLETIN

CAB SERVICE & PARTS CORPORATION

NEW YORK AND CHICAGO

SUBSIDIARY OF

Checker Cab Manufacturing Corporation

March 1, 1956

Subject: T U N E - U P

Description: MODEL A-8

We give you below a suggested Tune-Up proceedure. The proceedure is directed entirely to maintaining the high gasoline miles per gallon which is built in the Checker Cab. We have not considered the starting or lighting systems, including the voltage regulator.

T U N E - U P

Have engine at operating temperature, including oil, water, and manifold.

TEST FUEL PUMP

With pressure gauge at level of carburetor and engine at idle speed (400 RPM) gauge should read 3 # or higher. Check engine operation for rough idle, missing, sluggishness on acceleration, detonation and flat spot.

ROUGH IDLE

Frequently due to wrong idle adjustment; may be timing or ignition.

MISSING

Usually electrical trouble. If miss is not eliminated after complete tune-up, check valve stem clearance, sluggish valve action, compression pressure and valve timing.

SLUGGISH ACCELERATION

May be late ignition timing or lean carburetor.

DETONATION

Ignition too far advanced, excessive combustion chamber deposits, overheating, mixture too lean or low octane gasoline.

FLAT SPOT

Check distributor governor advance and carburetor. If carburetor, may be due to clogged idle system, worn throttle shaft, bent throttle plate, clogged main metering system or bent valve float. (continued)

CS 289 10M-10-56

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TUNE-UP (continued..... PAGE 2.)

If this condition is noted, carburetor should be rebuilt.

Proceed with tune-up; keeping in mind any of the points observed above.

BATTERY

Take gravity. Checker Cab batteries have 1.250 at 80° F., when fully charged and in good condition. Do not increase strength of battery acid as the 1.250° acid will give longer life. If gravity is less than 1,200° recharge battery and install fully charged battery in cab.

If battery is low there may not be sufficient voltage at the coil and this can cause misfiring which will be noticed first under heavy load operation.

DISTRIBUTOR

Examine for cracked cap and corroded terminals. Check side play of shaft. Should not be over .005" total movement under a light push. Inspect governors weight for freeness. Examine points for pitting and burning. Dress if required or install new points. Adjust point to .018 gap.

SPARK PLUG WIRES

Remove and inspect. Replace if insulation is dried or cracked, or there is evidence of shorting or spark jumping.

SPARK PLUGS

Remove and inspect. If original equipment plugs are used, a heavy sooted or moist condition indicated misfiring, usually the case if only 1 or 2 plugs are sooted or excessively rich mixture, usually due to a rich idle.

Clean plugs, making certain to lightly sand the electrodes across the gap. Set to .028 gap. Install plugs being careful not to overtighten.

IGNITION TIMING

Clean damper so that timing marks are visible.

(continued...)

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Facing the car the rear or left white mark is top center. If these marks have worn off, chalk mark the zero or top center position. Connect the timing light. (We suggest the power type light as it is more brilliant and easier to use.) Start engine and run at 400 RPM. Set timing to top center. Gradually increase engine speed and observe timing mark. If it does not move, governor advance is not functioning. If mark on damper moves to left of pointer, advance is operating.

At this point if an electric tachometer is available it should be used. If not, an approximate setting can be made by removing 1 spark plug wire and holding the terminal about $\frac{1}{4}$" from the plug terminal and count the number of sparks for 12 seconds. Multiply this number by 10 and it will give the engine speed in R P M.

CARBURETOR

Idle engine at 400 RPM. Turn idle adjusting needle in about 3/4 turn or until lean roughness develops. Return to original position and then back off about 3/4 turn or until rich roll becomes noticeable. If no adjustment in idle mixture is possible check for flooding by observing spilling from the main discharge tube. Usually spilling will cause a rough idle or a complete stall, but in some cases a slight amount of spillage will merely cause a rich idle. In either case, remove the carburetor from engine, dissassemble and clean thoroughly. Where no idle adjustment was obtainable pay particular attention to the idle systems, that is, all idle air intake ports and channels located in the top and fuel bowl assemblies and the idle discharge ports located in the throttle body. Scrape and clean carbon from around the throttle plate and discharge ports.

If carburetor is flooding, inspect fuel valve for dirt and wear and replace if necessary.

Check float level. Should be $1\frac{1}{2}$" plus or minus 3/64" measured from parting surface to bottom of float. To adjust, do not bend float, but add or remove gaskets under fuel valve. Assemble carburetor and reinstall.

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TUNE-UP

(continued.....PAGE 4.)

Warm up engine again. Adjust idle to leanest satisfactory mixture. Recall condition of spark plugs when removed and be guided accordingly. Remember also that a new engine requires a richer mixture and as it runs-in the idle can be gradually leaned out.

If the idle needle has been damaged either dress tapered section or install new idle needle. A mutilated needle will make it difficult or impossible to get an adjustment.

Since a rich idle will cut down gas mileage considerably, it is important that the leanest satisfactory idle adjustment be used.

Accelerate engine sharply with wide open throttle to about 1000 to 1200 RPM and immediately release the throttle. If recovery is good, that is, if the engine slows down smoothly to idle and does not roll, the idle setting is satisfactory and will not cause stalling in service. An exhaust gas analyzer should be used at this point to be certain that a lean idle is obtained.

AUTOMATIC CHOKE

This unit should be set open fully in the shortest time that will give satisfactory performance. Re-adjustment may be required with a seasonal change in gasoline, a change from one brand of gasoline to another or a change in temperature. To adjust, loosen the 3 small screws on the face of the choke and rotate the cover plate. (Clockwise, to decrease the time to open and counter-clockwise to open faster.) This check must be started from a cold engine.

By NEW YORK
SERVICE DEPARTMENT

CS 289 10M-10-56