21) Break-in procedure

for aircraft installation (in other applications proceed accordingly)

The break-in must be performed with the engine installed, and properly loaded with matched propeller for max. R.P.M. In case of an aircraft, anchor the fuselage to the ground. Run the engine according to the following graph:

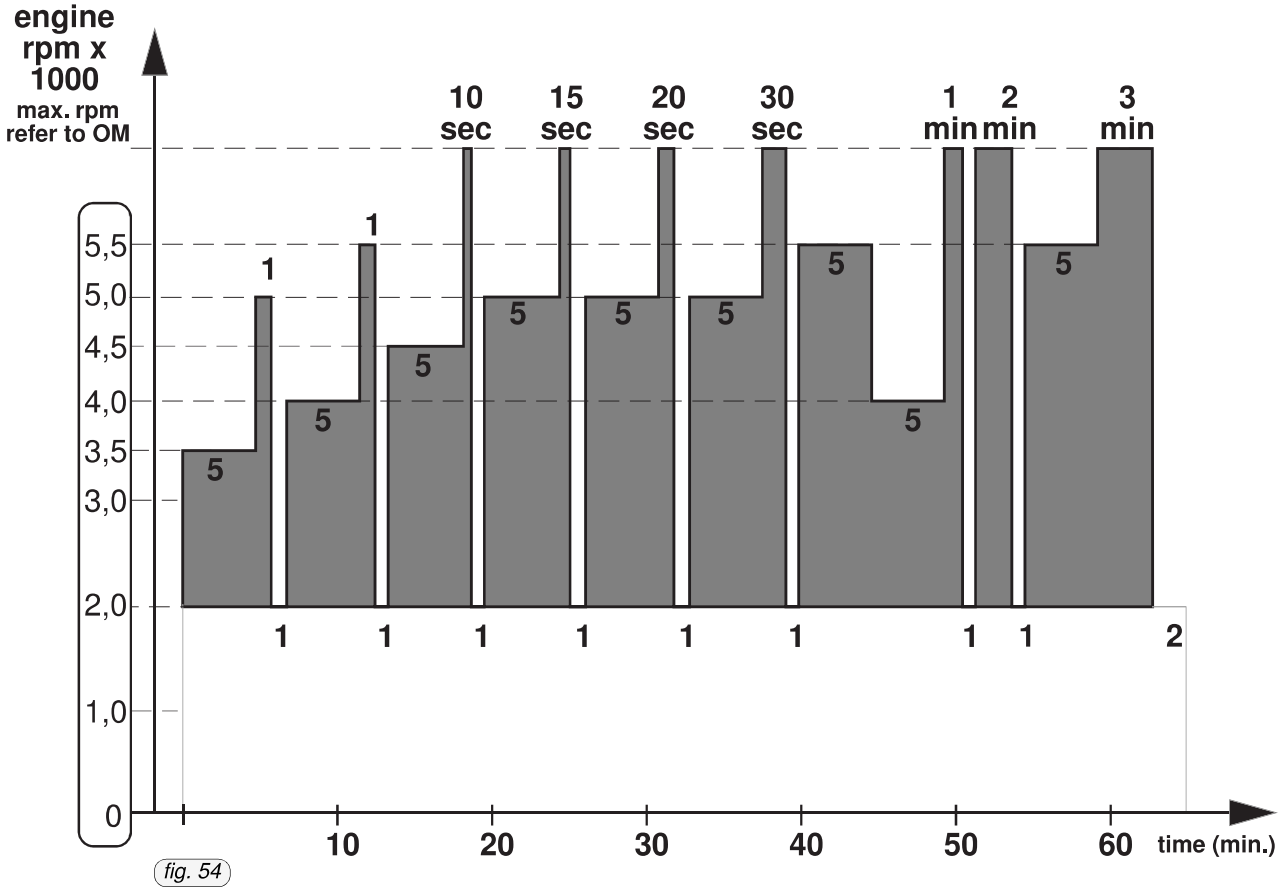

fig. 54

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On a liquid cooled engine it is possible that the cooling air flow (speed) on ground is not enough to provide adequate cooling for extended periods of time. Therefore, it is necessary to observe carefully the temperature of the cooling liquid during break-in procedure to avoid overheating. Before exceeding the maximum allowed cooling temperature on cylinder head (outlet) of 80 °C/180 °F interrupt the run-in and cool down the engine at idle for approximately one minute and continue the run from where it was interrupted.

On a free air engine it is possible that the cooling air flow on ground is not enough to provide the necessary cooling for extended periods of time. Therefore, it is necessary to observe carefully the cylinder head temperature (CHT) during the break-in procedure and avoid overheating. Before exceeding the maximum allowed **CHT of 250 °C / 480 °F** interrupt the run and cool down the engine at idle for approximately one minute and continue the run from where it was interrupted.

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Be sure to use a safe run-up area, to anchor aircraft at those points approved by the airframe manufacturer, and to have someone present who is able to shut off the engine instantly and to prevent unauthorized people entering the danger area.

Proper clothing, ear protection etc. should be used on any engine run-up test.

After this procedure the idle must be adjusted (see also latest revision of the current Maintenance Manual 447-503-582). Then proceed with taxi test to verify proper cooling system. Then short take offs can be conducted. After a few short full-load take-offs, but not later than after 2 hours total running time, the cylinder head nuts must be re-torqued to 22 Nm (195 in.lb.). For this procedure the cylinder cowl (if any) must be taken off.

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