

service bulletinM64-6
(Supersedes M50-7)

January 30, 1964

TO: Continental Authorized and Approved Service Stations,
Parts Dealers, Repair Facilities and Engine Owners.

SUBJECT: Prevention of idling failures on four-cylinder engines.

ENGINES AFFECTED: All four-cylinder engines.

ACCOMPLISH: Recommended as soon as possible in cases where idling
failures have been or are being encountered.

REFERENCE: FAA Aviation Safety Release No. 338

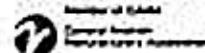
Gentlemen:

FAA Safety Release No. 338 discusses at length the causes of idling failures and offers suggestions for minimizing this trouble and little more can be added to this discourse. However, we would like to add the following comments and hints which have resulted from our investigation of this problem.

The acceleration problem seems to be most frequently encountered in outside air temperatures of 32° F. and below. When temperatures in this range are encountered, the pilot must use precaution in opening the throttle in flight after the engine has once been idled. If the throttle is opened suddenly and rapidly, transition from the idle system of the carburetor to the power system is so rapid that the engine is temporarily starved of fuel which might cause possible engine stoppage. However, we found in our tests that in every case where engine stoppage resulted for this reason, the engine could be restarted by one of the following procedures.

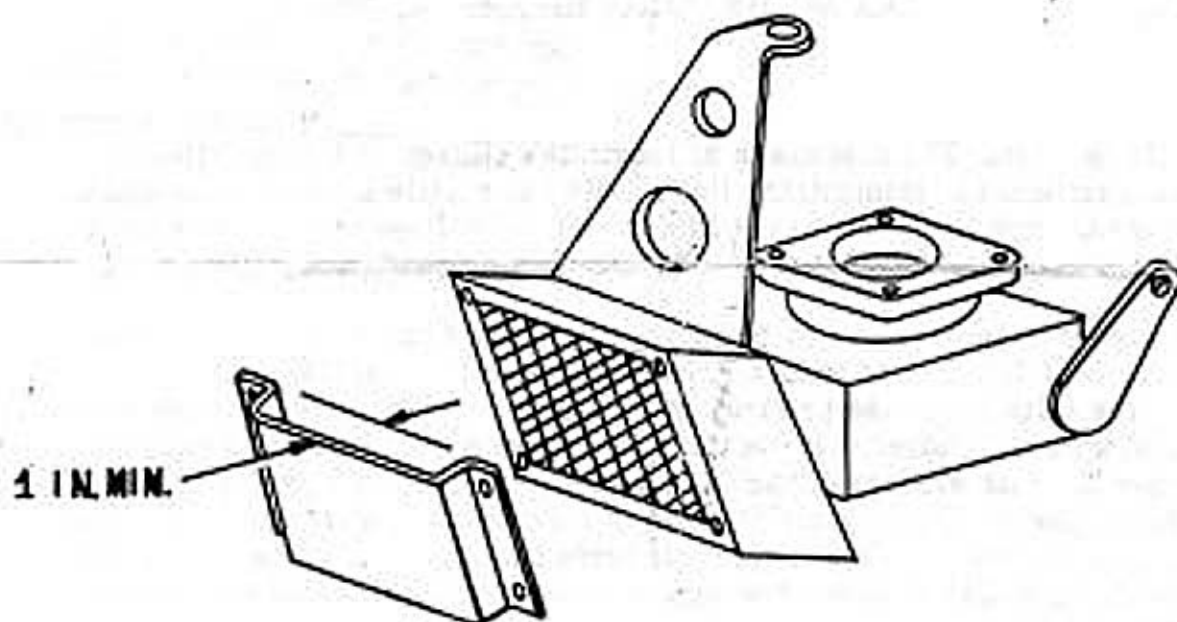
1. Return the throttle to the closed position and then open it slowly.
2. Leave the throttle in the wide open position and operate the primer for one or two strokes.

It is also called to your attention that the moment of inertia of a metal propeller is roughly 2-1/2 times that of a wood propeller. This means that the problem of acceleration of this greater mass through the transition period from the idle system to the power system of the carburetor is proportionately greater.



Our data further indicates that in two minutes after the throttle is closed, with carburetor heat "ON", the carburetor air temperature can drop as much as 72°. This makes it obvious that in extended glides with closed throttle, power should be applied momentarily at frequent intervals in order to supply some heat to the carburetor air heater.

The foregoing is intended as helpful information to be remembered and applied whenever necessary. However, it is always a good safety measure to have a mechanical aid to help combat idling failures and we therefore refer you to the sketch illustrated below showing the suggested baffle arrangement which is very simple and can be very easily and economically made up and installed over the standard air filter. Our tests have indicated that this arrangement gives improved acceleration characteristics and minimizes the possibility of engine stoppage on sudden opening of the throttle.



1. Baffle metal must be stiff enough to prevent inward deflection toward the filter.
2. Note that a minimum distance of 1 inch must be maintained between baffle and filter as shown.