IMMEDIATE ACTION

SERVICE BULLETIN

NUMBER 47

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SUBJECT: Preparation for Winter Operation

MODELS AFFECTED: J3 Series Airplanes and E2, J2, J3 40 H.P. (Not Equipped with Adequate Carburetor Heater.)

This bulletin is written to acquaint owners with the necessity for observing certain precautions in connection with the operation of their airplanes during the winter months.

There are several items of equipment in the engine installation which should be carefully inspected to insure satisfactory operation. These items are discussed in the following paragraphs.

1. A complete inspection of the carburetor air heater system should be made to make certain that all connections in the engine manifold are tight and to determine that no cracks exist in the manifolds. Any gaskets which may have been installed originally should be checked for tightness and, if found defective, should be replaced at once.

The rigidity of the manifold system should be determined to prevent leakage of exhaust gases as a result of excessive movement of manifold parts. It should be determined that the cold air shut-off valve in the air intake scoop is operating properly when the cockpit control is moved and excessive clearances between the valve and the air intake box should be corrected either by the installation of a new plate or by replacement of the defective part. Certain cases of excessive wear at the ends of the shaft to which the cold air shut-off valve is attached have been noted. This wear should be corrected by mounting bearing washers or plates on the ends of the shaft, these plates to be welded or riveted to the air intake housing.

2. All parts of the cabin heater should be carefully inspected to make certain that no exhaust gases are escaping from the manifold into the cabin heater ducts through cracks in the manifold or loose gaskets.

3. The fuel system should be flushed carefully to remove any moisture which may have accumulated in the fuel tank or lines and the gas strainer should be drained regularly. Moisture in these parts will freeze with the possibility of engine stoppage.

NUMBER 47

4. If operations are conducted in extremely cold regions where low oil temperatures are encountered during operations, it is advisable to reduce the amount of cooling air passing over the crank case or oil tank by closing or partially closing the openings in the cowl which provide cold air entrances. These openings may be closed by attaching metal plates or by doping a small section of fabric over the opening.

5. All persons operating your airplane should be instructed to take special precautions to prevent engine failure due to carburetor icing. It is advisable to use heat in the carburetor air during all gliding operations so that the engine will not cool off excessively. It should be pointed out that it is more desirable to fly with the carburetor heater turned on to prevent icing than to attempt to melt ice after it has started to form, as a large percentage of accidents due to carburetor icing are the result of insufficient time for ice to be melted from the carburetor passages after icing is first encountered. The loss in power due to use of carburetor heat is not excessive, and if there is any doubt in the operator's mind as to whether icing conditions are present, the safest procedure is to use full heat during these operations.

6. In starting engines during cold weather precautions should be taken to prevent carburetor fires, as overpriming the engine with a subsequent backfire through the carburetor will often result in a carburetor fire. To help prevent this condition, overpriming of the engine should be avoided.

7. It is recommended that the E2, J2, and J3 40 H.P. models not equipped with adequate carburetor heaters not be flown in weather conducive to carburetor icing.

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