INSTRUCTIONS FOR THE FORCED AIR COOLING SYSTEM ACCESSORY PACK FOR "CRICKET"

INTRODUCTION

The GMP "CRICKET" helicopter has been designed to operate satisfactorily in a wide range of temperature and altitude, utilizing conduction and convection cooling from the main frame and heat sink installation. However, some builders have expressed a wish to fit a forced-air cooling system. While this would have been in conflict with the objective of simplicity for the "Cricket" design, it is offered here as an accessory pack for those that wish to install it.

INSTALLATION

In order to install this cooling system on your "Cricket" you should first remove the engine, complete with clutch and starting cone, from the main frame of your helicopter. Now cut the black plastic cooling fan shroud as shown in the photographs so that you will have access to your main needle valve and also your idle adjustment. Another cut-out should be made to allow you to remove the glow plug from the head of your engine. Typical cut-outs are shown in the photos but remember that different engine installations may require different locations and shapes for the cut-outs.

One important factor to bear in mind is to cut out the minimum amount of plastic that you can so that you feed the greatest quantity of cooling air over your cylinder head. The raised projection on top of your cooling fan shroud should be cut out to the point where just the vertical lip remains. The hole should then be carefully smoothed with some sand paper. The photo sheet will give you a good idea of how the finished hole will look. Next remove the clutch and flywheel from your engine and replace the flywheel with the one from this accessory kit. The clutch housing and starter cone should now be replaced. Now, before re-installing the whole unit in your "Cricket", the main frame should be cut away, as shown in the diagram, in order to allow for the best shape of the cooling fan shroud. This can be done using a suitable file. If you decide not to do this, an alternative would be to slot the cooling fan shroud where it meets the main frame and use silicone to seal the joint of the slot and thie main frame.

Now re-install your engine and slide the cooling fan housing over it. Position the cooling fan shroud so that it is centrally located on the cylinder head and with a gap no greater than 1/8" between the cooling fan shroud and the cylinder head. Make sure that your cooling fan shroud is pushed as far forward as possible so that it very nearly touches the top surface of the blades of the cooling fan. The gap between the cooling fan blades and the fan housing should be no greater than 1/16" and preferably less. The smaller this gap the more efficient your cooling system will be. Now, after locating the cooling fan shroud you can finally fit it to your "Cricket" by means of the two metal straps and the sheet metal screws included in the kit. The photographs showing the installation should be self explanatory. You will notice that a piece of the discarded cooling fan housing material is used to deflect the air downwards. This is necessary if you are flying your "Cricket" in fast forward flight to avoid a conflict between the two airflows - out from the fan and in from the forward flight airflow.

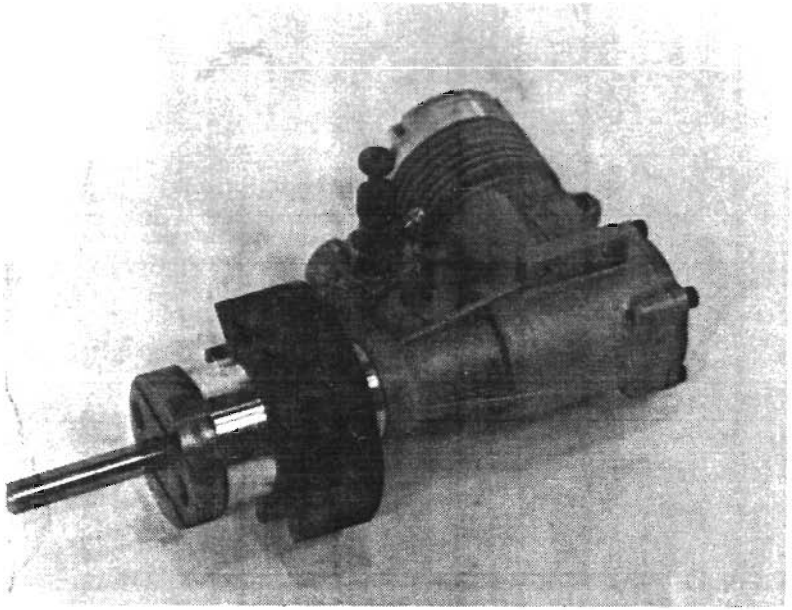
Finally, some slight adjustment may be needed to the metal straps to center your cooling fan shroud. After this is done you are then ready to fly your "Cricket" with your new forced air cooling system.

OPERATION

Don't forget, however, that with any helicopter, however efficient or effective the cooling system is, by running the engine too lean you can cause a greater heat rise in your engine than any cooling system can dissipate. So the addition of a forced air cooling system, such as this, to your "Cricket" does not mean that you must not still be very careful in keeping the setting of your engine well toward the "rich" side. A lean run can cause the engine to seize and give permanent damage.

Good luck with your cooling system for "Cricket".

GMP CRICKET



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