Beechcraft SERVICE LETTER

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SUBJECT: OVER-PRIMING THE BEECHCRAFT MUSKETEER

AIRCRAFT AFFECTED: All BEECHCRAFT Models A23, A23A, and A23-24

Several reports have been received from the field concerning deteriorated and distorted muffler assemblies.

It has been determined that these assemblies are being damaged by misuse of the electric boost pump during the starting procedure, in other words, by over-priming.

Know your priming system and the correct procedures to be used in both a cold and a hot start! They are different.

Over-priming loads the induction system with raw fuel and a mixture too rich to burn, which tends to wash oil off cylinder walls, causing barrels and rings to score. High oil consumption or piston seizure is the possible detrimental effect on the engine. This excess raw fuel is exhausted into the muffler of your Musketeer; and, when the start is accomplished, a mild explosion takes place, which may distort the perforated tubes through the center of the muffler and may even distort the muffler shell. Once distorted, the perforated tubes deteriorate quite rapidly.

Starting the Custom A23, A23A (Continental Engine)

For normal cold starts, with the mixture at full rich and the throttle full open, turn on the boost pump until the fuel pressure stabilizes. After the pressure stabilizes, usually at about 8 psi, turn the boost pump off, close the throttle to about the 1/3 open position and engage the starter. As the engine starts, close the throttle to about the 800 to 1000 rpm position. Be ready to switch on the boost pump momentarily to add prime if the engine falters after starting.

Over-boosting for a hot start is not difficult and should be avoided. Turning the boost pump on momentarily and then off again is usually sufficient. If the engine catches briefly and then falters, a momentary boost at that time will usually cause it to continue to fire. Using this procedure, you are always sure that the engine died from under-priming rather than over-priming, making hot starting easier and surer.

Starting the Super III A23-24 (Lycoming Engine)

Cold starts have been consistently accomplished with the mixture in the rich position and the throttle at about the 800 rpm position without the use of the fuel boost pump. However, cold starts may more easily be accomplished with less cranking if not more than 1 to 2 seconds of boost is used with the mixture in the rich position and the throttle open. After boost, move the throttle to about the 800 rpm setting and engage the starter. If a start is not accomplished within approximately 6 to 8 revolutions, place the mixture in idle cut-off position and continue cranking. The engine should fire when the mixture reaches the correct fuel/air ratio. When the engine starts firing regularly, slowly advance the mixture.

To accomplish a hot start, the mixture should be in the idle cut-off position and the throttle at about the 800 rpm setting when the starter is engaged. Do not use fuel boost for a hot start. When the engine starts firing regularly, slowly advance, the mixture.

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