FRANKLIN SERVICE BULLETIN

No. 31 Date: 5/21/46

Subject: OIL COOLER REINFORCEMENTS FOR "ODEL 6A4-150-B3 ENGINES

To increase the rigidity of the oil cooler tanks where they are soldered to the core of the oil cooler, we are supplying reinforcing bands for field installation for all coolers on engines model 644-150-83. Coolers involved are Fedders type.

Parts required are as follows:

| Quantity | Part No. | Part Name |
|------------------|---------------------------------|---|
| 4 2 8 1 | 18143 18142 3X36 18141 | Reinforcing Rods Reinforcing Bands Reinforcing Band Nuts Reinforcing Band Tie Bar |

The attached sketch shows the method of installation and attachment should be made in accordance with the following instructions after having removed the oil cooler from the engine oil cooler brackets.

- 1. Before attempting to install reinforcements, check the oil cooler carefully and see that any excess solder is removed from the flange section at the top and the bottom to permit the rods "B", as shown in the attached sketch to lie flat on the cooler tank metal surface. BE SURE THAT YOU DO NOT CUT INTO THE TANK "ETAL ITSELF WHEN REMOVING THE EXCESS SOLDER.
- 2. Hold the oil cooler in the position it would be in when looking at it from the front of the airplane.
- 3: Hold the oil cooler band, part 18142, in a position with the threaded ends pointing down and the long threaded end pointing toward the rear of the cooler. Slide the closed end or top of the band over the bracket on top of the cooler on the end opposite the inlet and outlet pipes and then spread the band enough to slide it over the bottom of the cooler. Slide the second bend over in the same manner so that both reinforcing bands are located between the two vertical brackets on top of the cooler.

- 4. With the reinforcing bands spaced on each side of the cooler name plate, install the threaded ends through the holes in the tie bar after having placed the tie bar in position with the letter "C" on it against the cooler and closest to the end of the coolerwhich has the inlet and outlet pipes. Note: The tie bar should be located so that the cooler drain plug has proper clearance for removal of the drain plug at any time in the future.
- Insert the four reinforcing rods, part #18143, under the two bands, locating the rods as shown in the sketch.
- 6. Tighten the reinforcing band nuts throughly so that there is pressure on all of the reinforcing rods and then install lock nuts. REINFORCING BAND NUTS SHOULD BE PROPERLY TORQUED TO 12 TO 15 INCH POUNDS.

 11/32* deep sockets, which are standard hand tool equipment, can be used and are deep enough to permit the thread section of the rod to extend into the socket without interfering.
- 7. Install the cooler on the engine cooler brackets, making sure that the ends of the engine cooler brackets are inside of the brackets on the cooler itself, as shown on the attached sketch. Check the rubber bumpers which are on the engine cooler brackets and see that they are in proper alignment and that they bear against the engine oil pan itself. Complete the cooler connections.
- 8. Check engine bil level and add oil if required.
- 9. Operate engine and check for leaks.
- 10. Complete installation of cowling, etc.

As soon as you have completed the installation, please be sure to write us giving us the engine number.

Installation should be made on all oil sociers on the above model engines as outlined above at the earliest possible date.

AIRCOOLED MOTORS, INC.

Descharge.

F. J. Schaefer

Service Engineering Manager

