

**BEECHCRAFT  
SUPER KING AIR 300  
MAINTENANCE MANUAL**

gallons of fuel. When adding previously blended fuel, the additive concentration should not be less than 0.06 percent by volume or more than 0.15 percent by volume. This additive should be used on a continuous basis.

#### **BIOBOR JF**

Biobor JF (123, Chart 1, 91-00-00) is not an anti-icing agent, but is intended to be used specifically as a fuel biocide. The compound is an extremely efficient biocidal agent and is very soluble in fuel as well as water. Biobor JF disperses throughout the entire fuel system to even the most remote areas soon after introduction into the system. The compound is used as a periodic treatment in concentrations of 135 ppm when the airplane has been operated in an environment conducive to fungal or microbial contamination, or when such contamination is evidenced by dirty sump drains, clogged filters, odor or visual evidence in the tanks, etc.

Biobor JF may also be used in concentrations of 270 ppm as a single dose shock treatment to clean out and sterilize a very contaminated system. Any system that is contaminated should be treated at the 270 ppm level. When sterility is achieved, the 135 ppm level may be used. Parked airplanes require only one treatment until fuel is burned off or replaced. Biobor JF is not volatile and may remain in the tank until the fuel is used.

The preferred method of introducing Biobor JF into the fuel is by injection through a metering device. If no metering device is available, blending may be accomplished by batch blending or by over-the-wing blending while filling the tanks. When half of the required quantity of fuel has been added, introduce the compound gradually, directly into the stream of fuel while adding the other half of the fuel. Complete mixing is necessary for fungicidal activity. Tank surface, gages, filters and linings should be inspected or replaced as necessary, depending upon the severity of the contamination.

Biobor JF must be used at a high enough concentration to kill, not just control the infestation, and when used only peri-

odically, it must be used often enough to prevent new growth. The mixture must be able to contact the entire surface of the fuel tank interiors and remain in contact up to 72 hours to effect the kill. Treated airplanes which are flown should be retreated at consecutive fills so that a 72-hour contact time is accomplished. Refer to Chart 2 for fuel ratios for specified concentrations as an aid in blending. Be sure to account for residual fuel in the tanks so that the proper dosage is maintained.

#### **FILLING THE TANKS**

When filling the airplane fuel tanks, always observe the following:

- a. Make sure the airplane is statically grounded to the servicing unit and to the ramp.
- b. Service the main tanks first, and the auxiliary tanks second. The main filler caps are located in the outboard fuel cell on the leading edge of each wing near the wing tip. The auxiliary filler caps are located on top of the wing center section, inboard of each nacelle.
- c. Allow a three hour settling period whenever possible, then drain a small amount of fuel from each drain point.

#### **DRAINING FUEL SYSTEM**

As an integral part of the nacelle fuel cell, a defueling adapter, located aft of the standby pump, contains a check valve to prevent fuel drainage when the plug is removed. Each wing fuel system may be drained as follows:

- a. Remove the cover on the bottom of the nacelle to gain access to the adapter plug.
- b. Remove the plug and screw the long end of an AN832-12 union into the adapter. The fuel will begin draining as the check valve is unseated by the union.
- c. The fuel may be gravity drained or, to facilitate defueling, may be pumped out with the aid of a fuel truck.

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CHART 2  
BIOBOR JF STERILIZATION AND MAINTENANCE TREATMENT LEVELS

TURBINE FUEL		BIOBOR JF @ 270 PPM			BIOBOR JF @ 135 PPM		
LBS.	GALS.	LBS.	GALS.	FL. OZS.	LBS.	GALS.	FL. OZS.
670	100	0.18	0.02	2.63	0.09	0.01	1.32
1,340	200	0.36	0.04	5.26	0.18	0.02	2.63
2,010	300	0.54	0.06	7.89	0.27	0.03	3.95
2,680	400	0.72	0.08	10.53	0.36	0.04	5.26
3,350	500	0.90	0.10	13.16	0.45	0.05	6.58
6,700	1,000	1.18	0.21	26.46	0.90	0.10	13.16
13,400	2,000	3.62	0.41	52.92	1.81	0.21	26.46
16,750	2,500	4.52	0.52	66.08	2.26	0.26	33.04
33,500	5,000	9.01	1.03	132.16	4.52	0.52	66.08
67,000	10,000	18.09	2.07	264.47	9.05	1.03	132.31

To estimate the fluid ounces of Biobor JF required to give a concentration of 270 ppm multiply pounds of fuel by 0.004 and for 135 ppm by 0.002.

CHART 3  
BIOBOR JF ADDITION LEVELS FOR VARIOUS FUELS  
BIOBOR JF RATES AT 270 PPM

FUEL	FUEL DENSITY AT 15°C		OZ. OF BIOBOR JF PER 1000 GAL. FUEL	GAL. OF FUEL TREATED PER QT. (32 oz) OF BIOBOR JF
	g/ml	lbs/gal		
JP-4	0.7601	6.343	25.37	1,261
Kerosene (Turbine Fuel)	0.8045	6.714	26.86	1,191
Diesel #1	0.8180	6.827	27.31	1,172
Diesel #2	0.8484	7.080	28.32	1,130
Bunker "C"	0.9952	8.305	33.22	963

Computed from fuel densities as surveyed by the American Petroleum Institute.