CF34-10 ENGINES

Fuel/Oil Heat Exchanger

UA544051-3

The engine uses two similar fuel/oil heat exchangers. The heat exchangers use oil-to-fuel heat transfer to remove heat from the engine and IDG oil. The UA544051-2 and -3 Fuel/Oil Heat Exchangers include a stainless steel core with two oil port fittings. The stainless steel core shell assembly holds a set of tubes. The tubes are between the FUEL IN and FUEL OUT ports. The difference between the UA544051-2 and UA544051-3 heat exchangers is the type of preformed packing used to seal the oil port fitting. The preformed packings are found in the Illustrated Parts List (IPL) on page 1005. The UA544051-2 configuration uses preformed packing M83248/1-912 (25) that is a high temperature, fluorocarbon elastomer. The UA544051-3 configuration uses preformed packing U544428 (25A) that is a fluorocarbon elastomer improved for performance with high thermal stability oils.

Two physically identical fuel/oil heat exchangers work together to transfer heat from the engine and IDG oils to the fuel supply. In one of the heat exchangers the hot oil from the aircraft IDG oil system goes into the OIL IN port. In the second heat exchanger the hot oil from the engine oil system goes into the OIL IN port. The oil flows around the core tubes, in both cases, and exits through OIL OUT port. The aircraft engine fuel goes into the FUEL IN port. The fuel flows through the core tubes, and then exits through the FUEL OUT port. In one of the heat exchangers, the engine fuel absorbs and removes heat from the IDG system oil. In the second heat exchanger, the hot engine oil heats the engine fuel

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