

中国民用航空局



CIVIL AVIATION
ADMINISTRATION OF CHINA

CAAC
适 航 指 令

AIRWORTHINESS DIRECTIVE

本指令根据中国民用航空规章《民用航空器适航指令规定》(CCAR-39) 颁发, 内容涉及飞行安全, 是强制性措施。如不按规定完成, 有关航空器将不再适航。

编号: CAD2008-MULT-39

修正案号: 39-6068

一. 标题: IAE V2500 系列涡扇发动机 4 号轴承零件

二. 适用范围:

本适航指令适用于装有本指令中所列件号零件的IAE V2500-A1, V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2525-D5以及V2528-D5涡扇发动机。这些发动机装于但不限于空客的A319, A320, A321和麦道的MD-90飞机。

三. 参考文件:

1. FAA AD No. 2008-14-15;
2. IAE 服务通告 V2500-ENG-72-0541 修订版 4, 2008 年 3 月 12 日。

四. 原因、措施和规定

本指令源于滑油从4号轴承腔流失的情况。颁发本指令是为了防止高压涡轮(HPT)和低压涡轮(LPT)关键寿命件(如HPT 1、2级空气封严)的热损伤。HPT 1、2级空气封严的损伤有可能造成发动机的非包容性故障而伤及飞机。

除非事先已经完成, 否则必须在规定的时间内完成本适航指令的要求:

1. V2500-A1发动机

对于V2500-A1发动机, 本指令生效后, 在下次进厂时, 但不迟于2008年11月30日, 拆掉本指令表1中列出件号的零件。IAE V2500-A1

发动机手册（E-V2500-1IA）的ATA章节查询包含了要拆除零件的信息。

表1 V2500-A1发动机要拆除的零件

ATA章节查询	件号P/N	名称
72-42-20	2A0367-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-20	2A2873-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-20	2A0830-01	Tube, Scavenge, No. 4 Bearing Assy.
72-42-20	2A1949-01	Tube, Scavenge, No. 4 Bearing Assy.
72-42-20	2A2028-01	Tube, Scavenge, No. 4 Bearing Assy.
72-42-20	2A0830-001	Tube, Scavenge, No. 4 Bearing Assy.
72-42-20	2A2274-01	Tube, Scavenge, No. 4 Bearing Assy.
72-42-33	2A0853	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2055	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2834	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2930	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3525	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3538	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A0851	Support Assy, No. 4 Bearing Seal.
72-42-33	2A2833	Support, No. 4 Bearing, Seal Assy.
72-42-33	2A3537	Support, No. 4 Bearing Seal Assy.
72-42-35	2A0892-01	Duct Assy, Cooling Air, No. 4 Bearing, Front.
72-42-35	2A2257-01	Duct Assy, Cooling Air, No. 4 Bearing, Front.
72-43-20	2A2056	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A2931	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A3526	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A0847	Seal Ring Holder.
72-43-20	2A0891-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-43-20	2A1205-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-43-20	2A3078-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-45-11	2A0594	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A1040	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A2181	Metering Plug, HPT Hub, Stage 1.
72-45-13	2A0884	Seal Air, HPT Stage 1.
72-45-13	2A1203	Seal Air, HPT Stage 1.
72-45-13	2A0884-001	Seal Air, HPT Stage 1.

79-22-49	5R8111	Tube A/O Oil-No. 4 Brg Scav Dif Case to Bif Panel.
79-22-49	5R8138	Tube A/O Oil-No. 4 Brg Scav Dif Case to Bif Panel.
79-22-49	6A5367	Tube A/O Oil-No. 4 Brg Scav Dif Case to Bif Panel.
79-22-49	5A9083	Tube A/O Oil-No. 4 Brg Discon to Discon.
79-22-49	5A9084	Tube A/O Oil-No. 4 Brg Discon to Scav Valve.
79-22-49	5A8573	Tube A/O Oil-Press 'T' To Pressure Transducer.
79-23-51	1648MK2	Scavenge Valve.

2. V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, 和V2533-A5发动机

对于V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5和V2533-A5发动机, 本指令生效后, 在下次进厂时, 但不迟于2011年6月30日, 拆掉本指令表2中列出件号的零件。IAE V2500-A5发动机手册(E-V2500-1IA)的ATA章节查询包含了要拆除零件的信息。

表2 V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5及V2533-A5发动机要拆除的零件

ATA章节查询	件号P/N	名称
72-42-20	2A0367-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-20	2A2873-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-33	2A2055	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2834	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2930	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3525	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3538	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A0851	Support Assy, No. 4 Bearing Seal.
72-42-33	2A2833	Support, No. 4 Bearing, Seal Assy.
72-42-33	2A3537	Support, No. 4 Bearing Seal Assy.
72-42-35	2A0892-01	Duct Assy, Cooling Air, No. 4 Bearing, Front.
72-42-35	2A2257-01	Duct Assy, Cooling Air, No. 4 Bearing, Front.
72-43-20	2A2056	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A2931	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A3526	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A0847	Seal Ring Holder.
72-43-20	2A0891-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.

72-43-20	2A1205-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-43-20	2A3078-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-45-11	2A0594	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A1040	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A2354	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A3182	Metering Plug, HPT Hub, Stage 1.
72-45-13	2A1352	Seal Air, HPT Stage 1.
72-45-13	2A3032	Seal Air, HPT Stage 1.
79-22-49	5R8138	Tube A/O Oil-No. 4 Brg Scav Dif Case to Bif Panel.
79-22-49	6A5367	Tube A/O Oil-No. 4 Brg Scav Dif Case to Bif Panel.
79-22-49	5A9083	Tube A/O Oil-No. 4 Brg Discon to Discon.
79-22-49	5A9084	Tube A/O Oil-No. 4 Brg Discon to Scav Valve.
79-22-49	5A8573	Tube A/O Oil-Press 'T' To Pressure Transducer.

对于装有件号为2A9521-002和2A9621-002的1级HPT转子组件的V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5和V2533-A5发动机, 件号为2A3182的1级HPT毂计量插头不需要拆除。

3. V2525-D5和V2528-D5发动机:

对于V2525-D5和V2528-D5发动机, 本指令生效后, 在下次进厂时, 但不迟于2011年6月30日, 拆掉本指令表3中列出件号的零件。IAE V2500-D5发动机手册(E-V2500-3IA)的ATA章节查询包含了要拆除零件的信息。

表3 V2525-D5和V2528-D5发动机要拆除的零件

ATA章节查询	件号P/N	名称
72-42-20	2A0367-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-20	2A2873-01	Tube Assy of, Weep, No. 4 Bearing Outer.
72-42-33	2A0851	Support Assy, No. 4 Bearing Seal.
72-42-33	2A2833	Support, No. 4 Bearing, Seal Assy.
72-42-33	2A3537	Support, No. 4 Bearing Seal Assy.
72-42-33	2A2834	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A2930	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3525	Seal Assy, No. 4 Bearing, Front.
72-42-33	2A3538	Seal Assy, No. 4 Bearing, Front.
72-42-35	2A2257-01	Duct Assy, Cooling Air, No. 4 Bearing, Front.

72-43-20	2A2056	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A2931	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A3526	Seal Assy, No. 4 Bearing, Rear.
72-43-20	2A0847	Seal Ring Holder.
72-43-20	2A1205-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-43-20	2A3078-01	Duct Assy, Cooling Air, No. 4 Bearing, Rear.
72-45-11	2A3182	Metering Plug, HPT Hub, Stage 1.
72-45-11	2A2354	Metering Plug, HPT Hub, Stage 1.
72-45-13	2A1352	Seal Air, HPT Stage 1.
72-45-13	2A3032	Seal Air, HPT Stage 1.

对于件号装有为2A9521-002和2A9621-002的1级HPT转子组件的V2525-D5和V2528-D5发动机，件号为2A3182的1级HPT毂计量插头不需要拆除。

4. 如果完成了IAE的服务通告V2500-ENG-72-0541修订版4（2008年3月12日发布），就已经符合本指令的要求。

5. 本指令生效后，就不要安装本指令中列出件号的零件。

完成本指令可采取能保证安全的替代方法或调整完成时间，但必须得到适航当局的批准。

五. 生效日期：2008 年 8 月 20 日

六. 颁发日期：2008 年 7 月 23 日

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