中国民用航空总局



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: CAD2002-MULT-04

修正案号: 39-3528

一. 标题: PW4000 发动机的使用限制

二. 适用范围:

本指令适用于PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4462和 PW4650发动机,这些发动机装于但不限于波音747、767、空客A300和麦道MD-11飞机上。

三. 参考文件:

PW4ENG 72-490

PW4ENG 72-504

PW4ENG 72-572

PW4ENG72-706

PW4ENG72-704

PW4ENG72-711

PW4ENG72-484

PW4ENG 72-486

PW4ENG72-514

PW4ENG 72-575

PW4ENG72-714

FAA AD 2001-25-11

PW4000 PW EM 50A443, 临时修改号 No.71-0026

(2001年11月14日)

PW EM 50A822, 临时修改号 No.71-0018

(2001年11月14日)

PW EM 50A605, 临时修改号 No.71-0035

(2001年11月14日)

PW IEN 96KC973D (2001年10月12日)

PW TR 71-0026

PW TR 71-0018

PW TR 71-0035

PW CIR 51A357, 72-35-68 节, 检查/核对-04, 索引 8-11

PW CIR 51A357, 72-35-68 节, 修理 16

四. 原因、措施和规定

本适航指令替代 CAD1999-MULT-30, 39-2645 CAD2001-MULT-44, 39-3318

除非已完成,否则完成以下工作:

为防止由于高压压气机(HPC)发生喘振而造成发动机推力下降,完 成如下工作:

- (a) 在执行本指令时, 按下列原则确定每架飞机上各发动机构型 和类别:
 - (1) 使用下表1确定发动机构型。
 - (2) 使用下表2确定空客飞机发动机类别。

装在波音飞机上的发动机

- (b) 除非属于本指令中(g) 段中的内容, 否则, 在本指令生效 之日起50个飞机循环(airplane cycle)内,将超出下表3中列出的发 动机自新循环(CSN),发动机自大修循环(CSO),或发动机自通过 Testing-21 (CST) 循环限制的发动机数目限制在:
 - (1) 对于双发飞机,每架飞机上不超过一台。
 - (2) 对于三发飞机,每架飞机上不超过两台。
 - (3) 对于四发飞机,每架飞机上不超过三台。
- (c)除非属于本指令中(g)段中的内容,否则,在本指令生效 之日起100个飞机循环内,将超出表3中列出的发动机CSN,CSO,或CST 限制的发动机数目限制在:

- (1) 对于三发飞机,每架飞机上不超过一台。
- (2) 对于四发飞机,每架飞机上不超过两台。
- (d) 在本指令生效之日起200个飞机循环内,将超出表3中列出的 发动机CSN, CSO, 或CST循环限制的发动机数目限制在,对于四发飞机, 每架飞机上不超过一台发动机。
- (e) 从而,保证每架飞机上超出表3中列出的CSN,CSO,CST限制 的发动机数目不超过一台。

装在空客飞机上的发动机

- (f) 对装在空客飞机上的发动机, 做下列工作:
- (1) 在本指令生效之日起50个飞机循环内,将超出表4中列出的 发动机CSN, CSO, 或CST循环限制的发动机数目限制在每架飞机不超过 一台。
- (2) 从而,确保将超出表4中列出的CSN,CSO,或CST限制的发 动机数目限制在每架飞机上不超过一台。

E构型的发动机

- (g) 对于所有E构型发动机, 做下列工作:
- (1) 在后续飞行前,将表1中规定的E构型发动机数目限制至每 架飞机一台。
- (2) 在累计1300个CSN或自转换为E构型起1300个循环前拆下所 有E构型发动机。

稳定性测试要求

- (h) 在下列条件下, 按本指令(b)(c)(d)或(f)拆下的发 动机可恢复使用:
- (1) 按照下列一份适用的PW4000发动机手册(EM) 临时修改完成 冷车 (cool engine) 燃油峰值 (Spike) 稳定性测试 (Testing-21) 并通过测试。具有构型E的发动机,或经历过Group3起飞喘振的发动机 除外:
- (i) PW4000 PW EM 50A443, 临时修改号No. 71-0026 (2001年11 月14日)。
 - (ii) PW EM 50A822, 临时修改号No. 71-0018 (2001年11月14日)。
- (iii) PW EM 50A605, 临时修改号No. 71-0035 (2001年11月14 日)。

- (iv) 在生效日以前, 按PW IEN 96KC973D (2001年10月12日) 测试的发动机满足Testing-21的要求,或
 - (2) HPC由新生产未使用过的HPC替换,或
 - (3) 已大修过HPC的发动机,或用大修过的HPC替换过的发动机。

最低构造标准

- (i) 对本指令生效后执行HPC大修的发动机,做下列工作:
- (1)根据PW4000清洗, 检查和修理(CIR)手册PN51A357, 72-35-68 节检查/核查-04, Indexs8-11(2001年9月15日修订版)检查HPC内机 匣的HPC中挂钩(mid-hook)和HPC 后挂钩(rear-hook)的磨损情况。 如果HPC后hook磨损超出可用限制,根据PW SB PW4ENG72-714(2000年 6月27日颁布)用耐久性高的后hook代替之。如果HPC内机匣中hook磨 损超出可用限制,根据PW4000 CIR PN51A357 72-35-68节,修理-16(1996 年6月15日颁布)的任何改版修理HPC内机匣中hook。
- (2) 自本指令生效之日起,任何进行HPC大修的发动机必须满足 下列普惠服务通告的构造标准才能恢复使用: PW4ENG72-484, PW4ENG 72-486, PW4ENG72-514和PW4ENG 72-575。采用阶段3构型的发动机符 合普惠服务通告PW4ENG72-514所规定的构造标准。
- (i) 任何在本指令生效后进行HPC和HPT单元体分离的发动机必须 符合普惠服务通告PW4ENG72-514的构造标准。采用阶段3构型的发动机 符合普惠服务通告PW4ENG72-514的构造标准。
- (K) 在本指令生效后,在发动机完成车间维修后恢复使用前,根 据本指令(h)段完成Testing-21,下列情况除外:
 - (1) HPC已大修过,或已用大修过的HPC替换,或
 - (2) HPC用新生产未使用过的HPC代替,或
- (3) 返厂时没有进行过主要的发动机安装边分离,其中不包含 "A""T"安装边。
- (1) 如在一个HPC大修周期内,用EEC程序插销更改过发动机额定 推力,或改变过安装(installation change),则使用与该大修周期 内使用的任何构型相关的最低循环限制。
 - (m) 对经历过喘振的发动机, 做下列工作:
- (1) 对经历过Group3起飞喘振的发动机, 拆下发动机并对HPC做 大修。
- (2) 对经历过压比(EPR)大于1.25的喘振的发动机,在25个循 环内拆下发动机并进行Testing-21。

定义

- (n) 在本指令中, 定义如下:
- (1) HPC大修: 根据发动机手册适用的配合和间隙章节的限制要 求修复HPC的5至15级叶尖间隙。
- (2) 阶段3发动机可根据以下方法确认:对于原制造的发动机, 数据牌上的发动机型号后有尾缀(一3);或对于在原制造的基础上根 据PW4ENG 72-490, PW4ENG 72-504, 或 PW4ENG 72-572改装的发动机, 发动机序号后有尾缀(CN)。
- (3) Group3起飞喘振: 在设定发动机起飞推力后, 在起飞运行(无 论设定为减推力,减额定推力,全额定起飞推力)期间发生的下列任 何发动机症状。这些症状在执行飞机级前推期间喘振的故障诊断程序 (aircraft level surge-during-forward-thrust troubleshooting procedures)后,没有发现具体的可更改的故障原因:
 - (i) 发动机噪音,包括隆隆声和巨响。
- (ii) 在固定推力值下,发动机参数(EPR,N1,N2和燃油流量) 不稳定。
 - (iii) 排气温度(EGT)升高。
 - (iv) 进口(inlet) 或尾喷口有火焰,或两者同时发生。
- (0) 将发动机冷车燃油峰值稳定性评估测试(Testing-21) 结果报告 到各地适航处。报告的数据包括如下内容:
 - 发动机序号。 (1)
 - (2)根据表1划分的发动机构型代码。
 - (3) 冷车燃油峰值稳定性测试。
 - HPC序号,及测试时HPC自新和自大修的时间和循环。 (4)
 - (5) 测试结果(通过/未通过)。
- (P) 应按下列PW发动机服务通告,内部工程通告(IEN),临时修改 (TR'S),清洗,检查,和修理手册的修理程序进行检查:

| 文件号 | 页数 | 修订 | 日期 | |
|--------------|------|----|------------|--|
| PWSB | 1-2 | 1 | 2001年11月8日 | |
| PW4ENG72-714 | 3 | 原始 | 2000年6月27日 | |
| | 4 | 1 | 2001年11月8日 | |
| | 5-12 | 原始 | 2000年6月27日 | |
| 总页数: 12 | | | | |

| | | 1 | |
|-----------------|--------------|----|--------------|
| PW IEN 96KC973D | 全部 | 原始 | 2001年10月12日 |
| 总页数: 19. | | | |
| PW TR 71-0026 | 全部 | 原始 | 2001年11月14日 |
| 总页数: 24. | | | |
| PW TR 71-0018 | 全部 | 原始 | 2001年11月14日 |
| 总页数: 24. | | | |
| PW TR 71-0035 | 全部 | 原始 | 2001年11月14日 |
| 总页数: 24. | | | |
| PW CIR 51A357, | 全部 | 原始 | 2001年9月15日 |
| 72-35-68节,检查 | | | |
| /核对-04, | | | |
| Indexes 8-11. | | | |
| 总页数: 5. | | | |
| PW CIR 51A357, | 全部 | 原始 | 1996年6月15日 |
| 72-35-68节,修理 | | | |
| 16. | | | |
| 总页数: 1. | | | |

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

表1 发动机构型列表

| 构型 | 构型代码 | 说明 |
|---------------------|------|-----------------------|
| (i)阶段1 (Phase 1) 无 | A | 出厂时未采用阶段3构型,或 |
| 高压涡轮(HPT) 一级导 | | 未转换成阶段3构型;并没有 |
| 向器斜切(cut back) | | 按SB PW4ENG 72-514的任何改 |
| (1TVCB) 。 | | 版进行HPT 1TVCB 。 |
| (ii)阶段1并进行 | В | 除按SB PW4ENG 72-514进行 |
| 1TVCB. | | HPT 1TVCB 改装外,其余与构 |
| | | 型(1)同。 |
| (iii)阶段3 (Phase 3), | С | 发动机出厂时已采用阶段3构 |
| 经过修理(2nd Run)。 | | 型,或在使用中已转换成阶段 |
| | | 3构型;并且HPC自新使用后以 |
| | | 至少经过一次大修。 |

| | • | + |
|--------------------|---|---------------------|
| (iv)阶段3(Phase 3),未 | D | 除HPC自新使用后未经过大修 |
| 经过修理(1nd Run)。 | | 外,其余与构型(3)同。 |
| (v)HPC Cutback 静子构 | Е | 按PW4ENG72-706, |
| 型发动机。 | | PW4ENG72-704, 或 |
| | | PW4ENG72-711及其任何改版 |
| | | 进行过改装的发动机。 |
| (vi)通过Testing-21的 | F | 按本指令(h)(1)段成功通过 |
| 发动机 | | Testing-21。一旦发动机通过 |
| | | Testing-21,在大修HPC或用 |
| | | 新的或大修过的HPC代替前, |
| | | 始终为F构型。 |

表2 空客飞机发动机类别清单

| 发动机型号 | 类别 | 发动机序号 (SN) |
|-----------------|----|---------------------------------|
| (i) PW4156, | 1 | 717201, 717205, 717702, 717703, |
| PW4156A,和PW4158 | | 717710, 717752, 717788, 717798, |
| 发动机 | | 717799, 724023, 724026, 724027, |
| | | 724033, 724034, 724036, 724037, |
| | | 724040, 724041, 724044, 724045, |
| | | 724048, 724049, 724050, 724051, |
| | | 724052, 724055, 724056, 724059, |
| | | 724061, 724062, 724063, 724065, |
| | | 724067, 724073, 724074, 724075, |
| | | 724079, 724088, 724089, 724090, |
| | | 724091, 724094, 724095, 724551, |
| | | 724552, 724555, 724556, 724557, |
| | | 724558, 724561, 724562, 724563, |
| | | 724564, 724567, 724568, 724569, |
| | | 724570, 724571, 724572, 724573, |
| | | 724574, 724575, 724576, 724577, |
| | | 724578, 724640, 724806, 724807, |
| | | 724808, 724809, 724811, 724820, |
| | | 724821, 724827, 724833, 724835, |
| | | 724836, 724840, 724841, 724848, |

| 724849,724855,724857,724858,724866,724861,724862,724865,724866,724868,724909,724910,724913,724914,724927,724912,724926,724927,727912,728519,728520,728521,728522,728523,728524,728525,728526,728527,728528,728534,728534,728535,728536,728537,728546,728542,728543,728543,728544,728554,728554,728554,728554,728554,728554,728554,728554,728554,728554,728554,728554,728554,728556,728557,728558,728560,728551,728558,728560,728551,728560,728561,728562,728563,728564。 (ii) PW4158 发动机 2 717704,724001,724002,724004,724005,724006,724007,724008,724009,724010,724011,724019,724020,724011,724019,724020,724011,724017,724068,724071,724086,724071,724086,724071,724086,724077,724086,724077,724086,724077,724080,724091,724801,724802,724803,724804,724804,724803,724804,724874,724875,724876,724880,724881,724882,724883,724884,724884,724887,724888,724884,724887,724888,724889,724890,724892, | | | ı | | | - |
|---|-----------------|---|---------|---------|---------|---------|
| 724868, 724909, 724910, 724913, 724914, 724914, 724924, 724925, 724926, 724927, 727912, 728519, 728520, 728521, 728522, 728523, 728524, 728525, 728526, 728527, 728528, 728534, 728535, 728536, 728537, 728538, 728544, 728545, 728546, 728547, 728548, 728546, 728547, 728548, 728546, 728547, 728558, 728554, 728554, 728554, 728554, 728554, 728554, 728554, 728554, 728554, 728560, 728551, 728552, 728563, 728564, 728564, 724004, 724005, 724001, 724002, 724004, 724009, 724010, 724011, 724019, 724020, 724031, 724035, 724038, 724039, 724042, 724043, 724047, 724068, 724069, 724071, 724076, 724077, 724080, 724091, 724092, 724094, 724097, 724080, 724097, 724801, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724826, 724847, 724851, 724852, 724860, 72487, 724861, 724861, 724861, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724871, 724872, 724873, 724874, 724882, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724887, 724887, 724887, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724881, 724882, 724883, 724884, 724885, 724886, 724887 | | | 724849, | 724855, | 724857, | 724858, |
| | | | 724861, | 724862, | 724865, | 724866, |
| 724927, 727912, 728519, 728520, 728521, 728521, 728522, 728523, 728524, 728525, 728526, 728527, 728528, 728534, 728535, 728536, 728537, 728538, 728534, 728542, 728543, 728544, 728545, 728546, 728547, 728548, 728546, 728547, 728552, 728553, 728550, 728551, 728552, 728553, 728564, 728561, 728562, 728563, 728564. (ii) PW4158 发动机 2 717704, 724001, 724002, 724004, 724005, 724006, 724007, 724008, 724009, 724010, 724011, 724019, 724020, 724031, 724035, 724038, 724039, 724042, 724031, 724035, 724036, 724077, 724068, 724069, 724071, 724076, 724077, 724068, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724864, 724867, 724869, 724873, 724874, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724881, 724882, 724883, 724884, 724887, 724882, 724883, 724884, 724887, 724887, 724887, 724878, 724888, 724881, 724882, 724883, 724884, 724887, 724887, 724887, 724887, 724887, 724887, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724887, 724887, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724887, 724887, 724887, 724888, 724887, 724888, 724887, 724887, 724887, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724887, 724887, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724888, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724887, 724888, 724888, 724888, 724887, 724888, 724888, 724888, 724887, 724888, 724887, 724888, 724888, 724888, 724887, 724888, 724887, 724887, 724887, 724888, 724888, 724888, 724888, 724887, 724887, 724887, 724888, 724888, 724887, 724888, 724888, 724887, 724888, 724887, 724888, 724888, 724888, 724887, 724888, 724887, 724888, 724887, 72 | | | 724868, | 724909, | 724910, | 724913, |
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| (ii) PW4158 发动机 2 717704, 724001, 724002, 724004, 724005, 724006, 724007, 724008, 724009, 724010, 724011, 724019, 724020, 724031, 724035, 724038, 724039, 724042, 724043, 724047, 724068, 724069, 724071, 724076, 724077, 724080, 724085, 724086, 724087, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724888, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724886, 724887, 724888, 724886, 724887, 724888, 724 | | | 728560, | 728561, | 728562, | 728563, |
| 724005, 724006, 724007, 724008, 724009, 724010, 724011, 724019, 724020, 724031, 724035, 724038, 724039, 724042, 724043, 724047, 724068, 724069, 724071, 724076, 724077, 724080, 724085, 724086, 724087, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 728564。 | | | |
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| 724020, 724031, 724035, 724038, 724039, 724039, 724042, 724043, 724047, 724068, 724069, 724071, 724076, 724077, 724080, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724805, 724803, 724804, 724805, 724823, 724824, 724825, 724826, 724828, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724873, 724874, 724872, 724873, 724874, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, 724887, 724887, 724886, 724886, 724887, 724887, 724887, 724886, 724887, 724886, 724887, 724887, 724886, 724886, 724887, 724887, 724887, 724886, 724886, 724887, 724887, 724888, 724886, 724887, 724887, 724887, 724887, 724888, 724888, 724886, 724887, | | | 724005, | 724006, | 724007, | 724008, |
| 724039, 724042, 724043, 724047, 724068, 724068, 724069, 724071, 724076, 724077, 724080, 724085, 724086, 724097, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724886, 724887, | | | 724009, | 724010, | 724011, | 724019, |
| 724068, 724069, 724071, 724076, 724077, 724080, 724085, 724086, 724087, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724020, | 724031, | 724035, | 724038, |
| 724077, 724080, 724085, 724086, 724087, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724039, | 724042, | 724043, | 724047, |
| 724087, 724092, 724093, 724096, 724097, 724801, 724802, 724803, 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724881, 724882, 724883, 724884, 724886, 724887, 724886, 724886, 724887, 724887, 724886, 724887, 724886, 724887, | | | 724068, | 724069, | 724071, | 724076, |
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| 724804, 724805, 724813, 724814, 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724087, | 724092, | 724093, | 724096, |
| 724819, 724823, 724824, 724825, 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724097, | 724801, | 724802, | 724803, |
| 724826, 724828, 724831, 724832, 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724804, | 724805, | 724813, | 724814, |
| 724843, 724846, 724847, 724851, 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724819, | 724823, | 724824, | 724825, |
| 724852, 724853, 724854, 724859, 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724826, | 724828, | 724831, | 724832, |
| 724860, 724863, 724864, 724867, 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724843, | 724846, | 724847, | 724851, |
| 724869, 724870, 724871, 724872, 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724852, | 724853, | 724854, | 724859, |
| 724873, 724874, 724875, 724876, 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724860, | 724863, | 724864, | 724867, |
| 724880, 724881, 724882, 724883, 724884, 724885, 724886, 724887, | | | 724869, | 724870, | 724871, | 724872, |
| 724884, 724885, 724886, 724887, | | | 724873, | 724874, | 724875, | 724876, |
| | | | 724880, | 724881, | 724882, | 724883, |
| 724888, 724889, 724890, 724892, | | | 724884, | 724885, | 724886, | 724887, |
| | | | 724888, | 724889, | 724890, | 724892, |

| | | <u>.</u> | | | |
|-----------------|---|----------|---------|---------|---------|
| | | 724893, | 724894, | 724895, | 724896, |
| | | 724897, | 724898, | 724899, | 724900, |
| | | 724932, | 727315, | 727436, | 728501, |
| | | 728502, | 728503, | 728504, | 728505, |
| | | 728506, | 728507, | 728508, | 728509, |
| | | 728510, | 728511, | 728515, | 728518, |
| | | 728531, | 728532, | 728533。 | |
| (iii) PW4156, | 3 | 序号未列 | 门入本表的 | 的所有其它 | 艺发动机 |
| PW4156A,和PW4158 | | | | | |

表3 波音飞机发动机匹配限制

| 构 | B747- | B767- | B767- | B767-PW4060/ | MD-11 |
|---|------------|------------|-----------|----------------|------------|
| 型 | PW4056 | PW4052 | PW4056 | PW4060A/ | -PW4460/ |
| 代 | | | | PW4060C/ | PW4462 |
| 码 | | | | PW4062 | |
| A | 1, 400 CSN | 3,000 CSN | 1,600 CSN | 900 CSN or CSO | 800 CSN |
| | or CSO | or CSO | or CSO | | or CSO |
| В | 2, 100 CSN | 4, 400 CSN | 2,800 CSN | 2,000 CSN or | 1, 200 CSN |
| | or CSO | or CSO | or CSO | CS0 | or CSO |
| С | 2, 100 CSN | 4, 400 CSN | 2,800 CSN | 2,000 CSN or | 1, 300 CSN |
| | or CSO | or CSO | or CSO | CS0 | or CSO |
| D | 2,600 CSN | 4, 400 CSN | 3,000 CSN | 2,200 CSN or | 2,000 CSN |
| | or CSO | or CSO | or CSO | CS0 | or CSO |
| Е | 750 CSN | 750 CSN | 750 CSN | 750 CSN or CSO | 750 CSN |
| | or CSO | or CSO | or CSO | | or CSO |
| F | 800 CST | 800 CST | 800 CST | 800 CST | 800 CST |

表4 空客飞机发动机匹配限制

| 构型 | A310 PW4156 和 | A300 PW4158 | A310 PW4156 和 | A310 |
|----|----------------|--------------|----------------|-----------|
| 代码 | PW4156A 和 | 类别2 | PW4156A 和 | PW4152 |
| | A300 PW4158 类 | | A300PW4158类 | |
| | 别1 | | 别3 | |
| A | 900 CSN or CSO | 1,850 CSN or | 500 CSN or CSO | 1,050 CSN |

| | | CS0 | | or CSO |
|---|----------------|---------------|----------------|------------|
| В | 2,200 CSN or | 4, 400 CSN or | 1,600 CSN or | 4,000 CSN |
| | CS0 | CS0 | CS0 | or CSO |
| С | 2,200 CSN or | 4, 400 CSN or | 1,600 CSN or | 4,000 CSN |
| | CS0 | CS0 | CS0 | or CSO |
| D | 4,400 CSN or | 4, 400 CSN or | 4,400 CSN or | 4, 400 CSN |
| | CS0 | CS0 | CS0 | or CSO |
| Е | 750 CSN or CSO | 750 CSN or | 750 CSN or CSO | 750 CSN or |
| | | CS0 | | CS0 |
| F | 800 CST | 800 CST | 800 CST | 800 CST |

五. 生效日期: 2002年2月5日

六. 颁发日期: 2002年1月28日

七. 联系人: 赵亚艳

民航总局航空器适航司

010-64208515