HNA Technic

地面N1限制值不一致的快速处置

华北区域波音技术组（内部使用）

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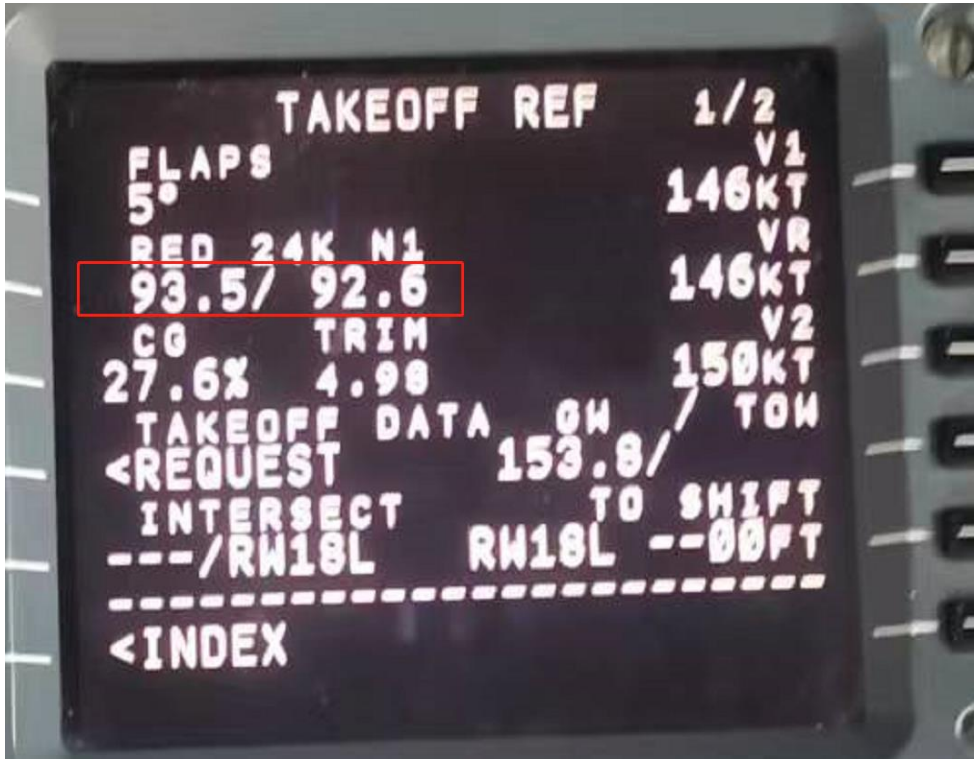
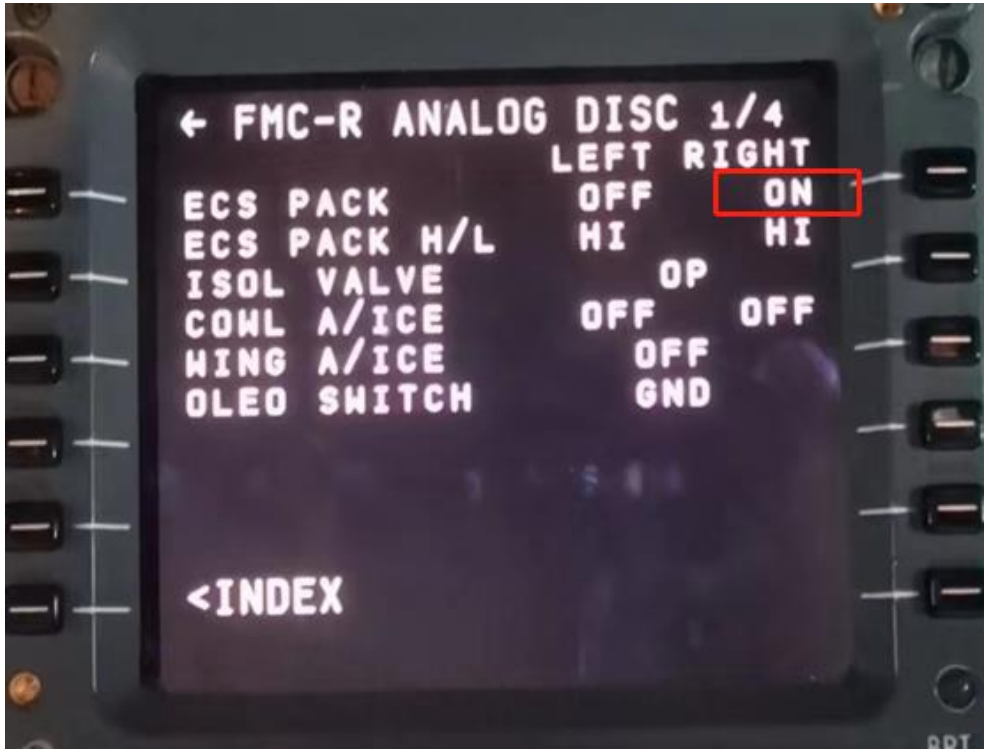
故障现象

某飞机机组反应CDU起飞基准页面N1限制值不一致，检查发现右组件活门位置离散信号和实际电门位置不一致。因此虽然此时组件电门都在OFF位置，但因为右组件活门在电门在OFF位时离散信号在ON，左右不一致，最终导致N1限制值不一致。核实右组件FCSOV件号为396608-1，依据MEL 21-02-04A放行。

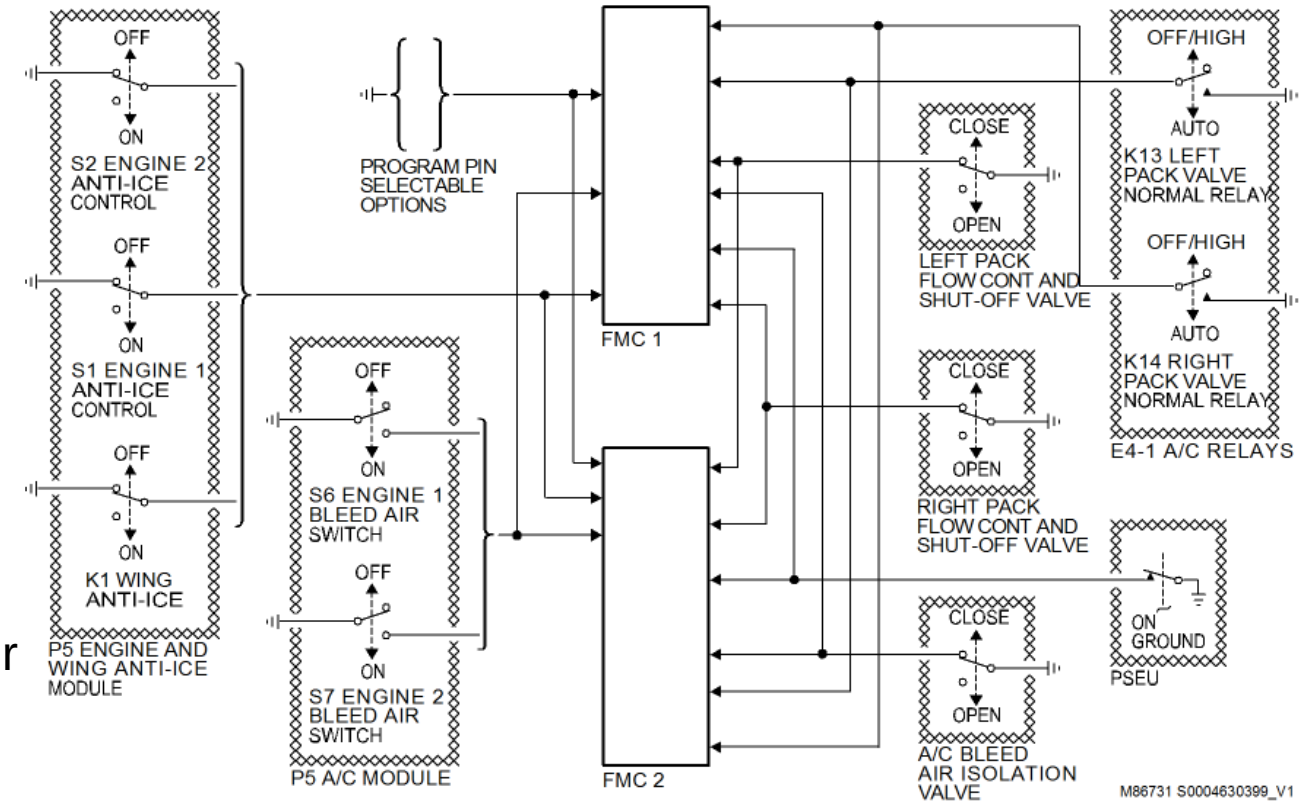




原理简介

The EEC adjusts the commanded N1 value for the amount of bleed air the airplane takes from the engine. If bleed air demand increases, N1 speed decreases to compensate for the additional load. This keeps engine hot section in limits for the current engine thrust rating. The EEC gets this airplane bleed configuration data from the DEU to find the airplane bleed load:

- Right pack on or off
- Left pack on or off
- Right pack in high or normal flow
- Left pack in high or normal flow
- Isolation valve open or closed
- Bleed valve for opposite engine open and engine running
- Wing anti-ice on or off
- Cowl thermal anti-ice on or off.



Inputs from switches and valves give engine bleed air data to the FMCS. The FMCS uses these signals to calculate the N1 limits for the engines.

核心逻辑：

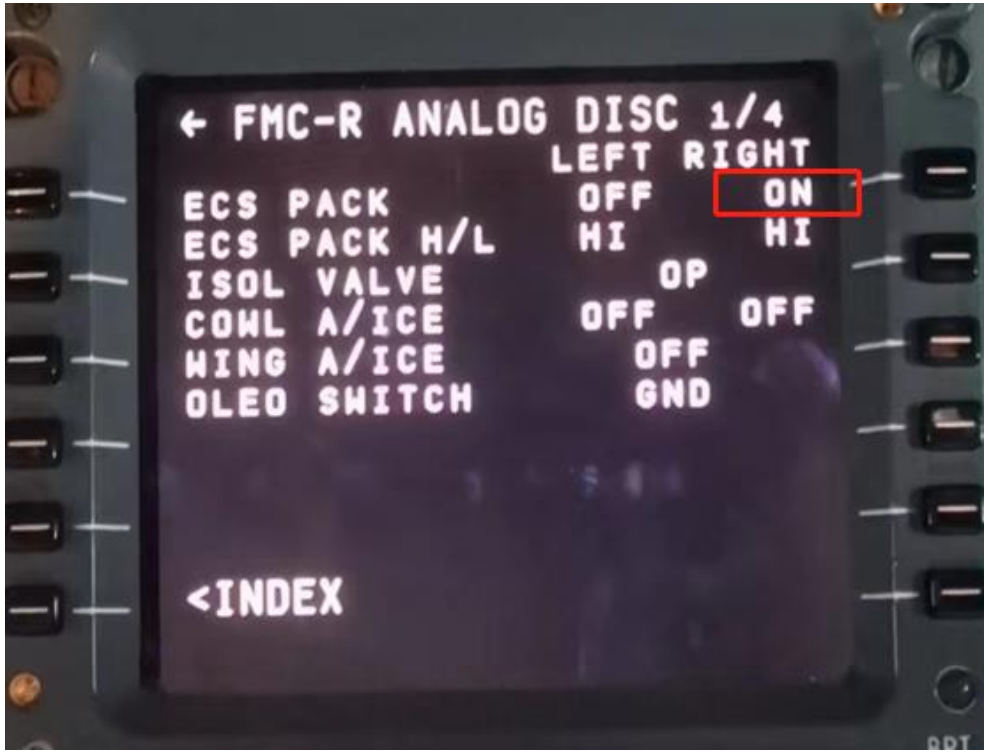
活门/电门位置（飞机的引气需求）提供给FMC，FMC根据引气需求计算N1限制值。

当飞机引气需求增加，N1限制值降低补偿引气负载的增加。例如，左组件活门OFF，右组件活门ON，右发N1限制值会低于左发

快速处置建议

接报故障后，首先确认左右组件电门位置、左右发动机进气道防冰电门位置是否一致，若不一致，将电门放置相同位置，并从CDU进入FMC页面，查看电门/活门位置是否一致。

注：根据机队经验，故障主要是由组件活门位置离散信号失效导致。按需参考MEL 21-02-04A或21-02-04B处置。



不一致

FMC离散数据读取方法

因构型原因，接近的方法略有不同，但大致路径一致

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(b) Push this sequence of keys on the two CDUs to show the FMCS ANALOG DISCRETE 1/4 page:

1) Push the INIT REF mode key on the two CDUs.

2) Push line select key (LSK) adjacent to INDEX on the two CDUs.

3) Push LSK 6R, adjacent to MAINT on the two CDUs.

4) Push the LSK adjacent to FMCS on the two CDUs.

HNA 002-005, 009, 016-024, 027-040, 042-057, 060, 061, 063-072, 074-099, 101-160, 163, 194-199, 201-212, 250-256, 701-712, 723-725, 803, 805, 806, 811, 812, 814, 816, 818-824, 826-828, 834-999; HNA 008 POST SB 737-34-3865

5) Push the LSK adjacent to L FMC on the Captain's CDU.

HNA 002-005, 009, 016-024, 027-040, 042-057, 060, 061, 063-072, 074-099, 101-160, 163, 194-199, 201-212, 250-256, 701-712, 723-725, 803, 805, 806, 811, 812, 814, 816, 818-824, 826-828, 834-999; HNA 008 POST SB 737-34-3865

6) Push the LSK adjacent to R FMC on the First Officer's CDU.

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7) Push LSK 4L, adjacent to DISCRETES on the two CDUs.

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