GSAC

AIRWORTHINESS DIRECTIVE

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Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.

Translation of 'Consigne de Navigabilité' ref. : 2001-264(B)
In case of any difficulty, reference should be made to the French original issue.

AIRBUS INDUSTRIE

A310 and A300-600 aircraft

PRATT & WHITNEY forward engine mount (ATA 10, 71)

APPLICABILITY:

AIRBUS INDUSTRIE A310 and A300-600 aircraft equipped with PRATT & WHITNEY engines, as follows:

- A310-221 (PW JT9D-7R4D1)
- A310-222 (PW JT9D-7R4E1)
- A310-322 (PW JT9D-7R4E1)
- A310-324 (PW 4152)
- A310-325 (PW 4156A)
- A300 B4-620 (PW JT9D-7R4H1)
- A300 C4-620 (PW JT9D-7R4H1)
- A300 B4-622 (PW 4158)
- A300 B4-622R (PW 4158)
- A300 F4-622R (PW 4158)

REASONS:

A recent review of life limited part lists showed that some life limit values had to be reduced.

The concerned parts are located in the PRATT & WHITNEY forward engine mount.

ACTIONS:

In order to prevent any rupture of the engine mount at life values lower than the limit values specified in chapter 05 of the A310 Aircraft Maintenance Manual (AMM 05) and in section 9-1 of A300-600 MPD, the following measures are rendered mandatory on the effective date of this Airworthiness Directive (AD):

1) Main beams having P/N 221-4005-1 (assembly P/N 221-4005-501):

AMM 05 revision 13 of the A310 indicates a limit of 40,000 flight cycles for these parts.

This limitation has been maintained for A310-221, A310-222, A310-322 and A310-324 (PW 4152) but has been reduced to 20,000 flight cycles for A310-325 (PW 4156A).

For the A300-600s, the limit indicated in section 9-1 Revision 00 of the A300-600 MPD remains unchanged, i.e. 20,000 flight cycles.

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For beams having P/N 221-4005-1 which have been used both in one or several configurations limited to 40,000 flight cycles and in one or several configurations limited to 20,000 flight cycles, calculate the remaining life potential in the present configuration (i) using the following formula:

$$Tr_i = \left[1 - \sum\left(\frac{Ca_j}{Cp_j}\right)\right] \times Cp_i$$

where:

Tr_i = remaining flight cycles for configuration i (present configuration).
Ca_j = flight cycles accumulated on previous configuration(s) j.
Cp_j = life limitation (in flight cycles) in previous configuration(s) j.
Cp_i = life limitation (in flight cycles) in present configuration i.

Calculated total life potential = $(\Sigma\ Ca_j + Tr_i)$

After this calculation, if the flight cycles accumulated by the part exceed the calculated total life potential, replace the beam. If the flight cycles accumulated by the part do not exceed the calculated total life potential, plan to replace the beam in order to comply with the calculated total life potential.

These calculations are required every time a part is moved from an installation to another having different limit values quoted in the AMM chapter 05/MPD section 9-1.

2) Cross beams having P/N 221-0242-5 (assembly P/N 221-0242-501):

In order to clarify the situation concerning the life limits for these beams, it is reminded that the beams can only be installed on:

- the A310-324 (PW 4152), and
- the A310 and A300-600 equipped with PW JT9D-7R4 engines.

AMM 05 Revision 13 of the A310 does not indicate any limit for these parts when they are installed on the A310-324. This AD introduces the 40,000 flight cycle limit for this configuration. The 40,000 flight cycle limit remains unchanged (in accordance with AMM 05 Revision 13) for A310-221, A310-222 and A310-322.

For A300-600s, the limit given in section 9-1 Revision 00 of the A300-600 MPD remains unchanged, i.e. 20,000 flight cycles.

For beams having P/N 221-0242-5 which have been used both in one or several configurations limited to 40,000 flight cycles and in one or several configurations limited to 20,000 flight cycles, calculate the remaining life potential in the present configuration (i) using the formula of paragraph 1 of this AD.

After this calculation, if the flight cycles accumulated by the part exceed the calculated total life potential, replace the beam. If the flight cycles accumulated by the part do not exceed the calculated total life potential, plan to replace the beam in order to comply with the calculated total life potential.

These calculations are required every time a part is moved from an installation to another having different limit values quoted in the AMM chapter 05/MPD section 9-1.

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Note: The provisions of this AD will be the subject of a revision of A310 AMM 05.
It is reminded that for life limited parts (according to AMM chapter 05 or section 9-1 of MPD), a follow-up of the times accumulated (flight hours, flight cycles, landings ....) since their origin is required.

REF.: A310 AMM chapter 05 Revision 13 dated February 27, 1998.
A300-600 MPD section 09 Revision 00 dated June 30, 2000.

EFFECTIVE DATE : JULY 07, 2001