

CHAPTER

05

**TIME LIMITS/
MAINTENANCE
CHECKS**

Pratt & Whitney
JT12 OVERHAUL MANUAL (PN 435108)

TIME LIMITS
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The List of Effective Pages records not only each page of subject revision but also each previously issued page which is still current. Blank pages and pages which are no longer current do not appear on this list. If there is any question about the currency of the maintained copy, it is recommended that each page of the manual be checked off against this List of Effective Pages. Any page which does not check out with this list, either by number or by date, shall be discarded. This list is reissued in its entirety whenever this manual section is revised.

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R INSTRUCTIONS FOR CONTINUED AIRWORTHINESS - TIME LIMITS

R 1. Instructions for Continued Airworthiness

A. General

R (1) The information published by Pratt & Whitney in
R Section 05-10-01, Airworthiness Limitations of this
R manual identifies the maximum hours that certain parts
R may operate prior to removal. In addition this section
R may identify maintenance actions that must be taken at
R specified intervals. This information is provided in
R compliance with the United States Code of Federal
R Regulations, Title 14, Aeronautics and Space, Part 33 -
R Airworthiness Standards: Aircraft Engines, Paragraph
R 33.4 Appendix A. Paragraph 33.4 Appendix A specifies,
R in part, that an Airworthiness Limitations section must
R be provided that is segregated and distinguished from
R the rest of the text. Information in this section must
R contain "each mandatory replacement time, structural
R inspection interval, and related structural inspection
R procedure, including envelope structural integrity,
R required for type certification."

R (2) The information supplied by Pratt & Whitney in Section
R 05-10-01, Airworthiness Limitations of this manual
R should be utilized in consideration of the clarifying
R statements provided in step (3) (a). These clarifying
R statements are consistent with regulatory guidance
R material provided to all engine manufacturers by the
R European Aviation Safety Agency. Reference is made to:
R European Aviation Safety Agency, Certification
R Specifications for Engines, CS-E Book 2 - Acceptable
R Means of Compliance, Subpart D - Turbine Engines;
R Design and Construction, AMC to CS-E515 Engine Critical
R Parts, effective November 24, 2003.

R (3) Step (3) (a) clarifying statements apply to the life
R limits provided by Pratt & Whitney in Chapter/Section
R 05-10-01, Airworthiness Limitations of this manual:

R (a) The following airworthiness limitations have been
R substantiated based on engineering analysis that
R assumes this product will be operated and
R maintained using the procedures and inspections
R provided in the Instructions for Continued
R Airworthiness supplied with this product by the
R Type Certificate holder or its licensees. For
R engine-critical parts and parts that influence
R engine-critical parts, any repair, modification, or
R maintenance procedures not approved by the Type

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Certificate holder or its licensees, or any substitution of such parts not supplied by the Type Certificate holder or its licensees may materially affect these limits.

CAUTION: THE FOLLOWING STATEMENTS APPLY TO PARTS DEFINED IN CHAPTER/SECTION 05-10-01, AIRWORTHINESS LIMITATIONS AND TO PARTS THAT ARE DIRECTLY ATTACHED TO THE PARTS DEFINED IN CHAPTER/SECTION 05-10-01, AIRWORTHINESS LIMITATIONS.

- (4) Pratt & Whitney is unable to state that the information published in Chapter/Section 05-10-01, Airworthiness Limitations of this manual applies to replacement parts, repairs, modifications, or maintenance procedures not developed by, or in partnership with, Pratt & Whitney. Pratt & Whitney does not have access to the approved technical data associated with replacement parts, repairs, modifications, or maintenance procedures not developed by, or in partnership with, Pratt & Whitney. Without analysis of the approved technical data, Pratt & Whitney is unable to state that the data published in Chapter/Section 05-10-01, Airworthiness Limitations in this manual applies. In such situations, the entity responsible for the continued airworthiness of the engine may want to contact the company or person that received approval for the manufacture and/or sale of replacement part(s) or approval for repairs, modifications, or maintenance procedures, to determine the methodology used to determine that the United States Code of Federal Regulations, Title 14, Aeronautics and Space, Part 33 - Airworthiness Standards: Aircraft Engines continues to be met, and to determine the appropriate life limitations for continued use of the part(s).

B. Airworthiness Limitations

- (1) Refer to Section 05-10-01, Time Limits for disk/hub hour limits.

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AIRWORTHINESS LIMITATIONS - TIME LIMITS

1. Airworthiness Limitations

- A. The Airworthiness Limitations section is FAA approved and specifies maintenance necessary under Federal Aviation Regulations.

2. Disk/Hub Life

- A. Service life is limited to and must not exceed either the specified hours or the specified cycles.
- B. In establishing and reporting time on hourly limited parts, time is defined as that accumulated time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing (flight time).

NOTE: The marking of hours and cycles by engine model on the engine parts is optional to maintaining accurate accumulated service life (hours and cycle by engine model) in the form of permanent records, paper documents or computer data base records. Refer to the Standard Practices Manual, Section 70-30-00.

- C. A cycle is defined as any flight, consisting of one take-off and one landing, regardless of length of flight and whether or not thrust reverser was used on landing. A touch and go landing and take-off is included in this definition. For further clarification refer to Chapter/Section 70-30-00, Standard Practices Manual.
- D. All disk (in present or any preceding configuration) life limits indicate total life accumulated prior to and subsequent to reoperation and reidentification.
- E. The % symbol adjacent to a part number indicates that no life extension is available for this part.
- F. The abbreviation CL means Manufacturing Change Letter.

NOTE: Manufacturing Change Letters are found adjacent to a part number and indicate the development level of the part at the time of its manufacture. Parts of the same part number but with different Change Letters continue to be fully interchangeable.

- G. Refer to Table 101 for JT12 engine limits and Table 102 for JFTD12 engine limits.

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AIRWORTHINESS LIMITATIONS - TIME LIMITS

DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
Hub, Compressor (1st Stage)	%409401	10000	8000
	%447901	10000	8000
	%596901	10000	8000
	667901	10000	8000
	%712701	10000	8000
	%748001	10000	8000
Disk - 2nd Stage Compressor	406302	3000	3000
	%406302 CL G or SB 744	6000	8000
	448802	4000	4000
	%448802 CL F or SB 744	8000	8000
	%541902	6000	8000
	%597402	8000	8000
	%670802	8000	8000
	%726402	8000	8000
	%726502	6000	8000
Disk - 3rd Stage Compressor	406203	2000	2000
	\$406203-001	2000	2000
	\$\$\$406203 CL G or SB 744	4000	7500
	\$\$\$406203-001 CL G or SB 744	4000	7500
	410703	4000	4000
	\$410703-001	4000	4000
	\$\$\$410703 CL F or SB 744	8000	8000
	\$\$\$410703-001 CL F or SB 744	8000	8000
	%541903	4000	7500
	\$\$\$541903-001	4000	7500
	%670403	8000	8000
	\$\$\$670403-001	8000	8000
	%726403	4000	7500
	\$\$\$726403-001	4000	7500

\$ The cycles and hours for PN 406203-001, 410703-001, 541903-001, 670403-001 and 726403-001 represent the total life accumulated prior to and subsequent to reoperation and reidentification from PN 406203 to 406203-001, 410703 to 410703-001, 541903 to 541903-001, 670403 to 670403-001, and 726403 to 726403-001.

Compressor And Turbine Rotor
Cycle Limits (JT12)
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DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
Disk - 4th Stage Compressor	406204	2500	2500
	%406204 CL H or SB 744	4000	6000
	%448804	12000	8000
	%541904	4000	6000
Disk - 5th Stage Compressor	406205	2500	2500
	%406205 CL H or SB 744	4000	6000
	%496705	8000	8000
	496705 - See SB 3421	4000	4000
	%541905	4000	6000
	541905 - See SB 3421	2500	2500
	%701505	8000	8000
	797305	8000	8000
Disk - 6th Stage Compressor	417806	2500	2500
	%417806 CL G or SB 744	4000	6000
	%496706	8000	8000
	%541906	4000	6000
	541906 - See SB 3421	2200	2200
	701106	8000	8000
	797706	8000	8000
Disk - 7th Stage Compressor	426107	2500	3000
	%426107 CL G or SB 744	2500	6000
	%448807	10000	8000
	%541907	2500	6000
Disk - 8th Stage Compressor	406208	4500	4500
	%406208 CL J or SB 744	5000	8000
	%541908	5000	8000
	541908 - See SB 3421	2200	2200
	701108	5000	8000
	725008	8000	8000
	796708	5000	8000
	803108	8000	8000

Compressor And Turbine Rotor
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DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
Disk - 9th Stage	406209	3000	3000
Compressor	%406209 CL J or SB 744	8000	8000
	%541909	8000	8000
	541909 - See SB 3421	2500	2500
	%701409	8000	8000
	797309	8000	8000
Disk - 1st Stage Turbine	405801	8000	8000
Disk - 2nd Stage Turbine	405802	8000	8000

Compressor And Turbine Rotor Cycle Limits (JT12) Table 101 (Continued)

DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
Gas Generator:			
Hub, Compressor (1st Stage)	%409401	10000	8000
	%447901	10000	8000
	%596901	10000	8000
	667901	10000	8000
	%712701	10000	8000
	%748001	10000	8000
Disk - 2nd Stage	%670802	8000	8000
	%726402	8000	8000
	%726502	6000	8000

Compressor And Turbine Rotor Cycle Limits (JFTD12) Table 102

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AIRWORTHINESS LIMITATIONS - TIME LIMITS

DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
R Disk - 3rd Stage	410703	4000	4000
R Compressor	\$410703-001	4000	4000
R	\$%410703 CL F	8000	8000
R	or SB 744		
R	\$%410703-001 CL F	8000	8000
R	or SB 744		
	%670403	8000	8000
	&%670403-001	8000	8000
	%726403	4000	7500
	&%726403-001	4000	7500
R & The cycles and hours for PN 410703-001, 410703F-001, 670403-001, R and 726403-001 represent the total life accumulated prior to and R subsequent to reoperation and reidentification from 410703 to R 410703-001, 410703F to 41703F-001, 670403 to 670403-001, and R 726403 to 726403-001.			
Disk - 4th Stage	406204	2500	2500
Compressor	%406204 CL H	4000	4000
	or SB 744		
	%448804	12000	8000
	%541904	4000	4000
Disk - 5th Stage	406205	2500	2500
Compressor	406205 CL H	4000	4000
	or SB 744		
	%496705	8000	8000
	496705 -	4000	4000
	See SB 3421		
	541905	4000	4000
	541905 -	2500	2500
	See SB 3421		
	%701505	8000	8000
	797305	8000	8000
Disk - 6th Stage	417806	2500	2500
Compressor	%417806 CL G	4000	4000
	or SB 744		
	%496706	8000	8000
	541906	4000	4000
	541906 -	2200	2200
	See SB 3421		
	701106	8000	8000
	797706	8000	8000

Compressor And Turbine Rotor
 Cycle Limits (JFTD12)
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AIRWORTHINESS LIMITATIONS - TIME LIMITS

DESCRIPTION	PART NO.	CYCLES MAX REPLACE AT	HOURS MAX REPLACE AT
Disk - 7th Stage	426107	2500	3000
Compressor	%426107 CL G or SB 744	2500	6000
	%448807	10000	8000
	%541907	2500	6000
Disk - 8th Stage	406208	4500	4500
Compressor	%406208 CL J or SB 744	5000	8000
	%541908	5000	8000
	541908 - See SB 3421	2200	2200
	701108	5000	8000
	725008	8000	8000
	803108	8000	8000
Disk - 9th Stage	406209	3000	3000
Compressor	%406209 CL J or SB 744	8000	8000
	%541909	8000	8000
	541909 - See SB 3421	2500	2500
	701409	8000	8000
	797309	8000	8000
Disk - 1st Stage	405801	8000	8000
Turbine			
Disk - 2nd Stage	420102	8000	8000
Turbine	#420102-001	8000	8000

The cycles and hours for PN 420102-001 represent the total life accumulated prior to and subsequent to reoperation and reidentification from PN 420102 to 420102-001.

Free Turbine:

Disk - 1st Stage	575001	%8000	%12000
Free Turbine			
Disk - 2nd Stage	575002	%8000	%12000
Free Turbine			

Compressor And Turbine Rotor
Cycle Limits (JFTD12)
Table 102 (Continued)

R
R

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