

Circular No. 4-017

# Operating hours of rented components with a limit of operating hours set by Maintenance Manuals

September 5, 2003  
June 30, 2011

First issue  
Amended

Airworthiness Division, Aviation Safety and Security Department  
Japan Civil Aviation Bureau  
Ministry of Land, Infrastructure, Transport and Tourism

(translated on May 10, 2016)

[Intentionally Blank]

September 5, 2003 First issue (KOKU-KU-KI-538)  
June 30, 2011 Amended (KOKU-KU-KI-282)

JCAB Circular

Director, Airworthiness Division  
Aviation Safety and Security Department  
Japan Civil Aviation Bureau  
Ministry of Land, Infrastructure, Transport and Tourism

Subject: Operating hours of rented components with a limit of operating hours set by Maintenance Manuals

1. Purpose

This JCAB Circular stipulates the methods for determining and managing the limit of operating hours of a component, etc. that is rented by an air carrier.

2. Definitions

2-1 Components

The term “component(s), etc.” in this JCAB Circular means a component, etc. to which the limit of operating hours is set by the maintenance manuals.

2-2 Rent

The term “rent” in this JCAB Circular means the cases listed below (excluding the case where a component, etc. is rent tentatively for a flight to the principal maintenance base).

2-2-1 When a component, etc. removed from the aircraft is installed on a different type of aircraft that belongs to the same operator

2-2-2 When a component, etc. removed from the aircraft is installed on the same type of aircraft or on a different type of aircraft that belongs to a different operator

2-2-3 When a component, etc. is rented without being removed from the aircraft, such as lease of aircraft

### 2-3 Equivalent Time Since Overhaul (ETSO)

The term “ETSO” in this JCAB Circular means, in cases when the component is rented between operators or types of aircraft whose Approved Time Between Overhaul (ATBO) for such component are different, operating hours to which Time Since Overhaul (TSO) of the component, etc. at that time of rent are converted, by corresponding it to the Approved Time Between Overhaul (ATBO) of a new operator or a new type of aircraft.

ETSO shall be calculated with the method specified in Section 3.

### 2-4 Limit of Operating Hours

The term “limit of operating hours” in this JCAB Circular refers only to ATBO, and does not include the lifetime limit and limits directed by JCAB Airworthiness Directives (TCDs).

### 3. Methods of Converting Operating Hours

Time since overhaul of the previous operator or the previous type of aircraft--TSO	
Time since overhaul of a new operator or a new type of aircraft	--ETSO
ATBO of the previous operator or the previous type of aircraft	--A
ATBO of a new operator or a new type of aircraft	--B

$$\text{ETSO} = \frac{B}{A} \times \text{TSO}$$

The time shall be rounded down to the minute.

Examples are shown below.

Example 1. There is an engine owned by Company A. Company A’s ATBO for this engine is 2,000 hours. This engine is rent from Company A to Company B with a TSO of 1,000 hours. If Company B’s ATBO for this engine is 1,400 hours, Company B’s ETSO at the time of rent is as follows:

$$\text{ETSO} = \frac{1,400}{2,000} \times 1,000 = 700:00$$

Example 2. In Example 1, if the engine is used for 50 hours by Company B and then returned to Company A. Company A’s ETSO at this point is as follows:

$$\text{ETSO (Company A)} = \frac{2,000}{1,400} \times 750 = 1,071:25$$

Example 3. In Example 1, if the engine is used for 20 hours by Company B and then rent to Company C, whose ATBO of this engine is 1,200 hours, Company C's ETSO at this point is as follows:

$$\text{ETSO (Company C)} = \frac{1,200}{1,400} \times 720 = 617:08$$

4. Methods of Management and Recording

4-1 When a component, etc. is rented, the information of (a) and (b) listed below must be written by a qualified maintenance technician in the column of the usage record, and the information of (c) in the column of reference in the flight logbook, respectively (with regard to an engine or propeller, the appropriate flight logbook for the component must be kept; for other components, the appropriate flight logbook must be kept according to the installed location).

- (a) Date of rent, name of the previous operator, aircraft type on which the component is installed, and registration number
- (b) Calculation Process of ETSO and ETSO
- (c) Time since rent (this time starts from ETSO)

Note: The total operating hours in the flight logbook do not change.

An example is shown below.

Sample of flight logbook

Operation Record						
Date	Category of Operation Hours					Reference
	Ground	Midair	Total	Total operation hrs. after manufacturing	Total operation hrs. after overhaul	
2002.11.5			2:00	3,000:00	1,000:00	
2002.11.6	Company A Company A Our company	Retrofitted from Model: Kawasaki, Type: BK117C-2 (JA××××) ATBO 2,000 hrs. ATBO 1,400 hrs.				
	ETSO =	$\frac{1,400}{2,000} \times 1,000 = 700:00$				
				3,000:00	1,000:00	700:00
2002.11.7			2:15			
2002.11.8			6:30	3,002:15	1,002:15	702:15
				3,008:45	1,008:45	708:45

4-2 Air carriers must specify in the maintenance manuals that the TSO management for rented components is performed in accordance with this JCAB Circular.

Note: If a component is rent between an air carrier and an aerial work service operator as well as between an air carrier and an operator of private aircraft, the proportional calculation specified in Section 3 shall not apply.

For example, an engine with a limit of operating hours of 3,000 hours specified by the public notice and a limit of operating hours of 2,000 hours set by the maintenance manuals may not be used for air transport services after being used for 2,000 hours after overhaul; however, the engine may be used for an additional 1,000 hours for aerial work services or private aircraft.

#### Supplementary Provisions

1. This JCAB Circular shall be enforced on September 5, 2003.
2. JCAB Circular TCL-65A-73, "Operating hours of components with a limit of operating hours set by Maintenance Manuals," shall be superseded by this JCAB Circular.

#### Supplementary Provision (June 30, 2011)

1. This JCAB Circular shall apply from July 1, 2011.

Contact the following for inquiries, opinions, etc. concerning this JCAB Circular.

Air Carrier Airworthiness Engineer  
Air Transport Safety Unit  
Aviation Safety and Security Department  
Japan Civil Aviation Bureau  
Ministry of Land, Infrastructure, Transport and Tourism  
2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8918  
Tel.: +81-3-5253-8731  
Fax: +81-3-5253-1661