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SL 118
SL 091/71-017
Honeywell Operating Information Letter（OIL）
OI331-11R20

NOTE

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SERVICE LETTER

MITSUBISHI HEAVY INDUSTRIES, LTD.
NAGOYA AEROSPACE SYSTEMS WORKS
10 OYE-CHO, MINATO-KU, NAGOYA, JAPAN

JCAB T.C. : No. 118
FAA T.C. : No. 091/71-017

DATE: September 20, 2022

SUBJECT: Honeywell Operating Information Letter (OIL) OI331-11R20

MODEL EFFECTIVITY: All MU-2B Airplanes

PURPOSE

This Service Letter is issued to ensure that owners/operators of MU-2B airplanes are aware of the release of Honeywell Operating Information Letter (OIL) OI331-11R20 and have received a copy of the attached OIL. If you have any questions, please contact Honeywell utilizing the contact information provided in the OIL.

The OIL recommends the installation of an Auto-Ignition System which Mitsubishi Heavy Industries, Ltd. (MHI) agrees with. MHI has issued two Service Bulletins (S/B 226E for A2PC airplanes and S/B 086/74-002A for A10SW airplanes) to install an Auto-Ignition System in addition to the existing Continuous Ignition System to reduce the possibility of engine flame-out when icing conditions are encountered and the continuous ignition is not selected.

As noted in the OIL, these general procedures do not supersede the information on operation in icing conditions presented in the JCAB and FAA approved Airplane Flight Manual for your particular model of MU-2B. (See NOTE below.) They do, however, serve as a reminder of the importance of using the engine anti-ice and ignition systems properly when operating in known or potential icing conditions. We remind pilots that icing can occur at any time of the year if the temperature and cloud moisture content are within the icing range.

NOTE

If your airplane is equipped with the Auto-Ignition System, the ignition switches should be placed in the "CONT" position when actual or potential icing conditions exist or in the "ON" position if the Auto-Ignition System is not installed. This includes all flight operations in any form of visible moisture when the outside air temperature is +10° C or less or the indicated OAT (RAT) is +10° C or less, when ice remains on the aircraft surfaces and/or during takeoff, climb out and landing when ice, rain, water, slush and/or snow is present on the runway.

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Honeywell

Operating Information Letter

Honeywell International
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Phoenix, AZ 85034

PLEASE DISTRIBUTE TO ALL AFFECTED FLIGHT CREW MEMBERS AND MAINTENANCE PERSONNEL

TO: All Owners/Operators, Airframe Manufacturers, Distributors, Sales and Service Organizations, and Field Service Representatives

APPLICATIONS: All TPE331 Engines

PURPOSE: To emphasize proper use of engine inlet anti-ice and provide additional information on the use of engine ignition in icing conditions.

DISCUSSION

There have been incidents in which TPE engines have flamed out during or following operation in icing conditions. Several dual engine flameouts have occurred. Typically, flameout events have occurred after departing icing conditions into clear air and **especially after descending out of icing conditions into warmer air.**

Engine inlet anti-ice (inlet or intake heat) should be used during all flight in potential icing conditions. Icing conditions should be considered to exist when flying in precipitation or visible moisture (including clouds or fog), with OAT +10 ° C (+50 ° F) or colder.

If the use of anti-ice is inadvertently delayed after encountering icing conditions, ice may accumulate on engine and airframe inlet surfaces. In such instances, subsequent application of engine inlet anti-ice can cause ice shedding and ingestion, which may cause flameout. Therefore, if ice has accumulated, turning ignition ON and deicing one engine at a time will reduce the possibility of dual engine flameouts.

Regardless of whether icing conditions presently exist, IGNITION should be ON at any time ice is suspected or observed to be collecting or shedding from one or both of the propellers, or propeller spinners.

Depending on ignition system configuration and possible duty cycle limitations, the IGNITION should be left ON (e.g. OVERRIDE), or selected to AUTOMATIC, (when so equipped) whenever ice is visible on the propeller spinner(s) or wing leading edges. **Ice accumulations can be difficult to detect visually.**

In all cases where takeoff or landing is being conducted **during and after operation in icing conditions, it is recommended that IGNITION be ON or AUTOMATIC during takeoff, approach and landing**.

PROCEDUREAL RECOMMENDATIONS

The recommendations in this document are general in nature, and are intended only to supplement approved Airplane Flight Manual procedures. In cases of conflicting requirements, the AFM should be the controlling document. The discussion above should be reviewed and understood by all flight crew members. The following summarizes the recommendations on use of ignition:

I. AIRCRAFT EQUIPPED WITH 5-MINUTE DUTY CYCLE IGNITION, WITHOUT AUTOMATIC IGNITION SYSTEM:

IGNITION ON should be selected:

a) During approach and landing, if icing conditions have been previously encountered **at any time** during the flight.

b) When ice is observed to collect or to be shedding from propeller(s) and/or spinner(s).

c) Prior to initial application of engine inlet heat or propeller deicing.

d) Immediately, any time engine flameout occurs as a possible result of ice ingestion.

II. AIRCRAFT EQUIPPED WITH AUTOMATIC, OR WITH ONE HOUR (OR LONGER) DUTY CYCLE IGNITION:

IGNITION ON (OR AUTOMATIC) should be selected:

a) Any time ice is visible on spinner(s) or leading edges.

b) During operation in potential icing conditions.

c) During approach and landing, if icing conditions have been previously encountered **at any time** during the flight.

d) When ice is observed to collect or to be shedding from propeller(s) and/or spinner(s).

e) Prior to initial application of engine inlet heat or propeller deicing.

f) ON immediately, any time engine flameout occurs as a possible result of ice ingestion.

Automatic ignition systems based on Negative Torque Sensing (NTS) switches will not activate the ignition when the power lever is below flight idle. Therefore, to avoid a flameout during landing rollout on an engine with NTS sensed automatic ignition, select ignition "ON" prior to touchdown.

Refer to your AFM for additional guidance on when to select ignition ON instead of AUTOMATIC. Continuously firing ignition will result in a more rapid relight than automatic ignition.

Flight crew members should be able to recall without hesitation the minimum actions necessary to airstart a TPE331 engine from either the windmilling (NTS-ing) or feathered condition.

IGNITION UNIT DUTY CYCLES

Depending on the type of ignition exciter units installed, the ignition system might be subject to a duty cycle limitation based on time ON and time OFF. This limitation should be considered when using ignition in flight. Use of AUTOMATIC mode (when installed) is not limited in flight, regardless of exciter unit. The following summarizes the duty cycles:

Exciter Unit	Duty Cycle
P/N 3070378-2	Continuous (no limit)
P/N 3105886-4	Continuous (no limit)
P/N 868962-3	One Hour (Total) ON in any two (2) hour period. If the engine is in compliance with Service Bulletin TPE331-75-0004: Above +50F (+10C) ambient temperature, the ignition unit may be run up to one hour at a time. Total time "on" shall not exceed one hour without one hour "off". The one hour "on" may be either continuous or intermittent. Below +50F (+10C) ambient temperature the ignition unit can be operated continuously (no limit).

P/N 868962-1/-2	1 minute "ON" - 1 minute "OFF" (limit 5 times per 30 minute interval). 2 minutes "ON" - 2 minutes "OFF" - 2 minutes "ON" - 23 minutes "OFF". 5 minutes "ON" - 55 minutes "OFF". NOTE: Some aircraft manufacturers have extended the duty cycle of the Bendix manufactured 868962-2 ignition unit based on the specific engine installation environment.

CONFIGURATION RECOMMENDATIONS

Though continuously firing ignition will provide a more rapid relight than automatic ignition, an automatic ignition system is an additional safety feature while minimizing use of the ignition exciter and igniter plugs. Many aircraft manufacturers using TPE331 engines on their aircraft have developed retrofit kits to permit the incorporation of an automatic ignition system on the aircraft and engines.

Honeywell strongly recommends that operators incorporate automatic ignition systems on their aircraft. Operators should contact the aircraft manufacturer to determine the availability of such systems for their aircraft.

Honeywell strongly recommends that all TPE331 engines be equipped with ignition units approved for continuous operation. Honeywell Service Bulletins are available to upgrade the ignition unit and rework the anti-ice shield as required.

For further assistance, contact your Honeywell Field Service Representative or the Honeywell Technical Operations Center at 1-800-601-3099 (U.S.) or 1-602-365-3099 (International).

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