



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Small Airplane Directorate  
901 Locust St., Room 301  
Kansas City, MO 64106

June 27, 2016

Exemption No. 13042A  
Regulatory Docket No. FAA-2011-1345

Mr. Adam Dennis  
Manager, Certification Engineering  
Viking Air Limited  
Victoria International Airport  
1959 de Havilland Way  
Sidney, British Columbia V8L 5V5, Canada

Dear Mr. Dennis:

This letter is to inform you that we have granted your petition to extend Exemption No. 13042. It explains the basis for our decision, describes its effect, and lists the conditions and limitations.

### **The Basis for Our Decision**

By letter dated May 19, 2016, Mr. Adam Dennis, Manager, Certification Engineering, Viking Air Limited (VAL), Victoria International Airport, 1959 de Havilland Way, Sidney, British Columbia V8L 5V5, Canada, petitioned the Federal Aviation Administration (FAA) on behalf of VAL for an extension of exemption number 13042 (enclosed), which grants relief from § 23.1549(b) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would allow VAL to use the color white in lieu of green on the Honeywell Primus Apex (Apex<sup>TM</sup>) Electronic Flight Instrument System (EFIS) to depict normal engine operating conditions on Model DHC-6 Series 400 airplanes for a limited time.

In your petition, you indicate that a small number of U.S aircraft are affected by Exemption Nos. 10465, 10465A, 11059, 13042, and that VAL is requesting an additional 12 month extension to Exemption No. 13042. This would ensure that aircraft delivered after July 31, 2017 will be fully compliant with § 23.1549(b) and all in-service deliveries will be retrofitted within three months from that date (October 31, 2017). You provided evidence that the required software modification has been completed, appears compliant with § 23.1549(b), and is in the process of being certified through Transport Canada. Approval of your exemption

ACE-16-00004-E

request will permit a small number of U.S. deliveries prior to completion and approval of the required changes that make the design compliant with § 23.1549(b).

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication because the exemption, if granted, would not set a precedent, and any delay in acting on this petition would be detrimental to VAL. Additionally, this exemption is an extension of the petitioner's exemption number 13042, which expires July 31, 2016 for new aircraft and October 31, 2016 for in-service aircraft.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in the enclosed Grant of Exemption Nos. 10465, 10465A, 11059, and 13042;
- The reasons stated by the FAA for granting the enclosed Grant of Exemption Nos. 10465, 10465A, 11059, and 13042 also apply to the situation you present; and
- A grant of exemption is in the public interest.

### **Our Decision**

The FAA has determined that the justification for the issuance of Exemption No. 13042A remains valid with respect to this exemption and is in the public interest. Therefore, under the authority provided by 49 U.S.C. 106(f), 40113 and 44701, which the FAA Administrator has delegated to me, I grant your petition, subject to the following conditions and limitations.

### **Conditions and Limitations**

1. VAL must certify and incorporate into the production line requirements for engine indications fully compliant with the requirements of § 23.1549(a), (b), and (c), into the model DHC-6 Series 400 airplanes no later than July 31, 2017.
2. VAL must retrofit the model DHC-6 Series 400 airplanes delivered under the terms of the exemption with the new engine indications described in condition 1 above no later than October 31, 2017.
3. Until the incorporation of the changes required in conditions 1 and 2 of this exemption have been completed, VAL must add to the airplane flight manual (AFM) a description of the indications and their non-compliant use of color, and the necessary instructions for properly interpreting indications.
4. For airplanes subject to condition 2 of this exemption, the operating limitations section of the AFM must include the following statement:

“No person may operate this airplane after October 31, 2017, unless the engine indications have been modified in accordance with the terms of Exemption No. 13042A.”

This statement may be removed from the AFM after the required modification has been made.

**The Effect of Our Decision**

This exemption terminates on July 31, 2017, unless sooner superseded or rescinded.

Sincerely,

//SIGNED//

Pat Mullen  
Acting Manager, Small Airplane Directorate  
Aircraft Certification Services

Enclosure[s]



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Small Airplane Directorate  
901 Locust Street  
Kansas City, Missouri 64106

September 28, 2015

Exemption No. 13042  
Regulatory Docket No. FAA-2011-1345

Mr. Adam Dennis  
Manager, Certification Engineering  
Viking Air Limited  
Victoria International Airport  
1959 de Havilland Way  
Sidney, British Columbia V8L 5V5, Canada

Dear Mr. Dennis:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

**The Basis for Our Decision**

By letter dated August 17, 2015, Mr. Adam Dennis, Manager, Certification Engineering, Viking Air Limited (VAL), Victoria International Airport, 1959 de Havilland Way, Sidney, British Columbia V8L 5V5, Canada, petitioned the Federal Aviation Administration (FAA) on behalf of VAL for an extension of exemption number 11059 (enclosed), which grants relief from § 23.1549(b) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would allow VAL to use the color white in lieu of green on the Honeywell Primus Apex (Apex™) Electronic Flight Instrument System (EFIS) to depict normal engine operating conditions on Model DHC-6 Series 400 airplanes for a limited time.

In your petition, you indicate that a small number of U.S. aircraft are affected by Exemption Nos. 10465, 10465A, and 11059 and that VAL is requesting an additional 12 month extension to Exemption No. 11059. This would ensure that aircraft delivered after July 31, 2016 will be fully compliant with § 23.1549(b) and all in-service deliveries will be retrofitted within three months from that date (October 31, 2016). You provided evidence that the required software modification has been completed, appears compliant with § 23.1549(b), and is in the process of being certified through Transport Canada. Approval of your exemption request will permit

of being certified through Transport Canada. Approval of your exemption request will permit a small number of U.S. deliveries prior to completion and approval of the required changes that make the design compliant with § 23.1549(b).

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication because the exemption, if granted, would not set a precedent, and any delay in acting on this petition would be detrimental to VAL. Additionally, this exemption is an extension of the petitioner's exemption number 11059, which expired July 15, 2015 for new aircraft and October 31, 2015 for in-service aircraft.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in the enclosed Grant of Exemption Nos. 10465, 10465A and 11059;
- The reasons stated by the FAA for granting the enclosed Grant of Exemption Nos. 10465, 10465A and 11059 also apply to the situation you present; and
- A grant of exemption is in the public interest.

#### **Our Decision**

Under the authority contained in 49 U.S.C. 106(f), 40113 and 44701, which the FAA Administrator has delegated to me, I hereby grant Viking Air Limited an exemption from 14 CFR § 23.1549(b) to the extent necessary to use the color white in lieu of green on the Honeywell Primus Apex (Apex™) Electronic Flight Instrument System (EFIS) to depict normal engine operating conditions on model DHC-6 Series 400 airplanes for a limited time, subject to the conditions and limitations described below.

#### **Conditions and Limitations**

1. Viking Air Limited must certify and incorporate into the production line requirements for engine indications fully compliant with the requirements of § 23.1549(a), (b), and (c), into the model DHC-6 Series 400 airplanes no later than July 31, 2016.
2. Viking Air Limited must retrofit the model DHC-6 Series 400 airplanes delivered under the terms of the exemption with the new engine indications described in condition 1 above no later than October 31, 2016.
3. Until the incorporation of the changes required in conditions 1 and 2 of this exemption have been completed, Viking Air Limited must add to the airplane flight manual (AFM) a description of the indications and their non-compliant use of color, and the necessary instructions for properly interpreting indications.
4. For airplanes subject to condition 2 of this exemption, the operating limitations section of the airplane flight manual (AFM) must include the following statement:

“No person may operate this airplane after October 31, 2016, unless the engine indications have been modified in accordance with the terms of Exemption No. 13042 .

This statement may be removed from the AFM after the required modification has been made.

This exemption terminates on July 31, 2016, unless sooner superseded or rescinded.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mel Johnson', with a long horizontal flourish extending to the right.

Mel Johnson  
Acting Manager, Small Airplane Directorate  
Aircraft Certification Services

Enclosure[s]



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Small Airplane Directorate  
901 Locust Street  
Kansas City, Missouri 64106

September 19, 2014

Exemption No. 11059  
Regulatory Docket No. FAA-2011-1345

Mr. Adam Dennis  
Manager, Certification Engineering  
Viking Air Limited  
Victoria International Airport  
1959 de Havilland Way  
Sidney, British Columbia V8L 5V5, Canada

Dear Mr. Adam Dennis:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

**The Basis for Our Decision**

By letter dated August 13, 2014, you petitioned the Federal Aviation Administration (FAA) on behalf of Viking Air Limited (VAL) for an extension of Exemption No. 10465. That exemption from § 23.1549(b) of Title 14, Code of Federal Regulations (14 CFR) permits VAL to receive type certification approval of the Model DHC-6 Series 400 airplanes with a non-compliant type design for the engine indication system for a limited time.

In your petition, you indicate that a small number of U.S. aircraft are affected by Exemption No. 10465 and VAL is requesting another 12 month extension to the exemption. This would ensure that aircraft delivered after July 31, 2015 will be fully compliant with § 23.1549(b) and all in-service aircraft will be retrofitted within three months from that date (October 31, 2015). You state that you are confident this additional time will enable you to complete the certification of the modified avionics. You have also committed to segregate the engine display software correction from the optional avionics upgrades if the upgrade certification causes any additional delays that preclude the engine display correction.

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Therefore, VAL requests an extension to July 31, 2015 for incorporation into production line requirements of a engine indication system fully compliant with the requirements of § 23.1549(b) and an extension to October 31, 2015 for retrofit of all in-service Model DHC-6 Series 400 airplanes. This additional time will enable your customers to schedule the incorporation of the exemption's terminating action along with their "Phase 2" upgrades into a single maintenance event and keep their downtime to a minimum.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested extension of the exemption would not set a precedent and any delay in acting on this petition would be detrimental to VAL.

Having reviewed your reasons for requesting an exemption, I find that—

- they are similar in all material respects to relief previously requested in the enclosed Grant of Exemption Nos. 10465 and 10465A;
- the reasons stated by the FAA for granting the enclosed Grant of Exemption Nos. 10465 and 10465A also apply to the situation you present; and
- a grant of exemption is in the public interest.

#### **Our Decision**

Under the authority contained in 49 U.S.C. 106(f), 40113 and 44701, which the FAA Administrator has delegated to me, I hereby grant Viking Air Limited an exemption from 14 CFR § 23.1549(b) to the extent necessary to allow VAL to receive type certification approval of the Model DHC-6 Series 400 airplanes with a non-compliant type design for the engine indication system for a limited time, subject to the conditions and limitations described below.

#### **Conditions and Limitations**

1. Viking Air Limited must certify and incorporate into the production line requirements for engine indications fully compliant with the requirements of § 23.1549(a), (b), and (c), into the model DHC-6 Series 400 airplanes no later than July 31, 2015.
2. Viking Air Limited must retrofit the model DHC-6 Series 400 airplanes delivered under the terms of the exemption with the new engine indications described in Condition 1 above no later than October 31, 2015.
3. Until the incorporation of the changes required in Conditions 1 and 2 of this exemption have been completed, Viking Air Limited must add to the airplane flight manual (AFM) a description of the indications and their non-compliant use of color, and the necessary instructions for properly interpreting indications.
4. For airplanes subject to Condition 2 of this exemption, the operating limitations section of the airplane flight manual (AFM) must include the following statement:

"No person may operate this airplane after October 31, 2015, unless the engine indications have been modified in accordance with the terms of Exemption No. 11059"

This statement may be removed from the AFM after the required modification has been made.

This exemption terminates on July 31, 2015, unless sooner superseded or rescinded.

Sincerely,

A handwritten signature in blue ink that reads "Earl Lawrence". The signature is written in a cursive style with a large initial "E".

Earl Lawrence  
Manager, Small Airplane Directorate  
Aircraft Certification Service

Enclosure[s]

Exemption No. 10465

UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
KANSAS CITY, MO 64106

In the matter of the petition of

**VIKING AIR LIMITED**

for an exemption from § 23.1549(b)  
of Title 14, Code of  
Federal Regulations

**Regulatory Docket No. FAA-2011-1345**

### **I. GRANT OF EXEMPTION**

By letter dated November 30, 2011, Mr. Adam Dennis, Certification Engineer, Viking Air Limited (VAL), 1959 de Havilland Way, Sidney, British Columbia V8L 5V5 petitioned the Federal Aviation Administration (FAA) on behalf of VAL for an exemption from § 23.1549(b) of Title 14, Code of Federal Regulations (14 CFR). The proposed exemption, if granted, would allow VAL to temporarily use the color white in lieu of green on the Honeywell Primus Apex (Apex<sup>TM</sup>) Electronic Flight Instrument System (EFIS) to depict normal engine operating conditions during certification testing of the VAL DHC-6, Series 400 Twin Otter airplane.

**The petitioner requests relief from the following regulation:**

Section 23.1549(b) prescribes, in pertinent part, that:

“(b) Each normal operating range must be marked with a green arc or green line, not extending beyond the maximum and minimum safe limits;”

**The petitioner supports its request with the following information:**

The petitioner states:

“Viking Air Limited (VAL) requests a temporary exemption from the requirements of 14 CFR 23.1549(b) for the VAL DHC-6 Series 400 (Twin

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Otter) to the extent necessary to allow FAA type certification of the aircraft with the current Honeywell Primus Apex™ engine displays.

As conditions for granting the requested temporary exemption, VAL commits to the following:

2. VAL working with Honeywell International Inc. will design and certify an engine display configuration on Primus Apex™ for the DHC-6 Series 400 specific to meeting the FAA normal engine display color requirements as specified in FAR 23.1549(b).
3. This design and certification will be accomplished within fifteen (15) months of granting this exemption.
4. VAL will provide a service bulletin to all US-registered field aircraft after certifying the new display configuration.”

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication because the exemption, if granted, would not set a precedent, and any delay in acting on this petition would be detrimental to VAL.

**The FAA’s analysis is as follows:**

The FAA finds that:

1. The integration on the Apex™ and with Crew Alerting System (CAS) messages, dynamic caution and warning engine display ranges, and integration with the Master Caution / Warning (MCW) System achieves a high level of safety that ensures immediate pilot awareness of caution or warning conditions.
2. The integrated cockpit environment developed around Honeywell’s Primus Apex™ also enhances the availability of engine information on both the pilot and co-pilot’s Primary Flight Displays (PFD’s).
3. The overall integration of the cockpit, the caution and warning level CAS messages available with respect to engine torque and T5 displays, and the associated digital display inverse video caution and warning level display design effectively provides the crew with current operating information, crew alerting, and achieve a high degree of safety.
4. The denial of this petition for exemption would delay the United States certification of the DHC-6 Series 400 airplane for approximately fifteen (15) months. VAL and U.S. DHC-6 Series 400 operators would experience significant revenue loss as a result. Additionally, the US Army would be delayed access to the aircraft. This delay may also result in aircraft order cancellations and revenue loss for Viking’s US partners and suppliers, including Honeywell International.

## 5. The FAA's Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, Viking Air Limited is granted an exemption with time-limited conditions from §23.1549(b) to the extent necessary to allow type certification of the model DHC-6 Series 400 airplanes with engine indications not in compliance with the requirements of § 23.1549 (b). For the model DHC-6 Series 400 airplanes, this exemption is subject to the following conditions and limitations:

## 6. Conditions and Limitations

1. Viking Air Limited must certify and incorporate into the production line requirements for engine indications fully compliant with the requirements of §§ 23.1549(a), (b), and (c), into the model DHC-6 Series 400 airplanes no later than July 31, 2013.
2. Viking Air Limited must retrofit the model DHC-6 Series 400 airplanes delivered under the terms of the exemption with the new engine indications described in Condition 1 above no later than December 31, 2013.
3. Until the incorporation of the changes required in Conditions 1 and 2 of this exemption have been completed, Viking Air Limited must add to the airplane flight manual (AFM) a description of the indications and their non-compliant use of color, and the necessary instructions for properly interpreting indications.
4. For airplanes subject to Condition 2 of this exemption, the operating limitations section of the airplane flight manual (AFM) must include the following statement:

"No person may operate this airplane after December 31, 2013, unless the engine indications have been modified in accordance with the terms of Exemption No. \_\_\_\_\_"

This statement may be removed from the AFM after the required modification has been made.

This exemption terminates on July 31, 2013, unless sooner superseded or rescinded.

Issued in Kansas City, MO, on March 1, 2012.

s/

John Colomy  
Acting Manager, Small Airplane Directorate  
Aircraft Certification Service



U.S. Department  
of Transportation

Small Airplane Directorate  
901 Locust Street  
Kansas City, Missouri 64106

**Federal Aviation  
Administration**

Date: July 16, 2013

To: Mr. Adam Dennis  
Manager, Certification Engineering  
Viking Air Limited  
Victoria International Airport  
1959 de Havilland Way  
Sidney, British Columbia V8L 5V5, Canada

Subject: Correction to Exemption No. 10565A

Action:	<input type="checkbox"/> Per Your Request	<input type="checkbox"/> Discuss With Me	<input type="checkbox"/> Take Appropriate Action
	<input checked="" type="checkbox"/> For Your Information	<input type="checkbox"/> For Your Approval	<input type="checkbox"/> Please Answer
	<input type="checkbox"/> Per Our Conversation	<input type="checkbox"/> For Your Signature	<input type="checkbox"/> Prepare Reply For:
	<input type="checkbox"/> Note and Return	<input type="checkbox"/> Comment	<input type="checkbox"/>

Remarks:

Viking Air Limited, Exemption No. 10465A did not include an updated date in condition number 4 to allow aircraft operators to take full advantage of this exemption extension. Attached is a corrected copy with the updated date in condition number four. Please file this with the original signed Exemption No. 10465 and 10465A.

We are sorry for the error and hope it has not inconvenienced you. If you have any questions, please call.

//SIGNED//

William Schinstock  
Manager, Regulations & Policy  
ACE-111  
Federal Aviation Administration



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Small Airplane Directorate  
901 Locust Street  
Kansas City, Missouri 64106

### **CORRECTED COPY**

This letter corrects the June 14, 2013, letter we sent granting your petition to extend Exemption No. 10465. The date in condition number four should have been updated to give operators the full benefit of the exemption extension.

June 14, 2013

Exemption No. 10465A  
Regulatory Docket No. FAA-2011-

1345

Mr. Adam Dennis  
Manager, Certification Engineering  
Viking Air Limited  
Victoria International Airport  
1959 de Havilland Way  
Sidney, British Columbia V8L 5V5, Canada

Dear Mr. Dennis:

This letter is to inform you that we have granted your petition to extend Exemption No. 10465. It explains the basis for our decision and describes its effect.

#### **The Basis of Our Decision**

By letter dated May 6, 2013, you petitioned the Federal Aviation Administration (FAA) on behalf of Viking Air Limited (VAL) for an extension of Exemption No. 10465. That exemption from § 23.1549(b) of Title 14, Code of Federal Regulations (14 CFR) permits VAL to receive type certification approval of the Model DHC-6 Series 400 airplanes with a non-compliant type design for the engine indication system for a limited time.

In your petition, you indicate that due to the small number of aircraft affected by Exemption No. 10465, and the fact that three of the seven aircraft are operated by one entity, VAL is requesting a 12 month extension to the exemption. This would ensure that aircraft delivered after July 31, 2014 will be fully compliant with § 23.1549(b), and all aircraft will be retrofitted within three months from that date (October 31, 2014). This additional time will

enable your customers to schedule the incorporation of the exemption's terminating action along with their "Phase 2" upgrades into a single maintenance event and keep their downtime to a minimum. Therefore, VAL requests an extension to July 31, 2014 for incorporation into production line requirements of a engine indication system fully compliant with the requirements of § 23.1549(b), and an extension to October 31, 2014 for retrofit of all fielded Model DHC-6 Series 400 airplanes.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested extension of the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to VAL.

**Our Decision:**

The FAA has determined that the justification for the issuance of Exemption No. 10465, remains valid with respect to this exemption and is in the public interest.

Therefore, under the authority provided by 49 U.S.C. 40113 and 44701, which the FAA Administrator has delegated to me, I grant your petition to extend Exemption No. 10465.

**The Effect of Our Decision**

Our decision extends the termination date of Exemption No. 10465 to July 31, 2014, unless superseded or rescinded. Conditions 1, 2 and 4 of the original exemption are changed as follows:

1. Viking Air Limited must certify and incorporate into the production line requirements for engine indications fully compliant with the requirements of § 23.1549(a), (b), and (c), into the model DHC-6 Series 400 airplanes no later than July 31, 2014.
2. Viking Air Limited must retrofit the model DHC-6 Series 400 airplanes delivered under the terms of the exemption with the new engine indications described in Condition 1 above no later than October 31, 2014.
3. Until the incorporation of the changes required in Conditions 1 and 2 of this exemption have been completed, Viking Air Limited must add to the airplane flight manual (AFM) a description of the indications and their non-compliant use of color, and the necessary instructions for properly interpreting indications.
4. For airplanes subject to Condition 2 of this exemption, the operating limitations section of the airplane flight manual (AFM) must include the following statement:

"No person may operate this airplane after October 31, 2014, unless the engine indications have been modified in accordance with the terms of Exemption No. 10465"

This statement may be removed from the AFM after the required modification has been made.

All other conditions and limitations of Exemption No. 10465 remain the same. This letter must be attached to, and is a part of, Exemption No. 10465.

Sincerely,

//SIGNED//

Earl Lawrence  
Manager, Small Airplane Directorate  
Aircraft Certification Service