

PRATT & WHITNEY CANADA  
**SERVICE BULLETIN**

**FOR REFERENCE ONLY**

P&WC S.B. No. 14001R19

**BULLETIN INDEX LOCATOR**

TURBOPROP ENGINE

TURBOPROP ENGINE APPROVED LISTING OF (SYNTHETIC) LUBRICATING OILS

MODEL APPLICATION

PT6A-64, PT6A-66, PT6A-66A, PT6A-66B, PT6A-66D, PT6A-67, PT6A-67A, PT6A-67AF,  
PT6A-67AG, PT6A-67B, PT6A-67D, PT6A-67F, PT6A-67P, PT6A-67R, PT6A-67RM, PT6A-67T

Compliance: Refer to Para. 1.E. in the Service Bulletin

Summary: This service bulletin provides a list of acceptable synthetic lubricating oils.

**Refer to P&WC online publication for latest revision of this SB14001**

Jan 12/1987  
Revision No. 19: May 11/2016

**PT6A-72-14001**  
Cover Sheet

24-Hour Global Service

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11 May 2016

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REVISION TRANSMITTAL SHEET  
TURBOPROP ENGINE MODEL PT6A

SUBJECT: Pratt & Whitney Canada Service Bulletin No. PT6A-72-14001, Rev. No. 19, dated May 11/2016 (P&WC S.B. No. 14001R19) TURBOPROP ENGINE APPROVED LISTING OF (SYNTHETIC) LUBRICATING OILS

Replace your existing copy of this service bulletin with the attached revised bulletin. Destroy the superseded copy.

Please retain this Revision Transmittal Sheet with the revised bulletin.

SUMMARY: This service bulletin is revised to update the Para. 3.D., Accomplishment Instructions.

EFFECT OF REVISION ON PRIOR ACCOMPLISHMENT:

None.

NOTE: A black bar in the left margin indicates a change in that line of text or figure.

REVISION HISTORY:

Original Issue: Jan 12/1987	Revision No. 15: Jul 08/2014
Revision No. 1: Jul 15/1982	Revision No. 16: Mar 20/2015
Revision No. 2: Aug 24/1987	Revision No. 17: Sep 09/2015
Revision No. 3: Apr 22/1988	Revision No. 18: Feb 04/2016
Revision No. 4: Jan 15/1990	Revision No. 19: May 11/2016
Revision No. 5: Feb 12/1990	
Revision No. 6: Feb 19/1991	
Revision No. 7: Sep 22/1993	
Revision No. 8: Sep 20/1994	
Revision No. 9: Mar 16/2005	
Revision No. 10: Sep 29/2005	
Revision No. 11: Oct 03/2006	
Revision No. 12: Jul 11/2007	
Revision No. 13: Oct 01/2007	
Revision No. 14: Sep 06/2012	



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TURBOPROP ENGINE  
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1. Planning Information

A. Effectivity

PT6A-64, PT6A-66, PT6A-66A, PT6A-66B, PT6A-66D, PT6A-67, PT6A-67A, PT6A-67AF, PT6A-67AG, PT6A-67B, PT6A-67D, PT6A-67F, PT6A-67P, PT6A-67R, PT6A-67RM, PT6A-67T Engines.

B. Concurrent Requirements

None.

C. Reason

To assure the use of approved engine lubricants and to recommend an oil change policy.

NOTE: Major factors affecting oil deterioration with time are engine mechanical condition, climatic conditions, dust and sand ingestion during takeoff and landing mode and engine utilization.

D. Description

- (1) To provide type of approved synthetic lubricating oils for the subject model engines.
- (2) Oil to be mixed must be of the same viscosity and must be listed as approved in tables 2 and 3 of this service bulletin.
- (3) Occasional or inadvertent adding of a different approved type II oil during routine servicing of the oil tank does not require oil drain and flush.

E. Compliance

Pratt & Whitney Canada Inc. recommends that Compliance conforms to the requirements of the Accomplishment Instructions.

F. Approval

Transport Canada has reviewed and approved the technical contents of this Service Bulletin.

G. Manpower

Once you have access to the part, an estimate of 1.5 man-hours is required to include this service bulletin at maintenance.

H. Weight and Balance

None.

■ P&WC No. DCR26012, DCR32790, DCR32867, DCR34666, DCR35615, DCR35648

Jan 12/1987

Revision No. 19: May 11/2016

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1. Planning Information (Cont'd)

I. Electrical Load Data

Not changed.

J. Software Accomplishment Summary

Not applicable.

K. References

Maintenance Manual P/N 3038321 (PT6A-64)  
Maintenance Manual P/N 3036122 (PT6A-66, PT6A-66B)  
Maintenance Manual P/N 3058082 (PT6A-66A)  
Maintenance Manual P/N 3070902 (PT6A-66D)  
Maintenance Manual P/N 3036132 (PT6A-67/67A/67AF/67AG/67R/67T)  
Maintenance Manual P/N 3038336 (PT6A-67B, PT6A-67P)  
Maintenance Manual P/N 3041195 (PT6A-67D)  
Maintenance Manual P/N 3071152 (PT6A-67F)  
Specification MIL-PRF-23699G, Type II (5cSt)  
Special Airworthiness Information Bulletin (SAIB) NE-14-30

L. Publications Affected

None.

M. Interchangeability and Intermixability of Parts

Not applicable.

2. Material Information

A. Industry Support Information

Not applicable.

B. Material - Cost and Availability

Not applicable.

C. Material Necessary for Each Engine

Not applicable.

D. Reidentified Parts

None.

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2. Material Information (Cont'd)

E. Tooling - Price and Availability

Not applicable.

3. Accomplishment Instructions

A. The oils listed in the following tables comply with this contractor's specification MIL-PRF-23699G. Table 2 and 3 list Type II oil (5 centistokes). These oils are fully approved for use in Pratt & Whitney Canada commercially operated engines of the models indicated.

B. No other oils are approved for these models. Should the use of an oil not listed be desired, the intended user should contact Pratt & Whitney Canada, Customer Support Department, for consultation.

C. The limits for the use of Oil additives are as follows:

- (1) Octel Oil Blue B Liquid Dye (previously DuPont Oil Blue dye LCPMC 79922) can be added to new "fresh" (MIL-PRF-23699G) synthetic lubricating oil in the strength of: 0.1219–0.1707 ml/ liter of oil or 0.0156–0.0218 oz/U.S. Gallon. The volume of blue dye in fresh synthetic oil is 25–35 ml/205 l (45 Imp. Gallon) of oil and should never exceed 35 milliliters/205 liters. P&WC recommends to add blue dye to engine oil on a one time basis when filling the engine oil system (Refer. Table 1). The dye improves sight glass visibility and aids in the detection of oil leaks.

TABLE 1, Lubricating oil, Blue Dye concentration

Oil	Quantity of Blue Dye	
	Volume (ml)	Weight (Oz)
1 liter	0.1219 - 0.1707	0.0041 - 0.0057
1 US gallon	0.4614 - 0.6461	0.0156 - 0.0218
1 Imperial gallon	0.5541 - 0.7760	0.0188 - 0.0262
Drum of 45 US gallon	20 - 29	0.6763 - 0.9806
Drum of 45 Imperial gallon (205 liters)	25 - 35	0.8454 - 1.1835

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3. Accomplishment Instructions (Cont'd)

D. Oil System Servicing

NOTE: P&WC experience, over an extended period of time, has indicated that regular oil changes are no longer necessary for the engine models covered by this service bulletin. However, operators should be aware of the danger of oil contamination from extraneous matter such as hydraulic fluid, sand, etc., which would require the oil system to be drained, flushed and replenished with new oil of an approved brand.

CAUTION: DO NOT MIX DIFFERENT VISCOSITIES OR SPECIFICATIONS OF OIL AS THEIR DIFFERENT CHEMICAL STRUCTURE CAN MAKE THEM INCOMPATIBLE.

- (1) Should oils of different viscosities become intermixed, drain and flush the complete oil system and refill with an approved oil, following the maintenance manual instructions.
  - (2) Should an operator wish to monitor oil quality, it is recommended that a program be established in collaboration with the operator's oil supplier/manufacturer.
  - (3) The term "Third Generation" is one that oil companies have used to describe turbine oils which have been granted the classification of High Thermal Stability (HTS) under MIL-PRF23699G. Any oil designated as a "Third Generation" lubricant is still a Type II (5 centistokes) lubricant. All "Third Generation" lubricants approved for this engine, as described in Table 3, have been classified as HTS oils.
  - (4) Engine oil is to be changed on condition, and/or if any of the following limits are exceeded. For additional oil system servicing requirements, refer to engine maintenance manual as follows:
    - Ref. EMM 72-00-00, ENGINE, TURBOPROP - INSPECTION Para 8. Periodic Inspection
- (a) Analyze the original engine oil for the following:
- The Total Acid Number (TAN) must be less than or equal 2 mg. KOH/g maximum.
  - Kinematics viscosity (at 100 °C) changes from -10 to +25 % maximum when compared to brand new oil from the same batch.
  - Water content less than 1000 ppm

NOTE: 1. Maximum: compared to the unused new oil of the same brand.

NOTE: 2. You must drain and replace with original oil (same brand/type currently in use) if one of the above limit is exceeded.



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3. Accomplishment Instructions (Cont'd)

- (5) Switching / Change over standard type II with another standard type II, standard type II with HTS or vice versa (Ref. Table 2 and 3)
- (a) For engines with less than 100 hours since new or since complete overhaul of the entire lubrication system hardware, the top-up method or the drain and fill method are acceptable without any additional oil filter inspection or replacement requirement (Ref. EMM 72-00-00, SERVICING, Lubricating Oil System).
- (b) For engines with more than 100 hours since new or since complete overhaul of the entire lubrication system hardware, the top-up method is required as follows:
- 1 Analyze the original engine oil per Para. 3. D. (4), (a), or alternatively drain and replace with original oil (same brand/type currently in use).  
  
NOTE: Not require if unacceptable amount of carbon debris is found and flush is performed per step 4, a below.
  - 2 Inspect main oil filter paying special attention to carbon deposits (Ref. EMM 79-20-02, OIL FILTER & CHECK VALVE - MAINTENANCE PRACTICES).
  - 3 If no carbon debris is found (traces are acceptable) (Ref. Fig. 1), the original oil does not need to be drained and engine does not need to be flushed.
    - a Top-up the engine oil with candidate oil in accordance with the oil level check (top-up) procedure (Ref. EMM 72-00-00, SERVICING, Lubricating Oil System).
  - 4 If unacceptable amount of carbon debris is found, do as follows:
    - a Flush engine oil system and refill with original oil (same brand/type currently in use) (Ref. EMM 72-00-00, SERVICING, Lubricating Oil System).
    - b Top-up the engine oil with candidate oil in accordance with the oil level check (top-up) procedure (Ref. EMM 72-00-00, SERVICING, Lubricating Oil System).
    - c Inspect main oil filter and clean (Ref. EMM 79-20-02, OIL FILTER & CHECK VALVE - MAINTENANCE PRACTICES) at 50, 100 AND 200 flight hours, paying special attention to carbon accumulation in the filter. If oil filter is clean at 200 hours, reinstate normal periodic inspection intervals (Ref. EMM 72-00-00, ENGINE, TURBOPROP - INSPECTION). If carbon debris is still observed at 200 hours, repeat oil filter inspection and cleaning at 100 hour intervals until no debris is found.

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3. Accomplishment Instructions (Cont'd)

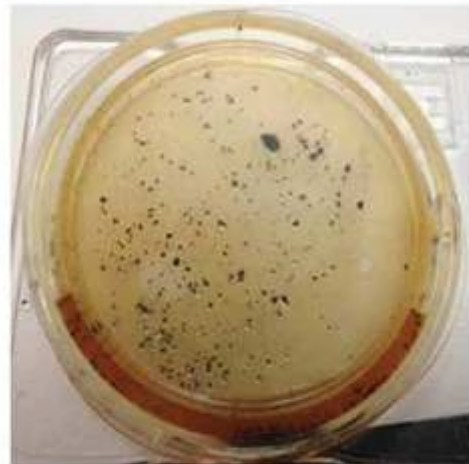
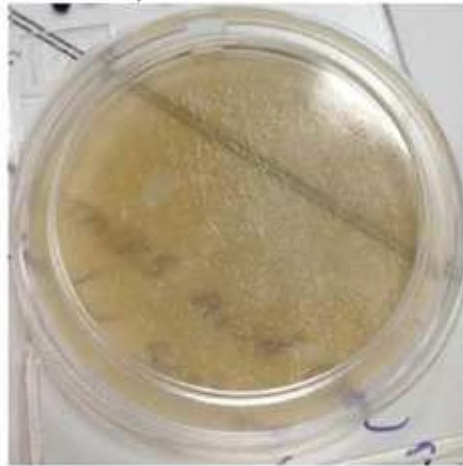
- (c) Add/replace the identification to engine AGB next to the oil filler cap and/or on the aircraft service panel to indicate oil brand/type being used for servicing.

NOTE: For Qualified Supplier details of the approved oil(s) listed below, refer to QPL-MIL-PRF-23699.

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Examples of acceptable amount of carbon debris  
Figure 1

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3. Accomplishment Instructions (Cont'd)

TABLE 2, Approved Standard Lubricating Oils (Synthetic), MIL-PRF-23699G – Type II (5 Centistokes)

BRAND	SUPPLIER
AeroShell Turbine Oil 500	Shell Canada Products Ltd. 400, 4th Avenue South West P.O. Box 100, Station M Calgary, Alberta Canada T2P 2H5 Tel. No. 1-800-661-1600
	Shell International Petroleum Co. Shell Centre London, SE1 7NA England Tel. No. 44-171-934-1234 Fax. No. 44-171-934-8060
Royco Turbine Oil 500	Anderol Specialty Lubricants 215 Merry Lane East Hanover NJ 07936 USA  TEL: 1-973-887-7410 www.anderol.com EMAIL: info-anderol@chemtura.com
Mobil Jet Oil II	Exxon Mobil Corporation 3225 Gallows Road Fairfax Virginia 22037 USA  TEL: 1-800-662-4525 www.exxonmobil.com

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3. Accomplishment Instructions (Cont'd)

TABLE 2, Approved Standard Lubricating Oils (Synthetic), MIL-PRF-23699G – Type II (5 Centistokes) (Cont'd)

BRAND	SUPPLIER
Castrol 5000	Castrol Speciality Products Div. 5331 East Slauson Blvd. Commerce CA 90040, USA Tel. No. 1-800-590-9855 Fax. No. 213-890-4707
	Castrol Canada Inc. 3660 Lakeshore Blvd. West Toronto, Ontario Canada M3W 1P2
	Castrol (U.K.) Ltd. Burmah House Pipers Way Swindon, Berkshire SN3 1RE England
BP Turbo Oil 2380 (Original Name) Eastman Turbo oil 2380 (New Name)	Eastman Chemical Company PO Box 431 Kingsport Tennessee 37660 USA  TEL: +1 (423) 229-2000 www.EastmanAviationSolutions.com EMAIL: TurboOil@eastman.com
Turbonycoil 600	NYCO S.A. 66 Ave. Des Champs Elysee Paris France 75008  TEL: +33 (0) 1 45 61 50 00 www.nyco.fr/ EMAIL: info@nyco.fr

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3. Accomplishment Instructions (Cont'd)

TABLE 3, Approved High Thermal Stability (HTS) Lubricating Oils (Synthetic),  
MIL-PRF-23699G – Type II (5 Centistokes)

BRAND	SUPPLIER
Aero Shell Turbine Oil 560 (ASTO 560)	Shell Canada Products Ltd. 400, 4th Avenue South West P.O. Box 100, Station M Calgary Alberta Canada T2P 2H5  TEL: 1-800-661-1600
	Shell International Petroleum Co. Shell Centre London England SE1 7NA  TEL: 44-171-934-1234 FAX: 44-171-934-8060

4. Appendix

Not applicable.