KNOWLEDGE TO KEEP YOU FLYING
CUSTOMER SERVICE

500 Series Technical Presentation

TEAM LEGACY
Concurrent Sessions

• 525 & M2 Pilot Round Table
  – Maple Room 205 11:00 – 12:00
• 560 XL/XLS/XLS+ Technical Review
  – Cypress AB Room 209 10:00 – 12:00
• Rockwell Collins PL21 and Fusion Updates, Field Issues and Obsolescence's
  – Osage Room 207 11:00 – 12:00
• Flight Department Management – Future Trends, Current Challenges
  – Oak Room 206 11:00 – 12:00
• Jeppesen: JDM Enhancements & Introduction to Operator / Solver
  – Cedar Room 204 11:00 – 12:00
• ADS-B Out – What’s Next For Textron Aviation
  – Birch Room 203 11:00 – 12:00
Please Set Communication Devices to Vibrate Mode

THANK YOU!
2017 Customer Conference IA Renewal Card

So that we may be able to give you the Inspection Authorization credit for attending our seminars, fill out your information, check the sessions that you attended, sign and drop in the IA Card boxes.

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Mailing Address</th>
<th>IA #</th>
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<th>Credit Hours</th>
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<td>Hawker 125 Session</td>
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<td>510 Session</td>
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<td>Hawker 400XP/Beechjet/Diamond Session</td>
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<td>Hawker 4000 Session</td>
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<td>523/525A/523B Series Session</td>
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<td>King Air Session</td>
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<td>CDMS &amp; LinxUs Update</td>
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<td>650 Session</td>
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<td>Protecting Your Aircraft</td>
<td>1 hour</td>
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<tr>
<td>680/680A Session</td>
<td>2 hours</td>
<td>Garmin G1000/3000/5000 Field Issues</td>
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<tr>
<td>750 Session</td>
<td>2 hours</td>
<td>Rockwell Collins PL21 and Fusion Updates</td>
<td>1 hour</td>
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Technical Presentation Worth IA Credit
Dave Quale
Director of Maintenance
Poet, LLC
Chairman
500-Series NBAA
Technical Committee
500 Series  
NBAA Technical Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Company/Position</th>
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<tbody>
<tr>
<td>Dave Quale</td>
<td>Poet</td>
</tr>
<tr>
<td>Mark Werner</td>
<td>CBL &amp; Associates Management</td>
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<tr>
<td>Dick Abernathy</td>
<td>Commerce Bank</td>
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<tr>
<td>John Bell</td>
<td>JB Aviation</td>
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<tr>
<td>Mark Chaney</td>
<td>Coca Cola Bottling Company Consolidated</td>
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<td>Lance Ferguson</td>
<td>Commonwealth Eye Surgery</td>
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<td>Michael Herman</td>
<td>Bear Air</td>
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<td>Rich Pickett</td>
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<td>James Schmidt</td>
<td>Amway Aviation</td>
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<tr>
<td>Andy Shafer</td>
<td>Scottsdale Hangar One</td>
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<td>Mike Strickland</td>
<td>Delhaize America</td>
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<tr>
<td>Patrick Taylor</td>
<td>Southwest Gas Corporation</td>
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<tr>
<td>Pat Welch</td>
<td>West Star Aviation, ALN</td>
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<tr>
<td>Chuck Zahnow</td>
<td>Duncan Aviation, BTL</td>
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</tbody>
</table>
NBAA Technical Committee
Walt Glosson  
Systems

James Eaton  
Avionics/Electrical

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  – RVSM, RNP-10, RNP-4, NAT-HLA Operations Procedures
  – RVSM Maintenance Program
  – Applicable Hawker, Beech, Cessna Tech Pubs
  – For Citation Part 91 operators: Request to Use MMEL as an MEL (along with supporting MMEL and Operations and Maintenance Procedures)

• GMU Service Available
  – GPS Height Monitoring Flight
  – We Can Come to Your Location

Matt Thompson
RVSM Manuals
rvsm@txtav.com
Fleet Statistics
500 Series

500/501
  Fleet Size: 582 Airplanes
  Fleet Total Time: 5,115,073 Hours
  High Time Airplane: 21,800 Hours
  Average Total Time: 8,788 Hours

550/551
  Fleet Size: 974 Airplanes
  Fleet Total Time: 7,262,749 Hours
  High Time Airplane: 19,110 Hours
  Average Total Time: 7,456 Hours
Fleet Statistics
500 Series

S550
Fleet Size: 152 Airplanes
Fleet Total Time: 1,351,854 Hours
High Time Airplane: 18,892 Hours
Average Total Time: 8,893 Hours

560
Fleet Size: 759 Airplanes
Fleet Total Time: 4,990,787 Hours
High Time Airplane: 18,613 Hours
Average Total Time: 6,575 Hours
Autopilot Wire Harness Position
550/560

• Issue: Possible Chafe Condition Between Autopilot Controller Wire Harness and Gear for Aileron Trim Tab Control and Indicator Assembly

  – Provides Instructions to Inspect for Damage and Correct Wire Harness Position
  – Compliance within 100 Flight Hours or 180 Days Whichever Occurs First
  – Affects 550-0956 thru -1136
  – Affects 560-0539 thru -0815
Fire Bottle Cartridge Ground Stud
All Models

• Issue: Possible Loose Ground Stud on Engine Fire Extinguisher Cartridge
  – Could Prevent Bottle from Being Electrically Connected

• Resolution/Status: Mandatory Service Letter CIL-26-01 Released May 2016 to Inspect for Loose Ground Stud
  – Applies to Cartridges Replaced or Manufactured Between April 2013 and July 2014
  – Provides Instructions to Torque Test Ground Stud
  – Compliance within 3 Years or 1200 Flight Hours Whichever Occurs First
• Issue: DO-260B ADS-B Out Mandate
  – FAA Mandate January 2020
  – EASA Mandate June 2020

• Resolution/Status: Optional Service Bulletins Released
  – SB560-34-163 Released January 2016 (Encore+)
    • Affects 560-0752 thru 560-0815 (Collins Equipped)
    • Transponders Must Be Upgraded Which Requires Advanced Scheduling
    • Must be Accomplished by Textron Aviation Owned Facility
  – SB560-34-164 Released June 2016 (Ultra/Encore)
    • Affects 560-0260 thru 560-0707 (Primus 1000 with Primus II Radios)
    • Requires WAAS/SBAS FMS
    • Requires Upgraded RM-855 RMUs and Enhanced Surveillance Transponder Installation
  – Honeywell and Rockwell Collins ADS-B Out ICA Supplements Available on TtxtavSupport.com website and Model 560 Maintenance Library (1View)
Collins XM Weather
560 Encore+

- **Issue:** Terminal Area Forecasts (TAF) Data Package Size Can Cause XM Weather Receiver to Reset Continually

- **Resolution/Status:** Informational Service Letter SL560-34-40 Released June 2016
  - Transmits Rockwell Collins Service Information Letter XMWR-1000 SIL 16-1
  - Changes DIP Switch Setting to Reset Override Mode
  - Affects 560-0751 thru -0815 With XM Weather Receiver
Meggitt Upgrade
550/560

- Issue: Meggitt Secondary Flight Display Upgrade
- Resolution/Status: Service Bulletins Released April 2016
  - SB550-34-112 R2 Affects 550-0809 thru 550-1044
  - SB560-34-136 R3 Affects 560-0401 thru 560-0643
  - Provides Instructions to Install Meggitt iSFD (Integrated Secondary Flight Display)
• Issue: Introduction of 4,800 Hour Life Limit for P/N 8230-3 Heat Exchanger With Release of Model 560 Maintenance Manual Revision 35

• Resolution/Status: Service Letter SL560-05-12 Released March 10, 2017
  – Provides One-Time Extension For Heat Exchangers That Are Beyond The Life Limit
  – Heat Exchangers That Have or Will Exceed Life Limit Prior to March 31, 2018 Must Be Replaced By April 1, 2018
  – High Parts Demand Expected and Advance Scheduling May Be Required
  – Affects Encore 560-0539 thru -0707
  – Affects Encore+ 560-0751 thru -0815
Medeco Locksets and Keys
All Models

• Issue: Customer Inquiries Regarding How To Obtain Replacement Medeco Locksets and Spare Keys

• Resolution/Status: Replacement Medeco Locksets and Spare Keys Available From Textron Aviation Parts Department (TAPD).
  – Keys Can Be Ordered Using P/N FASTKEY
  – Customer Must Supply Proof of Aircraft Ownership and Key Code or Send Spare Key To TAPD For Duplication
  – Replacement Lockset Part Number Based on Number of Doors Requiring Locks
    • P/N 5500004-805-1 (1 Cabin Door Lock + 5 Accessory Door Locks)
    • P/N 5500004-806 (1 Cabin Door Lock + 3 Accessory Door Locks)
    • P/N 5500004-809 (1 Cabin Door Lock + 4 Accessory Door Locks)
  – Contact TAPD (800-835-4000 or 316-517-5603) for Pricing and Availability
Pneumatic Pressurization Control System
500/550/S550/560

- Issue: Troubleshooting Pneumatic Pressurization Control System
  - Leaks in Pneumatic Plumbing Are A Frequent Cause Of Operational Issues

- Resolution/Status: Recommend Initial Troubleshooting Start By Completing The Following Leak Checks Per The Maintenance Manual Procedures In Chapter 21 Pressurization Control – Adjustment/Test
  - Vacuum and Pneumatic Relay to Outflow Valve Pneumatic Connection Leak Test
  - Controller to Pneumatic Relay Connection Leakage Test
Pneumatic Bottle Life Limit

• Issue: Customer Confusion Regarding Pneumatic Bottle Assembly Life Limit
  – Incorrectly Referencing Manufacture Date on Bottle Assembly

• Resolution/Status: Refer to Cylinder Date of Manufacture Not Assembly Date of Manufacture
  – Cylinder is Only Life Limited Part of Bottle Assembly
  – Cylinder Date of Manufacture Stamped on Neck Area
  – Assembly Date of Manufacture Does Not Change When Cylinder is Replaced
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**EXPORT CLASSIFICATION**

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<td>2. ECCN(s):</td>
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<td>3. P-ECCN(s):</td>
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<td>4. USML:</td>
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<td>5. P-USML:</td>
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PW500 AGENDA

GLOBAL SUPPORT
OIL ANALYSIS
FLEET STATISTIC
ELECTRONIC ENGINE CONTROL
JFC160 FUEL CONTROL
PUBLICATIONS
CUSTOMER FIRST CENTRES

VISION  Proactive approach to our customers needs with tailored technical support.

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My Customer Dashboard

Online buying

Mobility

Integrated Cart

Portal-wide search

Export Classification: No Technical Data
GLOBAL SUPPORT NETWORK

Worldwide Services
7 Parts Distribution Centers
13 Service Centers
17 Independent Facilities
100 Field service representatives
100 Mobile Repair Teams

10,000+ Customers... 200 Countries... 50,000 Engines... 614 Million hours

Export Classification: No Technical Data
P&W Proprietary Information
P&WC OIL ANALYSIS TECHNOLOGY AT A GLANCE

SENSITIVITY: KNOW EARLIER
Time to plan for an event

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<th>Engine operating hours</th>
<th>HUNDREDS OF HOURS</th>
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<td>P&amp;WC’s Oil Analysis Technology</td>
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<tr>
<td>Traditional Oil Analysis</td>
<td>–</td>
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<tr>
<td>Vibe Monitoring</td>
<td>–</td>
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<tr>
<td>Chip Defector</td>
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SPECIFICITY: WHERE IS IT HAPPENING?

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<th>Traditional Oil Analysis</th>
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<tr>
<td>Chemical elements concentration</td>
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<td>◆</td>
</tr>
<tr>
<td>Alloy concentration</td>
<td>–</td>
<td>◆</td>
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<tr>
<td>Particles characteristics</td>
<td>–</td>
<td>◆</td>
</tr>
<tr>
<td>Interaction behavior</td>
<td>–</td>
<td>◆</td>
</tr>
<tr>
<td>Isolate &amp; identify specific parts</td>
<td>–</td>
<td>◆</td>
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REVOLUTIONARY OIL ANALYSIS

Monitors the health of oil-wetted engine components including bearings, carbon seals and gears

Improved precision/sensitivity: Know where it is happening earlier

Demonstrated and proven on specific engines

POTENTIAL BENEFITS FOR OPERATORS

Lower maintenance costs
Predictable maintenance budget planning
Reduce delays and cancellations
Increase aircraft resale value

FROM REACTING TO ANTICIPATING TOWARD A 100% PLANNED MAINTENANCE ENVIRONMENT

Export Classification: No Technical Data

P&WC Proprietary Information
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pwc.ca
## PW500 FLEET STATISTICS

**March 2017**

<table>
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<tr>
<th></th>
<th>Cessna Citation Bravo</th>
<th>Cessna Citation Encore</th>
<th>Cessna Citation Encore+</th>
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<td><strong>Model</strong></td>
<td>PW530A</td>
<td>PW535A</td>
<td>PW535B</td>
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<tr>
<td><strong>Total Produced</strong></td>
<td>700</td>
<td>383</td>
<td>136</td>
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<tr>
<td><strong>Flying population</strong></td>
<td>638</td>
<td>330</td>
<td>130</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td>3,049,500</td>
<td>1,716,400</td>
<td>392,600</td>
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<td><strong>High Time / ESN</strong></td>
<td>14,388</td>
<td>11,042</td>
<td>6,374</td>
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<td><strong>Total Fleet Hour:</strong></td>
<td><strong>5,158,500</strong></td>
<td><strong>Total Produced:</strong></td>
<td><strong>1219</strong></td>
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</table>
ELECTRONIC ENGINE CONTROL

535B EEC

Issue
Transient voltage suppressor (TVS) faults
Early production Low Voltage Power Supply (LVPS) faults

Cause
TVS – manufacturing process
LVPS – solder joint flaw, batch related

Solution
Retrofit campaign to correct TVS and capture LVPS batch
Service Bulletin 30478 revised to category 3 15 Jul’15
Commercial Support Program issued
PW545C CSPN 1006723 15 Jul’15
CSPN closure Dec 2017

Status
Mar 2017
PW 535B, P/N 1007851
61% complete
**JFC160 FUEL CONTROL**

**Issue**
4 Events of unscheduled FCU removal due to liberated N2 Flyweight Governor bearing post SB30442 (Zero Backlash)

**Cause**
Field returned hardware inspection demonstrated varying levels of wear.

**Solution**
Bush type bearing to replace governor ball bearings

**Interim Solution**
Field refresh activity for units over 1000 hrs TSR

Service Bulletin 30512 published Dec’14
Commercial Support Program available CSPN #1007421

Export Classification: P-ECCN: 9E991
### PUBLICATIONS

**Maintenance Manual/IPC**

Planned next PW500 revisions: June 2017

**Service Information Letters / Civil Aviation Safety Alert (Transport Canada)**

SIL GEN-122R4  
Recovery Fee for Maintenance Deviation Letters

### Available Commercial Support Programs

<table>
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<th>Service Description</th>
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<tr>
<td>Fuel Tube (SB30490)</td>
<td>1004362</td>
<td>Nov 2017</td>
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<td>Rigid Fuel Manifold (SB30405)</td>
<td>1005989, 1006443</td>
<td>Nov 2022</td>
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<td>Electronic Engine Control (SB30478)</td>
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<td>Dec 2017</td>
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<td>HFC Inspection (SB30512)</td>
<td>1007421</td>
<td>Jun 2017</td>
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<td>Ignition Cable replacement (SB30529)</td>
<td>1008249</td>
<td>July 2017</td>
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JT15D AGENDA

FLEET STATISTICS

JT15D FILLER BALL VALVE ASSY

PROGRAM HIGHLIGHTS
## JT15D - FLEET STATISTICS

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<th>JT15D-1</th>
<th>JT15D-4</th>
<th>JT15D-5</th>
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<td>Total Produced</td>
<td>1,464</td>
<td>2,254</td>
<td>3,027</td>
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<td>Flying Population</td>
<td>968</td>
<td>1,594</td>
<td>2,288</td>
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<tr>
<td>Total Hours</td>
<td>12,002,900</td>
<td>18,396,400</td>
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<td>High Time TSN</td>
<td>24,013 hrs</td>
<td>19,205 hrs</td>
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<tr>
<td>1st Delivery</td>
<td>Mar ’71</td>
<td>Sep ’73</td>
<td>Jun ’84</td>
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Total Fleet Hours: 49,336,300

Data as of: Mar-2017
Issue
In an event of improper or omitted installation of the oil filler neck cap, oil loss may occur.

Cause
There is absence of a non-return feature in the oil filler neck on certain engine configuration

Solution
Service Bulletin JT15D-72-7639 released 16 Dec’16
Compliance code vary on oil return configuration
    Cat 4 for models pre SB7415
    Cat 7 for models post SB7415

P&WC SIL JT15D-059 special pricing for a limited time
Recent Updates
SIL No. JT15D-057R1 Authorised Manufacturer for new JT15D engine components
SB No 7642 Transfer of Manufacturing Rights for Various Parts

P&WC Warranty Policies have been revised & published Sept’16
HPT and HPC shaft PPSP increased to 2 x TBO
Bearing campaign (A00002) replaced by PPSP 2XTBO
JT15D-5 series HPT blades PPSP increased to 2 x TBO
JT15D-1 series HPT blades Post SB 7604 PPSP increased to 2 x TBO
JT15D-4 series HPT blades post SB 7293 PPSP increased to 2 x TBO

Recommendations
In case of HT Blade Fracture – 3 ½ Brg replacement recommended
Facilities encouraged to replace all mainline bearings at Overhaul

Export Classification: No Technical Data
Technical Panel

TEAM LEGACY MANAGER – MIKE GIBBONS
TEAM LEGACY – WALT GLOSSON / JAMES EATON
FLIGHT TEST – DAN MORRIS
SUSTAINING ENGINEERING – GARY LONG
PRATT & WHITNEY CANADA – LE DO VU
Questions
KNOWLEDGE TO KEEP YOU FLYING