



The Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida, U.S.A. 32960

SERVICE No. 1035 BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

DATE: September 3, 1999 (S/M)

SUBJECT:

Distribution of Textron Lycoming Service Bulletin 529A, "Reprint of Crane/Lear Romec Service Bulletin No. 101SB020, Rev.2"

MODELS AFFECTED:

PA-E23-250 Aztec (w/turbocharger)
PA-23-250 Aztec (w/turbocharger)
PA-24-260 Comanche (w/turbocharger)
PA-24-400 Comanche
PA-31, 31-300, 31-325 Navajo
PA-31-350 Navajo Chieftain
PA-31-350 T1020
PA-31P Pressurized Navajo
PA-31P-350 Mojave
PA-32RT-300T Turbo Lance II
PA-32-301T Saratoga
PA-32R-301T Turbo Saratoga SP
PA-32R-301T Saratoga II TC
PA-36-375 Brave
PA-46-350P Malibu Mirage

SERIAL NUMBERS AFFECTED:

27-2505 through 27-4866, 27-7304917 through 27-7405476, and 27-7554001 through 27-8154030
27-2505 through 27-4425,
27-4427 through 27-4573
24-4783, 24-4804 through 24-5034
26-2 through 26-148
31-2 through 31-8312019
31-5001 through 31-8452021
31-8253001 through 31-8553002
31P-1 through 31P-7730012
31P-8414001 through 31P-8414050
32R-7787001 through 32R-7987126
32-8024001 through 32-8424002
32R-8029001 through 32R-8629006,
3229001 through 3229003
3257001 through 3257102
36-7802001 through 36-8302025
4622001 through 4622200,
4636001 through 4636221

COMPLIANCE TIME:

Prior to next flight accomplish **Instruction 1** below. Thereafter, compliance must coincide with the compliance time listed in the attached Textron Lycoming and Crane/Lear Romec Service Bulletins.

APPROVAL:

The technical contents of this Service Bulletin have been approved by the Federal Aviation Administration (F.A.A.).

(OVER)
ATA: 7311

PURPOSE:

A recent incident has occurred where a severe fuel leak was discovered on an engine driven fuel pump. While the F.A.A. issued AD-98-18-12 reflecting Textron Lycoming Service Bulletin, SB529 and Crane/Lear Romec Service Bulletin 101SB020 which addresses this condition, it has been discovered that the time intervals between the required inspections are not short enough to accomplish the corrective action outlined in the Service Bulletins. To remedy this condition, Textron Lycoming Service Bulletin, SB529A and Crane/Lear Romec Service Bulletin 101SB020 Rev. 2 have been issued which reduces the compliance time. Left uncorrected, fuel under pressure may leak into the engine compartment resulting in a significant loss of fuel and/or creating a possible fire hazard.

This Service Bulletin provides distribution of Textron Lycoming Service Bulletin 529A and Crane/Lear Romec Service Bulletin 101SB020 Rev. 2.

INSTRUCTIONS:

1. Prior to next flight, determine if AD-98-18-12 or Textron Lycoming Service Bulletin, SB529 and Crane/Lear Romec Service Bulletin 101SB020 have been previously complied with. If Service Bulletin compliance has been achieved on the aircraft or on a replacement pump where at least 110 hours time in service has been obtained and no leaks are detected, proceed to instruction 4. **Caution: The accumulation of 110 hours time in service may not mean that full compliance with Textron Lycoming Service Bulletin, SB529 and Crane/Lear Romec Service Bulletin 101SB020 has occurred. To achieve full compliance, two consecutive inspections where the pump relief valve cover screws did not require re-torquing must have been accomplished.** If Service Bulletin compliance has not been achieved or if it can not be determined on the aircraft or on a replacement pump, continue with these instructions.
2. Comply with Textron Lycoming Service Bulletin 529A and Crane/Lear Romec Service Bulletin 101SB020 Rev. 2 immediately. *Note: If the aircraft is new or has had a replacement pump installed, and 10 or more hours time in service has been achieved, inspect the fuel pump per the applicable Crane/Lear Romec instructions prior to the next flight.*
3. Compliance times for initial and subsequent inspections must be followed precisely to assure corrective action. (See Crane/Lear Romec Service Bulletin 101SB020 Rev. 2 for applicable times.)
4. Upon compliance with the Textron Lycoming and Crane/Lear Romec Service Bulletins and completion of these instructions, make an appropriate logbook entry of compliance with this Service Bulletin.

MATERIAL REQUIRED:

As required per the attached Textron Lycoming Service Bulletin 529A, "Reprint of Crane/Lear Romec Service Bulletin No. 101SB020, Rev.2".

AVAILABILITY OF PARTS:

Textron Lycoming. (Check with your Piper Authorized Field Service Facility for details.)

EFFECTIVITY DATE:

This Service Bulletin is effective upon receipt.

SUMMARY:

Refer to the attached Textron Lycoming Service Bulletin 529A for details on applicable factory participation.

Please contact your Factory Piper Field Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated.

NOTE:

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the factory of address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections/Changes should be directed to:

The New Piper Aircraft, Inc.
ATTN: Customer Services
2926 Piper Drive
Vero Beach, FL 32960

TEXTRON Lycoming652 Oliver Street
Williamsport, PA 17701 U.S.A.
570/323-6181**MANDATORY**
SERVICE BULLETIN

DATE: August 2, 1999

Service Bulletin No. 529A
(Supersedes Service Bulletin No. 529)
Engineering Aspects are
FAA Approved

SUBJECT: Reprint of Crane/Lear Romec Service Bulletin No. 101SB020, Rev. 2

MODELS AFFECTED: All Textron Lycoming aircraft engines employing new or overhauled "AN" rotary fuel pump model series RB9080, RG9570 and RG17980, including:
IO-320, LIO-320;
IO-360, HIO-360, TIO-360, LTIO-360;
GO-435;
GO-480, IGO-480;
IO-540, AEIO-540, HIO-540, TIO-540, LTIO-540, IGO-540, TIVO-540;
TIGO-541;
IO-580, TIO-580;
and IO-720 engine models.
(See Effectivity for Service Bulletin No. 101SB020, Rev. 2.)

TIME OF COMPLIANCE: Same as that required for Service Bulletin No. 101SB020, Rev. 2.

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| <p>THE FAA HAS DETERMINED THAT APPLICABLE PORTIONS OF SERVICE BULLETIN NO. 529A MAY BE USED AS AN ACCEPTABLE ALTERNATE MEANS OF COMPLIANCE WITH AD 98-18-12 WHERE SERVICE BULLETIN NO. 529 IS REFERENCED.</p> |
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Crane/Lear Romec Service Bulletin No. 101SB020, Rev. 2 is reprinted in its entirety as follows. Textron Lycoming requires compliance with this Service Bulletin.

This reprint was current at the time Service Bulletin No. 529A was issued. However, when complying with this Service Bulletin, insure that this reprint of Crane/Lear Romec Service Bulletin No. 101SB020, Rev. 2 is still current at time of compliance.

NOTE

If the aircraft installation necessitates fuel pump removal for compliance, reference latest revision of Service Instruction No. 1420 for lubrication of fuel pump drive shaft prior to reassembly.

Pumps with a "/M" suffix after the Lear Romec Part Number are not subject to Textron Lycoming Service Bulletin No. 529A or Lear Romec Service Bulletin No. 101SB020, Rev. 2

CRANE

LEAR ROMEC

SERVICE BULLETIN

THIS SERVICE BULLETIN REPLACES SERVICE BULLETIN NO. 101SB018 FOR AFFECTED MODELS.**FUEL PUMP – Torquing of Relief Valve Cover Screws.****1. Planning Information.****A. Effectivity.**

NOTE: Pumps with the Lear Romec "/M" suffix added to the Lear Romec part number are not subject to this Service Bulletin.

This bulletin applies to the following Lear Romec rotary fuel pump models:

| <u>Lear Romec P/N</u> | <u>TC Holder P/N</u> | <u>Eligibility</u> |
|---|---|--|
| RG9080F2 RG9080J4A | Lycoming 68262 Lycoming LW-13909 | GO-435/GO-480 Series IO-540/IO-720/LTIO-540/ TIGO-541/TIO-540/ TIO-360 Series |
| RG9080J6A RG9080J7A RG9080J8A RG9570K1 RG9570K2 RG9570K3 RG9570K4 RG9570J RG9570J1 RG9570P/P1 RG17980 RG17980A RG17980D | Lycoming LW-14444 Lycoming LW-13920 Lycoming LW-15740 Lycoming 62E22288 Beech 50-389141-3 Beech 50-389141-5 Beech 50-389141-13 Beech 50-389141-7 Beech 50-389141-9 Lycoming LW-19012 Lycoming 74547 Lycoming 76188 Lycoming 76486 | IO-720/LTIO-540/TIO-540 Series IO-540/TIO-540/IGO-540 Series TIO-720/TIO-540/TIVO-540 Series AEIO-540 Series Various 56TC, 60 & 80 Series TIO-540-S1AD IO-540/IO-720/IO320 Series IO-320 Series IO-320/IO-540/TIO-540/ HIO-540 Series |
| RG17980E RG17980J RG17980K | Lycoming 77443 Lycoming 78993 Lycoming LW-11166 | IO-360/TIO-360 Series IO-360/IO-540/TIO-540 Series LIO-320/TIO-360/HIO-360/ IO-540/AEIO-540 Series |
| RG17980N RG17980P RG17980R RG17980U | Lycoming LW-12533 Lycoming LW-12534 Lycoming LW-15506 Lycoming 62D21153 | IGO-480-A1B6/IO-540 Series AEIO-540/IO-540/TIO-540 Series HIO-360 Series TIO-540 Series |

B. Reason.

There have been field reports of fuel leakage past the relief valve gasket on several of the above listed fuel pumps. This condition could result in a fire hazard, fuel flow fluctuation, or engine stoppage.

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Rev 2: July 21/99

CRANE

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SERVICE BULLETIN

FUEL PUMP – Torquing of Relief Valve Cover Screws.

C. Description.

This bulletin describes actions to be taken to ensure that valve cover screws are tightened to the correct torque value.

NOTE: Scheduled and periodic reinspections for torque and gasket extrusion are defined on page 5 of this document, paragraph 2.B.

D. Compliance.

- (1) Initial inspection after 5 hours but less than 10 hours of operation, or 30 days whichever comes first.
- (2) After initial inspection, perform scheduled inspections as follows:
 - (a) After 20 hours but less than 25 hours of operation, or 3 months whichever comes first.
 - (b) After 45 hours but less than 50 hours of operation, or 6 months whichever comes first.
- (3) Periodic inspection after every 50 accumulated hours of operation thereafter.

E. Approval.

Not applicable.

F. Manpower.

Manpower required to accomplish this bulletin varies depending on the pump model, the aircraft pump installation, and the status of the pump (on-aircraft/off-aircraft) at time of implementation. Actual torquing and safety-wiring will require no more than 0.5 man hours.

G. Material – Cost and Availability.

Not applicable.

H. Tooling – Price and Availability.

Not applicable.

I. Weight and Balance.

Not applicable.

J. References.

- (1) This service bulletin replaces Service Bulletin 101SB018 for affected models.
- (2) The following component maintenance manuals are applicable:
 - (a) RG9080 Series dated Feb 07/85 with Rev 3 dated Jan 06 19/95
 - (b) RG9570J/K/P Series dated Mar 15/86 with Rev 1 dated Nov 22/91
 - (c) RG17980 Series dated Sep 17/86 with Rev 3 dated Sep 18/91

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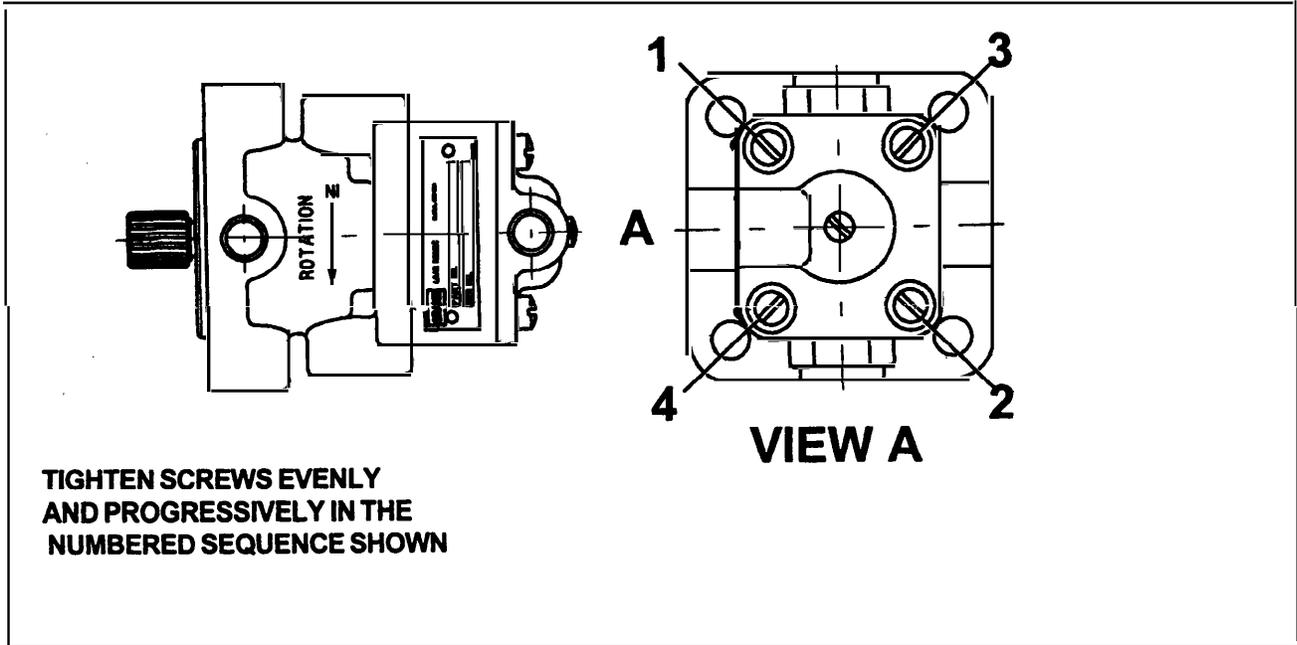
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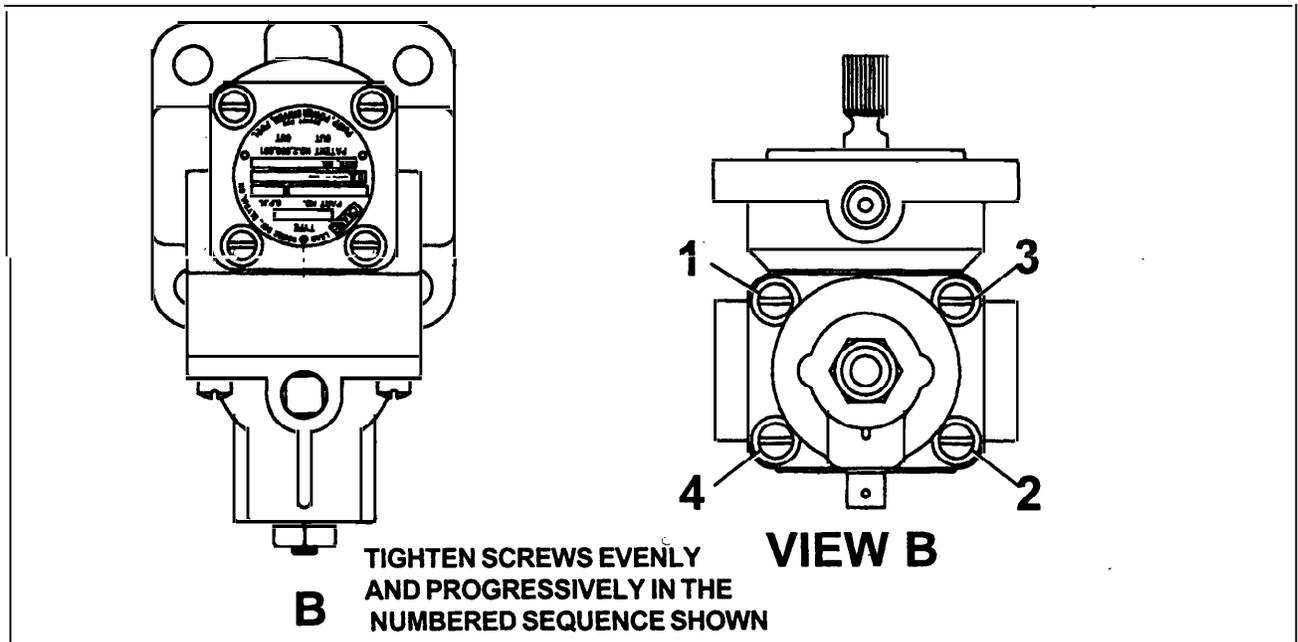
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SERVICE BULLETIN

FUEL PUMP – Torquing of Relief Valve Cover Screws.



Torquing Sequence – RG17980 Series
Figure 1



Torquing Sequence – RG9080 and RG9570 Series
Figure 2

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SERVICE BULLETIN

FUEL PUMP – Torquing of Relief Valve Cover Screws.

2. Accomplishment Instructions.

A. Initial Inspection.

(1) On Aircraft.

NOTE: If pump is not accessible on-aircraft such that the following inspection requirements can be fully complied with or is a pump model number RG9080J4A installed on Piper Malibu aircraft, it is mandatory to remove pump per applicable engine maintenance manual instructions and proceed according to paragraph 2.A.(2) Off Aircraft.

NOTE: Safety-wire need not be removed to perform the following check.

- (a) If pump is accessible without removing it from aircraft, the following check shall be performed.
- (b) Visually inspect the split line between the pump housing and relief valve housing for any evidence of noticeable gasket extrusion adjacent to the pump inlet & outlet ports. If there is evidence of noticeable extrusion, replace the pump per applicable engine maintenance instructions.
- (c) Check the tightness of relief valve cap attaching screws using a torque indicating screwdriver. Minimum torque shall be 23 inch-pounds. Torque shall be checked in the tightening direction.
- (d) If screws are loose, remove safety-wire and tighten screws evenly and progressively in a criss cross pattern to 23-25 inch-pounds torque in the sequence shown in figures 1 and 2.

NOTE: If screw torque registers greater than 23-25 inch-pounds when inspected per para. 2.A.(1)(c) above, the screws need not be backed off and retorqued. This bulletin applies only if screws exhibit preload torque of less than 23 inch-pounds.

- (e) Safety-wire screws after torquing in accordance with applicable component maintenance manual.

(2) Off Aircraft:

NOTE: Safety-wire need not be removed to perform the following check.

- (a) Visually inspect the split line between the pump housing and relief valve housing for any evidence of noticeable gasket extrusion adjacent to the pump inlet & outlet ports. If there is evidence of noticeable extrusion, replace the pump per applicable engine maintenance instructions.
- (b) Check the tightness of relief valve cap attaching screws using a torque indicating screwdriver. Minimum torque shall be 23 inch-pounds. Torque shall be checked in the tightening direction.
- (c) If screws are loose, tighten screws evenly and progressively in a criss cross pattern to 23-25 inch-pounds torque in the sequence shown in figure 1 and 2.

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SERVICE BULLETIN

FUEL PUMP – Torquing of Relief Valve Cover Screws.

NOTE: If screw torque registers greater than 23-25 inch-pounds when inspected per para. 2.A.(2)(b) above, the screws need not be backed off and retorqued. This bulletin applies only if screws exhibit preload torque of less than 23 inch-pounds.

(d) Safety-wire screws after torquing in accordance with applicable component maintenance manual.

(e) If applicable, reinstall per applicable engine maintenance manual instructions.

B. Scheduled and Periodic Reinspection.

Scheduled and periodic inspections are to be performed in accordance with paragraphs 2.A.(1) and (2).

(1) Periodically inspect in accordance with 1.D.(2) and 1.D.(3).

(a) Upon achieving 2 consecutive inspections where no retorquing is required, visually inspect the split line between the pump housing and relief valve housing for any evidence of leakage or of noticeable gasket extrusion adjacent to the pump inlet & outlet ports in accordance with 1.D.(3).

3. Material Information.

Not applicable.

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