



VENDOR SERVICE PUBLICATION

TO: All affected Owners/Operators, Piper International Distributors, Domestic Sales Dealers, Factory Direct Dealers, Parts Distributors, and Piper Field Service Facilities

SUBJECT: Textron Lycoming Service Bulletin Number 486

MODELS AFFECTED:

SERIAL NUMBERS AFFECTED:

PA-18-150 Super Cub	1809001 through 1809022, 1809024 through 1809026
PA-28-161 Cadet	2841001 through 2841139
PA-28-161 Warrior II	2816041, 2816042, 2816044 through 2816092
PA-28-181 Archer II	2890061 through 2890120
PA-28-236 Dakota	2811017 through 2811028
PA-28R-201 Arrow III	2837001 through 2837020 and 2837022
PA-32-301 Saratoga	3206043 through 3206053
PA-32R-301 Saratoga SP	3213012 through 3213024
PA-46-350P Malibu Mirage	4622001 through 4622044

PURPOSE: To distribute the attached Textron Lycoming Service Bulletin No. 486 to all affected Owners/Operators, Piper Distributors, Factory Direct Dealers, and Piper Field Service Facilities.

The attached Textron Lycoming Service Bulletin pertains to the inspection of the Single Belt Driven Ring Gear Support Assembly as installed on the affected aircraft above. Refer to the publication for specific details. Note: The aircraft as affected above reflects only factory original engine installation.

All claims should be submitted to Textron Lycoming as outlined in their Service Bulletin No. 486.

We Are Flying

TEXTRON Lycoming

Williamsport Plant
Textron Lycoming/Subsidiary of Textron Inc.
652 Oliver Street
Williamsport, PA 17701 U.S.A.

SERVICE BULLETIN

DATE:

August 4, 1989

Service Bulletin No. 486
Engineering Aspects are
FAA Approved

SUBJECT:

Inspection of **Single Belt Driven Ring Gear Support Assemblies**

NOTE

This Service Bulletin is **not applicable** to ring gears with multiple belt grooves.

MODELS AFFECTED:

All new, remanufactured and overhauled engines shipped from Textron Lycoming after June 12, 1989 are in compliance with this Service Bulletin.

Affected Starter Ring Gear Support Assembly Part Numbers are as follows:
72245, 74321 76628, 76944, 77579, 78426, 78652, LW-10552, LW-11519,
LW-12605, LW-13276, LW-13423, LW-13675, LW-16039, LW-16470, LW-16471,
LW-16577, LW-18694 and LW-18736.

Any of the following engine models that were remanufactured or overhauled and shipped from Textron Lycoming between January 1, 1988 to June 12, 1989 inclusive.

Affected Engine Models:

O-235 -C1, -C2A, -C2C, -H2C, -J2A, -K2B, -K2C, -L2A, -L2C, -N2A, -N2C, -P2A; **O-320** -A2B, -A2C, -A2D, -B2A, -B2B, -B2C, -D1A, -D1C, -D1D, -D1F, -D2A, -D2G, -D2J, -D3G, -E1A, -E2A, -E2D, -E2G, -E2H, -E3D, -H2AD; **IO-320** -B1A, -C1A, -D1B, -E2A; **AEIO-320** -D1B, -D2B, -E1B, -E2B; **LIO-320** -B1A, -C1A; **O-360** -A1A, -A1D, -A1AD, -A1F6, -A1F6D, -A1G, -A1G6D, -A1H6, -A2A, -A2F, -A3A, -A4A, -A4G, -A4J, -A4K, -A4M -A4N, -A5AD, -C1E, -C1F, -C1G, -C2C, -C2E, -E1A6D, -F1A6; **IO-360** -A1A, -A1B, -A1B6, -A1B6D, -A1D, -A1D6, -A3B6D, -B1B, -B1D, -B1F, -C1C6, -C1E6, -J1A6D; **HIO-360** -A1A, -C1A, -D1A, -E1AD, -F1AD; **AEIO-360** -A1A, -A1B, -A1B6, -A1D, -A1E, -B1B, -B1F, -B1G6, -B2F, -B4A, -H1A; **TIO-360** -C1A6D; **TO-360** -E1A6D; **LO-360** -A1G6D, -E1A6D; **LIO-360** -C1E6; **LTO-360** -E1A6D; **O-540** -A1C5, -A1D5, -A4B5, -B2B5, -B2C5, -B4B5, -F1B5, -G1A5, -G2A5, -H2A5, -J1A5D, -J3A5, -J3A5D, -J3C5D, -L3C5D; **IO-540** -B1C5, -C4B5, -C4D5D, -E1A5, -E1B5, -G1D5, -K1A5, -K1A5D, -K1B5, -K1G5, -K1G5D, K1H5, -K1J5D, K1K5, -L1B5D, -L1C5, -W1A5D, -V4A5D; **AEIO-540** -D4A5, -D4B5, -L1B5, -L1B5D; **TIO-540** -A2C, -C1A, -F2BD, -J2B, -J2BD, -S1AD, -AA1AD, -AB1AD, -V2AD, -W2A; **LTIO-540** -J2BD; **IO-720** -A1B, -D1C, -D1CD, -D1BD.

MODELS AFFECTED:
(Continued)

O-540 -B2B5 with serial number L-24309-40A; -B2C5 with serial number L-24314-40A; -B4B5 with serial numbers L-24220-40A thru L-24317-40A; -F1B5 with serial numbers L-24203-40A thru L-24267-40A; -G1A5 with serial numbers L-24206-40A thru L-24320-40A; -J1A5D with serial numbers L-24198-40A thru L-24319-40A; -J3A5 with serial number L-24196-40A; -J3A5D with serial number L-24197-40A thru L-24310-40A; -J3C5D with serial numbers L-24207-40A thru L-24293-40A; -L3C5D with serial number L-24308-40A.

IO-540-C4B5 with serial numbers L-23795-48A thru L-24116-48A; -C4D5D with serial numbers L-23784-48A thru L-24133-48A; -K1B5 with serial numbers L-23940-48A thru L-24132-48A; -K1G5 with serial numbers L-23731-48A thru L-24119-48A; -K1G5D with serial numbers L-23771-48A thru L-24122-48A and L-24120-48A; -K1H5 with serial number L-23930-48A; -K1J5D with serial numbers L-23738-48A thru L-24076-48A; -K1K5 with serial numbers L-23720-48A thru L-24134-48A; -W1A5D with serial numbers L-23733-48A thru L-24096-48A.

AEIO-540 -D4A5 with serial numbers L-23735-48A thru L-24137-48A; -L1B5D with serial numbers L-23736-48A thru L-24080-48A and L-24136-48A.

TIO-540 -A2C with serial number L-8922-61A; -C1A with serial numbers L-8940-61A thru L-8962-61A; -F2BD with serial numbers L-8924-61A and L-8939-61A; -J2BD with serial numbers L-8912-61A thru L-9053-61A; -S1AD with serial number L-9026-61A; -AA1AD with serial numbers L-8910-61A thru L-9031-61A; -AB1AD with serial numbers L-8950-61A thru L-9017-61A.

IO-720 -A1B with serial numbers L-1596-54A thru L-1612-54A; -D1C with serial numbers L-1599-54A and L-1601-54A.

TIME OF COMPLIANCE: At next 100 hour inspection period or earlier at owner's discretion.

It has been discovered that a small quantity of Starter Ring Gear Support Assemblies installed on engines and shipped as spares between January 1, 1988 and June 12, 1989 may exhibit one or more cracks on the front and/or rear machined surfaces. The crack or cracks may appear at any point on the surfaces mating with the crankshaft/propeller flange. See Figure 1, Page 5.

Before inspection, removal of the propeller and starter ring gear support assembly must be accomplished in accordance with the Aircraft Manufacturer's Service Manual. The support assembly must be removed from the engine for inspection.

After removal of the starter ring gear support, inspect the support assembly in the areas shown in Figure 1, Page 5, using a dye penetrant to insure no cracks are evident. Follow the penetrant manufacturer's instructions to perform the inspection.

If a crack is evident, the starter ring gear support assembly must be returned to Textron Lycoming through an authorized Textron Lycoming distributor for warranty consideration.

If no cracks are found, the starter ring gear support assembly must be identified with a yellow circular paint mark approximately 3/4 inch in diameter located 180 degrees from top dead center mark on the rear side of the support assembly. See Figure 1, Page 5.

Labor costs can be recovered by submitting a warranty application through any authorized Textron Lycoming Distributor.

Labor allowances: 2 Hours for Fixed Wing Aircraft.
6 Hours for Helicopters.

Labor allowances will be effective until one (1) year from date of this Bulletin.

After completion of this work, make a logbook entry stating that the engine has been inspected and complies with this Service Bulletin.

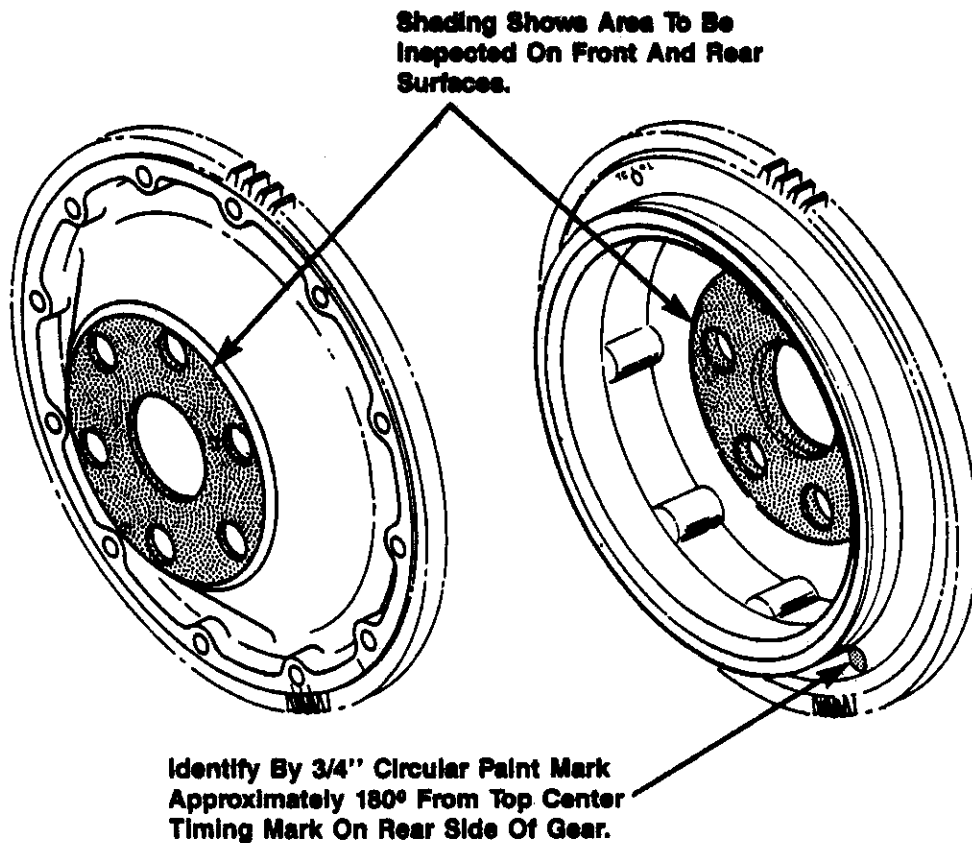


Figure 1. Starter Ring Gear Inspection Areas