



# SERVICE LETTER

No. 718

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

"FAA DOA SO-1 Approved"

May 31, 1974 S/M

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Subject: Bendix Magneto Bulletin No. 566 -- reference attached Avco Lycoming Service Bulletin No. 373, dated March 22, 1974.

Models and Serial Numbers Affected: All Piper aircraft with Bendix S-1200 series magneto equipped Lycoming engines installed (reference NEW MAGNETO IDENTIFICATION CHART, Pages 1 and 2, of the attached Avco Lycoming Service Bulletin No. 373).

Compliance Time: Refer to attached Avco Lycoming Service Bulletin No. 373, Time of Compliance.

Purpose: To provide distribution of the attached Avco Lycoming Service Bulletin No. 373, dated March 22, 1974, on which is reproduced Bendix Electrical Components Division's Service Bulletin No. 566, which provides information designed to improve the lubrication characteristics of the Bendix S-1200 series magnetos.

Instructions: Refer to attached Avco Lycoming Service Bulletin No. 373 and Bendix Electrical Components Division's Service Bulletin No. 566, reproduced therein.

Material Required: Reference attached Avco Lycoming Service Bulletin No. 373, Page 6.

Balance of Piper Service Letter format is not applicable; refer to attached Avco Lycoming Service Bulletin No. 373, dated March 22, 1974 (containing reproduction of Bendix Electrical Components Division's Service Bulletin No. 566) for additional details.

# AVCO LYCOMING DIVISION

WILLIAMSPORT, PENNSYLVANIA 17701

## Service Bulletin



DATE: March 22, 1974

Service Bulletin No. 373  
Engineering Aspects are  
FAA (DEER) Approved

SUBJECT: Bendix Magneto Bulletin No. 566

MODELS AFFECTED: All Avco Lycoming engines equipped with S-1200 series magnetos.

TIME OF COMPLIANCE: As required by subject bulletin.

The Bendix Electrical Components Division's Service Bulletin No. 566, reprinted herewith pertains to rework or replacement of the distributor block to accommodate two washers that are installed to improve the lubrication characteristics of the magneto. All Avco Lycoming engines shipped after February 1, 1974 with Bendix S-1200 series magnetos will have the modification herein described installed; engines in service that have the modification incorporated can be identified by either the serial number or the revision code on the magneto nameplate. All owners and operators of applicable engines are urged to comply with the requirements of this bulletin at their earliest opportunity.

### NOTE

New Bendix -1200 series magnetos that were built with this change incorporated are identified, on the magneto nameplate, by the revision code letter shown in the following chart. However, remanufactured -1200 series magnetos (blue label) with this change incorporated are identified by serial numbers which begin with no. 346001 and up. The serial numbers of additional remanufactured magnetos that have been modified to incorporate this change also are listed herein.

NEW MAGNETO IDENTIFICATION CHART

Engine models that employ - 1200 series magnetos	Magneto part number	Revision code on magneto name- plate indicating compliance with Bendix Bulletin No. 566
O-235-C series	LW-349305-1	C1
	LW-349365-3	C1
O-360, IO-360, HIO-360 except HIO-360-D	LW-349285-1	C1
	LW-349305-1	C1
	LW-349305-5	C1
	LW-349365-3	C1
HIO-360-D	LW-349285-5	B1
	LW-349310-3	C1
	LW-349235-3	A3
	LW-349235-4	A3
TIO-360	LW-349285-6	--
	LW-349305-6	--
LIO-360	LW-349305-3	C1
	LW-349365-6	C1
O-540, IO-540, TIO-540	LW-349290-1	C1
	LW-349290-10	--
	LW-349290-11	--
	LW-349310-1	C1
	LW-349310-8	C1
	LW-349370-4	C1
	LW-349370-11	--

## NEW MAGNETO IDENTIFICATION CHART (CONT.)

Engine models that employ -1200 series magnetos	Magneto part number	Revision code on magneto name- plate indicating compliance with Bendix Bulletin No. 566
TIO, TIGO-541	LW-349290-2	C1
	LW-349310-4	C1
IGSO-540	LW-349290-3	C1
	LW-349310-4	C1
VO, TVO-435 VO, TVO-540	LW-349290-4	C1
	LW-349290-9	B1
	LW-349310-10	B1
	LW-349310-11	B1
GO, GSO, IGSO-480	LW-349310-1	C1
	LW-349370-1	C1
	LW-349370-2	C1
	LW-349310-2	C1
IO-720	LW-349300-3	B1
	LW-349300-4	C1
	LW-349320-4	C1
	LW-349320-5	B1

Avco Lycoming engines equipped with Bendix remanufactured (blue label) -1200 series magnetos with the following serial numbers are exempt from the requirements of this bulletin by reason of having been modified after remanufacture to incorporate the modification described herein. (These are in addition to all those with serial numbers 346001 and up.)

- Magneto no. 10-349285-1: S/N's 305313, 307311, 307312, 307314, 316253 thru 316255; 323180 thru 323184; 323186 thru 323189; 336587, 1025022, 1029058, 1029173, 1029178.
- 10-349285-5: S/N's 323190 thru 323192.
- 10-349290-2: S/N's 336423, 336426, 336429, 336430, 336436, 336437, 336440, 336441.
- 10-349290-3: S/N's 249005 thru 249008; 249010, 249012, 249020, 323236, 336565.
- 10-349290-4: S/N 336038.
- 10-349300-4: S/N 323247.
- 10-349305-1: S/N's 336507, 336512, 336515, 336517, 336527.
- 10-349310-1: S/N's 336532, 336551, 336559.
- 10-349310-4: S/N's 247061, 336449, 336452, 336455, 336457, 336468, 336472, 336476.
- 10-349320-4: S/N 323319.
- 10-349365-3: S/N's 316345, 316351, 336480 thru 336482; 336484, 336485 thru 336488, 336492, 336494 thru 336498; 336502 thru 336504.
- 10-349370-1: S/N's 323338 thru 323340.

**AIRCRAFT**

**SUBJECT:** S-1200 Distributor Block and Gear Change

**REASON FOR BULLETIN:** 1. To inform Users of Subject Change.  
2. To Recommend Conversion of, and Provide Rework Information for Existing Magnetos.

**EQUIPMENT AFFECTED:** All S-1200 Series Magnetos.

**Maintenance (Spare) Parts Affected:**  
10-349211, 10-349212 and 10-349213 Distributor Blocks

**Compliance:**  
At first opportunity, but not later than next overhaul

**Detailed Instructions:**  
It has been found that the addition of a nylon insulating washer and steel skid washer between the distributor gear electrode and the block bushing, as shown in figure 1, reduces the possibility of deterioration of the lubricant and possible seizure of the parts.

The addition of the washers make it necessary to shorten the gear end of the bushing and block. New production blocks incorporating the change are identified by a raised

boss between the high tension towers at the six o'clock position and molded in letters as shown in figure 2. Reworked blocks are identified by a drill point indentation in the same location. New and reworked blocks both have different part numbers from the current (old) block. See Table 1.

The reworked blocks incorporate a narrower (.219") felt strip P/N 10-391346. All other blocks incorporate the currently used (.250") felt strip P/N 10-163374.

All factory new and factory reworked distributor blocks incorporate the new moisture resistant treatment.

It is recommended that all old distributor blocks be reworked or replaced no later than the next overhaul. Users wishing to rework blocks may do so in accordance with the following:

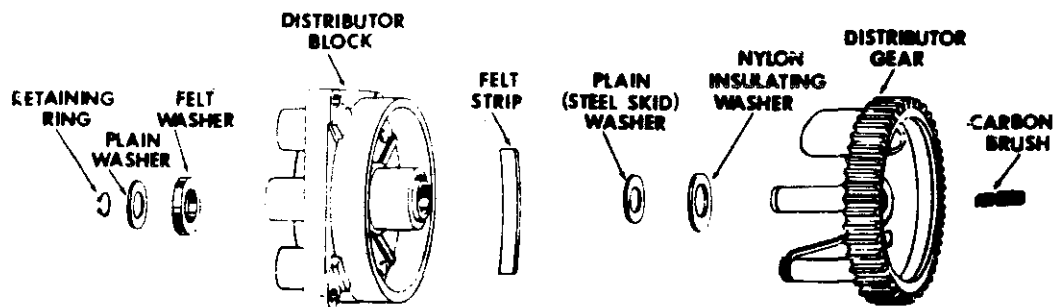


Figure 1.

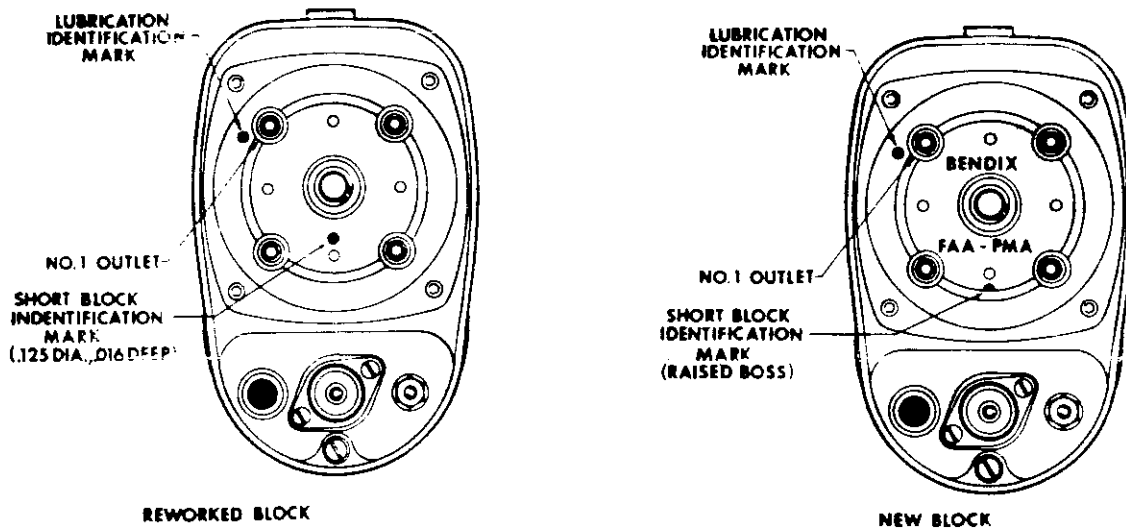


Figure 2

TABLE I

No. of Cyl.	Old Block (Rework or replace)	Reworked Block (Identify by Drill Point indentation)	New Block (Identify by raised Boss)
4	10-349211	10-391308	10-391411
6	10-349212	10-391414	10-391412
8	10-349213	10-391415	10-391413
	Use Felt Strip 10-163374	Use Felt Strip 10-391346	Use Felt Strip 10-163374

1. Clean and inspect to insure distributor block is suitable for continued use before reworking.

2. Fabricate an expanding arbor lathe fixture as shown in figure 3. (Similar arbors may be purchased from industry machine tool supply houses.)

3. With arbor in lathe, slide distributor block over arbor, high tension outlet tower side first, until block bushing bottoms on arbor shoulder. Tighten arbor expansion screw until block is held securely for turning operation.

4. Use a suitable cutting tool and turn so that overall length of bushing is  $1.200 + .005 - .000$  inch as shown in figure 4. (A Carbide tipped tool is recommended.)

5. Using same cutting tool, turn dielectric material of block so that resulting surface is .015 inch below end

of reworked bushing. See figure 4.

6. Slightly chamfer all corners of reworked surfaces.

7. Identify reworked blocks by drilling a flat bottomed hole .125" diameter and .016" deep in the six o'clock position as shown in figure 2.

8. Blow out chips and foreign matter.

9. Clean dielectric surfaces of distributor block thoroughly of all grease and coating by rinsing in a container of trichlorethylene. Repeat cleaning process until all coating is removed. Dry in a ventilated oven at 160° for 1/2 hour minimum.

10. Impregnate bronze bushing and coat distributor block as follows:



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Division**

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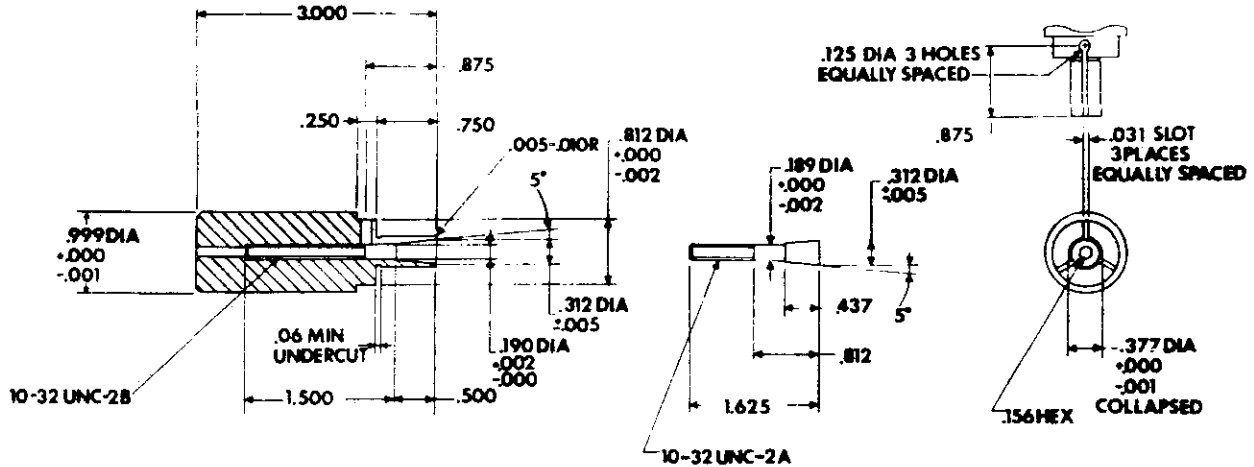


Figure 3.

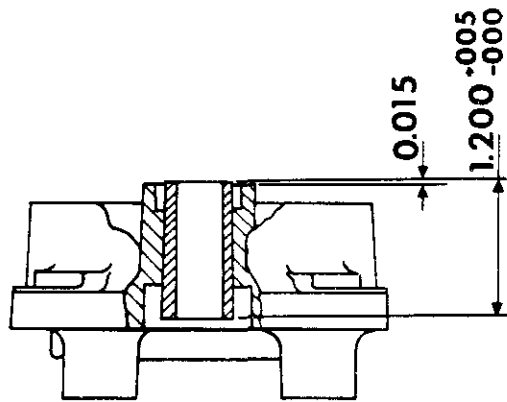


Figure 4.

**NOTE**

Care should be taken to keep coating away from bronze bushing and oil from coated surfaces.

a. If distributor block is not marked with a raised boss or drill point indentation to the left and adjacent to the No. 1 high tension tower (see figure 2), remove old lubricant from bushing as follows:

(1) Place distributor block, high tension towers up, on a piece of absorbant material, such as cardboard, in a 250°F oven for 4 hours. This should cause impregnating oil to appear on the surface of the bushing and on the absorbant material.

(2) Remove block from oven and using a clean dry cloth, immediately wipe all oil possible from inside diameter of bushing. It may be necessary to do this several times as part cools.

(3) Identify distributor block by drilling flat bottomed indentation 0.125 inch diameter and 0.016 inch deep located as shown in figure 2.

b. Install a 10-70506-10S protective cap or equivalent over each end of bushing in block. Dip block in coating\* to cover all molded surfaces. Remove block from solution and air dry for 30 minutes minimum.

c. Remove protective cap from electrode side of block and fill bronze bushing with Bendix Distributor Block Lubricant.\*\*

d. Place block in oven, using care not to spill any oil on coated surfaces. Bake block at 190° to 210°F for 2 hours to impregnate bushing with oil.

e. Remove block from oven and allow it to cool to room temperature.

f. Carefully remove protector cap and allow remaining oil to drain from bushing.

\*Bendix Distributor Block Coating, Part No. 10-391400.

\*\*Bendix Distributor Block Lubricant available in 16 oz cans, Part No. 10-391200.



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g. Install a new dry felt strip (.219 inch wide) P/N 10-391346 in groove on electrode side of reworked distributor block.

**NOTE**

Felt strip must not be lubricated.

Assemble large distributor gear, nylon and steel washers to new or reworked block as follows using figure 1 as a guide.

1. Saturate a new felt washer with Bendix Distributor Block Lubricant. \*\* Blot excess oil from washer until flat surfaces take on a "frosted" appearance, and seat washer in recess of block.

2. Slide nylon insulating washer 10-391309 and plain washer 10-391511 onto gear shaft.

3. Lubricate inside of bronze bushing with a light film of Bendix Distributor Block Lubricant. \*\* Insert shaft of gear through distributor block and position plain washer on shaft. Using the 11-3071 Retaining Ring Pliers, install retaining ring on shaft. Rotate gear to insure there is no interference between gear electrode and block electrodes.

**CAUTION**

Once modified, the distributor block can be used only with a gear having the nylon and steel washer installed over the shaft as shown in figure 1.

4. Install new carbon brush in hole in center of distributor gear.

**Parts Required Per Article:**

10-391346 Felt Strip (For reworked block only)  
10-391309 Nylon Washer  
10-349511 Plain Washer

**Special Tools Required:**

Expanding arbor lathe fixture. (See figure 3).

**Man Hours Required:**

Block Rework — ¼ hour.  
Assembly — Negligible.

\*\*Bendix Distributor Block Lubricant available in 8 ounce cans, Part No. 10-391200.