



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

SERVICE No. 626C BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: February 28, 1997

(M)

(Service Bulletin No. 626C Supersedes and Voids Service Bulletin No. 626B Dated June 15, 1979.)

SUBJECT:

**Elevator Down Spring Inspection
/Replacement**

REASON FOR REVISION:

To Revise Model and Serial Number Effectivity and
to add a Life Limit to the Elevator Down Spring.

MODELS AFFECTED:

PA-31, 31-300, 31-325 Navajo
PA-31-350 Navajo Chieftain
PA-31-350 T1020

SERIAL NUMBERS AFFECTED:

31-2 through 31-8312019
31-5001 through 31-8452021
31-8253001 through 31-8553002

COMPLIANCE TIME: Within the next one hundred (100) hours time in service or at the next scheduled inspection event, whichever occurs first and every one hundred (100) hours time in service thereafter. As noted below each one thousand (1000) hours time in service.

NOTE:

The need for the recurrent one hundred (100) hour inspection will be relieved when a down spring identified as Piper No. 71056-03 (and, if required, a Link Piper No. 71086-03) is installed (See Instruction 6, below). Old and new spring and links are each Life Limited to one thousand 1000 hours time in service.

APPROVAL:

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

PURPOSE:

1. To inspect the elevator down spring for damage which, if left undetected, could result in loss of elevator down spring tension and cause a variation in control input pressures.
2. To replace the elevator down spring if damage is noted.
3. To announce replacement parts, the installation of which will relieve the one hundred (100) hours recurrent inspection requirement.
4. To announce a one thousand (1000) hours Life Limit on all elevator down springs and links.

INSTRUCTIONS:

1. Remove the bottom half of the tail cone and side access plate from the aft fuselage to gain access to the elevator down spring. (Also known as a "bungee spring".)
2. Carefully remove the elevator down spring so as not to scar or otherwise damage the spring.

(OVER)

ATA: 2739

INSTRUCTIONS: (cont'd)

3. Using a dye penetrant, Zyglor or Magnaflux inspection procedure, inspect the hook and the last coil on both ends of the spring with a 10x magnifying lens for cracks, nicks or other surface imperfections.
4. If no damage is found, reinstall the spring and repeat the inspection at each one hundred (100) hours of operation. (See note 4) Set proper tension of the elevator balance spring by connecting a scale to the aft end of the spring and pulling rearward until proper tension is obtained with the elevator in the neutral position (PA-31 and PA-31-300, 30 ± 1 lbs.; PA-31-325 and PA-31-350, $37 \pm 1 -0$ lbs.). At this point observe which hole in the link is in line with the hook at the end of the spring and connect the spring into this hole in the link. *Installation of the spring in reverse will damage the spring and link.* (Reference rigging instructions in the appropriate Service Manual.)
5. If damage is found, replace the spring with Piper No. 71056-03 Elevator Down Spring, before further flight. Set proper tension as in step 4.
6. To relieve the need for the one hundred (100) hour recurrent inspection and to comply with the one thousand (1000) hours Life Limit, Elevator Down Spring, Piper Part No. 71056-03, must be installed. In order to achieve the proper down spring tension (PA-31 and PA-31-300, 30 ± 1 lbs.; PA-31-325 and PA-31-350, $37 \pm 1 -0$ lbs.) when Part number 71056-03 is installed, the existing spring link, Piper Part No. 42376-02, may have to be replaced with a longer link, Piper Part No. 71086-03.

NOTES:

1. Spring Link Part No. 42376-02 may have to be replaced with the new Link 71086-03 when the new spring 71056-03 is installed.
2. Spring Link replacement is not required when Elevator Down Spring, Piper P/N 42377-02 is installed. (See 4 below for spring replacement P/N & time.)
3. If necessary for ease of attachment at the spring, excess Link material may be trimmed off (.188 in. minimum edge distance).
4. The old springs and links *must not* remain in service beyond one thousand (1000) hours time in service. Once installed, the new spring and link must be replaced at each one thousand (1000) hours time in service thereafter.

MATERIAL REQUIRED: If required by inspection or Life Limit, one (1) each, Elevator Down Spring, Piper Part Number 71056-03, and (1) each, Elevator Down Spring Link, Piper Part No. 71086-03, per aircraft.

AVAILABILITY OF PARTS: Your Piper Field Service Facility.

SUMMARY: There is no factory participation for this Service Bulletin.

Please contact your factory authorized 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:

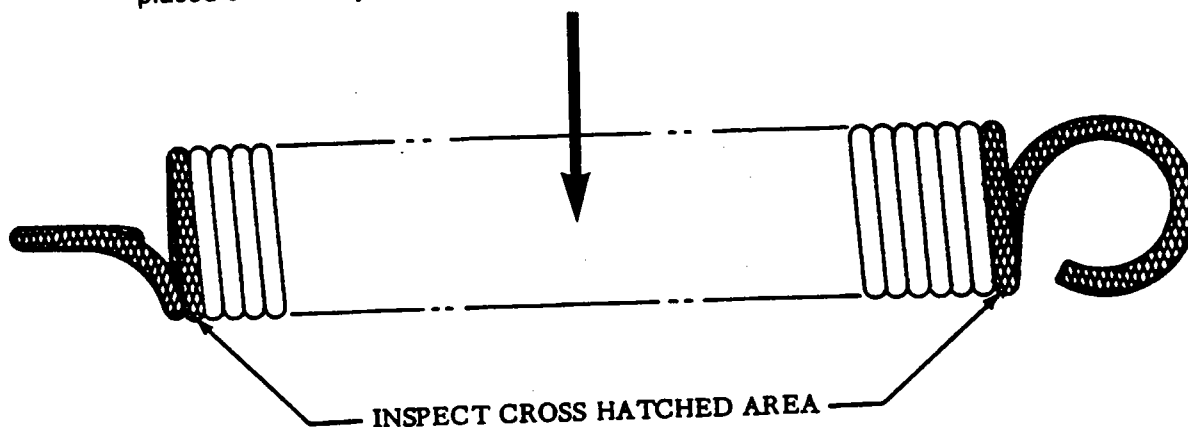
The New Piper Aircraft, Inc.
ATTN: Customer Services
2926 Piper Drive
Vero Beach, FL 32960

Note:

Piper P/N 71056-02 has been replaced by Piper P/N 71056-03. Installation of Piper P/N 71056-02 elevator down spring *will not* relieve the repetitive 100 hour inspection requirements.

Note:

Upon release of this Service Bulletin, all new Piper P/N 71056-03 elevator down springs shipped from the factory, will have the P/N placed on the body of the spring to assure positive identification.

**Note:**

With the exception of Piper P/N 71056-03, all other Piper P/N elevator down springs in service must be inspected at each 100 hours time in service.

Note:

Installation of Piper P/N 71056-03 elevator down spring will relieve the repetitive 100 hour inspection requirements.

Note:

All Piper P/N elevator down springs in service must be replaced at repetitive intervals not to exceed each 1000 hours time in service. (Includes Piper P/N 71056-03)

ELEVATOR DOWN SPRING