



MECHANICAL SPECIALTIES LLC  
1000 85<sup>th</sup> Ave. SW, Olympia, WA 98501

SB 11-02

## SERVICE BULLETIN KEEPERLESS CARGO HOOK MODIFICATION

Service Bulletin No.: 11-02  
Cargo Hook Model No. 303 and 606  
Date: February 23, 2011  
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Rev. 1 Oct. 5, 2011

**SUBJECT:** Cargo Hook Keeper Modification.

**MODELS AFFECTED:** Model 303 & Model 606

**COMPLIANCE:** Customer option

### DESCRIPTION:

Mechanical Specialties LLC has received customer requests for a keeperless cargo hook in order to comply with certain contract requirements. This bulletin provides modification instructions for cargo hook Models 303 and 606 to comply with those requirements. The two basic modifications accomplished by completion of this Service Bulletin are, removal of the load beam return spring for ease of attaching a load with one hand operation, and to affix the rotation of the keeper to eliminate uncontrolled release of the external load.

### APPROVAL:

The engineering design aspects of this bulletin are FAA/DER approved.

### MAN POWER:

Approximately 2 man-hours are required to complete this bulletin depending on cargo hook installation configuration. Man-hours are based on facilities and personnel available and may vary.

### MATERIALS:

The following materials are required to accomplish this modification and may be obtained through Mechanical Specialties LLC or any general aircraft hardware supply company.

<u>Item number</u>	<u>Cargo Hook Model</u>	<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
1	303	AN4-21A	Bolt	1
2	303	NAS1149F0332P	Washer	2
3	303	MS21044N4	Nut	1
4	606	AN4-24A	Bolt	1
5	606	NAS1149F0332P	Washer	2
6	606	MS21044N4	Nut	1

**SPECIAL TOOLS:**

None required

**WEIGHT AND BALANCE:**

Not affected

**ELECTRICAL LOAD DATA:**

Not affected

**REFERENCES:**

1. Document No. MSI-MNL003, REV.A, Operating and Maintenance Instructions (Hook Model 606).
2. Document No. MSI-MNL001, REV. A, Operating and Maintenance Instructions (Hook Model 303).

**ACCOMPLISHMENT INSTRUCTIONS:**

NOTE: Refer to document Reference number 1 for Cargo Hook Model 606 instructions and Reference number 2 for Cargo Hook Model 303 instructions, unless otherwise noted.

1. For ease of maintenance access, it is preferable to remove the cargo hook assembly when performing this bulletin; however, it is not required. If the cargo hook assembly is to remain installed on the aircraft, proceed to step 3.
2. For Model 606 or Model 303, remove cargo hook assembly from aircraft and place on suitable work surface, retain hardware for re-installation.
3. Remove load beam return spring; Model 606, reference 1 page 6, index #37 or for Model 303, reference 2, page 7, index #35.
4. Remove cotter pin, nut, washers and bolt retaining keeper on Model 606, reference 1 page 7, index #58 and #60. Remove nut, washers and bolt retaining keeper on Model 303, reference 2 page 8, index #61. Retain hardware for re-installation.
5. Remove keeper assembly and keeper spring; Model 606, reference 2 page 7, index #62 and #59 or for Model 303, reference 1, page 8, index #62 and #60.
6. Modify keeper (Model 303, p/n 3114-1, Model 606 p/n 6079-1) as follows:
  - a) Overlay the corresponding provided template on the side of keeper and mark location of hole to be drilled. One method to accomplish this task is to utilize an automatic center punch. Place point of punch at the center of the bolt location on the template and punch through the template thereby marking keeper for drilling.

- b) Repeat step 'a)' on the opposite side of the keeper by utilizing the opposite side of template.
  - c) Place keeper in non-marring or soft-jaw vise, preferably in a drill press.
  - d) Utilizing a .250 bit, Drill one hole from each side of keeper at the position of the punch marks; do not drill from one side all the way through second side, as this will improperly position the bolt on assembly.
  - e) Debur holes drilled in step'd)'.
7. Reinstall modified keeper on cargo hook assembly, reference reverse order of #5 and #4 above. The keeper spring function is eliminated by this bulletin and may be left out during assembly at the discretion of the installer. Keeper mounting bolt installation and torque values as follows:
- a). Model 606 ref. 1 page 7, index #60, Install bolt with one washer under head and one under nut, install nut and torque 160-190 inch/lbs., install cotter pin #58. Next, (refer to materials list), in newly drilled hole in keeper, install bolt (item 4) with washer under head and nut (item 5), install nut (item 6) and torque 50-70 inch/lbs. Check to assure keeper can no longer be moved.
  - b). Model 303 ref. 2, page 8, index #61, Install bolt with one washer under head and one under nut (AN960-416L), install nut (MS21044N4) and torque 50-70 inch/lbs. Next, (refer to materials list), in the newly drilled hole in keeper install bolt (item 1) with washer under head and nut (item 2), install nut (item 3) and torque 50-70 inch/lbs. Check to assure keeper can no longer be moved.
8. If cargo hook assembly was removed, reinstall cargo hook assembly on helicopter, perform functional test of mechanical and electrical releases and check for any binding or interference from the keeper.
9. Make entry in cargo hook historical record noting the completion of this Service Bulletin.

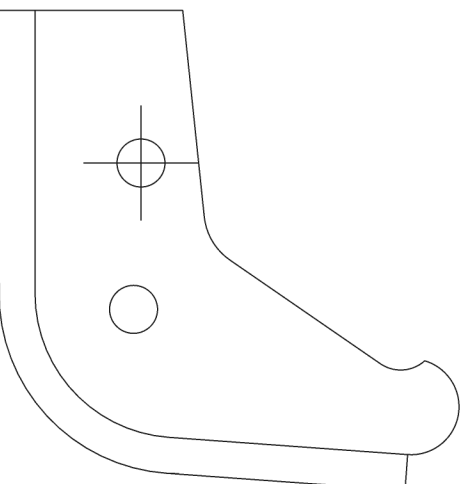
This modification may be carried out by any qualified aircraft mechanic. During the process, if desired, the keeper may be returned to Mechanical Specialties for modification at no charge to our customer.

**MAINTENANCE FACILITY:**

Mechanical Specialties LLC  
17842 Danby Dr SW  
Rochester, WA 98579

Ph. 360-273-7604  
Fax 360-273-8983

MODEL 303  
KEEPER DRILLING TEMPLATE

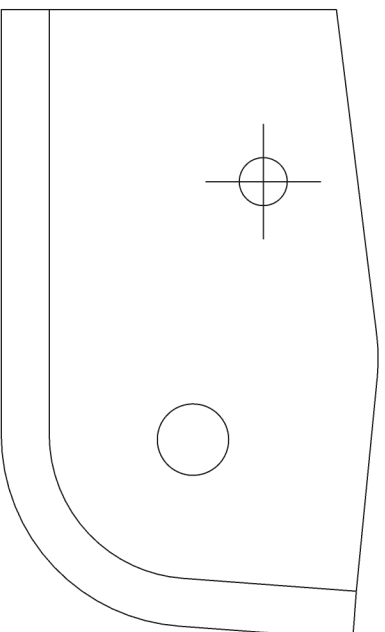


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MODEL 606

KEEPER DRILLING TEMPLATE



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