



MEMO/SAFETY BULLETIN

DATE: February 6, 1984

TO: All Kasperwing Owners

With the spring flying season rapidly approaching we would like to take this opportunity to update you on what we have been up to over the winter months, plus relay some safety related information on to you. First the safety stuff:

With over 300 Kasperwings in the field we are beginning to get some owner feedback as to items requiring maintenance. These fall into three categories.

1. Airframe (see Safety Bulletin 180-1)
2. Rigging
3. Drive system (see Safety Bulletin 180-2)

We will discuss these one at a time:

1. Airframe. On pages 17, 18 and 19 of the Pilot Flight Operations Manual is a list of items to inspect at least every 100 hours. (If you still have not received one of these manuals, please contact your dealer or the factory directly.) It would be a good idea for you to disassemble your entire plane prior to the spring flying season and inspect all items on the list or at the very least check it over very thoroughly prior to the first flight. This is particularly important if your wing has been set up outdoors all winter, exposed to the elements.

One of the things brought to our attention by a customer was the #S-29 channel brackets located at the rear of the lower frame (undercarriage assembly). Apparently cracks in the corners of the #S-29 brackets had developed due to loads imposed during taxiing over rough ground and/or engine vibration, and one of the lower frame tubes had become completely disconnected from the rear frame assembly! Please refer to Safety Bulletin 180-1 and inspect and/or replace these brackets before your next flight.

2. Rigging. If your wing has received a lot of use, the cables may have become stretched and are hanging loosely. Now would be a good time to replace any loose cables or re-rig the entire airframe.

A few owners have asked about installing turnbuckles to aid in adjustment. This is okay as long as you use an aircraft turnbuckle of appropriate strength. Do not use anything less than an AN130-16S rated at 1,600 lbs. and make sure that no more than three threads are protruding from the barrel ends at any time. Whenever possible, use the turnbuckles only in the upper rigging as these cables are usually the ones that get stretched due to landing loads. Be sure to properly safety wire turnbuckles prior to flight.

3. Drive system. Remove and check the drive belts for signs of cracking and measure the amount of freeplay at the propeller tip. If there is more than $\frac{1}{2}$ " of freeplay at the tip, then the prop and reduction unit should be removed and the shaft and bearings checked for wear. Refer to Safety Bulletin 180-2 and perform in the following order:

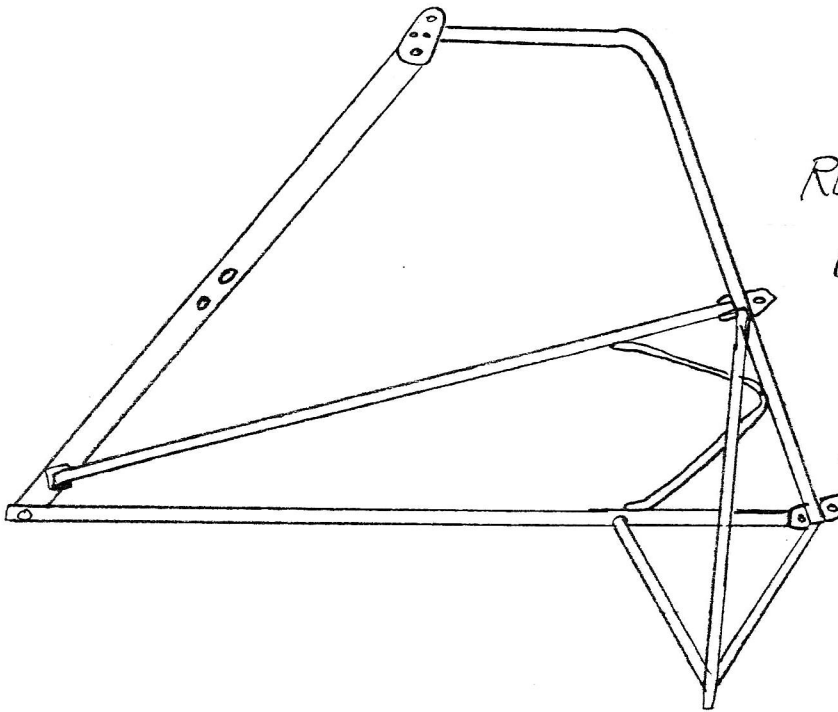
- A. Remove prop.
- B. Loosen pylon bolts and remove reduction unit.
- C. Remove large nut from aft end of reduction unit and slide out shaft and sleeve assembly.
- D. Check bearings for roughness during rotation. You can do this by holding the reduction unit in your hand and simply turning the inner race. If the bearings don't rotate smoothly, drive them out with a wood dowel and replace them.
- E. Check the prop shaft and sleeve for wear in the area where the shaft enters the front bearing. If the shaft is not excessively worn, remove the external sleeve and split one side of it lengthwise with a hacksaw. This will allow the pylon blocks to grip the sleeve and shaft more securely, eliminating the possibility of wear between the shaft and end of the sleeve. Reassemble the unit and check for proper operation. Contact us if you need replacement shafts or bearings.

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UNDERCARRIAGE
ASSEMBLY

REAR FRAME/LOWER-
FRAME TUBE ATTACH
BRACKETS

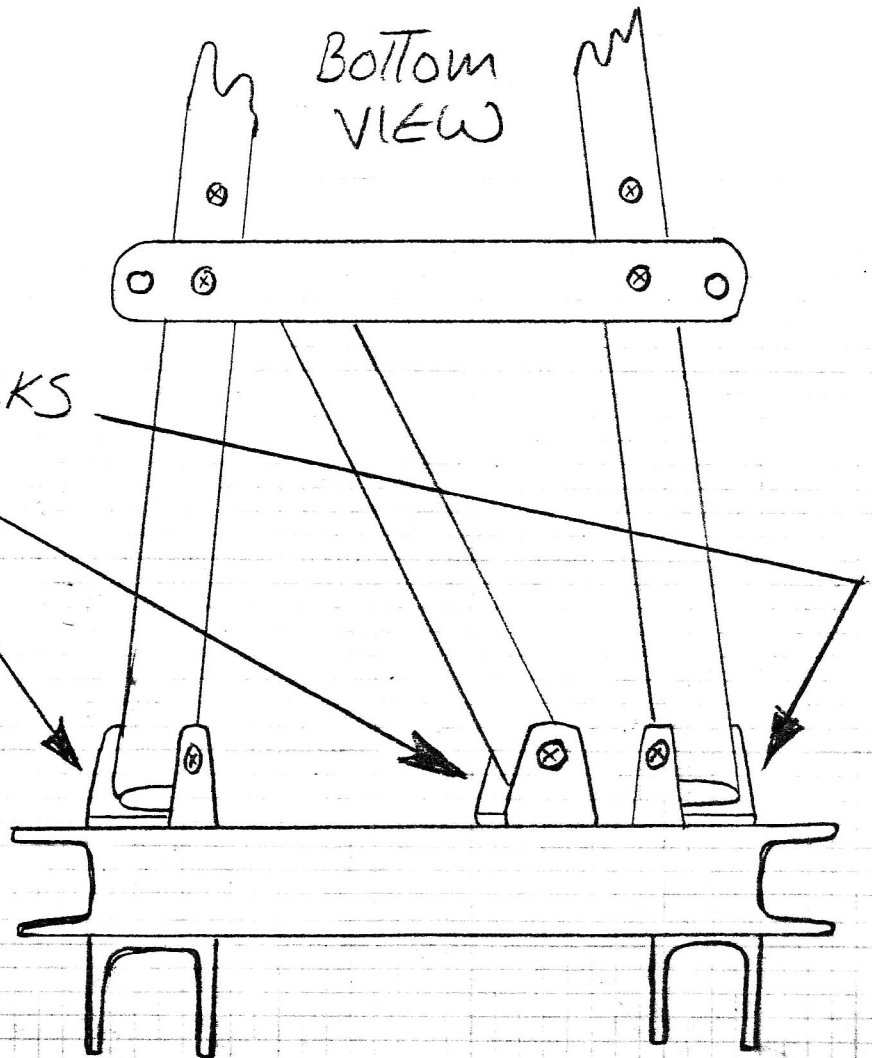


BOTTOM
VIEW

CHECK FOR CRACKS
OR HAIRLINE
FRACTURES

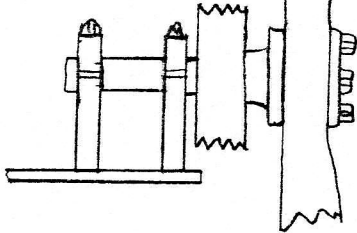
(S-29 BRKTS)

REPLACE IF
NECESSARY!

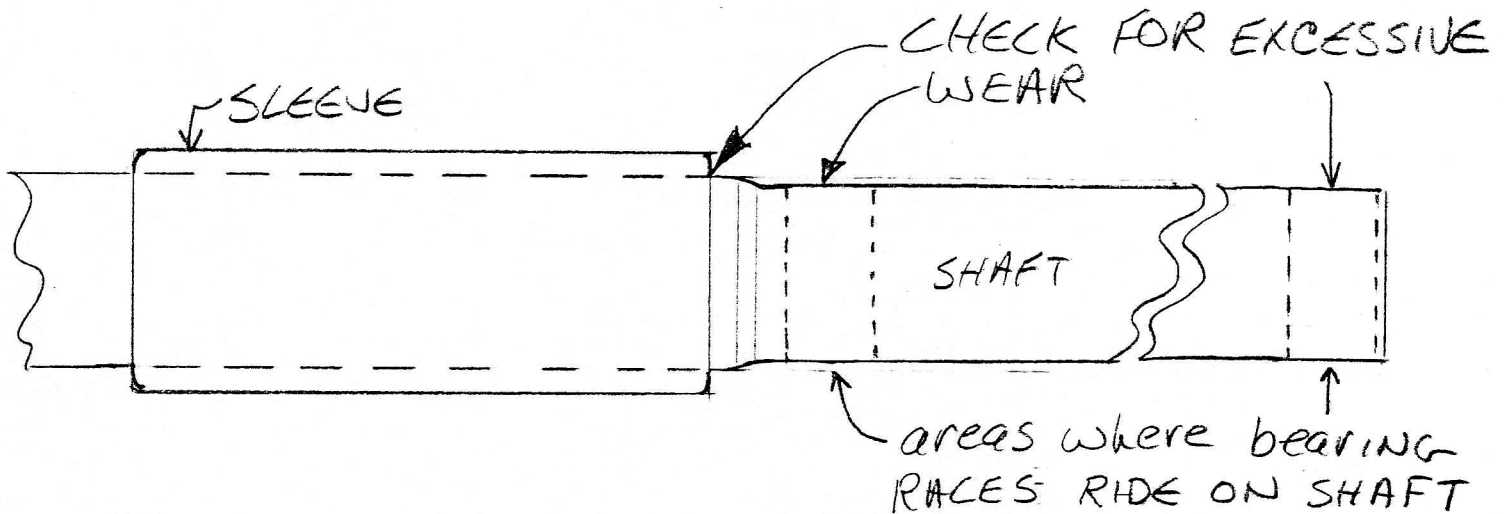


SAFETY BULLETIN 180-2 2/6/84

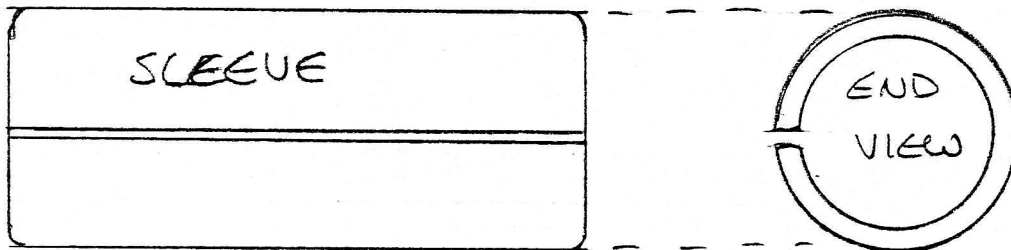
$\frac{1}{2}$ "
MAX.
FREEPLAY



WITH BELTS REMOVED, GENTLY
MOVE PROP TIP FORE AND AFT
AND CHECK FREEPLAY. IF PLAY
IS MORE THAN $\frac{1}{2}$ ", REMOVE
AND INSPECT SHAFT AND
BEARINGS.



IF SHAFT IS NOT EXCESSIVELY WORN,



REMOVE SLEEVE, PLACE IN VISE AND HACKSAW
A LENGTHWISE SLOT. REMOVE BURRS, RE-INSTALL
ASSEMBLY ON PLANE AND RE-CHECK PROPELLER
TIP FREEPLAY.