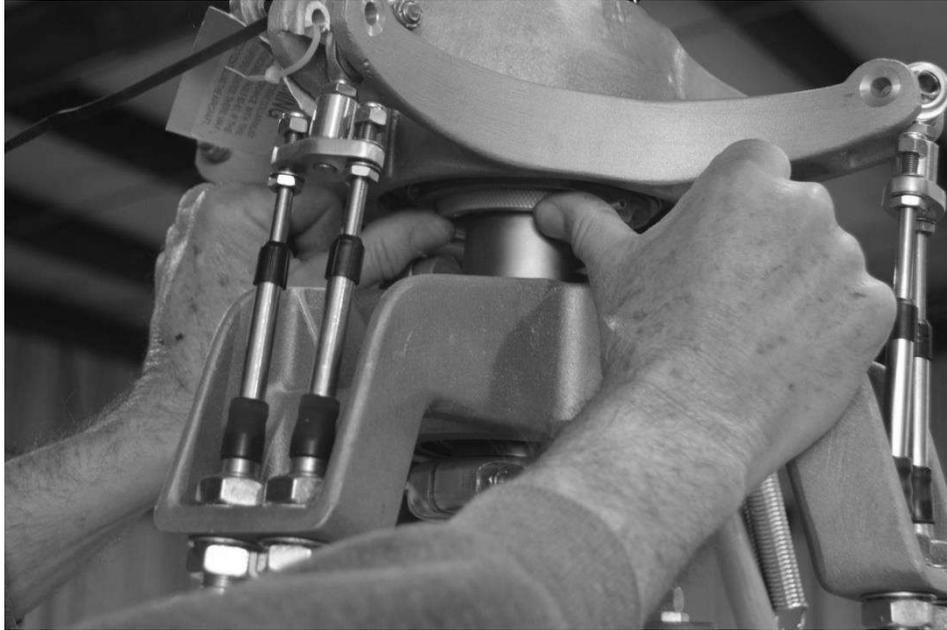


## Sliderball adjustment inspection

Without disassembling anything, place your thumbs under the sliderball adjustment ring and push up. See pic 379 there should be no vertical movement. If there is movement, is it slight or is it moving more than a 1/8" or more? Slight movement, adjustment may be required. Significant movement, further inspection is required.



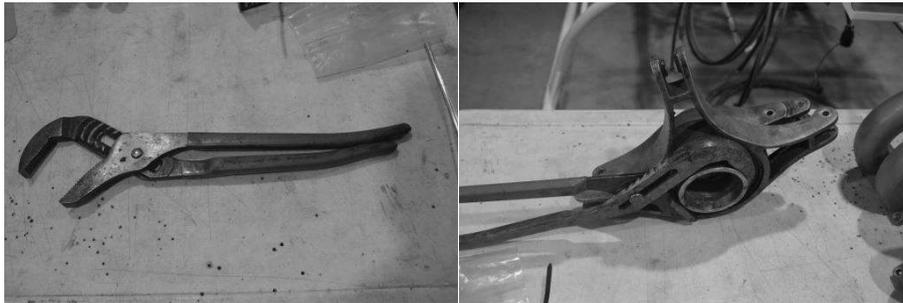
DSC\_0379

## Sliderball Adjustment from the RotorWay Manual

1. *Using a protractor level, set the swash plate perpendicular to the main shaft.*
  2. *Rotating the blades may help you in achieving the fore and aft angles. If a protractor level is not available, centering the cyclic stick should place the swash plate at a relative perpendicular angle to the shaft.*
  3. *Loosen the two set screws (part no. E00-9302, Ref. 16 on print E49-2002) three full turns.*
  4. *With your fingers\*\*, loosen the adjustment collar approximately 2 full turns in a counter clockwise direction, until it can be turned easily.*
  5. *Again using your fingers turn the collar in a clockwise direction until it comes to a stop.*
  6. *Make an index mark on the adjustment collar and non-rotating swashplate with a pencil or marker.*
  7. *Back off the adjustment collar counter clockwise 1/2".*
  8. *Then tighten the two set screws.*
  9. *See photos #14-16.*
- **Note:** *Use silicone on the set screws to help lock them in position and prevent them from backing out. Do NOT use Loctite*

- *If incorrectly adjusted, the slider ball adjustment collar will produce a feedback through the cyclic controls that feels like the cyclic wants to travel in any one direction independent of any input from the pilot.*
- *The amount of feedback felt by the pilot indicates how much the collar is incorrectly adjusted. (Feedback usually means the collar is too tight rather than too loose).*
- *If feedback through the cyclic continues, you may back off the adjustment collar another 1/4", for a total 3/4" maximum from the starting index mark.*

**Note.** Sometimes I need to use a large set of Channellocks (see pic) to gently break loose the knurled ring. Be careful not to mar the knurled ring. I think they are Channellock 480 BIGAZZ Tongue



## Visual Sliderball Inspection.

Begin by indexing and marking the pitch links with an up arrow and Master & Slave. Remove the pitch links.

Next slide the rubber MR shaft strap protector rubber sleeve all the way up the shaft. Next cut the wire ties that secure the top and bottom of the dust boot.

Next remove the AN5 bolt that secures the counter weight to the rotating swashplate. See pic 368.

Next loosen the AN4 bolt on the counterweight clamp. Carefully wedge a flat blade screwdriver tip to open the clamp slight enough to allow the counterweight to slide up the shaft to the hub plate bottom. See pic 369



DCS\_369

Now lift the dust boot and inspect the shaft for rust. See pic 370



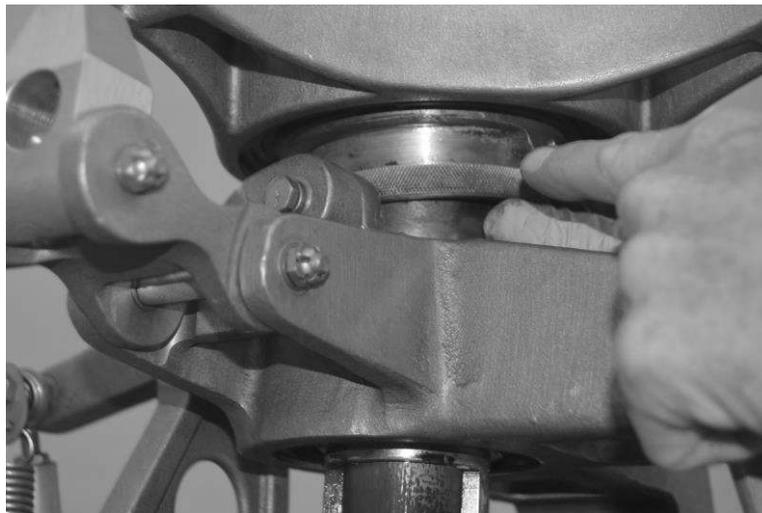
DCS\_370

Next remove the AN5 bolts that secure the cyclic control cable tees to the non-rotating swash plate. Also remove the AN5 bolt that secures the aft stabilizer scissors to the noon rotating swashplate. See pic 372



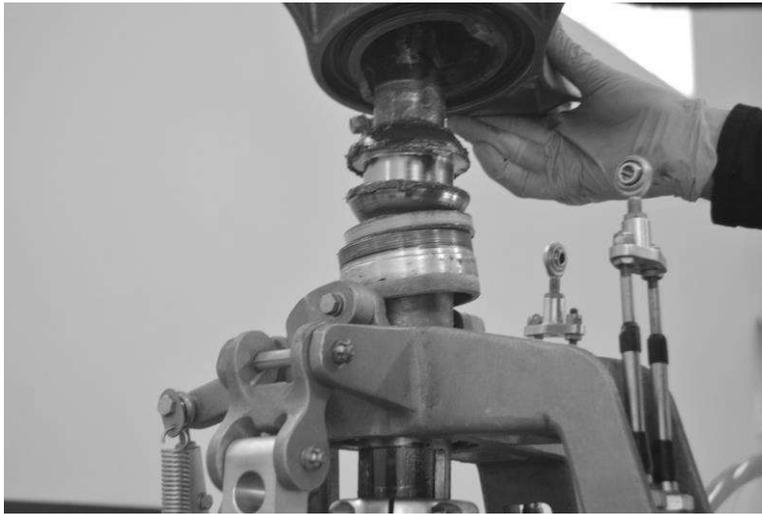
DCS\_372

Next remove the two set screws that secure the knurled lock ring. Unscrew the knurled ring until it comes off the bottom of the rotating swashplate. See pic 371



DCS\_371

Next lift the entire assembly (rotating and non-rotating swashplate) as high as it will go and secure with a bungee cord. See pic 373 and 375



DCS\_373



DCS\_375

Inspect the slider ball's convex surfaces for any corrosion, surface flaking or wear. Once the nickel plating wears away, the wear damage occurs very quickly as it is only aluminum. The wear is very noticeable and forms a "track" or "groove". Once the plating is gone, the sliderball must be replaced. See pic 365 worn sliderball. **Sliderball replacement requires MR shaft assembly to be removed.**



DCS\_365

If there is no wearing, (See pic 376) clean the surfaces of the slider ball and the delrin spherica bushings. The lower one is easy; the upper one is located in the upper rotating swashplate housing.

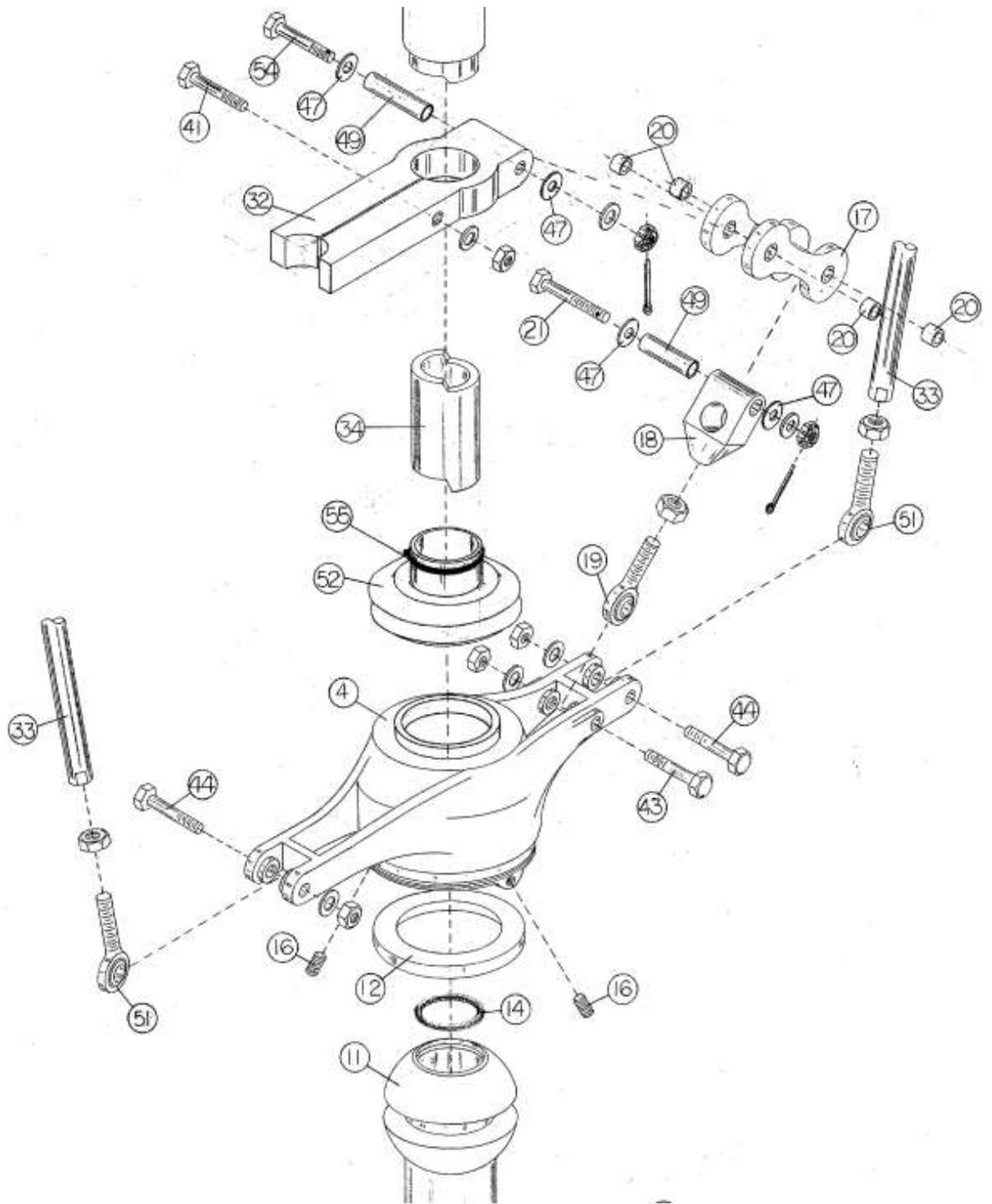
Apply a liberal amount of grease to the bushings and the sliderball surfaces. Use the CRC Sta-Lube Marine Grease.

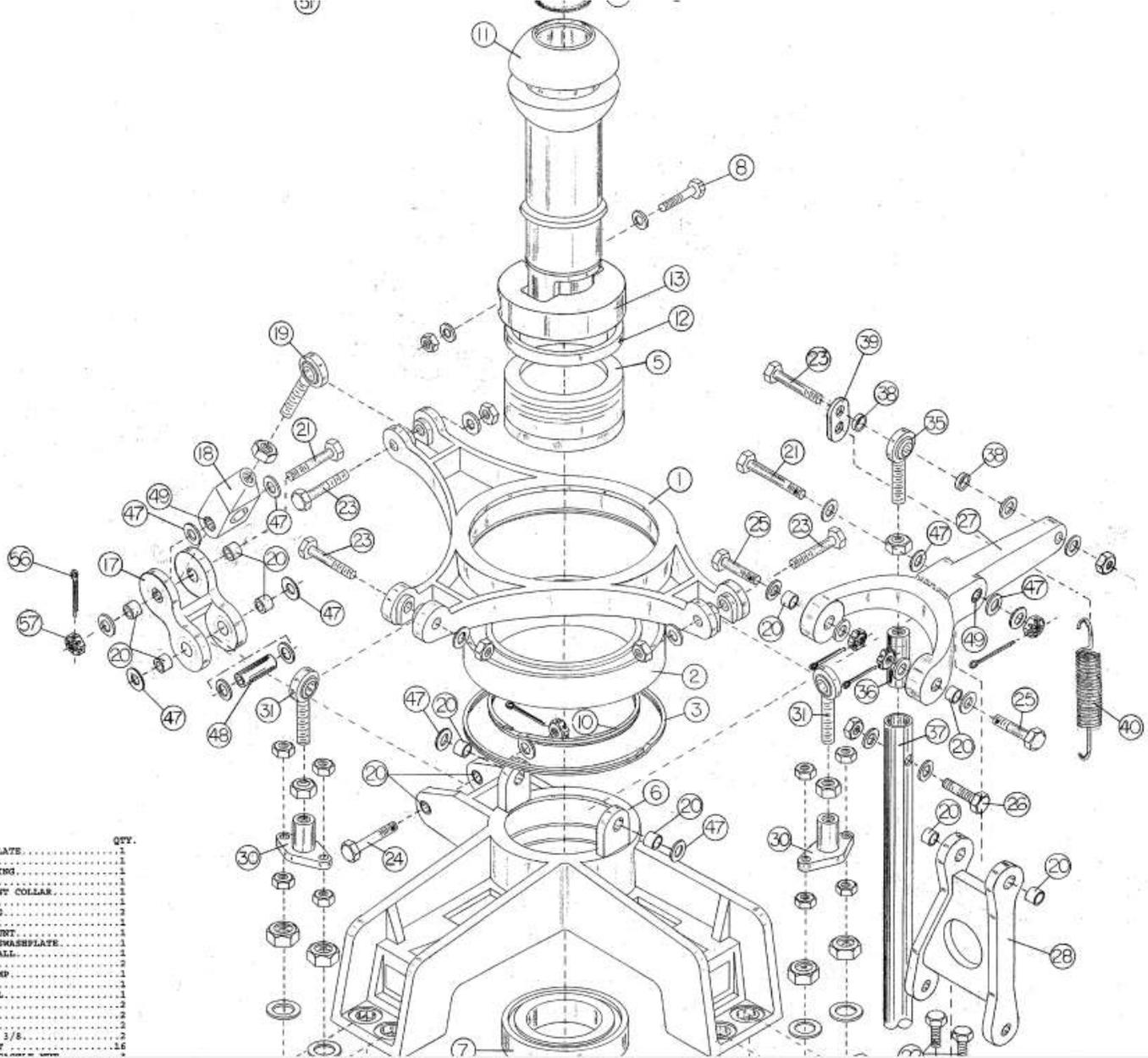


DCS\_376

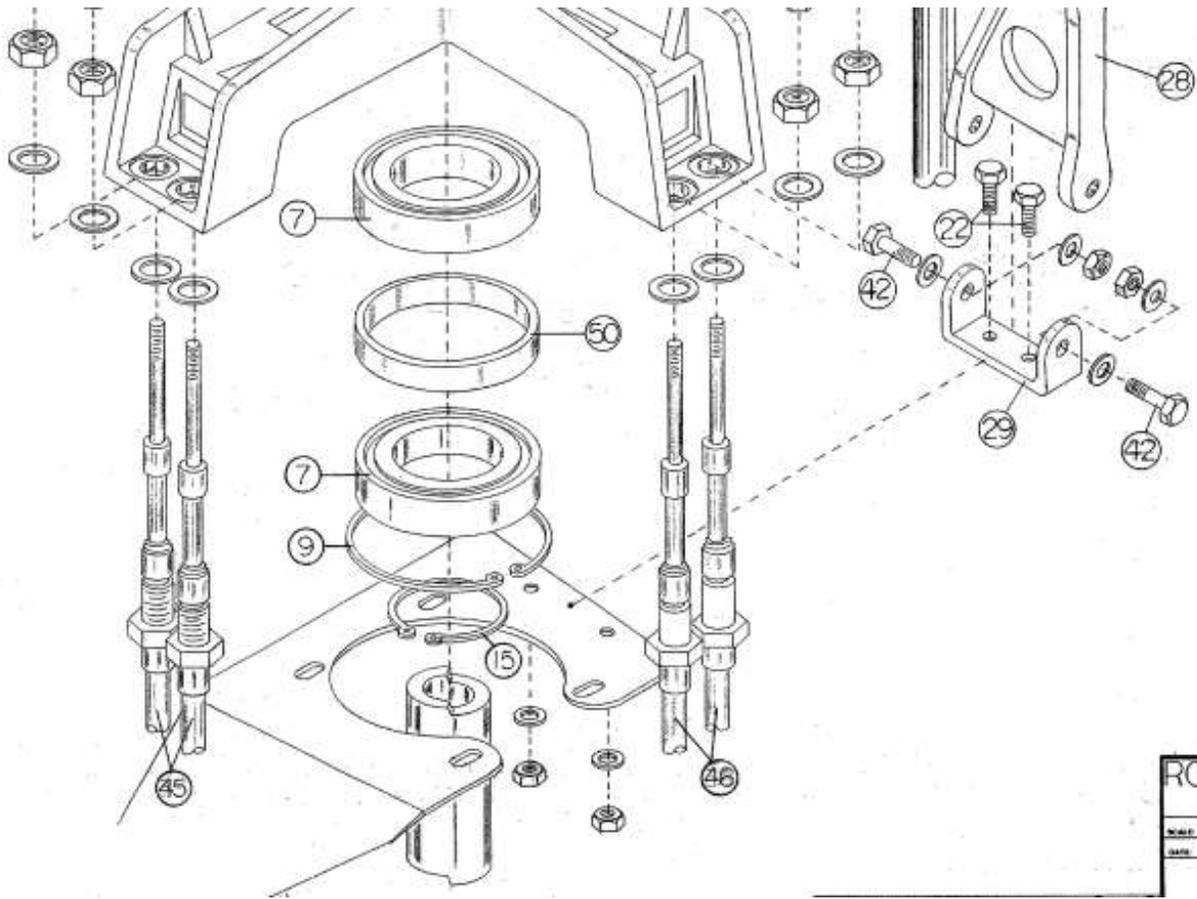
Reassemble in the reverse order.

Then follow the slider ball adjustment procedures listed above.





	QTY.
PLATE.....	1
RING.....	1
R.....	1
SWAY COLLAR.....	1
RO.....	2
.....	1
JUNT.....	1
SWASHPLATE.....	1
BALL.....	1
AMP.....	1
LL.....	1
.....	2
.....	2
K 3/8.....	2
RT.....	16



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