HUGHES SERVICE INFORMATION NOTICE

NOTICE NO. N-16.1

DATE September 27, 1967

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edes Service Information
No. N-16 dated 11-23-66)

SUBJECT: FIELD MODIFICATION - TAIL ROTOR ASSEMBLY

MODELS AFFECTED: All 269 Series Helicopters

TIME OF COMPLIANCE: At owners/operators discretion.

PREFACE: The information given in this Service Information Notice lists a convenient method for obtaining a fine balance adjustment of the tail rotor assembly to remedy an out of balance condition.

Reference

269A/A-1 Handbook of Maintenance Instructions
269B Handbook of Maintenance Instructions
TH55A HMI Addendum

Tools and Equipment

Micrometer   4 inch

a. Remove bolt, nut, cupped and plain washers securing pitch control link to tail rotor blade control horn.

CAUTION

An out-of-balance condition of the tail rotor assembly can result if the order of the bolt, nut, washer combination is not maintained.

b. Repeat step a. for opposite pitch control link.

c. Swing pitch control links back toward transmission assembly.

d. Using screwdriver, remove four screws securing two end plates to either side of fork assembly, remove plates.

e. Using micrometer, measure and record dimension across two flats of fork assembly. (See Figure 1)

f. Measure and record dimension across two bolts securing tail rotor to fork assembly.

g. Subtract dimension obtained in step f. from that obtained in step e. (See example).

$$
\begin{array}{ll}
\text{Dimension step e.} & 3.504 \text{ in.} \\
\text{Dimension step f.} & -3.491 \text{ in.} \\
\hline
& 0.013 \text{ in.}
\end{array}
$$

h. Add total fork assembly preload requirement 0.007 ± 0.001 in. to dimension obtained in step g. (See example)

$$
\begin{array}{l}
0.013 \text{ in.} \\
-0.007 \text{ in.} \\
\hline
0.020 \text{ in.}
\end{array}
$$

i. Divide sum obtained in step h. by (2). (See example)

$$
\begin{array}{r}
0.010 \text{ in.} \\
2\overline{)0.020 \text{ in.}} \\
\underline{20}
\end{array}
$$

j. Prepare two shims per dimension obtained in step i.

NOTE

Shims are 0.010 in. thick made up of 0.002 in.
laminations, peel as required. Preload caused
by shims should be 0.007 ± 0.001 in. total.

k. Install M 10009-3 shims, dimple down, on head of bolts securing
tail rotor to fork.

l. Position two end plates over shimmed bolts.

m. Position balancing weight support bracket over two end plates. (See
Figure 1.)

n. Align holes in support bracket and end plates, with holes in fork
assembly.

o. Secure support and plates to fork using four screws.

p. Secure balance weight assembly to support in following sequence:
bolt, thin washer, weight, two washers; torque bolt 50 to 70 in. lbs.

NOTE

Position weight perpendicular to support so weight is
equidistant on each side of support.

q. Run up aircraft on ground, flight test checking for vibration; adjust
weight as required until vibrations are gone or least apparent.

NOTE

Weight adjustment is accomplished by moving weight
assembly to either left or right of centerline of support.
If vibration increases after moving weight, return to
original position then move weight in opposite direction.
If vibration decreases, continue to move weight in same
direction until vibration is gone or is least apparent.
A bolt, nut and washers may be added to weight assembly
for more weight, if required.

Weight & Balance Data

Weight = 0.3 lbs.   Arm 269.0

Parts Required

Nomenclature	P/N	Mfg.
Shim Installation - flapping bearing adjustment, tail rotor	M 10009	HTC-AD
Weight assembly and balancing tail rotor	M 10007	HTC-AD

Weight

Dimension, per Step f

Shim Location Two Places

Pitch Control Link

End Plate

Fork Assembly

AN4-5A Bolt (Torque 50 to 70 in.-lb)
AN960-416 L Washer

AN960-416 Washer
2 Required

Nut Plate

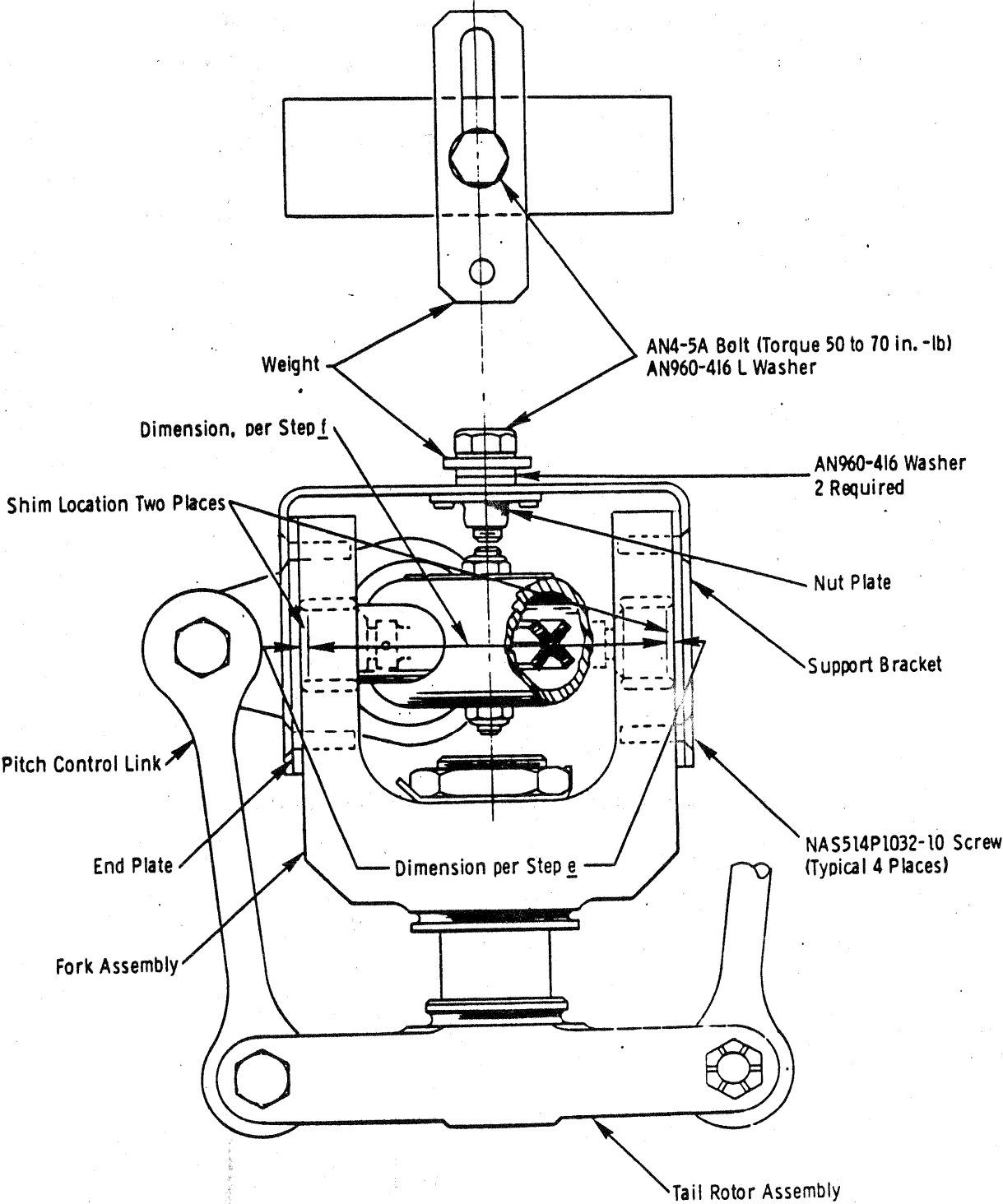Support Bracket

Dimension per Step e

NAS514P1032-10 Screw
(Typical 4 Places)

Tail Rotor Assembly

FIGURE 1. BALANCE WEIGHT INSTALLATION