TECHNICAL BULLETIN

BALLAST WEIGHT INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All MD Helicopters, Inc. (MDHI) MD600N helicopters, RN003 and subsequent.

B. Assembly/Components Affected By This Notice:

Tailboom Assembly (P/N 600N3500–503 and –505)

C. Reason:

The installation of certain optional equipment may move the aircraft fwd CG out of range. This condition would require the installation of a permanent ballast. This Bulletin provides operators with the option to install ballast weights in the tailboom assembly of their helicopters.

D. Description:

Operators can add 10, 20 or 30 pounds of ballast weight to the tailboom of their helicopter. Procedures in this Bulletin provide owners and operators with information pertaining to fabricating and installing ballast weights in the tailboom assembly. The weights come in three different sizes and are used in various combinations to gain the desired amount of ballast. 10 pounds can be obtained by installing 2 ea. –3 and –5 plates. 20 pounds can be obtained by installing 4 –7 plates only. 30 pounds can be obtained by adding 2 ea. –3 and –5 plates along with 4 –7 plates. Actual weight of plates and hardware will be used to calculate weight and balance.

E. Time of Compliance:

Customer option: shall be performed when the installation of optional equipment requires the installation of a permanent ballast.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA accepted.

G. Manpower:

10.0 man–hours.

H. Interchangeability:

None

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I. Material/Part Availability:

Contact commercial suppliers

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	**Part No.**	**Qty.**	**Source**
Plate	–3 Plate 4.50 x 5.00 x 0.250 inches	A/R	Field Fabricate Obtain lead from: MacMaster–Carr 9630 Norwalk Blvd. Santa Fe Springs, CA 90670–2932 (562)692–5911
Plate	–5 Plate 5.00 x 5.00 x 0.250 inches	A/R	Field Fabricate (see info above)
Plate	–7 Plate 17.80 x 2.88 x 0.250 inches	A/R	Field Fabricate (see info above)
Bolt	NAS6203–10	A/R	Commercially Available
Bolt	NAS6203–11	A/R	Commercially Available
Washer	NAS1149C0332R	A/R	Commercially Available
Washer	AN970–3	A/R	Commercially Available
Nut	MS21042L3	A/R	Commercially Available
Sealant	PR1422G (MIL–S–8802, Type II)	A/R	Commercially Available
Adhesive	EA9309.3 or EA9314 (HMS16–1068, CL 7)	A/R	Dexter Corporation or Commercially Available
Carbide Dagger Drill	0.1285 x 6.0	1	Industrial Tool and Supply Contact: R.J. 602–438–9323
Carbide Dagger Drill	0.191 x 3.0	1	Industrial Tool and Supply Contact: R.J. 602–438–9323
Inner Tube	650/700 x 10	1	Commercially Available
Scale	1 – 50 lbs.		Commercially Available

J. Warranty Policy:

N/A

K. Tooling:

Contact commercial suppliers.

L. Weight and Balance:

Weight and balance will have to be revised per the amount of weights installed.

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Handbook of Maintenance Instructions (CSP–HMI–2).

2. ACCOMPLISHMENT INSTRUCTIONS

Refer to Figure 1 and the Handbook of Maintenance Instructions.

(1). Remove rotating cone thruster per CSP–HMI–2, Section 53–40–30.

(2). Remove stationary thruster cone per CSP–HMI–2, Section 53–40–30.

(3). Remove Kevlar liner (P/N 500N3500–5).

(4). Use heat to soften adhesive. Do not exceed 150 degrees F. Use a thin scraper blade to pry liner free from tailboom. Avoid scratching tailboom. Do not leave scraper between liner and tailboom and allow liner to cool as the Kevlar will set.

(5). As required, cut 2 each –3, 2 each –5 and 4 each –7 plates from lead procured with a density of 0.4 pounds per cubic inch. A 12 inch x 36 inch, 1/4 inch thick is sufficient to make one set of 30 lb. ballast weights.

(6). Take lead weights and insert them into channel. It will be necessary to shape them to fit the I.D. of the tailboom. Use a sheet metal roller to shape the lead to the correct radius to fit in the boom. If a roller is not available, a 1 pound dead weight mallet will work to shape the lead into the channel. Use care when shaping the lead to not damage the tailboom.

(7). After the lead has been shaped to fit inside the tailboom, drill pilot holes in the lead with a #30 drill bit. Stack the mating plates together (both –3's, –5's and/or –7's) before drilling in order to get holes to align. Refer to Figure 1 for edge distances.

(8). Hold lead plate in place and using pilot holes in plates as a guide, drill holes in tailboom with a 0.1285 inch composite drill bit. Use sheet metal clamps to hold lead in place. Continue process until all pilot holes have been drilled.

(9). After all pilot holes have been drilled in tailboom, remove weights and drill to final dimension of 0.191 inch with composite drill bit. Drill final dimension of 0.191 inch in lead with a #11 drill bit.

(10). Clean any debris from tailboom.

(11). Weigh and record weight of plates and hardware to be installed.

(12). Coat faying surfaces with a layer of sealant (MIL–S–8802, Type II) to create a barrier between the tailboom and the plates. Install lead weights with hardware and seal around the edges after installation to prevent moisture from entering between the plates and between the plates and the tailboom.

(13). Install each pair of –3 and –5 coated plates with 4 ea. NAS6203–11 bolts, 4 ea. NAS1149C0332R washers, 4 ea. AN970–3 washers (against lead) and 4 ea. MS21042L3 nuts. Install both pair of –7 coated plates with 4 ea. NAS6203–11 bolts (aft side of plate) and 4 ea. NAS6203–10 bolts (forward side of plate) along with 8 ea. NAS1149C0332R washers, 8 ea. AN970–3 washers (against lead) and 8 ea. MS21042L3 nuts. Torque hardware 12 – 15 inch pounds plus drag torque (maximum).

(14). Reinstall liner. Skip bond a 1.00 x 1.00 inch area every 2.0 inches maximum with EA9309.3 adhesive. Hold inboard edge of liner with an inflated 650/700 x 10 inner tube. Outboard edge can be held in place using edge sheet metal clamps. Remove inner tube and clamps after 24 hours of cure time.

NOTE: If plates are ever removed, fill holes in the tailboom with PR1422G sealant.

(15). Reinstall thruster cones per HMI.

(16). Ballast weights installed at station 302.6. Operators will need to recalculate weight and balance using actual weight installed.

(17). Record compliance to this Technical Bulletin in the helicopter Log Book. Revise weight and balance using actual weight installed.

3. DISPOSITION OF PARTS REMOVED

N/A

4. POINTS OF CONTACT

For further assistance, contact your local MDHI Field Service Representative (refer to the latest revision of the *"At Your Service"* handbook for address and telephone numbers) or contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1–800–388–3378 or (480) 891–6342. DATAFAX: (480) 891–6782.

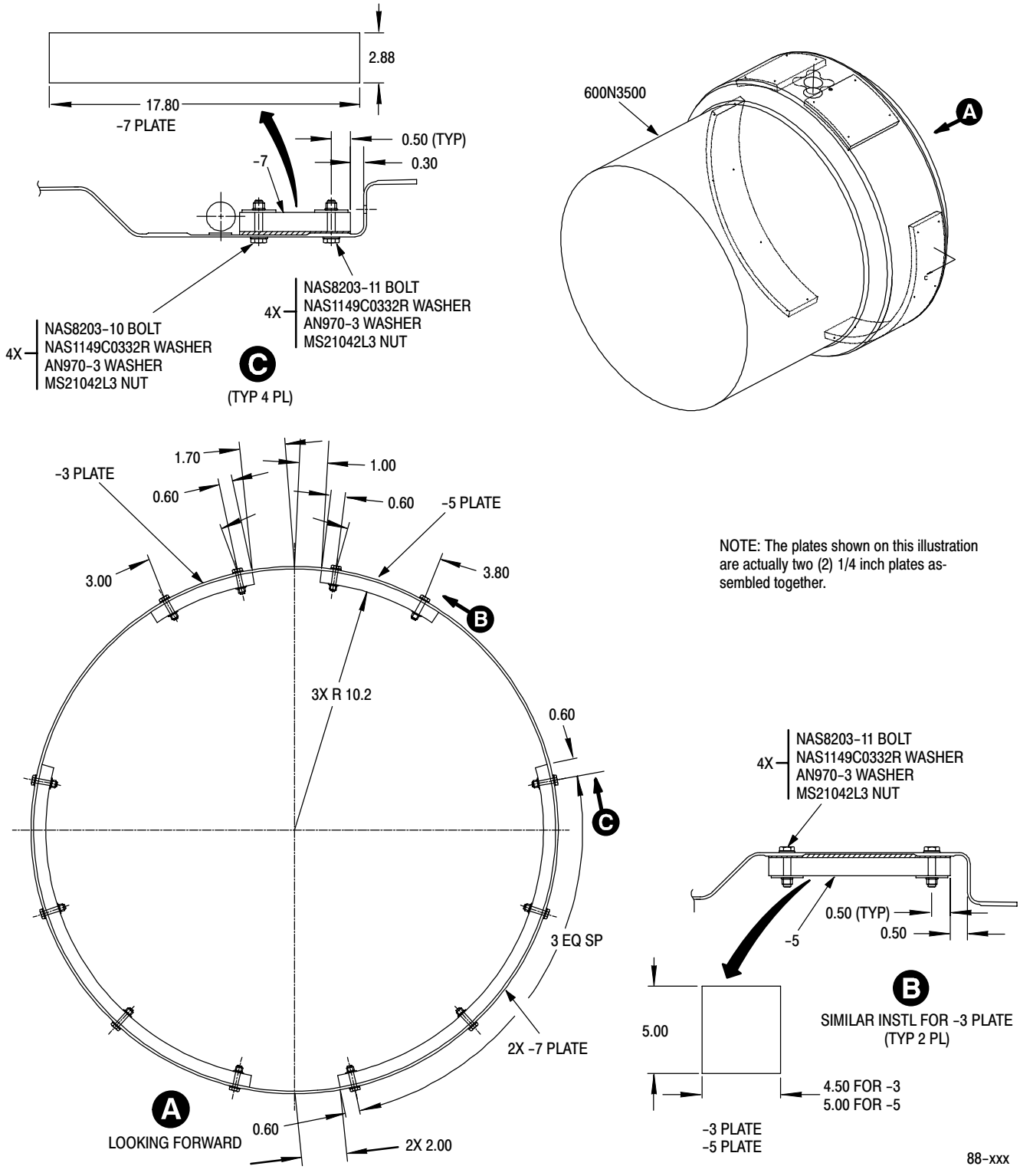

FIGURE 1. Tailboom Ballast Weight Fabrication and Installation.