



# TECHNICAL BULLETIN

\* Supersedes Service Information Notice No. DN-89.1, dated 21 August 1981

## BALANCING OF MAIN ROTOR HUB ASSEMBLY, PN 369D21200

### 1. PLANNING INFORMATION

#### A. MODELS AFFECTED:

All 500D Model 369D Helicopters

#### B. PREFACE:

This Service Information Notice provides procedures for main rotor hub balancing prior to installing one or more new blades, or one or more new dampers, when the operator wishes to check the balance of the hub alone.

#### C. TIME OF COMPLIANCE:

At owners and operators discretion.

#### D. FAA APPROVAL:

The resultant alteration to the affected helicopters described by the Field Balancing Procedure in this Notice (Bulletin) has been shown to comply with the Federal Aviation Regulations and is FAA Approved.

#### E. WEIGHT AND BALANCE:

Weight and balance not affected

#### F. REFERENCE:

500D Model 369D Basic HMI - Volume 1, Reissued 15 January 1982; Revision No. 1, 15 March 1982

#### G. TOOLS AND EQUIPMENT:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Balancer/Phazor, Chadwick-Helmuth Model 177	
Volt-ohm meter, Simpson 260	

#### H. MATERIALS:

MATERIALS			
Nomenclature	Part No.	Qty.	Source
Sealing compound, corrosion preventive (MIL-S-81733, Type II-2)	PR1436-G, Class B-2 PR14226, Class B PRI221	AR	Products Research and Chemical Corp. 543 San Fernando Rd. Glendale, Calif. 91302

DATE: 24 SEPTEMBER 1982  
PAGE 2 OF 5

# TECHNICAL BULLETIN

## I. PARTS LIST:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
(Early Configuration) Main Rotor Balance Kit, consisting of the following:	369D29999-5	1	HHI
Washer	HS1554	10	HHI
Washer	HS1555	10	HHI
Washer	AN 960C 10	100	Commercial
Washer	AN 960C 10L	100	Commercial
Screw	NAS603-56	10	Commercial
Screw	NAS603-64	10	Commercial
(Current Configuration) Main Rotor Balance Kit, consisting of the following:	369D29999-7	1	HHI
Washer	369D29934	10	HHI
Washer	369D29935	10	HHI
Washer	AN960C8	100	Commercial
Washer	AN960C8L	100	Commercial
Screw	NAS602-64P	10	Commercial
Screw	NAS602-72P	10	Commercial
Screw	NAS602-76P	10	Commercial

When ordering, specify Early Configuration Kit Part No. 369D29999-5 for Model 500D Helicopter Serial No. 0003D thru 0259D; specify Current Configuration Kit Part No. 369D29999-7 for Model 500D Helicopter Serial No. 0260D and subsequent.



# TECHNICAL BULLETIN

DATE: 24 SEPTEMBER 1982  
PAGE 3 OF 5

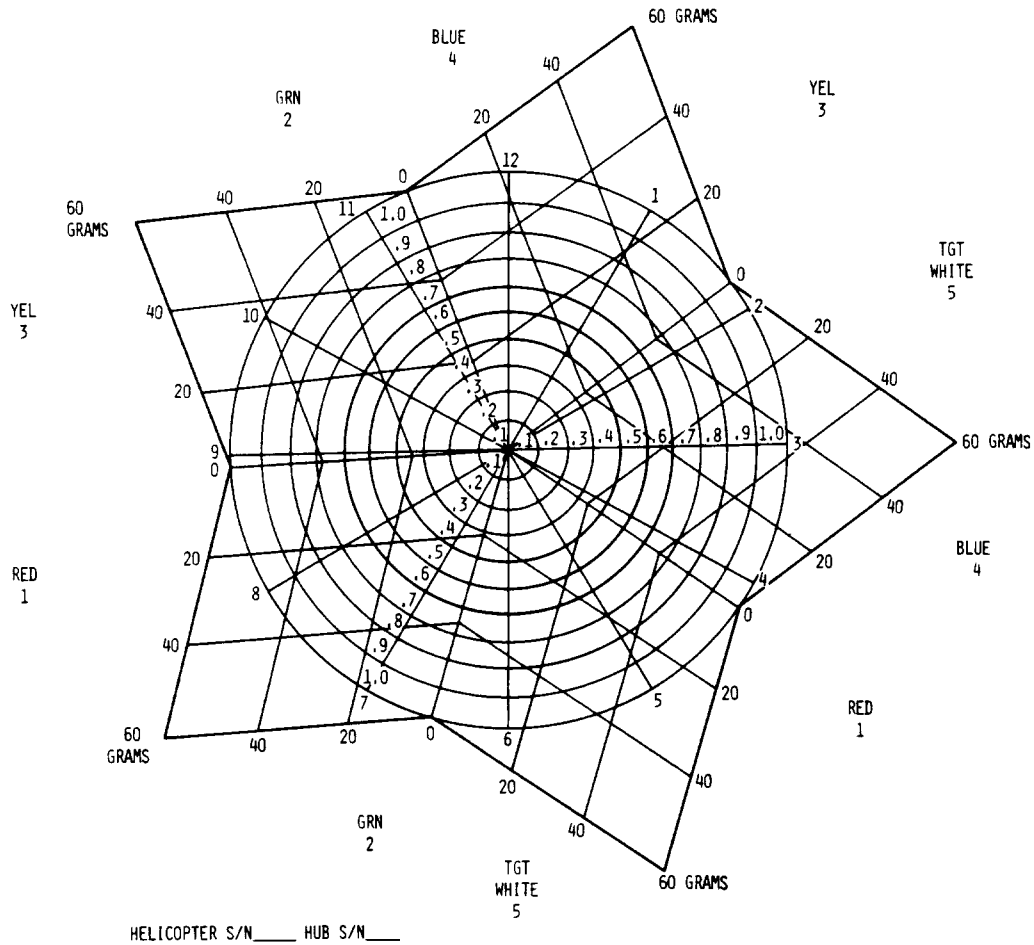
## 2. FIELD BALANCING PROCEDURE

- (1). Remove main rotor blades. (Refer to Section 7 of HMI-Vol. 1. )
- (2). Remove main rotor dampers. (Refer to Section 7 of Basic HMI-Vol. 1. )
- (3). Hook up Phazor. Refer to Chadwick-Helmuth Operation and Service Instruction HandBook No. 4313 for Helicopter Main Rotor and Tail Rotor Assemblies.
- (4). Run engine at 103 percent of N2.
- (5). Record IPS reading and direction (see Figure 1).
- (6). Plot IPS reading and direction on balance chart (see Figure 1).
- (7). Analyze chart for weight location and amount requirements.
- (8). Install weights as follows (see Figure 2):
- (9). Engage head of screw, inside lead-lag bolt, with Phillips screwdriver, then loosen locknut with 1/4-inch wrench.
- (10). Hold screw in place with screwdriver while adding or removing flat washers as required, then reinstall locknut.
- (11). Repeat steps (4). through (11). until reading is 0.15 IPS, or less.
- (12). After balance has been established satisfactorily, torque MS21042L08 locknuts to 20 to 35 inch-pounds or MS21042L3 locknuts to 30 to 60 inch-pounds as applicable. Coat screw threads, nuts and washers with PR-1436-G sealant. (To prevent imbalance, do not use excessive amount of sealant. )

**NOTE:** Intermixing of PN 369D21400-503 and M50452 main rotor blade damper assemblies in a ship set is not permitted. All dampers in ship set must be of same type and part number.

- (13). Reinstall main rotor blades per Section 7 of Basic HMI-Vol. 1.
- (14). Proceed with blade phasing per Section 7 of Basic HMI-Vol. 1.
- (15). Proceed with blade tracking per Section 7 of Basic HMI-Vol. 1.

# TECHNICAL BULLETIN



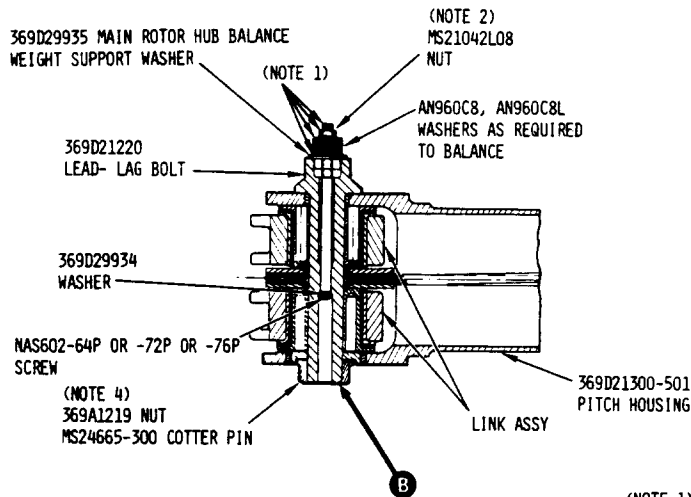
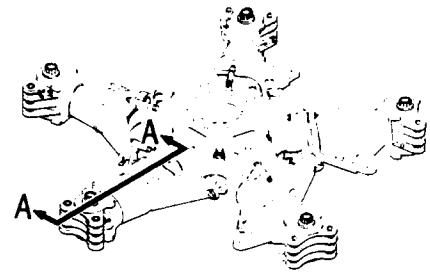
RUN NO.	IPS	CLOCK ANGLE	BALANCE WEIGHT AND LOCATION				
			(1) RED	(2) GREEN	(3) YELLOW	(4) BLUE	(5) WHITE
INITIAL							

ADN892-1

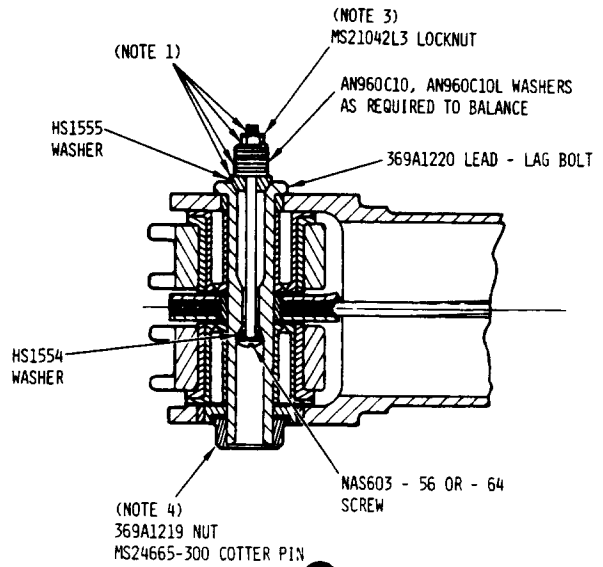
**Figure 1. Main Rotor Hub Balancing Chart**

# TECHNICAL BULLETIN

DATE: 24 SEPTEMBER 1982  
PAGE 5 OF 5



**A-A**  
SERIAL NO. 0260D AND SUBS



**B-B**  
SERIAL NO. 003D THRU 0259D

**NOTES:**

1. COAT SCREW THREADS, NUTS AND WASHERS WITH PR-1436-G, CLASS B-2 SEALANT.
2. TORQUE MS21042L08 LOCKNUT TO 20 TO 35 INCH-POUNDS.
3. TORQUE MS21042L3 LOCKNUT TO 30 TO 60 INCH-POUNDS.
4. DO NOT REMOVE OR DISTURB TORQUE ON 369A1219 NUT.

ADN892-2

**Figure 2. Main Rotor Hub Balancing**