

TECHNICAL BULLETIN
Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

No. 407-03-44

Date Oct. 15, 2003

Page 1 of 8

DATE
REV

MODEL AFFECTED: 407

SUBJECT: Mast Pole 407-040-038-101, -105 and Swashplate Drive Hub installation corrosion protection, Addition of

HELICOPTERS AFFECTED: Model 407 helicopters serial number 53000 through 53579.

[Model 407 helicopters serial number 53580 and subsequent will have the intent of this bulletin accomplished prior to delivery]

COMPLIANCE: At Customer's Option

DESCRIPTION:

This bulletin is issued to introduce procedures for added corrosion preventive measures to be performed on the main rotor mast. Part I modifies the mast pole paint scheme. Part II adds sealant to the upper edge of the swashplate boot. Part III changes the corrosion preventive compound and the installation procedures of the swashplate drive hub set.

APPROVAL:

Engineering aspects of this bulletin are Transport Canada approved.

MANPOWER:

No additional man hours are required if accomplished during normal maintenance or overhaul.

MATERIALS:

None required.

Consumable Material:

The following material is required to accomplish this bulletin, however this material is considered consumable (bench stock) material and may not require ordering depending on the operators consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Reference</u>
MIL-P-85582, TY1, CL2	Epoxy polyamide primer	C-204 (Note 1)
MILC85285, TYI, 16440	Polyurethane enamel Color 16440 per Federal Standard 59	C-245
THIXOGREASE	Grease	C-561 (Note 2)
ACETONE GALLON	Solvent	C-316 (Note 3)
MILS29574TYI CLB 6OZ	Sealant	C-396
MIL-C-16173, GR1 2OZ	Corrosion Preventive Compound	C-101
CCCC0046	Cheese Cloth, Bleached or equivalent	C-486

NOTES:

1. As an alternate, use MIL-PRF-85582, type 1, class C2 or MIL-PRF-23377, type 1, class C.
2. Only Thixogrease NLGI#2 is approved for use in this area.
3. As an alternate, use Methyl Ethyl Ketone (C-309).

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-407-MM-6, CHAPTER 63, REVISION 12.
BHT-407-MM-8, CHAPTER 67, REVISION 17.

PUBLICATIONS AFFECTED:

BHT-407-MM-6, CHAPTER 63, REVISION 12.
BHT-407-MM-8, CHAPTER 67, REVISION 17.
BHT-407-CR&O, CHAPTER 63, REVISION 1.

ACCOMPLISHMENT INSTRUCTIONS:

The accomplishment instructions are separated into **THREE PARTS**. The parts may be accomplished individually or all at the same time.

PART I Modification of the Mast Pole paint scheme.

1. The mast painting requirements, as indicated in the BHT-407-CR&O-6, Chapter 63 are changed to include the areas indicated in figure 1 of this bulletin. Following a thorough cleaning and visual inspection of the swashplate drive splines on the main rotor mast, paint the areas as shown in figure 1 with one coat of epoxy polyamide primer (C-204) and two coats of polyurethane paint (C-245) color 16640 per FED-STD-595
2. If part I of this Technical Bulletin has been completed, reidentify the mast data plate. If you have a 407-040-038-101 mast, vibroetch the data plate with a vibrating stylus to read 407-040-038-101FM. If you have a 407-040-038-105 mast, vibroetch the data plate with a vibrating stylus to read 407-040-038-105FM. The depth of the vibroetch must not exceed 0.005 inch (0.127 mm).
3. Make an entry in the Mast Historical Service Record to indicate which part(s) of this Technical Bulletin have been completed and if applicable, indicate the part number change.

PART II Addition of sealant to the swashplate boot.

1. Clean the faying surfaces of the mast and the upper ID of the swashplate boot with a clean cloth dampened with ACETONE (C-316) or MEK (C-309).
2. Following the installation of the swashplate boot, apply a bead of sealant (C-396) to the top edge of the boot and mast interface. Smooth and fair the sealant to the mast. Reference figure 2.
3. Make an entry in the Aircraft historical records to indicate which part(s) of this Technical Bulletin have been completed.

PART III Change to the Swashplate Drive Hub Set installation procedures

A) Change to Mast spline corrosion preventive compound.

CAUTION

DO NOT ALLOW CORROSION PREVENTIVE COMPOUND
ON THREADS OF THE NUTS OR BOLTS.

1. The spline corrosion preventive compound used for the installation of the swashplate drive hub set, as indicated in the BHT-407-MM-8, Chapter 67 has changed. Install the swashplate drive hub set per BHT-407-MM-8, CHAPTER 67 with the exception that you must apply a light coating of Grease (C-561), instead of lubricant (C-104) to the splines.

B) Change to Swashplate Drive Hub Set installation procedures.

CAUTION

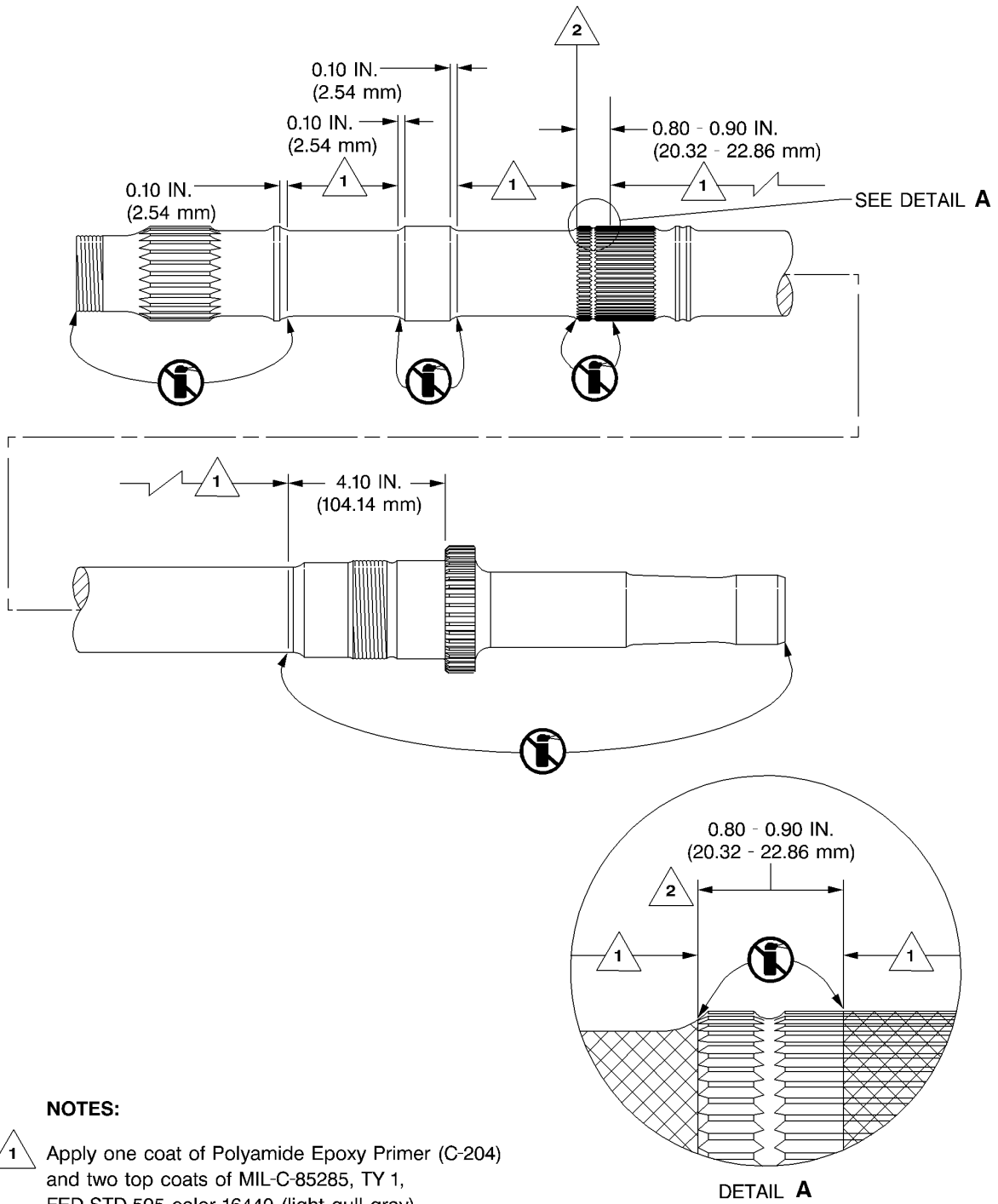
TO AVOID DILUTING OR WASHING OUT THE SPLINE
LUBE, DO NOT FLOOD THE AREA OF THE SPLINES
WITH SOLVENT (C-316).

1. Following the installation of the swashplate drive hub set per BHT-407-MM-8, wipe clean the upper area of the mast and swashplate drive hub set interface as well as the side gaps of the two pieces of swashplate drive the hub set with a clean cloth dampened with solvent (C-316). Refer to figure 2.

-NOTE-

The lower interface between the mast and swashplate drive hub set interface is to remain open and free of sealant.

2. Apply a 0.125 to 0.250 inch (MM) bead of sealant (C-396) around the upper interface of the mast and hub set. Also fill in the side gaps of the swashplate drive hub set with sealant (C-396). Refer to figure 3. Smooth and fair the sealant. If Part III of this TB has been accomplished, smooth and fair the sealant to overlap the paint on the mast by 0.10 inch (MM).
3. Prior to installing the swashplate drive gimbal to the swashplate drive hub set, coat the exposed (non painted) mast splines with grease (C-561).
4. Make an entry in the Aircraft historical records to indicate which part(s) of this Technical Bulletin have been completed.



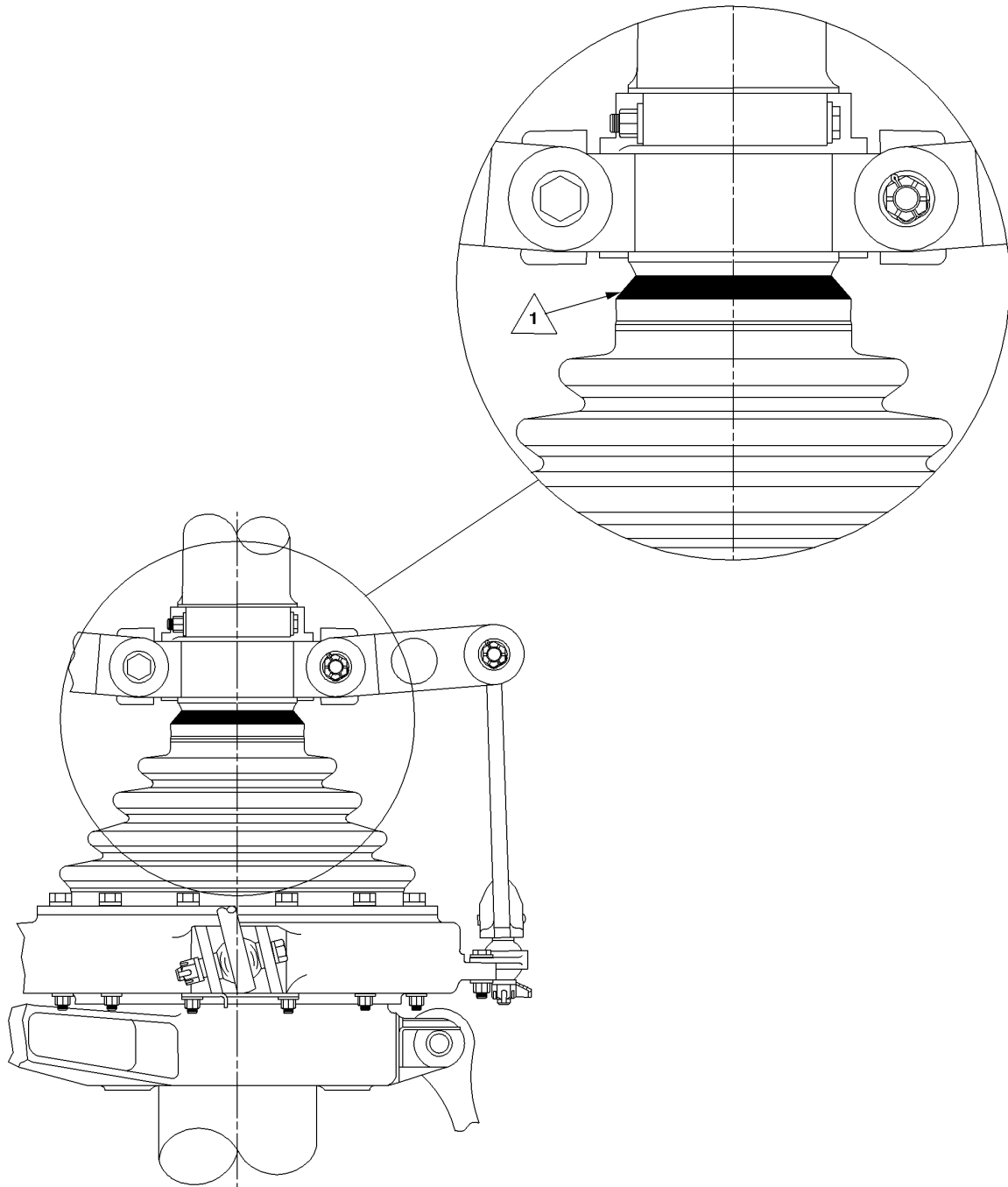
NOTES:

1 Apply one coat of Polyamide Epoxy Primer (C-204) and two top coats of MIL-C-85285, TY 1, FED-STD-595 color 16440 (light gull gray).

2 Paint to the edge of the minor diameter of the splines.

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Figure 1. Primer and paint application

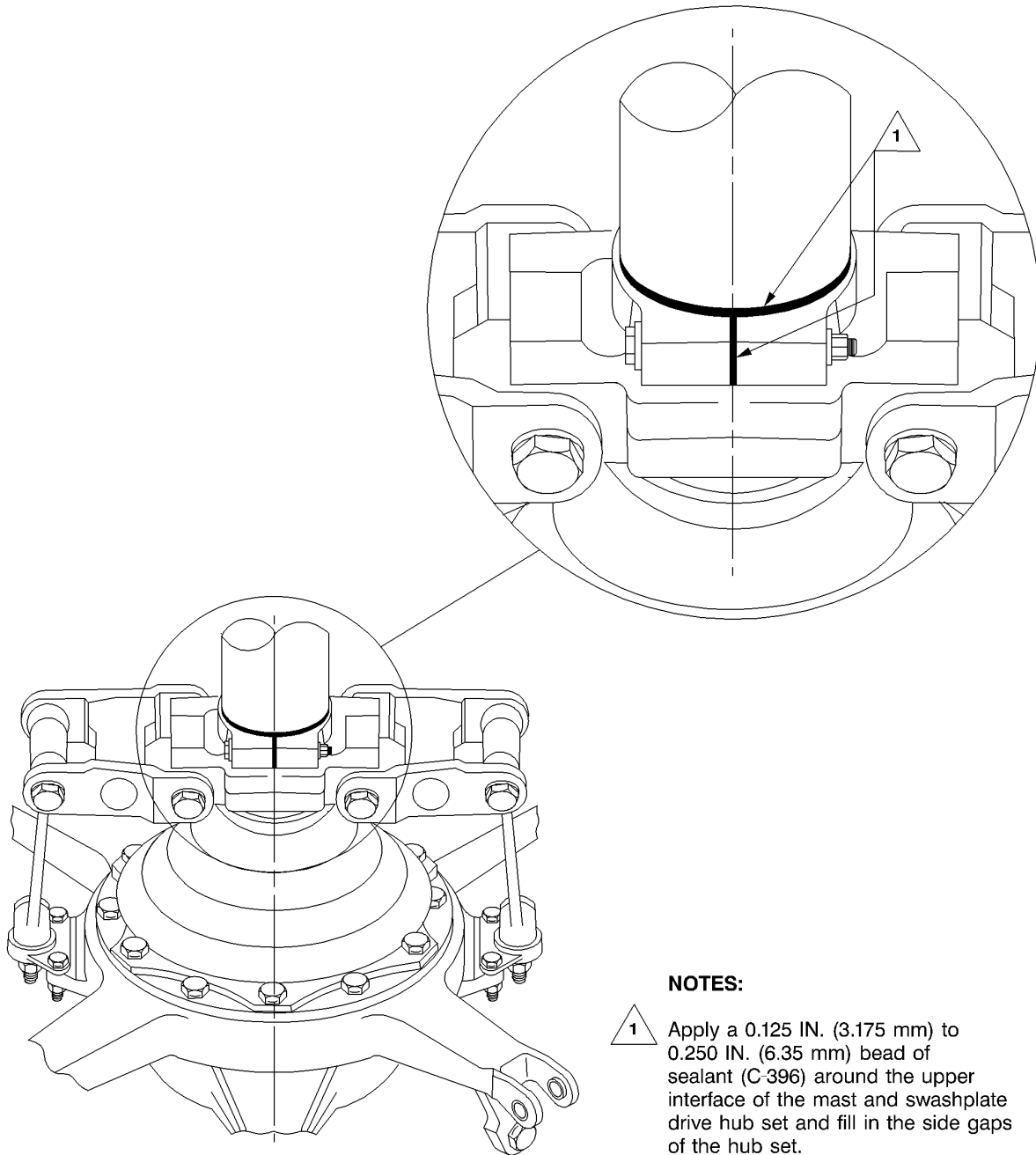


NOTE:

- 1 Apply a bead of sealant (C-396) to the top of the swashplate boot and mast interface.

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Figure 2. Sealant application to the swashplate boot



NOTES:

- 1 Apply a 0.125 IN. (3.175 mm) to 0.250 IN. (6.35 mm) bead of sealant (C-396) around the upper interface of the mast and swashplate drive hub set and fill in the side gaps of the hub set.
2. The lower interface between the mast and hub set interface is to remain open and free of sealant.

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Figure 3. Sealant application to the hub set