TO: ALL HOLDERS OF MAIN GEAR UPLOCK ASSEMBLY OVERHAUL MANUAL, 32-17-01

REVISION NO. 57, DATED NOV 1/08

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED												
	D&O	D/Assy	Cleaning	Insp/Chk	Repair	Assy	F/C	Test	T/Shooting	S/Tools	Storage	IPL	L/Overhaul
Removed extraneous circle 6 callout from the picture					X								

MAIN GEAR UPLOCK ASSEMBLY

32-17-01

BOEING P/N 65-46141-5 thru -12, -15 thru -26

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 30490	Aug 15/67
32-1083			Jan 5/83
32-10-83, Rev 1			Jan 5/83
		PRR 34401	Jun 5/88

LIST OF EFFECTIVE PAGES

* Indicates pages revised, added or deleted in latest revision
F Indicates foldout pages - print one side only

	PAGE	DATE	PAGE	DATE	PAGE	DATE
	32-17-01		603	Nov 1/07		
	T-1	Sep 5/93	604	Jul 1/07		
	T-2	BLANK	605	Nov 1/07		
*	LEP-1	Nov 1/08	606	Nov 1/07		
	LEP-2	BLANK	1101	Jul 1/04		
	T/C-1	Jan 5/81	1102	Jul 1/04		
	T/C-2	BLANK	1103	Mar 1/99		
	1	Jun 25/74	1104	Jul 1/04		
	2	Aug 15/67	1105	Jul 1/08		
	101	Dec 5/93	1106	Jul 1/02		
	102	BLANK	1107	Jul 1/02		
	301	Mar 1/08	1108	Nov 1/07		
	302	BLANK				
	401	Jul 1/04				
	402	Nov 1/01				
	403	Jul 1/04				
	404	Jul 1/04				
	405	Jul 1/04				
	406	Mar 1/01				
	407	Jul 1/99				
	408	Nov 1/02				
	408A	Jul 1/04				
	408B	Mar 1/06				
	409	Nov 1/07				
	410	Jul 1/04				
	411	Jun 1/96				
*	412	Nov 1/08				
	412A	Jul 1/01				
	412B	Mar 1/08				
	412C	Mar 1/08				
	412D	BLANK				
	413	Mar 1/00				
	414	Mar 1/08				
	415	Mar 1/00				
	416	Jul 1/06				
	417	Nov 1/06				
	418	Nov 1/06				
	419	Nov 1/06				
	420	Nov 1/06				
	501	Jul 1/01				
	502	BLANK				
	601	Sep 1/94				
	602	Mar 1/06				

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*[1] Special instructions not required. Use standard industry practices and the information contained in 20-30-03.

*[2] Special instructions not required. Use standard industry practices and the information contained in 20-44-02.

MAIN GEAR UPLOCK ASSEMBLY

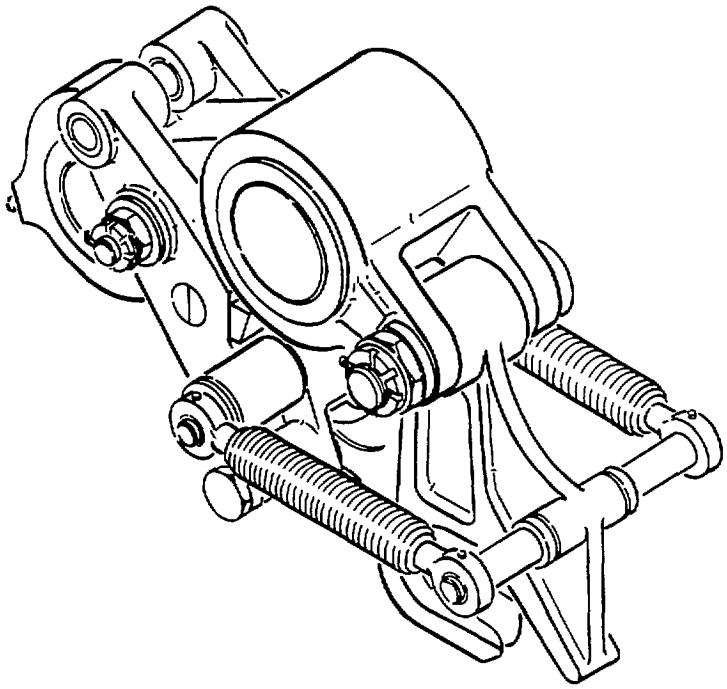


Figure 1. Main Gear Uplock Assembly

DESCRIPTION AND OPERATION

1. Description

A. The main gear uplock assembly consists of an uplock bellcrank assembly which supports two link assemblies and a hook assembly. A stop link assembly connects the hook assembly with the two link assemblies. Two tension springs located between the hook and the link assemblies pull the hook against stops on the two links.

2. Operation

A. Rotation of the two link assemblies about a pin supported in the bellcrank assembly causes the stop link to rotate stretching the two springs until the over-center position is reached. At this point the spring force pulls the hook back until the stops on the stop link assembly contact the stop of the two link assemblies.

3. Leading Particulars

Length (over all) -- 12 inches
Height (over all) -- 8 inches
Width (over all) -- 5.5 inches
Weight -- 16.8 pounds

DISASSEMBLY

1. Remove spring pins (1), uplock spring assemblies (2) and washer (5). Disassemble parts (6 through 8) (Fig. 1101).

   CAUTION: SPRING TENSION IS APPROXIMATELY 25 POUNDS.

2. Remove parts (9 thru 12) and stop link (13).

3. Remove parts (17 thru 19), bracket (63), washer (64) (if used), parts (20 thru 24) if applicable, links (25 and 29) and link (33).

4. Disassemble parts (39 thru 42) to separate hook (43) and uplock bellcrank (48). Remove parts (65 thru 69) if included with hook.

INSPECTION/CHECK

1. Examine all parts for defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.

2. Do a magnetic particle check per SOPM 20-20-01 on pins (6, 7), bolts (12, 19, 42), links (16, 28, 32, 37, 38), hook (47), and bellcrank (54).

3. Do a penetrant check per SOPM 20-20-02 on uplock spring assemblies (2).

4. Extend spring (2) to 5.82 inches. The load to do this must be 24-32 lb. Free length is approximately 4.33 inches.

REPAIR

1. Repair (Fig. 1101)

   A. General

      (1) Repair small defects by standard industry practices. Refer to Fits and Clearances for design dimensions and wear limits.

      (2) Refer to SOPM 20-10-01 and CMM 32-00-05 for repair of high strength steel parts.

   B. Pins (6, 7), Bolts (12, 19, 42) (Fig. 401)

      (1) Machine OD as required, within repair limits, to remove defects.

      (2) Shot peen as indicated.

      (3) If applicable, build up machined surface with chrome plate and grind to design dimensions and finish.

   C. Lugs and Holes (Fig. 402 thru 405)

      (1) Machine as required, within repair limits, to remove defects.

      (2) Shot peen as indicated, if applicable.

      (3) If the lug faces were machined, restore with the indicated plating buildup before you install the repair sleeves or oversize bushings.

      (4) Make repair sleeves or oversize bushings, as applicable, per Fig. 406 and 407. Or, for self-lubricated bushings, get the repair equivalent bushings and machine their OD to get the interference fit shown for sleeve repairs. Be sure to restore the edge chamfer of the OD.

      (5) Install repair sleeves or oversize bushings by the shrink fit method per SOPM 20-50-03. Machine bores to design dimensions per Fig. 402 thru 405 and 408.

         NOTE: Bellcrank assembly (48) uses bearing (49) which could be with or without lube passages. If the replacement bearing has lube passages, be sure to drill a hole through the wall of the repair sleeve in line with the lube hole in the bellcrank. Break sharp edges, and make sure the lube passage is clear. Then install a replacement lube fitting (53) per par. 3.D. below. If the replacement bearing does not have lube passages, it is not necessary to drill the hole through the sleeve or to install a lube fitting. Fill the lube hole in the bellcrank with BMS 5-95 sealant and refinish as necessary. If you do this, we recommend that you identify this bellcrank to tell you that lubrication of the bearing is not necessary.

      (6) Install teflon-lined bushings in sleeves by the shrink fit method per SOPM 20-50-03. Teflon-lined bushings do not require machining after installation.

      (7) On bellcrank (48), install bearing (49) into sleeve per par. 3.D. Or, if applicable, get and install an oversize bearing in the oversize hole per par. 3.D.

2. Refinish (Fig. 1101)

NOTE: Refer to SOPM 20-41-01 for explanation of F and SRF finish codes. Refer to SOPM 20-30-02 for stripping of protective finishes.

A. Spring assembly (2) -- Fig. 402.

B. Spacer (8) -- Passivate (F-17.25, which replaces F-17.09) all over. Material: AISI 302 CRES per QQ-S-763, Class 302, Condition A.

C. Pins (6, 7), bolts (12, 19, 42) and roller (61) -- Fig. 401.

D. Stop link (16) – Fig. 403

E. Link assemblies (25, 29, 33) -- Apply BMS 10-11, Type 2 enamel (SRF-12.63 or F-21.02) all over but not on bushings.

F. Links (28, 32, 37, 38)

(1) 65-46144-series -- Cadmium-titanium plate (F-1.308, which replaces F-1.181) and apply BMS 10-11, Type 1 primer (SRF-12.205 or F-20.02) all over. Material: 4340M steel, 270-300 ksi.

(2) 65-63667-series -- Cadmium-titanium plate (F-15.01) and apply BMS 10-11, Type 1 primer (F-20.02) all over. Material: 4340M steel, 270-300 ksi.

G. Spacer (41) -- Cadmium plate (F-1.32) all over. Material: 4340 steel, 125-145 ksi.

H. Hook assembly (43) -- Fig. 404.

I. Hook (47) -- Fig. 404.

J. Bellcrank assembly (48) -- Fig. 405.

K. Bellcrank (54) -- Fig. 405.

L. Spacer (62) -- Passivate (F-17.25, which replaces F-17.09). Material: 17-4PH CRES,180-200 ksi.

M. Actuator (63) --

(1) 69-42744-11, -12 -- Cadmium plate and apply BMS 10-11, Type 1 primer (F-16.01). Apply BMS 10-60 enamel (F-14.9813, which replaces SRF-14.9813). Material: 1020 steel.

(2) 69-42744-13 thru -18 -- No finish. Material: HYMU 80 steel or molypermalloy.

(3) 69-62779-5, -6, -9, -10 -- Cadmium plate and apply BMS 10-11, Type 1 primer (F-16.01, which replaces F-16.02). Material: 4130 steel, 125-145 ksi.

(4) 69-62779-11, -12 -- Cadmium plate and apply BMS 10-11, Type 1 primer (F-16.01). Apply BMS 10-60 enamel (F-14.9813, which replaces SRF-14.9813). Material: 4130 steel, 125-145 ksi.

N. Bracket (65) --

(1) 69-42744-7, -8 -- Chemical treat and apply BMS 10-11, Type 1 primer (F-18.06). Apply BMS 10-60 enamel (F-14.9813, which replaces SRF-14.9813). Material: Al alloy.

(2) 69-68779-1, -2 Assemblies

(a) Brackets 69-68779-3, -4 -- Chemical treat and apply BMS 10-11, Type 1 primer (F-18.06). Apply BMS 10-60 enamel (F-14.9813, which replaces SRF 14.9813). Material: Al alloy.

(b) Angles 69-68779-7, -8 -- Chromic acid anodize and apply BMS 10-11, Type 1 primer (F-18.13). Apply BMS 10-11, Type 2 enamel (F-21.02). Material: Al alloy.

3. Replacement (Fig. 1101)

A. Replace all cotter pins and lockwire.

B. Bushings -- Press out the old bushings. Install replacement bushings by the shrink fit method (SOPM 20-50-03). Machine the bushing ID to design dimensions and finish (Fig. 408).

C. Bearing (49) – Remove the old bearing. Roller swage a replacement bearing (SOPM 20-50-03). On 65-63663 series bellcrank (48), use type 3 retention with grease on mating surfaces. The bearing must not come loose or move when a push-out load of 4670 lb. is applied to outer race.

D. Lube fitting (53) -- If you did not fill the lube passage in the bellcrank with sealant, replace the lube fitting per CMM 32-00-03.

4. Materials

NOTE: Equivalent substitutes can be used.

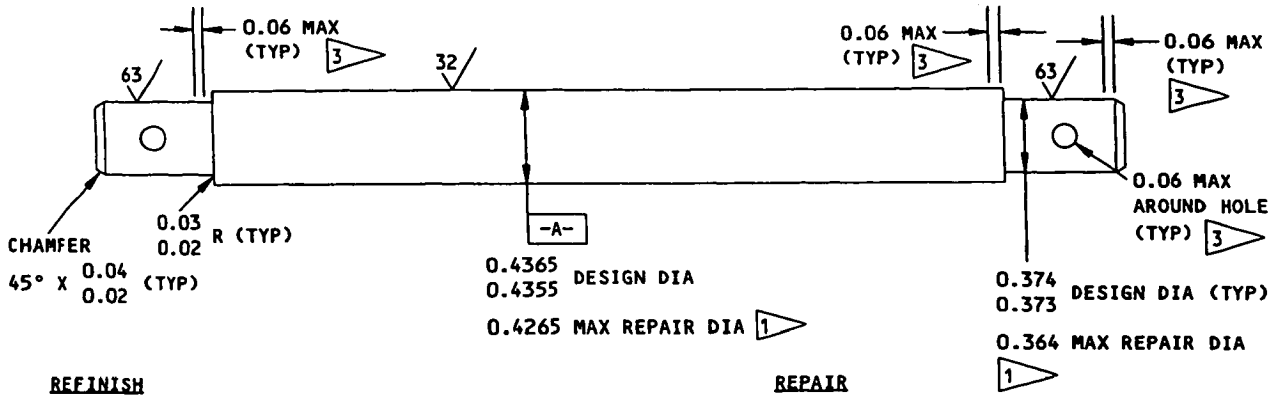
A. Primer -- BMS 10-11, Type 1 (SOPM 20-60-02)

B. Enamel -- BMS 10-60 (SOPM 20-60-02)

C. Dry solid film lubricant -- BMS 3-8 (SOPM 20-50-08)

D. Corrosion preventive compound -- MIL-C-11796, class 3 (SOPM 20-60-02)

E. Grease -- BMS 3-24 (preferred) or MIL-G-21164 (SOPM 20-60-03)



REFINISH

CHROME PLATE (F-15.04) DIA -A-, 0.002 MIN THICK AFTER GRINDING. CADMIUM-TITANIUM PLATE (F-15.01) ALL OTHER SURFACES. CADMIUM-TITANIUM PLATING THROW IN IS PREFERRED IN HOLES

REPAIR

REF 1

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

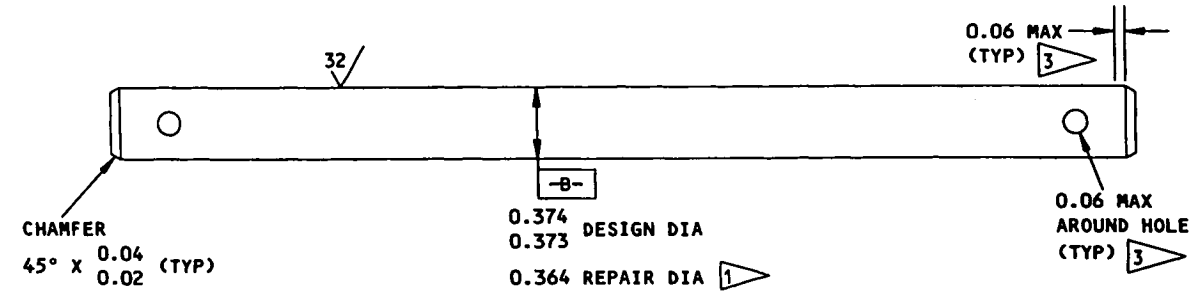
BREAK SHARP EDGES 0.01-0.03R

MATERIAL: 4340M STEEL, 270-300 KSI

DIMENSIONS ARE AFTER PLATING

ALL DIMENSIONS ARE IN INCHES

PIN (6)



REFINISH

CHROME PLATE (F-15.04) DIA -B-, 0.002 MIN THICK AFTER GRINDING. CADMIUM PLATE (F-1.32) ALL OTHER SURFACES. CADMIUM PLATING THROW IN IS PREFERRED IN HOLES

REPAIR

REF 1

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02-0.04R

MATERIAL: 4340M STEEL, 180-200 KSI

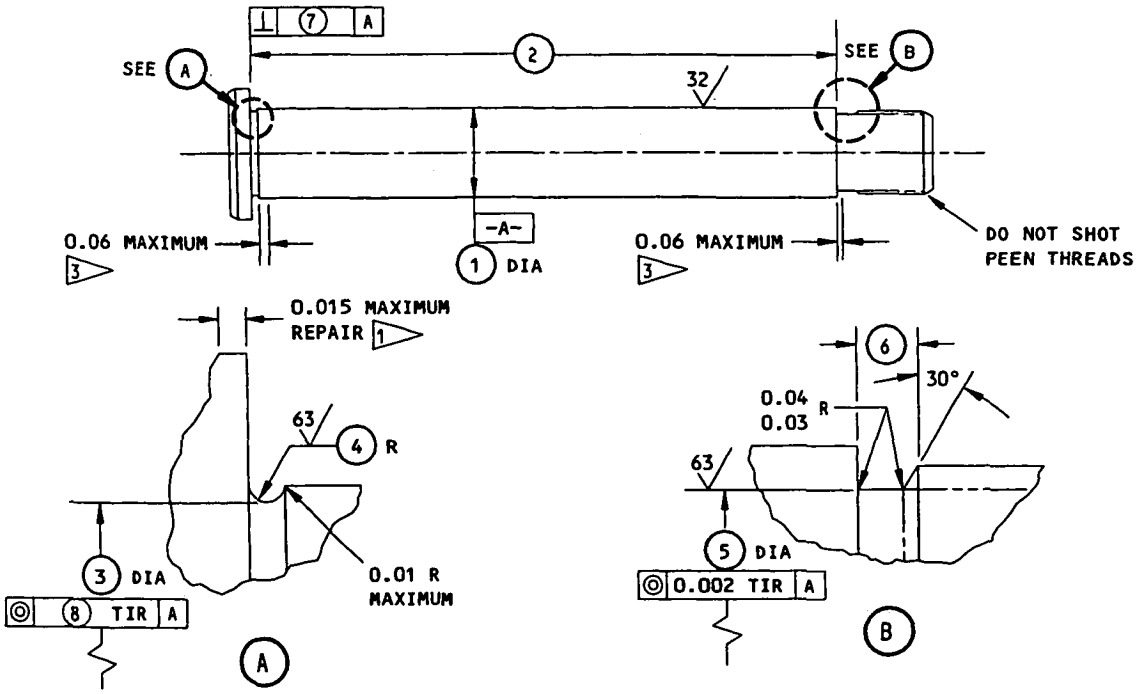
DIMENSIONS ARE AFTER PLATING

ALL DIMENSIONS ARE IN INCHES

PIN (7)

Pin and Bolt Repair and Refinish
Figure 401 (Sheet 1)

H98115



REFINISH

CHROME PLATE (F-15.04) DIA -A-, 0.002 MIN THICK AFTER GRINDING. CADMIUM-TITANIUM PLATE (F-15.01) ALL OTHER SURFACES.

REPAIR

REF 1 2

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

SHOT PEEN (REF SOPM 20-10-03)
0.016-0.033 SHOT SIZE
0.009-0.015 A2 INTENSITY

MATERIAL: 4340M STEEL, 270-300 KSI

DIMENSIONS ARE AFTER PLATING.

ALL DIMENSIONS ARE IN INCHES.

		(1)	(2)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
BOLT (12)	DESIGN DIM	0.374 0.373	2.79 2.78	—	0.358 0.354	0.04 0.03	0.252 0.247	0.093 0.073	0.002	0.004
	REPAIR LIMIT	0.364 1 8	—	—	0.334 2	—	0.230 2	—	—	—
BOLT (19)	DESIGN DIM.	0.5615 0.5605	2.98 2.97 4	2.33 2.32 5	0.5430 0.5400	0.05 0.04	0.314 0.309	0.093 0.073	0.005	0.005
	REPAIR LIMIT	0.5340 1	—	—	0.5075 2	—	0.285 2	0.104 2	—	—
BOLT (42)	DESIGN DIM	0.749 0.748	2.400 2.385 6	1.885 1.880 7	0.740 0.730	0.05 0.04	0.544 0.537	0.177 0.157	0.001	0.002
	REPAIR LIMIT	0.732 1	—	—	0.704 2	—	0.534 2	—	—	—

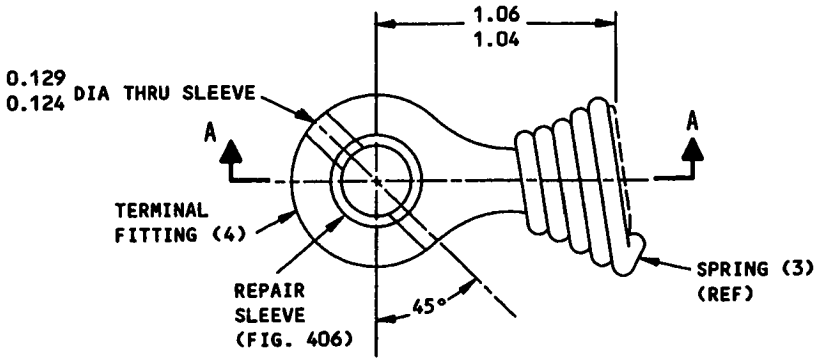
BOLTS (12, 19, 42)

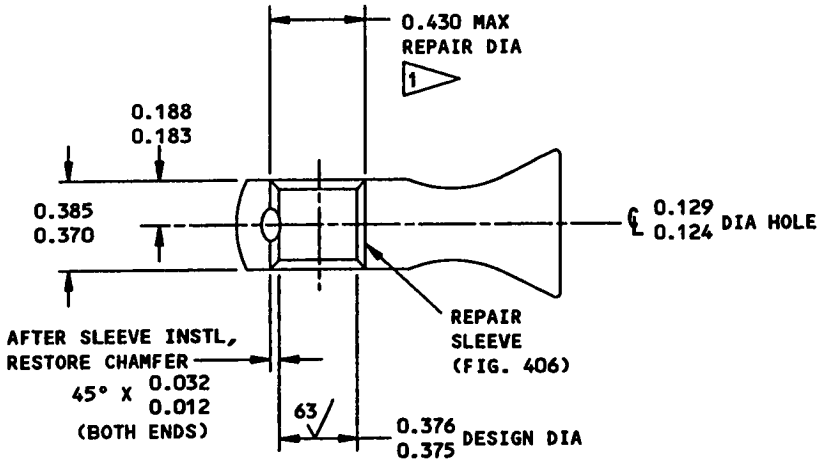
Pin and Bolt Repair and Refinish
Figure 401 (Sheet 2)

H98148

1. LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03) AND GRIND TO DESIGN DIMENSIONS AND FINISH. PUT A PLATING RUNOUT AS SHOWN.
2. RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED. REFINISH AS INDICATED.
3. CHROME PLATE RUNOUT
4. 69-39461-1
5. 69-39461-2
6. 69-39463-1
7. 69-39463-2
8. IF MORE REPAIR THAN THIS IS NECESSARY, THE PART MUST BE REMOVED FROM SERVICE.

Pin and Bolt Repair and Refinish
Figure 401 (Sheet 3)





A-A

REFINISH

DRY ABRASIVE BLAST PER SOPM 20-30-03 WITH THE SPRING EXTENDED, TO GET AT ALL SURFACES.

1 LIMIT FOR INSTL OF REPAIR SLEEVE (SEE FIG. 406)

REPAIR

REF 1

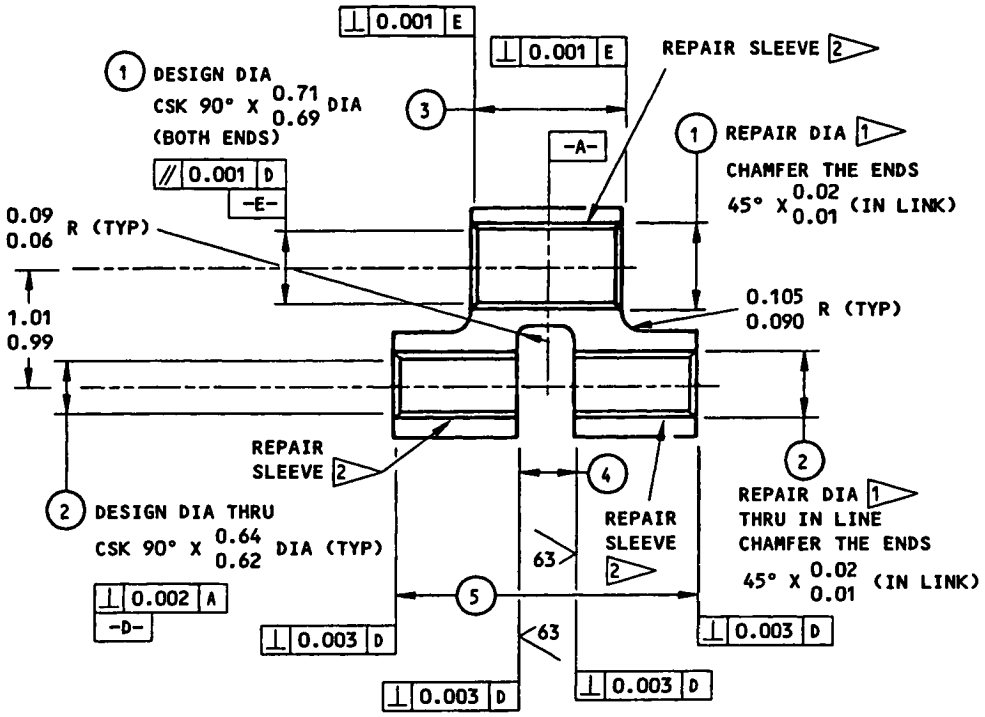
125 MACHINE FINISH EXCEPT AS NOTED

BREAK SHARP EDGES

MATERIAL: TERMINAL (4): AISI 303 CRES, PER QQ-S-763, CLASS 303, CONDITION A

ALL DIMENSIONS ARE IN INCHES

SPRING ASSEMBLY (2)
Spring Assembly Repair and Refinish
Figure 402



	1	2	3	4	5
DESIGN DIM	0.6256 0.6250	0.5631 0.5625	1.301 1.300	0.510 0.501	2.65 2.63
REPAIR LIMIT	0.6860 1 3	0.6230 1	—	—	—

REFINISH

PASSIVATE (F-8.07)

REPAIR

REF 1 2 3

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.03R

MATERIAL: 17-4PH CRES, 180-200 KSI

ALL DIMENSIONS ARE IN INCHES

1 LIMIT FOR INSTALLATION OF REPAIR SLEEVE (SEE FIG. 406)

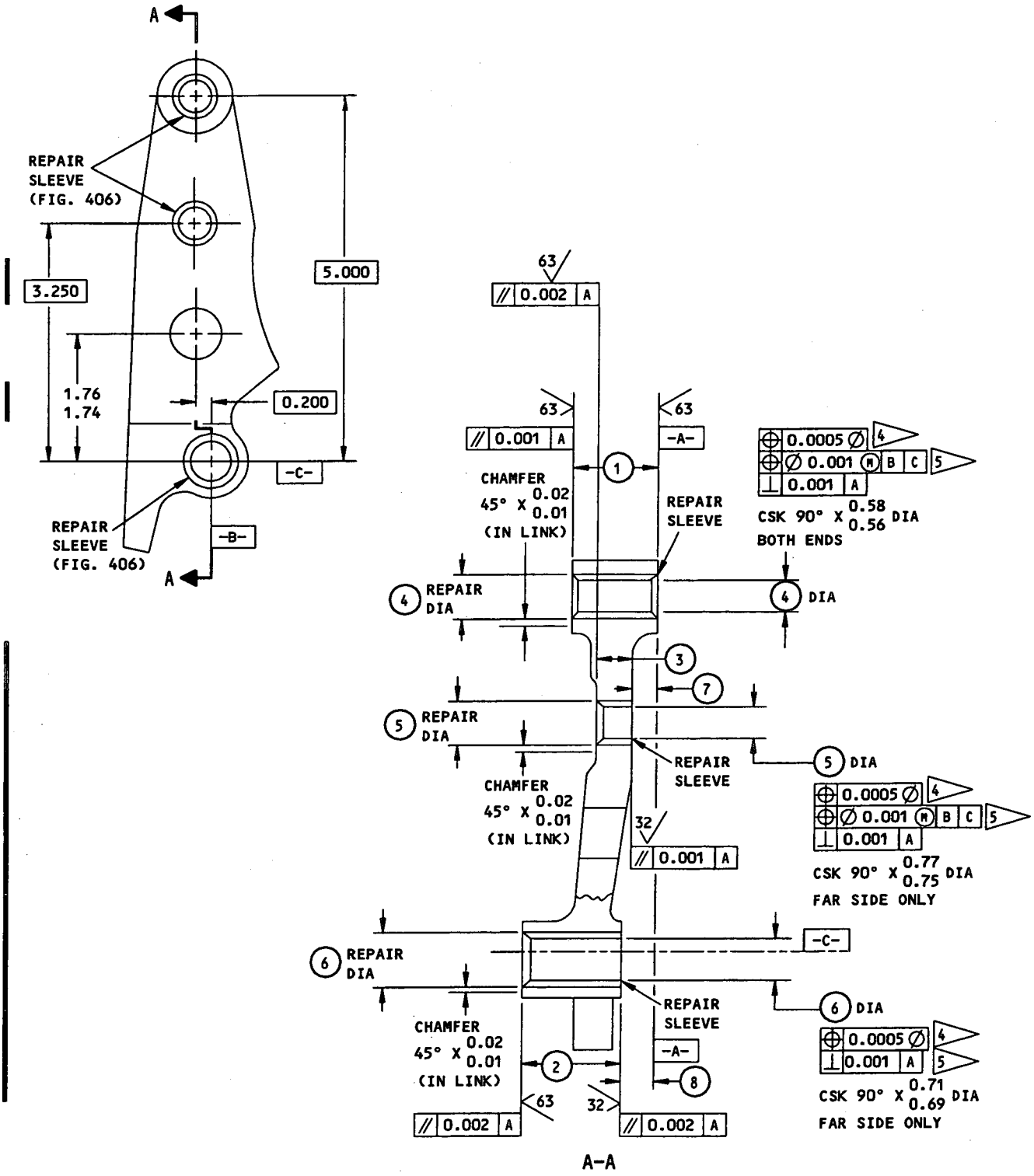
2 THE ENDS OF THE INSTALLED REPAIR SLEEVE MUST BE AT OR 0.005 MAXIMUM BELOW THE LINK FACES.

3 LIMIT FOR INSTALLATION OF OVERSIZE REPAIR BUSHING PER PARTS LIST, WITH OD ADJUSTED TO GIVE SAME INTERFERENCE FIT AS THE REPAIR SLEEVE.

STOP LINK (16)

Stop Link Repair and Refinish
Figure 403

E87177



UPLOCK LINK (28, 32, 37, 38)

Uplock Link Repair
Figure 403A (Sheet 1)

	(1)	(2)	(3) 4	(3) 5	(4) 4 6	(4) 7	(5)	(6)	(7) 5	(8) 5
DESIGN DIM	1.140 1.135	1.280 1.270	0.678 0.670	0.565 0.555	0.501 0.500	0.502 0.501	0.6884 0.6875	0.6259 0.6250	0.283 0.275	0.465 0.462
REPAIR LIMIT	1.100 3 12	1.240 9 11 1.230 1.220 10	—	0.525 9 0.515 0.505 10	0.650 1 12	0.562 1	0.7480 1 8	0.6860 1 8	—	—

1 LIMIT FOR REPAIR SLEEVES (SEE FIG. 406)

2 THE ENDS OF THE INSTALLED SLEEVES MUST BE AT OR 0.005 MAX BELOW THE FACES OF OF THE LINK

3 IF MATERIAL REMOVAL IS 0.015 OR LESS, LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03) AND GRIND TO DESIGN DIM AND FINISH. IF MATERIAL REMOVAL IS MORE THAN 0.015, LIMIT FOR NICKEL PLATE BUILDUP (SOPM 20-42-09) 0.001 MIN THICK FOLLOWED BY CHROME PLATE BUILDUP (SOPM 20-42-03) 0.015 MAX THICK, AND GRIND (SOPM 20-10-04) TO DESIGN DIMENSIONS AND FINISH.

4 65-46144-SERIES

5 65-63667-SERIES

6 65-63667-7,-8,-11,-12,-15,-16,-19,-20

7 65-63667-23,-24,-27,-28

8 LIMIT FOR INSTALLATION OF OVERSIZE REPAIR BUSHING PER PARTS LIST, WITH OD ADJUSTED TO GIVE SAME INTERFERENCE FIT AS THE REPAIR SLEEVE.

9 LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03). PUT A 0.030 PLATING RUNOUT AT RADII AND BORE EDGES.

REPAIR

REF 1 2 3 8 THRU 12

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.03R

SHOT PEEN (SOPM 20-10-03):

0.017-0.046 SHOT SIZE
0.010-0.016 A2 INTENSITY

MATERIAL: 4340M STEEL, 270-300 KSI

DIMENSIONS ARE BEFORE PLATING

ALL DIMENSIONS ARE IN INCHES

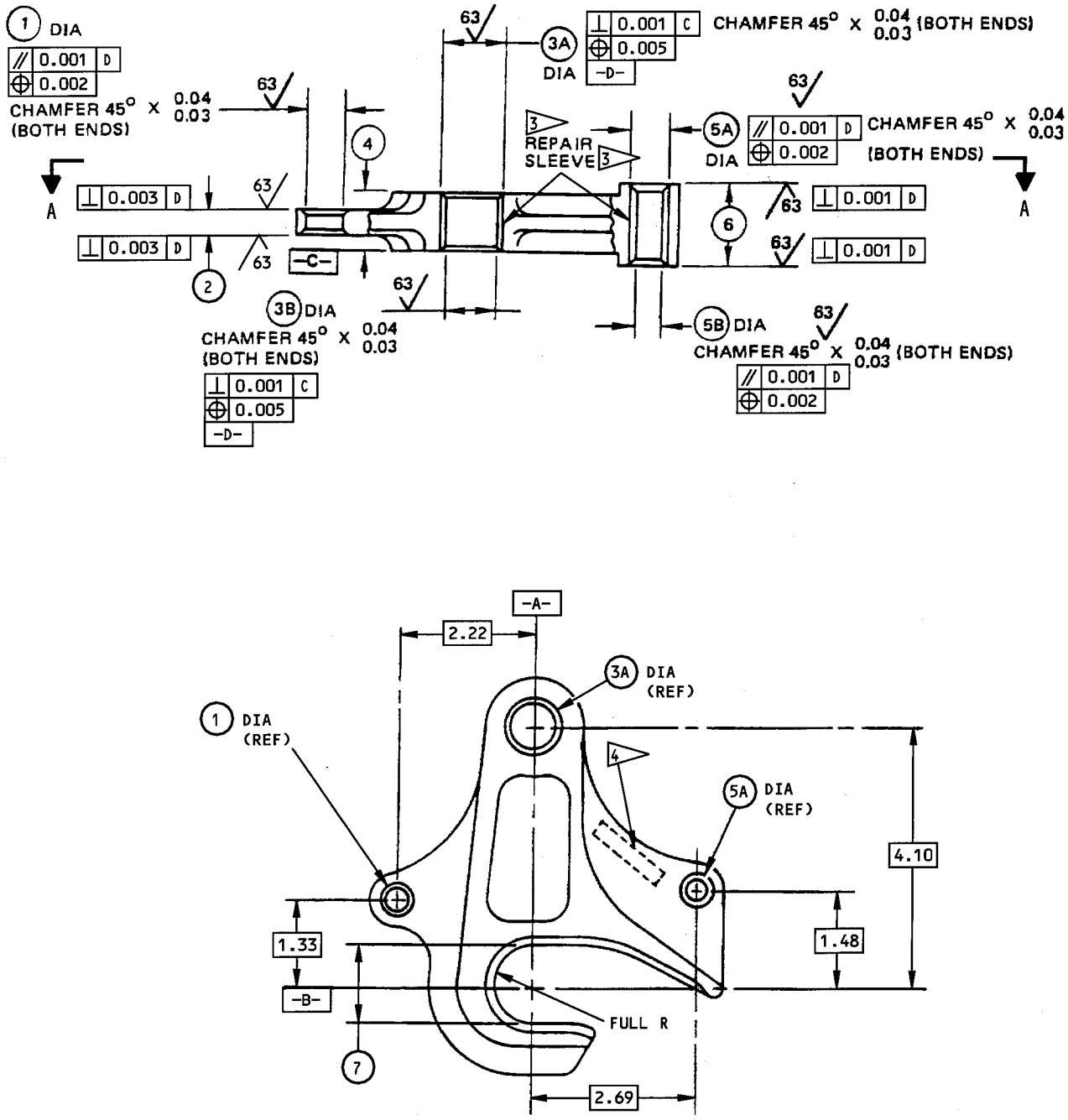
10 RANGE FOR 15-5PH OR 17-4PH CRES SHIM, 180-200 KSI. BOND SHIM WITH BMS 5-95 SEALANT.

11 CHROME PLATE REPAIR PER 9 NOT PERMITTED IF CIRCLE 6 DIA IS MORE THAN 0.675.

12 IF MORE MATERIAL THAN THIS MUST BE REMOVED, SCRAP THE PART

UPLOCK LINK (28, 32, 37, 38)

Uplock Link Repair
Figure 403A (Sheet 2)



A-A

HOOK (47)

Hook Repair and Refinish
Figure 404 (Sheet 1)

M61200

REFINISH

CADMIUM-TITANIUM PLATE (F-1.308, WHICH REPLACES F-1.181) ALL OVER BUT NOT IN THE THROAT. APPLY BMS 3-8 SOLID FILM LUBRICANT (F-19.10) TO THE THROAT SURFACES.

AFTER BUSHING INSTALLATION, APPLY BMS 10-11 TYPE 1 PRIMER (SRF-12.205 OR F-20.02) AND GRAY BMS 10-11 TYPE 2 ENAMEL (SRF-12.63 OR F-21.02), BUT NOT ON BUSHINGS OR THROAT.

REPAIR

REF 1 2 3 7 8 9

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.01-0.03R

SHOT PEEN: (SOPM 20-10-03):
0.017-0.046 SHOT SIZE
0.010-0.016 A2 INTENSITY

MATERIAL: 4340M STEEL, 270-300 KSI

ALL DIMENSIONS ARE IN INCHES

	(1)	(2)	(3A)	(3B)	(4) 5	(4) 6	(5A)	(5B)	(6)
DESIGN DIM	0.5631 0.5625	0.376 0.371	0.9382 0.9375	0.9382 0.9375	1.2500 1.2495	0.9500 0.9495	0.5631 0.5625	0.5631 0.5625	1.255 1.245
REPAIR LIMIT	0.623 1	0.364 9	1.0270 2 8	—	—	0.9195 9 0.9160 8	0.6570 2 8	—	1.215 9 1.175 8

	(7)
DESIGN DIM	1.270 1.260
REPAIR LIMIT	1.293 7

1 LIMIT FOR INSTALLATION OF OVERSIZE BUSHING (FIG. 407).

2 LIMIT FOR INSTALLATION OF REPAIR SLEEVE (FIG. 406) AND INSTL OF STANDARD BUSHING PER PARTS LIST.

3 SLEEVE MUST BE FLUSH TO 0.005 MAXIMUM BELOW FACE OF HOOK.

4 MARK THIS AREA WITH PART NUMBER AND SERIAL NUMBER, 0.25 MAXIMUM HEIGHT. USE ELECTRO CHEMICAL ETCH (0.006-0.009 DEEP), ELECTRIC VIBRATING PENCIL, OR SPHERICAL NOSE CUTTER 0.015 MAXIMUM DEEP. DATA MUST BE VISIBLE AFTER APPLICATION OF ALL FINISHES.

5 65-46142-6

6 65-46142-8

7 RESTORATION TO DESIGN DIMENSIONS NOT REQUIRED.

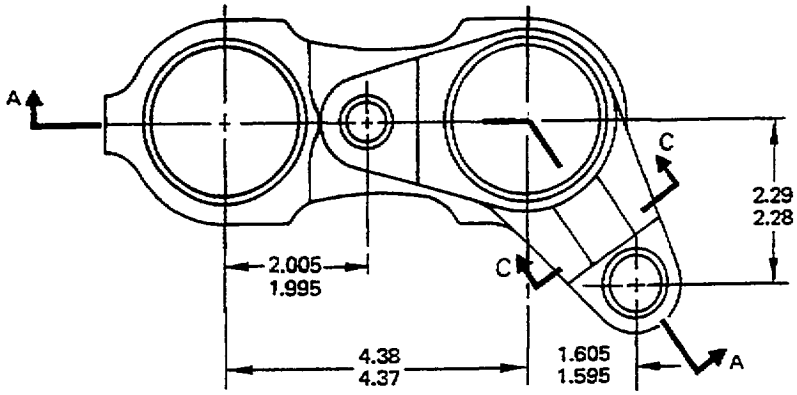
8 LIMIT FOR INSTALLATION OF OVERSIZE REPAIR BUSHING PER PARTS LIST, WITH OD ADJUSTED TO GIVE SAME INTERFERENCE AS THE REPAIR SLEEVE.

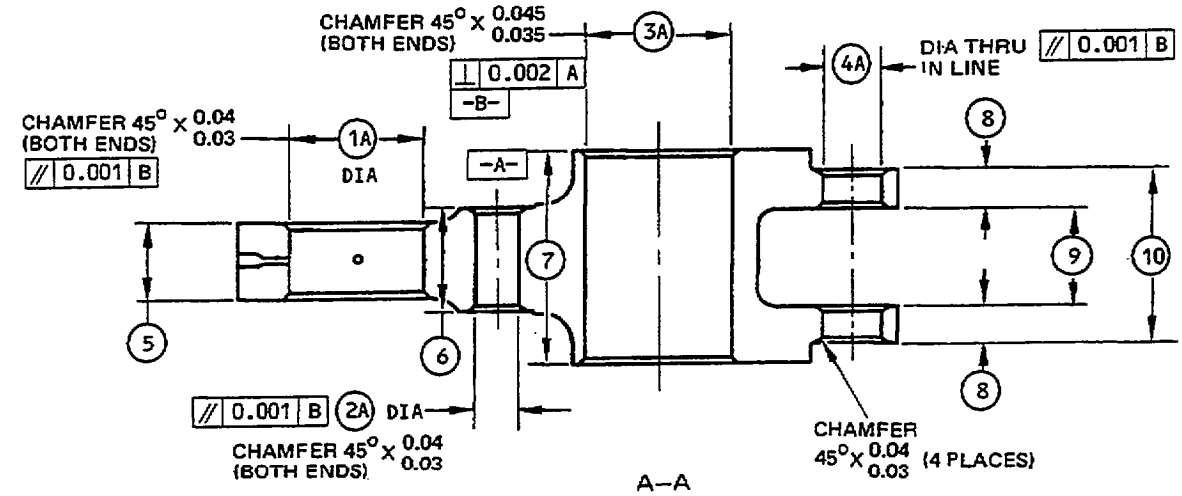
9 LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03)

HOOK (47)

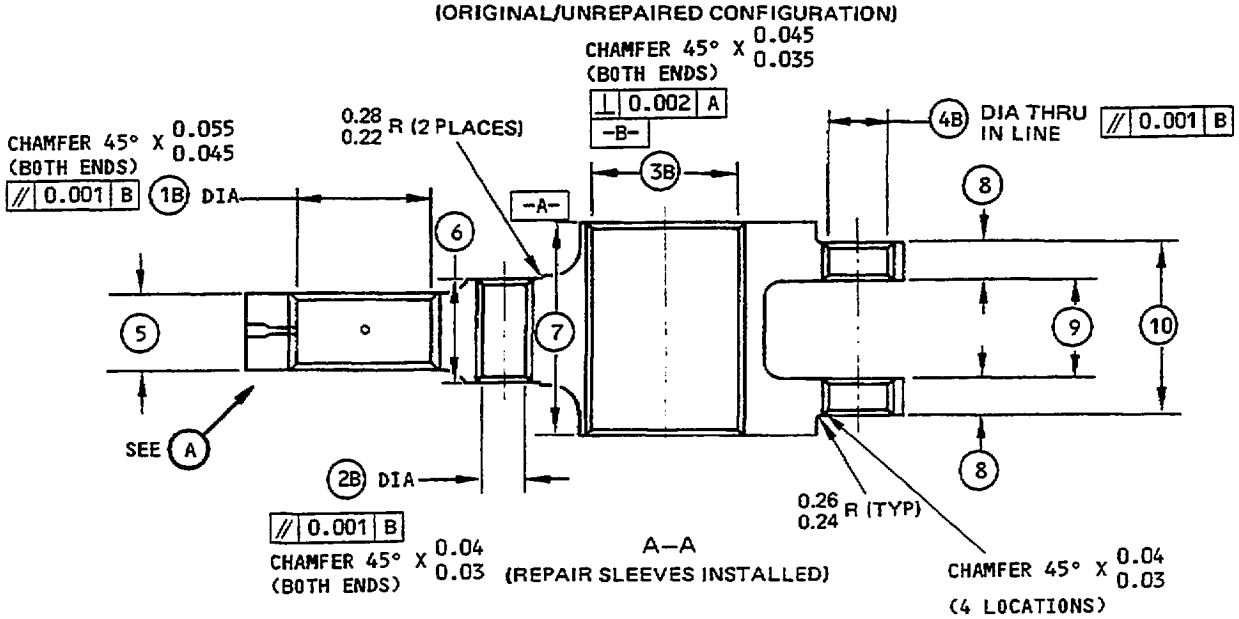
Hook Repair and Refinish
Figure 404 (Sheet 2)

E31469





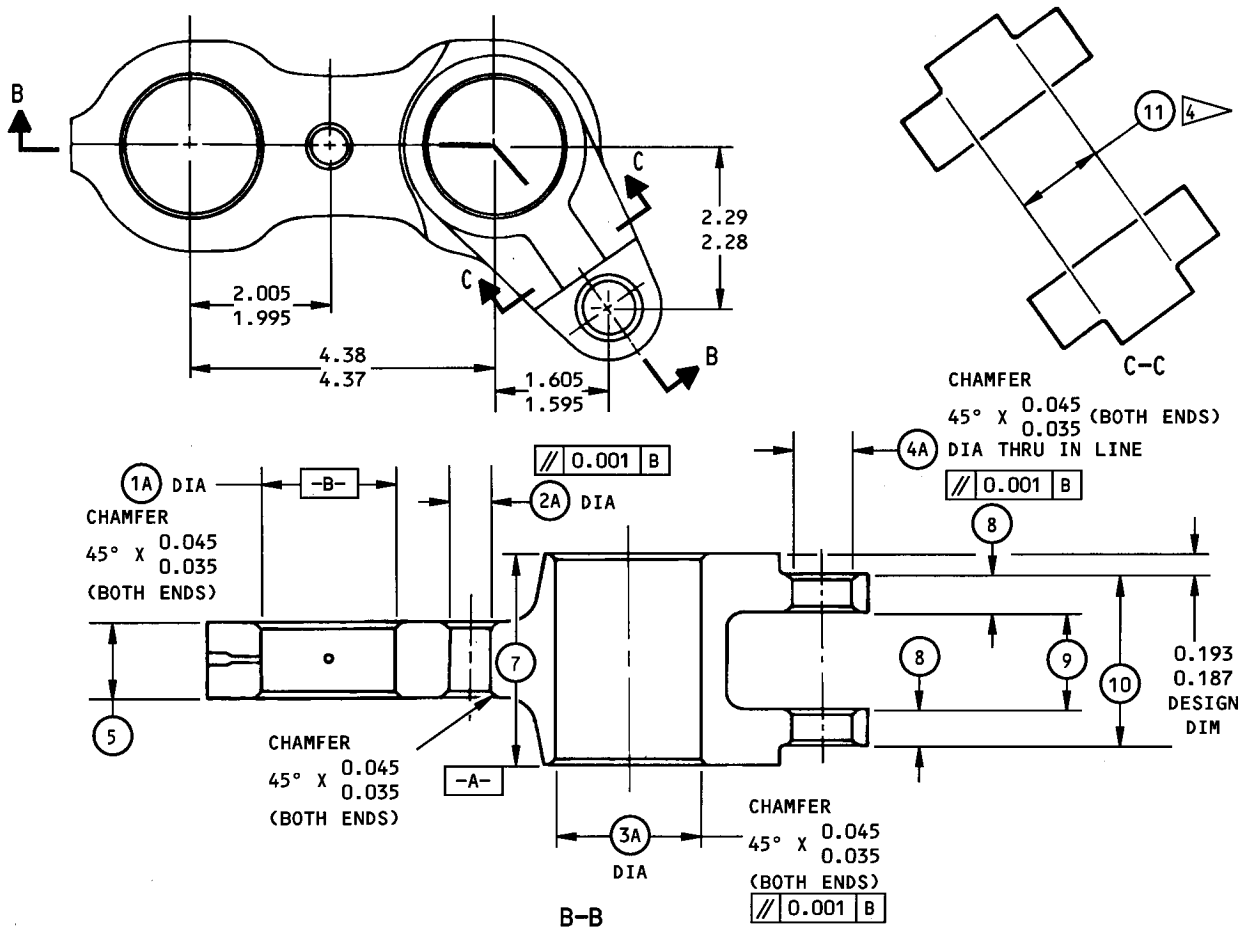
A–A
(ORIGINAL/UNREPAIRED CONFIGURATION)

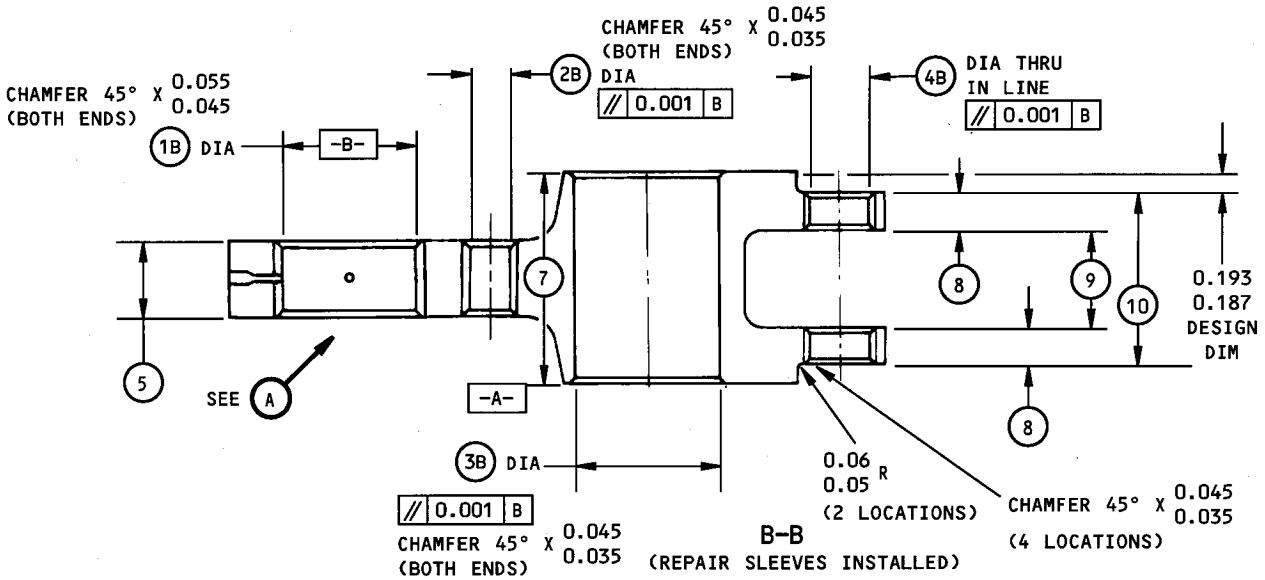


A–A
(REPAIR SLEEVES INSTALLED)

BELLCRANK (54)
65–46143–2

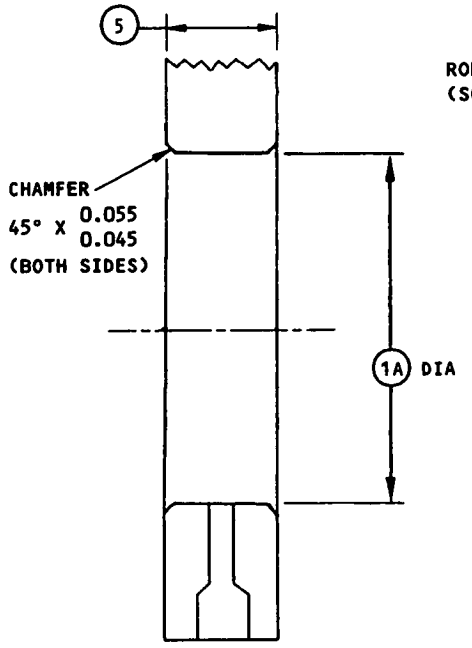
Bellcrank Repair and Refinish
Figure 405 (Sheet 1)



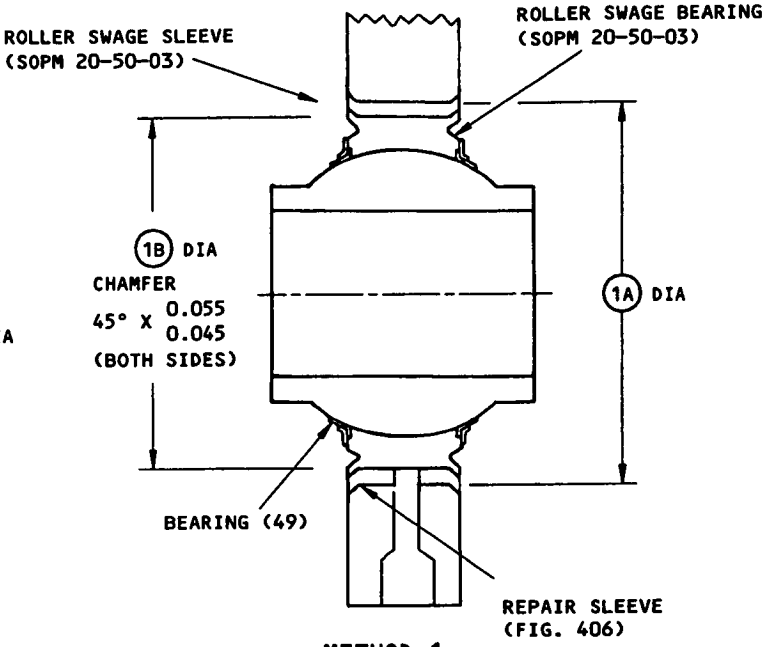


BELLCRANK (54)
65-63663-2,-4,-6,-8,-10
Bellcrank Repair and Refinish
Figure 405 (Sheet 2)

F78063



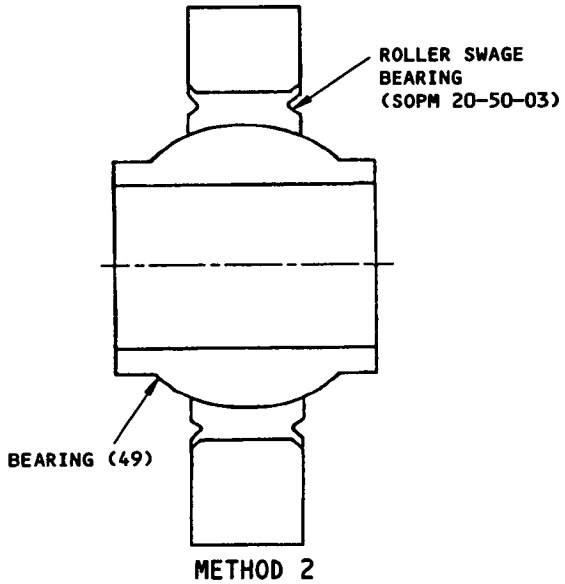
HOLE PREPARATION



METHOD 1

INSTALLATION OF REPAIR SLEEVE AND STANDARD BEARING

(ROTATED 90° COUNTERCLOCKWISE)



METHOD 2

INSTALLATION OF OVERSIZE BEARING

(A)

Bellcrank Repair and Refinish
Figure 405 (Sheet 3)

		(1A)	(1A)	(1B)	(1B)	(2A)	(2B)
65-46143 -1	DESIGN DIM	2.0000 1.9995	---	2.0000 1.9995	---	0.6884 0.6875	0.6884 0.6875
	REPAIR LIMIT	2.12 2.09 ▷1	---	---	---	0.748 ▷1 ▷3	---
65-63663 -2,-4,-6, -8,-10	DESIGN DIM	2.0000 ▷5 1.9995 ▷6 ▷14	2.3765 2.3755 ▷7 ▷13	2.0000 1.9995 ▷5 ▷6	2.3765 2.3755 ▷7	0.6884 0.6875	0.6884 0.6875
	REPAIR LIMIT	2.12 2.09 ▷1 OR SEE TABLE B ▷2	2.50 2.47 ▷1	---	---	0.765 ▷1 ▷3	---

TABLE A

		(3A)	(3B)	(4A)	(4B)	(5)	(6)
65-46143 -1	DESIGN DIM	2.189 2.188	2.189 2.188	0.9382 0.9375	0.9382 0.9375	0.937 0.927	1.301 1.300
	REPAIR LIMIT ▷1	2.25	---	0.998	---	---	---
65-63663 -2,-4,-6, -8,-10	DESIGN DIM	2.125 2.124	2.125 2.124	0.8755 0.8748	0.8755 0.8748	0.937 0.927	---
	REPAIR LIMIT ▷1	2.279 ▷8	---	0.936 ▷8	---	---	---

TABLE A

		(7)	(8) ▷11 ▷12	(9) ▷11 ▷12	(10) ▷11 ▷12	(11)	(11)
65-46143 -1	DESIGN DIM	2.8800 2.8600	0.5025 0.4950	1.380 1.375	2.380 2.375	0.76 0.75	---
	REPAIR LIMIT ▷1	---	---	---	---	---	---
65-63663 -2,-4,-6, -8,-10	DESIGN DIM	2.2700 2.2500	0.4015 0.3975	1.078 1.074	1.877 1.873	0.76 ▷5 0.75	0.76 ▷6 0.75 ▷7 ▷13 ▷14
	REPAIR LIMIT ▷1	2.2065	0.3675 ▷9 0.3250 ▷10	1.108 ▷9 1.154 ▷10	1.843 ▷9 1.800 ▷10	---	---

TABLE A

Bellcrank Repair and Refinish
Figure 405 (Sheet 4)

E73631

(1A) REPAIR LIMIT 2	OVERSIZE INCREMENT (REF)	MATING BEARING (49) (V16746)
2.0162 2.0157	1/64	BNG20E119P016
2.0312 2.0307	1/32	BNG20E119P032
2.0625 2.0620	1/16	BNG20E119P062
2.0937 2.0932	3/32	BNG20E119P093
2.1250 2.1245	1/8	BNG20E119P125

TABLE B

REFINISH

CADMIUM-TITANIUM PLATE (F-1.308, WHICH REPLACES F-1.181, OR F-15.01) AND APPLY PRIMER, BMS 10-11, TYPE 01 (SRF-12.205 OR F-20.02) ALL OVER.

BELLCRANK ASSY (48):

AFTER BUSHING INSTL, APPLY ENAMEL BMS 10-11, TYPE 2 (SRF-12.63 OR F-21.02) BUT NOT ON BUSHINGS OR NOTED BY 4

REPAIR

REF 1 2 3 8 THRU 12

32 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.02R MAXIMUM AFTER SLEEVE INSULATION, RESTORE BORE CHAMFERS AS INDICATED

SHOT PEEN (SOPM 20-10-03):
0.017-0.046 SHOT SIZE
0.010-0.016 A2 INTENSITY

MATERIAL: 4340M STEEL, 270-300 KSI

ALL DIMENSIONS ARE IN INCHES

1 LIMIT FOR INSTALLATION OF REPAIR SLEEVE. (SEE FIG. 406). MAKE SURE THE INSTALLED SLEEVE IS FLUSH WITH OR 0.005 MAXIMUM BELOW THE SURFACE OF THE BELLCRANK.

2 RANGE FOR INSTALLATION OF OVERSIZE BEARING.

3 LIMIT FOR INSTALLATION OF OVERSIZE REPAIR BUSHING PER PARTS LIST, WITH OD ADJUSTED TO GIVE SAME INTERFERENCE FIT AS THE REPAIR SLEEVE.

4 NO ENAMEL ON FACES

5 65-63663-2

6 65-63663-4

7 65-63663-6

8 LIMIT FOR INSTL OF OVERSIZE BUSHING (51, 52) (SEE FIG. 407), OR REPAIR SLEEVES PER 1 AND INSTL OF STD BUSHINGS PER PARTS LIST.

9 LIMIT FOR CHROME PLATE BUILDUP (SOPM 20-42-03) AND GRIND TO DESIGN DIMENSIONS AND FINISH. (0.015 MAXIMUM AFTER GRIND)

10 LIMIT FOR INSTALLATION OF FLANGED OVERSIZE OR REPAIR BUSHINGS ON INNER LUG FACES, AND PLATE BUILDUP ON OUTER LUG FACES. IF MATERIAL REMOVAL ON OUTER LUG FACES IS MORE THAN 0.015, LIMIT FOR SULFAMATE NICKEL PLATING (0.001 MIN THICK) (SOPM 20-42-09) FOLLOWED BY CHROME PLATE BUILDUP (0.015 MAXIMUM THICK) (SOPM 20-42-03).

11 IF MATERIAL IS REMOVED FROM THE HOLE AND THE LUG FACES, AND PLATE BUILDUP WILL BE USED TO REPAIR THE LUG FACES, DO THE PLATING BUILDUP BEFORE YOU INSTALL THE REPAIR BUSHINGS.

12 LUG FACE MACHINING REQUIREMENTS:

1. MATERIAL REMOVED FROM ANY FACE MUST NOT BE MORE THAN HALF THE DIFFERENCE BETWEEN THE DESIGN DIM AND REPAIR LIMIT
2. FLAT SURFACE MUST BE MINIMUM OF 0.02 LARGER THAN FLANGE DIA OF BUSHING TO BE INSTALLED
3. BLEND MISMATCH STEPS TO 0.18-0.26 RADIUS, OR IF WITHIN 0.10 OF LUG FILLET RADIUS USE SAME RADIUS AS LUG FILLET.

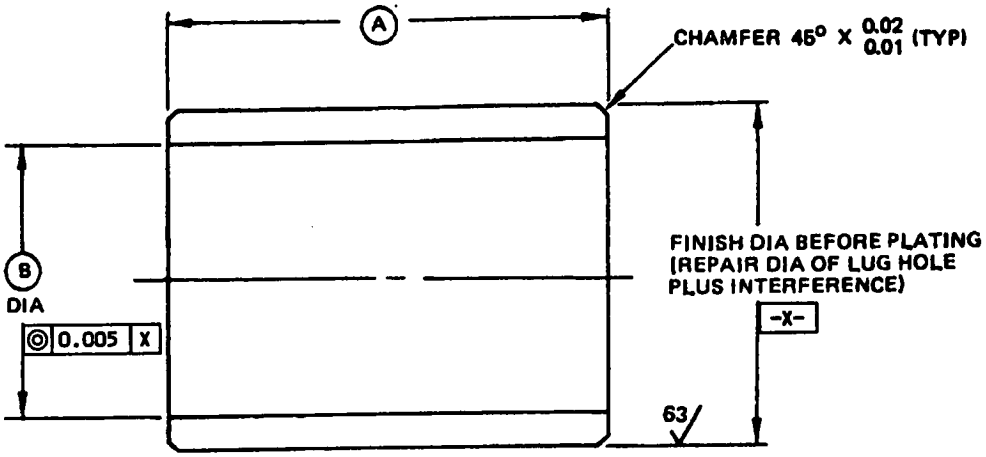
13 65-63663-8

14 65-63663-10

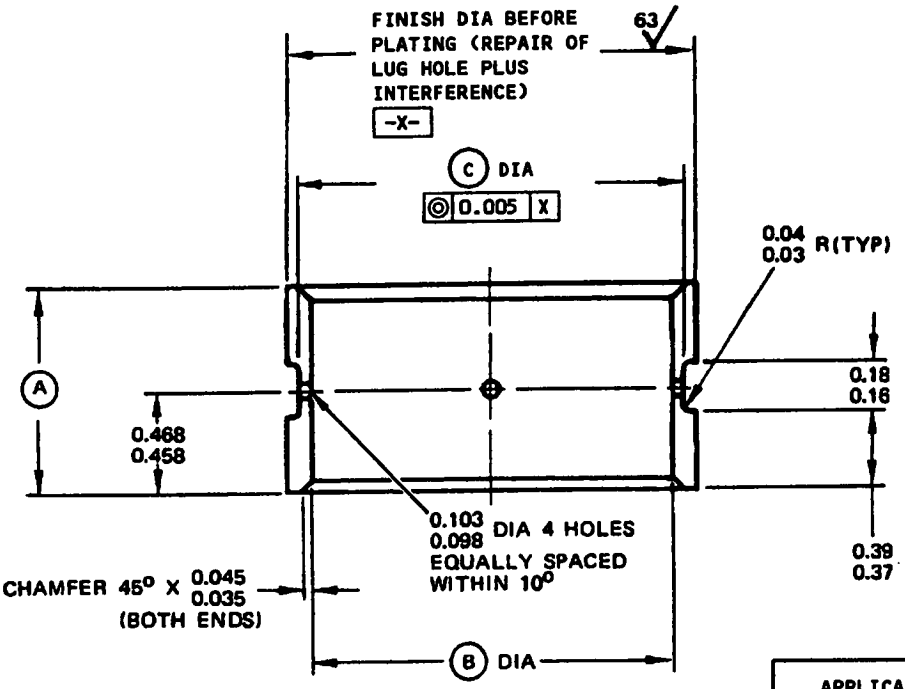
BELLCRANK (54)
65-46143-2, 65-63663-2,-4,-6,-8,-10

Bellcrank Repair and Refinish
Figure 405 (Sheet 5)

F78240



(SEE CHART, SHEET 2)



HOLE LOCATION (1A) FIG. 405
(SEE CHART, SHEET 2)

APPLICATION	(C)
BELLCRANK (54) 65-46143-2, 65-63663-2,-4,-10	2.065 2.060
BELLCRANK (54) 65-63663-6,-8	2.440 2.435

125 ALL MACHINED SURFACES UNLESS SHOWN DIFFERENTLY

BREAK SHARP EDGES 0.03R MAX

CADMIUM PLATE (OPT ON ID) (SOPM 20-42-05)

ALL DIMENSIONS ARE IN INCHES

Repair Sleeve Details
Figure 406 (Sheet 1)

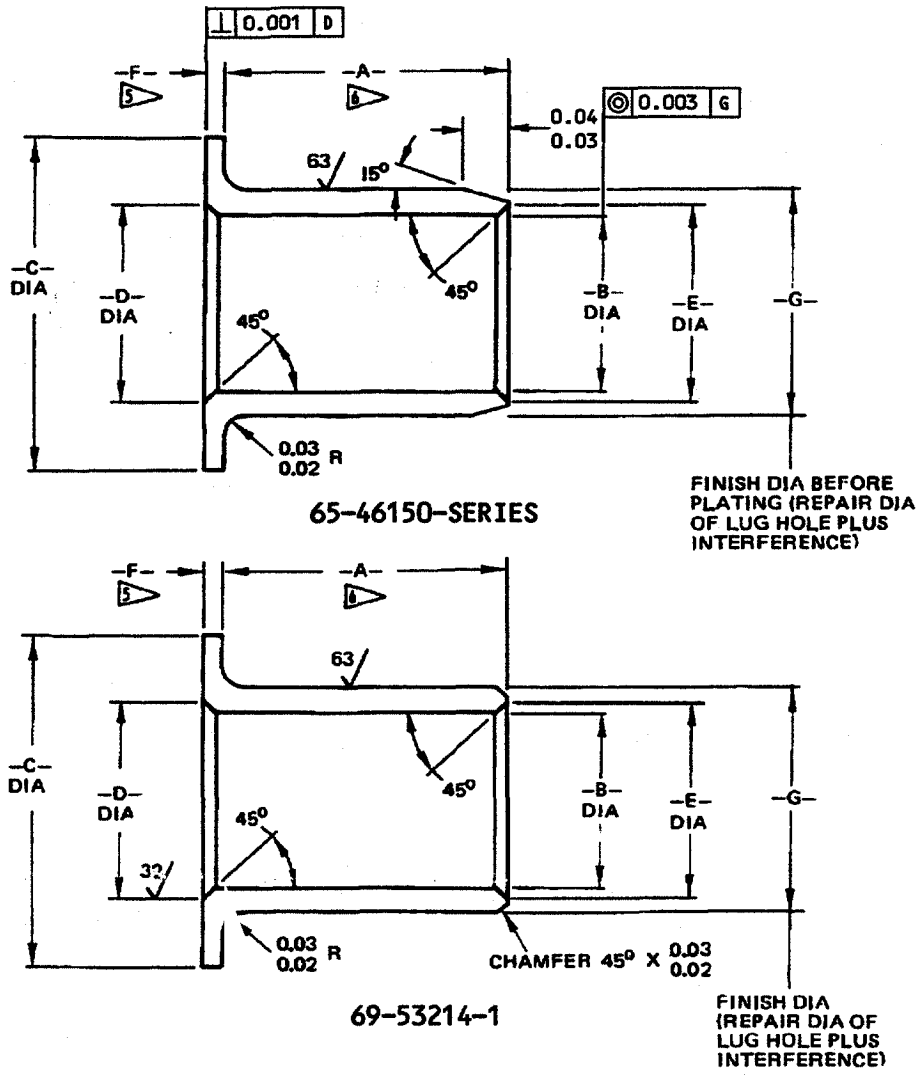
APPLICATION	REPAIR FIG.	HOLE LOCATION	A	B	INTER-FERENCE	MATERIAL
TERMINAL (4)	402	--	0.385 0.370	0.39 0.38	0.0013 0.0003	1
LINK (16)	403	2	1.04 1.03	0.54 0.52	0.0018 0.0005	2
LINK (16)	403	1	1.301 1.296	0.60 0.58	0.0018 0.0005	2
LINK (28,32,37,38)	403A	4	1.14 1.13	0.48 0.46	0.0018 0.0005	2
LINK (28,32,37,38)	403A	6	1.28 1.27	0.60 0.58	0.0018 0.0005	2
LINK (37,38) 65-46144-SERIES	403A	5	0.678 0.670	0.66 0.64	0.0018 0.0005	2
LINK (28,32,37,38) 65-63667-SERIES	403A	5	0.565 0.555	0.66 0.64	0.0018 0.0005	2
HOOK (47) (65-46142-6)	404	3A	1.250 1.245	0.91 0.89	0.0022 0.0006	2
HOOK (47) (65-46142-8)	404	3A	0.950 0.945	0.91 0.89	0.0022 0.0006	2
HOOK (47)	404	5A	1.255 1.245	0.54 0.52	0.0018 0.0005	2
BELLCRANK (54) (65-46143-2, 65-63663-2,-4,-10)	405	1A	0.937 0.932	1.97 1.96	0.0028 0.0010	2
BELLCRANK (54) (65-63663-6,-8)	405	1A	0.937 0.932	2.34 2.33	0.0028 0.0010	2
BELLCRANK (54) (65-46143-2)	405	2A	1.301 1.296	0.66 0.64	0.0018 0.0005	2
BELLCRANK (54) (65-46143-2)	405	3A	2.88 2.87	2.16 2.14	0.0028 0.0010	2
BELLCRANK (54) (65-46143-2)	405	4A	0.502 0.495	0.91 0.89	0.0018 0.0005	2
BELLCRANK (54) (65-63663-2,-4,-6,-8,-10)	405	2A	0.937 0.932	0.66 0.64	0.0018 0.0005	2
BELLCRANK (54) (65-63663-2,-4,-6,-8,-10)	405	3A	2.27 2.26	2.12 2.10	0.0028 0.0010	2
BELLCRANK (54) (65-63663-2,-4,-6,-8,-10)	405	4A	0.401 0.397	0.87 0.85	0.0018 0.0005	2

1 AISI 303 CRES, PER QQ-S-763 CLASS 303 CONDITION A

2 17-4PH CRES PER AMS 5643, SOLUTION TREATED, 180-200 KSI

Repair Sleeve Details
Figure 406 (Sheet 2)

H98273



125 ALL MACHINED SURFACES EXCEPT AS NOTED

BREAK SHARP EDGES 0.01-0.02R

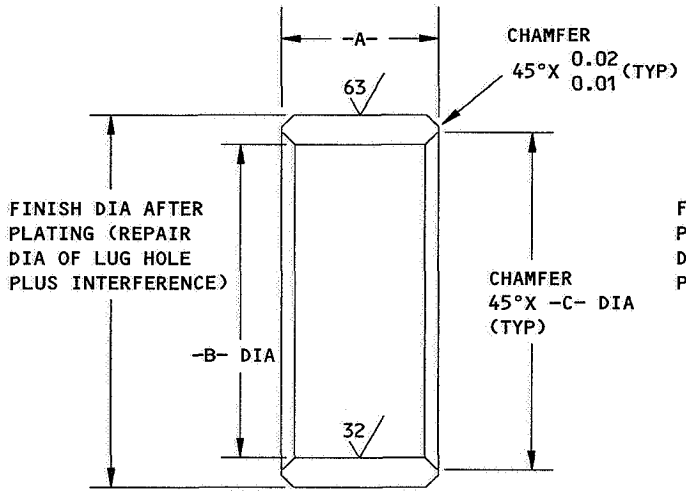
FINISH: AS NOTED

MATERIAL : AS NOTED

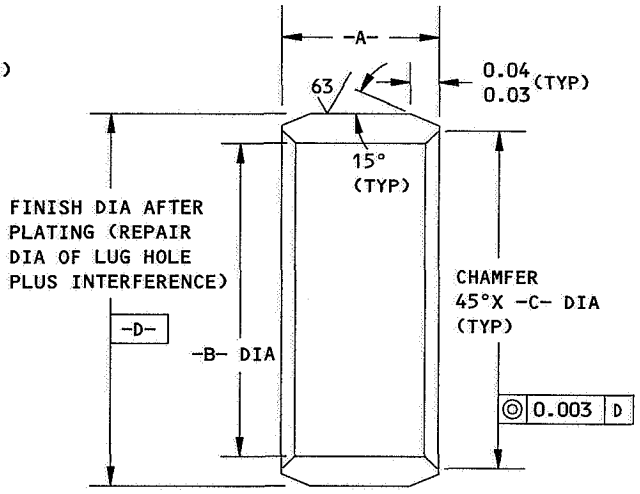
ALL DIMENSIONS ARE IN INCHES

REPLACES BUSHING	-A- 6	-B-	-C-	-D-	-E-	-F-	INTER-FERENCE	MATERIAL	FINISH
14 (69-53214-1)	1.08 1.06	0.377 0.376	0.88 0.86	0.42 0.40	0.42 0.40	0.062 0.060 5	0.0018 0.0005	1	NO FINISH
51 (65-46150-58)	1.09 1.07	1.969 MAX	2.51 2.49	2.16 2.14	2.06 2.04	0.10 0.09 5	0.0028 0.0010	2	4
52 7 (65-46150-59)	0.38 0.37	0.70 MAX	1.44 1.14	0.82 0.80	0.82 0.80	0.03 MIN	0.0018 0.0005	2	4

Oversize Bushing Details
Figure 407 (Sheet 1)



69-52250-1



65-46150-59

125 MACHINE FINISH EXCEPT AS NOTED

BREAK SHARP EDGES 0.01-0.02R

FINISH: AS NOTED

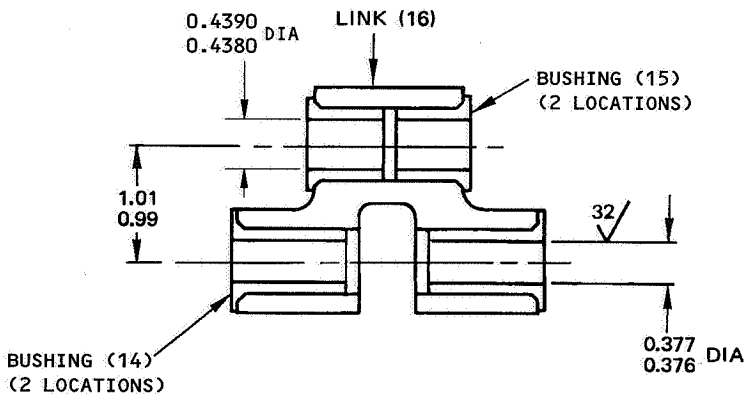
MATERIAL: AS NOTED

ALL DIMENSIONS ARE IN INCHES

REPLACES BUSHING	-A-	-B-	-C-	INTER-FERENCE	MATERIAL	FINISH
45 (69-52250-1)	0.383 0.363	0.377 0.376	0.45 0.43	0.0013 0.0003	3	8
52 (65-46150-59)	0.38 0.37	0.70 MAX	0.82 0.80	0.0018 0.0005	2	4

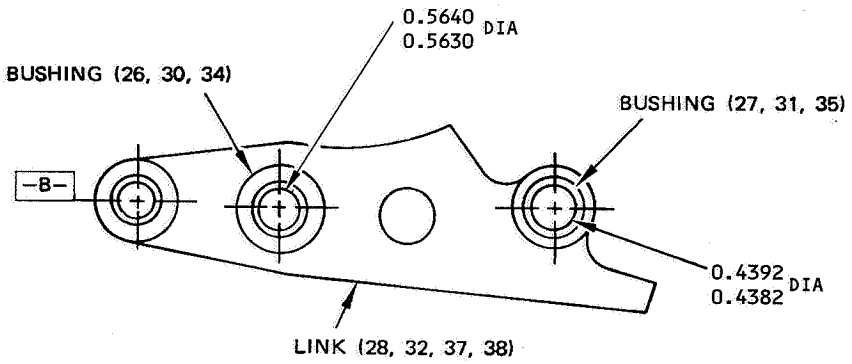
1. IRON-COPPER (SUPER OILITE) PER ASTM B439 GRADE 3 OR 4 (REPLACES MIL-B-5687, TYPE II, COMPOSITION B).
2. 17-4PH CRES PER AMS 5643, SOLUTION TREATED 180-200 KSI
3. AL-NI-BRONZE PER AMS 4640
4. CADMIUM PLATE (F-1.32, WHICH REPLACES 1.1923)(OPT IN ID)
5. PLUS AMOUNT REMOVED FROM LUG FACE
6. MINUS AMOUNT REMOVED FROM LUG FACE
7. FLANGED EQUIVALENT OF BUSHING (52) 65-46150-59
8. CADMIUM PLATE (F-4.201).

Oversize Bushing Details
Figure 407 (Sheet 2)

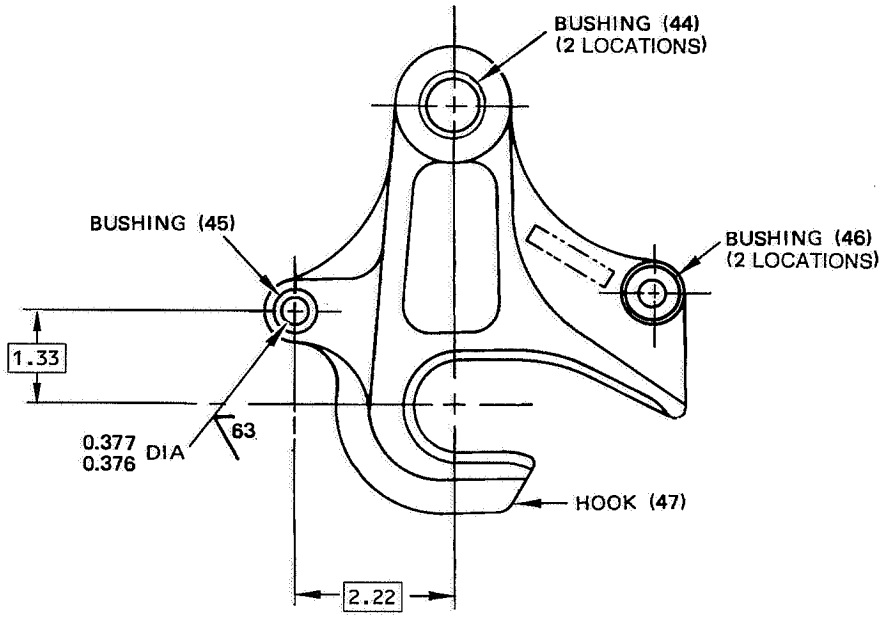


STOP LINK ASSEMBLY (13)

Link, Hook and Bellcrank Assemblies - Bushing Replacement
Figure 408 (Sheet 1)



LINK ASSEMBLY (25,29,33)

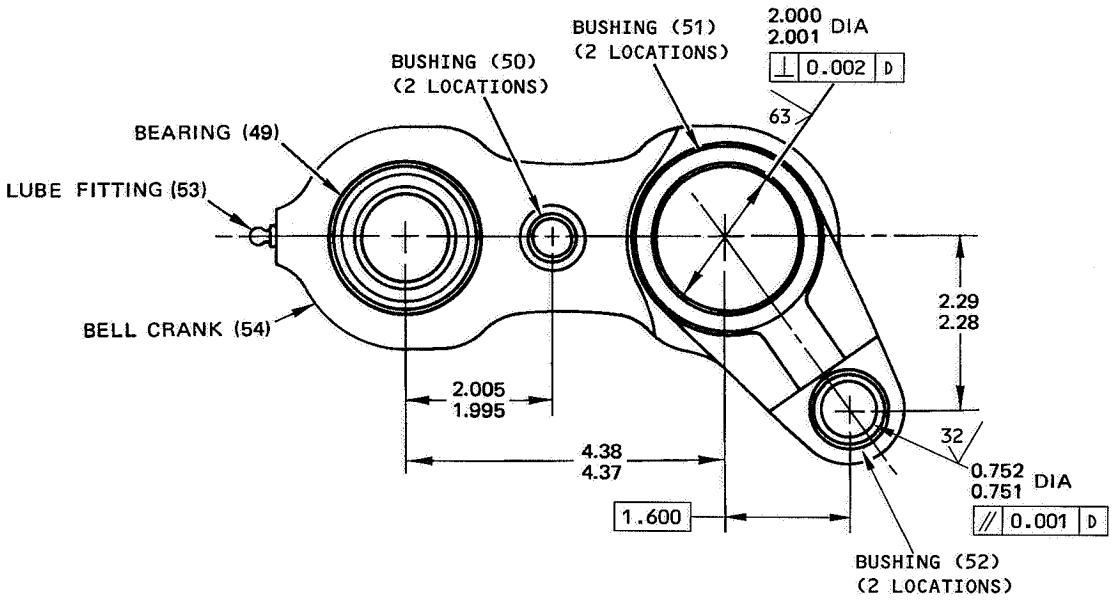


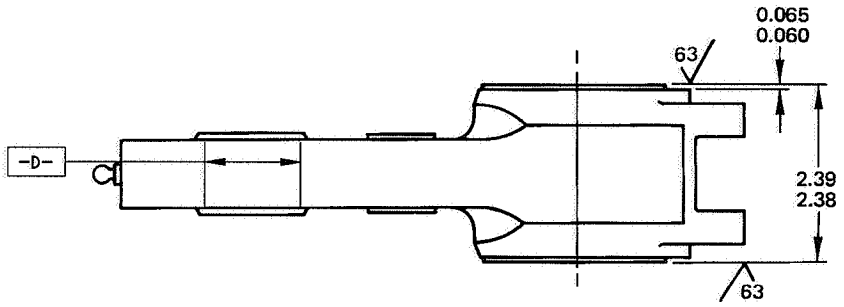
HOOK ASSEMBLY (43)

ITEM NUMBERS REFER TO FIG. 1101.
ALL DIMENSIONS ARE IN INCHES.

Link, Hook and Bellcrank Assemblies - Bushing Replacement
Figure 408 (Sheet 2)

H15033

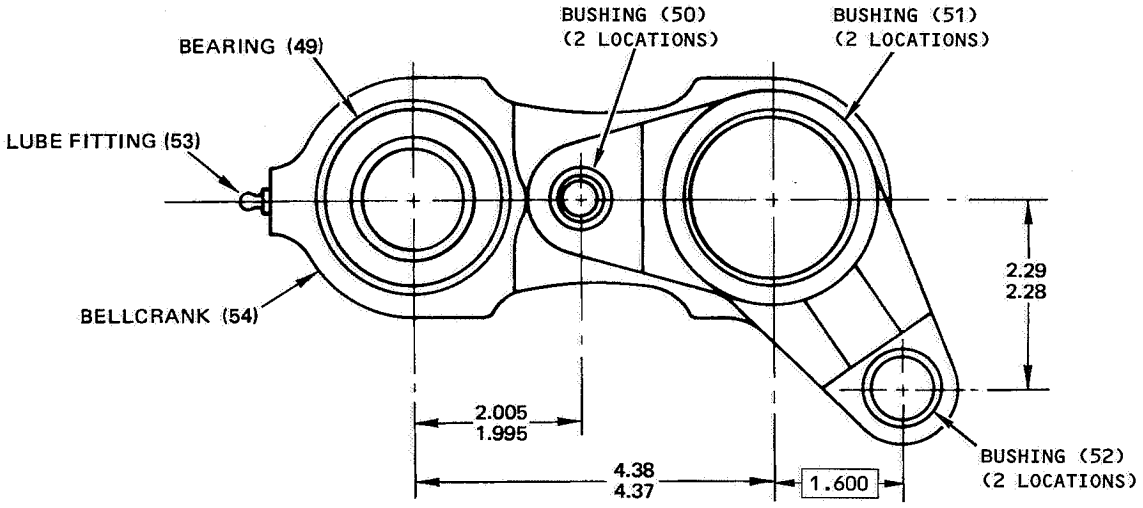




BELLCRANK ASSEMBLY (48)

65-63663-1,-3,-5

Link, Hook and Bellcrank Assemblies - Bushing Replacement
Figure 408 (Sheet 3)



BELLCRANK ASSEMBLY (48)

65-46143-1

Link, Hook and Bellcrank Assemblies - Bushing Replacement
Figure 408 (Sheet 4)

1307952

ASSEMBLY

1. General

   A. Lubricate all pins, shanks, threads and washer surfaces. Use MIL-G-21164 grease unless shown differently.

   B. Install all nuts lubricated unless shown differently.

   C. Apply MIL-G-21164 grease to lube fitting (53), after assembly is complete, until you see grease come out at the ID of the bearing.

2. As applicable, install bracket (65) with parts (66 thru 69) on hook (43).

3. Install hook (43) on uplock bellcrank (48) with bolt (42), spacer (41) and nut (40). Install the bolt as shown for left hand assemblies, and opposite for right hand assemblies. Tighten nut (40) to 500 pound-inches. If necessary, back off the nut to the nearest possible locking position and install cotter pin (39). A zero torque condition is acceptable.

4. Put link (33), or links (29, 25) if applicable, on uplock bellcrank (48) with the stops against the hook. As applicable, install actuator (63) and washer (64). Install parts (24 thru 20) on links (29, 25) only. Install bolt (19) and nut (18). Install the bolt as shown for left hand assemblies, and opposite for right hand assemblies. Lubricate the threads with BMS 3-33 or MIL-G-23827 grease. Tighten nut (18) to 125 pound-inches above run-on torque. If necessary, back off the nut to the nearest possible locking position and install cotter pin (17). A zero torque condition is acceptable.

   NOTE: Washer (64) is not used on actuator installations 69-42744-17, -18 or 69-68779-5, -6 installations (SB 32-1083).

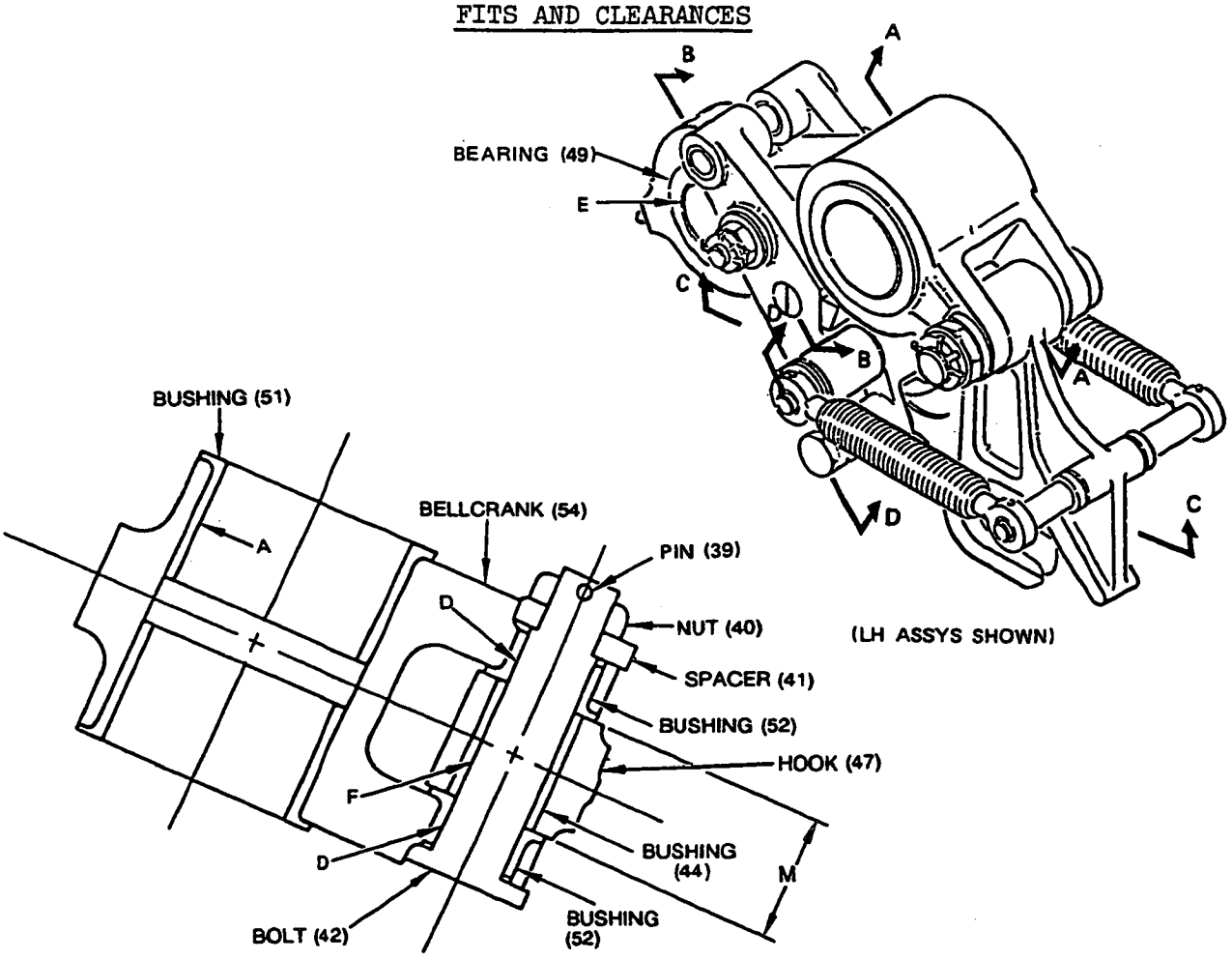
5. Put stop link (13) on hook. Attach with parts (12 thru 9). Install the bolt as shown for left hand assemblies, and opposite for right hand assemblies.

6. Install parts (8 thru 5). Install springs (2) on pins (6, 7). Attach with spring pins (1). Put the lockwire through the pins and around spring terminal fitting (4).

   NOTE: Springs are preloaded approximately 25 pounds during installation.

7. Pull links (25, 29) or (33) against the spring forces until bolt (12) is over center and the springs push stop link (16) against the stops on links (28, 32). Do this again to move stop link (16) back into original position. Make sure the parts move smoothly. If they do not, disassemble the unit and look for unwanted matter or defects.

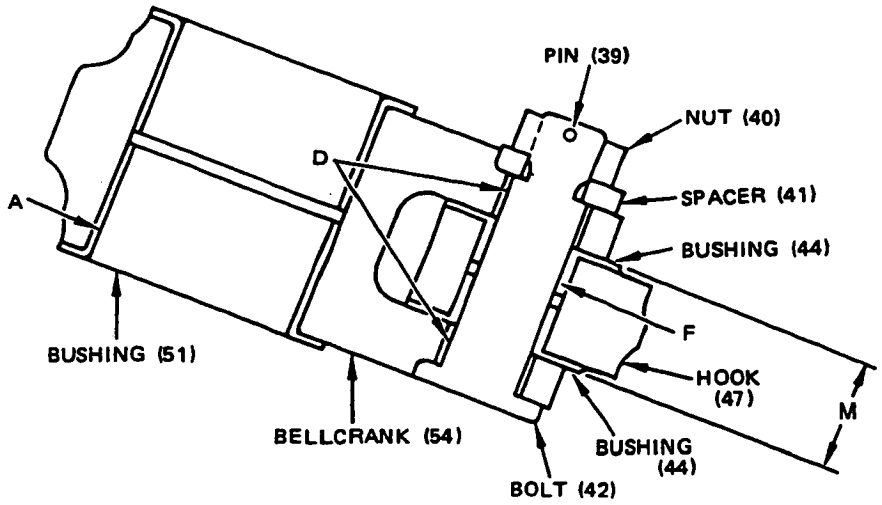
FITS AND CLEARANCES



(LH ASSYS SHOWN)

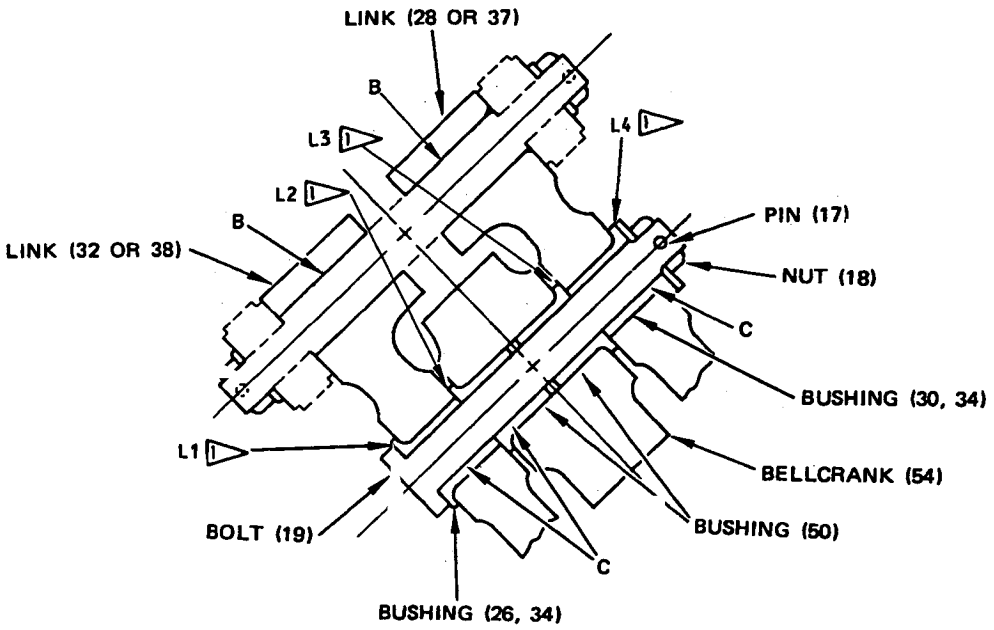
ASSYS 65-46141-5, -7 SHOWN; -6, -8 OPPOSITE

A–A



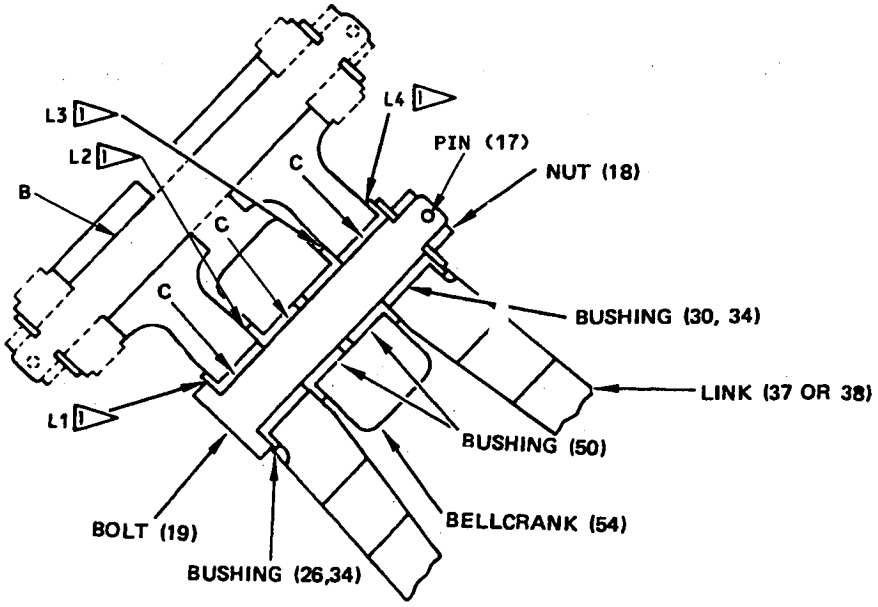
ASSYS 65-46141-9,-11,-15,-17,-19,-21,-23,-25 SHOWN;
-10,-12,-16,-18,-20,-22,-24,-26 OPPOSITE

A–A



ASSY 65-46141-5, -7 SHOWN; -6, -8 OPPOSITE

B–B



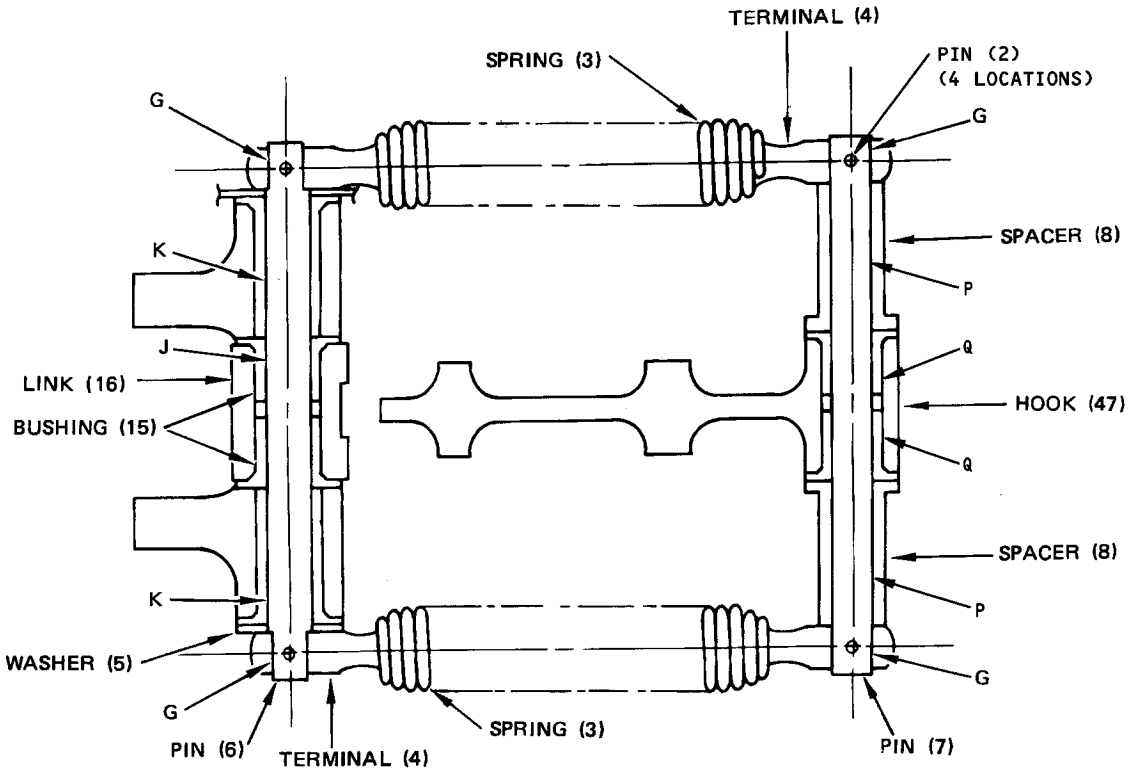
ASSYS 65-46141-9,-11,-15,-17,-19,-21,-23,-25 SHOWN;
-10,-12,-16,-18,-20,-22,-24,-26 OPPOSITE

B–B

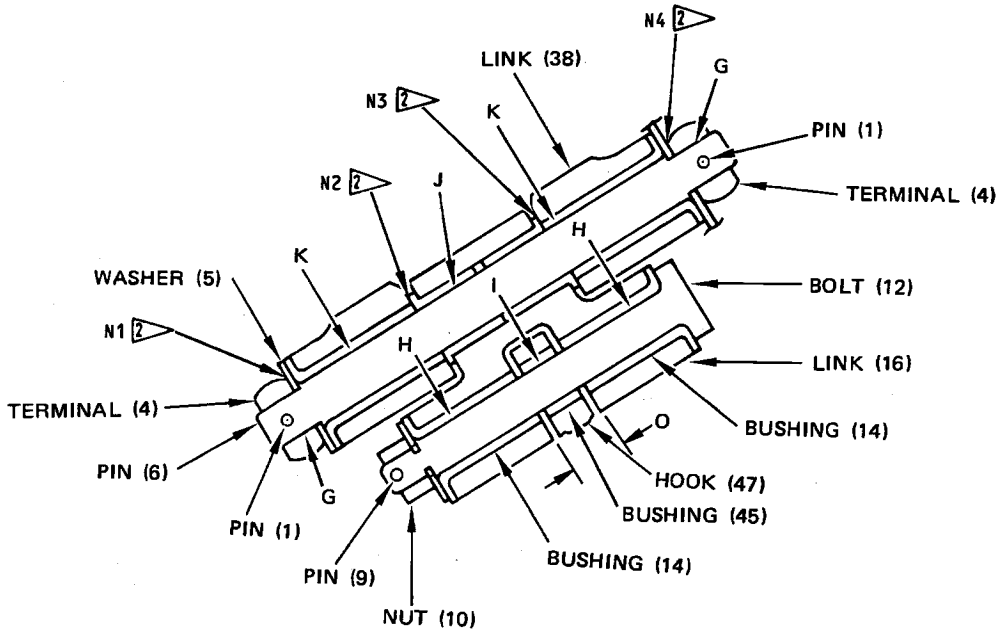
1 L = TOTAL AXIAL CLEARANCE = SUM OF CLEARANCES AT L1, L2, L3, AND L4

Fits and Clearances
Figure 601 (Sheet 2)

U35266



C–C



D–D

2 N = TOTAL AXIAL CLEARANCE = SUM OF CLEARANCES AT N1, N2, N3, AND N4

Fits and Clearances
Figure 601 (Sheet 3)

E87188

Ref Letter Fig. 601	Mating Item No. Fig. 1101	Design Dimensions				Service Wear Limits		
		Dimensions (inches)		Assembly Clearance (inch)		Dimension Limits (inch)		Maximum Allowable Clearance (inch)
		Min	Max	Min	Max	Min	Max	
A	ID 51 OD *[5]	2.000 1.997	2.001 1.998	0.002	0.004	1.996	2.003	0.006
B *[14]	ID 28,32, 37,38	0.500	0.501				0.504	
B *[15]	ID 28,32, 37,38	0.501	0.502				0.504	
C	ID 26,30 34,50 OD 19	0.5630 0.5605	0.5640 0.5615	0.0015	0.0035	0.5590	0.5660	0.006
D	ID 52 OD 42	0.751 0.748	0.752 0.749	0.002	0.004	0.747	0.754	0.007
E	ID 49*[3] OD *[6]	1.2495 1.2480	1.2500 1.2490	0.0005	0.0020	1.2460	1.2520	0.0060
E	ID 49*[4] OD *[7]	1.3745 1.3730	1.3750 1.3740	0.0005	0.0020	1.3710	1.3770	0.0060
F	ID 44*[1] OD 42	0.751 0.748	0.752 0.749	0.002	0.004	0.747	0.754	0.007
F	ID 44*[2] OD 42	0.752 0.748	0.753 0.749	0.003	0.005	0.747	0.754	0.007
G	ID 4 OD 6,7	0.375 0.373	0.376 0.374	0.001	0.003	0.372	0.378	0.006
H	ID 14 OD 12	0.376 0.373	0.377 0.374	0.002	0.004	0.372	0.379	0.006

Fits and Clearances
Figure 601 (Sheet 4)

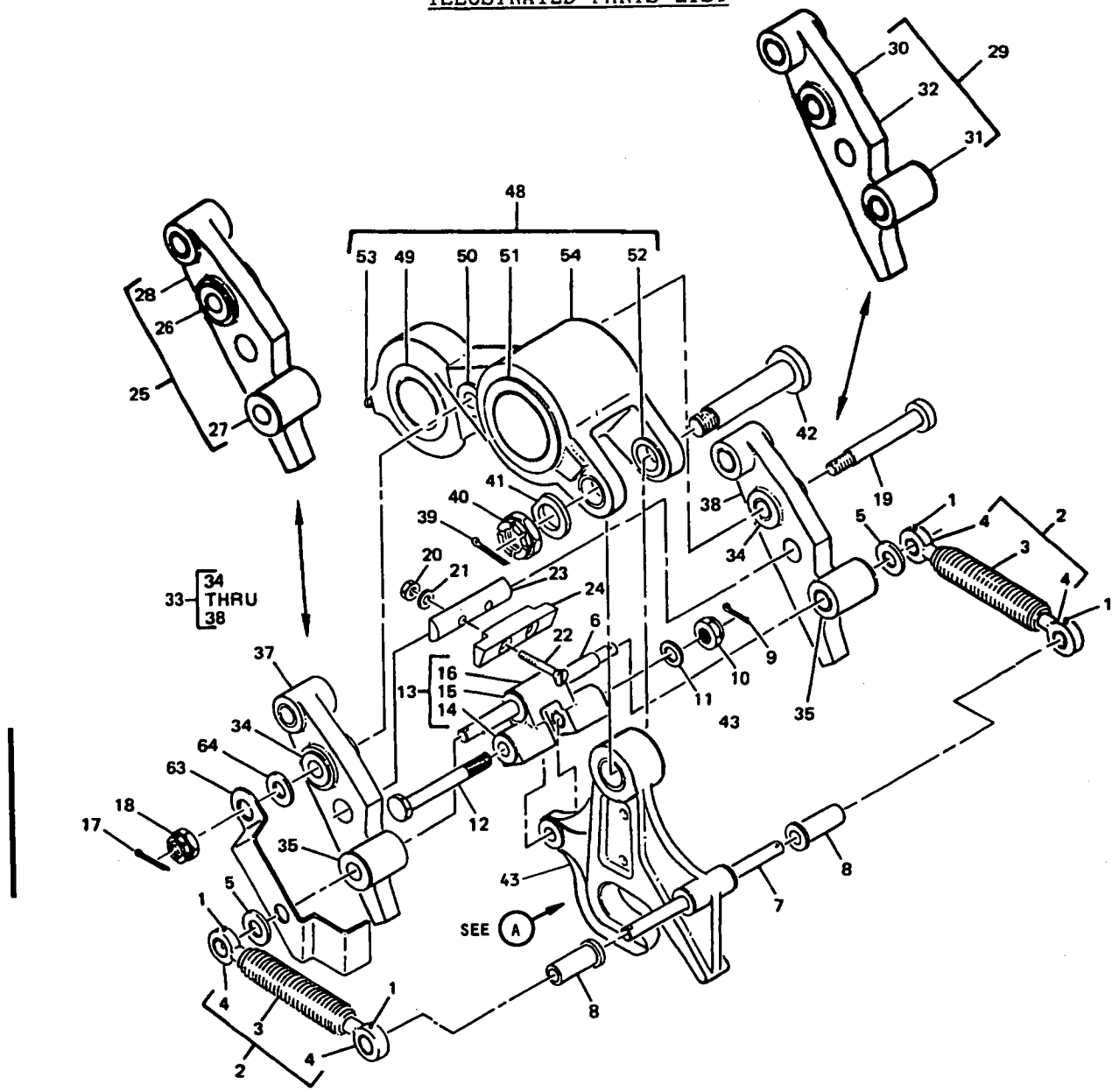
Ref Letter Fig. 601	Mating Item No. Fig. 1101	Design Dimensions				Service Wear Limits		
		Dimensions (inches)		Assembly Clearance (inch)		Dimension Limits (inch)		Maximum Allowable Clearance (inch)
		Min	Max	Min	Max	Min	Max	
I	ID 45 OD 12	0.376 0.373	0.377 0.374	0.002	0.004	0.372	0.379	0.006
J	ID 15 OD 6	0.4380 0.4355	0.4390 0.4365	0.0015	0.0035	0.4345	0.4415	0.0060
K	ID 27, 31, 35 OD 6	0.4382 0.4355	0.4392 0.4365	0.0017	0.0037	0.4345	0.4415	0.0060
L *[10]	*[8] 19, 24, 25, 29			0.065	0.100	*[9]	*[9]	0.110
L *[11]	*[8] 19, 33, 48			0.005	0.053	*[9]	*[9]	0.073
M *[10]	*[12] 48 *[13] 43	1.2510 1.2495	1.2600 1.2500	0.0010	0.0105	1.2470	1.2700	0.0200
M *[11]	*[12] 48 *[13] 43	1.0740 1.0695	1.0780 1.0740	0.0000	0.0085	1.0600	1.0830	0.0200
N *[10]	*[8] 6, 13, 25, 29			0.030	0.105	*[9]	*[9]	0.115
N *[11]	*[8] 6, 13, 33			0.000	0.077	*[9]	*[9]	0.090
O	*[12] 13 *[13] 43	0.501 0.371	0.510 0.376	0.125	0.139	0.370	0.520	0.150
P	ID 8 OD 7	0.404 0.373	0.416 0.374	0.030	0.043			
Q	ID 46 OD 7	0.376 0.373	0.377 0.374	0.002	0.004	0.372	0.379	0.005

Fits and Clearances
Figure 601 (Sheet 5)

*[1] Plain bushing 10-60516-236
*[2] Flanged bushing 10-60516-215
*[3] BACB10AB20, BACB10AB20M
*[4] BACB10AG22
*[5] Uplock support shaft 65-46146 (OHM 32-16-31)
*[6] Reaction link bolt 69-38993 (OHM 32-16-31)
*[7] Reaction link bolt 65C33723 (OHM 32-16-31)
*[8] Total axial clearance
*[9] Minimum bushing flange thickness 0.053
*[10] Assemblies 65-46141-5 thru -8
*[11] Assemblies 65-46141-9 and on
*[12] Dimension between inner flange faces of bushings, or inner lug faces
*[13] Dimension between outer flange faces of bushings, or outer lug faces
*[14] Uplock links 65-63667-7, -8, -11, -12, -15, -16, -19, -20
*[15] Uplock links 65-63667-23, -24, -27, -28

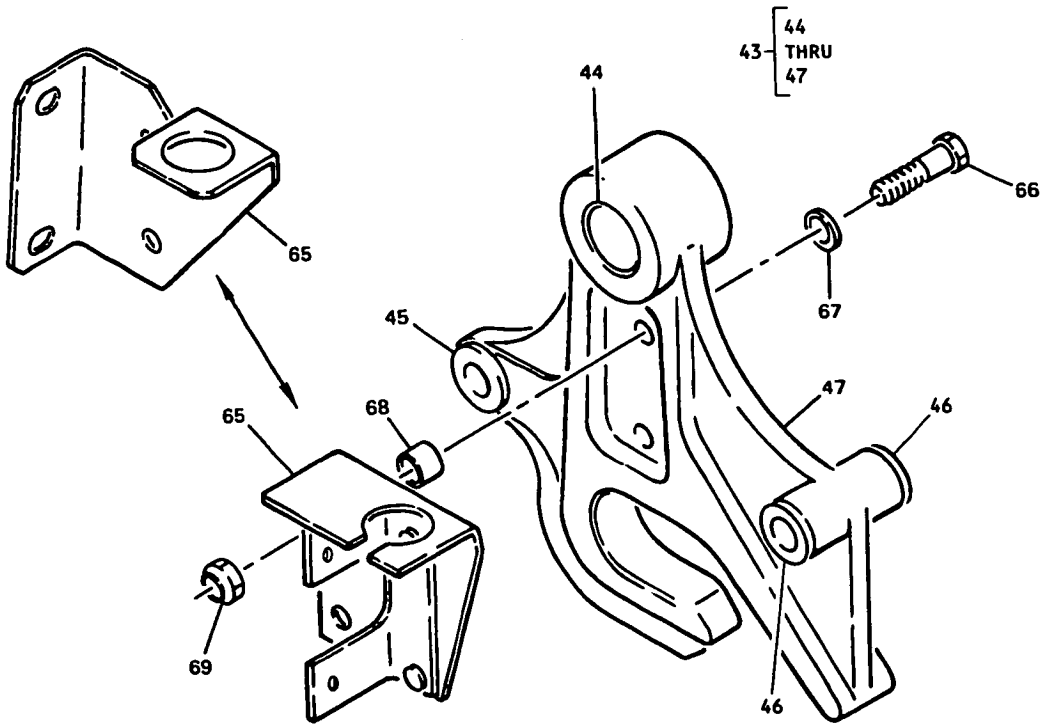
Fits and Clearances
Figure 601 (Sheet 6)

ILLUSTRATED PARTS LIST



NOTE: DIRECTION OF BOLTS (12, 19, 42) AS SHOWN FOR LEFT HAND ASSEMBLIES, AND OPPOSITE FOR RIGHT HAND ASSEMBLIES

Main Gear Uplock Assembly
Figure 1101 (Sheet 1)



(A)

Main Gear Uplock Assembly
Figure 1101 (Sheet 2)

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
1101-					
	65-46141-5		UPLOCK ASSY, MAIN GEAR LH	A	RF
	65-46141-6		UPLOCK ASSY, MAIN GEAR RH	B	RF
	65-46141-7		UPLOCK ASSY, MAIN GEAR LH	C	RF
	65-46141-8		UPLOCK ASSY, MAIN GEAR RH	D	RF
	65-46141-9		UPLOCK ASSY, MAIN GEAR LH	E	RF
	65-46141-10		UPLOCK ASSY, MAIN GEAR RH	F	RF
	65-46141-11		UPLOCK ASSY, MAIN GEAR LH	G	RF
	65-46141-12		UPLOCK ASSY, MAIN GEAR RH	H	RF
	65-46141-13		DELETED		
	65-46141-14		DELETED		
	65-46141-15		UPLOCK ASSY, MAIN GEAR LH	K	RF
	65-46141-16		UPLOCK ASSY, MAIN GEAR RH	L	RF
	65-46141-17		UPLOCK ASSY, MAIN GEAR LH	M	RF
	65-46141-18		UPLOCK ASSY, MAIN GEAR RH	N	RF
	65-46141-19		UPLOCK ASSY, MAIN GEAR LH	O	RF
	65-46141-20		UPLOCK ASSY, MAIN GEAR RH	P	RF
	65-46141-21		UPLOCK ASSY, MAIN GEAR LH	Q	RF
	65-46141-22		UPLOCK ASSY, MAIN GEAR RH	R	RF
	65-46141-23		UPLOCK ASSY, MAIN GEAR LH	S	RF
	65-46141-24		UPLOCK ASSY, MAIN GEAR RH	T	RF
	65-46141-25		UPLOCK ASSY, MAIN GEAR LH	U	RF
	65-46141-26		UPLOCK ASSY, MAIN GEAR RH	V	RF
1	MS51923-209		DELETED		
1	MS51923-209		. PIN, SPRING		4
2	69-39460-1		. SPRING ASSEMBLY, UPLOCK		2
3	69-39460-2		. . SPRING		1
4	69-39459-1		. . FITTING, TERMINAL		2
5	AN960C716L		. WASHER		2
6	69-39474-1		. PIN		1
7	69-39475-1		. PIN		1
8	69-41623-1		. SPACER		2
9	MS24665-136		. PIN, COTTER		1
10	AN320-5		. NUT		1
11	BACW10P94A		. WASHER		1
12	69-41624-1		. BOLT		1
13	69-39462-3		. LINK ASSY, STOP		1
14	69-53214-1		. . BUSHING		2
15	10-60516-241		. . BUSHING (OPT)		2
15	KJB427107B1		. . BUSHING, V50632		2
15	KJB427107B2		. . BUSHING, V50632 (0.03 OVERSIZE OD) (REPAIR PART)		AR
15	KJB427107B3		. . BUSHING, V50632 (0.06 OVERSIZE OD) (REPAIR PART)		AR
16	69-39462-2		. . LINK		1
17	MS24665-287		. PIN, COTTER		1
18	AN320-6		. NUT		1
19	69-39461-1		. BOLT	A-D	1
19	69-39461-2		. BOLT	E-V	1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
1101-					
20	BACN10JC4		. NUT	AB	2
21	AN960-416		. WASHER	AB	2
22	NAS584-13		. BOLT	AB	1
23	69-52251-1		. RETAINER	AB	1
24	69-52252-1		. STOP	AB	1
25	65-46144-1		. LINK ASSY	AB	1
26	10-60516-237		. . BUSHING		1
27	10-60516-238		. . BUSHING		1
28	65-46144-3		. . LINK		1
29	65-46144-2		. LINK ASSY	AB	1
30	10-60516-237		. . BUSHING		1
31	10-60516-238		. . BUSHING		1
32	65-46144-4		. . LINK		1
33	65-46144-5		. LINK ASSY	CD	1
33	65-63667-5		. LINK ASSY	E-H	1
33	65-63667-9		. LINK ASSY	KL	1
33	65-63667-13		. LINK ASSY (OPT TO 65-63667-17)	MN	1
33	65-63667-17		. LINK ASSY (OPT TO 65-63667-13)	MN	1
33	65-63667-17		. LINK ASSY	OP	1
33	65-63667-21		. LINK ASSY	Q-T	1
33	65-63667-25		. LINK ASSY	UV	1
34	10-60516-237		. . BUSHING (USED ON 65-46144-5)		2
34	10-60516-260		. . BUSHING (USED ON 65-63667-5,-9, -13,-17,-25)		2
34	10-60516-260		. . BUSHING (OPT)(USED ON 65-63667-21)		2
34	KJB427409B1		. . BUSHING, V50632 (OPT)(USED ON 65-63667-5,-9,-13,-17,-25)		1
34	KJB427409B1		. . BUSHING, V50632 (USED ON 65-63667-21)		2
34	KJB427409B2		. . BUSHING, V50632 (0.03 OVERSIZE OD) (REPAIR PART)		AR
34	KJB427409B3		. . BUSHING, V50632 (0.06 OVERSIZE OD) (REPAIR PART)		AR
35	10-60516-238		. . BUSHING (USED ON 65-46144-5, 65-63667-5,-9,-13,-17,-25)		2
35	10-60516-238		. . BUSHING (OPT)(USED ON 65-63667-21)		2
35	KJB427007B1		. . BUSHING, V50632 (OPT)(USED ON 65-63667-5,-9,-13,-17,-25)		1
35	KJB427007B1		. . BUSHING, V50632 (USED ON 65-63667-21)		2
35	KJB427007B2		. . BUSHING, V50632 (0.03 OVERSIZE OD) (REPAIR PART)		AR
35	KJB427007B3		. . BUSHING, V50632 (0.06 OVERSIZE OD) (REPAIR PART)		AR
36	65-46144-6		. . LINK ASSY (MATCHED SET) (USED ON 65-46144-5)		1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
1101-					
36	65-63667-6		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-5)		1
36	65-63667-10		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-9)		1
36	65-63667-14		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-13)		1
36	65-63667-18		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-17)		1
36	65-63667-22		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-21)		1
36	65-63667-26		. . LINK ASSY (MATCHED SET) (USED ON 65-63667-25)		1
37	65-46144-7		. . . LINK (USED ON 65-46144-6)		1
37	65-63667-7		. . . LINK (USED ON 65-63667-6)		1
37	65-63667-11		. . . LINK (USED ON 65-63667-10)		1
37	65-63667-15		. . . LINK (USED ON 65-63667-14)		1
37	65-63667-19		. . . LINK (USED ON 65-63667-18)		1
37	65-63667-23		. . . LINK (USED ON 65-63667-22)		1
37	65-63667-27		. . . LINK (USED ON 65-63667-26)		1
38	65-46144-8		. . . LINK (USED ON 65-46144-6)		1
38	65-63667-8		. . . LINK (USED ON 65-63667-6)		1
38	65-63667-12		. . . LINK (USED ON 65-63667-10)		1
38	65-63667-16		. . . LINK (USED ON 65-63667-14)		1
38	65-63667-20		. . . LINK (USED ON 65-63667-18)		1
38	65-63667-24		. . . LINK (USED ON 65-63667-22)		1
38	65-63667-28		. . . LINK (USED ON 65-63667-26)		1
39	MS24665-357		. PIN, COTTER		1
40	AN320-10		. NUT		1
41	66-24446-1		. SPACER		1
42	69-39463-1		. BOLT	A-D	1
42	69-39463-2		. BOLT	E-V	1
43	65-46142-5		. HOOK ASSY	A-D	1
43	65-46142-7		. HOOK ASSY	E-V	1
44	10-60516-236		. . BUSHING (USED ON 65-46142-5)		1
44	10-60516-215		. . BUSHING (USED ON 65-46142-7)(OPT)		2
44	KJB426912B1		. . BUSHING, V50032 (USED ON 65-46142-7) (PREF)		2
44	KJB426912B2		. . BUSHING, V50632 (0.03 OVERSIZE OD) (REPAIR PART)		AR
44	KJB426912B3		. . BUSHING, V50632 (0.06 OVERSIZE OD) (REPAIR PART)		AR
45	69-52250-1		. . BUSHING		1
46	10-60516-245		. . BUSHING (USED ON 65-46142-5)		2
46	10-60516-245		. . BUSHING (USED ON 65-46142-7)(OPT)		2
46	KJB427206B1		. . BUSHING, V50632 (USED ON 65-46142-5) (OPT)		2
46	KJB427206B1		. . BUSHING, V50632 (USED ON 65-46142-7) (PREF)		2

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
1101-					
46	KJB427206B2		. . BUSHING, V50632 (0.03 INCH OVERSIZE OD AND THICKER FLANGE) (REPAIR PART)		AR
46	KJB427206B3		. . BUSHING, V50632 (0.06 INCH OVERSIZE OD AND THICKER FLANGE) (REPAIR PART)		AR
47	65-46142-6		. . HOOK (USED ON 65-46142-5)		1
47	65-46142-8		. . HOOK (USED ON 65-46142-7)		1
48	65-46143-1		. BELLCRANK ASSY, UPLOCK	A-D	1
48	65-63663-1		. BELLCRANK ASSY, UPLOCK	EF	1
48	65-63663-3		. BELLCRANK ASSY, UPLOCK	GH	1
48	65-63663-3		. BELLCRANK ASSY, UPLOCK (OPT TO 65-63663-9)	MNQRU V	1
48	65-63663-5		. BELLCRANK ASSY, UPLOCK (OPT TO 65-63663-7)	KLOPS T	1
48	65-63663-7		. BELLCRANK ASSY, UPLOCK (OPT TO 65-63663-5)	KLOPS T	1
48	65-63663-9		. BELLCRANK ASSY, UPLOCK (OPT TO 65-63663-3)	MNQRU V	1
49	BACB10AB20		. . BEARING (USED ON 65-46143-1)		1
49	BACB10AB20M		. . BEARING (USED ON 65-63663-1,-3, -9)		1
49	BACB10AG22C		. . BEARING (USED ON 65-63663-5, -7)		
49	BNG20E119P016		. . BEARING, 1/64 INCH OVERSIZE (REPAIR PART), V16746 (USED ON 65-63663-1, -3, -9)		AR
49	BNG20E119P032		. . BEARING, 1/32 INCH OVERSIZE (REPAIR PART), V16746 (USED ON 65-63663-1, -3, -9)		AR
49	BNG20E119P093		. . BEARING, 3/32 INCH OVERSIZE (REPAIR PART), V16746 (USED ON 65-63663-1, -3, -9)		AR
49	BNG20E119P125		. . BEARING, 1/8 INCH OVERSIZE (REPAIR PART), V16746 (USED ON 65-63663-1, -3, -9)		AR
49	BNG20E119P062		. . BEARING, 1/16 INCH OVERSIZE (REPAIR PART), V16746 (USED ON 65-63663-1, -3, -9)		AR
50	10-60516-237		. . BUSHING (USED ON 65-46143-1)		2
50	10-60516-259		. . BUSHING (USED ON 65-63663-1)		2
50	10-60516-259		. . BUSHING (USED ON 65-63663-3, -5, -7, -9) (OPT)		2
50	KJB427309B1		. . BUSHING, V50632 (USED ON 65-63663-1, -3, -5, -7, -9)		2
50	KJB427309B2		. . BUSHING, V50632 (0.03 INCH OVERSIZE OD) (REPAIR PART)		AR

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
1101-50	KJB427309B3		. . BUSHING, V50632 (0.06 INCH OVERSIZE OD) (REPAIR PART)		AR
51	10-60516-240		. . BUSHING (USED ON 65-46143-1)		2
51	65-46150-58		. . BUSHING (USED ON 65-63663-1,-3, -5, -7,-9)		2
52	10-60516-242		. . BUSHING (USED ON 65-46143-1)		2
52	65-46150-59		. . BUSHING (USED ON 65-63663-1,-3, -5,-7,-9)		2
53	1645B		. . FITTING, LUBE V95879		1
54	65-46143-2		. . BELLCRANK (USED ON 65-46143-1)		1
54	65-63663-2		. . BELLCRANK (USED ON 65-63663-1)		1
54	65-63663-4		. . BELLCRANK (USED ON 65-63663-3)		1
54	65-63663-6		. . BELLCRANK (USED ON 65-63663-5)		1
54	65-63663-8		. . BELLCRANK (USED ON 65-63663-7)		1
54	65-63663-10		. . BELLCRANK (USED ON 65-63663-9)		1
			INSTALLATION PARTS		
63	69-42744-11		ACTUATOR (LH)		1
63	69-42744-12		ACTUATOR (RH)		1
63	69-42744-13		ACTUATOR (LH)		1
63	69-42744-14		ACTUATOR (RH)		1
63	69-42744-15		ACTUATOR (LH)		1
63	69-42744-16		ACTUATOR (RH)		1
63	69-42744-17		ACTUATOR (LH)		1
63	69-42744-18		ACTUATOR (RH)		1
63	69-68779-5		ACTUATOR (LH)(SB 32-1083)		1
63	69-68779-6		ACTUATOR (RH)(SB 32-1083)		1
63	69-68779-9		ACTUATOR (LH)		1
63	69-68779-10		ACTUATOR (RH)		1
63	69-68779-11		ACTUATOR (LH)		1
63	69-68779-12		ACTUATOR (RH)		1
64	AN960-616L		WASHER (USED WITH 65-42744-11 THRU -16)		1
65	69-42744-7		BRACKET (LH)		1
65	69-42744-8		BRACKET (RH)		1
65	69-68779-1		BRACKET (LH)(SB 32-1083)		1
65	69-68779-2		BRACKET (RH)(SB 32-1083)		1
66	NAS1103-10		BOLT		2
67	NAS620A10L		WASHER		2
68	NAS43DD3-22		SPACER		2
69	NAS679A3W		NUT		2

VENDORS

V16746	SPECLINE, INC., 2230 MOUTON DR., CARSON CITY, NEVADA 89706-0445
V50632	KAMATICS CORP., SUB. OF KAMAN CORP., 1330 BLUE HILLS AVE., P.O. BOX 3, BLOOMFIELD, CONNECTICUT 06002-5303
V95879	ALEMITE DIVISION OF STEWART WARNER CORP., 1826 DIVERSEY PARKWAY, CHICAGO, ILLINOIS 60614-1540