TO: ALL HOLDERS OF STOWAGE COMPARTMENT SNUBBER ASSEMBLY OVERHAUL MANUAL, 25-21-04

REVISION NO. 4, DATED JUN 5/86

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
Reinstated deleted parts, but added restrictions against removal						X						X	
Added detail parts of plungers (95)												X	
Consolidated data. Deleted procedures which can be accomplished using standard practices	X	X	X	X	X	X		X	X				
Updated vendor data for materials and parts			X		X	X						X	

STOWAGE COMPARTMENT SNUBBER ASSEMBLY

25-21-04

BOEING P/N 65-80145-1, -2

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 17823	Jul 15/73
		PRR 23638	Jul 15/73
		PRR 32284	Jul 15/73

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
	25-21-04					
	T-1	Jul 15/73				
	T-2	BLANK				
*	LEP-1	Jun 5/86				
	LEP-2	BLANK				
*	T/C-1	Jun 5/86				
	T/C-2	BLANK				
*	1	Jun 5/86				
*	2	Jun 5/86				
*	3	Jun 5/86				
*	4	Jun 5/86				
*	5	Jun 5/86				
*	6	Jun 5/86				
	7	BLANK				
*	8	Jun 5/86				
*	9	Jun 5/86				
*	10	Jun 5/86				

TABLE OF CONTENTS

*[1] Special instructions not required. Use standard practices and the information contained in 20-44-02 and 20-70-01.

STOWAGE COMPARTMENT SNUBBER ASSEMBLY

1. DESCRIPTION AND OPERATION

A. The stowage compartment snubber assembly is an oil-filled, single action cylinder used to slow the descent of an unlatched stowage compartment. The snubber consists of a cylinder, plunger rod, hydraulic motion-damping components, and end fittings containing bearings.

B. As loads are applied to retract the snubber, hydraulic pressure positions a plug in the piston to regulate flow of fluid past the piston, thereby maintaining a constant retraction rate.

C. Leading Particulars (Approximate)

Length -- 8 inches
Diameter -- 1 inch
Weight -- 1/2 pound
Operating medium -- Silicone oil
Fluid capacity -- 14 cc

2. DISASSEMBLY

A. Assembly 65-80145-1

(1) Pull plunger rod (15) out as far as possible.

(2) Remove fitting (1) and packing (10).

NOTE: Do not remove bearing (5) unless replacement is necessary.

(3) Pour out oil, pumping plunger rod (15) to assist in removing oil. Discard oil.

CAUTION: IN NEXT STEP DO NOT ALLOW PLUNGER (15) TO BE SCRATCHED, GOUGED OR OTHERWISE MARRED. DEFECTS ON ROD WILL DAMAGE SEAL AND PERMIT UNIT TO LEAK.

(4) Loosen stop (30). Wrap plunger rod (15) with masking tape. Hold with vise or pliers and remove fitting (31) and stop (30) from plunger rod.

NOTE: Do not remove bearing (40) unless replacement is necessary.

(5) Push plunger rod (15) from cylinder (60).

NOTE: Do not disassemble body (45), spring (50) and plug (55) unless necessary for replacement.

(6) Remove packing (70) from cylinder (60) with wire or dental pick (Fig. 1). Discard packing.

(7) Do not remove parts (65, 75 thru 90) retained in swaged end of cylinder (60).

B. Assembly 65-80145-2

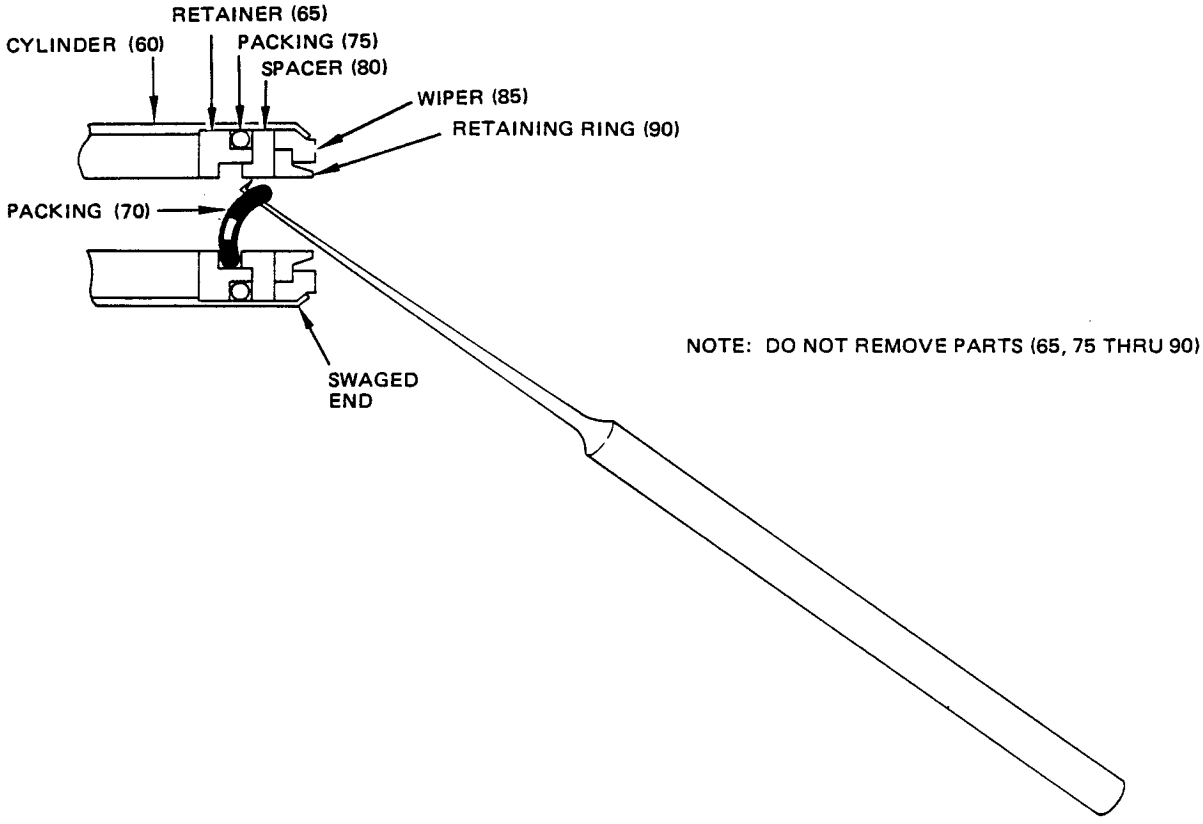
(1) Pull plunger (95) out as far as possible.

(2) Remove fitting (1) and packing (10).

NOTE: Do not remove bearing (5) unless replacement is necessary.

(3) Pour out oil, pumping plunger (95) to remove trapped oil. Discard oil.

(4) Further disassembly of this component is not recommended, except that fitting (31) may be removed to replace bearing (40).



Packing Removal
Figure 1

3. CLEANING

CAUTION: SOLVENTS AND CLOTHS USED TO CLEAN SNUBBER ASSEMBLY WILL BE CONTAMINATED WITH SILICONE OIL AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. SILICONE RESIDUE IS EXTREMELY DIFFICULT TO REMOVE AND WILL ADVERSELY AFFECT ADHESION OF PAINT AND ADHESIVES TO SURFACES SO CONTAMINATED.

A. Materials

NOTE: Equivalent substitutes may be used.

(1) Trichloroethylene -- MIL-T-7003 or BMS 11-6 (Ref 20-60-01)

(2) Acetone -- O-A-51 (Ref 20-60-01)

B. Clean per 20-30-03, and additional procedure in step C.

C. Remove Loctite 75 compound, and deposits on plunger rod (15), with a solution of 5% acetone in trichloroethylene.

4. INSPECTION/CHECK

A. Check all parts for obvious defects in accordance with standard industry practices and additional procedure in steps B and C.

B. Check plunger rod (15) or plunger (95) carefully for evidence of burrs, scratches or other defects that would adversely affect sealing.

C. On 65-80145-1 assembly, if items (45, 50, 55) are removed, check spring (50) for free length of approximately 0.47 inch, and a test length of 0.246 inch with a load of 7.65 -7.71 pounds.

5. REPAIR

A. Materials

NOTE: Equivalent substitutes may be used.

(1) Retaining Compound -- Loctite 75, V05972

(2) Acetone -- O-A-51 (ref 20-60-01)

(3) Trichloroethylene -- MIL-T-7003 or BMS 11-6 (Ref 20-60-01)

B. Repair is limited to replacement of bearings (5, 40), and (on 65-80145-1 assy only), rod (15), body (45), spring (50), plug (55). Other repair consists of restoration of original finish. Refer to Refinish for details.

C. Refinish

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

(1) Fittings (1A, 35) -- Apply decorative anodize (F-14.2992). Color chip match not required. Material: Al alloy.

(2) Cylinder (60) -- Apply decorative anodize (F-14.2992) to exterior only. Color chip match not required. Material: Al alloy.

(3) Spring (50) -- Apply cadmium-titanium alloy plate (F-1.181) all over.

(4) Plunger rod assembly (15) -- Mask all threaded areas and chrome plate (F-1.842) rod (25) OD 0.004 inch thick per 20-42-03. Grind per 20-10-04 to 0.248-0.249 design diameter and 16 microinch finish. Material: 4130 steel, 150-170 ksi. (Rod and ring are brazed together.)

D. Replacement

(1) Replace all parts damaged beyond minor repair.

(2) Bearings (5, 40) -- Roller swage new bearings per 20-50-03. Observe following additional requirements when replacing bearing (40) on 65-80145-2 assembly:

CAUTION: DO NOT ALLOW ROD ON PLUNGER ASSEMBLY (95) TO BE SCRATCHED OR OTHERWISE MARRED. DEFECTS ON ROD WILL DAMAGE SEAL AND PERMIT UNIT TO LEAK.

(a) Wrap plunger (95) rod with masking tape and hold with vise or pliers while removing fitting (31).

(b) After swaging new bearing, install fitting (31) with Loctite 75 retaining compound.

(3) (Assembly 65-80145-1) rod (15), body (45), spring (50) or plug (55) -- Install new 65-80145-9 plunger (95) or proceed as follows:

(a) Remove body, spring and plug from plunger rod. Replace parts as necessary.

(b) Install serviceable body, spring and plug in plunger rod.

(c) For initial adjustment, turn plunger rod (15) into body (45) until plug (55) exerts force of 0.75 pound when depressed to 0.250 inch from face of body (45).

(d) Check per TESTING and adjust as necessary to achieve required full-stroke time. Loosening body (45) increases full-stroke time; tightening body decreases time.

(e) After adjustment, apply Loctite 75 retaining compound to threads to lock adjustment. After compound is cured, remove excess with a solution of 5% acetone in trichloroethylene.

(4) Assembly 65-80145-2

CAUTION: USE EXTREME CARE IN REMOVING PLUNGER ASSEMBLY FROM CYLINDER AND IN REASSEMBLING PARTS TO AVOID DAMAGING SEAL. SEAL DAMAGE WILL PERMIT SNUBBER ASSEMBLY TO LEAK.

(a) If any component of plunger (95) requires replacement, replace entire plunger assembly.

6. ASSEMBLY

A. Materials

NOTE: Equivalent substitutes may be used.

(1) Retaining compound -- Loctite 75, V05972

(2) Silicone Oil -- DC 200-1000CS or DC 210-1000CS, V71984

B. 65-80145-1 Assembly

CAUTION: USE EXTREME CARE TO PREVENT DAMAGE TO PACKING.

(1) Install packing (70) in cylinder (60) per 20-50-06.

CAUTION: ALL THREADS MUST BE COVERED OR BROACHING OF PACKING (70) WILL OCCUR.

(2) Spiral-wrap threaded end of plunger rod (15) with thin plastic tape and twist to a point to protect packing (70) when pushing plunger rod (15) through cylinder (60).

(3) Remove tape. Attach stop (30) and install fitting (31) with retaining compound. Extend plunger rod (15) completely.

C. 65-80145-1, -2 Assemblies

(1) Install packing (10) on fitting (1) per 20-50-06.

(2) Fill cylinder (60) with silicone oil to within 1 inch of bottom of threads on interior of cylinder (60). Slowly push plunger rod (15) or plunger (95) up through oil until body is just covered with oil. Add oil to level of bottom of threads (approximately 14 cc total oil).

(3) Install fitting (1) and packing (10) in cylinder (60).

7. TESTING

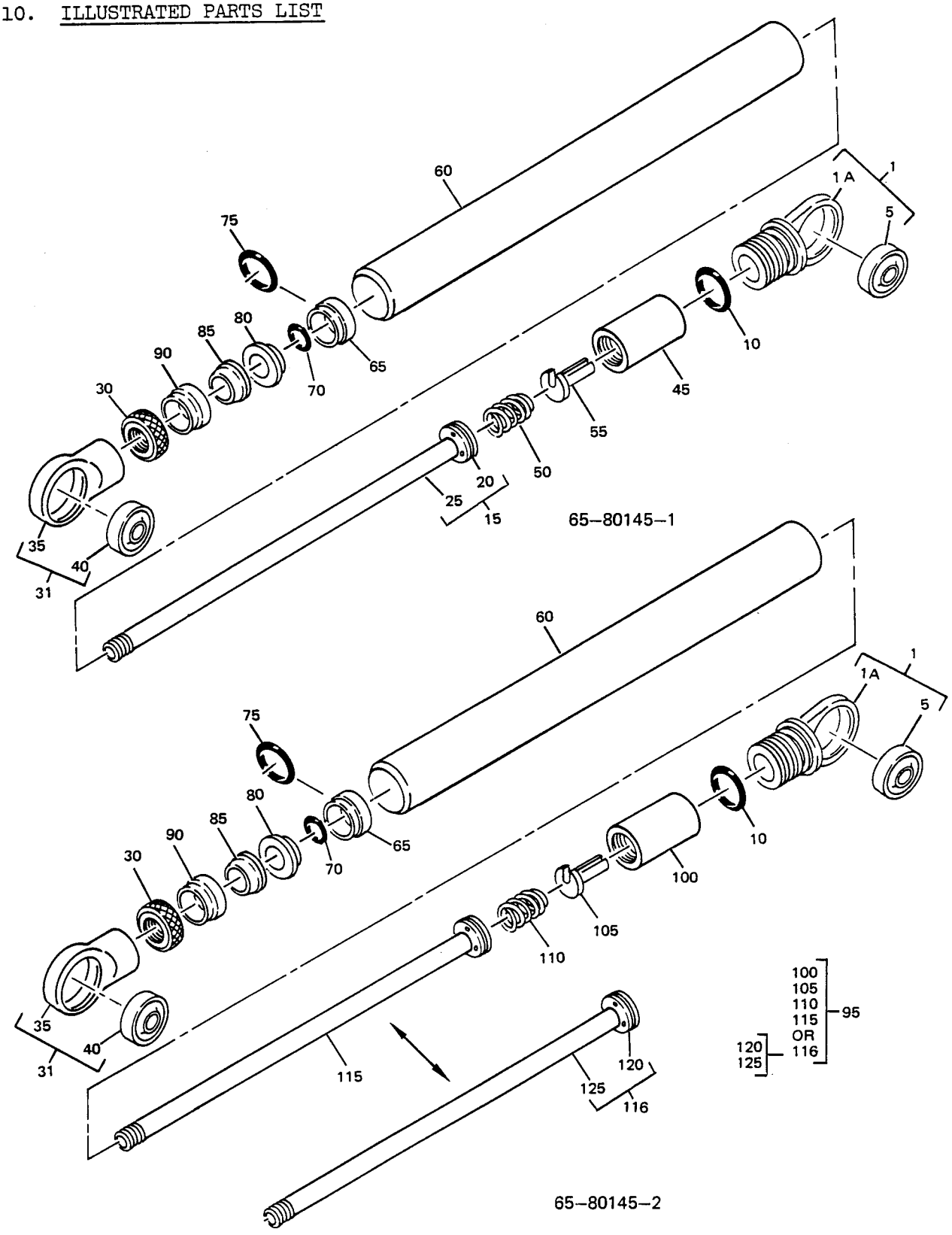
A. Starting with unit fully extended, apply retraction loads of 7, 15, 30 and 50 pounds. Full-stroke closing with each load should take 1 to 3 seconds at 65-75°F. Hold assembly in fully-extended position at least 10 seconds between checks.

B. Pump plunger rod assembly (15) or plunger assembly (95) and check for leakage around rod and at fitting assembly (1).

8. TROUBLE SHOOTING

Trouble	Possible Cause	Correction
Closing time for full stroke greater than allowed	Orifice plugged	Clean or clear opening in plug (55) or plunger (95)
	Orifice too small	Adjust body (45) and rod (15) (65-80145-1 only)
	Too much oil	Drain to correct level
Closing time for full stroke less than allowed	Orifice too large	Adjust body (45) and rod (15) (65-80145-1 only)
	Oil level low	Add oil to correct level
Leakage	Defective packing (10, 70)	Replace defective packing (10)

10. ILLUSTRATED PARTS LIST



Stowage Compartment Snubber Assembly
Figure 2

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
2-					
	65-80145-1		STOWAGE COMPARTMENT SNUBBER ASSY	A	RF
	65-80145-2		STOWAGE COMPARTMENT SNUBBER ASSY	B	RF
1	65-80145-7		. FITTING ASSY (PREF)		1
1	65-80145-6		. FITTING ASSY (OPT)		1
1A	69-62174-2		. . FITTING (USED ON 65-80145-7)		1
1A	69-62174-1		. . FITTING (USED ON 65-80145-6)		1
5	SCBA104		. . BEARING (V04318)(PREF ON 65-80145-7)		1
5	ABG4V103		. . BEARING (V50294)(OPT ON 65-80145-7)		1
5	NG4E		. . BEARING (V73134)(OPT ON 65-80145-7)		1
5	KSAB4N4		. . BEARING (V97613)(USED ON 65-80145-6)		1
10	NAS1611-013		. PACKING		1
15	69-62179-1		. ROD ASSY, PLUNGER	A	1
20	69-62179-2		. RING *[1]		1
25	69-62179-3		. ROD *[1]		
30	69-62180-1		. STOP	A	1
30	69-62180-1		. STOP *[2]	B	1
31	65-80145-5		. FITTING ASSY (PREF)*[2]	B	1
31	65-80145-4		. FITTING ASSY (OPT)*[2]	B	1
31	65-80145-4		. FITTING ASSY (PREF)	A	1
31	65-80145-3		. FITTING ASSY (OPT)	A	1
35	69-62173-3		. . FITTING (USED ON 65-80145-5)		1
35	69-62173-2		. . FITTING (USED ON 65-80145-4)		1
35	69-62173-1		. . FITTING (USED ON 65-80145-3)		1
40	SCBA104		. . BEARING (V04318)(PREF ON 65-80145-4,-5)		1
40	ABG4V103		. . BEARING (V50294)(OPT ON 65-80145-4,-5)		1
40	NG4E		. . BEARING (V73134)(OPT ON 65-80145-4,-5)		1
40	KSAB4N4		. . BEARING (V97613)(USED ON 65-80145-3)		1
45	69-62175-1		. BODY, PLUNGER	A	1
50	69-62176-1		. SPRING	A	1
55	69-62178-1		. PLUG, ORIFICE	A	1
60	69-62177-1		. CYLINDER		1
65	69-65710-1		. RETAINER *[3]	B	
65	69-62427-1		. RETAINER *[3]	A	
70	NAS1611-010		. PACKING	A	1
70	AR10103010A1H		. RING	B	1
75	NAS1611-013		. PACKING *[3]		1

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
2-					
80	69-65711-1		. SPACER *[3]	B	1
80	69-62426-1		. SPACER *[3]	A	1
85	69-62172-2		. WIPER *[3]		1
90	69-62170-1		. RETAINING RING *[3]		1
95	65-80145-8		. PLUNGER ASSY *[2]	B	1
95	65-80145-9		. PLUNGER ASSY *[2]	B	1
100	69-62175-1		. . BODY, PLUNGER		1
105	69-62176-1		. . SPRING		1
110	69-62178-1		. . PLUG, ORIFICE		1
115	69-65712-1		. . ROD, PLUNGER (USED ON 65-80145-9)		1
116	69-62179-1		. . ROD ASSY, PLUNGER (USED ON 65-80145-8)		1
120	69-62179-2		. . . RING *[1]		1
125	69-62179-3		. . . ROD *[1]		1

*[1] DO NOT DISASSEMBLE ROD ASSY. PARTS (20, 25) ARE BRAZED TOGETHER

*[2] 65-80145-4 FITTING (31) WITH 65-80145-9 PLUNGER (95) AND 69-62180-1 STOP (30) OPTIONAL TO 65-80145-5 FITTING (31) WITH 65-80145-8 PLUNGER (95)

*[3] DO NOT REMOVE PARTS (65, 75 THRU 90) FROM CYLINDER (60). PARTS ARE SWAGED IN PLACE INSIDE END OF CYLINDER

VENDORS

V04318 CAM INDUSTRIES, INC., 18250 68TH AVE. SOUTH, KENT, WASHINGTON 98032

V05972 LOCTITE CORP., 705 NORTH MOUNTAIN RD., NEWINGTON, CONNECTICUT 06111

V50294 NMB, INC., 9730 INDEPENDENCE AVE., CHATSWORTH, CALIFORNIA 91311

V71984 DOW CORNING CORP., 3901 SOUTH SAGINAW RD., MIDLAND, MICHIGAN 48640

V73134 HEIM DIV., INCOM INTERNATIONAL INC., 60 ROUND HILL ROAD, FAIRFIELD, CONNECTICUT 06340

V97613 SARGENT INDUSTRIES, KAHR BEARING DIV., 3010 NORTH SAN FERNANDO RD., BURBANK, CALIFORNIA 91503