Parker **TEST DATA RECORD**

Customer Support Operations Rev. H

Drawn [redacted] Date 3/30/95

Test Approval [redacted] Date 3/30/95

Eng. Approval [redacted] Date 3-30-95

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.A. Continuity Check	Check Continuity per wiring diagram (Fig. 403, Fig. 403A).	_____ OK	8/21/96	
11.B. Pin to Pin Resistance	Check pin to pin resistance at 70°F and record. Must comply with noted valve.			
	Pins / Resistance	Sys "A" / Sys "B"		
	1-2 71-87 OHMS (Solenoid PN 59600)	_____ / _____		
	1-2 49-62 OHMS (Solenoid PN 45080 @ 77°F)	_____ / _____		
	1-2 79-115 OHMS (Solenoid PN 45080-1 @ 77°F)	_____ / _____		
	5-6 900-1100 OHMS	_____ / _____		
	7-8 900-1100 OHMS	_____ / _____		
	1-4 0 OHMS (Short)	_____ / _____		
	9-10 80-165 OHMS	_____ / _____		
	11-12 60-135 OHMS	_____ / _____		
	3-Other Infinite (No Connection)	_____ / _____		
11.C. Dielectric Strength	Slowly apply noted voltages and hold for a period of 5 seconds (Fig. 403), 1 min (Fig. 403A). There must be no arcing or insulation failure.			
	1500 VAC Body to Pin 2 (Fig. 403)	_____ OK		
	1500 VAC Body to Pin 1 (Fig. 403A)	_____ OK		
	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 9 (Fig. 403)	_____ OK		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.C. Dielectric Strength (Continued)	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 11 (Fig. 403)	_____ OK	8/21/96 per investigation on NTSB	8/21/96 [redacted]
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 11.	_____ OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 9.	_____ OK		
	800 VAC between Pins 5 and 7	_____ OK		
	800 VAC between Pins 9 and 11 (Fig. 403A)	_____ OK		
11.D. Insulation Resistance	500 VDC between noted pins 100 Megohms min resistance 10 megohms min in-service. (Fig. 403)		N/A for NTSB	
	Pins	Sys "A" Sys "B"		
	1,5,7,9 & 11 to Body	_____ _____		
	1 to 5,7,9 & 11	_____ _____		
	5 to 7,9, & 11	_____ _____		
	7 to 9 & 11	_____ _____		
	9 to 11	_____ _____		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596 DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.B. Return Pressure	No external leakage or permanent set, each test. No intersystem leakage.	3000 3 ± 2 Sys A ____ ____ Sys B ____ ____	N/A for N38 test on 8/21/96	
12.C.3 & .4 Secondary Stroke/Flow Test	Measure and record leakage at open ports Ra and Rb. The unit shall not move after 25 lbs. is applied to lever TF83300-53, and leakage at each return port must not exceed the following: (a) 300-700 cc/min for overhauled unit. (b) 300-1085 cc/min for unit in service. *NOTE: Visual inspect lock to verify proper engagement.* not Required For This Dash #	Extend (12.C.3) Ra ____ cc/min Rb ____ cc/min Retract (12.C.4) Ra ____ cc/min Rb ____ cc/min Movement ____ in.	PAB 4.8 N.R. EXPLAIN BELOW	
12.D. Proof Pressure	No external leakage or permanent set, each test. No intersystem leakage.	5400 3 ± 2 Sys A ____ ____ Sys B ____ ____	N/A for N38 test on 8/21/96	
12.E. Rig Neutral Cylinder Stroke and Clearance Test	Output Rig Pin must fit. (27.46 - 27.54 Ref.) No binding or interference at 3000 PSI. Stoke 26° ± ½° each direction. Visual snubbing. No binding or interference at 0 PSI.	Rig Pin GO Surface Indicator at 0° 0° ~~Binding~~ Yes (No) Ext. 26° Ret. 26° Snubbing ✓ OK ✓ OK	8/20/96 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.F. Linkage Breakout Friction	19 oz. maximum to start extend. 1 oz. minimum in extend direction to start retract.	Ext. 11 Oz. Ret. 2 Oz.	CSO 22 FTO	
12.G. Input Force vs. Input Travel	Force plot must fall within limits shown on Fig. 723.	NOT OK	CSO 22 FTO	
12.H. Cylinder Rod Leakage	1 drop/25 cycles max at each End Gland (In-Service 1 drop/5 cycles) 2 drops/25 cycles max. at Center Gland (In-Service 2 drops/5 cylces) 1 drop/100 cycles max at Input Shaft (In-Service 1 drop/25 cycles)	Rod Gland 0 drops Aft Gland 0 drops Center 0 drops Gland Input Shaft 0 drops	CSO 22 FTO	
12.J. Internal Leakage	(1) Rig neutral leakage at RA & RB. 300 cc/min - overhaul. 3000 cc/min - In-Service. (2) & (3) Input lever at extend & retract stops 300-700 cc/min - overhaul. 300-1085 cc/min - In-Service.	Neutral RA 180 RB 190 RA RB Ext. 410 430 Ret. 420 360	CSO 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.J. Internal Leakage (Continued)	(4) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	Neutral RA ___ RB ___		
	(5) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RA RB Ext. ___ ___ Ret. ___ ___		
	(6) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RB Neutral 640	CSO 22 FTO	
	(7) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min @ RB 2000 cc/min above leakage measured in step (1) (b) @ RB for In-Service	RB Ext. 640 Ret. 680		

Parker **TEST DATA RECORD** (CONTINUATION)

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Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.K. Intersystem Leakage	Combined leakage from PB and RB 10 cc/min maximum.	.1 cc/min	CSO 22 FTO	
12.L. Transducer Output	4.2-4.8 VAC 65-44861-2 and 65C37052-2 (Sys A & B) 1.95-2.55 VAC 65-44861-3,-4 and 65C37052-2,-3,-4 (Sys A & B) 1.95-2.55 VAC 65-44861-5,-8 and 65C37052-5,-8 (Sys B) 3.07-3.67 VAC 65-44861-6,-7,-9,-11 and 65C37052-6,-7,-9 (Sys B)	"A" Extend ____ VAC Retract ____ VAC "B" Extend 3.53 VAC Retract 3.51 VAC	CSO 22 FTO	
12.M. Transducer Null	50 MV maximum at null for each system - Overhaul. 150 MV maximum at null for each system In-Service.	"A" Null ____ VAC "B" Null .059 VAC	CSO 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

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Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.N. Yaw Damper Authority	Per Figure 1, Ref. Test Data Sheet 10. Actuator must be stable and within .050" of neutral.	Ext. Ret. Sys "A" _____ Sys "B" .234/.238 Sys "A & B" ____ Stable Yes No Position from "ZERO" _____ Ext. Ret. Stable Yes No Position from "ZERO" _____ Ext. Ret.	CSO 22 FTO	
12.P. Manual Hysteresis 4.3.14	Hysteresis shall not exceed .004 inch each direction - Overhaul. .006 inch each direction In-Service	Extend .0015 Inch Retract .001 Inch	CSO 22 FTO	
12.Q. Yaw Damper System Phase Lag	Phase shift to be: 25 degrees (Sin Ø, 0.423) 30 degrees (Sin Ø, 0.500) for in-service units. No crossover in plot.	"A" sin Ø ____ "B" sin Ø .313 Crossovers: ~~Yes~~ (No)	CSO 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6944468-100

PART NO. 65-44861-9/65C37052-1 SERIAL NO. 159A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.R. Yaw Damper System Repeatability and Linearity	Pattern must repeat within 0.8" (.008" at actuator) - Overhaul. 1.2" (.012" at actuator) In-Service	"A" _____ in max "B" .28 in max		
	Overshoot after reversal must be 0.2" maximum (.002" at actuator)	"A" _____ in max "B" .01 in max	CSO 22 FTO	
	Average input/output slope of any 10% segment must fall within the slope limits shown.	"A" Yes No "B" (Yes) No		
12.S. Phase Check	Manual control "extend", actuator must extend.	Extend "A" EXT "B" EXT		
	Manual control "retract", actuator must retract.	Retract "A" RET "B" RET	CSO 22 FTO	
	Operation smooth and stable for A and B.	Stable: (Yes) No		
12.T. Yaw Damper Engage 4.3.17	.004" maximum movement-overhaul .010" maximum movement-In-Service.	"A" _____ in "B" .005 in	CSO 22 FTO	
12.U. By-Pass Valve Operation	(4) No piston movement at 250 PSI differential for either system.	"A" Yes (No) "B" Yes (No)		
	(6a) Noticeable decrease in flow at less than 460 PSI differential.	"A" 360 PSI "B" 360 PSI	CSO 22 FTO	
	(8) Piston rod movement of 1.00 inch or more in either direction.	Ext. ✓ OK Ret. ✓ OK		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 6544468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.V. Duty Cycle (optional) Not Required for In-Service Unless Actuator Seals Were Replaced	3.0 cc/8 hours maximum at each piston rod seal. 6.0 cc/8 hours at center gland - Overhaul. 1.8 cc/hr maximum at each piston rod seal. 3.6 cc/hr at center gland - In-Service.	Output End ____cc____hrs Fixed End ____cc____hrs Center ____cc____hrs	NTB Inspection 8/21/96 [redacted]	
12.W. Low Pressure Leakage (not same as 12.V.)	No external leakage in 8 hours - overhaul. No external leaks in one hour In-Service.	____cc____hrs	N/A for 8/26/96	

Form 1132-3A

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order 65414468-100

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/21/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KORHNEN

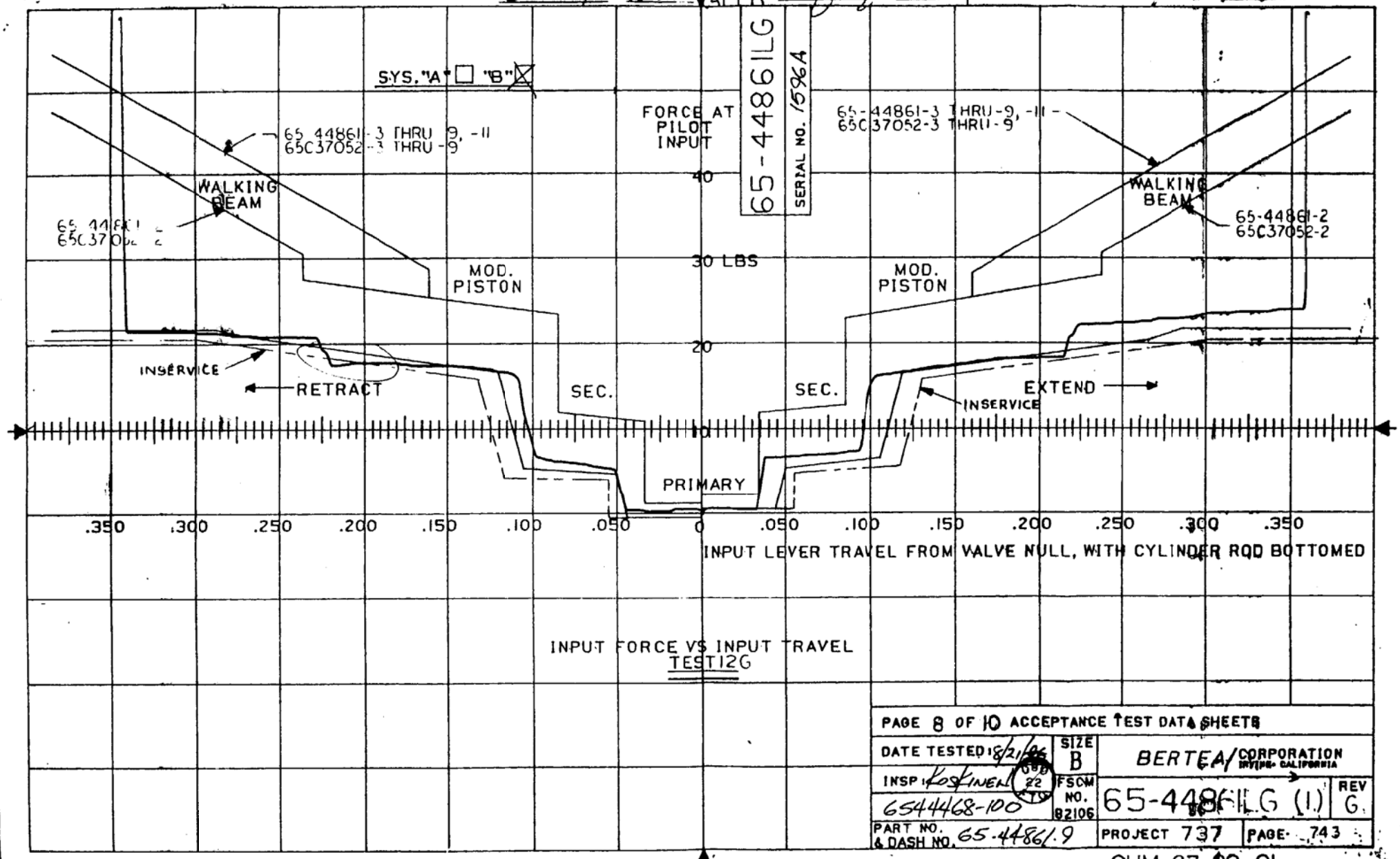
☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

OVERHAULED UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.294 to 0.334	0.294 to 0.334	0.335 to 0.375
65-44861-3,-4 65C37052-3,-4	0.137 to 0.177	0.137 to 0.177	0.294 to 0.334
65-44861-5,-8 65C37052-5,-8	———	0.137 to 0.177	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.215 to 0.255	———

IN-SERVICE UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.274 to 0.354	0.274 to 0.354	0.315 to 0.394
65-44861-3,-4 65C37052-3,-4	0.117 to 0.197	0.117 to 0.197	0.274 to 0.354
65-44861-5,-8 65C37052-5,-8	———	0.117 to 0.197	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.196 to 0.276	———

Actuator Output Stroke Limits
Figure 1

DRAWN: [illegible] DATE: 10-3-1 | ENG APPR: [illegible] DATE: 8-8 | TEST APPR: [illegible] DATE: 10-2-80



INPUT FORCE VS INPUT TRAVEL
TEST12G

PAGE 8 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8/21/86	SIZE B	BERTEA CORPORATION IRVINE, CALIFORNIA
INSP: KOSKINEN (QCD 22 ATP)	FSCM NO. 82106	65-44861LG (1) REV G
6544468-100		
PART NO. & DASH NO. 65-44861-9	PROJECT 737	PAGE 743

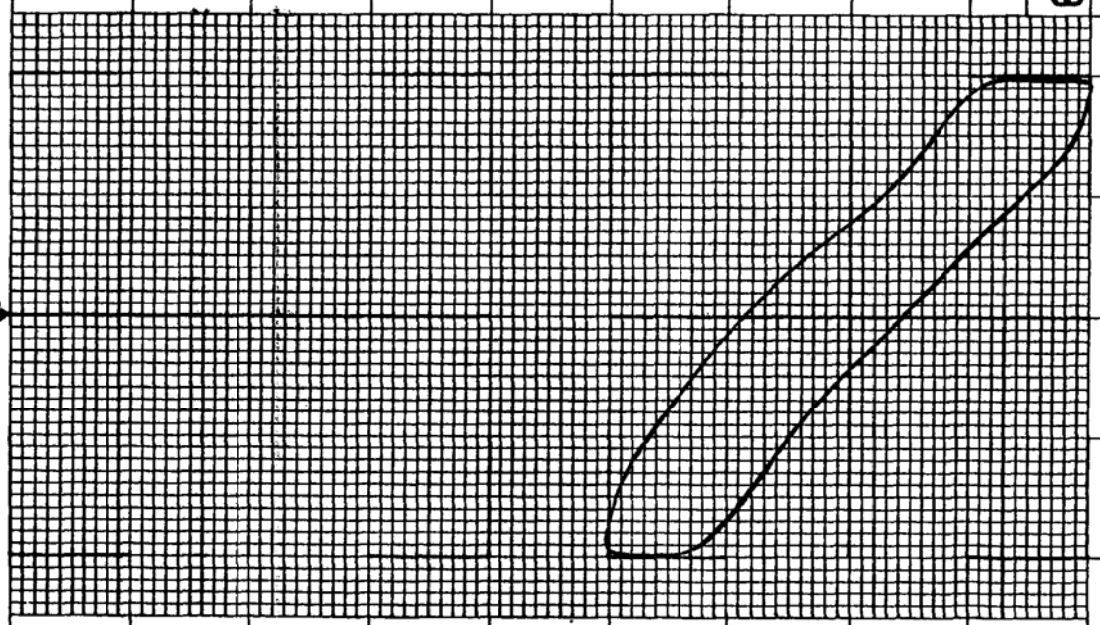
OHM 27-20-01

DRAWN: [illegible] DATE: 10-2-80 ENG. APPR: [illegible] DATE: TEST APPR: [illegible] DATE: 10-5

65-44861LG SERIAL NO. 1596A

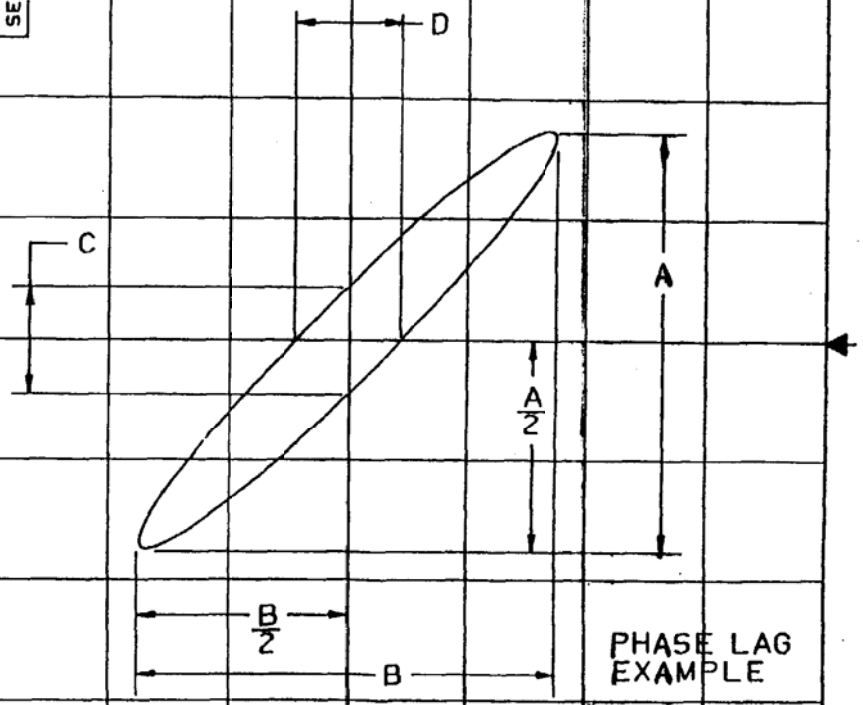
.423 OVERHAUL

SINE Ø MAXIMUM PER TEST REQ'MT .500 INSERVICE



$2\sqrt{\frac{C}{A} \cdot \frac{D}{B}} = \text{SINE } Ø$

CALCULATION



PHASE LAG EXAMPLE

SYS A	TEST 120	SYS B
	PHASE LAG	
SINE Ø .		SINE Ø .313
	(-5 ASSY, 1 SYSTEM ONLY)	

PAGE 9 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8/21/96 | SIZE B | BERTEA CORPORATION IRVINE, CALIFORNIA

INSP: Dale Kastner (C50 J22 K10) | RSCM NO. 82106 | 65-44861LG (2) | REV G

6544468-100

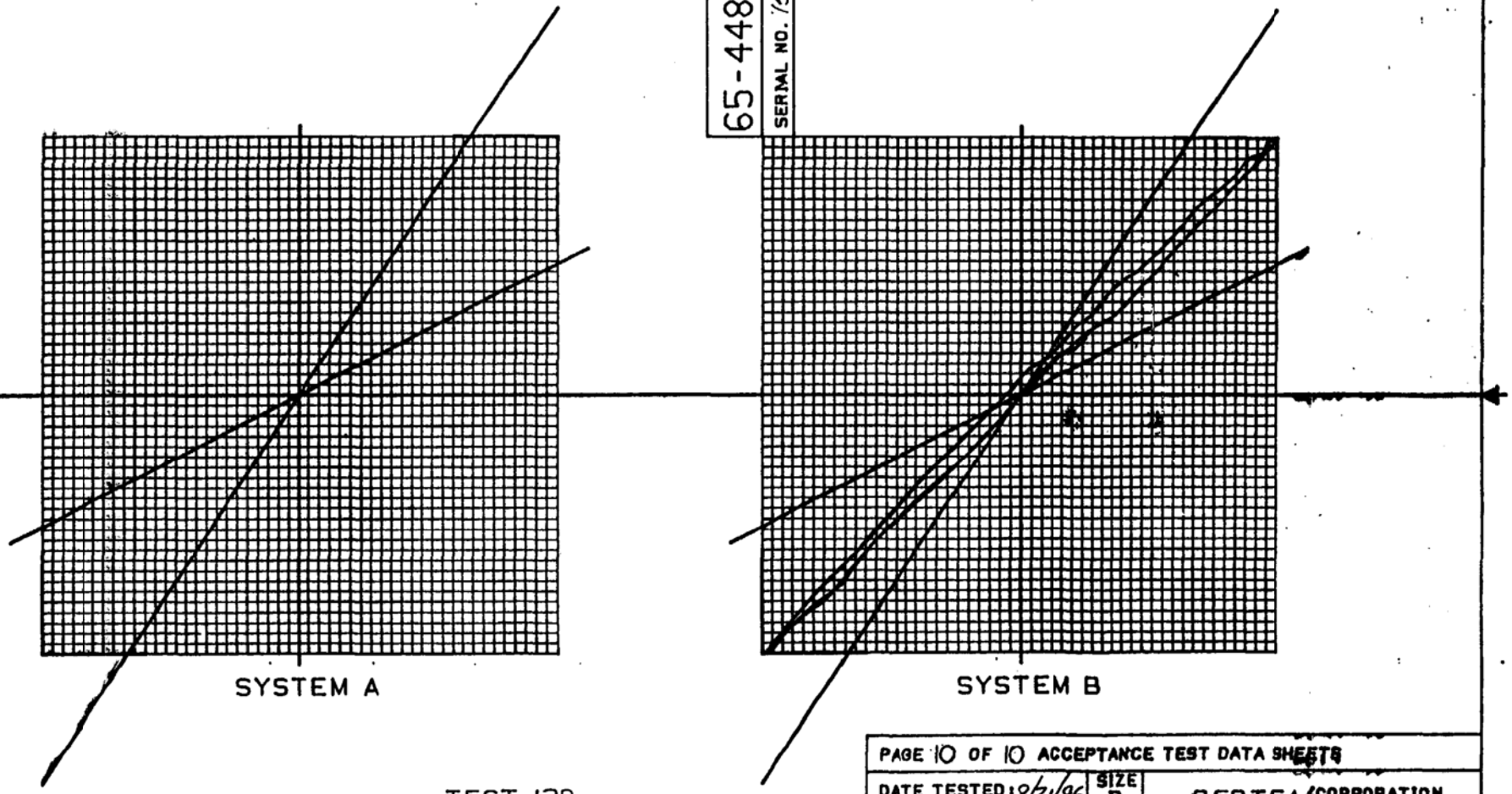
PART NO. & DASH NO. 65-44861-9 | PROJECT 737 | PAGE 750

OHM 27-20-01

DRAWN: [illegible] DATE: 10-2-80 | ENG. APPR: [illegible] DATE: 10-2-80 | TEST APPR: E. Cogan DATE: 10-2-80

65-4486ILG

SERIAL NO. 1596A



SYSTEM A

SYSTEM B

TEST 12R
REPEATABILITY AND LINEARITY
(-5 ASSY, 1 SYSTEM ONLY)

PAGE 10 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8/21/86	SIZE B	BERTEA CORPORATION
INSP: KOSKINEN	FSCM NO. 82106	65-4486ILG (3) REV G
6544468-100		
PART NO. & DASH NO. 65-4486-9	PROJECT 737	PAGE 751

OHM 27-20-01

Parker **TEST DATA RECORD**

Customer **Support Operations** Rev. H

Drawn [redacted] Date 3/30/95

Test Approval [redacted] Date 3/30/95

Eng. Approval [redacted] Date 3-30-95

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- **SERIAL NO.** 1596A **DATE OF TEST** 8/29/96

PART NAME RUDDER ACTUATOR PCU **INSPECTOR** KOSKINEN

☐ **PHOSPHATE ESTER** ☐ **MIL-H-5606** ☐ **MIL-H-83282** ☐ **AIR** ☐ **PD680**

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.A. Continuity Check	Check Continuity per wiring diagram (Fig. 403, Fig. 403A).	_____ OK		
11.B. Pin to Pin Resistance	Check pin to pin resistance at 70°F and record. Must comply with noted valve.			
	Pins — Resistance	Sys "A" — Sys "B"		
	1-2 — 71-87 OHMS (Solenoid PN 59600)	_____ _____		
	1-2 — 49-62 OHMS (Solenoid PN 45080 @ 77°F)	_____ _____		
	1-2 — 79-115 OHMS (Solenoid PN 45080-1 @ 77°F)	_____ _____		
	5-6 — 900-1100 OHMS	_____ _____		
	7-8 — 900-1100 OHMS	_____ _____		
	1-4 — 0 OHMS (Short)	_____ _____		
	9-10 — 80-165 OHMS	_____ _____		
	11-12 — 60-135 OHMS	_____ _____		
	3-Other — Infinite (No Connection)	_____ _____		
11.C. Dielectric Strength	Slowly apply noted voltages and hold for a period of 5 seconds (Fig. 403), 1 min (Fig. 403A). There must be no arcing or insulation failure.			
	1500 VAC Body to Pin 2 (Fig. 403)	_____ OK		
	1500 VAC Body to Pin 1 (Fig. 403A)	_____ OK		
	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 9 (Fig. 403)	_____ OK		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

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Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.C. Dielectric Strength (Continued)	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 11 (Fig. 403)	_____ OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 11.	_____ OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 9.	_____ OK		
	800 VAC between Pins 5 and 7	_____ OK		
	800 VAC between Pins 9 and 11 (Fig. 403A)	_____ OK		
11.D. Insulation Resistance	500 VDC between noted pins 100 Megohms min resistance 10 megohms min in-service. (Fig. 403)			
	Pins	Sys "A" Sys "B"		
	1,5,7,9 & 11 to Body	_____ _____		
	1 to 5,7,9 & 11	_____ _____		
	5 to 7,9, & 11	_____ _____		
	7 to 9 & 11	_____ _____		
	9 to 11	_____ _____		

Form 1132-3A

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.B. Return Pressure	No external leakage or permanent set, each test. No intersystem leakage.	3000 3 ± 2 Sys A _____ _____ Sys B _____ _____		
12.C.3 & .4 Secondary Stroke/Flow Test	Measure and record leakage at open ports Ra and Rb. The unit shall not move after 25 lbs. is applied to lever TF83300-53, and leakage at each return port must not exceed the following: (a) 300-700 cc/min for overhauled unit. (b) 300-1085 cc/min for unit in service. *NOTE: Visual inspect lock to verify proper engagement.*	Extend (12.C.3) Ra _____ cc/min Rb _____ cc/min Retract (12.C.4) Ra _____ cc/min Rb _____ cc/min Movement _____ in.		
12.D. Proof Pressure	No external leakage or permanent set, each test. No intersystem leakage.	5400 3 ± 2 Sys A _____ _____ Sys B _____ _____		
12.E. Rig Neutral Cylinder Stroke and Clearance Test	Output Rig Pin must fit. (27.46 - 27.54 Ref.) No binding or interference at 3000 PSI. Stoke 26° ± ½° each direction. Visual snubbing. No binding or interference at 0 PSI.	Rig Pin GO Surface Indicator at 0° 0° Binding Yes (No) Ext. 26° Ret. 26° Snubbing ✓ OK ✓ OK	CSO 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9 /65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
✓ 12.F. Linkage Breakout Friction	19 oz. maximum to start extend. 1 oz. minimum in extend direction to start retract.	Ext. 14 Oz. Ret. 4 Oz.	CSO 22 FTO	
✓ 12.G. Input Force vs. Input Travel	Force plot must fall within limits shown on Fig. 723.	OK LOW FORCE MOD, SHORT STROKE EXTEND		~~CSO 22 FTO~~
✓ 12.H. Cylinder Rod Leakage	1 drop/25 cycles max at each End Gland (In-Service 1 drop/5 cycles) 2 drops/25 cycles max. at Center Gland (In-Service 2 drops/5 cylces) 1 drop/100 cycles max at Input Shaft (In-Service 1 drop/25 cycles)	Rod-Gland .5 drops Aft Gland .5 drops Center 1.5 drops Gland Input Shaft 0 drops	CSO 22 FTO	
✓ 12.J. Internal Leakage	(1) Rig neutral leakage at RA & RB. 300 cc/min - overhaul. 3000 cc/min - In-Service. (2) & (3) Input lever at extend & retract stops 300-700 cc/min - overhaul. 300-1085 cc/min - In-Service.	Neutral RA 190 RB 200 RA RB Ext. 410 420 Ret. 420 360	CSO 22 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.J. Internal Leakage (Continued)	(4) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	Neutral RA ___ RB ___		
	(5) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RA RB Ext. ___ ___ Ret. ___ ___		
	(6) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RB Neutral 660	GSO 22 FTO	
	(7) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min @ RB 2000 cc/min above leakage measured in step (1) (b) @ RB for In-Service	RB Ext. 660 Ret. 680		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.K. Intersystem Leakage	Combined leakage from PB and RB 10 cc/min maximum.	1 cc/min	CSO 22 FTO	
12.L. Transducer Output	4.2-4.8 VAC 65-44861-2 and 65C37052-2 (Sys A & B) 1.95-2.55 VAC 65-44861-3,-4 and 65C37052-2,-3,-4 (Sys A & B) 1.95-2.55 VAC 65-44861-5,-8 and 65C37052-5,-8 (Sys B) 3.07-3.67 VAC 65-44861-6,-7,-9,-11 and 65C37052-6,-7,-9 (Sys B)	"A" Extend ____ VAC Retract ____ VAC "B" Extend 3.52 VAC Retract 3.51 VAC	CSO 22 FTO	
12.M. Transducer Null	50 MV maximum at null for each system - Overhaul. 150 MV maximum at null for each system In-Service.	"A" Null _____ VAC "B" Null .059 VAC	CSO 22 FTO	

Form 1132-3A

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.N. Yaw Damper Authority	Per Figure 1, Ref. Test Data Sheet 10. Actuator must be stable and within .050" of neutral.	Ext. Ret. Sys "A" _____ Sys "B" .231/.236 Sys "A & B" ____ Stable Yes No Position from "ZERO" _____ Ext. Ret. Stable Yes No Position from "ZERO" _____ Ext. Ret.	CSO 22 FTO	
12.P. Manual Hysteresis 4.3.14	Hysteresis shall not exceed .004 inch each direction - Overhaul. .006 inch each direction In-Service	Extend .001 Inch Retract .0005 Inch	CSO 22 FTO	
12.Q. Yaw Damper System Phase Lag	Phase shift to be: 25 degrees (Sin Ø, 0.423) 30 degrees (Sin Ø, 0.500) for in-service units. No crossover in plot.	"A" sin Ø ____ "B" sin Ø .311 Crossovers: Yes (No)	CSO 22 FTO	

Form 1132-3A

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.R. Yaw Damper System Repeatability and Linearity	Pattern must repeat within 0.8" (.008" at actuator) - Overhaul. 1.2" (.012" at actuator) In-Service	"A" _____ in max "B" .22 in max	CSO 22 FTO	
	Overshoot after reversal must be 0.2" maximum (.002" at actuator)	"A" _____ in max "B" .01 in max		
	Average input/output slope of any 10% segment must fall within the slope limits shown.	"A" Yes No "B" (Yes) No		
12.S. Phase Check	Manual control "extend", actuator must extend.	Extend "A" EXT "B" EXT	CSO 22 FTO	
	Manual control "retract", actuator must retract.	Retract "A" RET "B" RET		
	Operation smooth and stable for A and B.	Stable: (Yes) No		
12.T. Yaw Damper Engage 4.3.17	.004" maximum movement-overhaul .010" maximum movement-In-Service.	"A" _____ in "B" .003 in	CSO 22 FTO	
12.U. By-Pass Valve Operation	(4) No piston movement at 250 PSI differential for either system.	"A" Yes (No) "B" Yes (No)	CSO 22 FTO	
	(6a) Noticeable decrease in flow at less than 460 PSI differential.	"A" 350 PSI "B" 360 PSI		
	(8) Piston rod movement of 1.00 inch or more in either direction.	Ext. ✓ OK Ret. ✓ OK		

Parker **TEST DATA RECORD** (CONTINUATION)

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Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR KOSKINEN

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.V. Duty Cycle (optional) Not Required for In-Service Unless Actuator Seals Were Replaced	3.0 cc/8 hours maximum at each piston rod seal. 6.0 cc/8 hours at center gland - Overhaul. 1.8 cc/hr maximum at each piston rod seal. 3.6 cc/hr at center gland - In-Service.	Output End _____cc_____hrs Fixed End _____cc_____hrs Center _____cc_____hrs		
12.W. Low Pressure Leakage (not same as 12.V.)	No external leakage in 8 hours - overhaul. No external leaks in one hour In-Service.	_____cc_____hrs		

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☒ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-9/65C37052- SERIAL NO. 1596A DATE OF TEST 8/29/96

PART NAME RUDDER ACTUATOR PCU INSPECTOR K.OSKINEN

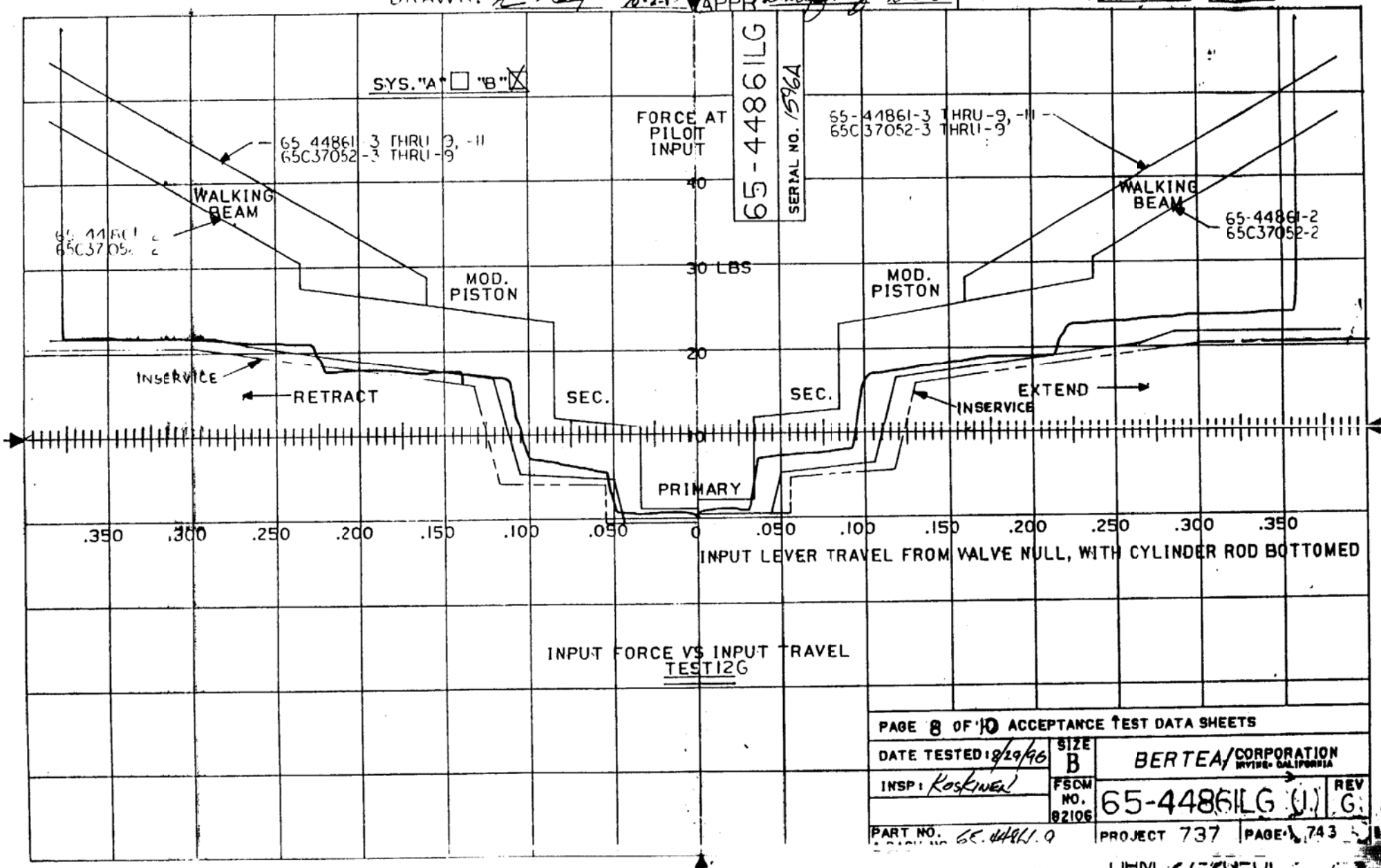
☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

OVERHAULED UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.294 to 0.334	0.294 to 0.334	0.335 to 0.375
65-44861-3,-4 65C37052-3,-4	0.137 to 0.177	0.137 to 0.177	0.294 to 0.334
65-44861-5,-8 65C37052-5,-8	———	0.137 to 0.177	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.215 to 0.255	———

IN-SERVICE UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.274 to 0.354	0.274 to 0.354	0.315 to 0.394
65-44861-3,-4 65C37052-3,-4	0.117 to 0.197	0.117 to 0.197	0.274 to 0.354
65-44861-5,-8 65C37052-5,-8	———	0.117 to 0.197	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.196 to 0.276	———

Actuator Output Stroke Limits
Figure 1

DRAWN: [illegible] DATE: 10-7-80 | ENG APPR: [illegible] DATE: 10-8-80 | TEST APPR: [illegible] DATE: 10-8-80



INPUT FORCE VS INPUT TRAVEL
TEST12G

PAGE 8 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8/29/96 | SIZE B | BERTEA CORPORATION IRVINE, CALIFORNIA

INSP: Koskinen | FSCM NO. 82106 | 65-44861LG (J) | REV G

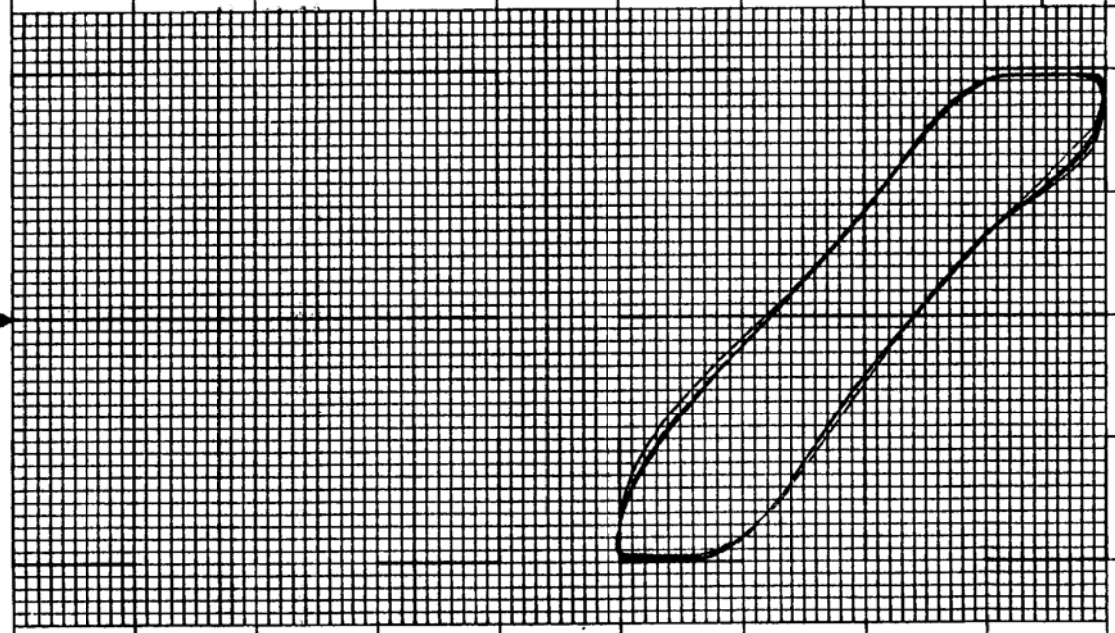
PART NO. 65-44861-9 | PROJECT 737 | PAGE 743

UNM 27120-01

DRAWN: [illegible] DATE: 10-2-80 ENG. APPR [illegible] DATE: TEST APPR: [illegible] DATE: 10-3-80

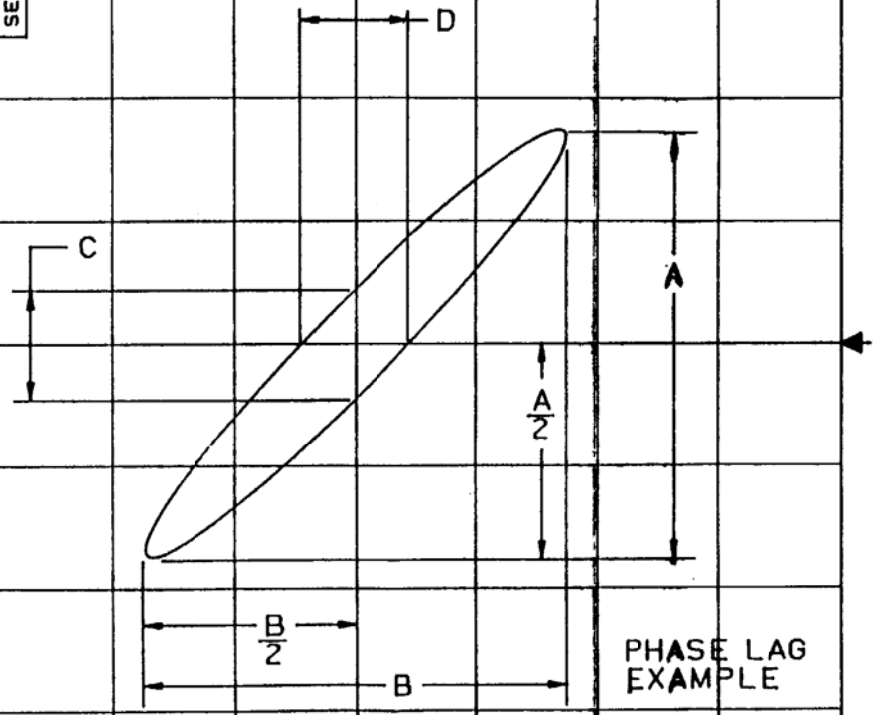
65-44861LG SERIAL NO./596A

SINE ø MAXIMUM PER TEST REQ'MT .423 OVERHAUL .500 INSERVICE



$2\sqrt{\frac{C}{A} + \frac{D}{B}} = \text{SINE } ø$

CALCULATION



PHASE LAG EXAMPLE

SYS A	TEST 12Q PHASE LAG	SYS B
SINE ø .		SINE ø .311
	(-5 ASSY, 1 SYSTEM ONLY)	

PAGE 9 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8/29/96 | SIZE B | BERTEA CORPORATION IRVINE, CALIFORNIA

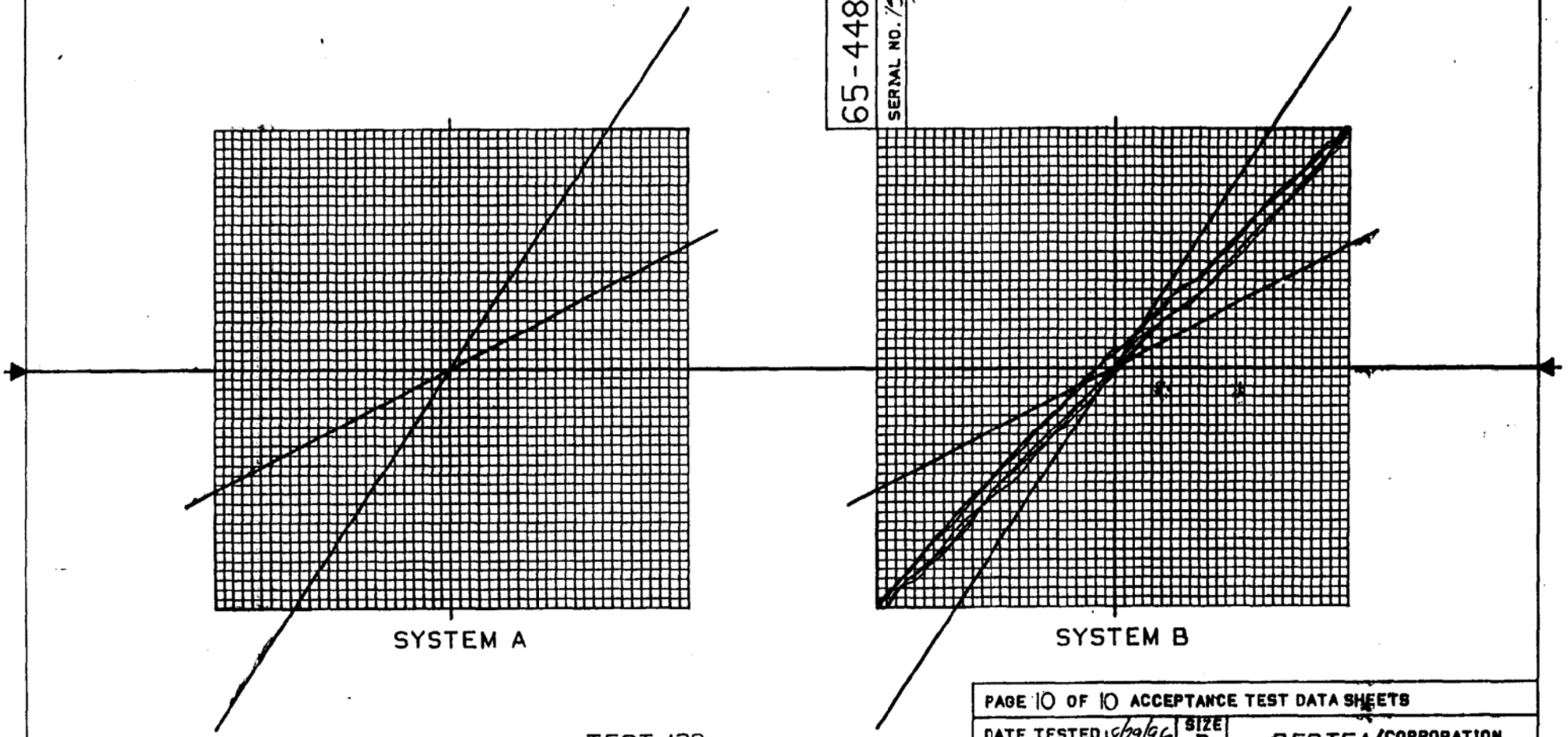
INSP: KOSKINEN | FSCM NO. 82106 | 65-44861LG (2) | REV G

PART NO. & DASH NO. 65-44861-9 | PROJECT 737 | PAGE 750

OHM 27-20-01

DRAWN: [illegible] DATE: 10-2-80 | ENG. APPR: [illegible] DATE: 10-2-80 | TEST APPR: [illegible] DATE: 10-2-80

65-4486ILG SERIAL NO. 1596A



TEST 12R
REPEATABILITY AND LINEARITY
(-5 ASSY, 1 SYSTEM ONLY)

PAGE 10 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 6/29/96	SIZE B	BERTEA CORPORATION DIVISION CALIFORNIA	
INSP: KOSKINEN	FSCM NO. 82106	65-4486ILG (3)	REV G
PART NO. & DASH NO. 65-4486I-9		PROJECT 737	PAGE 751

OHM 27-20-01

ENGR UNIT

Parker **TEST DATA RECORD**

Customer Support Operations Rev. H

Drawn [redacted] Date 3/30/95

Test Approval [redacted] Date 3/30/95

Eng. Approval [redacted] Date 3-30-95

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 657672-100

PART NO. ~~65-44861-///65C37052-~~ SERIAL NO. 2203A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.A. Continuity Check	Check Continuity per wiring diagram (Fig. 403, Fig. 403A).	OK		
11.B. Pin to Pin Resistance	Check pin to pin resistance at 70°F and record. Must comply with noted valve.			
	Pins / Resistance	Sys "A" / Sys "B"		
	1-2 71-87 OHMS (Solenoid PN 59600)	— / 81		
	1-2 49-62 OHMS (Solenoid PN 45080 @ 77°F)	— / —		FAB T1 FEX
	1-2 79-115 OHMS (Solenoid PN 45080-1 @ 77°F)	— / —		
	5-6 900-1100 OHMS	CSO 3 N.R. OF EXPLAIN BELOW / 1004		
	7-8 900-1100 OHMS	— / 1009		
	1-4 0 OHMS (Short)	— / 3		
	9-10 80-165 OHMS	— / 107		
	11-12 60-135 OHMS	— / 86		
	3-Other Infinite (No Connection)	— / —		
11.C. Dielectric Strength	Slowly apply noted voltages and hold for a period of 5 seconds (Fig. 403), 1 min (Fig. 403A). There must be no arcing or insulation failure.			
	1500 VAC Body to Pin 2 (Fig. 403)	OK		
	1500 VAC Body to Pin 1 (Fig. 403A)	OK		
	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 9 (Fig. 403)	OK		

RCVD TEST

 + R ST7F PAGES 743, 750, 751.

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 657 7672-100

PART NO. 65-44861-///~~65C37052-~~ SERIAL NO. 2203 A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.C. Dielectric Strength (Continued)	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 11 (Fig. 403)	_____OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 11.	_____OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 9.	_____OK		
	800 VAC between Pins 5 and 7	_____OK		
	800 VAC between Pins 9 and 11 (Fig. 403A)	_____OK		
11.D. Insulation Resistance	500 VDC between noted pins 100 Megohms min resistance 10 megohms min in-service. (Fig. 403)			
	Pins	Sys "A" Sys "B"		
	1,5,7,9 & 11 to Body	_____ _____		
	1 to 5,7,9 & 11	_____ _____		
	5 to 7,9, & 11	_____ _____		
	7 to 9 & 11	_____ _____		
	9 to 11	_____ _____		
	R'C'V'G' TEST			

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 6577672-100

PART NO. 65-44861-~~65C37052-~~ SERIAL NO. 22031A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.B. Return Pressure	No external leakage or permanent set, each test. No intersystem leakage.	3000 3 ± 2 Sys A None None Sys B None None	CSO 69 FTO	
12.C.3 & .4 Secondary Stroke/Flow Test	Measure and record leakage at open ports Ra and Rb. The unit shall not move after 25 lbs. is applied to lever TF83300-53, and leakage at each return port must not exceed the following: (a) 300-700 cc/min for overhauled unit. (b) 300-1085 cc/min for unit in service. *NOTE: Visual inspect lock to verify proper engagement.*	Extend (12.C.3) Ra 570 cc/min Rb 590 cc/min Retract (12.C.4) Ra 530 cc/min Rb 530 cc/min Movement, ~~Good~~ in.	CSO 69 FTO	
12.D. Proof Pressure	No external leakage or permanent set, each test. No intersystem leakage.	5400 3 ± 2 Sys A None None Sys B None None	CSO 69 FTO	
12.E. Rig Neutral Cylinder Stroke and Clearance Test	Output Rig Pin must fit. (27.46 - 27.54 Ref.) No binding or interference at 3000 PSI. Stoke 26° ± ½° each direction. Visual snubbing. No binding or interference at 0 PSI.	Rig Pin GO Surface Indicator at 0° Yes Binding Yes (No) Ext. 25.5° Ret. 25.5° Snubbing ✓ OK ✓ OK	CSO 69 FTO	

RCVG TEST

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☑ In-Service Work Order 577672-100

PART NO. 65-44861-11/~~65C37052-~~ SERIAL NO. 2203A DATE OF TEST 8-20-91

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☑ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ ~~PD680~~

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.F. Linkage Breakout Friction	19 oz. maximum to start extend. 1 oz. minimum in extend direction to start retract.	Ext. 14 Oz. Ret. 6 Oz.	CSO 69 FTO	
12.G. Input Force vs. Input Travel	Force plot must fall within limits shown on Fig. 723.	✓ OK	CSO 69 FTO	
12.H. Cylinder Rod Leakage	1 drop/25 cycles max at each End Gland (In-Service 1 drop/5 cycles) 2 drops/25 cycles max. at Center Gland (In-Service 2 drops/5 cylces) 1 drop/100 cycles max at Input Shaft (In-Service 1 drop/25 cycles)	Rod Gland 0 drops Aft Gland 0 drops Center 0 drops Gland Input Shaft 0 drops	CSO 69 FTO	
12.J. Internal Leakage	(1) Rig neutral leakage at RA & RB. 300 cc/min - overhaul. 3000 cc/min - In-Service. (2) & (3) ~~Input lever at extend & retract stops~~ ~~300-700 cc/min - overhaul~~ ~~300-1085 cc/min - In-Service~~	Neutral RA 260 RB 280 RA RB Ext. 540 555 Ret. 540 520	CSO 69 FTO	

R'CV'G YES

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 6577672-100

PART NO. ~~65-44861-11/65C37052~~ SERIAL NO. 2203 A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.J. Internal Leakage (Continued)	(4) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	Neutral RA RB N.R. EXPLAIN BELOW — 11		
	(5) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RA RB Ext. N.R. EXPLAIN BELOW Ret. — 11		
	(6) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RB Neutral 670	CSO 69 FTO	
	(7) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min @ RB 2000 cc/min above leakage measured in step (1) (b) @ RB for In-Service	RB Ext. 670 Ret. 650		

R'C'V'G' TEST

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

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Overhaul Manual 27-20-01 ☐ Overhaul ☑ In-Service Work Order 657672-100

PART NO. ~~65-44861-11/65C37052~~ SERIAL NO. 2203A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☑ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.K. Intersystem Leakage	Combined leakage from PB and RB 10 cc/min maximum.	1.4 cc/min	CSO 69 FTO	
12.L. Transducer Output	4.2-4.8 VAC 65-44861-2 and 65C37052-2 (Sys A & B) 1.95-2.55 VAC 65-44861-3,-4 and 65C37052-2,-3,-4 (Sys A & B) 1.95-2.55 VAC 65-44861-5,-8 and 65C37052-5,-8 (Sys B) 3.07-3.67 VAC 65-44861-6,-7,-9,-11 and 65C37052-6,-7,-9 (Sys B)	"A" Extend CSO 38 N.R. EXPLAIN BELOW VAC Retract ___ VAC "B" Extend 3.47 VAC Retract 3.54 VAC	CSO 69 FTO	
12.M. Transducer Null	50 MV maximum at null for each system - Overhaul. 150 MV maximum at null for each system In-Service.	CSO 38 N.R. EXPLAIN BELOW Null ___ VAC "B" Null .014 VAC	CSO 69 FTO	
	R'C'V'G' TEST			

Parker **TEST DATA RECORD (CONTINUATION)**

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Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 6577672-100

PART NO. 65-44861-7 ~~65C37052~~ SERIAL NO. 2203 A DATE OF TEST 8.20.96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.N. Yaw Damper Authority	Per Figure 1, Ref. Test Data Sheet 10. Actuator must be stable and within .050" of neutral.	Ext. Ret. Sys "A" .11 Sys "B" .237/.241 Sys "A & B" (ESO 33 N.R. EXPLAIN BELOW) Stable Yes ~~No~~ Position from "ZERO" (ESO 33 N.R. EXPLAIN BELOW) Ext. Ret. Stable Yes No Position from "ZERO" (ESO 33 N.R. EXPLAIN BELOW) Ext. Ret. -.11	(ESO 69 030)	
12.P. Manual Hysteresis 4.3.14	Hysteresis shall not exceed .004 inch each direction - Overhaul. .006 inch each direction In-Service	Extend .0000 Inch Retract .0005 Inch (ESO 33 N.R. EXPLAIN BELOW)	(ESO 69 030)	
12.Q. Yaw Damper System Phase Lag	Phase shift to be: 25 degrees (Sin Ø, 0.423) 30 degrees (Sin Ø, 0.500) for in-service units. No crossover in plot.	"A" sin Ø -.11 "B" sin Ø .444 Crossovers: Yes ~~No~~	(ESO 69 030)	

R'C'V'G' TEST

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

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Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 657672-100

PART NO. 65-44861-11/~~65C37052-~~ SERIAL NO. 2203A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.R. Yaw Damper System Repeatability and Linearity	Pattern must repeat within 0.8" (.008" at actuator) - Overhaul. 1.2" (.012" at actuator) In-Service Overshoot after reversal must be 0.2" maximum (.002" at actuator) Average input/output slope of any 10% segment must fall within the slope limits shown.	"A" ____ in max "B" 0.35 in max "A" ____ in max "B" 0.10 in max ~~"A" Yes No~~ "B" Yes No		
12.S. Phase Check	Manual control "extend", actuator must extend. Manual control "retract", actuator must retract. Operation smooth and stable for A and B.	Extend "A" OK "B" OK Retract "A" OK "B" OK Stable: Yes No		
12.T. Yaw Damper Engage 4.3.17	.004" maximum movement-overhaul .010" maximum movement-In-Service.	"A" ____ in "B" .001 in		
12.U. By-Pass Valve Operation	(4) No piston movement at 250 PSI differential for either system. (6a) Noticeable decrease in flow at less than 460 PSI differential. (8) Piston rod movement of 1.00 inch or more in either direction.	"A" Yes (No) "B" Yes (No) "A" 345 PSI "B" 350 PSI Ext. ✓ OK Ret. ✓ OK		

RC'V'G TEST

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 657 7672-108

PART NO. 65-44861- /65C37052- SERIAL NO. 2203A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.V. Duty Cycle (optional) Not Required for In-Service Unless Actuator Seals Were Replaced	3.0 cc/8 hours maximum at each piston rod seal. 6.0 cc/8 hours at center gland - Overhaul. 1.8 cc/hr maximum at each piston rod seal. 3.6 cc/hr at center gland - In-Service.	Output End ____cc____hrs Fixed End ____cc____hrs Center ____cc____hrs		
12.W. Low Pressure Leakage (not same as 12.V.)	No external leakage in 8 hours - overhaul. No external leaks in one hour In-Service.	____cc____hrs		

RCVD

Parker **TEST DATA RECORD (CONTINUATION)**

ustomer Support Operations

Rev. H

verhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order 65776-2-100

PART NO. 65-44861-~~/65C37052-~~ SERIAL NO. 2203 A DATE OF TEST 8-20-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR [redacted]

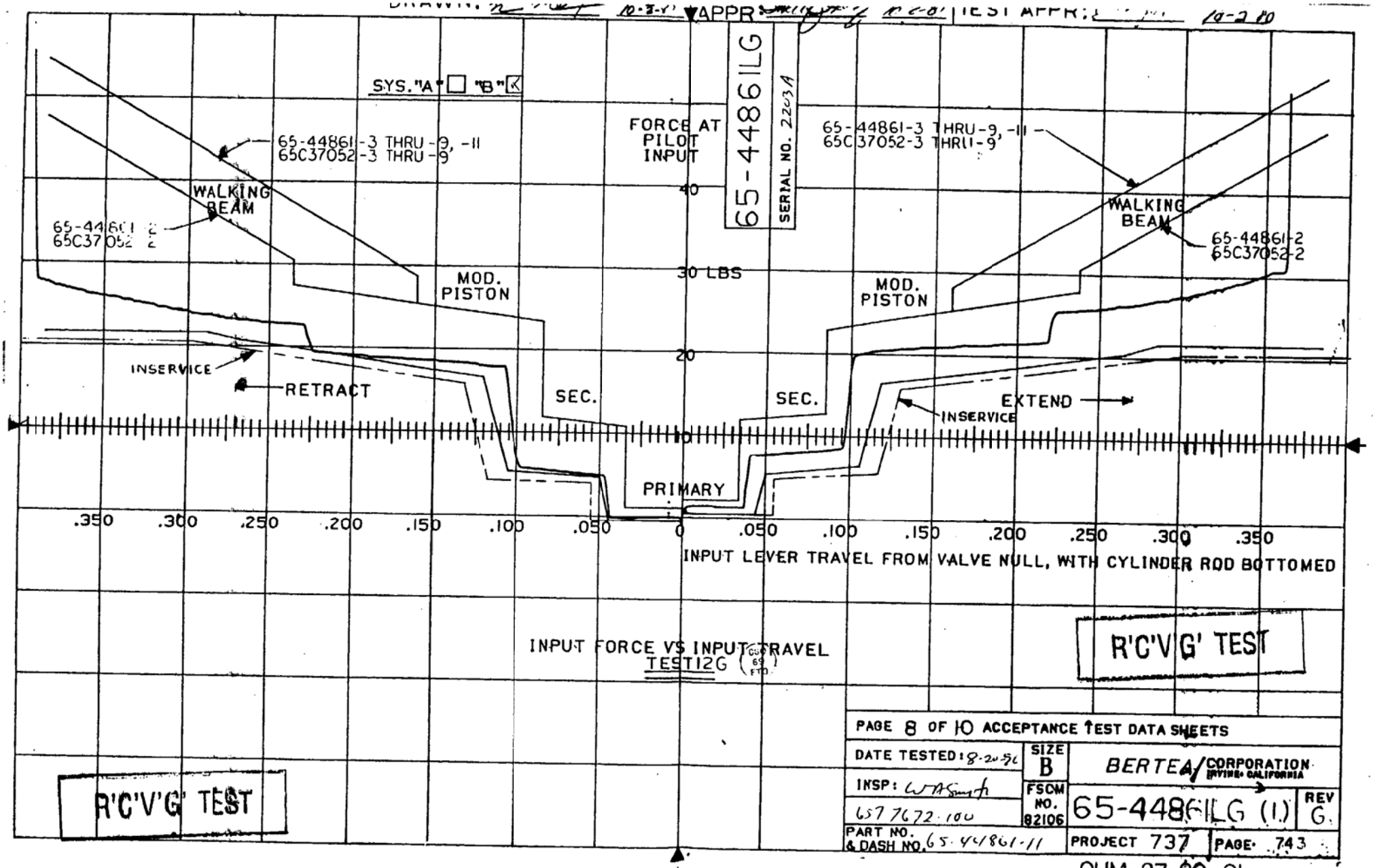
☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

OVERHAULED UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.294 to 0.334	0.294 to 0.334	0.335 to 0.375
65-44861-3,-4 65C37052-3,-4	0.137 to 0.177	0.137 to 0.177	0.294 to 0.334
65-44861-5,-8 65C37052-5,-8	——	0.137 to 0.177	——
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	——	0.215 to 0.255	——

IN-SERVICE UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.274 to 0.354	0.274 to 0.354	0.315 to 0.394
65-44861-3,-4 65C37052-3,-4	0.117 to 0.197	0.117 to 0.197	0.274 to 0.354
65-44861-5,-8 65C37052-5,-8	——	0.117 to 0.197	——
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	——	0.196 to 0.276	——

RCVD TEST

Actuator Output Stroke Limits
Figure 1


SYS. "A" ☐ "B" ☒
65-44861-3 THRU -9, -11
65C37052-3 THRU -9
WALKING BEAM
65-44861-2
65C37052-2
MOD. PISTON
INSERVICE
RETRACT
SEC.
FORCE AT PILOT INPUT
65-44861LG
SERIAL NO. 22031
40
30 LBS
20
10
PRIMARY
65-44861-3 THRU -9, -11
65C37052-3 THRU -9
WALKING BEAM
65-44861-2
65C37052-2
MOD. PISTON
SEC.
INSERVICE
EXTEND
.350 .300 .250 .200 .150 .100 .050 0 .050 .100 .150 .200 .250 .300 .350
INPUT LEVER TRAVEL FROM VALVE NULL, WITH CYLINDER ROD BOTTOMED
INPUT FORCE VS INPUT TRAVEL
TEST12G (69 FTD)
R'C'V'G' TEST
R'C'V'G' TEST
PAGE 8 OF 10 ACCEPTANCE TEST DATA SHEETS
DATE TESTED: 8-20-70
INSP: W A Smith
657672-100
PART NO. & DASH NO. 65-44861-11
SIZE B
FSCM NO. 82106
BERTEA CORPORATION IRVINE, CALIFORNIA
65-44861LG (1)
REV G
PROJECT 737
PAGE 743

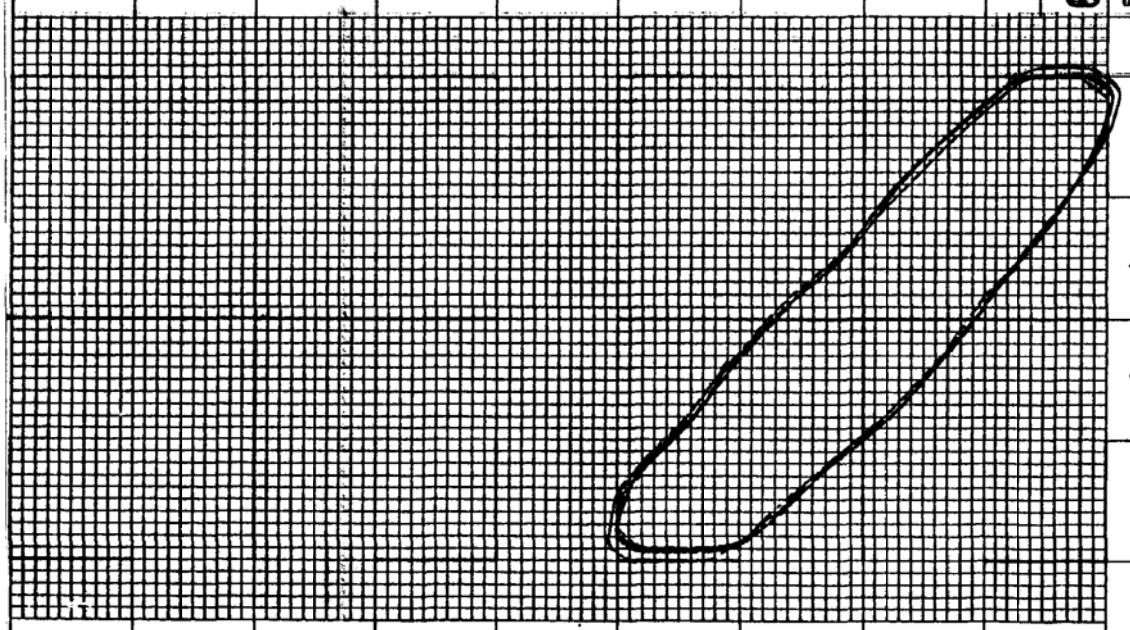
OHM 27-20-01

DRAWN: [illegible] 10-2-80 APPR [illegible] TEST APPR: [illegible]

65-44861LG

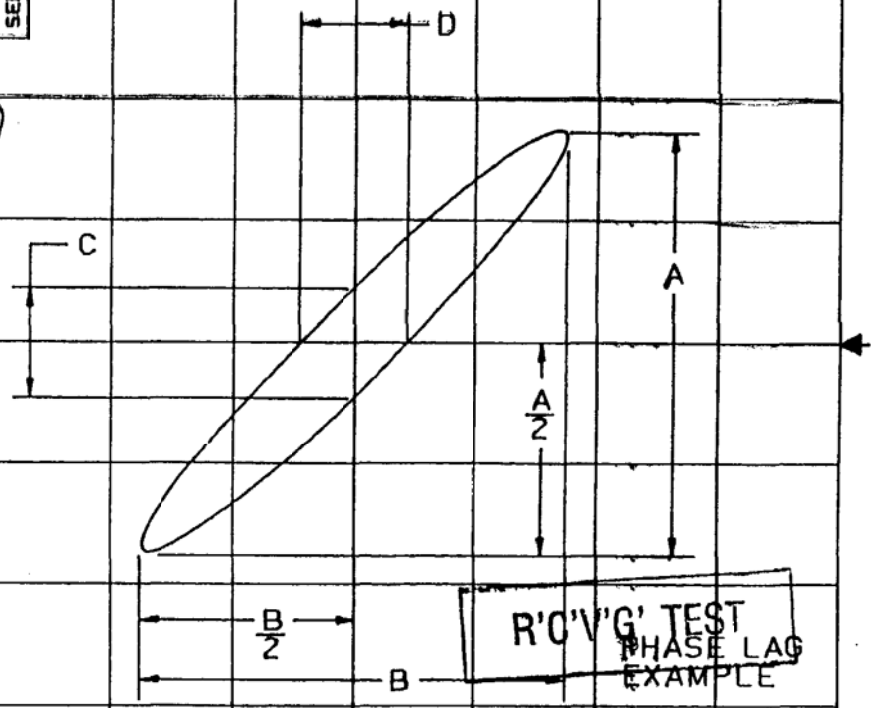
SERIAL NO. 2203 A

SINE ø MAXIMUM PER TEST REQ'MT .423 OVERHAUL .500 INSERVICE



$2\sqrt{\frac{C}{A} \cdot \frac{D}{B}} = \text{SINE } \phi$

CALCULATION



R'C'V'G' TEST PHASE LAG EXAMPLE

SYS A TEST 12Q SYS B

PHASE LAG

SINE ø .[illegible] SINE ø .444

R'C'V'G' TEST (-5 ASSY, 1 SYSTEM ONLY)

PAGE 9 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8-20-96

INSP: WA Smith

657672-100

PART NO. & DASH NO. 65-44861-11

SIZE B | FSCM NO. 82106 | BERTEA CORPORATION IRVINE, CALIFORNIA

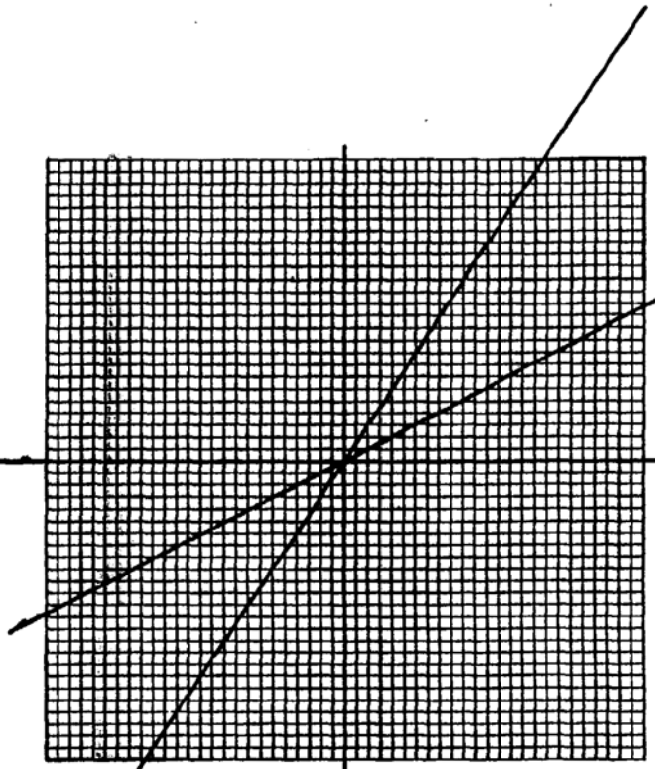
65-44861LG (2) REV G

PROJECT 737 PAGE 75

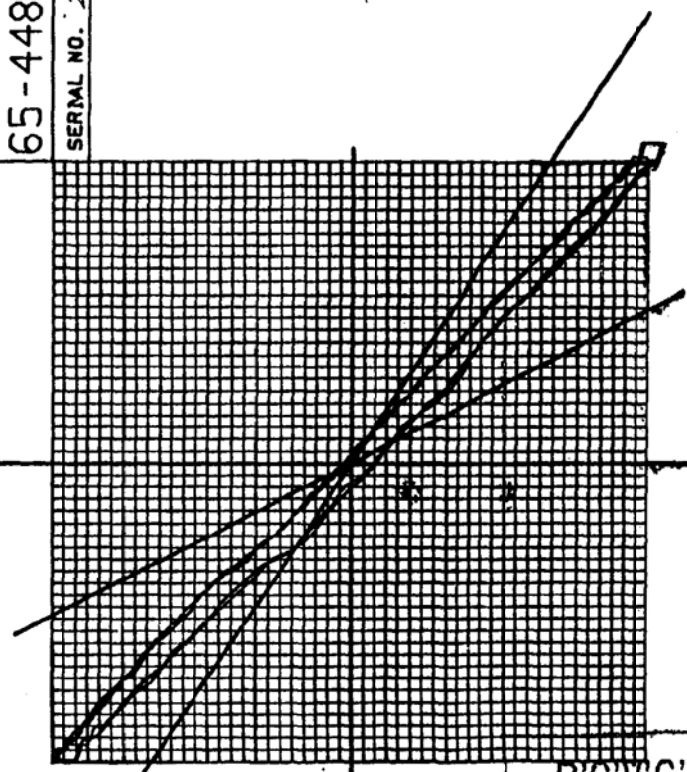
OHM 27-20-01

DRAWN: [illegible] 10-2-80 APPR: [illegible] 10-2-80 TEST APPR: [illegible] 10-2-80

65-4486ILG SERIAL NO. 22C3A



SYSTEM A



SYSTEM B

CSO 69 FTO

R'C'V'G' TEST

R'C'V'G' TEST

-11

TEST 12R
REPEATABILITY AND LINEARITY
(1-5 ASSY, 1 SYSTEM ONLY)

PAGE 10 OF 10 ACCEPTANCE TEST DATA SHEETS			
DATE TESTED: 8 20 %	SIZE B	BERTEA/CORPORATION	
INSP: W A Smith	FSCM NO. 82106	65-4486ILG (3)	REV G
657677-100			
PART NO. & DASH NO. ~~65E37052~~ 65-44861-11		PROJECT 737	PAGE 751

OHM 27-20-01

Parker **TEST DATA RECORD**

Drawn [redacted] Date 3/30/95

Customer Support Operations Rev. H

Test Approval [redacted] Date 3/30/95

Eng. Approval [redacted] Date 3-30-95

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-1//65C37052- **SERIAL NO.** 2203A **DATE OF TEST** 8-29-94

PART NAME RUDDER ACTUATOR PCU **INSPECTOR** BIGGERSTAFF

☒ **PHOSPHATE ESTER** ☐ **MIL-H-5606** ☐ **MIL-H-83282** ☐ **AIR** ☐ **PD680**

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.A. Continuity Check	Check Continuity per wiring diagram (Fig. 403, Fig. 403A).	_____ OK		
11.B. Pin to Pin Resistance	Check pin to pin resistance at 70°F and record. Must comply with noted valve.			
	Pins / Resistance	Sys "A" / Sys "B"		
	1-2 71-87 OHMS (Solenoid PN 59600)	_____ _____		
	1-2 49-62 OHMS (Solenoid PN 45080 @ 77°F)	_____ _____		
	1-2 79-115 OHMS (Solenoid PN 45080-1 @ 77°F)	_____ _____		
	5-6 900-1100 OHMS	_____ _____		
	7-8 900-1100 OHMS	_____ _____		
	1-4 0 OHMS (Short)	_____ _____		
	9-10 80-165 OHMS	_____ _____		
	11-12 60-135 OHMS	_____ _____		
	3-Other Infinite (No Connection)	_____ _____		
11.C. Dielectric Strength	Slowly apply noted voltages and hold for a period of 5 seconds (Fig. 403), 1 min (Fig. 403A). There must be no arcing or insulation failure.			
	1500 VAC Body to Pin 2 (Fig. 403)	_____ OK		
	1500 VAC Body to Pin 1 (Fig. 403A)	_____ OK		
	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 9 (Fig. 403)	_____ OK		

TEST DATA RECORD (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order _____

PART NO. ~~65-44861-1//65C37052~~ SERIAL NO. 22031 DATE OF TEST 8-29-95

PART NAME RUDDER ACTUATOR PCU INSPECTOR BUGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
11.C. Dielectric Strength (Continued)	1000 VAC Body and Pins 2,5,7 connected to common lead to Pin 11 (Fig. 403)	_____ OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 11.	_____ OK		
	1000 VAC Body and Pins 1,5,7 connected to common lead to Pin 9.	_____ OK		
	800 VAC between Pins 5 and 7	_____ OK		
	800 VAC between Pins 9 and 11 (Fig. 403A)	_____ OK		
11.D. Insulation Resistance	500 VDC between noted pins 100 Megohms min resistance 10 megohms min in-service. (Fig. 403)			
	Pins	Sys "A" Sys "B"		
	1,5,7,9 & 11 to Body	_____ _____		
	1 to 5,7,9 & 11	_____ _____		
	5 to 7,9, & 11	_____ _____		
	7 to 9 & 11	_____ _____		
	9 to 11	_____ _____		

Form 1132-3A

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order _____

PART NO. 65-44861-11/~~65C37052~~ SERIAL NO. 2203A DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.B. Return Pressure	No external leakage or permanent set, each test. No intersystem leakage.	3000 3 ± 2 Sys A ____ ____ Sys B ____ ____		
12.C.3 & .4 Secondary Stroke/Flow Test	Measure and record leakage at open ports Ra and Rb. The unit shall not move after 25 lbs. is applied to lever TF83300-53, and leakage at each return port must not exceed the following: (a) 300-700 cc/min for overhauled unit. (b) 300-1085 cc/min for unit in service. *NOTE: Visual inspect lock to verify proper engagement.*	Extend (12.C.3) Ra_____cc/min Rb_____cc/min Retract (12.C.4) Ra_____cc/min Rb_____cc/min Movement____in.		
12.D. Proof Pressure	No external leakage or permanent set, each test. No intersystem leakage.	5400 3 ± 2 Sys A ____ ____ Sys B ____ ____		
12.E. Rig Neutral Cylinder Stroke and Clearance Test	Output Rig Pin must fit. (27.46 - 27.54 Ref.) No binding or interference at 3000 PSI. Stoke 26° ± ½° each direction. Visual snubbing. No binding or interference at 0 PSI.	Rig Pin YES Surface Indicator at 0° ✓ Binding Yes (NO) Ext 25.5° Ret 25.5° Snubbing ✓ OK ✓ OK	CSO 3-25 P10	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order _____

PART NO. 65-44861-11/~~65C37052-~~ SERIAL NO. 22031 DATE OF TEST 8-29-94

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.F. Linkage Breakout Friction	19 oz. maximum to start extend. 1 oz. minimum in extend direction to start retract.	Ext. 9.75 Oz. Ret. 1.5 Oz.	CSO 35 FTO	
12.G. Input Force vs. Input Travel	Force plot must fall within limits shown on Fig. 723.	✓ OK	CSO 35 FTO	
12.H. Cylinder Rod Leakage	1 drop/25 cycles max at each End Gland (In-Service 1 drop/5 cycles) 2 drops/25 cycles max. at Center Gland (In-Service 2 drops/5 cylces) 1 drop/100 cycles max at Input Shaft (In-Service 1 drop/25 cycles)	Rod Gland 0 drops Aft Gland 0 drops Center TRACE drops Gland Input Shaft 0 drops	CSO 35 FTO	
12.J. Internal Leakage	(1) Rig neutral leakage at RA & RB. 300 cc/min - overhaul. 3000 cc/min - In-Service. (2) & (3) Input lever at extend & retract stops 300-700 cc/min - overhaul. 300-1085 cc/min - In-Service.	Neutral RA 270 RB 280 RA RB Ext. 540 550 Ret. 540 520	CSO 35 FTO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order _____

PART NO. 65-44861-11 ~~65C37052-~~ SERIAL NO. 22031T DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.J. Internal Leakage (Continued)	(4) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	Neutral RA ___ RB ___		
	(5) 65-44861 and 65C37052 System A energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RA RB Ext. ___ ___ Ret. ___ ___		
	(6) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min - overhaul 2000 cc/min above leakage measured in step (1) (b) In-Service	RB Neutral 670	CSO 35 FTO	
	(7) 65-44861-5 thru -9,-11 and 65C37052-5 thru -9 System B energized 1370 cc/min @ RB 2000 cc/min above leakage measured in step (1) (b) @ RB for In-Service	RB Ext. 680 Ret. 690		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order

PART NO. 65-44861-1)/65C37052- SERIAL NO. 2203A DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.K. Intersystem Leakage	Combined leakage from PB and RB 10 cc/min maximum.	1.1 cc/min	CSO 35 FTO	
12.L. Transducer Output	4.2-4.8 VAC 65-44861-2 and 65C37052-2 (Sys A & B) 1.95-2.55 VAC 65-44861-3,-4 and 65C37052-2,-3,-4 (Sys A & B) 1.95-2.55 VAC 65-44861-5,-8 and 65C37052-5,-8 (Sys B) 3.07-3.67 VAC 65-44861-6,-7,-9,-11 and 65C37052-6,-7,-9 (Sys B)	"A" Extend ____VAC Retract____VAC "B" Extend 3.42VAC Retract 3.45VAC	CSO 35 FTO	
12.M. Transducer Null	50 MV maximum at null for each system - Overhaul. 150 MV maximum at null for each system In-Service.	"A" Null _____VAC "B" Null .015VAC	CSO 35 FTO	

Form 1132-3A

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-1H~~65C37052-~~ SERIAL NO. 2203A DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.N. Yaw Damper Authority	Per Figure 1, Ref. Test Data Sheet 10. Actuator must be stable and within .050" of neutral.	Ext. Ret. Sys "A" _____ Sys "B" .236/.239 Sys "A & B" ____ Stable Yes No Position from "ZERO" _____ Ext. Ret. Stable Yes No Position from "ZERO" _____ Ext. Ret.	CSO 35 ETO	
12.P. Manual Hysteresis 4.3.14	Hysteresis shall not exceed .004 inch each direction - Overhaul. .006 inch each direction In-Service	Extend .000 Inch Retract .0005 Inch	CSO 35 ETO	
12.Q. Yaw Damper System Phase Lag	Phase shift to be: 25 degrees (Sin Ø, 0.423) 30 degrees (Sin Ø, 0.500) for in-service units. No crossover in plot.	"A" sin Ø _____ "B" sin Ø .328 Crossovers: Yes (NO)	CSO 35 ETO	

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☒ In-Service Work Order _____

PART NO. 65-44861-11/~~65C37052~~ SERIAL NO. 2203A DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.R. Yaw Damper System Repeatability and Linearity	Pattern must repeat within 0.8" (.008" at actuator) - Overhaul. 1.2" (.012" at actuator) In-Service	"A" _____ in max "B" .0016 in max	CSO 35 FTO	
	Overshoot after reversal must be 0.2" maximum (.002" at actuator)	"A" _____ in max "B" .000 in max		
	Average input/output slope of any 10% segment must fall within the slope limits shown.	"A" Yes No "B" (Yes) No		
12.S. Phase Check	Manual control "extend", actuator must extend.	Extend "A" EXT. "B" EXT	CSO 35 FTO	
	Manual control "retract", actuator must retract.	Retract "A" RET. "B" RET		
	Operation smooth and stable for A and B.	Stable: (Yes) No		
12.T. Yaw Damper Engage 4.3.17	.004" maximum movement-overhaul .010" maximum movement-In-Service.	"A" _____ in "B" .0065 in	CSO 35 FTO	
12.U. By-Pass Valve Operation	(4) No piston movement at 250 PSI differential for either system.	"A" Yes (No) "B" Yes (No)	CSO 35 FTO	
	(6a) Noticeable decrease in flow at less than 460 PSI differential.	"A" .340 PSI "B" .340 PSI		
	(8) Piston rod movement of 1.00 inch or more in either direction.	Ext. ✓ OK Ret. ✓ OK		

Parker **TEST DATA RECORD** (CONTINUATION)

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861-1~~H65C37052~~ SERIAL NO. 2203A DATE OF TEST 8-29-96

PART NAME RUDDER ACTUATOR PCU INSPECTOR BIGGERSTAFF

☒ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

TEST & REF.	REQUIREMENT	RESULTS	ACC	REJ.
12.V. Duty Cycle (optional) Not Required for In-Service Unless Actuator Seals Were Replaced	3.0 cc/8 hours maximum at each piston rod seal. 6.0 cc/8 hours at center gland - Overhaul. 1.8 cc/hr maximum at each piston rod seal. 3.6 cc/hr at center gland - In-Service.	Output End _____cc_____hrs Fixed End _____cc_____hrs Center _____cc_____hrs		
12.W. Low Pressure Leakage (not same as 12.V.)	No external leakage in 8 hours - overhaul. No external leaks in one hour In-Service.	_____cc_____hrs		

Parker **TEST DATA RECORD (CONTINUATION)**

Customer Support Operations

Rev. H

Overhaul Manual 27-20-01 ☐ Overhaul ☐ In-Service Work Order _____

PART NO. 65-44861- /65C37052- SERIAL NO. _____ DATE OF TEST _____

PART NAME RUDDER ACTUATOR PCU INSPECTOR _____

☐ PHOSPHATE ESTER ☐ MIL-H-5606 ☐ MIL-H-83282 ☐ AIR ☐ PD680

OVERHAULED UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.294 to 0.334	0.294 to 0.334	0.335 to 0.375
65-44861-3,-4 65C37052-3,-4	0.137 to 0.177	0.137 to 0.177	0.294 to 0.334
65-44861-5,-8 65C37052-5,-8	———	0.137 to 0.177	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.215 to 0.255	———

IN-SERVICE UNIT			
PCU Assembly	Actuator Output Stroke (inches)		
	System A	System B	System AB
65-44861-2 65C37052-2	0.274 to 0.354	0.274 to 0.354	0.315 to 0.394
65-44861-3,-4 65C37052-3,-4	0.117 to 0.197	0.117 to 0.197	0.274 to 0.354
65-44861-5,-8 65C37052-5,-8	———	0.117 to 0.197	———
65-44861-6,-7,-9,-11 65C37052-6,-7,-9	———	0.196 to 0.276	———

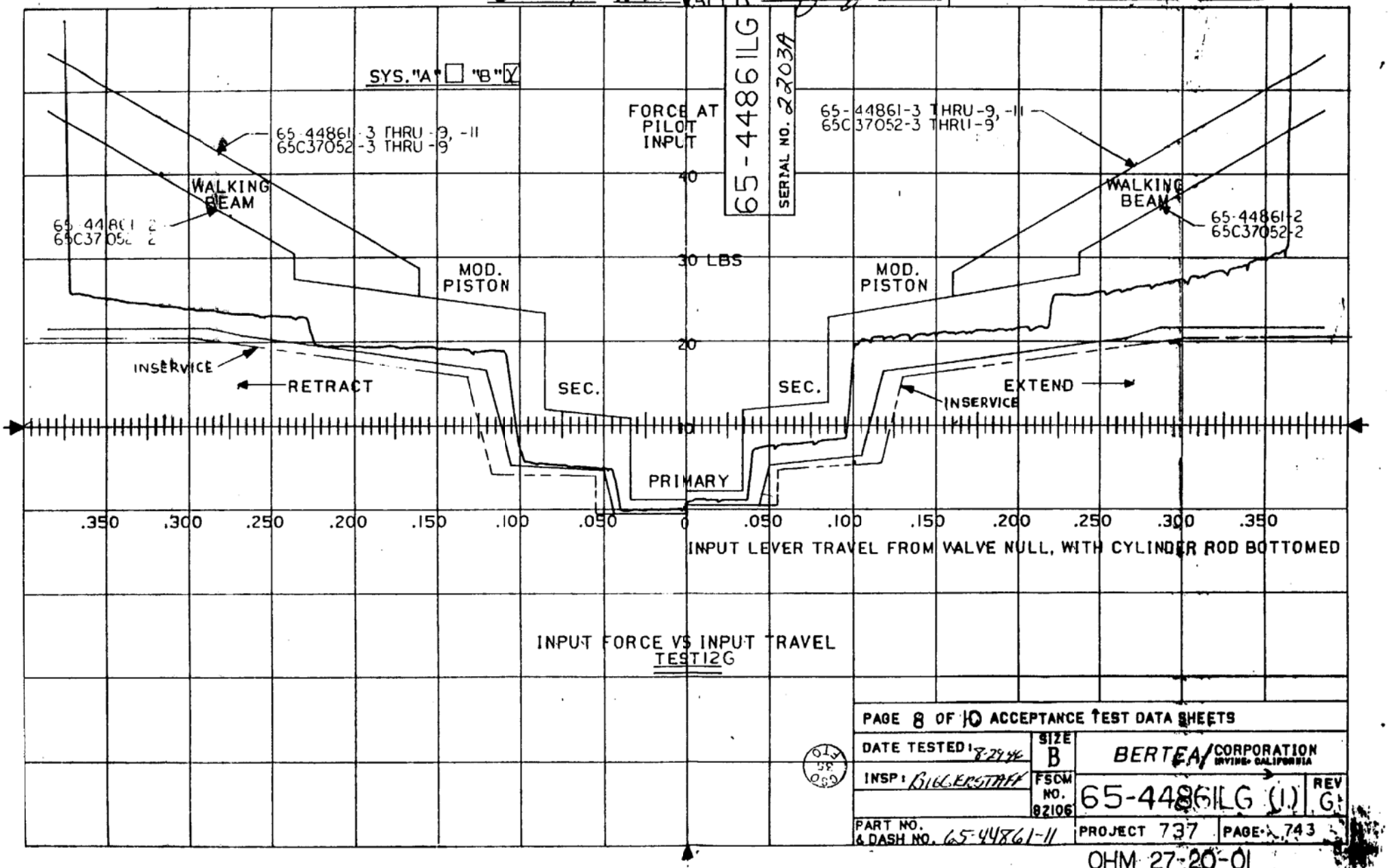
Actuator Output Stroke Limits
Figure 1

DRAWN: [illegible] DATE: 10-3-80 | ENG APPR: [illegible] DATE: 10-2-80 | TEST APPR: [illegible] DATE: 10-2-80

65-44861LG

SERIAL NO. 22034

SYS. "A" ☐ "B" ☒



INPUT FORCE VS INPUT TRAVEL
TEST12G

PAGE 8 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8-29-80

INSP: BIGGERSTAFF

SIZE B

FSCM NO. 82106

BERTEA CORPORATION IRVINE, CALIFORNIA

65-44861LG (1) REV G

PART NO. & DASH NO. 65-44861-11

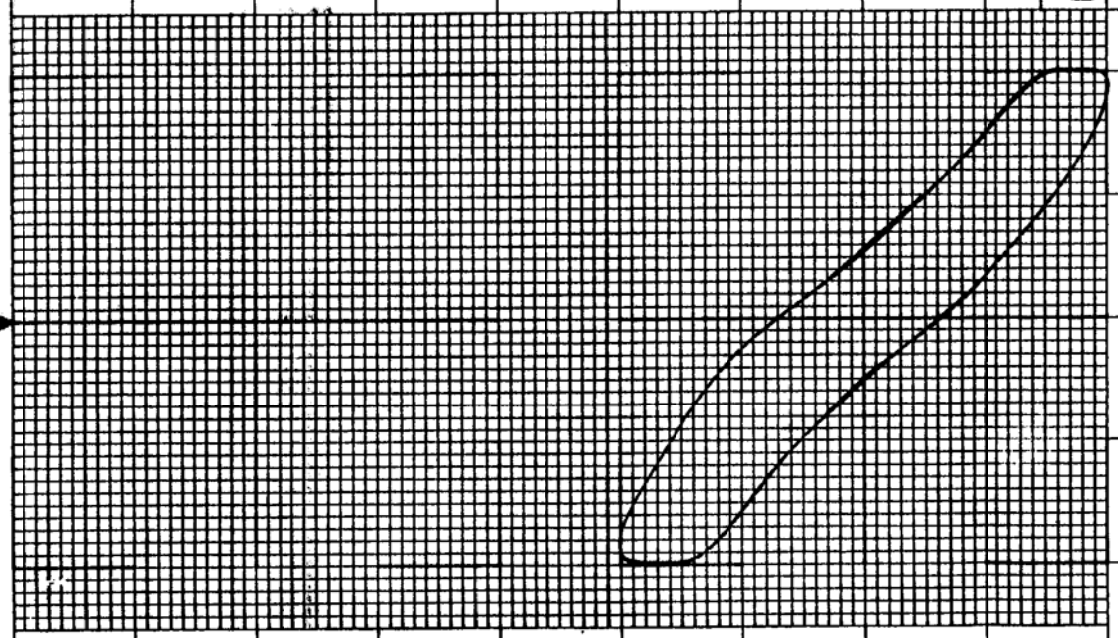
PROJECT 737 PAGE 743

OHM 27-20-01

DRAWN: R. Menefee DATE: 10-2-80 ENG. APPR: [illegible] DATE: TEST APPR: [illegible] DATE: 10-3-80

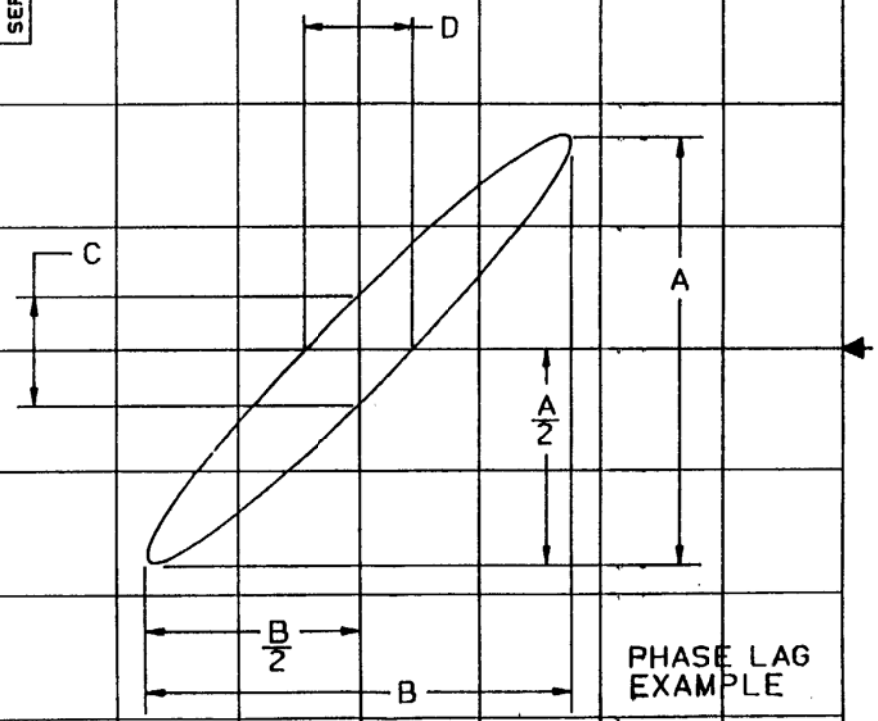
SINE ø MAXIMUM PER TEST REQ'MT .423 OVERHAUL .500 INSERVICE

65-44861LG SERIAL NO. 22034



$$2\sqrt{\frac{C}{A}+\frac{D}{B}} = \text{SINE } \phi$$

CALCULATION



PHASE LAG EXAMPLE

SYS A	TEST 12Q PHASE LAG	SYS B
SINE ø .___		SINE ø .328
	(-5 ASSY, 1 SYSTEM ONLY)	

C80 35 ETO

PAGE 9 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8-29-96 | SIZE B | BERTEA CORPORATION IRVINE, CALIFORNIA

INSP: BIGGERSTAFF | FSCM NO. 82106 | 65-44861LG (2) | REV G

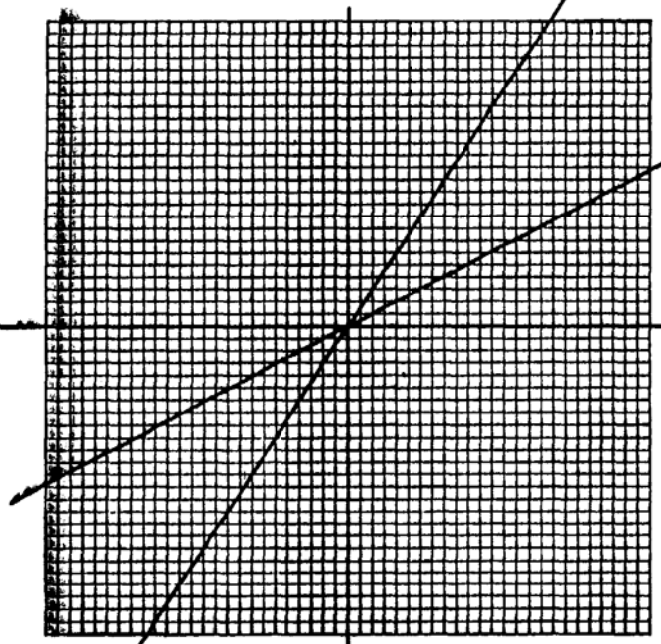
PART NO. & DASH NO. 65-44861-11 | PROJECT 737 | PAGE 750

OHM 27-20-01

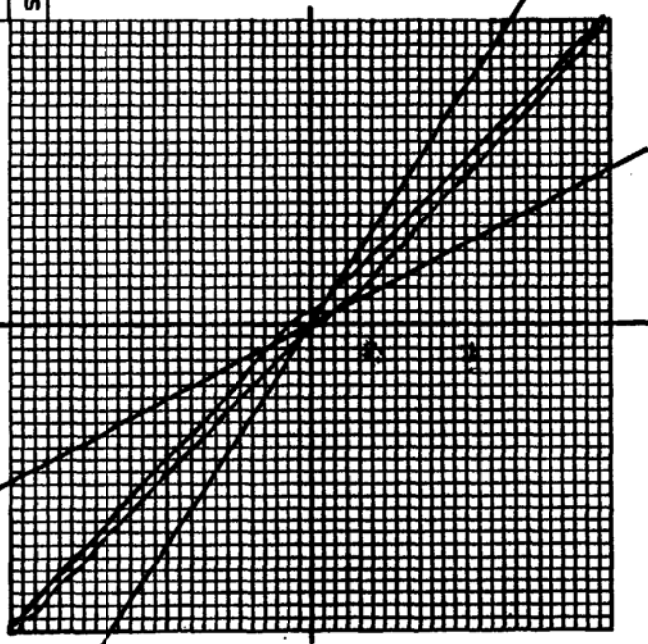
DRAWN: [illegible] DATE: 10-2-80 | ENG. APPR: [illegible] DATE: 10-2-80 | TEST APPR: [illegible] DATE: 10-3-80

65-4486ILG

SERIAL NO. 2-2034



SYSTEM A



SYSTEM B

TEST 12R
REPEATABILITY AND LINEARITY
(-5 ASSY, 1 SYSTEM ONLY)

CSA 35 ATO

PAGE 10 OF 10 ACCEPTANCE TEST DATA SHEETS

DATE TESTED: 8-29-80	SIZE B	BERTEA/CORPORATION IRVINE, CALIFORNIA
INSP: [illegible]	FSCM NO. 82106	65-4486ILG (3) REV G
PART NO. & DASH NO. 65-4486I-11	PROJECT 737	PAGE 751

OHM 27-20-01