

ATTACHMENT 1

Autopilot Servo Test Results During Duncan Aviation Examinations

Sperry Elevator Autopilot Servo Drive Assembly

Part Number: 4006719-904

Serial Number: 090839

Honeywell**COMPONENT MAINTENANCE MANUAL**

SM- 200 Servo Drive / Part No. 4006719

TABLE OF CONTENTSElevator
- 904Title

1.	SCOPE			
2.	REFERENCE DOCUMENTS			
3.	GENERAL INFORMATION			
4.	POWER REQUIREMENTS			
5.	TEST EQUIPMENT			
6.	TEST SETUP			
7.	TEST REQUIREMENTS			
	INSULATION RESISTANCE			
	DC RESISTANCE			
	ARC SUPPRESSION DIODE - NORMAL			
	ARC SUPPRESSION DIODE - REVERSE			
	CLUTCH PULL-IN VOLTAGE			
	CLUTCH DROP-OUT VOLTAGE			
	-905 THRU -913 AND -917, -920 THRU -926, -933, -944, -945, -946, -948, -949, -954, -955, -956, -			
	713, AND -733 ONLY			
	STALL TORQUE - CW DIRECTION - 1.00 AMPERES			
	STALL TORQUE - CW DIRECTION - 0.80 AMPERES			
	STALL TORQUE - CW DIRECTION - 0.60 AMPERES			
	STALL TORQUE - CCW DIRECTION - 1.00 AMPERES			
	STALL TORQUE - CCW DIRECTION - 0.80 AMPERES			
	STALL TORQUE - CCW DIRECTION - 0.60 AMPERES			
	-901 THRU -904, -914, -918, -919, -941 THRU -943, -951 THRU -953, AND -704 ONLY			
	STALL TORQUE - CW DIRECTION - 1.00 AMPERES	44.1-53.9	52	1A
	STALL TORQUE - CW DIRECTION - 0.80 AMPERES	35.1-42.9	41	.8A
	STALL TORQUE - CW DIRECTION - 0.60 AMPERES	25-30.5	38.5	.6A
	STALL TORQUE - CW DIRECTION - 0.40 AMPERES	16-19.5	24	.4A
	STALL TORQUE - CCW DIRECTION - 1.00 AMPERES		56	1A
	STALL TORQUE - CCW DIRECTION - 0.80 AMPERES		52	.8A
	STALL TORQUE - CCW DIRECTION - 0.60 AMPERES		38	.6A
	STALL TORQUE - CCW DIRECTION - 0.40 AMPERES		29	.4A
	STALL TORQUE - 0.30 AMP			
	CLUTCH WIRING KEY			
	STARTING CURRENT AND PHASING - CCW DIRECTION			
	STARTING CURRENT AND PHASING - CW DIRECTION			

Figure 1001 Sheet 1. Integrated Test Specification

Sperry Autopilot Rudder Servo Drive Assembly

Part Number: 4006719-906

Serial Number: 090845

Honeywell**COMPONENT MAINTENANCE MANUAL**

SM- 200 Servo Drive / Part No. 4006719

- 906 Yaw**TABLE OF CONTENTS****Title**

1. SCOPE
2. REFERENCE DOCUMENTS
3. GENERAL INFORMATION
4. POWER REQUIREMENTS
5. TEST EQUIPMENT
6. TEST SETUP
7. TEST REQUIREMENTS

- Clutch engagement @ 12V
- Clutch disengage @ 2.8V
- Tach output appears to be ~~checked~~ *but it has good output.*
- Motor turns CW & CCW

initially
had low
resistance
but after
running it appears
good.

INSULATION RESISTANCE

DC RESISTANCE

ARC SUPPRESSION DIODE - NORMAL

ARC SUPPRESSION DIODE - REVERSE

CLUTCH PULL-IN VOLTAGE

CLUTCH DROP-OUT VOLTAGE

-905 THRU -913 AND -917, -920 THRU -926, -933, -944, -945, -946, -948, -949, -954, -955, -956, -
713, AND -733 ONLY

	<u>Exp</u>	<u>Measured</u>	
STALL TORQUE - CW DIRECTION - 1.00 AMPERES	63-77	70	} CW
STALL TORQUE - CW DIRECTION - 0.80 AMPERES	50.2-61.3	64	
STALL TORQUE - CW DIRECTION - 0.60 AMPERES	36-44	45	
STALL TORQUE - CCW DIRECTION - 1.00 AMPERES	see above	74	} CCW
STALL TORQUE - CCW DIRECTION - 0.80 AMPERES		59	
STALL TORQUE - CCW DIRECTION - 0.60 AMPERES		55	

-901 THRU -904, -914, -918, -919, -941 THRU -943, -951 THRU -953, AND -704 ONLY

STALL TORQUE - CW DIRECTION - 1.00 AMPERES
 STALL TORQUE - CW DIRECTION - 0.80 AMPERES
 STALL TORQUE - CW DIRECTION - 0.60 AMPERES
 STALL TORQUE - CW DIRECTION - 0.40 AMPERES
 STALL TORQUE - CCW DIRECTION - 1.00 AMPERES
 STALL TORQUE - CCW DIRECTION - 0.80 AMPERES
 STALL TORQUE - CCW DIRECTION - 0.60 AMPERES
 STALL TORQUE - CCW DIRECTION - 0.40 AMPERES
 STALL TORQUE - CWW DIRECTION - 0.40 AMPERES
 STALL TORQUE - 0.30 AMP
 CLUTCH WIRING KEY
 STARTING CURRENT AND PHASING - CCW DIRECTION
 STARTING CURRENT AND PHASING - CW DIRECTION

Figure 1001 Sheet 1. Integrated Test Spedification**22-11-50**Page 1003
7 Apr 2015