

ATTACHMENT 2

Results of Garmin ATE for GSA28 Servo

Test Details

Test Report for 5G9001563

S/N: **5G9001563**

Env: **Final**

Result: **Failed**

P/N: 011-02927-11

UUT Type: GSA28 -2X

Start Date: 2022-10-20

Start Time: 10:33

Runtime: 401.17s

S/O: ENG NTSB

Rack ID: OLA-MFG-GSA28_3

TS Version: TS 2013

Load Common Limits (0s) **Done**

Status LED Test **Skipped**

Write ESN **Skipped**

Write Serial Number **Skipped**

Verify Serial Number (0s) **Passed (1)** Serial number matches: Unit reported "5G9001563", Expected "5G9001563"

ATE Software Version (0s) **Passed (1)** T06-A0549-00 Ver. 2.11

ATE Sequence Version (0s) **Passed (1)** T06-A0550-00 Ver. 2.10

ATE Limit Version (0s) **Passed (1)** T06-D0121-00 Ver. 2.13

Boot Block Software Version (0s) **Passed (1)** 006-B1626-00 Ver. 2.10

System Software Version (0s) **Passed (2)** 006-B1626-10 Ver. 4.90

Key Region Software Version **Skipped**

ATE Software Version Check (0s) **Passed (1)** T06-A0549-00 Ver. 2.11

ATE Sequence Version Check (0s) **Passed (1)** T06-A0550-00 Ver. 2.10

ATE Limits Version Check (0s) **Passed (1)** T06-D0121-00 Ver. 2.13

Boot Software Version Check (0s) **Failed** 006-B1626-00 Ver. 2.10

Fail/Errors

Only Fails

Expand All

Collapse All

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	Boot Software Version Check	Failed	0	EQ	1		

Save as .CSV

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Check (0s)

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	System Software Version Check	Failed	0	EQ		1	

Key Region Software Version Check **Skipped**

System ID (0s) **Passed (2)**

CAN Communication (1s) **Passed (1)**

Temperature Sensor (0s) **Passed (1)**

Voltage Monitors (1s) **Failed**

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	GEN052	Passed	3.3481	GELE	3.15	3.45	VMON +3.3V
1	GEN053	Passed	5.0014	GELE	4.8	5.2	VMON +5.0V
2	GEN054	Passed	11.763	GELE	11.25	12.25	VMON +12.0V
3	GEN055	Passed	-0.0117	GELE	-0.5	2	VMON Trim 1
4	GEN056	Passed	-0.0039	GELE	-0.5	2	VMON Trim 2
5	GEN057	Passed	2.4750	GELE	2.4	2.6	VMON Solenoid +2.5V
6	GEN058	Passed	14.060	GELE	13.5	14.5	VMON AC Power
7	GEN059	Passed	13.974	GELE	13.660	14.460	VMON Switched Power
8	GEN060	Passed	14.012	GELE	13.660	14.460	VMON Trim Sense
9	GEN061	Passed	13.675	GELE	13.224	13.974	VMON Motor Voltage
10	GEN062	Passed	-0.0062	GELE	-0.1	0.1	VMON Solenoid Current
11	GEN063	Failed	-1.8965	GELE	-0.1	0.1	VMON Motor Current 1
12	GEN064	Failed	-1.9104	GELE	-0.25	0.25	VMON Motor Current 2
13	GEN065	Passed	0.8834	GELE	0.7	1.1	VMON Bridge Integrity

Status and Error Messages (0s) **Passed (1)** Unit Status: Gen 1 = 0, Gen 2 = 0, Unit = 0

HW Configuration Inputs (0s) **Passed (4)**

Unit Current Draw (12s) **Passed (6)**

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Outer Path Friction (16s) Passed (3)

Max Speed at 30 in-lbs (18s) Passed (3)

Max Speed at 50/60 in-lbs (10s) Passed (3)

No Load Clutch Disengagement (18s) Passed (6)

Clutch Disengagement at 30 in-lbs (24s) Passed (6)

Clutch Disengagement at 60 in-lbs (25s) Passed (6)

Max No Load Speed and Speed Accuracy (15s) Passed (3)

Torque Error at No Load (16s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR030b	Failed	106.87	GELE	-3	3	Torque Error No Load Dyno - Servo CCW
1	MOTOR031b	Passed	0.4092	GELE	-1	1	Torque Error No Load Dyno Trq CCW
2	MOTOR032b	Passed	0.0001	GELE	-0.175	0.175	

Torque Accuracy at 30 in-lbs (18s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR110b	Failed	99.689	GELE	-3	3	Torque Acc 30 Dyno - Servo CCW
1	MOTOR111b	Passed	29.985	GELE	29	31	Torque Acc 30 Dyno Trq CCW
2	MOTOR112b	Passed	-0.0120	GELE	-0.175	0.175	

Torque Accuracy at 50/60 in-lbs (11s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR210b	Failed	105.41	GELE	-6	6	Torque Acc 50/60 Dyno - Servo CCW
1	MOTOR211b	Passed	60.037	GELE	59	61	

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- Fail/Errors
- Only Fails
- Expand All
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Clutch Disengagement at 60 in-lbs (24s) Passed (6)

Max No Load Speed and Speed Accuracy (15s) Passed (3)

Torque Error at No Load (16s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR030a	Failed	-82.559	GELE	-3	3	Torque Error No Load Dyno - Servo CW
1	MOTOR031a	Passed	0.5831	GELE	-1	1	Torque Error No Load Dyno Trq CW
2	MOTOR032a	Passed	0.0002	GELE	-0.175	0.175	

Torque Accuracy at 30 in-lbs (18s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR110a	Failed	-81.432	GELE	-3	3	Torque Acc 30 Dyno - Servo CW
1	MOTOR111a	Passed	30.005	GELE	29	31	Torque Acc 30 Dyno Trq CW
2	MOTOR112a	Passed	0.0348	GELE	-0.175	0.175	

Torque Accuracy at 50/60 in-lbs (11s) Failed

#	Test Number	Status	Reported Value	Condition	Low/Single Limit	High Limit	Description
0	MOTOR210a	Failed	-84.917	GELE	-6	6	Torque Acc 50/60 Dyno - Servo CW
1	MOTOR211a	Passed	60.014	GELE	59	61	Torque Acc 50/60 Dyno Trq CW

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Trim Inputs (6s) **Passed (6)**

Trim Drive (6s) **Passed (4)**

Stuck Relay Test (Unit off) **Passed (2)**
(2s)

End of Test