

Teardown Inspection Report

Originating Report #: N/A
Investigation #: DR423/01/23



No.3-76D (2nd Floor)
Jalan Desa 2/3
Desa Aman Puri, Kepong
52100 Kuala Lumpur
☎ : +6019-590 1525
✉ : zulconan@gmail.com

Works Order	Part Number	Serial Number	Description	
DR430340	5231-200-111 (70445760021)	423	Doppler Radar RDN 85	
Product Group	Unit			
Airborne Radar	01			
Customer	Customer Ref.	Customer Reason	Sales Order	
Galaxy Aerospace (M) S/B	GAM/DO/22/212 dtd 19 Dec 2022	Inoperative	Nil	

Initial Investigation Findings

Upon receipt of item, a thorough physical inspection was conducted. The exterior of the Doppler Radar was found to be in generally good condition all screws are available and secured in all places. A surface crack of appr. 10mm was observed. Minor nicks were found all around the surface with no further signs of corrosion, dents, or punctures. The main circular interconnect was in good condition with all pins intact.

ZUCO
Engineering Services
(AS0423908-P)



Teardown Inspection Report



No.3-76D (2nd Floor)
 Jalan Desa 2/3
 Desa Aman Puri, Kepong
 52100 Kuala Lumpur
 ☎ : +6019-590 1525
 ✉ : zulconan@gmail.com

Originating Report #: N/A
 Investigation #: DR423/01/23

Scope of Work			
Evaluation	Observation	Resolution	Subsequent Test/Examination
➤ Receive the unit, perform an initial visual inspection, and record findings	The outer panels were in fairly good condition with some acceptable wear & tear.	N/A	Upkeep Maintenance
➤ Disassemble the unit, perform rough cleaning, detailed inspection, and record findings	The internal parts and modules were in decent clean and intact condition.	N/A	Upkeep Maintenance
➤ Capacitive Power Supply Module - Electrolytic Capacitor	Arcing signs on both terminal	Maintenance required	Correction & Protection Maintenance carried out
➤ I/O Adapter Board – DC/DC Converter	DC Output Voltage – As stipulated	Further Test required	Transmission-Reception Test carried out after the replacement of Solid State Module
➤ Tracking 1 Board	Reference Carrier – Not Avail	Further Test required	Transmission-Reception Test carried out after the replacement of Solid State Module
➤ Tracking 2 Board	Reference Carrier – Not Avail	Further Test required	Transmission-Reception Test carried out after the replacement of Solid State Module
➤ Solid State Module: <ul style="list-style-type: none"> • Automatic Frequency Control (AFC) • Local Oscillator (LO) 	Upon examination, it was found that Solid State Source was faulty due to no voltage output of 24Vdc and +10.75V at Automatic Frequency Control (AFC) and Local Oscillator (LO) respectively.	Replaced	Transmission-Reception Test carried out after the replacement of Solid-State Module produced the following result: <ol style="list-style-type: none"> 1. Voltage check carried out at Solid State Source reading value: <ol style="list-style-type: none"> a. Local Oscillator (LO) <ol style="list-style-type: none"> i. Vcc = 28Vdc, &





Teardown Inspection Report



No.3-76D (2nd Floor)
Jalan Desa 2/3
Desa Aman Puri, Kepong
52100 Kuala Lumpur

☎ : +6019-590 1525
✉ : zulconan@gmail.com

Originating Report #: N/A
Investigation #: DR423/01/23

	LO frequency of 10.75MHz cannot be produced. Thus, Transmitter and RF circuit module will not function.		ii. Vd = 10.75V b. Automatic Frequency Control (AFC) i. Vcc = 28Vdc.
--	---------------------------------------------------------------------------------------------------------	--	--------------------------------------------------------------------------------

Parts Replacement	Qty	
1. Solid State Module.	01 ea	



Teardown Inspection Report

Originating Report #: N/A
Investigation #: DR423/01/23



No.3-76D (2nd Floor)
Jalan Desa 2/3
Desa Aman Puri, Kepong
52100 Kuala Lumpur
☎ : +6019-590 1525
✉ : zulconan@gmail.com

Conclusion

Succeeding the replacement of the *Solid State Module*, both voltage and signal generations were emitted and transmitted through the *Tracking 1 Board* and *Tracking 2 Board* giving appropriate readings.

The Doppler Radar is ready for a ground functional check prior to a functional flight check.

ZUCO

Engineering Services
(AS0423908-P)

Recommendation

ZUCO Engineering Services recommends that the Doppler Radar be ground functional checked on aircraft and subsequently progress with a functional flight check.

Investigated by
Noor Hisyam Ibrahim

ZUCO
Engineering Services
(AS0423908-P)
Date
17 Feb 2023