SERVICE INFORMATION
NO. SI 50-006

I TECHNICAL DETAILS

I.1 Airplanes affected

Type: DA 50 C

I.2 Subject

Safe Flight Service Bulletin for Lift Transducer C-99707-2

ATA-Code: 27-00

I.3 Reason

Safe Flight Instrument LLC has issued a Service Bulletin for the Lift Transducer C-99707-2 mandating the modification of a connector which is installed in the DA 50 in a protected area from the elements.

I.4 Information

For detailed technical information refer to Safe Flight Service Bulletin for Lift Transducer C-99707-2, which is applicable without any further additions or restrictions.

II REMARKS

1. Safe Flight Service Bulletin for Lift Transducer C-99707-2 is attached to this Service Information.
2. In case of doubt contact Safe Flight Instrument LLC.
3. For detailed information of the Service Information System refer to SI 50-001 latest issue.

SAFE FLIGHT

SERVICE BULLETIN

ATA CHAPTER	TITLE	EQUIPMENT
27	Moisture ingress on certain lift transducer main connections	C-99707-2

1. Planning Information

a. Effectivity

This modification is to be applied to Safe Flight Lift Transducer P/N C-99707-2, see Appendix A for affected Serial Numbers, as well as the aircraft mating connector of affected serial number units. This modification will be required on a go forward basis. Safe Flight will notify Diamond when an approved fix by the connector manufacturer (Amphenol PCD) is released, at which time Safe Flight will issue a revocation of the modification requirement.

b. Reason

The Manufacturer of the aircraft interface connector, Amphenol PCD, has made Safe Flight aware of a non-compliance of the connectors ability to prevent moisture ingress.

c. Description

1.) The moisture ingress prone component, P1 interface connector, is located at the end of the pigtail of Lift Transducer, P/N C- C-99707-2 (See Figure 1) .

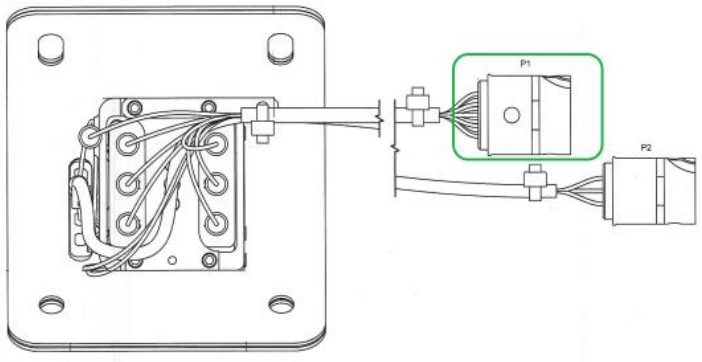


Figure 1

Once P1 is identified, the course of action to mitigate the potential moisture ingress will be either Method 1 for severe exposure areas that are classified as Severe Wind And Moisture Problem (SWAMP), or Method 2 for areas that incorporate aircraft design features that environmentally protect the P1 connection location. Both methods are in accordance with Amphenol's instructions and have been deemed acceptable by Amphenol's applications engineers.

d. Compliance

Mandatory

Safe Flight's recommendation is to perform the appropriate mitigation method, as included in this document, within 1 year of the issuance of this Service Bulletin.

e. Approval

Government approval is not required for the implementation of the change defined in this service bulletin

f. Manpower

The estimated manpower required for the accomplishment of this modification is 2 manhours. This includes Lift Transducer removal and aircraft connector mating pair cleaning and modification.

g. Weight & Balance

Negligible

h. Electrical Load Data

No Change to existing Lift Transducer electrical specification

i. Software Accomplishment Summary

Not applicable as LRU does not contain AEH

j. References

Amphenol Test Report TR-1990

2. Material Information

a. Material

The material list is as follows:

Manufacturer	MFG P/N	Quantity	Description	Comment
Amphenol PCD	SJS860910	1	Inline Plug (A/C side)	Mentioned for Reference
Amphenol PCD	M39029/57-354	5	Contact, Socket, Size 22	Mentioned for Reference
Amphenol PCD	M39029/57-358	4	Contact, Socket, Size 16	Mentioned for Reference
Amphenol PCD	SJS860900	1	Inline Receptacle (LRU side)	Mentioned for Reference
Amphenol PCD	M39029/58-360	5	Contact, Pin, Size 22	Mentioned for Reference
Amphenol PCD	M39029/58-364	4	Contact, Pin, Size 16	Mentioned for Reference
Nye Lubricants	NyoGel 760G	A/R	Dielectric Grease	
3M	70	A/R	Self-Fusing, Silicone Electrical Tape	
FAMIS	SOL218	A/R	Acetone Solvent O-A-51	ASTM D 329

Table 1

b. Tooling

Existing contact crimp tools should be utilized

3. Accomplishment Instructions

a. Method 1 - For installation areas classified as Severe Wind And Moisture Problem (SWAMP)

1.) Disconnect the mated P1 connector shells, Amphenol PCD P/N SJS860900 and P/N SJS860910.

2.) Thoroughly inspect the faces of each (see Figure 2) for evidence of any debris.

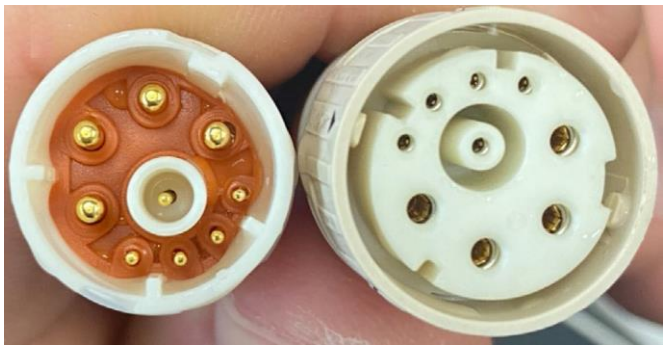


Figure 2

3.) Per Amphenol's recommendation, clean both faces of each connector shell with Acetone as specified in the materials list. Allow to dry per Amphenol's recommendation, approximately 5 minutes.

4.) Apply NyoGel 760G dielectric grease, as specified in the materials list and per Amphenol's recommendation (see Figure 3).

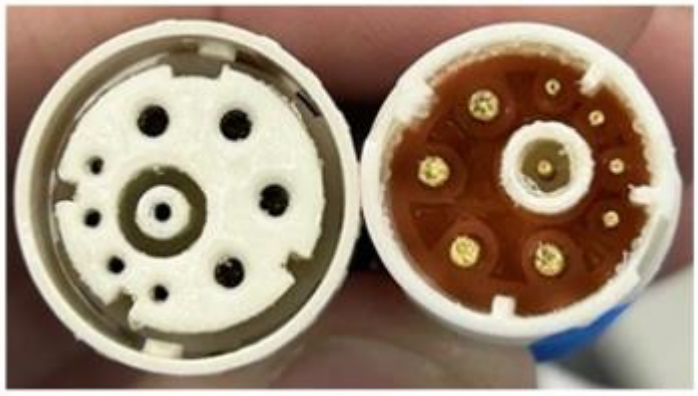
Grease is applied to the plug at an approximate thickness of 1/16" before mating the connector

Figure 3

5.) Connect the P1 connector shells, Amphenol PCD P/N SJS860900 and P/N SJS860910

6.) **Task Complete**.

Note: Subsequent disconnects of P1 mated connectors should show evidence of proper grease spreading as shown (see Figure 4).



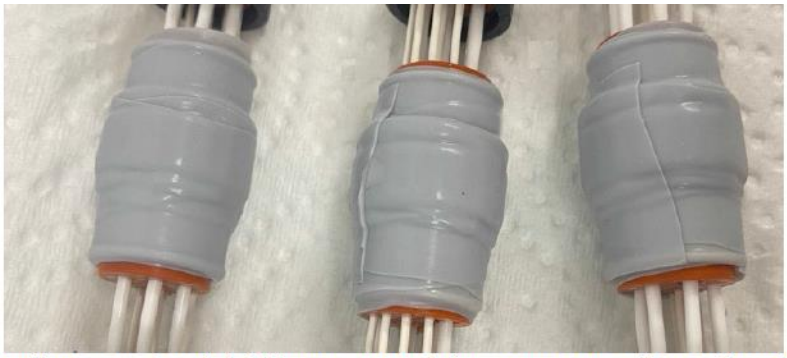
View of unmated example showing Dielectric Grease

Figure 4

b. <u>Method 2 - For installation areas classified as sealed or protected from the elements</u>

1.) Disconnect the mated P1 connector shells, Amphenol PCD P/N SJS860900 and P/N SJS860910.
2.) Thoroughly inspect the faces of each (see Figure 2) for evidence of any debris.
3.) Per Amphenol's recommendation, clean both faces of each connector with Acetone as specified in the materials list. Allow to dry per Amphenol's recommendation, approximately 5 minutes.
4.) Connect the P1 connector shells, Amphenol PCD P/N SJS860900 and P/N SJS860910.
5.) Apply 3M Self-Fusing - Silicone Electrical Tape, as specified in the materials list and per Amphenol's recommendation (see Figure 5).

6.) Task complete



Tape is tightly wrapped between 3 and 4 full turns around the connector with overlap. An additional 0.5 to 1 turn is applied without tension. Tape fuses for 24 hours in ambient conditions prior to testing.

Figure 5

Appendix A

DIAMOND, P/N C-99707-2, LIFT TRANSDUCER	
Lot Number	**Serial Numbers Affected**
192323	192323-01 thru 192323-05
192523	192523-01 thru 192523-05
200585	200585-01 thru 200585-10
201655	201655-01 thru 201655-10
205719	205719-01 thru 205719-10
206184	206184-01 thru 206184-08
206692	206692-01 thru 206692-10
207417	207417-01 thru 207417-26
208362	208362-01 thru 208362-05
208893	208893-01 thru 208893-05