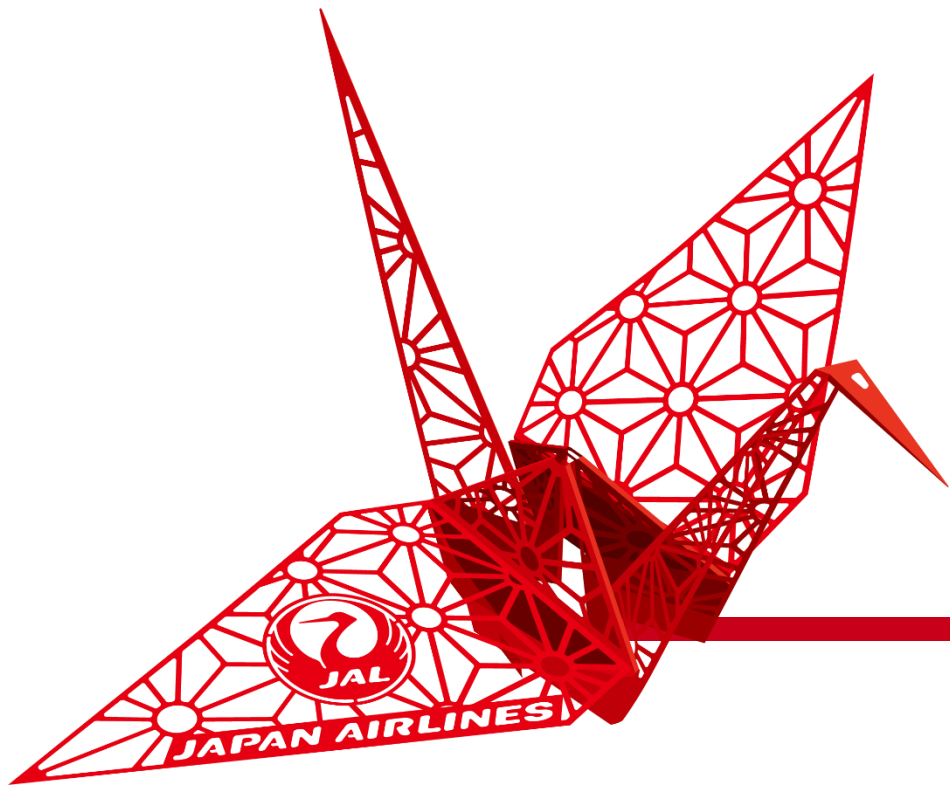




Harness MW0311(FADEC harness) Chafing

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2024-Oct



JAPAN AIRLINES

Background

JA323J experienced Air Turn Back event due to “BLEED TRIP OFF” light ON(R/H). Troubleshooting found the chafed wire harness MW0311(FADEC harness).

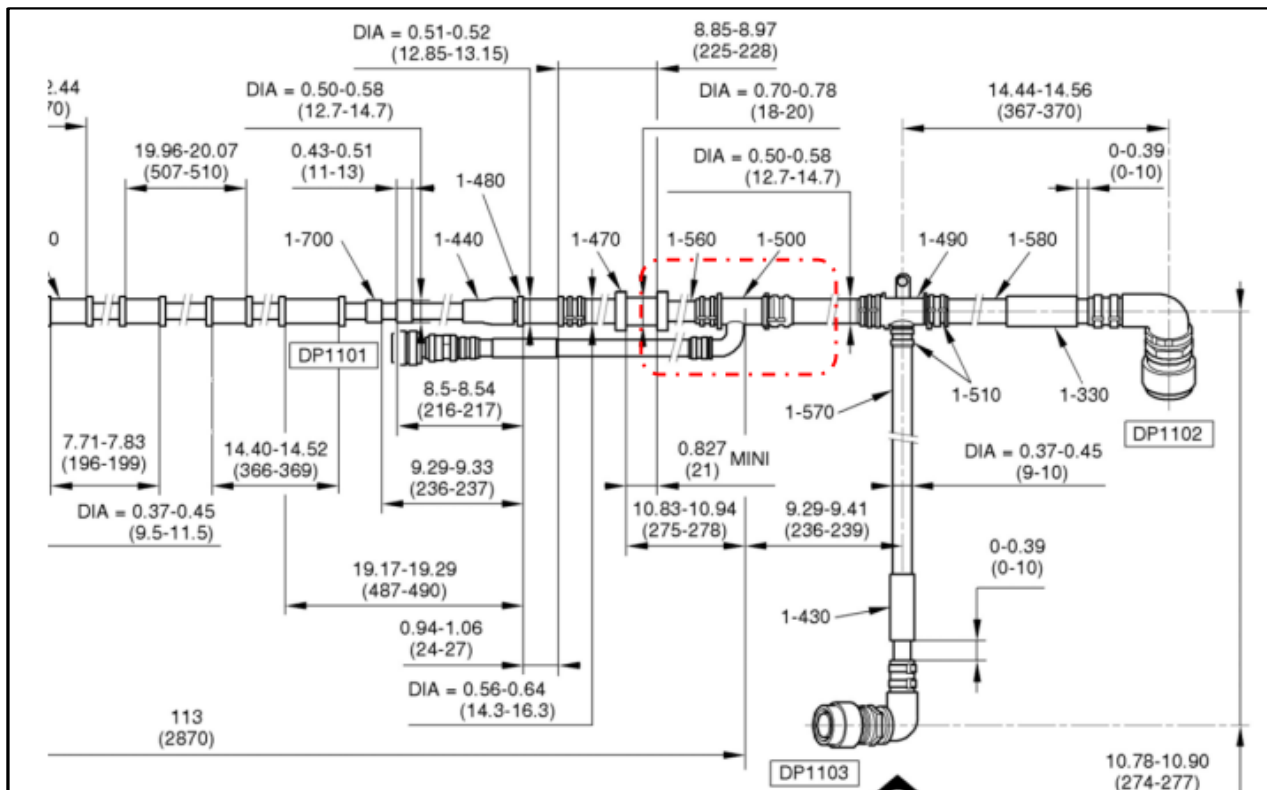


Figure 3 : Overview of MW0311

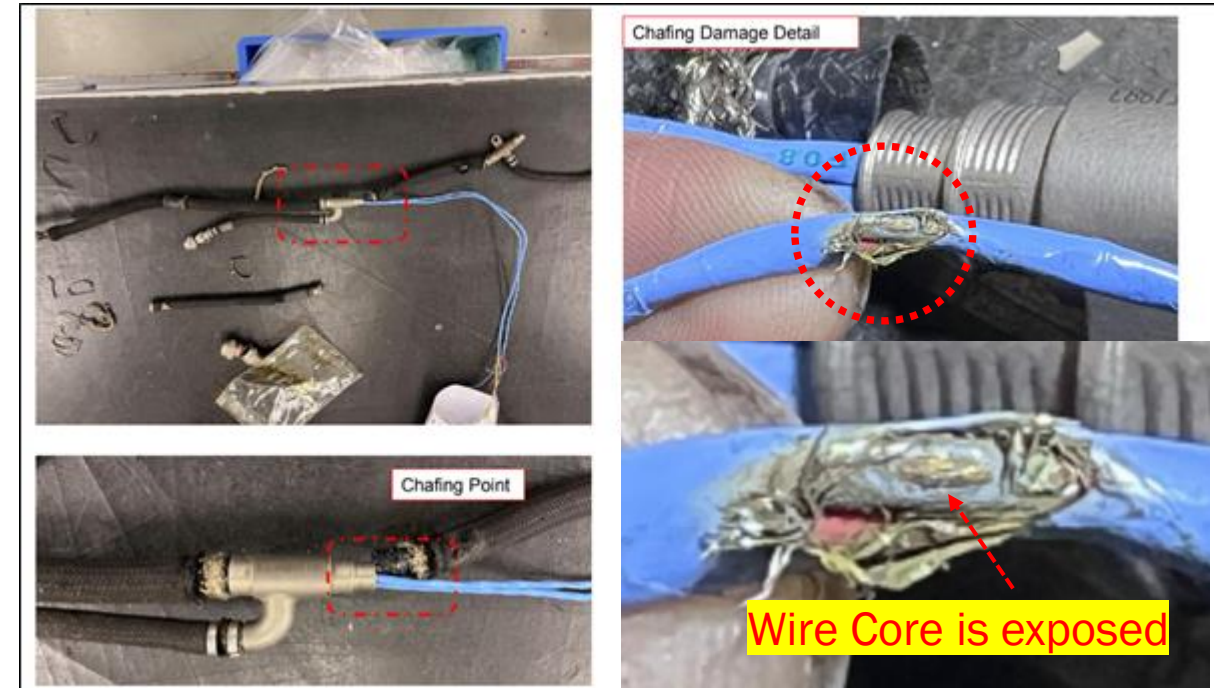


Figure 1 : Chafed point of MW0311
(Mid Portion of the harness)

The chafing was at the mid portion(branching point) of the harness. And this was the first removal.

- TSI 34,926 hours
- CSI 28,294 cycles.

Background

The chafed wire is routed into the overpressure detection switch in the BAR(Bleed Air Regulator). Resulted, the short circuit made at the chafed point was caused the incorrect overpressure detection.

JAL Experience:

- JAL has multiple experiences of the chafed MW0311 around corner area of DP1102. And there is CFM56-7B S/B 72-0779 which installs a PTFE insert over bundle of wires at the rear part of adapter assy.
- However, for other portion (e.g. DP1101, 1103 and Mid portion), there is no countermeasures.

Countermeasure development:

JAL is currently doing sampling removal for high time harness for investigation because the JA323J case was happened with the high time harness.

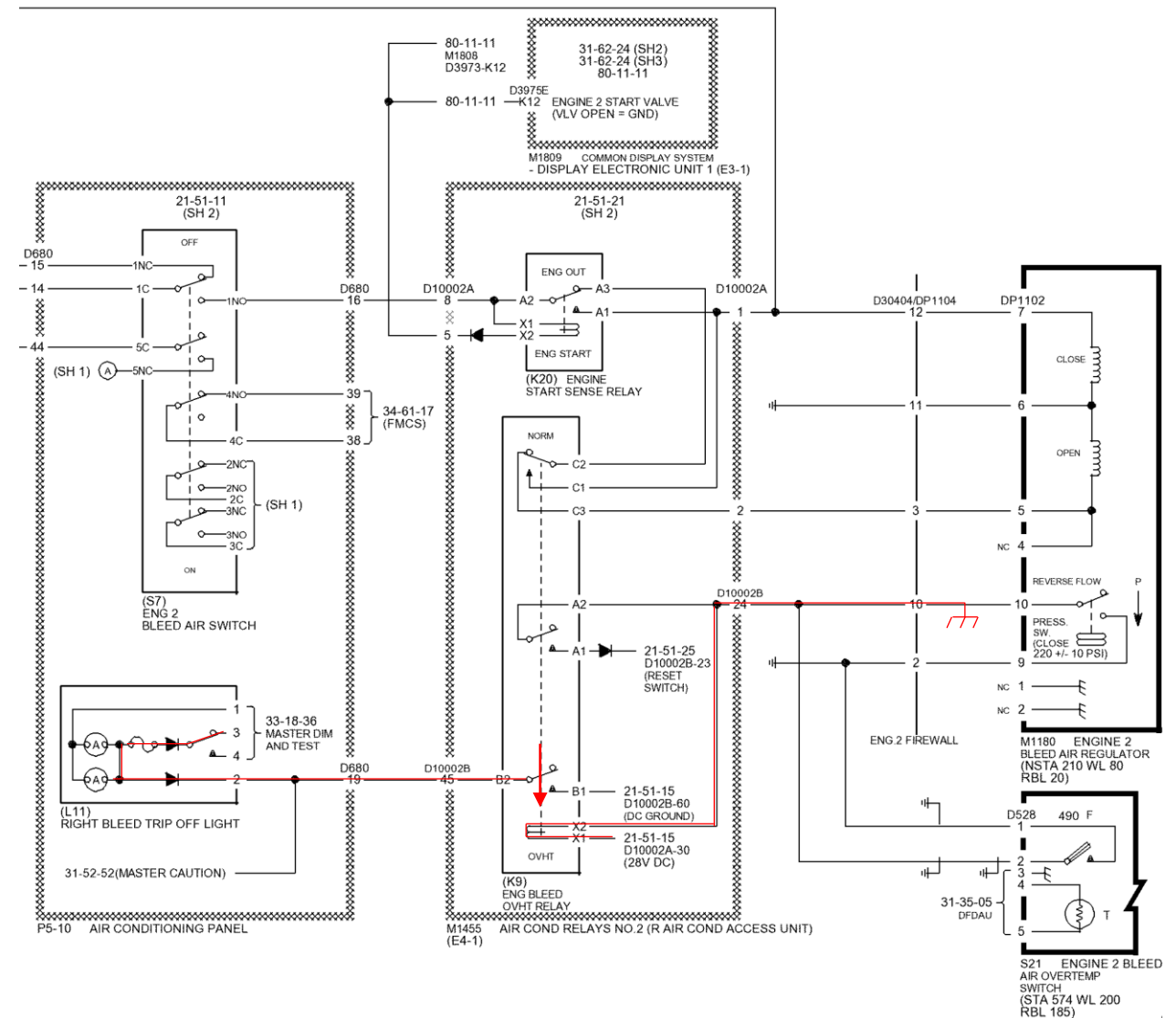


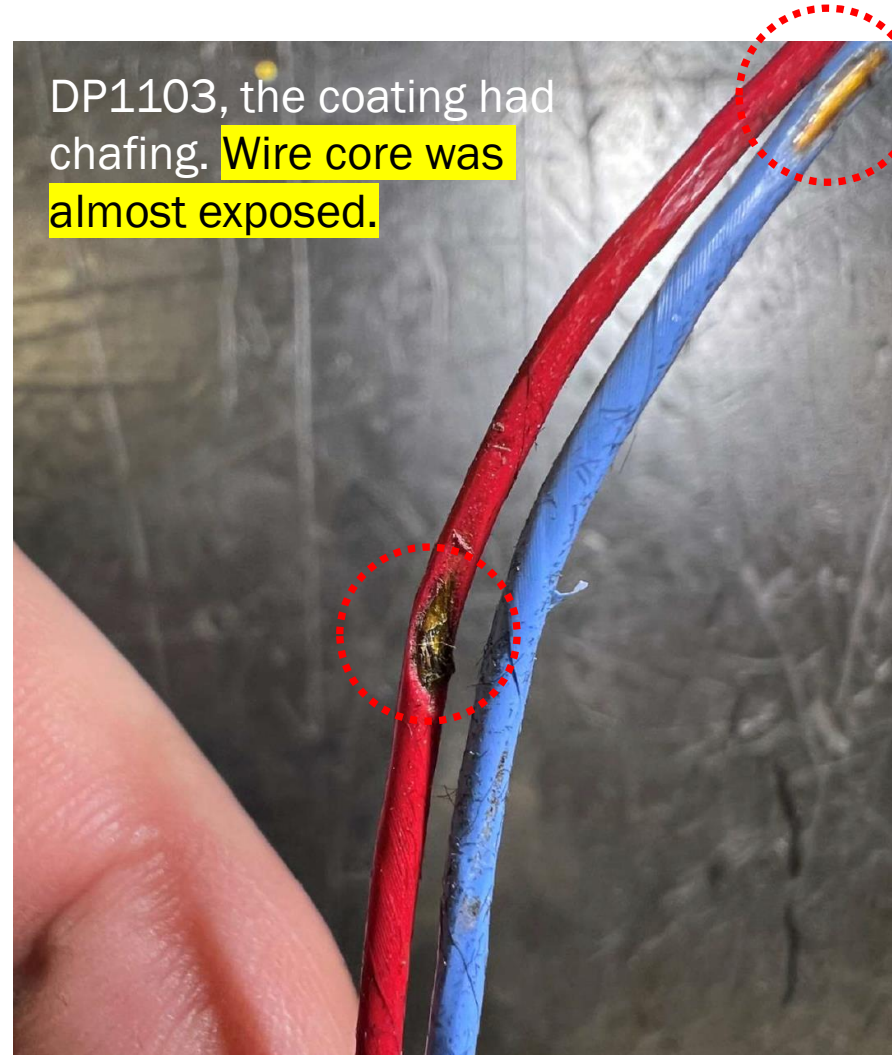
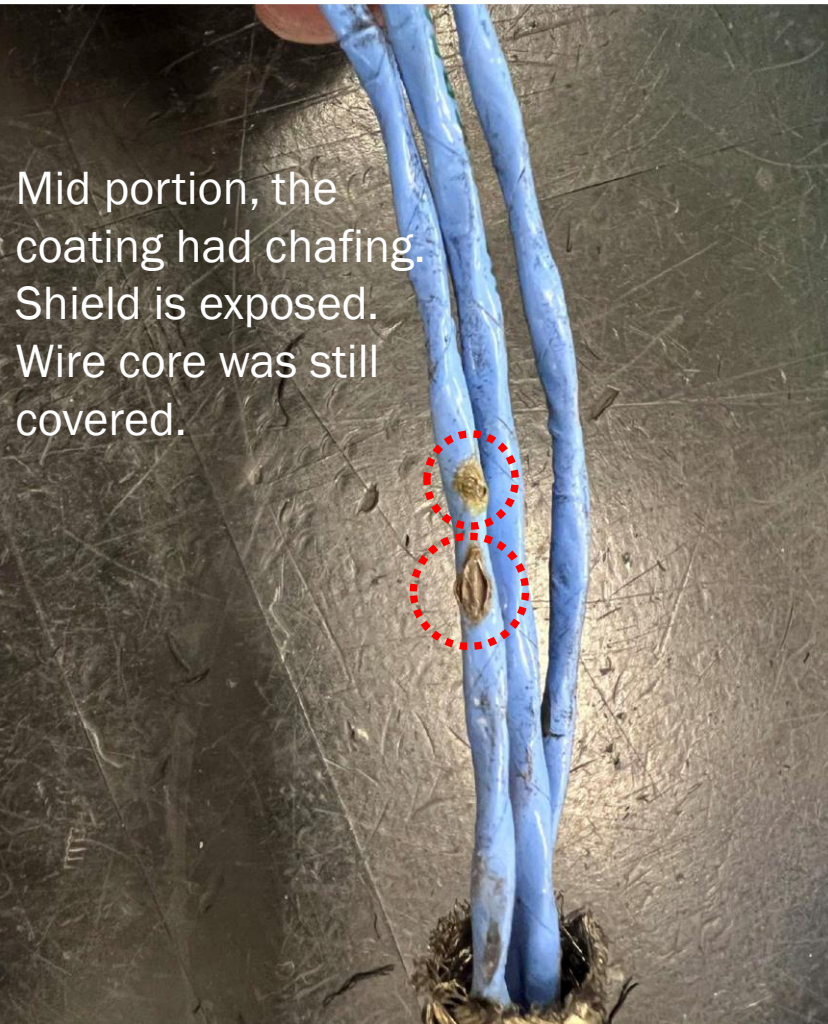
Figure 3 : Schematic of Overpressure detection and trip OFF light

Result of sampling check No.1



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JA306J L/H Harness , 33,056 hours, 18,511 cycles (3rd highest TSI)



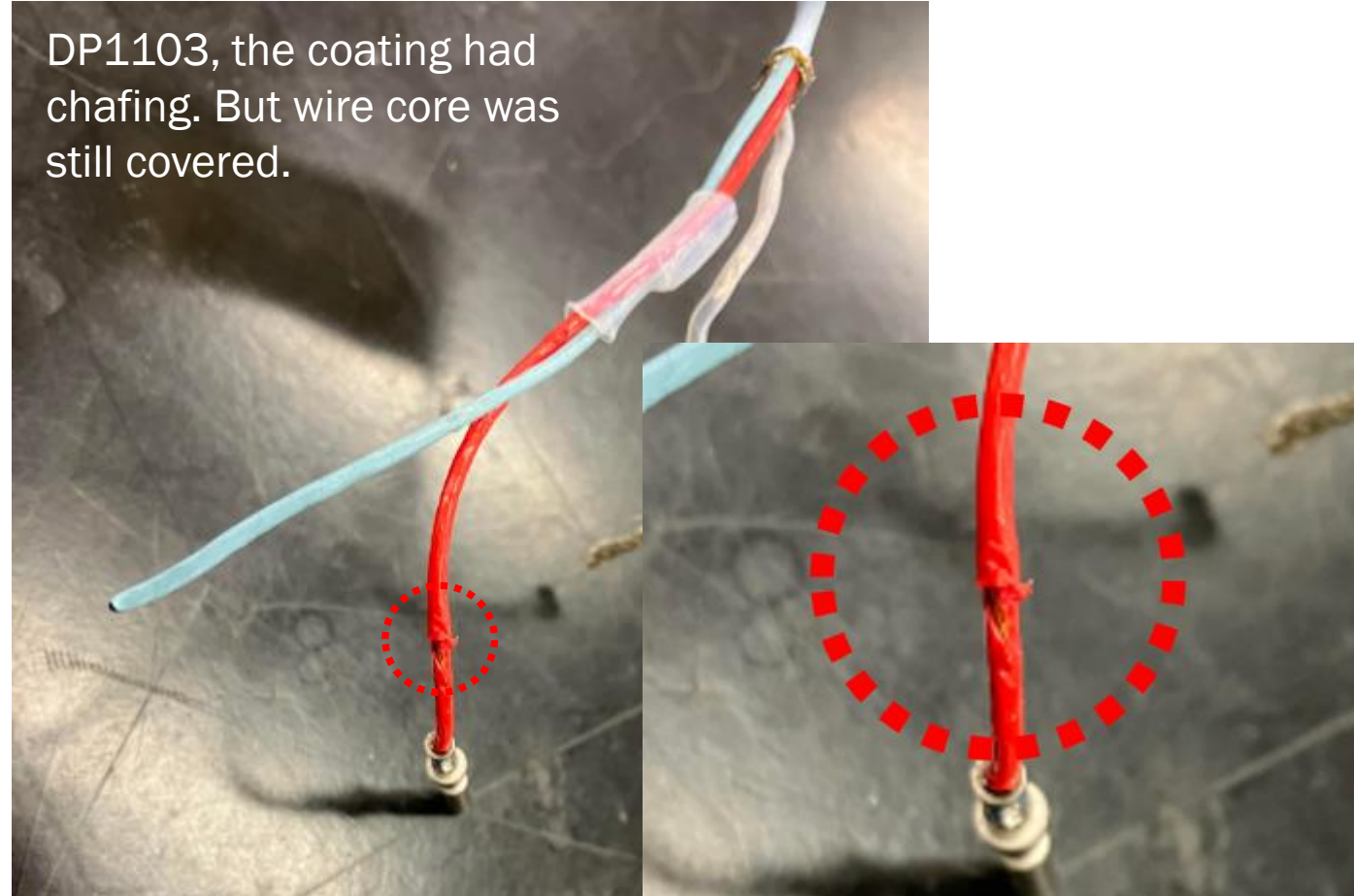
Result of sampling check No.2

JA328J R/H Harness , 38,946 hours, 21,792 cycles , The highest TSI of “internal wire” (It had a shop-in history but internal wire was not replaced).

Mid portion, the coating had chafing. Shield is exposed. But wire core was still covered.



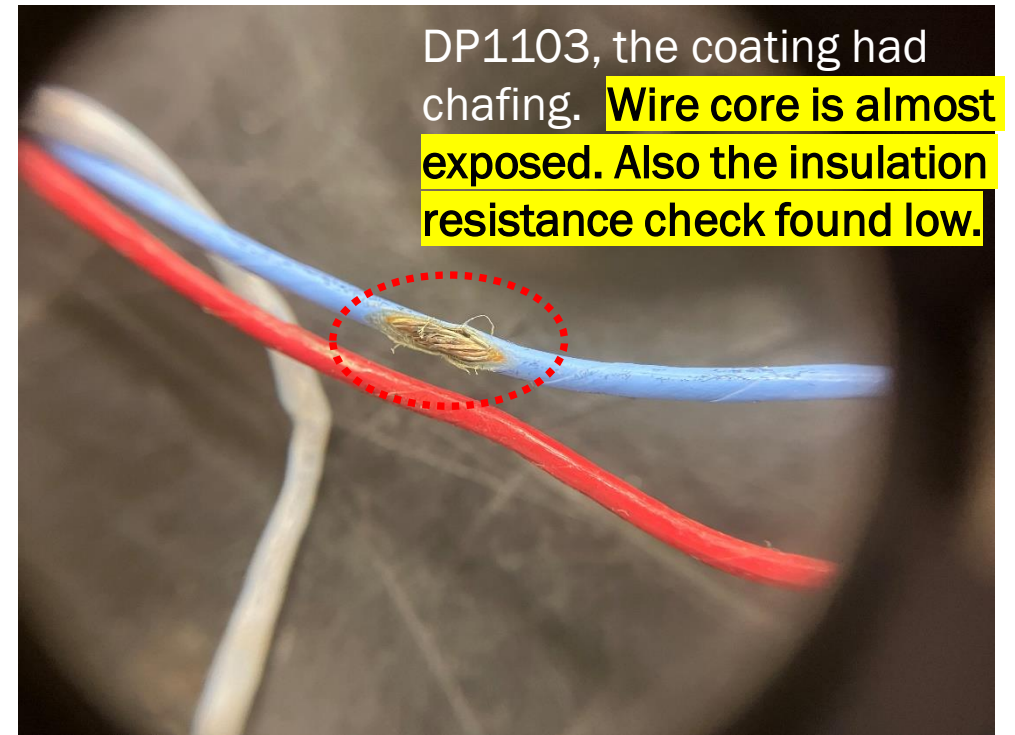
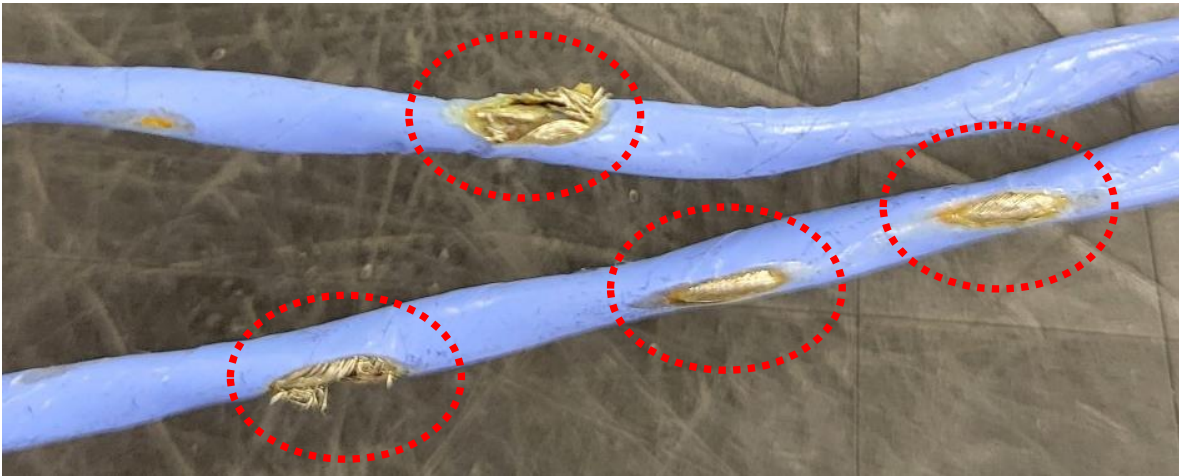
DP1103, the coating had chafing. But wire core was still covered.



Result of sampling check No.3

JA334J L/H Harness, TSI 33679 hours, CSI 19705 cycles, 2nd highest TSI

Mid portion, the coating had chafing. Shield is exposed.
But wire core was still covered.



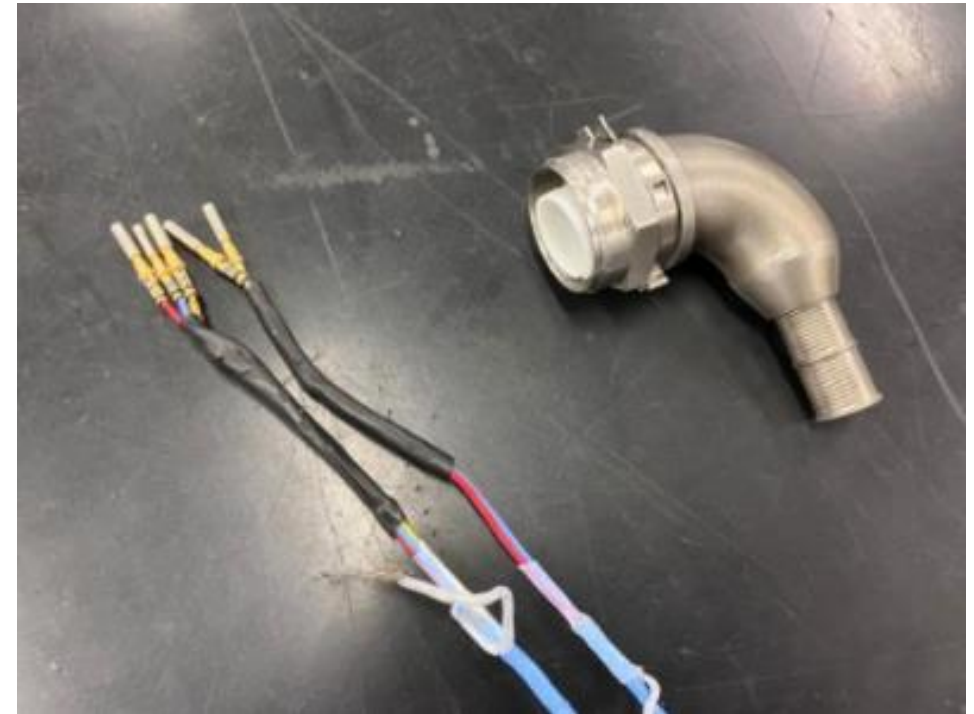
Result of sampling check No.4

JA333J R/H Harness, ~~TSI 35060 hours, CSI 18372 cycles~~ TSI about 2600 hours since new

Mid portion, the coating had chafing. Shield is exposed.
But wire core was still covered.



No damage on DP1102 and 1103



Conclusion & Requests

Conclusion

- Damage on Mid portion : Isolated Case
- Damage on DP1102 : Solved by SB72-0779
- Damage on DP1103 : Still in high risk

Request

- To operators, please comments your experiences about chafing of the harness MW0311.
- To Boeing/GE, please consider issuing an SB for DP1103 similar to the one issued for DP1102.