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Composite Sealing Systems

RESEARCH & DEVELOPMENT

LABORATORY REPORT

REPORT NUMBER

DD5864 Revision A

TITLE

Evaluation of NM506-65 to AMS 7271H, Section 4.5.3

DATE

9/13/2007
October 1, 2007

REFERENCE

Lab Request # 233, 425, 1072 & 1460
Addendum "B" LR 1072 of 10/5/06
Addendum "C" LR 1460 of 8/10/07

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Revision A 10-1-07 Updated with production compound number from LN1300.

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Research & Development Laboratory Report DD5864 Revision A

(Evaluation of NM506-65 to AMS 7271H, Section 4.5.3)

October 1, 2007

- TITLE:** Evaluation of NM506-65 to AMS 7271H, Section 4.5.3
- OBJECTIVE:** To evaluate NM506-65 2-229 o-rings, 3 samples, under a simulated component test per AMS 7271H, 4.5.3
- CONCLUSION:** Three sample o-rings were tested simultaneously. All three o-rings passed all tests required with no signs of leakage during any of the testing.
- PROCEDURES:**
1. Test specimens were o-rings conforming in dimensions to AS568-229.
 2. Test apparatus consisted of 3 identical fixtures as outlined in AMS 7271H, figures 3 & 4.
 3. The test was performed as outlined in AMS 7271H, Section 4.5.3. All three samples and fixtures were run simultaneously.

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October 1, 2007

DATA: Data for tests conducted from 7/23/2007 to 8/8/2007

Simulated Component Test

DATE	PRESSURE (psi)	FLUID	LEAKAGE (y or n)			TEMP (°F)	COMMENTS
			1	2	3		
7/23/2007	0	Fuel A	n/a	n/a	n/a	RT	6 hour soak in with ASTM Reference Fuel A
7/23/2007	50	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
7/23/2007	500	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
7/23/2007	1500	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
7/23/07 – 7/25/07	0	Fuel A	n/a	n/a	n/a	-67°F	Start low temp seq. in fuel for 48 hrs
7/25/07	50	Fuel A	n	n	n	-67°F	Pressurized test for <3 minutes
7/25/07	500	Fuel A	n	n	n	-67°F	Pressurized test for <3 minutes
7/25/07	1500	Fuel A	n	n	n	-67°F	Pressurized test for <3 minutes
7/25/07 – 7/27/07	0	Fuel B	n/a	n/a	n/a	RT	Drain Fuel A - Refill w/ Fuel B & start 48 hour soak
7/27/07	50	Fuel B	n	n	n	RT	Pressurized test for <3 minutes
7/27/07	500	Fuel B	n	n	n	RT	Pressurized test for <3 minutes
7/27/07	1500	Fuel B	n	n	n	RT	Pressurized test for <3 minutes & drain fuel
7/27/07 – 8/03/07	0	Dry	n/a	n/a	n/a	158°F	Start 168 hours dryout
8/03/07 -- 8/06/07	0	Dry	n/a	n/a	n/a	158°F	Complete Dryout, cool to RT
8/06/07	0	Fuel A	n/a	n/a	n/a	158°F	Refill w/ Fuel A & allow to stand 6 hrs.
8/06/07	50	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
8/06/07	500	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
8/06/07	1500	Fuel A	n	n	n	RT	Pressurized test for <3 minutes
8/06/07 – 8/08/07	0	Fuel A	n/a	n/a	n/a	-47°F	48 hr soak
8/08/07	50	Fuel A	n	n	n	-47°F	Pressurized test for <3 minutes
8/08/07	500	Fuel A	n	n	n	-47°F	Pressurized test for <3 minutes
8/08/07	1500	Fuel A	n	n	n	-47°F	Pressurized test for <3 minutes

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