

## 12.0 Appendix. Single-Lap-Joint Mechanical Testing Check List

Sample ID's: 20150443, 20150444, 20150445, 20150446, 20150447Test date: 7/14 Test temperature: 23.4<sup>2</sup>°C Test humidity 55%Testing facility and operator: msjTest frame model and serial number: instron 1124 SN:5054Test frame calibration date: 9/10/14Load cell model and serial number: SN:028

Load cell calibration date: \_\_\_\_\_

Crosshead speed: 1.3 mm/min (0.05 in/min), list other 1.276 mm/min

Nature of failure and other comments:

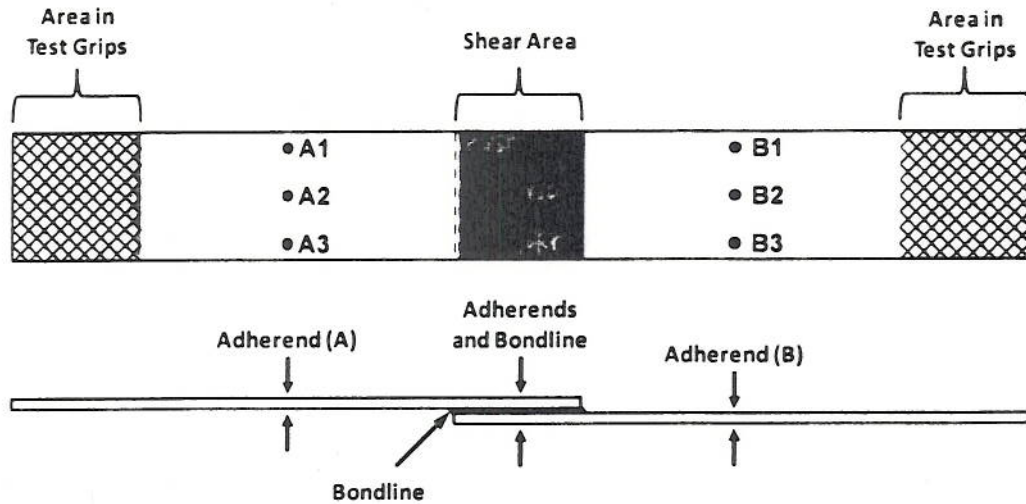
## 11.0 Appendix. Single-Lap-Joint Fabrication Check List

Sample ID's: 20150443, 20150444, 20150445, 20150446, 20150447Date: 6/25/15 @ 1630 Temperature: 74.1°F Humidity 52.9%Testing facility and operator: MSSAdhesive, type, and form: SciGrip SC7805Lot ID, manufacturer's code, expiration date: EX805A Lot: NC14H-007EX805B BLOCK Lot: NC14H-008 Date of Mfg: 8/27/2014Method of cleaning and preparing bonding surface: acetone wipe, 3M scotchbrite  
(048011-05530, A VEN, Lot #: MDM0 0205-4304). Grit blast (60 grit aluminum oxide)  
nitrogen blow offAC-131 3M ID No: 70-0052-0026-9 Lot #: 50033Mix/sit for 30 mins, wet out for 20 mins, nitrogen blow off

Adhesive preparation, application, and bonding conditions:

Two-component, 490 mL cartridge 10:1 mix ratio dispensed using  
MixPAC type DP 400-100 No. 2008-07153Tooling fixture and bonding pressure notes: aluminum fixture w/ 3 steel weightsAdhesive mixing to applied pressure time: < 5 minsCure cycle: 91.5 hrs @ RTOven used (model and serial number): Thelco SN: 699020978, Model: 130 DConditioning procedure: placed in DI water test tube in oven @ 63°C for 14 daysComments: 1010 mild steelAC-131 BB sol gel  
hot/wet

### 13.0 Appendix. Bondline Thickness Measurements



Aluminum grade: \_\_\_\_\_ Mfg. nominal thickness: \_\_\_\_\_ (mm – in)

Micrometer model, serial number, calibration date \_\_\_\_\_

Measurement units (circle) – mm or in

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150443	.0623	.0623	.0622	.06227
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0627	.0624	.0622	.06243
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1540	.1522	.1502	.15213
				C - (A + B)
	Average bondline thickness			.07743

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150444	.0622	.0622	.0622	.0622
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0622	.0621	.0620	.0621
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1517	.1513	.1519	.15163
				C - (A + B)
	Average bondline thickness			.02733

51290.

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150445	.0625	.0623	.0621	.0623
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0624	.0620	.0622	.0621
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1522	.1516	.1521	.15197
				C - (A + B)
	Average bondline thickness			.02757

2290.



Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
201504476	.0619	.0622	.0622	.0621
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0621	.0620	.0621	.06207
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1525	.1520	.1538	.15277
				C - (A + B)
	Average bondline thickness			.02860

Sample ID	Adherend (A1)	Adherend (A2)	Adherend (A3)	Average (A)
20150447	.0623	.0622	.0627	.0624
Comments	Adherend (B1)	Adherend (B2)	Adherend (B3)	Average (B)
	.0626	.0622	.0621	.0623
	Adherends and Bondline (C1)	Adherends and Bondline (C2)	Adherends and Bondline (C3)	Average (C)
	.1516	.1513	.1523	.15173
				C - (A + B)
	Average bondline thickness			.02703