
List of Engineering Approved Metallic Material Specifications

1 SCOPE

In the past several years many metallic material specifications have been cancelled and superseded by specifications that are not suitable for aircraft applications and de Havilland requirements. Therefore this ESP is issued to clarify which specifications are stabilized, revised, reaffirmed or cancelled and are acceptable to de Havilland Engineering.

STATUS DEFINITION

Stabilized: The standards document has not be subject to periodic reviews from the standards custodian and will not be subject to revision in the foreseeable future.

Revised: A standards document may be revised at the discretion of the custodian of the standard when a change to dimensions, scale, material or editorial updating are required that do not affect physical or functional interchangeability.

Reaffirmed: the standards custodian periodically reviews the standard to ensure that the standard meets the requirements and fulfill the needs of the aerospace community.

Cancelled: The standard is deemed cancelled by the standards custodian when all industry requirements for the part / material have ceased to exist or not to be used in design or replacement after the noted cancellation date.

2 APPLICABILITY

This ESP applies to all Dash 8 aircraft series in production and all out of production aircraft, for spares requirements. Where a specification has been cancelled, but the engineering approved specification is the cancelled specification, the latest issue of the specification before cancellation shall be used.

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TABLE 1 METALLIC MATERIALS SPECIFICATION

MATERIAL	MATERIAL FORM	PRESENT MATERIALS SPECIFICATION	SPECIFICATION STATUS: S = stabilized Re = Revised R = Reaffirmed C = Cancelled	ACCEPTABLE REPLACEMENT SPECIFICATION
ALUMINUM ALLOYS				
2014	EXTRUSION	AMS-QQ-A-200/2	S	
2024	EXTRUSION	AMS-QQ-A-200/3	R	
6061	EXTRUSION	AMS-QQ-A-200/8	S	
6063	EXTRUSION	AMS-QQ-A-200/9	C	ASTM B 241 - Type 1 Tubing
				ASTM B 221 - Type II tubing and all other products
7075	EXTRUSION	AMS-QQ-A-200/11	S	
7075	EXTRUSION	AMS-QQ-A-200/15	S	
7150	EXTRUSION	AMS 4345	R	
2024	ROLLED BAR	AMS-QQ-AQ-225/6	R	
6061	ROLLED BAR	AMS-QQ-A-225/8	C	AMS 4115 - Temper O
				AMS 4116 - T4
				AMS 4128 - Temper T451
				AMS 4117 - Temper T6, T651
7075	ROLLED BAR	AMS-QQ-A-225/9	S	
3003	SHEET	AMSQQ-A-250/2	C	ASTM B 209
2014	SHEET / PLATE	AMS-QQ-A-250/3	S	
2024	SHEET / PLATE	AMS-QQ-A-250/4	S	

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2024	CLAD SHEET	AMS-QQ-A-250/5	S	
5052	SHEET / PLATE	AMS4015 5052, O AMS4016 5052, H32 AMS4017 5052, H34	S	
6061	SHEET / PLATE	AMS-QQ-A-250/11	C	AMS 4025 - Temper O
				AMS 4026 - Temper T4, T451
				AMS 4027 - Temper T6, T651
7050	PLATE	AMS 4050	Re	
7075	PLATE	AMS-QQ-A-250/12	S	
7075	CLAD SHEET	AMS-QQ-A-250/13	C	AMS 4048 - Temper O, F
				AMS 4049 - Temper T6, T651
7075	SHT. CLAD 1 SIDE	AMS-QQ-A-250/18	S	
5052	TUBING	WW-T-700/4	R	AMS-WW-T-700/4
6061	TUBING	WW-T-700/6	S	AMS-WW-T-700/6
6061	TUBING	AMS-T-7081	C	AMS 4081 - T4
				AMS 4083 - T6
356	CASTING	AMS 4260	R	
A356.0	CASTING	AMS-A-21180	Re	
A357.0	CASTING	AMS-A-21180	Re	

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7050	FORGING	AMS 4333	Re	
7050	FORGING	AMS 4108	R	
7075	FORGING	QQ-A-367	R	AMS-QQ-A-367
7175	FORGING	AMS 4149	Re	
MAGNESIUM ALLOYS				
AZ31B	SHEET	AMS 4377	Re	
LOW ALLOY AND CARBON STEEL				
1010	SHEET	COMMERICAL QUALITY		
1010 AND 1025	SHEET	MIL-S-7952	Re	AMS 5046
1095	SHEET AND STRIP	MIL-A-7947	Re	AMS 5121
4130	SHEET AND PLATE	AMS 6345	Re	
4130	BAR	AMS-S-6758	R	AMS 6348
4130 AIR MELTED	BAR, FORGING	AMS 6049 FOR 125 -145 KSI AND 150 - 175 KSI	Re	
4340 VACUUM MELTED	BAR, FORGING	AMS 6414 FOR 180 - 200 KSI	Re	
4330	BAR, FORGING	AMS 6411	Re	
300 M VAC REM	BAR, FORGING	AMS 6419	Re	
9310	BAR, FORGING	AMS 6260	Re	
NITRIALLOY 135M (7140)	BAR	AMS6470	Re	AMS 6205 (VAC REM)

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9315	BAR, FORGED TUBE	AMS 6263	Re	
4130	TUBING	AMS-T-6736	Re	AMS 6360 - NORMALIZED AMS 6361 - 125 KSI AMS 6362 - 150 KSI
MUSIC WIRE (8015)	WIRE	AMS 5112	Re	
CORROSION RESISTANT STEEL				
301 1/4 HARD	SHEET, STRIP	AMS 5517	R	
301 1/2 HARD	SHEET, STRIP	AMS 5518	Re	
301 3/4 HARD	SHEET, STRIP	AMS 5902	R	
301 FULL HARD	SHEET, STRIP	AMS 5519	R	
321	SHEET, PLATE	AMS 5510	R	
347	SHEET, PLATE	AMS 5512	R	
15-5PH	SHEET, STRIP, PLATE	AMS 5862	Re	
17-7PH	SHEET, STRIP	AMS 5528	R	
303 AND 303Se	ANNEALED BAR	DHMS M2.23		
303 AND 303Se	COLD WORKED BAR	AMS 5738	R	
321	BAR AND FORGING	AMS-QQ-S-763	S	
431	BAR	MIL-S-18732		
PH13-8 Mo	BAR, FORGING	AMS 5629	Re	

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15-5PH	BAR, FORGING	AMS 5659	Re	
17-4PH	BAR, FORGING	AMS 5643	Re	
CUSTOM 455	BAR, FORGING	AMS 5617	R	
304	TUBING	MIL-T-8504	Inactive	
304	TUBING	AMS-T-6845	S	
321	TUBING	MIL-T-8606	Inactive	
321	TUBING	AMS 5570	Re	
21-6-9	TUBING	BMS 7-185		
302	SPRING TEMP. WIRE	AMS 5688	R	
17-7PH	COLD WORK WIRE	AMS 5678	R	
17-4PH	INVESTMENT CAST	AMS 5342	R	
TITANIUM ALLOYS				
Ti-CP-40	SHEET	MIL-T-9046	C	AMS 4902
Ti-CP-70	SHEET	MIL-T-9046	C	AMS 4901
Ti-5Al-2.5Sn	SHEET	MIL-T-9046	C	AMS 4910
Ti-6Al-4V	SHEET, PLATE	MIL-T-9046	C	AMS 4911 - Annealed
				AMS 4903 - Solution treated
Ti-6Al-4V	SHEET, PLATE	MIL-T-9046	C	AMS 4904-STa

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Ti-CP-70	BAR	MIL-T-9047	C	AMS 4921
Ti-6Al-4V	BAR	MIL-T-9047	C	AMS 6931 - Annealed
			C	AMS 6930 - STA
TI-6Al-6V	DIE FORGING	AMS 4938	R	
Ti-3Al-2.5V	TUBING	AMS 4945	R	
SHIM STOCK				
ALUMINUM COMP. 1	SHIM TYPE 1 OR 2	MIL-DTL-22499	C	AMS-DTL-22499/1A
BRASS COMP. 2	SHIM TYPE 1 OR 2	MIL-DTL-22499	C	AMS-DTL-22499/2A
CRES COMP. 3	SHIM TYPE 1 OR 2	MIL-DTL22499	C	AMS-DTL-22499/3A
COPPER ALLOYS				
COPPER, PURE	SHEET, STRIP	DHMS M2.22	Re	ASTM B152
COPPER ALLOY C17200	SHEET, STRIP	ASTM B 194		
COPPER, PURE	BAR	DHMS M2.22	Re	ASTM B152
COPPER ALLOY C17200	BAR	FOR COND. TF00: AMS 4533	Re	
		FOR COND. TH04: AMS 4534	Re	
		OR COND. TB00: AMS 4560	Re	Correction: AMS 4650
COPPER ALLOY C63000	BAR	AMS 4640	Re	