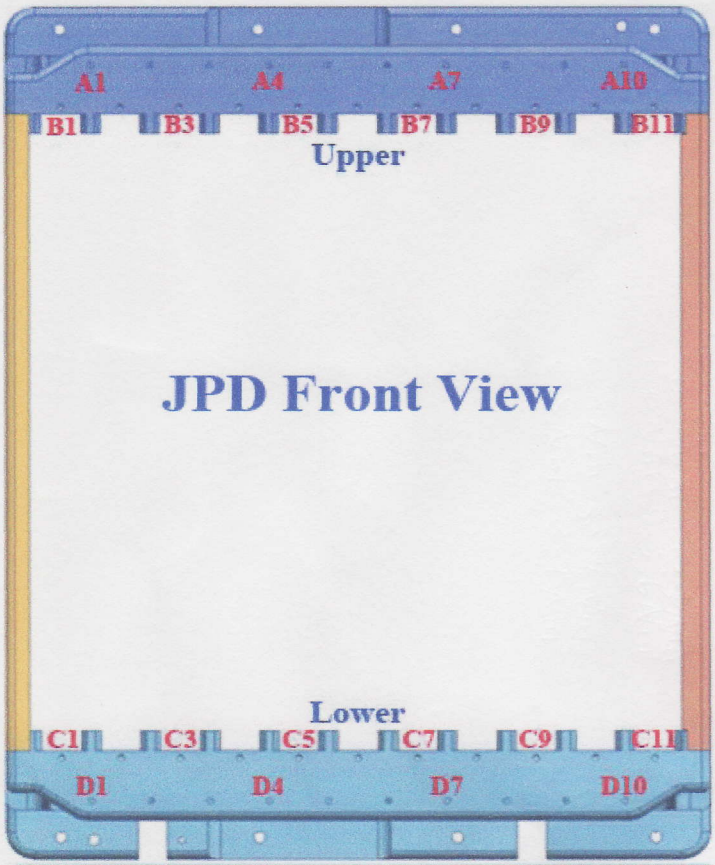
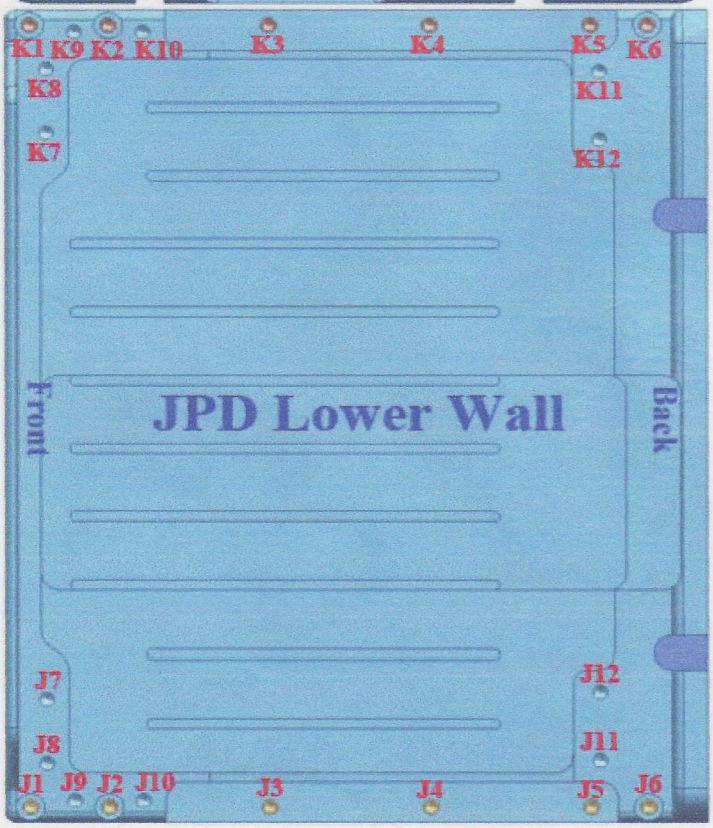
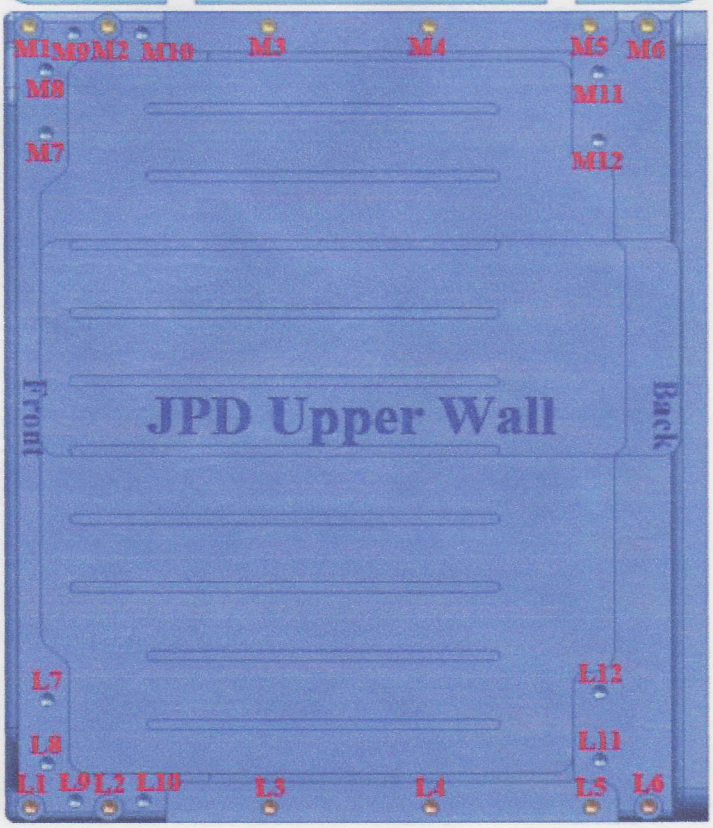
FM01

JPD Screws on Self-Lock Helicoils







JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*										
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
Torque Wrench S/N												
A1	#4-40 UNC	46 Ncm										
A2	#4-40 UNC	46 Ncm										
A3	#4-40 UNC	46 Ncm										
A4	#4-40 UNC	46 Ncm										
A5	#4-40 UNC	46 Ncm										
A6	#4-40 UNC	46 Ncm										
A7	#4-40 UNC	46 Ncm										
A8	#4-40 UNC	46 Ncm										
A9	#4-40 UNC	46 Ncm										
A10	#4-40 UNC	46 Ncm										
Torque Wrench S/N												
B1	#4-40 UNC	46 Ncm										
B2	#4-40 UNC	46 Ncm										
B3	#4-40 UNC	46 Ncm										
B4	#4-40 UNC	46 Ncm										
B5	#4-40 UNC	46 Ncm										
B6	#4-40 UNC	46 Ncm										
B7	#4-40 UNC	46 Ncm										
B8	#4-40 UNC	46 Ncm										
B9	#4-40 UNC	46 Ncm										
B10	#4-40 UNC	46 Ncm										
B11	#4-40 UNC	46 Ncm										

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*										
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
Torque Wrench S/N												
C1	#4-40 UNC	46 Ncm										
C2	#4-40 UNC	46 Ncm										
C3	#4-40 UNC	46 Ncm										
C4	#4-40 UNC	46 Ncm										
C5	#4-40 UNC	46 Ncm										
C6	#4-40 UNC	46 Ncm										
C7	#4-40 UNC	46 Ncm										
C8	#4-40 UNC	46 Ncm										
C9	#4-40 UNC	46 Ncm										
C10	#4-40 UNC	46 Ncm										
C11	#4-40 UNC	46 Ncm										
Torque Wrench S/N												
D1	#4-40 UNC	46 Ncm										
D2	#4-40 UNC	46 Ncm										
D3	#4-40 UNC	46 Ncm										
D4	#4-40 UNC	46 Ncm										
D5	#4-40 UNC	46 Ncm										
D6	#4-40 UNC	46 Ncm										
D7	#4-40 UNC	46 Ncm										
D8	#4-40 UNC	46 Ncm										
D9	#4-40 UNC	46 Ncm										
D10	#4-40 UNC	46 Ncm										

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*			July 6, 2007		317962V 30-Oct-2007					
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
Torque Wrench S/N					317993V	27E027279	~~[illegible]~~	1315886				
E1	#10-32 UNF	2.5 - 3 Nm			0.8 Nm	5.05 Nm	0.5 Nm	5.0 Nm				
E2	#10-32 UNF	2.5 - 3 Nm			0.8 Nm	5.05 Nm	0.6 Nm	5.0 Nm				
E3	#10-32 UNF	2.5 - 3 Nm			0.6 Nm	4.85 Nm	0.7 Nm	5.0 Nm				
E4	#10-32 UNF	2.5 - 3 Nm			0.7 Nm	4.95 Nm	0.7 Nm	5.0 Nm				
E5	#10-32 UNF											
Torque Wrench S/N												
F1	#4-40 UNC	46 Ncm										
F2	#4-40 UNC	46 Ncm										
F3	#4-40 UNC	46 Ncm										
F4	#4-40 UNC	46 Ncm										
F5	#4-40 UNC	46 Ncm										
F6	#4-40 UNC	46 Ncm										
F7	#4-40 UNC	46 Ncm										
F8	#4-40 UNC	46 Ncm										
F9	#4-40 UNC	46 Ncm										
F10	#4-40 UNC	46 Ncm										
F11	#4-40 UNC	46 Ncm										
Torque Wrench S/N												
G1	#4-40 UNC	46 Ncm										
G2	#4-40 UNC	46 Ncm										
G3	#4-40 UNC	46 Ncm										
G4	#4-40 UNC	46 Ncm										
G5	#4-40 UNC	46 Ncm										

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	26.06.2007		July 6, 2007		30-Oct-2007					
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
G6	#4-40 UNC	46 Ncm										
G7	#4-40 UNC	46 Ncm										
G8	#4-40 UNC	46 Ncm										
G9	#4-40 UNC	46 Ncm										
G10	#4-40 UNC	46 Ncm										
G11	#4-40 UNC	46 Ncm										
Torque Wrench S/N					317993V	2FE027279	317962V	1315886				
H1	#10-32 UNF	2.5 - 3 Nm	~~0.5 Nm~~		0.5 Nm	4.75 Nm	~~0.75 Nm~~	~~5.0 Nm~~				
H2	#10-32 UNF	2.5 - 3 Nm	~~0.5 Nm~~		0.5 Nm	4.75 Nm	0.65 Nm	5.0 Nm				
H3	#10-32 UNF	2.5 - 3 Nm			0.7 Nm	4.95 Nm	0.8 Nm	5.0 Nm				
H4	#10-32 UNF	2.5 - 3 Nm			0.5 Nm	4.75 Nm	0.6 Nm	5.0 Nm				
H5	#10-32 UNF											
Torque Wrench S/N												
H6	#4-40 UNC											
Torque Wrench S/N			317993V	2FE027279								
J1	#8-32 UNC	1.5 - 2 Nm	0.8 Nm	3.4 Nm								
J2	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
J3	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
J4	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
J5	#8-32 UNC	1.5 - 2 Nm	0.65 Nm	3.2 Nm								
J6	#8-32 UNC	1.5 - 2 Nm	0.5 Nm	3.1 Nm								
J7	#8-32 UNC											
J8	#8-32 UNC											
J9	#8-32 UNC											

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	26.06.2007		27.06.2007							
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
J10	#8-32 UNC											
J11	#8-32 UNC											
J12	#8-32 UNC				0.4 Nm	4.6 Nm						
Torque Wrench S/N			317993 V	2FE027279								
K1	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
K2	#8-32 UNC	1.5 - 2 Nm	0.95 Nm	3.5 Nm								
K3	#8-32 UNC	1.5 - 2 Nm	0.7 Nm	3.3 Nm								
K4	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
K5	#8-32 UNC	1.5 - 2 Nm	0.6 Nm	3.2 Nm								
K6	#8-32 UNC											
K7	#8-32 UNC											
K8	#8-32 UNC											
K9	#8-32 UNC											
K10	#8-32 UNC											
K11	#8-32 UNC											
K12	#8-32 UNC				0.5 Nm	4.7 Nm						
Torque Wrench S/N			317993 V	2FE027279								
L1	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
L2	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
L3	#8-32 UNC	1.5 - 2 Nm	0.7 Nm	3.3 Nm								
L4	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
L5	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
L6	#8-32 UNC	1.5 - 2 Nm	0.7 Nm	3.3 Nm								
L7	#8-32 UNC											

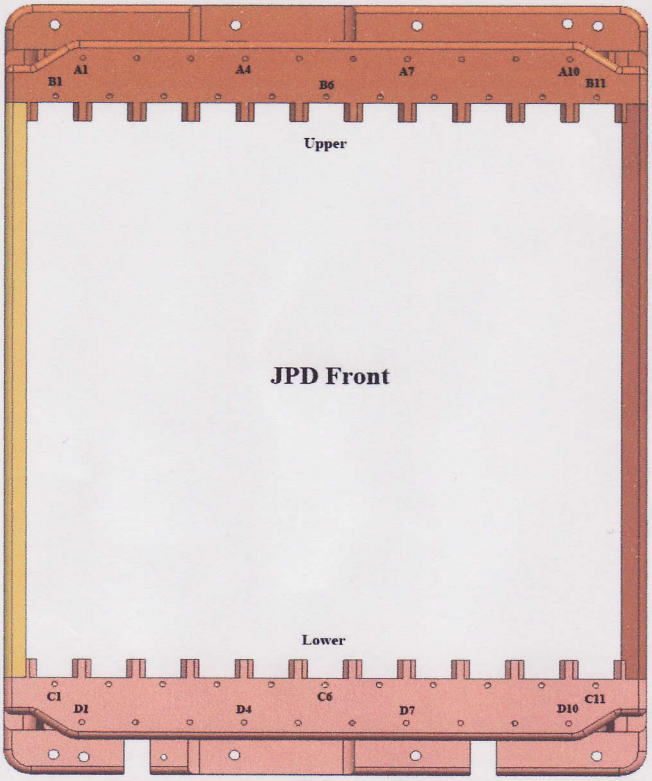
JPD FM01 Helicoils Torque Measurement Record

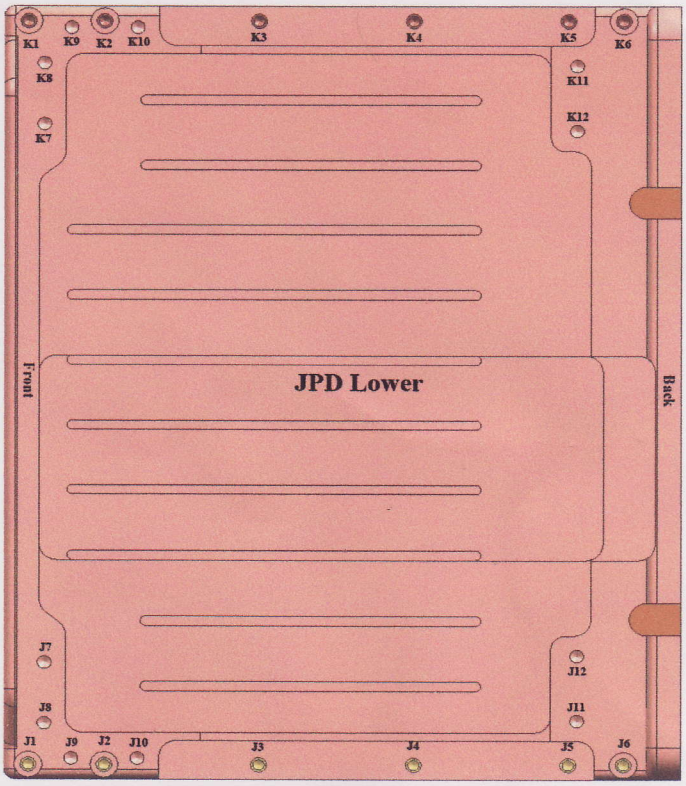
Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

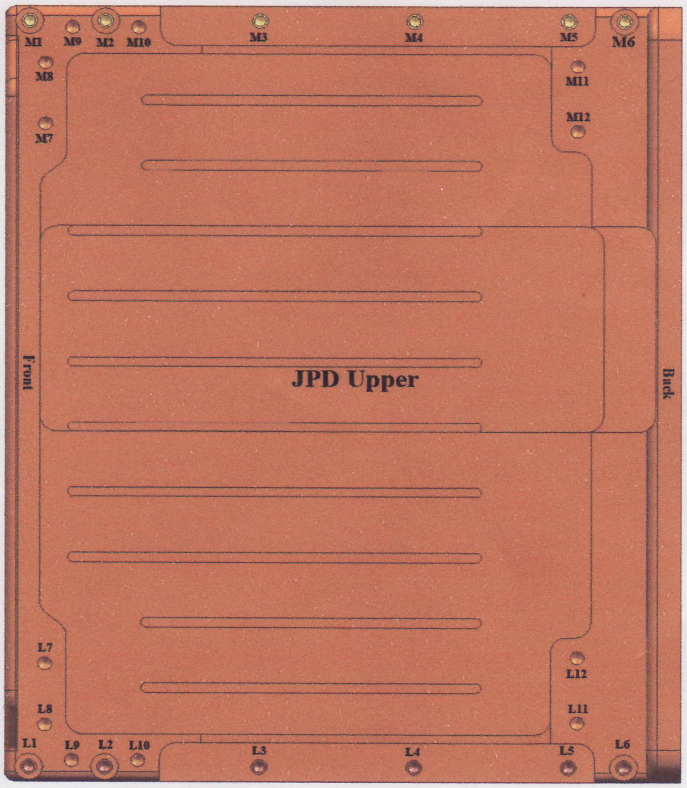
Screws		01.01.2007*	26.06.2007									
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
L8	#8-32 UNC											
L9	#8-32 UNC											
L10	#8-32 UNC											
L11	#8-32 UNC											
L12	#8-32 UNC											
Torque Wrench S/N			317993V	2FE027279								
M1	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
M2	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
M3	#8-32 UNC	1.5 - 2 Nm	0.9 Nm	3.5 Nm								
M4	#8-32 UNC	1.5 - 2 Nm	1.0 Nm	3.6 Nm								
M5	#8-32 UNC	1.5 - 2 Nm	0.8 Nm	3.4 Nm								
M6	#8-32 UNC	1.5 - 2 Nm	0.5 Nm	3.1 Nm								
M7	#8-32 UNC											
M8	#8-32 UNC											
M9	#8-32 UNC											
M10	#8-32 UNC											
M11	#8-32 UNC											
M12	#8-32 UNC											

* These are the old data. The running torques were not measured because of historical reason. The value is the torques applied.

JPD Screws on Self-Lock Helicoils







Old for keep! Use new one!

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	96.4.11									
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
A1	#4-40 UNC	46 Ncm										
A2	#4-40 UNC	46 Ncm										
A3	#4-40 UNC	46 Ncm										
A4	#4-40 UNC	46 Ncm										
A5	#4-40 UNC	46 Ncm										
A6	#4-40 UNC	46 Ncm										
A7	#4-40 UNC	46 Ncm										
A8	#4-40 UNC	46 Ncm										
A9	#4-40 UNC	46 Ncm										
A10	#4-40 UNC	46 Ncm										
B1	#4-40 UNC	46 Ncm	0.4 kgcm	50 Ncm								
B2	#4-40 UNC	46 Ncm	0.5	51								
B3	#4-40 UNC	46 Ncm	0.4	50								
B4	#4-40 UNC	46 Ncm	0.4	50								
B5	#4-40 UNC	46 Ncm	0.4	50								
B6	#4-40 UNC	46 Ncm	0.4	50								
B7	#4-40 UNC	46 Ncm	0.3	49								
B8	#4-40 UNC	46 Ncm	0.4	50								
B9	#4-40 UNC	46 Ncm	0.4	50								
B10	#4-40 UNC	46 Ncm	0.4	50								
B11	#4-40 UNC	46 Ncm	0.4	50								
C1	#4-40 UNC	46 Ncm	0.5	51								
C2	#4-40 UNC	46 Ncm	0.4	50								
C3	#4-40 UNC	46 Ncm	0.4	50								

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	Jan. 24, 2007									
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
C4	#4-40 UNC	46 Ncm	0.4 kgcm	50 Ncm								
C5	#4-40 UNC	46 Ncm	0.4	50								
C6	#4-40 UNC	46 Ncm	0.4	50								
C7	#4-40 UNC	46 Ncm	0.4	50								
C8	#4-40 UNC	46 Ncm	0.5	51								
C9	#4-40 UNC	46 Ncm	0.3	49								
C10	#4-40 UNC	46 Ncm	0.5	51								
C11	#4-40 UNC	46 Ncm	0.3	49								
D1	#4-40 UNC	46 Ncm										
D2	#4-40 UNC	46 Ncm										
D3	#4-40 UNC	46 Ncm										
D4	#4-40 UNC	46 Ncm										
D5	#4-40 UNC	46 Ncm										
D6	#4-40 UNC	46 Ncm										
D7	#4-40 UNC	46 Ncm										
D8	#4-40 UNC	46 Ncm										
D9	#4-40 UNC	46 Ncm										
D10	#4-40 UNC	46 Ncm										
E1	#10-32 UNF	2.5 - 3 Nm	0.92 Nm	52 kgcm								
E2	#10-32 UNF	2.5 - 3 Nm	0.89 Nm	52 kgcm								
E3	#10-32 UNF	2.5 - 3 Nm	1.0 Nm	53 kgcm								
E4	#10-32 UNF	2.5 - 3 Nm	1.0 Nm	53 kgcm								
E5	#10-32 UNF		1.5 Nm	58 kgcm								
F1	#4-40 UNC	46 Ncm										

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	Jan. 24. 2007									
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
F2	#4-40 UNC	46 Ncm										
F3	#4-40 UNC	46 Ncm										
F4	#4-40 UNC	46 Ncm										
F5	#4-40 UNC	46 Ncm										
F6	#4-40 UNC	46 Ncm										
F7	#4-40 UNC	46 Ncm										
F8	#4-40 UNC	46 Ncm										
F9	#4-40 UNC	46 Ncm										
F10	#4-40 UNC	46 Ncm										
F11	#4-40 UNC	46 Ncm										
G1	#4-40 UNC	46 Ncm										
G2	#4-40 UNC	46 Ncm										
G3	#4-40 UNC	46 Ncm										
G4	#4-40 UNC	46 Ncm										
G5	#4-40 UNC	46 Ncm										
G6	#4-40 UNC	46 Ncm										
G7	#4-40 UNC	46 Ncm										
G8	#4-40 UNC	46 Ncm										
G9	#4-40 UNC	46 Ncm										
G10	#4-40 UNC	46 Ncm										
G11	#4-40 UNC	46 Ncm										
H1	#10-32 UNF	2.5 - 3 Nm	1.1 Nm	54 kgcm								
H2	#10-32 UNF	2.5 - 3 Nm	0.9 Nm	52 kgcm								
H3	#10-32 UNF	2.5 - 3 Nm	0.95 Nm	53 kgcm								

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*	Jan. 24. 2007									
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
H4	#10-32 UNF	2.5 - 3 Nm	0.8 Nm	51 kgcm								
H5	#10-32 UNF		0.7 Nm	50 kgcm								
H6	#4-40 UNC											
J1	#8-32 UNC	1.5 - 2 Nm										
J2	#8-32 UNC	1.5 - 2 Nm										
J3	#8-32 UNC	1.5 - 2 Nm										
J4	#8-32 UNC	1.5 - 2 Nm										
J5	#8-32 UNC	1.5 - 2 Nm										
J6	#8-32 UNC	1.5 - 2 Nm										
J7	#8-32 UNC											
J8	#8-32 UNC											
J9	#8-32 UNC											
J10	#8-32 UNC											
J11	#8-32 UNC											
J12	#8-32 UNC											
K1	#8-32 UNC	1.5 - 2 Nm										
K2	#8-32 UNC	1.5 - 2 Nm										
K3	#8-32 UNC	1.5 - 2 Nm										
K4	#8-32 UNC	1.5 - 2 Nm										
K5	#8-32 UNC	1.5 - 2 Nm										
K6	#8-32 UNC											
K7	#8-32 UNC											
K8	#8-32 UNC											
K9	#8-32 UNC											

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*										
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
K10	#8-32 UNC											
K11	#8-32 UNC											
K12	#8-32 UNC											
L1	#8-32 UNC	1.5 - 2 Nm										
L2	#8-32 UNC	1.5 - 2 Nm										
L3	#8-32 UNC	1.5 - 2 Nm										
L4	#8-32 UNC	1.5 - 2 Nm										
L5	#8-32 UNC	1.5 - 2 Nm										
L6	#8-32 UNC	1.5 - 2 Nm										
L7	#8-32 UNC											
L8	#8-32 UNC											
L9	#8-32 UNC											
L10	#8-32 UNC											
L11	#8-32 UNC											
L12	#8-32 UNC											
M1	#8-32 UNC	1.5 - 2 Nm										
M2	#8-32 UNC	1.5 - 2 Nm										
M3	#8-32 UNC	1.5 - 2 Nm										
M4	#8-32 UNC	1.5 - 2 Nm										
M5	#8-32 UNC	1.5 - 2 Nm										
M6	#8-32 UNC	1.5 - 2 Nm										
M7	#8-32 UNC											
M8	#8-32 UNC											
M9	#8-32 UNC											

JPD FM01 Helicoils Torque Measurement Record

Screw Type	Min. Running Torque	Max. Running Torque	Seatting Torque
#4-40 UNC	10 oz.in (7 Ncm)	48 oz.in (34 Ncm)	65 oz.in (46 Ncm)
#8-32 UNC	1.6 lb.in (17 Ncm)	9 lb.in (1 Nm)	23 lb.in (2.6 Nm)
#10-32 UNF	2.0 lb.in (22.6 Ncm)	13 lb.in (1.46 Nm)	37.6 lb.in (4.25 Nm)

Screws		01.01.2007*										
Number	Type	Total	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
M10	#8-32 UNC											
M11	#8-32 UNC											
M12	#8-32 UNC											

* These are the old data. The running torques were not measured because of historical reason. The value is the torques applied.

AMS 計畫工作流程管制卡

AMS Project Working Procedure Control Card

硬品層次：
Hardware Level

✓ 電路組合板 PCA

☐ 模　組 Crate

☐ 其　他 Others

☐ 總　成 Combination

名　稱 Name	JPBP-REV5.1	序　號 Serial No.	94002 F
聯絡人 / 電話 Contact Person / Phone No.	林明池 Tel : 353110	參考資料 Reference	
發工日期 Starting date		需要日期 Due date	
工作流程 Procedure	接收日期 / 簽章 Receiving date / Signature	送出日期 / 簽章 Deliver date / Signature	備　考 Remark
1.零件篩選 Parts Screening			
2.單片製作 PCA Assembly	生管組 95.1.11 徐雪姬	生管組 95.1.12 徐雪姬	
3.目檢 Visual Inspection	生管組 95.1.12 品測-02	95.1.12	
4.機械件組裝 (一) Mechanical parts Assembly(一)	生管組 95.1.12 關恒功	生管組 95.1.12 關恒功	品後組 95.1.13 呂建樟
5.功測 Function Test	95.1.12	95.1.12	
6.上膠 Conformal Coating	生管組 95.1.13 葉宗堯		
7.目檢 Coating Inspection			
8.機械件組裝 (二) Mechanical parts Assembly (二)			
9.秤重 Scale Weight			
10.溫篩 Board ESS			
11.功測 Function Test			
12.模組組裝 Crate Assembly			
13.模組機檢 Crate Inspection			
14.模組功測 Crate Test			

AMS 計畫工作流程管制卡

AMS Project Working Procedure Control Card

硬品層次：
Hardware Level

■ 電路組合板 PCA
☐ 模　組 Crate
☐ 其　他 Others
☐ 總　成 Combination

名　稱 Name	JPD-Crate	序　號 Serial No.	FM01
聯絡人 / 電話 Contact Person / Phone No.	林明池 Tel : 353110	參考資料 Reference	
發工日期 Starting date		需要日期 Due date	
工作流程 Procedure	接收日期 / 簽章 Receiving date / Signature	送出日期 / 簽章 Deliver date / Signature	備　考 Remark
組裝			
機檢			
功測			
溫篩			
振篩			
機檢			
表面清潔			96.2.14
面板接頭螺帽上膠(JPSC除外)			96.3.20

JPMD FM/FS Board Control Document (S/N: 93006F)

Actions	Date	Operator	Comments		
			Test Items	Default Values	Result
Functional test after PCA	25-Jan-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			+3.3V JPMD-A / 4A Load	3.4V	
			+3.3V JPMD-A Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-A / 0.7A Load	5.1V	
			+5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-A / 0.4A Load	5.1V	
			-5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			+3.3V JPMD-B / 4A Load	3.4V	
			+3.3V JPMD-B Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-B / 0.7A Load	5.1V	
			+5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-B / 0.4A Load	5.1V	
			-5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U56 (Bus-A, side A)	-	
			Dallas sensor ID U57 (Bus-B, side A)	-	
			Dallas sensor ID U58 (Bus-A, side B)	-	
			Dallas sensor ID U59 (Bus-B, side B)	-	
Coating and board level ESS	27-Jan-05	CSIST			
Functional test after board level ESS	01-Feb-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			+3.3V JPMD-A / 4A Load	3.4V	
			+3.3V JPMD-A Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-A / 0.7A Load	5.1V	
			+5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-A / 0.4A Load	5.1V	
			-5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			+3.3V JPMD-B / 4A Load	3.4V	
			+3.3V JPMD-B Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-B / 0.7A Load	5.1V	
			+5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	

			-5.0V JPMD-B / 0.4A Load	5.1V	
			-5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U56 (Bus-A, side A)	-	B1000800361E1B10
			Dallas sensor ID U57 (Bus-B, side A)	-	7B00080036766710
			Dallas sensor ID U58 (Bus-A, side B)	-	C100080035F28D10
			Dallas sensor ID U59 (Bus-B, side B)	-	A500080036354D10
Stored in CSIST for crate assembly	03-Feb-05	CSIST			
Installed in crate mechanics	10-Feb-05	CSIST			
Crate disassembled, board stored in CSIST	13-Sep-05	CSIST			
Installed in JPBP v5.1 for JPBP fuctional test	11-Jan-06	A. Koulemzine			
Stored in CSIST	13-Jan-06	CSIST			

JPIF FM/FS Board Control Document (S/N: 93003F)

Actions	Date	Operator	Comments		
			Test Items	Default Values	Result
Functional test after PCA	25-Jan-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			JFOM +5.0V-A / 0.3A	5.4V	
			JFOM +5.0V-A /Ripples P-to-P, 20MHz band	85mV	
			JFOM +5.0V-B / 0.3A	5.4V	
			JFOM +5.0V-B /Ripples P-to-P, 20MHz band	85mV	
			JFOM -5.2V-A / 1.5A	5.6V	
			JFOM -5.2V-A /Ripples P-to-P, 20MHz band	85mV	
			JFOM -5.2V-B / 1.5A	5.6V	
			JFOM -5.2V-B /Ripples P-to-P, 20MHz band	85mV	
			JLIF +5.0 / 0.4A	5.2V	
			JLIF +5.0V /Ripples P-to-P, 20MHz band	85mV	
			J422 +5.0 / 0.6A	5.2V	
			J422 +5.0V /Ripples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U44 (Bus-A, side A)	-	
			Dallas sensor ID U45 (Bus-B, side A)	-	
			Dallas sensor ID U46 (Bus-A, side B)	-	
			Dallas sensor ID U47 (Bus-B, side B)	-	
Coating and board level ESS	27-Jan-05	CSIST			
Functional test after board level ESS	01-Feb-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			Status Registr R/W	Ok	
			Control Register R/W	Ok	
			JFOM +5.0V-A / 0.3A	5.4V	
			JFOM +5.0V-A /Ripples P-to-P, 20MHz band	85mV	
			JFOM +5.0V-B / 0.3A	5.4V	
			JFOM +5.0V-B /Ripples P-to-P, 20MHz band	85mV	
			JFOM -5.2V-A / 1.5A	5.6V	
			JFOM -5.2V-A /Ripples P-to-P, 20MHz band	85mV	
			JFOM -5.2V-B / 1.5A	5.6V	

			JFOM -5.2V-B /Ripples P-to-P, 20MHz band	85mV	
			JLIF +5.0 / 0.4A	5.2V	
			JLIF +5.0V /Ripples P-to-P, 20MHz band	85mV	
			J422 +5.0 / 0.6A	5.2V	
			J422 +5.0V /Ripples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U44 (Bus-A, side A)	-	8D0008003596CC10
			Dallas sensor ID U45 (Bus-B, side A)	-	4000080035F4FA10
			Dallas sensor ID U46 (Bus-A, side B)	-	EF00080036513910
			Dallas sensor ID U47 (Bus-B, side B)	-	F600080036483010
Stored in CSIST for crate assembly	03-Feb-05	CSIST			
Installed in crate mechanics	10-Feb-05	CSIST			
Crate disassembled, board stored in CSIST	13-Sep-05	CSIST			
Installed in JPBP v5.1 for JPBP fuctional test	11-Jan-06	A. Koulemzine			
Stored in CSIST	13-Jan-06	CSIST			

JPSC FM/FS Board Control Document (S/N: 93003F)

Actions	Date	Operator	Comments		
			Test Items	Default Values	Result
Functional test after PCA	25-Jan-05	A.Koulemzine	Status Register Read	Ok	
			JPSC +5.0V	5.0V	
			JPSC +5.0V /Ripples P-to-P, 20MHz band	85mV	
			JPSC +6.0V	6.0V	
			JPSC +6.0V /Ripples P-to-P, 20MHz band	85mV	
			JPSC -6.0V	-6.0V	
			JPSC -6.0V /Ripples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U16 (Bus-A, side A)	-	
			Dallas sensor ID U17 (Bus-B, side A)	-	
			Dallas sensor ID U18 (Bus-A, side B)	-	
			Dallas sensor ID U19 (Bus-B, side B)	-	
Coating and board level ESS	27-Jan-05	CSIST			
Functional test after board level ESS	01-Feb-05	A.Koulemzine	Status Register Read	Ok	
			JPSC +5.0V	5.0V	
			JPSC +5.0V /Ripples P-to-P, 20MHz band	85mV	
			JPSC +6.0V	6.0V	
			JPSC +6.0V /Ripples P-to-P, 20MHz band	85mV	
			JPSC -6.0V	-6.0V	
			JPSC -6.0V /Ripples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U16 (Bus-A, side A)	-	3C000800367D6610
			Dallas sensor ID U17 (Bus-B, side A)	-	9C00080035E47710
			Dallas sensor ID U18 (Bus-A, side B)	-	9F00080035B33110
			Dallas sensor ID U19 (Bus-B, side B)	-	AA000800364DED10
Stored in CSIST for crate assembly	03-Feb-05	CSIST			
Installed in crate mechanics	10-Feb-05	CSIST			
Crate disassembled, board stored in CSIST	13-Sep-05	CSIST			
Installed in JPBP v5.1 for JPBP fuctional test	11-Jan-06	A. Koulemzine			
Stored in CSIST	13-Jan-06	CSIST			

JPMD FM/FS Board Control Document (S/N: 93003F)

Actions	Date	Operator	Comments		
			Test Items	Default Values	Result
Functional test after PCA	25-Jan-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			+3.3V JPMD-A / 4A Load	3.4V	
			+3.3V JPMD-A Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-A / 0.7A Load	5.1V	
			+5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-A / 0.4A Load	5.1V	
			-5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			+3.3V JPMD-B / 4A Load	3.4V	
			+3.3V JPMD-B Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-B / 0.7A Load	5.1V	
			+5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-B / 0.4A Load	5.1V	
			-5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U56 (Bus-A, side A)	-	
			Dallas sensor ID U57 (Bus-B, side A)	-	
			Dallas sensor ID U58 (Bus-A, side B)	-	
			Dallas sensor ID U59 (Bus-B, side B)	-	
Coating and board level ESS	27-Jan-05	CSIST			
Functional test after board level ESS	01-Feb-05	A.Koulemzine	Status Registr Read	Ok	Ok
			Control Register R/W	Ok	Ok
			+3.3V JPMD-A / 4A Load	3.4V	
			+3.3V JPMD-A Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-A / 0.7A Load	5.1V	
			+5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			-5.0V JPMD-A / 0.4A Load	5.1V	
			-5.0V JPMD-A Riples P-to-P, 20MHz band	85mV	
			+3.3V JPMD-B / 4A Load	3.4V	
			+3.3V JPMD-B Riples P-to-P, 20MHz band	65mV	
			+5.0V JPMD-B / 0.7A Load	5.1V	
			+5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	

JPMD FM/FS Board Control Document (S/N: 93003F)

Actions	Date	Operator	Comments		
			-5.0V JPMD-B / 0.4A Load	5.1V	
			-5.0V JPMD-B Riples P-to-P, 20MHz band	85mV	
			Dallas sensor ID U56 (Bus-A, side A)	-	09000800368FFE10
			Dallas sensor ID U57 (Bus-B, side A)	-	B0000800368E3B10
			Dallas sensor ID U58 (Bus-A, side B)	-	E90008003687E910
			Dallas sensor ID U59 (Bus-B, side B)	-	E80008003606591 0
Stored in CSIST for crate assembly	03-Feb-05	CSIST			
Installed in crate mechanics	10-Feb-05	CSIST			
Crate disassembled, board stored in CSIST	13-Sep-05	CSIST			
Installed in JPBP v5.1 for JPBP fuctional test	11-Jan-06	A. Koulemzine			
Stored in CSIST	13-Jan-06	CSIST			

JPD-crate Control Document for Mechanic (FM01)

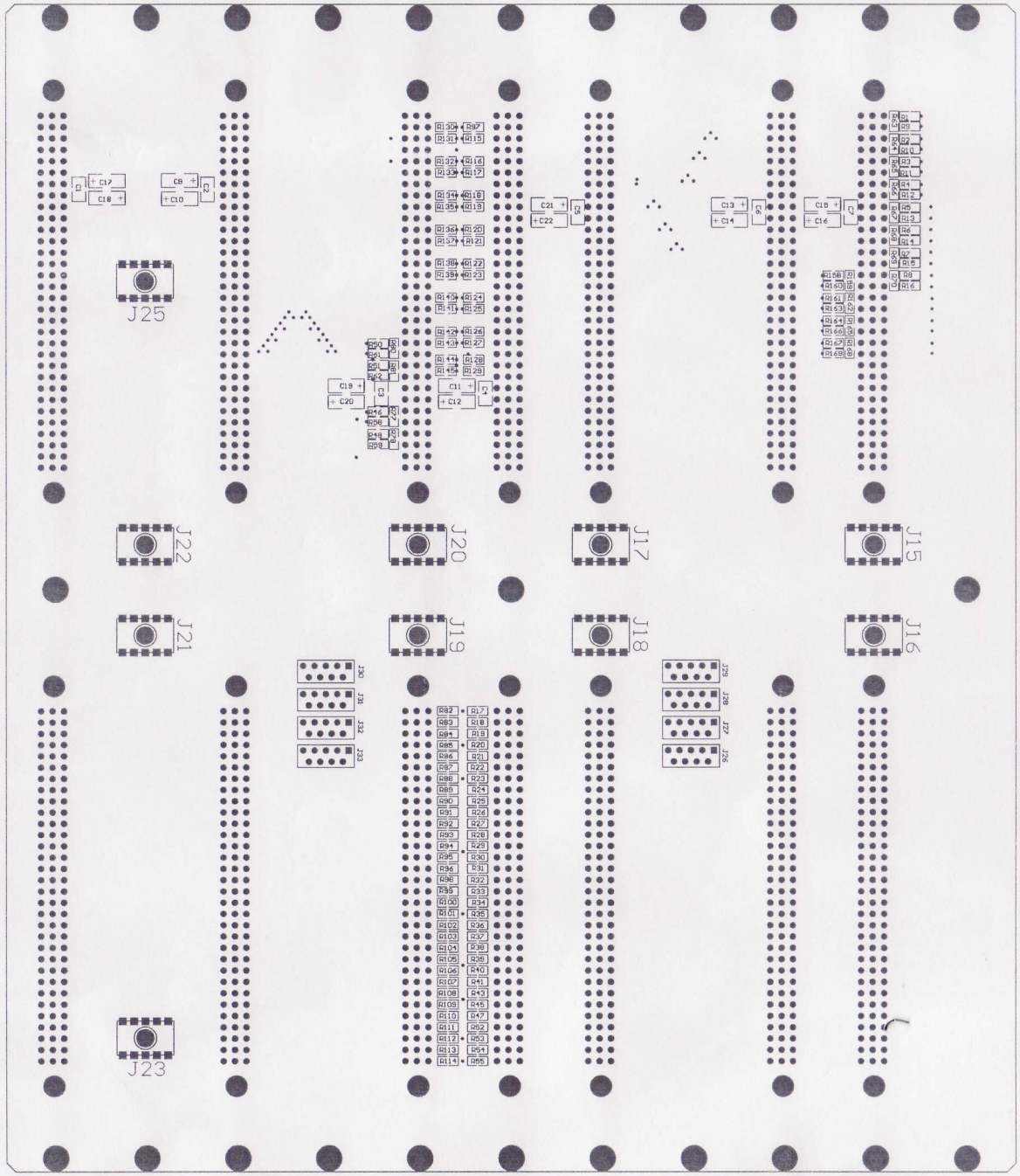
	Actions	Date	Operator	comments
1	production at 23rd factory	3-May-05	Justin	
2	inspection(including the surface treatment)	6-May-05	Justin	check the certification record
3	mechanics integration at B307	13-May-05	Kuan	
4	Back to 23rd factory to remove helicoil	5-Jun-05	Justin	receive command from CERN
5	install helicoil supplied by NASA	14-Aug-05	Justin	
6	Integrated JPD-crate mechanics at B307	25-Sep-05	Kuan	
7	store at B307		Kuan	
8	Visual inspection		Sasha, VK, …	OK

JPBP FM/FS Board Control Document (S/N: 94002F)

Actions	Date	Operator	Comments		
			Test Items	Default Values	Result
Functional test after PCA	25-Jan-05	A.Koulemzine	LVDS Bus Read/Write operation / USCM-A	Ok	Ok
			LVDS Bus Read/Write operation / USCM-B	Ok	Ok
			Dallas Bus-A [1…8] Read/Write operation	Ok	Ok
			Dallas Bus-B [1…8] Read/Write operation	Ok	Ok
			Analog signals readout / USCM-A	Ok	Ok
			Analog signals readout / USCM-B	Ok	Ok
Coating and board level ESS	27-Jan-05	CSIST			
Functional test after board level ESS	01-Feb-05	A.Koulemzine	LVDS Bus Read/Write operation / USCM-A	Ok	Ok
			LVDS Bus Read/Write operation / USCM-B	Ok	Ok
			Dallas Bus-A [1…8] Read/Write operation	Ok	Ok
			Dallas Bus-B [1…8] Read/Write operation	Ok	Ok
			Analog signals readout / USCM-A	Ok	Ok
			Analog signals readout / USCM-B	Ok	Ok
Stored in CSIST for crate assembly	03-Feb-05	CSIST			
Installed in crate mechanics	10-Feb-05	CSIST			
Crate disassembled, board stored in CSIST	13-Sep-05	CSIST			
Installed in JPBP v5.1 for JPBP fuctional test	11-Jan-06	A. Koulemzine			
Stored in CSIST	13-Jan-06	CSIST			

JPD FM JPBP

Bottom Side Component Placement



A.Kulemzin / MIT

JPD FM01 JPBP Torque Measurement Record

DATE:		31 – July – 2008		1 – AUG – 2008							
NAME:		KUAN		KUAN							
Torque Wrench S/N: (Seatting Torque 0.50Nm max)											
Running		406502W		406502W							
Total		6CF016535		6CF016535							
POWER TAP		Torque		Torque		Torque		Torque		Torque	
NO.	SCREW TYPE	Running	Total	Running	Total	Running	Total	Running	Total	Running	Total
J15	M3x6, poly-loc patch	11 Ncm	61 Ncm	10	60						
J16	M3x6, poly-loc patch	10	60	10	60						
J17	M3x6, poly-loc patch	11	61	10	60						
J18	M3x6, poly-loc patch	16	66	10	60						
J19	M3x6, poly-loc patch	10	60	10	60						
J20	M3x6, poly-loc patch	12	62	10	60						
J21	M3x6, poly-loc patch	23	73	10	60						
J22	M3x6, poly-loc patch	16	66	10	60						
J23	M3x6, poly-loc patch			24	74						
J25	M3x6, poly-loc patch			10	60						

AMS-02 Electronics
Non-Conformance Report

1.	**Subsystem:**	JPD Crate
2.	**Part Name:**	JPSC
3.	**Revision:**	5.0
4.	**Production:**	FM/FS
5.	**Production Date:**	2005
6.	**Producer:**	CSIST
5.	**Quantity:**	1
6.	**Serial Numbers:**	#03
7.	**Non Conformance:**	One DC-DC converter is broken which made 28V return line shorted to signal ground.
8.	**Solution:**	Change the DC-DC converter
9.	**Signature:**	Alexandre Koulemzine
10.	**Date of Report:**	Sep. 26, 2006

AMS-02 Electronics
Non-Conformance Report

1.	**Subsystem:**	J-JT-JPD Crates
2.	**Part Name:**	J-Crate Mechanics, JT-Crate Mechanics and JPD Mechanics
3.	**Revision:**	FM
4.	**Production:**	FM/FS
5.	**Production Date:**	2005
6.	**Producer:**	CSIST
5.	**Quantity:**	6
6.	**Serial Numbers:**	FM01 and FM02 for each kind of crate mechanics.
7.	**Non Conformance:**	The torque value applied to assemble the crate wall (#8-32 UNC screws) was not enough as specified in the drawings because the value used was taken from the old drawings. The setting torque is 2.6 Nm on the drawings. The applied torques were 1.5 – 2 Nm.
8.	**Solution:**	Retighten those screws one after the other for all 6 crates on June 27-28, 2007. The torque values are recorded.
9.	**Signature:**	Xudong CAI
10.	**Date of Report:**	Jan. 20, 2007

AMS-02 Electronics
Non-Conformance Report

1.	**Subsystem:**	JPD
2.	**Part Name:**	JPBP v 5.1
3.	**Revision:**	AMS02-GDAQ-JPBP-FM01 Aug.08
4.	**Production:**	FM/FS
5.	**Production Date:**	Jan.2006
6.	**Producer:**	CSIST
5.	**Quantity:**	1
6.	**Serial Numbers:**	94002F
7.	**Non Conformance:**	At the JPBP s/n 94002F [FM01] one row press-fit type pins of power tap J23 improper fixed in holes after installation. After pull-test for all other taps 7 taps more were found on the JPBP board with this type of non-conformity. JPBP s/n 94001F [FM02] is Ok.
8.	**Solution:**	Solder all pins for the power taps J17, J18, J19, J20, J21, J22, J23, J25 from the component side w/o crate disassembly.
9.	**Signature:**	Alexander Kulemzin
10.	**Date of Report:**	Aug.01, 2008