

No.	Part	Function	Failure Mode	Mechanism & Cause of failure	End effect of failure	Likelihood of failure (1-5)	Severity of failure (1-5)	Criticality (L x S) (25)	Recommended corrective action	Notes
1	PA Cylinders	Piston action lifts and drops the PA sheets	Cannot lift the PA sheets	Wear and tear	Non-operation of PA	2	5	10	Filter air. Service/replace cylinders after recommended number of uses - need a counter	
				Low air pressure				See No. 14		
2	PA sheets	Move up and down so that they are in/out of beam	Cannot lift the PA sheets	Friction between sheets	Non-operation of PA	1	5	5		TBC during testing
3	Pipework (cylinder to bulkhead)	Air supply and return	Cannot lift 1 PA sheet	Flexible tubing coming loose from cylinder	Limited use of PA	2	4	8		TBC during testing
				Flexible tubing coming loose from bulkhead adaptor	Limited use of PA	2	4	8		TBC during testing
				Cut/break in tubing	Limited use of PA	2	4	8		Unlikely as no through traffic
4	Pipework (stainless)	Air supply and return	Cannot lift 1 PA sheet	Stainless pipework coming loose from bulkhead	Limited use of PA	1	4	4		
				Cut/break in tubing	Limited use of PA	1	4	4		
5	Pipework (bulkhead to valves)	Air supply and return	Cannot lift 1 PA sheet	Flexible tubing coming loose from valve island	Limited use of PA	2	3	6		
				Flexible tubing coming loose from bulkhead adaptor	Limited use of PA	2	3	6		
				Cut/break in tubing	Limited use of PA	3	3	9		
6	Pipework (exhaust)	Air exhaust from valve island	Uncontrollable speed of rise/fall of PA sheets	Flexible tubing coming loose from valve island	Full use of PA, but may increase wear and be dangerous for people close by (should be nobody in the area when in operation)	2	4	8	Safety guard in front of PA. Always turn off gas supply before entering DSA.	Possible health and safety issue due to very fast moving parts
				Flexible tubing coming loose from needle valve		2	4	8		
				Cut/break in tubing between valve island and needle valve		3	4	12		
7	Pipework (input - stainless)	Air input to valve island	Cannot lift the PA sheets	Stainless pipework coming loose from building air supply	Non-operation of PA	1	4	4		Non-operation, but fixable as failure is inside trench
				Stainless pipework coming loose from bulkhead adaptor	Non-operation of PA	1	4	4		
				Cut/break in tubing	Non-operation of PA	1	4	4		
8	Pipework (input - flexible)	Air input to valve island	Cannot lift the PA sheets	Flexible tubing coming loose from valve island	Non-operation of PA	2	4	8		
				Flexible tubing coming loose from bulkhead adaptor	Non-operation of PA	2	4	8		
				Cut/break in tubing	Non-operation of PA	3	4	12		
9	Valve island	Box with valves to distribute air	Leaks air pressure	Wear and tear	Non-operation of PA	2	4	8	Filter incoming air	
				Plug coming loose from valve island	Non-operation of PA	1	4	4		TBC during testing

