



IRONMAN (Standard & LUL) - RISK ASSESSMENT

| Ref no | Task | Hazard | Consequences | L | S | R | Control Measures | L | S | R |
|--------|--------------------------------------|---|---|---|---|---|---|---|---|---|
| 1 | Lift individual parts. | Heavy component. | Injuries to person(s), musculoskeletal damage, back injury. | 3 | 3 | 9 | State in User Guide and on equipment masses of each part. Personnel to have manual handling training. | 1 | 3 | 3 |
| 2 | Assemble Ironman. | Collapsing structure. | Possible damage to equipment or injuries to person(s). Impact and crushing damage. | 3 | 3 | 9 | State in User Guide correct method for assembly. | 1 | 3 | 3 |
| | | Trapped fingers. | Injuries to person(s). | 3 | 2 | 6 | State in User Guide correct method for assembly. PPE advised. | 1 | 2 | 2 |
| 3 | Lift assembled Ironman. | Heavy load. | Injuries to person(s), musculoskeletal damage, back injury, impact and crushing damage. | 3 | 3 | 9 | State in User Guide mass of assembled unit and on Ironman serial number label. Personnel to have manual handling training. | 1 | 3 | 3 |
| 4 | Move Ironman along rail. | Brake failure / Runaway Ironman. | Possible damage to equipment or impact crushing injuries to person(s) | 2 | 4 | 8 | State in User Guide of its intended use only. Brake test every 3 months and before use. | 1 | 4 | 4 |
| | | Derail Ironman. | Possible damage to equipment or injuries to person(s). | 2 | 3 | 6 | State in User Guide that Bottom Beam must be fitted before moving. Side plates on wheel supports fitted to prevent wheel moving sideways. | 1 | 3 | 3 |
| 5 | Lift load with lifting equipment. | Personal injury or strain using Pul-Lift. | Personal injury or strain. | 2 | 2 | 4 | Operation Manual supplied with Pul-Lift. | 1 | 2 | 2 |
| | | Collapsed structure. | Possible damage to equipment or injuries to person(s), Impact and crushing damage. | 1 | 3 | 3 | Structure tested to 1.5 x SWL. FEA analysis on axles, legs show OK. State in User Guide maintenance of mainframe. | 1 | 3 | 3 |
| | | Unstable load. | Possible damage to equipment or injuries to person(s). | 2 | 3 | 6 | Method of operation in User Guide. | 1 | 3 | 3 |
| 6 | Store rail in Rail Storage Brackets. | Trapped fingers. | Injuries to person(s), Impact and crushing damage. | 2 | 3 | 6 | Method of operation in User Guide. PPE advised. | 1 | 3 | 3 |



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| | | Unsecured load. | Possible damage to equipment or injuries to person(s). | 2 | 3 | 6 | Method of operation in User Guide. | 1 | 3 | 3 |
| 6 | Move load sideways. | Personal injury or strain. | Personal injury or strain. | 2 | 2 | 4 | Design leads itself to using two hands, but correct operation stated in User Guide. | 1 | 2 | 2 |
| | | Runaway load when on cant. | Possible damage to equipment or injuries to person(s). | 4 | 3 | 12 | Design leads itself to using two hands, but correct operation stated in User Guide. Locking pin locked in position with Nordlock. SWL OK on maximum cant (1500kg at 150mm). | 1 | 3 | 3 |
| 7 | Transpose load (in addition to moving load sideways shown above). | Unstable load due to poor ground conditions. | Possible damage to equipment or injuries to person(s). | 3 | 2 | 6 | Method of operation in User Guide. PPE advised. | 1 | 2 | 2 |
| 10 | Storage of Ironman. | Tripping or falling. | Personal injury. | 2 | 2 | 4 | State in User Guide to store securely. | 1 | 2 | 2 |
| | | Damage to equipment. | Possible damage to equipment or injuries to person(s). | 2 | 2 | 4 | State in User Guide to store securely. | 1 | 2 | 2 |
| 11 | Damage to Ironman. | Reduction in efficiency during use. | Damage to equipment or injuries to person(s). | 4 | 2 | 8 | State in User Guide to inspect and replace parts when damaged, according to Maintenance / Test plans / Spare Parts List. | 1 | 2 | 2 |
| | | Collapse of structure. | Damage to equipment or injuries to person(s). | 1 | 3 | 2 | State in User Guide to inspect and replace parts when damaged, according to Maintenance/Test plans/Spare Parts List. | 1 | 3 | 2 |