

### 8.3 JOB SAFETY ANALYSIS (JSA)

| Task | Type of Exposure  | Hazard(s)   | † Risk Rating | Controls   | Model |      |      |      |       |           |
|------|---|---|---------------|--|-------|------|------|------|-------|-----------|
|      |   |   |               |  | NM-9  | NH-9 | MS-M | MS-9 | MS-10 | Skid Base |
| 1    | <b>Set up</b><br>Remove trailer from towing vehicle.                | <ul style="list-style-type: none"> <li>Trailer may run away or drop to ground.</li> </ul>   | 4             | <ul style="list-style-type: none"> <li>Engage park brake and lower jockey wheel before disconnecting trailer from towing vehicle.</li> <li>Ensure Trailer is not in the path of other working vehicles.</li> </ul> | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 2    | <b>Set Up</b><br>Operation Environment.                             | <ul style="list-style-type: none"> <li>Setting up Generator and Lighting Tower may be hindered by obstacles that could introduce higher risk factors.</li> </ul>  | 8             | <ul style="list-style-type: none"> <li>Ensure operating area is assessed and all foreseeable risks are controlled.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 3    | <b>Set up</b><br>Ground Condition.                                  | <ul style="list-style-type: none"> <li>Sump oil out of level causing engine damage.</li> <li>Stabiliser legs not able to support unit sufficiently.</li> </ul>  | 21            | <ul style="list-style-type: none"> <li>Ensure unit is set up on firm level ground. Level unit before use. (Item 5)</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 4    | <b>Set up</b><br>Fluid levels.                                      | <ul style="list-style-type: none"> <li>Incorrect fluid levels may cause damage to Engine and/or hydraulic pump.</li> </ul>  | 18            | <ul style="list-style-type: none"> <li>Check all fluid levels before use.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 5    | <b>Set up</b><br>Use of stabilizer legs.                            | <ul style="list-style-type: none"> <li>Unit over turning during set up.</li> <li>Lighting Tower becomes unstable as wind strength increases.</li> </ul>   | 3             | <ul style="list-style-type: none"> <li>Lower and lock stabilizers into position before raising Lighting Tower Mast.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 6    | <b>Set up</b><br>Lowering of hydraulic stabilizer legs (if fitted). | <ul style="list-style-type: none"> <li>Hydraulic leg may become crush point for operator or other's feet.</li> </ul>  | 17            | <ul style="list-style-type: none"> <li>Ensure path of hydraulic legs is clear of people.</li> <li>Stand clear when lowering stabilizer legs.</li> </ul>  |       | ✓    |      | ✓    | ✓     |           |
| 7    | <b>Set up</b><br>Lowering of manual stabilizer legs (if fitted).    | <ul style="list-style-type: none"> <li>Spring pin for actuating manual leg may become encrusted with dirt and mud.</li> <li>Drop down leg may become crush point for operator or other's feet.</li> </ul> | 18            | <ul style="list-style-type: none"> <li>Ensure spring pins are clean and free of dirt and mud before attempting to actuate.</li> <li>Stand clear of rear drop down legs when lowering stabilizer legs.</li> </ul>   | ✓     | ✓    | ✓    | ✓    |       |           |
| 8    | <b>Set up</b><br>Service Intervals.                                 | <ul style="list-style-type: none"> <li>Lighting Tower becoming electrically or mechanically unsafe.</li> <li>Generator and/or Engine damage.</li> </ul>   | 2             | <ul style="list-style-type: none"> <li>Check last service sticker or release tags.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 9    | <b>Set up</b><br>Release Load Binders on light bar.                 | <ul style="list-style-type: none"> <li>Mast will not rise.</li> <li>Load binders may release in uncontrolled manner.</li> </ul>   | 21            | <ul style="list-style-type: none"> <li>Release Load Binder before raising mast.</li> <li>Release load binders slowly and with care.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 10   | <b>Set Up</b><br>Remove retaining pin from light bar receiver       | <ul style="list-style-type: none"> <li>Mast will not raise</li> </ul>   | 21            | <ul style="list-style-type: none"> <li>Ensure pin is removed during set up</li> </ul>  | ✓     |      |      |      |       |           |
| 11   | <b>Set Up</b><br>Mast Raise to vertical                             | <ul style="list-style-type: none"> <li>Pushing down on mast tilt handle at incorrect angle</li> </ul>   | 18            | <ul style="list-style-type: none"> <li>Ensure light bar assembly is lifted out of receiver using handle provided before pushing down</li> </ul>  | ✓     |      |      |      |       |           |
| 12   | <b>Set Up</b><br>Lock Mast into vertical position                   | <ul style="list-style-type: none"> <li>Mast may fall if not locked into position</li> </ul>   | 7             | <ul style="list-style-type: none"> <li>Ensure locking pin is activated</li> <li>Test operation of secondary safety catch regularly</li> </ul>  | ✓     |      | ✓    |      |       |           |

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| 13   | <b>Start up</b><br>Light circuit breakers are switched OFF.                          | <ul style="list-style-type: none"> <li>Turning engine ON with circuit breakers ON may cause alternator damage.</li> </ul>  | 18            | <ul style="list-style-type: none"> <li>Turn all light circuit breakers OFF before turning engine ON.</li> <li>Circuit breakers may be turned ON once engine is ON.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 14   | <b>Start up</b><br>Raising and Rotating Mast.  | <ul style="list-style-type: none"> <li>Rotating mast post when Mast is not vertical may result in overturning of the machine.</li> </ul>                         | 12            | <ul style="list-style-type: none"> <li>Rotate mast post only when Mast is in a 100% vertical position.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 15   | <b>Start Up</b><br>Operation of Mast assembly.                                       | <ul style="list-style-type: none"> <li>Extended use of hydraulic motor may result in thermal overload.</li> </ul>  | 19            | <ul style="list-style-type: none"> <li>Set up by performing tasks in a safe and efficient manner.</li> </ul>  |       | ✓    |      | ✓    | ✓     | ✓         |
| 16   | <b>Start Up</b><br>Light Bar tilt position   | <ul style="list-style-type: none"> <li>Mast assembly may bind if light tilt is not vertical</li> </ul>   | 18            | <ul style="list-style-type: none"> <li>Ensure light tilt is vertical before extending mast</li> </ul>   | ✓     |      |      |      |       |           |
| 17   | <b>Start Up</b><br>Use of manual winch to extend mast assembly.                      | <ul style="list-style-type: none"> <li>Damaged cable may break leading to uncontrolled decent of second stage.</li> </ul>  | 17            | <ul style="list-style-type: none"> <li>Inspect winch cable regularly for wear or damage.</li> <li>Replace cable at any sign of wear or damage.</li> </ul>   | ✓     |      | ✓    |      |       | ✓         |
| 18   | <b>Start Up</b><br>Use of manual winch   | <ul style="list-style-type: none"> <li>Poor winding technique may introduce strain</li> </ul>  | 21            | <ul style="list-style-type: none"> <li>Ensure winch is operated in smooth, controlled fashion</li> </ul>  | ✓     |      | ✓    |      |       | ✓         |
| 19   | <b>Start up</b><br>Mast Post Swivel Plate (Manual mast post rotation variants only). | <ul style="list-style-type: none"> <li>Mast post is exposed to rotational forces due to wind loading, which may result in overturning of the machine.</li> </ul> | 12            | <ul style="list-style-type: none"> <li>Ensure swivel plate at base of mast post is pinned or locked in position after rotating.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 20   | <b>Start up</b><br>Test RCD.   | <ul style="list-style-type: none"> <li>Faulty RCD may lead to electrocution.</li> </ul>  | 4             | <ul style="list-style-type: none"> <li>Push TEST button.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 21   | <b>Operating</b><br>Proximity to lights.   | <ul style="list-style-type: none"> <li>Lights produce high UV that may damage skin or eyes.</li> </ul>   | 8             | <ul style="list-style-type: none"> <li>Do not look directly at lights.</li> <li>Maintain a distance of <b>8 METRES</b> from lights at all times.</li> <li>Ensure all affected employees are informed of safety distance.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 22   | <b>Operating</b><br>Light Condition.   | <ul style="list-style-type: none"> <li>Lights produce extreme UV without glass lens fitted that may damage skin or eyes very quickly.</li> </ul>                 | 8             | <ul style="list-style-type: none"> <li>Do not use lights without glass lenses.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 23   | <b>Operating</b><br>Electrical Energy.   | <ul style="list-style-type: none"> <li>Generator produces Low voltage at 240/415VAC.</li> </ul>  | 7             | <ul style="list-style-type: none"> <li>Avoid using in wet areas.</li> <li>Check all wiring and cables before use.</li> <li>Test RCD by pushing the TEST button.</li> <li>Do not open any AC controls whilst machine is running.</li> <li>Electrical work by a qualified electrician only.</li> <li>Close cabin doors once running.</li> </ul> | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 24   | <b>Operating</b><br>Moving unit during operation.                                    | <ul style="list-style-type: none"> <li>Unit may overturn if moved whilst running or if mast is raised or extended.</li> </ul>                                    | 5             | <ul style="list-style-type: none"> <li>Do not move whilst running or set up</li> <li>Follow correct shutdown procedures are followed before moving machine.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |

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| 25   | <b>Operating</b><br>Fuel Level                                       | <ul style="list-style-type: none"> <li>May cause damage to engine.</li> </ul>  | 18            | <ul style="list-style-type: none"> <li>Do not allow tank to empty below 1/6<sup>th</sup> full.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 26   | <b>Operating</b><br>Operation in a confined space or flammable area. | <ul style="list-style-type: none"> <li>May cause fire or diesel fume damage.</li> </ul>  | 7             | <ul style="list-style-type: none"> <li>Do not run in combustible area or confined space.</li> <li>Allow minimum 3 m horizontal clearance area around generator.</li> </ul>         | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 27   | <b>Operating</b><br>Frequency of fluid level checks.                 | <ul style="list-style-type: none"> <li>Low fluid level may cause irreparable damage to unit.</li> </ul>  | 18            | <ul style="list-style-type: none"> <li>Check fluid levels when refueling.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 28   | <b>Operating</b><br>Wind Gusts                                       | <ul style="list-style-type: none"> <li>Wind gusts in excess of 100 km/h may cause Lighting Tower mast to become unstable</li> </ul>                              | 7             | <ul style="list-style-type: none"> <li>Do not use Lighting tower mast if wind gusts in excess of 100 km/h are expected or forecast.</li> </ul>                                     | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 29   | <b>Shutdown</b><br>Circuit breakers.                                 | <ul style="list-style-type: none"> <li>Shutting down engine with circuit breakers ON may cause damage to alternator.</li> </ul>                                  | 18            | <ul style="list-style-type: none"> <li>Turn OFF all circuit breakers before switching engine OFF.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 30   | <b>Shutdown</b><br>Rotation of Mast Post swivel.                     | <ul style="list-style-type: none"> <li>Unit may overturn if Lighting Tower mast lowered with mast post swivel off-centre.</li> </ul>                             | 12            | <ul style="list-style-type: none"> <li>Ensure mast post swivel is locked in centre position before lowering Mast.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 31   | <b>Shutdown</b><br>Retracting Inner Mast.                            | <ul style="list-style-type: none"> <li>Unit may overturn if Mast is lowered with inner extended.</li> </ul>  | 12            | <ul style="list-style-type: none"> <li>Do not lower Mast until inner Mast is retracted.</li> <li>Ensure all interlocks are operating correctly</li> </ul>                          | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 32   | <b>Shutdown</b><br>Securing light bar.                               | <ul style="list-style-type: none"> <li>Damage to lights when towing may occur if light bar is not correctly secured.</li> </ul>                                  | 14            | <ul style="list-style-type: none"> <li>Ensure Mast is lowered into mast receiver.</li> <li>Secure light bar with load binders.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 33   | <b>Shutdown</b><br>Engine shutdown sequence.                         | <ul style="list-style-type: none"> <li>Turning engine off prematurely may cause battery to become flat.</li> </ul>   | 19            | <ul style="list-style-type: none"> <li>Ensure all ancillary shutdown functions are complete before turning engine OFF.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 34   | <b>Shutdown</b><br>Raising Stabiliser legs.                          | <ul style="list-style-type: none"> <li>Tower may roll away if handbrake is not applied before raising stabilizer legs.</li> </ul>                                | 13            | <ul style="list-style-type: none"> <li>Do not retract stabilizer legs until hand brake is confirmed to be properly applied.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 35   | <b>Moving</b><br>Jockey Wheel.                                       | <ul style="list-style-type: none"> <li>Jockey wheel may be damaged if not raised before moving.</li> </ul>   | 22            | <ul style="list-style-type: none"> <li>Do not move trailer if jockey wheel still down.</li> <li>Ensure jockey wheel is swiveled into horizontal position before moving.</li> </ul> | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 36   | <b>Moving</b><br>Tow Hitch Connection.                               | <ul style="list-style-type: none"> <li>Incorrect fitting may result in trailer coming loose from towing vehicle's hitch.</li> </ul>                              | 5             | <ul style="list-style-type: none"> <li>Ensure tow hitch is connected correctly and break away chains are attached to towing vehicle.</li> </ul>                                    | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 37   | <b>Moving</b><br>Hydraulic brakes (if fitted).                       | <ul style="list-style-type: none"> <li>Low fluid levels may lead to insufficient braking.</li> </ul>   | 8             | <ul style="list-style-type: none"> <li>Check for sufficient brake fluid before towing.</li> </ul>  |       | ✓    | ✓    | ✓    | ✓     |           |
| 38   | <b>Moving</b><br>Releasing Handbrake.                                | <ul style="list-style-type: none"> <li>Towing trailer with handbrake ON will lead to brakes burning out.</li> </ul>  | 19            | <ul style="list-style-type: none"> <li>Ensure handbrake is released once tow hitch and break away chains are fitted.</li> </ul>  |       | ✓    | ✓    | ✓    | ✓     |           |
| 39   | <b>Moving</b><br>Tyre Pressure.                                      | <ul style="list-style-type: none"> <li>Dangerous to tow with flat or damaged tyres.</li> </ul>   | 9             | <ul style="list-style-type: none"> <li>Check tyres for condition and correct inflation before towing.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 40   | <b>Moving</b><br>Tail light operation.                               | <ul style="list-style-type: none"> <li>Legislative requirements</li> <li>Signals must be operational to indicate vehicles intention to other traffic.</li> </ul> | 8             | <ul style="list-style-type: none"> <li>Ensure tail light plug is fitted to vehicle before moving</li> <li>Check tail light operation before moving.</li> </ul>                     | ✓     | ✓    | ✓    | ✓    | ✓     |           |

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| 41   | <b>Moving</b><br>Towing speed.  | <ul style="list-style-type: none"> <li>Dangerous to tow trailer at high speeds.</li> <li>May over turn or lose control.</li> </ul>                   | 8             | <ul style="list-style-type: none"> <li>Max. speed 80 km/h when towing on sealed road.</li> <li>Less than 30 km/h on unsealed roads or as conditions allow.</li> </ul>  | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 42   | <b>Moving</b><br>Towing speed   | <ul style="list-style-type: none"> <li>Dangerous to tow/push skid at high speeds.</li> <li>May over turn or lose control.</li> </ul>                 | 8             | <ul style="list-style-type: none"> <li>Tow/push at speeds less than 5 km/h or as conditions allow.</li> </ul>  |       |      |      |      |       | ✓         |
| 43   | <b>Moving</b><br>Lifting unit.  | <ul style="list-style-type: none"> <li>Unit may fall if not secured correctly.</li> </ul>  | 7             | <ul style="list-style-type: none"> <li>Lift with using all 4 lifting points only or forklift pockets where available.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 44   | <b>Moving</b><br>Use of push bar, towing eyes and chains (if fitted). | <ul style="list-style-type: none"> <li>Damage may occur to unit if not used correctly.</li> </ul>  | 13            | <ul style="list-style-type: none"> <li>Use Push Bar to push unit only.</li> <li>Use chains supplied and towing eyes to tow unit.</li> </ul>  |       |      |      |      |       | ✓         |
| 45   | <b>Hazard</b><br>Battery contains battery acid.                       | <ul style="list-style-type: none"> <li>Dangerous chemical may cause acid burns.</li> </ul>   | 18            | <ul style="list-style-type: none"> <li>Take care when topping up or checking battery.</li> <li>Observe MSDS requirements.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 46   | <b>Hazard</b><br>Generator uses diesel fuel.                          | <ul style="list-style-type: none"> <li>Combustible fluid may ignite and is an environmental hazard.</li> </ul>                                       | 16            | <ul style="list-style-type: none"> <li>Clean up diesel spills and check for leaks. Avoid close exposure to flame.</li> <li>Observe MSDS requirements.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 47   | <b>Hazard</b><br>Trailer may contain brake fluid (if fitted).         | <ul style="list-style-type: none"> <li>Dangerous chemical can cause injury if splashed or spilt.</li> </ul>  | 17            | <ul style="list-style-type: none"> <li>Take care when checking or topping up.</li> <li>Observe MSDS requirements.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     |           |
| 48   | <b>Hazard</b><br>Unit may contain hydraulic oil.                      | <ul style="list-style-type: none"> <li>Dangerous chemical can cause injury if splashed or spilt.</li> </ul>  | 17            | <ul style="list-style-type: none"> <li>Take care when checking or topping up.</li> <li>Observe MSDS requirements.</li> </ul>   |       | ✓    |      | ✓    | ✓     | ✓         |
| 49   | <b>Hazard</b><br>Generator contains engine oil.                       | <ul style="list-style-type: none"> <li>Environmental spill hazard.</li> </ul>  | 17            | <ul style="list-style-type: none"> <li>Check for leaks, take care not to spill oil on ground when filling or draining.</li> <li>Decant waste oil and dispose properly.</li> <li>Observe MSDS requirements</li> </ul> | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |
| 50   | <b>Hazard</b><br>Training.  | <ul style="list-style-type: none"> <li>Lack of proper training on the use and set up of tower may cause injury to un-qualified operators.</li> </ul> | 4             | <ul style="list-style-type: none"> <li>Obtain training from Allight or refer to operating manual.</li> </ul>   | ✓     | ✓    | ✓    | ✓    | ✓     | ✓         |

## Key

| Allight Risk Assessment |                |                |                |                |                |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Calculate the Risk      |                |                |                |                |                |
|                         | A              | B              | C              | D              | E              |
| 1                       | 1 High         | 2 High         | 4 High         | 7 High         | 11 Significant |
| 2                       | 3 High         | 5 High         | 8 High         | 12 Significant | 16 Moderate    |
| 3                       | 6 High         | 9 Significant  | 13 Significant | 17 Moderate    | 20 Moderate    |
| 4                       | 10 Significant | 14 Significant | 18 Moderate    | 21 Lower       | 23 Lower       |
| 5                       | 15 Significant | 19 Moderate    | 22 Lower       | 24 Lower       | 25 Lower       |

Note: 1-15 refer to Job Safety Analysis (JSA) before activity commences

### Step 1: Determine Probability

- A. Common or frequent occurrence.
- B. Is know to occur or "it has happened".
- C. Could occur or I've heard of it happening.
- D. Not likely to occur.
- E. Practically impossible.

### Step 2: Determine Consequences (Highest of the two)

- 1. Fatality or permanent disability.
- 2. Serious lost time injury or illness.
- 3. Disabling or short term lost time injury.
- 4. Medical treatment injury.
- 5. First aid injury.