Safe Operating Procedure  
Manual Engine Hoist

The instructions recommended within this document apply to normal risk conditions. If the Engine Hoist is to be operated in a dangerous or hostile environment, the user/client is responsible for conducting an appropriate risk analysis and applying suitable controls to mitigate those additional risks.

This instruction should be read in conjunction with the Risk Assessment procedure for the Engine Hoist.

### Safety risks:
- Hydraulic Failure
- Manual Handling
- Crushing

### You must wear this personal protective equipment when doing this task:

<table>
<thead>
<tr>
<th>Foot Protection</th>
<th>High Visibility</th>
<th>Eye Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Foot Protection" /></td>
<td><img src="image2" alt="High Visibility" /></td>
<td><img src="image3" alt="Eye Protection" /></td>
</tr>
</tbody>
</table>

### Pre-Operational Checks:
- ✓ Locate and ensure you are familiar with all hoist operations and controls.
- ✓ Ensure no slip/trip hazards are present in workspace and walkways.
- ✓ Put the Engine Hoist in a suitable location for safe operation and apply the brakes.
- ✓ Check that all fittings and connections and safety guards are in fitted and good condition prior to starting e.g. Pins and bolts.
- ✓ Check for signs of hydraulic fluid leaks and ensure no cracks or damage on hoist.
- ✓ Faulty equipment must not be used. Immediately report suspect machinery to Rapid Hire.
- ✓ Access and egress is clear.
- ✓ lighting is appropriate for task.
- ✓ Ensure exclusion zone is clearly marked.

### Safe Operation:

1. Use equipment in applications for which it is intended for.
2. Be aware of “pinch points” and keep fingers and feet away.
3. Check there is sufficient height for ram and boom.
4. Be sure load is secured and cannot move from the vertical line.
5. Use correctly rated SWL slings or chains to secure engine.
6. The approved lifting weight for each crane is stamped on the identification plate and must not be exceeded.
7. The hoist must only be used on smooth, hard, level surfaces.
8. Lifting arm to clear the engine bay, wheel crane into position at the front of the vehicle.
9. Close bleed valve on ram and pump handle to set ram to required height for positioning hook over the engine.
10. Connect hook to engine sling and Ensure load is balanced.
11. Pump ram so engine clears vehicle body and lower engine crane slowly.
12. Be sure equipment will not tip over, roll or slide or fall when not being operated.
13. Leave the machine in a work area that is safe, clean and in a tidy state.
Storage & Maintenance:

1. Before storage, twist release valve 1-1/2 turns counter clockwise to release pressure in hydraulic cylinder.
2. Clean down hoist and check over for damage after each lift.
3. Store in a clean, dry area to protect hoist from moisture.
<table>
<thead>
<tr>
<th>Likely Risk Issue</th>
<th>Who/What may be harmed? (Specific Persons)</th>
<th>What is the Rate Level? (Rate risk as Low, Medium or High)</th>
<th>What Risk Control Actions Needs to Be Taken? (What needs to be considered so that the risks are identified and effectively controlled)</th>
<th>Time Frame</th>
</tr>
</thead>
</table>
| Crushing                  | Participants, Operators, Spectators, Staff | Severity of Risk (S) – 3  
Likelihood of Risk (L) – 2  
Overall Risk (S x L) = 6  
MEDIUM                                                                 | • Operative to be trained in correct use of Engine Hoist  
• Hoist to be used in compliance with manufacturer’s instructions  
• Ensure operator’s hands and body parts are kept clear during operation and maintenance.  
• Ensure appropriate guarding is installed and in good working order prior to use  
• Keep clear of load at all times  
• Ensure lifting weight is not over the recommended weight stamped on hoist  
• Ensure lifting chains or slings are in good working order and not damaged | Each hire |
| Hydraulic Failure         | Participants, Operators, Spectators, Staff | Severity of Risk (S) - 2  
Likelihood of Risk (L) - 2  
Overall Risk (S x L) = 4  
MEDIUM                                                                 | • Ensure equipment is maintained and in good condition before use  
DO NOT USE FAULTY EQUIPMENT. REPORT IMMEDIATELY TO RAPID HIRE  
• Conduct periodic maintenance to ensure smoother operation  
• Check hydraulic fluid levels and check for leaks or damage before use | Each hire |
| Manual Handling           | Participants, Operators, Spectators, Staff | Severity of Risk (S) - 2  
Likelihood of Risk (L) - 2  
Overall Risk (S x L) = 4  
MEDIUM                                                                 | • Use equipment as per manufacturers recommendations  
• Be alert when working with engine hoist under load  
• Keep hand clear of pinch points  
• Allow hoist to do the lifting do not attempt to assist  
• Keep area clear of other workers whilst hoist is under load | Each hire |
| Slips, Trips and falls    | Participants, Operators, Spectators, Staff | Severity of Risk (S) - 1  
Likelihood of Risk (L) - 2  
Overall Risk (S x L) = 3  
LOW                                                                    | • Wear appropriate footwear  
• Ensure engine hoist is stable and on even ground  
• Ensure appropriate cleaning and housekeeping practices are maintained to minimise the risk of slips, trips and falls | Each hire |

**Calculation of Risk Evaluation**

Severity of Risk (S) is judged by evaluating the effects of the hazard if the risk occurs. This is evaluated as Minor = 1, Major = 2, Serious = 3

Risk Likelihood (L) - The likelihood of the harm occurring is evaluated on the basis of:  
- Unlikely =1, Possible = 2, Likely = 3

Overall Risk is calculated by multiplying the figure for Severity (S) and Likelihood (L).

The overall risk figure calculated is related to the Risk Level of either Low: 1 to 3; Medium: 4 to 6 or High: 7 to 9

**NB** This is a generic risk assessment only. It is advisable to carry out a site-specific assessment prior to using this equipment.