# **RISK ASSESSMENT OF PLANT**

Models: SJ12 and SJ16 Serial Range 14001630 and Above

| DATE OF ASSESSMENT :              | PLANT DESCRIPTION: SELF PROPELLED          | ORGANISATION: SKYJACK    |
|-----------------------------------|--|--------------------------|
| 12/01/2017                        | VERTICAL MAST – SKYJACK MODEL SJ12/SJ16    | AUSTRALIA                |
| Preliminary Assessment for Review | RISK ASSESSMENT METHOD USED: SAFETY REVIEW | ADDRESS : 4 Coates Place |
|                                   |  | Wetherill Park NSW 2164  |

| Α      | В   | С  | D                   | E  | F                                   | Х                    | Y   | Z     |
|--------|---|--|---------------------|--|-------------------------------------|----------------------|---|-------|
| Hazard | Hazard Description -  | Is there any risk?   | Risk                | Proposed SUPPLEMENTARY   | Are the                             | For Action           | Confirmation                                | Notes |
| No.    | (the situation or parts of plant<br>which could cause injury or illness)  | Describe the risk control measures<br>ALREADY implemented  | L = Low<br>M = Med. | risk control measure   | control<br>measures<br>practicable? | by whom              | that the<br>necessary<br>action has<br>been |       |
|        |   |  | H = High            |  | Yes/No                              |                      | completed                                   | L     |
| 1      | General   |  |                     |  |                                     |                      |   | 1     |
| 1.1    | Persons could be injured when<br>following a poor system of work in<br>relation to the operation of this device | Operating and Maintenance manual<br>provided detailing specifications,<br>limitations and residual hazards<br>associated with the operation of the<br>machine. [15801AB-A] | Н                   | Prepare a documented system of work<br>having regard to the operating<br>specification and limitations as detailed<br>in the owners operating manual.<br>AND<br>Verify that the procedure (including<br>maintenance) covers all modes of<br>operation of the Unit and is a<br>practicable solution.<br>AND<br>Instruct and train the operator in its<br>use. | Yes<br>Yes<br>Yes                   | MGMT<br>MGMT<br>MGMT |   |       |
| 1.2    | Persons could be injured if the device<br>is not suitable for the required task                                 | Machine specifications are included in the manual [Section 4, pp49,-51]  | Н                   | Ensure that the unit is adequately<br>rated in terms of capacity, height and<br>reach, rated inclination and mass;<br>having regard to the required task, the<br>site conditions and the environment<br>AND<br>Source another machine if the<br>specifications do not match the<br>requirements for the task   | Yes                                 | MGMT                 |   |       |
| 1.3    | Persons could be injured or injure  |  | Н                   | Ensure that all standard work  | Yes                                 | MGMT                 |   |       |

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| Α             | В   | C   | D                   | E  | F                        | Х                     | Y                        | Z     |
|---------------|---|---|---------------------|--|--------------------------|-----------------------|--------------------------|-------|
| Hazard<br>No. | Hazard Description -  | Is there any risk?  | Risk                | Proposed SUPPLEMENTARY<br>risk control measure   | Are the<br>control       | For Action<br>by whom | Confirmation<br>that the | Notes |
| 140.          | (the situation or parts of plant<br>which could cause injury or illness)                                    | Describe the risk control measures<br>ALREADY implemented | L = Low<br>M = Med. | hisk control measure   | measures<br>practicable? | by whom               | necessary<br>action has  |       |
|               |   |   | H = High            |  | Yes/No                   |                       | been<br>completed        |       |
|               | others when operating the unit without<br>sufficient information, instruction,<br>training and supervision. |   |                     | procedures (SWP's) are effectively<br>implemented<br>AND<br>Ensure that the operator(s) have read<br>and understand the training and<br>instructions (which must include<br>Manufacturer's and local information). | Yes                      | MGMT                  |                          |       |
| 1.4           | Injury as a result of site specific hazards.  | Warnings in manual [PP8-9,11]]                            | М                   | Ensure operators are able to identify<br>particular hazards that may be<br>encountered at the site and implement<br>actions to ensure that they are<br>addressed by appropriate means.<br>AND                      | Yes                      | MGMT                  |                          |       |
|               |   |   |                     | Ensure operators conduct a site<br>hazard assessment before use<br>AND   | Yes                      | MGMT                  |                          |       |
|               |   |   |                     | Ensure Operators implement<br>appropriate systems to eliminate the<br>hazards or adequately control the risks<br>associated with the hazards identified.<br>AND  | Yes                      | MGMT                  |                          |       |
|               |   |   |                     | Ensure operators feedback information relating to new hazards identified so they may be reviewed and measures implemented in a training package. AND   | Yes                      | MGMT                  |                          |       |
|               |   |   |                     | Ensure that if operators are uncertain<br>how to address a particular site hazard<br>that they seek advice from a<br>competent person.   | Yes                      | MGMT                  |                          |       |
| 1.5           | Persons could be injured if the unit is operated by persons under the influence of drugs and/or alcohol.    | Warning in manual [P10]                                   | H                   | Ensure that operators do not use the unit while under the influence of alcohol or drugs.   | Yes                      | MGMT                  |                          |       |
| 1.6           | Persons could be injured if the   | Warning in manual [P10]                                   | Н                   | Instruct the operator that he/she must   | Yes                      | MGMT                  |                          |       |

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| Hazard<br>No. | Hazard Description -  | Is there any risk?   | Risk                 | Proposed SUPPLEMENTARY<br>risk control measure   | Are the<br>control       | For Action<br>by whom | Confirmation that the   | Notes |
| NO.           | (the situation or parts of plant<br>which could cause injury or illness)  | Describe the risk control measures<br>ALREADY implemented    | L = Low              |  | measures<br>practicable? | by whom               | necessary<br>action has |       |
|               | which could cause injury or liness)   |  | M = Med.<br>H = High |  | •                        |                       | been<br>completed       |       |
|               | operator's performance is inhibited by<br>poor health or medication with side<br>effects.                               |  |                      | report to the supervisor if suffering<br>poor health and safe operating<br>performance could be affected.                                | Yes/No                   |                       |                         |       |
| 1.7           | Persons could be injured if the<br>operator's performance was inhibited<br>by excessive fatigue.                        |  | Н                    | Implement a system to ensure that<br>operators do not work excessive or<br>continuous shifts and manage peak<br>demands.                 | Yes                      | MGMT                  |                         |       |
| 1.8           | Persons could be injured if the<br>operator's vision is impaired by<br>sunlight or bright lights in close<br>proximity. |  | Н                    | Instruct the operator to in relation to the sighting of lights.  | Yes                      | MGMT                  |                         |       |
| 1.9           | Persons could be injured if the unit is<br>operated during storms.  | Warning in manual [P7]                                       | н                    | Ensure that the unit is not operated<br>during storms or if storms may arise<br>when carrying out the required task                      | Yes                      | MGMT                  |                         |       |
| 1.10          | Persons could be injured if equipment<br>is operated while not wearing<br>appropriate PPE.                              | Warning in manual [P8]<br>Requirement specified in AS2550.10 | H                    | Provide specification for appropriate<br>PPE including gloves, safety glasses,<br>hard hat and safety footwear as<br>appropriate.<br>AND | Yes                      | MGMT                  |                         |       |
|               |   |  |                      | Instruct operators on the requirements<br>for its use.<br>AND  | Yes                      | MGMT                  |                         |       |
|               |   |  |                      | Ensure PPE is inspected and certified on a routine basis.  | Yes                      | MGMT                  |                         |       |
| 1.11          | Persons could be injured due to exposure to UV.   |  | М                    | If required develop and provide<br>specification for appropriate UV<br>protection and its use.   | Yes                      | MGMT                  |                         |       |
|               |   |  |                      | AND<br>Provide UV protective equipment   | Yes                      | MGMT                  |                         |       |
|               | Cont:   |  |                      | AND<br>Instruct operators on the requirements  | Yes                      | MGMT                  |                         |       |
|               |   |  |                      | for its use.<br>AND<br>Ensure procedures are audited on a<br>routine basis.  | Yes                      | MGMT                  |                         |       |
| 1.12          | Injury due to unauthorised use.   | Unit is provided with a lockable main                        | L                    | Ensure that the unit is locked before  | Yes                      | MGMT                  |                         |       |

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|---------------|--|---|---|--|--|------------------------------|--|-------|
| Hazard<br>No. | Hazard Description -<br>(the situation or parts of plant<br>which could cause injury or illness)               | Is there any risk?<br>Describe the risk control measures<br>ALREADY implemented   | Risk<br>L = Low<br>M = Med.<br>H = High | Proposed SUPPLEMENTARY<br>risk control measure   | Are the<br>control<br>measures<br>practicable?<br>Yes/No | For Action<br>by whom        | Confirmation<br>that the<br>necessary<br>action has<br>been<br>completed | Notes |
|               |  | power key switch.<br>Note in manual [PP8, 13,14]  |   | leaving unattended<br>AND<br>Ensure that the machine is not lent or<br>sub-hired to any unauthorised person  | Yes  | MGMT                         |  |       |
| 2             | Structural Failure   |   |   |  |  |                              |  |       |
| 2.1           | MEWP could collapse as a result of design or manufacturing fault.  | Designed & manufactured and tested<br>by Skyjack to the requirements of<br>AS1418.10.<br>Prerequisites included in manual<br>regarding personnel qualifications and<br>responsibilities [P14  | L                                       | Ensure that the unit is registered with<br>Skyjack Inc.<br>AND<br>Periodically check for the existence of<br>routine Safety Alerts that may be<br>issued by the manufacturer or the<br>representative.<br>AND<br>Routinely inspect the MEWP by a<br>competent organisation external to<br>Operator.<br>AND<br>Monitor local Hazard Alerts and<br>Incident Safety Notices and examine<br>these to determine if they are or could<br>be relevant to the MEWP.              | Yes<br>Yes<br>Yes<br>Yes                                 | MGMT<br>MGMT<br>MGMT<br>MGMT |  |       |
| 2.2           | Structural failure due to influences<br>from load combinations not taken fully<br>into account<br><i>Cont:</i> | Operation manual details the load<br>combinations which are acceptable.<br>[Section 4].<br>Specification provided on nameplate.<br>Operation of MEWP interlocked so<br>that it cannot be operated on slopes<br>outside the specified limit.<br>Load limit marked on platform.<br>Warning provided on the machine and<br>specification provided in manual. | L                                       | Ensure that the machine is only<br>operated within the specification<br>detailed in the operating manual and in<br>accordance with industry standards<br>and AS2550.10;<br>AND<br>Ensure each person required to<br>operate the machine has been trained<br>and assessed in accordance with the<br>High risk work (WP) assessment<br>instrument or equivalent.<br>AND<br>Ensure the machine is isolated to<br>prevent unauthorised use at the end of<br>each work shift. | Yes<br>Yes<br>Yes  | MGMT<br>MGMT<br>MGMT         |  |       |

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|               | (the situation or parts of plant  | ALREADY implemented   | L = Low  |   | measures practicable? |                       | necessary<br>action has  |       |
|               | which could cause injury or illness)  |   | M = Med. |   | practicable           |                       | been                     |       |
|               |   |   | H = High |   | Yes/No                |                       | completed                |       |
|               |   |   |          | AND<br>Verify expected loading and confirm it<br>is less than Rated Capacity<br>AND   | Yes                   | MGMT                  |                          |       |
|               |   |   |          | Verify operating slopes<br>AND  | Yes                   | MGMT                  |                          |       |
|               |   |   |          | Verify wind loads expected in service.  | Yes                   | MGMT                  |                          |       |
| 2.3           | Structural failure due to dynamic<br>loading  | Warning in manual regarding<br>operation near drop-offs [P8].<br>Speeds provided in manual [P49]  | L        | Ensure that the system speeds are set<br>to the specifications provided in the<br>manual.<br>AND  | Yes                   | MGMT                  |                          |       |
|               |   |   |          | Ensure that the MEWP is maintained<br>in a manner to minimize the excessive<br>backlash between components  | Yes                   | MGMT                  |                          |       |
| 2.4           | MEWP could collapse as a result of<br>poor structural/mechanical<br>condition due to fatigue/wear | Machine design extensively tested<br>and validated for effects of fatigue.<br>Pre-start checks include checks of<br>general structural and mechanical | L        | Ensure that prestart checks are<br>completed in accordance with the<br>instructions in the manual<br>AND  | Yes                   | MGMT                  |                          |       |
|               |   | items and are included in manual.<br>[Table 4.6]<br>Note in manual to refer to latest<br>service Bulletins on Skyjack Website                         |          | That the machine is inspected and<br>maintained by a competent person in<br>accordance with the instructions<br>outlined in the service manual.<br>AND          | Yes                   | MGMT                  |                          |       |
|               |   | Checks of general structural and mechanical items included in manual  |          | That the Skyjack website is consulted<br>for latest updates in relation to the unit.<br>AND   | Yes                   | MGMT                  |                          |       |
|               |   | cover critical components.  |          | Undertake major inspection per<br>AS2550.10 at end of design life.  | Yes                   | MGMT                  |                          |       |
|               | Cont  | AS2550.10 covers inspections  |          |   |                       |                       |                          |       |
| 2.5           | Persons could be injured by the unit if operating in poor mechanical or hydraulic condition.      | Service and inspection log provided in manual. Preoperational checks listed in manual   | L        | Ensure that the unit is checked,<br>repaired and maintained by a<br>competent person in accordance with<br>the checklists contained in the<br>operation manual, | Yes                   | MGMT                  |                          |       |

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| Α      | В  | С  | D                               | E  | F                                   | Х          | Y   | Z     |
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| Hazard | Hazard Description -   | Is there any risk?   | Risk                            | Proposed SUPPLEMENTARY   | Are the                             | For Action | Confirmation                                | Notes |
| No.    | (the situation or parts of plant<br>which could cause injury or illness) | Describe the risk control measures<br>ALREADY implemented  | L = Low<br>M = Med.<br>H = High | risk control measure   | control<br>measures<br>practicable? | by whom    | that the<br>necessary<br>action has<br>been |       |
|        |  |  | п = піgn                        |  | Yes/No                              |            | completed                                   |       |
|        |  |  |                                 | AND<br>Modify maintenance program<br>according to use<br>AND   | Yes                                 | MGMT       |   |       |
|        |  |  |                                 | AND<br>Undertake major inspection per<br>AS2550.10 at end of design life.<br>AND                                 | Yes                                 | MGMT       |   |       |
|        |  |  |                                 | Instruct the operator/competent person to report all faults to management. AND                                   | Yes                                 | MGMT       |   |       |
|        |  |  |                                 | Ensure all inspections, servicing,<br>replacement of parts and modifications<br>are entered into logbook.<br>AND | Yes                                 | MGMT       |   |       |
|        |  |  |                                 | Use equivalent replacement parts<br>AND  | Yes                                 | MGMT       |   |       |
|        |  |  |                                 | Log replacement.   | Yes                                 | MGMT       |   |       |
| 2.6    | Personnel injured due to illegible<br>safety signs.                      | Full complement of signs provided in<br>manual [PP54-64]   | L                               | Maintain signs and replace as<br>necessary   | Yes                                 | MGMT       |   |       |
| 2.7    | Due to accidental impact –<br>unintentional activation of controls       | Controls protected against impact by a guard and enable switch.  | L                               | Ensure that Emergency Stop switch is<br>depressed when the platform<br>stationary                                | Yes                                 | MGMT       |   | i     |
|        |  | Controls more than 50mm below<br>guardrail level.<br>Instruction in manual to press<br>emergency stop button when stopped.                   |                                 | Implement system to ensure adequate<br>reporting of all incidents in relation to<br>machine<br>AND               | Yes                                 | MGMT       |   |       |
|        |  | [3.8.3]  |                                 | Ensure that all incidents in relation to the machine are reported and acted on.                                  | Yes                                 | MGMT       |   |       |
| 2.7.1  | Unintentional activation due to<br>entanglement with joystick            | Modified guard fitted to ensure that<br>enable switch cannot be contacted<br>accidentallycontacted by an external<br>cord, clothing or hose. |                                 | Ensure that Emergency Stop switch is depressed when the platform stationary                                      | Yes                                 | MGMT       |   |       |
|        |  | Instruction in manual to press   |                                 |  |                                     |            |   |       |

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|        |   |  | H = High            |   | Yes/No                              |              | completed                                   |       |
|        |   | emergency stop button when stopped.<br>[3.8.3]<br>Note in manual to avoid entanglement<br>with hoses or cords [P8]   |                     |   |                                     |              |   |       |
| 2.8    | Failure due to unauthorised alteration or interference.                                       | Note provided in operators manual<br>[P11] prohibiting unauthorised<br>modification  | L                   | Seek advice for all<br>modifications/repairs considered<br>during life of machine.<br>AND<br>Ensure that no additions or alterations<br>are performed on the platform without<br>approval   | Yes<br>Yes                          | MGMT<br>MGMT |   |       |
| 2.9    | Structural failure because of loose or missing fasteners                                      |  | L                   | Management to provide a logbook for<br>use by the operator and service<br>personnel<br>AND<br>Ensure that the unit is checked,<br>repaired and maintained in accordance<br>with the checklist contained in the<br>operation manual, by a competent<br>person. | Yes                                 | MGMT<br>MGMT |   |       |
| 3      | Overturning   |  |                     |   |                                     |              |   |       |
| 3.1    | Persons could be injured as a result of<br>instability or overturning – on<br>excessive slope | Chassis Tilt Alarm and interlock<br>provided<br>Instructions included in operations<br>manual regarding site checks prior to<br>deploying unit [P10]<br>Explanation of operation provided in<br>manual. [P15]<br>Slope limits provided [P49] | L                   | Ensure that the MEWP is operated<br>within the rated slope limitations<br>specified<br>AND<br>Ensure that the tilt sensor is<br>maintained in a proper working order<br>at all times.   | Yes<br>Yes                          | MGMT<br>MGMT |   |       |

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| 3.1.1         | Overturning recovering from an<br>increased grade  | Vertical Mast Platform can only lower.<br>Unit stability tested per AS1418.10<br>requirements  | L                                       | Ensure that personnel lower the platform when the tilt alarm is triggered   | Yes  | MGMT                  |  |       |
| 3.2           | Overturning due to collapse of support surface   | Instructions included in operations<br>manual regarding site checks prior to<br>operating MEWP [P9].<br>Wheel load labels fitted to the unit and<br>in manual.<br>Additional notes in AS2550.10                | М                                       | Ensure the unit is not set up on rough,<br>soft or otherwise hazardous surfaces   | Yes  | MGMT                  |  |       |
| 3.3           | Overturning as a result of setting up<br>on uneven surfaces                                      | Tilt alarm provided. Warning in<br>manual [P10]<br>Pre-op checks specified in manual<br>[P52]  | L                                       | Ensure that operators are trained<br>relating to proper setup, including the<br>necessity to set up on flat surfaces<br>within the limits specified both fore and<br>aft and sideways on the nameplate.<br>AND<br>Ensure operators follow these<br>requirements | Yes  | MGMT                  |  |       |
| 3.4           | Overturning due to overloading the platform  | Unit stability tested in accordance with<br>the requirements of AS1418.10<br>Enhanced overload and stability<br>criteria.<br>Precautions in manual [P9].<br>Rated load indicated on platform and<br>data plate | M                                       | Ensure that the rated capacity is not<br>exceeded and personnel observe the<br>load sensing system alarms and<br>understand their meaning.<br>AND<br>Conduct a weight audit on a periodic<br>basis  | Yes  | MGMT<br>MGMT          |  |       |
| 3.5           | Driving into a depression or near a drop off.  | Warnings in manual [P10}<br>Pothole protection system fitted<br>Inspection and tests provided in<br>manual.[2.3.7, & p27]  |   | Ensure that the unit is not operated<br>near drop-offs or holes<br>AND<br>Check the operation of the pothole<br>protection system per the manual.   |  |                       |  |       |
| 3.6           | Overturning due to high wind loads   | Unit designed and stability tested for a maximum wind speed of 12.5 m/s – for one person with deck extended.   | L                                       | Ensure that bluff bodies are not carried<br>or fitted to the platform<br>AND<br>Ensure that the MEWP is not operated  | Yes<br>Yes   | MGMT                  |  |       |

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|               |  |  | H = High            |  | Yes/No                   |                       | completed                       |       |
|               |  | Machine meets equivalent level of safety required by AS1418.10   |                     | in high wind gusting above the rated<br>wind speed.<br>AND   |                          |                       |                                 |       |
|               |  | Maximum wind speed stated in<br>operators manual, warnings in manual<br>regarding the fitting of bluff bodies<br>which may increase loads due to wind.<br>[P8] |                     | Monitor wind forecasts on a regular basis  | Yes                      | MGMT                  |                                 |       |
| 3.7           | Pushing or Pulling objects with<br>platform.                             | Warnings provided in manual [P9]<br>Label on the machine.  | М                   | Ensure that operators do not exert lateral force greater than that specified.  | Yes                      | MGMT                  |                                 |       |
| 3.8           | Due to tyre failure  | Solid tyres fitted<br>Instructions in manual regarding<br>inspection and replacement.<br>[PP9,17,51]   | L                   | Check tyre condition as per manual<br>AND<br>Ensure that only correct specification  | Yes                      | MGMT                  |                                 |       |
| 3.9           | Due to incorrect tyre specification                                      | Specification and warning provided in<br>manual [P49 table 2.3, P59]   | М                   | tyres and wheels are fitted<br>Ensure that only the correct<br>specification tyres are used                                | Yes<br>Yes               | MGMT                  |                                 |       |
| 3.10          | Operation on a truck or similar device                                   | Warning in manual [P9]   | М                   | Ensure that the unit is only operated<br>on firm ground capable of adequate<br>capacity and never on vehicle or<br>similar | Yes                      | MGMT                  |                                 |       |
| 3.11          | Overturning during towing with<br>platform raised.                       | Warning in manual. [2.5]   | М                   | Ensure that the platform is not towed with the platform raised.  | Yes                      | MGMT                  |                                 |       |
| 4             | Control malfunction &<br>uncontrolled motions                            |  |                     |  |                          |                       |                                 |       |
| 4.1           | As a result of control malfunction.                                      | Enable switch and Emergency Stop<br>system fitted.<br>Pre-operation checks included in<br>manual [Section 2.4]   | L                   | Ensure that control cubicle is clear and<br>free of tools and equipment that could<br>jam controls<br>AND                  | Yes                      | MGMT                  |                                 |       |
|               |  |  |                     | Verify condition and operation of<br>controls per manual.<br>AND<br>Check operation of Emergency-stop                      | Yes                      | MGMT                  |                                 |       |
| 4.0           | Due to contomination of budroulie  | Cimple reduct quotem with electric   |                     | system every day before use  |                          |                       |                                 |       |
| 4.2           | Due to contamination of hydraulic  | Simple robust system with electric   | L L                 | Ensure that the hydraulic system is  | Yes                      | MGMT                  |                                 | 1     |

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|---------------|--|--|---------------------|---|--------------------------|-----------------------|---------------------------------|-------|
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|               | (the situation or parts of plant<br>which could cause injury or illness) | ALREADY implemented  | L = Low<br>M = Med. |   | measures<br>practicable? |                       | necessary<br>action has<br>been |       |
|               |  |  | H = High            |   | Yes/No                   |                       | completed                       |       |
|               | system.  | powered pump actuated on demand<br>directly by controls.<br>Suction strainer provided.                   |                     | maintained by competent persons employing proper practice.  |                          |                       |                                 |       |
| 4.3           | Accidental knocking of controls  | Enable switch provided.<br>Emergency stop provided   | L                   | Maintain control console.<br>AND  | Yes                      | MGMT                  |                                 |       |
|               |  | Instruction in manual to press<br>emergency stop button when stopped.<br>[3.8.3]                         |                     | Ensure that the enable switch is tested<br>per the manual pre-operational<br>instructions.<br>AND   | Yes                      | MGMT                  |                                 |       |
|               |  |  |                     | The emergency stop is pressed when the platform is stationary.  | Yes                      | MGMT                  |                                 |       |
| 5             | Hydraulic  |  |                     |   |                          |                       |                                 |       |
| 5.1           | Failure of cylinder or hose resulting in movement                        | Cylinder fitted with load holding valves. Vertical movement is the only possible motion.                 | L                   | Ensure that the machine is withdrawn<br>from service and repaired if the mast<br>or platform position is not maintained<br>or there are signs of hydraulic leaks. | Yes                      | MGMT                  |                                 |       |
| 6             | Crushing/Trapping Hazards  |  |                     |   |                          |                       |                                 |       |
| 6.1           | Crush injury as a result of operation –<br>either travelling or raising. | Warning provided in manual. [P11]].<br>Movement is limited to either Vertical<br>motion or drive motion. | М                   | Ensure that operators, observe the<br>surroundings and travel at appropriate<br>speeds<br>AND   | Yes                      | MGMT                  |                                 |       |
|               |  |  |                     | Ensure that ground personnel are<br>available to observe and take<br>corrective action if necessary.<br>AND   | Yes                      | MGMT                  |                                 |       |
|               |  |  |                     | Ensure they are familiar with<br>emergency operation procedures   | Yes                      | MGMT                  |                                 |       |
| 6.2           | From pothole protection device   | Warnings in manual 3.5.3] and decals on machine  | М                   | Ensure that personnel remain clear of<br>the pothole protection device when the<br>machine is being operated.   | Yes                      | MGMT                  |                                 |       |
| 6.3           | Ground personnel crushed whilst<br>machine is travelling.                | Warning in manual [P9]<br>All motion alarm fitted  | М                   | Ensure that personnel remain clear of the platform when in use.   | Yes                      | MGMT                  |                                 |       |
|               |  | Checks specified in manual [P27]   |                     | AND<br>Ensure that All motion Alarm is  | Yes                      | MGMT                  |                                 |       |

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| Α      | В  | С   | D                   | E  | F                                   | Х          | Y   | Z     |
|--------|--|---|---------------------|--|-------------------------------------|------------|---|-------|
| Hazard | Hazard Description -   | Is there any risk?  | Risk                | Proposed SUPPLEMENTARY   | Are the                             | For Action | Confirmation                                | Notes |
| No.    | (the situation or parts of plant<br>which could cause injury or illness) | Describe the risk control measures<br>ALREADY implemented   | L = Low<br>M = Med. | risk control measure   | control<br>measures<br>practicable? | by whom    | that the<br>necessary<br>action has<br>been |       |
|        |  |   | H = High            |  | Yes/No                              |            | completed                                   |       |
|        |  |   |                     | checked per manual   | 100/110                             |            |   |       |
| 6.4    | Persons exposed to vehicular traffic.                                    |   | М                   | Implement a traffic management system  | Yes                                 | MGMT       |   |       |
| 6.5    | Crushing during maintenance  | Interlock provided that isolates pump<br>and functions when access cover is<br>removed<br>Warning in Manual that access to the<br>hydraulic/electric compartment must<br>only be performed with the platform<br>lowered. [PP19, 43] | L                   | Ensure that maintenance is performed<br>only when the platform is lowered and<br>in the maintenance position.  | Yes                                 | MGMT       |   |       |
| 7      | Slips, trips, falls  |   |                     |  |                                     |            |   |       |
| 7.1    | Falling from the platform  | Non slip flooring and standard access<br>provided.<br>Warning provided regarding use of<br>three points of contact<br>[PP11,18,21,23,27]<br>Warning provided regarding standing   | L                   | Ensure that access points and platform<br>floor are maintained and free of<br>obstacles, slick surfaces and slip<br>resistant.<br>AND<br>Observe instructions in manual. | Yes<br>Yes                          | MGMT       |   |       |
| 7.2    | Stepping out of elevated platform  | on guardrails.[P9]<br>Warnings provided in manual [P12]<br>Refer to requirements per AS2550.10  | L                   | Ensure that operator egress at heights<br>is prohibited unless in an emergency<br>and there is a safe means to do so.<br>AND<br>Ensure that the operator does not        | Yes<br>Yes                          | MGMT       |   |       |
|        |  |   |                     | egress from the platform at height<br>unless secured via a twin lanyard<br>assembly to a secure anchor point on<br>a fixed structure                                     |                                     |            |   |       |
| 7.3    | Use of step ladders or stools in<br>platform                             | Warnings provided in manual [P9]<br>Refer to requirements in AS2550.10  | L                   | Ensure that operators do not use any<br>means to gain additional height  | Yes                                 | MGMT       |   |       |
| 7.4    | Falling through the platform gate.                                       | Note in manual to check that the gate self closes and latches [P18]   | L                   | Ensure that the gate is free to close and automatically latches before use.  | Yes                                 | MGMT       |   |       |
| 7.5    | Falling whilst performing maintenance checks.                            | · · ·   | L                   | Ensure that operating procedures and<br>appropriate equipment is used during<br>maintenance.   | Yes                                 | MGMT       |   |       |

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| Α             | В  | С   | D        | E  | F                  | Х                     | Y                     | Z     |
|---------------|--|---|----------|--|--------------------|-----------------------|-----------------------|-------|
| Hazard<br>No. | Hazard Description -   | Is there any risk?  | Risk     | Proposed SUPPLEMENTARY<br>risk control measure   | Are the<br>control | For Action<br>by whom | Confirmation that the | Notes |
| NO.           | (the situation or parts of plant   | Describe the risk control measures<br>ALREADY implemented   | L = Low  | lisk control measure   | measures           | by whom               | necessary             |       |
|               | which could cause injury or illness)   | ALREADT Implemented   | M = Med. |  | practicable?       |                       | action has            |       |
|               |  |   |          |  |                    |                       | been                  |       |
|               |  |   | H = High |  | Yes/No             |                       | completed             |       |
| 8             | Falling Objects  |   |          |  |                    |                       |                       |       |
| 8.1           | Ground crew or passerby being struck by falling tools or objects                       | Warnings provided in manual [P10]<br>See also AS2550.10   | L        | Barricade area from public access<br>AND   | Yes                | MGMT                  |                       |       |
|               |  |   |          | Ensure that materials are not<br>supported on the guardrails or exceed<br>the confines of the platform.          | Yes                | MGMT                  |                       |       |
| 9             | Electrical Hazards   |   |          |  |                    |                       |                       |       |
| 9.1           | Persons could be injured due to<br>contact or approach to live electrical<br>apparatus | Warnings provided in manual [P7]<br>Legislative requirements to maintain<br>clearances<br>Warnings in AS2550.10                   | м        | Ensure persons observe the limits of approach as specified by regulation and as indicated on the signs attached. | Yes                | MGMT                  |                       |       |
| 9.2           | Use in Storms  | Warning provided in manual [P7]   | F        | Ensure that the unit is not used in storms   | Yes                | MGMT                  |                       |       |
| 9.3           | Driving over electrical leads  | Warning in manual [34]  | М        | Ensure that the unit is not driven near or over electrical leads or apparatus.                                   | Yes                | MGMT                  |                       |       |
| 9.4           | Electric shock due to fault with AC power supply                                       |   | М        | Check the condition of the AC Power<br>supply on a routine basis<br>AND  | Yes                | MGMT                  | •                     |       |
|               |  |   |          | Ensure that the supply is appropriately protected  | Yes                | MGMT                  |                       |       |
| 9.5           | From Battery Charger   | Warning in manual regarding<br>immersion in water [P44]<br>Warning to ensure that charger is<br>connected to properly grounded AC | М        | Ensure that the battery Charger is not<br>exposed to water and is in proper<br>working order before use.<br>AND  | Yes                | MGMT                  |                       |       |
|               |  | supply [P44]  |          | Ensure that power supply is properly<br>protected with a Residual Current<br>Device                              | Yes                | MGMT                  |                       |       |
| 10            | Fire or Burns  |   |          |  |                    |                       |                       |       |
| 10.1          | Work in an explosive atmosphere.   | Warning provided in manual [P11]  | М        | Ensure unit is not used in a hazardous environment.  | Yes                | MGMT                  |                       |       |
| 10.2          | During battery maintenance   | Note in manual [P44]]   | L        | Ensure that battery maintenance is<br>performed by competent persons in<br>accordance with established SWP's.    | Yes                | MGMT                  |                       |       |

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| Α             | В  | С   | D                           | E  | F  | Х                     | Y   | Z     |
|---------------|--|---|-----------------------------|--|--|-----------------------|---|-------|
| Hazard<br>No. | Hazard Description -<br>(the situation or parts of plant<br>which could cause injury or illness) | Is there any risk?<br>Describe the risk control measures<br>ALREADY implemented | Risk<br>L = Low<br>M = Med. | Proposed SUPPLEMENTARY<br>risk control measure   | Are the<br>control<br>measures<br>practicable? | For Action<br>by whom | Confirmation<br>that the<br>necessary<br>action has<br>been | Notes |
|               |  |   | H = High                    |  | Yes/No   |                       | completed   |       |
| 11            | Transport & Handling   |   |                             |  |  |                       |   |       |
| 11.1          | Injury as a result of accumulated deterioration during long term storage.                        |   | L                           | Ensure that an annual inspection is<br>comprehensively performed before<br>returning the unit to service.  | Yes  | MGMT                  |   |       |
| 11.2          | Injury loading/unloading from vehicle  | Warnings and instructions provided in manual [Section 3.9.1]                    | М                           | Ensure that the loading ramps are<br>adequate to support the machine and<br>the gradient is less than the maximum<br>gradability<br>AND                                    | Yes  | MGMT                  |   |       |
|               |  |   |                             | Ensure that the transport vehicle and<br>ramps are secured to prevent<br>rolling/shifting<br>AND   | Yes  | MGMT                  |   |       |
|               |  |   |                             | The ramp offers adequate friction to<br>prevent slipping   | Tes  | -                     |   |       |
| 11.2.1        | Injury releasing brakes  | Warning in manual [2.5.1]   | L                           | Ensure that the unit is secured before<br>releasing the brakes<br>AND  | Yes  | MGMT                  |   |       |
|               |  |   |                             | Ensure they are re-engaged before use or leaving unattended.   | Yes  | MGMT                  |   |       |
| 11.3          | Injury from unsecured device   | Procedures provided in manual<br>[Section 3.9.1]                                | М                           | Ensure that the unit is secured in<br>accordance with the requirements in<br>the manual and the turret<br>transportation lock is engaged                                   | Yes  | MGMT                  |   |       |
| 11.4          | Lifting the unit   | Procedure in manual [3.9.2]<br>Machine weight provided on<br>nameplate          | L                           | Ensure that only the designated lift<br>points are used during lifting and that<br>all rigging is appropriate for the task<br>AND<br>The platform is lowered and retracted | Yes  | MGMT                  |   |       |
| 12            | Maintenance  |   |                             |  | 162  |                       |   |       |
| 12.1          | Injury during hydraulic maintenance<br>from pressurized sources                                  |   | L                           | Instruct persons to follow all<br>precautions stated in manual.<br>AND   | Yes  | MGMT                  |   |       |
|               |  |   |                             | To follow established SWP's relating to hydraulic maintenance.   | Yes  | MGMT                  |   |       |

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| Α             | В   | С  | D                   | E   | F                        | Х                     | Y                     | Z        |
|---------------|---|--|---------------------|---|--------------------------|-----------------------|-----------------------|----------|
| Hazard<br>No. | Hazard Description -  | Is there any risk?   | Risk                | Proposed SUPPLEMENTARY<br>risk control measure  | Are the<br>control       | For Action<br>by whom | Confirmation that the | Notes    |
|               | (the situation or parts of plant<br>which could cause injury or illness)                      | Describe the risk control measures<br>ALREADY implemented            | L = Low<br>M = Med. |   | measures<br>practicable? |                       | necessary action has  |          |
|               |   |  | H = High            |   | Yes/No                   |                       | been<br>completed     |          |
| 12.2          | Strains/sprains when removing or<br>performing certain maintenance<br>aspects of the Unit.    |  | L                   | Establish appropriate work procedures<br>for all anticipated maintenance issues<br>arising<br>AND   | Yes                      | MGMT                  |                       |          |
|               |   |  |                     | Periodically review these SWP's.  | Yes                      | MGMT                  |                       |          |
| 12.3          | Persons may be injured as the result<br>of poor maintenance and/or<br>adjustment procedures.  |  | L                   | Supplement the manuals with concise<br>criteria in respect of :<br>Hazard warnings as detailed herein<br>and as identified during periodic safety<br>assessments and updates as<br>suggested in manual reviews<br>AND | Yes                      | MGMT                  |                       |          |
|               |   |  |                     | Ensure that the unit is tested by a competent person prior to being returned to normal service after repairs and/or adjustment of critical components or systems.   | Yes                      | MGMT                  |                       |          |
| 12.4          | Persons injured handling heavy or<br>unsupported items  |  | L                   | Instruct personnel in respect of proper<br>maintenance procedures including the<br>necessity to support items during<br>maintenance.  | Yes                      | MGMT                  |                       |          |
| 12.5          | Persons injured due to exposure to<br>pinch points/shear points                               |  | L                   | Instruct personnel in respect of proper maintenance procedures.   | Yes                      | MGMT                  |                       |          |
| 12.6          | Repair personnel crushed by falling platform during maintenance                               |  | М                   | Ensure personnel are trained in correct repair procedures   | Yes                      | MGMT                  |                       |          |
| 13            | Emergency Procedures  |  |                     |   |                          |                       |                       |          |
| 13.1          | Injuries exacerbated as a result of<br>incorrect emergency retrieval<br>procedures            | Instruction in manual [Section 2.6]<br>Simple manual lowering system | L                   | Ensure that persons are available at<br>ground level and are familiar with the<br>operation of the emergency system to<br>effect retrieval.   | Yes                      | MGMT                  |                       |          |
| 13.2          | Injuries exacerbated as a result of<br>insufficient communication procedures<br>or equipment. |  | L                   | Establish and audit routine emergency<br>procedures<br>AND  | Yes                      | MGMT                  |                       |          |
| Devision      |   |  |                     | Ensure that all operators are equipped<br>with portable communications<br>equipment where necessary.  | Yes                      | MGMT                  |                       | 1 - ( 40 |

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| Α             | В   | С  | D                    | E  | F                        | Х                  | Y                       | Z     |
|---------------|---|--|----------------------|--|--------------------------|--------------------|-------------------------|-------|
| Hazard<br>No. | Hazard Description -  | Is there any risk?<br>Describe the risk control measures | Risk                 | Proposed SUPPLEMENTARY<br>risk control measure   | Are the control          | For Action by whom | Confirmation that the   | Notes |
|               | (the situation or parts of plant<br>which could cause injury or illness)    | ALREADY implemented                                      | L = Low              |  | measures<br>practicable? | -                  | necessary<br>action has |       |
|               |   |  | M = Med.<br>H = High |  |                          |                    | been<br>completed       |       |
|               |   |  |                      | AND<br>Establish protocols and procedures to<br>ensure a timely and appropriate  | Yes/No<br>Yes            | MGMT               |                         |       |
|               |   |  |                      | response in emergencies.<br>AND<br>Ensure all operators report in when<br>attending site and on a routine basis<br>thereafter. | Yes                      | MGMT               |                         |       |
| 13.3          | Injuries exacerbated as a result of working solo.                           |  | L                    | Ensure that workers do not work solo<br>Or if not practicable<br>AND   | Yes                      | MGMT               |                         |       |
|               |   |  |                      | Ensure that all operators working solo<br>are equipped with portable<br>communications equipment.<br>AND                       | Yes                      | MGMT               |                         |       |
|               |   |  |                      | Establish protocols and procedures to<br>ensure a timely and appropriate<br>response in emergencies<br>AND                     | Yes                      | MGMT               |                         |       |
|               |   |  |                      | Specify maximum time limits and permissible routines for working solo.   | Yes                      | MGMT               |                         |       |
|               |   |  |                      | Ensure all operators report in when attending site and on a routine basis thereafter.  | Yes                      | MGMT               |                         |       |
| 14            | Other   |  |                      |  |                          |                    |                         |       |
| 14.1          | Persons injured using toxic chemicals<br>or flammable materials in platform | Open Platform provided                                   | L                    | Ensure operators are aware of the<br>hazards specific to the material being<br>used.   | Yes                      | MGMT               |                         |       |
| 14.2          | Due to confusing or conflicting<br>instructions in the manual               | Manual revised and updated.                              | L                    |  |                          |                    |                         |       |
| 14.3          | Due to failure to observe or rectify<br>safety upgrades from manufacturer   |  | L                    | Ensure that the owner of each<br>machine is registered with the<br>manufacturer.<br>AND  | Yes                      | MGMT               |                         |       |
|               |   |  |                      | Periodically check the status in respect   | Yes                      | MGMT               |                         |       |

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| Α      | В  | С   | D                               | E   | F                                   | Х            | Y  | Z     |
|--------|--|---|---------------------------------|---|-------------------------------------|--------------|--|-------|
| Hazard | Hazard Description -<br>(the situation or parts of plant<br>which could cause injury or illness) | Is there any risk?  | Risk                            | Proposed SUPPLEMENTARY  | Are the                             | For Action   | Confirmation   | Notes |
| No.    |  | Describe the risk control measures<br>ALREADY implemented | L = Low<br>M = Med.<br>H = High | risk control measure  | control<br>measures<br>practicable? | es<br>ble?   | that the<br>necessary<br>action has<br>been<br>completed |       |
|        |  |   |                                 |   | Yes/No                              |              |  | 1     |
|        |  |   |                                 | of safety bulletins or upgrades<br>applying to the machine.<br>AND<br>Ensure that safety upgrades provided<br>by the manufacturer are implemented.<br>AND | Yes                                 | MGMT         |  |       |
|        |  |   |                                 | Ensure the manufacturer is advised when the machine is disposed of.   | Yes                                 | MGMT         |  |       |
| 14.4   | Persons injured due to unrecognized hazard.  | Preliminary Hazard ID prepared provided.                  | М                               | Update hazard ID as necessary<br>AND<br>Implement Risk control measures as<br>necessary having regard to the<br>hierarchy of control measures             | Yes<br>Yes                          | MGMT<br>MGMT |  |       |
|        |  |   |                                 | available.  |                                     |              |  |       |

<sup>&</sup>lt;sup>i</sup> An alternative would be to consider incorporating logic such that the machine will not operate if a function is activated prior to the enable switch being activated and, that the joystick moves prior to the enable switch being triggered if the joystick experiences an external force.

### NOTES:

| 1. | SKJ:   | Skyjack   |
|----|--------|---|
| 2. | MGMT:  | Refers to the person legally responsible for the use of the unit; it generally means the employer, the company or the legal entity that has responsibility under the Health |
|    |        | and Safety legislation in the State or Territory in which the unit is beingused.  |
| 3. | OP:    | Is the operator, authorized by management and responsible for the operation and preoperational inspection and use of the unit.  |
| 4. | OWNER: | Is the person or organisation that owns the unit and is responsible for its condition and state of repair.  |
|    |        |   |

#### **GENERAL NOTES:**

- 1. This Risk Assessment has been prepared for Skyjack Australia for the subject plant and is not transferable to other plant or parties.
- 2. Item Numbers refer to hazards, which can exist if the unit is not adequately maintained e.g. Guards not fitted, gauges fail to correctly display readings etc. The measures listed to control risks arising from this type of hazard can include reference to operating procedures. Operating Procedures cannot make the operator responsible for inadequate maintenance/repairs etc but is only intended to ensure that the procedures include the need for the operator to report any faults detected.
- 3. This Hazard Identification and Risk Assessment document has been prepared based on information available at the date of publication. In order to ensure this Hazard Identification, Risk Assessment, Risk Control document is both accurate and complete; —Management of the UnitII must review it:
  - (a) According to the particular circumstances under which the plant and/or process is used and maintained,
  - (b) As new hazards are identified or as risks are re-assessed,
  - (c) As new or revised control measures are implemented,
  - (d) As and when work procedures are altered.

Although every attempt has been made by to identify reasonably foreseeable circumstances, no guarantee as to the completeness of this assessment is implied or provided.

- 4. -Preliminary is placed in this document to indicate that the Controls listed in Columns C and E are a practicable way of controlling the risks arising out of the Hazards listed in Column B. -Preliminary status remains in place until the -Management of the Unit" agrees that the assessment is complete and that the controls proposed are practicable.
- 5. Column Y has been provided on the document to allow the —Management of the UnitII to record that their Hazard Identification, Risk Assessment, and Risk Control process has been completed and that all controls are in place and operating. When Column Y is completed, the document becomes a record of the completeness of the process and the documentation (subject to any changes which need to be further reviewed in accordance with Item3 above).
- 6. The use of the word —ANDII or —&II in the supplementary risk control measure column is intended to mean that the combination of risk control measures are to be implemented on the whole not in part.
- 7. The determination of risk, column D, is a subjective assessment based on the following factors: exposure the number of times humans are exposed to the risk, the probability of the hazard arising, and the consequence of the hazard death or serious injury.

Revision D 12/01/2017 Page 17 of 18 160651AA.DOCX Risk management is a five-step process for controlling exposure to health and safety risks associated with hazards in the workplace. To properly manage exposure to risks, a person must:

- (a) Identify hazards;
- (b) Assess risks that may result because of the hazards;
- (c) Decide on appropriate control measures to prevent or minimise the level of the risks;
- (d) Implement control measures; and
- (e) Monitor and review the effectiveness of the measures.
- Hazards and risks are NOT the same thing.

A hazard is something with the potential to cause harm. This can include substances, plant, work processes or other aspects of the work environment. Risk is the likelihood that death, injury or illness might result because of the hazard.

As examples:

• The hazard is electricity—the risk is the likelihood that a worker might be electrocuted because of exposure to electrical wires that are inadequately insulated.

- The hazard is a 40 kg bag—the risk is the likelihood that a worker might suffer back strain from manually lifting 40 kg bags.
- The hazard is carbon monoxide—the risk is the likelihood that a worker might suffer carbon monoxide poisoning because they are using a petrol-operated pump in a well.

When undertaking risk management:

- (a) Involve workers in the process; (it is legal requirement that all stakeholders are consulted)
- (b) Don't use it to justify a decision that has already been made;
- (c) Consider good industry practice; and be aware of the current State of Knowledge in relation to the hazard
- (d) Record any risk management activities undertaken.

Under the relevant Workplace Health and Safety Acts, to properly manage exposure to risks, a person should consider the appropriateness of control measures in the following order (sometimes referred to as the \_Hierarchy of Control'):

- (a) Eliminating the hazard or preventing the risk; or
- (b) If eliminating the hazard or preventing the risk is not possible, minimising the risk by measures that must be considered n the following order:
  - (i) Substituting the hazard giving rise to the risk with a hazard giving rise to a lesser risk;
  - (ii) Isolating the hazard giving rise to the risk from anyone who may be at risk;
  - (iii) Minimising the risk by engineering means;
  - (iv) Applying administrative measures; and
  - (v) Using personal protective equipment.

Examples of subparagraph (iii)—redesigning work, plant, equipment, components or premises. Examples of subparagraph (iv)—training, reasonable hours of work.

The higher in the hierarchy of control, the better and more reliable the control is. In practice, several control options are often used in combination. Personal protective equipment is usually used in conjunction with other control measures.

Control measures must be implemented before work commences.

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