

RISK ASSESSMENT

For

Bobcat Skid Steer Loader

M Series *(including compact track)*



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Applicability

Standards referenced in the preparation of this document

Risk Assessment sheets

APPLICABILITY

The following Risk Assessment document is applicable to the following 2 models of Bobcat Skid Steer Loader:

- S630
- T630
- S650
- T650

STANDARDS REFERENCED

The following Standards, Acts and Regulations were referenced in the preparation of this Risk Assessment.

- NOHSC: 1010 (1994) - National Standard for Plant
- OHS Act 2000 (NSW)
- OHS Regulation 2001 (NSW)
- AS2359.6 (1995) – Powered Industrial Trucks – Safety Code
- AS4360 (2004) – Risk Management
- ISO/WD 3691-1 (1999) – Industrial Trucks – Safety Requirements and Verification
- EN1459 (1999) – Safety of Industrial Trucks

RISK ASSESSMENT - Bobcat Skid Steer Loader

Subject: Bobcat M Series Skid Steer Loaders

| | HAZARD | RISK | LEVEL | CONTROL |
|----|--|--|----------|---|
| | | Detail | | |
| 1 | Overload Loader causing tip over | Strike injury | Med High | Rating Plate checked by Licensed Operator re: O&M Manual. |
| 2 | Loader too large for required work | Property damage | | Always size the project up before commencement of work |
| 3 | Loader too small for required work | Machine damage, operator frustration | Low | Always size the project up before commencement of work |
| 4 | Bystanders impacted by boom arm/bucket | Impact injury - serious | Med High | Bystanders to be kept well clear at all times. Mirrors and beacon light fitted |
| 5 | Work too close to other machines - machine clashes | Strike injury to operator | Med High | Ensure adequate clearance between equipment |
| 6 | Work on soft/unstable ground - tipover | Strike injury to operator | High | Ensure ground is prepared properly, stable and able to support Loader, before commencement |
| 7 | 'Climbing' the Loader and tipover | Strike injury to operator | Med High | Do not 'climb' steep or unstable inclines |
| 8 | Tipover due to travelling on gradients incorrectly | Tip over causing operator strike injury | Med High | Follow proper procedures for travelling on slope re: O&M Manual. |
| 9 | Tipover due to turn on gradients unsafely | Tip over cause operator strike injury | Med High | Do not turn on an incline re: O&M Manual. |
| 10 | Pull machine over | Strike injury to operator | Medium | Always setup on stable ground, do not exceed the lift capacity of the Loader |
| 11 | Operator fall off when accessing cabin | Fall / strike injury | Medium | Always use 3 points of contact. Park machine square to appropriately use access steps. |
| 12 | Boom left in air - fall onto operator/bystander | Impact injury | Medium | Always lower attachment before parking machine |
| 13 | Bystander runover | Crush injury or death | High | Bystanders to be kept well clear at all times. Mirrors and beacon light fitted |
| 14 | Bystander/maintenance caught in closing cylinder | Hand crush injury | Medium | Keep well clear when machine in operation |
| 15 | Hose splits and sprays hot oil | Burns to operator | Low | Operator protected by cabin from spray. Never check for leaks with hands. |
| 16 | Drop items being carried - onto bystander | Strike injury to bystander | Med High | Bystanders to be kept well clear at all times. Mirrors and beacon light fitted |
| 17 | Drop items being carried - onto operator cabin | Strike injury to operator | Medium | Cabin fitted with safety glass at front and sides. Do not lift over cabin |
| 18 | Lift/lower people in bucket - fall out | Fall injury | High | Never lift people - Loader not designed to lift/lower people |
| 19 | Noise - hearing damage | Permanent hearing damage | Low | Machine low noise, especially in cabin |
| 20 | Vibration | Vibration injury to operator | Low | Padded suspension seat fitted, Machine operated stationary. Controls pilot oil controlled |
| 21 | Fire occurs - operator has impeded egress | Burns to operator | Low | 2 exits, one in different direction to engine compartment |
| 22 | Operating environment temperature very hot | Operator dehydration/fatigue | Low | Cabin can be fitted with air conditioning |
| 23 | Operating in dusty environment | Operator lung damage | Low | Fully enclosed cabin with filtered air conditioning |
| 24 | Exhaust pipe exposed | Burn leg | Med High | Use caution around exhaust pipe. Some guarding provided by engine cover |
| 25 | Control system fails | Machine uncontrolled - strike injury to op | Low | Emergency stop switch fitted in cabin |
| 26 | Radiator fan spinning | Hand caught in radiator - tear injury | Low | Fan guarded |
| 27 | Object falls onto cabin | Operator impact injury | Medium | Cabin designed to ROPS standard |
| 28 | Unauthorised starting/operation of machine | Death to operator or bystander | Medium | Locks fitted, key start fitted, password start capable. |
| 29 | Operator not qualified (Loader licence) | Death to operator or bystander | Med High | Operator must be licenced (LE licence) and authorised to operate Loader |
| 30 | Poor work method/practices | Operator or bystander death | Medium | OHS Acts require all operators to be trained in correct practices |
| 31 | Untrained in operation and safe work procedures | Operator or bystander death or injury | High | All operators of this Loader require Loader licence - otherwise breach of OHS Act |
| 32 | Buildup of explosive gas when recharging batteries | Explosion - loss of life | High | Charging MUST ALWAYS be in a clear and well vented area to reduce the buildup of Hydrogen gas |
| 33 | Buildup of exhaust gases in restricted workspace operation | | High | Loader not designed for restricted workspaces |
| 34 | Battery fluid reservoir leak | Corrosive - burns | Low | Conduct daily inspection re: O&M Manual. Stand machine down if batteries are leaking at all |
| 35 | Inadequate lighting causing impact with bystander | Bystander crush injury | Low | Worklights provided on all Loaders |
| 36 | Rain causing slippery operating conditions | Slip off Loader when exiting | Low | Foot step has non-slip tread |
| 37 | Smoking whilst recharging/changing batteries | Fire/explosion burns to Operator | Medium | Do not recharge batteries while smoking or when near open flame or sparks. |
| 38 | Slabbing of counterweight | Overload Loader, load loss, injure bystander | Low | Unauthorised modification of counterweight is not permitted. |
| 39 | Cabin structure failure | Operator crush/strike injury | Medium | Workplace Hazard Analysis - Machine should not be operated in such conditions. |
| 40 | Petrochemicals used for lubrication | Poisoning of skin (maintenance staff) | Low | Materials Safety Data Sheets available |
| 41 | Non-spark proof design used in explosive zones | Operator and bystander death | Low | Machine is not designed for such purposes |
| 42 | Use joystick incorrectly-load loss | Load loss - strike injury to bystander | Medium | Joystick ergonomically designed. Bystanders should not be close by when loading & unloading. |

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|----|---|--|----------|---|
| 43 | Indadvertantly use wrong function on joystick-load loss | Load loss - strike injury to bystander | Medium | Operator is required to be aware of the correct operation of the Loader |
| 44 | Inadvertantly accelerate-injury to bystander | Bystander crush injury | Medium | Pedal layout ergonomically designed, also spring return (ie remove foot) |
| 45 | Poor maintenance on Loader | Failure of structure - death | Med High | Ensure correct maintenance is undertaken and recorded |
| 46 | Safety decals missing | Staff not aware of dangers - injury | Medium | Ensure maintenance staff replace any missing or unreadable safety decals |
| 47 | Impact high voltage service lines (above or below) | Electrocution | Med High | Dial 1100 Before You Dig - always ensure adequate clearance in workarea |
| 48 | Maintenance staff open cylinder without bleeding pressure | Cylinder retract, oil spray, possible crush | Medium | Always use appropriate maintenance practices. Refer to Operator and Maintenance Manuals |
| 49 | Open radiator cap when hot | Burns | Med High | Always use appropriate maintenance practices. Refer to Operator and Maintenance Manuals |
| 50 | Stand on engine hood | Slip and fall off Loader - fall injury | Med High | Never stand on engine hood |
| 51 | Stand near bucket area | Impacted on lowering | Medium | Bystanders to be kept well clear at all times. Mirrors and beacon light fitted |
| 52 | Operate machine with guards missing | Tear injury | Medium | Never operate Loader with guard not in place |
| 53 | Operate machine when using mobile phone/MP3 etc | Impact bystander, roll machine - impact injury | High | Never operate Loader while distracted. |
| 54 | Demolition without additional safety guard | Breakoff comes through cabin front glass | Med High | Protection kits available. Refer to Operator Manual |
| 55 | Under or overcut in operation | Machine falls or major impact on cabin - crush | Medium | NEVER under, or over-cut |

Hierarchy of Control

1. Elimination
2. Substitution
3. Isolation
4. Engineering Control
5. Administrative Control
6. PPE

Risk scores listed as HIGH need action taken to minimise the risk