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RISK ASSESSMENT

For

Bobcat Skid Steer Loader

M Series *(including compact track)*



Bobcat
Australia

CONTENTS

Applicability

Standards referenced in the preparation of this document

Risk Assessment sheets

APPLICABILITY

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

- S510
- S550
- S590
- T590
- S630
- T630
- S650
- T650
- S770
- T770
- A770
- S850
- T870

STANDARDS REFERENCED

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

- NOHSC: 1010 (1994) - National Standard for Plant
- WHS Act 2011
- WHS Regulation 2011
- AS2359.6 (1995) – Powered Industrial Trucks – Safety Code
- AS31000 (2009) – 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 Detail	LEVEL	CONTROL
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	Low	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/ sleep 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 spits 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	Explosion - loss of life	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	Maintenants 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.

43	Inadvertently 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	Inadvertently 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