Government of Saskatchewan Ministry of Parks, Culture and Sport	**SAFE WORK PROCEDURES**	
Effective Date: April 1, 2013	**Revised:** March 14, 2012	**Replaces:** April 1, 2008

SKID-STEER, TRACTOR AND TRACTOR LOADER OPERATIONS

REFER TO SAFE WORK MANAGEMENT LOGISTICS (SWP Preamble) – it must be used in conjunction with this SWP

IMPORTANT: always refer to current OH&S legislation to ensure compliance

JOB DESCRIPTION

This procedure describes the safe operation of a skid steer, tractor or tractor loader and their attachments.

HAZARD IDENTIFICATION

Hazard Identification refers to personal injuries that may occur, vehicle/equipment damage and environmental damage. Hazards may include, but are not limited to the examples listed in the following table.

Bumps, bruises, scrapes	Death	Drowning
Burns	Cuts	Exposure
Injury to eye, hand, feet	Hearing/noise level	Spill
Asphyxiation	Musculoskeletal	Pinch points
Puncture	Slips, trips, falls	Struck by
Fire	Equipment collision/incidents/failure	Explosion
Dust	Electrocution	Crushing
Poisoning (inhalation, absorption, injection, ingestion)	Contamination of air ,water and soil	Insect stings
Environmental Conditions	Claustrophobia	Chronic/acute illness
Stress	Amputations	Exhaustion/fatigue

PRACTICES

- **CIRCLE CHECK**
  Complete circle check and documentation (keep copy in Equipment and/or office).
- Worker conducts a circle check on equipment being operated to detect equipment deficiencies and ensure that safety related defects and other necessary repairs or deficiencies are corrected prior to utilizing the unit.

- Worker should only perform repairs or adjustments that they can perform competently and have other repairs performed by a qualified/competent person.
- Ensure that a slow-moving sign is mounted to the rear of the skid steer or tractor.
- Backup alarm is audible and rotary lights are working.

1. PREPARATION

- Contact Utilities to locate and mark utility lines prior to any excavation
    - Sask 1st Call
        - toll free 1-866-828-4888
        - cell #4888
        - http://www.sask1stcall.com/
- Worker must have received adequate training and be competent in operation of the skid steer and tractor and its attachments.
- Worker obtains, loads, and secures all necessary tools, material, signs, personal gear, PPE and equipment required to do the job.
- Worker should watch for steps, tire clearance and attachment clearance.
- Worker should be aware of any slopes or unstable surfaces.
- Worker must ensure:
    - Doors/windows are secured in open or closed position at all times.
    - Adequate fuel to perform activities.
    - Seat belt and harness are always worn when operating skid steer, tractor and tractor loader.
    - That safety equipment is available (e.g. first aid kit, fire extinguisher, communication equipment, etc.).
- Advise the supervisor of trouble areas that are deemed to be a safety hazard and require improvement

2. SKID-STEER, TRACTOR AND TRACTOR LOADER OPERATIONS

Supervisors must ensure the following safety measures are taken:

- Worker makes a complete visual inspection of vehicle and the surrounding area prior to starting and moving vehicle.
- Worker operates to manufacturer's specifications.
- Enter and exit cab, using three-point stance.
- Never enter or exit equipment where there is risk of injury from oncoming traffic.
- There are no passengers other than the worker.
- Caution should be taken when bucket or treads are slippery, due to mud buildup or snow, etc.
- Adjust road speed to minimize bounce while traveling.
- The skid steer or tractor operator does not undermine stockpile, pile of snow or burrow pit when extracting aggregate or snow.
- Attachments are lowered to the ground when the attachment is not in use.
- When in transport from one location to another:
    - Activate rotary lights and proceed to destination, keeping as far to the right as safely possible.

    - Once destination is reached, come to a stop at an appropriate location and apply park brake; try to park in an approach if at all possible.
- When loading or unloading unit from trailer:
    - Load skid steer or tractor according to manufacturer's specifications (i.e. back up when at all possible).
    - Ensure path of travel is clear.
    - Load is secure if transported in the attachment of the skid steer or tractor.
    - All attachments are put in transport position.

3. ATTACHMENTS

Supervisors must ensure the following safety measures are taken:

- Only use attachments approved by the manufacturer.
- The attachment must be securely fastened to the skid steer or tractor.
- The attachment and load is at the lowest possible level before the skid steer or tractor moves.
- Operate the machine at adequate rpms to ensure all hydraulics are fully operational**.**
- Operate attachments to manufacturer's specifications.
- That all utilities are conspicuously identified, ruts filled, area/path of travel clear, communication with other workers in the area.
- The loader/bucket is at the lowest possible level before work commences with a rear mount attachment.
- Because of moving parts, maintain visible contact with any traffic, all workers and equipment in the work area, and maintain a safe zone.
- All safeguards are used and maintained according to manufacturer's specifications and safety switches are operating properly.
- When using attachments to lift loads, the load should be secured to prevent accidental movement. Position the skid steer or tractor so that it is square and level with the load prior to being moved.
- Be aware of the attachments extremities.
- Be aware of any possible hidden obstructions that may be present on the trail, road or parking lot.
- Operate the skid steer or tractor at speeds suitable for the attachment.
- The attachment used is adequate for work activity (e.g. bucket size for dirt versus bucket size for snow).
- Worker must not work beneath a front-end loader

Information above must be used in conjunction with all individual attachments listed below

Aerator

- Ensure corers are kept sharp and are secure.

Backhoe/Bucket – General

- If digging deeper than 1.2m, then side slopes must be cut back.
    - For type 1, 2 and 3 soils, the slope of the excavation must be at an angle not steeper than 1 horizontal to 1 vertical or 45 degrees measured from the horizontal.

    - For type 4 soils the slope of the excavation must be at an angle not steeper than 3 horizontal to 1 vertical or 19 degrees measured from the horizontal.
- Ensure hazard assessment is done for all frozen soils.
- Do not dig within 600 millimetres (mm) (2 feet (ft) of a pipeline, cable or conduit. Note: Within 600mm (2 ft) only hand digging is permitted.
- If worker is required to enter the excavated area install ladders, stairways or ramps to allow a safe means of entrance to and exit from and ensure that it is within 8 metres (m) of worker.
- When worker is in a trench more than 1.2 m deep, station a competent worker on the surface to alert the worker about development of any potentially unsafe conditions and provide assistance in an emergency.
- Maintain at least a 1 m buffer between excavation and excavated material.
- Ensure that no powered vehicle or mobile equipment or heavy load is located near an excavation so as to affect the stability of the walls of the excavation.
- Do not allow workers to enter excavation without shoring if deeper than 1.2 m with vertical walls.
- If excavation must be left open, then proper signing/control of area must be maintained.
- Refer to Part XVII of OH&S Regulations.

Backhoe – Also refer to Backhoe / Bucket General

- Ensure the stabilizers are down and level, lower bucket to the ground.
- Unlock backhoe boom arm.
- Extend boom to maximum to identify reach and safe zone.
- Maneuver boom to identify reach and safe zone at right angles.
- Ensure that no load is lifted, other than aggregate/soil (e.g. barrels, etc.).

Bucket – Also refer to Backhoe / Bucket General

- Position skid steer or tractor squarely lined up with excavation area, moving skid-steer forward in low gear, with load arms lowered and bucket cutting edge tipped in a downward angle.
- Control bucket angle or lift to minimize tire slippage.
- If an immovable object is struck, determine what it is, then if desired to remove, back up try to dislodge object with bucket.
- When bucket is sufficiently filled, back up with bucket as close to ground as possible, move to appropriate location to empty bucket or load into truck box.

Back Blade and Front Mount Dozer Blade

- Position skid-steer/tractor with front mount dozer blade to begin blading in the direction of travel.
- Blade on the right side of the road with the direction of traffic at all times.
- Be aware that bridges, curbing, sidewalks, culverts, manholes and stones could be higher than the work surface.
- Watch the surface for anything that may be higher or lower than the surface so that proper adjustments can be made.

- If there is a frost boil/hole on the road surface, the operator must flag the area and report to supervisor.
- Position blade to begin blading, placing windrow as close to center of road as possible, ensuring sufficient space for vehicular traffic in both driving lanes – if the road is wide enough.
- Lower blade to ground, set park brake and exit cab on shoulder side, if possible. If worker must exit on the driving lane side, he/she should be aware of traffic and should not exit the cab until dust or snow clears.
- Make frequent visual checks to the rear for any large rocks or objects placed in the windrow or on the driving surface during the course of operations.
- Periodically check condition of blades and moldboard for wear or breakage – change blades when required.
- If it becomes necessary to remove a large rock or object, worker utilizes the skid-steer/tractor by backing up and repositioning moldboard to remove rock or object, or the worker can stop the skid-steer, exit the cab and after ensuring it is safe to do so, physically remove rock or object from the road surface.
- Care must be taken when removing an object with the skid-steer/tractor, ensure adequate line of sight before commencing removal. If an adequate line of sight is not possible, the worker should physically remove object when safe to do so.
- Predetermine location to terminate windrow and prior to approach or turnaround area, slowly lift moldboard off road surface while maintaining road speed to void any remaining material into windrow.
- Drive past approach and then back into approach or turnaround area and drive forward onto road surface, reposition moldboard and proceed to blade windrow across road, feathering out any remaining material.
- The moldboard should be readjusted while on approach or turnaround area.
- Watch for steps and tire clearance while repositioning the moldboard.
- Check for traffic before entering back onto the surface.
- In the event of a mechanical failure, worker should make all possible attempts to remove skid-steer/tractor from surface, inform supervisor of situation and clearly mark the skid-steer/tractor.
- If it is not possible to remove windrow from road surface overnight, the windrow must be clearly and distinctly marked.
- Refer to SWP – Grader Operations when using back blades for single blading, spot blading, pulling side slope blading, and blade and teeth changing.

Cement Mixer

- Refer to SWP – Cement Mixer.

Seeder, Tree Spade, Plow, Cultivator, Disc, Fork & Grapple – Refer to section # 4. – ATTACHMENTS

Jackhammer

- Ensure tour of duty is established for workers, due to vibration.

- Use proper setting of hydraulics to avoid over-torqueing.
- Always keep your tools in top condition.
- When not in use, all sharp edged, toothed and pointed tools must be properly stored in such a manner that points and edges will not be a hazard.
- Use extra caution when jackhammering around utilities and uneven slopes.

Landscape Rake
- Arrive at jobsite and position skid steer/tractor with landscape rake to begin raking in the direction of travel.
- Watch the surface for anything that may be higher or lower than the surface so that proper adjustments can be made.
- Make frequent visual checks rearward for any large rocks or objects placed in the windrow.
- Periodically check condition of teeth for wear or breakage – change teeth when required.
- Watch for steps and tire clearance while repositioning the rake.

Post-hole auger
- Do not dig within 600 millimetres (mm) (2 feet (ft) of a pipeline, cable or conduit. Note: Within 600mm (2 ft), only hand digging is permitted.
- Do not allow workers to enter excavation.

Rotary Mowers
- Ensure blades are kept sharp.
- Ensure that debris is not thrown onto road surface or oncoming traffic.
- Refer to SWP – Grounds Maintenance.

Rotovator
- Ensure blades are kept sharp and are secure.

Sickle Mowers (i.e. front-end loader attached, 3 point hitch attached, or pull behind)
- Ensure blades are kept sharp.
- Refer to SWP – Grounds Maintenance.
- Worker must not be allowed to work in front of sickle mowers while in operation.

Snow blower
- Refer to SWP Snow Removal Operations

Sprayer
- Worker must have certification for pesticides application.
- Sprayer cannot be operated within 500 metres of a surface water body.
- Ensure the tractor loader bucket is at the lowest possible level before work commences.

Sweeper

- Sweeper should only be used with flashing warning lights.
- Start up sweeper slowly to ensure that it is turning freely. The discharge must be turned away from all buildings, equipment and people to prevent damage or injury.
- Lift sweeper up and down to ensure proper hydraulic operation.
- If shear pin breaks, shut down power take off (PTO). Turn off unit, exit unit and replace with new pin.
- Investigate why pin broke.
- Clear obstruction with tools. Never use hands or feet to clear obstructions.

Trencher – also use in conjunction with Backhoe/Bucket General

- Rotate worker's seat to operate trencher and controls.
- Extend boom to maximum to identify reach and safe zone.
- Maneuver boom to identify reach and safe zone at right angles.

NOTE: Worker/Contractor must report all incidents to supervisor or designate as soon as reasonably possible following the procedures outlined in the Incident Reporting and Investigation Policy – PS 818 of the Public Service Commission Human Resource Manual

4. END OF WORKDAY OR SHIFT

- If hazards continue to exist within the work area at day/shift's end, the supervisor must identify those hazards with the appropriate signage.
- When work is suspended for the day/shift, equipment may be left at the work site, if a secure parking location is available.
- The work zone must be deactivated by removal of all work zone signs, except for public awareness/courtesy signs, which are required to inform the public.

TRAINING AND CERTIFICATION REQUIREMENTS

REQUIRED TRAINING:

- WHMIS
- Powered Mobile Equipment

ASSOCIATED TRAINING, AS REQUIRED:

- Operation of Utilized Tools and Equipment
- Valid Class 5 Drivers License
- First Aid & CPR/AED Training
- Fire Extinguisher Training
- Pesticide Applicator Certification

RELATED SAFE WORK PROCEDURES/MANUALS/REFERENCE MATERIAL

S.W.P.'s: for Utilized Tools/Equipment and/or Task.

Manuals/Reference Material:

- Operator's Manual for Utilized Tools and Equipment
- First Aid & CPR/AED Manual
- WHMIS Manual
- Ministry Safety Manual
- *The Occupational Health and Safety Act and Regulations*