# Start-Up & Shutdown Procedures

## MOUNTING AND DISMOUNTING

- Mount or dismount the machine only at locations that have steps and/or handholds. Before you mount the machine, clean and inspect the steps and handholds. Make all necessary repairs.
- Always face the machine whenever you get on or off the machine.
- Maintain three-point contact with the steps and with the handholds. (Three-point contact can be 2 feet and 1 hand or 1 foot and 2 hands).
- Do not mount or dismount a moving machine. Never jump off the machine. Do not carry tools or supplies when you try to mount the machine or when you try to dismount the machine.

## BEFORE STARTING THE MACHINE

<table>
<thead>
<tr>
<th>Step</th>
<th>Was procedure step completed properly?</th>
<th>Evaluator Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspect the condition of the seat belt and mounting hardware</td>
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<tr>
<td>Regardless of appearance, replace the seat belt after three years of use</td>
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<tr>
<td>Adjust the seat so that full pedal travel can be achieved with the operator’s back against the back of the seat</td>
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<tr>
<td>Make sure the machine is equipped with a lighting system that is adequate for the job conditions</td>
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<tr>
<td>Make sure all machine lights are working properly</td>
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<tr>
<td>Before you start the engine and before you move the machine, make sure that no one is underneath the machine, around the machine, or on the machine</td>
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</tbody>
</table>

## STARTING THE MACHINE

<table>
<thead>
<tr>
<th>Step</th>
<th>Was procedure step completed properly?</th>
<th>Evaluator Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn the battery disconnect switch ON (if equipped)</td>
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<tr>
<td>Make sure that the engine shutdown switch is in the ON position</td>
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<tr>
<td>Adjust seat, adjust mirrors, fasten seat belt</td>
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<tr>
<td>Move hydraulic lockout control to the LOCKED position</td>
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<tr>
<td>Ensure all implements are grounded</td>
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<tr>
<td>Move the joysticks to HOLD</td>
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<tr>
<td>Ensure all personnel are clear of machine</td>
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<tr>
<td>Sound horn</td>
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<tr>
<td>Turn the key start switch to ON</td>
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<tr>
<td>Observe monitoring system, add fluids if necessary</td>
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<tr>
<td>In cold-weather conditions, wait until the indicator light for the starting aid equipment is in the OFF position (refer to O&amp;MM)</td>
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<tr>
<td>Turn the key start switch to START and crank engine</td>
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</tbody>
</table>

## MACHINE WARM-UP

<table>
<thead>
<tr>
<th>Step</th>
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</thead>
<tbody>
<tr>
<td>Allow machine to warm up (per time required in O&amp;MM)</td>
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<tr>
<td>Engage and disengage joystick controls to help speed warm-up of hydraulic components</td>
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<tr>
<td>Turn engine speed dial to medium, run engine for 5 minutes, continuously move joystick from BUCKET DUMP to HOLD</td>
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<tr>
<td>Turn the engine speed dial to the maximum engine speed and move joystick from BUCKET DUMP to HOLD to attain relief pressure</td>
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<tr>
<td>Cycle all controls to allow warm oil to circulate through all cylinders &amp; lines</td>
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<tr>
<td>Check gauge, indicators, and action light frequently</td>
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</tbody>
</table>
### MOVING THE MACHINE

<table>
<thead>
<tr>
<th>Step</th>
<th>Eval Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make sure area is clear</td>
<td></td>
</tr>
<tr>
<td>Turn the engine speed dial to the operating range</td>
<td></td>
</tr>
<tr>
<td>Move hydraulic lockout control to UNLOCKED position</td>
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<tr>
<td>Raise boom</td>
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<tr>
<td>Depress service brake pedal</td>
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<tr>
<td>Disengage parking brake</td>
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<tr>
<td>Select desired transmission gear</td>
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<tr>
<td>Release service brake pedal</td>
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<tr>
<td>Move travel speed pedal to the desired direction and to the desired speed</td>
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</table>

### MACHINE SHUT DOWN

<table>
<thead>
<tr>
<th>Step</th>
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<tbody>
<tr>
<td>Park machine on smooth, level area</td>
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<tr>
<td>To slow the machine, release travel pedal and depress service brake pedal</td>
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<tr>
<td>Lower all hydraulic implements</td>
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<tr>
<td>Move hydraulic lockout control to the LOCKED position</td>
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<tr>
<td>Run engine at low idle for 5 minutes to allow engine to cool</td>
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<tr>
<td>Turn key start switch to OFF and remove key</td>
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<tr>
<td>Utilize correct delayed engine shutdown procedure if equipped</td>
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<tr>
<td>Note: Overriding delayed engine shutdown may reduce engine &amp; machine system component life</td>
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<tr>
<td>Use for emergency situations only</td>
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</tr>
<tr>
<td>Turn battery disconnect switch to OFF</td>
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<tr>
<td>Do not turn off the battery disconnect switch until the “wait to disconnect lamp” has turned off. If the switch is turned off when the indicator lamp is illuminated the Diesel Exhaust Fluid (DEF) system will not purge the DEF. If the DEF does not purge, DEF could freeze and damage the pump and lines (if equipped).</td>
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</tr>
<tr>
<td>Dismount machine using 3-point contact</td>
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<tr>
<td>If parking for extended period: block tires, remove disconnect switch key and install vandalism guards (if equipped)</td>
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<tr>
<td>Conduct post-operation walk-around inspection</td>
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</tbody>
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### NOTES:

Inspected by: ___________________________ Date: ___________ Time: ___________