



# Start-Up & Shutdown Procedures 7495

Inspector \_\_\_\_\_ Evaluator \_\_\_\_\_

## 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.

Was procedure step completed properly?	√	Evaluator Comments
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### BEFORE STARTING THE MACHINE

Inspect the condition of the seat belt and mounting hardware Regardless of appearance, replace the seat belt after three years of use		
Adjust the seat so that full pedal travel can be achieved with the operator's back against the back of the seat		
Make sure the machine is equipped with a lighting system that is adequate for the job conditions Make sure all machine lights are working properly		
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		

### STARTING THE MACHINE - PERMISSIVES SCREEN (LEFT OPERATOR SCREEN)

E-Stop is checked		
1 Start within 2 minutes is checked		
2 Starts within 5 minutes is checked		
Drive Ready is checked		
Drive Cabinet Temperature is checked		
Phase Sequence is checked		
Auxiliary Ground Fault is checked		
Incomplete Start-up Sequence is checked		
Joystick Calibrated is checked		
Joysticks in Neutral is checked		
Hoist Released is NOT checked		
Crowd Released is NOT checked		
Swing Released is NOT checked		
Propel Released is NOT checked		
Boarding Ladder is checked		
Press the Drive Power ON button		
Monitor air pressure using status screen on left hand operator display		
Address all CDA faults		
Sound the signal horn making sure ALL personnel are clear of machine		
Ensure joysticks are in neutral, select DIG mode		
Press control RESET		
RELEASE the brakes using the control screen		
Briefly actuate swing, crowd, hoist controls - verify motion is operational		
Perform pre-op check of propel motion before operating propel		
Verify hoist and crowd limits are set properly and operational		



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Was procedure step completed properly?	✓	Evaluator Comments
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## NORMAL SHUTDOWN PROCEDURE

Park machine on firm SAFE ground away from any possible damage areas, falling rocks, flooding, etc.		
Place dipper on ground and return joysticks to neutral		
Make sure all brakes are set		
Press the Control Stop Button		
Press the Drive Power Off. This shuts down the drive		
DO NOT use the emergency stop for normal shutdown, this will set all the brakes.		

## EMERGENCY SHUTDOWN

Pressing any one of the Emergency Stop buttons will stop the machine under operations emergency conditions		
This button causes electrical and immediate mechanical braking simultaneously		
If machine is in motion, power will remain on the motions in order to provide electrical braking for a few seconds		
If the machine is in motion or stopped, this button will power the DC bus to approximately zero voltage quickly after the time delay		
Pressing the Emergency Stop button when any drive is in motion may result in component damage		

## RESTARTING AFTER AN ELECTRICAL FAULT

Before any/all motion can be reset, the following conditions must be met:		
For hoist/propel motion the hoist/propel transfer switch is in the position called for by the operator's mode selector switch		
Joystick for motion being reset must be in NEUTRAL		
Motion mechanical brake selector button must be in SET position		
For hoist or crowd travel limits, the motion will first slow down and then will stop, but the controls will remain active. Reversing the joystick will remove the fault and allow continued operation.		
For a boom jacking fault, ALL motions will stop but the controls will remain active. Reversing the crowd joystick will remove the fault and allow continued operation. For HydraCrowd equipped machines this takes approximately 3 seconds before the retract motion begins to respond. GENTLY retract the dipper handle until boom is completely lowered. You can then resume normal operation.		
If boarding ladder and/or stairs are pulled down while the machine is in operation, an alarm message will be sent to the operator and swing and propel motions will be shut down. Hoist and crowd motions will remain active. Once ladder and/or stairs are back in positions, motions may be restarted by pressing the control reset button.		
For most other faults, the machine will be shut down and brakes set. In these situations, the controls cannot be reset until the fault has been corrected by an electrician.		

## NOTES:

Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

