

OPERATOR TIPS H-SERIES

MAXIMIZE FUEL SAVINGS WITH EVERY LOAD

Our load-sensing hydraulics (938H-972H) deliver consistent operation and productivity at lower engine speeds. So you burn less fuel to do more. Studies show that unique operator techniques have a major impact on fuel savings and productivity. Following are some tips to ensure that H-Series operators move more material and burn less fuel. Make sure to utilize these techniques when setting up a truck loading demo.

GET THE RIGHT LOADER.

GETTING STARTED. Equip the machine with proper tires and bucket sizes/work tools. Radial tires are always preferred; L3-L4-L5 size classes. Remember, heavier tires require more fuel. Most importantly: Always consider the job application and use the lowest RPM required for the job. Use automatic 2-4 mode and avoid using teeth and adaptors for stockpiled aggregate. When possible, set the transmission in fuel efficient mode to the lower RPM upshift.

GET IN POSITION. Spot trucks so they're in the right position to load. When loading, try not to travel more than twice the length of the loader. Avoid placing the lift lever in detent and make use of the transmission neutralizer.

GET LOADED. Engage 1st gear prior to penetrating the pile and keep engine speed at or below 1600 RPM. When the cutting edge of the bucket starts penetrating the pile, gradually engage lift cylinders and increase rimpull. Lift the bucket approximately 2 ft (600 mm). Complete the loading cycle by raising the bucket smoothly and start tilting back in three steps. Most importantly, don't pump the bucket.

GET MOVING. Continue to lift while reversing. Use the brakes when changing directions, not full throttle FNR. Approach the truck while matching the remaining distance with the lift speed to just clear the bed height.

GET DUMPED. Don't raise the bucket any higher than necessary. Start dumping the bucket early and lift only what's needed to clear the bed height when backing out. Dump the load in a controlled manner. Keep your engine speed low while dumping. Remember: The advantage of load-sensing hydraulics is that you'll have more hydraulic flow at lower engine speeds.

GET BACK. When backing away from the truck after dumping, accelerate as you back out. Let off the throttle to change direction, accelerate to the pile for the next load.

IDLE DOWN IN IDLE. Reduce fuel burn whenever possible. Always set the parking brake when idling to utilize engine idle management.

H-SERIES APPLICATION TIPS – HOW TO LOWER

GENERAL OPERATION

DO:	DON'T:
• Make the proper GET selection for the application • Set the parking brake during idling. This will neutralize the transmission and activate engine idle management	• Use bucket teeth if unnecessary • Idle unnecessarily • Allow machine to be parked with transmission engaged • Reinforce bucket with unnecessary steel
• Purposeful, consistent working cycles • Change directions using the brakes	• “Stop and go” – sudden movements • Change directions full throttle with FNR
• Rule of thumb: working cycle approx. 30-45 sec • Spot the truck • Short cycle loading <2 machine lengths (load – backup – dump – backup)	• Load with excessive distances between loader and truck • Try to achieve high fill factors at the cost of speed
• Minimize load and carry if possible • Use 1:10 as a rule for load and carry slopes	• Travel longer load and carry distances than needed • Carry material on steep slopes

TRUCK LOADING

DO:	DON'T:
• Make sure the shift and power mode is set in automatic 2-4 mode, downshift to 1st just before penetrating the material	• Run empty bucket across ground
• Use the correct penetration angle, set bucket detent correctly	• Approach pile with bucket tilted forward
• Penetrate material slowly, lift bucket to apply ground pressure to front wheels. Keep lifting 5-10% stroke, while curling the bucket back	• Jerk bucket up/down (Hog the pile)
• Back out, lift partially • Let off throttle, use brakes, change direction, approach the truck • Lift and adjust ground speed/lift to reach truck; be smooth	• Stop lifting • Change direction using full throttle and no brakes • Use neutralize, stop and lift, to reach the truck load over height
• Penetrate material gradually • Always load in 1st gear	• Have tire to ground slippage • Load in 2nd gear
• Complete bucket rack back at 1/3 of maximum lift • Achieve maximum fill factor, no overload	• Drive into the material while loading bucket • Overload bucket
• Slow acceleration when reversing	• Accelerate too quickly

FUEL CONSUMPTION

H-SERIES

LOAD AND CARRY

DO:	DON'T:
• Accelerate slowly • Limited braking, remove foot off throttle early • Use large radius tires for less wear and resistance • Adjust tire pressure to application needs	• Fully accelerate and lift bucket at the same time • Fully accelerate and immediately brake • Use small radiuses – (tire wear and ground damage) • Make unnecessary movements

HAUL ROADS MANAGEMENT

DO:	DON'T:
• Small grades • Consistent slope design • Maintain haul roads with proper compaction, water runoff • Use both lanes • Use variable shift, automatic 2-4 and ride control • Small ramps in front of hoppers	• Inconsistently design haul roads or grades • Make unnecessary gear shifts • Let potholes develop. This will cause rolling resistance and material spill • Drive in high RPM at a set gear • Accelerate or brake when not required

LOADING HOPPERS

DO:	DON'T:
• Lift bucket only to reach hopper • Lift bucket while dumping • Dump all material from the bucket • Use return-to-dig function	• Lift higher than necessary • Dump material from too high • Drive with sticky material remaining in the bucket • Overfill the hopper • Lose time • Use wrong or inefficient approach angles

TRANSPORTING

DO:	DON'T:
• Use ride control or other comfort features • Use correct gear • Communicate logistics and plan	• Operate under high vibration • Drive in high RPM unless required • Operate empty loads • Operate logistical problems

