



HOW EXCAVATOR WORK MODES CAN BOOST PRODUCTIVITY AND REDUCE COSTS

Matt McLean, product manager, wheeled excavators

It's all about work modes. Today's excavators come with a variety of them to match engine speed and pump flow to the application. Selecting the proper mode ensures operators have the appropriate power and controllability for the task at hand — without burning more fuel than necessary.

Too often, operators tend to jump directly into the highest mode, regardless of task. The presumption can be that higher rpm equates to more productivity — but that's not always the case. Constantly running at the highest mode not only burns unnecessary fuel, it can result in speeds that only the most skilled operators are equipped to handle effectively.

With some simple tips and changes to operator behavior, you can see a positive impact to your operation's bottom line.

Volvo excavators feature nine total settings within four work modes — Idle (I), Fine (F), General (G) and Heavy (H). Selection of the mode during operation — perhaps more so than any other feature — offers the greatest potential for saved fuel, saved time and gained productivity, when used properly.

So, what are the four work modes your operators should be using? Let's take a look:

1. Idle (I) minimizes fuel consumption

What is it?

The “I” mode has two settings that allow the engine to run at low rpms when the machine isn’t actively working.

When should I use it?

The lower of the two settings runs at 800 rpm, offering the best possible fuel consumption short of the machine being off, which should be used as often as possible when not actively working. The higher “I” setting runs at 1,000 rpm, which still offers excellent fuel efficiency, but allows for quicker warmup times as compared to the lowest setting.

What’s my benefit?

The lower the rpm, the lower the fuel consumption and the greater cost savings. Volvo excavators also offer an auto-idle function which can be set to automatically switch to “I” mode after a predetermined amount of time, simplifying cost-saving potential for the operator.

2. Fine (F) provides precise control

What is it?

The “F” mode has two settings — each providing a lower pump flow for increased controllability, while still providing high boost pressure and full power.

When should I use it?

The lower of the two settings is ideal for fine finish work such as grading, whereas the higher setting provides

full power and slightly higher pump flow for the perfect balance between speed and controllability. The higher setting is ideal for scenarios that require speed, precision and power, such as setting large pipes or culverts in a trench.

What’s my benefit?

When used properly, the “F” mode ensures higher productivity and quality of work through increased precision.

3. General (G) dials in exact power

What is it?

With four settings ranging from 1,400 rpm to 1,700 rpm, the “G” mode allows the operator to choose a setting that achieves the task at hand with the least amount of fuel consumption.

When should I use it?

The “G” mode is excellent for general digging and excavation, and it allows the operator to find the perfect balance between power and fuel efficiency.

What’s my benefit?

It’s estimated that going down even two settings within “G” mode can reduce fuel consumption by up to 10%. Training operators to scale back will not only save on operating cost, but will also reduce stress on the engine and lead to longer machine life.

4. Heavy (H) boasts brute force

What is it?

The “H” mode offers one setting in which the engine runs at 1,900 rpm.

When should I use it?

The “H” mode is strictly for tasks that require maximum machine power and speed such as heavy truck loading and digging in extremely hard terrain at maximum depths. Fuel consumption is higher than any other mode and should only be used when necessary to accomplish the task at hand.

What’s my benefit?

Your operators have access to extremely impressive power as needed, but can scale back to save on fuel during normal operations.

To see Volvo work modes firsthand, watch this short video. And make sure your operators understand which mode to use for the task at hand. With more efficient excavator operation, you’ll see improved performance — and an improved bottom line.

Meet The Expert:

Matt started designing heavy equipment in 1996 and joined Volvo 14 years ago. He spent years working on skid steer loaders, trenchers, and horizontal directional drills. Today Matt’s role at Volvo has him conducting excavator product training for sales staff, collecting customer feedback to hear what tools and changes people are looking to see in the next generation of excavators, and spreading the word about the latest excavator technologies from Volvo. He is passionate about building customer relationships and enjoys getting to introduce people to Volvo’s latest machines.

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