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**Note:**

Before using these Quick Tips, read *DOCU054 AutoDriller User Guide* to become familiar with the safe operation of the AutoDriller.

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**Important:**

Pason recommends that you only start and operate the AutoDriller when the bit is on bottom. If you choose to use the AutoDriller when the bit is not fully on bottom during, for example, reaming or setting on bottom (initiating drilling), then it is imperative that you set a reasonable ROP limit or time drill set point. Failure to do so can potentially allow the blocks to fall or drop in an unsafe manner.

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**Safe Installation of the Overpull Limiter**

During the normal operation of the AutoDriller, the safety disconnect between the stepper motor and the brake handle chain should be 2 to 3 inches from the pulley of the overpull limiter. To achieve this, increase the length of the chain between the safety disconnect and the brake handle. The AutoDriller will pick up the slack. Also, apply a shot of WD40 to the quick coupler every week and perform a functional test. For more information, see *DOCU111 Overpull Limiter Installation Quick Tips*.

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**Note:**

Failure to follow the safe installation guidelines above can prevent the safety mechanism from disconnecting, which may result in injury and/or damage to equipment.

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**Starting and Stopping the AutoDriller**

To start the AutoDriller, ensure that there is a WOB target entered and, optionally, “not to exceed limits” for pressure, torque, ROP, or time drilling, then unlatch both kill switches (one on the drill floor and one in the doghouse).

To stop the AutoDriller, push either kill switch.

**Main AutoDriller Screen**

To open the main AutoDriller screen, from the EDR main screen select **SETUP**, then **AUTODRILLER**. The **PASON AUTODRILLER** screen opens.

**Calibrating the AutoDriller**

All calibrations are taken from the EDR system except for the drum encoder calibration. Calibrate the drum encoder at the start of each hole and when a slip-and-cut is done.

1. Ensure that the depth sensor is properly calibrated.
2. From the PASON AUTODRILLER screen, select **CALIBRATE AUTODRILLER ENCODER**.
3. Stop the blocks and select **OK**.
4. Move the blocks up at least 3 m (9 ft) and stop them.
5. Select **OK**. The calibration is complete.

## Setting Targets and Limits

Dashed lines in any of the boxes for Desired WOB, Diff Press Limit, Desired Torque, ROP Limit, or Time Drill, indicate that the respective control mode is not enabled. To enable these modes, use the procedures below.

### Setting the Desired WOB Target

1. From the PASON AUTODRILLER screen, select **SET DESIRED WOB**.
2. Select the buttons to increase or decrease the WOB target by 0.1, 0.5, or 3 kdaN (kLBS).
3. Select **EXIT**. Desired WOB has been set.

### Setting the Pressure Limit

1. From the PASON AUTODRILLER screen, select **SET DESIRED DIFF PRESS**.
2. Select the buttons to increase or decrease the differential pressure target by 2, 25, or 50 kPa (PSI).
3. Select **EXIT**. Desired diff press has been set.

### Adjusting the ROP Limit

1. From the PASON AUTODRILLER screen, select **SET ROP LIMIT**.
2. Select the **CHANGE** button, enter the ROP limit, and select **OK**.
3. Select **EXIT**. The ROP limit has been set.

### Adjusting the Time Drilling Rate

1. From the PASON AUTODRILLER screen, select **SET TIME DRILL TARGET**.
2. Select the **CHANGE** button in the top box to enter a target in meters (feet)/hour. Or, select the **CHANGE** button in the bottom box to enter a target in seconds/cm (in). The system will convert the entry to the other units automatically. Remember that setting either value to 0 disables the function.
3. Select **EXIT**.

### Setting the Pump Pressure Limit

1. From the PASON AUTODRILLER screen, select **SET MAX PUMP PRESS**.
2. Select the **CHANGE** button, enter the maximum pump pressure limit, and select **OK**. Select **EXIT**.

### Setting the Torque Limit

1. From the PASON AUTODRILLER screen, select **SET DESIRED TORQUE**.
2. Select the **CHANGE** button, enter a torque limit, and select **OK**. Select **EXIT**.

### Adjusting System Performance

If the AutoDriller is not keeping up, or if drilling is rough, you can modify system performance by adjusting the brake handle pull speed and the motor speed in the following ways:

1. From the PASON AUTODRILLER screen, select **ADJUST BRAKE HANDLE**.

2. To adjust brake pull aggressiveness, select **INCREASE PULL SPEED** or **DECREASE PULL SPEED**.
3. To adjust brake sensitivity (the handle movement required to squeak the drum), select **INCREASE SENSITIVITY** or **DECREASE SENSITIVITY**.
4. To increase or decrease the speed of the stepper motor, select **INCREASE MOTOR SPEED** or **DECREASE MOTOR SPEED**. Select **EXIT**.

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**Note:**

See *DOCU054 AutoDriller User Guide* for more information on brake pull speed and sensitivity, and motor speed.

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## Saving and Loading Setups

You can save and then load sliding or rotating control parameters so you don't have to reset your WOB target, and pressure and ROP limits every time you switch drilling methods.

1. From the PASON AUTODRILLER screen, select **SLIDING/ROTATING**.
2. Read the current values of all parameters in the table. Select **SAVE CURRENT TO SLIDING** or **SAVE CURRENT TO ROTATING** to save the current values to either setup.
3. When you are ready to load the sliding or rotating parameters, select **LOAD FROM SLIDING** or **LOAD FROM ROTATING**.
4. You will be asked to confirm your changes. Select **EXIT** when you are done.