

Breaks Utility

BREAKS UTILITY

The Breaks Utility allows you to:

- Create and manage General Breaks, such as lunch, smoke, and coffee breaks.
- Configure Tiedown Breaks.

Note: You use the Tiedown Utility to define tiedown locations. And you use the Breaks utility to configure the tiedown shift and start, end, and duration times.

- Schedule Events. This includes: scheduling equipment to execute an action at a specified time (status change, logon, etc.); and configuring DISPATCH to execute an Expression/FORM at a specific time.

Note: Scheduling events is a separate task from scheduling breaks. The two functions are unrelated.

Breaks Utility

Note: Do not use the Breaks utility to schedule weekly, monthly, yearly, or holiday breaks, for example, Christmas Day. These types of breaks are configured in the *config.prv* file.

Once you create a break, the system sends the break information to equipment field computers at the times specified in the Breaks Utility. If an operator does not take the break (or does not return) at the given time, DISPATCH generates an exception.

Topics in this section:

- [Break Basics](#)
- [Creating Breaks](#)
- [Renaming Breaks](#)
- [Changing Break Details](#)
- [Deleting Breaks](#)
- [Managing Events](#)

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Break Basics

The section discusses the basic information you need to know before creating breaks or changing break information.

Topics in this section:

- [Break Types](#)

- [Break Shift and Begin, End, and Duration Times](#)

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[Breaks Utility](#) > [Break Basics](#) > *Break Types*

Break Types

You can assign different Break Types to a break, depending if the break is a *general* break or *tiedown* break.

General Break Types

The system provides the following General Break types:

- [Most Loaders DO Break](#)
- [Most Loaders DO NOT Break](#)
- [Lunch Break](#)

Most Loaders DO Break

Informs DISPATCH that trucks and most shovels break at the same time. Shovel operators request the break by pressing DELAY and entering the proper DELAY code. The break starts after dispatcher verification.

DISPATCH schedules trucks for the break when the corresponding shovel goes on DELAY for the break. Trucks located at the shovel are Auto-DELAYed, and trucks in transit are Auto-DELAYed after arriving at the dump or shovel.

This flexible scheme allows the mine to stagger coffee and lunch breaks to ensure an uninterrupted flow of trucks to crushers and dumps. Also, the system can be configured to Auto-DELAY trucks at their current locations and to allow truck operators to manually request breaks on the field computer.

NAME	BREAK TYPE	CODE	SHIFT	BEGIN	END	DURATION	DELETE?
AFT SMOKE	Most Loaders DO Break	NONE	Day Shift	17:30:00	17:45:00	00:15:00	Del?
DAY SMOKE	Most Loaders DO Break	NONE	All Shifts	09:30:00	09:45:00	00:15:00	Del?
NIGHT SMOKE	Most Loaders DO Break	NONE	Night Shift	05:00:00	05:15:00	00:15:00	Del?
SHFTCHNGE	Most Loaders DO Break	0183	All Shifts	07:00:00	07:30:00	00:30:00	Del?

Scheduled Events

Eqmt. for event: FORM/EXPR events:

Event Time:

TIME SHIFT EQMT OR EXPRESSION ACTION OF REPEAT DELETE?

Examples of the Break Type "Most Loaders DO Break"

Most Loaders DO NOT Break

Informs DISPATCH that trucks break, but most shovels do not break. DISPATCH schedules trucks for the break as they assign off a dump. DISPATCH distributes truck breaks over the break window to limit the impact on production.

Lunch Break

Informs DISPATCH that all shovels and trucks break for lunch or coffee at the same time on each shift. When configuring a Lunch Break, define the Duration of the break to match the time period between the Begin and End times.

For example, if you set the Begin time to 12:00:00 and the End time to 12:30:00, set the Duration to 00:30:00.

Tiedown Break Types

The system provides the following Tiedown Break types:

- [Tiedown at Locations](#)
- [Tiedown at Excav/Loaders](#)
- [Tiedown on Holiday](#)
- [Tiedown at Shovel/Location](#)

Tiedown at Locations

Informs DISPATCH to send trucks to tiedown locations specified in the Tiedown Utility. Use the Breaks Utility to define the Begin and End times of the Tiedown at Locations break.

Tiedown at Excav/Loaders

Informs DISPATCH to send trucks to tiedown at shovels (shovels specified as tiedown locations in the Tiedown Utility) or to the shovels' associated tiedown locations. Use the Breaks Utility to define the Begin and End times of the Tiedown at Excav/Loaders break.

Tiedown on Holiday

Informs DISPATCH to set the status of an equipment to HOLIDAYSTATUS and the reason code to HOLIDAY REASON, if the equipment is not Down or Spare at the start of a Holiday shift. Use the Breaks Utility to define the Begin and End times of the Tiedown on Holiday break.

Tiedown at Shovel/Location

Informs DISPATCH to send trucks to tiedown at shovels (shovels specified as tiedown locations), their associated locations, or the locations listed as tiedown locations in the Tiedown Utility. Use the Breaks Utility to define the Begin and End times of the Tiedown at Shovel/Location break.

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[Breaks Utility](#) > [Break Basics](#) > Break Shift and Begin, End, and Duration Times

Break Shift and Begin, End, and Duration Times

For both General and Tiedown breaks, you must specify a shift (Day, Night, or All Shifts) and Begin, End, and Duration times.

Shift Field

When creating a General Break or a Tiedown Break, you specify which shift the break applies to in the Shift field. The Shift field options are mine-specific. For example, the options could be All Shifts, Day Shift, and Night Shift or All Shifts, Day Shift, Afternoon Shift, and Night Shift.

If a break has a unique shift constraint, a separate break is necessary for that shift. However, if a break occurs at the same time during a shift, regardless if it is a Day shift, Afternoon Shift, or Night shift, you only need to create one record for the break. The system calculates the correct break Begin and End times for each shift using the same offset from the end of shift.

Important: If you have more than one shift, and the shifts are not equally split (for example, if your day is divided into three shifts, 7, 6, and 11), the offset time might be more difficult to configure.

Begin, End, and Duration Fields

Correctly configuring the Begin, End, and Duration times assures that the break works as you designed it to.

- The Begin time designates the start of the break procedure.
- For General Breaks, End specifies the end time of the break. For Tiedown Breaks, End specifies the time all equipment should be at tiedown locations.
- For General Breaks, Duration specifies the length of the break. For Tiedown Breaks, Duration specifies (in minutes) a window of time where equipment is eligible for assignments to tiedown locations. The duration must be less than or equal to the End Time minus the Start Time.

As an example, assume we have a Tiedown Break with the following time values:

Begin: 18:30:00

End: 19:20:00

Duration: 00:40:00

In this example, DISPATCH begins tiedown assignments at 18:30.

The value in the Duration field is the amount of time that DISPATCH has to execute the tiedown procedure. The value of the Duration field must allow enough time for all equipment to position for tiedown.

All equipment must be in place by the End time, which, in this example, is 19:20.

Important: Do not set the End time to the same time as the actual end of the shift. If you do, DISPATCH might send a truck to its tiedown location within a few minutes of the shift end. Consequently, the truck would be late for the shiftchange. So it is best to set the End time to a few minutes before the actual Shift End.

Important: Pay special attention during tiedown and override DISPATCH decisions when appropriate.

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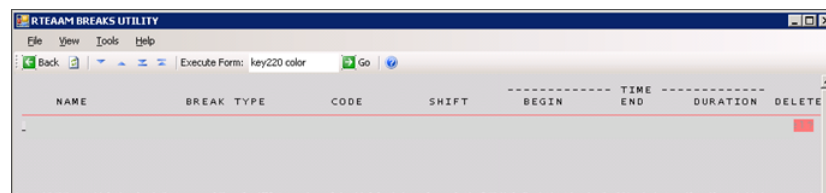
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[Breaks Utility](#) > [Creating Breaks](#)

Creating Breaks

To create a break:

1. [Start the Breaks Utility.](#)



Break Utility

2. In the Name field, enter a break name. For example, for a lunch break, you could enter Lunch. For a Tiedown Break, you could enter Shiftchange.

Note: Break names must be unique.

NAME	BREAK TYPE	CODE	SHIFT	BEGIN	END	DURATION	DELETE?
LUNCH							

Lunch Entered

A prompt similar to the following appears:

Lunch does not exist, Create? (Y/N)

- Click to answer yes.

Default values for the break appear.

NAME	BREAK TYPE	CODE	SHIFT	BEGIN	END	DURATION	DELETE?
LUNCH	Most Loaders DO Break	NONE	All Shifts	Unknown	Unknown	00:00:00	Del?

Break Default Values

- Right-click the [Break Type](#) field, and select the break type. For a lunch break, you would select the break type [Lunch Break](#). For a tiedown break, you would select one of the tiedown break types ([Tiedown at Locations](#), [Tiedown at Excav/Loaders](#), etc.).
- In the Code field, enter the reason code for the break. You can type ? to display a list of the Delay reason codes.
 - If creating a Tiedown Break, enter a Delay code that can be assigned to all equipment taking the break.
 - If a code does not apply, you can leave the default value None.
- Right-click the Shift field, and select the applicable shift or All Shifts.
- In the Begin field, enter the break start time.
- Note:** The values you can enter in the Begin and End fields are restricted by the begin and end times of the shift you are currently in.
- In the End field, enter the end time for the break.
- In the Duration field, enter the break duration. The duration must be less than or equal to the End Time minus the Start Time.
- Press Enter.

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[Breaks Utility](#) > Renaming Breaks

Renaming Breaks

To change the name of a break:

- [Start the Breaks Utility](#).
- Click the break name; for example, Lunch.
- Enter a new name; for example, Coffee.

A prompt similar to the following appears:

Coffee doesn't exist. Create? (Y/N)

- Right-click to answer no.

A prompt similar to the following appears:

Rename Lunch to Coffee? (Y/N)

TBT BREAKS UTILITY

File View Tools Help

Back Execute Form: breaks Go

NAME	BREAK TYPE	CODE	SHIFT	BEGIN	TIME END	DURATION	DELETE
LUNCH	Most Loaders DO Break	NONE	All Shifts	Unknown	Unknown	00:00:00	Del?

Scheduled Events

Eqmt. for event: NONE FORM/EXPR event:

Event Time:

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?
17:47:44	All Shifts	Truck T100	Down	100		Del?

Rename LUNCH to COFFEE? (Y/N)

localhost C:\Program Files\intellimine\mms\dsp\cl\tbt\com

Rename Break Prompt

5. Click to answer yes.

TBT BREAKS UTILITY

File View Tools Help

Back Execute Form: breaks Go

NAME	BREAK TYPE	CODE	SHIFT	BEGIN	TIME END	DURATION	DELETE?
COFFEE	Most Loaders DO Break	NONE	All Shifts	Unknown	Unknown	00:00:00	Del?

New Break Name Coffee

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[Breaks Utility](#) > [Changing Break Details](#)

Changing Break Details

You can edit the following break details: Break Type, Code, Shift, Begin, End, and Duration.

Note: If you incorrectly enter a time in the Begin field that is later than the time in the End field, the system changes the End field to match the time in the Begin field. Likewise, if you enter a time in the End field that is earlier than the time in the Begin field, the system changes the Begin field to match the value in the End field. In both cases the system automatically changes the value in the Duration field to 00:00:00.

1. [Start the Breaks Utility.](#)
2. Change data as necessary.

The system automatically saves the new entries.

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[Breaks Utility](#) > *Deleting Breaks*

Deleting Breaks

To delete a break:

1. [Start the Breaks Utility](#).
2. Click the break's Del? field.

A message similar to the following appears:

COFFEE Deleted.

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[Breaks Utility](#) > *Managing Events*

Managing Events

The Breaks Utility Scheduled Events section allows you to schedule an event. Events include

- Scheduling equipment to execute an action at a specific time
- Configuring DISPATCH to execute an Expression/FORM at a specific time

Topics in this section:

- [Scheduling an Action Type Event](#)
- [Scheduling a Form or Expression](#)
- [Changing Event Details](#)
- [Scheduling a Recurring Event](#)
- [Deleting an Event](#)

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[Breaks Utility](#) > [Managing Events](#) > [Scheduling an Action Type Event](#)

Scheduling an Action Type Event

You can schedule equipment to execute an action (status change, logon, etc.) at a specific time. For example, if there is a safety procedure you must execute on a certain piece of equipment every day, you can schedule a delay for that equipment and specify the safety procedure. Or, there might be certain actions that you want to regulate, such as scheduling the order and time in which your water trucks are refilled.

To create an action type event, you first define the equipment you want to execute the action and the time the event should occur. You then specify the shift, the action, and the action's related reason code (if one applies).

DISPATCH executes the event on a daily basis, until you delete the event.

1. [Start the Breaks Utility.](#)

Scheduled Events

Eqmt. for event: NONE FORM/EXPR event: _____

Event Time: _____

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?

Break Utility's Scheduled Events Section

2. Right-click the Eqmt for event field, and select the type of equipment that you want to execute the action.

Scheduled Events

Eqmt. for event: Truck FORM/EXPR event: _____

Event Time: _____

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?

Selecting Equipment Type Truck

A prompt similar to the following appears:

Enter Truck ID:

3. Enter the equipment ID; for example, T210.

Scheduled Events

Eqmt. for event: NONE FORM/EXPR event: _____

Event Time: _____

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?

Enter Truck ID: T210

Entering Truck T210

4. Press Enter.

The cursor moves to the Event Time field.

5. Type the start time of the event.

Scheduled Events

Eqmt. for event: Truck T210 FORM/EXPR event: _____
 Event Time: 15:00:00

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?

Entering Time the Event Start Time

6. Press Enter;

A prompt similar to the following appears:

Create new event for T210 at 15:00:00? Y/N

7. Click to answer yes.

The event appears in the list of scheduled events.

Scheduled Events

Eqmt. for event: Truck T210 FORM/EXPR event: _____
 Event Time: _____

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?
15:00:00	All Shifts	Truck T210	Ready	NONE		Del?

New Equipment Event, T210

Use the following fields to finish defining the event.

- Time** Time the event will occur, as entered in the **Event Time** field. You can change the Time.
- Shift** Shift that the event occurs in. Right-click and select a shift or All Shifts.
- Eqmt or Expression** Do not enter a value in this field.
- Action** The action executed on the equipment. Enter ? to display a list of available actions.
- Code** The code value for the action defined in the **Action** field. For example, if the action is a **Status Change**, enter a reason code. If the action is **Logon**, enter an operator ID.
- Repeat** Used to create repeating records. See [Scheduling a Recurring Event](#).

8. Press Enter to save the event.

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[Breaks Utility](#) > [Managing Events](#) > [Scheduling a Form or Expression](#)

Scheduling a Form or Expression

The Breaks Utility can execute any standard or custom FORM, or run any expression defined in the *client_exprs.frm* file. You can use this functionality to help schedule actions that have been required by regulations that are not typically associated to an event or standard code. For example, regulations may require a specific road to be shut down for maintenance at the same time every day.

Note: To identify a FORM or expression that contains the features you require, contact your Modular Support engineer.

1. [Start the Breaks Utility](#).
2. In the FORM/EXPR Event field, enter a FORM or an expression name; for example, DownLocation.

Scheduled Events

Eqmt. for event: NONE FORM/EXPR event: DOWNLOCATION
 Event Time: _____

TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?

Entering DownLocation

3. In the Event Time field, enter the start time of the event.

The screenshot shows a window titled "Scheduled Events". At the top, there are two fields: "Eqmt. for event:" with a dropdown menu set to "NONE", and "FORM/EXPR event:" with a dropdown menu set to "DOWNLOCATION". Below these is the "Event Time:" field, which contains the text "22:30:00" and a mouse cursor. Below the "Event Time" field is a table with the following headers: "TIME", "SHIFT", "EQMT OR EXPRESSION", "ACTION", "CODE", "REPEAT", and "DELETE?". The table is currently empty.

Entering Time 22:30:00

4. Press Enter.

The following prompt appears:

Create new event for DOWNLOCATION at 22:30:00? (Y/N)

5. Click to answer yes.

The event appears in the list of scheduled events.

The screenshot shows the "Scheduled Events" window again. The "Event Time:" field is now empty. The table below has one row of data: "22:30:00" in the "TIME" column, "All Shifts" in the "SHIFT" column, "DOWNLOCATION" in the "EQMT OR EXPRESSION" column, "Form" in the "ACTION" column, "NONE" in the "CODE" column, and "Del?" in the "DELETE?" column. A pink arrow points to the "Del?" button.

New Expression Event, DownLocation

Use the following fields to finish defining the event.

Field	Definition
Time	Time the event will occur, as entered in the Event Time field. You can change the Time.
Shift	Shift that the event occurs in. Right-click and select a shift or All Shifts.
Eqmt or Expression	The expression that executes the action programmed in the code.
Action	When you define a FORM or an Expression, this field defaults to FORM. Do not edit this field.
Code	Leave this field blank.
Repeat	Specify a time (in hours and minutes) when the event should reoccur. For additional details, see Scheduling a Recurring Event .

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[Breaks Utility](#) > [Managing Events](#) > [Changing Event Details](#)

Changing Event Details

To change event details:

1. [Start the Breaks Utility](#).
2. Make the changes to the event and press Enter.
 - For action events, you can change data in the Time, Shift, Action, and Code fields.
 - For FORM/Expression events, you can change data in the Time and Shift fields.

Scheduled Events						
Eqmt. for event: <u>NONE</u>		FORM/EXPR event: <u>DOWNLOCATION</u>				
Event Time: _____						
TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?
22:30:00	Night Shift	DOWNLOCATION	Form	765		Del?
						Del?

Updated Expression Details

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[Breaks Utility](#) > [Managing Events](#) > [Scheduling a Recurring Event](#)

Scheduling a Recurring Event

If you would like an event to repeat at a different time, you can specify a time for it to recur in the REPEAT field. The system will then copy the event record and make a new record with a different start time. You can schedule a "repeat" when you first create the record or for an existing record.

Note: The repeat function is used primarily for testing purposes.

1. [Start the Breaks Utility.](#)
2. In the event's Repeat field, enter a time for the event to recur. Use hours and minutes; for example, 10:30.

Scheduled Events						
Eqmt. for event: <u>NONE</u>		FORM/EXPR event: <u>DOWNLOCATION</u>				
Event Time: _____						
TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?
22:30:00	Night Shift	DOWNLOCATION	Form	775	10:30	Del?

Creating Recurring Event at 10:30:00

A prompt similar to the following appears:

Create new event for DOWNLOCATION at [10:30:00]? (Y/N)

3. Click to answer yes.

DISPATCH creates the new event record. The new event record has the same values as the original event record, except for the new Time value.

Note: If the original record was for a specific shift (for example, Night Shift), the value in the Shift field changes to All Shifts if the new time is outside the range of the original shift.

Scheduled Events						
Eqmt. for event: <u>NONE</u>		FORM/EXPR event: <u>DOWNLOCATION</u>				
Event Time: _____						
TIME	SHIFT	EQMT OR EXPRESSION	ACTION	CODE	REPEAT	DELETE?
<u>22:30:00</u>	<u>Night Shift</u>	<u>DOWNLOCATION</u>	<u>Form</u>	<u>775</u>	<u>1</u>	<u>Del?</u>
<u>10:30:00</u>	<u>All Shifts</u>	<u>DOWNLOCATION</u>	<u>Form</u>	<u>NONE</u>	<u>1</u>	<u>Del?</u>

Default Values for Recurring Event

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[Breaks Utility](#) > [Managing Events](#) > [Deleting an Event](#)

Deleting an Event

To delete an event:

1. [Start the Breaks Utility.](#)
2. Click the event's Del? field.

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