### LINK SCHEDULE

Link Schedule Screen is the screen which contains the list of all the machines along with some properties. This screen works on "**parent-child table relationship**" which has the ability to show child rows for each row.

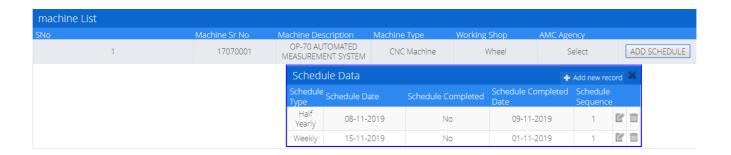
This child rows are attached to each parent row, and can be used, for example, to provide extra information about the parent row. Here, you will do crud operation over the child row.

The term CRUD is short for Create, Read, Update and Delete-

- Create
  - Creates a new row in the machine\_schedule\_transaction table with data as entered by the user
- Read
  - Returns a Stream over all the rows in the machine\_schedule\_transaction table
- Update
  - Updates an existing row in machine\_schedule\_transaction table in the database from the given entity based on primary key- "schedule id"
- Delete
  - Removes the row from machine\_schedule\_transaction table in the database

When user clicks on the "Link Schedule" option under the "Operations on Machine Maintenance" Menu option of Maintenance, all the machines along with their attributes will be shown here.

machine List							
SNo	Machine Sr No	Machine Description	Machine Type	Working Shop	AMC Agency		
1	17070001	OP-70 AUTOMATED MEASUREMENT SYSTEM	CNC Machine	Wheel	Select	ADD SCHEDULE	
2		HUMAN MACHINE INTERFACE-I	CNC Machine	Wheel	Select	ADD SCHEDULE	
3	14700002	Bolster Machining-II	CNC Machine	Bogie	Select	ADD SCHEDULE	
4	14600001	Bogie Frame Machine-I	CNC Machine	Bogie	Select	ADD SCHEDULE	
5		OP-110 WHEEL HUB GREASING STATION	CNC Machine	Wheel	Select	ADD SCHEDULE	
6		HMI-III	CNC Machine	Wheel	Select	ADD SCHEDULE	



Here, you can add a new record of child entity by clicking button 'Add Schedule', can edit already available child record by clicking edit button, or delete existing machine record by clicking delete button.

#### **Functionalities:**

A new child record is created by clicking toolbar icon 'Add New Record' under the button 'Add Schedule'.

✓ **List of Machines**: A Machine List table with the following properties is displayed:

• S No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

• Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

• Machine Description

Description of machines corresponding to the particular machine ID.

• Machine Type

Type of machine is to be selected here. There are some types which are already defined like CNC machine, non-CNC machine, laboratory instruments etc.

• Working Shop

Sequence of stages are carried out in different shops such as wheel shop, bogie shop etc.

• AMC Agency

ID and description associated with the AMC Agency.

#### ADD SCHEDULE (CHILD TABLE)

✓ Add New Record: There are various fields:

• Schedule Type

Schedule types are- weekly, half-yearly, yearly etc

• Schedule Date

Date on which activities are scheduled

• Schedule Completed Flag

Flag to know whether scheduled activity is completed or not

• Schedule Completed Date

Date on which scheduled activity is completed

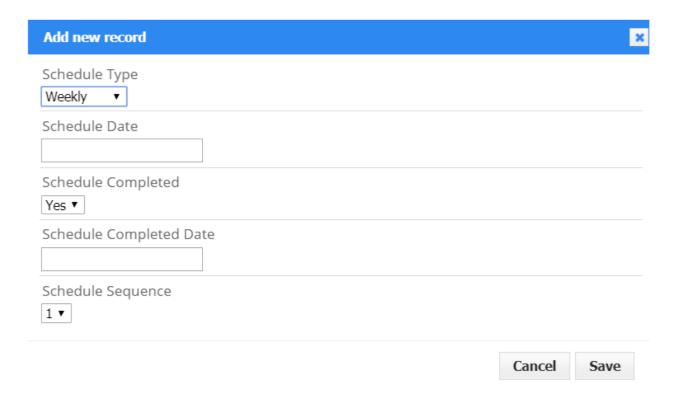
• Schedule Sequence

Sequence number of scheduled activity

**Note**: Editing and deleting of existing data can be done on the screen.

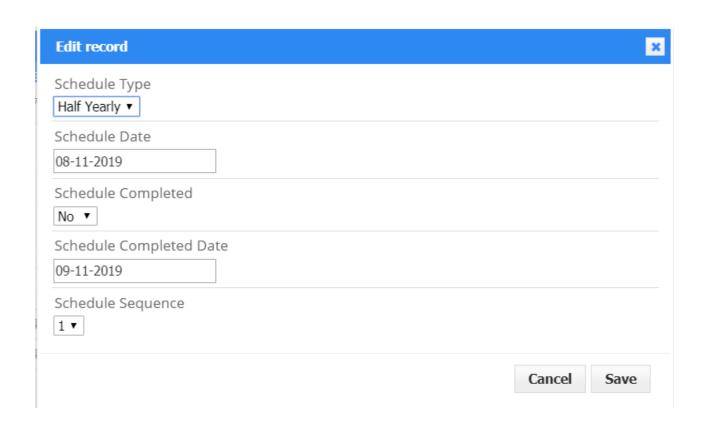
#### ADDING NEW RECORD

When you click on Save button, data as entered by the user will be saved on the screen and in the database, one row will be added with the same data.



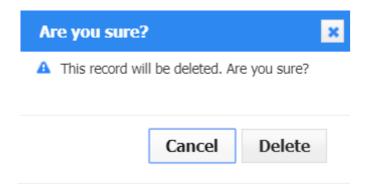
#### EDITING ALREADY EXISTING RECORD

When you want to add some new information to the existing data or want to update already entered data, you click on the edit button on the screen.



#### **DELETE DATA**

When you want to delete some data, you click on the delete button on the screen. Data deleted from the Screen will be deleted from database as well.



# LINK SCHEDULE ACTIVITY

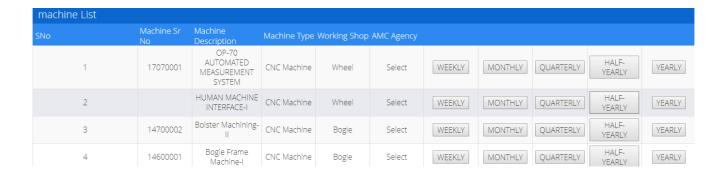
Link Schedule With Activity Screen is the screen which contains the list of all the machines along with some properties. This screen works on "**parent-child table relationship**" which has the ability to show child rows for each row.

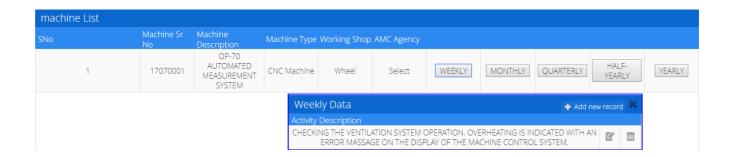
This child rows are attached to each parent row, and can be used, for example, to provide extra information about the parent row. Here, you will do crud operation over the child row.

The term CRUD is short for Create, Read, Update and Delete-

- Create
  - Creates a new row in the machine\_schedule\_activity table with data as entered by the user
- Read
  - Returns a Stream over all the rows in the machine\_schedule\_activity table
- Update
  - Updates an existing row in machine\_schedule\_activity table in the database from the given entity based on primary key- "activity no"
- Delete
  - Removes the row from machine\_schedule\_activity table in the database

When user clicks on the "Link Schedule Activity" option under the "Operations on Machine Maintenance" Menu option of Maintenance, all the machines along with their attributes will be shown here.





Here, you can add a new record of child entity by clicking button "Weekly, Monthly, Quarterly, Half-Yearly, Yearly", can edit already available child record by clicking edit button, or delete existing machine record by clicking delete button.

#### **Functionalities:**

A new child record is created by clicking toolbar icon 'Add New Record' under the button 'Add Schedule'.

✓ **List of Machines**: A Machine List table with the following properties is displayed:

#### • S No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

#### • Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

#### • Machine Description

Description of machines corresponding to the particular machine ID.

#### • Machine Type

Type of machine is to be selected here. There are some types which are already defined like CNC machine, non-CNC machine, laboratory instruments etc.

#### • Working Shop

Sequence of stages are carried out in different shops such as wheel shop, bogie shop etc.

#### • AMC Agency

ID and description associated with the AMC Agency.

#### Weekly, Monthly, Quarterly, Half-Yearly, Yearly

#### ✓ **Add New Record**: There is one field only:

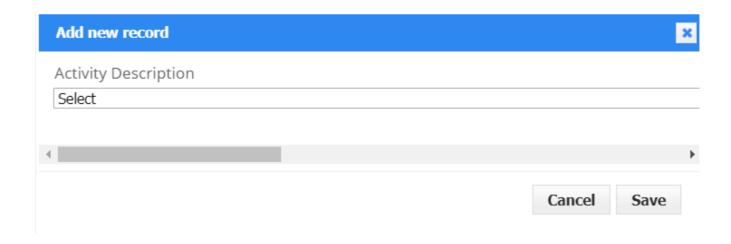
#### • Activity Description

Description of all the activities associated with unique activity no

**Note**: Editing and deleting of existing data can be done on the screen.

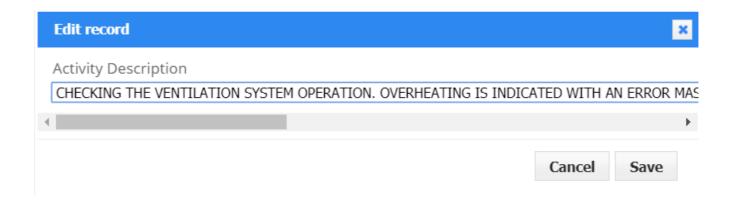
#### ADDING NEW RECORD

When you click on Save button, data as entered by the user will be saved on the screen and in the database, one row will be added with the same data.



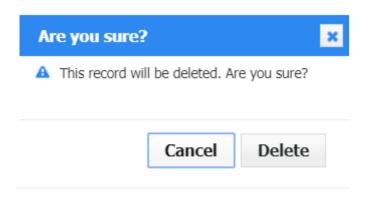
#### EDITING ALREADY EXISTING RECORD

When you want to add some new information to the existing data or want to update already entered data, you click on the edit button on the screen.



#### **DELETE DATA**

When you want to delete some data, you click on the delete button on the screen. Data deleted from the Screen will be deleted from database as well.



## REPORT MACHINE FAILURE

The breakdown maintenance is a type of maintenance that involves using a machine until it completely breaks down and then repairing it to working order. This Report Machine Failure is the major part of this maintenance.

This Report Machine Failure Screen contains all the machines with their attributes. On this screen, one toolbar will be there. On submitting the required details of the toolbar, the selected machine will be reported as failed with the details entered by the user.

When user clicks on the "Report Machine Failure" option under the "Operations On Machine Maintenance" Menu option of Maintenance, all the machines and their some attributes will be shown here.

Machine List						
5No	Machine Sr No	Machine Description	Machine Type	Working Shop	Maintenance Shop Id	AMC Agency
1	17070001	OP-70 AUTOMATED MEASUREMENT SYSTEM	CNC Machine	Wheel Shop	Select	Select
2		HUMAN MACHINE INTERFACE-I	CNC Machine	Wheel Shop	Select	Select
3	14700002	Bolster Machining-II	CNC Machine	Bogie Shop	Select	Select
4	14600001	Bogie Frame Machine-I	CNC Machine	Bogie Shop	Select	Select
5		OP-110 WHEEL HUB GREASING STATION	CNC Machine	Wheel Shop	Select	Select
6		HMI-III	CNC Machine	Wheel Shop	Select	Select
7	17020001	OP-20 CNC AXLE TURNING M/C	CNC Machine	Wheel Shop	Select	Select

Here, you can report the failure of any machine using toolbar option 'Machine Report Failure'. The failed machines will be displayed in red colour.

#### **Functionalities:**

A machine is reported failed by clicking toolbar icon 'Machine Report Failure'.

- ✓ **List of Machines**: Machine List table with the following properties is displayed:
- Sr No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

• Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

- Machine Description
  - Description of machines corresponding to the particular machine ID.
- Machine Type

Type of machine is to be selected here. There are some types which are already defined like CNC machine, non-CNC machine, laboratory instruments etc.

• Working Shop
Sequence of stages are carried out in different shops such as wheel shop, bogie shop etc.

#### • Maintenance Shop ID

IDs associated with the maintenance shop of machines.

#### • AMC Agency

IDs and descriptions associated with the AMC Agency.

- ✓ Machine Report Failure: There are some fields which will update the details of breakdown of machine:
- Enter Breakdown Date

Date on which machine was failed. This date can be of today as well as past but can't be of future.

#### • Failure Code

Dropdown of all the failure descriptions to be selected by the user.

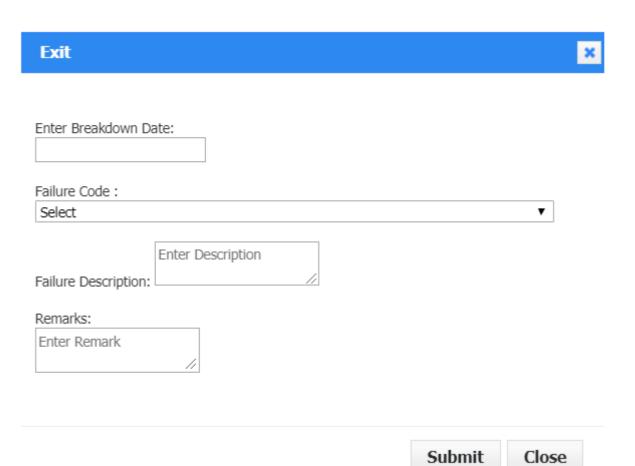
#### • Failure Description

Descriptions of failed properties of the machines as entered by the user.

#### • Remarks

Remarks entered as by the user.

When you click on Submit button, data as entered by the user will be saved in the database under the table "machine\_breakdown".



# PERFORM ACTION ON FAILED MACHINE

The breakdown maintenance is a type of maintenance that involves using a machine until it completely breaks down and then repairing it to working order. This Action on Failed Machine is the major part of this maintenance.

This Perform Action on Failed Machine Screen contains only the failed machines with their attributes. On this screen, one toolbar "Perform Action" will be there. On submitting the required details of the toolbar, the selected machine status will be reported either as under progress or resolved as entered by the user.

When user clicks on the "Perform Action on Failed Machine" option under the "Operations On Machine Maintenance" Menu option of Maintenance, all the failed machines and their some attributes will be shown here.

Failed	Failed Machine							
SNo	♦ Machine Sr No.	♦ Machine Description	Breakdown Date	Breakdown Details	♦ Breakdown Remarks	Comissioning Date		
2	17060001	OP-40 ULTRASONIC TESTING	26-11-2019			17-10-2015		
3	17090001	OP-210 CNC SURFACE PORTALLATHE M/C	26-11-2019	mhtvxg	poul8lyxs	17-10-2015		
4	13000001	CNC BED MILLING MACHINE FLIQ153 WWAS (TOS KURIW)	11-11-2019			19-12-2014		

Here, you can report that the machine is either failed or failure resolved of any machine using toolbar option 'Perform Action'. The failed machines will be displayed in red colour.

#### **Functionalities:**

Actions on the failed machines is reported by clicking toolbar icon 'Perform Action'.

- ✓ **List of Machines**: Machine List table with the following properties is displayed:
- S No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

• Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

• Machine Description

Description of machines corresponding to the particular machine ID.

• Breakdown Date

Date on which machine was failed.

• Breakdown Details

Details of breakdown condition.

• Breakdown Remarks

Remarks as entered by user in the report machine failure task.

- Commissioning Date

  Date on which machine is commissioned.
- ✓ **Perform Action**: There are some fields which will update the action performed on failed machines:
- Enter Action to be Performed Action which will be performed on the failed machines.
- Remarks Remarks as entered by the user.
- Status

  Two kinds of status can be updated like- Under Progress and Resolved. Under Progress is for those machines which are still failed and Resolved is for those machines which are repaired.
- Enter completion date

  Date on which the failed machine is repaired. This date picker will be disabled till the status is under progress, further when the status is resolved, then the date picker will be enabled.

When you click on Submit button, data as entered by the user will be saved in the database under the table "machine\_failed\_action".

Action taken for CNC BED MILL	×
Enter Action To be Performed:	
Remarks:	
Status:	
Select ▼	
Enter Completion Date:	
26-11-2019	
Submit Close	

### OVERDUE SCHEDULE

Scheduled maintenance is any maintenance that is arranged to be done ahead of time and within a predetermined period. It can either be a recurring task done at regular time intervals or a one-time task. Scheduled maintenance includes inspections, adjustments, regular service, and planned shutdowns.

This Overdue Schedule Screen contains only those machines whose scheduled activity is due. On this screen, one toolbar "Release For Schedule" will be there. On submitting the required details of the toolbar, the selected machine will be released for the scheduled activity.

When user clicks on the "Overdue Schedule" option under the "Operations On Machine Maintenance" Menu option of Maintenance, all the machines and their some attributes whose scheduled activity is due will be shown here.

Schedule Due Machine					
SNo	Machine Sr No.	Machine Description	♦ Schedule Type	Schedule Date	+
1					

#### **Functionalities:**

Machine is released for schedule activity by clicking toolbar icon 'Release for Schedule'.

- ✓ **List of Machines**: Machine List table with the following properties is displayed:
- S No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

• Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

- Machine Description
  - Description of machines corresponding to the particular machine ID.
- Schedule Type Schedule types are- weekly, half-yearly, yearly etc.
- Schedule Date

Date on which activity is scheduled for machine.

- ✓ **Release for Schedule**: There is only one field which will be updated:
- Enter Release Date

  Date as entered by the user for the schedule of machine.

When you click on Submit button, data as entered by the user will be saved in the database.

Release Machine Under Water				
Enter Release Date:				
27-11-2019				
	Submit	Close		

## OVERDUE ACTION SCHEDULE

Scheduled maintenance is any maintenance that is arranged to be done ahead of time and within a predetermined period. It can either be a recurring task done at regular time intervals or a one-time task. Scheduled maintenance includes inspections, adjustments, regular service, and planned shutdowns.

This Overdue Action Schedule Screen contains only those machines who are dispatched for the scheduled activity to be done. On submitting the required details of the toolbar, the selected machine will have some information to be submitted by the user for the scheduled activity.

When user clicks on the "Overdue Action Schedule" option under the "Operations On Machine Maintenance" Menu option of Maintenance, all the machines and their some attributes whose scheduled activity is due will be shown here.

Schedule Due Machine					
SNo	Machine Sr No.	Machine Description	♦ Schedule Type	Schedule Date	<b>♦</b>
1	14000001	Under Water Plazma-I (Z2191)	Wundefined	26-11-2019	

#### **Functionalities:**

Machine record is submitted with some information by clicking toolbar icon 'Perform Action'.

- ✓ **List of Machines**: Machine List table with the following properties is displayed:
- S No

A unique identifier assigned incrementally or sequentially to the machines, to uniquely identify them.

• Machine Sr No

A unique identifier assigned by the user to the machines, to uniquely identify them.

• Machine Description

Description of machines corresponding to the particular machine ID.

• Schedule Type

Schedule types are- weekly, half-yearly, yearly etc.

• Schedule Date

Date on which activity is scheduled for machine.

- ✓ **Perform Action**: There are some fields which will be updated:
- Enter Action to be Taken
  Action to be taken will be entered by the user
- Remarks Remarks as entered by the user
- Enter Schedule Completed Date Final completion date of the scheduled activity

• Is Spare Replace
It has two options: Yes and No, when any spare changes are there, then we have to select "YES" and add information like spare description and serial number, otherwise left it at "NO".

When you click on Submit button, data as entered by the user will be saved in the database.

