

# MaintSmart CMMS Software - An Overview

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Companies and organizations worldwide are realizing that a good CMMS (computerized maintenance management system) pays for itself very quickly. MaintSmart CMMS is a complete maintenance management system. MaintSmart CMMS Software is used worldwide by manufacturing, major universities, military, government, public utilities, hotels, restaurants, vehicle fleets and more. MaintSmart CMMS Software was originally designed by a maintenance manager after becoming frustrated with cryptic codes, confusing user-interfaces and incomplete systems. MaintSmart CMMS Software's design focuses on ease of use, speed of data entry, data analysis and reporting. User-friendly text is used instead of cryptic codes.

Selecting a good CMMS can be quite difficult. Countless CMMS applications are available. Unfortunately many come and go each year. MaintSmart CMMS Software, established in 1996, is here to stay. Our CMMS is comprehensive yet doesn't require you to use any more of the program than you need. MaintSmart CMMS Software is priced as if you'll only use one part of the program. Many common fields are optional and shortcuts abound.

## **MaintSmart CMMS Software separates itself from other CMMS' is several important ways:**

- is fully self-contained, no modules, programs, databases or yearly fees are needed.
- Multiple equipment hierarchies with unique equipment "tree".
- provides a simple interface to work orders, PMs, equipment failure, purchasing/inventory and reliability analysis.
- is priced as if you only intend to use one of these sections
- is the ONLY CMMS that integrates reliability analysis behind the scenes to guide you toward optimized PM task lists.
- evaluates each equipment item 'cost to own' including labor hours, inventory and lost opportunity cost.
- suggests personnel for jobs based upon skills
- determines if equipment is getting more or less reliable
- guiding you to the proper action while maximizing the efficiency of your resources
- tree view display for equipment and inventory.
- Reports in countless ways Crystal Reports, Excel, or save any data grid as web page, .pdf, text, Excel, etc
- Many shortcuts including optional fields, work station defaults for most common fields.

Training is not required. Sixty days toll-free support and unlimited email support for life at NO charge insures successful implementation and use. Extended support is available. Our users range from being very happy to being excited about using MaintSmart CMMS Software.

# Work Orders - An Overview

## Speed of Data Entry

- Most fields are optional.
- Up to nine fields may use default settings. These defaults automatically populate fields when a new work order is created.
- Drop-down lists provide valid entries.
- Filters provided for drop-down boxes further narrow items in selection.
- Type-search available on appropriate drop-downs.
- Duplicate work order with one mouse-click.
- Work order templates are boiler-plates of existing work orders. These are used to automatically create new work orders.
- Sort and merge work order view.
- Limit data view with flexible on-the-fly filtering. Save these filters as a menu item for later use if needed.
- Aged work orders are flagged with colored grid row.
- Create a down time(unexpected failure) record and MaintSmart CMMS Software responds by creating a work order with the appropriate task.
- Much more. Call us for a web demo!

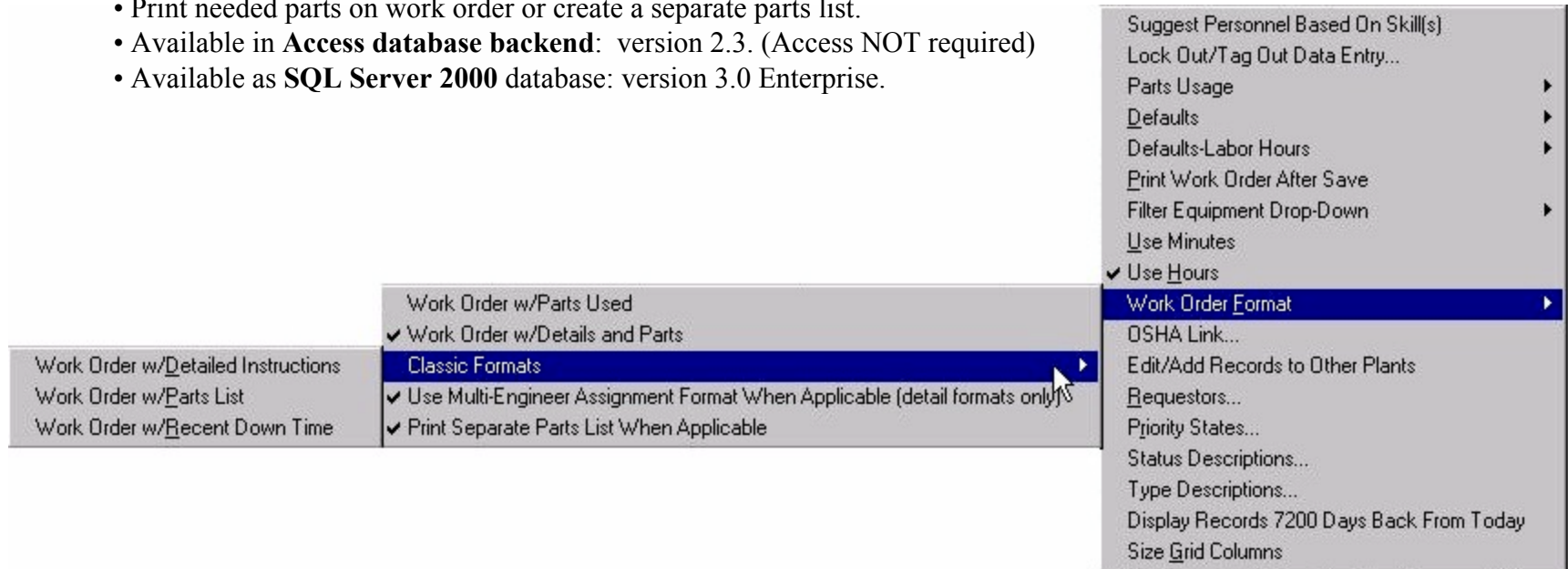
The screenshot displays the 'Work Order Data Entry' window in the MaintSmart CMMS software. The window has a menu bar with 'File', 'View', 'Filters', 'Templates', 'Meters', 'Flags', 'Barcodes', 'Invoices', and 'Blanket WO'. Below the menu bar is a toolbar with various icons. The main area contains a table with columns: 'Work Order Number', 'Date Assigned', 'Date Completed', 'Name', and 'Area'. The table shows several work orders, with the first two rows highlighted in red, indicating they are aged. A context menu is open over the table, listing options such as 'Work Order w/Parts Used', 'Work Order w/Details and Parts', 'Classic Formats', 'Use Multi-Engineer Assignment Format When Applicable (detail formats only)', and 'Print Separate Parts List When Applicable'. The 'Work Order Format' option is selected and highlighted in blue. The 'Options' menu is also open, showing a list of settings including 'Edit/Add Records to Other Plants', 'Display Records 7200 Days Back From Today', 'Suggest Personnel Based On Skill(s)', 'Parts Usage', 'Defaults', 'Defaults-Labor Hours', 'Work Order Format', 'OSHA Link...', 'Lock Out/Tag Out Data Entry...', 'Requestors...', 'Priority States...', 'Status Descriptions...', 'Type Descriptions...', and 'Size Grid Columns'.

Work Order Number	Date Assigned	Date Completed	Name	Area
19	2/19/2001	3/22/2001	Larry Pratts	No Area Assign
23	1/19/2001	1/22/2001	Ken Wright	No Area Assign
53	7/5/02			
56	7/11/2002		Bill Rehnquister	Bread Baggers/
58	7/11/2002		Nick Dixon	Bread Make Up

# Work Orders - An Overview

## Flexibility



- Add short task description, comments and up to 2GB of detailed instructions for each work order.
- Six work order formats to choose from including w/needed parts, w/parts and details, w/recent failure history, etc.
- Add unlimited file attachments to each work order. These could be CAD drawings, prints, additional instructions, etc.
- Add unlimited employees to each work order. MaintSmart CMMS Software tracks their labor hours then tells you how much their time cost.
- Save/Print/Email work orders directly from MaintSmart CMMS Software.
- Formats include: Adobe .pdf, Excel, MS Word, HTML(web page), delimited text, Lotus 123, even XML!
- Bill external or internal customers with MaintSmart CMMS Software unique work order invoices. Use employee wage rate or charge rate.
- View/enter labor as hours or minutes.
- Print needed parts on work order or create a separate parts list.
- Available in **Access database backend**: version 2.3. (Access NOT required)
- Available as **SQL Server 2000** database: version 3.0 Enterprise.



# Work Orders - An Overview

## Unparalleled Power

- Link parts usage to work order templates. MaintSmart CMMS Software automatically uses the parts when the work order is created.
- Optionally let MaintSmart CMMS Software suggest personnel based upon percentage of possessed skills for the work order task.
- Barcoded work orders make updating tasks a snap.
- Work orders may be created automatically from meters. These meters could be hours, cycles, days, etc.
- Work orders may be linked to OPC or DDE data items (meters) residing in PLCs or from an Excel spreadsheet.
- OPC/DDE linked work order templates create work orders automatically when meter expires. (unique feature)
- Combine unlimited work orders into one 'Blanket Work Order'
- Security limits selected users to 'requestor only' permission.
- Activate all work requests with one mouse-click.
- User-defined work order type, priority and status.
- All expenses associated with each work order is analyzed and/or reported on.

<b>Company Name</b>		Printed By:																										
Work Order <b>23</b>																												
Plant: 327	Area/Location: No Area Assignment - 327	Date Assigned: 1/19/2001																										
Priority:	Department: Bulk Ingredients	Status: Request																										
Type:		Engineer: Ken Wright																										
<u>Equipment: 032 Bulk Yeast CIP System #1</u>		Task: 01051 Rebuild Pump(s)																										
	Asset #	Instructions: Rebuild sanitizer pump																										
Location: Ingredient Room	Serial #	<i>Use Safety Equipment    Do Not Bypass Safeties    Do Not Operate Equipment Without Guards in Place</i>																										
Building: Main Plant	Equipm	<b>Parts Used for this Work Order:</b>																										
Equipment Info.: Refrigerated bulk yeast system		<table border="1"> <thead> <tr> <th>Part Number</th> <th>Description</th> <th>Quantity Used</th> <th>Available</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>V99</td> <td>Drive Belt</td> <td>3</td> <td>0</td> <td>No Stock Belt Rack</td> </tr> <tr> <td colspan="5"><i>* REORDER: 5.00ea / Drive Belt - V99 *</i></td> </tr> <tr> <td>GG-889</td> <td>Sheet Plastic</td> <td>1</td> <td>22</td> <td>Z3 E</td> </tr> <tr> <td>6203</td> <td>Bearing</td> <td>3</td> <td>12</td> <td>H8 H</td> </tr> </tbody> </table>		Part Number	Description	Quantity Used	Available	Location	V99	Drive Belt	3	0	No Stock Belt Rack	<i>* REORDER: 5.00ea / Drive Belt - V99 *</i>					GG-889	Sheet Plastic	1	22	Z3 E	6203	Bearing	3	12	H8 H
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Requested By: Tom Jardine	Requestor Phone: 555-1																											
Requestor Office: Wrapping																												
<u>Work Order Details: 23</u>																												
Date Assigned: 1/19/2001																												
Status: Request																												

# Create A Work Order

## To Create A New Work Order Follow These Steps:

- Press the **New** button.
- Select the equipment from the **Equipment** drop-down. (Note: you may press the **F** button to filter the drop-down.)
- Select a task from the **Task** drop-down. (Note: you may press the **Filter** button to filter the drop-down.)
- Press the **Save** button. That's it! Of course you may use some of the other drop-downs if needed.
- **Note:** Its simple to save defaults that fill all of the work order fields for you when you press the **New** button. Call us.

## To Print/Email/Save The Work Order:

- Left mouse-click the work order in the grid. The row changes color.
- Right mouse-click the colored row and select **Assign/Print This Work Order**. That's it!
- When the print preview screen appears you may print, save or email this work order by pressing the print or export icon at top of print preview screen.
- MaintSmart CMMS Software can automatically create work orders based upon expired meters. Call us for simple instructions on this feature.
- Save/export any work order as Adobe (.pdf), MS Word, Excel, text, HTML (web page) and many more formats then email directly from MaintSmart CMMS Software!

The screenshot shows the 'Work Orders/Work Requests' form with the following fields and values:

- Plant:** AnyTown
- Date Assigned:** 07/16/2003
- Date Completed:** 05/28/2002
- Requestor (optional):** Elmo Puddy
- Engineer Name(optional):** David Hackworth
- Equipment:** 001 Yeast Refrigeration Compressor #
- Work Area/Location:** F No Area Assignment
- Department:** Bulk Ingredients
- Short Instructions (optional 255 chars.):** Replace valve in cylinder #4
- Type (optional):** Work Order
- Status (optional):** Active
- Priority (optional):** Urgent
- Labor Hours:** (empty)
- Task:** 00546 Rebuild Air Valve(s)
- File Attachments (optional):** E:\Catox\stox\ACTLOG\20030620A1.DBF

Buttons at the bottom include: Add, Remove, View, New, Delete, Save, Cancel.

# Edit A Work Order

## To Edit Work Order Follow These Steps:

- Left mouse-click the work order in the grid. The row changes color indicating selection.
- Change the data items in the boxes below the grid as needed.
- Press Save.

## More Detail May Be Added To This Work Order If Needed (optional work order features):

- **Add Detailed Instructions:** Press the **Details** button to add up to 2 GB of text instructions to each work order.
- **Add Helper Employees to This Work Order:** to add helper employees to the work order simply select the employee(s) from the **Engineer Name** drop-down then press the "+" button. MaintSmart CMMS Software starts timing their labor. Add unlimited employees to each work order!
- **Add Attachments:** Add attachments (files) of any type to the selected work order by pressing the **Add** button near the bottom of the screen.
- **Use Parts:** Press the Use Parts button to reference parts usage to this work order. Later MaintSmart CMMS Software consolidated all expenses associated with this work order or equipment item.

The screenshot displays the software interface for editing a work order. On the left, a grid lists equipment items with their IDs and descriptions. Below the grid, there are input fields for 'Engineer Name' (set to Nick Dixon) and 'Short Instructions'. A 'Details' button is visible. On the right, a 'Labor Hours - Work Order #23' window is open, showing a table of labor entries. Below the table, there are fields for 'Work Order Start Date/Time' (07/17/2003 8:32:22 PM) and 'Work Order Stop Date/Time' (07/17/2003), along with an 'Apply' button. At the bottom, a list of work orders is shown, with the selected one highlighted in blue.

Work Order Number	Engineer	Start Timing	Start Date/Time	Stop Timing	Stop Date/Time
23	Ken Wright	<input checked="" type="checkbox"/>	7/5/2003 8:57:12 PM	<input checked="" type="checkbox"/>	7/5/2003 8:57:12 PM
23	No Assignment - 327	<input checked="" type="checkbox"/>	7/5/2003 8:57:08 PM	<input type="checkbox"/>	
23	Shannon Reeves	<input checked="" type="checkbox"/>	7/17/2003 8:32:22 PM	<input type="checkbox"/>	

Work Order Details (editable grid)

Work Order Start Date/Time: 07/17/2003 8:32:22 PM [Apply]

Work Order Stop Date/Time: 07/17/2003

- WO#: 19 - 104 Dough Mixer #1 - 00268 Repair Leak(s)
- WO#: 23 - 032 Bulk Yeast CIP System #1 - 01051 Rebuild Pump(s)**
- WO#: 29 - 255 Cooler #3 - 00576 Inspect Carrier Chain For Damaged Links

# Analyze Work Orders

## Work Order Analysis:

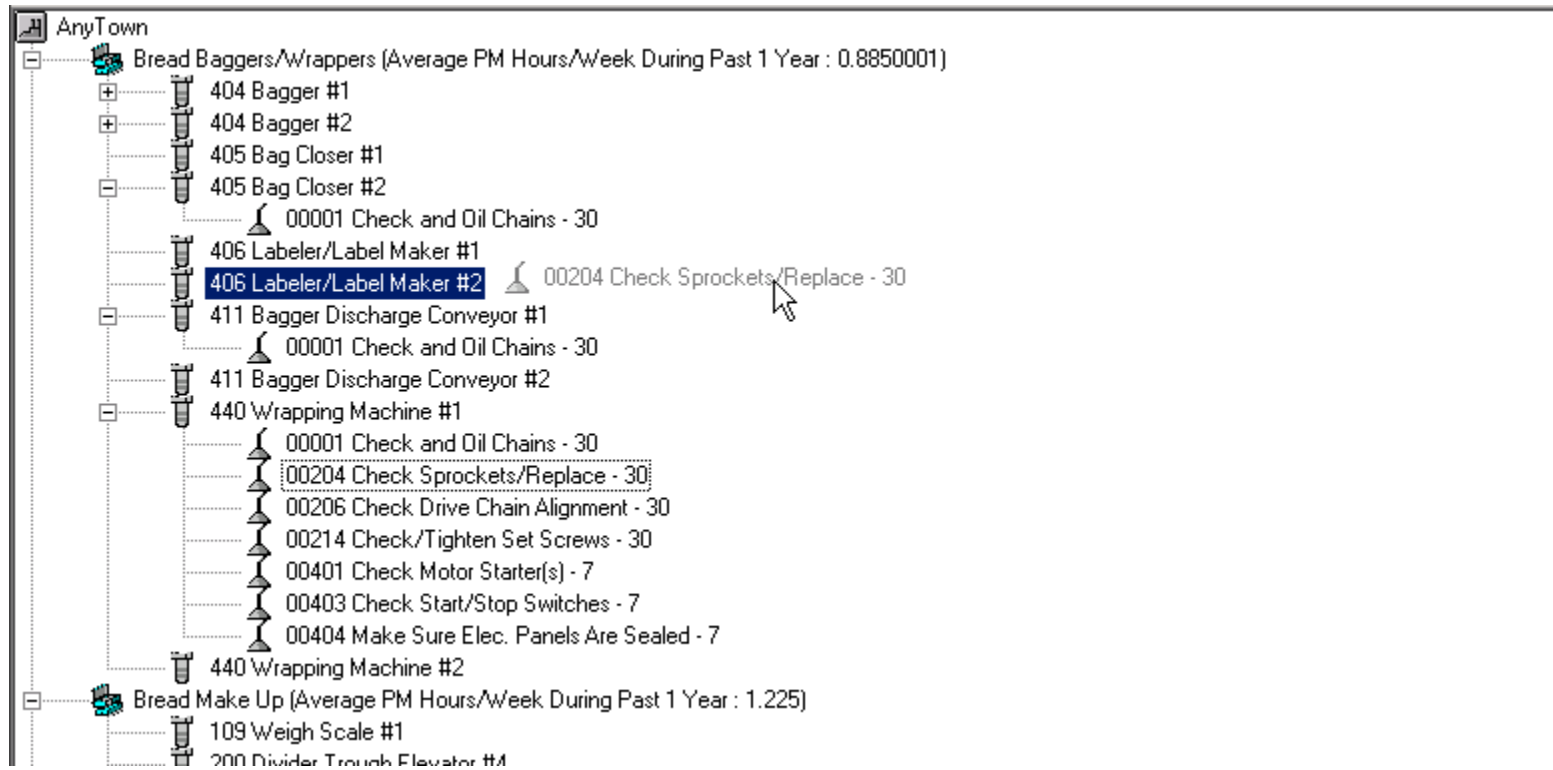
- Know where your resources are going. Filter and group data for analysis in a format you can benefit from.
- Save analysis reports in countless formats (.pdf, MSWord, Excel, etc.) then email, save or print.
- These analysis features also apply to PMs, equipment failures and inventory/purchasing.



# PMs - The Easy Way

## Preventive Maintenance:

- MaintSmart CMMS Software separates PMs from work orders if you it to.
- Build PM lists in minutes.
- Use drag and drop to adjust or build PM lists.
- Unique filtering system provides a way to create the following menu item (example: “Bob’s Weekly PMs”). Bob simply clicks this menu item once a week and presto!



# PMs - The Easy Way

## Preventive Maintenance:

- Link PMs and work orders to parts needed for the job
- MaintSmart CMMS Software suggests personnel for the job based upon skill ratio.
- Six PM list formats to choose from.
- Optionally automatically update completed PMs based upon historical averages.
- Add up to 2 GB of detailed instructions to each PM task.
- Comments field is used by employee to provide feedback on performed task.
- PMs archive then recycle automatically with new start/due date.

### Preventive Maintenance List

Print Date: 8/1/2003

Plan1327

Task	Interval	Start	Due	Hours	Parts Used
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David Hackworth

Employee Number: 5306

001 Yeast Refrigeration Compressor #1

S/N: 657490

Asset: 225

Location: Warehouse H

Building: H

00001 Check and Oil Chains

7

6/13/2003

6/20/2003

Notes:

Part Description

Part Number

Quantity Needed

Available

Part Location

Drive Belt

V99

3 ea

2

Low Stock

Belt Rack

Connecting Rod

YY44a

3 ea

5

Y64

Refrigeration Compressor #1	Yes	00110 Remove Excess
Refrigeration Compressor #1	Yes	00204 Check Sprocke
Refrigeration Compressor #1	Yes	00206 Check Drive Ch
Refrigeration Compressor #1	Yes	00214 Check/Tighten

Selected PM Tasks - Skill-Based Maintenance In Effect

Assign To:   8 / 1 /

Date Mode:

PM Tasks

50% - Nick Dixon

50% - Lester Cooke

50% - Larry Pratts

Filter Report: Print

# Inventory - Purchasing, Receiving, Parts Usage

## Purchasing:

- Optionally use drag and drop purchase requisitions (see picture below).
- Duplicate P.O.s
- Defaults fill common data field speeding data entry.
- Above maximum/below minimum stock level notification.
- Reorder list in one mouse-click.
- Physical inventory variance report in seconds.
- Automatic restocking to inventory when purchases are received, automatic inventory depletion when parts are used.
- All parts usage linked to who and why used. Defaults may be set to speed this step.
- Link parts usage to work orders and PMs. Automatically use the parts with no user input. Notification of shortages.
- Running total for account and P.O. displayed.
- Notification if not preferred vendor (see picture on right).

Part	Quantity in Stock	ReOrd
RR-250 - Rubber Balls	14ea	86

PO Number:  Show POs  Item Type: Inventory

PO-6574895

Not The Preferred Vendor (Delta Rubber)

LIN-A \* Tank Liner

Total Cost to Bring All Items to Minimum Stock Levels: 110.50

Add These Items To Requisition:

86 RR-250 - Rubber Balls @ 0.5

Quantity of Selected Item: 86

Total Cost This Requisition: 43.00

# Equipment Failure

## Equipment Failure (down time):

- Unlimited ways to analyze equipment failures helps you pin-point problem areas fast.
- Example below: Get the “top” or “bottom X count or % of failures. (Below: Top 17% failure causes with equipment.)
- Tracks “Time Down”, “Time To Repair” and “Impact” (lost opportunity cost due to failure). Use any or all of these.
- Export data set directly to Excel, HTML or text with no effort.
- Failure records are later used to perform reliability analysis (AMSAA military standard) if needed. MaintSmart CMMS Software is the only CMMS that provides this tremendously powerful feature!
- MaintSmart CMMS Software can optionally create the right work order automatically when entering a failure record.

Equipment	Cause	Impact
233 Oven Burner Control/Oven Extension	00051 Oven Shelf Jammed/Damaged	210
201 Divider	00041 Pipe Restricted	101
273 Enrober	00041 Pipe Restricted	80
211 Proof Box	00208 Burned/Damaged Motor Winding	60
404 Bagger	00227 Safety Interlock Open	45
233 Oven Burner Control/Oven Extension	00004 Sprocket Slipped	45
214 Panner	00402 Foreign Object in Machine	42
216 Final Steam Proofer Feed Conveyor	00034 Conveyor Jammed	41
233 Oven Burner Control/Oven Extension	00229 Burned/Damaged Coil	40
238 Cooler Feed Conveyor	00010 Shaft Bearing Failed	38
273 Enrober	00211 Switch (Other) Failed	35

Top Worst 17% of Impact to Schedule From 8/1/2003 Through 7200 Days Prior to 8/1/2003 Where Plant is AnyTown.

Use Excel

Plant: AnyTown

Row Heading: [Empty]

Category Field: Equipment

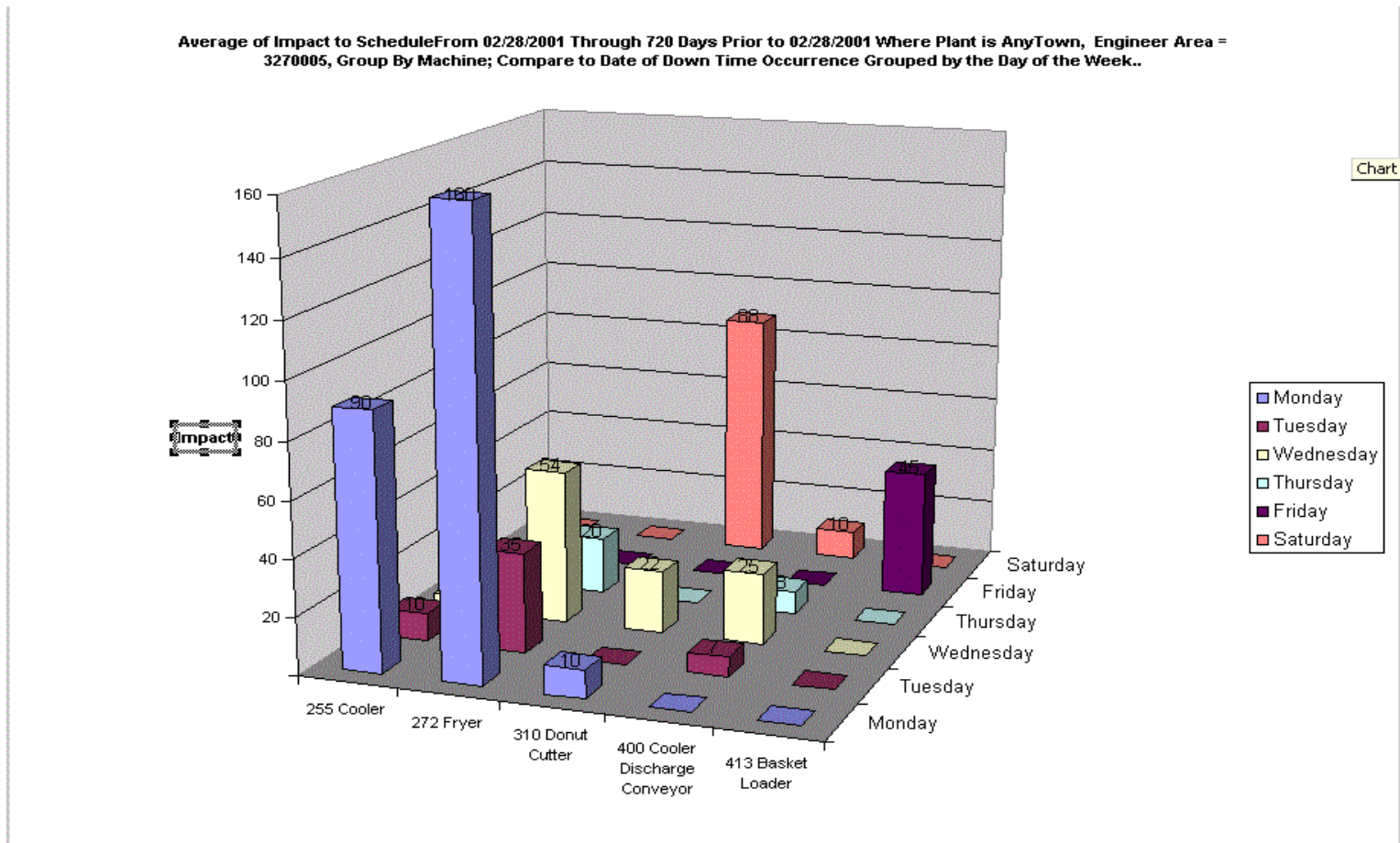
Value Field: [Empty]

Use Excel

# Equipment Failure Analysis

## Equipment Failure Analysis (down time):

- MaintSmart CMMS Software automatically creates a chart in Excel using analysis data. Note: title of chart also created automatically.
- Right mouse-click failure analysis grid (down time) for quick statistics on current data set.



# Advanced Features

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MaintSmart CMMS Software sets itself apart from the countless CMMS' on the market with several advanced features not found in other products. MaintSmart CMMS Software's advanced features are there if you need them. MaintSmart CMMS Software not only generates all of the reports you need from the data you enter but also uses this data later for analysis purposes. **Why settle for less?**

## **Reliability Analysis:**

- MaintSmart CMMS Software provides the MTBF (average time between failures) by failure cause.
- Need to know if your PM program is reducing unexpected failures? MaintSmart CMMS Software gives you this valuable information.
- Adjust PM task lists based upon reliability data. Remedial or preventive tasks may be linked to failure causes.
- Reliability analysis provides feedback on effectiveness of PM program (closed loop system).

## **OPC Meter-Linking:**

- MaintSmart CMMS Software can link OPC server data items to MaintSmart CMMS Software meters. Example: hour meter, counter, etc.

## **Work Order, PM, Inventory, Failure and Skills Analysis:**

- MaintSmart CMMS Software is heavy on analysis. MaintSmart CMMS Software rewards you for entering data for work orders, PMs, etc.
- Quick statistics from all analysis data grid (right mouse-click)
- Define analysis scenario with available filter criteria.
- Create all the charts you'll ever need.
- FIFO, LIFO or Average inventory methods.

## **Miscellaneous Utilities and Features:**

- Data grid filters are user defined filtered views of data. Save these filters and they become a menu item for future use.
- All data grids may be exported to HTML (web page), Excel (.csv) or simple text format.
- PM list configuration is streamlined with the use of drag/drop, task packages and job list templates.
- Email most reports (including PM lists and work orders) directly from MaintSmart CMMS Software.
- "Draw" work into Scheduler with your mouse.
- Link up to six unit/interval definitions to a "meter tag" then link tag to work order for automatic work orders.