

# Tango™ Advanced Case Closure

Many Tango users have requested the ability to enter information at the closure of a Condition Case. At case closure the repair has been validated and more is known about the equipment problem, cost of repair, and failure details, than when the condition entries were written.

This new function adds valuable reliability information intended to help you extend the life of equipment and validate the savings derived from your reliability program. Entering this information is not required, and you may simply click the 'Close Condition Case' button at the bottom of the page to continue without entering any information.

This new feature is turned off by default. If you would like Advanced Case Closure turned on for your database, contact Chris Tyler at [chris.tyler@tf7.com](mailto:chris.tyler@tf7.com) or call 24/7 at 1-865-681-0282.

Note: We recommend closing the Asset Tree view by clicking the icon on the top toolbar. This will provide a wider view and ensure all options can be seen clearly.



## Features of Advanced Case Closure:

1. **Condition Entries and Condition Case Details**
2. **Fault Findings**
3. **Predictive Maintenance Outcome**
4. **Closing Comments**
5. **Avoided Cost**
6. **Linked Documents**

## 1. Condition Entries and Condition Case Details

Condition Entry Case Closure

Condition Entries In Case

Condition Entry 1

Case ID: 2275

TAYLOR CREEK PLANT >> BLOWER BLDG >> AERATION  
BLOWER #2 >> 016488 - MOTOR, AC

Entered: Apr 09, 2019

Condition Case Details

→ At the top of the page you will see a summary of the condition entry. If there is more than one condition entry, each one can be seen by clicking the tab at the top of the box.

→ Click Condition Case Details to see the full summary.

## 2. Fault Findings

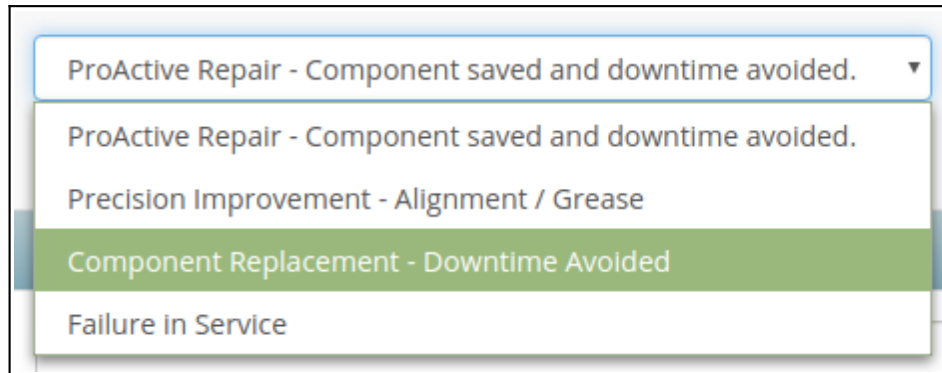
The fault progression table is intended to help plant reliability engineers better understand the root causes of failure.

Faults			
Fault Findings +			
	Fault	Fault Group	Update Fault Problem Level
	Lubrication - grease problem	Lubrication	Primary Failure
	Alignment problem	Mechanical	Secondary Cause
	Balance problem	Mechanical	Need to Investigate

→ All suspected faults from all entries in the case are shown here. The user may add new fault findings by clicking the 'plus' symbol at the top. Existing faults may be edited by choosing a new problem level from the drop-down menu and clicking the 'plus' button at the right, or deleted entirely by clicking the button at the left.

### 3. Predictive Maintenance Outcome

This field is meant to help reliability management understand the number of finds for each category.



ProActive Repair - Component saved and downtime avoided. ▼

ProActive Repair - Component saved and downtime avoided.

Precision Improvement - Alignment / Grease

Component Replacement - Downtime Avoided

Failure In Service

→ Choose Predictive Maintenance Outcome by clicking the drop-down menu and choosing Proactive Repair, Precision Improvement, Component Replacement, or Failure in Service.

## 4. Closing Comments

This provides documentation for future reliability improvements that should be considered for this location.

Closing Comments

TEST SAVE COMMENTS

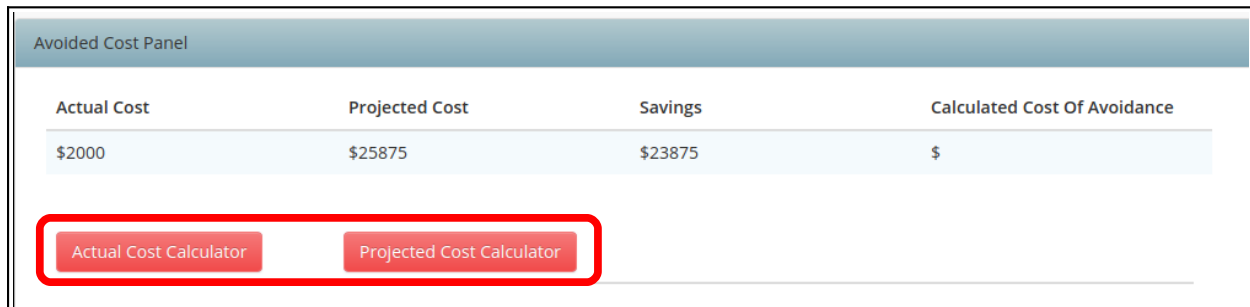
Save Comments

→ Add any closing comments and click Save.

## 5. Avoided Cost

This section allows entry of actual repair costs usually available at the work order closure and estimation of repair costs if the problem had not been detected. We have also added the ability to define component rebuild cost and component downtime cost in \$/hr as component attributes. If these fields are available, they will be populated into the cost of failure field. For each case closure Tango will calculate Savings (Avoided Cost), and this will be used in metrics reports for the program monthly/quarterly/yearly savings.

**Note:** The last column – Calculated Cost of Avoidance – will only display a value if your facility is tracking Budgeted Hours and Component Age. If you have questions about how to use this feature, please contact Chris Tyler at [chris.tyler@tf7.com](mailto:chris.tyler@tf7.com) or call 24/7 at 1-865-681-0282.



Avoided Cost Panel

Actual Cost	Projected Cost	Savings	Calculated Cost Of Avoidance
\$2000	\$25875	\$23875	\$

Actual Cost Calculator    Projected Cost Calculator

→ Modify or add actual or projected costs by clicking to bring up the calculator needed.

### Actual Cost Calculator – Cost Totals Summary

The top portion of the window shows a summary of total costs, including rebuild costs, transportation, production, parts, and labor.



Actual Cost Line Item

Cost Totals Summary

Rebuild Cost Attribute	\$0
Total Cost Of Parts	\$750
Total Cost Of Transportation	\$750
Total Cost Of Production	\$
Total Cost Of Labor	\$3

## Actual Cost Estimator – Cost Line Item Table

The lower portion of the window is the Cost Line Item Table. Here you may add a new item by type, then add labor cost per hour, cost, and a comment or justification. Existing items may be deleted by clicking the button in the right column.

Cost Line Item Table

Cost Item Type	Labor Cost/Hr	Cost	Comment / Justification	Date	
<div>Cost Item Type</div>	<div>Enter Labor In <div>hrs</div></div>	<div>\$</div> <div>Enter Cost Here</div> <div>.00</div>	<div>Enter Your</div>	<div>Today</div>	<div>Save Entry</div>
Labor	3	\$3		Jun 12, 2019	<div></div>
Labor	444	\$0	3333	Jun 12, 2019	<div></div>
Transportation	0	\$750	Trans	May 06, 2019	<div></div>
Parts	0	\$250	Test cost comments	May 06, 2019	<div></div>
Parts	10	\$500	TEST 1	May 06, 2019	<div></div>

OK

## Projected Cost Calculator – Projected Cost Line Item

Like the Actual Cost Calculator, the top portion shows a summary of total costs, including rebuild costs, transportation, production, parts, and labor.

Projected Cost Line Item

Cost Totals Summary

Rebuild Cost Attribute	\$0
Total Cost Of Parts	\$13000
Total Cost Of Transportation	\$2300
Total Cost Of Production	\$10000
Total Cost Of Labor	\$575

## Projected Cost – Cost Line Item Table

Here you may view or edit the Risk of Failure and Likelihood Site Picked Up Issue. Both are used in Calculated Cost of Avoidance. Risk of Failure is also used in the Projected Cost calculation. You may also add a new item by type, then add labor cost per hour, cost, and a comment or justification. Existing items may be deleted by clicking the button in the right column.

Cost Line Item Table

Probability Of Occurrence / Risk Of Failure  
100%

Likelihood Site Picked Up Issue  
10%

Cost Item Type	Cost	Comment / Justification	Date	
<div>Cost Item Type</div>	<div>\$</div> <div>Enter Cost Here</div> <div>.00</div>	<div>Enter Your Closing Comment Here</div>	Today	<div>Save Entry</div>
Transportation	\$2300	Test 3	May 06, 2019	<div></div>
Labor	\$575	test 5	May 06, 2019	<div></div>
Parts	\$3000	Test 4	May 06, 2019	<div></div>
Parts	\$10000	Test 2	May 06, 2019	<div></div>
Production	\$10000	Test comment PCL1	May 06, 2019	<div></div>

OK



## 6. Linked Documents and Close Condition Case

This has been the most requested Condition Case Closure feature. It provides a place to link case closure documents such as repair reports, failure analysis, new baseline tests, and more.

The screenshot shows a web interface with two main sections. The top section, titled 'Linked Documents', has a header bar with a folder icon, the text 'LinkedDocuments', and a lightning bolt icon. Below the header is a light gray box containing the text 'No linked documents are associated with this Item yet.' Underneath this box are three red buttons: 'Upload File', 'Upload Url', and 'Upload Screenshot'. The bottom section, titled 'Close', has a header bar with the text 'Close'. Below the header is a single red button labeled 'Close Condition Case'.

→ Add linked documents (files, URLs, or screenshots).

→ Close Condition Case