

TANGO™ Repair Tracker: SOP – Shop Set Up and Use

1. Define repair vendor name, location, & equipment types to be repaired for each repair shop, along with user name(s) and password(s) for each shop in Tango Db Admin.

At the bottom of the main 'User Configuration' page select 'Vendor/Shop User' for shop users, then select the appropriate vendor/shop name from the dropdown list. Also, select "allow to scrap."

For shop users it is recommended to select the 'Permit Installation Closure in Repair Tracker' role so they will be able to open Tango repair jobs for equipment that is still 'installed' in a Tango functional location.

Edit	User Name	Roles	Rights	Tech Prefs	Vendor	Location	Plant User	Apply
	Mike Manager				24/7 Systems, Inc.		Plant User 24/7 Systems, Inc., 24/7 Demo	Apply
	Guest01				24/7 Systems, Inc.		Standard Tango User	Apply
	Guest02				24/7 Systems, Inc.		Plant User 24/7 Systems, Inc., 24/7 Demo	Apply
	Guest03				24/7 Systems, Inc.		Standard Tango User	Apply
	James Tech				Electrical Condition Analyst		Standard Tango User	Apply
	John Boss				Plant Manager		Plant User 24/7 Systems, Inc., 24/7 Demo	Apply
	John M Shop				Master	b@b.com	Vendor Rockridge Repair Service	Apply
	John Planner				Maintenance Planner		Plant User 24/7 Systems, Inc., 24/7 Demo	Apply
	John Shop				Motor Repair Shop		Vendor Rockridge Repair Service	Apply
	John Supervisor				24/7 Systems, Inc.		Plant User 24/7 Systems, Inc., 24/7 Demo	Apply
	John Tech				Vibration Condition Analyst		Standard Tango User	Apply

Legend

- Disabled User
- User Role Template
- Location Rights Template

Add New User
Add Template

2. Provide each repair shop in tracking program with stainless steel QR Tags to be attached to each tracked component at the shop.

If the equipment has a previously installed Equipment ID tag, use the installed tag as the plant tag number. If the equipment does not have an installed Id tag, use the supplied WR Tag as the plant tag. The Tango QR tag will be installed on the motor after repair and maintenance.



3. When the shop user logs in to Tango Repair, the Repair Tracker 'Start Page' will open. Near the top of the Start Page is the list of any open repair jobs, and at the bottom is a list of any recently closed repair jobs.

Add Repair Findings and Shop Data

Update Repair Status

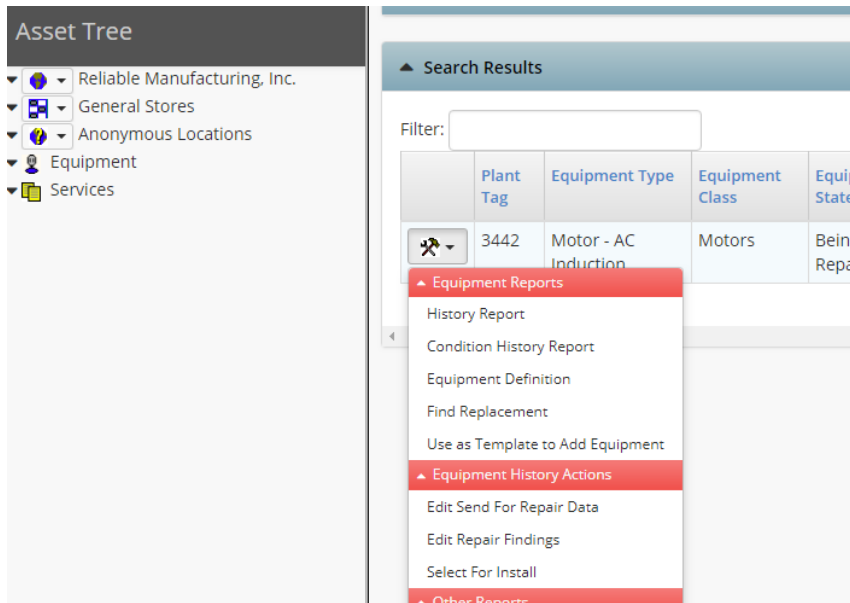
Update/View Equipment Definitions

Equipment Being Repaired							
	Company Name	Plant	Equipment Type	Plant Tag	Start Date	Plant PO Number	P R N
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	2142	Mar 10, 2011	489080	
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3442	Jan 17, 2011	pending	0
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - DC Series	3712	Apr 04, 2011	370259	
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	453	Apr 08, 2011	482859	
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3015	Mar 16, 2011	578294	

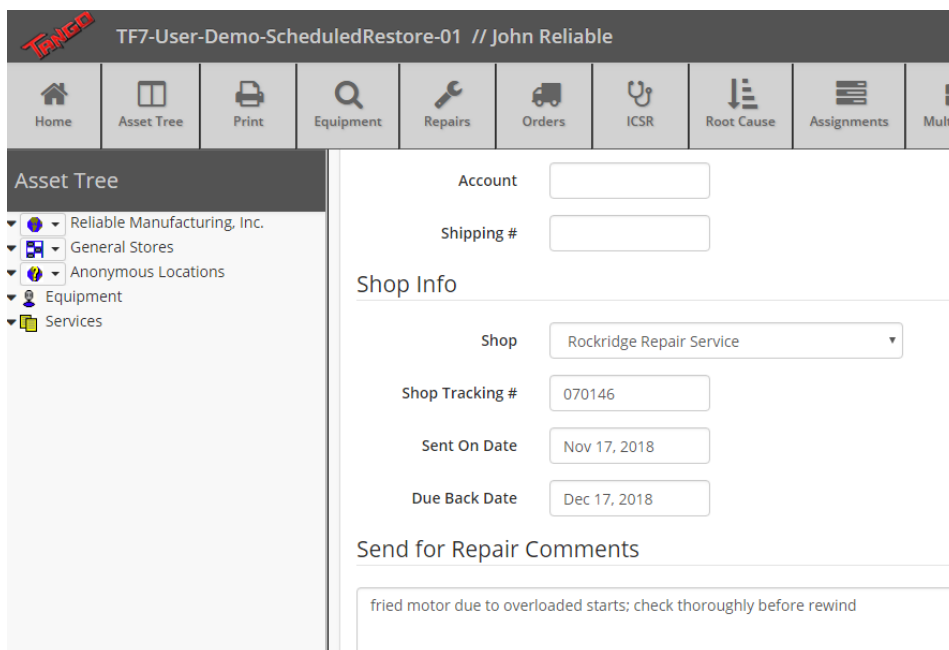
4. If the equipment being repaired is in the Start Page list of open jobs, then the shop user can click on the appropriate item to 'Add Repair Findings', 'Update Repair Status', or 'Update/View Equipment Definitions.'
5. If the equipment being repaired is not in the list of open jobs, then the shop user will first need to click 'Find Existing' at the left side of the Start Page to see if the equipment exists in the database but has not been 'Sent for Repair.'

	Company Name	Plant	Equipment Type	Plant Tag	Start Date	Plant PO Number
Repair	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3442	Jan 17, 2011	pending

- When the equipment is found in the database, the shop user can 'Send For Repair' to his shop by clicking the lightning bolt icon at the left side of the search results.



- On the 'Send for Repair' screen the 'Shop' name and 'Sent On Date' must be entered at minimum before the repair job can be saved.



- If the equipment does not already exist in Tango, the shop user will need to click 'Add New' at the left side of the Start Page and enter the design information for the fields with a red asterisk.

When the new equipment definition is saved, the 'Send for Repair' screen will appear.

Equipment Type Search

If the equipment has a previously installed Equipment ID tag, use the installed tag as the plant tag number.
 If the equipment doesn't have an installed ID tag, use the supplied WR Tag as the plant tag.
 The Tango QR tag will be installed on the motor after repair and maintenance.

Insert Equipment Definition

Property	Value
Plant Tag*	<input type="text"/>
Connection Type	<input type="text"/> ▼ ○
Material	<input type="text"/> ▼ ○
Maximum Install Interval (Days) - Current	<input type="text"/>
Maximum Install Interval (Days) - Specified	<input type="text"/>
Maximum Storage Interval (Days)	<input type="text"/>
Model Number	<input type="text"/>
Pressure - Max	<input type="text"/> PSI ▼
Serial Number	<input type="text"/>
System Media	<input type="text"/> ▼ ○
Type	<input type="text"/>

NOTE: If the plant has not specified a Plant Tag #, enter the QR Code ID (Human Readable Text) for the steel QR tag that will be attached later.

- Once a 'Send for Repair' has been completed and saved, the Repair Tracker 'Start Page' will appear, and the shop user can confirm that the new repair job is now in the 'Equipment Being Repaired' list.

Equipment Being Repaired									
	Company Name	Plant	Equipment Type	Plant Tag	Start Date	Plant PO Number	Plant Requisition Number	Shop Tracking Number	Status
Add Repair Findings and Shop Data	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	2142	Mar 10, 2011	489080		060989	PO Received <i>Apr 12, 2007</i>
Update Repair Status	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3442	Jan 17, 2011	pending	07-0134567	070146	Tear down and Inspection <i>quote to be sent by Feb 1 Apr 12, 2007</i>
Update/View Equipment Definitions	24/7 Systems, Inc.	24/7 Demo	Motor - DC Series	3712	Apr 04, 2011	370259		070407	Repaired, Not Shipped <i>Jun 25, 2007</i>
	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	453	Apr 08, 2011	482859		070421	Quoted Replacement (Non-Repairable) <i>Jun 25, 2007</i>
	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3015	Mar 16, 2011	578294		070332	Quoted, Waiting on Approval <i>Quote sent April 2, 2007 Apr 13, 2007</i>
	24/7 Systems, Inc.	24/7 Demo	Motor - AC Induction	3556	Jan 27, 2011				

10. A shop user can click the 'Plant Tag' ID to open the 'View/Edit Equipment Definition' function. This information can be confirmed, edited, or new information such as bearing numbers or stator slot count can be added.

Equipment ID Info

Equipment Type: Motor - AC Induction
Plant Tag: 2142
Serial Number: ES223007

Equipment Properties Identification

Property	Value
Frame Size	364TZ
Model Number	????
Motor Mfg	General Electric
Plant Tag	2142
Power	60 HP
Serial Number	ES223007
Speed	1800 RPM

Procedure Templates Panel

- AC Repair Specification
- DC Repair Specification

Repair Finding and Shop Data Entry Panel

View Status History

Date	Type	Comment
Apr 12, 2007 (07:43:36)	Quote Approved	finish date expected by Nov 22
Apr 12, 2007 (07:44:51)	PO Received	

Enter/Edit Fault Findings

Plant	Shop	Fault	Fault Group	Status	Comments	Problem Level
Yes	<input checked="" type="checkbox"/> Shop	Equipment (PC) rebuild	Other	Unacknowle		<Undefined>
Yes	<input checked="" type="checkbox"/> Shop	Bearings Damaged	RepairTrack Defaults	Unacknowle		<Undefined>

11. A shop user will click 'Repair' to open the Repair Tracker form for more documenting the job details, including reasons for functional failure and specifying the primary failure and root cause of failure, if possible.

- Attach all required repair documents including:
 1. Photographs of the damage/failure
 2. Mechanical inspection

3. Balance test / Load test
4. Failure Analysis

- Enter warranty, cost and completion date.

Enter/Edit Repair Actions

Repair Actions +

Action	Comments
Install New Bearings	<input type="text"/>

Repair Information

Shop:

Repair Cost:

Date Sent:

Date Returned:

Warranty End Date:

Installation Warranty: **Days**

Plant PO#:

Shop Tracking#:

Send For Repair Comments

provide detailed quote after teardown & inspection

Comments on the state of the equipment when it arrived at the shop

Return From Repair Comments

Comments related to the repair of the equipment or information that came to light during repair.

Linked Documents

Document Desc	Type	Delete
Motor in receiving	Unknown/Generic	🗑️
Motor in receiving	Unknown/Generic	🗑️
Motor in receiving	Unknown/Generic	🗑️

Save/Close Repair Options or View History

(cont'd)

- The 'Save' button at the bottom of the page allows the user to save incremental information, then return later to add more information.
- The 'Close Repair' button at the bottom of the page will end data entry for this repair job. The shop user will not be able to reopen the repair to add or edit information (this can be done in Tango by an Admin user).

12. Status update

13. Attaching & assigning a QR tag before returning equipment to the plant.

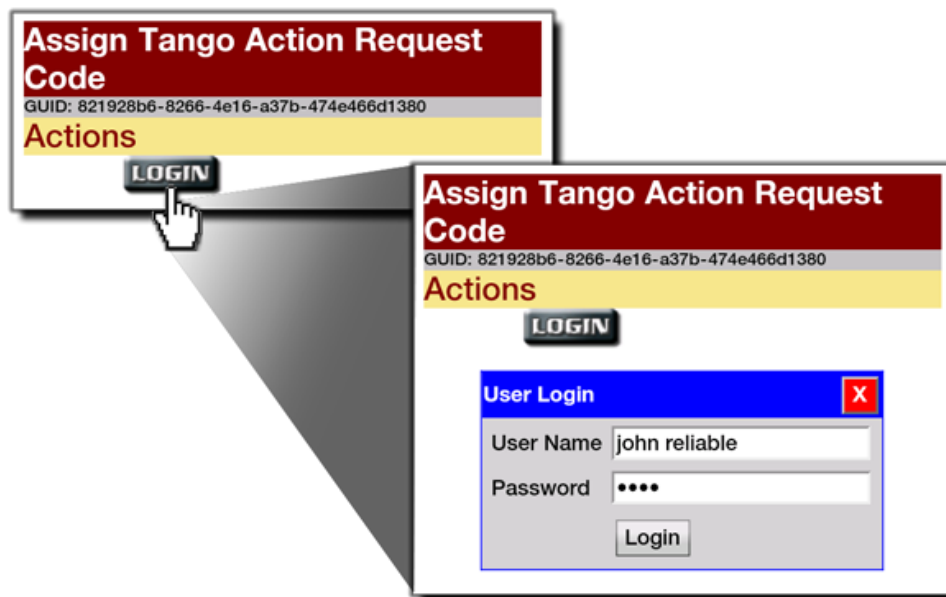
This guide section is to help users assign unspecified QR Codes to equipment, location, or user tag.

Note: Before users can use Tango™ Mobile, users must have a barcode scanner installed on their Smart Phone or Tablet. Some devices may already have this type of application installed, other will have to download one from an App Store. For this tutorial, we are using [ZXing \("Zebra Crossing"\)](#) which is available for Android and Apple products.

Important: All QR Codes must first be assigned by 24/7 Systems to specific Tango™ databases before they will work for database users. [Contact us](#) for more information.

To assign a QR code, scan an unassigned QR code with a Smart Phone or Tablet.

Once users have scanned the QR code, users may be prompted to choose a course of action, choose "**Open Browser**" or the equivalent. This will bring the users to a login screen which will require their Tango™ username and password.



Note: User must have "Location Edit Users" rights to assign QR Codes.

After entering a username and password, the user will see the following screen.

Assign Tango Action Request Code
GUID: 821928b6-8266-4e16-a37b-474e466d1380

Actions

Equipment Tag

Plant Tag

Search

Location Tag

User Tag

From this screen, users will have three options to assign the QR Code:

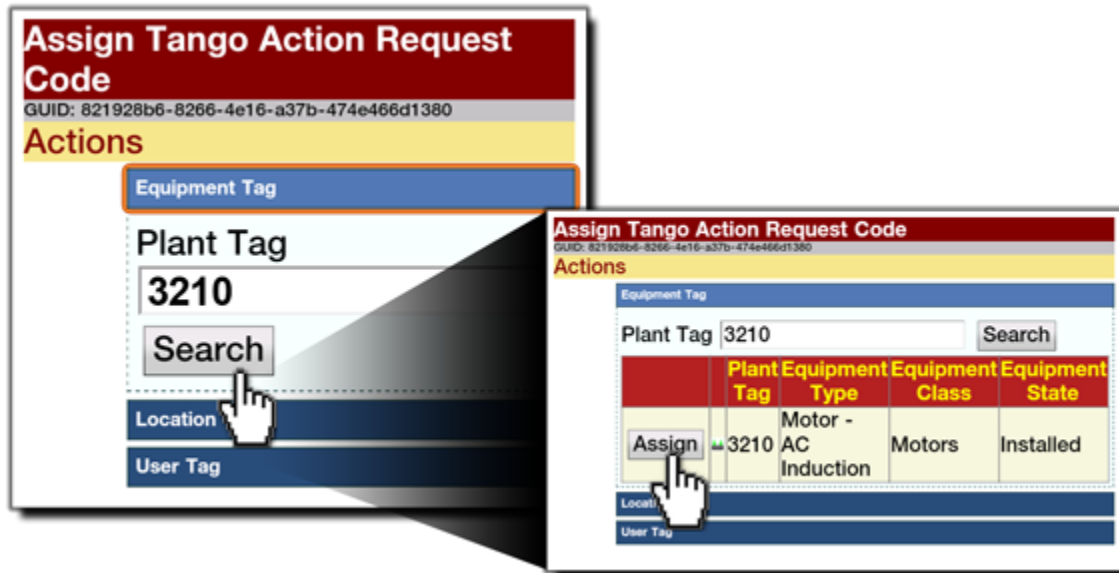
1. [Equipment Tag](#)
2. [Location Tag](#)
3. [User Tag](#)

Touch the blue title bar to move between these options.

ASSIGN: Equipment Tag

To assign the QR to Equipment, touch the Equipment Tag blue bar:

1. Enter the Plant Tag ID into the text field and select "**Search**".



2. All available items for that search will be displayed in a new screen. Select "**Assign**" next to the desired Equipment.