

Total Tyre Control® Professional Suite

Quick Reference Guide



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About TTC Earthmover

Total Tyre Control® **(TTC)** software was developed from a tyre industry platform to be used as a hands-on tool, and is based on a philosophy of supporting the most effective and safe use of the tyre asset.

Total Tyre Control® is a Windows-based application that utilises user-friendly graphics and click-and-drag tyre change input. The ability to comprehensively check tyre data integrity at every stage of input ensures the highest level of data accuracy. This is invaluable in assisting you to work with their tyre supplier to ensure the best tyre for the job, and also provides the tyre manufacturer with research and development data to support the client.

Total Tyre Control® Earthmover tracks tyres and rims and it provides in depth information on tread wear, tyre usage, manufacturer comparison and more.

TTC Support

Requesting support via email should be done using ttc.support@Klinge.com.au and not to individual KLINGE personnel in case that person is unavailable. We note TTC Earthmover is a mature product and most minor problems arising out of day to day use are generally not "time critical". KLINGE will provide the Support Service, with a target response time to a support request of 8 hours in KLINGE's normal working hours in each time zone respectively. KLINGE have resources in place to provide user support across 4 time zones - Brisbane and across all North American time zones - Monday to Friday excluding public holidays and weekends.

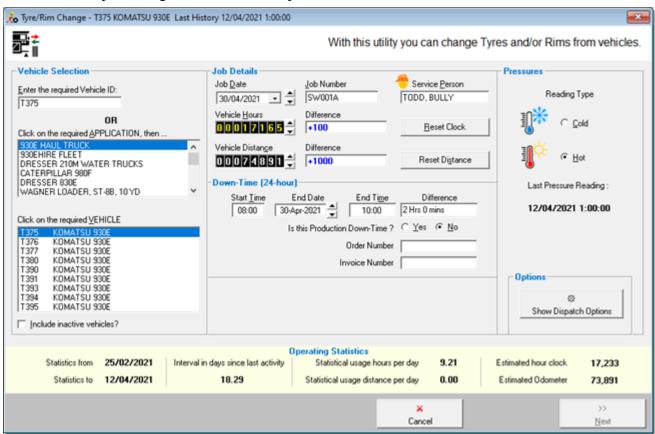


Tyre/Rim Change

This section of the guide steps you through the process of recording a tyre/rim change and provides shortcuts where applicable.

Record a tyre/rim change:

Select Classic Tyre Change from the Data Entry menu.



- Vehicle ID: Type the vehicle ID into the text entry box.
- **Job Date:** Use the arrow keys or drop down list to choose the date of the tyre change.
- **Job Number:** Enter the job number that appears on your tyre change sheet.
- **Service Person:** Enter the names or initials of the persons or crew involved with the tyre change.
- **Vehicle Hours / Distance:** Amend the vehicle hours/distance to current figures by clicking on the arrows next to the meters or by clicking on the actual hours/distance numbers.



If FMS data is imported for your vehicles, the clocks will be updated automatically.





HINT: Left mouse click to advance the clock by one unit, right mouse click to move the clock back by one unit.



New vehicle clocks and odometers

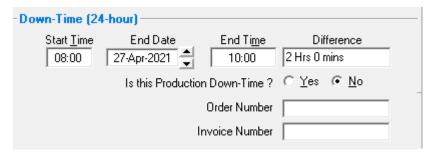
A manual adjustment to the **Difference** field may be required when an hour clock or odometer has been changed in the vehicle.



EXAMPLE

The hour clock's last recorded reading in TTC is 52,006. The clock was removed from the vehicle at 52,050 and when a reading was done on the new clock, it read 115. The **Difference** is determined by adding the usage on the old clock to the usage on the new clock -> 52,050 - 52,006 = 46 + 115 = 159. The **Vehicle Hours clock** would be 115 and the **Difference** should be manually set at 159.

NOTE: If the clock was nonoperational for some period of time, it may be more appropriate to set the difference by calculating how many days since the last activity and multiplying that by the average daily usage. i.e. 126 days @ 17 hours per day = 2142. Statistics and estimated clock/odometer readings are displayed at the bottom of the first tyre change window to make the math easy for you!



- **Down-Time**: Enter the start and end times of the job using the 24-hour clock.
- Production Down-Time: (Was the tyre change scheduled?) Click Yes or No.
- Order/Invoice Number: Enter if required. These are quite often used in instances where a third party carries out the tyre change.
- Reading Type: Click Hot or Cold to indicate the state of the tyres during the tyre change. This is used against any pressure readings that are recorded for this vehicle during this job.
- Click Next.

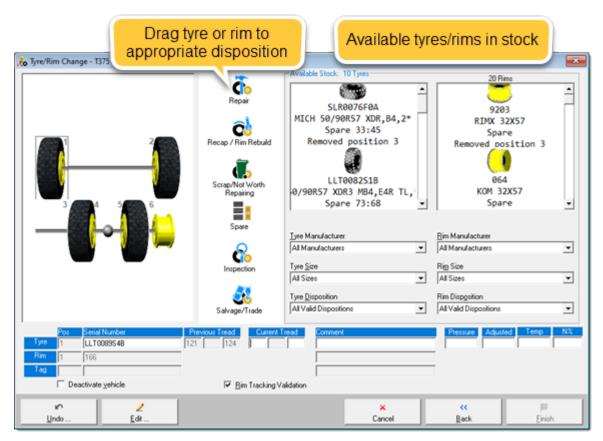


Can't click Next? Check the following:

- Job Date is correct.
- Job Number & Service Person fields are complete.
- Hot or Cold is selected.
- Date of Last Pressure Reading is not greater than job date (if it is, use Files > Pressures to undo pressure reading).



Exploring the tyre/rim change window





Right-click on any of the vehicle's positions to view fitment information. This is good practice to ensure you are removing and fitting the correct tyre/rim. You also have the opportunity to swap tread readings if the tyre has been turned on its rim.



Click **Undo** or **Edit** to undo or amend your last action. Use the available check box to activate or deactivate the vehicle if required. The opportunity to reverse a tyre change job after it's been finished is available through Data Entry > **Undo Tyre/Rim Change**.

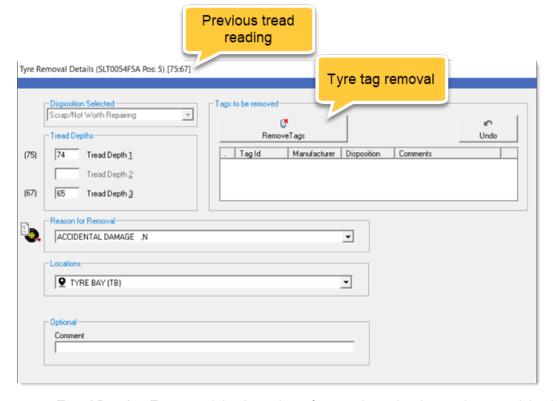


If adjustments need to be made after the completing the job in TTC, look at Data Entry > Tyre Change Maintenance for edit and undo options.



Removing tyres and rims

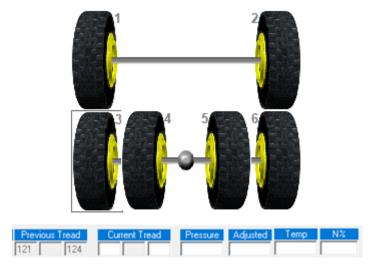
- Click and hold the tyre or rim with the left mouse button.
- Drag the tyre to the designated disposition.
- Drop the tyre (release left mouse button).



- **Tread Depths:** Enter tread depths at time of removal notice the previous tread depths at the top of the window. You will not be allowed to enter depths greater than these.
- Reason for Removal: Select from the drop down list.
- Location: Select a destination from the drop down list.
- Comment: Add if required.
- Tags to be removed: Click to remove tag if required.
- Click Save. If a tag has been removed, you may be prompted to assign a disposition to the tag.

Record tread depths, pressures, temperature and nitrogen percentage

With the vehicle down for service, you may have the opportunity to check the tread depths and pressures of all positions. Click on each position as shown below and enter the readings.





Fit a tyre or rim:

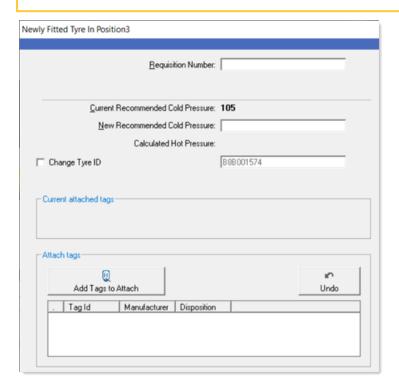
- Select a tyre/rim from the Available Stock.
- Drag and drop (hold down the left mouse button and release the tyre/rim) into place on its target position.





NOTE: TTC will only offer tyres/rims that will fit the current vehicle. However, if you attempt to mix bias ply and radial tyres, or change the tyre sizes, you will receive a warning sign _____ – you can proceed if appropriate.

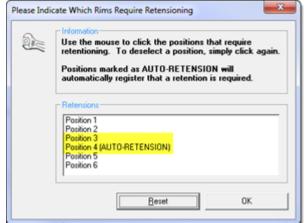
The system default is to show all manufacturers and all sizes specified as suitable in **Vehicle Specifications** and **Size Equivalents** (both found under the Files menu).



- Requisition Number: This is appears for new tyres and rims and is an optional field.
- New Recommended Cold Pressure: This field requires and entry.
- Options are available to change the tyre ID for new tyres, attach a tag, and swap tread readings on tyres with uneven treads.

- Once you fit all tyres and rims and recorded any treads and pressures, click Finish to complete the job.
- If Retensions are required (set in the Applications table), you will be prompted to mark positions that require retensioning. Click the relevant positions, then press OK.

You do not need to mark positions already marked AUTO-RETENSION. This label is applied after a rim has been changed in TTC. In the example to the right, the rim was changed on position 4 but position 3 also requires retension because it had to be removed and refitted during the actual tyre change process. In this instance, you would select Position 3 before clicking **OK**.





Vehicle Period End (Audit/Survey)

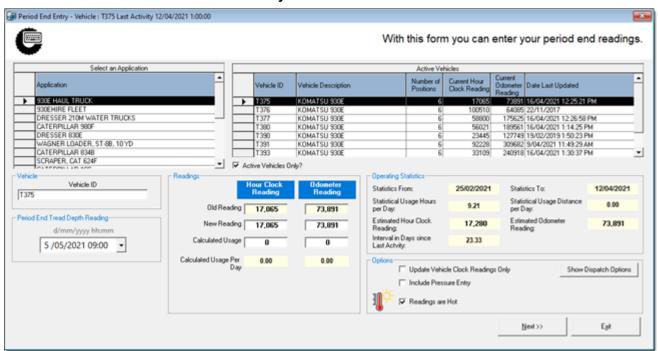
The **Tread Depth Period End** form is normally used to record tread depth readings taken from vehicles during a monthly survey. It can also be used to record pressure readings, and update hours/distance readings only when required. If the vehicle has a linked rim application, its clock data will automatically updated.



If FMS data is imported for your vehicles, the clocks will be updated automatically.

Record Period End Vehicle data:

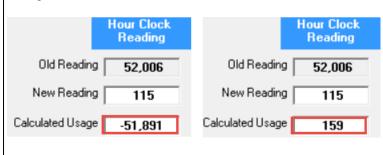
Select Vehicle Period End from the Data Entry menu.



- Vehicle ID: Type the vehicle ID and press Enter.
- Date/Time: Type the date and time of the period end and press Enter.
- Hour Clock/Odometer Readings: Type the new readings and press Enter. The Calculated Usage fields are modified automatically.
- Update Vehicle Clock Readings Only: Select this option if you want to update the clock readings only.
- Include Pressure Entry: Select this option to record pressures readings along with tread depths.
- Readings are Hot: Deselect this option if it was a cold pressure reading.
- Click Next.

New vehicle clocks and odometers

A manual adjustment to the **Calculated Usage** field may be required when an hour clock or odometer has been changed in the vehicle.



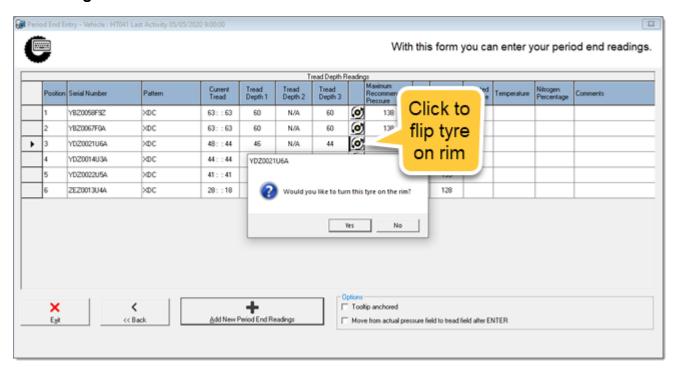


EXAMPLE

The hour clock's last recorded reading in TTC is 52,006. The clock was removed from the vehicle at 52,050 and when a reading was done on the new clock, it read 115. The **Calculated Usage** is determined by adding the usage on the old clock to the usage on the new clock -> **52,050 - 52,006 = 46 + 115 = 159.** The **New Reading** would be **115** and the **Calculated Usage** should be manually set at **159**.

NOTE: If the clock was nonoperational for some period of time, it may be more appropriate to set the difference by calculating how many days since the last activity and multiplying that by the average daily usage. i.e. 126 days @ 17 hours per day = 2142. Statistics and estimated clock/odometer readings are displayed on the first screen of Period End window to make the math easy for you!

Recording the collected data



- Type the new readings and press Enter after each entry.
- Click Add New Period End Readings to complete the process.



If adjustments need to be made after the completing the Vehicle Period End, look under the Data Entry menu for Period End adjustment and undo options.

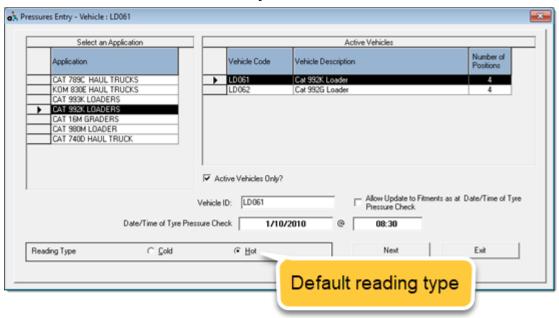


Pressure Check

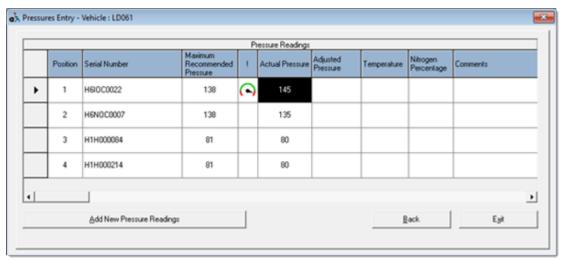
Use the **Pressure Check** data entry form to record vehicle tyre pressure readings.

Record pressure data:

Select Pressure Check from the Data Entry menu.



- Vehicle ID: Enter the vehicle ID.
- Allow Update to Fitments as at Date / Time of Pressure Check: Check this box If tyres on the vehicle have changed since the date of the pressure check.
- **Date and Time:** Enter the date and time of the pressure reading.
- Reading Type: Were the tyres Hot or Cold during the reading. If unsure, leave at Hot.
- Click Next.



- Actual Pressure: Input pressure readings for each position (you will be alerted if the value entered appears
 to be too low or too high).
- If required, note the Adjusted Pressure, Temperature, Nitrogen Percentage and Comments.
- Click Add New Pressure Readings to confirm and complete the record for the vehicle.



HINT: Pressure adjustments can be made under Files > Pressures.



Stock Receipts Wizard

The Stock Receipt Wizard is a set sequence of steps to guide you through the entry of new and second hand tyre/rim stock.

Add tyre and rim stock:

Select Enter Stock-Received Wizard from the Data-Entry > Stock-Receipts menu.

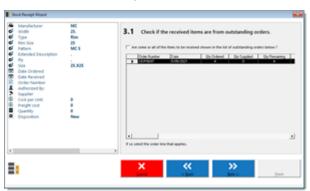
Click **Next** to proceed to step 1.



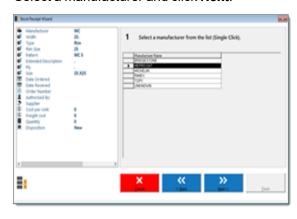
Step 2
Select a size and click Next.



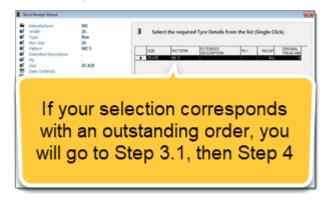
Step 3.1 Indicate if this stock is part of the order and click **Next**.



Step 1Select a manufacturer and click **Next**.



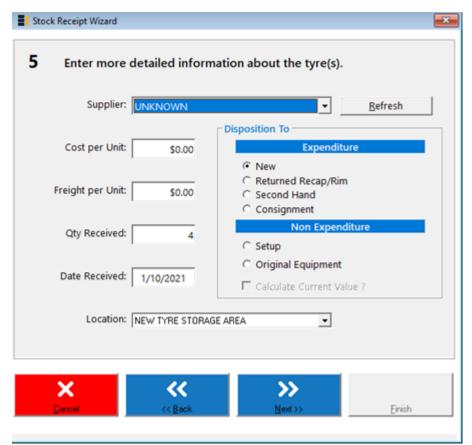
Step 3Select the specification and click **Next**.



Step 4
Fill in the required information and click **Next**.







Step 5

- Supplier: Select the supplier from the drop down list.
- Cost per unit: Type the cost per unit.
- Freight per unit: Type the freight per unit if applicable.
- Qty Received: Type the quantity of stock received.
- Location: Select a location from the drop down list.
- Disposition To: Select the appropriate expenditure or non-expenditure.
- Click Next.

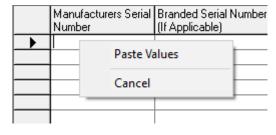
NOTE: Original equipment should be used for **Non-Expenditure** tyres on receipt of new vehicles. Setup tyres are normally associated with spare stock that has no known history.



- Enter Serial/Brand Numbers for each new item.
- Add comments if needed and Click
 Finish to complete the wizard.

Stock Received Results





If stock receipting more than one tyre or rim in the same transaction, right-click on the grid to paste all serial numbers at the same time.

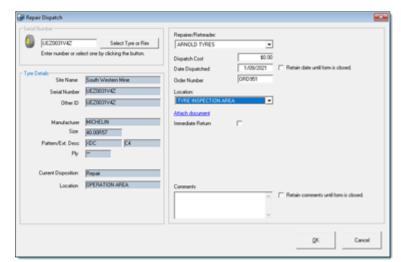


Repairs Recording

Once a tyre or rim has been assigned a Repair disposition, it will need to be processed in TTC before it can be returned to service or moved to scrap or inspection.

Dispatch a tyre/rim for repair:

Select **Dispatch Tyre/Rim for Repair** from the Data Entry > **Repairs Recording** menu.





- Serial Number: Type the serial/brand number of the tyre/rim.
- Repairer: Select the repair's name from the drop-down box. if the Repairer does not appear on this list, it will need to be added in Files>Suppliers.
- Dispatch Cost: Add any costs associated with dispatching the tyre/rim.
- Date Dispatched: Type the date the tyre/rim left site.
- Order Number: Type the order number if required.
- Location: Choose the location of the tyre/rim.
- Attach document: This launches Data Entry > Manage Related Documents. This could be used to attached order documents or images of the damaged tyre/rim.
- Immediate Return: If the tyre or rim has already been returned, you can tick this box and choose the repair type, enter the repair cost and select the new location of the tyre.
- Enter a Comment if needed and click
 OK to return the tyre/rim to spare.

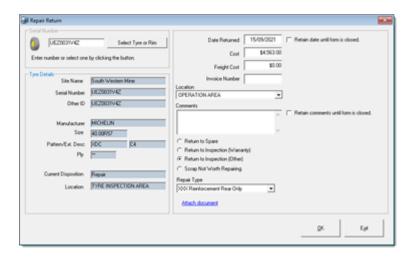


When using Immediate Return, the tyre/rim is returned to Spare. If a different disposition is intended, return the tyre/rim using the option shown on the next page.



Return a tyre/rim from repair:

Select **Return Tyre/Rim from Repairer** from the Data Entry > **Repairs Recording** menu.



- Serial Number: Type the serial/brand number of the tyre/rim.
- Select Tyre or Rim: If you are unsure of the serial number, click this option to open the Tyre and Rim Search utility.
- Date Returned: Type the date of the tyre/rim return to site.
- Cost: Type the cost of repair, if any.
- Dispatch Cost: Add any cost associated with returning the tyre/rim to site
- Invoice Number: Type an invoice number if required.
- Location: Select the new location for the tyre/rim.

- Comments: Add a comment if needed.
- **Disposition list:** Choose the new disposition for the tyre/rim.
- Repair Type: Select the repair type.
- Attach Document: This launches Data Entry > Manage Related Documents. This could be used to attached repair documents, NDT reports or images.
- Click **OK** to confirm the return of the tyre/rim.



New Vehicles Wizard

Use the **New Vehicles Wizard** to set up your vehicles in **TTC**. Before starting the wizard, ensure that you have imported the vehicle's tyres and rims (if you are tracking rims) and that the type of vehicle you are setting up has been created in Files > **Vehicle Specifications**. The vehicle's application (Files > **Applications**) should also be in place before you begin. Vehicles can be setup without tyres but will remain inactive until a full compliment of tyres have been fitted to it in the system.

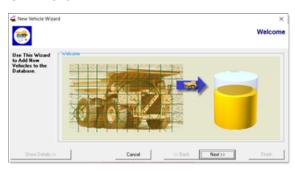
Add a new vehicle:

Select New Vehicles Wizard from the Data Entry menu.

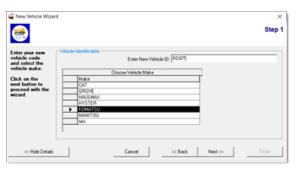
Click Yes to proceed.



Click Next.

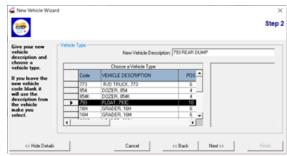


Step 1 Select the make of the vehicle, assign an ID and click **Next**.

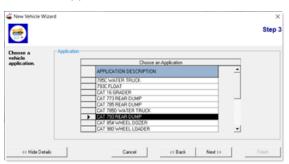


Step 2

Select the vehicle type, add a description and click **Next**.



Step 3 Select an Application and click **Next**.



Step 4

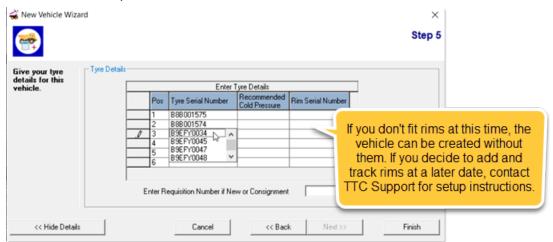
Enter the vehicle info, select the odometer type and location and click **Next**.





Step 5

Select the tyres and rims from the drop down lists and type the recommended cold pressure for each position. Click **Finish** to complete the creation of the vehicle.





HINT: If all positions have the same recommended cold pressure, type the pressure for position 1 only. You will be prompted to use the same pressure for the remaining positions when you click Finish.



Tyre and Rim Specifications

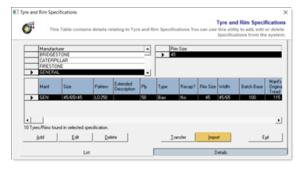
If you need to stock receipt a tyre or rim with a specification that is not registered in your database, you will need to import or create it through the Tyre and Rim Specifications table.

Import a Tyre or Rim Specification

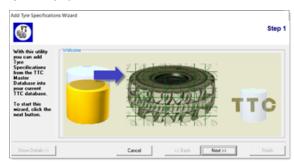
The Import button allows you to import tyre/rim specifications from the TTC master tyre/rim database.

Select Tyre/Rim Specifications from the Files menu.

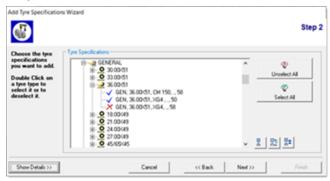
Click Import.



Step 1 Click Next.



Step 2



specs available.

display the sizes available.

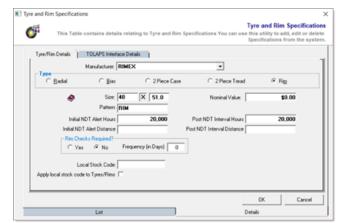
- Locate the specification and double-click it so that a check mark appears next to it.
- Click **Next** and **Finish** to import the specification into your TTC database.

Locate the manufacturer and click its + symbol to

Locate the size and click its + symbol to view the

Verify / configure the specification

After importing the spec, it is good practice open it (click on the Details tab) to ensure the correct one was imported. If it's a rim you've imported, now is a good time to set your NDT alert levels.



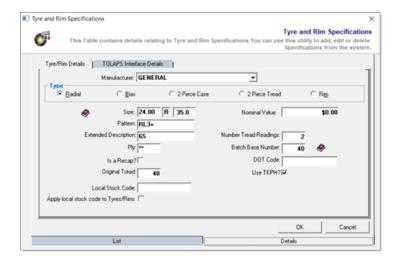


Manually add a tyre specification

If the tyre specification you need is not available through the import process, add it manually.

Select Tyre/Rim Specifications from the Files menu and click Add.





- Manufacturer: Select a manufacturer from the drop down list.
- Type: Select Radial or Bias.
- Size, Pattern, Extended Description (compound or other description) and Ply Rating: Type these in their respective text entry field.
- Recap: Tick this box if applicable.
- Original Tread: Type the manufacturer's original tread.
- Local Stock Code: Type a local stock code to this field if you have one.
- Apply local stock code to Tyres/Rims: Tick this box to add the stock code to other tyres of this specification and follow the directions given after clicking OK.
- Number Tread Readings: Standard is 2 readings for earthmover tyres, 3 for line haulage tyres.
- Batch Base Number: This is assigned automatically. However, if you have more than one specification of the same size and manufacturer, but different pattern and extended description, you may want the tyres/rims to be in separate batches for each of the patterns. In this case, you should allocate a batch base number to each pattern.
- **DOT Code:** Enter a dot code if needed.
- Use TKPH: Tick this box if you wish to complete the TOLAPS Interface Details form.
- Double-check the information you have entered.
- Click OK.

The TKPH or TMPH rating information is only applicable to users with earthmover tyres who have TOLAPS™ installed. Updated manufacturer TKPH or TMPH ratings may be input to this file. Elevated TKPH ratings (from manufacturer) may also be stored in this file (see note below).



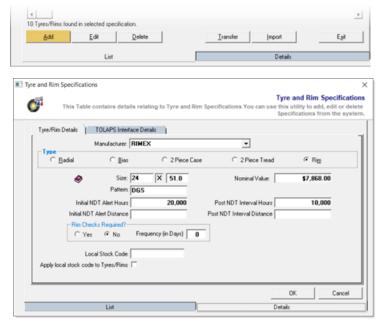
NOTE: Updated or elevated TKPH/TMPH ratings must be sourced from the tyre manufacturer. These must only be used with the consent and guidance of the tyre manufacturer.



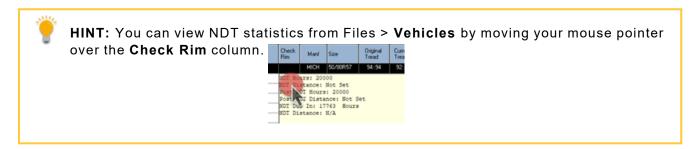
Manually adding a rim specification

If the rim specification you need is not available through the import process, add it manually.

Select Tyre/Rim Specifications from the Files menu and click Add.



- Manufacturer: Select a manufacturer from this drop down list.
- Type: Select Rim.
- Size & Pattern: Type these in their respective text entry field.
- Default Rim Hours & Distance: Use these instead of or along side the rim alerts available through Files > Applications.
- Initial and Post NDT Hours & Distance: Set your initial and post NDT alert hours or distance. If set, the Post NDT levels will be set as default after a rim is sent to repair or rim rebuild for the first time.
- Local Stock Code: Type a local stock code to this field if you have one.
- Apply local stock code to Tyres/Rims: Tick this box to add the stock code to other tyres of this specification and follow the directions given after clicking OK.





Vehicle Specifications

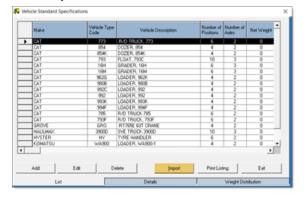
Before you can create a vehicle in TTC, you may need to create or import a vehicle specification which is used as a template for creating vehicles of that type.

Import a Vehicle Specification

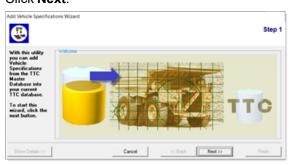
The **Import** button allows you to import vehicle specifications from the **TTC** master vehicle database.

Select Vehicle Specifications from the Files menu.

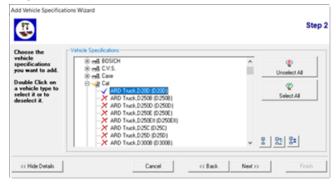
Click Import.



Step 1 Click Next.



Step 2



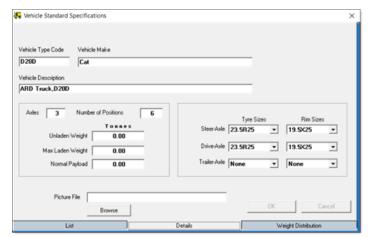
 Click the + sign next to the Manufacturer you are interested in. Find the specification you are looking for and double-click to select it. (Double-clicking again will deselect it.)



 Click Next and then Finish to import the vehicle specification.

Verify the spec

After importing the specification, it is good practice to open the spec and ensure it is the one that you want to use for the vehicle you want to stock receipt.

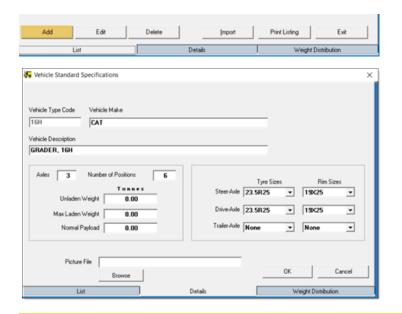




Manually add a vehicle specification

If the vehicle specification is not found in the master database, you will need to add it manually.

Select Vehicle Specifications from the Files menu and click Add.

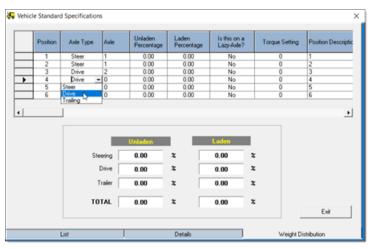


- Vehicle Type Code: Enter a vehicle code.
- Vehicle Description: Enter a description.
- Axles and Number of Positions: Enter the number of axles and positions.
- Unladen Weight, Max Laden Weight and Normal Payload: These need to be complete ONLY if you are a TOLAPS™ user.
- Tyre/Rim Sizes: Use the drop down menus to select the correct tyre and rim sizes.
- **Picture File:** If needed, browse and select a image for the vehicle spec.
- Click OK.

NOTE: Tyre and Rim sizes will only show if they have already been imported through **Tyre and Rim Specifications**.



Click **OK** to dismiss the reminder.



- Axle Type: Select the type of axle (Steer, Drive or Trailing) for each position.
- Axle: Type the axle number that each position is fitted to in the example shown, positions 1 & 2 are on axle 1 and positions 3 and 4 will be axle 2 and positions 5 and 6 will be on axle 3.
- Unladen/Laden: These percentages are only applicable to TOLAPS™ users.
- Click Exit to complete the setup.



Undo Tyre/Rim Change

Use this utility to undo changes made in the Tyre/Rim Change data entry utility.

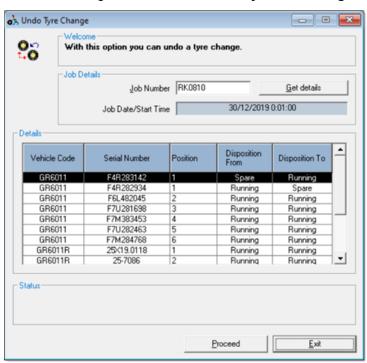
Example of use: An incorrect tyre was been fitted to a vehicle in **TTC**.



NOTE: The **Undo Tyre/Rim Change** option will only consider the most recently entered tyre/rim change for a vehicle.

Undo a tyre/rim change

Select Job Change Maintenance > **Undo Tyre/Rim Change** under the Data Entry menu.



- Job Number: Type the number for the tyre/rim change you wish to undo.
- Press Enter or click Get Details.
- Confirm the job number and click Proceed.



■ Click **Yes** to confirm the job deletion.



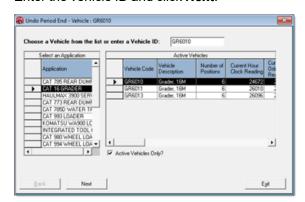
Undo Period End

Use this to reverse entries made in Data Entry > **Vehicle Period End** when, for example, a tread reading has been attributed to the wrong tyre.

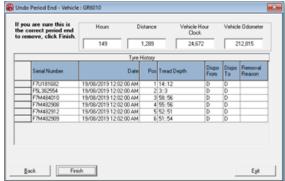
Undo a Period End record

Select Job Change Maintenance > **Undo Tyre/Rim Change** under the Data Entry menu.

Enter the vehicle ID and click Next.



View the details to ensure you have selected the correct vehicle. Click **Finish** to confirm the undo action.





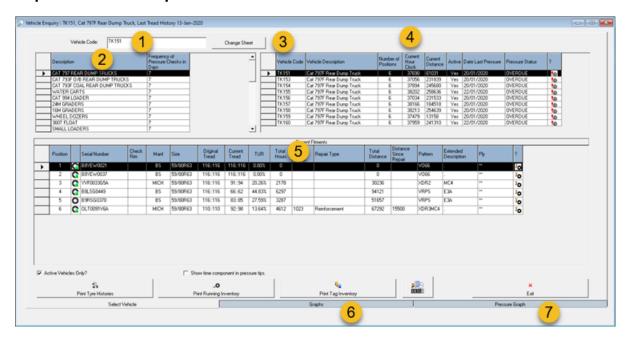
NOTE: The **Undo Period End** option will only show the most recently entered Period End for a vehicle.



Vehicles Enquiry

The **Vehicles** enquiry allows you to look at current vehicle fitment information and graphs and to look up detailed data on each tyre/rim.

Explore Vehicle Enquiries:



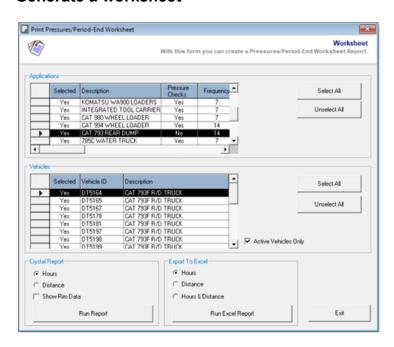
	Description	Tips
1	Vehicle Code	Type R after the vehicle ID & press Enter to see the Rim vehicle.
2	Applications list and Frequency of Pressure Checks for each.	The list order and frequency check settings are found under Files > Applications .
3	Change Sheet	Print a TCR for the selected vehicle.
4	Vehicle list	List of vehicles for selected Application. Hover over ? column to view any outstanding maintenance items for each vehicle. Maintenance items are recorded in Data Entry > Field Check - Scheduled Maintenance.
5	Tyre fitments	Tyre fitments for the selected vehicle. Move mouse over serial number to view rim info, move mouse over Check Rim column to view NDT stats. Double-click serial number for detailed info.
6	Graphs	View graphic information for your fitments on the selected vehicle. Right-click on graphs for export options.
7	Pressure Graph	Select this tab to view pressure reading data for the selected vehicle. Click points on graph to view position readings or export graph to Excel.



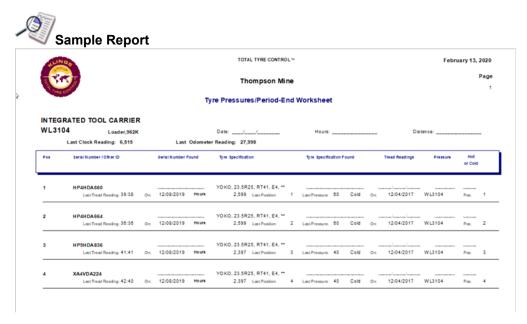
Pressures/Period End Worksheet

The **Print Pressures/Period End Worksheet** option allows you to produce and print a worksheet for recording tyre pressures and tread depths on-site. Worksheets can be printed for single vehicles, single applications, multiple vehicles or multiple applications. Along with tyre details, blank spaces are provided to record relevant data.

Generate a worksheet



- Use the Select/Unselect Applications and Select Active or Select/Unselect Vehicles buttons to define which vehicles you wish to appear on the worksheet. If using the Unselect All option, double-click next to the application/vehicle name in the Yes/No column of the table to select your choices.
- Choose your report export options by selecting from the Crystal Report or Export to Excel option boxes.
- Click Run Report or Run Excel Report.





Set Report Selection Criteria

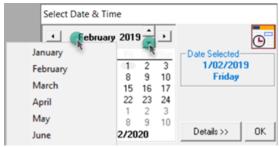
Use the **Selection Criteria** to set dates and filter out information to generate reports that target specific areas of interest.



HINT: If you run a report and the results are not what you expected, check the selection criteria to ensure the correct options are selected.

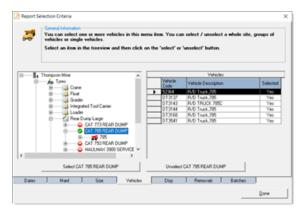
Dates tab



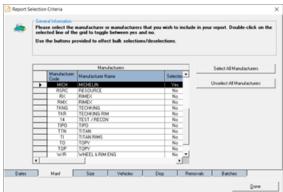


Activities typically use a date-range while inventories use an **As At Date**. After clicking on the calendar icon, you can use the up and down arrows to increase the month or year values or click the month to reveal a pick list.

Vehicles Tab



Manufacturers Tab



When running reports on a small number of items, use Unselect All before selecting the items you would like to include by double-clicking them or using the available selection buttons.



Notes			