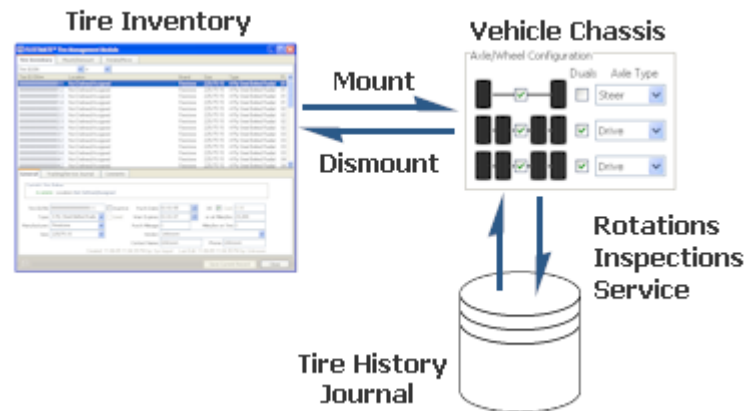


CUSTOMER GUIDE: Tire Management

Overview

FLEETMATE features a Tire Management Module that will enable you to serialize your tires and track tire location, pressure and tread depth, usage (i.e. miles or km) and tire rotations. Using Tire Management is optional. It will require more effort on your part to record the details. But the results can be beneficial if you need a great deal of information on tire wear and tire costs.

Each tire must be assigned a unique **ID Number**. All costs associated with tire related activities are recorded via Work Orders. This includes the tire cost, and the costs associated with mounting/dismounting tires and rotating tires. Tire service costs, such as re-treading, are captured via Work Orders as well. These costs then relate back to the associated vehicle.



Basic Illustration of the Tire Management System in FLEETMATE

Material Costs of a Tire

The current cost assigned on the tire record is expensed when the tire is mounted on a vehicle. The cost on the tire record then becomes zero.

If a tire is later dismounted and retreaded or serviced, the charge incurred for re-treading or other service is captured and recorded on the tire record. When the tire is then mounted on a vehicle, this cost will be expensed to the vehicle on which the tire is mounted. The cost on the tire record is then returned to a value of zero until the next tire service record is recorded.

This expensing process will then repeat. This is how actual tire costs are captured and allocated. Keep in mind that these cost do NOT relate to your fleet maintenance labor.

In order to capture cost, the Type field must be set to either **"Retread"** or **"Service"**.

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If you need to manage tires that were **Original Equipment** on a vehicle, check the **OE** box as you add the tire records, and leave the cost set to zero. Then mount the tires on the vehicle using the **Mount/Dismount** tab of the Tire Management module. Set the Odometer to zero (0) so that the current mileage on the vehicle will be picked up by the tire.

Each tire being managed by FLEETMATE features a history journal. The journal will contain all of the activities related to a tire including rotations, mounts and dismounts, warehouse location changes, and tire services such as re-capping, and repairing leaks. Journal entries cannot be edited.

You will need to periodically record **Inspection** records for a tire. The Inspection record is used to update **pressure** and **tread depth** data, and to make any notes regarding the tire and/or its condition. The Inspection record is the primary means of recording tread wear, so it is important that inspection records be entered on a regular, routine basis (e.g. weekly, monthly, etc.).

You can also update tread wear data and pressure data during a tire rotation, and from within the work order process as you replace tires on a vehicle.

In order to **Mount** a tire on a vehicle, the vehicle's chassis configuration (i.e. number of axles, tires per axle, and axle type) must first be defined. You can define the vehicle chassis using the **Details** dialog, or you can right-click on a vehicle in the Tire Management window to define the chassis. When using the Tire Management window, first select the **Mount/Dismount** tab, then right-click on the vehicle to define the vehicle chassis.

Once a tire is mounted on a vehicle, you can no longer edit the chassis definition. Make sure the vehicle chassis is defined properly before mounting a tire on a vehicle.

If you replace a casing, you can either continue using the same Tire ID/SN identifier and capture the replacement cost, or inactivate or delete the prior Tire ID/SN and enter a new Tire ID/SN for the new casing.

If you delete a Tire ID/SN, its history is also deleted so the activity will no longer be present in your database. All activity on work orders however, is retained. As an alternative you can make the old casing **Inactive**. This will retain the prior data, but the tire will not be available for use.

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Tire Availability for Mounting

The **Mount/Dismount** tab will display a list of all available tires in the lower portion of the window. These tires are available for mounting on a vehicle.

A tire will only be made available for mounting if either of the following conditions exist:

1. The tire was just added to the database and no history exists
- or*
2. The tire is not currently mounted, *and*
The tire history journal shows a tread depth greater than 2/32nds of an inch

A tire that has just been added to your database will indicate an initial location value of **Not Defined/Assigned**, or the default value that you have defined using the **Company Data | Company Information...** dialog. One journal transaction is recorded when you add a tire, to log the insertion of the tire record in your database. The tire's initial physical location, tread depth and pressure values will be set to your default values. Use the **Company Data | Company Information...** dialog to adjust these default values.

If necessary, you can also issue a **Change Tire Location** journal entry to indicate the proper physical location of the tire. This is helpful if the tire will be stored in a warehouse for an indefinite period of time, as a spare.



Additional Information

Note that the target vehicle's chassis (i.e. axle and wheel configuration information) must be defined before attempting to mount a tire on a vehicle. A tire's tread depth must also be greater than **2/32nds** (mm), and greater than the **Replace** (pull point) limit of the axle definition.

The system will not prevent you from mounting a tire that has a **Tread Depth** that is at or below the **Warning** point for the intended axle. It will prevent mounting a tire that is at or below the **Replace** point for the target axle.

When originally mounting an **Original Equipment** tire on a vehicle, if you want the mileage on the tire to equal the total mileage currently on the vehicle, set the **Odometer** value on the **Mount Tire** journal entry window to **Zero**. The tire will then pickup the vehicle's mileage.

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Tread Wear

The tread depth on each tire will be governed by two (2) tread wear alert values: **Warning** and **Replace**. The **Replace** value represents your pull-point. The actual values will depend upon the **type of axle** on which the tire is mounted. As an example, a tire on a **Steer** axle on a motor coach will require a greater tread depth than a tire mounted on a **tag** axle on a motor coach. These alert points are managed by you using the **Company Data | Company Information...** menu option.

When a tire's tread depth reaches the **Warning** value (determined by the axle type), the record will be listed in **orange** in the Tire Management window as a visual clue that the tire will need attention soon. When a tire's tread depth reaches or is less than the **Replace** value (i.e. your pull-point), the record will be listed in **red**. The tire should then be dismantled, and either reconditioned, or the casing should be replaced.

Any tire with a tread depth of **2/32nds** or less cannot be mounted. You may issue a Tire Service record to record the details involving re-treading/re-capping, including the cost of the service and the new tire tread depth specifications. Once the tire is returned to normal specifications, the tire will be available for mounting.

A tire cannot be serviced while on a vehicle. If a tire is to be re-treaded/re-capped, you will need to replace the tire first. Replacing a tire via a Work Order will automatically dismantle the original tire, and will mount the new tire. Once the tire requiring service has been dismantled, you can record a tire service record indicating that the tire has been re-treaded/re-capped. The cost of the tire service is recorded in the tire journal, as well as the new tread depth specifications. This cost will be expensed the next time this tire is once again mounted.

A tire's location cannot be changed while the tire is on a vehicle. If a tire is to be re-located to a warehouse or storeroom, you will need to replace the tire first, or simply confirm that the tire is not currently mounted. While a tire is dismantled (i.e. not on a vehicle) you can change the tire's warehouse location.

The current cost assigned on the tire record is expensed when the tire is mounted on a vehicle. The cost on the tire record then becomes zero. If a tire is later dismantled and re-capped, the charge incurred for re-capping is captured and recorded on the tire record. When the re-capped tire is then mounted on a vehicle, this cost will be expensed to the vehicle on which the tire is mounted. The cost on the tire record is then returned to a value of zero until the next tire service record is recorded. The expensing process will then repeat, and will prevent duplicate expensing of tire costs.

i Additional Information

If you replace a casing, you can continue to use the same **Tire ID/SN**, or you can enter a new Tire ID/SN for the new casing. The decision here will be based on your business practices. When you Retread or Service a tire you will be given the option of clearing prior tire history, and starting over. You can answer **No** to this dialog, and retain all prior history for the **Tire ID/SN**.

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Adding a Single Tire Record to Tire Management



To add a new tire record to the tire management module, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

With the **Tire Inventory** tab selected at the top of the window, your current tire records will be listed in the upper pane of the Tire Management Module window. Right-click in the tire list area and choose **Add New Tire Record** from the popup menu. A new tire record will be added to your list, and will have a **Tire ID/SN** value of "**_NEW_TIRE**".

General Tab

The tire record is added to your database with a **Tread Depth**, **Pressure**, and **Location** following default values from the **Tires/Tread Depth Alerts** tab on the **Company Data | Company Information...** dialog.

Assign a unique value to the **Tire ID/SN** field and press [**Tab**] two (**2**) times (to advance past the Inactive Flag). Enter the tire **Type**, **Manufacturer**, and **Size** for this item.

Continue entering all relevant information about the tire. Once all data has been entered, click the **Save Current Record** button to save your data.

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Adding Multiple Tire Records to Tire Management



To can add a **Batch** of up to 999 tire records into your database at once, using one window. This can save you some initial typing. Once the tire records are in-place, you can make whatever adjustments may be necessary.

With the **Tire Inventory** tab selected at the top of the window, your current tire records will be listed in the upper pane of the Tire Management Module window. Right-click in the tire list area and choose **Add Batch – Multiple Tire Records...** from the popup menu. A new **Add Tire Batch** window will appear.

In the upper portion of the window you'll specify the **Number of Tire Records to Create**, define a **Prefix** (up to eight (8) characters), and define the **Starting Numeric Value** to use for this series of tires.

Using the remaining fields on the **Add Tire Batch** window, define the values that will be used for these tires. Use care to use accurate values. As an example, if you add several hundred tire records in a batch and you do not specify the correct tire size for the batch, it will be time consuming to go through your records to make corrections.

Continue entering all relevant information about the tires in the batch. Once all data has been entered, click the **OK** button to add your tire records. This may take several seconds, depending upon the number of tires specified in the batch.

As each tire record in the batch is created, an initial Tire Journal record will also be recorded to show the activity, and to log initial tread depth, pressure and location values.



Additional Information

You can also **Import** tire records. This can be helpful if you have tire information in an external source such as a text file or an Excel[®] worksheet. Refer to the **Importing Data** document in the FLEETMATE program group on your PC for additional information regarding data imports.

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Editing a Tire Record



To edit an existing tire record in the tire management module, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

With the **Tire Inventory** tab selected at the top of the window, your current tire records will be listed in the upper pane of the Tire Management module window. Click in the tire list area on the record that you need to edit.

Once you click a tire in the list, its current information will be listed on the **General** tab in the lower portion of the window.

Make whatever changes are needed to the tire record, and then click the **Save Current Record** button to save your changes.

Deleting a Tire Record

To delete an existing tire record in the tire management module, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

With the **Tire Inventory** tab selected at the top of the window, your current tire records will be listed in the upper pane of the Tire Management module window. Right-click on the tire record you need to delete, and choose **Delete Selected Tire Record** from the popup menu.



Note that if the tire is currently mounted on a vehicle, you cannot delete the tire. You will first need to dismount the tire. Once the tire is no longer mounted on a vehicle, you may delete the tire record.

Also note that deleting a tire record will also delete all history concerning the tire, including cost information. Prior related costs recorded on work orders, however, will not be affected. You also have the option of retaining the tire record, and making it **Inactive**, rather than deleting it.

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Recording a Tire Inspection Record

A Tire Inspection record is used primarily to periodically record **Tread Depth** and **Tire Pressure** values. You can also record comments and **Observations** about a tire and its condition.

To add a new tire inspection record, click the **Tire Inventory** Tab. Next, click the tire in the upper list area that you want to add an inspection record to.

In the lower portion of the Tire Management window, click the **Tracking/Service Journal** tab. Existing journal records, if any, will be listed for the selected tire.

Right-click in the **Tracking/Service Journal** list area and choose the **Add Journal Record | Inspection...** menu option. An **Inspect Tire** window will appear. You can now record tire pressure and tread depth values, as well as make any relevant comments regarding the condition of the tire.

If the Tire is Mounted...

If the tire is currently mounted on a vehicle, you have the option of issuing a work order and specifying **Labor Units** and **Cost per Unit** values so that the appropriate labor charges are recorded on a Work Order, against the vehicle on which the tire is mounted. If you have the Automatic Work Order Numbering feature activated, you will see the word "auto" appear in the Work Order No field. This system will now automatically issue a new work order to record labor and cost data for you. Otherwise, enter your work order number in the Work Order No field.

If the Tire is NOT Mounted...

If the tire is not currently mounted on a vehicle, you can record tread depth, pressure and any comments you care to make. You cannot, however, record labor units and cost per unit information via a work order. This is because the tire is not associated with a specific vehicle.

Complete the tire inspection window by supplying all relevant information about the inspection. Make certain that tread depth information is correct. Click the **OK** button to save your inspection record, or click **Cancel** to abandon your entries.

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Changing a Tire Location

You can change the current storage location for any tire that is not currently mounted. This function is useful if you need to transfer a spare to a different warehouse location. This function only changes the tire's current storage location.

To change a tire's storage location, click the **Tire Inventory** Tab. Next, click the tire in the upper list area that you want to move to a different location.

In the lower portion of the Tire Management window, click the **Tracking/Service Journal** tab. Existing journal records, if any, will be listed for the selected tire.

Right-click in the journal list and choose **Change Tire Location** from the popup menu. This will open a Change Tire Location window. Change the location to the new location and record any comments you care to make.

Click the **OK** button to save the location change, or click **Cancel** to abandon the location change record.

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Mounting/Dismounting Overview



To mount a tire on a vehicle, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

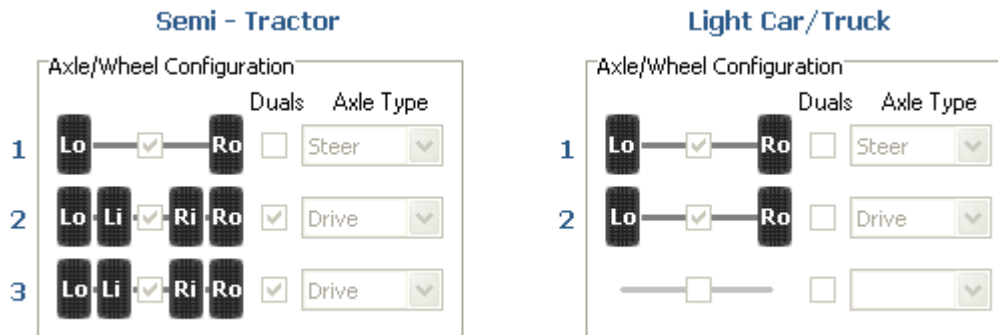
A mount location is identified by using a combination of axle number, and wheel position designation. This approach makes it possible to accommodate virtually any chassis configuration.

Axle/Wheel Designations

Axes are numbered sequentially from one (1) to six (6); therefore, the maximum number of axles that a vehicle can feature is six (6). An axle can feature either two (2) or four (4) wheels, and each wheel is identified in the following way, moving from left to right:

- **Lo** – Left Outer
- **Li** – Left Inner
- **Ri** – Right Inner
- **Ro** – Right Outer

The following are two example chassis configurations, and the axle/wheel identifiers that will be used.



Example Chassis Configurations

Using this system of identification, it is easy to locate the tractor tire positioned at **3-Ri**. The tire is on the right-inner wheel on axle number three of the tractor.

Each axle is also assigned a **Type: Steer, Drive or Free/Tag**. The axle type is used to monitor tread depth allowances separately, based on the axle type on which the tire is mounted. As an example, both axles on a tandem-axle trailer would be set to the Free/Tag axle type.

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Mounting a Tire on a Vehicle



To mount a tire on a vehicle, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

Click the **Mount/Dismount** tab at the top of the window. This tab will list fleet vehicles in the upper portion of the window, and all available tires in the lower portion.


As you click a vehicle, you will see a representation the vehicle's axle/wheel configuration appear on the right side of the window. Click on the vehicle record you need. You can now mount a tire at each wheel position displayed.

There are two ways to mount tires: **Drag and Drop** or **Select and Right-Click**



Drag and Drop Mounting

Hover your mouse over the tire in the **Available Tires** list and watch for your mouse cursor to change to the picture above. You'll need to position your mouse near the top or bottom of the row. Once the mouse pointer changes, click and hold the mouse button on the tire record, drag the tire to the intended wheel position, and release the mouse button to drop the tire on that position. A **Mount Tire** journal dialog will appear. You may now specify the details of the mount. Click **OK** to mount the tire, or click **Cancel** to abandon the mount operation.

The  mouse pointer means that you cannot drop the tire on the wheel position. A tire is likely already mounted there.



Select and Right-Click Mounting

Click on the wheel position at which you want to mount the tire. The wheel position icon will change to the picture above. The target location is now selected. Next, right-click on the tire wish to mount and choose the **Mount Tire at Selected Location...** option from the popup menu. A **Mount Tire** journal dialog will appear. You may now specify the details of the mount. Click **OK** to mount the tire, or click **Cancel** to abandon the mount operation.



Additional Information

As you mount a tire, be sure to record current **Tread Depth** and **Pressure** readings to keep your database up to date. When originally mounting an **Original Equipment** tire on a vehicle, if you want the mileage on the tire to equal the total mileage on the vehicle, set the **Odometer** value on the initial **Mount Tire** journal entry window to **Zero**.

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Dismounting a Tire from a Vehicle



To dismount or remove a tire from a vehicle, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

Click the **Mount/Dismount** tab at the top of the window. This tab will list fleet vehicles in the upper portion of the window, and all available tires in the lower portion.

As you click a vehicle, you will see a representation the vehicle's axle/wheel configuration appear on the right side of the window. Click on the vehicle record you need. You can now dismount any tire at any wheel position displayed.

To dismount a tire, click the hold the tire with your mouse, drag it to the **Available Tires** list in the lower portion of the window, and then release the mouse button to drop the tire. A **Dismount Tire** journal dialog will appear. You may now specify the details of the dismount. Click **OK** to dismount the tire and return it to the available tires list, or click **Cancel** to abandon the dismount operation.



Additional Information

As you dismount a tire, be sure to record current **Tread Depth** and **Pressure** readings to keep your database up to date.


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Rotating Tires on a Vehicle



To rotate tires on a vehicle, click the **Tire Management** toolbar button or use the **Company Data | Tire Management...** menu option.

Click the **Rotate/Move** tab at the top of the window. This tab will list fleet vehicles on the left. The right side of the window will list current tire positions near the top, and will contain a series of data fields beneath the tire positions. If no tire positions appear in the upper list, no tires are currently mounted on the vehicle.

To rotate tires, click, hold and drag rows to the desired Axle/Wheel positions using the  buttons. You can also click on the non-fixed area of a row (appears blue when clicked), and use the **Move Up** and **Move Down** buttons to move the tires to different Axle/Wheel positions.

As you update the tire positions, click in the **Tread Depth** and **Pressure** cells to update these values to the most recent readings for each tire. This will help keep your tire data up to date. Simply click the cell and type the new value.

If you want to start over in the process, click the **Reset** button to return everything to its prior state.

Beneath the tire position list you can complete all relevant fields pertaining to the rotation. Without work order information this only consist of date and odometer value. You can also opt to record labor data on a work order by checking the **Record Work Order** box. In this case you will need to provide additional information to satisfy the process.

When you are ready to save the rotation information, click the **Save Rotation** button.

If you wish to abandon your rotation information, simply click on a different vehicle in the vehicle list.



Additional Information

If you issue a work order to record labor details of the rotation, only the tires involved in actual moves will be recorded on the work order. In other words, if a tire has not been repositioned to a different Axle/Wheel location, there will be no reference to the tire in the labor lines on the work order. Likewise, no tire history will be recorded for that tire.