EM Track-III release 3.7.5

New Retread Logic explained

EM Track-III versions prior to release 3.7 assumed that any tire being retread begins a new life after retread. The new logic contains four (4) new features that deviate from the prior logic:

- The Casing Value is always considered, not only upon a Retread return.
- A new feature allows the entry of Cap and Casing (Stock Retread) to be entered into inventory
- The Scrap and Retread reports are being expanded to, in case of retreads, show each life separately.
- All reports showing Cost and/or Cost/Hour are adjusted to take the Casing Value into account

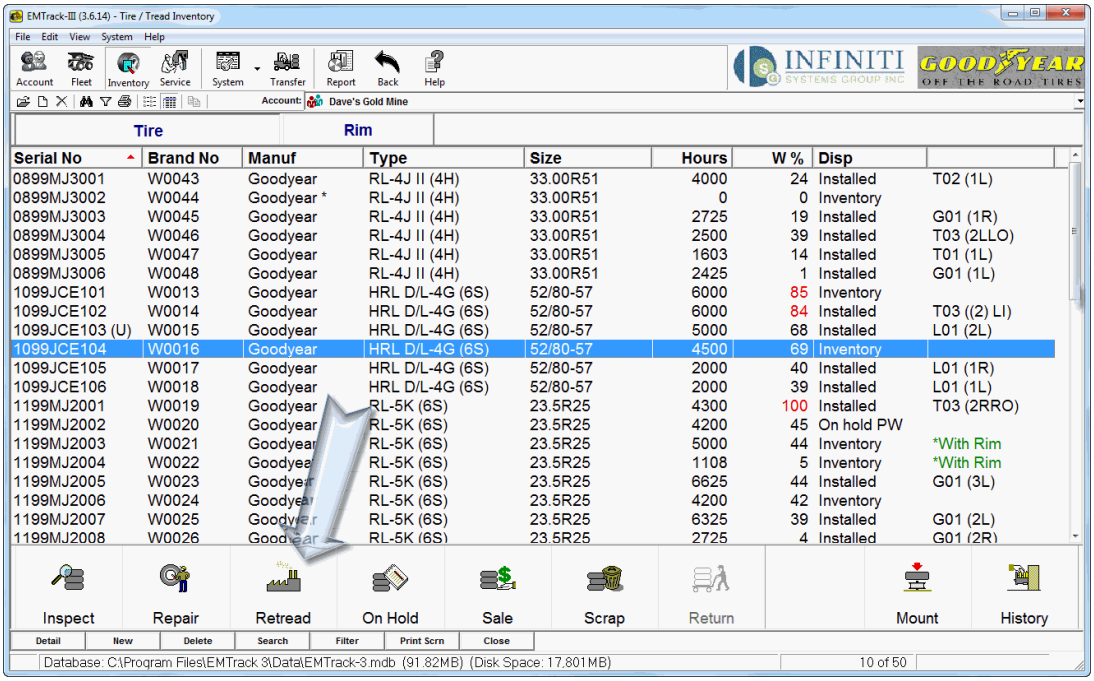
In order for EM Track to offer valuable tire performance data it is important that correct data is fed into the system. Customers that followed the correct sequence of "sending to Retread" and "returning form Retread" in the past will find the new reports to already be accurate and show the past tire lives.

EM Track versions prior to 3.7.0 allowed the entry of retread, repair counts and cost in the inventory detail screen without tires going through the correct retread steps. Those customers may find that the new reports may not correctly reflect the tire's prior life. There is nothing we can do to remedy this.

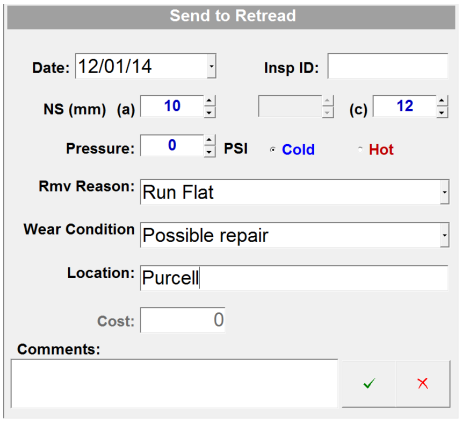
We explain here the correct use of the retread steps.

1. Sending a tire to Retread

   The retread sequence begins by sending a tire to Retread. This step is typically initiated on the inventory screen by selecting the tire and clicking on the Retread Icon, but it can also be initiated from the Service screen at the time the tire is removed and selecting the disposition of "Retread".



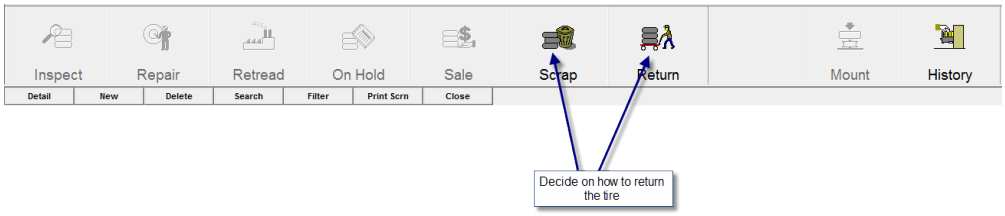
Once the Retread icon is clicked, a screen overlay is presented where specific information may be entered.



The most important information is the Date field and the most recent tread measurements (NS). Any of the other data is optional and should be provided to accrue a good tire history

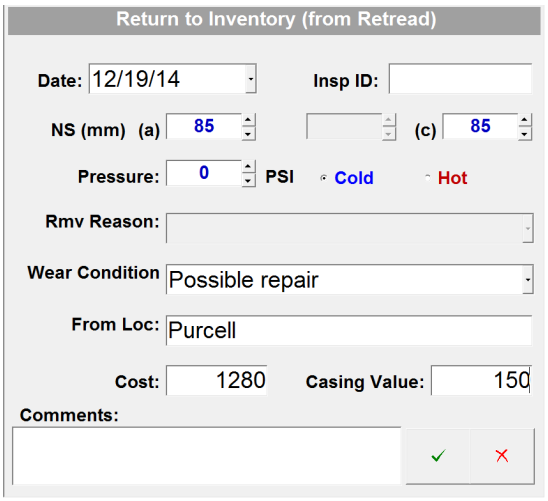
2. Returning a tire from Retread

Once the tire is returned to you, select its serial number on the inventory summary screen and click one of the return options



Pressing the “Scrap” Icon will scrap the tire immediately.

Pressing the “Return” icon will begin the Return to Inventory sequence by displaying the return overlay.



Data on this screen is paramount for accurate reporting.

The “Date” of return and the new tread readings need to be updated. The values initially default to the prior known information. Since there is a new tread on this casing the new tread measurement (NS) is entered.

The comment field may contain any additional information you may want to retain with this retread.

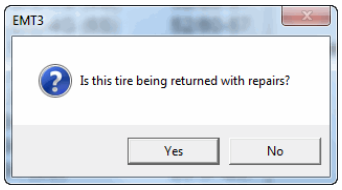
The **Cost** data is important for EM Track to report valuable information later.
The **Cost value** is the true retread cost excluding any repairs. You may include repair costs in this value, but the system prefers that you enter repairs separately in the next step for more accurate reporting.

The Casing Value is now always asked for, both for new as well as retread tires. With multiple retreads the casing value will eventually reduce to nothing (0). Some low quality tires may never have a casing value as they cannot get retread.

The operating cost (Cost/Hr) computation on the Retread and some other reports is new. It is discussed later in section 6: Report Formulae

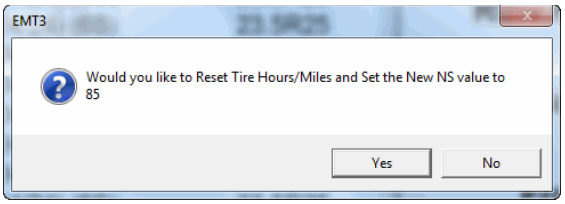
3. Finishing up

   After you click the closing green checkmark you will be asked whether any repairs were associated with this retread.



Answering “Yes” will display the next screen where you can enter any number of individual repairs and their associated cost. Each separate repair item will create a “dummy” tire history record pair (Sent to Repair and Returned from Repair). This is so that the reports can list each repair item separately. If you do not wish this separation you can simply make one (1) entry with the total repair cost and use a combined description for all repairs.

Once you complete the optional repair entries you will be presented with the following final question:

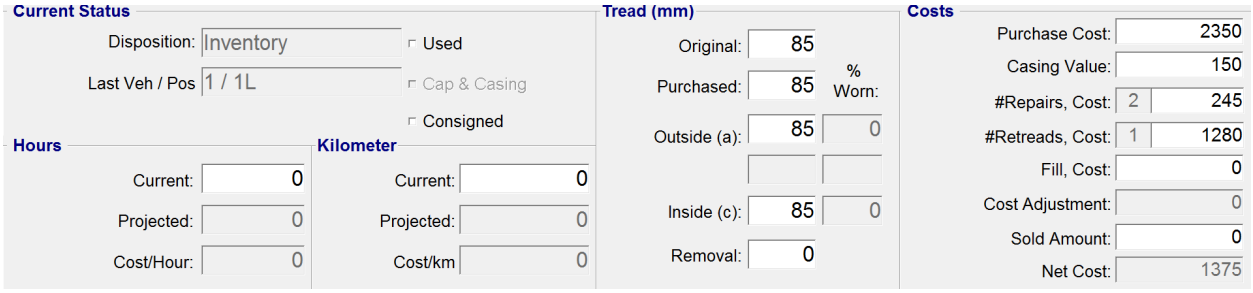


Answering “Yes” to this question will reset the current Tire Hours and Miles/KMs to zero (0) and performance accounting starts from this point forward. The Casing Hours and Miles are always retained in the background and will be used for Casing Performance data in addition to the current Tread Performance data.

The previous tire is considered scrapped and will be listed on the scrap reports 11, 12 and 13, even if its serial number does not change. When a casing value is entered it is treated like an adjustment to the tire (deducted from the total cost) on all reports.

4. The Tire Detail after completed Retread Return

   The example discussed here will yield the following tire detail upon completion of the return event



Tire Hours and Mile/Km data have been reset to zero (0) meaning that this tire now begins a new life

- Original purchase cost remains displayed (new with EM Track version 3.7)
- Retread Count is now one (1), meaning it is the first retread
- Retread cost is $1,280. That is the cost for “this” life, not an accrued cost in case of multiple retreads.
- Casing Value is $150
- The Net cost of the current tire life is $1375: $1280 + $245 - $150
- Tread Depth (NS) is set to 85, declaring the tire as new at 0% wear

On the Inventory summary screen there is one (1) asterisk next to the Manufacturer Name (Goodyear). Each consecutive retread will add one additional asterisk.

Important Note:
The fields **Number of Retreads** and **Number of Repairs** are no longer open for user input. The new system depends on the proper sequencing of “Sending To Retread” and “Returning From Retread”. The Retread and Repair Cost fields *may* be open for user input *after* a tire has been returned from retread in case its cost is not known until later. The count fields are never open for user modification.

Looking at this tire’s history shows the entire sequence of events:

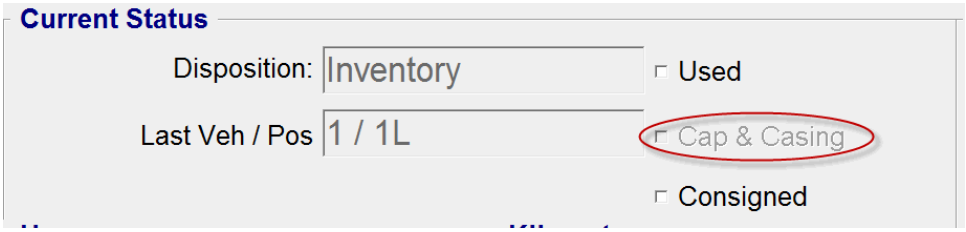
11/27/14	Remove	Inventory	10,12	0	4861	0	0	1	
12/01/14	Send to	Retread	10,12	0	4861	0	0	1	
12/19/14	ReturnRt	Inventory	85,85	0	0	0	1280	1	
12/19/14	Send to	Repair	85,85	0	0	0	0	1	
12/19/14	ReturnRp	Inventory	85,85	0	0	0	170	1	1 Section Repair
12/19/14	Send to	Repair	85,85	0	0	0	0	1	
12/19/14	ReturnRp	Inventory	85,85	0	0	0	75	1	1 Patch

5. Cap and Casing (New feature)

   This new feature allows the proper entry of previously capped (retread) tires into inventory. The Purchase Cost field should reflect the amount you paid for the tire and the Casing Value should reflect the value of the casing without the tread value. The retread amount should remain zero

(0) since you do not truly know what its cost may have been. Tires marked as Cap&Casing will be included in the Retread Report together with any regularly retread tires.

On the **Current Status** section of the inventory Detail screen you see a new check-box to indicate that a tire is a Cap and Casing type.



The Cap & Casing checkbox is open only when you enter a new tire into inventory. Afterwards it only shows its status.

6. Formulae used in conjunction with the new Retread and Scrap Reports

Computation of Cost/Hour is now different, depending on where a tire is in its life.

a. For a tire that has never been retread (first life):
Cost/Hour = (Purchase Cost + Repairs – current Casing Value) / Hours of operation

b. For each successive tire life "n":
Cost/Hour = (Retread Cost(n) + ∑Repairs(n) – current Casing Value) / Hours of operation(n)

c. The Total line for all retreads:
Cost/Hour = (Purchase Cost + ∑Retread Costs + ∑Repairs – last Casing Value)/ ∑Hours in operation

Note that on the scrap and retread reports it is possible that the last life may have no more casing value as the tire is permanently discarded.
Also note that the Casing Value is not specifically listed on the reports. It is implicitly used in the formulae. The only exception is the Individual Tire History

7. Retread Report #17

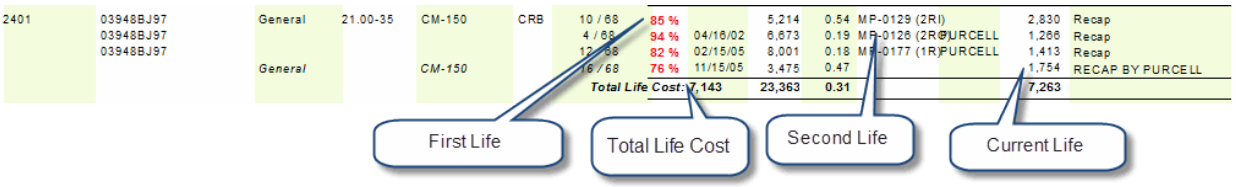
Report #17 is re-designed to show the retread history of selected tires.

When a tire is retread more than once the Casing Value is not considered until the final Life Cost.

The first line shows the original life of the tire (before retread). It uses the original purchase cost as the cost base. The following rows are successive retread(s), each using the retread cost as the

cost base. The cost column follows the cost rules listed in section 6. The total line is the sum of all data over the life of the tire.

When a tire is retread more than once, then multiple lines for the same tire serial number are listed as in the example below.



This tire was retreat three times. The first line shows the original (fist) life of 5214 hours. There was one repair in the first life for $180. The purchase cost was $2650. Therefore the total cost of the first life is 2650 + 180 = 2830.

The second line shows data after the first retread (second life). The retread cost was $1266

The third line is the second retread with a cost of $1413

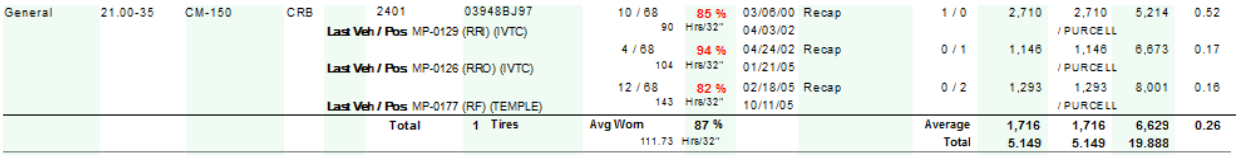
The last line is after the third retread. It is also the current life. The tire is now installed and is still operating, accruing 3475 hours so far. The retread cost was $1636 with one repair for $118 for a total of $1754. The current casing value for that tire is $120.

The Total Life Cost is the sum of all costs (Purchase + Repairs + Retread) less the current Casing Value: $7263 – 120 = $7143

8. Scrap Tire report #13

The Scrap tire report has been expanded to show each life of a retread tire. Each time a tire is retreaded, the prior life is considered scrapped.

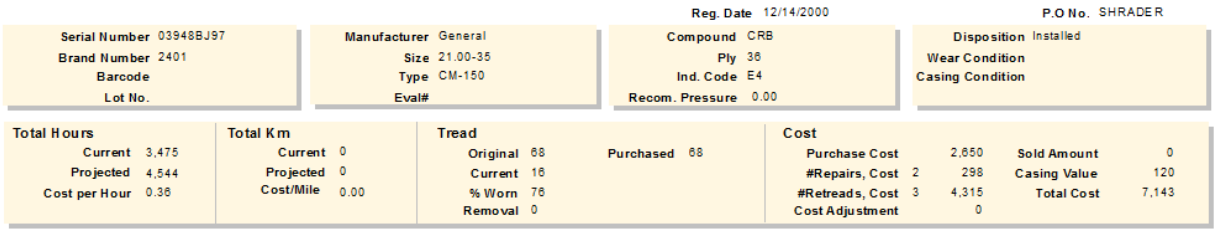
The currently known casing value is deducted from all tire cost computations as casing values of prior lives do not matter.



Note that the current life is not part of this report example as the tire is still in service. Once the tire is scrapped for good then this report reflects cradle to grave information

9. Individual Tire History Report #49 (printed from the tire history screen)

   The Cost section of this report has been expanded to show cradle-to-grave information.



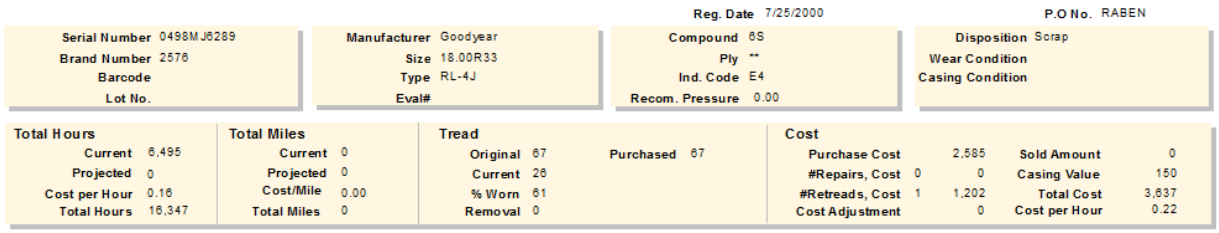
				Reg. Date	12/14/2000	P.O No.	SHRADER
Serial Number	03948BJ97	Manufacturer	General	Compound	CRB	Disposition	Installed
Brand Number	2401	Size	21.00-35	Ply	36	Wear Condition	
Barcode		Type	CM-150	Ind. Code	E4	Casing Condition	
Lot No.		Eval#		Recom. Pressure	0.00		

Total Hours		Total Km		Tread				Cost				
Current	3,475	Current	0	Original	68	Purchased	68	Purchase Cost	2,650	Sold Amount	0	
Projected	4,544	Projected	0	Current	16			#Repairs, Cost	2 298	Casing Value	120	
Cost per Hour	0.36	Cost/Mile	0.00	% Worn	76			#Retreads, Cost	3 4,315	Total Cost	7,143	
				Removal	0			Cost Adjustment	0			

The Total Hours and Total Km/Miles blocks have changed in that the Cost/Hr and Cost/Distance sections now show values depending on whether a tire is new or has been retread.

In the case of retread tires we show information pertaining to the “Current Life” only. For this particular tire the Cost/Hr is computed as (Current Cost – Casing Value) / Projected hours = (1754 – 120) / 4544 = 0.36. Please refer to values shown on the retread report in section 7.

The Cost block shows different values once a tire is either **scrapped or sold**. We then show the total life cost per hour in the Cost block and Cost/Hr of its last life after retread in the Hours block. When a tire was never retread then the two Cost/Hr values will be the same.



				Reg. Date	7/25/2000	P.O No.	RABEN
Serial Number	0498MJ6289	Manufacturer	Goodyear	Compound	6S	Disposition	Scrap
Brand Number	2576	Size	18.00R33	Ply	**	Wear Condition	
Barcode		Type	RL-4J	Ind. Code	E4	Casing Condition	
Lot No.		Eval#		Recom. Pressure	0.00		

Total Hours		Total Miles		Tread				Cost				
Current	6,495	Current	0	Original	67	Purchased	67	Purchase Cost	2,585	Sold Amount	0	
Projected	0	Projected	0	Current	26			#Repairs, Cost	0 0	Casing Value	150	
Cost per Hour	0.16	Cost/Mile	0.00	% Worn	61			#Retreads, Cost	1 1,202	Total Cost	3,637	
Total Hours	16,347	Total Miles	0	Removal	0			Cost Adjustment	0	Cost per Hour	0.22	

The above example tire had 1 retread at a cost of 1,202 and a casing value of 150. It ran for 6,495 hours after retread. Therefore Cost/Hr for the current (last) life is (1,202 – 150) / 6,495 = 0.16. The total life cost is the (total cost – casing value) / total hours: (3,787 – 150) / 16,347 = 0.22

10. Other reports affected with release 3.7

    In addition to reports discussed above, the following reports have been adjusted to account for the Casing Value in the Cost and Cost/Hr computations:

    - Scrap Summary Report #11
    - Tire Cost Summary report #14
    - Repaired Tires #16
    - Installation Report #29

Tire Use and Cost Report #30 now lists “Total Life Cost”, in case of retreads

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