

TRUE OR FALSE?

PUTTING AN END TO RECEIVED WISDOM
ON THE SUBJECT OF RETREADING



TO RETREAD OR NOT TO RETREAD? YOU DECIDE!



Competitiveness, safety, respect for the environment are major issues for transport professionals. All solutions that promote company performance and cost containment are therefore welcome!

In this context, tyre management plays an important role.

This management combines a judicious choice of quality products initially, plus retreading operations that extend the life of these products.

It is up to each company to program the «multiple lives» of their tyres in order to make the most of them, according to their needs.

This «white paper» provides a clear response to those who ask «When to turn to these solutions? Up to what point? Under which conditions?»

Here you will find everything that you always have wanted to know about Multiple Life Solutions for your tyres.

Enjoy the read, have a safe journey!

...and long life to your tyres!

This document is published under the auspices of the French rubber manufacturers' association (SNCP) and of the Union of Tyre Professionals (SPP), representing active players in the retreading network in France: manufacturers, retreaders, independents, distributors specialising in tyres, ecological organisms, collectors...



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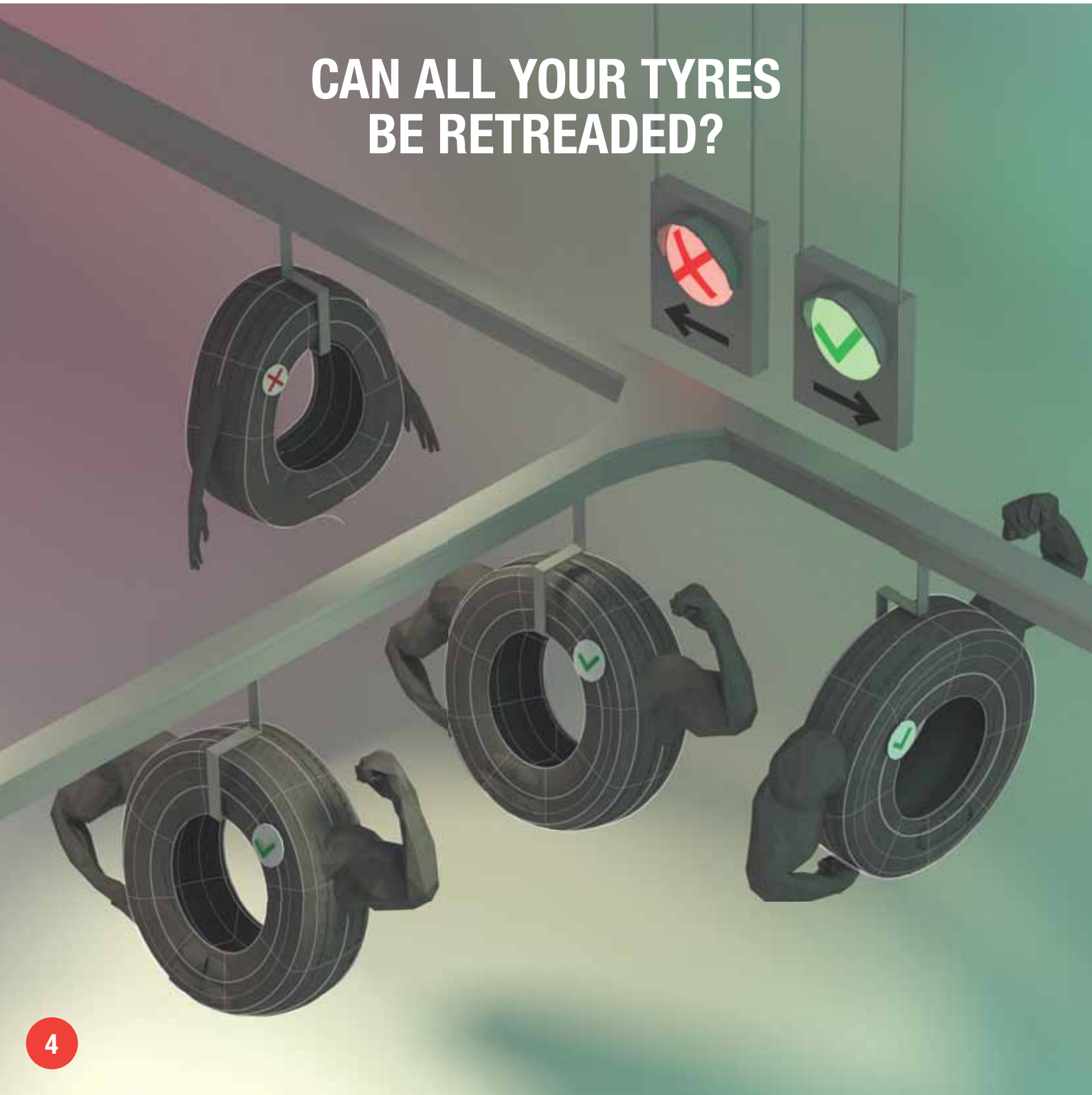
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CAN ALL YOUR TYRES BE RETREADED?



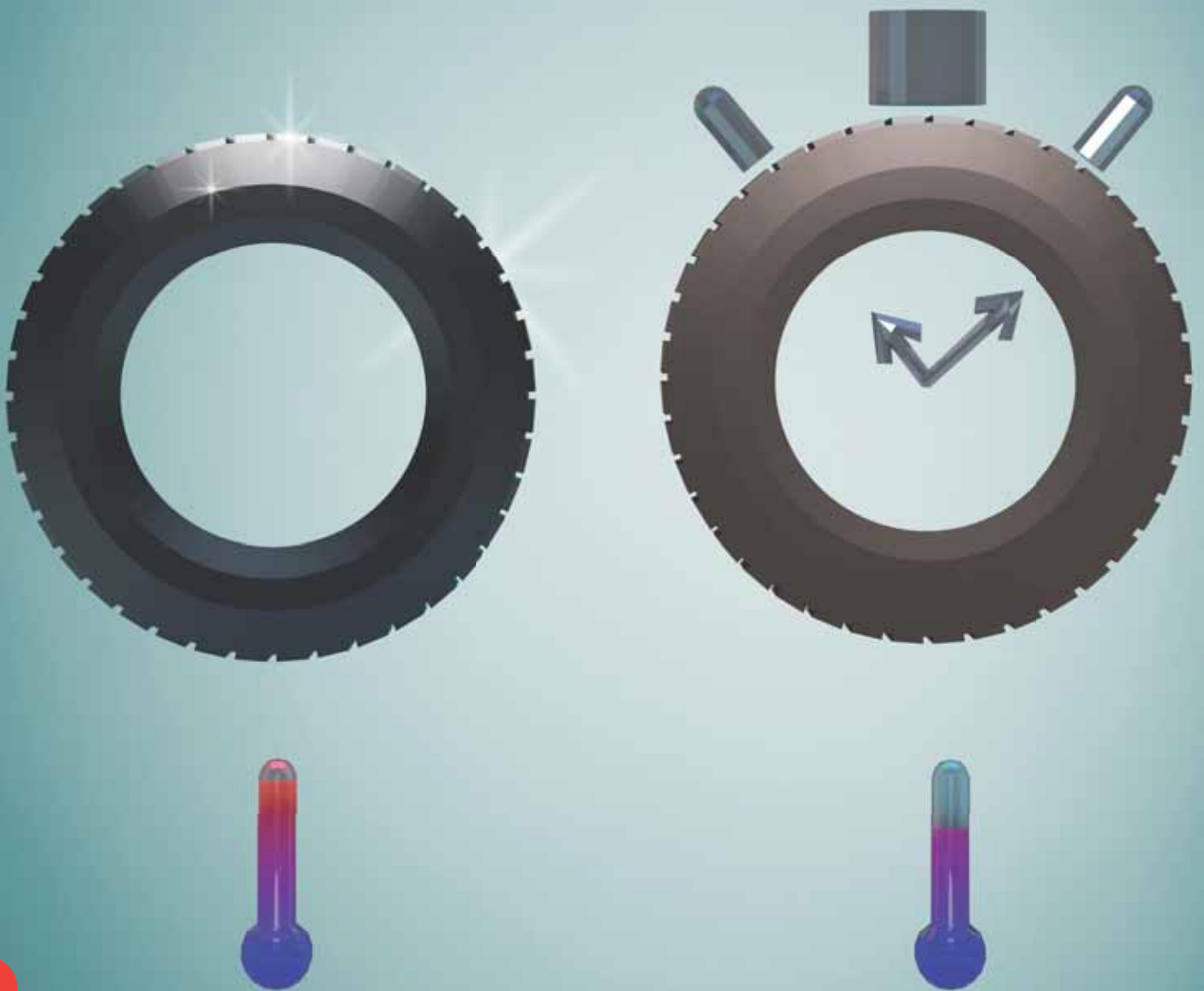
**TRUE
BUT...**

**NOT ALL TYRES ARE EQUAL WHEN TESTED FOR RETREADING ACCEPTABILITY.
SUCCESS DEPENDS ON TWO CONDITIONS:**

- ◆ They must be designed from the beginning to be optimally retreaded.
Only those with a casing strong enough to permit several lives are accepted by the most intransigent retreaders.
- ◆ Maintenance must be professional and regular.

Certain manufacturers work constantly to develop the potential of their casings and thus improve the retreadability of their tyres.

ALL RETREADING PROCESSES HAVE THE SAME ADVANTAGES?



FALSE

DEPENDING ON YOUR PRIORITIES, YOU CAN CHOOSE BETWEEN TWO RETREADING PROCESSES:



MOULD CURE RETREADING

Raw rubber covers the entire prepared casing (top and sides) of the tyre, which then is placed in a mould that will give the retreaded tyre its final shape. Vulcanisation takes place in a press heated to 160°C, for about one hour, as if for a new tyre.

Advantages :

- ◆ When conducted by manufacturers, this process makes it possible to totally exploit the performance of the original casing.
- ◆ It provides dimensional homogeneity that guarantees more regular wear, for any type of original casing.
- ◆ A tyre retreaded with this procedure looks like new, with entirely remade sides and markings -- a plus for the appearance of the vehicle.



COLD RETREADING

A pre-moulded tyre tread band, with its definitive pattern, is placed on a moulded casing. Vulcanisation in a curing oven at 115°C for about three hours guarantees cohesion of the whole.

Advantages :

- ◆ It is faster to obtain retreaded casings with good management of this process.
- ◆ There are more possibilities to change tread patterns.

The care and the expertise of retreaders are crucial to the stages of selection, verification, repair and coating of casings to guarantee the quality and reliability of the finished product. In French retreading factories, nearly one million casings are inspected every year, with cutting-edge technology! This irreplaceable experience is based on the qualifications of the operators who examine and prepare your tyres down to the smallest detail.

NEW TYRE PERFORMANCE IMPROVES THANKS TO YOUR USED TYRES?






TRUE

IN-DEPTH KNOWLEDGE OF YOUR USED TYRES GUIDES THE EVOLUTION OF THE STRUCTURES AND MATERIALS OF FUTURE TYRE GENERATIONS

Certain large manufacturers retread their tyres themselves. Some use the tests that they carry out on casings when they arrive at their retreading factories in order to better analyse the impact of real use on your tyres. This data, observed year after year, completes tests carried out in the laboratory and on test tracks, and provides valuable information to designers of new tyres.



As soon as they arrive in retreading factories, tyres are subjected to in-depth testing. Diagnostic summaries are a mine of information on the tyres of today. Engineers interpret the data to optimise the tyres of tomorrow.

YOUR RETREADED TYRES PROVIDE THE SAME PERFORMANCE?



**TRUE
... IF**

YOUR RETREADED TYRES WILL PROVIDE THE SAME KEY PERFORMANCE AS YOUR NEW TYRES IF:

- ◆ The original casing is of superior quality, robust and long lasting.
- ◆ The materials, technology, competences and professional experience of the retreader are excellent: they are critical for first-rate retreading.

Certain retreading manufacturers, use the same rubber and patented tread patterns for their retreaded tyres as they do for their new tyres, thereby reconstituting the initial architecture:

- ◆ *a guarantee of quality, since you will recover the key performance points of your new tyres.*

YOU SAVE MONEY WITH RETREADED TYRES?





TRUE

RETREADING COMBINES THREE ADVANTAGES FOR YOUR TYRE BUDGET, WITHOUT COMPROMISING YOUR SAFETY:

- ◆ A retreaded tyre is up to 40% less expensive than the equivalent new tyre ⁽¹⁾.
- ◆ 100% more kilometres: retreading of a quality casing by an expert doubles the life of your tyres at minimal cost.
- ◆ Several retreads: provided that external and internal analysis of the casing allows it, a tyre can be retreaded several times, for even more kilometres!

YOU CAN RETREAD YOUR ORIGINAL CASING SEVERAL TIMES!

The retreadability of your tyres depends on your activity and on the way that you manage your fleet. If you opt to provide your tyres with a multiple life, keep an eye on the factors that influence the way that they wear:

- ◆ The intrinsic characteristics of the tyre (sturdiness and stamina of the casing, type and volume of the tyre, tread patterns suited to your use).
- ◆ Tyre pressure.
- ◆ Load weight on axles.
- ◆ Mechanical condition of the vehicle (axle alignment, vehicle geometry).
- ◆ Driving style.

⁽¹⁾ Manufacturers' 2014 data and Internet prices reported by an independent organisation in 2014.

THE AGILITY OF YOUR OPERATION IS REFLECTED IN YOUR TYRES AS WELL?





TRUE

YOU CAN ADAPT THE TYRES ON YOUR VEHICLES TO DEVELOP THE AGILITY THAT YOU NEED FOR YOUR BUSINESS

- ◆ For optimum management of your stock, you have different options when you want to mount your retreaded tyres on your vehicles. After retreading, a tyre can be mounted on an axle other than the original.
- ◆ You can adapt your vehicles' tyres to different variations of your activity. Transporters, public works enterprises, you can adapt your tyres for different purposes when you have them retreaded, thanks to new tread patterns that can be adapted to your activity.

All retreading manufacturers can contribute to this flexible vehicle usage.

For these operations, you can rely on the recommendations of your tyre manufacturer, as well as on the advice of your distributor.

THE RETREADED TYRE IS ALWAYS YOURS?



FALSE

IN EUROPE, YOU HAVE TWO CHOICES:

- ◆ Registered (nominative) retreading guarantees the restitution of your tyre's original casing after retreading. This is the preferred option of manufacturers with a retread offering.
- ◆ the standard direct exchange of your used tyres for retreaded tyres is a quicker solution.

**YOU CAN MOUNT
YOUR RETREADED TYRES
AS IF THEY WERE NEW?**



TRUE

A RETREADED TYRE CAN REPLACE A NEW TYRE UNDER CERTAIN CONDITIONS:

- ◆ If all the tyres on the same axle are retreaded, they must have the same characteristics (see below).
- ◆ To be mixed on the same axle, new tyres and retreaded tyres must have the same characteristics (see below); moreover, all casings must have been retreaded by their own manufacturer.

A valuable possibility in case of damage that requires the replacement of a tyre ⁽¹⁾ !

TYRES MOUNTED ON THE SAME AXLE MUST HAVE THE SAME CHARACTERISTICS

- ◆ *Same retread brand ⁽²⁾.*
- ◆ *Size.*
- ◆ *Category of use (road tyres, special or snow tyres marked M+S). What matters is the category of use rather than the tread pattern of the tyre.*
- ◆ *Structure (radial or diagonal).*
- ◆ *Speed indicator.*
- ◆ *Load indicator.*

⁽¹⁾ Manufacturers recommend mounting your retreaded tyres on motorised or carrying axles.

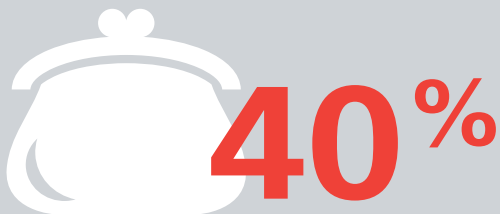
⁽²⁾ Depending on legislation in force in the country.

WHY RETREAD?

SAVINGS



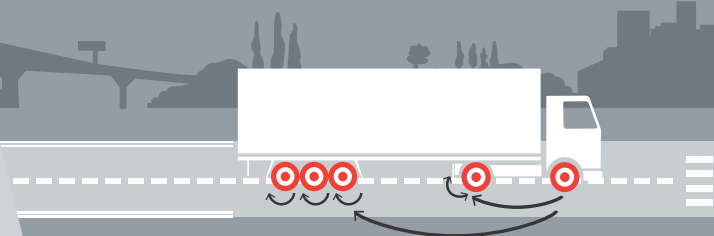
KILOMETRES⁽¹⁾



LESS EXPENSIVE

than a new tyre and retreadable
several times⁽²⁾

FLEXIBILITY



**GET THE
MOST
OUT**



**OF YOUR RETREADED
TYRES**

Choose from among several mounting
options for optimal stock management

**YOUR BRAND
MANUFACTURER AND
YOUR DEALER ARE THERE
TO HELP YOU**

⁽¹⁾ 2013 Manufacturers' internal tests.

⁽²⁾ European average. Manufacturers' 2014 prices and Internet prices reported by an independent organisation in 2014.

CUT COSTS AND BE THE PROMOTER OF TRANSPORT
THAT IS SUSTAINABLE AND FLEXIBLE TRANSPORT TO USE

PROTECTED THE ENVIRONMENT

Retreading

**DOUBLES
THE LIFE ⁽¹⁾**

of your tyre and saves
natural resources



A retreaded tyre =

-70%

of the raw material needed
for a new tyre ⁽²⁾

WITH NO
COMPROMISE
ON SAFETY

ADAPT TREAD PATTERNS TO YOUR USE

It is possible to choose from
among several hundred
combinations of original tread
patterns and retread patterns

⁽¹⁾ 2013 Manufacturers' internal tests.

⁽²⁾ Retreading, on average, requires the addition of only 20 kg of raw materials, a gain of 70% compared to the purchase of a new tyre.

FOR MORE INFORMATION: RETREADING FOR TRUCKS WEB SITE
www.lecaoutchouc.fr/economie/marche-du-rechapege-poids-lourds

RETREADING PRESERVES THE ENVIRONMENT?



TRUE

RETREADING SAVES NATURAL RESOURCES AND PRESERVES THE ENVIRONMENT

Retreading makes it possible to prolong the life of worn tyres, which amount to 17 million tons each year globally⁽¹⁾.

- ◆ Fewer CO2 emissions → 100 retreaded tyres = 5 tons less material consumed and more than 6 tons of CO2 not ejected into the atmosphere.
- ◆ Less material consumed → 1 retread= 50 kilos of raw material saved.
A buffed tyre requires the addition of only 20% more additional material on average: a gain of 70% over the material required to manufacture a new tyre!
- ◆ Less waste →- 300 kilos for a triple-axle trailer.
Retreading six tyres on a triple-axle trailer means six worn tyres less to recycle !

CIRCULAR ECONOMY FOR A CLEANER WORLD

*In Europe, all used tyres are recycled⁽²⁾.
They are transformed into playgrounds,
synthetic grass, shoe soles, floor
tiles, casters...new research
soon will make possible innovative and ever
more efficient recycling of your tyres.*

⁽¹⁾Source: Environmental and Energy Conservation Agency, 2014.

⁽²⁾Directive 31/CE of 26 April 1999 prohibits the dumping of used tyres.

WHY RETREAD?

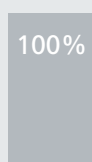
Retreading carried out with the counsel of your brand
and your distributor =



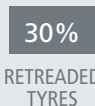
2x+
KILOMETRES⁽¹⁾



40%
LOWER PURCHASE PRICE⁽²⁾

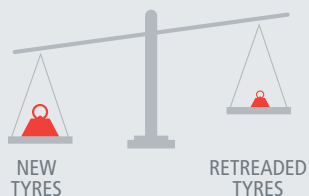


NEW
TYRES



RETREADED
TYRES

Raw materials consumption
comparison⁽³⁾ :



NEW
TYRES

RETREADED
TYRES

Waste to recycle :
a retreaded tyre represents

50 kg
less waste to recycle



ECONOMY - ECOLOGY - SECURITY

Extend the life and the key performance of your tyres whilst saving you save money and preserving
the environment:

it's possible! When you opt for professional and personalised management of your tyres,
you optimise the profitability and flexibility of your business, in total security!

(1) 2013 manufacturers' tests

(2) European average. Manufacturers' 2014 prices and Internet prices reported by an independent organisation in 2014.

(3) It takes only 20 kg of raw materials, on average, to retread a tyre, a gain of 70% compared to the manufacture of a new tyre.