

Agenda:

- Winter Tire Usage in Canada
- Winter Rated vs. M+S vs. All-Weather vs. All Season
- The Value of Retreading
- Corporate Social Responsibility (CSR)

Why are Winter tires important?



Tires

The Cost to Canadian Drivers

“Weather-related collisions in Canada **cost approximately \$1.1 billion per year**; among these crashes are those occurring in winter conditions. Misperceptions such as cost, sufficiency of current tires and milder winter weather are all factors in the lack of use of winter rated tires among Canadian drivers.”

- Traffic Injury Research Foundation, 50th Annual Report, 2013

Tires

Most important safety feature

- Tires are the only contact between your vehicle and the road
- Tires transmit all steering, braking, and traction forces
- Safety properties of tires become extremely important in demanding driving conditions



All Season (3 Season) Tires M+S

What are the requirements for a tire to be certified as M+S?

- Have multiple pockets or slots in at least one tread edge that extend toward the tread center at least 1/2 inch from the footprint edge
- Measured perpendicularly to the tread centerline, have a minimum cross-sectional width of 1/16 inch
- Have edges of pockets or slots at angles between 35 and 90 degrees from the direction of travel
- Have a contact surface void area with a minimum of 25% based on mold dimensions
- No tire testing required

M+S Tires

In Other Words.....

- Virtually all Tires meet the M+S requirements
- The M+S designation can be added to any tire by any manufacturer and has no regulation whatsoever
- Use of M+S started in the 50's and simply indicated a lug tread design
- M+S= All Season



Winter Rated Tires

3 peak Mountain Snowflake


- Tires that meet certification have 3-Peak mountain snowflake symbol
- Tightly regulated
- Tires must pass traction tests that indicate quantifiable, significant improvements in braking, acceleration, and cornering over a baseline all-season tire
- Rubber compound retains elasticity at temperatures below 7°C



All-Weather Tire Option

- The rubber compounds and tread patterns of all-weather tires have been specifically designed to meet the specifications for the 3PMSF.
- Rubber compound is flexible at temperatures above and below 7 degrees C
- Aggressive tread design and siping provides stability by biting snow, pushing away water and slush
- Provides sensitive handling in warmer conditions
- Can be kept on a vehicle year round

ALL-WEATHER



Milder winter conditions with heavy rain, snowfall that melts quickly, and slushy conditions.



Temperatures above & below 7°C

Designed to stay flexible in temperatures above and below 7°C. Provides excellent grip on snow, slush, wet roads and bare asphalt.



Aggressive tread design and siping provides stability by biting snow, pushing away water and slush. Also provides sensitive handling in warmer conditions.

All-Weather Tire Option

FEATURES OF THE ALL-WEATHER TIRE



FREEZING TEMPERATURES

Soft, flexible rubber compounds resist cold temperatures, allowing the tread to continue to flex and grip wet, and slushy roads.



SLUSH PLANING

Water flows easily off the slick polished main grooves and the lateral grooves open to the sides of the tire, evacuating water away from the contact area.



TIRE SQUIRM

Self-locking siping located in the central rib locks and supports the tire. This improves stability at higher speeds.



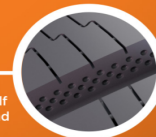
SEVERE SERVICE EMBLEM

To qualify for this rating, the tire's tread design and depth must provide 110% more snow traction than a summer or all-season tire.



SLIPPERY CONDITIONS

Various slits across the tread blocks improve traction in wet or slushy conditions.



FUEL SAVINGS

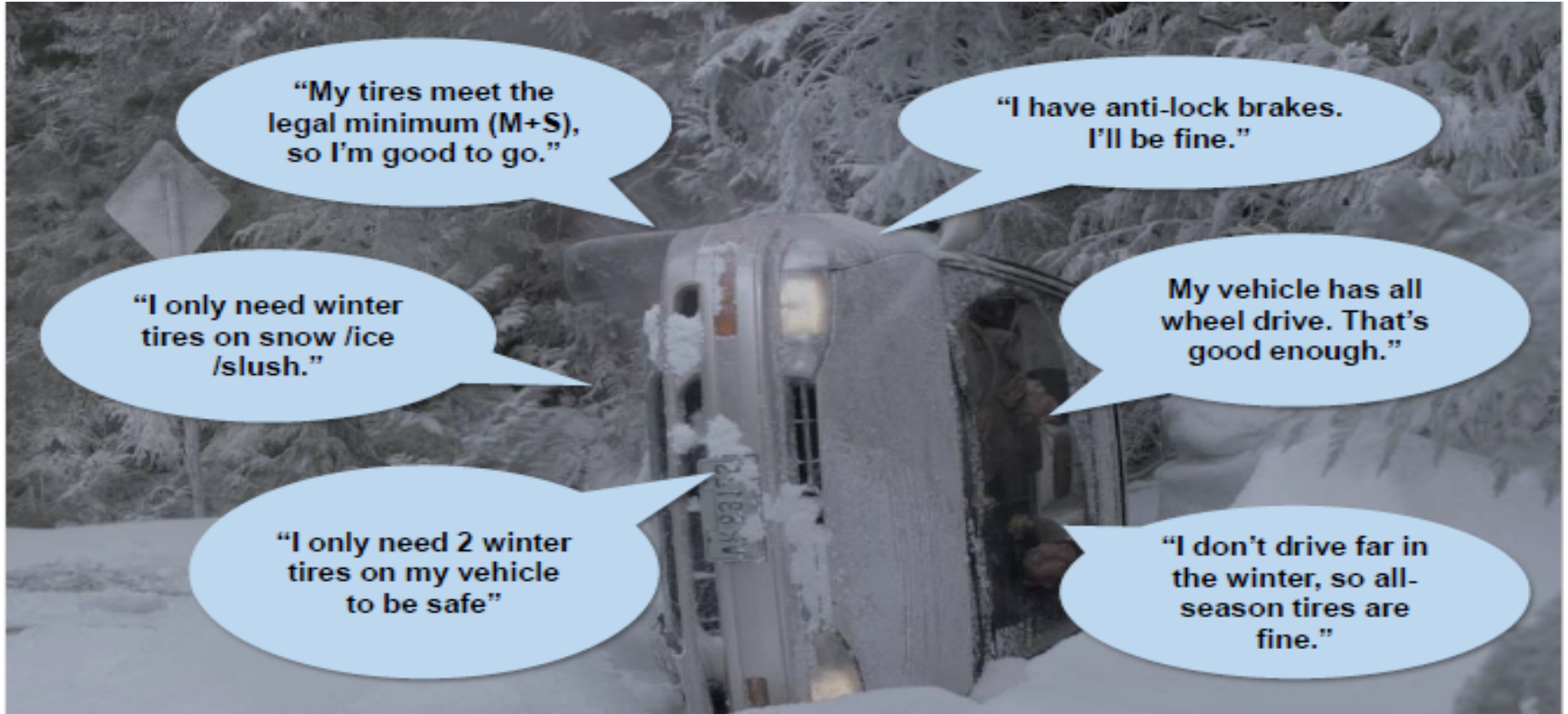
Round cavities on the sides of the ribs, resembling a golf ball pattern, cool the tire and reduce drag.

nokian
WRG3 ALL-WEATHER TIRE

KALOTIRE

KALOTIRE

Winter Driving Myths



Do I Need Winter Tires?

High °F	Low °F		High °C	Low °C
44	34	January	7	1
47	35	February	8	2
51	38	March	10	3
56	42	April	13	6
62	48	May	17	9
67	53	June	20	12
72	57	July	22	14
72	57	August	22	14
66	51	September	19	11
56	45	October	14	7
48	38	November	9	3
43	33	December	6	1
57	44	Year	14	7

Average monthly temperatures in Vancouver

- Vancouver enjoys some of the mildest temperatures in Canada, but still experiences winter conditions
- The average low temperature is below 7 degrees Celsius for six months out of the year
- Many Vancouver drivers don't believe they need winter-rated tires – until the snow falls



www.cbc.ca/news/canada/british-columbia/top-5-metro-vancouver-weather-stories-of-2016-1.3914497

Winter Rated Tires

“With temperatures just below freezing and on dry pavement, stopping distance for vehicles equipped with all-season tires is 30% longer than for vehicles with winter tires.”

“Furthermore, the winter tire has better traction on a snowy surface at temperatures of -40 degrees Celsius than an all-season tire has at +4 degrees Celsius”

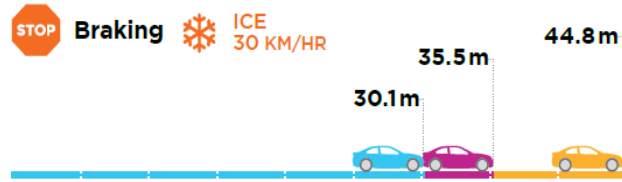
Winter Tires: A Review of Research on Effectiveness and Use, The Traffic Injury Research Foundation, 2012


Winter Rated Tires

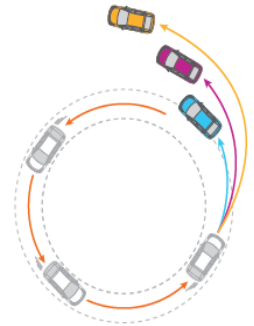
- The numbers don't lie
- On snow and ice, all-season(3-Season) tires don't provide safe braking or cornering
- Kal's Tire Testing data shows compared to 3-seasons, winter tires stopped 9 metres sooner on ice and over 6 metres sooner on snow

THINK ~~ALL~~³-SEASON TIRES ARE GOOD ENOUGH IN WINTER?*

LEGEND:  Winter Tires  All-weather Tires  3-season Tires




Cornering  ICE



 **Slush Straight-line**

On slush straight-line stability tests, the professional drivers rated:



 **Slush Cornering**

On slush cornering tests, the professional drivers rated:



* Aggregate results of the 19 tires tested by Kal Tire.

Winter tires are three times better at holding a corner on ice than 3-season tires.

KalTire.com/Testing



Tire Management Options:

Winter or Year Round?

1. Winter/Summer tire option

- Tire storage management
- Changeover and balancing or additional set of wheel and TPMS
- Optimal tire for road conditions
- Downtime twice a year for changeovers

3. Year Round option

- M+S tire option not suitable for winter road conditions
- All-weather tire option



The Value of Retreading

The Value of Retreading

Retread Myths

The most recent in-depth studies across a number of gov't agencies in the United States, internationally and with Bandag have shown that the two biggest retreading myths are **False**.

- All tire debris on the roadside are retreads - **False**
- Retreads are unsafe - **False**

The Value of Retreading

Retread Myths

MYTH 1: RETREADS LITTER OUR ROADS.

FACT: Those rubber gators on the road with all the wire? Not often retreads.

There's one way to determine if rubber scraps on the road are retreads. Look closely. Many of those gators contain wire. And there's no wire in the rubber retreaders use. In fact, the scrap rubber you see is almost always the result of a casing failure, not a retread failure.



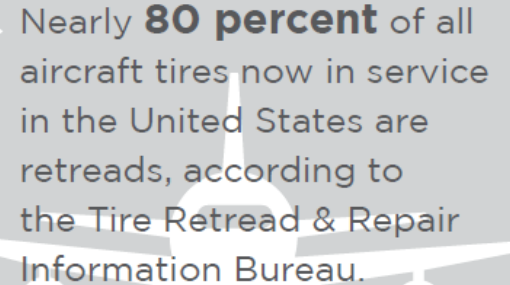
The Value of Retreading

Retread Myths

MYTH 2: THEY'RE NOT SAFE.

FACT: Here's a testament to safety: nearly every major airline trusts retreads.

Today's sophisticated retreads are nothing like their predecessors. In fact, they're so safe, school bus fleets rely on them. Even fighter jet pilots count on them. And you can imagine the stress jet tires undergo on takeoffs and landings.



Nearly **80 percent** of all aircraft tires now in service in the United States are retreads, according to the Tire Retread & Repair Information Bureau.

The Value of Retreading

Safety

2008 US Department of Transportation Debris Study determined that:

- **Road hazards** were the causes of failure **39%** of the time.
- The second biggest cause of failure was and still is **poor tire maintenance**.
 - **Excessive heat** resulted in 30% of failures.
- **Over 85% of failures were NOT the result of the retread process.**

The Value of Retreading

Cost Effective

- Allows companies to utilize existing assets longer (Extends asset life by up to 500%)
- Equal or superior to Tier 3 in performance (Cost per 1,000km's)
- Equal or better quality to new Medium Truck Tier 3/4 (Failure rates below industry Avg)
- Equal or better Road Hazard and Warranties (Industry best)

The Value of Retreading

Franchise Standards of Excellence (FSE)



Bandag is SmartWay Verified



What is SmartWay?

- EPA's (Environmental Protection Agency) SmartWay program helps companies advance supply chain sustainability by measuring, benchmarking, and improving freight transportation efficiency.

Why does SmartWay matter?

- Through SmartWay technology verification and branding, EPA has accelerated availability, adoption and market penetration of fuel-saving technologies and operational practices while helping companies save fuel, lower costs and reduce adverse environmental impacts.

[SmartWay Verified](#)

The Value of Retreading

Franchise Standards of Excellence (FSE)

Kal Tire Retread and Road Hazard Warranty



RETREAD ROAD HAZARD WARRANTY

PEACE OF MIND. FREE.

✔ High-performance tires you can count on.

✔ Backed by Canada's best Retread Road Hazard & Casing Warranty.



KalTire.com

- ✔ Better for business.
- ✔ Better for the environment.
- ✔ Better for communities.

Local Jobs

Our certified retread technicians are hardworking Canadians who take great pride in their tires and their communities. Our commercial stores and our retread facilities in the regions we serve are important employers and contributors to each of the local economies.

The Environment

Kal Tire retreads provide savings that both your fleet and the environment will thank you for.

Every Kal Tire retread produced has enough energy savings to power an average home for more than a month.

One new medium truck tire uses 83 litres of oil to produce.

One retreaded medium truck tire uses only 26 litres oil to produce.

Kal Tire reduces oil consumption by over 4 million gallons or 18.5 million litres of oil every year.

Community Facilities

Kal Tire donates a portion of your medium truck retreads and MaxTread retreads to Kal's RePlay Fund—a program that enhances community facilities with rubber product flooring, roofing and more.



A COMMUNITY PROGRAM OF
KALTIRE

Kal Tire's Retread Road Hazard Warranty and Retread Warranty is limited. Please read and understand the conditions outlined below.

Kal Tire Retread Road Hazard Warranty

- Within the first 25% of wear (highway use only).
- Within the first 15% (on/off-road use only).
- Full replacement, repair or credit is based on original invoice price.
- Warranty does not cover chain damage or mechanical failure.
- Warranty not applicable to key or national accounts.¹
- Warranty will be honoured at any Kal Tire commercial location in Canada.²

Kal Tire Retread Warranty

- Kal Tire warranties all our retreads (customer or Kal Tire casing) to be free of defects in our materials, workmanship and casing failure to 2/32 of an inch of remaining tread.
- Workmanship and materials defect warranty does not cover damage from road hazards, improper inflation, wheel misalignment, repairs by another dealer(s), incorrect/improper mounting, vehicle damage, damage caused by abuse and neglect, collision, fire, curbing, vandalism and chemical corrosion.
- Credit is prorated based on actual invoice price.³
- Additional customer responsibility restrictions apply along with items not covered by Kal Tire. See in-store for details.

1 - See in-store for details on national account warranty.

2 - Other restrictions apply. See in-store for details.

3 - Actual invoice price refers to the price paid for products purchased from Kal Tire.



The Value of Retreading

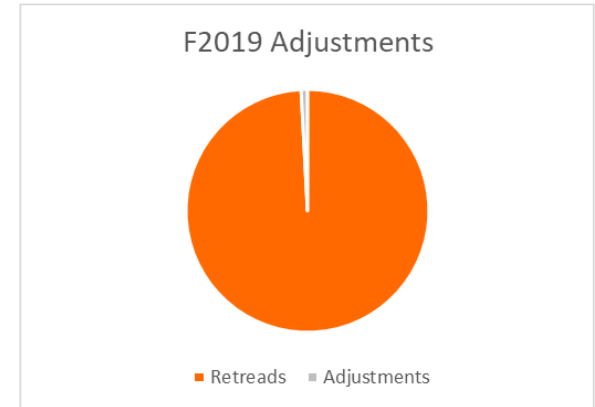
Franchise Standards of Excellence (FSE)

Adjustment Rates – (Warrantied Tires)

Kal Tire Retreads have some of the best adjustment rates in the industry.

- 1.10% in F2017 based on 339,000 Retreads
- 1.00% in F2018 based on 346,000 Retreads
- 0.86% in F2019 based on 324,000 Retread

Retread adjustment rates are equal to or better than new Medium Truck tire manufacturers

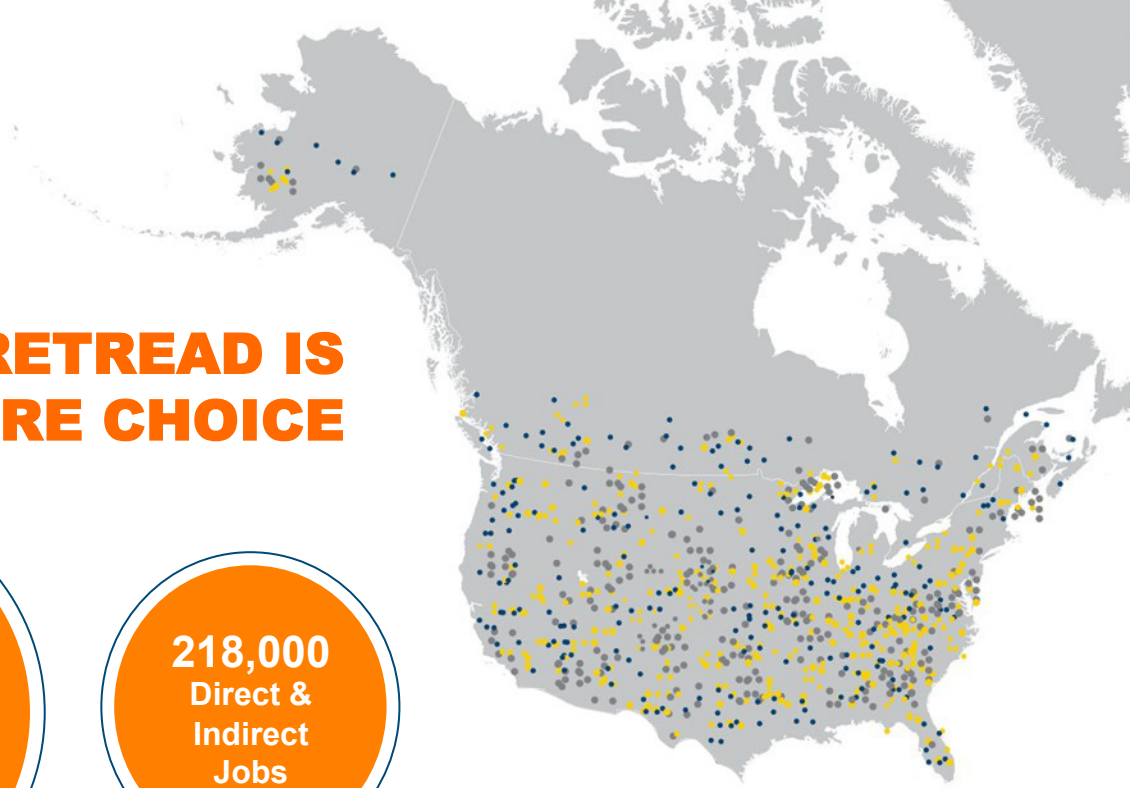


IN NORTH AMERICA RETREAD IS THE RESPONSIBLE TIRE CHOICE

683
Plants

\$3.2B
Economic
Impact

218,000
Direct &
Indirect
Jobs





Environmental Sustainability



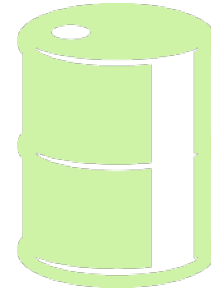
ONE RETREADED TRUCK TIRE SAVES ENOUGH ENERGY TO POWER AN AVERAGE HOME FOR OVER A MONTH.

From Duke: A retreaded truck tire = 2901 MJ/tire energy savings is enough to power 800 homes for 1 hour (3.62 MJ per home per hour)
15M retreads / yr = 43.5B MJ – enough to power all the homes in the US for 4 days (based on 2016 US Census of 125.82M households in US)
(MJ= 1M joule) (1 joule = 2.78 kWh)



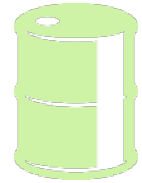
Retreading and Corporate Social Responsibility

- Kal Tire retreads an avg of 320,000 tires per year significantly reducing our carbon footprint
- Each Retread produced uses only 26 litres of oil to produce vs. new tire production which uses 83 litres of oil
- That's a savings of 56 Litres of oil per retread or the annual equivalent to using **17.92 Million Less** Litres of Oil in our total production process



Uses 83
litres

New Tire



Uses 26
Litres

Retread

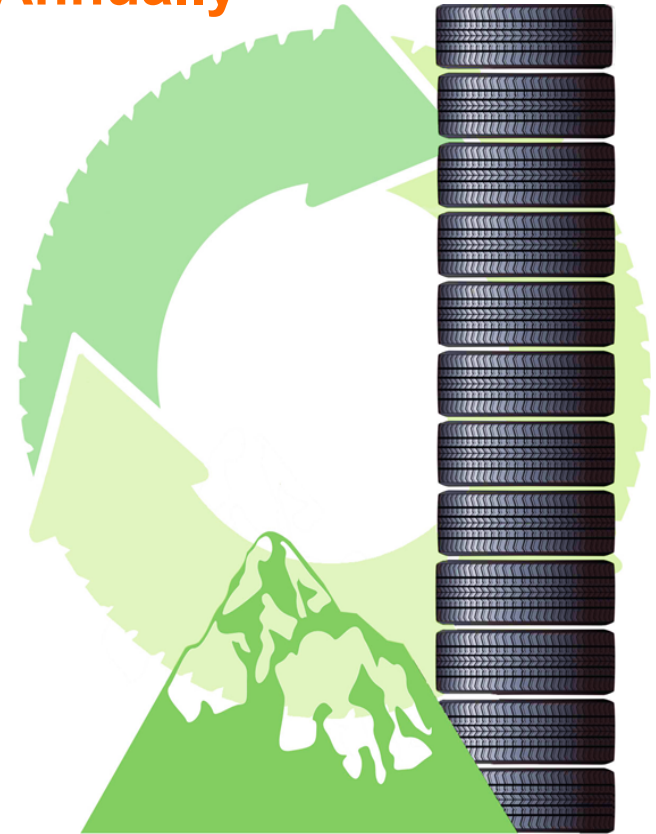
RETREAD IS THE RESPONSIBLE TIRE CHOICE

KAL TIRE SAVES AN AVG OF
320,000 MED TRUCK CASINGS
FROM LANDFILLS EVERY YEAR



Kal Tire Helps Recycle Two Million Tires Annually

- Kal Tire participates in provincial tire recycling programs and act as tire recycling drop-off point.
- Across Canada, our locations collect over two million scrap tires for recycling every year. If we stacked all those tires, the height would be 57 times higher than Mount Everest.
- Kal Tire recently invested in the expansion of a tire recycling facility in Alberta to accommodate recycling giant mining tires from the oil sands.



Mount Everest


Supporting a Circular Economy – Tire Derived Polymers

- Kal Tire supports a circular economy by reusing tire tread buffing from our retread plants in our OTR retread compounds.
- Devulcanized rubber, also known as tire-derived polymer (TDP), is blended into our OTR rubber tread compound, providing a high-quality product that performs in OTR applications just as well as our regular tread compound.



Supporting a Circular Economy – Carbon Black

- Kal Tire is currently developing a thermal conversion plant in Chile to convert scrap tires to liquid fuel, carbon black, steel, and synthetic gas.
- We are working with UBC to refine the carbon black for lithium-ion battery applications and fabrication of metal, plastic and rubber materials.
- Our team has met with the Government of Canada's National Research Council and CanmetMATERIALS to explore research and development opportunities for reclaimed carbon black.

 Natural Resources Canada / Ressources naturelles Canada



CanmetMATERIALS / CanmetMATÉRIAUX



Retreading and Corporate Social Responsibility

- Retreading has allowed Kal Tire to build and maintain strong customer CSR partnership such as Coca-Cola



**Coca-Cola
Canada
Bottling
Limited**

Coca-Cola Canada Bottling Limited saved approximately 302,272 litres of oil and prevented 5317 tires from going into landfills in 3 years by purchasing retreaded tires.

**Kal Tire Certificate of
Corporate Social Responsibility**


Colin Rafferty, Corporate Account Manager
Kal Tire



March 2019

Reducing Energy Consumption and Emissions

- Kal Tire has measured the carbon footprint of our Canadian operations, revealing electricity consumption as our top source of carbon emissions.
- As a result, we have completed major lighting retrofits in our warehouses and retread plants and upgrade lighting in our store division as lighting upgrades are needed or major renovations are take place.





Social Responsibility Summary
October 2019

Corporate Social Responsibility



A COMMUNITY
PROGRAM OF



- Kal's RePlay Fund launched in March 2019 to enhance non-profit, community facilities with safe, functional and lasting recycled rubber products
- 12 projects have been funded, spanning from Ottawa to Vancouver Island (see map on next slide)
- Five projects are complete; the other seven will be completed spring 2020
- Visit: www.KalTire.com/RePlay for more detail



A COMMUNITY
PROGRAM OF

KALTIRE

1. Sarah Beck Memorial Playground – Langford, BC
2. Food Eco District Library Demonstration Garden – Victoria, BC
3. Quayside Tuggers Play Structure – New Westminister, BC
4. Bow Valley SPCA Dog Run – Canmore, AB
5. Eugene de Coste School Playground – Calgary, AB
6. St. Gerard School Playground – Edmonton, AB
7. Warman Childcare Centre Playground – Warman, SK
8. Rall's Island Community Park Playground – The Pas, MB
9. Municipality of North Norfolk Skating Rink Matting – North Norfolk, MB
10. Cornish Childcare Centre Playground – Winnipeg, MB
11. KIDS Inc Childcare Centre Playground – Winnipeg, MB
12. Hammond Barrier Free Playground – Hammond, ON

Red = completed 2019
Black = 2020 completion

KALTIRE

Corporate Social Responsibility

Kal Tire's Replay Fund is a catalyst for change in communities

- Every member of Kal Tire supports our RePlay fund, from Vernon to Toronto, allowing us to reach more people in the communities that we serve
- Team members and their families attend our major project opening ceremonies, including zone managers, store managers, tire technicians, as well as team members from our retread and corporate sales teams
- A number of key Replay Fund Project Grants were initiated by team members in cities across Canada. Just another way in which we serve our communities



Corporate Social Responsibility

Positive Social Impact

- The Kal Tire Replay Fund has provided Kal Tire the opportunity to create community partnerships in both the Arts and Sciences
- Caravan Farm Theatre – Located in Salmon Arm, BC
- Okanagan Science Centre – Located in Vernon, BC



Last Thoughts



What has you thinking?
Did you learn anything new
or surprising?



Thank you!