



Everything on
WHEELS





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Celebrating the Wheel

The history of the wheel is one that's continuously debated and scrutinized by history experts.

According to the Smithsonian Magazine, the technology dates to 3500 B.C. in Mesopotamia. The creation served as potters wheels before being fitted for use with chariots. While the origins are unclear, the invention is unique because it is a human innovation. Celebrate the revolutionizing discovery of the wheel by learning these fun facts about its history and modern-day use from the Smithsonian.

THE WHEEL OF FORTUNE — MORE THAN A GAME SHOW

According to ancient Greek or

Roman history concepts, goddess Fortuna used a wheel of fortune to determine the fate of those she looked upon. You can find it mentioned in historical pop culture, including work by Geoffrey Chaucer and William Shakespeare.

THE FIRST PATENT

The U.S. Patent and Trademark Office issued the first patent involving a wheel to James Macomb of Princeton, New Jersey, in 1791. His invention involved a design for the hollow water wheel that created hydropower for mills. The original documentation was

destroyed in a structure fire in 1836.

THE WHEEL WAS REINVENTED IN 2001

If you thought reinventing the wheel was merely a famous saying, John Keogh of Australia proved otherwise. In 2001, he was issued a patent for his "circular transportation facilitation device." The stunt was meant to raise awareness of the flaws in the country's new patent system.

NORTH AMERICAN WHEELS WERE FIRST USED IN TOYS

In the 1940s, archaeologists unearthed wheeled toys in pre-Columbian layers of sediment in Mexico. The figures depicted dogs

and other animals with wheels rather than legs. Interestingly, the indigenous North Americans wouldn't use wheels for transportation until the arrival of European settlers.

CAMELS AS MODE OF TRANSPORTATION

Between the second and the sixth centuries A.D., camels overtook wheeled carriers as the standard mode of transportation in the Middle East and northern Africa.

Historians speculate that it was due to the decline of roads after the Roman Empire fell and the camel saddle's invention. While the animals were used to get around, societies still relied on wheels for irrigation, milling and pottery operations.

Vehicles Equipped For Snow

In mid-February 2021, the National Operational Hydrologic Remote Sensing Center estimated that ice or snow covered about 70.4% of the continental United States.

The unprecedented weather impacted states that are unfamiliar with frigid conditions and left millions of Americans unprepared.

Before next winter, get ready by upgrading your vehicle with a well-equipped model to navigate snowy roadways. Vehicles equipped with all- and four-wheel drive help drivers travel in snowy and icy conditions more safely because each wheel receives torque and power simultaneously, maintaining stability.

WHAT IS ALL-WHEEL DRIVE?

All-wheel drive vehicles are often considered the most efficient type of drivetrain for wintry roads. Equipped cars, trucks and SUVs are available in two types of drivetrain:

- Full-time. All four wheels receive continuous power while the vehicle is in operation.
- Part-time. A vehicle travels as a two-wheel drive until sensors determine hazardous conditions are present and



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send signals to the computer. Once the alert is received, it engages both axles to provide better traction and control.

While all-wheel-drive autos offer several benefits for drivers, they do include a few setbacks. For instance, the unique features are sometimes only available on premium models, increasing the vehicle's price

tag. They are also not suitable for rigorous off-roading conditions if your daily driver is also used for rough terrain hobbies.

WHAT IS FOUR-WHEEL DRIVE?

Four-wheel drive setups offer the same capabilities as their all-wheel counterparts by providing traction control to

all their tires. The most significant difference is that a driver must almost always activate the feature rather than allowing it to engage automatically.

Some older pickup trucks used locking hubs, forcing operators to exit the vehicle to initiate the wheels manually. Today, most vehicles include a shifter or push-button switch

that actuates the system from inside the cabin. The main disadvantage of four-wheel-drive systems compared to the all-wheel drive is that a driver must guess when the extra traction is necessary. This can lead to dangerous conditions when navigating on icy roads with hazards that aren't always visible.

Zero-Turn Lawn Mowers

For some, mowing the lawn is a relaxing way to spend a summer day. However, others find the chore monotonous and a nuisance, sometimes avoiding the task by spending a chunk of their budgets toward a professional lawn care service.

If you don't have the time or desire to cut the grass, consider investing in a fast-paced, zero-turn lawn mower to expedite the process. While the equipment's initial cost may be hefty, its heavy-duty durability will pay for itself over the machine's life.

Before making a purchase, it's beneficial to consider if your yard is applicable for a zero-turn and choose a suitable model. For instance, zero-turn deck sizes are often more broad than traditional riders, making it impossible to enter or exit small gates without modifications. You will also want to ensure that your land is free from obstructions that create hard-to-reach areas as the innovative machines excel in open spaces.

ZERO-TURN FEATURES

The unique design of a zero-turn gives it many advantages over a traditional



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riding mower. First, its distinctive lap bar controls and exceptional steering radius allow operators to turn their equipment a full 360 degrees. The increased maneuverability makes it a great choice for sticking close to trees and obstacles to limit the trimming required. Many models allow the user to adjust the machine's mowing speed to match their expertise and adapt to different yard areas.

Another advantage of zero-turn mowers is the heavy-duty decks. If your yard is uneven, consider finding a machine with small wheels installed underneath the blade compartment. They are designed to raise the deck to maintain an even cut on bumpy terrains.

SAFETY TIPS

Because a zero-turn is so much faster and heavy duty

than push or riding mowers, users should operate them with extreme caution. Check out some safety tips from the Risk Management Association.

- Do not mow on slopes greater than 15 degrees.
- Keep the roll bar in the fully raised and locked position.
- Allow plenty of clearance in the vicinity of drop-offs and on the unstable ground

near water sources.

- Keep your speed under control and operate the control levers with smooth, even pressure.

If you're new to the power of a zero-turn mower, it's wise to become accustomed to a residential, low-grade machine. Commercial class equipment can be more durable but can take longer to understand its powerful capabilities.

Go-Karts

Millions of children and brave adults have enjoyed letting loose on a go-kart track.

Families across the country have bonded over DIY builds, custom modifications and priceless adventures surrounding these vehicles. In addition to building memories, go-karts often serve as training wheels for kids to learn about personal responsibility and caring for a motorized machine.



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HISTORY OF GO-KARTS

According to the National Museum of American History, go-karting was officially organized in the 1950s. Manufacturers began marketing affordable motorized karts toward pre-teens based on open-wheeled cars used for racing on oval tracks in the 1930s and 1940s.

Before long, creative parents began equipping the vehicles with more powerful motors and that led to children racing each other. Early races were performed on regular paved tracks. Still, they were mainly held on specially designed raceways designed for the specialized karts. Several professional racing drivers like Jeff Gordon, Al Unser, Jr. and Michael Andretti credit the competitions as their first taste of the racing world.

GO-KART DRIVING TIPS

Whether you're driving go-karts for fun or as a racer,

it's essential to learn tips to improve your speed and performance. Check out a few ways to dominate your friends during a ride of leisure or beat other drivers during a competition.

- Keep your hands steady on the wheel as go-karts are notorious for sensitive steering.
- Find the perfect timing to execute a turn. Slow down

shortly before the turning attempt and aim for speed as you begin to straighten.

- Try to keep your eyes focused on the path ahead at long distances to help your brain process the track.
- Make wide turns at each corner to enhance your racing speeds.
- Use a gentle force on the steering wheel to prevent

sharp or sudden turns.

SAFETY TIPS

While it's fun to brag with friends about a souped-up go-kart, it's essential to travel in these vehicles with the utmost care. Remember to insist that all drivers and passengers have appropriate safety gear like helmets and seatbelts. You should also teach

children about the importance of driving respectfully for their safety and others'.

While go-karts are affordable means to get around, it's essential to perform routine maintenance periodically. Ensure the ride is free of gas leaks before operating, the brakes are in working order and the tires are inflated to the recommended psi.

Must-See Ferris Wheels

As warmer weather approaches, the carnival season makes its way into small towns and larger cities.

For many, deep-fried guilty pleasures, exciting rides and social communication during these events have become a tradition. The Ferris wheel is a long-celebrated staple at festivals.

The Ferris wheel's invention began as a need for an impressive American landmark to be showcased during the World's Columbia Exposition in 1893. Held in Chicago, the event commemorated the 400th anniversary of Christopher Columbus landing in the new world.

To rival France's Eiffel Tower unveiling in 1889, George Washington Gale Ferris brought forth an idea for an enormous metal wheel. Check out some of the specifications of the iconic structure, as recorded by the Chicago Architecture Center.

- The original Ferris wheel reached heights of 264 feet.

- It featured 36 gondolas, capable of holding 60 people each, for a total of 2,160 guests.

- 1.4 million people paid the admission fee of 50 cents.

- After being sold to St. Louis for the 1904 World Fair, the wheel was destroyed in 1906 and sold for scrap metal.

If you enjoy the magnifi-



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cent wheels, consider checking out some of the unique tourist attractions in the United States.

THE HIGH ROLLER: LAS VEGAS

The gigantic 550-foot tall High Roller offers tourists a 30-minute revolution with some of the best views in Vegas. Rides are available day or night to catch different perspectives of the strip and the surrounding desert. While each of the 28 pods is air-conditioned, visitors can upgrade to the VIP cabin and an Open Bar Happy Hour.

CENTENNIAL WHEEL: CHICAGO

Visit the city where the Ferris wheel originated. The Centennial Wheel gives tourists an eagle-eye view of

Chicago's magnificent skyline. Pods are designed to withstand winds of 115 mph, which is fitting in the "Windy City." The encapsulated gondolas are also equipped with durable safety glass that holds up during severe storms, making the wheel a year-round attraction.

PACIFIC WHEEL: SANTA MONICA, CALIFORNIA

Credited as the only solar-powered Ferris wheel globally, the Santa Monica ride offers panoramic views of the Southern California coastline and the Pacific



MARCO VERCH/CREATIVE COMMONS

Top left:

The High Roller.

Top right:

Centennial Wheel.

Right: Pacific Wheel.



GASTON HINOSTROZA/CREATIVE COMMONS

Ocean. The wheel travels 2.5 revolutions per minute, allowing plenty of time to absorb the sights. Take a trip

during the evening for a dynamic light show featuring 174,000 energy-efficient LEDs.

Start a Food Cart Service

The food truck industry is booming in the United States.

According to the Census Bureau, the number of establishments in 2018 was 5,970, double the amount in 2013.

However, startup costs and maintenance of a large truck or trailer can be a steep investment.

If you're interested in learning the field's ropes, getting started with a food cart can be less strenuous on a budget. An affordable cart can also be an excellent resource for established sit-down restaurants. Owners can mobilize their operations and introduce themselves to a broader audience. Consider using the inexpensive vehicle to visit communities outside of your brick-and-mortar location to show off your unique flavors and menu. Learn more about starting a food cart to supplement your diner's income or begin a brand-new endeavor.

FINDING A CART

When searching for a food cart, you must be honest about the necessities you require. Plan for the size you'll need, the amount of storage, and the equipment you'll need to generate power. With a strategy in place, you'll next need to consider your budget.



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You can sometimes save a great deal of money by investing in a used cart already set up with the equipment your food service needs. Buying a new model may cost more, but it allows you to customize the unit with new equipment and accessories. You'll also be treated to manufacturer warranties and reduced risks of

costly breakdowns and repairs.

BENEFITS OF A FOOD CART

The most significant advantage of a food cart rather than using a truck or trailer is the ease of mobility. Rather than loading expensive accessories and equipment, most carriages are easily transported by

pushing or even hauling by bicycle. Owners gain the ability to seamlessly travel to local events or crowded shopping center lots to reach new customers.

FOLLOW HEALTH AND STATE CODES

Businesses that involve food are expected to meet strict

federal and local requirements that regulate safety and health. Before beginning your operation, research your area's laws regarding working in the food industry. You may be required to achieve certifications, permits, and power sources like gas or electricity approved by licensed professionals in some places.

Wheeled Excavators

Tracked excavators are known for their exceptional digging power and stability. The more powerful capabilities are created due to their low center of gravity and the undercarriage's considerable weight.

As wheeled machines gained popularity, manufacturers built their equipment to combat shortcomings compared to tracked models and upgrade to more convenient features.

Multiple industries rely on excavators for a broad range of purposes. Because of their efficiency in digging, lifting and demolishing, you can find the heavy-duty equipment on construction sites, mining operations and forestry fields.

If you're in the market for a machine or are thinking of renting one for a weekend project, consider investing in a wheeled unit rather than its track-propelled counterparts. Check out a few advantages this type of machinery offers.

MOBILITY

If you're familiar with tracked excavators, you already understand that they are not known for speed. Transferring them from the highway to a worksite requires



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the additional support of a commercial trailer and pickup truck with capable towing abilities.

Wheeled options add more convenience by offering road-ready proficiency and the capacity to travel on rugged terrains when navigating to a job site. Typically a tracked unit can crawl between 4 and 6 mph. In comparison, wheel-powered machines travel around 22 mph, helping

boost productivity when traveling is required.

STABILITY AND VERSATILITY

The track and undercarriage system on some excavators lends it extraordinary stability. Operators can seamlessly handle working on slopes without fears of tipping. To compete with this ability, wheeled excavators feature additional support

called outriggers. When in place, the outriggers provide comparable stable circumstances that are featured in tracked versions.

A wheeled excavator offers more versatility by being suitable for hard surfaces that a track system would destroy. With wheels, sites like urban environments, paved roadways and parking lots can be accessed without damaging the property.

BUDGET

While a wheeled excavator can cost more initially, the required maintenance and repair costs are far less substantial than tracked equipment. Replacing tires is much more affordable and less labor-intensive than resolving track issues. The undercarriage is also more durable on wheeled models as it does not get as much repeated abuse as track-powered machines.