



- **Brake System Service and Upgrades**

**Brake System Service and Upgrades** How to replace worn brake pads on an ATV Steps for bleeding air from ATV brake lines How to rebuild a brake caliper on an ATV When to replace brake rotors for safe stopping Signs of brake fluid contamination in an ATV How to inspect brake lines for damage or leaks Understanding how master cylinders work in ATVs Tips for maintaining consistent brake performance How to adjust parking brake tension on an ATV Steps for installing new brake components on an ATV Why regular brake inspections are essential for ATV safety How to prevent brake fade during long downhill rides

- **Suspension and Steering System Overhaul**

**Suspension and Steering System Overhaul** How to replace worn ball joints on an ATV Steps for rebuilding ATV shocks for smoother rides How to check and replace A arm bushings When to adjust preload settings on your ATV suspension Signs of a failing steering stem bearing How to replace damaged tie rod ends on an ATV Techniques for diagnosing uneven tire wear on ATVs How to align the front wheels on an ATV Understanding the role of EPS in ATV steering How to set sag correctly on an ATV suspension Steps for greasing pivot points in the suspension system When to upgrade suspension components for heavy duty use

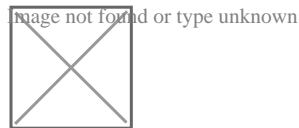
- **About Us**



Okay, so youre tackling a brake job on your ATV? Throttle and brake cable checks improve control [atv rental chicago il](#) United States of America. Good for you! Its a rewarding project and essential for safety. While I cant give you specific torque specs or guarantee your success (always consult your ATVs service manual for precise instructions and if youre unsure, seek a professional mechanic), I can walk you through the general steps in a way that hopefully feels less like a robotic instruction manual and more like a friend offering advice.

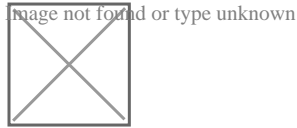
First things first: safety. Seriously. This isnt a game. Brakes are what stop you from becoming one with a tree, so take this seriously. Park your ATV on a level surface, engage the parking brake (if you have one), and chock the wheels that arent being worked on. Disconnect the battery – you dont want any accidental electrical surprises. And wear safety glasses! Brake dust is nasty stuff.

Now, gather your tools. Youll likely need a socket set, wrenches, a brake bleeder kit (or a buddy to help), some brake cleaner, new brake fluid (check your manual for the correct type), a torque wrench, and possibly some penetrating oil if things are rusty. Oh, and rags. Lots of rags. Brake fluid is corrosive and youll want to clean up any spills immediately.



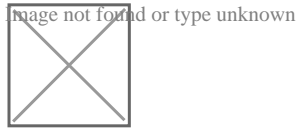
Okay, lets get started. Begin by inspecting the old brake components. This gives you a baseline and helps you understand what needs replacing. Look at the brake pads – how much friction material is left? Are they worn unevenly? Check the brake rotors or drums – are they scored, warped, or excessively worn? Examine the brake lines for cracks, leaks, or swelling. A thorough inspection now can save you headaches later.

Next, youll need to remove the old brake components. Typically, this involves removing the wheel first. Then, youll likely need to remove the brake caliper (for disc brakes) or the brake drum (for drum brakes). Be careful when disconnecting brake lines – brake fluid will drip, so have a rag ready. If youre replacing the rotor, youll probably need to remove the caliper bracket as well. Remember to take pictures as you disassemble everything. This will be a lifesaver when its time to put it all back together.



Now, clean everything! Use brake cleaner to thoroughly clean the caliper, rotor (or drum), and any other components you're reusing. This removes brake dust, grease, and other contaminants that can affect braking performance. Be careful not to get brake cleaner on any painted surfaces, as it can damage them.

Time for the fun part – installing the new components. Install the new rotor (or drum) according to the manufacturer's instructions. If you're replacing the caliper bracket, install that as well. Then, install the new brake pads into the caliper. Make sure they're seated correctly and that any clips or pins are properly secured. Reinstall the caliper onto the bracket, making sure to tighten the bolts to the manufacturer's specified torque.



If you disconnected the brake lines, now's the time to reconnect them. Use new crush washers if required, and again, tighten to the specified torque. Be careful not to overtighten, as this can damage the fittings.

Now comes the crucial step: bleeding the brakes. This removes air from the brake lines, which is essential for proper braking performance. There are several methods for bleeding brakes, including using a brake bleeder kit or having a friend pump the brake pedal while you open and close the bleeder valve on the caliper. Follow the instructions for your chosen method carefully. The goal is to get a steady stream of brake fluid without any air bubbles. Keep an eye on the brake fluid reservoir and top it off as needed.

Once you've bled the brakes, double-check all your connections and make sure everything is tight. Reinstall the wheel and tighten the lug nuts to the specified torque. Pump the brake lever or pedal several times to make sure the brakes are working properly.

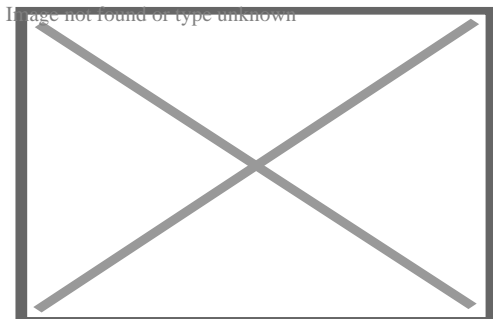
Finally, and this is super important, take your ATV for a test ride in a safe area. Start slowly and gradually increase your speed, testing the brakes at each speed. Pay attention to how the brakes feel. Do they feel spongy? Do they pull to one side? If anything feels off, stop immediately and re-inspect your work.

Installing new brake components on an ATV isn't rocket science, but it does require attention to detail and a commitment to safety. Take your time, follow the instructions in your ATV's service manual, and don't be afraid to ask for help if you get stuck. With a little patience and effort, you can get the job done right and enjoy safe and reliable braking performance. Good luck!

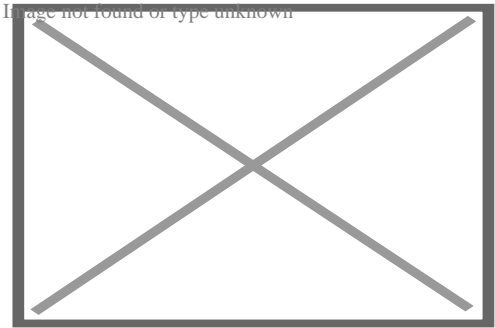
## About Kawasaki Motors

Kawasaki Motors, Ltd. ( Kawasaki Motor Co., Ltd. (Kawasaki Heavy Industries, Ltd.), Kawasaki Motor Co., Ltd. (Kawasaki Heavy Industries, Ltd.) su Kabushikigaisha) is a Japanese movement supplier that creates bikes, all-terrain cars, utility automobiles, watercraft, outboard electric motors, and various other electrical products. It acquires its origins from Kawasaki Airplane Industries, a subsidiary of Kawasaki Heavy Industries, and is rooted in the bike, watercraft, and engine companies. In 1953, they started making engines for bikes and have actually given that generated products such as the Mach and Ninja series in bikes and the Jet Ski, which has ended up being a common term for individual boat. Up until 2021, it was a division of Kawasaki Heavy Industries, referred to as the Kawasaki Aerospace Business ( Kawasaki Aerospace Business (Kawasaki Heavy Industries, Ltd.) and later on the Kawasaki Motorcycle & Engine Business ( Kawasaki Motorcycle & Engine Business (Kawasaki Heavy Industries, Ltd.). In 2021, it was separated as Kawasaki Motors, Ltd, a completely possessed subsidiary of Kawasaki Heavy Industries.

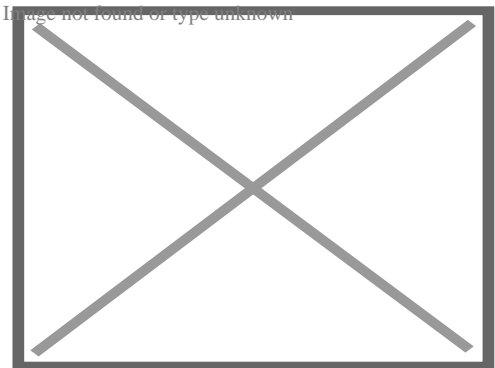
## About Car dealership



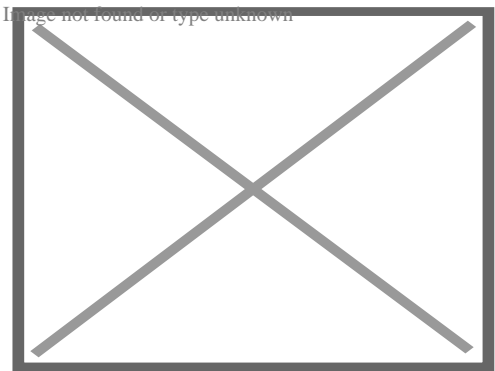
Typical car dealership (in this case a Jeep dealer) in the U.S. selling used cars outside, new cars in the showroom, as well as a vehicle entrance to the parts and service area in the back of the building



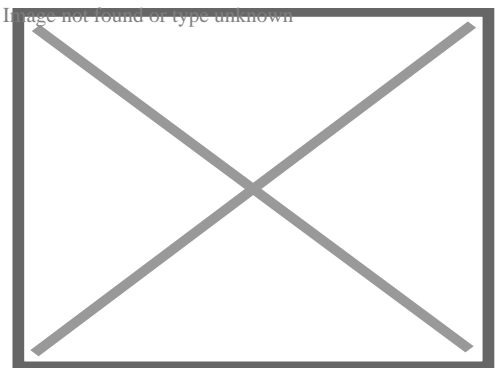
An aerial view of auto dealer's service in Kuopio, Finland



Service and repair entrance



Auto dealer's service and repair facility



## Dealer for vintage cars

A **car dealership**, or **car dealer**, is a business that sells new or used cars, at the retail level, based on a dealership contract with an automaker or its sales subsidiary. Car dealerships also often sell spare parts and automotive maintenance services.

In the United States, car dealerships have historically been an important source of state and local sales taxes. They have considerable political influence and have lobbied for regulations that guarantee their survival and profitability. By 2010, all US states had laws that prohibited manufacturers from side-stepping independent car dealerships and selling cars directly to consumers. By 2009, most states imposed restrictions on the creation of new dealerships to compete with incumbent dealerships.

Economists have characterized these regulations as a form of rent-seeking that extracts rents from manufacturers of cars, increases costs for consumers, and limits entry of new car dealerships while raising profits for incumbent car dealers. Research shows that as a result of these laws, retail prices for cars are higher than they otherwise would be.<sup>[1][2]</sup>

## Car dealerships in the United States

[edit]

Main article: Car dealerships in the United States

The early cars were sold by automakers to customers directly or through a variety of channels, including mail order, department stores, and traveling representatives.<sup>[1]</sup> For example, Sears made its first attempt at selling a gasoline-engined chain-drive high-wheeler in 1908 through its mail-order catalog and starting in 1951 the Allstate through select its stores and the catalog.<sup>[3][4]</sup>

The first car dealership was opened in 1889 by Fred Koller in Reading, Pennsylvania and sold cars manufactured in Cleveland, Ohio. This would have been the first dealership solely dedicated to automobiles, as opposed to horse-drawn carriages.<sup>[5]</sup>

Today, direct sales by an automaker to consumers are limited by most states in the U.S. through franchise laws that require new cars to be sold only by licensed and bonded, independently owned dealerships.<sup>[6]</sup> The first woman car dealer in the United States was Rachel "Mommy" Krouse who in 1903 opened her business, Krouse Motor Car Company, in Philadelphia, Pennsylvania.<sup>[7]</sup>

The number of car dealerships in the US peaked in 1927 at 53,125 and steadily decreased over the next decades. By 1960, there were 33, 658 dealerships; by 1980, 23,379; and by 2001, 22,007.<sup>[1]</sup>

Car dealerships are usually franchised to sell and service vehicles by specific companies. They are often located on properties offering enough room to have buildings housing a

showroom, mechanical service, and body repair facilities, as well as to provide storage for used and new vehicles. Many dealerships are located out of town or on the edge of town centers. An example of a traditional single proprietorship car dealership was Collier Motors in North Carolina.<sup>[8]</sup> Many modern dealerships are now part of corporate-owned chains with hundreds of locations.<sup>[9]</sup> Dealership profits in the US mainly come from servicing, some from used cars, and little from new cars.<sup>[10]</sup>

Most automotive manufacturers have shifted the focus of their franchised retailers to branding and technology. New or refurbished facilities are required to have a standard look for their dealerships and have product experts to liaise with customers.<sup>[11][12]</sup> Audi has experimented with a hi-tech showroom that allows customers to configure and experience cars on 1:1 scale digital screens.<sup>[13][14]</sup> In markets where it is permitted, Mercedes-Benz opened city centre brand stores.<sup>[15]</sup>

Tesla Motors has rejected the dealership sales model based on the idea that dealerships do not properly explain the advantages of their cars, and they could not rely on third-party dealerships to handle their sales.<sup>[16]</sup> However, in the United States, direct manufacturer auto sales are prohibited in almost every state by franchise laws requiring that new cars be sold only by dealers.<sup>[17]</sup> In response, Tesla has opened city centre galleries where prospective customers can view cars that can only be ordered online.<sup>[18][19]</sup> These stores were inspired by the Apple Stores.<sup>[20]</sup> Tesla's model was the first of its kind, and has given them unique advantages as a new car company.<sup>[21]</sup>

## **Economic theory**

[edit]

In economic theory, car dealerships can be characterized as franchisees and automobile manufacturers as franchisors. A franchise relationship can be beneficial to both parties, as the franchisee can sell a well-made and attractive product while the franchisor can rely on the franchisee to incur downstream costs and use its local relationships to sell more products and services.<sup>[1]</sup>

The franchisor can act opportunistically by imposing constraints and burden on the franchisee after the latter has incurred sunk costs, such as investing in physical assets and building up a reputation with customers. The franchisor could for example require that cars be sold at low prices, and services be performed for little compensation. The franchisee could on the other hand act opportunistically by using its local monopoly to perform poor customer service, charge customers more, and pass those unnecessarily high costs to the franchisor.<sup>[1][22]</sup>

## **Regulations that protect car dealers**

[edit]

Car dealerships have lobbied for regulations that increase the survival and profitability of car dealerships:[<sup>1</sup>]

- By 2010, all US states had laws that prohibited manufacturers from side-stepping independent car dealers and selling cars to customers directly.
- By 2009, most states imposed restrictions on the creation of new dealerships to compete with incumbent dealerships.
- All states impose severe limits on the ability of a manufacturer to terminate a franchise relationship.
- Most states prevent manufacturers from engaging in "quantity forcing" whereby manufacturers require that dealers purchase vehicles that they had not ordered.
- Most states limit the ability of manufacturers to discriminate between car dealers (for example, by providing better terms to large car dealers with economies of scale or dealers that provide better customer service).
- Many state laws impose upon manufacturers the precise terms under which they must compensate dealers for the costs associated with warranty repairs (these can incentivize dealers to increase the price of repairs to customers).
- Most state laws require upon the termination of a dealership that manufacturers buy back the inventory, and special equipment and in some cases pay the rent of the dealer's facilities.

The issuance of new dealership licenses can be subject to geographical restriction; if there is already a dealership for a company in an area, no one else can open one. This has led to dealerships becoming in essence hereditary, with families running dealerships in an area since the original issuance of their license with no fear of competition or any need to prove qualification or consumer benefit (beyond proving they meet minimum legal standards), as franchises in most jurisdictions can only be withdrawn for illegal activity and no other reason.[<sup>23</sup>]

## Criticism

[edit]

Economists have characterized these laws as a form of rent-seeking that extracts rents from manufacturers of cars and increases costs for consumers of cars while raising profits for car dealers.[<sup>1</sup>][<sup>24</sup>][<sup>25</sup>][<sup>26</sup>] Multiple studies have shown that regulations that protect car dealerships increase car costs for consumers and limit the profitability of manufacturers.[<sup>27</sup>]

This has led to consumer campaigns for establishment or reform, which have been met by huge lobbying efforts by franchise holders. New companies trying to enter the market, such as Tesla, have been restricted by this model and have either been forced out or been forced to work around the franchise model, facing constant legal pressure.[<sup>28</sup>]




## Electric vehicles

[edit]

According to a 2023 survey by the Sierra Club, two-thirds of US car dealerships did not have electric or hybrid vehicles for sale.<sup>[29]</sup> Reasons for this include supply chain difficulties,<sup>[29]</sup><sup>[30]</sup> as well as a need for car dealers to make substantial investments in new employee training and infrastructure to be able to sell, service and maintain electric vehicles.<sup>[31]</sup>

## Car dealerships in the European Union

[edit]

 **This section needs expansion.** You can help by adding to it. *(May 2023)*

In the European Union, car manufacturers were permitted from 1985 to 2006 to enter into contracts with car dealerships that restricted what kinds of cars dealers were permitted to sell.<sup>[32]</sup><sup>[33]</sup> Car manufacturers were able "to impose qualitative, quantitative and geographical restrictions on supply by selling their cars only through a limited number of dealers bound by strict franchise agreements."<sup>[32]</sup> In 2006, the European Commission determined that it was anti-competitive for car manufacturers to prohibit dealers from carrying multiple car brands.<sup>[33]</sup>

Car manufacturers in the European Union are increasingly shifting towards selling cars directly to customers without reliance on independent dealers. Volvo has announced plans to sell all vehicles directly to customers by 2030.<sup>[34]</sup><sup>[35]</sup>

## Multibrand car dealers

[edit]

Multibrand and multi-maker car dealers sell cars from different and independent carmakers.<sup>[36]</sup> Some are specialized in electric vehicles.<sup>[37]</sup>

## Auto transport

[edit]

Auto transport is used to move vehicles from the factory to the dealerships. This includes international and domestic shipping. It was largely a commercial activity conducted by manufacturers, dealers, and brokers. Internet use has encouraged this niche service to expand and reach the general consumer marketplace.

## See also

[edit]

- Auto auction
- Auto row
- Automaker
- Car broker
- Car rental
- List of auto dealership and repair shop buildings
- Showroom
- Used car

## Organizations

[edit]

- Carfax
- Kelley Blue Book
- Federation of Automobile Dealers Associations of India (FADA)
- National Automobile Dealers Association
- Presidential Task Force on the Auto Industry

## References

[edit]

- <sup>^</sup> ***a b c d e f g*** Lafontaine, Francine; Morton, Fiona Scott (2010). "Markets: State Franchise Laws, Dealer Terminations, and the Auto Crisis". *Journal of Economic Perspectives*. **24** (3): 233–250. doi:10.1257/jep.24.3.233. ISSN 0895-3309.
- <sup>^</sup> Bodisch, Gerald (May 2009). "Economic Effects Of State Bans On Direct Manufacturer Sales To Car Buyers". U.S. Department of Justice, Anti-Trust Division. Retrieved 23 July 2024.
- <sup>^</sup> Strohl, Daniel (24 October 2018). "Sears sold many things well, just not automobiles". *Hemmings*. Retrieved 6 December 2022.
- <sup>^</sup> Tate, Robert (17 March 2015). "When Sears Sold Vehicles: Remembering the Allstate | 2015 | Story of the Week". *motorcities.org*. Retrieved 6 December 2022.
- <sup>^</sup> Ryan, Tom (31 March 2022). "Dealership Business Model: The Future of Automotive Retail". Archived from the original on 21 May 2022.
- <sup>^</sup> Quinland, Roger M. "Has the Traditional Automobile Franchise System Run Out of Gas?". *The Franchise Lawyer*. **16** (3). Archived from the original on 14 May 2016. Retrieved 21 April 2016.
- <sup>^</sup> *The Evening Bulletin* (published by Philadelphia Bulletin) 7 December 1953 page 1 (column 3) and page 16 (column 4) and *The Evening Bulletin* 29 January 1954 (obituary)
- <sup>^</sup> Cotter, Tom (22 September 2013). "Former AMC Dealership Full of Cars". *Barn Finds*. Retrieved 8 September 2019.

9. ^ Tucker, Sean (15 September 2021). "The Future of Car Shopping: Fewer Dealerships, More Consolidation". *Kelley Blue Book*. Retrieved 6 December 2022.
10. ^ "NADA Data 2015 the annual financial profile of new-car dealerships". *National Automobile Dealers Association*. 2015. pp. 6–7. Retrieved 8 September 2019.
11. ^ "New BMW stores to be big, open, beige".
12. ^ "Geniuses smart move for dealers, BMW says".
13. ^ Foy, Henry (29 December 2013). "Online showrooms and digital dealerships revolutionise car buying". *FT*. Archived from the original on 2 July 2014. Retrieved 22 November 2021.
14. ^ Singh, Sarwant. "The Future of Car Retailing". *Forbes*. Archived from the original on 29 April 2017.
15. ^ "Mercedes-Benz growth strategy dominates 2013". *daimler.com*. 2 January 2014. Archived from the original on 8 January 2014. Retrieved 6 December 2022.
16. ^ "Dealer or no dealer: Tesla's sales model under fire". *america.aljazeera.com*. Retrieved 12 July 2023.
17. ^ Bodisch, Gerald R. (May 2009). "Economic Effects of State Bans on Direct Manufacturer Sales to Car Buyers". *United States Department of Justice*. Archived from the original on 19 June 2015. Retrieved 21 August 2016.
18. ^ "Tesla sets up shop in Dallas -- minus test-drives and sales".
19. ^ "Tesla: we're not car dealerships". 6 June 2014. Archived from the original on 30 May 2016.
20. ^ "The Perfect Tesla Store". *tesla.com*. Archived from the original on 6 December 2017.
21. ^ Gross, Daniel (11 April 2016). "Tesla's Real Innovation Isn't the Electric Car". *Slate*. Archived from the original on 6 December 2017.
22. ^ "Inside the rise of 'stealerships' and the shady economics of car buying". *NPR*. 2022.
23. ^ "State Franchise Law Carjacks Auto Buyers".
24. ^ "Death of a car salesman". *The Economist*. 2015. ISSN 0013-0613.
25. ^ DePillis, Lydia (1 June 2017). "Auto dealerships are America's most powerful middlemen". *Chron*.
26. ^ Girotra, Karan; Netessine, Serguei (2014). "The Fight Over Tesla Shows How Little Value Dealerships Add". *Harvard Business Review*. ISSN 0017-8012.
27. ^ "Auto Franchise Laws Restrict Consumer Choice and Increase Prices".
28. ^ Yglesias, Matthew (26 October 2014). "Car dealers are awful. It's time to kill the dumb laws that keep them in business". *Vox*. Retrieved 2 October 2020.
29. ^ **a b** Calma, Justine (12 May 2023). "What two-thirds of car dealerships are missing in the US". *The Verge*.
30. ^ Irfan, Umair (8 May 2023). "Why most car dealers still don't have any electric vehicles". *Vox*. Retrieved 31 May 2023.
31. ^ Wayland, Michael (28 January 2023). "Carmakers face a crossroads as they work to fit auto dealers into their EV plans". *CNBC*. Retrieved 31 May 2023.
32. ^ **a b** "Car industry at the crossroads". *POLITICO*. 5 September 2001.
33. ^ **a b** "European car dealers win right to multi-franchise [sic]". *The Irish Times*. 2006.
34. ^ Campbell, Peter (2 March 2021). "Volvo Cars to go all electric by 2030 as it shifts sales online". *Financial Times*.

35. ^ Apeldoorn, Robert Van (22 November 2021). "Acheter sa voiture sur le net, une évolution qui pourrait bouleverser la vente via les concessionnaires". *Trends-Tendances (in French)*. Retrieved 30 November 2023.
36. ^ "Publications - European Commission" (PDF). Archived (PDF) from the original on 2 April 2015. Retrieved 22 March 2015.
37. ^ Blanco, Sebastian. "First EVEN EV store opens in Iceland's biggest shopping mall". Archived from the original on 6 April 2015.

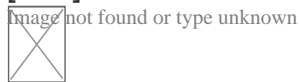
## Further reading

[edit]

- Genat, Robert (2004). *The American Car Dealership*. Motorbooks International. ISBN 9780760319345.

## External links

[edit]



Wikimedia Commons has media related to ***Automobile dealerships***.

- EU car dealership reforms
- v
- t
- e

Retail

## **Key concepts**

- Counter display unit
- Display stand
- Endcap
- Facing
- Free standing display unit
- Gondola
- History of retail
- Merchandising
  - Visual merchandising
- Point of sale display
- Retail design
- Retail merchandising unit
- Self-service
- Shelf-ready packaging

- Agricultural supplies
- Alcohol
- Antiques
- Automotive fuel
- Automotive parts
- Beauty products
- Books
- Cannabis
- Catering
  - Mobile
- Chocolate
- Clothes
- Comics
- Confectionery
- Consumer electronics
- Cycles
- *Doujin shop*
- Dry goods
- Equestrian supplies
- Eyewear
- Fish
- Flowers
- Food
- Foodservice
- Fruit stand
- Furniture
- Garden centre
- Gardening supplies
- General merchandise
- Gold
- Greengrocer
- Grocery
  - Public grocery
- Guns
- Hardware
- Health food
- Herbal tea
- Hobby supplies
- Home decor
- Home improvement products
- Ironmongery
- Jewellery
- Lingerie
- Lumber
- Magic supplies
- Meat
- Medications

**By product**

- Anchor tenant
- Automat
- Automated retail
- Big-box store
- Boot fair
- Boutique
- Brick and mortar
- Bring and buy sale
- Butcher shop
- Car boot sale
- Cash and carry
- Cashierless store
- Category killer
- Chain store
- Charity shop
- Closeout store
- Company store
- Consignment shop
- Consignment store (East Asia)
- Convenience store
  - Automated convenience store
  - Corner store
  - Mini-mart
  - Mini market
  - Superette
- Dark store
- Department store
  - Junior department store
  - Public department store
- Discount store
- E-commerce
- Estate sale
- Experiential commerce
- Experiential retail
- Factory outlet
- Factory store
- Flash retailing
- Free box
- Freeshop
- Free store
- Garage sale
- General store
- Give-away shop
- Haberdasher
- Head shop
- High Street
- Honesty box

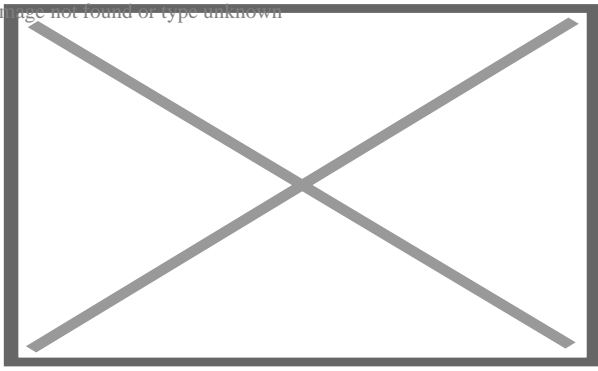
### **By type**

- Arabber
- Boutique
- Braderie
- Butcher shop
- Concession stand
- Cooked food centre
- Costermonger
- Direct sellers
- Duty-free shop
- Food booth
- Food cart
- Food court
- Food hall
- Food kiosk
- Food stall
- Food stand
- Food truck
- Gift shop
- Hawker
- Hawker centre
- Ice cream truck
- Ice cream van
- Museum shop
- Pawn shop
- Peddler
- Pharmacies
- Refreshment stand
- Snack bar
- Snack kiosk
- Souvenir shop
- Surplus store
- Tack shop
- Tax-free shopping
- Tuck shop

### **About Polaris Slingshot**



Image not found or type unknown



## Overview

**Manufacturer** Polaris Industries

**Production** 2014–present

**Model years** 2015-Present

## Body and chassis

**Layout** FR layout

## Powertrain

**Engine** 2.4 liter (2,384 cc) GM Ecotec *LE9* I4 (2015–2019 model years), Polaris ProStar 2.0 Liter (1997cc) DOHC I4 (2020 - present model years)

**Transmission**

- 5-speed Aisin *AR5* manual (all model years)
- 5-speed *AutoDrive* AMT (2020–present model years)

## Dimensions

**Wheelbase** 105 in (2,667 mm)

**Length** 149.6 in (3,800 mm)

**Width** 77.6 in (1,971 mm)

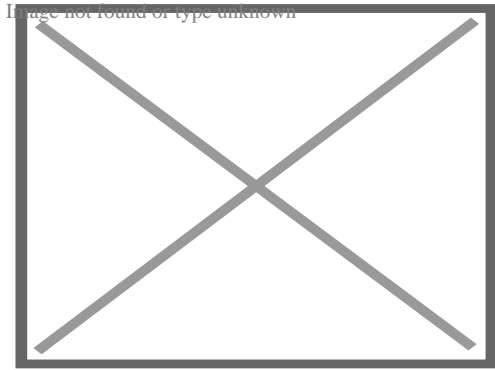
**Height** 51.9 in (1,320 mm)

**Curb weight** 1,651 lb (749 kg)

The **Polaris Slingshot** is a three-wheeler. The first edition of the model was introduced in 2014 as a 2015 model.

## Specifications

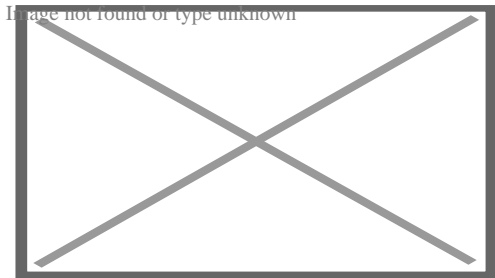
[edit]



The Slingshot has a waterproof interior.

The Slingshot has a tilt-adjustable steering wheel, side-by-side bucket seats,<sup>[1]</sup> and does not lean. It has no roof, doors, or side windows. The open interior is waterproof and can be hosed down and drained because it has drain holes in the floor.<sup>[2]</sup>

The S and SL models include a 20x9-inch back wheel fitted with a 255mm width tire, and 18x7.5-inch front wheels with 225mm wide tires. The SLR and R models have the same front wheels and tires, but feature an upgraded 20x11-inch rear wheel fitted with a 305mm wide tire. All models have a front double wishbone suspension with an anti-roll bar. An optional five-speed automatic transmission became available in 2020 with the release of the generation two models. A small windshield is an optional extra on the base model, and fitted as standard on the SL model.<sup>[3]</sup> There is also an optional fiberglass wind and sun cover, which Polaris calls a "Slingshade", that features inset polycarbonate windows and snaps onto the Slingshot's tube frame, acting somewhat like a hardtop roof.<sup>[4]</sup> The steering wheel, gear stick, and brake, clutch, and throttle pedals have a conventional automobile layout.



In Manhattan, New York City

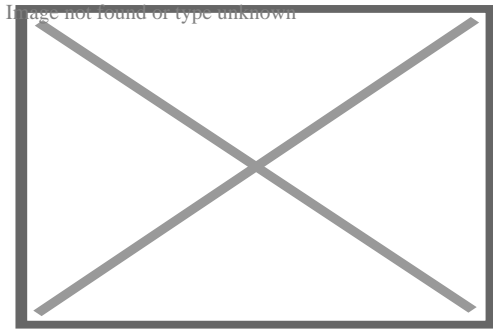
## Classification

[edit]

In the United States, depending on the jurisdiction, the Slingshot may be registered as a motorcycle or autocycle. It is classified as an autocycle in 49 states (with one state, Massachusetts, requiring a motorcycle license) as of January 2024.<sup>[5]</sup> Three-point seat belts are fitted; however, it has no airbags or crumple zone, and in certain jurisdictions, the driver and passenger must wear motorcycle helmets.<sup>[6]</sup>

## Performance

[edit]



Polaris Slingshot on Live Oak Road, Orange County, CA

Beginning with the 2020 model year, the Slingshot is powered by a 2.0 L inline four-cylinder gasoline-powered Polaris ProStar Engine rated at 203 hp (151 kW; 206 PS) at 8250 rpm and 144 pound force-feet (195 N·m) of torque at 6500 rpm.

It can be fitted to either a conventional five-speed manual or an AutoDrive five-speed automated manual transmission the first time an automatic transmission has been made available on the Slingshot. This transmission is essentially the same standard five-speed synchromesh-equipped manual gearbox, but the clutch and shifting are hydraulically actuated and computer-controlled. The interior was also redesigned, and the exterior was updated. For the 2015 through 2019 model years, the Slingshot was powered by a GM-sourced 2.4 L Ecotec I4 that is rated at 173 hp (129 kW; 175 PS) at 6200 rpm and 166 pound force-feet (225 N·m) of torque at 4700 rpm.

## See also

[edit]

- Campagna T-Rex, another 3-wheeled vehicle
- List of motorized trikes
- Microlino
- Nobe GT100
- Elio Motors
- Three-wheeler

## References

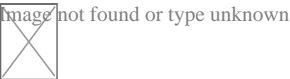
[edit]

- ↑ The Polaris Slingshot Is Your Amazing New Three-Wheeled Track Machine

2. ^ "2015 Polaris Slingshot Top Speed and Specs". *motorcyclecruiser.com*. Retrieved 2018-04-19.
3. ^ "Polaris Slingshot: First Drive". *autoblog.com*. 9 December 2014. Retrieved 20 Jan 2015. "this is most certainly not a car, and it's also not a motorcycle by any stretch of the imagination"
4. ^ Fogelson, Jason. "2018 Polaris Slingshot SL Test Ride And Review: Exchanging Sneers For Grins". *Forbes*. Retrieved 2018-04-17.
5. ^ "License Requirements". *polaris.com*. Retrieved 2024-07-02.
6. ^ Brandt, Eric (February 2018). "Polaris Slingshot Grand Touring LE Adds Luxury to the Three-Wheeler". *thedrive.com*. Retrieved 2018-04-18.

External links

[edit]



Wikimedia Commons has media related to ***Polaris Slingshot***.

- Polaris Slingshot
- v
- t
- e

Polaris Inc.

- Divisions
- Polaris Commercial
  - Polaris Defense

- Subsidiaries
- GEM
  - Indian
  - Victory Motorcycles
  - Taylor-Dunn
  - Polaris Europe
    - Aixam
    - Goupil Industrie
  - Polaris India

	<b>UTVs</b>	<ul style="list-style-type: none"> <li>○ Ace</li> <li>○ Dagor</li> <li>○ Ranger</li> <li>○ RZR <ul style="list-style-type: none"> <li>○ M RZR</li> </ul> </li> <li>○ Sportsman <ul style="list-style-type: none"> <li>○ MV 850</li> </ul> </li> <li>○ Taylor-Dunn <ul style="list-style-type: none"> <li>○ G-100</li> <li>○ ET-150-72</li> </ul> </li> </ul>
<b>Polaris products</b>	<b>NEVs</b>	<ul style="list-style-type: none"> <li>○ GEM <ul style="list-style-type: none"> <li>○ e2/e4/e6</li> <li>○ eLXD</li> <li>○ eM1400</li> </ul> </li> <li>○ Taylor-Dunn <ul style="list-style-type: none"> <li>○ BT-280</li> <li>○ FT-240</li> <li>○ FT-280</li> <li>○ T-941</li> <li>○ T-942</li> </ul> </li> </ul>
	<b>Snowmobiles</b>	<ul style="list-style-type: none"> <li>○ 550-Series</li> <li>○ 600-Series</li> <li>○ 800-Series</li> <li>○ Indy</li> <li>○ RMK</li> <li>○ Rush</li> <li>○ Switchback</li> </ul>
	<b>Motorcycles</b>	<ul style="list-style-type: none"> <li>○ Indian</li> <li>○ Slingshot</li> </ul>
	<b>Commercial trucks</b>	<ul style="list-style-type: none"> <li>○ Brutus</li> <li>○ M14000</li> <li>○ Multix</li> <li>○ Ranger XP</li> <li>○ Taylor-Dunn <ul style="list-style-type: none"> <li>○ Bigfoot XL</li> <li>○ BF-3000</li> </ul> </li> </ul>

About Shorewood Home & Auto (Formerly Circle Tractor)

## Driving Directions in Will County

---

john deere homer glen

41.64194464615, -87.907293353371

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

[Open in Google Maps](#)

**john deere homer glen**

41.664600222373, -87.96819704524

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**atv rental chicago il**

41.545276661987, -87.96486613091

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**



**auto atv**

41.58938458501, -87.942080491627

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**atv push mower**

41.619926653045, -87.892455610928

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**atv rental chicago il**

41.544615869136, -87.989359069024

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**john deere homer glen**

41.620165606192, -87.989335447653

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**atv stores in illinois**

41.554418107696, -87.979806538721

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**gravely tractors & polaris atv**

41.562098144276, -87.981490622895

Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

Destination

**[Open in Google Maps](#)**

**auto atv**

41.552561624984, -87.891646486351

## Starting Point

Shorewood Home & Auto (Formerly Circle Tractor), 13639 W 159th St, Homer Glen, IL 60491, USA

## Destination

**Open in Google Maps**

## Google Maps Location

https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587958021423633,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d87.9510205!16s%2F

Click below to open this location on Google Maps

**Open in Google Maps**

## Google Maps Location

https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.688,000192733008,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d87.9510205!16s%2F

Click below to open this location on Google Maps

**Open in Google Maps**

### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.9510205,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.9510205,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F)

### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.687.99990961812,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.687.99990961812,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F)

### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.911896967961,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.911896967961,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F)

### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.891646486351,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.891646486351,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F)

### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.908518836185,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.587.908518836185,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d-87.9510205!16s%2F)



#### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.588022544133851,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](#)

#### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.687947342550038,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](#)

#### Google Maps Location

<https://www.google.com/maps/place/Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29/@41.688000073251853,25.2z/data=!4m6!3m5!1s0x880e41f2e579f223:0xe5c5c23b2b8dc77a!8m2!3d41.598588!4d87.9510205!16s%2F>

Click below to open this location on Google Maps

[Open in Google Maps](#)

#### Google Maps Location

<https://www.google.com/maps/dir/?api=1&origin=41.562098144276,-87.981490622895&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](#)

#### Google Maps Location

<https://www.google.com/maps/dir/?api=1&origin=41.589248669717,-88.005034547215&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](#)

#### Google Maps Location

<https://www.google.com/maps/dir/?api=1&origin=41.560634759023,-88.026171054283&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.560634759023,-88.026171054283&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

**Google Maps Location**

<https://www.google.com/maps/dir/?api=1&origin=41.58938458501,-87.942080491627&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.58938458501,-87.942080491627&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

**Google Maps Location**

<https://www.google.com/maps/dir/?api=1&origin=41.657032854171,-87.99990961812&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.657032854171,-87.99990961812&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

**Google Maps Location**

<https://www.google.com/maps/dir/?api=1&origin=41.579276774696,-87.956507786578&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.579276774696,-87.956507786578&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

**Google Maps Location**

<https://www.google.com/maps/dir/?api=1&origin=41.606342917118,-87.909382977642&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.606342917118,-87.909382977642&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

**Google Maps Location**

<https://www.google.com/maps/dir/?api=1&origin=41.6017944719,-88.000192733008&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](https://www.google.com/maps/dir/?api=1&origin=41.6017944719,-88.000192733008&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363)

## Google Maps Location

<https://www.google.com/maps/dir/?api=1&origin=41.608455488079,-88.008265754223&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](#)

## Google Maps Location

<https://www.google.com/maps/dir/?api=1&origin=41.575715082595,-87.911896967961&destination=Shorewood+Home+%26+Auto+%28Formerly+Circle+Tractor%29%2C+1363>

Click below to open this location on Google Maps

[Open in Google Maps](#)

Shorewood Home & Auto

Phone : +17083010222

Email : +17083010222

City : Shorewood

State : IL

Zip : 60404

Address : 1002 W Jefferson St

## Google Business Profile

Company Website : <https://www.shorewoodhomeandauto.com/>

## USEFUL LINKS

[ATV Dealer](#)

[ATV Repair](#)

[Sitemap](#)

[Privacy Policy](#)

[About Us](#)

Follow us