Click to verify

Chevrolet Division, General MotorsAfter a great deal of painstaking research last month, I was able to determine that the very last three-speed automatic available in a new car in North America came in the 2002 Toyota Corolla/Geo Prizm. After that, I hunted down the identity of the last new car available here with a four-speed manual transmission (the 1996 Toyota Tercel). It turned out to be much tougher to determine the very last new car North Americans could buy with the good old three-on-the-tree column-shift manual transmission, but now I know.Plymouth Division, Chrysler CorporationChrysler put the three-speed column-shift manual on the map back in the 1939 model year, with the "Remote Control" shifter setup in the '39 Plymouths. This rig allowed the use of a big, cushy bench seat and three-abreast seating, without a floor shifter banging into anyone's knees.Plymouth Division, Chrysler CorporationOther manufacturers followed suit, and most Detroit cars of the immediate postwar era came off the assembly line with three-on-the-tree manual transmissions. Throughout the 1940s and 1950s, most affordable American cars used this setup, and the three-on-the-tree remained commonplace well into the 1960s. I came of driving age in the early 1980s, and three-on-the-trees were still semi-mainstream at that point… but they disappeared quickly after that. Plymouth Division, Chrysler CorporationIf you ask a bunch of nitpicky car-history freaks to name the very last car you could buy new in North America with a three-on-the-tree, you'll get a wide range of answers, delivered with varying levels of vehemence. The main candidates will boil down to the Chevy Nova, the Dodge Aspen, and the Ford Fairmont (and the badge-engineered siblings of those cars). The final new truck you could buy with a three-on-the-tree is another subject, but we'll cut to the chase by letting you know it was a 1987 GM product.Chevrolet Division, General MotorsI purchased sales brochures and owner's manuals for numerous models, consulted with an incredibly knowledgeable Chrysler restorer with a complete set of dealership reference books from the 1970s, and dove down far too many online-forum rabbit holes populated by very angry old dudes to determine that the absolute last three-on-the-tree car available here was the 1979 Chevrolet Nova (and its Oldsmobile and Pontiac twins).Chevrolet Division, General Motors1979 was the final year for the rear-wheel-drive GM X-Body, and the three-on-the-tree died with the platform (the Citation and its siblings were based on an unrelated front-wheel-drive X Platform).Chevrolet Division, General MotorsYou could buy three-on-the-floor manual transmissions in Detroit cars after 1979, but that's a tale we'll tell a bit later. The very last year for a Chrysler-built, American-market new car with a three-on-the-tree manual was 1978, when the Dodge Aspen, Plymouth Volaré, Dodge Monaco and Plymouth Fury could be purchased with a 1939 Plymouth-style shifter (your enraged uncle who swears he bought a new '80 Volaré with a three-on-the-tree is wrong, sorry). American Motors ditched the three-on-the-tree earlier, with the 1976 Pacer and Hornet being the last Kenosha machines so equipped.Chevrolet Division, General MotorsIn theory, the first-year Ford Fairmont could be purchased with a three-on-the-tree manual, which makes 1978 the last year for a Ford car with such a shifting rig, but I am extremely skeptical that anyone in Dearborn actually signed off on spending vast sums of money to build a one-year-only bespoke steering column for a desperately obsolete shifter configuration on the brand-new Fox platform. Most likely, the 1977 Ford Maverick/Mercury Comet was the final real-world three-on-the-tree Ford car here. If it turns out that three-on-the-tree Fairmonts really made it off the assembly line, then someone needs to build a three-on-the-tree 1990s Fox Mustang using that special steering column.Since the 1979 Oldsmobile Omega and Pontiac Phoenix were mechanically identical to the Nova, the three-on-the-tree was the base transmission hardware available on the entry-level versions of those cars. However, anyone willing to buy the Pontiac- or Olds-badged Nova probably felt able to spring for the automatic or at least the three- or four-speed floor-shifted manual transmission in those cars, and I'll bet close to zero three-on-the-tree Omegas or Phoenixes made it out of the showrooms in 1979. When the new Oldsmobiles were in early for 1980, the three-on-the-tree was history.Robert BechtleSo, next time you're talking about the racing prowess of the three-on-the-tree and someone claims the '80 Aspen could be purchased with that most American of transmission hardware, set them straight with the truth: the 1979 Nova, Omega and Phoenix were the final three-on-the-tree cars sold new here. Both of the steering columns reviewed in this article have been removed from the vehicles. Start by removing the steering wheel with an appropriate puller, and then sliding the main shaft out the bottom end of the column. There will be a spring under the steering wheel holding the upper column shaft bushing into the upper bearing…don't lose the spring or bushing. Also, remove the spring-loaded horn contact from the turn signal switch so it doesn't fall out and get lost. Next, remove the turn signal stalk, then the shift handle (by driving out the retaining pin) and finally the three Phillips-head screws holding the turn signal retaining plate (Fig. 01). Next, you'll need to remove the turn signal switch. Because the wiring is snaked up through the column, and the plastic harness connectors are too large to pull through, you'll have to remove the connectors. You do this by using the yellow-handled tool (Fig. 02) to release the small prongs for each wire and remove all wires from the connector. But first you need to make a careful inspection (and take some notes) about the proper orientation of the wires, so they can be replaced in their respective positions during reassembly. Pull the turn signal switch up and out of the column. Next, use a 7/16" socket to remove the two nuts holding the turn signal housing from the column housing. When you go to lift the turn housing away from the column housing, be sure you don't lose the two bolts. The heads of these two bolts are just barely hooked into holes in the end of the column housing, as shown in Fig. 04. Also shown in Fig. 04 and marked with a yellow arrow is the end of the shift tube, as it extends up through the shift collar. Next, make a schematic of how the shifter arms at the base of the column are arranged, and then you can slide the shift collar and shift tube out from the main column housing. (The shift tube is actually separate from the shift collar, so it's possible it'll slide off the tube first, and then you can grab the tube and pull it out.) This in turn will release the two shifter arms at the base of the column. You'll notice that there is a thin plastic thrust washer on each side of the shifter arm pack, as well as a thicker plastic spacer between the two shifter arms. Pull the two shifter arms out of the column, along with the two thrust washers, and then rotate the thick spacer around 90-degrees so that it can be removed from the main column housing. The spacer is flat on two sides to allow for easy installation/removal and must be spun for clearance to remove (Fig. 8). Fig. 01 - I've removed the three screws holding the turn signal switch. Fig. 02 - Use the yellow-handled tool to release the column wiring from the connectors. Fig. 03 - Remove these two nuts and remove the column spacer. Before automatic transmissions dominated the roads, drivers had to master the art of manually shifting gears. Among the most iconic of these setups was the “Three on the Tree”—a column-mounted three-speed manual transmission found in many classic American cars. While modern drivers may find it unfamiliar, those who grew up with it understand the charm and challenge of this old-school shifting system. If you ever drove a car with a “Three on the Tree,” you probably take pride in your driving skills. Unlike today’s stick shifts that sit on the center console, this setup required a unique combination of clutch work, hand coordination, and mechanical understanding. A “Three on the Tree” refers to a three-speed manual transmission controlled by a gear lever mounted on the steering column. This system was common in vehicles from the 1930s through the 1980s, particularly in American sedans, trucks, and some utility vehicles. The shifter is mounted on the steering column, to the right of the wheel. First gear (low) is typically engaged by pulling the lever toward the driver and down. Second gear is achieved by pushing the lever up and away from the driver. Third gear (high) is selected by pulling the lever down after second. Reverse is usually located by pulling the lever toward the driver and up. A clutch pedal is used to disengage and engage gears smoothly. This system allowed for a cleaner floor design, making room for bench seats—a popular feature in older American cars. During the 1930s to the 1970s, the “Three on the Tree” was the standard for many vehicles. Cars like the Ford F-Series trucks, Chevrolet Bel Air, and Dodge pickups were equipped with this setup. It was widely used because it was simpler and cheaper to manufacture than floor-mounted transmissions. Saved space in the cabin, allowing for more passenger room. Provided a smooth driving experience when shifting properly. More economical and durable compared to early automatic transmissions. Gave drivers a sense of control over their vehicle’s performance. Back in the day, learning to drive meant mastering this transmission. If you couldn’t handle “Three on the Tree,” you weren’t considered a real driver. As technology evolved, so did transmissions. By the late 1970s and early 1980s, automatic transmissions became the norm, reducing the demand for manual gear shifting. The convenience of automatic gearboxes and the introduction of five-speed floor-mounted manual transmissions led to the gradual disappearance of the “Three on the Tree.” By the 1990s, only a handful of vehicles still offered column-shift manuals, mostly in commercial or utility vehicles. Today, it’s nearly impossible to find a new car with this setup. Automatics became more reliable and fuel-efficient. Drivers preferred the convenience of automatic shifting. Safety concerns and crash regulations led to different steering column designs. Front-wheel-drive vehicles became more common, eliminating the need for a column-mounted shifter. Now, if you see a car with “Three on the Tree,” it’s likely a classic car enthusiast’s prized possession. Driving a car with this transmission wasn’t just about shifting gears—it was a skill that separated seasoned drivers from amateurs. If you knew how to drive one, you were part of an elite group of drivers who truly understood vehicle mechanics. The gear pattern wasn’t as intuitive as modern manuals. It required precise clutch work to avoid stalling. Downshifting took practice to match engine speed. Shifting too aggressively could damage the transmission. Because of these challenges, being able to handle a “Three on the Tree” is still considered a mark of driving expertise. Many iconic cars and trucks had this transmission, including: 1950s Chevrolet Bel Air 1940s Ford Deluxe Coupe 1960s Chevrolet C10 Pickup 1950s Dodge Coronet 1970s Ford F-100 1960s Plymouth Fury 1970s GMC Sierra Classic 1940s Studebaker Champion If you own or have driven one of these, you’ve experienced a piece of automotive history. With the resurgence of interest in classic cars and manual transmissions, some enthusiasts have restored their vehicles with this setup. However, modern automakers are unlikely to bring it back due to safety regulations, driver preferences, and evolving technology. Still, learning about it and appreciating its role in automotive history is essential for anyone passionate about cars. The “Three on the Tree” was more than just a gear-shifting mechanism—it was a driving experience that defined an era. While it may be gone from modern vehicles, it lives on in the memories of those who drove them and the collectors who preserve them. If you ever get a chance to drive one, consider it an opportunity to connect with the past and prove your driving skills. Because let’s be honest—if you can handle “Three on the Tree,” you’re a true badass. TrendsThis quirky shift setup was once more common than “four on the floor.” In the late 1930s, column shifters became the norm in cars. The steering column was coined the “tree.” As such, the typical three-speed manual transmission controlled by the column-mounted selector became known as “three on the tree.“ As some may remember, learning how to operate them wasn’t very intuitive. Of course, the remaining examples are now uber-classic. If you ever find yourself needing to drive one in some sort of dystopian post-apocalyptic event, here’s how to work a “three on the tree.” A couple of great (and humorous) tutorial videos are also embedded below. 1960 Ford F-100 pickup with “three on the tree” | Bring a Trailer The pedals work like any other manual. You’ll have three: the gas, brake, and clutch. Image a four-gear “H” pattern drawn on the side of the column that the shifter traces while you’re driving. Reverse is the top left corner of the “H.” First is the left lower corner. Second is the right upper, and third is the lower right. The selector stick is spring-loaded, so it should almost guide itself along the “H” pattern with a bit of assistance. Check that you’re in neutral. It’ll look between 2 and 3 o’clock on the steering wheel. Imagine it’s the center horizontal line of the “H.” You’ll notice some play in the shifter. Reverse is straight up from neutral and a bit toward you. It’s high; think of putting the stick at about 1 o’clock on the steering wheel. First gear is down past neutral. Notice the shifter moving slightly toward you due to the spring load, and lower it to between 3 and 4 o’clock. Second gear requires a quick pit stop at neutral. Then, notice the shifter move ever so slightly away from you up to about 1 o’clock. Remember that if you forcibly “pull” it toward you and up, you’ll land in reverse. Let the shifter do its tracing. Third gear is pretty much back where first was, between 3 and 4 o’clock. Again, the spring-loaded stick should know to go from second to third basically on its own. And that’s it! To help you identify late cars that used this setup, here’s a list of 10 of the last “three on the tree” production cars, courtesy of J.D. Power: Fiat Ducato Ford XF Falcon 1986 Ford F100 Peugeot 504 Mercedes-Benz W124 E-Class Taxi Toyota Hiace Nissan Cedric, Toyota Crown Citroen 2CV SAAB 96 Trabant Watch a longer video on how to drive a “three on the tree” below. Happy shifting! Related 2022 Toyota Tundra Recall: Trucks With Loose Nuts Could Crash If current trends continue, unless significant action is taken, the art of shifting a manual transmission will be lost to the following generation. Most manufacturers no longer provide a manual option because Americans are increasingly forgoing the ability to manually shift their cars. It’s a sad reality, but some automakers will certainly continue to provide column shifters for at least another ten years. The present generation of drivers has lost one important driving skill: how to shift a column-shifted manual, sometimes referred to as three-on-the-tree. This was the required specification for regional Holdens, Falcons, Valiants, and even the Leyland P76 throughout the 1960s and 1970s. Being able to change speeds and having a six-passenger bench interior was a classic “have your cake and eat it, too” situation. On the other hand, shift linkages were more annoying than those that were on the floor. Anyone who lived through the 1980s will remember that shift levers were positioned on the steering columns of cars and trucks. In the postwar period, the column shifter gearbox layout was the most common, but significant technical advancements in the 1970s led to its extinction. In this article, we’ll examine the history and cultural importance of the column shifter to see if it still has a place in the modern, fast-paced vehicle industry. A Column Shifter: What Is It? The first column shifter was introduced to the US market in 1938. It all began with a three-speed manual shifter that let drivers manually adjust the ratios. The 1940s and 1950s saw the widespread usage of the three-speed column shift, sometimes referred to as three-on-the-tree, in American vehicles. Up to the late 1960s, many automobiles used three-on-the-tree column shifters with overdrive transmissions that allowed three additional ratios. A solenoid locked the planetary gear set to produce a higher gear when you pressed the accelerator pedal while moving forward in first gear. These vehicles lacked bucket seats in favor of roomier interiors with broad benches. To provide room for additional passengers in the front, the shifter was purposefully placed on the steering column behind the wheel. Drivers with big families were drawn to this. This arrangement has advantages and disadvantages. Key benefits of a column shifter Efficacious but simple design. There is more room for passengers up front. The mechanical feedback is superb. Drawbacks of a column shifter Shifters’ placement can be confusing. Central consoles, parking brakes, storage spaces, and other useful features are traded for extra seating capacity. Possibly more slowly than the shift sticks in use today. Classic Vehicles with Column Shifters Many cars featured three-on-the-tree column shifters with overdrive gearboxes that offered three more ratios until the late 1960s. When you depressed the accelerator pedal while moving forward in first gear, a solenoid locked the planetary gear set to provide a higher gear. The planetary would then unlock when the gearbox was put in second gear, then lock again when the accelerator was let off. Through the third gear, this was repeated. To disengage the overdrive feature for towing, often a T handle labeled “overdrive” must be pulled out. One issue with column shifters was that they frequently wore out, and the linkage occasionally become fouled. As a result, the shifter would not function until the hood was lifted, the driver reached the base of the steering column, and the pieces were repositioned. Some column shifters (primarily Fords) tended for the cast metal shift collar to break where the shifter entered it. What, though do pickup trucks and vintage muscle cars have in common? Many of them were powered by manual, three-speed gearboxes. Here are a few illustrations: The Chevy Impala SS from 1966 Few vehicles could match the cult status of the 1966 Chevrolet Impala SS. The 1966 model adopts Chevy’s “Wide Stance” design and has a wider front and rear tire, distinct body lines, and a clean hood contour. The horizontal rear tail lamp lenses took the place of the six separate rear tail lamps that had been a standard on Impalas since 1958. To provide passengers access to the back compartment, the interior of the Strato bucket seats is folded forward. One problem with column shifters was that the linkage occasionally got fouled, and they regularly wore out. Because of this, the shifter was inoperable until the hood was raised, the driver reached the steering column’s base, and the parts were adjusted. The 283-cubic-inch Turbo Fire was the basic V-8 engine, and it had a fully synchronized three-speed manual gearbox with a column shifter. It generated 195 BHP at 4800 RPM. The V-6 or V-8 engines and manual or automatic gears offered in Chevy’s Super Sports models were built for performance. In 1966, the Impala sold 38,000 vehicles, making it the second-best-selling sedan in the country thanks to its 7.0-liter V8 engine. The Torino GT from 1968 The Ford Torino GT, a more opulent Fairlane alternative, was unveiled in 1968. With lower body moldings and a fastback roofline that dipped to the edge of the trunk lid, this two-door muscle vehicle was based on a 500XL GTA that had undergone a makeover. The fresh appearance performed well on the racecourse. Ford at once had a stunning midsize vehicle that might rival the Pontiac GTO. In addition to the standard three-speed column-shift manual transmission, the GT had alternative V-8 engines, high-end wheel covers, and additional illumination in the door panels. 265 horsepower and 390 pound-feet of torque were generated by the FE-series engine. With over 500,000 units sold in its first year, the Torino dominated the market. By the end of 1972, Torino was the intermediate with the highest sales in its market. The Ford Falcon XF Despite the Falcon’s numerous American firsts, it was a philistine in certain aspects, keeping its column manual, umbrella handbrake, and leaf springs long after Holden had done away with them. This gave the Falcon its unique character. The Borg-Warner three-speed column shifter was offered until 1993, the year that the XF Falcon Ute and Panel Van was discontinued. These days, finding one is difficult, but if you do, take it. The Ford F100 from 1986 America’s backbone is made up primarily of large, heavy pickup trucks, and this trend is continuing. The modern F150 is a far cry from the useful classics, sporting an aluminum body, color displays, and a ton of chrome. In the 1980s, a 4.9-liter straight-six and a three-on-the-tree Borgy were both offered for the F-Series. When the new generation was introduced without a choice, it happened last in 1986. A year or two prior, Dodge and Chevrolet had discontinued the option. W124 E-Class Taxi by Mercedes-Benz No new Mercedes-Benz passenger car has a clutch pedal, in contrast to arch-rival BMW, which still offers manual gearboxes as a special order option on its autos. This is why finding that a column-shift manual for the W124 E-Class was offered from 1984 to 1996 is such a strange piece of knowledge. This was because due to their robust design, Mercedes-Benz vehicles were commonly used as taxis throughout continental Europe. Option ‘626’ offered a four-speed column-shift manual transmission with a shifter fashioned like a dog biscuit (a variant for Finland). With the previous two S-Classes having a little tab for the (auto) gear selection, the column-shifted Benz is back. Why this was only accessible in Finland is unknown. 1966 Chevrolet Impala SS with a column shifter by Riley / CC BY 2.0. The standard V-8 engine was the 283-cubic-inch Turbo Fire, which included a completely synchronized three-speed manual transmission with a column shifter. At 4800 RPM, it generated 195 BHP. Chevy’s Super Sports models include V-6 or V-8 engines with manual or automatic gearboxes that are built for performance. The Toyota Hiace The second-generation Hiace, equipped with a practical column-shifter for the five-speed manual gearbox, was produced in 1995 in various countries. In Australia, several of these Hiace vehicles are in good operating condition; typically, they are used as camper vans or backpacker transports. Hiaces is followed by a floor change, which causes some awkward physical contact for bench seaters. Taxis In Japan: Nisan Cedric and Toyota Crown Japanese taxis are mostly Toyota Crown Comfort or Nissan Cedrics with LPG-powered 2.0-liter engines. They are quiet, unobtrusive cars. Up until 1999, both of these large sedans could be had with column-shift four-speed manual gearboxes, but it wasn’t exactly a luxurious experience. The Comfort, probably the same vehicle but with a four-speed floor automatic gearbox, is still on the market. The Fiat Ducato The original 1981 Ducato, which wasn’t offered in the US, was badge-engineered to look like various Peugeot, Citroen, and even Alfa Romeo models. Up until 1993, a column-shift manual transmission was an option; however, the next model introduced a standard gear lever on the dashboard to take its place. The Peugeot 504 The durable Peugeot 504, designed by Pininfarina, was produced for three decades in Australia, up until the early 1980s, while Nigerian manufacturing continued until 2006. Before it fell out of vogue in the 1990s, this was a classic Peugeot with a smooth ride and durability that solidified its reputation. Another option was a stunning column-shift manual, which was claimed to be a tactile treat to use. The Citroen 2CV France’s people vehicle, the tin snail, features a unique shifter system that is located on the dash. The ball is attached to a telescopic rod that moves in an unorthodox manner, near the steering column. The Saab 96 Though it is no longer with us, the quirky Swedish carmaker SAAB will always be remembered. The 96 was one of the final European vehicles with a column-shift manual transmission and the brand’s final two-stroke vehicle. The Trabant The Trabant 601 was the only form of transportation available to the proletariat before the 1989 collapse of communist East Germany’s iron wall. It was a front-drive, two-stroke car made of the recycled cotton composite Duroplast. Its four-speed gearbox also included an innovative column-shift arrangement that involved adjusting an umbrella-shaped rod at odd angles. The vehicle was built until 1991 when West Germany’s more contemporary cars started to take off. The Torino GT from 1968 with a column shifter by Josephew / CC BY-SA 3.0. The youthful appearance did well on the racetrack. Ford immediately had a magnificent midsize car that could compete with the Pontiac GTO. The GT included additional lighting in the door panels, different V-8 engines, and high-end wheel coverings in addition to the normal three-speed column-shifter manual transmission. Why Don’t Car Makers Use Column Shifters Anymore? Several factors contributed to the demise of the three-speed manual transmission with gearshift lever positioned on the column among both consumers and automakers. 1. A Change In Priorities and Client Preferences A change in customer views was shown by the introduction of console and floor shifters. Customers shifted from bench seats to bucket seats as safety concerns increased. The vehicle’s center console, which was positioned in the middle seat, had the gearshift, storage spaces, and infotainment systems. There was plenty of space available once the column shifter was taken out for equipment like cruise control, intermittent wipers, fog lights, and shift paddles. 2. Complexities When Downshifting The column shifter’s location might be uncomfortable for certain persons. Downshifting requires a great degree of accuracy. In situations when you need to swap gears rapidly, such as in an emergency, this can affect your timing. 3. Transmissions with Push Buttons As push-button devices became more prevalent in the 20th century, automakers explored the notion of electronically controlled gears in passenger cars. This thought experiment, originally employed in the Vulcan System in 1914, allowed drivers to change gears with the touch of a button. The technology was still being developed by automakers even though it was far from optimal. The Chrysler Corporation’s version, which debuted in 1956, was dubbed The Magic Touch. Push-button technology was developed further by Ford’s Mercury division with its Keyboard Control. This craze didn’t last very long because consumers preferred the reliable control of a traditional selector to the potential of electronically controlled transmissions. 4. Automatics Have Become More Affordable and Useful The three-on-the-tree method was abandoned in the 1960s and 1970s with the advent of affordable automated vehicles. Even though four-speed manual and automatic gearboxes were undeniably popular, three-speed column-shift cars continued to be manufactured far into the 1980s. The faster and less fuel-efficient manual transmissions are outperformed by the eight or ten speeds found in many modern automatic gearboxes. The fact that automated gearboxes outsell manual transmissions in the US is not surprising. Only 41 of the 327 new car models manufactured in the US in 2020 will feature manual transmissions, according to Edmunds. Nissan announced the discontinuation of stick shifts on the Frontier in the same year. How to Convert a Column Shift to an Automatic Floor Shift Your car’s steering column contains a column shifter, often on the right side. Making the switch from a column shifter to a floor shifter in your modified vehicle just requires a few lever adjustments. A commercial push-button-based electronic shift selector by Comyu / CC BY-SA 3.0. In the 20th century, as push-button gadgets proliferated, automakers investigated the possibility of having passenger cars’ gears be electronically operated. This hypothetical system, first used in the Vulcan System in 1914, let drivers shift gears by pressing a button. Depending on your degree of tool and mechanical skill, you may replace your column shifter with a floor shifter in less than eight hours. However, even a novice DIYer with little to no expertise may do this project. Step 1 Using a flathead screwdriver, remove the center cap from the steering wheel. Utilizing a 9/16-inch socket and ratchet, loosen the central nut. Use a steering wheel puller, which is available at most auto parts stores, to remove the steering wheel from the column shaft. Attach the puller, according to the instructions on the puller’s packaging. Step 2 Use needle nose pliers to unclip the shaft. The gear sleeve cannot be removed because of the clip, which slips into a groove in the shaft. A sleeve cap, which lacks a gear slot, should be used in place of the gear sleeve. The shaft clip should be repositioned over the shaft. After replacing the steering wheel, tighten the center bolt and swap out the center cap. Replace the steering wheel. Step 3 Under the vehicle, where it connects to the transmission, locate the shifter linkage. With needle tip pliers, remove the carter pins from the linkage and then take the linkage away from the transmission. Step 4 Drill a 1/2-inch hole in the floor hump that is directly above the transmission linkage position. Place the floor shifter template there, lining up the center with the hole that has already been drilled. Use a Sharpie marker to outline the template’s outside border. Step 5 To hold the new floor shifter in place, insert it into the floor and fasten it with the 1/2-inch metal screws. To conceal the shifter components underneath, slide the rubber boot over the shifter. Step 6 Connect the linkage shaft on the transmission to the floor shifter linkage below the vehicle. Using needle nose pliers, move the linkage pins through the shaft holes. To keep dirt from getting into the linkage’s components, spray white grease on the linkage. Step 7 As you would your column shifter, use the new floor shifter. The reverse is second from the top, neutral is third, the drive is fourth, and so on. “Park” is located at the front. A Loose Column Shifter: How to Repair It The gear shifter is one of the most crucial parts of a vehicle. As the name suggests, this will let you change from one gear to another. Therefore, if it is destroyed, your safety can be in danger. You’ll struggle to control how your car moves. That so, any issue should be resolved as quickly as possible to stop it from getting worse. The column shifter frequently has problems, one of which is that it is loose. This happens frequently, especially if your car is older. Overuse and movement cause the column shifter to loosen over time. The majority of the time, tightening the bolts will take care of the issue. Automatic transmission by Silverxxx / CC BY-SA 3.0. With the introduction of reasonably priced automated cars in the 1960s and 1970s, the three-on-the-tree approach was abandoned. Despite the undeniable popularity of four-speed manual and automatic gears, three-speed column-shift vehicles were still produced well into the 1980s. Continue reading if you want advice on how to fix a loose column shifter. Additionally, we’ll provide you with some advice on how to maintain your column shifter’s optimal performance so that you may drive with confidence. What You’ll Require Make sure you have the following supplies on hand before you begin: How to Fix a Loose Column Shifter: Step-By-Step Instructions The simple procedures to fix a loose column shifter are listed below. 1. Identify the Cause of the Column Shifting Issue At this point, you are already aware that the column shifter is loose. It can even make an odd noise and is no longer as responsive to your controls. Even though you may be aware of the problem, you do not understand its cause. Finding the issue’s root is the first step, after which you can come up with a plan for fixing it. The hood must first be opened. Have someone adjust the column shifter for you while you watch the engine to make things simpler. Search for the moving part. Continue to the next area to inspect if everything seems to be in working order and if there don’t seem to be any loose parts. Look at the space under the steering wheel. This is usually the source of the problem. No components need to be taken out. All that’s left to do is inspect to confirm that this is the problem’s origin. Your hand should land on the steering column as you locate and depress the brake pedal. As you turn the steering wheel, you can see how this section moves. Examine the components, especially the bolts, that come into contact with the gear lever. They are probably scattered all over. If they are, you know you’ve identified the source of the issue, and all you need to do to fix it quickly and painlessly is to tighten it. 2. Take Out the Bolts If they’re slack and jiggling, all you have to do is take out the bolts holding them in place. For this, you’ll need a torque screwdriver, the size of which will depend on the vehicle. After removing each bolt individually, proceed to the subsequent step to align them. 3. Insert a Thread Locker Once the bolts have been removed, apply the thread locker. This will keep the bolt tight and secure despite any vibrations that may happen. If this is not done, the bolts will come loose once more. 4. Restore the Bolts After installing the bolt, tighten it. Tighten it up using the torque screwdriver. Test the column shifter; at this point, it should no longer be unstable. Ensure the bolts are securely fastened to prevent any further wiggle. Peugeot 504 Limousine with a column shifter by Joost J. Bakker / CC BY 2.0. Australia produced the Peugeot 504 from the early 1980s for three decades, while Nigeria produced them until 2006. This was a classic Peugeot with a comfortable ride and durability that cemented its name before it went out of style in the 1990s. A magnificent column-shifter manual was another choice; it was touted as being a tactile delight to operate. Pro Tips Regarding Column Shifter: The Key Factors to Remember Be cautious when changing gears. Most of us are undoubtedly guilty of moving too firmly and appearing upset all the time. You run the risk of having a sloppy column shifter if you do this often. Don’t ignore the problem when it initially arises. Acting becomes looser the longer you wait. In the worst instance, this might jeopardize the performance and safety of your car. Bolts shouldn’t be overtightened. Ensure that it is firmly attached to prevent wobbling. On the other side, if it’s too tight, it won’t move, making it more challenging to change gears. Spray some oil or lubrication on the bolt to make it simpler to spin if it’s too tight and preventing you from removing it. Sometimes only tightening the bolt is insufficient. This is especially true if the problem has become more serious. The column shifter itself might be the problem. In this case, you might need to buy a new column shifter. It is best to obtain expert assistance because installation might be challenging. In rare cases, you might also need to swap out the shift tube. The tube may crack or shatter due to the low quality of the materials used. It’s possible that some materials can’t withstand constant exposure to the weather. Verify that the shifter’s other parts, including the tube, are in excellent operating condition. The Conclusion Vehicles with manual gearboxes required a column shifter during the early to the mid-20th century. As transmission technology developed, the original shifter was relegated to obscurity. Although the majority of drivers disagree, there is a small but devoted fan club of drivers that love the three-on-the-tree layout online. A ten-speed column-shift car is not expected to be produced any time soon because fewer vehicles with manual transmissions are being produced these days. With the introduction of engineless electric vehicles, the demise of the column shifter seems inevitable. Jim Wicks is the founder of MotorVehicleHQ. With over two decades of experience in the automotive industry and a degree in Automotive Technology, Jim is a certified car expert who has worked in various roles ranging from a mechanic, car dealership manager, to a racing car driver. He has owned more than 20 cars over the past 15 years. Ask him about any vehicle you see on the road and he can tell you the make, model and year. He loves the aesthetics of all things cars, and keeps his vehicles in pristine condition. In his free time, Jim enjoys getting his hands dirty under the hood of a classic car or taking long drives along the country roads. His favorite car? A 1967 Shelby GT500, a true classic that, according to Jim, “represents the pure essence of American muscle.” Both of the steering columns reviewed in this article have been removed from the vehicles. Start by removing the steering wheel with an appropriate puller, and then sliding the main shaft out the bottom end of the column. There will be a spring under the steering wheel holding the upper column shaft bushing into the upper bearing…don't lose the spring or bushing. Also, remove the spring-loaded horn contact from the turn signal switch so it doesn't fall out and get lost. Next, remove the turn signal stalk, then the shift handle (by driving out the retaining pin) and finally the three Phillips-head screws holding the turn signal retaining plate (Fig. 01). Next, you'll need to remove the turn signal switch. Because the wiring is snaked up through the column, and the plastic harness connectors are too large to pull through, you'll have to remove the connectors. You do this by using the yellow-handled tool (Fig. 02) to release the small prongs for each wire and remove all wires from the connector. But first you need to make a careful inspection (and take some notes) about the proper orientation of the wires, so they can be replaced in their respective positions during reassembly. Pull the turn signal switch up and out of the column. Next, use a 7/16" socket to remove the two nuts holding the turn signal housing from the column housing. When you go to lift the turn housing away from the column housing, be sure you don't lose the two bolts. The heads of these two bolts are just barely hooked into holes in the end of the column housing, as shown in Fig. 04. Also shown in Fig. 04 and marked with a yellow arrow is the end of the shift tube, as it extends up through the shift collar. Next, make a schematic of how the shifter arms at the base of the column are arranged, and then you can slide the shift collar and shift tube out from the main column housing. (The shift tube is actually separate from the shift collar, so it's possible it'll slide off the tube first, and then you can grab the tube and pull it out.) This in turn will release the two shifter arms at the base of the column. You'll notice that there is a thin plastic thrust washer on each side of the shifter arm pack, as well as a thicker plastic spacer between the two shifter arms. Pull the two shifter arms out of the column, along with the two thrust washers, and then rotate the thick spacer around 90-degrees so that it can be removed from the main column housing. The spacer is flat on two sides to allow for easy installation/removal and must be spun for clearance to remove (Fig. 8). Fig. 01 - I've removed the three screws holding the turn signal switch. Fig. 02 - Use the yellow-handled tool to release the column wiring from the connectors. Fig. 03 - Remove these two nuts and remove the column spacer. Modern manual transmissions, at least what's left of manuals, are typically five-speed or six-speed setups. However, decades ago, there was a time when manual transmissions were made in four-speed and even three-speed configurations. Most of the time, the gear shift was either on the floor, or mounted in the console between the front seats in more low-slung sporty cars. However, three-speed transmissions occasionally placed the shift lever on the steering column, leading to the name "three on the tree." Although the design may look a little odd to 21st century automotive sensibilities, it really wasn't a very unusual setup for cars of decades past. Much like the floorboard placement of the high-beam switch in older cars, a "three on the tree" configuration was the norm for many years. Three-speed manual shifter on the steering column was in regular use among American cars from the 1940s until the late-1970s. In use, it works a lot like a regular manual transmission: the actual transmission is still where it should be, the means of selecting gears is just closer to your hand when it is on the wheel. The actual shifting pattern of a three-speed transmission is in an "H" shape, and the neutral gear is in the middle. It may vary depending on the car, but generally, the reverse gear requires you to pull the lever towards you and to push up. For first gear, simply push down from the reverse position. For second gear, return the shift lever to the neutral spot, push the lever away from you, and push it up. Third gear is just straight down from second gear. Economy cars and base trim trucks and vans had this setup as standard for decades. As with anything, it requires practice if you find yourself behind the wheel of a three-on-the-tree, but beyond that, it's simply just a different way of moving the gears to where they are supposed to be. Advertising from Ford for the first generation of the Ford Falcon in 1961 claimed that the column mounted shifter saved space and were easy to use, asserting that other floor-mounted transmission levers were awkward. While enthusiasts will likely always pine for a manual transmission, perhaps only the diehard nostalgic gearheads will prefer a column mounted shifter. Column-mounted ShifterSome cars have a gear lever mounted on the steering column of the car. A 3-speed column shifter, which came to be popularly known as a "Three on the Tree", began appearing in America in the late 1930s and became common during the 1940s and 1950s. If a U.S. vehicle was equipped with overdrive, it was very likely to be a Borg-Warner type, operated by briefly backing off the gas when above 28 mph to enable, and momentarily flooring the gas pedal to return to normal gear. The control simply disables overdrive for such situations as parking on a hill or preventing unwanted shifting into overdrive. Later, European and Japanese models began to have 4-speed column shifters with this shift pattern: A majority of North American-spec vehicles for USA and Canada had a 3-speed column-mounted shifter - the first generation Chevrolet/GMC vans of 1964-70 vintage had an ultra-rare 4-speed column shifter. The column-mounted manual shifter disappeared in North America by the mid 1980s, last appearing in the 1987 Chevrolet pickup truck. Outside North America, the column-mounted shifter remained in production. All Toyota Crown and Nissan Cedric taxis in Hong Kong had the 4-speed column shift until 1999 when automatic transmissions were first offered. Since the late 1980s or early 1990s, a 5-speed column shifter has been offered in some vans sold in Asia and Europe, such as Toyota Hiace and Mitsubishi L400. Column shifters are mechanically similar to floor shifters, although shifting occurs in a vertical plane instead of a horizontal one. Because the shifter is further away from the transmission, and the movements at the shifter and at the transmission are in different planes, column shifters require more complicated linkage than floor shifters. Advantages of a column shifter are the ability to switch between the two most commonly used gears—second and third—without letting go of the steering wheel, and the lack of interference with passenger seating space in vehicles equipped with a bench seat.