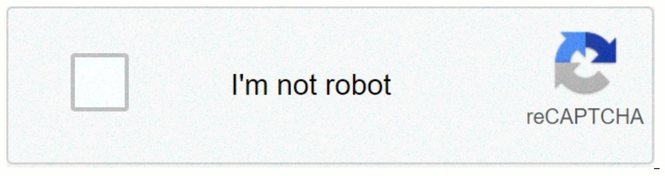

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2008 scion xb manual transmission fluid change

For those who love driving, a manual gearbox is a favorite. Most have more gears than an automatic, so while controlling the gearbox and clutch takes a little practice, the reward is much better performance control. Fans of the manual gearbox will also tell you that the whole driving experience is more enjoyable. The manual transmission fluid, also called gear oil, is the lubricant that keeps things cool and running smoothly. Although we tend to take these things for granted, it is just as vital a part of your drivetrain as any other component. It is a complex cocktail that can handle huge friction and huge temperature fluctuations. Inside the transmission there is a lot of steel, but there may also be comparatively thin brass guides. The liquid must cope equally well with the demands of both under pressure. We have looked at the range of manual transmission fluids available so we can help you choose the right one for your vehicle. Our recommendations cover an option for different vehicles. The following purchase guide extends to the composition of the liquid in more detail and answers some common questions. Basic estimatesYing types of transmission In Europe and Japan, about 90% of new vehicles have manual gearboxes. It's a very different story in the United States, with only about 15% of vehicles using one. However, rates have been higher in the past, and many classic and collectible cars are still used on a regular basis. In these two cases, we need to look at the full range of types of liquid manual gearbox, not just those for today's cars. Early manual gearboxes were noisy devices with straight-cut tools, technically called a sliding mesh gearbox, although the common name is crash gearbox because of the way gears crash together if the speed of the engine and gearbox were not carefully matched. Then came the fixed eye gearbox, and then the manual synchromesh gearbox, which is now in use. Although syndromesh was first introduced to Cadillacs in the 1920s, vehicles with collision gearboxes - mostly trucks and agricultural vehicles - were still produced in the 1960s.CompositionGear oil can be mineral-based or synthetic, both used in a wide variety of vehicles. However, synthetic is much more popular. One drawback with mineral oil is that it contains oxygen molecules, and oxygen rust - it's not something you want in your transmission! In addition, the synthetic manual transmission oil offers better performance in a wider temperature range. Some people have a misconception that mineral oil is more natural and thus more environmentally friendly. However, it is extracted from crude oil using refining methods that make extensive use of solvents, so it's not exactly environmentally friendly. It is debatable whether polyethylene glycol or similar products in synthetic synthetics better, but it's not much worse. The composition of the oil varies from one manufacturer to another, but will contain the following: Oxidation inhibitors to prevent rustDegulsifiers to increase lubrication and reduce overheatingExtreme pressure (EP) additives to improve performance in contact areas. Anti-foaming agentsThere are two important figures when it comes to manual transmission fluid: performance and violet. Performance: Given as a GL number, this is the suitability of the liquid for different workloads. Juicy: Given as a SAE number, this is the thickness of the oil. PerformanceThe American Petroleum Institute (API) created a system for automotive tool oils, giving them a lubricant tool (GL) number as a guide to how they work with different metals in transmission. The numbers range from GL-1 (lighter) to GL-5 (heavier). Most modern cars and trucks use GL-4, but it's worth checking just to be sure. Viscosity is a more complex issue. At high speeds and with new transmissions in good physical condition, ideally you want low viscosity oil (thin). However, under heavy load, you want high viscous (thick) oil. The latter is also better at protecting parts from wear. So all types of liquid transmission, and indeed all types of engine oil, are something of a compromise. The Society of Automotive Engineers (SAE) has developed a viscosity rating system that has been adopted by both car manufacturers and liquid producers and is recognized worldwide. The higher the number, the thicker the oil. The liquid itself can be divided into two types: mono- aphth and multistage. Monograde: These types of oil were widely used until the 1970s and are still in some racing machines. They usually maintain performance for more than multigrades. However, their big disadvantage is how they are affected by temperature. A monograde defined as SAE 90, for example, is ideal for high ambient temperature applications (up to 212°F), but does not work well at low temperatures. A different product, SAE W90 (W for winter) is necessary if temperatures fall below 0 °F.Multigrade: But no one wants to change their transmission fluid with the seasons. Multiple grads are the answer. Sae 75W90, a common score for manual transmission fluid, has a 75 in winter temperatures and a slightly higher score of 90 when heated, and this is the ideal combination. The most advanced multi-tiers have gone a step further. A decade ago, you almost always bought oil based on SAE's number. Now you will see many synthetics that satisfy differently One is rated for 75W, 80W, 40, 10W40, and 15W40 - it's both a tool oil and an engine oil. They can also handle a much wider range of temperatures, for example, from -40°F to 300°F.It sounds confusing, but as long as it meets the requirements of your manual gearbox, you, It's all right, it's all right Manual transmission fluid prices With general, when we collect our reports, we like to offer a guide to cheap, mid-range, and expensive products. However, most manual transmission fluids cost somewhere between $15 and $22 per quarter, so there is no huge variation. We expected to have to pay a premium for a manufacturer's genuine brand fluid, such as Ford, GMC, or Toyota, but that's not the case. The amount of manual transmission fluid your vehicle needs can be anywhere from 6 to 16 quarters, so a difference of five bucks a quart soon adds up. You may be able to save some money by buying in bulk, although deals are not common. At the end of the day, the most important factor is getting the right manual transmission fluid for your vehicle. If you find many that are appropriate, you can then compare the prices. When to change the fluid Experts say that, if properly cared for, a manual gearbox will last about 120,000 miles, although there are examples of carefully driven cars that have gone twice that distance. The following symptoms indicate that something may be wrong. Changing the manual transmission fluid may not be the solution, but if you don't know the last time it was done, then it's the first thing you should try and usually the cheapest. Keep in mind that some of these problems may also be related to the clutch. There is a difficulty or inability to shift to speed. The vehicle changes, but the stick is heavy. The vehicle falls under a tool or into neutral unexpectedly. You hear whining or grinding noises, especially when shifting. Any of these problems require immediate attention. The situation will only get worse, and while a new manual gearbox is cheaper than an automatic, it is still likely to cost over $1,500.FAQQ. How often should I change the manual transmission fluid?A. You should always follow the advice given in your vehicle owner's manual, but most manufacturers recommend that it should be changed every 30,000 to 60,000 miles. If your transmission has to work hard, either through frequent gear changes (typical in very hilly areas) or because you do a lot of towing, you might want to change it more often. It doesn't hurt. A regular visual check is a good idea or note if you are getting any of the problem signs listed above. Although some modern vehicles have lifetime fluids - designed to never need change - several experts still recommend it for vehicles exceeding 100,000 miles. All transmissions and these tiny particles contaminate the liquid, creating more decay. It's a vicious circle that breaks by changing this dirty liquid to clean. Given how rarely he needs to do it, we think it's worth it. Q. Can I change the manual transmission fluid myself?A. If you are comfortable with basic car maintenance, it should be simple. These days there is a lot of useful guidance online. You will need Get your car onto a few ramps (never get under it when it's just in a jack). You will also need an oil pan to catch the old liquid. The process can vary depending on the vehicle, but basically, it is a matter of removing the filling plug, then the drain plug, and allowing the transmission to empty, and then reverse the process. When replacing plugs, it is a good idea to use the new washers, because the old ones might be worn or destroyed. Be careful not to overfill when adding the new liquid. Q. Can I use the same transmission fluid I use in my automatic vehicle?A. Possibly, but still, you should refer to your owner's manual. Some cars will run quite happily on automatic transmission fluid (ATF). It is generally a more powerful chemical composition because automatic transmissions work harder and become hotter. However, never assume this is the case. You should never mix the two or use the ATF to fill the manual transmission fluid. He slapped a lid on the bed of his compact pickup, added wallpaper, some seats and voila, the vehicles were born. The original vehicles were basic and more tuned to handle off-road adventures by hauling the family to and from football games comfortably, but as it progressed, the vehicles became a formidable player in sub-luxury bullet vehicles. The vehicles came standard with a manual gearbox and had optional four-wheel drive instead of its standard two-wheel-drive configuration. Changing the oil in the manual gearbox in vehicles is a simple task, but it requires a pump to refill the gearbox with oil. Under the hood: How to change the manual transmission fluid on a Mazda 626Acse the FluidPark vehicle on a flat surface. Unplug the ground cable from the negative battery terminal. Lift the vehicle according to the instructions stated in the owner's manual and support it with the reception bases. Unplug the speedometer cable and remove the drive tool from the manual transaxle. There will be a knurled mounting at the end of the cable. Relax this accessory to remove the band. Place a large catch pan of used oil under the manual transaxle drain plug. The drain plug is located at the bottom of the transmission. Remove the manual transaxle drain plug. Allow all the liquid to drain from the transaxle. Replace the drain plug in the transaxle. Refill fluidplace with a funnel in the hole of the speedometer drive tool. Add between 3 and 5 of the API specification GL-4 or GL-5 manual transmission fluid depending on the year of your vehicle and how many gears it has. Clean the speedometer equipment with a cloth and place it back in the hole. Remove the speedometer tool. Liquid should cover the movement tool completely, but does not grow over the shoulder just above the top of the tool. Add liquid as needed to achieve the optimal level. Reinstall the speedometer motion tool. Lower the vehicle and reconnect the grounding cable negative battery terminal. Slot setWrench setWaste oil catch panFloor jackJack standsManual gearbox liquid API GL-4 or GL-5Shop rags How do I change the manual transmission fluid to a 1991 Toyota Celica GTS? Drain the old liquid from your TransmissionDrive Celica for about 20 minutes so the transmission oil reaches operating temperature. Park your car on flat ground and lift the back and front of the vehicle with a floor socket and support it with two sockets standing at the front and two sockets standing at the back. Make sure the car is stable. This will let you work under the car and vehicle level so the new transmission fluid is at the right level. Locate the filling plug on the left side of the transmission, next to the bell housing. Unbutton the filling plug with a 24 mm key. Remove the plug and flange underneath. Clean the filling hole and filling plug well with a fluff-free shop cloth. Locate the transmission drain plug to the back and bottom right of the case. Place a large baking pan under the drain plug and unbutton the plug with a 24 mm key. Move the drain pan out of the way after draining the oil and wipe clean the area around the drain hole and threads with a fluffless shop cloth. Clean the drain plug and threads with the rag, as well as replace the finger-tight plug after draining all the oil. Tighten the drain plug with the 24 mm box-end key. Refill the transmission with new 2.5 liters of Dexron III automatic transmission fluid (ATF) through the filling hole using a hand siphon pump. Check the oil level by inserting your finger through the filling hole. The oil must reach the bottom end of the filling hole. Add more oil if necessary. Replace the filling plug together with a new finger-tight flange. Tighten the filling plug with the 24 mm key. Lift the back and front of your Celica with the floor socket, remove the sockets and lower the car. Test your Toyota.Check drive transmission for oil leaks. Floor jackJack stands (4)24mm box-end keyLint-free shop ragLarge drain panDexron III ATFHand pump siphonNew filling flange-plug How to change the manual transmission fluid to a 1996 MiataDrive the Miata for about ten minutes to warm up the manual transmission fluid. Park the Miata on a flat surface and adjust the emergency brake. Jack the front end of the Miata up and adjust the jack standing under the rail frame, behind each Rubber. Lower the Miata onto the reception stops. Slide down the side of the Miata guide and locate the transmission drain plug. The transmission drain plug in the 1996 Mazda Miata is a 24 mm drain plug located at the bottom of the transmission. Slide the liquid catch pan under the transmission drain plug. Turn the drain plug counterclockwise with a 1/2 inch motion caste and a 24 mm socket. Finish unscrewing the drain plug with your fingers. Wait, wait all manual transmission fluid to drain out of the gearbox and into the catch pan. Screw the drain pan back to the bottom of the transmission and tighten it down. Locate the manual transmission filling plug on the driver side of the transmission. The filling plug will be about halfway up the transmission. The filling plug is also a 24mm bolt head. Turn the filling plug counterclockwise with the 1/2 inch motion castor and 24mm socket. Place the long plastic tube in the liquid pump. Place the other end of the plastic tube in the transmission filling hole. From under the car, pump the 75-90 tool oil into the manual gearbox until the oil starts to run out of the filling hole. Crank the engine and wait a few minutes to see if the level of liquid goes down into the filling hole. If so, pump more than 75-90 oil into the manual gearbox. If the oil remains at the top of the filling hole, turn off the engine. Remove the plastic tube from the filling hole. Screw the filling plug back to the side of the manual gearbox. Tighten the filling plug down with the 24 mm socket and 1/2 inch motion caste. Lift miata and remove the bases of the jack. Lower Miata to the ground. JackJack standsFluid catch pan1/2-inch drive ratchet24mm socketHand held pump liquidMela plastic tube75-90 gear oil How to change the manual transmission fluid to a 1994 4-Runner 4x4Drive the 4Runner until it reaches operating temperature, about halfway up the temperature gauge, then park on a flat surface. Lift the front of the 4Runner with a floor socket and slip slot standing under the rails of its frame. Lower the SUV to the base of the jack. Crawl under the truck until you are near the center of the transmission and find the drain plug at the bottom of the transmission. Set a drain pan under the drain plug. Loosen the drain plug with a ratchet and a socket, then remove the drain plug manually. Allow the liquid to drain from the transmission until the liquid drips slowly from the drain hole. Remove the old flange from the drain plug, clean the drain plug with a clean, fluff-free cloth, and then insert a new flange into the drain plug. Hand-thread the drain plug into the transmission and make it comfortable with a ratchet and socket. Pour the specified amount of GL-4 or GL-5, 75W-90 gear oil into a tool oil pump. If the 4Runner has a V-6 engine, it requires 3 1/5 liters and the 4Runner four-cylinder requires 4 1/10 liters. Find the control and filling hole on the passenger side of the transmission, about halfway up to the side of the transmission compartment. Remove the control and filling plug from the transmission, using a castor and socket, and place the gear oil pump tube in the control and filling hole. Pump the tool oil pump to pump oil into the transmission until the oil begins to drip from the control and filling hole. Pull the tool tool oil pump tube the control and filling hole. Remove the old washing machine from the control and filling plug and clean the plug threads with a clean, fluff-free cloth. Drive a new flange onto the control and filling plug and hand-thread it into the transmission. Connect the plug to a ratchet and socket. Wipe the gear oil on the transmission side with a clean, fluff-free cloth. Lift the 4Runner from the sockets with a floor socket and remove the sockets. Lower the SUV to the ground. Take the old tool oil to a used car liquid recycling center for disposal. Most auto parts stores will get old tool oil for free. Floor jackJack standsRain panRatchetSocket setClean, fluff-free clothNew drain plug flange4 quarters GL-4 or GL-5, 75W-90 gear oil (V-6 models)5 quarts GL-4 or GL-5, 75W-90 tool oil (four-cylinder models) Oil pump control toolsNew-and-fill crimson flange