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that some mowers produce the same amount of pollution (emissions other than carbon dioxide) in one hour as driving a 1992 model vehicle for 650 miles (1,050 km).[30] Another estimate puts the amount of pollution from a lawn mower at four times the amount from a car, per hour, although this report is no longer available.[31] Beginning in 2011, the United States Environmental Protection Agency set standards for lawn equipment emissions and expects a reduction of at least 35 percent.[32] Gas-powered lawn mowers produce GHG emissions. A minimum-maintained lawn management practice with clipping recycling, and minimum irrigation and mowing, is recommended to mitigate global warming effects from urban turfgrass system.[33] Battery-powered lawn mowers offer cleaner alternatives to consumers by producing zero emissions, being more efficient, and eliminating risks of spilled gasoline.[34] Gasoline-powered lawnmowers are not regulated to have emission-capturing technology. [34] Mowers can create significant noise pollution,[35][36] and could cause hearing loss if used without hearing protection for prolonged periods of time.[37] Lawn mowers also present an occupational hearing hazard to the nearly one million people who work in lawn service and ground-keeping.[38] One study assessed the occupational noise exposure among groundskeepers at several North Carolina public universities and found noise levels from push lawn mowers measured between 86 and 95 decibels (A-weighted) and from riding lawn mowers between 88 and 96 dB(A); both types exceeded the National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limit of 85 dB(A).[39] The risk of hearing loss and noise pollution can be reduced by using battery-operated mowers or appropriate hearing protection such as earplugs or earmuffs. It is possible for a lawn mower to damage the underlying soil, the roots of the grass, and the mower itself if the blades cut through the grass and collide with the underlying ground. Therefore, it is important to adjust mower height properly and choose the right tires for a lawn mower to prevent any marking or digging. Alvin Straight Ambient noise level Groundskeeping (includes list of equipment) Lawn mower racing Noise control Non-road engine Organic lawn management Roll over protection structure (for lawn tractors or ride-on mowers) Small engine ^ a b c d "Mower History". The Old Lawnmower Club. The First Mowers. Retrieved 27 June 2024. ^ US RE 8560, Passmore, Everett G., "Improvement in Lawn-Mowers", published 23 February 1869, issued 28 January 1879 ; see pg 1, col 2. For a copy, see Google Patents copy. This source indicates the patent number as "6,980". 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Install a knotted new rope through the housing hole, wind it around the pulley, and secure it. (CC BY-ND 2.0) by joedferg A broken pull cord is a common issue, but it’s not the end of the world. Our guide will walk you through the process of fixing it yourself. You’ll be surprised at how simple it can be. Let’s get your mower back on track! Contents1 How Does a Pull Cord Work?2 How to Fix a Lawn Mower’s Pull Cord: Step-by-Step2.1 ● Step 1: Gather the Necessary Tools2.2 ● Step 2: Prepare the Lawnmower2.3 ● Step 3: Disconnect the spark plug cable2.4 ● Step 4: Remove the Rewind Housing2.5 ● Step 5: Remove Old Broken Pull Cord2.6 ● Step 6: Install the New Pull Cord2.7 ● Step 7: Wind The Starter pulley2.8 ● Step 8: Insert the New Cord In The Housing2.9 ● Step 8: Cut off The Extra Length of the Pull Cord2.10 ● Step 9: Reinstall The Rewind Housing2.11 ● Step 9: Reconnect the spark plug2.12 ● Step 11: Test the Mower’s Some general tips when working on a lawnmower pull cord:4 Other Pull Cord Fixes5 Related Questions:6 Remarks: 6.1 • Loading the Recoil Spring When you pull your lawnmower’s cord, it spins a hub connected to the crankshaft. As the crankshaft rotates, an electromagnetic connection starts the spark plug while the carburetor pushes the gas into the combustion chamber. The engine starts operating once the gas starts burning and the lawnmower’s blades start turning. The area around which the cord is wound is connected to the motor by a recoil spring that automatically rewinds the thread every time after pulling it. When everything is adjusted correctly, there shouldn’t be any limp in the cord. But if the pull cord is damaged, you won’t be able to start your lawnmower. In many cases, fixing the lawnmower pull cord means replacing it. This is the case when the cord is broken, or the recoil spring is damaged and does not return properly to the housing. Replacing the pull cord is probably also a good idea if it is damaged. The step-by-step procedure will help with this. It is also possible that the pull cord is stuck. In that case, there is probably no need to replace it. You can follow the first five steps to reach the pull cord. Then untangle it, check it, and reattach all parts. Before you start disassembling the various parts, knowing what is inside a lawnmower’s pull cord housing is good. The pull cord housing’s primary components are a handle, a pulley, a starter pull rope, and a recoil spring. Now, let us get into more detail. Rex Allen Lawnmower Expert You will need a screwdriver, lighter, needle-nose pliers, a wrench, a new pull rope of exact thickness, and protective gear like safety gloves and safety goggles. Place the lawnmower in a well-lit environment, preferably on an even, flat surface. Place some wooden wedges under the mower’s wheels if you have a slopy driveway. Placing the wedges will stop the lawnmower from moving. Also, enable the parking brake. Disconnect the spark plug cable. This ensures that no unintentional starting of the engine can occur when you are working on or close to moving part of a lawnmower. Find the lawn mower’s rewind housing. Remove engine parts to gain access to the recoil starter housing. Remove the screws of the housing with the help of a screwdriver. Lift the housing off. The starter pulley and the remains of the old pull rope should come with it. To open the rewind housing, lightly hit the casing. Find the edge of the broken rope, hold the edge tight, and pull out. The region from which the fractured rope is pulled will be used to insert the new cord. You can find removed cords at any hardware store or buy them online. Take the new pull cord. Place a knot on one end of the pull cord and enter the new cable in the same place as the old cord. Slowly rotate it in the right direction around the pulley and fasten the cord. Keep turning the pulley until you start to feel some resistance. Wind the starter pulley clockwise through five or six complete revolutions, being careful to hold the pulley securely. Keep the pulley rotating until the recoil housing pores and the pulley’s pellets are in the same position. Align the recoil starter housing hole with the hole in the pulley. Insert the screwdriver through the holes. It will prevent the pulley from rotating in the opposite direction. Rex Allen Lawnmower Expert Feed one end of the new cord through the holes and tie a single knot at the end of the wire. After inserting the cord through the rewind housing hole, please give it a knot. Heat the cord with a lighter flame. Hold the cord tightly while you remove the screwdriver, and let the pulley unwind slowly. The cord will wrap around the pulley as it unfolds. Pull the pull cord tightly before allowing it to reach its previous position. Remove the screwdriver. Allow the pull cord to get fastened around the wheel. After everything has returned to its previous position, cut it off if any excessive rope is left. Carefully reinstall the rewind housing to its previous position. Reinstall all the screws that you removed with the help of a screwdriver. Tighten the screws. Make sure it is perfectly secured in its place by giving it a gentle jolt. Reconnect the spark plug so the mower is ready to start. After everything is done, it is time to start the engine. Start the lawnmower engine as you would typically do. If you did all things right, the mower should work perfectly. At the start of the replacement process, specify a place to hold the screws. A screw holder will prevent you from losing the screws. Be careful when removing the screwdriver from the housing so your finger does not stick to the spring. Use the user manual from the manufacturer. Keep your workplace clean; ensure no potential electric or fire hazard exists. Always start such repairs when stress-free and relaxed because tension can cause serious harm while working with such machinery. The section above explains the procedure for pull cord replacement and the fix for the broken pull cord. However, a faulty pull cord doesn’t necessarily mean a damaged one. Your pull cord might not work correctly because of worn-out recoil housing or spring issues. Replace the recoil housing with a new set if it is worn out. You can solve spring issues by replacing the spring winding with more turns on the spring to increase its tension. Rex Allen Lawnmower Expert The likely reasons that can make the pull cord hard to pull are not holding the bail lever while starting, an out-of-adjustment engine brake, a broken flywheel key, and blade obstruction. A lawnmower pull cord becomes loose when the recoil spring has lost its tension. To fix this issue, remove the pulling assembly and give it a couple of turns to tighten it. Replacing the spring would be even better. A lawnmower pull cord generally costs between 5 to 10 dollars. We recommend you buy a good quality pull cord, even if expensive. A suitable quality cord will last longer. If you get your pull cord replaced by a mechanic, expect it to cost between 20 to 25 dollars or more. The guide mentioned above is the general process of how to fix a lawnmower pull cord. But keep in mind that this guide is for a small lawnmower. It would be best to take precautionary measures like wearing safety gloves and disconnecting the spark plug from the engine. The starter cord cannot suddenly start when you are working on it. We hope this guide has helped you fix a lawnmower pull cord. Here’s a more detailed process: First, load the recoil spring and ensure the engagement lugs are in place. Then, tie on the new pull cord. Be sure to apply pressure on the recoil to ensure it’s secure. Next, attach the recoil to the engine. Don’t pull too hard on the cord, or it will break. You might consider using a synthetic oil like Amsoil to lubricate the moving parts. Finally, thread the cord through the hole on the mower’s handle and tie a knot you can easily undo if you need to adjust the cord’s length. Remember, always load the cord carefully to avoid any potential injuries. We hope this guide has helped you fix the problem with your pull cord.