

Stihl Fs 45 Spark Plug Removal

Introduction to the Stihl FS 45 and Spark Plug Maintenance

If you own a Stihl FS 45 trimmer, you already know it is a reliable workhorse for tackling grass, weeds, and overgrown areas around your property. Like any small engine tool, regular maintenance is the key to keeping it running smoothly season after season. One of the most common yet often misunderstood tasks is the **Stihl FS 45 spark plug removal**. Whether you are experiencing hard starting, rough idling, or simply following your routine maintenance schedule, knowing how to properly remove and inspect the spark plug can save you time, money, and frustration. This guide walks you through the entire process step by step, covering everything from the tools you need to the common pitfalls to avoid. By the end, you will have the confidence to perform this essential task yourself and keep your trimmer performing at its best.

Why Spark Plug Removal Matters for Your Stihl FS 45

The spark plug is a small but critical component of the engine. It creates the spark that ignites the fuel-air mixture in the combustion chamber, which in turn powers the piston and keeps the engine running. Over time, spark plugs accumulate carbon deposits, wear down their electrodes, or become fouled by oil or fuel additives. When this happens, the engine may become difficult to start, misfire, lose power, or run inefficiently. Regularly performing a **Stihl FS 45 spark plug removal** allows you to inspect the plug visually, clean it if necessary, or replace it with a new one. This simple task can restore lost performance, improve fuel economy, and prevent more serious engine problems down the road. It is a cornerstone of preventative maintenance that every owner should know.

Understanding the Stihl FS 45 Engine

Before diving into the removal procedure, it helps to understand what you are working with. The Stihl FS 45 is equipped with a lightweight, two-cycle engine. Two-cycle engines mix oil with the fuel for lubrication, and they operate at high RPMs. This design means the spark plug can become fouled more quickly than in a four-stroke engine, especially if the fuel mixture is off or if the engine is frequently run at low speeds. The spark plug in the FS 45 is located on the top or side of the cylinder, depending on the exact model year. It is almost always accessible without removing major components, which makes routine inspection and replacement relatively straightforward. Knowing this basic layout will help you locate the plug quickly and proceed with confidence.

Tools You Will Need for the Job

Having the right tools on hand makes the process smooth and prevents damage to the trimmer. You do not need a full mechanic's set, but a few specific items are essential. Here is a list of what you will typically need for **Stihl FS 45 spark plug removal**:

- **Spark plug socket** – A 5/8-inch or 16mm spark plug socket is the standard size for most small engines. A socket with a rubber insert inside helps grip the plug and prevents it from falling.
- **Socket wrench or ratchet** – A small ratchet or a T-handle wrench that fits the spark plug socket.
- **Extension bar (optional)** – If the spark plug is recessed, a short extension can make it easier to reach.
- **Wire brush or compressed air** – For cleaning debris away from the spark plug area before removal.
- **Feeler gauge** – If you plan to gap a new spark plug, a feeler gauge ensures the gap is correct.
- **Anti-seize compound (optional)** – A small amount on the threads of the new plug can prevent seizing in the future.
- **Torque wrench (optional)** – For precise tightening, though hand tightening plus a slight turn is often sufficient.
- **Safety glasses and gloves** – Always protect your eyes and hands when working on small engines.

Safety Precautions Before You Begin

Before you attempt any maintenance on your Stihl FS 45, including spark plug removal, take a few moments to ensure your safety and the safety of the equipment. First and foremost, make sure the engine is completely cool. A hot engine can cause burns, and the spark plug itself can be very hot. Allow the trimmer to sit for at least 15 to 30 minutes after the last use. Next, disconnect the spark plug wire from the spark plug. This prevents the engine from accidentally starting while you are working. It is also a good idea to work in a well-ventilated area, away from any flammable materials. Finally, have a clean, flat surface to work on so you do not lose small parts like the spark plug boot or the plug itself. Following these simple precautions will keep the job safe and straightforward.

Step-by-Step Guide to Stihl FS 45 Spark Plug Removal

Step 1: Locate the Spark Plug

Begin by placing the trimmer on a clean, stable work surface. Look for the spark plug on the top or side of the engine cylinder. It is typically covered by a black rubber boot that connects a wire from the ignition coil. On the Stihl FS 45, the spark plug is usually easy to spot once you remove any debris or grass clippings that may have accumulated around the engine shroud.

Step 2: Clean the Area Around the Spark Plug

Before you remove anything, use a wire brush or a blast of compressed air to clean away dirt, grass, and oil residue from around the base of the spark plug. This step is crucial because any debris that falls into the cylinder when the plug is removed can cause serious internal damage. Take your time here to ensure the area is as clean as possible.

Step 3: Remove the Spark Plug Boot

Grasp the rubber boot firmly and pull it straight off the spark plug. Do not pull on the wire itself, as this can damage the connection inside the boot. If the boot is stuck, you can gently twist it back and forth while pulling. Once the boot is off, set it aside so it does not accidentally touch the plug or metal parts of the engine.

Step 4: Insert the Spark Plug Socket

Place the spark plug socket over the spark plug. Make sure it seats fully onto the hex portion of the plug. If you are using an extension, attach it to the socket first. The socket should fit snugly without wobbling. A socket with a rubber insert is ideal because it will hold the plug securely when you lift it out.

Step 5: Turn Counterclockwise to Loosen

Attach your ratchet or wrench to the socket. Turn the wrench counterclockwise (to the left) to loosen the spark plug. It may be tight from being in place for a long time, so apply steady, even pressure. Once the plug is loose, you can often unscrew it the rest of the way by hand using the socket and extension.

Step 6: Remove the Spark Plug

Carefully lift the socket out of the engine, bringing the spark plug with it. If the plug does not stay in the socket, use a pair of needle-nose pliers or your fingers (with gloves) to gently lift it out. Set the plug on a clean surface and inspect it closely. This is your chance to read the condition of the plug, which can tell you a lot about how your engine is running.

Inspecting the Old Spark Plug

Once you have successfully completed the **Stihl FS 45 spark plug removal**, take a good look at the plug. The appearance of the electrode and insulator can reveal valuable information. A light tan or gray color on the insulator indicates a healthy fuel mixture and proper combustion. A black, sooty deposit suggests the engine is running too rich or the air filter is dirty. An oily, wet plug points to an oil-rich fuel mixture or worn piston rings. A white or blistered insulator indicates overheating, which could be caused by a lean fuel mixture or cooling system blockage. If the electrode is rounded or worn, the plug has simply reached the end of its service life. Based on your inspection, you can decide whether to clean and re-gap the old plug or replace it entirely. For most owners, replacing the plug is the best option because a new plug ensures reliable performance and is inexpensive.

Common Challenges During Spark Plug Removal

While the process is generally simple, you may encounter a few obstacles. One common issue is a stuck or seized spark plug, especially if it has been in the engine for a long time or if anti-seize compound was not used during installation. If the plug will not budge, apply penetrating oil around the base and let it sit for 10 to 15 minutes before trying again. Avoid using excessive force, as this can strip the threads in the cylinder head. Another challenge is losing the spark plug boot or dropping the plug into the engine shroud. To avoid this, work slowly and keep your workspace organized. If the boot is cracked or damaged, replace it along with the plug. Finally, be mindful of cross-threading when reinstalling the new plug. Always start threading by hand to ensure it goes in smoothly before using a wrench.

Choosing the Right Replacement Spark Plug for Your Stihl FS 45

Not every spark plug is suitable for the Stihl FS 45. Using the wrong plug can lead to poor performance or even engine damage. The factory recommended spark plug for most FS 45 models is the **NGK BPMR7A** or the equivalent **Champion RCJ7Y**. These plugs have the correct thread size, reach, and heat range for the engine. Always consult your owner's manual to confirm the exact specification for your trimmer's year and model. When purchasing a new plug, buy from a reputable source to avoid counterfeit products. A quality spark plug ensures proper ignition, efficient combustion, and long service life.

Gapping the New Spark Plug

New spark plugs often come with a preset gap, but you should always verify it before installation. The correct gap for the Stihl FS 45 is typically 0.020 inches (0.5 mm), but check your manual to be sure. Use a feeler gauge to measure the gap between the center electrode and the ground electrode. If the gap is too narrow, gently pry the ground electrode open with the feeler gauge tool. If it is too wide, press the electrode down slightly. Be careful not to touch the center electrode, as this can damage the insulator. A properly gapped plug ensures a strong, consistent spark.

How to Reinstall the Spark Plug Correctly

Now that you have completed the removal and selected a new plug, it is time to put everything back together. Start by applying a tiny drop of anti-seize compound to the threads of the new plug. This is optional but highly recommended, as it makes future removal much easier. Place the plug into the spark plug socket and lower it into the hole. Turn the socket clockwise by hand until you feel the threads engage. Never force it. If you feel resistance, back it out and try again to avoid cross-threading. Once the plug is hand-tight, use your ratchet to tighten it an additional quarter to half turn. If you have a torque wrench, the recommended torque is typically 15 to 20 foot-pounds, but hand tightening plus a slight turn is sufficient for most users. Do not overtighten, as this can damage the threads or crush the gasket. Finally, push the spark plug boot back onto the plug until it clicks or seats firmly. Make sure the boot is fully engaged to prevent arcing or misfiring.

Tips for Extending the Life of Your Spark Plug

After going through the **Stihl FS 45 spark plug removal** process, you naturally want to get the

- longest life possible from your new plug. Here are a few practical tips that will help.
- **Use fresh, properly mixed fuel** - Old fuel or incorrect oil ratios can cause carbon buildup and fouling. Always mix fuel according to the