

# How to Adjust an Air Fuel Mixture Screw

An air fuel mixture screw is a special screw on an engine's carburetor that controls the flow of fuel to the engine. Adjusting this screw changes how fast or slow an engine idles and how smoothly it runs. The basic process for adjusting an...

Part 1 of 2:

## Warming up the Engine and Finding the Screw

1. **Start the engine and let it run for 5 minutes to warm it up.** Turn the key in the ignition to start the engine. Let it idle for at least 5 minutes so it warms up to normal operating temperature.<sup>[1]</sup>
  1. Note that this process is the same for any type of engine with an air fuel mixture screw. It could be a car, motorcycle, scooter, ATV, or anything else with a carburetor.
  2. Always make air fuel mixture screw adjustments with a warm engine and the engine running, so you can listen to how the adjustments affect the engine's idle speed.

**Tip:** An air fuel mixture screw is also known as an idle mixture screw.<sup>[2]</sup>

2. **Identify the carburetor by finding the engine's air filter.** Look at the engine and spot the round or cone-shaped air filter. The carburetor is the part of the engine that the air filter is attached to.<sup>[3]</sup>
  1. For example, on a car the air filter might be large and round and sit on top of the carburetor. On a motorcycle, the air filter usually comes off the side of the engine and faces the rear of the bike.
3. **Find the flat-headed, slotted, gold-colored brass screw on the carburetor.** Look at all the different screws on the carburetor until you spot the gold one with a flat slotted head. This is the air fuel mixture screw.<sup>[4]</sup>
  1. Most air fuel mixture screws are located on the side of the carburetor, but it depends on the specific engine.

Part 2 of 2:

## Turning the Screw to Adjust It

1. **Turn the screw clockwise until the engine starts to sound rough.** Use a flathead screwdriver to tighten the screw. Listen to the engine's idle sound and stop turning the screw when it starts making a rough rising and falling sound instead of its normal idling sound.<sup>[5]</sup>
  1. Tightening the screw weakens the air and fuel mixture and decreases the amount of fuel flowing to the engine.
2. **Loosen the screw and count the turns until the engine sounds irregular.** Use your flathead screwdriver to turn the screw counterclockwise, counting the number of rotations you make as you go. Listen to the idling of the engine and stop turning the screw when the engine's idle sound starts sounding irregular, like it is revving too fast.<sup>[6]</sup>

1. Loosening the screw enriches the air and fuel mixture and increases the amount of fuel flowing to the engine.
3. **Set the screw in the middle between the rough- and irregular-sounding spots.** Turn the screw back clockwise until it is approximately in the middle location between where the engine's idle sounds irregular and rough. This will set the engine to a regular idle speed.<sup>[7]</sup>
  1. For example, if you turned the screw 2 full turns counterclockwise from the spot where the engine's idle started to sound rough, now turn the screw clockwise 1 full turn.
4. **Make adjustments 1/2 a turn in either direction to find the smoothest idle speed.** Turn the screw counterclockwise and clockwise 1/2 a turn from the middle position and listen to the sound of the idle. Set the screw in the position where the engine's idle sounds most even and smooth.<sup>[8]</sup>
  1. You might notice that turning the screw 1/2 a turn in either direction makes the engine start to sound rougher or more irregular, in which case you can just set the screw back to the middle position.

**Tip:** The factory position for most air fuel mixture screws is usually between 1.5 and 2.5 turns out from being screwed all the way in. If you ever want to start fresh, turn the screw clockwise until it is lightly seated, then back it out about 2 turns. Then you can make adjustments from this position.<sup>[9]</sup>

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