

The Torch Exhaust Flamethrower Kit Instruction Guide



Disclaimer and Legal Agreement

The Torch Exhaust Flamethrower Kit sold by DIYflamethrowers.com is for OFF ROAD USE ONLY! By purchasing, installing and/or using the provided instructions, you agree to the following:

- Absolve the site owner of any damage that the buyer may encounter to their personal vehicle. This includes items sold by the site owner, suggested items to purchase and/or tutorials provided.
- Absolve the site owner of any damage a buyer may encounter to private or public property. This includes items sold by the seller, suggested items to purchase and/or tutorials provided.
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- Absolve the site owner of any personal injury or death from the use of the kit. This includes items sold by the site owner, suggested items to purchase and/or tutorials provided.
- Absolve the site owner of any liability for CEL (Check Engine Light) codes that may follow the use of this product. This includes items sold by the site owner, suggested items to purchase and/or within tutorials provided.
- Absolve the site owner of legal liability regarding local, state and/or federal laws that prohibit automotive modifications. This includes items sold by the site owner, suggested items to purchase and/or within tutorials provided.

Limited 90-Day Warranty

A 90-day warranty from the date of purchase covers all the provided components for the Torch Exhaust Flamethrower Kit that includes: (1) The Torch Brain Box, (2) The Switch Panel and (3) The Ignition Safety Switch if they meet the following requirements:

- The specific component is DOA, and the buyer can explain how it doesn't work.
- The components are not tampered with (i.e. a buyer cracking open the box).
- The components are not visibly or electronically damaged due to incorrect installation, excessive heat, water damage or otherwise improper introduction to the elements.

The 90-day warranty DOES NOT cover any of the necessary components purchased through 3rd party suppliers such as Amazon or local auto parts stores. Please take these issues up with those providers.

Guarantees of the Torch Exhaust Flamethrower Kit

There are TWO guarantees given for the Torch Exhaust Flamethrower Kit:

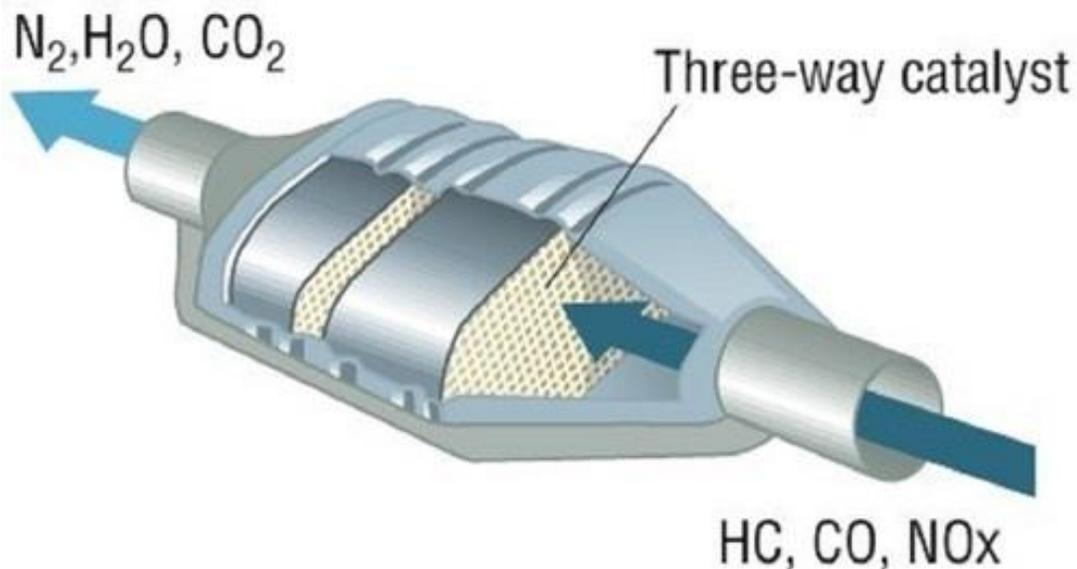
1. With the proper components and proper setup, the Torch Brain Box will provide a solid spark to the spark plug(s) in the tailpipe(s).
2. With the proper setup needed for the ignition cut, raw fuel will go through the engine to the tailpipes.

However, the kit DOES NOT guarantee exhaust flames. This is mostly due to vehicles with restrictive exhaust. Please read the next section for a detailed explanation.

Catalytic Converters and Restrictive Exhaust

Even with proper installation, a vehicle equipped with the Torch Exhaust Flamethrower Kit may produce small or no flames at all. This is usually due to highly restricted exhaust piping, especially if ANY catalytic converters are installed.

This kit WILL NOT work if any form a catalytic converter is installed. This includes high-flow aftermarket catalytic converters. These must be entirely removed and replaced with straight-through piping. As you can see in the diagram below, a catalytic converter changes the chemical compounds of engine exhaust to non-combustible exhaust gasses.



Furthermore, a high-flow exhaust setup is suggested for use with this kit. High performance exhaust setups including straight-through flowing mufflers and/or resonators will provide better flame output from the tailpipes.

Needed Additional Components

The Torch Exhaust Flamethrower Kit ONLY includes the Safety Switch, the Switch Panel and the Torch Brain Box. The buyer will need to purchase additional items to properly complete the kit for their specific needs. These necessary items include:

- Additional 16 Gauge Wire
- In-Line Fuse
- Barrel Ignition Coil(s) (one per exhaust pipe)
- Ignition Coil Wire(s) (one per exhaust pipe)
- Spark Plug(s) (one per exhaust pipe)
- Spark Plug Non-fouler(s) (one per exhaust pipe)

You can find compatible all the needed parts to complete the kit in the link provided below along with direct links these components on Amazon.com:



16-Guage Red and Black Wire



Waterproof In-line Fuse



Barrel-Style Ignition Coil
(on per exhaust pipe)



Spark Plug Wires
(one per exhaust pipe)



Spark Plug Non-Fouler
(one per exhaust pipe)



Spark Plugs
(one per exhaust pipe)



<https://bit.ly/TorchParts>

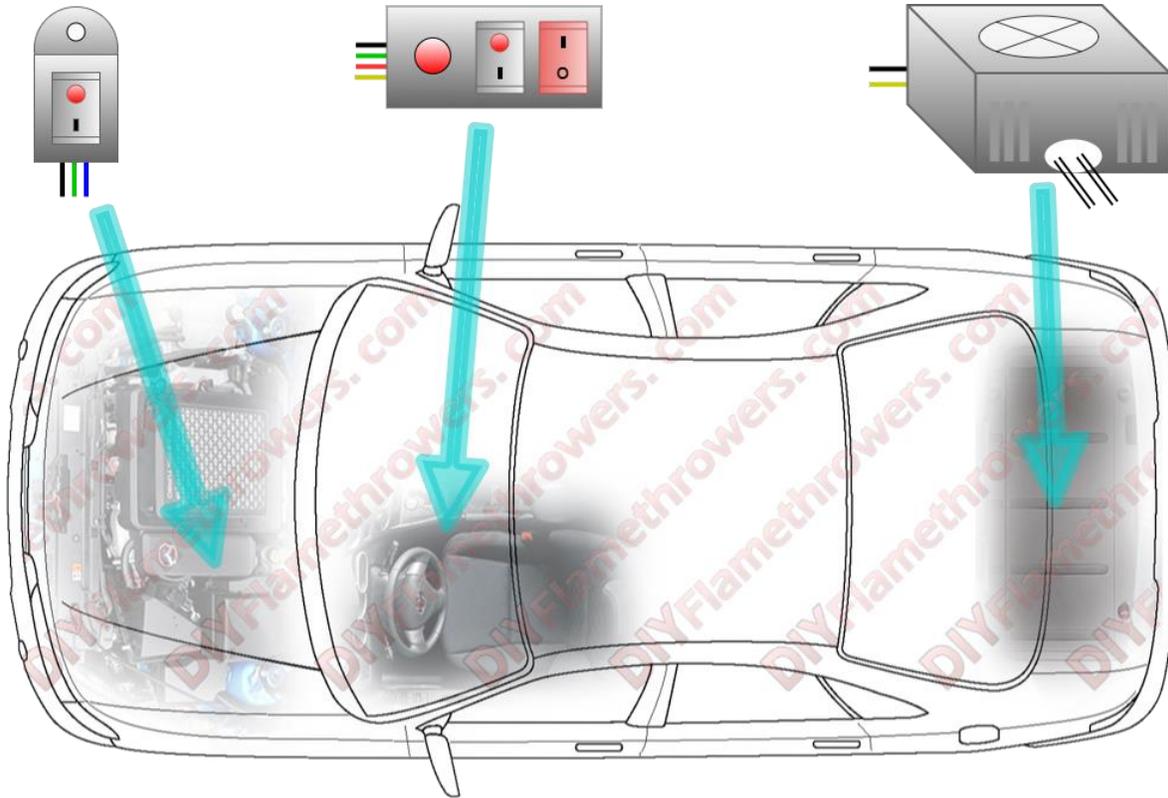
If you already have any of these components like the 16-Gauge wire and usable spark plugs laying around, there is no reason for you to buy them again. Use what you already have to complete the kit.

However, there are components that you CANNOT overlook. These include the Barrel-Style Ignition Coil(s), Spark Plug Wire(s) and Spark Plug Non-Fouler(s). These components are expressly needed to ensure the the Torch Exhaust Flamethrower Kit works properly.

DO NOT purchase or attempt to use other ignition coils that have not been vetted by DIYflamethrowers.com. You risk damaging the Torch Brain Box and/or experiencing no spark from the provided setup.

Placement and Installation of Components

For optimal use, place the provided components of the Torch Exhaust Flamethrower Kit in the designated areas of the vehicle.



Under-hood Safety Switch

This switch is spliced between the body ground of the car and the common ground connection for the ignition coil packs. Depending on your car, you may need to contact a professional with expertise in your car's make and model to locate this wire. It should be placed close to the ignition common ground under the hood. DO NOT mount this switch on the engine block or close to hot components.

When activated by switching it up to the RED position, this will allow the switch panel in the cockpit of the car to properly cut the ignition circuit allowing raw fuel to flow through the system ultimately reaching the tailpipes. It is suggested this switch remain deactivated on long drives and/or when the flame kit is not going to be used for an extended amount of time.

Switch Panel

This should be mounted in the cockpit of the vehicle. It should be mounted properly in a location that the driver can use it on-demand, yet not be accidentally triggered. The RED wire must be connected in series with an In-Line Fuse to an available "Accessory ON" +12V source (i.e. the cigarette lighter positive lead that turns off when the car is off).

DO NOT connect the RED wire directly to constant +12V. Doing so can cause damage to the Torch Brain Box and can also drain your battery if left on for an extended period of time.

Torch Brain Box

This should be mounted in the trunk or otherwise closest to the exhaust coil barrels. DO NOT mount the box outside or under the car as the box can be damaged by excessive heat, water or the elements. Make sure that you allow proper airflow for the box fan and side vents for proper cooling of components.

Exhaust Barrel Coils

These can be mounted inside or outside the car. However, it is suggested that all exposed electrical leads be covered with electrical tape or liquid tape. They should be mounted no further than 2.5 feet from the location of the spark plugs in the tailpipes.

Spark Plug Wires

Spark plug wires running from the barrel coils to the spark plugs CANNOT touch any metal on the body of the car as this can cause the high voltae to discharge causing a weak spark. Slack from the wires can be tied off to plastic or rubber parts like bumper supports using zip ties.

Making Spark Plug Bungs

A 14mm spark plug non-fouler can be converted into a spark plug bung with the use of a Dremel or similar metal cutting tool. The tips of the non-foulers are to be cut off, the threads checked and cleaned, and then test fitted to a spark plug. DO NOT force a spark plug if it does not completely thread through the modified bung. Use the Dremel or a file to clean any excess metal pieces at the end of the modified bung.

Installing the Spark Plug Bung

Choose a place on the exhaust pipe that is 4-6 inches from the tip of the pipe. Drill a 17mm hole in the pipe, clean the hole, and test fit the spark plug bung. Once it is snugly fit, weld the bung to the side of the pipe. DO NOT use JB Weld to mount the bung. This could create a poor ground for the spark plug that can cause a weak spark.

For more information on the installation including detailed pictures and videos, please visit the link below:



Use the QR Code or just follow the link below for the following:

- Added information and tutorials for installation.
- A comprehensive troubleshooting guide.
- Growing number of pictures and videos of installation and usage.

<https://bit.ly/TorchInstall>

Torch Exhaust Flamethrower Kit

Wire Connections

Redundancy Switch

THIS SWITCH IS SPLICED BETWEEN THE COMMON GROUND FOR THE IGNITION COIL(S) AND BODY GROUND

Purpose: The Primary redundant switch is to be located in the engine back close to the ignition coil(s) where it's function is to be a safeguard from faulty or failing wiring for the ignition cut sequence. This switch should be turned OFF when on long drives where the flame kit will not be used.

R1 BLACK Ground to the body of the car. The ground wire spliced from the ignition coil(s) can be used.

R2 BLUE Connect to the COMMON GROUND of the ignition coil(s) wire.

R3 GREEN Connect to **S2** wire of the Switch Panel in the cockpit of the car. GREEN to GREEN

Switch Panel

Purpose: The Switch Panel turns on the Torch Brain Box, disengages the secondary redundant switch and allows the user to operate the flame kit from the cockpit of the vehicle using the push button as a momentary ignition cut.

S1 BLACK Ground to the body of the car.

S2 GREEN Connected to **R3** wire from the Redundancy Switch. GREEN TO GREEN

S3 RED Connected to +12V Accessor with an In-Line Fuse.

S4 YELLOW Connected to **T2** with addition wire routed from the cockpit to the trunk. YELLOW to YELLOW

Torch Brain Box

Purpose: The Torch Brain Box provides the spark in the tailpipes with the use of the tailpipe coil(s), spark plug wire(s) and spark plug(s) added to tailpipes.

T1 BLACK Ground to the body of the car.

T2 RED Connected to the **S4** wire with additional wire on the switch panel. YELLOW TO YELLOW

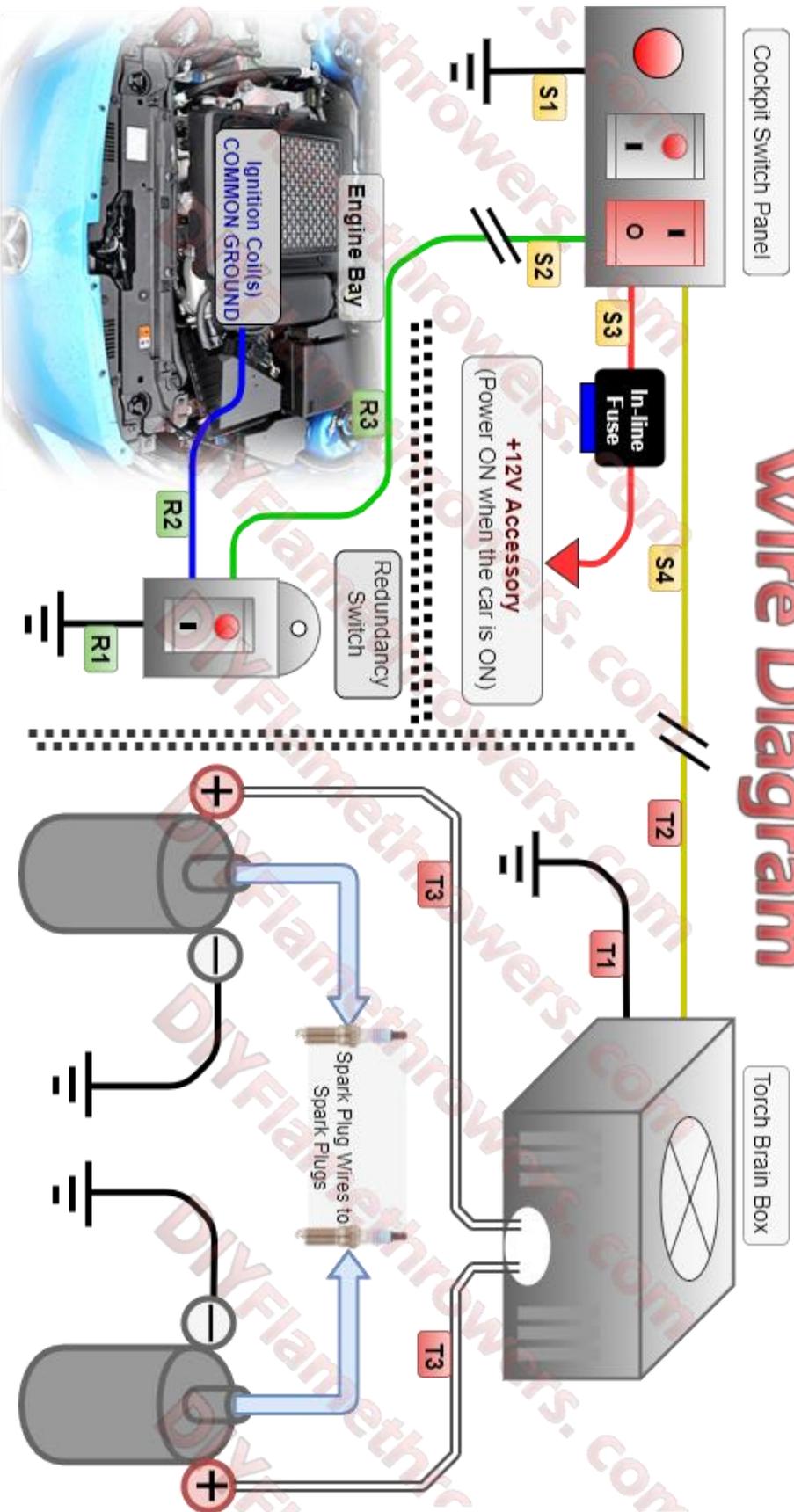
T3 WHITE Connected to the positive terminal of the tailpipe coil(s).

NOTE: If you have a single exhaust setup, you will only use one WHITE wire. Cut and Tape off the other wire. You will also only need ONE of the following: barrel coil, spark plug wire and spark plug.

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Torch Exhaust Flamethrower Kit Wire Diagram



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Initial Testing of All Components

You have installed all of the provided components, the additional components and properly spliced the ignition wire in your engine bay. Now you need to check all of the wiring and components before showing off those flames! Go through this following checklist before attempting to use the kit.

1. Deactivate the Safety Switch under the hood. Now start your car.
Does it run like normal? If YES, move on to the next step. If NO, check your spliced connections between the common ground on the ignition coils and body ground.
2. Activate ONLY the Safety Switch under the hood. Now start your car.
Does it run like normal? If YES, move on to the next step. If NO, check the Cockpit Switch GREEN wire going to the Safety Switch.
3. Activate BOTH the Safety Switch under the hood and the black rocker switch on the cockpit Switch Panel. Now start your car.
Does it run like normal? If YES, move on to the next step. If NO, check the BLACK wire from the Switch Panel in the cockpit that should be grounded to the body of the car.
4. Activate BOTH the Safety Switch under the hood and the black rocker switch on the cockpit Switch Panel. Start your car, and when the car is running press the round momentary switch for for less than a second.
Does the car noticeably die when the switch is pressed? If YES, your wiring is properly setup for the ignition cut! If NO, check the proper pinout of the common ground for you car. You may have spliced the wrong wire.

Torch Brain Box and Spark Testing (provided that all of the above have been tested)

1. Turn the car on to Accessory, and make sure the radio is OFF. Turn the RED rocker switch placed in the cockpit of the car to ON. Go to the trunk where the Torch Brain Box is placed.
Is the fan running and can you hear the buzzing from it? If YES, move on to the next step. If NO, check the yellow wire leads to the Switch Panel and the BLACK Ground Wire on the Torch Brain Box.
2. If the Torch Brain Box is working as properly, the next test is for a constant spark in the tailpipes. Can you hear and/or see a spark in the tailpipes? If YES, everything is properly connected and working. You can now move on using the kit. If NO, you need to assess incorrect wiring between the exhaust coils, the connected spark plug wires, and/or the spark plugs in the tailpipes.

Using the Torch Exhaust Flamethrower Kit

So you have made it this far. All of the wiring is properly connected, the ignition cut is working, the Torch Brain Box turns on from the switch when the vehicle is on, and you have a constant spark in your tailpipe(s). Everything is working as properly, and it's now time to finally get those sweet exhaust flames. Here's how to properly do it!

Flip the Under-hood Redundant (safety) Switch to ACTIVATED

Toggle the rocker switch to RED, which activates the cockpit Switch Panel. You can leave this switch as ACTIVATED if you have confidence in wiring from this switch to the cockpit Switch Panel.

Properly Warm up your Vehicle

Start your vehicle and warm it up to operating temperature. Drive the vehicle around for at least 3 minutes. Don't be conservative in your driving. Ride the gears. The kit requires that the engine is up to operating temperatures and that the exhaust is also hot. The unburnt fuel through the exhaust setup needs to be atomized. A cold engine will not provide optimal atomization of raw fuel resulting in no flames until both the engine and exhaust is properly warmed up.

Getting Ready to Shoot Flames

Toggle the Black and Red rocker switches on the Switch Panel UP. Both need to be on to the use of the momentary pushbutton. Now you can use the pushbutton on the Switch Panel to cut the ignition and shoot flames!

HOW TO SHOOT FLAMES

Rev the vehicle to at least 3,000 RPM, press the momentary pushbutton on the Switch Panel to cut the the ignition. Plant your foot on the gas pedal when the ignition cut is in place. You should hear a wind-down of the engine, and then a "POOOOFFFF" from the exhaust flames. Stop the pushbutton ignition cut before the engine dies. Have someone outside the car to verify flames. Exhaust flames are best seen at night.

NOTE: The proper use of the Torch FlameThrower Kit has a learning curve. You can experience backfires, the vehicle dying from momentary ignition cut for too long, and embarrassing displays with no flames.