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## **MOTORCYCLE EXHAUST SYSTEM INSTALLATION INSTRUCTIONS**

Harley Davidson ®  
Sportster® Models 2004-2011  
Part Number: M141510S, B, X

**WARNING:**

*Not legal for use on catalyst-equipped vehicles except for racing vehicles which may not be operated on a highway.  
This exhaust may not meet State or Federal Noise Emissions standards and may not be used on any vehicle  
if such use is in violation of State or Federal Noise Emission standards.  
Not Legal for Sale or Use in California on Emissions controlled Vehicles.*

***Your New Patriot Exhaust is Unique in the Industry with the SFI Valve Technology  
that allows you to tailor the sound and power curve to your riding style.***

***Please read and understand these instructions completely prior to attempting installation.  
Check the parts list and tools required to be sure all you have all the necessary items.***

**Attention Customers Breaking in New Engines:** Due to the extreme heat generated during the break-in process, the appearance of the exhaust may be discolored in certain areas. It is recommended that new motors be broken in with an old set of pipes and that preliminary jetting and tuning are performed before installation of your new Patriot Exhaust.

## **REMOVAL OF STOCK EXHAUST**

**Make sure the motorcycle is completely cool before starting  
*Hot Exhaust can, and will, burn you***

1. If you are not familiar with the basic mechanical workings of your motorcycle, please refer to a Factory Shop Manual or consult a Professional Mechanic
2. *Oxygen Sensor equipped models;* unplug the sensors from the wiring harness and remove any cable ties to free the wiring. See Shop Manual for details if you are unsure of how or where to unplug the sensors.
3. Remove the two nuts that attach each exhaust flange to the cylinder head. Save these nuts for installation. It may be easier to loosen or remove the stock heat shields for better access.
4. Remove clamp bolt that mounts the rear pipe to the Sprocket Cover.
5. Remove the two bolts on each muffler that hold the mufflers to the bracket and remove the mufflers.
6. Remove the stock exhaust pipes from the motorcycle.
7. If your bike has Oxygen Sensors, use a 22mm (or 7/8") wrench to remove them from the exhaust, being careful not to damage them. Set sensors aside for re-installation.
8. Remove the bracket that held the rear pipe to the Sprocket cover, it will not be re used.
9. Remove the Sprocket cover from the bike. It may be easier to remove the brake rod first.
10. Remove the stock bracket from the transmission.
11. Remove the three bolts that hold the factory exhaust bracket to the transmission.

# INSTALLATION

**Notice:** Chrome, Black Coating, & Stainless can be easily scratched during installation if you are not careful.

**Warranty does NOT cover this type of damage.**

1. Check the condition of the Exhaust gaskets and Replace as necessary. Patriot™ recommends Harley® part #17048-98 or equivalent.
2. Using a pair of Lock Ring Pliers, remove the Snap Rings and Flanges from your original exhaust. Check that the snap rings and flanges are in good condition and flat. Replace any parts that are bent or corroded.
3. Install the flanges and snap rings onto your new Patriot™ Exhaust.
4. If your motorcycle is equipped with Oxygen Sensors, Install them into the bungs on the Patriot Exhaust using Anti Seize on the threads (Note: Apply Anti Seize to threads only, contamination of the sensor probe can harm the Oxygen Sensor and affect engine performance). If you do not have Oxygen Sensors, install the supplied plugs into the bungs.
5. Bolt the Patriot exhaust bracket to the transmission. See Photo 1.
6. Reinstall the Sprocket cover and the brake rod.
7. Slip the Patriot™ Exhaust up to the cylinder heads, carefully placing the pipes in the exhaust ports without damaging the exhaust gaskets.
8. Slide the flanges over the exhaust studs and *Loosely* install the original exhaust flange nuts, DO NOT tighten at this time.
9. Check the alignment of the exhaust to bracket and shift the pipe as necessary to allow installation of the bolts. Slip the carriage bolts through the pipe and the bracket and loosely install the flange nuts.
10. Tighten all exhaust flange nuts evenly to a final torque of approximately 8-10 ft. lbs. You will notice as you tighten the flange nuts that the exhaust will tend to move one way or another. Tightening them evenly will allow the pipes to seat square to the gasket and remain flush with the bracket.
11. Tighten the Exhaust pipe to bracket flange nuts to 12-14 ft. lbs.
12. Reconnect the oxygen sensor wiring in the opposite manner to which it was removed.
13. Insert the straight end of the lock cable through the adjuster on the SFI Valve. The SFI Adjustment cable mounts to the muffler using the included 10-32 Stainless Allen Screw, lock washer, and a drop of Loctite.
14. Check for clearance of brake pedal to header on mid control models with pedal fully compressed and adjust at master cylinder. ***This is critical failure to do so could cause loss of rear brake, causing a crash resulting in death, or worse !***
15. Carefully clean all Dirt, Oil, and Fingerprints from your Patriot™ Exhaust. These things can permanently discolor your exhaust and are not covered by warranty.
16. Check over the installation to make sure that all fasteners are properly tightened and the cable is operating smoothly.

## STARTING THE ENGINE

Start the engine and allow it to warm up to operating temperature, but do not allow idling for an excessive period of time as this can cause overheating and discoloration of the exhaust. Check for any unusual noises or exhaust leaks.

NOTE: On carbureted bikes DO NOT run with the choke on for any longer than necessary as this can cause discoloration to the exhaust.

For the first few miles you may see an abnormal amount of smoke from your exhaust, especially if riding with the SFI™ Valve in the closed position. **Do Not Panic**, this is normal as the silencing material breaks in. This will usually stop after the first couple of miles. Riding with SFI™ valve In the Open (Loudest) position it will create the most Horsepower. It is possible to ride with the valve at any position between Open & Closed to suit the sound preferred and your riding style.

**NOTE:** Re-tighten all hardware after the first 20 miles and then again at each scheduled service.

## PARTS LIST

Qty	Description
1	2 into1 Header System
1	Front Heat Shield (Installed)
1	Rear Heat Shield (Installed)
2	Oxygen Sensor Plugs
1	Lock Rod
2	5/16" Serrated Flange Nuts
2	5/16" Carriage Bolts
1	10-32 X 3/8" Stainless Steel Allen Head Cap Screws
1	Stainless Steel Lock Washer
1	Exhaust Mounting Bracket

## TOOLS REQUIRED

Flat Blade Screwdriver  
5/16" Nut Driver  
1/2" Combination Wrench  
9/16" Combination Wrench  
22mm or 7/8" Wrench for Oxygen Sensors  
5/32" Allen Wrench  
Loctite® 222 or Equivalent  
Lock Ring Pliers  
1/4" or 3/8" Drive Ratchet and Extension  
1/2" and 9/16" Sockets  
Anti Seize

## **IMPORTANT NOTE**

- ***Patriot Defenders are made from Stainless Steel and WILL turn Gold in color over time. This is normal and is a characteristic of Stainless Steel.***

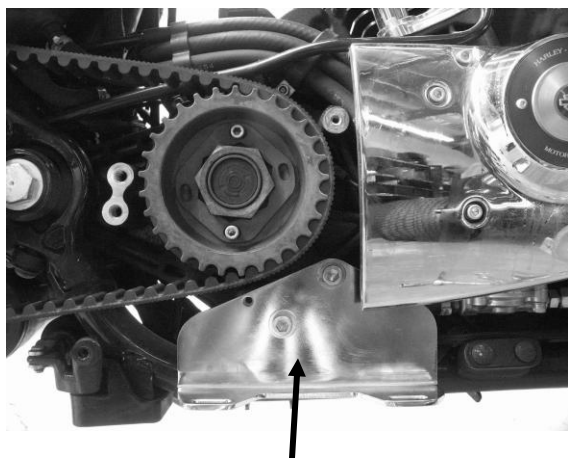
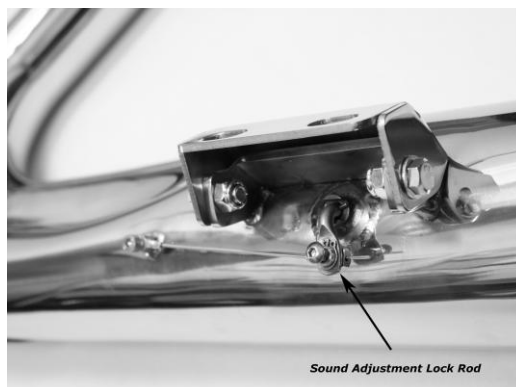


Photo 1, Patriot Bracket installed on transmission



Sound Adjustment Lock Rod  
(Shown on Softail Pipe, bracket is different)

The Patriot Defender™ exhaust will increase the performance of your motorcycle, however due to increased efficiency it will be necessary to re-jet your Carburetor or recalibrate your Fuel Injection. Failure to do so can cause improper performance, overheating, and/or discoloration of your exhaust.

Patriot's *Top Fueler* is pre programmed for use with your Defender Exhaust System and is user adjustable to accommodate other changes to your motorcycle.

Fuel injected Harley-Davidson's® are equipped with an ECU (computer) that's programmed to deliver proper fuel/air mixture for a stock bike. The Patriot Defender™ changes the flow characteristics of the motor, requiring a change to the fuel requirements. The Patriot Top Fueler adjusts the fuel flow by sensing the load being placed on the motor for proper and accurate fuel mixture at all times. The Top Fueler is easily adjustable to compensate for changes in Cams, Air Filters, even Big Bore and Stroker motors without the need for hooking up to a computer or making cumbersome downloads.

Visit [www.patriotpipes.com](http://www.patriotpipes.com) for more information on the Finest Fuel Injection Controller available.



## LIMITED ONE YEAR WARRANTY

All Patriot Defender™ Exhaust are guaranteed, to the original purchaser, to be free of defects in materials and workmanship for one year. This warranty covers the replacement or repair of the product only and does not cover the cost of removal and installation. ***Discoloration or "Bluing" is caused by Excessive Heat or Improper Tuning and IS NOT covered by this warranty. Patriot Defenders are made from Stainless Steel and WILL turn Gold in color over time. This is normal and is a characteristic of Stainless Steel.*** It is possible to use Stainless Steel Polish to return to a bright and shiny finish. The Heat Shields are chrome plated and should only be polished with Chrome Polish. Damage or product failure resulting from collision, improper installation, off-road use, road hazards, the use of exhaust insulating wrap or like products or rust occurring after installation, is not covered by the warranty. Should a part become defective it should be returned to the original selling retailer and must be accompanied with the sales receipt. If there is no retailer in your area, call the factory for a return authorization and return your part prepaid to the factory for inspection. Patriot reserves the right to replace or repair the alleged defective part at our discretion and return the part freight collect.