



Yamaha Raptor 660

MUFFLER INSTRUCTIONS

Thank you for purchasing the FMF Powercore 4 muffler for your **Raptor 660**. We have spent countless hours of design work and testing to insure you receive the highest quality product on the market today.

Your Powercore 4 muffler has been developed using the latest design, testing and manufacturing technologies. It is manufactured from an extruded aluminum canister with a stainless steel tig welded mid pipe, hi-flo modular endcap and uses space age sound-absorbing packing material.

The Powercore 4 muffler is designed to broaden your existing powerband and give you an all around power increase.

Check out our website www.fmfracing.com for more information.

ATTENTION

This product is designed for closed course use only unless otherwise stated and not intended to meet emission regulations for use on public lands, roads, or access routes - consult with local jurisdictions.

Please read all instructions thoroughly before installation. Failure to follow all installation instructions completely will void any FMF warranty implied or otherwise. FMF Racing will not be held responsible for problems derived from improper installation and/or improper usage.

Before you begin installing this product, be sure you are wearing **eye protection** and gloves. You should have a complete understanding of how to remove and replace your stock exhaust. If you do not, you should have it installed by a professional mechanic. Keep all OEM parts when removing your stock exhaust, as some parts may be utilized with the FMF exhaust depending on your particular application.

PARTS SUPPLIED

- | | |
|-----------------------------|--------------------------------|
| (1) Medium Strap Bracket | (2) 19mm x 45mm Bracket Spacer |
| (1) Short Strap Bracket | (2) 8mm x 60mm Bracket Bolts |
| (2) Rubber Bracket Sleeves | (1) Header Band Clamp |
| (1) Aluminum Reducer Sleeve | |

TOOLS REQUIRED

- | | |
|------------------|-----------------|
| 11mm Wrench | Contact Cleaner |
| 12mm Wrench | WD-40® |
| Vise Grip Pliers | Hi-temp Silicon |

REMOVAL

OEM = Original Equipment Manufacturer

- 1] Loosen the OEM header clamp at the front of the muffler.
- 2] Slightly loosen the header flanges at the front of the motor.
- 3] Loosen and remove the front upper OEM muffler bolt.
- 4] While holding the muffler, loosen and remove the rear upper OEM muffler bolt.
- 5] Gently slide the muffler rearward to release it from the header. Spray WD-40 on the joint if it is difficult to remove.

PRE-INSTALLATION

- 6] Insert the aluminum reducer sleeve into the front of the muffler until it is fully seated. Use some hi-temp silicon to aid sealing. Loosely install the band clamp on the front of the muffler inlet.
- 7] Install the rubber sleeves onto the strap brackets so that the rubber is facing inward. Make sure the outer lip is over the bracket edge fully. No rubber should be in the area where the bracket tabs pinch together.
- 8] Clean the header where the muffler slips over with contact cleaner.
- 9] Lightly coat the header with hi-temp silicon to aid sealing.

INSTALLATION

- 10] Slip the muffler inlet over the header.
- 11] Slide the short strap bracket carefully over the muffler and position it to the front upper mounting point. Be careful not to scratch the aluminum canister and make sure the “inside” sticker on the bracket is towards the subframe.
- 12] Using vise grip pliers, pinch the strap bracket tabs together and install the supplied 8mm x 60mm bolt with one of the 19mm x 45mm aluminum spacers between the subframe and the bracket. Do not fully tighten at this time.
- 13] Slide the medium strap bracket carefully over the muffler and position it to the rear upper mounting point. Be careful not to scratch the aluminum canister and make sure the “inside” sticker on the bracket is towards the subframe.
- 14] Using vise grip pliers, pinch the strap bracket tabs together and install the supplied 8mm x 60mm bolt with one of the 19mm x 45mm aluminum spacers between the subframe and the bracket. Do not fully tighten at this time.
- 15] Slowly tighten all mounting fasteners and clamps to OEM specified torque specs, starting from the header and working back. Make sure the header and muffler are in neutral positions and not binding.
- 16] Inspect the complete exhaust to make sure the exhaust system is not in contact with the frame, shock spring, engine, body panels or any cables, hoses or wiring. The exhaust system should only be in contact with the exhaust port and mounting points. Confirm all controls operate in accordance with the manufacturer’s specifications.

POST-INSTALLATION

- 17] Before operating your Raptor, we recommend using a145 and a 150 main jet, 22.5 pilot jets and to remove the snorkel from the top of the airbox lid. The carb that feeds 2 valves uses the larger main jet. Our sea-level, 70 degree, jetting recommendations are to be used as a guide only. There are too many variables outside of FMF’s control to give you an exact configuration. If you’re not capable of tuning your motorcycle yourself, please find a mechanic in your area who is capable to take on this role. Refer to our website for more jetting information.
- 18] Start the engine and bring it up to operating temperature. Check for exhaust leaks.
- 19] Let engine cool completely and re-torque all mounting hardware to the manufacturers specifications.

MAINTENANCE

To clean your FMF muffler, simply use soap and water when it becomes dirty. Let exhaust system cool before cleaning. Do not spray cold water onto a hot exhaust. Dry completely.

Use a fine scotch-brite pad and WD-40® to clean the stainless steel mid pipe and endcap if needed.

We recommend repacking your Powercore 4 muffler after 20-30 hours of use when properly jetted. This will maintain peak performance and keep that race tone. We have various packing materials to choose from. We also recommend cleaning the spark arrestor screen (if equipped) every 30 hours of use using a wire brush gently.

To repack the muffler, remove the four (4) allen screws from the front of the muffler using a 4mm allen wrench. Do not remove the rear endcap. Gently slide out the front mid pipe from the muffler canister. You may need to use a rubber or plastic mallet to lightly tap it out. Be careful not to damage the muffler. Unwrap the packing from the core and discard. If your muffler uses a 2 stage packing, only remove the outer layer. Wrap the core with new packing and secure with a strip of masking tape. Do not pack too tightly, as this will hamper performance and increase the sound level. Before re-installing the inner core assembly, apply a thin layer of hi-temp silicon on the front endcap where the aluminum canister slips over. Slip inner core assembly into canister making sure the perforated core fully seats in the rear endcap. Re-install the allen screws until snug or tighten 1/4 turn after the screw makes contact with the canister.

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