Full Exhaust System
Installation Instructions

Thank you for choosing FMF as your performance aftermarket exhaust. We have spent countless hours of R&D and testing to ensure you receive the highest quality product on the market today.

All FMF products are developed using the most current technology available for design and manufacturing. Every exhaust is made 100% at the Flying Machine Factory in Southern California. We use only the highest quality American materials for function and durability.

Since 1973, FMF has been bringing you the very best in bolt on performance. Our products are specifically engineered to broaden your existing powerband and give you an all around power increase with substantial weight savings. Bolt on FMF and \textit{FEEL THE POWER}!

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

Please read all instructions thoroughly before installation. Failure to follow all installation instructions will void any warranty implied or otherwise. FMF Racing is not responsible for problems due to improper installation and/or improper use.

Before you begin installing this product, we recommend wearing safety glasses and mechanics gloves. You must know how to remove and replace your stock exhaust in order to install this FMF product otherwise have it installed by a professional mechanic. Keep all stock parts from your existing system as some components may be necessary to install your new FMF exhaust depending on the application.

<table>
<thead>
<tr>
<th>Parts Supplied</th>
<th>Tools Required</th>
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<tbody>
<tr>
<td>(1) muffler 045335, 045336</td>
<td>T25, T30 Torx wrench</td>
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<tr>
<td>(1) 6x16mm bolt 920141</td>
<td>spring puller</td>
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<tr>
<td>(2) 6x25 bolt 920670</td>
<td>4, 6mm allen wrench</td>
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<tr>
<td>(2) 10x16 bolt 900724</td>
<td>WD-40</td>
</tr>
<tr>
<td>(2) 6mm nut 920140</td>
<td>8, 10, 13mm, 7/8&quot; wrenches</td>
</tr>
<tr>
<td>(3) 8mm nut 900625</td>
<td>anti seize compound</td>
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<tr>
<td>(1) muffler hanger (2 piece) 841541</td>
<td>10mm offset wrench</td>
</tr>
<tr>
<td>(10) spring 980025</td>
<td>10mm ratchet box wrench (optional)</td>
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<tr>
<td></td>
<td>10mm socket with ratchet and wobble extension (optional)</td>
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<tr>
<td></td>
<td>small magnetic probe or screwdriver</td>
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<td></td>
<td>flat-blade screwdriver</td>
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Removal

1. Make sure engine is completely cool prior to installation and the vehicle is supported by other means than the kickstand. The vehicle must be stable and secure while performing this installation.
2. Remove both passenger and rider seats.
3. Remove rear upper cowlign.
4. Remove belt cover.
5. Remove right side swingarm pivot cover near the oil dipstick.
6. Loosen the two (2) clamps connecting the stock muffler to the headers.
7. Remove the four (4) muffler mounting bolts (figs. 1-4). Note the left front bolt is secured with a nut. Use a 13mm box end wrench to hold the nut while removing the bolt. Loosening the right foot peg mount will make muffler removal easier. Save all fasteners for later use.
8. Push the rear of the muffler down as you pull back and side-to-side to release the muffler from the headers. Use WD-40 where the muffler pipes connect to the headers to help ease removal.
9. Reinstall the left front nut and bolt removed in step #7 to secure the oil cooler. Only thread nut onto the bolt 3-4 turns.
10. Unplug and loosen both O2 sensors but do not remove them from the headers
11. Remove the nuts securing the front header to the engine then remove the front header. Remove the O2 sensor from the front header. Keep nuts and the O2 sensor for later use.
12. Remove the heatshield from the rear header.
13. Remove the nuts securing the rear header to the engine. Use an offset 10mm wrench to loosen the top nuts and a regular or ratchet box wrench to loosen the bottom nuts. Use your fingers where possible to spin the nuts off the header studs. For those nuts not accessible with fingers, use a screwdriver to turn the nut. Use a magnetic probe or screwdriver to catch the nuts as they release from the header studs. Keep nuts for later use.
14. Lift the rear header off the header studs and move slightly to the right.
15. Remove the O2 sensor from the rear header. Save for later use.
16. Carefully rotate the rear header clockwise as you remove the header from the vehicle.
17. Remove the kickstand.

18. Inspect the header flange gaskets. If either gasket did not come off with the headers, leave gaskets in place on the engine. They must be free of tears and cracks. There should only be a minimal amount of gasket material lost by removing the headers. If either gasket is stuck to the header during removal, carefully remove it using a razor blade and reinstall onto the header studs. Replace a torn or damaged gasket.
19. Reroute the engine sensor on left side of engine near the rear cylinder (fig. 5). Remove the bolt mounting the sensor and cut the cable tie supporting the sensor wire. Reroute the sensor on the outside of the frame and reinstall into the engine. Tighten to manufacture’s specifications.
20. Install the rear manifold onto the engine. The rear manifold appears shorter and is more curved than the front. Carefully sliding the upper-right mounting ear of the manifold flange around and below the bottom-right mounting stud (Fig. 6). Once past the stud, position the flange onto the four (4) mounting studs. Using one (1) of the nuts removed in step #13, thread onto the bottom left header stud and tighten finger tight. Install the remaining three (3) header nuts removed in step #13 using a magnetic probe or screwdriver to hold the nut in position while threading onto the stud with a screwdriver. Tighten all nuts to manufacturer’s specifications.

21. Install the front manifold onto the engine and loosely thread on the four (4) nuts removed in step #11.

22. Coat the outlet of the rear manifold where the rear midpipe connects with anti seize compound.

23. Install the rear midpipe onto the rear manifold (the rear midpipe is longer than the front). Using a spring puller, install two (2) supplied springs to connect the midpipe to the manifold. Fasten the midpipe to the engine using the supplied 6x16mm bolt, and tighten to 7 ft-lbs. or 84 in-lbs. (fig. 7).

24. Coat the outlet of the front manifold where the front midpipe connects with anti seize compound.

25. Install the front midpipe onto the front manifold. Using a spring puller, install two (2) supplied springs to connect the midpipe to the manifold. Fasten the midpipe mount to the engine using a stock bolt removed in step #7 along with a supplied 8mm nut. Thread the bolt through the oil cooler first (fig. 8). Do not fully tighten at this time.
26. Tighten the front manifold nuts to manufacture’s specifications.
27. Using anti seize compound, coat the outlet of both midpipes where the “Y” collector pipe connects.
28. Slide the collector pipe onto the midpipes and position the collector outlet pointing up and to the right. Once fully seated onto the midpipes, install four (4) supplied springs at the collector/midpipe junction.
29. Fasten the collector pipe to the engine using the two (2) supplied 10x16 bolts. Do not fully tighten at this time.
30. Tighten the front midpipe mount fasteners to manufacture’s specifications.
31. Install the muffler hanger brackets. First install the left side bracket (fig. 9) to the stock left-rear mounting point (fig. 3) using a stock bolt removed in step #7 along with a supplied 8mm nut. Install the right side bracket to the stock right rear mounting point (fig. 4) using a stock bolt removed in step #7 along with a supplied 8mm nut. The right bracket mounts behind the left. Tighten all fasteners finger tight.
32. Coat the outlet of the collector pipe where the muffler connects with anti seize compound. Slide the muffler onto the collector pipe until fully seated. Install two (2) supplied springs to connect the muffler to the collector pipe. Install two (2) supplied 6x25mm bolts and 6mm nuts to fasten the muffler to the hanger brackets (fig. 10).
33. Reinstall both O2 sensors. In order to ensure the wiring does not burn, reroute the wire leading to the front sensor. First, obtain as much slack in the wire as possible by uncoiling it from the main wire loom. Then route the wire toward the right side of the vehicle along the front valve cover. Loop the wire down and over the lower right radiator mount.
34. Make sure the pipes and muffler are in a neutral position and not binding. Slowly tighten all mounting fasteners to manufacturer’s specifications starting at the collector pipe and finishing at the muffler mount. Be sure to tighten the left oil cooler bolt and right foot peg bolts, as well as reinstall the rear cowling and seats.
35. Inspect the complete exhaust to make sure there is no 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(s) and mounting points. Confirm all controls operate in accordance with manufacturer’s specifications.

**Installation (cont.)**

36. All FMF exhaust products are designed to use stock fuel settings unless otherwise noted. There are too many variables to provide precise specifications; mainly altitude and temperature. If you are not capable of tuning the fuel settings yourself, please find a mechanic in your area.
37. Start the engine and bring to operating temperature. Check for exhaust leaks.
38. Allow the engine to cool completely and torque all mounting hardware to manufacturer’s specifications.

**Post - Installation**

36. All FMF exhaust products are designed to use stock fuel settings unless otherwise noted. There are too many variables to provide precise specifications; mainly altitude and temperature. If you are not capable of tuning the fuel settings yourself, please find a mechanic in your area.
37. Start the engine and bring to operating temperature. Check for exhaust leaks.
38. Allow the engine to cool completely and torque all mounting hardware to manufacturer’s specifications.
Maintenance

To clean your FMF muffler, allow to cool and use mild soap and water. Do not spray water onto a hot exhaust. Mild soap and water is recommended on the muffler canister to reduce streaking and uneven discoloration. Dry completely with a soft cloth.

We recommend repacking your FMF muffler if there is a noticeable sound difference or any discoloration to the canister. This will maintain peak performance and keep that race tone. More frequent repacking may be necessary for less than optimal fuel settings or sustained high speed riding.

Water will ruin packing. Cover the exhaust outlet when washing your vehicle. Repack your muffler if water enters the chamber and saturates the packing. **FMF offers the Apex Muffler Repacking Kit #012441 for servicing your Apex muffler.** See instructions included with repacking kit for servicing your muffler.

**DISCLAIMER:** All products manufactured and/or distributed by FMF Racing are a) intended for use on stock vehicles specific to the U.S. market; b) for closed course use only unless otherwise stated and c) not intended to meet emission regulations for use on public lands, roads or access routes – consult with local jurisdictions. FMF Racing makes no claims as to the products applicability, effectiveness or fitment on modified machines. FMF Racing is the sole determines of abuse, misuse, installation errors and modifications. We assume no liability for any errors in listings, specifications, part numbers, prices or model applications. We reserve the right to change specifications, product descriptions, product quality, pricing and application at any time without notice and without further obligation. Buyer assumes all risk for any and all damage caused to themselves, a third party and/or property by virtue of failure of these products. By installing and/or using an FMF product, you hereby accept and understand these stated terms and conditions and have followed all instructional steps.

**LIMITED WARRANTY:** All merchandise manufactured by FMF Racing has a warranty against manufacturing defects for a period of one (1) year from the date of invoice. Warranty is limited to the repair or replacement of defective products. There is no warranty for normal wear and tear, any type of crash damage or for product failure due to improper muffler or packing maintenance. FMF Racing reserves the right to repair, replace or issue an FMF credit for defective product at its discretion. Credits are valid for a period of one (1) year from issuance. No credit will be issued for labor or other costs incurred beyond the value of the original product. Product returned as a warranty after having been used, if found to be defective, is not valued at the full purchase price. A depreciated value will be estimated for used product. Product accepted as a warranty claim and repaired or replaced will be returned via UPS-ground freight no charge. Warranty excludes product that has been modified or where the product was improperly installed, abnormally used or misused. This limited warranty is in lieu of all other guarantees or warranties implied or expressed. This includes, without limitation, any warranties of merchantability and fitment for a particular purpose. We make no warranty as to products distributed by FMF Racing, expressed or implied. We will, however, pass on all warranties made by the manufacturer, who has sole responsibility for performing such warranties. A return authorization number must be issued by FMF Racing before product is returned. Returns must be sent back to FMF Racing freight prepaid. Proof of purchase, such as a copy of the original invoice, must accompany all warranty claims. Warranties will be honored to the direct purchaser only.