

CMP Turbo Kit Installation Instructions

2008-2014 Touring Models

Bike Prep

- Drain engine oil into a clean pan and inspect oil for contaminant. Any debris going through the motor will end up in the turbo, resulting in failure. If debris is present, this issue must be addressed before installation of turbo system.
- Remove ECM fuse
- Remove exhaust, air cleaner assembly, oil pressure switch and cam cover. Lower exhaust mount will be used as support for the turbo tail pipe.



Exhaust

- When installing the exhaust, attach everything snug but still loose enough to adjust position. Once everything is aligned with intake, then tighten all hardware up.
- Thread in oil pressure adapter so the fitting is positioned in the 11:00 position.



- Install cam cover

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- Install new flanges onto head pipes
- Install rear head pipe



- Slide cross-over pipe into rear head pipe



- Slide front "Y" pipe into cross-over pipe and front head port, then attach spring



- Now is the easiest time to install the Thunder-Max wideband o2 sensors
- Now that the whole head pipe assembly is on, evenly tighten the exhaust port flanges. The head pipe assembly will move to the location where it's in the least amount of bind.
- Install the "L" shaped turbo mount to the front rocker box bolt. The opposing end should closely line up with the inside of the top, front bolt hole on the head pipe flange.

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- Install turbo onto head pipe. The m8x1.25-135 stainless bolt will go through top front flange hole. Leave all hardware snug but still loose enough to adjust position. Tighten after both tail pipes have been lined up.



- Loosely attach tail pipe to turbo assembly



- Loosely mount wastegate to rear tail pipe and waste gate tail pipe to wastegate.



- Line up both tail pipes and tighten hardware

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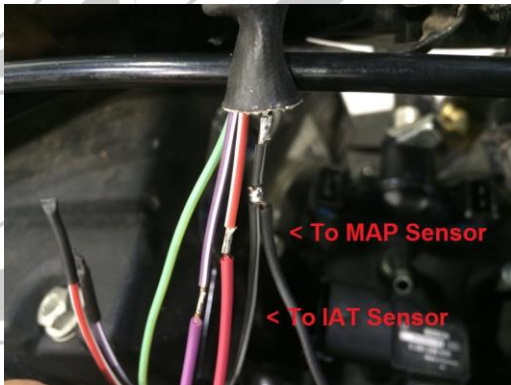
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- Install oil drain line and oil feed line. Position oil feed line so it does not come in contact with exhaust or turbo housing.



Intake

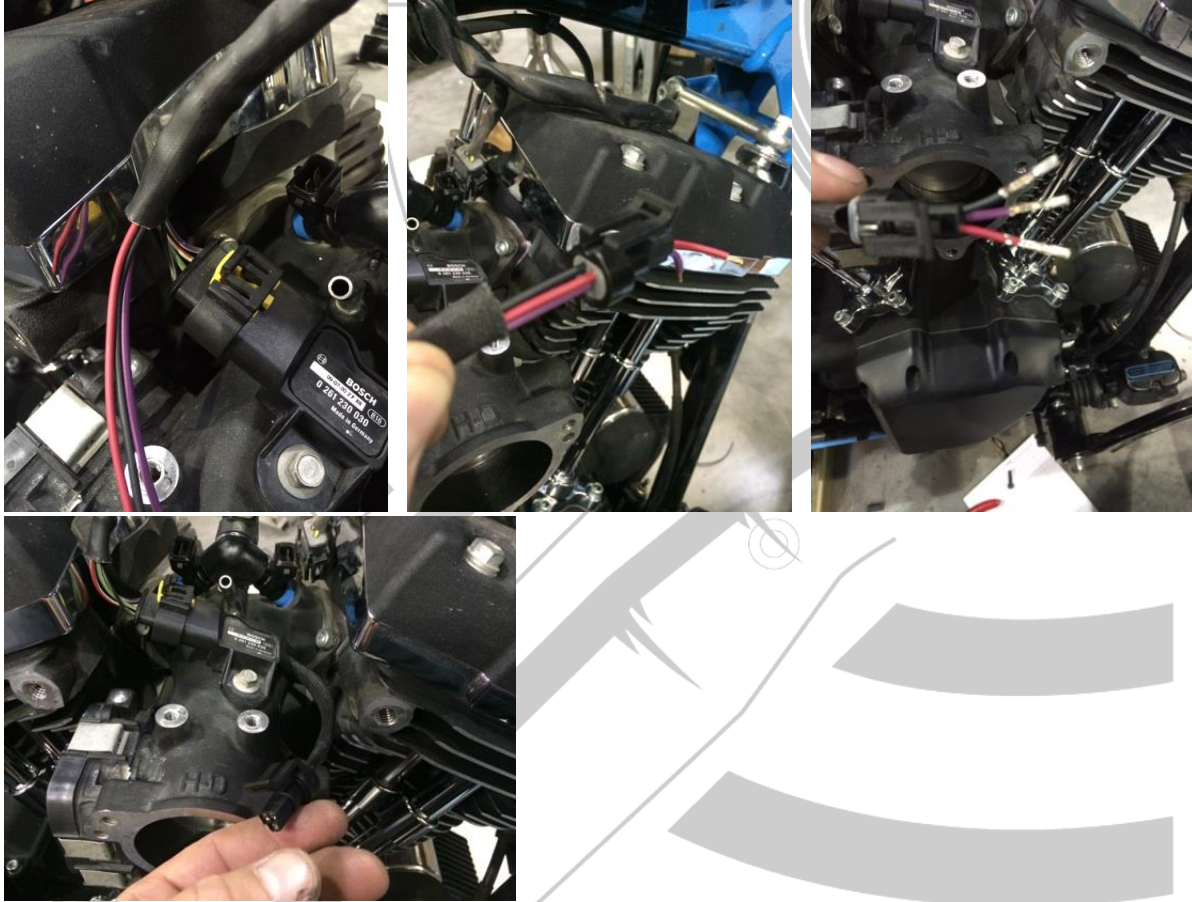
- Install injectors and slide vacuum line onto fitting located on top of throttle body
- The factory TMAP sensor is a map sensor and an intake air temperature sensor. It will remain as the intake air temperature sensor but will no longer be used for a map signal. Cut the black, red, and purple wires coming from the TMAP sensor. Stagger the cuts 1" apart. Solder in the MAP sensor harness to the existing factory harness. The black wire will need to be soldered into the new MAP sensor harness and the original TMAP harness. Cover all bare wire with heat shrink. **Do not use push together connectors, a poor connection will result in drivability issues and possibly severe engine failure**



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- Push the MAP sensor wires through the supplied connector. Cut wires to desired length and then install pins. **WARNING!** The terminals are “pull to seat” meaning you must feed the wire through the connector housing **BEFORE** you crimp the terminals. The wire is then pulled back into the housing and the terminal locks in place.

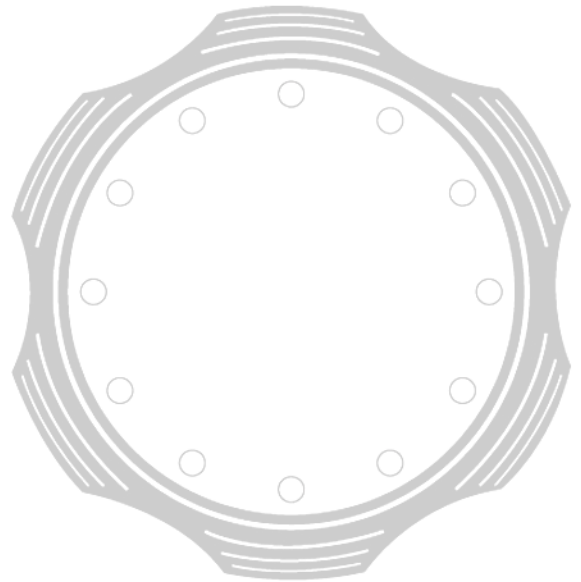
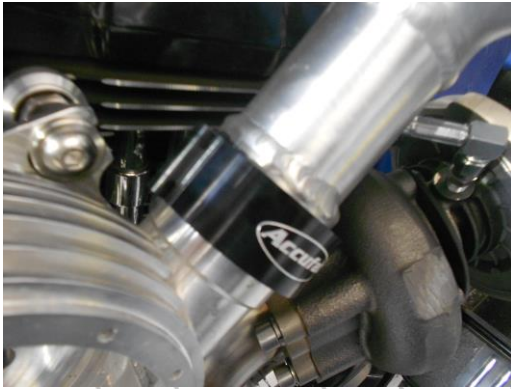


- Install breathers
- Push pressure line onto fitting and connect harness extension to map sensor on back of plenum
- Attach plenum to the breather bolts and throttle body

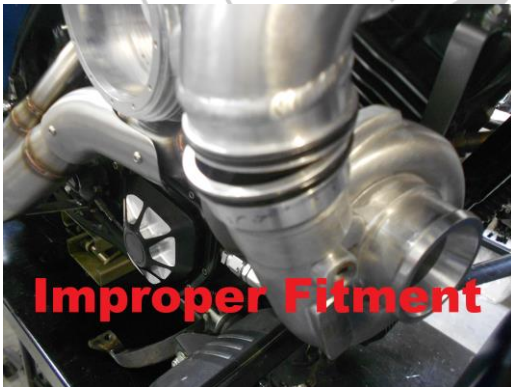
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- Attach engine side of intake tube to plenum



- Check fitment/alignment of intake tube to turbo



- If the intake tube does not perfectly line up, loosen the 4 bolts on the back of the intake side of the turbo. Rotate turbo until fitment is resolved.
- Secure intake tube to turbo using Accufab clamp



- Attach air filter to front of turbo housing
- Attach plenum cover

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- Attach blow off valve to intake tube



- Route pressure line from plenum to wastegate and vacuum line from throttle body to blow off valve.
- Install the pre-programmed Thunder-max
- Install ECM fuse
- Remove spark plugs
- Replace oil filter and oil using a synthetic 20w50
- Turn ignition on and hold start button for 3 seconds (this will prime oil into turbo)
- Set gap on new spark plugs at .040" and install
- Before starting clean all parts (use spray polish on polished parts and wd-40 on coated parts)
- Start and allow to idle for 20 seconds, shut off
- Re-start and allow to idle until motorcycle is at operating temperature
- Test drive
- Check all hardware and connections
- **Re-check all nuts/bolts after the first 50 miles and at every service!**

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