

SML-204



OIL COOLING SYSTEMS

M8 Liquid Cooled Models 2017-Current • Includes Trikes

M8 Touring models with lower fairings 2017-Current

3.0 Dual Fan Assisted

Lower Fairing Mount

For Coolers #SMT8-3

Oil Cooler Installation Guide



Welcome to UltraCool Oil Cooling Systems

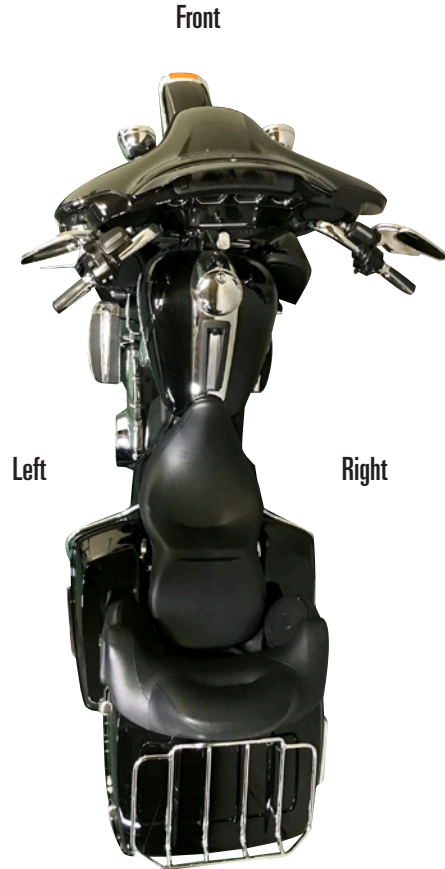
Thank you for making UltraCool your oil cooling system of choice. We hope you will find our installation guide helpful in your installation process. If you need more assistance please call our Tech Dept at (951) 698-4962 or email us at info@pcracingusa.com. If you run into a problem with your particular bike or fitting with other accessories etc, please call us before returning as we likely have a solution or part to make it work for you.

Thank you, UltraCool

Tools Required

The tools you will need to complete this installation:

- 2006-2013 Touring models purchase
 - 4 pin electrical connector #RF-170
- New hacksaw blade appropriate for plastic
- Flat head screw driver
- 5/32" Allen wrench
- 2 - 11/16" Open end wrench
- 1/2" and 7/16" Open end wrench
- Ratchet with 3/8" drive
- Extension with 3/8" drive
- 1/2", 7/16", and 1" socket
- Oil Filter wrench
- 17mm socket if installing a FLO Oil Filter
- Torque wrench - check your lbs
- Bike lift - nice to have
- Oil can
- Torx #25, 27, and 40
- Power drill
- 5/16" Drill bit
- Wire Strippers and Crimper
- 7/16" Allen driver **(Included in kit)**



Note: Instructions are illustrated and explained from a rider's point of view

Kit Contents



A Complete Oil Cooler Assembly

B Complete Oil Adapter with thermal switch wire

C LED Indicator Light

D Wiring Harness

E Relay

F Test Jumper

G Tie Straps

H Thread Locker

I Fitting Wrench

J Hoses

K Blue Wire Connector

L Frame Clamps

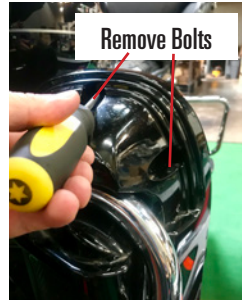
M Double Sided Tape

N 7/16" Hex Tool

Step 1 Disassemble Left Lower Fairing



1a. With a flat head screw driver pop off the inside top cover as shown.



1e. Remove outside bolts to allow removal of inside cover.



1b. Remove inside top nut as shown to allow removal of opposite side cover.



1f. Pinch to disconnect door lever and remove the air door & inside cover.



1c. Remove outer cone cover.



1g. Remove door lever from inside cover.



1d. Remove bottom screws and top nut for removal of inside cover.



1h. Pop off front grill.



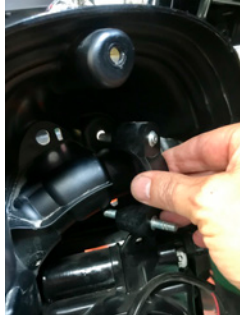
1i. Remove lower fairing while leaving the radiator & water lines in place.

Step 1 Continued

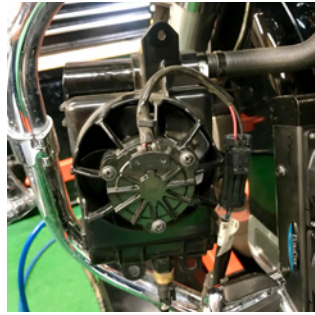
1j.



1k.



1L. Leave the radiator & water lines in place



Step 2 Remove the fairing insert

2a. Fairing insert is double side taped into the fairing. Starting at the top corners pry off the tape connection to remove the insert.

2a.



2b.



2c.



2d. Scrape off double sided tape residue



Step 3 Cut Fairing



3a. With new hacksaw blade cut thin edge approx. 3 inches from the top and cut off the top air door pivot arm.



3b. Cut off the bottom air door pivot arm and the thin edge straight across as shown.

Step 4 Cut Fairing Insert



4a. Cut the air door duct off the fairing insert.



4b.

Step 5 Tape the insert back on the fairing



5a. Cut and trim the supplied double side tape to replace the factory tape.



5b. Peel the red layer off the tape and replace the insert back into the fairing. Press hard on the taped areas.

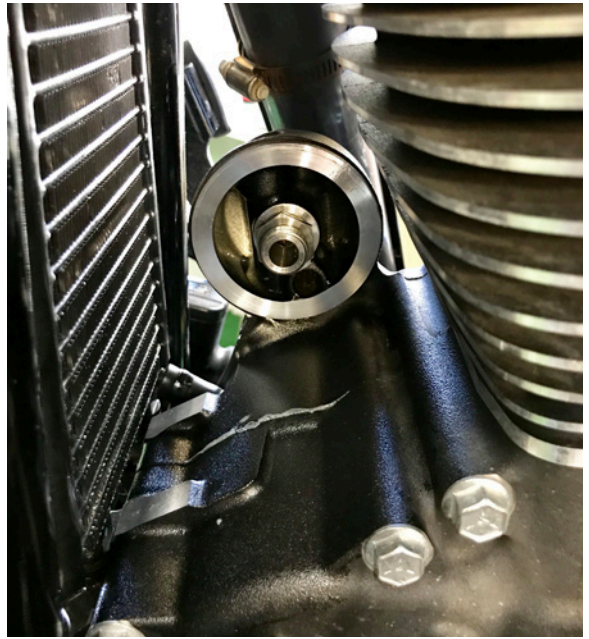
Completed Fairing



Step 6

Oil Filter Adapter

Remove oil filter and stock threaded bushing from engine. Clean old thread locker with towel or cotton swab.



Step 7

Install Oil Filter Adapter

Install oil filter adapter with threaded bushing supplied. This requires the 7/16" allen hex driver, provided in kit. Torque to 18-20lb-ft. **Be sure to use blue thread locker.**



Step 8

Frame Clamps

Put the frame clamps into position. You may need to loosen the bracket holding the lines near the frame. Use thread locker on all bolts especially the clamp bolts.



Step 9

Mount Heat Exchanger

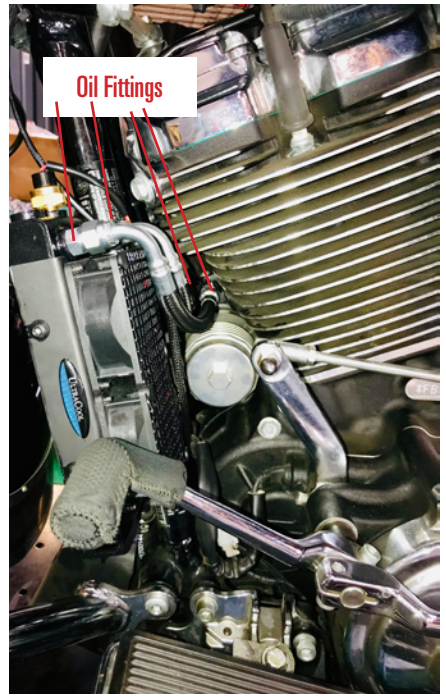
Mount the heat exchanger with the clamps, bolts, and lock washers. Don't tighten the bolts on the clamps completely so you can slide the clamps as low as possible until the top clamp hits the frame cross member. Connect the hoses before completely tightening the clamp bolts.



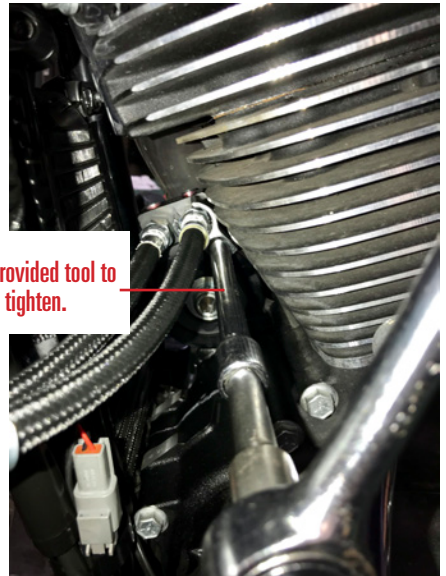
Step 10

Oil Fittings & Tighten Hoses

Very important to oil the oil line fittings then install the hoses as shown.



Use provided tool to tighten.



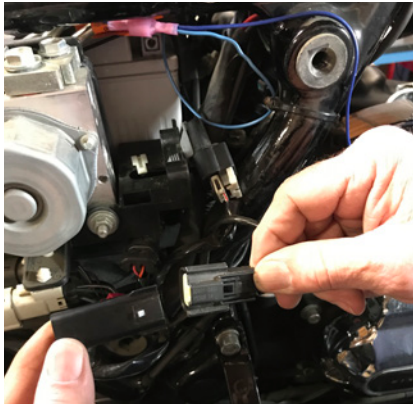


Step 11

Wiring

Remove seat, left and right covers and the main fuse. Gain access to the battery terminals. (Refer to your service manual if needed). Locate wiring harness with relay and attach red (pos) and black (neg) wire to battery.

Locate accessory connector, (this is located above main fuse block). Remove cover and install black connector with blue wire that came with the kit. Connect the two blue wires together with supplied male-female connector.



Step 12

Under right side cover, remove plug from the accessory connector.



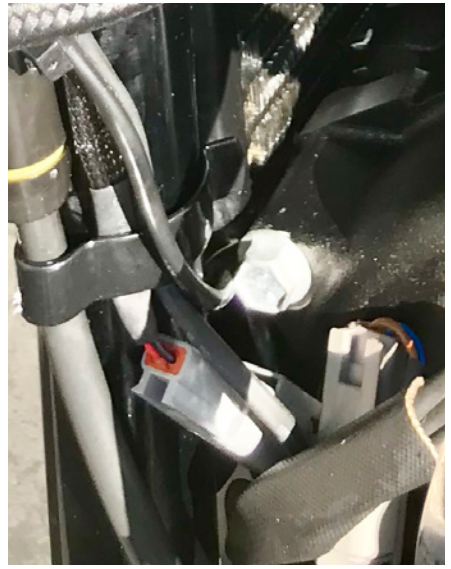
Step 13

Remove the two bolts on the left side fuse box area to allow you to bring the white connector on the wiring harness under the frame and into the battery area. Run the wiring harness out the bottom opening of the fuse box and run/ tie wrap the wire along and under the frame to the front on the bike.

Step 14

Installing Wiring Harness

Locate wiring harness with black connector and two grey connectors. Connect black connector together with the red/yellow connector on the thermal switch. Connect grey fan connector on the thermal switch. Connect grey fan connector to one of the grey plugs (doesn't matter which one). The other grey connector is for the LED light. Route the wiring harness down the left side of the frame rail up to the side box and connect two white connectors together. Tie up wiring and test with test jumper provided by unplugging the thermal switch and inserting the the test jumper.



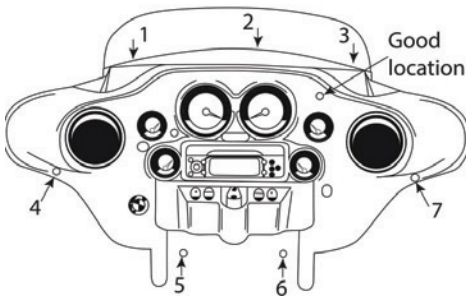
Step 14

Installing Wiring Harness

Wiring Harness

- 1) White Power Connector
- 2) Grey Connectors to Fan and LED Light (Interchangeable)
- 3) Black Connector to Thermal Switch





Step 15

Installing LED

3 Options:

1) We have a small toggle mount that fits under a screw on your handlebar controls Part #AC-21B (included in your kit).

2) You can mount the LED light in a fairing by drilling a 5/16" hole.

3) We have a handlebar LED light clamp for 1" handlebars only. Available in Chrome part #AC-20C, Black part #AC-20B, and Black Chrome part #AC-20BC. These are available at UltraCoolfl.com or any UltraCool Dealer.

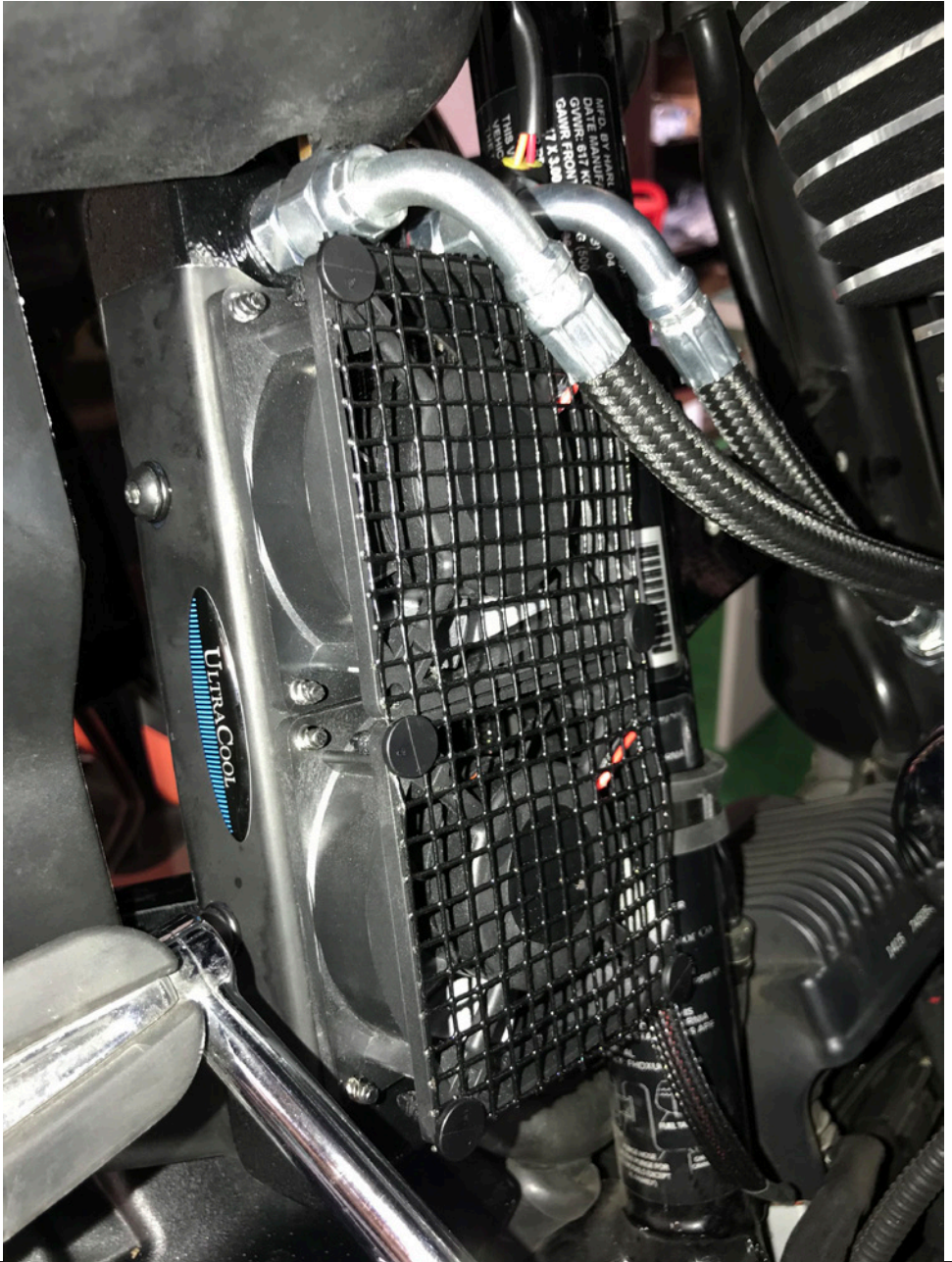


Install LED light connector last so you can feed the LED wire through tight areas on the handle bars, frame, etc. To install the LED connector, push the 2 wires through the back of the connector — either way is fine. Be careful not to break wire connectors when pushing through. Use the orange clip as shown to snap/lock the wires in place.

Step 16

Reassemble Fairing

Reassemble the modified fairing on the bike by reversing the disassembly instructions.



Step 17

Test Electrical Connections

Locate the test jumper in your parts bag. Unplug harness from the thermal switch and plug jumper into the harness instead. Turn on bike ignition. Fans and LED light should run.



If the fans and LED work with the test jumper, remove the jumper and plug in the thermal switch. Save the test jumper to trouble shoot in the future.

Step 18

Check List

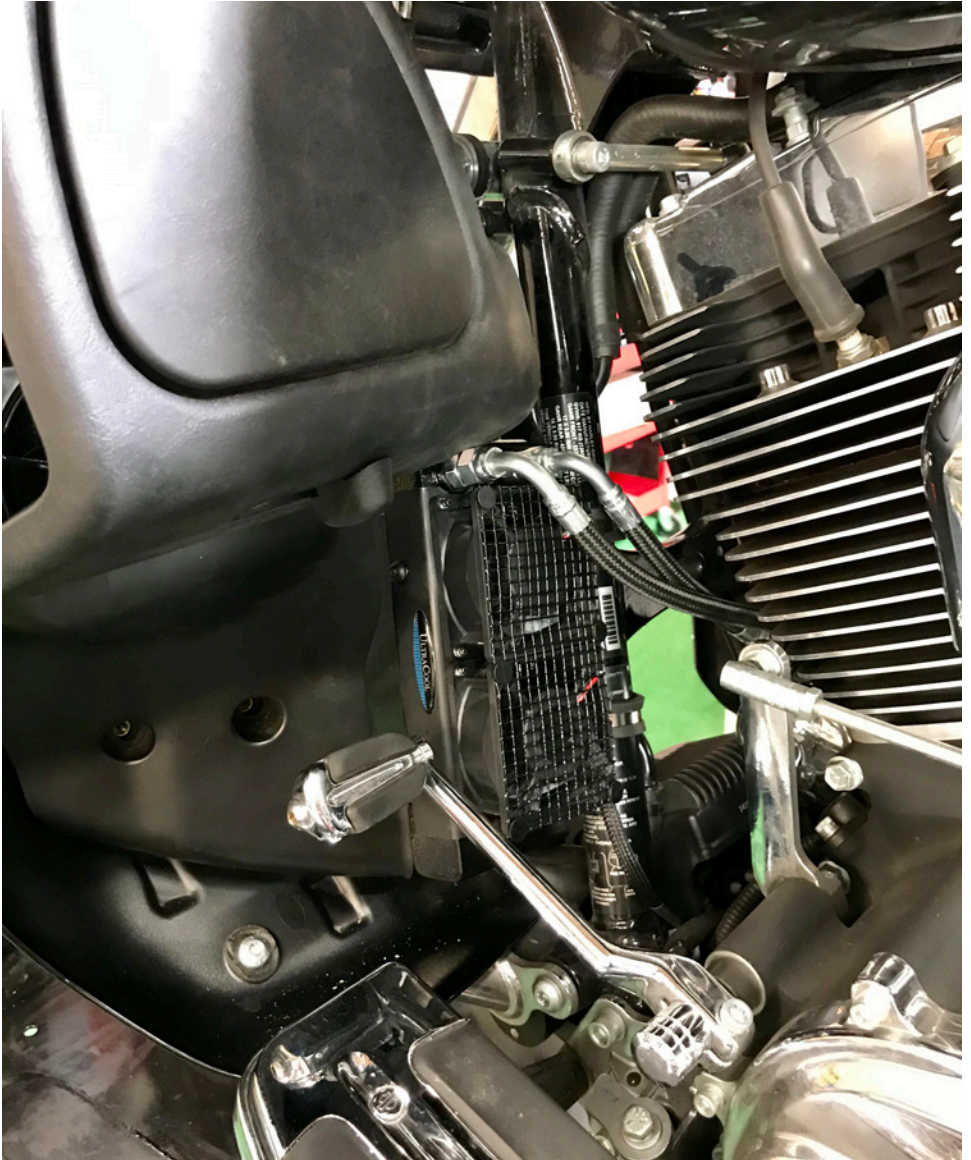
- Check Hoses are tight
- Install Oil Filter and Clean up any oil
- Start Engine and Check oil

Trouble Shooting:

If the oil line fittings leak at all, simply loosen and retighten the fitting with the provided tool.

Congratulations! You are good to go!

Note: On your next warm day ride (after a minimum of 10 miles) the fans will turn on when the oil reaches 210 degrees. Do not test by letting your engine idle in your driveway as this will not get your oil hot.



Accessories

FLO Oil Filter

Provides additional 10 degrees of cooling power and consistent filtering across the entire surface. Flows 7 times more than paper or synthetic filters while filtering to 35 microns (absolute, 1 pass test). Unaffected by water, heat or pressure and the bypass valve will not open on cold startups and high RPM. Built in 17mm hex nut for easy removal. It is easily cleaned and reused, paying for itself. Available in Polished Aluminum with clear anodize part #PCS4C or Black anodize part #PCS4B. (We do not chrome or paint our filters as that holds in heat)



LED Light Handlebar Clamp

A very stylish way to mount your LED light to 1" handlebars.



Chrome #AC-20C



Black #AC-20B



Black Chrome #AC-20BC

LED Toggle Mount

Mounts LED to handlebar controls. Part #AC-21B
(included in kit)



Notes



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(951)698-4962 • info@pcracingusa.com
UltraCoolfl.com

WARRANTY

One year parts only from date of purchase.

Warranty registration must be completed in full and received
within 45 days of purchase to validate warranty.

Warranties are non-transferrable

Register for warranty at www.UltraCoolfl.com/warranty-registration/

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installation or modification of our products. Intended for stock motorcycles.

Patent #6955150

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