

2017-Present Milwaukee 8 Liquid Cooled Installation Guide



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TOOLS REQUIRED:

**DRIP PAN OR SOMETHING TO
COLLECT**

SMALL AMOUNT OF OIL

H.D. OIL FILTER WRENCH 3"

OR

FILTER STRAP WRENCH DEEP WELL

7/8" SOCKET EXTENSION FOR

SOCKET ALLEN WRENCH SET

PHILLIPS SCREW DRIVER 9/16"

OPEN END WRENCH TWO-11/16"

OPEN END WRENCHES

-RECOMMENDED-

PLIERS & SNIPS

HEAT GUN

WOBBLE ALLEN WRENCH

MILWAUKEE 8 KIT



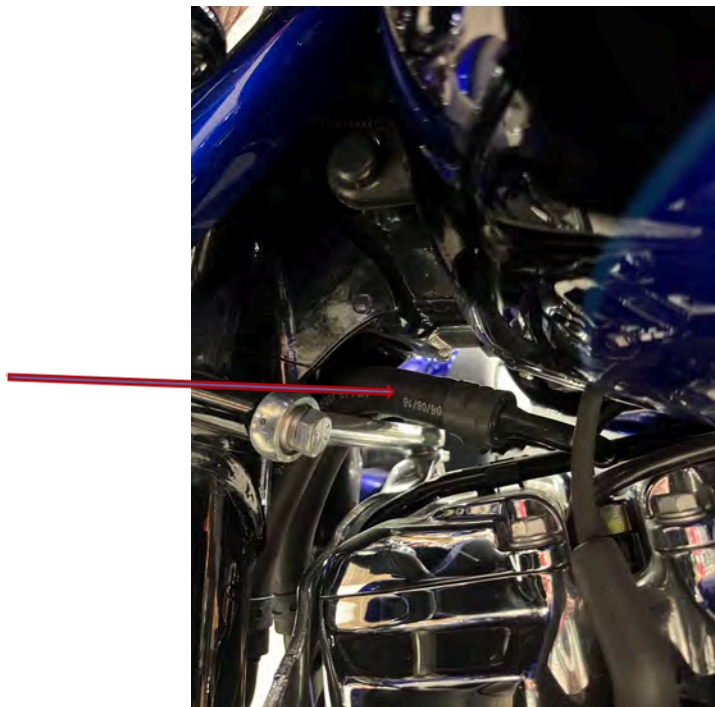
STEP 1

REMOVE COVER FROM WATER PUMP.



STEP 2

REMOVE THE CLAMPS ON THE COOLANT LINES (ON THE TOP OF THE HEADS) THEN PULL THE HOSES OFF. YOU WILL USE A LITTLE COOLANT.



STEP 3

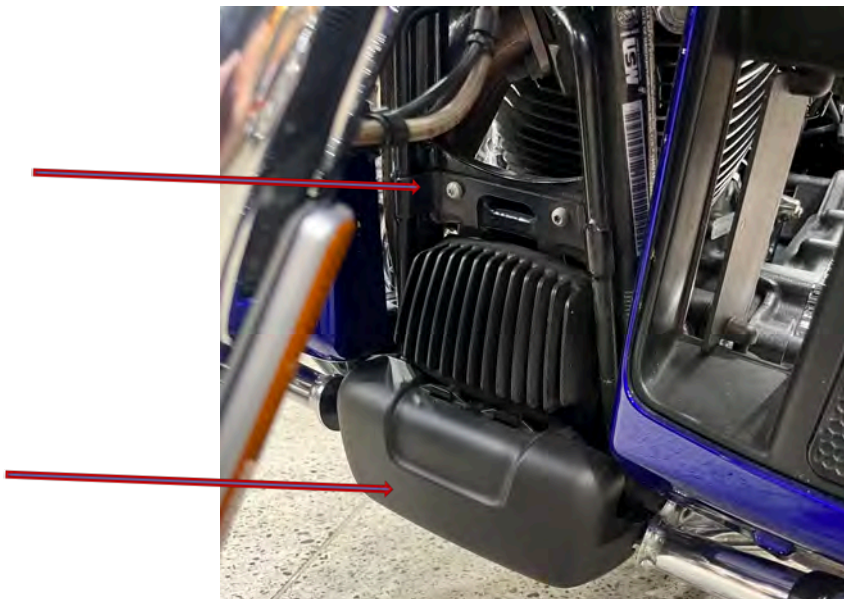
REMOVE OIL FILTER AND NUT THAT HOLDS ON THE FILTER WITH A 7/8" SOCKET



STEP 4

NOW YOU CAN REMOVE THE SCREWS THAT HOLD THE REGULATOR AND COOLANT PUMP. ALSO, THE ELECTRICAL CONNECTORS FROM THE REGULATOR UNDER THE COVER

NOTE: IF YOU TAKE OFF THE WATER PUMP REGULATOR ASSEMBLY, IT IS EASIER TO RUN LINES AND INSTALL THE ADAPTER BUT NOT NECESSARY.



STEP 5

INSTALL 90° FITTING ONTO INNER HALF OF THE ADAPTOR PLATE (JUST SNUG FOR NOW). INSTALL O-RING ON THE INSIDE FACE OF THE INNER HALF OF THE ADAPTOR PLATE. USE A BIT OF GREASE TO HOLD IN PLACE. TAKE TUBE NUT AND TIGHTEN TO 40 FOOT POUNDS. NOTE: CLOCK ADAPTER TO ALMOST TOUCH THE CYLINDER. YOU CAN CLOCK THE ADAPTER WITH A LONG SCREW DRIVER OR PRY BAR, USING A RAG OR CLOTH TO PROTECT THE FINISH. WHEN ADAPTER IS FULLY ASSEMBLED, IT SHOULD TOUCH THE CYLINDER FINNS. THIS WILL ALLOW CLEARANCE FOR THE OIL FILTER, AS THERE IS NOT MUCH ROOM.

SHOWN WITH COOLANT PUMP AND REGULATOR REMOVED



STEP 6

INSTALL LONG HOSE. START AT FRONT OF BIKE AND THREAD HOSE BETWEEN FRAME ENGINE AND OVER REAR FRAME BRACE AND OUT THE BACK OF THE FRAME. NOW CONNECT THE HOSE TO THE ADAPTER.



HERE IS A PICTURE OF WHAT IT LOOKS LIKE WHEN YOU DON'T REMOVE THE WATER PUMP



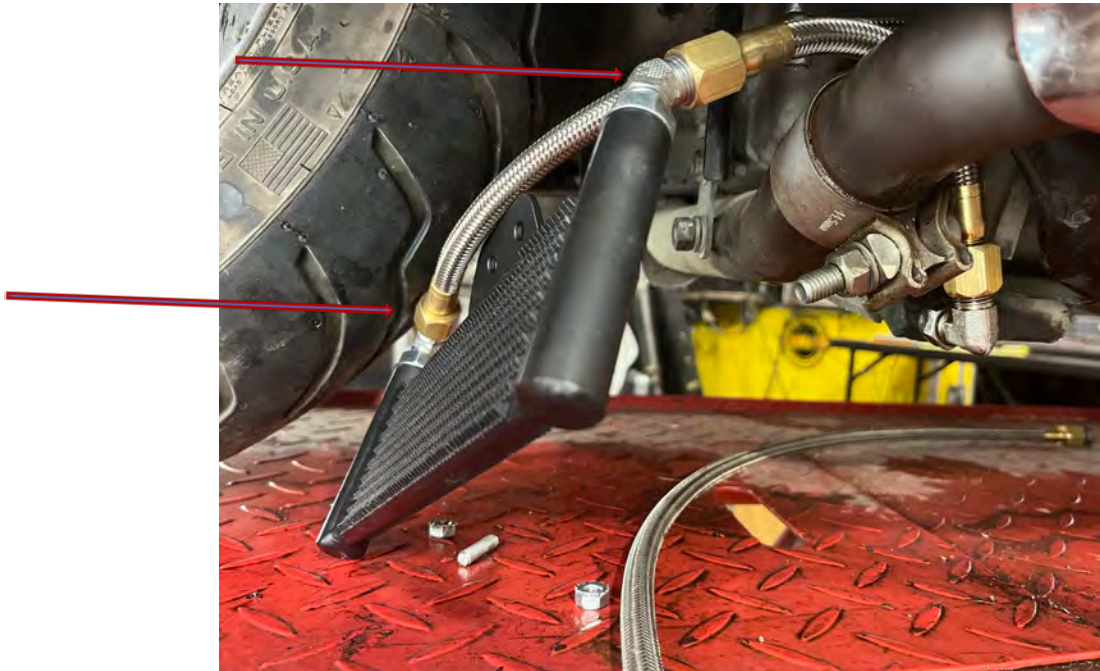
STEP 7

AT THE REAR OF THE OIL PAN THERE ARE TWO BOLTS THAT HOLD THE EXHAUST CROSSOVER TUBE. REMOVE THEM AND INSTALL THE TWO SUPPLIED ALLEN SET SCREWS. (THIS MAKES IT EASIER TO INSTALL THE BACK ELEMENT AFTER THE HOSES ARE INSTALLED.)



STEP 8

NOW CONNECT THE LONG HOSE TO THE 90° FITTING ON THE THE REAR ELEMENT, AND THE SHORT HOSE ON THE 45° FITTING ON THE REAR ELEMENT. TIGHTEN IN SHOWN POSITION.



STEP 9

BOLT ON THE OUTSIDE ADAPTER PLATE WITH THE FOUR ALLEN SCREWS.

CAUTION: DO NOT OVER TIGHTEN

YOU MIGHT HAVE TO USE A WOBBLE ALLEN WRENCH TO GET THE EXHAUST SIDE BOLTS TIGHTENED.

STEP 10

THE SECOND LONGEST HOSE HAS TO BE THREADED BETWEEN THE LEFT CORNER OF THE COOLANT PUMP AND RUN THROUGH TO THE RIGHT SIDE OF THE FRAME, WHICH WILL ATTACH TO THE ELEMENT BETWEEN THE OIL PAN AND CRANK CASE.

ATTACH THIS HOSE TO THE FITTING ON THE ADAPTER.

MAKE SURE IT'S CLOKED ABOVE THE WIRE HARNESS CONNECTOR ON THE REGULATOR AND BE SURE IT'S NOT RUBBING ON THE CONNECTOR.

STEP 11

NOW PUT THE TAB OVER THE FRAME AND ATTACH THE HOSE TO THE ELEMENT THAT GOES IN BETWEEN THE CRANK CASE AND THE OIL PAN.



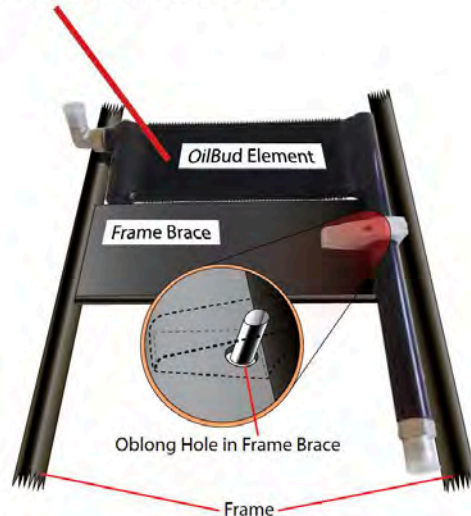
STEP 12

NEXT TAKE THE ELEMENT WITH LONG TUBE AND INSTALL IT OVER THE FRAME BRACE AND ATTACH TO THE ELEMENT BETWEEN THE OIL PAN AND THE ENGINE CRANK CASE. LEAVE LOOSE FOR NOW. INSTALL ALUMINUM CLAMPS AND LEAVE LOOSE.

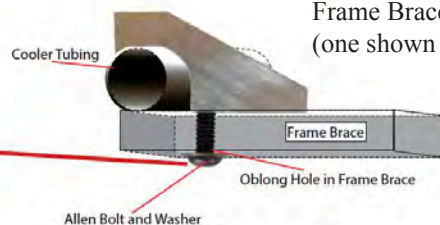
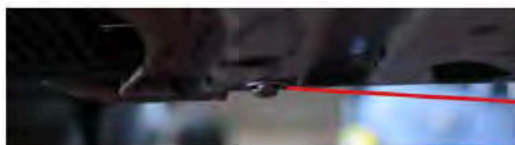
INSERT THE REAR ELEMENT OVER THE FRAME CROSS MEMBER LIKE THIS

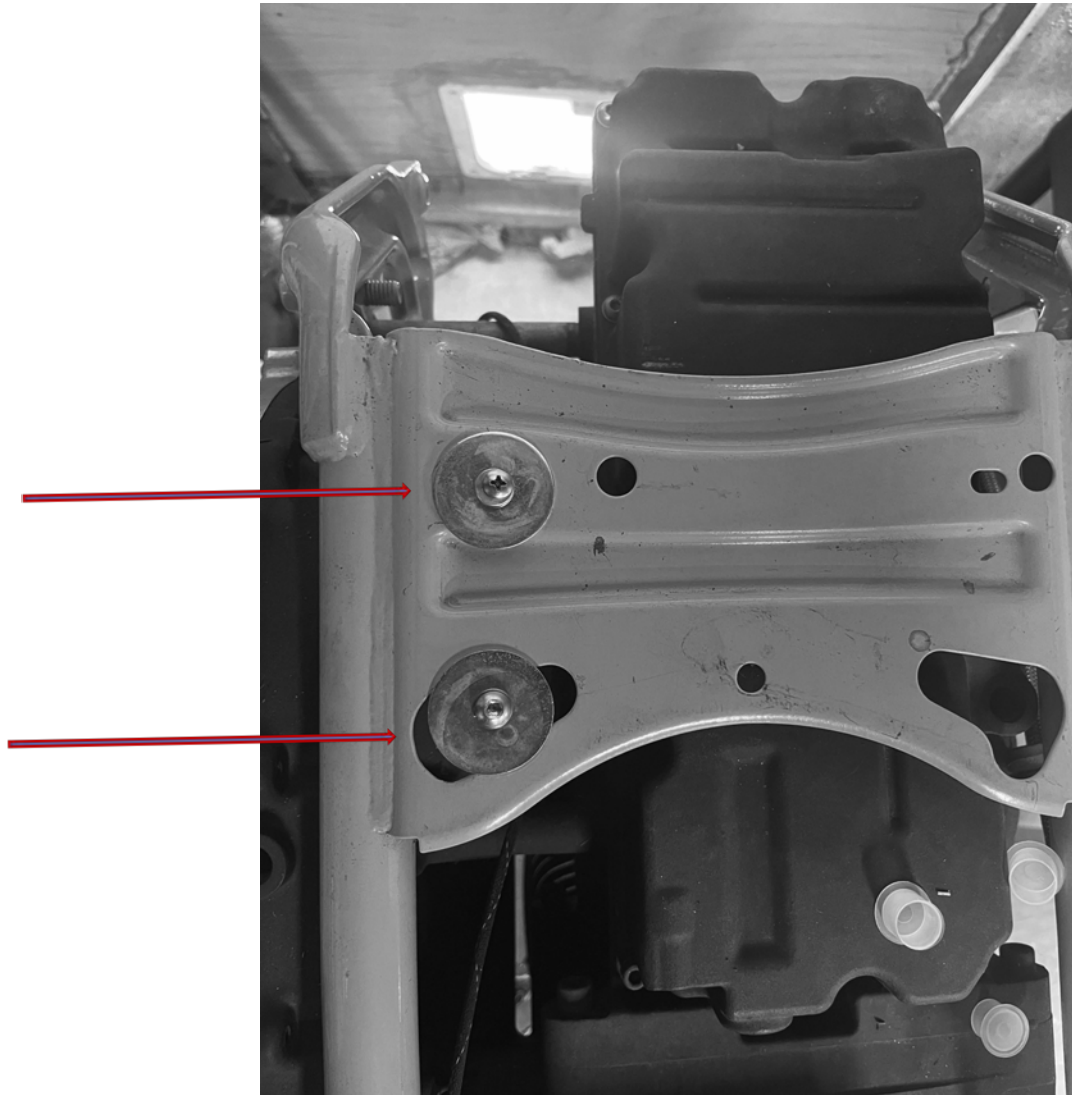


INSERT OILBUD ELEMENT OVER FRAME AND FRAME BRACE AND PLACE TUBING UNDER THE BRACKET. TIGHTEN DOWN BRACKET BOLT SOME MORE TO KEEP IN PLACE.



Aluminum Brackets to Frame Brace Assembly (one shown in diagram).





JOIN BOTH COOLER
HALVES HERE.
TIGHTEN WITH FINGERS.

WARNING*
GO AROUND & CHECK FOR
CABLES RUBBING OR
PINCHING OF HOSES.



STEP 13

SCREW ON SHORT HOSE TO MIDDLE ELEMENT.



STEP 14

ATTACH THE REAR ELEMENT TO SET SCREWS, AND INSTALL NYLOCKS. NOW TIGHTEN AND CHECK ALL FITTINGS TO MAKE SURE THEY ARE TIGHT. NOTE: IF THE ELEMENT INTERFERES WITH THE EXHAUST SHROUD, USE THE SUPPLIED 1/4" SPACERS TO GET CLEARANCE.

STEP 15

NOW RE-ATTACH THE WATER PUMP/REGULATOR ASSEMBLY. USE THE SUPPLIED SPACERS AND FASTENERS. PUT SUPPLIED HEAT SHRINK OVER THE HOSE AND PUSH OVER THE TUBES ON TOP OF THE HEAD. TAKE HEAT GUN AND SHRINK THE TUBE. MAKE SURE THE FITTINGS ARE CLOCKED SO THEY DON'T RUB ON ELECTRICAL FITTING.

FINAL CHECK UP STEPS

CHECK MIDDLE ELEMENT AND THAT IT HAS CLEARANCE FROM CRANKCASE ABOUT 1/16" (ADJUST REAR CLAMPS AS NEEDED)

CHECK ALL CONNECTIONS AND FASTERS.

INSTALL OIL FILTER AND COOLANT PUMP COVER.

START THE BIKE AND MAKE SURE THERE IS OIL PRESSURE AND THERE ARE NO LEAKS. IT MIGHT TAKE A LITTLE WHILE FOR THE COOLER TO FILL WITH OIL, SO THE OIL LIGHT MIGHT STAY ON FOR A LITTLE WHILE.

CAUTION: MAKE SURE HOSES HAVE TIE WRAPS TO PREVENT CHAFING

YOU ARE READY TO RIDE!!!!