



INSTRUCTIONS

-J01026

REV. 12-1-91

Kit Number 62588-80

DELUXE COMBINATION OIL COOLER/THERMOSTAT KIT

General

This kit is designed for use on all 1971 and later FX, 1971 to 1981 XL, and 1984 and later FXST model motorcycles.

This kit contains the following parts:

Item	Qty.	Description
1	1	Bracket (triangular - FX)
2	1	Bracket (rectangular - XL)
3	1	Oil cooler
4	1	Nipple, hose splice
5	(10 ft.)	Hose, oil
5	5	Clamp, hose
7	6	Nylon ties
8	2	Bolt, bracket to cooler
9	2	Bolt, bracket to frame (XL)
10	4	Lockwasher
11	1	Nut
12	1	Bolt, bracket to frame (FX)

CAUTION

All oil coolers and lines are installed in the part of the oil flow loop that RETURNS engine oil to the oil tank. The oil cooler OUTLET must direct oil flow into the RETURN to the oil tank.

Although the cooler MUST be in the oil flow RETURN loop, it can be installed either before or after the oil filter.

Lay-out/measure oil lines/hoses carefully BEFORE cutting the bulk oil line in this kit - MEASURE TWICE; CUT ONCE! The lengths given in this Instruction Sheet are approximations and can vary from bike to bike because of individual variations and accessories.

CAUTION

Hoses must be routed so they do not contact or interfere with any hot or moving parts. Do not pull hoses too tight, or oil flow restrictions can occur. Hoses must be routed above the bottom of the frame tube to prevent hose damage if frame should contact pavement or highway obstacle.

NOTE

The XL and FX instructions (except FXST/FLST) specify using hose connection fitting from this kit as a hose splice. Use only if necessary. There is enough hose supplied in the kit for a direct route from the oil cooler to the oil tank.

Installation - XL

1. See figure 1. Two tapped holes can be found in the area beneath the steering head where the front

downtubes meet. Secure rectangular mounting bracket (2) to frame with two bolts (9) and lockwashers (10). Tighten bolts to 12 ft-lbs torque.

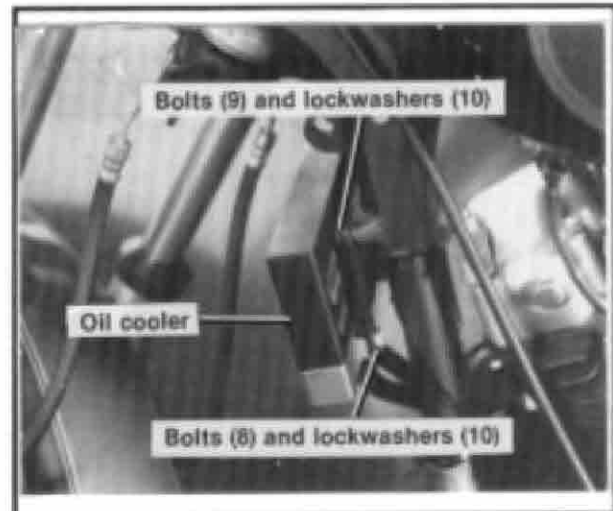


Figure 1. Oil Cooler Mounting (XL)

2. Secure oil cooler (3) to mounting bracket (2) with bolts (8) and lockwashers (10). Tighten bolts to 12 ft-lbs torque.
3. See figure 2. Remove the oil return hose, at the oil pump. Cut off one inch from the hose end to expose a new section for reconnection.

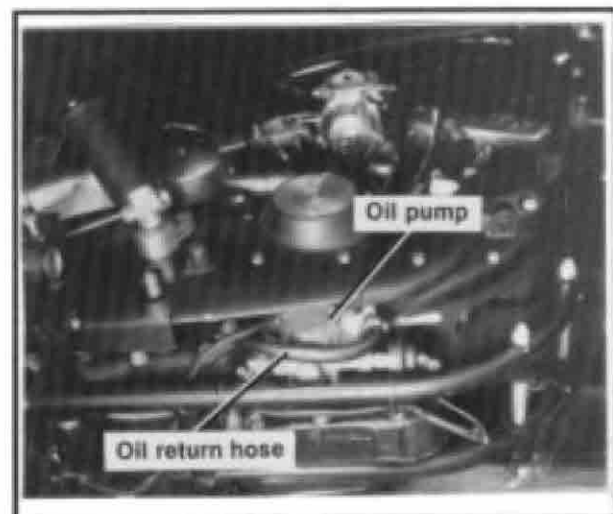


Figure 2. Oil Pump

- Cut the hose (5), included in the kit, into two equal parts. Fasten one end to the oil pump return fitting and secure it with a clamp (6).
- See Figure 3. Route the hose, that was attached in Step 4, up the right downtube to the left oil cooler fitting. Cut off excess hose and fasten with a clamp (6).

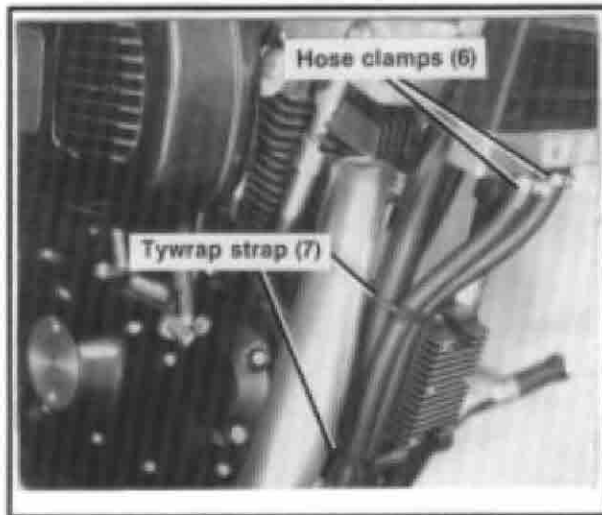


Figure 3. Strapping Hoses (XL)

- Attach the second half of the hose (5) with a clamp (6) to the right oil cooler fitting, route it down the right downtube to meet the original oil return hose removed from the oil pump.
- See "Note" on Page 1. Use the nipple (4) and clamps (6) to join the original oil return hose with the oil cooler return hose.
- Secure hoses to the downtubes and frame with nylon ties (7).
- See System Flow Test at end of "Installation - FXST" instructions.

NOTE

All hose clamps (6) should be tightened to between 10 and 12 in-lbs torque.

Installation - FX Models

- Insert bracket frame bolt (12) through the top hole in the triangular mounting bracket (1). Assemble the oil cooler to the triangular mounting bracket (1) using bolts (8) and lockwashers (10). Tighten bolts to 12 ft-lbs torque.
- See Figure 4. Install the oil cooler assembly, placing bracket frame bolt (12) through the hole provided. Secure to frame using locknut (11) and lockwasher (10). Tighten to 12 ft-lbs torque.

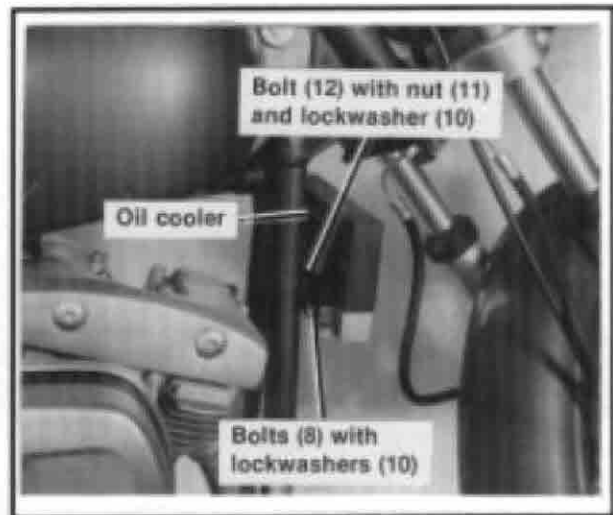


Figure 4. FX Oil Cooler Mounting

- See Figure 5. Remove the oil return hose, at the oil pump. Cut off one inch from the hose end to expose a new section for reconnection.

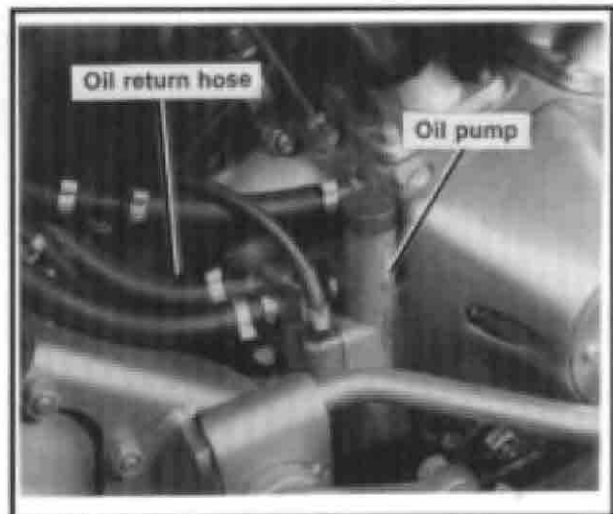


Figure 5. FX Oil Line Routing

- Cut the hose included in the kit into two equal parts. Fasten one end to the oil pump return fitting and secure it with a clamp (6).
- Route the hose that was attached in Step 4, under the crankcase and forward over the front frame crossmember. Continue forward, running the hose up the right downtube to the left oil cooler fitting. Cut off excess hose and fasten with a clamp (6).
- Attach the second half of the hose supplied to the right oil cooler fitting and fasten with a clamp (6). Route the hose down the right downtube. Continue back over the front frame crossmember, under and then up behind the crankcase to meet the original oil return hose removed from the oil pump.

7. Use the nipple (4) and hose clamps (6) to join the original oil return hose with the oil cooler return hose.
8. Secure hoses to the downtubes and frame with nylon ties (7).
9. See System Flow Test at end of "Installation - FXST".

Oil Cooler Installation - Softail® Models 1984-1986, Excluding 1986 1/2 Heritage

Install oil cooler using FX method. See OIL COOLER INSTALLATION - FX, E, S; 1977-1985.

CAUTION

Do not attempt to install this oil cooler(s) on the 1986 1/2 Heritage. It cannot be properly installed on this model.

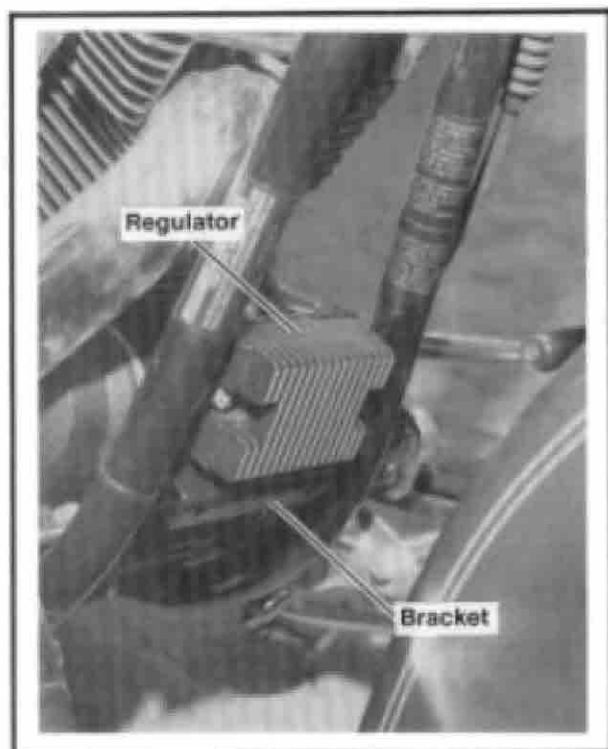


Figure 6. Oil Cooler Bracket

1987 & Later

1. Remove regulator. Do not discard fastening hardware.

NOTE

- 1987 - 1989 Softails have welded studs securing the regulator to the frame. 1990 and later Softails have bolts and nuts securing the regulator to the frame.

- As you remove the regulator hardware, note that there is an internal starwasher under each bolt head and under each nut. The starwashers are necessary to establish a ground for the regulator.

NOTE

See Figure 6. Bracket must be positioned as shown to properly locate the oil cooler.

2. See Figure 7. Place bracket, Part No. 62408-B7A in position under regulator. Install bracket and regulator using original bolts, starwashers and locknuts.

NOTE

You MUST use the starwashers to ensure proper regulator ground. On 1987 - 1989 models, place a starwasher under each nut. On 1990 and later models, place a starwasher under each bolt head and under each nut.

3. Use 3/8 - 24 x 3/4 in. bolts and nuts to fasten oil cooler to regulator bracket.



Figure 7. Oil Cooler Bracket and Oil Cooler

4. Install hoses. See HOSE INSTALLATION procedure appropriate for your model year vehicle.

Hose Installation - All Softail Models To 1991

1. See Figure 8. Cut a three foot length from kit hose. Attach one end to the outlet fitting on oil filter mount. Route other end up right downtube to oil cooler inlet fitting. Cut off excess hose and secure with clamp.
2. Attach one end of remaining hose to oil cooler outlet fitting and secure with clamp from kit. Route hose along left downtube, over frame crossmember, under engine, up rear of crankcase, and to return fitting on oil tank. Cut off excess hose and secure with clamp.
3. Secure hoses to downtube and frame with nylon ties from kit.
4. Perform SYSTEM FLOW TEST Section at the end of this Instruction Sheet.

1992 Models Hose Installation

Install oil cooler according to OIL COOLER INSTALLATION instructions preceding this section.

1. See Figure 9. Locate the point on the oil return line (to oil tank) where the steel/chrome line joins the rubber hose. Remove the clamp. Remove the hose from the steel line. Use a pan to catch the oil which may spill.
2. Place a hose clamp over one end of the kit hose. Install hose and clamp over the end of the steel line, approximately 1 in.

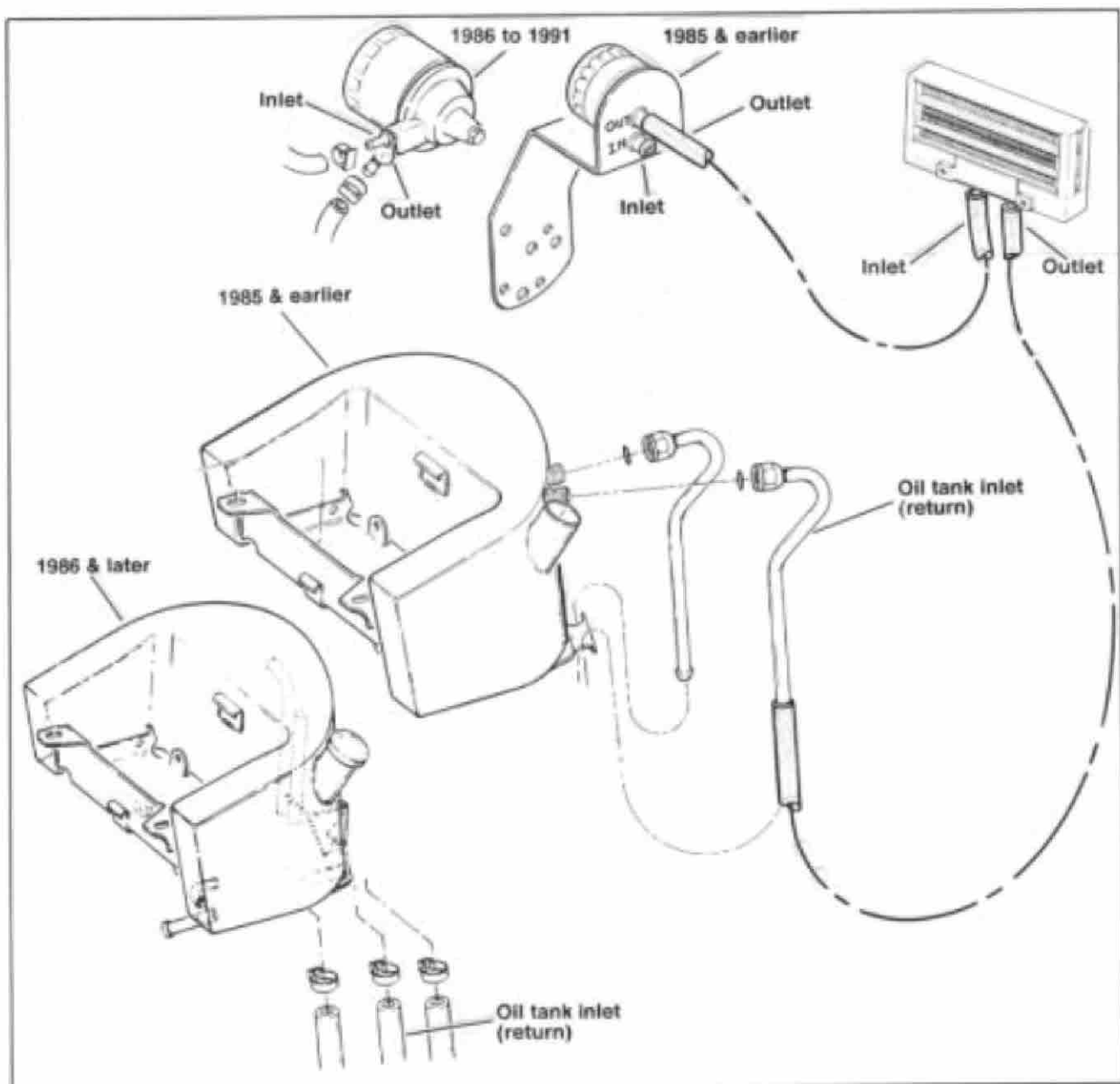


Figure 8. FXST/FLST Oil Cooler Hose Routing

3. Route hose over the frame cross member, to the left side of the vehicle. Make a large enough loop in the hose that the hose will not crimp. Use a nylon tie to fasten the hose to the inner, upper side of the frame tube.

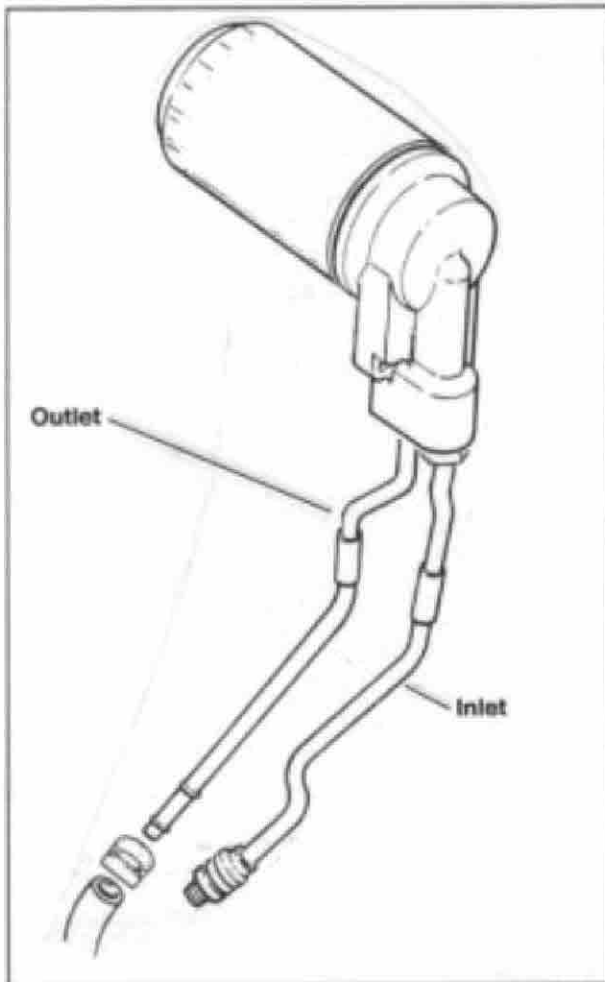


Figure 9. Oil Filter Mount - 1992; All 1340cc Models

4. Lead the hose up the inside of the frame tube to the oil cooler INLET, securing it periodically with nylon ties.
5. Cut the hose to length and install it with a hose clamp.
6. Install the remainder of the hose on the oil cooler OUTLET, using another hose clamp.
7. Lead the outlet hose down the inside of the right frame tube to the oil tank return hose you removed from the steel line. Periodically secure it with nylon ties.
8. Cut the outlet hose to length and join it to the return hose, using the the connector and one hose clamp for each side. Tighten hose clamps.

System Flow Test - All Models

CAUTION

Installing oil cooler will require the addition of 1/2 - 1 pint of oil to the engine lubrication system. Check oil level after the engine has run for a few minutes. Fill up to, but not above, full mark on dipstick.

1. Start engine. Examine all hose connections for leaks. If there is no leakage, allow engine to warm up and proceed to Step 2.
2. Verify that temperature of oil cooler core increases when engine reaches normal operating temperature. If oil cooler remains cool after engine has warmed up, there may be an oil obstruction. Turn off engine and check system for source of obstruction.