

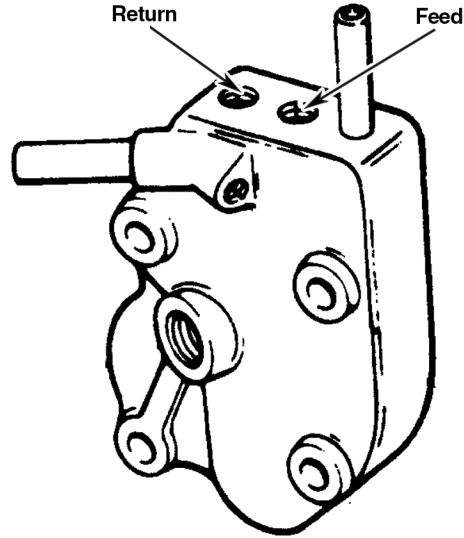
V-Twin Mfg.

Sifton Oil Pump Installation Guide VT No. 12-9969

This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

This installation guide is to be used with all the below listed Sifton Oil Pumps.

Pump	Pump W/Breather	Year	Finish
12-9969		1936-72	Polish
12-9970		1936-72	Chrome
	12-9800	1936-53	Polished
	12-9801	1936-53	Chrome
	12-9806	1954-72	Polished
	12-9807	1954-72	Chrome
12-9969	12-9800	1936-72	Polished
12-9971	12-9802	1973-91	Polished
12-9972	12-9803	1973-91	Chrome
12-9975	12-9804	1992-99	Polished
12-9976	12-9805	1992-99	Chrome



Sifton Oil Pump Assembly features improved oil pump pressure regulation that will ensure correct oiling to all areas of BT engines. This pump kit includes all necessary fittings, snap rings, keys, gaskets and mounting bolts. Our Sifton oil pumps can be used either on chain drive or belt drive models.

Note: On 1970-80 models a drilling operation is required. Oil pump kits with breather include drive gear gasket, breather gear and washers.

Note: Some of our Sifton oil pumps may include various other parts including but not limited to the following items. Drive shaft gears, breather gear kits and pinion drive gears. The items may be necessary in order to complete the installation of the oil pump.

Note: The installation of the Sifton oil pump kits may require additional modification to your engines crankcases, depending on the year and application.

Note: All Sifton oil pumps are listed by model year. It is the responsibility of the installer to carefully follow the step by step instructions listed for that particular oil pump.

Note: The installation instructions will vary from pump to pump depending on year and model. Sifton is not responsible for incorrect installation of the oil pump and/or for incorrect crankcase modifications. **READ INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION.**

Note: Failure to perform all required steps as instructed will result in engine damage.

Note: The 1948-1962 and 1966-1972 crankcases will each require additional modifications in order to function like the 1973 & later style oiling systems. Step 3 applies to all 1948-1969 crankcases except 1963-1965 models. Step 4 applies to 1970-1972 crankcases. Both procedures separate oil supplied to top and bottom ends to increase oil pressure to hydraulic lifters and top end. This modification will help prevent the hydraulic lifters from collapsing while running at low RPM's. Although these two steps are not a requisite, Sifton highly recommends them for all engines using hydraulic lifters with the exception of the 1963-1965 Panheads using outside oiler.

Oil Pump Installation Instructions:

Note: Be sure that you have properly identified your crankcases as this will be critical for the correct assembly. Also be advised that some aftermarket crankcases may not be consistent with that of a OEM stock year group. If you have any doubt as to the modifications needed for your aftermarket crankcases, contact the crankcase manufacturer. **Improper oil pump installation due to incorrect identification of crankcase year group may result in engine damage.**

Disassembly of Crankcases and Crankcase Model Identification all Years. - Refer to your OEM service manual for your specific model in order to remove the stock oil pump and mounting studs or bolts from the crankcase.

1. Crankcase Modification - 1970-1972 Models Only Plug 3/16" Oil Overflow Hole.

1. Carefully enlarge hole with a 13/64 drill bit (.203") (13/64") drill. Wrap masking tape around drill bit exactly .225" from the point of the drill bit to use as depth guide. Use extreme caution so as not to distort the hole.
2. Using 1/4-20 tap, carefully tap hole deep enough for 1/4-20 set screw to rest flush with or slightly below gasket surface. Use straight edge to confirm set screw does not protrude above the gasket surface. Use caution when tapping hole. Do not tap hole too deep otherwise the screw can be completely threaded through the hole. The screw should become tight in the threads when it is just below the gasket surface.
3. Using red loctite, install the 1/4-20 set screw.

2. Crankcase Modification - 1970-1980 Only Drill Pressure Valve Relief Hole.

1. Install Sifton Oil Pump Drill Jig, VT Part No.16-0986 on oil pump gasket surface of crankcase. For further information see instructions for VT No. 16-0986.
2. Use .125" (1/8") drill bit to drill pressure relief hole into gear cavity.

CAUTION - Do not perform Step 2. (Crankcase Modification - 1970-1980) on stock 1936-1969 crankcases or any crankcase with angled tappet screen. The drilling of this passage will intersect the tappet screen oil passage, which will result in loss of oil pressure. Loss of oil pressure will cause a lack of adequate lubrication which will lead to serious engine damage.

3. Optional Crankcase Modification - 1948-1962 - Plug and Re drill Crankshaft Feed Hole. - The purpose of this modification is to alter 1948-1962 and 1966-1969 crankcases to the 1973 & later style oiling. With this oiling system heads and lifters get primary, unrestricted oil supply first. The lower end main and rod bearings get secondary, low pressure oil after the top end is supplied. **This modification is only recommended when hydraulic lifters are being used.** 1963-1965 and other Panheads with outside oilers cannot utilize the optional crankcase modification, due to the fact that they have a different oil supply system. **If the modification is performed on Panheads with "outside oilers" as described in step 3 the result will be oil starvation to the top end which will result in severe engine damage.**

1. Using a .203" (13/64") drill bit carefully drill a hole .850" deep. **Note:** Wrap a piece of tape .850" from point of the drill bit to use as depth guide. Use caution so as not to distort the hole.
2. Using a 1/4 -20 tap, carefully tap the hole deep enough for the 1/4 -20 set screw to bottom out. The screw head should be between .550" to .600" below the cam cover gasket surface. **Note: Do not tap hole too deep. If hole is tapped too deep the set screw will block the tappet screen oil**