



Filter Knowledge, Unfiltered

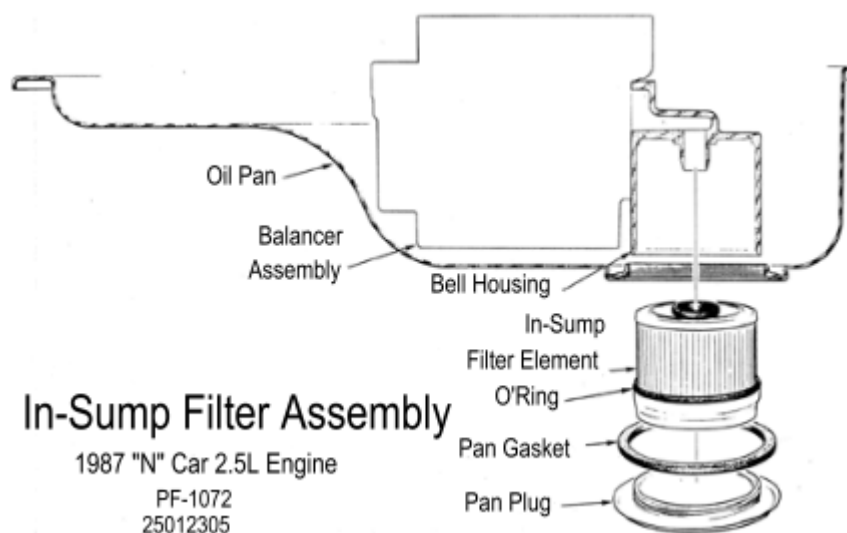
Technical Service Bulletin 93-2R1

In-Sump Oil Filters

In-sump oil filters replace the more traditional spin-on filter on vehicle applications where limited space is available. Smaller or more cramped engine compartments require alternative approaches to oil filter installation. This filter's location in the oil pan (sump) housing makes for quick access from the bottom of the engine.

Although the in-sump oil filter resides inside the engine, it is not a lifetime filter. In fact, it performs just like the spin-on oil filter. The operating conditions and filtration requirements are the same as traditional standards. Therefore, periodic maintenance is necessary as the filter becomes plugged.

An example of an in-sump oil filter application is the General Motors 2.5 liter in-line four cylinder engine. The figure details the filter housing accompanied with an exploded view of the filter and pan plug components. The drain plug (located on the pan plug) allows the installer to drain the oil through a small opening. Removal of the pan plug (after draining the oil) provides access to the oil filter. A special tab on the bottom end plate allows for quick removal of the filter with pliers.



Special attention must be given to the gaskets on the filter and on the oil pan plug assembly. First, check for all necessary gaskets on the oil filter and in the replacement kit. Second, remove all corresponding gaskets and debris from the

sealing surfaces. Finally, properly lubricate all gaskets and grommets with clean engine oil before installation. Following this procedure insures proper servicing of the in-sump oil filter. Refer to the owner's manual or filter catalog for the exact filter location and servicing for your vehicle application.

For additional information, contact:

Filter Manufacturers Council
P.O. Box 13966
Research Triangle Park, NC 27709-3966
Phone: 919/406-8817 Fax: 919/406-1306
www.filtercouncil.org
Administered by Motor & Equipment Manufacturers Association