

# Filter Base Mounting —SAE J363 FEB80

SAE Recommended Practice  
Completely Revised February 1980

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Report of the Engine Committee, approved October 1968, completely revised February 1980.

**Scope**—This SAE Recommended Practice identifies the necessary dimensional characteristics of filter base mounting configurations to accept the more commonly used lubricating oil and diesel fuel spin-on filters.

**GENERAL INFORMATION**

**Lubricating Oil Spin-On Filter Base Mounting**—Fig. 1 is a composite drawing which outlines the base mounting and clearance requirements for spin-on oil filters.

Table 1 lists the insert thread size and gasket seal diameters of the base mounts for the more commonly used spin-on oil filters and their recommended applications.

**Diesel Fuel Spin-On Filter Base Mounting**—Fig. 2 is a composite drawing which outlines the base mounting and clearance requirements for spin-on fuel filters. Optional methods of preventing fuel leakage by the insert threads may be provided by means of a radial seal boss Type E or a compression seal member Type D as shown respectively in the upper and lower halves of the drawing. The insert is to be threaded full distance F plus at least one full thread.

Table 2 lists the insert thread size and gasket seal diameters of the base mounts for the more commonly used spin-on fuel filters and their recommended applications.

**Note:** The insert thread sizes listed in Tables 1 and 2 which are recommended for use are those designated by an asterisk. Others listed are available but not recommended as standard.

Only Unified National thread sizes are shown since the decision to adapt metric threads for filter mounting has not been finalized by engine manufacturers in the United States.

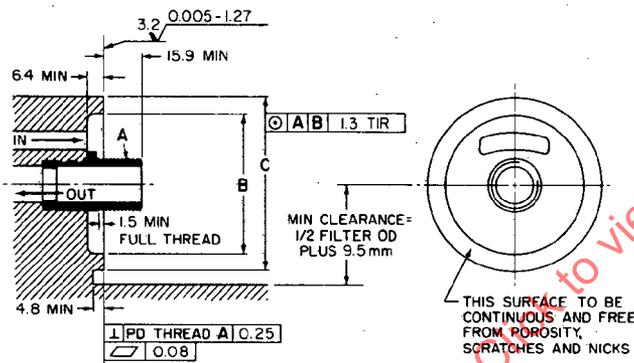


FIG. 1

TABLE 1—LUBRICATING OIL FILTER BASE MOUNTING DIMENSIONS

A Insert Thread Size	B I.D. mm	C O.D. mm	Recommended Filter Applications
*5/8-18 UNF2A	59.0 ± 1.0	79.0 ± 1.0	Partial flow with built in restriction
*3/4-16 UNF2A	59.0 ± 1.0	79.0 ± 1.0	Full flow with 62 kPa bypass valve
*13/16-16 UN2A	59.0 ± 1.0	79.0 ± 1.0	Full flow without bypass valve
13/16-16 UN2A	75.0 ± 1.0	93.0 ± 1.0	Full flow without bypass valve
*7/8-16 UNF2A	59.0 ± 1.0	79.0 ± 1.0	Full flow with 138 kPa bypass valve
1-12 UNF2A	59.0 ± 1.0	79.0 ± 1.0	Full flow without bypass valve
*1-16 UN2A	59.0 ± 1.0	79.0 ± 1.0	Full flow without bypass valve
*1 1/8-16 UN2A	87.0 ± 1.0	113.0 ± 1.0	Full flow without bypass valve
1 1/2-12 UNF2A	87.0 ± 1.0	113.0 ± 1.0	Full flow without bypass valve
*1 1/2-16 UN2A	87.0 ± 1.0	113.0 ± 1.0	Full flow without bypass valve

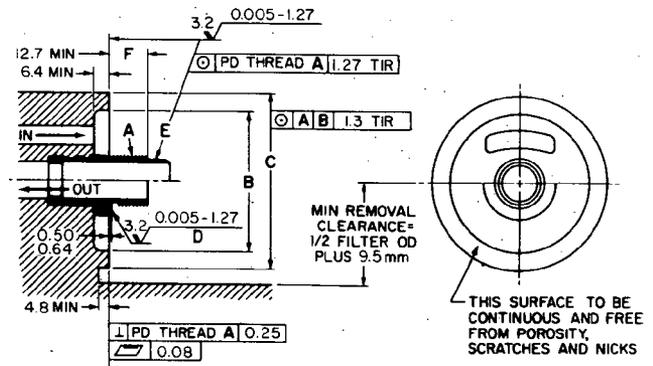


FIG. 2

TABLE 2—DIESEL FUEL FILTER BASE MOUNTING DIMENSIONS

A Insert Thread Size	B I.D. mm	C O.D. mm	Recommended Filter Applications
5/8-11 UNC2A	59.0 ± 1.0	79.0 ± 1.0	Diesel fuel filter
13/16-12 UN2A	75.0 ± 1.0	93.0 ± 1.0	Secondary diesel fuel filter
*13/16-18 UNS2A	59.0 ± 1.0	79.0 ± 1.0	Primary diesel fuel filter
*7/8-14 UNF2A	59.0 ± 1.0	79.0 ± 1.0	Secondary diesel fuel filter
7/8-16 UN2A	59.0 ± 1.0	79.0 ± 1.0	Secondary diesel fuel filter
*15/16-16 UN2A	59.0 ± 1.0	79.0 ± 1.0	Diesel fuel filter
1-12 UNF2A	75.0 ± 1.0	93.0 ± 1.0	Primary diesel fuel filter
*1-14 UNS2A	59.0 ± 1.0	79.0 ± 1.0	Diesel fuel filter
*1 1/16-16 UN2A	87.0 ± 1.0	113.0 ± 1.0	Secondary diesel fuel filter
*1 1/4-12 UNF2A	87.0 ± 1.0	113.0 ± 1.0	Diesel fuel filter
*1 3/8-16 UNF2A	87.0 ± 1.0	113.0 ± 1.0	Diesel fuel filter

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