

Title (en)
FOUR-STROKE INTERNAL COMBUSTION ENGINE

Title (de)
VIERTAKTBRENNKRAFTMASCHINE

Title (fr)
MOTEUR A COMBUSTION INTERNE A QUATRE TEMPS

Publication
EP 1147298 A1 20011024 (EN)

Application
EP 00904332 A 20000113

Priority

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Abstract (en)
[origin: WO0043655A1] A four-stroke internal combustion engine (20) is provided. There is provided within an engine housing (28) an oil reservoir (126) and a valve chamber (156) which independently communicate with a crank chamber (124). A strategically placed divider (116) and passageway, located within the engine housing (28), appropriately direct lubricant within the engine housing (28) so that the internal cavity of the engine is lubricated during use in various operating attitudes, and so that the fluid flows to and is held in the proper chambers of the engine housing during storage. There is also provided a breather arrangement for an internal combustion engine (20) which includes a cam shaft (98) having a hollow passageway in communication with the crank chamber (124) and the air intake system of the engine. There is also provided an engine housing which can be utilized for engines having different horse power ratings. There is also provided a crankshaft bearing assembly (68, 70) which prevents damage to the bearing upon insertion of the crankshaft (80) into the crank chamber (124).

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Cited by
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WO 0043655 A1 20000727; AU 2610700 A 20000807; AU 760498 B2 20030515; CA 2368207 A1 20000727; CA 2368207 C 20051213; CN 100351505 C 20071128; CN 100357577 C 20071226; CN 100368661 C 20080213; CN 1218118 C 20050907; CN 1298972 C 20070207; CN 1298973 C 20070207; CN 1298974 C 20070207; CN 1338024 A 20020227; CN 1560445 A 20050105; CN 1560446 A 20050105; CN 1560447 A 20050105; CN 1560448 A 20050105; CN 1560449 A 20050105; CN 1654794 A 20050817; DE 60017198 D1 20050203; DE 60017198 T2 20051222; DE 60017200 D1 20050203; DE 60017200 T2 20051222; DE 60018905 D1 20050428; DE 60018905 T2 20060330; DE 60018986 D1 20050428; DE 60018986 T2 20060126; DE 60031463 D1 20061130; DE 60031463 T2 20070823; DK 1267052 T3 20050509; DK 1267054 T3 20050509; EP 1147298 A1 20011024; EP 1147298 B1 20050323; JP 2002535547 A 20021022; JP 2005282582 A 20051013; JP 2005320975 A 20051117; JP 2005344727 A 20051215; JP 2006138326 A 20060601

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