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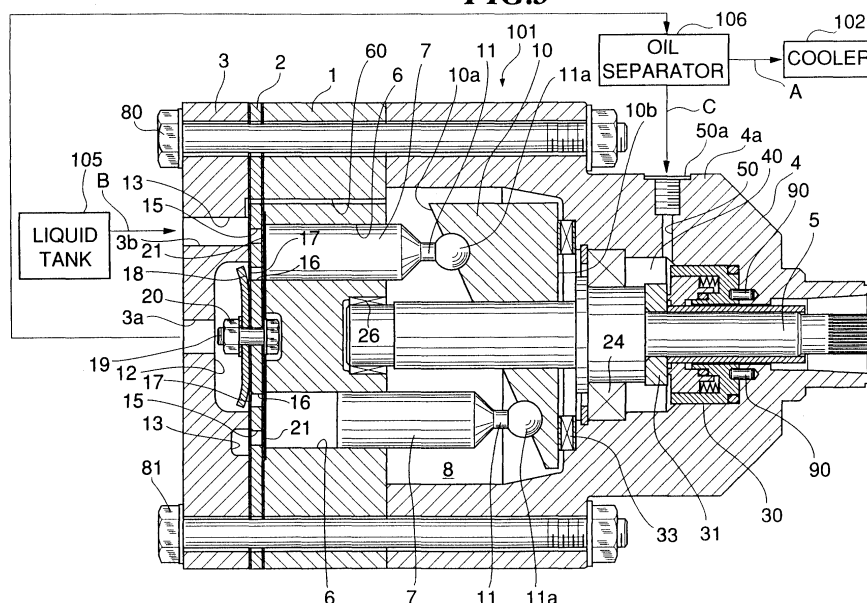
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(54) **Compressor for use in a transcritical refrigeration cycle system**

(57) A compressor (101) for use in a transcritical refrigeration cycle system, comprises a housing (4), a drive shaft (5) supported rotatably by a bearing (24) within the housing (4), a shaft seal (30, 31) interposed between the housing (4) and the drive shaft (5) so as to prevent a high-pressure fluid consisting essentially of a refrigerant and a lubricating oil from leaking from the

compressor (101), and a space (40) in which are received the bearing (24) and the shaft seal (30, 31). Pressure within the space (40) is lower than the discharge pressure of the high-pressure fluid. The housing (4) is formed with a lubricating oil return passage (50) for returning lubricating oil separated from the high-pressure fluid discharged from a discharge port (3a) of the compressor (101, to the space (40).

FIG.3





European Patent
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EUROPEAN SEARCH REPORT

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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The present search report has been drawn up for all claims			F04B F16J
Place of search		Date of completion of the search	Examiner
THE HAGUE		1 March 1999	Jungfer, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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