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(54) **Title:** LUBRICANT FOR LOW GLOBAL WARMING POTENTIAL REFRIGERANT SYSTEMS

(57) **Abstract:** The disclosed technology relates to a working fluid for a low global warming potential (GWP) refrigeration system that includes a compressor, where the working fluid includes an ester based lubricant and a low GWP refrigerant, and where the ester based lubricant includes an ester of one or more branched carboxylic acids where said branched carboxylic acid contains 8 or less carbon atoms. The disclosed technology provides commercially useful low GWP working fluids (commercially useful working fluids based on low GWP refrigerants) that do not have the solubility and/or miscibility problems commonly seen in low GWP fluids, including high viscosity fluids and applications.



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