

Lubricant Formulations Containing Phosphonium Ionic Liquids

Disclosure Number

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Technology Summary

A lubricant formulation containing one or more ionic liquids (ILs) as additives. The dispersant is high molecular weight (HMW), low molecular weight (LMW), or a combination among them. Conventional anti-wear additives, e.g., zinc dialkyldithiophosphate (ZDDP), may be used together with the IL(s). For example, using an IL together with an additive, a detergent, and a dispersant provides a good overall performance in friction and wear reductions. Potential applications include internal combustion engines, gears, bearings, axles, hydraulic systems, metal cutting and forming, and other manufacturing processes.

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