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(57) Abstract :

All manufacturers of diesel vehicles (4-wheelers or higher) claim that the engine of their vehicle would work at better efficiency if the owners follow the recommendations given in their instruction manuals. There remains different mileage figure for the same capacity of vehicle engine designed by different manufacturers. They would also not part with their know-how in order to prevent others from working on it. An alternative which can be thought of as a means to increase the engine efficiency is to preheat the fuel before it goes to engine. Though this contributes to the purpose, but needs inputs of extra energy. As this does not increase efficiency to an appreciable extent, this is not a viable proposition. However, as per this present invention, it has been found that a lot of scope still exists for further improving the engine efficiency. Herein new designs have been worked out in order to further increase vehicle diesel engine efficiency. There have been considered two modes of increasing the efficiency of vehicle diesel engines- viz. (i) by internal recovery/conserving of heat by redesign of silencer in order to utilise it back in the engine and (ii) by designing the optimum advance of fuel injection; these two together leading to 11-15 % increase in engine efficiency.

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