

Efforts to Reduce Value Fuel Consumption and Exhaust Gas Emissions by Using Tilt Angle Variation Turbo Cyclone and Fuel Compositon 4 Stroke 1 Cylinder Gasoline Engine

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ABSTRACT

Use of turbo cyclone on intake manifold 4 stroke 1 cylinder gasoline engine can make air and fuel that will enter engine cylinder becomes rotating, so mixing between air and fuel become more perfect. Besides use of ethanol as a fuel mixture pertamax makes octane value of the fuel goes up, so can resistant to knocking. Research at Department of Transportation Lumajang regency. In this study using experimental methods with tilt angle variation turbo cyclone 30°, 45° and 60° also using pertamax fuel and addition of ethanol by 5% (E5), 10% (E10) and 15% (E15). From test results it can be concluded that with addition of turbo cyclone variations 30° and 45° better in reducing value of fuel consumption and exhaust emissions compared to turbo cyclone 60° also addition of ethanol increases amount of fuel consumption but it can reduce value of exhaust emissions. Using turbo cyclone 30° on average gasoline engines are best at reducing fuel consumption and exhaust emissions. Addition of ethanol can increase viscosity of pertamax fuel.

Keywords : Fuel Consumption, Exhaust Emissions