



Hino Engine testing with B20 bio diesel fuel

The test operated to 6th-Jan from 11th-Nov at BTMP-BPPT.
Detailed investigation is on going.

Flash report is as below;

1. Test Engine type
2. Test condition
3. Engine Performance at Initiating a test
4. Time chart of PS, Fuel, back pressure of fuel line
5. Summary

30th-Jan-2015
Hino Motors,



1. Test Engine type, test condition

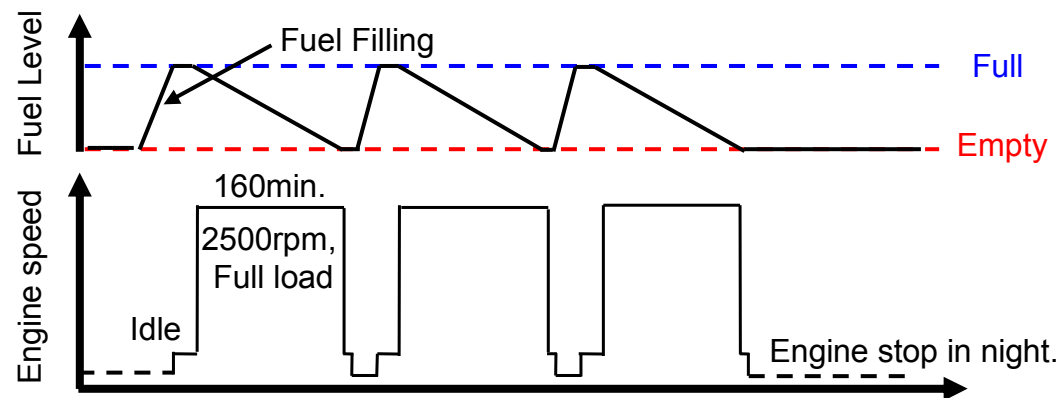
Engine Type	Water cooled, 4Cylcle Diesel Engine, Turbocharger with Inter cooler
Number of Cylinders	6Cylinder, In-line Engine
Engine Displacement	8L
Injection System	Direct Injection System, Electrical control System (Common-rail)
Maximum gross Power	210kW at 2500rpm
Maximum gross Torque	893Nm at 1500rpm
Emission regulation	EURO II



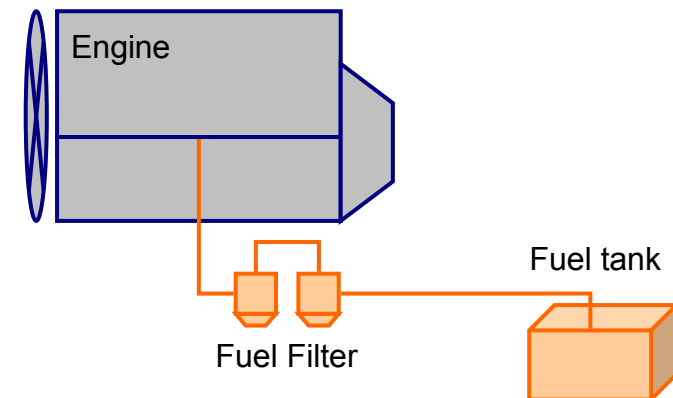
2. Test condition

Operation Condition	2500rpm Full load condition (Max. Power Point)
Operating pattern	160min, 3cycles in day, Total 400hr
Fuel Line	Same as actual vehicle
Fuel	B20 fuel mixed by BRDST. Fuel properties is analyzed by LEMIGAS.

Operating pattern

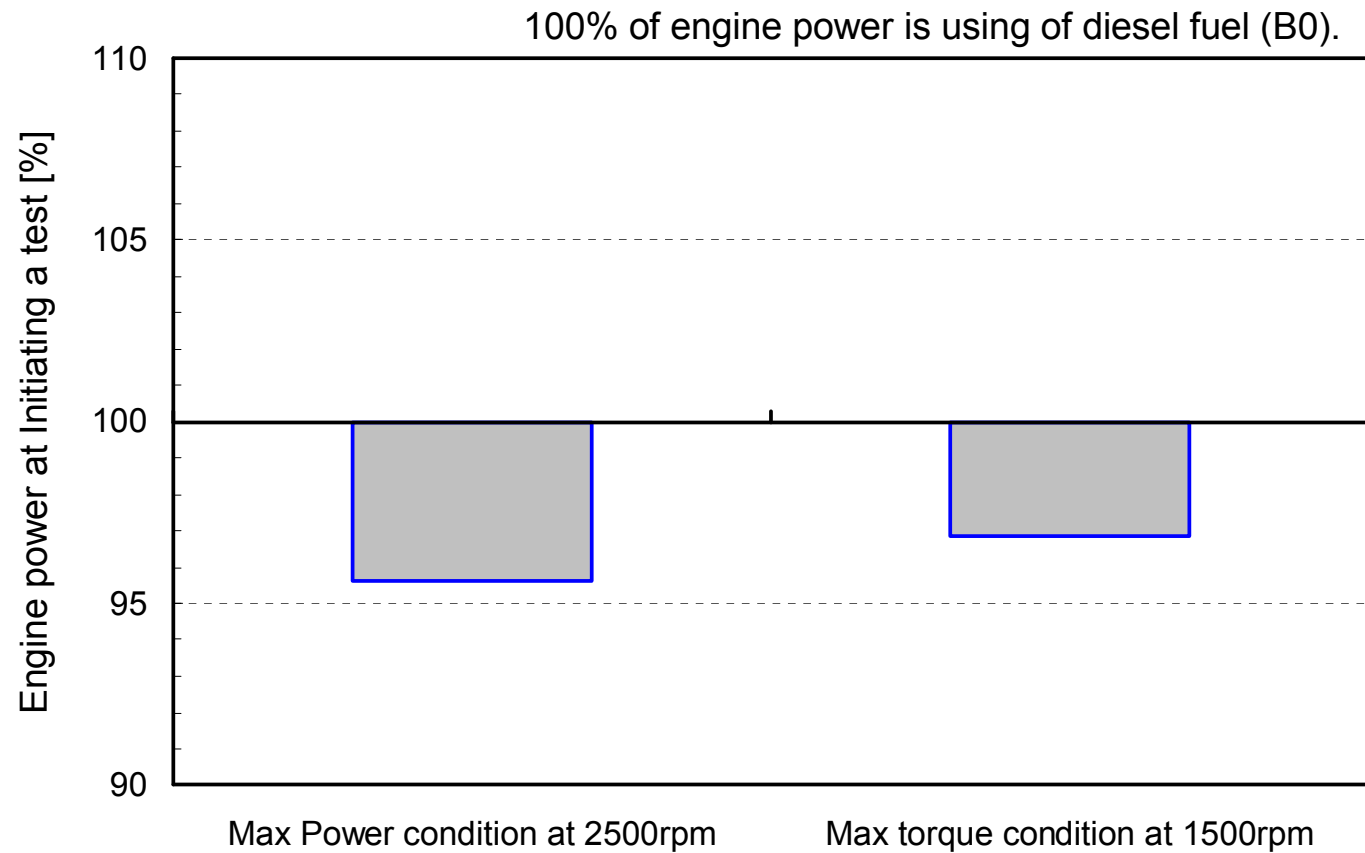


Fuel line





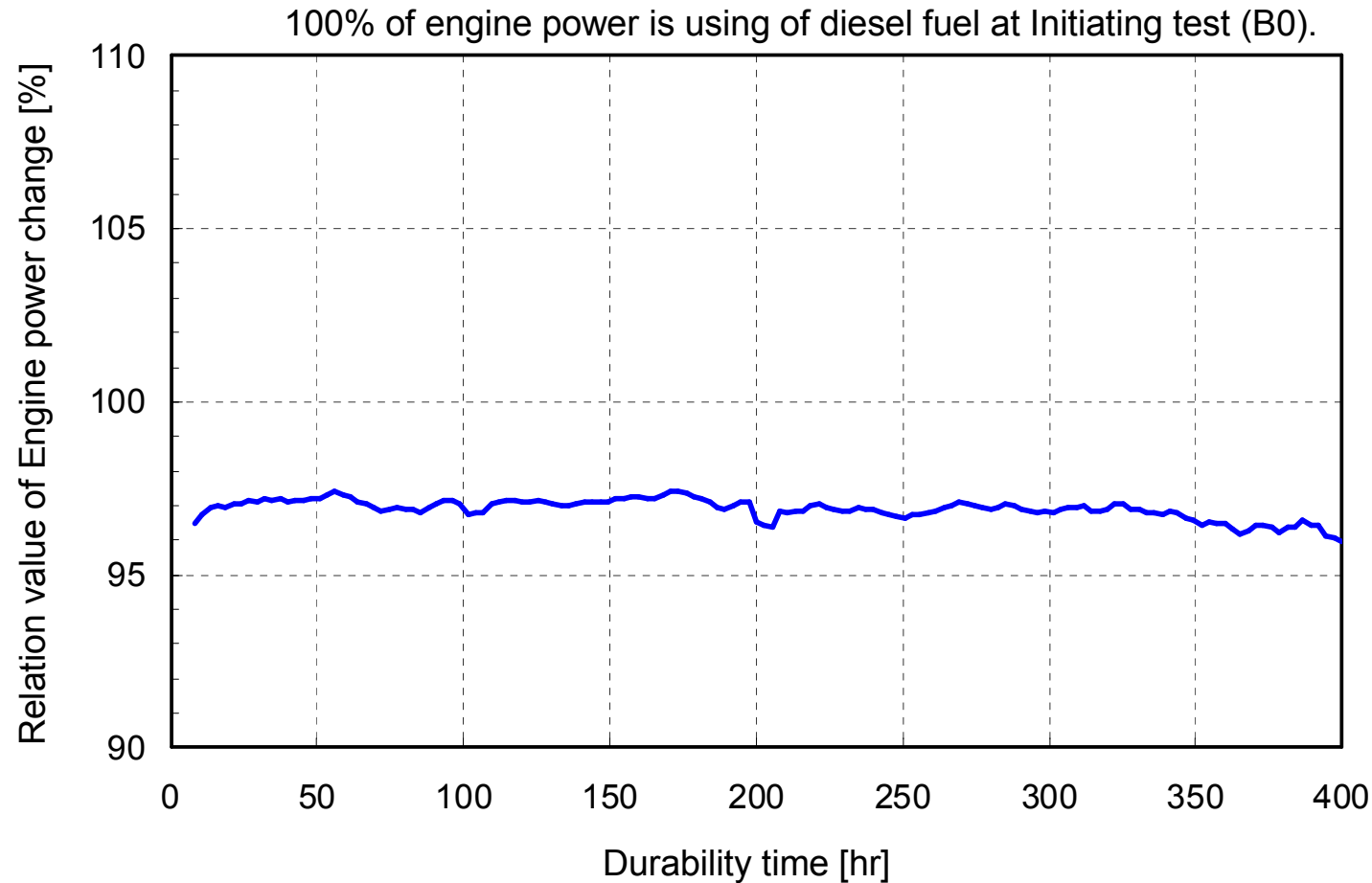
3. Engine Power at Initiating a test



Engine power with B20 fuel was 3-5 % lower than that with diesel fuel (B0).



4-1. Time chart of Engine Power

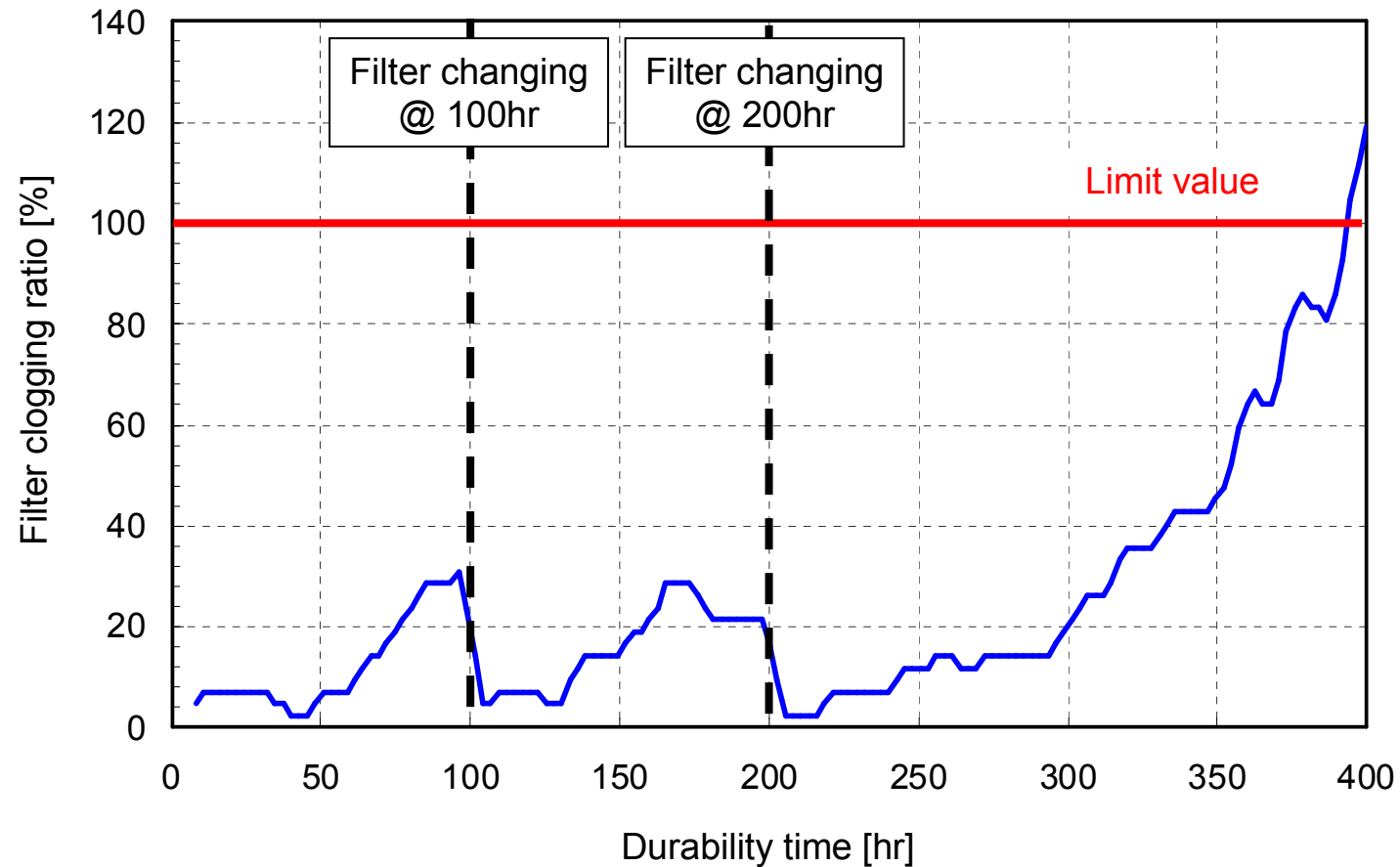


Engine Power at 400hr was on almost 0hr of engine power.
But, Tendency of engine power decreasing was to be observed.
The injection parts is needed of detail analysis.



4-2. Time chart of Fuel filter pressure

Fuel filter clogging ratio was calculated by differential pressure of fuel filter.



Fuel filter was clogged in early period.



5. Summary

[Summary]

- Engine power with B20 fuel was 3-5 % lower than that with diesel fuel (B0).
- Engine Power at 400hr was on almost 0hr of engine power. But, Tendency of engine power decreasing was to be observed. The injection parts is needed of detail analysis.
- Fuel filter was clogged in early period.

[Upcoming plan]

- Detail analysis for parts after durability test : - End of Apr.