

P.P. Winterthur Gas & Diesel AG, PO Box 414, CH-8401 Winterthur

Premier Six Pte Ltd
Mrs. Quek Mei Xing
73 Ubi Road 1, #08-63
Oxley Bizhub
Singapore 408733

Winterthur, 6. December 2016

No Objection Letter: Premier Six Opt-Max BoB300 additives (BN40 to 120)

Dear Sir/Madam,

The **Premier Six Opt-Max BoB300 additive package for Blending on Board**, blended with a **validated system oil according to technical bulletin RT-138 A1 and within operational limits according to technical bulletin RT-138**, has satisfactorily completed a 4'000 hours validation test for the BN 40 to <80 range on-board the vessel **Maersk Antares (IMO 9342504)** fitted with a **Wärtsilä® 12RT-flex96C-B** engine and a 4'000 hours validation test for the BN 80 to 120 range. Based upon the results of the engine inspections and lubricating oil analyses, Winterthur Gas & Diesel (WinGD) has no objection to the use of the mentioned **additive package for Blending on Board** in WinGD X, WinGD X-DF, WinGD RT-flex, Wärtsilä® RTA, Wärtsilä® RT-flex and Wärtsilä® X engines as well as in Sulzer 2-stroke engines operating on fuels with a sulphur content in the range of **0.5<S<3.5% w/w**.

Specific test information:

BN range of test	BN 40 - BN 120										
Tested BN blends	BN 40	BN 50	BN 60	BN 66	BN 76	BN 85	BN 90	BN 96	BN 100	BN 104	BN 106
Fuel sulphur	0.08 % and 1.03 %	0.82 %	0.08 % and 1.02 %	0.05 % and 1.71 %	0.10 % up to 2.47 %	2.85 %	3.32 %	3.20 % up to 3.51 %	2.10 % up to 3.34 %	2.85 % and 3.48 %	3.34 % up to 3.48 %
Feed rates	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh	0.8 g/kWh
Engine type	12RT-flex96C-B										
System oil type used during test	ExxonMobil Mobilgard 300 (validated system oil, during test within operational limits according to technical bulletin RT-138) ExxonMobil does not warrant the performance of new or used ExxonMobil Mobilgard 300 when used as blend component in BOB systems producing on board blended cylinder oils.										
Load range during test	7 % - 63 % MCR										

Premier Six assumes all responsibility for the performance of the mentioned **additive package for Blending on Board** in service in the mentioned engine types to the exclusion of any liability of WinGD and companies belonging to the Wärtsilä group. **Premier Six** along with other possible manufacturers and distributors of the mentioned lubricating oil shall indemnify, compensate and hold harmless WinGD and companies belonging to the Wärtsilä group from and against any claims, damages and losses caused by the mentioned **additive package for Blending on Board**. The application must comply with WinGD's and Wärtsilä's lubricating oil requirements and recommendations. Lubricants should be used as recommended in the Wärtsilä Technical Bulletins RT-138, RT-161 and other manuals.

Premier Six undertakes to inform the undersigned representatives of any subsequent changes in the formulation of the mentioned **additive package for Blending on Board**. This **No Objection Letter is valid for a period of two years** from the date of issue and may be re-issued and extended if satisfactory field performance is proven during the two year period.

Yours sincerely,



Konrad Räss
General Manager Combustions System
Winterthur Gas & Diesel Ltd.



Sangram Kishore Nanda
General Manager Product Engineering
Wärtsilä Services Switzerland Ltd.