OUTBOARD RANGE

Category: Seven Seas Series Automotive and Agriculture Lubricants **Description:** A four stroke engine oil for outboard application, formulated with carefully selected high quality base oils and special four stroke additives to achieve the following properties:

- a perfect lubrication of all motor parts
- a very active detergency, resulting in a cleaner motorcompartment
- good cold start properties
- a very strong activity against wear, oxidation and corrosion
- excellent shear stability

Application: This four stroke engine oil is special advised for the lubrication of high speed four stroke engines under heavy duty load. Because four stroke outboard engines require other properties for engine oils, this oil is not suitable for use in passenger cars. This engine oil meets the newest requirement for outboard engines of the NMMA.

Performance Level: Meets the requirements of NMMA FC-W

Total Base Number, mgKOH/g:

Typicals:	Density at 15 °C, kg/l:	0,876
	Viscosity -25 °C, mPa.s:	5000
	Viscosity 40 °C, mm ² /s:	76,60
	Viscosity 100 °C, mm ² /s:	11,80
	Viscosity Index:	149
	Flash Point COC, °C:	216
	Pour Point °C.	-27



Category: Seven Seas Series Automotive and Agriculture Lubricants **Description:** A four stroke engine oil for outboard application, formulated with carefully selected high quality base oils and special four stroke additives to achieve the following properties:

- a perfect lubrication of all motor parts
- a very active detergency, resulting in a cleaner motor compartment
- good cold start properties
- a very strong activity against wear, oxidation and corrosion
- excellent shear stability

Application: This four stroke engine oil is special advised for the lubrication of high speed four stroke engines under heavy duty load. Because four stroke outboard engines require other properties for engine oils, this oil is not suitable for use in passenger cars. This engine oil meets the newest requirement for outboard engines of the NMMA.

Performance Level: Meets the requirements of NMMA FC-W

 Typicals:
 Density at 15 °C, kg/l:
 0,892

 Viscosity 40 °C, mm²/s:
 151,90

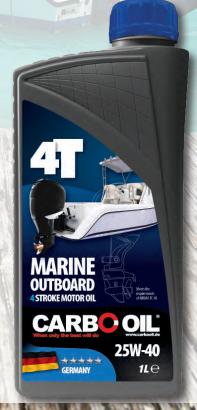
 Viscosity 100 °C, mm²/s:
 15,50

 Viscosity Index:
 104

 Flash Point COC, °C:
 244

 Pour Point, °C:
 -21

 Total Base Number, mgKOH/g
 7,7



Category: Seven Seas Series Automotive and Agriculture Lubricants **Description:** A four stroke engine oil for outboard application, formulated with carefully selected high quality base oils and special four stroke additives to achieve the following properties:

- a perfect lubrication of all motor parts
- a very active detergency, resulting in a cleaner motorcompartment
- good cold start properties
- a very strong activity against wear, oxidation and corrosion
- excellent shear stability

Application: This four stroke engine oil is special advised for the lubrication of high speed four stroke engines under heavy duty load. Because four stroke outboard engines require other properties for engine oils, this oil is not suitable for use in passenger cars. This engine oil meets the newest requirement for outboard engines of the NMMA.

Performance Level: Meets the requirements of NMMA FC-W

Typicals:		Density at 15 °C, kg/l:	0,876
		Viscosity -25 °C, mPa.s:	5000
		Viscosity 40 °C, mm ² /s:	76,60
	0	Viscosity 100 °C, mm ² /s:	11,80
		Viscosity Index:	149
		Flash Point COC, °C:	216
		Pour Point, °C:	-27
		Total Base Number, mgKOH/g:	7,7



SKIPPER RANGE

Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

Application: This marine oil is suitable as lubricating oil of high- and medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is less then 1,8%. Due to its load-carrying properties this oil can also be used in shipboard gearboxes.

Performance Level: API CF Mil-L-2104C

Typicals:	Density at 15 °C, kg/l:	0,900
	Viscosity 40 °C, mm ² /s:	135,00
	Viscosity 100 °C, mm ² /s:	14,50
	Viscosity Index:	103
	Flash Point COC, °C:	254
	Pour Point, °C:	-21
	Total Base Number, mgKOH/g:	25,0
	Sulphate Ash, %:	3,26
	SAE:	40



Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

Application: This marine oil is suitable as lubricating oil of high- and medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is less then 1,8%. Due to its load-carrying properties this oil can also be used in shipboard gearboxes.

Performance Level: API CF Mil-L-2104C

Typicals: Density at 15 °C, kg/l: 0,900 Viscosity 40 °C, mm²/s: 138,00 Viscosity 100 °C, mm²/s: 14,40

Viscosity Index: 103 Flash Point COC, °C: 254

Pour Point, °C: Total Base Number, mgKOH/g:

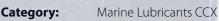
Sulphate Ash, %: 2,74

SAE: 40





20,3



Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

This marine oil is suitable as lubricating oil of high- and **Application:** medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is less then 1.8%. Due to its load-carrying properties this oil can also be used in shipboard gearboxes.

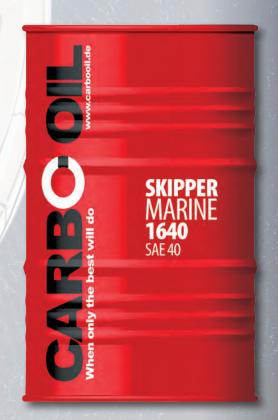
API CF Mil-L-2104C DEF STAN 91-22/2 **Performance Level:**

0,898 **Typicals:** Density at 15 °C, kg/l: Viscosity 40 °C, mm²/s: 151,90 Viscosity 100 °C, mm²/s: Viscosity Index: 14,40

92 Flash Point COC, °C: 252 Pour Point, °C: -21

Total Base Number, mgKOH/g: 16,3 Sulphate Ash, %: 2,21 SAE:

40



Category: Marine Lubricants CCX

Description: This multigrade marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong oxidationstability
- a high and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

Application: This multigrade marine oil is suitable as lubrication oil of high- and medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel. Due to its load-carrying properties this oil also can be used in shipboard gearboxes.

Performance Level: API CF Mil-L-2104C

Typicals: Density at 15 °C, kg/l: 0,885

Viscosity -20 °C, mPa.s:

Viscosity 40 °C, mm²/s:

Viscosity 100 °C, mm²/s:

Viscosity Index:

Flash Point COC, °C:

Pour Point, °C:

Total Base Number, mgKOH/g:

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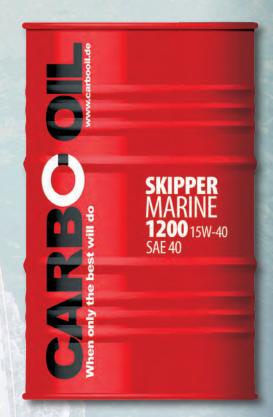
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Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong oxidationstability
- a stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

Application: This marine oil is suitable as lubrication oil of high- and medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel. Due to its load-carrying properties This oil also can be used in shipboard gearboxes.

Performance Level: API CF Mil-L-2104C DEF STAN 91-22/2

Typicals: Density at 15 °C, kg/l: 0,896 Viscosity 40 °C, mm²/s: 153,10 Viscosity 100 °C, mm²/s: Viscosity Index: 15,10 99 Flash Point COC, °C: 258 Pour Point, °C: -21 Total Base Number, mgKOH/g: 12,5 Sulphate Ash, %: 1,67 SAE: 40



Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong oxidationstability
- a stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good waterseparation power

This marine oil is suitable as lubrication oil of high- and **Application:** medium speed marine diesel engines with or without turbo-charging and the use of distillate diesel fuel. Due to its load-carrying properties This oil also can be used in shipboard gearboxes.

API CF Mil-L-2104C DEF STAN 91-22/2 **Performance Level:**

Typicals: 0,896 Density at 15 °C, kg/l: Viscosity 40 °C, mm²/s: 153,10 Viscosity 100 °C, mm²/s: 15,10 Viscosity Index: 99 Flash Point COC, °C: 258 Pour Point, °C: -21 Total Base Number, mgKOH/g: 12,5

Sulphate Ash, %: 1,67 40





This marine oil for diesel engines in marine applications **Description:** has the following properties:

- a strong oxidationstability
- a stable viscosity index

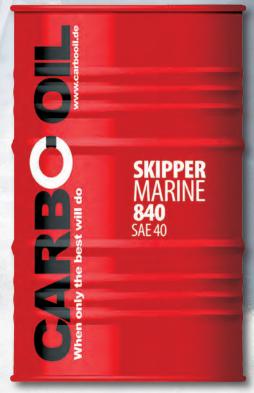
SAE:

- a good alkalinity to neutralise the acid compounds, which are produced during the combustion of a distillate diesel fuel
- a high detergency and dispersion power
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- a good waterseparation power

Application: This marine oil is suitable for the system-lubrication of low-speed marine crosshead-type engines and other engines in coastal and inland navigation.

API CC Mil-L-2104A DEF 2101D **Performance Level:**

Typicals: Density at 15 °C, kg/l: 0,899 Viscosity 40 °C, mm²/s: 150,00 Viscosity 100 °C, mm²/s: 14,90 Viscosity Index: 99 Flash Point COC, °C: 255 Pour Point, °C: -24 Total Base Number, mgKOH/g: 8,3 Sulphate Ash, %: 1,15 40



Category: Marine Lubricants CCX

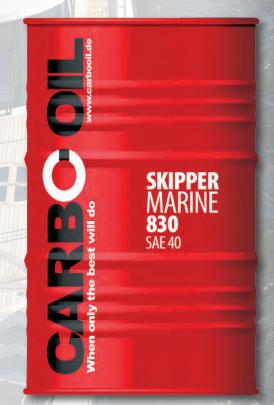
Description: This marine oil for diesel engines in marine applications has the following properties:

- a strong oxidationstability
- a stable viscosity index
- a good alkalinity to neutralise the acid compounds, which are produced during the combustion of a distillate diesel fuel
- a high detergency and dispersion power
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- a good waterseparation power

Application: This marine oil is suitable for the system-lubrication of low-speed marine crosshead-type engines and other engines in coastal and inland navigation.

Performance Level: API CC Mil-L-2104A DEF 2101D

Typicals:	Density at 15 °C, kg/l:	0,891
	Viscosity 40 °C, mm ² /s:	102,00
	Viscosity 100 °C, mm ² /s:	11,50
	Viscosity Index:	99
	Flash Point COC, °C:	250
	Pour Point, °C:	23
	Total Base Number, mgKOH/g:	8,3
	Sulphate Ash, %:	1,15



CAPTAIN RANGE

40

Category: Marine Lubricants CCX

SAE:

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good water separation power

Application: This marine oil is suitable as lubricating oil for heavy marine diesel engines with or without turbo-charging and the use of distillate diesel fuel with a high sulphur content.

Performance Level: No Data

 Typicals:
 Density at 15 °C, kg/l:
 0,931

 Viscosity 40 °C, mm²/s:
 202,20

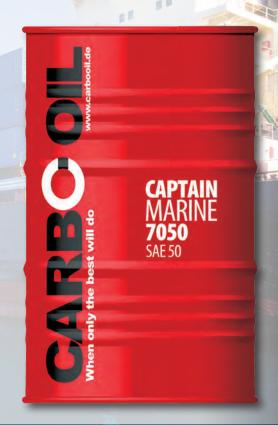
 Viscosity 100 °C, mm²/s:
 19,00

 Viscosity Index:
 106

 Total Base Number, mgKOH/g:
 70,8

 Sulphate Ash, %:
 8,98

 SAE:
 50



Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good water separation power

Application: This marine oil is suitable as lubricating oil for heavy marine diesel engines with or without turbo-charging and the use of distillate diesel fuel with a high sulphur content.

Performance Level: No Data

Typicals: Density at 15 °C, kg/l: 0,916 Viscosity 40 °C, mm²/s: 129,40 Viscosity 100 °C, mm²/s: 13.50 Viscosity Index: 99 Flash Point COC, °C: 264 Pour Point, °C: -30 Total Base Number, mgKOH/g: 60,0 Sulphate Ash, %: 7,62 40 SAE:





Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good water separation power

Application: This marine oil is suitable as lubricating oil for more heavy marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is higher.

Performance Level: API CD

Typicals: Density at 15 °C, k		,910
Viscosity 40 °C, m		91,10
Viscosity 100 °C, r	nm^2/s : 1	7,40
Viscosity Index:	9	8
Flash Point COC, °	°C: 2	68
Pour Point, °C:	_*	15
Total Base Numbe	er, mgKOH/g: 4	1,0
Sulphate Ash, %:	5	,15
SAÈ:	5	0



Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional additives to obtain the following properties:

- a strong resistance against oxidation
- a good and stable viscosity index
- a high detergency and dispersion power
- a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
- effective in preventing from wear, corrosion and foam
- a low pourpoint
- good water separation power

This marine oil is suitable as lubricating oil for more heavy marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is higher.

Performance Level: API CD

Typicals:	Density at 15 °C, kg/l:	0,913
	Viscosity 40 °C, mm ² /s:	142,90
	Viscosity 100 °C, mm ² /s:	14,50
	Viscosity Index:	100
	Flash Point COC, °C:	252
	Pour Point, °C:	-21
	Total Base Number, mgKOH/g:	40,1
	Sulphate Ash, %:	5,42
	SAĖ:	40



Category: Marine Lubricants CCX

Description: This marine oil for diesel engines for marine applications, is based on top-grade solvent-refined base oils and multifunctional

- additives to obtain the following properties: - a strong resistance against oxidation
 - a good and stable viscosity index
 - a high detergency and dispersion power
 - a good alkalinity, to neutralise the acid compounds which are produced during the combustion of a distillate diesel fuel
 - effective in preventing from wear, corrosion and foam
 - a low pourpoint
 - good waterseparation power

Application: This marine oil is suitable as lubricating oil for more heavy marine diesel engines with or without turbo-charging and the use of distillate diesel fuel where the sulphur content is above 1,8%.

Performance Level: API CF Mil-L-2104C

SAF.

Typicals:	Density at 15 °C, kg/l:	0,902
DEPTH N	Viscosity 40 °C, mm ² /s:	92,40
	Viscosity 100 °C, mm ² /s:	11,00
	Viscosity Index:	104
	Flash Point COC, °C:	246
	Pour Point, °C:	-23
	Total Base Number, mgKOH/g:	30,0
	Sulphate Ash, %:	4,07





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