

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS B-43
		Former Designation: CEMS B-43
TITLE: Gasoline Engine/Crankcase Oils		CURRENT REV No.: 1412
		DATE: Dec. 2014
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: Rev. 1404 – April 2014
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Added another type that meets GMW 15827.		

1.0 APPLICATION

One grade of engine oil (5W-30) is covered by this specification. This grade may also be merchandized under the Fleetrite brand name.

2.0 SCOPE

This specification covers the engineering requirements for oils used in the gasoline or propane engines of Navistar products.

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the MPAPS B-50 specification.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following Specifications, Standards, and Regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949	ASTM D2896	ASTM D6709
CFR Title 29, Part 1910		
NAVISTAR Manufacturing Std. MS-D-13	ASTM D3829	ASTM D6891
NAVISTAR Engineering Design Std A-16	ASTM D4485	ASTM D7109
NAVISTAR MPAPS B-50	ASTM D4683	ASTM D7216
ASTM D92	ASTM D4739	ASTM D7528
ASTM D97	ASTM D4951	ASTM D7589
ASTM D130	ASTM D5185	MPAPS B-50
ASTM D445	ASTM D5293	FTM 791 C 203
ASTM D874	ASTM D5800	FTM 791 C M-3470.1
ASTM D892	ASTM D6593	GM Test Procedure GM-9099P
ASTM D1298	ASTM D6304	FTM 791 C M-3470.1
ASTM D892		GMW 15827

4.0 CLASSIFICATION OR DESIGNATION

4.1 Type I is an engine oil that meets the requirements of Table 1 as well as API SN.

4.2 Type II is an engine oil that meets the requirements of Table 1, API SN and GMW 15827. It can be licensed as dexos1®.

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4.3 In the event that material is ordered to the requirements of this specification without reference to either Type I or Type II, **Type I material shall be supplied.**

5.0 REQUIREMENTS

Oils supplied to the requirements of this specification shall consist of suitable refined petroleum base stocks compounded with such functional additives as are necessary to meet the specified requirements. Re-refined base stocks may be used provided that all other property and performance requirements are met. Material and workmanship shall be in accordance with recognized good commercial practices. The material shall be suitable for the use intended, be free of visible water, and have no objectionable odor. In the event of a conflict between the text of this specification and any references cited herein, the text of this specification shall take precedence.

5.1 Oil Performance Requirements

Candidate oils supplied to the requirements of this specification shall be evaluated by engine tests conducted on properly referenced test stands at calibrated engine testing laboratories as determined by the ASTM Test Monitoring Center. The following tests are required for SN oil.

Engine Tests	ASTM Test Description	Engine Tests	ASTM Test Description
Test Sequence IIIG and IIIGB	D 7320	Test Sequence VG	D 6593
Robo or Sequence IIIGA	D 7528 or D 4684	Test Sequence VID	D 7589
Sequence IVA	D 6891	Test Sequence VIII	D 6709

5.1.1 Performance

Performance of the candidate oil as measured by these tests shall meet or exceed limits listed in SAE J183, Engine Oil Performance and Engine Service Classification for the API engine service categories designated for that Navistar Oil Grade.

5.1.1.1 Note: Extrapolation or read-across of results from engine performance and/or shear stability tests conducted on formulations containing substantially similar additive treatments, and/or viscosity grades, may be considered acceptable on an individual basis. All differences between the viscosity grades may be considered on an individual basis. All differences between the formulations actually tested and the candidate oil must be fully explained in writing.

5.2 Special Performance Requirements

5.2.1 Shear Stability

The shear stability of all grades shall be determined by ASTM D 7109 with 90 passes. The kinematic viscosity at 100° C of the stripped, filtered sample shall not decrease more than 1.50 cSt, as compared to fresh oil.

5.2.2 Navistar Performance Test

A sample of the candidate oil will be required by Navistar Engine Engineering for evaluation in engine tests that may utilize shear stability tests as a performance metric. As an alternative, Southwest Research Institute, 6220 Culebra Road, P.O. Box 28510, San Antonio, TX 78228-0510, Phone (210) 522-2122, Fax (210) 522-3496, may be contracted to perform the required tests. The candidate oil shall meet or exceed the performance criteria established for these tests.

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