3-GP-375a
12 May 1955
CANCELLATION
16 September 1966

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification
for

LUBRICATING OIL, ENGINE: HD, Grade 40

CGSB Specification 3-GP-375a, dated 12 May 1955, is cancelled as of 16 September 1966.

ARCHIVES COPY

ARCHIVES COPY

3-GP-375a
12 May 1955
AMENDMENT NO. 1
31 December 1963

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification
for

OIL; LUBRICATING, INTERNAL COMBUSTION ENGINE, HEAVY DUTY (GRADE 40)

TITLE* - Cover Page and Page 1 - Change to read:

LUBRICATING OIL, ENGINE: HD Grade 40

Withdrawn/Retirée

* This revised title is in accordance with NATO Codified Nomenclature.

NADA

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

SPECIFICATION

for

OIL; LUBRICATING, INTERNAL COMBUSTION ENGINE, HEAVY DUTY (GRADE 40)

Withdrawn/Retirée

3-GP-375a
12 May 1955
Supersedes 3-GP-375
23 October 1948

This specification applies to Grade 40 Heavy Duty Engine Oil suitable for the crankcase lubrication of reciprocating internal combustion engines and wherever a general purpose lubricating oil of this grade is required.

NATIONAL RESEARCH COUNCIL, OTTAWA, CANADA

Price
10 cents

For the convenience of those wishing to purchase publications of the Canadian Government Specifications Board, coupons are available in denominations of 5¢, 25¢, and 50¢ and may be obtained by forwarding a remittance to the National Research Council in the form of Bank, Express, or Post Office Money Order, or a cheque made payable at par in Ottawa, to Receiver General of Canada, credit National Research Council (stamps are not acceptable). These coupons can then be used when submitting orders for publications. An Index of Specifications can be obtained on request.

COMMITTEE ON SPECIFICATIONS FOR
PETROLEUM AND ASSOCIATED PRODUCTS

(Membership at date of approval by the Committee
for submission to the CGSB)

Parkin, J.H. (Chairman)	Division of Mechanical Engineering National Research Council
Barton, H.B.	McColl-Frontenac Oil Co. Limited
Black, J.W.	DVD/Department of National Defence
Broughton, J.W.	Division of Mechanical Engineering National Research Council
Campbell, R.O.	British American Oil Co. Limited
Chantler, H.McD.	Department of Mines & Technical Surveys
Charlesworth, J.S.	Research Council of Alberta
Chisholm, W.H., Major	DST/Department of National Defence
Elworthy, R.T.	Department of Trade & Commerce
Kuhring, M.S.	Division of Mechanical Engineering National Research Council
Lamoureux, P.E.	Trans-Canada Air Lines
Laycraft, N.E.	Department of Public Works
Londeau, H.J.M., S/L	AFHQ/Department of National Defence
Lusk, J.	Shell Oil Co. of Canada Limited
Montgomery, D.S.	Department of Mines & Technical Surveys
Rhodes, D.F.	Canadian Oil Companies Limited
Showalter, H.A.	IS/Department of National Defence
Thoms, B.H.J., Cdr.	RCN/Department of National Defence
Udall, P.J.	Division of Mechanical Engineering National Research Council
Whitfield, L.F.	Imperial Oil Limited
Williams, F.D.M.	Orenda Engines Limited
Mitton, H.E. (Secretary)	CGSB/National Research Council

Withdrawn/Retirée

3-GP-375a
12 May 1955
Supersedes 3-GP-375
23 October 1948

CANADIAN GOVERNMENT SPECIFICATIONS BOARD

Specification
for

OIL; LUBRICATING, INTERNAL COMBUSTION ENGINE, HEAVY DUTY (GRADE 40)

Withdrawn/Retiree

1. DEFINITION

1.1 This specifdcation applies to Grade 40 Heavy Duty Engine Oil suitable for the crankcase lubrication of reciprocating internal combustion engines and wherever a general purpose lubricating oil of this grade is required.

2. GENERAL REQUIREMENTS

2.1 The oil furnished under this specification shall be a petroleum or synthetically prepared product or combination thereof, with or without additive materials. No re-refined components shall be used.

2.2 The additive materials including the anti-foaming agents shall remain uniformly distributed throughout the oil at temperatures ranging from the pour point to 300°F. and shall not separate or decrease in effectiveness during storage.

2.3 The oil shall be free from suspended matter, grit, water, or any other adulteration, and shall be uniform in appearance.

2.4 Requirements contained herein are absolute and not subject to correction for tolerance of the test methods. However, if multiple determinations are made, average results will be used.

3. DETAIL REQUIREMENTS

		Min.	Max.	Test Method
3.1	Flash Point, °F	400	-	27.1
3.2	Viscosity at 210°F.			
	Kinematic Centistokes	12.94	16.78	36.1
	Approx. S.U. Seconds	70	85	36.2

		Min.	Max.	Test Method
3.3	Viscosity Index	75	-	37.1
3.4	Pour Point, °F (note 1)	-	/ 10	28.2

Note 1: After being cooled below its pour point the oil shall regain its homogeneity on standing at a temperature which is not higher than 10°F above the pour point.

3.5 Foaming- The oil shall have the following foaming characteristics when tested in accordance with Method 51.1:

(a) In initial aeration test (at 75 / 1°F), no limit on the amount of foam immediately following the bubbling period, but not more than 300 ml. shall remain after 10 minutes of foam collapse.

(b) In intermediate aeration test (at 200 / 1°F), no limit on the amount of foam immediately following the bubbling period, but not more than 25 ml. shall remain after 10 minutes of foam collapse.

(c) In final aeration test sequence (at 75 / 1°F), no limit on the amount of foam immiately following the bubbling period, but not more than 300 ml. shall remain after 10 minutes of foam collapse.

3.6 Oxidation Characteristics - The oil shall be non-corrosive to alloy bearings and to ferrous and non-ferrous engine components. Satisfactory characteristics of the oil in this respect shall be demonstrated when the oil is tested in accordance with Method 109.1. This test need not be conducted if Grade 40 oil contains additives previously used in a finished oil qualified under 3-GP-345a or 3-GP-365a.

3.7 Ring Sticking, Wear and Accumulation of Deposits - The effectiveness of the oil in preventing the sticking or piston rings and the clogging of oil channels, and in minimizing the wear of the cylinders, rings and loaded engine components, such as the camshaft lobes, cam followers, valve rocker arms, rocker arm shafts and oil-pump and distributor-drive gears shall be demonstrated when tested in accordance with Method 108.1. This test need not be conducted if Grade 40 oil contains additives previously used in a finished oil qualified under 3-GP-345a or 3-GP-365a.

3.8 Compatibility - The oil shall be compatible with all engine lubricating oils previously qualified under this specification and specifications 3-GP-343, 3-GP-345a, 3-GP-351a, 3-GP-365a and 3-GP-395a.

Withdrawn/Retirée

4. QUALIFICATION, INSPECTION, SAMPLING AND TEST METHODS

4.1 Qualification

4.1.1 Tests for qualification shall consist of tests for all the requirements of this specification.

4.1.2 Qualification tests may be conducted in any laboratory or plant approved by the purchaser except the tests for compatibility, foaming, and pour point which will be conducted at Armour Research Foundation, Chicago, Illinois, U.S.A. The cost of all qualifying tests is to be borne by the prospective supplier regardless of where such tests are made.

4.1.3 The purchaser reserves the right to reject any tenders on oil to this specification which have not been subjected to the required qualification tests and found satisfactory. A previously qualified product in which any change is made in additive or base stock is required to be qualified product in which any change is made in additive or base stock is required to be qualified as a new product.

4.2 Sampling

4.2.1 Qualification Test Sample - A sample of the size required by the laboratory conducting the qualification test shall be obtained in accordance with Section 1.2 of 3-GP-0: Schedule of Methods of Testing Petroleum and Associated Products.

4.2.2 Inspection Test Samples - A sample of not less than 1 Imperial gallon shall be obtained in accordance with Section 1.2 of 3-GP-0: Schedule of Methods of Testing Petroleum and Associated Products.

4.3 Testing

4.3.1 Unless otherwise specified, the methods of testing shall be those specified in 3-GP-0: Schedule of Methods of Testing Petroleum and Associated Products, using the procedure detailed in each requirement.

5. NOTES

5.1 Intended Uses - This oil is intended for the crankcase lubrication of reciprocating internal combustion engines under all conditions of service when ambient temperatures are above +10°F.

5.2 Related CGSB Specifications

5.2.1 CGSB Specifications 3-GP-343, 3-GP-345a, 3-GP-351a, 3-GP-365a and 3-GP-395a.

Withdrawn/Retired

5.3 Other Related Specifications

5.3.1 U.S. Military Specification MIL-L-2104a and Amendment No. 1

5.4 Qualification Procedure

5.4.1 Information regarding the procedure for qualification of oils under this specification may be obtained from the Secretary, Canadian Government Specifications Board, National Research Council, Ottawa, Canada.

Withdrawn/Retiree

Correspondence regarding this specification should be addressed to the Secretary, Canadian Government Specifications Board, National Research Council, Ottawa, Canada.