

Notification of the Department of Energy Business
Re: Specification for Appearance and Quality of Engine Oils
B.E. 2558 (2015)

In order to specify the appearance and quality of engine oils that are suitable and in accordance with international standards, and in order to be able to supervise oil traders more circumspectly, by virtue of the provisions of Section 25, Paragraph one of the Fuel Trade Act, B.E. 2543, the Director-General of the Department of Energy Business hereby issues a notification as follows:

Clause 1. This notification shall be called the “Notification of the Department of Energy Business, Re: Specification for Appearance and Quality of Engine Oils B.E. 2558”.

Clause 2. This notification shall come into force as from the day following the date of its publication in the Government Gazette.

Clause 3. The Notification of the Department of Energy Business, RE: Specification for Appearance and Quality of Engine Oils B.E. 2554 (2011) dated 26 September B.E. 2554 shall be repealed.

Clause 4. This notification shall not apply to engine oils distributed or in possession for distribution to outside the Kingdom.

Clause 5. In this notification,
“Engine oils” mean engine oils for use in 4-stroke gasoline engines and diesel engines.

Clause 6. The appearance and quality of engine oils shall be classified into 2 types as follows:

- (1) Chemical and physical properties which shall comply with the details prescribed in the annex of this notification.
- (2) Engine performance which shall be notified by an oil trader and approved by the Director-General.

Clause 7. Engine oils with the following engine performance quality levels as classified by the American Petroleum Institute (API) shall not be distributed within the Kingdom.

- (1) Engine oils for use in 4-stroke gasoline engines with the engine performance quality levels of SA and SB
- (2) Engine oils for use in diesel engines with the engine performance quality levels of CA and CB

Clause 8. The following types of oil traders wishing to distribute engine oils or having in possession of engine oils for distribution purposes shall notify the appearance and quality of the engine oils according to Form Thor Por Kor 414 annexed hereto in order to acquire an approval from the Director-General.

- (1) Engine oil producers
- (2) Engine oil importers
- (3) Engine oil traders possessing their own trade names or trademarks that are intended to be used for their engine oils

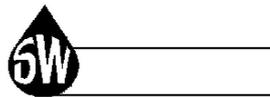
Clause 9. The notification form for the appearance and quality of engine oils and other supporting documents shall be submitted to the Bureau of Fuel Quality of the Department of Energy Business.

Clause 10. When it appears that the documents submitted by the oil trader in order to obtain the approval according to Clause 9 are incorrect or incomplete, the Director-General may give an order to the oil trader to correct the mistakes or to submit additional documents within a period of 30 days from the date on which the oil trader receives the order.

If the oil trader fails to correct the mistakes or to submit the additional documents within the period specified in Paragraph one, it shall be deemed that the oil trader has abandoned the application.

Clause 11. After the Director-General has approved the appearance and quality of the engine oil notified by the oil trader, the Department of Energy Business will grant the oil trader a certificate of approval according to Form Thor Por Kor 415 attached hereto, in which a registration number is given.

The registration number given by the Department of Energy Business shall comprise a Tor Por symbol and a registration number inside a rectangle as the following:



The certificate of approval according to Paragraph one shall be valid for 3 years as from the date of its issuance, except for a case where the oil trader requests for the approval by referring to the appearance and quality documents of the engine oil that the certificate of approval of its quality has been granted to other engine oil producer. In which case, the expiry date of the certificate given shall be the same as that stated in the certificate granted to the engine oil producer. The certificate of approval may be renewed according to Clause 12.

Clause 12. The oil trader who wishes to renew the certificate of approval according to Clause 11 shall submit an application form according to Form Thor Por Kor 416 attached hereto this notification within a period of 60 days prior to the expiry date.

The certificate of approval shall be renewed for a term of 3 years each time, commencing on the expiry date of the expiring certificate or the expiry date of the latest renewed certificate as the case may be. An exception is in a case where the certificate to be renewed was granted through the method of referring to the appearance and quality of the engine oil that has been approved for other engine oil producer, in which case, the expiry date of the renewed certificate shall be the same as that stated in the certificate granted to the engine oil producer.

Clause 13. Once the oil trader has submitted the application form for renewal of the certificate of approval within the period specified in Paragraph 1 of Clause 12, it shall be deemed that the certificate of approval continues to be valid until the Director-General gives an order otherwise.

Clause 14. In a case where the oil trader fails to submit the application form for renewal of the certificate of approval within the period specified in Paragraph 1 of Clause 12, it shall be deemed that the certificate of approval has been revoked.

Clause 15. In a case where the Director-General has approved the appearance and quality of the engine oil according to Clause 11 or permitted the renewal of the certificate of approval according to Clause 12 but it appears at a later time that the documents submitted during the application contain inaccuracy or particulars deviating from the facts, the Director-General may order the oil trader to submit additional documents in order to eradicate such inaccuracy or to rectify such particulars within 30 days as from the date on which the oil trader receives the order.

If the oil trader fails to submit the documents or to rectify the mistaken particulars within the period specified in Paragraph 1, the Director-General may issue an order to revoke the certificate of approval issued according to Clause 11 or to revoke the renewed certificated according to Clause 12.

Clause 16. After the Director-General has approved the characteristic and quality of enging oil according to Clause 11 or permitted a renewal of the certificate of approval according to Clause 12, the oil trader who later wishes to make changes or add more information regarding the characteristic and quality of engine oil to the approved notification form shall submit a written request for approval to the Director-General at least 30 days prior to the date on which the oil trader seeks to accomplish such changes.

Clause 17. In distribution of engine oil specified in the certificate of approval according to Clause 11 or in the renewed certificate of approval according to Clause 12, the oil trader shall comply with the conditions as follows:

(1) In distribution of engine oil packaged in a container of size not exceeding 210 liters, the product label shall at least contain the following information:

- (a) Product name, viscosity grade, standards and quality levels of the engine oil, and the statement “**Approved by the Department of Energy Business**”, which shall be placed immediately after the declaration of the standard and the quality level that have been approved by the Department of Energy Business.
- (b) Registration number which shall be displayed in the pattern specified by the Department of Energy Business
- (c) Name and place of business of the engine oil producer, the engine oil importer, or the engine oil traders possessing their own trade names or trademarks.
- (d) Day, month, year of manufacture or packing.

(2) In distribution of engine oil packaged in a container of size exceeding 210 liters, the engine oil trader shall generate a document containing the information according to (1) and submit to the purchasers.

(3) The engine oil trader who has been granted the approval shall notify the Department of Energy Business the changes of names, head office addresses, places of manufacture, packing or storage, or the stoppage of production, the distribution or imports of engine oil, within the period of thirty days from the date of such changes or the date of stoppage of production, distribution or imports, as the case may be.

(4) The engine oil trader shall notify their annual trade volume of engine oils according to Form Thor Por Kor 417 attached hereto to the Department of Energy Business within 31 January of the following year.

(5) The oil trader shall have duty, from time to time as ordered by the competent officer, to collect samples of engine oils and submit to the competent officer in order to perform an inspection on the appearance and quality.

Notified on 10 February B.E. 2558

Witoon Kulcharoenwirat

Director-General of the Department of Energy Business

**Annex of the Notification of Department of the Energy Business
Re: Specification for Appearance and Quality of Engine Oils B.E. 2558 (2015)**

Chemical and Physical Properties of Engine Oil

No.	Item	Limit	Viscosity Grade												Test Method
			0W	5W	10W	15W	20W	25W	16	20	30	40	50	60	
1.	Viscosity 1.1 at Temperature of °C Centipoise (cP)	Max	-35	-30	-25	-20	-15	-10	-	-	-	-	-	-	ASTM D 5293
		Max	6,200	6,600	7,000	7,000	9,500	13,000	-	-	-	-	-	-	
	1.2 at 100 °C CentiStoke (cSt)	Min	3.8	3.8	4.1	5.6	5.6	9.3	6.1	6.9	9.3	12.5	16.3	21.9	ASTM D 445
		Max	-	-	-	-	-	-	<8.2	<9.3	<12.5	<16.3	<21.9	<26.1	
2.	Viscosity Index	Min	-	-	-	-	-	-	92						ASTM D 2270
3.	Flash Point, °C	Min	182				199				204				ASTM D 92
4.	Pour Point, °C	Max	-	-	-	-	-	-	-6						ASTM D 97
5.	Copper Strip Corrosion	Max	No. 2a												ASTM D 130
6.	Water Content, vol%	Max	0.05												ASTM D 95
7.	Sediment Content, vol%	Max	0.07												ASTM D 2273
8.	Foaming Characteristics, ml 8.1 Tendency, sequence 1/2/3 - Quality levels lower than API SH and API CG-4 - Quality levels of API SH (Except SAE 5W-30, 10W-30 and 15W-40) - Quality levels of API SH (SAE 5W-30, 10W-30 and 15W-40 only), and API SJ, SL, SM, and SN - Quality levels of API CG-4, CH-4, CI-4, CI-4 Plus and CJ-4	Max	25/150/25												ASTM D 892
		Max	25/150/25												
		Max	10/50/10												
		Max	10/20/10												
		Max	nil/nil/nil												
	8.2 Stability, Sequence 1/2/3 For engine oils of quality levels higher than API SN and CJ-4, the foaming characteristics shall be as specified by the American Petroleum Institute (API) or as specified in ASTM D 4485. The foaming characteristic of engine oils meeting standards other than APIs, shall be as specified in such standards.	Max	nil/nil/nil												

Note: 1. Equivalent test methods may be used, but in case of discrepancy or dispute, the methods prescribed in this Annex shall prevail.
2. Multigrade engine oils shall meet the viscosity requirements of both a "W" low temperature grade and a 100°C operating temperature grade.

**Attachment to the Notification of Department of the Energy Business
Re: Specification for Appearance and Quality of Engine Oils B.E. 2558**

Form Thor Por Kor 414 Page 1

(Garuda Emblem) Department of Energy Business	Notification form for engine oil performance	For official use only
		Form No. _____
		Received on _____
<input type="checkbox"/> Producer <input type="checkbox"/> Importer <input type="checkbox"/> Engine oil traders who possess their own trade names or trademarks	<input type="checkbox"/> Name of Natural person _____ National ID card no. _____ <input type="checkbox"/> Name of business organisation _____ National ID card no. _____	Registration No. _____ Tor Por _____ Tor Por _____ Tor Por _____

In request for approval from the Department of Energy Business, I hereby notify the performance of _____ samples of engine oils as follows:

Address/ Location of head office (A natural person shall identify the address as appears in his or her commercial registration certificate)	House no. ___ Moo ___ Trok/Soi _____ Street _____ Sub-district _____ District _____ Province _____ Postal code _____ Tel _____ Fax _____
Name of producer/ Location of blending	Name _____ House no. ___ Moo ___ Trok/Soi _____ Street _____ Sub-district _____ District _____ Province _____ Postal code _____ Tel _____ Fax _____
Name of packager/ Location of packaging	Name _____ House no. ___ Moo ___ Trok/Soi _____ Street _____ Sub-district _____ District _____ Province _____ Postal code _____ Tel _____ Fax _____
Name of keeper/ Location of storage (Location maps shall be attached)	Name _____ House no. ___ Moo ___ Trok/Soi _____ Street _____ Sub-district _____ District _____ Province _____ Postal code _____ Tel _____ Fax _____
Details of engine oil	Name of engine oil _____ Level of quality <input type="checkbox"/> API (SC and higher, CC and higher) _____ <input type="checkbox"/> ACEA _____ <input type="checkbox"/> JASO _____ <input type="checkbox"/> GLOBAL _____ <input type="checkbox"/> OEM or automotive manufacturers _____ <input type="checkbox"/> Others _____ Viscosity Grade SAE _____, SAE _____, SAE _____ SAE _____, SAE _____, SAE _____

Supporting documents	<p>1. <u>Engine performance information documents</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> (1) Notification form for engine oil performance (Form Thor Por Kor 414/1) <input type="checkbox"/> (2) Formulation of engine oil (Form Thor Por Kor 414/2) <input type="checkbox"/> (3) Datasheets of additives, which shall include information of at least name, type, application, dosage, base number, elemental content, and chemical and physical properties <input type="checkbox"/> (4) Details of base oil used in production, which shall include information of at least production source, group as classified by API, chemical and physical characteristics such as sulphur content, viscosity index, and saturates content (this document is required only for engine oil of quality levels API SJ and higher, or API CH-4 and higher, with an exception of the quality levels that are declared obsolete by API, and for engine oils meeting quality standards other than API, the requirement shall be as specified for such quality levels in such standards) <input type="checkbox"/> (5) Results of engine performance tests (Form Thor Por Kor 414/3) and a copy of reports of engine test results issued by test institutes. <input type="checkbox"/> (6) Formulation of engine oil used in tests of engine performance (Form Thor Por Kor 414/4) <input type="checkbox"/> (7) Letter of consent to permit citation of supporting documents of approved engine oil (Form Thor Por Kor 414/5) {documents (2) – (6) are exempted provided that document (7) is present} <p>2. <u>General information documents</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> (1) A copy of commercial registration certificate issued not exceeding 6 months from the date of submission of application form with the company's objectives including petroleum products or engine oil trade (only required for juristic person and an exemption may be given if on-line checking is possible) <input type="checkbox"/> (2) A copy of a national identification card and a copy of a commercial registration certificate with the objectives including petroleum products or engine oil trade (only required for natural person) <input type="checkbox"/> (3) Power of attorney letter (if any), which shall be accompanied by a photocopy of national identification cards of principle and authorised person <input type="checkbox"/> (4) A written consent to use the premises as head office, blending location, packing location or storage location (required for premises residing in the Kingdom of Thailand which the applicants have no right upon) <input type="checkbox"/> (5) Other documents (please specify)
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I hereby certify that above statements are all correct and true.

Signature _____ Applicant

(_____ Typed name _____)

Day _____ Month _____ Year _____

Seal of juristic person

Notification form of engine performance

(For application form no. _____)

Name of engine oil trader (Applicant) _____

Name of engine oil _____

Quality level _____

Viscosity grade SAE _____, SAE _____, SAE _____

SAE _____, SAE _____, SAE _____

Total base number (TBN) / Elemental Content		Limits		Test Method ⁽⁵⁾
		Min	Max	
TBN ⁽¹⁾				ASTM D 2896
Elemental content ⁽²⁾ (percent by weight)	Calcium (Ca)			ASTM D 4951
	Magnesium (Mg)			
	Phosphorus (P)			
	Zinc (Zn)			
	Others (please specify)			
Sulphur (S) ⁽³⁾				ASTM D 6443
Sulphated ash content ⁽⁴⁾				ASTM D 874

- Note:
- (1) TBN shall be declared as integer and may vary up to 20% from typical value.
 - (2) The content of all elements in the active ingredients of the additives shall be declared and may vary up to 20% from their typical values, except in a case where the standards or quality levels the engine oil claims to meet have already specified the limits for some elements, the oil trader shall report the limits for such elements according to those standards or quality levels. It should also be noted that elemental concentration shall be reported to two decimal places, except when it is lower than 100 ppm and rounding off the third digit is not possible. In which case, the elemental concentration may be reported to three decimal places.
 - (3) Sulphur content shall be declared only when required by some standards or some quality levels that the engine oil claims to meet. The value reported may vary up to 20% from the typical value and shall have two decimal places if its concentration is 100 ppm or higher, In a case where the concentration is lower than 100 ppm and rounding off the third digit is not possible, the concentration may be reported to three decimal places.
 - (4) Sulfated ash content shall be declared only when required by some standards or some quality levels that the engine oil claims to meet. The value reported shall have one decimal place and may vary up to 20% from the typical value and shall be in accordance with the limit specified in such standards.
 - (5) Equivalent test methods may be used, but in case of discrepancy or dispute, the methods prescribed in this form shall prevail.

I hereby certify that above statements are all correct and true.

Signature _____ Applicant

(_____ Typed name _____)

Day _____ Month _____ Year _____

Seal of juristic person

Formulations of engine oil seeking approval

Name of engine oil _____

Quality level _____

SAE Viscosity grade _____

Blending components ¹⁾	Percent by weight (%wt)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
Total	100 %

Note: All components shall be declared, except for dye and perfume. For engine oil of quality levels API SJ and CH-4 or higher, with an exception of the quality levels that are declared obsolete by API, the engine oil traders shall declare the group of all types of base stocks used in production according to API classification, name of manufacturer and location of manufacture. For engine oils claiming quality standards other than API, the requirements shall be as specified in such standards.

I hereby certify that the information contained in this form is correct and true.

For applicant

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

For engine oil producer/ formulation owner

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

The English text is an unofficial translation. In case of any discrepancies between the Thai text and the English translation, the Thai text shall prevail.

Summary of engine test results

Quality level _____

Test items	Parameters	Test limits	Results	Oil code	Name of test sponsor	Name of testing laboratory	Test run number ¹⁾

Note : 1) As specified by testing laboratory

I hereby certify that the information contained in this form is correct and true.

For test sponsor

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

For engine oil producer

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

For applicant

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

Formulation of engine oil used in testing of engine performance

Oil code	SAE viscosity grade	Formulation, wt% ¹⁾

Note : 1) All components shall be declared. For engine oil of quality levels API SJ and CH-4 or higher, with an exception of the quality levels that are declared obsolete by API, the engine oil traders shall declare the group of all types of base stocks used in production according to API classification, name of manufacturer and location of manufacture. For engine oils claiming quality standards other than API, the requirements shall be as specified in such standards

I hereby certify that the information contained in this form is correct and true.

For test sponsor

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

For engine oil producer

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

For applicant

Signature _____

Typed name _____

Job title _____

Date _____

Seal of juristic person

**Letter of consent
to permit referencing of supporting documents of approved engine oil**

Date _____

1. I (company name) _____
have notified the appearance and quality, and the production formulation of an engine oil
named _____
quality level of _____
viscosity grade of SAE _____ , SAE _____ , SAE _____
SAE _____ , SAE _____ , SAE _____
in order to seek an approval from the Director-General and have been granted the approval
under certificate number _____ issued on _____

2. I give my consent to oil trader named _____
to refer to the documents, declaring the engine performance and the production formulation of
my engine oil that has been granted the approval according to 1., as information for the
Department of Energy Business in an evaluation of the notification of the engine performance
of the engine oil named _____ with quality level of _____
viscosity grade of SAE _____ , SAE _____ , SAE _____
SAE _____ , SAE _____ , SAE _____

I allow do not allow the above engine oil trader to view or to duplicate the
referencing documents.

Signature _____ (Company giving consent)
(_____ Typed name _____)
Signature _____ (Witness)
(Seal of juristic person) (_____ Typed name _____)
Signature _____ (Witness)
(_____ Typed name _____)

No. _____

Form Thor Por Kor 415

(Garuda Emblem)

**Certificate of Approval
of Engine Performance of Engine Oil**

This certificate of approval is issued to certify that

Name of engine oil trader _____

Location of head office _____

is granted an approval of the engine performance of engine oil.

Name of engine oil _____

Quality level _____

Viscosity grade SAE _____ , SAE _____ , SAE _____

The registration numbers are designated as the followings:

SAE.....



SAE.....



SAE.....



This certificate of approval is valid from _____ to _____

Date of issuance _____

Seal of Department of Energy Business

**Annex of the Notification of Department of the Energy Business
Re: Specification for Appearance and Quality of Engine Oils B.E. 2558**

Form Thor Por Kor 416

(Garuda Emblem) Department of Energy Business	Notification Form for Certificate of Approval Renewal		For official use only
			Form No. _____
			Received on _____
<input type="checkbox"/> Producer	<input type="checkbox"/> Importer	<input type="checkbox"/> Name of Natural person _____	
<input type="checkbox"/> Engine oil traders who possess their own trade names or trademarks		National ID card no. _____	
		<input type="checkbox"/> Name of business organisation _____	
		National ID card no. _____	

I hereby request for a renewal of the Certificate of Approval No. _____ issued on _____ with the details as follows:

- Renewal without cancellation of any engine oil registration number
- Renewal with cancellation of some engine oil registration numbers as follows:

I confirm that the engine performance and the production formulation of the engine oil of the above registration numbers remain the same as initially approved by the Department of Energy Business.

I hereby certify that the information contained in this form is correct and true.

Signature _____ Applicant

(_____ Typed name _____)

Day _____ Month _____ Year _____

Seal of juristic person

Sales volume reporting form for 4-stroke gasoline engine oils and diesel engine oils

Name of engine oil trader.....

For calendar year.....

- Producer**
- Importer**
- Engine oil traders who possess their own trade names or trademarks**

Volume : Liter

No.	Name of engine oil (please specify registration number)	Standard	Quality level	Viscosity grade (SAE)	Opening stock	Supply / Production Volume				Sales Volume		Closing stock	Remark
						Production for customers (Rebrand)	Production under trade names of your own (Excluding rebrand)	Purchase from other producers and sold using your own trade name (Rebrand)	Import for domestic sale (Excluding the volume imported for export)	Local	Export (Excluding the volume imported for export)		
Total													

Note : If the engine oils were acquired by purchasing from other producers and then were rebranded to your own brand, the names of the original producers must be declared in the Note column.
 If you produced engine oils for your customers (Reband), you must also fill in and submit page 2 of the thor por kor 417 form.
 If you imported engine oils and sold to your customers for rebranding, the names of your customers must be declared in the Note column.

Signature _____ Engine oil trader

(_____ Typed name _____)

Day _____ Month _____ Year _____

Seal of juristic person

Sales volume reporting form for 4-stroke gasoline engine oils and diesel engine oils

Name of engine oil trader _____

For calendar year _____

Volume : Liter

No.	Name of customer	Name of Engine Oil (please specify registration number)	Standard	Quality level	Viscosity grade (SAE)	Sales volume	Remark
Total							

Remark: Besides submission of a hard copy of a sales volume report, if possible, a soft copy as a Microsoft Excel file should also be submitted via electronic mail.

Signature _____ Engine oil trader

(_____ Typed name _____)

Day _____ Month _____ Year _____

Seal of juristic person