# Notification of the Department of Energy Business Re: Specification for Appearance and Quality of Engine Oils B.E. 2554 (2011)

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. 2554".

**Clause 2.** This notification shall come into force as from 1 December B.E. 2554 onwards.

**Clause 3.** The Notification of the Department of Energy Business, RE: Specification for Appearance and Quality of Engine Oils B.E. 2547 dated 19 April B.E. 2547 shall be repealed.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

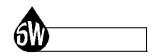
**Clause 9.** The notification form for the appearance and quality of engine oils and other supporting documents shall be submitted to the Bureau of Fuel Quality of the Department of Energy Business.

**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.** 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.

**Clause 17.** The engine oil that has been given the approval for the appearance and quality before the date this notification has come into force may continue to display the label on the engine oil container as prescribed in the preceding notification until 31 December B.E. 2554. Once this period has elapsed, the details on the label shall be in accordance with the prescription given in this notification, except in a case where the oil trader submit in writing to the Department of Energy Business before 31 December 2012 a request for an extension. The Department of Energy Business shall evaluate the request on a case by case basis.

Notified on 26 September B.E. 2554 Viraphol Jirapraditkul 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. 2554 (2011)

No.	Item	Limit					Viscos	sity Gra	ade					Test Method
			0W	5W	10W	15W	20W	25W	20	30	40	50	60	
1.	Viscosity													
	1.1 at Temperature of °C		-35	-30	-25	-20	-15	-10	-	-	-	-	-	ASTM D 5293
	Centipoise (cP)	Max	6,200	6,600	7,000	7,000	9,500	13,000	-	-	-	-	-	
	1.2 at 100 °C	Min	3.8	3.8	4.1	5.6	5.6	9.3	5.6	9.3	12.5	16.3	21.9	ASTM D 445
	CentiStoke (cSt)	Max		-	-	-	-	-	<9.3	<12.5	<16.3	<21.9	<26.1	
2.	Viscosity Index	Min	-	-	-	-	-	-	•		- 92			ASTM D 2270
3.	Flash Point , $^{o}C$	Min	-	182 -	 ───► 	←	 	 - 199 	 ) —		 ──→	<b>←</b> 2	∎ 204 <b>→</b>	ASTM D 92
4.	Pour Point , <sup>o</sup> C	Max	-	-	-	-	-	-	←		-6		►	ASTM D 97
5.	Copper Strip Corrosion	Max		  	1	 	 N 	Io. 2a	 	  	 	 	 ──►►	ASTM D 130
6.	Water Content, vol%	Max	•	1	1	 	 	0.05		 	 	 	, ► 	ASTM D 95
7.	Sediment Content, vol%	Max	•	1 	! 	<u> </u>	  	0.07	 	 	1 1	 	' ►	ASTM D 2273
8.	Foaming Characteristics, ml													ASTM D 892
	8.1 Tendency , sequence 1/2/3			1	1	I	1	1		1	1		1	
	- Quality levels lower than API SH and API CG-4	Max	•				25	5/150/25	i <u> </u>					
	- Quality levels of API SH (Except SAE 5W-30, 10W-30 and 15W-40)	Max					25	5/150/25	i <u> </u>					
	- Quality levels of API SH (SAE 5W-30, 10W-30 and 15W-40 only), API SJ, SL, SM, and SN	Max					10	/50/10						
	- Quality levels of API CG-4, CH-4, CI-4, CI-4 Plus and CJ-4	Max	•				10	/20/10						
	8.2 Stability, Sequence 1/2/3	Max					— nil	/nil/nil						•
	For engine oils of quality levels higher than API SN and CI-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.													

# **Chemical and Physical Properties of Engine Oil**

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. 2554

# Form Thor Por Kor 414 Page 1

(Garuda Emblem)	Notification form	For official use only	
Department of Energy Business	for engine oil performance	Form No.	
		Received on	
□ Producer □ Importer	□ Name of Natural person	Registration No.	
□ Engine oil traders who	National ID card no.	Tor Por	
possess their own trade	□ Name of business organisation	Tor Por	
names or trademarks	National ID card no.	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	House no.	Moo	Trok/Soi	Stree	t	
office (address of natural	Sub-district		District	]	Province	
person shall be as appeared	Postal code		Tel		Fax	
on National ID card)						
Name of producer/ Location	Name					
of blending	House no.	Moo	Trok/Soi	Stree	t	
	Sub-district		District	]	Province	
	Postal code		Tel		Fax	
Name of packager/ Location	Name					
of packaging			Trok/Soi	Stree	t	
	Sub-district		District	]]	Province	
	Postal code		Tel		Fax	
Name of keeper/ Location	Name					
of storage (Location maps	House no.	Moo	Trok/Soi	Stree	t	
shall be attached)	Sub-district		District	]	Province	
	Postal code		Tel		Fax	
Details of engine oil	Name of engine	oil				
	Level of quality	API	(SC and higher	r, CC and higher)		
			EA			
			0			
		$\Box$ GLC	OBAL			
	□ OEM or automotive manufacturers					
			ers			
	Viscosity Grade	e SAE		, SAE	, SAE	
		SAE		, SAE	, SAE	

Supporting documents	1. Engine performance information documents
Supporting documents	
	$\Box$ (1) Notification form for engine oil performance (Form Thor Por Kor 414/1)
	$\Box$ (2) Formulation of engine oil (Form Thor Por Kor 414/2)
	<ul> <li>(3) Datasheets of additives, which shall include information of at least name, type, application, dosage, base number, elemental content, and chemical and physical properties</li> <li>(4) Details of base oil used in production, which shall include information of at least</li> </ul>
	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 CG-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 in such standards)
	□ (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.
	□ (6) Formulation of engine oil used in tests of engine performance (Form Thor Por Kor 414/4)
	□ (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}
	2. General information documents
	<ul> <li>(1) A copy of commercial registration certificate issued not exceeding 6 months from the date of submission of application form (only required for juristic person and an exemption may be given if on-line checking is possible)</li> <li>(2) A copy of a national identification card (only required for natural person)</li> </ul>
	<ul> <li>(3) Power of attorney letter (if any), which shall be accompanied by a photocopy of national identification cards of principle and authorised person</li> <li>(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</li> </ul>
	Thailand which the applicants have no right upon)
	□ (5) Other documents (please specify)

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

Signature				Applicant
	(	Typed name		)
Day		Month Ye	ar	
		Seal of juristic person		

# Notification form of engine performance

(For application form no. \_\_\_\_\_)

Name of engine	oil trader (Applica	nt)		
Name of engine	oil			
Quality level				
Viscosity grade	SAE	, SAE	, SAE	
	SAE	, SAE	, SAE	

Total hass number (TD)	Lir	nits	Test Method <sup>(4)</sup>	
Total base number (TB)	Min	Max		
TBN <sup>(1)</sup>				ASTM D 2896
Elemental content <sup>(2)</sup>	Calcium (Ca)			ASTM D 4951
(percent by weight)	Magnesium (Mg)			
	Phosphorus (P)			
	Zinc (Zn)			
	Others (please specify)			
				-
	Sulphur (S)			ASTM D 6443
Sulphated ash content <sup>(3)</sup>				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 active elements in the additives shall be declared within their limits specified in ASTM D 4485 or in the quality standard that the engine oil claims to meet. In a case where limits do not exist, the reported elemental content may vary up to 20% of their typical values. 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) Sulfated ash content shall be declared only when required by some quality levels or by international standards that the engine oil claims to meet. The value reported may vary up to 20% from the typical value and shall be in accordance with the limit specified in such standards.
  - (4) 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 nam	e	_)	
Day		Month	Year		
		Seal of juristic	e 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 in the formulation, except dye and perfume, shall be declared. For engine oil of quality levels API SJ and higher or API CG-4 and higher, a group of base stock according to API classification, a name of manufacturer, and a location of manufacturing shall be declared for each base stock used in production.

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

For applicant	For engine oil producer/ formulation owner			
Signature	Signature			
Typed name	Typed name			
Job title	Job title			
Date	Date			
Seal of juristic person	Seal of juristic person			

### Form Thor Por Kor 414/3

### 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 <sup>1)</sup>

Note : 1) As specified by testing laboratory

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

For test sponsor	For engine oil producer	For applicant
Signature	Signature	Signature
Typed name	Typed name	Typed name
Job title	Job title	Job title
Date	Date	Date
Seal of juristic person	Seal of juristic person	Seal of juristic person

Oil code	SAE viscosity grade	Formulation, wt% <sup>1)</sup>

# Formulation of engine oil used in testing of engine performance

Note : 1) All components shall be declared. For engine oil of quality levels API SJ and higher or API CG-4 and higher, a group of base stock according to API classification, a name of manufacturer, and a location of manufacturing shall be declared for each base stock used.

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

For test sponsor	For engine oil producer
Signature	Signature
Typed name	Typed name
Job title	Job title
Date	Date
Seal of juristic person	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

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		Ľ	Date		
1. I (com	npany name)				
		uality, and the production	on formulation of a	n engine oil	
quality level of	medality level of				
viscosity grade of	SAE	, SAE	, SAE		
	SAE	, SAE	, SAE		
in order to seek an under certificate nur		he Director-General and issued	U	the approval	

 $I \ \Box$  allow  $\Box$  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	)

(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 e	ngine performance of engine oil.		
Name of engine oil			
Quality level			
Viscosity grade SAE	, SAE	, SAE	

# The registration numbers are designated as the followings:

SAE	<b>M</b>
SAE	<b>SW</b>
SAE	<b>5</b> W
This certificate of approval is valid from	m to
Date	of issuance
	Seal of Department of Energy Business

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.

#### Annex of the Notification of Department of the Energy Business Re: Specification for Appearance and Quality of Engine Oils B.E. 2554

Form Thor Por Kor 416

			For official use only			
	Emblem) Energy Business	Notification Form for Certificate of Approval Renewal	Form No.			
Department of Energy Dusiness		Certificate of Approval Kenewar	Received on			
Producer		Name of Natural person				
□ Engine oil trac	lers who possess	National ID card no.				
their own trade names or		□ Name of business organisation				
trademarks		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 na	ime	)	
Da	y	Month	Year		
		Seal of juristic pe	erson		

Sales volume reporting form for 4-srtoke 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

NT		G 1 1	0 11	<b>X</b> 7 <b>·</b> ·,		D 1 /		1 1 1		0.1	1	01 '	D 1		
No.	Name of engine oil	Standard	-	- •	rd Quality			Opening Production	3	Supply volume		Sale vo	olume	Closing	Remark
	(please specify		level	grade	stock	for others <sup>1)</sup>	Pro	duction	Import	Local	Export	stock			
	registration number)			(SAE)				Expon							
				× /			Self-production <sup>2)</sup>	Production by other							
							•	local blenders <sup>3)</sup>							
		Total													

Note : 1) means contracted production of engine oils under trade names or trademarks of other engine oil traders

2) means production of engine oils under trade names or trademarks of the reporter

3) means production of engine oils by contracted producers under trade names or trade marks of the reporter For the case of contracted production, please specify name of contracted producers in the remark column. For the case of production for other oil traders, Form Thor Por Kor 417 page 2 shall be filled out and submitted additionally.

Signature					Engine oil trader
	(	Typed n	ame	_)	
Day	/	Month	Year		
		Seal of juristic p	person		

#### Form Thor Por Kor 417 Page 2 (For contracted producers)

#### Sales volume reporting form for 4-srtoke 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
		* * * * *					

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		