

NAME: ENGINE OIL CHARGES FOR DIESEL TEDOM ENGINES

**1. INTRODUCTION**

- 1) The Regulation is mandatory for TEDOM engines during the warranty period.
- 2) According to the Regulation TEDOM 258 the engine oils are broken down into 5 groups by efficacy (groups TEDOM 258-1, TEDOM 258-2, TEDOM 258-3, TEDOM 258-4, TEDOM 258-5).
- 3) The engine oil group TEDOM 258-5 is destined for TEDOM engines which are equipped with SCR and DPF (selective catalytic reduction, diesel particulate filter) exhaust gas after-treatment system. These oils belong to the Low SAPS group (low content of Sulphate Ash, Phosphorus, Sulfur).
- 4) If a specific engine oil is approved pursuant to the Regulation TEDOM 258 for use on TEDOM engines, the company that has applied for incorporation of the engine oil among the approved ones is always granted the official approving letter (certificate) specifying the oil group which the oil in question is approved for. Validity of each certificate is limited by max. 2 years

**2. ENGINE BREAKDOWN INTO SERVICE GROUPS WITH RESPECT TO OIL LOAD**

AUTOMOTIVE ENGINES	
SERVICE GROUP	CHARACTERISTIC FEATURES OF OPERATION
H	<u>Heavy-duty traffic</u> – traffic on building sites, fields, off-road traffic (on non-consolidated roads, in dusty environment etc.), city traffic (municipal vehicles, vehicles operated at very short distances between the stops, with frequent idle run)
M	<u>City and intercity traffic</u> – the vehicles operated inside or outside municipalities at short and medium distances between the stops, traffic on consolidated roads
L	<u>Long-distance traffic</u> – the vehicles operated in long-distance and international traffic, traffic on primary (A) roads, motor roads and on highways, breaks in target points and on safe stops only

ENGINES OF OTHER DRIVING UNITS, EXCEPT RAIL VEHICLES (el. power plants, ships, building machines, tractors, agricultural machines, etc.)	
SERVICE GROUP	CHARACTERISTIC FEATURES OF OPERATION
S	<u>Heavy-duty traffic</u> – the engines loaded immediately after the cold start without the possibility of preheating to the operating temperature under partial load, the engines loaded predominantly or permanently within the max. power range
C	<u>Light traffic</u> – the engines loaded only after preheating to the operating temperature under partial load, the engines loaded predominantly or permanently within the max. torque range

595/12	9.10.2012	z	ČAPEK	SUPERSEDES THE REGULATION: of 08.02.2000
588/11	29.6.2011	y	ČAPEK	
587/10	10.9.2010	x 1x	ČAPEK	ELABORATED by: Ing. Jiří Čapek (engine design)
541/09	22.5.2009	w 1x	ČAPEK	
504/09	30.1.2009	v 1x	ČAPEK	CHECKED by: Ing. Stanislav Novotný (engine design manager)
613/08	4.11.2008	u 1x	ČAPEK	
01-0557/08	12.5.2008	t 1x	ČAPEK	APPROVED by: Ing. Stanislav Novotný (engine design manager)
01-0614/07	12.12.2007	s 1x	ČAPEK	
01-0517/07	26.02.2007	r 1x	ČAPEK	DATE: 04.03.2000
01-0566/06	06.12.2006	p 1x	ČAPEK	
01-0531/06	05.06.2006	n 1x	ČAPEK	<b>TEDOM S.R.O. DIVIZE MOTORY (ENGINE DIVISION)</b>
01-0523/06	05.04.2006	m 1x	ČAPEK	
01-0512/06	02.03.2006	l 1x	ČAPEK	
CHANGE	DATE	IND.	SIGNATURE	

### 3. PERIODICITY OF OIL CHANGES FOR INDIVIDUAL ENGINE OIL GROUPS, SERVICE GROUPS AND TEDOM ENGINE SERIES

AUTOMOTIVE ENGINES							
SERVICE GROUP	Engines of series M 1.2 A,B			Engines of series M 1.2 C			SCR+DPF
	PERIODICITY OF OIL REPLACEMENT /km/ FOR OIL GROUPS						
	TEDOM 258-1	TEDOM 258-2	TEDOM 258-3 and 4	TEDOM 258-2	TEDOM 258-3	TEDOM 258-4	TEDOM 258-5
H	5 000	10 000	15 000	10 000	15 000	20 000	20 000
M	10 000	20 000	30 000	20 000	30 000	40 000	40 000
L	20 000	30 000	40 000	30 000	45 000	60 000	60 000

ENGINES OF OTHER DRIVING UNITS, EXCEPT RAIL VEHICLES (el. power plants, ships, building machines, tractors, agricultural machines, etc.)							
SERVICE GROUP	Engines of series M 1.2 A,B			Engines of series M 1.2 C			SCR+DPF
	PERIODICITY OF OIL REPLACEMENT /engine hours/ FOR OIL GROUPS						
	TEDOM 258-1	TEDOM 258-2	TEDOM 258-3 and 4	TEDOM 258-2	TEDOM 258-3	TEDOM 258-4	TEDOM 258-5
S	200	300	400	300	400	500	500
C	400	600	800	600	800	1 000	1 000

### 4. PERMITTED VISCOSITY OIL CLASSES WITH RECOMMENDED AMBIENT AIR TEMPERATURES

- Season oils (monograde) : SAE 30 (from + 5°C up to +30°C) – for oil group 1 only (TEDOM 258-1)  
 SAE 40 (from +10°C up to +40°C)
- All-season oils (multigrade) : SAE 20W-40 (from -10°C up to +40°C)  
 SAE 15W-40 (from -15°C up to +40°C)  
 SAE 10W-40 (from -20°C up to +40°C)  
 SAE 5W-40 (from -30°C up to +40°C)

### 5. NOTES

- 1) The engine oils of group TEDOM 258-1 may not be used for the TEDOM engines, series M 1.2 C .
- 2) The engine oils of the groups TEDOM 258-1 and TEDOM 258-2 may not be used for the engines 250kW.
- 3) Periodicity for rail vehicle oil replacement is resolved in a separate Regulation No. 61-0-0263-1.
- 4) The maximum periodicity for engine oil change is 1 year.
- 5) The periodicities of engine oil changes shown above are applicable for the diesel oil with the maximum sulphur content up to 0.5% weight. In case of higher sulphur content (up to 1% weight) the periodicity for engine oil change must be reduced by half.
- 6) The periodicity of engine oil change is halved for using RME fuel (FAME) according to ISO 14214
- 7) The approved full-flow oil cleaner or the approved full-flow oil cleaner element is replaced during engine oil change (the same periodicity), but may not exceed periodicity of oil cleaner or cleaner element change shown below. It is necessary to use only the cleaners or elements approved by the engine development department. Use of the unapproved cleaner or element or breach of periodicity for their change can result in serious engine damage. The specific cleaner or cleaner element type for each individual engine is contained in the Spare Part Catalogue and in the Operation Manual. On the date of the latest updating of the Regulation TEDOM 258 the following cleaners/elements have been approved:

Element MANN FILTR JIPAP O 11 OTO	Change after max. 45 000 km and/or 800 engine hours
Element MANN FILTR JIPAP H 1173/1	Change after max. 45 000 km and/or 800 engine hours
Element FILTRON OM 501	Change after max. 45 000 km and/or 800 engine hours
Cleaner TEDOM 7085 501	Change after max. 60 000 km and/or 1000 engine hours
Cleaner TEDOM 7085 502	Change after max. 45 000 km and/or 800 engine hours
Cleaner FLEETGUARD LF 4112	Change after max. 60 000 km and/or 1000 engine hours
Cleaner FLEETGUARD LF 3658	Change after max. 45 000 km and/or 800 engine hours
Cleaner MANN HUMMEL W 11 102	Change after max. 60 000 km and/or 1000 engine hours

The centrifugal oil cleaner is cleaned during engine oil change, but after 45 000 km or 800 engine hours as a maximum.

## 6. APPROVED ENGINE OILS

### OIL GROUP TEDOM 258-1

MOL DYNAMIC MAX SAE 10W-40  
 OMV SUPER DIESEL SAE 15W-40  
 PARAMO TRYSK SUPER SAE 15W-40  
 PARAMO TRYSK SUPER SAE 20W-40

### OIL GROUP TEDOM 258-2

FUCHS TITAN UNIVERSAL HD SAE 15W-40  
 MOL DYNAMIC TURBO DIESEL SAE 15W-40  
 MOL DYNAMIC TURBO PLUS SAE 15W-40  
 PARAMO TRYSK SUPER TURBO (M7 ADS IV) SAE 15W-40  
 PARAMO MOGUL DIESEL DT SAE 15W-40  
 OMV TRUCK M PLUS SAE 15W-40  
 OMV TRUCK LIGHT SAE 5W-40  
 RAVENOL FORMEL SUPER MINERALÖL DIESEL SAE 15W-40

### OIL GROUP TEDOM 258-3

<p>FUCHS TITAN TRUCK 1540 SAE 15W-40          FUCHS TITAN CFE 1040 MC SAE 10W-40          FUCHS TITAN UNIC 1040 MC SAE 10W-40          FUCHS TITAN CARGO MC SAE 10W-40          FUCHS TITAN UNIC PLUS MC SAE 10W-40          GULF SUPERFLEET LE SAE 15W-40          MOL DYNAMIC TRANSIT SAE 15W-40          OMV TRUCK LD SAE 15W-40          PARAMO TRYSK TOP TIR (M7 ADS V) SAE 15W-40          PARAMO MOGUL DIESEL DTT SAE 15W-40          PARAMO MOGUL DIESEL DTT EXTRA SAE 15W-40          PLATINUM ULTOR CG-4 SAE 15W-40</p>	<p>PLATINUM ULTOR CH-4 SAE 15W-40          PLATINUM ULTOR PLUS SAE 15W-40          Q8 T 750 SAE 15W-40          Q8 T 800 SAE 10W-40          RAVENOL TURBO-PLUS SHPD 15W-40          RAVENOL EXPERT SHPD 10W-40          VALVOLINE ALL FLEET EXTRA SAE 15W-40</p>
---	---

### OIL GROUP TEDOM 258-4

MOL DYNAMIC SYNT DIESEL SAE 10W-40  
 OMV TRUCK FE PLUS SAE 10W-40  
 PARAMO MOGUL DIESEL DTT PLUS SAE 10W-40  
 Q8 T 860 SAE 10W-40  
 RAVENOL PERFORMANCE TRUCK SAE 10W-40

### OIL GROUP TEDOM 258-5

Q8 T 905 SAE 10W-40

**7. ENGINE OIL VOLUME IN THE ENGINE**

ENGINE SERIES M 1.2 x	ENGINE VERSION	BOTTOM COVER DRAWING NUMBER (MODEL NUMBER) 442 1 1015 xxx 5	OIL CHARGE CA/LITRES/ *)	
			DRY ENGINE	DURING CHANGE
x = A	oblique	xxx = 004 (1512)	28	24
	horizontal	xxx = 008 (2062)	26	22
	vertical	xxx = 004 (1512)	28	24
x = B	vertical	442 1 7026 079 5 (metal stamping)	30.5	25
	horizontal	xxx = 008 (2062)	26	22
x = C	vertical	442 1 7026 099 5 (metal stamping)	30.5	25
		xxx = 038 (4629)	34.5	29.5
		xxx = 039 (4629)	34.5	29.5
		xxx = 040 (4633)	26	19,5
	xxx = 041 (4634)	56	51	
horizontal	xxx = 029 (4221)	32	27	

\*) Oil charge in litres is of indicative character only. The decisive criterion is that oil level must range between MIN and MAX signs on the oil level dipstick.