

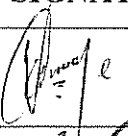
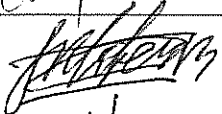
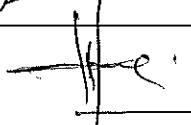


Kenya Power

**SPECIFICATIONS**

**For**

**FUELS AND LUBRICANTS**

	NAME	DESIGNATION	SIGNATURE	DATE
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**PART B – DETAILED TECHNICAL SPECIFICATIONS (DTS)**

**1 - MOTOR GASOLINES (PREMIUM)**

TEST			LIMITS	TEST METHOD		Compliance /Remarks	Ref. Page
Parameter	Units	Base		ASTM D	IP		
i) Octane No. RON		min	93	2699			
ii) Lead	g/L	min	0.05		352		
		max	0.84*				
iii) Distillation				86	123		
Recovery up to 10%	°C	max	71				
Recovery up to 50%	°C	max	115				
Recovery up to 90%	°C	max	180				
Final boiling point	°C	max	205				
Residue	%/vol	max	2				
iv) Density @ 15 °C	Kg/ m <sup>3</sup>	Range	720-775	4052			
v) Volatility			93 (a)	323	69		
vi) Existent gum	mg/1 00 ml	max	4	381	131		
vii) Induction	mins.	min	240	525			
viii) Copper Corrosion		max	1	130	154		
ix) Sulphur Content	% mg	max	0.2	2784	243		
x) Doctor Test			Negative	4952	30		
xi) Mercaptan Sulphur	% mg	max	0.0015	3227	342		
xii) Oduor			Marketable				
xiii) Colour			Red	Visual			
xiv) Dye	g/m <sup>3</sup>	max	1.3				

## 2 - MOTOR GASOLINES (REGULAR)

TEST			LIMITS	TEST METHOD		Compliance/ Remarks	Ref. Page
Parameter	Units	Base		ASTM D	IP		
i) Octane No. RON		min	83	2699			
ii) Lead	g/L	min	0.05		352		
		max	0.84*				
iii) Distillation				86	123		
Recovery up to 10%	°C	max	71				
Recovery up to 50%	°C	max	115				
Recovery up to 90%	°C	max	180				
Final boiling point	°C	max	205				
Residue	ml	max	2				
iv) Volatility			93 (a)	323	69		
v) Density @ 15 °C	Kg/ m <sup>3</sup>	Range	720-775	4052			
vi) Existent gum	mg/10 0 ml	max	4	381	131		
vii) Induction	mins.	min	240	525			
viii) Copper Corrosion		max	1	130	154		
ix) Sulphur Content	% mg	max	0.2	2784	243		
x) Doctor Test			Negative	4952	30		
xi) Mercaptan Sulphur	% mg	max	0.0015	3227	342		
xii) Oduor			Marketa ble				
xiii) Colour			Green		Visual		
xiv) Dye	g/m <sup>3</sup>	max	1.3				

### 3 - AUTOMOTIVE GAS OIL (DIESEL)

TEST			LIMITS	TEST METHOD		Compliance /Remarks	Ref. Page
Parameter	Units	Base		ASTMD	1P		
i) Density at 20°C	Kg/m <sup>3</sup>		815-865	4052	365		
ii) Flash PMCC	°C	min	66	93	34		
iii) Sulphur content	%mg	max	1.0	4294	336		
iv) Cloud point	°C	max	12(a)	2500	219		
v) CFPP	°C	max	6(b)		309		
vi) CCI		min	48	4737	380		
vii) Water	%v	max	0.05	95	74		
viii) Distillation				86	123		
ix) Recovery at 365°C	%v	min	90				
x) FBP	°C	max	400				
xi) Viscosity at 40°C	cS	1.6-5.5	445	71			
xii) Colour		max	3.5	1500			
xiii) Copper corrosion		max	1	130	154		
xiv) Sediment	%m	max	0.01	473	53		
xv) Ash	%m	max	0.01	482	4		
xvi) Strong Acid No.	mgKOH/ g	max	Nil	974	139		
xvii) Total Acid No.	mgKOH/ g	max	0.5	974	139		
xviii) RCR on 10% Res	%m	max	0.15	524	14		

Cloud point may exceed 12 if CFPP is max 5

CFPP may exceed 6 if cloud point is max 9

#### 4- KEROSENE

TEST			LIMITS	TEST METHOD		Compliance /Remarks	Ref. Page
Parameter	Units	Base		ASTM D	1P		
i) Density at 20°C	Kg/m <sup>3</sup>	max	817	4052	365		
ii) Colour Saybolt		min	+15	156			
iii) Smoke Point	min		25	1322			
	mg/kg	max	15		10		
iv) Distillation				86	123		
Recovery at 200°C	%V	min	20				
Final Boiling Point	°C	max	300				
v) Flash Point Abel	°C	min	38		170		
vi) Sulphur content	%mg	max	0.15	4294	336		
vii) Copper Corrosion		max	1	130	154		
viii) Odour			Marketable				

## **5 - SPECIFICATION FOR OILS AND LUBRICANTS**

### **(a) ENGINE OIL**

i) Commercial Vehicles multipurpose engine oil formulated to meet severe service demands for both diesel and petrol engines;

Should meet or exceed *APICF4, CF, SG*.

The engine oil should be multi-grade of *SAE 15W 40 and above*

ii) Passenger cars Multi-grade oils suitable for four stroke diesel and petrol engines;

Should meet or exceed *API SH, CF*

The engine oil should be multi-grade of *SAE 20W 50 and above*

### **(b) GEAR TRANSMISSION**

i) High performance multi-grade gear lubricant for commercial fleet manual transmissions, axles and final drives in heavy duty service.

Should meet the *API GL5*

Oil should meet viscosity grade of *SAE90*.

ii) High performance multi-grade gear lubricant intended for lubrication of commercial fleet manual transmission.

Should meet *API GL4*

Oil should meet viscosity grade of *80W 90* or Grade *80W 140*.

### **(c) HYDRAULIC OILS**

High quality hydraulic oil especially for use in hydraulic systems and equipment

Should meet *ISO VG32*

Should meet *ISO VG46* grade.

### **(d) AUTOMATIC TRANSMISSION FLUID**

i) A premium quality fully inhibited GM DEXRON approved ATF for use in passenger and commercial vehicle automatic transmissions as well as power steering.

Should meet *DEXRON II*

**(e) GREASE LUB**

Premium quality grease meeting the following specifications;

- i. Lithium thickener as per the equipment requirements
- ii. NGLI Consistency no. 2& 3 depending on application
- iii. Should contain extreme pressure additive

**(f) MOTOR CYCLE OILS**

Two stroke engine oils meeting the following specifications;

- i. API TSC2
- ii. API TSC1

**(g) BRAKE FLUID**

High quality brake fluid which should meet *DOT 4* specifications.

**(h) DISTILLED WATER**

Premium quality distilled water meeting the following specifications;

- i. Ph: 4.0-7.0
- ii. Conductivity: < 5 Units
- iii. Total solids: < 1 mg/liter
- iv. Hardness: Negligible
- v. Inorganic: Negligible
- vi. Sulphate: Negligible