

HYDROCARBON DEVELOPMENT INSTITUTE OF PAKISTAN

PTRL, Operations Office, Plot No.18, H-9, Islamabad

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Form No.: 07 Issue Date: 28.06.18 Revision No: 00

TEST REPORT

Test Report No.:	HDIP/PTRL/B-2219/20	Date:	27.10.2020
Sample:	PMG (Tank No. 321)	Sample Collected on:	15.10.2020
Depot/Storage Name:	M/s Attock Refinery Limited, Rawalpindi.		

Test Method	Test Title	Specification	Results
-	Appearance	-	Clear and free from suspended impurities
-	Colour Visual	Green	Light Green
ASTM D-1298	Specific Gravity @ 60/60 °F	"To be reported"	0.7337
ASTM D-130	Copper Corrosion @ 50 °C/Hrs 3	1 Max.	1a
ASTM D-4294	Sulphur Content, wt%	0.05 Max.	0.0004
ASTM D-3831	Manganese Content, mg/L	24 Max.	17.31
ASTM D-2699	Research Octane Number	90.0 Min.	90.0
ASTM D-86	DISTILLATION		
	IBP °C	-	43
	10 % Vol. Recovered @ °C	80 Max.	54
	50 % Vol. Recovered @ °C	125 Max.	90
	90 % Vol. Recovered @ °C	180 Max.	154
	FBP °C	205 Max.	194
	Recovered Vol. %	-	99.0
	Residue Vol. %	2.0 Max	0.5
	Total Recovery %	-	99.5
	Loss Vol. %	-	0.5
REMARKS:	To the extent of tests carried out, the sample conforms to the Directorate General of (Oil)'s specifications for Motor Gasoline.		


GENERAL MANAGER



ATTOCK REFINERY LIMITED

QUALITY CONTROL LABORATORY

PRODUCT TEST REPORT

UNLEADED PREMIUM MOTOR GASOLINE

Sample / Report #:	PM-167-20-10	Tank #:	10
Date Received:	02-Nov-2020	Date Reported:	02-Nov-2020

S/No	Test	Method	Specification	Result
1	Colour	-	Green	Green
2	Odour	-	Marketable	Marketable
3	Specific Gravity @ 15.6°C	ASTM D1298	Reported	0.7351
4	Octane No. Research (RON)	ASTM D2699	Min 90	90.1
5	10 % Vol. Recovery, °C	ASTM D86	Max 80	61.6
6	50 % Vol. Recovery, °C	ASTM D86	Max 125	96.1
7	90 % Vol. Recovery, °C	ASTM D86	Max 180	146.5
8	End Point, °C	ASTM D86	Max 205	186.9
9	Residue, % Vol.	ASTM D86	Max 2	1.0
10	Total Sulfur, ppm	ASTM D4294	Max 500	5.0
11	Reid Vapour Pressure, at 37.8°C, PSI	ASTM D323	Max 10.0	8.2
12	Copper Strip Corrosion @ 50°C (122°F)	ASTM D130	Max 1	1a
13	Existent Gum, mg/100 ml	ASTM D381	Max 4	1
14	Mercaptan Sulfur, ppm	ASTM D3227	Max 10	3.0
15	Induction Period, Minutes	ASTM D525	Min 240	>240
16	Appearance	Visual	BCFSM*	Clear & Bright
17	Doctor Test	ASTM D4952	Negative	Negative
18	Benzene, Vol%	ASTM D4053	Max 5.0	0.99
19	Lead Contents, g/Litre	ASTM D3237	Max 0.013	0.007
20	Manganese Content, mg/L	ASTM D3831	Max 24	19.9
21	Oxygenate Contents, Vol% i) Ether Based ii) Alcohol Based (Ethanol / Methanol)	ASTM D4815	i) 0.5 Max ii) Non-Detectable	No Oxygenates added at ARL

* Bright, Clear and free from water & suspended impurities

Note: This report shall not be produced except in full. Measurement Uncertainty will be provided on request from the customer.

We confirm that the product complies with Unleaded PMG PSQCA Specifications for Above Tests.

Remarks: Product is light sensitive, therefore, it is recommended that sampling must be done in Amber/Brown bottles/metallic cans as per ASTM D4057 "Manual Sampling of Petroleum and Petroleum Products".

Muhammad Umer

Prepared By

M. Tariq

Issued By

* This is computer generated report and does not require signatures

End of Test Report

HYDROCARBON DEVELOPMENT INSTITUTE OF PAKISTAN

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TEST REPORT

Test Report No.:	HDIP/PTRL/B-2218/20	Date:	27.10.2020
Sample:	HSD (Tank No. 329)	Sample Collected on:	15.10.2020
Depot/Storage Name:	M/s Attock Refinery Limited, Rawalpindi.		

Test Method	Test Title	Specification	Results
ASTM D-1500	ASTM Color	3.0 Max.	0.5
ASTM D-1298	Specific Gravity @ 60/60 °F	"To be reported"	0.8438
-	API Gravity @ 60/60 °F	-	36.19
ASTM D- 976	Cetane Index (Calculated)	45 Min.	49
ASTM D-93	Flash Point (PMCC) °C	54 Min.	69
ASTM D- 97	Pour Point °C	6 Max.	-9
ASTM D-130	Copper Corrosion @ 100 °C/Hrs 3	1 Max.	1a
ASTM D-95	Water % V/V	0.05 Max.	Nil
ASTM D-445	Kinematic Viscosity @ 40 °C, cSt	1.5 Min. – 6.5 Max.	3.04
ASTM D-189	Conradson Carbon Residue on 10% Distillation Residue, percent	0.2 Max.	Nil
ASTM D-4294	Sulphur Content wt%	1 Max.	0.021
ASTM D-482	Ash Wt. %	0.01 Max.	Nil
ASTM D-2500	Cloud Point °C	9 Max.	5
ASTM D-86	Distillation		
	IBP °C	-	174
	10 % Vol. Recovered @ °C	-	203
	50 % Vol. Recovered @ °C	-	268
	90 % Vol. Recovered @ °C	365 Max.	348
	Recovered Vol. % @ 365 °C	90 Min.	95
REMARKS:	The sample conforms to the Directorate General of Oil's specifications for High Speed Diesel (HSD), to the extent of tests carried out in this laboratory.		


GENERAL MANAGER



ATTOCK REFINERY LIMITED

QUALITY CONTROL LABORATORY

PRODUCT TEST REPORT

HIGH SPEED DIESEL

Sample / Report #:	HD-278-20-329	Tank #:	329
Date Recieved:	03-Nov-2020	Date Reported:	03-Nov-2020

S/No	Test	Method	Specification	Result
1	Specific Gravity @ 15.6°C	ASTM D1298	Report	0.8444
2	Color, ASTM	ASTM D1500	Max 3.0	0.5
3	Cloud Point, °C	ASTM D2500	Max 6	4
4	CFPP, °C	IP 309	Max 6	-1
5	Pour Point, °C	ASTM D97	Max 3	-6
6	Flash Point, °C	ASTM D93	Min 54	62
7	50 % Vol. Recovery, °C	ASTM D86	Report	270.1
8	90 % Vol. Recovery, °C	ASTM D86	Max 365	357.4
9	Cetane Index	ASTM D976	Min 45	50
10	Kinematic Viscosity at 40°C, cst	ASTM D445	1.50-6.50	2.984
11	Total Sulfur, ppm	ASTM D4294	Max 500	276
12	Corrosion, Copper @ 100°C, Classification	ASTM D130	Max 1	1a
13	Conradson Carbon % wt of 10% residue	ASTM D189	Max 0.20	0.010
14	Sediments, % Wt.	ASTM D473	Max 0.01	0.009
15	Ash Content, % Wt.	ASTM D482	Max 0.01	0.008
16	Water Content, % Vol.	ASTM D95	Max 0.05	0.01
17	Total Acid No. mg KOH/gm	ASTM D974	Max 0.50	0.2
18	Strong Acid Number, mg KOH/gm	ASTM D974	Max Nil	Nil

Note: This report shall not be produced except in full. Measurement Uncertainty will be provided on request from the customer.

We confirm that the product complies with HSD PSQCA and MP&NR Specifications for Above Tests.

Remarks: _____

Muhammad Umer
Prepared By

M. Tariq
Issued By

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End of Test Report