

ADMINISTRATIVE EXTENSION REPORT

प्रशासनिक विस्तार रिपोर्ट

COMMERCIAL TEST REPORT

व्यावसायिक परीक्षण रिपोर्ट

COMB- 294/2942/2022

Month: November, 2022

COMB- 213/2480/2020

Month: June, 2020

TEST REPORT IS VALID UPTO : 30th June, 2027



**PREET 987 D
SELF PROPELLED COMBINE HARVESTER**



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture and Farmers Welfare

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Northern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, सिरसा रोड, हिसार, (हरियाणा) - 125 001

Tractor Nagar, Sirsa Road, Hisar (Haryana)-125 001

[ISO 9001:2015 CERTIFIED]

Website: <http://nrfmtti.gov.in/>

E-mail: fmti-nr@nic.in

Tele./FAX: 01662-276984

5. TWO- HOUR ENGINE PERFORMANCE TEST

5.1	The results of Maximum power 2 hours test of engine under natural ambient conditions is summarized as under:				
Power, (kW)	Engine Speed, (rpm)	Fuel Consumption			Specific energy
		(l/h)	(kg/h)	(kg/kWh)	(kWh/ l)
Combine Harvester (Previous sample)					
73.8	2299	21.87	18.05	0.245	3.37
Combine Harvester (Present sample)					
73.2	2199	18.87	15.67	0.213	3.88

Remark – Power variation between previous sample & present sample is within limit as per IS: 15806-2018

6. ESSENTIAL TEST/ INSPECTION

As per the provisions laid down in the IS:15806-2018, Table 2, (i), for change in prime mover make and model within $\pm 10\%$ variation in power and engine speed (for tractor operated combine only), No test required, only physical inspection is recommended. Hence the observations of the comparative specification of the prime mover are given in Chapter 3 and performance parameters are given herewith.

	Parameter	Previous Sample (Prime mover)	Present sample (Prime mover)	Remarks
4.1	Make	Ashok Leyland	VE Commercial Vehicles Ltd.	Change
4.2	Model	H6ETIC3RD22	E494	Change
4.3	Max. Power (absolute) Average max. power observed during 2 hrs. max. power test in natural ambient condition, kW	73.8	73.2	Variation with in limit
4.4	Rated Power, kW	70.3	73.2	
4.4	Rated Speed, rpm	2200	2200	No change

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5. SELECTED PERFORMANCE AND OTHER CHARACTERISTICS AS PER IS: 15806-2008 (Complete evaluation including originally tested sample and sample inspected/tested for administrative extension)

Sr. No	Characteristics	Category (Evaluative/ Non evaluative)	Requirement (R)/ Declaration (D)	Tolerance	Observed	Remark
1	2	3	4	5	6	7
I. Prime mover performance						
	a) Max. power (absolute) - Average max. power observed during 2 hrs. max. power test in natural ambient condition, kW	Evaluative	74.0	±5% of declared value	73.2	Conforms
	b) Max. power during field test after adjusting the no load engine speed as per recommendation of the manufacturer for field work, kW	Evaluative	67.0	±5% of declared value	67.6	Conforms
	c) Power at rated engine speed, kW (under natural ambient condition)	Non-Evaluative	74.0	±5% of declared value	73.2	Conforms
	d) Specific fuel consumption corresponding to average maximum power under 2h maximum power test, g/kWh	Evaluative	218	±5% of declared value	212.5	Conforms
	e) Max. smoke density at 80% load between the speed at max. power & 55% of speed at max. power or 1000 rpm which ever is higher	Evaluative	As per CMVR rule	Nil	1.23 m ⁻¹	Conforms
	f) Max. crank shaft torque, (Nm) observed during the test after no load engine speed is adjusted as per manufacturer's recommendation for field work	Evaluative	380	±8% of declared value	400.8	Conforms


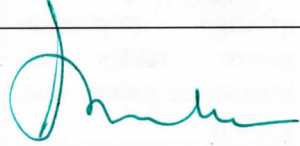
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g)	Back-up torque, %	Evaluative	7% min.	Nil	26.41	Conforms
h)	Max. operating temperature, °C i) Engine oil ii) Coolant	Evaluative	130 105	Should not exceed the declared value	103 94	Conforms
i)	Lubrication oil consumption, g/kWh	Evaluative	Not exceeding 1 % of SFC at maximum power (high ambient)	Nil	0.12	Conforms

6. SUMMARY OF OBSERVATIONS, COMMENTS AND RECOMMENDATIONS

- 6.1 Change in the declared maximum power and the rated power of the prime mover (i.e.), **Ashok Leyand, H6ETIC3RD22** and **VE Commercial vehicles Ltd, E494**. is within $\pm 10\%$., hence eligible for Administrative Extension as per provisions laid down in IS:15806-2018.
- 6.2 The effect of the modifications on performance has been examined and considered that, the modifications are not going to affect the results of the original test. The Original test report, therefore, applies also to the modified combine harvester.

TESTING AUTHORITY

Er. SANJAY KUMAR AGRICULTURAL ENGINEER	
Dr. MUKESH JAIN DIRECTOR	 22.11.2022

The test report is compiled by Er. Sunil Kumar Patil, Senior Technical Assistant

7. APPLICANT'S COMMENTS

We will comply with during our regular production of the combine harvester.