



**MARUTHI KRISHI UDYOG MPIC 63003  
MULTI PURPOSE POWER INTER CULTIVATOR**



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation and Farmers Welfare

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

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<b>Machine-301/1056</b>	<b>MARUTHI KRISHI UDYOG MPIC 63003 MULTI PURPOSE POWER INTER CULTIVATOR</b>	<b>COMMERCIAL (ICT)</b>
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Manufacturer : M/s. Maruthi Krishi Udyog,  
Near Kere Kodi, Nelamangala,  
Bangalore Rural Dist. - 562 123,  
Karnataka, **India**

Applicant : The Manufacturer

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MULTI PURPOSE POWER INTER CULTIVATOR**

Report No. : Machine-301/1056

Month: August

Year: 2019



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Pitting of seat/faces of valves : None

Any visual damage to the teeth of timing gears : Normal

Clearance between valve guide and valve stem (mm)

- Intake valve : 0.08

- Exhaust valve : 0.09

**16.2 Clutch** : Not applicable

**16.3 Transmission gears:**

All the gears of the transmission system were found in normal working condition.

**16.4 Rotary drive unit:**

The rotary drive unit was dismantled and all the components were found in normal working condition.

## **17. COMMENTS & RECOMMENDATIONS**

### **17.1 Engine Performance:**

17.1.1 The maximum power and rated power were observed as 3.9 kW under natural ambient condition against the declared value of 3.7 kW.

17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 291 g/kWh against the declared value of 287 g/kWh.

17.1.3 Max. Torque was observed as 12.4 Nm against the declared value of 11.5 Nm.

17.1.4 Back up torque of engine was observed as 7.26%,

**17.2** Max. Noise at operator's ear level was observed as 99 dB (A). which is higher as per ILO. Therefore corrective action to reduce the noise should also be taken.



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**17.3** The amplitude of mechanical vibration on most of the assemblies of the intercultiator was observed on higher side and to the maximum extent of 430 microns, Which is directly concerned with Operator's Health, Safety and Comfort. Besides, it also adversely affect the useful life of the components. In view of the above, this should be taken care for corrective action.

**17.4** The hardness of plough conforms to the requirement of IS 10691:1983.

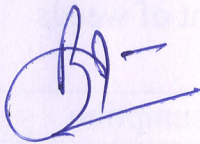

**17.5** The chemical composition of plough does not conform to the requirement of IS 10691:1983. This should be looked into for corrective action.

**17.6** Labeling plate provided should be as per the requirement of IS.

**17.7 Technical literature:**

The User manuals of intercultiator and engine was supplied with the test sample for reference during the test. It is however, recommended that same may be revised and bought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel.

**TESTING AUTHORITY:**

<b>B.N. DIXIT AGRICULTURAL ENGINEER</b>	
<b>Dr. P.P. RAO DIRECTOR</b>	

**18. APPLICANT'S COMMENTS**

"We will do all the possible necessary changes as per your recommendation for our future products".