**Single cylinder automotive hybrid research engine with dual fuel setup and**

**Open ECU system**

 **open ECU system**

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|  | **Name of the equipment:** Single cylinder automotive hybrid research engine with dual fuel setup and open ECU system**Make & Model:**Mahindra, Jeeto (Engine No - UAK3A17253)**I-Stem Registration ID-** **Category of Instrument**Heat Engines**Types of Analysis / Testing**Performance (Load Test), Combustion Analysis Charts (P-Ɵ, P-V etc), Heat Balance and Emission Test.**Application:** Diesel and hydrogen**Description of Instrument**The engine is a single cylinder, four stroke, water cooled with maximum power 15 HP output at 3600 RPM. This engine can be operated with diesel, diesel + hydrogen dual fuel mode and hybrid mode (engine + electric motor). |

**Booking Details**

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| **Book through I-STEM:** <https://www.istem.gov.in/>**Slot Booking Link**I-STEM Slot Booking link for External User | **Booking available for**Internal and External Both**Requisition form for** InternalExternal**Contact Details** |
| **Faculty In-charge:** Dr. Saleel Ismail**Email ID:**saleel@nitc.ac.in**Phone number:**9884691904 | **Technical Staff:** Pradeep Kumar K K kkp69@nitc.ac.inDhaneesh DCdhaneeshdc@nitc.ac.inAthul Krishna K R athulkrishnakr@nitc.ac.inVasu TCtcv74@nitc.ac.in**Features, Working Principle and Specifications**  | **Department**MED**Office Email ID**medoffice@nitc.ac.in**Location**Heat Engines Lab, Department of Mechanical Engineering**Lab Phone No**04952286456. |
| **Features of the equipment*** The engine is a single cylinder, four stroke, water cooled with maximum power 15 HP output at 3600 RPM.
 | **Features, Working Principle and Specifications** **Unique features/Measurement capabilities, if any*** This engine can be operated with diesel, diesel + hydrogen dual fuel mode and hybrid mode (engine + electric motor).
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| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**

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| Bore  | 93 mm |
| Stroke Length  | 92 mm |
| Displacement  | 625 cc |
| Max Power  | 15 HP @ 3600 rpm |
| Max Torque  | 35 Nm @ 2000 rpm |

 | **Measurement/Sample specifications:** * Diesel and hydrogen

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**Type of Sample Required for Analysis / Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions**

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| * Quantity: As per the type of test.
* Sample should be in sealed condition with proper labelling.
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**User Charges Rs. (GST Extra)**

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| **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| Rs. 500/ sample | Rs. 1000/ sample+GST | Rs. 3000/ sample+GST | Rs. 3000/ sample + GST |