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

**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**  Internal  External  **Contact Details** | |
| **Faculty In-charge:**  Dr. Saleel Ismail  **Email ID:**  [saleel@nitc.ac.in](mailto:saleel@nitc.ac.in)  **Phone number:**  9884691904 | **Technical Staff:**  Pradeep Kumar K K kkp69@nitc.ac.in  Dhaneesh DC  dhaneeshdc@nitc.ac.in  Athul Krishna K R  [athulkrishnakr@nitc.ac.in](mailto:athulkrishnakr@nitc.ac.in)  Vasu TC  tcv74@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). | | |
| **Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)**   |  |  | | --- | --- | | 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 | | |

**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. |

**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 |