**PUSHPENDER KUMAR**

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**Aspiring managerial positions in the Automobile/ HVAC Testing & Validation**

**EXECUTIVE SUMMARY**



* An astute professional with **around 15 years** of rich experience in Automotive testing and validation;

- New Product Development - R&D, Prototyping - Competitor Vehicle Benchmarking

- Value Engineering - Component Development - Vehicle Testing

- Automobiles Diagnostics - Route Cause Analysis & Rectification - Project Management

- Vehicle & System Validation - Workshop Management - Vehicle Ride & Fleet Management

-Bus body code (AIS052 and AIS 056)

* Deft at leading on-road autonomous vehicle testing in the form of exploratory test trips and regular test routes in several locations, serving data collection and product validation requirements.
* Skilled in establishing engineering expertise from scratch for Validation, Homologation Testing, Routine Testing & Trial Testing of products.
* Expertise in evaluating vehicle dynamics aimed at bringing improvement in the ride; demonstrated excellence in Vehicle Test proving including Ground Management & Control.
* Gained familiarity with installation procedure, programming & data analysis for following instruments as; Das2A, V-Box3i, Data Taker, IMC, Fluke, SLM, Yokogawa, Fuel Flow Meter(AIC, DFM & Onosoki), Lux Meter, Pedal Force Meter etc.
* **Design:-DFMEA, DFA, TGW, IPTV, APQP.**

**KEY RESULT AREAS**



* Coordinating with certification & testing agency for domestic & export homologation.
* Studying technical specifications to estimate testing cost, testing requirements and its timeline.
* Monitoring and testing equipment along with analyzing and documenting test results.
* Preparing compliance reports and directing validation activities.
* Resolving testing problems and making adjustments or improvements to equipment and processes.
* Reviewing processes & work flows and re-designing them to enhance operational efficacy.
* Designing & developing Test Rigs and handling procurement of new Test Facilities; evaluating, obtaining clearance & implementing Value Engineering Proposals and alternate source development.
* Instituting quality systems / procedures in the organization to reduce rejections and ensure zero defect products.
* Planning effective manpower deployment & works scheduling of qualified workforce; addressing training needs of staff to enhance skills and productivity.
* Developing validation schedules along with conducting training and overseeing the work of validation technicians.
* Keeping up to date on industry standards and regulations.
* Performing testing and validation of HVAC components and Systems along with preparing test plans.

**CAREER CONTOUR**



**Since Mar 2019 with JCB India Limited, Pune (XP Shop) as Deputy Manager (Projects, Brake, Steering, Noise and Pressure Measurement Testing) - WLS Project**

**Accountabilities**

* Conducting Pre-CMVR test for the assigned projects and conducting performance trials as per Design Validation Plan (DVP).
* Providing technical support to homologation team during CMVR certification activity.
* Preparing fuel economy and benchmarking plan with various competitor vehicles & execution of the same.

**Highlights**

* Carried out machine level testing such as brake, steering and noise testing.
* Successfully completed validation of Wheel loader machine within stipulated timeline.

**Nov 2008 – Feb 2019 with TATA Motors Ltd., Lucknow (Outdoor Testing)**

Apr 2017 – Feb 2019 as Executive (Projects, Cost of Ownership, NVH, HMI, and PreHomologation) - Vehicle Testing and Validation in ERC (Engineering Research Center)

Apr 2016 – Mar 2017 as Officer – (Projects, PreHomologation) - Vehicle Testing and Validation in Engineering Research Center

Dec 2011 – Mar 2015 as Junior Officer – (Ergonomics & Projects) Vehicle Testing and Validation in Engineering Research Center

Nov 2008 – Dec 2011 as Associate – (HVAC & NVH) - Vehicle Testing and Validation in Engineering Research Center

**Accountabilities**

* Performed vehicle preparation and conducting Pre-CMVR test for the assigned projects.
* Conducted performance trials as per Design Validation Plan (DVP).
* Provided technical support to homologation team during CMVR certification activity.
* Prepared fuel economy & benchmarking plan with various competitor vehicles & execution of the same.

**Highlights**

* Completed RSG tuning with Cummins team & got SLD certification from ARAI in record time for JnNURM II projects.
* Successfully completed validation of Ergo-pack instrument cluster within stipulated timeline.
* Efficiently completed fuel economy trial for 1512 BSIV, 1623FE Coach and 1623 RE LE project with competitor vehicle in the field along with service team. Completed the LPO 1512 brake trials are completed.
* Identified the LPO 1618 buses observed the noise issue in dynamic condition and resolved the issue.

**Oct 2005 - Sep 2008 with R&D, Subros Ltd., NOIDA (HVAC Testing - Research & Development)**

Oct 2006 – Sp 2008 as Assistant Engineer – Projects, and HVAC Testing & Validation

Oct 2005 – Sep 2006 as Diploma Engineer Trainee (DET) - HVAC Testing & Validation, R&D

**Accountabilities**

* Conducted HVAC Cooling performance test component level and vehicle level (as per JIS,DDS and TDS).
* Carried out testing machine setup as per test specifications all around.
* Conducted frost resistance test, antifreeze testing on cooling unit and air pressure drop across the heat exchanger.
* Conducted heater and radiator testing, thermistor location test, hot spot optimization test and thermal image mapping across the components.
* Ran the wind tunnel chamber according to the desire test condition (-30ºC to +60ºC).
* Performed cooling performance & heater testing in vehicles and also carried out charge optimization test component, and vehicle level.
* Conducted Heater core heating capacity air side, heating capacity coolant side & pressure drop air side & coolant side test.
* Carried out compressor pressure ratio, power consumption, volumetric efficiency, isentropic efficiency and mechanical efficiency test.

**Highlights**

* Successfully completed the HVAC testing for Mahindra Xylo project in a very cost effective manner.
* Efficiently completed HVAC Trial with service team in North region.
* Carried out HVAC Testing on lot of cars from Maruti, TATA and Mahindra.

**ACADEMIC CREDENTIALS**



2014 B.E. (Mechanical) from Institute of Mechanical Engineers (IME), Mumbai with 60%

2005 Diploma in Mechanical Engineering from Board of Technical Education, Lucknow with 73.32%

2002 B.Sc. from C.C.S University, Meerut with 56.7%

**KNOWLEDGE PURVIEW**



* **Homologation Testing:** Comprehensive knowledge of IS, AIS & SAE standards. Aware of Homologation Testing requirement, methodology used by certification agencies (ARAI & VRDE). Conducted enormous numbers of conformity test (Pre-CMVR) and participated during ARAI & VRDE certification tests as well. Demonstrated abilities in technical analysis for meeting the statutory requirement/norms as per standard.
* **Other Tests Carried Out:** Head lamp Leveling Device (HLLD), Speed Limiter Device (SLD), Brake Test, Noise Test (Interior & Pass By Noise), Cooling Test, CSFC, Gradeability, Range Test, TCD, TCCD, Steering Effort, Speedo-odo calibration and driver ergonomics.
* **Performance Testing:** Thorough knowledge of vehicle level validation through performance testing in context of IS, AIS & SAE standards. Technically aware of the driving factor & major contributors for different performance tests. Extensive knowledge in data interpretation, report preparation & presentation.
* **Test Carried Out:** Coast Down, Powertrain performance (Acceleration & Drivability), Fuel Economy(City & Highway trials), Brake Test(Static), CG Measurement, Back Pressure Measurement, Duty Cycle measurement & optimization for various components(Air Compressor, Cooling Fan, AC Unit, Gear Utilisation) , Pedal Travel & Effort Measurement and Gear Shift/ Select Effort.
* **Durability Testing:** Rich exposure of durability testing methodology for vehicle level validation, preventive & breakdown maintenance, component life (wear life) durability, oil life monitoring, Articulation test, Shower test, Water wading test, Tear Down Analysis, Air intake restriction measurement, LPC measurement and Starter motor circuit resistance.
* **Accelerated Durability Testing:** Well aware of various torture tracks (Pave, Pot Hole, Corrugated, Twist/ Articulated Track) available at VRDE and other test methods as; Clutch Drop Test and Ditch Test.
* **Diagnostic/ Application Software:** Hands-on experience on Engine Diagnostic Tool(Cummins Insite, TML HCV/LCV diagnostic tool), Samtec, Allison Doc, Canoe and Cecalwin.

**PERSONAL DOSSIER**



**Date of Birth:** 30th September 1982

**Address:** Flat No. 1553 Tower-2b Landcraft Golflink Society Near Columbia Asia Hospital, Ghaziabad-201002

**Languages Known:** Hindi and English