

# Testing Bench Manager & Test Engineer

## Vos activités

Define and agree with the stakeholders (Customer and Continental) all the project system related requirements ensuring full understanding, development coverage and traceability according to Customer and continental processes and tools.

Plans, Execute, and report all the test activities of a project

He/she is responsible for developing testbenches, analyze test specifications, execute test, and evaluating tests results; all in order to verify that the system fulfils the allocated requirements (Internal and Customer related)

Defines test tool requirements develop and/or make sure the necessary tool equipment's are available.

Support the issues/failures understanding and resolution

Requirements and Test bench Manager has to follow:

- Requirement management, processes and tools
- SiL (Software in the Loop): Test of functionality of single software components or the complete software system
- HiL (Hardware in the Loop): Test of functionality of the complete software focusing on the interaction between software and hardware.
- Vehicle Modelling, Systems modelling in order to guarantee the Close loop testing (As on a real vehicle)
- Vehicle Modelling Validation

## Reporting

The resource will report to the Requirements and test group Leader.

## Tasks:

- Develop, enhance and maintain test tools & Tests Bench according to Project and Stakeholders needs
- Define/Develop/consolidate test environments (SIL, HIL, VEH)
- Create passive vehicle models
- Create Active vehicle models: modelling all the vehicle components/nodes (into virtual ECU and actuators) interfacing with the HW under tests to create a Bench test environment closed loop representing the real vehicle
- Create and maintain a methodology to update vehicle models according to the project requirements emission/Status (Active Vehicle) and according to the passive vehicle development status



Référence  
**REF16070N**

Domaine fonctionnel  
**Research and Development**

Site  
**Torino**

Niveau de leadership  
**Leading Self**

Flexibilité du poste  
**Hybrid Job**

Unité légale  
**Continental Automotive Italy  
S.p.A.**

- Validate vehicle models (Active and passive)
- Ensure the Maintenance of the Benches needed (HIL, SIL, Customer Bench) according to stakeholders needs
- Bus communication set-up between model signals and ECU or between two different ECUs (the ECUs could be either physical or simulated depending on the system requirements);
- CarMaker scenarios definition and/or adaption depending on desired requirements.
- to support in the fault injection plan and proper signal communication.
- SW development such as HMI: such as on vehicle including dashboard, Key Status (or Ignition Working Condition or vehicle state handling), maneuvers definition, Automatic failure generation set up, Vehicle BUS definition as easy as possible (Example starting from dbc files)
- Support to create a flexible architecture to ensure the SIL/MIL/HIL closed loop simulation on OEM & Conti Test benches.
- Test Cases according to Customer & Internal Continental needs for reaching a full test scope
- Test Automation when feasible
- Data collecting / Failure analysis/ reports generation
- Establish Test Management Board (TMB)
- Monitoring of release test activities, support deviation.
- Review test results and monitoring of action items.
- Develop a project specific test strategy
- Define test activities & schedule (TPS)
- Support and establish customer specific test
- Responsible for test related customer Communication, FlashLoader, Network Management, Transport Protocol, Physical Layer & Diagnostic
- Create release recommendation
- Coordinate and align test strategy, test benches, test tools cross locations

#### **Additional responsibility & Support:**

- Support of different requirements engineers for the correct requirements analysis, interpretation, and internal requirement translation for the developers
- Define a requirement implementation timing and traceability
- Manage the requirements changes request and requirements release packages.

#### **Quality & Stakeholders satisfactions**

- Ensure Quality in all the related responsibility, Processes according to Continental & Customer requirements
- Customer & CES/Continental Interfaces
- Interface with other department personnel in resolution of development issues from above (System, SW, Architecture, ...)
- Establish Lessons learned process & feedback culture within the Conti & OEM interfaces
- Active steering. Agree and steer new request with Customer

Engineers, find a win-win solution

- Continuous improvement: improve customer perception through excellence in customer interaction. Capability to increase information flow & understanding between customer and Continental Teams

### **Required knowledge & Skill**

- Expert Designer knowledge on HIL Test Bench, including HW, SW and tests case (IPG, Vector, NI)
- High Knowledge on CARMAker / IPG SW & Tools
- Expert of Diagnostic, BUS (Message Map, Network Management, Transport protocol), FlashLoader, FSF, Vehicle Functions) à And all the ISO related
- Automotive Software development knowledge
- Experience of analytic testing and trouble shooting in Bench, test environments (HIL, SIL, ...) and plant facilities
- Good Experiences with CAN, DIA (ISO), FSF, Vehicle Functions, E&E Architectures
- Good Knowledge for:
  - Matlab, Simulink, C code programming, Rapid prototyping, CANoe (Including CAPL Script generation), Canalyzer (Including CAPL Script generation), Dianalyzer, Office packages, Vector test studio
  - HIL Bench architecture
- Hand over experiences
- Complex system engineering experiences
- Good Knowledge for Vehicle dynamics & Controls
- Good Knowledge on vehicle components and modelling (Active and passive vehicle)
- Good Knowledge on ECU's and actuators modelling
- Base knowledge on functional safety ISO 26262
- Knowledge of IEC 61508 or SPICE processes
- Valid Driving License (Min B) and good driving skills

### **Votre profil**

- graduated with Master engineering university on Electronic, Informatics, Electrical, Mechatronics, Automation

### **Notre offre**

- English à Fluent
- Italian à Mother Language
- German à Desired

### **Soft Skills:**

- Good team worker, problem solving oriented, flexibility, ability to take good decisions (win-win) quickly.
- Good international social skills and drive-force to get the required support from all the responsible persons within Conti and OEM requirements and testing departments to solve the issues, with

quality, on time.

- Authority to lead/Steer meetings (@ Continental and Customer) discussing issues and their solutions.
- Good Leading skills
- Excellent communication skills.
- Continue improvement & motivation for knowledge increase
- Proactive behaviour

## **Others**

- Driving License B
- Good Driving Skills

Ready to drive with Continental? Take the first step and fill in the online application.