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AutomatedUniversalEngineJunctionBoxTesting System using PLC and HMI

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Abstract:*This paper discusses a new methodology for developing an automated test system of engine junction boxes using programmable logic controllers (PLCs) and human machine interfaces (HMIs). The legacy process of testing using human resources normally leads to long test times and unnecessary labor. In this instance, PLCs and HMIs will be used as a testing methodology for visual inspection and wire continuity testing. The junction box will be mounted in a test panel for branching inspection/potential connector usage. and the HMI will provide feedback to the operator in real time. In this automated process human testing will be eliminated and create more efficiency, accuracy and reliability in the test process.*

Keywords:
EngineJunctionBox,Automatedtesting,ProgrammableLogicControllers(PLC),VisualInspection,WireContinuity Testing, Human Machine Interfaces (HMI), Efficiency,Accuracy, Reliability