

Design and Implementation of an Electronic System for an Off-Highway Vehicle Application

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Objective: Design and implement an electronic controls package for the 2007 Purdue Quarter Scale Pulling Tractor

Features:

- Parker Hannifin CAN-Bus Control
- Fuse and Relay Access Panel
- Throttle and Steer-By-Wire
- Shrouded Wiring Harness
- Printed Circuit Board
- Deutsch Connectors
- Sensor Integration



ASABE
1/4 Scale Tractor
International Student Design Competition

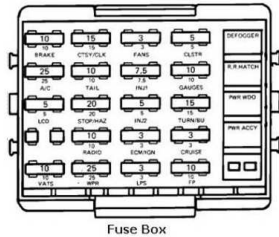


2007 Purdue Quarter Scale Pulling Tractor Pro/E Model

Design Methodology

Safety

Object Detection Sensor
Reverse Alarm
Ignition Lockout Feature
Brake, Seat, and Clutch Switches

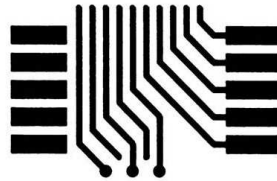


Ergonomics

Gauge Clusters in IQAN MDL
No Dash Interference
MDL and Joystick Location
Centrally Located Fuse & Relay Box

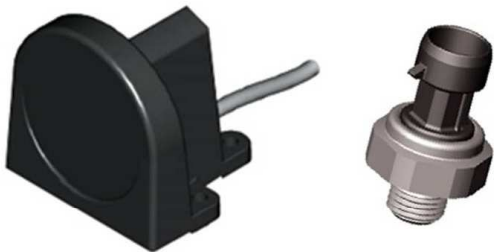
Manufacturability

Shrouded Wiring Harness
Printed Circuit Board
Deutsch Connectors
Sensor Suppliers



Performance

True Ground Speed Sensor
Engine Speed Sensor
Oil Pressure Transducers
Data Acquisition



Packaging

Steer-By-Wire
Linear Actuator
Throttle-By-Wire
Electronic Servo Control



