



ASTA  
Technologies

# BUSINESS PORTFOLIO



## Company Information



### About

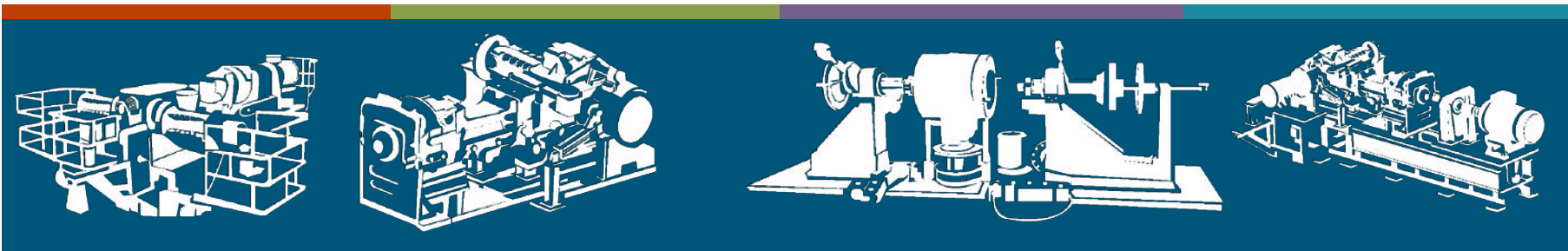
ASTA Technologies is a technology-driven company based in Gurgaon. We offer a wide range of customer-focused solutions, services, and products for various industries including Automotive, Aerospace, Research & Development, Manufacturing, Defense, Power, Railways, Transportation, and Medical.

We have domain expertise in various verticals and we specialize in providing end-to-end solutions for Test & Measurement, Automation, Data Acquisition, LabVIEW software development, Mechanical System Design, and Manufacturing.

### Strengths

Our team is led by engineers having more than a decade of experience in developing complex and custom large-scale test systems in various domains. The ASTA team comprises of several Certified LabVIEW engineers with advanced degrees from global universities.

The core strength of our team is to provide high-end solutions and services leveraging experience from mechanical, software, electronics, electrical, hydraulics, pneumatic, and manufacturing departments working together to provide a comprehensive solution to meet specific requirements.





## ASTA Clients





## Partners and Alliance Members

### Instrumentation & control



### Test & Measurement

**Honeywell**

### Manufacturing



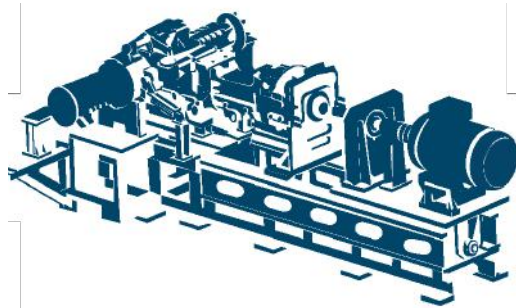
### Hydraulics



**HYDMARK APPLICON**



## Services



**M**echanical System

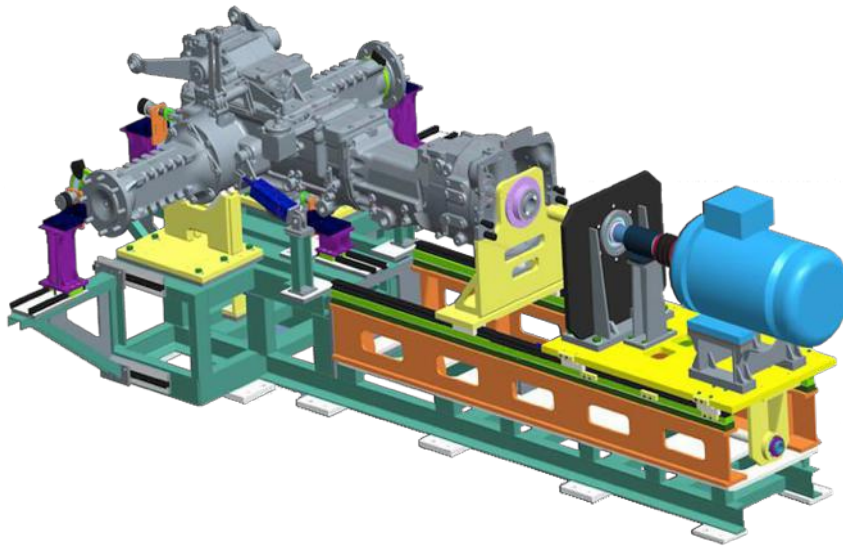
**Design & Manufacturing**



**L**abVIEW

**Software development**

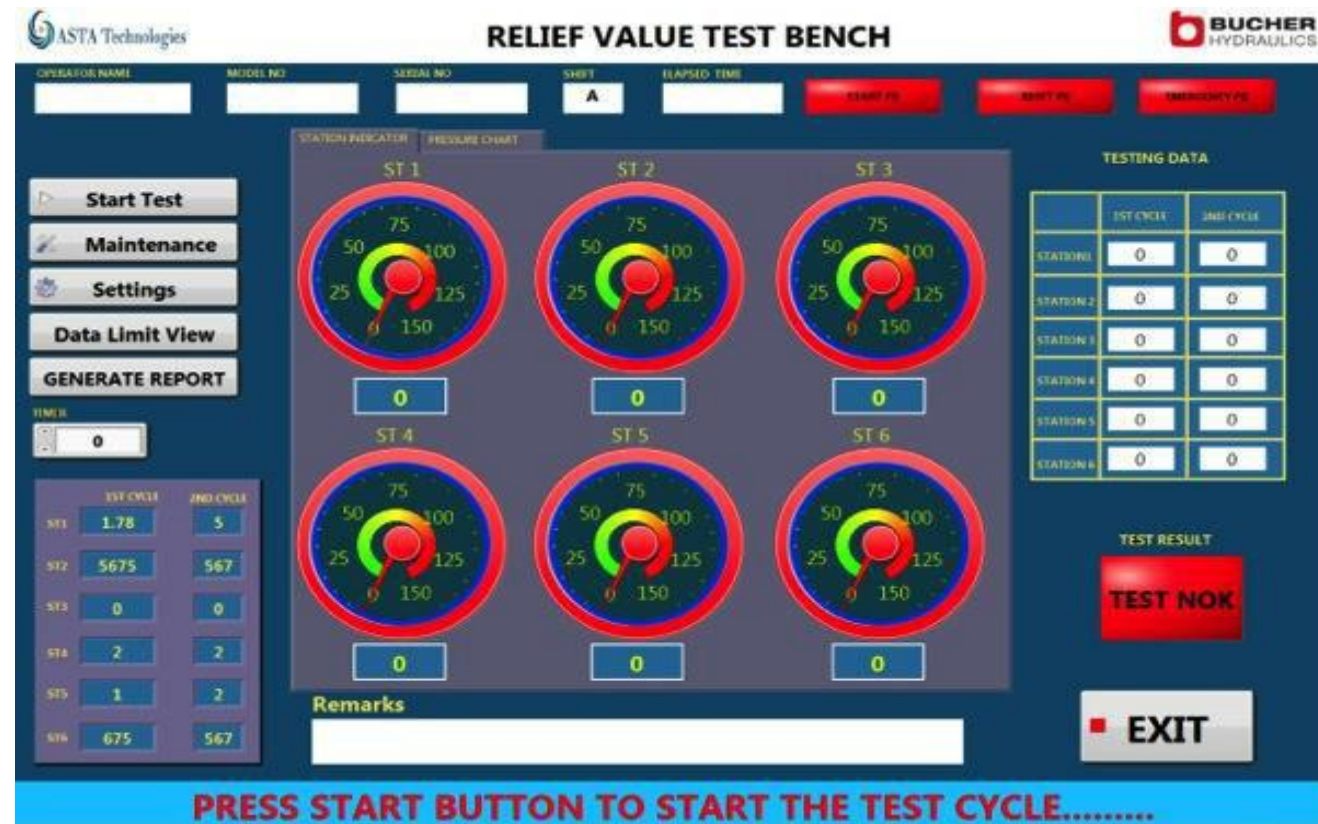




## Mechanical System Design & Manufacturing

ASTA technologies mechanical team's breadth and depth knowledge of mechanical engineering is helping some of the most critical projects come to life. Our team has experience developing complex and large scale SPM mechanical systems.

With over two decades of experience our design team is well equipped to handle industrial, commercial, consumer and product engineering from start to finish.



# LabView Software Development

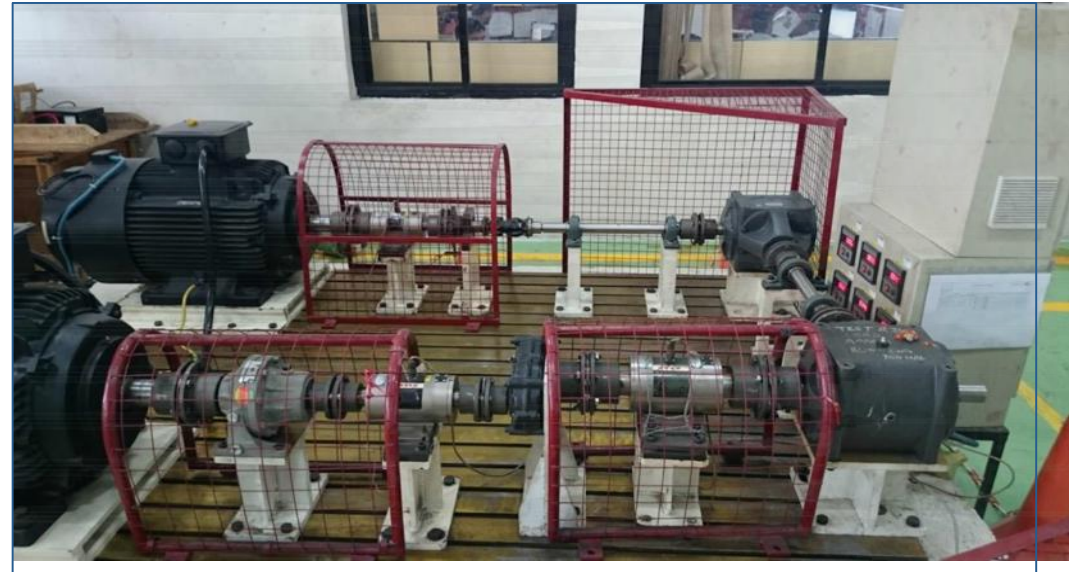
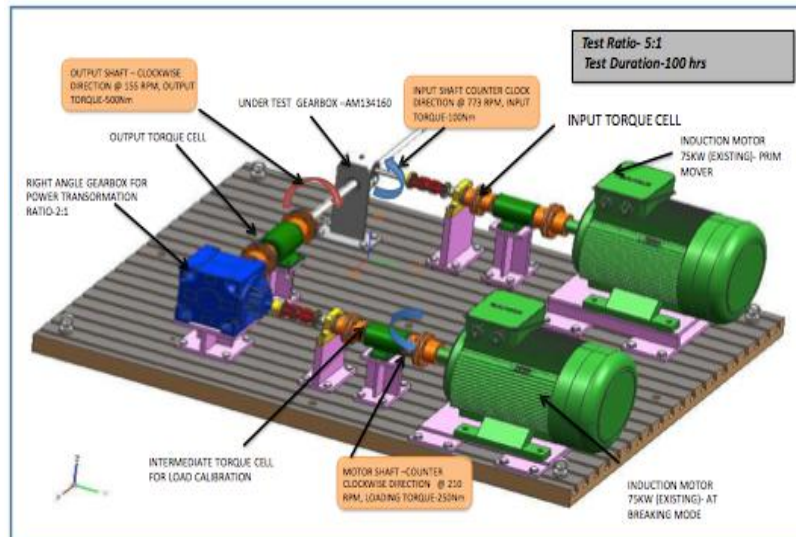
Our experienced, certified National Instruments LabVIEW engineers and software architects develop custom test and measurement automation systems for all kind of applications ranging from instrument control, Line automation, industrial automation, Data acquisition systems, test and measurement to fatigue test systems.







## Regenerative Gearbox Test System



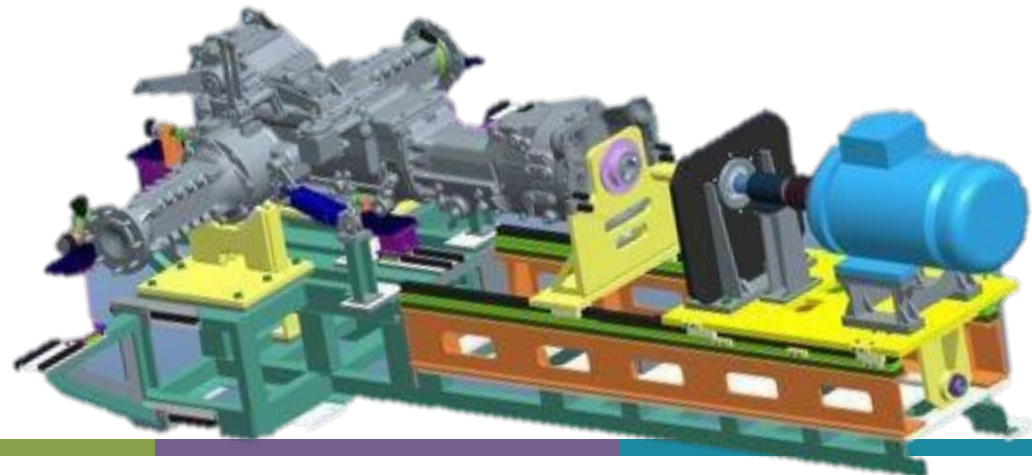
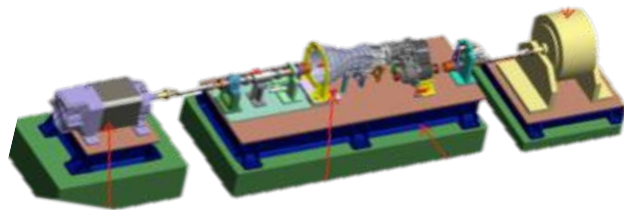
### About:-

The Gear Box Test Rig is used for the Endurance testing of the gear boxes, by applying variable RPM using Prime mover at the Input shaft of the Gear box and torque is applied using breaking motor at the output end. The torque is measured through Torque Cell at both the Input & Output shafts of the Gearbox using a real Time Data Acquisition System.

The software was developed in Ni Labview Real time with FPGA programming.

The system used for this gearbox testing runs on regenerative power concept to deliver accurate results with minimum power consumption.

## Transmission Test Rig



### About:

Transmission test rigs enable functional & durability testing of Transmission components at the End of Line. Custom design and manufacturing of test rigs for testing transmission components including gearboxes, drive shafts, differentials and complete transaxles is undertaken.

Testrig For transmission comes with complete operational and analysis software made in NI LabVIEW with complete interface with Ni Hardware, Mechanical systems PLC's and HMI.



## Transmission Assembly Line

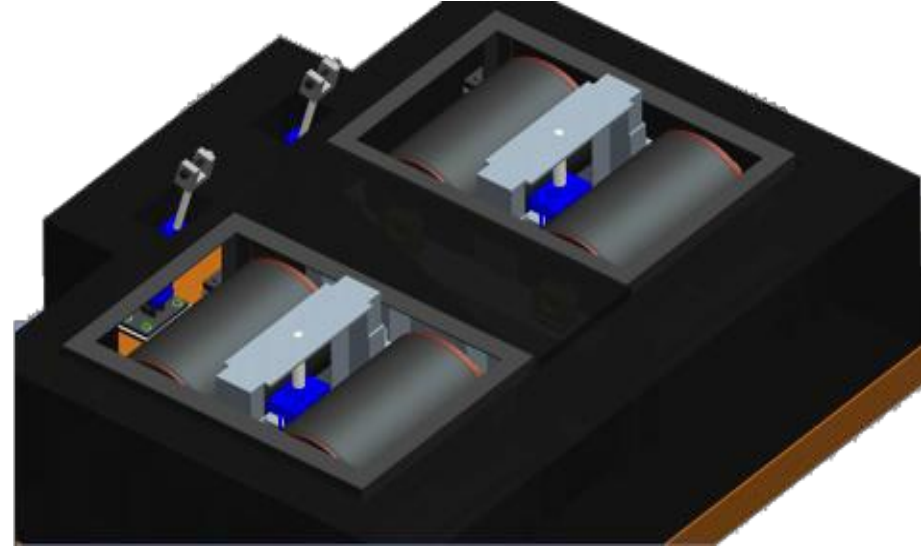


### Hydraulic presses for assembly of automotive components:-

- Case Housing - Transmission component assembly like cones, dowel and bearings.
- Differential housing - roller bearing and dowel pin.
- Cover Differential – Roller Beading, dowel pin, oil seal.
- Clutch housing – Oil seal and brushing shaft.
- weld Control arms – Bush and Shaft-pivot.
- Knuckle joints; Ball joints, Bearing.
- Hub Wheel – Stud Front and Rear.



## Roller Test Bed



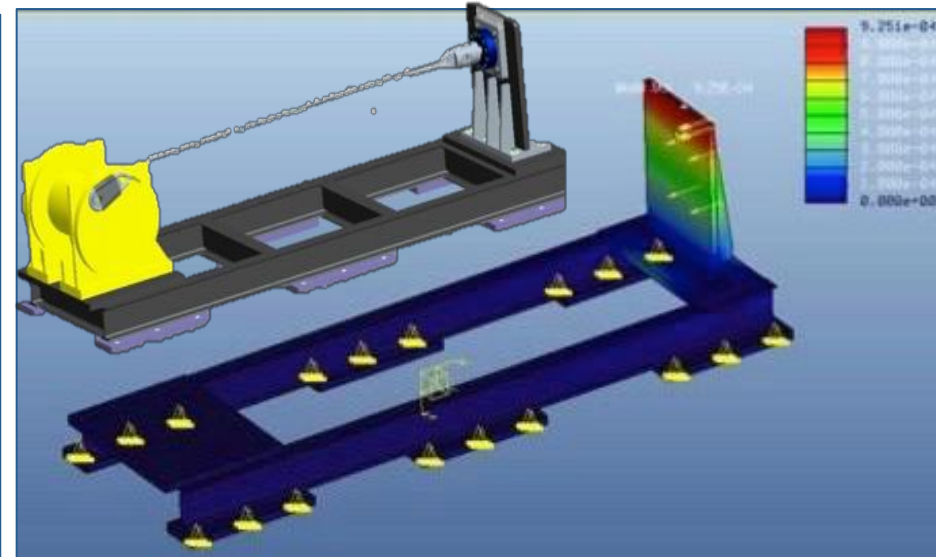
### About:

ASTA Technologies provide roller test bed for end of line testing for vehicles. The rear lifter assembly is also tested with the loading from the hydraulic actuator of up to 2 TON .

- Roller test bed has been installed at the end of line of the tractor assembly at the Bharatpur Plant .
- It involves a development of testing system of Tractor for different RPM, Loading test of rear lifter with the hydraulic assembly by hydraulic actuators.
- Test bed rollers are specially designed for the no slippage and no wear out of the tires of the vehicle.
- The system is Hydraulic system for the loading and lifting actuators.
- The Testing software and system is designed on NI LabVIEW software and real time hardware.



## Hoist Destructive Testing

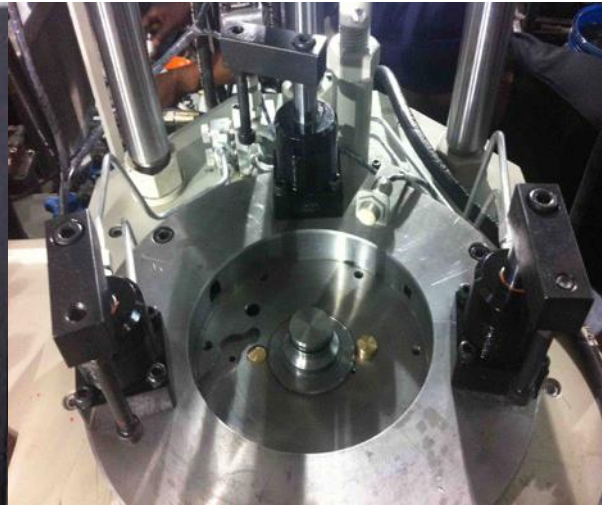


### About:-

ASTA Technologies has long-standing experience in building highly complex Testing system. This is an automated Destructive testing for hoist Up to 10Ton load with hydraulic power pack and LabVIEW Software data acquisition.

The complete system was designed, CAE analysis, Manufacturing and the testing of five different hoist done at our Faridabad facility.

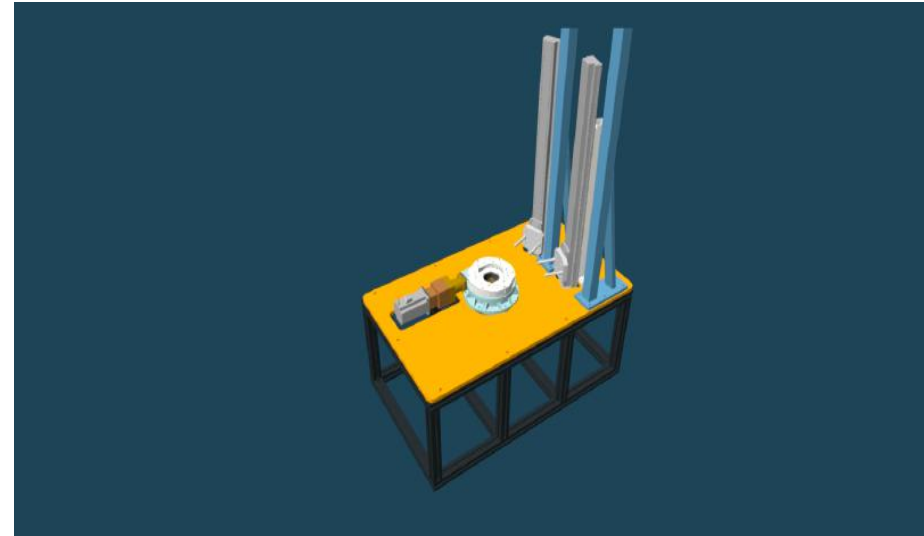
## TLB Transmission PUMP Test RIG

**About:-**

The Pump Test rig has been designed to demonstrate the operating characteristics of a series of different pumps. A self contained pump test rig, containing all the services and instrumentation for determining the characteristic curves of different pumps at different speeds and Loading pressures. A custom designed Pump fixture and Oil Sump was designed to simulate the actual working condition.

After the testing pump was marked with the integrated marking machine.

## CNC Hobbing Robotic system



### About:-

ASTA Technologies has long-standing experience in building highly complex assembly line for automotive components. We Hobbing Pick and place systems for the assembly of automotive components.

Hobbing System Pick and place the gears from the indexing stack of the machine and place in the CNC Machine gripper picking the finished gear from the machine and placing in the finished stack.

- It makes the machine operational for more than three hours without operator attention and saves manpower time.
- It also saves the time as all the operations happen during the machining time.
- It works for 10 different types of gears in dimension.



## Software of 45 Degree, FBMT & HBMT For passenger car seats



### About:

- ASTA Technologies provide complete solution for testing of seat testing of vehicles.

- A CAR Seat is being tested for Horizontal Moment
- LOAD application wherein the Horizontal Moment load is applied through Electric Linear Servo Actuator (ELSA).
- THE POINT P rotates around HIP POINT when the ELSA pulls POINT P.



## Accelerator Pedal System Assembly



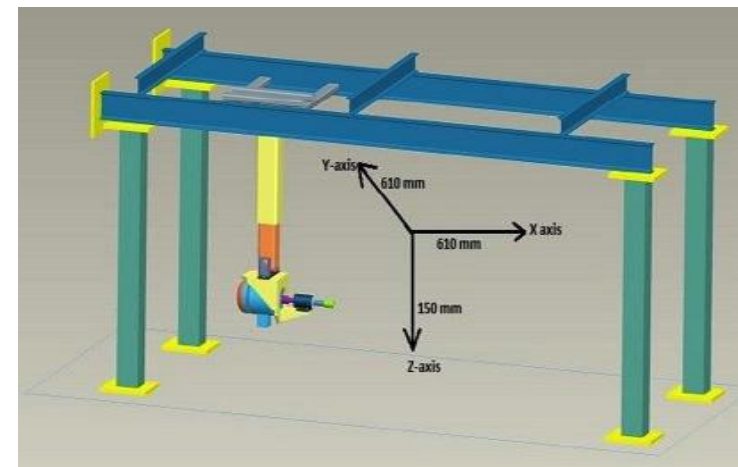
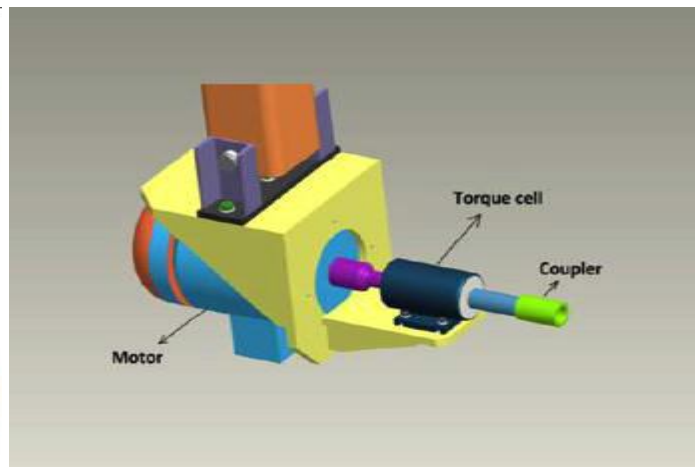
### About:-

ASTA Technologies provide end-to-end solution for assembly of Accelerator Pedal Sensor cover assembly. From Sensor base assembly stations., Pin cutting station, Sensor cover assembly and High voltage Test station. Vision testing of PCB and brush carrier station, Final Accelerator paddle assembly and calibration station.

## Rig4WD Test Rig for Front axle

### Project Specification:-

- Multispeed Transmission test rig for the performance and for quality assurance testing Transmission on the productionline.
- It involves a development of testing system of transmission for different online test RPM ratio test, Direction Test, Vibration Test and Run in Test line.





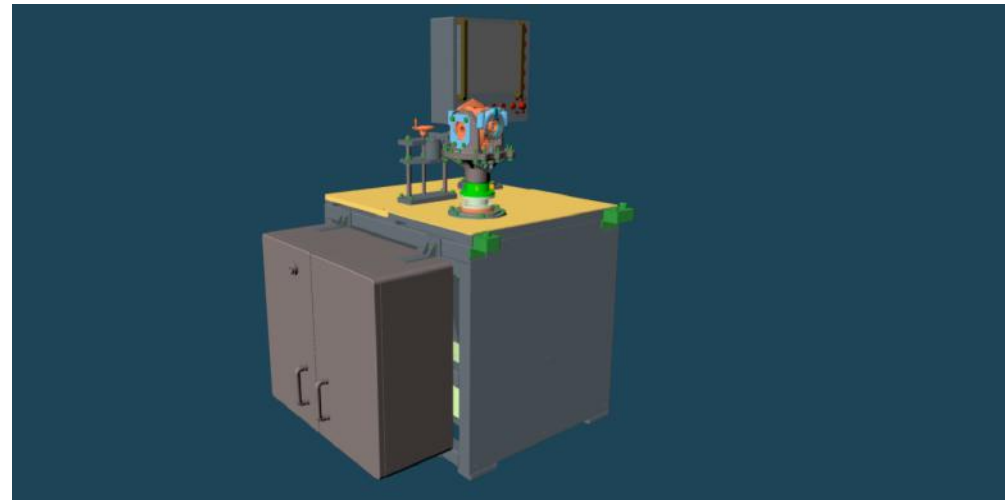
## Backlash setting for Driveline differential



### **About:-**

ASTA Technologies Provide end-to-end solution for backlash setting in transmission assembly. The system sets the backlash and final preload in the differential assembly.

## Pinion pre-load Machine



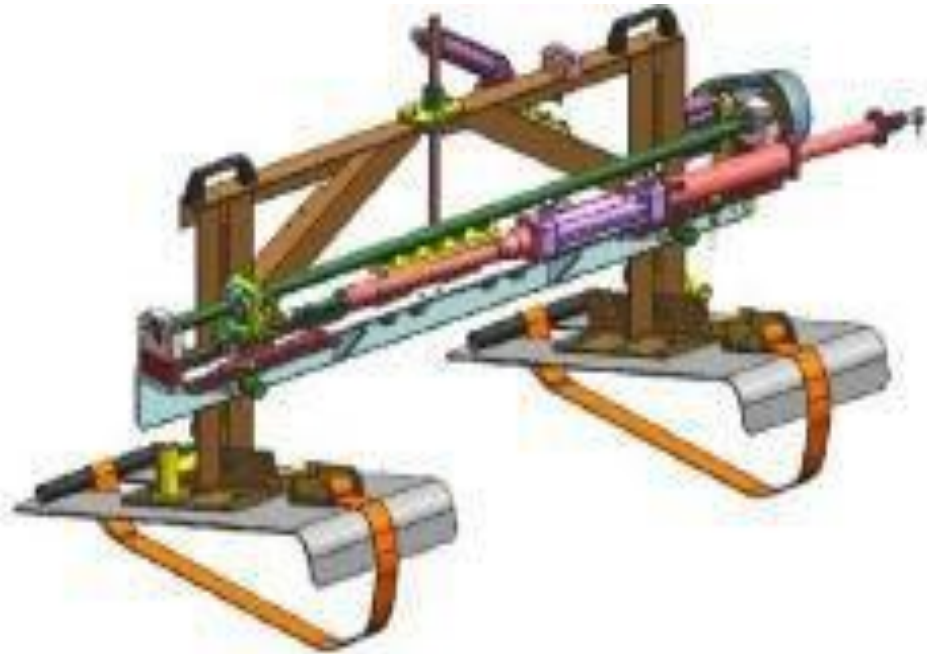
### About:-

ASTA Technologies design and manufacture high precision linear motion Pinion preload machine to preload the nut pinion arrangement in the differential housing with dual servo motor synchronization using torque sensors as monitoring parameter.

- The project includes the design, concept building & development of two Assembly machines for the Driveline differential of an earth-moving vehicle.
- One machine preloads the nut pinion arrangement in the differential housing with the two servo motor synchronization with the torque sensor as monitoring parameter.



## Car Door testing system



### Project Specification:-

- Door testing for its joints and locking setup Testing.
- Small testing setup installed on seats for complete cycle testing of all for doors of the car.
- Calculation of door closing and opening speed with the accurate door displacement by servomotor.
- Reports and data can be visualized on remote PC outside Car.

## Other projects



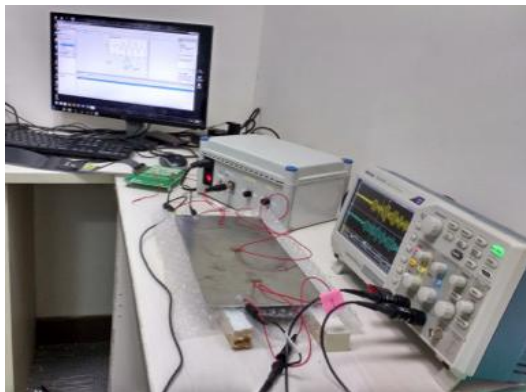
ITL Leak Testing Machine



JCB Remote Vehicle Control



JCB Valve Testing



Crack Detection on Engine



Ultrasonic Sensor testing



## Real Time Energy Monitoring And Management Systems (A Product Of ASTA Technologies)



### About:-

A portable energy logger allows you to monitor your company energy consumption. It will measure the mains power or individual devices, logging the data directly through to a local file or up to our dedicated energy server if required. The data will appear in real time so that you can view it as it happens or store it to disk for your convenience. The system passes the government requirements for third party working through real time graphical displays, you can see exactly what is happening when there is a change in the power consumption like turning on a kettle or the heating kicking in.

The system also allows for the extension of temperature and humidity sensors as additional add-ons.

The system has been used to monitor everything from heat pumps to swimming pools to industrial machinery and complete buildings.



## Conclusion:-

We are a company, which has young and dynamic people who put unrelenting efforts for the work at hand. We as a team have a common objective of customer first. We strive to be a respectable name with our competitors, client and vendors, as we know that respect comes from good ethics and values. We have worked both on Hydraulics and Pneumatics and we have dedicated persons for Instrumentation and Circuit Design. Apart from working on NI Hardware and Software, we also have people who have proven record of setting up applications based on PLC.