APA'S SOURCE SMART PROGRAM

APA ENGINEERING

1. Snapshot of APA Engg
2. Sourcing Processes used
3. Case study of Sourcing Program for a customer
4. Case Studies of 2 typical products sourced

SNAPSHOT OF APA ENGG

APA ENGINEERING

Quality

- Sourcing primarily from **OEM suppliers**.
- 10 Inspectors inspecting average of **50 different parts per day** at vendor locations.
- Sampling size determined by **AQL standards** and PPAP documents generated on customer request

Delivery

- 18 sourcing engineers, majority are **specialists in Engine Parts** sourcing.
- Two warehouses in the **Special Economic Zone** to optimize logistics costs for the customer
- **In house software** to help monitor and generate metrics

Cost

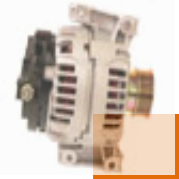
- Domain experts **strategically located** to exploit cluster of excellence all over India. Eg Chennai, Coimbatore, Pune, Hyderabad, Delhi etc
- **Consolidation of goods** and reducing freight costs by co-operative approach with shipping companies
- **Local knowledge** and street smart sourcing

TYPICAL PARTS WE SOURCE

APA ENGINEERING

Engine Parts

- Cylinder Liner
- Pistons & Rings
- Con rods
- Bearings & Bushings
- Water & Oil Pumps
- Radiators & Oil Coolers.
- Camshafts & Crankshafts
- Valves, Guides & Seats
- Fuel Injection parts



Electrical Parts

- Alternators & Starters
- Generators & Drives
- Armatures, Field Coils
- Switches
- Regulators
- Cable assemblies
- Pinions

Others

- Air & Oil Filters
- Clutches, pressure plates, Clutch covers etc
- Steering system parts and kits
- Hydraulic systems parts & kits
- Precision machined; Stamped; Forged; Cast parts

SOURCING PROCESSES USED

APA ENGINEERING

Class APArt

SOURCING EXPERTS EMBRACING TECHNOLOGY

APA ENGINEERING

Brick & Mortar

- Domain expert Engineers involved in sourcing follow up
- Leveraging Existing Relationships
- Regular Supplier Visits & Phone Calls
- Weekly chats with us on Pending Orders

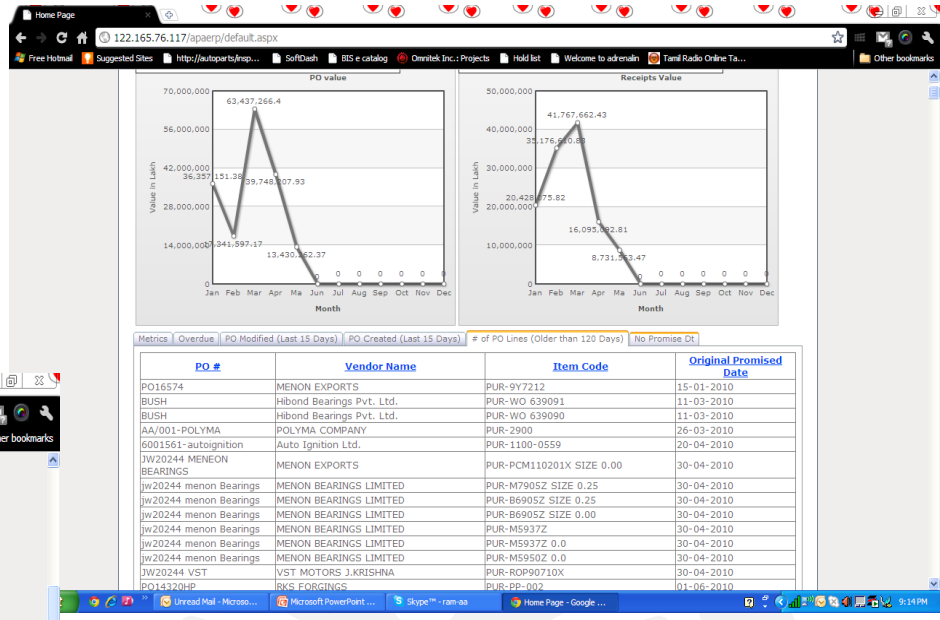
Technology

- eProcurement module
- Auto reminder emails to suppliers.
- Pending Order reports to Suppliers
- Daily follow Up check list emails to Buyers
- Analysis and performance indicators for taking actionable decisions

...CONTD

APA ENGINEERING

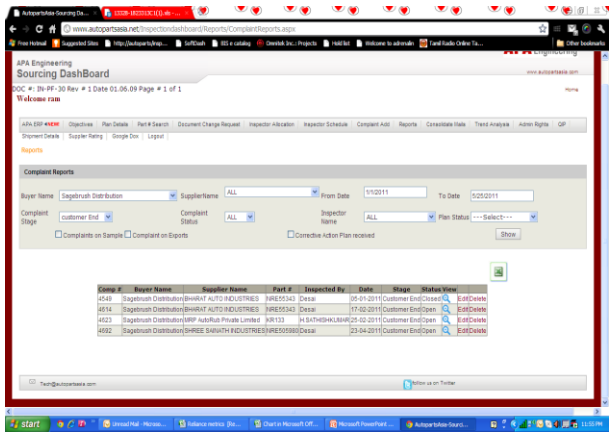
Application to monitor sourcing information



- Status of the enquiries.
- Status of Orders placed.
- Status of transit supplies.
- Details about pending orders.
- Move in/Move out reports
- Inventory reports

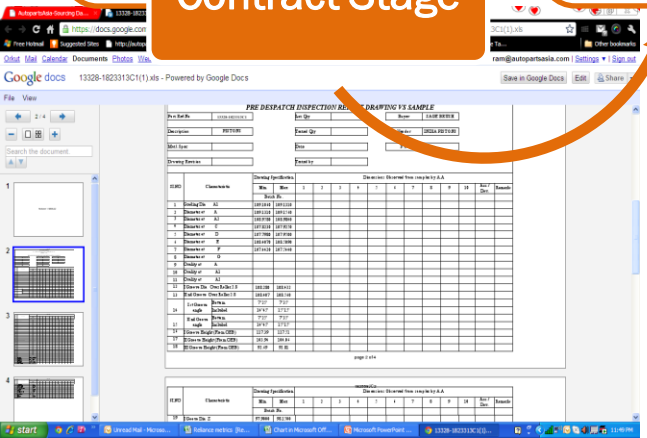
EXHAUSTIVE PRODUCT VALIDATION PROCESS

APA ENGINEERING



Contract Stage

- Drawing & Inspection Plan approved by Reliance & Supplier
- Inclusion of packaging & other non dimensional requirements in plan.



Pre-dispatch Inspection stage

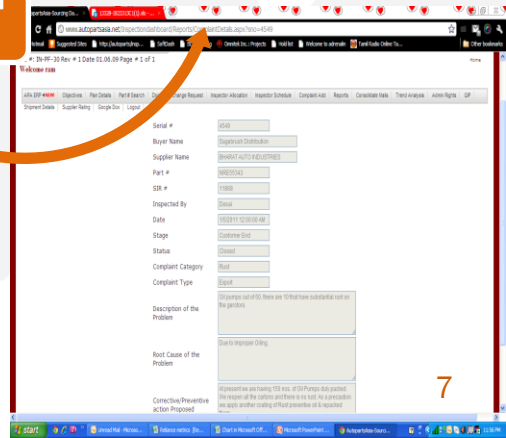
- AQL standards for determining sample size
- Sea worthiness of packaging check
- PPAP documentations,(optional)

Post Inspection

- Instant uploading of Inspection results
- Clarification from customer, if reqd
- Reports to accompany goods as well as available online

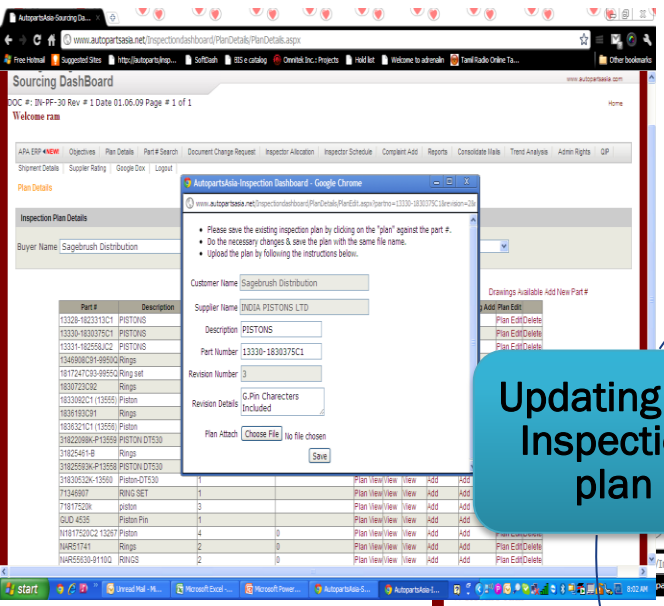
Online Information

- Plans, Reports, Drawings
- Shipments , PO and Reports linked
- Pre despatch & Customer complaint information



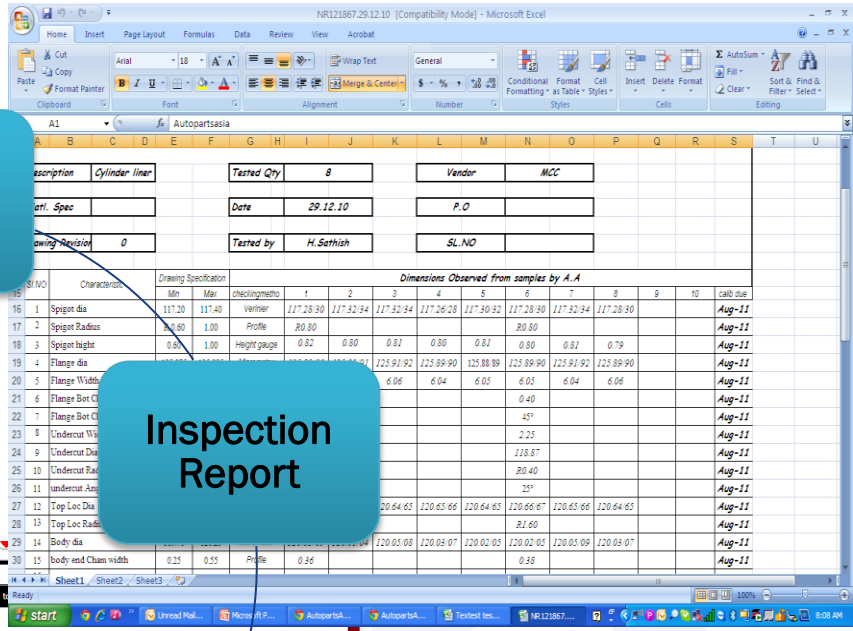
COMPLAINT HANDLING/ INSPECTION CYCLE

APA ENGINEERING



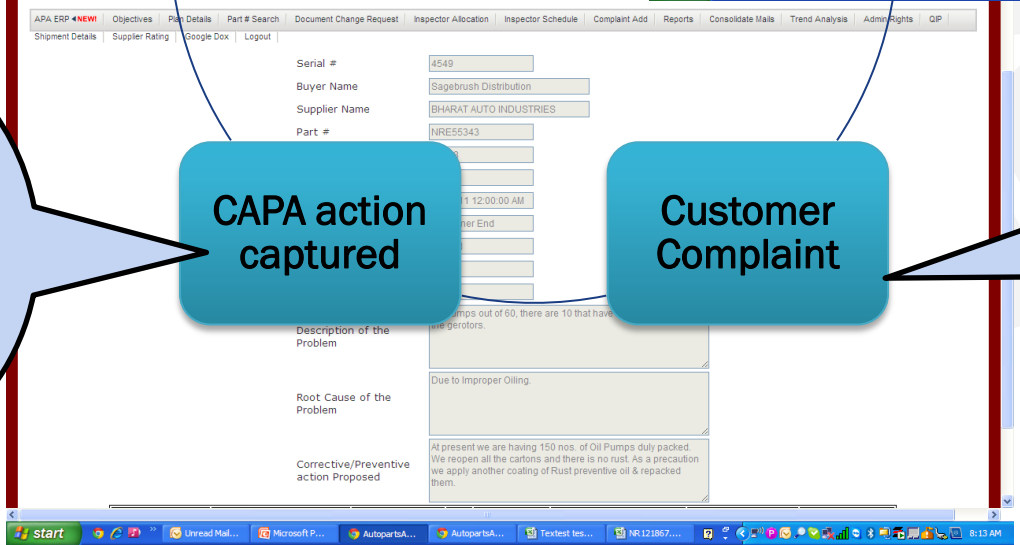
New Inspection Plan

Updating the Inspection plan



Inspection Report

Mentors assigned to monitor and assist suppliers



CAPA action captured

Customer Complaint

Linked to Supplier Rating

CASE STUDY:
SOUCESMART PROGRAM RELIANCE INC

APA ENGINEERING

Reliance Parts Corporation is a US based company, distributing Engine Parts for the Agriculture & Heavy Duty Industry - Cylinder Kits, Engine Valves, Bearings, Crankshafts, Camshafts, etc. They carry parts for John Deere Diesel engines, International Harvester, Ford, Kubota, Cummins, etc.

10 Year APA SourceSmart Customer!

RELIANCE
Power Parts

CHALLENGES FACED BY RELIANCE

1. High Product cost from existing sources

2. Inconsistent Product Quality

3. Delivery Delays and lack of timely communication

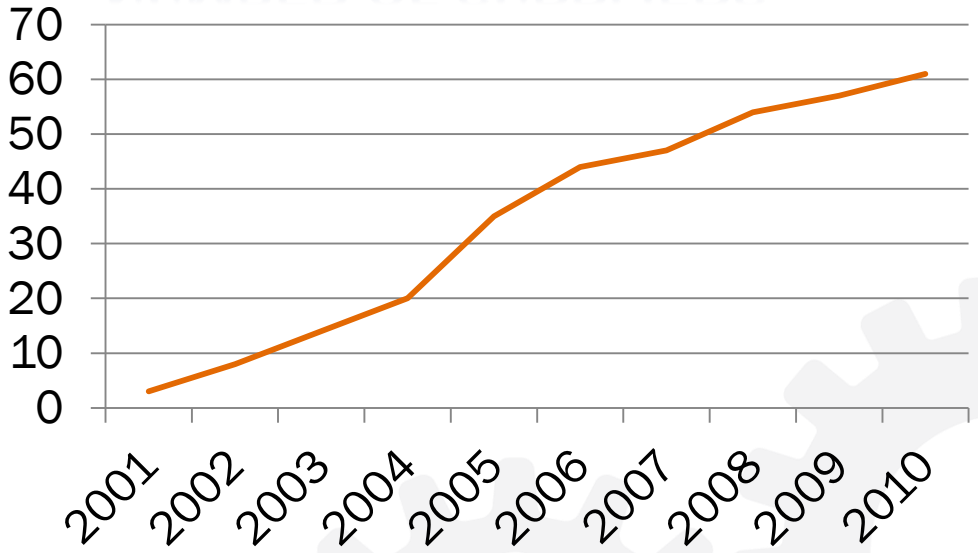
PRESENT STATUS

1. **High Product cost from existing sources**
   Supplier mapping / Low cost sources /
   20% cost saving

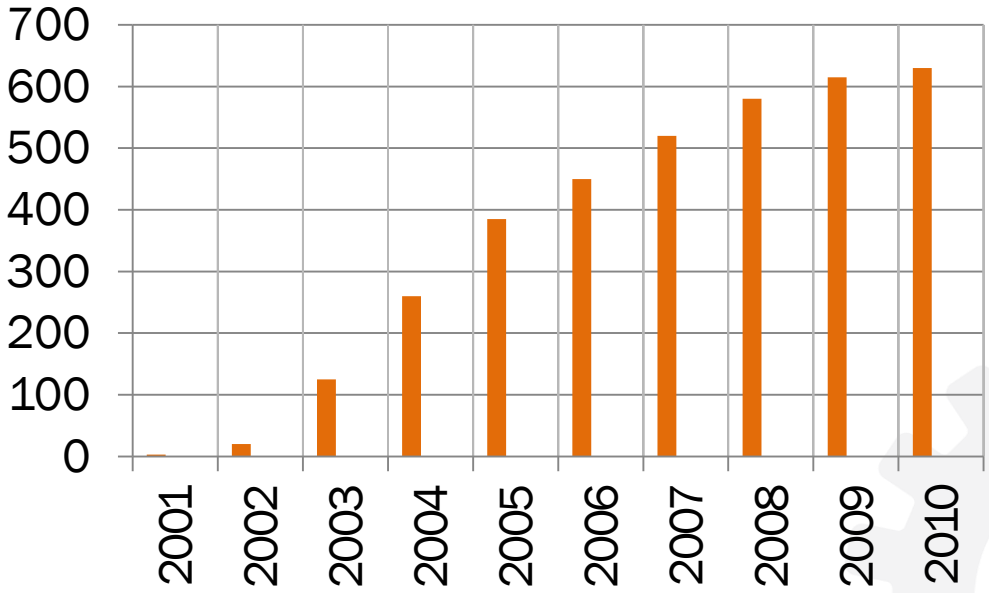
2. **Inconsistent Product Quality**
   Predespatch inspection as per Quality plans/APQL sampling / Material testing /
   warranty costs down to 0.2% of turnover from 5%

3. **Delivery Delays and lack of timely communication**
   Vendor visits/Online status report/leverage existing relationship / customized sourcing software /
   Inventory level reduced by 40%

NUMBER OF SUPPLIERS

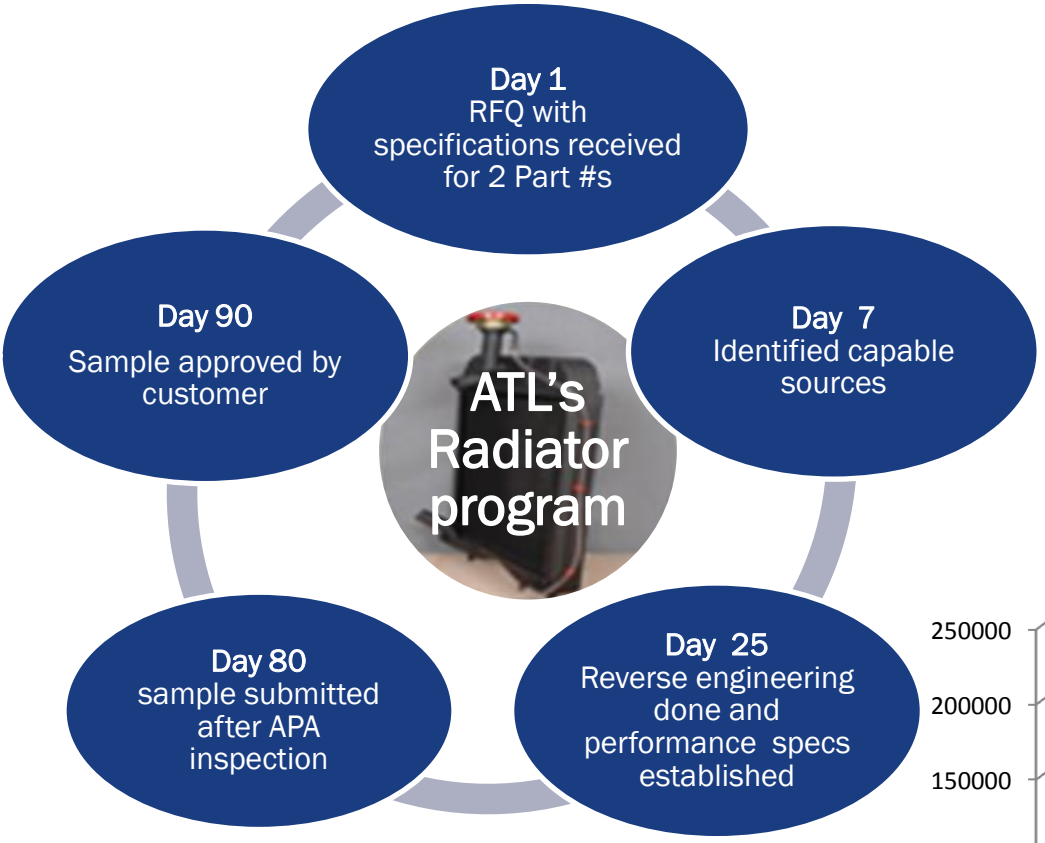


NUMBER OF PARTS SOURCED



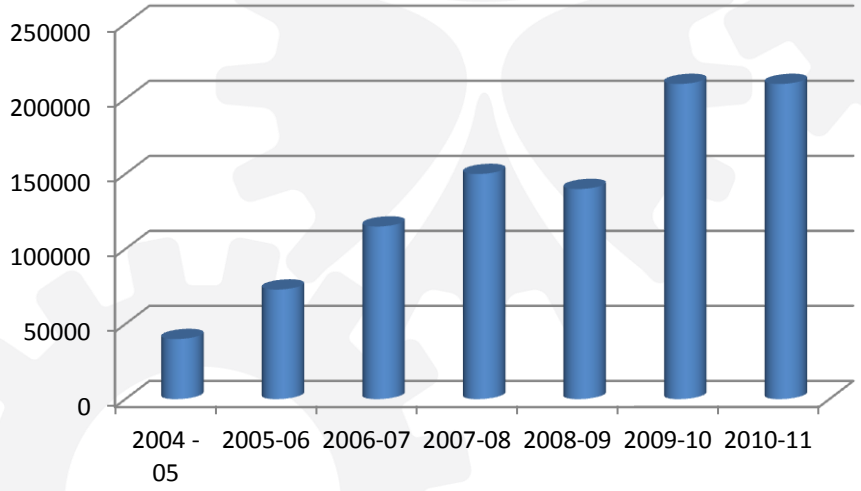
CASE STUDY 1 :
90 DAY TRACTOR RADIATOR DEVELOPMENT

APA ENGINEERING



Key Performance Criteria established
Pressure Test
Pressure Impulse Test
Filler Neck Leakage test
Heat Dissipation performance test
Internal Cleanliness tests
Vibration Test

Business trend in US$



CASE STUDY 2 :
120 DAY TRACTOR SEAT REVERSE ENGINEERING

APA ENGINEERING

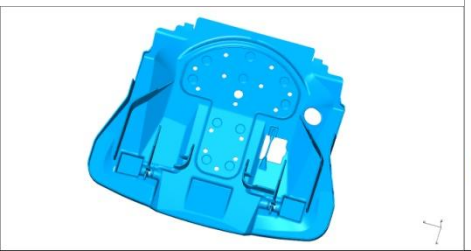
August 2011 : Seat Development started

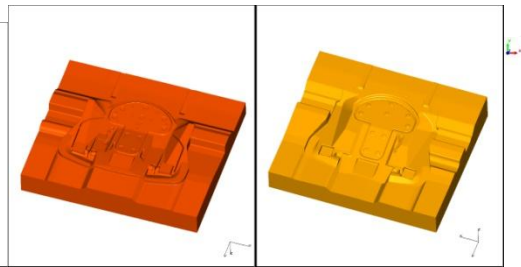
November 2011 : Tools developed

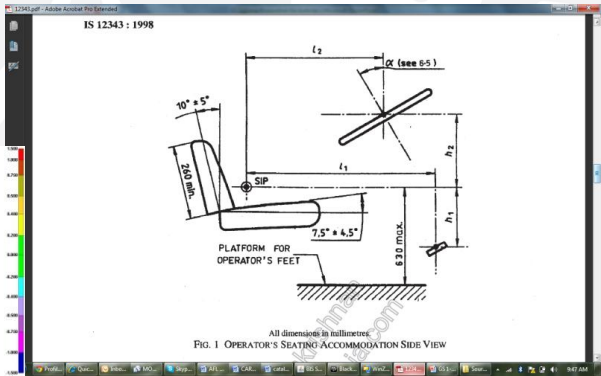
December 2011 : Seat Samples Made

Functional Tests done
Seat Suspension : Static test assuming driver's mass of 50-120 kgs
Lateral Stability Tests : Not to exceed 5 deg as per IS 12343
Vibration Test : Not to exceed 100um
PU Foam & Fabric tests : 1.Hardness tests as per ASTM D 3574-05 2.Tear Strength by Die C 3.Fabric tests as per FMVSS 302

30% cost saving established







APA'S SOURCESMART PROGRAM

APA ENGINEERING