

## **Bibliography**


### **Book Bibliography :**

- 1) Code Complete 2<sup>nd</sup> Edition – Steve McConnell
- 2) Sun Certified Programmer for Java (Study guide)  
  
6<sup>th</sup> Edition– Kathy Sierra
- 3) Effective Java - Joshua Bloch

### **Web Bibliography:**




- 1) [www.tutorialspoint.com](http://www.tutorialspoint.com)
- 2) <https://docs.oracle.com/javase/7/docs/api>
- 3) [www.javatpoint.com](http://www.javatpoint.com)

# Annexure 1 : User Interface Screens

Alliance Diagnostic Tool					
02:10 hrs		JOB CARD		Status: <span style="color: red;">In Progress</span>	
Job Card ID : J223-X6			VI Number: 125478SGDH12541GH5		
Address : Flat No 6, ABEL Apartments, Platinum Park, PUNE 1154210 INDIA		Ferraro(NSFZA)		VQ25(DE)2495	
		01/01/2016		21547	
 Maintenance ==>		1. Engine Oil 2. Coolant 3. Brake Fluid 4. Battery 5. Hoses		Observed DTCs(ECU's) ==>	
Vehicle Symptoms ==>		1.Excessive Smoke from Tail Pipe 2.Low Oil Pressure 3.Low Compression 4.Battery Charging 5.Check Battery Water Level		Estimated Cost 38275/-	
Service Advisor	65-0222	Registration Date	27/02/2013	Phone	+91-9823658741
Fuel Volume	Vehicle Inventory	Vehicle Damage (Scratch/Dent)		2.FRONT LEFT Indicator 3.FRONT RIGHT --- 4.REAR ---	
	<-- Items --> 1.Service Book 2.Tool Kit 3.Extra Tire				

 Alliance Diagnostic Tool

01:00 hrs **JOB CARD** Status: **In Progress**

Job Card ID : J223-X6		VI Number: 125478SGDH2541GH5	
Address : Flat No 6, ABIL Apartments, Platinum Park, PUNE 1154210 INDIA		Terrano(NSF2A)	MQ25(DE)2495
		01012016	21547
	Maintenance ==>	1. Engine Oil 2. Coolant 3. Brake Fluid 4. Battery 5. Hoses	Observed DTC's(ECU's) ==>  1. P0455 2. P0128 3. P0411 4. P0133 5. P0401 6. P0301
	Vehicle Symptoms ==>	1.Excessive Smoke from Tail Pipe 2.Low Oil Pressure 3.Low Compression 4.Battery Charging 5.Check Battery Water Level	Estimated Cost 38275/-
Service Advisor	99-0502	Registration Date	27/02/2013
Phone	+91-9823658741		
Fuel Volume	Vehicle Inventory	Vehicle Damage (Scratch/Dent)	<-- Items -->
	<-- Items --> 1.Service Book 2.Tool Kit 3.Extra Tire	1.FRONT Bumper 2.FRONT LEFT Indicator 3.FRONT RIGHT	



# Alliance Diagnostic Tool

00:30 mins






## JOB CARD

Status: **In Progress**

Maintenance ==>	1. Engine Oil 2. Coolant 3. Brake Fluid 4. Battery 5. Hoses	Observed DTC's(ECU's) ==>	2. P0128 3. P0411 4. P0133 5. P0401 6. P0301 7. P0400		
Vehicle Symptoms ==>	1. Excessive Smoke from Tail Pipe 2. Low Oil Pressure 3. Low Compression 4. Battery Charging 5. Check Battery Water Level	Estimated Cost 38275/-			
Service Advisor	<b>99-0202</b>	Registration Date	27/02/2013	Phone	+91-9823658741
Fuel Volume 	Vehicle Inventory <-- Items --> 1. Service Book 2. Tool Kit 3. Extra Tire 4. Clock 5. Cigar Lighter 6. Remote	Vehicle Damage (Scratch/Dent)	<-- Items --> 1. FRONT Bumper 2. FRONT LEFT Indicator 3. FRONT RIGHT --- 4. REAR --- 5. REAR		

 Alliance Diagnostic Tool

00:00 **JOB CARD** Status: **Completed**

 Maintenance ==>	1. Engine Oil 2. Coolant 3. Brake Fluid 4. Battery 5. Hoses	Observed DTC's(ECU's) ==>	2. P0128 3. P0411 4. P0133 5. P0401 6. P0301 7. P0400
 Vehicle Symptoms ==>	1. Excessive Smoke from Tail Pipe 2. Low Oil Pressure 3. Low Compression 4. Battery Charging 5. Check Battery Water Level	Estimated Cost 38275/-	
Service Advisor	X9-0302	Registration Date	27/02/2013
Phone	+91-9823658741		
Fuel Volume 	 Vehicle Inventory <-- Items --> 1. Service Book 2. Tool Kit 3. Extra Tire 4. Clock 5. Cigar Lighter 6. Remote	 Vehicle Damage (Scratch/Dent)	2. FRONT LEFT Indicator 3. FRONT RIGHT --- 4. REAR --- 5. REAR LEFT Dent 6. REAR RIGHT

 Precondition  
 Repair  
 Verify Repair

**CHECK A/F SENSOR 1 INPUT SIGNAL CIRCUIT FOR OPEN AND SHORT**


1. Turn Ignition Switch OFF
2. Disconnect ECM harness connector
3. Check the continuity between A/F sensor 1 harness connector and ECM harness connector

DTC	A/F sensor 1			Cx
	Bank	Connector	Terminal	
P2096 P2097	1	F12	1 2	
P2098 P2099	2	F61	1 2	

4. Check the continuity between A/F sensor 1 harness connector and ground, or ECM harness connector and ground

DTC	Bank	Connector	Terminal	Ground	Not e	P2096 P2097		Ground	Not e
						F79	69		
P2096 P2097	1	F12	1				69		
			2				73		
P2098 P2099	2	F61	1				77		
			2				61		

5. Also check harness for short to power

 Precondition  
 Repair  
 Verify Repair

**CHECK AIR FUEL RATIO (A/F) SENSOR 1 POWER SUPPLY**

1. Disconnect A/F sensor 1 harness connector
2. Turn ignition switch ON.
3. Check the voltage between A/F sensor 1 harness connector and ground

DTC	A/F sensor			Ground	Voltage (V)
	Bank	Connector	Terminal		
P2096 P2097	1	F12	4	Ground	Battery voltage
P2098 P2099	2	F61	4	Ground	

Is the inspection result normal?

Please connect communication device and switch Ignition ON to automatically read VIN from vehicle.  
If system fails to read VIN then manually enter the 17 characters

Reading VIN...

Enter VIN








Next

0%  
Reading VIN...



## Annexure 2 : Output Reports with Data

### 1) Day wise Technician Reports

 Alliance Diagnostic Tool      

**Reports**

**Job Card Details**

**Day**








**Month**

**Enter technician Id**

Sr.No	Technician_Id	JobCard_Id	Date
1	134	125487	03/01/2015

Reports>Job Card

## 2) Month wise Job Card Reports

 Alliance Diagnostic Tool      

**Reports**

**Job Card Details List**

Month:

Sr No	Technician_id	JobCard_id	Date
1	123	125468	01/01/2015
2	134	326541	02/01/2015
3	134	125487	03/01/2015
4	123	215478	05/01/2015
5	145	326541	13/01/2015
6	231	215469	15/01/2015
7	231	215478	16/01/2015
8	134	326541	16/01/2015
9	123	236541	17/01/2015
10	145	899758	28/01/2015
11	145	365884	30/01/2015

Reports>Job Card

### 3) Day wise Job Card Reports

**Alliance Diagnostic Tool**

Reports

**Job Card Status**

Day:

Month:

Job Card ID	Customer ID	Status	Vehicle No	VIN
12544	145	Completed	2547	12541265A3KCD4F51
12545	251	Completed	5147	36574LKD625VHJ25S
12546	520	In Progress	5478	623145HDC45JRU6

Reports > Job Card

#### 4) Day wise Technician Availability

**Alliance Diagnostic Tool**

**Reports**

**Technician Availability**

Day:








Month:

**Proceed**

Technician_Id	Name	Status	Service Station
102541	Samsul	Available	Banglore
5412365	Rocky	Available	Deccan-Pune
78541203	Chris	Not Available	Kothrud-Pune
5214712	John	Available	Humbai-Paral
45215	Ben	Available	Banglore
362587	Shane	Not Available	Humbai-Paral
9058923	Will	Available	Kothrud-Pune
3012544	Ricky	Available	Humbai-Paral
521410	Michael	Not Available	Banglore
3022514	David	Available	Deccan-Pune
2514789	Steve	Not Available	Kothrud-Pune
30214578	Elon	Available	Humbai-Paral
362541	Charles	Available	Deccan-Pune
3021452	Hartin	Not Available	Kothrud-Pune

Reports > Technician

## 5) Month wise Technician Performance Reports

 Alliance Diagnostic Tool      

**Reports**

**Technician Performance Details**








Month:

Enter technician Id:

Sr No	Technician_id	JobCard_id	Date
1	134	326541	02/01/2015
2	134	126487	03/01/2015
3	134	326541	16/01/2015

Reports>Technician

## 6) Month wise Vehicle Reports

Alliance Diagnostic Tool

Reports

**Vehicle Report Details**

VIN	Model	Customer Id	Reg date	Vehicle Number
12355AD8965412301	Lti	12541	03/01/2008	23651
15478AH4521VH456	Zti	56471	02/04/2012	65410
125478963251ADXC2	Vti	51478	21/02/2015	77777

Reports>Vehicle Details