

*EMERGING
AUTOMOTIVE SERVICE
SCENARIO*

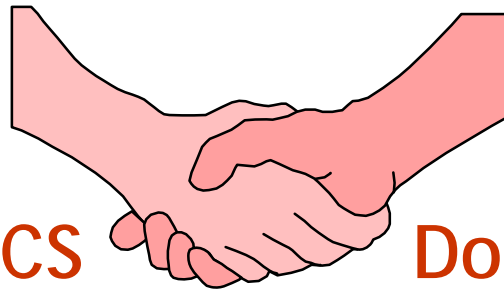
A presentation by
Mahindra First Choice Services Ltd

MULTIBRAND
CAR SPACE
SERVICE

Mahindra
First Choice

PPF

(People, Process, Facilities)



MFCS

Don Bosco

MULTIBRAND
CAR SPACE
SERVICE

Mahindra
First Choice

COMPANY OUTLET



Scope of the presentation

- The Mahindra Group
 - The sectors
- Part 1
 - The After Market sector
 - About Mahindra First Choice Services Ltd
 - The BCG Report
 - Expansion plan
- Part 2
 - Automotive Service

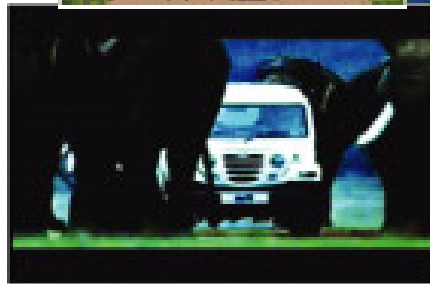
The Mahindra Group

✧ Rs 27000 Crores
conglomerate with diversified
interests

✧ Global excellence at
dramatically lower costs

✧ Sustained leadership across
the sectors

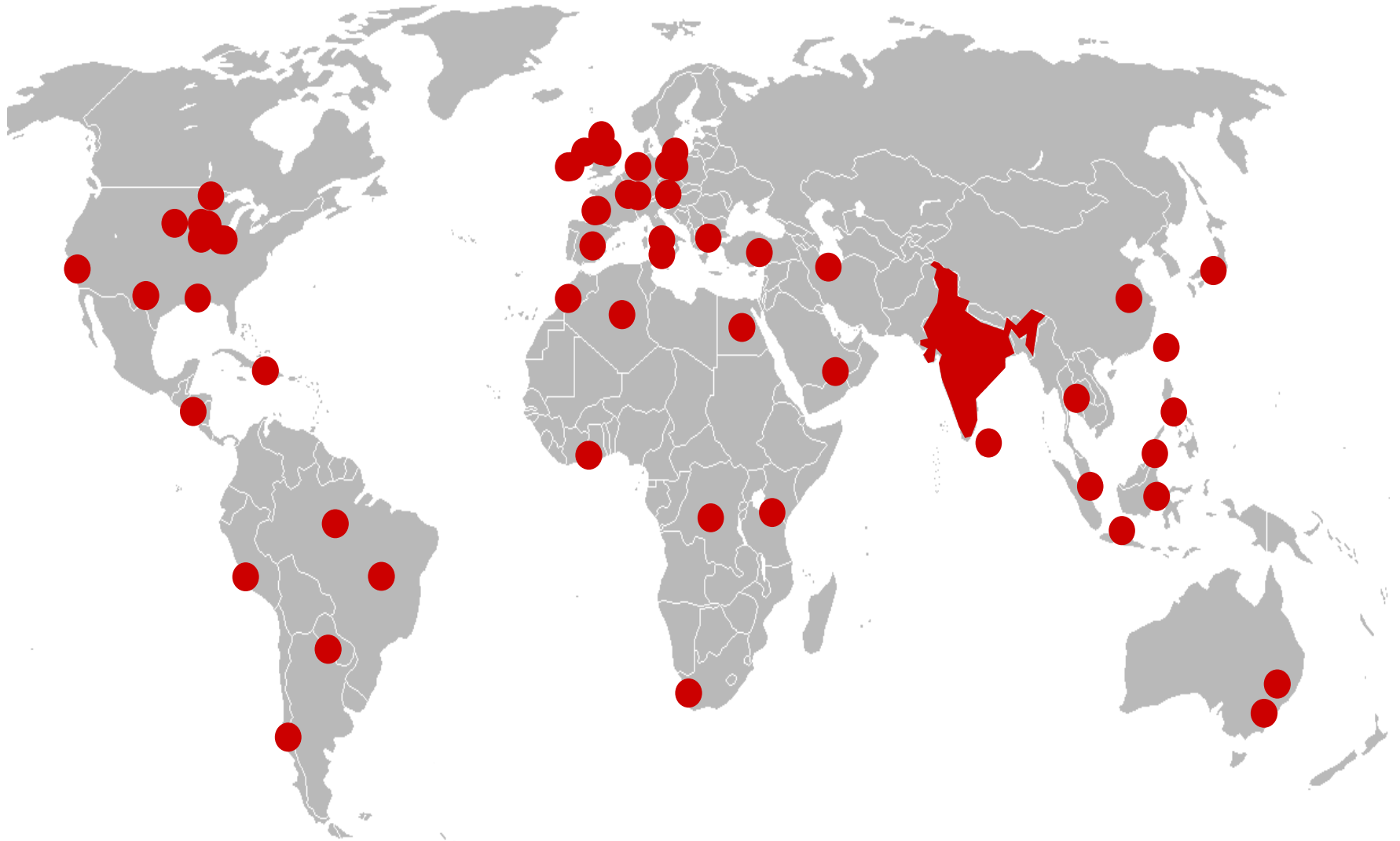
✧ A very strong corporate
brand



MULTIBRAND
CAR SPACE
SERVICE

Mahindra
First Choice

Global Presence



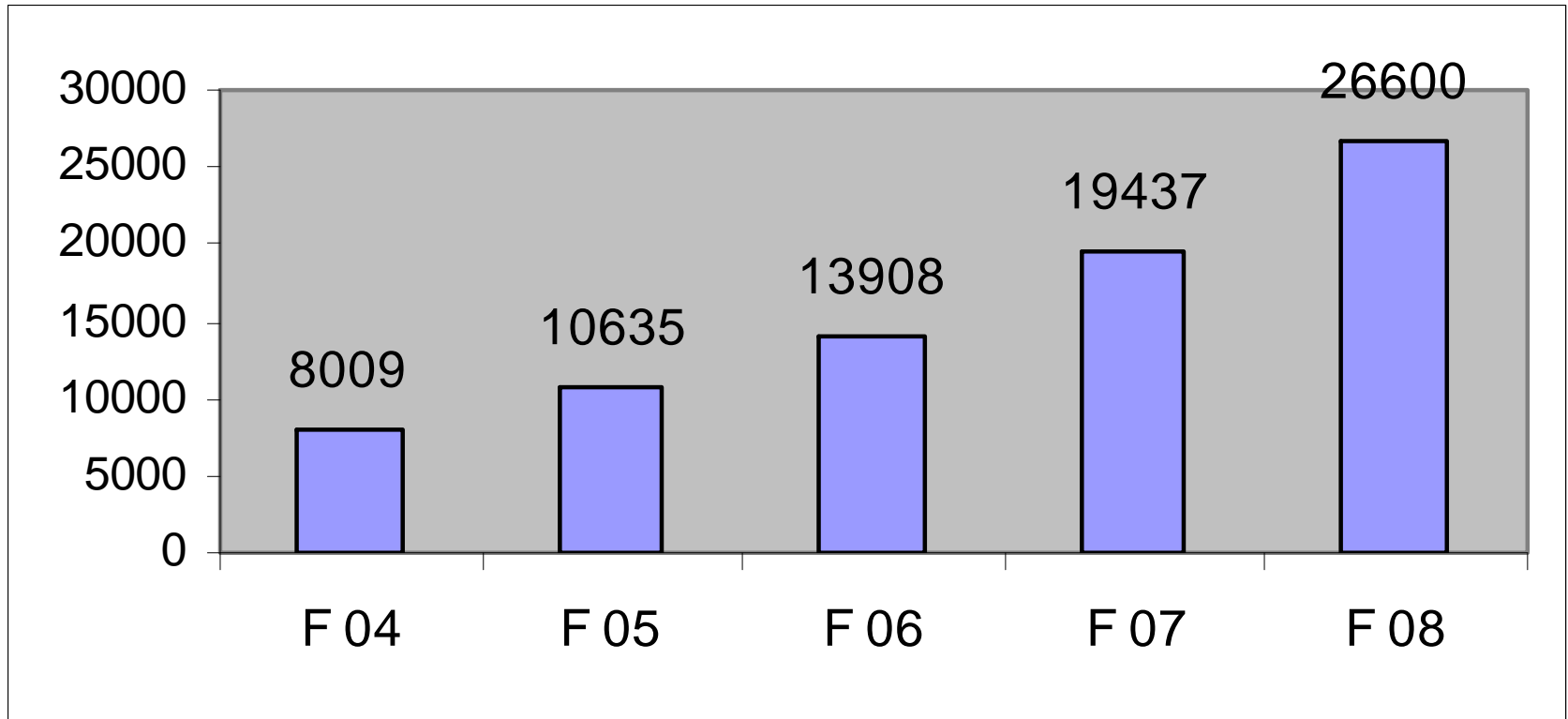
MULTIBRAND
CAR SPACE
SERVICE

Mahindra
First Choice

Financial Performance

Revenue up by 37% over F07

In Rs. Crores



Our Businesses

Automotive

Automotive Division

Mahindra Renault

Mahindra Europe

Mahindra South Africa

Mahindra International

Mahindra Navistar

Farm Equipment

Farm Equipment Division

Mahindra USA

Mahindra Shubhlabh

Mahindra China

Mahindra Australia

Mahindra Gujarat

Systech

Mahindra Forging

Mahindra Composites

Mahindra Gears

Mahindra Steel & Stampings

Strategic Sourcing

Mahindra Engineering

Trade, Retail & Logistics

Mahindra Retail

Mahindra Logistics

Mahindra Intertrade

Mahindra Steel Service

Mahindra Middle East Electrical Steel Service

Financial Services

Mahindra Finance

Mahindra Insurance Brokers

Mahindra Rural Housing Finance

Infrastructure

Mahindra Lifespaces

Mahindra Holidays

Mahindra Water Utilities

Mahindra Consulting Engineers

Mahindra World Cities

Information Technology

Tech Mahindra

Bristlecone

Mahindra Special Services

Mahindra Logisoft

Mahindra Consulting Division

After-Market

Mahindra FirstChoice

Mahindra FirstChoice Services

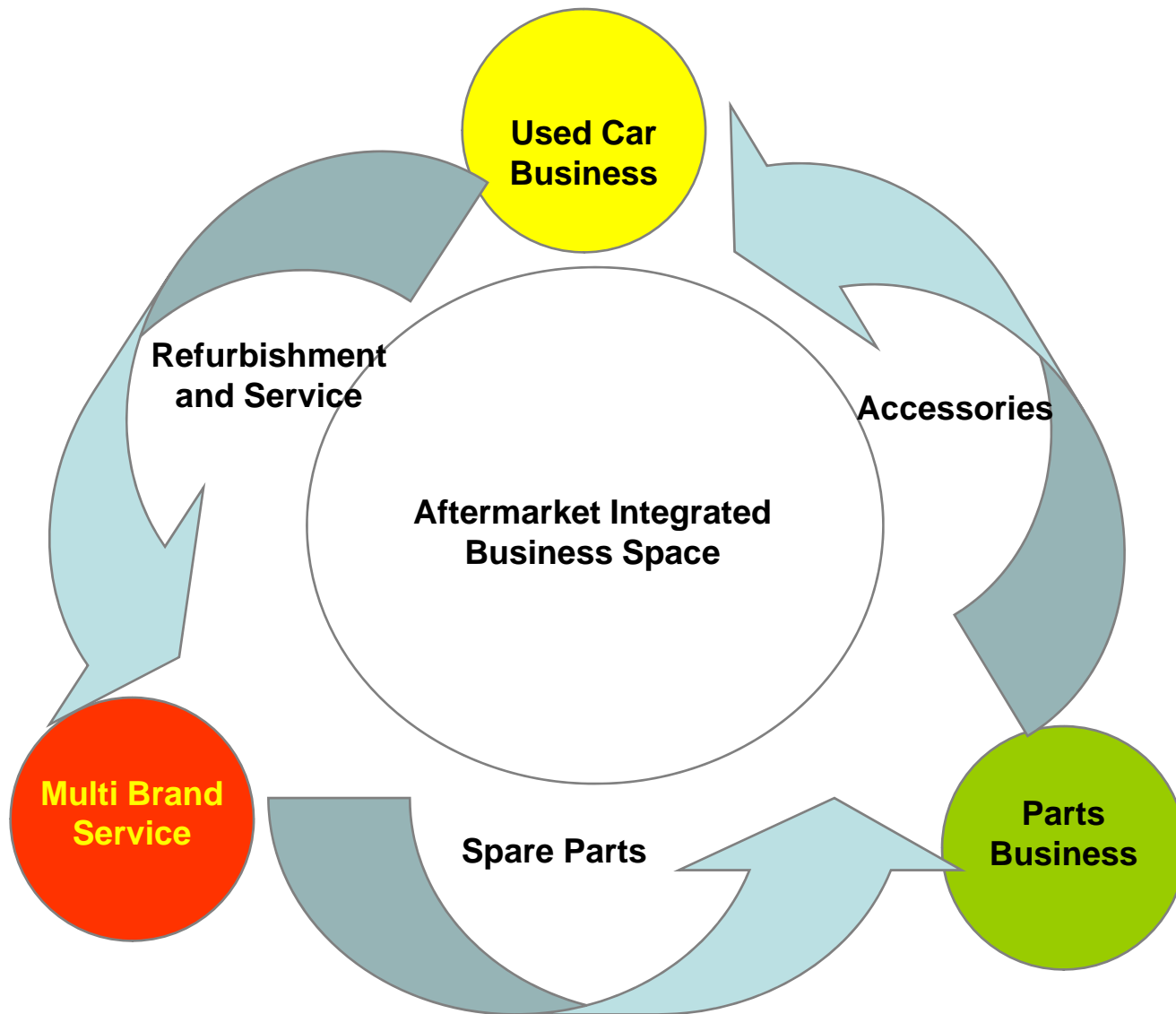
Mahindra Spares Business

Part 1

~ About Mahindra First Choice Services Ltd

Aftermarket Sector - the core purpose

“To create in the organized aftermarket space, a business eco-system which mirrors the existing eco-system for new vehicles”



**Mahindra &
Mahindra Ltd.**

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graph TD; A["Mahindra & Mahindra Ltd."] --- B["Mahindra Spares Business"]; A --- C["Mahindra First Choice Wheels Ltd."]; A --- D["Mahindra First Choice Services Ltd."];
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**Mahindra
Spares
Business**

**Mahindra First
Choice Wheels
Ltd.**

**Mahindra First
Choice Services
Ltd.**

Targets for FY 2015

(In Rs. Crores)

	Revenue	Activity	Profits
Used Car	950	3800	62
Spares	1900	1900	220
Service Chain	170	920	21
Totals	3020	6620	303

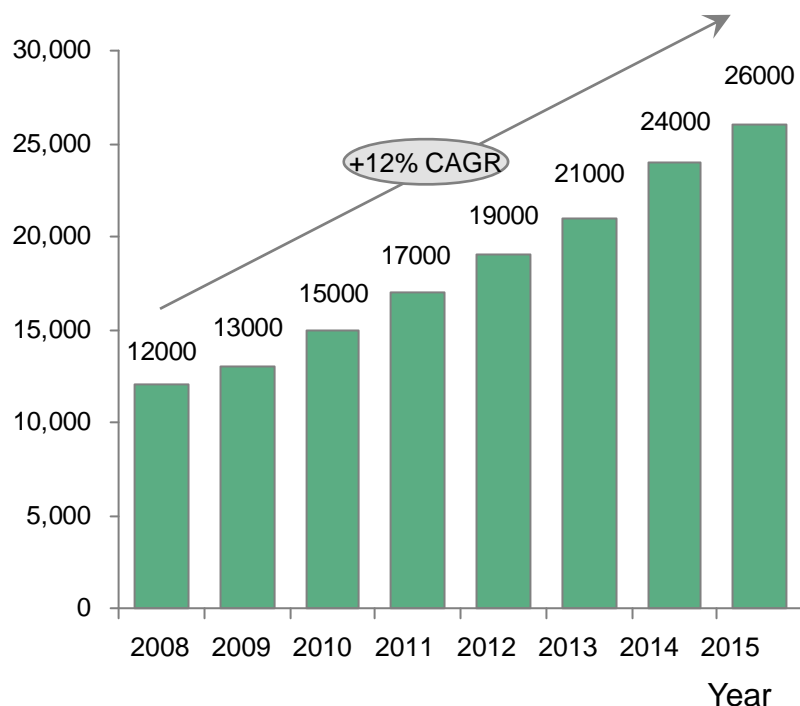
First Choice Services Limited

Market potential as per the BCG report

Car servicing is a large and rapidly growing opportunity

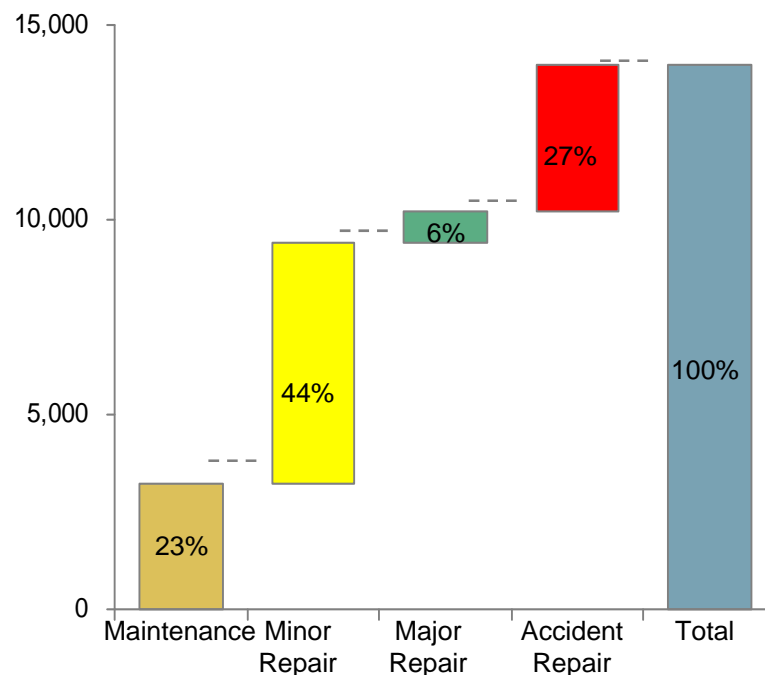
**Service market expected to grow to
~ Rs 26000 Crores by 2015**

Market Size Rs Crores



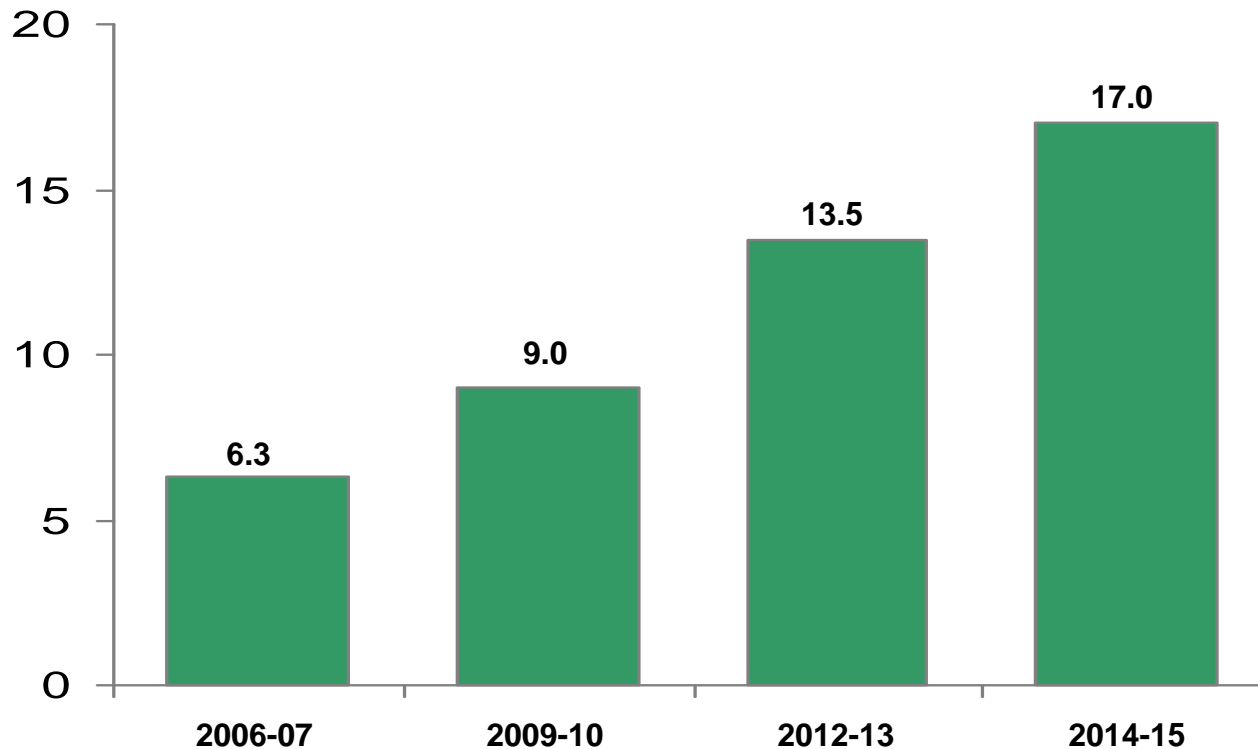
**Maintenance & minor repair services
account for ~ 70% of market**

Market Size Rs Crores



Rapid growth...

10 year car parc (In Million)

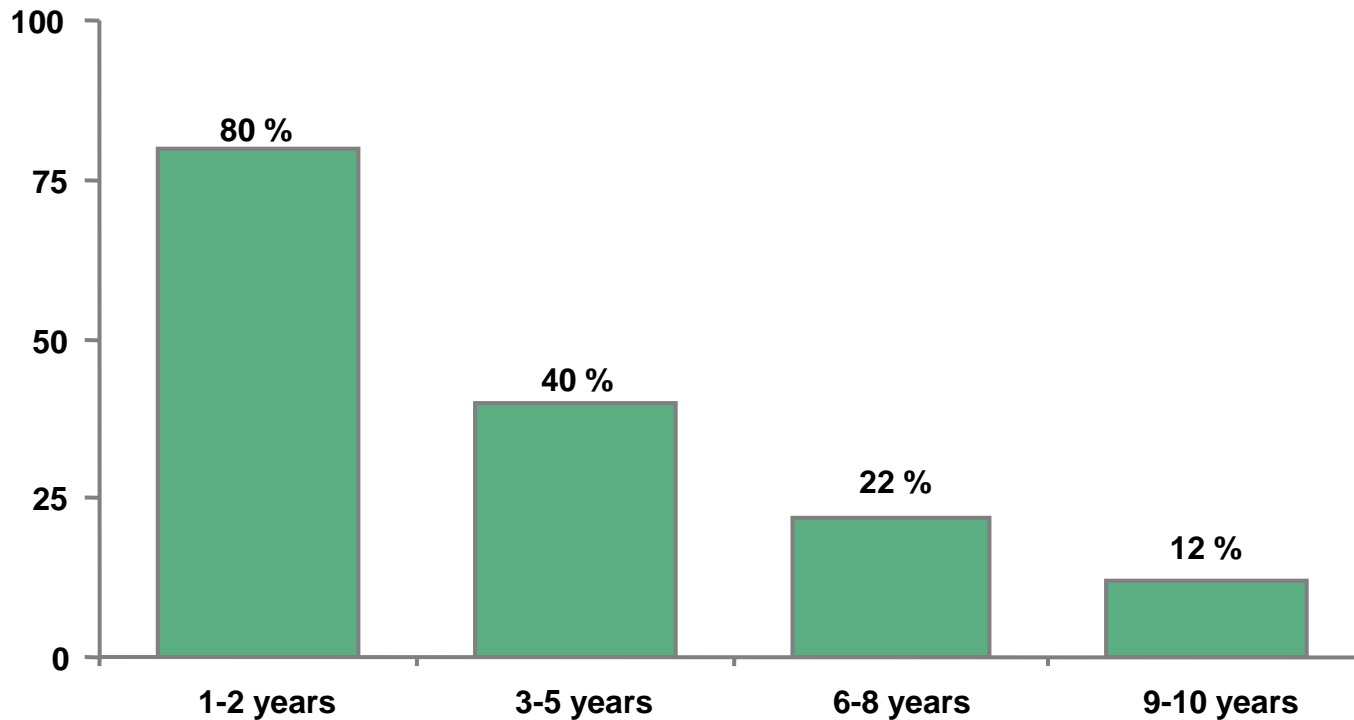


Car parc growth will necessitate large investments in service infrastructure

*Note: Car parc growing at 12% CAGR;
Source: SIAM, analyst reports, interviews with ARs and IGs, BCG analysis*

... With decreasing dependence on Authorized Repairers as car parc becomes older

Authorized Repairer Retention (%)

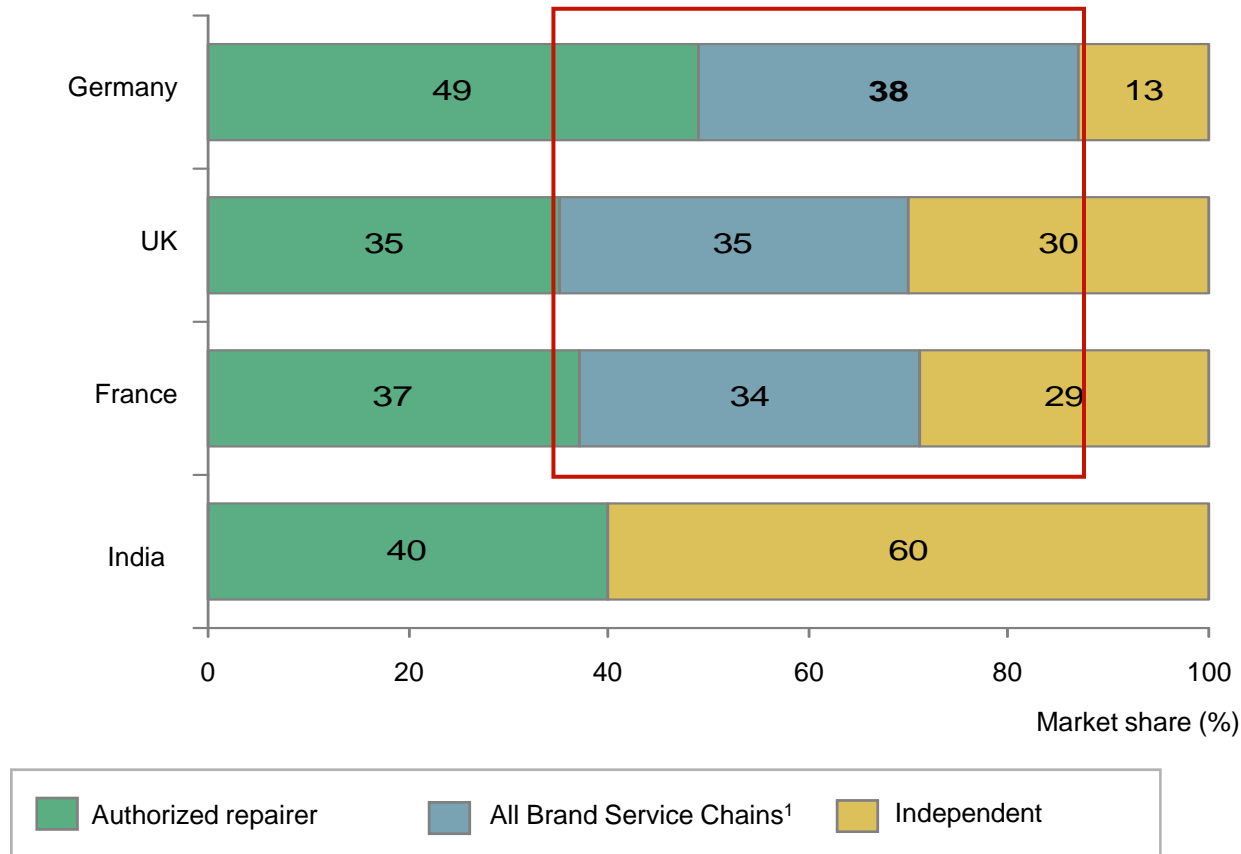


... Strong opportunity to capture customers in 'transition'

Note: Car parc growing at 12% CAGR

Source: SIAM, analyst reports, interviews with ARs and IGs, BCG analysis

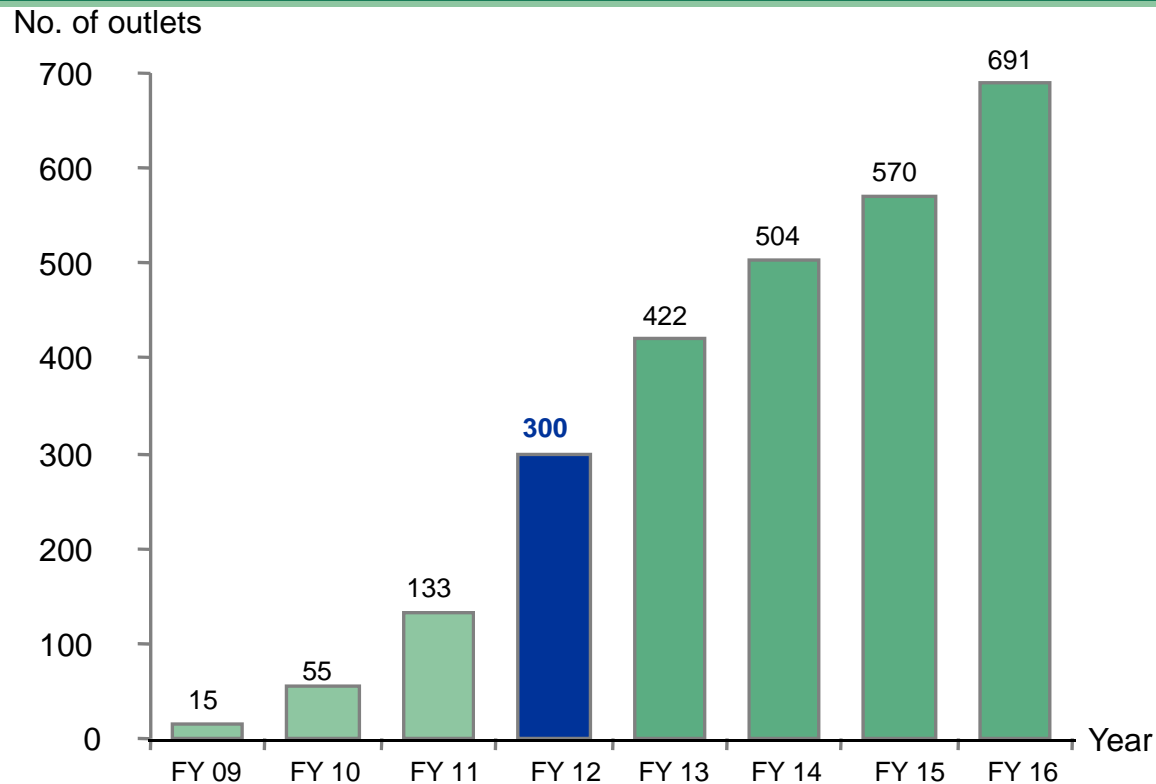
All Brand service chains have significant presence abroad



1. All Brand Service Chains include Fast Fits, Specialists like Tire, Lubes etc.
2. Source: Wolk; Datamonitor; National car associations; BCG analysis

Based on the BCG Report our plans and budgets were laid out

Target to open 600+ outlets across the country



* 6 – 15 bay workshops planned

* Budgeted investment of Rs 500 crores in the coming years

Outlets in FY 2008-09

- Mumbai
 - Parel
 - Andheri
 - Thane
 - Borivali
- Pune
- Delhi
 - Gurgaon
 - GT Road
 - Noida
- Chennai
 - Guindy
 - 1 outlets
- Bengaluru
 - Jayanagar
- Hyderabad
 - Balanagar
 - 2 outlet
- Goa

We have handled 37 different brands of cars

r Therapy
your car

Relax. Enjoy your coffee,
while we get your car ready

Car Shampoo
Strictly no harmful detergents

Lounge facility



Bay area







महिंद्रा
फर्स्ट चॉइस

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First Choice

महिंद्रा
फर्स्ट चॉइस

Outlet frontages

SHILPALAY

Our vision is to create a unique car service experience by offering the best care for your car and value for your money & time



Every part we change in your car is as genuine as our intentions



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Part 2:
~ Automotive Service

PRODUCT CHANGES

- Innovations/Inventions
- Government Regulations
- Competition
- Modifications/Improvements

INNOVATIONS/INVENTIONS

- Voice Messaging System
- DDAS - Digital Drive Assist System
- GSM Based systems
- GPS Based system/Navigation systems
- In-car entertainment systems

GOVERNMENT REGULATIONS

1. Emission Regulations

Bharat Stage 2 - Already in use

Bharat Stage 3 - Already in use

Bharat Stage 4 - By 2009/2010

Bharat Stage 5 - Future

2. NVH Regulations - Pass-by Noise

3. Safety Regulations

GOVERNMENT REGULATIONS

EMISSION REGULATIONS

BHARAT STAGE 3 (Equivalent to Euro 3)

- In use in metros/major cities

BHARAT STAGE 2 (Equivalent to Euro 2)

- In use in “rest of India”

BHARAT STAGE 4 (Equivalent to Euro 4)

- Expected in 2009/2010

Tier 2 , BIN 5

- Emission regulations in the US

OBD 2

- Emission regulations in the US

Euro 4

- Present emission standard in Europe

Euro 5

- Expected in 2010

GOVERNMENT REGULATIONS

EMISSION REGULATIONS

TECHNOLOGIES

- Variable Vane Turbocharging (VVT)
- Variable Geometry Turbocharging (VGT)
- Electronic Waster Control - Turbo charger
- Common Rail Diesel Injection (CRDi)
- Electronic Diesel Control (EDC)
- Exhaust Gas Recirculation (EGR)
- Multi-point Fuel Injection (MPFi)
- Catalytic Convertors
- Selective Catalytic Reduction (SCR)
- Computers & ECUs
- Multiplexed Networks - CAN/ISO
- Hybrid vehicles
- Plug-in electric vehicles
- Hydrogen Fuel cell vehicles

GOVERNMENT REGULATIONS

NVH REGULATIONS

PASS-BY NOISE REGULATIONS

Passenger Vehicles - 74 db

Load Carriers - 77 db

TECHNOLOGIES

- Turbocharged engines
- Advanced combustion chamber designs (in engines)
- Low friction/Low noise transmissions
- Low friction/Low noise differentials

GOVERNMENT REGULATIONS

SAFETY REGULATIONS

HEAD LAMP LEVELLING SYSTEM

CRASH SAFETY - Frontal, Lateral, Roll-over

BRAKING SYSTEMS

ABS - Anti-Lock Braking System

ASR - Anti-Spin Regulation

Traction Control

ESP - Electronic Stability Program

SEAT BELTS

AIR BAGS

COMPETITION

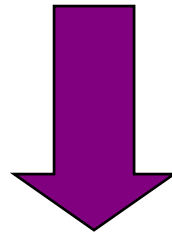
MNC competitors will bring in more and more advanced technologies related to customer comfort in automobiles.

TECHNOLOGIES EXPECTED :

- Automatic Cruise Control (ACC)
- Automatic Climate Control
- Automatic Transmissions
- Active Suspension
- Active Noise Control (ANC)
- Electronic Power Steering (EPS)
- Telematics
- Communication with other cars
- Communication with internet
- Navigation

Transformation of the Automobile from :

Mechanical System



Electro- mechanical System

Transformation at MFCSL :

Mechanical System
(Cables, shafts..)

- “Experienced” mechanics
- Practical Knowledge
- Mechanical Tools
- No standard Process



Electro-Mechanical System
(Wires, Connectors, Controllers ..)

- Trained Technicians
- Theoretical Knowledge
- Electronic + Mechanical Tools
- Diagnostic/Repair Process

HOW DO WE HANDLE THIS CHANGE ?



PEOPLE - *TECHNICIANS*

MFCSL/Don Bosco

ACQUIRE / TRAIN

PROCESS - *MANUALS/CHARTS*

FOLLOW / PREPARE

FACILITIES - *TOOLS & EQUIPMENT*

USE / MAKE

PEOPLE - MANPOWER

“Experienced” Mechanic

- Knowledge “gained” over many years
- Handled same product/aggregate for many years
- No knowledge on electrical circuits/systems
- Difficult to adapt to major product changes
- Repair work more by “practical” knowledge and “repalace one by one”, rather than diagnosis

Trained technicians

- Knowledge “learnt” quickly
- Sound theoretical knowledge
- Handles drastic product changes with ease
- Will be conversant in mechanical & electrical systems
- Diagnosis & trouble shooting

PROCESS - MANUALS/CHARTS

Present

- Diagnosis and trouble shooting by “Experience”
- Manuals/Charts not used extensively

Future

- Diagnosis and trouble shooting by referring to symptom charts/trouble shooting charts
- Follow defined process in trouble shooting

FACILITIES - TOOLS

Mechanical Tools

- Standard Workshop tools
- Few Mechanical Special Tools
- Few Equipments like Wheel aligner/Wheel balancer

Mechanical + Electronic Tools

- Mechanical Tools + Special Tools

+

- Electronic Diagnostic Tools/PC based tools
- Sophisticated special tools/Multi-meters

A FUTURE TECHNICIAN WILL

- **UNDERSTAND** the problem from the customer
- **ANALYSE** the situation with theoretical knowledge
 - **REFER** to charts & manuals
 - **USE** the right tools & equipment
 - **REPAIR & VERIFY** the repair

IN SHORT, HE WILL FOLLOW

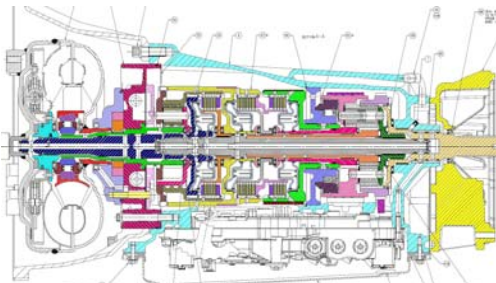
“STRATEGY BASED DIAGNOSTICS”

Partnership between MFCSL & Don Bosco

- CRDe Engines
- ABS /ASR
- Traction control/ESP
- Auto Transmission
- CAN network
- Airbags
- GEN3 immobiliser (secret codes)
- Electric vehicles
- All Wheel Drive
- ITM differential (Electronic)
- Auto Transaxle
- Electronic power steering
- Electronic parking brake
- Navigation systems
- Telematics
- Hybrid

MECHANIC

- **Mechanical Jobs**



**TECHNICIAN
(Electro-mechanic)**

- **Diagnostic Jobs**

Front-end

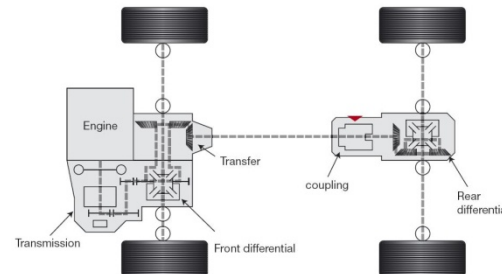
Backend

TEKline

- **Assistance**

CoTEK

- **Expert Help**
- **Trainer**
- **Tech Contact**



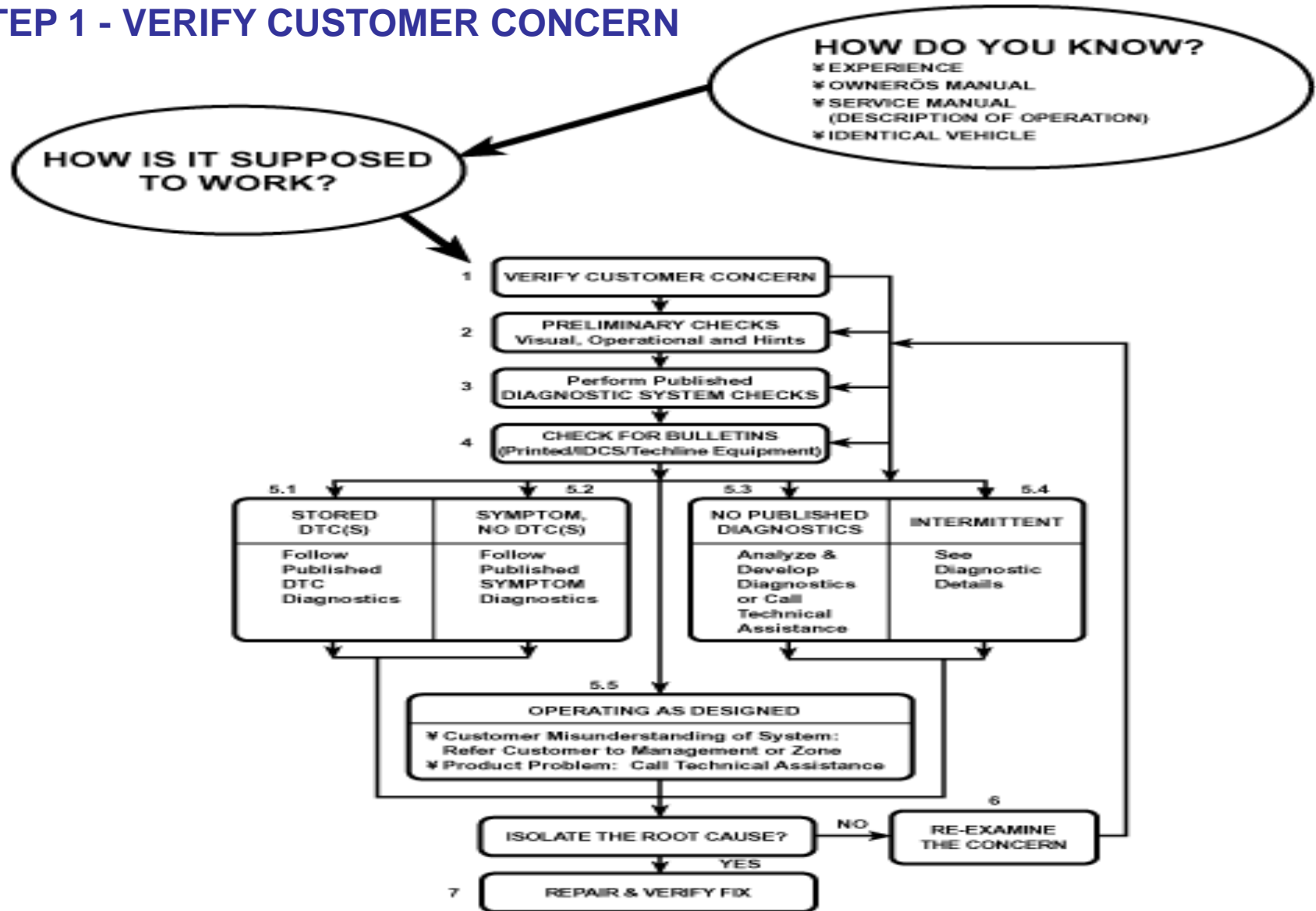
Routine Service Jobs which can no longer be done without the use of Scan tool (Diagnostic tester)

Job	Model	Reason for Scan tool
Replace or check oil level	Scorpio Vlx Automatic	To ensure transmission oil reaches a specific temperature before oil level topping is attempted
Replace transmission control unit (TCU)	Scorpio Vlx Automatic	To ensure learnt parameters are transferred to the new unit as well as VIN no is flashed in to the new unit
Replace transmission	Scorpio Vlx Automatic	To learn new transmission parameters in to the ECU and flash VIN
Brake Bleeding	Scorpio Vlx/Automatic	To open and close the solenoid dump valves in the ABS circuit to ensure full bleeding
Engine compression testing	All CRDe/MPFi engines	Scan tools measures the compression by measuring the current drawn by the starter to rotate the engine.
Replace Engine (CRDe)	Scorpio Slx/Vlx	To learn new injector IQA values in to the new ECU
Replace engine control unit (ECU)	Scorpio Slx/Vlx	To learn old injector IQA values in to the new ECU
Replace injectors	Scorpio Slx/Vlx	To learn new injector IQA values in to the new ECU
Denting /Painting jobs	Scorpio with Airbags (future)	To lock the airbag controller to avoid accidental deployment
Supply of new Ignition key	Scorpio Vlx/Ingenio	Re-program the key
All Diagnosis work		Read Fault code Erase Fault code Drive actuators live data Read
Soft Retrofits	All	Upgraded ECU dataset flashing - download data form TEKnet website and flash in to identified vehicle ECUs

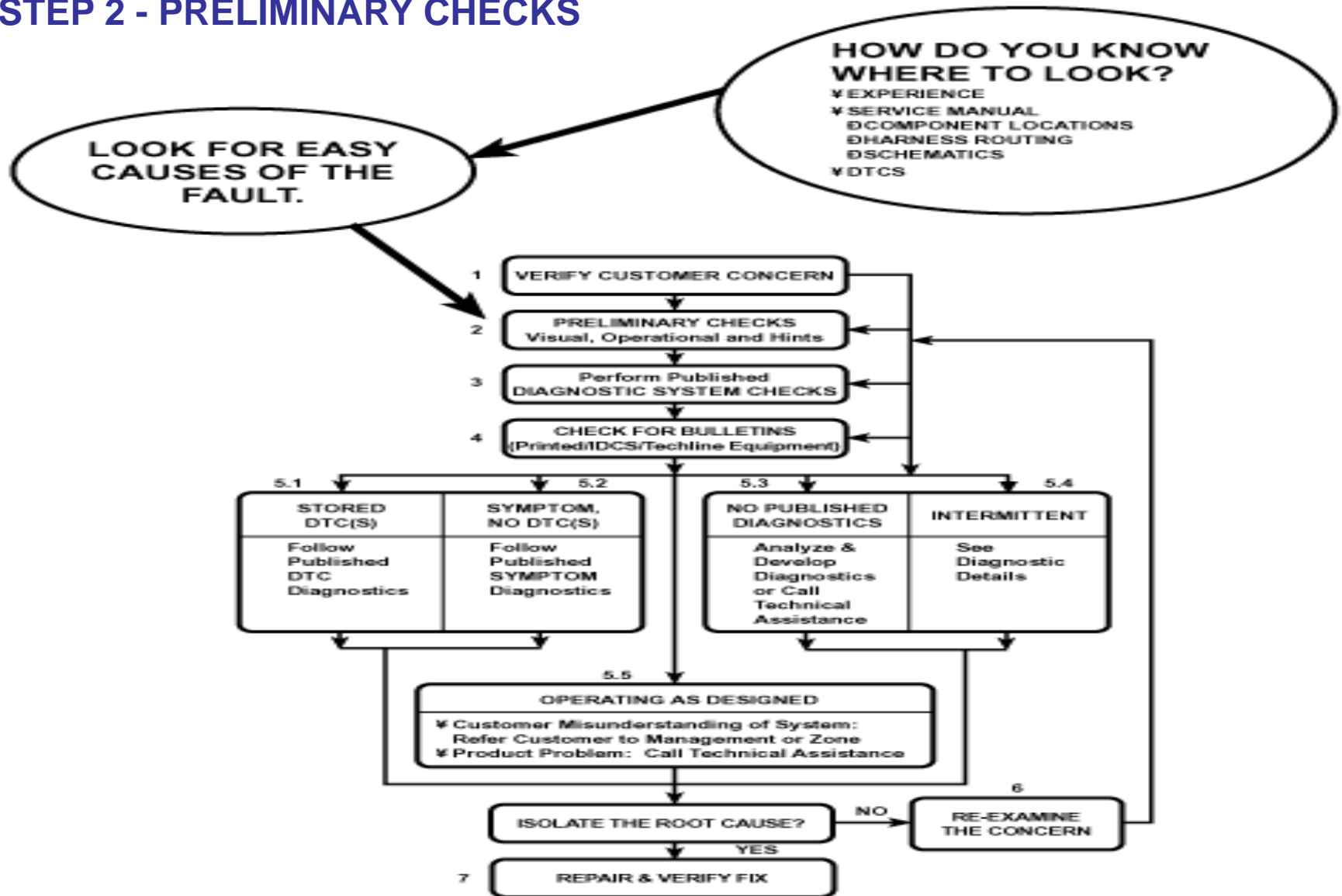
Looking forward to a great & a lasting partnership

STRATEGY BASED DIAGNOSTICS

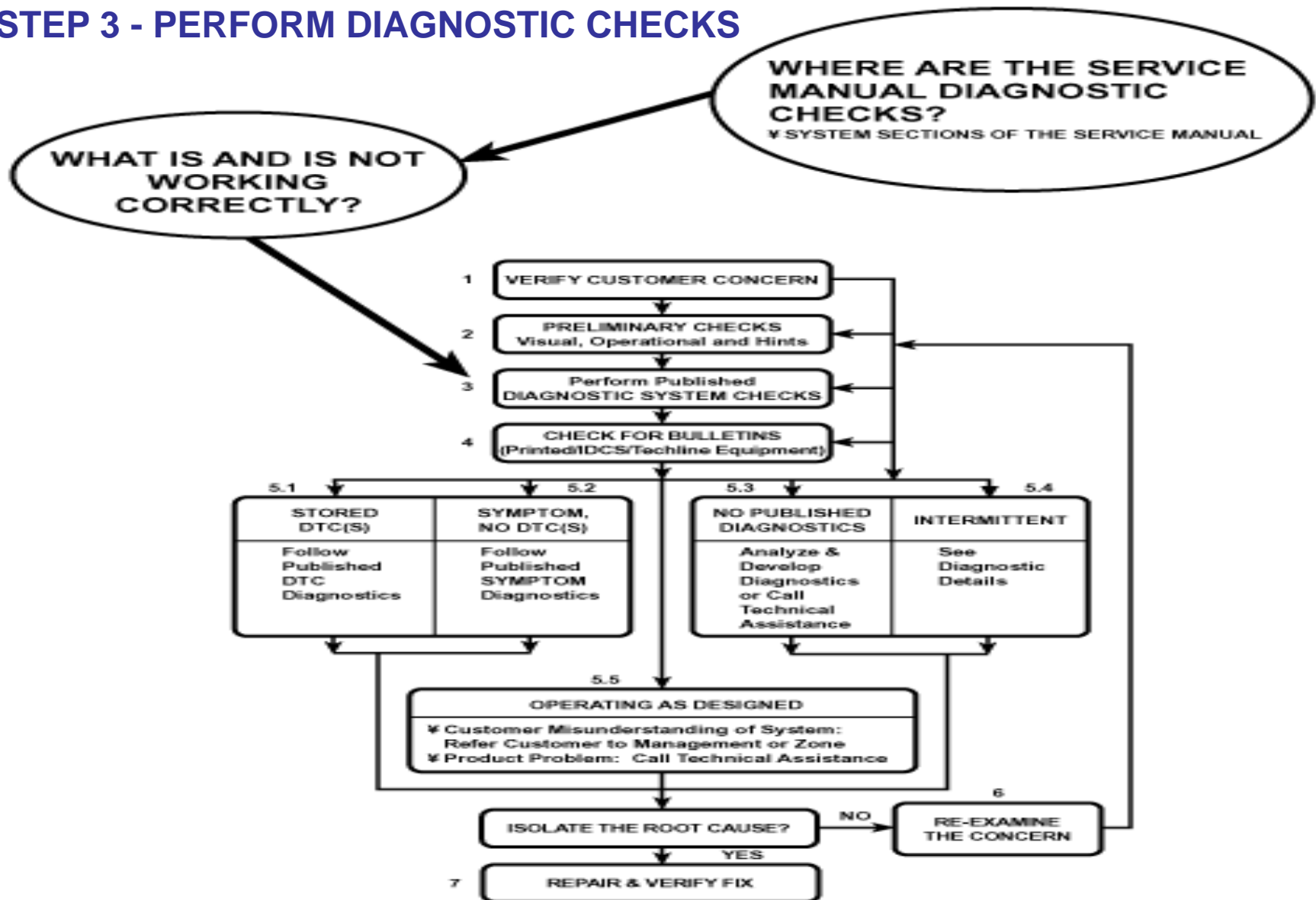
STEP 1 - VERIFY CUSTOMER CONCERN



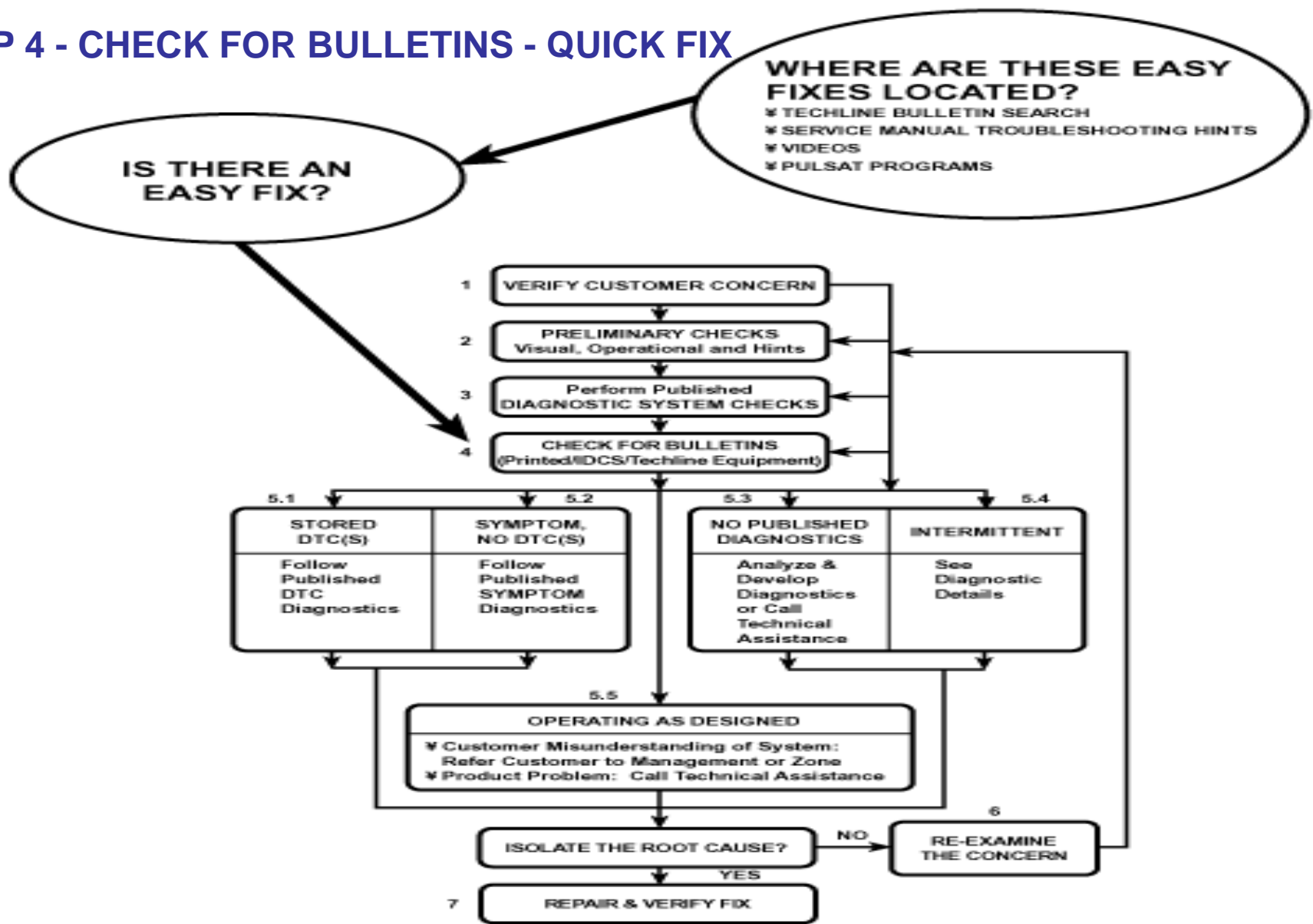
STEP 2 - PRELIMINARY CHECKS



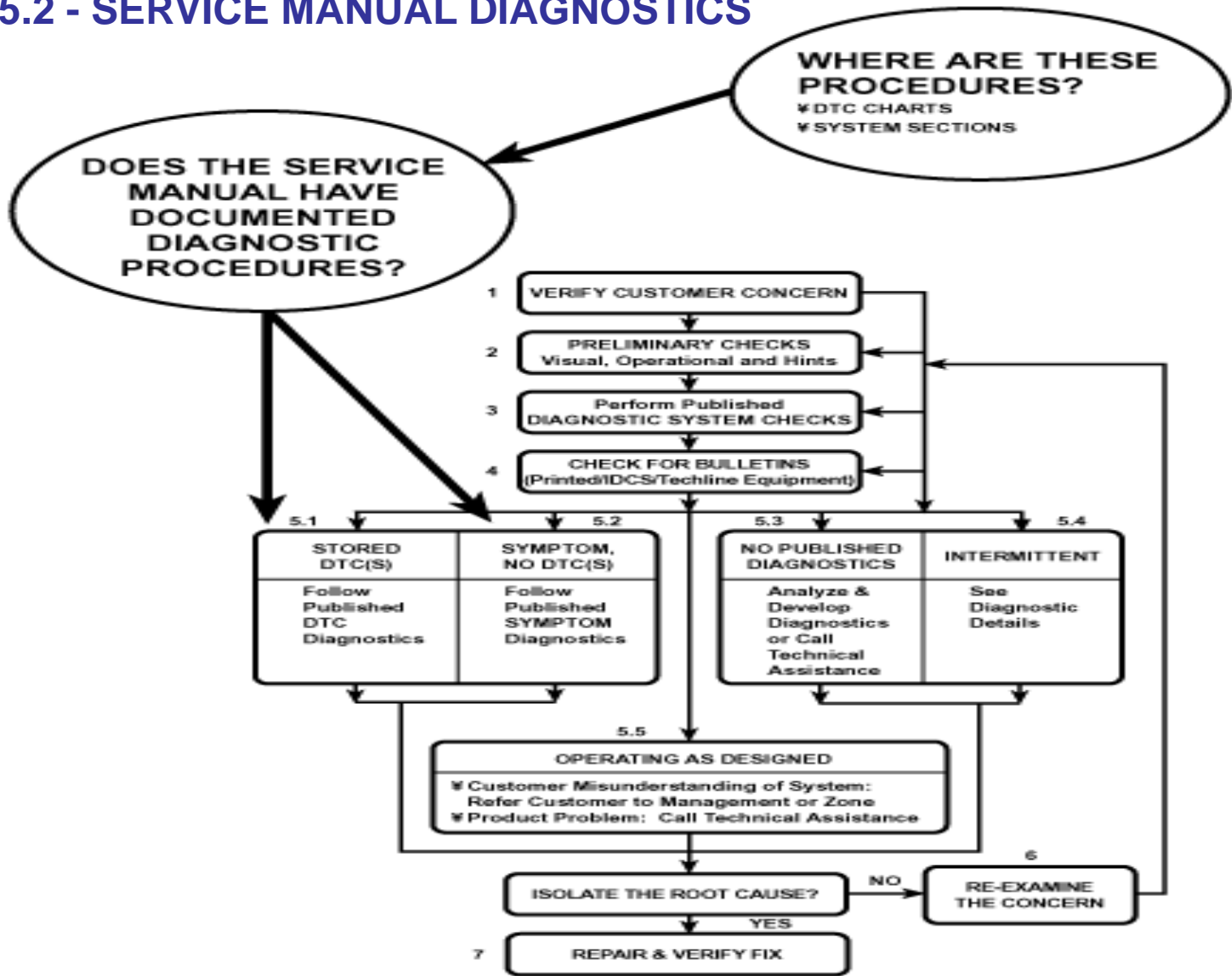
STEP 3 - PERFORM DIAGNOSTIC CHECKS



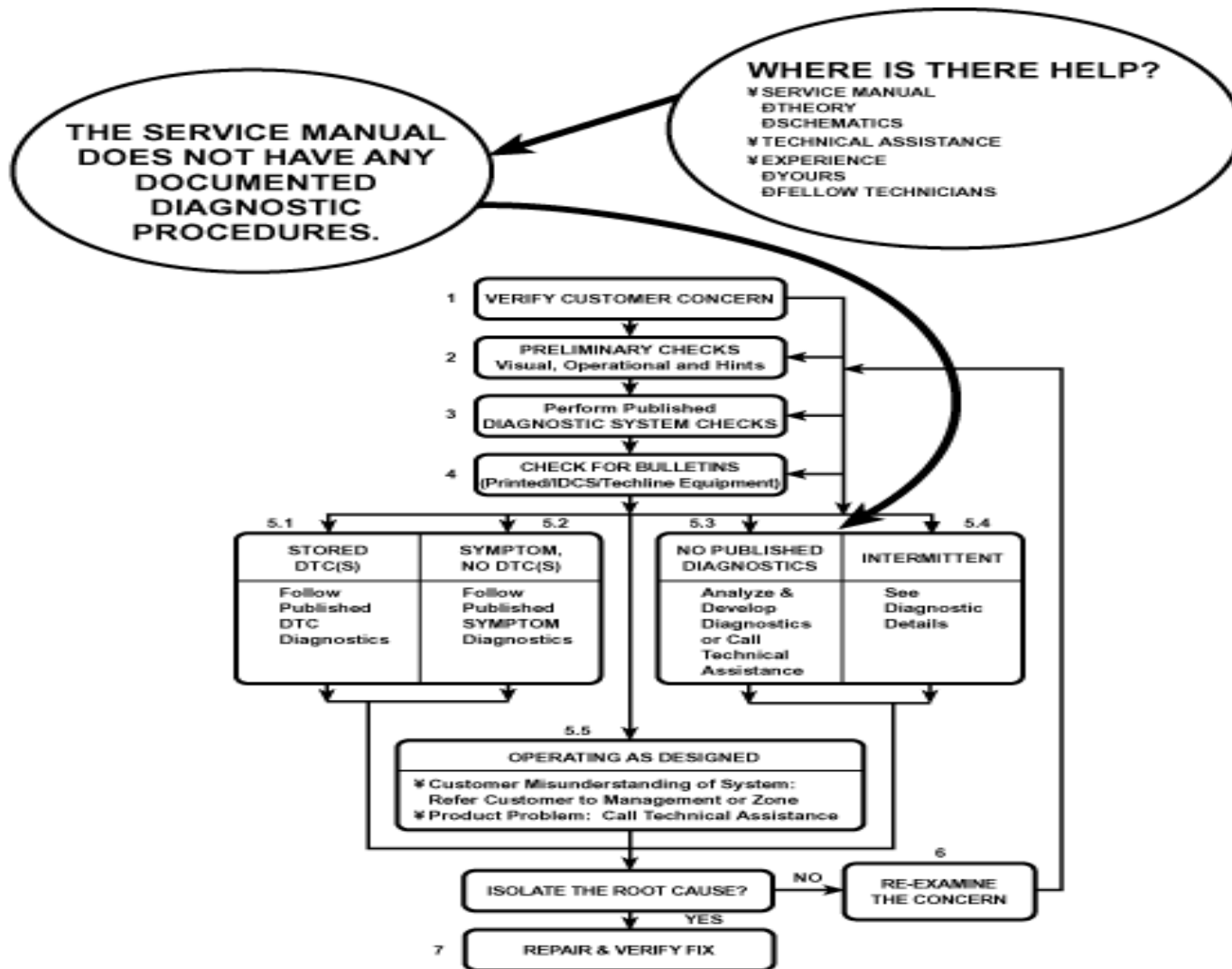
STEP 4 - CHECK FOR BULLETINS - QUICK FIX



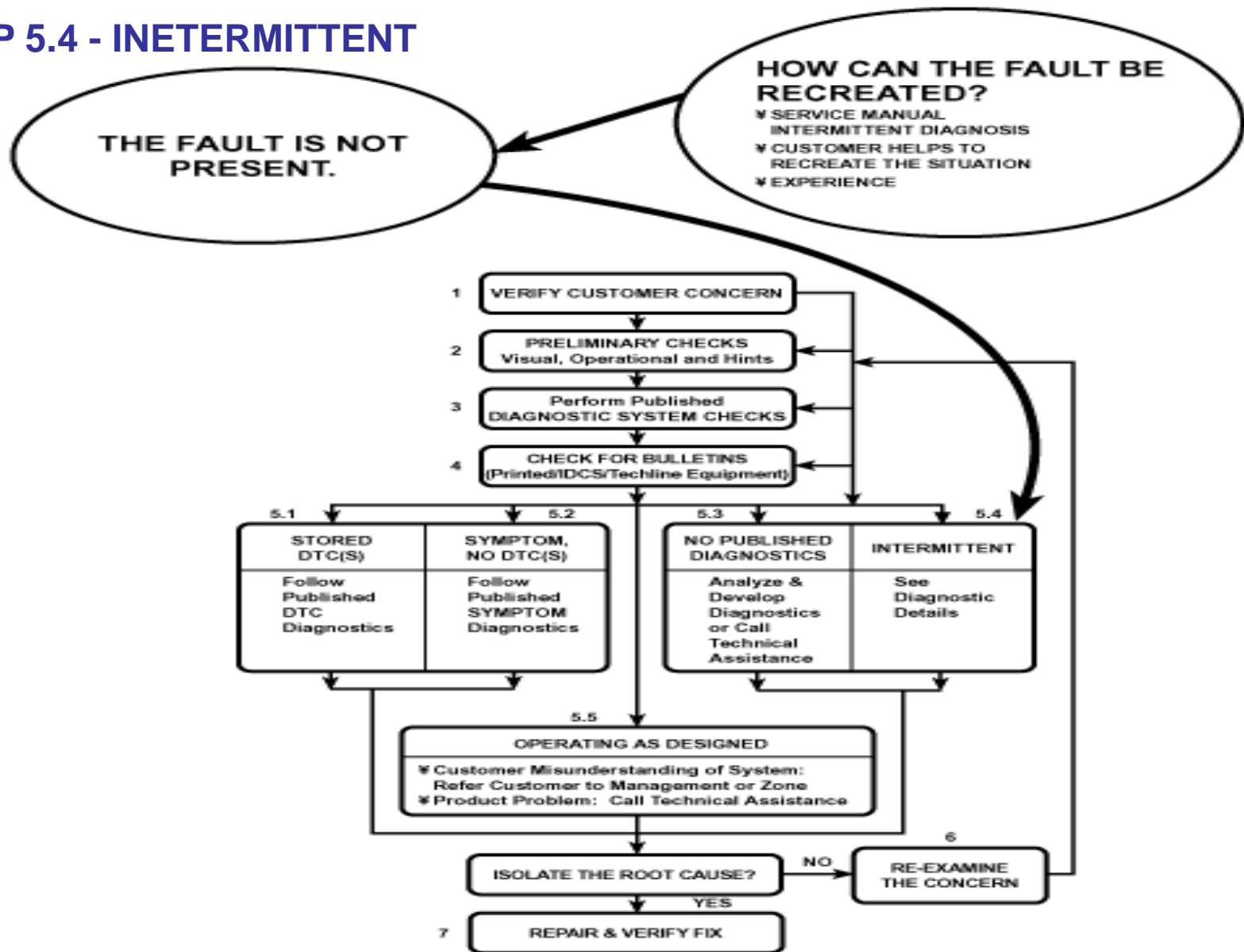
STEP 5.1/5.2 - SERVICE MANUAL DIAGNOSTICS



STEP 5.3 - NO PUBLISHED DIAGNOSTICS



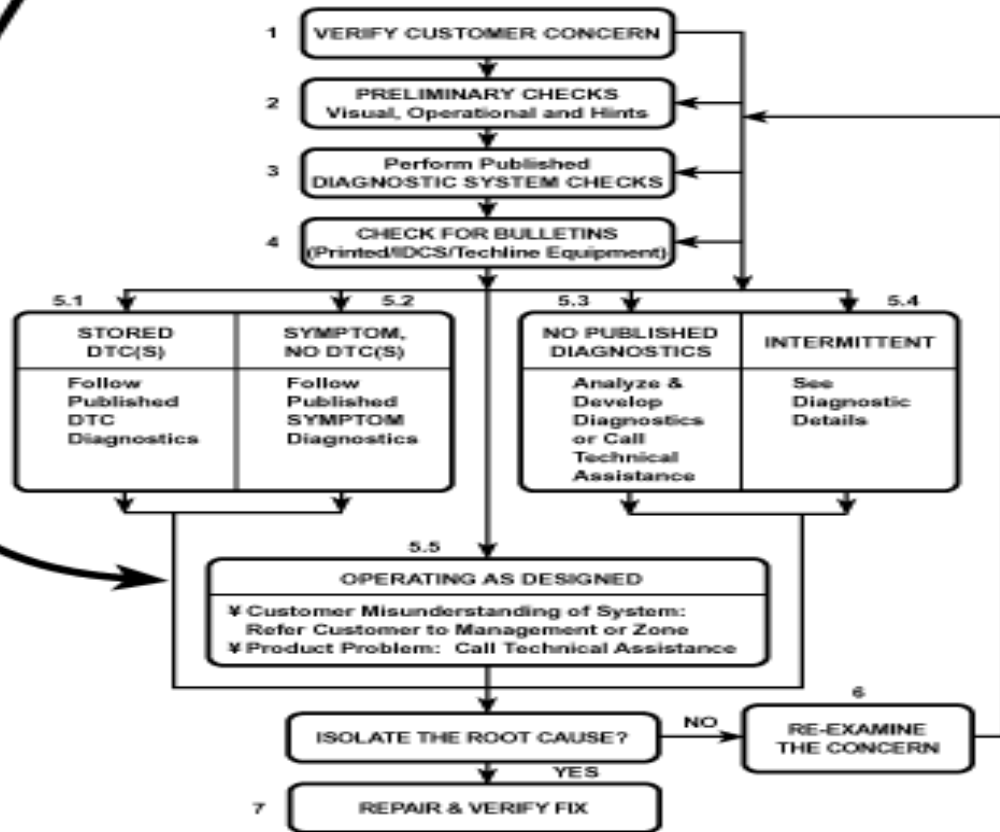
STEP 5.4 - INTERMITTENT



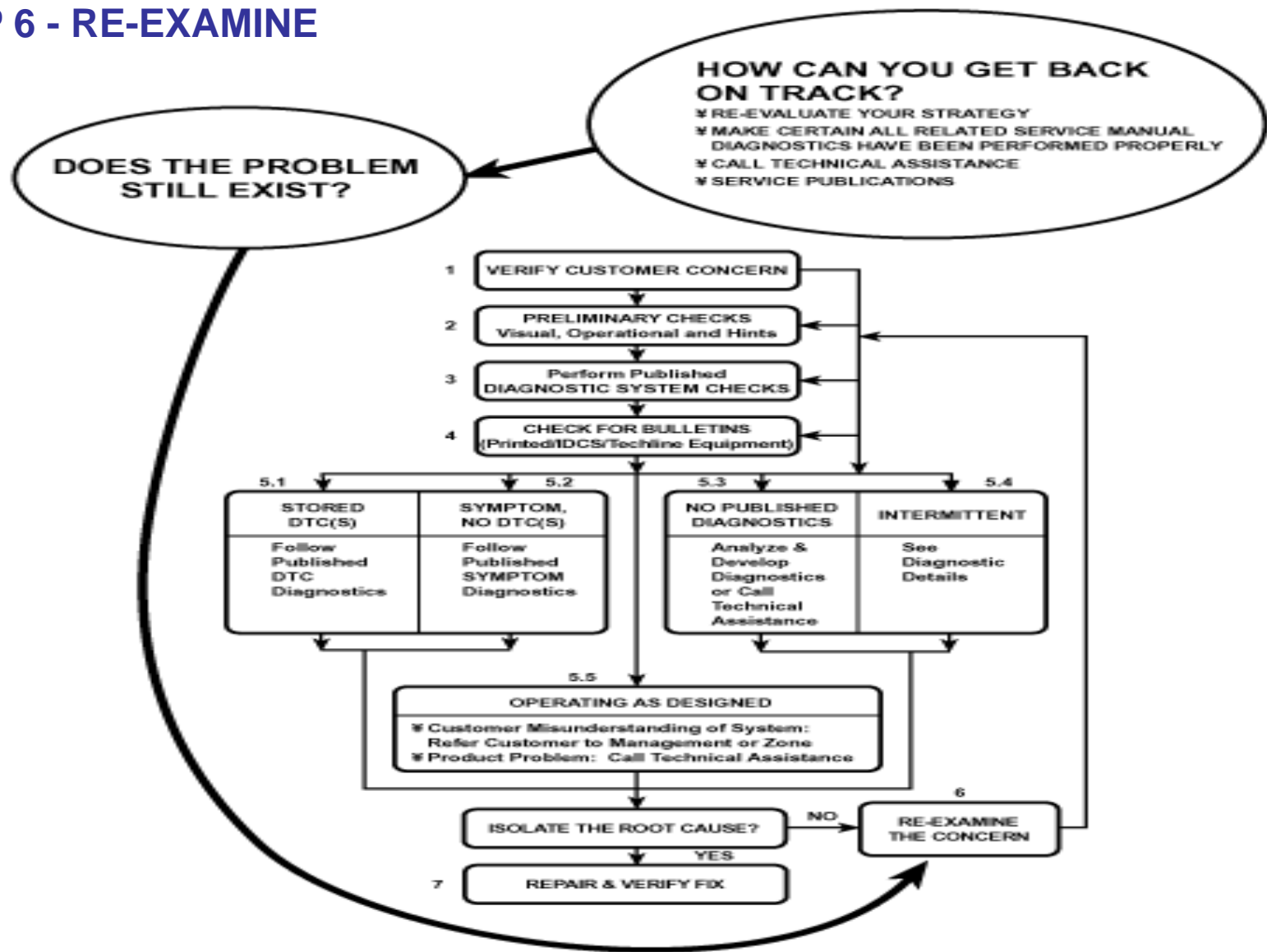
STEP 5.5 - OPERATING AS DESIRED

DOES THE CUSTOMER MISUNDERSTAND THE NORMAL OPERATION OF THE SYSTEM?

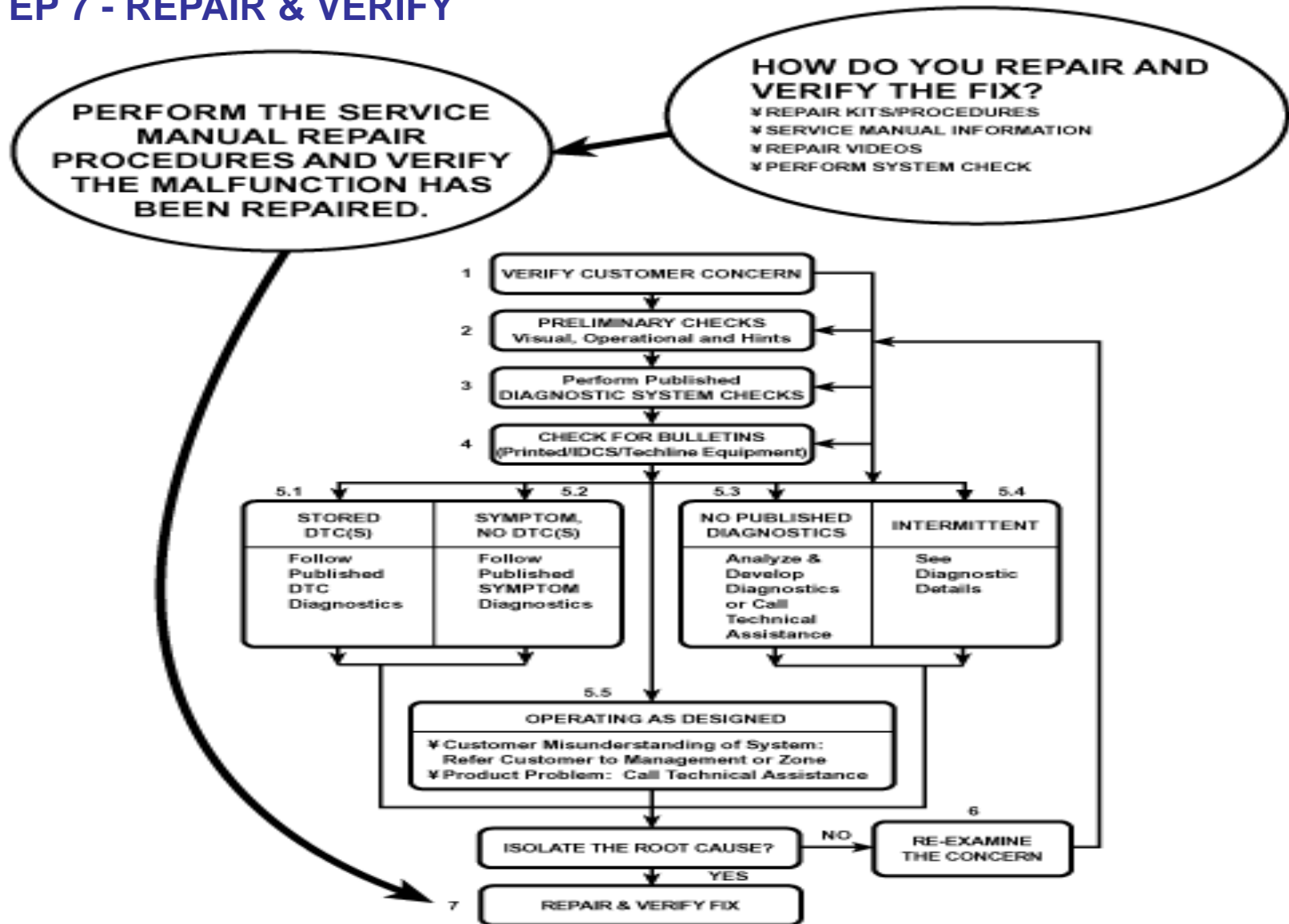
HOW CAN YOU HELP THE CUSTOMER UNDERSTAND THE SYSTEM IS OPERATING NORMALLY?
 ✓ OWNER'S MANUAL
 ✓ LIKE VEHICLE
 ✓ SERVICE MANUAL



STEP 6 - RE-EXAMINE



STEP 7 - REPAIR & VERIFY

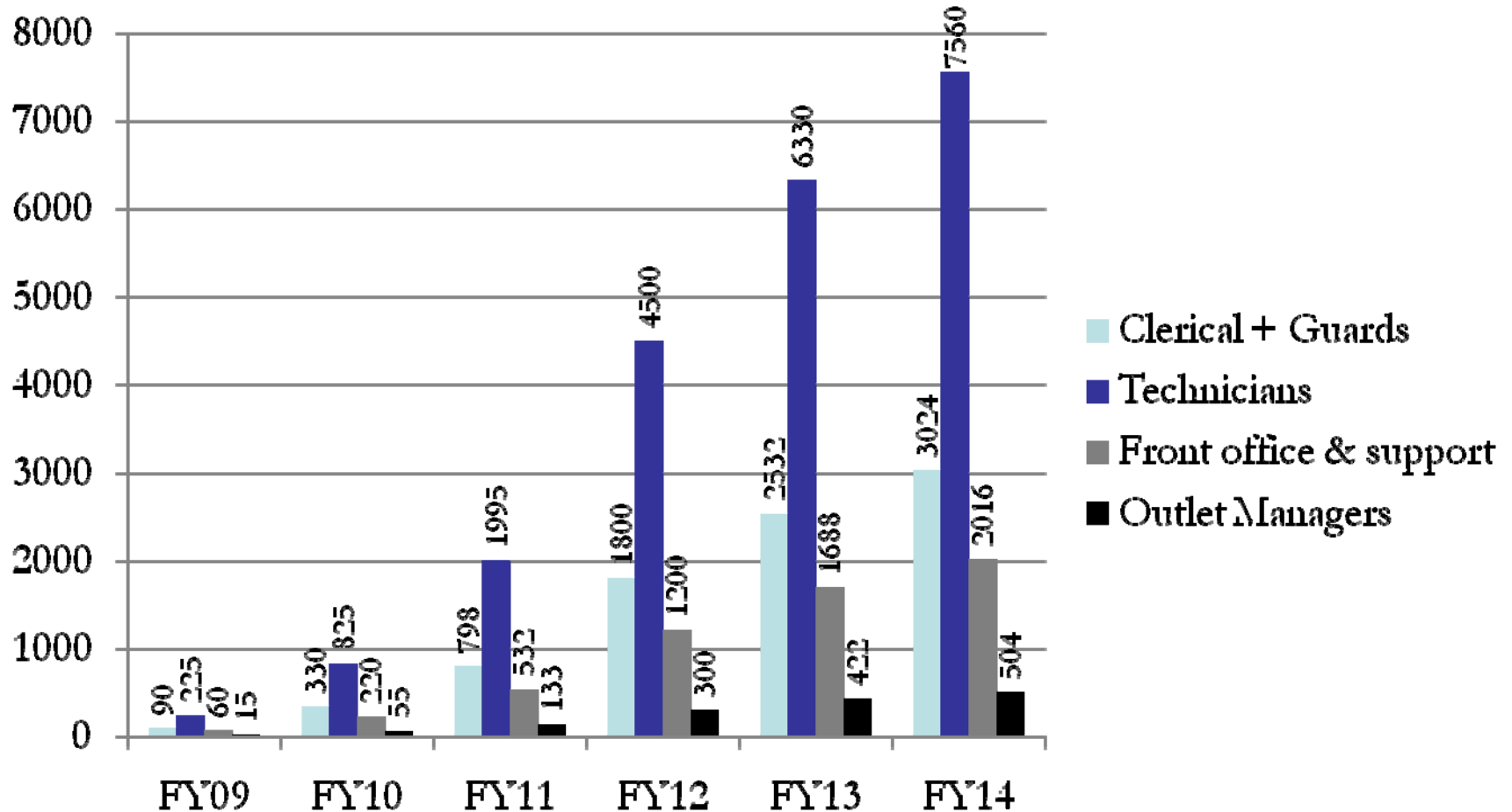


Looking forward to a great & a lasting partnership

MULTIBRAND
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Manpower Projections for 'MFCSL'



Industry Characteristics for MFCSL

- Multi Brand Operations
 - There are 8 major Manufacturers of vehicles in India
 - There are more than 61 models of cars prevalent in Indian industry.
- Large Job Generation Prospects
 - The work is primarily labor intensive
- Large No. of spares related logistics
 - There are 3.5 lacs different SKU's
- Competition from new Car dealers & street-side garages

Workforce Characteristics

- A large no. of technically trained staff (ITI's, NCTVT etc.)
- Prospect for local employment
- Majority of staff can be sourced from weaker section of society
- Current pool of trained staff is not quality conscious & customer friendly

What Alliance with Don Bosco could do

- It can provide ready to use 'Manpower'
- Optimum mix of 'experienced' & 'Trained' Manpower
- Co-development of curriculum
- Emphasis on both technical & soft skills.
- Re orientation of Experienced Staff

Workmen Characteristic

- Technology Savvy
- Process compliant
- Customer Focus
- Willingness to Learn
- High productivity

Thank you