SITE TECHNICAL DOCUMENTATION

myC2-2

Doc. No. :	**SCT U38 SSC DTS 0021**
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Produced by ***SAGEM SA***
2, rue du Petit Albi, 95800 Cergy Saint-Christophe, France
Tel (33) 1 30 73 50 50 - Fax (33) 1 30 73 50 55

NO DISCLOSURE AGREEMENT

CONTENTS

CHAPTER 1 - FOREWORD

This document is common to all phones in the SAGEM. It is composed of independent sheets:

- Symptom sheets = Symp Sheet XX
- Test and check sheet = Test Sheet XX
- Maintenance procedure sheet = Proc Sheet X XX

The applicability of a procedure is indicated in the independent sheets title block:

- All types = GSM 850/900, GSM 1800/1900 and dual band.

These sheets are updated from time to time in Technical Information Bulletins (TIB).

The information contained in this document is non-contractual, since phone characteristics can change.

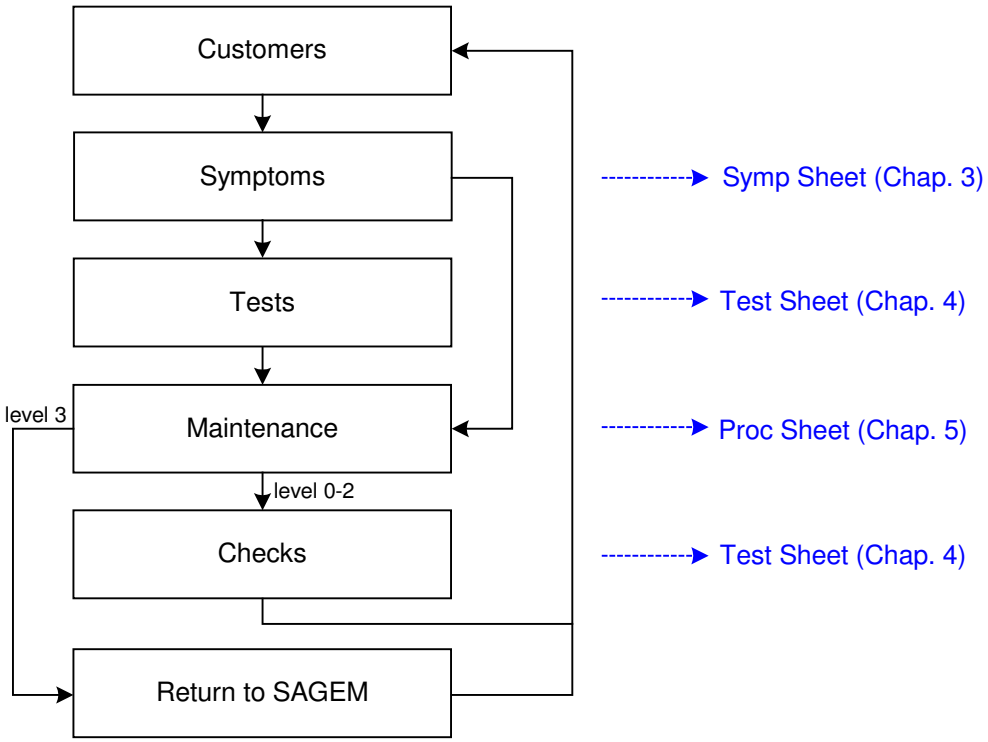
Phones are managed based on *SAGEM* handset codes; any order for spare parts must refer to these codes (typical code 25 xxx xxx-x).

1.1 HOW TO USE THE SITE TECHNICAL DOCUMENTATION

This is a modular document. Each sheet is unique and independent. In some cases several sheets may have to be used in order to determine the complete procedure to be applied.

A troubleshooting chapter (chapter 3) is provided and is sorted according to the type of reported fault, to determine the maintenance procedure to be carried out.

These sheets describe the procedure to be followed. They refer to test sheets or removal and replacement maintenance sheets. Maintenance ,executed by the repair centre, terminates either by returning the product to the customer, or by dispatching it to level 3 maintenance (return to factory).



All sheets include illustrations to make it easier to read the procedure.

- **Chapter 1 : Foreword**, describes general data about this document.
- **Chapter 2 : Description - Operation**, describes general data and options available in the myC2-2.
- **Chapter 3 : Symptoms**, contains troubleshooting procedures to be carried out on equipment.
- **Chapter 4 : Tests and checks,** contains tests and check procedures to be performed on the equipment.
- **Chapter 5 : Maintenance procedures**, contains level 0 to 2 maintenance procedures to be carried out on the equipment, and the procedure to return to SAGEM level 3.
- **Chapter 6: Accessories**, describes the characteristics of accessories for myC2-2 phones.
- **Chapter 7: Technical Information Bulletins**, contains the various modifications made to this documentation.
- **Chapter 8: Illustrated Parts Catalogue**, contains the various reference for spare parts.
- **Appendix 1**: **Composition table**, contains the various SAGEM references codes for equipment described in this document.

1.2 ABREVIATIONS

AAC	Advanced Audio Coder
ADPCM	Adaptive Differential Pulse Codec Modulation
ALS	Alternative Line Services
AOC	Advice Of Charge
CCD	Charged Coupled Device
CLI	Calling Line Identification
CLIP	Calling Line Identification Presentation
CSTN	Colored Super Twisted Nematic
DCS	Digital Cellular System
EFR	Enhanced Full Rate
EMS	Enhanced Message Service
FDN	Fix Dial Number
GPRS	General Packet Radio Service
GSM	Global System for Mobile
IMEI	International Mobile Equipment Identity
ISO	International Standard Organisation
LCD	Liquid Crystal Display
LU	Livret d'Utilisation (User's guide)
MMS	Multimedia Message Service
PCS	Personnal Communication Service
PIN	Personal Identity Number
PUK	PIN Unlocking Key
RF	Radio Frequency

SAR	Specific Absorption Rate
SIM	Subscriber Identify Module
SMS	Short Message Service
SMS CB	Short Service Message Cell Broadcast
SMT	Sagem Mobiles Tools
TFT	Thin Film Transistors
USSD	Unstructured Supplementary Service Data
VGA	Video Graphics Array
WAP	Wireless Application Protocol
WiFi	Wireless Fidelity
WSP	Wireless Session Protocol

1.3 COMMENTS SHEET

Broad experience is very beneficial in several respects. Please let us know your comments so that we can improve the contents and presentation of this document.

Your suggestions will be read carefully by:

- the design laboratory,
- production,
- the purchasing department,
- the after sales service,
- all users of this document.

All your suggestions are valuable, they will help us to better satisfy you.

Please photocopy and fill in the sheet 1-4.

Document title: **Site Technical Document for myC2-2**

Reference : **SCT U38 SSC DTS 0021**

Date :

Please fill in the following table :

	Excellent	Good	Fairly good	Passable
Easy to find the required information				
Clarity of information provided				
Quality and accuracy of information given				
Document outline				
Document presentation and appearance				
Quality of illustrations				
General satisfaction				

Do you think this document could be improved ? if so, how ? :

- ❒ Improve the overall view
- ❒ Improve the table of contents
- ❒ Improve the structure
- ❒ Add illustrations
- ❒ Add details
- ❒ Add information

Comments : _____
_____
_____

Would you like to discuss the problems mentioned in this questionnaire? If so, state :

Name of the person to be contacted : _____ Phone : _____

Company : _____ Date : _____

Address : _____

THANK YOU FOR PARTICIPATING IN THIS ENQUIRY. YOUR COMMENTS WILL HELP US CONTINUE TO IMPROVE THE QUALITY OF OUR DOCUMENTATION AND THUS BETTER SATISFY YOUR NEEDS.

When you have filled in this questionnaire, please send it :

SAGEM S.A.
Support Service Client / URD 38
2 rue du petit Albi
BP 8250
95801 Cergy Saint-Christophe
FRANCE

CHAPTER 2 - DESCRIPTION - OPERATION

2.1 REMINDERS ABOUT THE GENERAL NETWORKS CHARACTERISTICS

Table 1 below gives the characteristics of the radio interface for the GSM 850 / 900, GSM 1800 systems :

	GSM 900	**GSM 1800**
Frequency Band (MHz)	890 - 915 925 - 960	1710 - 1785 1805 - 1880
Number of time intervals per TDMA frame	8	
Width 2 x W simplex (MHz)	2 x 25	2 x 75
Duplex spacing (MHz)	45	95
Modulation speed (kbit/s)	271	
Speech throughput (kbit/s)	13 (5,6)	
Maximum data throughput (kbit/s)	12	
Multiple access	Frequency and temporal multiplexing / frequency duplexing	
Cell radius (km)	0,3 to 30	0,1 to 4
SAGEM terminal power (W)	2	1

Table 1 : Radio Interface

Table 2 shows powers as a function of the network:

	GSM 900		**GSM 1800**	
Class number	Maximum nominal power (W)	Allowable interval (W)	Maximum nominal power (W)	Allowable interval (W)
1	-	-	1	[0,63 ; 1,6]
2	8	[5,0 ; 12,7]	0,25	[0,16 ; 0,4]
3	5	[3,2 ; 7,9]	4	[2,5 ; 6,3]
4	2	[1,3 ; 3,2]		
5	0,8	[0,5 ; 1,3]		

Table 2: Terminals power class

Table 3 shows power classes :

	Class 1	Class 2	Class 3	Class 4	Class 5
GSM 900	43 dBm	39 dBm	37 dBm	33 dBm	29 dBm
GSM 1800	30 dBm	24 dBm	36 dBm	-	-

Table 3: RF power classes

2.2 REMINDERS ABOUT THE CHARACTERISTICS AND OPTIONS OF myC2-2

Remark: This information is given for guidance, and is in no way contractual characteristics vary according to customers and countries.

GENERAL CHARACTERISTICS	
Size	
Dimension (LxWxH, mm)	85x44x21
Weight (g)	80
Volume (cm3)	78
Power Management	
Battery type	Lithium-ion 650mAh
Charging time	3h
Talk time (TW.09)	Up to 3h
Standby time (TW.09)	Up to 340h
Display and User Interface	
Screen type	CSTN
Colours	4 096 colours
Number of lines	Up to 8lines
Screen size LxH (mm)	29x22
Screen resolution (pixels)	101x80
Backlight	Yes
Programmable key	Yes, 2
Sub LCD (clam design)	No, transparent window only
Customisation	
Handset colours	Silver
Interchangeable covers	No
Radio	
GSM Band	900, 1800 MHz
Automatic switching between bands	Yes
Voice codecs	FR,HR,EFR
Operating System	

CONNECTIVITY	
Radio	
GPRS	No
UMTS	No
Internet	
Browser	WAP v1.2
Push	Yes
Built-in data / fax Modem	Yes
Data Transfer	
Serial	No
IrDA (Obex or other standard)	No
Bluetooth	No
USB	Yes
WiFi (802.11b,a)	No
PC/MAC directory synchronisation	No

MULTIMEDIA	
Messaging	
SMS	MO/MT/CB
EMS	Yes, v5
MMS	No

Instant messaging (IMPS) - Chat	No
MULTIMEDIA (cont'd)	
Notification	Yes
Predictive text input	T9
Video & Images	
Camera	No
Video Player	No
Image Format	BMP,PNG,GIF,JPEG
Audio	
Audio Recorder	No
Polyphonic ringtones	16
Hi-Fi ringtones	Yes
Audio formats	IMELODY,MIDI,WAV,AMR
Entertainment	
Wallpaper	Yes
Screensaver	No
Clock display	Yes, analog or digital
Embedded games	Yes, ArcadeBox
JAVA	No
OTA Downloads	
Protocol supported	EMS, WSP-GET, WAP save as
Wallpaper / screensaver	Yes
Animation	Yes
Ringing melodies	Yes
Java application	No
CALL MANAGEMENT	
Voice features	
Mute mode	Yes
Integrated handsfree mode	Yes
Address book features	
Call group	Yes
Personal information management (V-card)	No
Ringtone / Icon customisation	Yes
Advanced Features	
Conference call	yes
Call list (dialled, received and missed)	Yes
Caller ID	Yes
Anonymous mode	Yes
Call wait / call hold / call transfer	Yes
Call forwarding	Yes
Sim toolkit	Yes
Vibrate mode	Yes
Speed dialling	Yes
Automatic redial	Yes
Any key answer	No
Automatic hang up	Yes
SPECIAL FEATURES	
Keyboard Features	
Direction key	Yes, up and down
Programmable key	Yes, 2
Keypad lock	No
Silent key	Yes, available via long press on *
Menu key	Yes

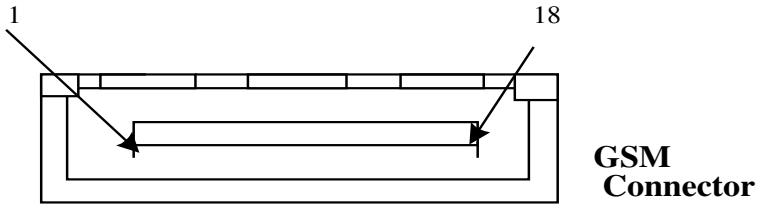
Personal Management Features	
SPECIAL FEATURES (cont'd)	
Calculator	Yes
Alarm Clock	Yes
Organizer	No
To Do	No
Voice memo	No
Currency converter	Yes
Languages	Up to 4
Compatible Accessories	
Data cord	No
Universal charger	Yes
Hands free kit	yes

MEMORY	
Internal phone book (positions)	Up to 100
Messaging memory (positions)	Up to 20
Redial list (positions)	Up to 20
Additional multimedia memory	no
Embedded memory (Max size for total user objects)	Up to 240 ko

2.3 DATA/AUDIO/CHARGE CONNECTOR

2.3.1 Connector description

This connector is located at the bottom of the transmission module and enable the connection to various accessories. It comprises power supply pins and signals.



2.3.2 Signal description

SYMBOL	PIN No.	SIGNAL FUNCTION
BFTXP	1	Differential input from microphone
BFTXN	2	Differential input from microphone
BFRXP	3	Differential output to earphone
BFRXN	4	Differential output to earphone
VBAT	5	POWER SUPPLY IMAGE VOLTAGE, connect this signal to «CHARGER» (pin n°1) to switch the module on.
DETECT	6	Accessories detection
CTS	7	Clear To Send
RTS	8	Request To Send
DSR	9	Data Send Ready
DTR	10	Data Terminal Ready
TXD1	11	UART transmit 1
TXD2	12	UART transmit 2
GND	13	ZERO VOLT
RXD1	14	UART receive 1
RI	15	Ring Indicator
DCD	16	Data Carrier Detect
RXD2	17	UART receive 2
CHARGER	18	Phone set power ON and power supply signal.

2.4 IDENTIFICATION

All phones are identified with an identification label sticked on the antenna.

2.4.1 Illustration

2.4.2 Description

a : IMEI (bar code),

b : IMEI (15 characters)

c : Reference of product / aesthetic used (bar code)

d: Reference of product / aesthetic used (9 characters)

e : Date code + Manufacturing level + Production area Indication,

Ex. F274/02 = (*F*) fabrication area (F : Fougères), (*274*) day of year, (*02*) last digit of year (02→2002).

Ex: B254: Manufacturing level

Ex: Made in China: Production area Indication

f : Product designation

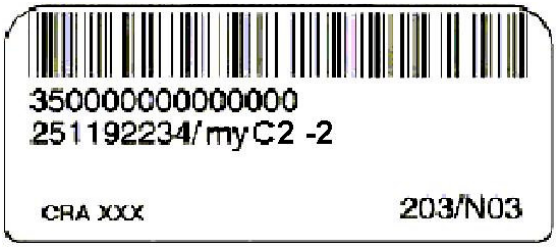
g :Module serial number (bar code)

h: Module serial number (10 characters),

i: Sim card Indication (Sim 3V…)

2.4.3 Description after repair

A new sticker is positioning by Repairing Centre near the sim card connector:

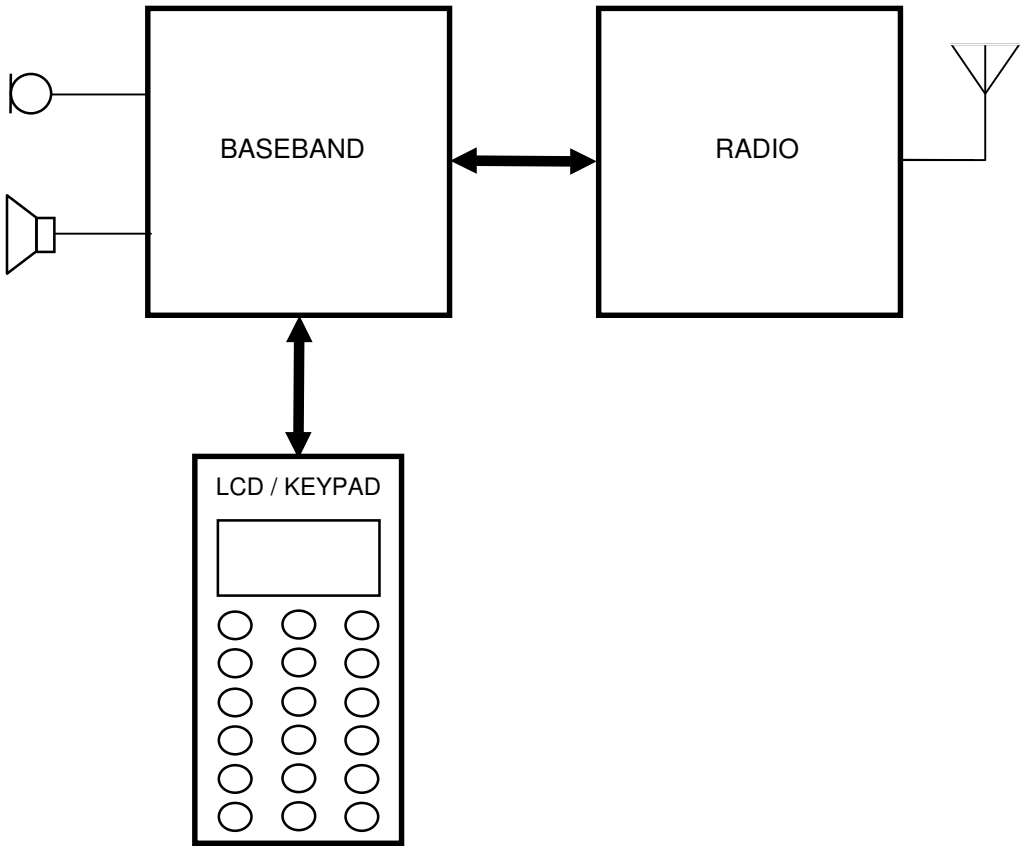


This extra line will appear if the mobile has already been repaired.

- **CRA XXX** ⇒ N° of CRA,
- **203/N03** ⇒ Date of repair: (203) repairing day, (03) last digit of year (03→2003).

2.5 PHONE BLOCK DIAGRAM

2.5.1 myC2-2 block diagram



2.5.2 Standards and environment

Conformance Document

SAGEM SA declare under its sole responsibility that the product Dual Band GSM/DCS Type B2003 conforms to the

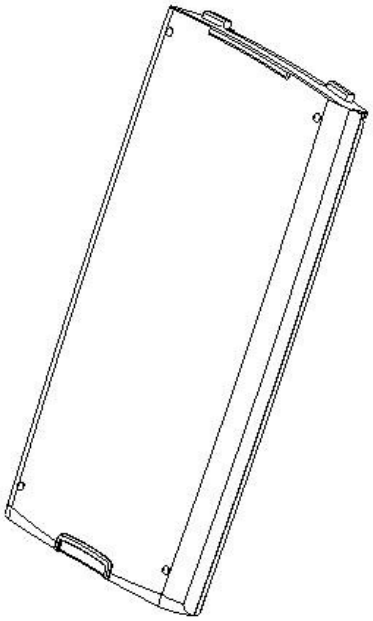
requirements of the following EEC directives:

EEC Directive	1999/5/CE
Safety	EN 60950
EMC	EN 301 489-1 / EN 301 489-7
Low voltage directive	73/23/CEE
Network	3GPP TS 51.010-1 v 5.2.0 selected with GCF-CC v 3.10.0 included
Requirements	GT01 v 4.7.0 / TBR 19 Edition 5 /TBR 20 Edition 3 / TBR 31 Edition 2
	TBR 32 Edition 2 / EN 301 419-1 /EN 301511
Health	EN 50360 / EN 50361

2.6 EQUIPEMENTS

The description and operation of SAGEM myC2-2 are given in the "User's handbook" supplied with the phone. This chapter only describes equipment that operates with the myC2-2 phones .

2.6.1 Battery packs



Over view

2.6.1.1 Characteristics

Technology	Weight	Voltage/ capacity
Li-ion	22	3,6V/ 650mAh

2.6.1.2 Description

Li-ion type batteries are used. They are rechargeable using:

- mains power supply modules,

Batteries caution use:

- Store the batteries in a dry and cool place (excessive cold and heat damage the batteries reliability).
- They must never be stored in bulk, even the rejects, to avoid any short circuits.
- Do not dismantle the battery packs. (Li-Ion regulations).
- Only use original mains power supply module.
- **All the out of order batteries must be returned to SAGEM.**

2.6.1.3 Charging time

The following table shows typical charging times for different batteries.

Battery	500 mA travel chargers	"Simple" unregulated chargers 230 V Nom. (110 V Nom.)
Li-ion	230 V (110 V)	254 V (121 V)
	3h	2h45

2.6.2 Mains modules

2.6.2.1 Description

These mains power supply modules accept large dynamic variations in the power supply network. They are available for a number of connector types:

- E.U,
- United Kingdom
- United States,

2.6.2.2 Mains modules

Reference	Weight (g)	Vol (cm^3)	Primary voltage
SIMPLE UNREGULATED MAINS POWER SUPPLY MODULES 1.5 V. 300 mA.			
EC MAINS MODULE	180	85	230 V
UK MAINS MODULE	180	120	230 V
US MAINS MODULE	210	105	110 V

CHAPTER 3 - SYMPTOMS

3.1 GENERAL

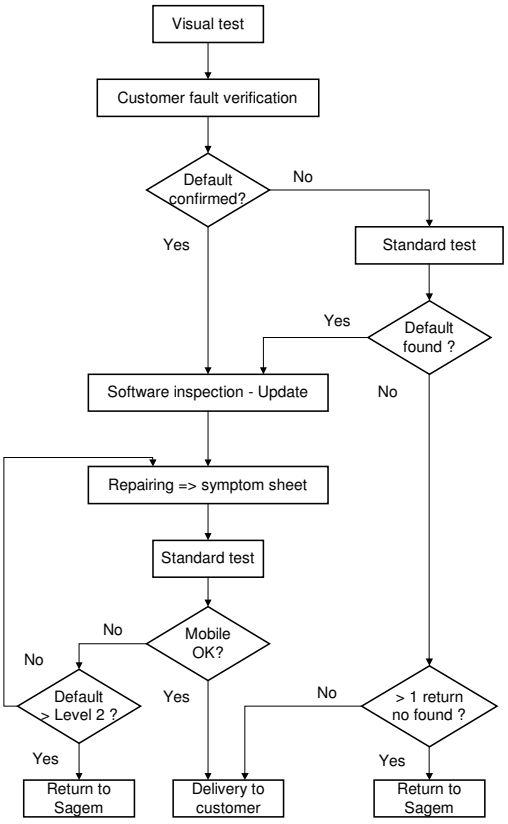
After you have received the **customer return sheet** (Proc Sheet 3 02), carry out the troubleshooting procedure.

This chapter will help you to identify the defective element(s), using the troubleshooting table.

It contains flow charts broken down by fault type. Each flow chart describes the procedure to be followed and contains cross references to tests or maintenance.

The conclusion of each troubleshooting procedure is :

- Return to SAGEM =The Return to the SAGEM centre can concern either the card, or the radiotelephone according to instructions given to the Centres of repair.
- Delivery to the customer



Visual test :

- Glass state
- Keypad state (elastomer, inscription)
- Connector state (data/audio/charge ,battery, SIM)
- Plug and position of battery
- SIM card position
- Oxidation

Standard test :

- Display test : Hot Line menu
- Contrast control
- All keypad keys test (check bips keys)
- Audio and radio test
- Battery charge test
- Vibrating device test : Hot Line menu
- Charger test
- Real call with a operator SIM card

Software inspection :

For all mobiles to repair, the checking by SMT is

These flow charts should be followed in full. After a reference to a removal/replacement sheet or to a test to be carried out, you should return to the initial flow chart and continue the search until reaching a final conclusion.

3.2 LIST OF REPORTED DEFECTS

The following is a list of defects that may be reported :

Code	Indicated fault	Procedure
A0	Display malfunction	Symp Sheet 04
A1	No power up	Proc Sheet 2 06 or 3 01
A2	No display up	Symp Sheet 04
A3	Freezes up	Proc Sheet 2 06 or 3 01
A4	Back lights problem	Proc Sheet 2 06 or 3 01
A5	Broken LCD	Symp Sheet 04
A6	Line or digit missing	Symp Sheet 04
B0	Power supply / no charge	Symp Sheet 01
B1	Defective battery contact	Proc Sheet 0 01
B2	Defective charger connector	Proc Sheet 2 06 or 3 01
B3	Defective board power supply	Proc Sheet 2 06 or 3 01
B4	Defective charge icon display	Proc Sheet 2 06 or 3 01
B7	Autonomy	Symp Sheet 01
B8	Electrically defective battery	Test Sheet 03
B9	Mechanical lock problem on battery	Proc Sheet 0 01
B10	Broken battery	Test Sheet 03
B11	Defective charger	Test Sheet 02
B12	Broken charger	Test Sheet 02
B13	Intermittent cut with reboot	Proc Sheet 2 06 or 3 01
B14	Intermittent cut without reboot	Proc Sheet 2 06 or 3 01
C1	Not functioning keyboard	Symp Sheet 05
C2	Lateral key problem	Symp Sheet 05
D1	Sim missing	Proc Sheet 2 06 or 3 01
D2	Other messages	Proc Sheet 2 06 or 3 01
D3	EEPROM pb	Proc Sheet 2 06 or 3 01
D4	Untuned mobile	Proc Sheet 2 06 or 3 01
D5	Hard failure	Proc Sheet 2 06 or 3 01
D6	Sim lock	Proc Sheet 2 06 or 3 01
D7	Post code	Test Sheet 01
D8	Return SAV	Proc Sheet 2 06 or 3 01
D9	Unknown battery	Test Sheet 03

Code	*Indicated fault*	*Procedure*
E1	Defective loudspeaker (hails)	Symp Sheet 08
E2	Loudspeaker voice distortion	Symp Sheet 08
E3	Defective microphone	Symp Sheet 08
E4	Microphone voice distortion	Symp Sheet 08
E5	Vibrating device malfunction (depending on models)	Symp Sheet 07
E6	Defective audio connector	Symp Sheet 08
F1	No network localisation	Symp Sheet 02
F2	Intermittent calls drop	Symp Sheet 02
F3	Network temporary drop	Proc Sheet 2 06 or 3 01
F4	Radio test not ok	Proc Sheet 2 06 or 3 01
F5	Outgoing call failure	Symp Sheet 02
F6	Incoming call failure	Symp Sheet 02
G1	Broken or damaged glass	Proc Sheet 2 03
G2	Broken or damaged cover	Proc Sheet 1 01/ 2 02
G5	Broken or damaged keyboard	Proc Sheet 1 03
H1	DATA PROBLEM (SMS, EMS, SMS,GPRS, WAP, DOWNLOADING GAMES, RINGING TONES, SCREEN SAVER, NO COMMUNICATION WITH A PC, POCKET PC or PALM)	Without object
H2	Video function	Without object
H3	INFRARED function (IRDA)	Without object
I1	Oxidation marks	Proc Sheet 2 06 or 3 01
I2	FM function	Proc Sheet 2 06 or 3 01
I3	Monetic function	Proc Sheet 2 06 or 3 01
I4	Broken or damaged accessory	Proc Sheet 2 06 or 3 01
I5	Defective SIM connector	Proc Sheet 2 06 or 3 01
I6	Malfunction of the menu	Proc Sheet 2 06 or 3 01
I7	Lack function in the menu	Proc Sheet 2 06 or 3 01
I8	No fault found	Symp sheet 03

3.3 ERROR MESSAGES DURING START UP

Message	Meaning	Procedure
WARNING UNTUNED RADIO	Invalid EEPROM field (SAGEM)	SAGEM Factory Return
PB IMEI	Consistency problem at IMEI level	SAGEM Factory Return
SIM MISSING	SIM card missing or badly inserted	Insert the SIM card
IMEI ERROR	Consistency problem at IMEI level	SAGEM Factory Return
UNTUNED	Mobile not configured	SAGEM Factory Return (except electronic SWAP boards sent by SAGEM Factory which only need a SMT process)
UNKNOWN BATTERY	Battery not recognised by the mobile	Replace the battery
MOBILE PHONE LOCKED	Number of seizures of sim locked code exceeded	SAGEM Factory Return Not repair under warranty
SIM BLOCKED	Three bad PIN codes have been input	Contact the operator
SIM LOCKED (with SIM)	SIM card not adapted to the operator	Replace the SIM card
SIM LOCKED (without SIM)	Attempt of corruption (EEPROM fields)	SAGEM Factory Return Not repair under warranty
BATTERY TOO LOW	Battery state	Replace the battery

3.4 OTHER ERROR MESSAGES

Message	Meaning
"LINE INCIDENT"	Fax & PC link type "Problems"
"FULL MEMORY"	Fax & PC link type "Problems"
"CLEARING REJECTED"	Fax & PC link type "Problems"
"CHECK CONNECTION"	Fax & PC link type "Problems"
"NOT CONSULTED DOCUMENT"	Fax & PC link type "Problems"
"DEVICE PROBLEM"	Fax & PC link type "Problems"
"VERIFY APPLICATION"	Fax & PC link type "Problems"
"BUSY"	"Problems" related to the network and Communications
"K.PAD LOCKED PRESS *V"	Keypad locked
"OPTION NOT AVAILABLE"	Menu not available for this product version
"PROG.KEY NOT VALID"	Input "Problems"
"ERROR!!"	Calculation error with the calculator (division by zero)
"NOT REACHABLE"	Call forwarding if the mobile is not reachable
"NOT AVAIL."	Not available
"PIN ERROR"	" PIN input problems "
"PIN2 BLOCKED"	Following input errors

"PUK ERROR"	Following input errors
Message	***Meaning***
"PUK2 BLOCKED"	Following input errors
"CODE ERROR"	The phone code input for locking the mobile is incorrect
"NOT AVAIL."	Service not implemented in the network
"TRY AGAIN"	Following a network problem
"NETWORK BUSY"	"Problems" related to the network and Communications
"WAIT"	"Problems" related to the network and Communications
"UNBLOCK?"	"Problems" related to the SIM card
"MEMO REC. CUT"	Save during storage in the answering machine truncated due to lack of space
"FUNCTION NOT ALLOWED"	Prohibited function requested
"NOT FOUND"	Unsuccessful search (on directory, etc.)
"BUSY"	"Problems" related to the network and Communications
"REJECTED"	The requested operation was refused by the network
"EMPTY"	Empty (note pad, memo, etc.)
"NOT IN GROUP"	Error display following an error code returned from the network (CUG menus)
"CREDIT END"	“Credit end” information (paying call prohibited)
"CREDIT TOO LOW"	“Credit too low” information (CUG menus)
"NO AUTHORIZED ACTION DURING A WAP CALL"	Not available action during a wap call
"NOT CONFIGURED ACCESS"	Selection of a not configured provider
"UNKNOWN ACCESS"	Selection of a not fully configured provider
"UNKNOWN CALL IN PROGRESS"	Selection of a provider during a call in progress
"NO RESPONSE OF THE SERVER"	" Problems" related to the server
" NO RESPONSE OF THE NETWORK"	"Problems" related to the network and Communications
"NOT AVAILABLE NETWORK"	"Problems" related to the network and Communications
"TOO LONG URL ADDRESS"	The address typed is too long

3.5 LIST OF OBSERVED DEFECTS

A SAGEM code is assigned to each confirmed defect. This code should be entered on **Proc Sheet 3 01, SAGEM Factory Return**, if the phone to be repaired is returned to SAGEM **(see chapter 5).**

3.6 INFORMATION ABOUT NEW NOTICED FAULTS

Detection by the repair center of new fault shall induce to respect the following procedure

a) The concerned technician fills a precise report using the document NPD report **SAV GSM 277 V1**

b) Then, this document is transmitted by email to the concerned Area Manager or Support Engineers for approval. Accordingly, 2 ways are possible :

- The problem is already known by SAGEM, then the mobile have to follow the normal process in ARC with eventual additional data given by AM or SE

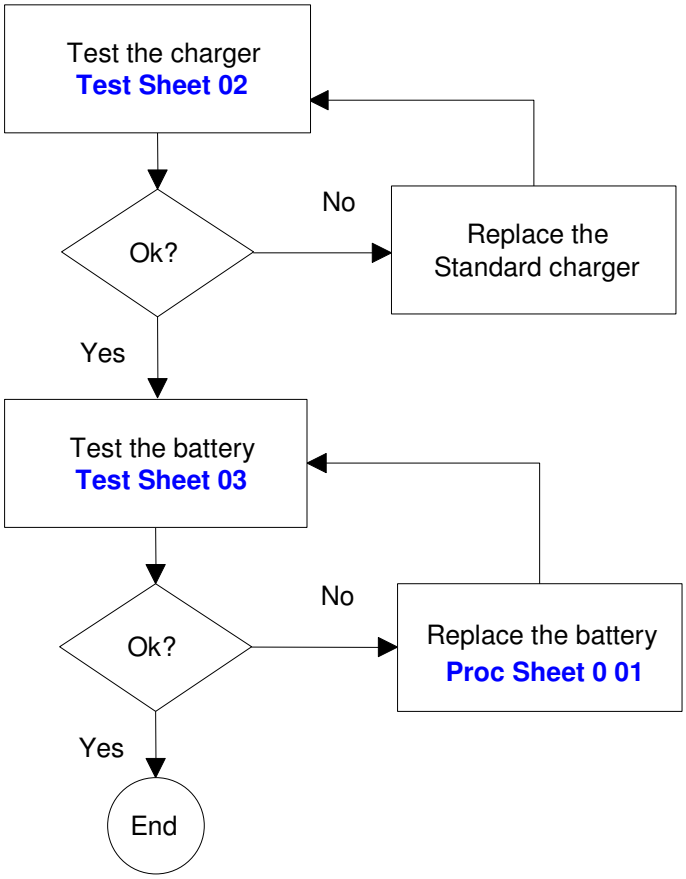
- Return of mobile to MTB is requested.

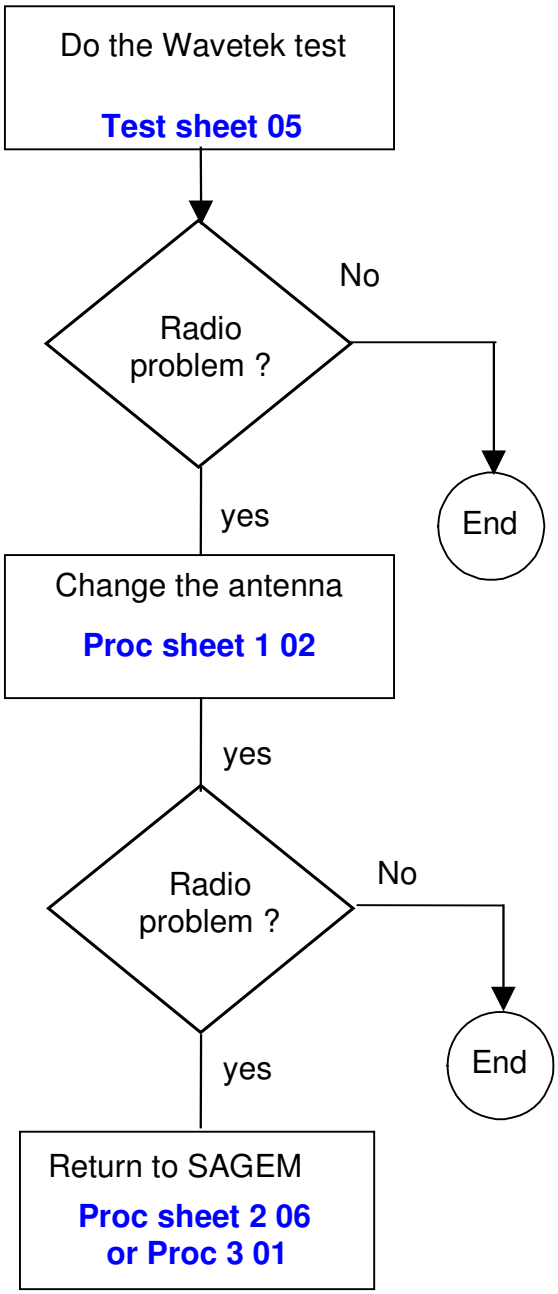
c) In that second case, the ARC will have to request a specific RMA number for this mobile in order to facilitate the treatment when arriving in SAGEM.

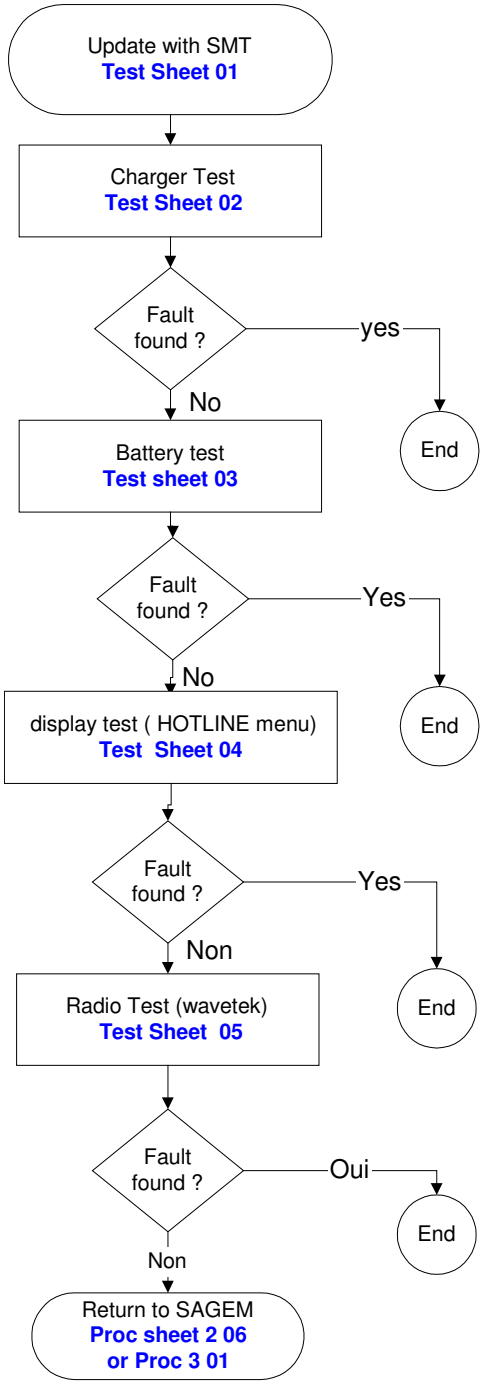
d) This mobile returned to SAGEM will be swapped following ARCs habitual process for MTB return but will be MANDATORY linked to a paper version of the document filled by the technician.

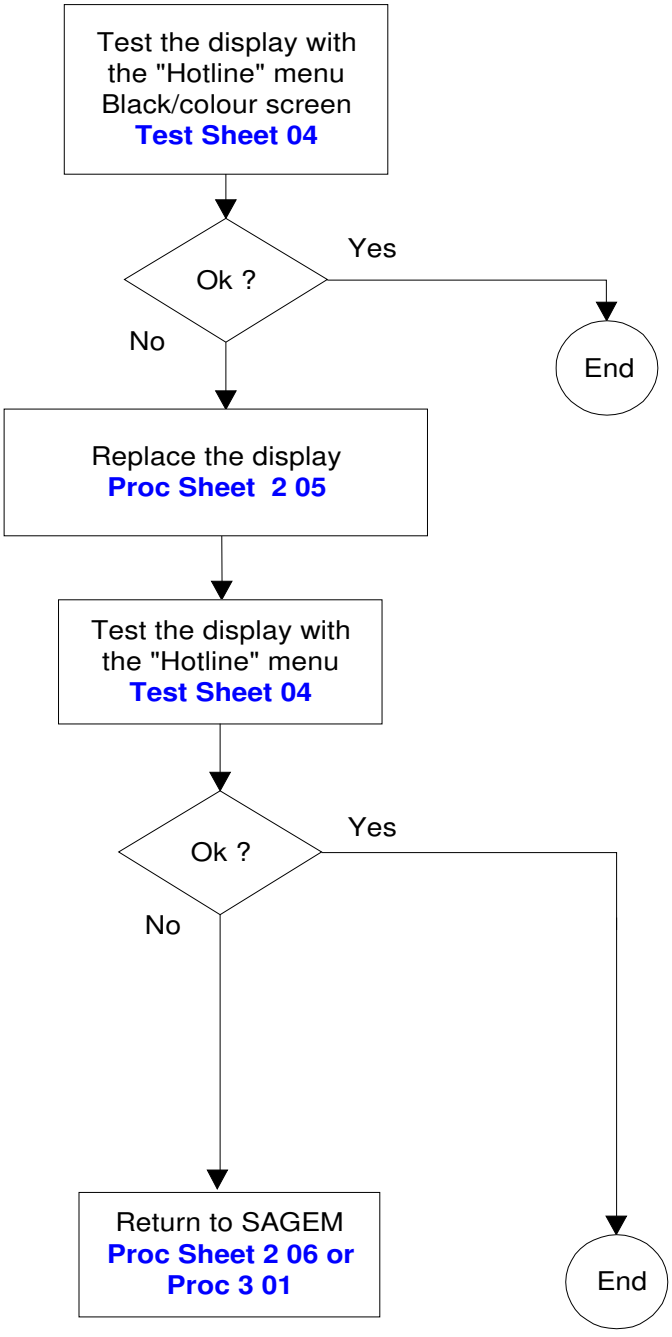
e) The treatment will have to be reproduced on the daily report and will be considered as level 3. Specified fault code will be then the technically closest one of the noted one, in the grid given by SAGEM

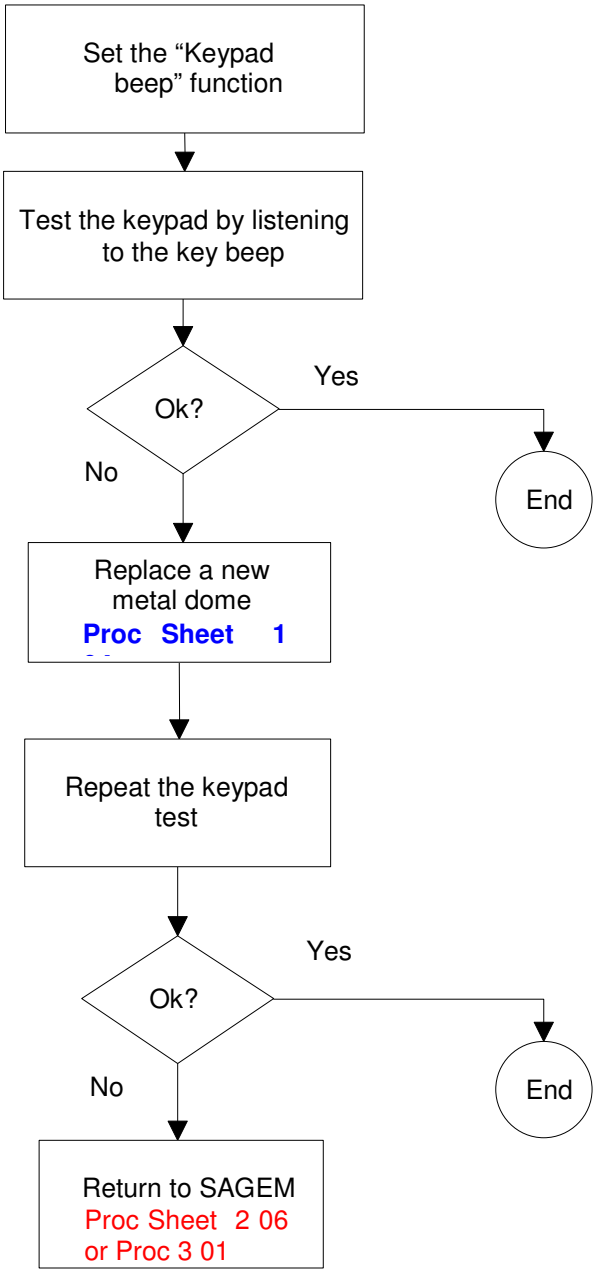
SYMPTOM SHEETS

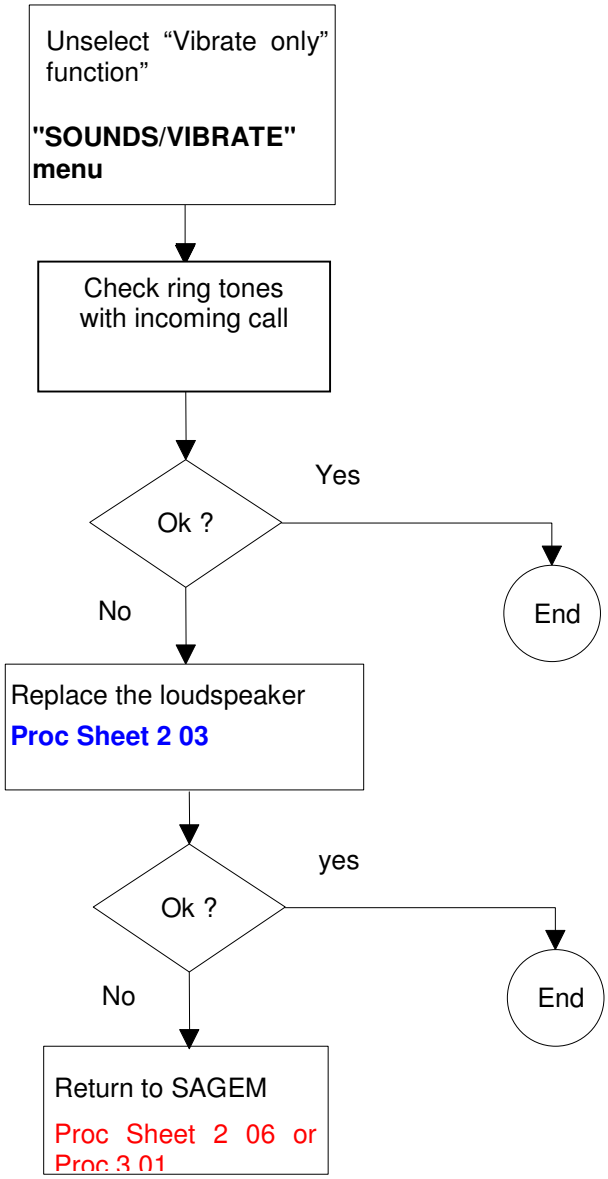

Test the charger
Test Sheet 02
Ok?
No
Replace the Standard charger
Yes
Test the battery
Test Sheet 03
Ok?
No
Replace the battery
Proc Sheet 0 01
Yes
End

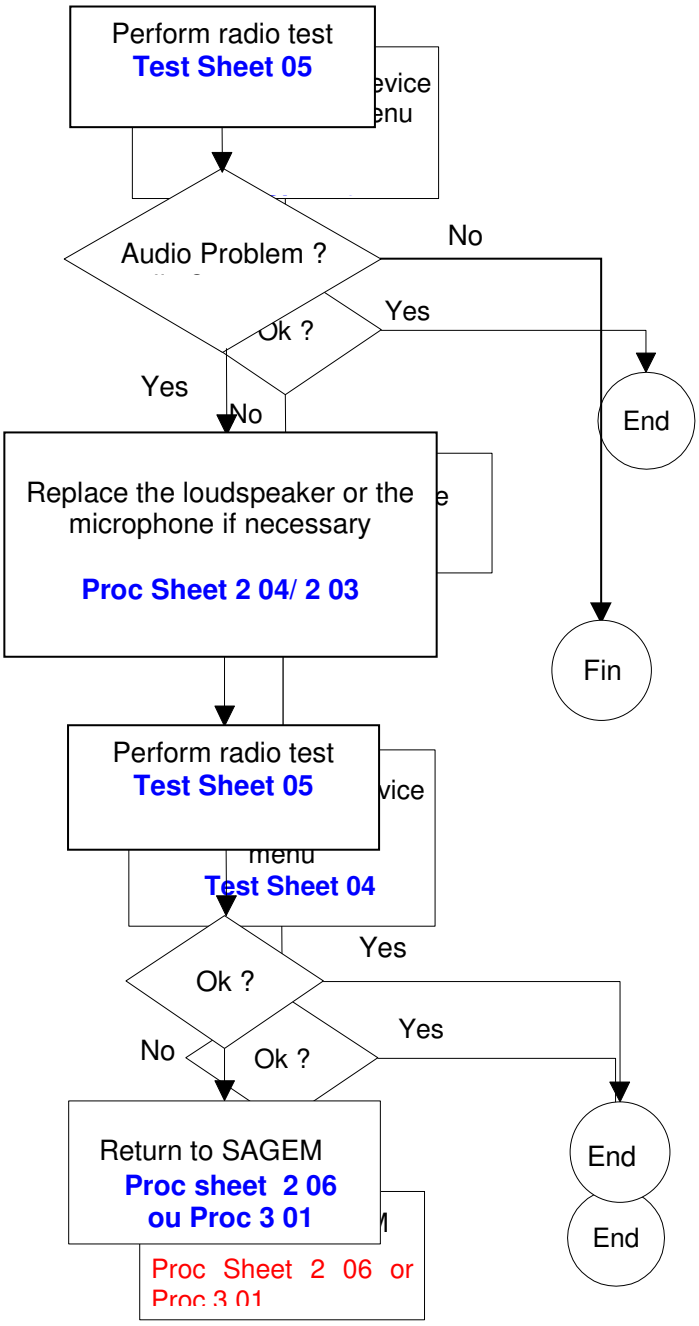

Do the Wavetek test
Test sheet 05
Radio problem ?
No
End
yes
Change the antenna
Proc sheet 1 02
yes
Radio problem ?
No
End
yes
Return to SAGEM
Proc sheet 2 06 or Proc 3 01


Update with SMT
Test Sheet 01
Charger Test
Test Sheet 02
Fault found ?
yes
End
No
Battery test
Test sheet 03
Fault found ?
Yes
End
No
display test (HOTLINE menu)
Test Sheet 04
Fault found ?
Yes
End
Non
Radio Test (wavetek)
Test Sheet 05
Fault found ?
Oui
End
Non
Return to SAGEM
Proc sheet 2 06
or Proc 3 01


Test the display with the "Hotline" menu Black/colour screen
Test Sheet 04
Ok ?
Yes
No
End
Replace the display
Proc Sheet 2 05
Test the display with the "Hotline" menu
Test Sheet 04
Ok ?
Yes
No
Return to SAGEM
Proc Sheet 2 06 or Proc 3 01
End


Set the “Keypad beep” function
Test the keypad by listening to the key beep
Ok?
Yes
No
End
Replace a new metal dome
Proc Sheet 1
Repeat the keypad test
Ok?
Yes
No
End
Return to SAGEM
Proc Sheet 2 06
or Proc 3 01


Unselect “Vibrate only” function”
"SOUNDS/VIBRATE" menu
Check ring tones with incoming call
Ok ?
Yes
End
No
Replace the loudspeaker
Proc Sheet 2 03
Ok ?
yes
End
No
Return to SAGEM
Proc Sheet 2 06 or Proc 3 01


Perform radio test
Test Sheet 05
Audio Problem ?
No
Yes
Ok ?
Yes
No
End
Replace the loudspeaker or the microphone if necessary
Proc Sheet 2 04/ 2 03
Fin
Perform radio test
Test Sheet 05
menu
Test Sheet 04
Yes
Ok ?
Yes
No
Ok ?
Return to SAGEM
Proc sheet 2 06
ou Proc 3 01
End
End
Proc Sheet 2 06 or

CHAPTER 4 - TESTS AND CHECKS

4.1 ABOUT TESTS

Tests and checks are made after the troubleshooting procedures (chapter 3) and before the maintenance procedures (chapter 5).

They are broken down into modules and are sorted by types of confirmed faults. The user must be equipped with special test tools in order to carry out the tests.

4.2 TEST TOOLS

The references of SAGEM tools, listed hereafter, are given in Appendix 1 : Composition table.

The following test tools are necessary :

1. the **ARC downloading kit**, including the test case provided with:
   - the data cable (to PC),
   - the retrofit cable,
   - the mains power supply module.
   - Retrofit adapter
2. the **radio test bench**, provided with:
   - SIM card of test.
   - MyC2-2 calibration tool
   - Adjustable regulate power supply 0-15V / 4A
   - Wavetek 4107

– **CADEX C7000** / **C7200** / **ASTRATEK** with myC2-2 adapter
   - Charger test kit
   - Voltmeter (minimum impedance : 20 KΩ per Volt in DC)
   - Ammeter

3. an **IMEI labels printing station**, including :
   - Printer,
   - Roll of labels,
   - Connecting cable for PC (parallel printer cable),
   - Printing software,

4.3 INSTALLING ON A WORKSTATION

4.3.1 Minimum required configuration

The minimum configuration of the workstation is :

4. Processor 1Ghz,
5. 128 Mbytes of RAM,
6. Windows 2000, Windows XP,
7. 2.1 Gbytes hard disk (1 Gbytes available),
8. 1 parallel port and 2 serials port.
9. Network card, sound card.
10. 1 internet access,

4.3.2 Installing the ARC downloading kit

The ARC downloading kit interfaces the SMT software with the phone to be repaired.

11. Connect the 9-pin SUB-D connector to the PC serial port (COM1).
12. Connect the power supply module to the mains power outlet.
13. Connect the phone to be repaired to the system connector.

4.3.3 SMT functions

The SMT maintenance software can:

14. Download new software if needed
15. Configure default values and checks them.
16. Unblocked the " PHONE CODE "
17. Delete the customer directory and SMS
18. Print identification labels.
19. Make a electronic board exchange
20. Adjust the display contrast
21. Read the Site Technical Documentation (manual of repair)
22. Select a test sequence

The procedures for using these functions are described in **TEST Sheet 01**.

TEST SHEET

To run the functions described below, run the SMT application from the desktop icon.

<u>Notice:</u> The active connection with SMT (via the serial port), validate in itself the data functionality of the handset.

Download the latest software

1. Click on DOWNLOAD button.
2. Follow the procedures on the screen.
3. Make sure that the mobile phone is not in the sleep mode (press the Start key)

Configure and check default values

1. Click on the CONFIGURE popup menu and then VERIFY (Verfab).
2. Follow the procedures on the screen.

Release the " POST CODE"

3. Click on the CONFIGURE popup menu and then on RELEASE
4. Follow the procedures on the screen.

Print identification labels

5. Click on the on LABEL popup menu and then PRINT LABEL .
6. Follow the procedures on the screen

- **Audio parameters setting**

7. Click on the AUDIO popup menu
8. Follow the procedures on the screen

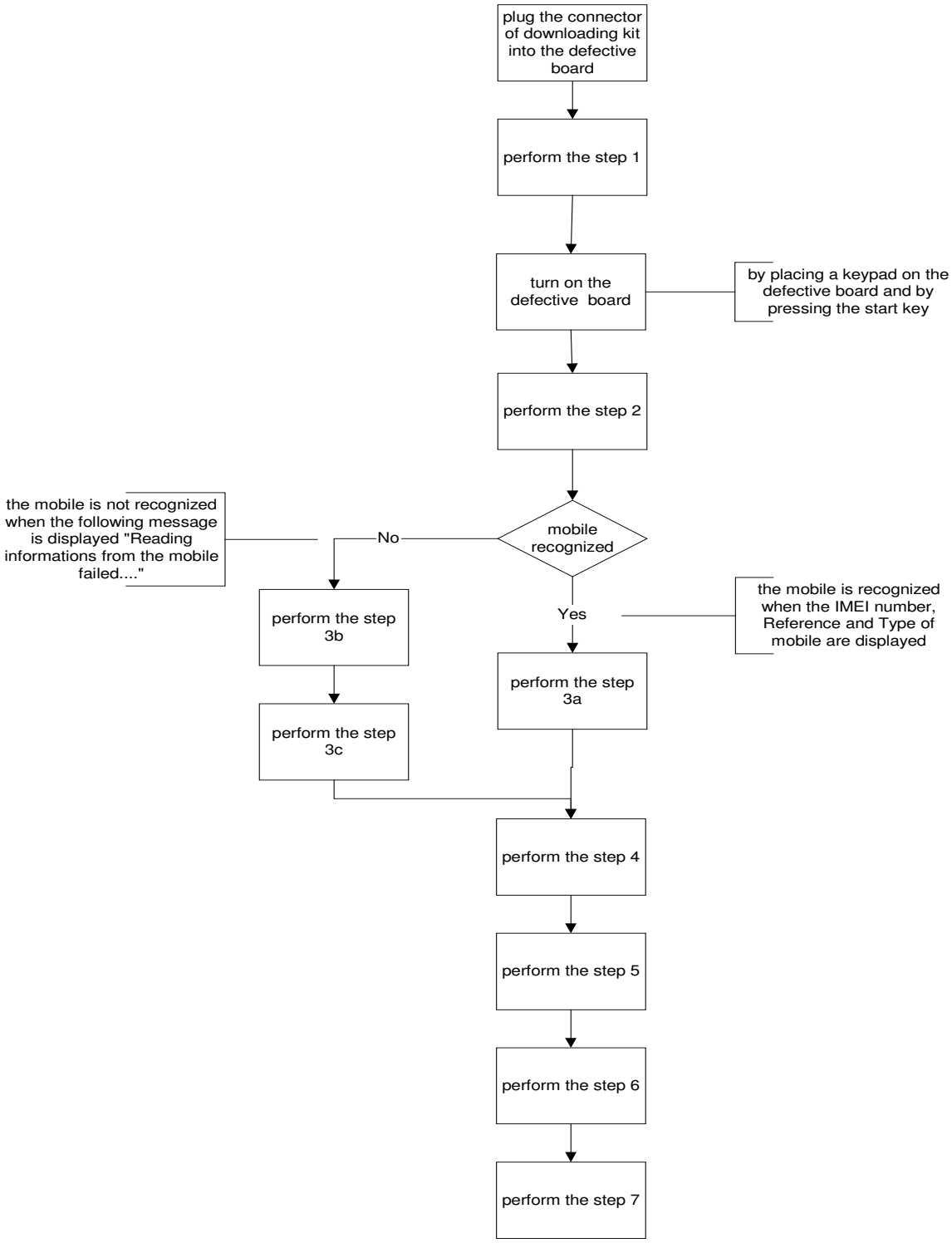
SMT SEQUENCE: Series of the different functions under SMT (sequence of tests)

1. Click on SMT SEQUENCE popup menu.
2. Select the different functions you want to carry out then click on LAUNCH button.

- **Electronic board exchange**

9. Click on the SWAP popup menu , then SWAP
10. Follow the procedures on the screen

SWAP : Electronic board Configuration

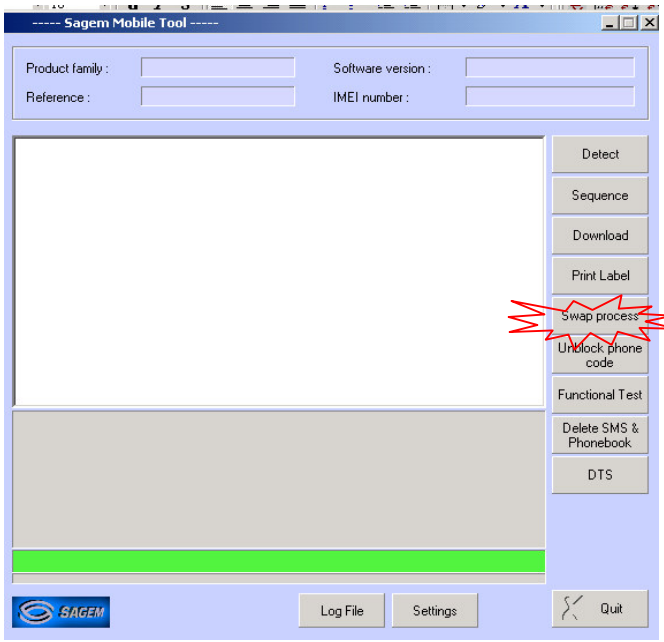


Step 1

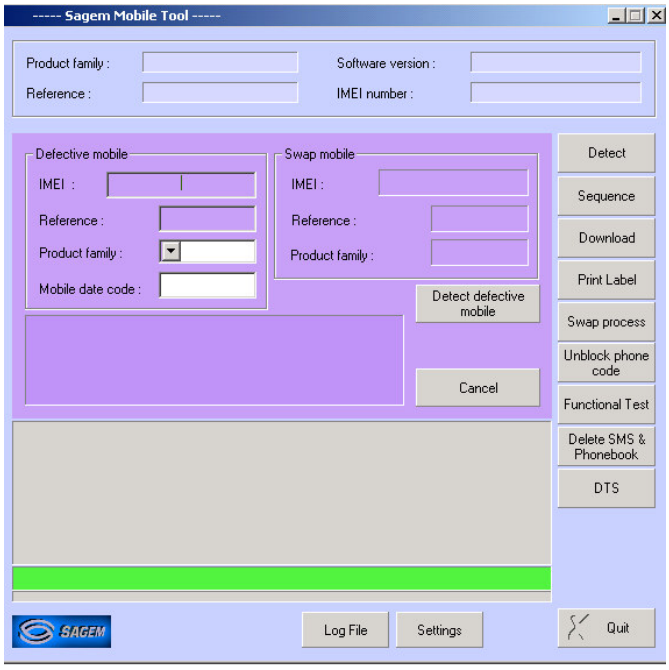
SMT Front page

Click on the « SWAP Process » menu.

Example

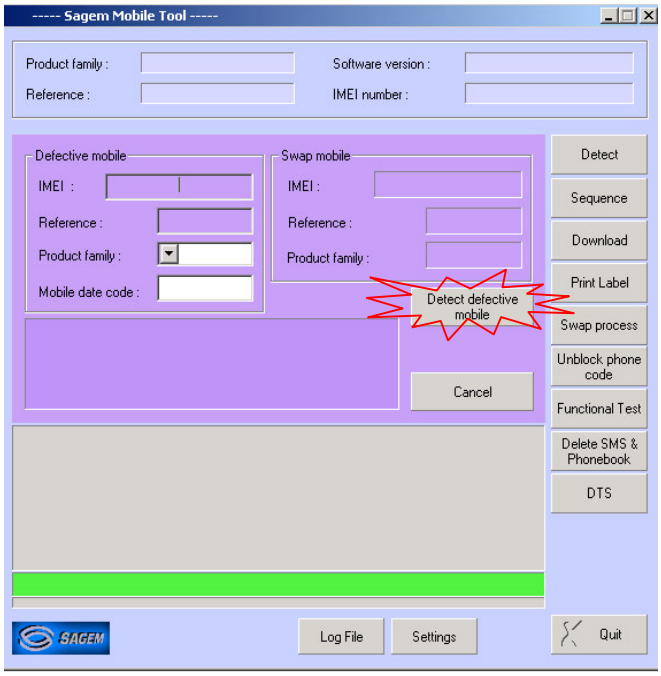


The following screen appears :



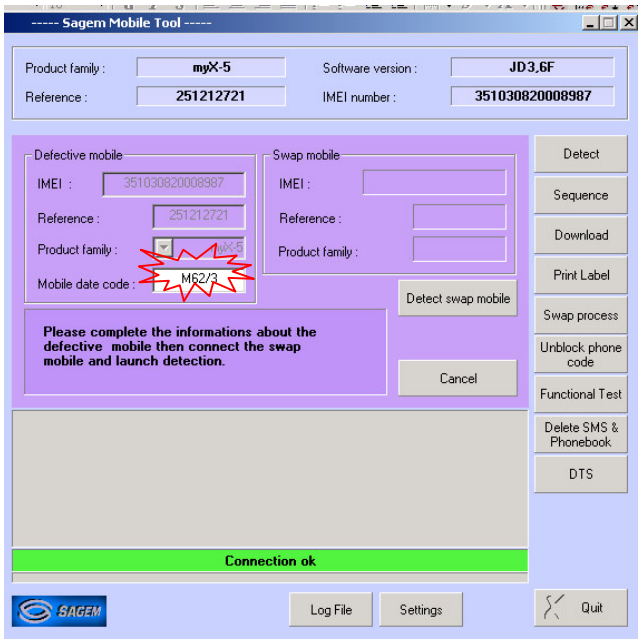
Step 2

Please click on « Detect defective mobile » button



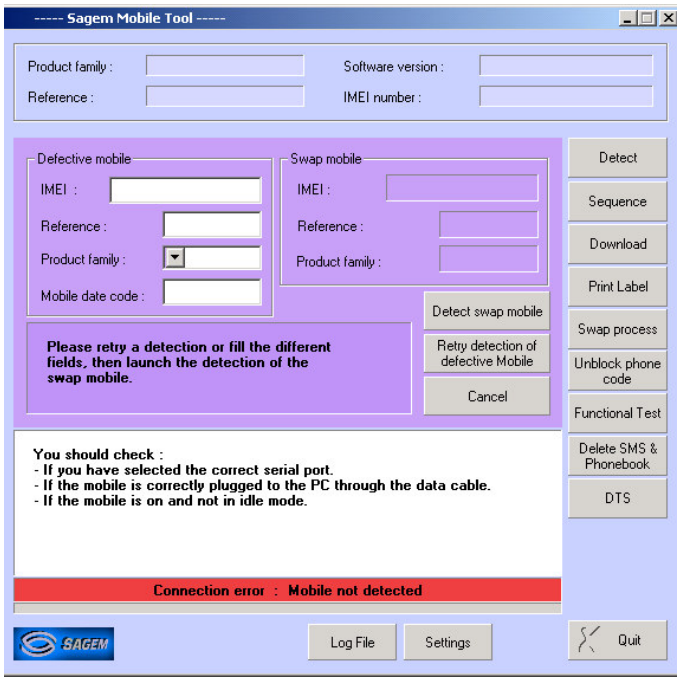
Step 3a

The following screen appears : the mobile is recognized. Then, enter the mobile date code



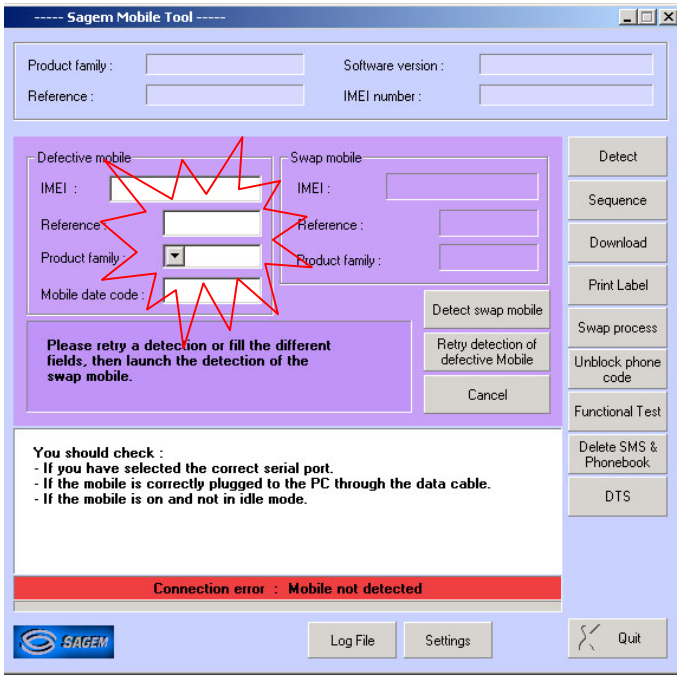
Step 3b

If this screen appears, the mobile is not recognized.



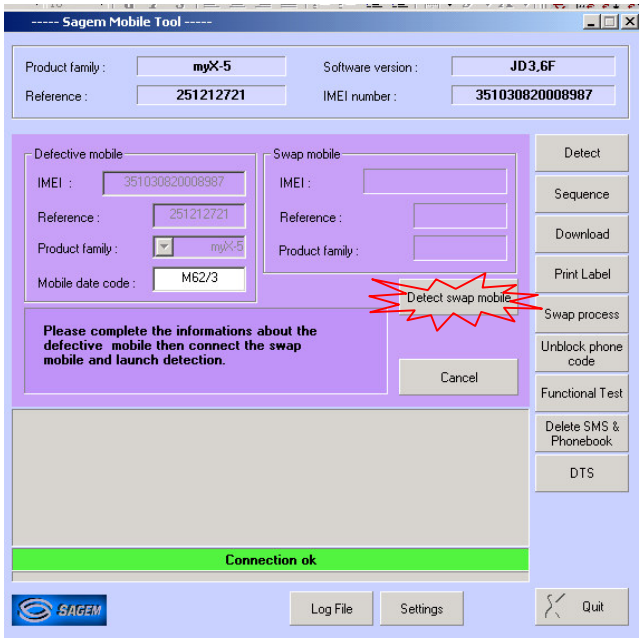
Step 3c

You must fill in the empty blanks requested according to the information written on the production label



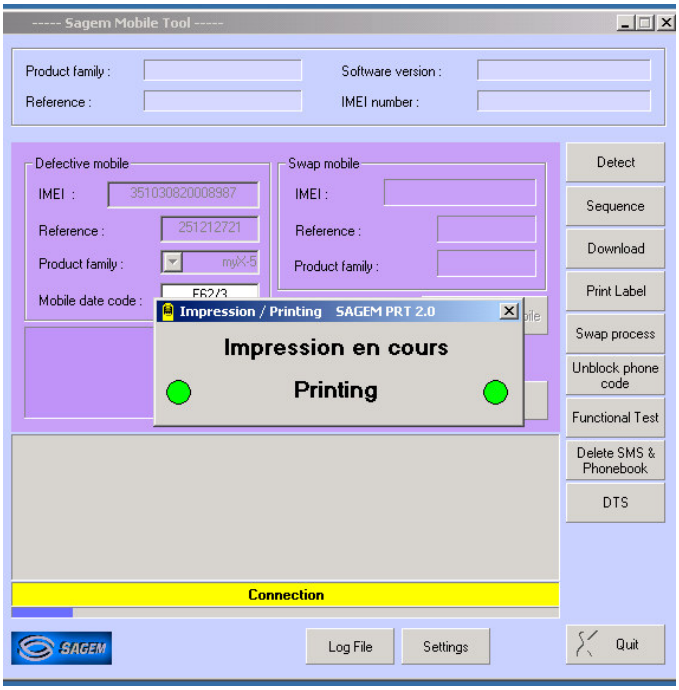
Step 4

Plug and switch on the new mobile, then push on the "Detect Swap mobile" button



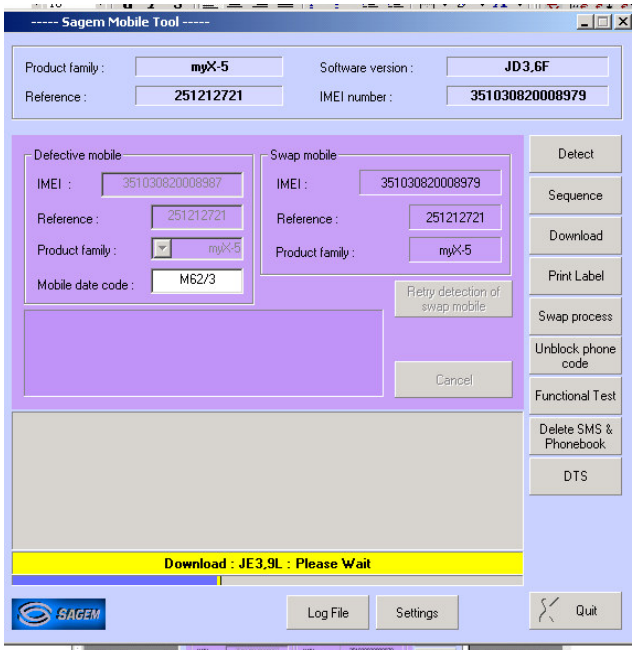
Step 5

After clicking on "OK", SMT prints the label which will be used to close the ESD bag of the defective board.



Step 6

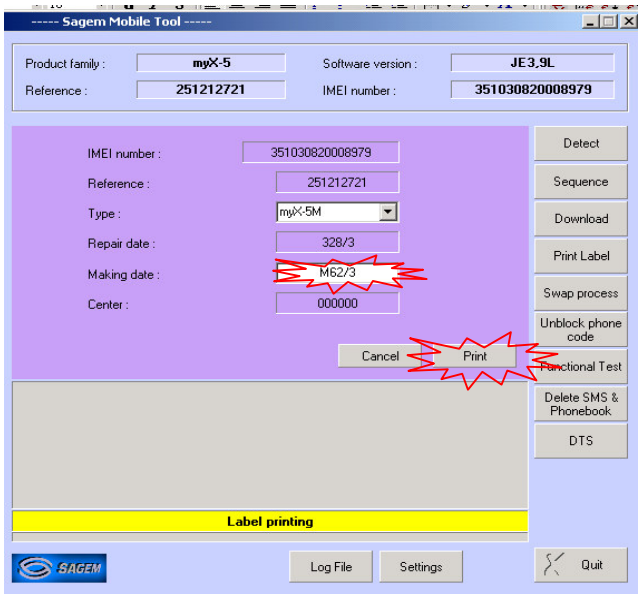
The downloading is starting if the mobile need to be updated



Etape 7

SMT opens the following screen to print the new label : please dial the "MAKING DATE" (Production date) written on the label of the defective mobile.

Then stick the new label on the functional mobile

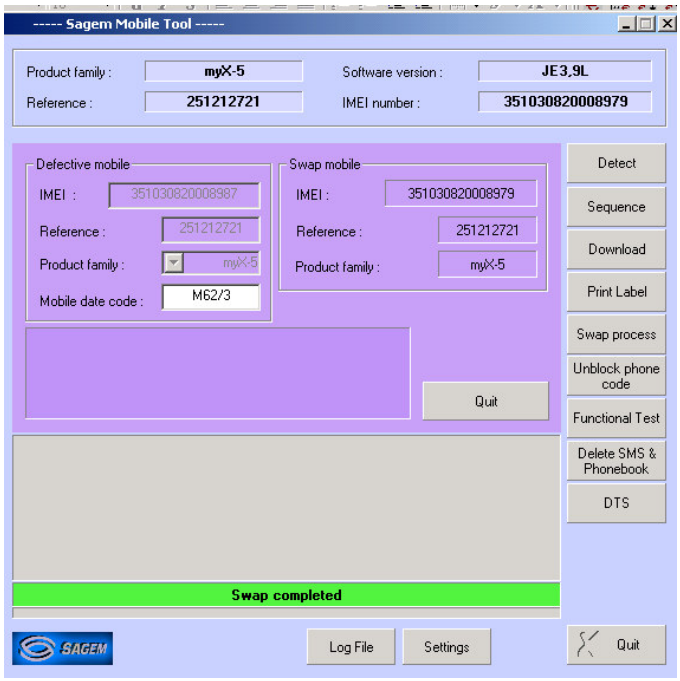


The swap board sequence is completed.

RESULTS

When old mobile is recognized, the audio parameters from the defective mobile have been sent to the functional mobile.

When old mobile is not recognized, the DEFAULTS audio parameters are sent to the functional mobile



Test description

This test checks the various battery chargers.

Test procedure

1. Check visually the charger connector.
2. Connect the charger to be tested to the mobile .
3. Access to the "HOTLINE" menu by pressing on the MENU key and then the * key.
4. Select the APPLICATION menu and the BATTERY STATUS to check that the battery voltage is increasing

Test description

This test allows to test the various batteries.

Required tools

- CADEX C7000 / C7200 / ASTRATEK
- Flex arm or myC2-2 adapters,
- a voltmeter (minimum impedance 20 kΩ per Volt in DC).

Test procedure

1. Measure the battery voltage between the V poles, **the voltage shown must be between 2.5V and 4.5V**.

- If the voltage < 4v ,load the battery for 30 minutes with a universal charger and follow the instructions below
- If the voltage > 4V Measure the internal resistance with a CADEX or ASTRATEK batteries testers
- **Notice:** Choose on the batteries tester ,the battery type (Li-ion) ,the nominal battery voltage (3,6V) and the battery capacity (550 mA)
- Read the result :If the internal resistance < 300 mOhms the battery is **OK**
- If the internal resistance = 300 mOhms the battery is **defective**

Access to the "HOTLINE" menu

Access to the "HOTLINE" menu is possible with a powered up mobile.

The "HOTLINE" menu is accessed by pressing on the MENU key and then the ***** key.

Enter the corresponding code (bold) to choose the menu to be viewed.

To go out the "HOTLINE" menu, press successively on the **C** key to return at the operational screen of the mobile.

Description of the myC2-2 "HOTLINE" menu

1 APPLICATION

- BATTERY : gives the value of the battery voltage.
- VERSION : reads the installed software version and the IMEI code.

2 PROM : Not used

3 SIM LOCK : accesses the "SIM LOCK" menu (password required).

4 TESTS LCD

- BLACK DISPLAY : displays the screen in black.
- WHITE DISPLAY.
- RED DISPLAY
- GREEN DISPLAY
- BLUE DISPLAY
- WHITE CHECKERBOARD
- PHOTO DISPLAY : functions on the screen to showing a picture.
- VIBRATE: tests the vibrating device.

NOTE : The "HOTLINE" menu is only accessible with a valid SIM card.

Test description

This test tests myC2-2 phones during a call.

Required tools

- A Wavetek
- A RF coupler
- A myC2-2 calibration tool
- –

Test procedure

1. Position the calibration tool first on the RF coupler to calibrate it
2. Position the myC2-2 module on the RF coupler
3. Switch the Wavetek on and press on "AUTOTEST".
4. Choose the corresponding program using the "UP" and "DOWN" arrows.
   Mobile :**myC2-2**
   Frequency range : **GSM, DCS or GSM/DCS**,
   Coupling type : **ANTENNA**.
5. Press on "ENTER" and wait until the end of the calibration.
6. Follow the instructions shown on the Wavetek.

CHAPTER 5 - MAINTENANCE PROCEDURES

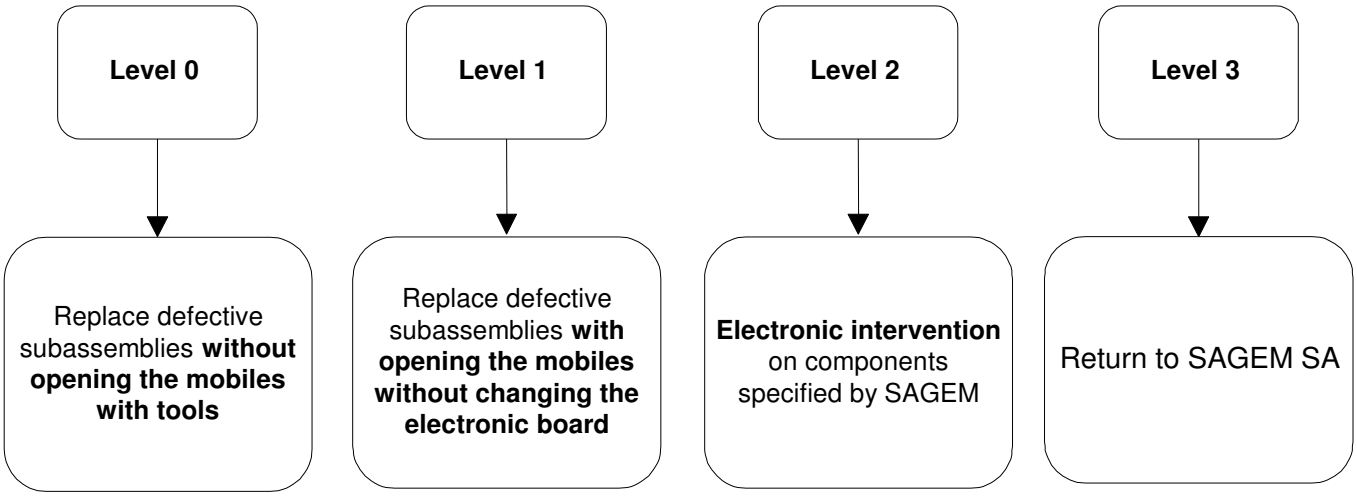
23. TECHNICAL WORK LEVELS

There are four technical work levels:

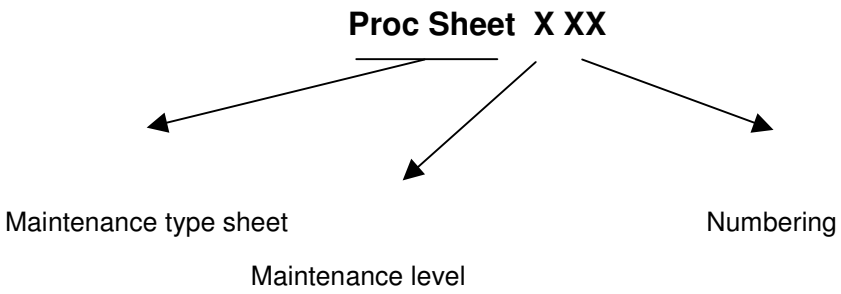
- Level 0,
- Level 1,
- Level 2,
- Level 3.

Each level represents a maintenance degree that depends on which elements are to be removed.

Note: Presence or use on the radiotelephone of non genuine element (material and software) leads automatically the exclusion from SAGEM warranty



Maintenance procedure sheets are coded as follows :



5.2 SHORT LOOP PROCESS

1. Initialisation

From the communication by Sagem and the reception of the concerned products by the short loop process, the Repair Centre shall comply with the above procedure. The application of the Short loop process will end when received the authorisation of repairing given by Sagem.

2. Administrative checks to be done by the Repair Centre

- Authorisation from Sagem for treating the reference received (Part number)

- Process to be applied : short loop process or normal process (DTS, Normal, etc…). The Repair Centre shall check if the product received has to be treated according to the short loop process.

- Controls on the warranty conditions and DOA conditions (if the Repair Centre is authorised) communicated by Sagem.

3. Tests and controls :

- Checks if there are no external shocks or oxidation marks (the covers shall be dismantled in case of exchangeable covers)

- Checks and confirmation of the defect (real call with SIM, functional test keypad , display, vibrating device, etc…)

- Check the concordance between the defect declared by the end-user and the defect observed

- Call back of the end-user or dealer (as far as possible) either in case of misunderstanding of the defect declared by the end-user or in case of the non observation of the defect. (see the appendix “Additional information about the No Fault Found –NFF-> at the end of this document allowing according to the case to understand the return of the product)

If any doubts occurred concerning out of warranty products received, the Repair Centre shall send to Sagem Montauban (with knowledge to the Area Manager and Support Engineer) the photo of the defect.

N.B :

- The handsets shall not be dismantled (by using screwdrivers) except previous request from Sagem.
- The Repair Centre will not make any Repair (such as spare parts exchange or software upgrade) except previous communication of Sagem. The exchanges of handsets or accessories are the only intervention authorised.

4. Exchange by the Repair Centre

- The Repair Centre will use the products delivered for swap to the Repair Centre for exchanging the products to the end-users (except particular process defined by Sagem).

- The under- warranty handsets and accessories received shall be exchanged to the end-user.

- The under- warranty handsets and accessories declared No Fault Found (NFF) shall be exchanged to the end-users except previous communication of Sagem.

- The Out of warranty handsets and accessories (oxidation, shocks, …) will be repaired by the Repair Centre after acceptation by the customer of an estimate according to the Sagem out of warranty repair prices communicated.

- The under- warranty and out of warranty handsets shall be sent to Sagem Montauban.

- In the frame of the Short loop process, there is no level 1 (L1) intervention

5. Reports

An exchange of an handset and its accessories shall be codified Level 3 (L3)

An accessory exchange shall be codified Level 0 (L0).

The Repair Centre shall capture all the information required for issuing and sending the Repair Reports and Status reports according to the Contractual frequency defined. The Reports shall includes the products treated by the Repair Centre under- warranty or out of warranty.

6. Procedure

From the beginning date of the Short loop process application and **minimum each week, the Repair Centre shall ship the products (handsets and accessories) to Sagem Montauban.**

6.1. Handsets :

- MRA Procedure for the after-Sales products (one MRA number for the products concerned by the short loop).

- MRA Procedure for DOA products (one MRA DOA number for the products concerned by the short loop) if the Repair Centre is authorised to treat the DOA products.

The MRA request shall be sent to Sagem Montauban (with knowledge to the Area Manager and Support Engineer).

The shipment of products to Sagem Montauban shall comply with the MRA procedure. Furthermore each products shall be sent with the Return Product Sheet filled in indicating the defect declared by the end-user and the defect observed by the Repair Centre (Sagem Defect codes).

The NFF products sent to Sagem Montauban shall be identified by using separate package. Furthermore this products shall be sent with the complete description of the defect declared by the end-user (not codified).

The accessories received by the Repair Centre shall be sent to Sagem Montauban sent back attached with the handset (not connected to the handset).

6.2. Accessories :

For the accessories received without the handsets, the procedure is the following:

Accessories return procedure to Sagem Montauban to be used. The Repair Centre shall indicate on the parcel Accessories + model (ex : myC2-2) for the accessories received in the Repair Centre without the handsets.

7. Sagem Montauban

Sagem Montauban will ship back to the Repair Centre the same quantity of handsets and accessories as the quantity received.

8 Additional information about the no fault found

In any case: Ask to the end-user the frequency of the defect and the circumstances of its apparition (during an incoming or out-going call, while playing, while downloading, etc.). Try to answer the questions: Where? When? How?

- If the customer complains about a **"Power supply / charging"** failure : (shutting down of the mobile, problem of booting, etc.);
  - During which operation ? In which circumstances ?
  - What is the state of the battery and the charger before shipment to the repair centre ?
  - If the mobile shuts down by itself, must he enter his code pin, adjust the date and the hour when rebooting the phone?

- If the customer complains about a communication problem:
  - What are his residence zone and the reception level of the mobile (Number of receipt bar);
  - What is the state of the battery when the defect appears?
  - In case of loss of communication :
    - With or without total extinction of the mobile?
    - Does the loss of communication occur always in the same place and with the same person?
    - Does the loss of communication occur while browsing in the menus, during the communication, or during playing or downloading?

- If the customer complains about a problem of blockage of key of the keyboard:
  - In which circumstances does the problem occur?
  - Did he activate the keypad locking ?
  - Did he change or remove the upper cover ?
  - Which are the non functioning keys ?

5.3 MAINTENANCE TOOLS

The following tools are necessary to carry out maintenance operations :

– Electrical screwdrivers with tightening torque settings **(0.25 NM)**.

– Metal dome jig.

– Plastic Tweezers.

– Gloves

– ESD protection strap

– Soldering iron

– Solder wick

– Cross shaped screwdriver .00x75

– Flat screwdriver 2x75

LEVEL 0 MAINTENANCE

4.4 Tools :

4.5 - Not applicable

4.6 Preliminary operation :

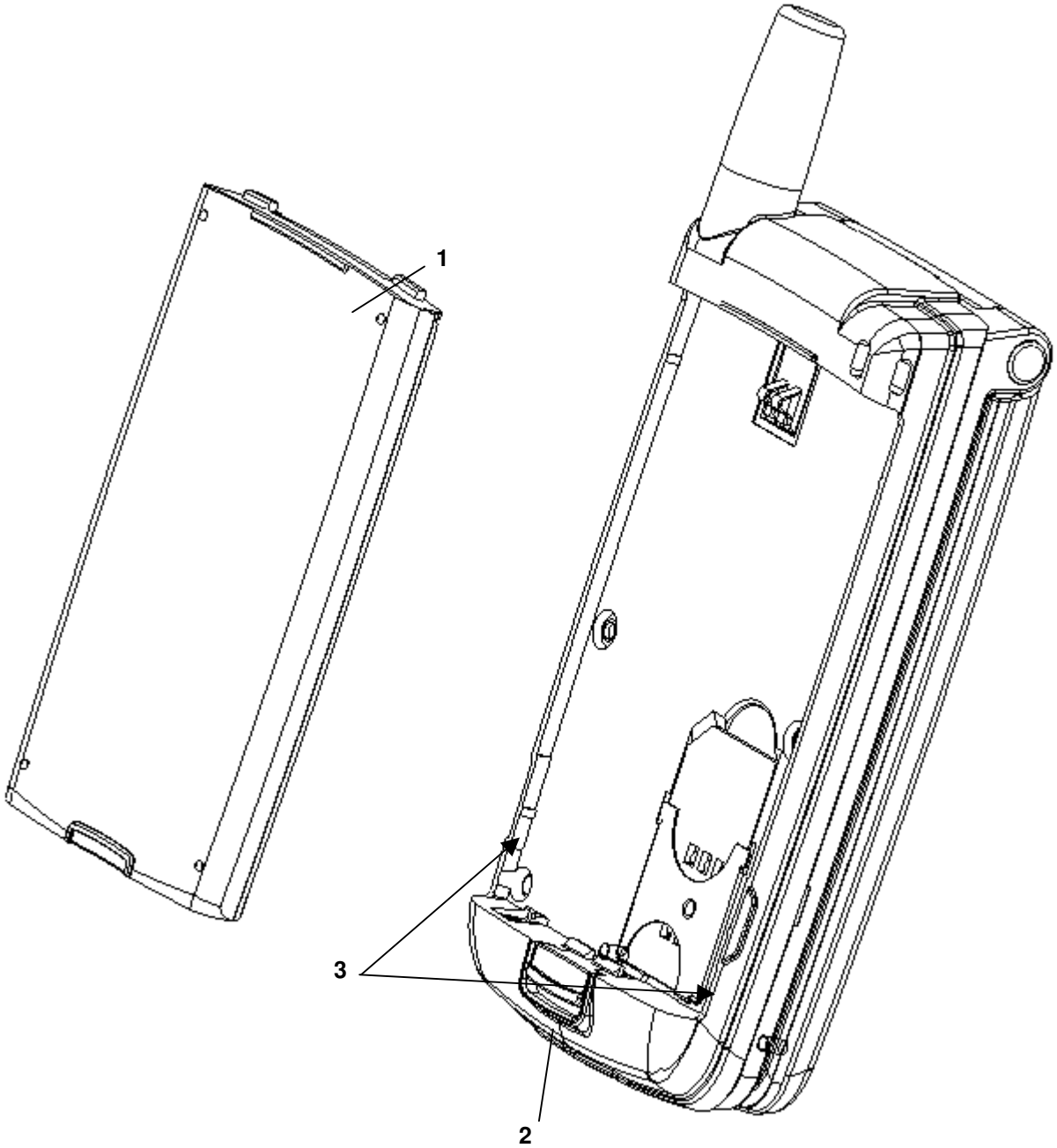
4.7 - Switch off the mobile phone

4.8 Removal procedure :

1. Unlock the battery pack (1) , by pushing the lock button (2) upwards and extract it by mean of two nicks (3).
2. Remove the battery (1).

4.9 Placement procedure :

1. Replace the battery pack (1) by engaging top hooks first .
2. Push button (2) upwards and push the battery pack (1) into locked position


1
3
2

LEVEL 1 MAINTENANCE

4.10 ***Tools :***

- Cross shaped screwdriver
- A 0.6mm torx screwdriver

4.11 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).

4.12 Removal procedure :

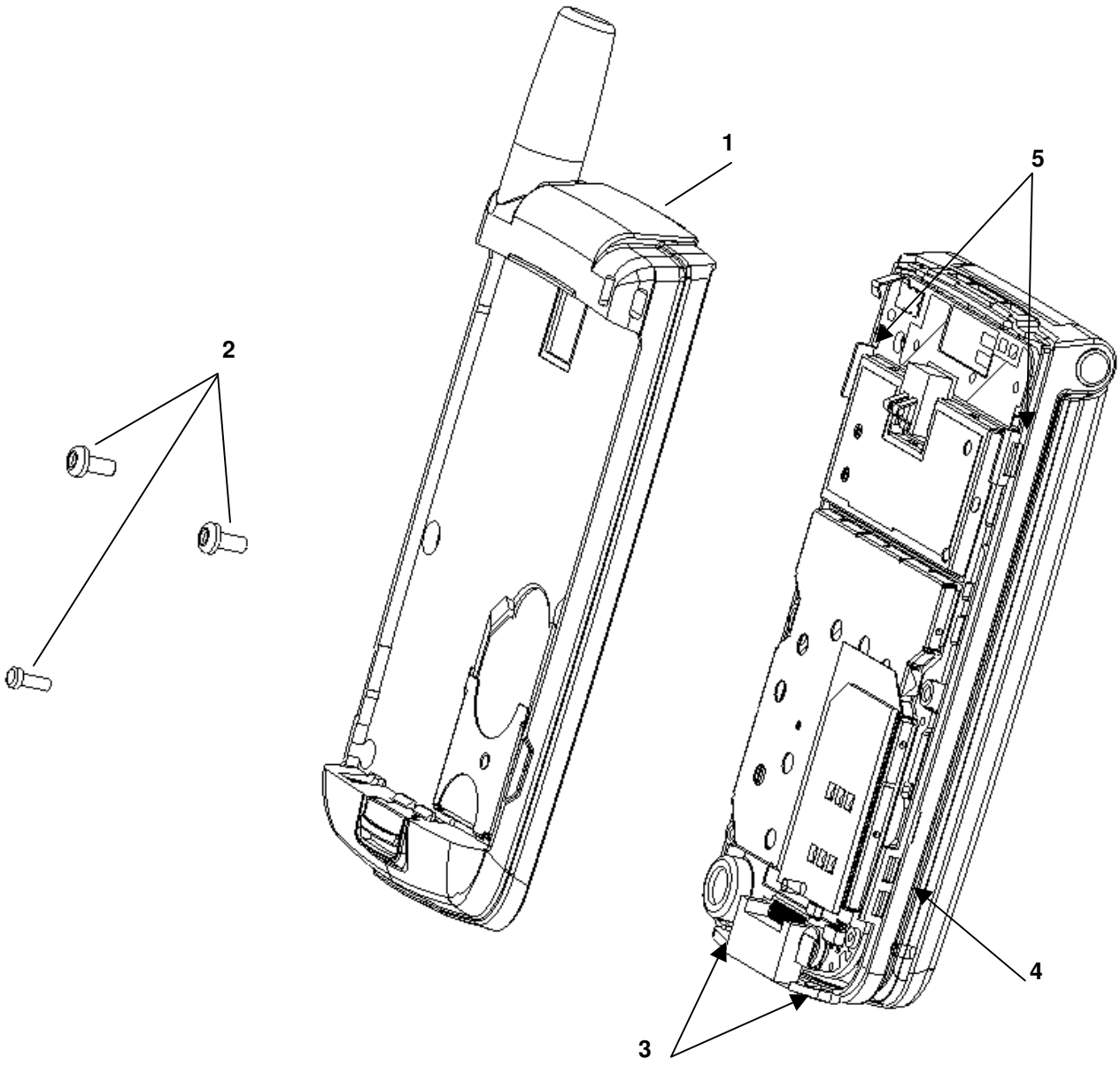
1. On the back cover (1), unscrew the three attachment screws (2) .
2. Lift delicately the back cover (1) up by pressing on the lower pins (3) then, insert a flat screwdriver into the nicks (4) an press inside the back cover (1) while keeping separated the two covers to release the stop pins (5)
3. Remove rear cover (1)

4.13 Placement procedure :

1. Replace the back cover (1) by engaging top hooks first .
2. Push down back of rear cover and screw the three attachment screws (2) with **0,25 N.m** torque**.**

4.14 Further operations :

1. Replace the battery pack (Proc sheet 0 01)


1
2
3
4
5

4.15 ***Tools :***

- Cross shaped screwdriver
- A 0.6mm torx screwdriver

4.16 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).

4.17 Removal procedure :

1. On the back cover, press the two antenna stop pins (3) to liberate it from the back cover (2)
2. Remove the antenna (1)

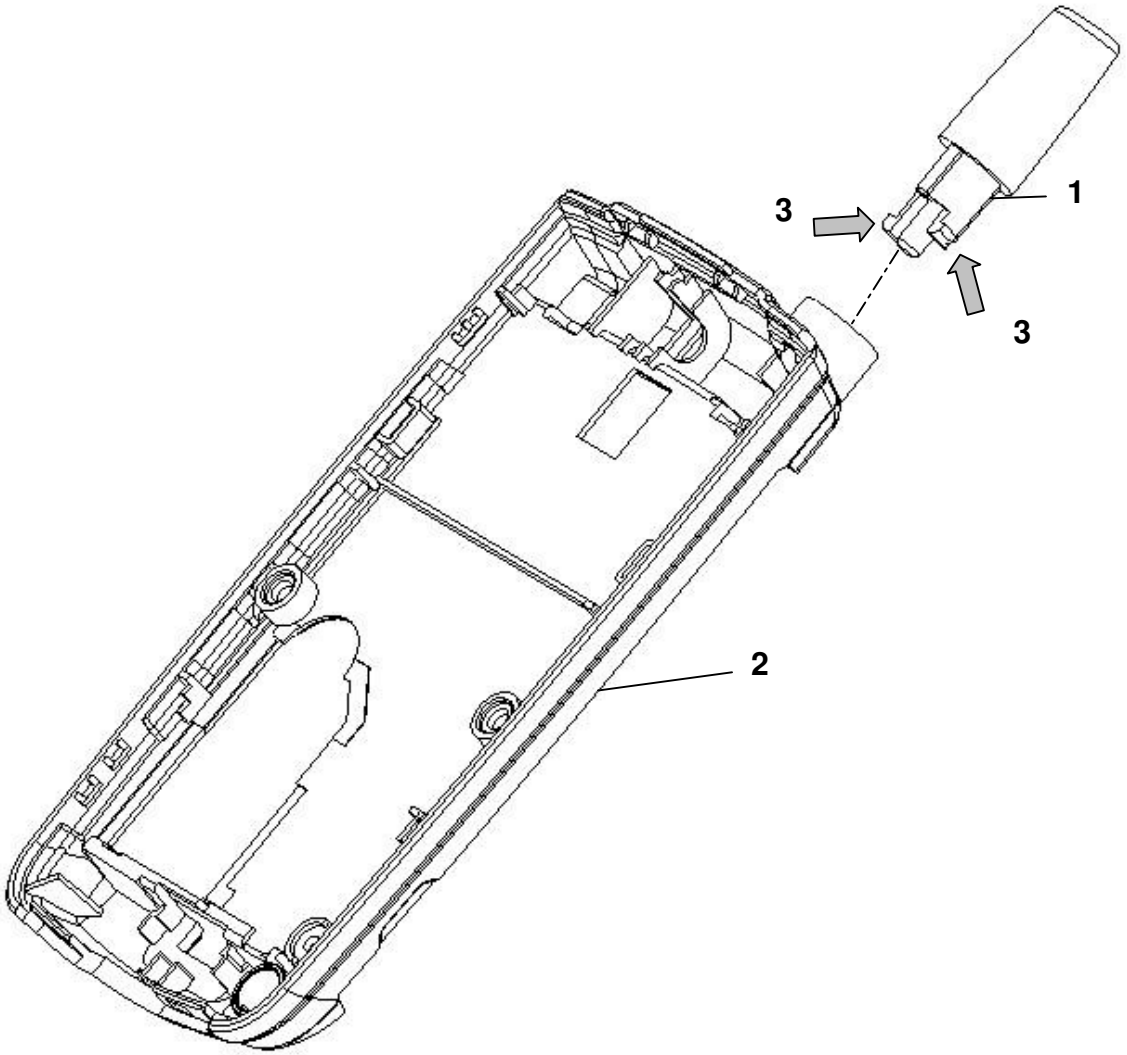
4.18 NOTA: This operation require to change systematically the antenna.

4.19 Placement procedure :

1. Position the antenna (1) in its housing by pressing the antenna stop pins (3)
2. Screw the attachment screw (2) with **0,25 N.m** torque.

4.20 Further operations :

1. Replace the back cover (Proc sheet 1 01).
2. Replace the battery pack (Proc sheet 0 01).


3
1
3
2

4.21 ***Tools :***

- Cross shaped screwdriver
- A 0.6mm torx screwdriver

4.22 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).

4.23 Removal procedure :

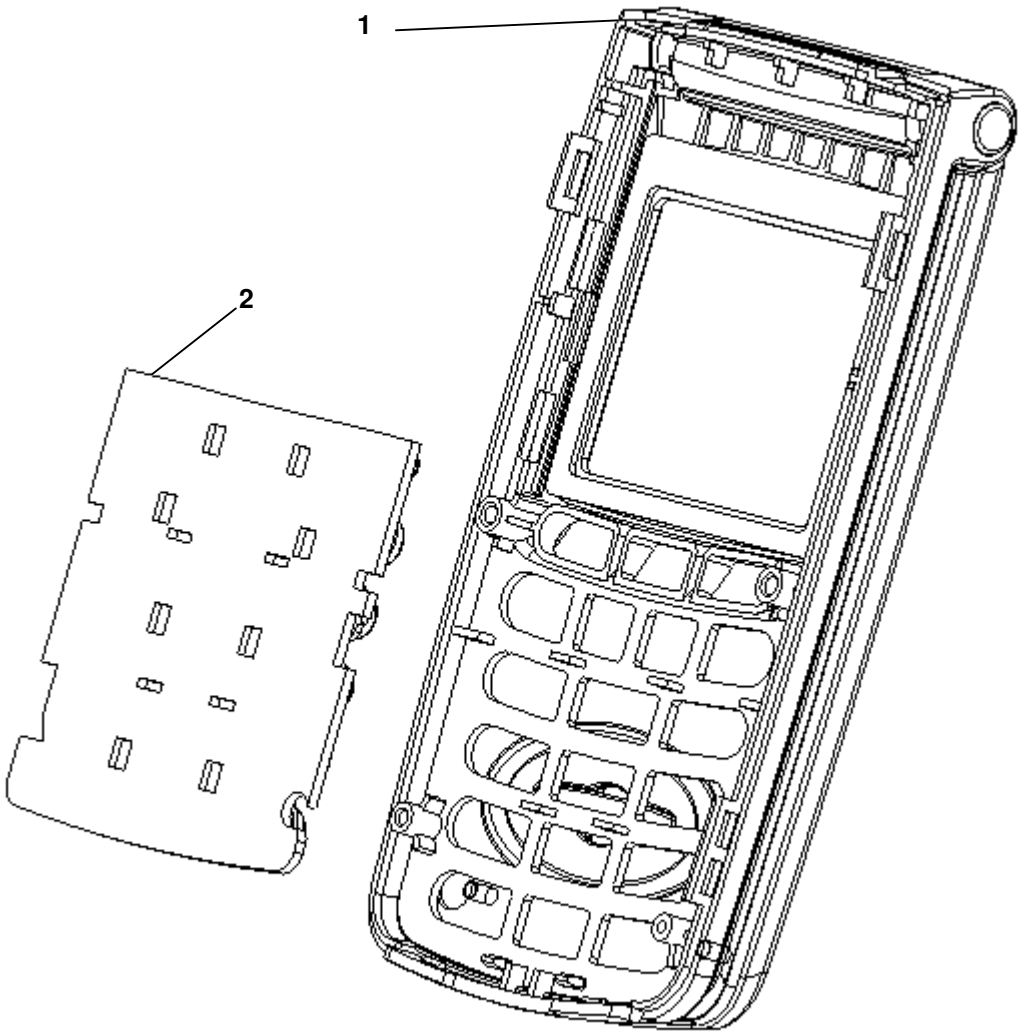
1. Lift equipped electronic board up to liberate it of the front cover (1)
2. Remove the keypad (2) from the front cover (1).

4.24 Placement procedure:

1. Clean the keypad (2) with compressed air.
2. Place the keypad (2) in its housing
3. Place the equipped electronic board in its housing

4.25 Further operations:

1. Replace the back cover (Proc sheet 1 01).
2. Replace the battery pack (Proc sheet 0 01).


1
2

4.26 Tools :

-- A 0.6mm torx screwdriver
- Cross shaped screwdriver

- Gloves
- Metal dome Jig
  Tweezers

4.27 Preliminary operation

This procedure must be performed by a technician with gloves.

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).

4.28 Removal procedure :

1. Turn the electronic board (1) round to liberate it of the front cover
2. Unstick the ground tape on the display
3. Turn the display round by pressing on the four display stop pins to liberate it from the electronic board (1)
4. Remove the metal dome (2) of the electronic board

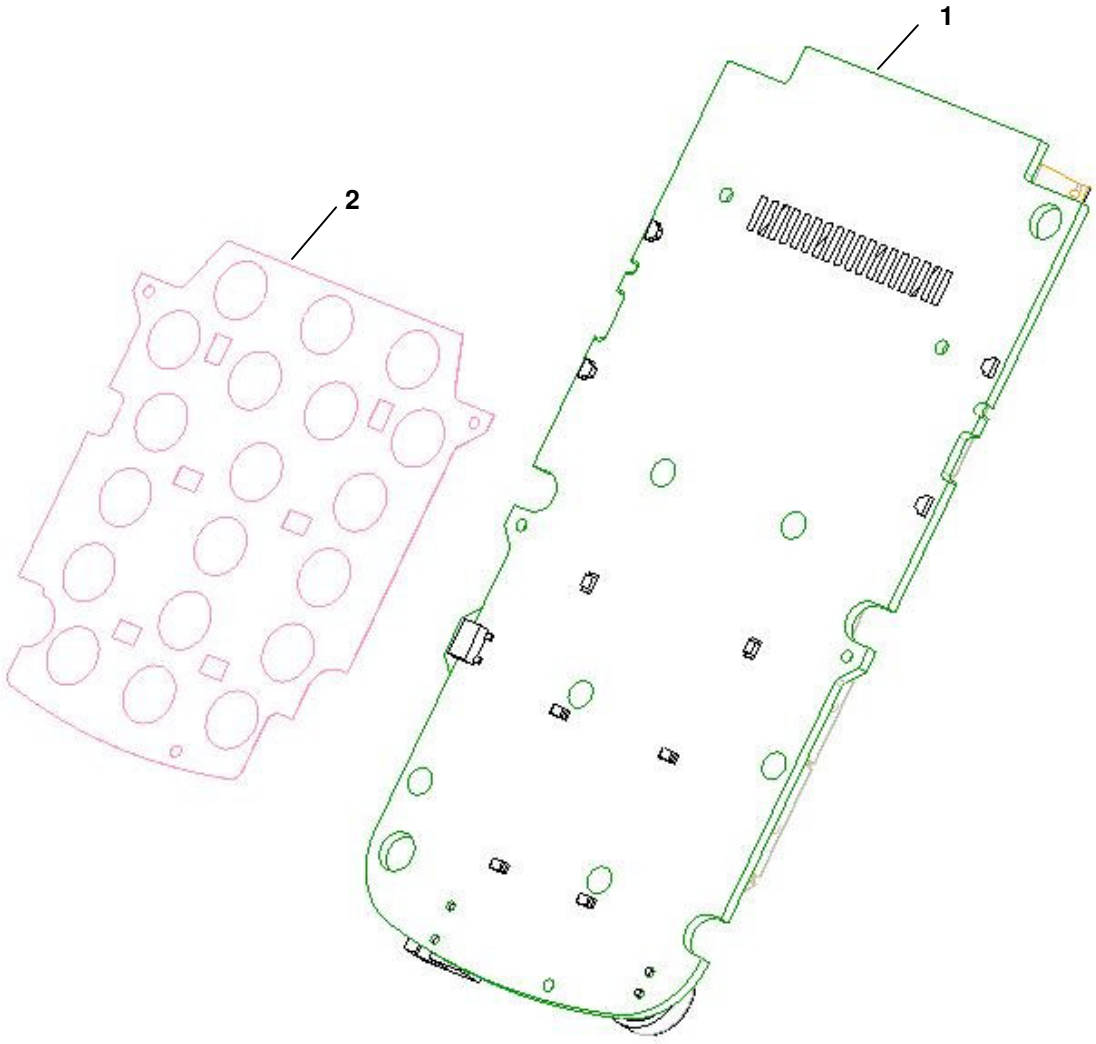
4.29 Placement procedure :

Warning : The metal dome is not reusable, it must be necessarily replaced by a new metal dome, unless the board is swapped and sent as level 3

1. Replace the new metal dome (2) on the equipped electronic board (1), using the metal dome jig.
2. Position the display in tis housing
3. Place the equipped electronic board (1) in its housing

4.30 Further operations :

1. Replace the back cover (Proc sheet 1 01).
2. Replace the battery pack (Proc sheet 0 01).
3. Carry out the radio test (Test Sheet 04).


1
2

4.31 ***Tools :***

- A 0.6mm torx screwdriver
- Cross shaped screwdriver

4.32 Preliminary operation :

1. Remove the battery (Proc sheet 0 01).
2. Remove the SIM card .
3. Remove the back cover (Proc sheet 1 01).

4.33 Removal procedure :

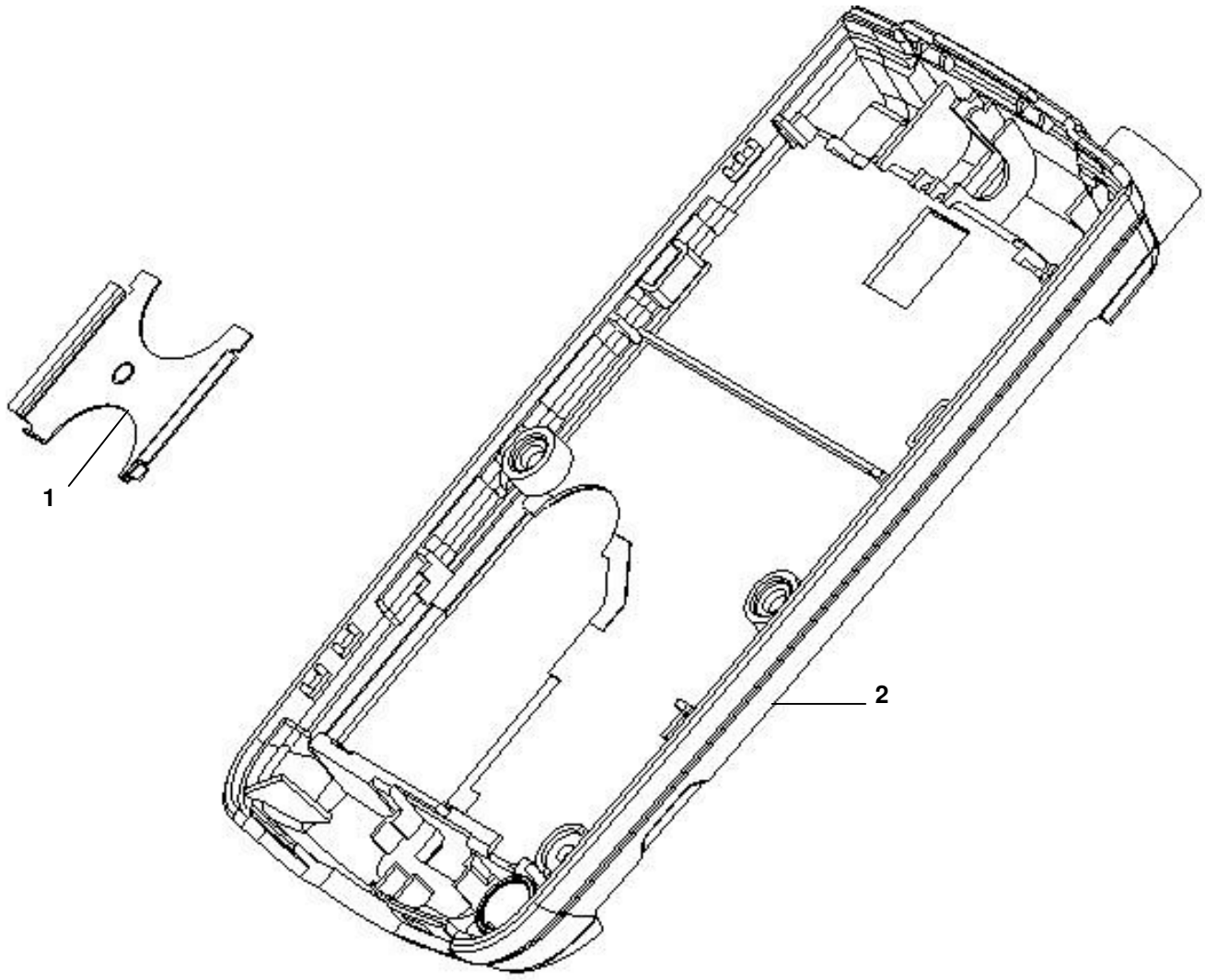
1. On the back cover (2), looked at from the battery side, press firmly the SIM locker (1) until its extraction .
2. Remove the SIM cover (1).

4.34 Placement procedure :

1. From the internal view of the back cover, place the SIM cover (1) in position in its housing.
2. Click fit the SIM cover (1) on the plate.

4.35 Further operations :

1. Replace the back cover (Proc sheet 1 01).
2. Replace the battery pack (Proc sheet 0 01).
3. Carry out the radio test (Test Sheet 04).


1
2

4.36 Tools :

- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Tweezers

4.37 Preliminary operation

1. Remove the battery (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).

4.38 Removal procedure :

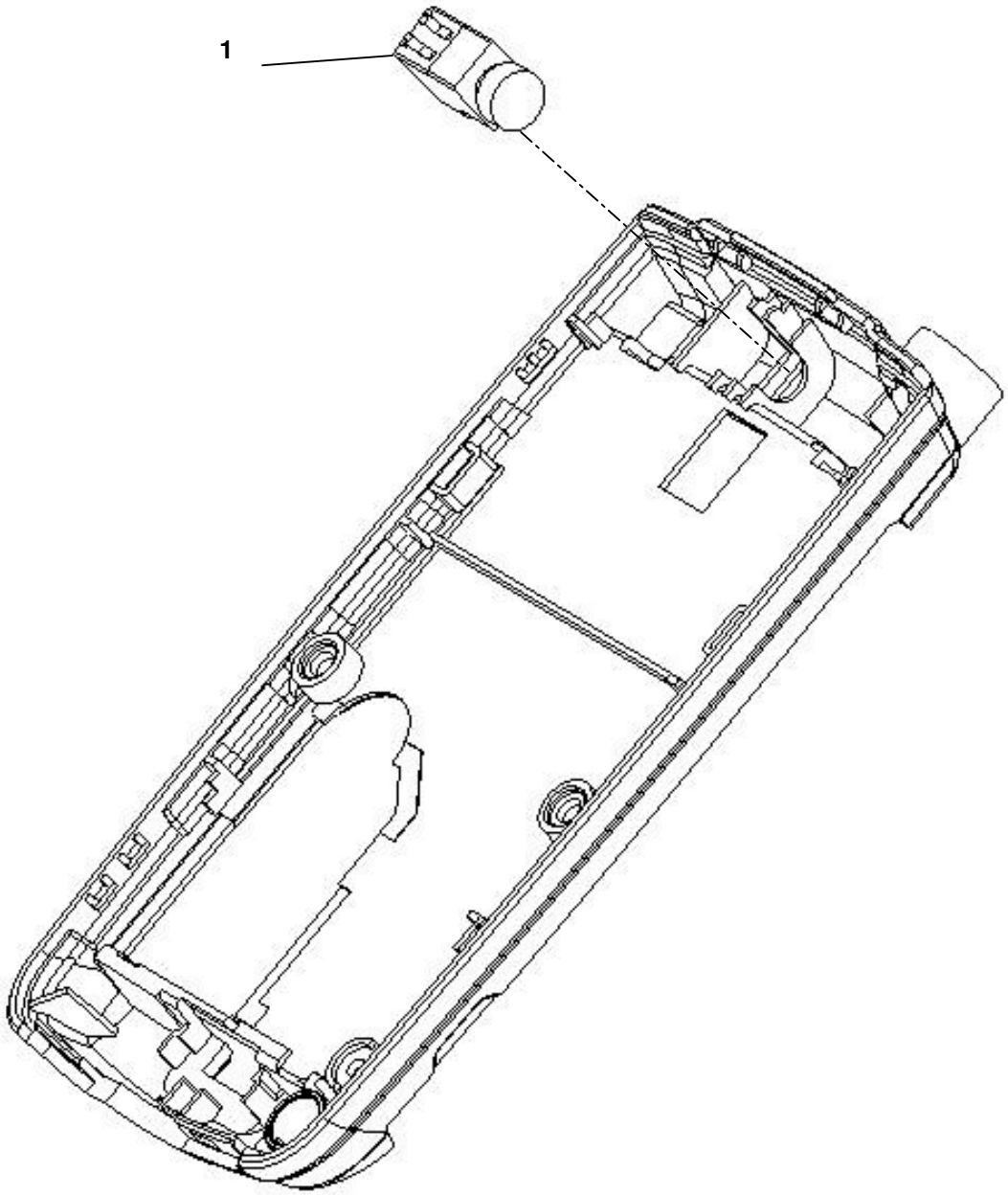
1. Remove, with the tweezers, the vibrating device (1) in its housing .

4.39 Placement procedure :

1. Put the vibrating device in its housing, respecting the foolproof device

4.40 Further operations :

1. Replace the back cover (Proc sheet 1 01).
2. Replace the battery pack (Proc sheet 0 01).
3. Carry out the radio test (Test Sheet 04).


1

4.41 ***Tools :***

- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Flat screwdriver

4.42 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01)

4.43 Removal procedure :

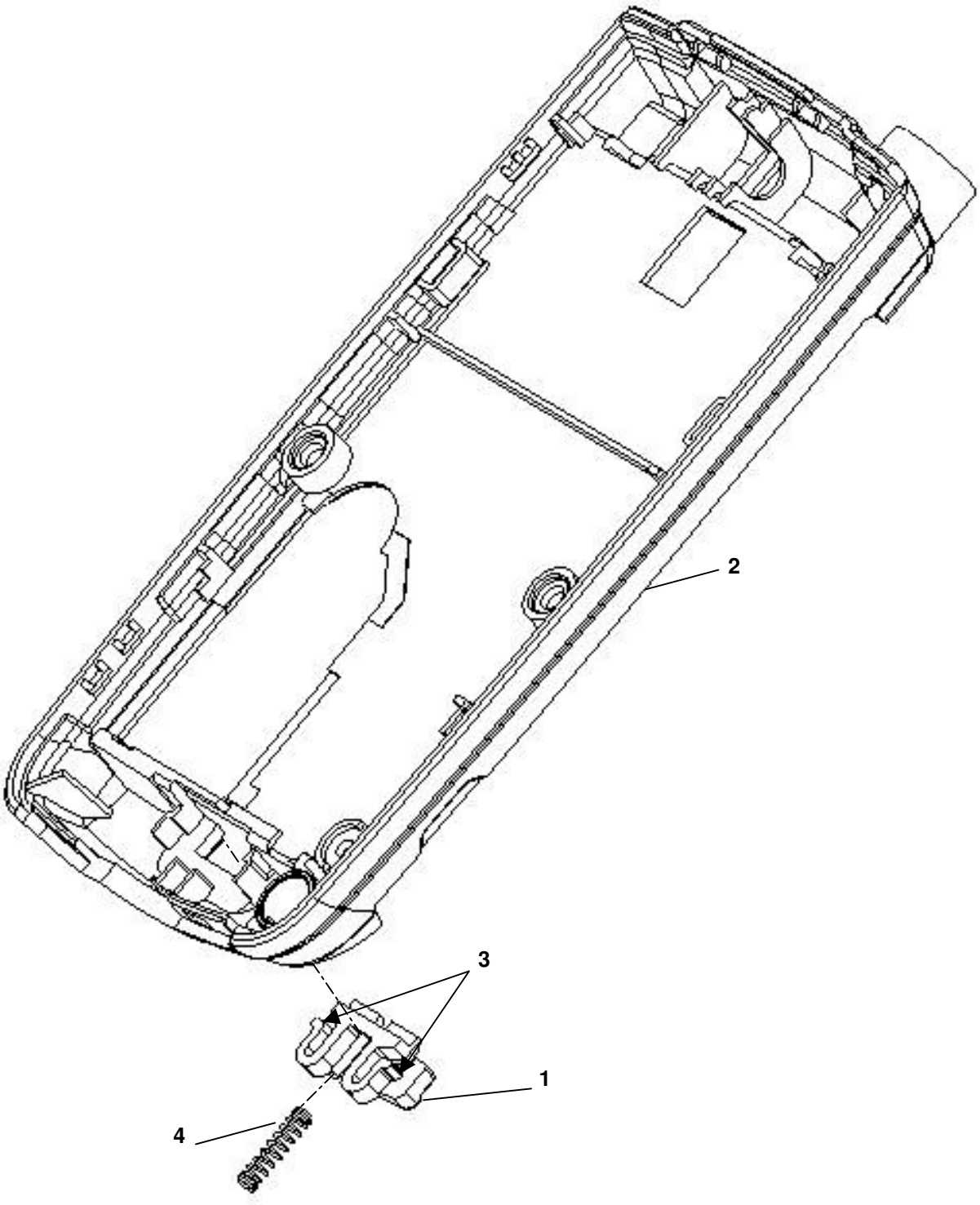
1. Press on the battery locker stop pins (3) and slide the battery locker (1) to release it from the back cover (2)
2. Remove the spring (4) from the battery locker (1)
3. Remove the battery locker (1)

4.44 Placement procedure :

1. Replace the spring (4) on the battery locker (1)
2. Slide the battery locker (1) in its housing into locked position

4.45 Further operations :

1. Replace the back cover (Proc sheet 1 01)
2. Replace the battery pack (Proc sheet 0 01)


2
3
1
4

LEVEL 2 MAINTENANCE

4.46 ***Tools :***

- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Soldering iron

4.47 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).

4.48 Removal procedure :

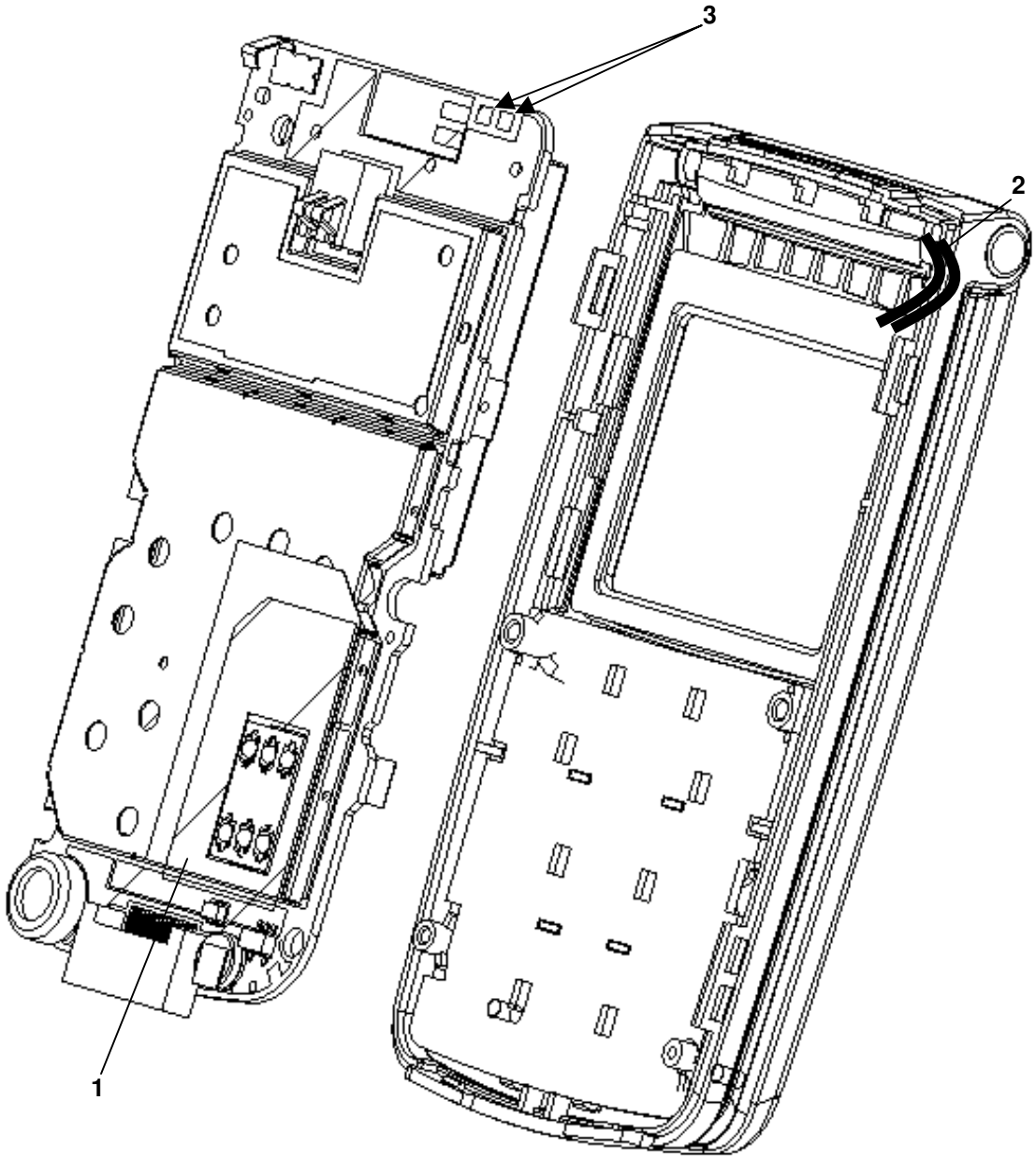
1. Unsolder the loudspeaker wires (2) on the electronic board (1)
2. Remove the electronic board (1)

4.49 Placement procedure :

1. Replace the electronic board (1) in its housing
2. Flux the place of the loudspeaker wires (3) and solder it on the electronic board (1),

4.50 Further operations :

1. Remove the back cover (Proc sheet 1 01).
2. Remove the battery pack (Proc sheet 0 01).


3
2
1

4.51 ***Tools :***

- Tweezers
- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Soldering iron

4.52 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).
3. Remove the electronic board (Proc sheet 2 01).

4.53 Removal procedure :

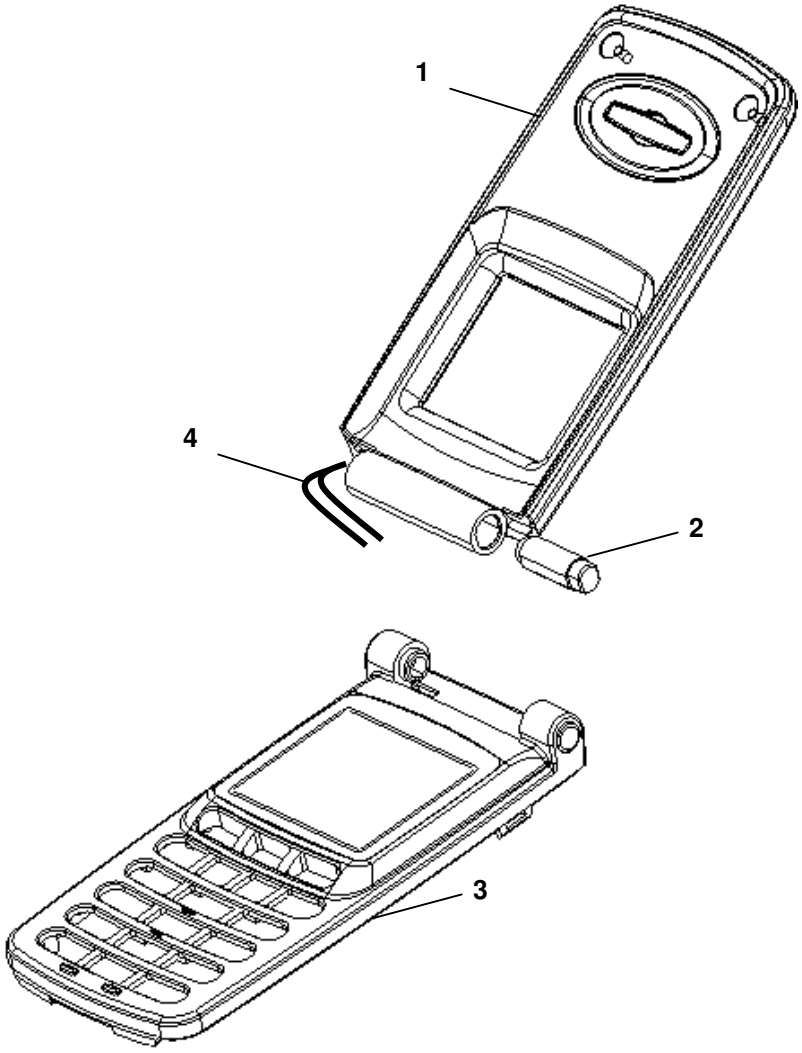
1. Press the hinge (2) inside the front cover by means of (curved) tweezers to release the equipped flip (1)
2. Remove the front cover (3)

4.54 Placement procedure :

1. Position the equipped flip (1) in its housing by inserting the loudspeaker wires (4) into the front cover (3)
2. Press firmly the hinge (2) with a flat screwdriver, to fix the equipped flip (1) on the front cover

4.55 Further operations :

1. Replace the electronic board (Proc sheet 2 01).
2. Replace the back cover (Proc sheet 1 01).
3. Replace the battery pack (Proc sheet 0 01).


1
4
2
3

4.56 ***Tools :***

- Tweezers
- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Soldering iron
- Flat screwdriver

4.57 Preliminary operation

1. Remove the battery pack (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).
3. Remove the electronic board (Proc sheet 2 01).

4.58 Removal procedure :

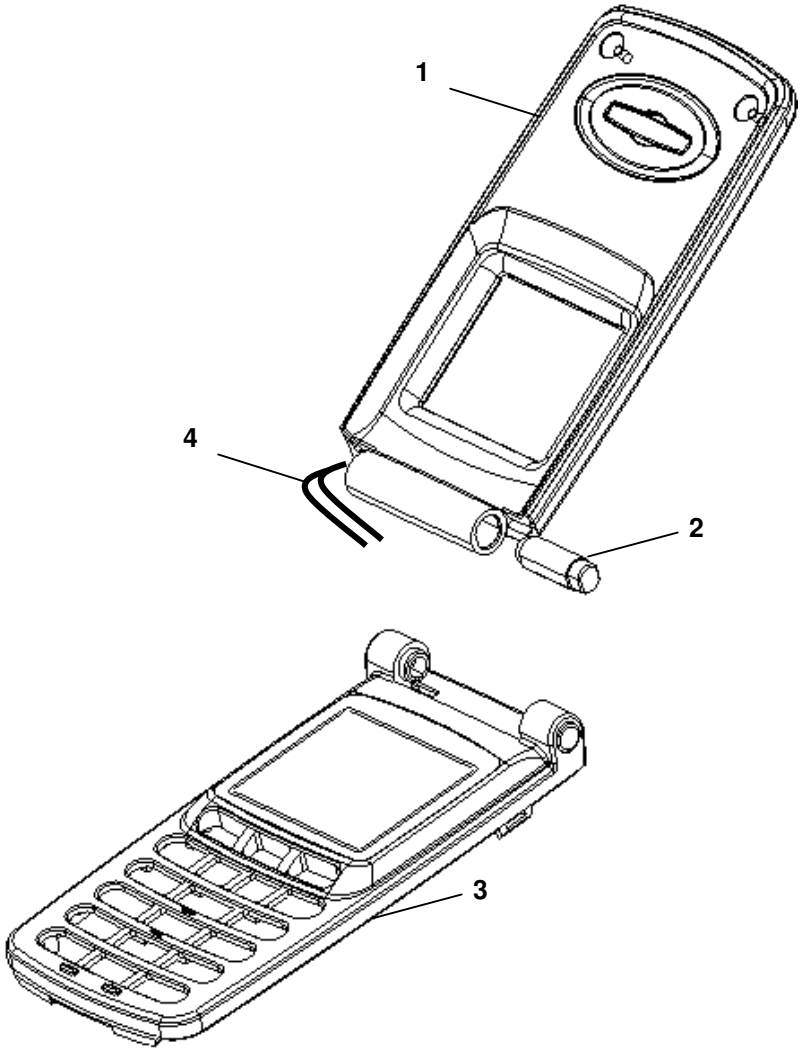
1. Press the hinge (2) inside the front cover (3) by means of (curved) tweezers to release the equipped flip (1)
2. Remove the equipped flip (1)

4.59 Placement procedure :

1. Position the equipped flip (1) in its housing by inserting the loudspeaker wires (4) into the front cover
2. Press firmly the hinge (2) with a flat screwdriver, to fix the equipped flip (1) on the front cover (3)

4.60 Further operations :

1. Replace the electronic board (Proc sheet 2 01).
2. Remove the back cover (Proc sheet 1 01).
3. Remove the battery pack (Proc sheet 0 01).


1
4
2
3

4.61 Tools :

- A 0.6mm torx screwdriver
- Cross shaped screwdriver
- Soldering iron
- Solder wick

4.62 Preliminary operation

1. Remove the battery (Proc sheet 0 01).
2. Remove the back cover (Proc sheet 1 01).
3. Remove the equipped electronic board (Proc sheet 1 06).

4.63 Removal procedure :

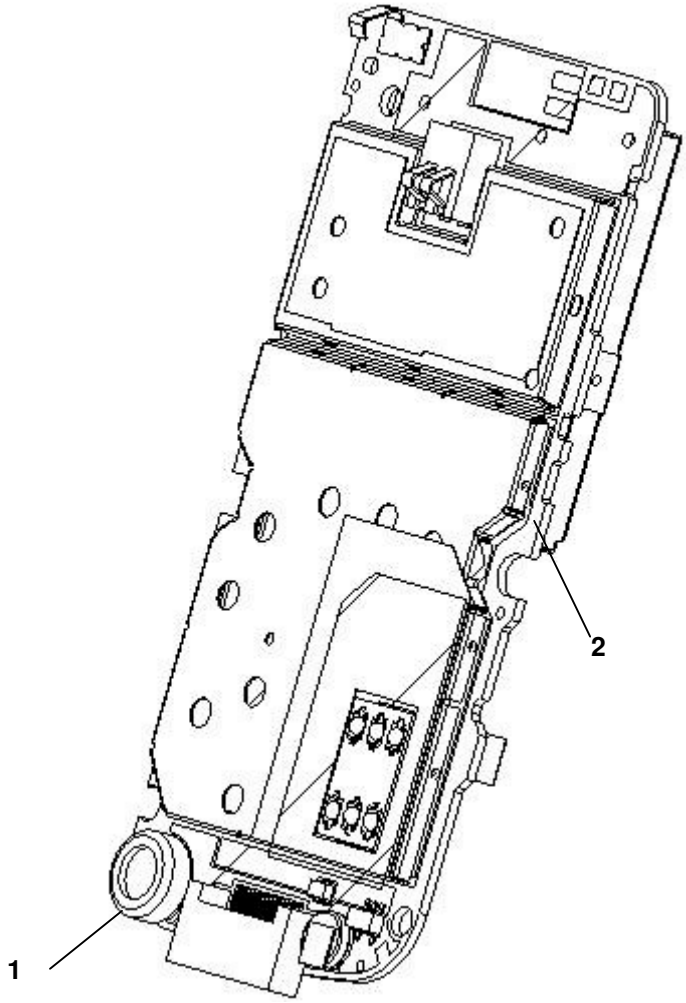
1. Unsolder the microphone (1) from the equipped electronic board (2)
2. Remove the microphone (1)

4.64 Placement procedure :

1. Flux the place of the microphone (1) and solder on the equipped electronic board (2)

4.65 Further operations :

1. Replace the equipped electronic board (Proc sheet 1 06).
2. Replace the back cover (Proc sheet 1 01).
3. Replace the battery pack (Proc sheet 0 01).


1
2

Nota: This operation needs particulars tools. The electronic board shall return to SAGEM centre.

4.66 Preliminary operation

1. Control of the IMEI label integrity
2. Remove the equipped electronic board (**Proc sheet 2 01**)
3. Control of any oxidation marks (on the equipped electronic board and under the metal dome)

4.67 Return procedure :

(a) The equipped electronic boards are packaged in individual electrostatic envelopes. They must be stocked in their original package of reception , to insure a good protection against external attacks (see enclosed photos)

(b) During the equipped electronic boards manipulation , gloves and electrostatic strap must be worn at all times.

(c) The defective equipped electronic boards have to be returned to SAGEM factory, packaged individually, in the original package (see enclosed photos) , in the appropriate ESD box : One box per Sagem reference (check reference written on the box).

(d) The defective board should display the defect code written on a sticker (placed on the shielding) and written on the ESD bag label too (printed with SMT).

Note :

- **On the defective boards , it is necessary to check visually under the metal dome to discover if it shows oxidation marks. The defective boards should be returned with their original metal dome**
- **Boards with oxidation should not to set in conformance with the warranty**
- **The defective boards must never be mixed with the complete mobiles**

4.68 Placement procedure :

1. Take a board in the stock of swap boards from the same Sagem reference.

4.69 Further operations :

1. Place the new equipped electronic board on the assembly plate. .(**Proc sheet 2 01**)
2. Follow stages (see enclosed photos)

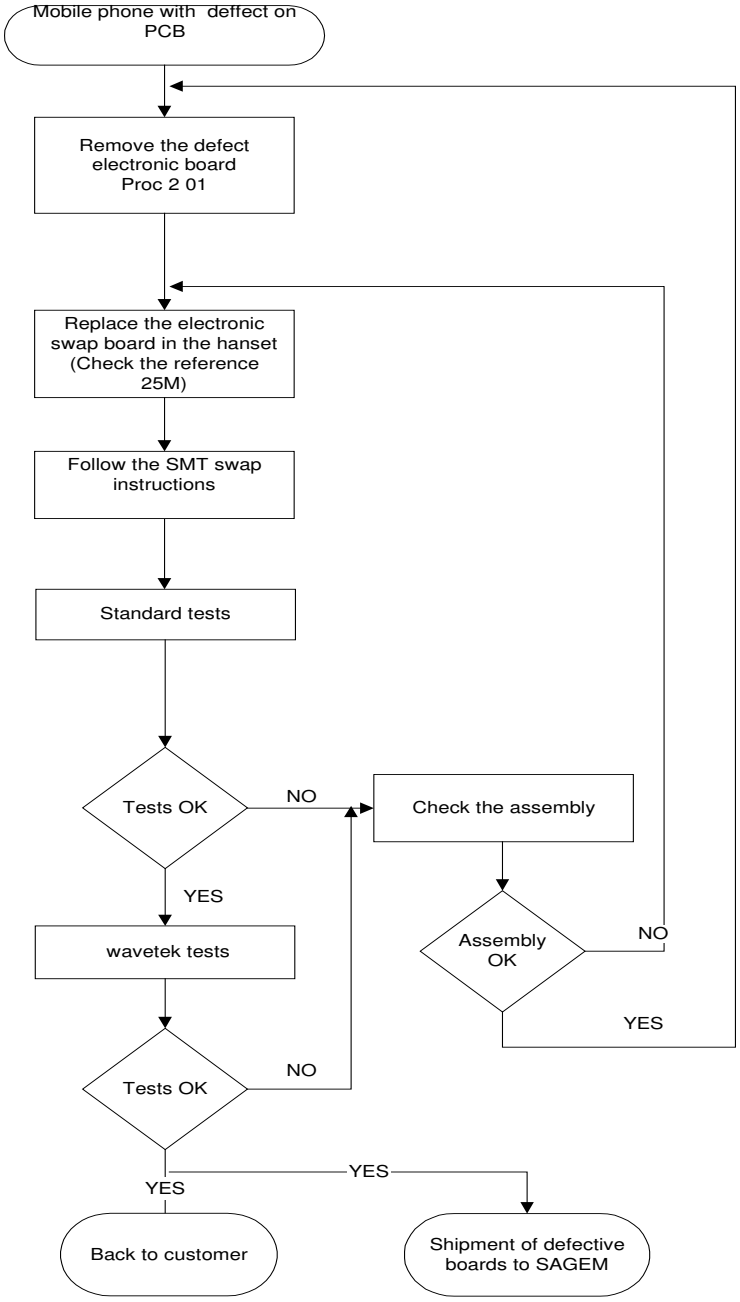
Example of equipped electronic boards packaging :

Boards packaging SAGEM -> ARC

Boards packaging ARC -> SAGEM

SAGEM electrostatic shielding box
Reference 20 boards: 27441180-4
Reference 100 boards: 27 511110-6

Electronic board exchange process



Detection of N3 defect : See the Technical documentation

-Check oxidation under the metal dome .

- Audio parameters written on the new swap board

- Display test : Hot Line Menu
- Keypad test
- Vibrating device test

- See Technical documentation (test sheet 05)

- Follow return instructions page 5-33

IMPORTANT

Mobile packaging sent to SAGEM S.A. :

Follow the Proc sheet 2 06

Packaging for swap or mobile components storage :

The swap and the mobile components must be stored with a particular care especially for the most sensible component (Display , loudspeaker etc…).

LEVEL 3 MAINTENANCE

Informations CRA/CRA information :	*Garantie/Warranty :*
Nom/Name :	Garantie standard/Standard warranty : ☐
Rue /Street :	Déjà réparé/préviously repaired : ☐
Ville / City :	*Hors garantie/Out of warranty :*
Code postal /Poscode :	Garantie expirée /Expired warranty : ☐
Pays/Country	Mauvaise utilisation / Misuse : ☐
Telephone /Phone :	
Nom du produit/product :	N° Série/Sérial n° :
Date d'achat/Date of purchase	N° IMEI :

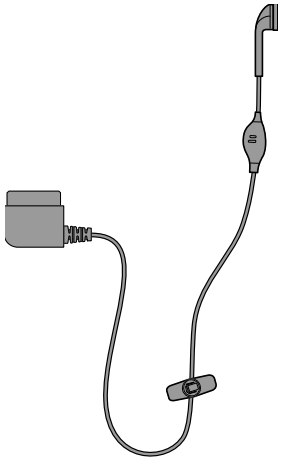
Code SAGEM		Type de défauts	Type of fault
		PROBLEME D'AFFICHAGE	**DISPLAY PROBLEM**
A1	☐	PAS D AFFICHAGE LED ETEINTES	NO POWER UP
A2	☐	PAS DAFFICHAGE LED ALLUMEES	NO WAKE UP
A3	☐	BLOCAGE DE L AFFICHAGE	FREEZES UP
A5	☐	AFFICHEUR CASSE	BROKEN LCD
A6	☐	LIGNE, DIGIT OU PIXEL MANQUANT, CONTRASTE, COULEUR	MISSING LINE, DIGIT or PIXEL, CONTRAST, COLOR
A7	☐	PB RETROECLAIRAGE	BACKLIGHTS PROBLEM
		PROBLEME D'ANTENNE	**ANTENNA PROBLEM**
A10	☐	ANTENNE CASSEE / ABSENTE	BROKEN / MISSING ANTENNA
		PROBLEME D'ALIMENTATION / CHARGEUR	**POWER SUPPLY / CHARGING PROBLEM**
B1	☐	CONTACT BATTERIE DU MOBILE DEFECTUEUX	DEFECTIVE MOBILE BATTERY CONTACT
B2	☐	CONNECTEUR DE CHARGE DU MOBILE DEFECTUEUX	DEFECTIVE MOBILE CHARGER CONNECTOR
B3	☐	ALIMENTATION CARTE DEFECTUEUSE	DEFECTIVE POWER SUPPLY OF THE BOARD
B4	☐	AFFICHAGE CHARGE DEFECTUEUX	DEFECTIVE CHARGE ICON DISPLAY
B5	☐	CONSOMMATION MODE ETEINT	CURRENT CONSUMPTION WITH PHONE OFF
B7	☐	PROBLEME D AUTONOMIE	AUTONOMY
B8	☐	BATTERIE DEFECTUEUSE	ELECTRICALLY DEFECTIVE BATTERY
B9	☐	TENUE MECANIQUE BATTERIE	MECHANICAL LOCK PROBLEM ON BATTERY
B10	☐	BATTERIE CASSEE	BROKEN BATTERY
B11	☐	CHARGEUR DEFECTUEUX	DEFECTIVE CHARGER
B12	☐	CHARGEUR CASSE	BROKEN CHARGER
B13	☐	COUPURE INTERMITTENTE AVEC REDEMARRAGE	INTERMITTENT SWITCH OFF WITH REBOOT
B14	☐	COUPURE INTERMITTENTE SANS REDEMARRAGE	INTERMITTENT SWITCH OFF WITHOUT REBOOT
		PROBLEME DE CLAVIER	**KEYBOARD PROBLEM**
C1	☐	CLAVIER INOPERANT	NOT FUNCTIONING KEYBOARD
C2	☐	PROBLEME TOUCHE LATERALE	LATERAL TOUCH PROBLEM
		MESSAGE D'ERREUR	**ERROR MESSAGE**
D1	☐	SIM ABSENTE	SIM MISSING
D2	☐	AUTRES MESSAGES	OTHER MESSAGES
D3	☐	PB EEPROM	EEPROM
D4	☐	MOBILE NON REGLE	UNTUNED MOBILE
D5	☐	HARD FAILURE	HARD FAILURE
D6	☐	SIM VERROU	SIM VERROU
D7	☐	CODE POSTE	POST CODE BLOCKED
D8	☐	RETOUR SAV	SAV RETURN
D9	☐	BATTERIE INCONNUE	UNKNOWN BATTERY
		PROBLEME AUDIO	**AUDIO PROBLEM**
E1	☐	HP DEFECTUEUX (grésille)	DEFECTIVE LOUDSPEAKER (hails)
E2	☐	HP VOIX DEFORMEE OU PARASITES	LOUDSPEAKER VOICE DISTORTION
E3	☐	MICRO DEFECTUEUX	DEFECTIVE MICROPHONE
E4	☐	MICRO VOIX DEFORMEE OU PARASITE (DISTANT)	MICRO VOICE DISTORTION
E5	☐	PROBLEME DE VIBREUR	VIBRATING DEVICE PROBLEM
E6	☐	CONNECTEUR AUDIO DEFECTUEUX	DEFECTIVE AUDIO CONNECTOR
		PROBLEME DE COMMUNICATION	**COMMUNICATION PROBLEM**
F1	☐	PAS DE LOCALISATION RESEAU	NO NETWORK RETRIEVAL
F2	☐	COUPURE DE COMMUNICATION	INTERMITTENT CALLS DROP
F4	☐	TEST RADIO NON OK	TEST RADIO NO OK
F5	☐	ECHEC APPEL SORTANT	OUTGOING CALL FAILURE
F6	☐	ECHEC APPEL ENTRANT	INCOMING CALL FAILURE
F7	☐	PERTE TEMPORAIRE DE RESEAU	NETWORK TEMPORARY DROP
		PROBLEME COSMETIQUE / DEFAUT VISUEL	**COSMETIC PROBLEM**
G1	☐	VITRE CASSEE OU ABIMEE	BROKEN OR DAMAGED GLASS
G2	☐	COQUE CASSEE OU ABIMEE	BROKEN OR DAMAGED COVER
G3	☐	FLAP CASSE OU ABIME	BROKEN OR DAMAGED FLIP
G5	☐	CLAVIER CASSE OU ABIME	BROKEN OR DAMAGED KEYBOARD
G6	☐	BOUTON VERROU DEFECTUEUX	DEFECTIVE LOCK BUTTON
		AUTRES PROBLEMES	**OTHER PROBLEM**
H1	☐	KIT ACCESSOIRES HS	BROKEN OR DAMAGED ACCESSORY
H2	☐	FONCTION FM (MOBILE)	FM FUNCTION (Mobile)
H3	☐	FONCTION MONETIQUE	MONETIC FUNCTION
I1	☐	TRACE D OXYDATION	OXYDATION MARKS
I3	☐	PAS DE DEFAUT CONSTATE	NO FAULT FOUND
I5	☐	MANQUE FONCTION DANS MENU	LACK FUNCTION IN THE MENU
I6	☐	CONNECTEUR SIM DEFECTUEUX	DEFECTIVE SIM CONNECTOR
I7	☐	DYSFONCTIONNEMENT D'UNE FONCTION DU MENU	MALFUNCTION OF THE MENU
I8	☐	RECONFIGURATION DU MOBILE	MOBILE RETROFIT
I9	☐	BLACK LISTE	BLACK LIST
		PROBLEME MULTIMEDIA	**MULTIMEDIA PROBLEM**
K1	☐	PROBLEME DATA (SMS, EMS, SMS,GPRS, WAP, TELECHARGEMENT JEUX, SONNERIES, SAUVEUR D'ECRAN, NE COMMUNIQUE PAS AVEC UN PC, POCKET PC OU PALM)	DATA PROBLEM (SMS, EMS, SMS,GPRS, WAP, DOWNLOADING GAMES, RINGING TONES, SCREEN SAVER, NO COMMUNICATION WITH A PC, POCKET PC or PALM)
K2	☐	FONCTION VIDEO	VIDEO FUNCTION
K3	☐	FONCTION INFRAROUGE (IRDA)	INFRARED FUNCTION (IRDA)

Cachet du Vendeur/Dealer's Stamp :	***Informations Client /Information :***
	Nom/Name :
	Rue /Street :
	Ville / City :
	Code postal /Poscode :
	Pays/Country
	Telephone /Phone :
Nom du produit/product :	N° Série/Sérial n° :
Date d'achat/Date of purchase	N° IMEI :
Garantie/Warranty :	***Hors garantie/Out of warranty :***
Garantie standard/Standard warranty : ☐	Garantie expirée /Expired warranty : ☐
Déjà réparé/préviously repaired : ☐	Mauvaise utilisation / Missuse ☐

Code SAGEM			Type de défaut	Kind of fault
A0			AFFICHAGE DEFECTUEUX	DISPLAY MALFUNCTION
A10			ANTENNE CASSEE / ABSENTE	ANTENNA BROKEN / MISSING
B0			ALIMENTATION/CHARGE	POWER SUPPLY / NO CHARGE
B7			PROBLEME D'AUTONOMIE	AUTONOMY
B8			BATTERIE DEFECTUEUSE	BROKENBATTERY
B11			CHARGEUR DEFECTUEUX	CHARGER MALFUNCTION
C0			PROBLEME CLAVIER	KEYBOARD MALFUNCTION
C2			PROBLEME TOUCHE LATERALE	LATERAL TOUCH PROBLEM
D0			MESSAGE D'ERREUR	ERROR MESSAGE
D1			SIM ABSENTE	SIM MISSING
D7			CODE POSTE	POST CODE BLOCKED
E0			PROBLEME AUDIO	AUDIO PROBLEM
E3			MICRO DEFECTUEUX	MICROPHONE MALFUNCTION
E5			PROBLEME DE VIBREUR	VIBRATING DEVICE MALFUNCTION
F0			PROBLEME DE COMMUNICATION	COMMUNICATION MALFUNCTION
G1			VITRE CASSEE OU ABIMEE	BROCKEN GLASS
G2			COQUE CASSEE OU ABIMEE	BROCKEN COVER
G3			FLAP CASSE OU ABIME	BROKEN FLIP
G5			CLAVIER CASSE OU ABIME	BROCKEN KEYBOARD
G6			BOUTON VERROU DEFECTUEUX	DEFECTIVE LOCK BUTTON
K2			FONCTION VIDEO	VIDEO FUNCTION
K3			FONCTION INFRAROUGE (IRDA)	INFRARED FUNCTION (IRDA)
K4			FONCTION WAP	WAP FUNCTION
K5			FONCTION GPRS	GPRS FUNCTION
K6			FONCTION SMS, EMS, MMS.	SMS, EMS, MMS FUNCTION
K7			NE COMMUNIQUE PAS AVEC UN PC	NO COMMUNICATION WITH A PC
K8			NE COMMUNIQUE PAS AVEC UN POCKET PC OU PALM	NO COMMUNICATION WITH A POCKET PC or PALM
K9			LIAISON DATA (MESSAGE "AUCUNE PORTEUSE DETECTEE")	DATA (MESSAGE "NO CARRIER DETECTED")
K10			TELECHARGEMENT JEUX	DOWNLOADING GAME
K11			TELECHARGEMENT IMAGE / SON / ECONOMISEUR D'ECRAN	DOWNLOADING PICTURE / RINGTONE / SCREEN SAVE
H1			KIT ACCESSOIRES HS	BROCKEN ACCESSORIES
H2			FONCTION FM (MOBILE)	FM FUNCTION
H3			FONCTION MONETIQUE	MONETIC FUNCTION
I5			MANQUE FONCTION DANS MENU	LACK FUNCTION IN THE MENU
I7			DYSFONCTIONNEMENT D'UNE FONCTION DU MENU	MALFUNCTION OF THE MENU
I8			RECONFIGURATION DU MOBILE	MOBILE RETROFIT
I9			BLACK LISTE	BLACK LIST
I0			AUTRES DEFAUTS A PRESICER	OTHERS / TO BE PRECISED

CHAPTER 5 - ACCESSORIES

5.1 PEDESTRIAN HANDSFREE KIT



5.1.1 Description

Ear support with microphone on the cable for handsfree conversation.

5.1.2 Characteristics

Item	Dimensions	Loudspeaker impedance	Microphone
PEDESTRIAN HANDSFREE KIT	Length: 1.25 m Dist. micro/loudspeaker: 25 cm	150 Ω 119 dB SPL	2,2 kΩ -42 dB SPL

CHAPTER 6 - TECHNICAL INFORMATION BULLETIN

6.1 PURPOSE

The purpose of the Technical Information Bulletin (TIB) is to complete the maintenance operations described in this document. They give to the repair centers the complementary technical informations and the corrective procedures to be applied to maintain the product following it's evolution.

6.2 APPLICATION

The Technical Information Bulletin (TIB) are reference and must be applied by the repair centers.

The Technical Information Bulletin (TIB) will be sent only to the concerned repair centers. The Technical Data Bulletin will not be received by the repair centers with a reference number in sequence.

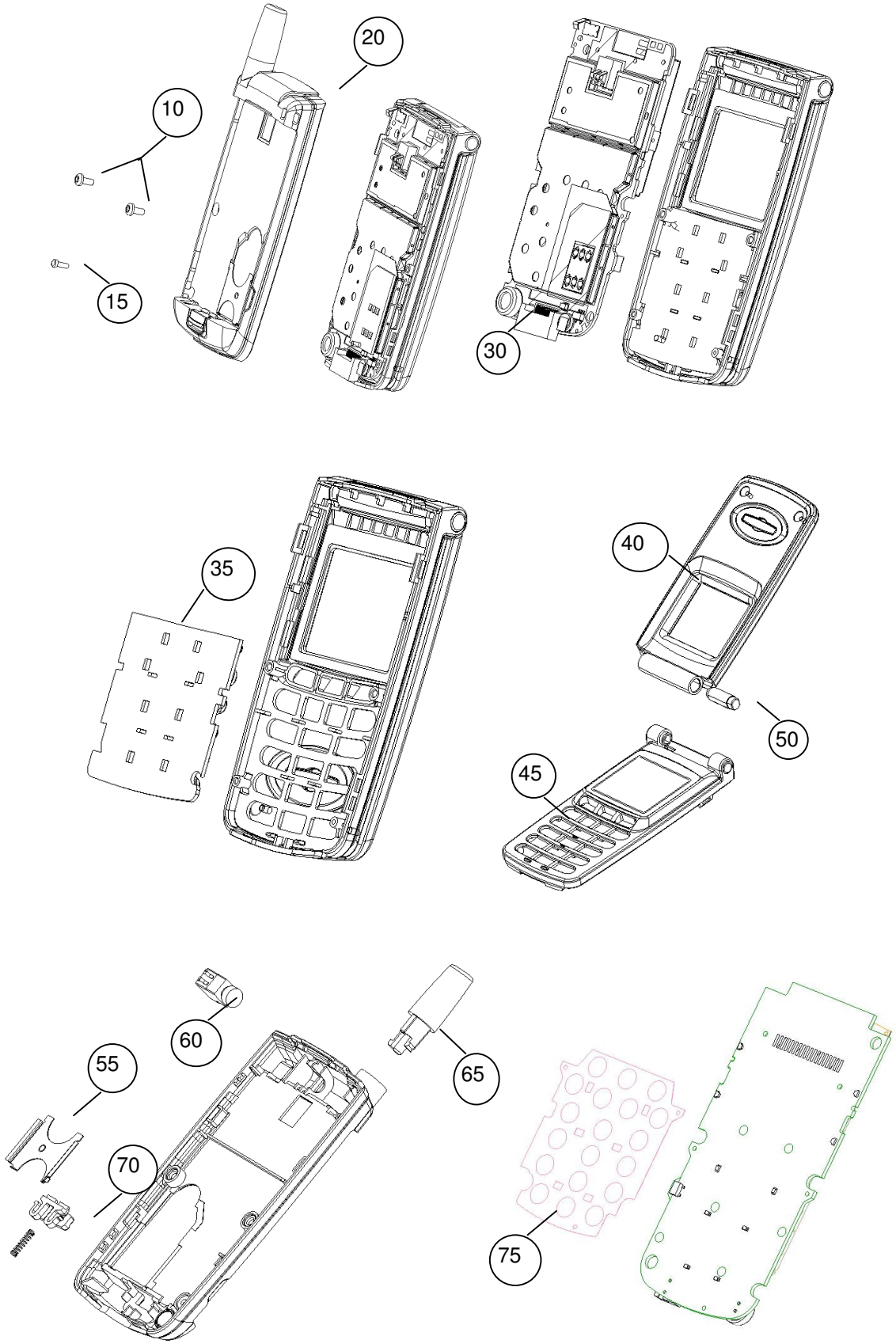
The follow up of the Technical Information Bulletin (TIB) and the action being to be performed are under the responsibility of the repair centers.

CHAPTER 7 - ILLUSTRATED PART CATALOG

8.1 myC2-2 spare parts

SSEMBLY	QTY	DESIGNATION
10	2	RLX 1,8-6 screw
15	1	Cross shaped Screw
20	1	Front cover
25	1	Electronic board
30	1	microphone
35	1	Elastomer keypad
40	1	Flip
45	1	Front cover
50	2	Hinge
55	1	SIM locker
60	1	Vibrating device
65	1	Antenna
70	1	Battery locker
75	1	Metal Dome

8.2 myC2-2 exploded view



CHAPTER 8 - COMPOSITION TABLE

8.1 PURPOSE

This chapter contains the SAGEM codes of articles mentioned throughout the Site Technical Documentation.

8.2 LIST OF ARTICLES

TEST TOOLS	
Designation	**Reference**
-2 Metal dome jig	To define
-2 calibration tool	To define
-2 cable	To define

PEDESTRIAN HANDSFREE KIT	
Designation	**Reference**
Pedestrian handsfree kit	25 130 173-9