

Equipment List, Mechanical

Applicable for W902

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1 General

This document describes the equipment required to repair the product(s) listed in the “Applicable for” section of this document at the Mechanical Repair Level and to upgrade the product’s software. The first section is equipment that can be purchased from a Sony Ericsson Parts and Tools warehouse. The second section is equipment that must be purchased from other vendors.

2 Column Definitions

The columns that make up the equipment table are grouped into two categories. The two categories are: description type columns and process type columns.

2.1 Description Type Columns

The columns that assist in specifying and/or clarifying the equipment needed are considered description type columns.

- Description = The name of the equipment.
- Part Number = The Sony Ericsson part number to use when ordering from a Sony Ericsson Parts and Tools warehouse.
- Comments = Additional information that helps to specify or clarify the equipment.
- Picture = An image of the equipment



2.2 Process Type Columns




The columns that indicate the repair processes in which equipment should be used are considered process type columns. An “X” in the column indicates that the equipment must be used for a process, and a “Z” in the column indicates that the equipment is optional.




- Flash Upgrade = An upgrade of the signalling software in the phone.
- Manual Test = A manual test of the functions of the phone.
- Trouble Shooting = A method of determining the cause of the phone’s failure to perform a function.
- Repair = A method of replacing failed components.



3 Repair Equipment, Mechanical

3.1 Sony Ericsson-Provided Repair Equipment



Description	Part Number	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Torque Screwdriver	NTZ 112 459	<p>Any torque driver may be used as long as the driver meets the following requirements:</p> <ul style="list-style-type: none"> The driver must be capable of applying the specified torque value +/- 6% The driver must be set so that the maximum torque speed of the driver does not exceed 670 rpm <p>NOTE - The torque values used on this product are 18 N-cm and 8 N-cm</p>				X	X
Bits (T6)	NTZ 112 288					X	X

Description	Part Number	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
USB Cable DCU-65	RPM 13112	This is the flashing cable. This cable interfaces the phone to the PC.		X	X		
Zebra Printer Ribbon	LZK 102 734/1	This is the ribbon that should be used in the Zebra printer when generating labels for this product.					X
Front Opening Tool	NTZ 112 302/2	This tool is one of the options that can be used during the repair process of this product anywhere the term "pry tool" is specified in the repair instructions.					Z

Description	Part Number	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Memcard 512 Mbyte	KDR 109 171/512	This item is needed to test the applicable product's memory slot.			X		
Dummy Battery	1208-5627	This item, also known as a "Battery Eliminator", can be used in the place of the battery when it is used in conjunction with the power supply and the power cables.		Z	Z		
Guitar Pick	NTZ 112 590	This tool is one of the options that can be used during the repair process of this product anywhere the term "pry tool" is specified in the repair instructions.					X


Description	Part Number	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Camera Tool	NTZ1121077	This tool is used remove the QCIF VGA Camera					X
Flex Film Assembly Tool	NTZ 112 521	This tool is used to remove Flex film during the repair process					X



3.2 Equipment Provided by Other Supplier


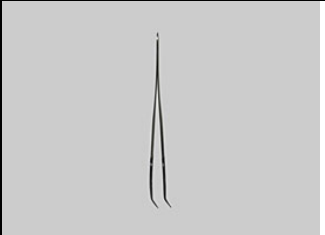
Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Battery	Model # - BST-38 • Purchase from local vendor		X	X		
Battery Charger – that connects to system connector	Model #: CST-70 or equivalent • Use a charger that works with your area's electrical system. • Purchase from local vendor			X		X
Style 2A Tweezers	This device must be conductive or electrostatic-dissipative. This part can be ordered from Stanley Supply & Services (www.stanleysupplyservices.com).					X
Style 3C Tweezers	This device must be conductive or electrostatic-dissipative. This part can be ordered from Stanley Supply & Services (www.stanleysupplyservices.com).					X
Brush	This device must be electrostatic-dissipative					X

Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Isopropyl Alcohol – 99% concentration by volume	<p>Only isopropyl alcohol that is 99% concentration by volume should be used.</p> <ul style="list-style-type: none"> Other names used for this material include rubbing alcohol, IPA, 2-Propanol, and Isopropanol. Products named using any of the names mentioned are acceptable as long as they meet the 99% concentration by volume requirement. There is no specific supplier that this material needs to be obtained from, but a list of web sites that sell products that meet the 99% by volume requirement are provided below for convenience. <ul style="list-style-type: none"> * http://www.ini-industries.com * http://www.first-aid-product.com/industrial/isopropyl-alcohol.htm * http://www.sigmaaldrich.com/ 					X
Gloves	This device must be electrostatic-dissipative				X	X
Finger Cots	This device must be electrostatic-dissipative				X	X
ESD work surface	<p>The work surfaces a phone is exposed to when disassembled must be electrostatic-dissipative.</p> <p>The use of an ESD mat is acceptable.</p>				X	X

Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
ESD grounding device	A device that grounds a person to the ESD work surface is required. The use of an ESD wristband is acceptable.				X	X
Lint-free wipes						X
Barcode Scanner	The device must be able to decode code 128 and 128C					X
Hands-Free Cable – that connects to system connector	Model #: HPM-70 or equivalent • Purchase from local vendor			X		
Computer	Computer requirements at this service level: • An IBM compatible 500 MHz or higher processor • A minimum of 256 MB RAM or greater, depending on what is specified by the operating system's manufacturer • Two extra USB ports – one for the Smartcard reader and one for flashing equipment • A COM port for the Zebra Printer • A connection for barcode scanner • A connection for a Bluetooth device • Must use one of the following operating systems – Windows 2000, and XP, and Vista		X			X

Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Nylon Pointer	This tool is one of the options that can be used during the repair process of this product(s) anywhere the term “pry tool” is specified in the repair instructions. This part can be ordered from Stanley Supply & Services (www.stanleysupplyservices.com). The Stanley Supply & Services Part Number is 151-168 .					X
Zebra Printer (Must be 300 dpi)	Current Model Options: 110XIIIPlus or Z4Mplus These models use a DB9 Male-DB9 Female Null Modem Cable to connect to the computer (POS 42).					X
	Discontinued Model Options: NOTE – The following models may also be used, but Zebra has discontinued selling them. <ul style="list-style-type: none"> • 90xi Series • Z4M • Z4000 deluxe These models use a DB25 Male-DB9 Female Null Modem Cable to connect to the computer (POS 42).					

			Flash Upgrade	Manual Test	Trouble Shoot	Repair
Description	Comments	Picture				
Null Modem Cable	<p>This cable connects the Zebra printer to the computer. Two companies that carry this type of cable are CDW (www.cdw.com) and QVS (www.qvs.com).</p> <p>Part numbers for the DB9 Male-DB9 Female version: CDW – 361875 (6 Feet Long)</p>					X
	<p>Part numbers for the DB25 Male-DB9 Female version: CDW – 375939 (6 Feet Long) QVS – CC314-06 (6 Feet Long) QVS – CC314-10 (10 Feet Long)</p>					
Bluetooth Device	A working Bluetooth device such as a known good mobile phone with Bluetooth enabled or a PC with a Bluetooth card installed is needed to test the functionality of the Bluetooth feature on this product.			X		
Hot Air Device	This kind of device may be needed to assist in removing the label from this product.					Z
Ionized Air Gun or Blower	<p>Optional, but recommended – Ionized air neutralizes the static that tends to cause particles to cling to a surface, therefore allowing dust and fine particles to be easily blown off unlike most standard air blowing devices.</p>					Z

Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Test SIM or Inactive SIM	Either a Test SIM, an inactive SIM, or a functioning SIM is needed to evaluate phone functionalities such as Bluetooth, FM radio, etc.			Z		
A Functional SIM (GSM)	A functional SIM (GSM) is needed for performing an “On the Air” GSM test. A functional SIM (GSM) can be used instead of the inactive SIM or Test SIM to evaluate phone functionalities such as Bluetooth test, FM radio, etc.			X		
A Functional USIM (UMTS)	A functional USIM (UMTS) is needed for performing an “On the Air” UMTS test.			X		
Dental hook						X
ESD Tweezers						X

Description	Comments	Picture	Flash Upgrade	Manual Test	Trouble Shoot	Repair
Power Supply	NOTE: Only necessary if using a battery eliminator Requirements: <ul style="list-style-type: none"> • The output voltage should, at minimum, be variable from 0 to 5 volts • The output current should, at minimum, be adjustable from 0 to 2 amps • Optional, but recommended – A digital display capable of showing the current value 		Z	Z		
Power cables – one red and one black	NOTE: Only necessary if using a battery eliminator. Cable Requirements: <ul style="list-style-type: none"> • Minimum cross sectional area of conductor = 1.2mm² • Maximum length = 1.5 m • One end of cable must have a male banana-type connector to be able to interface with the battery eliminator. • The other end of the cable needs whatever connection is necessary to connect to the power supply that you have. 		Z	Z		

4 Revision History

Rev	Date	Changes / Comments
1	2008-09-11	First Release