# **TCL 40 R 5G**

## **T771K**





**Starlight Black** 

Stardust Purple

#### Warning:

- All features, functions, specifications, and other product information provided in this document, including but not limited to the advantages, aesthetics, price, components, performance, availability and capacity of the product are subject to change without notice.
- TCL will not be responsible for any damage to the product, injury or other safety issues caused by the result of repair by an unauthorized service provider, user repair or unprofessional product repair.
- Any damage to the product resulted from an attempt to repair the product by any person or 3<sup>rd</sup> party other than TCL authorized service provider will not be covered by warranty.

## Content

1	Prec	autions	3		
2	Gene	eral Product Information	4		
3	Main	tenance preparation	5		
	3.1	Handset with at least 50% battery charges	5		
	3.2	Supported Micro SD card and SIM card, 5V2A Charger, Type-C USB Cable	5		
	3.3	PC with below configurations to do software update by using PC tool	5		
	3.4	Backup the user data before repairing. There are two ways below for your reference	5		
4	Factory Reset				
	4.1	Remove Google account before doing factory reset	6		
	4.2	Factory Reset	6		
	4.3	Recovery mode	6		
5	Software Update				
	5.1	Software update by FOTA	8		
	5.2	Software update by using Mobile Upgrade tool	8		
6	Function Test with Support Centre				
7	Troubleshooting		13		
	7.1	What should I do if my device reboots by itself?	13		
	7.2	What should I do if my device system lags or freezes?	13		
	7.3	What should I do if my device cannot charge or charges slowly?	13		
	7.4	What should I do if my fingerprint unlock function works slowly or fails?	14		
	7.5	What should I do if my device's battery drains under normal use?	14		
	7.6	What should I do if my device auto powers off?	14		
	7.7	What can I do if my device heats up?	15		
	7.8	What should I do if my device cannot power on?	15		
8	Contact of TCL hotline and service centers				
9	Disa	ssembly and reassembly	16		
	9.1	Disassembly tools	16		
	9.2	Disassembly Process (video)	16		
	9.3	Reassembly process and tools	16		
10	Expl	ode View	22		
11	Split	View	23		

#### 1 Precautions

- Use only demagnetized tools specifically designed for small electronic repairs, most electronic parts are sensitive to electromagnetic forces.
- 2) Use only high quality screwdrivers when repairing products. Poor quality screwdrivers can easily damage the heads of the screws.
- Always use genuine spare parts. Parts from third party may not function properly or even cause damage.
- 4) The parts below require calibration to ensure proper function after repair, please contact TCL authorized Repair Center.
  - Sensors (proximity, fingerprint), dual camera, touch screen panel, speaker, motherboard and more.
- 5) The IPXX degree of protection cannot be guaranteed in the event of repair by the user or by an unqualified person.
- 6) If the device suffered from water/liquid damage, you will have the option to have a repair, but this may exceed the value of the device, depending on level of damage.
- 7) If you need detailed diagnosis, please contact TCL authorized Repair Center.
- 8) Do not remove, damage, heat, short circuit, or disassemble the battery. If you need to replace the battery, camera, screen or motherboard, go to a TCL authorized Repair Center for repair.
- 9) Before any repair, backup personal information and important data, and then proceed with the repair.
- 10) Many semiconductors parts inside the device are sensitive to electrostatic discharges that can cause unrecoverable damages on the parts. Setup and stay in an Electrostatic Protected Area (EPA) to avoid electrostatic discharge before opening the device for repair.
- 11) Before repairing the device, you must be absolutely certain that the device is turned off.
- 12) Repair the device in a safe/explosion-proof environment. If the device is damaged, emits smoke or if you smell a burning odor, stop repairing/using the device immediately, use a fire extinguisher or fire-proof box, and contact TCL.
- 13) When removing the back cover, be careful not to damage the product, especially the battery. Recommended safety equipment: Glasses/Gloves/Mask, etc.
- 14) Before assembly, make sure that there are no screws or foreign objects around the battery.
- 15) Before assembly, make sure that there are no abnormalities before reattaching the back cover.

## 2 General Product Information

Features/Hardware	Description				
Design	Dimensions: 164.46*75.4*8.99mm; Weight: 192g				
System	TCL UI 4.0; Android 12				
Processor	Chipset: MT6833V/NZA; CPU: 2x A76 2.2GHz, 6x A55 2.0GHz; GPU: ARM G57 MC2				
Memory & Storage	4GB RAM +64GB/128GB ROM; Support micro SD cards up to 1TB				
Display	6.6" HD+ NXTVISION display + V Notch screen				
	50 MP main camera: PDAF, 1/2.76", 0.64um, F1.8, field of view 74.2°, 5P lens.				
Rear Camera	2MP macro camera: FF, 1/5 ", 1.75μm, F2.4, field of view 88.8°, 3P lens.				
	2MP depth camera: FF, 1/5 ", 1.75μm, F2.4, field of view 85°, 3P lens.				
Front Camera	8MP front camera: FF, 1/4 ", 1.12µm, F2.0, S5K4H7(80.6°)/GC08A3(78°), 4P lens				
Battery	5000mAh (standard)				
	2G bands: GSM 850/900/1800/1900				
	3G bands: B1/2/4/5/8				
	4G bands: B1/3/5/7/8/20/28/32/38/40/41/42				
	4*4MIMO: 4G: B1/B3/B7/B38/B41; 5G: n1/n3/n7/n41/n78;				
On an anotherity	5G bands: n1/n3/n5/n7/n8/n28/n38/n40/n41/n78				
Connectivity	802.11a/b/g/n/ac Wi-Fi				
	Wi-Fi Direct				
	5G mobile hotspot, VoLTE, VoWiFi				
	Bluetooth 5.1, USB 2.0 Type-C, NFC				
	Dual SIM model: 1 4FF Nano + 1 4FF Nano or 1 Micro SD card				
Concern	GPS, A-GPS, BeiDou, Galileo, GLONASS				
Sensors	Accelerometer, E compass, proximity sensor, light sensor, fingerprint sensor.				
Accessories	5V2A Charger, Type-C Cable, Quick Guide, SIM Card Pin, PSI				

## 3 Maintenance preparation

- 3.1 Handset with at least 50% battery charges
- 3.2 Supported Micro SD card and SIM card, 5V2A Charger, Type-C USB Cable
- 3.3 PC with below configurations to do software update by using PC tool.
- CPU: Equal to Pentium 1.6 GHZ or above
- RAM: 4GB or above
- Hard Disk: 10GB or above
- Operation System: Win7/Win8/Win10
- USB port
- Internet connection with minimum internet speed of 8Mb/s
- 3.4 Backup the user data before repairing. There are two ways below for your reference.

**Method 1**: You need to add your Google account details first. Go to "Settings"-> "System"-> "Backup" -> Touch "Turn on" in the window which has now opened ->Touch "Back up now.

\* App data, SMS text messages, Device settings, Call history, and Contacts will be backed up.

**Method 2**: You can back up your data to another phone via the "Switch Phone" app, and then recover data when your phone has been repaired.

Swipe up in the home screen to find the search bar->enter "Switch Phone" ->Transfer the contents by following the instructions.

## 4 Factory Reset

Factory reset will reset your phone to restore it to its factory settings. This will delete all data including files and downloaded apps. Please backup the user data before doing factory reset.

### 4.1 Remove Google account before doing factory reset

If Google account is not removed before doing the factory reset, it is not possible to setup the device with another Google account at initial setup after the factory reset and it will require you to login your previous signed-in Google account. It is recommended that you log out of the Google account. Follow the below steps to remove your Google account from the device.

You can go to "Settings"->"Accounts"->touch your google account->"REMOVE ACCOUNT"->touch "REMOVE ACCOUNT".

## 4.2 Factory Reset

You can follow the below steps to perform factory reset when the phone is powered on.

Go to main menu -> "Settings"-> "Reset"-> "Erase all data (factory reset)"-> Touch "Erase all data" in the open window -> "Erase all data".

#### 4.3 Recovery mode

How to use: Long press "Power" Key + "Volume up" key in power off mode to enter recovery mode.

**When to use**: When you cannot start your handset or when there is something wrong during switch on or when cannot charge.

**Consumer personal data format**: It will format consumer data, and the memory and settings of your product will return as released from factory.

#### Click-through steps:

1) Power off the device, long press "Power" Key+ "Volume up" key until the LCD lights on;

2) Press "Volume" key to select "Wipe data/factory reset" and press "Power" key to confirm;



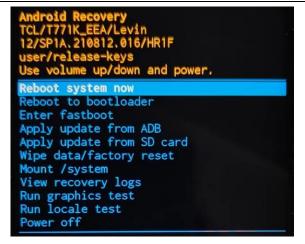
Android Recovery
TCL/T771K\_EEA/Levin
12/SP1A.210812.016/HR1F
user/release-keys
Use volume up/down and power.
Reboot system now
Reboot to bootloader
Enter fastboot
Apply update from ADB
Apply update from SD card
Wipe data/factory reset
Mount /system
View recovery logs
Run graphics test
Run locale test

Select "Factory data reset" and press "Power" key to confirm; 4) Select "Reboot system now" and press "Power" key to confirm.

Power off

```
Android Recovery
TCL/T771K_EEA/Levin
12/SP1A.210812.016/HR1F
user/release-keys
Use volume up/down and power.
Wipe all user data?
THIS CAN NOT BE UNDONE!

Cancel
Factory data reset
```



## 5 Software Update

It is suggested to upgrade the handset software to latest version for better performance. Before upgrade, please remember to backup your data and keep your phone fully charged.

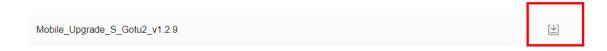
#### 5.1 Software update by FOTA

Firmware-Over-The-Air ("FOTA") is a way in which the firmware of a mobile device is updated wirelessly by the device's manufacturer. Firmware runs in the background without any input from the user, to make sure that the device's hardware runs properly. Head to your device's "Settings"->"System"->"Updates" or "System Update"

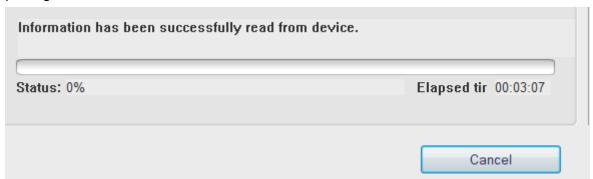
### 5.2 Software update by using Mobile Upgrade tool

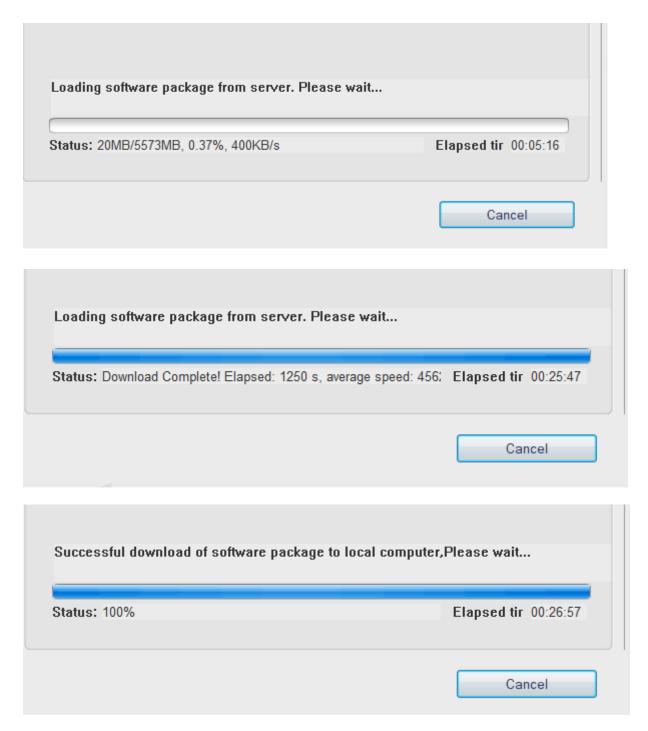
Download the corresponding SW upgrade tool Mobile\_Upgrade\_S\_Gotu2\_v1.2.9 from website:
 <a href="https://www.tcl.com/global/en/service-support-mobile/tcl-40-r-5g.html">https://www.tcl.com/global/en/service-support-mobile/tcl-40-r-5g.html</a>

## **SOFTWARE**



- 2) Open the download Mobile\_Upgrade\_S\_Gotu2\_v1.2.9 Setup.exe file and choose the language, install the tool according to the prompt.
- 3) After finish install the tool, click "Finish" and restart your computer.
- 4) Open the tool, choose the language, select the model "T771", click "Start"->"Next" ->click "Yes"->Power off your phone and connect it to computer via USB cable and waiting for loading software package.

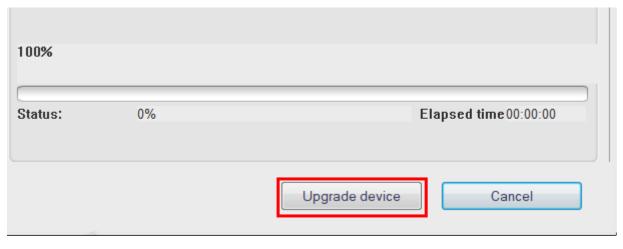


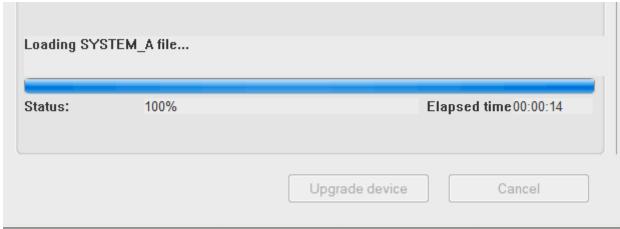


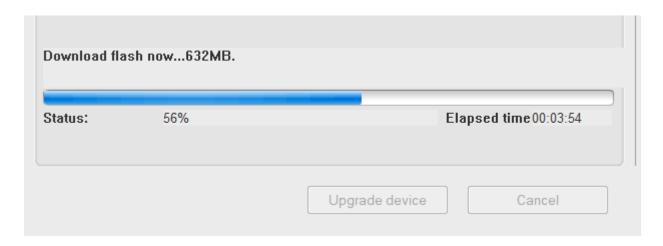
5) Click "OK" and disconnect your phone from USB cable when the tool pops up the prompt "Please disconnect your device from the USB cable to proceed".



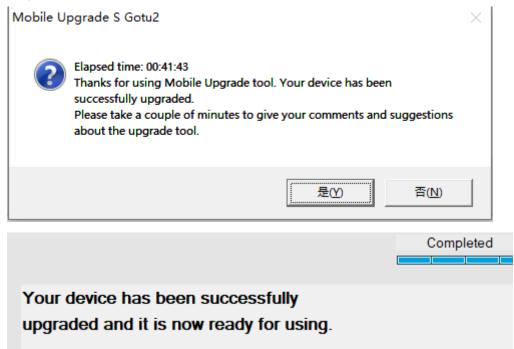
6) Click "Upgrade device" and connect your powered off phone to computer, waiting for upgrade.







7) Upgrade successfully.



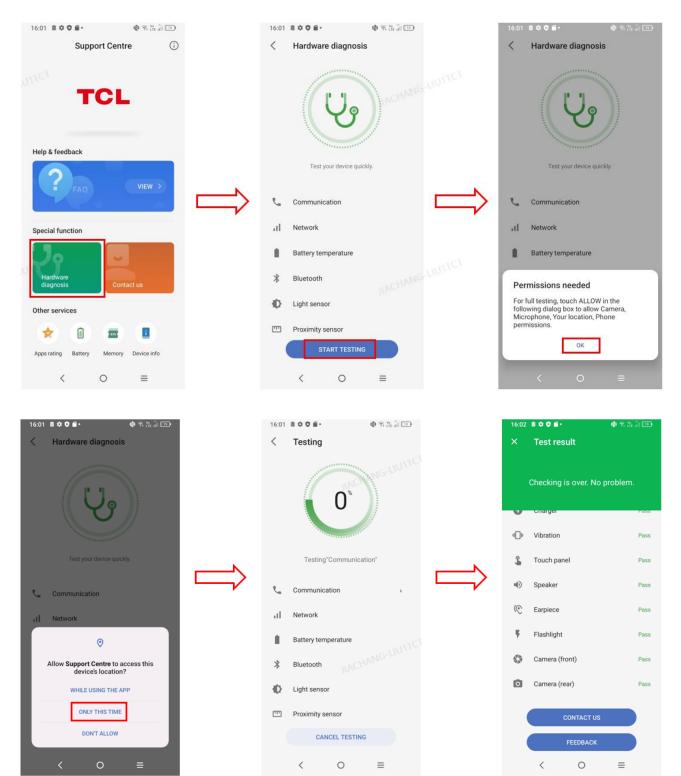
## **6 Function Test with Support Centre**

- 1) Check that the Micro SD card are inserted correctly.
- 2) Power on the product to launch the auto test.
- 3) If the product displays "input NCK code", this means the software is Network locked or SIM locked, and can only be used with dedicated SIM card hence use the relevant SIM card or enter the phone NCK code if available.
- 4) Open the "Support Centre" app->Click "Agree"->"Hardware diagnosis"->"START TESTING" >Authorize the permissions required for diagnostics->Follow the instructions to test

Rev.: 1.0	TCL 40 R 5G_T771K _H1 Service Manual V1.0	Page: 11/25				
	Confidential and proprietary information contained in this repair guide is subject to change without notice.					
Distribution	Distribution, transfer, copy of any content or data in this document without the written permission of TCL is strictly prohibited.					

## Service Manual

## TCL Communication Technology Holdings Ltd.



## 7 Troubleshooting

#### 7.1 What should I do if my device reboots by itself?

- a) If the issue appears occasionally, it may be caused by anomalies in a file. It is recommended that you continue to use the device normally.
- b) Check if the issue occurs during charging. If yes, we recommend trying the official charger and data cable.
- c) If the issue occurs while using a third-party app, make sure the app is compatible with your device and Android version. Try uninstalling the third-party app.
- d) If the issue occurs while using the built-in app, try to reset or update your device.

## 7.2 What should I do if my device system lags or freezes?

- a) Try to restart your device.
- b) Charge your device until the battery level is at least 20%.
- c) Too many apps running in the background or the system cache not being cleared may cause a system lag. Touch the Menu key at the bottom corner of screen to view recently used applications. Touch "Clear all" to close the tasks.
- d) Uninstall unused apps from time to time to ensure that your device has sufficient storage space.
- e) If the issue occurs in third-party apps, please uninstall the third party apps responsible.
- f) If you are playing a game, watching online video or listening to online music, your device may lag or freeze because of a poor network connection. Enable Airplane mode for a few minutes, then disable it and check your network connection again. Alternatively, move to a location with a better network connection
- g) Try to reset or update your device.

#### 7.3 What should I do if my device cannot charge or charges slowly?

- a) Check if there is any visible damage to the charger USB, the charger itself or the charging port of your device. If yes, back up your data and take your device and proof of purchase to our repair center to get more professional technical assistance.
- b) Charge the device with a TCL official charger for at least 30 minutes, then try again.

- c) Verify whether there are any third-party power management software apps downloaded. If so, please uninstall these.
- d) Please don't use the device for a long time while it is charging.
- e) Try to reset or update your device.

#### 7.4 What should I do if my fingerprint unlock function works slowly or fails?

- a) Pattern, PIN or Password security unlocking is required after the device restarts. Fingerprint unlock does not function at this point but it will work again after unlocking using another method.
- b) Make sure there are no stains such as water or sweat on the fingerprint sensor. If there are, wipe the surface and try again.
- c) Try to re-enter your fingerprint to your device by accessing "Settings"->"Security & biometrics"->"Fingerprint".
- d) Try to reset or update your device.

## 7.5 What should I do if my device's battery drains under normal use?

- a) Check if the device is in a high or low temperature environment. If yes, we advise you to use it only under normal operating conditions.
- b) Deactivate Bluetooth, Wi-Fi, or GPS when not in use.
- c) The battery drains quickly when playing games and watching videos. This is normal when running large games for a long time or watching videos.
- d) Too many apps running in the background or the system cache not being cleared may cause battery draining. Touch the Menu key in the bottom corner of the screen to view recently used applications. Touch "Clear all" to close the apps.
- e) Try to reset or update your device.

#### 7.6 What should I do if my device auto powers off?

- a) Power off your device and charge the device with a TCL official charger for at least 30 minutes, then try to power on again.
- b) If the issue occurs while using a third-party app, make sure the app is compatible with your

device and Android version. Try uninstalling the third-party app.

c) Try to reset or update your device.

#### 7.7 What can I do if my device heats up?

A warning or sensation of heat in the device is the normal consequence of the CPU handling excessive data, which makes the battery warm. It is not harmful to the battery or device even if the device feels hot.

Use the following actions to make your device return to its normal temperature:

- a) It is suggested not to expose your phone in sunshine for a long period of time;
- b) Close large power consumption applications, such as music, chatting applications, GPS application, 3D gaming, video streaming etc.
- c) Reduce the brightness of the screen to lower the temperature.
- d) Avoid using your device while charging.
- e) Avoid using a protective case that does not dissipate heat. Remove your protective case if your device heats up.

#### 7.8 What should I do if my device cannot power on?

- a) Charge the device with a TCL official charger for at least 30 minutes, and then try to power on again.
- b) Press and hold the power key for 10 to 15 seconds until the device vibrates, to perform a forced re-boot.
- c) Try to reset or update your device.

If the previously described options do not help, you can contact our hotline or repair center to get more professional technical assistance. Find the hotline or repair center information from the TCL website or APP "Support center".

#### 8 Contact of TCL hotline and service centers

If you are looking for official professional repair, please visit **HOTLINE & SERVICE CENTERS (tcl.com)** and search for the contact in your country/region.

Rev.: 1.0	TCL 40 R 5G_T771K _H1 Service Manual V1.0	Page: 15/25			
Confidential and proprietary information contained in this repair guide is subject to change without notice.					
Distribution	Distribution, transfer, copy of any content or data in this document without the written permission of TCL is strictly prohibited.				

## 9 Disassembly and reassembly

#### 9.1 Disassembly tools

You may use the following tools during the disassembly and reassembly procedure.



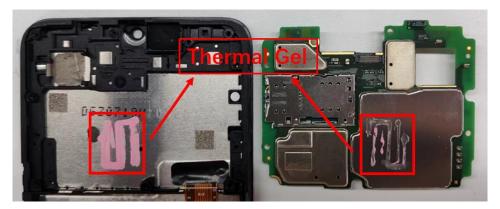
## 9.2 Disassembly Process (video)

Please refer to disassembly video "Disassembly Process for TCL 40 R 5G\_T771K".

## 9.3 Reassembly process and tools

Reassembly process is reverse order of the disassembly process. But there are some precaution as follow:

- Double-side sponge tape, battery packing pet, all types of adhesive on battery cover must be replaced with new ones once it is disassembled.
  - Conductive cloth, high temperature adhesive, double-side adhesive tape, or other adhesive are selectively replaced, depend on breakage, stickiness conditions
- 2) Dual Cam verification must be done once camera module /main PCBA was reassembled.
- 3) There is "Thermal Gel" between main PCBA and Furnished Underfilling. If a new main PCBA or Furnished Underfilling or both of them were repalced, new thermal gel should be filled.



**Note:** No need to clean the the original thermal gel when fill new thermanl gel. Prepare the "Thermal Gel" locally because of shipment restricted.

Item	Spe.	Picture
Thermal Gel	Thermal conductivity higher	10
(Prepare locally)	than 2.0W	
		<u> </u>

It is suggested to add the new thermal gel on Furnished Underfilling directly opposite the main PCBA, around **250±10mg**.



**Note:** if you do not use or have the Thermal Gel in a right way, device thermal performance can be diminished and causing device abnormal performance (overheating, system crash) or even device damaged.

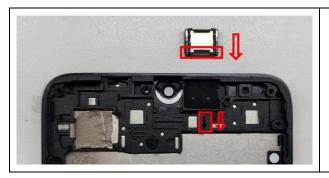
4) Pay attention to the direction of the Receiver and Speaker.

a) Receiver	b) Speaker
-------------	------------

Rev.: 1.0 TCL 40 R 5G\_T771K\_H1 Service Manual V1.0 Page: 17/25

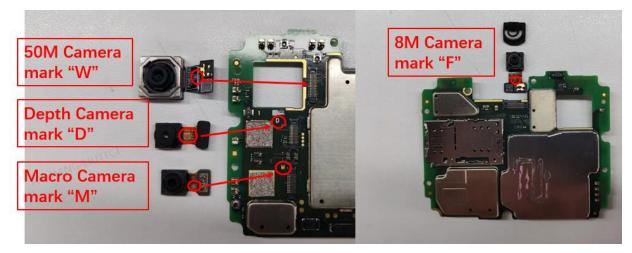
Confidential and proprietary information contained in this repair guide is subject to change without notice.

Distribution, transfer, copy of any content or data in this document without the written permission of TCL is strictly prohibited.

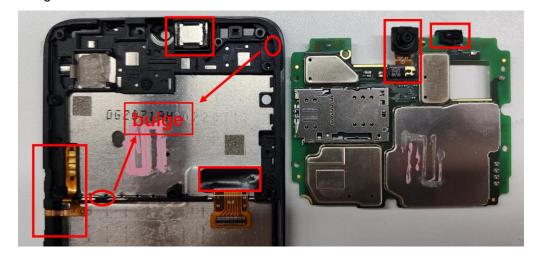




5) Assemble the cameras and matching rubbers to the Main PCBA according to the following tag tips.Pay attention to the direction of the Front 8M Rubber Cover.



6) Before assembling the Main PCBA, assemble the <u>P-sensor Rubber Cover</u>, <u>8M Camera</u> and its rubber. Pay attention to the direction of the <u>Front 8M Rubber Cover</u>. Assemble the <u>Side key furnished FPC</u> and <u>Receiver</u> on the Furnished Underfilling. The marked bulges should be taken care of during the installation of the Main PCBA.

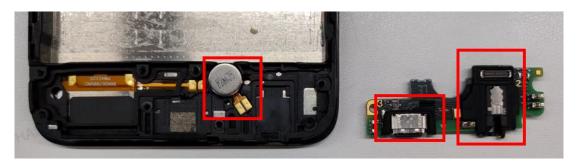


7) Before assembling the Sub PCBA, assemble the <u>Coin Vibrator</u>, <u>Audio jack rubber</u> and <u>USB rubber</u>.

Note: Part of the RF Cable3 (Blue) is under the Sub PCBA.

Rev.: 1.0

TCL 40 R 5G\_T771K \_H1 Service Manual V1.0



8) After assemble the Main PCBA, install the <u>Screw</u> (PM1.4×0.454×L2.5mm, screw torque: 0.8±0.1 kgf.cm).



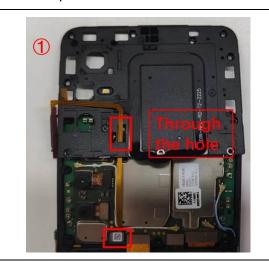
9) Installation sequence: Main PCBA-> RF Cable3 (Blue) -> Sub-PCBA -> RF Cable2 (Black) -> RF Cable1 (White). Pay attention to the trace of the RF Cables and the position of the RF Connector.



10) Paste the Main sub Furnished FPC, as shown in the photo.

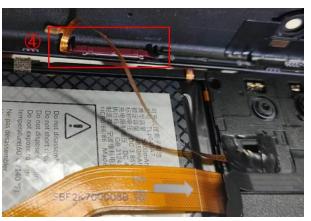


11) Connect the <u>Fingerprint Module</u> to the Main PCBA. Use <u>FP FPC Tape</u> to hold the Fingerprint Module in place.









12) Before install the screws, assemble the <u>rubbers</u> and <u>P-sensor Mylar</u> on Furnished UPPER Frame

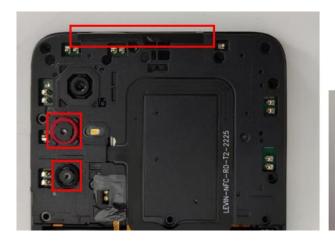
Rev.: 1.0 TCL 40 R 5G\_T7

TCL 40 R 5G\_T771K \_H1 Service Manual V1.0

Page: 20/25

Confidential and proprietary information contained in this repair guide is subject to change without notice.

and assemble <u>ANT Conductive Material</u> on Furnished Bottom Frame. (**Note:** Do not lose or forget to install ANT Conductive Material, otherwise the mobile phone signal will deteriorate.)

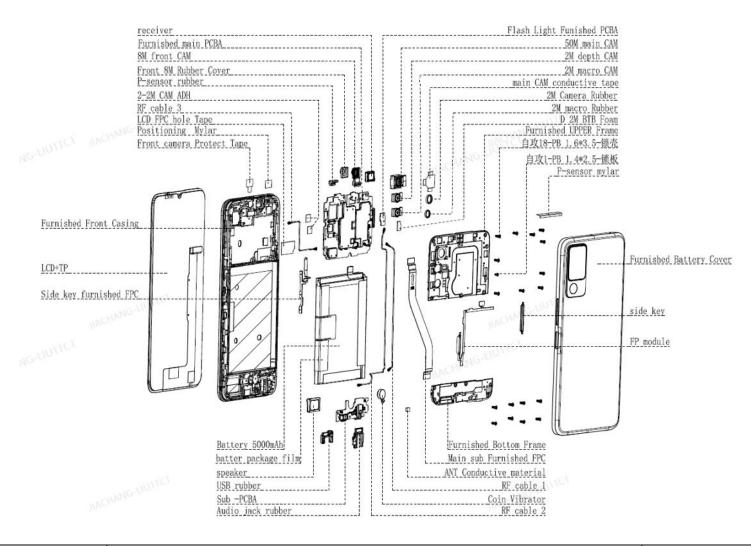




13) Install the screws (PB1.6x0.5PxL3.5 mm, screw torque: 0.9±0.1 kgf.cm).



## 10 Explode View



Rev.: 1.0

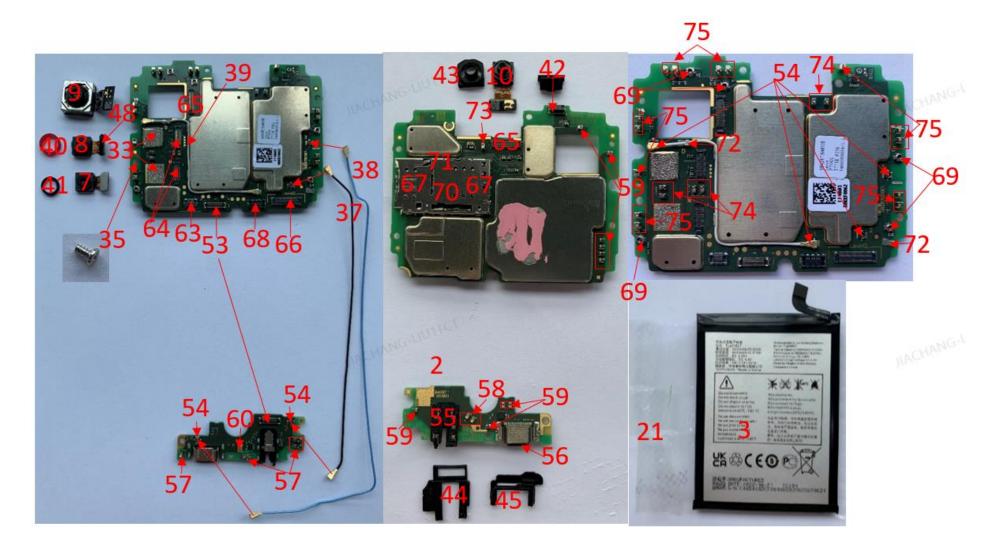
TCL 40 R 5G\_T771K\_ Service Manual V1.0

Confidential and proprietary information contained in this repair guide is subject to change without notice.

Distribution, transfer, copy of any content or data in this document without the written permission of TCL is strictly prohibited.

## 11 Split View





Rev.: 1.0	TCL 40 R 5G_T771K_ Service Manual V1.0	Page: 24/25		
Confidential and proprietary information contained in this repair guide is subject to change without notice.				
	Distribution, transfer, copy of any content or data in this document without the written permission of TCL is strictly prohibited.			

31

Furnished UPPER Frame

47

P-sensor Mylar

Tag No.	Description WACHA	Tag No.	Description	Tag No.	Description WACHAIN	Tag No.	Description
1	Furnished Underfilling	32	Furnished Bottom Frame	48	2M BTB Press Foam	65	BTB Connector
2	Sub PCBA	33	2M CAM ADH	49	50M rear CAM conductive tape	66	BTB Connector
3	LI-Polymer Battery	34	ANT Conductive Material	50	Side key furnished FPC	67	SIM Card Connector
4	Fingerprint Module	35	Screw	51	Main sub Furnished FPC	68	BTB Battery Connector
5	Receiver	36	Screw	52	FP FPC Tape	69	RF Switch
6	Speaker	37	RF Cable2	53	BTB Connector	70	Memory Card Block
7	Macro Camera	38	RF Cable3	54	RF Connector	71	SIM card connector Holder
8	Depth Camera	39	RF Cable1	55	Audio Jack	72	RF cable clip
9	50M Camera	40	2M Camera Rubber	56	Type C Connector	73	Antenna Spring
10	8M Camera	41	2M Macro Rubber	57	Antenna Spring	74	Antenna Spring
11	Furnished Battery Cover	42	P-sensor Rubber Cover	58	Antenna Spring	75	Antenna Spring
21	Battery Tape	43	Front 8M Rubber Cover	59	Antenna Spring	76	Humidity sticker
22	Flash PCB Tape	44	Audio jack rubber	60	MIC	77	REC FPC
23	Speaker Hole Foam	45	USB rubber	61	Flash Light Funished PCBA		
30	Coin Vibrator	46	LCD FPC hole Tape	63	BTB Connector	1	

### -END OF DOCUMENT-

64

BTB Connector