ThinkReality VRX Service Guide

Repair Centers and Service Providers

May 11th, 2023



ThinkReality VRX Service Guide (support.lenovo.com/solutions/HT515274)

- Describes the service process for repair center and service providers

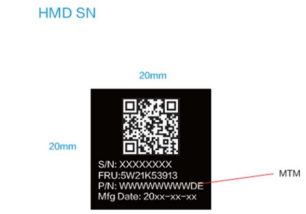
ThinkReality VRX Service Kit (https://support.lenovo.com/us/en/downloads/DS563239)

- For repair centers and service providers
- A Windows 10 app that includes:
  - Diagnostics
  - Serial Number Update

ThinkReality VRX (12DE, 12DF) Introduction:

- Has “swap” service model, not a “repair” service model.
  - No “supplier warranty” (no warranty on the VRX service parts), No Return to Vendor (RTV).
- VRX is an Android device. (Android 12 with Over-the-Air updates).

- VRX Serial Number (S/N) in Device Settings and is also located behind the **Rear Pad**.





For more information:

- ThinkReality VRX Overview and Service Parts (***support.lenovo.com/solutions/vrx***)
- ThinkReality VRX FAQ's and Troubleshoot (***support.lenovo.com/solutions/HT515273***)

Service Parts:

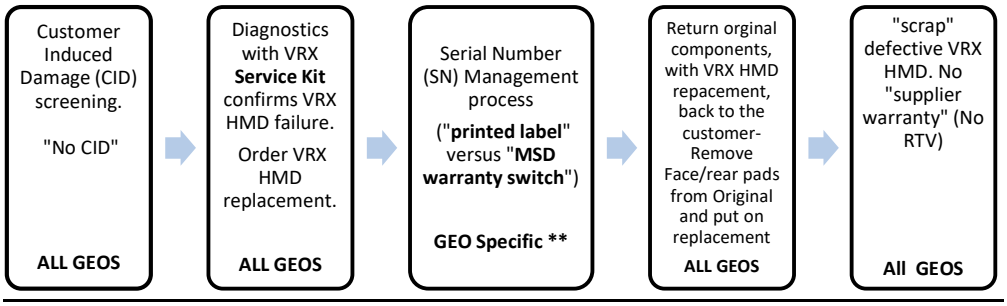
Service Parts information is available at: ***support.lenovo.com/solutions/vrx***

Requirements for the ThinkReality VRX Service Process

- ThinkReality VRX HMD (**5W21K53913**)
- ***ThinkReality VRX Service Kit*** (Win10 app) at: ***https://support.lenovo.com/us/en/downloads/DS563239***
- VRX USB-C Cable (**5C11K53908**)
- Compatible Windows 10 PC system with a USB-C port.

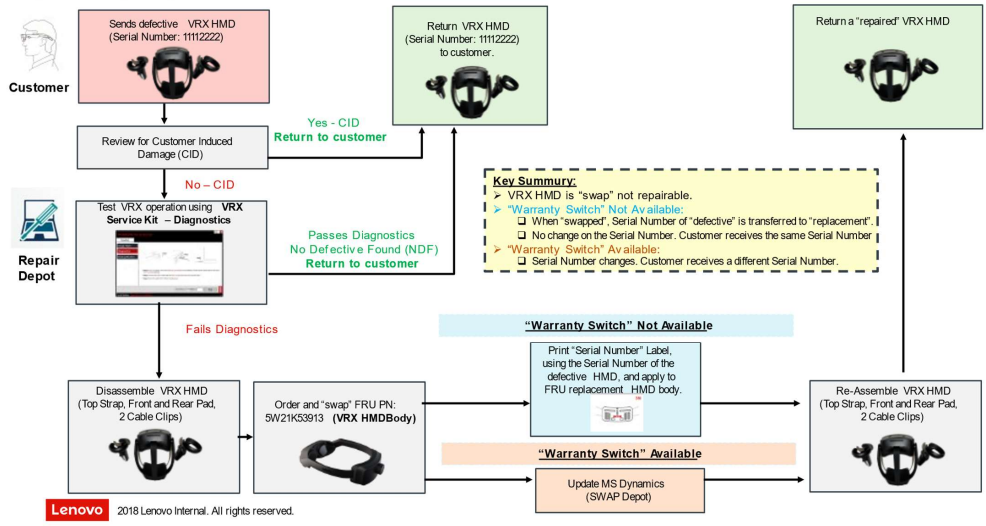
Overview of the Service Process:

The following is the service process for a "**defective**" ThinkReality VRX HMD (**5W21K53913**).

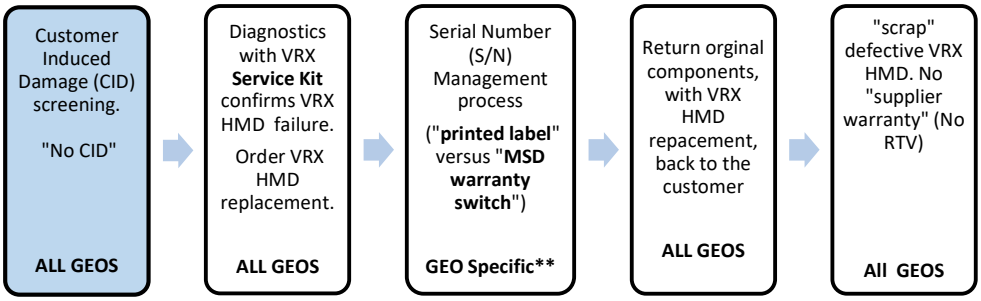


- Review for Customer Induced Damage (CID)
  - Yes: Return ThinkReality VRX to customer / quote for billable replacement.
  - No:
    - With **ThinkReality VRX Service Kit** and an **VRX USB-C Cable** (**5C11K53908**)
      - Run Diagnostics
        - Fails:
          - Order and “swap” VRX HMD (**5W21K53913**)
          - S/N Management (use <u>one</u> of the following) process:
            - “MSD Warranty Switch”: Use MS Dynamics (SWAP DEPOT) . (**North America Process to use)**.
            - “Printed S/N label”.
          - Return original components with VRX HMD replacement back to the customer.
          - “scrap” defective VRX HMD. No “supplier warranty”. (No RTV)
        - Pass:
          - Return ThinkReality VRX to customer

Repair Depot procedures: Detailed Process



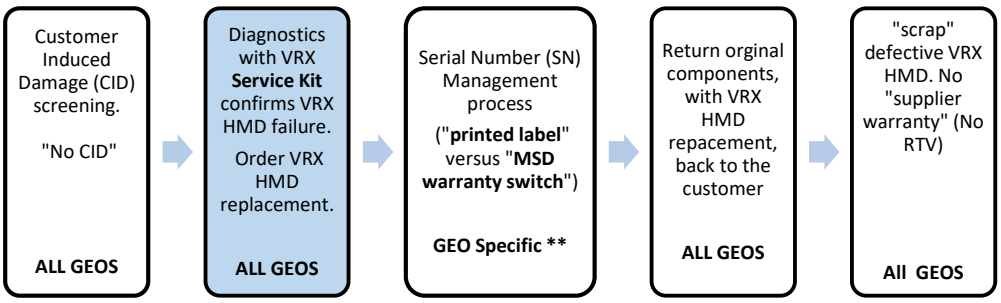
Customer Induced Damage (CID) Screening



CID includes any obvious crack, broken, bent, burned on the VRX HMD.

If the VRX HMD has CID, return VRX HMD to customer.

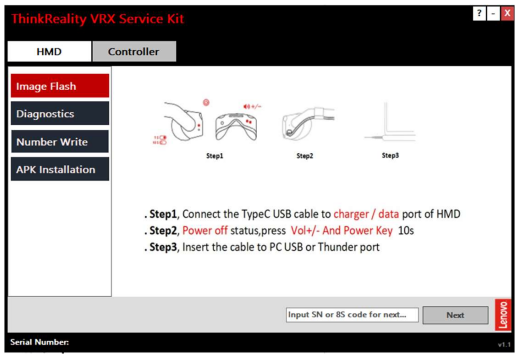
Diagnostics with ThinkReality VRX Service Kit, Order VRX HMD Replacement



Diagnostics:

1. Charge the VRX HMD. Look for the LED indicators…
2. Start with the VRX HMD off
3. Simultaneously press the Volume "-" and Power Button for 5 seconds. May need to repeat 3 times.
   - Will see the BIOS Screen
4. Open up ThinkReality VRX Service Kit.
5. Connect USB-C to PC and HMD.
6. Select **Diagnostic**, add the **VRX Serial Number** and click **Next**.
7. Push Power Button and the HMD will start up.
8. Wait for Device Status turns Green and Click "Start".
9. Pay Attention and follow any prompts.
10. At the end of test, Lower left Corner look for Pass/Fail.
11. If failed, click on Log Tab ad Look for Failure.

Test the **ThinkReality VRX** HMD by connecting to a **compatible PC** system with **the ThinkReality VRX Service Kit** and following the **ThinkReality VRX Service Kit** "***Diagnostics***" instructions.



Step 1: Test using the ***CUSTOMER*** VRX HMD, and the ***CUSTOMER*** *VRX* USB-C cable.

HMD	USB-C Cable	"Diagnostics"
Customer	Customer	**Pass:** • Return VRX HMD to customer
		Fail: • Remove **customer USB-C cable** and replace with **repair center USB-C cable**. • Proceed to **Step 2**.

Step 2: Test using the ***CUSTOMER*** VRX HMD, and the ***REPAIR CENTER*** VRX USB-C cable.

HMD	USB-C Cable	"Diagnostics"
Customer	Repair Center	**Pass:** • Defective **customer USB-C Cable**. • Customer needs a USB-C cable (5C11K53908) replacement.
		Fail: Defective VRX HMD. • Order replacement VRX Glass Body (5W21K53913) • Begin the VRX HMD "SWAP" Process.

When the VRX HMD are defective, and needs replacement (swap), perform the following:

1. Remove Front Pad, Rear Pad, Top Strap and Prescription Lens Insert Holder:
    - ***NOTE: Keep these parts together, along with the customer's VRX USB Cable.***
    - ***These parts will be attached to the replacement ThinkReality VRX HMD before returning the device to the customer.***
2. Order replacement **VRX HMD** Service Part Number (**5W21K53913**).

Remove Face Pads, Rear Pad, Top Strap and Cable Clips.

The **ThinkReality VRX HMD** (**5W21K53913**) may have the following attached parts:

- VRX Front Pad (Wide**: 5A71K53907,** Narrow**: 5A71L74364**)
- VRX Read Pad (**5A71K53919**)
- VRX Top Strap (**5A71K53909**)
- VRX Lens Insert Holder with prescription lenses (**Not Available**)
- VRX USB-C cable (**5C11K53908**)
- VRX Cable Clips (2) (**5A71K53915**)

All these parts:

- Can be removed.
- ***Must be saved and kept together.***

- Are attached to the replacement **VRX HMD** (**5W21K53913**), before returning the VRX to the customer.



Face Pad Removal:

- Grab the Front Pad, gently pull from the Bottom and out from **VRX HMD**.



Rear Pad Removal:

- Grab the Rear Pad, gently pull from the Bottom and out from the **VRX HMD**.



Removable Rear Pad

VRX Cable Clips (2)



Top Strap Removal:

Remove the Front and Rear Pads, pull out Top Strap.

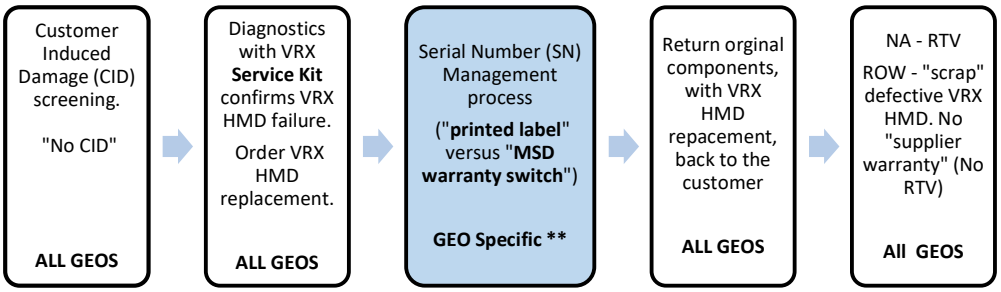


Top Strap

Order replacement VRX HMD service part number:

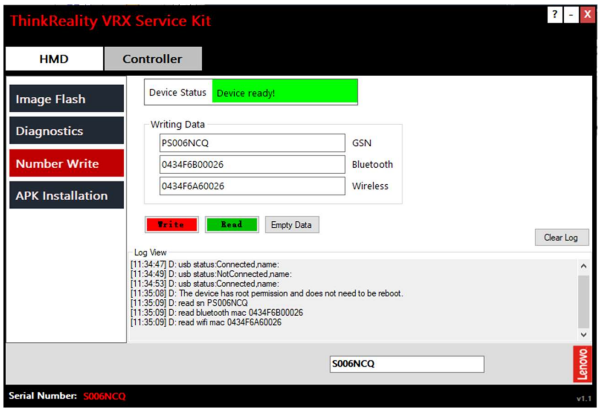
Order replacement **VRX HMD** Service Part Number (**5W21K53913**)

Serial Number (SN) Management Process (Geo Specific**):

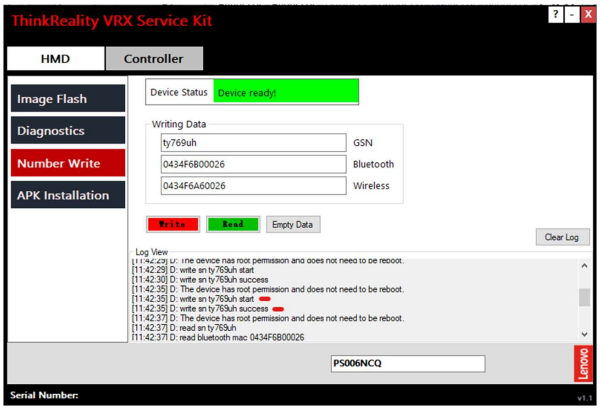


How do you update the SN, Bluetooth and Wireless?

Commented [EP1]: Edmund updated.

1. Start with the HMD off.
2. Push and Hold Volume "-" and Power Button for 5 seconds, may need to repeat 3 times.
3. Open up ThinkReality VRX Service Kit (Run as Administrator).
4. Connect USB-C to PC and HMD.
5. Select Number Write, add SN of HMD.
6. Push Power Button and the HMD will start up.
7. Wait for Device Status turns Green.
8. Read GSN (SN) of HND, Bluetooth and Wireless
    i. Click on READ to get GSN (SN), Bluetooth and Wireless.
    ii. 

9. Update GSN (SN), Bluetooth and Wireless of HMD
    - Click on Empty Data
    - Type in the required change in the required field.

- Click on Write
- In the Log will say, ": write sn $$$$$$$$ start then "write sn $$$$$$$$ success".
  - 

- Restart HMD and go into About to verify update.
  - 

- If Successful, Shutdown HMD and close Diagnostics.

The Serial Number (SN) management process varies by region/country.

- EMEA: Requires printing a SN label ("**Printed Label**").
- U.S., Canada: "**MSD Warranty Switch**"

<u>For countries (EMEA, AP) that do not have "MSD Warranty Switch", must print a SN label:</u>
This process has the customer receiving the "same" VRX SN that was sent to repair center.

- Transfer SN of “**defective VRX**” to the “**customer replacement VRX**” SN by printing a SN label. The VRX SN is located behind the rear pad.



For countries (North America) that have “MSD Warranty Switch”:
This process has the customer receiving a “different” VRX SN than was sent to repair center.

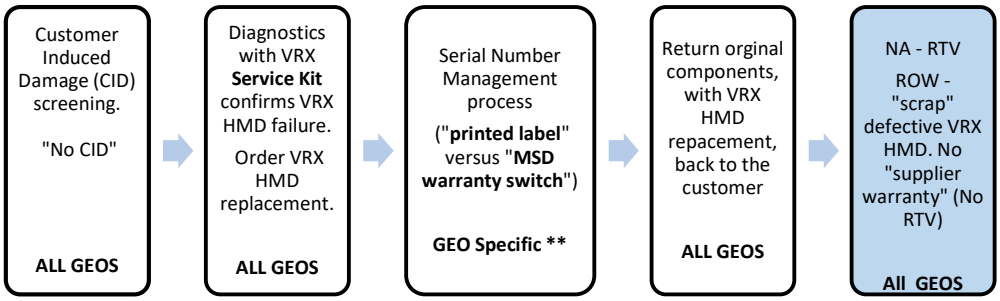
- Perform warranty switch from “defective” product SN to “replacement” product SN in repair center (vendor) shop floor system.
- Send signal with updated warranty information from shop floor system to MSD (MS Dynamics)

Return original components, with VRX HMD replacement to customer

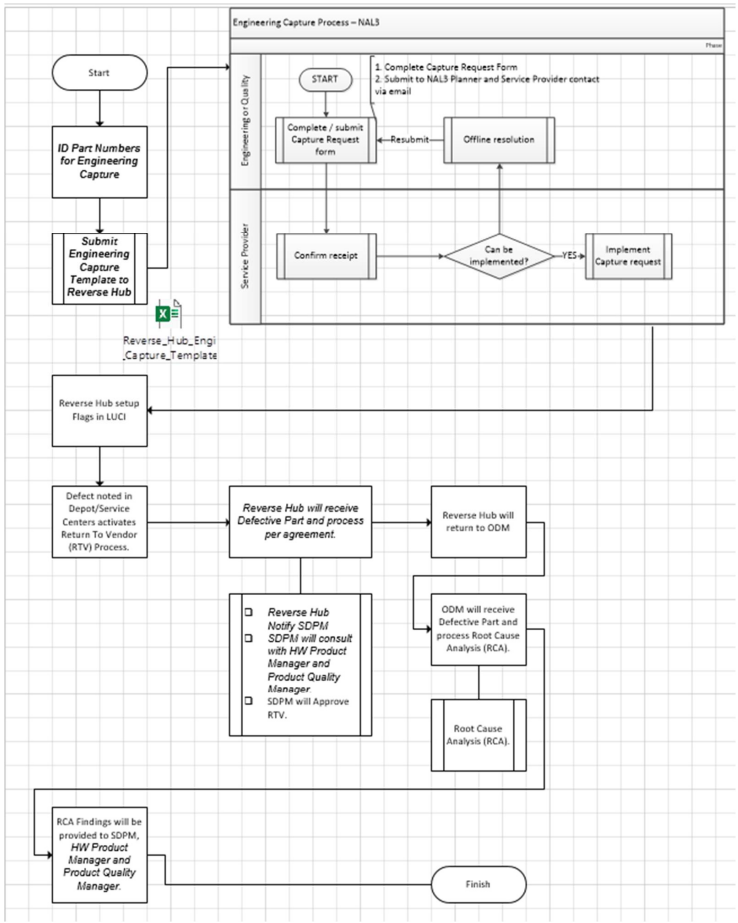
Customer Induced Damage (CID) screening. "No CID" **ALL GEOS**	Diagnostics with VRX **Service Kit** confirms VRX HMD failure. Order VRX HMD replacement. **ALL GEOS**	Serial Number (SN) Management process ("**printed label**" versus "**MSD warranty switch**") **GEO Specific ****	Return orginal components, with VRX HMD repacement, back to the customer **ALL GEOS**	NA - RTV ROW - "scrap" defective VRX HMD. No "supplier warranty" (No RTV) **All GEOS**

Assemble (Face Pad, Rear Pad, Top Strap, USB-C cable, and other VRX components) and send the VRX replacement to customer.

“Scrap” defective VRX HMD. No “supplier warranty”.



- The VRX HMD does not have "**supplier warranty**"
- As a result, NA - RTV
- ROW - "scrap" defective VRX HMD. No "supplier warranty" (No RTV)
- Note: North America U.S. depot will return headsets during first few months for Failure Analysis (FA).


Engineering Capture Process – NAL3
Start
ID Part Numbers for Engineering Capture
Submit Engineering Capture Template to Reverse Hub
Reverse_Hub_Engi
_Capture_Template
Engineering or Quality
START
1. Complete Capture Request Form
2. Submit to NAL3 Planner and Service Provider contact via email
Complete / submit Capture Request form
Resubmit
Offline resolution
Service Provider
Confirm receipt
Can be implemented?
YES
Implement Capture request
Reverse Hub setup Flags in LUCI
Defect noted in Depot/Service Centers activates Return To Vendor (RTV) Process.
Reverse Hub will receive Defective Part and process per agreement.
Reverse Hub will return to ODM
Reverse Hub Notify SDPM
SDPM will consult with HW Product Manager and Product Quality Manager
SDPM will Approve RTV.
ODM will receive Defective Part and process Root Cause Analysis (RCA).
Root Cause Analysis (RCA).
RCA Findings will be provided to SDPM, HW Product Manager and Product Quality Manager.
Finish