

GEMORO[®] UltraTester 3+

SIMULTANEOUS DIAMOND,
MOISSANITE & WHITE
SAPPHIRE TESTER

**WITH ADVANCED
PATENTED UV-F1
IDENTIFICATION
TECHNOLOGY[®]**



READ BEFORE USING

Some moissanite, including the Forever One or “F1” moissanite that was introduced in late 2015, will incorrectly be identified as diamond when tested on a traditional combination electrical and thermal conductivity tester.

The **GEMORO ULTRATESTER 3+** uses **PATENTED UV-F1 TECHNOLOGY®**, and is specifically calibrated to identify this faint electrical conductivity property.

Be aware that BODY OIL is also electrically conductive. Due to the tester’s enhanced sensitivity for electrical conductivity, dirty diamonds may potentially test as moissanite with this device. To avoid false/positive readings on dirty diamonds, **ALWAYS CLEAN THE STONE** by simply wiping the body oil off on the provided **STONE TESTING CLOTH** prior to performing a test. Periodically, also clean any accumulated body oil off the probe tip by gently rubbing it on a piece of uncoated printer or copy paper—SEE MANUAL.



Scan this QR code for our **ULTRATESTER 3+** instructional video.

NATURAL FANCY COLOR DIAMONDS & TREATED FANCY COLOR DIAMONDS

Because some natural fancy color diamonds and some treated fancy color diamonds are electrically conductive, the **GEMORO ULTRATESTER 3+** should ideally be used on colorless stones only.

This limitation applies to all testers that utilize thermal and electrical conductivity methods for testing the authenticity of the stone.

LAB GROWN DIAMONDS

HPHT lab grown diamonds may test as moissanite or diamond (since they are diamonds) when using this device. HPHT lab grown diamonds may have trace amounts of the boron that is used in the growing process, which like moissanite is also electrically conductive. These diamonds may also set off the testers metal alert feature. It is recommended to always also inspect the girdle of any questionable stone to look for the laser inscription noting the lab report number with an LG prefix, identifying it as a lab grown diamond.

NEED HELP? Call **GEMORO** at **800.527.0719** for immediate assistance.

The **GEMORO ULTRATESTER 3+** is the ultimate tester for diamond fraud protection! The **ULTRATESTER 3+** features exclusive UV-F1 TECHNOLOGY® and is capable of identifying the widest range of the electrically conductive moissanite material available, including the super-low electrically conductive Forever One moissanite.

OPERATING PROCEDURE & OWNERS MANUAL

Congratulations on your purchase of the **ULTRATESTER 3+** from **GEMORO** Superior Instruments, the most trusted name in gemological instrumentation for the jewelry industry. You've made a great choice. Built upon the foundation of the second generation and most popular tester to date, the **ULTRATESTER 3+** offers even more. Separate diamonds (natural/lab) from moissanite, white sapphire, CZ, and other known diamond simulants with confidence.

IMPORTANT: PLEASE BE CERTAIN TO READ THE FOLLOWING COMPLETELY BEFORE USING.

THERMAL CONDUCTIVITY & ELECTRICAL CONDUCTIVITY

TESTING METHODS: The recognized method for separating diamonds from all known diamond simulants (except moissanites and lab grown or synthetic diamonds) is the thermal conductivity test. The thermal conductivity test works consistently well because the thermal (or heat) conductivity property of a diamond is significantly greater than all other

gemstones (except moissanites and lab grown diamonds). White sapphires are also thermally conductive, yet not as conductive as diamonds or moissanites.

The recognized, most practical way for separating the vast majority of moissanite gemstones from diamonds is the electrical conductivity test; since moissanite conducts electricity, while diamonds, as well as other known diamond simulants do not. It should be noted that while moissanite gemstones are electrically conductive, in some there might only be a small and varying degree of electrical conductivity. With the advanced PATENTED UV-F1 TECHNOLOGY® utilized in the **ULTRATESTER 3+**, you can identify the widest range of electrically conductive moissanite gemstones available, including the super-low electrically conductive Forever One moissanite.

Other than some rare natural and natural fancy color diamonds, as well as some lab grown or synthetic diamonds (HPHT grown diamonds), natural white diamonds do not conduct electricity. If a white stone does not conduct heat or electricity, it will be determined to be more than likely a common CZ, or another diamond simulant. **Because body oil is electrically conductive and the stone being tested may not be clean, any test result that indicates moissanite, especially on smaller size stones that haven't been cleaned, should**

be suspect. They should then be cleaned with the GEMORO Stone Testing Cloth (or a dry and clean microfiber or cotton cloth or paper towel), and then retested. DUE TO THE ELECTRICAL CONDUCTIVITY PROPERTY FOUND IN THE BORON USED IN THE PRODUCTION OF HPHT LAB GROWN DIAMONDS, WHEN THE ULTRATESTER 3+ TESTS THESE STONES THEY MAY TEST AS EITHER MOISSANITE OR THE ETAL ALERT FEATURE MAY BE ACTIVATED.

The **GEMORO ULTRATESTER 3+** utilizes both the thermal conductivity and electrical conductivity testing methods in one seemingly simultaneous test, and it will quickly help in identifying and separating the stone in question. The **ULTRATESTER 3+** is an advanced, technologically based tool and it should be used as a helpful device only. The **ULTRATESTER 3+** is not meant to replace the trained gemologist.

NATURAL FANCY COLOR DIAMONDS & TREATED FANCY COLOR DIAMONDS

Because some natural fancy color diamonds and some treated fancy color diamonds are electrically conductive, the **GEMORO ULTRATESTER 3+** should ideally be used when testing colorless stones only. This limitation applies to all testers that utilize thermal and electrical conductivity methods for testing the authenticity of the stone.

IMPORTANT DISCLAIMER: The **ULTRATESTER 3+** is a helpful screening instrument that by design should be used as a quick method for helping to identify diamond, moissanite, and white sapphire. The **ULTRATESTER 3+** should not be used as the final method for determining the authenticity or identity of the stone being tested. The final determination of the identity of any stone, whether genuine or not, should only be made by a trained gemologist. Neither **GEMORO** nor any of its affiliates, dealers, or distributors shall be held liable for any loss and/or damages associated with the use of the **ULTRATESTER 3+**. No warranties exist with respect to the **ULTRATESTER 3+** or its use other than those expressly contained herein. All other warranties of any kind or character whatsoever, whether expressed or implied, including warranties of merchantability or fitness for a particular purpose, are hereby disclaimed and are excluded from the warranties hereunder. In the event that a claim is made with respect to the **ULTRATESTER 3+** or its use, the maximum liability of **GEMORO**, and its affiliates, dealers, and distributors shall be the amount paid for the **ULTRATESTER 3+**.

PLEASE READ BEFORE USING THE PROVIDED NiMH RECHARGEABLE BATTERIES: Before using the NiMH rechargeable batteries that have been provided with your tester, the batteries should be fully charged as indicated by the small round LED indicator next to

the power button glowing green when the **ULTRATESTER 3+** is plugged in. While the batteries are being charged, the tester may be used as desired while powered by the AC current.

CONDITIONS FOR IDEAL OPERATION

1. USE BATTERY POWER ONLY when testing a stone in order to optimize the PATENTED UV-F1 moissanite detection technology.
2. The **ULTRATESTER 3+** should be used in the following environmental conditions. Both the tester and the stone being tested must be the same temperature. By not following these instructions you risk compromising the accuracy of the test.
 - a. Temperature: 65°F-80°F (18°C-27°C)
 - b. Air Relative Humidity: 45%-75%
3. The stone being tested must be dry. If the surface of the stone is wet or has any type of surface moisture it may not test correctly.
4. The stone being tested must be clean. Aside from obvious visible dirt that may be present on the stone, there may also be hand, body oil or other contaminates on the stones surface that may not be visible and which could impact the accuracy of the test. ALWAYS be certain to clean the stone being tested with an ultrasonic or steamer cleaner or other appropriate means, and then thoroughly dry it and/or remove any cleaning chemicals remaining on the stone prior to testing. A **GEMORO**

STONE TESTING CLOTH has been provided with each **ULTRATESTER 3+** and for convenience it should be used to wipe off any body oil from the stones surface prior to testing.

5. It is imperative that the probe tip be cleaned regularly or ideally prior to performing a test. Please be aware that there may be body oil or other contaminates on the probe tip that may not be visible, which could impact the accuracy of the test. To clean the probe tip, take a piece of uncoated white printer or copy paper and lay it on a table, counter or other flat surface. Place the tester at a 90-degree angle against the paper with the probe tip lightly touching it. Apply enough pressure to gently depress the retractable probe tip slightly inside the housing, while carefully rubbing the probe tip on the paper in a forward motion a few times to clean it. Repeat this process routinely or prior to testing each time to ensure the cleanliness of the probe tip.

6. Always allow the stone being tested to cool off for 5-10 seconds prior to retesting. Blowing on the stone is recommended and will speed up this process. Please be aware that if while testing a stone the **ULTRATESTER 3+** light pipe turns pink, unless it is a white sapphire or sapphire watch crystal, odds are that the stone has been overheated from prolonged exposure to the probe tip and, therefore, you must wait for the stone to cool off prior to retesting.

ULTRATESTER 3+ FEATURES

1. Helps to identify diamonds, moissanites and white sapphires, including genuine sapphire watch crystals. The test results are shown via its PATENTED color-coded light pipe and unique sounding beep tones.
2. Quickly assists with testing most any size diamond, moissanite and white sapphire, whether mounted or loose.
3. The sleek and ergonomic shape comfortably rests in and on your hand when properly held, and the tester has PATENTED intuitive finger grip pads for increased user-friendliness and ease of use.
4. The LED illuminator and UV fluorescence detector are positioned under the probe tip. The LED Illuminator is a super bright LED that illuminates the stone being tested and, since it is a UV LED, it also helps to identify fluorescence in diamonds.
5. The tester is equipped with a retractable probe tip designed to protect the probe tip if excessive force is used while testing or if it is accidentally dropped.
6. The tester housing is made from durable ABS and is covered with **GEMORO's** exclusive rubberized paint that provides an even greater grip.
7. Powered by (3) supplied 1.5V AAA NiMH rechargeable batteries and conveniently charged by a micro-USB C adapter. The rechargeable batteries

may be substituted with AAA alkaline batteries if a suitable power outlet is unavailable to recharge the NiMH batteries.

8. The tester is also designed to have its batteries charged with the optional **GEMORO ULTRADOCK 3** charging station accessory (Item #0772-C). For convenient charging, we recommend ordering the optional **ULTRADOCK 3** charging stand with the **ULTRATESTER 3+**.

9. Includes a **GEMORO** protective ballistic nylon carrying case, aluminum loose stone holder, **GEMORO TEST STONE CLOTH**, as well as (3) user-replaceable AAA NiMH rechargeable batteries, a universal multi-voltage 100V-240V AC adapter/charger cube with premium micro-USB C cord.

10. The tester is also designed to be used with the optional handy **PATENTED GEMORO TEST STONE MAGNIFIER** attachment, which when clipped onto the tester's tip area allows the user to more easily see and test small diamonds without accidentally touching the setting or prongs (Item #0780).

11. The tester has an auto-off function to preserve the battery life and it will automatically turn itself off after a period of 5 minutes of non-use. After powering down, if you wish to resume using the **ULTRATESTER 3+**, simply touch the tester's power button and within seconds the tester will turn itself back on again.

12. Glowing LED Light Pipe and Probe Tip Indicator. Innovative PATENTED colored LEDs visually indicate:

GREEN = Diamond **A**

BLUE = Moissanite **B**

PINK = Sapphire **C**

RED = Metal Alert **D**

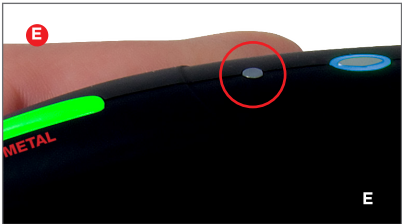


13. LED Indicator. The round LED indicator is located next to the oval shaped power button. Colored LEDs visually indicate **E**:

GREEN = Fully Charged Batteries

YELLOW = Charging Batteries

RED = Low Batteries



Battery LED Indicator

14. Bright green LED illuminated power button.

15. Pocket-sized and portable.

16. Simple to operate.

SPECIFICATIONS

- Working Voltage: DC 1.2V (3) x AAA NiMH, DC 1.5V, (3) x AAA alkaline batteries or its universal voltage 100V-240V AC adapter cube.
- Probe Tip Warm-Up Time: Approximately 25 seconds.
- NiMH and Alkaline Battery Working Time: Approximately two hours of continuous use.
- Working Temperature: 65°F-80°F (18°C-27°C).
- Air Relative Humidity: 45%-75%.
- Net Weight: Approximately 100g (including batteries).

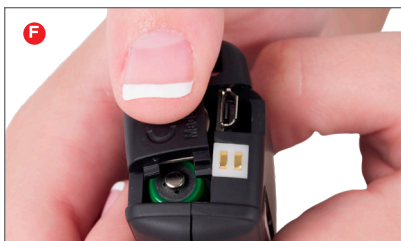
CAUTION: DO NOT disassemble the **ULTRATESTER 3+** other than to replace the batteries or the warranty will become void.

- UV EYE HAZARD - Avoid looking directly into the UV LED.

OPERATION

1. NiMH Battery Installation: Install the (3) supplied NiMH rechargeable batteries by first removing the battery compartment door located on the end of the **ULTRATESTER 3+** by using your thumb to slide the textured area down and in the direction of the arrow **F**. Then correctly insert the NiMH batteries into the battery compartment. The correct polarity positioning for each battery is indicated on the side of the battery compartment wall, which shows the positive (+) and negative (-) polarity **G**. Always be certain that the batteries are correctly positioned in the battery compartment holder, or the tester will not power on. Then carefully replace the battery compartment door. To increase the life of the NiMH rechargeable batteries, fully charge the batteries prior to use.

If you wish to replace the NiMH batteries with high quality alkaline batteries, follow the same procedure as outlined above, after first removing the NiMH batteries and then inserting alkaline batteries.



Tester Battery Compartment



Battery Polarity

2. The **ULTRATESTER 3+** batteries may be charged by placing it in the optional **ULTRADOCK 3** battery charging station with the USB C power cord plugged into the rear of the charging station or by plugging its supplied USB C power cord into the rear of the tester and the USB C adapter cube directly into a wall outlet. Once the tester is connected to the AC adapter or the charging station, the tester will switch to its DC power mode. The tester's built-in Intelligent Charging Circuit "ICC" will automatically identify the type of batteries installed (NiMH rechargeable batteries or alkaline batteries). If alkaline batteries are

installed, the circuit will automatically cut off the power supply to the batteries so that the alkaline batteries will not be recharged. If NiMH rechargeable batteries are installed, the batteries will be recharged and at the same time the tester may be used with the AC adapter.

3. To turn the **ULTRATESTER 3+** ON press the oval shaped power button, located on the top center edge of the tester **H** and hold it down for approximately one second, then release the button. The power button's green LED indicator will begin flashing. The warm-up time is approximately 25 seconds. When it has fully warmed up, the flashing green LED light will become solid, and a beep tone will be sounded. You may now begin using the tester.

4. To turn the **ULTRATESTER 3+** OFF, press the oval shaped power button once again **H** and hold it down for approximately one second, then release the button. The power button's blue LED indicator will no longer be illuminated indicating it has been turned OFF. If the **ULTRATESTER 3+** has been left on for a period of approximately 5 minutes without being used, it will automatically turn itself OFF.



Power Button


5. The **ULTRATESTER 3+** is also equipped with a PATENTED color-coded light pipe and probe tip cone indicator. This line-of-sight colored indicator allows the user to easily see the test results while keeping their eyes on the stone being tested.

GREEN = Diamond

BLUE = Moissanite

PINK = Sapphire

RED = Metal Alert

6. **Prior to using the ULTRATESTER 3+, be certain to REMOVE THE WHITE CAP at the front end of the tester that serves to protect the probe tip from accidentally being bent or broken** . The cap may be easily removed by simply applying a minimal amount of pressure to the sides of the cap, as you hold it between your thumb and forefinger. Then gently pull it out and off. Always replace the cap when the **ULTRATESTER 3+** is not in use.



Probe Tip Cap

7. To properly hold the **ULTRATESTER 3+**, it is important to grasp the tester similarly to how you'd hold a writing pen or pencil, but with your thumb and forefinger touching the PATENTED finger pads located on either side of the

tester **J**. This will allow you to easily manipulate the tester and make the best contact with the stone being tested. While holding the tester, its ergonomic shape allows it to comfortably rest on the top of your hand. If you hold the tester without touching the finger pads, the metal alert feature will not function.



How To Properly Hold The Tester

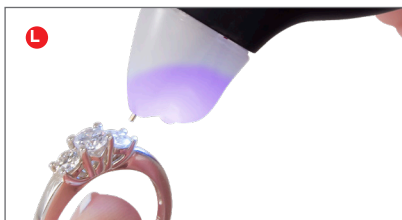
8. The LED Illuminator allows the user to easily see the stone being tested to confirm that only the stone is being tested and that the setting or prongs are not accidentally being touched. This LED is a special UV type **K** that may also be used to identify the fluorescence characteristic found in approximately 25-30% of all diamonds. You may also attach the optional **GEMORO TEST STONE MAGNIFIER** (Item# 0780) to the **ULTRATESTER 3+** by clipping it onto the end of the tester's probe tip cone. This will allow you to see a magnified view of the stone being tested and help ensure proper contact with the stone while not accidentally touching the setting or prongs.



Fluorescing Stone

9. TESTING MOUNTED STONES:

With one hand, ALWAYS hold the ring (or setting) that contains the stone you wish to test and in your other hand hold the ULTRATESTER 3+ L. NEVER TEST A RING WHILE PLACED IN A RING BOX OR IT MAY NOT TEST CORRECTLY. Quickly, yet firmly touch the testers probe tip to the stone's table, while being certain not to allow the probe tip to touch the metal setting or prongs. While firmly depressing the spring-loaded probe tip all of the way in until you hear a click sound, touch the stone just long enough to allow the tester to indicate a reading (1 or 2 seconds) and then take the probe tip away from the stone. **Be aware that a stone that has been overheated by prolonged exposure to the probe, or from body heat due to wearing or the environment, may not test accurately.** Always allow the stone and setting a few seconds to cool off to room temperature before testing. Blowing on the stone will speed up this process.



Testing A Mounted Stone

10. Testing Loose Stones: Place the loose stone in the supplied aluminum loose stone testing plate positioned with the stones culet facing down into the recessed hole in the testing plate. Then hold the testing plate steady with one hand, as this will also allow the electrical current to pass through your body, permitting the tester to function as designed and test properly. While holding the **ULTRATESTER 3+** in your other hand, firmly touch the probe tip to the loose stone's table until the test result is indicated **M**. **YOU MUST FOLLOW THIS PROCEDURE WHEN TESTING LOOSE STONES OR THE TESTER MAY NOT TEST CORRECTLY. DO NOT ATTEMPT TO TEST LOOSE STONES WHILE HOLDING THEM IN YOUR FINGERS OR THE TESTER MAY NOT TEST CORRECTLY.**



Testing Loose Stones With Testing Plate


11. The probe tip must be cleaned routinely to ensure proper contact with the stone being tested. To clean the probe tip, take a piece of uncoated white copy or printing paper and lay it on a table or counter or other flat surface. Place the tester in a 90-degree angle to the paper with the probe tip lightly touching the paper. Apply enough pressure to gently depress the retractable probe tip slightly inside the housing. Then carefully rub the probe tip in one direction on the paper to clean it.

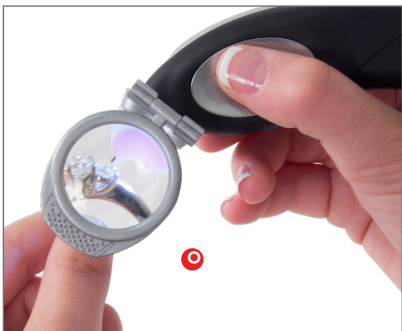
12. USING THE OPTIONAL

ULTRADOCK 3: Place the charging station in a convenient location near where it will be used such as on a desk, showcase or repair area. Take the testers micro-USB C power cord and plug it into the rear of the **ULTRADOCK 3**, while plugging the USB-C into its AC power cube adapter. Plug the adapter into a convenient wall outlet. You may now simply place the **ULTRATESTER 3+** in the charging stations cradle with its on bottom edge facing down, and the rear of the **ULTRATESTER 3+** facing the back end of the cradle. The **ULTRATESTER 3+** will automatically have its NiMH batteries charged while in the **ULTRADOCK 3**. **N**

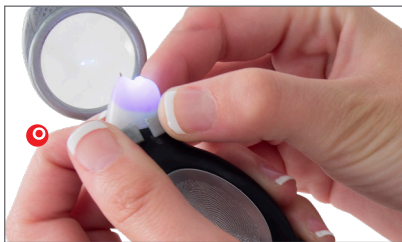


Tester In Optional ULTRADOCK 3

13. Using the Optional **Test Stone Magnifier**: Insert the **ULTRATESTER 3+**'s probe tip cone through the wider opening of the magnifiers oval shaped bracket and clip it into place. Depending on whether you are right or left-handed, you may conveniently position it on either side of the tester. Pivot the hinged magnifier so that it is positioned in front of the testers probe tip. You may now view the stones you are testing under magnification. 



How To Use The Magnifier



How To Remove The Magnifier

MAINTENANCE:

1. The **ULTRATESTER 3+** is not user serviceable other than battery replacement, probe tip cleaning, and recalibration. If additional service is required, please contact your supplier or the factory. Any other attempt to repair the tester by a user will void the warranty.
2. Always replace the protective probe tip cap to keep the probe tip from becoming damaged.
3. If using alkaline batteries, always replace the batteries after long periods of time to prevent premature corrosion or battery leakage, which is common with old or spent alkaline batteries after a period. Be aware that damage to the **ULTRATESTER 3+** may occur if there is battery leakage and it will void the warranty.
4. In the event the **ULTRATESTER 3+** is not used for an extended period, the batteries should be removed.
5. Routinely clean the probe tip.
6. The **ULTRATESTER 3+** is not user serviceable other than battery replacement, probe tip cleaning, and recalibration. If service is required, please contact your supplier or the factory. Any other attempt to repair the tester by a user will void the warranty.

HELPFUL SUGGESTIONS

1. If substituting alkaline batteries for the NiMH rechargeable batteries, only use high-quality AAA alkaline batteries.

2. Prior to testing a stone, always make certain the stone being tested has been cleaned and has no body oil on its surface, while noting that this oil may not be visible to the naked eye. Since the **ULTRATESTER 3+** is a highly sensitive instrument that is capable of identifying even the lowest electrically conductive moissanite, and because body oil is electrically conductive, without first cleaning the stone you may get a false-positive moissanite indication when testing a diamond.

3. The **ULTRATESTER 3+** is designed to be able to easily test faceted or rough stones of virtually all sizes. However, please keep in mind that small stones will naturally heat up much faster after being touched by the probe tip. After each test be certain to cool off the stone by blowing on it or waiting a few seconds until it cools if a retest is required. If testing diamonds in a pave setting, please note it is easy to accidentally overheat the stones next to the one being tested. Therefore, it is very important that you test the stones while alternating testing one area of the ring and then another, while regularly blowing on the stones to cool them off.

4. The **ULTRATESTER 3+** has been calibrated at the factory and should not require further calibration. If after using the **ULTRATESTER 3+** it is determined that recalibration is required, please contact the factory for calibration instructions, which can be easily accomplished by any user.

WARRANTY

Congratulations on your purchase of the **GEMORO ULTRATESTER 3+**! Your **ULTRATESTER 3+** features a **2-YEAR PROBE TIP**, plus a **LIFETIME LIMITED WARRANTY** on the electronics within the tester. The batteries have a 6-month warranty. Damage caused by abuse will void the warranty. These warranties become effective from the date of the original purchase assuming the purchaser fills out the **WARRANTY REGISTRATION FORM** gemoroproducts.com/warrantyregistration or the purchaser provides a copy of their invoice (bill of sale) when making a warranty claim. In the event the tester's owner has not registered their tester or provided a copy of their invoice for when they purchased the **ULTRATESTER 3+**, warranty service will be determined by the serial number tracking system as interpreted by the factory. In the event the **ULTRATESTER 3+** is no longer available or has been discontinued and warranty coverage is applicable, at the factory's sole discretion, an equivalent tester may be substituted for the defective **ULTRATESTER 3+**. The purchaser shall incur the cost for postage, insurance, and handling

for all warranty and non-warranty repairs. Warranty repairs and/or replacements will be shipped back to the customer FOB Destination to the location of the customer's choosing if within the continental United States. Non-warranty repairs will be shipped back to the customer FOB Factory. Should the customer require the repair and/or replacement unit(s) to be shipped outside the continental United States, the customer will be required to pay any related shipping charges and any related taxes/duties for the respective destination country, regardless of whether it is a warranty or non-warranty claim.

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UltraTester 3+ Instructional Video

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