# Customer Product Return Instructions
## October 2020

# Outline

- Introduction
- Portal process
  - Getting started
  - Basic information
  - Priority levels
  - Other details
  - Uploading files
  - Summary
  - Submitted!
  - After the first time

# Introduction: Customer Product Return Portal

## What Is CPR:

The Customer Product Return (CPR) portal is an online tool for efficiently submitting failure analysis requests to TI. It is designed to improve the failure analysis return request process.

## Why Use CPR:

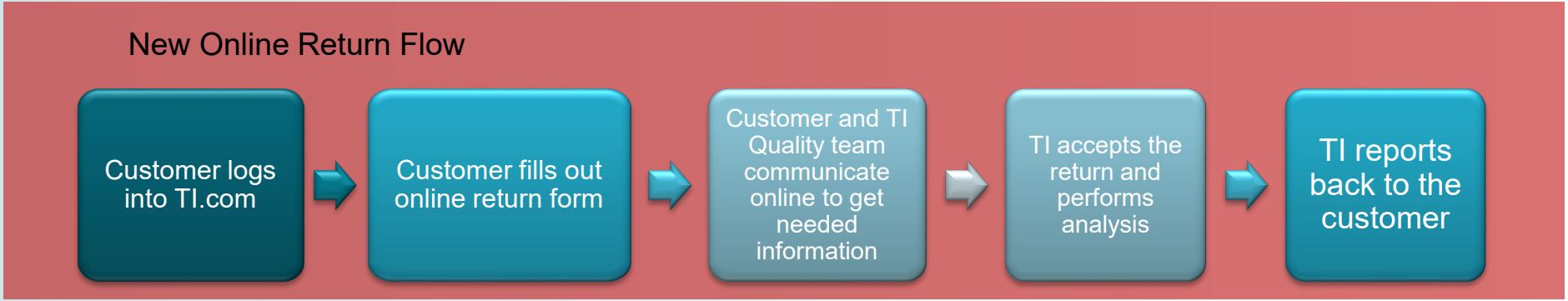
- Supports TI's focused strategy of centralized web services. Rather than having to search, call, or locate a Tier via field, regional, or customer service for help
- Improved communication though elimination of paper and random emails
- Improved data collection with data validation and file upload support
- Improved access from anywhere in the world using the ti.com website
- Improved tracking with a single point of contact for submission status
- Improve customer visibility to return status
- Direct automated interface to TI's internal Quality Event Management (QEM) system

# Introduction: Customer Product Return Portal

## Other CPR Benefits:

- All first-time users must register for a **myTI** account via the www.TI.com website. A **myTI** account includes following features:
  - Buy ICs & request free samples, tools, & software
  - Get support on E2E (Engineer to Engineer) forum
  - Simulate customer designs in WEBENCH
  - Personalize your web experience, set alerts for TI products & software
  - Customer Product Return (CPR) Portal
- CPR allows TI customers to submit their requests online in real time.
- Allows/notifies TI CQE team from all regions to view request immediately upon submission.
- Customers are able to select options like:
  - Refund for credit, Product replacement, or Failure analysis
  - Data collection with data validation in one system
  - Type of issue specific questions for major categories will be enabled based on customer selection
    - » Includes TI parts' specific details (e.g. DLP, programmable or RF low power parts)
  - File upload feature of supporting documents with pre-defined category labels
- CPR supports history tracking with time stamp capture & status updates
- The automated interface imports the CPR data into TI QEM system and generates the QEM#.

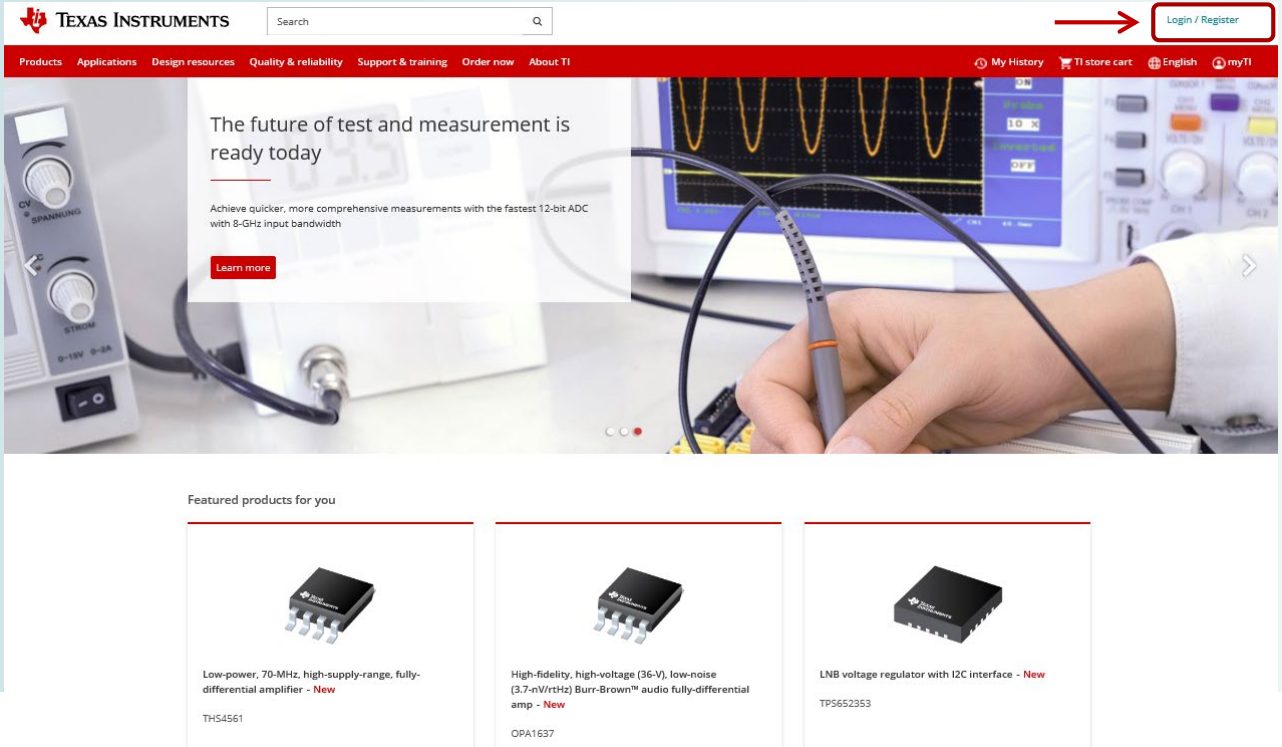
# Introduction: Online Flow




- One point of contact for the customer accessible from anywhere
- Required information is highlighted upfront reducing the need for back and forth between TI and customer
- Reduced cycle time between return initiation and start of analysis
- Return status notification provided by email and a customer portal to check the return acceptance status

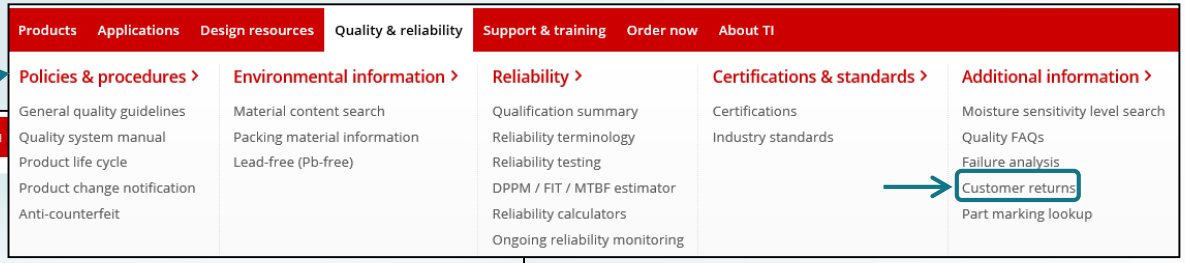
# Getting started: Creating / accessing myTI

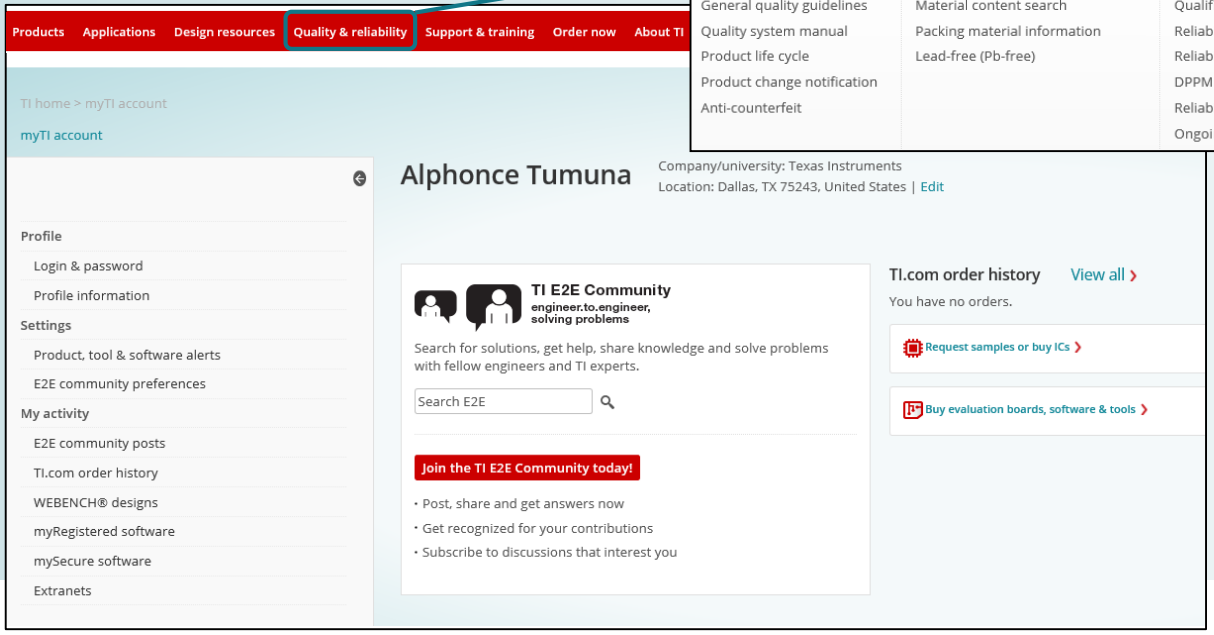
## For best results, use Google Chrome, Internet Explorer 11, or Mozilla Firefox.




- Start at TI's main website (www.ti.com)
- The top right link gives the option to login or register for a myTI account
  - All first-time users must register for an account
  - https://www.ti.com/myti/nsdocs/register

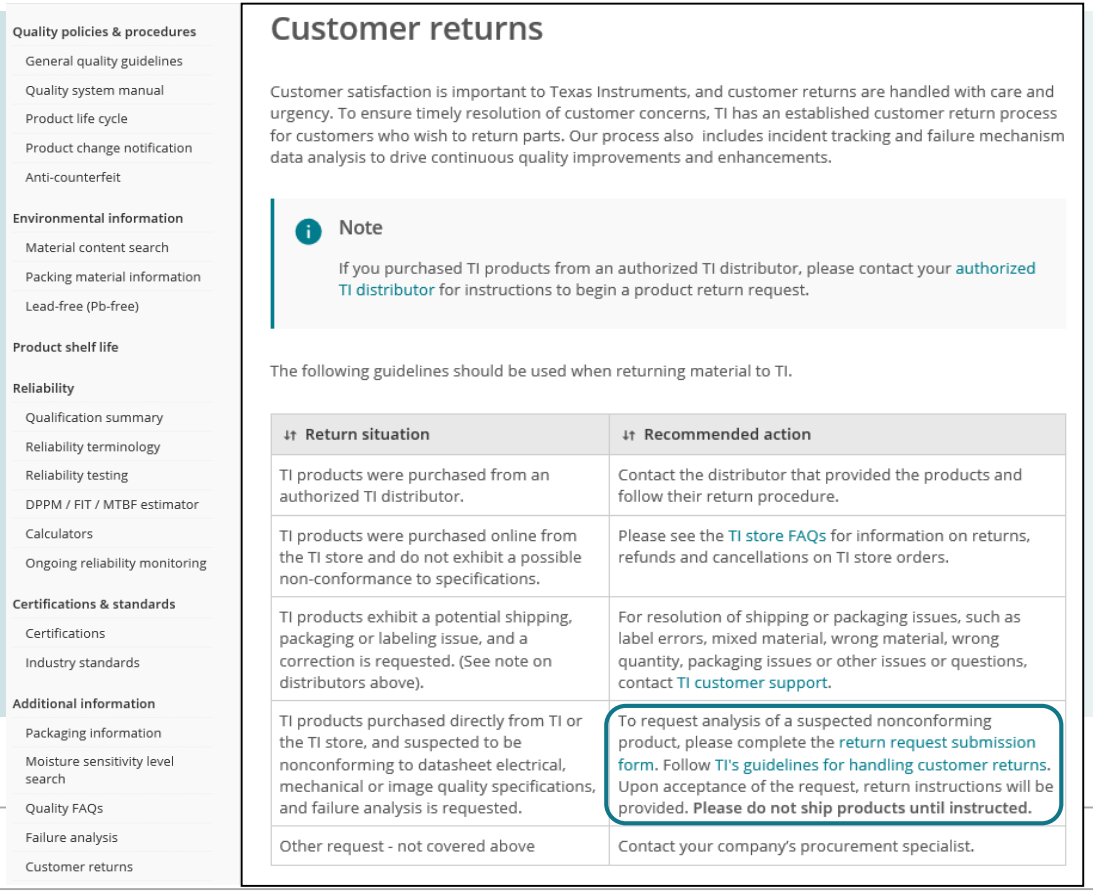
# Getting started: Accessing ‘Customer returns’ page




- If this is your first time logging in or you have not submitted a return before then click on ‘Quality & reliability’ tab to open up the options above
- Click on the ‘Customer returns’ link to get to the customer returns page

# Getting started: ‘Customer returns’ page



Quality policies & procedures
- General quality guidelines
- Quality system manual
- Product life cycle
- Product change notification
- Anti-counterfeit

Environmental information
- Material content search
- Packing material information
- Lead-free (Pb-free)

Product shelf life

Reliability
- Qualification summary
- Reliability terminology
- Reliability testing
- DPPM / FIT / MTBF estimator
- Calculators
- Ongoing reliability monitoring

Certifications & standards
- Certifications
- Industry standards

Additional information
- Packaging information
- Moisture sensitivity level search
- Quality FAQs
- Failure analysis
- Customer returns

## Customer returns

Customer satisfaction is important to Texas Instruments, and customer returns are handled with care and urgency. To ensure timely resolution of customer concerns, TI has an established customer return process for customers who wish to return parts. Our process also includes incident tracking and failure mechanism data analysis to drive continuous quality improvements and enhancements.

**Note**

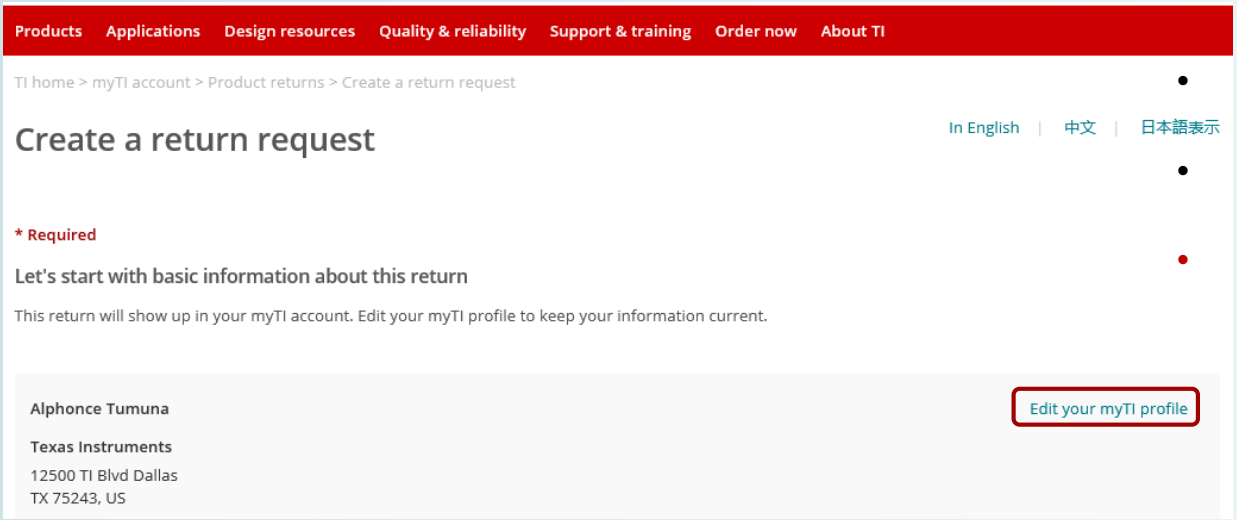
If you purchased TI products from an authorized TI distributor, please contact your authorized TI distributor for instructions to begin a product return request.

The following guidelines should be used when returning material to TI.

| Return situation | Recommended action |
|---|---|
| TI products were purchased from an authorized TI distributor. | Contact the distributor that provided the products and follow their return procedure. |
| TI products were purchased online from the TI store and do not exhibit a possible non-conformance to specifications. | Please see the TI store FAQs for information on returns, refunds and cancellations on TI store orders. |
| TI products exhibit a potential shipping, packaging or labeling issue, and a correction is requested. (See note on distributors above). | For resolution of shipping or packaging issues, such as label errors, mixed material, wrong material, wrong quantity, packaging issues or other issues or questions, contact TI customer support. |
| TI products purchased directly from TI or the TI store, and suspected to be nonconforming to datasheet electrical, mechanical or image quality specifications, and failure analysis is requested. | To request analysis of a suspected nonconforming product, please complete the return request submission form. Follow TI's guidelines for handling customer returns. Upon acceptance of the request, return instructions will be provided. **Please do not ship products until instructed.** |
| Other request - not covered above | Contact your company's procurement specialist. |

- You will arrive at the ‘Customer returns’ page
- For devices purchased through an authorized TI distributor, please contact the distributor
- Review the provided ‘Return situation’ options and follow the recommended action for the matching scenario
- Click on the ‘return request submission form’ link to start a request
- A link to the guidelines for handling customer returns is also provided
- Returns not handled in accordance with the guidelines may not be accepted

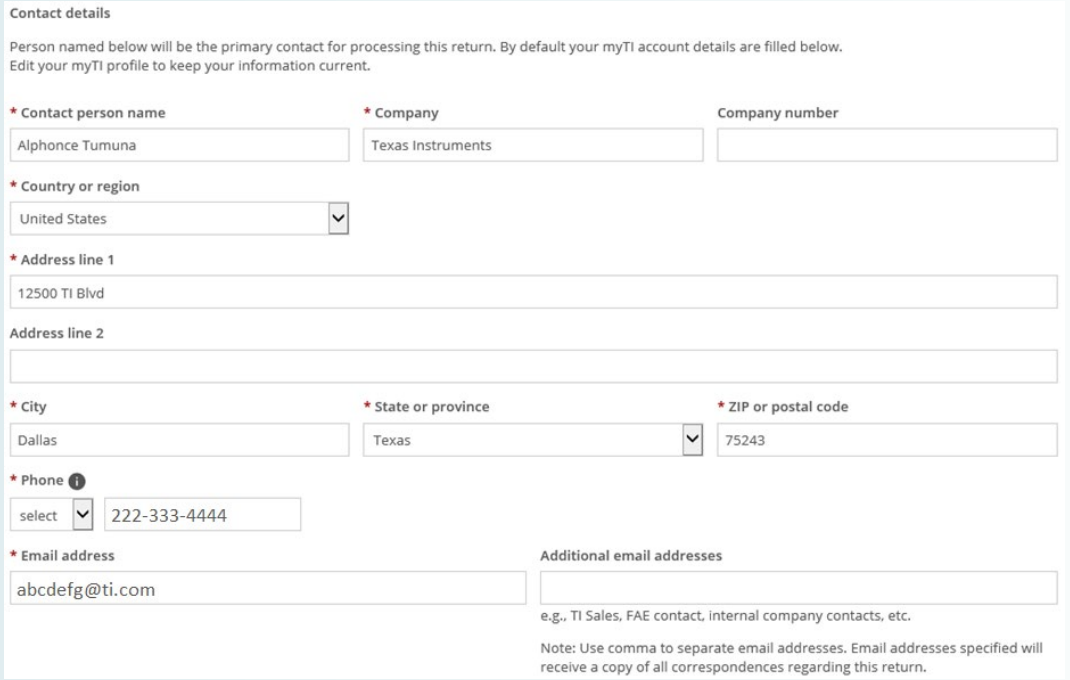
# Getting started: ‘Create a return request’




- Profile information will preload from myTI account
- If myTI account information is incorrect, use “Edit your myTI profile’ link
- **City and Country/Region are mandatory fields for CPR tool. Province is mandatory for Asia**

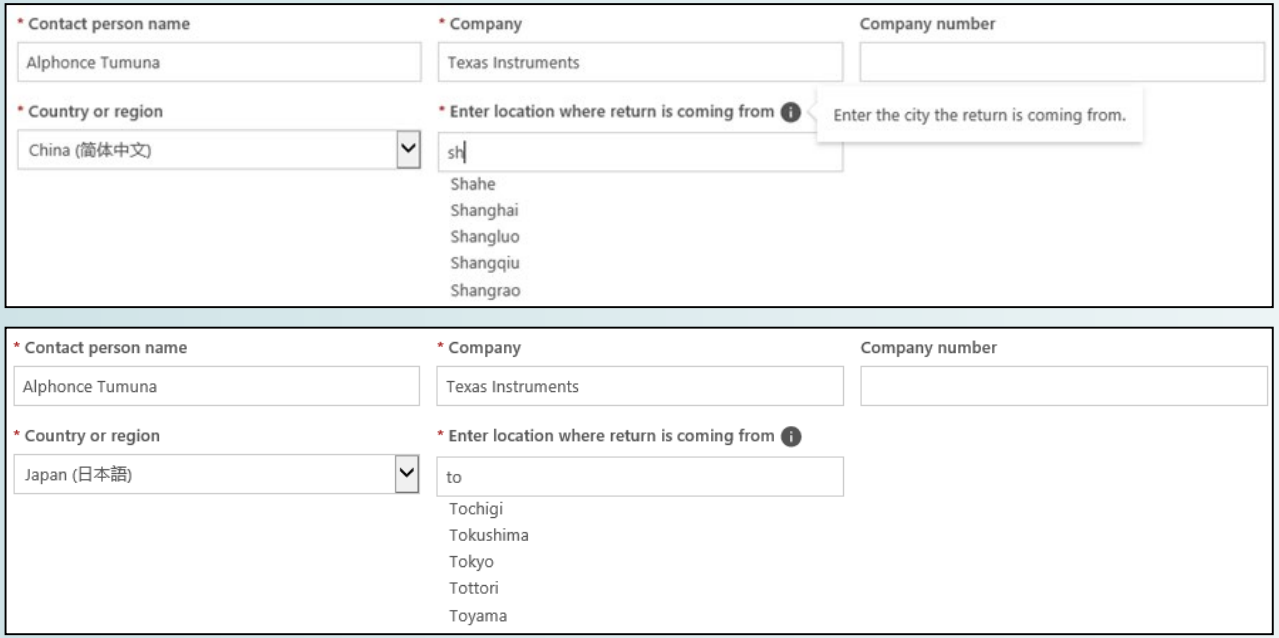
# Creating a request: ‘Contact details’

- Contact information provided in myTI account will be automatically loaded here
- Review to check for errors and make any necessary corrections
- **The required information is marked by red asterisks**
- An additional email address box is available to add anyone else who should be notified




**Note: Enter contact information in English. Use of other languages will result in an error and an inability to proceed to the next page.**

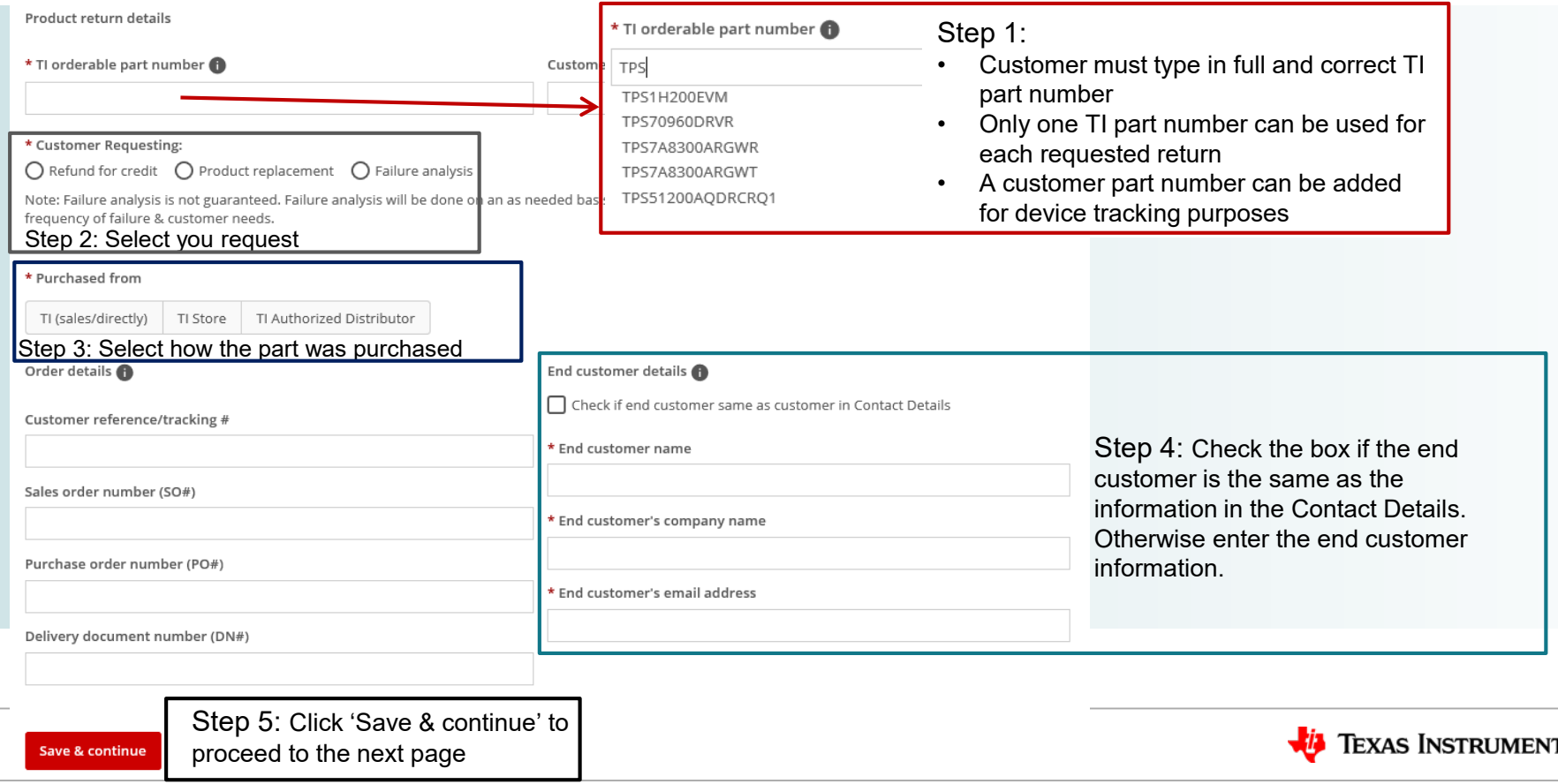
# Creating a request: selecting ‘Return origin’



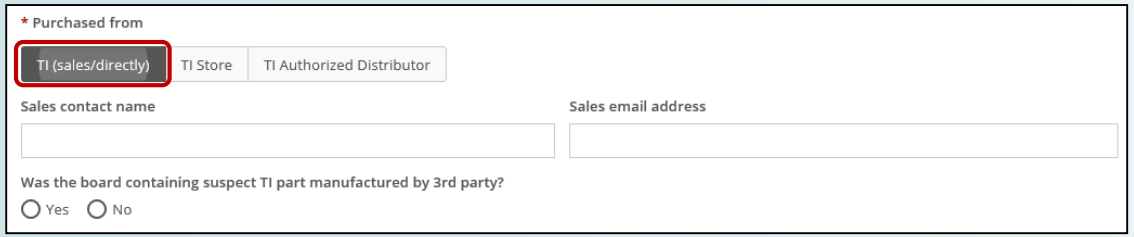

- If China or Japan is selected as the country or region, an additional box titled ‘Enter location where return is coming from’ will appear
- For China select the corresponding city and for Japan the prefecture the return is coming from
- The available locations are preprogrammed and starting to type will show you the available options

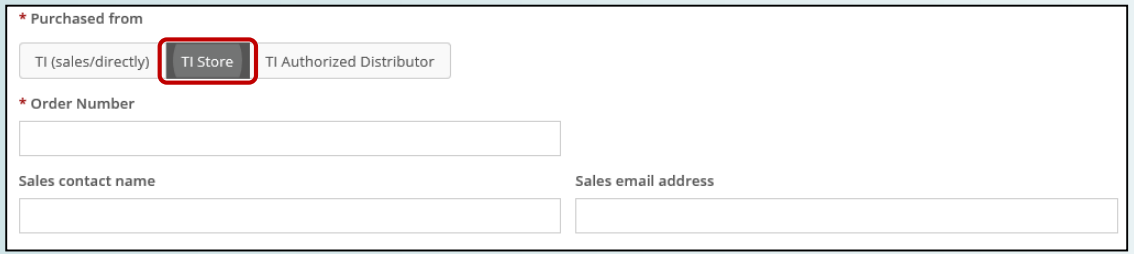
# Basic info: filling out ‘Product return details’

## For best results, use Google Chrome, Internet Explorer 11, or Mozilla Firefox.



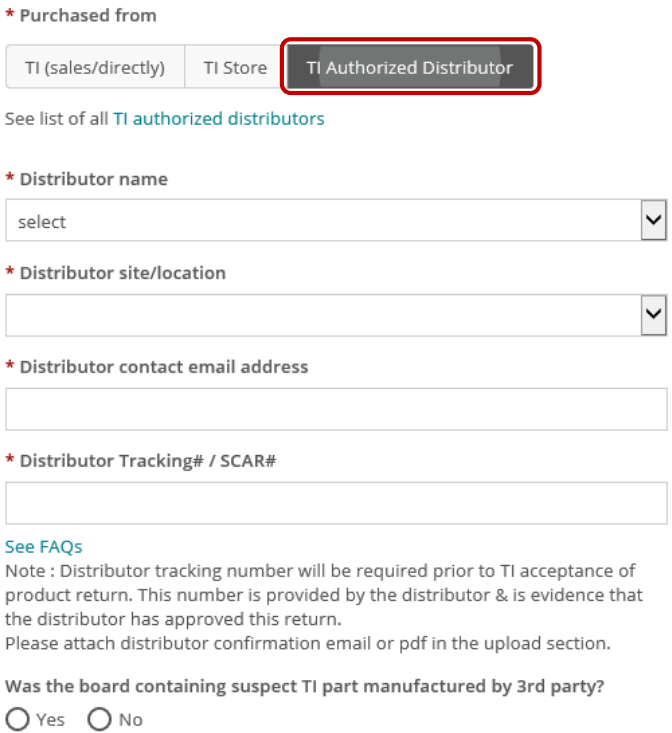
# Basic info: ‘Purchased from’ TI sales/Store




- For devices bought through the sales team or the TI store, the sales contact name and email address will be helpful with traceability
- If you purchased through the TI store the order number is required.

# Basic info: ‘Purchased from’ a distributor



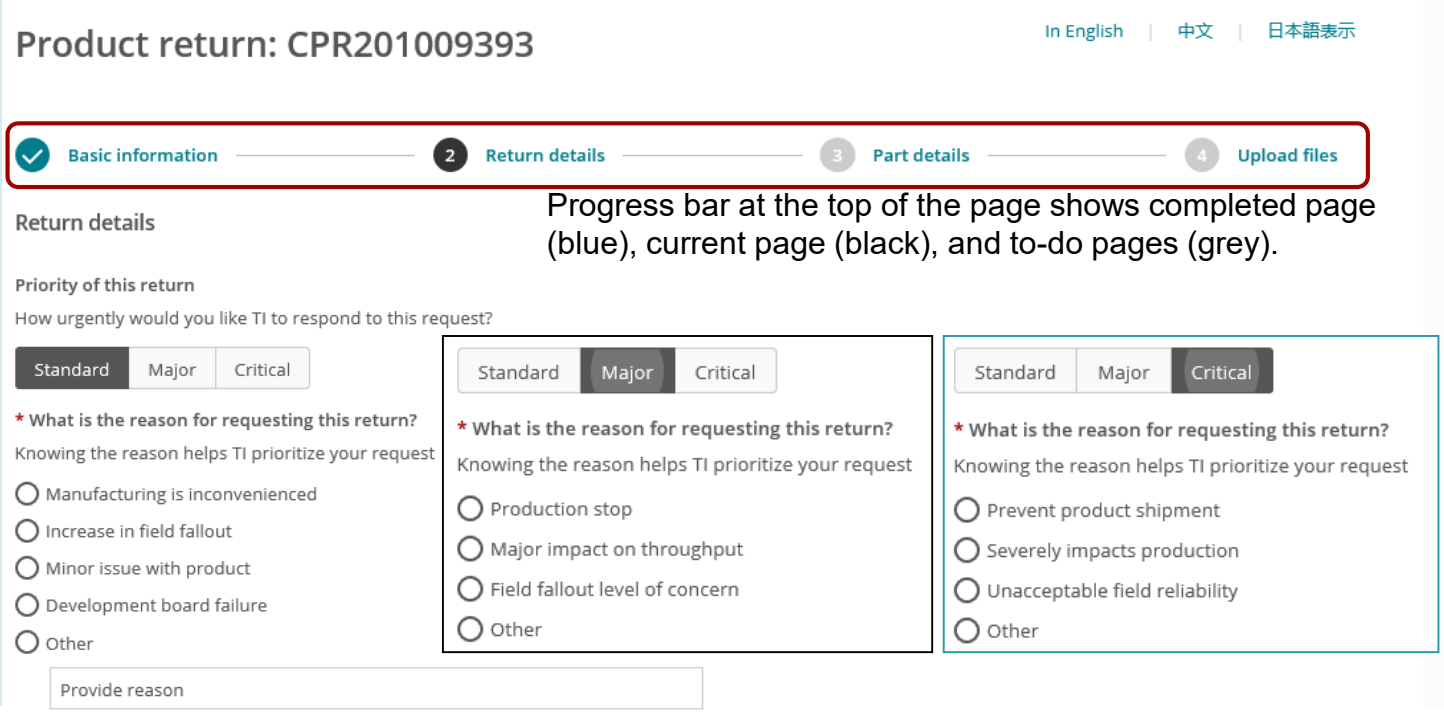

Select ‘TI Authorized Distributor’ tab for devices bought through a distributor

- A drop down menu of all the distributors TI uses is available under ‘Distributor name’. Select your distributor followed by their location
- **Distributor tracking # / SCAR#** is required from the distributor for the final return submission
  - If not available yet, the customer can continue with the submission but will be required to fill out the field later
  - The completed form can be downloaded and emailed to the distributor to obtain the tracking #
- Distributor email address & location are required fields

| Distributor | Tracking# format | Example |
|---|---|---|
| ARROW | RMA-YYYY-XXXXX | RMA-2018-00897 |
| AVNET | RMA# XXXXXXXX | RMA# 60448966 |
| KTL | KTL-YYMM-XXXXX | KTL-1808-02457 |
| MACNICA | CLV-XX-FARXXXX | CLV-17-FAR0385 |
| MARUBUN | FYY-XXXX | F16-0209 |
| NEXTY ELECTRONICS | 9XXXXXX | 9800602 |

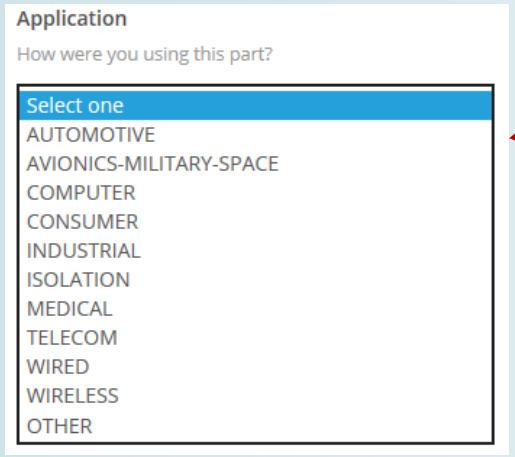
# Return details: Priority of this return

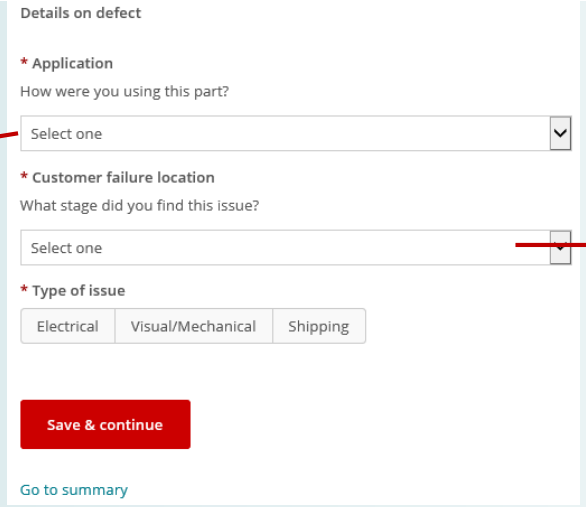
- The ‘Return details’ page collects information about the unit(s) being returned
- You can select the level of priority that TI should handle the request and the reason why
- If you have a reason not available in the provided options select ‘Other’ and type it in the provided box

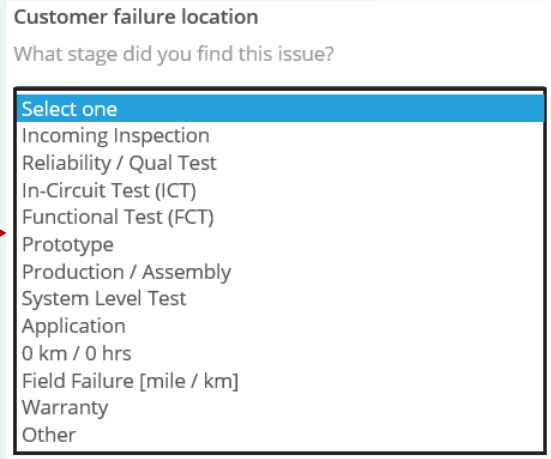



Progress bar at the top of the page shows completed page (blue), current page (black), and to-do pages (grey).

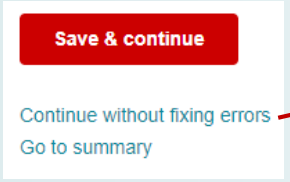
# Return details: ‘Details on defect’




Drop down menus are available for the application and failure location. Select the options that match your observed issue.

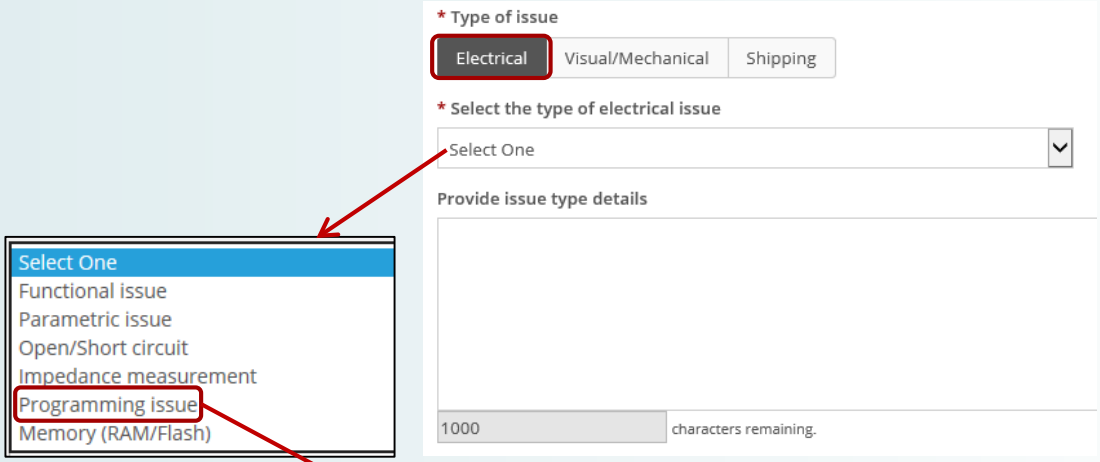



If there are some errors when you click ‘Save & continue’ a link will appear allowing you to proceed to the next page without fixing the reported errors.

Note: All the required information will need to be filled in before a request can be submitted.

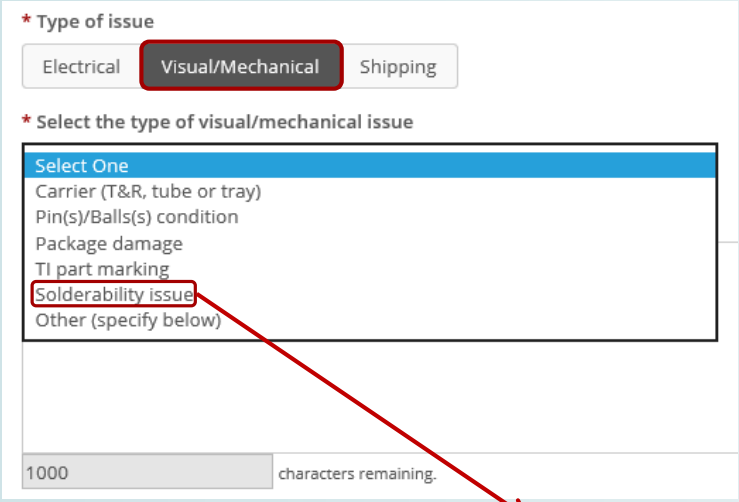
# Return details: ‘Type of issue’ Electrical

- Select the matching issue from the options in the drop down menu
- Add any details in the ‘Provide details’ box
- For a programming issue a pop-up section will appear requiring more information about the observed issue




Programming conditions, frequency, hardware, software, methods, etc. can be entered.

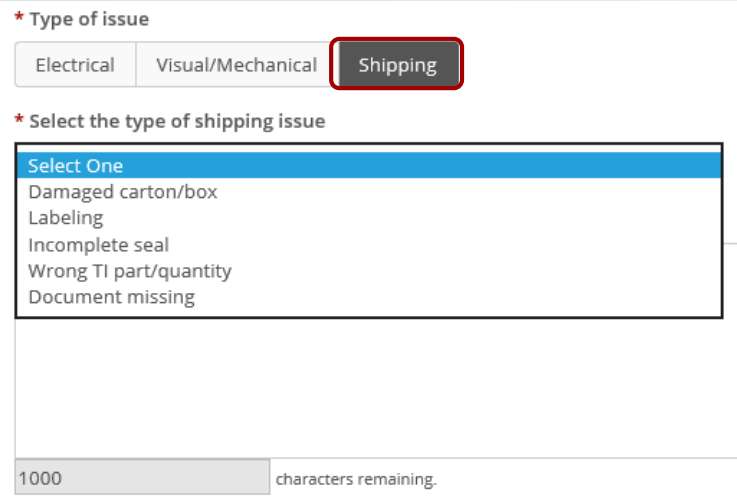
# Return details: ‘Type of issue’ Visual/Mechanical




- Pick the matching observed issue from the drop down menu
- If none of the options match your issue select ‘Other’ and explain in the ‘Provide details’ box
- For ‘Solderability issue’ a pop-up section will appear requiring more information

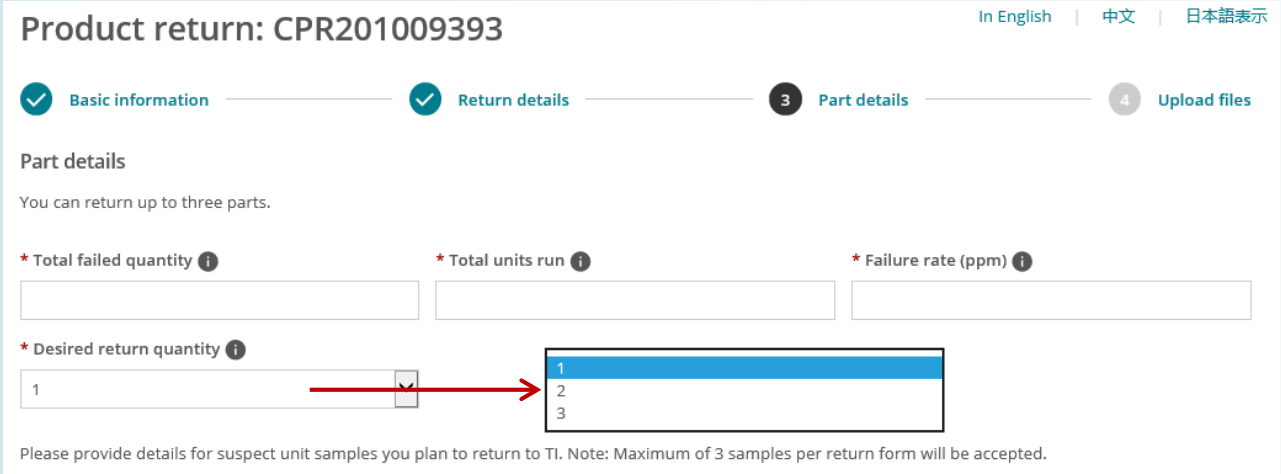
Solder profile, max temp, type of solder, age, finish on the lead, etc. can be entered.

# Return details: ‘Type of issue’ Shipping



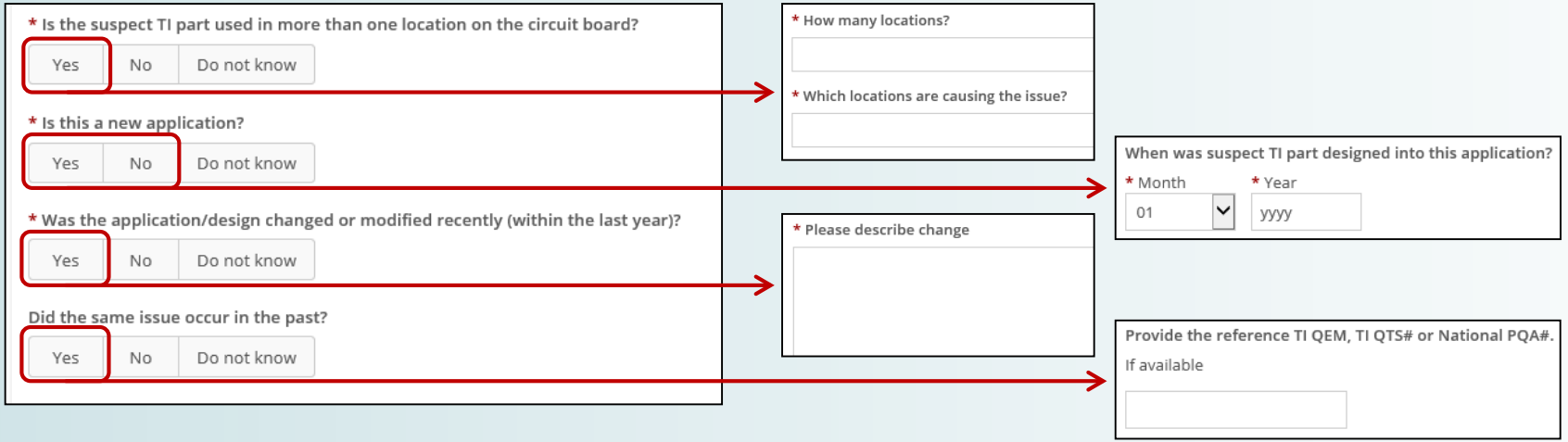

Select the type of shipping issue from drop down menu and add any additional details in the provided box.

# Part details: Device history



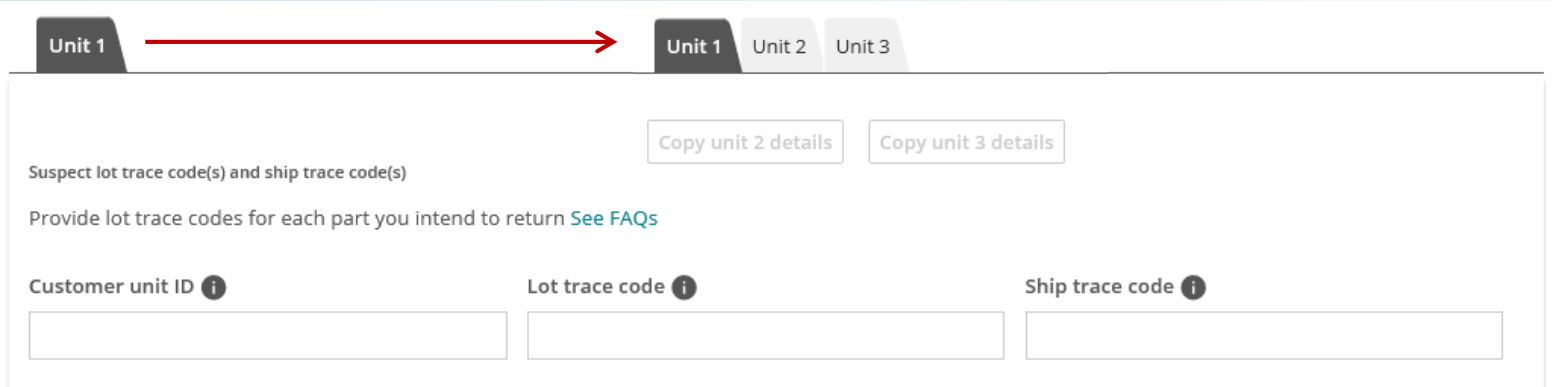

- The ‘Part details’ page collects information about the unit(s) being returned
- Number of failure units and total units run can be entered
- The failure rate will be automatically calculated from the total failed quantity and total units run entered
- 3 units is the maximum number per return request form

# Part details: Application information



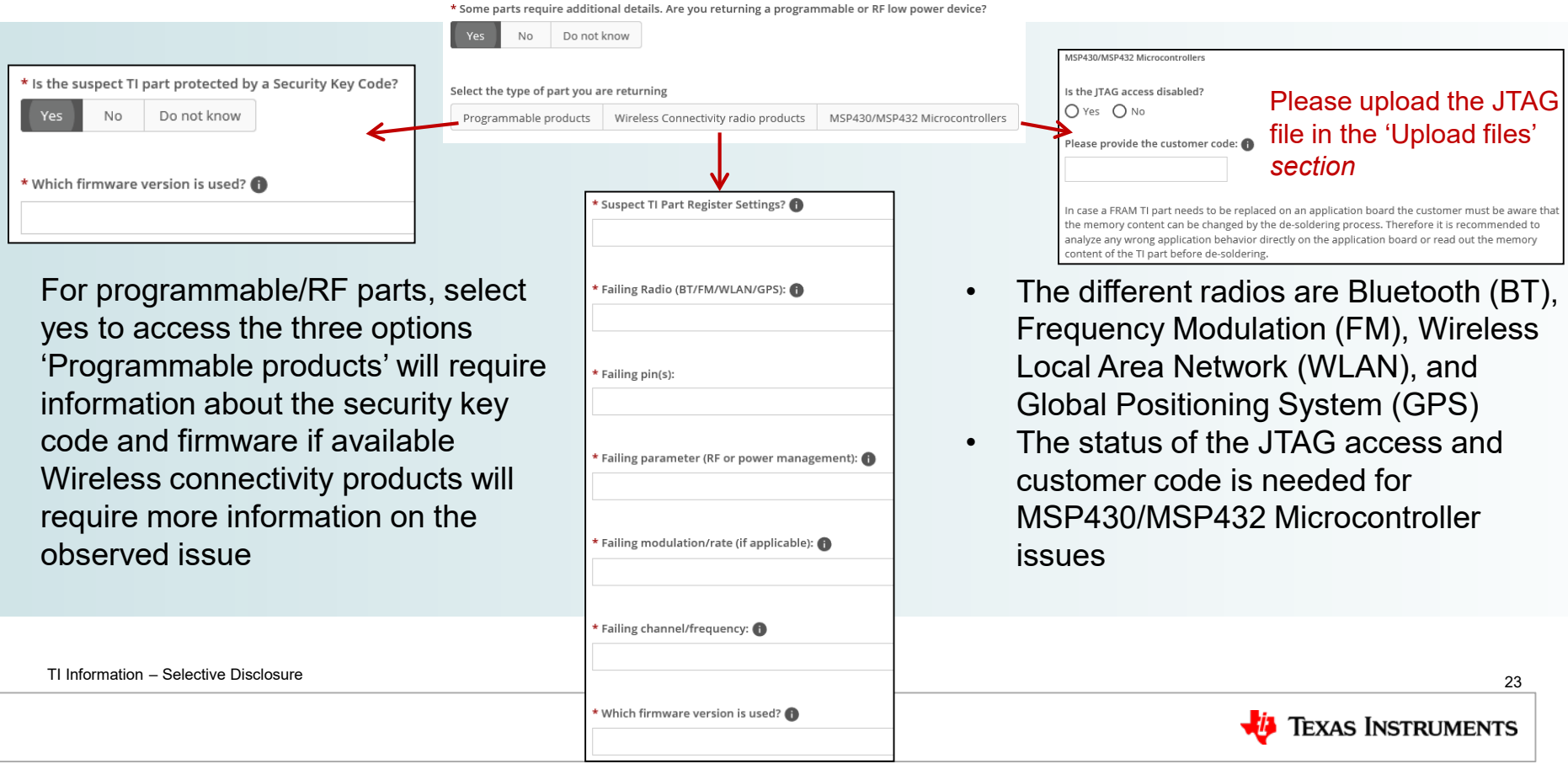

- Provide answers to the questions about the application
- Whether the part is used in more than one location, new application or change, and when the part was designed in can provide clues for the cause of the observed issue
- If there was a previous return for the same issue please provide the matching report

# Part details: Unit information




- Depending on the number of units being returned you will get different tabs for each unit
- If there is a unique code used to identify the unit(s) being returned enter it in the ‘Customer unit ID’ box
- Provide the lot trace code (LTC) in the box provided (this will be mandatory in the future)
- The ship trace code can be found on the shipping label next to the characters ‘1T’
- Once you have filled in all the information for ‘Unit x’ and clicked ‘Save unit x details’ button at the bottom of the page, you can copy over the information for the next unit if they are identical using ‘Copy Unit x details’ button

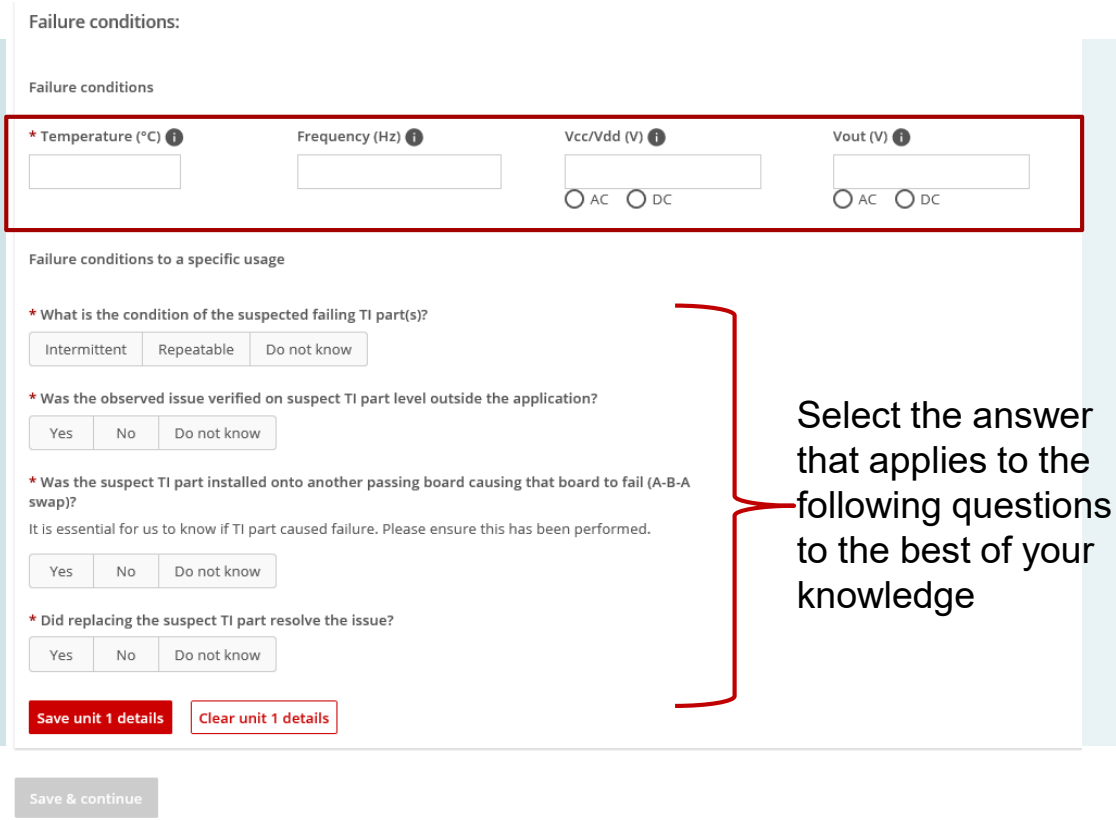
# Part details: Programmable and RF devices




- For programmable/RF parts, select yes to access the three options
- 'Programmable products' will require information about the security key code and firmware if available
- Wireless connectivity products will require more information on the observed issue

- The different radios are Bluetooth (BT), Frequency Modulation (FM), Wireless Local Area Network (WLAN), and Global Positioning System (GPS)
- The status of the JTAG access and customer code is needed for MSP430/MSP432 Microcontroller issues

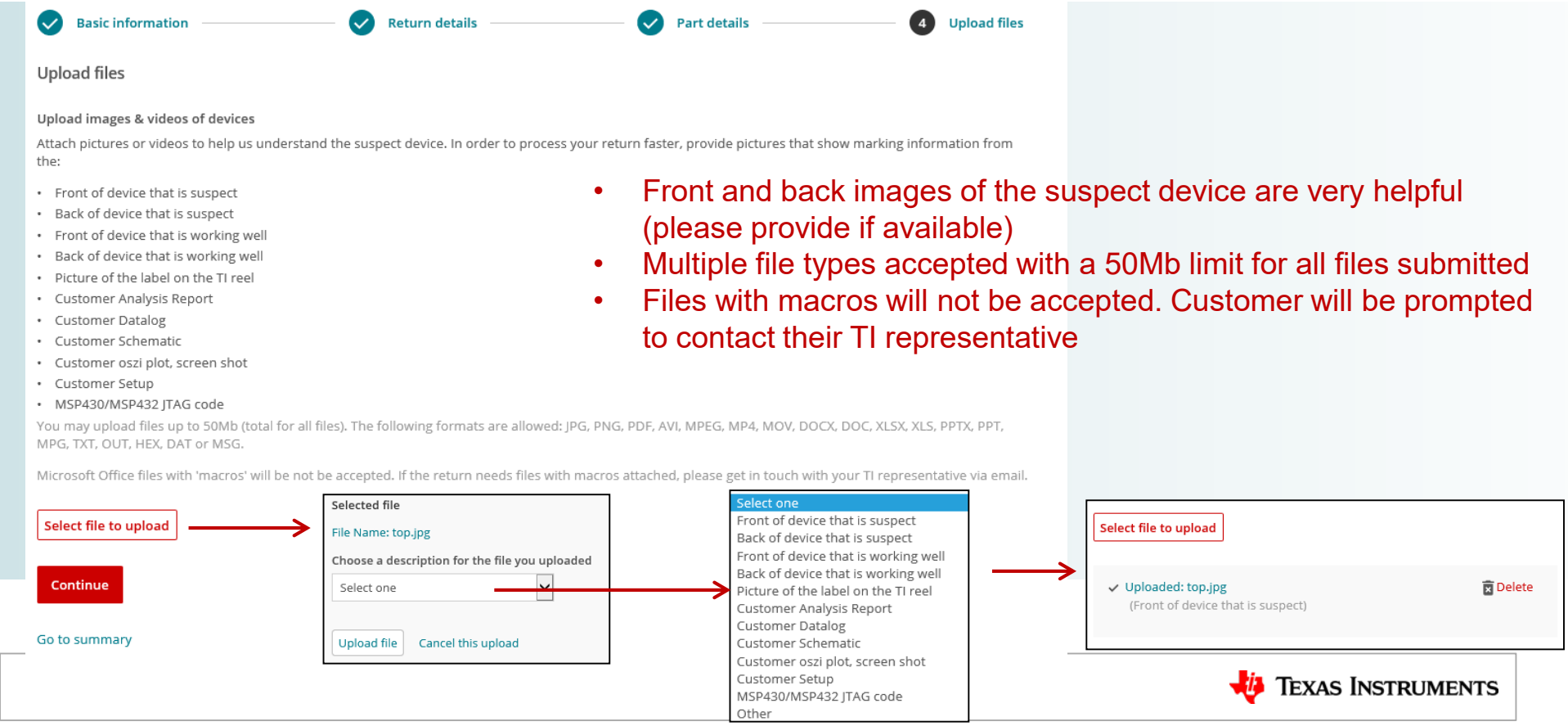
# Part details: Biasing conditions & verification




Select the answer that applies to the following questions to the best of your knowledge

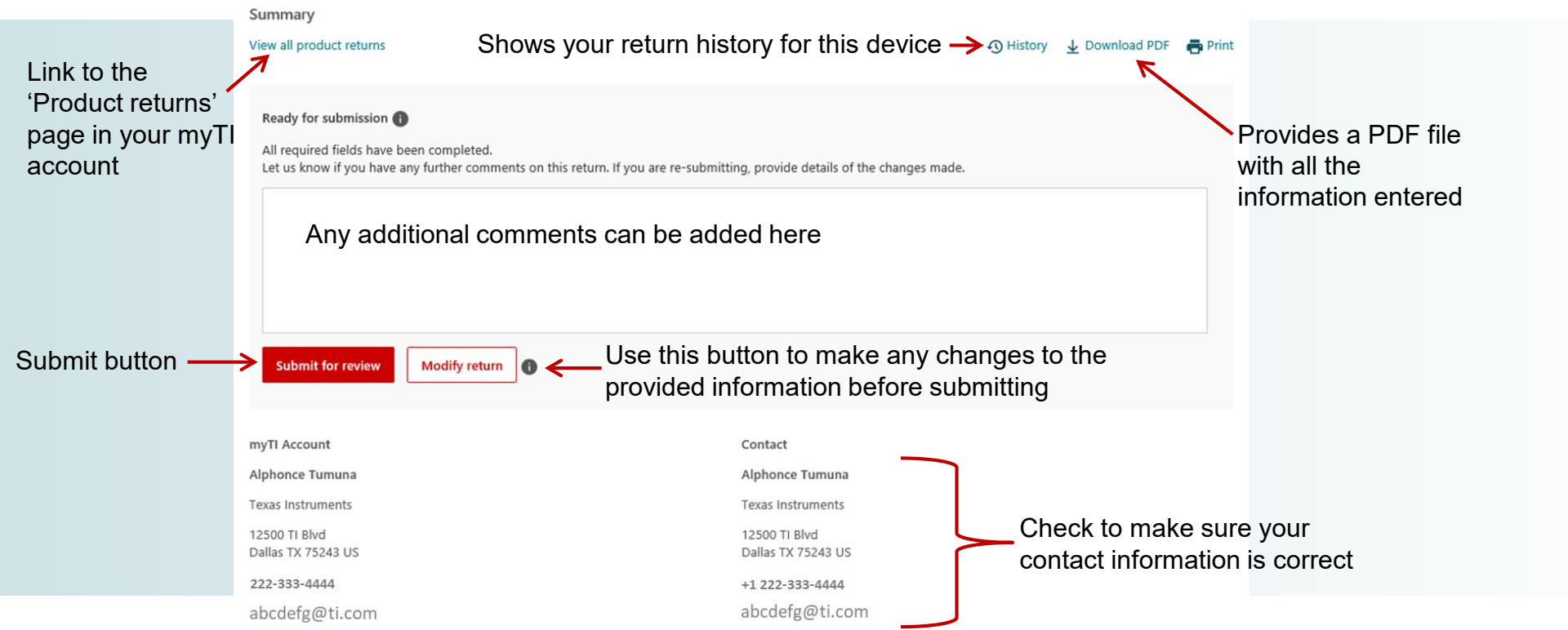
- Information about the biasing conditions is critical in helping TI process and verify the observed issue (Please be as detailed as possible)
- The temperature at which the issue is observed is required information
- Enter frequency in Hz (leave blank if the device is not switching)
- Supply voltage (Vcc/Vdd) and output voltage (Vout) along with whether they are switching (AC) or not (DC) are optional
- Click ‘Save unit x details’ button
  - **Be sure to go to the tabs for the other units and fill in their information**
- Once all the unit(s) details have been filled out and saved click the ‘Save and continue’ button to proceed to the next page

# Uploading files




- Front and back images of the suspect device are very helpful (please provide if available)
- Multiple file types accepted with a 50Mb limit for all files submitted
- Files with macros will not be accepted. Customer will be prompted to contact their TI representative

# Summary: Submitting the request for TI review



# Summary: Reviewing entered information

| Basic information | |
|---|---|
| Product return details | |
| TI orderable part number | TPS25831QWRHBRQ1 |
| Customer part number | |
| Customer requesting | Failure analysis |
| Purchased from | |
| Vendor | TI (sales/directly) |
| Sales contact name | |
| Sales email address | |
| Was the board containing suspect TI part manufactured by 3rd party? | |
| Board manufacturer name | |
| Board manufacturer site/location | |
| Board manufacturer contact email address | |
| Order details | |
| Customer Reference/Tracking # | |
| Sales Order Number (SO#) | |
| Purchase Order Number (PO#) | |
| Delivery Document Number (DN#) | |
| End customer details | |
| End customer name | Corey Lewis |
| End customer's company name | Texas Instruments |
| End customer's email address | Corey12@NEpats.com |

| Return details | |
|---|---|
| Return details | |
| Priority of this return | Standard : Manufacturing is inconvenienced |
| Application | AUTOMOTIVE |
| Customer failure location | Production / Assembly |
| Type of issue | Electrical: Functional Issue |
| Provide issue type details | Low output |

| Part details | |
|---|---|
| Part details | |
| Total failed quantity | 2 |
| Total units run | 100000 |
| Failure rate (ppm) | 20 ppm |
| Desired return quantity | 2 |
| Is the suspect TI part used in more than one location on the circuit board? | N |
| How many locations? | |
| Which locations are causing the issue? | |
| Is this a new application? | N |
| When was suspect TI part designed into this application? | 01/2015 |
| Was the application/design changed or modified recently (within the last year)? | N |
| Did the same issue occur in the past? | N |
| Provide the reference TI QTS# or National PQA#. | |

# Summary: Reviewing entered information cont'd

| | Part 1 | Part 2 |
|---|---|---|
| Suspect lot trace code(s) and ship trace code(s) | | |
| Customer unit ID | x1 | x1 |
| Lot trace code | 45KT789 | 45KT789 |
| Ship trace code | | |
| Programmable products | | |
| Are you returning a programmable or RF low power device? | N | N |
| Is the suspect TI part protected by a Security Key Code? | | |
| Which firmware version is used? | | |
| Wireless Connectivity radio products | | |
| Suspect TI Part Register Settings? | | |
| Failing Radio (BT/FM/WLAN/GPS): | | |
| Failing pin(s): | | |
| Failing parameter (RF or power management): | | |
| Failing modulation/rate (if applicable): | | |
| Failing channel/frequency: | | |
| Which firmware version is used? | | |
| MSP430/MSP432 Microcontrollers | | |
| Is the JTAG access disabled? | | |
| Please provide the customer code: | | |

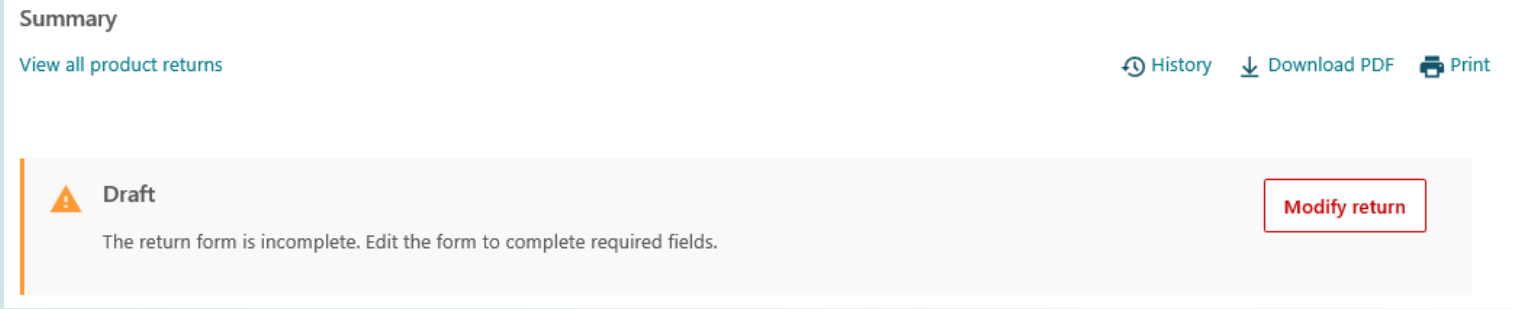
| Failure conditions: | | |
|---|---|---|
| Temperature (°C) | 25(°C) | 25(°C) |
| Frequency (Hz) | | |
| Vcc/Vdd (V) | 5(V) DC | 5(V) DC |
| Vout (V) | 1(V) DC | 1(V) DC |
| Failure conditions to a specific usage | | |
| What is the condition of the suspected failing TI part(s)? | Repeatable | Repeatable |
| Was the observed issue verified on suspect TI part level outside the application? | Y | Y |
| Was the suspect TI part installed onto another passing board causing that board to fail (A-B-A swap)? | N | N |
| Did replacing the suspect TI part resolve the issue? | Y | Y |

**Files**

| Files | Description | Download |
|---|---|---|
| top.jpg | Front of device that is suspect | Download |

The second portion of the 'Parts detail' section and uploaded files (check to make sure the lot trace code and uploaded images are correct)

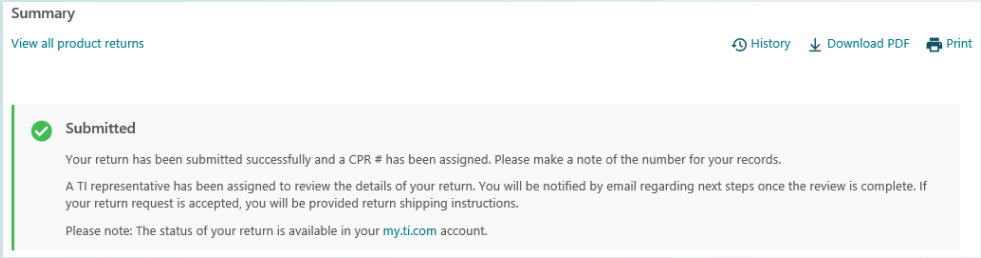
# Summary: Missing information



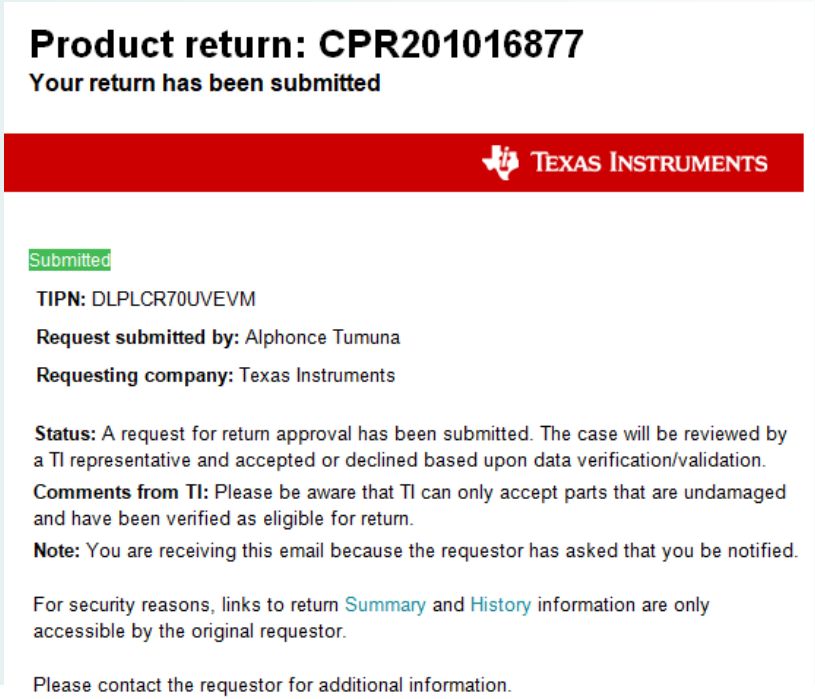

- If there is required information missing the summary page will show a ‘Draft’ status and you will not be able to submit
  - Clicking the ‘Edit’ button will take you the page with the missing information
  - The required fields will be highlighted by a red triangle


- For devices procured through a distributor, this status will appear if the disty tracking number was not initially entered
  - You can download the summary form & forward the return summary to the distributor to receive a tracking #.
- Once all the required information is provided, the summary page will now have a ‘Submit for review’ button and the return can be submitted

# Submitted!: Notification



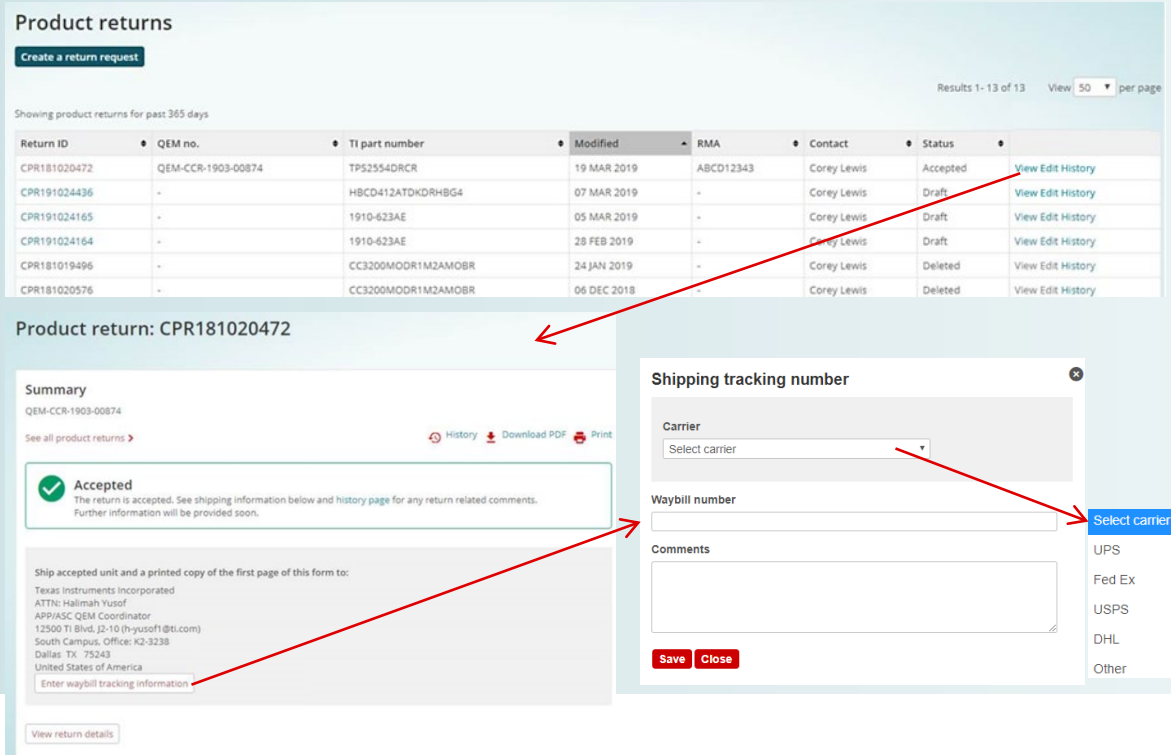

- Above notification appears once the return has been submitted
- An email confirmation along with an attachment containing the summary of the information entered will be sent to the customer
- TI quality engineer is assigned to review the request based on product
- TI quality engineer will accept, decline, or request more information from customer



# After the first time: Creating a request

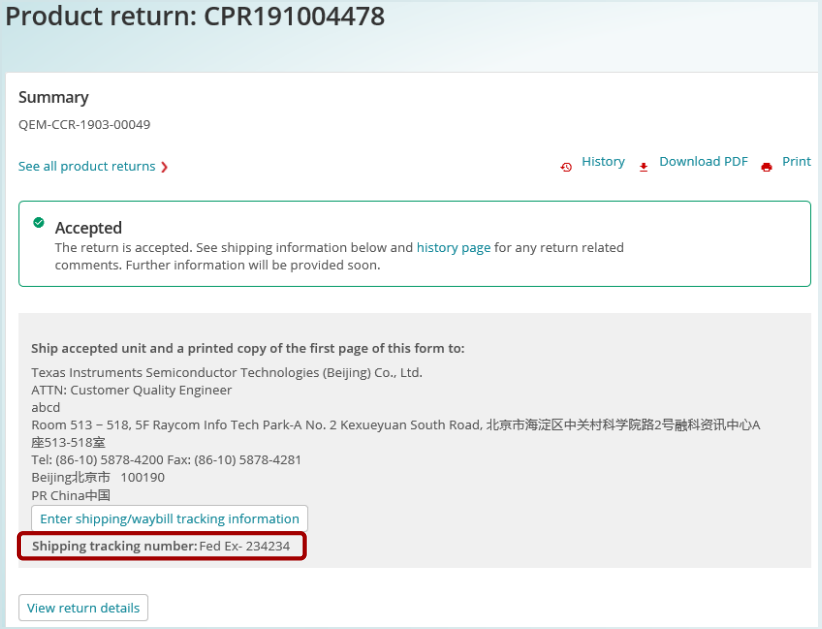

- If you previously submitted a return(s), there will be a section labeled ‘Product returns’ showing the return history, CPR #, and status
  - Click on the CPR# to make any changes to a previously submitted request
- Clicking on the link under ‘My activity’ or the ‘View All’ link to get to the ‘Product returns’ page
- Click on the ‘Create a return request’ button to go to the Customer Product Return page

# Accepted: entering shipping/tracking information




- You will receive an email if your return has been accepted with information on where to ship the part
- Log into your MyTI account and in the Product returns page click the ‘View’ link for the accepted return to access the summary page
- Information about where to ship the part will also be available on this page
- Click the ‘Enter waybill tracking information’ button and add your shipping information and click on the ‘Save’ button
- The tracking information should now appear in the summary page and an email will be sent out

# Accepted: entering shipping/tracking information cont'd




- The shipping information should now appear in the summary page and an email will be sent out

**Sender:** Texas Instruments - Product Returns

**Subject:** QEM-CCR-1903-00049 / Ship Tracking Number Added to CPR191004478

**Distributor RMA#:**

**TIPN:** DLP650LEFYA

**Request submitted by:** Karthi Govindasamy

**Requesting company:** Texas Instruments

Texas Instruments

**Status:**

A ship tracking number has been added to QEM-CCR-1903-00049 / CPR191004478

**Ship Tracking Number :** Fed Ex - 234234

**Comments :**

**Note:** You are receiving this email because the requestor has asked that you be notified.

For security reasons, links to return Summary and History information are only accessible by the original requestor.

Please contact the requestor for additional information.

# Thank you for your business