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| **Project Identification** | | | | | | | |
| **Project Name** | | | | | | | |
| Project Tatsu: Toyo Tires TE + CA | | | | | | | |
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| Toyo Tires | | | | | | | |
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# General Information

## Overview

During the warranty claim process it is possible (CA) or necessary (US) that the some or all the tires claimed be requested to be returned to Toyo for inspection. When this happens, Toyo is responsible for arranging and paying the cost for shipment from the dealer-customer to Toyo’s plant.

The Warranty module does not directly support the logistics of the tire return, only the request that they be returned and acknowledgment of the return when it occurs. Nor is Warranty involved in the subsequent disposition decision as to what to do with the tires once they are inspected.

From the Warranty module’s perspective, the tires belong to the end consumer throughout the transaction. Toyo’s granting of a credit with regards to the tires is acknowledgement of a manufacturing defect or that the tires did not live up to expectations. It is **not** a re-purchase of the tires back from the consumer.

## Business Requirements

Toyo’s Logistics Dept requires an S/4H document to –

* advise them of the need to pick the warranty tires up from the dealer,
* a process to control the procuring of a carrier to execute the pickup,
* a process to receive the tires into “DNI” non-valuated, inventoried stock, and
* a process for the final disposition of the tires after Technical inspection to either
  + execute the put-away into a non-valuated inventory SLoc for future sale, or
  + write off to scrap (at zero value)

During the goods receipt of the warranted tires, Warranty Dept also needs the acknowledgement of the goods being in-plant to flow back to the warranty claim, which is the notification to the adjudicator that the tires have arrived and to perform the technical inspection.

## Assumptions

There is an SAP-delivered function module in warranty claims connected to action code A100: WTY04\_DELIV\_FREE-OF\_CHARGE. This FM creates a sales order from the claim based on a user-performed action. The purpose of this is to issue a free-of-charge replacement for the warranted item.

We assume that this FM can be copied and adapted to create a Return sales order that can be used to anchor the logistics processes required by Toyo.

We further assume that there is a user exit that can be utilized in the return delivery GR process that can trigger the warranty claim update to notify that the tires have been received in-plant, which will trigger the Technical inspection. This is usually accomplished with t-code WTYRP.

## Integration Points and Dependencies

1. A copy of WTY04\_DELIV\_FREE-OF\_CHARGE integration point between Warranty module and Sales to generate a customer return sales order.
2. A user exit in the PGR process of the customer return in-bound delivery that triggers the program SAPLWTY11 associated with the warranty transaction WTYRP-Warranty Part to be Returned.
3. Configuration of a new Return sales order that is non-billable and is complete after the delivery.
4. Configuration of a Material Type like ZNVA-Marketing-Stock & Non Val but with Sales views activated, or modification to ZNVA to activate the Sales views.
5. Creation of six materials based on the new ZNVA material type that will be generic tires, differentiated only by the Brand and Category of the assigned product hierarchy, and the associated Profit Center

|  |  |  |  |
| --- | --- | --- | --- |
| PRODHA | Description | PRCTR | Description |
| NL | Nitto Light Truck | NLTR | NITTO – LTR |
| NP | Nitto Passenger | NPCR | NITTO – PCR |
| NT | Nitto Truck/Bus | NTBR | NITTO – TBR |
| TL | Toyo Light Truck | TLTR | TOYO – LTR |
| TP | Toyo Passenger | TPCR | TOYO – PCR |
| TT | Toyo Truck/Bus | TTBR | TOYO – TBR |

## Security and Control Considerations

## Other Relevant Information

# Functional Unit Test Scenarios

| Test Case | Description | Fiori Tile / Navigation | Expected Results |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
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# Enhancements

|  |  |
| --- | --- |
| Enhancement Type | Routine / Formula |
| Is this a Core Modification or copy of SAP program? | Yes  No |
| If Yes, Decision Record # for Approval |  |
| Name of User Exit / BAdI, Transaction, Screen, or Search Help | Copy of WTY04\_DELIV\_FREE-OF\_CHARGE for SD return  User exit in PGR of SD return delivery |
| Source Object if Copying |  |

## Program Details

### SD Configuration Changes

Create a new SD Return Order sales doc type **ZREW-Warranty Return** that is LR-Returns Delivery relevant but not relevant for invoicing using elements from RE-Returns Order and SD-Subs.Dlv.Free of Ch..

Assign an item category (**RENN**) that is not relevant for pricing or billing to the new return order type.

Confirm the copy control for order 🡪 delivery and confirm no copy control for order or delivery 🡪 billing.

### MM Configuration Changes & Master Data

New ‘generic’ material masters to be created using material type **ZNVA-Marketing-Stock & Non Val** or equivalent. Currently ZNVA is not configured with Sales views, which will be required. Either a new material type will need to be created or ZNVA extended to include the sales views.

For accounting purposes, there must be one generic material master for each profit center. To achieve this, there must be one generic material for each valid combination of PH1-Brand and PH2-Category, as follows:

| MATNR | PH1 | Descr | PH2 | Descr | Profit Ctr |
| --- | --- | --- | --- | --- | --- |
| WTY\_NLTR | N | Nitto | L | LTR | NLTR |
| WTY\_NPCR | N | Nitto | P | PCR | NPCR |
| WTY\_NTBR | N | Nitto | T | TBR | NTBR |
| WTY\_TLTR | T | Toyo | L | LTR | TLTR |
| WTY\_TPCR | T | Toyo | P | PCR | TPCR |
| WTY\_TTBR | T | Toyo | T | TBR | TTBR |

### Function Modules

1. **WTY04\_RETURN\_FOC**

| Name | Func Group | Appl Area | Description |
| --- | --- | --- | --- |
| WTY04\_RETURN\_FOC | WTY04 |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Using project naming standards, copy function module WTY04\_DELIV\_FREE\_OF\_CHARGE to WTY04\_RETURN\_FOC or similar.

The FM will create a sales return sales order of doc type ZREW. The source FM appears to deal with the mapping of the most critical fields, so the following only addresses the integration of the warranty claim to the return order for those fields that may be in addition to or an exception to what is done by ‘default’ in the FM. The assumption is that the relationship between the claim and the order is captured in document flow in either or both the claim and the return order.

The end user will perform elementary action A090 – Check for Parts that have to be Returned in the warranty claim. This will trigger function module ZOTC\_WTY\_CHECK\_FOR\_RETURN\_PRTS which performs some maintenance to the claim. It may be necessary to create a new interlinked action to perform the ZOTC\_WTY\_CHECK\_FOR\_RETURN\_PRTS FM functions and then the new functions described in this spec.

The return order should only be created for those tires which have been specifically requested to be returned. This will be identified where PVWTY-RETPA = 1 – Status for Parts that Have to Be Returned from Claimant on the IC version of the claim (PVWTYV-KATEG = IC). A claim may have up to eight line items (a restriction from the Canadian Hybris portal interface). One or more of those tire items may be required to be returned.

**Return Order Header**

| WTY table | WTY field | SD table | SD field | Descr/Expl |
| --- | --- | --- | --- | --- |
|  |  | VBAK | AUART | ZREW – Warranty Return |
| PNWTYH | REFNO | VBAK | BSTNK | Hybris Claim No / Customer PO |
| PNWTYH | REFDT | VBAK | BSTDK | Claim Date / Cust PO Date |

The line items on the return order will be determined based on the PH1 + PH2 values of the warranted tires on the claim. Using PVWTY-MATNR, select PRODH1 and PRODH2 from MARA-PRODHA.

Use the PRODH1 and PRODH2 returned to find the ZNVA material type product with matching PRODH values. Use that material as the MATNR on the return order. Then we want to enhance the material on the return order with information from either the warranty claim line-item or from MARA of the warranty tire. *Note that in most situations, all the tires on the claim will be the same MATNR.*

**Return Order Items**

| WTY/MARA table | WTY field | SD table | SD field | Descr/Expl |
| --- | --- | --- | --- | --- |
| PVWTY | MATNR | VBAP | KDMAT | Material Number / Cust Material No. |
| MARA | MAKTX | VBAP | ARKTX | Item Description of warranty tire no. |
| MARA |  | VBAP | BRGEW | Gross Weight of warranty tire no. |
| MARA |  | VBAP | NTGEW | Net Weight of warranty tire no. |
| MARA |  | VBAP | GEWEI | Weight Unit of warranty tire no. |
| MARA |  | VBAP | VOLUM | Volume of warranty tire no. |
| MARA |  | VBAP | VOLEH | Volume Unit of warranty tire no. |
| PNWTYH | CLMNO | VBAP | VGBEL | Claim Number / Reference document |
| PVWTY | POSNR | VBAP | VGPOS | Item Number / Reference Item |

The last two fields are included in case some other link between the claim and the return order is not created by the existing FM.

1. **WTYRP Warranty Returned Products trigger**

When the tires from the above return order are PGR’d into stock using the normal logistics processes, we need to signal that back to the associated warranty claim. The stand-alone transaction to perform this is **WTYRP**. The inputs are the claim number and the total quantity of tires received, as seen in this screenshot:

A screenshot of a computer

Description automatically generated with medium confidence

The requirement is to locate a user exit or enhancement spot in the sales PGI/PGR delivery process when this process can be invoked when the return order doc type = ZREW.

### Import Parameters

| Parameter | Description | Reference Field | Proposal | Optional |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

### Export Parameters

| Parameter | Description | Reference Field |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### Table Parameters

| Parameter | Description | Reference Structure | Optional |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

### Exceptions

| Exceptions | Description |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

### Related / Called Objects

| Object Name | Description | Remarks |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

### User Exits

| Name / ID | Application Area | Description |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Screen Details

## Detailed Technical Design

<All objects created for this WRICEF  
Specific Code logic that needs to be understood to support  
Technical dependencies>

## Other Details