

**Version 1.1**

**Date: 2018/11/15**

Abstract

**Describes the post sales order release process to pick goods ordered by customers in an efficient manner suitable to the Engineparts business and operational cycle.**

**The original solution was designed and implemented as a BSc Honors project that scored well**

Template

*Document purpose*

**Table of Contents**

Document approval and distribution list 2

1. Introduction 3

2. Audience 3

3. Objectives 4

4. Dependencies 4

5. Risks and mitigation 4

6. Requirements overview 4

7. Acceptance 6

# Document approval and distribution list

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Name / Title** | **Signature** | **Date** |
| **Document Type / purpose** | | | |
| Prepared by |  |  |  |
| Reviewed by |  |  |  |
| Approved by |  |  |  |

# Introduction

The picking process aims at extracting stock from a specific warehouse based on instructions issued via a confirmed sales order.

In some instances, there may be reason for the picking of goods that do not form part of the sales process i.e. where goods are to be returned to suppliers or goods are to be destroyed due to expiry or faulty. For these instances the ***Returns to Vendor*** (RTV) process manages the stock holding and isolation followed by the generating of a ***Sales Order*** with ***very specific*** picker instructions. This is described in greater detail in the ***Returns to Vendor (RTV)*** part of the documentation.

# Audience

Receiving

Warehouse

Despatch

Suppliers

# Objectives

The objective of this sub system is to ensure that ordered goods (Sales Ordering) are accurately picked following an pre-defined priority with dynamic optimisation of sales order consolidation to picking jobs. Concurrently, there are option to dynamically adjust workforce allocations and workforce workload to optimise production to meet with distribution ***time to depart*** schedules.

The picking sub-system design and 1st implementation formed part of a BSc student development program where the best of Honours students received parcelled projects for their dissertation

# Business Rules

When a sale order is created, no stock is placed on reserve, only recorded as a potential demand. Applying the 1st come 1st serve principal.

At the time of releasing a sales order, the sales order defined stock requirements are placed on reserve such that the stock is not available for sale anymore.

At this time a sales order translates into a picking order status and the sales order can be viewed but not changed anymore.

Should there be a reason for it, the picking order can be cancelled, and the sales order consequently is also cancelled.

Should there not be enough stock on hand to fulfil the sales order defined requirement, the quantity picked becomes the ruling quantity for later invoice generation.

It is a business requirement and so implemented that in some instances stocking items may only be sold in sets. This rule is enforced at sales order time and again as part of the picking process in the following manner:

* 4 items required but only 3 in stock and the stocking item has no set restriction, the 3 items are confirmed as picked.
  + For such events, the rule is that the picker is required to refer the shortage to the relevant storeman for immediate investigation.
  + Should the storeman find the missing item(s), the picker can complete the order
  + During the investigation period the picking order is placed on hold with the relevant reason code for management review of warehouse efficiencies.
  + Should the storeman not find the required items, the picker picked quantity remains. However, the non-conformance is injected into the daily cycle count process as an exception to be investigated
* 3 items requested a set rules of 4 or nothing is in place then the sales person will not be allowed to order the 3 items and the quantity will be zero. By way of an explanation is that some exotic vehicles pistons are always supplied and consumed in sets. Breaking a set of pistons may results in the rest of the set becoming unsaleable.

Although this is a sales order functional requirement, it is raised here for the reader to understand the underlying rules and reasons why

* Where items on hand are found to be non-conformant, this is referred to the storeman for investigation with immediate effect.
  + The picking order is placed on hold
  + The store-man conducts the investigation and if the goods are non-conformant, a bin to bin transfer for the non-forming goods is processed to a non-selling bin and the storeman then physically moves the goods accordingly
  + When opportune, the position is investigated in line with documentation under ***warehouse management.***
  + The non-conforming items event injects a stock check for the next daily cycle count where a more detailed investigation is launched

# Detail description of functionality

* 1. Customer sales order would have to have received a valid delivery node allocation at the time of sales order creation / before releasing the sales order.
  2. To note these node codes are verified against a route to which it is allocated
  3. The sub system auto calculates the correct route allocation based of best time to departure, in the event of the node code being allocated to multiple route codes
  4. It is a management responsible to ensure that routes and related node codes form an efficient / permissible combination
  5. These node / route combinations are agreed to with one or more delivery service providers, including own fleet facilities.
  6. ***Customer to collect*** is a valid route and node combination that depicts the collection counter
  7. Picking sub system. This sub system is delivery node and route allocation aware and provides the following feedback to related users:
  8. Picking jobs within a parameter defined time to complete is displayed without any emphasis
  9. Picking jobs within a parameter defined time period to route departure not completed are displayed in orange raising the system urgency to complete to meet with the planned departure time
  10. As soon as a route departure time has almost been reached (parameter defined) these are displayed in red

# Dependencies

|  |  |  |
| --- | --- | --- |
| # | Description | Action / By whom |
| 1 | Sales order process |  |
| 2 | Warehouse management |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |

# Risks and mitigation

|  |  |  |
| --- | --- | --- |
| # | Risk | Mitigation |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |

# Requirements overview

|  |  |  |
| --- | --- | --- |
| # | Description | Action / By whom |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |

# Acceptance

I hereby confirm that I have been fully informed of the documents content and, received training to understand how the detailed instructions are to be applied

Name …………………………………………………………………………….

Job Title ………………………………………………………………………….

Signed ……………………………………………………………………………

Date ………………………………………………………………………………