



# QMS Standard Work

<b>Title:</b>	Part Number Codes for Sourcing & Inspection of Castings and Forgings	<b>Document Number &amp; Revision:</b>	PM-07-02-05	A
<b>Process Owner:</b>	Product Engineering	<b>Date of Revision / Last Review:</b>	12.18.2024	

## 1.0 PURPOSE:

This instruction describes part number suffix codes and their application to indicate sourcing restrictions and inspections for castings and forgings when such options are unavailable in the drawing part number key.

The codes described herein have been used historically but are not the preferred method going forward. Newer part drawings should include part number key options for sourcing restrictions and inspections, which will make using the codes described herein unnecessary in the future.

## 2.0 SCOPE:

- 2.1 This document applies to all personnel responsible for reviewing customer requirements, determining material requirements, and creating new Item Masters. Applicable product types are Sundyne-specific raw materials defined by a drawing, such as castings and forgings. Customer Requirements for sourcing and inspection must be reviewed against the [ME02AA01 Sundyne Materials List](#) document and the data provided in the tables below. Refer to the flowchart at the end of this document for an overview of the process.
- 2.2 For items other than castings and forgings, such as industry-standard raw material and off-the-shelf standard mechanical, electrical, and instrumentation components, refer to [PM-07-02-08, Part Number Codes for Sourcing, Certification, & Special Requirements](#).

## 3.0 DEFINITIONS:

**Manufacturing:** Production of the raw material ingot into the final product form. Since casting vendors create and control the composition of the casting material, the casting production location is the origin and manufacturing location.

**Qualifying Country:** See Table 2 in [PM-07-02-08 Part Number Codes for Sourcing, Certification, & Special Requirements](#).

**Global:** Not restricted to any country.

## 4.0 INSTRUCTIONS:

- 4.1 The sourcing and inspection codes described herein are intended to be suffixes to casting and forging part numbers defined by Sundyne drawings.
- 4.2 If special requirements exceed the scope of this document, then PM-07-02-13 (Serialized Item Numbering) should be used instead.
- 4.3 Material selection, sourcing, certification, and documentation requirements must be reviewed and determined during the Quoting [PM-07-01-01, Quote Generation](#), and [PM-07-01-02, Contract Reviews](#).
- 4.4 When needed, a new item Master defining material requirements is created per [PM-07-02-07, Item Master Creation](#) using the information defined in this work instruction.
- 4.5 The general process first identifies the “standard” item, which will require the suffix code. Next, an Item Master is created with one of the suffix codes defined in this work instruction. Only one suffix



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code from Table 1 may be used per item master, and the suffixes defined in [PM-07-02-08, Part Number Codes for Sourcing, Certification, & Special Requirements](#), are not allowed to be used.

- 4.6 The “-XRAY” suffix is intended to be used only for castings and only for those that do not have an X-ray option in the drawing P/N Key. The radiographic method and acceptance criteria shall be per the casting drawing (typically provided in the drawing notes). If a forging requires an X-ray or a casting drawing does not have X-ray instructions, the item master text must specify the method and acceptance criteria. The vendor shall provide reader sheets and radiographic films.
- 4.7 The “-D” suffix requires that the raw material's origin and the part's manufacturing conform to the List of Qualified Countries in Table 2 of [PM-07-02-08, Part Number Codes for Sourcing, Certification, & Special Requirements](#). For forgings, this requires that the vendor provide proof that the raw material ingot was cast in a qualified country, and that the part was forged in a qualified country. For castings, since the material composition is created and/or finalized by the casting vendor, proof that the part was cast in a qualified country is sufficient.
- 4.8 Note that the “-D” suffix requirement in this document requires a qualified country for both origin and manufacturing, while the “-D” sourcing code in [PM-07-02-08, Part Number Codes for Sourcing, Certification, & Special Requirements](#) requires only that the manufacturing be from a qualified country.
- 4.9 The “-D” requirement should not be referred to as “Domestic,” as this description is incorrect.
- 4.10 Item masters for the parent items (finished parts made from the casting or forging) must be serialized per [PM-07-02-13, Serialized Item Numbering](#) to call out the casting or forging with the suffix. The parent items may not use suffixes (because drawings define them). The serialized item master text for the parent item must specify the casting or forging part number with the appropriate suffix.

## 5.0 Part Number Codes

**Table 1 - Definitions**

Code	Sourcing Description	Definition
-XRAY	Radiographic Inspection Required	Radiographic inspection of the part per the method and acceptance criteria defined on the casting drawing
-D	Qualifying Country Origin and Manufacturing	Sourcing origin and manufacturing must be documented to be from one of the qualified countries listed in Table 2 of PM-07-02-08

**Notes:**

- 1) For code “-XRAY,” the vendor shall provide reader sheets and radiographic films.
- 2) For code “-D,” the vendor shall provide certification of origin and manufacturing location.



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- 5.1 For the Qualifying Country list, see Table 2 in [PM-07-02-08, Part Number Codes for Sourcing, Certification, & Special Requirements](#).

### 6.0 Item Master Text Examples

- 6.1 The item master text should clearly define the suffixes applied per this procedure. The following examples are to be followed for clarity and consistency.

Note: The examples below may not exist or match existing item master text.

#### **Example 1 (-XRAY): Diffuser casting requiring radiographic inspection:**

Original casting P/N: CDJ09AG24DB

New casting P/N and Item Master text:

SUNDYNE P/N CDJ09AG24DB-XRAY  
CASTING, DIFFUSER  
CDJ09AG24DB WITH SPECIAL REQUIREMENT  
MARK P/N AS CDJ09AG24DB-XRAY  
-XRAY = RADIOGRAPH REQUIRED PER DRAWING C-DJ09AG24  
AND SUNDYNE PM-07-02-05

Original finished P/N: DJ09AC95DB0750L

New finished part P/N and Item Master text (serialized for S/N A12345678-01-02):

SUNDYNE P/N DJA12345678-01-02  
DJ09AC95DB0750L, SPECIAL  
DIFFUSER, INSERT, CONE EXTENSION  
MAKE PER DJ09AC90-96 DRAWING  
CONFIGURATION DJ09AC95DB0750L  
MARK P/N AS DJA12345678-01-02  
SPECIAL REQUIREMENTS:  
1) MAKE FROM CDJ09AG24DB-XRAY

#### **Example 2 (-D): Seal Housing forging requiring qualified country sourcing:**

Original forging P/N: FHO08AD01DB

New forging P/N and Item Master text:

SUNDYNE P/N FHO08AD01DB-D  
FORGING, HOUSING, SEAL  
FHO08AD01DB WITH SPECIAL REQUIREMENT  
MARK P/N AS FHO08AD01DB-D



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-D = QUALIFIED COUNTRY SOURCING RESTRICTION  
PER SUNDYNE PM-07-02-05

Original finished P/N: HO08AP14DBE0J

New finished P/N and Item Master text:

SUNDYNE P/N SHA12345678-01-02 (serialized for S/N A12345678-01-02)

HO08AP14DBE0J, SPECIAL

HOUSING, SEAL

MAKE PER HO08AP14 DRAWING

CONFIGURATION HO08AP14DBE0J

MARK P/N AS SHA12345678-01-02

SPECIAL REQUIREMENTS:

1) MAKE FROM FHO08AD01DB-D



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## 7.0 Process Overview Flowchart

