



Rolls-Royce

SABRe: Identity marking for forgings and flash welded rings

Supplier Briefing Pack.

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This process shall be applied to forgings and flash welded rings supplied to Rolls-Royce and its suppliers ***(excluding direct deliveries to Rolls-Royce Deutschland)***, when RRES90005, JES 115 or JES 208 -1, -2 or -3 is instructed on the drawing ;or when serialisation is instructed by the Rolls-Royce Controlling Laboratory, then the requirements of this process shall apply.

For direct deliveries to Rolls-Royce Deutschland when JES 115 or JES 208-1, -2, -3 is instructed on the drawing, the serialisation format will be instructed by the Rolls-Royce Deutschland Controlling Laboratory.

For all other forgings and flash welded rings not controlled by RRES90005, JES 115 or JES 208, where serialisation is required, the requirements and format will be instructed by the Rolls-Royce Controlling Laboratory.

This process may also be applied to components machined directly from bar but only with the agreement of the Rolls-Royce Controlling Laboratory.

This process does not apply to compressor rotor blade or turbine blade forgings (normally subject to JES 123 or JES 182).

Associated Specifications

- RRES90005
- JES 115
- JES 123
- JES 124
- JES 125
- JES 182
- JES 208

- MSRR 9951
- MSRR 9951 / 1

General requirements

All forgers and flash welded ring manufacturers of components for which there is a requirement for serialisation will maintain a system for the control and allocation of serial numbers and batch identity markings.

The forger / flash welded ring manufacturer must maintain records of all internal and Rolls-Royce serial numbers and batch identity markings allocated.

General requirements (continued)

The forger / flash welded ring manufacturers (internal) serial number will be allocated as soon as possible, i.e. at the billet cutting stage or when the component is manufactured from bar and maintained through all subsequent stages of manufacture.

Where required by MSRR 9951 / 1, this shall be traceable to the material cast and position in the cast.

Where no location code is allocated to a manufacturer, the manufacturer may obtain a new location code from the Rolls-Royce External Laboratory, Derby, UK.

Parts requiring individual serialisation

Where there is a requirement for individual serial numbers (e.g. *RRES90005*, *JES 208 - 1*, *JES 208 - 2*) the correlation system to be employed is a unique serial number regardless of part number or configuration and structured as follows:

- (a) The manufacturer's location code (listed in Appendix 1-B).
- (b) The material specification 3 alpha code as stated on the Condition of Supply (CoS) drawing.
- (c) Numeric unique to (a) and (b) combination.

There are no constraints on the size of the numeric.

Parts requiring individual serialisation (continued)

The material code “as used” does not indicate the final heat treatment condition and does not change with any subsequent processing.

When one serialised component is split into several details (e.g. rings machined from pots), the components shall be identified by a suffix ‘/ 1’, ‘/ 2’ etc to the original serial number - as previously defined.

Parts delivered ahead of standardisation

Parts may only be delivered ahead of standardisation with the agreement of the Rolls-Royce manufacturing engineering manager responsible. This is to permit Critical / Sensitive forgings to be machined prior to the completion of any component approval testing but after the completion of production release testing.

This normally only applies to forgings delivered direct to Rolls-Royce.

Such deliveries shall be subject to separate Release Notes and not mixed with any other products.

Parts delivered ahead of standardisation (continued)

When forgings or flash welded rings requiring individual serialisation are delivered prior to standardisation of a new part or ahead of final clearance of an FPD, the Rolls-Royce Controlling Laboratory may instruct that the parts shall be marked with a 'temporary' serial number.

Until the component approval is complete, only the temporary serial numbers shall remain on the component although the corresponding production serial numbers shall be advised on the release documentation.

Parts delivered ahead of standardisation (continued)

The use of 'temporary' serial numbers is mandatory for critical / sensitive forgings or flash welded rings delivered to Rolls-Royce Derby or Sunderland prior to standardisation or where this is an outstanding FPD.

The 'temporary' serial number shall consist of:

- The supplier's location code
- Non-standardised part indicator ('WMD').
- Component number unique to (a) and (b) combination.

Parts delivered ahead of standardisation (continued)

In such circumstances, forgings should not be marked with the production serial number. The temporary serial number will be replaced by the production serial number at a later stage of manufacture in Rolls-Royce.

This is the responsibility of the Rolls-Royce Controlling Laboratory.

Parts delivered ahead of standardisation (continued)

For temporary serial numbers, because of numeric constraints on the 'Trace' system, once the numeric 9999 has been reached, then the forging supplier must commence a second 'WMD' series with a different location code.

When this situation arises, the Rolls-Royce Laboratory, should be contacted for instructions.

Note: there are no constraints on the size of the production numeric.

Parts delivered ahead of standardisation (continued)

Associated release paperwork should state both the temporary serial number ('WMD' number) and corresponding production serial number (as previously defined). It shall also state the reason for the use of temporary serial numbers (e.g. subject to FPD XXX or subject to standardisation).

Use of temporary serial numbers must be continued until formal instructions are received from Rolls-Royce Controlling Laboratory to discontinue them. Components will then be marked with production serial numbers as previously described.

Parts Delivered Ahead of Testing or Subject to Uncleared Concession Action

Forgings may only be delivered ahead of testing or subject to unclear concession action with the written agreement of the Rolls-Royce manufacturing engineering manager responsible. This will only be permitted in cases of extreme urgency. In such circumstances the certificate of conformity must clearly state that the parts are subject to test (and quote the Rolls-Royce authority for release) or unclear concession action (and quote the concession application number).

The use of 'temporary' serial numbers (as previously defined) is mandatory for critical/sensitive forgings or flash welded rings delivered to Rolls-Royce Derby or Sunderland ahead of testing or subject to unclear concession action.

Parts Requiring Only Batch Serialisation

Parts shall be marked with a batch identity marking regardless of part number or configuration and structured as follows:

- The supplier location code (listed in Appendix 1).
- Batch serialisation indicator ('B').
- Numeric unique to (a) and (b) combination

Temporary serial numbers shall not be used for components requiring batch identity markings.

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