



Supplier Run@Rate Procedure

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1. Purpose

This procedure specifies the assessment and method to evaluate Supplier's production capacity versus the quoted production capacity, which happens after Supplier's PPAP content has been prepared including the Quality of the parts meeting TE Quality Requirements and before final PSW Approval Signature by TE. The document is applicable for all suppliers of TE Automotive plants. For Sustaining Production items, see note 5.3.8. In case a regional/local procedure is in place, it's mandatory to ensure that the regional/local process superseding this guideline covers the defined minimum requirements described on this procedure.

2. Applicability Scope

All direct material components going into TE products covering the following Automotive standards. Plating or other special process only when they provide the direct service to TE. Out of Scope: Raw materials, Catalogue Parts, Directed parts by customers, passive electronics components and packaging.

ISO 9001 IATF 16949 ISO 14001 OHSAS 18001 ISO 50001

Other (specify)

3. Definitions and Abbreviations

<i>Item</i>	<i>Definition</i>
APQP	Advanced product quality planning
FAI	First Article Inspection
PPAP	Production part approval process
ASQ	Advance Supplier Quality Engineer
R@R	Run at Rate
MDE/DDE	Mold Design Engineering, Die Design Engineering

4. Responsibilities

ASQ

- Confirms if R@R is applicable and if yes, the type of R@R (item 5.3.2), inform the decision to supplier.
- Based on the R@R type, schedules in APQP a kick off meeting, and lead the supplier R@R production activities.
- Confirms that quoted capacity meets or exceeds TE capacity requirement. (min. 125% TE peak capacity demand)
- Support Procurement to work with supplier to improve the capacity.

Procurement:

- Confirms the agreed quoted capacity by reviewing the R@R Assessment Report (Format [AUTGP15-A1](#)).

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- Follows and make sure the Supplier Capacity Ramp up Plan meets TE demand.
- Drive the supplier to improve the capacity when R@R does not meet the capacity demand.

MDE/DDE: – Applicable only when it's a TE Owned Tool at Supplier:

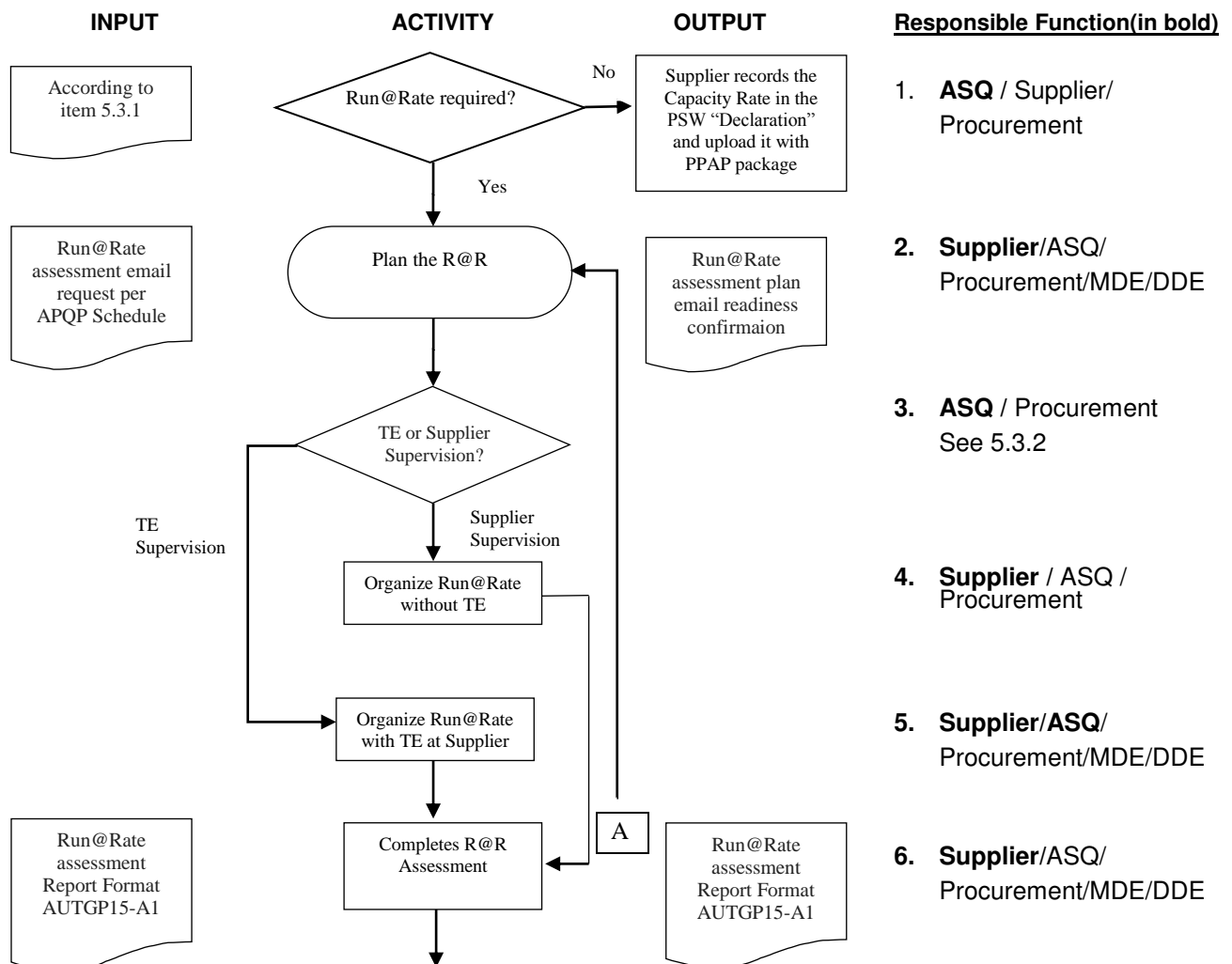
- Ensures the Tool/Die Capacity meets or exceeds the quoted tool capacity from the technical point of view.
- When applicable, provides technical solutions for the findings related to tool/die/ during R@R when the Tool Design is owned by TE.

5. Process Description

5.1 Process Measurables / Measuring Procedures and Goals and Actions

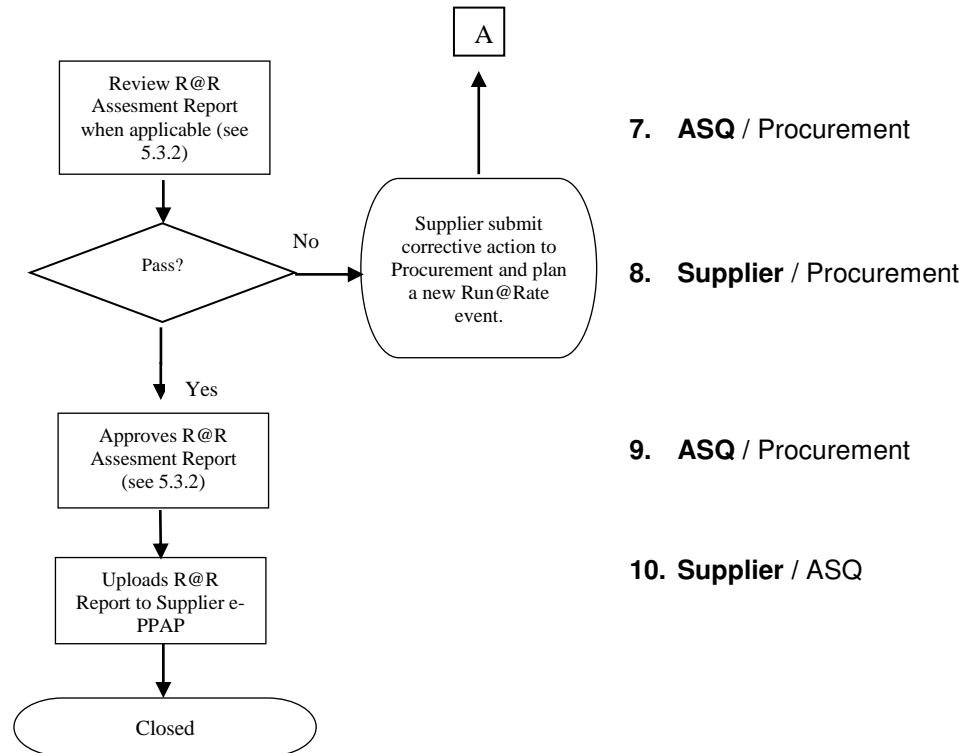
Measurables	Measuring Procedures	General Goals	Response Actions
According AUTGP15-A1	According AUTGP15-A1	To Pass R@R	See 5.3.6

5.2 Process Inputs & Process Outputs



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5.3 Process description

5.3.1 R@R Criteria

R@R is mandatory for:

- Projects Type 2. All components following R@R applicability scope (see above item 2). Then follow item 5.3.2 to define R@R Type.
- New / High Content Technologies (Manufacturing / Product) at Supplier Site
- Other type of parts: Region / Country Procurement and ASQ Leaders can define whether R@R needs to be performed considering manufacturing / product complexity or previous capacity concerns. Request for R@R must be formalized by email specifying the reason for it.
- For Sustaining topics see point 5.3.8

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5.3.2 R@R type

(a). TE Supervision

This is applicable for the following cases: New supplier to TE, new manufacturing location of an existing TE supplier, new product type for an existing supplier or new technology for an existing supplier. TE team (ASQ, Procurement, MDE/DDE when applicable) supervise whole process on site.

(b). Supplier Supervision

Supplier supervises whole process, nominating a representative for supervision. R@R date must be informed to TE ASQ and executed according to Plan. The R@R Assessment Report format [AUTGP15-A1](#) must be finished within 48h after R@R production and submitted to the ASQ.

ASQ can determine whether the R@R Assessment Report needs to be submitted for review and approval by ASQ prior Supplier uploading the signed report on e-PPAP or not.

5.3.3 R@R Production Quantity

The quantity of produced material must be representative of production capacity during R@R period and approved by supplier/ASQ, the influence elements, such as product complexity, shelf-life period, storage, single shift or multi-shifts and so on, should be considered according to the R@R Assessment Format [AUTGP15-A1](#).

The default quantity of R@R is: Serial Peak Production Demand per shift at full speed operation during 1 shift or as agreed with TE ASQ and Procurement.

If the parts produced during R@R meet all Quality Requirements, the parts can be used and shipped to TE according to TE purchase orders upon ASQ authorization via PSW approval. If the parts do not meet quality requirements and the ASQ decides the parts are not fit for TE use, it's the supplier's responsibility to scrap the parts at the supplier's cost.

5.3.4 R@R conduct time

Supplier must conduct R@R after the supplier's PPAP content has been prepared including the Quality of the parts meeting TE Q Requirements, and before final PSW Approval Signature by TE.

5.3.5 R@R checking content

During the period of R@R, the following items will be reviewed: Related manufacturing documents, manufacture and parts quality requirements, requirements for the sub-supplier in terms of quality and capacity, package and transportation.

(a). Documents including: PPAP documents, Process Flow Chart, DFMEA/PFMEA, Control Plan and WI/QIP.



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(b). Parts must be manufactured at final production location and final serial equipment, using related processing tool, measurement, material, operators, condition and equipment that are the same as defined in the PPAP document.

(c). All parts produced during R@R shall fulfill TE's Quality requirements.

5.3.6 R@R result

There are 3 type of R@R results: Pass, Not pass, and Pass with conditions

(a). Pass

The demonstrated capacity during R@R is met (125% TE peak demand) or exceeds, Scrap Rate is according or below quoted rate (when defined), Quality requirements are met and no major nonconformities are found. Supplier proves that there is enough capacity to meet continuous quality and volume production.

(b). Not Pass

The demonstrated capacity during R@R is below 100% of TE peak demand and / or Scrap rate is worst than quoted (when defined) and / or there are major nonconformities found in the process. In that case, the supplier shall submit the corrective action plan to Procurement and ASQ within five working days after R@R is finished.

After the corrective actions are completed, a new R@R event must be planned in agreement with ASQ and Procurement.


(c). Pass with conditions

The demonstrated capacity during R@R is between 100% and 125% of TE peak demand, only minor nonconformities are found in the process, scrap rate is according or below quoted rate (when defined) and the quality of the parts are acceptable by TE SQ Function. Pass with conditions status can be given to supplier if the supplier can provide a solid improvement plan to improve the capacity to meet 125% of TE peak volume and solving the nonconformities. For such suppliers, a PSW with interim approval status will be given (validity no longer than 90 days or at discretion of ASQ) and can only achieve full approval status when the R@R is considered Pass.

Note: The Supplier Tool's payment process remains the same (full payment until PSW is fully approved)

5.3.7 R@R record

R@R records are uploaded by the supplier on the e-PPAP System along with the rest of the PPAP documentation for the mentioned part number. The R@R Reports must be filled and signed by the Supplier, and if applicable by Procurement and ASQ.

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5.3.8 R@R during Sustaining Production

If a R@R is required during Sustaining due to capacity / volume risks (see below) or verification of critical suppliers, this activity must be led and coordinated by the respective Procurement representative following a new R@R event using the format R@R Assessment Report Format [AUTGP15-A1](#) supported by Logistics / Supply Chain Planner. When applicable, the corresponding SQE will be the function in SQ that can support this activity whenever required.

Parts with identified volume / capacity risks:

- TE owned Tool or TE Tool Design where R@R was missed during APQP stage, having capacity concerns in serial production.
 - o In a situation of a tool transfer (and a new PPAP is required) to support full demand / machine allocation and to see the whole picture of Supplier capacity, a R@R event must be scheduled prior transfer, and re-run a R@R at final location by ASQ (as part of the new PPAP)
- TE owned Tool or TE Tool Design related Scrap is higher than RFQ Scrap target.

The R@R Assessment Report must be filled and submitted by Supplier, and must be reviewed and signed as Approved by Procurement to consider it valid. After this, the document will be stored in the Document Management module in Jagger for the corresponding Supplier.

6. Further Applicable Documents and Attachments

- [R@R Assessment Report Format AUTGP15-A1](#)

7. Document History

Change Date (yyyy-mm-dd)	New Revision	Chapter	Main Changes (short description)	Name
2023-01-09	01		Initial release	F. Barrios, David Zhu