	SECTION 13: COLOR AND GRAIN APPROVAL	Ref: TM-QA-DO-06-329-E
		Revision Level: 2
		Date: 08/09/04
		Page: 1

PURPOSE: To define the requirements to obtain part color and grain approval

SCOPE: Applies to any part requiring color (including gloss) and / or grain as indicated on the part drawing

RELATED DOCUMENT(S):

QUALITY ASSURANCE PROJECT PLAN (QAPP) (TMI SQAM Section 25)
TMI RAW MATERIAL CERTIFICATION STATEMENT (TMI SQAM Section 24 – Appendix 24A)


REQUIRED DOCUMENT(S):

INTERIOR PARTS COLOR MATCHING FOLLOWUP SHEET - TMI APPENDIX 13A
COLOR / GRAIN APPROVAL REQUEST - TMI APPENDIX 13B
GRAIN INFORMATION SHEET - TMI APPENDIX 13C
GRAIN AUTHORIZATION SHEET - TMI APPENDIX 13D

RESPONSIBILITIES:

A. COLOR APPROVAL -

- 1) Color and grain masters will be issued to the supplier by TMI Purchasing.
- 2) Timing requirements for color matching and grain instructions will be proposed through the Phase 2 & 3 QAPP issued by TMI Plant QC. The supplier should then detail their planned timing in the QAS submitted to TMI at the beginning of launch activity.
- 3) The supplier is responsible for developing, confirming, and certifying the color with the raw material supplier prior to TMI review. Certification should be documented by use of the TMI RAW MATERIAL CERTIFICATION STATEMENT (TMI SQAM Section 24 - Appendix 24A). Supplier preparation must include, but is not limited to, the following:
 - a) Run parts in all colors using mass production process
 - b) Check visually at the supplier
 - c) Check by colorimeter at the supplier
 - d) Complete the data sheet and copy supplier color standards to be presented at TMI review
 - e) Produce sample parts (2 per color / mold / material) to be reviewed with TMI
 - f) Attend reviews with TMI per TMI requirements
- 4) The supplier must provide visual and colorimeter data showing parts meet color standards or color boundary samples. The numerical data forms the basis for benchmarking and tracking process variation. Preference should be given to the scale which best replicates the visual technique. This data must be submitted using the INTERIOR PARTS COLOR MATCHING FOLLOW SHEET (TMI Appendix 13A) or its TMI approved equivalent.
- 5) The supplier must attach a COLOR / GRAIN APPROVAL REQUEST (TMI Appendix 13B) to the part / data

	SECTION 13: COLOR AND GRAIN APPROVAL	Ref: TM-QA-DO-06-329-E
		Revision Level: 2
		Date: 08/09/04
		Page: 2

submission and submit to TMI - QC.

- 6) TMI Plant QC will schedule Color and Grain Approval reviews with the supplier. Color approval is based on visual and numerical evaluation with visual color matching being the controlling method used for final judgment. Visual evaluation is conducted with reference to the master and mating parts.
- 7) At each color matching review, TMI will give the supplier further instructions using the PARTS COLOR MATCH FOLLOWUP SHEET.

B. GRAIN APPROVAL -

- 1) The supplier must submit a GRAIN INFORMATION SHEET (TMI Appendix 13C) along with actual parts to TMI - QC per QAS / TPR timing if the part drawing indicates a requirement for graining. The GRAIN INFORMATION SHEET must specify the maximum depth and range of grain that the tooling will accept. This information is used to confirm that the individual grained parts meet the design intent for the vehicle.
- 2) TMI - QC will review the Grain Information Sheet for accuracy and comparison with mating parts. Based on the acceptability of the Grain Information Sheet, and the following criteria, TMI will issue a GRAIN AUTHORIZATION SHEET (TMI Appendix 13D) to the supplier:
 - a) Pilot samples satisfy all dimensional, appearance, and fit requirements for both individual parts and assembly into the vehicle. TMI QC may require actual production parts and data for this verification process.
 - b) No further changes will be made to materials or molds (cavity side). (NOTE: The supplier must confirm that adequate draft angle is present in the tool to prevent a die lock condition after graining.)
- 3) Once the supplier receives the Grain Authorization Sheet, the supplier must indicate the date by which grained parts will be provided to TMI, sign the sheet, and return it TMI - QC by the indicated due date.
- 4) The supplier should initiate graining of the tool only after receiving a Grain Authorization Sheet from TMI.
- 5) The supplier must submit actual grained parts with a COLOR / GRAIN APPROVAL REQUEST to TMI in order to gain final grain approval.

REVISION	REVISION DATE	SECTION	CHANGE DESCRIPTION
0	07/09/01	ALL	Initial Release
1	05/20/03	ALL	Added revision record
2	08/09/04	RESP: A – 1 & 2	Added clarification of responsibility and timing / Added reference to QAPP



SECTION 13: COLOR AND GRAIN APPROVAL

Ref: TM-QA-DO-06-329-E

Revision Level: 2

Date: **08/09/04**

Page: 3