

## Extreme Tool & Engineering Validation Deliverables

Level 1

Level 2

Level 3

Level 4

*Uncontrolled Document when Printed. Verify current revision prior to use.*

### Mold Function D2/D3

### Process Centering D2/D3

### Steel Adjustment

### Process Capability D2/D3

#### Molding Department

RJG workbook (partial)	RJG workbook (Full)	Establish process using workbook	Establish process using workbook
Dynamic cavity imbalance	Dynamic cavity imbalance		
Gate freeze study	Gate freeze study		
Viscosity Curve	Viscosity Curve		
Mold function review	Mold function verification		
Pull 30 shots, 25 to customer, 1 to program manager, 4 to Quality	Pull shots as follows, 30 shots High, Low & Nominal to Quality, 5 shots High low & nominal to customer, 1 shot High low & nominal to program manager	Pull shots as follows, 30 shots High, Low & Nominal to Quality, 5 shots High low & nominal to customer, 1 shot High low & nominal to program manager	Pull shots as follows, 30 shots Nominal process spaced evenly throughout a 4 hour run to Quality & another 30 shots alternated between our shots to Customer, 5 shots alternated through 4 hour run to
Find tool/process Max high & low pack pressure capability / Issues	Workbook updated, and considered final documentation	Verify all aspects of workbook documentation are complete & final, any changes must be documented in notes section of workbook & dating workbook procedure is followed	Verify tool stability & function during 4 hour run. Any interruption during this run is to be documented, and run clock resets
Add to Work Order Issues list on Tool function, Process & Setup	Verify Work order on Tool function, Process & Setup items are addressed and no additional items remain		Initiate Work order on Tool function & wrap up pending final tool transfer
Deliver all information & Parts to QA	Deliver all information & Parts to QA	Deliver all information & Parts to QA	Deliver all information & Parts to QA

#### QC Department

Visual on one shot	Visual	Steel adjustment to meet all print specifications	Visual
critical inspection/measurements one shot	Complete Critical inspection, 1 pcs / cavity, High, low & nominal shots, verify acceptance & proceed to complete Full First Article	Complete Critical inspection update on, 1 pcs / cavity, High, low & nominal shots, verify acceptance & proceed to update Full First Article	Complete Critical inspection update on, 30 pcs / cavity nominal shots
Add to Work Order Issues List and part cosmetic or dimensional concerns	Verify Work order and part cosmetic or dimensional items are addressed and no additional items remain	All items must pass print requirements before proceeding to level 4	Add to Work order on Tool function & wrap up pending final tool transfer
QM to Notify PM upon completion of all items	QM to Notify PM upon completion of all items	QM to Notify PM upon completion of all items	QM to Notify PM upon completion of all items