## PHASE 3 - TOOL BUILD RFQ

Document Type:APLSRev. Date: 05.aug.04Document No:CE-1201027-FMRev. Level: 9

## **CE's APQP and Product Launch System (APLS)**

|                                     | Program Name       |   |  |  |
|-------------------------------------|--------------------|---|--|--|
| Product & Machine Information       |                    |   |  |  |
| Part Name                           | Texture Type       | Machine Tonnage                               |  |  |
| Faceplate                           | see below          |   |  |  |
| Customer                            | Texture Supplier   | Mach. Manufacturer                            |  |  |
|                                     |                    |   |  |  |
| No. of Cavities                     | Plastic Resin Type | Machine Type                                  |  |  |
| 1-cav                               | PC-ABS             | waciiile Type                                 |  |  |
| 1 oav                               | I O ADO            |   |  |  |
|                                     |                    |   |  |  |
|                                     |                    |   |  |  |
| MOLD TYPE                           | MOLD CONSTRUCTION  | STEEL TYPE                                    |  |  |
| Prototype                           | X Standard         | A Plate P-20                                  |  |  |
| <b>X</b> Production                 | Three Plate        | B Plate P-20                                  |  |  |
| X Injection Mold                    | Reverse Ejection   | Cavities                                      |  |  |
| Blow Mold                           | Modular            | Cores   |  |  |
| Rotational Mold                     | Stack              | Side Actions                                  |  |  |
| Other                               |                    | Other   |  |  |
| Est. Mold Base: Length:             | Cavities Cores     |   |  |  |
| Width:                              | Inserted           | e.g. P-20, P-20 HH, 4140, stainless steel     |  |  |
| Height:                             | In Solid           | H-13, S-7, Aluminum, BeCu, Ampco              |  |  |
| EJECTION                            | <u>COOLING</u>     | SIDE ACTIONS                                  |  |  |
|                                     | SH MH              | Qt  |  |  |
| X Standard                          | Blocks             | Mechanical Slides                             |  |  |
| Reverse                             | X Mold Base X      | Hydraulic Slides                              |  |  |
| Hydraulic                           | Slides             | Hydraulic Slides Hydraulic Cylinders Cam Pins |  |  |
| Mechanical                          | Inserts            | Cam Pins                                      |  |  |
| Ejector Pins                        | Lifters            | Air Cylinder                                  |  |  |
| Ejector Blades                      | Core Pins          | Spring Loaded                                 |  |  |
| Ejector Sleeves                     | Clamp Plates       | Hand Load                                     |  |  |
| Lifters                             | Stripper Plates    | X Lifters 3                                   |  |  |
| Strippers                           | Thermal Pins       | Other   |  |  |
| 2 Stage Ejection                    | Baffles            | Notes: Faceplate-assume 3 lifters             |  |  |
| Air Poppets                         | Bubblers           | -   |  |  |
| Guided Ejection                     | Rotating Water     |   |  |  |
| Spring Loaded Cover Assist Ejection | Junction           |   |  |  |
| Accelerated Ejection                | Other              |   |  |  |
| Early Returns                       | Notes:             |   |  |  |
| Other                               |                    |   |  |  |
| Notes:                              |                    |   |  |  |
|                                     |                    |   |  |  |
|                                     |                    |   |  |  |
|                                     |                    |   |  |  |

Date Sent:

Submit Quotes By:

2005.07.19

2005.07.22

|   | Program Name   |                              |          |
|---|--|------------------------------|----------|
| GATING  | PLATING SH MH  | SPECIAL<br>FEATURES          | Qty:     |
| X Cold Sprue Center   | Nitriding  | X Date Codes                 |          |
| Cold Sprue Offset   | Electrodes Ni  | Shift Codes                  |          |
| Hot Drop  | Chrome   | X Material ID                |          |
| Manifold  | Polyond  | Floating Plates              |          |
| Valve Gate  | Armoloy XADC   | Transducers                  |          |
| X Subgate   | Other  | P <sub>L</sub> Locks         |          |
| Edge Gate   |  | Switches                     |          |
| Cashew Gate   | Specify Plated Area(s) In Cavity:                            | Engraving                    |          |
| Direct Gated  |  | X QMC Plates X Cycle Counter |          |
| Other   |  | X Cycle Counter              |          |
|   |  | X Mold Samples               |          |
| Number of Gates (Drops):  | <u> </u>   | Gate Inserts                 |          |
| Manifold Manufacturer:  |  | Cavity Shut-Off              |          |
| Manifold Series:  |  | X Water Manifolds            |          |
| Color Changes:  | <u></u>  | X Lift Lug                   |          |
|   |  | <u>PROCESS</u>               |          |
| FINISHES SH   | THREADS MH   | <u>FEATURES</u>              | <u>)</u> |
| A1 - Grade #3 Diamond Buff  | Auto-Unscrewing (Rack)                                       | Gas Assist                   |          |
| A2 - Grade #6 Diamond Buff  | Auto-Unscrewing (Motor)                                      | In-Mold Decorating           |          |
| A3 - Grade #15 Diamond Buff   | Hand Loads extra sets  | Insert Molding               |          |
| B1 - 600 Grit Paper   | Line of Draw   | Two-Shot                     |          |
| B2 - 400 Grit Paper   | Out of Draw  |                              |          |
| B3 - 320 Grit Paper   | Expanding  |                              |          |
| C1 - 600 Stone  | Hasco  |                              |          |
| C2 - 400 Stone  | Other  | <b>GENERAL INI</b>           | FO       |
| C3 - 320 Stone  |  | <u> </u>                     |          |
| D1 - Dry Blast Glass bead #11   |  | No. of Samples:              | 1        |
| D2 - Dry Blast #240 Oxide   |  | Build Timing (wks):          |          |
| D3 - Dry Blast #24 Oxide  |  | Data Release Date:           |          |
| Other   |  | Tool Certification:          | yes      |
|   |  | Quote Number:                |          |
| Special Instructions and Comments:  |  | Job Number:                  |          |
| Quote cold sprue/runner to subgate i  | into tab (1 per cav)   |                              |          |
| Quote optional 1 drop (1 per cav) pno   | eumatic valve gate hot-half from Incoe (include installation | )                            |          |
| Quote seperately #3 Ford Stipple  |  |                              |          |
| Quote line item for QMC Plates, Lift  | Lug and Water manifolds                                      |                              |          |
| Notes:  1) All quotes submitted must be based off of authorized and documented by the Project To 2) All 2-D and 3-D Tool Data Is Property of Ca | •  | ool Build Standards must be  |          |

Send quotes to: Kevin Bull Phone No.: 616-254-4214

616-975-4717

E-Mail: bullk@cascadeng.com

FAX No.: