



**Semi - Finished Camshafts  
January, 2025**

717 Woodworth Rd. Jackson, Michigan 49202  
517-787-2040

# **EVERWEAR-GEAR™ CAMSHAFTS**



Camshaft Machine Company has manufactured camshafts since 1942. We specialize in both cast and steel semi-finished(UGL's) camshaft cores for the entire performance industry. Many of today's "performance" cam companies rely on Camshaft Machine Company cores for the development of their individual high performance finished grinds.

The High performance industry has struggled for years with durability problems between the distributor gears and steel camshaft gears. The materials used to manufacture steel camshafts today are extremely durable; however there have been some compatibility problems with stock distributor gears. These problems seem to arise when there is increased loads added to the system. Below are just a few of the variables that contribute to stress and or problems.

1. High Performance Oil Pumps (Higher Pressure which increases gear loads).
2. Different Oil Viscosity
3. Distributor Gear Quality
4. Cam Gear Quality
5. Lubrication for the gears
6. Miss matching of new and old gears.
7. Excessive backlash between the 2 gears.

Camshaft Machine Company developed the new Everwear-Gear™ in November of 2003.

We enlisted help from MSD as they have worked on gear wear problems for many years. MSD has developed a test standard that can measure durability, as well as allowing oil temperature, oil pressure and RPM changes. To measure our progress, and quantify our overall gear quality, we used the American Gear Manufactures Association (AGMA) standard 1 thru 15 scale, 1 being the lowest level of performance.

Our standard process is to plunge hob our gears, the hob is fed vertically into the gear on the camshaft. OEM manufacturing has used this plunge hob process for years with good success on stock oil pump and limited RPM applications. We rate the OEM production gear quality throughout the industry in the 3 – 4 range.

To make a precision quality gear, we wanted to find a better cast iron material than our "Proferall++". We developed a new cast iron material for our Everwear-Gear™ that has excellent wear characteristics. We used a special nitride process to case harden the gear. Once we had the material we needed to address the machining process for the gear, we had to go to a "through" hobbing process. Many improvements have been made in the design of the hobs over the years. We developed a new topping hob that holds the shape of the tooth (K curve), the pitch diameter, and O.D. in very close tolerance to the centerline of the gear. There is now a true relationship between the O.D. of the gear to the centerline of the gear. In the past engine builders would make a decision on the quality of the gear based on the run-out of the O.D. on the gear with the cam on the centers. Because we rough turn the O.D. of our standard production camshafts, there is no consistent relationship between the O.D. and the root or pitch diameter. With the new Everwear-Gear™, there is a very consistent relationship. Our Everwear-Gear™ has an AGMA rating of 9. This is truly a precision gear.

Our test setup used a DC motor to drive the engine, which is basically a "Reverse Dyno". The crank, camshaft, distributor and a high performance oil pump were installed for testing. The test used 50 wt. racing oil at 50°F, the test was setup to produce 150psi oil pressure. The engine was accelerated from 0 to 800rpm and then held at 800rpm. Using camshafts and gears currently being sold by several manufacturers, we were unable to have the gears live longer than 72 seconds. Using the MSD cast iron distributor gear #8531 and the new CMC Everwear-Gear™, the camshafts and Gears were removed after 38 Hours with minimal wear.

## CMC Bearing Journal Size Specifications

| <b>Decsription</b>   | <b>Finished Size</b> | <b>Bearing Type</b> |
|----------------------|----------------------|---------------------|
| SB Chevy Std.        | 1.8687               | Bushing             |
| SB Chevy Roller Std. | 1.875                | Roller              |
| BB & Rocket Block    | 1.9492               | Bushing             |
| 50mm                 | 1.9683               | Roller              |
| 55mm                 | 2.1653               | Roller              |
| LS1-6 55mm CMC       | 2.1653               | Roller / Bushing    |
| LS1-6 55mm GM Spec.  | 2.1659               | Bushing             |

# AMC

| AMC 1966-93 290-304-343-360-390-401 C.I. V-8 Roller follower only |          |      |          |      |        |                                 |             |      |                  |      |                  |               |       | EF001  |
|---|----------|------|----------|------|--------|---------------------------------|-------------|------|------------------|------|------------------|---------------|-------|--------|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIAMETER | LOBE<br>WIDTH | STEEL | Notes: |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |                  |               |       |        |
| 310601  | 250°     | 250° | .350     | .350 | 112.0° | 4.0°                            | 108°        | 116° | .680             | .680 | 1.12             | .58           | 5150  |        |

  

| Studebaker 1957-63 V-8 Roller follower only |          |      |          |      |        |                                 |             |      |                  |      |                  |               |       | EF007  |
|---|----------|------|----------|------|--------|---------------------------------|-------------|------|------------------|------|------------------|---------------|-------|--------|
| PART NO.                                    | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIAMETER | LOBE<br>WIDTH | STEEL | Notes: |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |                  |               |       |        |
| 310600                                      | 250°     | 250° | .325     | .325 | 110.0° | 0.0                             | 108°        | 112° | .600             | .600 | .92              | .56           | 8660  |        |

# Buick - Cadillac

| Buick 1962-67 198-225 C.I. V-6 (ODD FIRE) Roller Cams <span style="float: right;">EF105</span>                                |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
|---|----------|------|----------|------|--------|---------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|--------------------------------|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313603  | 240°     | 240° | .350     | .350 | 112°   | 5.5°                            | 109°        | 115° | .558             | .558 | .87          | .48           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Buick 1990- 95 231 C.I. 3.8 L. V-6 Roller Vin Code "L" <span style="float: right;">EF112</span>                               |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313608  | 230°     | 230° | .305     | .305 | 112.0° | 140.0°                          | 116°        | 108° | .605             | .605 | .87          | .40           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Buick 1995-01 231 C.I. 3.8 L. V-6 Roller Series II & III Eng. Codes "L36" , "L67" <span style="float: right;">EF113</span>    |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313609  | 241°     | 241° | .305     | .305 | 112.0° | 140.0°                          | 116°        | 108° | .630             | .630 | .87          | .40           | 5150           |                                |
| 313614  | 274°     | 274° | .340     | .340 | 110.0° | 141.0°                          | 110°        | 110° | .598             | .598 | .87          | .40           | 5150           |                                |
| 313615  | 241°     | 241° | .305     | .305 | 111.0° | 143.0°                          | 108°        | 114° | .630             | .630 | .87          | .40           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Buick 1961-67 215 C.I. Aluminum Block V-8 300-340 C.I. Cast Iron Block - Roller Cams <span style="float: right;">EF102</span> |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313613  | 270°     | 270° | .350     | .350 | 110.0° | 3.0°                            | 108°        | 112° | .513             | .513 | .85          | .48           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Buick 1968-80 350 C.I. V-8 Roller Cams <span style="float: right;">EF104</span>   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313612  | 270°     | 270° | .350     | .350 | 110.0° | 1.0°                            | 108°        | 112° | .557             | .557 | .92          | .48           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Buick 1957-66 364-401-425 C.I. V-8 Roller Cams <span style="float: right;">EF101</span>                                       |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 313611  | 270°     | 270° | .350     | .350 | 110.0° | 3.0°                            | 108°        | 112° | .513             | .513 | .86          | .56           | 5150           |                                |
|   |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| Cadillac 1968-84 368-425-472-500 C.I. V-8 HYD ROLLER CAM <span style="float: right;">EF133</span>                             |          |      |          |      |        |                                 |             |      |                  |      |              |               |                |                                |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from hole   | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                         |
|   | INT.     | EXH. | INT.     | EXH. |        |                                 | INT.        | EXH. | INT.             | EXH. |              |               |                |                                |
| 314600  | 250°     | 250° | .350     | .350 | 112.0° | 144.0°                          | 110°        | 114° | .540             | .540 | .92          | .52           | 1055           | 2-piece: cam & flange assembly |

# GM Holden

| <b>GM HOLDEN L6 3.3L - 202 cu.in.</b>                       |          |      |          |      |        |                 |             |      |                  |      |               |            |        | EF322  |
|---|----------|------|----------|------|--------|-----------------|-------------|------|------------------|------|---------------|------------|--------|--------|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIAMETER | LOBE WIDTH | STEEL  | Notes: |
|   | INT.     | EXH. | INT.     | EXH. |        | CCW from keyway | INT.        | EXH. | INT.             | EXH. |               |            |        |        |
| 326607  | 240°     | 240° | .370     | .370 | 110.0° | 1.0°            | 108°        | 112° | .550             | .550 | .90           | .54        | 5150   |        |
| 326608  | 270°     | 270° | .400     | .400 | 106.0° | 3.0°            | 104°        | 108° | .525             | .525 | .90           | .54        | 5150   |        |
|   |          |      |          |      |        |                 |             |      |                  |      |               |            |        |        |
| <b>GM HOLDEN V8 253-308 cu.in., CARBURATED - ROLLER CAM</b> |          |      |          |      |        |                 |             |      |                  |      |               |            |        | EF321  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIAMETER | LOBE WIDTH | ATERIA | Notes: |
|   | INT.     | EXH. | INT.     | EXH. |        | CCW from dowel  | INT.        | EXH. | INT.             | EXH. |               |            |        |        |
| 326601  | 250°     | 250° | .350     | .350 | 111.0° | 1.0°            | 108°        | 114° | .600             | .600 | 1.00          | .53        | 1055   |        |
| 326604  | 240°     | 240° | .350     | .350 | 108.0° | 0.0°            | 106°        | 110° | .600             | .600 | 1.00          | .53        | 1055   |        |
| 326605  | 282°     | 282° | .400     | .400 | 106.0° | 0.0°            | 106°        | 106° | .550             | .550 | 1.00          | .53        | 1055   |        |
|   |          |      |          |      |        |                 |             |      |                  |      |               |            |        |        |
| <b>GM HOLDEN V8 253-308 cu.in., WITH EFI - ROLLER CAM</b>   |          |      |          |      |        |                 |             |      |                  |      |               |            |        | EF324  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIAMETER | LOBE WIDTH | ATERIA | Notes: |
|   | INT.     | EXH. | INT.     | EXH. |        | CCW from dowel  | INT.        | EXH. | INT.             | EXH. |               |            |        |        |
| 326600  | 250°     | 250° | .350     | .350 | 111.0° | 1.0°            | 108°        | 114° | .600             | .600 | 1.00          | .53        | 1055   |        |
| 326602  | 280°     | 280° | .400     | .400 | 107.0° | 0.5°            | 107°        | 107° | .550             | .550 | 1.00          | .53        | 1055   |        |
| 326603  | 228°     | 228° | .350     | .350 | 112.0° | 2.0°            | 110°        | 114° | .600             | .600 | 1.00          | .53        | 1055   |        |
| 326606  | 240°     | 240° | .350     | .350 | 108.0° | 0.0°            | 106°        | 110° | .600             | .600 | 1.00          | .53        | 1055   |        |

# GM V6

| GM 1987-95 262C.I. (4.3L) V-6 (EVEN FIRE 90 Degree) Roller only - Standard Rotation RH <span style="float: right;">EF165</span>                 |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
|---|----------|------|----------|------|--------|---------------|-------------|------|------------------|------|-----------|------------|-------------|--|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.     | EXH. |        | CW from dowel | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 315642  | 202°     | 213° | .269     | .273 | 112.0° | 5.0°          | 108°        | 116° | .675             | .675 | 1.06      | .48        | 1055        | Distributor Gear Integral with shaft             |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| GM 1990-97 262C.I. (4.3L) V-6 with balance shaft (front end pilot) Roller only <span style="float: right;">EF183</span>                         |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.     | EXH. |        | CW from dowel | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 315687  | 213°     | 213° | .273     | .273 | 112.0° | 5.5°          | 107°        | 117° | .675             | .675 | 1.06      | .48        | 1055        | Distributor Gear Integral with shaft             |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| GM 1987-95 262C.I. (4.3L) V-6 90 Degree "Gear Drive 1-2-3-4-5-6 - firing order" Roller only <span style="float: right;">EF165</span>            |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.     | EXH. |        | CW from dowel | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 315643  | 202°     | 213° | .269     | .273 | 112.0° | 5.0°          | 108°        | 116° | .675             | .675 | 1.06      | .48        | 1055        | Distributor Gear Integral with shaft             |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             | RH cam rotation; LH crank rotation               |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| GM LV1-LV3 GEN V Single Bolt with Variable Valve Timing "VVT" V-6 Roller Cam - With Fuel pump Tri-lobe <span style="float: right;">EF191</span> |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.     | EXH. |        | CW from dowel | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 316620  | 238°     | 238° | .338     | .338 | 114.0° | 10.0°         | *           | *    | .760             | .760 | 1.24      | .48        | 5150        | stock Tri-lobe Lift = .224                       |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             | Other available fuel pump lobes: plus14% (.251); |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             | plus 32% (.294) ; plus37%(.306)                  |
|   |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |
| * lobe centers are variable in engine   |          |      |          |      |        |               |             |      |                  |      |           |            |             |  |

# Chevy 1957-1996 Small Block V8

| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA  | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIA. | LOBE WIDTH | MATERIAL | Notes:  |
|--|----------|------|---------|------|------|--------------------------------|-------------|------|--------------------|------|-----------|------------|----------|---|
|  | INT.     | EXH. | INT.    | EXH. |      |                                | INT.        | EXH. | INT.               | EXH. |           |            |          |   |
| <b>1957-94 SB ROLLER CAMS V-8 STANDARD SPACING FLAT FACE</b> <span style="float: right;">EF176</span>  |          |      |         |      |      |                                |             |      |                    |      |           |            |          |   |
| 315772   | 194°     | 204° | .271    | .286 | 112° | 5.5°                           | 107°        | 117° | .670               | .662 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315878   | 232°     | 242° | .330    | .330 | 112° | 5.5°                           | 107°        | 117° | .618               | .618 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315673   | 232°     | 242° | .334    | .334 | 112° | 5.5°                           | 107°        | 117° | .618               | .618 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                          |
| 315875   | 240°     | 244° | .350    | .350 | 112° | 5.0°                           | 108°        | 116° | .470               | .470 | .85       | .48        | 8660 Q&T | Small Base Circle - EVERWEAR-GEAR™                            |
| 315848   | 260°     | 270° | .415    | .415 | 106° | 1.0°                           | 104°        | 108° | .525               | .525 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315658   | 267°     | 274° | .434    | .423 | 106° | 1.5°                           | 103°        | 109° | .500               | .500 | .92       | .54        | 5150     | Distributor Gear Integral with shaft                          |
| 315648   | 267°     | 274° | .434    | .423 | 106° | 1.5°                           | 103°        | 109° | .530               | .530 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                          |
| 315846   | 270°     | 270° | .415    | .415 | 112° | 4.0°                           | 110°        | 114° | .532               | .532 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315630   | 274°     | 274° | .425    | .425 | 108° | 2.0°                           | 106°        | 110° | .530               | .530 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                          |
| 315730   | 274°     | 274° | .425    | .425 | 108° | 2.0°                           | 106°        | 110° | .530               | .530 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315803   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 102°        | 110° | .493               | .493 | .85       | .48        | 8660 Q&T | Sm. Base Circle - - EVERWEAR-GEAR™                            |
| 315876   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 102°        | 110° | .550               | .550 | .90       | .48        | 8660 Q&T | Std Brg Journals - EVERWEAR-GEAR™                             |
| 315856   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 102°        | 110° | .588               | .588 | 1.00      | .48        | 8660 Q&T | 50mm(1.969")Roller bearing Journals - EVERWEAR-GEAR™          |
| 315805   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 102°        | 110° | .550               | .550 | .90       | .48        | 8660 Q&T | Roller Brg. Jrnls 1.875" - EVERWEAR-GEAR™                     |
| 315823   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 102°        | 110° | .583               | .583 | 1.00      | .48        | 8660 Q&T | 1.949" BB Journals - EVERWEAR-GEAR™                           |
| 315776   | 275°     | 275° | .400    | .400 | 106° | 1.0°                           | 104°        | 108° | .553               | .553 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315840   | 275°     | 275° | .400    | .400 | 108° | 3.0°                           | 104°        | 112° | .583               | .583 | 1.00      | .48        | 8660 Q&T | 1.949" BB Journals - EVERWEAR-GEAR™                           |
| 315824   | 275°     | 275° | .400    | .400 | 108° | 3.5°                           | 103°        | 113° | .593               | .593 | 1.00      | .48        | 8660 Q&T | 50mm (1.969") Journals - EVERWEAR-GEAR™                       |
| 315822   | 278°     | 278° | .435    | .435 | 106° | 2.0°                           | 102°        | 110° | .490               | .490 | .85       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315855   | 280°     | 280° | .430    | .430 | 108° | 3.5°                           | 103°        | 113° | .523               | .523 | .90       | .48        | 8660 Q&T | Roller Bearing 1.875" - EVERWEAR-GEAR™                        |
| 315621   | 290°     | 290° | .350    | .350 | 108° | 2.0°                           | 106°        | 110° | .590               | .590 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                          |
| 315721   | 292°     | 292° | .350    | .350 | 108° | 2.0°                           | 106°        | 110° | .595               | .595 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 415600   | 271°     | 271° | .350    | .350 | 110° | 3.0°                           | 108°        | 112° | .595               | .595 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                          |
| 315807   | 290°     | 294° | .460    | .445 | 108° | 3.5°                           | 103°        | 113° | .483               | .499 | .85       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| <b>1957-95 SB ROLLER CAMS V-8 4 X 7 FIRING ORDER SWAP F.O. 1-8-7-3-6-5-4-2 FLAT FACE</b> <span style="float: right;">EF176</span>              |          |      |         |      |      |                                |             |      |                    |      |           |            |          |   |
| 315706   | 256°     | 262° | .380    | .380 | 112° | 5.0°                           | 108°        | 116° | .490               | .490 | .85       | .48        | 8660 Q&T | Small Base Circle - EVERWEAR-GEAR™                            |
| 315808   | 260°     | 270° | .415    | .415 | 106° | 1.0°                           | 104°        | 108° | .525               | .525 | .90       | .48        | 8660 Q&T | Std Bearings - EVERWEAR-GEAR™                                 |
| 315828   | 260°     | 270° | .415    | .415 | 106° | 1.0°                           | 104°        | 108° | .525               | .525 | .90       | .48        | 8660 Q&T | Roller Bearing Journals 1.875" - EVERWEAR-GEAR™               |
| 315835   | 260°     | 270° | .415    | .415 | 106° | 1.0°                           | 104°        | 108° | .575               | .575 | 1.01      | .48        | 8660 Q&T | 50mm(1.969") Roller Bearing Journals - EVERWEAR-GEAR™         |
| 315702   | 274°     | 274° | .425    | .425 | 108° | 2.0°                           | 106°        | 110° | .530               | .530 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315809   | 275°     | 275° | .400    | .400 | 106° | 2.0°                           | 101°        | 111° | .493               | .493 | .85       | .48        | 8660 Q&T | Small Base Circle - EVERWEAR-GEAR™                            |
| 315800   | 280°     | 290° | .485    | .485 | 112° | 4.0°                           | 110°        | 114° | .613               | .613 | 1.05      | .48        | 8660 Q&T | 55 mm (2.165") EVERWEAR-GEAR™                                 |
| 315844   | 286°     | 296° | .460    | .445 | 114° | 6.5°                           | 109°        | 119° | .463               | .478 | .85       | .48        | 8660 Q&T | Std Bearings - Small Base Circle - EVERWEAR-GEAR™             |
| 315821   | 286°     | 296° | .480    | .460 | 114° | 6.5°                           | 109°        | 119° | .469               | .488 | .85       | .48        | 8660 Q&T | EVERWEAR-GEAR™ - Roller Brg Journals 1.875" Small Base Circle |
| 315722   | 273°     | 273° | .350    | .350 | 110° | 2.5°                           | 108°        | 112° | .595               | .595 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™  |
| 315845   | 290°     | 296° | .460    | .445 | 110° | 4.0°                           | 106°        | 114° | .463               | .478 | 1.01      | .48        | 8660 Q&T | 50mm (1.969") Journals - EVERWEAR-GEAR™                       |
| <b>1957-95 SB ROLLER CAMS V-8 (4 X 7- 3 X 2) "C" FIRING ORDER SWAP F.O. 1-8-7-2-6-5-4-3 FLAT FACE</b> <span style="float: right;">EF176</span> |          |      |         |      |      |                                |             |      |                    |      |           |            |          |   |
| 315841   | 260°     | 270° | .390    | .390 | 108° | 2.0°                           | 106°        | 110° | .560               | .560 | .90       | .48        | 8660 Q&T | Roller Bearing 1.875 - EVERWEAR-GEAR™                         |
| 315842   | 260°     | 270° | .415    | .415 | 108° | 2.0°                           | 106°        | 110° | .675               | .675 | 1.24      | .48        | 8660 Q&T | 55 mm (2.165")R.B. Journals - EVERWEAR-GEAR™                  |
| 315847   | 260°     | 270° | .415    | .415 | 108° | 2.0°                           | 106°        | 110° | .570               | .570 | 1.00      | .48        | 8660 Q&T | 50mm (1.969") EVERWEAR-GEAR™                                  |
| 315747   | 260°     | 270° | .415    | .415 | 108° | 2.0°                           | 106°        | 110° | .570               | .570 | 1.00      | .48        | 8660 Q&T | 50mm (1.969") Dist.Gear Integral with shaft                   |

# Chevy 1957-1996 Small Block V8

| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIA. | LOBE WIDTH | MATERIAL | Notes:   |
|--|----------|------|---------|------|--------|--------------------------------|-------------|------|--------------------|------|-----------|------------|----------|--|
|  | INT.     | EXH. | INT.    | EXH. |        |                                | INT.        | EXH. | INT.               | EXH. |           |            |          |  |
| <b>1987-96 SB ROLLER TAPPET V-8 REVERSE ROTATION STEPPED FACE (CHAIN DRIVE)</b> <span style="float: right;">EF179</span>     |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| 315783   | 214°     | 214° | .300    | .300 | 110.0° | 111.0°                         | 108°        | 112° | .640               | .640 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| <b>GM 1987-96 SB V-8 LT1, LT4, L98, HYDRAULIC ROLLER CAMS STEPPED FRONT</b> <span style="float: right;">EF164</span>         |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| 315769   | 194°     | 204° | .271    | .286 | 111°   | 5.0°                           | 106°        | 116° | .686               | .671 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315760   | 207°     | 207° | .242    | .242 | 110°   | 3.0°                           | 108°        | 112° | .712               | .712 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315757   | 214°     | 214° | .300    | .300 | 112°   | 5.0°                           | 108°        | 116° | .650               | .650 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315657   | 214°     | 214° | .300    | .300 | 112°   | 5.0°                           | 108°        | 116° | .650               | .650 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                   |
| 315670   | 232°     | 242° | .334    | .334 | 112°   | 5.5°                           | 107°        | 117° | .611               | .611 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                   |
| 315870   | 232°     | 242° | .334    | .334 | 112°   | 5.5°                           | 107°        | 117° | .610               | .610 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315653   | 274°     | 274° | .425    | .425 | 108°   | 2.0°                           | 106°        | 110° | .530               | .530 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                   |
| 315853   | 274°     | 274° | .425    | .425 | 108°   | 2.0°                           | 106°        | 110° | .530               | .530 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315816   | 275°     | 275° | .400    | .400 | 108°   | 1.0°                           | 108°        | 108° | .549               | .549 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315817   | 275°     | 275° | .400    | .400 | 112°   | 3.0°                           | 112°        | 112° | .549               | .549 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315818   | 275°     | 275° | .400    | .400 | 112°   | 3.0°                           | 112°        | 112° | .470               | .470 | .85       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315819   | 280°     | 288° | .441    | .441 | 112°   | 3.0°                           | 112°        | 112° | .508               | .508 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315820   | 280°     | 288° | .441    | .441 | 112°   | 3.0°                           | 112°        | 112° | .470               | .470 | .85       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 315851   | 273°     | 273° | .350    | .350 | 110°   | 2.5°                           | 108°        | 112° | .595               | .595 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™; 4-7 swap firing order                  |
| 315650   | 292°     | 292° | .350    | .350 | 108°   | 2.0°                           | 106°        | 110° | .595               | .595 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                   |
| 315827   | 290°     | 290° | .350    | .350 | 112°   | 5.0°                           | 108°        | 116° | .560               | .560 | .90       | .48        | 8660 Q&T | Small Base Circle - EVERWEAR-GEAR™                     |
| 315850   | 298°     | 298° | .350    | .350 | 108°   | 2.0°                           | 106°        | 110° | .595               | .595 | .90       | .48        | 8660 Q&T | EVERWEAR-GEAR™   |
| 415601   | 271°     | 271° | .350    | .350 | 110°   | 3.0°                           | 108°        | 112° | .595               | .595 | .90       | .48        | 5150     | Distributor Gear Integral with shaft                   |
| These cams have stepped front nose with a reamed .50 hole. Pin protrudes .620 but can be pressed into .300 for early LT1/L98 |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| <b>1958-65 348-409 C.I. Chevy V-8 RETROFIT ROLLER CAMSHAFT</b> <span style="float: right;">EF153</span>                      |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| 315603   | 267°     | 267° | .325    | .325 | 110°   | 6.0°                           | 108°        | 112° | .624               | .624 | 1.06      | .50        | 8660 Q&T | 4-7 SWAP FIRING ORDER; EVERWEAR-GEAR™                  |
| 315610   | 270°     | 270° | .350    | .350 | 110°   | 6.0°                           | 108°        | 112° | .600               | .600 | 1.06      | .50        | 8660 Q&T | EVERWEAR-GEAR™   |
| 351636   | 270°     | 270° | .350    | .350 | 110°   | 6.0°                           | 108°        | 112° | .600               | .600 | 1.06      | .50        | 5150     | EVERWEAR-GEAR™   |
| <b>CHEVY NASCAR SB V-8 SB2 CYL HEADS WITH STD BLOCK</b> <span style="float: right;">EF189</span>                             |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| 315861   | 275°     | 275° | .400    | .400 | 108°   | 3.5°                           | 103°        | 113° | .545               | .545 | .90       | .48        | 8660 Q&T | Std Bearings - EVERWEAR-GEAR™                          |
| 315862   | 275°     | 275° | .400    | .400 | 108°   | 3.5°                           | 103°        | 113° | .545               | .545 | .90       | .48        | 8660 Q&T | 1.875" Roller Bearing Journals - EVERWEAR-GEAR™        |
| 315863   | 275°     | 275° | .410    | .410 | 108°   | 3.5°                           | 103°        | 113° | .580               | .580 | 1.07      | .48        | 8660 Q&T | 1.949" Roller Bearing Journals - EVERWEAR-GEAR™        |
| 315864   | 275°     | 275° | .410    | .410 | 108°   | 3.5°                           | 103°        | 113° | .583               | .583 | 1.07      | .48        | 8660 Q&T | 50 mm(1.969") Roller Bearing Journals - EVERWEAR-GEAR™ |
| <b>CHEVY NASCAR SB V-8 SB2 CYL HEADS WITH SB2 BLOCK</b> <span style="float: right;">EF180</span>                             |          |      |         |      |        |                                |             |      |                    |      |           |            |          |  |
| 315895   | 275°     | 275° | .410    | .410 | 113°   | 7.5°                           | 105°        | 115° | .680               | .680 | 1.12      | .48        | 8660 Q&T | 55MM BEARING NO GUN DRILL - EVERWEAR-GEAR™             |
| 315839   | 275°     | 275° | .410    | .410 | 113°   | 7.5°                           | 105°        | 115° | .583               | .583 | 1.07      | .48        | 8660 Q&T | 50 mm(1.969") Roller Bearing Journals - EVERWEAR-GEAR™ |

# GM LS- Gen III-IV-V

| GM 1997-UP LS V-8 3 BOLT Roller Cam <span style="float: right;">EF187</span> |          |      |          |      |        |                                |             |      |                  |      |              |               |                |              |
|--|----------|------|----------|------|--------|--------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|--------------|
| PART NO.   | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:       |
|  | INT.     | EXH. | INT.     | EXH. |        |                                | INT.        | EXH. | INT.             | EXH. |              |               |                |              |
| 315647   | 240°     | 250° | .350     | .350 | 113.0° | 9.0°                           | 110°        | 116° | .738             | .738 | 1.24         | .48           | 5150           |              |
| 315604   | 234°     | 234° | .320     | .320 | 114.0° | 10.0°                          | 110°        | 118° | .790             | .790 | 1.24         | .48           | 5150           |              |
| 315703   | 234°     | 234° | .320     | .320 | 109.0° | 5.5°                           | 109°        | 109° | .790             | .790 | 1.24         | .48           | 5150           |              |
| 315709   | 234°     | 234° | .320     | .320 | 118.0° | 12.0°                          | 114°        | 122° | .790             | .790 | 1.24         | .48           | 5150           |              |
| 315623   | 236°     | 236° | .323     | .323 | 112.0° | 8.0°                           | 110°        | 114° | .760             | .760 | 1.24         | .48           | 5150           |              |
| 315692   | 240°     | 240° | .350     | .350 | 114.0° | 10.0°                          | 110°        | 118° | .760             | .760 | 1.24         | .48           | 5150           |              |
| 315654   | 240°     | 246° | .370     | .365 | 113.0° | 9.0°                           | 110°        | 116° | .718             | .723 | 1.24         | .48           | 5150           |              |
| 315704   | 258°     | 258° | .360     | .360 | 109.0° | 5.5°                           | 109°        | 109° | .710             | .710 | 1.24         | .48           | 5150           |              |
| 315705   | 258°     | 258° | .360     | .360 | 112.0° | 7.0°                           | 112°        | 112° | .730             | .730 | 1.24         | .48           | 5150           |              |
| 316610   | 267°     | 274° | .373     | .365 | 117.0° | 11.5°                          | 113°        | 121° | .715             | .723 | 1.24         | .48           | 5150           |              |
| 316611   | 260°     | 260° | .384     | .384 | 111.0° | 7.5°                           | 109°        | 113° | .715             | .715 | 1.24         | .48           | 5150           |              |
| 315600   | 260°     | 260° | .384     | .384 | 109.0° | 5.5°                           | 109°        | 109° | .715             | .715 | 1.24         | .48           | 5150           |              |
| 315815   | 275°     | 275° | .415     | .415 | 110.0° | 6.5°                           | 109°        | 111° | .675             | .675 | 1.15         | .48           | 5150           | NO GUN DRILL |

  

| GM "LS" GEN IV Single Bolt NON-VVT V-8 Roller Cam <span style="float: right;">EF190</span> |          |      |          |      |        |                                |             |      |                  |      |              |               |                |        |
|--|----------|------|----------|------|--------|--------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|--------|
| PART NO.   | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes: |
|  | INT.     | EXH. | INT.     | EXH. |        |                                | INT.        | EXH. | INT.             | EXH. |              |               |                |        |
| 315607   | 234°     | 234° | .320     | .320 | 114.0° | 10.0°                          | 110°        | 118° | .790             | .790 | 1.24         | .48           | 5150           |        |
| 315602   | 240°     | 240° | .350     | .350 | 114.0° | 10.0°                          | 110°        | 118° | .760             | .760 | 1.24         | .48           | 5150           |        |

  

| GM "LS" GEN IV Single Bolt with Variable Valve Timing "VVT" V-8 Roller Cam <span style="float: right;">EF190</span> |          |      |          |      |        |                                |             |      |                  |      |              |               |                |                                       |
|---|----------|------|----------|------|--------|--------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|---------------------------------------|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Notes:                                |
|   | INT.     | EXH. | INT.     | EXH. |        |                                | INT.        | EXH. | INT.             | EXH. |              |               |                |                                       |
| 315619  | 234°     | 234° | .320     | .320 | 114.0° | 10.0°                          | *           | *    | .790             | .790 | 1.24         | .48           | 5150           | * lobe centers are variable in engine |
| 315612  | 240°     | 245° | .340     | .340 | 114.0° | 9.0°                           | *           | *    | .758             | .758 | 1.24         | .48           | 5150           |                                       |

\* lobe centers are variable in engine

  

| GM "LT1" GEN V Single Bolt with Variable Valve Timing "VVT" V-8 Roller Cam - With Fuel pump Tri-lobe <span style="float: right;">EF193</span> |          |      |          |      |        |                                |             |      |                  |      |              |               |                |   |
|---|----------|------|----------|------|--------|--------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|---|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Available fuel pump lobes: stock (.224), +14%<br>(.251) +32% (.294), +37% (.306)<br>plus 32% Tri-lobe Lift = .294 |
|   | INT.     | EXH. | INT.     | EXH. |        |                                | INT.        | EXH. | INT.             | EXH. |              |               |                |   |
| 315645  | 230°     | 240° | .335     | .335 | 116.0° | 8.0°                           | *           | *    | .758             | .758 | 1.24         | .48           | 5150           | plus 32% Tri-lobe Lift = .294   |
| 315646  | 240°     | 250° | .350     | .350 | 116.0° | 8.0°                           | *           | *    | .743             | .743 | 1.24         | .48           | 5150           | plus 32% Tri-lobe Lift = .294   |
| 315628  | 242°     | 242° | .330     | .330 | 114.0° | 9.0°                           | *           | *    | .768             | .768 | 1.24         | .48           | 5150           | plus 32% Tri-lobe Lift = .294   |

\* lobe centers are variable in engine

  

| GM GEN III/GEN V "Hybrid" 3 Bolt V-8 Cam With Fuel Pump Tri-lobe <span style="float: right;">EF195</span> |          |      |          |      |        |                                |             |      |                  |      |              |               |                |   |
|---|----------|------|----------|------|--------|--------------------------------|-------------|------|------------------|------|--------------|---------------|----------------|---|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY<br>DIA. | LOBE<br>WIDTH | STEEL<br>GRADE | Available fuel pump lobes: stock (.224), +14%<br>(.251) +32% (.294), +37% (.306)<br>plus 37% Tri-lobe Lift = .306 |
|   | INT.     | EXH. | INT.     | EXH. |        |                                | INT.        | EXH. | INT.             | EXH. |              |               |                |   |
| 316627  | 252°     | 267° | .360     | .360 | 117.0° | 11.5°                          | 113°        | 121° | .737             | .737 | 1.24         | .48           | 5150           | plus 37% Tri-lobe Lift = .306   |

# Chevy Big Block V8

| 1967-97 BB ROLLER CAM. V-8 STD ROTATION FLAT FACE Standard Firing Order |          |      |         |      |                |                                |             |      |                    |      |               |            |          | EP177                                |
|---|----------|------|---------|------|----------------|--------------------------------|-------------|------|--------------------|------|---------------|------------|----------|--------------------------------------|
| PART NO.  | .050 DUR |      | CAMLIFT |      | effective LSA* | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL | Notes:                               |
|   | INT.     | EXH. | INT.    | EXH. |                |                                | INT.        | EXH. | INT.               | EXH. |               |            |          |                                      |
| 315678  | 232°     | 242° | .334    | .334 | 112°           | 9.5°                           | 107°        | 117° | .663               | .663 | 1.05          | .54        | 5150     | Distributor Gear Integral with shaft |
| 315778  | 232°     | 242° | .334    | .334 | 112°           | 9.5°                           | 107°        | 117° | .663               | .663 | 1.03          | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315838  | 248°     | 248° | .380    | .380 | 114°           | 9.0°                           | 112°        | 116° | .609               | .609 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315869  | 250°     | 250° | .350    | .350 | 110°           | 7.0°                           | 108°        | 112° | .642               | .642 | 1.00          | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315867  | 256°     | 262° | .380    | .380 | 110°           | 7.0°                           | 108°        | 112° | .604               | .604 | 1.00          | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315694  | 275°     | 275° | .400    | .400 | 110°           | 5.5°                           | 111°        | 109° | .595               | .595 | .95           | .54        | 5150     | Distributor Gear Integral with shaft |
| 315794  | 275°     | 275° | .400    | .400 | 110°           | 5.5°                           | 111°        | 109° | .595               | .595 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315708  | 275°     | 280° | .410    | .420 | 110°           | 8.5°                           | 105°        | 115° | .570               | .565 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315811  | 275°     | 280° | .410    | .420 | 108°           | 7.5°                           | 103°        | 113° | .570               | .565 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315894  | 275°     | 286° | .400    | .380 | 110°           | 8.5°                           | 105°        | 115° | .583               | .603 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315810  | 280°     | 284° | .450    | .425 | 110°           | 8.5°                           | 105°        | 115° | .532               | .556 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315812  | 288°     | 292° | .460    | .435 | 114°           | 10.5°                          | 109°        | 119° | .530               | .543 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315729  | 290°     | 290° | .350    | .350 | 110°           | 7.0°                           | 108°        | 112° | .639               | .639 | 1.00          | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 315629  | 290°     | 290° | .350    | .350 | 110°           | 7.0°                           | 108°        | 112° | .639               | .639 | .95           | .54        | 5150     | Distributor Gear Integral with shaft |
| 315813  | 304°     | 320° | .480    | .480 | 116°           | 11.0°                          | 112°        | 120° | .515               | .515 | .90           | .54        | 8660 Q&T | EVERWEAR-GEAR™                       |

\* adjusted on cam plus or minus 6.25° for odd or even cylinders

| CHEVY 1967-97 BB ROLLER CAM V8 4 X 7 FIRING ORDER SWAP FLAT FACE F.O. 1-8-7-3-6-5-4-2 |          |      |         |      |                |                                |             |      |                    |      |               |            |          | EP177   |
|---|----------|------|---------|------|----------------|--------------------------------|-------------|------|--------------------|------|---------------|------------|----------|---|
| PART NO.  | .050 DUR |      | CAMLIFT |      | effective LSA* | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL | Notes:  |
|   | INT.     | EXH. | INT.    | EXH. |                |                                | INT.        | EXH. | INT.               | EXH. |               |            |          |   |
| 315752  | 290°     | 310° | .500    | .480 | 115°           | 11.0°                          | 110°        | 120° | .535               | .545 | .97           | .54        | 8660 Q&T | Distributor Gear Integral with shaft          |
| 315868  | 250°     | 250° | .350    | .350 | 110°           | 7.0°                           | 108°        | 112° | .640               | .640 | 1.03          | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |
| 315865  | 275°     | 286° | .400    | .380 | 110°           | 8.5°                           | 105°        | 115° | .583               | .593 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |
| 315836  | 280°     | 284° | .450    | .425 | 110°           | 8.5°                           | 105°        | 115° | .538               | .550 | .97           | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |
| 315837  | 280°     | 284° | .450    | .425 | 110°           | 8.5°                           | 105°        | 115° | .538               | .550 | .97           | .54        | 8660 Q&T | 50mm Roller Bearing Journals - EVERWEAR-GEAR™ |
| 315879  | 285°     | 300° | .475    | .450 | 114°           | 10.5°                          | 109°        | 119° | .514               | .539 | .90           | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |
| 315852  | 290°     | 310° | .455    | .445 | 115°           | 11.0°                          | 110°        | 120° | .535               | .545 | .90           | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |
| 315825  | 304°     | 320° | .480    | .480 | 116°           | 11.0°                          | 112°        | 120° | .515               | .515 | .90           | .54        | 8660 Q&T | EVERWEAR-GEAR™                                |

\* adjusted on cam plus or minus 6.25° for odd or even cylinders

| BB MARK VI ROLLER CAM. V-8 (STEPPED FRONT) Standard Firing Order |          |      |         |      |                |                                |             |      |                    |      |               |            |          | EP181                                |
|--|----------|------|---------|------|----------------|--------------------------------|-------------|------|--------------------|------|---------------|------------|----------|--------------------------------------|
| PART NO.   | .050 DUR |      | CAMLIFT |      | effective LSA* | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL | Notes:                               |
|  | INT.     | EXH. | INT.    | EXH. |                |                                | INT.        | EXH. | INT.               | EXH. |               |            |          |                                      |
| 315885   | 222°     | 232° | .334    | .334 | 112°           | 9.5°                           | 107°        | 117° | .663               | .663 | 1.03          | .62        | 8660 Q&T | EVERWEAR-GEAR™                       |
| 351635   | 222°     | 232° | .334    | .334 | 112°           | 9.5°                           | 107°        | 117° | .663               | .663 | .97           | .54        | 5150     | EVERWEAR-GEAR™                       |
| 315697   | 232°     | 242° | .334    | .334 | 112°           | 9.5°                           | 107°        | 117° | .663               | .663 | .97           | .54        | 5150     | EVERWEAR-GEAR™                       |
| 351634   | 250°     | 250° | .350    | .350 | 110°           | 7.0°                           | 108°        | 112° | .640               | .640 | .97           | .54        | 5150     | EVERWEAR-GEAR™                       |
| 315696   | 275°     | 275° | .400    | .400 | 110°           | 5.5°                           | 111°        | 109° | .595               | .595 | .97           | .62        | 8660 Q&T | Distributor Gear Integral with shaft |
| 315896   | 275°     | 275° | .400    | .400 | 110°           | 5.5°                           | 111°        | 109° | .593               | .593 | .95           | .62        | 8660 Q&T | EVERWEAR-GEAR™                       |

\* adjusted on cam plus or minus 6.25° for odd or even cylinders

| BB MARK VI ROLLER CAM. REVERSE ROTATION (STEPPED FRONT) F.O. 1-2-7-5-6-3-4-8 |          |      |         |      |                |                                |             |      |                    |      |               |            |          | EP184          |
|--|----------|------|---------|------|----------------|--------------------------------|-------------|------|--------------------|------|---------------|------------|----------|----------------|
| PART NO.   | .050 DUR |      | CAMLIFT |      | effective LSA* | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL | Notes:         |
|  | INT.     | EXH. | INT.    | EXH. |                |                                | INT.        | EXH. | INT.               | EXH. |               |            |          |                |
| 315788   | 222°     | 232° | .334    | .334 | 112°           | 1.75°                          | 107°        | 117° | .650               | .650 | 1.03          | .54        | 8660 Q&T | EVERWEAR-GEAR™ |
| 351637   | 222°     | 232° | .334    | .334 | 112°           | 1.75°                          | 107°        | 117° | .650               | .650 | .97           | .54        | 5150     | EVERWEAR-GEAR™ |

\* adjusted on cam minus or plus 6.25° for odd or even cylinders

| BB 8.1L ROLLER CAM. V-8 STANDARD ROTATION FIRING ORDER 1-8-7-2-6-5-4-3 |          |      |         |      |                |                                |             |      |                    |      |               |            |          | EP188                        |
|--|----------|------|---------|------|----------------|--------------------------------|-------------|------|--------------------|------|---------------|------------|----------|------------------------------|
| PART NO.   | .050 DUR |      | CAMLIFT |      | effective LSA* | #1 Exh Timing<br>CW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL | Notes:                       |
|  | INT.     | EXH. | INT.    | EXH. |                |                                | INT.        | EXH. | INT.               | EXH. |               |            |          |                              |
| 315710   | 254°     | 254° | .350    | .350 | 112°           | 9.0°                           | 108°        | 116° | .640               | .640 | 1.03          | .54        | 8660 Q&T | EVERWEAR-GEAR™ 5/16" threads |
| 351633   | 254°     | 254° | .350    | .350 | 112°           | 9.0°                           | 108°        | 116° | .640               | .640 | .97           | .54        | 5150     | EVERWEAR-GEAR™ 5/16" threads |

\* adjusted on cam plus or minus 6.25° for odd or even cylinders

# Chrysler - Dodge Truck

| Chrysler 1964-73 273-340 C.I., 1967-90 318 C.I. 1971-93 360 C.I. V-8 (FOR ROLLER LIFTERS) "A" ENG. <span style="float: right;">EF036</span> |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
|---|----------|------|---------|------|--------|---------------------------------|-------------|------|--------------------|------|---------------|------------|---------------|---------------------------------|
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CW from keyway | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE   | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 411631  | 222°     | 222° | .319    | .319 | 114.0° | 6.0°                            | 109°        | 119° | .769               | .769 | 1.00          | .50        | 1055          |                                 |
| 311802  | 280°     | 280° | .425    | .425 | 110.0° | 4.0°                            | 105°        | 115° | .568               | .568 | .91           | .56        | 8660 Q&T      |                                 |
| 311619  | 290°     | 290° | .350    | .350 | 110.0° | 4.0°                            | 105°        | 115° | .639               | .639 | 1.00          | .56        | 1055          |                                 |
| This camshaft has a 1.13" long gear press fit (Front Nose) and oil holes in the interm bearings.  |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| Dodge Truck 1990-91 318-360 5.2L, 5.9L V-8 Short Nose with oil holes <span style="float: right;">EF042</span>                               |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| 411627  | 222°     | 222° | .319    | .319 | 114°   | 6.0°                            | 109°        | 119° | .769               | .769 | 1.00          | .50        | 1055          |                                 |
| Dodge Truck 1994-98 360 5.9L V-8 Short Nose without oil holes <span style="float: right;">EF040</span>                                      |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| 411628  | 222°     | 222° | .319    | .319 | 114°   | 6.0°                            | 109°        | 119° | .769               | .769 | 1.00          | .50        | 1055          |                                 |
| Chrysler 1958-78 ALL SB V-8 (Exc. Hemi) ROLLER CAM WITH 3 BOLT GEAR "B" ENG. <span style="float: right;">EF027</span>                       |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CCW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL      | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 311821  | 244°     | 244° | .350    | .350 | 112°   | 9.5°                            | 108°        | 116° | .640               | .640 | .90           | .56        | 5150          |                                 |
| 311703  | 280°     | 280° | .425    | .425 | 110°   | 10.0°                           | 105°        | 115° | .568               | .568 | .90           | .56        | 5150          |                                 |
| 311823  | 310°     | 310° | .500    | .500 | 114°   | 9.5°                            | 112°        | 116° | .506               | .506 | .90           | .56        | 8660          |                                 |
| Chrysler 1966-71 426 "Hemi" V-8 (USE 3 BOLT GEAR) ROLLER LIFTER <span style="float: right;">EF030</span>                                    |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CCW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL      | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 311704  | 280°     | 280° | .425    | .425 | 110°   | 10.0°                           | 105°        | 115° | .568               | .568 | .90           | .56        | 5150          |                                 |
| Chrysler HEMI CAM; BAE & RODECK BLOCKS; 1.90 LIFTER BORE SPACING; #5 Journal 1.749; six 3/8-24 bolts  |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CW from mark   | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL      | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 311808  | 300°     | 300° | .510    | .510 | 114°   | 0°                              | 114°        | 114° | .578               | .578 | 1.10          | .56        | S7 TOOL STEEL | 1-8-7-3-6-5-4-2 FO ; J1-J4 54mm |
| 311809  | 300°     | 300° | .510    | .510 | 114°   | 0°                              | 114°        | 114° | .695               | .695 | 1.10          | .56        | S7 TOOL STEEL | 1-8-7-3-6-5-4-2 FO ; J1-J4 60mm |
| 311816  | 300°     | 300° | .510    | .510 | 114°   | 0°                              | 114°        | 114° | .578               | .578 | 1.10          | .56        | S7 TOOL STEEL | 1-8-7-2-6-5-4-3 FO ; J1-J4 54mm |
| Chrysler HEMI CAM; BAE & RODECK BLOCKS; 2.00 LIFTER BORE SPACING; All journals same size; three bolts & 3 dowels                            |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CCW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL      | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 311817  | 300°     | 300° | .510    | .510 | 117°   | 6.0°                            | 111°        | 123° | .695               | .695 | 1.22          | .64        | S7 TOOL STEEL | 1-8-7-3-6-5-4-2 FO ; J1-J4 60mm |
| 311818  | 300°     | 300° | .510    | .510 | 117°   | 6.0°                            | 111°        | 123° | .695               | .695 | 1.22          | .64        | S7 TOOL STEEL | 1-8-7-2-6-5-4-3 FO ; J1-J4 60mm |
| 311819  | 300°     | 300° | .510    | .510 | 117°   | 6.0°                            | 111°        | 123° | .578               | .578 | 1.10          | .64        | S7 TOOL STEEL | 1-8-7-3-6-5-4-2 FO ; J1-J4 54mm |
| 311820  | 300°     | 300° | .510    | .510 | 117°   | 6.0°                            | 111°        | 123° | .578               | .578 | 1.10          | .64        | S7 TOOL STEEL | 1-8-7-2-6-5-4-3 FO ; J1-J4 54mm |
| Chrysler HEMI 2000 UP 5.7L AND 6.2L ROLLER CAM without VVT <span style="float: right;">EF045A</span>  |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CCW from dowel | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL      | Notes:                          |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH. | INT.               | EXH. |               |            |               |                                 |
| 311813  | 240°     | 240° | .360    | .360 | 114°   | 47.0°                           | 112°        | 116° | .778               | .778 | 1.12          | .56        | 5150          |                                 |
| Chrysler HEMI 2009 UP 5.7L AND 6.2L ROLLER CAM with VVT (Gen 3) <span style="float: right;">EF045A</span>                                   |          |      |         |      |        |                                 |             |      |                    |      |               |            |               |                                 |
| 311600  | 235°     | 245° | .360    | .360 | 114°   | 46.0°                           | *           | *    | .778               | .778 | 1.12          | .56        | 5150          |                                 |
| 311602  | 240°     | 253° | .350    | .350 | 118°   | 44.0°                           | *           | *    | .777               | .777 | 1.12          | .56        | 5150          |                                 |
| 311605  | 212°     | 220° | .330    | .330 | 113°   | 46.0°                           | *           | *    | .798               | .798 | 1.12          | .56        | 5150          |                                 |
| 311606  | 206°     | 218° | .318    | .318 | 118°   | 40.0°                           | *           | *    | .763               | .763 | 1.12          | .56        | 5150          |                                 |

\* lobe centers are variable in engine

# Ford

| 1983-88 122 C.I. (2.0L) 1974-90 140 C.I. (2.3L) OHC 4 Cyl. 4 CAM BEARING Roller Cam |          |      |         |      |        |                                 |             |        |                    |      |               |            |             | EF086  |
|---|----------|------|---------|------|--------|---------------------------------|-------------|--------|--------------------|------|---------------|------------|-------------|--|
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing<br>CW from dowel  | LOBE CENTER |        | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH.   | INT.               | EXH. |               |            |             |  |
| 312667  | 270°     | 270° | .340    | .340 | 104°   | 132.0°                          | 105°        | 105°   | .560               | .560 | .95           | .68        | 1055        |  |
| 1989-91 232 C.I. (3. 8L) V-6 (USE W/ROLLER LIFTERS)                                 |          |      |         |      |        |                                 |             |        |                    |      |               |            |             | EF087  |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing<br>CW from keyway | LOBE CENTER |        | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH.   | INT.               | EXH. |               |            |             |  |
| 312636  | 224°     | 224° | .300    | .300 | 113.5° | 99.0°                           | 108°        | 119°   | .755               | .755 | 1.00          | .52        | 1055        |  |
| 312643  | 225°     | 234° | .255    | .267 | 112.0° | 100.5°                          | 112°        | 112°   | .744               | .744 | 1.12          | .62        | 1055        |  |
| 1962-91 221 - 302 C.I. V-8 ROLLER . FIRING ORDER 1-5-4-2-6-3-7-8                    |          |      |         |      |        |                                 |             |        |                    |      |               |            |             | EF076  |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing<br>CCW from dowel | LOBE CENTER |        | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH.   | INT.               | EXH. |               |            |             |  |
| 312650  | 198°     | 208° | .278    | .294 | 112°   | 97.5°                           | 112°        | 112°   | .750               | .734 | .90           | .51        | 1055        |  |
| 312649  | 242°     | 242° | .334    | .334 | 111°   | 94.5°                           | 106°        | 116°   | .704               | .704 | .90           | .51        | 1055        |  |
| 312624  | 290°     | 290° | .350    | .350 | 108°   | 94.5°                           | 106°        | 110°   | .645               | .645 | .98           | .51        | 1055        |  |
| 1969-91 351W C.I., 1982-95 302 C.I. H/O V-8 ROLLER; FIRING ORDER 1-3-7-2-6-5-4-8    |          |      |         |      |        |                                 |             |        |                    |      |               |            |             | EF077  |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing<br>CCW from dowel | LOBE CENTER |        | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH.   | INT.               | EXH. |               |            |             |  |
| 312653  | 208°     | 216° | .331    | .331 | 112°   | 95.25                           | 107.5°      | 116.5° | .697               | .697 | 1.12          | .51        | 1055        |  |
| 312628  | 210°     | 210° | .278    | .278 | 115°   | 98.5°                           | 115°        | 115°   | .760               | .760 | 1.12          | .51        | 1055        |  |
| 312642  | 232°     | 232° | .334    | .334 | 112°   | 96.0°                           | 109°        | 115°   | .720               | .720 | 1.12          | .51        | 1055        |  |
| 312852  | 232°     | 242° | .334    | .334 | 114°   | 96.25                           | 109.5°      | 118.5° | .694               | .694 | 1.00          | .51        | 8660 Q&T    | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 312652  | 232°     | 242° | .334    | .334 | 114°   | 96.25                           | 109.5°      | 118.5° | .694               | .694 | 1.12          | .51        | 1055        |  |
| 312726  | 262°     | 262° | .380    | .380 | 111°   | 95.0°                           | 107°        | 115°   | .653               | .653 | 1.00          | .51        | 5150        | 7/16-20 Tapped Nose - EVERWEAR-GEARTM                        |
| 312673  | 275°     | 275° | .400    | .400 | 108°   | 93.25                           | 103°        | 113°   | .633               | .633 | .98           | .51        | 1055        | Distributor Gear Integral with shaft 3/8-16 tapped nose      |
| 312801  | 275°     | 275° | .400    | .400 | 108°   | 93.25                           | 103°        | 113°   | .633               | .633 | 1.00          | .51        | 8660 Q&T    | All 5 Journals 2.051" - 7/16-20 Tapped Nose - EVERWEAR-GEAR™ |
| 312718  | 275°     | 275° | .430    | .430 | 114°   | 96.5°                           | 110°        | 118°   | .603               | .603 | 1.00          | .51        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose        |
| 312800  | 280°     | 280° | .425    | .425 | 110°   | 94.0°                           | 105°        | 115°   | .600               | .600 | 1.00          | .51        | 8660 Q&T    | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 312707  | 280°     | 280° | .425    | .425 | 106°   | 92.5°                           | 101°        | 111°   | .600               | .600 | 1.00          | .51        | 5150        | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 312804  | 280°     | 280° | .425    | .425 | 110°   | 94.25                           | 105°        | 115°   | .600               | .600 | 1.00          | .51        | 8660 Q&T    | All 5 Journals 2.051" - 7/16-20 Tapped Nose - EVERWEAR-GEAR™ |
| 312819  | 280°     | 280° | .425    | .425 | 110°   | 94.0°                           | 105°        | 115°   | .600               | .600 | 1.00          | .51        | 8660 Q&T    | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose        |
| 312713  | 286°     | 296° | .460    | .445 | 114°   | 96.5°                           | 110°        | 118°   | .575               | .588 | 1.00          | .51        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose        |
| 312710  | 290°     | 290° | .350    | .350 | 110°   | 96.5°                           | 110°        | 110°   | .563               | .563 | 1.00          | .51        | 5150        | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 312625  | 290°     | 290° | .350    | .350 | 108°   | 94.5°                           | 106°        | 110°   | .690               | .690 | 1.12          | .51        | 1055        |  |
| 312665  | 290°     | 290° | .350    | .350 | 112°   | 97.5°                           | 112°        | 112°   | .690               | .690 | 1.12          | .51        | 1055        |  |
| 312725  | 290°     | 290° | .350    | .350 | 108°   | 94.5°                           | 106°        | 110°   | .690               | .690 | 1.00          | .51        | 5150        | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 312765  | 290°     | 290° | .350    | .350 | 112°   | 97.5°                           | 112°        | 112°   | .690               | .690 | 1.00          | .51        | 5150        | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |
| 351W SVO BLOCKS 55 MM CORE WITH #5 MAIN 50 MM                                       |          |      |         |      |        |                                 |             |        |                    |      |               |            |             | EF077  |
| PART NO.  | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing<br>CCW from dowel | LOBE CENTER |        | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:   |
|   | INT.     | EXH. | INT.    | EXH. |        |                                 | INT.        | EXH.   | INT.               | EXH. |               |            |             |  |
| 312811  | 275°     | 275° | .430    | .430 | 110°   | 94.5°                           | 106°        | 114°   | .668               | .668 | 1.12          | .51        | 8660 Q&T    | Alternate Lobe Spacing 7/16-20 Tapped Nose - EVERWEAR-GEAR™  |
| 312812  | 275°     | 275° | .430    | .430 | 110°   | 94.5°                           | 106°        | 114°   | .668               | .668 | 1.12          | .51        | 8660 Q&T    | 7/16-20 Tapped Nose - EVERWEAR-GEAR™                         |

# Ford

| 1970-82 351C-351M-400 C.I. V-8 (USE HYDRAULIC ROLLER LIFTERS) <span style="float: right;">EF096</span> |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
|--|----------|------|---------|------|--------|-----------------|-------------|--------|--------------------|-------|---------------|------------|-------------|---|
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CCW from dowel  | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312626   | 290°     | 290° | .350    | .350 | 108°   | 98.0°           | 106°        | 110°   | .645               | .645  | .98           | .51        | 5150        | Distr. Gear Integral with shaft - 3/8-16 Tapped Nose  |
| 312706   | 285°     | 285° | .410    | .410 | 108°   | 96.5°           | 103°        | 113°   | .625               | .625  | .98           | .51        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 1963-76 352-360-390-406-410-427-428 C.I. V-8 "FE" <span style="float: right;">EF064</span>             |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CW from dowel   | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312705   | 232°     | 232° | .335    | .335 | 111.0° | 82.0°           | 106°        | 116°   | .735               | .735  | 1.12          | .62        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 312703   | 285°     | 285° | .410    | .410 | 108.0° | 83.5°           | 103°        | 113°   | .663               | .663  | 1.12          | .62        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 1968-94 370-429-460 cubic inch V-8 Roller cams <span style="float: right;">EF046</span>                |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | #1 Int Timing   | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CCW from dowel  | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312708   | 237°     | 243° | .370    | .377 | 110°   | 101.0°          | 104°        | 116°   | .715               | .712  | 1.12          | .62        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 312702   | 282°     | 282° | .430    | .430 | 108°   | 101.0°          | 104°        | 112°   | .650               | .650  | 1.12          | .62        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 312709   | 300°     | 300° | .490    | .490 | 114°   | 104.5°          | 111°        | 117°   | .590               | .590  | 1.00          | .62        | 5150        | Distr. Gear Integral with shaft - 7/16-20 Tapped Nose |
| 1996 - 2003 SOHC 4.6L 2 VALVE V-8 <span style="float: right;">EF081</span>                             |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | Timing          | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CW from keyway  | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312659   | 240°     | 248° | .306    | .306 | 114°   | #1 Int 124°     | 111°        | 117°   | 1.000              | 1.000 | 1.10          | .44        | 1055        |   |
| 312660   | 240°     | 248° | .306    | .306 | 114°   | #1 Exh 37°      | 111°        | 117°   | 1.000              | 1.000 | 1.10          | .44        | 1055        |   |
| 1996-2003 DOHC 4 VALVE 4.6L V-8 <span style="float: right;">EF081</span>                               |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | Timing          | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CCW from keyway | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312661   | 213°     | 213° | .288    | .288 | NA     | #1 Int 212°     | 112.7°      | NA     | .999               | .999  | 1.10          | .44        | 1055        | RH Int.   |
| 312663   | 213°     | 213° | .288    | .288 | NA     | #5 Int 127°     | 112.7°      | NA     | .999               | .999  | 1.10          | .44        | 1055        | LH Int.   |
| 312662   | 217°     | 217° | .288    | .288 | NA     | #1 Exh 123°     | N/A         | 112.7° | .999               | .999  | 1.10          | .44        | 1055        | RH Exh.   |
| 312664   | 217°     | 217° | .288    | .288 | NA     | #5 Exh 347°     | N/A         | 112.7° | .999               | .999  | 1.10          | .44        | 1055        | LH Exh.   |
| SOHC 3 VALVE 4.6L & 5.4I V-8 <span style="float: right;">EF088</span>                                  |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | Timing          | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CCW from keyway | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312671   | 213°     | 236° | .288    | .300 | 133°   | #1 Int 74°      | 105°        | 119°   | .926               | .926  | 1.15          | .50        | 1055        | RH  |
| 312672   | 213°     | 236° | .288    | .300 | 91.2°  | #5 Int 55.5°    | 105°        | 119°   | .926               | .926  | 1.15          | .50        | 1055        | LH  |
| 312681   | 213°     | 236° | .288    | .300 | 133°   | #1 Int 74°      | 105°        | 119°   | .926               | .926  | 1.15          | .50        | 1055        | RH Journals oversize .020"                            |
| 312682   | 213°     | 236° | .288    | .300 | 91.2°  | #5 Int 55.5°    | 105°        | 119°   | .926               | .926  | 1.15          | .50        | 1055        | LH Journals oversize .020"                            |
| Ford 7.3 L "GODZILLA" V8 <span style="float: right;">EF088</span>                                      |          |      |         |      |        |                 |             |        |                    |       |               |            |             |   |
| PART NO.   | .050 DUR |      | CAMLIFT |      | LSA    | #1 Exh Timing   | LOBE CENTER |        | BASE CIRCLE RADIUS |       | BODY DIAMETER | LOBE WIDTH | STEEL GRADE | Notes:  |
|  | INT.     | EXH. | INT.    | EXH. |        | CCW from keyway | INT.        | EXH.   | INT.               | EXH.  |               |            |             |   |
| 312602   | 248°     | 256° | .380    | .380 | 115°   | 138.0°          | *           | *      | .830               | .830  | 1.16          | .55        | 5150        | revised timing October 2024                           |
| 312610   | 230°     | 240° | .335    | .335 | 121°   | 130.0°          | *           | *      | .850               | .850  | 1.16          | .55        | 5150        | new part October 2024                                 |

\* lobe centers are variable in engine

# Oldsmobile - Pontiac

| Oldsmobile 1967-85 260-307-350-400-403-425-455 C.I. V-8 (39 DEG. CAM BANK ANGLE) <span style="float: right; font-size: small;">223</span> |          |      |          |      |        |                |             |      |                  |      |           |            |             |  |
|---|----------|------|----------|------|--------|----------------|-------------|------|------------------|------|-----------|------------|-------------|--|
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Int Timing  | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | <b>Notes:</b>                                  |
|   | INT.     | EXH. | INT.     | EXH. |        | CCW from dowel | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 317600  | 270°     | 270° | .350     | .350 | 110.0° | 12.0°          | 108°        | 112° | .652             | .652 | 1.06      | .53        | 1055        | <i>4-7 Swap firing order (1-8-7-3-6-5-4-2)</i> |
| 317603  | 270°     | 270° | .350     | .350 | 110.0° | 12.0°          | 108°        | 112° | .652             | .652 | 1.06      | .53        | 1055        | <i>Standard firing order (1-8-4-3-6-5-7-2)</i> |
|   |          |      |          |      |        |                |             |      |                  |      |           |            |             |  |
| Pontiac 1955-81 265-287-301-316-326-347-350-370-389-400-421-428-455 C.I. V-8 <span style="float: right; font-size: small;">EF241</span>   |          |      |          |      |        |                |             |      |                  |      |           |            |             |  |
| PART NO.  | .050 DUR |      | CAM LIFT |      | LSA    | #1 Int Timing  | LOBE CENTER |      | BASE CIRCLE RAD. |      | BODY DIA. | LOBE WIDTH | STEEL GRADE | <b>Notes:</b>                                  |
|   | INT.     | EXH. | INT.     | EXH. |        | CW from dowel  | INT.        | EXH. | INT.             | EXH. |           |            |             |  |
| 318600  | 270°     | 270° | .350     | .350 | 110.0° | 2.0°           | 108°        | 112° | .615             | .615 | 1.06      | .52        | 5150        | <i>4-7 Swap firing order (1-8-7-3-6-5-4-2)</i> |
| 318601  | 278°     | 278° | .435     | .435 | 110.0° | 3.0°           | 106°        | 114° | .530             | .530 | 1.06      | .52        | 5150        | <i>4-7 Swap firing order (1-8-7-3-6-5-4-2)</i> |
| 318602  | 270°     | 270° | .350     | .350 | 110.0° | 2.0°           | 108°        | 112° | .615             | .615 | 1.06      | .52        | 5150        | <i>Standard firing order (1-8-4-3-6-5-7-2)</i> |
|   |          |      |          |      |        |                |             |      |                  |      |           |            |             |  |

# Light Duty Diesel

| 2019-up Ram 6.7 L Cummins Diesel L6 with OEM roller camshaft <span style="float: right;">EF517</span>    |                 |      |          |      |        |                |             |      |                    |      |               |            |             |        |
|--|-----------------|------|----------|------|--------|----------------|-------------|------|--------------------|------|---------------|------------|-------------|--------|
| PART NO.   | .050 DUR        |      | CAMLIFT  |      | LSA    | #1 Exh Timing  | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL    | Notes: |
|  | INT.            | EXH. | INT.     | EXH. |        |                | INT.        | EXH. | INT.               | EXH. |               |            |             |        |
| TBD  | your specs here |      |          |      |        |                |             |      |                    |      | 1.25          | .75        | 5150        |        |
| Ford Powerstroke Diesel V8 2003-2010 6.0-6.4 L <span style="float: right;">EF266</span>                  |                 |      |          |      |        |                |             |      |                    |      |               |            |             |        |
| PART NO.   | .050 DUR        |      | CAMLIFT  |      | LSA    | #1 Exh Timing  | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL    | Notes: |
|  | INT.            | EXH. | INT.     | EXH. |        |                | INT.        | EXH. | INT.               | EXH. |               |            |             |        |
| TBD  | your specs here |      |          |      |        |                |             |      |                    |      | 1.50          | .55        | 1055        |        |
| Ford " Scorpion" Powerstroke Diesel V8 2011-2017 6.7 L <span style="float: right;">EF048</span>          |                 |      |          |      |        |                |             |      |                    |      |               |            |             |        |
| PART NO.   | .050 DUR        |      | CAMLIFT  |      | LSA    | #1 Exh Timing  | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL    | Notes: |
|  | INT.            | EXH. | INT.     | EXH. |        |                | INT.        | EXH. | INT.               | EXH. |               |            |             |        |
| TBD  | specs here      |      |          |      |        |                |             |      |                    |      | 1.50          | .50        | 5150        |        |
| GM Duramax Diesel <span style="float: right;">EF045A</span>  |                 |      |          |      |        |                |             |      |                    |      |               |            |             |        |
| PART NO.   | .050 DUR        |      | CAMLIFT  |      | LSA    | #1 Exh Timing  | LOBE CENTER |      | BASE CIRCLE RADIUS |      | BODY DIAMETER | LOBE WIDTH | MATERIAL    | Notes: |
|  | INT.            | EXH. | INT.     | EXH. |        |                | INT.        | EXH. | INT.               | EXH. |               |            |             |        |
| TBD  | specs here      |      |          |      |        |                |             |      |                    |      | 1.30          | .58        | 5150        |        |
| Oldsmobile 1978-85 350 C.I. (5. 7L) V-8 DIESEL (ROLLER LIFTERS) <span style="float: right;">EF223</span> |                 |      |          |      |        |                |             |      |                    |      |               |            |             |        |
| PART NO.   | .050 DUR        |      | CAM LIFT |      | LSA    | #1 Int Timing  | LOBE CENTER |      | BASE CIRCLE RAD.   |      | BODY DIA.     | LOBE WIDTH | STEEL GRADE | Notes: |
|  | INT.            | EXH. | INT.     | EXH. |        | CCW from dowel | INT.        | EXH. | INT.               | EXH. |               |            |             |        |
| 317606   | 250°            | 250° | .350     | .350 | 110.0° | 11.0°          | 106°        | 114° | .685               | .685 | .92           | .53        | 1055        |        |