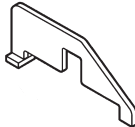
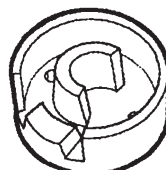
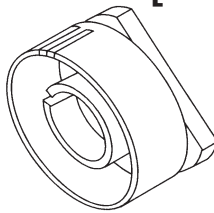
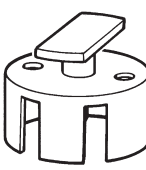
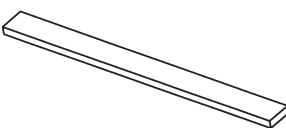
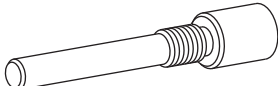
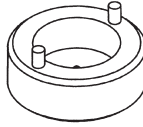
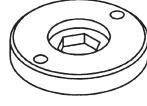
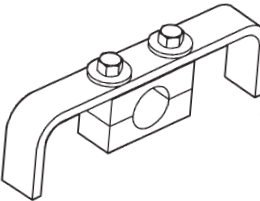
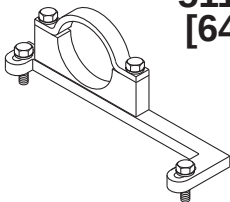
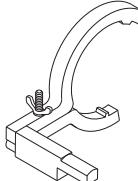
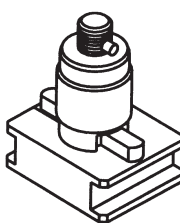
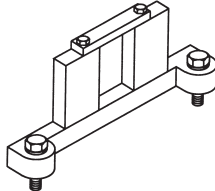
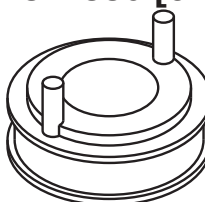
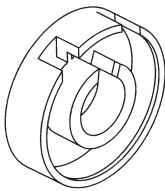
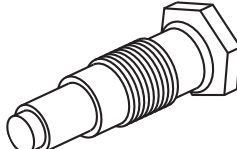
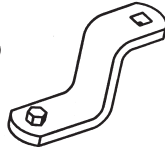
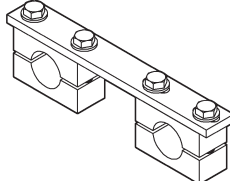
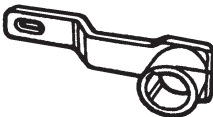
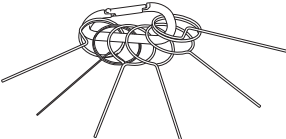
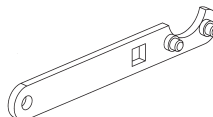


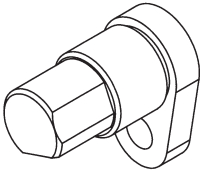
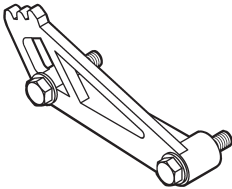
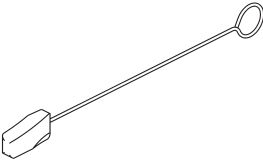
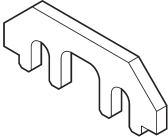
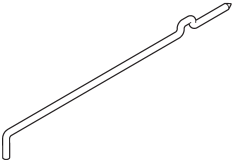
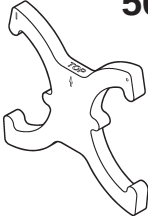
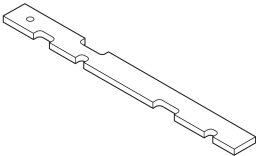
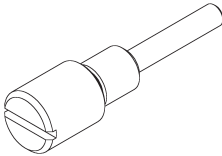
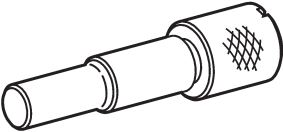
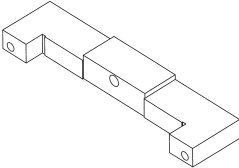
# Parts List & Operating Instructions for No. 6690 Ford Master Cam Tool Kit

|                                                                                                         |                                                                                                         |                                                                                                      |                                                                                                       |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 511532 [6009] (2X)<br> | 511555 [6020] (2X)<br> | 511536 [6469]<br>  | 511537 [6470]<br>  |
| 511539 [6472]<br>      | 511540 [6473]<br>      | 511541 [6474]<br>  | 511542 [6475]<br>  |
| 511543 [6476]<br>     | 511544 [6476]<br>     | 511545 [6477]<br>  | 511546 [6478]<br>  |
| 511547 [6479]<br>   | 511548 [6480]<br>    | 511549 [6481]<br> | 511550 [6482]<br> |
| 511551 [6483]<br>  | 511552 [6484]<br>    | 511553 [6485]<br> | 511554 [6485]<br>  |
| 525216 (2X)<br>     | 525217<br>         | 525218<br>        | 525219 [6024]<br>  |
| 565834<br>          | 567611<br>         |                                                                                                      |                                                                                                       |

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|                                                                                                                |                                                                                                                 |                                                                                                                 |                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <div>567613</div> <div></div> | <div>567614</div> <div></div>  | <div>567617</div> <div></div> | <div>567618 (2X)</div> <div></div> |
| <div>567619</div> <div></div> | <div>567620</div> <div></div>  | <div>567621</div> <div></div> | <div>567622</div> <div></div>      |
| <div>567623</div> <div></div> | <div>567649</div> <div></div> |                                                                                                                 |                                                                                                                       |
|                                                                                                                |                                                                                                                 |                                                                                                                 |                                                                                                                       |
|                                                                                                                |                                                                                                                 |                                                                                                                 |                                                                                                                       |
|                                                                                                                |                                                                                                                 |                                                                                                                 |                                                                                                                       |

## Ford Tool Application Chart

| Year      | Make & Model   | Engine                   | Tool Description                                                                       | Part No.                                     | Ford American Part No.      | Ford Global Part No. |
|-----------|----------------|--------------------------|----------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------|----------------------|
| 1995-1997 | Aerostar       | 3.0L V6                  | Cam Sensor Synch Tool                                                                  | 6472 (511539)                                | T95T-12200-A                | 303-529              |
| 1996-1998 | Aerostar       | 4.0L V6                  | Cam Sensor Synch Tool                                                                  | 6472 (511539)                                | T95T-12200-A                | 303-529              |
| 2002-2005 | Aviator        | 4.6L 4V                  | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set | 525216<br>525217<br>565834                   | T93P-6256-AHR               | 303-445<br>303-446   |
| 2003-2005 | Aviator        | 4.6L 4V                  | Crankshaft Holding Tool                                                                | 525219                                       | T93P-6303-A                 | 303-448              |
| 1995-2002 | Continental    | 4.6L 4V                  | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool                                | 525216<br>525217                             | T93P-6256-AHR               | 303-445<br>303-446   |
| 1994-2002 | Contour        | 2.0L 4 cyl. VIN 3        | Cam Alignment Tool                                                                     | 6474 (511541)                                | T94P-6256-CH                | 303-465              |
| 1997-2002 | Contour        | 2.0L 4 cyl. VIN 3        | Crankshaft TDC Timing Pin                                                              | 6475 (511542)                                | T97P-6000-A                 | 303-574              |
| 1999-2002 | Cougar         | 2.0L VIN 3               | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                        | 6474 (511541)<br>6475 (511542)               | T94P-6256-CH<br>T97P-6000-A | 303-465<br>303-574   |
| 1997      | Cougar         | 3.8L V6                  | Cam Sensor Synch Tool                                                                  | 6469 (511536)                                | T96T-12200-A                | 303-562              |
| 1991-2008 | Crown Victoria | 4.6L 2V V8               | Cam Positioning Tool                                                                   | 6009 (511532)                                | T91P-6256-A                 | 303-380              |
| 1997-2002 | Crown Victoria | 4.6L VIN W               | Cam Positioning Tool<br>Cam Positioning Tool                                           | 6009 (511532)<br>6020 (511555)               | T91P-6256-A<br>T92P-6256-A  | 303-380<br>303-413   |
| 1992-2008 | Crown Victoria | 4.6L 2V V8               | Cam Positioning Tool                                                                   | 6020 (511555)                                | T92P-6256-A                 | 303-413              |
| 1992-2011 | Crown Victoria | 4.6L                     | Crankshaft Holding Tool                                                                | 525219                                       | T93P-6303-A                 | 303-448              |
| 1997-2008 | Econoline      | 4.2L V6                  | Cam Sensor Synch Tool                                                                  | 6469 (511536)                                | T96T-12200-A                | 303-562              |
| 1997-1998 | Econoline      | 4.6L & 5.4L V8, 6.8L V10 | Cam Positioning Tool<br>Cam Positioning Tool                                           | 6009 (511532)<br>6020 (511555)               | T91P-6256-A<br>T92P-6256-A  | 303-380<br>303-413   |
| 1997-2002 | Econoline      | 4.6L & 5.4L              | Cam Positioning Tool                                                                   | 6476 (511543 & 4)                            | T96T-6256-AR                | 303-S568             |
| 1997-2002 | Econoline      | 5.4L V8                  | Cam Holding Tool                                                                       | 6477 (511545)<br>565834                      | T96T-6256-B                 | 303-557              |
| 1997-2002 | Econoline      | 6.8L V10                 | Cam Positioning Tool<br>Cam Holding Tool                                               | 6476 (511543 & 4)<br>6477 (511545)<br>565834 | T96T-6256-AR<br>T96T-6256-B | 303-S568<br>303-557  |
| 1997-2009 | Econoline      | 4.6 VIN W                | Cam Holding Tool<br>Tensioner Retaining Pin Set                                        | 6477 (511545)<br>565834                      | T96T-6256-B                 | 303-557              |
| 1997-2012 | Econoline      | 4.6L VIN W               | Cam Positioning Tool                                                                   | 6020 (511555)                                | T92P-6256-A                 | 303-413              |
| 2012      | Edge           | 2.0L VIN 9               | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                        | 6474 (511541)<br>6475 (511542)               | T94P-6256-CH<br>T97P-6000-A | 303-465<br>303-574   |
| 2012      | Edge           | 2.0L                     | Crankshaft TDC Timing Pin                                                              | 567622                                       |                             | 303-507              |
| 2007-2012 | Edge           | 3.5L                     | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                | 567618<br>567619                             |                             | 303-1248<br>303-1530 |
| 2011-2012 | Edge           | 4.0L                     | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                | 567618<br>567619                             |                             | 303-1248<br>303-1530 |
| 2001-2004 | Escape         | 2.0L VIN B               | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                        | 6474 (511541)<br>6475 (511542)               | T94P-6256-CH<br>T97P-6000-A | 303-465<br>303-574   |
| 2005-2008 | Escape         | 2.3L VIN Z               | Cam Alignment Tool                                                                     | 6474 (511541)                                | T94P-6256-CH                | 303-465              |
| 2005-2008 | Escape Hybrid  | 2.3L VIN H               | Cam Alignment Tool                                                                     | 6474 (511541)                                | T94P-6256-CH                | 303-465              |
| 2005-2008 | Escape         | 2.3L                     | Crankshaft TDC Timing Pin                                                              | 567622                                       |                             | 303-507              |
| 2009-2012 | Escape         | 2.5L VIN 7               | Cam Alignment Tool                                                                     | 6474 (511541)                                | T94P-6256-CH                | 303-465              |
| 2009-2012 | Escape Hybrid  | 2.5L VIN 3               | Cam Alignment Tool                                                                     | 6474 (511541)                                | T94P-6256-CH                | 303-465              |
| 2009-2012 | Escape         | 2.5L                     | Crankshaft TDC Timing Pin                                                              | 567622                                       |                             | 303-507              |

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### Ford Tool Application Chart

| Year      | Make & Model | Engine                         | Tool Description                                                                                                                                                                                | Part No.                                                                                                                | Ford American Part No.                                                                                     | Ford Global Part No.                                                            |
|-----------|--------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1997-2013 | E-Series     | 4.6L, 5.4L, 6.8L               | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 2000-2005 | Excursion    | 5.4L, 6.8L                     | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 1997-2002 | Expedition   | 4.6L VIN W                     | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 1997-2013 | Expedition   | 4.6L, 5.4L                     | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 1997-2002 | Expedition   | 5.4L                           | Cam Positioning Tool<br>Cam Positioning Tool<br>Cam Positioning Tool<br>Cam Holding Tool<br>Tensioner Retaining Pin Set                                                                         | 6009 (511532)<br>6020 (511555)<br>6476 (511543 & 4)<br>6477 (511545)<br>565834                                          | T91P-6256-A<br>T92P-6256-A<br>T96T-6256-AR<br>T96T-6256-B                                                  | 303-380<br>303-413<br>303-S568<br>303-557                                       |
| 2005-2012 | Expedition   | 5.4L 3V                        | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                                                                                                            | 567614<br>567617                                                                                                        |                                                                                                            | 303-1046<br>303-1175                                                            |
| 2012      | Explorer     | 2.0L VIN 9                     | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                                                                                                                                 | 6474 (511541)<br>6475 (511542)                                                                                          | T94P-6256-CH<br>T97P-6000-A                                                                                | 303-465<br>303-574                                                              |
| 2011-2012 | Explorer     | 3.5L                           | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 1996-1998 | Explorer     | 4.0L V6                        | Cam Sensor Synch Tool                                                                                                                                                                           | 6472 (511539)                                                                                                           | T95T-12200-A                                                                                               | 303-529                                                                         |
| 1997-2011 | Explorer     | 4.0L SOHC V6 VIN E             | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 1997-2008 | Explorer     | 4.0L SOHC VIN X                | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 1999-2002 | Explorer     | 4.0L Push Rod V6               | Cam Sensor Synch Tool                                                                                                                                                                           | 6483 (511551)                                                                                                           |                                                                                                            | 303-638                                                                         |
| 1997-2002 | Explorer     | 4.6L VIN W                     | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 2006-2010 | Explorer     | 4.6L 3V                        | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                                                                                                            | 567614<br>567617                                                                                                        |                                                                                                            | 303-1046<br>303-1175                                                            |
| 2002-2005 | Explorer     | 4.6L                           | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 1996-1998 | Explorer     | 5.0L V8                        | Cam Sensor Synch Tool                                                                                                                                                                           | 6469 (511536)                                                                                                           | T96T-12200-A                                                                                               | 303-562                                                                         |
| 1999-2002 | Explorer     | 5.0L V8                        | Cam Sensor Synch Tool                                                                                                                                                                           | 6470 (511537)                                                                                                           |                                                                                                            | 303-630                                                                         |
| 1993-2004 | Ford Series  | 4.6L VIN V<br>4.6L VIN H,R,V,Y | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool                                                                                                                                         | 525216<br>525217                                                                                                        | T93P-6256-AHR                                                                                              | 303-445<br>303-446                                                              |
| 2011-2012 | F-150        | 3.5L                           | Camshaft Holding Tool<br>Chain tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 2011-2012 | F-150        | 4.0L                           | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 1997-2004 | F-150        | 4.6L VIN 6                     | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 1997-2010 | F-150        | 4.6L VIN W                     | Cam Positioning Tool<br>Cam Positioning Tool<br>Crankshaft Holding Tool                                                                                                                         | 6009 (511532)<br>6020 (511555)<br>525219                                                                                | T91P-6256-A<br>T92P-6256-A<br>T93P-6303-A                                                                  | 303-380<br>303-413<br>303-448                                                   |
| 2009-2010 | F-150        | 4.6L 3V                        | Timing Chain Locking Tool                                                                                                                                                                       | 567617                                                                                                                  |                                                                                                            | 303-1175                                                                        |
| 2011-2012 | F-150        | 5.0L                           | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 2004-2010 | F-150        | 5.4L 3V                        | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                                                                                                            | 567614<br>567617                                                                                                        |                                                                                                            | 303-1046<br>303-1175                                                            |
| 1997-2010 | F-150        | 5.4L                           | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |

| Ford Tool Application Chart |                                  |            |                                                                                                     |                                                               |                                            |                                 |
|-----------------------------|----------------------------------|------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------|---------------------------------|
| Year                        | Make & Model                     | Engine     | Tool Description                                                                                    | Part No.                                                      | Ford American Part No.                     | Ford Global Part No.            |
| 2006-2012                   | F-53 Motorhome Chassis           | 6.8L       | Timing Chain Locking Tool<br>Crankshaft Holding Tool                                                | 567617<br>525219                                              | T93P-6303-A                                | 303-1175<br>303-448             |
| 2011-2012                   | F-59 Commercial Stripped Chassis | 6.8L 3V    | Timing Chain Locking Tool<br>Crankshaft Holding Tool                                                | 567617<br>525219                                              | T93P-6303-A                                | 303-1175<br>303-448             |
| 1997-2008                   | F-Series Truck                   | 4.2L       | Cam Sensor Synch Tool                                                                               | 6469 (511536)                                                 | T96T-12200-A                               | 303-562                         |
| 1997-1998                   | F-Series Truck                   | 4.6L       | Cam Positioning Tool<br>Cam Positioning Tool                                                        | 6009 (511532)<br>6020 (511555)                                | T91P-6256-A<br>T92P-6256-A                 | 303-380<br>303-413              |
| 1997-2002                   | F-Series Truck                   | 5.4L       | Cam Positioning Tool<br>Cam Positioning Tool<br>Cam Positioning Tool<br>Tensioner Retaining Pin Set | 6009 (511532)<br>6476 (511543 & 4)<br>6020 (511555)<br>565834 | T91P-6256-A<br>T96T-6256-AR<br>T92P-6256-A | 303-380<br>303-S568<br>303-413  |
| 1997-2002                   | F-Series Truck                   | 4.6L       | Cam Positioning Tool                                                                                | 6476 (511543 & 4)                                             | T96T-6256-AR                               | 303-S568                        |
| 1997-2002                   | F-Series Truck                   | 5.4L       | Cam Holding Tool                                                                                    | 6477 (511545)                                                 | T96T-6356-B                                | 303-557                         |
| 1997-2009                   | F-Series Truck                   | 4.6L VIN W | Cam Holding Tool<br>Tensioner Retaining Pin Set                                                     | 6477 (511545)<br>565834                                       | T96T-6256-B                                | 303-557                         |
| 1999-2010                   | F-Super Duty                     | 5.4L       | Crankshaft Holding Tool                                                                             | 525219                                                        | T93P-6303-A                                | 303-448                         |
| 1999-2013                   | F-Super Duty                     | 6.8L       | Crankshaft Holding Tool                                                                             | 525219                                                        | T93P-6303-A                                | 303-448                         |
| 2005-2009                   | F-Super Duty 250-550             | 5.4L 3V    | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                | 567614<br>567617                                              |                                            | 303-1046<br>303-1175            |
| 2005-2009                   | F-Super Duty 250-550             | 6.8L 3V    | Timing Chain Locking Tool                                                                           | 567617                                                        |                                            | 303-1175                        |
| 2011-2012                   | Fiesta                           | 1.6L       | VCT Alignment Tool<br>Camshaft Holding Timing Tool<br>Crankshaft TDC Timing Pin                     | 567620<br>567621<br>567623                                    |                                            | 303-1097<br>303-376B<br>303-748 |
| 2012                        | Focus                            | 2.0L VIN 2 | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                                     | 6474 (511541)<br>6475 (511542)                                | T94P-6256-CH<br>T97P-6000-A                | 303-465<br>303-574              |
| 2000-2004                   | Focus                            | 2.0L VIN 3 | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                                     | 6474 (511541)<br>6475 (511542)                                | T94P-6256-CH<br>T97P-6000-A                | 303-465<br>303-574              |
| 2002-2004                   | Focus                            | 2.0L VIN 5 | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                                     | 6474 (511541)<br>6475 (511542)                                | T94P-6256-CH<br>T97P-6000-A                | 303-465<br>303-574              |
| 2005-2012                   | Focus                            | 2.0L VIN N | Cam Alignment Tool                                                                                  | 6474 (511541)                                                 | T94P-6256-CH                               | 303-465                         |
| 2005-2011                   | Focus                            | 2.0L VIN N | Crankshaft TDC Timing Pin                                                                           | 6475 (511542)                                                 | T97P-6000-A                                | 303-574                         |
| 2005-2012                   | Focus                            | 2.0L       | Crankshaft TDC Timing Pin                                                                           | 567622                                                        |                                            | 303-507                         |
| 2003-2007                   | Focus                            | 2.3L VIN Z | Cam Alignment Tool                                                                                  | 6474 (511541)                                                 | T94P-6256-CH                               | 303-465                         |
| 2005-2007                   | Focus                            | 2.3L       | Crankshaft TDC Timing Pin                                                                           | 567622                                                        |                                            | 303-507                         |
| 2004-2007                   | Freestar                         | 3.9L VIN 6 | Cam Sensor Synch Tool                                                                               | 6470 (511537)                                                 |                                            | 303-630                         |
| 2004-2007                   | Freestar                         | 4.2L       | Cam Sensor Synch Tool                                                                               | 6469 (511536)                                                 | T96T-12200-A                               | 303-562                         |
| 2006-2009                   | Fusion                           | 2.3L VIN Z | Cam Alignment Tool                                                                                  | 6474 (511541)                                                 | T94P-6256-CH                               | 303-465                         |
| 2006-2009                   | Fusion                           | 2.3L       | Crankshaft TDC Timing Pin                                                                           | 567622                                                        |                                            | 303-507                         |
| 2010-2012                   | Fusion                           | 2.5L VIN A | Cam Alignment Tool                                                                                  | 6474 (511541)                                                 | T94P-6256-CH                               | 303-465                         |
| 2010-2012                   | Fusion Hybrid                    | 2.5L VIN 3 | Cam Alignment Tool                                                                                  | 6474 (511541)                                                 | T94P-6256-CH                               | 303-465                         |
| 2010-2012                   | Fusion                           | 2.5L       | Crankshaft TDC Timing Pin                                                                           | 567622                                                        |                                            | 303-507                         |
| 2010-2012                   | Fusion Hybrid                    | 3.5L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                             | 567618<br>567619                                              |                                            | 303-1248<br>303-1530            |

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### Ford Tool Application Chart

| Year      | Make & Model        | Engine     | Tool Description                                                                                                  | Part No.                             | Ford American Part No.       | Ford Global Part No.            |
|-----------|---------------------|------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------|---------------------------------|
| 1991-2008 | Grand Marquis       | 4.6L 2V    | Cam Positioning Tool                                                                                              | 6009 (511532)                        | T91P-6256-A                  | 303-380                         |
| 1992-2008 | Grand Marquis       | 4.6L 2V    | Cam Positioning Tool                                                                                              | 6020 (511555)                        | T92P-6256-A                  | 303-413                         |
| 1997-2002 | Grand Marquis       | 4.6L VIN W | Cam Positioning Tool<br>Cam Positioning Tool                                                                      | 6009 (511532)<br>6020 (511555)       | T91P-6256-A<br>T92P-6256-A   | 303-380<br>303-413              |
| 1992-2011 | Grand Marquis       | 4.6L       | Crankshaft Holding Tool                                                                                           | 525219                               | T93P-6303-A                  | 303-448                         |
| 2005-2006 | GT                  | 5.4L 4V    | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Crankshaft Holding Tool<br>Tensioner Retaining Pin Set | 525216<br>525217<br>525219<br>565834 | T93P-6256-AHR<br>T93P-6303-A | 303-445<br>303-446<br>303-448   |
| 2000-2006 | LS                  | 3.9L       | Timing Chain Tensioner Assy<br>Crankshaft Alignment Tool<br>Camshaft Holding Tool                                 | 567611<br>567613<br>567649           |                              | 303-1532<br>303-645A<br>303-530 |
| 2003-2004 | Mach 1              | 4.6L 4V    | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set                            | 525216<br>525217<br>565834           | T93P-6256-AHR                | 303-445<br>303-446              |
| 2003-2004 | Marauder            | 4.6L 4V    | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set                            | 525216<br>525217<br>565834           | T93P-6256-AHR                | 303-445<br>303-446              |
| 2005-2008 | Mariner             | 2.3L VIN Z | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2005-2008 | Mariner Hybrid      | 2.3L VIN H | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2005-2008 | Mariner             | 2.3L       | Crankshaft TDC Timing Pin                                                                                         | 567622                               |                              | 303-507                         |
| 2009-2012 | Mariner             | 2.5L VIN 7 | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2009-2012 | Mariner Hybrid      | 2.5L VIN 3 | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2009-2012 | Mariner             | 2.5L       | Crankshaft TDC Timing Pin                                                                                         | 567622                               |                              | 303-507                         |
| 2006-2008 | Mark LT             | 5.4L 3V    | Cam Phaser Holding Tool<br>Timing Chain Locking Tool<br>Crankshaft Holding Tool<br>Tensioner Retaining Pin Set    | 567614<br>567617<br>525219<br>565834 | T93P-6303-A                  | 303-1046<br>303-1175<br>303-448 |
| 1993-1998 | Lincoln Mark Series | 4.6L 4V    | Camshaft Positioning Tool Assy                                                                                    | 525216                               |                              | 303-445                         |
| 2003-2004 | Lincoln Mark Series | 4.6L 4V    | Camshaft Holding Tool                                                                                             | 525218                               |                              | 303-1248                        |
| 2006-2009 | Milan               | 2.3L VIN Z | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2006-2009 | Milan               | 2.3L       | Crankshaft TDC Timing Pin                                                                                         | 567622                               |                              | 303-507                         |
| 2010-2011 | Milan               | 2.5L       | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2010-2012 | Milan Hybrid        | 2.5L VIN 3 | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2010-2011 | Milan               | 2.5L       | Crankshaft TDC Timing Pin                                                                                         | 567622                               |                              | 303-507                         |
| 2007-2011 | Milan               | 3.5L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |
| 2010-2012 | MKS                 | 3.5L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |
| 2009-2012 | MKS                 | 3.7L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |
| 2010-2012 | MKT                 | 3.5L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |
| 2010-2012 | MKT                 | 3.7L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |
| 2012      | MKX                 | 2.0L VIN 9 | Cam Alignment Tool                                                                                                | 6474 (511541)                        | T94P-6256-CH                 | 303-465                         |
| 2012      | MKX                 | 2.0L       | Crankshaft TDC Timing Pin                                                                                         | 567622                               |                              | 303-507                         |
| 2007-2012 | MKX                 | 3.5L       | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                           | 567618<br>567619                     |                              | 303-1248<br>303-1530            |

| Ford Tool Application Chart |              |                    |                                                                                                                                                                                                 |                                                                                                                         |                                                                                                            |                                                                                 |
|-----------------------------|--------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Year                        | Make & Model | Engine             | Tool Description                                                                                                                                                                                | Part No.                                                                                                                | Ford American Part No.                                                                                     | Ford Global Part No.                                                            |
| 2011-2012                   | MKX          | 4.0L               | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 2006-2009                   | MKZ          | 2.3L VIN Z         | Cam Alignment Tool                                                                                                                                                                              | 6474 (511541)                                                                                                           | T94P-6256-CH                                                                                               | 303-465                                                                         |
| 2006-2009                   | MKZ          | 2.3L               | Crankshaft TDC Timing Pin                                                                                                                                                                       | 567622                                                                                                                  |                                                                                                            | 303-507                                                                         |
| 2010-2012                   | MKZ          | 2.5L VIN A         | Cam Alignment Tool                                                                                                                                                                              | 6474 (511541)                                                                                                           | T94P-6256-CH                                                                                               | 303-465                                                                         |
| 2010-2012                   | MKZ Hybrid   | 2.5L VIN 3         | Cam Alignment Tool                                                                                                                                                                              | 6474 (511541)                                                                                                           | T94P-6256-CH                                                                                               | 303-465                                                                         |
| 2010-2012                   | MKZ          | 2.5L               | Crankshaft TDC Timing Pin                                                                                                                                                                       | 567622                                                                                                                  |                                                                                                            | 303-507                                                                         |
| 2007-2012                   | MKZ          | 3.5L               | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 2004                        | Monterey     | 3.9L VIN 6         | Cam Sensor Synch Tool                                                                                                                                                                           | 6470 (511537)                                                                                                           |                                                                                                            | 303-630                                                                         |
| 2004-2007                   | Monterey     | 4.2L               | Cam Sensor Synch Tool                                                                                                                                                                           | 6469 (511536)                                                                                                           | T96T-12200-A                                                                                               | 303-562                                                                         |
| 1997-2011                   | Mountaineer  | 4.0L SOHC V6 VIN E | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 1997-2008                   | Mountaineer  | 4.0L SOHC VIN X    | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 1999-2002                   | Mountaineer  | 4.0L Push Rod V6   | Cam Sensor Synch Tool                                                                                                                                                                           | 6483 (511551)                                                                                                           |                                                                                                            | 303-638                                                                         |
| 1997-2005                   | Mountaineer  | 4.6L VIN W         | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 2006-2010                   | Mountaineer  | 4.6L 3V            | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                                                                                                            | 567614<br>567617                                                                                                        |                                                                                                            | 303-1046<br>303-1175                                                            |
| 2002-2005                   | Mountaineer  | 4.6L               | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 1996-1998                   | Mountaineer  | 5.0L V8            | Cam Sensor Synch Tool                                                                                                                                                                           | 6469 (511536)                                                                                                           | T96T-1220-A                                                                                                | 303-562                                                                         |
| 1999-2002                   | Mountaineer  | 5.0L V8            | Cam Sensor Synch Tool                                                                                                                                                                           | 6470 (511537)                                                                                                           |                                                                                                            | 303-630                                                                         |
| 2011-2012                   | Mustang      | 3.7L               | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 1996-1998                   | Mustang      | 3.8L V6            | Cam Sensor Synch Tool                                                                                                                                                                           | 6469 (511536)                                                                                                           | T96T-12200-A                                                                                               | 303-562                                                                         |
| 1999-2004                   | Mustang      | 3.8L V6            | Cam Sensor Synch Tool                                                                                                                                                                           | 6470 (511537)                                                                                                           |                                                                                                            | 303-630                                                                         |
| 2005-2010                   | Mustang      | 4.0L SOHC VIN N    | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 2011-2012                   | Mustang      | 4.0L               | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                                                                                                                                         | 567618<br>567619                                                                                                        |                                                                                                            | 303-1248<br>303-1530                                                            |
| 1996-2010                   | Mustang      | 4.6L               | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |

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### Ford Tool Application Chart

| Year      | Make & Model  | Engine            | Tool Description                                                                                                                                                                                | Part No.                                                                                                                | Ford American Part No.                                                                                     | Ford Global Part No.                                                            |
|-----------|---------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1997-2002 | Mustang       | 4.6L VIN W        | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 1996-2004 | Mustang       | 4.6L VIN X        | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 2003-2004 | Mustang       | 4.6L VIN Y        | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 2005-2010 | Mustang       | 4.6L 3V           | Cam Phaser Holding Tool<br>Timing Chain Locking Tool                                                                                                                                            | 567614<br>567617                                                                                                        |                                                                                                            | 303-1046<br>303-1175                                                            |
| 1996-2001 | Mustang       | 4.6L 4V           | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set                                                                                                          | 525216<br>525217<br>565834                                                                                              | T93P-6256-AHR                                                                                              | 303-445<br>303-446                                                              |
| 2003-2004 | Mustang Cobra | 4.6L 4V           | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set                                                                                                          | 525216<br>525217<br>565834                                                                                              | T93P-6256-AHR                                                                                              | 303-445<br>303-446                                                              |
| 2011-2012 | Mustang       | 5.0L              | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 2007-2012 | Mustang       | 5.4L 4V           | Camshaft Positioning Tool Assy<br>Camshaft Holding Tool<br>Tensioner Retaining Pin Set                                                                                                          | 525216<br>525217<br>565834                                                                                              | T93P-6256-AHR                                                                                              | 303-445<br>303-446                                                              |
| 2007-2012 | Mustang       | 5.4L              | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 1994-2002 | Mystique      | 2.0L 4 cyl. VIN 3 | Cam Alignment Tool                                                                                                                                                                              | 6474 (511541)                                                                                                           | T94P-6256-CH                                                                                               | 303-465                                                                         |
| 1997-2002 | Mystique      | 2.0L 4 cyl. VIN 3 | Crankshaft TDC Timing Tool                                                                                                                                                                      | 6475 (511542)                                                                                                           | T97P-6000-A                                                                                                | 303-574                                                                         |
| 1998-1999 | Navigator     | 5.4L              | Cam Positioning Tool<br>Cam Positioning Tool                                                                                                                                                    | 6009 (511532)<br>6020 (511555)                                                                                          | T91P-6256-A<br>T92P-6256-A                                                                                 | 303-380<br>303-413                                                              |
| 1998-2002 | Navigator     | 5.4L              | Cam Positioning Tool<br>Cam Holding Tool<br>Tensioner Retaining Pin Set                                                                                                                         | 6476 (511543 & 4)<br>6477 (511545)<br>565834                                                                            | T96T-6256-AR<br>T96T-6256-B                                                                                | 303-S568<br>303-557                                                             |
| 2005-2012 | Navigator     | 5.4L 3V           | Cam Phaser Holding Tool<br>Timing Chain Locking Tool<br>Tensioner Retaining Pin Set                                                                                                             | 567614<br>567617<br>565834                                                                                              |                                                                                                            | 303-1046<br>303-1175                                                            |
| 1998-2013 | Navigator     | 5.4L              | Crankshaft Holding Tool                                                                                                                                                                         | 525219                                                                                                                  | T93P-6303-A                                                                                                | 303-448                                                                         |
| 2001-2011 | Ranger        | 2.3L VIN D        | Cam Alignment Tool                                                                                                                                                                              | 6474 (511541)                                                                                                           | T94P-6256-CH                                                                                               | 303-465                                                                         |
| 2005-2011 | Ranger        | 2.3L              | Crankshaft TDC Timing Pin                                                                                                                                                                       | 567622                                                                                                                  |                                                                                                            | 303-507                                                                         |
| 1995-1997 | Ranger        | 3.0L V6           | Cam Sensor Synch Tool                                                                                                                                                                           | 6472 (511539)                                                                                                           | T95T-12200-A                                                                                               | 303-529                                                                         |
| 1998-2008 | Ranger        | 3.0L V6           | Cam Sensor Synch Tool                                                                                                                                                                           | 6473 (511540)                                                                                                           |                                                                                                            | 303-589                                                                         |
| 1996-1998 | Ranger        | 4.0L V6           | Cam Sensor Synch Tool                                                                                                                                                                           | 6472 (511539)                                                                                                           | T95T-12200-A                                                                                               | 303-529                                                                         |
| 1997-2011 | Ranger        | 4.0L SOHC VIN E   | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 1997-2008 | Ranger        | 4.0L SOHC VIN X   | Cam Gear Holding Tool<br>Crankshaft Holding Tool<br>Cam Holding Tool Adapter<br>Cam Holding Tool<br>Cam Gear Holding Tool Adapter<br>Timing Chain Tensioner Tool<br>Cam Gear Bolt Socket & Ext. | 6478 (511546)<br>6479 (511547)<br>6480 (511548)<br>6481 (511549)<br>6482 (511550)<br>6484 (511552)<br>6485 (511553 & 4) | T97T-6256-B<br>T97T-6303-A<br>T97T-6256-D<br>T97T-6256-C<br>T97T-6256-A<br>T97T-6K254-A<br>T97T-6256-F, -G | 303-564<br>303-573<br>303-576<br>303-577<br>303-578<br>303-571<br>303-565, -575 |
| 2003-2011 | Ranger        | 4.0L SOHC         | Timing Chain Tensioner<br>Cam Gear Bolt Socket & Ext.                                                                                                                                           | 6484 (511552)<br>6485 (511553 & 4)                                                                                      | T97T-6K254-A<br>T97T-6256-F, -G                                                                            | 303-571<br>303-565, -575                                                        |
| 1999-2000 | Ranger        | 4.0L Push Rod     | Cam Sensor Synch Tool                                                                                                                                                                           | 6483 (511551)                                                                                                           |                                                                                                            | 303-638                                                                         |
| 1996-1997 | Sable         | 3.0L V6 2V        | Cam Sensor Synch Tool                                                                                                                                                                           | 6472 (511539)                                                                                                           | T95T-12200-A                                                                                               | 303-529                                                                         |
| 1998-2005 | Sable         | 3.0L V6 VIN U     | Cam Sensor Synch Tool                                                                                                                                                                           | 6473 (511540)                                                                                                           |                                                                                                            | 303-589                                                                         |
| 1998-2006 | Sable         | 3.0L V6 VIN Z     | Cam Sensor Synch Tool                                                                                                                                                                           | 6473 (511540)                                                                                                           |                                                                                                            | 303-589                                                                         |

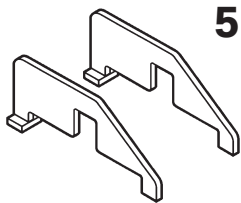
| Ford Tool Application Chart |                  |               |                                                                                   |                                |                             |                                |
|-----------------------------|------------------|---------------|-----------------------------------------------------------------------------------|--------------------------------|-----------------------------|--------------------------------|
| Year                        | Make & Model     | Engine        | Tool Description                                                                  | Part No.                       | Ford American Part No.      | Ford Global Part No.           |
| 2008-2012                   | Sable            | 3.5L          | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                           | 567618<br>567619               |                             | 303-1248<br>303-1530           |
| 1996-1997                   | Taurus           | 3.0L V6 2V    | Cam Sensor Synch Tool                                                             | 6472 (511539)                  | T95T-12200-A                | 303-529                        |
| 1998-2005                   | Taurus           | 3.0L V6 VIN U | Cam Sensor Synch Tool                                                             | 6473 (511540)                  |                             | 303-589                        |
| 1998-2006                   | Taurus           | 3.0L V6 VIN Z | Cam Sensor Synch Tool                                                             | 6473 (511540)                  |                             | 303-589                        |
| 2008-2012                   | Taurus, Taurus X | 3.5L          | Camshaft Holding Tool<br>Chain Tensioner Hold Down Tool                           | 567618<br>567619               |                             | 303-1248<br>303-1530           |
| 1997                        | Thunderbird      | 3.8L V6       | Cam Sensor Synch Tool                                                             | 6469 (511536)                  | T96T-12200-A                | 303-562                        |
| 2002-2005                   | Thunderbird      | 3.9L          | Timing Chain Tensioner Assy<br>Crankshaft Alignment Tool<br>Camshaft Holding Tool | 567611<br>567613<br>567649     |                             | 303-532<br>303-645A<br>303-530 |
| 1997-2002                   | Town Car         | 4.6L VIN W    | Cam Positioning Tool<br>Cam Positioning Tool                                      | 6009 (511532)<br>6020 (511555) | T91P-6256-A<br>T92P-6256-A  | 303-380<br>303-413             |
| 1992-2011                   | Town Car         | 4.6L          | Crankshaft Holding Tool                                                           | 525219                         | T93P-6303-A                 | 303-448                        |
| 2010-2012                   | Transit          | 2.0L VIN N    | Cam Alignment Tool<br>Crankshaft TDC Timing Pin                                   | 6474 (511541)<br>6475 (511542) | T94P-6256-CH<br>T97P-6000-A | 303-465<br>303-574             |
| 2010-2012                   | Transit          | 2.0L          | Crankshaft TDC Timing Pin                                                         | 567622                         |                             | 303-507                        |
| 1995-1997                   | Windstar         | 3.0L V6       | Cam Sensor Synch Tool                                                             | 6472 (511539)                  | T95T-12200-A                | 303-529                        |
| 1998-2003                   | Windstar         | 3.0L V6 VIN U | Cam Sensor Synch Tool                                                             | 6473 (511540)                  |                             | 303-589                        |
| 1996-1998                   | Windstar         | 3.8L V6       | Cam Sensor Synch Tool                                                             | 6469 (511536)                  | T96T-12200-A                | 303-562                        |
| 1999-2003                   | Windstar         | 3.8L V6       | Cam Sensor Synch Tool                                                             | 6470 (511537)                  |                             | 303-630                        |
| 2006-2009                   | Zephyr           | 2.3L VIN Z    | Cam Alignment Tool                                                                | 6474 (511541)                  | T94P-6256-CH                | 303-465                        |
| 2006-2009                   | Zephyr           | 2.3L          | Crankshaft TDC Timing Pin                                                         | 567622                         |                             | 303-507                        |

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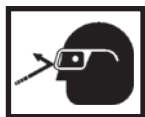
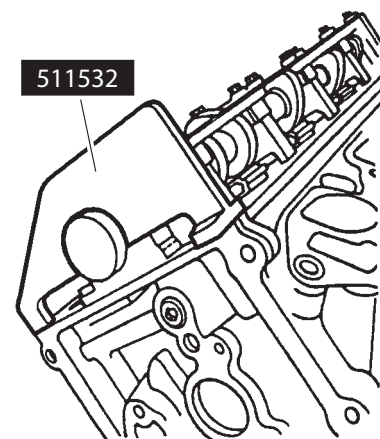
## 511532 Ford Camshaft Positioning Tool

|              |             |                   |                                                                          |
|--------------|-------------|-------------------|--------------------------------------------------------------------------|
| Application: | 1991 – 2008 | 4.6L 2V           | Crown Victoria, Grand Marquis                                            |
|              | 1997 – 2012 | 4.6L & 5.4L, 6.8L | Econoline                                                                |
|              | 1997 – 2002 | 5.4L              | F-Series Truck                                                           |
|              | 1998 – 1999 | 5.4L              | Navigator                                                                |
|              | 1997 – 2002 | 5.4L              | Expedition                                                               |
|              | 1997 – 2002 | 4.6L              | Expedition, Explorer, Crown Victoria,<br>Grand Marquis, Town Car (VIN W) |
|              | 1997 – 2004 | 4.6L              | F-150 (VIN 6)                                                            |
|              | 1997 – 2010 | 4.6L              | F-150 (VIN W)                                                            |
|              | 1997 – 2005 | 4.6L              | Mountaineer (VIN W)                                                      |
|              | 1997 – 2002 | 4.6L              | Mustang (VIN W)                                                          |
|              | 1996 – 2004 | 4.6L              | Mustang (VIN X)                                                          |
|              | 2003 – 2004 | 4.6L              | Mustang (VIN Y)                                                          |

**CAUTION:** To prevent damage to valves and pistons, do NOT rotate the crankshaft and / or camshaft(s) when removing the timing chain(s) and installing the cylinder heads.

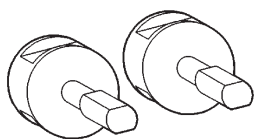
Because this is not a free-wheeling engine, if it has “jumped time,” there will be damage to the valves and / or pistons which will require the removal of the cylinder heads. The cam sprocket should be disassembled from the camshaft only when one of the components must be replaced.

1. Remove all necessary components to access the timing chains.
2. Rotate the engine to No. 1 TDC.
3. Install No. 511532 on flats of the camshaft as shown to prevent accidental rotation of the camshafts.
4. Perform camshaft service as required.
5. Refer to the vehicle service manual for the correct camshaft-to-crankshaft timing procedure.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511555 Ford Camshaft Positioning Tool

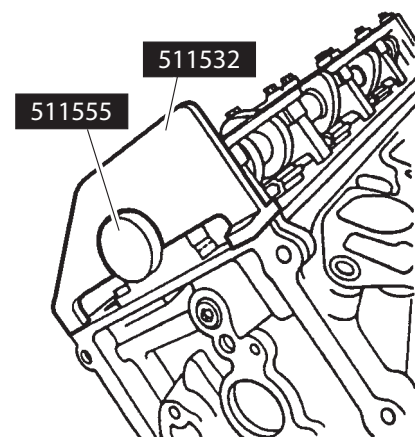


|              |             |                   |                                                                          |
|--------------|-------------|-------------------|--------------------------------------------------------------------------|
| Application: | 1992 – 2008 | 4.6L 2V           | Crown Victoria, Grand Marquis                                            |
|              | 1997 – 1998 | 4.6L, 5.4L & 6.8L | Econoline                                                                |
|              | 1997 – 2000 | 5.4L              | F-Series Truck                                                           |
|              | 1998 – 1999 | 5.4L              | Navigator                                                                |
|              | 1997 – 2002 | 5.4L              | Expedition                                                               |
|              | 1997 – 2002 | 4.6L              | Expedition, Explorer, Crown Victoria,<br>Grand Marquis, Town Car (VIN W) |
|              | 1997 – 2012 | 4.6L              | Econoline (VIN W)                                                        |
|              | 1997 – 2004 | 4.6L              | F-150 (VIN 6)                                                            |
|              | 1997 – 2010 | 4.6L              | F-150 (VIN W)                                                            |
|              | 1997 – 2005 | 4.6L              | Mountaineer (VIN W)                                                      |
|              | 1997 – 2002 | 4.6L              | Mustang (VIN W)                                                          |
|              | 1996 – 2004 | 4.6L              | Mustang (VIN X)                                                          |
|              | 2003 – 2004 | 4.6L              | Mustang (VIN Y)                                                          |

*NOTE: Must be used with tool No. 511532*

**CAUTION:** To prevent damage to valves and pistons, do NOT rotate the crankshaft and / or camshaft(s) when removing the timing chain(s) and installing the cylinder heads.

Because this is not a free-wheeling engine, if it has “jumped time,” there will be damage to the valves and / or pistons which will require the removal of the cylinder heads. The cam sprocket should be disassembled from the camshaft only when one of the components must be replaced.



1. Remove all necessary components to access the timing chains.
2. Rotate the engine to No. 1 TDC.
3. **Disassembly:** Install Camshaft Positioning Tool (511555) and Cam Positioning Tool (511532) into each camshaft end, as shown, before removing timing chain tensioners and chains to prevent valve train damage.
4. **Assembly:** Install Camshaft Positioning Tool (511555) and Cam Positioning Tool (511532) into each camshaft end, as shown, before installing timing chains and tensioners to prevent valve train damage.



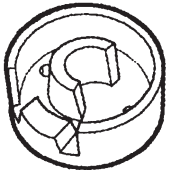
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

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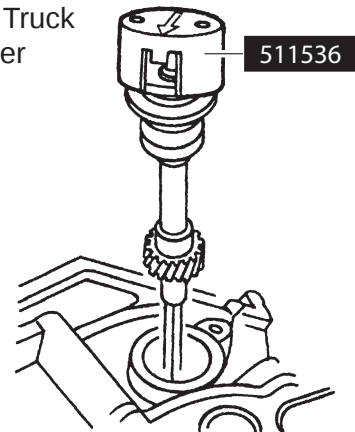
## 511536 Ford Camshaft Sensor Synchronizer Tool



Application: 1996 – 1998 3.8L Mustang, Windstar  
1997 3.8L Thunderbird/Cougar  
1997 – 2008 4.2L Econoline, F-Series Truck  
1996 – 1998 5.0L Explorer, Mountaineer  
2004 – 2007 4.2L Freestar, Monterey

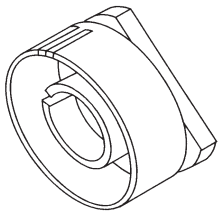
**Caution:** Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. The connector **MUST** be reassembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at TDC of the compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511536.
3. Rotate tool on camshaft sensor housing until tool engages housing notch. (Tool should be square and in contact with entire top of housing.)
4. Install camshaft sensor housing and tool assembly into engine according to instructions in the vehicle service manual. Torque fasteners to factory specifications.



**! WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

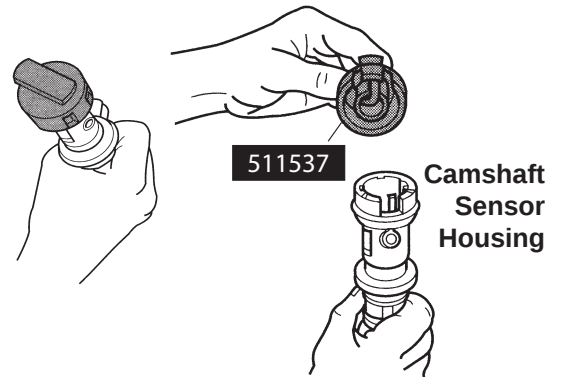
## 511537 Ford Camshaft Sensor Synchronizer Tool



Application: 1999 – 2003 3.8L Windstar  
1999 – 2002 5.0L Explorer, Mountaineer  
1999 – 2004 3.8L Mustang  
2004 – 2007 3.9L Freestar (VIN 6)  
2004 3.9L Monterey (VIN 6)

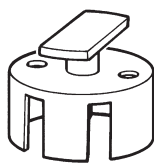
**Caution:** Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. The connector **MUST** be assembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at TDC of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511537.
3. Rotate tool on camshaft sensor housing until tool engages housing notch. (Tool should be square and in contact with entire top of housing.)
4. Install camshaft sensor housing and tool assembly into engine according to instructions in the vehicle service manual. Torque fasteners to factory specifications.



**! WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

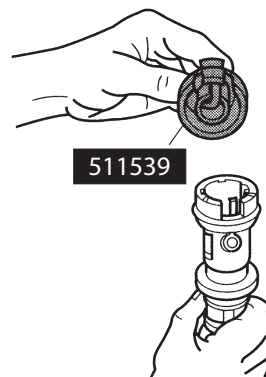
## 511539 Ford Camshaft Positioning Tool Set



Application: 1995 – 1997 3.0L Windstar, Aerostar, Ranger  
1996 – 1997 3.0L 2V Taurus, Sable  
1996 – 1998 4.0L Aerostar, Ranger, Explorer

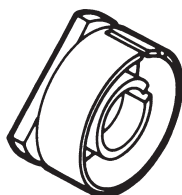
**Caution:** Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. The connector **MUST** be assembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at TDC of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511539.
3. Rotate tool on camshaft sensor housing until tool engages housing notch. (Tool should be square and in contact with entire top of housing.)
4. Install camshaft sensor housing and tool assembly into engine according to instructions in the vehicle service manual. Torque fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

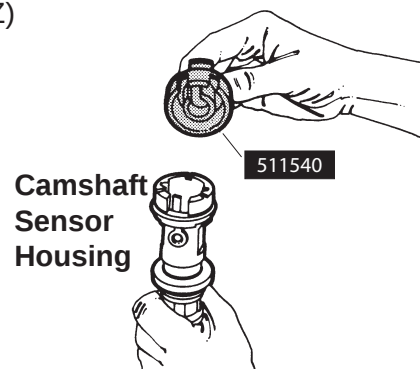
## 511540 Ford Camshaft Sensor Synchronizer Tool



Application: 1998 – 2002 3.0L Windstar (VIN U)  
1998 – 2005 3.0L Taurus, Sable (VIN U)  
1998 – 2006 3.0L Taurus, Sable (VIN Z)  
1998 – 2008 3.0L Ranger

**Caution:** Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. The connector **MUST** be assembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at TDC of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511540.
3. Rotate tool on camshaft sensor housing until tool engages housing notch. (Tool should be square and in contact with entire top of housing.)
4. Install camshaft sensor housing and tool assembly into engine according to instructions in the vehicle service manual. Torque fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

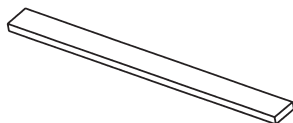
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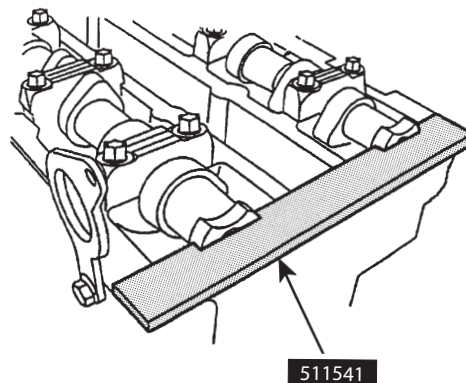
## 511541 Ford Camshaft Alignment Tool

Application: 1994 – 2002 2.0L Contour, Mystique (VIN 3)  
1999 – 2002 2.0L Cougar (VIN 3)  
2000 – 2004 2.0L Focus (VIN 3)  
2001 – 2011 2.3L Ranger (VIN D)  
2005 – 2008 2.3L Escape Hybrid, Mariner Hybrid (VIN H)  
2003 – 2007 2.3L Focus (VIN Z)  
2005 – 2008 2.3L Escape, Mariner (VIN Z)  
2006 – 2009 2.3L Fusion, Milan, Zephyr, MKZ (VIN Z)  
2009 – 2012 2.5L Escape Hybrid, Mariner Hybrid (VIN 3)  
2010 – 2012 2.5L Fusion Hybrid, Milan Hybrid, MKZ Hybrid (VIN 3)  
2009 – 2012 2.5L Escape, Mariner (VIN 7)  
2010 – 2012 2.5L Fusion, MKZ (VIN A)  
2010 – 2011 2.5L Milan  
2012 2.0L Focus (VIN 2)  
2002 – 2004 2.0L Focus (VIN 5)  
2012 2.0L Edge, Explorer, MKX (VIN 9)  
2001 – 2004 2.0L Escape (VIN B)  
2005 – 2012 2.0L Focus (VIN N)  
2010 – 2012 2.0L Transit (VIN N)



**NOTE:** The camshaft timing slots are offset. If the camshaft alignment timing tool cannot be installed, rotate the crankshaft one complete revolution clockwise to correctly position the camshafts.

**CAUTION:** The Camshaft Alignment Tool is for camshaft alignment only. Using this tool to prevent rotation can result in engine damage.



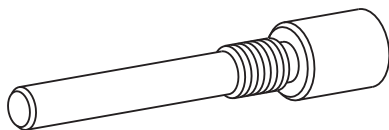
1. Rotate engine to TDC on the No. 1 cylinder.
2. Align camshafts by installing tool No. 511541 into the slots at the rear of the camshafts as shown.
3. Service the timing belt as required according to instructions in the vehicle service manual.
4. Torque fasteners to factory specifications.
5. Remove the tool.



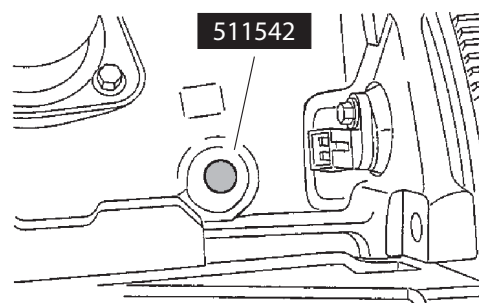
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511542 Ford Crankshaft TDC Timing Pin

Application: 1997 – 2002 2.0L Contour, Mystique (VIN 3)  
1999 – 2002 2.0L Cougar (VIN 3)  
2000 – 2004 2.0L Focus (VIN 3)  
2012 2.0L Focus (VIN 2)  
2002 – 2004 2.0L Focus (VIN 5)  
2012 2.0L Edge, Explorer (VIN 9)  
2001 – 2004 2.0L Escape (VIN B)  
2005 – 2011 2.0L Focus (VIN N)  
2010 – 2012 2.0L Transit (VIN N)



**CAUTION:** To prevent damage to the engine, remove the No. 511542 timing pin from the engine and reinstall the access plug **BEFORE** cranking the engine.



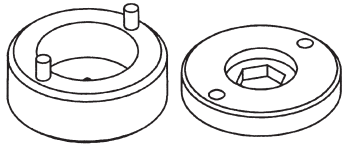
1. Rotate crankshaft to set No. 1 cylinder on TDC of compression stroke.
2. Remove the access plug from the engine and install tool No. 511542 timing pin as shown. (The pin will completely thread into the hole when the engine is at TDC on the No. 1 cylinder.)
3. Service the timing belt as required according to vehicle service manual procedures.
4. Torque fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511543/511544 Ford Camshaft Positioning Tool Set

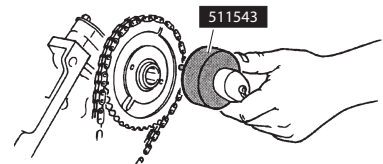
Application: 1997 – 2002 4.6L Econoline, F-Series Truck (VIN W)  
1997 – 2002 5.4L Econoline, Expedition, F-Series Truck  
1997 – 2002 6.8L Econoline  
1998 – 2002 5.4L Navigator



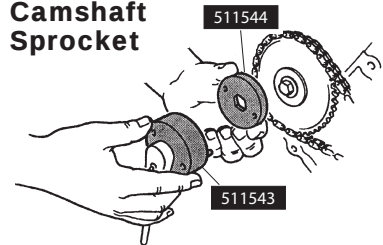
**NOTE:** This tool is used with No. 511545 Ford Camshaft Holding Tool.

- Two-hole Camshaft Sprocket:**  
Use No. 511543 to position the camshaft sprocket (2-hole) on the engine as shown.
- 18 mm Camshaft Sprocket:**  
Use No. 511543 with No. 511544 to position the camshaft sprocket (18 mm hex hd.) on the engine as shown.
- Service the timing chain as required according to procedures in the vehicle service manual.
- Torque the fasteners to factory specifications.

### 2-Hole Camshaft Sprocket



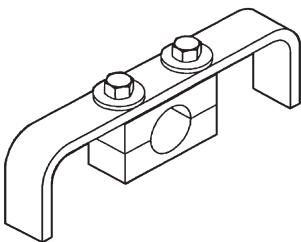
### 18 mm Hex Hd. Camshaft Sprocket



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511545 Ford Camshaft Holding Tool

Application: 1997 – 2009 4.6L Econoline, F-Series Truck (VIN W)  
1997 – 2002 5.4L Econoline, Expedition, F-Series Truck  
1997 – 2002 6.8L Econoline  
1998 – 2002 5.4L Navigator

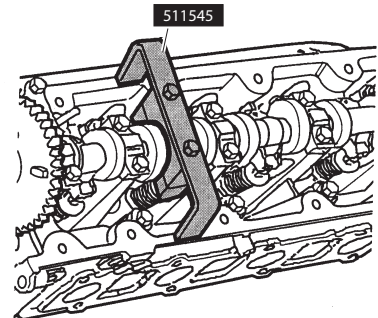


**NOTE:** This tool is used with No. 511543 & 511544 Ford Camshaft Positioning Tool

- Install No. 511545 on the camshaft as shown.
- Torque hex hd. bolts at 20 ft.•lbs. to ensure correct clamping force.

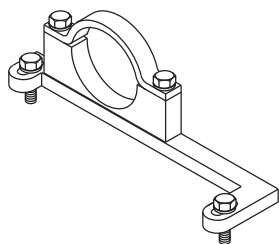
**CAUTION:** Each bolt must be engaged by the same number of threads in the bottom clamp to ensure correct clamp alignment.

- Repair the engine as required according to instructions in the vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

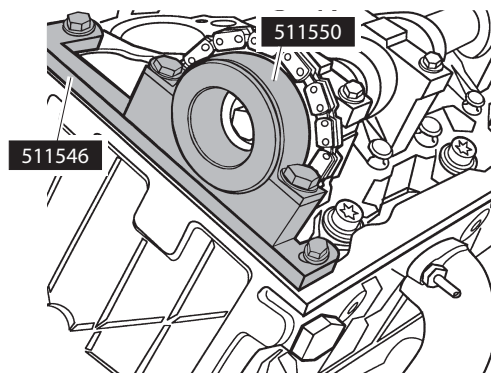
## 511546 Ford Camshaft Gear Holding Tool



Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)

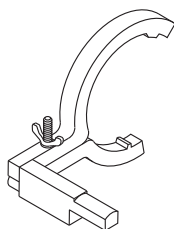
**NOTE:** This tool is used with No. 511550 Ford Camshaft Gear Holding Tool Adapter.

1. Install tool Nos. 511546 and 511550 on the camshaft as shown.
2. Secure tool No. 511546 to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque the fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511547 Ford Crankshaft Holding Tool

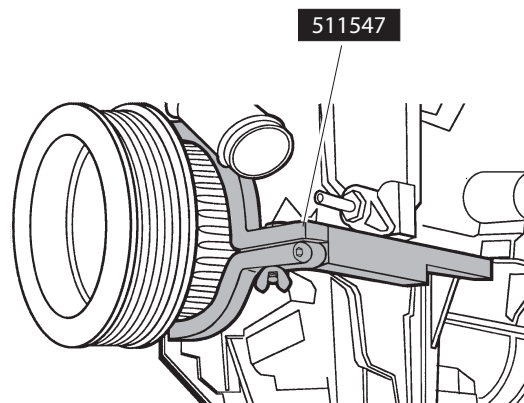


Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)

1. Install No. 511547 on the crankshaft damper.
2. Rotate the engine counterclockwise (CCW) until the tool stops against the engine block.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.



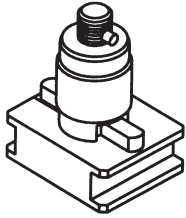
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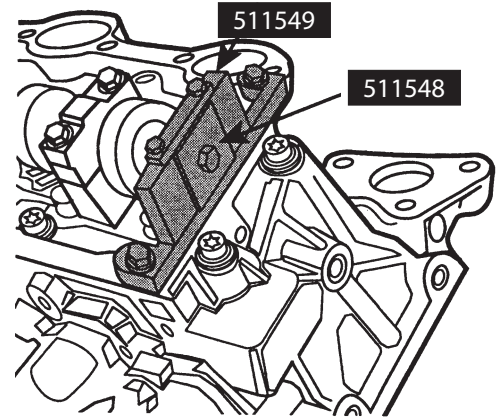
## 511548 Ford Camshaft Holding Tool Adapter

Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)



*NOTE: This tool is used with No. 511549 Ford Camshaft Holding Tool.*

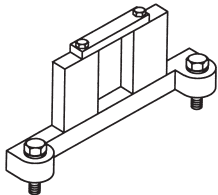
1. Install tool No. 511548 and 511549 on the camshaft as shown.
2. Secure tool No. 511549 to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque the fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

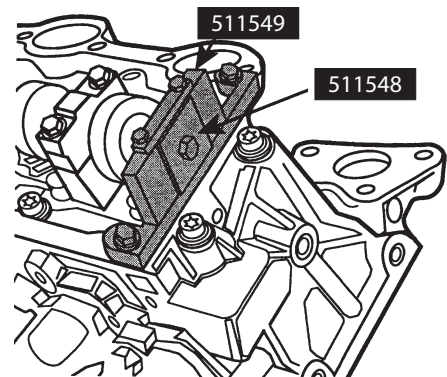
## 511549 Ford Camshaft Holding Tool

Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)



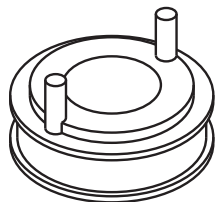
*NOTE: This tool is used with No. 511548 Ford Camshaft Holding Tool Adapter.*

1. Install tool Nos. 511548 and 511549 on the camshaft as shown.
2. Secure tool No. 511549 to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

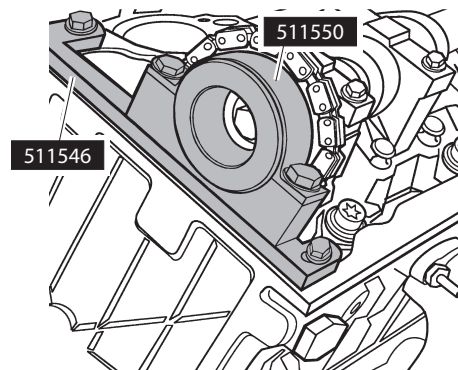
## 511550 Ford Camshaft Holding Tool Adapter



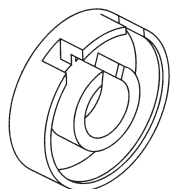
Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)

**NOTE:** This tool is used with No. 511546 Ford Camshaft Gear Holding Tool.

1. Install tool Nos. 511546 and 511550 on the camshaft as shown.
2. Secure tool No. 511546 to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque the fasteners to factory specifications.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

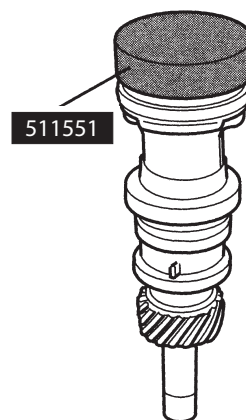


## 511551 Ford Camshaft Synchronizer Tool

Application: 1999 – 2002 4.0L Push Rod Explorer, Mountaineer  
1999 – 2000 4.0L Push Rod Ranger

**CAUTION:** Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. The connector **MUST** be reassembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at TDC of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511551.
3. Rotate tool on camshaft sensor housing until tool engages housing notch. (Tool should be square and in contact with entire top of housing.)
4. Install camshaft sensor housing and tool assembly into engine according to instructions in the vehicle service manual.
5. Torque fasteners to factory specifications.



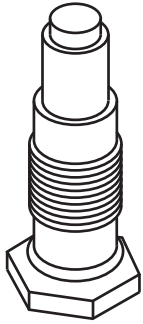
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

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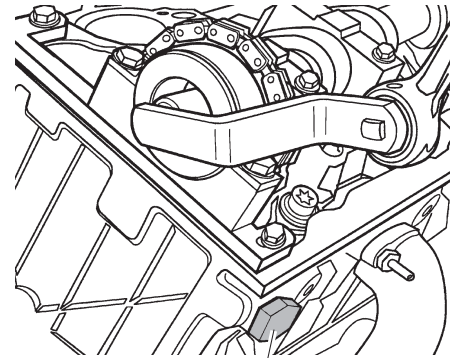
Issue Date: May 2013 Rev. A

## 511552 Ford Timing Chain Tensioner Tool



Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)  
2003 – 2011 4.0L SOHC Ranger

1. Remove the hydraulic chain tensioner from the engine.
2. Install tool No. 511552 into the engine to hold pressure on the timing chain during the cam timing procedure.
3. Adjust camshaft timing according to instructions in the vehicle service manual.
4. Torque the fasteners to factory specifications.



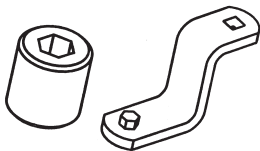
511552



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 511553/511554 Ford Camshaft Gear Bolt Socket Extension

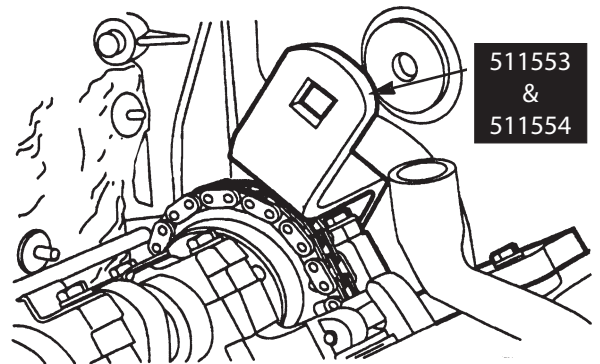
Application: 1997 – 2011 4.0L SOHC Explorer, Mountaineer, Ranger (VIN E)  
1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)  
2005 – 2010 4.0L SOHC Mustang (VIN N)  
2003 – 2011 4.0L SOHC Ranger



1. Assemble tool Nos. 511553 and 511554 socket and extension on the camshaft gear bolt as shown.

**Removal:** Use a ratchet or breaker bar to loosen and remove the bolt from the camshaft.

**Assembly:** Use a torque wrench to tighten bolt on the camshaft. Refer to the vehicle service manual for the correct torque specifications.



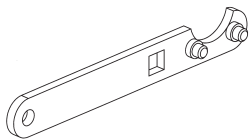
511553  
&  
511554



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

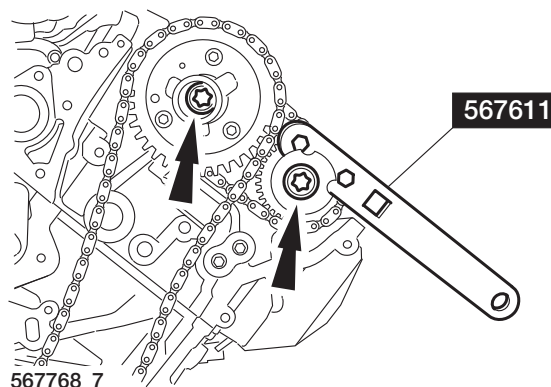
## 567611 Ford Timing Chain Tensioner Tool

Application: 2000 – 2006 3.9L LS  
2002 – 2005 3.9L Thunderbird



**NOTE:** The 567611 is to be used with 567649 Camshaft Locking Tool. The exhaust camshaft sprocket bolt must be fully tightened before tightening the intake camshaft sprocket bolt.

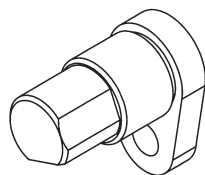
1. Install the 567611 Timing Chain Tensioner Tool onto the exhaust camshaft sprocket and apply tension to the camshaft sprocket.
2. Tighten the intake camshaft sprocket bolts as discribed in vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 567613 Ford Crankshaft Positioning Tool

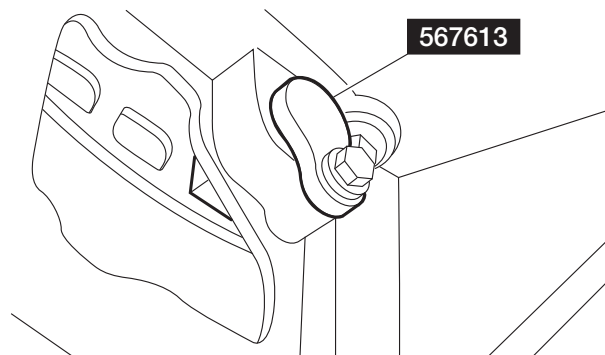
Application: 2000 – 2006 3.9L LS  
2002 – 2005 3.9L Thunderbird



1. Remove the crankshaft position sensor.
2. Turn the crankshaft so the keyway is in the 6 o'clock position.

**NOTE:** There is one window on the ignition pulse wheel that is unique to accept the 567613.

3. Install the 567613 Crankshaft Alignment Tool.
4. Service the timing chain as required according to instructions in the vehicle service manual.
5. Remove the 567613 and reinstall the crankshaft position sensor.
6. Torque fasteners to factory specifications.



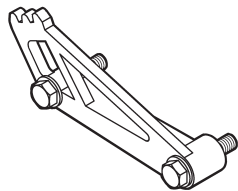
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

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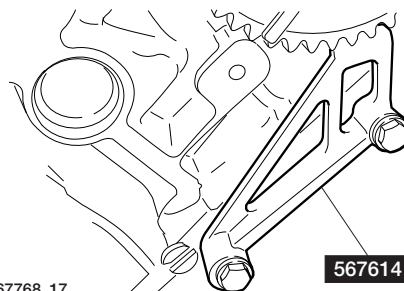
## 567614 Ford Cam Phaser Holding Tool



Application: 2005 – 2012 5.4L 3V Expedition, Navigator  
2004 – 2010 5.4L 3V F-150  
2006 – 2008 5.4L 3V Mark LT  
2005 – 2009 5.4L 3V F-Super Duty 250-550  
2006 – 2010 4.6L 3V Explorer, Mountaineer  
2005 – 2010 4.6L 3V Mustang

**CAUTION:** Only use hand tools for installation and removal of the camshaft phaser sprocket assembly.

1. Install the Camshaft phaser sprocket and new camshaft phaser bolt finger tight.
2. Install the 567614. Torque the camshaft phaser bolt to specifications according to the vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 567617 Ford Timing Chain Locking Tool

Application: 2005 – 2012 5.4L 3V Expedition, Navigator  
2004 – 2010 5.4L 3V F-150  
2006 – 2008 5.4L 3V Mark LT  
2009 – 2010 4.6L 3V F-150  
2005 – 2009 5.4L 3V F-Super Duty 250-550  
2005 – 2009 6.8L 3V F-Super Duty 250-550  
2005 – 2010 4.6L 3V Mustang  
2006 – 2010 4.6L 3V Explorer, Mountaineer  
2006 – 2009 6.8L 3V F-53 Motorhome Chassis  
2011 – 2012 6.8L 3V F-53 Motorhome, F-59 Commercial Stripped Chassis

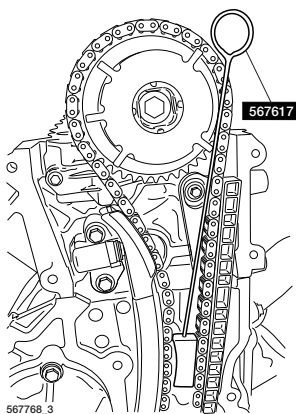


Figure 1

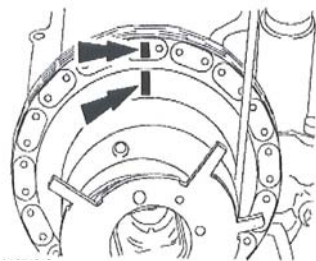
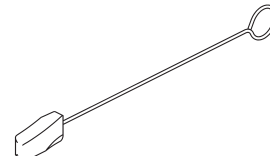


Figure 2

1. Install the 567617 timing chain. (Figure 1)
2. Scribe a location mark on the timing chain and camshaft phaser sprocket assembly. (Figure 2)

**NOTE:** Do not remove the 567617 at any time during service. If the 567617 is removed, the timing chain will move out of time and the front cover will have to be removed to re-time the engine.

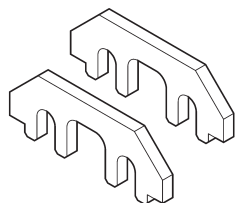
3. Remove camshaft phaser sprocket to perform service according to instructions in service manual.
4. Torque all fasteners to factory specifications.
5. Remove 567617.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

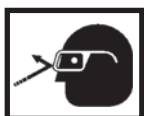
## 567618 Ford Camshaft Holding Tool

Application: 2007 – 2012 3.5L Edge, MKX, MKZ  
2007 – 2011 3.5L Milan  
2010 – 2012 3.5L Fusion Hybrid  
2008 – 2012 3.5L Taurus, Taurus X, Sable  
2010 – 2012 3.5L MKS, MKT  
2011 – 2012 3.5L Explorer, F-150  
2009 – 2012 3.7L MKS  
2010 – 2012 3.7L MKT  
2011 – 2012 3.7L Mustang  
2011 – 2012 4.0L Mustang, F-150, MKX, Edge

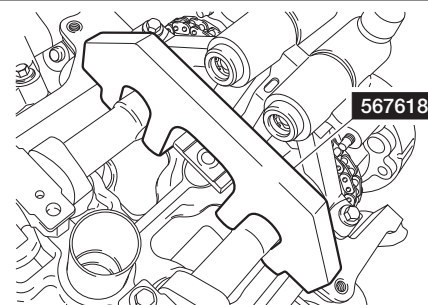
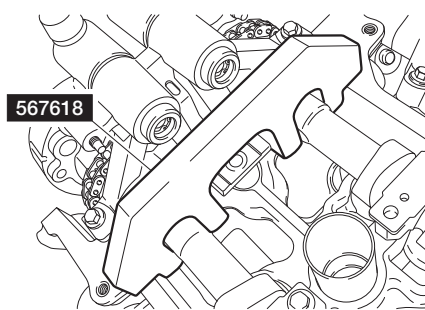


**NOTE:** The camshaft holding tool will hold the camshafts in the Top Dead Center (TDC) position.

1. Rotate the engine to No. 1 TDC.
2. Install the 567618 on to the flats of the camshaft.
3. Perform camshaft service as required.
4. Refer to the vehicle service manual for the correct camshaft to crankshaft timing procedure.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.



567768\_1

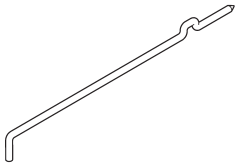
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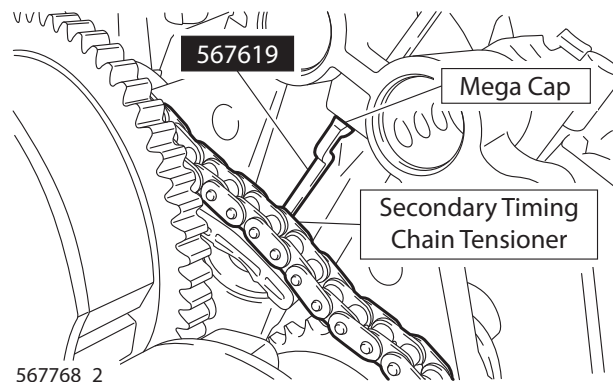
Issue Date: May 2013 Rev. A

## 567619 Ford Chain Tensioner Hold Down Tool

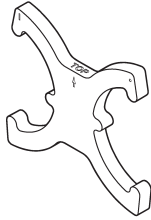
Application: 2007 – 2012 3.5L Edge, MKX, MKZ  
2007 – 2011 3.5L Milan  
2010 – 2012 3.5L Fusion Hybrid  
2008 – 2012 3.5L Taurus, Taurus X, Sable  
2010 – 2012 3.5L MKS, MKT  
2011 – 2012 3.5L Explorer, F-150  
2009 – 2012 3.7L MKS  
2010 – 2012 3.7L MKT  
2011 – 2012 3.7L Mustang  
2011 – 2012 4.0L Mustang, F-150, MKX, Edge



1. Insert the 567619 through the hole in the top of the mega cap.
2. Compress the secondary timing chain tensioner and install the 567619 in the hole on the rear of the secondary timing chain tensioner guide. Position the Chain Tensioner Hold Down Tool against the mega cap to retain the tensioner in the compressed position.
3. Perform service to secondary timing chain as required according to vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.



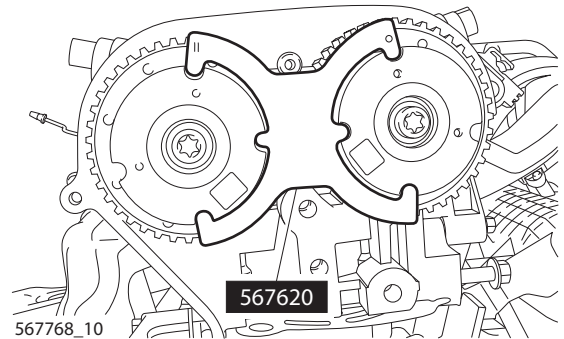
## 567620 Ford VCT Alignment Tool

Application: 2011 – 2012 1.6L Fiesta

**CAUTION:** Do not loosen or remove the crankshaft pulley bolt without first installing the 567620. The crankshaft pulley and the crankshaft timing sprocket are not keyed to the crankshaft. Before any repair requiring loosening or removal of the crankshaft pulley bolt, the crankshaft, and camshafts must be locked in place by the 567620, otherwise engine damage may occur.

**NOTE:** If camshaft service is required, install the 567621 Ford Camshaft Holding Timing Tool into the end of camshaft first.

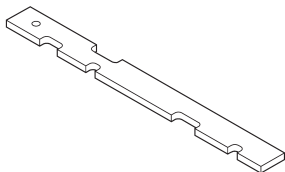
1. The timing marks on the camshaft phaser and sprocket must be at the 12 o'clock position.
2. Install the 567620 to maintain this position.
3. Perform camshaft service as required according to vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 567621 Ford Camshaft Holding Timing Tool

Application: 2011– 2012 1.6L Fiesta

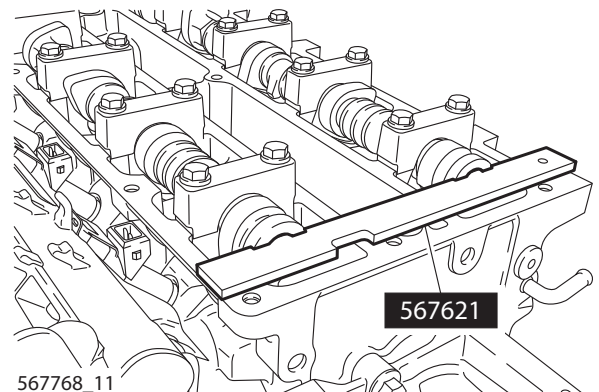


**NOTE:** Use an open-ended wrench to hold the camshafts by the hexagon to prevent the camshafts from turning.

1. Rotate each camshaft until the 567621 fits into the end of the camshafts.

**NOTE:** When 567621 is installed the timing marks of the camshaft phaser and sprocket must be at the 12 o'clock position.

2. Perform camshaft service as required according to vehicle service manual.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

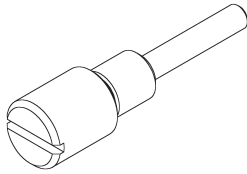
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## 567622 Ford Crankshaft TDC Timing Pin

Application: 2005 – 2008 2.3L Escape, Mariner  
2009 – 2012 2.5L Escape, Mariner  
2005 – 2012 2.0L Focus  
2005 – 2007 2.3L Focus  
2005 – 2011 2.3L Ranger  
2006 – 2009 2.3L Fusion, Milan, Zephyr, MKZ  
2010 – 2012 2.5L Fusion, MKZ  
2010 – 2011 2.5L Milan  
2010 – 2012 2.0L Transit  
2012 2.0L Edge, MKX



**NOTE:** The 567622 Crankshaft TDC Timing Pin will contact the crankshaft and prevent it from turning past TDC. However, the crankshaft can still be rotated in the counterclockwise direction. The crankshaft must remain at the TDC position during the crankshaft pulley removal and installation.

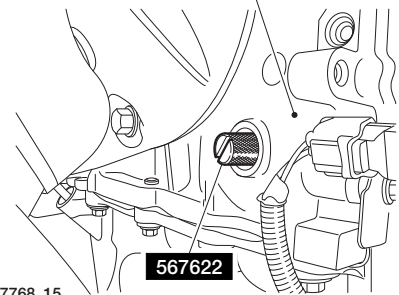
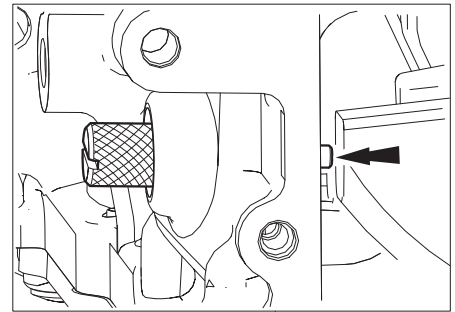
1. Remove engine plug bolt.

**NOTE:** Only rotate the crankshaft in the clockwise direction.

2. Install the 567622 Crankshaft TDC Timing Pin in the hole. Rotate crankshaft until it makes contact with the 567622 Crankshaft TDC Timing Pin.
3. Perform crankshaft or timing service as required according to vehicle service manual.



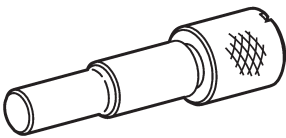
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.



567768\_15

## 567623 Ford Crankshaft TDC Timing Pin

Application: 2011 – 2012 1.6L Fiesta

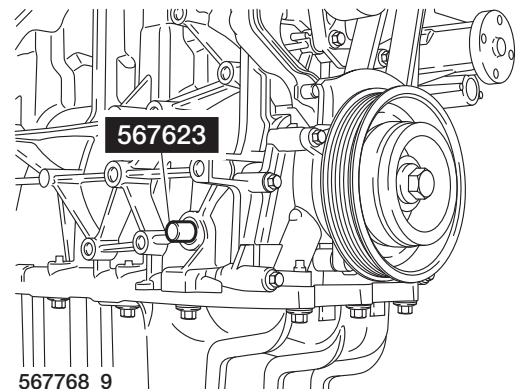


**NOTE:** The 567623 Crankshaft TDC Timing Pin will contact the crankshaft and prevent it from turning past TDC. However, the crankshaft can still be rotated in the counterclockwise direction. The crankshaft must remain at the TDC position during the crankshaft pulley removal and installation.

1. Remove the engine plug bolt.

**NOTE:** Only rotate the crankshaft in the clockwise direction.

2. Install the 567623 Crankshaft TDC Timing Pin in the hole.
3. Rotate the crankshaft until it contacts the 567623 Crankshaft TDC Timing Pin.
4. Perform crankshaft or timing service as required according to vehicle service manual.

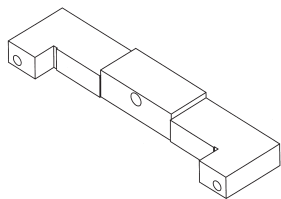


567768\_9



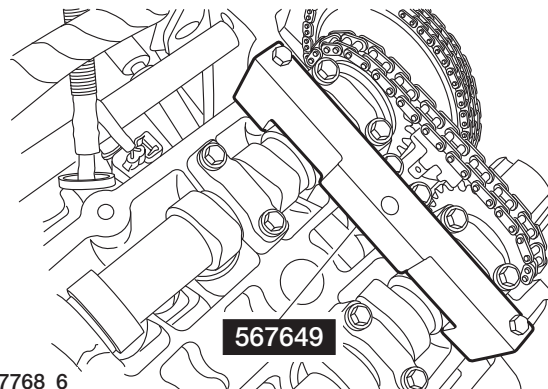
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 567649 Ford Camshaft Holding Tool



Application: 2000 – 2006 3.9L Lincoln LS  
2002 – 2005 3.9L Thunderbird

1. Make sure the holes on the camshaft flats are facing upward.
2. Install 567649 Camshaft Holding Tool.
3. Perform camshaft service as required according to instructions in vehicle service manual.
4. Remove the 567649 from the cylinder head.
5. Torque fasteners to factory specifications.



567768\_6



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

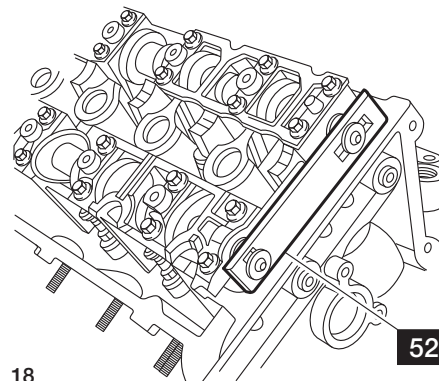
## 525216 Ford Camshaft Positioning Tool Assembly

Application: 2002 – 2005 4.6L 4V Aviator  
2005 – 2006 5.4L 4V GT  
2007 – 2012 5.4L 4V Mustang  
1996 – 2001 4.6L 4V Mustang  
2003 – 2004 4.6L 4V Mustang Cobra, Mach 1  
2003 – 2004 4.6L 4V Marauder  
1993 – 1998 4.6L 4V Lincoln Mark Series  
1993 – 2004 4.6L 4V Ford Series VIN V  
1995 – 2002 4.6L 4V Continental



**NOTE:** This tool must be used with 525217 Camshaft Holding Tool.

1. Rotate the engine to TDC No. 1 cylinder.
2. Install tool No. 525216 Camshaft Positioning Tool Assembly into the rear "D Slot" on camshaft.



567768\_18



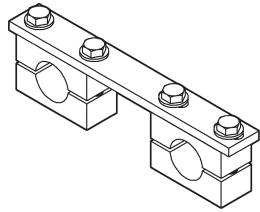
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

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## 525217 Ford Camshaft Holding Tool

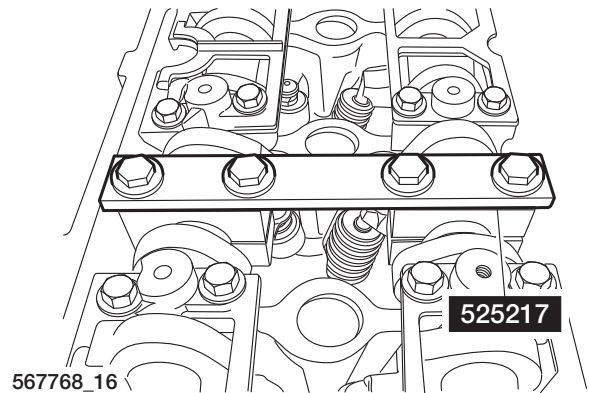


Application: 2003 – 2005 4.6L 4V Aviator  
2005 – 2006 5.4L 4V GT  
2007 – 2012 5.4L 4V Mustang  
1996 – 2001 4.6L 4V Mustang  
2003 – 2004 4.6L 4V Mustang Cobra, Mach 1  
2003 – 2004 4.6L 4V Marauder  
2003 – 2004 4.6L 4V Ford Series (VIN H,R,V,Y)  
1995 – 2002 4.6L 4V Continental  
1993 – 1998 4.6L 4V Lincoln Mark Series

**CAUTION:** To prevent damage to valves and pistons, do NOT rotate the crankshaft and / or camshaft(s) when removing the timing chain(s) and installing the cylinder heads.

Because this is not a free-wheeling engine, if it has “jumped time,” there will be damage to the valves and / or pistons which will require the removal of the cylinder heads.

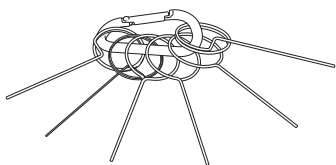
1. Rotate the engine to TDC No. 1 cylinder.
2. Install tool No. 525217 Camshaft Holding Tool onto the machined centers of both the intake and exhaust camshafts. Evenly torque the four clamping bolts on the tool to 15 ft-lbs (20 Nm).



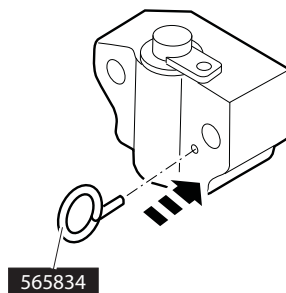
**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 565834 Ford Tensioner Retaining Pin Set

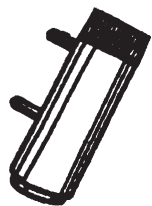
Application: 2002 – 2005 4.6L 4V Aviator  
2005 – 2006 5.4L 4V GT  
2007 – 2012 5.4L 4V Mustang  
1996 – 2001 4.6L 4V Mustang  
2003 – 2004 4.6L 4V Mustang Cobra, Mach 1, Marauder  
1997 – 2009 4.6L 4V Econoline, F-Series Truck (VIN W)  
1997 – 2002 5.4L 4V Econoline, Expedition, F-Series Truck  
1997 – 2002 6.8L 4V Econoline  
1998 – 2002 5.4L 4V Navigator



1. Compress the tensioner per vehicle service manual procedure.
2. Install the appropriate tensioner retaining pin into the hole in the tensioner to hold the tensioner compressed.
3. Install tensioner onto engine and timing components per vehicle service manual procedures.
4. Remove pin to allow tensioner to apply tension to timing components.

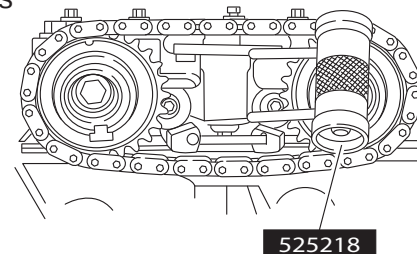


## 525218 Ford Secondary Timing Chain Tensioner Tool



Application:

2003 – 2004 4.6L 4V Lincoln Mark Series



**CAUTION:** To prevent damage to valves and pistons, do NOT rotate the crankshaft and / or camshaft(s) when removing the timing chain(s) and installing the cylinder heads.

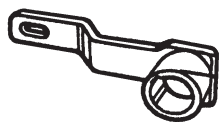
Because this is not a free-wheeling engine, if it has “jumped time,” there will be damage to the valves and / or pistons which will require the removal of the cylinder heads.

1. Insert tool No. 525218 Secondary Timing Chain Tensioner Tool between upper and lower rubbing blocks of the chain tensioner.
2. Rotate knob on top of tool until spring pressure is applied to the tensioner, and the knob on the tool rotates freely.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

## 525219 Ford Crankshaft Holding Tool



Application: 2003 – 2005 4.6L 4V Aviator

1992 – 2011 4.6L Crown Victoria, Grand Marquis, Town Car

1997 – 2013 4.6L, 5.4L, 6.8L E-Series

2000 – 2005 5.4L, 6.8L Excursion

1997 – 2013 4.6L, 5.4L Expedition

1998 – 2013 5.4L Navigator

2002 – 2005 4.6L Explorer, Mountaineer

1997 – 2010 4.6L F-150 VIN W

1997 – 2010 5.4L F-150

2011 – 2012 5.0L F-150

2006 – 2008 5.4L Mark LT

2005 – 2006 5.4L GT

1999 – 2010 5.4L F-Super Duty

1999 – 2013 6.8L F-Super Duty

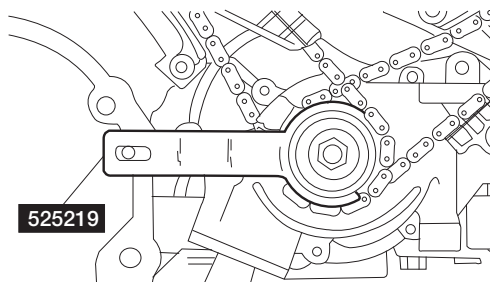
2006 – 2012 6.8L F-53 Motorhome Chassis

2011 – 2012 6.8L F-59 Commercial Stripped Chassis

1996 – 2010 4.6L Mustang

2007 – 2012 5.4L Mustang

2011 – 2012 5.0L Mustang



567768\_12

1. Using tool No. 525219 Crankshaft Holding Tool, rotate crankshaft to set No. 1 cylinder at TDC.



**WARNING:** Wear eye protection that meets ANSI Z87.1 and OSHA standards.

Form No. 567768

Sheet No. 15 of 15

Issue Date: May 2013 Rev. A