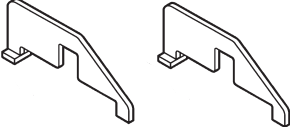
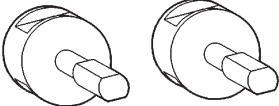
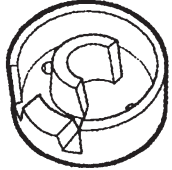
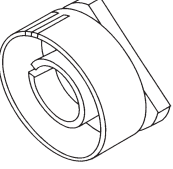
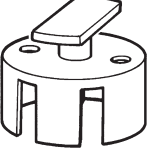
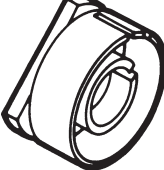
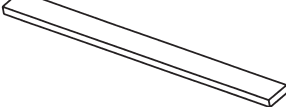
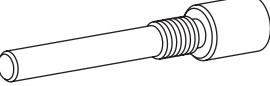
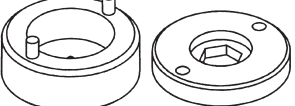
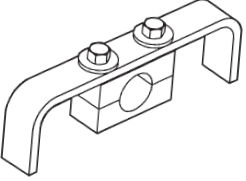
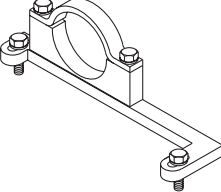
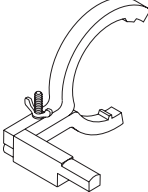
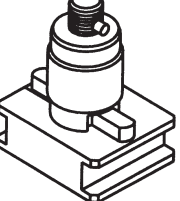
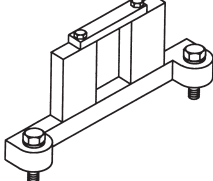
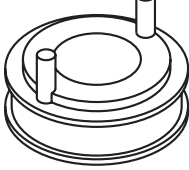

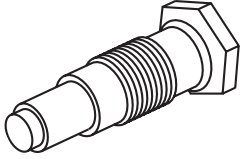
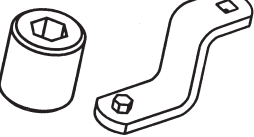
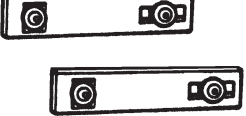
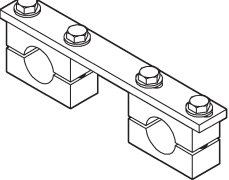
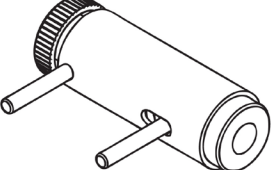
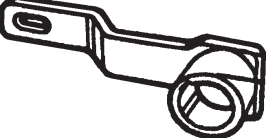
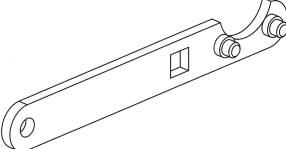
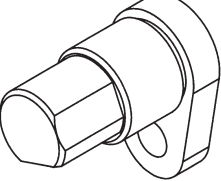
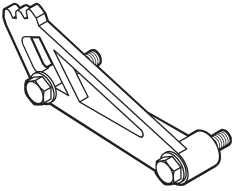
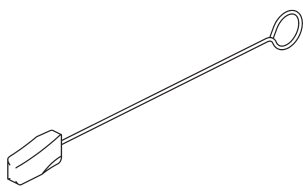
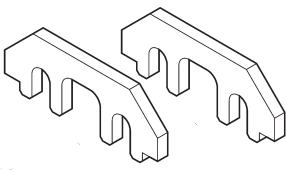
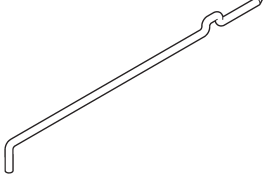
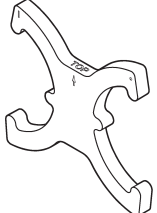
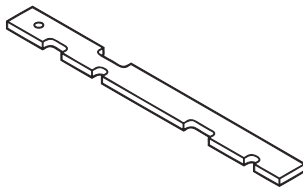
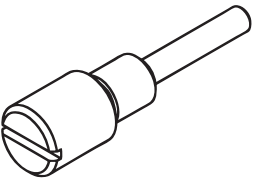
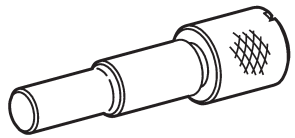
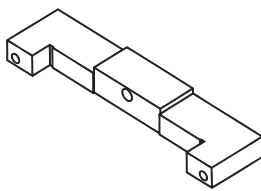


No. 6690 Ford Master Cam Tool Kit

<p>511532 (6009)</p> 	<p>511555 (6020)</p> 	<p>511536 (6469)</p> 	<p>511537 (6470)</p> 
<p>511539 (6472)</p> 	<p>511540 (6473)</p> 	<p>511541 (6474)</p> 	<p>511542 (6475)</p> 
<p>511543 & 511544 (6476)</p> 	<p>511545 (6477)</p> 	<p>511546 (6478)</p> 	<p>511547 (6479)</p> 
<p>511548 (6480)</p> 	<p>511549 (6481)</p> 	<p>511550 (6482)</p> 	<p>511551 (6483)</p> 
<p>511552 (6484)</p> 	<p>511553 & 511554 (6485)</p> 	<p>525216</p> 	<p>525217</p> 
<p>525218</p> 	<p>525219 (6024)</p> 	<p>567611</p> 	<p>567613</p> 

No. 6690 Ford Master Cam Tool Kit continued

<p>567614</p> 	<p>567617</p> 	<p>567618</p> 	<p>567619</p> 
<p>567620</p> 	<p>567621</p> 	<p>567622</p> 	<p>567623</p> 
<p>567649</p> 			

Ford Tool Application Chart

Year	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 Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2003-2005	Aviator	4.6L 4V	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1995-2002	Continental	4.6L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
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 Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
1997	Cougar	3.8L V6	Cam Sensor Synch Tool	6469 (511536)	T96T-12200-A	303-562
1992-2011	Crown Victoria	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1991-2008	Crown Victoria	4.6L 2V V8	Cam Positioning Tool	6009 (511532)	T91P-6256-A	303-380
1992-2008	Crown Victoria	4.6L 2V V8	Cam Positioning Tool	6020 (511555)	T92P-6256-A	303-413
1997-2002	Crown Victoria	4.6L VIN W	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1997-2008	Econoline	4.2L V6	Cam Sensor Synch Tool	6469 (511536)	T96T-12200-A	303-562
1997-2009	Econoline	4.6L VIN W	Cam Holding Tool	6477 (511545)	T96T-6256-B	303-557
1997-2014	Econoline	4.6L VIN W	Cam Positioning Tool	6020 (511555)	T92P-6256-A	303-413
1997-1998	Econoline	4.6L & 5.4L V8, 6.8L V10	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
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)	T96T-6256-B	303-557
1997-2002	Econoline	6.8L V10	Cam Positioning Tool Cam Holding Tool	6476 (511543 & 4) 6477 (511545)	T96T-6256-AR T96T-6256-B	303-S568 303-557
2012	Edge	2.0L	Crankshaft TDC Timing Pin	567622		303-507
2012-2014	Edge	2.0L VIN 9	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2007-2014	Edge	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2011-2014	Edge	4.0L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2013-2014	Escape	1.6L	VCT Alignment Tool Camshaft Holding Timing Tool Crankshaft TDC Timing Pin	567620 567621 567623		303-1097 303-376B 303-748
2001-2004	Escape	2.0L VIN B	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2013-2014	Escape	2.0L VIN 9	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2005-2008	Escape	2.3L	Crankshaft TDC Timing Pin	567622		303-507
2005-2008	Escape	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2009-2012	Escape	2.5L	Crankshaft TDC Timing Pin	567622		303-507
2009-2014	Escape	2.5L VIN 7	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
2009-2012	Escape Hybrid	2.5L VIN 3	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
1997-2013	E-Series	4.6L, 5.4L, 6.8L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448

Ford Tool Application Chart

Year	Model	Engine	Tool Description	Part No.	Ford American Part No.	Ford Global Part No.
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 Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1997-2014	Expedition	4.6L, 5.4L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1997-2002	Expedition	5.4L	Cam Positioning Tool Cam Positioning Tool Cam Positioning Tool Cam Holding Tool	6009 (511532) 6020 (511555) 6476 (511543 & 4) 6477 (511545)	T91P-6256-A T92P-6256-A T96T-6256-AR T96T-6256-B	303-380 303-413 303-S568 303-557
2005-2012	Expedition	5.4L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175
2012-2014	Explorer	2.0L VIN 9	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2011-2014	Explorer	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
1996-1998	Explorer	4.0L V6	Cam Sensor Synch Tool	6472 (511539)	T95T-12200-A	303-529
1997-2008	Explorer	4.0L SOHC VIN X	Cam Gear Holding Tool Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -575
1997-2011	Explorer	4.0L SOHC V6 VIN E	Cam Gear Holding Tool Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -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 Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2002-2005	Explorer	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2006-2010	Explorer	4.6L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175
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 4.6L VIN H,R,V,Y	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2011-2014	F-150	3.5L	Camshaft Holding Tool Chain tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2011-2014	F-150	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2011-2012	F-150	4.0L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
1997-2004	F-150	4.6L VIN 6	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1997-2010	F-150	4.6L VIN W	Cam Positioning Tool Cam Positioning Tool Crankshaft Holding Tool	6009 (511532) 6020 (511555) 525219	T91P-6256-A T92P-6256-A T93P-6303-A	303-380 303-413 303-448
2009-2010	F-150	4.6L 3V	Timing Chain Locking Tool	567617		303-1175
2011-2014	F-150	5.0L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1997-2010	F-150	5.4L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2004-2010	F-150	5.4L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175

Ford Tool Application Chart

Year	Model	Engine	Tool Description	Part No.	Ford American Part No.	Ford Global Part No.
2006-2014	F-53 Motorhome Chassis	6.8L	Timing Chain Locking Tool Crankshaft Holding Tool	567617 525219	T93P-6303-A	303-1175 303-448
2011-2012	F-59 Commercial Stripped Chassis	6.8L 3V	Timing Chain Locking Tool Crankshaft Holding Tool	567617 525219	T93P-6303-A	303-1175 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 Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1997-2002	F-Series Truck	4.6L	Cam Positioning Tool	6476 (511543 & 4)	T96T-6256-AR	303-S568
1997-2009	F-Series Truck	4.6L VIN W	Cam Holding Tool	6477 (511545)	T96T-6256-B	303-557
1997-2002	F-Series Truck	5.4L	Cam Positioning Tool Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6476 (511543 & 4) 6020 (511555)	T91P-6256-A T96T-6256-AR T92P-6256-A	303-380 303-S568 303-413
1997-2002	F-Series Truck	5.4L	Cam Holding Tool	6477 (511545)	T96T-6356-B	303-557
1999-2010	F-Super Duty	5.4L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1999-2014	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 Timing Chain Locking Tool	567614 567617		303-1046 303-1175
2005-2009	F-Super Duty 250-550	6.8L 3V	Timing Chain Locking Tool	567617		303-1175
2011-2014	Fiesta	1.6L	VCT Alignment Tool Camshaft Holding Timing Tool Crankshaft TDC Timing Pin	567620 567621 567623		303-1097 303-376B 303-748
2012-2014	Flex	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2012-2014	Focus	2.0L VIN 2	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2000-2004	Focus	2.0L VIN 3	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2002-2004	Focus	2.0L VIN 5	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2005-2011	Focus	2.0L VIN N	Crankshaft TDC Timing Pin	6475 (511542)	T97P-6000-A	303-574
2005-2012	Focus	2.0L VIN N	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
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
2013-2014	Fusion	1.6L	VCT Alignment Tool Camshaft Holding Timing Tool Crankshaft TDC Timing Pin	567620 567621 567623		303-1097 303-376B 303-748
2013-2014	Fusion	2.0L	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2006-2009	Fusion	2.3L	Crankshaft TDC Timing Pin	567622		303-507
2006-2009	Fusion	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2014	Fusion	2.5L	Crankshaft TDC Timing Pin	567622		303-507
2010-2014	Fusion	2.5L VIN A	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2014	Fusion Hybrid	2.5L VIN 3	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2012	Fusion Hybrid	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530

Ford Tool Application Chart

Year	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
1992-2011	Grand Marquis	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1997-2002	Grand Marquis	4.6L VIN W	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2005-2006	GT	5.4L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool Crankshaft Holding Tool	525216 525217 525219	T93P-6256-AHR T93P-6303-A	303-445 303-446 303-448
2000-2006	LS	3.9L	Timing Chain Tensioner Assembly Crankshaft Alignment Tool Camshaft Holding Tool	567611 567613 567649		303-1532 303-645A 303-530
2003-2004	Mach 1	4.6L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2003-2004	Marauder	4.6L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2005-2008	Mariner	2.3L	Crankshaft TDC Timing Pin	567622		303-507
2005-2008	Mariner	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2009-2012	Mariner	2.5L	Crankshaft TDC Timing Pin	567622		303-507
2009-2012	Mariner	2.5L VIN 7	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
2009-2012	Mariner Hybrid	2.5L VIN 3	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2006-2008	Mark LT	5.4L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool Crankshaft Holding Tool	567614 567617 525219	T93P-6303-A	303-1046 303-1175 303-448
1993-1998	Lincoln Mark Series	4.6L 4V	Camshaft Positioning Tool Assembly	525216		303-445
2003-2004	Lincoln Mark Series	4.6L 4V	Camshaft Holding Tool	525218		303-1248
2006-2009	Milan	2.3L	Crankshaft TDC Timing Pin	567622		303-507
2006-2009	Milan	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2011	Milan	2.5L	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 Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2010-2012	Milan Hybrid	2.5L VIN 3	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2014	MKS	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2009-2014	MKS	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2014	MKT	2.0L	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2010-2014	MKT	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2010-2014	MKT	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2012	MKX	2.0L	Crankshaft TDC Timing Pin	567622		303-507
2012	MKX	2.0L VIN 9	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2007-2012	MKX	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2011-2014	MKX	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2011-2012	MKX	4.0L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530

Ford Tool Application Chart

Year	Model	Engine	Tool Description	Part No.	Ford American Part No.	Ford Global Part No.
2013-2014	MKZ	2.0L	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
2006-2009	MKZ	2.3L	Crankshaft TDC Timing Pin	567622		303-507
2006-2009	MKZ	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2010-2012	MKZ	2.5L	Crankshaft TDC Timing Pin	567622		303-507
2010-2012	MKZ	2.5L VIN A	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
2007-2012	MKZ	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2013-2014	MKZ	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2010-2012	MKZ Hybrid	2.5L VIN 3	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465
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
1997-2008	Mountaineer	4.0L SOHC VIN X	Cam Gear Holding Tool Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -575
1997-2011	Mountaineer	4.0L SOHC V6 VIN E	Cam Gear Holding Tool Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -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 Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2002-2005	Mountaineer	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2006-2010	Mountaineer	4.6L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175
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
2011-2014	Mustang	3.7L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 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 Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -575
2011-2012	Mustang	4.0L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
1996-2010	Mustang	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448

Ford Tool Application Chart

Year	Model	Engine	Tool Description	Part No.	Ford American Part No.	Ford Global Part No.
1997-2002	Mustang	4.6L VIN W	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1996-2004	Mustang	4.6L VIN X	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2003-2004	Mustang	4.6L VIN Y	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2005-2010	Mustang	4.6L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175
1996-2001	Mustang	4.6L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2011-2014	Mustang	5.0L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2007-2012	Mustang	5.4L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2007-2012	Mustang	5.4L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
2003-2004	Mustang Cobra	4.6L 4V	Camshaft Positioning Tool Assembly Camshaft Holding Tool	525216 525217	T93P-6256-AHR	303-445 303-446
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 Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
1998-2002	Navigator	5.4L	Cam Positioning Tool Cam Holding Tool	6476 (511543 & 4) 6477 (511545)	T96T-6256-AR T96T-6256-B	303-S568 303-557
1998-2013	Navigator	5.4L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
2005-2012	Navigator	5.4L 3V	Cam Phaser Holding Tool Timing Chain Locking Tool	567614 567617		303-1046 303-1175
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 Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -575
1997-2008	Ranger	4.0L SOHC VIN X	Cam Gear Holding Tool Crankshaft Holding Tool Cam Holding Tool Adapter Cam Holding Tool Cam Gear Holding Tool Adapter Timing Chain Tensioner Tool Cam Gear Bolt Socket & Extension	6478 (511546) 6479 (511547) 6480 (511548) 6481 (511549) 6482 (511550) 6484 (511552) 6485 (511553 & 4)	T97T-6256-B T97T-6303-A T97T-6256-D T97T-6256-C T97T-6256-A T97T-6K254-A T97T-6256-F, -G	303-564 303-573 303-576 303-577 303-578 303-571 303-565, -575
2003-2011	Ranger	4.0L SOHC	Cam Gear Bolt Socket & Extension	6485 (511553 & 4)	T97T-6256-F, -G	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
2008-2012	Sable	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 303-1530
2013-2014	Taurus	2.0L	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
1996-1997	Taurus	3.0L V6 2V	Cam Sensor Synch Tool	6472 (511539)	T95T-12200-A	303-529

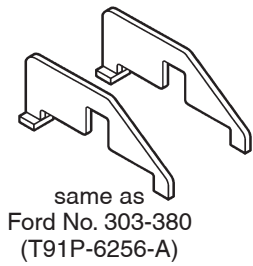
Ford Tool Application Chart

Year	Model	Engine	Tool Description	Part No.	Ford American Part No.	Ford Global Part No.
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
2008-2014	Taurus, Taurus X	3.5L	Camshaft Holding Tool Chain Tensioner Hold Down Tool	567618 567619		303-1248 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 Assembly Crankshaft Alignment Tool Camshaft Holding Tool	567611 567613 567649		303-532 303-645A 303-530
1992-2011	Town Car	4.6L	Crankshaft Holding Tool	525219	T93P-6303-A	303-448
1997-2002	Town Car	4.6L VIN W	Cam Positioning Tool Cam Positioning Tool	6009 (511532) 6020 (511555)	T91P-6256-A T92P-6256-A	303-380 303-413
2013-2014	Transit	1.6L	VCT Alignment Tool Camshaft Holding Timing Tool Crankshaft TDC Timing Pin	567620 567621 567623		303-1097 303-376B 303-748
2010-2012	Transit	2.0L	Crankshaft TDC Timing Pin	567622		303-507
2010-2013	Transit	2.0L VIN N	Cam Alignment Tool Crankshaft TDC Timing Pin	6474 (511541) 6475 (511542)	T94P-6256-CH T97P-6000-A	303-465 303-574
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	Crankshaft TDC Timing Pin	567622		303-507
2006-2009	Zephyr	2.3L VIN Z	Cam Alignment Tool	6474 (511541)	T94P-6256-CH	303-465

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511532 (6009) Ford Camshaft Positioning Tool



Application:	1991 – 2008	4.6L 2V	Crown Victoria (V8), Grand Marquis
	1997 – 1998	4.6L & 5.4L V8, 6.8L V10	Econoline
	1997 – 2002	5.4L	Expedition
	1997 – 2002	4.6L	Expedition, Explorer, Crown Victoria, Grand Marquis, Town Car (VIN W)
	1997 – 2004	4.6L	F-150 (VIN 6)
	1997 – 2010	4.6L	F-150 (VIN W)
	1997 – 1998	4.6L	F-Series Truck
	1997 – 2002	5.4L	F-Series Truck
	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)
	1998 – 1999	5.4L	Navigator

Note: The 1991 4.6L 2V V8 application does not require the use of tool No. 511555 (6020).

CAUTION: To prevent damage to valves and pistons, do NOT rotate the crankshaft and/or camshaft(s) when removing timing chain(s) and installing 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. Assemble tools :
 - **1991 4.6L 2V V8 :** Refer to Figure 1. Install No. 511532 (6009) on flats of the camshaft to prevent accidental rotation of the camshafts.
 - **All other applications :** Refer to Figure 2. Install No. 511532 (6009) and Cam Positioning Tool No. 511555 (6020) into each camshaft end before removing (or installing) timing chain tensioners and chains—this prevents valve train damage.
4. Perform camshaft service as required.
5. Refer to the vehicle service manual for the correct camshaft-to-crankshaft timing procedure.

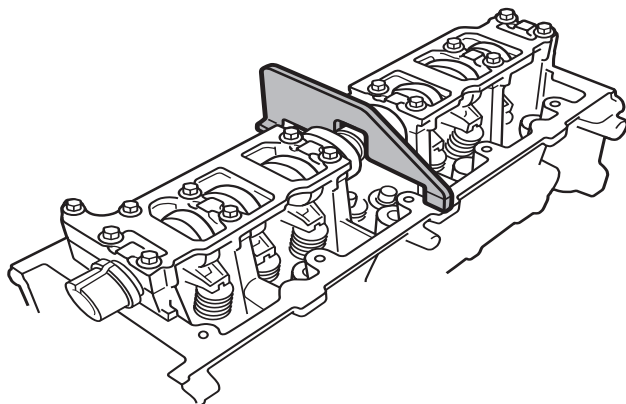
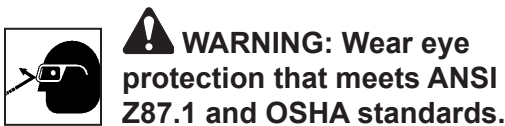


Figure 1

The 1991 4.6L 2V V8 application does not require the use of tool No. 6020.

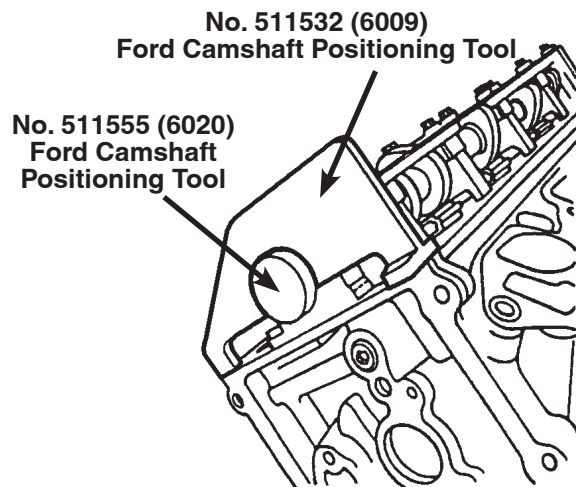
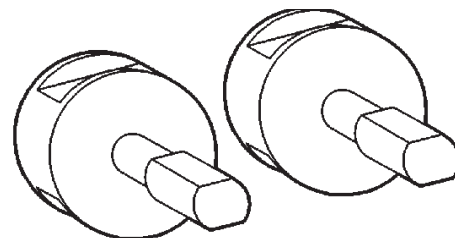


Figure 2

All other applications.

511555 (6020) Ford Camshaft Positioning Tool

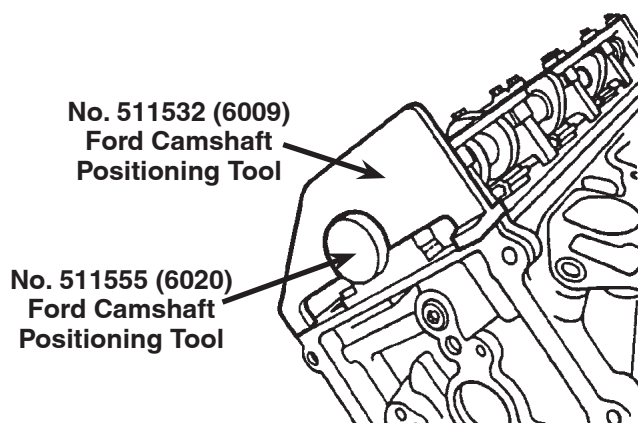
Application:	1992 – 2008	4.6L 2V	Crown Victoria (V8), Grand Marquis
	1997 – 2002	4.6L	Crown Victoria, Expedition, Explorer Grand Marquis, Town Car (VIN W)
	1997 – 1998	4.6L & 5.4L	V8, 6.8L V10 Econoline
	1997 – 2012	4.6L	Econoline (VIN W)
	1997 – 2002	5.4L	Expedition
	1997 – 2004	4.6L	F-150 (VIN 6)
	1997 – 2010	4.6L	F-150 (VIN W)
	1997 – 1998	4.6L	F-Series Truck
	1997 – 2002	5.4L	F-Series Truck
	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)
	1998 – 1999	5.4L	Navigator



Note: Tool No. 511555 (6020; same as Ford No. 303-413/T92P-6256-A) must be used with tool No. 511532 (6009; same as Ford No. 303-380/T91P-6256-A).

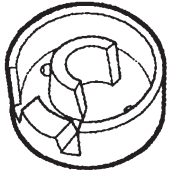
CAUTION: To prevent damage to valves and pistons, **DO NOT rotate the crankshaft and/or camshaft(s) when removing the timing chain(s) and installing the cylinder heads.** Because this is not a free-wheeling engine, if it has "jumped time" there will be damage to the valves and/or pistons, which will 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 top dead center.
3. **Disassembly:** Install Camshaft Positioning Tool (511555/6020) and Cam Positioning Tool (511532/6009) into each camshaft end, as shown, before removing timing chain tensioners and chains to prevent valve train damage.
4. **Assembly:** Install Camshaft Positioning Tool (511555/6020) and Cam Positioning Tool (511532/6009) 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.

511536 (6469) Ford Camshaft Sensor Synchronizer Tool

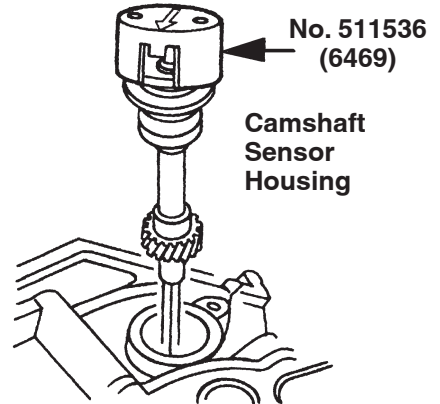


Application:	1997	3.8L V6 Cougar, Thunderbird
	1997 – 2008	4.2L V6 Econoline, F-Series Truck
	1996 – 1998	5.0L V8 Ford Explorer, Mercury Mountaineer
	2004 – 2007	4.2L Freestar, Monterey
	1996 – 1998	3.8L V6 Mustang, Windstar

Note: Same as Ford No. 303-562 (T96T-12200-A).

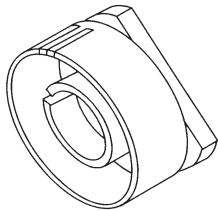
CAUTION: Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. To prevent equipment damage, the connector **MUST** be reassembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at top dead center of the compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511536 (6469).
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 (6470) Ford Camshaft Sensor Synchronizer Tool

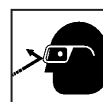
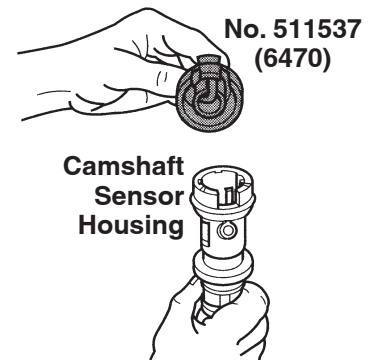
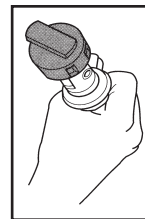


Application:	1999 – 2002	5.0L V8 Explorer, Mountaineer
	2004 – 2007	3.9L Freestar (VIN 6)
	2004	3.9L Monterey (VIN 6)
	1999 – 2004	3.8L V6 Mustang
	1999 – 2003	3.8L V6 Windstar

Note: Same as Ford No. 303-630.

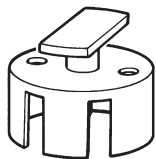
CAUTION: Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. To prevent equipment damage, the connector **MUST** be reassembled in the same position during installation.

1. Rotate crankshaft to set No. 1 cylinder at top dead center of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511537 (6470).
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.

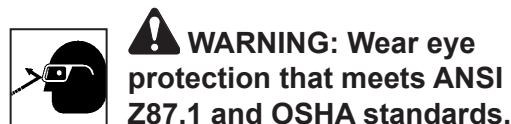
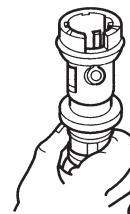
511539 (6472) Ford Camshaft Positioning Tool Set



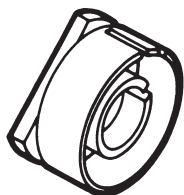
Application: 1995 – 1997 3.0L V6 Aerostar, Ranger, Windstar
 1996 – 1998 4.0L V6 Aerostar, Explorer, Ranger
 1996 – 1997 3.0L V6 2V Sable, Taurus

CAUTION: Before removing the camshaft sensor housing assembly, note the position of the camshaft sensor electrical connector. To prevent equipment damage, 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. 511539 (6472).
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.



511540 (6473) Ford Camshaft Sensor Synchronizer Tool

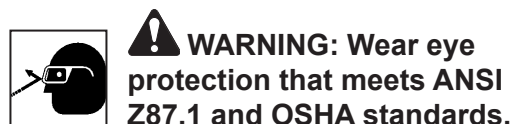


Application: 1998 – 2008 3.0L V6 Ranger
 1998 – 2005 3.0L V6 Sable, Taurus (VIN U)
 1998 – 2006 3.0L V6 Sable, Taurus (VIN Z)
 1998 – 2003 3.0L V6 Windstar

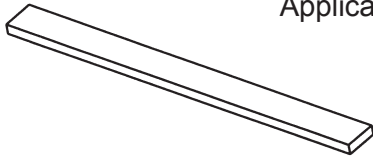
Note: Same as Ford No. 303-589.

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

1. Rotate crankshaft to set No. 1 cylinder at top dead center of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511540 (6473).
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.



511541 (6474) Ford Camshaft Alignment Tool



Application:	1994 – 2002	2.0L 4 cyl. Contour, Mystique (VIN 3)
	1999 – 2002	2.0L Cougar (VIN 3)
	2012 – 2014	2.0L Edge, Explorer (VIN 9)
	2001 – 2004	2.0L Escape (VIN B)
	2013 – 2014	2.0L Escape (VIN 9), Fusion, MKZ, Taurus
	2005 – 2008	2.3L Escape, Mariner (VIN Z)
	2009 – 2014	2.5L Escape (VIN 7)
	2005 – 2008	2.3L Escape Hybrid, Mariner Hybrid (VIN H)
	2009 – 2012	2.5L Escape Hybrid, Mariner Hybrid (VIN 3)
	2012 – 2014	2.0L Focus (VIN 2)
	2000 – 2004	2.0L Focus (VIN 3)
	2002 – 2004	2.0L Focus (VIN 5)
	2005 – 2012	2.0L Focus (VIN N)
	2003 – 2007	2.3L Focus (VIN Z)
	2006 – 2009	2.3L Fusion, Milan, MKZ, Zephyr (VIN Z)
	2010 – 2014	2.5L Fusion (VIN A)
	2010 – 2014	2.5L Fusion Hybrid (VIN 3)
	2009 – 2012	2.5L Mariner (VIN 7)
	2010 – 2011	2.5L Milan
	2010 – 2012	2.5L Milan Hybrid, MKZ Hybrid (VIN 3)
	2014	2.0L MKT
	2012	2.0L MKX (VIN 9)
	2010 – 2012	2.5L MKZ (VIN A)
	2001 – 2011	2.3L Ranger (VIN D)
	2010 – 2013	2.0L Transit (VIN N)

Note:

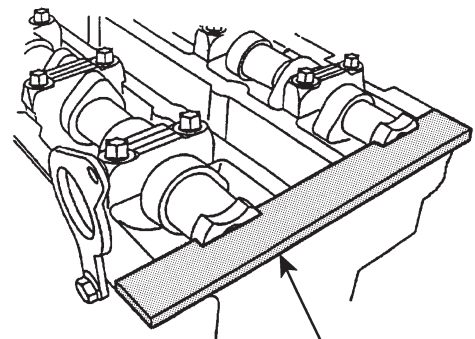
- Same as Ford No. 303-465 (T94P-6256-CH).
- The camshaft timing slots are offset. If the camshaft alignment timing tool cannot be installed, rotate the crankshaft one complete revolution clockwise to correctly position the camshafts.

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 top dead center on the No. 1 cylinder.
2. Align camshafts by installing tool No. 511541 (6474) 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.



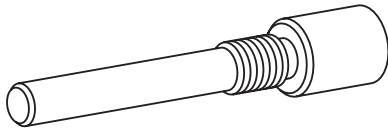
WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.



No. 511541
(6474)

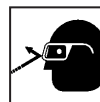
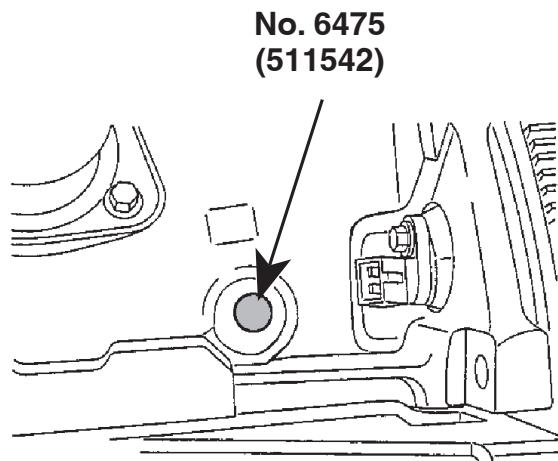
511542 (6475) Ford Crankshaft TDC Timing Pin

Application: 1997 – 2002 2.0L 4 cyl. Contour, Mystique (VIN 3)
 1999 – 2002 2.0L Cougar (VIN 3)
 2012 – 2014 2.0L Edge, Explorer (VIN 9)
 2001 – 2004 2.0L Escape (VIN B)
 2013 – 2014 2.0L Escape (VIN 9), Fusion, MKZ, Taurus
 2012 – 2014 2.0L Focus (VIN 2)
 2000 – 2004 2.0L Focus (VIN 3)
 2002 – 2004 2.0L Focus (VIN 5)
 2005 – 2011 2.0L Focus (VIN N)
 2014 2.0L MKT
 2010 – 2012 2.0L Transit (VIN N)



CAUTION: To prevent damage to the engine, remove the No. 511542 (6475) timing pin from the engine and reinstall the access plug **BEFORE** cranking the engine.

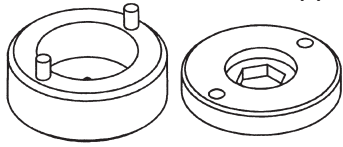
1. Rotate crankshaft to set No. 1 cylinder on TDC of compression stroke.
2. Remove the access plug from the engine and install tool No. 511542 (6475) timing pin as shown. (The pin will completely thread into the hole when the engine is at TDC on the No. 1 cylinder.)
3. Service the timing belt as required 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 (6476) 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 V10 Econoline
 1998 – 2002 5.4L Navigator



511543

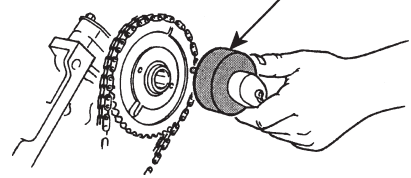
511544

Note:

- 511543 is the same as Ford No. 303-569 (T96T-6256-AR1) and 511544 is the same as Ford No. 303-570 (T96T-6256-AR2).
- This tool is used with No. 6477 (511545) Ford Camshaft Holding Tool.

2-Hole Camshaft Sprocket

No. 511543



1. Two-hole Camshaft Sprocket:

Use No. 511543 to position the camshaft sprocket (2-hole) on the engine as shown.

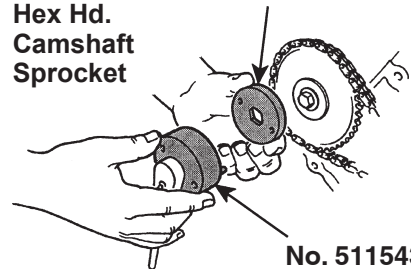
18 mm Hex Hd. Camshaft Sprocket:

Use No. 511543 with No. 511544 to position the camshaft sprocket (18 mm hex hd.) on the engine as shown.

2. Service the timing chain as required according to procedures in the vehicle service manual.
3. Torque the fasteners to factory specifications.

18 mm Hex Hd. Camshaft Sprocket

No. 511544



No. 511543



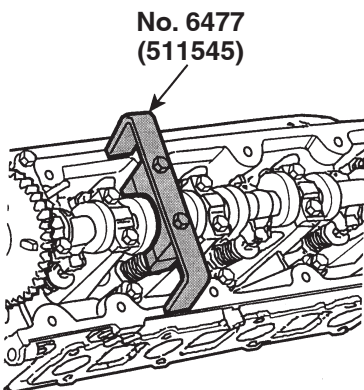
WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

511545 (6477) Ford Camshaft Holding Tool

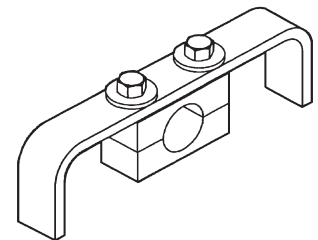
Application: 1997 – 2009 4.6L Econoline, F-Series Truck (VIN W)
 1997 – 2002 5.4L Econoline (V8), Expedition, F-Series Truck
 1997 – 2002 6.8L V10 Econoline
 1998 – 2002 5.4L V8 Navigator

Note:

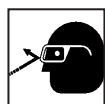
- Same as Ford No. 303-557 (T96T-6256-B).
- This tool is used with No. 6476 (511543 & 511544) Ford Camshaft Positioning Tool Set.



No. 6477 (511545)



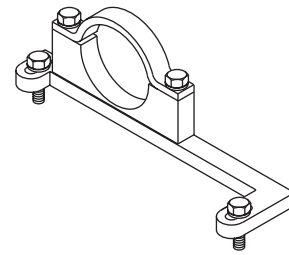
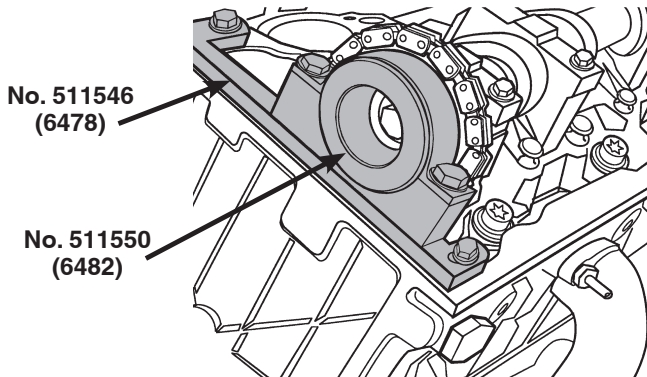
1. Install tool No. 511545 (6477) on the camshaft as shown.
2. Torque hex hd. bolts at 20 ft.•lbs. to ensure correct clamping force. *Note: Each bolt must be engaged by the same number of threads in the bottom clamp to ensure correct clamp alignment.*
3. Repair the engine as required according to instructions in the vehicle service manual.



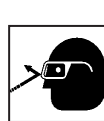
WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

511546 (6478) Ford Camshaft Gear Holding Tool

Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)



1. Install tool Nos. 511546 (6478) and 511550 (6482) on the camshaft as shown.
2. Secure tool No. 511546 (6478) 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.

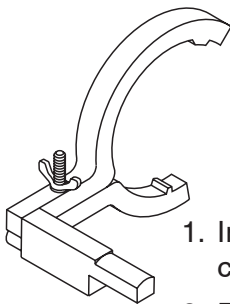


WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

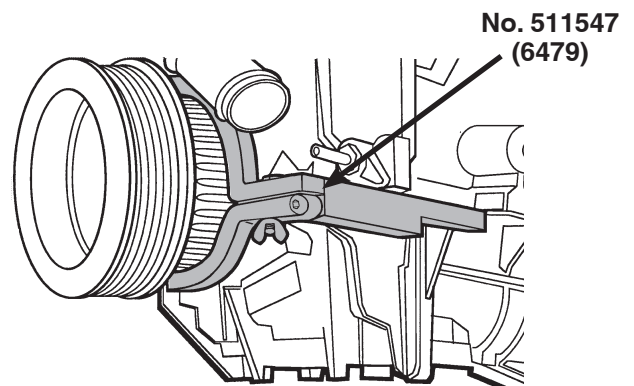
511547 (6479) Ford Crankshaft Holding Tool

Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)

Note: Same as Ford No. 303-573 (T97T-6303-A).



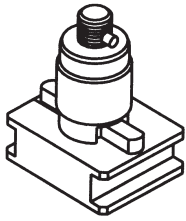
1. Install tool No. 511547 (6479) on the crankshaft damper.
2. Rotate the engine counterclockwise (CCW) until the tool stops against the engine block.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque fasteners to factory specifications.



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

511548 (6480) Ford Camshaft Holding Tool Adapter

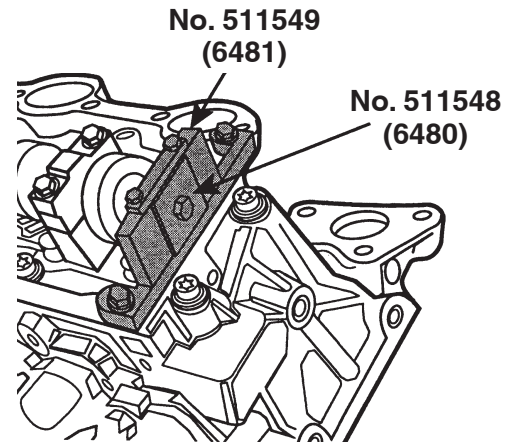
Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)



Note:

- Same as Ford No. 303-576 (T97T-6256-D).
- This tool is used with No. 511549 (6481) Ford Camshaft Holding Tool.

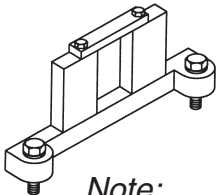
1. Install tool Nos. 511548 (6480) and 511549 (6481) on the camshaft as shown.
2. Secure tool No. 511549 (6481) to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque fasteners to factory specifications.



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

511549 (6481) Ford Camshaft Holding Tool

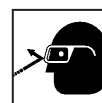
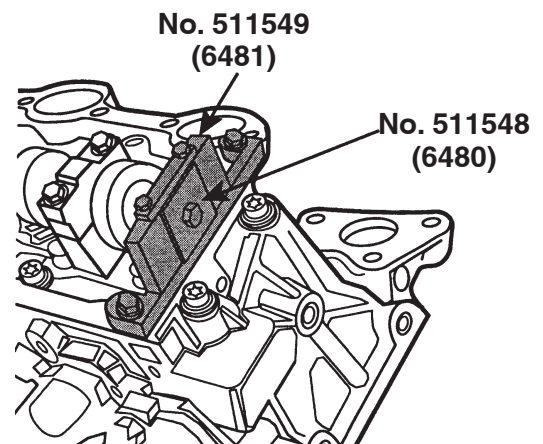
Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)



Note:

- Same as Ford No. 303-577 (T97T-6256-C).
- This tool is used with No. 511548 (6480) Ford Camshaft Holding Tool Adapter.

1. Install tool Nos. 511548 (6480) and 511549 (6481) on the camshaft as shown.
2. Secure tool No. 511549 (6481) 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.



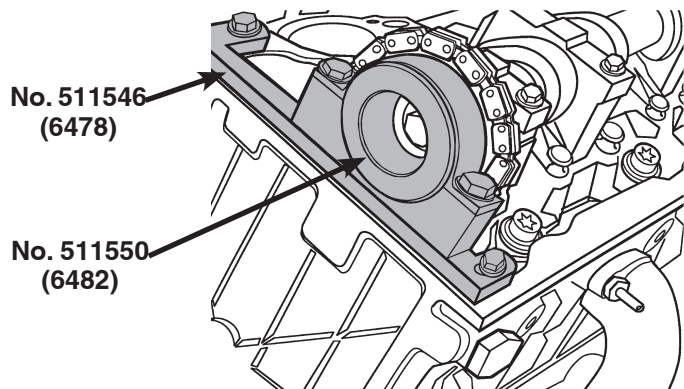
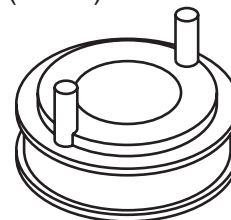
WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

511550 (6482) Ford Camshaft Holding Tool Adapter

Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)

Note:

- Same as Ford No. 303-578 (T97T-6256-A).
- This tool is used with No. 511546 (6478) Ford Camshaft Gear Holding Tool .



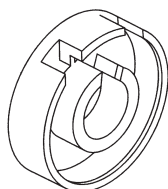
1. Install tool Nos. 511546 (6478) and 511550 (6482) on the camshaft as shown.
2. Secure tool No.511546 (6478) to the cylinder head.
3. Service the timing chain as required according to instructions in the vehicle service manual.
4. Torque fasteners according to factory specifications.



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

511551 (6483) Ford Camshaft Synchronizer Tool

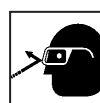
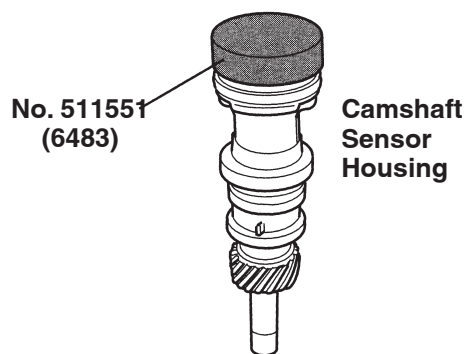
Application: 1999 – 2002 4.0L Push Rod Explorer, Mountaineer
 1999 – 2000 4.0L Push Rod Ranger



Note: Same as Ford No. 303-638.

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

1. Rotate crankshaft to set No. 1 cylinder at top dead center of compression stroke.
2. Engage camshaft sensor housing vane in slot of tool No. 511551 (6483).
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.

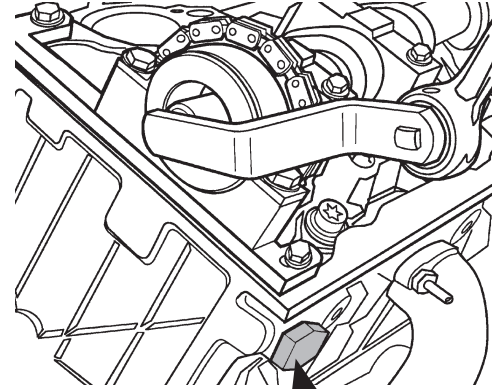
511552 (6484) Ford Timing Chain Tensioner Tool

Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)

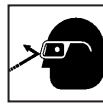


Note: Same as Ford No. 303-571 (T97T-6K254-A).

1. Remove the hydraulic chain tensioner from the engine.
2. Install tool No. 511552 (6484) 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 fasteners to factory specifications.



No. 511552
(6484)

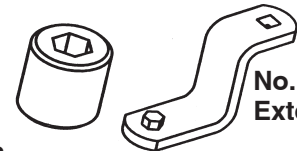


WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

511553 / 511554 (6485) Ford Camshaft Gear Bolt Socket Extension

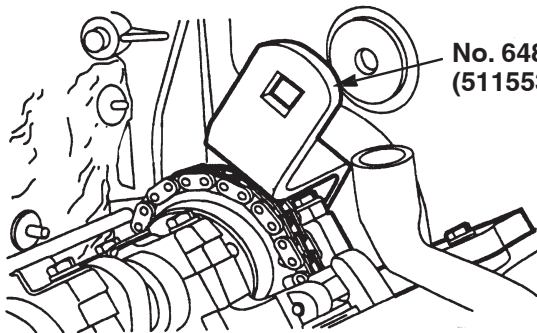
Application: 1997 – 2011 4.0L SOHC Explorer (V6), Mountaineer (V6), Ranger (VIN E)
 1997 – 2008 4.0L SOHC Explorer, Mountaineer, Ranger (VIN X)
 2005 – 2010 4.0L SOHC Mustang (VIN N)
 2003 – 2011 4.0L SOHC Ranger

Note: 511553 is the same as Ford No. 303-565 (T97T-6256-G)
 and 511554 is the same as Ford No. 303-575 (T97T-6256-F).



No. 511553
Camshaft Gear
Bolt Socket

No. 511554
Extension

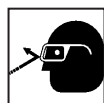


No. 6485
(511553 & 511554)

1. Assemble the No. 6485 (511553 & 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.

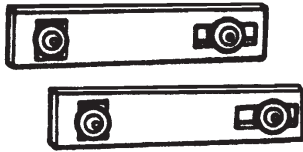
Assembly: Use a torque wrench to tighten the bolt on the camshaft. Refer to the vehicle service manual for the correct torque specifications.



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

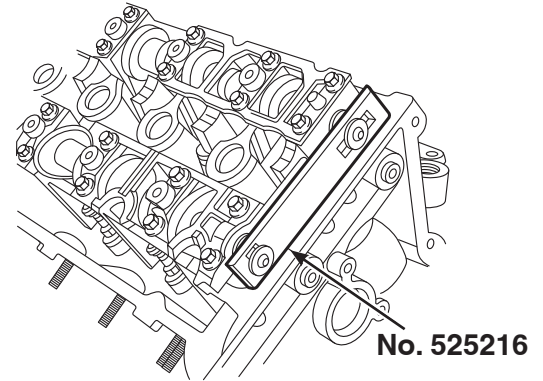
525216 Ford Camshaft Positioning Tool Assembly

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



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

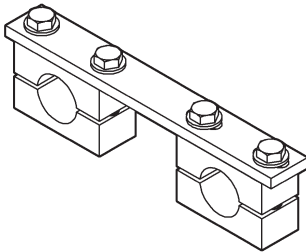
1. Rotate the engine to TDC No. 1 cylinder.
2. Install tool No. 525216 Camshaft Positioning Tool Assembly into the rear "D Slot" on camshaft.
3. Perform camshaft service as required according to instructions in vehicle service manual.
4. Remove the 525216 from the cylinder head.
5. Torque fasteners to factory specifications.



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

525217 Ford Camshaft Holding Tool

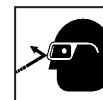
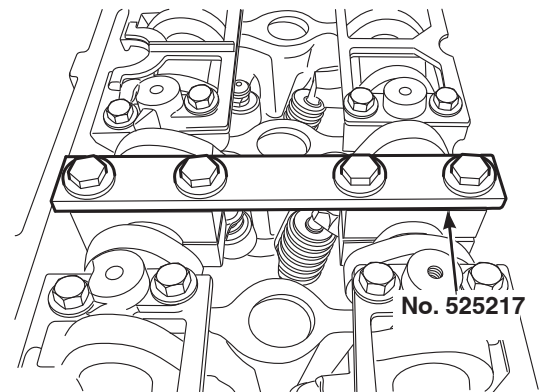
Application: 2002 – 2005 4.6L 4V Aviator
 1995 – 2002 4.6L 4V Continental
 1993 – 2004 4.6L Ford Series (VIN H,R,V,Y)
 2005 – 2006 5.4L 4V GT
 2003 – 2004 4.6L 4V Mach 1, Marauder, Mustang Cobra
 1993 – 1998 4.6L 4V Lincoln Mark Series
 1996 – 2001 4.6L 4V Mustang
 2007 – 2012 5.4L 4V Mustang



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.

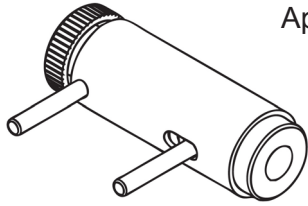
Because this is not a free-wheeling engine, if it has "jumped time," there will be damage to the valves and / or pistons which will require the removal of the cylinder heads.

1. Rotate the engine to TDC No. 1 cylinder.
2. Install 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)
3. Perform camshaft service as required according to instructions in vehicle service manual.
4. Remove the 525217 from the camshafts.
5. Torque fasteners to factory specifications.



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

525218 Ford Secondary Timing Chain Tensioner Tool

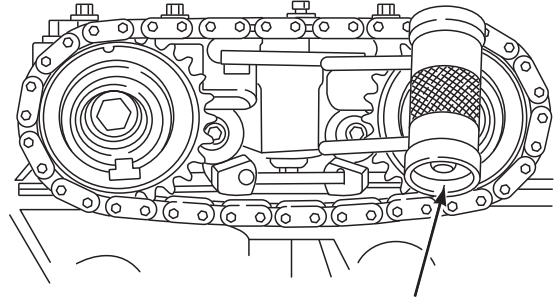


Application: 2003 – 2004 4.6L 4V Lincoln Mark Series

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 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.
3. Perform camshaft service as required according to instructions in vehicle service manual.
4. Remove the 525218 from the timing chain tensioner.
5. Torque fasteners to factory specifications.



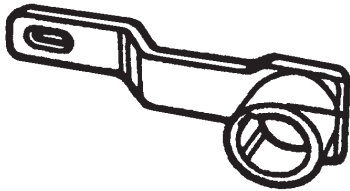
No. 525218



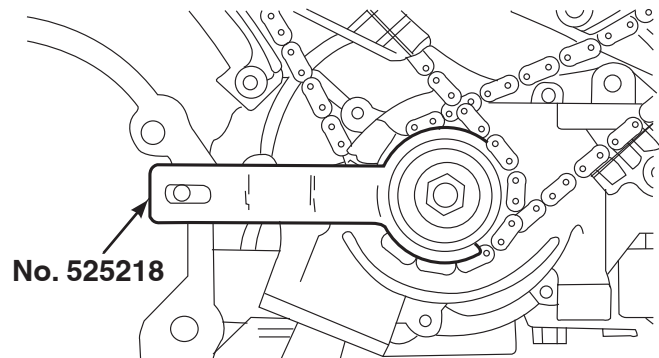
WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

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 – 2014 4.6L, 5.4L Expedition
 2002 – 2005 4.6L Explorer, Mountaineer
 1997 – 2010 4.6L F-150 (VIN W)
 2011 – 2014 5.0L F-150
 1997 – 2010 5.4L F-150
 2006 – 2014 6.8L F-53 Motorhome Chassis
 2011 – 2012 6.8L 3V F-59 Commercial Stripped Chassis
 1999 – 2010 5.4L F-Super Duty
 1999 – 2014 6.8L F-Super Duty
 2005 – 2006 5.4L 4V GT
 2006 – 2008 5.4L 3V Mark LT
 1996 – 2010 4.6L Mustang
 2011 – 2014 5.0L Mustang
 2007 – 2012 5.4L Mustang
 1998 – 2013 5.4L Navigator

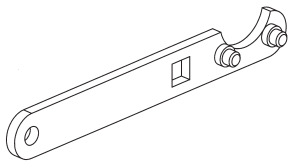


1. Rotate the engine to top dead center on the No. 1 cylinder.
2. Install No. 525219 Crankshaft Holding Tool, aligning the crankshaft key with keyway in the tool.
3. Install the end of the tool over the engine front cover alignment dowel.
4. Perform timing chain service as required according to instructions in the vehicle service manual.
5. Remove the 525219 from the crankshaft.
6. Torque fasteners according to factory specifications.



No. 525218

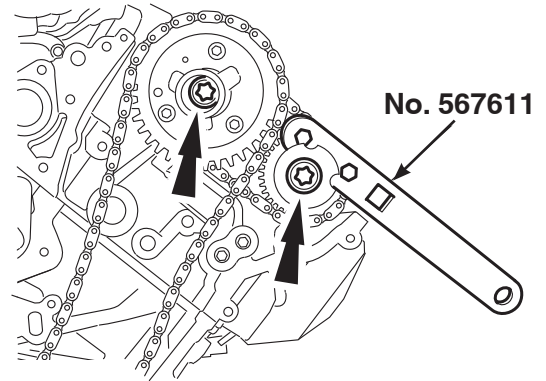
567611 Ford Timing Chain Tensioner Tool



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

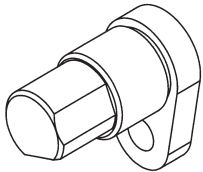
Note: The 567611 is to be used with 567649 Camshaft Locking Tool. The exhaust camshaft sprocket bolt must be fully tightened before tightening the intake camshaft sprocket bolt.

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 described in vehicle service manual.



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

567613 Ford Crankshaft Positioning Tool

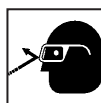
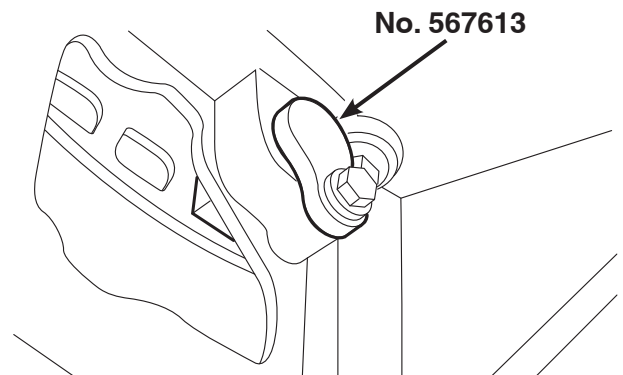


Application: 2000 – 2006 3.9L LS
2002 – 2005 3.9L Thunderbird

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

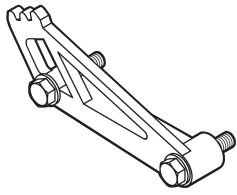
Note: There is one window on the ignition pulse wheel that is unique to accept the 567613.

3. Install the 567613 Crankshaft Positioning 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.

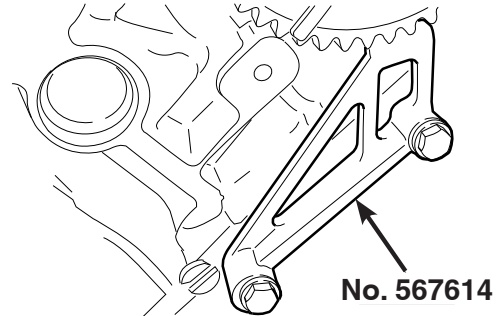


WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.

567614 Ford Cam Phaser Holding Tool

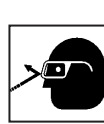


Application: 2005 – 2012 5.4L 3V Expedition, Navigator
 2006 – 2010 4.6L 3V Explorer, Mountaineer
 2004 – 2010 5.4L 3V F-150
 2005 – 2009 5.4L 3V F-Super Duty 250-550
 2006 – 2008 5.4L 3V Mark LT
 2005 – 2010 4.6L 3V Mustang



CAUTION: To prevent equipment damage, use only 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

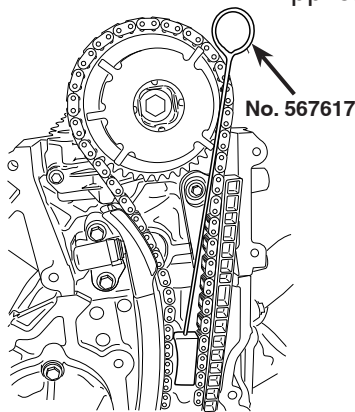
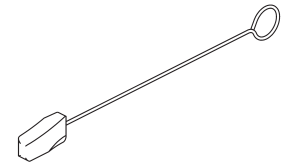


Figure 1

Application: 2005 – 2012 5.4L 3V Expedition, Navigator
 2006 – 2010 4.6L 3V Explorer, Mountaineer
 2009 – 2010 4.6L 3V F-150
 2004 – 2010 5.4L 3V F-150
 2006 – 2014 6.8L F-53 Motorhome Chassis
 2011 – 2012 6.8L 3V F-59 Commercial Stripped Chassis
 2005 – 2009 5.4L 3V F-Super Duty 250-550
 2005 – 2009 6.8L 3V F-Super Duty 250-550
 2006 – 2008 5.4L 3V Mark LT
 2005 – 2010 4.6L 3V Mustang



1. Install the 567617 timing chain locking tool. (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.

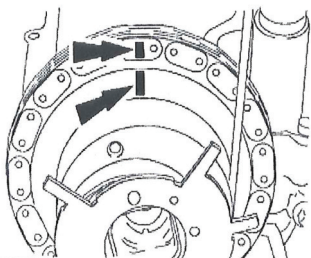
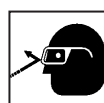


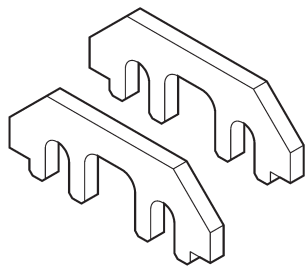
Figure 2



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

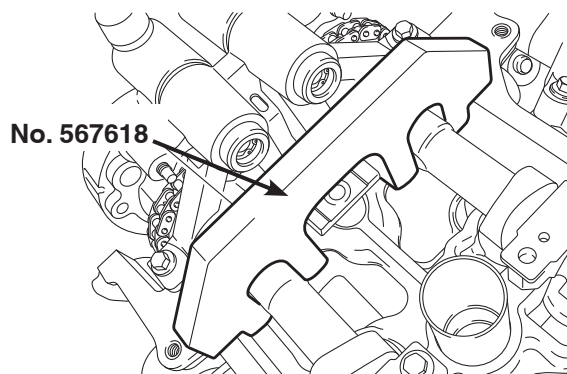
567618 Ford Camshaft Holding Tool


Application: 2007 – 2014 3.5L Edge
 2011 – 2014 4.0L Edge
 2011 – 2014 3.5L Explorer, F-150
 2011 – 2014 3.7L F-150, MKX
 2011 – 2012 4.0L F-150, MKX, Mustang
 2012 – 2014 3.5L Flex
 2010 – 2012 3.5L Fusion Hybrid
 2007 – 2011 3.5L Milan
 2010 – 2014 3.5L MKS, MKT
 2009 – 2014 3.7L MKS
 2010 – 2014 3.7L MKT
 2007 – 2012 3.5L MKX, MKZ
 2013 – 2014 3.7L MKZ
 2011 – 2014 3.7L Mustang
 2008 – 2012 3.5L Sable
 2008 – 2014 3.5L Taurus, Taurus X

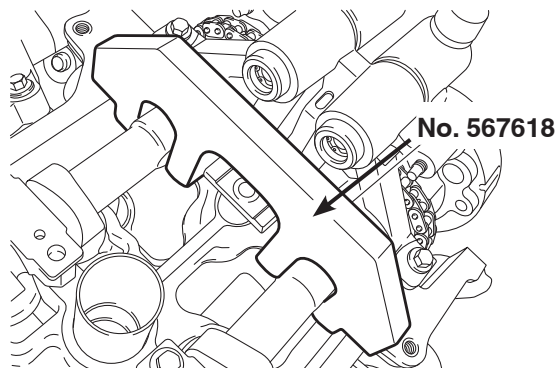


Note: The camshaft holding tool will hold the camshafts in the Top Dead Center (TDC) position.

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.

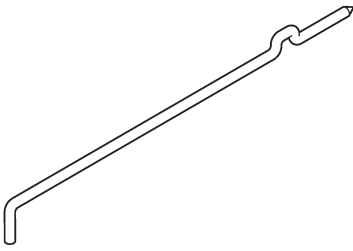


 **WARNING: Wear eye protection that meets ANSI Z87.1 and OSHA standards.**



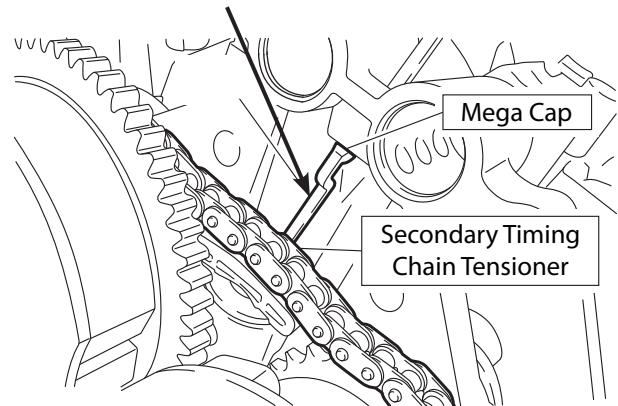
567619 Ford Chain Tensioner Hold Down Tool

Application: 2007 – 2014 3.5L Edge
 2011 – 2014 4.0L Edge
 2011 – 2014 3.5L Explorer, F-150
 2011 – 2014 3.7L F-150, MKX
 2011 – 2012 4.0L F-150, MKX, Mustang
 2012 – 2014 3.5L Flex
 2010 – 2012 3.5L Fusion Hybrid
 2007 – 2011 3.5L Milan
 2010 – 2014 3.5L MKS, MKT
 2009 – 2014 3.7L MKS
 2010 – 2014 3.7L MKT
 2007 – 2012 3.5L MKX, MKZ
 2013 – 2014 3.7L MKZ
 2011 – 2014 3.7L Mustang
 2008 – 2012 3.5L Sable
 2008 – 2014 3.5L Taurus, Taurus X

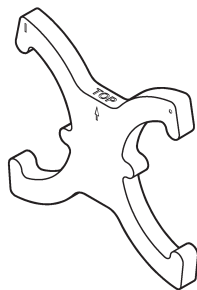


1. Insert the 567619 through the hole in the top of the mega cap.
2. Compress the secondary timing chain tensioner and install the 567619 in the hole on the rear of the secondary timing chain tensioner guide. Position the Chain Tensioner Hold Down Tool against the mega cap to retain the tensioner in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

No. 567619



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



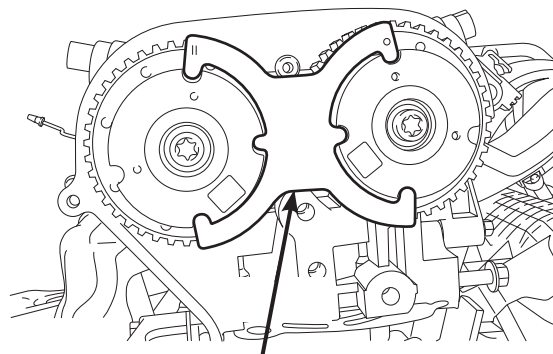
567620 Ford VCT Alignment Tool

Application: 2011 – 2014 1.6L Escape, Fusion, Transit
2013 – 2014 1.6L Fiesta

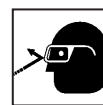
CAUTION: Do not loosen or remove the crankshaft pulley bolt without first installing the 567620. The crankshaft pulley and the crankshaft timing sprocket are not keyed to the crankshaft. Before any repair requiring loosening or removal of the crankshaft pulley bolt, the crankshaft, and camshafts must 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.



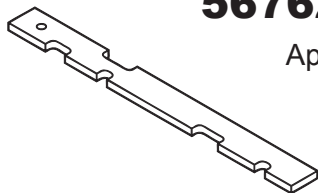
No. 567620



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

567621 Ford Camshaft Holding Timing Tool

Application: 2011 – 2014 1.6L Escape, Fusion, Transit
2013 – 2014 1.6L Fiesta

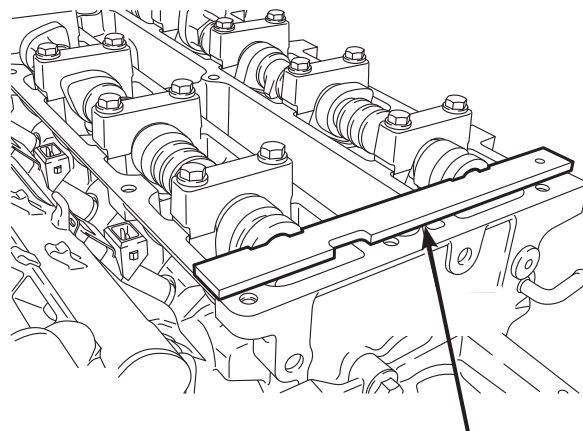


Note: Use an open-ended wrench to hold the camshafts by the hexagon to prevent the camshafts from turning.

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.



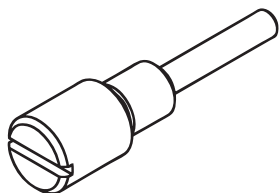
No. 567621



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

567622 Ford Crankshaft TDC Timing Pin

Application:	2012 2.0L Edge, MKX
	2005 – 2008 2.3L Escape, Mariner
	2009 – 2012 2.5L Escape, Mariner
	2005 – 2012 2.0L Focus
	2005 – 2007 2.3L Focus
	2006 – 2009 2.3L Fusion, Milan, MKZ, Zephyr
	2010 – 2014 2.5L Fusion
	2010 – 2011 2.5L Milan
	2010 – 2012 2.5L MKZ
	2005 – 2011 2.3L Ranger
	2010 – 2012 2.0L Transit

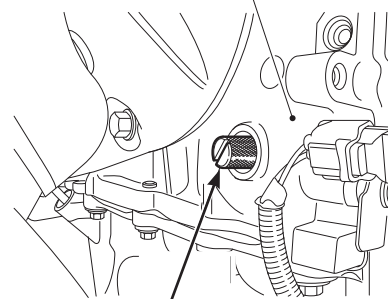
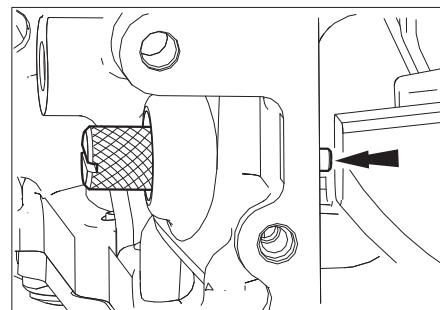


Note: The 567622 Crankshaft TDC Timing Pin will contact the crankshaft and prevent it from turning past TDC. However, the crankshaft can still be rotated in the counterclockwise direction. The crankshaft must remain at the TDC position during the crankshaft pulley removal and installation.

1. Remove engine plug bolt.

Note: Rotate the crankshaft in the clockwise direction only.

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.



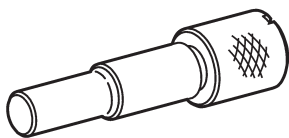
No. 567622



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

567623 Ford Crankshaft TDC Timing Pin

Application:	2011 – 2014 1.6L Escape, Fusion, Transit
	2013 – 2014 1.6L Fiesta

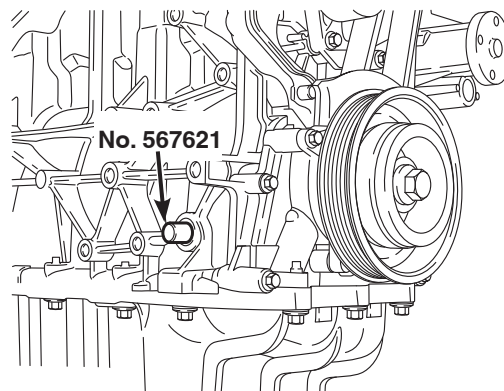


Note: The 567623 Crankshaft TDC Timing Pin will contact the crankshaft and prevent it from turning past TDC. However, the crankshaft can still be rotated in the counterclockwise direction. The crankshaft must remain at the TDC position during the crankshaft pulley removal and installation.

1. Remove the engine plug bolt.

Note: Rotate the crankshaft in the clockwise direction only.

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.

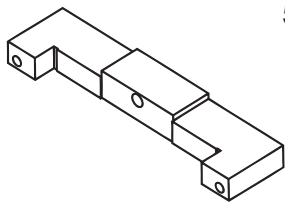


No. 567621



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

567649 Ford Camshaft Holding Tool

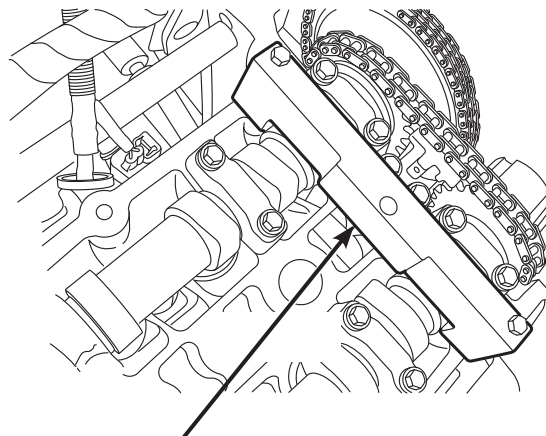


Application: 2000 – 2006 3.9L Lincoln LS
2002 – 2005 3.9L Thunderbird

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.



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



No. 567649



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International Sales: (507) 455-7223
Fax: (507) 455-7063
Website: www.otctools.com