

Incorrect or out of phase engine timing can result in damage to the valves. The Tool Connection cannot be held responsible for any damage caused by using these tools in anyway.

Safety Precautions – Please read

- Disconnect the battery earth leads (check radio code is available)
- Remove spark or glow plugs to make the engine turn easier
- Do not use cleaning fluids on belts, sprockets or rollers
- Always make a note of the route of the auxiliary drive belt before removal
- Turn the engine in the normal direction (clockwise unless stated otherwise)
- Do not turn the camshaft, crankshaft or diesel injection pump once the timing chain has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- Do not turn the crankshaft or camshaft when the timing belt/chain has been removed
- Mark the direction of the chain before removing
- It is always recommended to turn the engine slowly, by hand and to re-check the camshaft and crankshaft timing positions.
- Crankshafts and Camshafts may only be turned with the chain drive mechanism fully installed.
- Do not turn crankshaft via camshaft or other gears
- Check the diesel injection pump timing after replacing the chain
- Observe all tightening torques.
- Always refer to the vehicle manufacturer's service manual or a suitable proprietary instruction book
- Incorrect or out of phase engine timing can result in damage to the valves
- It is always recommended to turn the engine slowly, by hand, and to re-check the camshaft and crankshaft timing positions



When you have finished with this book please recycle it

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Guarantee



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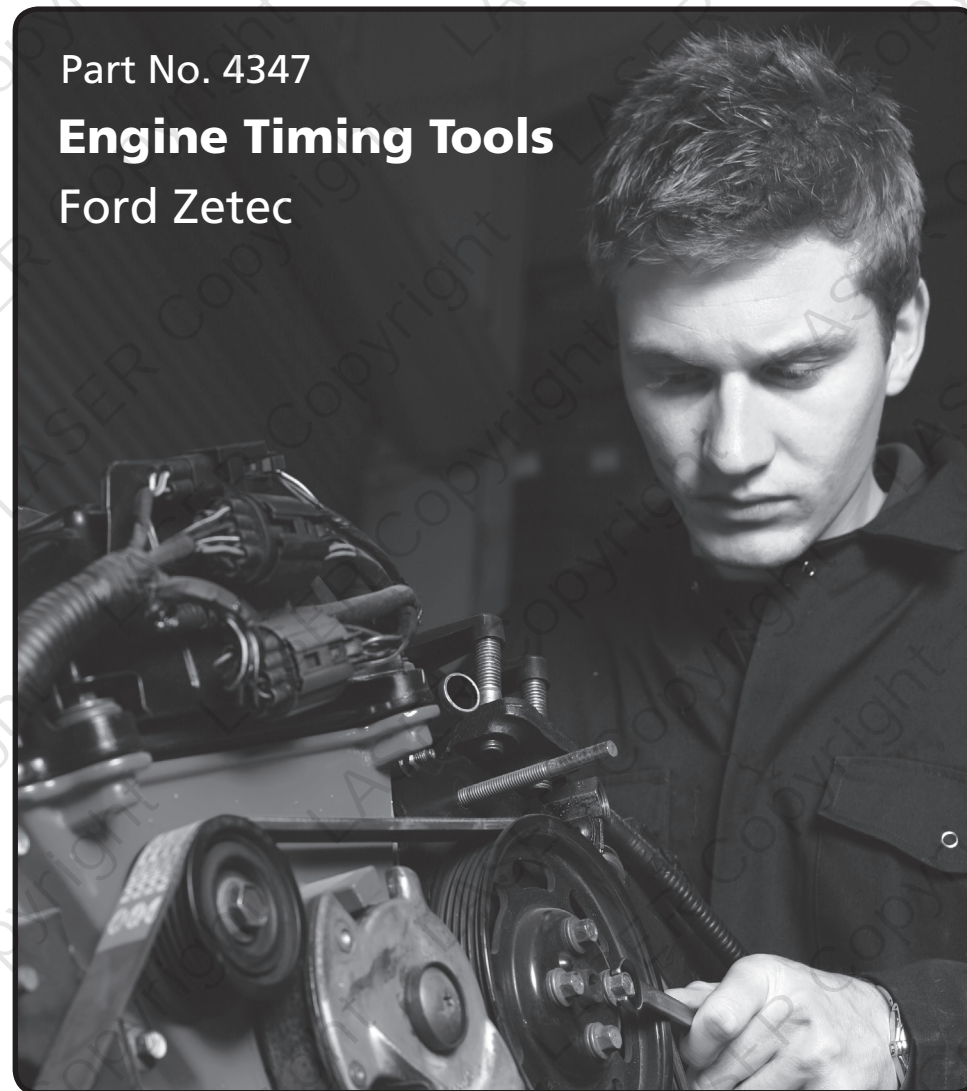
If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear and tear are excluded as are consumable items and abuse.

LASER®

Part No. 4347

Engine Timing Tools

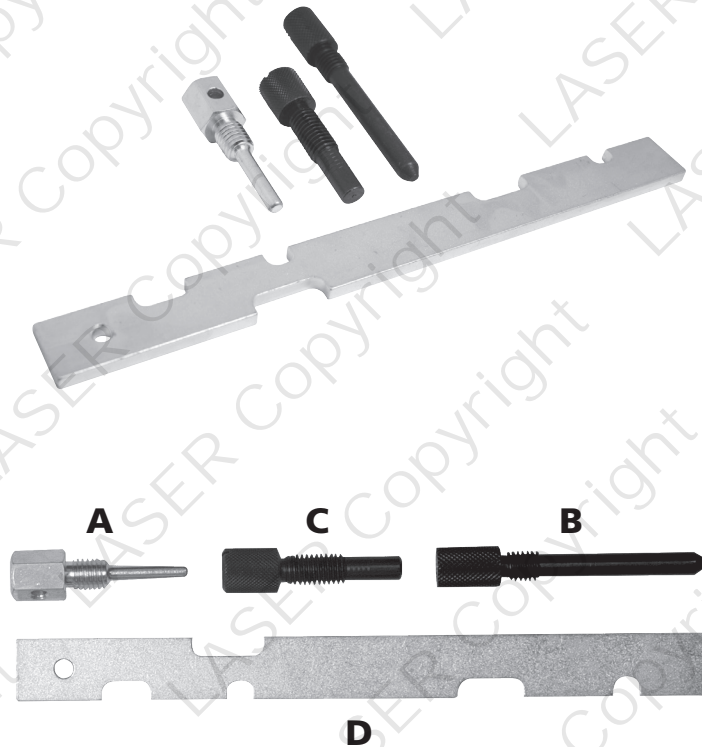
Ford Zetec



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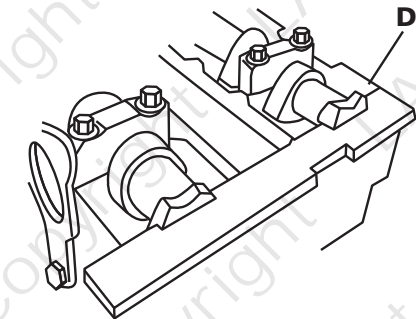
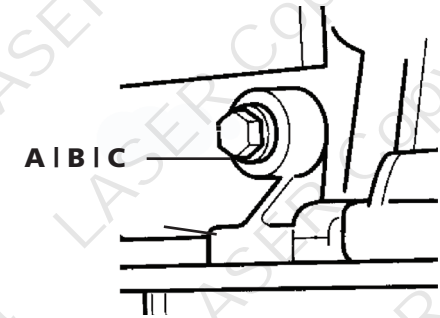
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Instruction (DE)



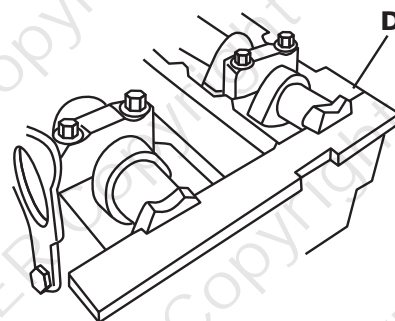
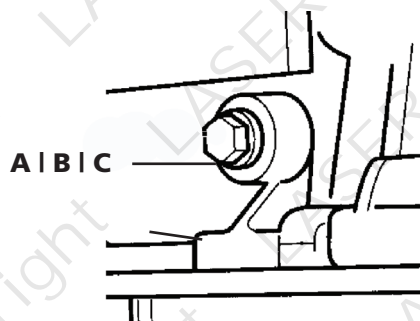
Ref	Code	Oem Ref.	Description
A	C035	21-210 303-507	Crankshaft Timing Pin
B	C036	21-163 303-574	Crankshaft Timing Pin
C	C311	21-259 303-748	Crankshaft Timing Tool
D	C312	21-162B 303-376 303-376B	Alignment Plate

- Scheiben zur Einstellung/Sicherung der Nockenwelle werden zur genauen Anpassung mit einer Bezugskerbe verwendet, die sich am Ende der Nockenwelle befindet, wobei die Oberseite des Nockenwellengehäuses die Nockenwelle in der Position des Oberen Totpunktes (OT) hält.
- Zum Entfernen des Nockenwellendeckels und des Zahnriemendeckels den Anweisungen aus dem Bedienungshandbuch folgen.
- Motor in der normalen Drehrichtung drehen, bis die Scheibe zur Einstellung/Sicherung der Nockenwelle in die bearbeitete Kerbe am Ende der Nockenwelle eingefügt werden kann.
- Der Kurbelwellen OT-Positionierungsstift ist so konstruiert, dass er in den Zylinderblock geschraubt wird und eine Blockierung für die Kurbelwelle ermöglicht, die zur Einstellung der OT-Position gegenpositioniert wird.
- Motor in normaler Drehrichtung drehen, bis die Einstellmarkierung auf dem Kettenrad der Einspritzpumpe mit dem Gussansatz auf dem Steuerungsdeckel auftaucht.
- Verschlussstopfen vom Zugangsloch des Zylinderblocks entfernen und OT-Positionierungsstift aufschrauben.
- Kurbelwelle langsam im Uhrzeigersinn drehen, bis die Rippe das Ende des Stiftes berührt. Zylinder Nummer 1 ist jetzt beim OT auf Arbeitstakt eingestellt.



Instruction (ES)

- Las placa de consigna/seguridad de eje de levas se utilizan para alinear bien una ranura punto de referencia, situada en un extremo del eje de levas, con la superficie superior de la caja de ejes de leva para sujetar el eje de levas en posición (TDC) de Centro Absoluto.
- Seguir las instrucciones en el manual de servicio para remover la cubierta del eje de levas y la cubierta de la correa de tiempos (dentada).
- Girar el motor en dirección normal hasta que pueda insertarse la placa de consigna/seguridad en la ranura mecanizada en el extremo del eje de levas.
- El Pin de Localización de (Centro Absoluto) está diseñado para enroscarse en el bloque de cilindros y ofrecer un tope para posicionarlo contra el cigüeñal para consignar la posición (Centro Absoluto).
- Girar el motor en la dirección normal hasta que la marca de tiempos (poner a punto) en el piñón de la bomba de inyección se alinee con al saliente moldeado en la cubierta de tiempos (poner a punto).
- Remover el tapón del agujero de acceso al bloque de cilindros y enroscar el pin de localización de TDC (Centro Absoluto).
- Girar lentamente el cigüeñal a la derecha hasta que la banda contacte el extremo del pin. Ahora el cilindro número 1 está en el (Centro Absoluto) de la carrera de ignición.



Applications

The application list for this product has been compiled cross referencing the OEM Tool Code with the Component Code.

In most cases the tools are specific to this type of engine and are necessary for Cam belt or chain maintenance.

If the engine has been identified as an interference engine valve to piston damage will occur if the engine is run with a broken Cam belt.

A compression check of all cylinders should be performed before removing the cylinder head.

Always consult a suitable work shop manual before attempting to change the Cam belt or Chain.

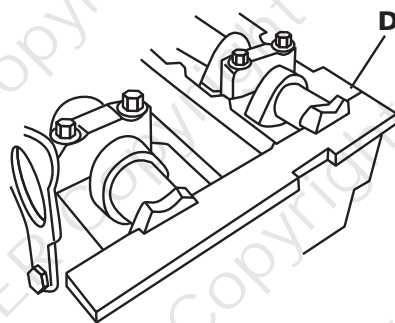
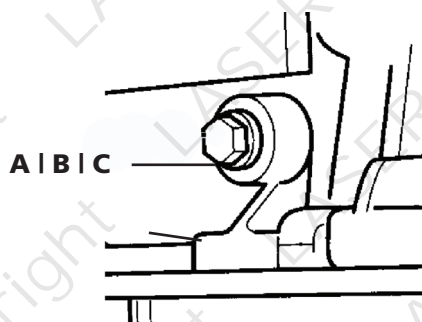
The use of these engine timing tools is purely down to the user's discretion and Tool Connection cannot be held responsible for any damage caused what so ever.

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

Manufacturer	Model	Style	Engine Code	Year
Ford	Cougar	2.0 16v	Zetec	1999
Escort	Orion	1.6 1.8 16v	RKC L1K L1H	1991-98
Fiesta	Puma	1.25 1.4	DHA DHB DHC DHD FHA FHE	1995-97
Fiesta	XR2i	1.25 1.4 1.6	DHA DHB DHC DHE DHF DHG HA FHE L1T L1V	1997-02
Fiesta	Fusion	1.25 1.4 1.6	FUJA FUJB FXJA FXJB FYJA FYJB F8JA F8JB M7JA M7JB	2002-07
Focus		1.4 1.6 1.8 2.0 16v		1998-00
Focus		1.8 TDi	Zetec	2002-03 1998-00
Focus		1.4 1.6	Zetec	2002-03
Focus		1.6 1.6 16v TI-VCT	FXDA/C FXDB/D FYDA/C FYDB/D DYDH	1998-05
Focus	CMax	1.6 1.8 2.0 16v	HWDA HWDB	2003-07
Mondeo		1.8 16V	L1F L1J RKA RKB NGA	1993-00
RS1800		1.7	RDB RQB RQC	1991-98
Puma		1.25	MHA	1997-2000
Mazda	121	1.7	DHA	1995-98

Instruction (GB)

1. Camshaft Setting / Locking Plate is used to accurately align a datum slot, located in the end of the camshafts. The various slots cut into the edge of the plate permit clearance around adjacent parts.
2. Follow the service manual instructions to remove the camshaft cover and timing belt cover.
3. Turn engine in the normal direction of rotation until the camshaft setting/locking plate can be inserted into the machined slot in the end of the camshaft.
4. Crankshaft TDC Location Pin is designed to screw into the cylinder block and provide a stop for the crankshaft to be positioned against to set the TDC position.
5. Turn the engine in the normal direction of rotation until the timing mark on the injection pump sprocket lines up with the cast lug on the timing cover.
6. Remove the plug from the cylinder block access hole and screw in the TDC location pin.
7. Slowly turn the crankshaft clockwise until the web makes contact with the end of the pin. Number 1 cylinder is



Instruction (FR)

1. Plaque de réglage /blocage d'arbre à cames sont utilisées pour aligner avec précision une encoche repère positionnée à l'extrémité de l'arbre à cames, avec la face supérieure du carter d'arbre à cames afin de tenir l'arbre à cames à la position du point mort haut (PMH).
2. Suivre les instructions du manuel d'entretien pour démonter le carter d'arbre à cames et le carter de la courroie de distribution.
3. Tourner le moteur dans le sens de rotation normal jusqu'à ce que la plaque de réglage /blocage d'arbre à cames puisse être insérée dans l'encoche usinée positionnée à l'extrémité de l'arbre à cames.
4. Broche de centrage de vilebrequin au PMH est conçue pour se visser dans le bloc-cylindres et procurer une butée contre laquelle le vilebrequin se positionne pour régler la position du PMH.
5. Tourner le moteur dans le sens de rotation normal jusqu'au point où le repère de calage de distribution du pignon de la pompe d'injection est aligné avec le repère de centrage moulé positionné sur le carter de distribution.
6. Démonter le bouchon du trou d'accès du bloc-cylindres et visser la broche de centrage au PMH.
7. Tourner lentement le vilebrequin dans le sens horaire jusqu'à ce que la toile touche l'extrémité de la broche. Le cylindre numéro 1 est alors réglé au PMH du temps d'allumage.

