



AST5240 Petrol (Chain) Engine Setting / Locking Tool Kit

Applications:

Engine codes:

B10XE (L5Q)	D10XFL (LE1)	B14XNT (LFE)
D10XE (L5Q)	D10XFT (LE1)	D14XNT (LFE)
B10XL (LWT)	B14XFL (LE2)	B15XHT (LFV)
B10XFL (LE1)	B14XFT (LE2)	D15XHL (LFV)
B10XFT (LE1)	D14XFL (LE2)	B14XE (LV7)
B10XHL (LE1)	D14XFT (LE2)	

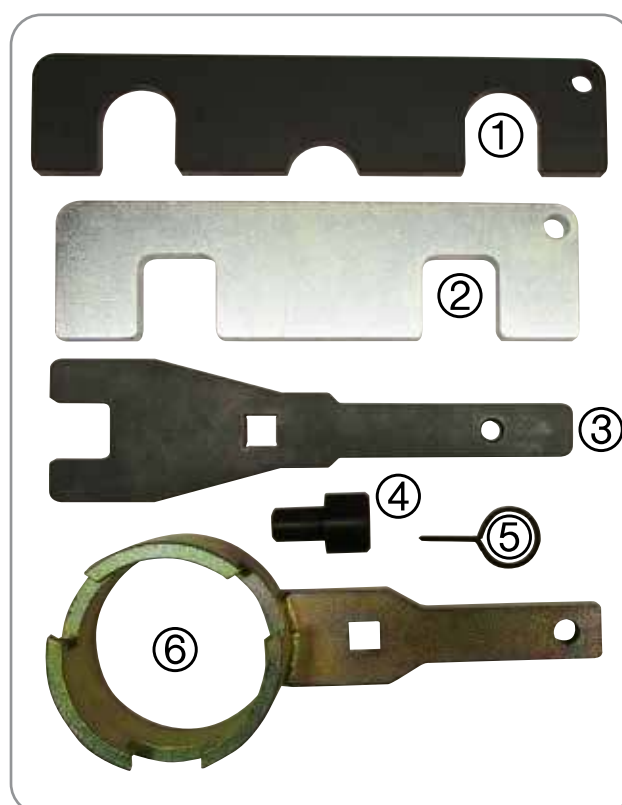
Models:

Adam	Corsa-E	Karl
Adam Rocks	Insignia-B	Mokka X
Astra K	Insignia-B Tourer	Viva

IMPORTANT: Always refer to the vehicle manufacturer's service instructions, or proprietary manual, to establish the current procedures and data. Product Information Sets detail applications and use of the tools with any general instructions provided as a guide only.

AST has a policy of continuous development & reserve the right to change product specification or appearance without prior notice.

Kit Contents / Spares:



Item	Part No.	Description	OE Ref.
1	AST5241	Camshaft Setting Tool (Turbo)	EN-51367
2	AST5242	Camshaft Setting Tool (N.A)	EN-51632
3	AST5243	Water Pump Balance Shaft Adjuster	EN-51298
4	AST5239	Crank Pulley Removal Adapter	EN-44226/5
5	AST4640T7	Tensioner Locking Pin	EN-49073
6	AST4768A	Crankshaft Pulley Hold Tool	EN-44226
-	AST5225-84	Case + Insert	-

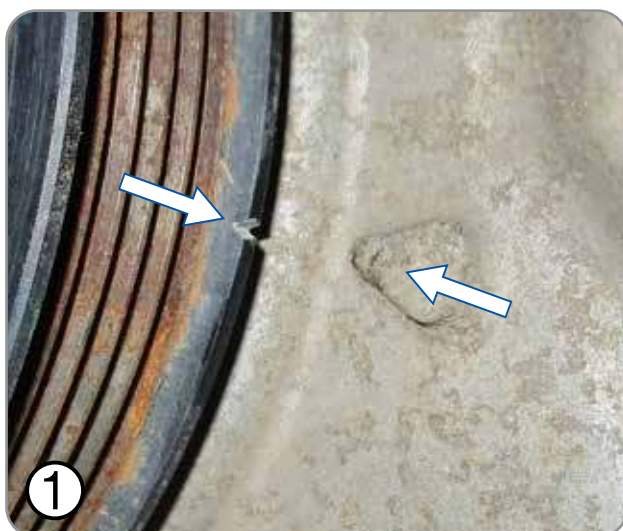
Introduction

AST5240 covers engine setting / timing chain removal and installation procedures on 1.0/1.4/1.5 Turbo and Naturally Aspirated Petrol engines fitted to Opel / Vauxhall applications.

Named the GM SGE (Small Gasoline Engine) family, it is manufactured as small-displacement three- and four-cylinder petrol engines ranging from 1.0L to 1.5L. It replaces the S-TEC and the earlier ecoTec and ecoFlex versions. It was first introduced in the Vauxhall / Opel Adam in 2014 and can now be found in multiple models.

The 1.0L in-line 3-cylinder, 1.4L in-line 4-cylinder and the 1.5L in-line 4-cylinder have two variants to include a Naturally Aspirated Indirect Injection, or a Direct Injection turbo.

Timing Check



Ensure engine at TDC on No.1 cylinder – the raised triangular shape on the casing must be in line with the 'V' notch on the crankshaft pulley.



Remove the crankshaft pulley retaining bolt and insert **AST5239 Crank Pulley Removal Adapter**



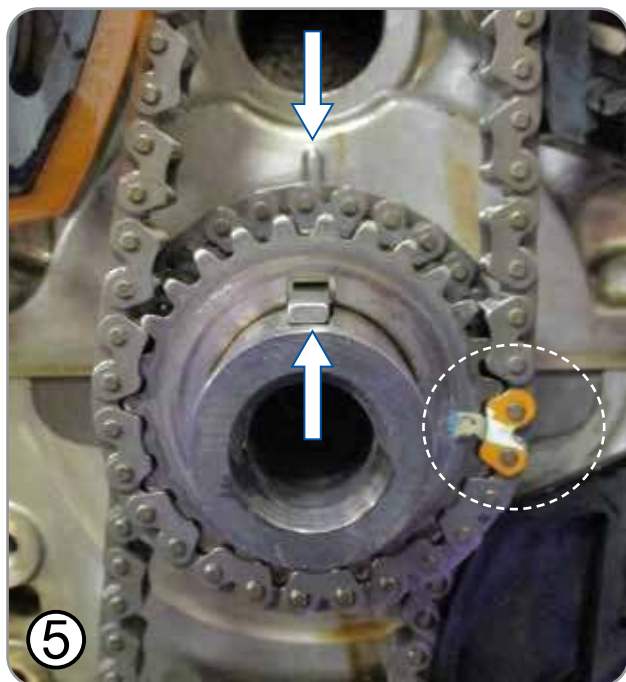
Ensure timing marks on each camshaft adjuster are aligned – the timing mark on each camshaft adjuster must be in line with the coloured chain links.



Remove the crankshaft pulley using an appropriate puller, for example **AST4969**.

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Once the crankshaft pulley and timing chain covers have been removed, ensure timing mark indent on crankshaft sprocket is aligned with the coloured chain link.

NOTE: The crankshaft key will also align with the vertical mark on the casing.



Reset the timing chain tensioner by pushing the plunger into the tensioner housing and lock into position with the timing chain tensioner locking pin. Remove and replace the timing chain guides and timing chain.



For Normally Aspirated engines, fit **AST5242 camshaft alignment tool** onto the hexagon shaped section of the camshafts. Ensure the tool is seated flat onto the cylinder head. For Turbo engines, fit **AST5241 camshaft alignment tool**.



Once the timing chain guides and timing chain have been installed, remove the timing chain tensioner locking pin.

Remove the camshaft alignment tool and rotate the engine clockwise two revolutions. Recheck the timing marks are aligned correctly and reinstall the camshaft locking tool to ensure correct valve timing.

NOTE: If the camshaft locking tool cannot be installed, the valve timing is incorrect. Perform the timing procedure from the beginning and recheck.