

BGA Product Offering

All BGA products meet or exceed OEM Quality specification.



DRIVE BELTS



CAMTRAIN



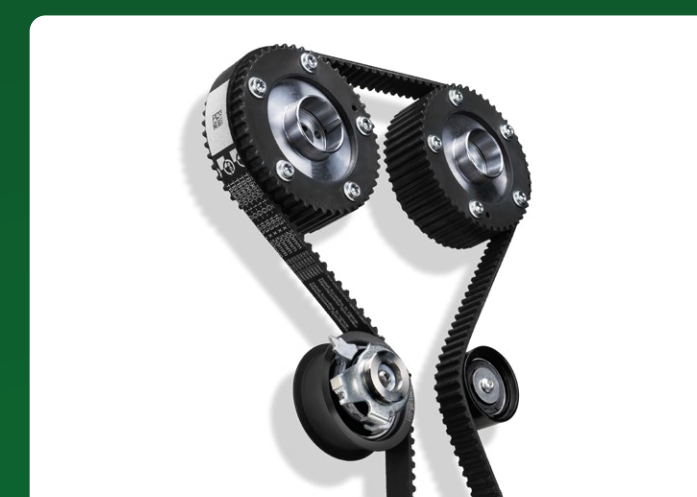
COOLING



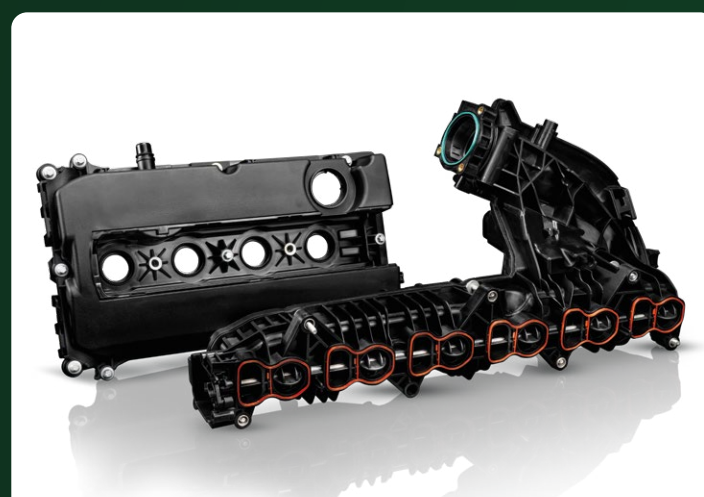
CRANKSHAFT PULLEY



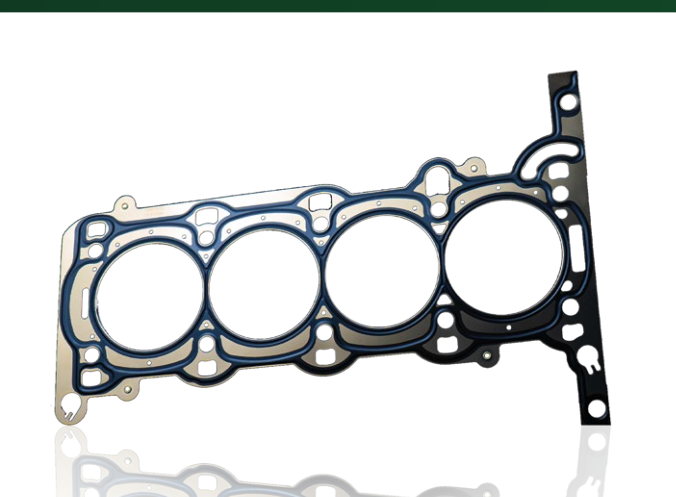
TIMING CHAIN KITS



TIMING BELT KITS



ENGINE VENTILATION



GASKET, BOLTS & SEALANT



LUBRICATION



OIL COOLER



TRANSMISSION

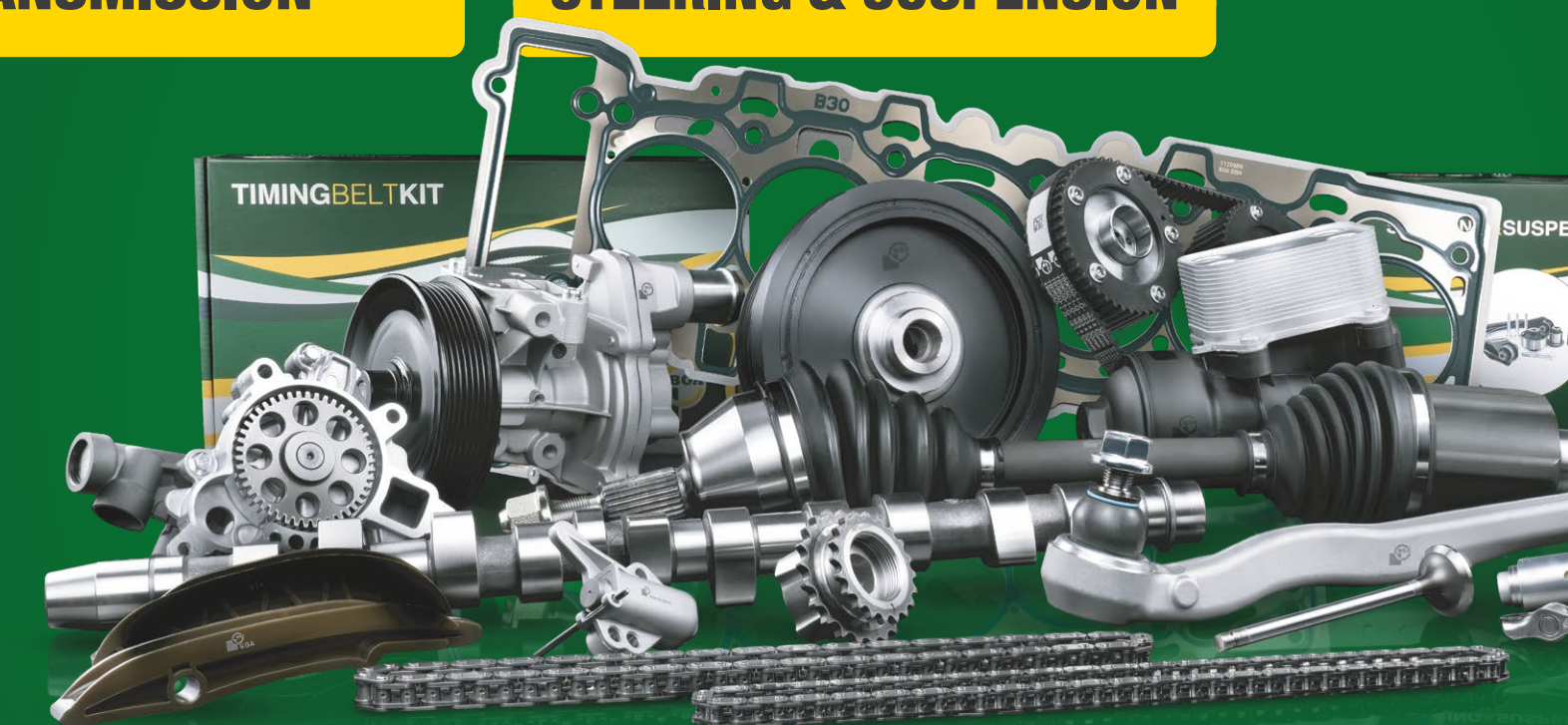


STEERING & SUSPENSION



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40,000 REFERENCES IN STOCK COVERING ALL MAKES.



The important bits!

BGA's OEM Group was founded in 1929.

TESTING & QUALITY CONTROL

BGA uses OE (Original Equipment) parameters and tolerances as the mandatory MINIMUM requirements to pass our quality controls.



QUALITY CERTIFICATES



Block Exemption



ISO 9001:2015



IATF 16949:2016



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BGA's OEM Group

- BGA is part of an OEM Group which collaborates with vehicle manufacturers to produce Original Equipment.
- BGA's Group is an OEM for some of the worlds largest automotive brands:



- BGA's OEM Group was **established in 1929**, manufacturing gaskets for the Ford Model T!



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BGA'S commitment to quality

Each BGA product follows the same process at BGA's Research and Development center in the United Kingdom, ensuring the BGA product matches the latest OE technology.



QUALITY CERTIFICATES:



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BLOCK EXEMPTION



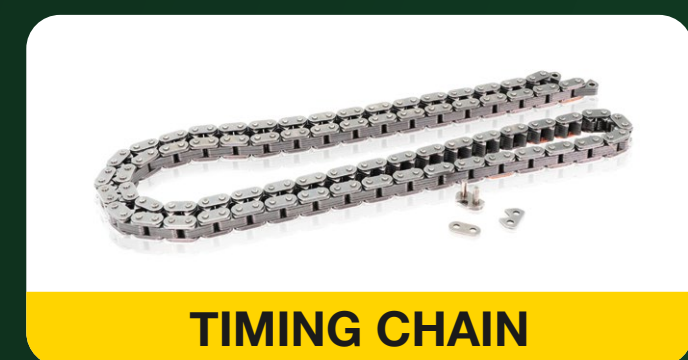
ISO9001:2015



IATF 16949:2016

Timing Chain Kits

A Timing Chain Kit includes the Chain, Sprockets, Tensioners, and Guides needed to synchronise the engines camshaft and crankshaft, ensuring valves open and close at the correct time for optimal engine performance and efficiency.



Full Kit vs Full Kit + VVT

TC0906FK

TC0906VFK

ADDITIONAL VVT SPROCKETS



VS.



It is critical mechanics are aware fitting a full timing chain kit ensures all components work harmoniously, reducing mismatched wear and potential failures.

BGA advises full kits to enhance reliability, prevent costly repairs, and ensure optimal engine performance, addressing issues not solved by replacing individual parts.



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What do the components do?

VVT Sprocket

The Variable Valve Timing (VVT) sprocket adjusts the timing of the camshaft in response to engine conditions. It optimizes performance, fuel efficiency, and emissions by varying the valve opening and closing times.

Tensioner

The tensioner maintains the correct tension in the timing chain. It prevents slack, reduces vibration, and minimizes wear by keeping the chain properly aligned and taut, ensuring consistent and accurate valve timing.

Timing Chain

The chain transmits mechanical power from the crankshaft to the camshaft, ensuring synchronized rotation. This synchronization is crucial for precise timing of the engine's intake and exhaust valves, enabling optimal engine performance.

Guides

Guides support and direct the timing chain, reducing friction and wear. They ensure the chain follows the correct path, preventing misalignment and maintaining consistent timing, which is essential for engine efficiency and longevity.

Sprocket

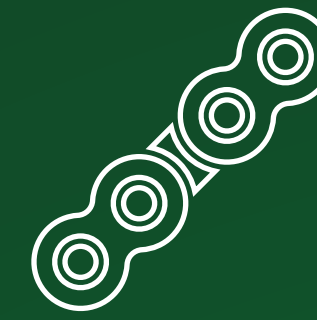
The sprocket is a toothed wheel that meshes with the timing chain. It connects to the camshaft or crankshaft, facilitating the transfer of rotational motion and ensuring the synchronized operation of engine components.



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Chain Manufacturing & Testing



Chains Manufactured by top-tier OEM.



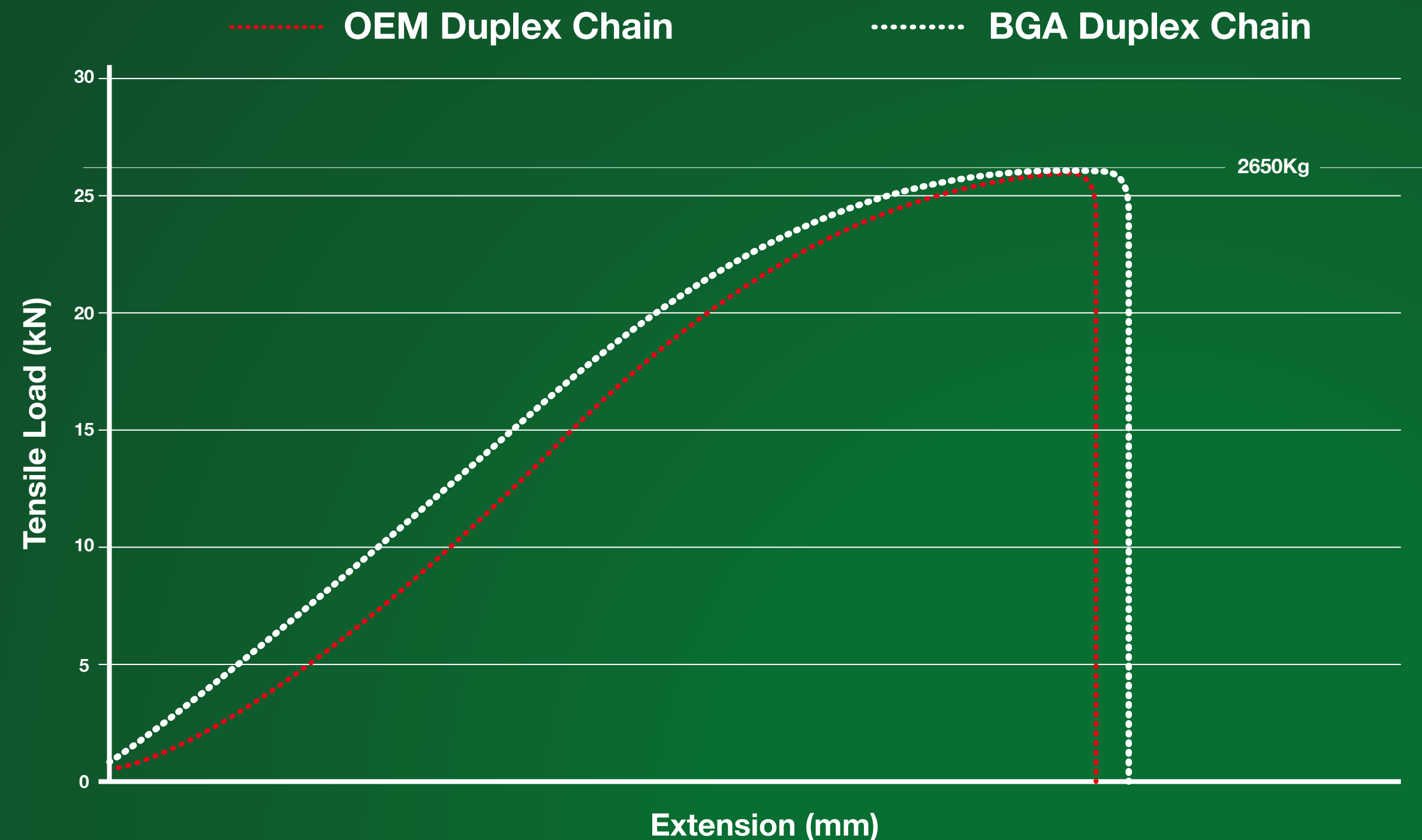
Made from premium 38CrMoAl and GCr15 Steel.

TESTING vs OEM:

BGA Timing Chains are subjected to control pulling force with a range of different parameters measured presented in a line graph.



BGA vs OEM Tensile Comparison Testing Simplex



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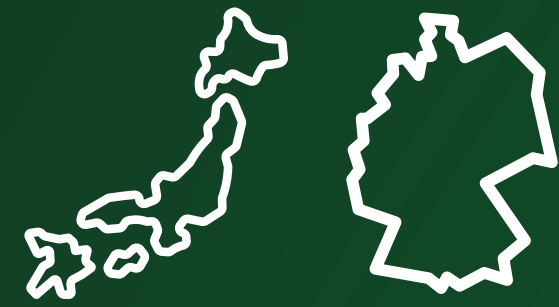
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The Real life example Graph above shows BGA's TC0900FK Chain outperforming OEM on Tensile load and extension.

Guide Manufacturing & Testing

OEM



BGA's Group has been Injection Moulding OEM products since 1929.

Raw materials imported from Japan and Germany.

Testing:

- Spectral analysis equipment utilised from OE division to analyse guides.
- CMM machines used to evaluate guide sizing guaranting 100% accuracy fitment.



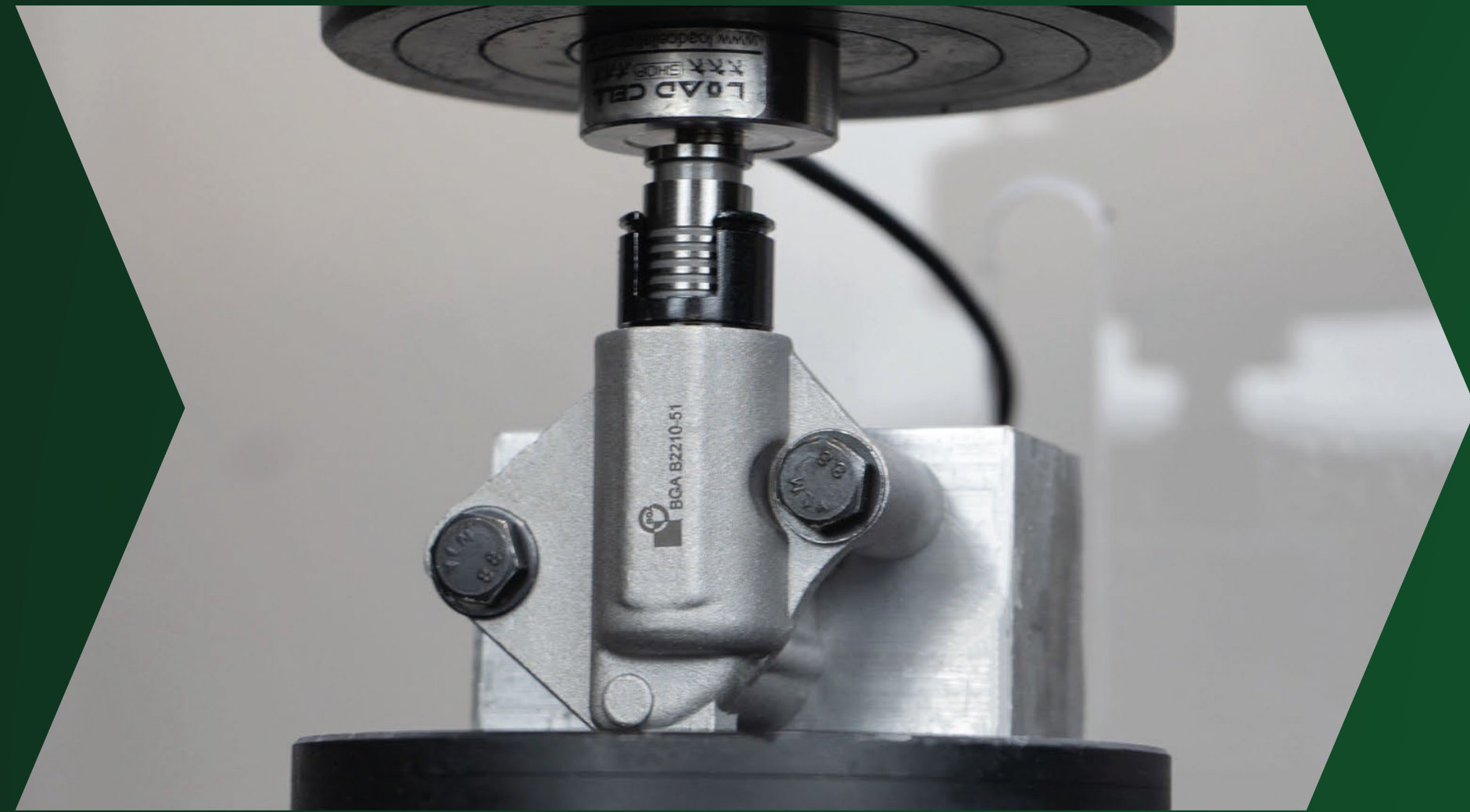
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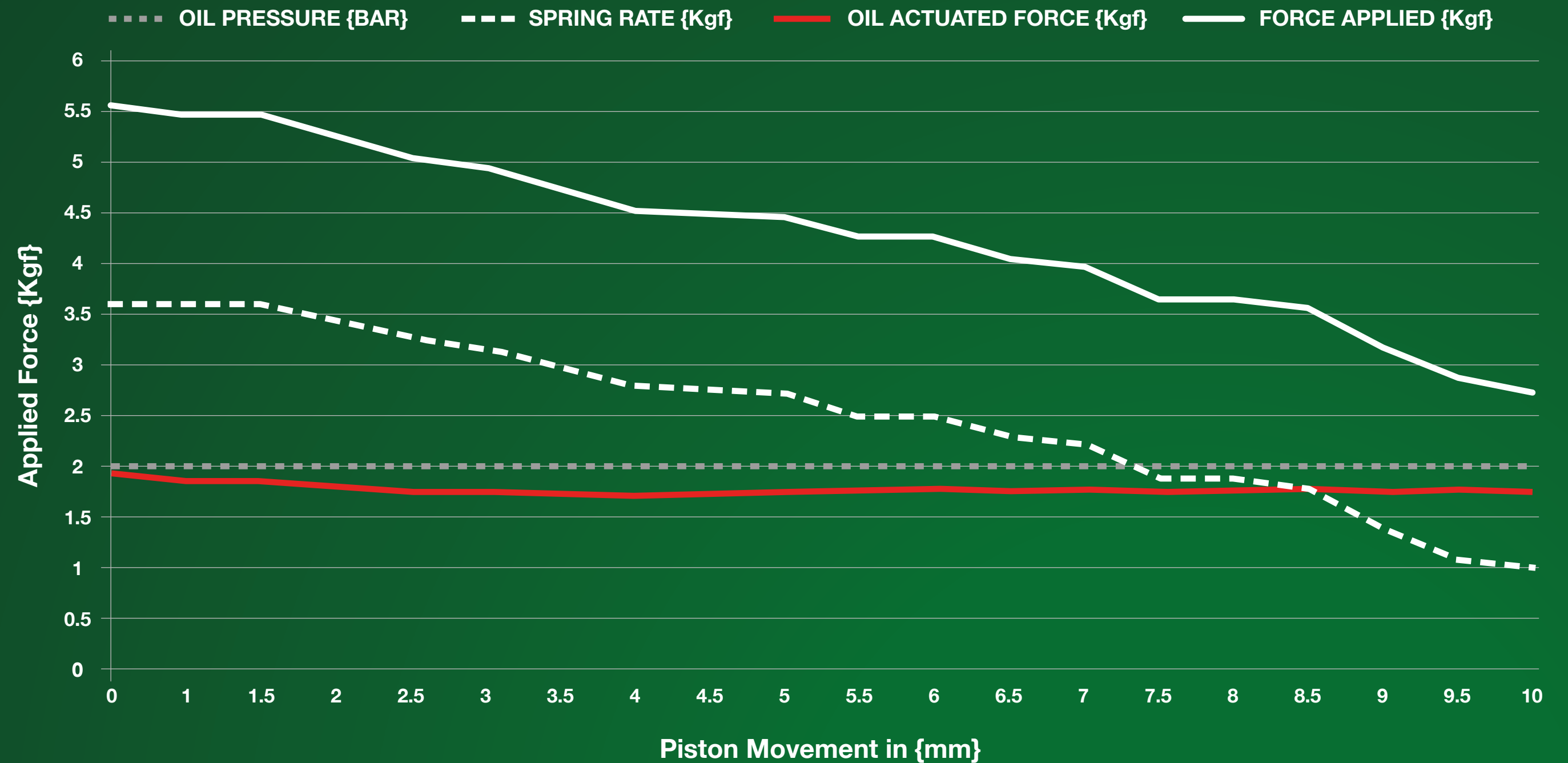
Tensioner Manufacturing & Testing

HYDRAULIC TENSIONER PERFORMANCE TEST:

The tests on BGA's Timing Chain Kit tensioners ensures optimal functionality, durability, and reliability, meeting the highest industry standards for engine performance and longevity. All tests are carried out vs. OEM, to ensure quality is met or surpassed.



Hydraulic Tensioner Performance Test



The test & graph above ensure proper functioning, durability, and compliance with specifications. It verifies load management, temperature response, and noise reduction, detects manufacturing defects, and validates design improvements. This testing guarantees reliability, safety, and consistency, preventing engine failures and enhancing overall engine performance and longevity.



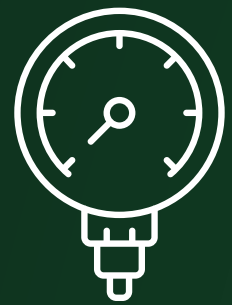
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VVT Manufacturing & Testing

VVT FUNCTION TESTING TO MATCH OR SURPASS OE

The VVT is mounted on a bespoke fixture which enables real world evaluation of torque performance, critical to its operation within the engine's valve train.



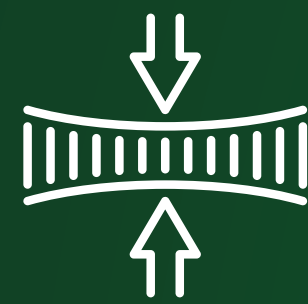
Leak/Pressure



Endurance/Life Cycle



Surface Finish



Hardness



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BGA Chainshield Technology

**CHAIN
SHIELD
TECHNOLOGY**



“The latest technological advancements in Timing Chains. All chains are pre-lubricated with a specially formulated chain lubricant.”

Why is this important?

- Protects the chain against external elements, up to, and during the installation.
- Aids in the lubrication of the chain on the initial start-up after installation, prior to the full engine oil supply reaching your newly fitted components.
- Reduces the risk of premature wear from a non lubricated chain.



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The most complete kits in the market.

Mechanics understand the importance of replacing all components when replacing a Timing Chain. BGA offer the most complete kits in the aftermarket, containing all components necessary to carry out a full repair.

#	OE Numbers	Description
1	03C109158A	Timing Chain
2	03C109509P	Tensioner Guide
3	03C109469K	Guide
4	03C109571F	Camshaft Sprocket
5	03C105209AQ	Crankshaft Sprocket 18t/18t
6	03C105209AG	Crankshaft Sprocket 18t/23t
7	03C109507AH	Tensioner
8	038103085E	Oil Seal
9	03C109088E	VVT Sprocket
10	N91197001	VVT Bolt
11	03E109511	Guide Bolts
12	N91097201	Tensioner Bolts
13	03C103825A	Sleeve
14	N90256202	Cam Sprocket Bolt
15	03C109287F/G/H	Timing Cover Gasket
16	N91048601	Crank Bolt
17	03C109293A	Cover Seal



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Timing Chain Kit Identification

OE DATA UNCLEAR?

TC6504FK/TC9505FK Example. Both Chain Kits are listed for the same applications.

The easiest way to identify the correct kit is by looking at the chain links clearly identified by BGA.

TC6504FK



TC9505FK



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Timing Chain Kit Identification

TWO CHAIN KITS LISTED FOR THE SAME APPLICATIONS.

TC0380FK/TC0381FK Example. Both Chain Kits are listed for the same applications.

What's the difference?

Euro 5 / Euro 6 emissions.

TC0380FK



TC0381FK



Autocat V9.1 (BGAW)

Always Identify The Vehicle

AK59WSN

Vauxhall

Agila

1.2

2009

Agila 1.3 CDTi 75 (2008-2014)

AGILA CLUB CDTI

16V

Diesel

1248 cc

Z13DTJ(LDV)

Mod/S=MK2 B H08

Transmission

Manual

Engine No

1164734

VIN

W0LFXB52S9M281670

Year of Manufacture

2009

Door Plan

Hatch (5 Doors)

Date First Registered

28/09/2009

Colour

Silver

Number of Gears

5

BHP/KW

73/54

Co2 Emission

120,E4

Product Group Selection: Belt/Chain

Suppliers

BGA Group (4)

Position

[View More >>](#) [Clear](#)

Model Details	Years	Description	Part Number	Supplier	Pos	FT	Body	CC	Cyl	Cam	Valve
Agila 1.3 CDTi 75 (2008-2014)	03/08-03/11	Drive Belt	6PK1180	BGA Group			Dsl	Hatch	1248	4	DOHC 16
Agila 1.3 CDTi 75 (2008-2014)	03/08-03/11	Drive Belt	6PK1318	BGA Group			Dsl	Hatch	1248	4	DOHC 16
Agila 1.3 CDTi 75 (2008-2014)	03/08-03/11	Timing Chain Kit	TC0380FK	BGA Group			Dsl	Hatch	1248	4	DOHC 16
Agila 1.3 CDTi 75 (2008-2014)	03/08-03/11	Timing Chain Kit	TC0381FK	BGA Group			Dsl	Hatch	1248	4	DOHC 16

Description	Timing Chain Kit	Engine Code	Z13DTJ
BHP	74	Part Note	With Sprockets
Part Note 5	For Engines Up To And Including Euro 5		



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Timing Chain Kit Identification

TC0235FK/TC0238FK Engine Break

'Up to', and 'From' Engine breaks on shared applications.

Engine Break on this example is 19TR2328, highlighted here.

Summary:

Timing Chain Kits can be different by the following

- Engine Breaks
- Emission Levels

Different Timing Chain Kits can contain components that are also in other kits. Taking one OE number and cross referencing can lead to incorrect Kits being ordered.

The screenshot shows the Autocat V9.1 (BGAW) software interface. The left sidebar contains vehicle details for a Corsa D 1.4 (2006-2011) with engine number 19KW3889 and CO2 emission of 149 E4. The main area displays a 'Product Group Selection' of 'Belt/Chain' and a table of parts. A red box highlights the 'Part Note 2' for the timing chain kit, which specifies 'To Engine Number: 19TR2328'. A red arrow points from the text 'Engine Break on this example is 19TR2328, highlighted here.' to this part note.

Model Details	Years	Description	Part Number	Supplier	Pos	FT	Body	CC	Cyl	Cam	Valve
Corsa D 1.4 (2006-2011)	07/06-05/10	Drive Belt Kit	DB9504K	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Drive Belt Kit	DB9505K	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Drive Belt	5PK1230	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Drive Belt	5PK1355	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Drive Belt	5PK1370	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Timing Chain Kit	TC0235FK	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Timing Chain Kit	TC0235K	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Timing Chain Kit	TC0238FK	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa D 1.4 (2006-2011)	07/06-05/10	Timing Chain Kit	TC0238K	BGA Group		Pet	Hatch	1364	4	DOHC	16
Corsa C 1.4 (2003-2007)	10/03-04/07	Timing Belt Kit	TB9500CPK	BGA Group		Pet	Hatch	1389	4	DOHC	16
Corsa C 1.4 (2003-2007)	10/03-04/07	Timing Belt Kit	TB9500K	BGA Group		Pet	Hatch	1389	4	DOHC	16

Description	Engine Code
Timing Chain Kit	Z14XEP
BHP 90	With Sprockets
Part Note 2	To Engine Number: 19TR2328



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Guaranteed OEM Quality with an industry leading
36 Month Warranty.**

