



TIMING CHAIN UPGRADE

SUPERIOR QUALITY | 3-YEAR WARRANTY

WHAT MAKES IT BETTER?

- ✓ Aluminium Nitride + 5th Gen Vanadium Coating
- ✓ Improved Wear & Corrosion Resistance
- ✓ Up to an additional +30% Coating Thickness
- ✓ Reduced Surface Roughness (-30%)
- ✓ Stronger acid/oil resistance under real world conditions

Compared to OE suppliers, Motive's heat-treated chains offer longer life cycles, better performance in harsh conditions, and consistent durability.

HEAT TREATMENT TECHNOLOGIES

ALUMINIUM NITRIDING (AIN)

- Creates AIN layer on chain pin surface
- Enhances hardness & corrosion resistance
- Replaces outdated carbonitriding process

VANADIUM CARBIDE (VC, 5th GEN)

- Forms a protective carbide layer
- Prevents acid/corrosion damage
- Fewer surface inclusions, better fatigue resistance

✓ BUSHING CHAIN



✓ ROLLER CHAIN



✓ SILENT CHAIN

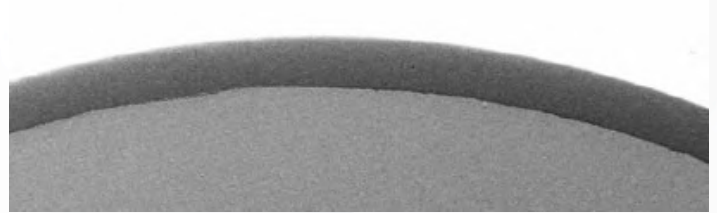


MICROSCOPIC VIEW

4th GEN VANADIUM (OLD)



5th GEN VANADIUM (NEW)



KEY TEST COMPARISONS (MOTIVE VS OE)

Test Item	Motive Result	OE Result	Final
Surface Hardness	~2190 HV0.2	~2170 HV0.2	Better
Coating Thickness	15.3µm	14.3µm	Better
Surface Roughness (Rz)	~0.13	~0.24	Smoother
Tensile Strength (kN)	12.3 / 10.4 / 9.3	Matches OE	Equal
Wear Resistance (Oil)	Less Elongation	Slightly More	Better
Fatigue Resistance	0.2% elongation @400h	0.2% @400h	Equal

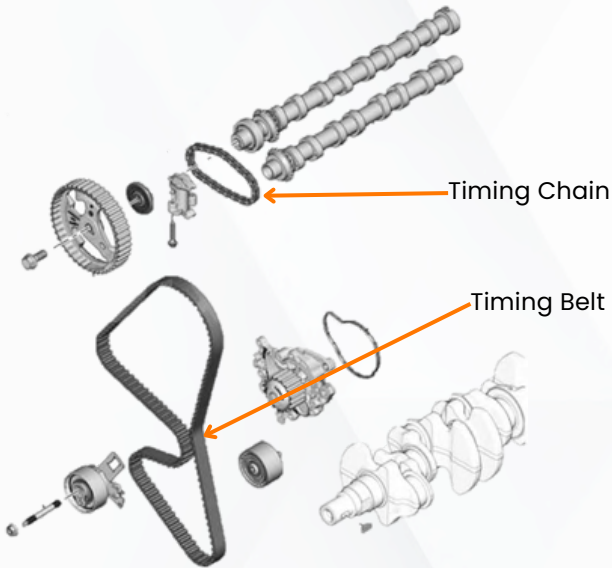
All critical specs meet or exceed OE standards across multiple chain types and environments.

REAL-WORLD CONDITIONS

- Oil Dilution Test: Better resistance with 0W20 + contaminants**
- Acidification Test: VC layer retains anti-corrosion performance**
- Rotational Fatigue Test: No breakage, consistent elongation**

7MM TO 8MM UPGRADE FOR PSA DV5 1.5L BLUEHDI ENGINE

DISTRIBUTION CHAIN ISSUES



The issue in the distribution chain comes from a **cylinder head unconformity**, which may cause a serious mechanical fault.

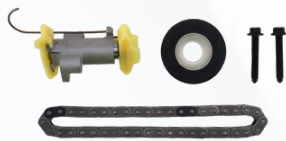
The effects include **stretch and, in the worst scenario, failure of the chain** linking the camshafts, well before the expected life cycle of 150,000 km. Two **symptoms** related to the chain:

- Excessive chatter noise suggests the wear of the chain.
- The engine turns off due to the chain.

SOLUTIONS



7mm pitch chain
TCK335



8mm pitch chain
TCK366



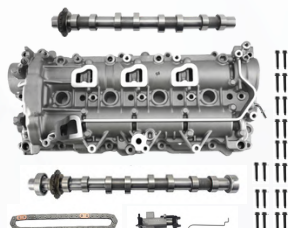
7mm adapted camshaft
T4460 & T4461



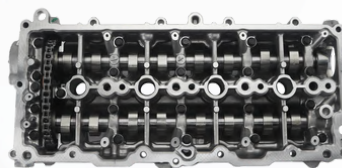
8mm adapted camshaft
T4468 & T4467



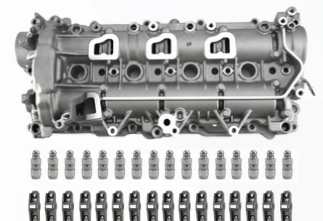
Cam Carrier
CAMC13



Cam Carrier Kit
CAMC13PK



Cam Carrier Assembled Kit
CAMC13ASB



Cam Carrier Full Kit
CAMC13FK

In an **official note**, PSA group announced that from January 2023, they introduced a more robust 8mm chain to be implemented on this powertrain, replacing the previous faulty 7mm chain.

This update prevents the chain breakage and, therefore, the damage to camshafts and sprockets as well as the risk of engine failure.

The chain upgrade also implies a modification of both the camshafts and the rocker cover.

Motive's solution includes the supply of the 8mm chain as well as the adapted components to its partners, as requested by the market.

WHY UPGRADE TO 8MM?

CONS (7MM)	PROS (8MM)
Due to a smaller chain, tensioners and guides wear out faster, requiring more frequent adjustments during installation.	Larger, optimised chain and guides provide a better fit and stability, reducing the need for adjustments during installation.
Weaker tension design, prone to loosening and timing jumps.	Stronger tensioner design maintains proper tension, preventing loosening and timing jumps.
Chain slack during cold starts causes timing misalignment.	Stable cold-start performance, with improved tension and chain design reducing misalignment and noise.
Faster wear rate, resulting in a shorter lifespan.	Greater wear resistance results in a longer lifespan and fewer replacements.
Thinner chain with more links, weaker strength, and prone to elongation.	Thicker, wider chain increases strength, load capacity, and resists elongation.

**LONGER
LIFESPAN AND
WORRY-FREE
RELIABILITY**

3-YEAR WARRANTY

Choose durability and stability that lasts:

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