

A detailed close-up photograph of an engine's timing mechanism. The image shows a metal timing chain with its links and pins, meshing with several cast-iron gears of different sizes. The gears have various shapes, including one with a star-like pattern. The lighting is dramatic, highlighting the metallic textures and the precision of the components. The background is a blurred view of the engine's internal parts.

**MAGNETI  
MARELLI**

PARTS & SERVICES

# TIMING CHAIN KIT





# PERFECT SYNCHRONICITY

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The timing chain plays a fundamental role in ensuring that the vehicle performs correctly, as it guarantees the synchronisation of various parts of the engine.

It is essential, as it transmits the movement from the drive shaft to the cam shaft, causing it to rotate. Lubricated with engine oil, the chain ensures that these parts are synchronised.

The number of vehicles in operation fitted with timing chains continues to increase, and this in turn leads to an increased demand for parts for repairs. Therefore **Magneti Marelli Parts & Services** offers a complete range of kits for the correct replacement of the timing chain.





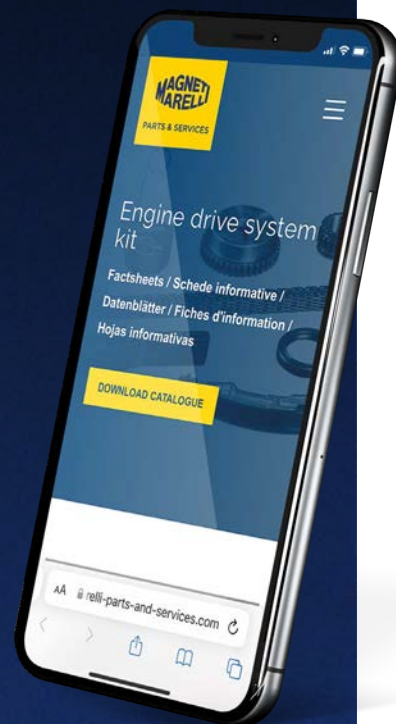


# THE ADVANTAGES OFFERED BY OUR RANGE



**TECHNICAL BULLETINS:**  
for easier access to fitting  
instructions/additional information.

Read/download them with your  
smartphone/tablet using the **QR CODE**  
in the boxes from the **Magneti Marelli  
Parts & Services Chain Kit** range.

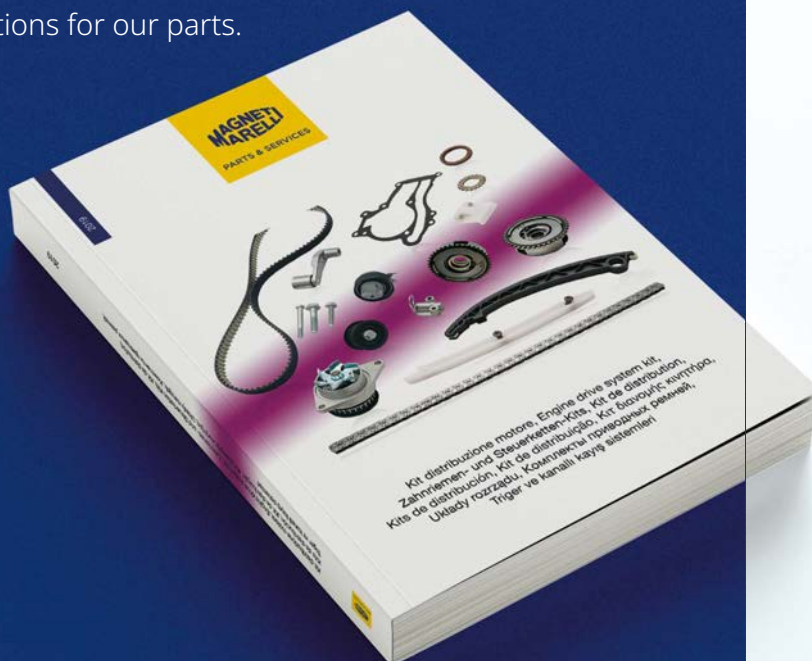


## THE CATALOGUE

Available in printed or PDF form from the website  
[www.magnetimarelli-parts-and-services.com](http://www.magnetimarelli-parts-and-services.com).



Visit our online catalogue and **WebCat**  
for technical information, cross references  
and a list of applications for our parts.





# OUR RANGE

**160 items** with new parts added regularly.

Some kits are available in two formats:

- **“base”**, a more economical version (the part number ends in “0”);
- **“extended”**, with more components (the part number ends with “2”).

**Both kits contain the essential parts for proper maintenance.**

**Excellent coverage** of vehicles in operation fitted with timing chains.

Kits for both **European** and **Asian vehicles**.

**Specific packaging** to protect fragile components (e.g. gaskets, shaft seals).



## THE FEATURES OF OUR CHAIN

- **Carbon-nitriding** of the **chain links** to increase surface hardness and resistance to stress/wear;
- **ChroVan Pin**: the surfaces of the **pins** are treated with a chrome vanadium alloy to increase surface hardness and resistance to stress/wear.

**Variable valve timing (VVT) starter gear**



**Timing chain**

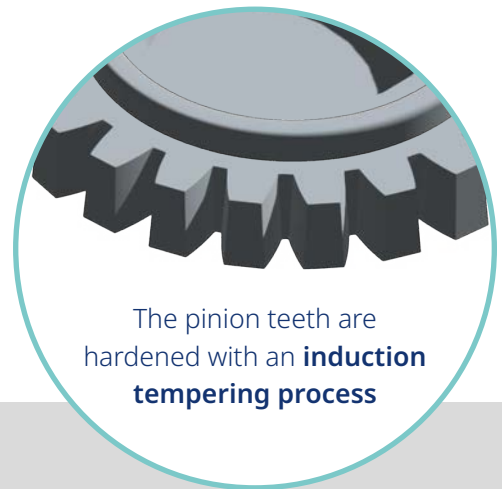
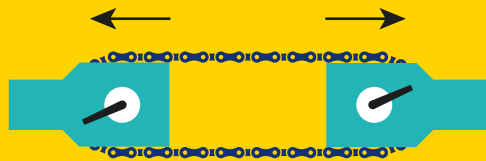




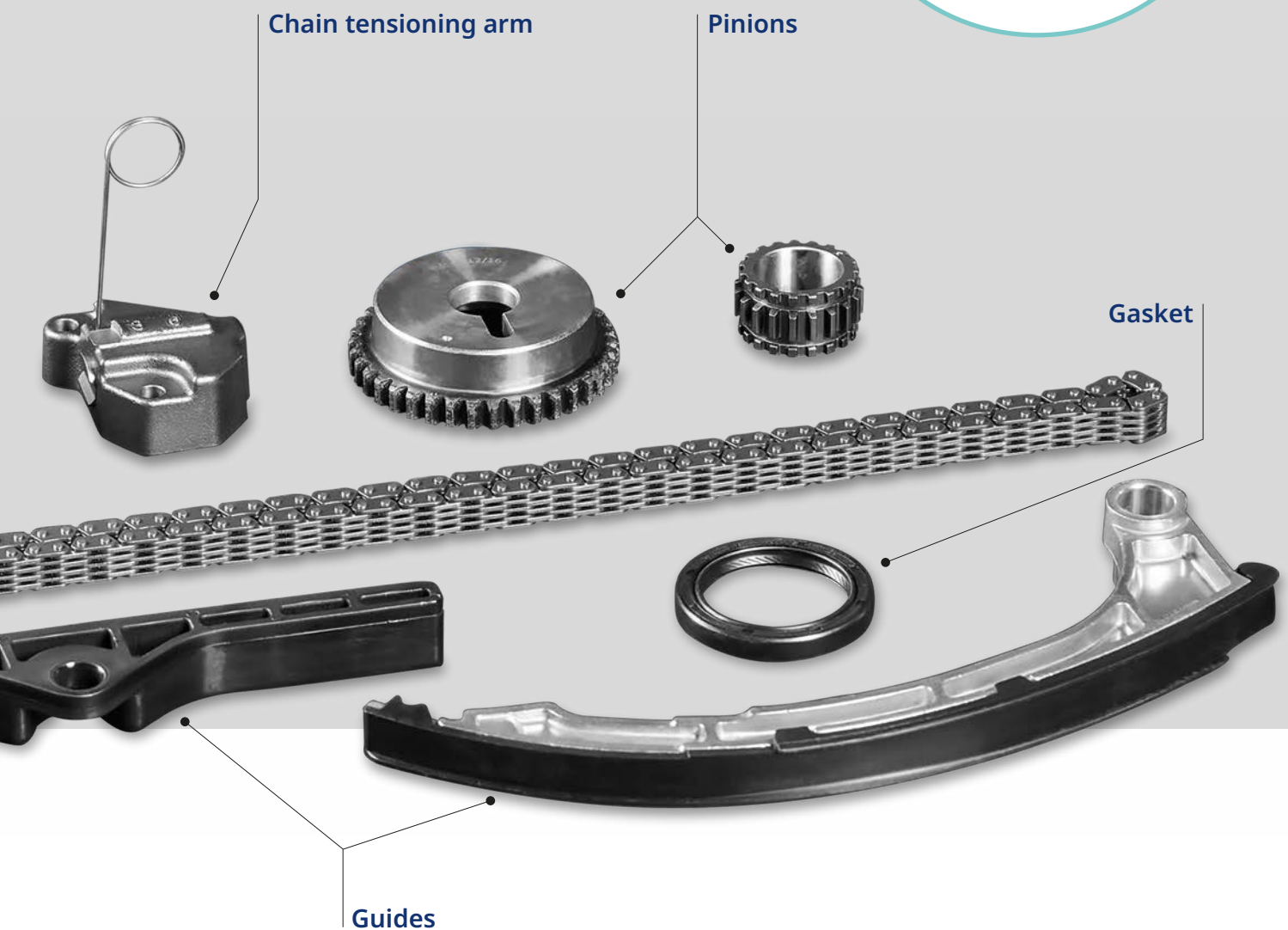
## TESTS AND CHECKS

Quality components **subjected to numerous tests and checks** (breaking test, micro-hardness test):

- **Resistance test:** these last for up to 800 hours and simulate component use for 180,000 km.
- **Super breaking test** to assess the chain's breaking point.



The pinion teeth are hardened with an **induction tempering process**





# NOISE: POSSIBLE CAUSES

Some noise can be caused by an excessive lengthening of the timing chain. **Pay attention to these signs** during the different stages of engine function:

①

## COLD STARTING

When starting the engine, a metallic sound from the distribution housing may be caused by the tensioning arm having reached its full extent, allowing the lengthened chain to collide with the guides.

②

## RUNNING AT LOW REVS

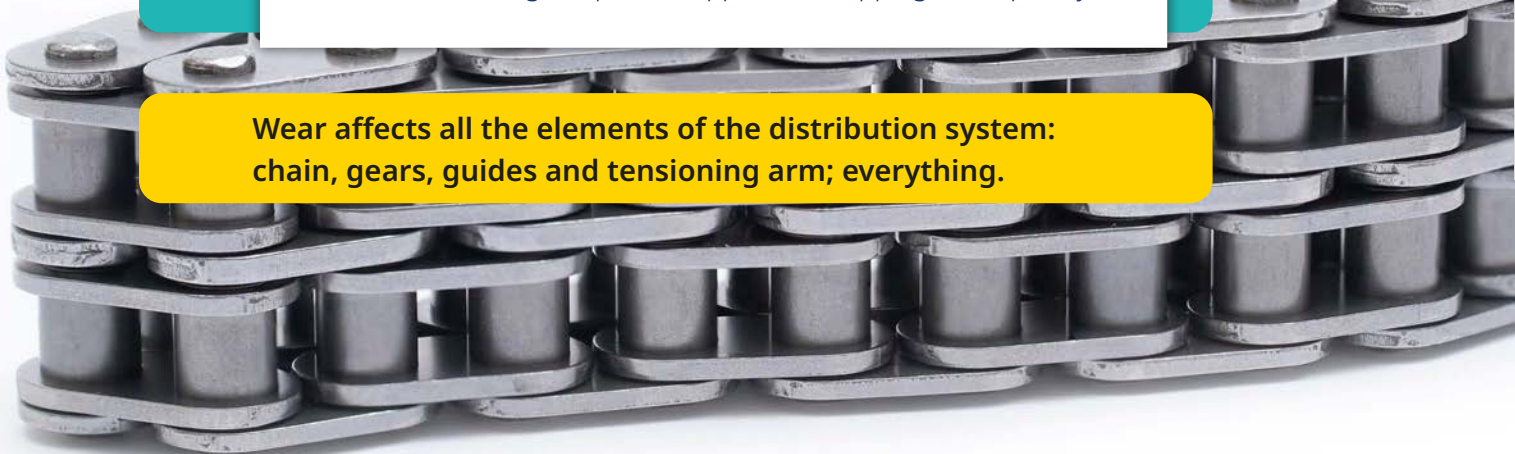
A particular noise can be heard from the distribution housing. The noise may be caused by a lengthened chain colliding with the guides.

③

## RUNNING AT LOW AND VARIABLE REVS

In engines equipped with VT gears, a lengthened chain will cause a variation in timing. The electronic control unit will detect the fault, report it and put the engine into protection mode, reducing the power supplied or stopping it completely.

**Wear affects all the elements of the distribution system: chain, gears, guides and tensioning arm; everything.**







# COMMON PROBLEMS AND CAUSES

With a long lifespan that extends the entire life cycle of the vehicle to which it is fitted, the timing chain is used for its reliability and durability.

However, there are a number of factors that may lead to premature wear of the timing chain, leading to the need for replacement:



## MAINTENANCE

**Scheduled maintenance not respected**



## OIL

Failure to change engine oil/**use of incorrect engine oil**



## DRIVING

**Driving style:** sudden acceleration, cold starts, high speeds...



## ENGINE

**Problems related to engine design**

When replacing the timing chain, it is recommended that **ALL TRANSMISSION COMPONENTS ARE ALSO REPLACED** to avoid the risk of successive failure causing damage to the engine.

The Magneti Marelli Parts & Services chain kits include **ALL THE NECESSARY COMPONENTS** for professional repair (screws, shaft seals, gaskets...).



Scan and watch



[magnetimarelli-parts-and-services.com](https://magnetimarelli-parts-and-services.com)



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