

[b]2) Timing Chain Tensioners Issue

Description/Bad News[/b]

Although probably a low percentage overall, many owners of the XJ8 8 cylinder engines have reported problems with the timing chain tensioners. XJR8s are also susceptible but possibly to a lesser degree because they use a simpler timing mechanism.

The tensioner's job is to keep the timing chain tight. If a tensioner fails, the timing chain becomes loose and the chain can jump one or more teeth on the cogs in the engine. Apparently one jumped tooth results in rough running. Two jumped teeth and the engine can destroy itself.

[b]Good News and Information[/b]

The good news is that a) not all engines are affected, b) the problem can be prevented in advance although at significant cost, and c) Jaguar acknowledge the problem (sort of) and have revised their tensioner design twice during the production run.

The problem is mainly confined to cars from 1997, 1998, and 1999. Cars from this era had the original specification tensioners. These first generation tensioners are made of plastic. During regular use the plastic weakens until eventually it cracks and in some cases disintegrates. When this happens the tensioner loses its compression and the pressure on the timing chain is reduced or lost making a jumped tooth more likely....bad news although it is not an automatic disaster.

The problem generally shows itself at approximately 60000 miles (100,000km) and upwards.

Jaguar issued a Technical Service Bulletin (TSB) that addresses the issue.
The TSB number is 303-30.

Here is the text.

<<start of Jaguar text>>

Engine - Rattle Noise on Start Up 303-30

DATE 12/98

V8 XJ Series/XK8

MODEL

1997-99 MY XK8 Range

1998-99 MY V8 XJ Series

VIN

Refer to engine no. in text

Noise During Start Up - Install Revised Timing Chain Tensioners

Issue:

Some vehicles within the above VIN range may experience a rattling noise when the engine is started. This noise may be caused by the secondary timing chain tensioners. Research has shown that a noise can originate at the chain tensioners to cause a resonance in another part of the engine.

A revised, spring assisted, secondary timing chain tensioner has been introduced to eliminate this concern, commencing at engine No. 98102106XX. Introductory VINs are not yet available. In case of a customer complaint, In case of a customer complaint of start up noise, determine if the noise is caused by the secondary timing chain tensioners. If the secondary timing chain tensioners are the cause of the noise, they should be replaced by the revised tensioner.

<end of Jaguar text>>

My 1998 XJ8 3.2 had this rattle. The best way to hear the rattle is to open the bonnet, and get someone else to experience) there are a few seconds where the chain doesn't quite catch on the teeth and it is dragged loosely along so that the tensioners have lost all their pressure.

To me the rattle is similar to the sound a bicycle chain makes when it runs loose through its chain guard. Imagine that you turn your bicycle upside down to put the chain on and you turn the pedals by hand. Usually (in my experience) there are a few seconds where the chain doesn't quite catch on the teeth and it is dragged loosely along the inside (upside down) chain guard. Imagine that sound heavier and faster and you have the engine rattle. If you don't quite follow (or you have never had a chain guard) just imagine a heavy metal chain being pulled quickly along some thick plastic. That's the kind of sound and it is very audible. Trust me, you will know it if you have it. The sound will last for a few seconds. In my case it was two- three seconds and other people have reported greater durations than that.

You can consult your engine number (different to the VIN number). The engine number may be on your car's documentation. Otherwise you can apparently find it on your engine at the front left-hand side (as you sit in the car). I couldn't see mine but there are some descriptions of "how to" on the web.

<http://forums1.roadfly.com/jaguar/forums/xj8/6349517-1.html>

Interestingly the engine number is something of a time and date stamp...keep it simple, and why not?

Pre engine number 98102106XX you should be careful. After this engine number Jaguar introduced the second generation of tensioners. They are strengthened (although still plastic) and they seem to do a much better job. My 2000 XJR has no rattle at all during starting. Jaguar released a steel tensioner in 2002/2003. Some Jaguar technicians have reported fitting this steel tensioner during preventative maintenance.

It is possible to upgrade all your tensioners and preferably to the steel version. This is quite a big job costing approximately 2000 pounds or 3000 euros at a main dealer. Many independent specialists will do it for less but it isn't small change. Still, what price peace of mind?

Here are some good articles on the subject. http://www.johnmulvihill.com/Personal/jag_service_issues.htm

<http://www.jag-lovers.org/cjw/#0104a>

[b]Summary of Tensioners Issue[/b]

1997-1999 have first generation tensioners.

1999-2002 have the second generation.

2002-2003 probably has the third generation.

If you buy earlier than engine number 98102106XX, make sure you factor in the potential costs and hassle of this issue. After engine number 98102106XX you don't need to worry too much.