JAGUAR	XK	DATE 07/05	100-36

SERVICE **TECHNICAL BULLETIN**

Engine Drive Belt – Noise Issues – Diagnosis

MODEL 2003 MY-ON XK Range

VIN A30645-ON

Issue:

This bulletin has been issued for information only, to assist dealers in diagnosing the cause of engine drive belt noise issues.

Action:

Obtain the following useful information prior to investigating the issue:

1. The customer description of the issue including the type of noise, when it happens, how long it lasts, is it related to external temperature, does it only happen on engine start-up or is it constant?
2. The vehicle history - has a belt noise been reported in the past? Is it the same issue that is being reported now? What repairs were conducted during the previous visit?

Carry out the following checks before starting the engine:

> **Note:** The checks below should help identify drive belt contamination or system alignment problems.

3. Are there any coolant/oil leaks onto the drive belt?
4. Is there any other contamination on the drive belt?
5. Is there any drive belt dust or debris visible?
6. Does the drive belt have frayed edges?
7. Are there any other wear marks on the drive system or drive belt?
8. Are there any loose components?
9. Are any brackets or components obviously out of alignment?
10. Are there any signs that there is run out in the pulleys or components?

11. Is the drive belt tension correct?

> ⚠ **Caution:** Before removing a drive belt, mark the direction of rotation, and ideally belt position, on the belt so that it can be reinstalled in the same orientation.

If the vehicle is supercharged (SC) it will be necessary to determine which of the drive belt systems is causing the noise. One way to do this is to remove the SC belt then briefly run the engine. If the noise stops then the SC system is the source, if the noise continues it is caused by the auxiliary drive system.

Carry out the following checks with the engine running:

> **Note:** If the customer states that the noise stops when the engine warms up there is a limited amount of time (usually around two minutes) to carry out the checks.

13. Is the drive belt tracking sideways as it passes over the pulleys?
14. Any signs of run-out on the pulleys or components?
15. Is there any contact between the edge of the drive belt and any of the engine components?
16. Is there any unusual movement of the drive belt as it enters the pulleys?

Carry out the following checks without the engine running:

17. Remove the suspect drive belt and carefully inspect for damage/frayed edges, excessive wear at edges of the drive belt.
18. Examine the pulleys and drive components for signs of damage, run out or misalignment.
19. Rotate the pulleys by hand to determine if they squeak without the belt installed.

> **Note:** If the belt is changed, this is likely to stop the belt noise for a short period of time, but if there is another cause, the noise may return.

20. If the belt appears worn then the belt should be replaced, otherwise the belt can be reused.
21. If the noise is only apparent from a cold start, it may be the result of the drive belt shape ‘setting’ when wrapped around a pulley (normally this will be the pulley with the smallest diameter). As the belt warms up it becomes more pliable and the noise will stop.
22. The other reason for a cold start only noise could be a component within the drive system, for example a bearing in a pulley, which is seizing when cold but runs more freely when warm.
23. If there is evidence of misalignment in the Front End Auxiliary Drive (FEAD) system, check the generator bracket and generator for correct fit and alignment, followed by the other drive system components and pulleys.