

# TECHNICAL BULLETIN

LTB00474NAS

06 AUG 2012



## **SECTION: 303-01**

### **'Rattle' / 'Click' Noise from Front of Engine**

#### **AFFECTED VEHICLE RANGE:**

LR4 (LA)	VIN: AA510742 – CA627794 Model Year: 2010 – 2012
Range Rover Sport (LS)	VIN: AA212147 – CA754165 Model Year: 2010 – 2012
Range Rover (LM)	VIN: AA304426 – CA384083 Model Year: 2010 - 2012

#### **CONDITION SUMMARY:**

**Situation:** A 'rattle' / 'click' noise may be heard from the front of the engine. The noise may be more pronounced when the engine is at idle speed

**Cause:** This may be caused by insufficient tension on the engine's primary chain system.

**Action:** In the event of a customer concern of the above, refer to the Repair Procedure outlined below.

#### **PARTS:**

LR032088.....	Timing chain tensioner	Qty: 2
LR032090.....	Timing chain tensioner blade	Qty: 2
LR012004.....	Timing chain	Qty: 2
LR010765.....	Timing chain guide RH	Qty: 1
LR012642.....	Timing chain guide LH	Qty: 1
LR010696.....	Washer	Qty: 2

#### **TOOLS:**

Refer to Workshop Manual for any required special tools

#### **WARRANTY:**

△ **NOTE:** Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Always refer to DDW to obtain the latest repair time.

DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

NOTE: The information in Technical Bulletins is intended for use by trained, professional Technicians with the knowledge, tools, and equipment required to do the job properly and safely. It informs these Technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by 'do-it-yourselfers'. If you are not a Retailer, do not assume that a condition described affects your vehicle. Contact an authorized Land Rover service facility to determine whether this bulletin applies to a specific vehicle.

DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Reset timing chain tensioners <b>LR4; Range Rover Sport 5.0L NA</b>	12.65.89/33	5.70	42	LR032088
Reset timing chain tensioners <b>Range Rover Sport 5.0L SC</b>	12.65.89/33	6.60	42	LR032088
Reset timing chain tensioners <b>Range Rover 5.0L NA</b>	12.65.89/33	7.0	42	LR032088
Reset timing chain tensioners <b>Range Rover 5.0L SC</b>	12.65.89/33	6.90	42	LR032088
Timing chain tensioners and tensioners blades - Renew <b>LR4; Range Rover Sport 5.0L NA</b>	12.65.89/34	13.40	42	LR032088
Timing chain tensioners and tensioners blades - Renew <b>Range Rover Sport 5.0L SC</b>	12.65.89/34	16.70	42	LR032088
Timing chain tensioners and tensioners blades <b>Range Rover 5.0L NA</b>	12.65.89/34	11.20	42	LR032088
Timing chain tensioners and tensioners blades - Renew <b>Range Rover 5.0L SC</b>	12.65.89/34	14.10	42	LR032088
Timing chain, tensioners, blades and guides - Renew <b>LR4; Range Rover Sport 5.0L NA</b>	12.65.13	13.50	42	LR032088
Timing chain, tensioners, blades and guides - Renew <b>Range Rover Sport 5.0L SC</b>	12.65.13	16.90	42	LR032088
Timing chain, tensioners, blades and guides - Renew <b>Range Rover 5.0L NA</b>	12.65.13	11.40	42	LR032088
Timing chain, tensioners, blades and guides - Renew <b>Range Rover 5.0L SC</b>	12.65.13	14.30	42	LR032088

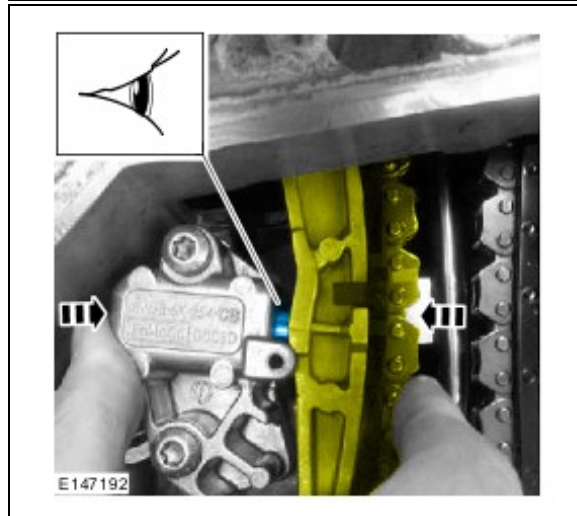
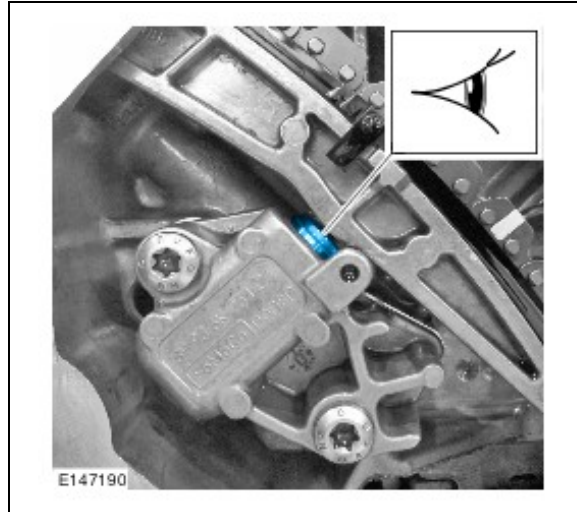
**NA = Naturally Aspirated; SC = Supercharged**

*Normal Warranty policies and procedures apply*

## **REPAIR PROCEDURE**

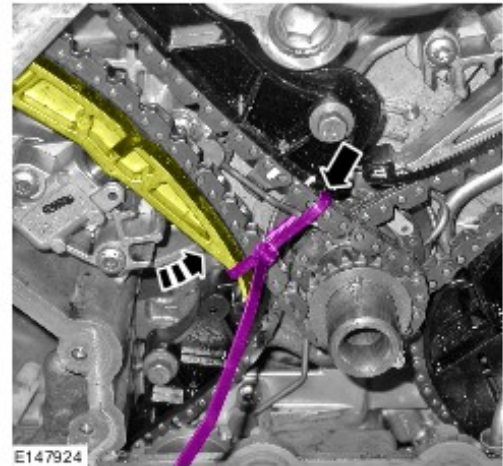
### **VEHICLES WITH LESS THAN 500 MILES (800 KM)**

1. Refer to Workshop Manual section 414-00 and disconnect the battery ground cable.
2. Refer to Workshop Manual section 303-01 and remove the lower timing cover.
3. Check that the tensioner plunger is not stuck within the tensioner body.
  - If there is a gap between the tensioner plunger and the tensioner blade, the tensioner plunger is stuck within the tensioner body, carry out steps 5 to 9.
  - If there is no gap between the tensioner plunger and the tensioner blade, carry out step 4.
4. Make sure that the timing chain tensioner plunger is positioned in the first ratchet position.
  - Firmly squeeze the timing chain to see if the tensioner plunger retracts in to the tensioner body.
  - If the tensioner plunger retracts all the way in to the tensioner body and/or if the tensioner blade makes contact with the tensioner body, the tensioner plunger is not in the first ratchet position, carry out steps 10 to 12.

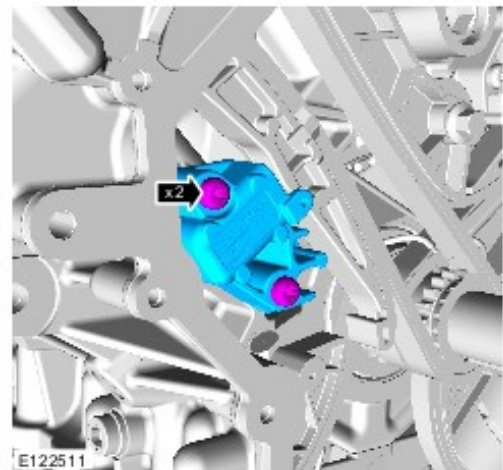


△ **NOTE: Only carry out steps 5 to 9 if the tensioner plunger is stuck within the tensioner body.**

5. Using a suitable tie-strap, secure the tensioner blade away from the tensioner.

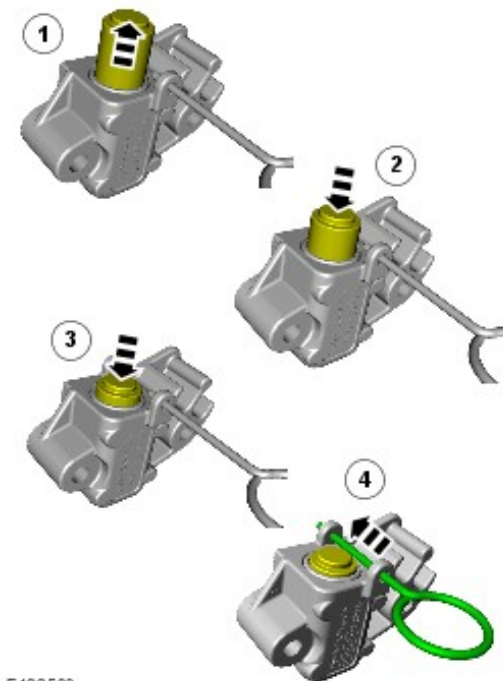


6. Remove the tensioner.
- Remove the two (2) Torx bolts.



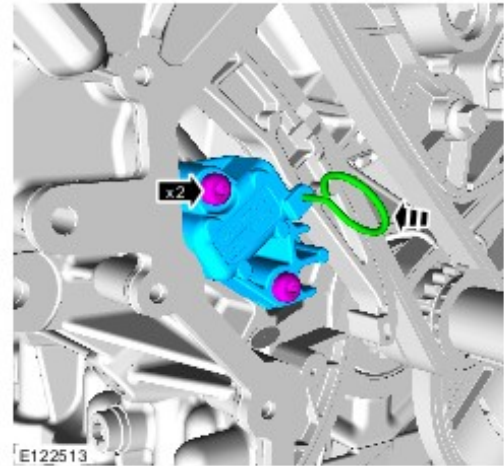
**⚠ CAUTION: Make sure that the plunger exerts pressure against the pin.**

7. Reset the tensioner.
- Make sure the plunger is fully extended.
  - Push the plunger in to the tensioner body.
  - Continue to apply pressure to the plunger until it is fully retracted in to the tensioner body.
  - Insert a suitable pin.



8. Install the tensioner.

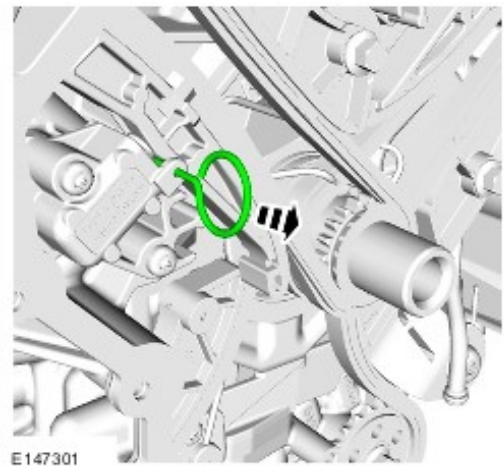
- Tighten the two (2) Torx bolts to 10 Nm.



**⚠ CAUTION:** Make sure that the plunger exerts pressure against the tensioner blade.

9. Release the tensioner plunger.

- Remove the pin.
- Proceed to step 13.

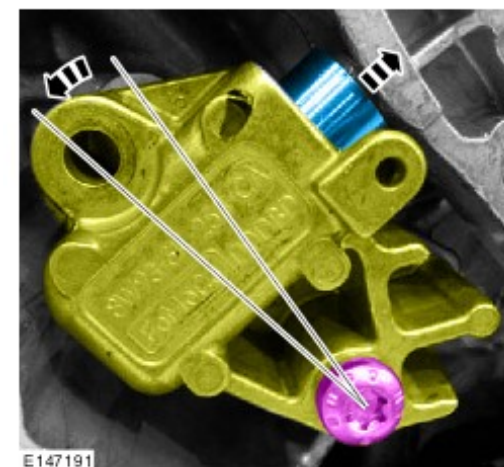


**△ NOTE:** Only carry out steps 10 to 12 if the tensioner plunger is not in the first ratchet position.

**⚠ CAUTION:** Do not remove the lower Torx bolt.

10. Release the tensioner.

- Remove the upper Torx bolt.
- Slacken the lower Torx bolt.
- Allow the tensioner to pivot around the lower bolt, this will allow the plunger to extend and latch in to the first ratchet position.

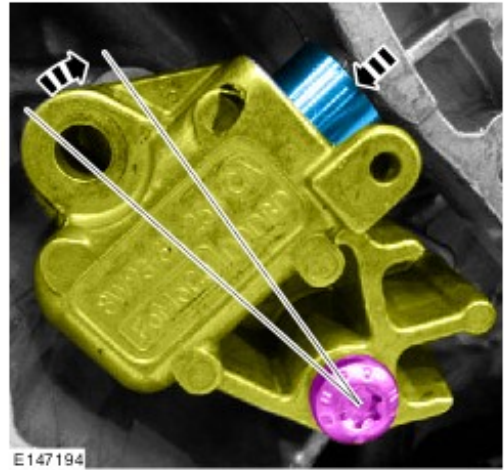


**⚠ CAUTION: Do not use a metal tool to lever the tensioner.**

**⚠ CAUTION: Make sure that the upper Torx bolt is installed finger tight before removing the lever from the tensioner.**

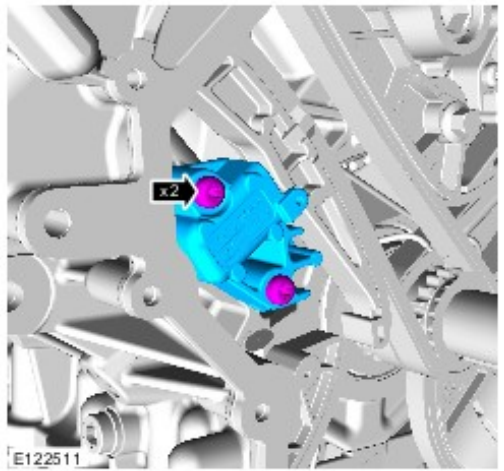
11. Re-position the tensioner.

- Using a suitable plastic tool, lever the tensioner in to the correct position.
- Install the upper Torx bolt.



12. Secure the tensioner.

- Tighten the two (2) Torx bolts to 10 Nm.
- Repeat the check in step 4 to make sure that the plunger is in the first ratchet position.
- Continue to step 13.



13. Carry out the checks in steps 3 and 4 to the tensioner on the other engine bank, and carry out rectification if required.

14. Refer to Workshop Manual section 303-01 and install the lower timing cover.

15. Refer to Workshop Manual section 414-00 and connect the battery ground cable.

**VEHICLES WITH MORE THAN 500 MILES (800 KM) BUT LESS THAN 40,000 MILES (64,000 KM)**

**△ NOTE: LR4 and Range Rover Sport Only.**

**△ NOTE: Do not remove the timing chain guides.**

16. Remove and discard the tensioner blades and tensioners from both engine banks.

- Refer to Workshop Manual section 303-01 and carry out removal steps 1 to 14 and step 16 of the *Timing Drive Components* procedure.

**△ NOTE: LR4 and Range Rover Sport Only.**

17. Install the new tensioner blades and tensioners.



- Refer to Workshop Manual section 303-01 and carry out install step 1 and steps 3 to 50 of the *Timing Drive Components* procedure.

△ **NOTE: Range Rover Only.**

△ **NOTE: Do not remove the timing chain guides.**

18. Remove and discard the tensioner blades and tensioners from both engine banks.

- Refer to Workshop Manual section 303-01 and carry out removal steps 1 to 14 and step 16 of the *Timing Drive Components* procedure.

△ **NOTE: Range Rover Only.**

19. Install the new tensioner blades and tensioners.

- Refer to Workshop Manual section 303-01 and carry out install step 1 and steps 3 to 45 of the *Timing Drive Components* procedure.

#### **VEHICLES WITH MORE THAN 40,000 MILES (64,000 KM)**

20. Refer to Workshop Manual section 303-01 and replace the tensioner blades, tensioners, chain guides and timing chain of the *Timing Drive Components* procedure.