SIB 12 01 04 ELAST alternator drive belt and alternator pulley with Freewheel 12 001 04 (003) This Service Information Bulletin replaces SI 12 001 04 (003) **dated April 2004**.

The contents of this bulletin have not changed; bulletin numbering was updated.

MODEL

This document applies to the following Motorrad AG models: n/a

This document applies to the following Motorrad model descriptions: n/a

This document applies to the following Motorrad series: n/a

SITUATION

This document is applies to the following categories: Engine Electrical Systems

Supporting Materials <u>picture_as_pdf</u> 12 001 04 (003) ELAST belt.pdf

	Service	Bulletin	Page 1 of 4		
	Date: March 2004				
	Bulletin No:	12 001 04 (003)			
	BMW	Motorrad USA			
Operating Manager	Subject:	Introduction of the New ELAST alternat drive belt and alternator pulley with Free	or wheel		
Sales Department	Models:	R 1100 S, R 1150 R, R 1150 GS, R 1150 RS, and R 1150 RT with alternator. (Models with 40A alternator are excluded)	n 50 A		
Accessory Department	Information:	All R 259 opposed twin models from July 2003 production and on have been fitted with the New ELAST Belt and pulley with Freew	nward 'neel.		
Parts Department		The purpose of the Freewheel pulley is to minimize the load plac the belt, which will reduce belt stretching.	ed on		
Service Department	Important:	The ELAST belts are maintenance free, which means it is no I necessary to re-tension the belt on engines fitted with the new E belt and Freewheel pulley.	onger LAST		
12 72-2003	Important Note:	The new ELAST belt never needs adjusting (after it's initial adjustment), however it must be changed every 36,000 miles	s.		
		The Poly-V belt still needs to be re-tensioned at the 6000 service and replaced every 36,000 miles.) mile		
	Distinguishing Features between the two belts:	A) ELAST belts: The alternator / front cover engine cover has a triangular symbol on the bottom edge (see picture). This symbol introduced at the same time the ELAST belt was introduced, the by checking for this symbol during a service you can be confider ELAST belt is installed. Since the arrow indicates a ELAST belt, it longer necessary to re-tension the belt.	small of was refore nt the t is no		
	Important Note:	If the motorcycle is fitted with the optional accessory cover (chrome-plated or carbon fiber) the engine number should be chr to determine which type of belt is installed (see table). B) Wording on the belt: ELAST belt P/N 12 31 7 681 841 BMW 11 28 7681841	ecked		







Model	Generator	Freewheel	Engine Number
R 1100 S	40A	No	28036408
	50A	Yes	27036614
R 1150 GS	40A	No	27036660
	50A	Yes	27036659
R 1150 GS ADV	All	Yes	26037299
R 1150 RT	All	Yes	27036605
R 850 RT	All	Yes	27036604
R 1150 R Rockster	All	Yes	26036359
R 1150 R	All	Yes	27036620
R 850 R	All	Yes	27036621
R 1150 RS	All	Yes	26037338

Definition: Definition of engine numbers:

Using engine number 28036408 as an example. The last 4 digits 408 is the 408th engine produced in calendar week 28 (the first 2 digits), the year is the 3rd & 4th digits, 03 in this case. The 6 (5th digit in the engine number) stands for opposed twin engine. If more then 1000 engines are built in a week then the 5th digit will change to a 7. The engine number can be found on the engine block forward and below the right cylinder. Reference: New Retailer Training.

Adjustment: Repair Technique for ELAST Belt and Freewheel Pulley

(see attached pages from the repair manual)

There are major differences in the procedures for installing / removing / tensioning Poly V belts and ELAST belts. The most important difference is the adjustment procedure. The following **always** applies for the tensioning of the belts.

ELAST belt:Adjustment by means of a gauge to set the pitch between pulleys.Poly-V belt:Adjustment by means of special tool **90 88 6 123 551** torque to: 8 Nm

Attention: Any attempt to use the gauge to tension a Poly-V belt will result in rapid damage to the belt and may also damage the alternator.





Elastic Belt P/N **12 31 7 681 841** **Exceptions:** After introduction of the Elast belt (July 2003), some engines still had to be fitted with the Poly-V belts because of supply issues. These engines were manufactured in calendar weeks 28, 29 and 30. All of these engines have the following identification marks:

White dot on the top of the front cover / alternator carrier. Yellow sticker on top of the front cover / alternator carrier and / or Yellow sticker towards the bottom of the front cover

For these **exception motorcycles** the belt does not have to be re-tensioned as part of the 6,000 mile service. If the belt has to be replaced, then install an ELAST belt. Once an ELAST belt is installed, remove the yellow or white mark from the alternator mount carrier.





Correct Installation: Special Tool 90 88 6 123 750



Incorrect Installation: Special Tool 90 88 6 123 750

- Special Tools: Special Tool Number 90 88 6 123 570 is the gauge used to set the pitch between the two pulleys for Elast belt installations. In the repair manual both part numbers 90 88 6 123 571 and 90 88 6 123 572 are superseded by P/N 90 88 6 123 570.
 - Important
Note:Special tools part number 90 88 6 123 570 will be sent to all dealers under the
automatic tool shipment program.

Special tools part number **90 88 6 123 581** and **90 88 6 123 582** are to be used to remove / install the alternator freewheel pulley. These tools will be sent under the automatic tool shipment program.

Use special tool 90 88 6 123 570:

This information is a supplement to the workshop manual pages attached to this Service Bulletin. You can see that the special tool has two bearing surfaces; the larger bearing surface is positioned on the crankshaft pulley groves.

Bulletin No: 12 001 04 (003)

Press downward on the tool to ensure the bearing surface lays flat against the crankshafts pulley grooves.

With your fingers keeping downward pressure, use a 3/8 drive short ratchet to turn the eccentric cam in the center of the tool, until the pin touches the top section of the tool. Using your fingers to push downward on the tool where it touches the crankshaft grooved pulley, you will ensure the tool aligns correctly with the upper alternator pulley.

The upper section of the tool has a raised lip which fits into the large groove of the freewheel pulley, when the tool is fully extended. If the lip of the upper bearing surface is in the large groove then you can be sure that the bearing surface is lying evenly against the pulley grooves.

Important Please refer to the attached 3 page Workshop Manual. Note:

Contact : Pat Raymond Service and Technical Manager BMW Motorrad USA (201) 307 4261 pat.raymond@bmwna.com



Note:

Front cover (2) for the resilient belt has an arrow (1) at the bottom for the purposes of identification.

• Remove front cover (2).



• Remove screw (3) and nuts (4,5) from alternator.



Warning:

Take care not to trap your fingers.

• Turn the crankshaft in the normal direction of rotation (arrow) to disengage the belt from the bottom belt pulley.

Installing resilient belt

Drawing resilient belt over pulleys

- Slacken the fasteners securing the alternator.
- Loop the resilient belt over the top belt pulley.



- Seat the resilient belt against the right-hand side of the bottom belt pulley.
- Turn the crankshaft in the normal direction of rotation (arrow) to draw the belt fully onto the bottom belt pulley.

Pretensioning resilient belt

- Slacken the fasteners securing the alternator.
- Draw the resilient belt over the pulleys.



 Fit eccentric tensioner for resilient belt, BMW No. 12 3 571, and adapter R259, BMW No. 12 3 572, over the bottom belt pulley.



- Pretension the eccentric tensioner for resilient belt with adapter R259 against the top belt pulley.
- Tighten screw (1) and nuts (2,3) of alternator.

Tightening torque:

Alternator to alternator mount cover

- Back off eccentric tensioner for resilient belt, BMW No. 12 3 571, and adapter R259, BMW No. 12 3 572, and remove.

Removing belt pulley freewheel

• Remove the resilient belt.



- Remove the cover from the belt pulley freewheel.
- Fit socket, BMW No. 12 3 581, and lever, BMW No. 12 3 582.
- Lock lever, **BMW No. 12 3 582**, against the crankcase with the pin and release the belt pulley freewheel from the alternator.
- Remove the belt pulley freewheel.

Installing belt pulley freewheel

- Resilient belt is removed.



- Install the belt pulley freewheel.
- Using socket, **BMW No. 12 3 581**, and lever, **BMW No. 12 3 582**, tighten the belt pulley freewheel on the alternator.

Tightening torque:

Belt pulley freewheel to alternator

- Fit the cover for the belt pulley freewheel.