

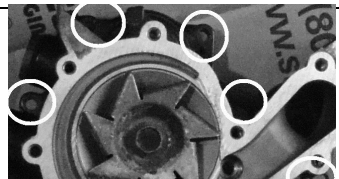
Disclaimer: These are just my notes from when I did this. I do not claim that this is the “right” way to do this. Follow these instructions **at your own risk**. This is for a 1993 K1100LT. Verify correct part numbers for your year and model. Send any comments/corrections to smithduck@gmail.com






Not my videos but helpful:

YouTube Part 1: <https://www.youtube.com/watch?v=-CBtaioRMx0>

YouTube Part 2: <https://www.youtube.com/watch?v=j8JUY8C2c08>

BMW PARTS			
Slip Ring Seal	11411741870	\$16.37	
Spacer Bush	11511464902	\$ 7.86	
Shaft Seal	11411460329	\$ 11.17	
New Design Impeller(optional)	11411461173	\$ 10.96	
Small O-ring	11411460403	\$ 1.14	
Large Red O-ring	11111460392	\$1.80	
OTHER			
<ul style="list-style-type: none"> • Engine oil (filter) • Coolant (Water Wetter) • Permatex Form-a-Gasket 2 			

Step	Description	Picture
0. PREP		
0.1 Drain engine oil	Drain plug - 8mm Allen	
0.2 Drain coolant	Disconnect temp sensor lead Temp sensor - 14mm socket	
0.3 Disconnect oil switch lead	Front – blue – temp sensor Rear – white – oil switch	
1. REMOVE RADIATOR GRILL		
1.1 Brake line bracket	5mm Allen	
1.2 Mounting uscrews	Philips – 7/side, 2 top	
2. REMOVE WATER PUMP		
2.0	Place rag on ground under pump	
2.1 Cover	(Break impeller bolt – 13mm socket) 9 x 5mm Allen Rubber mallet	
2.2 Water/oil pump	2 x 5mm Allen long under impeller 5 x 5mm Allen	

<u>Step</u>	<u>Description</u>	<u>Picture</u>
2.3 Pull boots through body		
3. REMOVE OLD SEAL		
3.1 Remove impeller	13mm socket 6mm Allen	
3.2 Remove spindle	Replace impeller bolt a few threads and then tap out the main spindle from the front (check spindle for wear)	
3.3 Remove old seal	Using a screwdriver, carefully tap around the perimeter of the old seal from the back of the pump	
	Old seal removed	
4. INSTALL NEW PARTS		
4.1 Install shaft seal	Light coat of grease around shaft seal perimeter to ease installation Tap in (spring side up) using a socket (18mm) as a drift	
4.2 Install slip ring seal	Tap in (blue stripe down) using a socket (27mm) as a drift	
4.3 Install spindle	<ul style="list-style-type: none"> • Lightly grease long spindle shaft • Gently push through by hand from rear until it stops • Use impeller bolt to pull it through • Add spacer to impeller bolt when threads bottom out and repeat to finish pulling spindle through until gears flush on rear 	
4.4 Install spacer and impeller	<ul style="list-style-type: none"> • Install spacer (cup in) and impeller (33Nm) – or torque later after pump installed • Check spindle friction – if too tight then back out impeller bolt a little and tap while ensuring rear gears remain flush 	

5. INSTALL WATER PUMP		
5.1 Install body	<ul style="list-style-type: none"> • Install new O-ring on driving gear – thin coat of oil • Make sure U-hole in engine block is clear • Install red O-ring • Run sensor leads through hole • Apply thin coat of sealant making sure not to get any in the U groove (I don't think the red O-ring needs any) • Get the 5 bolts finger tight • Get the two long bolts finger tighten • Tighten all 7 bolts in criss-cross pattern to 10Nm • Tighten oil switch (if necessary 40Nm – really hard LOL) 	
5.2 Install cover	Apply light coat of sealant Finger tighten bolts Criss-cross tighten to 10Nm	
5.3 Install temp sensor	9 Nm	
5.4 Attach sensor leads	White – oil (rear) Blue – temp (front)	
5.5 Refill engine oil	Make sure drain plug is in first!	
5.6 Refill coolant	Install hose ending!	
	3 oz. Water Wetter 60/40 water/coolant	
5.7 Reinstall radiator grill	7 Phillips per side 2 Phillips top 5mm brake line bracket	