

Manufacturer	Part Number	Description	Qty	Cost	Ordered				
Beisan	N/A	Rebuilt Vanos with Beisan BS023, BS024, BS021, and BS025	1	1500		\$2000, but \$500 core refund			
Beisan	BS022	Anti rattle kit	1	80		Might not need - not sure			
Beisan	BS028	Bearing set	1	18					
Beisan	BS026	Exhaust upper chain guide	1	80					
BMW	11-36-7-831-938	Vanos gasket seal (OE)	1	11		https://www.fcpeuro.com/products/bmw-vanos-gasket-elring-11367831938			
BMW	11-12-1-437-395	Valve cover stud grommet (Genuine)	2	4		https://www.fcpeuro.com/products/bmw-valve-cover-seal-washer-11121437395			
BMW	07-11-9-963-129	Oil drain hose crush washer	2	2		https://www.fcpeuro.com/products/bmw-gasket-ring-07119963129			
BMW	07-11-9-963-072	Vanos oil accumulator pipe crush washer	2	2		https://www.ecstuning.com/b-genuine-bmw-parts/gasket-ring-priced-each/07119963072/			
BMW	11-36-7-833-218	Sprocket hub diaphragm spring and pressure plate	2	84		https://www.ecstuning.com/b-genuine-bmw-parts/vanos-diaphragm-spring-set/11367833218/			
BMW	07-12-9-905-536	Sprocket sleeve bolts (use blue locite when installing)	12	40		https://www.fcpeuro.com/products/bmw-s54-vanos-hub-bolt-kit-07119913589kt			
BMW	07-11-9-963-342	Chain guide mounting bolt washer	1	1		https://www.fcpeuro.com/products/bmw-o-ring-07119963342			
BMW	07-11-9-963-418	Crankshaft chain tensioner washer	1	1		https://www.fcpeuro.com/products/bmw-gasket-ring-a26x31al-07119963418			
BMW	11-31-7-830-159	Timing change guard rail (the bottom one)	1	45		https://www.fcpeuro.com/products/bmw-timing-chain-guide-rail-right-lower-11317836441			
Optional									
Beisan	BS095	Anti rattle kit tool (will need if mechanic doesn't have it)	1	20					
Beisan	BS027	New exhaust hub (optional) There was an updated vanos pressure line (do I have it???)	1	400		https://nam3forum.com/forums/forum/main-forum/e46-2001-2006/12635-vanos-oil-line/page2			
BMW	11-36-7-837-614	Vanos pressure accumulator line (there was an updated version that bolts to vanos)	1	186		https://www.fcpeuro.com/products/bmw-pressure-hose-assy-11367837614			
BMW	07-11-9-905-175	Banjo bolt for vanos pressure accumulator line (can I reuse existing?)	2	15		https://www.ecstuning.com/b-genuine-bmw-parts/hollow-bolt-priced-each/07119905175/			
BMW	07-11-9-963-072	Crush washers for vanos pressure accumulator line	4	2		https://www.fcpeuro.com/products/bmw-gasket-ring-07119963072			
		VANOS housing piston covers 10Nm (84 in-lbs)							
		VANOS Oil Hose from Oil Filter Housing (Banjo Bolt) - 32Nm (23.5 ft-lbs)							
		Reverse Thread VANOS Bolts connecting VANOS to Cam Shafts - 8Nm (71 in-lbs)							
		VANOS piston plug caps - 50Nm (37 ft-lbs)							
		VANOS solenoid to VANOS control unit - 30Nm (22 ft-lbs)							
		VANOS mounting nuts (6) - 8Nm (71 in-lbs)							
		Engine hanger nut and bolts- 10Nm (7 ft-lb)							
		Camshaft position sensor - 5Nm (42 in-lbs)							