

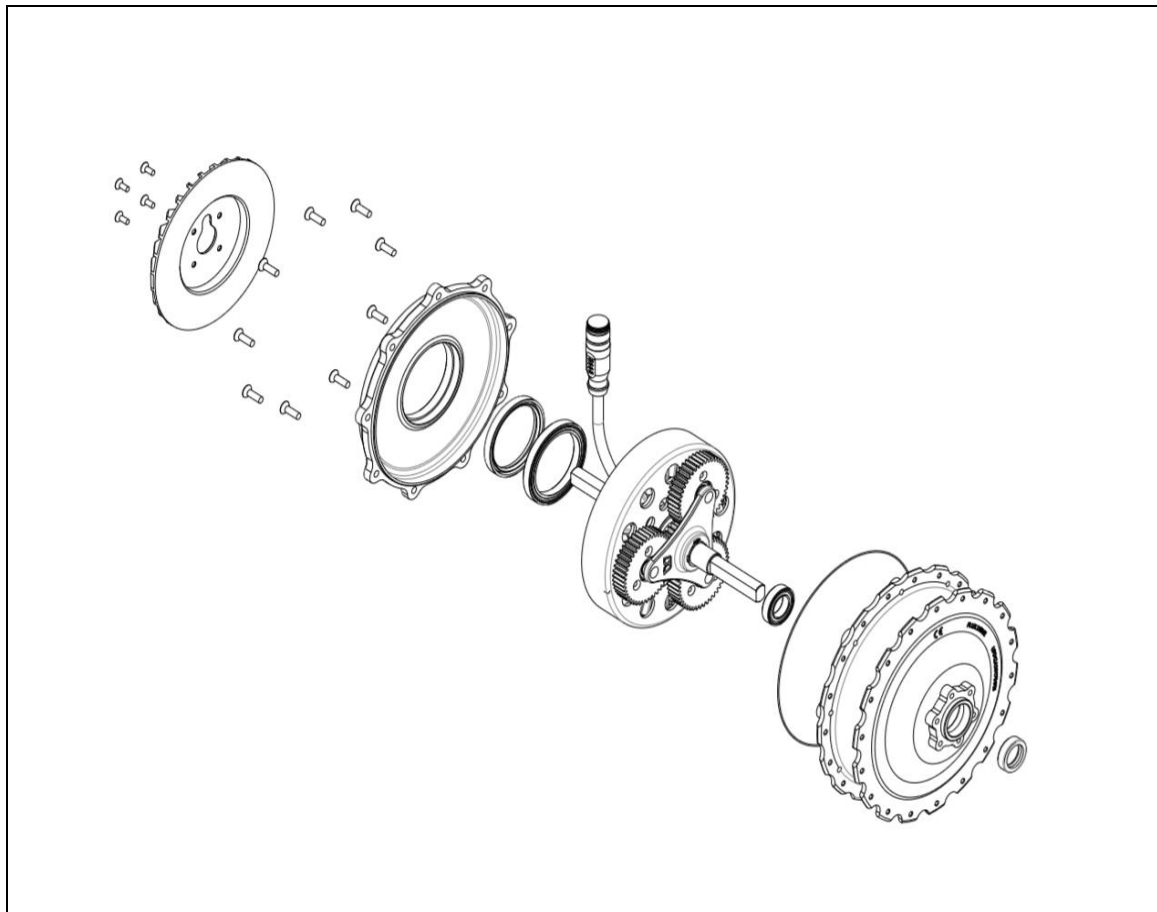


2018 2x2 Motor Service check list

Date:
Chassis/VIN Code:
Name:
Dealership:

	Motor should be checked for fault codes prior to removal of the wheel from the bike.
	Remove motor from the bike and place on the motor disassembly table
	Rotate motor with a 10mm spanner and check for smooth rotations, any roughness may indicate an issue.
	Remove heat sink cover. You can do this by removing the four M4 x10 Torx screws (This is the non-brake rotor side) These fasteners have thread locker applied and will require a heat gun to soften this before removal.
	Remove the motor side cover. You can do this by removing the nine M6 x16 Torx screws (This is the non-brake rotor side) These fasteners have thread locker applied and will require a heat gun to soften this before removal.
	The motor can now be removed by gently tapping the opposite side of the axle gently (Note excessive force may damage components and void your warranty) The axle needs to be clean to pass through the seal and bearing, you may need to clean this with a small scotch bright pad.
	Look for signs of water. This corrodes the motor parts/bearings and significantly reduces its life span. If there is excessive water present, please contact your UBCO distributor.
	The motor should be cleaned with an electro-clean degreaser and inspected for any signs of wear or damage.
	Check bearings by loading with your fingers and rotate them. Any roughness requires the bearing to be replaced.
	Inspect the planetary gear system. This part is a wear and tear / sacrificial item and may require changing. Any signs of wear will require the gears to be replaced.
	When replacing the gear carrier remove the circlip and then use a three legged puller to remove the gear carrier. You will now be required to remove each gear and replace these with the new part.
	Before reinstalling the gear carrier check for any signs of damage to the key or keyway
	When reinstalling the gear carrier ensure that LOCTITE 660 has been applied to the keyway and shaft.
	The gear set (Planet, Sun and pinion gear) must be very clean. Any small amount of debris can cause an issue. Re-fit the gear carrier by pressing it lightly or tapping this on with a punch, Excessive force will damage the rear circlip. Refit the forward circlip.
	Rotate the motor and ensure there are no contacting parts and the motor spins freely.
	Check all seals in the motor housing and cover. Replace if necessary
	After all new parts are installed it is time to refit the motor into the housing, apply rubber grease to the seals and O-ring a small amount of (Silicone based grease) to the planetary gears and ring gear. Please note using the incorrect grease may result in damage to the gears and will void all warranty. Gently lower the motor into the housing and rotate it into place allowing the gears to align. At this point the gears should be engaged, it may require a gentle tap to fully engage correctly. Do not apply any force

	unless the gears are aligned with the ring gear. This will cause damage and void your warranty.
	Rotate the motor with a 10mm spanner to check for correct engagement.
	Apply a small amount of rubber grease to the O-ring and install onto the cover lay cover into position. Apply red high strength Loctite to the motor cover fasteners and reassemble.
	Motor cover torque is 7Nm.
	Reinstall heat sink cover. You can do this by fitting the four M4 x10 Torx screws These fasteners should have a small amount of blue low strength thread locker applied.
	With the motor all back together, use a 10mm spanner to rotate the motor. This should rotate easily without excessive noise or roughness.
	Clean and wipe down wheel and motor. This has been serviced and should appear so.
	Re-install into bike and test.
	Any excessive noise or roughness should be identified and rectified immediately as this will cause future problems.
	Update motor maps if required (See UBCO website) Ensure there are no motor codes present.
	Test ok? Great work. Update the service records and return to the customer.



Technician signature: