Maintenance

A) Lubrication





A plastic cove protects the **ats-speed-drive** against dust and spray, The cover exerts only a limited pressure to minimize friction losses, and therefore cannot retain an oil bath. The original lubrication is done with an **MoS_2-lube,** which is a good compromise between oil and grease lubrication characteristics, and is also an effective long term lubrication in case, the ride never does any maintenance, MoS_2-injectors are available as an accessory, they provide enough lubrication for at least 3000-4000 km. For riding in very low temperatures , oil lubrication gives better results than grease, Insert a few drops (1~2ml) 1-2 times a year or after 2000-3000 km, too much oil can cause leakage.



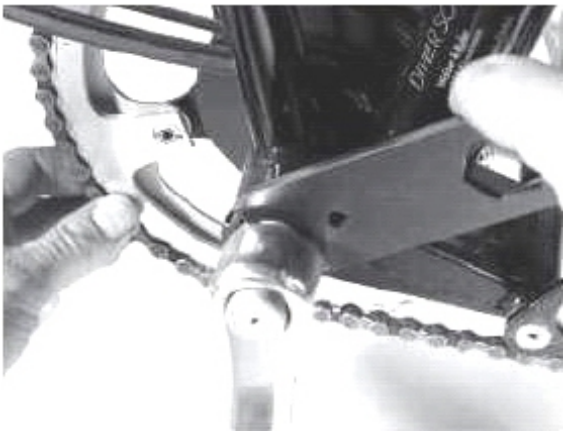
If the **ats-speed-drive** starts running noisily in low gear (when there is no load on the planets) after extended use , this is probably due to a lack of oil on the planet bearings , Insert some lube at the slot screw. (Slot screw → SD165 on front/right side, SD250 on back/left side of gear housing)

Very important: move the crank until you can see another hole on the rotating disk. Only if the lubricant passes the hole of disk, it reaches the gears. (At this moment, you can use a pin to insert this hole, 16mm depth.) Also lube on right side gearing on the same time.(When the pin only can insert 5mm depth.)

Grease and oil each have their benefits, MoS_2 grease damps noise much more effectively than oil, Oil causes less friction losses , especially at low temperatures.

Never use a different grease than the original MoS_2 grease, Quantity: 1-2ml.

B) Adjusting the gearing play



Please note: the adjustment of the gearing play is made at the factory with painstaking accuracy, Do not change the position of the self-locking nut at the left end of the axle without a good reason

Only adjust the gearing play, if the chainring has play along the axis of the spindle. Slightly tighten up the self-locking nut on the left end of the axle(only a few degrees), Never tighten the nut too firmly, preload on the gearing system may damage the bearings. Please note, that some play between the cranks and chainring in the direction of rotation is normal and necessary for proper engagement of the gears after switching.

To check a potentially incorrect adjustment , proceed as follows :

-Unscrew the self-locking nut on the axle 1/4-1/2 turns.

-Move the chainring in the direction of the spindle to feel the play

-Slowly tighten the nut while moving the chanring at the same time

-Feel the play decreasing

C) Removing cranks



To remove a crank , please note: if not using the small tube or an M6 nut , you will destroy the shifting shaft when pushing with a standard puller! Once the shifting shaft damaged, ats-speed-drive will not shifting anymore! Repair it will charge even under warranty period (2 years). Or, please visit our website: www.ats-speeddrive.com to see details.

Very important:

If using a different crankarm not provided from us, make sure the hole has a depth of at least 8mm.

Please also make sure that the right-side crankarm is not wider than 25mm, to prevent it from touching the spider when being tightened.

Caution: Kickplate (easy-shift levers, it is accessory for speed drive, not covered by warranty) make shifting more easy. But it possible to make shifting ineffective! Because some unknown factors will damage kickplate when riding.

Ex: bent kickplate under unknown reason. It will let kickplate spring force different on right and left side. If spring force big different, the shift button might be stop on the center of BB housing (it cause the speed-drive spin freely.) or stop on right/left side forever (it cause shifting ineffective). Therefore when shifting gear ineffective happens, please take off the kickplate first, to make sure the shift button on correct position. (The button must be approximately flush with the surface of the crank when being pushed. It can protrude up to 1mm, especially in combination with easy-shift kickplates.

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