

NEXUS 8 trouble shooting manual

1.N-set

Adjustment issues

2.Pedaling

- a. Noise in all gears
- b. Squeaking noise

3.Freewheeling

Rough Turning

4.Up shifting

Hard to shift

5.Down shifting

Doesn't return to 1st gear

6.Coaster brake

- a. Braking force is too strong
- b. Squeaking noise
- c. Brake doesn't release

7.Inter changeability of NEXUS

- a. Nexus 8 Roller Brake and Alfine
- b. Coaster Brake Type

1. N-set Adjustment Issues

N-set is the term for the alignment of the two yellow marks on the cassette joint unit.
Any issues with adjustment come from somewhere between the shifter and hub.



Step 1

Check the connection of the outer casing and the shifter. Check this connection at the Cassette Joint unit side too.

Note: The shifter side ferrule is plastic, the Cassette Joint side is metal.



Step 2

Check the cable routing.

A tight bend in the cable increases the friction between the inner cable and the outer casing.



1. N-set Adjustment Issues

Step 3

Take the cable fixing bolt out of the Cassette Joint unit and check the shifting feeling.

If it feels heavy, it means that the cable efficiency is poor.

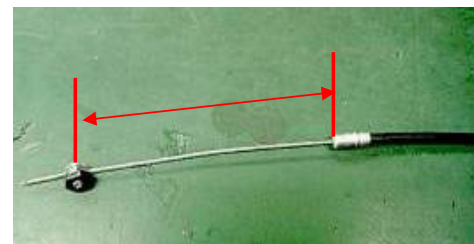
Grease the inner cable with Shimano SP-41 special grease or change the cable routing.



Step 4

Check the length between cable fixing bolt and the end of the outer casing.

The length should be 101mm.
(Please use TL-CJ10 or TL-CJ-40)






Step 5

Replace cable and housing.

2a. Pedaling - Noise in all Gears

There are many things that can contribute to a noise that occurs in all gears.

Step 1	<p>Check the N-set</p>	
Step 2	<p>It is possible that the chain can interfere with the chain case.</p> <p>Try taking the chain case off of the bicycle and recheck for noise.</p>	
Step 3	<p>Check the chain tension.</p> <p>High tension can cause rough turning and noise.</p>	

2a. Pedaling - Noise in all Gears

Step 4

Check the width and pitch of the chain and sprocket. Make sure that they match.



Step 5

Check that the sprocket is a Shimano product and that it is not worn down.



Step 6

Check the rotation of the bottom bracket to make sure that is not the source of the roughness and noise.



Step 7

When it isn't improved by the above items, there is possibility that the internal assembly is to blame.

Try another hub, wheel or internal assembly to verify.

2b. Pedaling - Squeaking Noise

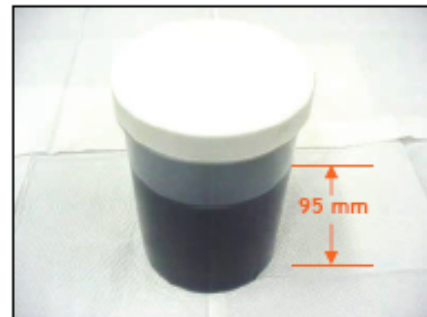
Squeaking noises come from the grease in the hub drying up.

You can re-grease the hub or use the new maintenance oil dip.

Notice

The lifespan of grease or oil depends greatly on the kind of grease or oil used. Genuine Shimano lubricants are recommended for maximum durability and performance.

Step 1



Simply fill the dipping vessel to a depth of about 95mm.



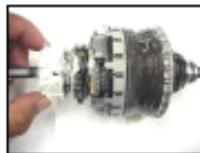
Remove coaster brake shoes if applicable.



If working on a coaster brake hub, apply new coaster brake/internal hub grease



Submerge the hub for 90 seconds with the large ball retainer up.



Reinstall the coaster brake shoes.






Allow oil to drain back into the vessel for 1 to 5 minutes.

After using the oil maintenance, there will be some initial noise from the coaster brake. It will go away on its own.

3. Freewheeling – Rough Turning

Rough turning while freewheeling can be caused by the following:

1. Interference between accessories and the wheel.
2. Over tightened or damaged bearings because of over torqued axle nuts.
3. The roller brake is engaged.
4. Worn or contaminated bearing races.

Step 1	<p>Check for interference between the wheel and accessories.</p>	
Step 2	<p>Loosen the axle nuts and re-check the freewheeling ability.</p> <p>Recommend torque is 3-4.5kNcm</p>	
Step 3	<p>Remove the roller brake from the bicycle and re-check the freewheeling ability.</p>	

3. Freewheeling - Rough turning

Step 4

Check the condition of the large bearing race.

If there is any damage or rust, exchange the axle unit or internal assembly.



4.Up Shifting - Heavy shifting

Most heavy shifting issues are caused by the cable and housing, not the hub internals.

Note:

Shifting from 4th to 5th gear always requires a little extra effort because the clutch is engaging. This is a normal condition.

Step 1

Take the cable fixing bolt out of the cassette joint unit and check the shifting feeling.

If there is a lot of resistance still and shifting feeling is heavy, it means that there is too much friction between the cable and housing.

Check the cable routing and replace or grease the inner cable with Shimano SP-41 special grease.



Step 2

If there is not excessive friction in the cable when disconnected from the cassette joint unit then there is a problem with the axle unit and it should be replaced – you can also simply replace the entire internal assembly. A heavy shifting feeling in all gears indicates that something is bent and it is not possible to repair it.

5. Down Shifting - Doesn't Return to 1st Gear

Nexus 8 and Alfine use an assist system which aids down shifting by using pedaling force.

Try turning the pedals, that may cause it to shift back to 1st gear.

If hub still won't return to 1st gear, there may be excessive cable friction or the internal assembly may be damaged.

Step 1

Disconnect the cable fixing bolt from the cassette joint unit.

Operate the shifter to see if the shifting feeling is too heavy. If it is, check the cable routing for tight bends and replace or grease the cable with Shimano SP-41 special grease.



Step 2

Turn the pedals with the cable fixing bolt still disconnected. If it shifts into 1st gear now, there was excessive friction between the cable and housing. If not, there is damage to the internal assembly and it will need to be replaced.






6a. Coaster Brake - Braking Force is Too Strong

This is caused by the surface of the brake shoe drying out or using a gear ratio that is too small.



Please check the gear ratio and add the grease to the brake shoe.
Shimano recommendation gear ratio (F/R) is 2.1

If the gear ratio is correct and grease doesn't help, replace the brake shoes.

Step 1	<p>Check the gear ratio between the chainring and the cog. The chainring should be about 2.1 times bigger than the cog.</p> <p>If the ratio is too low, the brake will be engaged with too much force. The internal assembly can also be damaged.</p>	
Step 2	<p>Check the condition of the grease on the brake shoes. If the grease is dried out, replace it with Shimano Nexus Grease.</p> <p>Other greases are either the wrong thickness or are not resistant to the heat generated from the brake. Do not use any other type of grease.</p>	
Step 3	<p>If the above steps do not solve the problem, it is possible that the brake shoe is deformed and needs to be replaced.</p>	


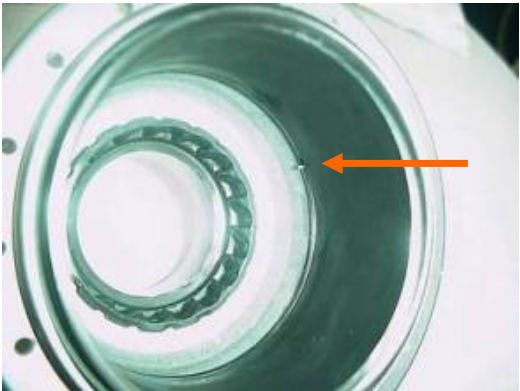
6b. Coaster Brake - Squeaking Noise

This is caused by the brake shoes wearing out or the grease drying up.



Step 1	<p>Check the condition of the grease on the brake shoes. If the grease is dried out, replace it with Shimano Nexus Grease.</p> <p>Other greases are either the wrong thickness or are not resistant to the heat generated from the brake. Do not use any other type of grease.</p>	 A photograph of a bicycle hub assembly. A red circle is drawn around the central part of the hub, specifically the area where the brake shoes are located, to indicate the point of inspection for grease.
Step 2	<p>If new grease does not help, the brake shoes are worn out and need to be replaced. Be sure to apply Nexus grease to the new brake shoes.</p>	 A close-up photograph of a single brake shoe. The shoe is a curved, metallic component. The surface that would contact the rim is heavily worn and discolored, appearing dark and rough, which indicates it needs to be replaced.

6c. Coaster Brake - Brake Doesn't Release

This is caused by either too much force applied to the brakes or a displaced hub shell slide spring.

Step 1	<p>If the brake was applied with too much force the shoes can have a hard time releasing when you begin to pedal forward again. The easiest gears to release the brake in are 1st and 5th.</p> <p>Shift into 1st or 5th gear and pedal forward with force to release the brake.</p>	
Step 2	<p>Check the position of the hub shell slide spring.</p> <p>Is the entire slide spring in the groove?</p> <p>This can affect the free play angle of the pedals.</p>	
Step 3	<p>If the above items still do not allow the brakes to release the internal assembly is damaged and must be replaced.</p>	

7a. Interchangeability for Nexus 8 Roller Brake and Alfine



Rollerbrake V-Brake versions		 Hub Shell						
		8R20/22	8R25/27	8R45	8R30/31	8R35/36	8R55/56	S500/501
	8R20/22 Standard	YES	YES*1	NO	NO	NO	NO	NO
	8R25/27 Premium	NO *2	YES	NO	NO	NO	NO	NO
		YES *3						
	8R45 for Cyber Nexus	NO	NO	YES	NO	NO	NO	NO
Internal unit	8R30/31 Standard	NO	NO	NO	YES	YES*1	NO	NO
	8R35/36 Premium	NO	NO	NO	YES	YES	NO	NO
	8R55/56 for Cyber Nexus	NO	NO	NO	NO	NO	YES	NO
	S500/501	NO	NO	NO	NO	NO	NO	YES

*1: possible, but not the same performance as original spec

*2: The internal unit from a complete hub has no return spring in the Rollerclutch = Not a good combination

*3: Replacement Internal Unit has spring in Rollerclutch = Good combination

7b. Interchangeability - Coaster Brake Type

Coaster Brake versions		 Hub Shell			
		8C20/22	8C45	8C31	8C56
 Internal unit	8C20/22 Standard	YES	NO	YES	NO
	8C45 for Cyber Nexus	NO	YES	NO	YES
	8C31 Standard	YES	NO	YES	NO
	8C56 for Cyber Nexus	NO	YES	NO	YES