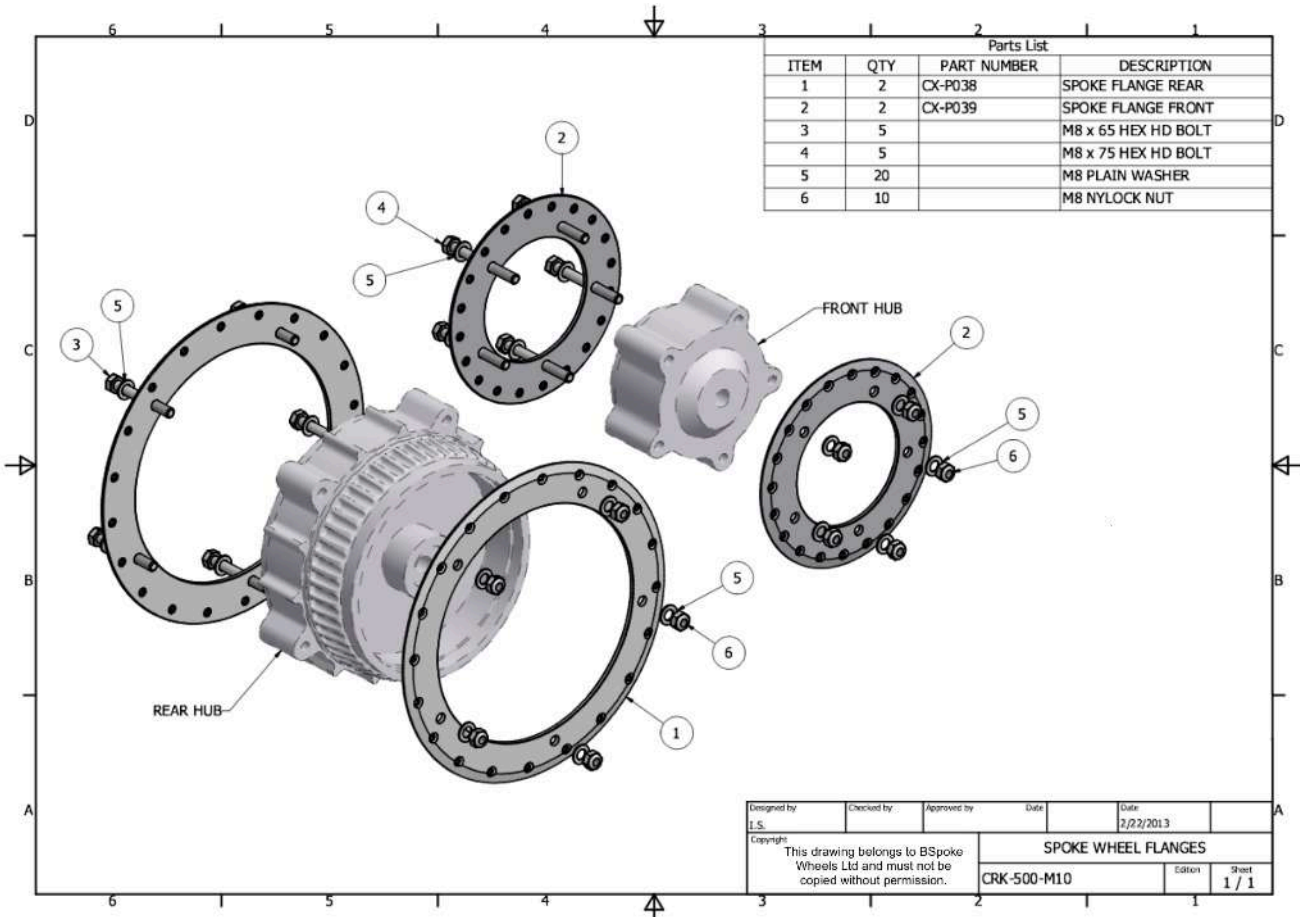


SPOKE CONVERSION FLANGE INSTRUCTIONS



Thank you for purchasing this product, please read the following instructions carefully before installing any equipment.



Your Module should include ***similar*** items to those shown in the drawing above.
The number and length of bolts may alter depending on the model of bike.

Removing the hubs from your comstar wheels

1. The spoke flanges are designed to be installed onto the existing Comstar hubs after removal of the 'Comstar' spokes and rim. If your Comstar wheels are in very good condition it would be worth considering buying a scruffy pair from ebay or similar.
2. Begin by removing the wheels from your bike. Remove the tyres, brake discs, drive spline etc so that you are left with a bare wheel.

SPOKE CONVERSION FLANGE INSTRUCTIONS



3. You will need the following tools to remove the hub:
- Angle grinder fitted with a thin metal cutting blade.
 - Hammer.
 - Old screwdriver that you don't mind hitting with the hammer.
 - A rod or punch about 6mm diameter.
 - A piece of wood to use as a lever.
 - **ALL NECESSARY PERSONAL PROTECTION EQUIPMENT**

4. Place the wheel on suitable supports with the comstar flange nuts uppermost.



5. Using the grinder make a vertical cut through the bolt and nut down as far as the comstar spoke to split the nut in half.



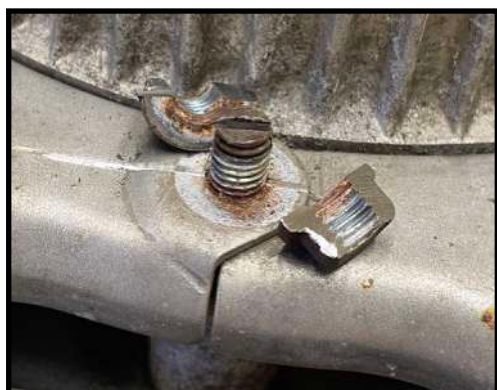
SPOKE CONVERSION FLANGE INSTRUCTIONS



- Repeat for all the fixing bolts, there will be 5 or 6 depending on the Comstar type.
- While you have the grinder going cut through one of the comstar spokes.



- Using the hammer and screwdriver split the two halves of the nut away



- The fixing bolts can now be nocked out using the hammer and rod.



Occasionally there may be a bolt that won't come out because it has corroded in place. See notes 12 to 17 below if that happens.

SPOKE CONVERSION FLANGE INSTRUCTIONS



10. Remove the inner half of the comstar spoke that you cut through. Then use the wood to lever the other spokes up out of the way to release the hub.



11. The hub can be de-greased and the bearings etc removed prior to installing the flanges.



NOTE :

12. If you have a bolt that won't release it is probably corroded into the hub and will have to be drilled out.
13. Turn the wheel over and cut off the bolt head with the grinder.
14. Cut through the necessary comstar spoke to release the hub.
15. Leave some of the corroded bolt proud of the face if possible as it can help to centre the drill.
16. The drilling is best carried out on a milling machine as it is important to do it as accurately as possible.
17. If you are sending your hubs to BSpoke for wheel building leave the stuck bolts in place and we will arrange to have them drilled.

SPOKE CONVERSION FLANGE INSTRUCTIONS



Installing the Conversion Flanges

1. The hub should be de-greased and the bearings removed if you are replacing them.
2. The steps to prepare the hub are as follows:
 - Remove bearings etc.
 - Clean the mounting faces.
 - Install the flanges.
 - Blast and paint the whole assembly
 - Install new bearings
 - Build wheel with rim and spokes.
3. The faces where the flanges will mount onto the hub need to be cleaned before installation.



4. It is recommended to use a nylon abrasive brush to do this in order to remove any dirt or corrosion.



SPOKE CONVERSION FLANGE INSTRUCTIONS



5. After abrading the faces they should be de-greased with brake cleaner or similar.



6. Inspect the flanges. If the number of spokes cannot be divided by the number of bolts there will be an index notch.

EG, 40 spokes, 5 holes = $40/5 = 8$ - No notch required

40 spokes, 6 holes = $40/6 = 6.66$ Index notch required.

The purpose of the notch is to ensure the spoke holes are staggered evenly on each side of the hub.

When there is a notch they must be located directly opposite to one another to ensure that the spoke holes align correctly.

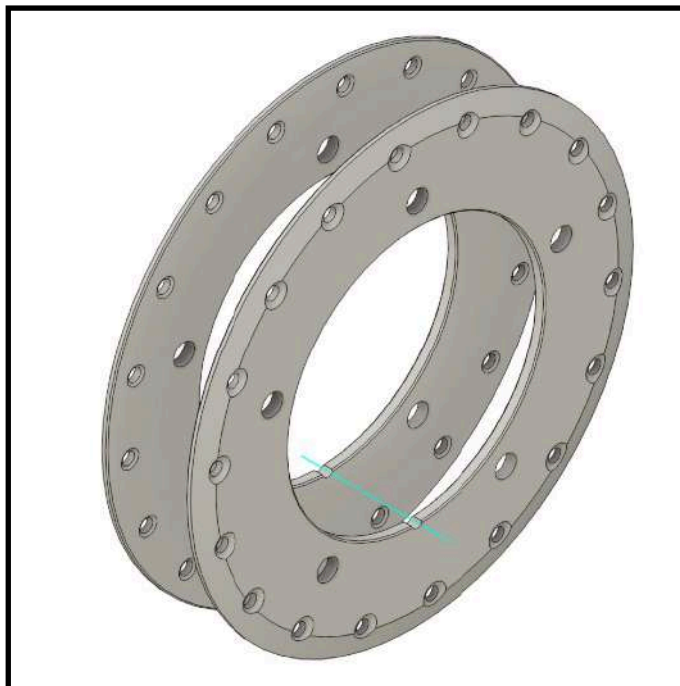
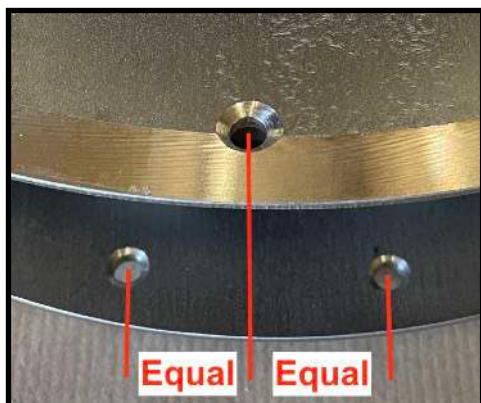
When there is no notch the flanges can be fitted in any position.



SPOKE CONVERSION FLANGE INSTRUCTIONS



7. Here you can see how the index notches are aligned on each side of the hub and the correct staggered alignment of the spoke holes.



8. Loctite High Strength Retainer should be used during assembly. Apply a few drops to each mounting face lug when installing the flanges.



SPOKE CONVERSION FLANGE INSTRUCTIONS



9. The flanges can be loosely assembled using the fixing bolts supplied.
10. On some rear hubs there may be one side where it is better to have the bolt head due to its lower profile.



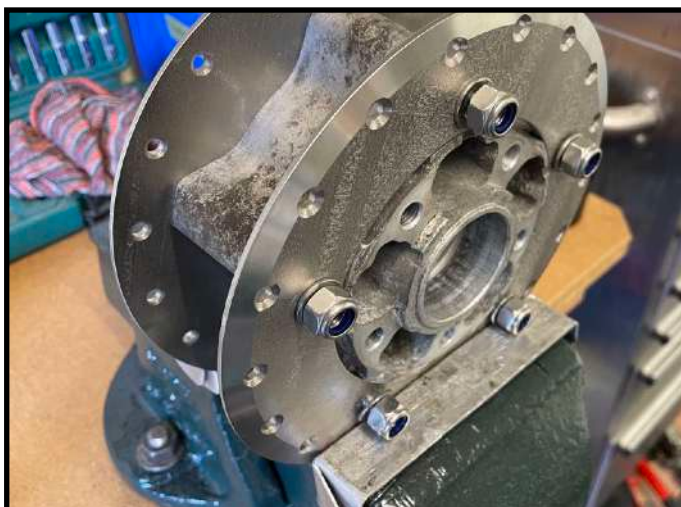
11. Use Loctite on the nuts also.



12. Tighten the fixings:

Torque M8 bolts to
28 N/m (21 lb/ft)

Torque M7 bolts to
18 N/m (13 lb/ft)



SPOKE CONVERSION FLANGE INSTRUCTIONS



13. The assembly can now be blasted prior to painting. Make sure to mask all bearing and braking surfaces. Also mounting surfaces for disk brakes.
14. After painting new bearings etc can be installed prior to building the wheel.

