

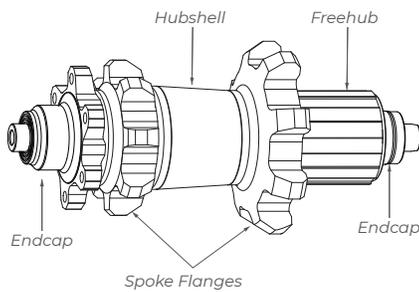
TORCH MOUNTAIN REAR HUB SERVICE

Industry Nine products are designed to keep you in the saddle and out of the service queue. Regular service and maintenance is simple and can be performed with basic tools readily available to the home or shop mechanic - **no proprietary tools are required.**

To properly service your Industry Nine Torch series hubs, please follow the steps below.

For more information: Call 828-210-5113, email service@industry-nine.com or visit industry-nine.com/support

ANATOMY OF A HUB



TOOLS

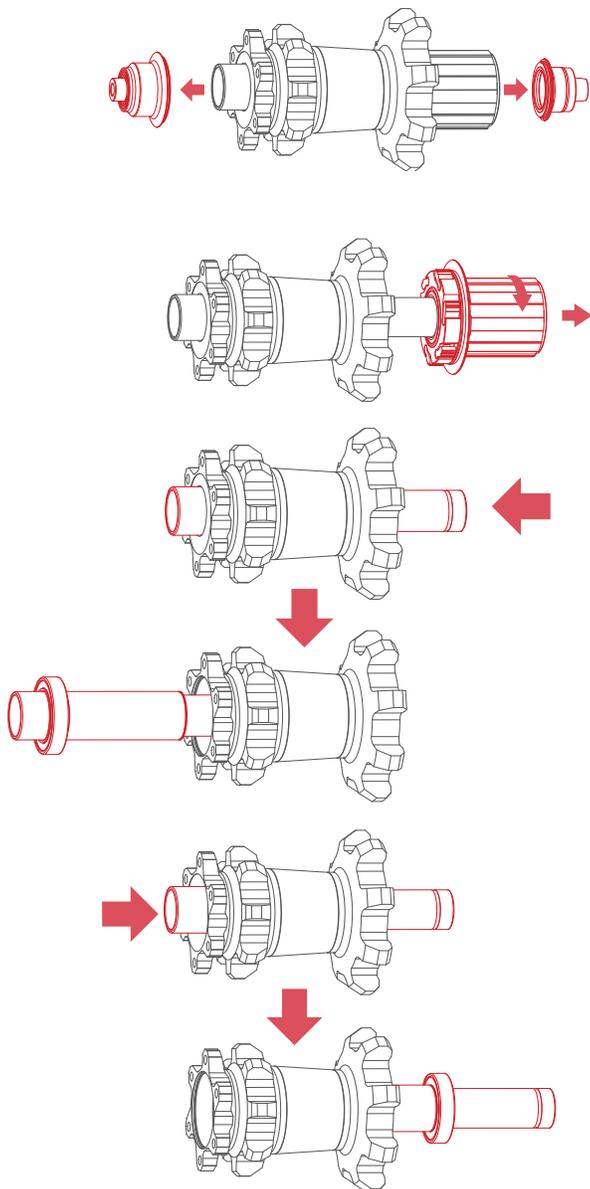
RUBBER / PLASTIC MALLET



BEARING LAYOUT CHART

HUBSHELL	DRIVE SIDE	NON-DRIVE SIDE
6 Bolt Mountain Front	1 x 61804	1 x 61804
6 Bolt Mountain Rear	1 x 61903	1 x 61804
Center Lock Mountain Front	1 x 18307	1 x 18307
Center Lock Mountain Rear	1 x 61903	1 x 61903
Lefty Front Mountain	1 x 61902	1 x 61805
FREEHUB	INBOARD	OUTBOARD
Torch XD, HG, Microspline	1 x 31803	1 x 61803

PRO TIPS: If you are having trouble getting the endcaps off, a (non-marring) soft jawed vice or soft jawed pliers can be used for removal.*



1.1 Rear Hub Disassembly - To disassemble your torch hubs you need to first remove the end caps from the axle. The end caps are held in place with a rubber O-ring seated in the endcap. Utilizing an axle vice to remove the endcaps is preferred. If an axle vise isn't available, end caps can be removed in some cases with a firm pull, or a pushed out from the opposite side with a punch, skewer, or through-axle. If you don't have access to an axle vise and more force is needed, you can protect the end cap with a shop rag and remove them with a bench vise or pliers utilizing light clamping force, so that you don't damage the endcaps.

1.2 Freehub Removal - Once the end caps are removed, the freehub can be pulled off by hand. Holding the wheel with the freehub facing down, and freewheeling it as it disengages from the driving, helps keep the pawls and their springs in place. It is a good idea to hold the wheel over a rag place on a shop bench or countertop, during this process, in case the pawls and/or springs are displaced from the freehub (the springs are small and can be easily lost if dropped on the floor.)

1.3 Rear Hub Axle + Bearing Removal - Once both end caps and the freehub are removed you will be left with an axle that is exposed on both sides. A tap with a mallet or soft surface from either side will dislodge the bearing and axle from the opposite side. The axle has shoulders that contact the inner race of the bearing, and will drive the bearing out of the hubshell. The order in which you remove the bearings does not matter.

The remaining bearing can be removed with a blind bearing puller or carefully with a drift/punch and a mallet. You can also reinsert the axle and use it to drive out the remaining bearing in the same manner you removed the first.

*Any service requiring removal of the 120 point drive ring should be done by Industry Nine or one of our approved distributors.

Reinsert the axle and use it to drive out the remaining bearing in the same manner you removed the first. The remaining bearing can also be removed with a blind bearing puller or carefully with a drift/punch and a mallet.

TORCH MOUNTAIN REAR HUB SERVICE

PRO TIPS:

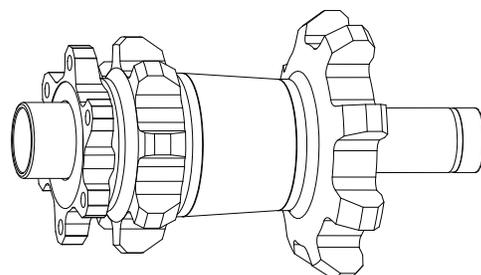
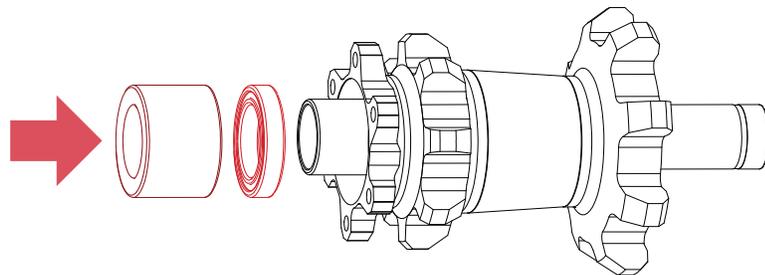
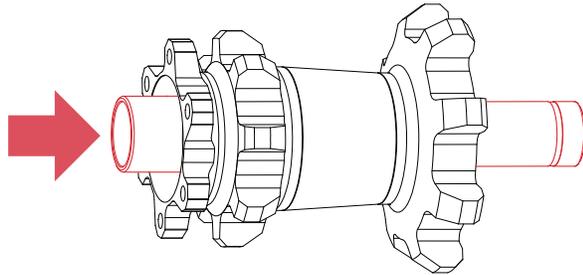
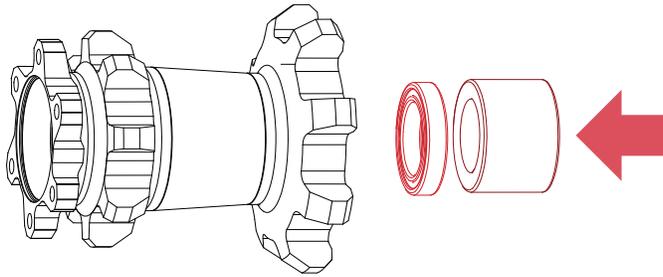
- *Reference Bearing Layout Chart for proper bearing size by hubshell type.
- Note grey side of bearing is designed to face outward from the product.
- To re-assemble, follow reverse order from disassembly. Take care to put all bearings in as straight as possible.
- You can install the bearings with a threaded rod bearing press, an arbor press, or a vice may be used to press in the bearings evenly and without impact.
- Be sure to thoroughly clean all components prior to assembly.

TOOLS
BEARING PRESS



BEARING LAYOUT CHART

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FREEHUB	INBOARD	OUTBOARD
Torch XD, HG, Microspline	1 x 31803	1 x 61803



1.4 Rear Hub Assembly - Start by lining the inside of your clean bearing bores with a thin film of grease, then press the drive side bearing into the drive side of the hub using a bearing press.

After the non-drive side bearing has been pressed in, put another thin film of grease on the outside the hubs axle, then insert it through the non-drive side of the hub.

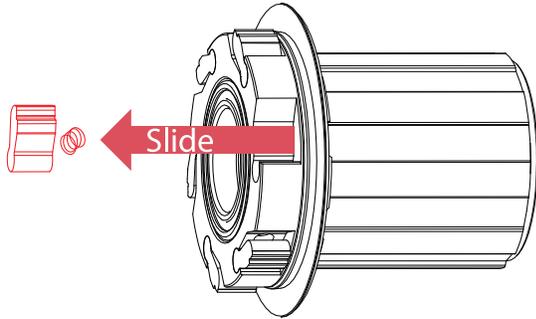
Press the non-drive side bearing over the end of the axle, into the non-drive side of the hubshell.

This will leave you with a hubshell that has an axle held captive by the two bearings.*

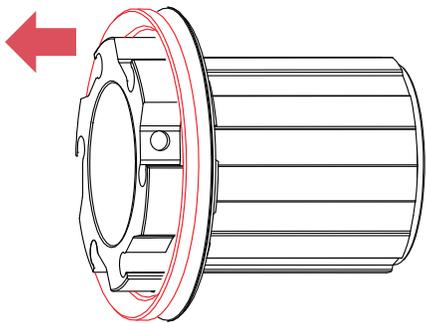
TORCH MOUNTAIN REAR HUB SERVICE

PRO TIPS:

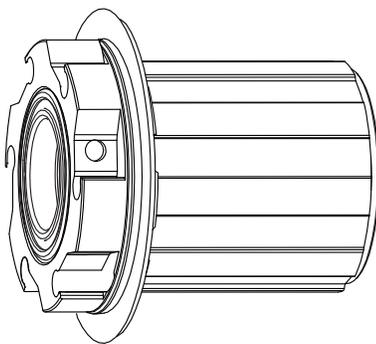
· Try to maintain perpendicularly to the bearing bore when removing bearings.



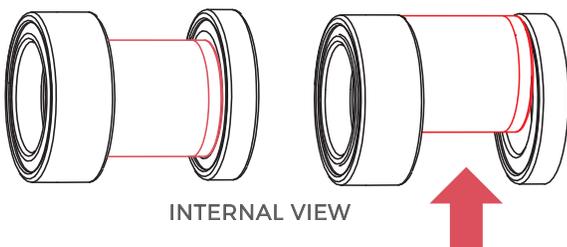
2.1 Freehub Disassembly + Service - Freehub drive components are easily removed by hand. The pawls slide out of the pawl pockets. The pawl springs should be paid special attention to when removing the pawls as to not lose them. The spring will typically slide out with the pawl.



2.2 Freehub Seal Access - This step is typically unnecessary in most service situations. Once the pawls are removed you can then access and service the freehub seal if needed. The **freehub seal** can be lifted from its seat with a little pressure.



2.3 Inner Freehub Bearing Removal - Once the drive components are removed from the freehub shell there will be **1 inboard and 1 or 2 outboard** bearings (depending on the freehub type) with a cylindrical spacer between them.



The **cylindrical spacer** can be shifted out of the way to access the inner race. Careful removal of one of these bearings (the order doesn't matter) with a blind bearing puller or tapped out with a drift or a punch will remove the bearing, allowing the spacer to be withdrawn. The remaining bearing should be removed in the same manner.

TORCH MOUNTAIN REAR HUB SERVICE

PRO TIPS:

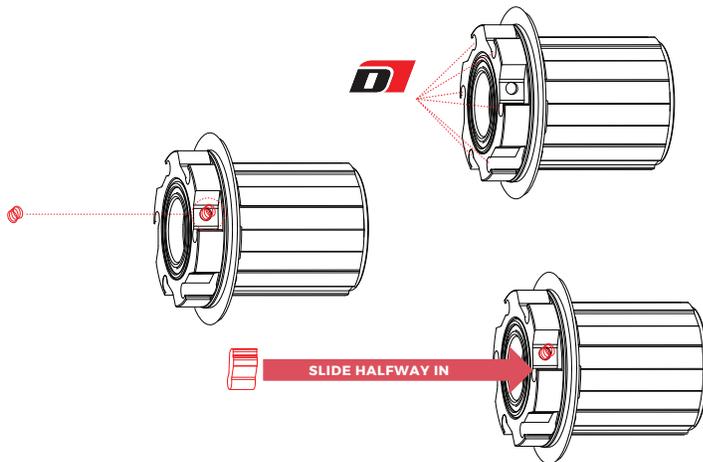
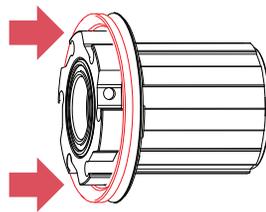
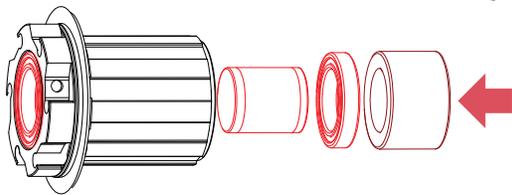
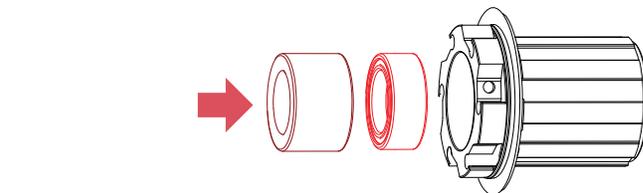
- *Reference Bearing Layout Chart for proper bearing size by hubshell type.
- Note grey side of bearing is designed to face outward from the product.
- To re-assemble, follow reverse order from disassembly. Take care to put all bearings in as straight as possible.
- You can install the bearings with a threaded rod bearing press, an arbor press, or a vice may be used to press the bearings in evenly and without impact.
- If there is additional drag found after assembly, it might be a result of an improper seal installation.
- Be sure to thoroughly clean all components prior to assembly.

TOOLS BEARING PRESS



BEARING LAYOUT CHART

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FREEHUB	INBOARD	OUTBOARD
Torch XD, HG, Microspline	1 x 31803	1 x 61803



4.1 Freehub Assembly + Service

The order in which the bearings are installed doesn't matter.

Be sure to put the cylindrical spacer in between the two bearings. You can install the bearings with a threaded rod bearing press, an arbor press, or a vice may be used to press the bearings in evenly and without impact.

4.2 Freehub Seal

-Before installing the freehub's pawls you will need to have the freehub's seal in place. This rubber seal can be pressed on by hand, make sure that there is no gap between it and the flange on the freehub.

4.2 Freehub Pawl Installation

-Lubricate the pawl-pockets with Dumonde Tech Freehub Oil. Take a pawl spring and push it into the spring-hole in the freehub body. A small Allen wrench will help locate the spring into the bore.

Next, slide a pawl halfway down into the pawl pocket. Then compress the spring with anything small enough to depress the spring and still fit between the pawl and the back of the pocket.

A small Allen wrench, small screwdriver, tweezers, etc. can be used. Make sure that the spring is securely seated on the freehub side and depress the pawl to make sure it has smooth action and its' full range of motion.

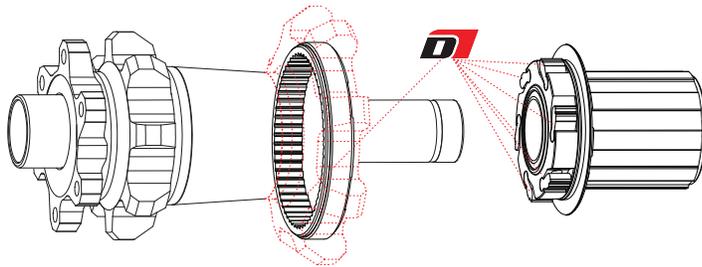
TORCH MOUNTAIN REAR HUB SERVICE

PRO TIPS:

- Apply grease to driving and pawls to quiet the freehub sound.
- Apply oil to driving and pawls to increase the freehub sound.

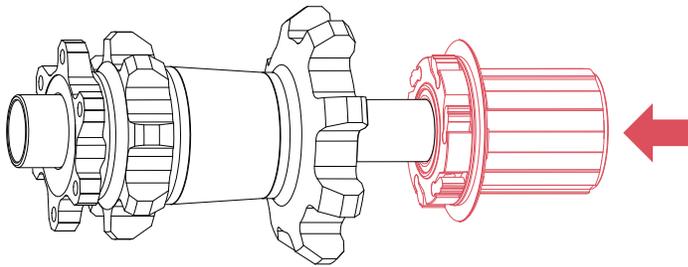
TOOLS

- DUMONDE TECH FREEHUB GREASE + OIL

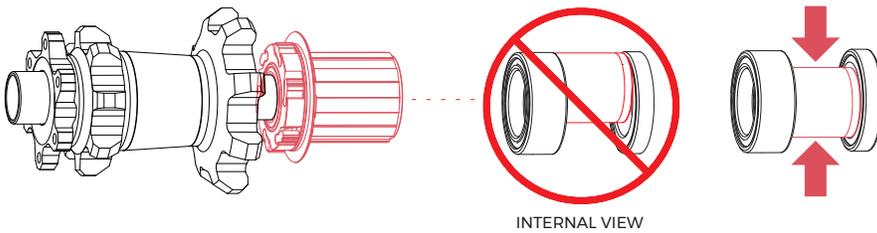


4.3 Free Hub Installation on Hub Shell

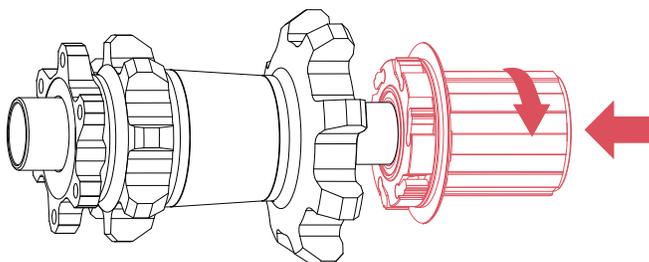
Apply a few drops of Dumonde Tech Freehub Oil to the driving, pawls, and freehub seal, as well as a thin film of grease to the axle.



Push the **freehub** onto the axle. Be sure that the freehub's **inner spacer is centered**, then slide the freehub over the axle onto the rear hub's drive side.



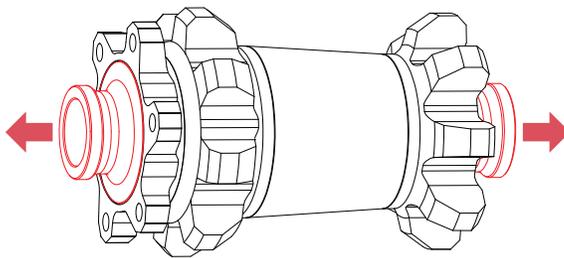
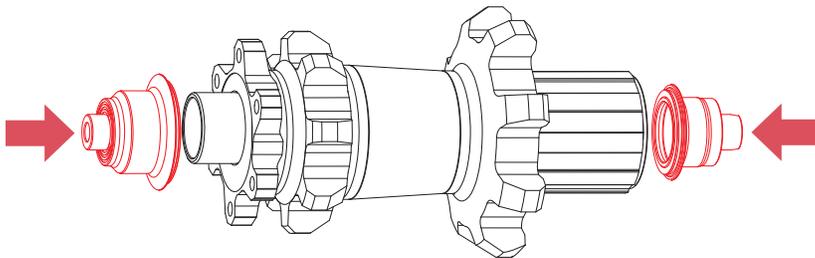
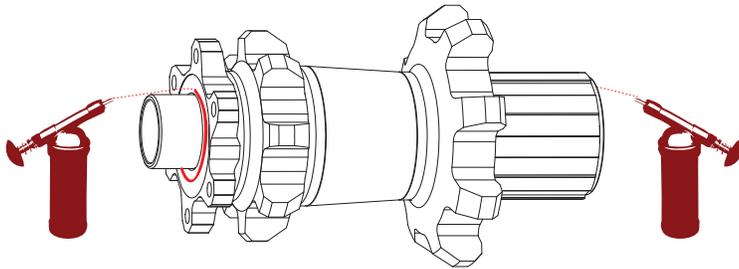
You will need to **center the cylindrical spacer** with your finger to in order for it to slide onto the axle.



Once the freehub makes contact with the driving gently press the **freehub** onto the hub while twisting it counter-clockwise to engage the pawls into the driving.

TOOLS

MARINE GREASE



5.1 Endcaps + Final Rear Hub Assembly - With the bearings, axle, and freehub installed you can now install the endcaps onto the axle to have a fully functional hub.

Put a film of marine grade (preferably) or other **waterproof grease** onto the front face of the bearing seal before installing.

When you push the endcap on, grease may get pushed out of the edges. The marine grease, create a membrane that will help keep your bearings from contamination that could reduce bearing life.

6.1 Front Hub Disassembly - The front hub consists of a cylindrical axle spacer held in place by two bearings and two **endcaps** pressed onto each side.

The cylindrical axle spacer has two o-rings, one per side. These o-rings keep the axle centered in the hub, but allows the spacer to tilt out of the way when removing bearings.

The front hub's **endcaps** are held in place with an o-ring seated in the endcap and saddled into an indent in the hubshell.

The **endcaps** can be removed with a light tug, or a poke through from your skewer or through axle. If more force is needed, protect the end cap with an axle vice or shop rag and pull off with a vice or pliers. Be careful not to damage the face that makes contact with your fork!

TORCH MOUNTAIN FRONT HUB SERVICE

PRO TIPS:

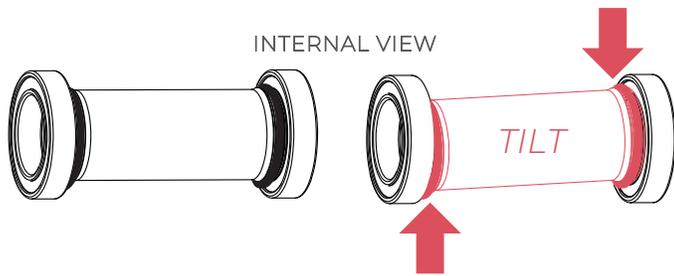
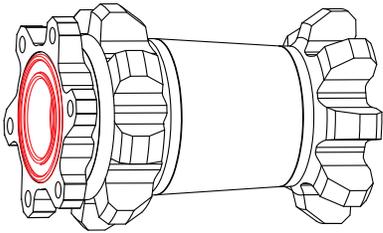
- *Reference Bearing Layout Chart for proper bearing size by hubshell type.
- Note grey side of bearing is designed to face outward from the product.
- To re-assemble, follow reverse order from disassembly. Take care to put all bearings in as straight as possible.
- You can install the bearings with a threaded rod bearing press, an arbor press, or a vice may be used to press the bearings in evenly and without impact.

TOOLS BEARING PRESS



BEARING LAYOUT CHART

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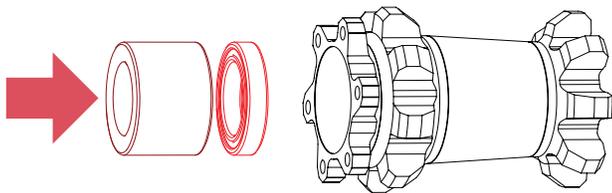


6.2 Front Hub Bearing Removal

- With the hub's end caps removed, there will be two bearings on each side with a spacer held captive in between them.

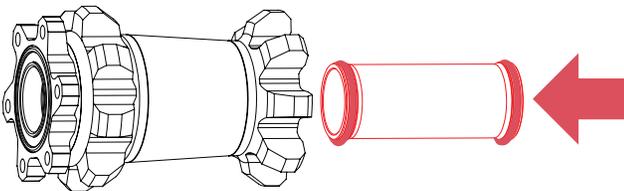
In order to remove a bearing you will need to cock the **inner spacer** to one side or another to expose the inner race of the bearing. This allows you to remove the bearings with a blind bearing puller or tapped out with a drift/punch.

If using a drift or a punch to knock the bearings out, be sure to alternate sides so that it is removed as evenly as possible. Once one bearing is removed (the order of removal does not matter) the spacer will fall out. The remaining bearing should be removed in the same way.

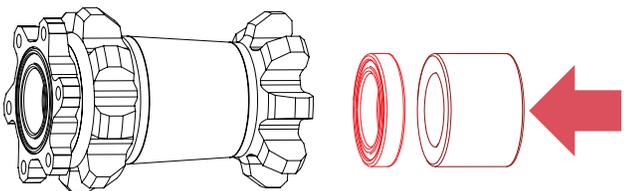


7.1 Front Hub Assembly

- Press **one bearing into the front hubshell**. The side you choose first does not matter.



Insert the inner spacer into the hubshell. Make sure that the **inner spacer's o-rings** are seated properly.



Press the second bearing into the other side. using a threaded rod **bearing press**, arbor press, or vice. Press the bearings in evenly and without impact.

INDUSTRY NINE SERVICE GUIDE

TORCH MOUNTAIN FRONT HUB SERVICE

PRO TIPS:

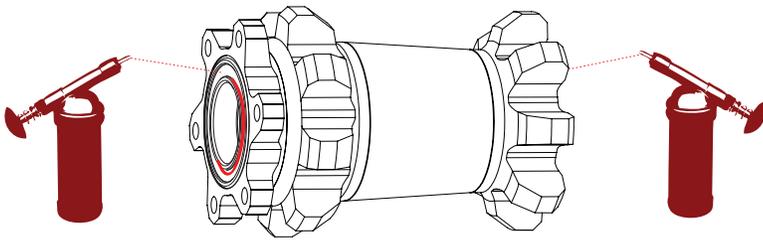
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TOOLS
BEARING PRESS
MARINE GREASE



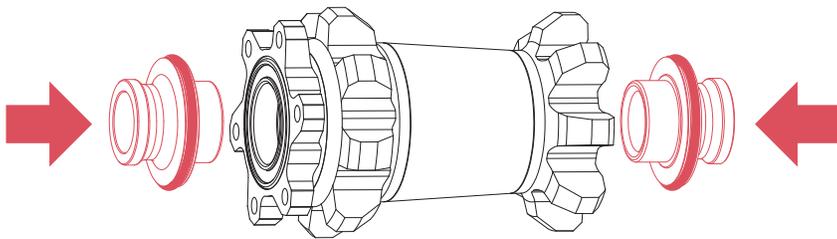
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Torch XD, HG, Microspline	1 x 31803	1 x 61803



7.2 Front Endcap Installation - Coat the seal of the bearing with a film of **marine grease** before pressing the endcaps into the hub.

Coat the o-rings inside the endcaps with **grease**.



Marine grease will create a membrane that will help keep your bearings free from contamination.