

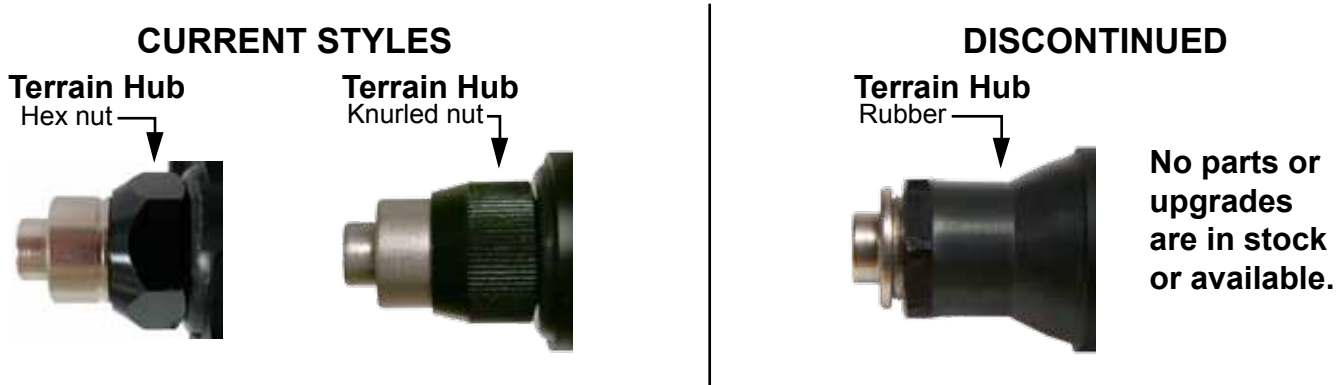
Terrain Rear Disc Hub: 12 x 142mm Thru Axle Retrofit



American Classic Rear Terrain Hub Bearing Change, Cassette Body Swap and Overhaul Instructions.

IDENTIFY YOUR TERRAIN HUB

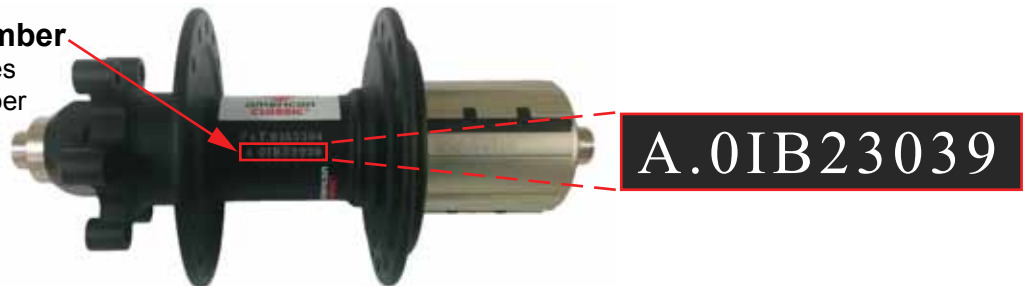
To identify, see the non-drive side of the hub (side without the cassette). Terrain hubs are in Terrain, Terrain Tubeless, and TCX Trekking wheel sets. Some Terrain hubs say "TERRAIN" on them. **Please note**, you can not determine which bearing sizes you need from looking at the outside of the hub. Some Terrain Rear Hubs require (4) 15267 bearings and others require (2) 6902 bearings in the hubshell and (2) 15267 bearings in the cassette body.



WHAT PARTS ARE COMPATIBLE WITH YOUR TERRAIN REAR HUB?

1. Find your Serial Number

- Between the hub flanges
- Below the Patent Number
- Begins with a letter



2. Terrain parts compatibility based on your Serial Number:

Serial Numbers beginning with A, B, or C

- Light Gold Terrain Shimano 9/10 Body
- Red Terrain Sram XD Body
- Terrain Quick Release Axle Kit
- Terrain 10x135mm Thru Axle Kit
- Terrain 12x142mm Thru Axle Kit

Serial Numbers beginning with D, E, or F

- Blue Terrain Shimano 10/11 Body
- Red Terrain Sram XD Body
- Terrain Quick Release Axle Kit
- Terrain 10x135mm Thru Axle Kit
- Terrain 12x142mm Thru Axle Kit

• **Tools Needed:** Two 12mm hex wrenches, needle nose pliers, 10mm socket, adjustable wrench, hammer, and small punch (at least 1/4" thick). You will also need degreaser such as Finish Line Citrus BioSolvent and a synthetic waterproof grease such as Pedro's SynGrease.

• **While disassembling the hub, keep all loose parts organized on a clean rag or paper towel. Do NOT modify or bend the cassette body loop spring in any way. Proper re-assembly is important to rider safety.**

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Terrain Hub (with Hex or Knurled Nut)



1. Insert a 5mm hex wrench into each end of the silver endcaps (where quick release goes through, one on each side).



2. Unthread non-drive side end cap only (side with no cassette).



3. Keep the 5mm hex wrench in drive side (side with cassette) end cap to hold the axle in place and unthread the hex or knurled nut with dust seal.



4. Once the end cap and adjusting nut are removed, you are ready to open the hub.



5. Separate the cassette body and axle from the hub shell by grabbing the body with your hand and pulling it out from the drive side.

Very Important!

Locate the 0.5mm axle spacer, which is either stuck to the drive side hub shell bearing or the inner bearing on the cassette body. **This spacer is critical to maintaining the correct engagement, do not lose.**

0.5mm axle spacer.

Note: Some hubs have an additional 0.5mm spacer between the cassette body and the outer axle cap.



6. Remove large black pawl seal from the hub shell.

**If you are installing new bearings continue to page 3.
If not, please find your combination below.**

AGAIN, FIND YOUR SERIAL NUMBER AND CASSETTE BODY COMBINATION

Serial Numbers beginning with A, B, or C

- Light Gold Shimano 9/10 - See Page 4
- Red Sram XD - See Page 6

Serial Numbers beginning with D, E, or F

- Blue Shimano 10/11 - See Page 5
- Red Sram XD - See Page 6

Proper re-assembly is important to rider safety.

All repairs should be performed by a professional bicycle mechanic.

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7. Remove pawls.



8. Remove cam plate. **IMPORTANT:** Keep cam plate for re-installation in Step 11.



9. Clean out the hub shell for inspection and new grease.

Bearing Removal:

You will need a hammer and small punch. Place the punch through the hub shell resting it on the opposite bearing's inner race.

Tap lightly with a hammer to remove each bearing, working around the bearing keeping the bearing as straight as possible.

NOTE: Identify hub shell bearings to see if 15267 or 6902 bearings are required. Bearing number is printed on bearing seal.



10. Bearing Installation: Position a new bearing onto the hub shell. Place old bearing on top of new bearing.

Tap lightly with a hammer, working around the bearing, keeping the bearing as straight as possible. Do not force the bearing. Make sure when tapping the bearing, it is going into the bore straight and evenly.

Re-install silver split sleeve.

Install second bearing and re-grease the hub shell before installing cam plate and pawls.

Note: Using bearings other than American Classic bearings will void the warranty and they may not function properly.



11. With a thin layer of clean grease coating the hub shell, re-install the cam plate. Refer to the picture for the correct orientation. Do not put the cam plate in upside down.



12. With a thin layer of clean grease coating the top of the cam plate, install all 6 pawls. Once completed, the pawls should freely engage in unison with the cam plate.

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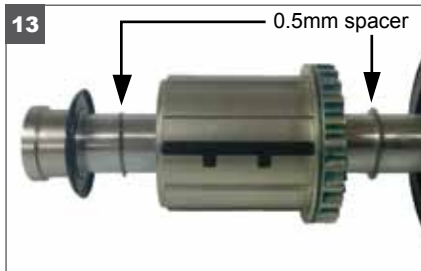
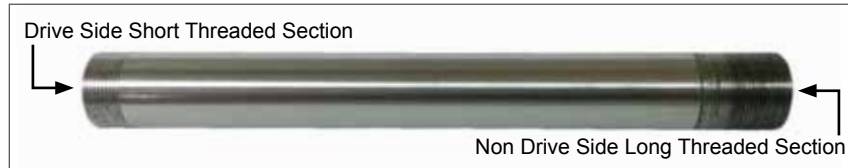
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Light Gold Shimano 9/10 body for Serial Numbers beginning with A, B, or C



Shimano 9/10 Axle Assembly.

With a thin layer of clean grease coating the pawls, join the axle, cassette body and spacers with the hub shell.

Order: End Cap > Dust Seal > 0.5mm spacer > Shimano 9/10 cassette body > 0.5mm spacer > Hub shell.



Very Important:

14. The large black pawl seal **MUST** be installed after the cassette body and axle have been joined with the hub shell.

With the axle pushed completely into the hub shell and pawls fully engaging with the cassette body, install the large black pawl seal.

NOTE: After completing Step 14, be sure the seal is securely in the groove on the cassette body and you can rotate the body freely without the seal moving. A bit of Tri-Flow® or similar lubricant will help with friction between the groove in the body and this seal.

Final Hub Assembly:



15. When the bare threaded axle is showing, grease threads and then re-install the knurled adjusting nut and end cap.



A. Insert 12mm hex wrench into drive side end cap. Keep the 12mm hex wrench in place.



B. Tighten the adjusting nut with dust seal until snug against the bearing. The O-ring inside the adjusting nut provides drag to hold the bearing adjustment.



C. Keep 12mm hex wrench in drive side. Place the 1.8mm spacer on the axle and thread on the end cap using another 12mm hex wrench.

Final Bearing Adjustment:

The purpose of adjustability is to extend the life of your bearings while reducing friction and rolling resistance to boost performance. The desired adjustment for American Classic hubs is described as "slightly more than no play" as to not overload the bearings. Some play will be removed with the clamping action of your quick release.



16. Insert the 12mm hex wrench into the cassette side end cap. Holding the hex wrench in place, the hex adjusting nut can be used to adjust the play. The internal O-ring will hold it in place, no lock nut is required. This can be done with fingers or with an adjustable wrench.

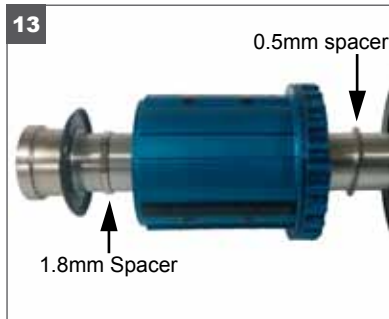
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Blue Shimano 10/11 body for Serial Numbers beginning with D, E, or F

Very Important: Blue Shimano 10/11 bodies only fit if the hub's Serial Number begins with D, E, or F.



Shimano 10/11 Axle Assembly.

NOTE: If switching from Sram XD to Shimano 10/11 the wheel will require redishing.

With a thin layer of clean grease coating the pawls, join the axle, cassette body and spacers with the hub shell.

Order: End Cap > Dust seal > 1.8mm spacer > Blue Shimano 10/11 cassette body > 0.5mm spacer > Hub shell.



Very Important:

14. The large black pawl seal **MUST** be installed after the cassette body and axle have been joined with the hub shell.

With the axle pushed completely into the hub shell and pawls fully engaging with the cassette body, install the large black pawl seal.

NOTE: After completing Step 14, be sure the seal is securely in the groove on the cassette body and you can rotate the body freely without the seal moving. A bit of Tri-Flow® or similar lubricant will help with friction between the groove in the body and this seal.

Final Hub Assembly:



15. When the bare threaded axle is showing, grease threads and then re-install the knurled adjusting nut and end cap.



A. Insert 12mm hex wrench into drive side end cap. Keep the 12mm hex wrench in place.



B. Tighten the adjusting nut with dust seal until snug against the bearing. The O-ring inside the adjusting nut provides drag to hold the bearing adjustment.



C. Keep 12mm hex wrench in drive side. Thread on the end cap with another 12mm hex wrench.

Final Bearing Adjustment:

The purpose of adjustability is to extend the life of your bearings while reducing friction and rolling resistance to boost performance. The desired adjustment for American Classic hubs is described as "slightly more than no play" as to not overload the bearings. Some play will be removed with the clamping action of your quick release.



16. Insert the 12mm hex wrench into the cassette side end cap. Holding the hex wrench in place, the hex adjusting nut can be used to adjust the play. The internal O-ring will hold it in place, no lock nut is required. This can be done with fingers or with an adjustable wrench.

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Red Sram XD body

Very Important: The Gray Rotor Spacer must be used if the hub's serial number begins with D, E, or F.



Sram XD Axle Assembly.

NOTE: The Gray Rotor Spacer must be used if the hub's Serial Number begins with D, E, or F to correctly space the rotor. If switching from Shimano 10/11 to Sram XD the wheel will require redishing.

With a thin layer of clean grease coating the pawls, join the axle, cassette body and spacers with the hub shell.

Order: End Cap > **NO DUST SEAL** > 1.8mm spacer > Sram XD cassette body > 0.5mm spacer > Hub shell.



Very Important:

14. The large black pawl seal **MUST** be installed after the cassette body and axle have been joined with the hub shell.

With the axle pushed completely into the hub shell and pawls fully engaging with the cassette body, install the large black pawl seal.

NOTE: After completing Step 14, be sure the seal is securely in the groove on the cassette body and you can rotate the body freely without the seal moving. A bit of Tri-Flow® or similar lubricant will help with friction between the groove in the body and this seal.

Final Hub Assembly:



15. When the bare threaded axle is showing, grease threads and then re-install the knurled adjusting nut and end cap.



A. Insert 12mm hex wrench into drive side end cap. Keep the 12mm hex wrench in place.



B. Tighten the adjusting nut with dust seal until snug against the bearing. The O-ring inside the adjusting nut provides drag to hold the bearing adjustment.



C. Keep 12mm hex wrench in drive side. Place the 1.8mm spacer on the axle and thread on the end cap using another 12mm hex wrench.

Final Bearing Adjustment:

The purpose of adjustability is to extend the life of your bearings while reducing friction and rolling resistance to boost performance. The desired adjustment for American Classic hubs is described as "slightly more than no play" as to not overload the bearings. Some play will be removed with the clamping action of your quick release.



16. Insert the 12mm hex wrench into the cassette side end cap. Holding the hex wrench in place, the hex adjusting nut can be used to adjust the play. The internal O-ring will hold it in place, no lock nut is required. This can be done with fingers or an adjustable wrench.