HYPERCO
High Performance Components

Hydraulic Perches Maintenance & Rebuilding

Congratulations on your purchase of Hyperco/ICP Hydraulic Perches! With minimal maintenance, this quality product should last for many seasons of useage.

These perches have four potential enemies : dirt, excessive heat, massive overloading, and trapped air. The following is a guide for you to get the most out of your purchase.

Rebuilding the Hyperco/ICP Hydraulic Perch

Hyperco/ICP Hydraulic Perches can be easily rebuilt by the user. Only six tools are necessary:

• Regular flat blade screwdriver (or aluminum wedge) - used to pry the 2 halves apart.

• Small Phillips screwdriver - for removal and insertion of the sealing screws

• Dental pick, or a toothpick - for removal of the seals

• Small, flat bottomed pan, .5" deep - for refilling and bleeding the unit

• Gap setting ring - used to set the proper gap between the two halves. Each model of perch requires it's own special gap setting ring, and are available separate from the rebuild kits. Consult us for the proper ring.

• 1 qt plastic bottle of oil with 1⁄4" diameter tip - - used to fill the assembly.

Use only official Hyperco/ICP rebuild components!

Rebuild kits are available for each model. Please specify which model you have when ordering the kit. Use of other than Hyperco/ICP supplied components will result in the unit's failure to operate correctly, or damage to the unit. The seals are Teflon coated for us on a custom basis – do not use standard o-rings! Failure to use the Tefloned seals will result in the unit sticking and not functioning correctly.

Step 1

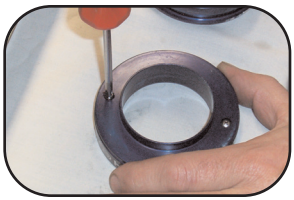
Remove the sealing screws and throw away – they need to be replaced with each rebuild.

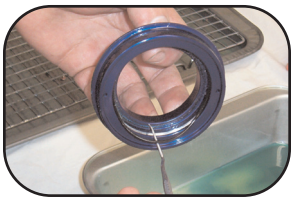
Gently pry apart the two halves. Use caution – DO NOT SCRATCH THE WALL SURFACES!

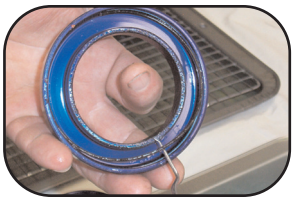
Remove the seals using the pick. Again, use caution so as to not scratch or ding the surfaces.

Spray the surfaces clean of all residual oil, and inspect the surfaces for any wear marks or scratches.

Line type scratches indicate that dirt was trapped between the walls. Wide areas of scuffing indicate that the unit's halves were not aligned correctly and rubbed against each other.



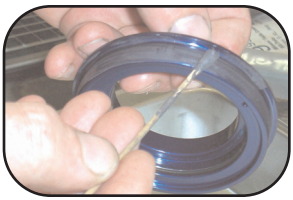




Step 2

Install the new seals. Inspect first to be sure that they do not have any molding, parting line flashing, or nicks.

Coat the walls and the seals with assembly grease. A cotton swab is provided in the rebuild kit for your convenience. Use as little grease as possible – it only needs to coat the surface with a thin film. FAILURE TO COAT THE SURFACE WITH THE SPECIAL GREASE PROVIDED WILL RESULT IN THE UNIT NOT OPERATING CORRECTLY! This special grease is necessary to prevent the seals from sticking to the walls after being motionless for a while.



Step 3

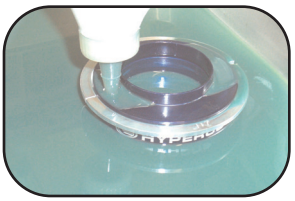
Squeeze the 2 halves together, using the Gap Setting Ring to align the halves. Keep the halves as square as possible to each other while squeezing – allowing them to tilt while being pushed together will most likely push a section of one or both of the seals out of it's groove and destroy the seal.

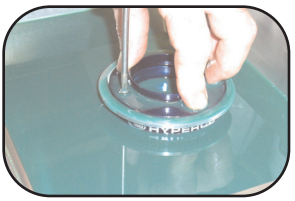
Step 4

Fill the unit by inverting the oil bottle and pushing the tip into one of the sealing screw recesses. Keep firm pressure on the piston with one hand to keep it seated against the Gap Setting Ring. Squeeze the bottle to force fluid thru the perch until no more air bubbles appear. It is advisable to stop squeezing the bottle a few times to allow any bubbles trapped in an area of turbulence to dislodge themselves.

Install the screws. Again, keep a steady pressure with one hand against the piston to keep it firmly seated against the Gap Setting Ring. If you remove the pressure before both screws are fully seated, it is possible to suck air back into the fluid cavity. If that happens, you will have to bleed the unit again.

We recommend that a high-quality synthetic gear lube with a moly additive be used, or you may purchase it from us. Do not use brake fluid! The standard seals are not compatible with brake fluids – they will swell and seize up the unit.





Step 5

Remove the unit from the pan. Remove the gap setting ring and set the unit on its edge for a few minutes to allow any oil trapped between the two halves to drain out. Spray clean with brake clean or in a parts washer. Dry with a rag.

Work the unit with your fingers to make sure that it moves freely and that there are no leaks. If it doesn't move freely, recheck the gap with the setting ring – if the gap is incorrect, reinstall the Gap Setting Ring, remove the screws while maintaining pressure on the perch and re-bleed.

Repeat the cleaning and draining process.

You will often see a light coat of fluid on the surface of the outer wall – this is normal.

Reinstall on the shock.

Dirt:

The clearances between the two halves of the perches are very tight – less than .002" – which makes them susceptible to damage from dirt if neglected for too long. Their smooth and efficient operation is dependent on the walls staying scratch-free.

If your car has its shocks exposed to picking up dirt and debris from the track, we advise that you check the gap between the two halves for any foreign matter after every on-track session. If any is to be found, just spray until clean with either brake cleaner, mineral spirits, alcohol, or a soap and water solution. Do NOT spray clean with a pressure washer!

If these perches are used in especially dirty environments, it may be possible to "seal" the unit with a wide rubber band to keep the dirt out. The rubber band will most likely work it's way off over a period of time, so frequent inspections and adjustments will be necessary.

Heat:

The recommended maximum operating temperature for the standard seals is 230 degrees Fahrenheit. If normal usage is expected to exceed that upper limit, the seals will need to be changed to Viton. Contact us for the proper seals for your unit.

Overloading:

Recommended maximum load for most units is 4500 pounds. Loads above this can lead to seal damage, and leakage. Some special units are sized for smaller loads – check with Hyperco if you expect loadings above 2000 pounds.

Air Trapped Inside:

Air trapped inside of the unit will allow it to collapse slightly once out on the track, causing a loss in ride height. The unit will also lose proper relationship between the two halves, allowing the walls to come in contact with each other, resulting in the unit jamming up and not working as designed. Repeated wall contact will eventually destroy the unit.

Life Time Between Rebuilds:

This Hydraulic perch is a precision product that is in constant motion while you are out on the track. While conditions of operation will vary the rebuild requirements, we recommend a maximum cycle time between rebuilds of 10-12 hours. Dirty environments and high loading will decrease the time allowable between rebuilds.

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