

## ZipperDrive Traction Belt System

A belt-traction system, which use may include (but is not limited to) a land-based vehicle or a drill / subterranean vehicle (on Earth or other planets, moons, asteroids or other bodies), contains features which may be geometric, magnetic, or otherwise attractive, which allow the traction belts to link together or otherwise transfer force or power from one belt to the other(s) for the purposes of locomotion or transport (includes the transport of goods via conveyor, etc.). It is envisioned that this technique may be used with the borebots drilling strategy (ref. Morley, 2021, [http://www.marspapers.org/paper/Morley\\_2021.pdf](http://www.marspapers.org/paper/Morley_2021.pdf) and <https://borebots.fyi> and [https://www.nasa.gov/directorates/spacetech/niac/2021\\_Phase\\_I/Autonomous\\_Robotic\\_Demonstration\\_for\\_Deep\\_Drilling/](https://www.nasa.gov/directorates/spacetech/niac/2021_Phase_I/Autonomous_Robotic_Demonstration_for_Deep_Drilling/)) as shown in Figure 1 and 2 below. The system as prototyped allows for debris to pass through the traction belt system without causing jams or breakage.

Video: <https://www.youtube.com/shorts/fARg3XMnxzk>



Figure 1 (left) and Figure 2 (right): Prototype ZipperDrive traction belts.