

Screw-Locking Wrench

Case Number: GSC- 14561-1

Patent Number: 7,207,245

Patent Exp. Date: 6/30/2025

DESCRIPTION

This invention is a screw-locking wrench for use by astronauts. The wrench has an upper screw lock and a lower screw lock surrounding a central cylindrical portion of a locking clutch drive. A lubed spline washer is disposed between the upper and lower screw locks. A drive member is disposed along a central axis, for driving a fastener. An upper handle and a lower handle are rotated in opposite directions with respect to the common axis. A preload spring pocket is provided between a gripping end and a working end for holding a preload spring.

FEATURES AND BENEFITS

- The configuration of the wrench provides the wrench with negligible backlash/dead zone region, negligible load bearing limitation, and provides simpler preload scheme. The wrench allows simple one-handed operation, and allows unlock operation by a simple turn of a wrist. The wrench is simple in construction and operation, reliable, less expensive and compact.

APPLICATIONS

- Satellites
- Mission Servicing

FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-14561-1, please contact:

Darryl Mitchell
Technology Manager
NASA Goddard Space Flight Center
Innovative Partnerships Program Office
darryl.r.mitchell@nasa.gov
301-286-5169