## PREPARE FOR THE UNPREDICTABLE

Product reliability in field, particularly in harsh environments, is paramount to the success of critical missions. Thats why we made on-the-go serviceability a priority when designing and developing the Reach $X$. In the event of a joint failure a single spare can be used to swap out the broken module in a matter of minutes without special tools or training. Common joint architecture along the Reach $X$ manipulator mean all joints are replaceable with just a few different spares on hand.

The Reach X Spares and Service Kit includes both high-speed and high-torque joints, as well as the tools and accessories required to make repairs and rapid configuration changes as necessary. Reduce costs associated with holding a full system spare and increase your operational efficiency today.


- Vacuum Items:
(Spare valves and tools to help pull vacuum on the joint if it lost any pressure during the module swap)
(1) YT-0673 Yato Vacuum Pump $\times 1$
(1) Vacuum Hose $(10 \mathrm{~mm} \times 395 \mathrm{~mm}) \times 1$
(1) RS1J-201 (Vacuum Port Hose Connection) $\times 1$
(8) RS1-319 (Sealing Screw) $\times 5$
(8) 9452 K 110 (Vacuum Port O-Ring) $\times 5$
(8) Alpha Duckbill Valve Assembly $\times 5$


## - Parts:

(Spare components if any are lost)
(5) RR USB w/ module swap documentation
(11) Jaw Bayonet Piston Ring
(12) Interconnect O-rings
(13) Spare module connection Bolts $\times 6$

## - Tools:

(All the drivers and tools needed to swap a joint and perform basic maintenance)
(4) Wera Torque Driver $\times 1$
(6) Wera Hex Key 2.5 mm 118094 (Hex Driver) $\times 1$
(7) Wera Torx bit (Alpha vac screw) $\times 1$
(14) RS2J-1028 (Bravo Piston Ring Tool) $\times 1$

## - Greases:

(Can be applied to bolts and O-rings if they need to be replaced)
(9) Silicon Grease Tube $\times 1$
(10) Marine Grease Tube $\times 1$

## - Joints:

(One spare high torque joint, and one spare high speed)
(2) 14-1001 HT Joint $\times 1$
(3) 14-1002 HS Joint $x 1$

