

Service Manual

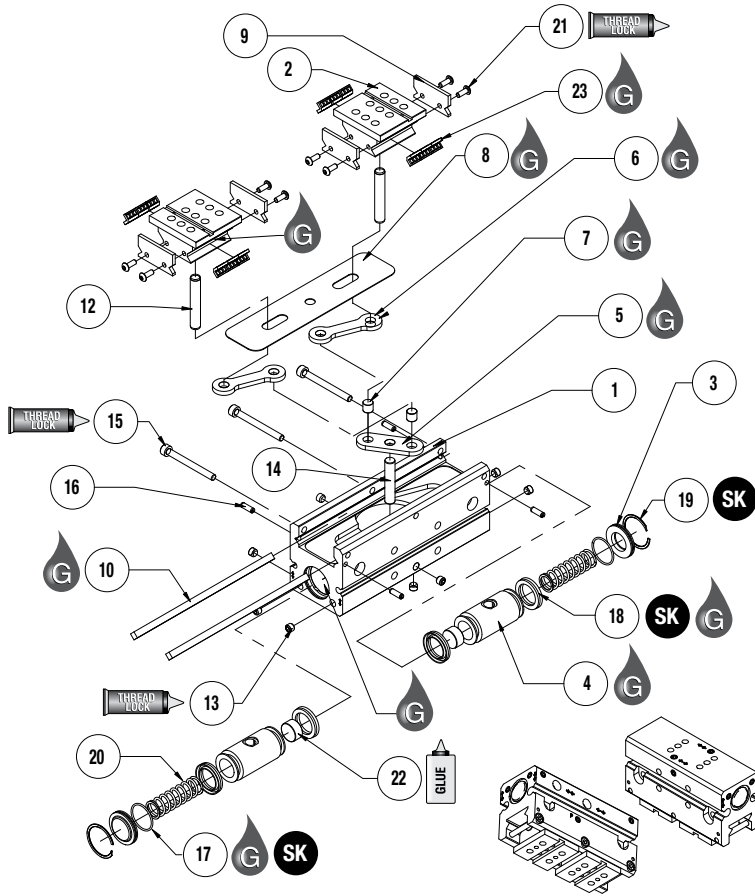
ROBOHAND | DPP Series



WARNING: This is a controlled document. It is your responsibility to deliver this information to the end user of the Destaco Robohand product. Failure to deliver this could result in your liability for injury to the user or damage to the machine. For copies of this manual, call your Customer Service Representative at 1.248.836.6700

DPP SERIES

Parallel Grippers | Maintenance and Assembly Procedure



Item	Qty	Name
01	1	Body
02	2	Jaw
03	2	Cap
04	2	Piston
05	1	Equalizer
06	2	Link
07	2	Equalizer Pin
08	1	Linkage Cover
09	4	Wiper
10	2	Way
12	2	Drive Pin
13	10	Set Screw – Air & Purge Plug
14	1	Pivot Pin
15	3	Preload Screw
16	4	Way Locating Pin
17	2	O-Ring – Cap Seal
18	4	U-Cup – Piston Seal
19	2	Retaining Ring
20	2	Spring for -C Spring Closed Option
21*	–	BHCS – Wiper Mounting Screw
22*	–	Magnet
23*	–	S'assy, Cage & Roller Bearings

Notes:

- 1) Contact the Robohand Sales Department for a complete spare parts list with order number and prices.
- 2)* Item #21 quantity varies per gripper size. Size -10M has 4 per unit. Sizes -14M, -20M have 8 per unit.
- 3)* Item #22 quantity varies per gripper size. Size -10M has 4 per unit. Sizes -14M, -20M have 2 per unit.
- 4)* Item #23 quantity and number of different sub-assemblies varies per gripper model. Contact Sales to determine the correct quantity and part numbers needed.

SK Seal Repair Kit Order #'s See Product Data Sheets

Assembly Procedure:

- 1) Lubricate #1 body (jaw cavity & bore).
- 2) Plug cross ports in body with #13 set screws.
- 3) Press #14 pivot pin into body.
- 4) Insert #22 magnet(s) into each #4 piston making sure magnets repel each other between pistons.
- 5) Lubricate and install #18 seals onto pistons.
- 6) Insert pistons into body with magnet sides facing in toward pivot pin.
- 7) Press #7 equalizer pins into #5 equalizer.
- 8) Assemble equalizer with #6 links and place onto pivot pin in body making sure holes in links line up with holes in pistons.
- 9) Place #8 linkage cover over equalizer and link assembly and seat in body pocket.
- 10) Press #12 drive pin into each #2 jaw.
- 11) Lubricate jaw bearing surfaces and install #9 wiper on each jaw end with #21 mounting screws.
- 12) Place #23 cage and roller bearing assemblies on jaw bearing grooves.
- 13) Place jaws into body aligning the drive pins with the holes in the linkage cover, links, and pistons. If jaws have off center key slot in them, jaws should be installed with this slot farther away from the gripper's center.

- 14) Slide #10 ways into body trapping them between body and jaws.
- 15) Install #16 way locating pins at each end of body to secure ways.
- 16) For -C spring closed option, insert #20 springs into pistons.
- 17) Place #17 seals onto #3 caps and install onto body with #19 retaining rings.
- 18) Install #15 preload screws and torque per preload adjustment procedure.

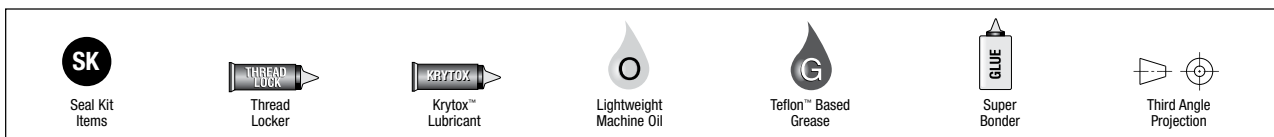
Preload Adjustment Procedure:

- 1) Tighten center preload screw first and then outer ones to the torque specification in step 2.
- 2) Use the following torque specification per gripper.
DPP-10M – 6 in-lbs [0.68 Nm]
DPP-14M – 8 in-lb [0.90 Nm]
DPP-20M – 13 in-lb [1.47 Nm]

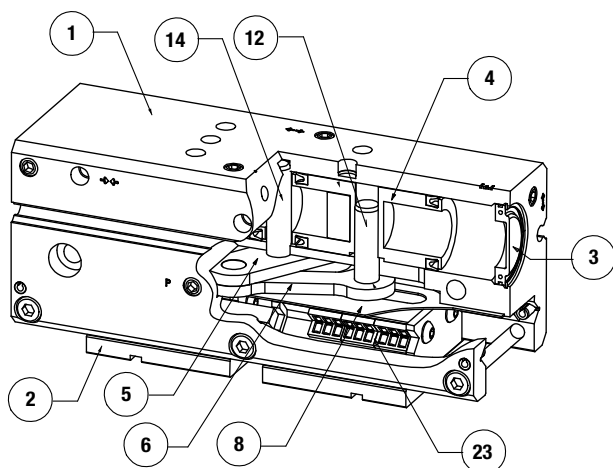
Note: Torque specifications provided are factory settings. Fine adjustment may be needed based on intent & application.

Non-Synchronous Procedure:

- 1) Remove preload screws, press out way locating pins, and slide out ways.
- 2) Pull out jaws and roller bearing assemblies. (If -C spring closed option, remove retaining rings, caps, and springs first.)
- 3) Remove linkage cover from body.
- 4) Remove equalizer and links from body.
- 5) Re-install linkage cover into body.
- 6) Re-install jaws and roller bearing assemblies into body aligning the drive pins with the hole in the linkage cover and each piston.
- 7) Re-install ways, press in way locating pins, and re-install preload screws. (If -C spring closed option, re-install springs, caps and retaining rings.)



Parallel Grippers | Maintenance and Assembly Procedure

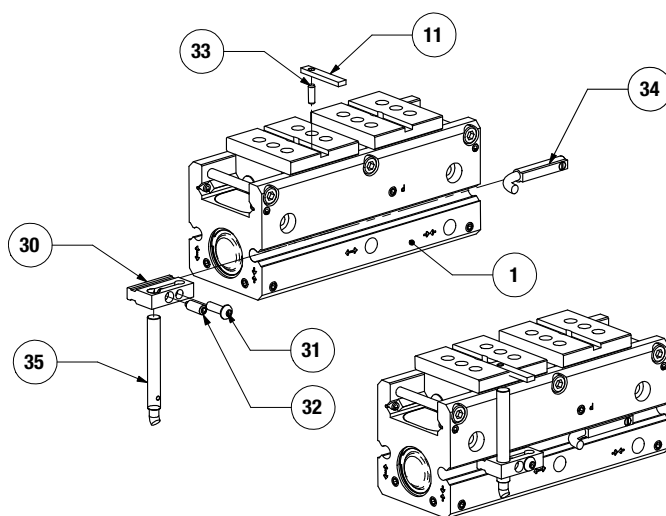


Item	Qty	Name
01	1	Body
02	2	Jaw
03	2	Cap
04	2	Piston
05	1	Equalizer
06	2	Link
08	1	Linkage Cover
12	2	Drive Pin
14	1	Pivot Pin
23*	-	S'assy, Cage & Roller Bearings

Notes:

- 1) Contact the Robohand Sales Department for a complete spare parts list with order number and prices.
- 2)* Item #23 quantity and number of different sub-assemblies varies per gripper model. Contact Sales to determine the correct quantity and part numbers needed.

Accessory Installation & Adjustment Instructions

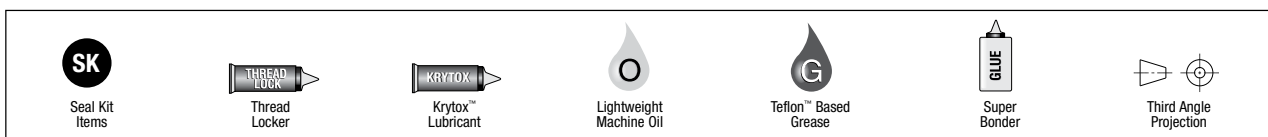


Magneto-Resistive Sensors:

- 1) Install sensors in profile slots of gripper body as shown.
- 2) Set sensors with integrated screw.

Inductive Sensors:

- 1) Insert sensor bracket (#30) into slot of body.
- 2) Insert dowel pin (#33) and target (#11) into jaw slot.
- 3) Insert sensor into bracket and adjust sensor depth so that sensor light indicates on target.
- 4) Tighten sensor locking screw (#31) to hold sensor depth.
- 5) Position sensor bracket for desired stroke detection.
- 6) Tighten sensor bracket with set screw (#32) to lock stroke detection position.





GLOBAL LOCATIONS

NORTH AMERICA

Corporate Headquarters

Auburn Hills, Michigan
Toll Free: 1.888.DESTACO
Marketing: marketing@destaco.com

Global Technology Center

Auburn Hills, Michigan
Tel: 1.248.836.6700
Customer Service: customerservice@destaco.com

Mt. Juliet, Tennessee
Tel: 1.888.DESTACO
Customer Service: customerservice@destaco.com

Wheeling, Illinois
Tel: 1.800.645.5207
Customer Service: camco@destaco.com

Red Wing, Minnesota (Central Research Laboratories)
Tel: 651.385.2142
Customer Service: sales@centres.com

ASIA

Bangkok, Thailand
Tel: +66-2-326-0812
Customer Service: info@destaco.com

Shanghai, China
Tel: +86-21-6081-2888
Customer Service: china@destaco.com

Bangalore, India
Tel: +91-80-41123421-426
Customer Service: india@destaco.com

EUROPE

Oberursel, Germany
Tel: +49-6171-705-0
Customer Service: europe@destaco.com

Sainte Florine, France
Tel: +33-4-73545001
Customer Service: france@destaco.com

Wolverhampton, United Kingdom
Tel: +44-1902-797980
Customer Service: uk@destaco.com

Sant Boi de Llobregat, Spain
Tel: +34-936361680
Customer Service: spain@destaco.com

Uithoorn, Netherlands
Tel: +31-297285332
Customer Service: benelux@destaco.com