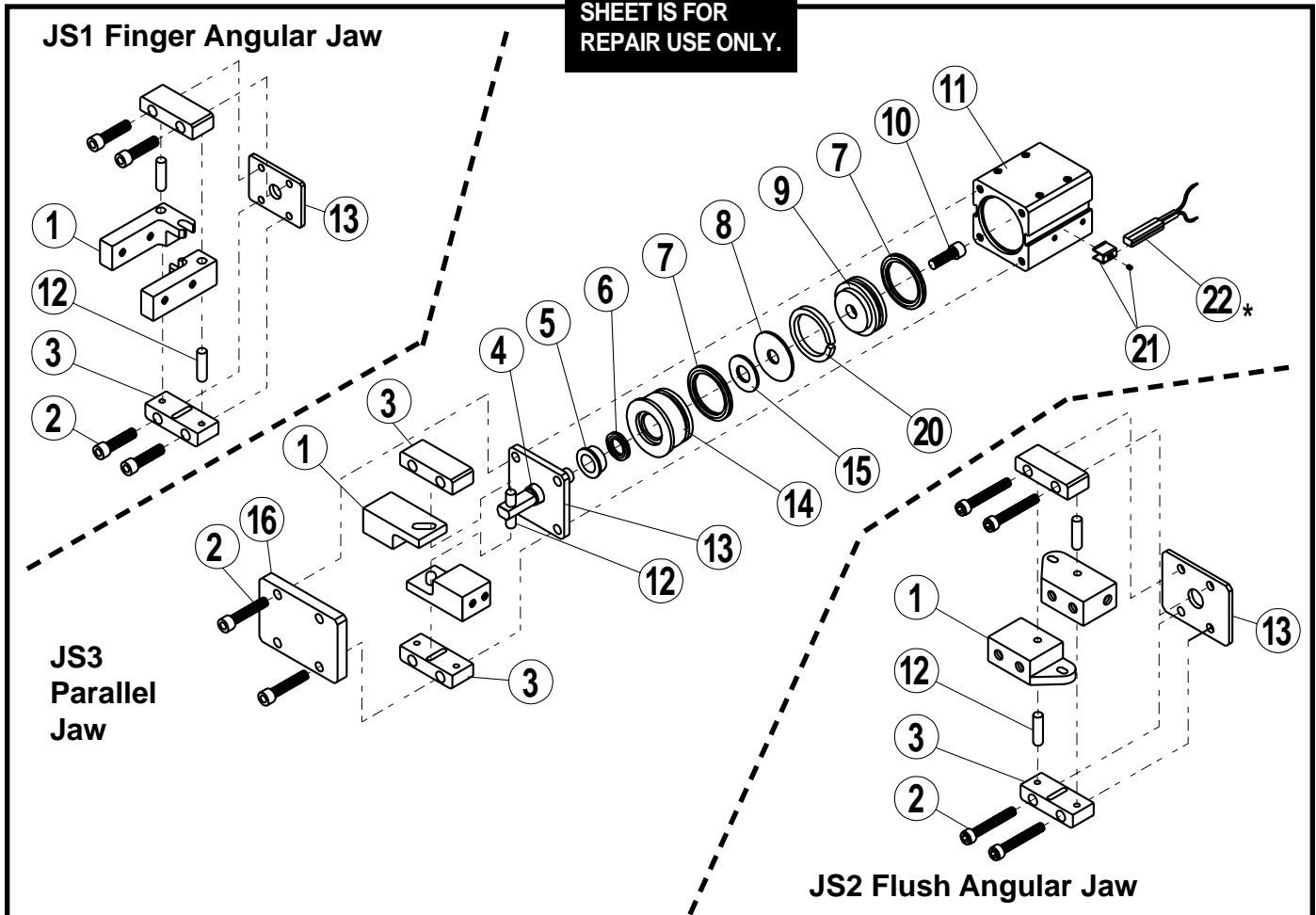


Gripper

1" Bore

Models: GPA100JS1
GPA100JS2
GPP100JS3

**DISCONTINUED
PRODUCT STYLE
OR SIZE. PARTS
SHEET IS FOR
REPAIR USE ONLY.**



List of Parts

ITEM	PART NO.	DESCRIPTION	GPA100JS1	GPA100JS2	GPP100JS3
1	1910-1006	Finger, Angular JS1			
	1910-1021	Finger, Flat, Angular JS2		2	
	1910-1007	Finger, Parallel			2
2	1075-1007	SHCS #8-32 x 0.88	4	4	
	1910-1013	SHCS #8-32 x 1.13			4
3	1910-1003	Block, Side, Angular Parallel	2	2	2
4	1910-1002	Shaft, Piston	1	1	1
5	1910-1009	Bearing, Sleeve	1	1	1
6	1080-1020	Seal, U-Cup, Buna-N	1	1	1
	1910-1032	Seal, U-Cup, Viton (optional)	1	1	1
7	1910-1015	Seal, Quad, Buna-N	2	2	2
	1910-1027	Seal, Quad, Viton (optional)	2	2	2
8	1910-1005	Washer, Magnet	1	1	1
9	1910-1001	Piston	1	1	1

*NOTE: Only universal mini Hall-effect switches are available in this bore size.

ITEM	PART NO.	DESCRIPTION	GPA100JS1	GPA100JS2	GPP100JS3
10	0910-1166	SHCS, #8-32 x .50	1	1	1
11	1910-1000	Housing	1	1	1
12	1910-1012	Pin, Dowel	1	1	1
13	1910-1010	Cover, Housing	1	1	1
14	1910-1008	Guide, Shaft	1	1	1
15	1910-1004	Bumper	1	1	1
16	1910-1011	Cover, Finger			1
20	1001-1202	Magnet	1	1	1
21	2506-9999	Switch Hardware Kit	1	1	1
*22	3600-9094	Switch, Hall Sinking, 5m Lead	1	1	1
	3600-9095	Switch, Hall Sinking, Male Conn	1	1	1
	3600-9092	Switch, Hall Sourcing, 5m Lead	1	1	1
	3600-9093	Switch, Hall Sourcing, Male Conn	1	1	1
	2503-1025	5m Quick-disconnect Lead	1	1	1

PISTON SHAFT DISASSEMBLY (1" BORE SIZE)**ANGULAR FINGER DISASSEMBLY:**

1. Remove the four screws (#02) from the Side Blocks (#03). Slide the side blocks and Angular Fingers (#01) from the gripper assembly. Slide an Angular finger (#01) from the dowel pin pressed into the Side Block (#03).

PARALLEL FINGER DISASSEMBLY:

1. Remove the four screws (#02) from the Side Blocks (#03) and and Finger Cover (#16). Remove the finger cover plate and side blocks. Slide the Parallel Fingers (#01) from the Dowel Pin (#12) on the Piston Shaft (#04).

HOUSING DISASSEMBLY:

1. Remove the entire piston/guide shaft assembly from the housing (#11).
2. Remove Quad Seal (#06) from the piston.
3. Loosen socket head cap screw (#10) to remove piston from piston shaft.
4. Remove piston from the stepped diameter of the piston shaft (For later reassembly note how the smaller of the two turned snouts of the piston faces the washer placed on the stepped diameter of the piston shaft).
5. If needed remove magnet (#20) from the smaller of the two turned snouts of the piston (#09). (For later reassembly use a felt tip marker to note how the magnet is positioned).
6. Remove washer (#08) from stepped diameter of piston shaft.
7. Slide bumper (#15) over piston shaft to remove.
8. Slide the Shaft Guide (#14) over the piston shaft to remove.
9. Remove Quad-ring (#07) from the Shaft Guide (#14).
10. Slide Quad Seal (#06) from piston shaft.
11. Slide Bearing Sleeve (#05) from piston shaft (For later reassembly note how flanged side of the sleeve rests against the housing cover).
12. Remove housing cover (#13) from the stepped diameter end of the piston shaft.

PISTON SHAFT ASSEMBLY (1" BORE SIZE)

1. If applicable, press the dowel pin (#12) through Piston Shaft (#04) ensure that the dowel pin is centered in the piston shaft.
2. **Angular Grippers only**
If applicable, press a dowel pin (#12) into each Side Block (#03) with an arbor press until it bottoms out in the side block. One hole of the side block will have a loose fit and the other an interference fit with the dowel pin, press the dowel pin into the hole with the interference fit.
3. Install housing cover (#13) over the stepped diameter end of the piston shaft and slide it up to the dowel pin.
4. Slide Bearing Sleeve (#05) onto piston shaft, flanged side of the sleeve should rest against the housing cover.
5. Lubricate Quad Seal (#06) with Magnalube "G" and slide over piston shaft until it seats against the bearing sleeve.
6. Lubricate and install Quad-ring (#07) onto the Shaft Guide (#14). Note: Inspect all quad seals after assembly to verify that there isn't a twist in the seal.
7. With stepped bore facing the housing cover slide the shaft guide over the piston shaft until it makes contact with the housing cover.
8. Slide bumper (#15) over piston shaft and seat it against the shaft guide.
9. Place washer (#08) onto stepped diameter of piston shaft.
10. If applicable install magnet (#20) onto the smaller of the two turned snouts of the piston (#09). (**NOTE:** Magnet must be positioned as it was before disassembly; see step #5 of housing disassembly. South pole of magnet must face toward gripper fingers for switch to function properly)
11. Insert piston onto the stepped diameter of the piston shaft so the smaller of the two turned snouts of the piston faces the washer placed on the stepped diameter of the piston shaft.
12. Secure piston to piston shaft with a socket head cap screw (#10). Use Loctite #272 on the screw.
13. Lubricate and install Quad Seal (#07) onto the piston.

HOUSING ASSEMBLY:

1. Verify the bore of the housing is clear of any dirt or debris. Lubricate the bore of the Housing (#11) with a thin film of Magnalube "G".
2. Insert entire piston/guide shaft assembly into housing (#11) until the housing cover rests on top of the housing. Line up the holes in the housing with the holes in the housing cover. Note: On those models that the housing cover extends over the side extend that portion of the cover over the dovetail side of the housing.

ANGULAR FINGER ASSEMBLY:

Note: Place a thin layer of Christolube "MCG 200" on all mating parts of angular gripper before assembly.

1. Slide an Angular finger (#01) over the dowel pin pressed into the Side Block (#03). Position the dowel pin on the piston shaft through the open slot in the angular gripper and into the recess milled into the side block. Place a small amount of Loctite #222 on the SHCS (#02) then loosely secure the side block to the housing. Do not tighten the SHCS at this time. Repeat the above step for the second half of the angular finger/slide block assembly. Squeeze both of the side blocks together to remove any sideplay from the fingers and tighten the four screws.

PARALLEL FINGER ASSEMBLY:

Note: Place a thin layer of Christolube "MCG 200" on all mating parts of parallel gripper before assembly.

1. Insert the dowel pin on the piston shaft through the angled slot of the Parallel finger. Repeat the above step for the second angular finger/side block assembly. Loosely secure the side blocks (#03) and Finger Cover (#16) to the housing with four SHCS (#02). Use Loctite #222 on the SHCS. Squeeze the two sideblocks together to remove any sideplay in the fingers and tighten the four socket head cap screws(#02).

INSPECTION:

1. Manually manipulate the jaws through a cycle to make sure it is properly assembled and does not have any sticking points before applying air. Clean the outside surfaces of the gripper with a cloth wetted with contact cleaner. **CAUTION do not spray contact cleaner into the lubricated gripper finger assembly.**

MAINTENANCE

The Gripper should be kept as clean as possible around the jaws.

LUBRICATION

All Tolomatic Grippers are prelubricated at the factory. To ensure maximum life, the following guidelines should be followed.

1. Filtration– We recommend the use of dry, filtered air in our products. 'Filtered air' means a level of 10 Micron or less. 'Dry' means air should be free of appreciable amounts of moisture. Regular maintenance of installed filters will generally keep excess moisture in check.
2. External Lubricators (optional)– The factory prelubrication of Tolomatic Grippers will provide optimal performance without the use of external lubrication. However, external lubricators can further extend service life of pneumatic actuators if the supply is kept constant.
Oil lubricators, (mist or drop) should supply a minimum of 1 drop per 20 standard cubic feet per minute to the cylinder. As a rule of thumb, double that rate if water in the system is suspected. Demanding conditions may require more lubricant. If lubricators are used, we recommend a non-detergent, 20cP @ 140°F 10-weight lubricant. Optimum conditions for standard cylinder operation is +32° to +125°F (+0° to 51.6°C). **NOTE: Use of external lubricators will wash away the factory installed lubrication. External lubricants must be maintained in a constant supply or the results will be a dry actuator prone to failure.**
3. Sanitary environments– Oil mist lubricators must dispense 'Food Grade' lubricants to the air supply. Use fluids with ORAL LD50 toxicity ratings of 35 or higher such as Multitherm® PG-1 or equivalent. Demanding conditions can require a review of the application.

SWITCH TYPE CODE

KY	(Hall-effect Switch (Sinking) 5-meter lead)
KX	(Hall-effect Switch (Sinking) 5-meter lead and QD)
TY	(Hall-effect Switch (Sourcing) 5-meter lead)
TX	(Hall-effect Switch (Sourcing) 5-meter lead and QD)

SWITCHES

On assembled Gripper, Secure Switch in slot on Gripper with a Clamp and Screw. **NOTE:** For Hall Effect Switch Magnet, be sure the S pole of the magnet (indicated with black dot) is facing toward the switch (down).

TO ORDER RETROFIT KITS: SW (then the model number and base size, and code for type of switch needed: **EXAMPLE: SWGPA100KX**)

All Switch Kits come with 1 switch and mounting hardware.

HARDWARE ONLY KIT: 2506-9999

QUICK-DISCONNECTS:

2503-1025 Female Connector 5M

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