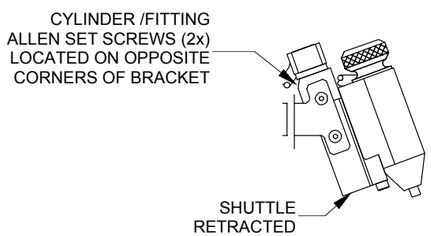
## RE-ASSEMBLY

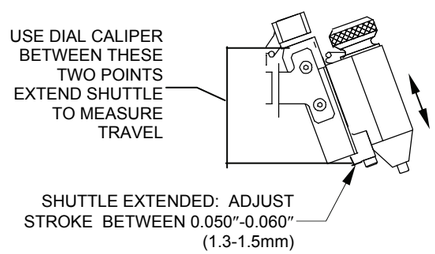
1. Apply lubricant (Magnalube-G P/N 520-0208, supplied) **sparingly** to the *shuttle* (Item 2) and the *bracket* (Item 3) contact surfaces.

2. Install *spring* (Item 8) in the bottom of the *shuttle* (Item 2) and carefully install the *shuttle* (Item 2) in the *bracket* (Item 3). Verify that the *spring* (Item 8) is in the proper position and the *shuttle* (Item 2) moves freely in the *bracket* (Item 3).

3. Install the *cylinder/fitting assembly* (Items 4 & 5) into the *bracket* (Item 3). Do not tighten *Allen set screws* (Item 7).

4. Using a Dial Caliper, measure the stroke of the *shuttle* from normal to extended position. Adjust the *cylinder/fitting assembly* (Items 4 & 5) until the stroke is between 0.050″ and 0.060″ (1.3-1.5mm).




5. Tighten the two *Allen set screws* (Item 7) in the *bracket* (Item 3) to lock down the *cylinder/fitting assembly* (Items 4 & 5).

6. Re-install the *elbow swivel fitting* (Item 6) ensuring that the *O-ring* is in place and fitting is properly oriented.

7. Apply Loctite 222 to the two 1-72 X 3/16 *Allen screws* previously removed and use them to reinstall the *pneumatic overhead shuttle assembly* on the *shuttle mounting arm*.

8. Inspect the *cartridge fitting/cap* (Item 12) for ink contamination and clean as necessary. Apply 60-80 PSI to the air fitting on the *cartridge fitting/cap* (Item 12) and verify uninhibited airflow. Replace the *washer* (Item 11) on the inside threads of the *cartridge fitting/cap* (Item 12).

9. Inspect the *coiled red air hose* (Item 10) for ink contamination or damage and replace as necessary. Reattach the *coiled red air hose* (Item 10) *to* the *cartridge fitting/cap* (Item 12).

10. Reconnect the *straight red air hose* to the *elbow swivel fitting* (Item 6).

11. Reinstall the *inker assembly*, install an ink cartridge and perform ink dot tests to verify proper operation.



XANDEX INC.
1360 Redwood Way, Suite A
Petaluma, CA. 94954
(707) 763-7799

# Instructions for X5200 (P8) Preventive Maintenance Kit 370-0003 Shuttle Model 216-0004

## 370-0003 SHUTTLE MAINTENANCE KIT PARTS LIST

The following is a list of parts included in the 370-0003 shuttle maintenance kit. To order additional kits or shuttle parts not included in this kit, contact your local Xandex distributor or Xandex Customer Service at (707) 763-7799, toll free in the US at (800) 767-9543, FAX (707) 763-2631 or visit us on the internet at www.xandexsemi.com

| NUMBER | DESCRIPTION | QTY |
|---|---|---|
| 160-0154 | COILED AIR HOSE | 1 |
| 510-3402 | SET SCREW, NYLON TIP | 2 |
| 511-1003 | WASHER | 1 |
| 517-0002 | SPRING, COMPRESSION | 1 |
| 520-0208 | MAGNALUBE-G, 2CC TUBE | 1 |
| 820-0099 | SHUTTLE PREVENTIVE MAINTENANCE INSTRUCTION | 1 |

Items necessary for maintenance not included in the Shuttle Maintenance Kit are:

- Isopropyl Alcohol*
- Threadlocker Loctite
- Teflon Thread Sealant Tape*

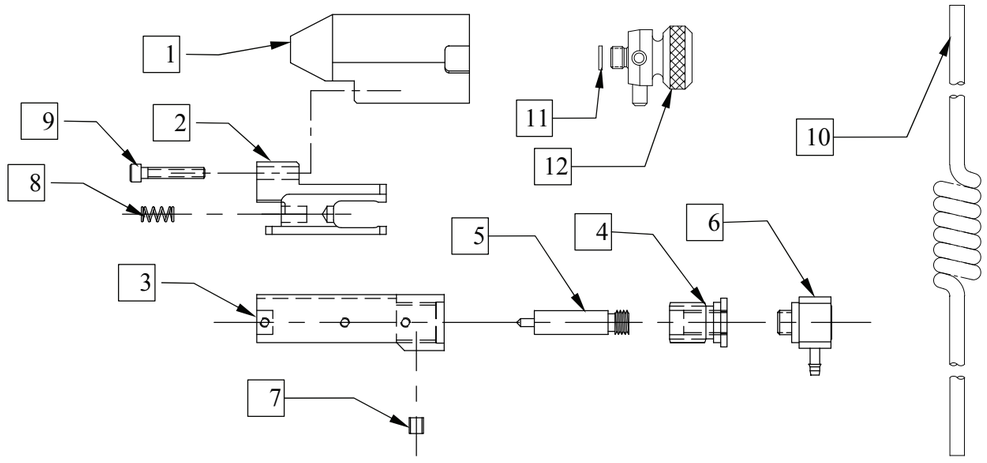
*Not available from Xandex

## PNEUMATIC SHUTTLE MAINTENANCE SCHEDULE

The recommended periodic preventive maintenance schedule for the Xandex pneumatic shuttle is as follows;

- Off-line use = 6 month intervals
- In-Line / Post Probe use = Once per year

## PART IDENTIFICATION REFERENCE

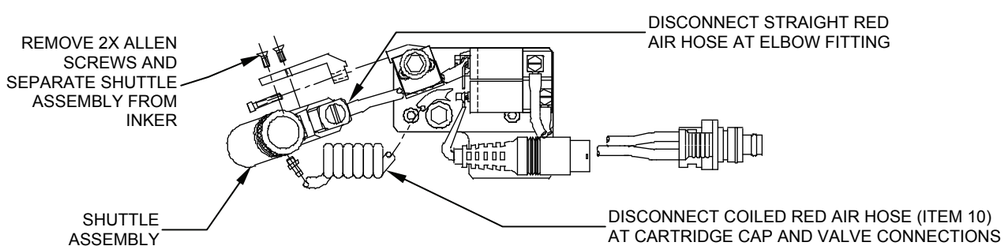



| ITEM | NUMBER | ITEM DESCRIPTION |
|---|---|---|
| 1 | 120-0087 | CARTRIDGE HLDR SHUTTLE P8 |
| 2 | 120-0088 | SHUTTLE PNEUMATIC P8 |
| 3 | 110-0973 | BRKT PNEU HOLDER OH CK |
| 4 | 120-0627 | FITTING PNEU SHTL SWIVEL |
| 5 | 160-0034 | CYLINDER SM-2 SUBMINIATURE MNT RGLTR/FLTR /WS |
| 6 | 160-0073 | FTNG ELBW SWVL 1/16X10-32 SS |
| +7 | 510-3402 | SCRSET 4-40X1/8 BLK NYLTP |
| +8 | 517-0002 | SPRING COMPRESSION .120X.014X1/4 MUSIC WIRE 2M |
| 9 | 510-2308 | SCR SHC 2-56 X 1/2 SS |
| +10 | 160-0154 | COILED AIR HOSE |
| +11 | 511-1003 | WASHER |
| 12 | 231-0066 | CARTRIDGE CAP ASSEMBLY |

+ Included in PM Kit

## X5200 SERIES PNEUMATIC SHUTTLE MAINTENANCE PROCEDURE

The X5200 and X5210 Inker Assemblies are similar in design, the main exception being different mounting hardware. The following describes the procedures for disassembly and reassembly of the Pneumatic Shuttle for maintenance purposes. All procedures apply to both the X5200 and X5210. All illustrations are of Model X5200.






1. Remove the ink cartridge (if installed). Remove the Inker Assembly from the Prober. Retain all inker mounting screws.

2. Disconnect the *straight red air hose* from the *elbow fitting* (Item 6) on the top of the *shuttle assembly* (grasp, do not crush, the hose with needle nose pliers over the fitting point and pull gently to disconnect, being careful not to damage hose).

3. Disconnect the *coiled red air hose* (Item 10) from the *cap/cartridge fitting* (Item 12) using same procedure.

4. Remove the two 1-72 X 3/16 Allen screws securing the *shuttle assembly* to the *shuttle mounting arm* and remove the shuttle assembly for maintenance.

## SHUTTLE DISASSEMBLY

1. Using a flat blade screwdriver, remove the *elbow swivel fitting* (Item 6) from the *shuttle assembly*. Take care not to dislodge the O-ring from the threaded shaft of the *elbow swivel fitting* (Item 6). The O-ring is integral to the fitting and is not sold separately.

2. Loosen the two *Allen screws* (Item 7) at the top corners of the *bracket* (Item 3). Using a wrench on the flat sides of the *cylinder* (Item 4), unscrew the *cylinder/fitting assembly* (Items 4 & 5) from the *bracket*.

3. Carefully lift and remove the *shuttle/cartridge holder assembly* (Items 1 & 2) from the *bracket* (Item 3), paying close attention to the *spring* (Item 8) located in the bottom of the *shuttle* (Item 2).

## SHUTTLE ASSEMBLY MAINTENANCE

**With the Shuttle removed and disassembled, perform the following checks to verify the condition and operation of these components.**

1. Clean the *shuttle*/*cartridge holder* (Items 2 & 1) and the *bracket* (Item 3) with Isopropyl Alcohol and a clean lint free cloth. Inspect *shuttle* (Item 2), *cartridge holder* (Item 1) and *bracket* (Item 3) for excessive wear or physical deformation. Replace as necessary. Check the *screw* (Item 9) that secures the *cartridge holder* (Item 1) to the *shuttle* (Item 2). If the screw is loose, remove it, apply a dab of Loctite 222 and re-install.

2. Inspect the *O-ring* on the *elbow swivel fitting* (Item 6) for obvious signs of deterioration. If worn, degraded or deformed, replace the *elbow swivel fitting*

3. Re-install the *elbow swivel fitting* (Item 6) on the *cylinder/fitting assembly* (Items 4 & 5) and apply/remove 60-80 PSI to verify operation. The cylinder should extend/retract smoothly as the air pressure is applied/removed. If problems are noted in operation, replace the assembly. Remove the *elbow swivel fitting* (Item 6) from the *cylinder/fitting assembly* (Items 4 & 5).

4. Inspect the *spring* (Item 8) for fatigue or physical deformation. Free length of *spring* is 0.25″ nominal. Replace if necessary.

5. Remove the two *Allen set screws* (Item 6) which lock the *cylinder/fitting assembly* (Items 4 & 5) in place in the *bracket* (Item 9). Replace the screws with new screws from the kit.