

# MC-1 REBUILD INSTRUCTIONS

Following are some general guidelines to follow when rebuilding the MC-1 master cylinder assembly.

## Disassembling the MC-1

1. Remove the clevis and jam nut from the shaft assembly.
2. Remove the dust cover, The dust cover can be cleaned using a solvent such as lacquer thinner to remove the dirt and oil. Do not soak dust cover in solvent as it will dissolve.
3. Using snap ring pliers, remove snap ring from reservoir cover, and remove the cover
4. Gently pull shaft assembly out of the master cylinder bore being careful to avoid damage to the bore.
5. Remove the 2-024 O-Ring from shoulder of housing.

## Disassembling the MC-1 Shaft Assembly

1. Remove Roll Pin from shaft assembly by compressing the shaft spring. Using a small punch or drill bit, remove the pin.
2. Remove washer, shaft spring, and passage button from shaft assembly.
3. Using snap ring pliers, remove the snap ring that secures the piston to the end of the shaft. Use snap ring pliers only to prevent damage to the shaft or piston.
4. Remove the O-ring from around the piston.
5. Using solvent dissolve the adhesive that secures the buna-n plug to the shaft head.

## Reassembling the MC-1 Shaft

1. Using Loctite 380 adhesive (or an equivalent compatible with Mil-H 5606 red aircraft fluid) adhere the buna-n plug supplied with kit, to the head of the shaft. (allow 24 hrs to dry)
2. Using 200 grit sandpaper, sand buna-n plug so that plug extends 0.035''  $\pm$  .005 from head of shaft. Care should be taken to ensure that the plug is sanded flat. Clean plug and shaft to remove any particles or foreign material.
3. Install O-Ring 2-012 supplied in the kit to the piston.
4. Using the proper snap ring pliers, secure the piston to the end of the shaft with the # 3000-X37 snap ring.

## Pretest shaft Assembly

1. Pulling the piston away from the buna-n plug, apply air to the passage hole in the piston to ensure free passage of air.
2. Press piston against buna-n plug while still applying air to ensure that the airway closes. There should be approximately .060'' play between the piston and the buna-n plug.

**Assembling the Shaft**

1. Place passage button on to shaft as shown in the drawing, followed by the shaft spring and washer. Secure in place with the roll pin.
2. Inspect the bore of the MC-1 Master Cylinder to ensure there has been no damage to the O-ring surface.
3. Lightly lubricate the piston O-ring with petroleum jelly or Mil-H 5606 red aircraft fluid. Insert the shaft assembly into the bore.

**Securing the Shaft assembly**

1. Replace the 2-024 buna-n O-ring on the shoulder of the master cylinder housing.
2. Install the reservoir cover using the # 3000x125 snap ring.
3. Remove the socket head cap screw from the reservoir cover t pressure test.

**Pressure Test**

1. Attach a pressure gage to the outgoing port of the master cylinder. Fill the master cylinder completely making sure that it is bled properly and free of air.
2. Manually activate the shaft to bring the pressure to 800psi. Travel on the shaft should be no more than 1/8" before the pressure starts to build.
3. Maintain the pressure on the shaft and apply a side load pressure of 20 pounds.

If the cylinder fails to maintain pressure, the following are possible reasons for failure.

- A) buna-n plug is not flat
- B) buna-n plug is out of tolerance.
- C) Piston O-ring damaged during installation.
- D) Air trapped in master cylinder bore.

After passing the pressure test, replace the the socket head cap screw, dust cover, jam nut and clevis.

Matco mfg has a full technical staff to assist you in your rebuild. We also offer an inexpensive factory rebuild service. For more information, call us at 801-335-0582  
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