CLUTCH PLUG REPLACEMENT FOR 900 AND 1200 MOUNTS

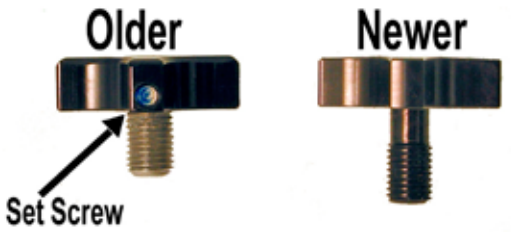
Who needs clutch plug replacements?

If the clutch knobs of your 900 or 1200 mount are tightened down with excessive force, or if the clutches are left extremely tight for an extended period of time, the plugs under the knobs may deform and splay out. This will cause your mount's clutches to not fully release and to feel very stiff when balancing. Once this happens, the clutch plugs should be replaced. Replacement is a convenience, not a requirement. ***The stiffness of the clutches will NOT affect mount performance and tracking!***

We have developed an extraction tool, **part # M0100**, that will successfully remove the clutch plugs so that you can install new ones. If you prefer to make your own tool, we offer instructions in the Technical Support section of our website.

There have been three different clutch plug lengths used over the years. Older mounts (well before GTO mounts) will have a slightly longer plug than their more recent brethren. You will need to be sure of your requirements before ordering. It is quite easy to tell the difference by looking at your clutch knobs. *Reference photo below and part numbers below left.*

Note: ***The presence or absence of the <u>set screw</u> is the most important detail.***



Clutch Plug Part Numbers:

Newer 900GTO and 1200GTO mounts: **M12665-A** (both axes)

Older 900 mounts (knob with set screw): **M12300** (both axes)

Older 1200 mounts (knob with set screw): **M12300** (Dec. axis); **M12290** (R.A. axis)

Please do not try to substitute your own clutch plugs since incorrect dimensions or composition of the material can impair the performance of your mount.

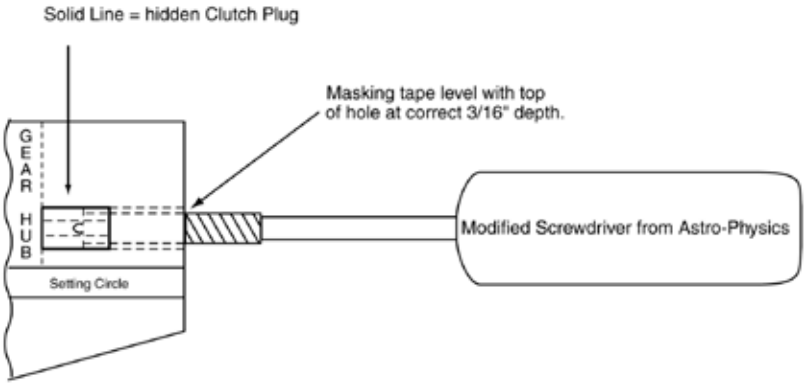
What you will need:

- A special screwdriver that has been modified by Astro-Physics (M0100). This screwdriver is marked with masking tape. DO NOT REMOVE this tape. Instructions for making your own tool can be found in the Technical Support section of our website.
- Replacement clutch plugs (M12665-A) or (M12300) and possibly (M12290).
- ½ to 1 pound hammer
- A light machine oil (example: 3 in 1)

Procedure to Replace "old" Clutch Plugs:

Removal of the old plugs will be done by "hammering" the special "screwdriver" into the old plug. This will create a "driving" slot for the "screwdriver" blade.

1. Remove the clutch knob from the clutch plug hole.
2. Insert the screwdriver into the clutch plug hole and press down firmly (make sure the guide point on the screwdriver is fully engaged in the center hole of the "old" clutch plug.
3. Sharply hammer the screwdriver so as to drive its' blade about 3/16 of an inch into the old plug. The masking tape on the screwdriver shank will provide a good reference for this 3/16" depth. The tape will be "level" with the top of the clutch plug hole when the correct depth has been achieved. *See the illustration at right.*



4. Maintaining a positive downward pressure, while turning the screwdriver in a counter clockwise direction. This will

cause the old clutch plug to be “unscrewed” from the clutch hole. You may need to use considerable turning force at first to get the old plug to start to “unscrew” itself.

5. About 25 or so revolutions of the screwdriver will be needed to withdraw the plug completely.

Note: *Compare the removed clutch plug to the replacement plugs. If they are not the same length, please contact Astro-Physics to exchange them for the correct size! See information above about variations.*

6. Place a “new” clutch plug down the hole.

7. Place 2 – 3 drops of light machine oil down the hole.

8. Replace clutch knob.

9. Repeat above steps with the remaining seven “old” clutch knobs.

CLUTCH PLUG EXTRACTION TOOL

For 900 and 1200 Mounts - Tip Details

An extraction tool (M0100) may be purchased directly from Astro-Physics. However, the adventurous, do-it-yourselfer may wish to make their own. This tool is made by grinding the tip of a standard 3/16” flat head screwdriver of 4-6 inch length.

The diagram shown here provides all the pertinent information for making the tool.

Do be careful to follow the dimensions accurately. The biggest danger in removing the plugs is to accidentally shred the plug material without the plug “unscrewing”. If this happens, the axis will need to be disassembled in order to remove the plug remnants.