# ASTRO-PHYSICS

## **Clutch Plug Replacement for 900 or 1200 Mount**

### 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 to feel very stiff and you will be unable to back off the pressure of the clutch knobs. Once this happens, the clutch plugs need to be replaced.

We have developed a tool, part #M0100 (TOOLSD), 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.

**IMPORTANT:** 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 knob. The pictures at right show this difference. **Note**: There have been several knob styles and knob shaft lengths. The presence or absence of the set screw is the most important detail to look for.

The part number of the current clutch plugs is M12665-A. (The older style clutch plugs are part # M12300 for both axes of the 900 and the dec axis of the 1200, and M12290 for the 1200's RA 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 find in this package:

- A special screwdriver that has been modified by Astro-Physics, if you ordered it. 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).

#### What you will need:

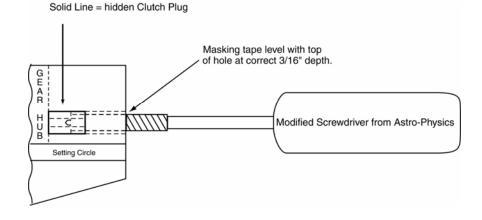
- ½ to 1 pound hammer
- A light machine oil (example: 3 in 1)

### Replacement of "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.

#### Please follow the steps below.

- 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 below).



- 4. Maintaining a positive downward pressure, turn 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.
- 6. **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.
- 7. Place a "new" clutch plug down the hole.
- 8. Place 2 3 drops of light machine oil down the hole.
- 9. Replace clutch knob.
- 10. Repeat above steps with the remaining seven "old" clutch knobs.