

MAGNETO MODIFICATION

SLICK 4300, 6300 SERIES

GENERATION 3 IGNITION



SLICK 4300, 6300 SERIES MAGNETO MODIFICATIONS:

This section covers two of the most common Slick 4300 & 6300 Series magneto modification on the installation of the ignition coil terminal stud into the magneto top contact points cover and/or the magneto main housing side. Both are excellent locations. **Example 1:** The main housing side modification will not require coil lead wire to be lengthened or modified. **Example 2:** The top cover retard stud location will require the coil lead to be lengthened and a new female terminal installed. The main factor to keep in mind is to locate the coil terminal stud and terminals away from any chance of grounding out on/in the magneto housing and/or other magneto components. Keep all wires keep clear of any rotating parts and where there is a chance of wire chafing. These are the most typical Slick series modifications performed off the aircraft. A qualified technician familiar with aircraft ignition systems should do this modification. Follow the modification procedures for your specific magneto application.

EXAMPLE 1: Main Housing Side location

1. Remove the top cover to gain access to the coil lead that is connected to the contact points. Remove both the capacitor and coil leads from the contacts. (Image 1d, 2d, 3d, 4d)



Image 1d



Image 2d



Image 3d



Image 4d

2. It will be necessary to remove the distributor cap/rotor assembly. (Image 5d)

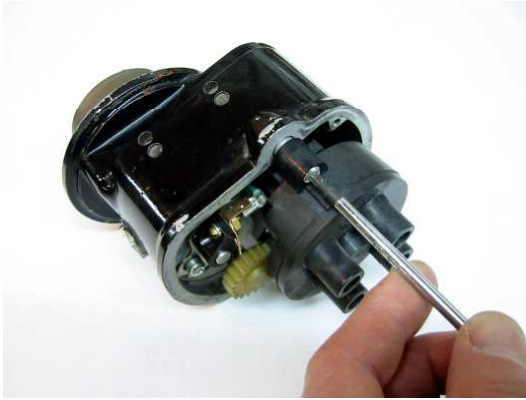


Image 5d

3. For reference and showing the general area of the lower part of the main magneto housing. This is the area where the ignition coil terminal stud will be located. The depth to the casting shelf measurement is 1.00". The distance from the casting step to the center of the distributor cap screw hole is also 1.00". (Image 6d, 7d)



Image 6d

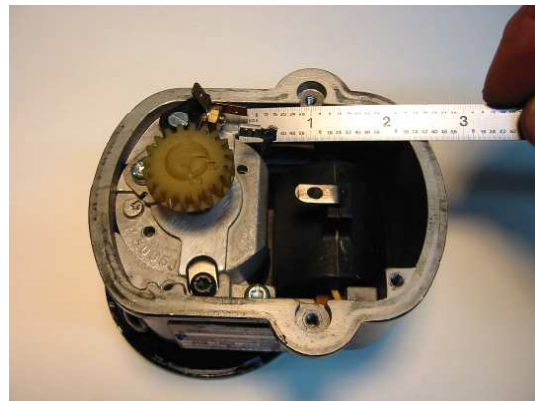


Image 7

4. The preferred location of the new coil terminal stud will be here. **Note:** *The indexed center punch mark for drilling.* The distance shown from the center of the distributor cap screw hole is .625". Also the distance from the top face is .625" Center punch and drill a hole sized to .250" (Image 8d, 9d)



Image 8d

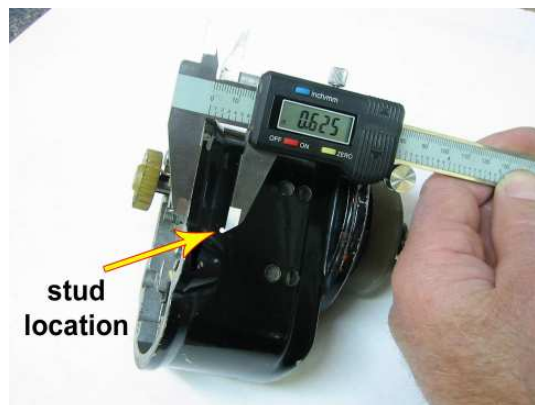


Image 9d

5. An outside/inside view of terminal location. (Image 10d, 11d)



Image 10d



Image 11d

6. The hardware is layout in order for the ignition coil terminal stud into the lower part of the main magneto housing. The male spade stud terminal will need to be modified. The male spade will need to be trimmed to a width of .187" to accept the original coil female terminal. Then bend the male spade to a 20° to 30° angle as shown. (Image 12d)



Image 12d

7. Coil terminal stud installed with male flag terminal. **Note:** *Between the two insulating shoulder washers at the magneto housing place a small amount of two-part epoxy for extra rotation resistance on stud.* Just snug, do not final tighten. (Image 13d)
8. Install the coil female terminal to the male spade terminal. (Image 14d)



Image 13d



Image 14d

9. Rotate the connected coil terminals to the 3 o'clock position, gently routing the coil wire into a small loop. (Image 15d)
10. Now finish tightening the coil terminal stud assembly. Tighten to 20 - 25 in.-lbs. (Image 16d)

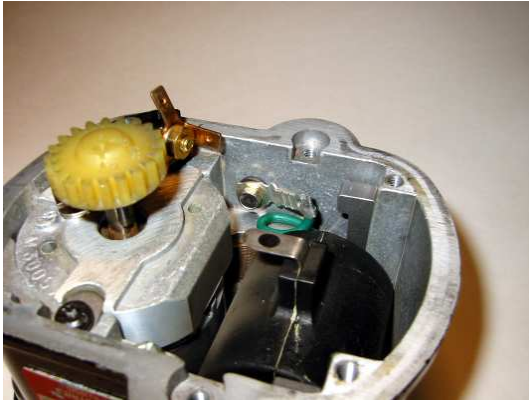


Image 15d



Image 16d

11. Re-install the index distributor cap/rotor assembly to the shaft gear. **Note:** If a Slick timing pin is not available, a #42 or .093" drill bit will do. Torque distributor cap screws to 18-28 in.-lbs. (Image 17d)
12. Re-connect the capacitor lead to the contact set. This will be the only connection to the contact set. **Note:** Clean magneto housing of all drill chips and any type of contamination with compressed air before reassembly. Install top cover housing screws, torque to 18-28 in.-lbs ready to install. (Image 18d)



Image 17d



Image 18d

EXAMPLE 2: Retard Stud location

1. This is the location of the original retard stud terminal. If not already in use, this is a good place for access. Remove the top cover to gain access to the coil lead that is connected to the contact points. Remove both leads from the contacts. (Image 1e)
2. Drill a hole sized to .250" in this location to accept the step washers and coil stud hardware. (Image 2e)



Image 1e



Image 2e

3. The hardware is layout in order for the ignition coil drive stud into the magneto top cover. The male spade stud terminal will need to be bent to a 70° angle. Install the Coil stud terminal with male flag terminal. **Note:** *Between the two insulating shoulder washers at the housing cover place a small amount of two-part epoxy for extra rotation resistance on stud.* Tighten to 20 – 25 in.-lbs. (Image 3e, 4e, 5e)

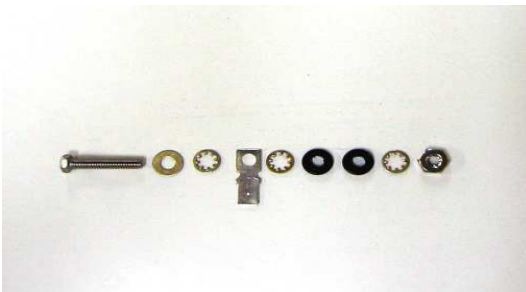


Image 3e



Image 5e



Image 4e

4. The coil lead is not long enough to reach to the new specified coil terminal stud location on the cover without splicing. Cut the original terminal flag off. Splice the coil lead with 18-awg tefzel or similar wire. The added splice with female terminal will add a total of 1.750" to 2.00" to primary coil lead. Install female spade terminal on coil lead end for spade connection. Crimp/solder and insulate with heat-shrink. (Image 6e, 7e, 8e, 9e)

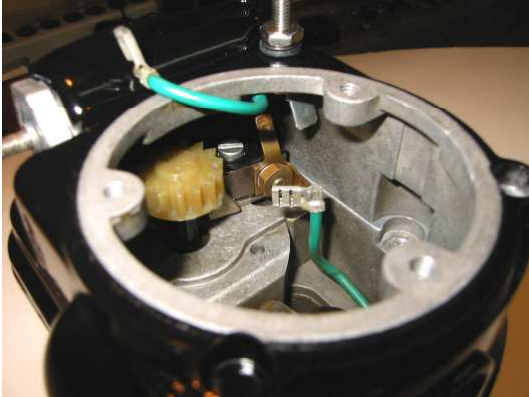


Image 6e



Image 7e

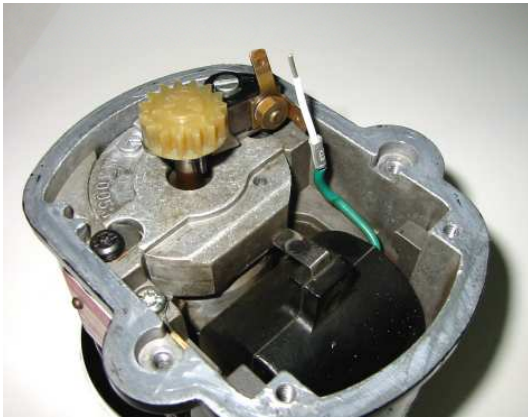


Image 8e



Image 9e

5. Connect the new coil lead to the new installed spade terminal and capacitor to the contact set. Route the coil lead away from the point's cam and any moving parts to prevent interference chafing. **Note:** Clean magneto housing of all drill chips and any type of contamination with compressed air before reassembly. Double check and close up, Install top cover housing screws, torque to 18-28 in.-lbs, ready to install. (Image 10e, 11e)



Image 10e



Image 11e