

SADLAK INDUSTRIES LLC

Nadeau Industrial Park Unit 7 P.O.Box 202 Coventry, CT 06238

Tel. (860) 742-0227 Fax. (860) 742-4244

Apr. 01, 2008

INSTRUCTIONS FOR INSTALLING SADLAK M14/M1A SCOPE MOUNT

- 1. PREPARATION 1:** Remove stripper clip guide from receiver (see below). Inspect for burrs on angled surface and inside dovetail groove. Remove with file or stone.
IMPORTANT! Remove stripper clip guide with care or receiver may crack!
To properly removing stripper clip guide,
 - i. Remove receiver from stock.
 - ii. From the inside of the receiver, insert a 3/32 diameter or slightly smaller pin punch and gently tap the spring pin out. Removing pin by pushing it into the receiver can be done but is not advised because of possible burrs on the inside of the receiver.
 - iii. Next support the left side of the receiver below stripper guide with a block of wood. Gently tap the stripper guide on the right side only. Stripper guide is removed from right to left.
CAUTION: Care should be taken not to use excessive hammer force to remove stripper clip guide. It may cause the receiver to crack at the thin cross-section or other damage to occur.
- 2. PREPARATION 2:** Remove all hardware from bag and inspect to assure all parts are included. Refer to Diagram #1 for list.
- 3. INSPECTION:** Check if the tapped hole in the receiver has good clean threads by manually threading the Hex Screw(3) into the hole (do not use a wrench). Damage to receiver or Hex Screw(3) may occur if threads in the receiver are dirty or damaged. If threads are good and clean, the screw will easily thread into it without binding. If it does not thread easily by hand, first clean receiver hole with solvent and small brush and compressed air (if available). If required, chase thread with a special #12-32 UNEF (Extra-Fine) chase screw. A hand tap may be required if the threads are severely damaged. Both the Chase Screw, Repair Tap and 3/32 Starrett Pin Punch are available from Sadlak Industries LLC. NOTE: The thread is a special Extra-Fine #12-32 UNEF do not use #12-28 UNF or #12-24 UNC. The Extra-Fine Tap is not typically available at Home Depot etc. Some large industrial tool supply companies might carry the item.
- 4. INSTALL SCOPE MOUNT:** Place scope mount in the Receiver Groove on the left side(see Fig.4). Slide mount toward barrel then back several times to check surface contact between the inside surface of mount and the receivers left side. To help see actual contact between the mount and receiver, it is best to use Prussian Blue Paste (also called high-spot marking paste). The paste is non-drying, non-staining and water soluble for easy cleanup. Available thru Sadlak Industries LLC. The Left Side Key (see Fig.3) on the mount should fit completely into the Receiver Groove and when pressed firmly against the receiver, no light should be visible between the mount and receiver. A positive full contact between the mount and the machined surface on the receivers left side will help assure maximum reliability. Full surface contact between mating surfaces will help return to zero when the mount is removed and prevent loosening of the mount due to the heavy recoil forces.
- 5. INSTALL CAM WASHER:** Insert Cam Washer(2) into elongated slot in left side of the mount. Start by positioning tab at 9 o'clock as shown in Fig.2.
- 6. INSTALL HEX SCREW:** Apply Loctite thread locker #222MS to Hex Screw(3) and insert thru Cam Washer(2) then carefully hand start screw into receiver. Partially tighten screw with 3/8 box wrench approx. 1/8 turn past hand-tight to allow mount to make full contact with receiver yet still be able to slide towards the stripper clip guide angled face. Note: it is important, at this stage, for the mount not to have contact with the receiver Angled Face (see Fig.2 & 4). A small light gap should be visible. This assures the Angled Face does not influence the positive contact on the left side between the mount and receiver. This positive contact on the left-side is very important and has greater priority for reliability than contact at the angled face of the stripper clip guide.
- 7. CAM MOUNT TOWARD ANGLED FACE:** Lightly tap the tab on the Cam Washer(2) with a plastic mallet clockwise until the above-mentioned light gap (step 6) at the angled face is reduced as the mount contacts the receiver. Keep tapping to allow the mount to ride up the angled face while the Hex Screw(3) remains moderately tight. You may notice the mount only contacts the angled face at a couple high points. This is often normal and caused by the variation in the manufacturing process and tolerances of the Angled Face. The original USGI blueprint did not hold this angled feature very accurately because the only function, at the time, was to mount the stripper clip guide. Civilian M1A manufactures often hold this feature even less accurately.

- 8. PREPARE CLIP GUIDE KEY:** Remove two small set screws in the clip guide key (see Fig.1) and apply Loctite thread locker. Re-install into key until flush.
 - 9. INSTALL CLIP GUIDE KEY:** Slide key into Dovetail Slot (see Fig 2 & 4) in receiver. Visually align center-threaded hole in key with hole in mount. NOTE: Key may require fitting at assemble due to variations in the Dovetail. The key is made of soft steel to allow hand filing to obtain a tight slip fit. Do not force key into dovetail, file for a slip fit.
 - 10. INSTALL CLIP GUIDE SCREW:** Thread screw into the Clip Guide Key(4). Partially tighten ¼ turn past hand-tight.
 - 11. LOCK KEY INTO DOVETAIL SLOT:** Screw both set screws in the Clip Guide Key(4) until contact is made with bottom of the dovetail slot in the receiver. Partially tighten 3/4 turns past hand-tight.
 - 12. FINAL TIGHTEN SCREWS:** Using an inch-lb torque wrench, final tighten the screws to the following specifications in the order listed:
 - 1) Hex Screw(3): 60-65 inch-lbs,
 - 2) Two set screws in the Clip Guide Key(4): 20 inch-lbs
 - 3) Clip Guide Screw(5): 30-35 inch-lbs
 - 13. FRONT POST SUPPORT:** Screw down Fr. Post Screw(6) (see Fig.1) until contact is made with the top of the receiver. Turn approx. 1/16 max. past contact point.
 - 14. LOCK FRONT POST SCREW:** Remove Fr. Post Set Screw(7), apply Loctite thread locker and re-install. Tighten to ½ turn past hand-tight.
 - 15. INSTALL RINGS AND SCOPE:** The scope mount installation is complete and you are ready to install the rings and scope. Note: It is recommended checking and re-torturing scope mount screws after the first 1000 round fired.
- NOTE: Apply to all screws Loctite thread locker #222MS or equivalent. Loctite 222MS is a Mil-Spec removable thread locker specifically designed for small screws under ¼ inch diameter on all screws. This type is highly recommended for maximum reliability.

A NOTE ABOUT M14(gov't) vs. M1A(civilian) RECEIVERS

Sadlak Industries LLC takes pride in the precision and workmanship of the products we sell. Our scope mounts are based on the original Brookfield Precision Tool design previously purchased by the military. They are precision machined to fit on any M14(military, Gov't issued, select-fire) or M1A (civilian version, semi-automatic) rifle that has been machined to the original USGI specifications. Unfortunately, not all current M1A receiver manufacturers adhere to the USGI specifications particularly in four problem area's:

- 1) Left side horizontal groove (sometimes groove is not cut deep enough),
- 2) Stripper clip guide angled face (sometimes it is too far forward),
- 3) Left side surface (sometimes it is not milled parallel to barrel or tapered),
- 4) Tapped hole (sometimes the location is not correct from receiver front).

Older receivers have a better track record. If your M1A receiver is made correctly on the left-side, this scope mount will fit against your receivers left side perfectly. The key on the inside of the mount is made smaller to fit inside the horizontal groove with only a small amount of play. The inside surface of the mount will rest flush and square, with no gap or visible light showing, against the machined surface on the left side of the receiver. If you see light between the mating surfaces your mount then your receiver is most likely not within USGI specifications.

The majority of the fitting problems are due to the left-side horiz. groove being machined too shallow. This causes the scope mount key to contact the groove forcing the mount off the receiver and cocking the rail to the right with visible light showing between the two parts. This problem is due to the tight tolerance of the original M14 USGI specifications. According to the USGI receiver drawing #7790189 the 60 degree groove on the left side should be .070/.078" wide per blueprint at the bottom and .149/.153" wide at the top as calculated from gage point which is .0312 below the left-side surface. Our study shows that the USGI groove is tightly machined with a tolerance or play of only .004 in the vertical movement. Please refer to our Sadlak Self-Inspection Kit (enclosed) to measure the groove width using precision ground pins.

The reason for the variation among receivers is that private manufacturers are not under a government contract, do not have to strictly adhere to the government issued USGI blueprint specifications, and are not inspected using government source inspectors and approved gages.

If your M1A receiver's left-side groove is "out-of-spec" you can still get a perfect fit using Sadlak Industries LLC custom fitting service for an additional charge. Please call or refer to the enclosed information flyer for pricing and shipping procedures.