

RIFLE 5.56 MM ARMALITE AR 15STRIPPING & ASSEMBLINGSTRIPPING1. General

Prove the rifle by cocking, examine breech, and allow the working parts to fly forward. Check that serial numbers on the bolt, and bolt carrier agree with the serial numbers on upper and lower receiver. Place selector lever at safe.

2. Commence stripping as follows:

- a. With the muzzle to the left, and the cover port ejection open, remove the magazine by pressing the magazine catch on the right side of the receiver.
- b. Keeping the muzzle to the left, turn the weapon over, and using the nose of a dummy round press the takedown pin to the right until the upper receiver disengages from the lower receiver.
- c. Again using the dummy round, press the receiver pivot pin to the right. Separate the upper and lower receiver groups.

Caution: The takedown pin and the receiver pivot pin are designed to be held captive in the lower receiver and cannot be removed completely.

3. Upper Receiver Group

- a. Keeping the muzzle to the left, grasp the charging handle, press in the latch, and pull to the rear, this withdraws the bolt carrier to the rear. Withdraw the bolt carrier clear of the receiver; the charging handle will then fall free of its groove in the upper receiver.

NOTE: When assembling, the bolt must be in the unlocked position.

- b. Holding the upper receiver on the bench with the muzzle up, pull down on the slip ring until the lower lip of the handguard is clear. Pull out and down on the handguard until the upper lip is free of the handguard cap. Repeat the same operation to remove the second handguard. Considerable pressure must be used to force the slip ring down (Use tool if available).
- c. Holding the barrel in the barrel remover jaws, at a position immediately to the rear of the flash suppressor, fit the combination wrench to the flash suppressor, and unscrew. Remove flash suppressor and lock washer.

NOTE: During assy the flash suppressor must be tightened by a Torque - wrench at 15-20 ft lbs. Removal and assy should be carried out at Field and Base only.

- d. Holding the barrel in the barrel remover jaws, forward of the front sight assembly and with the front sight uppermost, depress the detent front sight and unscrew the front sight. Remove the front sight detent and spring.
- e. With the left side of the upper receiver group uppermost, place the barrel on a block of wood at a point immediately at the rear of the front sight assembly. With the barrel held in the barrel remover jaws immediately forward of the front sight assembly, drive out the taper pins of the front sight assembly. Remove the front sight assembly, gas tube, and front cap handguard, by pulling or driving them towards the muzzle.

NOTE: Right side of upper receiver group uppermost, for assembly.

- f. With the right side of the front sight assembly and gas tube uppermost and resting on the bench, drive out the front swivel pin and gas tube pin. Remove swivel and gas tube.

Caution: Do not remove gas tube unless damaged.

- g. With the barrel held in the barrel remover jaws at a point in front of the chamber, fit the combination wrench into the serrations of the barrel nut and unscrew nut. Remove the ring slip handguard and barrel from the upper receiver.

NOTE: (1) During assembly, the torque is read when both wrenches are used together. When the torque reads 50 ft lbs., tighten to allow rod aligning to pass through nut barrel, slip ring assembly, upper receiver, and into key gas tube.

(2) Removal of barrel is to be carried out only by Field and Base Wksp.

- h. To dismantle slip ring assembly, unclip snap ring using pliers circlip external or a suitable punch; remove snap ring, barrel nut and spring slip ring.
- j. To remove the cover port ejection, remove the circlip and withdraw pin to the rear, lift out the cover port ejection.
- k. To dismantle rear sight, drive out the windgauge drum pin, remove windgauge drum pin, detent and spring, unscrew rear sight screw and remove sight and spring.

4. Bolt Carrier Group

- a. To dismantle the bolt carrier group, press out the pin retaining firing pin, elevate the front of the bolt carrier and allow the firing pin to drop from its housing.

NOTE: (1) On assembly firing pin must be in the forward position.

(2) On assembly of the pin split retaining firing pin, ensure that the hole in the head of the split pin is vertical, when the bolt carrier is horizontal before closing in the head of the split pin to clear the outside surface.

- b. Rotate the bolt until the cam pin is clear of the bolt carrier key and remove the cam pin by rotating it $\frac{1}{4}$ turn, lifting it out of the well in the bolt and bolt carrier. After the cam pin is removed the bolt will easily slide out of its recess in the bolt carrier.

NOTE: On assembly turn the bolt cam pin $\frac{1}{4}$ turn.

- c. To remove the extractor, press out the pin extractor with a suitable punch. Remove extractor spring and pin.
- d. To remove ejector tap out the ejector pin with a suitable punch, which must be controlled on its withdrawal to prevent loss of ejector and spring. Remove ejector, spring, and pin.

NOTE: Do not remove bolt rings unless damaged.

- e. To remove key gas tube, unscrew allen screws and lift out gas tube and screws.

NOTE: (1) When assembling the allen screws, they must be tightened by a Torque Wrench at 35-40 in lbs.

(2) Key gas tube is not to be removed unless necessary, and should be removed by Field and Base Wksps only.

5 Lower Receiver Group

- a. To dismantle the lower receiver, place the butt to the right, trigger down. Turn the selector lever to 'SEMI' position, place the thumb of the left hand on top of the hammer and pull the trigger with the index finger of the right hand. Let the hammer move slowly forward. Press out the hammer pin from right to left, controlling any sudden movement of hammer and spring. Remove pin hammer and spring.

NOTE: The hammer spring is attached to the hammer and should not be removed unnecessarily. Ensure all hammer springs are assembled correctly, ie: the extension arms of the hammer spring should be engaged on top of the trigger pin, and not under it on the receiver.

- b. To remove automatic sear, place selector lever in automatic position with the lower receiver left side up. Press out the automatic sear pin and remove automatic sear.

NOTE: On assembly of automatic sear, first rotate the long arm of the spring and lift it on to the left wall of the automatic sear, then place the automatic sear in position and assemble its pin. With a suitable screw driver, disengage the long arm of the spring from the left wall of the sear and on to the selector lever.

- c. To remove the selector lever, place the lower receiver with the right side up. Press out the selector lever. The trigger must be held forward when removing the selector lever.

NOTE: Considerable pressure is required to press out the selector lever. On assembly, first depress detent on the right side and then press the selector lever in.

- d. To remove the trigger, hold the trigger and disconnecter under control, press out the pin trigger from either side, allowing trigger to rise. Remove trigger, disconnecter, disconnecter spring, trigger spring and pin.

NOTE: (1) All pins in the trigger mechanism are retained by extensions of the operating springs engaging in grooves on the axis pins. On assembly, insert large end of disconnecter spring into trigger.

(2) Dismantling of the trigger mechanism should be carried out only when necessary.

- e. To remove the action spring guide assembly, using the index finger of the right hand push in on the buffer cap. With a suitable punch, push down on the buffer retainer. Allow the action spring guide assembly to move forward slowly until clear of the buffer retainer, and remove from the lower receiver together with the action spring.

- f. To remove bolt catch, tap out pivot pin, remove bolt catch, plunger, spring and pin.

- g. To remove catch magazine, press in the catch button on the right side of the lower receiver with a suitable punch until the catch is clear of the left side. Unscrew catch, remove, catch, catch button, and spring.

- h. To remove pistol grip, unscrew and remove screw, lock washer, pistol grip, spring safety detent, and safety detent.

NOTE: Spring safety detent is interchangeable with the spring ejector.

- j. To remove the butt-stock, undo screw cap stock at rear of butt, withdraw butt-stock from lower receiver extension, remove butt stock, capscrew, take down pin, spring detent and detent.

- k. To remove pivot pin, press detent of the pivot pin, remove pivot pin, detent and spring.

- l. To remove rear swivel assy, tap out roll pin and swivel axis pin, remove swivel, pin and base.

- m. To remove trigger guard, tap out pivot pin and remove trigger guard.

- n. To remove lower receiver extension, tap out retaining pin, unscrew extension, spring buffer retainer and buffer retainer.

NOTE: Lower receiver extensions will be kept with parent assy, and will be removed only when necessary.

6. Magazine

Press the nose of a dummy round into the round hole of the base plate, and push button plate out of the engagement of the lips of the magazine spring. Remove base plate, spring and follower.

7. Bayonet Knife

- a. Unscrew screws grip bayonet, remove lock washers and grips.
- b. Tap out pin retaining left and right hand release catches, remove catches left and right, and spring.

NOTE: The grips may be installed on either side of bayonet knife.

8. Bipod

Open the circlip washer, and press out the pivot pin; the legs will then come apart.

9. Assembly

To assemble the rifle, reverse the procedures of dismantling.

INSPECTION OF RIFLE 5.56 MM ARMALITE AR15

General

1. Ensure that:-
 - a. The Rifle is not loaded.
 - b. Serial numbers are present and correspond on upper receiver, lower receiver, bolt and bolt carrier.
 - c. All components are serviceable and free from rust, burrs and excessive pitting which would affect the functioning and/or the accuracy of the rifle.
 - d. All modifications have been carried out.

Barrel Assembly

2. Barrels will be rejected for the following faults:-
 - a. Puckers which impede gauge No. T27442. .2195"
 - b. Bulges.
 - c. Bends, when the accuracy of the rifle is affected.
 - d. Cuts or other irregularities which impede the gauge after the bore has been cleaned.
 - e. Excessive pitting of the bore which causes loss of gas around the bullet.
 - f. Cordwear to a degree which has caused the fired case to expand in the resulting groove or when cordwear has affected accuracy.
 - g. Broken or worn locking lugs in the barrel extension.
 - h. Badly damaged flash suppressor threads at muzzle.
 - i. Grooves for front sight taper pins badly worn.

NOTE: Barrels will not be rejected for slight irregularities, if when range tested the results obtained are within the limits defined in Para 15.

3. Ensure that:-
 - a. Chamber is clean and free from carbon deposits.
 - b. Locking lugs of barrel extension are clean.
 - c. Flash suppressor is not fractured and is secure on the barrel; readily accepts the bayonet; and the bayonet when assembled is secure.
 - d. Frontswivel is secure and operates freely.

/e. ...

- e. Barrel gas port is clear of carbon and any foreign matter. Carbon can be removed by use of a No. 43 (0.089 ins.) drill hand held.
 - f. Foresight is serviceable and positioned by its detent and spring; protectors are undamaged.
 - g. Foresight block is upright, secure, and the taper pins are not loose.
 - h. Gas tube is not cracked, blocked or damaged; it is in correct alignment for the key bolt, and secured by its pin.
 - i. Handguard slip ring is undamaged and moves freely against its spring.
 - j. Barrel is secure in the upper receiver assembly.
 - k. Nut barrel is tight and serrations have not been damaged (by tool).
4. Ensure that:-
- a. Upper receiver is not cracked, damaged, burred, or badly worn, especially at the recess for the detent cover ejection opening.
 - b. Handle cocking is free from cracks, burrs, and is not badly worn; it both assembles and moves freely in the receiver without fouling the gas tube, and is retained in the forward position by its catch and spring.
 - c. Backsight operates correctly, with no excessive play; screw rear sight is not distorted, the 300-500 meter leaf is clearly marked, 'L'; the plunger and spring operate freely.
 - d. Cover ejection opening and spring are not distorted or damaged, cover is positively retained in the closed position by its detent and spring; the snap ring is present on the pin ejection cover.

Bolt Carrier Assembly

5. Ensure that:-
- a. Bolt carrier is free from cracks and burrs; locking lugs of the bolt are undamaged; firing pin hole is not elongated, or the face of the bolt badly pitted or ringed.
 - b. Extractor and ejector are not damaged and work efficiently on their springs.
 - c. Bolt rings are not broken and ring gaps are correctly spaced (not to be in line). Qty 3 are fitted.
 - d. Pin bolt cam is free from burrs and correctly positioned in the bolt carrier.
 - e. Firing pin is not worn or damaged; it moves freely in the bolt; the retaining pin is secure and serviceable. Firing pin protrusion is within limits 0.028 and 0.036 ins. Gauge No. T27669.
 - f. Key bolt is secure on bolt carrier and is not damaged; securing screws are tight and staked; key bolt is clean and free from carbon.

/g. ...

- g. Bolt carrier assembly moves freely in the receiver; the gas tube enters freely into the key bolt as bolt carrier moves forward.

NOTE:- Carbon deposit can be removed from gas port holes of bolt carrier with a hand held No. 36 (0.106 in) drill.

Lower Receiver Assembly

6. Ensure that:-

- a. Lower receiver is not cracked, damaged or badly worn, especially at bolt catch recess.
- b. Bolt catch is not damaged and operates freely on its spring.
- c. Catch magazine is adjusted and functions correctly; its spring is not weak or distorted.
- d. Trigger mechanism functions correctly, components are not damaged or excessively worn, springs correctly assembled and not distorted or weak; selector lever is positively retained in each of the three positions.
- e. Pin pivot and take-down pin operate freely, their detent and springs retain them in the closed position and also prevent their removal from the receiver.
- f. Extension lower receiver is screwed fully home into receiver, and is secured by its pin; it is not dented or damaged.

g. Guide Assembly Action Spring:-

1. Buffer assembly is not damaged or badly worn and buffer cap is retained by its pin.
2. Guide buffer spring is not distorted or weak.
Overall length 12.5 ins (new).
3. Assembly works freely in the extension and is retained by the buffer retainer and spring.

Cartridge Head Space

7. Ensure that:-

- a. Bolt carrier assembly does not close over gauge No. T27921.

Stocking

8. Ensure that:-

- a. Handguards - surfaces are not badly damaged, (slight blemishes, broken serrations at top of handguards, and looseness, can be ignored); liners are tight with no rivets deficient; the finish of repairs is correct (fibre glass).
- b. Butt - surfaces are not badly damaged, (slight blemishes may be ignored); and not loose on the lower receiver. Butt pad is not perished, screw butt pad is tight and seated correctly; swivel is secured by its pin and operates freely.

/c. ...

- c. Pistol grip - surface is not badly damaged; (slight blemishes may be ignored); is not split or loose on the receiver.

Rifle Assembled

9. Ensure that:-

- a. Recoiling portions operate freely.
- b. Bolt rotates in carrier and locks in the forward position.
- c. Ejection cover operates correctly.
- d. Feed, extraction and ejection are correct.
- e. Action operates correctly, with the selector lever in each of its three positions.
- f. Action is held to the rear by the catch bolt on an empty magazine, and the bolt can be released by depressing the catch bolt.
- g. Magazine is retained by catch magazine and released when the catch is depressed.
- h. Trigger Pressure is between 5 and 8½ lbs (ONE PULL ONLY).

NOTE:- Play between upper and lower receiver assemblies may be ignored.

Range Testing

10. Field Workshops:- Range testing will only be necessary when repairs which are likely to affect functioning or accuracy have been carried out or to prove the serviceability of suspect components.

11. Base Workshops:- All Rifles will be range tested and zeroed after base workshop repair.