



WR MAGAZINES: ALL MODELS

Your WR magazine has been designed to be reliable and offer a greater capacity and generally a longer overall load length. They have the DNA of an elite item for the competitive and serious shooter that can also be used by the fastidious hunter and sports shooter. These units have been many years in the making and continue to evolve into the perfect solution.

Your WR mag should last you a long time. This is the mag of choice by many champion shooters at national and international level, so you may want it to last, hence the need for care.

Below is the latest instruction for assembly, care and maintenance for your Waters Rifleman magazine...

ARRIVAL: Your unit is ready to go on arrival. There are no modifications needed to the magazine or the rifle to fit for use.

LUBRICATION: The unit ships dry and free of any lube. The magazine may run fine without lube, but a light sparing application of lube can help in many ways, especially in A very light application of dry lube to mag internals is recommended.

CHECK FIT: The WR mag is made to 0.05 to 0.1mm tolerances (dependant on area of focus). The rifle receiver, stock and floorplate may vary up to nearly 1mm. If the rifle is bedded by way of a compound, then variance could be a lot more. The magazine has proven to fit most every standard, model, stock, from a factory release. After market modifications done to factory spec should be no problem.

CLIP IN AND OUT: The mag may be tight to clip in and press release to remove. This is a precisely made magazine (perhaps too precise). There are tolerance differences from rifle to rifle. As an example, the action take-down screws can be done up to different tension (sometimes too much). If you think it will never improve, then simply use a "smooth" (fine) file and take 0.1mm increments off the magazine latch tang, continuously testing fit as you go. DO NOT REMOVE more than 0.1mm at a time between testing. The magazine should be a tight fit, by design.



WEAR IN: When you first purchase a WR mag, the follower may be "too sharp" or "too new". The follower works best after it has cycled and bedded into the precise shape of mag internals. This will come with use, but this can be expedited by manually depressing and releasing the follower – but do it carefully - if manually wearing by hand, BE SURE to move the follower up and down squarely, such as it would when used in the rifle (ie. avoid tipping, stressing the follower, etc).

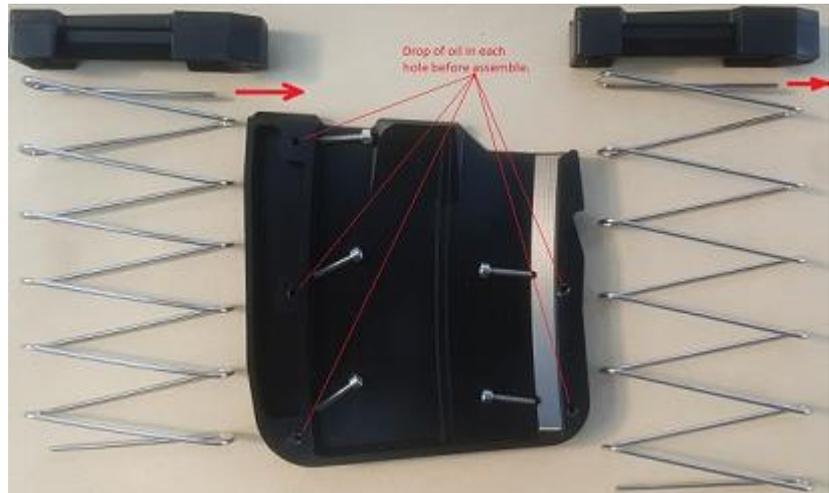
ASSEMBLY & MAINTENANCE:

- a) **CLEAN:** Clean the mag internals with a suitable solvent, removing all grease, oil, dirt, debris.
- b) **DRY LUBE:** Always dry-lube the internal of the mag. Dry lube need be applied to FRONT and REAR internals of the follower chute (should not be needed on the sides, but wouldn't hurt). The most common dry-lubes are Graphite powder, PTFE (Teflon) drying spray, or Silicone spray drying (non-greasy). Do not use oil, grease or similar.

c) CHECK: Ensure the follower flows freely in both halves before putting together. If it does not, there may be some foreign matter, damage, or the follower might be too new/tight. The follower and internals are made to a tight tolerance at 21deg C, so the follower may need to wear a little. Expedite the wear by considering filing a little material out of front centre of the follower (so there is a convex curve to suite the front curve of mag internal).

d) ANTI-SEIZE: Apply a tiny drop of an anti-seize or a drip of synthetic oil to the clam screw threaded holes. This prevents the threads from "binding" due to Alum and SS electrolysis. DO NOT allow oil or grease to run into the mag internals - oil and ammunition should not mix.

e) SPRING DIRECTION: Note, the spring tail at the top into the follower should point forwards, towards the front of the follower/mag (the base may be opposite facing, depending on mag model).



f) ALIGN: Be sure to align the 2 body parts as best as you can. There is 0.05mm play in the screw holes, so it may require some manual alignment as necessary. BE sure the mating surfaces are free of debris.

g) TIGHTEN: Screws should be done up pinch tight (do not over tighten). Be sure there is no foreign matter in the threaded hole.

h) TUNE: If you are heading to a world championship, and performance is critical, you might want to "tune" the performance of the stripping force by very fractionally re-forming the spring free length. Be sure to NOT allow the spring to form a helical shape - twist with the coil direction while stretching. Alternatively, the spring free length can be reduced by using pliers and pinching the coil ends.

MAGAZINE CARTRIDGE	GENERATION	CAPACITY	SPRING FREE LENGTH	COILS
223	ALL	6	80	4.5
223	ALL	10	130	6.5
6BR/250	ALL	6	130	5.5
6BR/250	ALL	10	170	7.5
308	ALL	6	130	5.5
308	G1-G5	10	170	7.5
308	G6	10	150	6.5
X55	ALL	6	130	5.5
X55	G1-G5	10	170	7.5
X55	G6	10	150	6.5
3006	ALL	6	130	5.5
3006	G1-G5	10	170	7.5
3006	G6	10	150	6.5

If you feel you want less pressure, you can try to elongate the spring coil rate OR cut off half a coil of spring at a time to get desired pressure (the latter is permanent). Remember to take small increments at a time.

i) TEST: When assembled, test carefully. Take any appropriate corrective action. If in doubt, ask.

TIGHT IS BEST: Ensuring a tight and solid fit keeps your repeater rifle as close to performance as a bolt action single shot rifle. Tight and solid assembly and fixing keeps harmonic vibration even through the whole rifle system, and helps dampen the vibration quicker and minimise vibration intensity spots.

MARKING AND SACRIFICE: This magazine is made of metal. Metal on metal will always result in witness marks. Use of the WR mag will result in witness marks on the aluminium magazine body. This is always going to happen, and is preferred to protect undue wear in the more expensive rifle receiver. The sacrificial wear areas are the front latch tang, rear top flat where mating the trigger front tension leaf spring, and the top rear pivot corners. Witness marks can be marked over with black as desired.

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