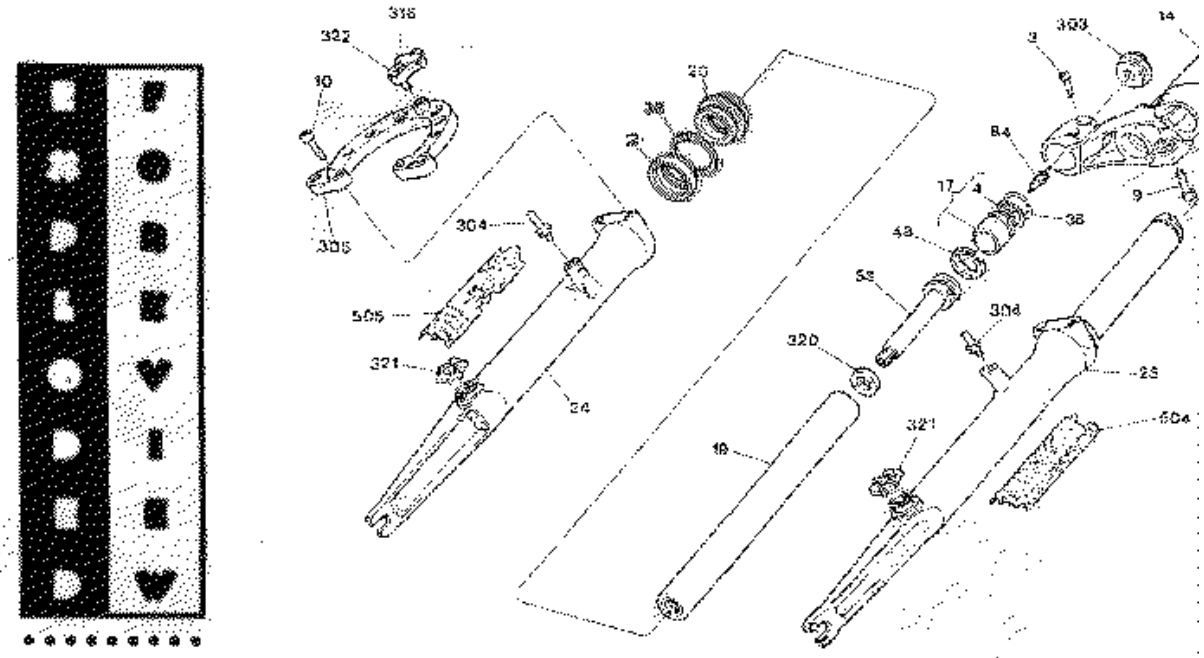


The reference numbers given in this section relate to the components shown in the exploded fork drawings.

XCR PARTS LIST

1. (14) Steer Tube
2. (15) After Market Style Crown
3. (303) Plastic Air Cap
4. (3) Crown Bolts
5. (9) Steer Tube Crown Bolt
6. (84) Schrader Air Valve
7. (38H) Stop Ring for Air Cap
8. (4) Rubber O-Ring
9. (17) Air Cap Assembly
10. (48) Delrin Valve Bushing
11. (53) Foot Valve
12. (320) Top Out Ring
13. (19) Stanchion Tube
14. (20) Dust Seal
15. (38) Snap Ring
16. (22) Oil Seal
17. (24) Left Slider (25) Right Slider
18. (304) Brake Boss
19. (321) Adjuster Knob
20. (505) Left Decal (504) Right Decal
21. (305) Brake Arch
22. (316) Brake Cam
23. (322) Brake Cam Bolt
24. (10) Brake Arch Bolts

XCR Disassembly Procedures

General Procedures to Follow When Servicing a Marzocchi Air / Oil Fork

To perform a simple oil change or a complete overhaul, Marzocchi forks require a small number of tools and no prior experience to self-service your fork. Please follow these guide lines to ensure that your fork will stay in excellent working condition before and after you work on it.

1. For disassembly, only use the tools specified by Marzocchi.
2. After a complete disassembly, use new seals and O-rings (if needed), when reassembling.
3. Clean all parts, especially seals and O-rings, with a non-flammable, biodegradable solvent.
4. Apply a thin coating of a teflon based grease to the O-rings as well as the inner lip of the oil seal when reassembling.
5. If your bike is subject to rainy, wet and or muddy conditions, dip the bolts in a teflon-based grease to prevent any corrosion or seizing.
6. Only use metric sized tools.

TOOLS For The XCR

REF.	ITEM	DESCRIPTION	USEAGE
A	104	Air cap extracting tool.	To remove & install the air cap assembly
B	R5043	Snap Ring Pliers.	To remove & install the oil seal snap ring
C	R5047	Oil Seal Insert Tool.	Installs the oil seal into the slider.
D	R5024	Long "T" handle allen tool.	To remove & install stanchion tube/valve
E	R5048	Seal Removal Ring.	Protects the slider when removing oil seal

OTHER PARTS YOU'LL NEED

1. The above items.
2. A metric ruler.
3. 2-3 shop rags.
4. Teflon-based grease.
5. 4 mm & 5 mm hex tools.
6. 20 weight oil, either Marzocchi or Finish Line.

TORQUE SETTINGS

THREAD DIAMETER	TIGHTENING TORQUE	
1. M5	Nm 9 "Newton Meters"	6.6 lb. "Foot Pounds
2. M6	Nm 10 "Newton Meters"	7.5 lb. "Foot Pounds

The reference numbers given in this section relate to the components shown in the exploded fork drawings

XCR XCR

FIG.1 Air Cap and Air Pressure Removal:
Before conducting any maintenance or replacement work, remove the plastic air caps (303) and release all the pressure in both fork legs through the air valves (84). Loosen the bolts (10) which secure the brake arch (305) to the sliders (24 & 25).

Note **Use a new hex tool to remove the bolt. If you have one stripped bolt head and were able to remove the three remaining bolts, you can spin the arch around to loosen the remaining bolt.**

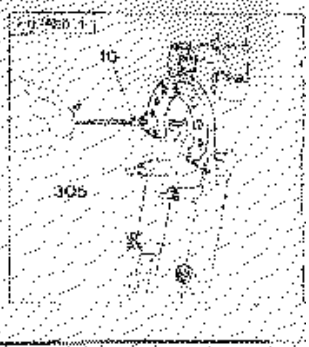


FIG.2 Fork Leg(s) Removal:
Remove the stanchion tubes (19) from the crown (15) by loosening the four bolts (3) (two on each side of the crown) and sliding the top of the stanchion tube (19) out of the crown (15).

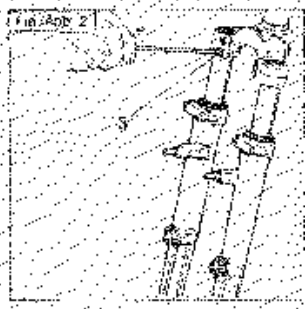


FIG.3 Air Cap Assembly Removal step 1:
Screw the air cap removal tool (104) onto the air cap assembly (17). Push the air cap assembly (17) into the stanchion tube (19) deep enough to access the stop ring (38H). Loosen and remove the air cap tool, then remove the stop-ring (38H) by pushing down on one side of the stop ring and lifting it out from the other.

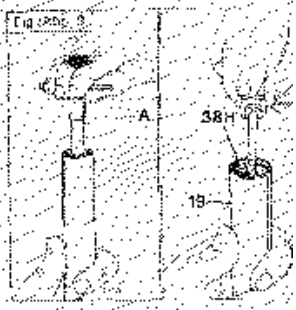


FIG.4 Air Cap Assembly Removal step 2:
Fasten the air cap tool (item 104) and pull out the air cap assembly (17) making sure to pull straight out to avoid breaking off the schrader air valve piece (17).

Note *There may be some resistance to the air cap removal due to corrosion between the stanchion/air cap assembly, or if the stanchion tubes are crimped or ovalized due to crown bolt over tightening. You must also overcome the resistance of the O-ring (04) when removing the air cap assembly.*

After air cap (17) is removed, invert the leg and drain the oil contained in each fork leg by plunging the stanchion tube (19) into the slider (24&25), to make sure all the oil is completely drained.

FIG.5 Seal Removal / Stanchion Tube Removal Step 1:
In order to remove the oil seal you must first remove the stanchion tube (19). Carefully secure the lower part of the slider (24&25) in a vice with aluminum blocks. Protect the surface of the sliders (24&25) with a cloth making sure not to scratch or smash the drop-out. Using the long "T" handle hex tool (Item R5024), insert it into the stanchion tube (19) and unscrew the lower valve (53) which holds the stanchion tube (19) in the slider (24&25). The lower valve acts as a securing bolt that secures the stanchion tubes (19) to the sliders (24&25). By unscrewing the lower valve, the whole valve assembly and stanchion tubes can be removed.

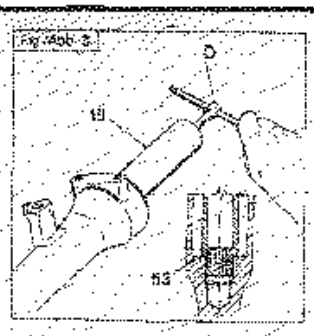


FIG.6 Seal Removal / Lower Valve Removal Step 2:
Pull the lower valve assembly (53)out of the stanchion tube (19)and check the condition of the delrin seal ring (48) and the rubber top-out ring (320) for wear. Replace these parts if necessary.

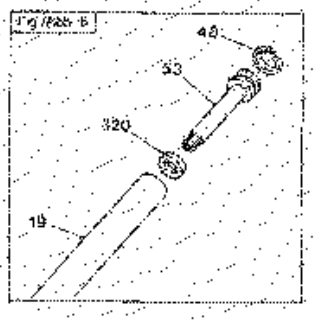


FIG.7 Seal Removal / Dust Seal Removal Step 3:
Remove the dust seal (20) from the top of the slider/fork leg (24&25) by exerting an upward pressure by means of a small screwdriver.

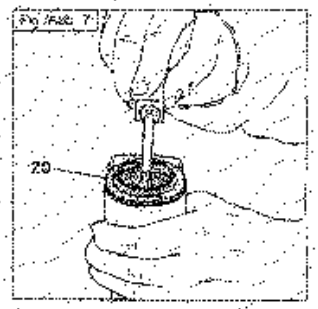


FIG.8 Seal Removal Step 4:
Using the snap ring pliers, as seen on page 3 item (B), or any standard pointed pliers, remove the snap ring (38) from the inside of the slider / oil-seal area. Place the protective ring (Item R5048) onto the top of the slider (24&25). Use a large flat head screwdriver to pry the oil seal (22) out. Be careful not to damage or scratch the inside of the slider when prying the seal out. Since the oil seal(22) is press-fit into the slider (24&25), you must overcome this resistance when prying the oil seal (22)out . Make sure you use the protective ring (Item R5048) which facilitates this operation.

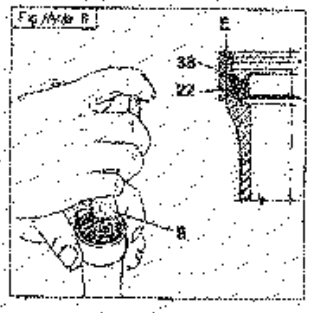
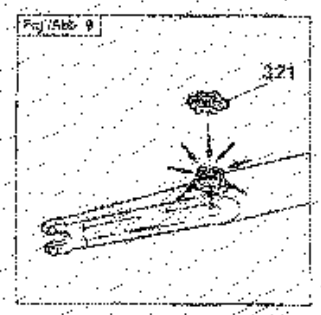


FIG.9 Lower Adjustable Valve Cap and Assembly:
The lower adjuster valve assembly should not be removed unless there is a oil leak or valve malfunction. If so, send it to Marzocchi Suspension Center for repair. The adjuster cap (321) can be easily replaced (plastic version) by simply snapping it onto the valve assembly, making sure to index the slot in the valve assembly with the plastic cap (321) index.



XCR
REASSEMBLY PROCEDURES

WARNING: Before reassembling, all components, including the lower adjustable valve, should be cleaned carefully and blown dry with compressed air.

Note: *Follow Proper Torque Settings when re-tightening the bolts as prescribed on page 8 of this manual.*

FIG.1 Foot Valve & Stanchion Tube Reassembly:
Slip the foot valve (53), complete with delrin valve bushing (48) and top out ring (320), into the stanchion tube (19). Carefully fit the stanchion tube (19) into the slider (24) & (25) and push the stanchion tube (19) down to the bottom of the slider.

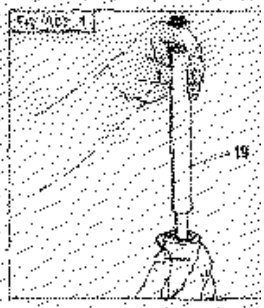


FIG. 2 Stanchion Tube Installation:
Carefully secure the lower part of the slider (24 and/or 25) drop out area, into a vice with aluminum blocks. Be sure not to deform or smash the drop out area when securing the slider. Using the long T-handle allen wrench (D), tighten the foot valve into the base of the slider. This resecures the stanchion tube (19) into the slider (24 and/or 25).

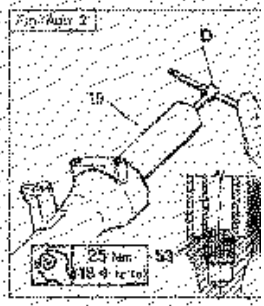


FIG.3 Seal Installation:
Using the seal seating tool (C), push a new oil seal (22) into its seat in the slider (24 and/or 25). Using a hammer or mallet, gently tap the seal seating tool (C), making sure the seal is fully seated. Then install the snap ring (38), making sure the snap ring is fully secured into its groove. If the snap ring (38) becomes unseated, oil will immediately escape through the seal (22). If this happens, remove all components and reinstall as directed.

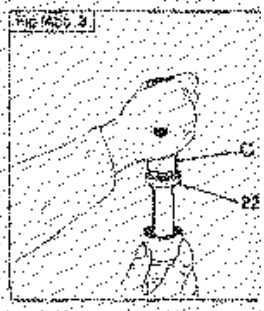


FIG.4 Oil Fill Procedure:
Fully compress the stanchion tube into the slider. In a vertical position, pour the Approved Replacement Oil (see page 19 for oil specifications) into the stanchion tube, filling the stanchion tube to the top. Then plunge the stanchion up and down to circulate the oil into the valve and chambers and compress the stanchion tube into the slider. The oil level will now be lower, top it off to the correct level. Make sure you allow all the air bubbles to flow out of the oil after filling. ie 5 min. Slowly plunging the stanchion tube up and down will facilitate this process. See "How to Measure the Oil Level", "Approved Replacement Oils", & "Oil Weights" information below for more details.

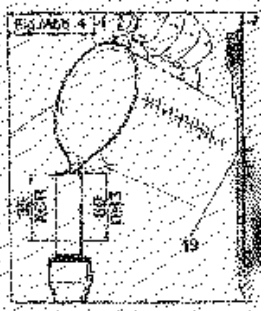
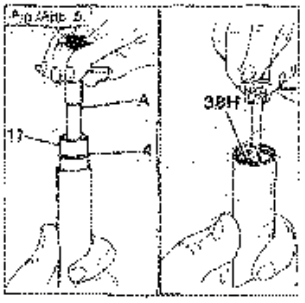


FIG. 5 Air Cap Assembly:
Using tool A (item 104) thread it onto the air cap assembly (17). Grease the O-ring (4) and carefully insert the air cap assembly (17) into the stanchion tube (17) pushing it beyond the groove for the stop ring . Insert the stop ring (38H) and securely seat it into the groove and inflate the fork leg. As the fork is inflated, the air cap assembly will move upward and lock against the stop ring. Set air pressure according the air pressure guide located in this manual. Double check all steps to insure your fork is properly set up!



Oil Tuning Tips

How to measure the oil level: Using a homemade dipstick or ruler, mark the measuring device to a specified length, ie 40mm. Fill the stanchion tube with oil according to Fig. 9 and insert the dipstick. Measure the distance from the top of the oil level to the top of the stanchion tube. Remember to have the stanchion tube fully compressed. The standard oil level will vary depending on your fork model.

35 mm _____
40 mm _____
45 mm _____

Tuning Note: A variance of 5 mm in oil level height is O.K. In general, a lower oil level, ie 50 mm, will make the fork more responsive or livelier for lighter weight riders. A higher oil level, ie 40 mm will make the fork feel less responsive, which is better for heavier riders. When the oil level is changed the air pressure will also need to be adjusted due to the change in volume area. Less oil means there is a larger air chamber and a higher oil level means there is a smaller air chamber.

Approved Replacement Oils:
Marzocchi oil item 52.5, or Finish Line Shock Oil are the **only** Marzocchi approved shock oils. Using other mountain bike suspension fork oil or motorcycle shock oil is not recommended and will void the warranty. Many motorcycle oils contain seal additives that will damage the seals and O-rings causing seal failure and possible damage to the fork.

Oil Weights: Make sure to use the specified oil weight when replacing the stock oil. Marzocchi uses different oil weights with different fork models, see oil weight chart and corresponding fork models in this manual to properly setup your fork. In general, a lighter weight fork oil will flow through the valving faster delivering a livelier, more responsive feel, offering less shock damping which may be better for lighter weight riders. Conversely, a heavier weight oil will flow through the valving slower offering greater shock damping which may be better for heavier weight riders. With the use of the adjusters on the XC 500, XC 600 & XCR forks, changing from one setting to the next is similar to changing to different weights of oils.