

**AVALANCHE**  
SUSPENSION

**AVA**  
ADVANTAGE  
PROGRAM

Making suspension better for everyone.



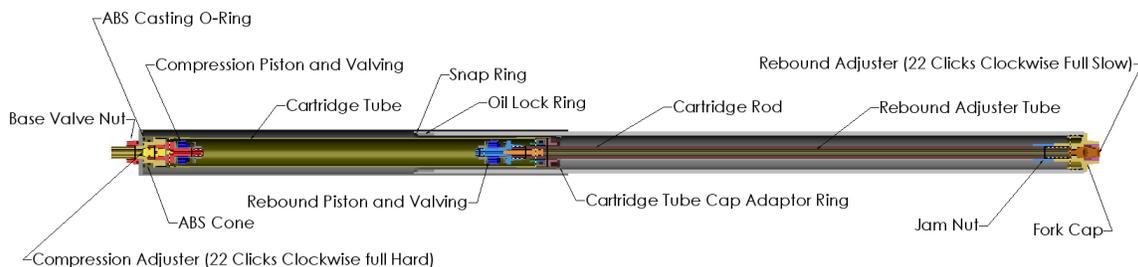
**Models Included:**

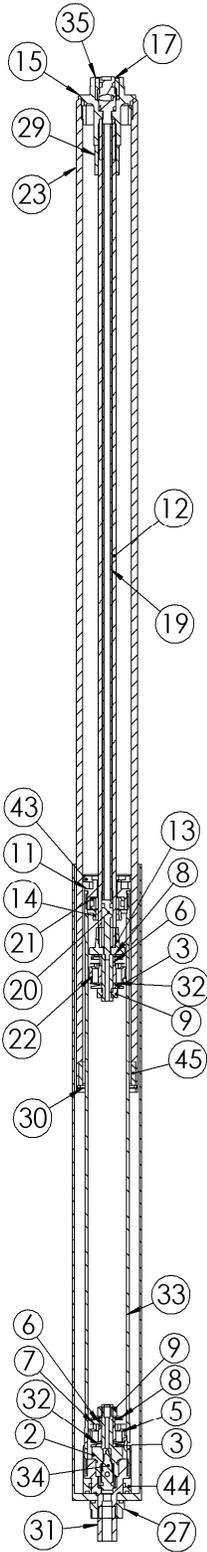
**Boxxer**

**Team/Race/World Cup**

2006-2009 - 32 mm

**Lyrik and Totem similar but different oil heights**





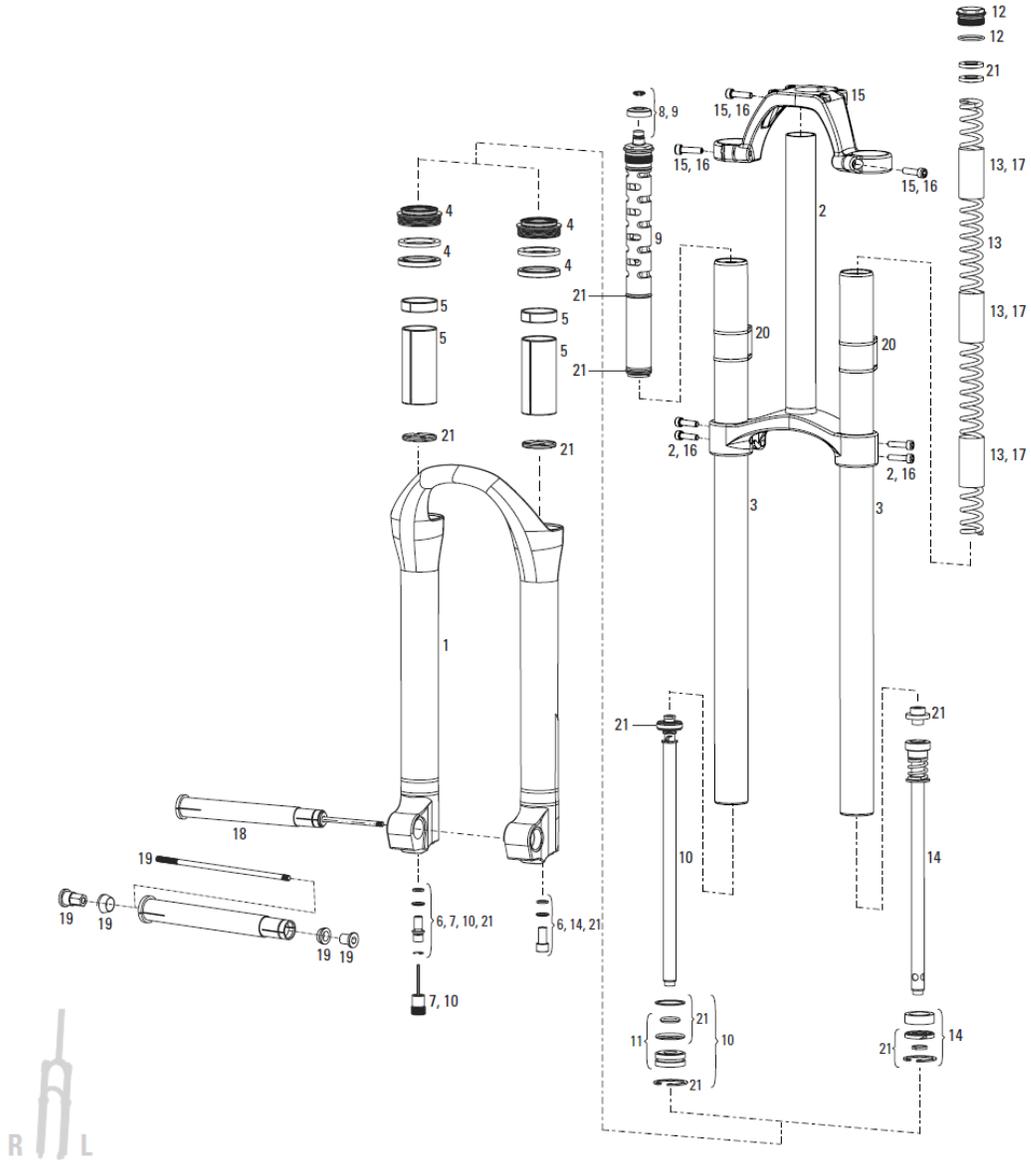
Materials List  
32 mm Boxer Cartridge Kit

| ITEM NO. | QTY. | Description                          |
|----------|------|--------------------------------------|
| 2        | 1    | comp arbor bolt                      |
| 3        | 1    | valve stop                           |
| 5        | 1    | 20 comp piston                       |
| 6        | 1    | check spool                          |
| 7        | 1    | check valve                          |
| 8        | 1    | check valve cup                      |
| 9        | 1    | 6 mm nut                             |
| 11       | 1    | cart tube end cap                    |
| 12       | 1    | cart rod                             |
| 13       | 1    | rebound stem                         |
| 14       | 1    | 20 mm top out washer                 |
| 15       | 1    | fork cap boxer                       |
| 17       | 1    | rebound adjuster                     |
| 19       | 1    | rebound adjuster rod                 |
| 20       | 1    | rebound needle                       |
| 21       | 1    | du bushing holder                    |
| 22       | 1    | 20 rebound piston                    |
| 23       | 1    | Boxer slider tube                    |
| 27       | 1    | Nut adapter                          |
| 29       | 1    | cart rod jam nut                     |
| 30       | 1    | 31 mm snap ring                      |
| 31       | 1    | Comp bolt adaptor 10mm               |
| 32       | 1    | comp shims                           |
| 33       | 1    | cart tube                            |
| 34       | 1    | high low adj needle-1                |
| 35       | 1    | adjuster detent THD                  |
| 36       | 1    | check valve cup                      |
| 37       | 1    | check spool                          |
| 38       | 1    | check valve                          |
| 39       | 1    | comp shims                           |
| 40       | 1    | valve stop                           |
| 41       | 1    | 6 mm nut                             |
| 42       | 1    | boxser casting dim                   |
| 43       | 1    | Cart tube end cap adaptor ring boxer |
| 44       | 1    | abscone boxer                        |
| 45       | 1    | Boxser abs insert                    |



Shown below for reference is the exploded view of the stock Boxxer Race/Team, use this in conjunction with the service manual provided by Rockshox to disassemble your fork to prepare it for the cartridge upgrade.

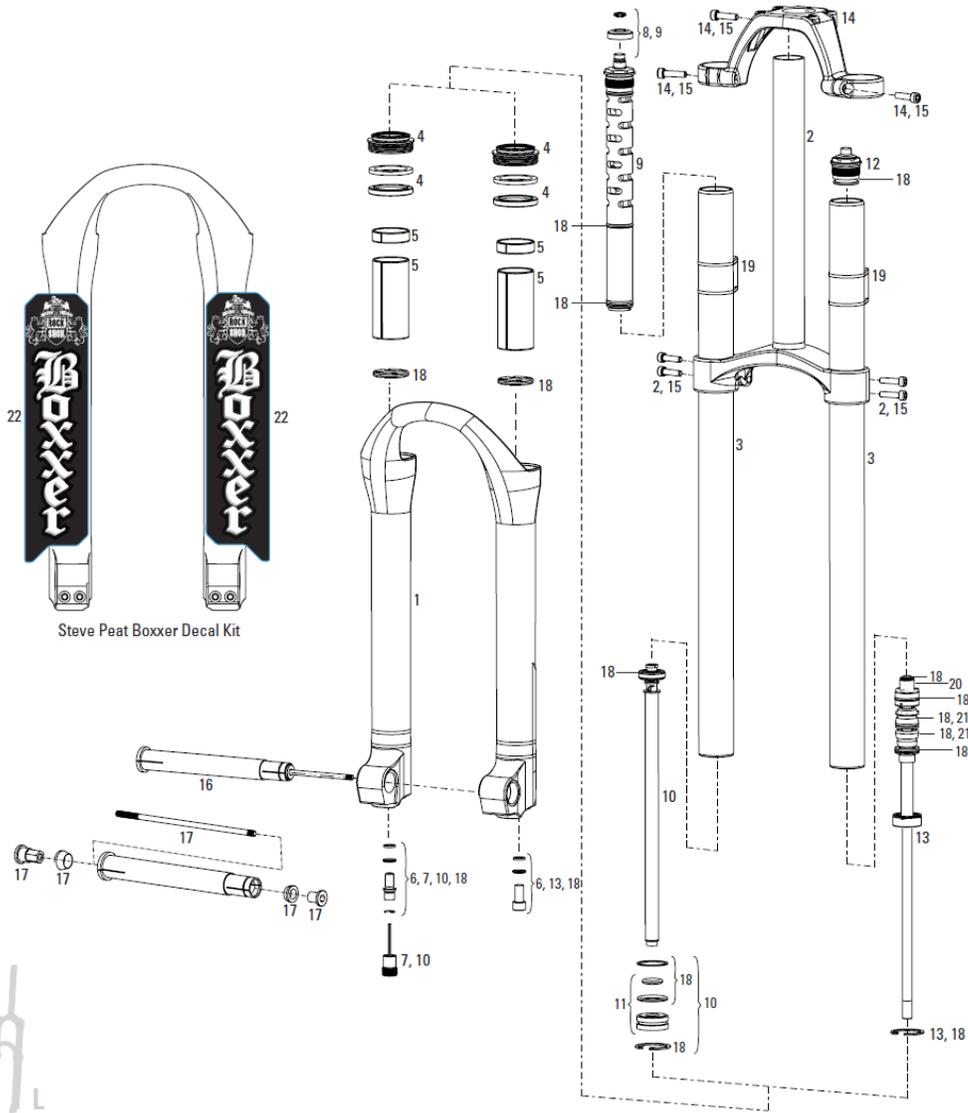
**BOXXER RACE/TEAM - MOTION CONTROL w/ BLACK BOX SPEED STACK - 32mm (2006-2009)**



**Note:**

1. All service kits include any and all replaceable o-rings, retaining rings, crush washers, crush washer retainers, and shaft bolts/nuts. Air service kits include schrader valve(s).
2. Rebound damper and spring shaft kits include crush washers, crush washer retainers and shaft bolts, as well as upper tube retaining rings and rebound adjuster knob.
3. Damper side = rider's right. Spring side = rider's left.
4. All lower legs include bottom-out bumpers, bushings, foam rings and dust seals installed.
5. Lower leg includes Boxxer DH Maxle.
6. 06-09 Boxxer Race features Motion Control compression damper with fixed Floodgate setting. 06-09 Boxxer Team features Motion Control compression damper with adjustable external Floodgate adjustment.
7. Refer to the 2008 RockShox Technical Manual ([www.sram.com](http://www.sram.com)) for oil volumes, air pressure settings and torque values.

Shown below for reference is the exploded view of the stock Boxxer World Cup, use this in conjunction with the service manual provided by Rockshox to disassemble your fork to prepare it for the cartridge upgrade.



**Note:**

1. All service kits include any and all replaceable o-rings, retaining rings, crush washers, crush washer retainers, and shaft bolts/nuts. Air service kits include schrader valve(s).
2. Rebound damper and spring shaft kits include crush washers, crush washer retainers and shaft bolts, as well as upper tube retaining rings and rebound adjuster knob.
3. Damper side = rider's right. Spring side = rider's left.
4. All lower legs include bottom-out bumpers, bushings, foam rings and dust seals installed.
5. Lower leg includes Boxxer DH Maxle.
6. Boxxer World Cup (Solo Air) honed upper tube (spring side/rider's left) is required for use with Boxxer Solo Air spring assembly.
7. Refer to the 2008 RockShox Technical Manual ([www.sram.com](http://www.sram.com)) for oil volumes, air pressure settings and torque values.

**Preparing your Boxxer for the Avalanche Advantage Cartridge upgrade kit**

The following steps will help guide you through the disassembly process and show you how to install the new cartridge:



Using a 4.5 mm allen key loosen the bolt 4-5 turns



Tap gently with a hammer to unseat the damper rod



Loosen the screw more if necessary and tap until the rod is unseated



Remove the bolt



Pull the slider tube and damper rod from lower legs



Insert a coat hanger or welding rod with a slight hook at the end



Reach to the bottom of the lower leg and hook the bottom out bumper



Remove the bottom out bumper and discard, this will not be used



Using snap ring pliers remove the ring from the bottom of the slider leg



Remove all the components so the slider bottom hole is empty



Reinsert the slider tube in the lower leg



Push the slider tube all the way in until it contacts the bottom of the leg



This end of the lower leg will need the internal 10 mm hole extended thru



Drill with a 10 mm drill slowly blowing off the chips to avoid falling in



Deburr the hole and remove any visible chips



Remove the slider tube being careful that the chips remain in the tube



Clean the slider tube and lower leg of any remaining chips, flush if necessary



In the plastic bag provided are an oil lock ring(ABS Insert) and a snap ring



The oil lock ring will have an arrow pointing to the champher, this will face out or down to prevent damage when sliding over the ABS cone.



Insert the oil lock ring (ABS insert) with the internal chamfer facing out



Insert the snap ring



Grease the oil and dust seals with your favorite slippery grease

Insert the slider tube



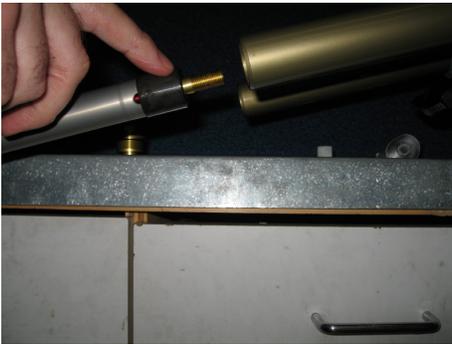
Prepare the cartridge kit as shown, remove the fork cap



Use RTV to help secure the -018 o-ring to the bottom of the ABS cone



Inset the o-ring into the bottom groove



Insert the cartridge assembly into the slider/lower leg, take care to not knock off the base o-ring



Guide the cartridge assembly thru the entire slider tube



Line the 10 mm adaptor bolt to the lower hole



Push it thru until the ABS cone bottoms on the lower leg



Prepare the 10 mm adaptor nut with RTV to help secure the -014 o-ring



Thread the nut with the o-ring facing the lower leg



Tighten the nut to 10-15 in-lbs



Pour oil into upper leg allowing oil to settle into the cartridge, pull the rod and stanchion tube up and down a bit until it is filled about an 100 mm from the top fully compressed



Cycle rod to remove any air bubbles and insert the rebound adjust rod. Fully compress the rod and stanchion tube.



After all air bubbles are removed and damping is smooth through out the stroke. Measure down to the top of the compressed stanchion to the oil, standard is 125 mm for the Boxxer 32, and 55 mm for the Totem and the Lyrik. Using a suction tool or just dump oil out until desired height is reached



Cycle rod to remove any air bubbles and insert the rebound adjust rod



Screw on the fork cap



Make sure the fork cap bottoms on the cartridge rod before the jam nut



Bring the jam nut up to the fork cap and tighten with a slight squeeze on the two wrenches, approximately 10 in-lbs, be careful not to over tighten as these parts can easily be damaged



Screw on the fork cap



Tighten fork cap hand tight

The fork can now be reassembled with the crowns and installed on your frame as described by your owners manuals.

Adjustments and internal settings are described in more detail in the following pages. The fork cap adjuster is the low speed rebound and the standard setting is 12 clicks out (counterclockwise) from full hard. The 10 mm adaptor bolt contains the low speed compression adjuster and the standard setting is 12 clicks out (counterclockwise) from full hard. It can be turned by inserting a small (3.75 mm wide max) flat blade screwdriver up into the lower leg adaptor bolt.

### **Set-up Options:**

#### **Oil Type:**

Recommended oil:

[Golden Spectro 85/150 Cartridge Fork Fluid 5wt or equivalent](#)

Pro Honda HP Fork Oil 5wt

Pro Circuit Fork Fluid PC-01

Yamalube 01 Suspension Oil / KYB 01

Bel-Ray Fork Fluid 5wt

There are many others that we have not tested but as long as they say for Cartridge Forks and or 85/150 rating they will work fine, all 5 wt fork oils are not the same so beware of lesser quality oils that may foam up easily

#### **Wet/already assembled:**

Standard height from top fully compressed: 125 mm for Boxxer 32, 55 mm for Totem and Lyrik

Optional Stiffer height from top fully compressed: 115 mm, 50 mm

Optional Softer height from top fully compressed: 140 mm, 60 mm

**Compression and Rebound Settings:**

*These are rough starting points, adjustments will vary from rider to rider*

**Standard:**

Compression 12 clicks out from full clockwise

Rebound 12 clicks out from full clockwise

**Downhill roots/rocky conditions:**

Compression 17 clicks out from full clockwise

Rebound 15 clicks out from full clockwise

**All Mountain smooth/drops conditions:**

Compression 8 clicks out from full clockwise

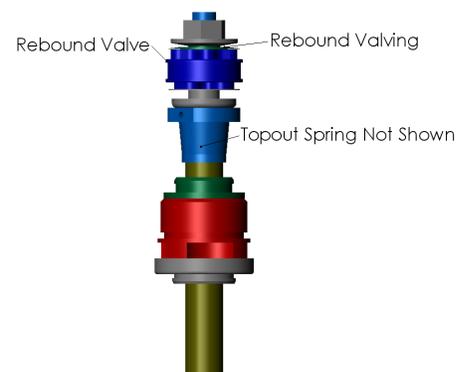
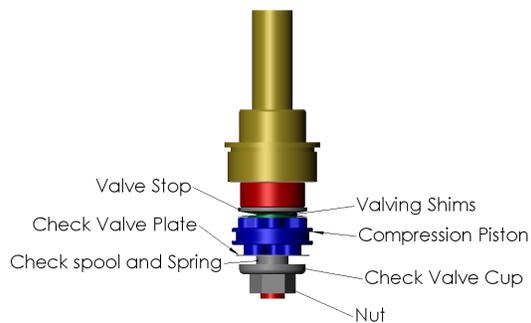
Rebound 10 clicks out from full clockwise

**Urban large drops to flat conditions:**

Compression 5 clicks out from full clockwise

Rebound 8 clicks out from full clockwise

**Revalving the Cartridge Kit:**



Standard Valving:

6mm ID Shims

| <b>Compression</b> | <b>Rebound</b> |
|--------------------|----------------|
| 17x.10             | 17x.10         |
| 15x.10             | 12x.10         |
| 16x.10             | 10x.10         |
| 15x.10             | 16x.10         |
| 14x.10             | 15x.10         |
| 13x.10             | 14x.10         |
| 12x.10             | 12x.10         |
| 11x.10             | 10x.10         |
| 10x.10             | 8x.20          |
| 8x.20              |                |

Optional Stiffer Compression/Slower Rebound Valving:

| <b>Compression</b> | <b>Rebound</b> |
|--------------------|----------------|
| 17x.10             | 17x.10         |
| 15x.10             | 17x.10         |
| 16x.10             |                |
| 15x.10             | 12x.10         |
| 14x.10             | 10x.10         |
|                    | 16x.10         |
| 13x.10             | 15x.10         |
| 12x.10             | 14x.10         |
| 11x.10             | 12x.10         |
| 10x.15             | 10x.10         |
| 8x.20              | 8x.20          |

Optional Softer Compression/Faster Rebound Valving:

| <b>Compression</b> | <b>Rebound</b> |
|--------------------|----------------|
| 17x.10             | 17x.10         |
| 14x.10             | 11x.10         |
| 16x.10             | 9x.10          |
| 14x.10             | 16x.10         |
| 12x.10             | 14x.10         |
| 10x.10             | 12x.10         |
| 8x.20              | 10x.10         |
|                    | 8x.20          |

## Disclaimer

Avalanche Suspension Inc. is not responsible for any damages to you or others from riding, transporting or other use of your Avalanche Advantage Rockshox Boxxer or mountain bike. User fully understands that mountain bike riding and/or racing is dangerous and hard on equipment. In the event your Avalanche Advantage Boxxer cartridge kit fork breaks or malfunctions, Avalanche Suspension Inc. will assume no liability or obligation beyond the repair or replacement of your fork.



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