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Mtn. Tamer Update Kit (P-1800-47) for Pre 2009 & older models

It is recommended that you fully read the entire instruction and setup sheets before starting so that you will know ahead of time what setup you will be using.

Installing the new shock hardware:

1. Lift the back end of the sled up high enough so that you can accurately work on the slide rails.
2. You will need to drill a new shock mounting hole in the slide rail for both front and back shocks. To do this, measure "X" straight forward from the middle of the original Mtn. Tamer shock mounting holes. Put a good center-punch on your mark. Drill holes with a sharp 25/32" drill-bit. **Hole Locations:** Arctic Cat M-Series, Front 1 1/4" ~ Back 7/8"
Polaris IQ & Edge, Front 7/8" ~ Back 3/4"
Ski-Doo XP & REV, Front 0 ~ Back 3/4"
Yamaha (all), Front 3/4" ~ Back 7/8"
3. Release air pressure from shocks. Remove the shocks from the suspension. Knock out the old lower shock bushing. A socket and rubber hammer works well for doing this.
4. Install the new 2 sided shock bushings. A rubber hammer will also work well for this. Put water-proof grease on the inside of the bushings and on the new shock-cross shafts. Install the shafts into the shock bushings. Note: one of the shock alignment collars has an "X" on it; this collar is pre-set in the right location. Install the shaft into the bushings and slide on the other collar. Squeeze the two together with your fingers with the shock in the middle. Tighten the set-screw down tight enough so that you can feel the end of the set-screw sink into the aluminum shaft. Use Red Loctite on the set-screw threads.
5. Reinstall the upper end of the shock first, and then install the lower end in the desired set of mounting holes in the slide rails.

Installing the new limiter straps:

6. Remove the old limiter strap and cross-shaft. Discard the strap and 2 alignment spacers.
7. Install the new limiter straps with the 3 new provided aluminum strap guide spacers onto the cross-shaft. Note: the longest spacer will go in the middle.
8. Reinstall the assembly into the slide rails. Use blue Loctite on the threads. Loop the top end over front top side of the upper cross-shaft. Install bolt so that the nuts will face forward
9. **Front arm set up:** Limiter strap setting and front shock air pressure will depend on your sleds set-up. Refer to the Set-Ups & Adjustment Sheet.

Installing the new slide bushings:

10. Remove the 2 slide mechanism bolts and the 2 back arm bolts from the slide rails. Remove the slide mechanism from the back arm. Discard the white plastic washers that are on the slide tubes (they will be used in a different spot). Remove the grease zerks from the back arm.
11. Knock out the old slide bushings. A regular screw-driver and a rubber hammer will work well for this.
12. Clean all grease and grime from the bushing holes with brake or carb cleaner on a rag.
13. Install the new 1-piece slide bushing in from the bottom using a rubber hammer to nock them in or remove the back arm from the sled and press them in. Use caution when doing this, make sure that you start the bushing in straight and that you use extreme caution while pushing them in so that you do not damage the bushings.
14. Drill the grease zerk hole with a sharp 3/16" drill bit. Reinstall the zerks.
15. Reinstall the slide mechanism assembly onto the arm. **Important:** The slide mechanism must be able to moves in and out freely; if it does not then you will need to ream the bush with a 7/8" reamer. Note: when the assembly is fully extended; look to see if the slide stop washers are stopping the suspension and that both sides are touching evenly. If they are not then you may need to swap the two around.
16. Reinstall the arm into the slide rails. Use blue Loctite on the threads.

Should you have any problems during installation, please call (208) 255-5644

Mtn. Tamer Suspension Adjustments & Set-Up Instructions



Understand How the Mtn. Tamer Suspension Works:

The biggest benefits of the Mtn. Tamer design is that it puts even pressure on the snow between the front and back portion of the suspension. This is achieved by our rear-arm slide mechanism and the mounting position of the shocks. The slide mechanism couples the back portion of the suspension to the front at a specific spot in the range of travel. At this point the suspension will then travel straight up into the tunnel, reducing the track angle, and applying the sleds weight toward the front, pulling it on top of the snow.

Knowing the 5 Adjustment Points on the Suspension:

Limiters Strap: The limiter straps are only adjustable from one end (the top). The lower end must be fastened around the limiter strap cross shaft and in-between the 3 alignment spacers. The strap has 10 adjustment holes in the middle of the strap. At the top end of the strap there are 2 other holes to choose from. The hole that is closest to the end of the strap is the standard adjusting hole. The hole that is 3" down from the end of the strap is an optional hole that will give the strap 10 coarser adjustments (works well on high-horse power sleds).

Optional Shock Mounting Locations: If you are using Timbersled slide rails, they will have 2 optional mounting locations for the front and back shock. The rearward holes are the standard mounting location; they will work the best for all around boondocking and deep powder riding. The forward holes will make the suspension 30% stiffer and more bottom-out resistant, they work well for larger riders and making more affective adjustments on turbo charged sleds.

Float Shock Air Pressure: Note: In your installation instructions are recommended air pressure set-ups for each sled brand and rider weight. Your kit includes an air pump to adjust the spring rate of the shock. To do this, lift up the back end of the sled, remove the silver air valve-cap (be very careful that you do not get any moisture inside the air valve). Thread the pump onto the valve-stem until you feel the pump pressure up, you will be able to see the pressure on the gauge. Also keep in mind that when the pump pressures up the shock looses 4 psi. When you unthread the pump you will hear it release air but will not affect the exact pressure you gave it. When tuning your suspension it is best to change air pressure in increments of 10 psi at a time. The Mtn. Tamer shocks have specific air pressure ranges that they must run in so that you do not damage the suspension (depending on the hole location in the rails).

Shock Pressure Ranges:

Front shock in front hole,	40 to 80 psi
Front shock in back hole,	75 to 100 psi
Back shock in front hole,	120 to 175 psi
Back shock in back hole,	130 to 175 psi

Warning: *If your suspension is bottoming out you need to stop and readjust. If you are unable to make the shocks perform properly you need to stop riding and contact us for assistance. Damage will occur if you ignore the problem.*

Back Arm Slide Mechanism: The slide mechanism has 2 adjustment points by adding or removing aluminum shims that were included in your original Mtn. Tamer kit.

1st you can adjust the sleds rear ride height by adding a shim onto the top side of the slide mechanism. This works well for fine tuning the amount of ski pressure your sled has on the trail without jeopardizing the amount of ski lift when climbing.

2nd you can adjust how much suspension couples by adding a shim to the bottom side of the slide mechanism. In conjunction with the limiter strap, this controls how much ski lift your sled will have.

Each sled brand has a max amount of shim you can add to the slide mechanism; if it is over shimmed the suspension will bind up.

Max Shim for each sled Brand:

Arctic Cat M-Series,	1/2" top ~ 1/4" bottom
Polaris IQ & Edge,	1/2" top ~ 3/4" bottom
Ski-Doo REV,	1/2" top ~ 3/4" bottom
Ski-Doo XP,	1/2" top ~ 1/2" bottom
Yamaha mtX,	1/2" top ~ 3/4" bottom

Warning: *Never exceed the max amount of shim that is recommended for your sled brand. Damage will occur if you do.*

A/C M-Series Recommended Set-Ups:

The given set-ups are intended to control ski lift and have been tested with a 200 lbs rider. They are a good starting point to go by; however, every rider has a different liking and will need to fine tune the suspension from these set-up points.

Normally Aspirated Sled *Slide shims:* No shim on bottom & ¼" shim on top
(Up to 180 HP) *Front shock:* 80 psi. In rearward mounting hole
Back shock: 140 psi. In rearward hole
Limiters strap: 7th hole down, using standard end hole on strap

Turbo Sled, 7 psi of boost *Slide shims:* No shim on bottom & ¼" shim on top
(Up to 220 HP) *Front shock:* 75 psi. In rearward mounting hole
Back shock: 145 psi. In rearward mounting hole
Limiters strap: 9th hole down, using standard end hole on strap

Turbo Sled, 10 psi of boost *Slide shims:* ¼" shim on bottom & ¼" shim on top
(Up to 250 HP) *Front shock:* 55 psi. In forward mounting hole
Back shock: 160 psi. In rearward mounting hole
Limiters strap: 10th hole down, using standard end hole on strap

Turbo Sled, 12 psi of boost *Slide shims:* ¼" shim on bottom & ½" shim on top
(Up to 280 HP) *Front shock:* 50 psi. In forward hole
Back shock: 130 psi. In forward mounting hole
Limiters strap: 8th hole down, using optional end hole on strap

Turbo Sled, 14 psi of boost *Slide shims:* ¼" shim on bottom & ½" shim on top
(Up to 325 HP) *Front shock:* 40 psi. In forward hole
Back shock: 140 psi. In forward mounting hole
Limiters strap: 10th hole down, using optional end hole on strap

Polaris IQ & Edge RMK Recommended Set-Ups:

The given set-ups are intended to control ski lift and have been tested with a 200 lbs rider. They are a good starting point to go by; however, every rider has a different liking and will need to fine tune the suspension from these set-up points.

Normally Aspirated Sled *Slide shims:* No shim on bottom & 1/4" shim on top
(Up to 160 HP) *Front shock:* 80 psi. In rearward mounting hole
Back shock: 140 psi. In rearward hole
Limiters strap: 4th hole down, using standard end hole on strap

Turbo Sled, 7 psi of boost *Slide shims:* 1/2" shim on bottom & 1/4" shim on top
(Up to 200 HP) *Front shock:* 80 psi. In rearward mounting hole
Back shock: 145 psi. In rearward mounting hole
Limiters strap: 6th hole down, using standard end hole on strap

Turbo Sled, 10 psi of boost *Slide shims:* 1/2" shim on bottom & 1/4" shim on top
(Up to 225 HP) *Front shock:* 55 psi. In forward mounting hole
Back shock: 150 psi. In rearward mounting hole
Limiters strap: 9th hole down, using standard end hole on strap

Turbo Sled, 12 psi of boost *Slide shims:* 3/4 shim on bottom & 1/4" shim on top
(Up to 250 HP) *Front shock:* 50 psi. In forward hole
Back shock: 160 psi. In rearward mounting hole
Limiters strap: 6th hole down, using optional end hole on strap

Ski-Doo XP Summit Recommended Set-Ups:

The given set-ups are intended to control ski lift and have been tested with a 200 lbs rider. They are a good starting point to go by; however, every rider has a different liking and will need to fine tune the suspension from these set-up points.

Normally Aspirated Sled *Slide shims:* No shim on bottom & No shim on top
(Up to 160 HP) *Front shock:* 55 psi.
Back shock: 130 psi. In rearward hole
Limiter strap: 6th hole down, using standard end hole on strap

Turbo Sled, 4 psi of boost *Slide shims:* ¼" shim on bottom & 0" shim on top
(Up to 190 HP) *Front shock:* 55 psi.
Back shock: 130 psi. In rearward mounting hole
Limiter strap: 8th hole down, using standard end hole on strap

Turbo Sled, 8 psi of boost *Slide shims:* ½" shim on bottom & ¼" shim on top
(Up to 210 HP) *Front shock:* 45 psi.
Back shock: 140 psi. In rearward mounting hole
Limiter strap: 10th hole down, using standard end hole on strap

Turbo Sled, 10 psi of boost *Slide shims:* ¾ shim on bottom & ½" shim on top
(Up to 230 HP) *Front shock:* 40 psi.
Back shock: 150 psi. In rearward mounting hole
Limiter strap: 8th hole down, using optional end hole on strap

Ski-Doo REV Summit Recommended Set-Ups:

The given set-ups are intended to control ski lift and have been tested with a 200 lbs rider. They are a good starting point to go by; however, every rider has a different liking and will need to fine tune the suspension from these set-up points.

Normally Aspirated Sled *Slide shims:* No shim on bottom & ¼" shim on top
(Up to 160 HP) *Front shock:* 85 psi. In rearward mounting hole
Back shock: 140 psi. In rearward hole
Limiter strap: 4th hole down, using standard end hole on strap

Turbo Sled, 4 psi of boost *Slide shims:* ½" shim on bottom & ¼" shim on top
(Up to 190 HP) *Front shock:* 85 psi. In rearward mounting hole
Back shock: 145 psi. In rearward mounting hole
Limiter strap: 7th hole down, using standard end hole on strap

Turbo Sled, 8 psi of boost *Slide shims:* ½" shim on bottom & ½" shim on top
(Up to 210 HP) *Front shock:* 55 psi. In forward mounting hole
Back shock: 150 psi. In rearward mounting hole
Limiter strap: 9th hole down, using standard end hole on strap

Turbo Sled, 10 psi of boost *Slide shims:* ¾ shim on bottom & ½" shim on top
(Up to 230 HP) *Front shock:* 45 psi. In forward hole
Back shock: 160 psi. In rearward mounting hole
Limiter strap: 6th hole down, using optional end hole on strap

Yamaha APEX Nytro-mtx Recommended Set-Ups:

The given set-ups are intended to control ski lift and have been tested with a 200 lbs rider. They are a good starting point to go by; however, every rider has a different liking and will need to fine tune the suspension from these set-up points.

Normally Aspirated Sled *Slide shims:* No shim on bottom & 0" shim on top
(Up to 160 HP) *Front shock:* 95 psi. In rearward mounting hole
Back shock: 145 psi. In rearward hole
Limiters strap: 3th hole down, using standard end hole on strap

Turbo Sled, 10 psi of boost *Slide shims:* 1/2" shim on bottom & 1/4" shim on top
(Up to 230 HP) *Front shock:* 60 psi. In forward mounting hole
Back shock: 155 psi. In rearward mounting hole
Limiters strap: 7th hole down, using standard end hole on strap

Turbo Sled, 15 psi of boost *Slide shims:* 3/4" shim on bottom & 1/2" shim on top
(Up to 280 HP) *Front shock:* 55 psi. In forward mounting hole
Back shock: 140 psi. In forward mounting hole
Limiters strap: 5th hole down, using optional end hole on strap

Turbo Sled, 18 psi of boost *Slide shims:* 3/4 shim on bottom & 1/2" shim on top
(Up to 300 HP) *Front shock:* 45 psi. In forward hole
(174" track recommended) *Back shock:* 150 psi. In forward mounting hole
Limiters strap: 8th hole down, using optional end hole on strap

Turbo Sled, 20+ psi of boost *Slide shims:* 3/4 shim on bottom & 1/2" shim on top
(Up to 350 HP) *Front shock:* 30 psi. In forward hole
(174" track recommended) *Back shock:* 160 psi. In forward mounting hole
Limiters strap: 10th hole down, using optional end hole on strap
