Installation & Maintenance Manual

SMX System & Parts

Take a minute to familiarize yourself with the parts and system included:

1 – Frozen MOTO SMX Snow Bike System

1 – Frozen MOTO Bike Specific fit system

- 1 – Seat Strut
- 4 – Subframe Spacers
- 2 – Fork Boss Spacers
- 2 – Fork Tube Blocks
- 2 – Fork Tube Plates (Fork Tube Block to Spindle Mounting)
- 1 – Spindle
- 1 – Complete Ski and Mounting Hardware
- 1 – Brake line, Banjo Bolt (10mm x 1.25 thread pitch) & Crush washers (these maybe attached and installed on the system)
- 2 – Elks Shocks stage 1 or 5 depending on the order

SMX Snow Bike System Installation

1. Remove the rear swing arm, linkage and shock assembly as instructed per your motorcycle manufacturer instructions.
2. Install the seat strut and attach it to the subframe center assembly with 10mm x 1.50 thread pitch that are 16mm long supplied (this may be done in advance)
3. Install motorcycle model specific fit kit in the subframe, turn the seat strut eyelet approximately 16 - 18 turns into the seat strut this will give a good reference point to start your fine tuning.
4. With the model specific fit kit installed align and install the system into the motorcycle, take care when installing to recheck that the seat strut eyelet is ready to be installed in the upper motorcycle shock mounting location. If this is not in the correct position it will require removal of the system and reinstallation to achieve.
5. Once in place and aligned Install the original motorcycle swing arm bolt back through the frame replace the original motorcycle washer and nut. Install the motorcycles original upper shock bolt back through the frame and attach the original nut (see Figure 5 for general location reference).

   Figure 5 (pic)
6. With both bolts and nuts attached Torque the swing arm bolt and nut as well as the upper shock bolt and nut to specific motorcycle manufacturer's specifications.
7. Attach the motorcycles master cylinder to the supplied brake line with the original banjo bolt and crush washers that were removed from the motorcycle. Also reattach the master cylinder back on the Frame with the original motorcycles bolts. Torque the master cylinder bolts to the motorcycle manufacturer's specification.
8. Bleed the brake using the motorcycle master cylinder and the upper most rear bleeder valve on the caliper, 1/4 inch 6 point box end wrench works the best. There are 4 bleeder valves one of the upper most valves must be used to remove all air from the system. Make sure to pay attention to the fluid level in the master cylinder reservoir as it will require refilling several times to completely fill the supplied line and caliper body the first time it is installed. DO NOT US THE SNOW BIKE IF THERE IS ANY BLEED OFF OF THE BRAKE PRESSURE OR IT DOES NOT REMAIN CONSTANT SOLID PRESSUREWHEN THE BRAKE IS APPLIED! This means you have remaining air in the line and have not bleed it completely or there is a leak. Check your motorcycle master cylinder banjo bolt and connection. Repeat the bleeding process until a solid brake is achieved.
9. Install the supplied chain around the jackshaft and motorcycle counter sprocket. The chain is left intentionally long and may need to be cut to the motorcycle correct length. This is due to the range of gears that can be used by manufacturers and changed by end users. This assures that the best fit possible can be achieved. Once the correct length and fitment are achieved use the supplied connecting link to join the ends of the chain. As a note you may want to buy a replacement chain and cut it to length while

performing this step as it is a safety factor to carry another chain just like a spare snowmobile belt as this is a wear item.

10. The subframe chain tensioner pre-installed in the subframe should be located in between the chains to allow for tensioning of the chain in a downward motion on the lower chain (see Figure 10). Make sure to check both rear and front chain tensions frequently to maintain even tension and removing excess tension which can result in binding and over tightening of the chain and ultimate failure.

Front Ski Installation

1. Remove the front wheel and front brake assembly according to the motorcycle manufacturer's specifications.
2. Install the fork tube plates to the spindle using the (4) 6mm bolts and (4) 6mm nylock nuts supplied and the 6mm bolt holes on the top of the spindle. Take care in aligning the plates on the spindle so that the plates also align with the forks. Tighten these close to being tight but not quite as a little movement will be needed to attach the fork blocks to the plates due to tight manufacturing tolerances for final fit and finish.
3. Slide the spindle and fork boss spacers together taking note that one may be longer than the other. If this is the case check the front axle as it may slide partially through one boss before encountering the fork spacer as designed by the motorcycle manufacturer. If this is the case use the shorter fork boss spacer on the side that the axel is initially started on to accommodate for the axel to slide through the fork boss and up against the spacer. This will leave enough room for the nut to be attached to the axel on the off side in step 4.
4. With the Fork Boss Spacers in place in the spindle slide the original motorcycle front axel back through the fork boss, fork boss spacer, spindle and through to the opposite fork boss spacer and fork boss. At this point reinstall the axel nut and hand tighten up against the fork boss, this will allow for some movement while fitting the fork blocks in step 5.
5. Install the fork blocks against the fork tube and slide downward into place against the fork plates taking care to make sure the correct block is on the correct side. The Brake side block has a cut out for the brake caliper leg to sit in.
6. Install the (4) 8 X 1.25 thread pitch bolts that are 25mm long through the fork plate and into the predrilled and tapped holes in the fork blocks. Hand tighten these bolts taking care to check alignment frequently.
7. Install the outer fork tube block paying attention to the Frozen MOTO logo aligmnment on the outside of the block attach the outer block with the (4) 8mm x 1.25 socket head cap bolts provided and tighten.
8. At this point a final check and tightening of the other bolts can be proceeded with. Tighten the bolts in the following manner to get the best fit possibly.
    a. Fork blocks (socket head cap bolts)
    b. Fork blocks to fork plate (8mm bolts)
    c. Fork plates to spindle (6mm bolts & 6mm nylock nuts)
    d. And finally front axel

Removal & Reinstallation of motorcycle components

1. To remove the Frozen MOTO SMX follow the installation instructions in reverse order.
2. Follow the motorcycle manufacturer's instructions and specifications for reassembly of front wheel, front brake, swing arm, and suspension that has been removed.

Shocks

The Elka Stage 1 or Stage 5 shocks supplied with the SMX come with a factory spring rate to cover the average rider just like motorcycles and are adjustable utilizing the preload nut located on the upper body of the shock. For setting information and troubleshooting refer to the Elka manual provided the manual is also available on the web at www.elkasuspension.com/support/manuals/

There are compression and rebound settings dependent on the shock model

Frozen MOTO recommends setting the shocks in the middle of the valve settings and adjusting the settings from this base line. If a heavier or lighter spring rate is desired contact your retailer for optional spring rates (additional cost may apply).

Track Adjustment

Track adjustment is performed by adjusting the upper track adjustment, located on the left and right of the tunnel, and the lower adjustment, located on the left and right rear of the rear rails see figure.

(Figure for adjustments goes here)

Track adjustments are made in two steps taking care to maintain even distance in the adjustment slots of both the upper and lower adjustments. If these adjustments are not made evenly then the system will be out of geometry and will create undesirable affects in operation such as binding or compromised ride. These adjustments are best to be made slowly and evenly in ¼ turn increments at a time. It is best to let the track remain as free as possible without ratcheting between the driver and drive lugs. Also note that some snow build up will occur so take note when breaking in and periodic checking that the track is not to tight due to the naturally occurring snow build up between the parts. Some stretching of the track may occur with a new track and should be checked periodically to eliminate any over or under tightening of the track this will result in optimal performance.

Maintenance

Chain- Gold o-ring chain is supplied as original equipment. In most gearing combination options one standard length 520 gold o-ring chain can be purchased from the retailer with an additional master link and broken to your specific needs to provide new service to both chains.

Sprockets- The original equipment sprockets are splined and the same as the 2013 KX450F counter sprockets and can be serviced by replacing the original with the 2013 KX45F counter sprockets. The jackshaft sprocket gearing can also be changed by changing the amount of teeth on the sprocket by changing the desired amount of teeth on the sprocket as these sprockets range from 12 – 15 teeth. This gives the operator ability to quickly and efficiently replace sprockets as these sprockets can also be purchased directly from a local retailer to save shipping time should you experience a need to change gearing or replace worn parts.

Hyfax- The Polaris RMK Pro Hyfaxes are used and are a direct replacement available from the retailer and can be cut down from a length replacement hyfax

Tracks- Specialty and replacement tracks are available from Frozen MOTO Industries only contact Frozen MOTO to discuss track options, availability, and costs.

Warranty

Frozen MOTO Industries LLC warranties SMX products against defects in materials and workmanship for a period of one (1) year from the date of the original purchaser under normal use, racing and freestyle riding void all warranties as these are not normal use.

Replacement and/or repair warranty is valid only by following all the outlined and detailed following:

1. Frozen MOTO requires notification prior to replacement of any part under this warranty to determine failure.
2. The SMX or part has not been installed in a modified system and manner and the part is not modified in any way that Frozen MOTO does not support in writing. Contact Frozen MOTO prior to any modification to the SMX system or parts.
3. Replacement or repaired parts will only be supplied upon receipt of the defective parts for Frozen MOTO inspection and failure determination.

Frozen MOTO shall have no obligation to warranty any SMX or part if the follow are not met:

1. Failure to notify Frozen MOTO of any potential defect prior to failure
2. SMX or Part is improperly installed
3. SMX or part is installed in any unapproved or modified manner.
4. SMX or part is used for any application other than it originally intended purpose.
5. SMX or part is continued to be used after defect or malfunction.
6. Frozen MOTO obligation is limited to replacement or repair of defective products only for the period of time as stated above and is at the sole discretion of Frozen MOTO after receiving and investigating the malfunction or defect.

Snow biking in general can be an inherently dangerous and life threatening sport due to the responsibility of the owner and operator in retrospect to riding and maintenance of the SMX system or parts and varying environmental conditions, as such Frozen MOTO has no obligation or liability for any injury or damage from the use of the SMX system or parts.