

# Xtreme Products Inc.

## Kit No. XTPIRS 3 INCH Polaris Ranger with Independent rear suspension

**Read these instructions carefully. Xtreme recommends, a professional mechanic perform the installation. Care should be taken to follow all standard safety procedures.**

A thorough inspection of the suspension should be made prior to performing the installation. Any worn, bent or broken parts should be replaced. After installation another inspection should be made, checking for loose components or missing hardware. Inspect, again after eight hours of operation.

To begin, check to make sure all components and necessary tools are on hand.

**Caution!!** Do to the changes Polaris made in their bikes. It is possible that you will need to remove some material on the strut housing. This will prevent the strut housing from rubbing the out-board CV boot. Check the attached drawing to see where to remove the material and which boot configuration to look for.

### **Components:**

The kit consists of a set of spacers (Aluminum) and two PVC spacers for the front. New brackets are furnished for the rear.

### **Disassembly / Installation Procedure**

1.)Begin by loosening the lug nuts on both front tires. Raise the unit, using a suitable lifting device or procedure, until the front tires are off the ground. If using a floor jack with stands, chock the rear wheels to prevent the unit from rolling. If using jack stands, make sure the stands are placed under the frame and not the body. Make sure the unit is **stable and secure**.

2.)Remove the tires / wheels.

**NOTE:** *Now is a good time to check the threads on the lug studs. Check for rust, pulled threads or other deterioration that could cause a stud/thread failure.*

3.)Remove the brake caliper and tie it up out of the way. Do not let it hang on the hose.

4.)Loosen the top pinch bolt on the strut. This bolt also attaches the brake hose.

- 5.) Remove the tie rod attaching bolt paying close attention as to the location of the washer/spacer used.
- 6.) Loosen the bottom ball joint attaching nut. Separate the ball joint and control arm, we recommend using a heavy weight (something larger than the hammer you are striking with) as a backup on the opposite side of the control arm you are striking.

When you strike the control arm where the ball joint is located you want to make a pinching blow so as to cause the ball joint to separate from the control arm. Using a "pickle fork" may cause damage to your ball joint boot causing you to have to purchase another boot.

- 7.) Remove the axle retaining nut and tap the end of the axle stub to loosen it in the housing. Remove the ball joint nut and drop the control arm. Slide the axle stub out of the hub being careful not to damage the seal. Wrap a cloth around the stub to prevent contamination and carefully tie it up out of the way.

**NOTE: PAY CLOSE ATTENTION TO THE INNER PLUNGE SOCKET AND DO NOT DISENGAGE. IF YOU DO, CAREFULLY WORK THE BEARINGS BACK INTO THE SOCKET. FAILURE TO DO THIS WILL CAUSE YOU TO DISASSEMBLE THE UNIT BACK TO THIS POINT AND START OVER. IN WORST CASES YOU CAN DAMAGE THE SOCKET AND HAVE TO REPLACE THE AXLE.**

- 9.) Loosen the lower pinch bolt and slide the strut housing down and off the strut. When you have the housing free place this on a table or in a vise and begin to remove the material necessary to prevent contact with the boot. Insert the steel sleeve and make sure this will not contact the boot also. (The sleeve is already cut to aid the process.) When you have removed the material necessary place the aluminum spacer over the shock and insert the shock back into the housing. Lower the shock in the housing until it seats firmly on the spacer and the coil is sitting in the retainer groove. Tighten the lower pinch bolt.
- 10.) Take the stub and reinsert into the hub. Do not try to insert it all the way. Take the lower control arm and lift it up and reinstall the ball joint into the control arm. Tighten the ball joint nut finger tight. Place a jack under the control arm to help hold it in place.
- 11.) You may now insert the stub into the hub and through the bearings. Be sure the inner plunge socket is engaged properly.
- 12.) Complete the reassembly in the reverse order that you used to disassemble. When you install the axle retaining nut, tighten this firmly making sure the bearings are seated and the axle stub is all the way into the hub. Look at the back of the hub and be sure the stub is all the way in.

13.) Make sure the coil and spacer are seated properly then using the jack you placed under the control arm apply pressure to the control arm, reattach all the components you removed in the reverse order. Make sure the strut is down in the housing and firmly against the steel sleeve. You may check this by inserting your finger through the bottom and checking to be sure it is tight. If not you may use a pry bar inserted in the coil to pry down on the strut until it is in position. Tighten and replace all “cotter pins” you removed.

15.) Proceed to the other side and repeat the steps listed.

### **Front diagrams**



On the left is a stock knuckle marked for removal and on the right is one with the material removed. Removing this material will not affect the integrity of the knuckle.



This shows the coil spacer in place notice the steel washer under the spacer. This should be installed to support the spacer.



This shows how to push the strut down on the spacer. You may have to apply pressure to the strut on some installations. When you have the strut seated on the spacer tighten the lower pinch bolt.

### **REAR Disassembly / Reassembly**

- 16) Lift the rear of the bike and place jack stands to support the weight and stabilize the bike. Remove the wheels and the rear shocks
- 17) Disconnect the sway bar on both sides be sure to keep all the bushings and washers.



- 18) Install the relocation brackets as shown in the picture and be sure to install the spacer in the factory crossmember. There is a factory hole in the frame rail to install the 3/8x1.0 bolt into. Install one bracket on each side of the crossmember. Repeat this on the opposite side.



19) Reinstall the shocks and be sure to install the washer included as shown one on each side of the shock.



20) Reconnect the sway bar one side at a time insert the new bolt through the bushings as they came off use the new tube furnished in place of the stock aluminum link. Do not tighten when you do one side wait until you have the bolts and sleeves installed on both sides before you tighten. Tighten the nut on the bolt until you get swelling of the bushings.

21) A good “Anti-Seize” compound should be applied to the lug studs and the tire/wheel combination of choice installed. Remove all jacks, jack stands and other devices used to lift and hold the bike. Check all brackets and bolts to be sure everything is tight.

**WARRANTY:** This kit will be warranted against defects in workmanship and materials ONLY. Problems from misuse, improper installation or abuse are not covered in the warranty. This warranty is good for one year (12 months) form date of purchase. All warranty claims MUST be accompanied by the original receipt or suitable proof of purchase date.

