TECHLINE- (218) 744-2107

2008-CURRENT YAMAHA NYTRO M-20 AIRWAVE INSTRUCTIONS 121611

1. **Turn off fuel valve.** Safely and securely lift and support the rear of the sled. Remove stock suspension.

2. On RH side of sled, locate and remove the rivet shown in Diagram #1 near the front of the sled. Drill this rivet hole out to 25/64" or 10mm.

3. Temporarily mount the RH torque arm bracket through the rear hole position and the hole drilled in Step #1. Measure down 6.223" or 158.1mm from top of stock mount plate to the center of the front hole in torque arm bracket, tighten bolt to hold securely in place. Then center punch the upper middle hole in torque arm bracket. Mark area of stock plate boss area and grind down flush with plate. Remove torque arm bracket to drill and grind plate. See Diagram #1

4. Locate stock RH rear arm factory plate on inside of tunnel and grind off the weld-nut on the inside of the tunnel and dill this hole out to 29/64" or 11.5mm. This will be the rear arm location. See Diagram #1.

5. Repeat steps #2, 3 and 4 on LH side of tunnel.

6. Braided hose and RH lock bracket procedure. Align the 7/16" hole drilled at rear of tunnel with the 7/16" hole in the Rear Shaft Lock Bracket and temporarily hold in place with 7/16" bolt provided. Parallel the top of bracket with the top of the tunnel. Measure at front and rear of bracket, when the two measurements are equal the bracket is parallel. There are two ¼" holes drilled in the front of the bracket. This is to give room for different types of stock brackets on the outside of tunnel. Either hole can be used. Mark the hole that best suits your sled and first drill out to ¼" and then drill out to 7/16". Remove Rear Shaft Lock Bracket from tunnel and place on right hand side of rear upper cross shaft.

7. Bolt front and rear torque arm brackets to front and rear arm shafts. Lay arm flat with torque arm brackets lying flat on floor. Torque to 70 ft lbs making sure brackets stay flat or parallel.

8. Place suspension into track. Attach front arm and torque arm brackets to the tunnel. **Note:** There are two 3/8" washers included with hardware. Place one washer between torque arm bracket and inside of tunnel on the rear mount location of torque arm bracket on each side of tunnel when bolting front arm into the tunnel. You may need to slightly pry against tunnel to clear torque arm bracket over factory tunnel bracing. Raise rear arm and bolt into place. Attach lock bracket, braided hose and hose protector. Torque to 70 ft lbs.

9. Attach upper front shock mount (40 ft lbs of torque), then Attach limiter strap. Adjust track with at least ½" of free hang (no weight) and proceed to set-up pages.

10. Diamond kits: mount the gauge, switch and compressor to your preference. Caution to keep airlines away from heat sources and rubbing or cutting on moving or rough surfaces. Plumb and wire the air system per included instructions.

11. Lock washer must be used on the Air Compressor clamp. If not used the clamp will pinch the body and stop pump the motor from turning.

PHOTO #1

PHOTO #2

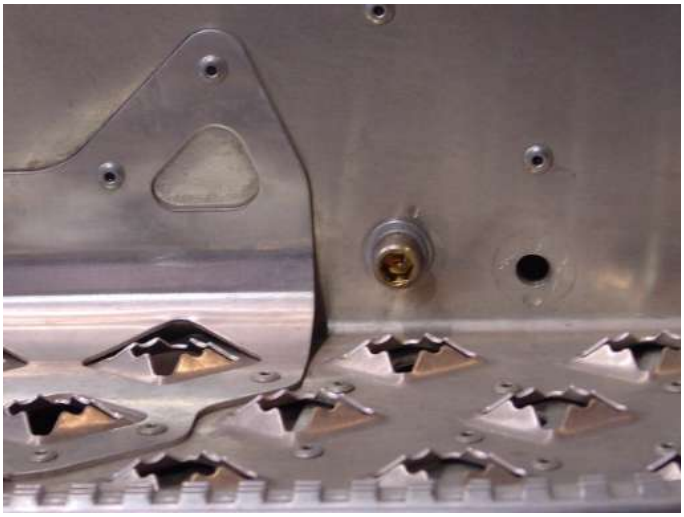
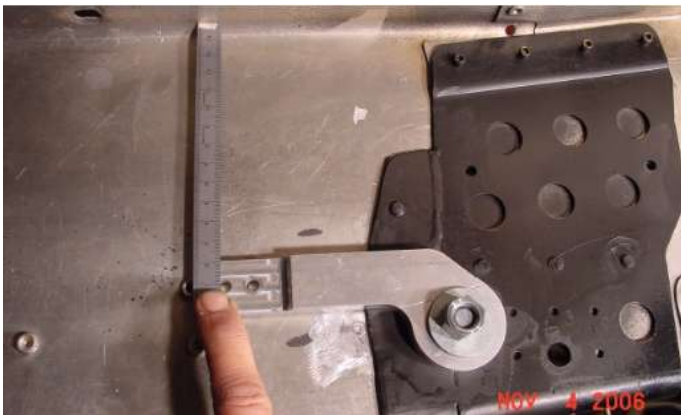


PHOTO #3

PHOTO # 4



PHOTO#5

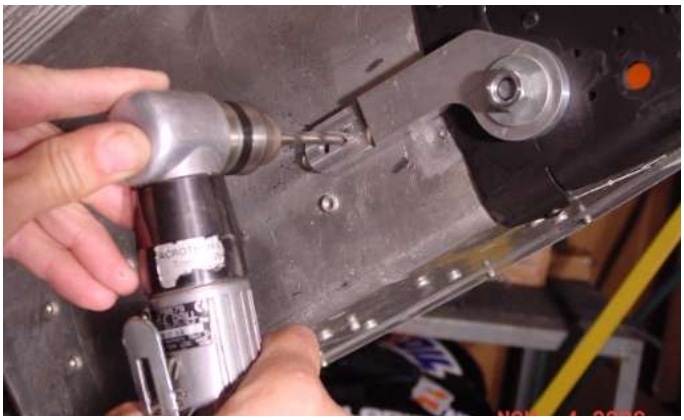


PHOTO #6

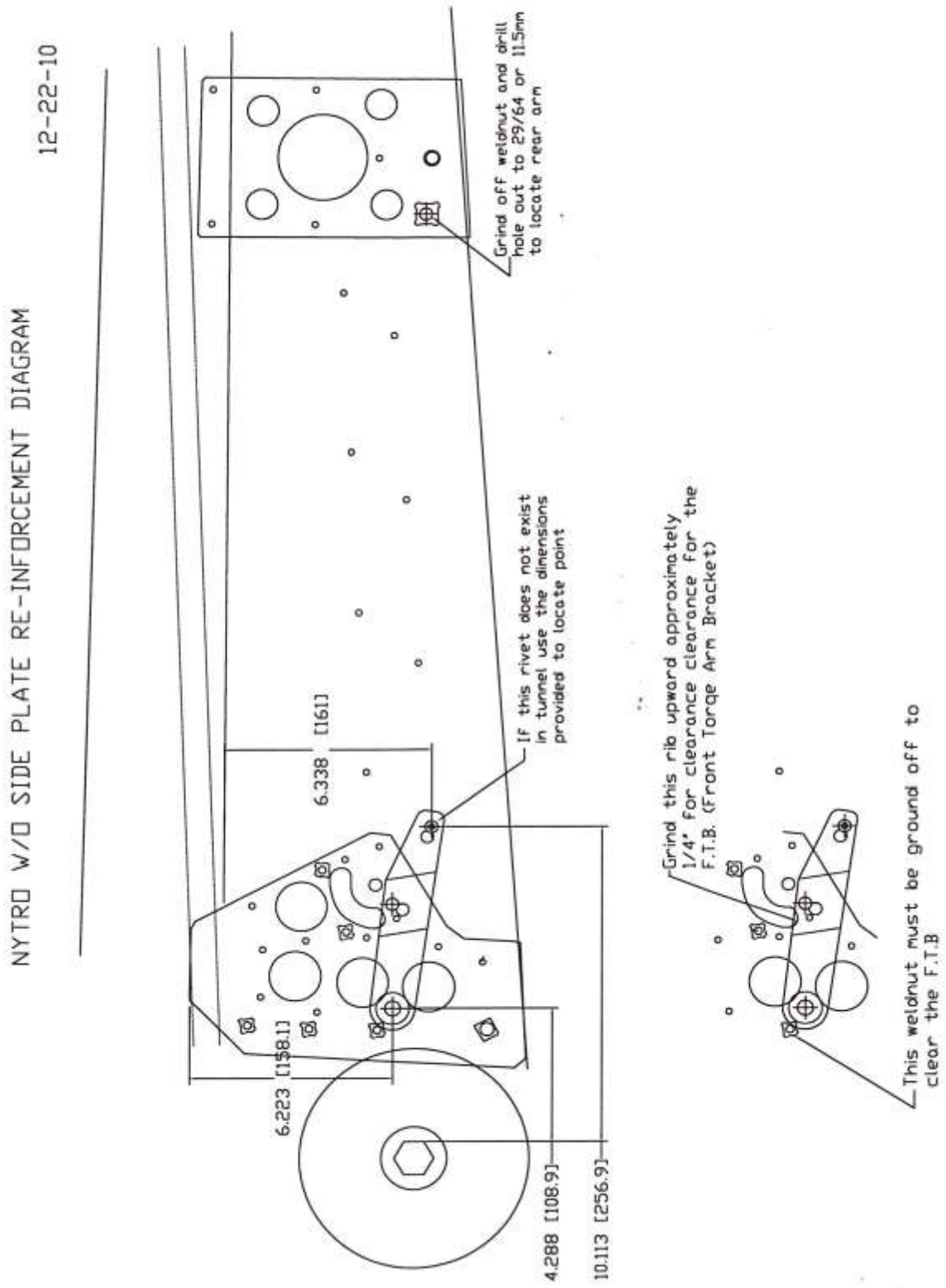
PHOTO #7

PHOTO #8

SAFTEY NOTICE

As with tires on an automobile the owner of any air suspension equipped vehicle must validate that the suspension's air pressure is sufficient for safe operation before allowing use of the air suspension equipped vehicle. All rubber and plastic products including O-rings, hoses, rubber bladders and tires have some level of porosity which air can and will pass through over time. In the purchase and or acceptance of this product the owners and users agree to and accept certain responsibilities. These include making certain that a static bounce test and a slow safety check ride is regularly performed before using the vehicle to establish that the sled and air suspension are functioning properly.

DIAGRAM#1


NYTRO W/O SIDE PLATE RE-INFORCEMENT DIAGRAM
12-22-10
Grind off weldnut and drill hole out to 29/64 or 11.5mm to locate rear arm
IF this rivet does not exist in tunnel use the dimensions provided to locate point
6.338 [161]
6.223 [158.1]
4.288 [108.9]
10.113 [256.9]
Grind this rib upward approximately 1/4" for clearance clearance for the F.T.B. (Front Torqe Arm Bracket)
This weldnut must be ground off to clear the F.T.B

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AIRWAVE INITIAL SET-UP REV-1 12/07/06

1. Please note that if your suspension is an Airwave Diamond with or without battery the needle on your Air-gauge should be vibrating while compressor operates. If it is not, then the compressor motor isn't turning. On sleds with batteries, please check for correct wiring installation.

On battery-less sleds it may be necessary to rev the sled's motor to just below clutch engagement to energize the compressor on low watt electrical systems. On such systems it may also help to shut the hand and thumb warmers off when making adjustments. If the gauge needle isn't vibrating when thumb input is made at the switch then the compressor isn't turning.

2. Please note that even though your sled's stock suspension may be advertised to have over 10" of rear travel it is likely that it has only 8-9 inches. To balance out the sleds it may be necessary to increase the ski shock preload to raise the front bumper by approximately 1.0 - 1.5 inches

3. Using either the onboard or a shop compressor fill the Air-spring until the suspension is at full extension (the point at which the rear shock tops out). This will require a Static Pressure (SP) setting from 50-70 psi., with the rider off the machine.

4. Take a measure from the ground to top of the rear bumper.

5. Have rider sit on sled (with or without gear) and bounce on the seat, then settle into the seat and take the bumper measurement again.

6. Subtract the second measurement from the first, the numbers for the initial settings should be 4.0" to 4.5". Adjust the Static Pressure (SP) pressure until within this range. Your suspension is now at a setting that will allow you to make your initial ride check.

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ADJUSTING THE AIRWAVE REV-1 12/07/06

A. Please note that a critical bit of information when tuning your suspension is the Static Pressure (SP) setting. This setting is checked with the rider off the sled after you have lifted the rear bumper to the top of travel and let the sled settle.

B. Once the initial Air Pressure has been set to achieve 4.0" to 4.5" of Sag measured at the rear bumper, the rider is ready to take the sled out on a smooth trail and get the feel of the suspension.

C. The rider can now make some acceleration runs to see if the Static Pressure or SP is sufficient to resist torque induced bottoming (if bottoming does occur an SP increase of approximately 5 psi should correct this).

   Again, on battery-less sleds it may be necessary to rev the sled's motor to just below clutch engagement to energize the compressor on low watt electrical systems. On such systems it may also help to shut the hand and thumb warmers off when making adjustments. If the gauge needle isn't vibrating when thumb input is made at the switch then the compressor isn't turning.

D. Next, find some slightly rougher terrain and ride through it and try to sense if the system is too soft or firm. Adjusting the Static Pressure (SP) either with hand pump, onboard compressor or shop compressor in 2 -3 psi increments will sufficiently change the suspensions reaction to the bumps to be noticeable.

E. Next, find some rougher terrain and ride through it starting slowly and build up speed as knowledge of the suspensions bottoming resistance is accumulated. Ultimately set the suspension maximum resistance to bottoming at a level acceptable to your personal preferences. The higher the resistance to bottoming will also give the least comfort in other situations.

Note: Once you achieve your settings you will find a change of 2-3 psi will make a significant change and 5 psi should be the maximum change made in at one time for a single rider. When adding a second rider of 150 lbs a change of approximately 20 psi is a good starting place, but a low speed check ride should be used to validate correct Stactic Pressure before traveling at any speed.

WARNING: **The Static Pressure or SP should never exceed 100 psi on a rider-less machine.**

AIRWAVE INITIAL AIRSPRING FILL

TECHLINE (218)744-2107

1. The rear of sled must be supported when filling system with air.
2. Airspring must be in proper position for initial filling. Airspring must be in a column with bottom of Airspring rolled over the piston. See Photo #1& #2.
3. Photo #3 & #4 show the improper position of airbag for filling with air. The Airspring **must not** be folder over, compressed or have the ring on bottom of piston exposed. See photo #3 & #4.
4. Proper position of Airspring is important to prevent failures.
5. **NOTE:** Do not use high pressure cleaning devices (car wash, pressure washer, etc.) on the AIRWAVE Suspension. High pressure water spray can damage the air springs.

PHOTO #1

PHOTO #2

PHOTO #3

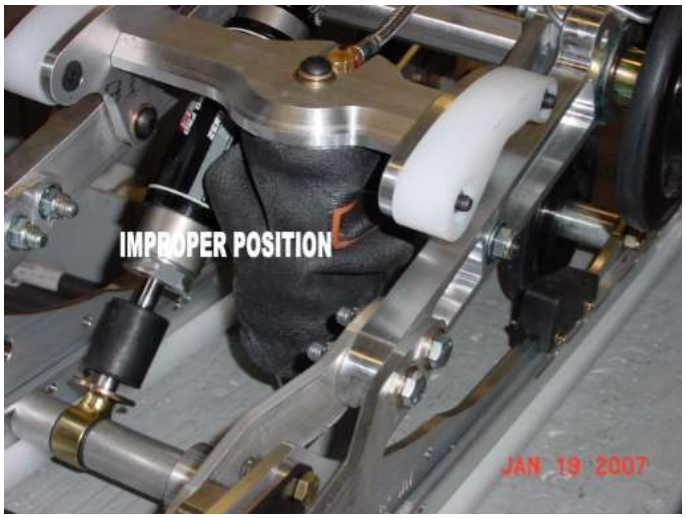
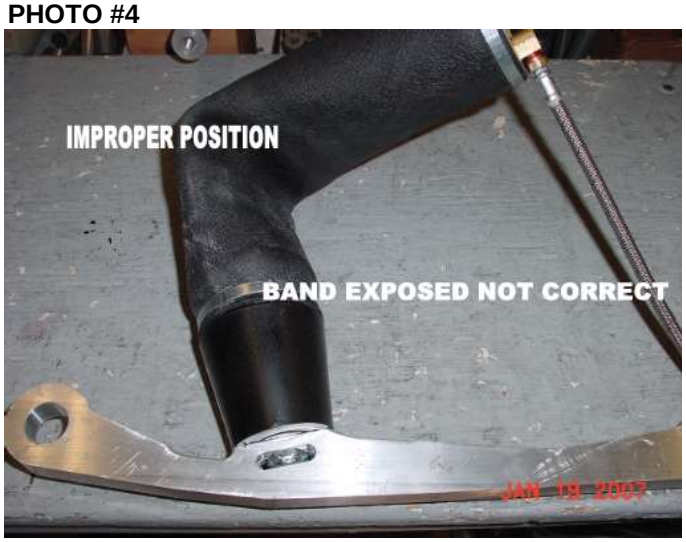


PHOTO #4



TEAMFAST M-10, M-20 ADJUSTABLE LIMITER STRAP 120611

1. The new Limiter Strap Kit has the limiter strap wrapping around the top tube on the left hand side of the rear arm and pointing forward, attaching to the limiter strap tie down on the left hand side of the lower tube of the front arm. The aluminum “C” clamp will mount on the left hand side of the grease fitting on the lower front arm tube. On new suspension builds the “C” clamp is already built into the front arm lower tube. The round lower shock shaft spacer tube provided with the kit will replace the existing limiter tie down spacer tube on lower shock shaft.

2. Under rails at front arm area, set sled down on a 4” x 4” block to assist with limiter strap attachment. Attach limiter strap to the limiter strap hold down. Limiter strap adjusting is done with adjuster bolt on front side of limiter hold down. Adjust limiter strap to a safe handling ski pressure that suits your riding style. Most settings start at the bottom two holes in the two halves of the limiter strap. Once the limiter strap is bolted to the limiter tie down bracket, tighten the adjuster bolt until it touches the lower arm tube and tighten the lock nut. Adjust with bolt as needed. Limiter strap settings very from rider to rider and sled to sled. See Photo #1.

3. Adjust track tension to a free hang measurement of ½” to ¾” with no weight hanging from track. Running too tight of a track will cause excessive drag and Hyphax wear.

PHOTO #1

PHOTO #2