

# Race Car Air Jacks INSTRUCTIONS

## **Kit Includes:**

4-Lifting Cylinders8-Cylinder Mounting Rings

**16-Cylinder Mounting Nuts** 

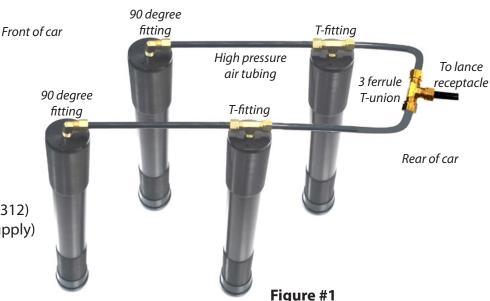
4-Safety Stands

1-Air Lance

1-Air Lance Receptacle

1-Plumbing Kit

Additional Required Components: 400psi Regulator (ALL11310) Hose Kit for Air Jack System (ALL11312) Nitrogen tank (400psi Minimum Supply)



**Recommended Plumbing** 

# **Lifting Cylinder Mounting:**

Each cylinder in the kit includes four mounting nuts and two steel mounting rings which should be welded and properly gusseted to the vehicle structure or chassis.

Tips to keep in mind when installing mounting rings:

- Front cylinders should be mounted as far forward on the car as possible, but positioned behind the front tires.
- Rear cylinders should be mounted towards the rear of car, positioned in front of the rear tires if possible.
- Position mounting rings in the middle of the threaded portion of the cylinder to allow final leveling adjustment.
- Mount the cylinders far off the vehicle center line to maintain stability while lifted.
- Mount the cylinders perpendicular to the floor in both directions.
- Mount the cylinders so the bottom of each foot is level to ensure stability while the vehicle is lifted. Be sure to check that the foot rests flat on the floor when the vehicle is lifted.
- It is recommended that the cylinder be mounted so the cylinder foot is above the bottom of the frame rail, or vehicle floor. This will help protect the cylinder from damage when not being used.

### **Cautions:**

- Do not exceed 400 PSI of working pressure.
- Do not get under the lifted vehicle without first properly installing safety stands.
- Do not place cylinders or run lines in areas of high temperature.
- Do not pressurize the system if the foot of the lift is not near the floor.
- Do not clean lift tube with hydrocarbon or equivalent chemicals.



## **Plumbing Instructions**

- 1. Using a quality thread sealing compound install line fittings into each lifting cylinder taking into consideration hose routing for fitting direction and placement.
- 2. Follow the next installation steps using Figure #2 as a reference.
- 3. Cut tubing to desired length with a razor blade or similar tool to prevent crushing or distorting tubing. Tubing should be cut off square to ensure proper installation and sealing.
- 4. Install brass sleeve inside tubing until flush with end of tubing.
- 5. Slide nut with captive sleeve over tubing.
- 6. Tighten the nut with captive sleeve, finger tight onto fitting body while inserting tubing until it bottoms in the fitting.
- 7. Complete the seal with one to two turns of the nut with a wrench.



Figure #2

#### **Air Lance Receiver Position**

Position the air lance receiver so that it remains protected from damage, and debris that may enter the air system. Also take into consideration comfort and ease of access for plugging in the air lance.

# **Initial Regulator Set-Up**

Before lifting vehicle for the first time the regulator must be calibrated for the weight of the vehicle. Once the entire system is plumbed, the regulator for the nitrogen must be set. Begin calibrating regulator by setting regulator pressure to approximately 200 psi. Follow lifting instructions, gradually increasing regulator pressure until vehicle is fully raised and safety stands can be installed (See Figure #3). Do not exceed 400psi.





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#### To Lift:

Do not remove lance from receptacle until vehicle has been lowered onto safety stands or jacks are fully retracted and vehicle is sitting on ground.

- Figure #4
- 1. Plug the air lance into the receiver; with the ball closed, and bleed valve fully open (See Figure #4).
- 2. Progressively open the ball valve allowing pressure to equalize in system until the valve is fully open and the vehicle is lifted (See Figure #5).
- 3. Once the vehicle is lifted close the ball valve (See Figure #4).
- 4. Install safety stands onto all cylinders. Safety stands install directly onto ram of cylinder when in the raised position (See Figure #3).
- 5. Once all safety stands are in place, vehicle can be lowered onto safety stands. See instructions for lowering vehicle.



## Figure #5

#### To Lower:

Do not remove lance from receptacle until vehicle has been lowered onto safety stands or jacks are fully retracted and vehicle is sitting on ground.

If vehicle has been lowered onto safety stands and lance was removed, reconnect lance to receptacle and follow lifting instructions until vehicle has been fully lifted and safety stands have been removed.

- 1. Close ball valve (See Figure #3).
- 2. Slowly turn the bleed valve to the release position to reduce the pressure of the system and lower the vehicle (See Figure #6). NOTE: Use caution when releasing bleed valve pressure, position bleed port away from operator and make sure fingers are clear of port (See Figure #7).
- 3. Once the vehicle is lowered and there is no longer nitrogen exiting the bleed port look under the car to check that the jacks are fully retracted. Now, the lance may be removed from the receptacle.



## **Helpful Tips:**

- Be sure the tubing is secured to help reduce vibration near connections.
- Do not route tubing near turbo, headers or exhaust system.
- Place heat sleeve such as ALL34292 over tubing to help prevent damage in areas where tubing may be exposed to direct heat.
- It is recommended to lubricate the lift tube occasionally using O-ring grease.

