



Fitting and Operational Instructions

CENTRAL TYRE INFLATION

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Congratulations, you now own the leading central tyre inflation system with technology reliability and performance

AIR CTI THE AUSTRALIAN SYSTEM WITH MULTIPLE DECADES OF TESTING

EASY

Easiest system to fit.

Easy tyre change, suspension access & maintaining tyre pressures

Quick inflation/deflation with large solenoids, streamlined tubing, and reliable rotators.

ADVANCED TECHNOLOGY

Best guarantee in the business to match the system

The isolator stops dangerous cross pumping of air automatically, technology unique to AIR CTI.

Air flow controlled when off camber, unique & invented by AIR CTI.

Filters throughout the system create reliability, continuity of inflate/deflate circuits monitoring.

Rotators are a slim fit, with robust life span, & sealing from external contaminants.

Tough drop pipes unique invention by AIR CTI.

SAFETY

AIR CTI advanced isolator automatic Isolation of tyres aid with safety and vehicle control.

AIR CTI uniquely manages dangerous cross pumping assisting safety

Controller is ultra-compact, has advanced technology unmatched with longevity & advance features while remaining easy to use.

GUARANTEE

Best guarantee in the business.

Components are guaranteed for 3 years/ 500,000kms. Including fair wear and tear.

Fertiliser system 2 years/ 300,000kms. Including fair wear and tear.



Message from founder

Dear Owner,

AIR CTI (Central Tyre Inflation), is the best addition you can make to any Truck or road vehicle.

Like any new tool, the AIR CTI system must be used, and used correctly. Preconceived ideas on tyre pressures are often incorrect. Filling tyres to 100 or 110 psi is NOT recommended by tyre manufacturers. Ensuring correct tyre pressure for the load and the road conditions will optimize tyre life. AIR CTI system will optimize tyre life, performance plus saving money.

Michelin clearly states; "Match tyre pressures to the weight carried." (Stated in load to inflation tables). It is the air pressure that supports the load and creates the right shape for the bit of rubber that contacts the ground. Only by adjusting the tyre pressure to suit the load, will you get the best performance, traction, tyre life, and safety outcomes. Transport vehicles routinely have wasted at least one tyre out of three, for the last multiple years! Smart businesses grow with improvement in technology and AIR CTI is part of the cost saving advances leading the world of transport.

AIR CTI has driver training available, as required including training your tyre fitters and mechanics, to maximize the tyre life for business and bottom-line savings. AIR CTI will lower maintenance time losses and cost, by following procedures included within the package. The information package consolidates your information to educate your business team. AIR CTI also welcomes contact, for clarification on system requirements and/or more detailed information. AIR CTI is here to help you earn more, lower your costs, and improve your operations and driver safety. Ensure Correct Installation of this system to enjoy the benefits AIR CTI system offers your business. If you have any concerns and/or comments, please contact AIR CTI. Incorrectly installed or used, system will not offer the service life or performance that is built into every AIR CTI system.

We are here to help at AIR CTI, the Central Tyre Inflation professionals, always at your service. Our help lines are available 8:00 am to 8:00 pm most of the time (excluding Public Holidays). Please ring us if you need any help or have any problems.

We are here to help at AIR CTI, the Central Tyre Inflation professionals, always at your service.

Regards,

A handwritten signature in blue ink, appearing to be 'Chet Cline', with a long horizontal stroke extending to the right.

Message from AIR CTI ® Founder
Mr. Chet Cline

Important safety message

Safety information is included throughout the documentation. This information manual is a general user guide covering the operation and installation of our AIR CTI system.

AIR CTI is a valuable accessory to your truck and it should be used in conjunction with this manual. Persons operating an AIR CTI equipped vehicle must familiarise themselves with both this manual and the AIR CTI system. This includes being aware of the loaded and unloaded weight of the vehicle and manufacturer specifications of your tyres. The weight of your vehicle at any time will affect the optimal pressures necessary to support its safe operation. The section within this manual on **Tyre Pressure Safety** provides additional information. If further support is required, please contact AIR CTI.

RISK ASSESSMENT

Use all conventional safety features associated with tyre work on vehicles. Ensure the truck is disabled before any work commences. Be aware that tyres and AIR CTI hardware are under pressure and as with all pressurised systems, a high level of caution is necessary.

Any persons undertaking installation and maintenance should have experience working on heavy road transport vehicles and be confident using tools and lifting equipment required to work with such vehicles. The use of personal protective equipment is necessary. For example, steel capped boots, eye protection, gloves and hearing protection.

The section within this manual on **Risk Assessment** provides additional information.

An additional section in this manual covers Risk Assessment for specialised vehicles where more than one wheel zone is bonded together (i.e. bonded wheel zones configured systems will simultaneously adjust Front and Rear zone tyre pressures in a 4WD vehicle.)

SCHEDULED MAINTENANCE

A regular schedule of maintenance is necessary for reliable operation of AIR CTI systems. Detailed checklists for **50 hour, Monthly and Six monthly** intervals are detailed within the Scheduled Maintenance section of this manual.

SPARES KIT

It is recommended all owner/operators carry a 'Grab kit' that suits their make/model of truck. See page 45.

WEIGH YOUR TRUCK TO ENSURE THAT YOUR PRESSURES MATCH YOUR LOAD

Heavy truck Tyre Manufacturers produce **Load to Inflation Tables**. Every tyre is made to a standard, that include these tables. Often Government regulators are not educated about the information in Load to Inflation Tables, or where and how to obtain this data.

THERE IS ONE CORRECT OPTIMUM TYRE PRESSURE FOR EACH TYRE SIZE AND LOAD. WHY?

The contact patch of the tyre to the road needs to be optimised. This patch of rubber must deflect, flatten out, to form the best shape, with identical pressure against the road, right across the entire footprint.

- This can only happen when the pressure matches the load on the tyre.
- This means, every time the load changes, the pressure must change too.
- All tyre manufacturers state this.

Unfortunately, most tyre shops and fitters do not understand these facts.

Important safety message CONTINUED

HOW DO WE ESTABLISH CORRECT AND OPTIMAL TYRE PRESSURE?

1. Weigh each axle of the truck when fully laden, and when empty, or as it runs, if weight doesn't change
2. Drive the truck's front axle/s onto the weigh bridge. Write down the load
3. Drive the next axle group onto the scale
4. This means that the prime mover (tractor) is completely on the scale. Write down the weight
5. Subtract the steer weight from the total prime mover weight, and divide by the number of axles
6. Often you can drive the steer tyres off the scales and only weighing the drive axles. Making this easier to calculate.

For example: [22,500 kg — 5,800 kg = 16,700 kg the tandem axle load]

The steer axle/s weight could be 5800 kg.

The fully loaded tandem drive prime mover could weight 22,500 kg.

Subtract 5,800 from 22,500 to obtain 16,700 kg on the tandem axle load.

The steer axle supports 5,800 kg on two tyres, each supporting 2,900 kg, and the rear axles support 16,700 kg, or 8,250 kg per axle, or 2,062.5 kg each tyre.

Steer tyres and drive tyres support different loads. This is why different pressures are required.

On the **Load to Inflation Table** look up the maximum axle load. ie. Steer axle: Find tyre size, Find **'single'** and look across table for **5,800 kg**. Correct cold pressure 11R22.5 tyre for this weight is **106 psi**.

For the correct rear tyre pressure for an axle load of **8,250 kg**, find your tyre size, Find **dual**, Go across the chart to find the load of **8,250 kg**. Optimal pressure for 11R22.5 tyre = Optimal cold pressure of **79 psi**.

AS YOU CAN SEE WHEN THE LOAD ON THE TYRE CHANGES THE PRESSURE SHOULD BE CHANGED. AIR CTI ARE HAPPY TO PROVIDE THIS INFORMATION.

NOTE

An 11R22.5 steer tyre that supports 3,000 kg per tyre needs a 110 psi cold, minimum

An 11R22.5 tyre that supports **3,000 kg** needs more pressure than one supporting only **2,060kg**.

In fact, at **3,000 kg**, it requires **110 psi** cold pressure (taken from a load to inflation table).

Because this tyre is a steer tyre, and has more sideways load, it needs another 10%. Correct COLD pressure should be **121 psi**. The rear tyres, supporting only **2,060 kg**, only need **79 psi** cold pressure.

Yet nearly every truck on our highways is running incorrect tyre pressures.

Michelin states that a 20% over inflated drive tyre wears out 22% faster. The drive tyres if inflated to the industry standard of 100 psi, they are 25% over inflated! Casing life is also reduced by 25%. This tyre would wear out 30% too fast, wasting one tyre in three!

WHAT ABOUT THE IDEAL TYRE PRSSURE WHEN THE TRUCK IS EMPTY?

Example: A flat top semi, with **5,000 kg** weight on the tandem drive tyres, 2,500 kg per axle, or 625 kg per tyre. Optimal highway pressure is only **30 psi**. At **100 psi**, this tyre is 300% over inflated. The tyre footprint will be one third of correct size.

Important safety message CONTINUED

Most four-wheel drives have more weight on each tyre, and no one would run 80 psi, let alone 100 psi in their 4x4s, like most trucks do.

Pressures quoted are cold pressures. With AIR CTI, your tyres will heat increasing up pressure up 10 to 15%. AIR CTI deals with these hot pressures. Hence, with our maximum legal load, on 11R22.5 tyres, the tandem drive's optimal hot tyre pressure is 92 psi, which is the high setting on your AIR CTI controller.

Your safety and success is vital to our business. Your success is our success. AIR Central Tyre Inflation system is the best tool option on your truck. Learn to use it correctly to your advantage.

If any doubt, or any questions, please phone AIR CTI.

- Use all standard safety features when working with tyres. Wheels/tyres can fail, and explode
- Chock tyres and disable the truck before any work on it. Trucks roll or may be started
- Tyre air & the AIR CTI system is high pressure. Adhere to all safety procedures

For optimal safety and operations:

- Do not operate the truck with the AIR Central Tyre Inflation system turned off
- AIR CTI is a tool that re inflates punctures, ensures all connected tyres are inflated to the same pressures, and warns the driver if a problem occurs.
- Always turn on the wheel taps and the controller when operating your truck.

**IF YOU DRIVE THE TRUCK WITH AIR CTI TURNED OFF YOU ARE DRIVING BLIND
YOU WILL HAVE NO WARNING OF ANY TYRE PRESSURE PROBLEMS**

Important AIR CTI system checks

ALWAYS TURN OFF WHEEL TAPS WHEN PARKING THE VEHICLE FOR AN EXTENDED TIME, LIKE OVER NIGHT.

Although the AIR CTI Isolator is a superb mechanism, a puncture can lead to numerous flat tyres if not turned off. And, when doing the required walk around before starting, turn on each tap, and listen. The air should hiss for a few seconds, as it equalizes. If one does not 'hiss', it may be flat. Please check. If flat, find out why. If it hisses for a long time, it means that tyre is most probably low on pressure. This indicates a puncture or slow leak. Ensure it is safe before continuing.

ALSO, GIVE THE ROTATOR DROP HOSE A BRIEF PUSH TO ROTATE THE ROTATOR.

Does it move freely, or is it loose or notchy? Check the inside of the Snizentite drop pipe for rub marks. It's much better to find a problem before starting. Fix any problems.

ALWAYS CLEAN OUT THE INSIDE OF YOUR TYRES WHEN FITTING. REMOVE DUST & GRIME.

Any dirt left in the tyres when fitted, will exhaust through the rotators, and solenoids, causing vastly increased wear, and problems. Filters are fitted but, are a compromise: if too fine, they would block up, causing other troubles. It is important to clean out the inside of tyres whenever they are being fitted

CHECK FOR LEAKS WEEKLY.

Use a spray bottle with soapy water and check all rotators and fittings for leaks.

IF A FITTING LEAKS, DO NOT TIGHTEN UP.

Simply tightening a fitting will not seal it. Increased tightening could break the fitting. Turn off all taps, release the pressure, and remove the fitting.

Apply a quality liquid sealant, like Loctite 567, 577, 569 or 5331 [depending on application], and replace. Allow 5 minutes for it to set.

Do not use Teflon tape. It will unravel or cut into strips which will block solenoids.

CHECK EXHAUST SOLENOIDS ENSURE THAT BOTH EXHAUST ON DEMAND AND BOTH FULLY SEAL UP WHEN THE EXHAUST CYCLE IS COMPLETE.

Tyre debris can stick the solenoid valves slightly open. Although rare, it is better to check. If one leaks, remove the clip at the top of the solenoid. Slide the black coil off the solenoid. Undo the large nut to remove the plunger and outer slide. Clean and reassemble. Be careful of the small spring and ensure the rubber sealing end is correctly replaced.

THE AIR CTI CONTROLLER DISPLAY IS THE DRIVERS MOST IMPORTANT GAUGE.

Drivers must visually check the pressures regularly, and listen for any beeps or warnings. The driver must understand and use this system to obtain the best results for all.

Drivers have a legal responsibility to walk around the truck and complete a safety check of all areas.

Important Pre start system checks

SAFETY CHECK

1. **Turn on each tyre valve, and listen for a short hiss as the tyre pressures equalize.**
Each tyre should hiss for 10 seconds or so.
2. **If no hiss, ensure that the tyre has air in it.**
3. **If it hisses for 30 seconds loudly, that tyre will probably be at a much lower pressure.**
4. **Check for puncture or air leak.**
5. **While turning on wheel taps, ensure all connections are secure.**
6. **Also feel inside the drop pipe for rub marks.**
There should be ample clearance between the drop pipe and the tyre, with no rub marks. Sometimes these drop pipes are hit and get knocked inward.
7. **Give the hose a push upwards to check smooth rotation of rotator.**
Lack of smooth movement please contact AIR CTI, Bearing maybe worn. In all AIR CTI systems, there are two more taps. Main supply air will be sourced from an air reservoir, or a distribution block, depending upon truck and brand.

There is also a tap (see picture right) on the filter assembly.

These taps are used to isolate the truck air from the CTI system for air when changing tyres or maintenance.

They must be open for the AIR CTI system to operate.



Tap to filter assembly.

Driver operations

Start the truck and let the air pressure build up. The AIR CTI controller display should start up, and run through its self-diagnostics, checking solenoid wiring, checking that the taps are open, and self-checking.

The current pressure reading will be on the left side of the screen, and the 'set' pressure on the right side. If a steer system is fitted, the steer pressures are the top line, and the drive pressures the bottom line. On Driver/Trailer System, top line is Drive. Bottom Line is Trailer. Three zone controls also available (Steer, Drive & Trailer).

Typically, the controller display will reset to the highest pressure at start up.

This is a safety feature that improves safety if another driver hops in the truck.

NORMAL OPERATIONS

The tyres will have cooled down over night and be a bit lower than the pressure they were left at. The controller will add air as soon as the compressor builds up sufficient pressure.

NOTE

The air pressure should be reasonably close to that required before driving. If air pressure is very low, check for problems. Ensure all tyres have some air pressure.

AIR CTI system can only check the air pressure in the tubes going to the tyres. If the inflate solenoid opens and high pressure enters, this will modify the apparent tyre pressure. The tyre pressures readings should be higher when inflating and should be lower when deflating.

This is normal. If not, a problem may exist. Select an alternative pressure if required.

As each truck, and its load capacity and value are different, these instructions need to be read with understanding. Load to Inflation Tables for your tyre size, with 10 to 15% added to convert the cold pressure to hot.

Any queries for clarification are welcomed by AIR CTI.

P1= highest setting on the controller display, for highway operation at the **heaviest legal load**. If over loading, contact AIR CTI for directions to reset P1.

On very hot days tyre pressure can be adjusted up a few psi, by pushing the up arrow on the right side of the controller. Each push adds 1 psi.

Normal conditions for max legal load, P1 is optimal. P2 or P3 = lower tyre pressure setting when **running empty**.

A truck with a crane, or a refrigerated van, will most likely require P2, or medium pressure.

A tray truck with nothing on it, or an empty tip truck, is probably optimal at P3.

Compare the actual weight with the pressure settings and the **Load to Inflation Tables**, to ensure correct operations.

Driver operations CONTINUED

THE FOLLOWING ARE EXAMPLES ONLY (DEPENDING UPON WEIGHT, AND TYRE SIZE/QUANTITY):

TIP TRUCK DRIVE TYRES:

- Highway laden: use P1.
- Highway empty: use P3.
- Gravel road laden: use P2.
- Gravel road empty, use P3.
- For maximum traction at slow speed, use P3. Inflate to P2 when possible.

LOG TRUCK, NO CRANE, FLAT TOW DRIVE TYRES:

- Highway laden, use P1 or high.
- Highway empty, use P3 or low.
- Gravel laden: use P2 or medium.
- Gravel empty: use P3 or low.
- For maximum traction at slow speeds, use P3 inflate to P2 when possible.

STOCK TRUCK OR LOG TRUCK WITH PIGGY BACK TRAILER DRIVE TYRES:

- Highway laden, use P1 or high.
- Highway empty, use P2.
- Gravel road laden; use P2.
- Gravel road empty: use P3.
- For maximum traction at slow speed, use P3.
- Inflate to P2 when possible.

CRANE TRUCK (TANDEM DRIVE TYRES THAT DOES NOT CHANGE WEIGHT):

- Highway: use P1 pressure. Typically, 92 psi.
- Gravel road: use P2 pressure. Typically, 60 psi.
- Soft conditions, sand, mud, rock at a reduced speed, use P3 for maximum traction and flotation. Typically 30 psi. Inflate to P2 when possible.

AIR CTI has available HOT, Load to Inflation Tables, allowing for the 12% approximate pressure rise from cold to hot, or, preferably, contact AIR CTI to ensure suitable pressures for your truck.

Blow outs are caused by excess heat buildup. Excess heat comes from excessive flexing of the side walls when the tyre pressure is significantly below optimal pressure, or over loaded. This does not happen quickly. It takes time for the heat to build up. Almost all blow outs are caused by a puncture or air loss, causing too much deflection, increasing the heat.

AIR CTI system immediately detects any air loss, beeps, and will inflate the tyre, if possible.

Most blow outs are prevented automatically. But ultimately, the driver must be attentive

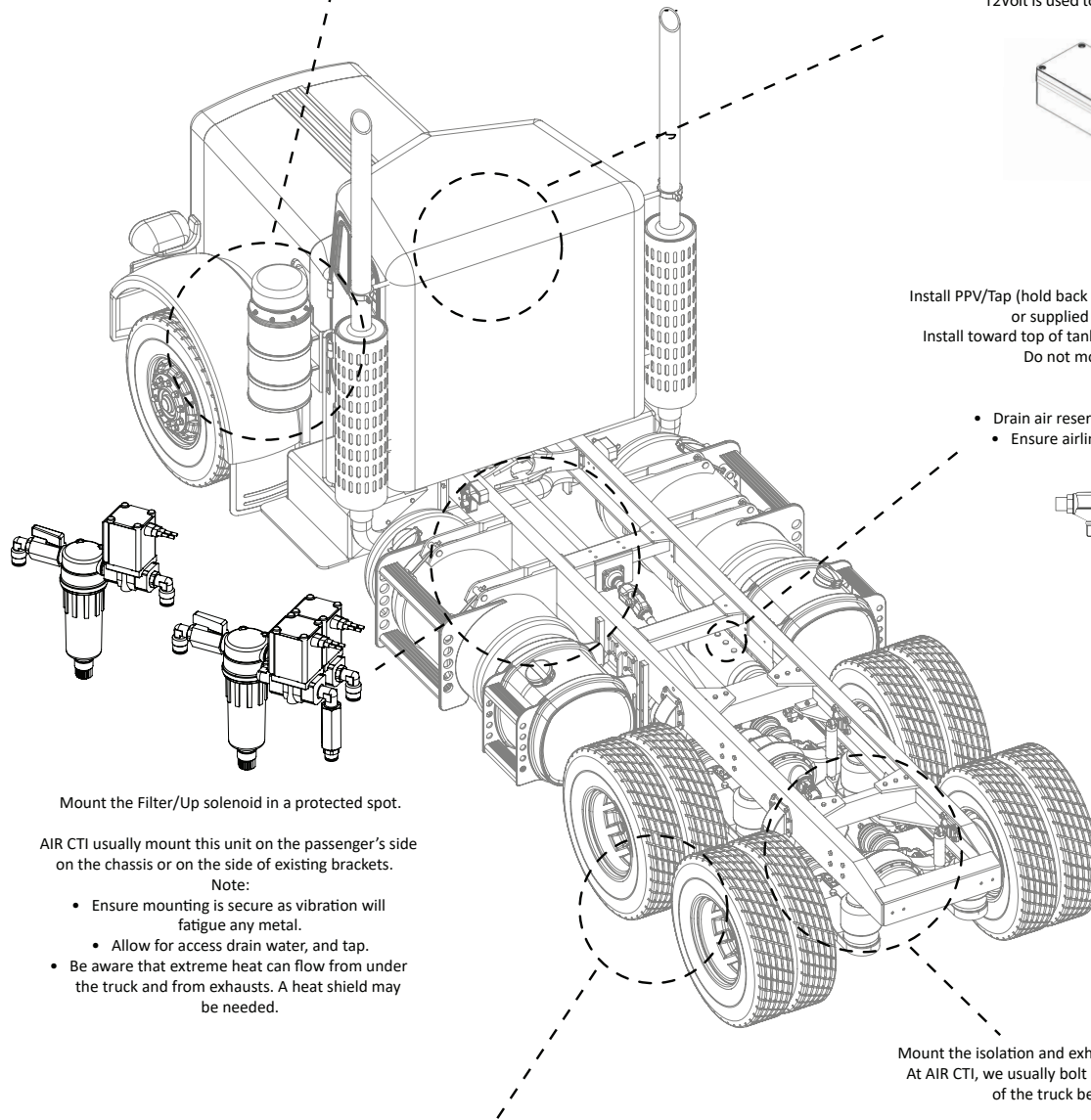
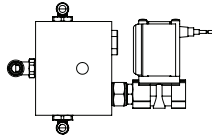
And ensure tyre pressures are correct.

WITH AIR CTI, 97% OF BLOW OUTS ARE PREVENTABLE, IF THE DRIVER IS ATTENTIVE.
Contact AIR CTI for further information.

Components layout AIR CTI

Mount the isolation and exhaust solenoids near the steer axles.
At AIR CTI, we usually bolt it to a chassis member at the front of the truck just behind or in line with the steer axles.

This allows easy access in the future.
This unit **MUST** be mounted vertically – the black solenoid bodies uppermost.



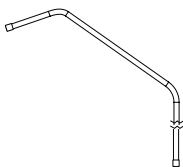
Mount the Filter/Up solenoid in a protected spot.

AIR CTI usually mount this unit on the passenger's side on the chassis or on the side of existing brackets.

Note:

- Ensure mounting is secure as vibration will fatigue any metal.
 - Allow for access drain water, and tap.
- Be aware that extreme heat can flow from under the truck and from exhausts. A heat shield may be needed.

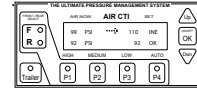
The model/make of your truck will determine the placement of the Snizentite hose. Stauff clamps will secure the Snizentite Hose to either the mudguard or mudguard support pipe.



When installed, Snizentites must not rub on wheels or Hubs. Allow a three finger clearance.

The Controller Display unit is mounted on the dash ensuring it is within easy reach and visibility of the driver.

Unimpeded visibility of the display by the driver is essential for safe operation of the AIR CTI system.



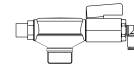
The TCU - Tyre Control Unit is installed hidden behind the dash - wired to 12Volt.
If a truck is 24Volt then a 24Volt reducer to 12Volt is used to operate the system.



Install PPV/Tap (hold back valve) unit in reservoir, secondary air or supplied manufacturer take-off.
Install toward top of tank to keep away from any water/oil.
Do not mount on tank bottom.

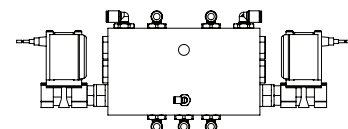
Note:

- Drain air reservoir tank before installation.
- Ensure airline is clear of interference.

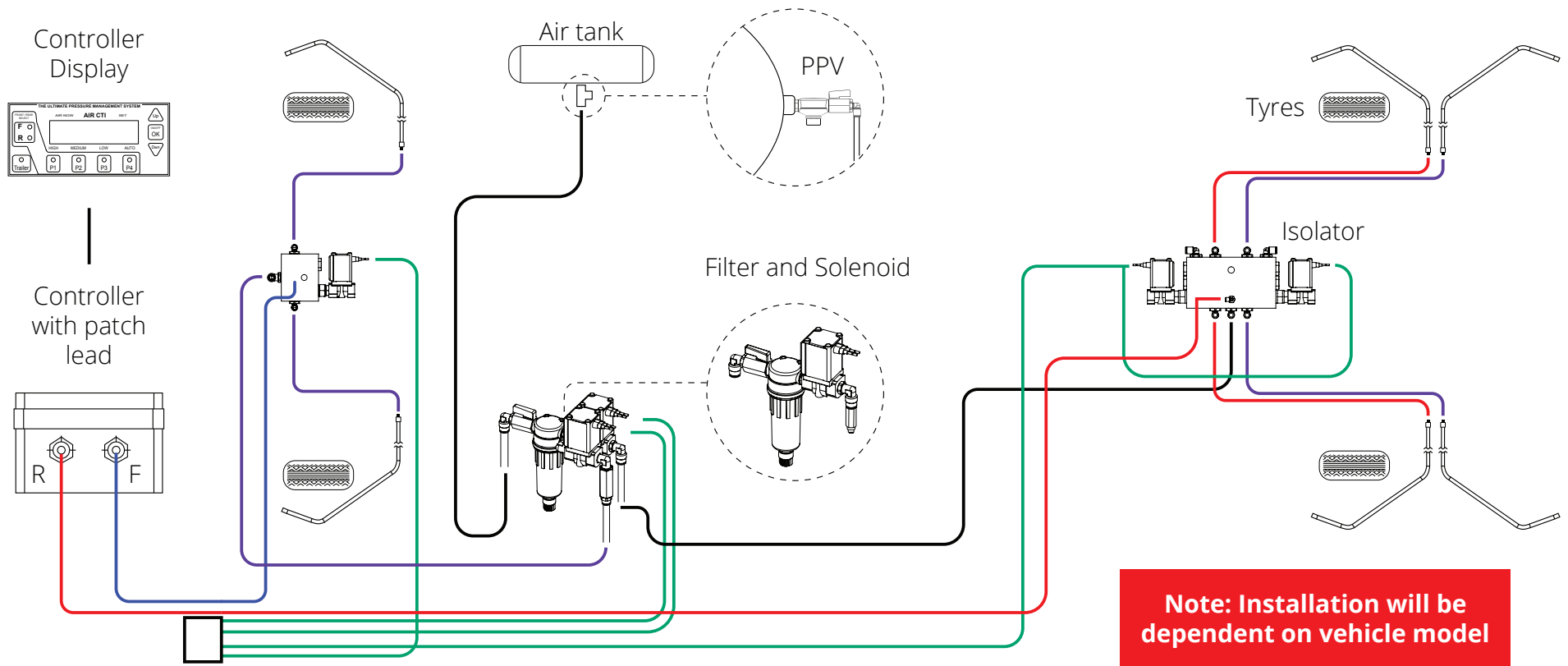


Mount the isolation and exhaust solenoids near the drive axles.
At AIR CTI, we usually bolt it to a chassis member at the rear of the truck behind the drive axles.

This allows easy access in the future. This unit **MUST** be mounted vertically – the black solenoid bodies uppermost.
Ensure the decal is the right way round.



6X4 DRIVE & STEER LAYOUT WITH DISPLAY CONTROLLER



Instructions: Drive & Steer System Snizentite Drop Pipes

Snizentite Drop Pipes are an extremely tough thick-walled pipe that conveys air out past the tyres and uniquely designed. Snizentite positioning is truck model dependent.

DRIVE SYSTEM DROP PIPE INSTALLATION

- Mounted via Stauff clamps to the bottom plastic mudguard mount bolt, if fitted, or to a mud guard support pipe mounted between the drive axles via U bolts or a special mounting bracket mounted to the turntable angle mounts
- Stauff clamps can be dual as shown, or single
- Undo Stauff clamp to install Snizentite through the Stauff Clamp and nip up bolts - DO NOT OVER TIGHTEN

They need to rotate if needed

- Snizentite drop pipes should be predominately level, i.e. their pivot should be similar to the suspension
- Two crimp clamps on each Snizentite are clamped to locate axially, one on each side of the clamp

STEER SYSTEM DROP PIPE INSTALLATION

- Steer systems are internal, with special drilled stub axles, or use a substantial bracket to locate the Snizentite pipe over and out past the tyre typically bolted to the brake actuator mount
- The vertical member is telescopic to allow vertical clearance over the tyre
- The optimal clearance depends upon mudguard clearance, and environment, use two 5/16 x 14 bolts to secure the vertical telescopic.
- The horizontal steel support is telescopic to allow alternate tyre fitment using one 5/16 x 1 3/4 bolt.
- Drill and bolt the telescopic parts with 1/4" bolts, one per unit to ensure adequate clearance
- The vertical member may need to be trimmed if it is too tall. To install the Snizentite pipe, remove threaded inserts, remove brass sleeve, insert pipe through the top steel pipe, reinstall the sleeve, apply Locktite 5331 to threads & insert
- Crimp clamp outside the pipe to secure the Snizentite pipe in place
- Run tubing down along brake hose, and ensure nothing fouls when the wheel turns or moves up and down
- Run tubing from Isolator to the Snizentite drop pipes neatly and away from pinching, cutting, or fouling members



SNIZENTITES MUST NOT RUB ON WHEELS OR HUBS – a three finger clearance is recommended

Positioning the Rotator Assembly

Position the Rotator assembly to point at the tyre valves. If tyre valves are not opposite, remove and align the wheel

- Rotator assemblies bolt to the axle flange studs on western trucks
- Clean paint off studs to ease mounting
- Sometimes a washer underneath is needed
- On hubs that bolt on, use the supplied long bolt or threaded rod, with the spacers to bolt them to the axle
- Sometimes threaded rod with extra nuts are used to space the bracket out
 - A short length of Push Lok hose is used to join the Snizentite pipe to the rotator
 - This hose must be cut to a length that pulls the Snizentite pipe in, yet provides sufficient length to allow the axle to droop fully
 - If this hose is too long, the Snizentite pipe will stick out, if too short, when the axle falls into a hole, the Snizentite pipe will be pulled into the tyre and start rubbing through
- Install the hose onto the Snizentite pipe, then visualize the axle movement, checking where it pivots from, to ensure it is long enough for the available suspension travel

Use some soap to make installing the push loc easier

HEX ROTATOR MAINTENANCE

AIR CTI rotators without maintenance & cleaning, it will reduce rotator life.

To obtain the best possible life of the rotator, ensure that the inside of the tyre is clean

Do not open rotator – warranty will be voided.

Contact AIR CTI for further information.

TYRE HOSES

Tyre hoses come in three shapes, straight, J, or 90 degrees. Straight and J are used on dual tyres, while 90-degree hoses are often used on steer tyres.

- Tyre hoses are over length, they need to be cut to length, to eliminate rubbing on the wheels.

Fit each one individually, some straight hoses in the drive may require a tyre extension valve.

- A crimp clamp is used to clamp the hose to either a Swifty, quick connect or a nut and tail depending on what fitting you have.

Take out tyre valve and reinstall tyre hose and plug into the Rotator Tap.

PUSH LOK HOSE

Push Lok hoses need to be long enough to allow full travel of suspension. If too short, damage can occur to bearings inside Rotator and Rotator case could also become damaged.

For further information contact AIR CTI



Instructions: Steer

Steer Internal can only be Volvo Axle and Meritor Axle . Installation - Ensure hub is fully greased and not oiled and the hub has been pre drilled. Contact AIR CTI for further information.

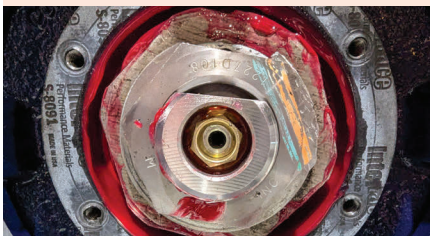
Step 1. Remove plastic hub cap



Step 2. Once removed, clean out grease and remove allen key plug in the stub axle.



Step 3. Seal drive dog with LOCTITE 577. Install drive dog in stub axle.



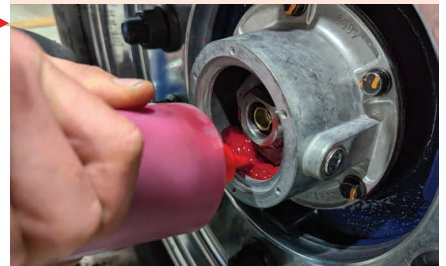
Step 5. Install metal hub cap to the hub (as supplied in kit). 6. Fill metal hub cap with SEMI



Step 4. Install white drive dog sleeve. Measure as shown in pic - Drive dog sleeve must be flush with metal cap. Cut to measured line, deburr the white sleeve. Install sleeve and double check length.



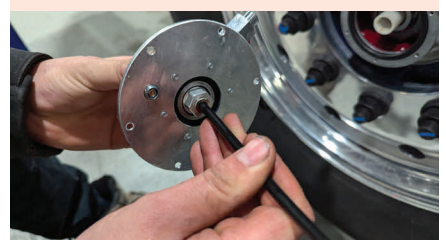
Step 6. FLUID GREASE - MUST BE SEMI FLUID GREASE, NOT PROVIDED



Step 7. Install provided O ring into metal hub cap as shown.



Step 8. Place provided black tube into rear of rotator base.



Continue to next page...

Step 9. Silicon the outside of O ring on steel cap and insert rotator ensuring black airline goes through the drive dog. Tap on rotator MUST be facing the tyre valve. Install phillip head screws as provided in kit into the roator base and hub cap.



Step 10. Install tyre hose onto valve and the nut and tail onto rotator taps as shown.



Step 13. Pull tyre valve out and install tyre hose.



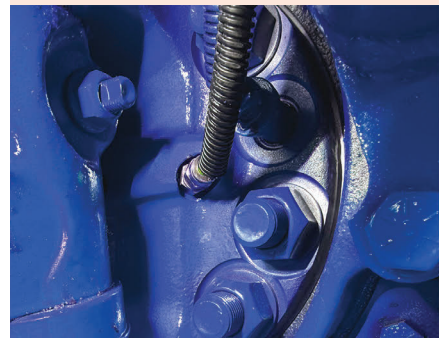
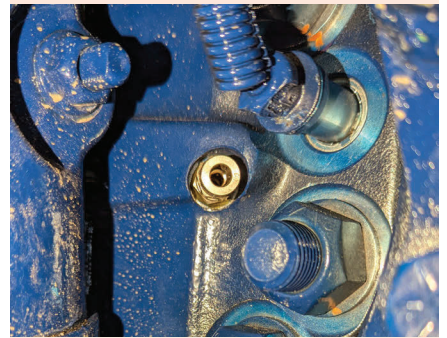
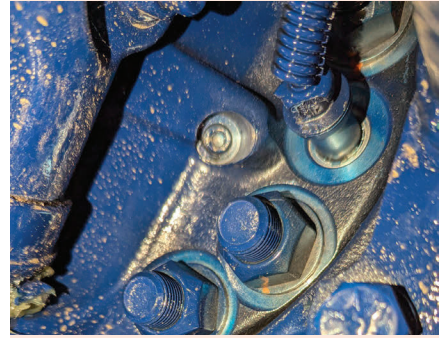
Step 12. Place hose clamp over hose and push hose onto nut and tail barb, crimp hose clamp as shown.



Step 11. Measure size of tyre hose and cut length ensuring the hose is not rubbing on rim or wheel studs.



Step 14. Located back of hub (pic one) remove allen key plug and insert 6mm fitting provided in kit (pic two) Plug in 6mm air line from isolator (below pic three).



ALWAYS CHECK FOR LEAKS WHEN FINISHED WITH SOAPY WATER.



External Steer/Drive Rotator Installation

Rotator can be attached to hub by All Thread or with a Bolt depending on Truck Model.

STEER EXTERNAL

Installs to the stand pipe bracket to the brake booster. The elbow bracket attaches to stand pipe bracket by two bolts (5/16" x 2" bolts). The telescopic pipe is attached to the elbow bracket by one bolt (5/16" x 1" bolt).

Snizentite pipe, remove brass collar and ear clamp.

Put Snizentite pipe through the telescopic, then attached the ear clamp and the brass collar back on.

Using Loctite 5331 attach the 3/8" or 6mm elbow to the end of the Snizentite.

DRIVE EXTERNAL - FLAT GUARD

Support Pipes are installed by one 5/8" x 3 1/2" UNF Bolt to the Chassis in the center of the Duals on the Drive using dual Stauff Blocks on round U Bolts.

Long Snizentites are then attached to the Push Lok Hose which is attached to the Rotators.

DRIVE EXTERNAL - PLASTIC GUARD

Single Stauff clamps are attached to the Plastic Guard. The short Snizentite is clamped to the Single Stauff Clamp, then attached to the Push Lok and Rotator.

Contact AIR CTI for further information.

Volvo: Internal Installation

Installation of AIR CTI system for Volvo Model trucks follow the same installation procedures as Meritor Internal Steer.

Up to Step 9.

The Rotator is connected to hubcap already and the airline. When installing the Rotator attached to hubcap make sure the air line feeds through the drive dog. Tap lines must to be facing in line with the tyre valve.

See below.



Continue from Step 10 of Steer Installation.

Always check for leaks when finished with soapy water.

Trailer Installation – Contact AIR CTI for further information.

Instructions: controller display operations

SELECT PRESSURES FOR DRIVING CONDITIONS

When selecting the desired tyre pressure: 1) select the zone, then 2) select the pressure

1. Zone selection

An indicator light will show which zone is currently being set.

The FRONT (F)/REAR (R)/ TRAILER (where fitted) buttons control which zone is being set.

Some vehicles are set up with the front and rear tyre zones locked together. In this set up, the R and F indicator lights will be on and the pressure buttons will change the front and rear pressures simultaneously.

2. Pressure selection

There are three primary preference settings

HIGH (P1), MEDIUM (P2) and LOW (P3).

Premium Controller Display controllers will show **P1** to **P3** preference buttons and tri-zone display controllers will show **HIGH**, **MEDIUM** and **LOW** buttons.

These buttons select appropriate pressures for different driving conditions.

STEER TYRE PREFERENCES		DRIVE TYRE PREFERENCES	
P1 HIGH	Always used for highway and sealed road operation.	P1 HIGH	Typically used on highways when transporting full loads.
P2 MEDIUM	Use on gravel roads or highways with medium loads or empty.	P2 MEDIUM	Typically used on highways when travelling empty. Use on gravel roads when fully laden.
P3 LOW		P3 LOW	Normally used when empty on gravel. Can be used when fully laden for maximum traction at slow speeds (less than 20kph).

Driver knowledge is important here. On some trucks the **LOW (P3)** setting may be appropriate. During heavy rain, a higher pressure will push the water away from tyres increasing traction.

Operators must remember to always run the pressure that is most suitable for the road conditions. E.g. a combination of heavy loads and higher speeds is not good for tyres, and **HIGH (P1)** is preferred.

NORMAL PRESSURE VARIATION

Tyre pressure can increase by 10-15% when tyres warm up and fall again when they cool down. The AIR CTI system will automatically compensate for this. The AIR CTI system will aim to maintain pressures within 2-3psi of the selected target pressure.

FINE PRESSURE ADJUSTMENT

After selecting one of the three preference settings (**HIGH (P1), MEDIUM (P2) or LOW (P3)**), the **UP** and **DOWN** buttons can be used to manually adjust the preferred tyre pressure in small 1 psi increments. Internal settings limit how far the pressure can be manually adjusted within the preference selected.

Fine pressure trimming by the driver can be set up to be temporary or permanent. On some vehicles the fine-tuning feature may be unnecessary and can be disabled.

Instructions: controller display operations CONTINUED

AUTOMATIC SPEED PROTECTION

Some AIR CTI systems are fitted with a vehicle speed sensor to protect the tyres some being driven at high speeds whilst at low pressures.

If the vehicle is set to a MEDIUM or LOW pressure when travelling at high speeds (65km's), the speed protection alarm will engage, and an exclamation mark will appear next to the pressure reading. After 2 minutes travelling at the higher speed, the control unit will beep 2 times and automatically shift to the HIGH (P1) pressure setting.



Instructions: controller display alarms

ALARM: SLOW LEAK

A tightly sealed air system should not fall in pressure unless directed to do so by the controller. If too many automatic inflation events happen within the pre-set interval, then a slow leak alarm will flash on the display.

During a slow leak alert, the system will continue to top up the tyres. Pressing the **OK** button will temporarily cancel the alarm, but where a genuine leak is present, the alarm will reoccur.

The driver must inspect the tyres and valves of the affected zone for any defects at the earliest opportunity.

ALARM: DEFLATION ALARM (TYRE BLOWOUT)

Rapid falls in tyre pressure will trigger a system alarm and must be given IMMEDIATE attention by the driver. Small tyre faults can quickly manifest as a major fault, causing secondary damage and compromise vehicle safety.

The AIR CTI system checks for large falls in tyre pressure not selected by the driver. If the tyre pressure falls below 80% of the current preference level, then a tyre fail alarm is triggered.

The alarm will double-beep and a message will flash: TYRE FAIL ALARM SEAL REAR TAPS!

The driver must stop the vehicle as soon as safe to do so. Close the air taps at the wheels on the affected zone to prevent a sudden deflation event affecting adjacent tyres. Pressing **OK** will cancel the alarm and stop the beeper.

During a tyre fail alarm, the system will continue to deliver air to the affected zone. This will minimise the potential of further damage occurring before the driver can stop and assess the problem.

ALWAYS CHECK THE DISPLAY REGULARLY BUT ESPECIALLY WHEN AN INFLATE ALARM OCCURS

When inflating, the actual tyre pressure showing on the controller should read higher than expected. If the controller's display actual pressure is lower, stop and check your tyres.

It is the driver's responsibility to maintain safe operations by ensuring that the correct tyre pressure is used at all times to maximise traction and handling.

IF A MAJOR PROBLEM OCCURS, OR IF PRESSURES REFUSE TO INCREASE

STOP AND CHECK

Instructions: Premium controller display operations (1 or 2 tyre zones)

This Central Tyre Inflation (CTI) control system is used on vehicles with a **Single tyre zone** (drive wheels only) or **Dual zone** (drive wheels and steer wheels).

GET TO KNOW YOUR CONTROLLER DISPLAY

1. Front or rear selection

Button switches between front and rear axle/s (F = front, R = rear). May be locked together as well.

2. Current tyre pressures (live pressure reading)

Top line information refers to front axle/s. Bottom line information refers to rear axle/s.

3. Selected tyre pressure (target pressure)

Target tyre pressure. Where a speed sensor is fitted, approximate speed will appear here.

4. Tyre pressure status

Whether the system is OK (at target pressure), inflating (INF) or deflating (DEF).

5. UP and DOWN fine pressure adjustment

Use to adjust the current pre-set psi in 1psi increments.

6. Trailer

Not applicable for single systems.



7. Main pressure adjustments

Used to select the desired tyre pressure.

8. P4 automatic

Customised setting for specialised systems. P4 AUTO is not applicable unless customised. Contact AIR CTI for customisation.

9. Controller Display Brightness

You can change the display to suit your personal preference. For night driving press **OK & DOWN** simultaneously. To restore full brightness, press **OK & UP**.

STANDBY MODE

**** STANDBY** is useful during vehicle maintenance. It should not be used while the vehicle is in motion**

STANDBY mode effectively turns off the air pressure tracking. When on **STANDBY**, all air solenoids are forced off and operator preference settings are hidden. Live tyre readings are still shown.

Press **OK** to enter and exit **STANDBY** mode.

Industry largely uses pressure measurements in ‘Pounds per square inch’ (psi) and this is the default unit of measure in AIR CTI systems. The system does support metric air pressure units of Kilopascals (kpa). If required, the display can be configured by a service agent to display pressures, rounded to the nearest 10kpa value. **(10kpa = 1.4psi)**

**IF A MAJOR PROBLEM
OCCURS, OR IF
PRESSURES REFUSE TO
INCREASE
STOP AND CHECK**

Instructions: TRI-ZONE controller display operations (2 or 3 tyre zones)

This Central Tyre Inflation (CTI) control system is used on vehicles with a **Single tyre zone** (drive wheels only) or **Dual zone** (drive wheels and steer wheels), or **Tri zone** (drive, steer and trailer).

GET TO KNOW YOUR CONTROLLER DISPLAY

DRIVING CONDITION PREFERENCE SELECTION

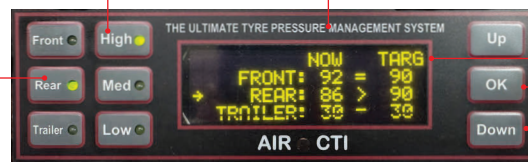
ZONE BUTTONS SELECT WHICH LINE IS TO BE AFFECTED BY PREF BUTTONS

LIVE READINGS FROM WHEEL PRESSURE SENSORS

SELECTED PRESSURE PREFERENCES

STANDBY & SETTINGS ACCESS

UP & DOWN TRIM PRESSURES



DISPLAY BRIGHTNESS

The display will operate at full brightness for daylight use. At night, a light sensor will automatically dim the display and illuminate the buttons.

When the system is in **STANDBY** mode:

The **HIGH** button will Dim/Brighten the display.

The **LOW** button turns the backlight on and off.

STANDBY MODE

**** STANDBY is useful during vehicle maintenance. It should not be used while the vehicle is in motion****

STANDBY mode effectively turns off system inflation and deflation, and only the current air pressure is shown.

Press **OK** to enter and exit **STANDBY** mode.

Pressing the **TRAILER** button will add or remove the trailer zone from the display.

TRAILER CONNECT / DISCONNECT

It is common for trailers to be attached or removed on the fly. The third Trailer zone should only be active if the trailer is actually present otherwise the trailer sensor will measure zero psi and this will trigger low-pressure alarm conditions on the display.

WHEN A TRAILER IS CONNECTED

Ensure that the tyre air line is connected at the hitch point and that the tyre taps are opened. Then activate the trailer zone on the controller display: Enter **STANDBY** mode by pressing **OK**. While in **STANDBY** mode, press the **TRAILER** button to activate the trailer zone on the display. The third zone should appear and will be active when normal tracking is resumed. Press **OK** to resume normal tracking.

When a trailer is disconnected the reverse procedure applies: lock the trailer wheel taps and isolate the tyre air line at the hitch point then disable the trailer zone on the controller display: enter **STANDBY** mode and press the **TRAILER** button to disable the third zone.

The pressure protection valve (ppv)

THE PRESSURE PROTECTION VALVE (PPV)

The Pressure Protector Valve (PPV), which limits air flow if the brake reservoir gets too low, is fitted to the rear air reservoir on Western trucks, or to specified spots on European trucks, often to a manifold typically near the gear box on the right side.

Ensure the PPV is installed correctly.

The arrow on it's body must point away from the air supply.

Do no fit on the bottom of air tanks, or where they can be hit.

DO NOT USE TEFLON TAPE

Always Apply Loctite 5331 for plastic & 569 Aluminum

An 8 mm (5/16") airline connects the PPV to the Filter Inflate solenoid.



Adjustable PPV



Fixed PPV

Instructions: Controller Display mounting options TCU – tyre control unit

The dash mounted controller is designed to attach to a flat face high up on the dash in a highly visible spot, within easy reach.

Optional mounting brackets are available, top mount bracket, flush mount bracket/DIN bracket.

It can be attached via Velcro tape, which minimizes or eliminates damage to the dash.

A12mm hole is required to feed the electrical cord to the TCU.

Often the controller can be fitted over a vacant switch location.

Sometimes switches can be moved around to make room.

The dash control is prewired to the TCU - Tyre Control Unit.



Flush Mount Premium Display



Bracket Mount Premium Display

TCU - TYRE CONTROL UNIT

Usually, this can be zip tied to existing looms.

Keep away from excess heat (heater outlets).

Connect the dash controller to this computer TCU.

The dash control, the TCU come prewired.

Open TCU box lid, remove long green plug and lead, fit isolator on chassis, run wiring loom neatly and feed through the firewall and plug in. Replace lid.

Secure wiring with zip ties to minimize vibration.



TCU – Tyre Control Unit

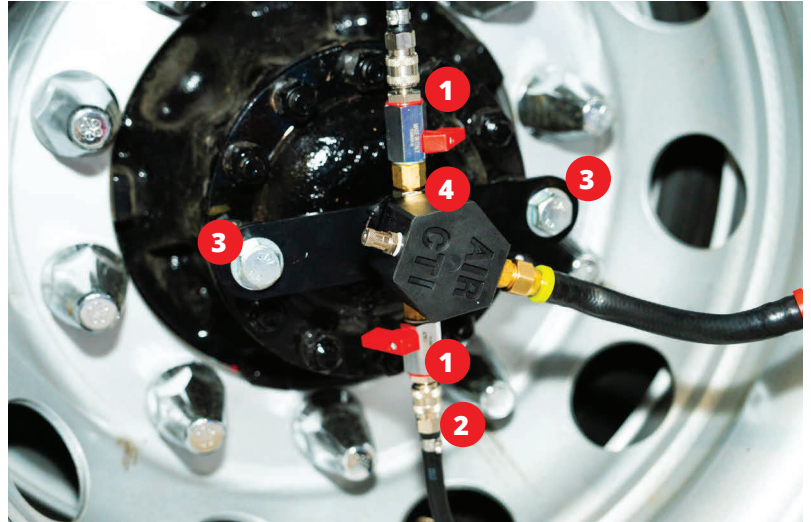
Instructions: Tyre Changing with Quick Connect Swiftly

BE AWARE

The inside of the tyre and rim must be clean wipe inside of tyre to ensure cleanliness any dirt will damage rotators and negate any warranty.

ENSURE SAFETY FIRST

Use conventional safety systems & PPE following industry standards. Chock truck. The following instructions relate to AIR CTI only.



1. **Turn off all wheel taps.**
2. **QUICK CONNECT FITTINGS:**
Push button on quick connect tyre hose fittings. Hold button in fully & remove.



To eliminate damage to the O ring, lubricate and ensure the button is fully depressed when installing Quick connect tyre hose fittings. Swiftly connect fitting – Push together to connect. Pulling back on collar helps the connection.

3. **MOUNTING BOLTS:**
Undo and remove the two rotator mounting bolts & washers
4. **ROTATOR:**
Swing rotator assembly, with drop pipe, up and out of the way. Secure as needed.

5. **Mark hub to remind you of the tyre valve position**
Note: Always remove the valve core in the new tyres Schrader valve when fitting tyre hose
6. **Change tyre, aligning the Schrader valve in the identical spot where valves were.**
Schrader valves must be on opposing sides, to ensure correct wheel balance, and for hose fitment.

IMPORTANT

DO NOT OVER TIGHTEN TYRE HOSE FITTING ONTO THE SCHRADER VALVE.

7. **Always remove the valve core in the new tyre's Schrader valve when fitting tyre hose.**
8. **Ensure all components are clean.**
9. **Tyre hoses can be installed prior to tyre, install if needed**
10. **Open wheel taps. Check for leaks.**

Instructions: Tyre Changing with Nut and tail

1. WHEEL TAPS

Turn off all wheel taps.

2. NUT & TAIL FITTINGS

Undo the nut, using two spanners as shown below, to ensure tap does not rotate and break the Locktite seal.

NOTE

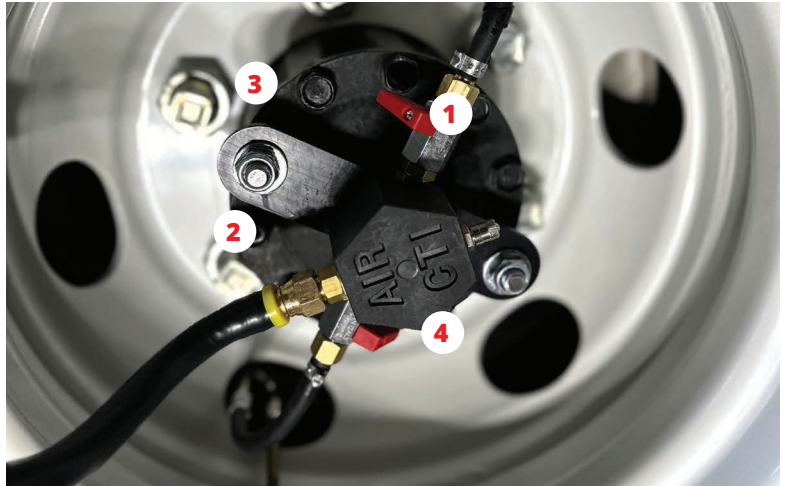
“Nut and Tails” for Highway systems on steer, and also on agricultural vehicles for simplicity.

3. MOUNTING BOLTS

Undo and remove the two rotator mounting bolts & washers.

4. ROTATOR

Swing rotator assembly, with drop pipe, up and out of the way. Secure as needed.



If any air leaks:

Remove fitting. Apply Loctite 5331 for plastic & 569 for Aluminum to threads. Reinstall fitting. Ensuring tap (red) handle [if fitting includes tap] is correctly aligned i.e.: as shown in main picture [above] which is located at a 60° angle

REMEMBER

THE INSIDE OF THE TYRE AND RIM MUST BE CLEAN. WIPE INSIDE OF TYRE TO ENSURE CLEANLINESS. ANY DIRT WILL DAMAGE ROTATORS & NEGATE WARRANTY. THANK YOU

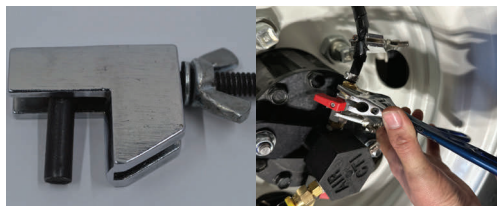
Tyre hoses are cut to length, to eliminate contact with the wheel, and fitted onto the quick connect barb or nut and tail barbs.

Install the crimp clamp, and squeeze with side cutters to tighten.

HEX ROTATOR

AIR CTI rotators without maintenance & cleaning, it will reduce rotator life.

To obtain the best possible life of the rotator, ensure that the inside of the tyre is clean.



Portable Hose Clamp for hose when undoing nut & tail.



Do not allow the nipple or tap to rotate, as this will cause a leak.



IMPORTANT NOTE Use 2 spanners on nuts and tails.



Tighten crimp clamp if hose leaks with side cutters.

DO NOT OPEN ROTATOR – Opening Rotator voids warranty.

Contact AIR CTI for servicing and faults.

Instructions:

Tyre Changing CONTINUED

MAINTENANCE: TAP REPLACEMENT

NOTE

Do not use Teflon tape.

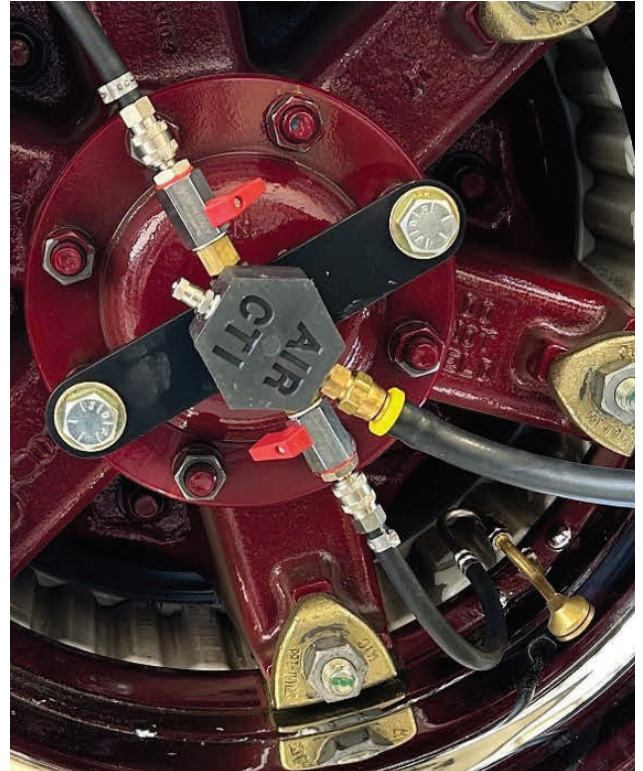
Tap Installation. When taps are installed, it is important that the taps are fitted (pictured: right).

Otherwise, the tap handle can be hit by components rotating including the push loc hose and fittings. Do not over tighten tapered fittings, as this will break the base or rotator as the taper forces into the thread.

Do not tighten any fitting to seal. If a leak occurs, remove fitting Use a few drops of thread sealant, Apply Loctite 5331 for plastic & 569 for Aluminum.

NOTE

Do not over tighten. The threads are tapered and will break components if over tightened.



Risk Assessment For AIR CTI

INTRODUCTION

A risk assessment is a mandatory requirement by “Health and Safety” as gazetted by the Australian government. Its purpose is to help define operating parameters and risks, thereby making life safer. CTI is like any other tool, used responsibly, it serves a valuable service. AIR CTI, as the manufacturer, has a duty of care to explain operation and risks. The owner of the vehicle has responsibilities too. He must ensure his operator understands CTI operation, and anything that may be unique to his profession. This is more important in the transport industry because it is so varied and specialised. Because of this, and that AIR CTI cannot control the operation, AIR CTI cannot be held liable for any damage to person or property.

All operators of any machines, as the name implies, is responsible for responsibly operating that machine. All operators should be inducted to be made aware of all operating parameters, of correct operating procedures, and of potential hazards that may exist if the correct operating procedures are not followed. The following will attempt to cover those areas. All operators should meet the standard requirements for Heavy Vehicle operations.

Ring AIR CTI if you have any concerns or questions.

AIR CTI system gives the driver the ability to lower or raise the pressures of their tyres as conditions and needs dictate. The AIR CTI system helps the driver to maintain their vehicle, while improving control, safety, and reduce operating costs.

- Ideal tyre pressures are those that will support the load and not overheat at the required speed. Naturally as speed increases tyre pressures must be increased to control heat build-up. At slower speeds, tyre pressures can be reduced. Tyre pressures also establish the rigidity of the tyre footprint and the tyre profile. Low tyre pressures allow the tyre to flex more, both radially and laterally. Lateral stability is directly affected by tyre pressure. As speeds increase, lateral stability requirements also increase. In simple terms, as loads are increased, and as speeds increase, tyre pressures must be increased. Otherwise, instability may cause an accident, and/or tyre heat will build up, which may cause a serious blow out.
- **Standard transport tyre pressures are too high for many conditions.** An unladen truck will ride rough, can be skittish as the tyres search for traction on bumpy roads, can wear uneven, and can lack traction. A too hard tyre will bounce off bumps and irregularities. A bouncing tyre that isn't on the road won't provide much traction. A bouncing tyre can't turn corners. A bouncing tyre can initiate shimmy, cause increased suspension wear, and increased chassis cracking. A bouncing tyre doesn't stop well.
- Most tyres will lose a slight amount of air. Normal tyre pressure loss is in the neighbourhood of 1 to 2 psi per week. With standard dual tyres, where one tyre is under inflated by 10%, it will reduce tyre life in both tyres by at least 10%. Under inflation of one tyre by 20% will reduce tyre life of both by 25%! Over inflation reduces tyre life too. A 20% over inflated drive tyre will wear out 22% faster. Operators running correct pressures are seeing a 30% plus reduction in just their tyre costs.
- Correct tyre pressures increase traction, improve tyre life, improve operator comfort, and reduce tyre related problems including punctures, reduce suspension damage and wear, reduce chassis damage and cracking, and reduces road damage significantly. Drivers are less stressed, have better control, are more comfortable, and are healthier.

But, as with any tool, the operator must use it correctly. Operator failure can be hazardous.

- Under inflation can damage tyres through excessive heat build-up. Excessive heat can lead to blow outs.
- Under inflation will make a vehicle handle sluggishly. The vehicle will wallow, steer poorly, and in general will not respond directly.

Risk Assessment

For AIR CTI CONTINUED

- Over inflation makes a vehicle rough riding, and skittish and may tend to bounce which can lead to the truck going wide on rough corners, erratic handling, and hopping axles and tyres when braking hard. Jack knives are more prone with over inflated tyres.
- If unsure of operation, leave the CTI system at its highest setting, which replicates conventional pressures.

Typical operating procedure

These tyre pressure examples are for conventional trucks running on conventional tyres

- Use the maximum standard pressure, **P1 (High)**, for heavy laden highway conditions, or other conditions when speed will be above 90 kph. The AIR CTI system will help warn of any tyre problems. The operator should closely observe the tyre pressure gauge and investigate any leakage immediately that it is safe to do so, to verify that the problem will not affect safe continuation of the trip.
- Upon any start up or restart, the operator should check the AIR CTI Display to ensure all tyres are at the required operating pressure. The operator should regularly check their display as it doesn't take long to damage a tyre from under inflation.
- When unladen at highway speeds, it is generally safe to use a pressure of around 60 psi (4.1 bar), typically **P2 (Medium)** setting. This pressure reduction is only for lightly loaded trucks, and then only for standard tyre sizes and quantities, and then only after careful monitoring to establish that none of the tyres are over heating in actual practice. Any time tyre loads change, tyre pressure and temperature must be monitored and adjusted, as necessary.
- When laden off road at speeds under 80 kph, tyre pressures can also be reduced to around 60 psi (4.1 bar), **P2 (Medium)**. This pressure reduction will provide added traction, and improved ride, with better braking, and less tyre damage, and increased safety, but careful monitoring will be necessary to verify safe operating conditions. As loads and speeds vary, pressures will have to be adjusted. Do not use low pressures when laden at any speeds above 80 kph. Check that tyre temperatures are not excessive for your particular job conditions.
- At speeds under 30 kph, a lower pressure again will aid traction, reduce tyre, suspension, and road damage, but should be monitored carefully considering all potential problems. A pressure as low as 30 psi (2.1 bar), typically **P3 (Low)**, should be reasonably effective, but only when traveling slowly. Potential traction gains of 200 % have been demonstrated. As soon as conditions that require maximum traction improve, increase air pressures.

When tyre section, height, size, or quantity are different, then pressures must be adjusted. If the unladen truck has a crane fitted, or a tray, cradle, special body, or anything that affects the standard unladen axle load, then unladen pressures must be adjusted to suit. If the loaded weight of the truck is above normal, then pressures must be adjusted. High cornering loads will need added tyre pressure.

Normally, the owner or his responsible representative, will establish recommended tyre pressures at the required conditions and these will be set at the time of installation. If conditions vary at a later date, these pressure settings may need to be adjusted. The operator should be aware of these recommendations to allow for proper control of the vehicle. If the vehicle is sold, or the operator changes, it is imperative that the induction process is followed so that the driver understands this. The driver is the person in charge.

STANDARD OPERATION:

- Standard Australian highway laden pressures are 92 psi (6.35 bar). This is also the recommended pressure whenever the vehicle is parked for the night, or longer (more air to lose if a puncture or leak exists.).

Risk Assessment

For AIR CTI CONTINUED

- Upon initial start up, check CTI pressures. It is considered normal for slight loss of pressure, and for a lower pressure in the morning because the tyres were warmer when stopped. Tyre pressures rise when they work, and lower when cool. Five to ten psi drop is quite normal. If pressures have dropped considerably, the tyres and the CTI system should be checked for punctures or leaks. Adjust pressures for the initial drive conditions.

WHEEL ASSESSMENT PROCEDURES

The driver's legal responsibility is to walk around the truck and check lights, tyres, etc. Turn on each tyre valve and listen for a short hiss as the tyre pressures equalize. Each tyre should hiss for 10 seconds or so. If no hiss, ensure that the tyre has air in it. If not, fix it. If it hisses for 30 seconds loudly, that tyre will be at a much lower pressure. Check and find out why. Is it a puncture or an air leak? If either, fix it.

While turning on wheel taps, ensure all is securely bolted down, and secured. Fix anything that is loose. Also feel inside the drop pipe for rub marks. There should be ample clearance between the drop pipe and the tyre, with no rub marks. If any exist, find out why and fix. Sometimes these drop pipes are hit, and get knocked in. Lift the push loc hose to cause the rotator to move, feeling for any roughness in the bearing, or excess axial movement. Contact AIR CTI if any doubt.

In all systems, there are two more taps. One will be on the air supply, where Air for the AIR CTI system is sourced. This may be an air reservoir, or a distribution block, depending upon truck and brand. Follow the air line back from the inflate solenoid/filter assembly. The tap will have a red handle. There is also a tap on the filter/inflate solenoid assembly. These taps are to isolate the truck air from the CTI air when changing tyres or maintenance. These taps must be open (red handle in line with the hose, not across the hose) for the AIR CTI system to operate.

Start the truck and let the air pressure build up. The AIR CTI controller should start up and run through its internal diagnostics. The live pressure reading will be on the left side of the screen, and the target pressure on the right side. Where a steer system is fitted, the steer pressures are the top line and the drive pressures the bottom line (On vehicles where the two tyre zones are on the drive wheels and a trailer, the top line will represent the Drive wheels and the lower line will track the trailer).

Typically, the controller will default back to **P1 (High)** pressure at start up. This is to ensure the vehicle is in a safe state should the driver forget to check, or if another driver hops in the truck, or the driver forgets.

Normal operations, the tyres will have cooled down over night, and be a bit lower than the pressure they were left at. The controller will add air as soon as the compressor builds up sufficient pressure.

NOTE

The tyre pressures should be reasonably close to the target pressures before driving. If air pressure is very low, check for problems. Ensure all tyres have some air pressure.

NOTE

AIR CTI system can only check the air pressure in the tubes going to the tyres. If the inflate solenoid opens and high pressure enters, this will modify the apparent tyre pressure. The tyre pressure readings should be higher when inflating and should be lower when deflating. The system will often pause to take an accurate pressure reading before continuing. The controls do permit the operator to trim a target pressure up or down in 1 psi steps, but this is a temporary setting limited to within 10psi of the target pressure and will reset the next time the vehicle is started.

Risk Assessment

For AIR CTI CONTINUED

Optimal highway pressure is taken straight from Load to Inflation tables for your tyre size, with 12% added to take the cold pressure to hot. The optimal gravel road pressure is usually 60% of the optimal highway pressure. For instance, an Aussie tandem drive with 11R22.5 dual tyres, needs **92 psi (6.34 bar)** for highway. 60% of that is **55.2 psi (3.81 bar)**, which is the ideal pressure for gravel roads up to 80 kph.

For maximum traction, engaging an even lower pressure at very low speed, will substantially increase traction and flotation. Increase pressures to optimal for the road surface as soon as practical. **30 psi** in a truck drive wheel will virtually double the traction over **90psi** but should only be used at just 20 kph for short distances.

This provides a larger footprint, that keys into the road for better traction and braking, while reducing vibration and punctures.

Typically, **P1 (High)** is the optimal pressure for fully laden at highway speeds. On very hot days, this pressure can be manually adjusted up a few psi. For normal conditions for max legal load, **P1 (High)** is optimal.

When running empty, a lower pressure is optimal. Depending upon your truck, this could be **P2** or **P3 (Medium or Low)**. For instance, a tray truck with nothing on it, or an empty tip truck, is probably optimal at **P3 (Low)**. But, a truck with a crane, or a refrigerated van, will most likely require **P2 (Medium)** pressure. Compare the actual weight with the pressure settings and the Load to Inflation Tables, to ensure correct operations.

Some typical examples:

STOCK TRUCK OR LOG TRUCK WITH PIGGY BACK TRAILER DRIVE TYRES

- Highway laden, use P1 or high
- Highway empty, use P2
- Gravel road laden, use P2
- Gravel road empty: use P3
- For maximum traction at slow speed, use P3 .
Inflate to P2 when possible.

CRANE TRUCK (TANDEM DRIVE TYRES THAT DOES NOT CHANGE WEIGHT)

- Highway, use P1 pressure. Typically 92psi
- Gravel road, use P2 pressure. Typically 60psi
- Soft conditions, sand, mud, rock at a reduced speed, use P3 for maximum traction and flotation
- Typically 30 psi. inflate to P2 when possible..

TIP TRUCK DRIVE TYRES

- Highway laden, use P1
- Highway empty, use P3
- Gravel road laden, use P2
- Gravel road empty, use P3
- For maximum traction at slow speed, use P3.
Inflate to P2 when possible.

LOG TRUCK, NO CRANE, FLAT TOW DRIVE TYRES

- Highway laden, use P1 or high
- Highway empty, use P3 or low
- Gravel laden, use P2 or medium
- Gravel empty, use P3 or low
- For maximum traction at slow speeds, use P3.
Inflate to P2 when possible.

Risk Assessment

For AIR CTI CONTINUED

These are examples only. Weigh your truck, check the Load to inflation tables, allowing for the 10-12% pressure rise from cold to hot, or, preferably, contact AIR CTI to ensure suitable pressures for your truck.

Remember, the optimal tyre pressure will provide the best performance and life for the tyre, the truck, and the roads, and driver, while reducing damage to all. Driver health is damaged by excess vibration. Use the correct tyre pressure to reduce vibration.

Blow outs are caused by excess heat buildup. Excess heat comes from excessive flexing of the side walls, when the tyre pressure is significantly below optimal pressure, or over loaded. This does not happen quickly. It takes time for the heat to build up.

Almost all blow outs are caused by a puncture or air loss causing too much deflection, which increases the heat. AIR CTI immediately detects any air loss, beeps, and will inflate the tyre, if possible. Most blow outs are prevented automatically. But, ultimately, the driver must be attentive, and ensure tyre pressures are correct.

WHEEL ZONES BONDED TOGETHER

AIR CTI ON FRONT (STEER) WHEELS

CTI on the steer axle offers many advantages. The operator can tell at a glance that his tyres have air in them. Punctures, up to the capacity of the compressor and system, are automatically re inflated, and therefore, blow outs are almost a thing of the past. Naturally any leak should be inspected immediately. Pressures can be adjusted to suit the needs, depending upon the system purchased.

CTI provides a great tool with the potential of safer operation. A blow out, or any failure, on the steer axle is potentially very dangerous. Extra care must be taken to ensure safe operation of your vehicle. If there is any doubt, a responsible person should be contacted.

BONDED WHEEL ZONES

In the combined control such as a mobile crane or boom lift and some recreational 4WD trucks, the steer tyre and drive pressures are bonded together, so preference changes will affect both wheel zones simultaneously. In the standard display this is highlighted by the Front and Rear yellow status LEDs being illuminated at the same time.

The Tri-zone AIR CTI controller supports up to three zones of operation, (Steer, Drive and Trailer). This controller type has more flexible zone bonding controls where any two of the three may be bonded while the remaining zone remains independent, or all three zones may be bonded together, allowing all zones to be affected by a single preference button press.

All of the zone bonding configurations are preset at the time of the vehicle installation and can be changed through consultation with an AIR CTI agent.

LOW PRESSURES AT STARTUP

In the mornings, when the tyres are cold, tyre pressures will be down by a few psi. This is normal, and the AIR CTI system will adjust this. If pressure is down over 10 psi, check for leaks or punctures.

Always turn off all wheel taps whenever parking the truck for an extended period, or overnight. A small puncture may deflate your tyres, ruining your morning.

Operations & risk assessment

For AIR CTI

CTI provides a great tool with the potential of safer operation. A blow out, or any failure, on the steer axle is potentially very dangerous. Extra care must be taken to ensure safe operation of your vehicle. If there is any doubt, a responsible person should be contacted.

Check all air lines very regularly with soapy water and look for any unexplained air leaks. If a tyre is low before starting work, find out why. This could be caused by a simple air leak or puncture, or it could be indicative of a stone bruise, or other damage. Very regular checks of the pressure gauge while driving is best practice and strongly recommended. If the controller beeps, check the pressure. If it beeps repeatedly, stop and investigate.

As with any tool, correct use is essential to ensuring the many advantages of CTI.

In the combined control, for instance on a crane or cherry picker, the steer tyre pressures are adjusted automatically, relative to the drive tyre adjustment. As the drive tyre pressures are reduced, to P2, or P3, the steer tyres are automatically reduced to their setting, as does the trailer tyres if AIR controls are fitted. Conversely, as the drive tyre pressures are increased, the steer tyres are also inflated. Whenever changing your drive tyre pressures, always check that the steer tyre gauge is indicating that they have changed too, and the pressure is appropriate.

Normal operating pressures are approximately 50, 75 psi and 110 psi on the steer, or as requested. Trailer tyres are usually 30, 55, and 80 psi. These pressures are for Australian legal loads and standard tyres. INF or DEF indicate inflation, or deflation. Whenever INF appears, and the controller beeps, check the gauge. If it is higher than expected, good. If the pressure reading has dropped below expectations, stop and investigate immediately. Turn off wheel taps if needed. If a puncture or slow leak happens, as soon as the pressure has dropped below the lower threshold, only a few psi, the up solenoid, and INF will illuminate. The displayed pressure should increase. If the controller goes back to OK after 20 or so seconds, and gauge shows near full pressure, then the leak is only slow.

If it stays on for a minute or more, stop the truck and investigate. Sometimes, a large impact or bump can momentarily make the controls believe that the pressure is too high. It will exhaust air for 10 seconds or so and may re inflate for a short time. This is quite normal.

In the mornings, when the tyres are cold, tyre pressures will be down by a few psi. This is normal, and the AIR CTI system will adjust this. If pressure is down over 10 psi, check for leaks or punctures. A separate gauge shows the trailer tyres pressures, if fitted. Trailer tyres work similarly if fitted.

Always turn off all wheel taps whenever parking the truck for a while, like overnight. A small puncture may deflate your tyres, ruining your morning. The AIR CTI control system lets the gauge read the lowest tyre pressure, not the highest.

If unsure, ring AIR CTI on +61 (03) 5127 6128

Australian guarantee For AIR CTI

AIR CTI knows that our customers are central to our business. AIR CTI is built with quality in mind, and to prove that, the AIR CTI guarantee is the best guarantee available, by far. We don't do the standard manufacturing defects guarantee, we guarantee that AIR CTI will do its job for 3 years or 500,000km. This guarantee includes fair wear and tear of all components. Your satisfaction is guaranteed. Because AIR CTI is fitted to vehicles that, from necessity, operate in remote areas throughout the world, the guarantee is for parts only, unless brought to our workshop.

AIR CTI is a tool designed and proven to benefit transport. This tool is manufactured and supplied with sound engineering and quality control, designed using the best knowledge attained from decades of feedback, 50 years of personal experience, and thousands of hours of research, using international and Australian information.

Any tool is only as good as those using it. AIR CTI is simply a tool. Optimal performance requires knowledge and skills, as does maintenance. Just like any other tool, if it is not used correctly, if warnings or readouts are not acted on, or if, for any other reason or problem, ultimately, all responsibility is that of the driver or operator. Correct maintenance is also necessary for successful operation. Customer management must ensure that both the operator/driver and maintenance staff understand and apply all necessary education, control and actions. This is all explained in the owner's manual supplied with every system.

AIR CTI have endeavored to design and manufacture a product that combines the best of quality and design features, but have no control over incorrect installation, poor maintenance, or operations, and neither conditions or operator. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages or any other damage are not covered.

AIR CTI reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured. There are no warranties, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description hereof. Seller disclaims the implied warranty of merchantability. This warranty shall not apply to any AIR CTI product which has been improperly installed, modified, or customized, or improperly maintained.

AIR CTI (Seller) warrants that the products sold hereunder shall be free from defects in material and workmanship and work as intended, under normal use, and service when correctly specified, installed and maintained, and provided that the products shall not have sustained any damage or injury by whomever or through whatever means inflicted and that the Buyer, it's agents or employees, shall not have attempted to make any adjustments, repairs, or modifications to the products sold and further provided that no replacement parts or components except AIR CTI or AIR CTI approved parts or components shall have been used, and provided specifically that the products be utilized in strict compliance with the operating data supplied by the Buyer to Seller.

LIMITATIONS OF WARRANTY

1. This guarantee is in lieu of all other warranties, whether oral, written, express, implied or statutory.
2. AIR CTI shall not be liable to the Buyer or any other person for incidental or consequential losses, damages, or expenses, directly or indirectly arising from the sale, handling, or use of the products or from any other cause relating thereto.
3. Seller's liability hereunder whether based on contract, tort (including but not limited to negligence and strict liability) or otherwise, is limited to, at sellers' option, the replacement or repair of defective products or the repayment of, or crediting buyer with an amount equal to a portion of the purchase price upon return of the products.
4. In the event of a defect, Buyer must contact Seller to obtain shipping instructions so that the product may be inspected at Seller's facility in Morwell, Victoria.
5. After inspection, Seller shall determine if the warranty applies, and if it does, shall, at Seller's option, report or replace the product, or repay or credit Buyer with a portion of the purchase price.
6. If Sellers elects to repay or credit a portion of the purchase price, the refund amount shall be pro-rata based on the remaining amount of warranty period.
7. This warranty applies only to the original purchase of new products purchased from Seller, an authorized dealer of Seller, or an OEM. It does not apply to any second hand or rebuilt products.
8. Further, Seller does not warrant to replace, repair or refund the cost of any parts that are obsolete (ie; the Seller no longer manufactures), or that are wear parts. The Warranty does not apply if the defect is due to improper or faulty installation of the product.
9. Any claim by Buyer with reference to the products sold hereunder for any cause, shall be deemed waived by the Buyer unless submitted to Seller in writing within 1095 days from the date of shipment of the products to which the claim relates.
10. No agent, employee or representative of the Seller has any authority to bind the Seller to any affirmation, representation of warranty concerning the goods sold under this contract, unless such affirmation, representation of warranty is specifically Included within this agreement. No modification or alteration of the foregoing disclaimer of warranty and limitation of remedies or provisions shall be valid and enforceable unless set forth in a separate document issued and executed by an officer of the Seller.

Details subject to change without notice.

50 Hour Check List

Check all components are secure, and that none are loose.

If there is a leaking fitting, turn off all taps, remove fittings. Remove Loctite from fittings, apply Loctite 243 [if metal to metal] 5331 [if plastic] thread sealer and retighten. Which fitting leaked?

Check that exhaust flow comes from all exhaust tubes.

IT IS ESSENTIAL THAT THIS FORM IS RETURNED TO AIR CTI

RETURN THIS LIST TO: AIR CTI **E** admin@aircti.com **P** +61 (03) 5127 6128
MAILING ADDRESS: AIR CTI 10 Holmes Rd, Morwell, Victoria, 3840, Australia

Double check with your tyre man that he always wipes the inside of the tyres clean before fitting. This is vital for a long service life.	
Check tightness of all tyre hoses. These may need a nip up	
Check all components for security, that they are not loose	
Wobble/rotate the rotator body to get a feel for correct feel. It should turn smoothly with minimal play	
Use soapy water to check for air leaks. There should be none	
If there is a leaking fitting, turn off all taps, remove fitting, apply Loctite 243 thread sealer and retighten. Which fitting leaked?	
Check Snizentite pipe for any wear marks between wheel/tyre	
Report any damage. Where did it rub?	
Reposition Snizentite pipe if it rubs, or contact AIR CTI for advice	
Check that exhaust flow comes from the exhaust	
Check that driver is using correct pressures	
What pressure does he use on highway loaded?	
What pressure does he use on highway unloaded?	
What pressure does he use on gravel loaded?	
What pressure does he use on gravel unloaded?	
Does he have any other problems?	
Have all drivers/operators been Inducted in the use of the AIR CTI® system & maintenance requirements?	

Owner _____

Contact person _____	Ph _____
Company _____	Driver name _____
Date _____	Serial No _____
Truck model _____	Rego _____
kms _____	

NOTE

Correct usage and maintenance is essential for a long service life. AIR CTI needs your feedback.

IT IS ESSENTIAL THAT THIS FORM IS RETURNED TO AIR CTI.

Monthly Check List

Check all components are secure, and that none are loose.

If a fitting is leaking, turn off all taps, remove fittings. Remove Loctite from fittings, apply Loctite 243 [if metal to metal] 5331 [if plastic] thread sealer and retighten. Write here which fitting leaked.

Check Tubing joins for leaks with soapy water. If leaking, remove tube, cut 10 mm off cleanly, refit. Check that exhaust flow comes from all exhaust tubes

IT IS ESSENTIAL THAT THIS FORM IS RETURNED TO AIR CTI

RETURN THIS LIST TO: AIR CTI **E** admin@aircti.com **P** +61 (03) 5127 6128
MAILING ADDRESS: AIR CTI 10 Holmes Rd, Morwell, Victoria, 3840, Australia

Double check that your tyre person always wipes the inside of the tires clean before fitting. This is vital for a long service life.	
Check tightness of all tyre hoses. These may need a nip up	
Check all components for security, that they are not loose	
Wobble rotator body. A little play, but no bearing roughness	
Use soapy water to check for air leaks. There should be none	
If a leaking fitting, turn off all taps, remove Loctite fitting, apply 243 thread sealer and retighten. Write here which fitting leaked.	
Check Tubing joins for leaks with soapy water. If leaking, remove tube, cut 6 mm off cleanly, refit.	
Check Snizentite pipe for any wear marks from the wheel/tyre	
Report any damage. Where did it rub?	
Reposition Snizentite pipe if it rubs, or contact AIR CTI for advice	
Check that exhaust flow comes from all exhaust tubes	
Check that no flow when not exhausting.	
Check that driver is using correct pressures especially new drivers	
What pressure does he use on highway loaded?	
What pressure does he use on highway unloaded?	
What pressure does he use on gravel loaded?	
What pressure does he use on gravel unloaded?	
Does he have any other problems?	
Have all drivers/operators been Inducted in the use of the AIR CTI system & maintenance requirements?	

Truck Owner _____

Company _____ Driver name _____

Date _____ Serial No _____ Truck model _____ Rego _____

NOTE
 Correct usage and maintenance is essential for a long service life. AIR CTI is here to help.

SIX MONTHLY Check List

For peak performance, simple checks are essential. So is feedback. AIR CTI needs to know your problems and successes. Please report any problems or questions.

Ring AIR CTI if you have any problems.

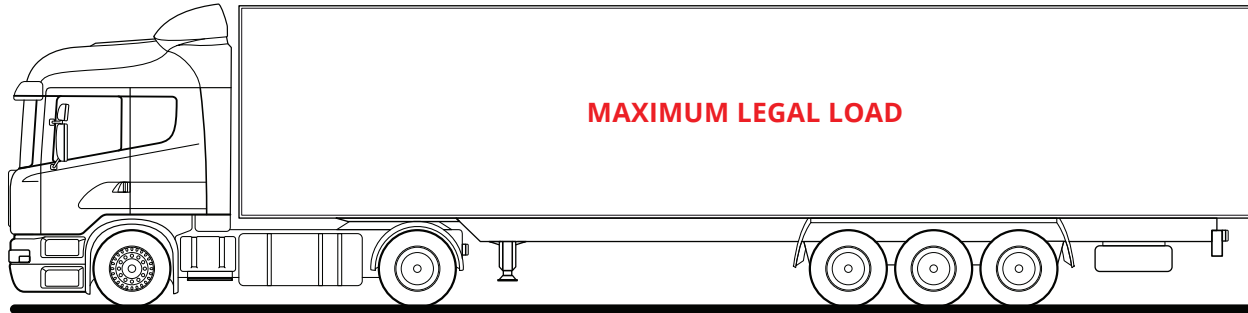
IT IS ESSENTIAL THAT THIS FORM IS RETURNED TO AIR CTI

RETURN THIS LIST TO: AIR CTI **E** admin@aircti.com **P** +61 (03) 5127 6128
MAILING ADDRESS: AIR CTI 10 Holmes Rd, Morwell, Victoria, 3840, Australia

Have all drivers/operators been Inducted in the use of the AIR CTI system & maintenance requirements?	
Double check that your tyre man always wipes the inside of the tyres clean before fitting. This is vital for a long service life.	
Check tightness of all tyre hoses. These may need a nip up	
Check all components for security, that they are not loose	
Wobble rotator body, it should have a little play, no roughness	
Use soapy water to check for air leaks. There should be none.	
If a leaking fitting, turn off all taps, remove fitting, apply Loctite 5331 thread sealer and retighten. Note which fitting leaked.	
Check Tubing joints for leaks with soapy water. If leaking, remove tube, cut 6 mm off cleanly, and refit.	
Check Snizentite pipe for any wear marks from the wheel/tyre	
Report any damage. Where did it rub?	
Check that exhaust flow comes from all exhaust tubes	
Check that no flow when not exhausting	
Apply grease to rotator (small hole) using a needle grease adaptor with waterproof grease. See manual	
Check that driver is using correct pressures, especially new drivers	
What pressure does he use on highway loaded?	
What pressure does he use on highway unloaded?	
What pressure does he use on gravel loaded?	
What pressure does he use on gravel unloaded?	
Does he have any other problems?	

Truck Owner	Company		
Driver	Date		
Truck model	Serial No	Rego	kms
Is AIR CTI working for you?	Great	Good	Poor
Details			

Optimal Cold Tyre Pressures For Typical Australian Conditions

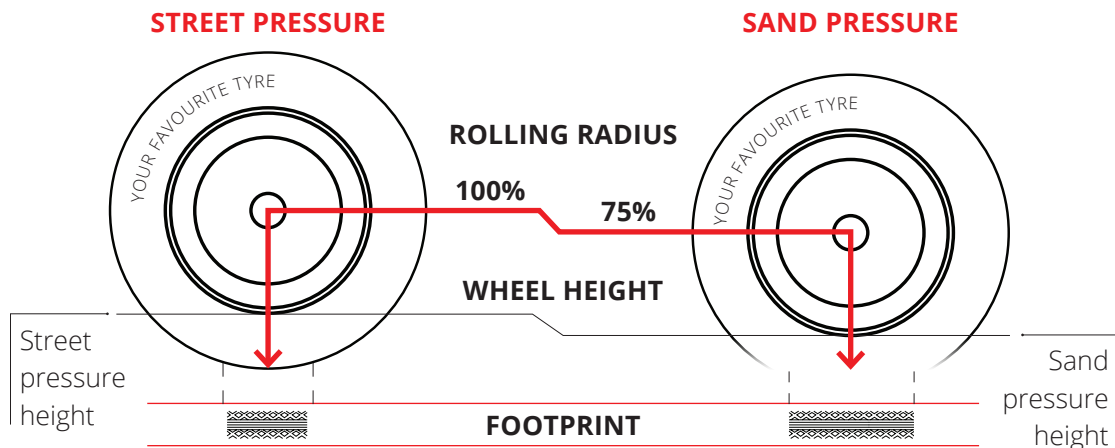


Correct tyre pressures 11R22.5 tyres

Steer tyre 120 psi
3 tonne per tyre
Unloaded 2.8 tonne 115 psi

Drive 80 psi
2.06 tonne per tyre
Unloaded < 1 tonne 40 psi

Trailer 70 psi
1.75 tonne per tyre
Unloaded <1/2 tonne 30 psi



RECOMMENDED COLD TYRE PRESSURE

22.5 INCHES LOAD TO INFLATION TABLE																			
TABLE OF INFLATION PRESSURE (BAR) IN REFLECTION TO MAXIMUM LOAD PER AXLE (KG)																			
54	58	62	65	69	73	76	80	83	87	91	95	98	102	105	109	112	116	120	124
3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
11R Single Tyre Load					4140	4320	4500	4680	4860	5040	5220	5400	5580	5760	5940	6120	6300		
11R Dual Tyre Load					7620	7950	8290	8620	8950	9280	9610	9940	10270	10610	10940	11270	11600		

Optimal HOT Tyre Pressures For Typical Australian Conditions

CORRECT HOT TYRE PRESSURE FOR AUSTRALIAN TRUCKS WITH 11R22.5 TYRES ONLY 0817

This chart used information from Michelin, Bridgestone, Firestone, Goodyear and the USA Tire and Rim Handbook. Safe truck operation is in the drivers' hands. This information is the best available and should be used as a guide. **Correct pressures are shown for highway use (100 kmh), for gravel road use (80 kmh), and for maximum traction (20 kmh max).**

Correct HOI Tyre Pressure for Australian Trucks with 11R22.5 tyres ONLY 0817

STEER TYRE PRESSURES			
AXLE LOAD	HIGHWAY	GRAVEL	MAX TRACTION
5T	100	75PSI	40PSI
5.5T	110	75PSI	45PSI
6T	120	80PSI	50PSI
6.5T	NEED LARGER TYRE		
DRIVE AND/OR TRAILER - RECOMMENDATION PRESSURES			
DRIVE & TRAILER	DUAL TYRES	DUAL TYRES	DUAL TYRES
9.0 T	99 psi	67 psi	37 psi
8.5 T	94 psi	63 psi	35 psi
8.25 T	92 psi	60 psi	30 psi
7.5 T	81 psi	58 psi	30 psi
7.0 T	74 psi	53 psi	30 psi
6.5 T	68 psi	48 psi	30 psi
6 T	63 psi	44 psi	30 psi
5.5 T	56 psi	40 psi	30 psi
5 T	51 psi	36 psi	30 psi
4.5 T	44 psi	32 psi	27 psi
4 T	38 psi	30 psi	27 psi
3.5 T	32 psi	27 psi	27 psi
3 T	30 psi	27 psi	27 psi
2.5 T	30 psi	27 psi	25 psi
2 T	30 psi	27 psi	25 psi
AXLE LOAD	PSI	PSI	PSI

This chart used information from Michelin, Bridgestone, Firestone, Goodyear and the USA Tire and Rim Handbook. Safe truck operation is in the drivers' hands. This information is the best available and should be used as a guide. **Correct pressures are shown for highway use (100 kmh), for gravel road use (80 kmh), and for maximum traction (20 kmh max)**

Trouble shooting

AIR CTI aims to provide a trouble free system. We are always available to assist you with any concerns and guarantee our system with correct maintenance. Check for air leaks once per week with soapy water ie. while washing the truck.

AIR CTI DASH COMPONENTS

1. Leaks or puncture occurs & controller display will be inflating at regular intervals with warning beep.
2. Any leaks should be fixed directly, or reported to the maintenance department.

INF' = INFLATION

If this is displayed on display controller, and the reading is still low, no air is getting into the system.

1. Check the air supply, then check all taps (including the PPV tap) are on. Look for kinked air hoses.
2. Ensure truck air pressure is higher than the PPV valve setting: above 90 psi (6.5 bar)
3. Check the inflate solenoid. If it is warm, it's probably energized.
4. Remove air line from the tyre side of the inflate solenoid to check for air flow. If no air flow, either the main PPV tap is closed, no air supply in reservoir or solenoid is stuck 'closed'.
5. If solenoid is stuck closed (because it's dirty) disassemble and clean.
6. If "INF' comes on repeatedly, check for leaks or puncture.
7. A dirty exhaust solenoid that is leaking air, can also cause "INF' to come on repeatedly.
8. Check the exhaust filter on the Pneumatic Isolator is not leaking air. Clean the solenoids if leaking.

'DEF' = DEFLATE

1. Sometimes the 'DEF' = Deflate will appear on the controller display, but it won't deflate or is slower to deflate.
2. Check that air is exhausting. Air is coming out of the exhaust tube on the isolator.
3. Has someone left the Schrader valves in the tyre valve?
4. Filters are now installed between the isolator and the exhaust solenoids and in each wheel tap fitting to help fight poor tyre changing practices.
5. These filters can clog up if tyres are fitted with dirt in them and/or dust left inside.

NEW TYRES HAVE BEEN FITTED. HAS THE SHRADER TYRE VALVE INSERT BEEN LEFT IN THE TYRE VALVE?

This valve insert must be removed.

Sometimes tyre hoses are over tightened, and sometimes tyre valves are misshapen and the tyre valve is blocked off.

TO TEST FOR GOOD AIR FLOW FROM TYRES:

1. Turn off all wheel taps, and the main inflate tap.
2. Then disconnect the quick connect (QC) (or nut and tail) tyre hose from one side of the rotator.
3. Turn on this tap and drain the air. Next turn on the other tap to allow rapid air loss from the opposite side, then test the other side for adequate flow of air.
4. No adequate air flow?
5. Either the Schrader valve has been left in, or the filter is blocked
6. Repeat this process on all other tyres. Schrader valves must be removed.

NOTE

Failure to remove the Schrader valves will cause problems, from control problems to potentially severe tyre wear and/or tyre blow outs. **Schrader valves must be removed.**

Trouble shooting CONTINUED

AIR ROTATORS

AIR Rotators are the best and most advanced technology available, and specifically designed and manufactured by AIR CTI.

1. **Dirt = biggest enemy.** Several layers of dirt protection are built in along with large bearings, and specialized materials. Dirt when blasted with thousands of pounds of pressure from a high pressure hose will damage seals and bearing.
2. Dirt left in tyres when they are fitted will significantly shorten seal life. Clean inside of tyres.
3. Weekly, checks for free rotation of the rotator. Rotator should rotate smoothly with limited lateral movement
4. Ensure the rotator is firmly attached. The attachment bolts should have a thread locker Locktite applied when assembling. Routine maintenance eliminates problems occurring.

NOTE

Most Rotator wear is caused by dirt left in tyres. Ensure the inside of the tyres are wiped clean. Dirt will exhaust out through the rotator and damage the seal.

TYRE HOSES

Sometimes tyre hoses leak slightly at the barb end after an extensive period of time when in use.

1. Simply tighten the crimp clamp a little more by gently squeezing the ears together with side cutters which should immediately cure this.
2. Crimp clamps are available from bearing or industrial supply firms, if you need a new one. A light grinding, or hack saw will cut through an ear making it possible to remove this unit.

QUICK CONNECTS (PREMIUM SYSTEMS) = EASE OF TYRE CHANGING

1. They may need wiping down, or blowing off to clean dirt out, once in a while.
2. Always push button in and hold when installing or removing to stop locking part cutting the O ring. A little WD40 lube is wise. Replace O ring if it leaks

Please contact AIR CTI with any queries, if required.

Business hours P +61 (0) 3 5127 6128

Tech Support (24/7) P 0427 004 072

PART NUMBER	PART DETAILS	
11604	Snizentite Short Short	
11605	Snizentite Short	
11606	Snizentite Long	
14001	New Rotator - Brass Armature	
10452	Colder Male	
11025	Colder Female	
11022	Nut & Tail	
11020	Push Loc Fitting	
10055	RO HDC Tap	

PART NUMBER	PART DETAILS	
11492	Tyre Hose Straight	
11493	Tyre Hose J	
11494	Tyre Hose 90Deg	
15540	Valve Seals	
11574	Colder Seals	
11027	Valve Extender 75mm	
15116	Solenoid Black	
11495	Filter Bowl	
11496	Filter - Complete	

PART NUMBER	PART DETAILS	
11497	25 Micron Filter	
11018	Crimp Clamp Tyre Hose S/S 11.9mm	
10350	178-5/8 Mnt Meritor Bracket	
15070	Hose - Push Loc (1.2m)	
11046	Swifty Connect (Male)	
11047	Swifty Connect (Female)	
90073	Drive Grabbit Kit	
90074	4X4 with Nut and Tails Grabbit Kit	
90076	Drive with External Steer Grabbit Kit	
90077	Drive with Internal Steer Grabbit Kit	

AVAILABLE AIR CTI SYSTEMS

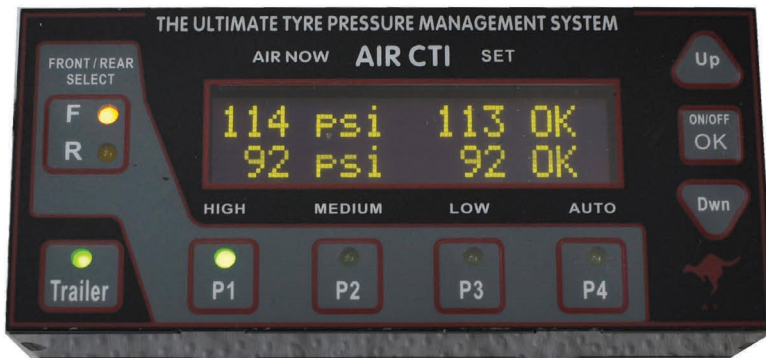


TRADESMAN HYWAY SYSTEM CONTROLLER DISPLAY

Little bigger than a credit card. A inflate/deflate filtered system that operates DRIVE ONLY, with HYWAY Display Controller. No isolator included.

SIZE

95mm Length
35mm Width
15mm Depth



PREMIUM CTI SYSTEM CONTROLLER DISPLAY

A inflate/deflate filtered system that runs to an isolator. Suitable for Drive & Steer with Premium Controller Display.

SIZE

105mm Length
50mm Width
25mm Depth



TRI ZONE CTI SYSTEM CONTROLLER DISPLAY

A inflate/deflate filtered system that runs to an isolator. Suitable for Drive, Steer & Trailer operations. Used with Tri-Zone Controller Display.

SIZE

155mm Length
45mm Width
30mm Depth



AIRCTI.COM