

Ausco's Premium Pump Pack

For use with Ausco's LC wet brakes for Toyota Land Cruisers



- **Safe to Operate**
- **Less Cost to Own**
- **Simple to Install and Maintain**

When it comes to brakes, failure is not an option.

Introduction

Ausco builds products designed to handle the requirements of each specific application. Our Premium Pump Pack is no exception. This system has been tested extensively for two years and is sold to mines in seven countries, on four continents. We are convinced that it is right product for our customers. This product has benefits that include:

- Safety - Safer towing options
- Lower Cost of Ownership – Longer life and lower maintenance than competition, which pays for itself in about one year, while protecting your brakes from damage caused by tampering
- Simple to Install and Service – Our Premium Pump Pack's slim design makes it possible to install behind the seat with all wiring and plumbing already in place, while the on-board diagnostics make troubleshooting a snap.



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Safer to Operate – Tow Mode

Brakes are the #1 safety concern on vehicles. Any time an operator has to leave the vehicle to release the brakes puts them at risk. Ausco has refused such designs with major OEM customers, like Caterpillar and Atlas Copco. There is too much liability. Our Tow Mode keeps the end-user safe.

- The Ausco system uses a simple Tow Mode button on the dash panel to notify the PLC that the engine is not running. The system goes into Tow Mode and releases the parking brake without having the engine running. The operator can engage the parking/emergency brake with the dash button as usual, or by opening the door (if the optional door sensor is installed). The driver releases the brake from his seat; all braking functions are preserved.
- Tow Mode allows the operator to release the brake for towing without “hot wiring” the unit or using a hand pump. The operator stays safely behind the steering wheel. He won’t be standing outside the cab, or in front of the vehicle. If all else fails, there is a quick connect inside Ausco’s Premium Pump Pack which would allow for a hand pump to manually release the brakes; again, from the safety of the vehicle’s cab.
- While in Tow Mode, all brake functions are still operable and available to the driver for safe towing. When the engine starts back up, the system automatically returns to normal mode operation. No one has to remember to remove jumpers or the hand pump.



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Less Cost – Low Maintenance

Spend your time mining, not fixing pump kits

- Ausco estimates that our pump kit is nearly twice the cost of competitor's product, which has an average lifespan of twelve months. If you consider that our pump packs have been in the field for over three years without a single failure, you could expect a one-year payback on Ausco's pump kit.
- In one instance, our system had seen nearly 7,000 hours of use, and still performs without issue. Considering Land Cruisers have an average life-expectancy of three years, your customers will save a significant amount over the life of each vehicle. We anticipate that our pump packs will outlive the vehicles they are mounted to.
- All components used within our Premium Pump Pack are "Harsh Duty." On top of that, they are protected within a sealed 14 gauge stainless steel enclosure – corrosion resistant and built to take the punishment of mine use. All connectors are marine grade and impervious to the environment.



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Less Cost – Tamper Resistant

Protect your brakes against tampering

- Competitive systems use pressure switches to set the release pressure of the unit. The problem is that the system is not protected against tampering. We have seen units returned from the field with the pressure switch setting altered.
- If the pump kit does not reach adequate pressure due to altered settings, the brakes will drag, overheat, and fail. Now, you have a very expensive repair bill, because not only are you fixing the pump kit, but you are also fixing the brakes, which can run into thousands of dollars per incident. The first time that this happens, the brake repair cost will exceed the price of the Premium Pump Pack.
- The Ausco pump kit avoids this problem altogether. Since it uses a PLC controller, there is no pressure switch to alter. To change pressure would require that the PLC be reprogrammed, something that a technician in the field cannot do. Thus, the Ausco system completely avoids this failure, and the costs that are associated with it.



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Simpler to Install & Maintain

What good is technology and “bullet-proofing” if the system isn’t user friendly? Ausco’s engineers developed our system to be plug-and-play and simple to understand.

Simple to install:

- Our system comes preassembled, fully tested, and ready to install with a full wiring package. We implemented simple, logical controls with clear and concise labeling.
- Ausco’s pump kit utilizes a PLC controller wired to the ignition circuit, so the engine off position turns on the brakes. Options to connect engine oil pressure and door switch to the unit are also built into the unit. With the PLC controller, the unit is very easy to adapt to other safety systems, such as PDS (Pedestrian Detection Systems).
- Whether you have a two-door or four-door truck, our pump’s stainless steel enclosure is designed to fit in spaces that other pump packs cannot. Being mounted within the cab will keep our system protected from physical damage and the debilitating effects of harsh winter weather.

Simple Troubleshooting:

- Because Ausco uses an intelligent PLC controller, on-board diagnostics are possible. This speeds your time to figure out what might be wrong, so that you can quickly get it fixed.



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Simple System Operation

Dash Panel Alerts Identification

Green Light - Solid	System ready for operation
Green Light - Flashing	Tow Mode is active
Red Light - Solid	Vehicle is in park. System is not pressurized.

Dash Panel Functions

Release The Park Brake:	1. Twist to release the PARK BRAKE button.
	2. The RED light will flash.
	3. The GREEN light will be on steady when the brake is released.
Set The Park Brake:	1. Push the PARK BRAKE button in.
	2. The RED light will be on steady, indicating that the brakes are engaged.
Engage Tow Mode:	1. Push the PARK BRAKE button in.
	2. Press the TOW MODE button. Do not hold it down. The GREEN light will flash while the RED light stays on.
	3. Twist to release the PARK BRAKE button. The RED light will flash. Then the RED light will turn off and the GREEN light will continue to flash.



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Certified for your market

Ausco is committed to meeting the requirements of each market we sell into. We have met the criteria for the following governmental and mining market regulations:

✓ Canada

- CAN/CSA-M424.3-M90 (Mining standard self-certified by Ausco)
- Vale Mining Standard

✓ South Africa/Europe

- ECE R13.08 (On road standard self-certified by Ausco)
- SANS 1589:2012 (Mining standard certified by SAVTA)

✓ Australia

- ADR 35 (On road standard self-certified by Ausco)
- MDG 15 (Mobile and transportable equipment for use in mines standard self-certified by Ausco)
- MDG 39 (Underground coal mining standard self-certified by Ausco)
- Mt. Isa Mines (Mt Isa mining standard self-certified by Ausco)



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Conclusions

Ausco is proud to offer customers our LC brake system with the Ausco Premium Pump Pack. It is simply the best brake product on the market for the Toyota Land Cruiser. It provides the customer with:

- Safety
 - Will reliably do its job every time – works when it is needed
 - Will allow a vehicle to be moved immediately, while keeping the operator in his seat with all braking functions preserved and then automatically returning to normal operation mode when the vehicle is fixed – operator is safe during a tow
- Lower Cost
 - Will protect the electric components during operation – no more failing pump kits
 - Will eliminate pressure setting tampering - protects your brakes against damage
- Simpler to Install and Maintain
 - Will be easy to install on any Land Cruiser – plug and play with no need to figure out wiring or mounting/installation problems
 - Will be easier to troubleshoot with on-board diagnostics – faster and easier to fix



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