

NZH

TRANSPORT HYDRAULIC SOLUTIONS

DELTA

HOISTS

WARRANTY INSTRUCTIONS
INSTALLATION & MAINTENANCE



REMEMBER

NZH offer a full consultation service for all your hydraulic requirements.

NZH offer you, the valued customer, our knowledge and backup for competent after sales service.

“We’re there when you need us”

Please note it is the installer’s responsibility to ensure that all the products supplied are of the correct type and specification for the application, to read all fitting instructions, and carry out all work in a tradesmans like manner. Failure to comply with these instructions could void your right to equipment warranty as detailed in this booklet. NZH products used outside the manufacturers recommended specification will void right for warranty.

Thank you for purchasing our equipment, we are confident given the correct care, it will provide many years of trouble free service.





DELTA HOIST WARRANTY

GENERAL CONDITIONS

NZH Ltd (hereinafter called NZH) guarantees new DELTA products supplied by them to be free from manufacturing defects. NZH undertakes to repair or replace (at their discretion) any part which is or becomes faulty as a direct result of a manufacturing defect within the warranty period, provided that the faulty product is presented for repair to NZH. The customer shall bear any labour costs, freight charges and other cost associated with the return of allegedly defective goods to NZH. Any repairs required to rectify warranty defects are to be carried out by NZH or authorised service agents. Only genuine DELTA replacement parts are to be used. No responsibility is accepted for the suitability or otherwise of the machinery, truck, chassis, transmission, or other equipment or device which the product might be mounted on or fitted to.

APPLICABILITY

This warranty applies to equipment manufactured by DELTA and any accessories supplied by, fitted to the equipment by DELTA. Warranty products other than those manufactured by DELTA will be covered by that manufacturer's warranty policy.

WARRANTY PERIOD

The period of this warranty is for a 24 month period from the date of invoicing by NZH.

This warranty is predicated upon the normal utilisation rate indicated by DELTA and NZH on its specification sheets. NZH reserves the right to reduce the warranty period when a higher utilisation rate occurs or when the product is being used against recommended manufacturers applications.

CANCELLATION OF WARRANTY

This warranty is cancelled in full under the following conditions:

- Modifications unauthorised by NZH or not carried out by authorised NZH service agent.
- Repairs not carried out by authorised NZH agent or use other than genuine NZH/DELTA replacement parts.
- Pressure settings found to be in excess of DELTA/NZH specifications.
- Equipment found to be modified without NZH's approval.
- Equipment found to have been used in an application outside the manufacturers application guidelines.

Note: This warranty does not apply to any faults arising from any cause whatever other than manufacturing defects.





DELTA INSTALLATION INSTRUCTIONS

Delta cylinders are designed and sized for loads along the longitudinal axis, ie “no side load to be applied”. For off road, and spreading operations, a stabiliser should be installed. **NON COMPLIANCE MAY VOID WARRANTY.**

- 1 Ensure the bottom mounts are greased.
- 2 Ensure the top trunnion mount is greased. **NB:** Caution not to overgrease.
- 3 Ensure both the hose connection and the hoist port is clean before connecting the hydraulic line.

The cylinder must always be handled in such a way so as to avoid damage.

Mechanical Mounting of Cylinder:

- The cylinder must clear the tray during all points of travel.
- All mount pin centerlines must be parallel to the tray pivot centerline, within 0.5mm over the width of the trunnion.
- For top mount type cylinders, the trunnion mount centerline and the top pivot pin centerline must be parallel within 0.25mm to each other.
- For suspension tube type cylinders, the trunnion mount centerline and the lifting bracket pin centerline must be parallel within 0.25mm to each other.
- For suspension tube type cylinders, we recommend dimensions ‘A’ and “B” should be within 2mm of each other for adequate operation (refer to Figure 1). This will require the hoist to be tilting towards the tray in applications where the tray pivot is low.
- The tray pivot must be square to the truck chassis in *both* directions.
- The cylinder must be located centrally on the truck chassis.
- Use high tensile bolts of the maximum size practicable for mounting holes. Do *not* drill out mounts to suit oversize bolts.
- Care must be taken if the hardchromed surface of the stages is exposed, as any damage to this surface will cause cylinder leakage.
- All hose connections to the cylinder must have enough length to allow for full cylinder movement and must not rub on any equipment during operation.
- The final stage must be extended by 20mm when the body is fully lowered. This prevents the body from riding on the hoist, which may cause damage.
- The primary limit on hoist life in truck applications is the wear caused by vibration of the hoist as the vehicle travels along the road. The cylinder stages are hardchromed, which extends life over a non-hardchrome hoist by approximately 5 times. To attain full life, it is recommended that body locks are fitted.

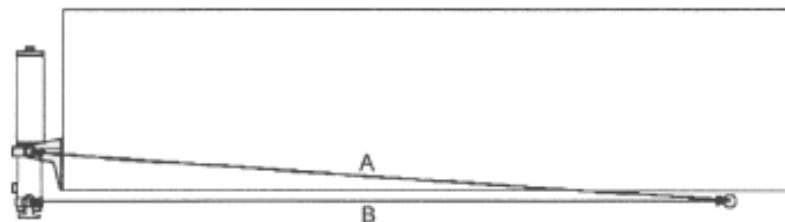


Figure 1: Suspension tube type cylinder mounting (dimensions to pin centerlines)



Hydraulic system Connection to Cylinder:

- Basic hydraulic fitting skills are required for the fitting of the cylinder into the system.
- The cylinder must be assembled into the system in a dust free environment, to minimise contamination entering the ports.
- Oil cleanliness is of the utmost importance. Do *not* remove the port plug from the hoist until immediately prior to connection to the system. All elements of the system (hoses and tanks included) must be flushed with clean hydraulic fluid prior to connection to the other elements of the system. In addition the oil used to fill the system must be clean.
- All hydraulic fittings must be free from burrs and have smoothly finished threads. (Note that when screwing into aluminium some fittings and valves may cause a fine slither of aluminium 'wire' to enter into the system, so action must be taken to avoid contamination of the system in this way).

WARNINGS:

- Impact loads on the cylinder may cause damage to the cylinder.
- The cylinder must be protected from physical damage.
- The cylinder hardchrome surfaces must be protected from damage (note that some chemicals can damage the hardchrome surface eg caustic).
- Do not weld directly on the cylinder without first seeking advice from the manufacturer.
- Do not weld near the cylinder so that the welding current passes through the cylinder as this will damage the cylinder internally.
- The hose sizes and pressure ratings must be correct for the application.





DELTA OPERATING AND SAFETY INSTRUCTIONS

Before starting a tipping operation ensure that the tailgate is unlocked. Failure to do so will overload the hoist.

Tip with the vehicle on solid ground to eliminate body twist, which may damage the cylinder.

To avoid stress on the cylinder and body, do not drive the vehicle with tipping body raised.

- 1 Set engine at idle speed.
- 2 Check cylinder control lever or switch is in "HOLD" position.
- 3 Engage PTO to manufacturers specifications.

DO NOT ENGAGE PTO IF ENGINE SPEED IS ABOVE IDLE.

- 4 Move control lever or switch to "RAISE" position.
- 5 Set engine speed to 1000/1500 RPM Max. Do not exceed the recommended engine speed as damage to PTO and pump may occur. Additional pressure is not achieved by increasing engine revolutions.
- 6 When cylinder is fully extended, reduce engine revolutions back to idle. Do not "rev-up" the engine when hoist is fully extended.
- 7 If the tipping body is to be held at any one position, place control lever or switch in "HOLD" position and disengage PTO.
- 8 To lower tipping body, place control lever or switch into "LOWER" position. If graduated or slow lower fitted, also use to lower the body.
- 9 With tipping body lowered, ensure that PTO is disengaged and control lever or switch is in "HOLD" position. This prevents oil back feed to tank.
- 10 Secure tailgate.





DELTA MAINTENANCE INSTRUCTIONS

Before checking or working under the body or tray, ensure that the vehicle is positioned on a hard surface and the vehicle and tray are correctly blocked and safely secured.

- 1 At each normal vehicle service, or every 10,000 KM, whichever occur first, raise the tray body and clean away any accumulated dirt or debris.
- 2 Grease top clevis pivot pin and each of the foot mount pivots (2).
NB Caution not to overgrease.
- 3 Check tension and condition of cylinder foot and clevis mounting bolts and replace or tighten as necessary.
- 4 Check the cylinder, PTO/pump, valve, hose and fittings for oil leaks.
- 5 Check all hoses for evidence of collapse or “kinking”. Repair or replace IMMEDIATELY.
- 6 Clean away any build up from around the oil tank filler breather cap before checking the oil level. Top oil if required. Clean breather filler before replacing. Refer oil specifications contained in this manual.
- 7 Replace system filter (if fitted). If filter is not fitted, check the oil for contamination and replace as required.

NOTE: AFTER COMPONENT FAILURE OR OIL CONTAMINATION, FLUSH OUT THE ENTIRE HYDRAULIC SYSTEM AND REFILL WITH SPECIFIED OIL.





HYDRAULIC OIL RECOMMENDATIONS

High quality oil should always be maintained in the hydraulic operation system to ensure maximum life for your equipment.

Circuit operating temperatures should never exceed 50°C (130°F). If the oil temperature does exceed these limits, it is recommended that it be replaced.

GEAR PUMPS – RECOMMENDED VISCOSITY IS 68cSt AT 40°C.

PISTON PUMPS – RECOMMENDED VISCOSITY IS 46cSt AT 40°C.

HYDRAULIC FILTRATION

Always ensure the hydraulic system has been cleaned throughout before use (ie tank, hoses).

To achieve maximum life of hydraulic components, it is recommended that a high quality filter is fitted to either the return line or the pressure lines only.

NOTE: THIS INFORMATION IS SUPPLIED AS AN AID TO PROLONG THE LIFE OF THE HYDRAULIC COMPONENTS IN USE.



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