



a division of GLBH Group Manufacturing Ltd.

Operating Manual

DGC80T Draft Gear Compressor

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Important Safety Information

To ensure the safe use of this equipment it is the responsibility of the owner and operator that any individual operating this equipment or working in the vicinity of this equipment is deemed to be competent, defined by the region's Safety Codes and Regulations, an example is as follows:

Competent: in relation to a person, means adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

In order for the equipment to perform as designed and safely, proper maintenance must be performed periodically.

Improper operation, maintenance, lubrication and repair of this equipment may result in serious injury or death.

Hydra Tech tools are specially designed pieces of equipment and as such should NOT be modified in any way.

Hydra-Tech International is not capable of foreseeing every possible circumstance that may involve a potential hazard. As such, the warnings within this document and labeled on the equipment are not all-inclusive. It is the owner and operator's responsibility to first ensure that any use of this equipment not specifically recommended by Hydra-Tech International, be it operation, maintenance, lubrication or repairs, be deemed safe for the equipment operator, all persons present, and prevent damages to the equipment.

Information, images, and specifications contained within this document are based on information available at the time it was written or last revised. The contents of this document may change over time and the latest version of this document should be obtained by the owner and/or operator prior to use of the equipment.

For further information or suggestions regarding the safe operation, maintenance and repair of the Draft Gear Compressor please contact Hydra-Tech International using the following contact information:

#110, 5842 – 86th Avenue SE
Calgary, Alberta, Canada T2C 4L7
Telephone (403) – 720 – 7740
Website: www.hydra-tech.net

Safety is everybody's business!

- Wear proper personal protective equipment when operating hydraulic equipment.
- When the pump is running, oil is under high pressure.
- Do not use gasoline powered pumps in an explosive atmosphere.
- Operate and refuel in a well ventilated area only.
- Avoid inhaling exhaust gasses.
- Always check fluid levels prior to use.
- Always check pump for damage prior to use.
- Never attempt to connect / disconnect hoses while pump is running.

DGC80T – Draft Gear Compressor

The DGC80T is designed to be used for the safe removal of a railcar draft gear of E, F, or rotary type couplers.



Maintenance

RAM

1. Before each use, visually inspect the ram for any obvious damage such as cracks, oil leaks, or damaged hoses / couplers. The ram should be extended and checked for damage / wear.
2. Annually the ram should be load tested to its full 80-ton (160,000 lbs) capacity through the entire stroke.
3. Every two years the ram should be fully disassembled, inspected, re-sealed and tested.

PUMP

1. Before each use the condition and level of the oil should be checked. Any “milky” or contaminated oil must be replaced.
2. Every 3 months a pressure gauge should be connected to the pump outlet to confirm it is building full pressure (10,000 PSI [689 bar])
3. The oil should be changed yearly.

Operation



A visual inspection of the tool should be done prior to each use checking for any damage or missing parts; particular attention should be given to the condition of the hydraulic hoses and connectors.

This procedure can be used when the retaining pin and coupler have been removed. The yoke support plates will have been removed before the draft gear can be dropped.

1. Support the draft gear assembly, by positioning the draft gear table underneath it.
2. Visually inspect draft gear compressor, hose, and hydraulic quick disconnect for any damage and be sure the ram is fully retracted. Even though the ram has a spring return, force may have to be applied to the ram, with the hydraulic pump control in the released position, to fully retract it.
3. Insert the proper draft gear cradle ie: “E”, “F”, OR “Rotary” into the pocket.
4. Place the draft gear compressor onto the cradle fully into the pocket, saddle first against the follower plate. The back end of the draft gear compressor has a milled step intended to interface with the reaction keys. The cradles are intended to bring the draft gear compressor up to the centerline of the follower block. If the cradles do not bring the ram up high enough, simply place some shim material under the base of the cradle.
5. Insert the appropriate reaction key ie: “E”, “F”, or “Rotary”.
6. When using the “F” style reaction key, the draft gear compressor must be at the proper elevation, and centered, to allow the ram to move ahead into the concave of the follower block. This will ensure there is enough clearance for the reaction key to be inserted.
7. If there is more than a 3/8” gap between the reaction key, draft gear compressor, and follower plate stack up, use shims to take up the gap before attempting the compression process.
8. If cradles are not being used, hold the ram and reaction key in alignment with the draft gear, use the hydraulic pump to extend the ram and contact the follower plate. Once the ram contacts the follower plate use only a minimal amount of pressure to support the components in position. Using the draft gear compressor cradles eliminates this step in most cases.



Caution: Care must be taken not to pinch fingers when getting the components set up. Use only enough pressure to support the components. Do not start compressing the gear until personnel are clear.

9. With the draft gear compressor supported and in position, do a visual inspection to confirm all components are square and in alignment with the draft gear.
10. Standing well back, compress the draft gear until it releases from the car.
11. Use the draft gear table to lower the draft gear assembly. Watch that the hose does not catch as the draft gear lowers. As soon as the draft gear clears the car slowly release the draft gear compressor to remove all stored energy.



Caution: The ram and hose are under pressure as the draft gear is being lowered to clear the car – DO NOT TOUCH THE HOSE AND STAND WELL BACK. There is also a large amount of energy stored in the draft gear – USE CAUTION.

Service Centres

Please contact Hydra-Tech International for current information on the closest service center to you. Contact information for Hydra-Tech International follows:

#110, 5842 – 86th Avenue SE, Calgary, Alberta, Canada T2C 4L7

Telephone (403) – 720 – 7740

Website: www.hydra-tech.net

STANDARD WARRANTY

1. **WARRANTY POLICY.** Subject to those terms and conditions contained herein, Seller warrants that all Seller products conform in all material respects to the description identified in the quotation, proposal or offer made by Seller to Buyer for the sale of its products (collectively, "**Quotation**") and will be free from defects in material and workmanship for two (2) years from the date of shipment to Buyer (except for spare parts which Seller warrants for one (1) year from the date of shipment to Buyer). Products manufactured by manufacturers other than Seller and/or its affiliates ("**Other Manufacturer's Products**") supplied by Seller to Buyer are not warranted by Seller. Other Manufacturer's Products may be warranted separately by their respective manufacturers and Seller shall, to the extent possible, assign to Buyer whatever rights Seller may obtain under any such warranties.

THE FOREGOING REPRESENTS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SELLER TO BUYER AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW (INCLUDING BY STATUTE) OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

2. **WARRANTY REMEDIES.** Buyer's sole and exclusive remedy for Seller's breach of the foregoing warranties during the warranty period shall be, at Seller's sole discretion, the repair and/or replacement of any defective products (or component parts thereof) pursuant to the terms of and conditioned upon Buyer's compliance with the procedure identified in Section 5 hereof.
3. **LIMITATION OF DAMAGES. SELLER SHALL HAVE NO LIABILITY TO BUYER OR ANY END USER OF PRODUCTS OR SERVICES WITH RESPECT TO THE SALE OF PRODUCTS OR PROVISION OF SERVICES UNDER THE QUOTATION FOR LOST PROFITS OR FOR SPECIAL, CONSEQUENTIAL, EXEMPLARY, OR INCIDENTAL DAMAGES OF ANY KIND WHETHER ARISING IN CONTRACT, TORT, PRODUCT LIABILITY, STRICT LIABILITY OR OTHERWISE, EVEN IF SELLER WAS ADVISED OF THE POSSIBILITY OF SUCH LOST PROFITS OR DAMAGES. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY DAMAGES WHATSOEVER IN EXCESS OF THE TOTAL PRICE PAID BY BUYER FOR PRODUCTS AND/OR SERVICES REFERENCED IN THE QUOTATION.**
4. **INAPPLICABILITY OF, AND VOIDING OF THE WARRANTY.** This Standard Warranty does not cover defects in Seller products which are not defects in material and workmanship and may be attributed to other causes including but not limited to failure to operate and/or maintain Seller products in accordance with the applicable Seller installation and/or operator's manuals, owner's manuals, maintenance manuals, manufacturer's recommendations, and any other manuals, guidelines or recommendations of Seller concerning the maintenance and operation of Seller products that may be communicated to Buyer from time to time, side-pulling of load, shock loading, excessive jogging, eccentric loading, overloading, accidental occurrence, improper repair, improper handling or storage of products, chemical exposure and/or abnormal operating conditions not identified to and expressly and specifically accepted by Seller in writing prior to Seller's issuance of a Quotation, or any other cause that in Seller's sole discretion is not attributable to defects in material and workmanship. Failure of products to meet published performance specifications due to abnormal operating conditions beyond Seller's knowledge or control shall not be considered defects in either workmanship and/or material.

Modification of Seller products and/or incorporation of Other Manufacturer's Products into Seller products by individuals and/or organizations other than Seller shall void this Standard Warranty.

Buyer's failure to pay in full when due for the products and services provided for in a Quotation shall void this Standard Warranty.

5. **WARRANTY PROCEDURE.** To obtain warranty remedies pursuant to this Standard Warranty, Buyer must strictly adhere to the following procedure. Buyer's failure to comply with the terms of this procedure shall void this Standard Warranty.
- (a) Buyer shall, within seventy-two (72) hours of any claimed non-conformance or defect in Seller products, notify Seller's Warranty Administrator in writing of the alleged non-conformance or defect.
 - (b) Seller shall, within a reasonable time, advise Buyer of its intention to initially accept or deny the warranty claim pursuant to the terms of this Standard Warranty. If Seller elects to initially accept the warranty claim, it shall advise Buyer of its intention to replace, repair, or otherwise further inspect the allegedly nonconforming or defective products (or component parts thereof) ("**Initial Acceptance**").
 - (i) **Replacement of allegedly nonconforming or defective products.** Should Seller provide Initial Acceptance of Buyer's warranty claim and elect to replace the allegedly nonconforming or defective products (or component parts thereof), or should Seller elect to provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently elect to replace the allegedly nonconforming or defective products (or component parts thereof), Seller shall within a reasonable time, ship new, comparable, replacement products to Buyer F.C.A. Seller's plant, warehouse or dock, as defined by Incoterms 2010, via the lowest cost method available.
 - (ii) **Repair of allegedly nonconforming or defective products.** Should Seller provide Initial Acceptance of Buyer's warranty claim and elect to repair and/or permit the repair of the allegedly nonconforming or defective products (or component parts thereof) by approved third parties, or should Seller elect to provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently elects to repair the allegedly nonconforming or defective products, Seller shall, unless otherwise agreed in writing by the Warranty Administrator, pay only those direct labor costs incurred to effectuate the repair and the cost of Seller replacement products consumed during said repair provided that the costs for all products and/or services are approved in advance in writing by Seller's Warranty Administrator.
 - (iii) **Inspection of allegedly nonconforming or defective products.** Should Seller provide Initial Acceptance of Buyer's warranty claim through notification to Buyer that Seller elects to inspect the allegedly nonconforming or defective products (or component parts thereof) and then subsequently determine that the alleged nonconformity or defect is not covered under this Standard Warranty, Seller shall bill Buyer, and Buyer shall pay Seller any and all costs associated

- (iv) with the performance of inspection of allegedly nonconforming or defective products.

WAIVER. BUYER HEREBY WAIVES ANY CLAIM THAT THE EXCLUSIONS OR LIMITATIONS IDENTIFIED HEREIN DEPRIVE IT OF AN ADEQUATE REMEDY. BUYER SHALL BE ENTITLED TO NO OTHER REMEDY OTHER THAN THOSE IDENTIFIED IN SECTION 2 HEREOF WITH RESPECT TO THE PROVISION OF PRODUCTS AND/OR SERVICES BY SELLER REGARDLESS OF THE FORM OF CLAIM OR CAUSE OF ACTION, WHETHER BASED IN CONTRACT, TORT INCLUDING NEGLIGENCE, STRICT LIABILITY OR OTHERWISE.