



OPERATION, SERVICE AND PARTS OF HYDRAULIC KIT

SAFETY PRECAUTIONS

If any operating, service or parts problems are encountered, please call G&B Specialties, Inc. for technical assistance.



- Failure to heed to any of the following warnings could result in severe bodily injury and/or equipment damage.
- Read and understand this manual completely before attempting operation of the railgear equipped vehicle.
- Operating instructions provided below only address the Rafna railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Railway company rules governing rail travel must be observed at all times.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- Ensure all body parts and loose clothing are clear of any moving parts of the railgear. Be aware of all pinch points.
- Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.



OPERATION OF HYDRAULIC KIT

With the hydraulic kit installed on this vehicle, it may be operated as normal.

Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.

Refer to the Railgear Kit Operation, Service and Parts manual for information on the mechanical operation, service and parts of the railgear.

Location And Operation Of The Railgear Hydraulic System Controls:

1. The PTO must be engaged following the manufacturer's recommendations. At this point the PTO should come on but the railgear should not move until the lever is actuated.
2. The direction of the front or rear railgear movement is selected by actuating the lever on the respective railgear operating valve located near the railgear. At this point the railgear should move in the selected direction.
3. To stop the movement of the railgear, bring the lever on the respective railgear operating valve to the center position.
4. Disengage the PTO following the manufacturer's recommendation.



SERVICE OF HYDRAULIC KIT

The hydraulic kit must be serviced regularly to avoid damage to the equipment. Table 1 below provides the Recommended Service Schedule and Table 2 provides Standard Fastener Torque Values.

The recommended oil for the railgear hydraulic system is ESSO Univis Extra or equivalent. In extremely cold weather areas/seasons, ESSO Univis J13 or equivalent may be used.

Table 1: Recommended Service Schedule

Service Required	Initial 100 km (62 Miles) of road and/or rail use	Daily	Weekly	Monthly
Inspect hydraulic kit fasteners (re-torque if required)		✓	✓	✓
Inspect all hydraulic fittings and hoses for leaks and wear.		✓	✓	✓

Table 2: Standard Fastener Torque Values

Fastener Size	Fastener Torque Value (ft-lbs) Dry
1" UNC Gr. 8 Fasteners	250
3/4" UNC Gr. 8 Fasteners	175
5/8" UNC Gr. 8 Fasteners	150
1/2" UNC Gr. 8 Fasteners	100
3/8" UNC Gr. 8 Fasteners	40
1/4" UNC Gr. 8 Fasteners	12



HYDRAULIC SYSTEM RELIEF VALVE SETTING

The following procedure details how to adjust the railgear pressure relief valve settings. One relief valve is located on each operating valve and there may be one or more additional relief valves in the railgear hydraulic system. An adjustment of the relief valve settings should be carried out at installation and/or if ever there appears to be inadequate hydraulic pressure to operate the railgear.

1. Locate the hydraulic hose that supplies the front operating valve from the railgear hydraulic system pressure line and disconnect it at the front operating valve.
2. Release the pressure in the railgear hydraulic system. Install a combination test gauge (up to 3000 PSI) and shutoff valve between the disconnected hydraulic hose and the front operating valve. The pressure gauge will indicate the relief valve setting while the shutoff valve will enable a false load to be put on the hydraulic pump. Ensure that the shutoff valve is installed between the test gauge and front operating valve.
3. Engage the hydraulic pump.
4. Close the shutoff valve to enable the railgear hydraulic system relief valve to start releasing pressure. The pressure reading on the test gauge should indicate 2000 PSI. If this reading is incorrect, adjust the railgear hydraulic system relief valve accordingly.
5. Once the correct pressure on the railgear hydraulic system relief valve is obtained, open the shutoff valve.
6. Proceed to adjust each operating valve relief valve setting as follows:
 - a) Have an assistant watch the test gauge pressure reading while adjusting the relief valve settings.
 - b) Ensure the shutoff valve has been completely opened.
 - c) With the railgear fully raised in road position Select “UP” on the operating valve. Hold in this position until oil passes over the relief valve and a reading is taken on the test gauge.
 - d) The pressure should be 1800 PSI on the front and rear operating valves. Adjust the relief valve setting accordingly.
 - e) Proceed to adjust the second operating valve relief valve setting.
7. Release the pressure in the railgear hydraulic system and remove the test gauge and shutoff valve.
8. Reconnect and tighten all hydraulic hoses.



PARTS OF RAILGEAR KIT

