

Hydraulic Trak Jack

910192

Operating and Maintenance Manual



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910192

Record of Changes

Rev No.	Date	Description of Changes
Rev 1	9.2017	Initial Release
Rev 2	1.2019	Branding Update
Rev 3	10.2019	Add Service Parts List

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Section 1: Overview and Safety

Trak Jack Overview

Racine Railroad Products designs and manufactures equipment primarily for the repair and new construction of rail and railroad tie track maintenance.

The Trak Jack is one of the lightest hydraulic rail jacks in the market, our jack offers a 10-ton lifting capacity. The simple and efficient design is easy to use, yet durable enough to be used for years to come.

It's one piece forged base yields superior strength and stability. The Trak Jack features an integrated hand pump for compactness and ease of use.

construction of rail and railroad tie track maintenance.

Do not use this machine for other than its intended purpose.

Please read these instructions when using this tool, which can only be used for the specified purpose. This instruction manual should be kept throughout the life of the tool.

The operator of this tool should:

- Have access to this operation instruction.
- Read and understand this operation instruction.

Note: Information in this document is subject to change without notice.

Environmental Protection



Comply with relevant national waste disposal laws and regulations. Waste electronic devices cannot be treated as household waste.

Equipment, accessories, and packaging shall be recyclable.



Don't throw the discarded equipment in trash cans.

Safety Information

For safe installation and operation of this equipment, carefully read and understand the contents of this manual. Improper operation, handling, or maintenance can result in equipment damage and personal injury.

Only trained and authorized personnel should be allowed to operate this machine. In addition, all personnel at the worksite should be aware of the safety concerns and their individual responsibilities prior to working this machine.

Please read and comply with all the safety precautions in this manual **before** operating this machine. Your safety is at risk.

Safety Terms



DANGER indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury will occur.



WARNING indicates a hazardous operating procedure, practice, or condition. If the hazardous situation is not avoided death or serious injury could occur.



CAUTION indicates a potentially hazardous operating procedure, practice, or condition. If the hazardous situation is not moderate or minor injury could occur.

Machine Use and Safety Precautions



Failure to follow safety precautions when operating this equipment can result in serious injury or death to the operator or other persons in the area.
Observe the following precautions whenever you are operating, working on or near this equipment.

Do not use this machine for other than its intended purpose.

Do not make any modifications without authorization or written approval from Racine Railroad Products. Replace all Racine Railroad Products and OEM parts with genuine Racine Railroad Products and OEM parts. Using non-OEM parts may compromise the safety of the machine.

Do not wear loose clothing, jewelry, radio belts, etc., when operating, working on or near this equipment. They can be caught in moving parts and may result in severe injury.

Always wear appropriate personal protective clothing when operating this equipment: e.g., Orange safety vest, hard hat, safety glasses with side shields, hearing protection, steel-toed safety boots, leather gloves, dust respirator, etc.

Always lift heavy objects with the knees and legs, not the arms and back.

Always keep hands, arms, feet, head, clothing, etc., out of the operating area and away from all rotating or moving components when operating, working on or near this machine.

Always make sure that all guards, covers, belts, hoses and operating components are in good working order and that all controls are in the appropriate position before starting the engine.

Always make sure that all safety equipment installed properly and are in good working order. Do not operate the machine until unsafe conditions have been corrected.

Always operate in a well-ventilated area and make sure that the air filters, air filter covers, and muffler are in good condition.

Always keep the machine clean and free of debris. Operate the machine in a safe and responsible manner. Exercise caution when fueling, working on or near rotating or moving components, hot components, and fuel systems. Be aware of potential fire hazards and prevent sparks, exhaust, etc., from starting fires on the machine and/or work area.

Always comply with all instructions provided on any decals or placards installed on the machine and with any relevant amplifying information provided in this manual or other general operating procedures.

Section 2: Specifications and Installation

Specifications

Performance

Maximum Lift.....	8.9 in. / 226 mm
Maximum Load	10 tons / 9070 kg
Pump Displacement.....	46 cu. In / 7.5 cc stroke, single speed
Advance rate per stroke.....	14 in. / 3.6 mm
Pressure at rated load.....	7300 psi / 500 bar
Maximum pump handle effort	80 lbs / 355 N

Dimensions and Weight

Baseplate Size	6 x 11 in. / 15 x 28 cm
Lift Toe Width and Depth	2-1/2 x 3/63 x 76 mm
Height (retracted).....	14.5 in / 37 cm
Height extended.....	23.4 in. / 59 cm
Net Weight (less oil).....	43 lbs / 20 kg
Lever Bar Length	36 in. / 80 cm

Installation Instructions

Unpacking Instructions

Upon receiving your Trak Jack promptly remove it from the shipping container. Always keep top side of container up. Inspect unit for damage which may have incurred during shipping and report it to carrier for claim.

Before Operating

- The total load lifted or supported by the jack must never exceed the rated capacity. Excess pressure can result in personal injury. Use a jack with enough capacity to lift a load. Keep clear of lifted loads.
- Inspect each jack before each usage or shift to prevent unsafe conditions from developing. Properly support the jack. Do not lift people or loads with people on them.
- Do not put poorly balanced or off-center loads on the jack pad or jack. The load can tip and cause personal injury. Do not use in unstable or hazardous position.
- The jack must be used on flat surfaces to be able to carry the load correctly. The base must be completely supported. Do not push or lift on the ends of the base.
- As the load is lifted, use blocks or cribs to guard against a falling load.
- To help prevent personal injury, do not allow personnel to go under, or work on, a load before it is properly cribbed or blocked. All personnel must be clear of a load before lowering or lifting.
- Lift only dead weight loads. Do not add additional weight to a lifted load. Do not use jacks that are damaged, altered or in poor condition.
- The reservoir must have enough hydraulic fluid to fully stroke the jack. Use only approved hydraulic fluids.
- Users must make sure that all safety related decals and stickers are whole and readable. Replace those which become unreadable.
- Never use extreme heat to disassemble a hydraulic ram or cylinder. Metal fatigue can lead to unsafe conditions.
- Be aware of possible "pinch points" of the jack and stay clear to avoid personal injury.
- When lifting with the edge of the lifting toe, place a wedge between the load and the top of the lifting toe to avoid bending the cylinder column.
- Carry the jack only by the carrying handle. Make sure the jack is in the fully lowered position. Remove operating levers when not in use to avoid accidental dislocation of the jack and reduce the tripping hazard.
- Make sure all personnel are clear of the load before lifting or lowering. **Do not** use extenders unless authorized by a qualified person.



Never use this tool when working around electrified rail unless it is de-energized, or you have been properly trained to work on electrified rail. If you are not sure the rail is live or not, you must treat it as being live and dangerous to life.



Make sure that all personnel are clear of the load before attempting to raise or lower the jack. Serious injury or death could result from the improper use of this hydraulic jack.

Section 3: Tool Operation

Personal Protective Equipment



Before operating this machine, make sure that all general safety precautions are observed, and that proper personal protective clothing is worn as described below.

At a minimum, operators should wear the following Personal Protective Equipment:

1. Safety Glasses
2. Hearing Protection
3. Hard Hat
4. High Visibility Safety Vest
5. Leather Work Gloves
6. Steel Toed Safety Shoes

Raising A Load

Before putting the Trak Jack into initial service, or after an extended period of being unused, perform a visual inspection for bent, broken, cracked, missing, or worn components.

Make sure the hydraulic fluid and lubricant level is correct. Fully extend and retract the rail jack without a load to ensure that the jack is primed.



WARNING

Overtightening the release valve can damage the valve seat. Do not use pliers or wrenches to tighten the release valve.

1. Before using the Track Jack, make sure that it is set on a firm surface capable of bearing the intended load.
2. Make sure the release valve is closed. Turn it clockwise until it is hand tight
3. Pump the handle until the toe lift or head lift plate rises to and engages the load.



WARNING

Make certain that the lifting toe is fully engaged on the load, and the entire jack is stable, before proceeding further.

4. Insert the jack handle fully into the handle socket and pump until the desired lift has been obtained.
5. Remove the jack handle from the handle socket once the load reaches its desired height.
6. Crib or block the load to prevent accidentally dropping the load.

Lowering A Load

1. Make sure all personnel are clear of the load.
2. Remove cribbing or blocking if used.
3. Open the release valve by turning it counter-clockwise (open slowly).
4. When the load reaches the desired level, close the release valve by turning it clockwise until it is hand tight.

Horizontal Operation

The Trak Jack can also be used horizontally to separate two items, if it is placed with the handle socket facing upwards.

1. Place the Trak Jack base against the largest, heaviest, or otherwise least moveable of the two items.
2. Close the release valve by turning it clockwise until hand tight.
3. Pump the handle socket until the lifting toe or the head of the lifting toe firmly engages the more moveable of the two items.
 - Make sure personnel are clear of all items being jacked before attempting to move anything.
4. Insert the jack handle into the handle socket and pump until the desired separation has been obtained.
5. Remove the jack handle from the socket once the moveable load reaches its desired separation.
6. To free the jack, open the release valve by turning it counter-clockwise. When the lift plate is clear, close the release valve.



WARNING

Never lift or lower a load heavier than the load rating of the jack. Damage to the jack or load could result in improper use of this tool.

Pump Handle

The pump handle is included with the Trak Jack is designed with a 4:1 safety factor.

Do not use the pumping handle for any other purpose. **Do not** substitute other material for use as a pumping handle.

Section 4: Maintenance

It is highly recommended to practice regular check-ups and maintenance in accordance with the usage frequency to keep your tool in better condition and reduces total running costs.

General

Store the Trak Jack in an upright position, in a place where it is protected from the elements, abrasive dust, and damage.

Use only recommended repair and replacement parts and materials.

Do not use the jack for applications it was not designed for.

Use the carrying handle to transport the Trak Jack from location to location. Do not carry the Trak Jack by inserting the jack handle in the socket.

Cleaning

Establish a routine to keep the jack as free from dirt.

Jacks exposed to rain, sand, or grit- laden air should be cleaned prior to each use.

Exposed screw threads should be cleaned and re-lubricated as necessary.

Keep the cylinder clean at all times. Keep the piston retracted when not in use.

Operating lever and load-bearing surfaces should be free of slippery material or fluids.

Keep tool labels and stickers legible.

Hydraulic Fluid

The Trak Jack holds approximately 28 ounces / 820 cc cubic inches of hydraulic fluid in its reservoir

A jack that is low on hydraulic fluid can lift a full load, but not to the full lift height. As the reservoir begins to run dry, the lever socket becomes very easy to pump, and the jack stops lifting. To add oil:

1. Fully retract the plunger.
2. Remove the fill plug.
3. Fill the reservoir with new, clean fluid (use ISO # I5 Hydraulic Fluid) to a level 1/8 inch below the bottom of the fill plug hole.



Do not use brake fluid or other non-approved substitute fluids. Lighter weight fluids may cause the jack to fail under load.

Do not overfill or under fill the reservoir as this may damage the hydraulic jack

Note: If the fluid level is correct, the pump handle will become almost impossible to pump by hand as the piston reaches full extension and maximum hydraulic pressure

Annual

Regardless of usage, the Trak Jack hydraulic fluid should be changed annually to ensure proper operation of the jack. To drain the fluid:

1. Thoroughly clean the area around the fill plug.
2. Remove the fill plug and lay the Trak Jack on its back to allow the fluid to drain from the fill hole into an appropriate receptacle.
 - Dispose of the used hydraulic fluid in accordance with Environmental Protection Agency regulations.
3. Make sure dirt or other contaminants do not enter the reservoir while the fill plug is removed. When drained, check the fluid for contaminants. If the fluid appears gritty or dirty, flush the reservoir with clean hydraulic fluid before refilling.
4. Refill the reservoir with the recommended hydraulic fluid. Stand the jack upright, and with the piston fully retracted, fill the reservoir until the fluid level is 1/8 inch below the bottom of the fill plug.
5. Before returning the jack to service, fully extend the piston without a load by pumping the pump handle without the long extension handle. If the fluid level is correct, the pump handle will become almost impossible to pump by hand as the piston reaches full extension. Replace the plug.
6. It may be necessary to bleed air out of the cylinder. See instructions for *Purging Air*.
7. Inspect the jack for leaks, cracks, or other damage.

Purging Air

Air trapped within the jack hydraulic system can be removed by performing the following steps.

1. Make sure the plunger is fully retracted.
2. Pry out the cap on top of the unit.
3. Loosen (*do not remove*) the cap screw under the cap located in the top of the plunger.
4. Place the jack in a suitable fixture to prevent the extension of the plunger while purging air.
5. Add hydraulic fluid to the reservoir if necessary. See instructions above for adding fluid.
6. Pump the handle until oil comes up through the thread area of the cap screw in the plunger.
7. Tighten the socket head capscrew to 10-12 ft. lbs./14-16 Nm.
8. Top off the reservoir with hydraulic fluid.

Note: Make sure the plunger is fully retracted before filling the reservoir.

Troubleshooting

Problem	Cause	Correction
Jack will not raise	Release valve not closed.	Close the valve.
	Release valve ball not seating properly.	Have hydraulic jack serviced by a qualified technician.
	Seal failure	Have hydraulic jack serviced by a qualified technician
Jack raises but will not hold.	Release valve ball not seating properly.	Have hydraulic jack serviced by a qualified technician.
	Relief valve set too low or malfunctioning.	Have hydraulic jack serviced by a qualified technician.
	Seal failure.	Have hydraulic jack serviced by a qualified technician.
Jack only raises part way.	Hydraulic fluid level is low.	Add hydraulic fluid.
Jack leaks hydraulic fluid.	Seal failure.	Have hydraulic jack serviced by a qualified technician.
Jack retracts slowly.	Air in the hydraulic system.	Purge air from the hydraulic
Jack raises but pulses and hesitates.	Air in the hydraulic system.	Purge air from the hydraulic system.

Section 5: Parts and Service Support

Technical Support & Service

Telephone and web-based technical support is available for current production models through our Technical Service Department. Service Manuals and limited technical support may be available for models that are no longer in production.

Telephone and E-mail Technical Support

Telephone and e-mail technical support is available on normal U.S. business days from 8:00 AM to 5:00 PM U.S. Central Time Zone (GMT +6 (+5 Daylight Savings Time)). Contact us at:

Phone: (262) 637-9681

E-mail: techserv@racinerailroad.com

Non-Warranty Technical or Field Service Support

Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, *at the customer's expense*, to assist in the correction of non-warranty related problems. Contact our Technical Service Department to coordinate Non-Warranty Technical or Field Service Support.

Warranty Technical or Field Service Support

Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, *at no charge to the customer*, to assist in the correction of warranty related problems. Contact our Technical Service Department to coordinate Warranty Technical or Field Service Support.

Warranty Parts & Service

Warranty parts and service are coordinated through our Technical Service Department.

Warranty Parts Claims

Material claimed to be defective must be returned to our factory for evaluation. Defective materials will be replaced, or your account will be credited if replacement materials have already been purchased. Please contact our Technical Service Department at the address provided below if you have any questions or problems.

Warranty Service Support

Depending upon the circumstances and availability of technical service personnel, we may provide technical assistance and/or field service support, *at no charge to the customer*, to assist in the correction of warranty related problems. Contact our Technical Service Department at the address provided below to coordinate Warranty Technical or Field Service Support.

Trak Jack Service Parts List

FOR SERVICE ONLY			
NO.	QTY	DESCRIPTION	PART NO.
1	1	KIT, CARRY HANDLE REPAIR	473847
2	1	KIT, SPRING	473848
3	1	PIN, UPPER BEAM	473849
4	1	BEARING	473850
5	1	SPRING ASSEMBLY	473851
6	1	RING, STOP	473852
7	1	RESERVOIR	473853
8	1	PIN, LOWER BEAM	473854
9	1	RING, RETAINING	473855
10	1	CAP ASSEMBLY	473856
11	1	GASKET	473857
12	1	HANDLE, PUMP	473858
13	1	BLADDER	473859
14	1	KIT, RESERVOIR REPAIR	473860
15	1	KIT, CYLINDER REPAIR	473861
16	1	KIT, RELEASE VALVE REPAIR	473862
17	1	KIT, BEAM AND PISTON REPAIR	473863
18	1	PISTON	473864
19	1	KIT, PUMP REPAIR	473865

Section 6: Warranty Terms and Conditions

Warranty Period

Each new machine and new parts of our manufacture are warranted against defects in material and workmanship for one year from the date of shipment from our factory.

When contacting customer service for factory parts, service or warranty support please provide the:

- Racine Railroad Products Model
- Serial Number
- Any locally assigned identification

Vendor Parts Warranty Period

Other equipment and parts used, but not manufactured by Racine Railroad Products, Inc., are covered directly by the manufacturer's warranty for their products.

Warranty Parts and Service

We will repair or replace, without charge, F.O.B. factory, Racine, Wisconsin, USA, any part Racine Railroad Products manufactures which is proven to be defective during the warranty period.

Material claimed defective must be returned, if requested, to the factory within 30 days from the date of the claim for replacement. Ordinary wear and tear, abuse, misuse, and neglect are not covered by this warranty. Depending upon the circumstances, we may provide technical assistance and/or technical service support, without charge, to assist in the correction of warranty related problems.

Non-Warranty Parts and Service

Material damaged through normal wear and tear, abuse, misuse and/or neglect are not covered by our warranty and should be ordered directly from our Customer Service.

Note: Parts for models that are no longer in production may not be available.

Non-Warranty Parts Orders

When placing a parts order please provide the following information:

- Company Name and Billing Address
- Purchase Order Number and Issuing Authority
- Shipping Address
- Special Handling Instructions
- Contact Phone Number
- Machine Model and Serial Number
- Part Numbers and Quantities Being Ordered

Note: *Please use Racine Railroad Products part numbers when ordering parts.* Racine Railroad Products part numbers are shown in the parts lists and drawings of this manual and have only six (6) numbers.

Any part number with other than six numbers (e.g., contains alpha-numeric characters) is a Vendor Part Number and **not** a Racine Railroad Products part number