



BOATHANDLING SYSTEMS  
SWEDEN

# GC Stern Drive Installation Jack



OWNER'S MANUAL TXJ1001

[www.gcboathandling.com](http://www.gcboathandling.com)



## **WARNING**

Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

## INTENDED USE

This jack is designed to lift and raise outboard marine engines only. The jack features an overload valve bypass system to prevent jack damage and user injury. Compact design allows use in confined spaces. Easily fits under low mounted marine engines. Meets ASME PALD safety standards.

## TECHNICAL SPECIFICATIONS

Item	Description
Rated Capacity	340 kg
Min. Lift Height (m)	0,48 m
Max. Lift Height (m)	0,84 m
Forward Tilt Degree	5°
Aft Tilt Degree	12°
Left Tilt Degree	9.5°
Right Tilt Degree	13°
Base L x W x H (m)	1,17 x 0,66 x 0,48 m

Safe Operating Temperature is between 4°C - 41°C.

## GENERAL SAFETY RULES



### WARNING

**Read and understand all instructions.** Failure to follow all instructions listed below may result in serious injury.



### CAUTION

Do not allow persons to operate or assemble this jack until they have read this manual and have developed a thorough understanding of how the jack works.



### WARNING

**The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur.**

It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

## SAVE THESE INSTRUCTIONS

# IMPORTANT SAFETY CONSIDERATIONS

## DO NOT OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL.

To maintain the Service Jack and user safety, the responsibility of the owner is to read and follow these instructions.

- Inspect the service jack for proper operation and function.
- Keep instructions readily available for equipment operators.
- Make certain all equipment operators are properly trained; understand how to safely and correctly operate the unit.
- Allow unit operation only with all parts in place and operating properly.
- Use only genuine replacement parts.
- Service and maintain the unit only with authorized or approved replacement parts; negligence will make the jack unsafe for use and void the warranty.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Store these instructions in the handle of your jack.
- Keep all decals on the unit clean and visible.

## Safety

Always follow safety precautions when installing and operating this jack. Keep all decals on the unit clean and visible. Before proceeding ensure that you fully understand and comprehend the full contents of this manual. Failure to operate this equipment as directed may cause injury or death. The distributor is not responsible for any damages or injury caused by improper use or neglect.



## WARNING

**DO NOT USE** wood blocks or any other non-approved load sustaining devices or any other non-approved lifting devices for a means of lifting with the jack and or load being raised. The manufacturer only warrants loads to be sustained by jack stands that meet current ASME standards. Failure to heed these warnings may cause injury or death.

# SAFETY MARKINGS



## WARNING

1. Study, understand, and follow all instructions before operating this device.
2. Do not exceed rated capacity.
3. Use only on hard, level surfaces.
4. Lifting device only. Immediately after lifting, support the marine engine with appropriate means.
5. Do not move or dolly the boat while on the jack.
6. Lift only on areas of the marine engine as specified by the marine engine manufacturer.
7. No alterations shall be made to this product.
8. Only attachments and/or adapters supplied by the manufacturer shall be used.
9. Do not get under or allow anyone under the marine engine until it has been supported with appropriate means.
10. Center load on saddle prior to lifting.
11. Use wheel chocks or other blocking device on opposing wheels before using jack.
12. Secure boat hull and trailer to ensure no shifting, movement, or tipping will occur when removing the marine engine.
13. Do not use this jack for any use other than the manufacturer specified usage.
14. Failure to heed these markings may result in personal injury and/or property damage.



## GENERAL SAFETY INSTRUCTIONS

### Position the Jack

Position the jack to only lift on the areas of the marine engine as specified by the manufacturer. After lifting the marine engine always support the load with appropriate means before working on the marine engine.

### Do Not Overload Jack

Do not overload this jack beyond its rated capacity. Overloading this jack beyond its rated capacity can cause damage to or failure of the jack.

### Always Use on Hard Level Surfaces

This jack is designed only for use on hard level surfaces capable of sustaining the load. Use on unstable or other possible loss of load.

### Chock and Block (Stabilize)

Apply parking brake in vehicle before operating jack. A chock is a wedge for steadying an object and holding it motionless, or for preventing the movement of a wheel. Chock the wheel opposite the end being lifted.



## **GENERAL SAFETY INSTRUCTIONS (continued)**

When you block a load, you secure and support a load that is being lifted. The block(s) or stabilizer(s) should have a weight capacity that is greater than the weight of the load which is being lifted.

### **Center Load on Jack Saddle.**

Center load on jack saddle before lifting engine.

Off-center loads and loads lifted when the jack is not level can cause loss of load or damage to the jack.

### **Do not raise or lower the engine unless tools, materials and people are clear.**

When the lift is being lowered, make sure everyone is standing at least 2 meters away.

Be sure there are no tools or equipment left under or around the jack before lowering.

### **Always lower the jack slowly.**

### **DO NOT USE THE JACK TO SUPPORT OR STABILIZE A LOAD.**

Using the jack to support or stabilize a load may result in unexpected movement and result in serious injury, being crushed and death. Always securely chock and block (stabilize) the load to be lifted. Never place any part of the body under a raised load without properly chocking and supporting the load.

### **Never use the jack on curved or tubular bumper.**

Do not jack curved bumpers this will result in a boat slipping off the jack and falling, causing serious injury or death. Use a bumper lift to lift most vehicles with curved bumpers or plastic bumpers.

### **Wear ANSI-approved safety glasses and heavy-duty work gloves during use.**

### **Do not adjust the safety valve.**

### **Do not move or dolly boat while jack is in use.**

### **Stay alert. Use caution and common sense when operating jack.**

Do not use a jack when tired, incoherent, dizzy, under the use or drugs or alcohol.

### **Training.**

Read this manual before use. Do not allow anyone who has not read this manual, and/or does not understand the requirements, use the jack.

### **Spectators.**

Do not allow bystanders around the jack or under the load supported only by the jack.

Do not allow anyone in the boat while the jack is in use. Keep all bystanders away from boat when in use.

### **Operators.**

Not for use by children or people with reduced mental capacity. Not for use under the influence of drugs or alcohol.

### **Inspection.**

Inspect the jack carefully before each use. Ensure the jack is not damaged, excessively worn, or missing parts. Do not use the jack unless it is properly lubricated. Using a jack that is not in good clean working condition or properly lubricated may cause serious injury.



## GENERAL SAFETY INSTRUCTIONS (continued)

### Additional Notes

Save the receipt, warranty and these instructions.

**Do not modify** the jack in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the jack was designed.

**Always check for damaged or worn** out parts before using the jack. Broken parts will affect the equipment operation. Replace or repair damaged or worn parts immediately. When jack is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

## ASSEMBLY

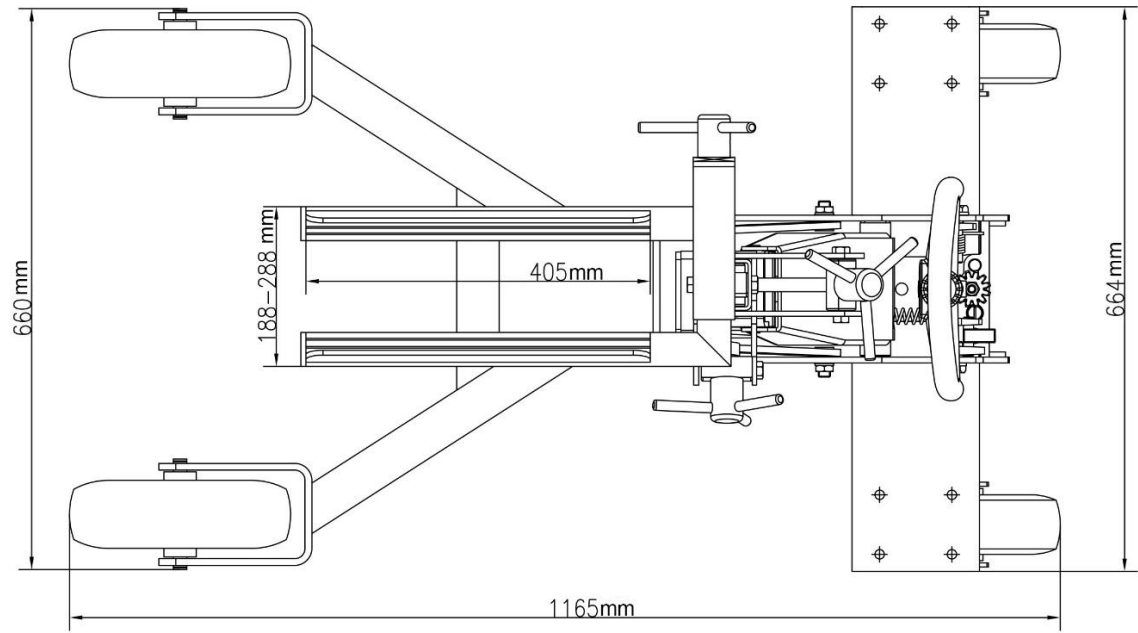
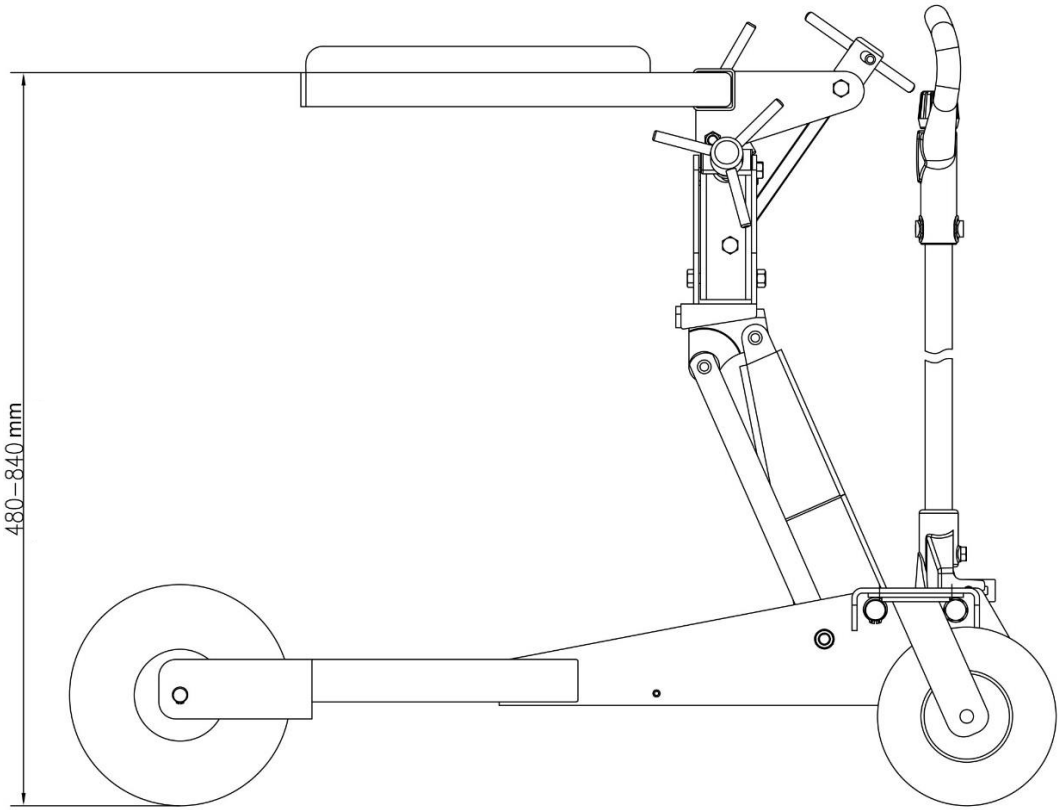
1. Familiarize yourself with the jack.
2. **Prior to assembly**, carefully remove the retaining clip attached to the handle socket.  
CAUTION: The socket will tend to spring upward when the clip is removed. To prevent possible injury, place one hand on the top of handle socket to control the upward motion of the handle socket retaining clip, and then carefully remove the retaining clip. After removed slowly allow handle socket to raise back into resting position.
3. Take off the screw located on handle piece 1; Attach handle pieces 1 and 2 making sure to align the holes on both sections. Reinsert the screw and tighten.
4. Unfasten the screw located in the Handle Socket to insert the assembled handle.
5. Line up the square hole located at the bottom of the handle over the square bolt inside the Handle Socket.
6. Secure the handle in place by tightening the screw in the Handle Socket without any weight on the jack. Cycle the lift up and down several times to insure the hydraulic system is operating properly. (Perform to the Air Purge Procedure before first use.)



## CAUTION

**Do not lift or carry jack by handle. Handle could dislodge and jack may fall, resulting in possible injury or property damage.**

PRODUCT OVERVIEW



# SYSTEM AIR PURGE PROCEDURE

## IMPORTANT: BEFORE FIRST USE

Perform the following Air Purge Procedure to remove any air that may have been introduced into the hydraulic system as a result of product shipment and handling. This step is to be completed without any weight on the jack.

1. Turn release valve **counter-clockwise** one full turn to the open position.
2. Rapidly pump the handle 6–8 times. Leave handle in down position to expose oil fill plug.
3. With a flat blade screwdriver, push the oil fill plug slightly to the side to purge trapped air from system. (Use caution not to tear or puncture the oil plug.)
4. Turn release valve clockwise to the closed position.
5. Jack is now ready for use. Check for proper pump action.

## BEFORE USE – SAFETY INSTRUCTIONS



### WARNING

Study, understand and follow all warnings and instructions before using this stand. Do not exceed rated capacity. Use only on hard, level surfaces capable of sustaining the load. Tighten and adjustment all mechanisms before applying the load. Be sure part is centered and secured before applying load to dolly. Off center loads may make the load rotate in either direction, use caution or care to make sure load is secure before releasing or moving parts. Move dolly slowly and carefully to avoid instability of part. Do not attempt to move the loaded dolly across a floor having cracks or other obstacles that could impede movement. Never work directly under a supported load. Visually inspect stand for damage before use. Check for cracked welds, bent metal and loose, damaged or missing parts. Check and that the pump operates smoothly before putting into service. Inspect before each use. Do not use if bent, broken or cracked components are noted. Do not overload. Lifting device only. Immediately after lifting, support the marine engine with appropriate means. Use only attachment and adapters supplied and approved by the manufacturer. Do not make any alterations to this product. Failure to heed the warnings may result in personal injury, property damage and/or death.

## OPERATION INSTRUCTION

1. Move the transmission jack to the right place.
2. Turn on the handle clockwise, turn off the release value rod, operate the handle up and down to make the upper frame go up properly.
3. Make the upper frame of the transmission jack positioned under the right supporting point of the engine, adjust the three handles of the upper frame to make it parallel with the supporting point of the engine.
4. Operate the handle up and down to lift the engine to the top of it completely.
5. Take the engine out of the boat, adjust three handles and tighten the engine to the left and right support arms and make the engine parallel with the ground.
6. Turn on the handle slowly and anticlockwise, release the rod of release value, lowering the engine slowly and stable. Make sure do not turn over the rod of release value more than one circle.
7. Pull the transmission jack to move the engine to the right place.
8. For lifting, operate the machine by the above steps by contrary.

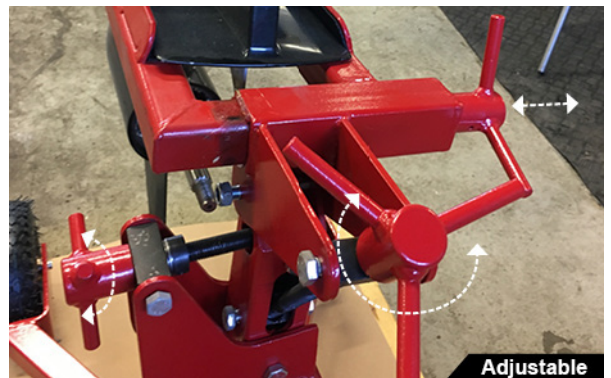


### WARNING

1. Don't overload.
2. Only for lifting something, not for supporting.
3. Don't work under the jacks which are lifted by the transmission jack.
4. Make sure to keep your hands, fingers and arms away from the parts which can move.
5. Always work on the smooth ground.
6. When lifting, moving or descending, ensure that all the people are away from it and be careful.
7. Before moving, lowering the engine, make sure that the left and right support arms fix the engine tightly.



**CAUTION:** Never wire, clamp or otherwise disable the lift control valve to function by any means other than by using the operator's hand. Use the handle provided with this product or an authorized replacement handle to ensure proper release valve operation. Do not use extensions on the operating handle.



3 adjustment screws

## LOWERING THE JACK

1. Raise load high enough to allow clearance for the jack stands to be removed, then carefully remove jack stands.
2. Remove support stands.
3. Grasp the handle firmly with both hands. Securely hold on to the jack handle so your hands do not slip and ensure the release valve does not rapidly lower.
4. Carefully open the Release Valve by slowly turning the handle counter-clockwise. Do not allow bystanders around the jack or under the load when lowering the jack.
5. After removing jack from under the load, keep jack in the lowered position to reduce exposure to rust and contamination.



### WARNING

USE EXTREME CAUTION WHEN LOWERING THE JACK. THE JACK HANDLE MAY TURN RAPIDLY. OPENING THE RELEASE VALVE TOO FAST CAN CAUSE THE JACK TO LOWER RAPIDLY. FAILURE TO HEED THESE WARNINGS COULD CAUSE SERIOUS INJURY OR DEATH.

## MAINTENANCE INSTRUCTIONS

If you use and maintain your equipment properly, it will give you many years of service. Follow the maintenance instructions carefully to keep your equipment in good working condition. Never perform any maintenance on the equipment while it is under a load.

### Inspection

You should inspect the product for damage, wear, broken or missing parts (e.g.: pins) and that all components function before each use. Follow lubrication and storage instructions for optimum product performance.

### Binding

If the product binds while under a load, use equipment with equal or a larger load capacity to lower the load safely to the ground. After un-binding; clean, lubricate and test that equipment is working properly. Rusty components, dirt, or worn parts can be causes of binding. Clean and lubricate the equipment as indicated in the lubrication section. Test the equipment by lifting without a load. If the binding continues, contact Customer Service.

## **Cleaning**

If the moving parts of the equipment are obstructed, use cleaning solvent or another good degreaser to clean the equipment. Remove any existing rust, with a penetrating lubricant.

## **Lubrication**

This equipment will not operate safely without proper lubrication. Using the equipment without proper lubrication will result in poor performance and damage to the equipment. Some parts in this equipment are not self-lubricating inspect the equipment before use and lubricate when necessary. After cleaning, lubricate the equipment using light penetrating oil or lubricating spray.

Use a good lubricant on all moving parts. For light duty use, lubrication is needed once a month. For heavy and constant use, lubrication is recommended every week.

**NEVER USE SANDPAPER OR ABRASIVE MATERIAL ON THESE SURFACES!**

## **Rust Prevention:**

Check rams and pump plungers on the power unit assemblies daily for any signs of rust or corrosion. Without a load lift the equipment as high as it goes and look under and behind the lifting points. If signs of rust are visible clean as needed.

## **Grease Fittings**

Some models contain grease fittings that will regularly need to be greased and lubricated.

## **How the Jack Operates**

With release valve closed, an upward stroke of the jack handle draws oil from the reservoir tank into the plunger cavity. Hydraulic pressure holds the valve closed, which keeps the oil in the plunger cavity. A downward stroke of the jack handle releases oil into the cylinder, which forces the ram out. This raises the saddle. When the ram reaches maximum extension, oil is bypassed back into the reservoir to prevent an over extended ram stroke and possible damage to the jack. Opening the release valve allows oil to flow back into reservoir. This releases hydraulic pressure on the ram, which results in lowering the saddle.

## **Storing the Jack**

1. Lower the Lifting Arm.
2. Place the handle in the upright position.
3. Store in a dry location, recommended indoors.

*Note: If the jack is stored outdoors, be sure to lubricate all parts before and after use to ensure the jack stays in good working condition.*

## TO ADD JACK OIL

1. Position the jack on level ground and lower the saddle.
2. Remove the oil plug.
3. Fill the oil case until oil level is just beneath the lower rim of the oil fill hole.
4. Replace oil plug.
5. Perform the Air Purge Procedure.

## TO REPLACE JACK OIL

1. Position the jack on level ground and lower the saddle.
2. Open release valve by turning handle counter-clockwise.
3. Remove the oil fill plug.
4. Turn the jack on its side to drain old oil from the oil fill hole.
5. Position the jack on level ground and keep saddle in the lowered position. Fill the oil case until oil level is just beneath the lower rim. Keep dirt and other foreign materials clear when pouring.
6. Replace oil plug.
7. Perform Air Purge Procedure.



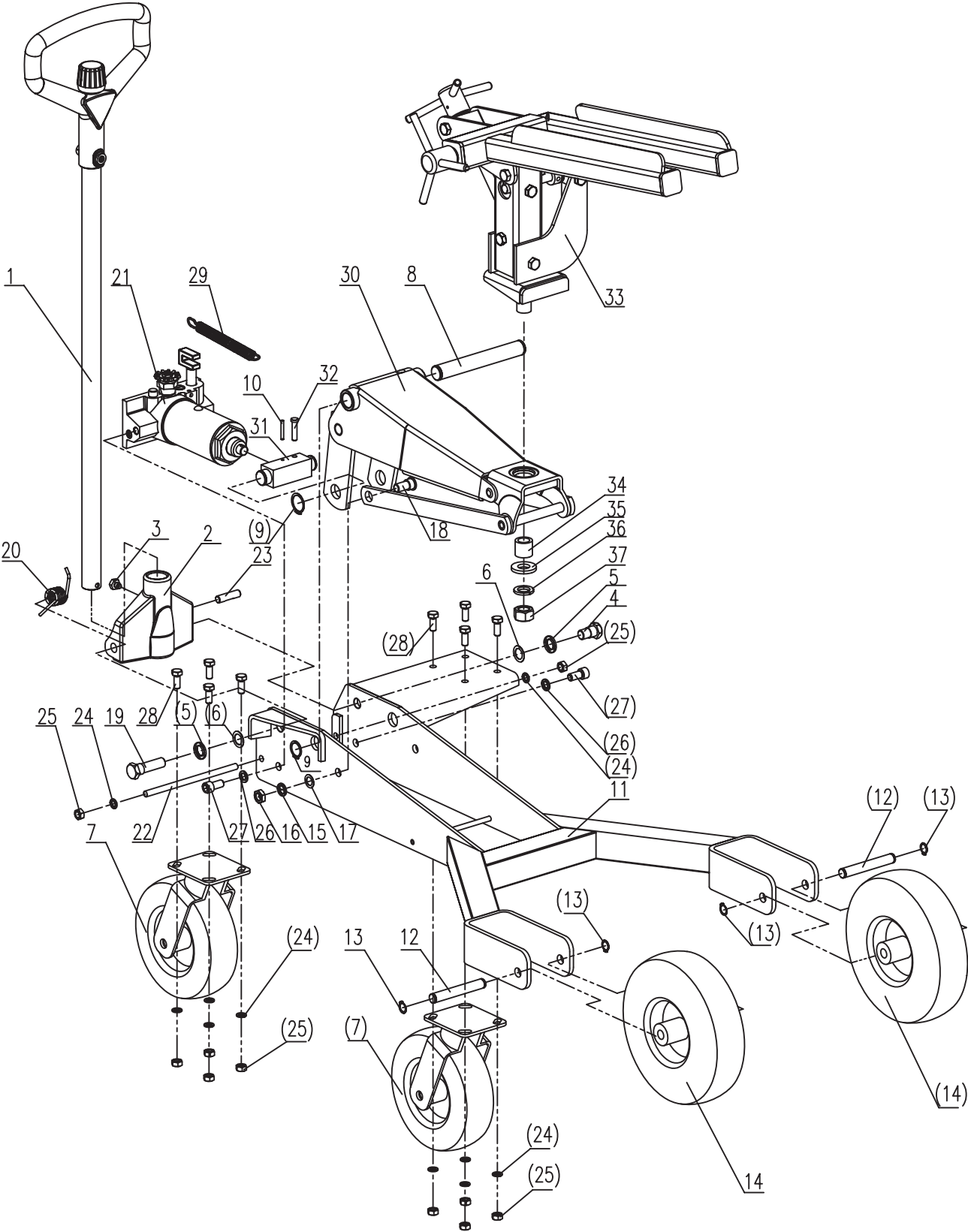
## ADDITIONAL WARNINGS

- DO NOT USE MOTOR OIL IN THE JACK.
- ONLY USE ANTI-FOAMING JACKOIL.
- ALWAYS USE A GOOD GRADE HYDRAULIC JACK OIL.
- DO NOT USE HYDRAULIC BRAKE FLUID, ALCOHOL, GLYCERINE, DETERGENT, MOTOR OIL OR DIRTY OIL.
- USE OF A NON-RECOMMENDED FLUID CAN CAUSE DAMAGE TO A JACK.
- AVOID MIXING DIFFERENT TYPES OF FLUID AND NEVER USE BRAKE FLUID, TURBINE OIL, TRANSMISSION FLUID, MOTOR OIL OR GLYCERIN. IMPROPER FLUID CAN CAUSE PREMATURE FAILURE OF THE JACK AND THE POTENTIAL FOR SUDDEN AND IMMEDIATE LOSS OF LOAD.
- DISPOSE OF HYDRAULIC FLUID IN ACCORDANCE WITH LOCAL REGULATIONS.

## ADDITIONAL LUBRICATION

1. Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oil cloth. NEVER USE SANDPAPER OR ABRASIVE MATERIAL ON THESE SURFACES!
2. When not in use, store the jack with pump piston and ram fully retracted.

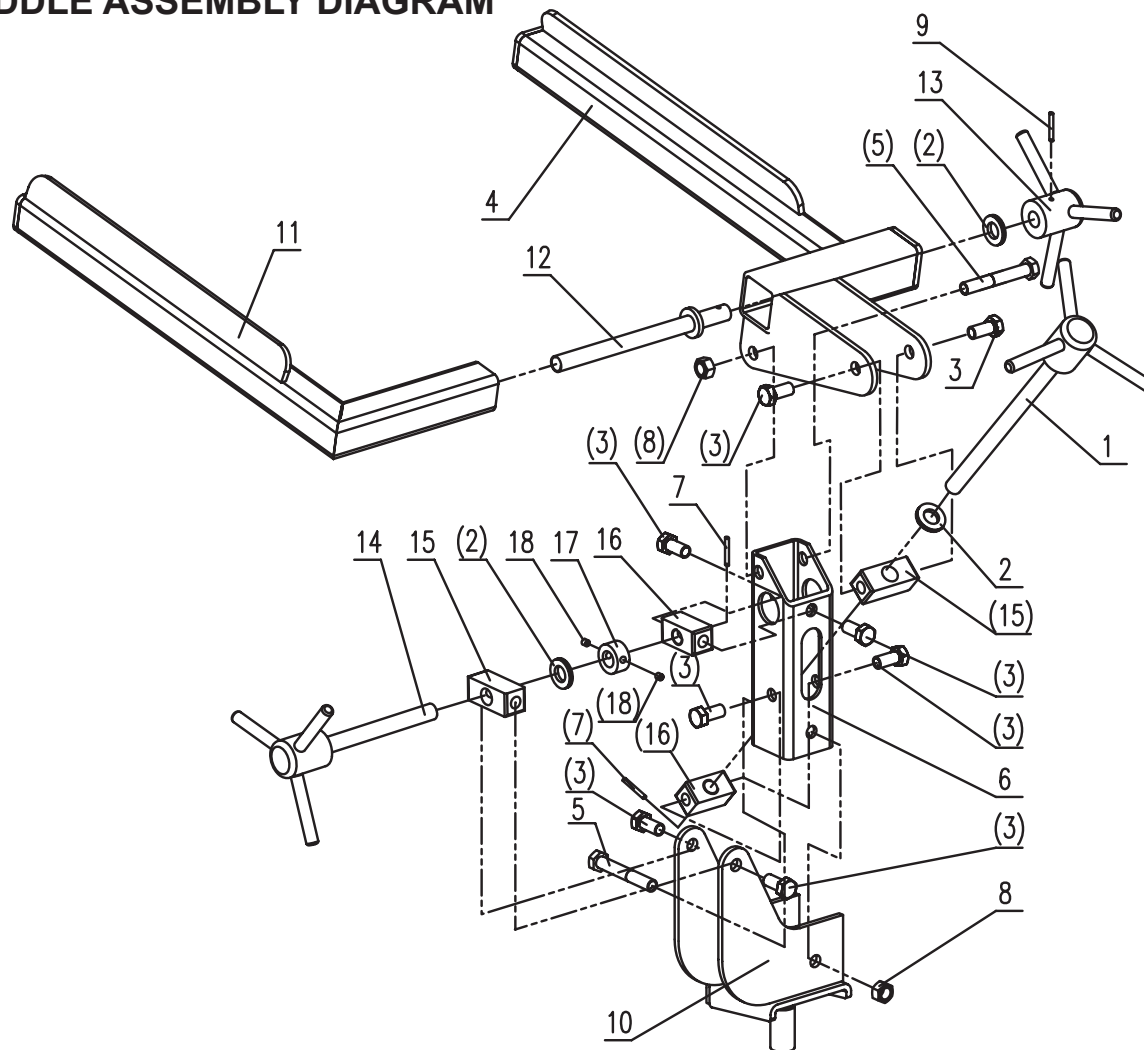
ASSEMBLY DIAGRAM



## ASSEMBLY PARTS LIST GC STERN DRIVE INSTALLATION JACK

Item No	Description	Part Number	Qty
1	Handle	TXJ1001-001	1
2	Handle Socket	TXJ1001-002	1
3	Screw, Handle Socket	TXJ1001-003	1
4	Left Bolt, Handle Socket	TXJ1001-004	1
5	Spring Washer 18mm	TXJ1001-005	2
6	Press Hand Axis Washer	TXJ1001-006	2
7	8" Inflatable Rubber Wheels	TXJ1001-007	2
8	Support Shaft	TXJ1001-008	1
9	Shaft C-Clip 25mm	TXJ1001-009	4
10	Cotter Pin M4x40mm	TXJ1001-010	1
11	Frame Assembly	TXJ1001-011	1
12	Axle, Front Wheel	TXJ1001-012	2
13	Shaft C-clip 16mm	TXJ1001-013	4
14	10" Inflatable Rubber Wheels	TXJ1001-014	2
15	Spring Washer 14mm	TXJ1001-015	2
16	Nut M14mm	TXJ1001-016	2
17	Connecting Rod Pin Pads	TXJ1001-017	2
18	Connecting Rod Pin	TXJ1001-018	2
19	Axle, Handle Socket	TXJ1001-019	1
20	Torsion Spring	TXJ1001-020	1
21	Hydraulic Unit Assembly	TXJ1001-021	1
22	Block Rod	TXJ1001-022	1
23	Handle Socket Pin	TXJ1001-023	1
24	C-clip 10mm	TXJ1001-024	10
25	Nut 10mm	TXJ1001-025	10
26	C-clip 12mm	TXJ1001-026	2
27	Socket Head Cap Screw M12x25mm	TXJ1001-027	2
28	Bolt M12x25mm	TXJ1001-028	8
29	Returning Spring	TXJ1001-029	1
30	Lifting Arm Assembly	TXJ1001-030	1
31	Lifting Block	TXJ1001-031	1
32	Extension Spring Rivet	TXJ1001-032	1
33	Saddle Assembly	TXJ1001-033	1
34	Sleeve	TXJ1001-034	1
35	Thick Flat Washer 20mm	TXJ1001-035	1
36	C-clip 20mm	TXJ1001-036	1
37	Nut 20mm	TXJ1001-037	1

## SADDLE ASSEMBLY DIAGRAM



## ASSEMBLY PARTS LIST GC STERN DRIVE INSTALLATION JACK

Item no	Description	Part Number	Qty
1	Handle	TXJ1001-038	1
2	Needle Roller Bearings	TXJ1001-039	3
3	Bolt M12X20mm	TXJ1001-040	8
4	Right Arm Assembly	TXJ1001-041	1
5	Bolt	TXJ1001-042	2
6	Square Tube	TXJ1001-043	1
7	Spring Column Pin M4X18mm	TXJ1001-044	2
8	Locknut M12	TXJ1001-045	2
9	Spring Column Pin M4X30mm	TXJ1001-046	1
10	Base Assembly	TXJ1001-047	1
11	Len Arm Assembly	TXJ1001-048	1
12	Middle Screw Components	TXJ1001-049	1
13	Swivel Knob Assembly	TXJ1001-050	1
14	Swivel Knob Assembly 2	TXJ1001-051	1
15	Linking Block 1	TXJ1001-052	2
16	Linking Block 2	TXJ1001-053	2
17	Sleeve	TXJ1001-054	1
18	Cone point set screws M6X8mm	TXJ1001-055	2

## TROUBLESHOOTING

JACK WILL NOT LIFTLOAD	JACK WILL NOT HOLD LOAD	JACK WILL NOT LOWER	POOR JACK LIFTING	WILL NOT LIFT TO FULL EXTENSION	CAUSES AND SOLUTIONS
✕	✕		✕		Release valve is not completely closed. (Turn handle clockwise).
✕					Weight Capacity Exceeded.
✕			✕		Air is in the hydraulics. Purge air from system.
✕	✕		✕	✕	Low oil level. Add oil as required.
		✕			Oil reservoir is overfilled: Drain excessive oil. Lubricate moving parts.
		✕			Jack is binding or foreign obstruction.
✕	✕		✕		Power unit malfunctioning. Replace the power unit.

Safe Operating Temperature is between 4°C – 41°C

# EC DECLARATION OF CONFORMITY

WE, *CHANGSHU TONGRUN AUTO ACCESSORY CO. LTD.*

*ADDRESS: NEW LONG TENG INDUSTRY AREA, CHANGSHU ECONOMIC DEVELOPMENT ZONE, CHANGSHU JIANGSU CHINA*

DECLARE, IN SOLE RESPONSIBILITY, THAT THE FOLLOWING MACHINE:

## TRANSMISSION JACK

**Model No.:**  
**TXJ1001**

REFERRED TO IN THIS DECLARATION CONFORMS TO THE FOLLOWING DIRECTIVE: MACHINERY DIRECTIVE 2006/42/EC

WE WILL KEEP ON FILE FOR REVIEW THE FOLLOWING TECHNICAL DOCUMENTATION:

- OPERATING AND MAINTENANCE INSTRUCTIONS
- TECHNICAL DRAWINGS
- HAZARDS ANALYSIS AND SOLUTIONS
- OTHER TECHNICAL DOCUMENTATION SUCH AS QUALITY MEASURES ASSURANCE FOR DESIGN AND PRODUCTION

NOTE: THIS DECLARATION BECOMES INVALID IF TECHNICAL OR OPERATION MODIFICATIONS ARE INTRODUCED WITHOUT THE MANUFACTURER'S CONSENT.

(PLACE AND DATE ISSUED)

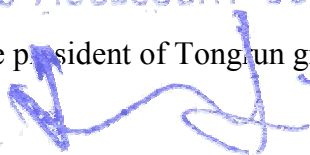
15, JUN, 2018

New Longteng industry area, changshu  
Economic development zone,  
Changshu jiangsu china.

(NAME AND SIGNATURE POSITION)

常熟通润汽车零部件股份有限公司  
CHANGSHU TONGRUN  
AUTO ACCESSORY CO.,LTD

The president of Tongrun group





# GC STERN DRIVE INSTALLATION JACK

MODEL NO.	TXJ1001
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MAX LOAD	340 KG
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MIN. HIGHT	480 MM
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MAX. HIGHT	840 MM
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NET WEIGHT	71 KG
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- This stern drive jack usage is only for removal and installation of the stern drive.
- This stern drive jack is designed for use only on hard, level and smooth surfaces.
- Read, understand and follow all instructions before operating this jack.
- The boat must be properly and adequately supported before usage of the stern drive jack.
- Center load on the saddle and be sure the setup is stable and secure.
- Never move this jack with a load any higher off ground than necessary and move it carefully and slowly.
- DO NOT lift or support a boat with this jack.
- No alterations shall be made to this product.
- Only attachments and/or adapters supplied by the manufacturer shall be used.
- Failure to heed these warnings and instructions may result in personal injury and/or property damage.

 Directive 2006/42/EC