



JSTTA1000

**1000-LBS. CAPACITY
TRANSMISSION JACK - 2 STAGE WITH AIR**

OWNER'S MANUAL



SPECIFICATIONS

Maximum Capacity.....	1000-Lbs.
Minimum Height.....	35"
Maximum Height	75"
Saddle Tilt Fore and Aft.....	37° by 26°
Saddle Tilt Side to Side	+12°, -12°
Base Size.....	30-1/4" square
Required Air Pressure.....	100 psig
Weight.....	145.2-Lbs.



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WARNING INFORMATION

THIS INSTRUCTION MANUAL USES THE FOLLOWING SYMBOLS AND DEFINITIONS TO ALERT YOU TO HAZARDOUS CONDITIONS WHICH MAY CREATE A RISK OF PERSONAL INJURY AND/OR PROPERTY DAMAGE.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

!WARNING

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



IMPORTANT: READ THESE INSTRUCTIONS BEFORE OPERATING

BEFORE USING THIS DEVICE, READ THIS MANUAL COMPLETELY AND THOROUGHLY, UNDERSTAND ITS OPERATING PROCEDURES, SAFETY WARNINGS AND MAINTENANCE REQUIREMENTS. SAVE THESE INSTRUCTIONS.

It is the responsibility of the owner to make sure all personnel read this manual prior to using this jack. It is also the responsibility of the jack owner to keep this manual intact and in a convenient location for all to see and read. If the manual or product labels are lost or not legible, contact Mac Tools for replacements. If the operator is not fluent in English, the product and safety instructions shall be read to and discussed with the operator in the operator's native language by the purchaser/owner or his designee, making sure that the operator comprehends its contents.

!WARNING

This product is intended only for use in the removal, repair, and installation of vehicle transmissions. Do not use or modify this product for any other purpose than that for which it was designed without consulting the manufacturer's authorized representative. The use of portable automotive lifting devices are subject to certain hazards that cannot be prevented by mechanical means, but only by the exercise of intelligence, care, and common sense. It is therefore essential to have owners and personnel involved in the use and operation of the equipment who are careful, competent, trained, and qualified in the safe operation of the equipment and its proper use. Examples of hazards are dropping, tipping or slipping of loads caused primarily by improperly securing loads, overloading, off-centered loads, use on other than hard level surfaces, and using equipment for a purpose for which it was not designed.

METHODS TO AVOID HAZARDOUS SITUATIONS

!WARNING



- Read, study, understand and follow all instructions before operating this device
- Inspect the jack before each use. Do not use jack if damaged, altered, modified, in poor condition, leaking hydraulic fluid, or unstable due to loose or missing components. Make corrections before using
- Consult the vehicle manufacturer for the transmission's center of balance
- Secure the transmission to the jack's saddle with the anchorage restraint system provided before raising or lowering the transmission
- Center load on saddle. Be sure setup is stable before working on vehicle
- Support the engine with a stand before unbolting the transmission from the engine
- Wear eye protection that meets ANSI Z87.1 and OSHA standards (users and bystanders)
- Do not use jack beyond its rated capacity. Do not shock load
- Use only on a hard level surface
- Adequately support the vehicle before starting repairs
- Use of this product is limited to the removal, installation and transportation in the lowered position, of transmissions, transfer cases and transaxles
- Do not use any adapters unless approved or supplied by Mac Tools
- Always lower the jack slowly and carefully
- Do not use or modify the product for any other purpose than that for which it was designed without consulting the manufacturer's authorized representative
- This product may contain one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. *Wash hands thoroughly after handling*
- Failure to heed these warnings may result in serious or fatal personal injury and/or property damage

CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

!WARNING

Failure to read this manual completely and thoroughly, failure to understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, MAINTENANCE INSTRUCTIONS and comply with them, and failure to comply with the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.

SETUP INSTRUCTIONS

⚠ WARNING

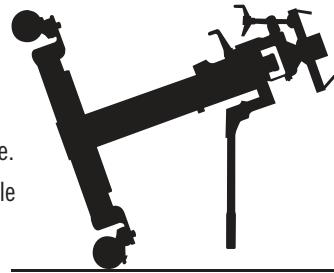
Failure to follow these Setup Instructions may result in serious injury or death, and/or property damage.

1. Refer to the exploded view drawing on page 5 to identify jack components.
2. Place the hydraulic power unit in an upright position. Secure the legs (#2-4) to the cylinder (Item #1-1A) with the bolts (Item #2-5), washers (#2-6) and nuts (#1-29). Do not tighten.
3. Secure swivel casters (#2-1 and #2-7) to leg caster brackets as shown in the exploded view drawing on page 5.
4. Tighten the hardware that secures the legs (#2-4) to the cylinder (#1-1A).
5. Place the saddle assembly (#3-31) on the stud protruding from the top of the hydraulic unit assembly, (RS1000AHUA). Align the hole in the saddle with the hole in the stud and secure with the bolt (#3-26) and nut (#3-27).
6. Sometimes air gets trapped in the second stage hydraulic system during shipping and/or handling. Evidence of an air bound system is a spongy feeling during the pump operation, or the ram will not rise to maximum extension, or the ram will not rise proportionate to a full incremental pump stroke.

PURGING AIR FROM THE SECONDARY STAGE HYDRAULIC SYSTEM:

- a. Turn the release valve knob in a clockwise rotation until it stops. Now turn the knob in a counterclockwise direction two full rotations.
- b. Tilt the entire jack on two caster wheels with the pump handle pointing down as shown in the accompanying silhouette. At the same time, operate the pump handle until the loose feel of the pump is met with some resistance.
- c. Turn the release valve knob in a clockwise rotation until it stops and at the same time continue pumping the handle while lifting the jack to its upright position.
- d. Pump the jack to maximum extension. Repeat steps "a" through "c" until all air is purged from the system.

6. The primary stage of the power unit is air activated. The air activated portion will also give the user many years of trouble free operation if the shop air system is properly maintained. The shop air system must have an air regulator adjusted to the proper pressure. The system must be free from dirt and moisture. Do not drop disconnected air lines on dirty shop floor or dirty environment and then reconnect to the jack. Contaminants in the air system can cause the air valve to malfunction and the air cylinder to score. Contaminants and/or water found in the air cylinder voids the warranty.



OPERATING INSTRUCTIONS

⚠ WARNING

Failure to follow these Operating Instructions may result in serious injury or death, and/or property damage.

1. Lift the vehicle to the desired work height and support the vehicle in accordance with the lift manufacturer's recommended support procedure and all the instructions and warnings in this manual.
2. Use an under hoist stand rated greater than the weight of the engine to support the engine before unbolting the transmission from the engine or bolting the transmission to the engine.
3. Position the transmission jack directly under the transmission. Depress the foot pedal marked "UP" to raise the jack to maximum first stage height. Pump the handle on the hydraulic second stage in order to raise the saddle to a height very close to the center of balance point of the transmission oil pan but do not touch the transmission. **IMPORTANT:** When applying a load to the jack's saddle, the jack's air stage ram should be either lowered all the way down or extended all the way up and in its pressurized locked position. If a load is applied to the jack's saddle when the first stage air ram is only partially raised, the jack's ram may drop suddenly.
4. Adjust the ratchet arms on the saddle so that the bent up section of the arms will fit in the mounting flange around the perimeter of the transmission oil pan. Slowly and gently pump the jack so the connection is made and then secure the transmission to the jack's saddle with the tie down strap provided. Sometimes it is necessary to turn the fore and aft and also the side to side tilt knobs so the saddle is in the proper alignment with the transmission pan before securing the load to the saddle.
5. Make sure the tie down strap is very tight when securing the transmission to the saddle and before raising or lowering the transmission.
6. Remove the transmission from the engine according to instructions in the vehicle service manual.
7. Once the transmission has been disconnected from the engine, very slowly turn the release valve knob on the second stage hydraulic block in a counter clockwise direction. Make sure the jack's saddle and transmission do not hang up on any under car components, wiring, fuel lines, etc.



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OPERATING INSTRUCTIONS (continued)

IMPORTANT: Continue to lower the load until the second stage bottoms out and then depress the first stage "UP" pedal for a second to increase air pressure before depressing the "DOWN" pedal to lower the transmission all the way down.

8. When installing a transmission, follow the above instructions but in the applicable order and according to the vehicle manufacturer's installation procedure.

PREVENTATIVE MAINTENANCE

WARNING

Failure to follow these Preventative Maintenance instructions may result in serious injury or death, and/or property damage.

1. Always store the jack in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements. The jack must be cleaned of water, snow, sand, grit, oil, grease or other foreign matter before using.
2. Lubricate moving parts, excluding the telescopic rams, monthly with a general purpose grease.

IMPORTANT: any jack found to be defective as a result of worn parts due to insufficient or lack of lubrication is not eligible for warranty consideration.

3. It should not be necessary to refill or top off the reservoir with hydraulic fluid unless there is an external leak. An external leak requires immediate repair which must be performed in a dirt-free environment by qualified hydraulic repair personnel who are familiar with this equipment.

WARNING

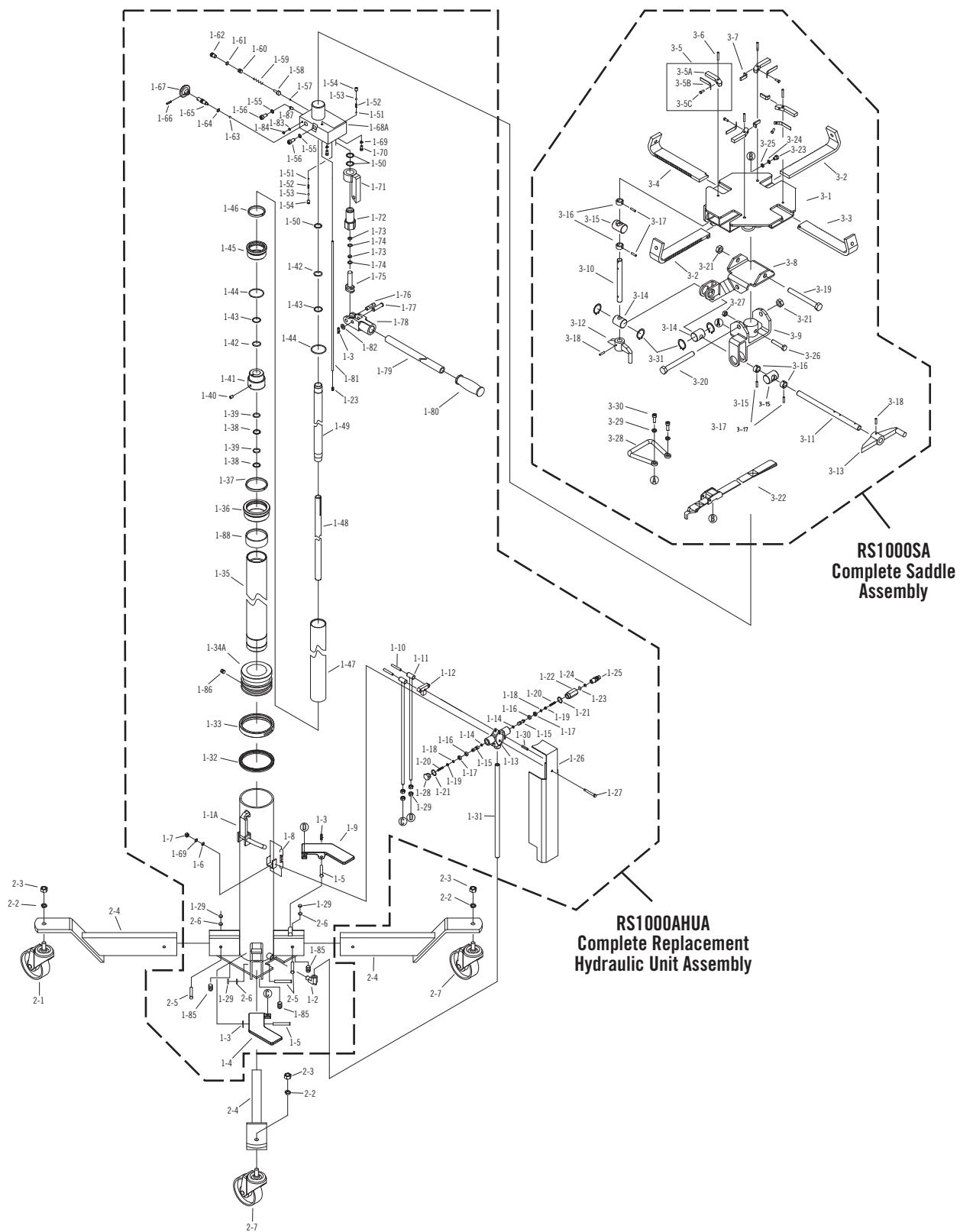
In order to prevent seal damage and jack failure, never use alcohol, hydraulic brake fluid or transmission oil in the jack. Use Chevron Hydraulic Oil ISO 32 or its equivalent Unocal Unax AW150, or hydraulic jack oil.

4. Every jack owner is responsible for keeping the jack labels clean and readable. Use a mild soap solution to wash external surfaces of the jack but not any moving hydraulic components.
5. Do not attempt to make any hydraulic repairs unless you are a qualified hydraulic repair person that is familiar with this equipment. Repairs must be performed by an authorized service center.

TROUBLESHOOTING

PROBLEM	ACTION
1. Unit will not lift rated load.	Purge air from hydraulic system by following procedure under SETUP.
2. Unit will not sustain rated load or feels "spongy" under rated load.	Purge air from hydraulic system as above.
3. Unit will not lift to full height.	Purge air from hydraulic system as above.
4. Handle tends to raise up while the unit is under rated load.	Pump the handle rapidly several times to push oil past ball valves in power unit.
5. Unit still does not operate.	Contact your Mac Tools Distributor.

PARTS DIAGRAM





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PARTS LIST

Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
1-1A	RS100011	Air Cylinder Assembly	1	1-49		Oil Cylinder	1
1-2		Coupler	1	1-50	*	Copper Washer	3
1-3		Pin	3	1-51	*	Steel Ball	2
1-4		Pedal A	1	1-52		Spring	2
1-5		Pin	2	1-53	*	Steel Ball	2
1-6		Washer	1	1-54		Screw	2
1-7		Nut	1	1-55	*	Copper Washer	2
1-8		Spring	1	1-56		Bolt	2
1-9		Pedal B	1	1-57	*	Steel Ball	1
1-10		Pin	2	1-58	*	Ball Seat	1
1-11		Link Rod	2	1-59	*	Spring	1
1-12		Link Rod	1	1-60		Screw	1
1-13	RS7200B113A	Valve Block (incl. #1-13 to 1-25, 1-28)	1	1-61		Washer	1
1-14		O-Ring	2	1-62		Bolt	1
1-15		Valve Rod	2	1-63	*	Steel Ball	1
1-16		Sealing Washer	2	1-64	*	O-Ring	1
1-17		Cap	2	1-65	RS7200B165	Oil Release Valve Rod (incl. #1-64 to 1-67)	1
1-18		Copper Washer	2	1-66		Pin	1
1-19		Screw	2	1-67		Release Knob	1
1-20		Spring	2	1-68A	RS1000168	Valve Block Assembly	1
1-21		Copper Washer	2	1-69		Lock Washer	3
1-22		Coupler	1	1-70		Bolt	2
1-23		Filter	2	1-71	RS7200B171BK	Pump Seat	1
1-24		Snap Ring	1	1-72	RS7200B172BK	Pump cylinder	1
1-25		Coupler	1	1-73	*	O-Ring	2
1-26		Plate	1	1-74	*	Snap Ring	2
1-27		Bolt	1	1-75	RS7200B175	Pump Plunger	1
1-28		Cap	1	1-76		Pin	1
1-29		Nut	8	1-77		Pin	1
1-30		Pin	1	1-78	RS7200B178BK	Handle Socket (incl. #1-76, 1-77, 1-78, 1-3)	1
1-31	RS7200C131	Air Pipe	1	1-79	RS7200B179BK	Handle (incl. #1-79, 1-80)	1
1-32	*	Y-Seal	1	1-80		Handle Sleeve	1
1-33		Bushing	1	1-81		Oil Pipe	1
1-34A	RS1000134	Piston	1	1-82		Washer	1
1-35		Pneumatic Piston Rod	1	1-83		Washer	1
1-36		Cylinder Cap	1	1-84		Bolt	1
1-37		Guide Ring	1	1-85		Bolt	4
1-38	*	O-Ring	2	1-86		Bolt	1
1-39	*	Nylon Gasket	2	1-87	*	Throttle valve	1
1-40		Screw	1	1-88		Bushing	1
1-41		Screw Cap	1	2-1	RS7140C21	Non Locking Swivel Caster (incl. #2-1 to 2-3)	2
1-42	*	O-Ring	2	2-2		Lock Washer	4
1-43	*	Nylon Gasket	2	2-3		Nut	4
1-44	*	O-Ring	2	2-4		Leg	4
1-45		Piston Cap	1	2-5		Bolt	4
1-46		Guide Ring	1	2-6		Lock Washer	4
1-47		Oil Container	1	2-7	RS7140C22	Locking Swivel Caster (incl. #2-2, 2-3, 2-7)	2
1-48		Hydraulic Piston Rod	1		RSJSTTA1000PLK	Product Label Kit (not shown)	1

PARTS LIST FOR SADDLE ASSEMBLY

Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
3-1		Bracket	1	3-15	***	Shaft	2
3-2	RS7140C32BK	Bracket C	2	3-16	***	Bushing	4
3-3	RS7140C33BK	Bracket B	1	3-17	***	Pin	4
3-4	RS7140C34BK	Bracket A	1	3-18		Pin	2
3-5		Retainer Plate Assembly	4	3-19		Bolt	1
3-5A		Retainer Plate	4	3-20		Bolt	1
3-5B	RS7140CSABK	Spring Assembly (incl. #3-5A, 3-5B, 3-5C, 3-6, 3-7)	4	3-21		Lock Nut	2
3-5C		Rivet	4	3-22	RS7140C322	Strap	1
3-6		Pin	4	3-23		Bolt	1
3-7		Retainer Plate A	3	3-24		Lock Washer	1
3-8		Adjusting Bracket	1	3-25		Washer	1
3-9		Adjusting Bracket A	1	3-26	**	Bolt	1
3-10	RS1000310BK	Screw B (incl. 3-10, 3-12, 3-18) Revision B	1	3-27	**	Lock Nut	1
3-11	RS1000311BK	Screw A (incl. 3-11, 3-13, 3-18) Revision B	1	3-28		Grip	1
3-12		Handle B	1	3-29		Washer	2
3-13		Handle A	1	3-30		Bolt	2
3-14	***	Shaft	2	3-31		Retaining Ring	4

Only index numbers identified by Part Number are available separately.

* Only available in Seal Kit, RS7200DSK, ** Only available in Bolt Kit, RS7140CBK, *** Only available in Saddle Bearing Kit, RS7140SBK. (2 each of #3-14, #3-15, 4 each of #3-16, #3-17)



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LIMITED WARRANTY

MAC TOOLS WARRANTS TO ITS CUSTOMERS THAT THE COMPANY'S MAC TOOLS BRANDED PRODUCTS ARE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS.

Mac Tools will repair or replace its Mac Tools branded products which fail to give satisfactory service due to defective workmanship or materials, based upon the terms and conditions of the following described warranty plans attributed to that specific product. This product carries a ONE-YEAR warranty. During this warranty period, Mac Tools will repair or replace at our option any part or unit which proves to be defective in material or workmanship.

Other important warranty information:

This warranty does not cover damage to equipment or tools arising from alteration, abuse, misuse, damage and does not cover any repairs or replacement made by anyone other than Mac Tools. The foregoing obligation is Mac Tools sole liability under this or any implied warranty and under no circumstances shall we be liable for any incidental or consequential damages.

Note: Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. If you have any questions about warranty service, please contact Mac Tools. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.