



PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

REV A 09-05-08

# INSTALLATION AND OPERATION MANUAL

## TRANSMISSION JACKS

### MODELS:

RTJ-1

RTJ-660

RTJ-1100

RTJ-3000



RTJ-1 Shown



Keep this operation manual near the machine at all times. Make sure that ALL USERS read this manual.

### SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

### BE SAFE

Ranger™ Transmission Jacks are designed and built with safety in mind. However, proper training and thoughtful operation on the part of the operator can increase your overall safety. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.



1645 Lemonwood Dr.  
Santa Paula, CA. 93060, USA  
Tel: 1-805-933-9970  
Toll Free: 1-800-253-2363  
Fax: 1-805-933-9160  
[www.rangerproducts.com](http://www.rangerproducts.com)

## WARRANTY POLICY

Ranger Products™ are backed by over 35 years of manufacturing experience. Every Transmission Jack bearing the Ranger™ name is sold with the following warranty.

- ◆ Each Ranger Product™ is warranted to be free from defects in workmanship and material for a period of one year from the date of shipment provided that a written claim for such defect is made within that time.
- ◆ This warranty does not cover damage or defects caused by carelessness of the operator, misuse, abuse or abnormal use which in any way impairs the proper functioning of the equipment or by the use or addition of parts not manufactured by Ranger Products™ or its suppliers.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

If your Ranger Products™ machine is not functioning properly, call your Ranger Products™ dealer immediately. On some occasions, an independent contractor may be hired to do the repairs. Within the warranty period, a customer should not hire his own contractor unless it is authorized in writing by Ranger Products™.

If it is necessary to return equipment for repairs, your dealer will so advise you. When returning equipment for repairs, see that machines are properly crated and protected, and prepay transportation.

Defective parts replaced at no charge must be returned to your dealer or Ranger Products™ within 60 days of the date that the replacement parts are shipped; otherwise, you must pay for the replacement parts at the current selling price.

## SHIPPING DAMAGE

**If any damage is found, notify your carrier immediately and save all crating materials for the carrier's inspector to examine. Failure to promptly report damage could result in denial of your claim.**

A trucking company's procedure for handling damage is as follows:

1. Immediately send out an inspector. An inspection report is filled out on the spot, a copy of which is given to the customer.
2. The **customer** has to call the carrier to request a claim form.
3. The customer mails in the claim form.
4. The claim usually takes two (2) months to process.

**If a unit is seriously damaged, your Ranger Products dealer may be able to intervene, requesting that the damaged unit be returned and a new unit delivered.**



If no damage is found, remove the bolts or steel bands which fasten the machine to the skid. The machine may be fastened on two or all four corners. Remove the machine from the skid being careful not to damage the casters on the underside.

## IMPORTANT SAFETY TIPS

- ◆ Transmission Jacks are for removing, transporting and installing transmissions or specified components only.
- ◆ **DO NOT** lift or support a vehicle with a transmission jack.
- ◆ Be sure to read all warning labels and the instructions manual prior to operation of this equipment.
- ◆ Keep hands and body clear of all pinch points.
- ◆ Use the Jack for loading under rated capacity only. **DO NOT OVERLOAD.**
- ◆ Ensure the Jack is set on a solid level surface that can sustain the load. Use on other that hard surfaces can result in instability and loss of the load.
- ◆ Be sure that the Jack is well supported before operation.
- ◆ Keep transmission low when rolling across the floor.
- ◆ Keeps chains secured until ready to remove transmission form jack. **DO NOT** tow loaded jack by hydraulic pump handle.
- ◆ Always maintain a clean work area. Keep visitors and especially children away from work area.
- ◆ This Transmission Jack is to be operated by professional personnel only. Operation by non-professional personnel may result in injury and /or property damage.

## SPECIFICATIONS / FEATURES

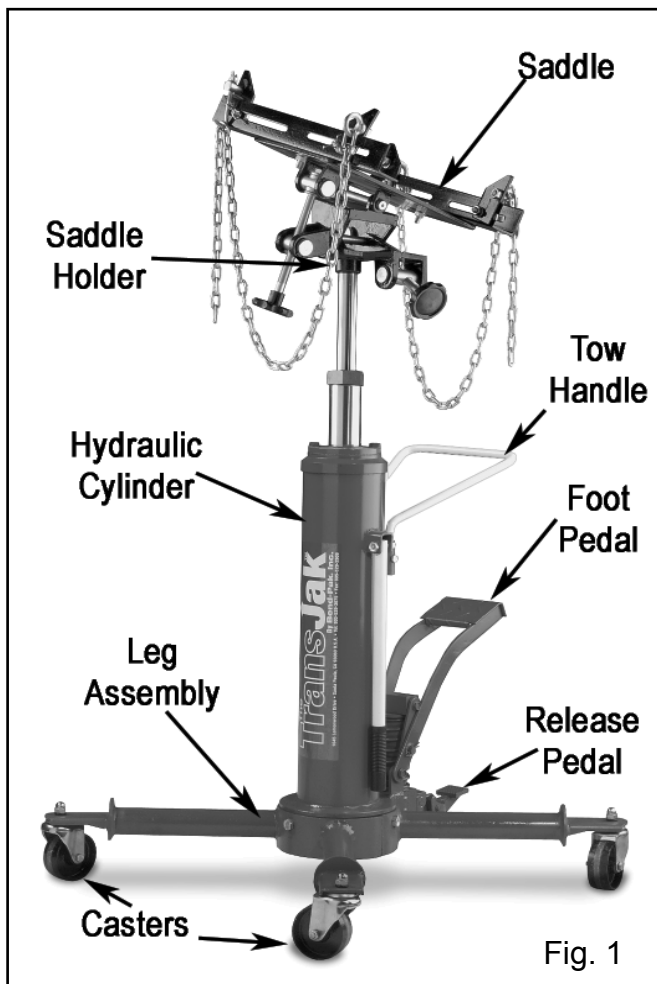
Model	Capacity		Lowered Height	Raised Height	Base Dimensions	Shipping Weight
	1st Stage	2nd Stage				
RTJ-1	2,000 lbs 907 Kg	1000 Lbs 454 g	37" 940mm	79.5" 2019mm	39" x 39" 991mm x 991mm	214 Lbs 97 Kgs
RTJ-660	660 Lbs 229 Kg		51" 1295 Kg	73" 1864mm	30" x 30" 762mm x 762mm	92 Lbs 42 Kg
RTJ-1100	1,100 Lbs 499 Kg		45" 1143mm	72" 1829	24" x 24" 610mm x 610mm	115 Lbs 52 Kg
RTJ-3000	3,000 lbs 1361 Kg	2,000 Lbs 907 Kg	37" 940mm	79.5" 2019mm	45" x 45" 1,143mm x 1,143mm	232 Lbs 105 Kg

# ASSEMBLY INSTRUCTIONS

Refer to the section for your specific model's instructions.

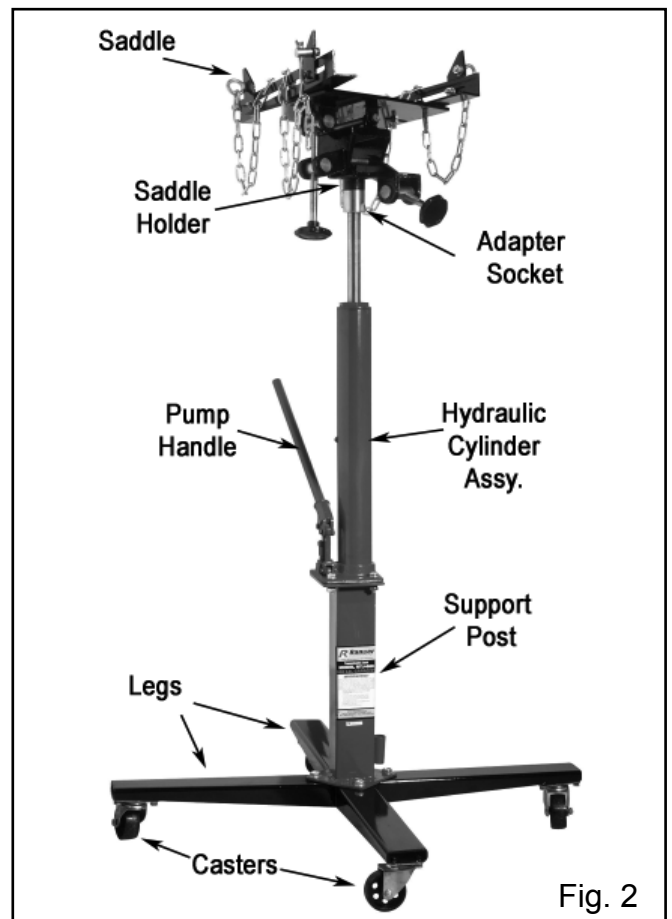
## RTJ-1

1. Locate the two, "leg assemblies", and attach each assembly to the bottom of the Hydraulic Cylinder using the three bolts and washers.
2. Attach the Casters to the ends of each leg, one at a time. Finger tighten the Casters until all four are attached. Then properly tighten using a wrench.
3. Screw the Saddle Holder onto the shaft of the Hydraulic Cylinder and tighten the "set screw" located on the Saddle Holder.
4. Attach the Tow Handle and the Steering Handle.
5. Attach the Pins and chains to the Saddle.



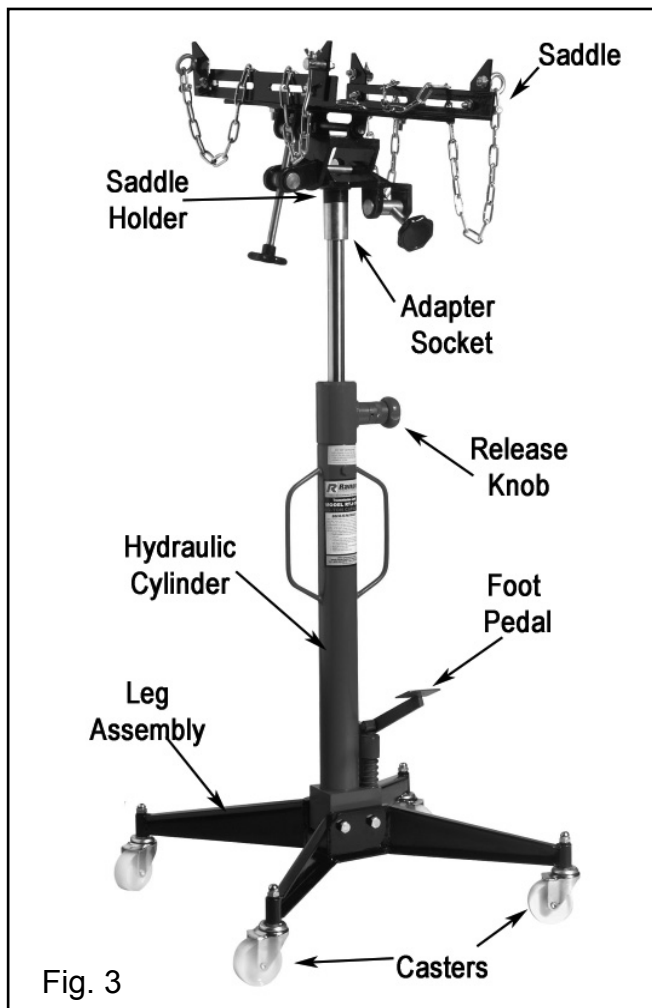
## RTJ- 660

1. Locate the four Casters and attach them to the bottom of the ends of the four Legs. Use the four nuts and bolts with the washers for each leg, ensure they are well tightened.
2. Attach each Leg to the bottom Support post using the hex head bolts.
3. Set the Hydraulic Cylinder Assembly on the top plate of the Support Post and fasten the four bolts with the washers and nuts.
4. Slide the adapter socket (on saddle neck) onto the shaft of the cylinder and fasten the "set screw" on the adapter.
5. Simply insert the Pump Handle into the Pump Handle socket.
6. Attach the Pins and chains to the Saddle.



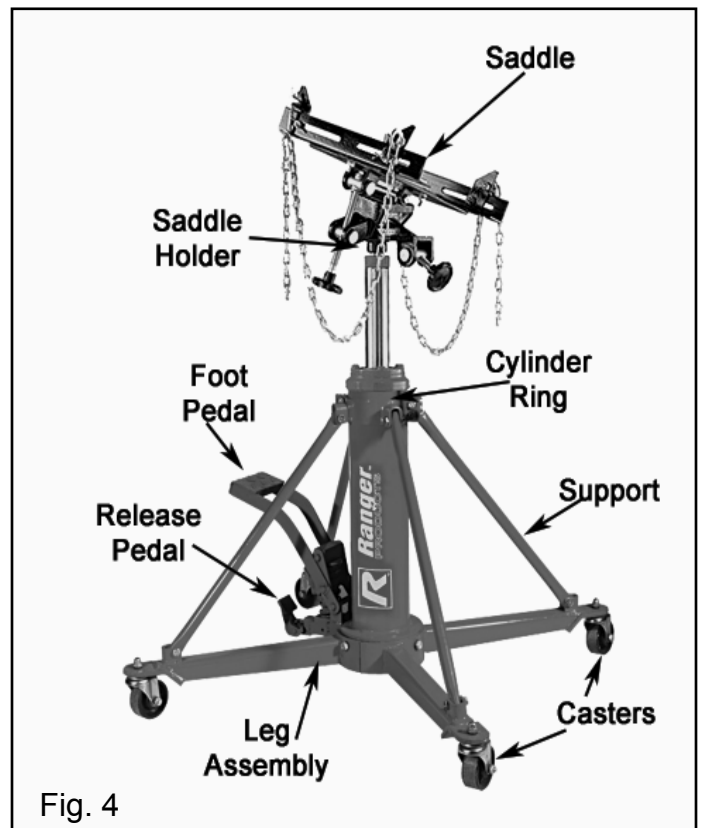
## RTJ-1100

1. Attach the two, Leg Assemblies to the block on Hydraulic Cylinder Assembly, using the hex head bolts and washers.
2. Locate the four Casters and attach them to under carriage through the holes provided. Finger tighten the nuts and once all the Casters are attached, properly tighten all nuts.
3. Simply slide the Adapter Socket (on Saddle Neck) onto shaft of the hydraulic ram and tighten the "set screw" holding the saddle in place.
4. Attach the Pins and chains to the Saddle.



## RTJ-3000

1. Locate the two, Leg Assemblies, and attach each assembly to the bottom of the Hydraulic Cylinder using the three bolts and washers.
2. Attach the Casters to the ends of each leg, one at a time. Finger tighten the Casters until all four are attached. Then properly tighten using a wrench.
3. Screw the Saddle Holder onto the shaft of the Hydraulic Cylinder and tighten the set screw located on the holder.
4. Attach the two Cylinder Ring halves together and attach the four Supports to the Collar and the Leg Assemblies.
5. Attach the Pins and chains to the Saddle.



# OPERATING INSTRUCTIONS

1. With the vehicle elevated on lift, position jack beneath transmission, as nearly as possible to the transmission's center of weight or balance point.

Note: RTJ-660 ONLY, Ensure the hydraulic release valve is closed by turning it clockwise.



**CAUTION!**  
**DO NOT EXCEED THE MAXIMUM CAPACITY OF YOUR PARTICULAR MODEL.**

For additional copies or further information, contact:  
 BendPak, Inc. / Ranger Products  
 1645 Lemonwood Dr.,  
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 1-805-933-9970  
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 rangerproducts.com

2. Pump the jack to raise the Saddle close to the transmission.

Note the following to raise your Jack. See figures 1-4.

RTJ-1	Foot Pedal
RTJ-660	Foot Pedal
RTJ-1100	Pump Handle
RTJ-3000	Foot Pedal

3. Roll the Saddle side to side and tilt forward and backward as needed to firmly contact the bottom of the transmission.

4. Secure the transmission to the jack using the heavy duty chain anchors.

5. Before unbolting the transmission from the engine, support the engine with a jack stand or other appropriate device.

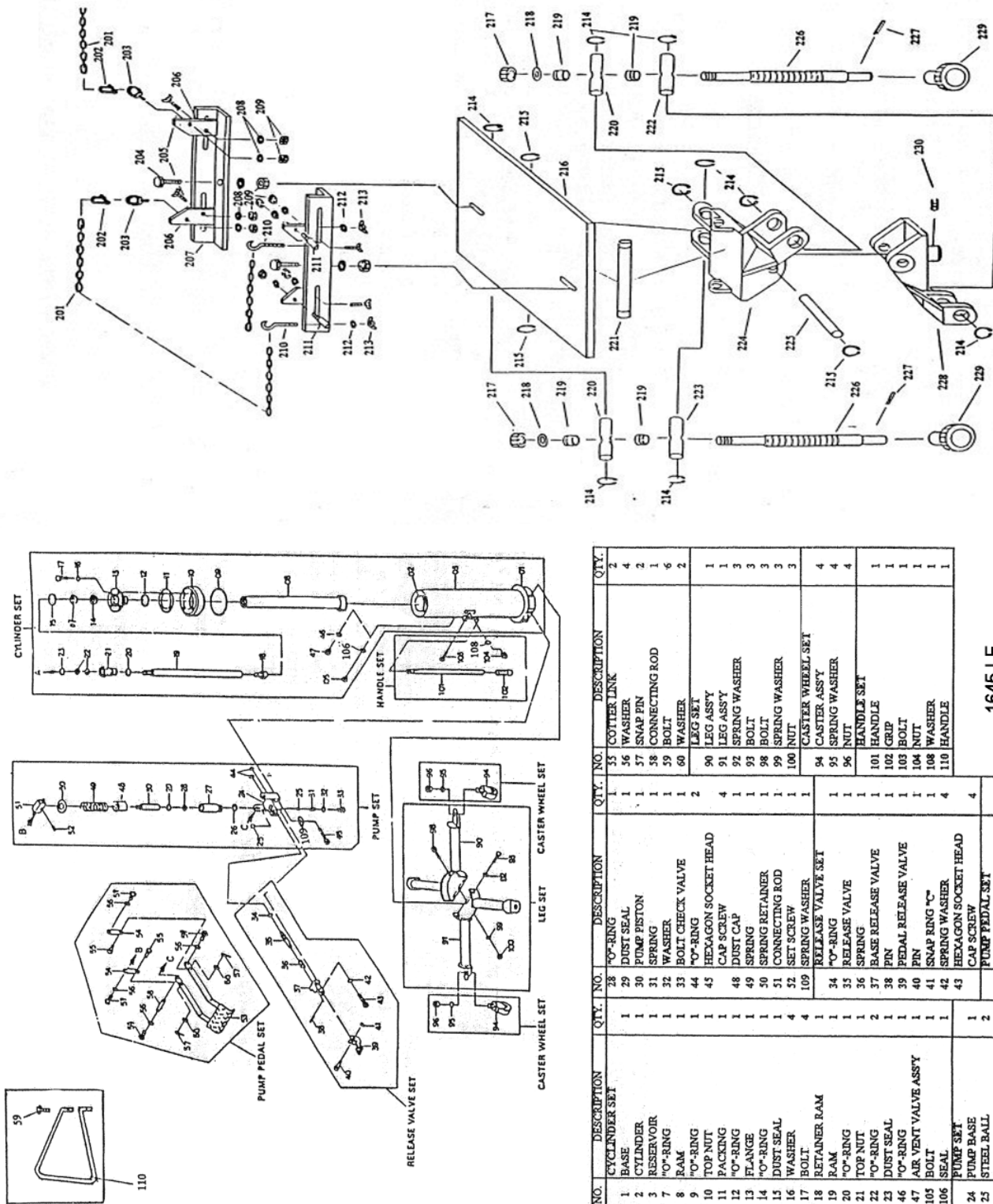
6. When all the connections to the vehicle have been uncoupled and the transmission is free, lower the hydraulic stage/saddle slowly using the hydraulic release mechanism.

Note the following to lower your jack. See figures 1-4.

RTJ-1	Foot Pedal
RTJ-660	Release Valve (Cylinder Base)
RTJ-1100	Release Knob (Cylinder Top)
RTJ-3000	Foot Pedal

Note: RTJ-660 Turn the release valve counter clockwise.  
 RTJ-1100 Turn knob clockwise.

# RTJ-1 Exploded View



## PARTS LIST

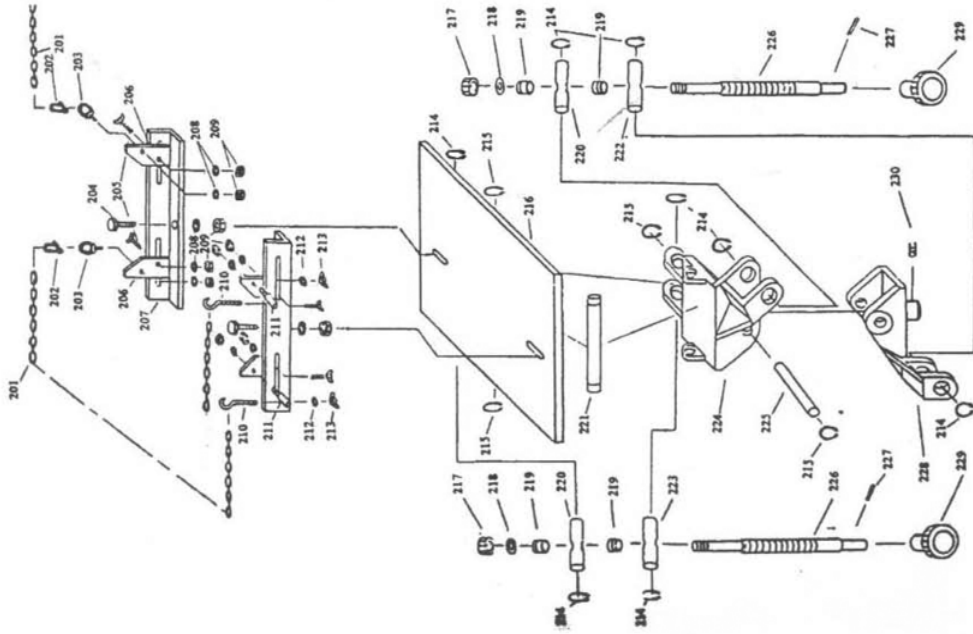
NO.	DESCRIPTION	QTY.
201	Chain	2
202	Shackle	2
203	Eye Bolt	2
204	Bolt M10*30	2
205	Wing Bolt	4
206	Stationary Plate	4
207	Angle Plate	2
208	Washer 10	12
209	Nut M10	12
210	Hook Bolt	2
211	Hook Pin	2
212	Washer 8	2
213	Wing Nut	2
214	Retaining Ring	8
215	Retaining Ring	4
216	Saddle Kit	1
217	Nut M10	2
218	Washer 10	2
219	Bearing	4
220	Stationary Rod	2
221	Connecting Rod	1
222	Stationary Rod	1
223	Stationary Rod	1
224	Tilting Saddle	1
225	Connecting Rod	1
226	Adjustable Screw	2
227	Spring Pin	2
228	Bottom Plate	1
229	Grip	2
230	Set Screw	1

NO.	DESCRIPTION	QTY.	NO.	DESCRIPTION	QTY.
1	CYLINDER SET	1	35	COVER LINK	2
2	BASE	1	36	WASHER	4
3	CYLINDER	1	37	SNAP PIN	2
4	RESERVOIR	1	38	CONNECTING ROD	1
5	"O"-RING	1	39	BOLT	6
6	"O"-RING	1	40	WASHER	2
7	"O"-RING	1	90	LEG ASSY	1
8	RAM	1	91	LEG ASSY	1
9	TOP NUT	1	92	SPRING WASHER	3
10	"O"-RING	1	93	BOLT	3
11	PACKING	1	98	BOLT	3
12	"O"-RING	1	99	SPRING WASHER	3
13	FLANGE	1	100	NUT	3
14	"O"-RING	1	94	CASTER WHEEL SET	4
15	DUST SEAL	1	95	CASTER ASSY	4
16	WASHER	4	96	SPRING WASHER	4
17	BOLT	1	97	NUT	4
18	RETAINER RAM	1	101	HANDLE SET	1
19	RAM	1	102	HANDLE	1
20	"O"-RING	1	103	GRIP	1
21	TOP NUT	1	104	BOLT	1
22	"O"-RING	2	105	PIN	1
23	DUST SEAL	1	41	SNAP RING "C"	1
24	"O"-RING	1	42	SPRING WASHER	1
25	DUST SEAL	1	43	HEXAGON SOCKET HEAD	1
26	"O"-RING	1	34	RELEASE VALVE SET	4
27	PUMP CYLINDER	1	35	RELEASE VALVE	4
28	PUMP SET	1	36	SPRING	1
29	PUMP BASE	2	37	BASE RELEASE VALVE	1
30	STEEL BALL	1	38	PIN	1
31	PUMP PISTON	1	39	PEDAL RELEASE VALVE	1
32	WASHER	1	40	"O"-RING	1
33	LEG SET	1	41	BOLT	4
34	"O"-RING	1	42	SNAP RING "C"	1
35	RELEASE VALVE SET	1	43	HEXAGON SOCKET HEAD	1
36	"O"-RING	1	34	RELEASE VALVE SET	4
37	RELEASE VALVE	1	35	RELEASE VALVE	4
38	BASE RELEASE VALVE	1	36	SPRING	1
39	PEDAL RELEASE VALVE	1	37	BASE RELEASE VALVE	1
40	"O"-RING	1	38	PIN	1
41	BOLT	4	39	PEDAL RELEASE VALVE	1
42	SNAP RING "C"	1	40	"O"-RING	1
43	HEXAGON SOCKET HEAD	1	41	BOLT	4
44	RELEASE VALVE SET	1	42	SNAP RING "C"	1
45	RELEASE VALVE	4	43	HEXAGON SOCKET HEAD	1
46	SPRING	1	34	RELEASE VALVE SET	4
47	BASE RELEASE VALVE	1	35	RELEASE VALVE	4
48	PIN	1	36	SPRING	1
49	PEDAL RELEASE VALVE	1	37	BASE RELEASE VALVE	1
50	"O"-RING	1	38	PIN	1
51	BOLT	4	39	PEDAL RELEASE VALVE	1
52	SNAP RING "C"	1	40	"O"-RING	1
53	HEXAGON SOCKET HEAD	1	41	BOLT	4
54	PUMP PISTON	1	42	SNAP RING "C"	1
55	LEG LINK	2	43	HEXAGON SOCKET HEAD	1

1645 LE

# RTJ - 660 Exploded View

## EXPLODED DRAWING OF SADDLE

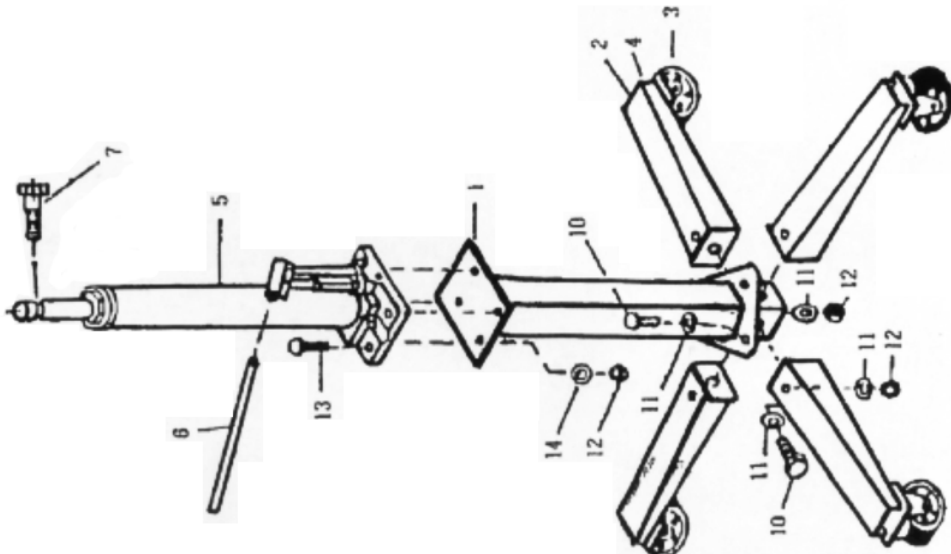


**PARTS LIST**

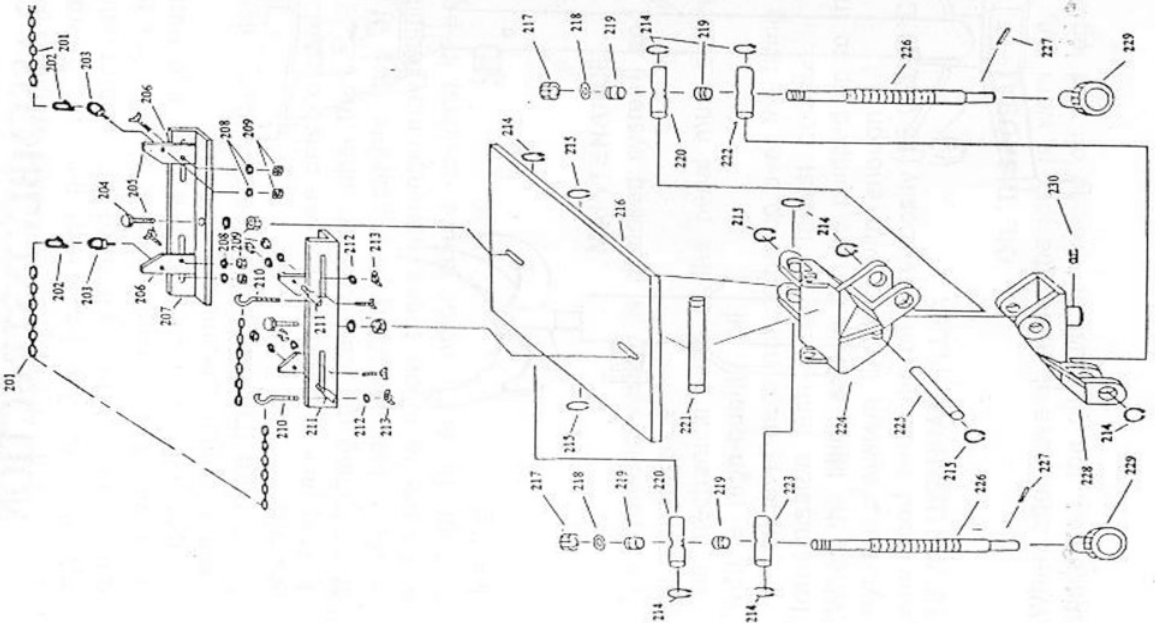
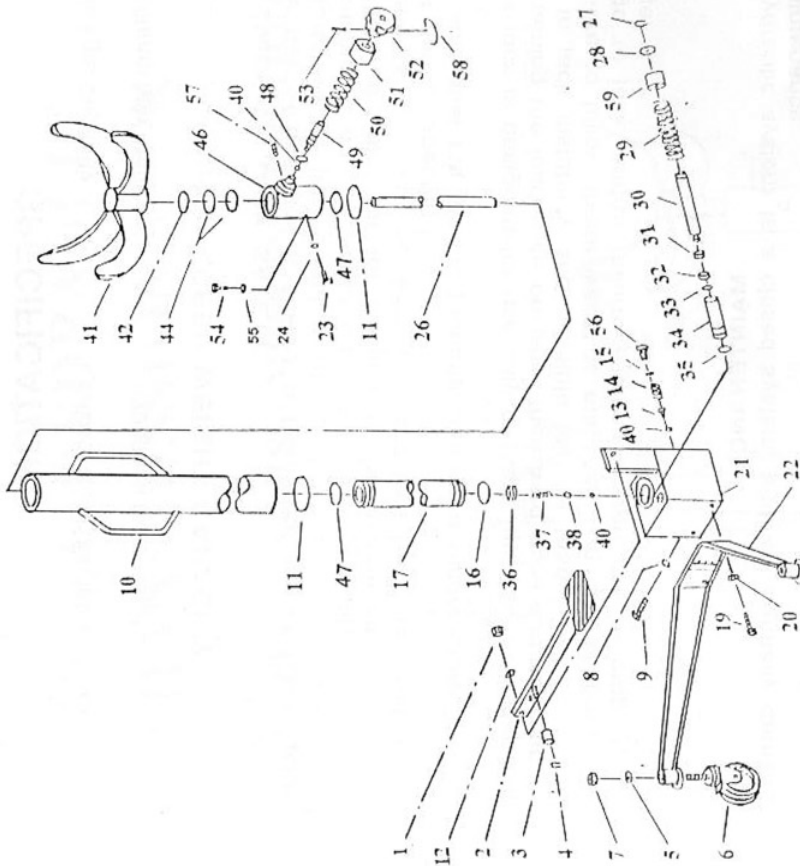
NO.	DESCRIPTION	QTY.
201	Chain	2
202	Shackle	2
203	Eye Bolt	2
204	Bolt M10*30	2
205	Wing Bolt	4
206	Stationary Plate	4
207	Angle Plate	2
208	Washer 10	12
209	Nut M10	12
210	Hook Bolt	2
211	Hook Pin	2
212	Washer 8	2
213	Wing Nut	2
214	Retaining Ring	8
215	Retaining Ring	4
216	Saddle Kit	1
217	Nut M10	2
218	Washer 10	2
219	Bearing	4
220	Stationary Rod	2
221	Connecting Rod	1
222	Stationary Rod	1
223	Stationary Rod	1
224	Tilting Saddle	1
225	Connecting Rod	1
226	Adjustable Screw	2
227	Spring Pin	2
228	Bottom Plate	1
229	Cap	2
230	Set Screw	1

**PARTS LIST**

NO	DESCRIPTION	QTY.
1	Support Post	1
2	Legs	4
3	Caster	4
4	Nut&Bolt	4
5	Long Jack	1
6	Jack Handle	1
7	Bolt	1
10	Hex Bolt	8
11	Washer	8
12	Nut	12
13	Bolt	4
14	Spring Washer	4



# RTJ-1100 Exploded View



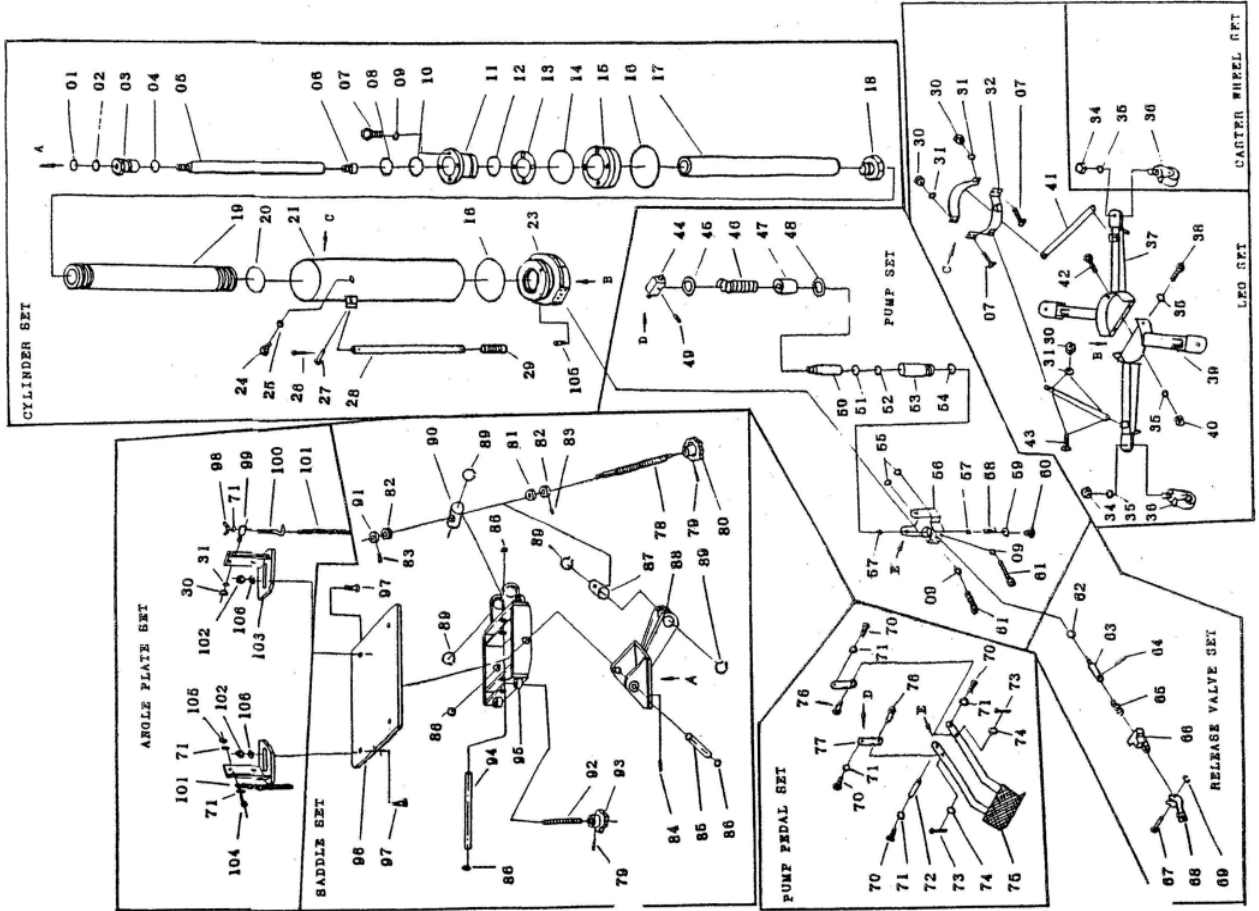
## PARTS LIST

NO.	DESCRIPTION	QTY.
201	Chain	2
202	Shackle	2
203	Eye Bolt	2
204	Bolt M10*30	2
205	Wing Bolt	4
206	Stationary Plate	4
207	Angle Plate	2
208	Washer 10	12
209	Nut M10	12
210	Hook Bolt	2
211	Hook Pin	2
212	Washer 8	2
213	Wing Nut	2
214	Retaining Ring	8
215	Retaining Ring	4
216	Saddle Kit	1
217	Nut M10	2
218	Washer 10	2
219	Bearing	4
220	Stationary Rod	2
221	Connecting Rod	1
222	Stationary Rod	1
223	Stationary Rod	1
224	Tilting Saddle	1
225	Connecting Rod	1
226	Adjustable Screw	2
227	Spring Pin	2
228	Bottom Plate	1
229	Grp	2
230	Set Screw	1

NO.	PART NAME	QTY.	NO.	PART NAME	QTY.	NO.	PART NAME	QTY.
1	Nut M10	1	17	Cylinder	1	38	Ball 9.5	1
2	Pedal	1	19	Bolt M10*20	4	40	Ball 1/4"	2
3	Bush	1	20	Washer 10	4	41	Fork or ADT	1
4	Circlip 12	1	21	Pump	1	42	Dust Ring	1
5	Washer 12	4	22	Under Carriage	2	44	O-Ring	2
6	Swivel Wheel	4	23	Bolt	1	46	Cylinder Head	1
7	Nut M12	4	24	O-Ring	1	47	O-Ring	1
8	O-Ring	1	26	Piston	1	48	O-Ring	1
9	Screw	1	27	Circlip 16	1	49	Release Rod	1
10	Reservoir	1	28	Washer	1	50	Spring	1
11	O-Ring	2	29	Spring	1	51	Bush	1
12	Washer 10	1	30	Pump Piston	1	52	Release Knob	1
13	SAFETY VALVE	1	31	V-Ring	1	53	Split Pin	1
14	Spring Guide	1	32	Dust Ring	1	54	Bolt	1
15	Spring	1	33	O-Ring	1	55	Seal	1
16	O-Ring	1	34	Pump Unit	1	57	Screw M6*12	1
17	O-Ring	1	35	O-Ring	1	58	Circlip	1
18	Ball 1/4"	1	36	Screw	1	59	Bush	1
19	Screw	1	37	Spring	1			
20	O-Ring	1						



# RTJ - 3000 Exploded View



NO.	DESCRIPTION	QTY.
01	CYLINDER	1
02	DUST SEAL 42X7	1
03	"O"-RING 41X3.5	1
04	TOP NUT	1
05	"O"-RING 45X3.1	1
06	RAM	1
07	RETAINER RAM	1
08	BOLT M10X30	8
09	DUST SEAL	1
10	SPRING WASHER 10	4
11	"O"-RING 65X5.7	1
12	FLANGE	1
13	"O"-RING 65X3.1	1
14	PACKING	1
15	"O"-RING 85X3.1	1
16	TOP NUT	1
17	"O"-RING 135X5.7	2
18	RAM	1
19	RETAINER RAM	1
20	CYLINDER	1
21	RESERVOIR	1
22	J"-RING 80X5.7	1
23	BASE	1
24	AIR VENT VALVE ASSY	1
25	"O"-RING 16X2.4	1
26	SNAP PIN	1
27	PIN	1
28	HANDLE	1
29	GRIP	1
30	DUST PIPE	1
31	LEG SET	6
32	NUT M10	20
33	WASHER 10	2
34	HALF RING	4
35	NUT M12	10
36	SPRING WASHER 12	4
37	CASTER ASSY	1
38	LEG ASSY	3
39	BOLT M12X35	3
40	LEG ASSY	1
41	"NUT M12	3
42	LEG STAND	4
43	BOLT M12X35	5
44	BOLT M10X45	6
45	PUMP SET	1
46	CONNECTING ROD	1
47	SPRING RETAINER	1
48	SPRING	1
49	DUST PIPE	1
50	SPRING RETAINER	1
51	SET SCREW M8X10	1
52	PUMP PISTON	1
53	DUST SEAL	1
54	"O"-RING 30X3.1	1
55	"O"-RING 38X3.5	1
56	"O"-RING 14X2.4	2
57	PUMP BASE	1
58	BALL 8	2
59	SPRING	1
60	WASHER	1
61	SCREW	1
62	BOLT M10X55	4
63	RELEASE VALVE SET	1
64	"O"-RING	1
65	RELEASE VALVE	1
66	PIN	1
67	SPRING	1
68	BASE RELEASE VALVE	1
69	PIN	1
70	PEDAL RELEASE VALVE	1
71	SNAP RING	1
72	PUMP PEDAL SET	1
73	SCREW M8X12	4
74	WASHER 8	10
75	CONNECTING ROD	1
76	SNAP PIN	2
77	WASHER 14	2
78	PEDAL PUMP PISTON	1
79	COTTER LINK	2
80	LINK	2
81	SADDLE SET	1
82	ADJUSTABLE SCREW	1
83	SPRING PIN	5
84	GRIP	1
85	NUT M18	1
86	BEARING	2
87	SET SCREW M6X10	2
88	SET SCREW M8X10	1
89	CONNECTING ROD	1
90	CONNECTING ROD	1
91	CONNECTING ROD	1
92	CONNECTING ROD	1
93	CONNECTING ROD	1
94	CONNECTING ROD	1
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97	CONNECTING ROD	1
98	CONNECTING ROD	1
99	CONNECTING ROD	1
100	CONNECTING ROD	1
101	CONNECTING ROD	1
102	CONNECTING ROD	1
103	CONNECTING ROD	1
104	CONNECTING ROD	1
105	CONNECTING ROD	1



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