



SERVICE MANUAL

Upright Rammer

TV6

TV72

This manual is intended to give the instruction on how to disassemble the Tacom Brand Tamping Rammer, Model TV6 and TV72. Numbers in [] indicate the reference number of the components as shown in the attached exploded parts illustration.

1) Remove the Engine

PROCEDURE		TOOLS
1-1)	<p>Move the Hose Clamp [29] at the engine side from Fuel Hose [28].</p> <p>Attention!! <i>Close the Fuel Shut Off Valve before moving the Hose Clamp.</i></p>	Pliers
1-2)	Remove Fuel Hose [28] from the engine.	
1-3)	Remove the Throttle Wire [36] from the engine [1].	
1-4)	Remove four bolts [2] to remove the Recoil Guard [17] beneath the engine.	Wrench
1-5)	Remove two bolts [18] at the Engine Stay [16]	Wrench
1-5)	<p>Remove four nuts [8] at the engine.</p> <p>Attention!! <i>Put a piece of wood beneath the Ramming shoe to prevent the machine from tipping forward, as the removal of the engine will shift the center of gravity of the machine.</i></p>	Wrench
1-6)	Hold the engine firmly, and remove the engine from the machine.	

2) Remove Centrifugal Clutch from the Engine

PROCEDURE		TOOLS
2-1)	Place the engine on the work table.	
2-2)	While holding the Recoil Starter Knob of the engine firmly, remove the Nut [14] from the P.T.O. Shaft of the Engine	Wrench or Impact Wrench
2-3)	<p>Take out the Centrifugal Clutch from the P.T.O Shaft of the Engine.</p> <p>Attention!! <i>Do not attempt to run the engine when the clutch is removed from the Clutch Housing [42]. Otherwise, the Clutch will be damaged.</i></p>	

3) Remove the Operation Handle

PROCEDURE		TOOLS
3-1)	Loosen the screw at the Throttle Lever [35], and remove the Throttle Lever from the Operation Handle [38].	
3-2)	Loosen the Hose Band [37], and remove the Throttle Wire [45] from operation handle.	Pliers
3-3)	Remove the Fuel Tank [21] from the Operation Handle [38] by loosening the Bolt [31] and Nut [34]. Attention!! <i>Handle the remaining fuel in the Fuel Tank with extreme care.</i>	Wrench
3-4)	Remove the Bolts [39] at both side of the Operation Handle [38] to remove the Operation Handle off the Rubber Isolator [46].	Wrench
3-5)	Remove the Bolts [47] to remove the Rubber Isolator [46] from the Crank Case [49]	Wrench

4) Remove the Clutch Housing

PROCEDURE		TOOLS
4-1)	Remove Bolt [43], Spring Washer [44], and Washer [45], which holds the Clutch Housing [42] to the Pinion Shaft [62]	Socket Wrench
4-2)	Pull out the Clutch Housing [42] from the Pinion Shaft [62].	
4-3)	Remove the Key [66] from the Pinion Shaft [62].	

5) Dismantle the Crankcase

PROCEDURE		TOOLS
5-1)	Remove four Bolt [75] to take Crank Case [49] apart from Guiding Cylinder [73]. Attention!! <i>Take extra care when removing the last bolt, as the Guiding Cylinder will suddenly be lowered.</i>	Wrench
5-2)	Pull up the Crank Case [49] to expose the connecting part of Connecting Rod [67] and the Guide Joint [88].	
5-3)	Remove the Snap Ring [72].	Snap Ring Pliers

PROCEDURE		TOOLS
5-4)	Hold the Crank Case [49] firmly. Put a steel bar of 10mm diameter to the Piston Pin, and remove the Piston Pin [71] by hitting the Steel bar with a hammer. Attention!! <i>Pay attention to the alignment of the Rod Pin against the Connecting Rod.</i>	Steel Bar Hammer
5-5)	Remove the Crankcase Assembly from the machine, and put it on the work table.	
5-6)	Remove eight Bolts [52] to take the Crank Case Cover [50] off the Crank Case [49].	Wrench
5-7)	Remove the Shaft Collar [55] from the Crank Case [57].	Wrench Pliers
5-8)	Remove the Snap Ring [60] from the Crank Shaft [57].	Snap Ring Plier
5-9)	Remove the Crank Shaft [57] from the Crank Case [49] by hitting the Crank Shaft [57] from the engine side using a steel bar of 20mm diameter & 200mm length. Attention!! <i>Be sure to hit the Crank Shaft from the engine side.</i>	Steel Bar Hammer
5-10)	Remove the Connecting Rod [67] from the Crank Shaft [57].	
5-11)	Remove the Pinion Shaft [62] from the Crank Case [49] by hitting the Pinion Shaft [62] from the engine side using the steel bar of 20mm diameter & 200mm length.	Steel Bar Hammer

6) Remove the Guiding Cylinder

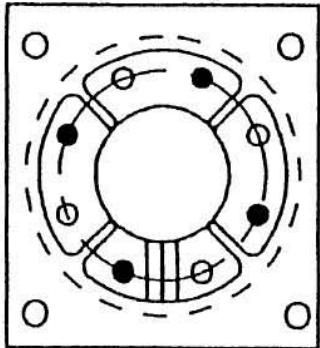
PROCEDURE		TOOLS
6-1)	Remove O Ring [74] from the Guiding Cylinder [73].	
6-2)	Remove the Bellows Stop Band [79] - Upper - and remove the Spacer [78]. Insert the tip of Screw Driver between the Guiding Cylinder [73] and Bellows [77], and move the tip along the guiding cylinder to take the Guiding Cylinder [73] apart from the Bellows [77]. Attention!! <i>Do not damage the Bellows.</i>	Screwdriver

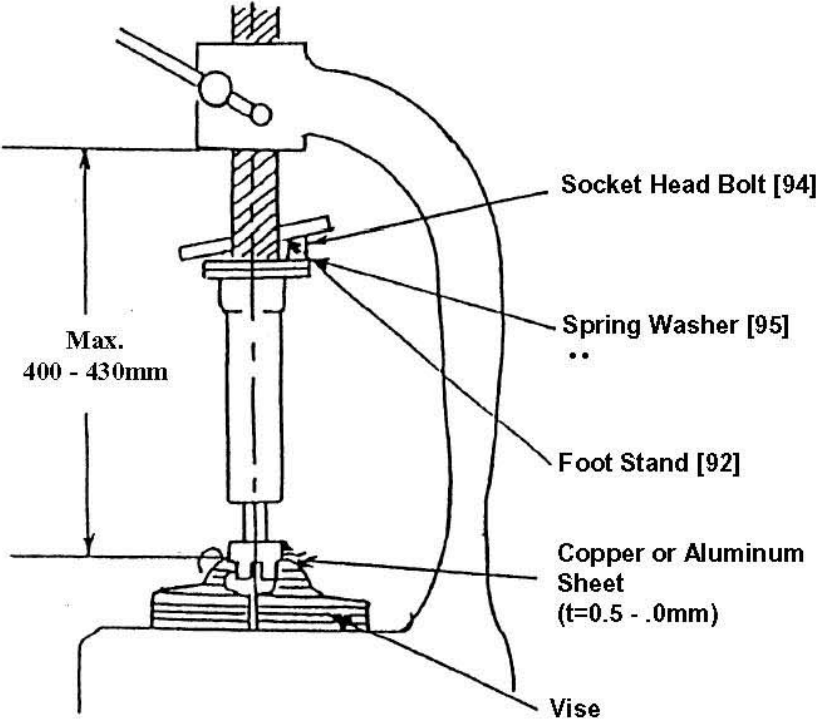
PROCEDURE		TOOLS
6-3)	Remove the Bellows [77] from the Protector [80] using the same method as that of removing the Bellows from the Guiding cylinder	

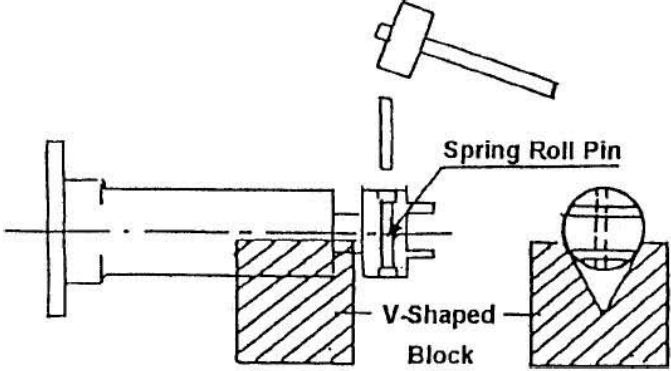
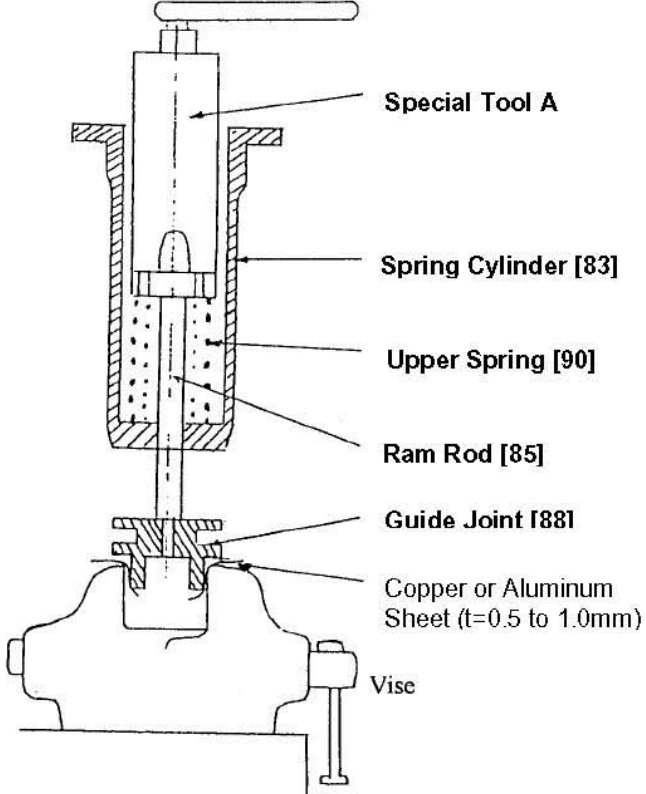
7) Remove the Ramming Shoe

PROCEDURE		TOOLS
7-1)	Drain the Oil in the Protector.	
7-2)	Remove the Nylock Nut [99] and Spring Washer [98].	Wrench
7-3)	Pull up the Spring Cylinder [83] while stepping on the Ramming Shoe [96] to remove the Spring Cylinder Assembly from the Ramming Shoe [96].	
7-4)	Turn the Ramming Shoe over, and hit the Bolt [97] to remove them from the Ramming Shoe [96]	

8) Dismantle the Spring Cylinder

PROCEDURE		TOOLS
8-1)	<p>While pressing the Protector [80] against Foot Stand [92], remove the Socket Head Bolt [93].</p> <p>Attention!! Remove only No. 93 Socket Head Bolt. Do not remove socket Head Bolt [94] at this time.</p> <p>Foot Stand as seen from bottom</p> <p>(FRONT)</p>  <p>● [93]...Remove ○ [94]...Don't remove</p>	Hex. Key Wrench

PROCEDURE	TOOLS
<p>8-2) Set the Spring Cylinder Assembly to the Press as shown below.</p>  <p>Max. 400 - 430mm</p> <p>Socket Head Bolt [94]</p> <p>Spring Washer [95] ..</p> <p>Foot Stand [92]</p> <p>Copper or Aluminum Sheet (t=0.5 - .0mm)</p> <p>Vise</p>	<p>Press Vise</p>
<p>8-3) Put a pressure on the Foot Stand, and remove Socket Head Bolt [94].</p>	<p>Hex. Key Wrench</p>
<p>8-4) Gradually relieve the pressure of the press.</p> <p>Attention!! <i>Pay extra care to relieve the pressure gradually until the inner spring is fully stretched.</i></p>	
<p>8-5) Remove the Foot Stand</p>	
<p>8-6) Remove the Lower Spring [91] from the Spring Cylinder [83].</p>	

PROCEDURE	TOOLS
<p>8-7) Lay the Spring Cylinder on a V-shaped Block, and knock off the Spring Roll Pin [89] from the Joint Guide [88], using a Steel Bar of 5.5 to 5.8mm diameter and a hammer..</p> 	<p>V-shaped Block Steel Bar Hammer</p>
<p>8-8) Removing the Upper Spring from the Spring Cylinder</p> <p>Set the Spring Cylinder Assembly as shown below.</p> 	<p>Special Tool (A) Vise</p>

PROCEDURE		TOOLS
8-9)	Rotate the Special Tool (A) to remove the Ram Rod [85] from the Guide Joint [88].	Socket Wrench
8-10)	Take out the Upper Spring [90] from the Spring Cylinder [83].	

The reassembly procedure is the reverse of the disassembly procedure. Clean all components with suitable solvent, and replace any worn parts at the time of reassembly.

Exploded Parts Drawing TV6 TV72

