

**POWER  
WEDGE**

# Users Guide



**A** **AMERICAN**  
RESCUE TECHNOLOGY INCORPORATED

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## INCLUDED IN SET:

- Power Wedge
- Hand Pump
- 10 Feet of Hose
- 3 Lb. Dead Blow Hammer
- Utility Bar
- Door Strap
- Molded Carrying Case
- Strap Plate
- (2) 5/16"-18 x 5/8" Cap Screws
- (2) Velcro Hose Straps

## POWER WEDGE

The Power Wedge is a multi-use, forcible entry tool, originally designed for opening entry doors. At American Rescue Technology we adapted this tool for many uses, including vehicle rescue, confined space rescue, structural collapse, machinery entrapment, machinery maintenance and many others. At American Rescue Technology we believe the time for "one tool, one job" is over. Multi-use tools are the future of the firefighting/law enforcement fields.

## TOOL & PERSONAL SAFETY CONSIDERATIONS

- Always wear protective clothing when working with the Power Wedge.
- Distribute force as evenly as possible over both spreading heads and all spreading surfaces.
- Insert spreading tips as far in as possible. Use dead blow hammer when appropriate.
- DO NOT use a metal hammer against Power Wedge body or heads. Use dead blow hammer provided with kit. Metal hammers could chip or cause damage to the Power Wedge.
- To reduce chances of tool failure, protect fittings on tools against unnecessary abuse.
- When using the Power Wedge to open doors, use the door strap when possible to keep the tool from falling and causing damage.

## MAINTENANCE REQUIREMENTS

**POWER WEDGE:** During regular maintenance cycles, check the couplers and adapters for tightness and clean. Keep dirt and other contaminants off of the couplers. Check the pushing heads for damage, clean if necessary. If you experience leaks in the hydraulic cylinder, contact American Rescue Technology.

**HOSE:** Check tightness of couplers and keep clean

**HAND PUMP:** Check tightness of couplers and clean. Clean and oil pumping mechanism when necessary. Check fluid level in hand pump. Stand hand pump on end, coupler side down, and remove phillips head screw from hand pump. With the power wedge retracted, the fluid level should be about one inch from the opening. Fill if necessary, fluid is available from your local dealer

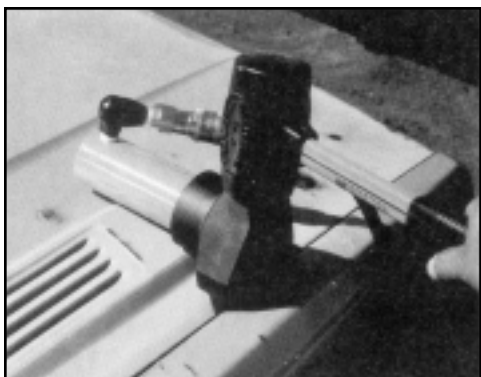
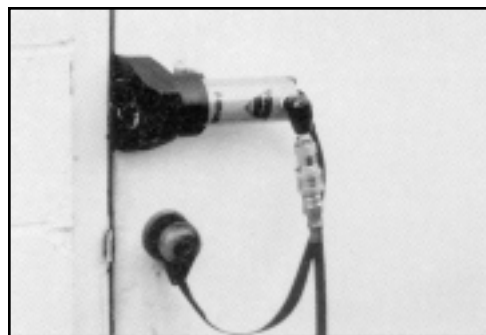


Location of fluid fill



## DOOR OPENING

Place the **Power Wedge** between the door and the door jam, near the locking mechanism. The dead blow hammer can be used to force it into place if necessary. Connect the door strap to the door handle (this will prevent the possibility of damage from the tool falling to the ground). Move away from the door and operate the hand pump. The tremendous power and over 4" of stroke will break most doors. **TIP:** Remember, doors always open to the side with the exposed barrel section of the hinge.



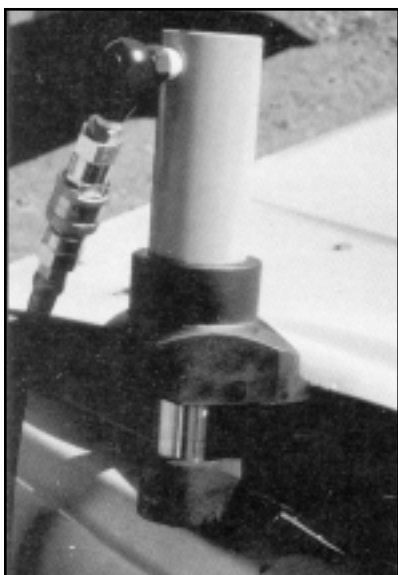
## GENERAL USE

The **Power Wedge** can be put into many tight places by using the dead blow hammer provided with the kit. The **Power Wedge** should only be hit in the back as shown. Keep the hoses and couplers out of the way, hitting the couplers could damage the swivel assembly.

## VEHICLE RESCUE

The **Power Wedge** is an effective tool for making purchase points on automobiles. By exposing Nader pins and door hinges, heavy hydraulic tools or air hammers can be used to remove the doors.

The **Power Wedge** is also valuable on car fires. It can be placed between the hood and the fender to make an access point for applying foam or water. The 10' hose keeps the operator from interfering with the attack crews.



## UNDERWATER USE

The **Power Wedge**, hand pump and hose are a closed system and can be used underwater in rescue and salvage operations. The hose should be connected to the **Power Wedge** and hand pump prior to being submerged. Afterward, the external pump mechanism should be dried and oiled.



## CONFINED SPACE RESCUE

When working in confined spaces, the **Power Wedge** can be used to free victims from wreckage or other obstacles. When lifting with the **Power Wedge**, always crib the object as you lift. This will protect the patient in case of a load shift or other unexpected problem. The **Power Wedge** can also be used in these situations to give clearance for airbags.

## MACHINERY MAINTENANCE

The **Power Wedge** can be used to lift heavy machinery for maintenance. Cribbing should be used while lifting the machinery and blocked into place before maintenance work is done. The **Power Wedge** can also be used to help level and position new machinery.



## FORCIBLE ENTRY

Removing barred or guarded windows can easily be done with the **Power Wedge**. Simply place the **Power Wedge** between the guard and a solid surface. Extending the **Power Wedge** should break the bolts, making the guard easy to remove. The quiet operation and remote use make this an effective tool for police and S.W.A.T. teams.

## SPECIFICATIONS

	<u>POWER WEDGE</u>	<u>KIT</u>
Weight:	14 Lbs.	37 Lbs.
Spreading Force:	20,000 Lbs.	NA
Spreading Distance:	4 1/8"	NA
Dimensions:	8.75" x 5.25" x 4.63"	18.75" x 16" x 7"
Hose Length:	NA	10'
	<u>HAND PUMP</u>	
Fluid Capacity:	16 oz.	NA
Oil Volume per Stroke		
1st Stage up to 200 PSI	.23 Cu. In.	NA
2nd Stage up to 10,000 PSI	.06 Cu. In.	NA
Max. Operating Pressure:	10,000 PSI	10,000



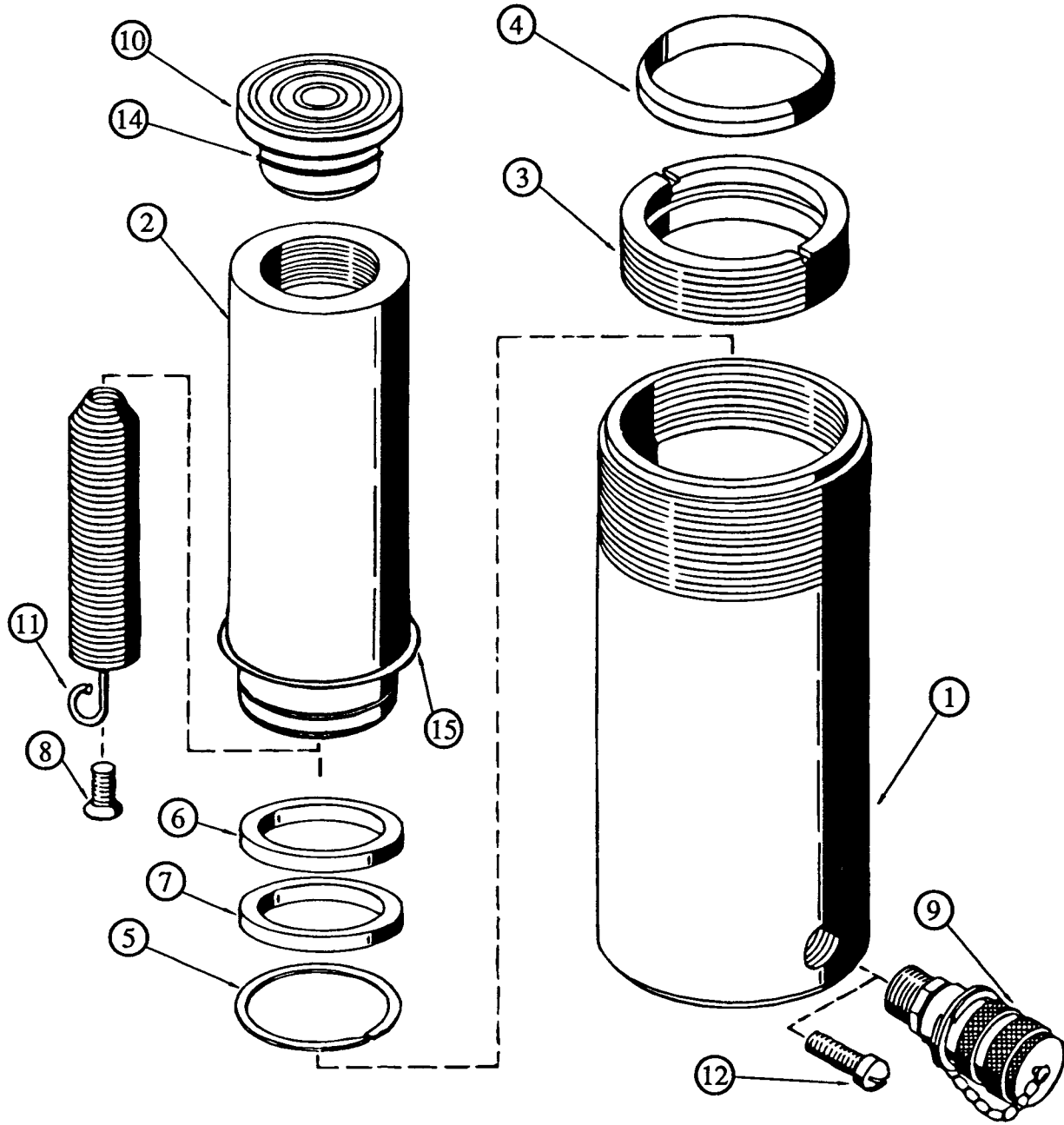
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Your Local Dealer:



# Repair Parts Sheet

Power Wedge Spring Return Cylinder R104  
Part # ART.330.109.0



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## Power Wedge R104 Cylinder Parts List

#	DESCRIPTION	QTY.	PART NUMBER	
			R102 13178	R104 13179
1	Housing	1	85926	85927
2	Piston	1	89079	89080
3	Retaining Nut	1	89077	89077
4	Wiper Ring	1	*	*
5	Retaining Ring	1	85716	85716
6	Bearing Ring	1	88973	88973
7	U-Seal	1	*	*
8	Screw	1	85729	85729
9	Ram Half Coupling	1	18211	18211
10	Load Cap Assembly	1	18348	18348
11	Spring	1	85676	86156
12	Screw	1	85942	85942
14	Load Cap O'Ring	1	5602208	5602208
15	Steel Stop Ring	1	88968	88968
	Packing Kit		54344	54344

## ENGINEERING DATA

R104 Capacity 10 Tons @ 8945 PSI On 2.236 Sq. In. Ram Area. Stroke 4 1/8"

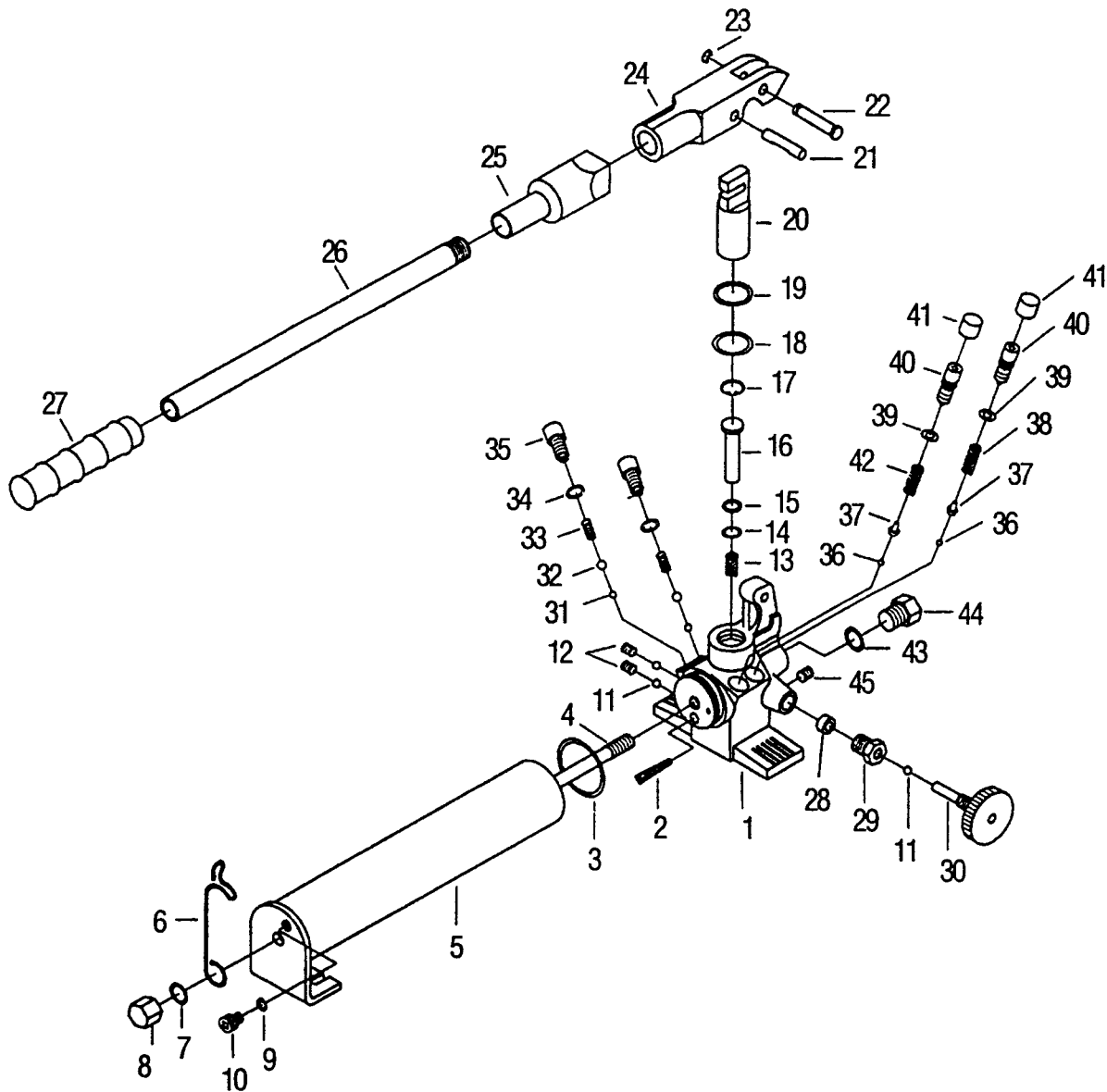


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# Repair Parts Sheet

Power Wedge Hand Pump P22  
Part # ART.330.110.0



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## Power Wedge P22 Hand Pump Parts List

ITEM NUMBER	DESCRIPTION	QTY.	CONTROL NUMBER P20	CONTROL NUMBER P22
1	Housing	1	N/A	N/A
2	Filter	1	6067001	6067001
3	O-Ring	1	*	*
4	Long Screw	2	6067046	6067046
5	Reservoir	1	6067047	6067047
6	Handle Clip	1	6067055	6067055
7	O-Ring	1	*	*
8	Nut	1	6067056	6067056
9	O-Ring	1	*	*
10	Air Vent/Fill Plug	1	6067057	6067057
11	Steel Ball	4	6067010	6067010
12	Plug	2	6067011	6067011
13	Spring	1	6067062	6067062
14	O-Ring	1	*	*
15	Back Up Ring	1	*	*
16	Lower Piston	1	<b>6067060</b>	6067018
17	Snap Ring		<b>6067054</b>	6067019
18	O-Ring	1	*	*
19	Back Up Ring	1	*	*
20	Upper Piston	1	<b>6067058</b>	6067022
21	Piston Pin	1	6067028	6067028
22	Socket Pin	1	6067027	6067027
23	Snap Ring	1	6067026	6067026
24	Socket	1	6067023	6067023
26	Handle	1	6067024	6067024
27	Handle Grip	1	6067025	6067025
28	Release Valve Packing	1	*	*
29	Release Nut	1	6067038	6067038
30	Release Valve	1	6067039	6067039
31	Steel Ball	2	6067012	6067012
32	Steel Ball	2	6067013	6067013
33	Outlet Ball Spring	1	6067049	6067049
34	Copper Washer	1	6067014	6067014
35	Bolt	1	6067015	6067015
36	Steel Ball	1	6067034	6067034
37	Pin	1	6067033	6067033
38	H.P. Spring	1	<b>6067061</b>	6067032
39	O-Ring	1	*	*
40	Relief Adjuster	1	6067029	6067029
42	L.P Spring	1	<b>6067059</b>	6067031
44	3/8 NPT Bolt Plug	1	6067035	6067035
45	Plug	1	6067	6067
	Packing Kit	1	<b>54148</b>	54149

\* Items included in packing kit