

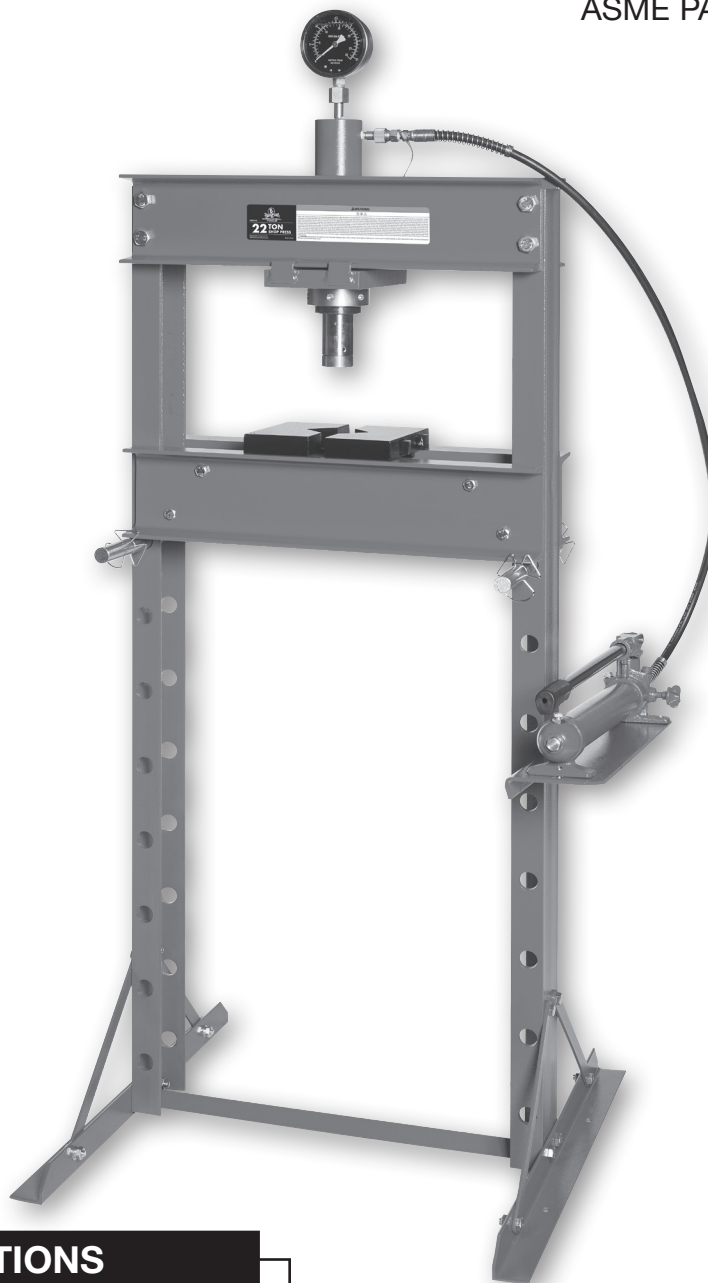


CSESP22T

22-Ton Capacity Shop Press

OPERATING MANUAL • WARNING INFORMATION • PARTS LIST

Manufactured to comply with the
ASME PASE-2019 Safety Standard



SPECIFICATIONS

Maximum Capacity	22-Ton
Overall Frame Height	59"
Throat Height	0" - 38"
Throat Width	21-1/4"
Ram Stroke	7-1/4"
Distance Between Bed Rails	4-1/4"
Frame Width	25-1/4"
Base Depth	27-1/2"
Shipping Weight	246-Lbs.



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WARNING INFORMATION



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: TO REDUCE THE RISK OF INJURY, USER MUST READ INSTRUCTION MANUAL BEFORE USING PRODUCT. SAVE THESE INSTRUCTIONS.

It is the responsibility of the owner to make sure all personnel read this manual prior to using this shop press. It is also the responsibility of the shop press 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 Cornwell 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.

THE NATURE OF HAZARDOUS SITUATIONS

This product must only be used for the removal and installation of bearings on shafts, and the removal and straightening of components. Do not use this product for any other purpose. The use of automotive service and maintenance devices is 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 press.
 - Wear eye protection that meets ANSI Z87.1 and OSHA standards (users and bystanders).
 - Visual inspection of the shop press should be made before use, checking for signs of cracked welds, bent bed pins, loose or missing bolts, leaks, or any other structural damage. Corrections must be made before using the press.
 - 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.
 - Parts being pressed may splinter, shatter, or be ejected from the press at a dangerous rate of speed. Because there are a variety of press applications, it is the responsibility of the press owner to provide adequate guards, eye protection and protective clothing to the press operator.
 - Do not go near leaks. High pressure hydraulic fluid can puncture skin and cause serious injury, gangrene, or death. If injured, seek emergency medical help as immediate surgery is required to remove the fluid.
 - Prior to use make sure the press is securely anchored to a concrete floor.
 - Keep hands, arms, feet, and legs out of work area. Accidental slippage can result in personal injury.
 - Always use an accurate force gauge to measure pressing force.
 - Do not exceed the rated capacity or tamper with the pressure/force settings. When attachments and adapters are used the rated capacity of the system shall be no greater than the rated capacity of the lowest rated component or combination of components that make up the system.
 - Avoid off-center loads. Offset loads can damage ram and may cause load to eject at a dangerous rate of speed. Do not use any spacer or extender between the press ram plunger and the item being pressed. If there is not enough ram stroke, adjust the height of the movable bolster.
 - Remove all loads from movable bolster before attempting to adjust bolster height. Beware of possible falling bolster.
 - Press only on loads supported by movable bolster and press plates included. Do not support loads on floor or press frame legs.
 - When using any accessories such as press plates or arbor plates, be certain they are centered on the movable bolster and in full contact with both sides of the bolster.
 - Before applying load, be certain all movable bolster supporting pins are fully engaged. Verify lift cables (if equipped) are slack before pressing on the bolster.
 - Always use a bearing shield when pressing bearings.
 - Use caution when positioning work to be pressed to ensure the item to be pressed cannot be ejected at a dangerous rate of speed.
 - Release hydraulic pressure before loosening any fittings.
 - Maintain proper hydraulic fluid levels.
 - Failure to heed and understand these markings may result in serious or fatal personal injury and/or property damage.
- WARNING:** This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.





CONSEQUENCES OF NOT AVOIDING HAZARDOUS SITUATIONS

⚠ WARNING

Failure to read this manual completely and thoroughly, understand its OPERATING INSTRUCTIONS, SAFETY WARNINGS, MAINTENANCE INSTRUCTIONS and not comply with them, and neglecting the METHODS TO AVOID HAZARDOUS SITUATIONS could cause accidents resulting in serious or fatal personal injury and/or property damage.

SETUP

⚠ 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 6 to identify shop press components.
2. Loosely assemble the upper beams (#10) to the one post (#20) at one end with the bolts (#9), washers (#11), spring washers (#12) and nuts (#13) as shown in the exploded view drawing. Slide the ram plate (#7) on the beams (#10). Loosely assemble the other ends of the upper beams (#10) to the other post (#20). All hardware will be tightened at a later time.
3. Place the lower cross member (#26) between the two posts (#20) so the holes at either end of the cross member line up with the holes in the bottom of the posts. Align the holes in the feet (#21) with the same holes in the bottom of the posts (#20) as shown in the exploded view drawing. Secure the feet, posts and lower cross member together using the bolts (#25), washers (#22), spring washers (#23) and nuts (#24).
4. The four supports (#34) are used to keep the posts (#20) perpendicular to the feet (#21) when installed. Install one end of the supports (#34) to the holes in the posts (#20) with the bolts (#33), washers (#14), spring washers (#15) and nuts (#16). Do not tighten until later. Install the other ends of the supports (#34) to the feet (#21) with the same hardware (#33, 14, 15 and 16).
5. Tighten all hardware mentioned in steps 1 through 4 making sure the feet (#21) are flat on the floor and posts (#20) are perpendicular to the floor.
6. Secure the pump assembly plate (#31) to the post (#20) with the bolts (#36), washers (#22), and nuts (#24) as shown in the exploded view drawing. The oval hole in the pump assembly plate (#31) should face towards the operating side of the press.
7. The pump (#32) must be secured to the pump assembly plate (#31) with the washers (#30) and bolts (#29).
8. Screw the upper round nut (#6) all the way on the threads of the ram assembly (#3). Insert the end of the ram (#3) through the hole in the ram plate (#7) until the upper round nut (#6) rests on top of the ram plate (#7).
9. The threads of the ram assembly (#3) should be exposed below the ram plate (#7). Screw on the lower round nut (#8) on the ram threads just until the nut engages all the threads. Raise the ram up until the top of the lower round nut (#8) is up against the bottom of the ram plate (#7) and then screw down the upper round nut (#6) until plate (#7) is sandwiched between the upper and lower round nuts. Tighten set screws in the upper and lower round nuts.
10. Insert the nylon ring (#2) in the fitting on top of the ram assembly (#3) and install the gauge (#1) in the fitting. Tighten the gauge in the fitting so the face of the gauge is pointing towards the operating side of the press.
11. Install the coupler at the end of the oil hose (#39) in the coupler of the ram assembly (#3) and tighten by hand only.
12. Install the adaptor (#5) in the bottom of the ram assembly (#3) and tighten the screw (#4).
13. Tilt the work bed (#18) so that each end will straddle the posts (#20). Raise the work bed to the desired height and closest to the holes in the posts (#20). Insert the pins (#19) through the holes in the posts (#20) and secure the pins in the holes by inserting the clips (#35) in the ring grooves of the pins (#19). The work bed (#18) can now rest on the pins (#19).
14. If the back end of the pump (#32) is equipped with a fill screw (#38) that also serves as a breather for the pump's reservoir, turn the screw counterclockwise until it stops.
15. Sometimes during shipping and handling, air may become trapped in the hydraulic system and cause the pump to malfunction or not achieve a full pump stroke.

PURGING AIR FROM THE HYDRAULIC SYSTEM:

- a. On the side of the pump (#32) is a knob that must be turned clockwise all the way until it stops in order to extend the ram (#3) during the pumping operation. Turn the knob counterclockwise two full rotations from its stop position. Install the pump handle (#37) in the pump's handle receiver and operate the pump 10 full incremental pump strokes.
- b. Turn the knob clockwise until it stops. Activate the pump to see if the ram extends correctly.
- c. Repeat steps a through b until all of the air is purged out of the system.

-Save these instructions-



OPERATION

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

CHECK YOUR LOCAL, STATE AND FEDERAL REGULATIONS REGARDING THE SAFE USE OF THIS PRESS.

1. Prior to use, the press feet (#21) shall be firmly anchored to a concrete floor to prevent movement and tipping of the press while it is being used.
2. Evaluate the work to be accomplished in order to make full use of the ram assembly (#3) stroke. Consideration to press accessories used in conjunction with the component to be worked on should determine the work height of the work bed (#18).
3. Make sure the work bed (#18) is free of any accessories, work pieces and tools before raising or lowering the work bed. The work bed is light enough to be raised and lowered by hand. Once the work bed (#18) is at its desired work height, install the pins (#19) in the post (#20) holes closest to the underside of the work bed. Make sure the pins (#19) are fully engaged in the parallel flanges of the press's posts (#20).
4. Make sure the ram assembly is completely retracted at this time by turning the knob on the side of the pump (#32) in a counterclockwise direction. Assemble the work setup on the work bed (#18) so that it is secure, stable and the ram assembly is properly aligned with the part to be pressed so it makes for a straight vertical operation.
5. Install proper guarding that provides adequate protection against any flying parts and use a bearing shield if it applies to the application.
6. Make sure that goggles and all protective clothing are worn at this time and clear the press work area of bystanders before using.
7. Turn the knob on the side of the pump (#32) in a clockwise direction until it stops and slowly activate the pump handle until the ram (#3) meets the load. Continue to slowly pump the handle to make sure the setup is still stable and the ram (#3) is pushing straight and vertical. Discontinue pumping if the setup or vertical ram travel looks compromised. Release the ram by turning the knob on the side of the pump (#32) counterclockwise and make any required setup changes before pumping again. Make sure to read the gauge (#1) intermittently so the force does not exceed the lowest rated capacity press accessory, plunger or adapter being used.
8. After the work has been completed, retract the ram all the way, remove everything off the top of the work bed (#18) and raise the work bed off the top of the pins (#19). The pins (#19) can be removed and work bed (#18) moved to another height. Always support the work bed (#18) with pins (#19). Never leave the press unattended without the pins (#19) supporting the work bed (#18).

PREVENTATIVE MAINTENANCE

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

1. Any press found to be inoperable or not operating according to its original design as a result of worn parts due to lack of lubrication or adjustment, air/hydraulic system (if applicable) contaminated with water, rust and/or foreign materials from the air supply or other outside source is not eligible for warranty consideration.
2. The press must be anchored to a concrete floor and placed in a well protected area where it will not be exposed to inclement weather, corrosive vapors, abrasive dust, or any other harmful elements.
3. Check for hydraulic leaks and tighten, repair or replace components before using.
4. Use a general purpose grease to lubricate the pump linkage on the pump (#32).
5. It should not be necessary to refill or top off the pump's hydraulic fluid reservoir unless there is an external leak. An external leak requires immediate repair by a qualified hydraulic repair mechanic who is familiar with the press.

⚠ WARNING In order to prevent seal damage and press failure, never use alcohol, hydraulic brake fluid or transmission oil in the press's hydraulic system. Use hydraulic jack oil.

6. Do not attempt to make any hydraulic repairs unless you are a qualified hydraulic repair person that is familiar with this press. Repair by an authorized service center is recommended.

-Save these instructions-



INSPECTION

⚠ WARNING Failure to follow these Inspection instructions may result in serious injury or death, and/or property damage.

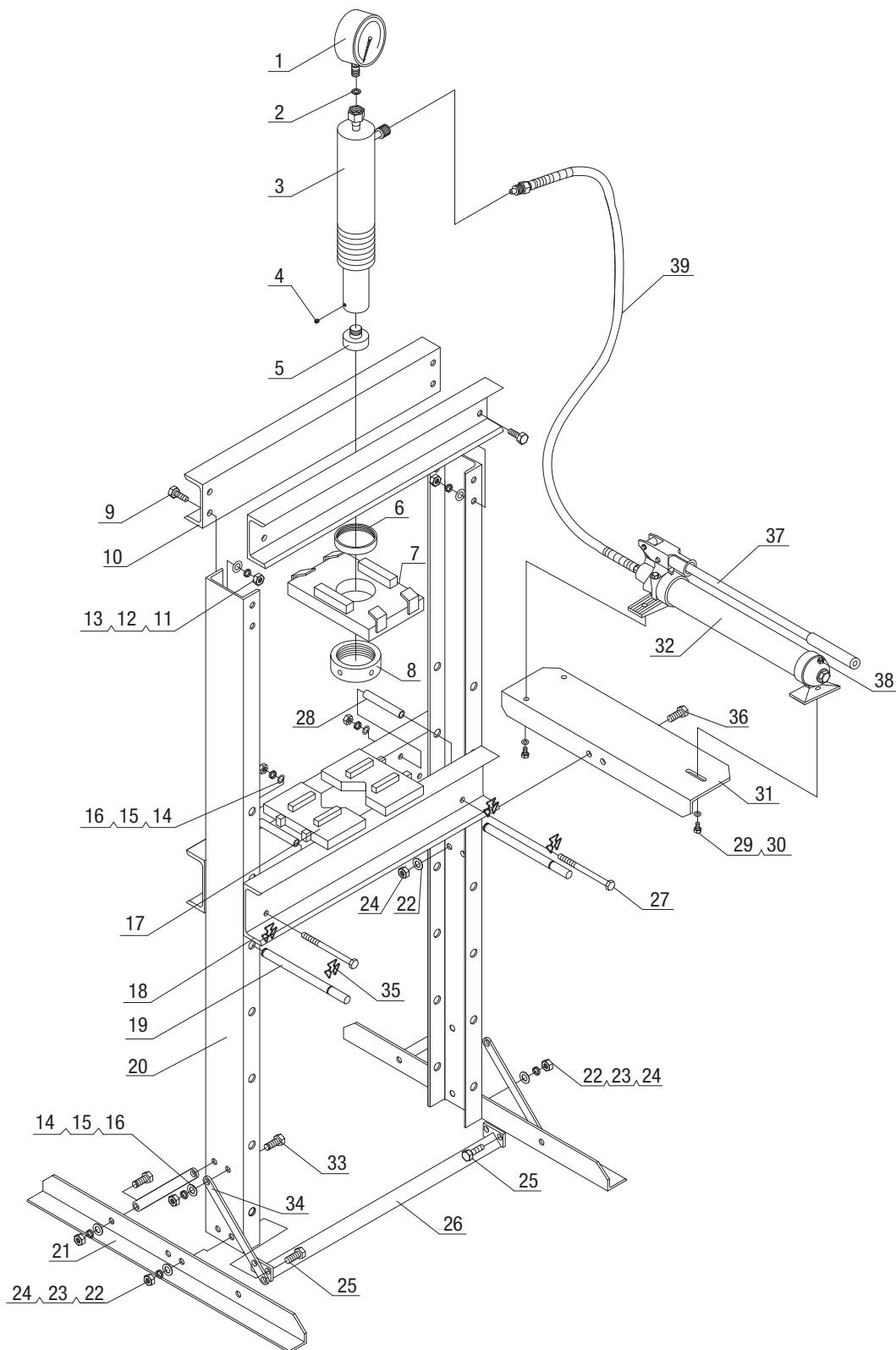
Visual inspection should be made before each use of the press, checking for damaged, loose or missing parts. Each press must be inspected by a manufacturer's repair facility immediately if subjected to an abnormal load or shock. Any press which appears to be damaged in any way, is found to be badly worn, or operates abnormally **MUST BE REMOVED FROM SERVICE** until necessary repairs are made by a manufacturer's authorized repair facility. It is recommended that an annual inspection of the press be made by a manufacturer's authorized repair facility and that any defective parts, decals or warning labels be replaced with manufacturer's specified parts. A list of authorized repair facilities is available from the manufacturer.

TROUBLESHOOTING

PROBLEM	ACTION
1. Ram will not extend.	Make sure the round vent screw on the pump's reservoir is open. Purge air from hydraulic system by following procedure under SETUP.
2. Ram will not hold rated load.	Make sure the round vent screw on the pump's reservoir is open. Purge air from hydraulic system by following procedure under SETUP.
3. Pumping feels "spongy" under rated load.	Make sure the round vent screw on the pump's reservoir is open. Purge air from hydraulic system by following procedure under SETUP.
4. Ram will not extend all the way.	Make sure the round vent screw on the pump's reservoir is open. Purge air from hydraulic system by following procedure under SETUP.
5. Ram will not retract all the way.	Make sure the round vent screw at the top reservoir is open. If this does not correct the problem contact your Cornwell Distributor for details on handling warranty.
6. Press still does not operate properly.	Contact your Cornwell Distributor.

-Save these instructions-

PARTS LIST





PARTS LIST

Index No.	Part No.	Description	Qty.	Index No.	Part No.	Description	Qty.
1	RS6361901	Pressure Gauge	1	21		Foot Base	2
2	RS6361902	Nylon Ring	1	22	*	Washer	6
3	RS22T03BK	Ram Assembly - Black	1	23	*	Spring Washer	4
4	*	Screw	1	24	*	Nut	6
5	RS6361905	Adapter	1	25	*	Bolt	4
6	RS6361906	Upper Round Nut	1	26		Lower Cross Member	1
7		Ram Plate	1	27		Bolt	4
8	RS6361908	Lower Round Nut	1	28		Tube	4
9	*	Bolt	8	29	*	Bolt	3
10		Upper Beam	2	30	*	Washer	3
11	*	Washer	8	31		Pump Assembly Plate	1
12	*	Spring Washer	8	32	RS22T32BK	Pump - Black	1
13	*	Nut	8	33	*	Bolt	8
14	*	Washer	12	34		Support Bar	4
15	*	Spring Washer	12	35	RS6361938	Clip	4
16	*	Nut	12	36	*	Bolt	2
17	RS6361917	Arbor Plates (pair)	1	37	RS6361933	Handle	1
18		Work Bed	2	38	RS6361934	Fill Screw	1
19	RS6361919	Pin	2	39	RS6361935	Oil Hose	1
20		Post	2		RSCSESP22TPLK	Product Label Kit (not shown)	1

Only index numbers identified by Part Number are available separately.

* Available in Hardware Kit, RS63619HK.



WARRANTY COVERAGE

Cornwell Quality Tools Company ("Cornwell") warrants against defects on this product for a period of TWO (2) YEARS from the date of original retail purchase. Subject to the conditions and limitations set forth below, Cornwell will, at its option, either repair or replace any part of the product(s) that proves defective by reason of improper workmanship or materials.

This warranty does not cover any damage to this product that results from accident, abuse, misuse, natural or personal disaster, or any unauthorized disassembly, repair, or modification. Repairs, disassembly and modification are only authorized to be made by Cornwell or a warranty service center approved by Cornwell.

WARRANTY SERVICE

To obtain warranty service, contact your Cornwell dealer.

EXCLUSIONS AND LIMITATIONS

THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. CORNWELL SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, TO THE EXTENT PERMITTED BY APPLICABLE LAW, ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF CORNWELL CANNOT LAWFULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. IN NO EVENT SHALL CORNWELL BE LIABLE TO THE PURCHASER OR TO THE USER OF A CORNWELL PRODUCT FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, TORT, OR ANY OTHER LEGAL THEORY. SUCH DAMAGES INCLUDE, WITHOUT LIMITATION, EXPENSES, LOST REVENUES, LOST SAVINGS, LOST PROFITS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE PURCHASE, USE OR INABILITY TO USE THE CORNWELL PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitation on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state.

Repair kits and replacement parts are available for many Cornwell products, regardless of whether or not the product is still covered by a warranty plan.