



TIRE SERVICE INTERNATIONAL

TC-6, TC-15, TC-16 Filter Crushers

buyTSI.com - 800.223.4540

TC-6

1 Filter Capacity



TC-15

9"x 16" Crush Chamber



TC-16

15"x15" Crush Chamber



READ INSTRUCTIONS THOROUGHLY BEFORE OPERATING

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General Description

This operation manual includes instruction for all three models of Tire Service International's (TSI) oil filter crushers. They offer capacity and speed and are designed for any automotive shop, large volume fleet shop, or other heavy-duty applications. Although this manual refers to crushing oil filters, the larger units have the capacity to crush other metal containers.

TC-6 Our most economical filter crusher. It is perfect for small repair and lube shop use. Faster and quieter than air operated crushers, the electric hydraulic system crushes smoothly without the loud "air slamming" of air operated units. This unit will crush all passenger car/light truck oil filters and can be wall mounted or used with the TSI optional stand.

TC-15 Our most popular model. It crushes up to 4 filters at a time. The workhorse of oil filter crushers, the TC-15 produces 38,000 lbs of crushing force! The TC-15 also crushes 1 gallon paint/solvent containers in the 9" x 16" crush chamber.

TC-16 Delivers a solid 64,000 lbs of crushing force! Crushes multiple automotive, truck and industrial filters in a 15" x 15" x 20" crush chamber. Heavy construction with a 220V motor will insure years of dependable operation. Also available with an AC option which allows the operator to push a button and walkaway.

Safety Requirements

1. READ THIS MANUAL BEFORE OPERATING
2. SAFETY GLASSES ARE REQUIRED
3. Do not defeat any safety devices
4. Follow instructions on decals
5. Before each use visually inspect the following items:
 - A. Check for loose bolts, fittings, leaking hydraulic fluid, and damaged or improperly assembled accessory equipment.
 - B. Clean any liquid spills from the floor and crusher.

Installation Requirements

- Power source for either 120v or 220V depending on model.
- The 120v needs 30 amp dedicated service and the 220v needs 20 amp dedicated service.

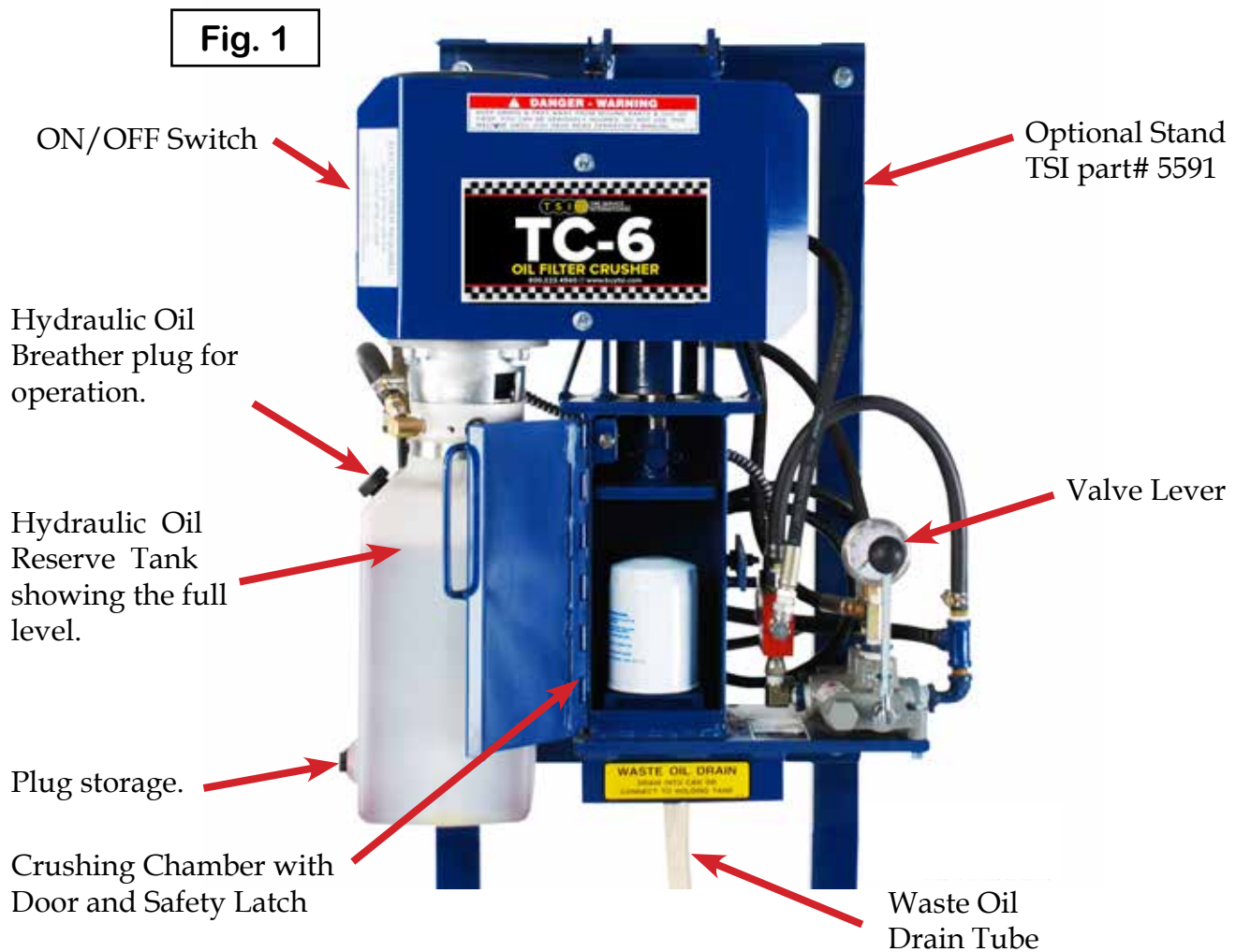
General Set-Up Instruction for All Models

1. Inspect the unit for any damage during shipping. Please file a claim if damage is found.
2. Prepare a clean, level surface with adequate room to maneuver and accumulate waste liquid.
3. Remove packaging materials and inspect for any loose fittings or bolts.

Continued on to individual model set-up...

Do not plug in until the unit is completely set-up and prepared for use.

TC-6 Primary Parts



TC-6 Set-Up Instruction

1. The TC-6 can be mounted on a wall or bolt directly to a stand shown in Fig. 1.
 - A. Instructions for mounting on the optional stand are on page 5.
 - B. If mounting unit to wall, it is extremely important the wall supports the 225 pounds weight and operation motion. Measure the unit for bolt pattern and use 3/8" hardware to securely fasten unit to studs.
2. Make sure it is level for proper operation.
3. Remove contents of crushing chamber. This includes a barbed fitting and oil drain hose.
4. For shipping purposes, the oil reserve tank has a plug in the top to prevent leaking. To run the unit the solid plug must be replaced with a breather type plug. It is not advisable to run the unit with the shipping plug installed. *Continued on next page...*

TC-6 Set-Up Instruction (continued)

6. The breather plug is stored at the bottom of the tank during shipping. It is necessary to install this in the top of the tank in order to run the unit. Exchange the two plugs before operating, see Fig. 2.
7. Store the solid shipping plug at the bottom of the tank to be used when the unit is moved. Tighten firmly until snug, but do not over tighten.
8. Verify hydraulic oil level is about 3" from top of reserve tank. When low, use automatic transmission fluid to bring level up.
9. Thread the barbed fitting under the crushing chamber.
10. Slide the waste drain hose over the barbed end of the fitting at least 1/2 inch.
11. Place the end of the oil drain tube into a pail or other receptacle to catch waste oil draining from the unit. The optional stand allows for a 55 gallon drum to store oil from crushed filters.
12. Plug the unit into the power source.

Fig. 2



TC-6 Operation

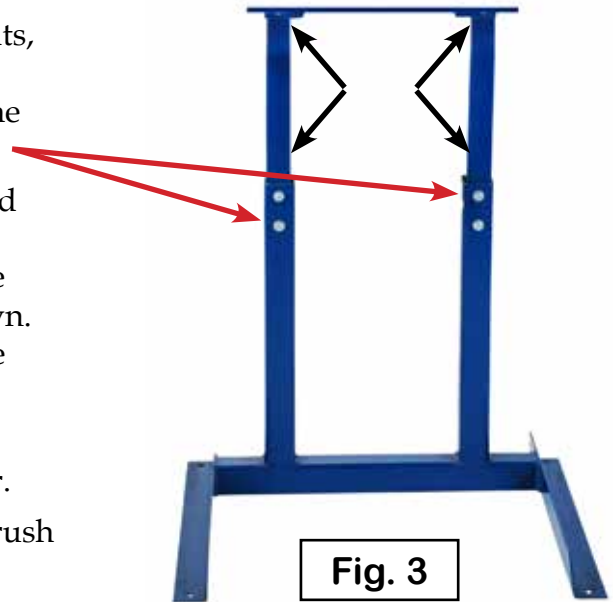
1. Open the crushing chamber door and place a filter open-end down over centering pin.
2. Close and latch door. Units with the Door Safety Switch option will not run if the door is not closed properly.
3. Turn unit on with electric toggle switch.
4. Pull valve lever and hold the lever until a 'strained' squealing noise from the relief valve indicates the crushing is complete.
5. Push the lever back to the return position. The valve will lock into a detent position. This means the crushing plunger will automatically return to the starting position.
6. Open the door and remove crushed filter.
7. Repeat the crushing cycle as needed. It is not necessary to turn off the unit between crushing cycles. TSI recommends running the motor continuously.
8. Upon completion, shut the motor off and clear away all debris from the crushing chamber. Periodically check the oil drain tube for debris. If it becomes clogged, unplug the unit from electric power source before servicing.
9. Empty the drain tank as needed.



Do not operate with the crushing chamber door open.

TC-6 Optional Stand Set-Up

1. The optional TSI Stand comes with 4 longer bolts, washers, and self-locking nuts. Fasten the two vertical square tubes to the base as shown by the red arrows in Fig. 3.
2. The remaining nuts, bolts, and washers are used to mount the TC-6 unit to the stand frame. See the black arrows at the top of Fig. 3. This can be done with the frame standing up or laying down. However, if laid down, the solid plug **MUST** be installed in the top of the hydraulic tank.
3. Bolt the stand to the floor using 3/8" bolts on a level area with enough clear room to maneuver.
4. Tighten all mounting bolts firmly, but do not crush the square tubes.



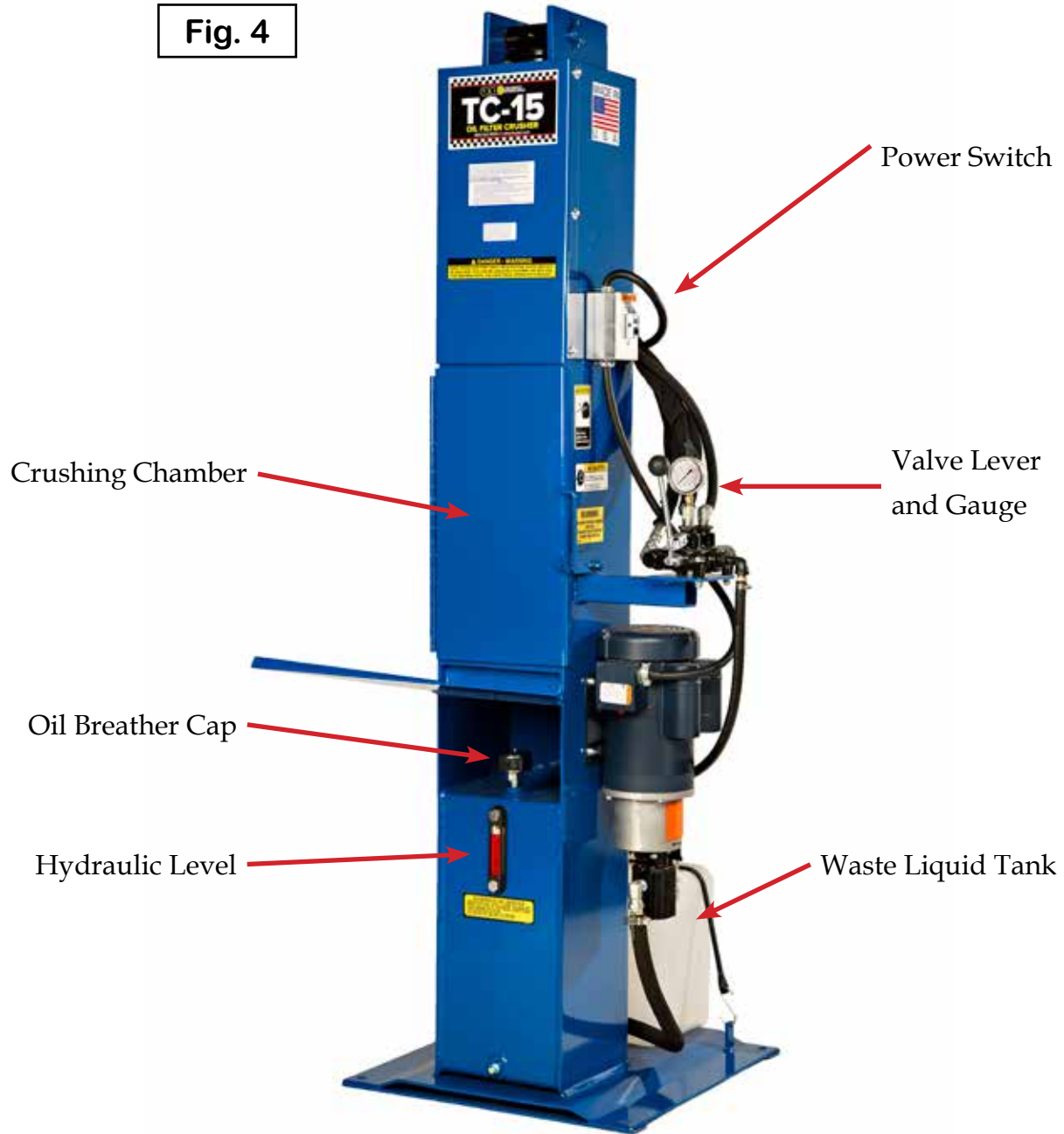
TC-15 Set-Up Instruction

See page 8 for TC-16 set-up

1. Inspect unit for any freight damage. If any damage is found, please file a claim with the trucking company.
2. Discard other packaging materials and unbolt unit from skid.
3. Verify the hydraulic oil level is about 3" from top of reserve tank. When low, use automatic transmission fluid to bring the level up.
4. Some components are stored in the crushing chamber during shipping. These include the oil drain tube, vented oil breather, and riser. Remove these items for setup.
5. Replace the solid plug on top of hydraulic reserve tank with the vented oil breather plug. Keep the solid plug for use if the unit is moved.
6. Connect the 1-1/4" ID clear drain hose from the fitting on the rear of the TC-15 to the plastic holding container provided. Connecting drain tube to a larger waste container is permissible.
7. Bolting the unit to the floor in a clear, accessible area is highly recommended.
8. Once everything is set-up and assembled, it is safe to plug the unit in to the proper electric power source. TSI recommends giving the unit its own circuit. Using an extension cord is not recommended for safety.
9. Above the valve lever on the right side of the unit (facing the crushing chamber) is the electric operating switch. Before turning on the unit, always clear the crushing chamber.

TC-15 Primary Features

Fig. 4



Do not operate with the crushing chamber door open.

TC-15 and TC-16 Operation

1. Open the Chamber door.
2. Determine using the riser or not depending on the height of filters being crushed and the end-result expected. Tip: Using the riser whenever possible will decrease cycle time.
3. Place a single filters in the middle of the chamber. If two filters, place diagonally. Any more should be placed symmetrically from center of the chamber outward until chamber is full.
4. Only crush filters with the same height.
5. All filters must be placed face down (open-end down) in chamber so liquid is drained.
6. Close door and make sure door latch is secure. The units come equipped with a Door Safety Switch. The unit will not operate with the crushing chamber door open. Do not disable this function!
7. Turn on the electric switch. On Automated Units this is the green START button.
8. The motor should run continuously between loading and unloading crushing chamber.
9. The cylinder will stop moving if the crushing chamber door is opened or if the red STOP button is pressed.

Automated Unit

1. Push the DOWN button on the control box and the cylinder will complete a cycle and crush the filters in the chamber. The pressure sensor is set between 1700 - 2000 PSI.
2. Once the unit finishes the crushing cycle, the filters can be removed and the chamber refilled. If repeating this operation, leave the power on. If not, press the red STOP button to shut off all power.
3. Press the UP button at any time and the cylinder will retract.

Manual Unit

1. Pull the valve lever and hold until you hear a 'strained' squealing noise of the relief valve indicating the near completion of the crushing stroke.
2. Hold until the pressure gauge indicates 2500 to 2800 PSI.
3. Release the lever which places the unit in a neutral position.
4. Push the valve lever to retract the cylinder and raise the crushing ram.
5. Open the door and remove the crushed filters.

Manual or Automated Unit

1. Upon completion, shut the motor off and clear away all debris from the crushing chamber.
2. Wipe liquid from around unit.
3. Periodically check the drain tube and clear any debris.
4. Empty waste tank properly when needed.

TC-16 Primary Features

Fig. 5



Do not operate with the crushing chamber door open.

TC-16 Set-Up Instructions

1. Inspect unit for any freight damage. If damaged, please file a claim with the trucking company.
2. Discard other packaging materials and unbolt unit from skid.
3. Some components are stored in the crushing chamber during shipping. These include the oil drain tube, vented oil breather, riser and hardware. Remove these items for setup.
4. Assemble legs-stand under unit. Using a hoist, lift the main frame assembly. Bolt on the legs and frame pieces (See Page 8) under the unit as shown.
5. The Drip pan is located between the hydraulic oil tank and main frame structure. Bolt-on the drip pan. Line-up drain hole then tighten.
6. Once assembled, tighten all bolts firmly and make sure unit is stable and level.
7. Locate a suitable area to operate and bolt unit to the floor. Six 3/8" hardened bolts are recommended. Remember to keep area clear while operating.
8. Automatic model is 4-wire 220 volt, 20 amp, single phase. Manual model is 3-wire 220 volt, 20 amp, single phase. Dedicated circuits are suggested.
9. Verify hydraulic oil level is about 3" from top of reserve tank. When low, use automatic transmission fluid to bring level up.
10. Replace solid plug on top of hydraulic reserve tank with the vented oil breather plug. Keep the solid plug to use if the unit is moved.
11. Connect the 1-1/4" ID clear drain hose to the fitting on the rear of the TC-16.
12. Insert end of drain tube into a 55 gallon barrel placed under the unit. Customer supplies 55 gallon barrel or other waste receptacle.
13. Once everything is set-up and assembled, it is safe to plug the unit in to the proper electric power source. Using an extension cord is not recommended for safety.

See page 7 for TC-16 operation.

Maintenance

Regular maintenance on all Filter Crushers should include the following:

- Replace Hydraulic oil with a universal automatic transmission fluid every six months. Add oil as needed between changes.
- The TC-6 has a screen-type oil filter that does not require replacement.
- The TC-15 and TC-16 require oil filter changes with every oil change.
 - TC-15 oil filter element TSI #3090-1
 - TC-16 oil filter element TSI #3154-Filter

Repair Parts

TSI Item #	Description
TC-6	
3019-4000	Gauge 2.5 Dia x 1/4 NPT
3020	Valve-Hyd
3639	Cylinder 3 x 8 TC-6
TC-15	
10171	Gauge, Sight for Hydraulic Tank, Level 5"
3019-4000	Gauge 2.5 Dia x 1/4 NPT
3020	Valve-Hyd
3090-1	Spin on Cannister
3624	Pump, HYD. 7 GPM, 2 Stage
3640	Cylinder 4 x 16 TC-15
TC-16	
10171	Gauge, Sight for Hydraulic Tank, Level 5"
3019-4000	Gauge 2.5 Dia x 1/4 NPT
3020	Valve-Hyd
3154-Filter	Filter (Spin On) White

Notes

Model	Height	Length	Width	Weight
TC-6*	32"	12"	27"	225 lbs
TC-15	72"	36"	26"	580 lbs
TC-16	104"	40"	40"	1,500 lbs

* Not including optional stand

California Proposition 65

California's Proposition 65 entitles California consumers to special warnings for products that contain chemicals known to the state of California to cause cancer and birth defects or other reproductive harm if those products expose consumers to such chemicals above certain threshold levels.

WARNING: Some of Tire Service International's products can expose you to chemicals including chromium compounds, which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Your risk from exposure to these chemicals varies, depending on exposure time. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles. Wash your hands after touching TSI's products.

Warranty and Return Policy

Warranty & Workmanship you can depend on.

With over 30 years of manufacturing experience we maintain the ability to provide competitive prices while employing and manufacturing the majority of our products in the USA. Pride in our workmanship and standing behind each and every product is not just our claim but our uncompromising responsibility.

Tire Service International equipment is warranted to be free from defects in materials and workmanship for a period of one year from the date of original purchase to the original owner. Repair labor is warranted for 90 days from the date of original purchase. Bushings, blades, bearings and normal wear and tear are not covered under warranty. Careless handling, negligence, misuse, abuse, mutilation, improper operation, making unauthorized repairs, additions, and or alterations automatically cancel this warranty and relieves TSI of any obligation. Cheetah tanks claimed to be defective while under warranty will be evaluated at our manufacturing plant and either repaired if possible or exchanged and returned or credit issued to the customer account at our discretion. Damage resulting from dropping the tanks will not receive warranty consideration. Warranty parts need to be returned prepaid to the plant for credit. Any replacement parts shipped from the plant will be shipped at the customer's expense. Machines requiring warranty work must be brought to the manufacturing plant in 201 Chelsea Rd, Monticello, MN or to a repair facility authorized by TSI.

!!WARNING!! Goods returned without an RGA will be refused. A Returned Goods Authorization form must be obtained before returning any material or goods. All non-warranty returns will be subject to a 15% restocking fee plus any additional charges for reconditioning/repacking.



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