

OPERATING MANUAL | TC-710 BALER



July 09, 2019

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Made in the USA at our plant in Monticello, MN



WARNING!

The instructions and warning contained in this manual should be read and understood before using or operating this tool. Do not allow anyone to use or operate this tool until they have read this manual and have developed a thorough understanding of how this tool works. Failure to observe any of the following instructions could result in severe personal injury to tool user and bystanders, or cause damage to the tool and property. Keep this manual for future reference.

-  **WARNING!** - Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. it
-  **WARNING!** - Personal Protective Equipment: Safety goggles, gloves, non-skid shoes and hearing protection.
-  **WARNING!** - Keep bystanders and children out of the work area while operating this tool.
-  **WARNING!** - Always keep work clean, uncluttered, and well lit. Do not work on floor surfaces that are slippery.
-  **WARNING!** - Do not operate this tool if you are tired or under the influence of alcohol, drugs, or medications that could affect your ability to use the tool properly.
-  **WARNING!** - Inspect before each use. Do not use if broken, bent, cracked or damaged parts are noted (Including warning label). If the unit appears damaged in any way, is missing parts, or operates abnormally, it shall be removed from service immediately. All units that have been dropped, impacted suddenly, or dented should be removed from service.
-  **WARNING!** - The warnings, cautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.
-  **WARNING!** - Operate in an area with adequate ventilation

SAFETY INSTRUCTIONS



WARNING!

Only personnel trained in operation of the TC-710 should operate this machine.

Thoroughly read all safety and operating Instructions before using this machine. Observe all precautionary safety decals and wear protective eyewear.

GENERAL: Disconnect electrical power supply before any maintenance.

Do not allow water or moisture to come into contact with electrical motor, electrical control system or any electric components.

Cover motor and switch box if machine is to be washed.

Information within this instructional guideline will cover usage of both electric and gas versions of the TC-710.

This machine weighs just over one ton. Use adequate care when handling it.

CAUTION:

The TC-710 Baler's primary function is to crush beverage type plastic and aluminum containers. Consult with Tire Service International before crushing other materials. **DO NOT** crush or bale combustible materials.

ELECTRICAL INSTALLATION:

A standard TC-710 Baler requires a 220 or 440 volt, 3 phase, 30-amp service.

TSI recommends only a certified electrician connect the TC-710 to your power source.

SET-UP INSTRUCTIONS

Remove unit from packaging. The TC-710 may be anchored to the floor or casters may be fastened to the mounting pads if mobility is preferred.

Remove shipping plug from the top of oil reservoir and replace with breathable air cap.

Whether in use or in storage it's advisable to position unit on a flat surface.

Review all instructions before connecting unit to electric power source or starting the engine!

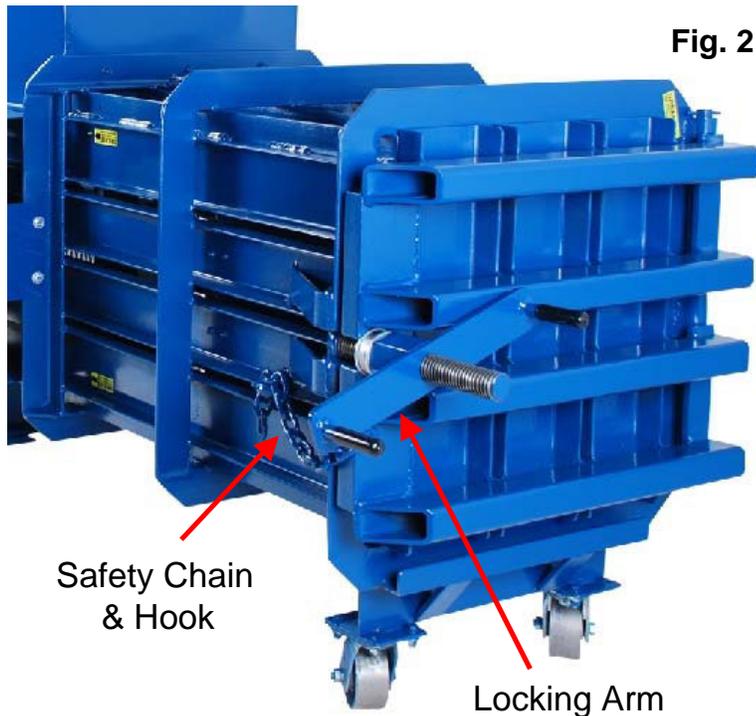
Primary Features:

Fig. 1



NOTE: Fig. 1 displays an electric unit. Gas units have the power source located on the opposite side of where electric motor is mounted.

SET-UP INSTRUCTIONS (continued)



The bale chamber end of the unit (Fig. 2) in a closed position.

Note the chain fastened to a hook. Unless pushing a bale out of the baling chamber the chain must be hooked for safety purposes.

OPERATING INSTRUCTIONS

PREPARING TO MAKE A BALE:

Route each of 3 baling wires in the baling chamber end as shown in Fig. 3.

Each wire rests between the channel openings on either side of the chamber. See photo in Fig. 4 on Page 5.

This configuration works best on your first bale.

Bales that follow won't have to "balance" on the channels.

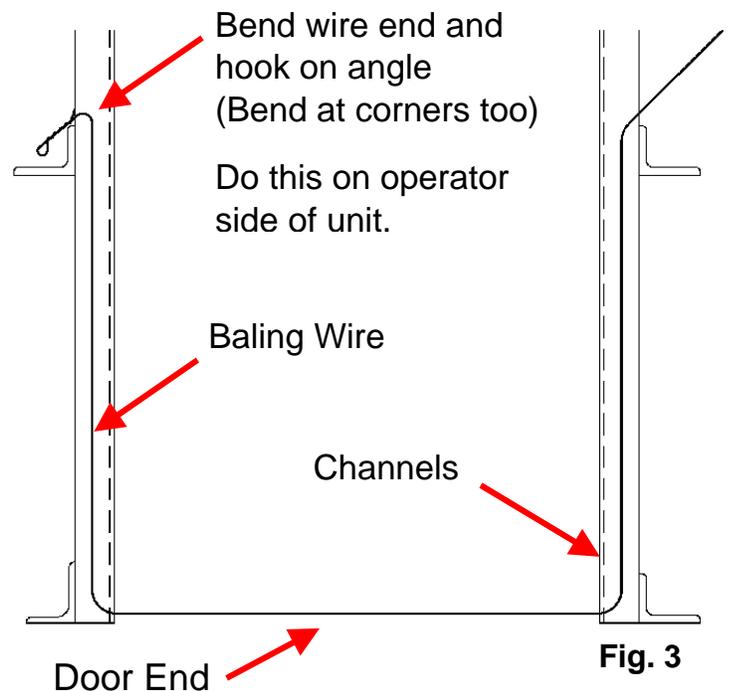




Fig. 4

All 3 bale wires in position before closing door. (Fig. 4.)

SECURING DOOR (Fig. 5)

1. Close door.
2. Firmly tighten locking arm.
3. Secure safety chain link in hook.
(It's not necessary to tighten the locking arm with excessive force.)

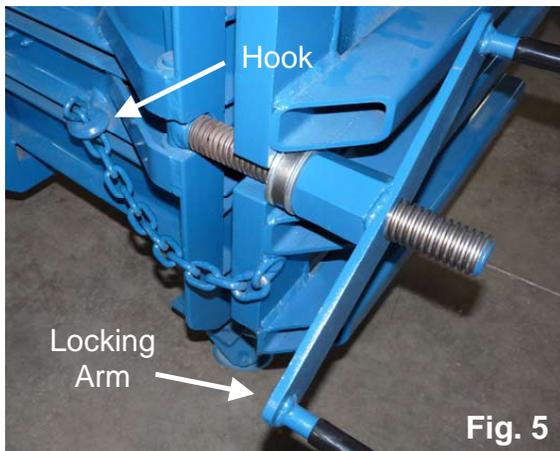


Fig. 5

With over 45,000 pounds of platen force hooking the safety chain is an important safety precaution.

Once the door and locking arm are closed, plug-in or start the machine.



Fig. 6

For gasoline or diesel units refer to engine manual and instructions.



CAUTION: DO NOT leave unit turned "ON" and unattended

Run unit at full throttle when making a bale. Adjust to slow idle when not using hydraulics.

Run at slow idle for about 1-2 minutes before shutting off engine.

OPERATING INSTRUCTIONS (continued)

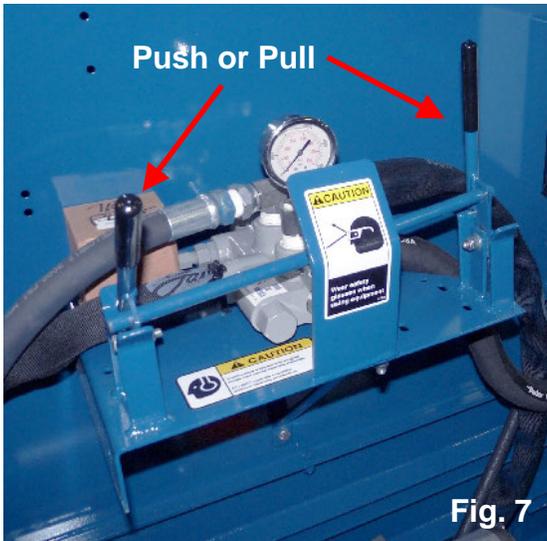


Fig. 7

VALVE CONTROL HANDLES (See. Fig. 7.)

Pull both handles to extend platen.

Push both handles to return platen.

Retract platen before loading hopper.

See platen in Fig. 8.

Load material to be crushed into hopper making sure it slides down into the compacting chamber. Don't let the hopper become clogged.

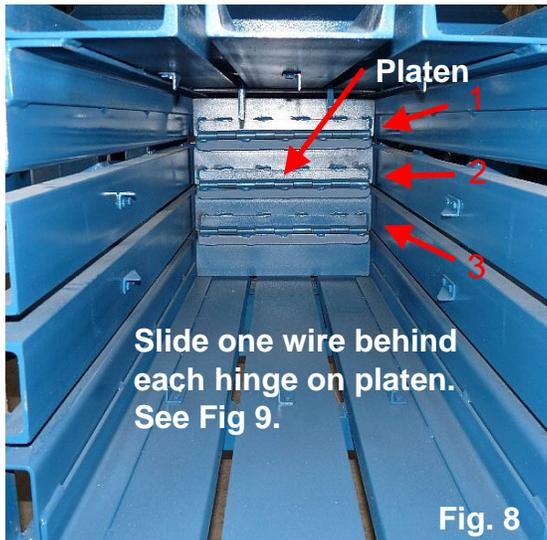


Fig. 8

Use the valve control handles (Pull) to extend the platen to compress the contents in the chamber.

Retract the platen with the valve control handles (Push.) The valve has a detent position. While cylinder is returning the valve spool will return to neutral. (To adjust see page 10.)

To create a full bale this step will need to be repeated several times.

Displayed in Fig. 8 is an empty bale chamber and the platen. The platen compresses the contents towards the door.

When the contents can no longer be compressed any further it is time to tie-off the three bale wires.

The excess wire that was fed through the chamber must now thread its way back through the platen.

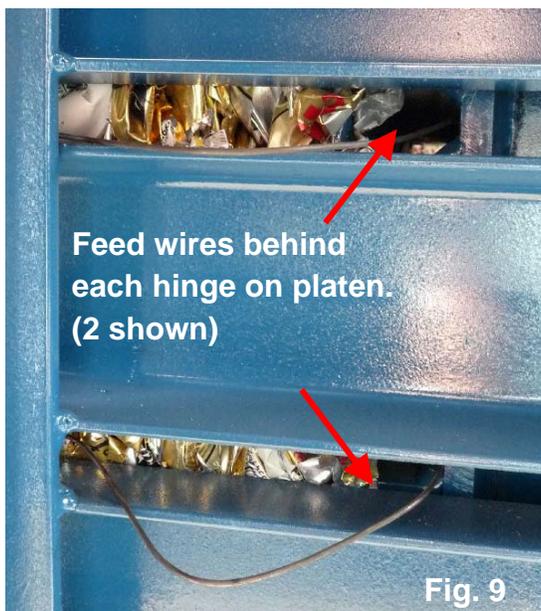


Fig. 9

OPERATING INSTRUCTIONS (continued)



Fig. 10

TWISTING THE WIRES (See. Fig. 10)

Each wire will exit the other side of the bale chamber. Don't cinch the wires tightly through each of their loops and twist together. Slack must be present before twisting off wires or they will break.

Use Wire Insertion Rod (Fig. 11) if debris covers these access holes. Plunge rod through, thread wire into hole at rod end and pull. More slack is needed for plastic bottles.

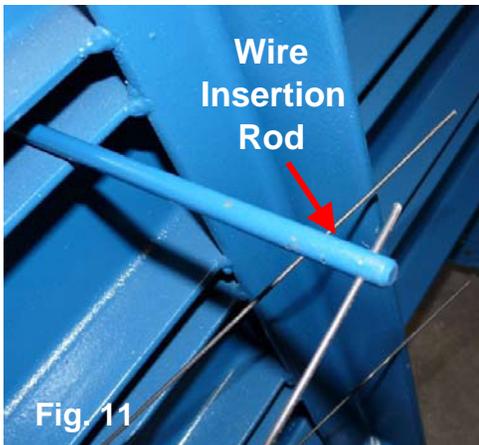


Fig. 11

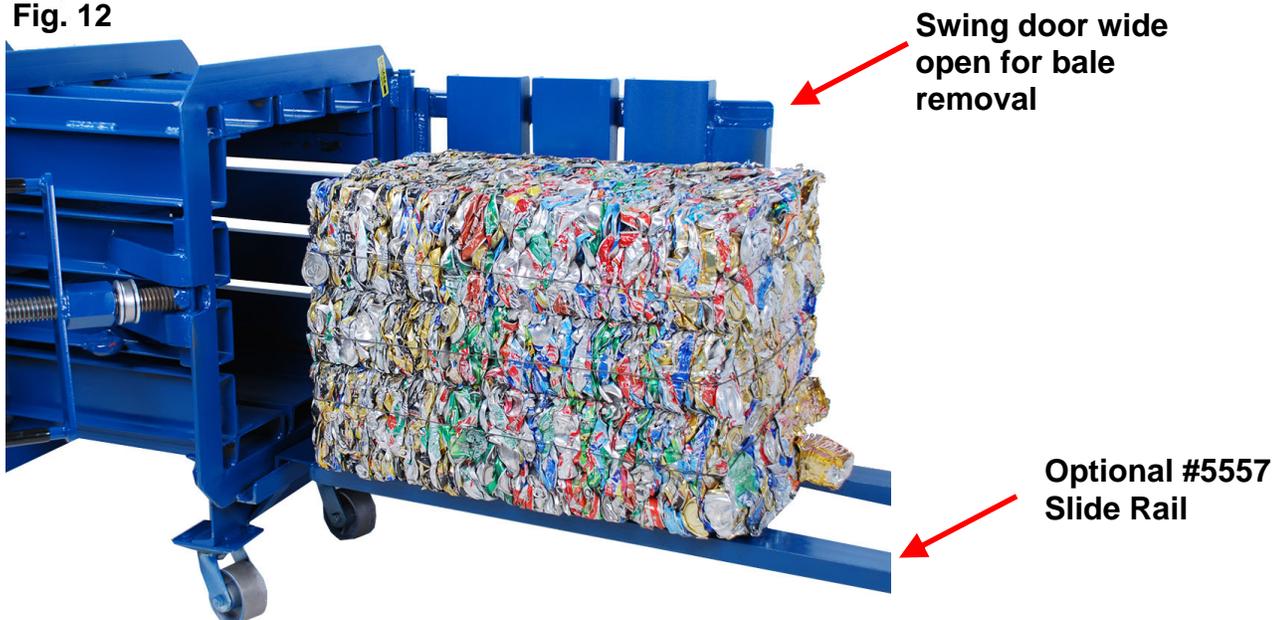
COMPLETING A BALE

Make sure you retract the platen to take some of the slack out of the baling wire you just secured. This also relieves hydraulic pressure from the bale, from the door and from the Locking Arm.

Remember, this unit can generate over 45,000 pounds of force so be sure to push the valve control handles to release pressure from the door before opening it!

Unhook safety chain and carefully unscrew the locking arm for the door. With the door open start making another bale. Have product in the hopper and as you start to crush the contents with the plunger the new bale being made will push the one you just finished wire-tying out of the baling chamber. See Fig. 12.

Fig. 12



MAINTENANCE INSTRUCTIONS



Disconnect unit from electrical power or shut off engine before maintenance

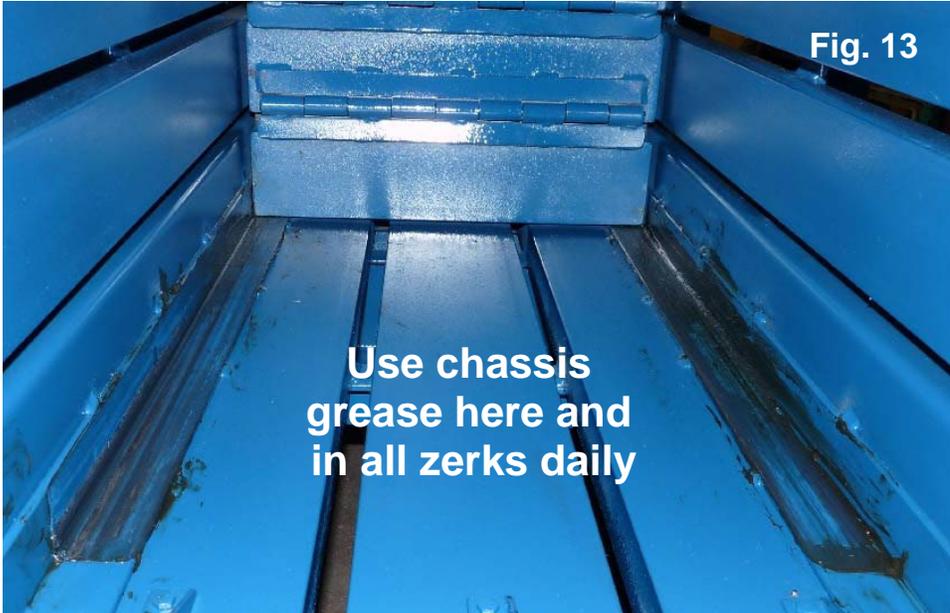


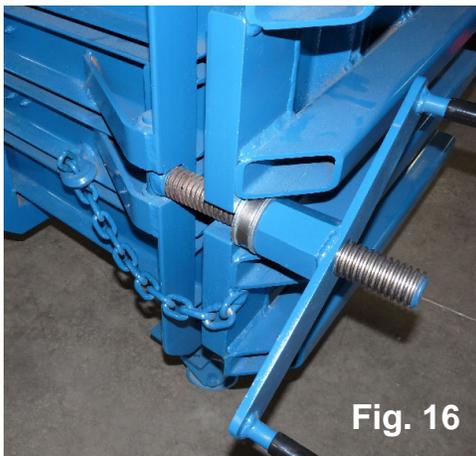
Fig. 13

Above shows a generous amount of grease applied to the wear angles within the bale chamber. (Fig. 13) Clean off before applying fresh grease.



GREASE ZERKS

Grease on door hinge. (Fig. 14) & above one side of the bale chamber. (Fig. 15)



ACME THREAD

(Fig. 16) Shows the locking arm screw for the door. Keep clean and well lubricated with spray silicone.

MAINTENANCE INSTRUCTIONS (Cont.)

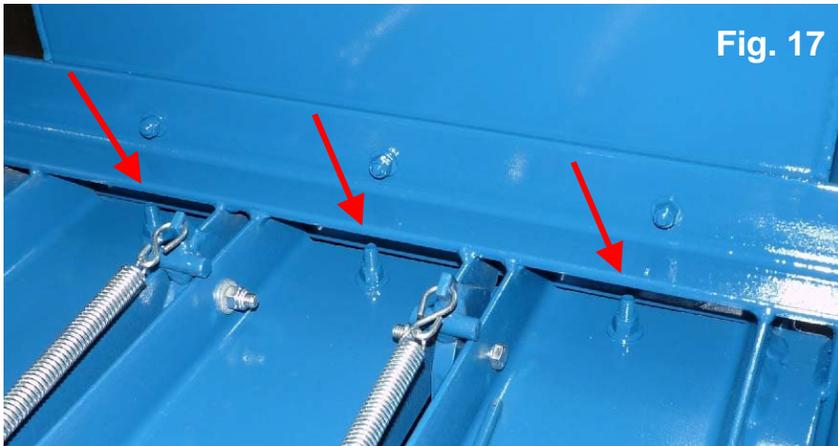


Fig. 17

SHEAR BLADE REPLACEMENT

Remove screws at arrows shown in Fig. 17.

Next remove shear blade and replace. Install in reverse order.

Check for proper blade clearance.

Normal clearance is .015 to .020 inches.

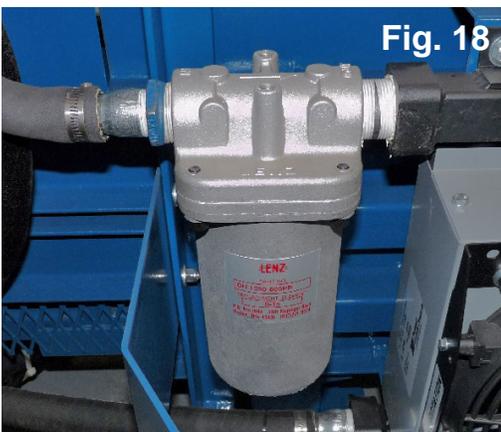


Fig. 18

OIL FILTER

Drain hydraulic fluid every six months when replacing oil filter. (Fig. 18)

Fill hydraulic reservoir 3 inches from top of tank with a universal automatic transmission fluid. Fluid required is approximately 10 gallons.

Replace filter with TSI Part #10130E.

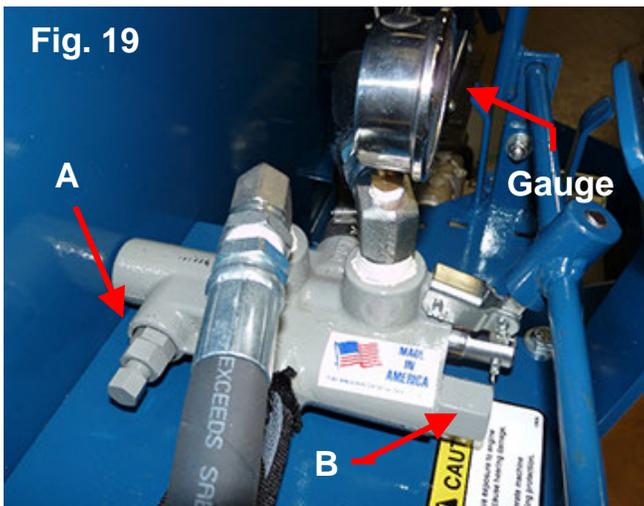


Fig. 19

VALVE ADJUSTMENT

(Fig. 19)

If the valve "kicks out" on the ram's return stroke, the detent will have to be tightened slightly.

At "A" loosen the lock nut. Turn the outer screw in 1/4 turn and tighten lock nut. Continue to bale.

If it "kicks out" again, loosen the nut and readjust the screw another 1/4 turn. Repeat as necessary.

Normal hydraulic pump pressure at the gauge for the TC-710 is 2400-2500 P.S.I. when the ram is fully extended. If adjustment is needed remove the cap nut at "B" (in Fig. 19) and use an allen head wrench to make an adjustment to the hydraulic pump pressure. To increase pressure turn the screw in 1/4 turn. To decrease pressure turn the screw out 1/4 turn.

Repeat as necessary until the correct pressure is attained.

Do not exceed a maximum of 2500 P.S.I. at the gauge. If a replacement gauge is needed contact TSI and refer to Part #3019.

BALER ACCESSORIES

Below are a few available options for the TC-710 Recycling Baler.

SLIDE RAIL

The table mounts to all TC-710 Balers and can be adjusted for height. (Fig. 20)

TSI Part #5557

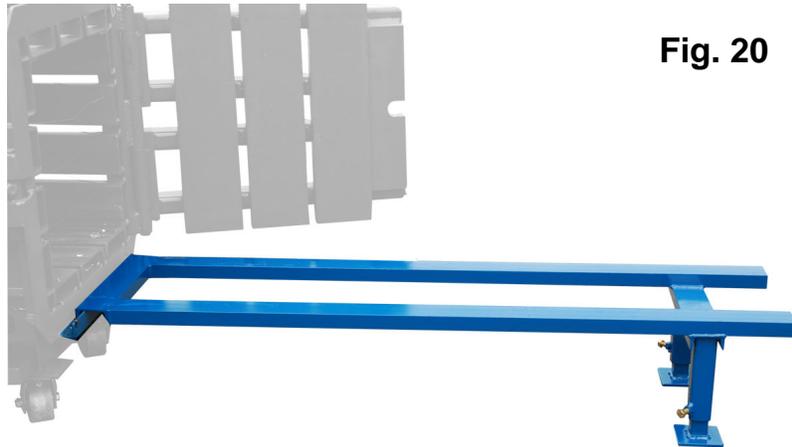


Fig. 20

DRIP PAN

The drip pan slides under the crushing chamber. It also has a drain plug. (Fig.21)

TSI Part #5954



Fig. 21

HOPPER CHUTE

The hopper chute allows for more volume of materials being fed into the TC-710.

TSI Part #6116K



Fig. 22

TROUBLESHOOTING

PROBLEM	SOLUTION
<p>1. Motor does not run or does not have any power</p>	<p>GAS MOTOR Recheck power supply to unit. At least 30 amps, 220 volt should be available at the baler. Check to make sure all electrical connections are proper. Check circuit breaker box to insure proper breakers are installed. If motor runs the wrong direction, rewire as per wiring instructions on motor name plate. The proper direction is counter clockwise looking at shaft end.</p> <p>ELECTRIC MOTOR Recheck power supply to unit. Check motor nameplate for amperage, voltage & hz required. Supply electric power as required to the baler. Check to make sure all electrical connections are proper. Check circuit breaker box to insure proper breakers are installed. If motor runs the wrong direction, rewire as per wiring instructions on motor name plate. The proper direction is counter clockwise looking at shaft end.</p>
<p>2. Hydraulic pressure will not attain 2200 – 2300 PSI on pressure gauge.</p>	<p>A. Reservoir tank low on fluid. Add fluid to be 2-3 inches from top of tank. B. Hydraulic filter element clogged or dirty. Replace filter element with a new filter. C. Readjust relief valve in hydraulic valve body – See operating and maintenance instructions on TC-710 on procedure. D. Motor is not operating properly – see motor section #1 above. E. Hydraulic pump may be defective and pump will have to be replaced.</p>
<p>3. Bale is loose and compacted solid</p>	<p>Hydraulic system is not developing pressure – see section #2 above.</p>

Warranty Statement & 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.

Return Policy:

!!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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SPECIFICATIONS

OUTPUT

PRODUCT	BALE POUNDS
Beverage Cans	150 lbs
P.E.T Bottle	150 lbs
HDPE	140 lbs

Note: These weights can vary depending on density of material.

POWER SUPPLY & HYDRAULICS

Total Platen Force	45,160 lbs
Cylinder Bore & Stroke	5" x 30"
Per Square Ince on the Platen	113 lbs
System Pressure	2,300 PSI
Cycle Time	20 Seconds
Oil Cooler	Standard
Bale Size	20" x 20" x 36"

MACHINE DIMENSIONS

Length	8'9"
Height	3'11"
Width	3'6" - Electric 4'6" - Gas
Weight	2,030 lbs
Power Unit: Electric (Standard)	10 HP Electric 220/440 V, 3 Phase
Options	18HP B&S Gas with Electric Start



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