TIRE SERVICE INTERNATIONAL

Cabinet Truers
711 and 1200R

buyTSI.com - 800.223.4540

Read this manual before operating

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Safety Requirements

1. WARNING - WEAR SAFETY GLASSES

2. USE CAUTION! Machine is equipped with a very sharp rotating blade.

3. KEEP MACHINE CLEAN AND FREE OF DEBRIS

4. DO NOT WEAR LOOSE CLOTHING

5. Operating this machine requires reading this manual. Improper operation can damage tires and cause bodily harm. Please read this manual, follow the safety features, and make sure to understand the operation before turning the machine on.

6. Only use Truer on clean tires completely free from debris. If truing used tires remove sand, stones and other foreign matter from tire tread. This includes the rims and hubs.

7. Do not leave machine in use unattended.

Set Up Information

1. Provide 110-115 V, 60 Hz, single phase

2. Inspect the machine for any shipping damage or loose parts.

3. Be careful to not disturb preferences already set on machine.

4. For accuracy and consistency bolt the Truer on a clean, level surface and take advantage of the leveling feet on the machine.

5. Operate unit on a clean, level surface with room to maneuver. If Truer Cabinet is not level or sturdy, adjust the leveling screws to make the necessary changes until level.

6. Read and follow all operating and safety instructions.

7. Cabinet Truers are primarily used for tires mounted on rims. These can range from 15 wide to 43 inches in diameter.

8. Keep the machine and associated parts and adapters free from damage. A Mandrel for instance, if bent, can result in poor results when truing a tire. Bending a Mandrel as little as .020" off-center can result in a substantial amount of excess rubber removal and ruin a tire.

9. The first step to "True" a tire is to select the proper adapter that fits your rim. Refer to Adapter Information Section starting on page 7. Whether you have a steel, aluminum, or hub mounted tire you must use the proper adapter. Please refer to the "Adapter Guide" to determine how to fasten your rim onto the Truer Mandrel to place in the Bearing Saddle for truing.

Tip: Remember to use Tri-Wheel stand in Figures 5, 6 and 7 on page 6.

Model 711: Primary Features

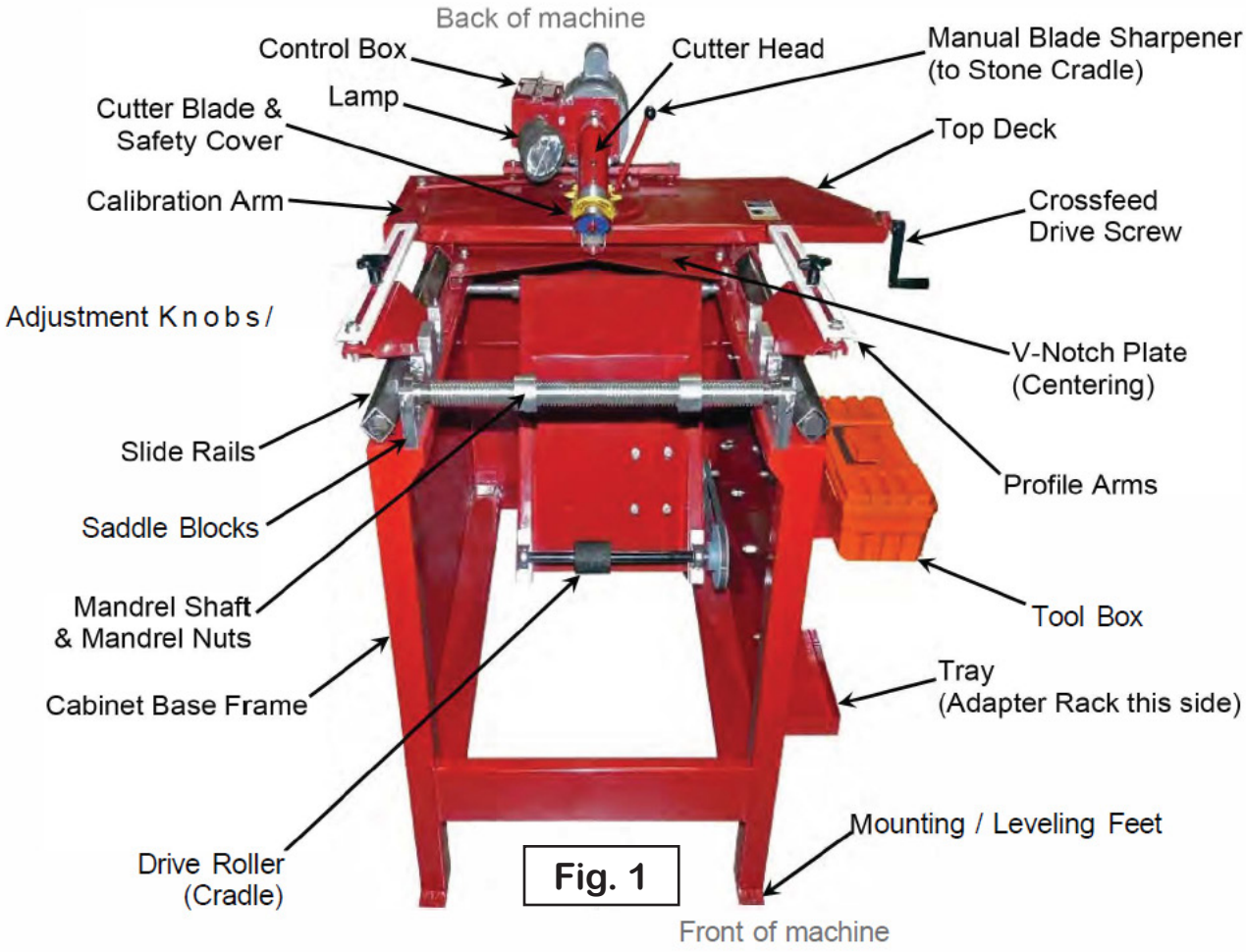


Fig. 1

1200R Primary Features

Like the model 711 unit, many features are the same. Refer to page 3 for common features. Please note the main differences are how the Top Deck is mounted and how it functions.

Fig. 2

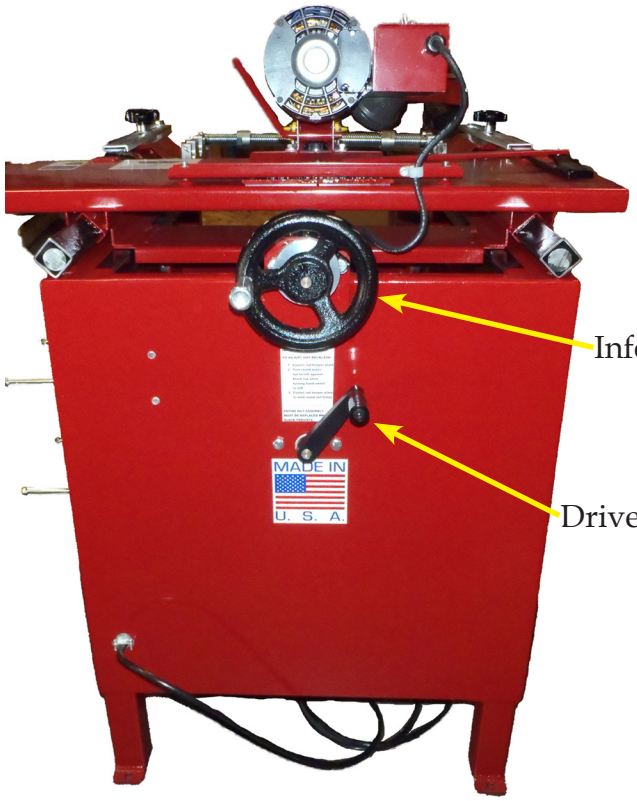


Fig. 3

General Notes

Why "True" a tire?

1. Tire truing is performed to eliminate poorly balanced tires, wheel skip, reduces balancing weights, cupping and extend tire life and performance. It also helps reduce wear and tear on suspension systems.

2. The goal for truing tires is to make tires round (from the center out) and to make the tread surface either flat to the road or with a perfect profile around a tire. In general not all tires are round. Once you mount a tire on a Tire Truer and rotate it you'll see just how far out of round tires really are.

3. With that in mind the accuracy of creating a round tire is in the hands of each Tire Truer Operator. The more aware and skilled an operator is, the better the result in making a tire round.

4. Another key factor is to remove as little tread as necessary. Removing too much can damage a tire during truing. It will also unnecessarily decrease the tire life.

5. Parked vehicles develop a flat spot on the tires. DO NOT true a tire without warming the tires or driving the vehicle to remove the flat spot. We recommend using our model 975 Tire Warmer for this purpose or driving the vehicle at least 4 miles before removing and truing the tires.

What to choose: A model 711 or 1200R

1. The 711 makes a profile cut used in normal usage tires.

2. To cut a flat and/or specific angle on the tread for racing use a 1200R unit.

Operating Instructions

Loading tire into machine: This applies to both the model 711 and 1200R Truers

1. Move Top Deck assembly to furthest position away from Mandrel Shaft location (see Fig. 1 on page 3). Shown is the Top Deck moved back away from the Saddle Blocks.

2. Loosen the Adjustment Knobs on the Profile Arms and spread them apart when doing this. This will prevent the tire from accidentally contacting the cutter blade when the tire, Mandrel Shaft, and Adapter assembly is loaded into the Saddle Blocks on the machine.

3. When placing tire and Mandrel Shaft assembly in the Saddle Blocks, pick the bearing seat location closest to the Cutter Blade without the tire contacting the blade.

4. The set screws on one of the bearings should be tightened firmly on the Mandrel Shaft. Use the other bearing and set screws as an adjustment feature to expand the Mandrel Shaft and bearing assembly between the Saddle Blocks.

FIG. 5

FIG. 6

FIG. 7

Figure 8 is a close-up of the Mandrel Shaft assembly. It consists of a bearing, set screw, Saddle Block, and thumb screw. The bearing is tight against the Washer Stop as seen in Fig. 8.

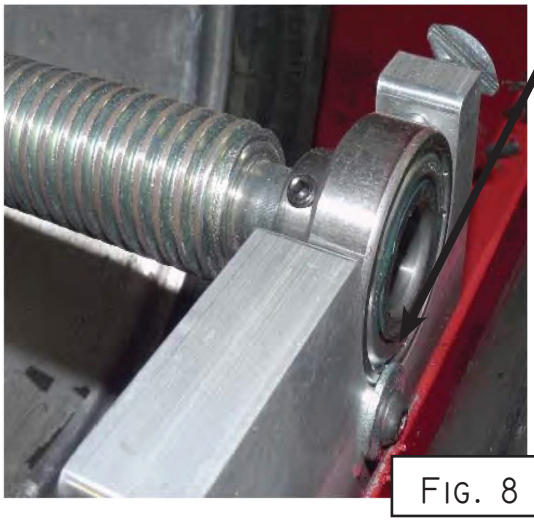


FIG. 8

5. Tighten the bearing set screws and thumb screws in Saddle Block on both sides.

6. Spin the tire slowly. The tire needs to rotate perpendicular to the Mandrel Shaft. Severe damage to a tire can occur if attempting to true a poorly mounted tire.

7. **Check for run-out and concentricity to the Mandrel Shaft before truing!**

8. If necessary make adjustments and check for debris which could cause for poor mounting.

9. Double-check that the tire rotates evenly on the Mandrel Shaft and bearings before proceeding.

Adapter Information

1. This guide will explain the application, use, and purpose of Amermac Tire Truer Adapters.
2. Primarily there are two types of Tire Truer Adapters:
   - A. **Bolt Centric**: Used when the bolt circle of a rim centers a tire.
   - B. **Hub Centric**: When the center hole of the rim pilots the tire center.

Tire Truer Adapters A 1 - A6

A1

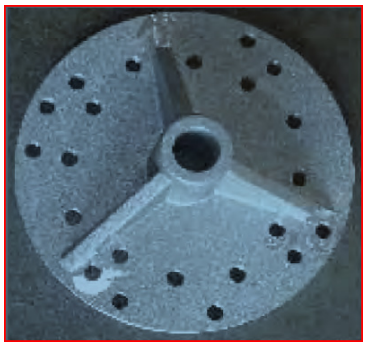
A2

A3

Center Shaft outside diameter is 1.75" on A 1 - A5

A4

A5



A6

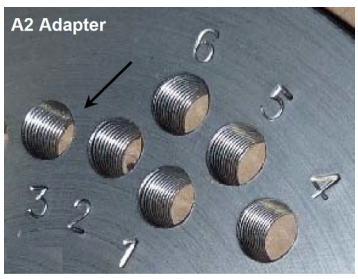
Above are Bolt Centric adapters with 34 bolt patterns. The set can be used on over 1000 makes and models of cars, light trucks and sport utility vehicles.

Choosing a Bolt Centric Adapter

Tire Service International has developed a TRUER ADAPTER CHART, shown on the next page. The chart is based on bolt circle diameters and the number of lug nuts or wheel studs for each rim type.

For example:

Finding an adapter to use for a 5-lug, 4.500" diameter bolt circle. Look in the # of Lugs column and go down to 5 Lugs; look for the bolt circle diameter listed in the next column; find the Adapter Name, in this case "A2." The part number for this is shown as 6381 and the pattern to use is hole pattern 3 (shown at right) stamped near each threaded hole that correspond with each adapter and the various bolt circle diameters listed on the chart.



Bolt Centric Adapter Chart

# of Lugs	Bolt Circle inch	Bolt Circle mm	Adapter Part Number & Pattern	Adapter Name	Measurement Driven	Notes
3 or 6	3.500	88.90	6382-1	A4	inch	
3 or 6	4.000	101.60	6382-2	A4	inch	
3 or 6	4.500	114.30	6382-3	A4	inch	
3 or 6	4.53	115.00	6364-1	A3	mm	
3 or 6	4.72	120.00	6364-2	A3	mm	
3 or 6	5.000	127.00	6382-4	A4	inch	
3 or 6	5.197	132.00	6364-3	A3	mm	
3 or 6	5.315	135.00	6364-4	A3	mm	
3 or 6	5.500	139.70	6382-5	A4	inch	
3 or 6	6.000	152.40	6382-6	A4	inch	
3 or 6	7.000	177.80	6382-7	A4	inch	
3 or 6	7.087	180.00	6367-3	A6	mm	
3 or 6	8.250	209.60	6367-4	A6	inch	
3 or 6	8.858	225.00	6367-5	A6	mm	
4 or 8	3.940	100.00	6366-1	A5	mm	
4 or 8	4.250	108.00	6366-2	A5	inch	
4 or 8	4.500	114.30	6366-4	A5	inch	
4 or 8	6.500	165.10	6367-1	A6	inch	
4 or 8	6.690	170.00	6367-2	A6	mm	
5	3.940	100.00	6362-1	A1	mm	
5	4.000	101.60	6381-1	A2	inch	
5	4.250	108.00	6381-2	A2	inch	
5	4.331	110.00	6362-2	A1	mm	
5	4.410	112.00	6366-3	A5	mm	
5	4.500	114.30	6381-3	A2	inch	
5	4.530	115.00	6362-3	A1	mm	
5	4.720	120.00	6362-4	A1	mm	
5	4.750	121.00	6381-4	A2	inch	
5	5.000	127.00	6381-5	A2	inch	
5	5.118	130.00	6362-5	A1	mm	
5	5.315	135.00	6362-6	A1	mm	
5	5.500	139.70	6381-6	A2	inch	
5	5.906	150.00	6366-5	A5	mm	
5 or 10	8.859	225.00	6367-6	A6	mm	Use 3 holes

Please note: Bolt circle diameters are listed in both inch (highlighted) and millimeter increments. The bolt centric adapters mount on a 1.25″ diameter mandrel shaft with spacers and locking mandrel nuts.

Bolt Centric Instructions

1. Select the correct adapter and place it on the Tri-Stand (Fig. 9.) Put the tire/rim on it and line-up the holes in order to fasten them together using the supplied hex bolts (see photo insert.)

2. Hand tighten making sure the mating surface between the two have no gap. **Tighten when solid contact is made on the Mandrel Shaft using the Mandrel Wrenches**.

3. Figures 10 and 11 show a mounting variation. Using the front or back of the adapter is acceptable as long as the end result can center the tire tread to the Cutter Blade.

FIG. 9

FIG. 10

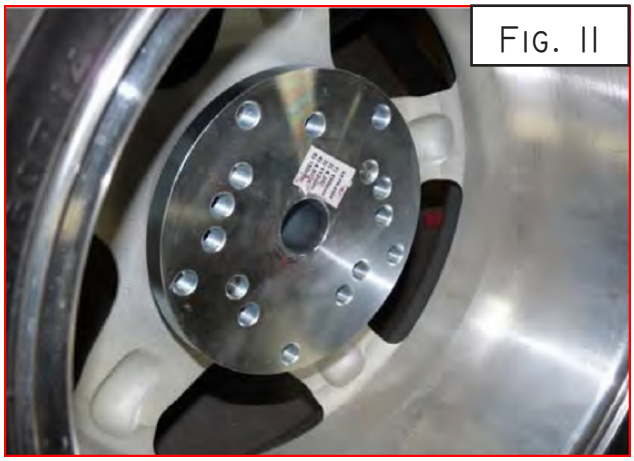


FIG. 11

4. See Fig. 12 showing Spacers (photo insert) being used along with the Mandrel Nuts and shaft bearings.

5. More experienced operators may opt to assemble the adapter and Mandrel Shaft parts together. Place it into the Tri-Stand and simply mount the tire to it.

6. **The key is selecting the correct adapter without having to put it all together, then take it apart and re-assemble it.**

7. Heavier tires may not allow for this, so both methods are shown.

8. Once assembled, place into a suitable pillow block groove (Fig. 13). Take the play out of the mandrel shaft and bearings and tighten the bearing set screws.

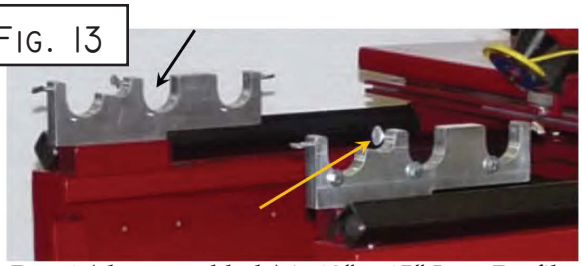
9. Center the tire tread with cutter head.

10. Proceed by tightening the mandrel nuts and adapter assembly.

11. You are now ready to true the tire.

FIG. 12

FIG. 13



Pos. 1 (closest to blade) is 13″to 15″ Low Profile
Pos. 2 is 15″ High Profile to 19″
Pos. 3 is 20″ to 24.5″

Hub Centric Instructions

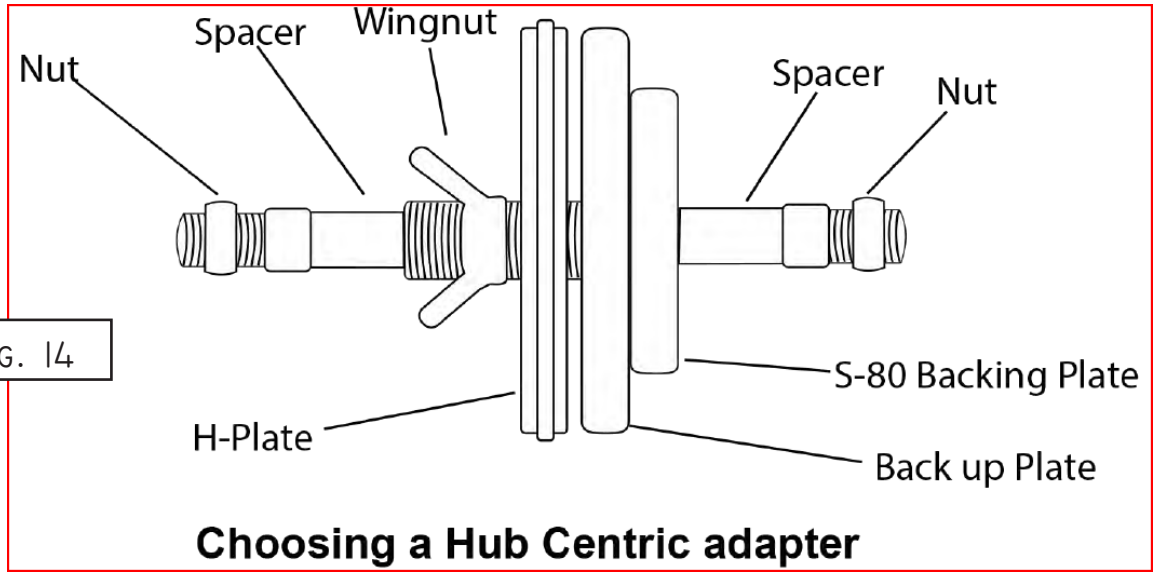


FIG. 14

1. The Amermac Group H series adapters (see Fig. 15 below) are based on the center inside diameter of a rim. These adapters used along with the Series 80 Backing Plate and wing nut (Fig. 16 below right) are generally used for truing medium to large truck tires.

2. The adapters have a part name and sizes (usually in millimeters) stamped on them. Both sides of these adapters are machined to one or more bore sizes. Measure the inside diameter of the rim, convert it to millimeters and select an adapter that fits tight in relation to the tire.

3. **Cleaning the rim surface where the adapter and backing plate mount is critical.**

FIG. 15

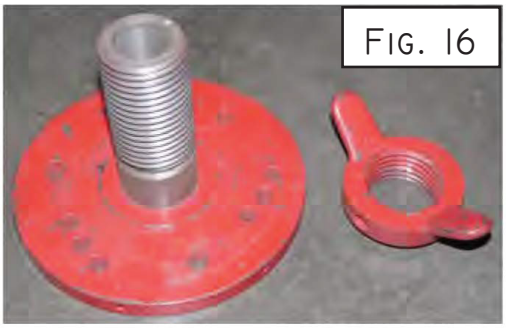


FIG. 16

4. Fig. 17 shows a picture of a Hub Centric Amermac Adapter.

FIG. 17

5. Do not force onto a rim. Measure carefully and make sure the rim is clean. A spacer/backing plate PN HBP-001 can be used with series 80 backing plate and wing nut.

6. Sandwich the rim between these plates and tighten.

7. NOTE: When truing any tire, make sure all debris is removed from the entire rim and tire including inside tread! A small pebble trapped between these parts when sandwiched together will damage a tire. If necessary use a wire brush, sandpaper or emery cloth to prepare the rim. It is time well spent.

Hub Centric Instructions

1. Many of the same principles of using the Bolt Centric Adapters apply to the Hub Centric Adapters. The end result is to have the tire and rim mounted to an adapter, on the Mandrel Shaft and ultimately centered to the Cutter Blade on the machine.

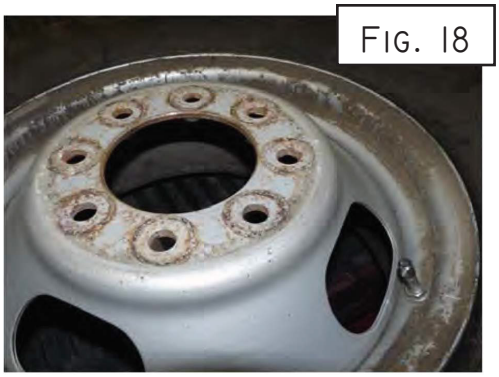


FIG. 18

2. Rather than mounting the rim to an Bolt Centric Adapter, the Hub Centric Adapter is fitting inside the center opening of a rim and sandwiched together between Backing Plates or spacers.

3. Rim preparation is critical. In Fig. 18, a rim is shown with dirt and rust on it. Clean it off or the tire may be ruined.

4. It cannot be stressed enough to select the right adapter that fits properly in the center hole of the rim. If there is too much play, the tire can become damaged or ruined. (see next page)

5. In Figures 19 and 20, a Hub Centric adapter has been selected and mounted to a truck tire using the Series 80 Backing Plate.

6. Assemble the Mandrel Nuts and spacers on the mandrel and align tire with the Cutter Blade.

PROPER EYEWEAR AND FOOT PROTECTION REQUIRED. AVOID LOOSE CLOTHING.

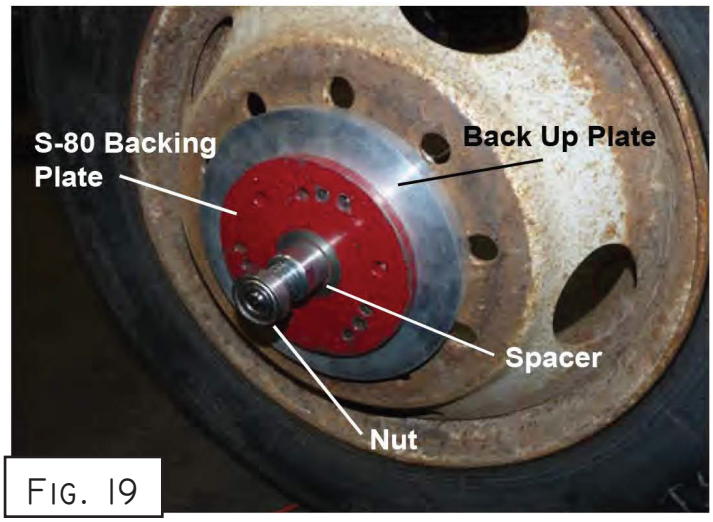


FIG. 19

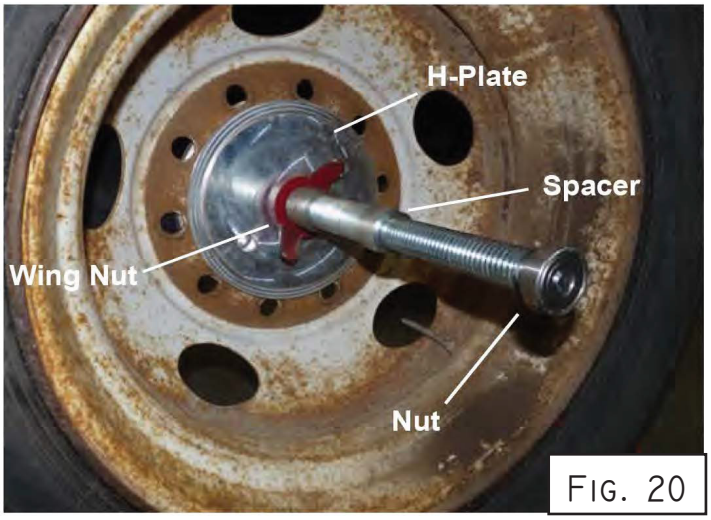


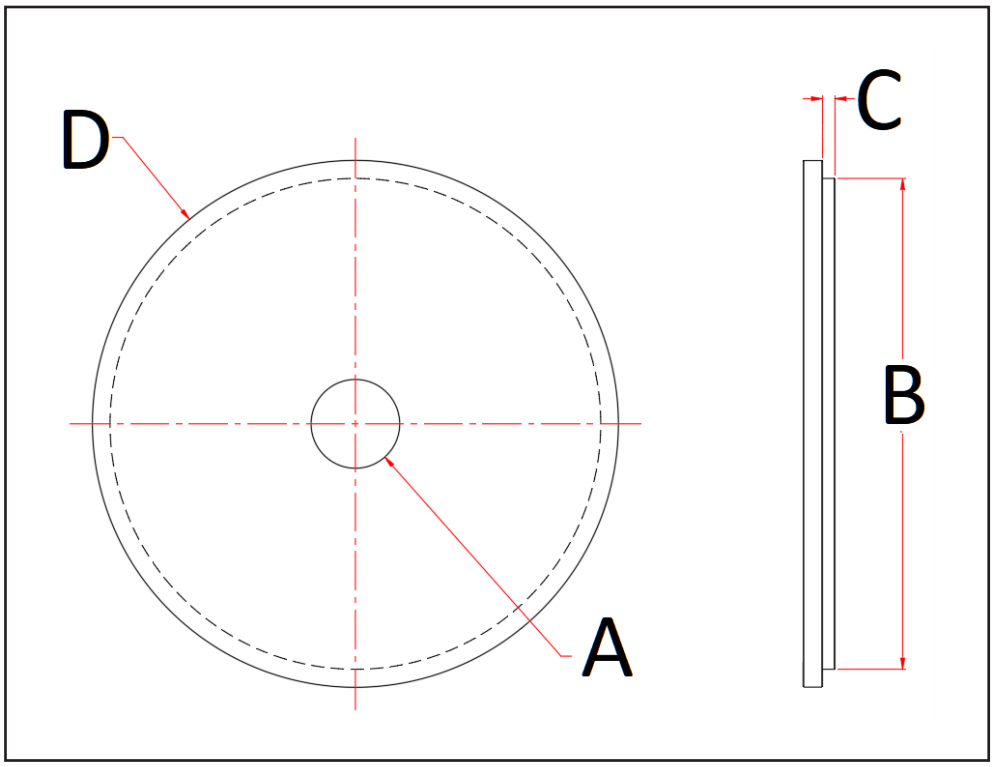
FIG. 20

7. The same applies when locating the tire and adapter assembly on the Truer. Select the appropriate Pillow Block location, tighten set screws in the Mandrel Bearings and tighten thumb screws. Once positioned, tighten the wing nut and Mandrel nuts.

8. NOTE: In Figures 19 and 20 a rustier rim was used to show that even in certain conditions Truing can still be achieved. Prior to truing this rim emery cloth and sand paper were used to clean the bore and contact surfaces of the rim.

TSI recommends checking each Mandrel Shaft for straightness fairly often.

Hub Centric Adapters



Most adapters have two "B" dimensions shown below because there are different size adapters on each side of center plate.

Part #	Adapter #	A (bore)	B (Diameter)	C	D (OD)
15575	HLD-012	2"	125.1mm	.20"	8.25"
			170mm	.34"	
15199	HLD-005	2"	125.2mm	.26"	8.25"
			170mm	.26"	
15069	HHD-002	2"	220.1mm	.26"	10"
			221.1mm	.26"	
15672	HHD-002Y	2"	220.1mm	.51"	10"
			221.1mm	.26"	
15276	HHD-001	2"	220.2mm	.26"	10.125"
			228.2mm	.26"	
15068	HHD-011	2"	220.2mm	.26"	11.9"
			281.2mm	.26"	
15449	HBP-001	2"	244.5mm	.75"	244.5mm
15447	HLD-003		123.97mm		
			138.68mm		

Special Adapters

Part 6343

BAN-LMM-AIG
Bandolero Legends
Formula 1

Part 6368 Go-Kart

711 Operating Instructions

Centering

1. The tire must be centered to the machine. Slide out the V-Notch Plate centering gauge located under the Top Deck to center the tire (see Fig. 21 below). If properly centered both sides of the tire will touch the V-Notch equally. If not loosen the Mandrel Nuts and center the tire. Make adjustments then tighten mandrel nuts using the Mandrel Wrench.

2. After tire is centered slide the V-Notch Plate out of the way under the Top Deck

Tire Truing

1. **Clean tire tread of sand, grit, pebbles and all debris before truing.**

2. Loosen the two clamping knobs and position the top deck to 24 then tighten both clamping knobs. As you become more experienced you may wish to change the setting on the calibration arm.

3. Use the Infeed Drive Screw to advance the Cutter Blade close to the tire. Rotate the tire by hand and see how much the tire is out-of-round. The blade should not touch the tire at this test.

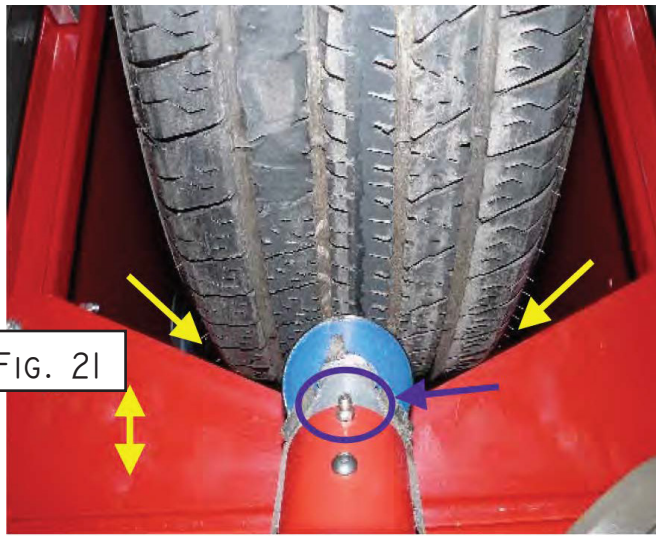


FIG. 21

FIG. 22

Move Top Deck back a little so Cutting Blade is not contacting tire.

FIG. 23

Set Calibration arms to 24.

Tire Truing (Continued)

4. Turn Drive Roller ON and raise it to engage with the tire (Fig. 24) by turning the Drive Roller Screw located at the rear of machine. It is spring loaded, so no need to force it.

5. Lift Blade Safety Guard (Fig. 25) and turn Cutter Blade switch ON in the direction which truing is to be performed. We suggest truing the right half of the tire tread first. Start at center and move right. Make sure Cutter Blade is razor sharp before each pass.

6. Turn on Lamp and adjust to illuminate the cutting area.

FIG. 24

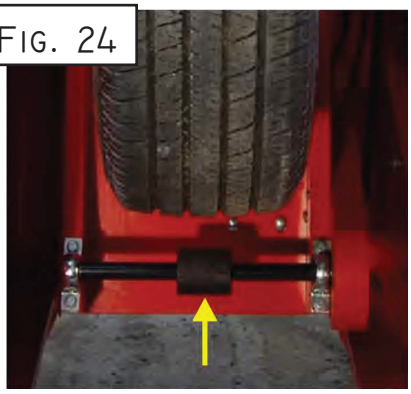
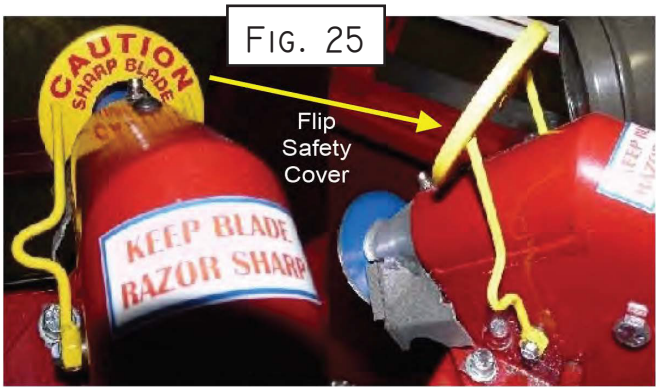


FIG. 25

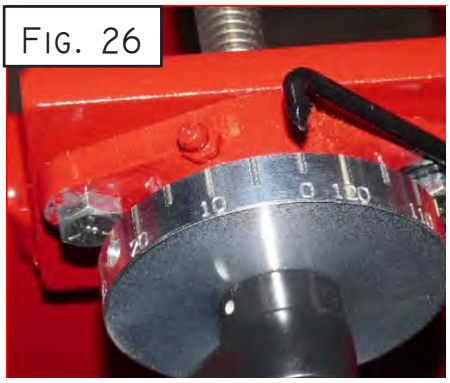


7. Turn the lnfeed Drive Screw with the Cutting Gauge on it (in back of unit, see Fig. 26) to advance the blade until it barely starts cutting.

8. **Observe how much the tread is out-of-round to determine the depth of the cut.**

9. Grip the infeed Drive Screw (to keep it from turning) and turn the slip-wheel Cutting Gauge to zero. This establishes the starting point. This is needed after the first pass is complete and the blade is positioned for the second pass. The starting point needs to be the same.

FIG. 26



10. The Cutter Gauge measures the depth of cut.

11. Turning it one full revolution makes the Cutting Blade move 1/8" (.125") into or away from the tire.

12. In no case should a single cut be more than 1/32" in depth. Basically from 0 to 3 on the Gauge, which is .030 inches. Still, we suggest starting with a .020 inch cut.

13. Between each mark = . 005".

14. **NOTE: The Cutting Blade is specially hardened and sharpened during cutting, but it will become dulled by embedded objects in the tread. To insure a clean, smooth cut, sharpen as necessary.**

15. **NOTE: Blade life depends on the operator as much as the differences in rubber from one brand to another. A blade will last longer on newer tires as opposed to tires with pebbles or debris not cleaned properly from the treads.**

711 Operating Instructions

NOTE: The Cutting Gauge wheel and adjustment techniques are the same for all Cabinet Tire Truers. If the slip adjustment feature on the Cutting Gauge is too loose, mildly tighten the set screw on it. Fig. 26 on page 14.

KEEP HANDS AWAY FROM SPINNING TIRE AND CUTTING BLADE

The Cut

1. At this point your machine should be ON. The Roller Drive should be spinning the tire, the Lamp should be ON and the Cutter Blade should be making a .020" deep cut into the center of the tire. If cutting to the right, be sure the motor direction is switched to the right (clockwise).

2. Using the Crossfeed Crank on the Top Deck slowly traverse the Top Deck and Cutting Blade across the right half of the tread. This cut will be a perfect profile of the original tread in accordance with the setting of the index on the Profile Arm (Fig. 23 on page 13.) Notice the Motor Assembly and Cutting Blade pivoting slightly to match the profile of the tire.

3. The Mandrel Shaft, bearings and thumb screws as well as the rim mounted on the adapter need to be secure at all times. This includes the Profile Arms, Knobs and linkage assembly. While truing, make sure tire position does not change.

KEEP CUTTER BLADE RAZOR SHARP - KEEP THE CUTTING AREA CLEAN

4. Observe the rate of speed moving the Top Deck and how consistent the cut is being made. Go faster or slower to suit the desired end-result.

5. Upon completing the end of the first pass on the tread, back the Top Deck and Cutting Blade away from the tire using the upper crank handle. Be careful not to lose the "zero" setting. Turn the Cutter Blade Motor OFF.

6. Reposition the Cutter Blade location at the center of the tire where you first started. Turn the Cutter Blade Motor ON, this time Reverse the motor direction by toggling the switch toward the new direction of truing. Set your cut on the cutting gauge and proceed with the left side of tire.


FIG. 27

7. We highly recommend truing both sides of the tire for each change of depth in the tire before making the final cut. Slowing down traversing the Top Deck results in a smoother end result.

8. It is suggested a novice repeat the operation several times by taking lighter cuts until all the high spots in the tread have been removed. After experience, an operator will gain skill and a better understanding of capabilities of the machine.

9. When the tire is complete, turn OFF the Motors, lamp and remove the tire and Mandrel assembly, then remove tire from adapter.

10. This completes the truing operation for a standard model 711 unit.

1200R Operating Instructions

1. See Page 6 for tire mounting instruction. Load tire in either of the two furthest Saddle Block locations from Cutter Head and tighten thumb screws (see pages 6-11).

2. Position Cutter Head at mid-tire. Crossfeed left and right to verify tire is parallel with the Top Deck.

3. Set the Top Deck to zero angularity. Loosen the knob (see Fig. 28) under both sides of the Top Deck and align the two flat steel pivoting plates. Do not remove knobs.

4. Figure 29 displays the location of the Calibration Mark Decal on the back left-hand side of the unit under the Top Plate. Another decal is on the right side. Use these to establish a consistent cut angle on the tire.

5. For specific details describing how deep a cut is being made per a given angle and tire width please refer to the Truing Angle and Cut Depth Chart on page 17.

6. Proceed to Flat Cut or Angular Cut once you have a tire mounted and ready to go.

FIG. 28

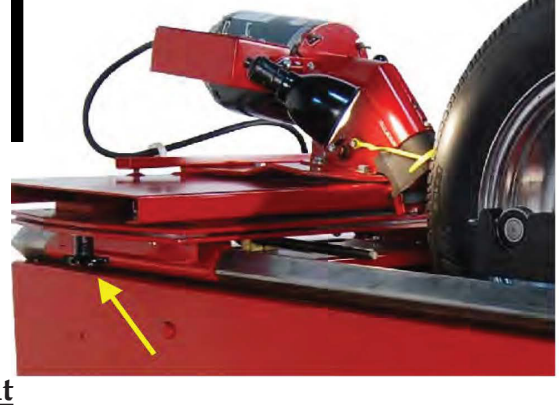
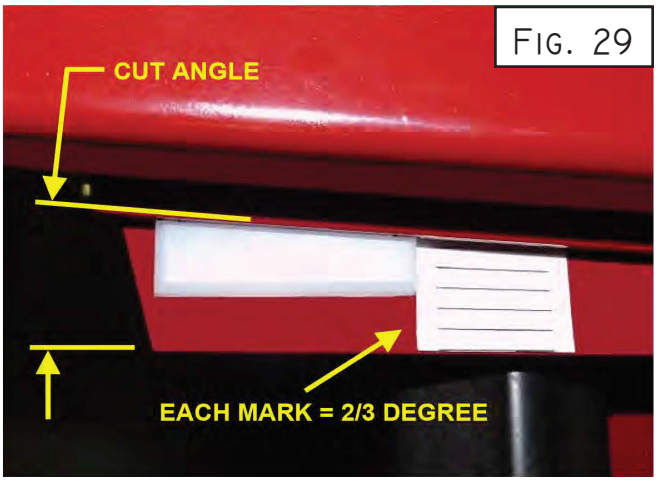


FIG. 29



Flat Cut

1. Consider the end result of the tire. If the cut is flat you can proceed by setting the depth desired. Engage the Drive Roller and prepare the Cutter Blade as stated on Page 14, Fig. 24 & 25.

2. Position the Cutter Head to one side of the tire and begin your cut. The same cutting parameters listed on page 14, referring to Fig. 26 cutting .020" or (1/32" maximum) apply.

3. Instruction on The Cut (page 15) applies here with the exception of not using the tire center for repositioning the Cutting Blade. For finer cuts* remove less rubber material on the final pass and slow down the speed of the Cutter Head traversing speed. ***Manually sharpen the Cutting Blade more often if necessary.**

KEEP CUTTER BLADE RAZOR SHARP - KEEP THE CUTTING AREA CLEAN

Angular Cut

1. The degree Calibration Marks on 1200R Truers have long been referred to as being in increments of 1°. It has been determined the actual angle between each mark is about two-thirds of a degree. Which is measurable considering each angle on a 10 inch wide tire being trued from the center-out ends up having between 1/16 and 1/8 inch rubber removed from each edge.

Angular Cut (continued)

2. Center tire to the Cutter Blade and determine the angle* to cut the tire. For specific details describing how deep a cut is being made per a given angle and tire width, please refer to the Truing Angle and Cut Depth Chart below.

3. Pivot the Top Deck to set your angle using the Calibration Marks (Fig. 28 and 29) and tighten both knobs under the Top Deck.

4. Cut the rubber from tire in increments no greater than 1/32" maximum (.020 inches is suggested.) It is up to the operator whether to start from left to right or right to left.

Angles starting not on-center with the tire

1. This can also be achieved by applying the same criteria as listed above in the Angular Cut directions. The variable being where to identify the highest pitch of the tire (new angled tire center) is to be. It is advisable to measure and mark the tire in relation to the centered Cutter Blade along with indicating where the tire mounted to an Adapter is mounted on the Mandrel Shaft, so duplicating the application can be more consistent.

When the tire is complete, turn OFF the motors, lamp, and remove the tire and Mandrel assembly, then remove tire from adapter.

Truing Angle and Cut Depth Chart

Cut Lines	8″ wide	10″ wide	12″ wide	14″ wide
1 = .675°	3/64	1/16	1/16	5/64
2 = 1.350°	3/32	7/64	9/64	5/32
3 = 2.025°	9/64	11/64	13/64	15/64
4 = 2.700°	11/64	7/32	17/64	5/16
5 = 3.375°	7/32	9/32	21/64	25/64
6 = 4.050°	1/4	21/64	13/32	15/32
7 = 4.725°	19/64	3/8	29/64	35/64
8 = 5.400°	21/64	27/64	33/64	39/64

This chart indicates rounded numbers portraying different scenarios that will help decide the angle and cut for each pass for truing a tire.

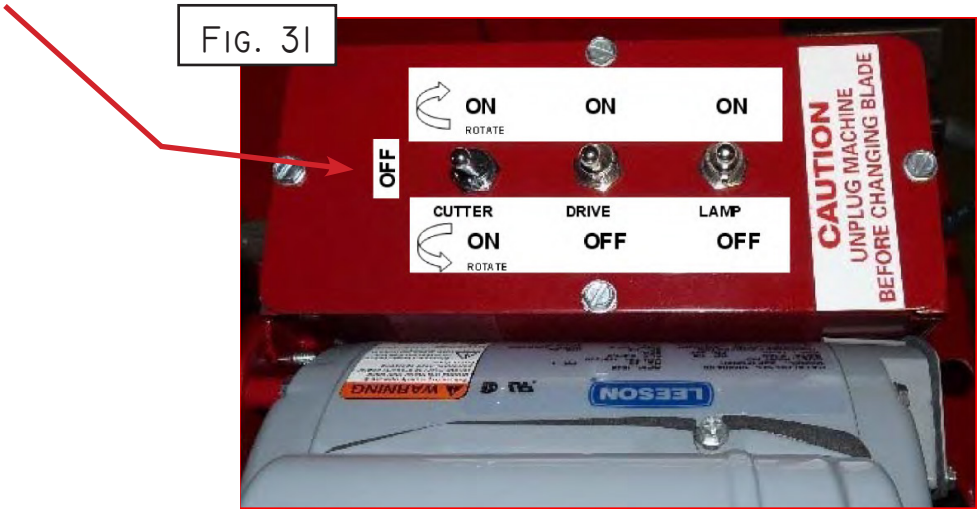
Electric Controls - All Units

Control Box - Standard

1. Below in Fig. 31 is the standard Control Box. The Cutter Blade is operated by 3-position toggle-switch on the left. The switch for each the Drive Motor and Lamp are either on or off.

2. The directional switch for the Cutter Blade is marked with Clockwise (right) and Counter -Clockwise (left) arrows. The top of the cutting blade should rotate in the same direction the Deck travels. Always stop (turn off) the blade before changing direction of the switch.

FIG. 31



Truer Maintenance

NOTE: Maintenance is based on truing approximately 100 tires a week.

Daily

1. Keep the machine clean. Remove rubber chips and debris with a brush or air nozzle. Too much accumulated debris can complicate operation of the machine as well as add to hazardous working conditions. We recommend cleaning working contact areas after each truing.

2. Check Blade and Sharpening Stone. Refer to Repair Parts List to order replacements.

3. Make sure the Mandrel is straight. If it is not straight the result on truing a tire incorrectly is magnified considerably. Maintaining straightness is essential.

4. Verify Blade Safety Cover is operational.

Weekly

1. Lightly oil and lubricate (with a silicone solution) all working surfaces such as slide rails, drive screws, pivot points, gears, and contacting movable parts for longer product life and smoother operation. The lubricate should offer corrosion protection, metal wetting, water displacement and penetration to surfaces. Depending on use, it may be necessary to lubricate more often than weekly.

2. Clean and visually check adapters for wear and tear.

Monthly

1. Add standard chassis grease to zerks on Cutter Head and Flange Bearings.

2. Check belt wear. Total belt deflection when tight is 1/4" to 3/8" midway between pulleys.

Cutter Blade and Grinding Stone

1. TSI suggests installing a new stone with each new blade. This will provide proper seating of the stone to the blade and will extend the life of the blade giving better sharpening.

Changing Cutter Blade and Grinding Stone

1. In Fig. 33 use Spanner Wrench (Fig. 34 and 35) and Allen wrench to remove the Cutter Blade.

2. Loosen the Socket Head Cap Screw while inserting the Spanner Wrench into the Blade to keep it from turning. Loosen and remove the screw and cap, then remove the Cutter Blade. Before installation of the new Cutter Blade replace the Grinding Stone.

FIG. 33

BE VERY CAREFUL WHEN HANDLING OR CHANGING CUTTING BLADE! UNPLUG FROM POWER

Once replaced, tighten blade to 30-40 ft-lbs and stone to 15-20 ft-lbs.

FIG. 34

FIG. 35

Truer Maintenance

Changing Cutter Blade and Grinding Stone (continued)

3. Lift the manual blade sharpening lever in Fig. 36 to lower stone cradle. As supplied with each unit, work the short ended Allen Head Wrench into the Stone-Bolt Hex, Fig. 37.

4. While holding the Allen Head Wrench in place, let go of the manual sharpening lever, then insert the Special Socket into the bottom of the Stone Cradle (see Fig. 38) to make contact with the Jam Nut. Loosen and remove the old Stone and Paper Washers. In reverse order replace the new Stone and Paper Washers. Tighten securely to remove any play left between the Stone in the Cradle and the Bearing housed in the Grinding Stone Cradle. NOTE: There should not be any "wobble" of the stone if the nut is securely tightened.

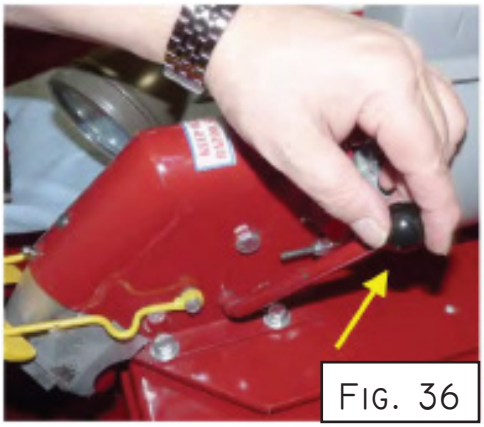


FIG. 36

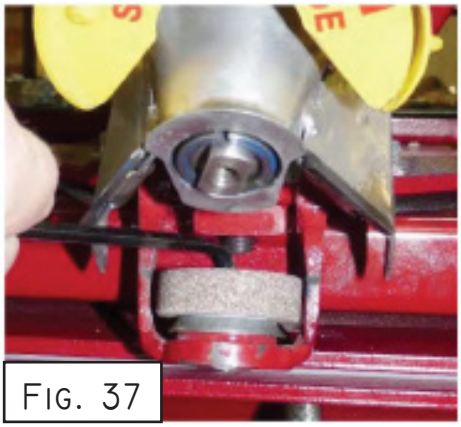


FIG. 37

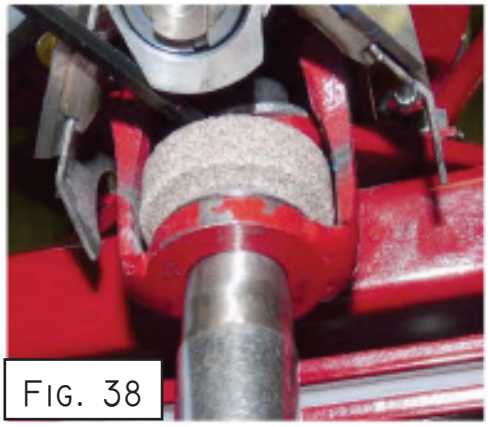


FIG. 38

BE VERY CAREFUL WHEN HANDLING OR CHANGING CUTTING BLADE!

6. When replacing the Cutter Blade make sure the spring loaded Carbide Blades are firmly against the back-side of the Cutter Blade (see yellow arrow in Fig. 39.) Use the Spanner Wrench, Fig. 35 to tighten Cutter Blade.

7. Once Cutting Blade and Stone have been replaced recheck your work. Upon everything being properly replaced, run the unit to sharpen and 'seat' the new Stone and Cutting Blade to each other before using for the first time.

Sharpening Manually

Machine is self-sharpening during operation, but blade needs to be sharpened after installation and if blade becomes dull.

1. Figures 40, 41, and 42 (see next page) are various stages of sharpening the Cutter Blade manually.

2. Using lever (Fig. 36) lift the Stone to make contact with the Cutter Blade. Grind on it for a few seconds then release so blade can briefly cool and debris can clear itself.

NOTE: Do not burn the edge of the blade with continuous grinding. Allow time to cool.

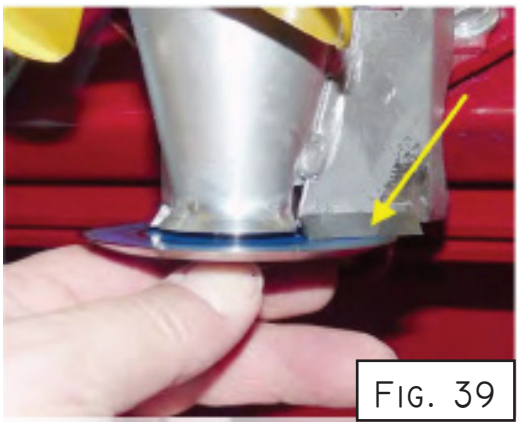


FIG. 39

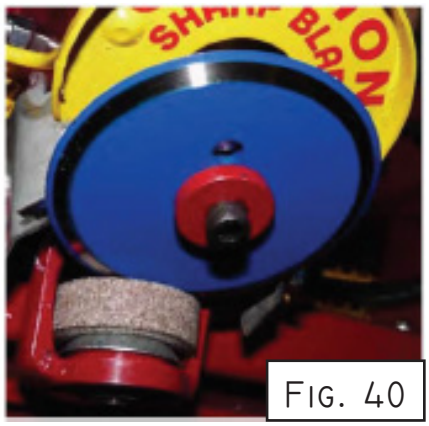


FIG. 40

Truer Maintenance

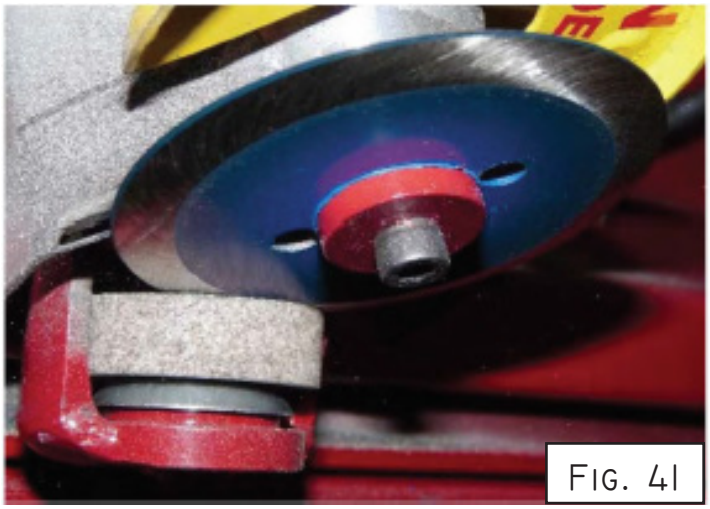


FIG. 41

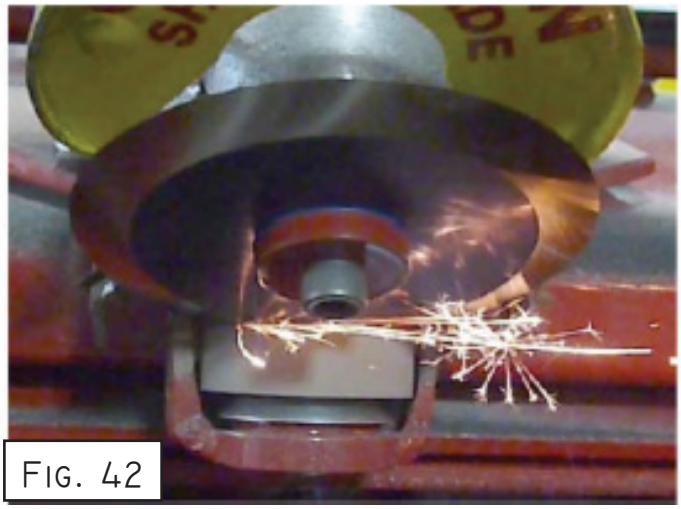


FIG. 42

3. Repeat the grinding and releasing process until the blade is razor sharp.
4. Machine maintenance is vital to maintain accurate cutting ability. If parts on the machine are broken, damaged or loose it WILL cause damage to a tire.
5. Address those situations promptly.
6. TSI is not responsible for careless operation and use of these machines or the damage that could incur due to improper use and operation.
7. Grease zerk locations: Figures 43 to 46 below and Fig. 21 on Page 12 (see circle and arrow).

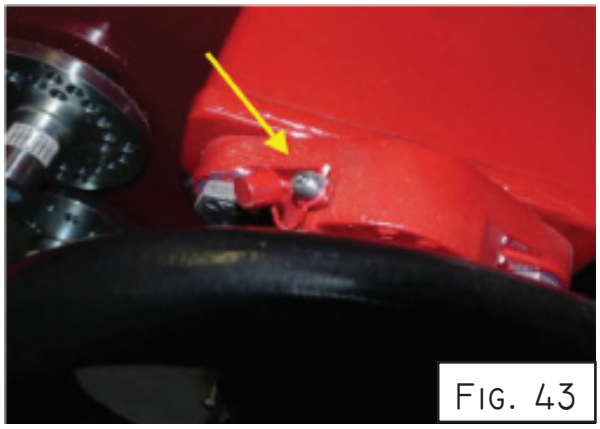


FIG. 43

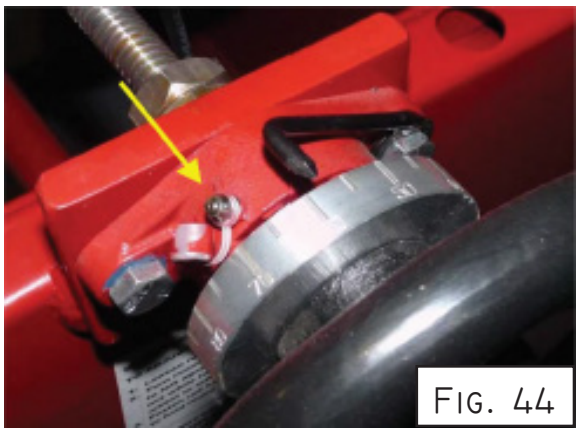


FIG. 44

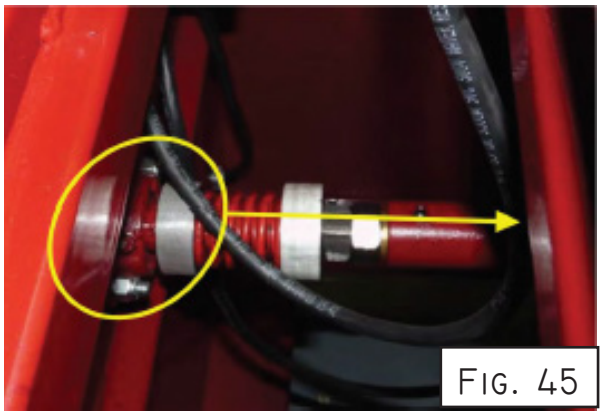


FIG. 45

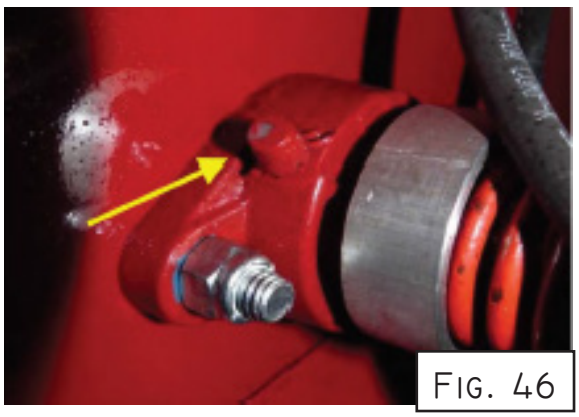


FIG. 46

Specifications

Each model comes complete with a Mandrel Shaft Assembly consisting of: One Mandrel Shaft, two Mandrel Shaft Bearings and two Mandrel Shaft Locking Nuts.

Standard Electric

Required Power: 120 V, 60 Hz, 20 Amp Dedicated Circuit

Cutter Blade Motor: 1/3 HP, 120 V, 60 Hz, 1 Phase
Tire Rotation Motor: 1/3 HP, 120 V, 60 Hz, 1 Phase
LED Lamp: 120 V, TSI PN 12170 Replacement

Option
Crossfeed Motor: 1/8 HP, 90 V, 60 Hz, 1 Phase

Unit Size
The 711 and 1200R units measure 46" long x 45" wide x 4 7" high

Truer Tire Size Capacity - standard units*
Model 711: 18" minimum to 42" maximum x 15" wide
Model 1200-R: 18" minimum to 42" maximum x 15" wide
** Special order machines can handle smaller or larger diameter tires*

FIG. 47

Optional Lift

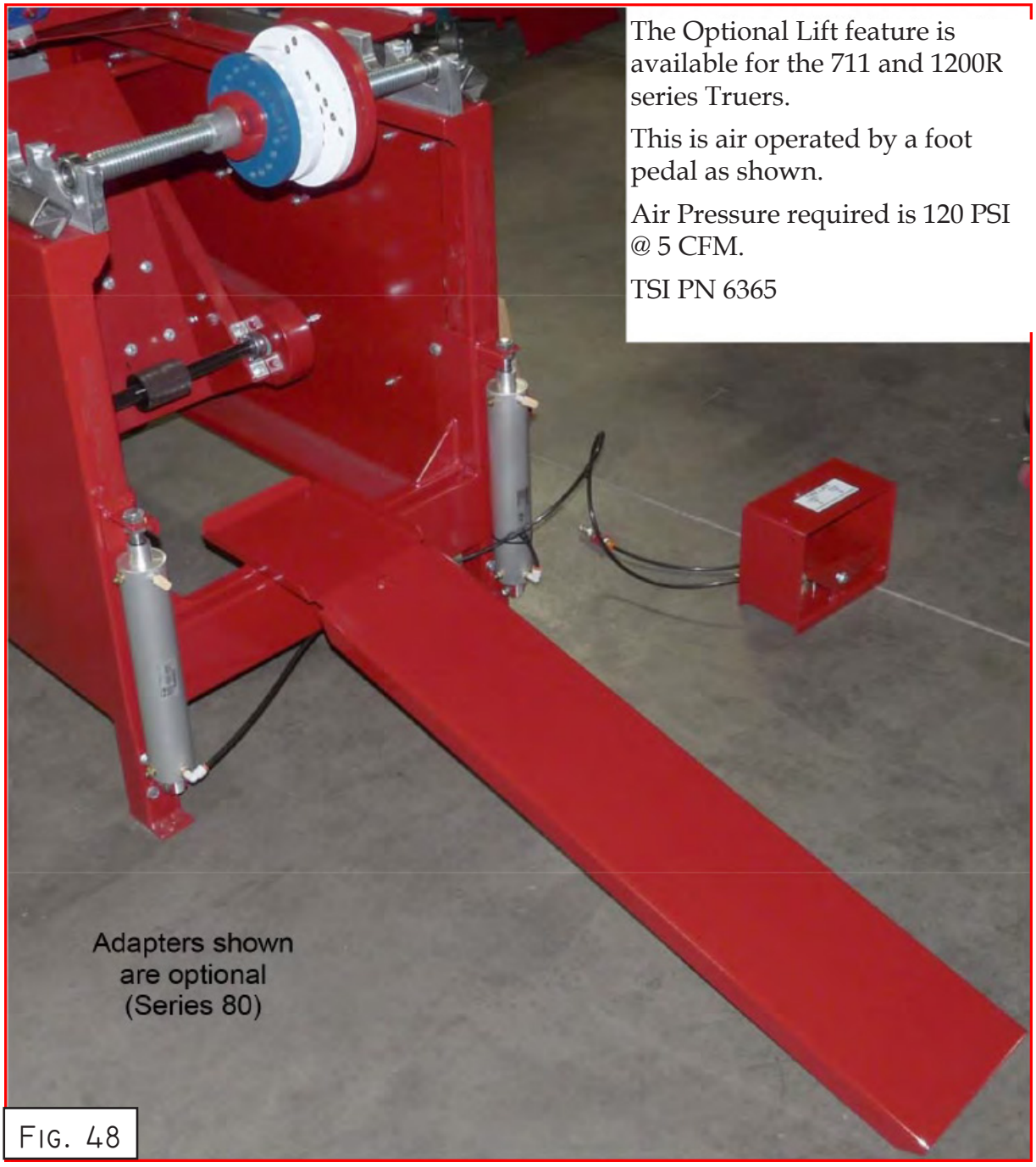


FIG. 48

The Optional Lift feature is available for the 711 and 1200R series Truers.

This is air operated by a foot pedal as shown.

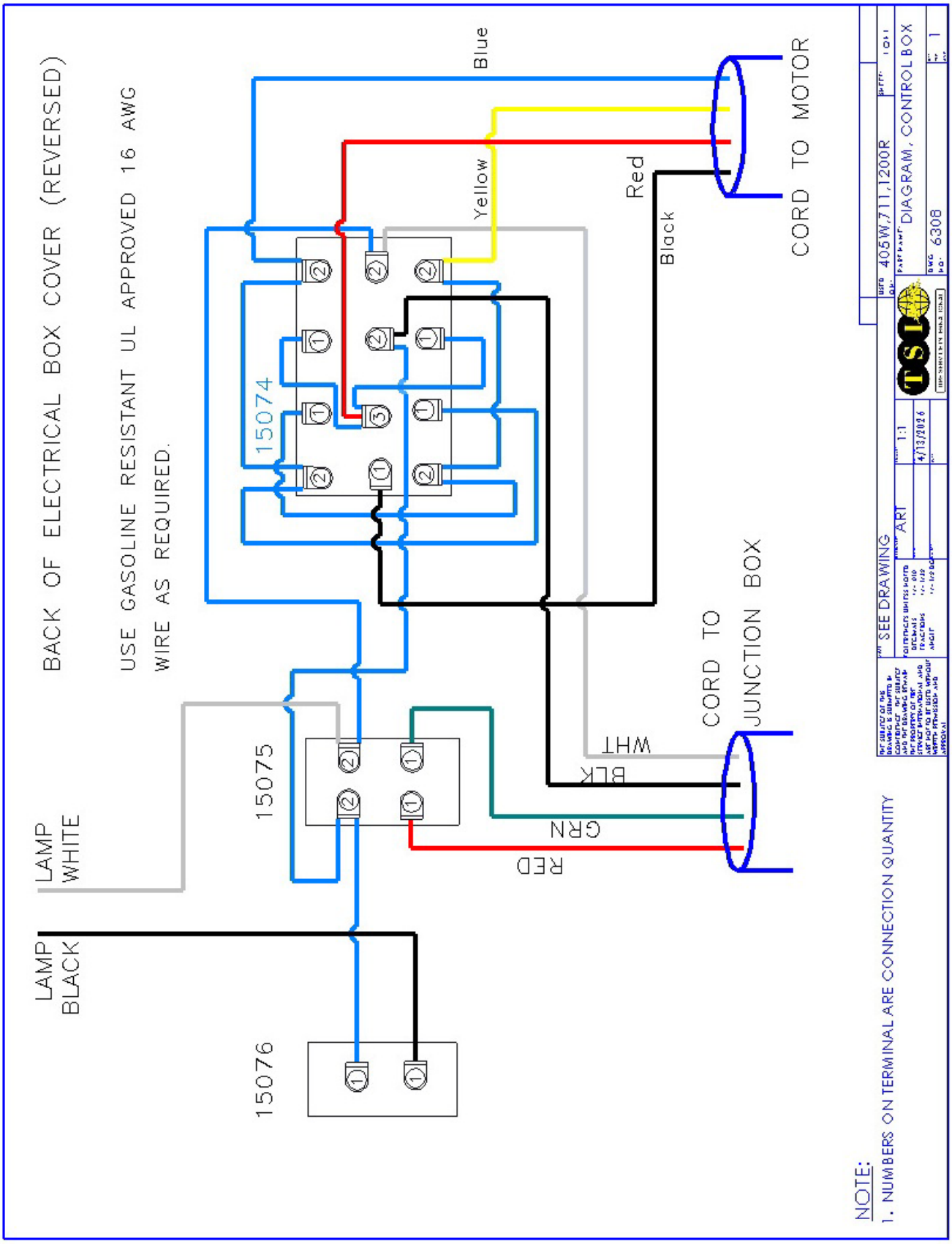
Air Pressure required is 120 PSI @ 5 CFM.

TSI PN 6365

Repair Parts List (Model 711 and 1200R)

Item	Description
4954	Crank Hand Wheel with set screw
6306	Spring Mounted Carbide Clip (was #6476)
6307	Stone carriage
6427	Bearing Housing Complete
12170	X34 LED FLOODLIGHT 120
15005	Blade, Truer (AM-53)
15014	Nut , Top Table Crossfeed (AM-73)
15067-60 Lower	Motor, Lower Electric 1/3 HP 60 Hz
15067-60 Upper	Motor, Upper Electric 1/3 HP 60Hz (rewired for reverse direction)
15074	Toggle Switch, 3 Position Reversing- 12 Terminal
15075	Toggle Switch, Drive Motor Reversing
15076	Toggle Switch, Truer Lamp Reversing
15138	Bearing, Stone (AM-P41and45)
15211	Dust Cup, Stone (AM-46)
15216	Wheel, Handle 6" (AM-6 and P6)
15226	Stone w/ 2 paper washers (AM-47)
15232	Spring for Carbide (AM-112A)
15291	Bearing 1.85 OD X 3/4 ID
15396	Mandrel 21.375 (AM-18A)
Adapters:	
6362	Wheel Adapter, A1 5 Lug metric
6381	Wheel Adapter, A2 5 Lug Inch
6364	Wheel Adapter, A3 3 Lug Metric
6382	Wheel Adapter, A4 3 Lug Inch
6366	Wheel Adapter, A5 Multi
6367	Wheel Adapter, A6 8-10 Lug P/U AL

Schematic


BACK OF ELECTRICAL BOX COVER (REVERSED)
USE GASOLINE RESISTANT UL APPROVED 16 AWG WIRE AS REQUIRED.
LAMP WHITE
LAMP BLACK
15074
15075
15076
Blue
Yellow
Red
Black
CORD TO MOTOR
CORD TO JUNCTION BOX
WHT
BLK
GRN
RED
SEE DRAWING
ART
405W,711,1200R
DIAGRAM, CONTROL BOX
6308
NOTE:
1. NUMBERS ON TERMINAL ARE CONNECTION QUANTITY

405W PORTA TRUER

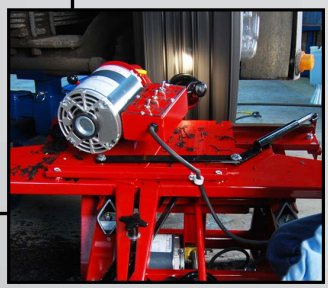
405-W Porta Truer shown with optional truer stand

INCLUDES

SCOOTER SEAT

MADE IN USA

Designed to handle bus, truck, trailer, passenger car and light truck applications



SHIPPING SPECIFICATIONS:
48" L x 38" W x 27" H
278 lbs shipping weight

PRODUCT FEATURES

Fast, accurate and dependable, the heavy duty **405-W Porta Truer** is designed to roll up to any vehicle and true the tire without removing the wheel. The versatile design means the entire job can be completed within a matter of minutes. Truing the tire on wheel bearings insures absolute accuracy.

- Versatile, low maintenance design.
- Folding handle design for compact storage.
- Built-in tire profile follower.
- Cuts up to 17.5" wide on a 24" profile.
- Adjustable work light.
- Rotary stone blade sharpening system
- 14 foot power cord.
- 60 Hz., 110-115 V, Single Phase

OPTIONAL ACCESSORIES

#6418 Adjustable Truer Stand

The tuer stand allows the operator to true tires already mounted on a spin balancer. Set the height to the balancer once and true any diameters.

Rev. 04.23.2019

TSI TIRE SERVICE INTERNATIONAL

Made in the USA at our plant in Monticello, MN
3451 South 40th Street, Phoenix, Arizona | www.buytsi.com
Ph: 800.223.4540 | Fax: 602.437.5025 | Email: sales@buytsi.com

Notes

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.

TSI TIRE SERVICE INTERNATIONAL

Register your product online!

www.buytsi.com/registration

!!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.

Visit www.buyTSI.com for any additional information. Also be sure to follow us on all the Socials, and subscribe to our YouTube channel for all our product videos.