

ASSEMBLY

1. Screw the long threaded knob (Ref. #18) into the base support. A thin layer of grease on the threads will assure smooth operation.
2. Screw the short threaded knob (Ref. #14) into the caliper arm.
3. Insert the sliding axle holders into the axle holder brackets. The "V" shaped notches in the holders should be toward the center of the stand with their open sides facing up. The indicator scales with vertical red lines should face the caliper arm.
4. Slide a plastic cap over the outer end of each axle holder.
5. Screw a small threaded knob (Ref. No. 2) into the threaded hole on each axle holder bracket. **DO NOT OVERTIGHTEN!**
6. The stand may be bolted to a bench for stability during use. An optional tilting base accessory (TSB-6) is available which allows tilting the stand forward or back for comfortable use at any bench height.

OPERATION

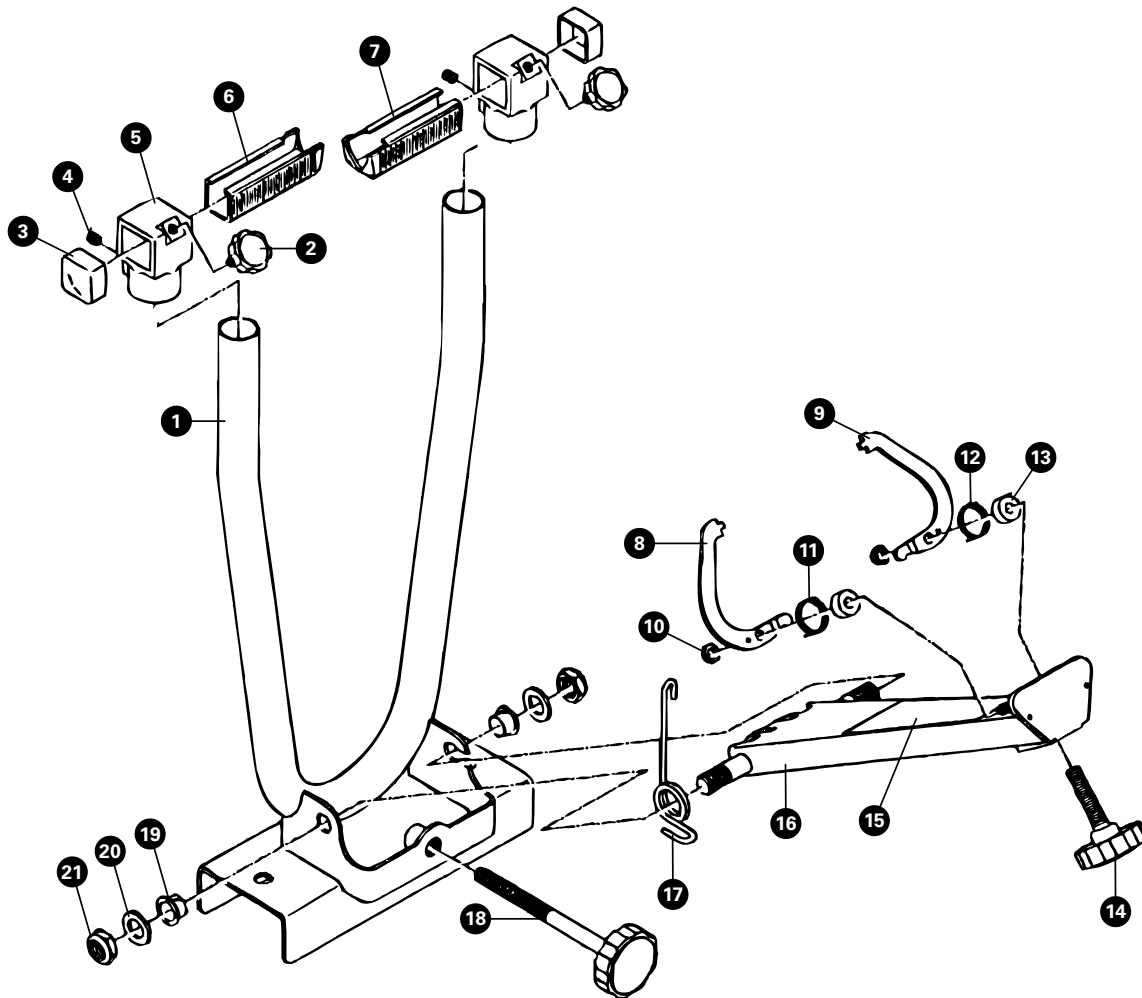
1. Turn knob 18 in several turns until the caliper arm is low enough to clear the rim.
2. Turn knob 14 in several turns until the calipers spread far enough apart to clear the width of the rim.
3. Remove the tire, tube, and rim strip from the wheel to be trued. Remove the quick release skewer or axle nuts and washers from the axle. Rotate the axle to make sure it is not bent and to check for proper cone adjustment. All spacers and lock nuts must be in place and properly adjusted on the axle before placing the wheel in the truing stand.
4. Place the wheel into the stand by placing the ends of the axle into the "V" notches of the axle holders. Push on the plastic end caps of the axle holders to hold the wheel securely. Slide the holders and wheel left or right so that an equal number of lines shows on each holder. This will insure that the wheel is properly "dished" or offset to provide space for the gear cluster. Tighten knobs 2 to lock the axle holders in place.

WHEEL TRUING TIPS

Wheel truing is not as mysterious as many seem to think. The following points should be checked before attempting to true any wheel:

1. Remove the tire, tube, and rim strip from the wheel. This will simplify adjusting for "hop" in the rim and prevent damage to the tube if spokes protrude during truing.

2. Make certain that all spacers and lock nuts are properly placed on the axle.
 3. Rotate the axle to be sure that the cones are properly adjusted and the axle is not bent.
 4. Use a spoke wrench that is properly sized to the nipples. We recommend use of Park Tool professional quality spoke wrenches.
- Work slowly and patiently at first. Speed will come with practice.
 - It may not be possible to straighten a rim that is dented or severely bent. Spokes can only be tightened so much. Replacement of the rim or a new wheel are the only solutions for a badly damaged rim. If replacement is necessary, **ALWAYS** remove the gear cluster using proper tools before cutting or removing any spokes.
 - Tightening spokes running from one flange of a hub will pull the rim toward that flange.
 - Loosening spokes from one flange will cause the rim to move away from that flange.
 - Spokes should be tightened and loosened only one half to one turn at a time. Adjust spokes from opposite flanges of the hub to eliminate side to side movement (wobble) of the rim. After each operation, squeeze parallel pairs of spokes around the wheel to relieve spoke wind-up. Spokes on the gear cluster side of the hub will necessarily be tighter because of "dishing" to provide clearance for the gear cluster.
 - Check for high spots (hop) in the rim. If you find a high spot, determine how many spokes are included in the high spot. Loosen an even number of spokes opposite the wheel from the high spot and tighten the same number of spokes in the high spot. Work out from the center of the high spot toward its edges. Repeat for any other high spots.
 - Adjustment for hop may have affected wobble. Work slowly and patiently back and forth between wobble and hop adjustments until the rim is as true as possible.
 - Check for protruding spokes before mounting the tire and tube.



TS-6 PART NUMBERS

Ref. #	Part #	Description	Qty.
1	261	Base and Uprights	1
2	259	Knob and Shaft	2
3	258	Endcap	2
4	254B	Setscrew, M6 x 6mm	2
5	254A	Axle Holder Bracket	2
6	255AL	Sliding Axle Holder, Left	1
7	255AR	Sliding Axle Holder, Right	1
8	219-2L	Caliper, Left	1
9	219-2R	Caliper, Right	1
10	226-2	Nut, 1/4 - 20 Thin Nylon Lock	2
11	222SL	Spring, Left	1

Ref. #	Part #	Description	Qty.
12	222SR	Spring, Right	1
13	228-2	Spacer	2
14	224S	Knob and Shaft	1
15	250	White Background Decal	1
16	207-6	Caliper Arm, Includes Decal	1
17	206-2	Spring	1
18	217S	Knob and Shaft	1
19	235-2	Nylon Bushing	2
20	234-2	Washer, 1/2 x 7/8	2
21	233-2	Nut, 1/2 - 20 Thin Nylon Lock	2