

Truck: _____
Date: _____
Tech: _____

NOTE: Perform all worksheet calculations using decimal inches for accuracy — fractions introduce rounding error at each step that compounds through the formula. Convert the final result to the nearest 1/32" fraction only when a physical measurement or shim selection is required, using the conversion table provided. The table shows both INCH and MM conversions.

INCH FRACTION → DECIMAL				LATERAL AXLE OFFSET CHECK			
IN Fraction	Decimal IN	MM	Decimal IN	Front Axle — Right Reading		Front Axle — Left Reading	
1/32	0.03125	1	0.0394	Rear Axle — Right Reading		Rear Axle — Left Reading	
1/16	0.0625	2	0.0787				
3/32	0.09375	3	0.1181	STEP 1 — BASELINE THRUST MEASUREMENT <i>Wheel at 12 o'clock — locking square upright, silver arm level</i>			
1/8	0.125	4	0.1575	Rear Side Reading		Front Side Reading	
5/32	0.15625	5	0.1969				
3/16	0.1875	6	0.2362	BOX 1 Rear – Front = BASELINE THRUST			
7/32	0.21875	7	0.2756				
1/4	0.25	8	0.3150	STEP 2 — RUNOUT THRUST MEASUREMENT <i>Roll wheel to 6 o'clock — reinstall locking square, verify level</i>			
9/32	0.28125	9	0.3543	Rear Side Reading (180°)		Front Side Reading (180°)	
5/16	0.3125	10	0.3937				
11/32	0.34375	11	0.4331	BOX 2 Rear – Front = RUNOUT THRUST			
3/8	0.375	12	0.4724				
13/32	0.40625	13	0.5118	STEP 3 — CALCULATE RUNOUT CORRECTION			
7/16	0.4375	14	0.5512	Runout Difference <i>(Larger of BOX 1 or BOX 2) – (Smaller of BOX 1 or BOX 2) — always a positive number</i>			
15/32	0.46875	15	0.5906				
1/2	0.500	16	0.6299	BOX 3 Divide by 2 = RUNOUT CORRECTION AMOUNT			
17/32	0.53125	17	0.6693				
9/16	0.5625	18	0.7087	STEP 4 — DETERMINE RECOMMENDED SHIM ADJUSTMENT VALUE			
19/32	0.59375	19	0.7480	If BOX 2 is LESS than BOX 1 : ADD Runout Correction (BOX 3) to Runout Thrust (BOX 2)		If BOX 2 is GREATER than BOX 1 : SUBTRACT Runout Correction (BOX 3) from Runout Thrust (BOX 2)	
5/8	0.625	20	0.7874				
21/32	0.65625	21	0.8268	RECOMMENDED SHIM ADJUSTMENT VALUE:		_____ (_____)	
11/16	0.6875	22	0.8661				
23/32	0.71875	23	0.9055	VERIFICATION: With wheel at 6 o'clock, reinstall locking square and re-measure Rear – Front. When this measurement equals the Runout Correction Amount (BOX 3) , the axle is perpendicular to the frame. If reading equals zero — over-corrected. If reading equals BOX 2 — no correction has taken place.			
3/4	0.750	24	0.9449	STEP 5 — TANDEM AXLE SCRUB MATCHING		STEP 6 — STEER AXLE MEASUREMENTS <i>Tires on turn plates — locking square downward, level on top</i>	
25/32	0.78125	25	0.9843	Left Axle-to-Axle		TOE	
13/16	0.8125	26	1.0236	Right Axle-to-Axle		Behind Steer Tires	
27/32	0.84375	27	1.0630	Difference × 0.38 =		In Front of Steer Tires	
7/8	0.875	28	1.1024	SCRUB SHIM NEEDED:		TOE (Rear–Front)	
29/32	0.90625	29	1.1417	_____ (_____)			
15/16	0.9375	30	1.1811				
31/32	0.96875	31	1.2205				
1	1.000	32	1.2598				