



MODEL H7937 TAPER ATTACHMENT FOR THE G0600 LATHE INSTRUCTIONS

Inventory

The Model H7937 taper attachment was carefully packed when it left our warehouse. If you discover it is damaged after you have signed for delivery, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, you should inventory the contents.

Inventory (Figure 1)	Qty
A. Taper Attachment Assembly	1
B. Roll Pins 8.5 x 40mm	2
C. Cap Screws M10-1.5 x 40mm.....	4
D. Deadman Arm and Deadman	1

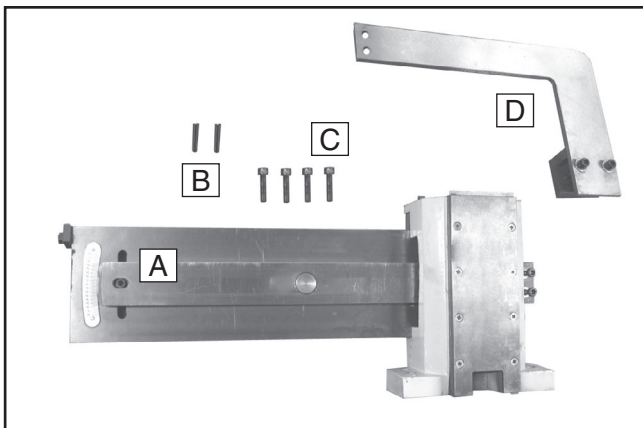


Figure 1. Model H7937 inventory.



The Model H7937 taper attachment was designed to fit onto the Model G0600 lathe (**Figure 2**). The maximum stroke is 455mm, the maximum angle range 0° to 8°, and the total weight is 95 lbs.

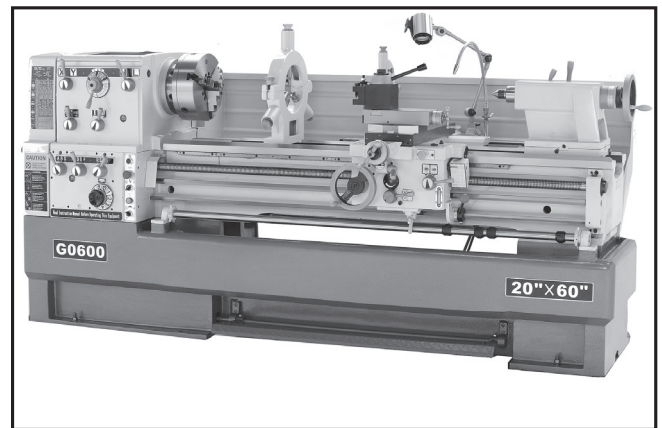


Figure 2. Model G0600 lathe.

This attachment is intended to be a permanent installation. Installation will take approximately 1.5 hours and require the following:

Needed Items	Qty
Assistant.....	1
Hex Wrenches (3, 4, 5, 6, and 8mm).....	1 Ea
Drill Bit (8mm).....	1
Drill (3/8").....	1
Oil Can with Pressure Tip	1
Dial Indicator with Magnetic Base	1
Phillips Screwdriver (#2).....	1
Hammer.....	1

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Installation

To install the taper attachment:

1. DISCONNECT LATHE FROM POWER!
2. With the assistance of a helper and using a 6mm hex wrench, remove the four cap screws holding the splash guard on the lathe.
3. Using a 6mm hex wrench, remove the two lead screw end-cap cap screws. Using a 3mm hex wrench, loosen the set screw (Figure 3) and unthread the collar nut from the end of the lead screw.

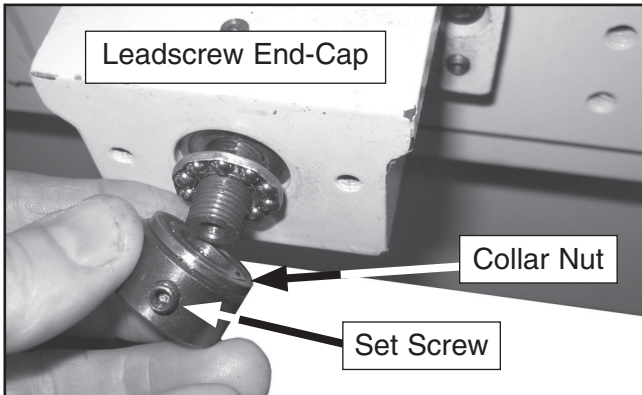


Figure 3. Lead screw end-cap.

4. With one hand ready to catch the race and ball bearing cage, use your other hand to pull the lead screw end-cap off of the lead screw (Figure 4).

Note: The outer race and the caged bearing will drop into your hand and the inner bearing and race will stay on the lead screw.

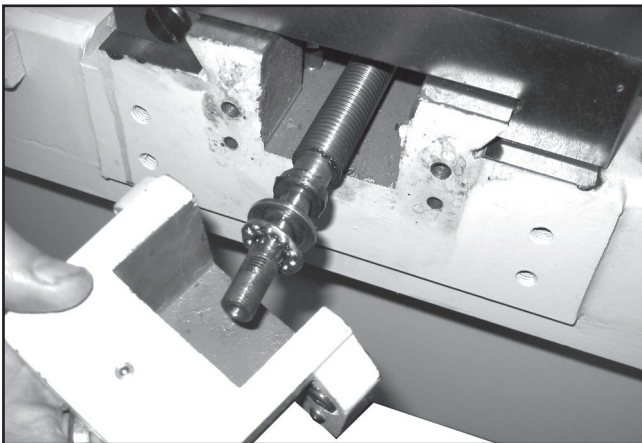


Figure 4. End-cap removal.

5. Using a tool with a curved end, carefully work the inner bearing races (Figure 5) from both sides of the casting bore.

Note: Make sure to keep the correct race with its original bearing, and do not hammer on the casting or chisel the races out. The races are merely a loose fit. If they are difficult to remove, be patient and spray some penetrating oil into the bore and carefully work the race out from the grease suction that is holding the race. You can also soak the casting in mineral spirits to break this suction.

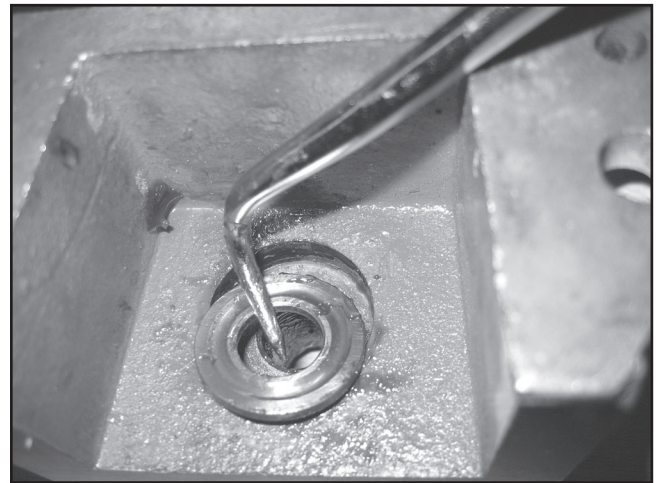


Figure 5. End-cap race removal.

6. Using a #2 Phillips screwdriver, remove the eight flat head screws and the taper attachment top plate (Figure 6).

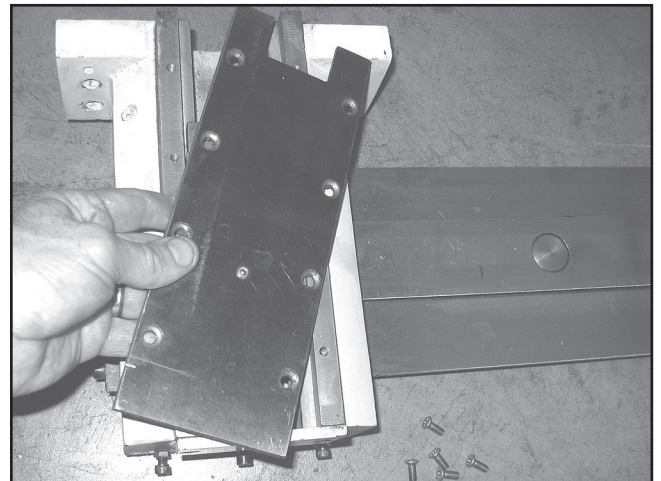


Figure 6. Top plate removal.



- Using a 4mm hex wrench, loosen the slide block set screw. (**Figure 7**).

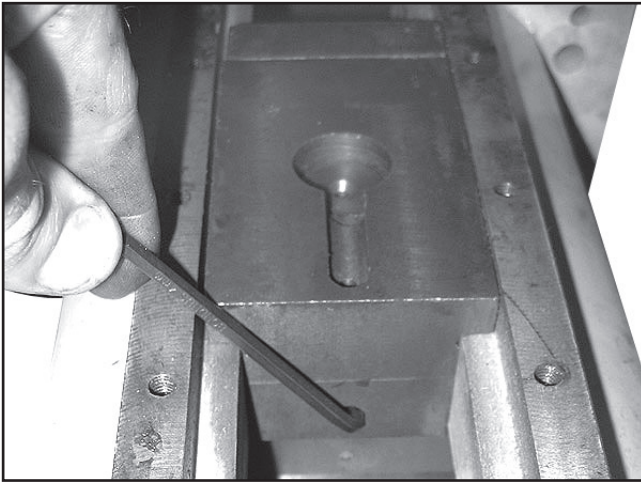


Figure 7. Slide block removal.

- Lift out the slide block without losing the brass anti-score plug (**Figure 8**).

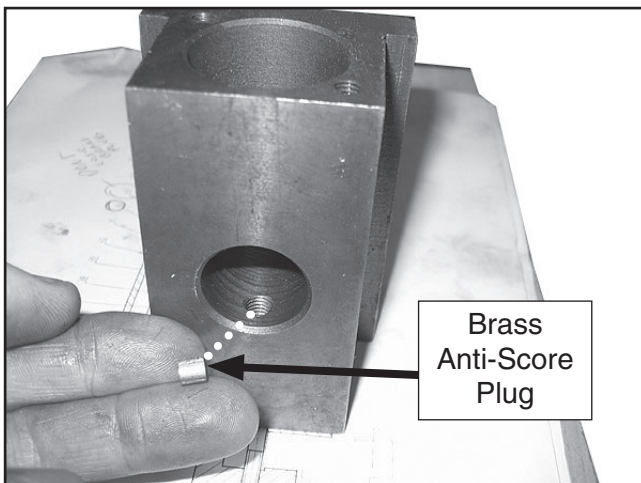


Figure 8. Slide block brass anti-score plug.

- Apply a dab of multipurpose grease to the brass plug to prevent it from falling out when handling the slide block.

Note: *This brass plug prevents the set screw from scoring the main pivot pin when the taper attachment is being used.*

- Using a 5mm hex wrench, remove the two cap screws and the slide block end cap (**Figure 9**).

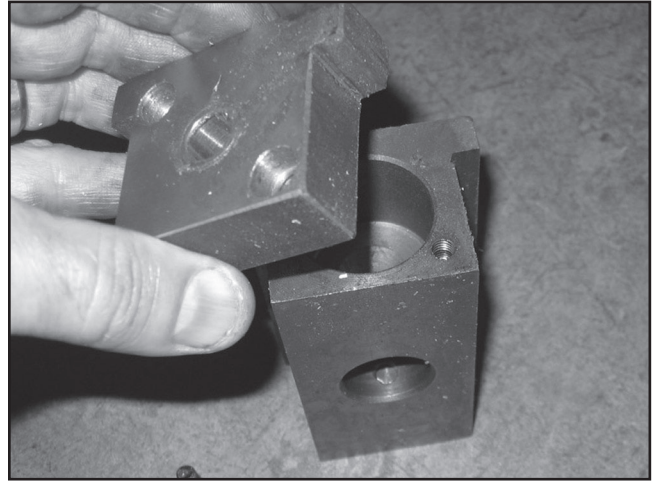


Figure 9. Slide block end-cap removal.

- Oil and install the bearings and races onto the lead screw in the order shown in **Figure 10**, finger-tighten the lead screw collar nut onto the lead screw until the bearings are slightly preloaded and the slide block end cap has no lash or end play.

- Using a 4mm hex wrench, tighten the set screw (**Figure 10**).

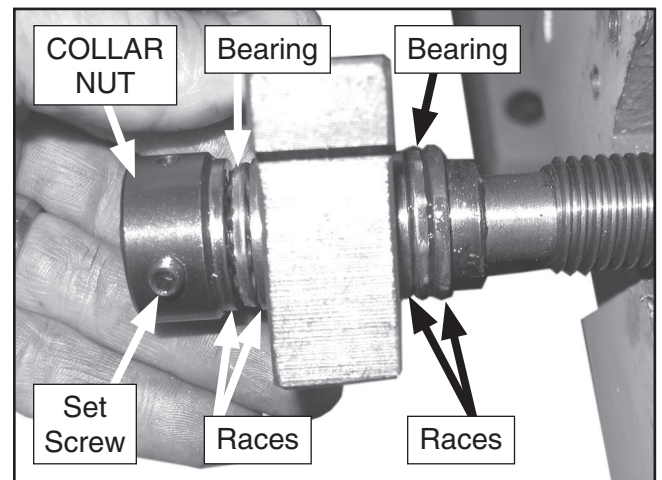


Figure 10. Slide block end-cap installation.



- Using a 5mm hex wrench, secure the slide block onto the end cap with the two previously removed cap screws (**Figure 11**).

Note: Make sure that the top of both slide and end cap surfaces are flush with one another after tightening the cap screws (**Figure 11**).

- Pull or push the cross slide assembly so the center of the pivot pin bore is 6.25" from the carriage face (**Figure 11**).

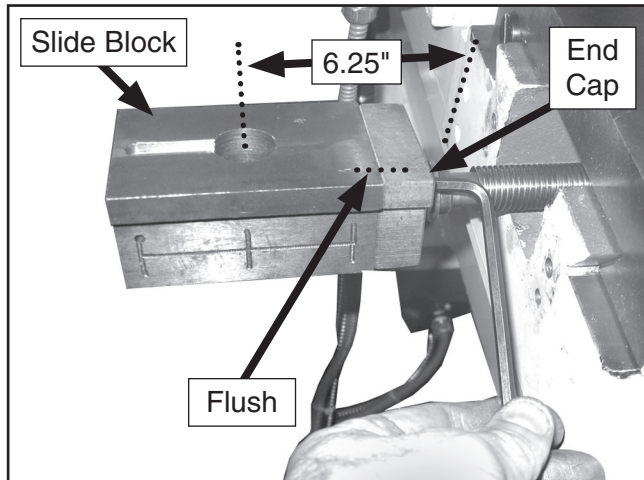


Figure 11. Slide block installation.

- Make sure the brass plug is still inside of the slide block.
- With the help of an assistant, raise and align the taper attachment assembly, so the pivot pin slides into the pin bore in the slide block (**Figure 12**).
- With your assistant aligning the taper attachment mounting holes, use an 8mm hex wrench to secure the taper attachment to the carriage face (**Figure 12**).

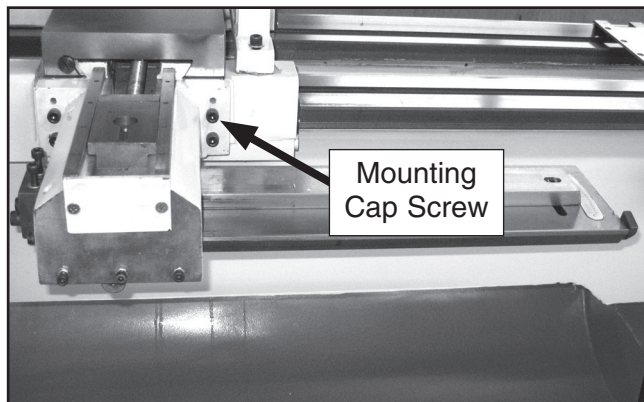


Figure 12. Taper attachment installation.

- Using a 4mm hex wrench, snug the slide block set screw so the brass plug is slightly preloaded against the pivot pin (**Figure 13**).

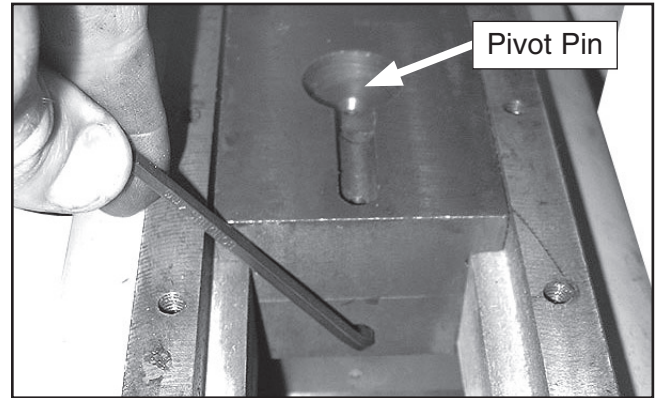


Figure 13. Pin adjustment.

- Liberally apply drops of oil at the locations shown in **Figure 14**.

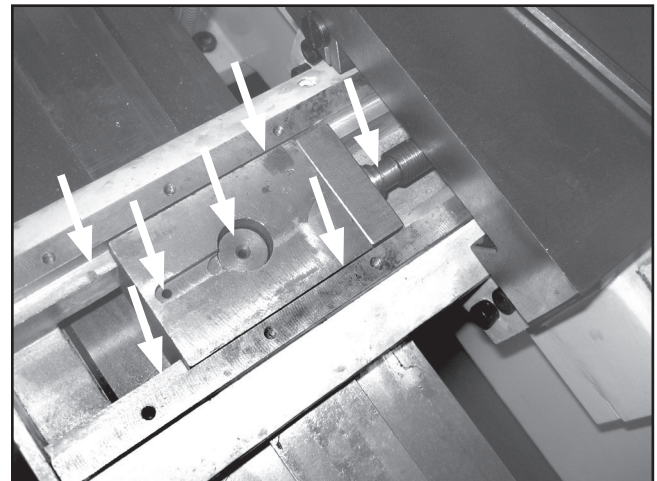


Figure 14. Setup lubrication locations.

- Reinstall the top plate as shown in **Figure 15**.

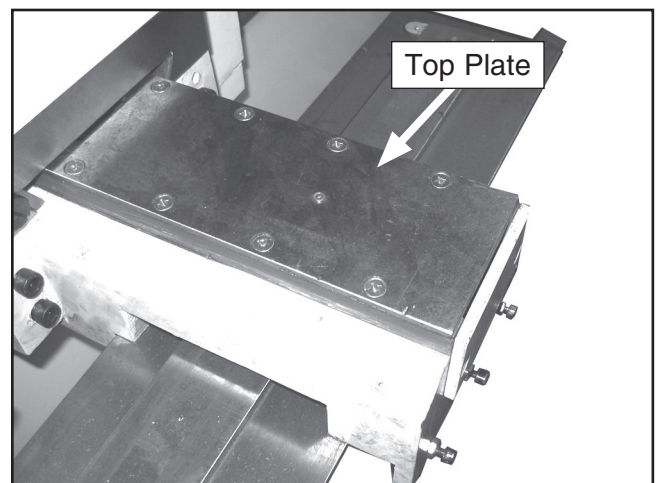


Figure 15. Top plate installation.



21. Position the deadman arm and deadman, as shown in **Figure 16**, and use a 6mm hex wrench to secure the cap screws.

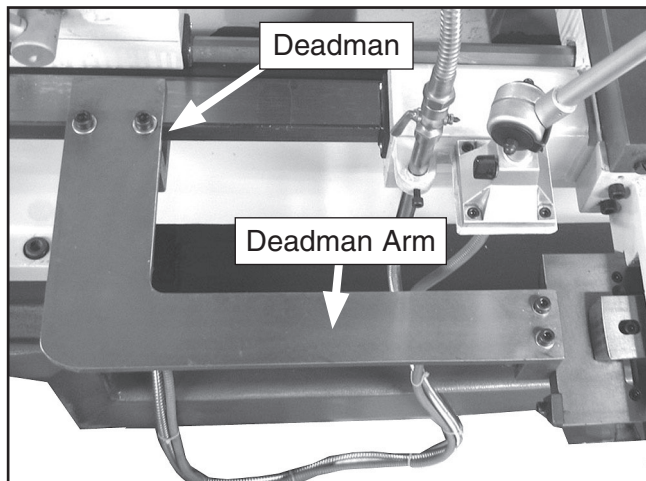


Figure 16. Deadman and arm installation.

22. Turn the taper angle control knob (**Figure 17**), so the taper attachment points to zero degrees as shown on the taper attachment scale (**Figure 18**).
23. Using a 6mm hex wrench, tighten the dovetail lock cap screws (**Figures 17 and 18**, one is located at each end of the taper attachment dovetail).

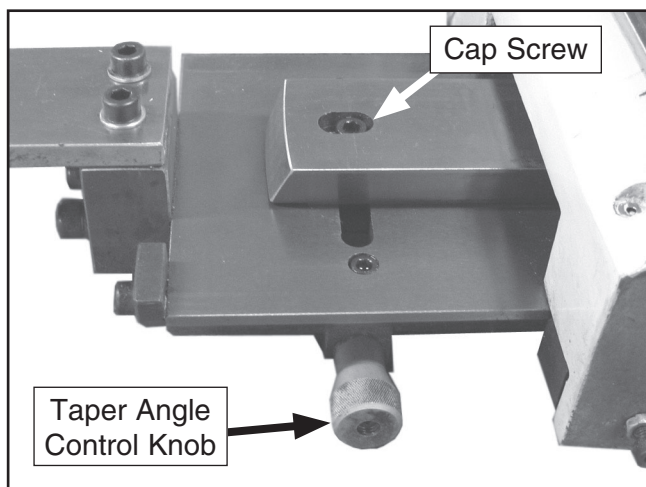


Figure 17. Taper angle control knob.

24. Move the carriage so the taper attachment stops completely at the rearmost position (**Figure 18**).

25. Setup a dial indicator as shown in **Figure 18**, so the dial indicator point is against the top of the dovetailed way.

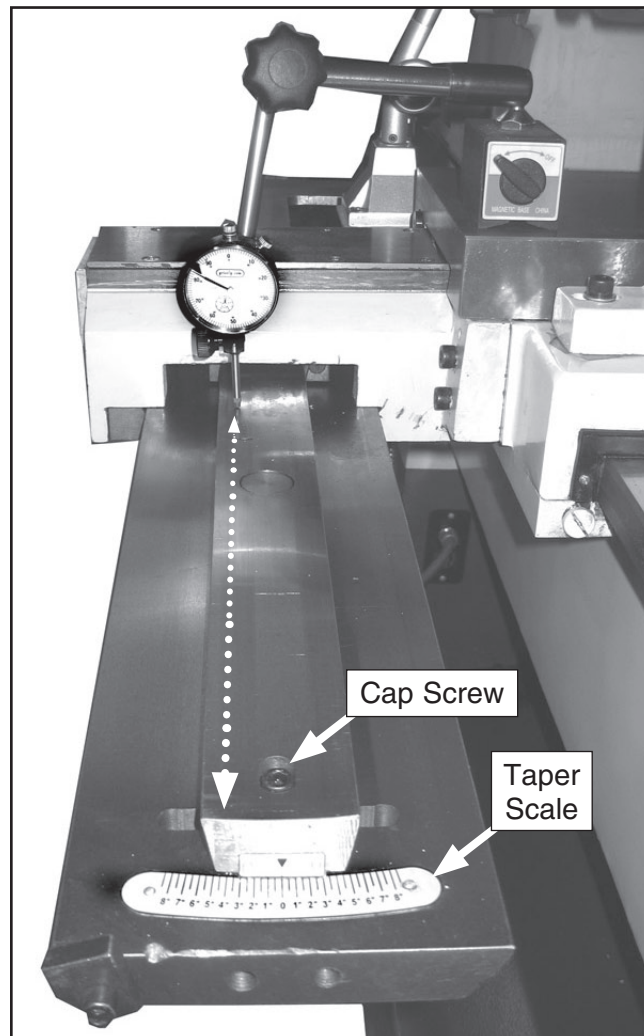


Figure 18. Parallelism verification.

26. Move the carriage to the other end of the way, and read the dial indicator and note the amount of total misalignment in parallelism between the path of the carriage and the path of the taper attachment.

Readings on the dial indicator showing a tilt of 0.050" or less between the two extreme positions of the taper attachment are acceptable and have no significant impact on taper operations.



—If the parallelism is greater than 0.050", go to **Step 27**.

—If the parallelism is 0.050" or less, go to **Step 29**.

- 27.** Loosen the four mounting cap screws and rotate the taper attachment left or right to correct the alignment (**Figure 19**).

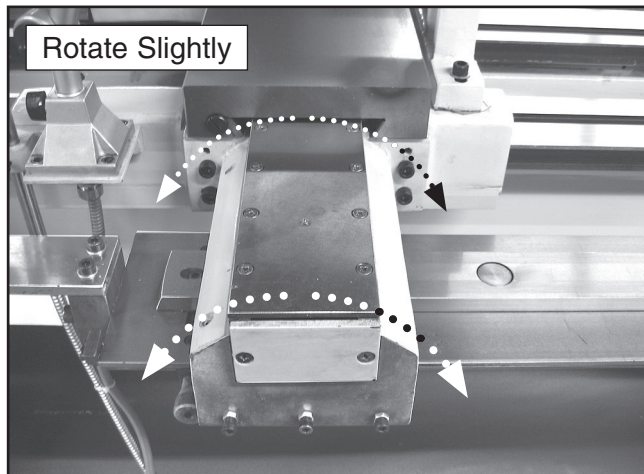


Figure 19. Parallelism correction.

- 28.** When the alignment is 0.050" or less, retighten the cap screws, and double check your parallelism.

- 29.** Using the existing 7.5mm diameter holes in the taper attachment housing as drill bit guides (**Figure 20**); drill two 8mm diameter holes 13mm deep into the carriage.

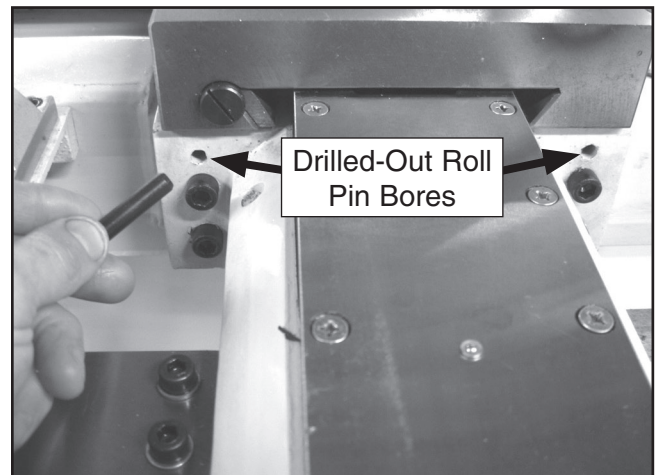


Figure 20. Roll pin installation.

- 30.** Position and hammer in the directional roll pins so they will permanently lock the taper attachment in the current alignment position.
- 31.** Reinstall the lathe splash guard.



Operation

When the deadman cap screws (**Figure 21**) are tightened, the deadman clamps against the bedway and the taper attachment engages. When the cap screws are loose, the taper attachment is disengaged and normal lathe operations can occur.

To use the taper attachment:

1. DISCONNECT LATHE FROM POWER.
2. Move the carriage, cross slide, and compound rest so your turning bit is at your needed location to begin the tapered cut.
3. Using an 8mm hex wrench, tighten both deadman cap screws so the deadman clamps against the lathe bedway (**Figure 21**).

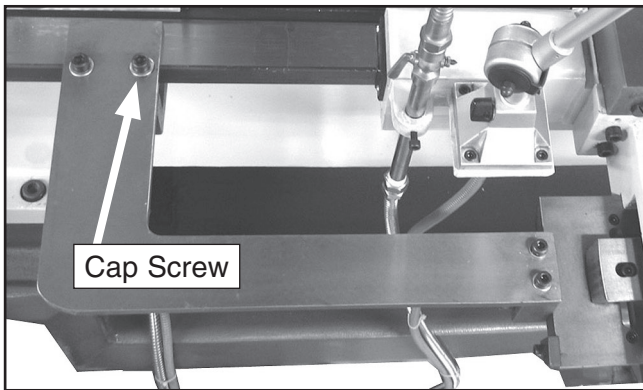


Figure 21. Deadman location.

4. Using a 6mm hex wrench, loosen both dovetail lock cap screws (**Figures 22 & 23**).

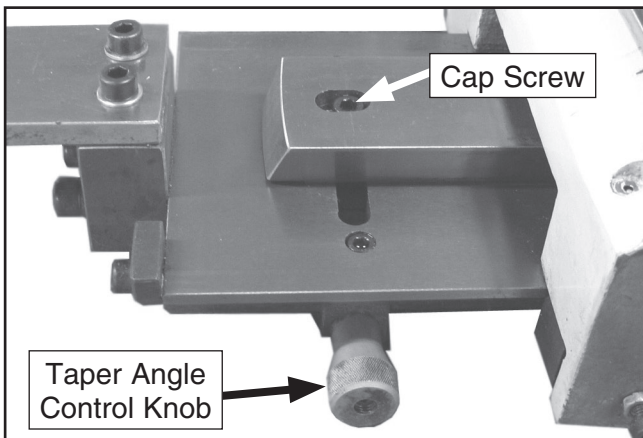


Figure 22. Taper angle control knob.

5. Turn the taper angle control knob (**Figure 22**) until you reach the taper angle that you need as indicated by the taper scale (**Figure 23**).

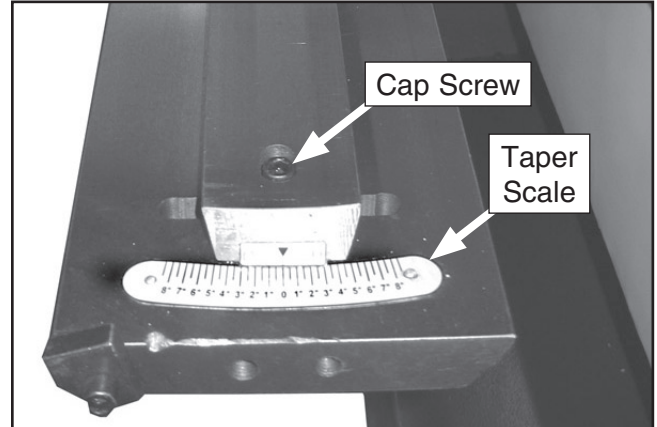


Figure 23. Taper scale.

6. Retighten both dovetail lock cap screws.
7. Begin lathe operations.

To disable the taper attachment:

1. DISCONNECT LATHE FROM POWER.
2. Use an 8mm hex wrench, and loosen both deadman cap screws so the deadman can slide on the way as the carriage is moved.
3. Using a 6mm hex wrench, loosen both dovetail lock cap screws.
4. Turn the taper angle control knob until you reach "0" as indicated by the taper scale.
5. Using a 6mm hex wrench, tighten both dovetail lock cap screws.



Lubrication



Using an oil can with the same oil you used on your lathe ball oilers, apply liberal amounts of oil to the three ball oilers, the pivot pin, and the dovetail surface shown in **Figure 24**.

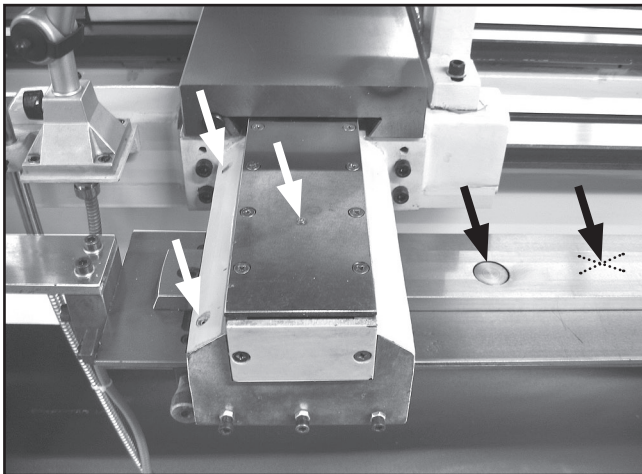


Figure 24. Lubrication locations.

Using an oil can with the same oil you use on your lathe ball oilers, apply oil on the knob threads and the dovetail ways shown in **Figure 25**.

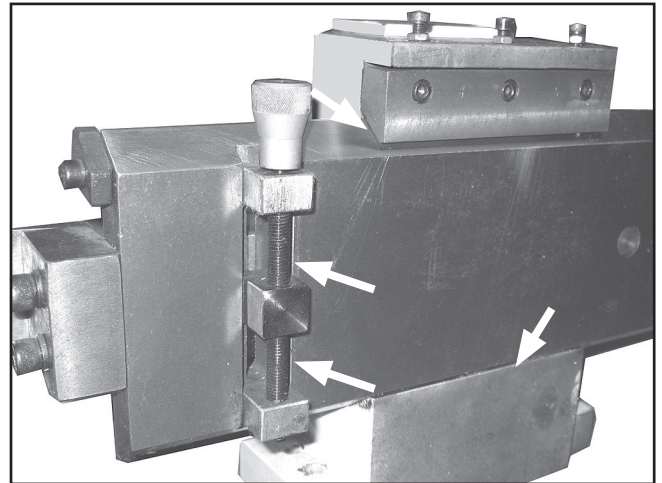


Figure 25. Lubrication locations.

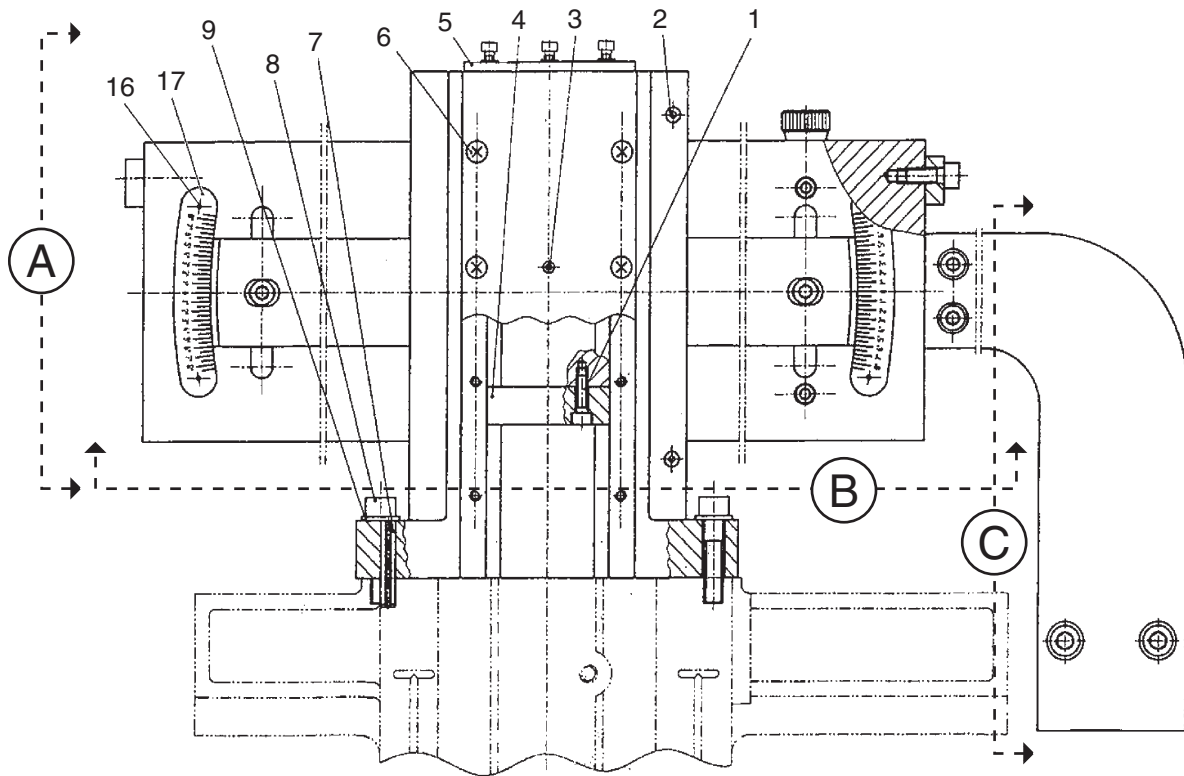
Cleaning

Vacuum excess metal chips and wipe off the remaining metal, coolant, and oils with a dry cloth.

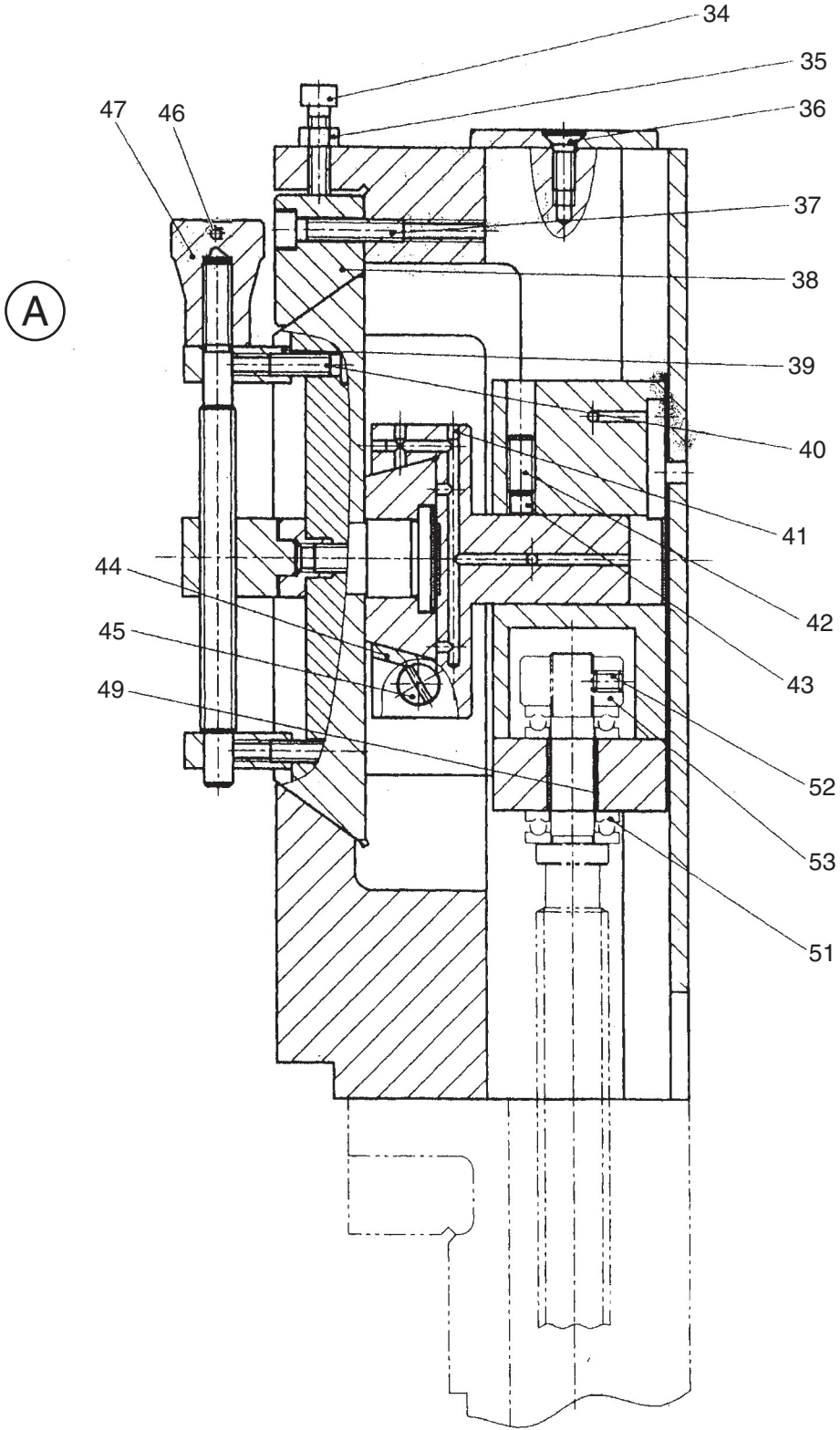
If any coolant sludge has built up, use mineral spirits to remove, and then relubricate with the same oil you use on your lathe or use G96[®] Gun Treatment, SLIPIT[®], or Boeshield[®] T-9 to prevent surface rust.



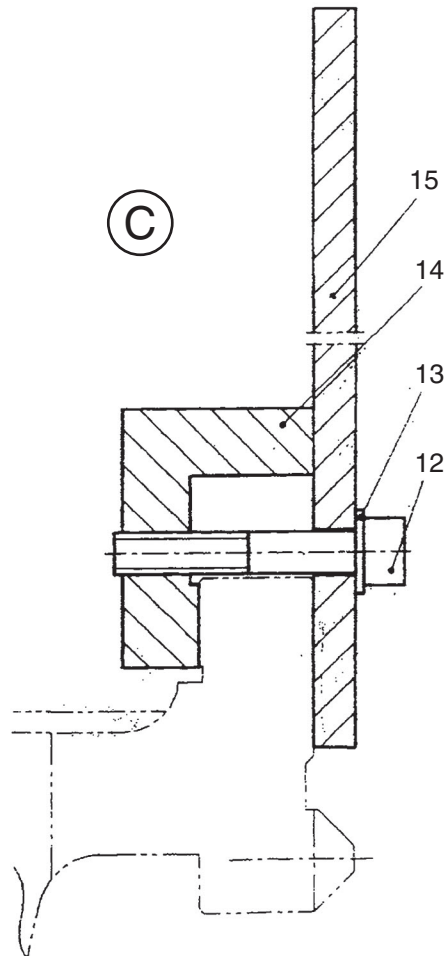
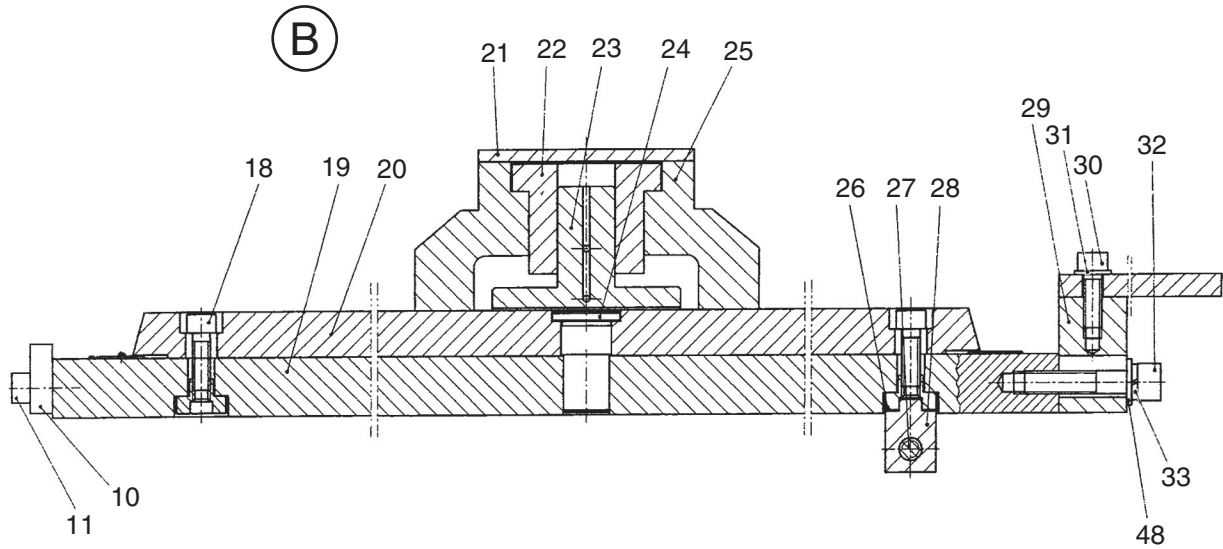
Main Parts Diagram



Slide Block Parts Diagram



Slide and Deadman Parts Diagram



Parts List

REF	PART #	DESCRIPTION
1	PSB02M	CAP SCREW M6-1 X 20
2	PH7937002	BALL OILER 8MM
3	PH7937003	BALL OILER 6MM
4	PH7937004	SLIDE BLOCK CASTING
5	PH7937005	STOP
6	PFH38M	FLAT HD SCR M6-1 x 16
7	PH7937007	ROLL PIN 8 X 45
8	PSB61M	CAP SCREW M10-1.5 X 20
9	PW04M	FLAT WASHER 10MM
10	PH7937010	STOP
11	PSB14M	CAP SCREW M8-1.25 X 20
12	PSB71M	CAP SCREW M10-1.5 X 60
13	PW04M	FLAT WASHER 10MM
14	PH7937014	DEADMAN CLAMP
15	PH7937015	DEADMAN ARM
16	PH7937016	RIVET 2 X 6
17	PH7937017	SCALE PLATE
18	PSB31M	CAP SCREW M8-1.25 X 25
19	PH7937019	LOWER PROFILE SEAT
20	PH7937020	UPPER PROFILE SEAT
21	PH7937021	TOP PLATE
22	PH7937022	SLIDE BLOCK
23	PH7937023	PIVOT
24	PH7937024	AXLE
25	PH7937025	MAIN CASTING
26	PH7937026	BLOCK

REF	PART #	DESCRIPTION
27	PH7937027	ADJUSTMENT LEAD SCREW
28	PH7937028	ADJUSTMENT BLOCK NUT
29	PH7937029	SPACER BLOCK
30	PSB31M	CAP SCREW M8-1.25 X 25
31	PW01M	FLAT WASHER 8MM
32	PSB143M	CAP SCREW M10-1.5 X 50
33	PLW06M	LOCK WASHER 10MM
34	PSB06M	CAP SCREW M6-1 X 25
35	PN01M	HEX NUT M6-1
36	PFH38M	FLAT HD SCR M6-1 x 16
37	PSB07M	CAP SCREW M6-1 X 30
38	PH7937038	WEDGE
39	PH7937039	SUPPORT
40	PSB02M	CAP SCREW M6-1 X 20
41	PH7937041	PIN
42	PSS06M	SET SCREW M8-1.25 X 16
43	PH7937043	BRASS ANTI-SCORE PLUG
44	PH7937044	GIB
45	PH7937045	SPECIAL SCREW
46	PSS16M	SET SCREW M8-1.25 X 10
47	PH7937047	DIAL
48	PW04M	FLAT WASHER 10MM
49	PH7937049	END CAP
51	P51101	THRUST BEARING 51101
52	PSS03M	SET SCREW M6-1 X 8
53	PH7937053	COLLAR NUT