

## ADJUST THE CARRIAGE LOCK

3. If the carriage lock handle (187) does not snap into the horizontal position or the carriage moves out of position, the lock needs adjusting. To adjust the lock, use a 1/2" socket with an extension and ratchet handle to tighten or loosen the nut located at the back of the carriage assembly, as shown in Fig. B-45.

4. When the carriage lock handle snaps into the horizontal position and the carriage no longer moves when the handle is in the horizontal position, tighten the nut a final 1/4 turn.

### WARNING

The carriage lock handle **MUST** snap into the horizontal position, otherwise the carriage lock may vibrate loose.

## SET THE WORKTABLE'S 90° LEFT STOP

### CAUTION

Always make sure the Mark V headstock and carriage are locked and all casters are raised off the floor before lifting the Mark V into the vertical drill press position.

5. Unlock the carriage and headstock. Move the headstock to the middle of the way tubes. Then move the carriage between the headstock and base mount (right side).

6. Tighten the headstock and carriage locks. Place the Mark V in the vertical position by loosening the headrest handle (15), firmly grasping the way tubes (20) near the headrest end, and lifting the tubes into the 90° position, as demonstrated in Fig. B-46.

7. See Fig. B-47. Use your fingers to screw in the base lock (2). Note the base lock is slightly off center to the countersink found in the bench base, as shown in Fig. B-48. This offset allows the base lock to more firmly hold the base in place.

8. Move the worktable into the 90° position by loosening the table tilt lock (165), as seen in Fig. B-49, then putting the worktable in the horizontal 90° position, as shown in Fig. B-50. Retighten the table tilt lock only enough to allow movement with firm pressure.

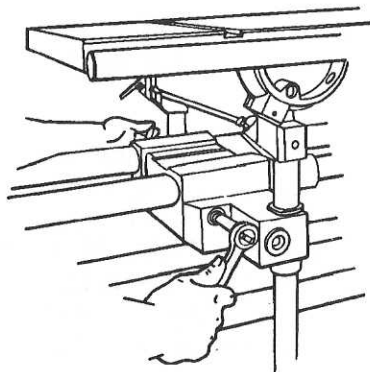


Fig. B-45

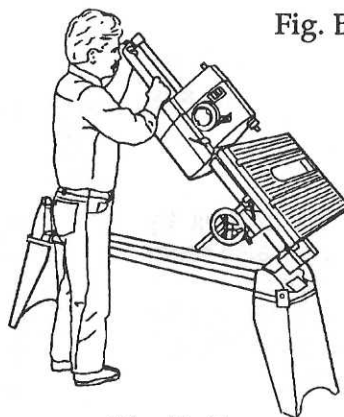


Fig. B-46

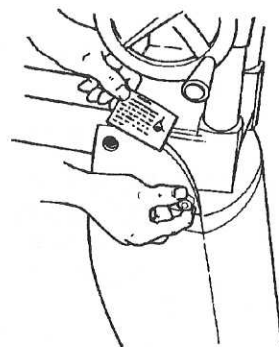


Fig. B-47

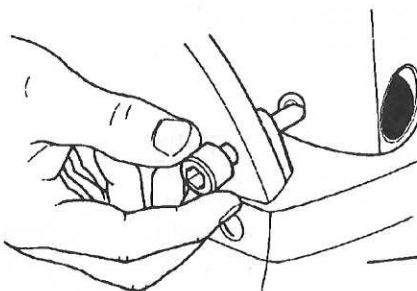


Fig. B-48

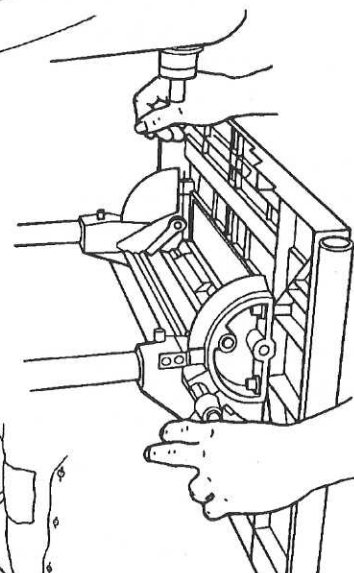


Fig. B-49

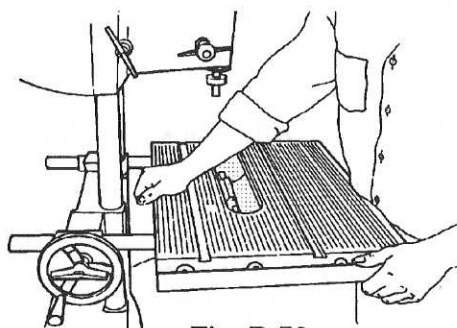


Fig. B-50

9. Use a 5/32" Allen wrench to remove the table insert, as demonstrated in Fig. B-51.

10. To install the drill chuck, mount the chuck on the spindle and align the chuck's setscrew with the spindle knob's setscrew, as shown in Fig. B-52. This allows the chuck's setscrew to set on the flat part of the spindle. Use a 5/32" Allen wrench to securely tighten the drill chuck's setscrew.

11. Install a 3/8" to 1/2" straight drill bit in the drill chuck and use the chuck key to lock it place. See Fig. B-53.

#### NOTE

Check the straightness of the drill bit by rolling it on a flat surface. You can also hand-rotate the drill chuck while holding the combination square against the drill bit and the table. If the bit is not straight DO NOT use it for these alignment instructions.

12. With the drill bit above the table opening, use the quill feed to extend the bit 1/2" into the table opening, as in Fig. B-54.

13. Set the combination square against the bit and table, as shown in Fig. B-55. The square should contact the bit along its entire length. When the table is exactly perpendicular to the drill bit, lock the table, as seen in Fig. B-56.

14. Both 90° stops (shown in Figs. B-57 and B-58) should contact the underside of the table. If they don't, use a 1/2" wrench to adjust the stops.

15. Re-check the setting by loosening the tilt lock, moving the table, and then repeating Steps 13 and 14. (Re-checking the settings is very important!)

#### SET THE WORKTABLE'S 0° STOP

16. Remove the drill bit and drill chuck from the spindle.

17. Loosen the base lock (2). Firmly grasp the way tubes and lower the headstock into the horizontal position, then engage the head rest.

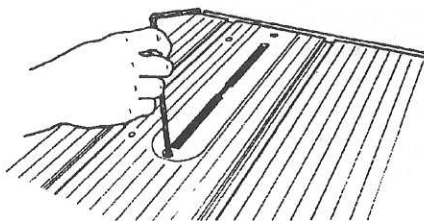


Fig. B-51

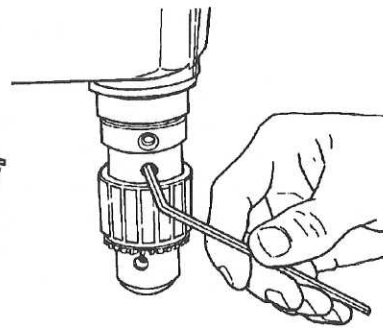


Fig. B-52

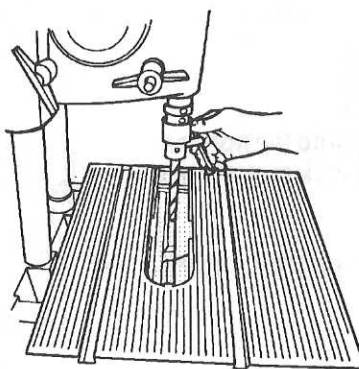


Fig. B-53

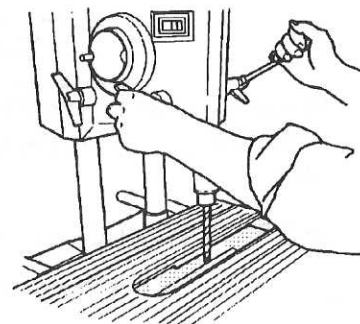


Fig. B-54

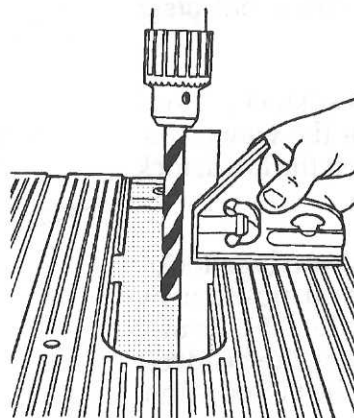


Fig. B-55

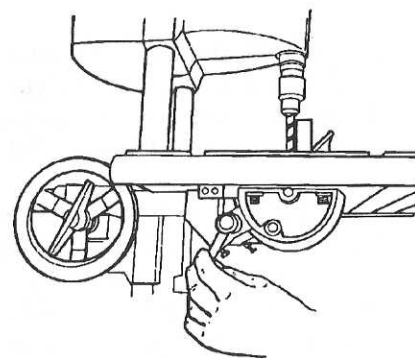


Fig. B-56

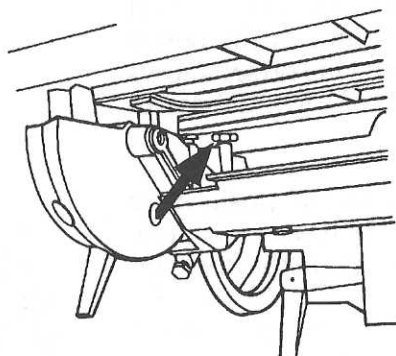


Fig. B-57

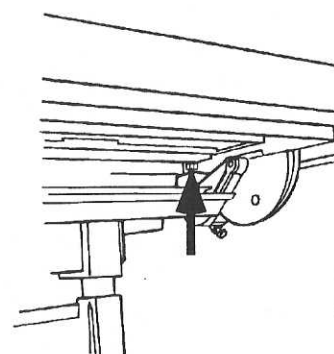


Fig. B-58

**18.** Loosen the table tilt lock and place the table in the horizontal "0" position. Re-tighten the table tilt lock only enough to allow movement with firm pressure.

**19.** Mount the saw blade on the arbor:

**a.** Remove the arbor nut by turning it clockwise, as seen in Fig. B-59a. Hold the arbor with the threaded part pointing to the left.

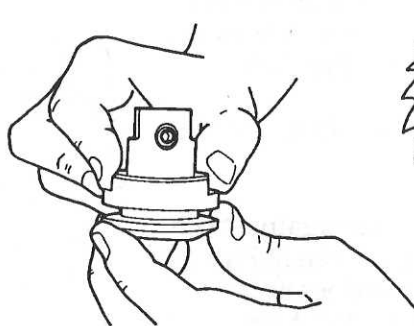


Fig. B-59a

**b.** Hold the blade with the teeth pointing toward you, as shown in Fig. B-59b, then insert the arbor through the hole. Replace the nut and finger tighten it, as in Fig. B-59c.

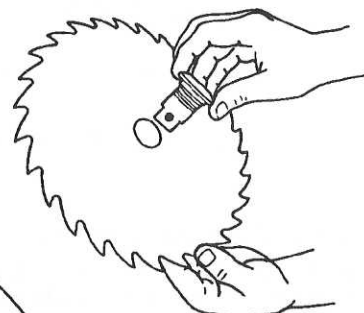


Fig. B-59b

**c.** Place the blade and arbor on your workbench with the nut pointing up.



Fig. B-59c

**d.** Hold the arbor with an adjustable wrench and tighten the arbor nut with the arbor wrench, as demonstrated in Fig. B-59d. Another way to tighten the arbor nut is to clamp the arbor in a bench vise, as illustrated in Fig. B-59e, and tighten the nut with the arbor wrench.

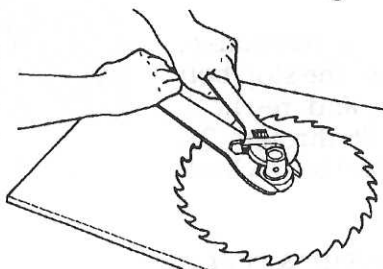


Fig. B-59d

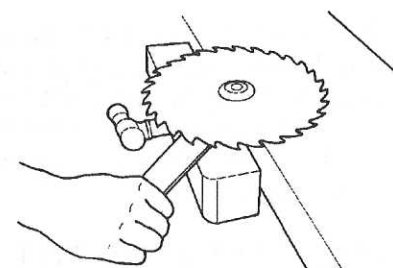


Fig. B-59e

### WARNING

The only time the saw blade is used without the upper or lower saw guards is during alignment and only after the Mark V is turned off and unplugged.

**20.** Mount the saw blade on the spindle and align the arbor setscrew with the spindle knob's setscrew, then use a 5/32" Allen wrench to tighten the arbor setscrew, as seen in Fig. B-60.

**21.** Re-install the table insert (138) in the worktable.

**22.** Raise the worktable so that it clears the top of the saw blade.

**23.** Loosen the carriage lock and slide the carriage so the saw blade is directly beneath the slot in the table insert. See Fig. B-61.

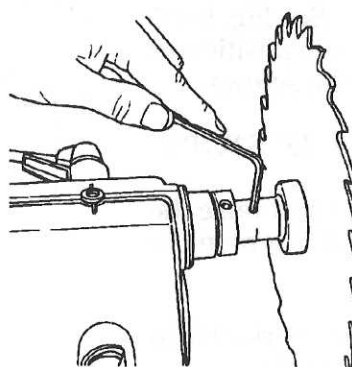


Fig. B-60

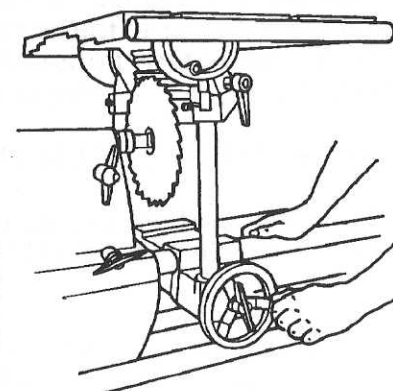


Fig. B-61

24. Lower the worktable (but not all the way down) so the saw blade comes through the slot. Lock the table height, as seen in Fig. B-62.

25. Tighten the carriage lock, as shown in Fig. B-63.

26. Place the combination square against both the saw blade and worktable, as seen in Fig. B-64. Make sure the square's blade does **not** touch a saw tooth and **does** rest in a gullet between teeth.

27. If the worktable is not exactly perpendicular to the saw blade, adjust the worktable so it is perpendicular to the saw blade, then tighten the tilt lock.

28. To adjust the 0° stop, simultaneously depress the table stop pin and use a 1/2" wrench to adjust the stop bolt. The stop bolt should just contact the side of the stop pin. Once the stop bolt is adjusted, the stop pin will "snap" back when the tilt lock is tightened. See Fig. B-65.

29. Loosen the tilt lock, move the worktable, then depress the 0° stop pin until the stop bolt contacts it. Tighten the tilt lock, and re-check the setting by repeating Steps 26 through 28. See Fig. B-66. (It is very important to re-check the setting!)

### ADJUST THE TABLE TILT INDICATOR

30. Tighten the table tilt lock and check that the "0" mark on the indicator aligns with the "0" mark on the trunnion ((149).

31. To adjust the scale, use a medium Phillips screwdriver to loosen the two screws which hold the indicator to the tie bar. See Fig. B-67. Then while holding the indicator in position so the "0"s are aligned, re-tighten the screws.

### ADJUST THE WORKTABLE'S 45° STOPS

32. Loosen the table height lock and raise the table until it clears the saw blade. Tighten the height lock.

33. Loosen the tilt lock and tilt the worktable to the right until it makes contact with the two 45° stop bolts (158).

34. Tighten the tilt lock only enough to allow movement with firm pressure.

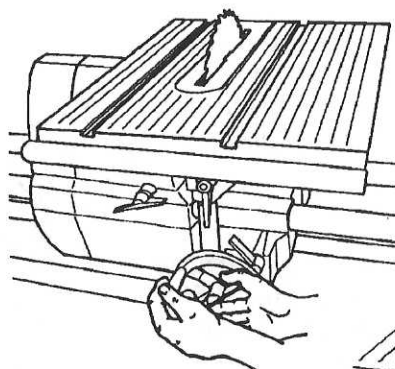


Fig. B-62

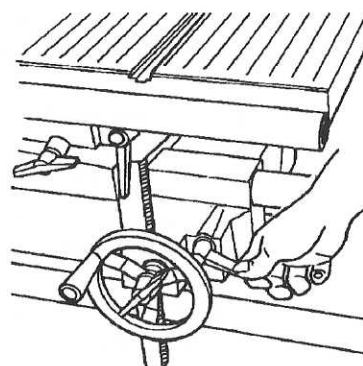


Fig. B-63

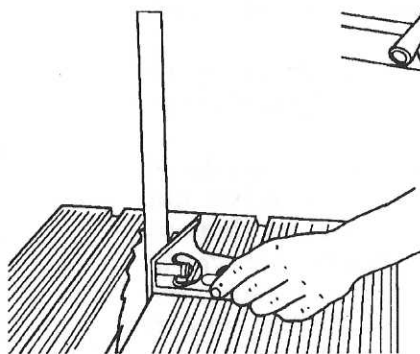


Fig. B-64

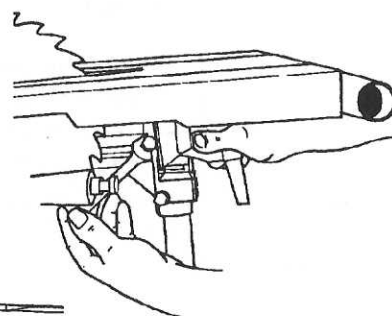


Fig. B-65

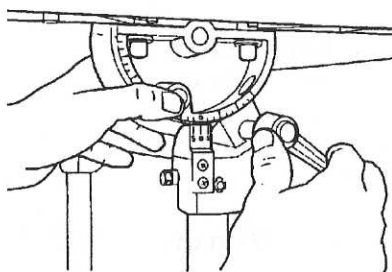


Fig. B-66

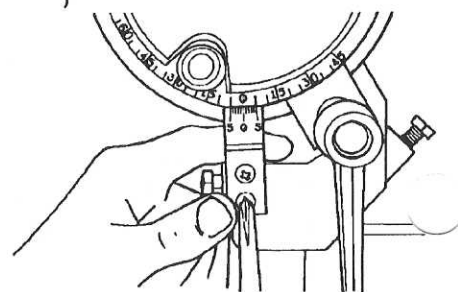


Fig. B-67