

Cold Forming of Metals

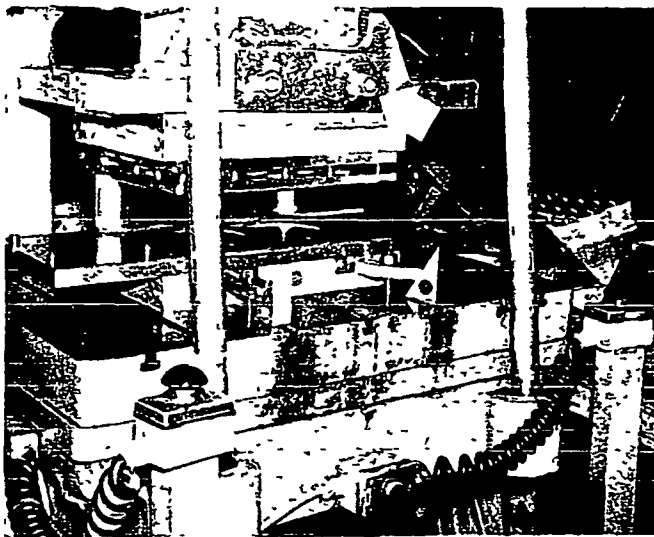


FIG 25-43 — Mounting bolts (arrow) pass through the ram to fasten upper die securely. Lower die is clamped to bolster. Note two-hand control.

slide down to its lowest position by turning the flywheel or crankshaft. (If a safety bar is used as a lever to turn the crankshaft, it should have a spring and collar arrangement that will prevent its being accidentally left inserted in the crankshaft. See Fig 25-42.) Measure the clear height between the bottom of the slide and the bolster plate. This distance should be slightly greater than, or at least equal to, the height of the closed die. If not, raise the slide by means of the adjusting screw until this is assured. When physical recessing is necessary, block up the slide with timber, metal blocks or posts provided for this purpose. Blocks should be equipped with an electric receptacle plug to hold open the circuit when they are in the die. Thus, they will not be left in the press when power is applied.

For heavy presses—Jog or inch the press to bring the slide down to its lowest position and measure the clear height between it and the bolster plate. Again, if this distance is not slightly greater than, or at least equal to, the height of the die in the closed position, adjust the slide until such clearance is assured. Raise the slide, block it in position, shut off the power, and lock the switch.

Dismantle or disconnect a point-of-operation safety device only if it is absolutely necessary. For example, enclosure guards fastened

to the press, gate or barrier guards, and some types of sweep guards will have to be removed, but not, in general, pull-back guards or photoelectric cells. All parts of any dismantled safety devices should be carefully put aside so that they may be reinstalled in good condition as soon as the new dies have been placed.

Clean off the bolster plate, preferably with a brush. Check that bolt holes are clear of slugs. (A pencil-shaped magnet is valuable for removing iron or steel slugs.) Burrs can be removed with a flat file.

Check the die to make sure it contains no overlooked chips, tools, or finished parts, and that it is in good operating order. Then transfer the die from the truck to the press (See "Transferring Dies Safely," above.)

Line up the die in the correct operating position and remove the posts or blocks from under the slide. (For heavy presses—Reconnect the power to operate the slide. For light presses—Manually turn the flywheel to move the slide, using a safety bar if necessary—Fig 25-42.) Then, carefully lower the slide until it fits firmly against the top die. It is extremely important not to put too much pressure on pierce or trim dies. Tighten all bolts and clamps necessary to secure the top half of the die to the slide. Bolting the die to the slide with bolts through holes in the upper die shoe is recommended (Fig 25-43). On