will bypass these gears as in low speed they are idlers. We next come to another set of gears, a 32 tooth idler shaft driving gear (5080-127) driving a 60 tooth idler shaft driven gear (5080-126). This gear in turn drives the idler shaft (5080-122). On this shaft is placed the gear of the desired time cycle. For more information on this, refer to feed change gears. You will note, that we end up with an 80 tooth gear. This is the clutch body gear (5080-131-1). Within the clutch body gear is a rollaway clutch. This gear drives rear worm drive shaft short (5080-139-2). On this shaft is a worm (5080-61) which drives a rear worm wheel (5080-20). The ratio of the worm to the worm wheel is 1:10. Attached to the rear worm wheel is a quick index clutch cam (5080-85). As this rotates it moves a lever up and down to allow the machine to engage into high and low speed. Now to go back to the 80 tooth quick index drive gear (5080-50), driving the 40 tooth quick index driven gear (5080-51). We shift the machine into high and the quick index gear will drive the quick index driven gear which in turn drives the worm drive shaft long (5080-139-1) which is coupled to the rear worm drive shaft short (5080-139-2). We are now driving through the high speed side and override the rollaway clutch by putting the rolls back into a neutral position for the length of the index. Look at the rear worm drive shaft short (5080-139-2) and see that the rear worm wheel (5080-20) drives the rear cam shaft at a speed of 1/10 of the shaft (5080-139-2). Following the worm drive shaft long (5080-139-1) to the extreme right end, we find the driving clutch bracket gear (5080-136-2). This is a 24 tooth bevel gear which meshes with 24 tooth bevel gear (607). Which in turn drives the end worm drive shaft (5080-140-2). Another worm is on this shaft that drives the front worm wheel (5080-82). NOTE - If the machine is out of time, it may be timed by this set of bevel gears by slipping it one tooth one way or the other. The worm drives this worm wheel also 1/10 the speed, therefore, both cam shafts will run at the same rate of speed. Attached to the chuck and feed cam is a chuck and feed cam index roll (5180-2). This roll is so positioned that as the machine indexes into high speed the roll is inserted into the slots of the Geneva motion star wheel (5134-1). Attached to the Geneva motion star wheel is the Geneva disc gear. This gear has 75 teeth and is indexed as the Geneva motion is indexed by the roll on the cam. This gear meshes with the revolving head-gear (5133) which also has 75 teeth, indexing the revolving head. Located on the front cam shaft (5080-69) is the locating cam (5080-75). This activates the locking and unlocking of the locating lever (5080-34-1). This lever locks the carrier into position for the machining to be performed during the working portion of the cycle (0-50).

The locating and clamping lever, which locates and clamps the carrier (or head), should be checked occasionally to make sure it is locking securely. If not, the lever should be adjusted just tight enough to resist a lead hammer blow directly over the locating block without causing the roll on the bottom of the lever to move freely. Before attempting this procedure disengage the starting clutch. When tapping the top of the lever with the hammer, use one hand to feel the roll. NOTE - There must be a drag on the roll. More pressure may be applied by loosening the cam lever screw bushing (5080-35-SB) and turning screw (5080-35-SS) clockwise. Then tighten cam lever screw bushing (508-35-ISB) and turning screw (5080-35-SS) clockwise. Then tighten NOTE - When machine is running, the roll must be turning, not skidding.