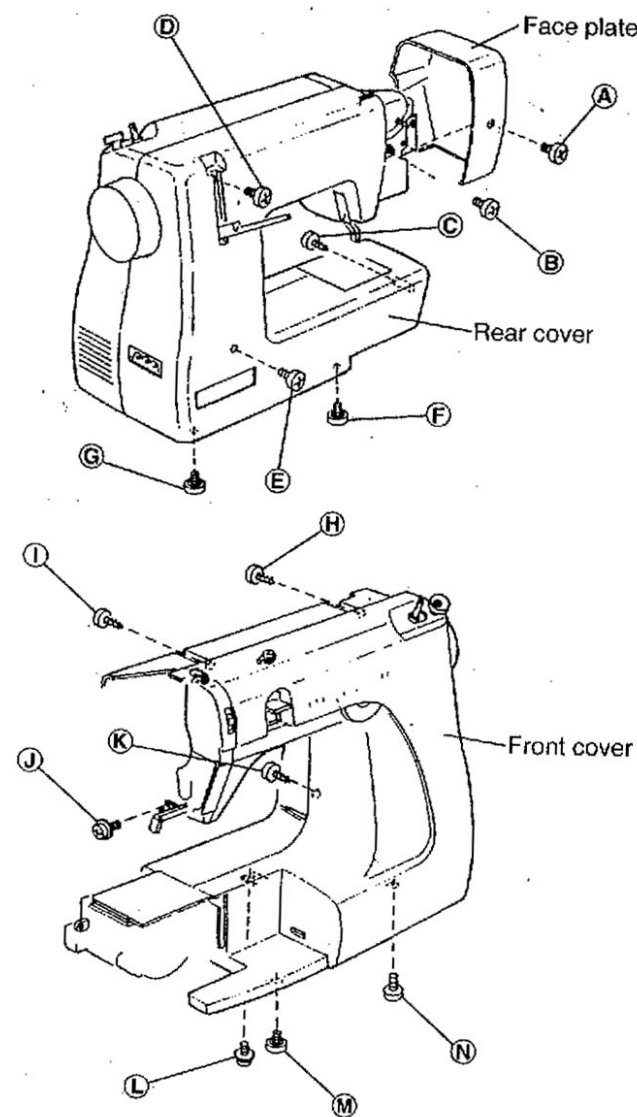


TO CHANGE FACE PLATE, FRONT & REAR COVER



[FACE PLATE]

1. Remove or tighten set screw A.

[REAR COVER]

1. Remove face plate.
2. Remove set screws B, C, D, E, F and G.
(Set screw F and G has rubber cushion.)

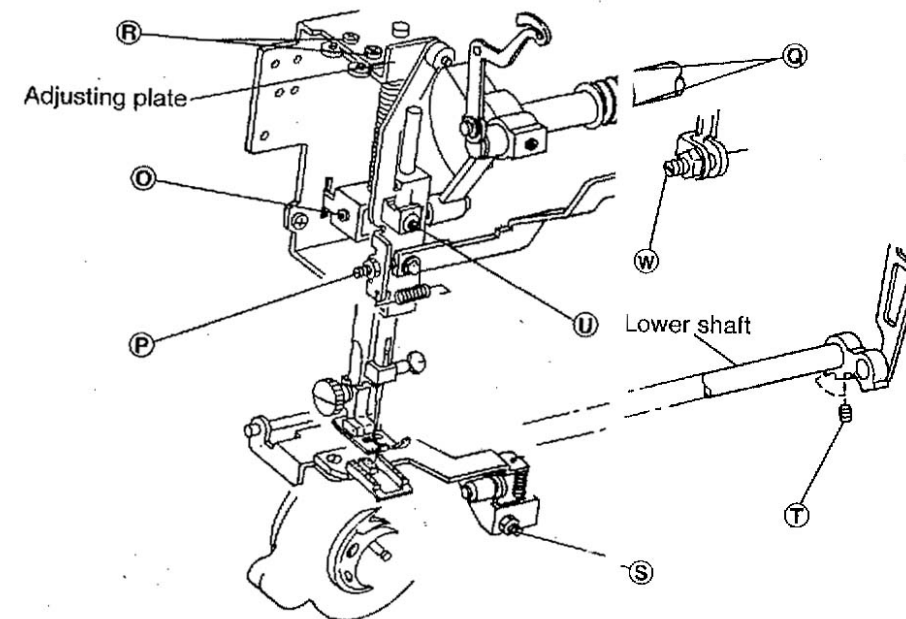
[FRONT COVER]

1. Remove face plate and rear cover.
2. Remove set screws H, I, J, K, L and M.
Loosen set screws N and O.
(Set screw O has rubber cushion.)

* Remove face plate for adjustments O, P, R and U.

* Remove front cover for adjustments Q, T and W.

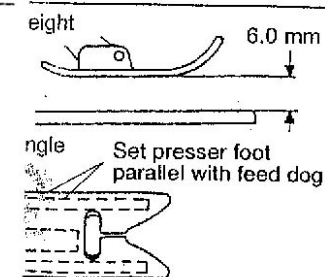
MECH NICAL ADJUSTMENT FOR MODEL 639



O. ADJUSTMENT OF PRESSER BAR HEIGHT AND ANGLE

- ★ When presser foot lifter is raised, open space between the needle plate and presser foot should be 6.0 mm for standard adjustment.
- ★ The angle of presser foot should be parallel with the feed dog.

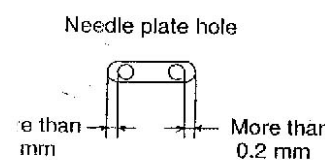
1. Raise the presser foot lifter.
2. Loosen set screw Q and move the presser bar up and down for adjustment of the presser bar height.



P. ADJUSTMENT OF NEEDLE DROP POSITION

- ★ When Machine is set the maximum zigzag width, the clearance between needle and needle plate hole should be more than 0.2 mm. Also, when machine is set at straight stitch sewing, the needle should drop at center needle position.

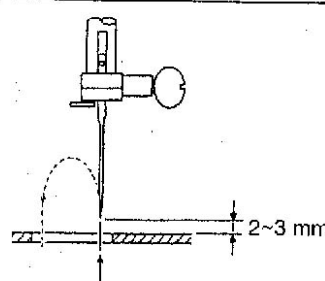
1. Adjust the needle drop position with set screw P.



Q. ADJUSTMENT OF LATERAL NEEDLE SWING

- ★ When needle bar is raised from the right needle position for zigzag stitching, the starting point of the lateral swing should be in range of 2.0 ~ 3.0 mm above the surface of needle plate.

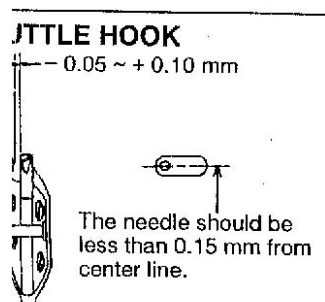
1. Set the maximum zigzag width.
2. Loosen two screws Q on upper shaft worm gear. (Hold one of screws with screw driver in order to prevent upper shaft worm gear from turning and turn the balance wheel toward you to adjust.)



R. THE CLEARANCE BETWEEN NEEDLE AND THE TIP OF SHUTTLE HOOK

- ★ The clearance between the needle and the tip of shuttle hook should be - 0.05 to + 0.10 mm.

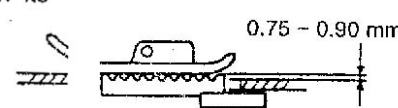
1. Set the maximum zigzag width and the needle drop position at left position.
2. Loosen two set screws R and move the adjusting plate in front and rear for adjustment of clearance.



S. ADJUSTMENT OF FEED DOG HEIGHT

- ★ The highest position of the feed dog should be 0.75 ~ 0.90 mm above the needle plate when the presser foot is lowered with its maximum presser.

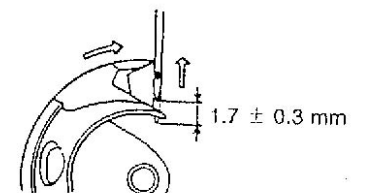
1. Open bed cover.
2. Insert or loosen the set screw S for adjustment.



T. ADJUSTMENT OF HOOK TIMING

- ★ The height of needle from its lowest point of travel should be in range of 1.7 ± 0.3 mm when the tip of shuttle hook meets exactly the left side of needle at the left needle position with maximum zigzag width.

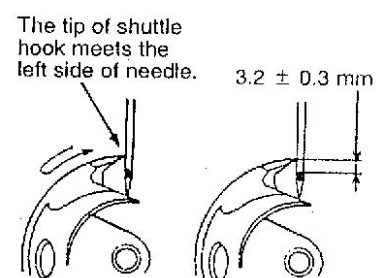
1. Set the pattern selector dial at maximum zigzag width and needle drop position is at "LEFT".
2. Loosen two set screws T and raise the needle bar 1.7 mm from its lowest point.
3. Turn the handwheel toward you to meet the tip of shuttle hook at left side of needle. Tighten two set screws T after setting.



U. ADJUSTMENT OF NEEDLE BAR HEIGHT

- ★ When the tip of shuttle hook meets exactly the left side of needle at the left needle position with maximum zigzag width, the distance between the upper edge of needle eye and top surface of hook should be in the range of 3.2 ± 0.3 mm.

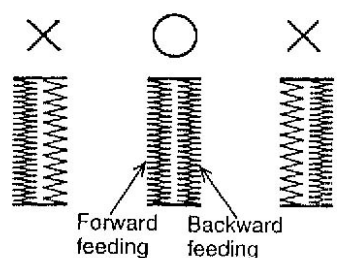
1. Set the pattern selector dial at maximum zigzag width and left needle position.
2. Loosen set screw U and move the needle bar up and down for adjustment.



V. ADJUSTMENT OF BUTTONHOLE FEED BALANCE

- ★ When sewing buttonhole, there should not be much feeding difference between the right and left side rows. The standard is 9 ~ 12 stitches in the right side row against 10 stitches in the left row.

1. Remove the cap on rear cover.
2. Adjust the feed balance with set screw V.
 - If the left side row is coarser than the right side row, turn set screw V to right.
 - If the right side row is coarser, turn set screw V to left.



W. ADJUSTMENT OF RIGHT SIDE ROW BUTTONHOLE ZIGZAG WIDTH (TO ADJUST CUTTING WIDTH)

- ★ When buttonhole stitch is sewn, left and right side rows zigzag width should be same size.

1. If both left and right rows are uneven zigzag width, adjust set screw W.

NOTE: Make sure the cutting space is enough with seam ripper.

