

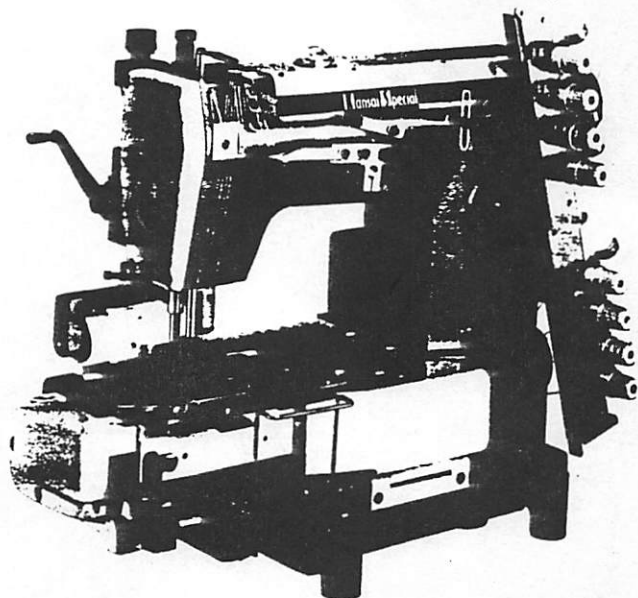
Industrial Sewing Machines

Kansai Special

INSTRUCTION MANUAL

F SERIES 1

Industrial Sewing Machines



F-4404PMD

Industrial Sewing Machines

Kansai Special

From the library of: Superior Sewing Machine & Supply LLC

1. Description of model. High speed, multiple needle, double-chainstitch, semi-cylinder bed machine with automatic lubrication.

1-1 Type of stitch. Double-chainstitch (fig.1) stitch formation

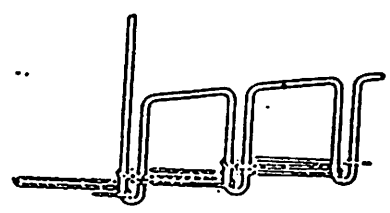


Figure 1

1-2 Models

Models	F-4404P	F-4404PMD	F-4412P	F-4412PMD
Number of needles	2-4	2-4	6-12	6-12
Type of needle	-----UY*113GS #11-#16-----			
Needle bar stroke	--34 mm--			
Feeding mechanism	--plain--			
Oil Lubrication	--Automatic--			
Maximum speed/RPM's	5000	4500	4500	4000

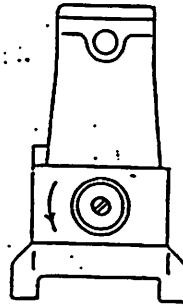
PAGE 2

2. Motor pulleys and V-belts

2-1 Use M-shape belt

2-1 Rotation of the pulley

2-3 Select pulleys according to speed as follows:



R.P.M.	50Hz	60Hz
5000	105	85
4500	95	80
4000	85	70

3. Filling and draining oil

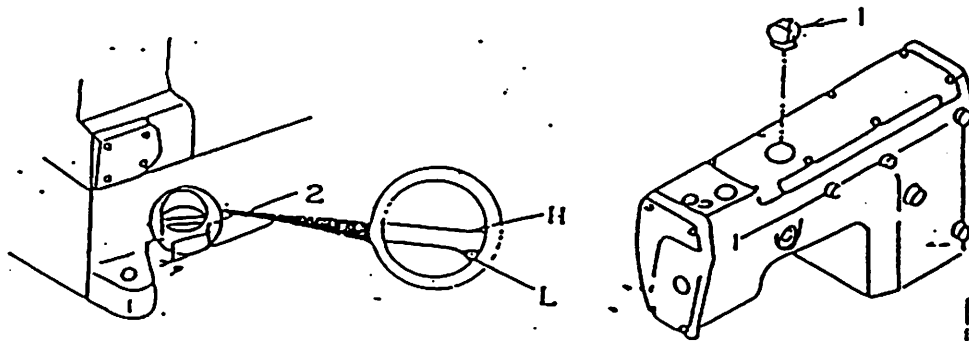
3-1 Type of oil

Use TELLESSO #33 or similar oil

3-2 Filling oil reservoir

Remove cap screw 1 and fill oil to line H on the oil gauge. On the oil gauge, line H shows the maximum and line L shows the minimum amount of oil. Oil level should always be kept between line H and line L.

Figure 2



3-3 Make sure that oil splashes in cap screw 1 during operation. If oil is not circulating and oil level is correct as explained in 3-2.

3-4 Draining Oil

Remove screw 3 from right hand side of the oil tank to drain oil.

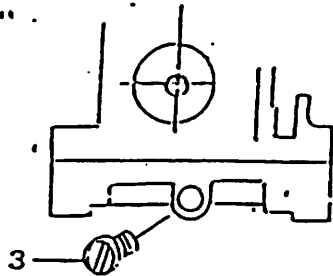
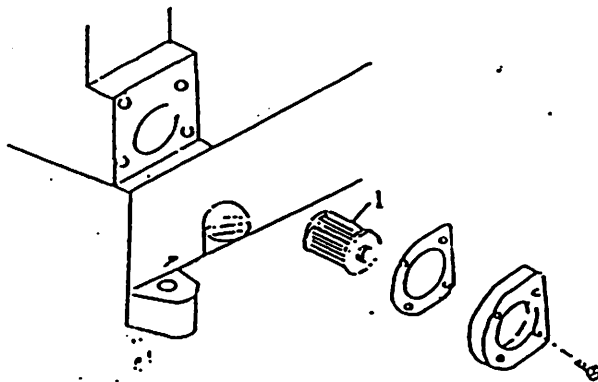


Figure 3

4. Changing the oil filter

If oil doesn't splash in the cap screw, clean or change the filter as in figure 4. Maintenance should be done monthly.

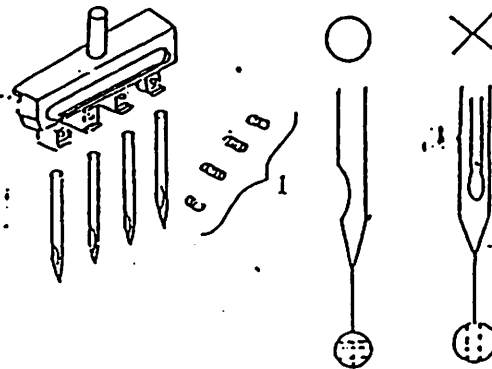
Figure 4



5. Changing needles

No. 1 in figure 5 shows the needle set screws. To change needles loosen needle set screw insert fresh needle fully into needle clamp with the scarf facing left as shown in the figure then tighten set screws.

Figure 5



6. Threading

6-1 The mechanism for exposing loopers to simplify looper threading.

- A) Looper rocker lock release button
- B) Looper rocker drop down lever, on the looper shaft

*Use these mechanisms to thread. Refer to Figure 6.

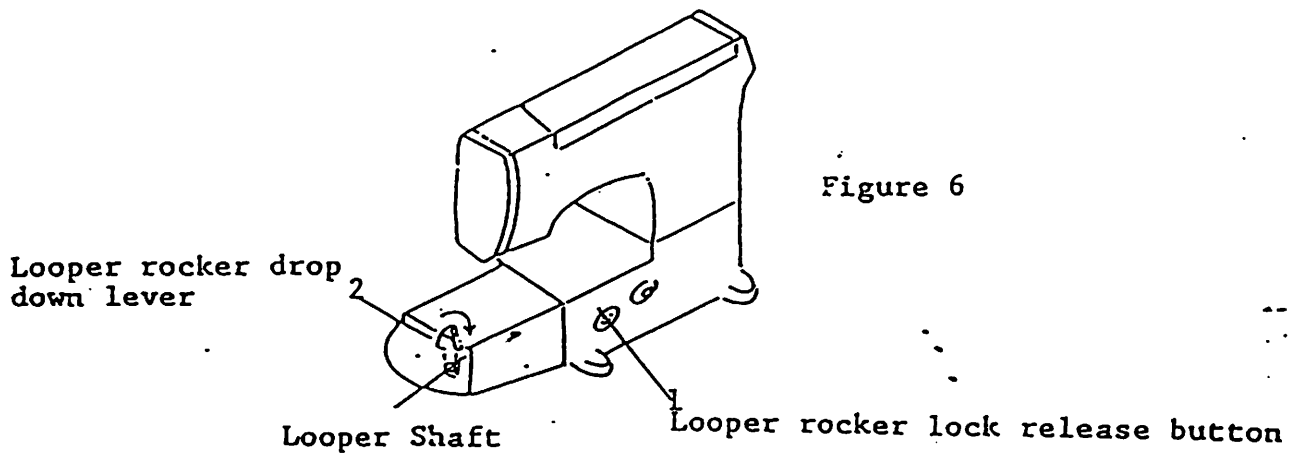


Figure 6

- a. Turn the hand wheel (pulley) set the needle bar at the highest position.
- b. Push button No. 1 and pull lever No. 2 to the front. The looper rocker will drop down, exposing the loopers for easy looper threading.
- c. After threading, push back the looper rocker to original position.

6-2 Threading diagram

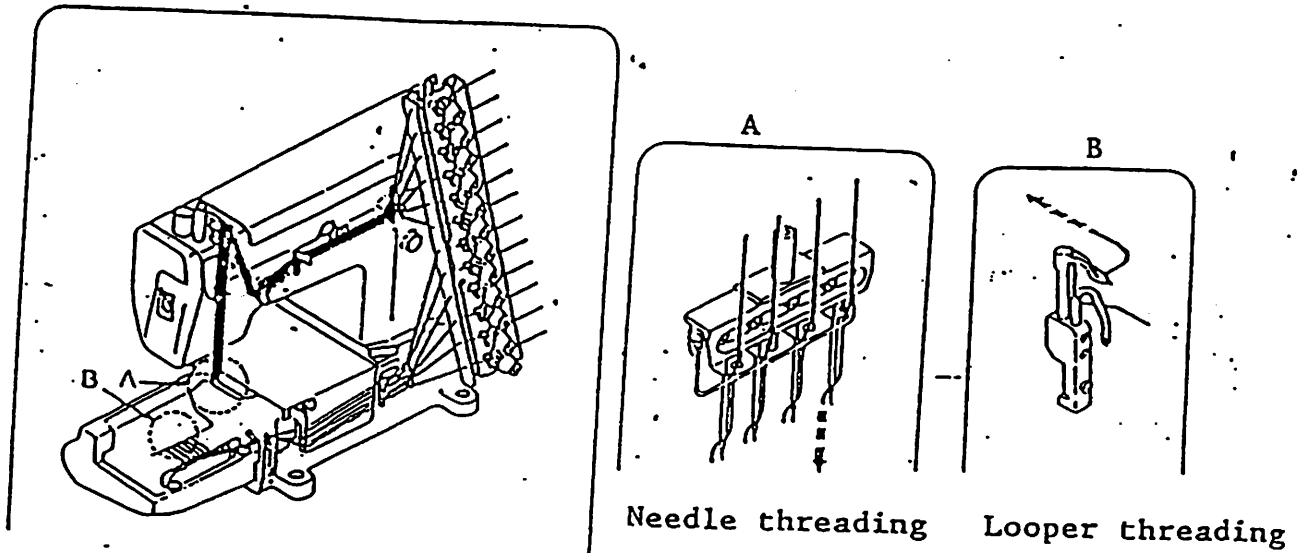
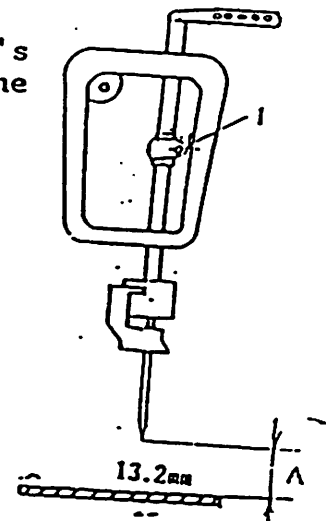


Figure 7

7. Adjusting the needle bar height (Figure 8)
Turn the handwheel to the needle bar's highest point. Loosen screw No.1 and adjust the height so that needle's points are positioned at 13.2 mm from the surface of the needle plate. Tighten screw No. 1 after adjustment.

Figure 8



8. Looper and needle distance (front to back, Figure 9 and 10)
When the needle bar is at the lowest position, points of the loopers should be at 3.0 mm from the needles. (clearance A) Adjustment can be made by screw No.1 in Figure 10. The screw is for the stop lever on the looper rocker shaft.

Figure 9



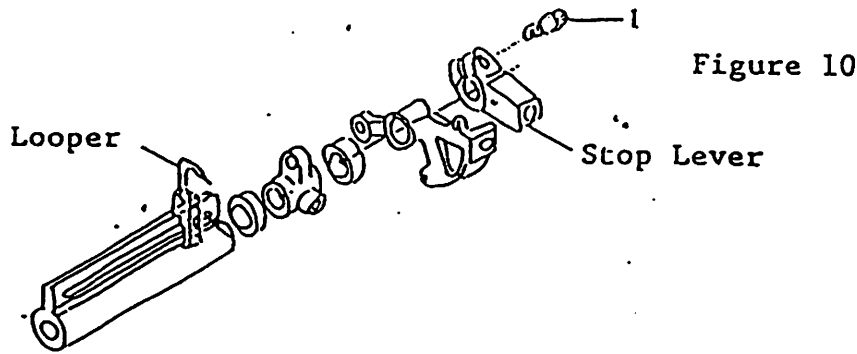


Figure 10

9. Timing of needle and looper

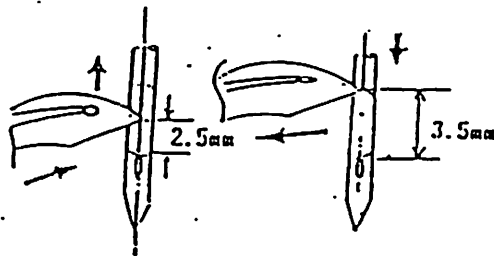


Figure 11 A

Figure 11 B

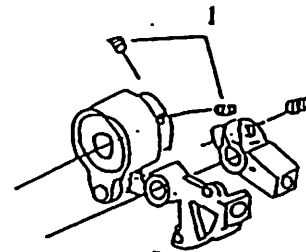


Figure 12

Turn the handwheel counter-clockwise. As the needle bar goes up and the loopers access to the needles, points of loopers should come at 2.5 mm above the needle's eyes as shown in Figure 11-A. When the needle bar comes down and the loopers move to the back, points of loopers should go through at 3.5 mm above the needle's eyes as shown in Figure 11-B. Adjustment can be made by screws No.1 of the eccentric on the main shaft as shown in Figure 12.

10. Clearance of needle and looper (Fig. 13)

10-1 When the point of looper passes by scarf of needle, the clearance between them should be 0-0.1 mm. To adjust this, loosen screw D (fig. 13A.)

10-2 Setting of needle guard (Fig. 14)

The clearance of needle and needle guard should be 0-0.1 mm when needle guard is located at the closest position to the needle. Loosen screw A for this adjustment.

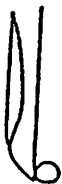


Figure 13

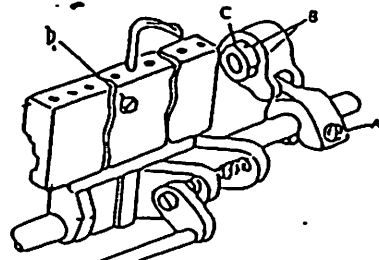


Figure 13 A

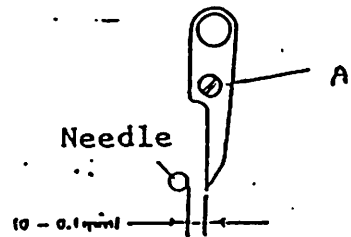


Figure 14

11. Adjustment of spreaders

11-1 Flat surface of spreader looper should be parallel with surface of needle plate as shown in figure 15.

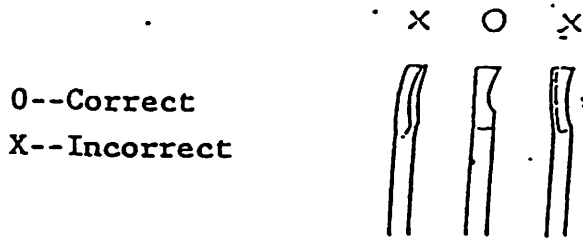


Figure 15

11-2 Distance of needle to the point of spreader looper. (Fig. 16)

Turn handwheel and locate spreader looper in front of needle then secure the distance of 0.5 mm between them by loosening screw A.

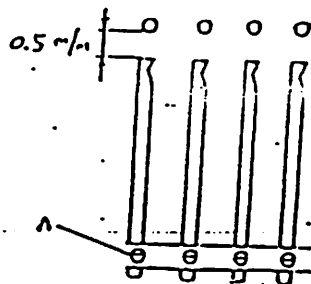


Figure 16

11-3 Location of spreader looper to looper (Fig. 17)

When spreader bar is at its extreme left end, right side point of spreader looper should be located 0.5 mm left of right side surface of looper.

To adjust this, loosen screw A so that spreader bar B can be shifted.

At the same time, keep clearance 0.1 mm between top of looper and lower end of spreader looper.

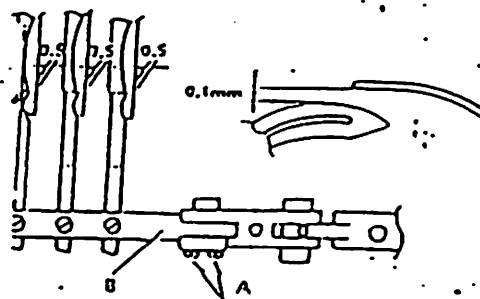
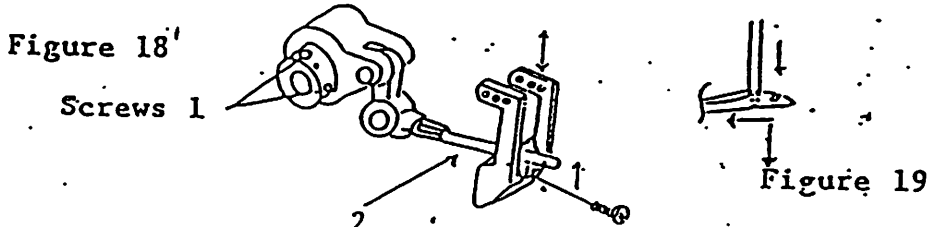


Figure 17

12. Adjusting the thread take-up

12-1 Adjustment of the timing

When the needle bar comes down and the point of the needle reaches the bottom line of the looper, (fig. 19) thread take-up bar No.2 should start to move up as shown in Figure 18. Adjustment can be made by screws No. 1 on the eccentric.



12-2 Amount of looper thread take up

Amount of thread take up can be adjusted according to thread type by adjusting eyelet as shown in Figure 20. Distance between the eyelets and the bar at its lowest point are as follows.

Kind of thread	Distance mm
cotton	8 mm
polyester	10 mm
wooly	15 mm

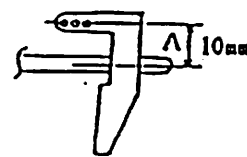


Figure. 20

13. Adjustment of the feed dog

13-1 Height of the feed dog

When the needle bar is at its highest position, teeth of the feed dog should protrude 1 to 1.2 mm from the needle plate as shown in Figure 22. Adjustment can be made by screw No. 3. After fixing the height, fix pins No. 1 by screw No. 2 so that the feed dog will not move downward.

13-2 Inclination of the feed dog

There shouldn't be any inclination for the feed dog. Adjustment can be made by bolt No. 4 so that the feed can be kept at its horizontal position.

13-3 Timing of the feed dog

When the needle bar comes down and point of the needle reaches the surface of the needle plate, tops of the feed dog and the surface of the needle plate should be at the same level. When the needle bar goes up and point of the needle reaches the surface of the needle plate, the position should be the same.

Figure 21

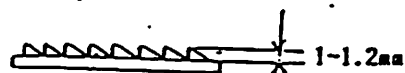
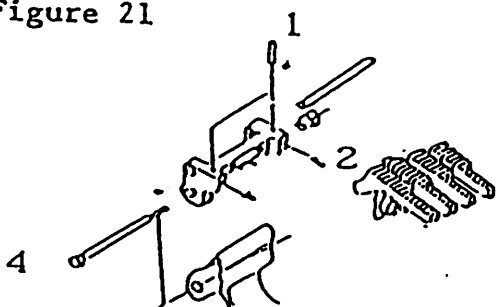


Figure 22

14. Adjusting the puller

14-1 Amount of puller feed.

Adjustment by nut No. 1. Move the nut up for less feeding and down for more feeding.

14-2 Timing of the puller

When the needle bar moves up and point of the needle is at 1.5 mm from the surface of the needle plate, movement of the puller's feeding should start as shown in Figure 24. Adjustment can be made by screws No. 3 on the eccentric as in Figure 23.

Figure 23

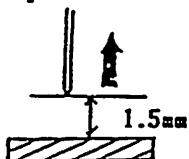
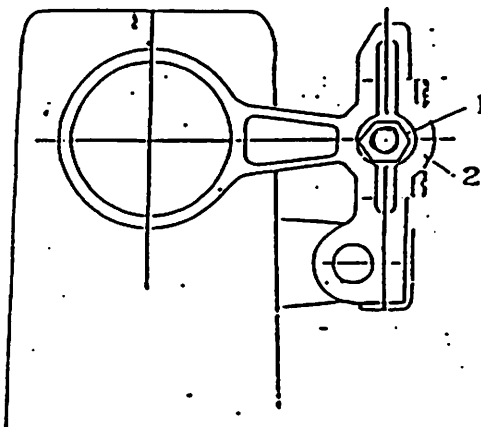
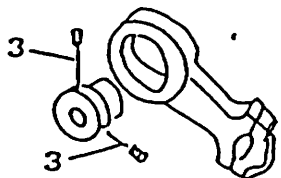


Figure 24

15. Adjusting pressure of the presser foot

Pressure on the presser foot should be as light as possible, unless skipping stitches. Adjustment can be made by screw No. 1 in Figure 25. Nut No. 2 is the stopper for screw No. 1.

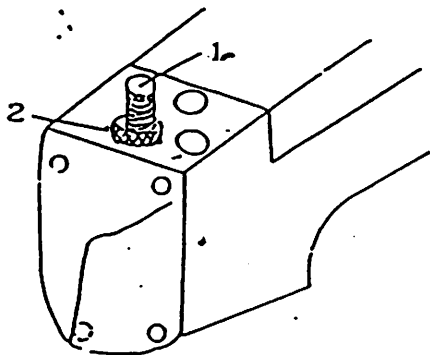


Figure 25

16. Adjusting thread tension

Adjustment of thread tension may be made according to kinds of material, types of thread, stitch length, and formation of stitch. Tension should be as light as possible, unless skipping of stitch and poor stitch occur.

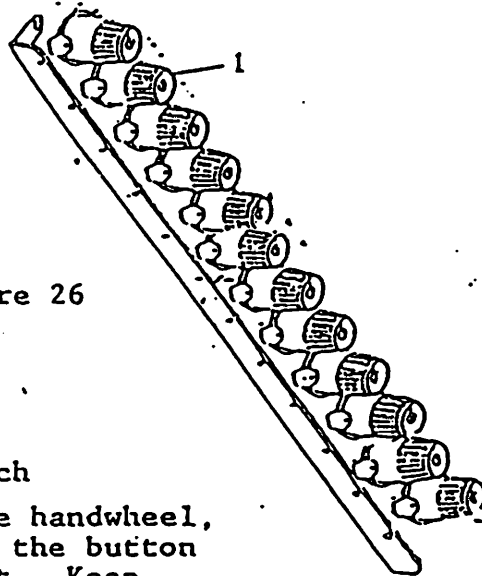


Figure 26

17. Adjusting length of stitch

Push button No.1 turn the handwheel, and find the point where the button will be depressed deepest. Keep pushing the button and turn the handwheel continuously to obtain a smaller stitch, or turn the handwheel clockwise to obtain a larger stitch. After obtaining required stitch length release the button.

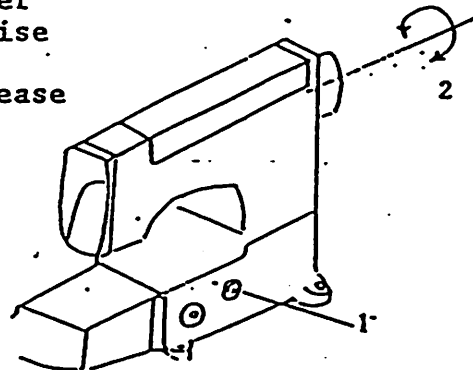


Figure 27

18. Adjusting MD(metering device) for Model F44QOPMD

Feeding amount of MD can be adjusted by nut No.1 in Figure 28. Move up joint No.2 for less feeding and move down for more feeding. Fix the nut at the point which provides the required amount of elastic feeding.

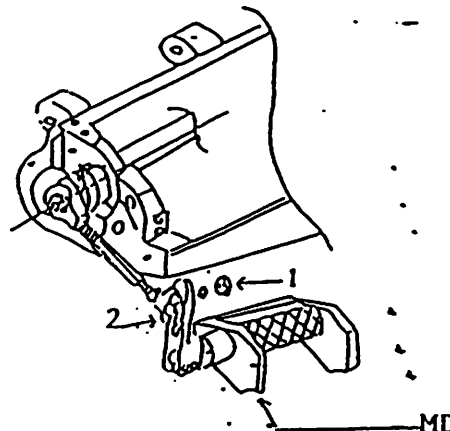


Figure 28

