

# **SINGER**

**791D100A, 200A**

**792D100A, 200A, 300A**

# Service Manual

## SINGER\*

791D100A/200A

792D100A/200A/300A

THE SINGER COMPANY.

# SINGER 791D MACHINES

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# NEEDLE BAR AND LOOPER

## 1. Needle Bar

Needle Bar Stroke: 27 mm for 791D100A and 792D100A  
30 mm for 791D200A and 792D200A  
33.4 mm for 792D300A

Needle: Cat. No. 3651-05 #10 for 792D100A  
Cat. No. 3651-05 #14 for 791D100A  
Cat. No. 3651-05 #16 for 791D200A and 792D200A  
Cat. No. 3651-05 #20 for 792D300A

### Needle Penetrating Position (Fig. 1)

Clearance between needle and left and right side of needle hole in throat plate shall be even.

Clearance between needle and front edge of needle hole in throat plate shall be 0.3 mm.

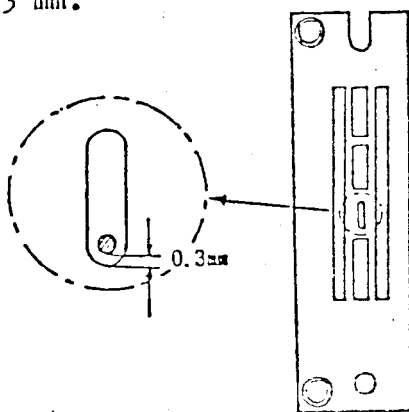


Fig. 1

## 2. Looper

Looper Stroke: 24 mm for all varieties

### Looper Height (Fig. 2)

When looper is at right dead point, clearance between looper and feed dog shall be 0.7 mm.

### Looper Timing (Fig. 2)

When needle bar is at lower dead point, looper shall be at right dead point. In this case, distance between center of needle and end of looper shall be:

3.6 mm for 791D100A and 792D100A  
3.2 mm for 791D200A and 792D200A

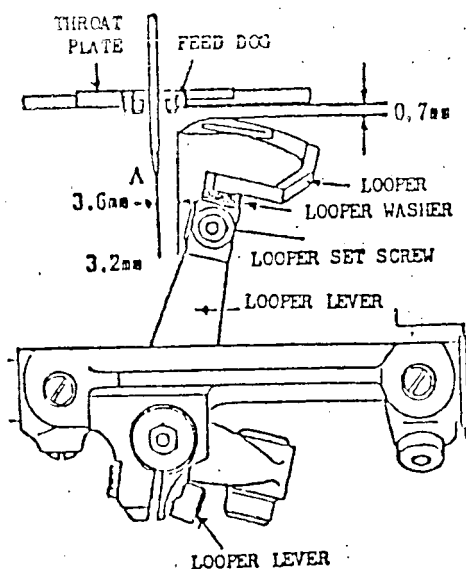


Fig. 2

### Clearance Between Loper and Needle (Fig. 3)

When looper point crosses the needle center during needle up stroke, clearance between looper and needle shall be 0.1 mm.

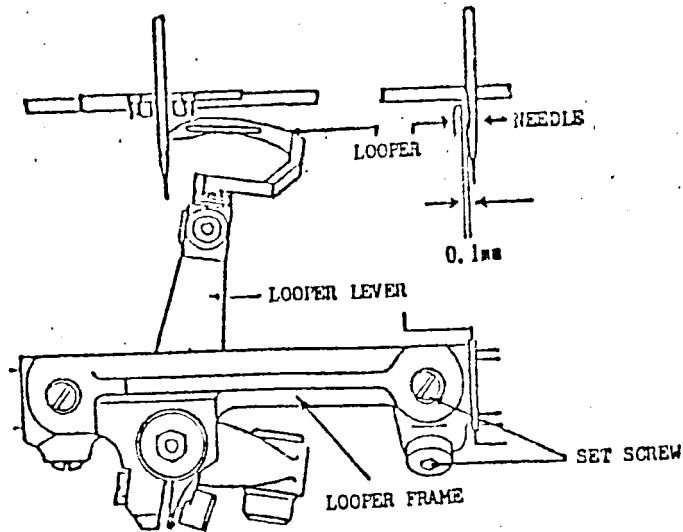
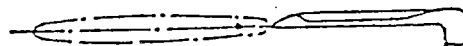
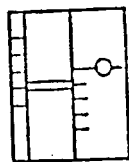
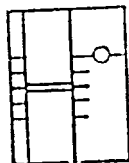
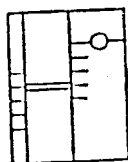


Fig. 3

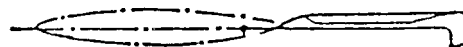
### Front and Back Loper Timing

With looper in the right position, when machine pulley is turned towards the operator, looper shall pass behind the needle and when turned in the opposite direction, looper shall pass in front of the needle and move the same distance to the left. Front and back movement shall be adjusted as follows.

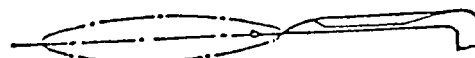
### Looper Avoiding Mark Position



791D100  
792D100



791D200  
792D200



792D300

## Looper and Needle Height (Fig. 4 and 5)

When looper point comes to left edge of needle during needle bar up stroke, clearance between looper point (lower edge) and upper edge of needle eye shall be approximately 0.8 mm.

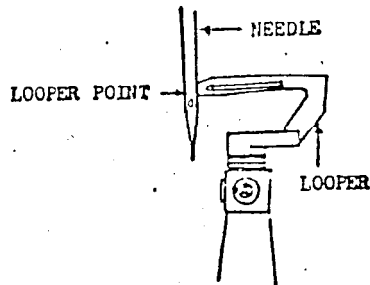


Fig. 4

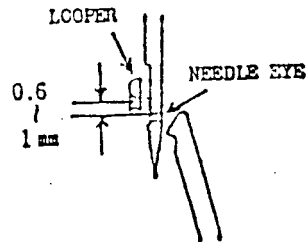


Fig. 5

## NEEDLE GUIDE POSITION

### 1. Back Needle Guide Height (Fig. 6)

When needle is at lower dead point, lower edge of needle eye shall align with back needle guide edge.

### 2. Needle and Back Needle Guide Clearance (Fig. 6)

Clearance between needle and back needle guide shall be 0.1 mm.

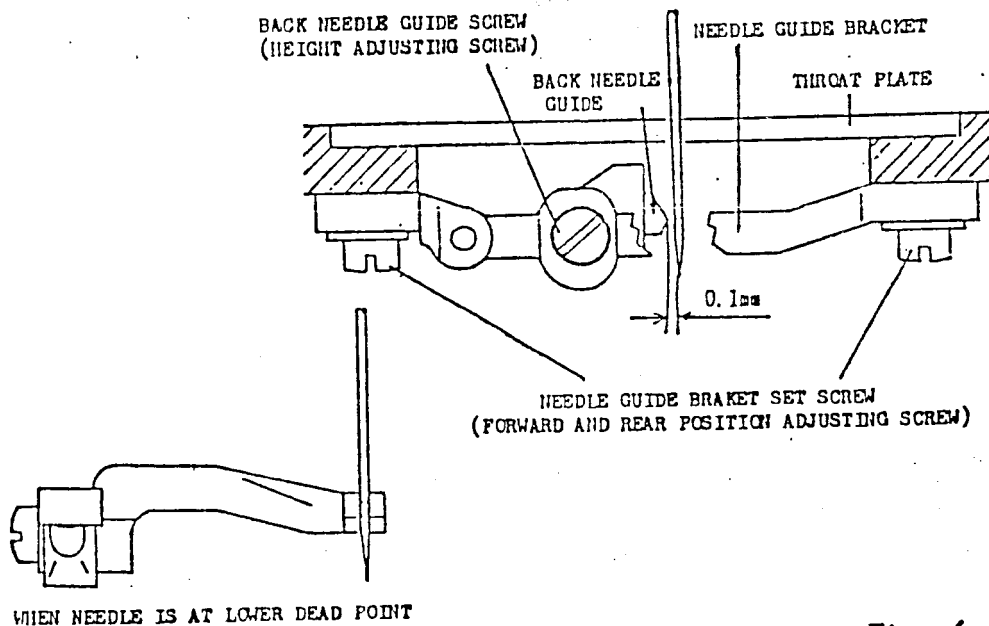


Fig. 6

### Front Needle Guide Height (Fig. 7)

When looper moves forward and right edge of needle aligns with looper point, lower edge of needle eye shall align with line on front needle guide.

### Forward and Rear, Left and Right Position of Front Needle Guide (Fig. 8)

When looper moves forward and right edge of needle aligns with looper point, clearance between needle and front needle guide shall be approximately 0.1 mm and edge of front needle shall be approximately 2 mm to the right of needle center.

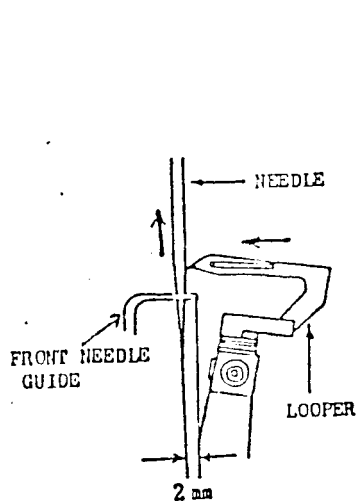


Fig. 7

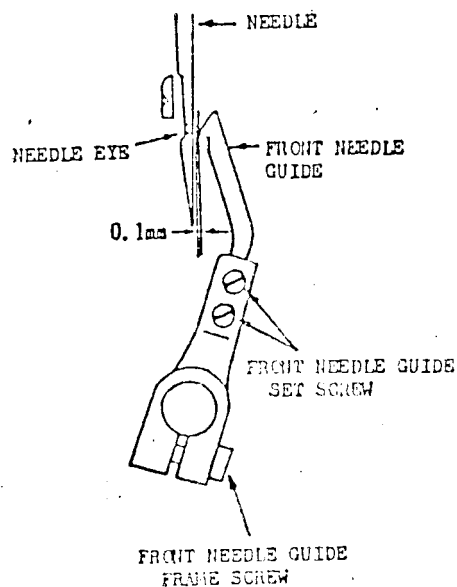


Fig. 8

## THREAD PULLER AND LOOPER TENSION THREAD DEFLECTORS TIMING (Fig. 9)

Thread puller and looper thread tension deflectors shall be adjusted so that when needle point aligns with lower edge of looper or lowers within 1 mm, looper thread shall cast off from left looper thread tension deflector.

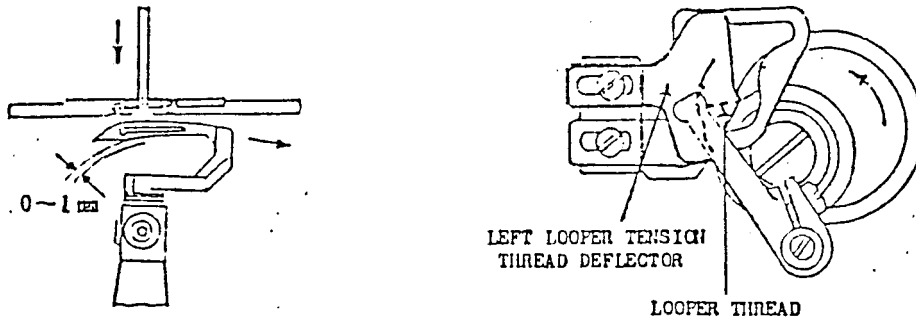


Fig. 9

## FEED DOG

### 1. Feed Dog Height (Fig. 10)

When feed dog is at the highest position, all the tooth shall project approximately 0.9 to 1 mm above throat plate.

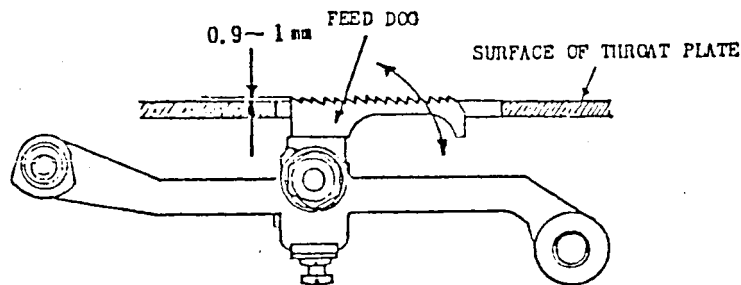


Fig. 10



## 2. Feed Dog Level (Fig. 11)

When tooth ends nearest to operator is even with top of throat plate during lifting movement, tooth ends furthest from operator shall project approximately 0.1 to 0.15 mm above throat plate.

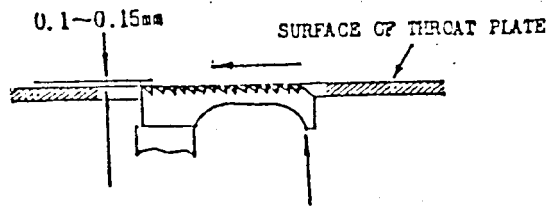


Fig. 11

## FEED AND FEED LIFTING ECCENTRIC PHASE (Fig. 12)

Feed and Feed Lifting Eccentric Phase of Thread Take-Up Crank Short Shaft  
(View from needle bar side)

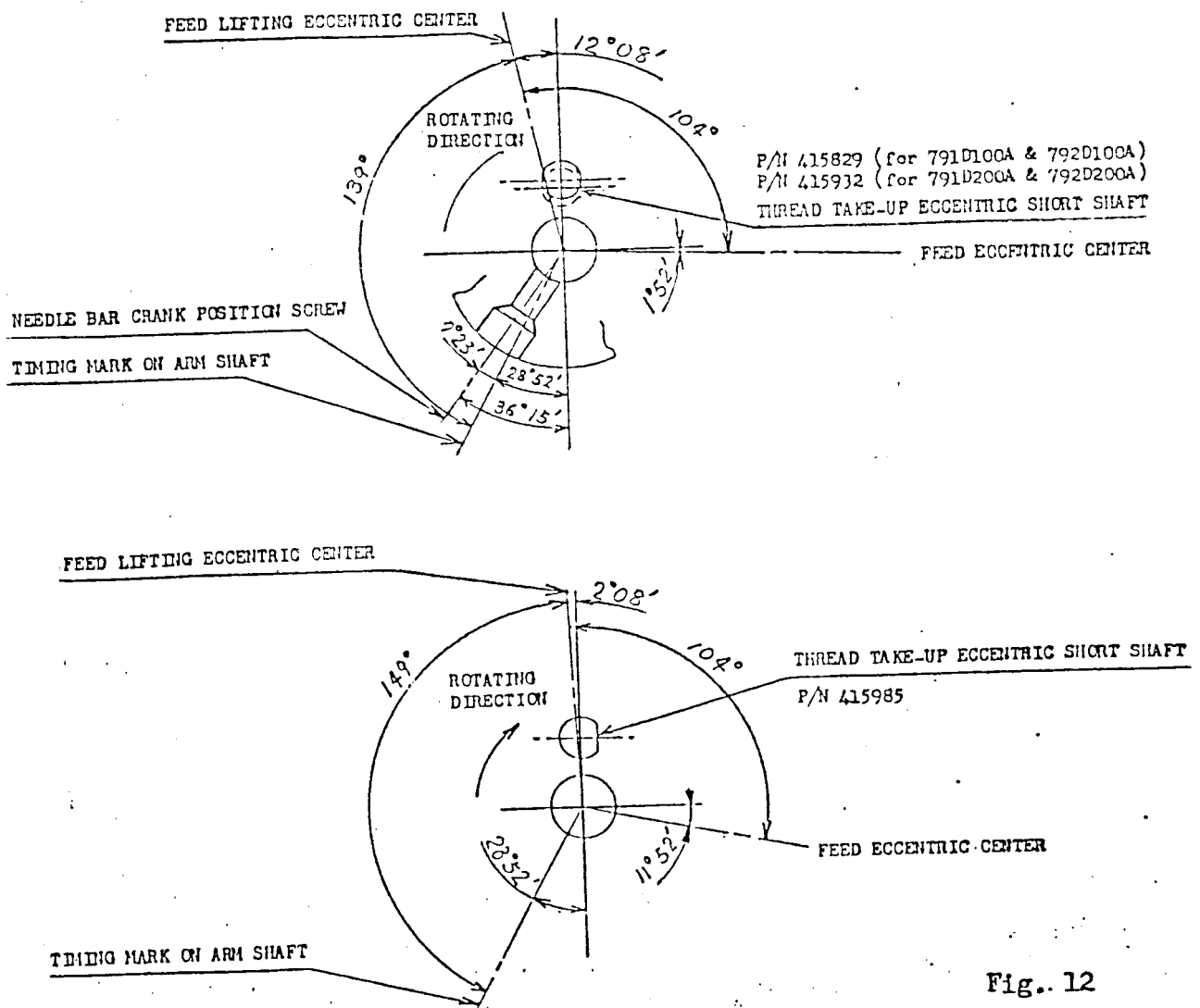


Fig. 12

## STITCH LENGTH

Maximum Stitch Length: 6 S.P.I. for 791D100A, 791D200A, 792D200A  
and 792D300A  
10 S.P.I. for 792D100A

## PRESSER FOOT

1. Clearance Under Presser Foot: (When raised by hand)  
6.4 mm for 791D100A and 792D100A  
7.9 mm for 791D200A, 792D200A and  
792D300A

(When raised with knee lifter)  
10 to 11 mm for all varieties

2. Presser Foot Pressure: 3.0 kgs. for all varieties

## MAXIMUM SPEED

6,000 R.P.M. for 791D100A  
5,500 R.P.M. for 792D100A, 791D200A  
and 792D200A  
4,800 R.P.M. for 792D300A