

Catalog No. T143M  
Supplement For  
Puller Machines

## Illustrated Parts List

For Styles

HF611K101MF

LF611K118MF

HF611K118MF

LF611K152MF

HF611K152MF

LF612K101MBE-16

HF612K101MR-48

LF613K101HR-8

LF611K101MF

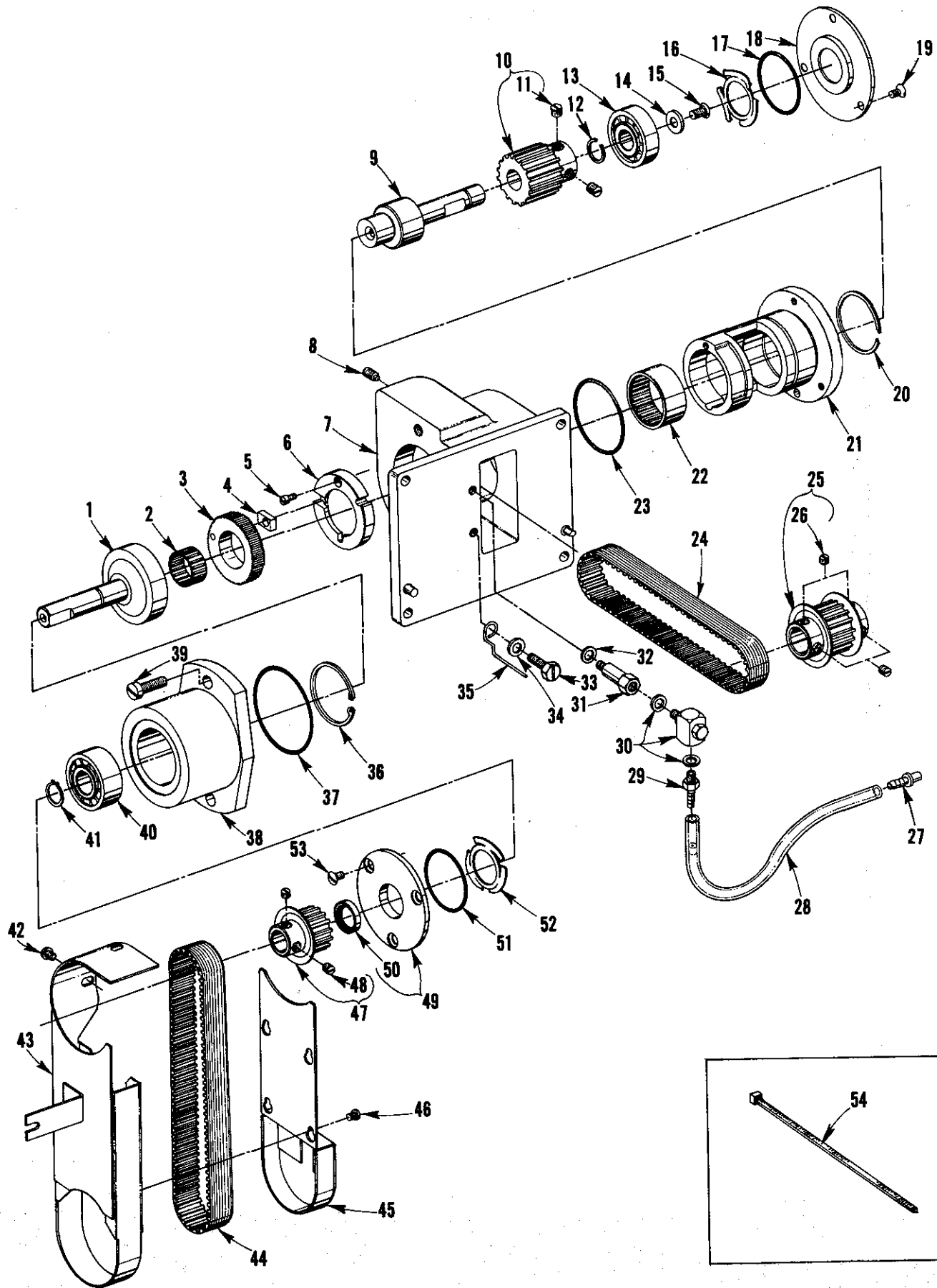
LF613K101HR-9

 **Union Special**<sup>®</sup>  
Finest Quality Industrial Sewing Equipment

September 1, 1989

Union Special Corporation, One Union Special Plaza, Huntley, IL 60142, U.S.A.  
Union Special, GmbH, Schwabstrasse 33, D-7000 Stuttgart 1, West Germany

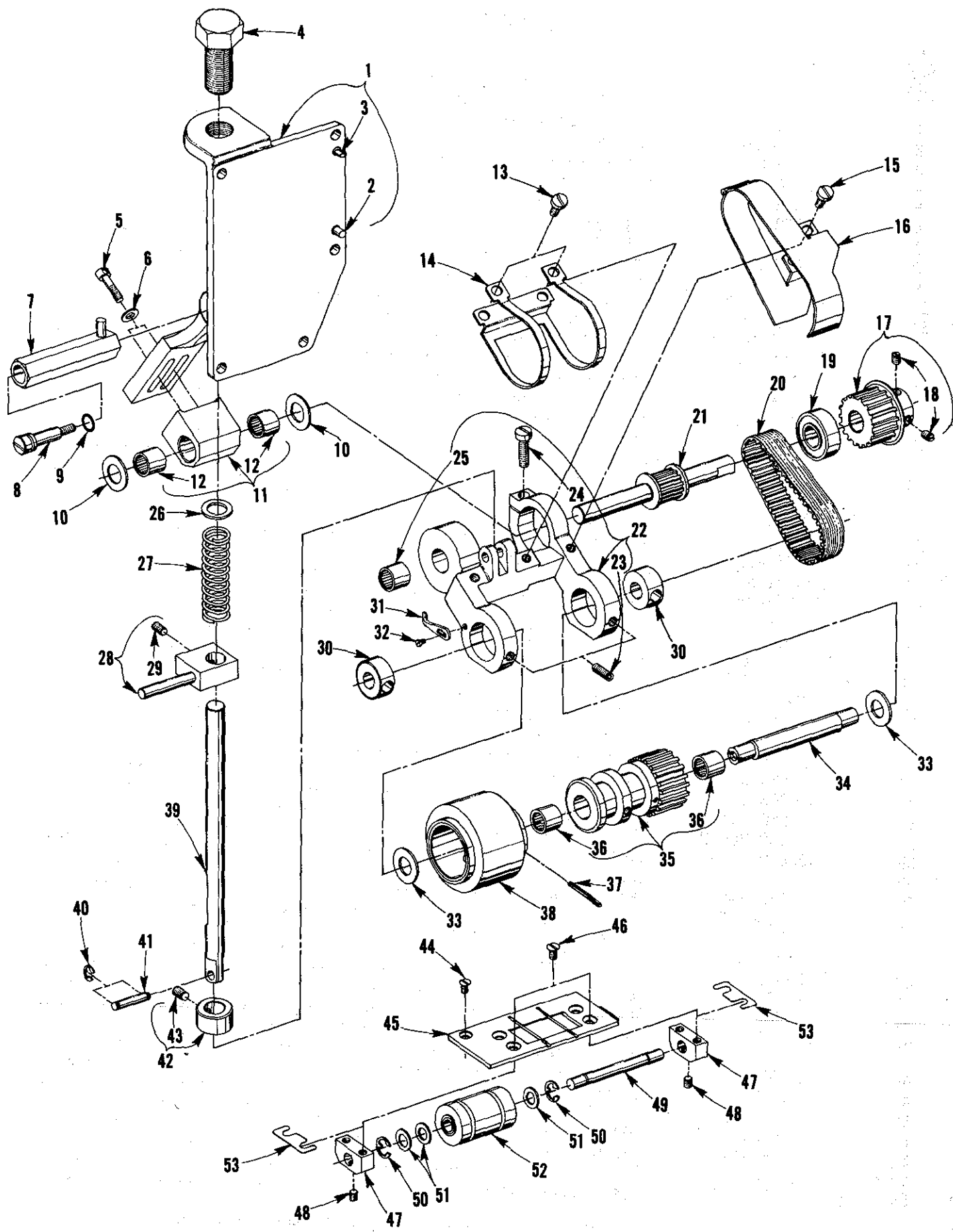
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PULLER DRIVE

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u>  | <u>Amt. Req.</u> |
|-----------------|-----------------|---|------------------|
| 1               | C50078 L        | Gear, internal -----  | 1                |
| 2               | 660-889         | Bearing, cage -----   | 1                |
| 3               | C50078 M        | Gear -----  | 1                |
| 4               | C50078 J        | Block, slide -----  | 1                |
| 5               | 22593           | Screw -----   | 1                |
| 6               | C50078 N        | Ring, guide -----   | 1                |
| 7               | C50078 G        | Housing, bearing -----  | 1                |
| 8               | 22894 J         | Screw -----   | 1                |
| 9               | C50022 L        | Shaft, eccentric drive -----  | 1                |
| 10              | C50042 AC-16    | Sprocket -----  | 1                |
| 11              | 98              | Screw -----   | 2                |
| 12              | 660-891 C       | Ring, retaining -----   | 1                |
| 13              | 660-888         | Bearing, ball -----   | 1                |
| 14              | 59451 F         | Washer -----  | 1                |
| 15              | 22574 D         | Screw (left hand threads) -----   | 1                |
| 16              | 660-914         | Spring, finger -----  | 1                |
| 17              | 660-886 A       | "O" Ring -----  | 1                |
| 18              | C50082 AR       | Cover -----   | 1                |
| 19              | 22524           | Screw -----   | 3                |
| 20              | 661-70 A        | Ring, snap -----  | 1                |
| 21              | C50078 P        | Housing, eccentric -----  | 1                |
| 22              | 660-892 C       | Bearing -----   | 1                |
| 23              | 660-886 C       | "O" Ring -----  | 1                |
| 24              | C50042 AF       | Belt, timing -----  | 1                |
| 25              | C50042 AB-16    | Sprocket -----  | 1                |
| 26              | 98              | Screw -----   | 4                |
| 27              | 50394 D         | Connector, oil tube -----   | 1                |
| 28              | C50094 AG       | Tube, oil -----   | 1                |
| 29              | 671 F-19        | Connector -----   | 1                |
| 30              | RM3633-1        | Fitting, oil -----  | 1                |
| 31              | 671 F-64        | Fitting, extension -----  | 1                |
| 32              | RM2964 B        | Washer -----  | 1                |
| 33              | 22824 B         | Screw -----   | 1                |
| 34              | 53634 C         | Washer -----  | 1                |
| 35              | C50093 CS       | Protector, tube -----   | 1                |
| 36              | 660-891 B       | Ring, snap -----  | 1                |
| 37              | 660-886 B       | "O" Ring -----  | 1                |
| 38              | C50078 H        | Housing, bearing -----  | 1                |
| 39              | 136             | Screw -----   | 2                |
| 40              | 660-890         | Bearing, ball -----   | 1                |
| 41              | 660-918         | Ring, retaining -----   | 1                |
| 42              | 22825           | Screw -----   | 3                |
| 43              | 21375 BX        | Guard, belt -----   | 1                |
| 44              | C50042 AG       | Belt, timing -----  | 1                |
| 45              | 21375 BY        | Cover -----   | 1                |
| 46              | 604             | Screw -----   | 4                |
| 47              | C50042 Z-13     | Sprocket, puller driving (See sprocket chart for<br>stitch length combinations) ----- | 1                |
| 48              | 22560 B         | Screw -----   | 2                |
| 49              | C50082 AP       | Cover -----   | 1                |
| 50              | 660-893         | Seal, lip -----   | 1                |
| 51              | 660-886 A       | "O" Ring -----  | 1                |
| 52              | 660-914         | Spring -----  | 1                |
| 53              | 22524           | Screw -----   | 3                |
| 54              | 670 E-2         | Tie, cable; to secure Ref. No. 28 -----   | 1                |

NOTE: Ref No. 1-24, 36-41 and 49-53 can be ordered under Assembly No. 29476 PK.



ROLLER PULLER

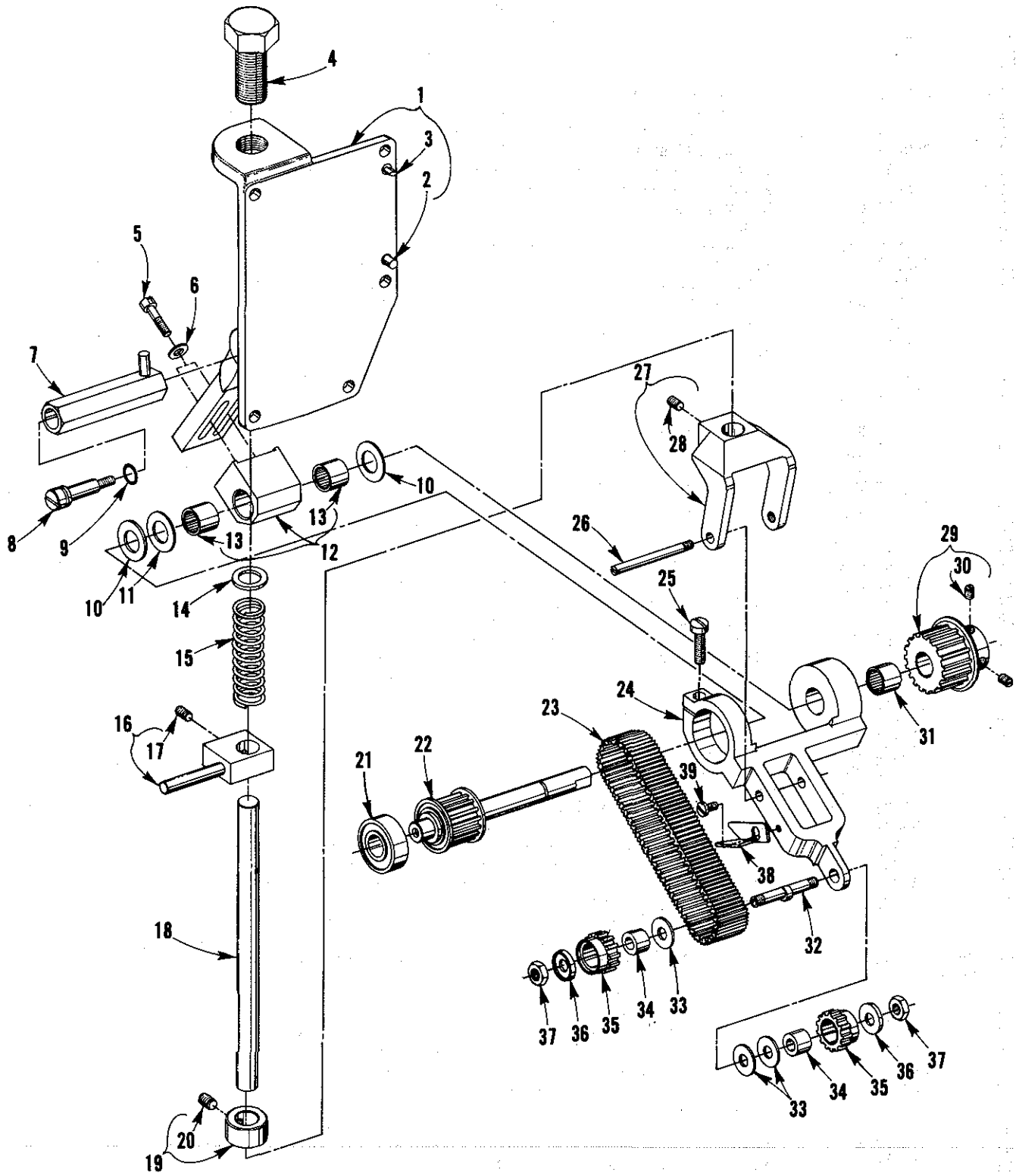
| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u>  | <u>Amt. Req.</u> |
|-----------------|-----------------|---|------------------|
| 1               | C50078 F        | Bracket, mounting -----   | 1                |
| 2               | 667 C-8         | Pin, dowel -----  | 1                |
| 3               | 51-716 BLK      | Pin, locating -----   | 1                |
| 4               | C50077 D        | Screw, adjusting -----  | 1                |
| 5               | 88 F            | Screw -----   | 2                |
| 6               | 8372 A          | Washer -----  | 2                |
| 7               | C50077 C        | Sleeve, stop -----  | 1                |
| 8               | C50077 B        | Stud, screw -----   | 1                |
| 9               | 660-220         | "0" Ring -----  | 1                |
| 10              | C50077 J        | Washer -----  | 2                |
| 11              | C50078 S        | Block, mounting -----   | 1                |
| 12              | 660-892 A       | Bearing, needle -----   | 2                |
| 13              | 94              | Screw -----   | 4                |
| 14              | C50078 V        | Guard, feed roller -----  | 1                |
| 15              | 94              | Screw -----   | 2                |
| 16              | 21375 BW        | Guard, belt -----   | 1                |
| 17              | C50042 Z-18     | Sprocket, puller driven (see sprocket chart for stitch length combinations) ----- | 1                |
| 18              | 22560 B         | Screw -----   | 2                |
| 19              | 660-887         | Bearing, ball -----   | 1                |
| 20              | C50042 AE       | Belt, timing -----  | 1                |
| 21              | C50022 K        | Shaft, drive -----  | 1                |
| 22              | C50078 E        | Yoke, feed roller -----   | 1                |
| 23              | 22894 E         | Screw -----   | 2                |
| 24              | 136             | Screw -----   | 1                |
| 25              | 660-892 B       | Bearing, needle -----   | 1                |
| 26              | 51242 L         | Washer -----  | 1                |
| 27              | 28633 L         | Spring -----  | 1                |
| 28              | C50077 H        | Collar, puller lifting -----  | 1                |
| 29              | 22894 AM        | Screw -----   | 1                |
| 30              | C50078 T        | Block, thrust -----   | 1                |
| 31              | 39656 A         | Knife, chain cutting -----  | 1                |
| 32              | 604             | Screw -----   | 1                |
| 33              | C50077 K        | Washer -----  | 2                |
| 34              | C50022 N        | Shaft, upper roller -----   | 1                |
| 35              | C50042 AL       | Sprocket, drive -----   | 1                |
| 36              | 660-892 A       | Bearing, needle -----   | 2                |
| 37              | 660-219 L       | Pin, roll -----   | 1                |
| 38              | C50075 B        | Roller, upper (Smooth Polyurethane) -----   | 1                |
| 39              | C50077          | Shaft, puller lifter -----  | 1                |
| 40              | 660-416         | Ring, retaining -----   | 2                |
| 41              | C50036 AJ       | Pin, roller lifter -----  | 1                |
| *42             | C50036 R        | Collar, stop -----  | 1                |
| *43             | 98              | Screw, set (required to replace screw in Ref. No. 42) -----                       | 1                |

Ref. Nos. 1 thru 43 to be ordered under Assembly No. 29476-PH with Smooth Polyurethane Roller and 29476 PW with Bakelite Saw Tooth Roller.

|    |              |   |   |
|----|--------------|---|---|
| 44 | AS22 D       | Screw -----                                 | 1 |
| 45 | C50078 R     | Plate, feed -----                           | 1 |
| 46 | 22526        | Screw -----                                 | 4 |
| 47 | C50078 U     | Block, bearing -----                        | 2 |
| 48 | 22894 W      | Screw -----                                 | 2 |
| 49 | C50074       | Shaft -----                                 | 1 |
| 50 | 660-330      | Ring, retaining -----                       | 2 |
| 51 | 6042 A       | Washer -----                                | 3 |
| 52 | C50076       | Roller, lower (Smooth Polyurethane) -----   | 1 |
| -  | 50375 C      | Roller, lower (Steel Diamond Knurled) ----- | 1 |
| -  | 50375 D      | Roller, lower (Bakelite Saw Tooth) -----    | 1 |
| 53 | C50078 AF-15 | Shim -----                                  | 1 |
| -  | C50078 AF-10 | Shim -----                                  | 1 |

Ref Nos. 44 thru 52 can be ordered under Assembly No. 29476-PJ with Smooth Polyurethane Roller and 29476 PV with Bakelite Saw Tooth Roller.

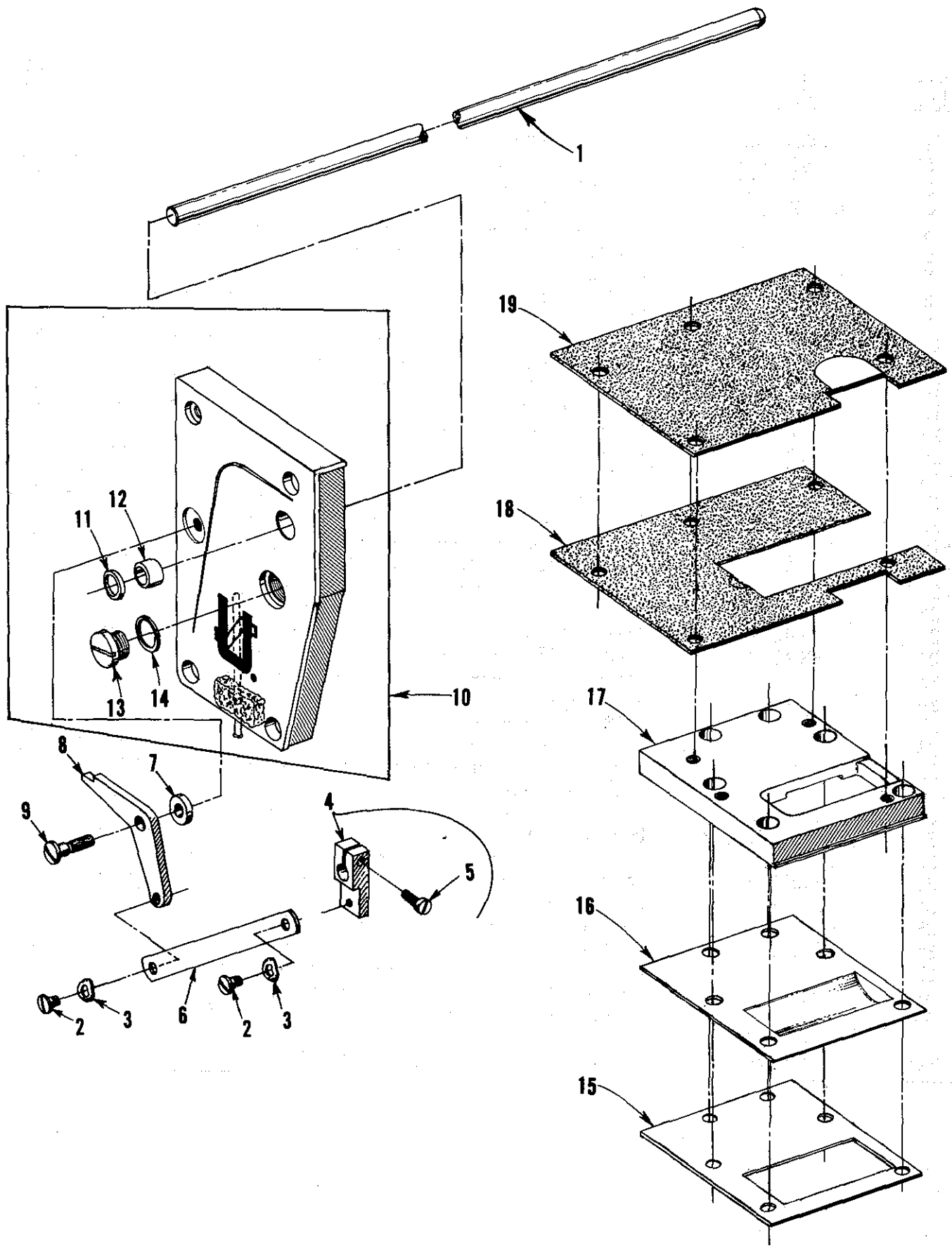
|   |         |   |   |
|---|---------|---|---|
| - | 50375 A | Roller, upper (Steel Diamond Knurled) ----- | 1 |
| - | 50375 B | Roller, upper (Bakelite Saw Tooth) -----    | 1 |
| - | 50375   | Roller, upper (Steel Saw Tooth) -----       | 1 |



BELT PULLER

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u>   | <u>Amt. Req.</u> |
|-----------------|-----------------|--|------------------|
| 1               | C50078 AE       | Bracket, mounting -----  | 1                |
| 2               | 667 C-8         | Pin, dowel -----   | 1                |
| 3               | 51-716 BLK      | Pin, locating -----  | 1                |
| 4               | C50077 D        | Screw, adjusting -----   | 1                |
| 5               | 88 F            | Screw -----  | 2                |
| 6               | 8372 A          | Washer -----   | 2                |
| 7               | C50077 C        | Sleeve, stop -----   | 1                |
| 8               | C50077 B        | Stud, screw -----  | 1                |
| 9               | 660-220         | "O" Ring -----   | 1                |
| 10              | C50077 M        | Washer -----   | 2                |
| 11              | C50077 J        | Washer -----   | 1                |
| 12              | C50078 AC       | Plate, binder -----  | 1                |
| 13              | 660-892 A       | Bearing, needle -----  | 2                |
| 14              | 51242 L         | Washer -----   | 1                |
| 15              | 28633 L         | Spring -----   | 1                |
| 16              | C50077 H        | Collar, lifting -----  | 1                |
| 17              | 22894 AM        | Screw -----  | 1                |
| 18              | C50078 Y        | Rod, lifter -----  | 1                |
| *19             | C50036 R        | Collar, stop -----   | 1                |
| *20             | 98              | Screw, set (required to replace screw in Ref No. 19)                                 | 1                |
| 21              | 660-887         | Bearing, ball -----  | 1                |
| 22              | C50078 AB       | Shaft, drive -----   | 1                |
| 23              | C50042 AK       | Belt, timing -----   | 1                |
| 24              | C50078 W        | Yoke, roller -----   | 1                |
| 25              | 136             | Screw -----  | 1                |
| 26              | 22570 E         | Screw -----  | 1                |
| 27              | C50078 AA       | Lifter -----   | 1                |
| 28              | 22894 R         | Screw -----  | 1                |
| 29              | C50042 Z-16     | Sprocket, puller driven (see sprocket chart for<br>stitch length combinations) ----- | 1                |
| 30              | 22560 B         | Screw -----  | 2                |
| 31              | 660-892 B       | Bearing -----  | 1                |
| 32              | C50078 X        | Shaft -----  | 1                |
| 33              | C50077 N        | Washer -----   | 3                |
| 34              | C50037 D        | Ferrule -----  | 2                |
| 35              | C50042 AJ-12    | Sprocket -----   | 2                |
| 36              | C50063 Y        | Washer -----   | 2                |
| 37              | 18              | Nut -----  | 2                |
| 38              | 52930 AC        | Knife, chain cutting -----   | 1                |
| 39              | 604             | Screw -----  | 1                |

#Ref No. 1 thru 39 can be ordered under Assembly No. 29476 PL.





COVERS AND PULLER LIFTER PARTS

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u>  | <u>Amt. Req.</u> |
|-----------------|-----------------|---|------------------|
| 1               | 50322 F         | Shaft, presser foot lift (upper) -----                              | 1                |
| 2               | 22758           | Screw -----   | 2                |
| 3               | 660-718         | Washer, spring -----  | 2                |
| 4               | C50077 E        | Lever, lifter -----   | 1                |
| 5               | 93              | Screw -----   | 1                |
| 6               | C50077 F        | Link, connecting -----  | 1                |
| 7               | C50078 AD       | Spacer -----  | 1                |
| 8               | C50077 G        | Lever, lifter roller -----  | 1                |
| 9               | 22557 J         | Screw, shoulder -----   | 1                |
| 10              | 50382 BM        | Cover, head -----   | 1                |
| 11              | 660-739         | Seal, oil -----   | 1                |
| 12              | 660-896         | Bushing -----   | 1                |
| 13              | 22883 B         | Screw, plug -----   | 1                |
| 14              | C50082 AA       | Gasket -----  | 1                |
| 15              | 50382 U         | Gasket, for Roller Puller (only) -----                              | 1                |
| 16              | 37-70 BLK       | Trough, blank, for Roller Puller (only) -----                       | 1                |
| 17              | 50382 V         | Cover, feed chamber, for Roller Puller (only) -----                 | 1                |
| 18              | 50301 P         | Plate, cloth (left) for Styles LF611K101MF<br>and HF611K101MF ----- | 1                |
| -               | 50301 Z         | Plate, cloth (left) for Style HF612K101MR-48 -----                  | 1                |
| -               | 50301 AD        | Plate, cloth (left) for Style HF612K101MBE-16 -----                 | 1                |
| -               | 50301 AE        | Plate, cloth (left) for Styles LF613K101HR-8<br>and 101HR-9 -----   | 1                |
| 19              | 50301 D         | Plate, cloth (left) for Styles LF611K118MF and<br>HF611K118MF ----- | 1                |
| -               | 50301 T         | Plate, cloth (left) for Styles LF611K152MF and<br>HF611K152MF ----- | 1                |

**PULLER SPROCKETS COMBINATIONS**

This chart shows the stitch length produced by available sprocket combinations. Sprockets furnished in the machines produces approximately 9.2 S.P.I. If a different length is required, refer to the chart for appropriate dash number when ordering sprockets-C50042-Z-( ).

**Roller Puller Sprocket Variations**

|                                    |     | NUMBER OF STITCHES PER INCH       |                       |                       |                       |                       |                      |                      |                      |                      |
|------------------------------------|-----|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>DRIVEN SPROCKET PART NUMBER</b> | -18 | 14.69 SPI<br>(1.73mm)             | 13.37 SPI<br>(1.90mm) | 12.25 SPI<br>(2.07mm) | 11.30 SPI<br>(2.25mm) | 10.50 SPI<br>(2.42mm) | 9.80 SPI<br>(2.59mm) | 9.18 SPI<br>(2.77mm) | 8.65 SPI<br>(2.94mm) |                      |
|                                    | -17 | 13.87 SPI<br>(1.83mm)             | 12.62 SPI<br>(2.01mm) | 11.56 SPI<br>(2.20mm) | 10.67 SPI<br>(2.38mm) | 9.91 SPI<br>(2.56mm)  | 9.25 SPI<br>(2.75mm) | 8.67 SPI<br>(2.93mm) | 8.16 SPI<br>(3.11mm) | 7.71 SPI<br>(3.30mm) |
|                                    | -16 | 13.06 SPI<br>(1.94mm)             | 11.88 SPI<br>(2.13mm) | 10.89 SPI<br>(2.53mm) | 10.05 SPI<br>(2.53mm) | 9.34 SPI<br>(2.72mm)  | 8.71 SPI<br>(2.92mm) | 8.16 SPI<br>(3.11mm) | 7.69 SPI<br>(3.30mm) | 7.26 SPI<br>(3.50mm) |
|                                    | -15 |                                   | 11.14 SPI<br>(2.28mm) | 10.21 SPI<br>(2.49mm) | 9.42 SPI<br>(2.70mm)  | 8.75 SPI<br>(2.90mm)  | 8.16 SPI<br>(3.11mm) | 7.65 SPI<br>(3.32mm) | 7.21 SPI<br>(3.52mm) | 6.80 SPI<br>(3.73mm) |
|                                    | -14 |                                   |                       | 9.52 SPI<br>(2.67mm)  | 8.76 SPI<br>(2.89mm)  | 8.16 SPI<br>(3.11mm)  | 7.62 SPI<br>(3.33mm) | 7.14 SPI<br>(3.56mm) | 6.72 SPI<br>(3.78mm) | 6.35 SPI<br>(4.00mm) |
|                                    | -13 |                                   |                       |                       | 8.16 SPI<br>(3.11mm)  | 7.59 SPI<br>(3.35mm)  | 7.08 SPI<br>(3.59mm) | 6.63 SPI<br>(3.83mm) | 6.25 SPI<br>(4.07mm) | 5.90 SPI<br>(4.31mm) |
|                                    | -12 |                                   |                       |                       |                       | 7.00 SPI<br>(3.63mm)  | 6.53 SPI<br>(3.89mm) | 6.12 SPI<br>(4.15mm) | 5.76 SPI<br>(4.41mm) | 5.44 SPI<br>(4.67mm) |
|                                    | -11 |                                   |                       |                       |                       |                       | 5.98 SPI<br>(4.24mm) | 5.61 SPI<br>(4.53mm) | 5.28 SPI<br>(4.81mm) | 4.99 SPI<br>(5.09mm) |
|                                    | -10 |                                   |                       |                       |                       |                       |                      | 5.10 SPI<br>(4.98mm) | 4.81 SPI<br>(5.28mm) | 4.54 SPI<br>(5.60mm) |
|                                    |     | -10                               | -11                   | -12                   | -13                   | -14                   | -15                  | -16                  | -17                  | -18                  |
|                                    |     | <b>DRIVE SPROCKET PART NUMBER</b> |                       |                       |                       |                       |                      |                      |                      |                      |

**PULLER SPROCKETS COMBINATIONS**

This chart shows the stitch length produced by available sprocket combinations. Sprockets furnished in the machines produces approximately 9.2 S.P.I. If a different length is required, refer to the chart for appropriate dash number when ordering sprockets-C50042-Z-( ).

**Belt Puller Sprocket Variations**

|                                    |     | NUMBER OF STITCHES PER INCH       |                       |                       |                       |                       |                      |                      |                      |                      |
|------------------------------------|-----|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>DRIVEN SPROCKET PART NUMBER</b> | -18 | 13.10 SPI<br>(1.94mm)             | 11.92 SPI<br>(2.13mm) | 10.92 SPI<br>(2.33mm) | 10.08 SPI<br>(2.52mm) | 9.37 SPI<br>(2.71mm)  | 8.74 SPI<br>(2.91mm) | 8.19 SPI<br>(3.10mm) | 7.71 SPI<br>(3.29mm) |                      |
|                                    | -17 | 12.37 SPI<br>(2.05mm)             | 11.26 SPI<br>(2.26mm) | 10.31 SPI<br>(2.46mm) | 9.52 SPI<br>(2.67mm)  | 8.84 SPI<br>(2.87mm)  | 8.25 SPI<br>(3.08mm) | 7.73 SPI<br>(3.28mm) | 7.28 SPI<br>(3.49mm) | 6.88 SPI<br>(3.69mm) |
|                                    | -16 | 11.65 SPI<br>(2.18mm)             | 10.60 SPI<br>(2.40mm) | 9.71 SPI<br>(2.62mm)  | 8.96 SPI<br>(2.83mm)  | 8.33 SPI<br>(3.05mm)  | 7.77 SPI<br>(3.27mm) | 7.28 SPI<br>(3.49mm) | 6.86 SPI<br>(3.70mm) | 6.48 SPI<br>(3.92mm) |
|                                    | -15 |                                   | 9.94 SPI<br>(2.56mm)  | 9.10 SPI<br>(2.79mm)  | 8.40 SPI<br>(3.02mm)  | 7.81 SPI<br>(3.25mm)  | 7.28 SPI<br>(3.49mm) | 6.83 SPI<br>(3.72mm) | 6.43 SPI<br>(3.95mm) | 6.07 SPI<br>(4.19mm) |
|                                    | -14 |                                   |                       | 8.49 SPI<br>(2.99mm)  | 7.84 SPI<br>(3.24mm)  | 7.28 SPI<br>(3.49mm)  | 6.79 SPI<br>(3.74mm) | 6.37 SPI<br>(3.99mm) | 6.00 SPI<br>(4.24mm) | 5.66 SPI<br>(4.49mm) |
|                                    | -13 |                                   |                       |                       | 7.28 SPI<br>(3.49mm)  | 6.77 SPI<br>(3.75 mm) | 6.31 SPI<br>(4.02mm) | 5.92 SPI<br>(4.29mm) | 5.57 SPI<br>(4.56mm) | 5.26 SPI<br>(4.83mm) |
|                                    | -12 |                                   |                       |                       |                       | 6.24 SPI<br>(4.07mm)  | 5.83 SPI<br>(4.30mm) | 5.46 SPI<br>(4.65mm) | 5.14 SPI<br>(4.94mm) | 4.86 SPI<br>(5.23mm) |
|                                    | -11 |                                   |                       |                       |                       |                       | 5.34 SPI<br>(4.76mm) | 5.00 SPI<br>(5.08mm) | 4.71 SPI<br>(5.39mm) | 4.45 SPI<br>(5.71mm) |
|                                    | -10 |                                   |                       |                       |                       |                       |                      | 4.55 SPI<br>(5.58mm) | 4.29 SPI<br>(5.92mm) | 4.05 SPI<br>(6.27mm) |
|                                    |     |                                   | -10                   | -11                   | -12                   | -13                   | -14                  | -15                  | -16                  | -17                  |
|                                    |     | <b>DRIVE SPROCKET PART NUMBER</b> |                       |                       |                       |                       |                      |                      |                      |                      |

