



20 DRAWINGS AND PARTS LISTS

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FISCHBEIN

“EMPRESS SERIES” SEWING HEADS

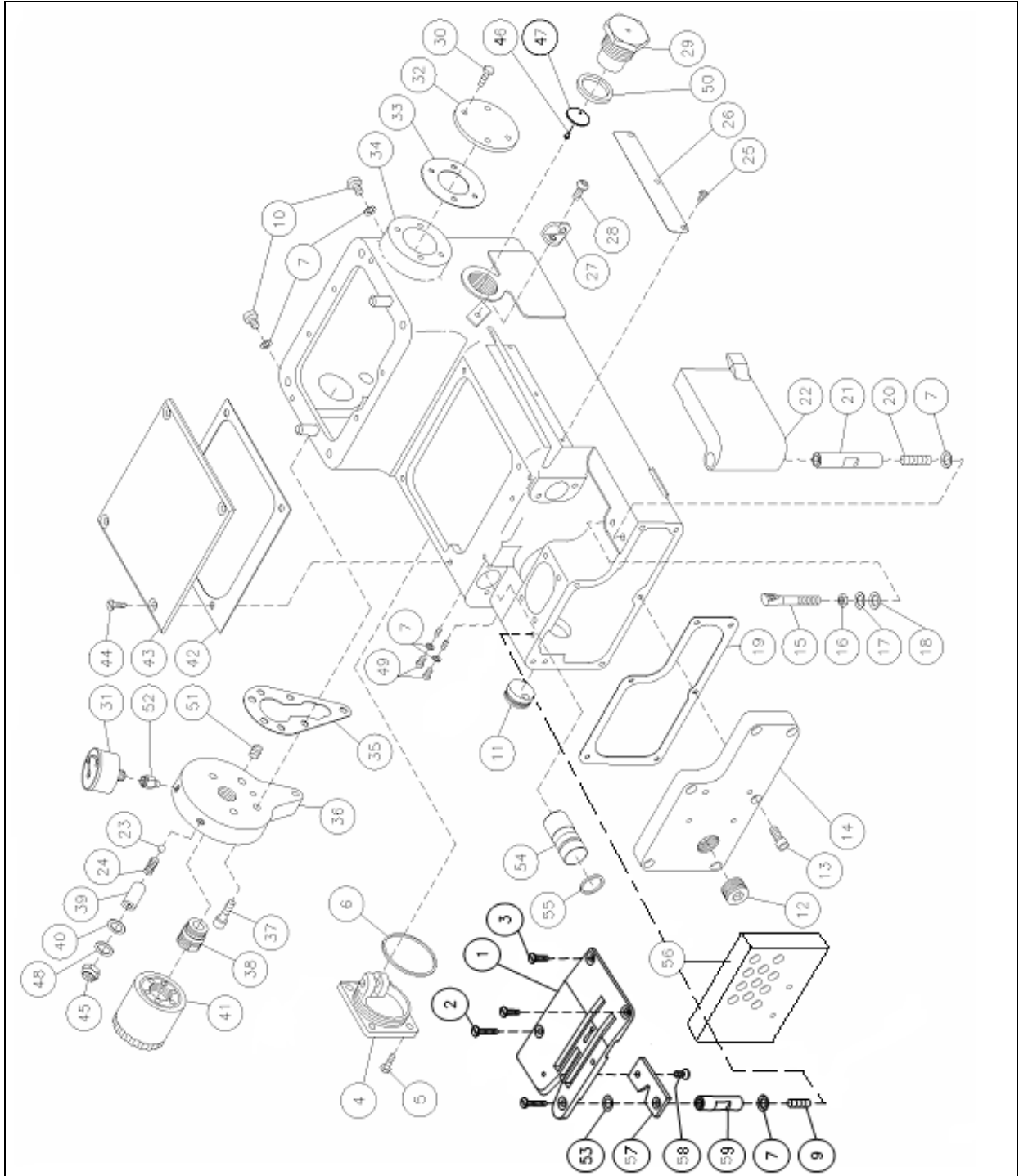
TYPE

200SC





20.1 HOUSING





HOUSING

| ITEM | Quantity | Item Code | Description: |
|------|----------|-----------|-------------------------------|
| 1 | 1 | 10018 | Throat plate, long stitch |
| 2 | 1 | F 103258 | Screw, Flat HD 10-32 x 5/8 |
| 3 | 2 | F 103238 | Screw, Flat HD 10-32 x 3/8 |
| 4 | 1 | 10085 | Bracket, Pivot Knife |
| 5 | 4 | H103212 | Screw, Hex 10-32 x 1/2 |
| 6 | 1 | 10084 | O-ring |
| 7 | 5 | WN 10 | Washer, Nylon |
| 9 | 1 | SS103258 | Screw, Soc. Set 10-32 x 5/8 |
| 10 | 2 | B 103214 | Screw, Binding HD 10-32 x 1/4 |
| 11 | 1 | 10112 | Window, oil level |
| 12 | 1 | 10111 | Plug, drain – magnetic |
| 13 | 6 | SC 103258 | Screw, Soc. Cap 10-32 x 5/8 |
| 14 | 1 | 15072 | Cover, bottom |
| 15 | 1 | 10170 | Pull off looper thread |
| 16 | 1 | NH 1420 | Nut, Hex 1/4-20 |
| 17 | 1 | WF 14 | Washer, Flat 1/4 |
| 18 | 1 | 10052 | Washer, Nylon |
| 19 | 1 | 10093 | Gasket, cover – bottom |
| 20 | 1 | SS 10321 | Screw, Soc. Set 10-32 x 1 |
| 21 | 1 | 10016 | Post, long – throat plate |
| 22 | 1 | 10005 | Door , looper |
| 23 | 1 | 15069 | Ball , chrome |
| 24 | 1 | 15078 | Spring, pressure |
| 25 | 3 | B 632316 | Screw, Binding HD 6-32 x 3/16 |
| 26 | 1 | 10098 | Cover, groove – thread |
| 27 | 1 | 10164 | Eyelet, thread – short |
| 28 | 1 | SB 103212 | Screw, Soc. BTTN 10-32 x 1/2 |
| 29 | 1 | 10116 | Assy, plug – breather |
| 30 | 4 | H 103212 | Screw, Hex HD 10-32 x 1/2 |
| 31 | 1 | 15053-B | Gauge, oil pressure 60 PSI |
| 32 | 1 | 15079 | Plate, cover – side |
| 33 | 1 | 10094 | Gasket, main shaft seal |
| 34 | 1 | 31070 | Housing, main |
| 35 | 1 | 10095 | Gasket, cover – manifold |
| 36 | 1 | 15056 | Manifold, filter |
| 37 | 5 | SC 103234 | Screw, Soc. Cap 10-32 x 3/4 |
| 38 | 1 | 15062 | Nipple , filter oil |
| 39 | 1 | 15064 | Plug, adjusting – manifold |
| 40 | 1 | 15074 | Seal, nylon |
| 41 | 1 | 15054-E | Cartridge, oil – filter |
| 42 | 1 | 10092 | Gasket, cover –top |
| 43 | 1 | 10014 | Plate, cover – top |
| 44 | 4 | F 103238 | Screw, Flat HD 10-32 x 3/8 |
| 45 | 1 | 11268 | Nut, Lock |
| 46 | 1 | 31136 | Deflector, Splash |
| 47 | 1 | 31137 | Screw, Tapping # 4x3/8AB |
| 48 | 1 | 3934 | Washer, Thrust |
| 49 | 2 | B103238 | Screw, Btnn. 10-32 x 3/8 |
| 50 | 1 | 10338 | O-ring 7/8 ID |
| 51 | 1 | 10125 | Plug 1/8 NPT |
| 52 | 1 | 16034 | Fitting, Adapter, 45 Deg |
| 53 | 1 | 15024 | Spacer, Shim |
| 54 | 1 | 10442 | Plug |
| 55 | 1 | 10441 | O-ring, 5/8 ID |
| 56 | 1 | 10800 | Guard, Looper opening |
| | 2 | SB103238 | Screw, Soc. BTTN 10-32 x 3/8 |
| 57 | 1 | 31032 | Stationary knife |
| 58 | 1 | F83214 | Screw, Flat HD 8-32 x 1/4 |
| 59 | 1 | 10015 | Post, short throat plate |

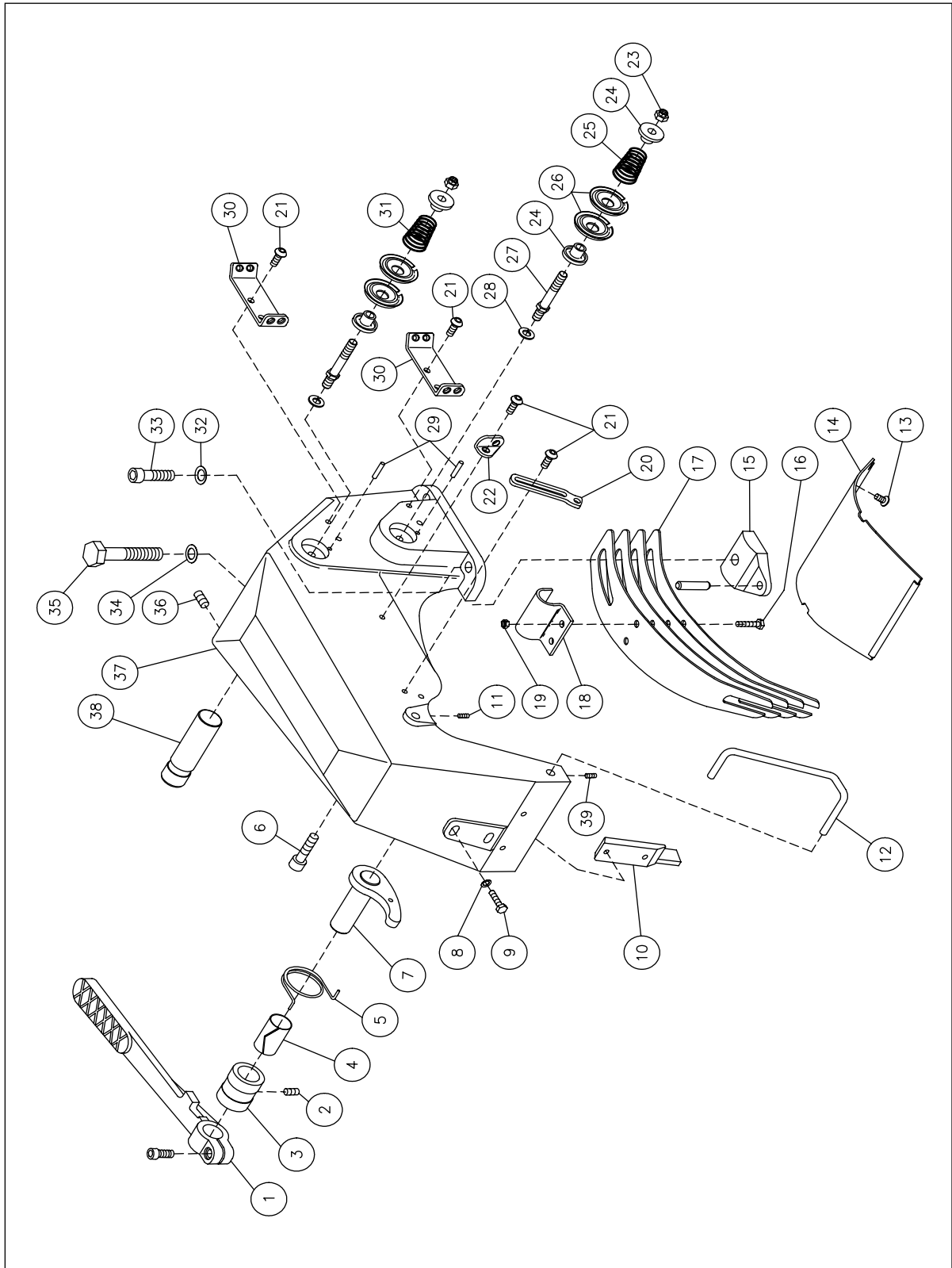


NEEDLE & PRESSER FOOT

| ITEM | Quantity | Item Code | Description: |
|------|----------|------------|--------------------------------------|
| 1 | 1 | 10190 | Pad, spring presser foot |
| 2 | 1 | F 63214 | Screw, Flat 6-32 x 1/4 |
| 3 | 1 | 10189 | Cradle, pad presser foot |
| 4 | 1 | 10004 | Lever, presser foot |
| | 2 | SC 14201 | Screw, Soc. Cap 1/4-20 x 1 |
| | 2 | PS 14112 | Pin, Spring |
| 5 | 1 | 10163 | Clamp, bearing sheet |
| 6 | 2 | SF 103258 | Screw, Soc. Flat 10-32 x 5/8 |
| 7 | 1 | 10162 | Sheet, bearing presser foot |
| 8 | 2 | SC 63234 | Screw, Soc. Cap 6-32 x 3/4 |
| 9 | 1 | 10213 | Plug, clamp drilled (presser foot) |
| 10 | 1 | 10214 | Plug, clamp tapped (presser foot) |
| 11 | 1 | SC 103234 | Screw, Soc. Cap 10-32 x 3/4 |
| 12 | 3 | 11309 | Nut |
| 13 | 1 | 10155 | Shank, presser foot |
| 14 | 1 | 10156 | Block, hinger presser foot |
| 15 | 2 | H 103234 | Screw, Hex 10-32 x 3/4 |
| 16 | 1 | 10048 | Retainer, rod connecting |
| 17 | 2 | SF 103238 | Screw, Soc. Flat 10-32 x 3/8 |
| 18 | 1 | 15115 | Presser foot |
| 19 | 1 | 10182 | Bolt, hinging presser foot |
| 20 | 1 | 15160-KIT | Rod, connecting needle drive |
| | 1 | 15109 | Screw, Set Cone 1/4-20 x 3/8 |
| | 1 | SS 142014 | Screw, Soc. Set 1/4-20 x 1/4 |
| 21 | 3 | 31042 | Washer, Thrust |
| 22 | 2 | 10029 | Bushing, lever presser foot |
| 23 | 2 | 10128 | Spring, garter lever seal |
| 24 | 4 | F 103238 | Screw, Flat 10-32 x 3/8 |
| 25 | 1 | 31014 | Seal, levers |
| 26 | 1 | 10026 | Shaft, lever |
| 27 | 1 | 31024-KIT | Lever, needle |
| | 2 | SC 1420114 | Screw, Soc. Cap 1/4-20 x 1 1/4 |
| 28 | 1 | 10031 | Chuck needle |
| 29 | 1 | 13053 | Needle |
| 30 | 1 | 10212 | Plug, clamp tapped |
| 31 | 1 | 10011 | Screw, clamp needle |
| 32 | 1 | 10211 | Plug, clam drilled |
| 33 | 1 | 10166 | Guide, thread (needle lever) |
| 34 | 2 | F 54038 | Screw, Flat 5-40 x 3/8 |
| 35 | 2 | 10119 | Disc, tension (needle lever) |
| 36 | 1 | 10009 | Spring, tension (needle lever) |
| 37 | 1 | B 103214 | Screw, Binding HD 10-32 x 1/4 |
| 38 | 1 | 10113 | Stud, tension (needle lever) |
| 39 | 2 | 10023 | Insert, thread – lever shaft bushing |
| 40 | 2 | SS 1032516 | Screw, Soc. Set 10-32 x 5/16 |
| 41 | 2 | 10025 | Bushing, shaft levers |
| 42 | 2 | SS 1032316 | Screw, Soc. Set 10-32 x 3/16 |
| 43 | 1 | 31026 | Screw, Hex 1/4-28 x 1/2 GR8 LG LOK |
| 44 | 4 | 15076 | Washer, Spring 1/4 |
| 46 | 1 | WF8 | Washer, Flat #8 |
| 47 | 1 | 31048 | Spacer? Rod-Connecting |



20.3 LEVER – HOUSING



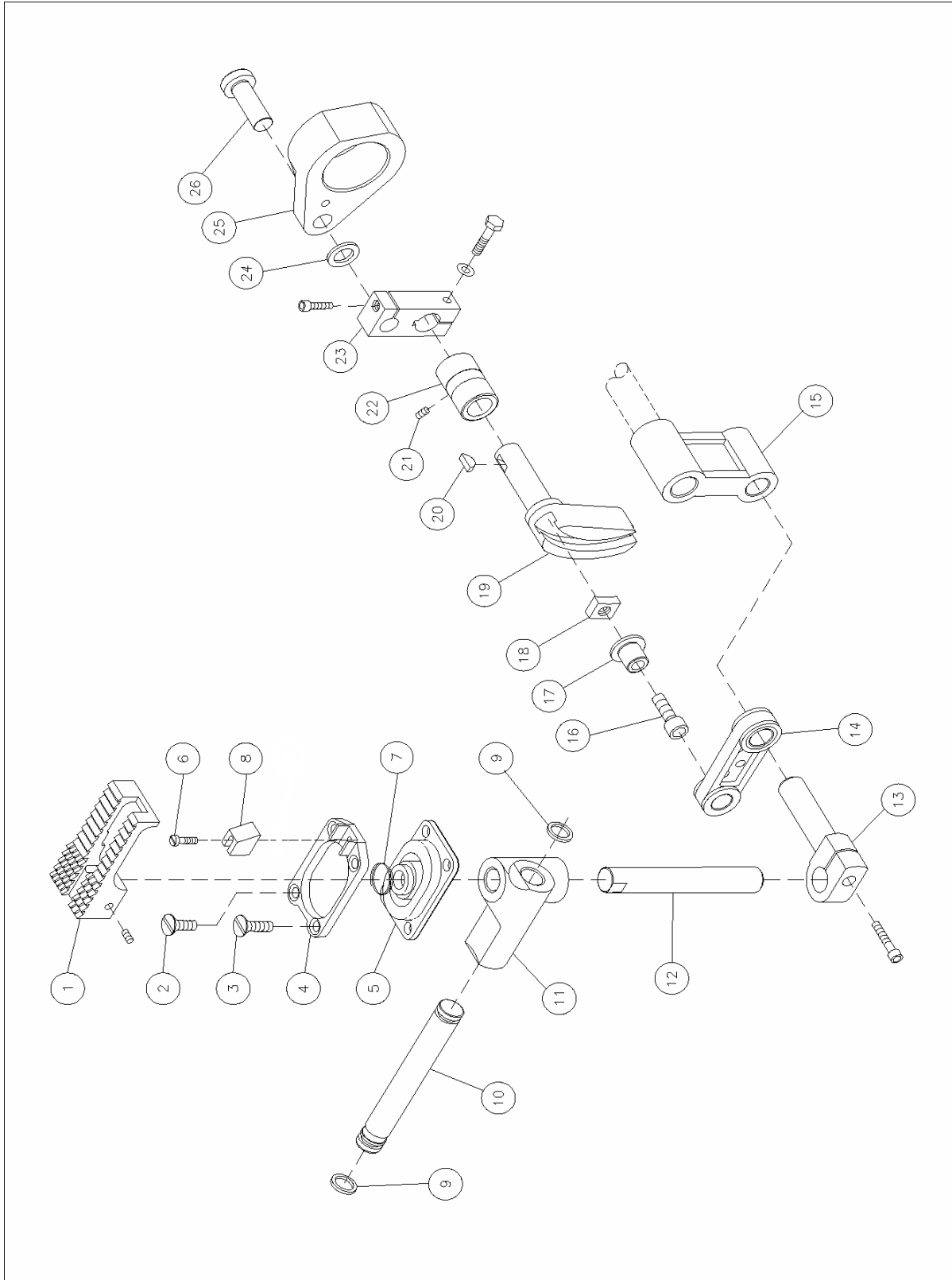


LEVER - HOUSING

| ITEM | Quantity | Item Code | Description: |
|------|----------|------------|------------------------------------|
| 1 | 1 | 31034 | Lever, lifter presser foot |
| | 1 | SC 142034 | Screw, Soc. Cap 1/4-20 x 3/4 |
| 2 | 1 | SS 142014 | Screw, Soc. Set 1/4-20 x 1/4 |
| 3 | 1 | 10139 | Bushing, lifter presser foot |
| 4 | 1 | 10186 | Liner, bushing lifter presser foot |
| 5 | 1 | 10187 | Spring, lifter lever |
| 6 | 1 | SC 5161858 | Screw, Soc. Cap. 5/16-18 x 5/8 |
| 7 | 1 | 10142 | Cam, lifter presser foot |
| 8 | 2 | WS 10 | Washer, Spring 10 |
| 9 | 2 | H 103278 | Screw, Hex HD 10-32 x 7/8 |
| 10 | 1 | 10161 | Guide, lever presser foot |
| 11 | 1 | SS 1032516 | Screw, Soc. Set 10-32 x 5/16 |
| 12 | 1 | 10188 | Guard, tension needle |
| 13 | 2 | B 103238 | Screw, Binding HD 10-32 x 3/8 |
| 14 | 1 | 31031 | Cover, guard lever |
| 15 | 1 | 10146 | Plate, presser foot |
| | 1 | PS 141 | Pin, Spring |
| 16 | 2 | H 103234 | Screw, Hex HD 10-32 x 3/4 |
| 17 | 4 | 10145 | Spring, presser foot |
| 18 | 1 | 10144 | Clamp, spring presser foot |
| 19 | 2 | 1-178 | Nut, Lock |
| 20 | 1 | 10171 | Pull off, needle thread |
| 21 | 7 | SB 103212 | Screw, Soc. BTTN 10-32 x 1/2 |
| 22 | 1 | 10164 | Eyelet, thread short |
| 23 | 2 | NH 1428 L | Nut, Hex 1/4-28 locking |
| 24 | 4 | 10114 | Sleeve, tension |
| 25 | 1 | 10008 | Spring, tension looper thread |
| 26 | 4 | 10120 | Disc, tension large |
| 27 | 2 | 10115 | Stud, tension |
| 28 | 2 | 11120 | Washer, lock |
| 29 | 2 | PS 18114 | Pin, Spring retaining tension disc |
| 30 | 2 | 10165 | Eyelet, thread long |
| 31 | 1 | 10007 | Spring, tension needle thread |
| 32 | 4 | 10234 | Washer, Spring |
| 33 | 4 | SC 516181 | Screw, Soc. Cap 5/16-18 x 1 |
| 34 | 1 | WF 38 | Washer, Flat 3/8 |
| 35 | 1 | H 3824134 | Screw, Adj. 3/8-24 x 1 3/4 |
| 36 | 1 | SS 142038 | Screw, Soc. Set 1/4-20 x 3/8 |
| 37 | 1 | 31075 | Housing, levers |
| 38 | 1 | 10143 | Shaft, spring presser foot |
| 39 | 1 | SS1032316 | Screw, Soc. Set 10-32 x 3/16 |
| 40 | | | |



20.4 FEED ASSEMBLY



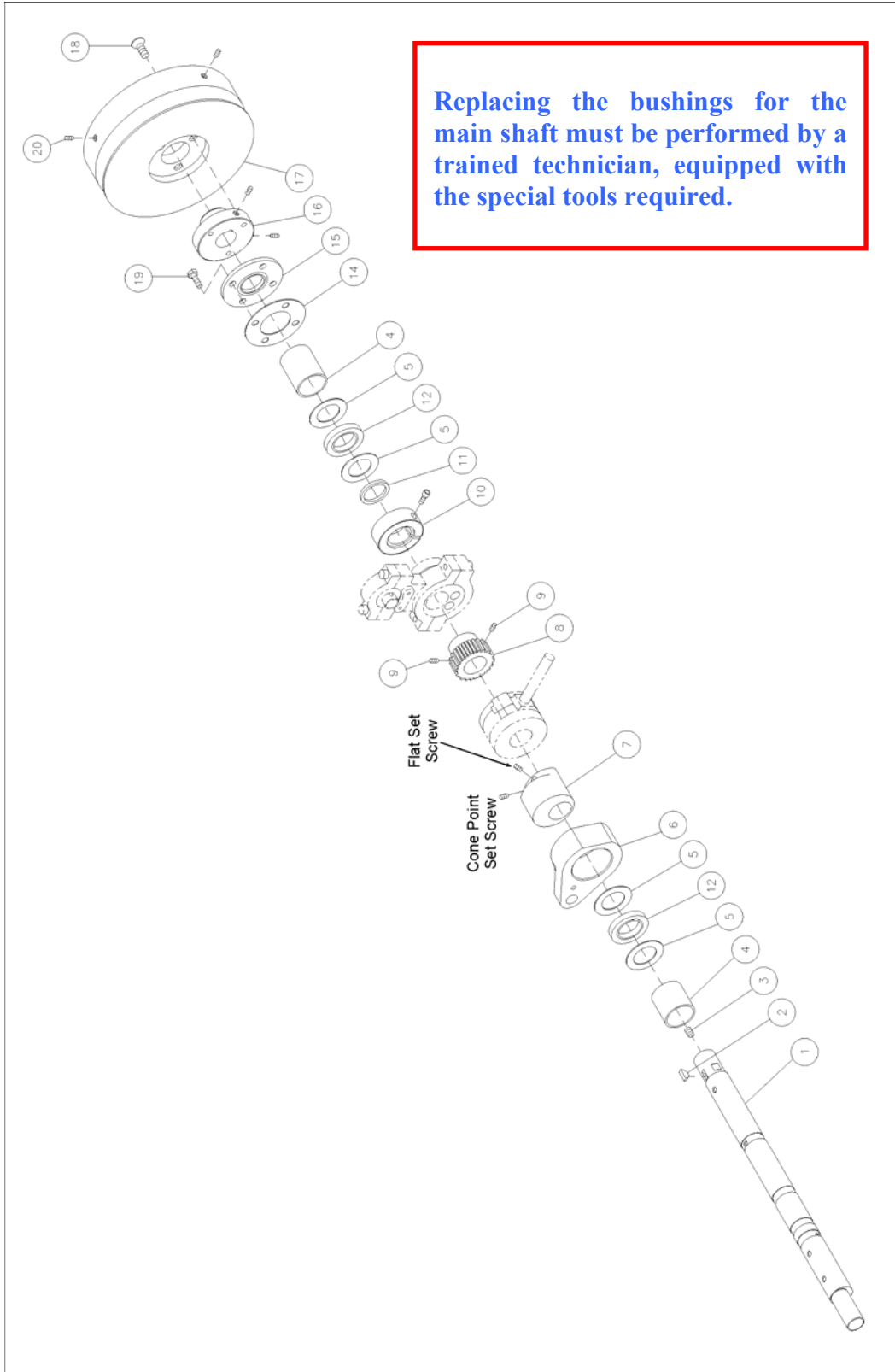


FEED ASSEMBLY

| ITEM | Quantity | Item Code | Description: |
|------|----------|------------|-----------------------------------|
| 1 | 1 | 10079 | Dog feed, long stitch |
| | 1 | SS 1032516 | Screw, Soc. Set 10-32 x 5/16 |
| 2 | 1 | F 103238 | Screw, Flat HD 10-32 x 3/8 |
| 3 | 3 | F 103212 | Screw, Flat HD 10-32 x 1/2 |
| 4 | 1 | 10177 | Holder, guard needle |
| 5 | 1 | 10077 | Seal, dog feed |
| 6 | 1 | P 54058 | Screw, Pan HD 5-40 x 5/8 |
| 7 | 1 | 10124 | Ring, Garter-Seal (Feed Dog) |
| 8 | 1 | 15167 | Guard, needle |
| 9 | 2 | 10075 | O-ring |
| 10 | 1 | 31012 | Rod, slide feed |
| 11 | 1 | 10073 | Slide feed |
| 12 | 1 | 31011 | Rod, carrier feed dog |
| 13 | 1 | 31008 | Clamp, rod feed dog carrier |
| | 1 | SC 142078 | Screw, Soc. Cap 1/4-20 x 7/8 |
| 14 | 1 | 31010 | Link, stroke feed |
| 15 | 1 | 31009 | Link, lift feed |
| 16 | 1 | SC 142878 | Screw, Soc. Cap 1/4-28 x 7/8 |
| 17 | 1 | 10068 | Pivot, adjusting feed stroke |
| 18 | 1 | 10067 | Nut, pivot feed stroke |
| 19 | 1 | 15154 | Lever, slotted feed rocker |
| 20 | 1 | 3192 | Key |
| 21 | 1 | SS 1032516 | Screw, Soc. Set 10-32 x 5/16 |
| 22 | 1 | 10109 | Bushing, shaft feed rocker |
| 23 | 1 | 31005 | Lever, pin feed rocker |
| | 1 | SC 54012 | Screw, Soc. Cap 5-40 x 1/2 |
| | 1 | H 103234 | Screw, Hex 10-32 x 3/4 |
| | 1 | WF 10 | Washer, Flat # 10 |
| 24 | 1 | 10215 | Washer, Thrust |
| 25 | 1 | 31072 | Rod, connecting prim. Feed stroke |
| 26 | 1 | 31006 | Pin, rod feed stroke connect. |



20.5 MAIN SHAFT



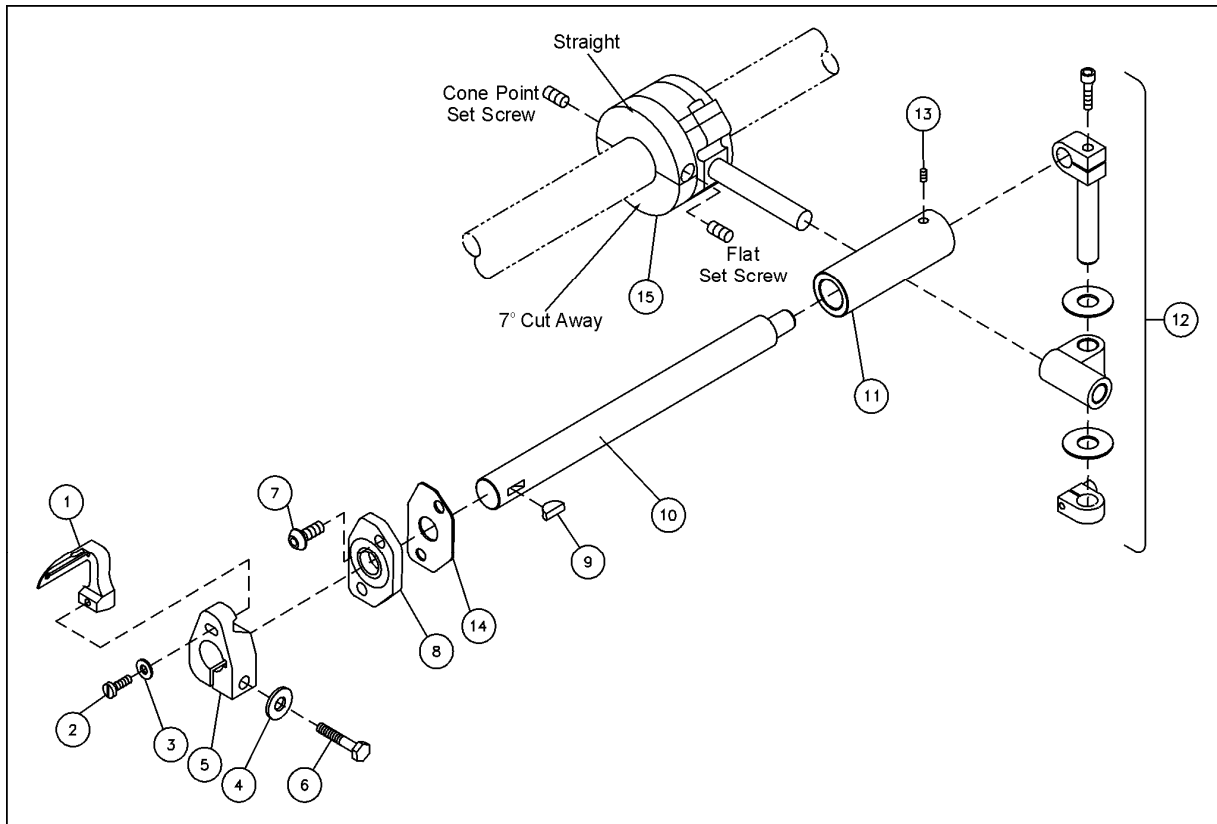


MAIN SHAFT

| ITEM | Quantity | Item Code | Description: |
|------|----------|-----------|---|
| 1 | 1 | 31158 | Shaft, Main 2 (S-stroke) |
| 2 | 1 | 3192 | Key |
| 3 | 1 | 10125 | Plug, pipe main shaft (Hi-Sp) |
| 4 | 2 | 31061 | Bushing, main shaft needle end (Hi-Sp) |
| 5 | 4 | 31064 | Washer, Thrust (Hi-Sp) |
| 6 | 1 | 31072 | Rod, connecting prim. Feed stroke (Hi-Sp) |
| 7 | 1 | 31051 | Eccentric, stroke feed (Hi-Sp) |
| | 1 | 15108 | Screw, Set 1/4-20 x 3/8 |
| | 1 | 15109 | Screw, Set Cone Point 1/4-20 x 3/8 |
| 8 | 1 | 31055 | Gear, drive pump (Hi-Sp) |
| 9 | 2 | SS83218 | Screw, Soc. Set 8-32 x 1/8 |
| 10 | 1 | 31066 | Collar, lock main shaft (Hi-Sp) |
| | 1 | SC 142858 | Screw, Soc. Cap HD 1/4-28 x 5/8 |
| 11 | 1 | 31059 | O-ring (Hi-Sp) |
| 12 | 2 | 31065 | Bearing, thrust (Hi-Sp) |
| 13 | | | |
| 14 | 1 | 10094 | Gasket, main shaft seal |
| 15 | 1 | 10035 | Assembly, seal main shaft |
| 16 | 1 | 10038 | Hub, pulley |
| | 2 | 15108 | Screw, Set 1/4-20 x 3/8 |
| 17 | 1 | 10199 | Pulley, adjustable |
| 18 | 3 | SF 103258 | Screw, Soc. Flat 10-32 x 5/8 |
| 19 | 4 | SC 103212 | Screw, Soc. Cap 10-32 x 1/2 |
| 20 | 2 | SS142038 | Screw, Soc. Set 1/4-20 x 3/8 |
| | | | |
| | | | |
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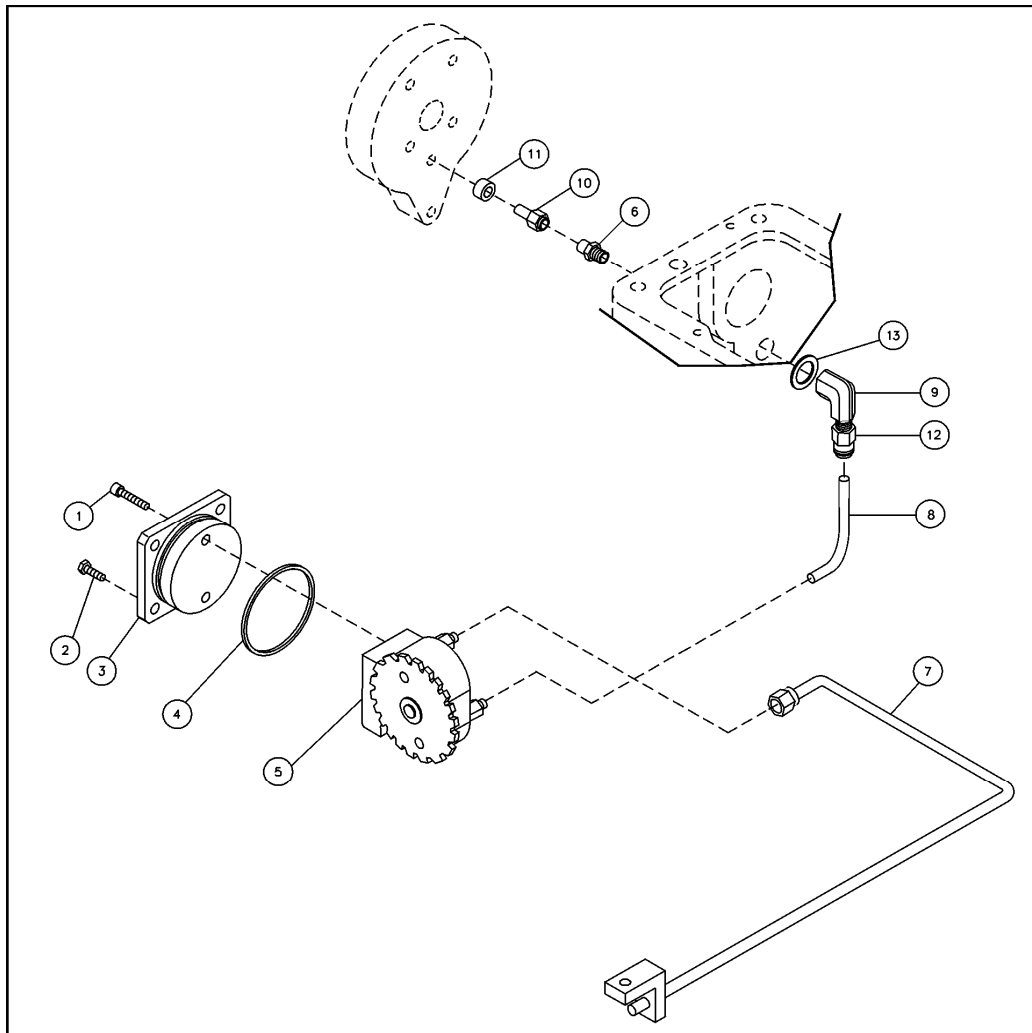
20.6 LOOPER ASSEMBLY



| ITEM | Quantity | Item Code | Description: |
|------|----------|------------|--|
| 1 | 1 | 10060 | Looper |
| 2 | 1 | SC54012 | Screw, Soc Cap 5-40 x 1/2 |
| 3 | 1 | WF5 | Washer, Flat 5 |
| 4 | 1 | WF10 | Washer, Flat 10 |
| 5 | 1 | 15155 | Holder, High Speed Looper (assy) |
| 6 | 1 | H103234 | Screw, Hex 10-32 x 3/4 |
| 7 | 2 | SB103212 | Screw, Soc. BTTN 10-32 x 1/2 |
| 8 | 1 | 15104 | Assembly, Seal, Knife Shaft |
| 9 | 1 | 3192 | Key |
| 10 | 1 | 31013 | Shaft, Looper |
| 11 | 1 | 10056 | Bushing, Shaft Looper |
| 12 | 1 | 10173 | Assembly, Pivot Looper |
| | 2 | 15066 | Washer, Thrust |
| | 1 | 15065 | Clamp |
| | 1 | 15039 | Pin, Pivot Looper |
| | 1 | 10153 | Knuckle, Pivot Looper |
| | 1 | SC103258 | Screw, Soc. Cap 10-32 x 5/8 |
| 13 | 1 | SS103214CP | Screw, Soc. Set 10-32 x 1/4 Cone Point |
| 14 | 1 | 15105 | Gasket, Looper Shaft Seal |
| 15 | 1 | 31052 | Assembly Cam, Looper (Hi-Sp) |
| | 1 | SS103258CP | Screw, Soc. Set Cone Point 10-32 x 5/8 |
| | 1 | SS103212 | Screw, Soc. Set 10-32 x 1/2 |



20.7 OIL PUMP ASSEMBLY



| Item No. | Quantity | Part No. | Description: |
|----------|---------------|----------|-------------------------------------|
| 1 | 2 | SC103278 | Screw, Soc. Cap 10-32 x 7/8 |
| 2 | 4 | H103212 | Screw, Hex HD 10-32 x 1/2 |
| 3 | 1 | 15015 | Mount Pump |
| 4 | 1 | 10084 | O-ring |
| 5 | 1 | 31092 | Assembly, Gear Pump (modified) |
| 6 | REF | 15059 | Fitting, Male Conn 1/8 M X 1/4 T |
| 7 | 1 | 15050 | Assy, Oil Line - Intake |
| 8 | 3.5 in (89mm) | 67735 | Tubing, Hydraulic 1/4 OD X .170 ID |
| 9 | 1 | 66085 | Fitting, Elbow 1/8 F X 1/8 F |
| 10 | 1 | 15088 | Tubing, copper (includes item #6) |
| 11 | 1 | 1882 | Bushing, Neoprene |
| 12 | 1 | 67733 | Fitting, Conn. 1/8 MNPT X 1/4 T(SP) |
| 13 | 1 | 15077 | Washer, Nylon Special |