

PARTS AND OPERATION MANUAL



FM9 FINISHING MACHINE

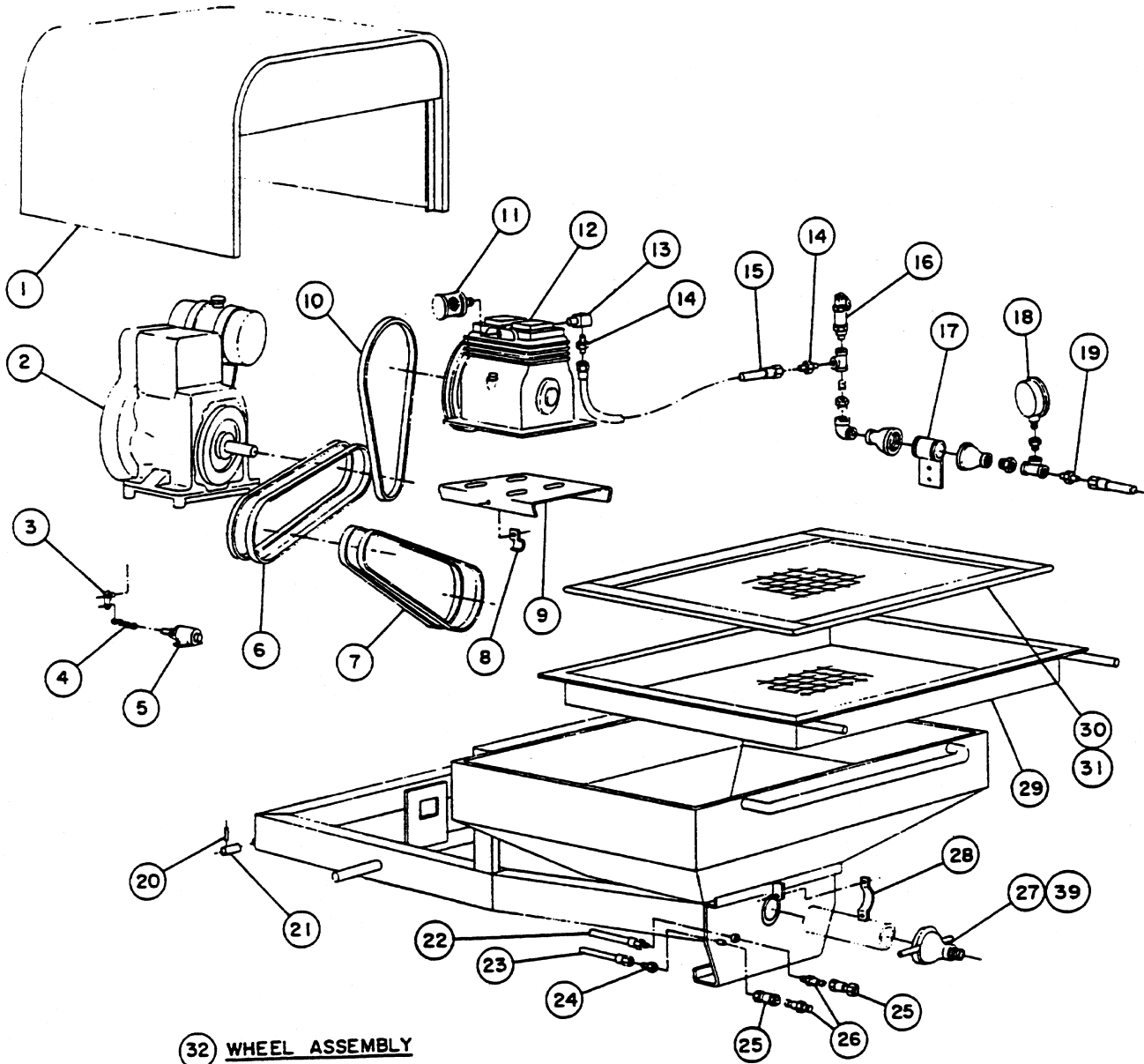
Revision #1 (03/12/01)

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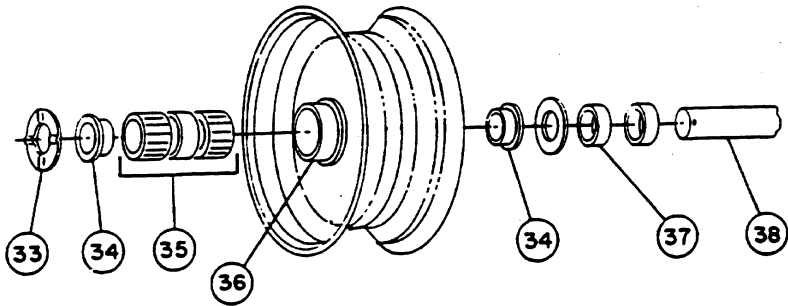
ESSICK — FM-9

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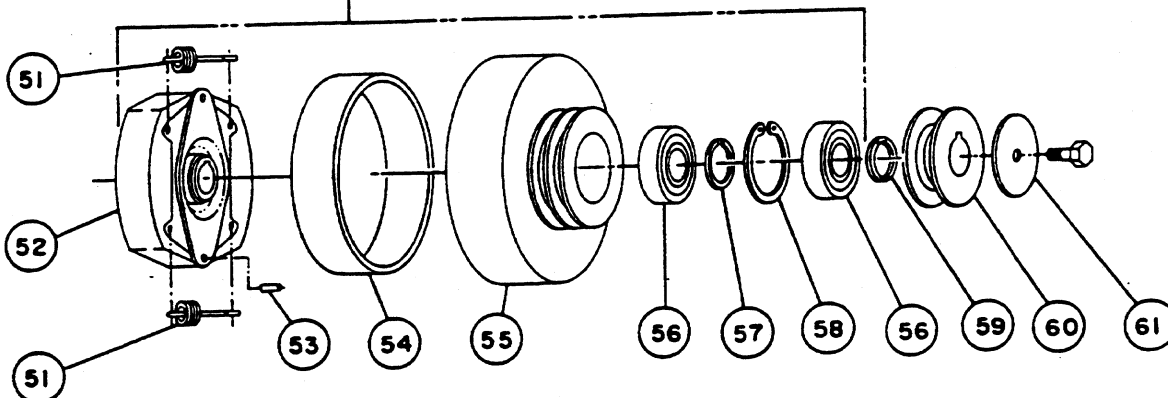
32 WHEEL ASSEMBLY



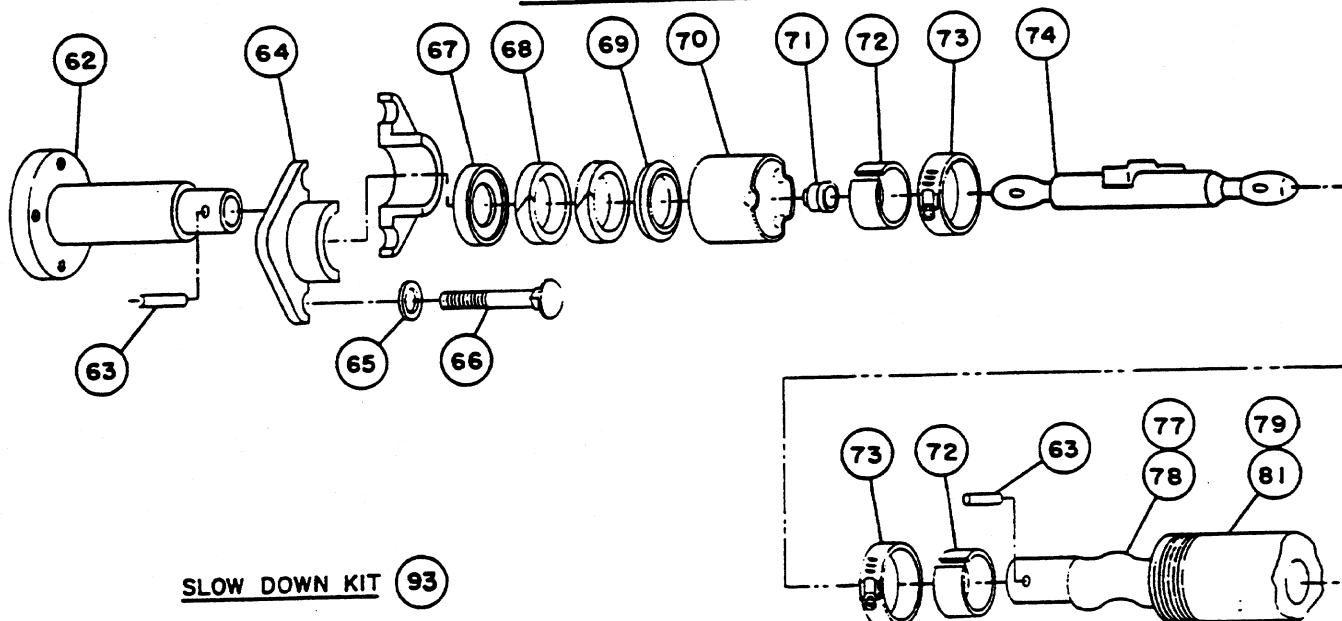
| <u>NO</u> | <u>PART NO</u> | <u>PART NAME</u> | <u>QTY</u> | <u>REMARKS</u> |
|-----------|----------------|--------------------------------------|------------|-----------------|
| 1 | 402635 | CAB ASSEMBLY | 1 | 62330527 |
| 2 | 937175 | ENGINE | 1 | 62330527 |
| 3 | 400538 | THROTTLE LEVER | 1 | 62330527 |
| 4 | 010036 | THROTTLE CHAIN | 1 | 62330527 |
| 5 | 400539 | AIR CYLINDER | 1 | 62330527 |
| 6 | 900144 | V-BELT-ENG. TO COUNTERSHAFT | 2 | 62330527 |
| 7 | 900148 | V-BELT-COUNTERSHAFT TO TRANS. | 2 | 62330527 |
| 8 | 928055 | CLIP | 1 | 62330527 |
| 9 | 400006 | COMPRESSOR BASE | 1 | 62330527 |
| 10 | 900296 | V-BELT-COMPRESSOR TO ENG. | 1 | 62330527 |
| 11 | 958019 | AIR FILTER | 1 | 62330527-960101 |
| 11 | 960101 | AIR FILTER | | |
| 12 | 958008 | COMPRESSOR | 1 | 62330527 |
| 12 | | | | |
| 13 | 911253 | MALE ELBOW | 1 | 62330527 |
| 14 | 911255 | ADAPTER | 2 | 62330527 |
| 15 | 400530 | AIR LINE | 1 | 62330527 |
| 16 | 913038 | SAFETY VALVE | 1 | 62339527 |
| 17 | 400496 | TANK SUPPORT | 1 | 62339527 |
| 18 | 920010 | AIR GAUGE | 1 | 62339527 |
| 19 | 911242 | ADAPTER | 1 | 62339527 |
| 20 | 925003 | ROLL PIN | 2 | 62339527 |
| 21 | 400506 | HINGE PIN | 2 | 62339527 |
| 22 | 400011 | AIR HOSE-TO TANK | 1 | 62330527 |
| 23 | 400012 | AIR HOSE-TO CYLINDER | 1 | 62330527 |
| 24 | 911243 | ADAPTER | 1 | 62330527 |
| 25 | 947035 | DISCONNECT BODY | 2 | 62330527 |
| 26 | 947032 | DISCONNECT PLUG | 2 | 62330527 |
| 27 | 400484 | PUMP OUTLET FITTING-1"-OPTIONAL | 1 | 62330527 |
| 28 | 400558 | STATOR TUBE CLAMP | 2 | 62330527 |
| 29 | 400010 | MAIN SCREEN - 2X2 | 1 | 62330527 |
| 30 | 400009 | SCREEN - 3X3 | 1 | 62330527 |
| 31 | 400008 | SCREEN -4X4 | 1 | 62330527 |
| 32 | 200793 | WHEEL ASSEMBLY W/TIRE & TUBE | 2 | 62330527 |
| 33 | 200017 | AXLE WASHER | 2 | 62330527 |
| 34 | 922003 | BEARING RETAINER | 4 | 62330527 |
| 35 | 201337 | BEARING | 2 | 62330527 |
| 36 | 941043 | WHEEL LESS TIRE & TUBE | 2 | 62330527 |
| 37 | 941077 | WHEEL SPACER | 4 | 62330527 |
| 38 | 400015 | AXLE | 2 | 62330527 |
| 39 | 400483 | PUMP OUTLET FITTING-1 1/2"-STANDARD. | 1 | 62330527 |

FM-9 — AUTOMATIC CLUTCH ASSEMBLY

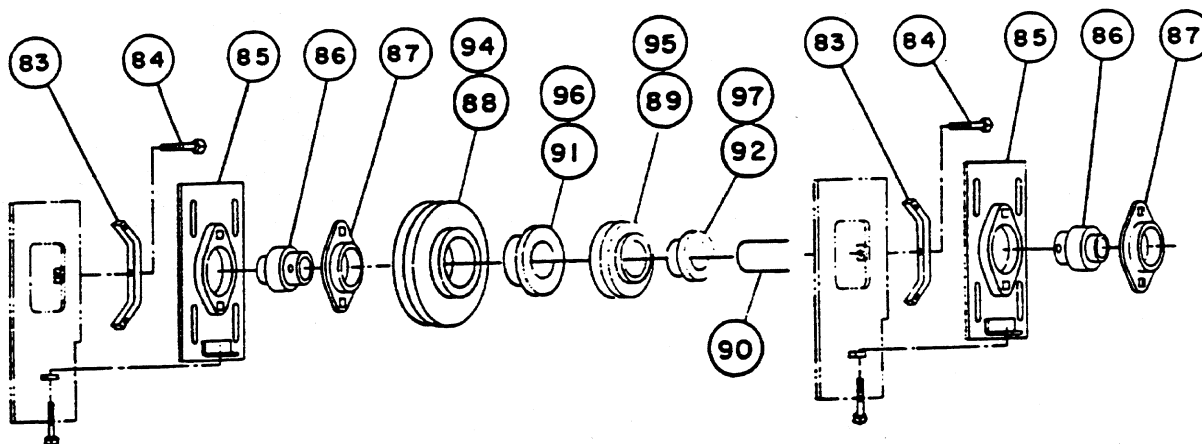
50 CLUTCH ASSEMBLY



DRIVE SHAFT DETAIL



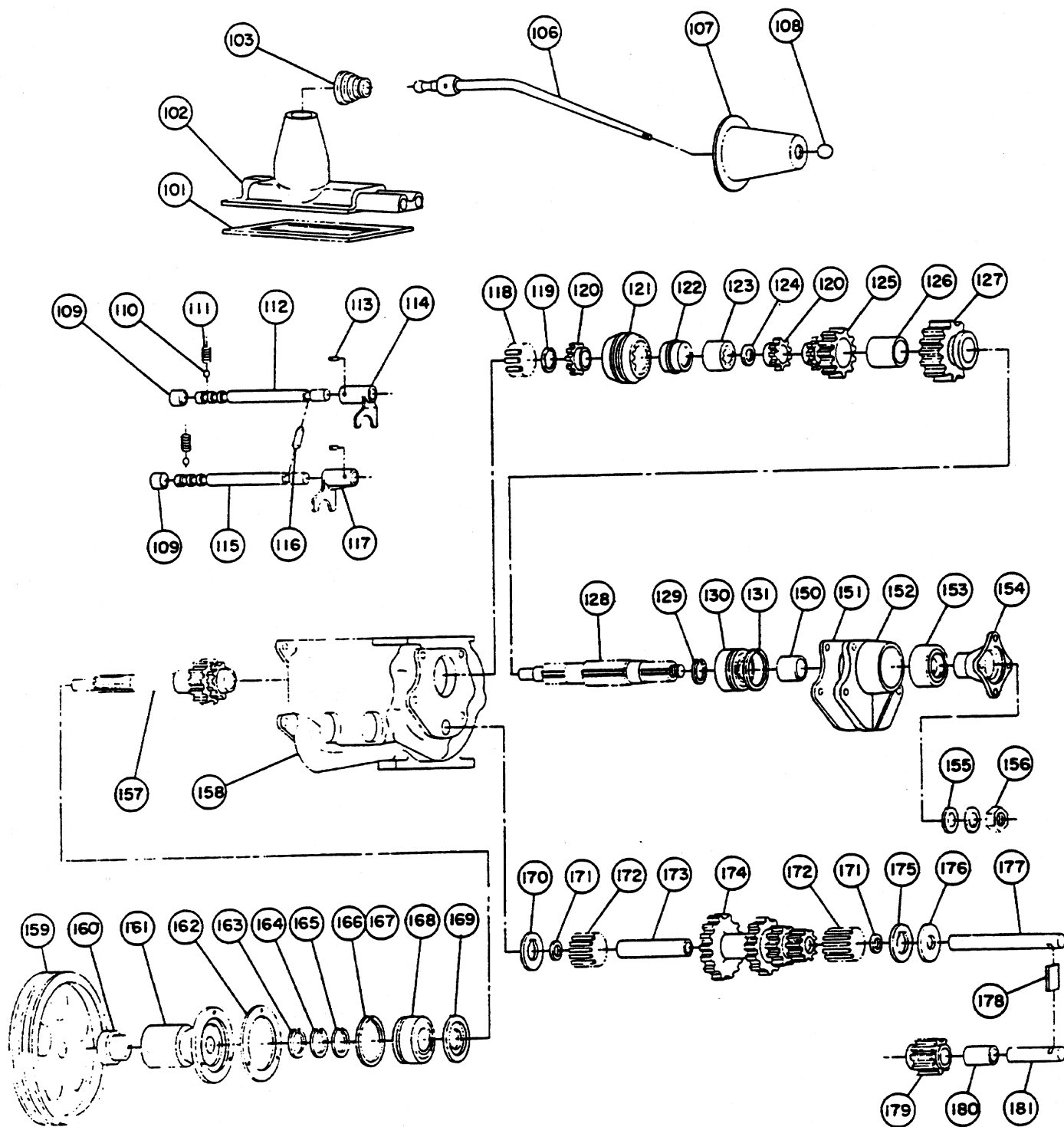
COUNTERSHAFT DETAIL



FM-9 — AUTOMATIC CLUTCH ASSEMBLY

| <u>NO</u> | <u>PART NO.</u> | <u>PART NAME</u> | <u>QTY.</u> | <u>REMARKS</u> |
|-----------|-----------------|--|-------------|----------------|
| 50 | 934014 | AUTOMATIC CLUTCH ASSEMBLY | 1 | 62330527 |
| 51 | 918046 | SPRING | 2 | 62330527 |
| 52 | 934182 | ROTOR PLATE ASSEMBLY | 1 | 62330527 |
| 53 | 925080 | PIN | 2 | 62330527 |
| 54 | 803378 | LINING W/RIVETS | 1 | 62330527 |
| 55 | 934180 | CLUTCH HOUSING | 1 | 62330527 |
| 56 | 902083 | BEARING | 2 | 62330527 |
| 57 | 934181 | BEARING SPACER | 1 | 62330527 |
| 58 | 926080 | SNAP RING | 1 | 62330527 |
| 59 | 960004 | PULLEY SPACER - KEY RING | 1 | 62330527 |
| 60 | 400709 | PULLEY | 1 | 62330527 |
| 61 | 300057 | RETAINING WASHER | 1 | 62330527 |
| 62 | 400931 | OUTPUT SHAFT ASSY.-INC. ITEM 71 | 1 | 62330527 |
| 63 | 401982 | DRIVE PIN | 2 | 62330527 |
| 64 | 400511 | PACKING GLAND HALF | 2 | 62330527 |
| 65 | 914002 | BIBB WASHER | 2 | 62330527 |
| 66 | 966209 | PACKING GLAND BOLT | 2 | 62330527 |
| 67 | 914201 | SEAL-DISCONTINUED-USE ITEM 68 | 1 | 62330527 |
| 68 | 200301 | PACKING RING | 3 | 62330527 |
| 69 | 200303 | PACKING RING | 1 | 62330527 |
| 70 | 400509 | PACKING BOX | 1 | 62330527 |
| 71 | 400532 | INSERT - DRIVE END | 1 | 62330527 |
| 72 | 400533 | COLLAR - DRIVE PIN | 2 | 62330527 |
| 73 | 928005 | CLAMP - DRIVE PIN | 2 | 62330527 |
| 74 | 400016 | DRIVE SHAFT AND AGITATOR | 1 | 62330527 |
| 77 | 400542 | LO-VOLUME ROTOR-15 1/8" LONG OPDTIONAL | 1 | 62330527 |
| 78 | 400545 | HI-VOLUME ROTOR-16 3/4" LONG STANDARD | 1 | 62330527 |
| 79 | 400543 | LO-VOLUME SOFT STATOR ORANGE OPTIONAL | 1 | 62330527 |
| 80 | 400549 | LO-VOLUME HARD STATOR-BLACK-OPTIONAL 12 3/8" LONG | | 62330527 |
| 81 | 400546 | HI-VOLUME SOFT STATOR-ORANGE-STD. 14 1/4" LONG | 1 | 62330527 |
| 81 | | | | |
| 82 | 400550 | HI-VOLUME SOFT STATOR-BLACK-STD. 14 1/4" LONG | | 62330527 |
| 83 | 400501 | TIGHTENER BRACKET | 2 | 62330527 |
| 84 | 961007 | ADJUSTING SCREW | 4 | 62330527 |
| 85 | 400535 | ADJUSTING BRACKET | 2 | 62330527 |
| 86 | 902073 | BEARING WITH COLLAR | 2 | 62330527 |
| 87 | 905003 | BEARING PLATE | 2 | 62330527 |
| 88 | 901282 | PULLEY LESS BUSHING | 1 | 62330527 |
| 89 | 901292 | PULLEY LESS BUSHING | 1 | 62330527 |
| 90 | 400497 | COUNTER SHAFT | 1 | 62330527 |
| 91 | 901003 | BUSHING FOR ITEM 88 | 1 | 62330527 |
| 92 | 901016 | BUSHING FOR ITEM 89 | 1 | 62330527 |
| | | <u>FOR SLOW-DOWN KIT-USE THE FOLLOWING:</u> | | |
| 93 | 400494 | SLOW-DOWN KIT-INCLUDES 94, 95, 96, 97 | 1 | 62330527 |
| 94 | 901492 | PULLEY LESS BUSHING | 1 | 62330527 |
| 95 | 901491 | PULLEY LESS BUSHING | 1 | 62330527 |
| 96 | 901493 | BUSHING-FOR ITEM 95 | 1 | 62330527 |
| 97 | 901519 | BUSHING-FOR ITEM 94 | 1 | 62330527 |

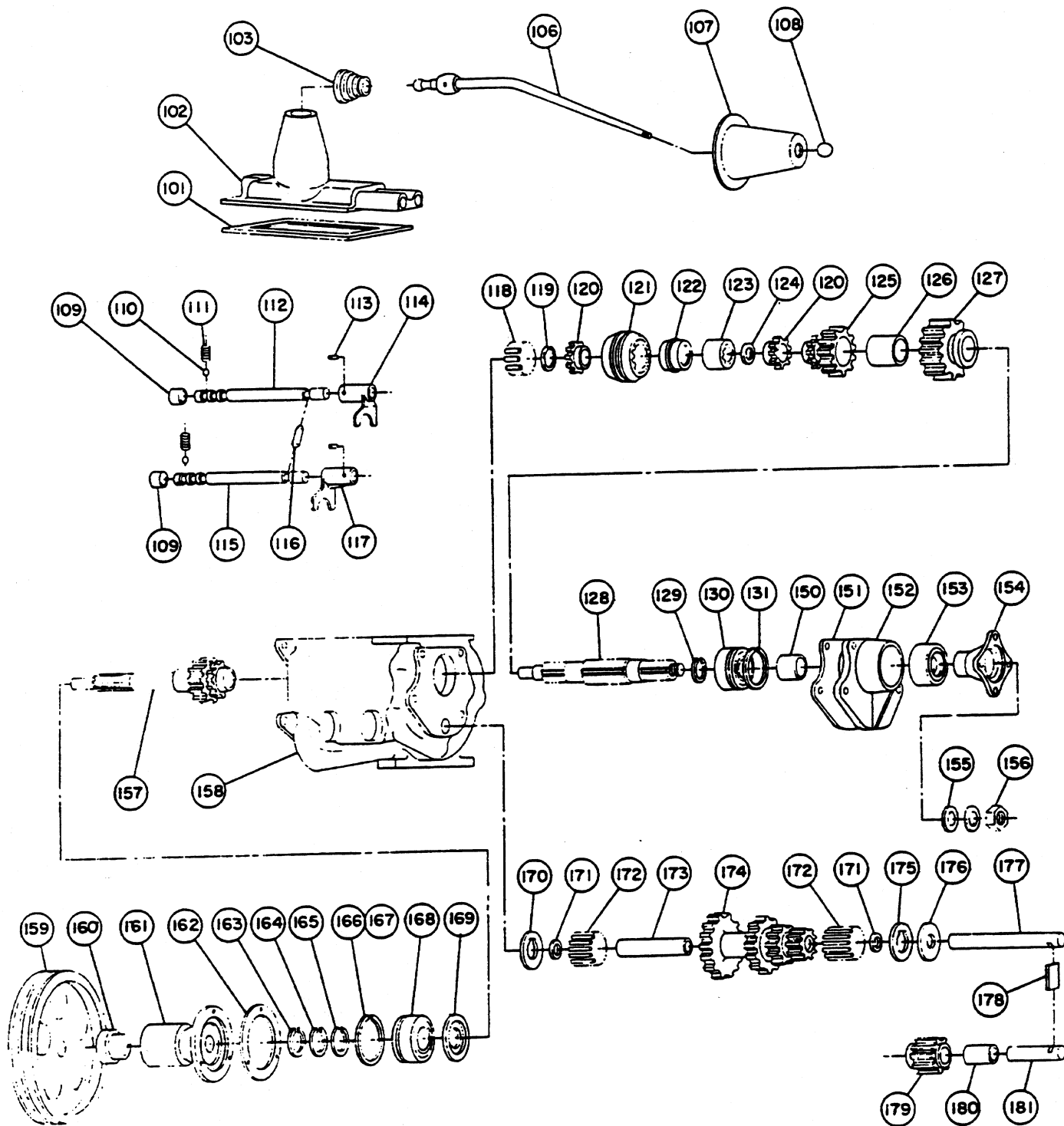
FM-9 — TRANSMISSION ASSEMBLY



FM-9 — TRANSMISSION ASSEMBLY

| <u>NO.</u> | <u>PART NO.</u> | <u>PART NAME</u> | <u>QTY</u> | <u>REMARKS</u> |
|------------|--------------------------------------|----------------------------------|------------|----------------|
| 100 | 400537 | TRANSMISSION ASSEMBLY | 1 | 62330527 |
| 101 | 914168 | GASKET- CONTROL HOUSING | 1 | 62330527 |
| 102 | 931166 | CONTROL HOUSING | 1 | 62330527 |
| 103 | 918048 | CONTROL LEVER SPRING | 1 | 62330527 |
| 106 | 402938 | CONTROL LEVER WITH BALL AND PIN | 1 | 62330527 |
| 107 | 970001 | RUBBER BOOT | 1 | 62330527 |
| 108 | 960002 | LEVER KNOB | 1 | 62330527 |
| 109 | 931168 | SHIFT RAIL CAP | 2 | 62330527 |
| 110 | 931175 | STEEL BALL | 2 | 62330527 |
| 111 | 918047 | POPPET SPRING | 2 | 62330527 |
| 112 | 931170 | LOW-REVERSE SHIFT RAIL | 1 | 62330527 |
| 113 | 931173 | FORK PIN | 2 | 62330527 |
| 114 | 931172 | LOW-REVERSE SHIFT FORK | 1 | 62330527 |
| 115 | 931169 | HIGH-INTERMEDIATE SHIFT RAIL | 1 | 62330527 |
| 116 | 931174 | INTERLOCK PLUNGER | 1 | 62330527 |
| 117 | 931171 | HIGH-INTERMEDIATE SHIFT FORK | 1 | 62330527 |
| 118 | 931165 | PILOT BEARING ROLLER | 13 | 62330527 |
| 119 | SNAP RING - CLUTCH HUB* | | | 62330527 |
| 120 | BLOCKING RING* | | 62330527 | |
| 121 | 931157 | SECOND & DIRECT CLUTCH ASSY *121 | 1 | 62330527 |
| | INCLUDES 119, 120, 122, 123, AND 124 | | | |
| 122 | SHIFTING PLATE* | | 62330527 | |
| 123 | INTERMEDIATE & HIGH CLUTCH HUB* | | | 62330527 |
| 124 | SPRING* | | 62330527 | |
| 125 | 932053 | SECOND SPEED GEAR | 1 | 62330527 |
| 126 | 931177 | GEAR BUSHING | 1 | 62330527 |
| 127 | 932054 | LOW-REVERSE GEAR | 1 | 62330527 |
| 128 | 955050 | MAINSHAFT | 1 | 62330527 |
| 129 | 926082 | SNAP-RING MAINSHAFT | 1 | 62330527 |
| 130 | 902010 | BEARING | 1 | 62330527 |
| 131 | 926083 | BEARING SNAP RING | 1 | 62330527 |

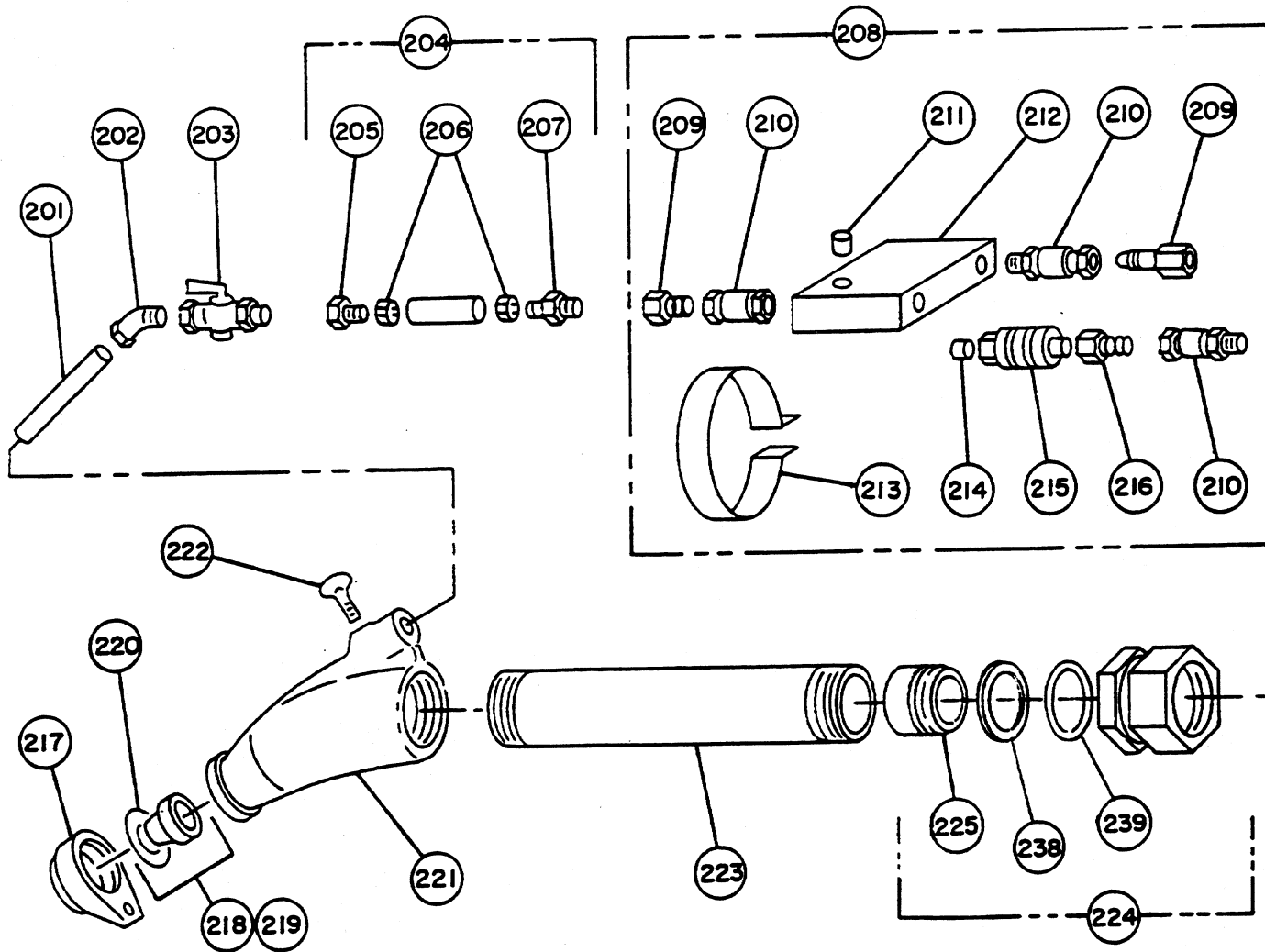
FM-9 — TRANSMISSION ASSEMBLY



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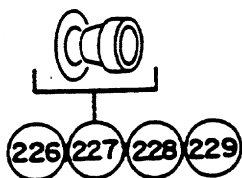
| <u>NO.</u> | <u>PART NO.</u> | <u>PART NAME</u> | <u>QTY.</u> | <u>REMARKS</u> |
|------------|-----------------|--------------------------|-------------|----------------|
| 150 | 931158 | MAINSHAFT SPACER | 1 | 62330527 |
| 151 | 914166 | GASKET BEARING RETAINER | 1 | 62330527 |
| 152 | 922019 | REAR BEARING RETAINER | 1 | 62330527 |
| 153 | 914169 | OIL SEAL | 1 | 62330527 |
| 154 | 401900 | COMPANION FLANGE | 1 | 62330527 |
| 155 | 931159 | MAINSHAFT WASHER | 1 | 62330527 |
| 156 | 931189 | MAINSHAFT NUT | 1 | 62330527 |
| 157 | 932052 | MAIN DRIVE GEAR | 1 | 62330527 |
| 158 | 931155 | TRANSMISSION CASE | 1 | 62330527 |
| 159 | 400500 | PULLEY | 1 | 62330527 |
| 160 | 902072 | BEARING W/COLLAR | 1 | 62330527 |
| 161 | 400495 | SHAFT HOUSING | 1 | 62330527 |
| 162 | 914167 | GASKET- BEARING RETAINER | 1 | 62330527 |
| 163 | 926086 | SNAP RING | 1 | 62330527 |
| 164 | 926087 | SNAP RING | 1 | 62330527 |
| 165 | 926088 | SNAP RING | 1 | 62330527 |
| 166 | 926084 | SNAP RING | 1 | 62330527 |
| 167 | 926085 | SNAP RING | 1 | 62330527 |
| 168 | 902050 | BEARING | 1 | 62330527 |
| 169 | 931181 | OIL BAFFLE | 1 | 62330527 |
| 170 | 931162 | THRUSTWASHER | 1 | 62330527 |
| 171 | 931161 | BEARING SPACER | 2 | 62330527 |
| 172 | 931178 | BEARING ROLLER | 40 | 62330527 |
| 173 | 931160 | BEARING SPACER | 1 | 62330527 |
| 174 | 932056 | COUNTERSHAFT GEAR | 1 | 62330527 |
| 175 | 931163 | THRUSTWASHER - C SHAFT | 1 | 62330527 |
| 176 | 931164 | THRUSTWASHER | 1 | 62330527 |
| 177 | 955051 | COUNTERSHAFT | 1 | 62330527 |
| 178 | 931179 | LOCK PLATE | 1 | 62330527 |
| 179 | 932055 | REVERSE IDLER GEAR | 1 | 62330527 |
| 180 | 931180 | BUSHING - IDLER GEAR | 1 | 62330527 |
| 181 | 955052 | REVERSE IDLER SHAFT | 1 | 62330527 |

FM-9 — BROWNING NOZZLE

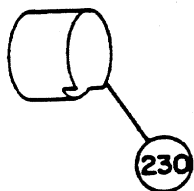


OPTIONAL PARTS FOR BROWNING NOZZLE

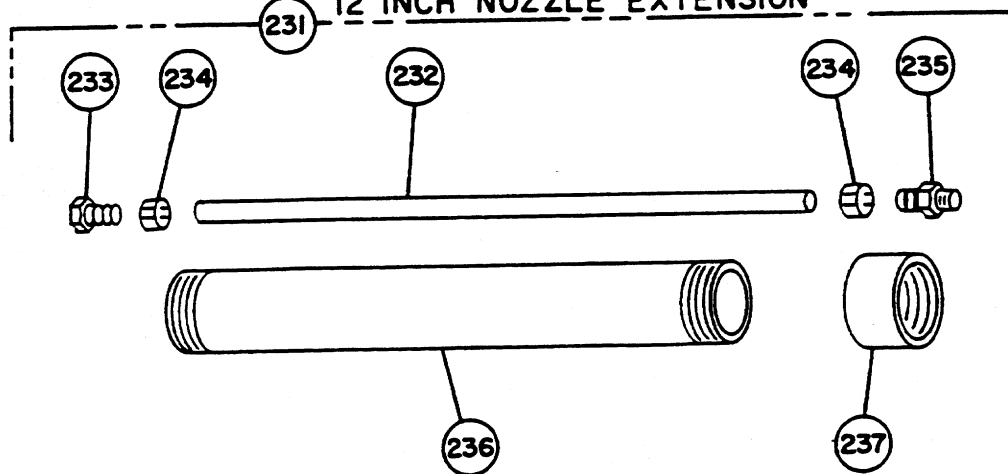
ORIFICE



NOZZLE SHIELD



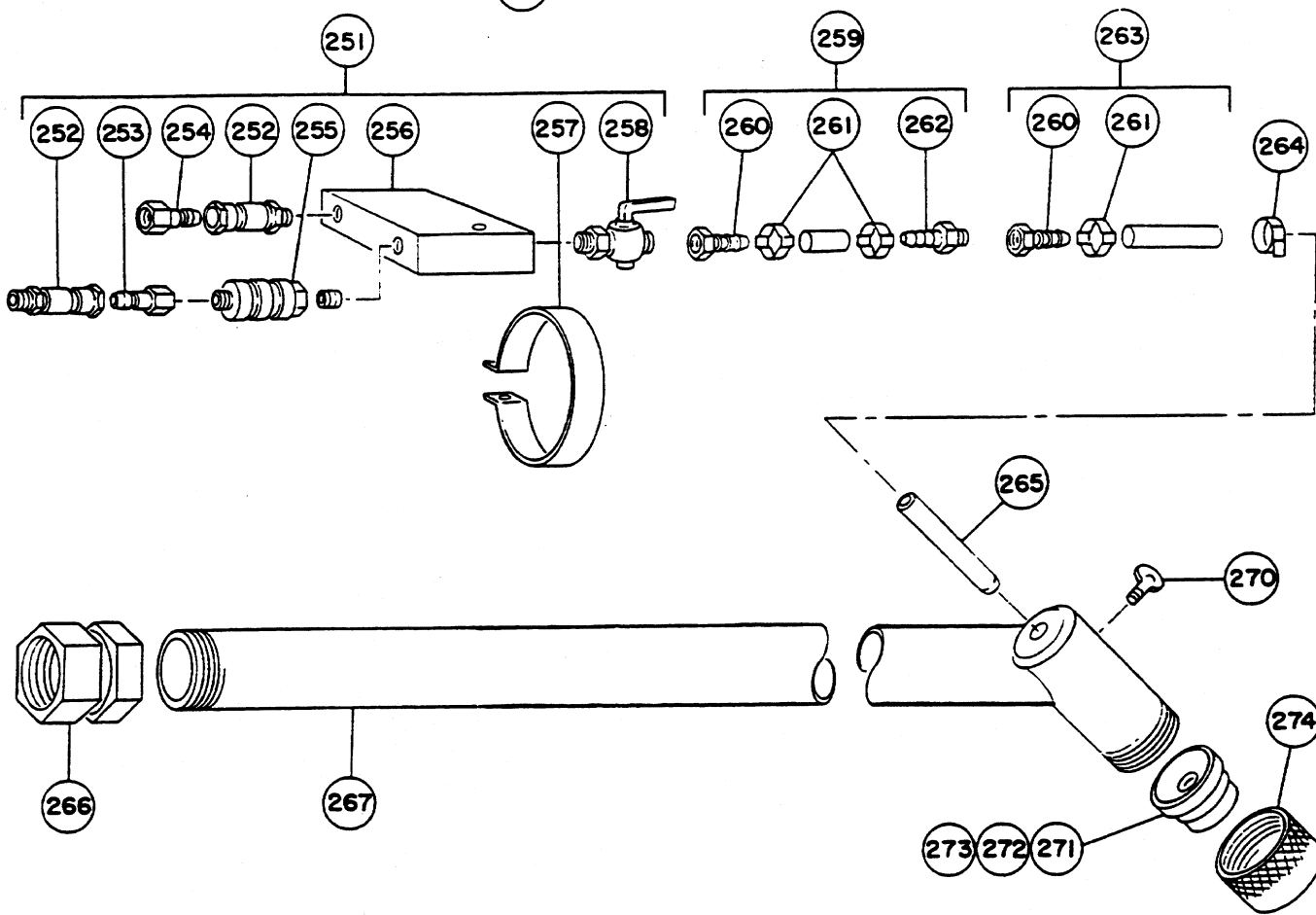
12 INCH NOZZLE EXTENSION



| <u>NO.</u> | <u>PART NO.</u> | <u>PART NAME</u> | <u>QTY.</u> | <u>REMARKS</u> |
|------------|-----------------|---|-------------|----------------|
| | | <u>FOR 12" BROWNING NOZZLE USE FOLLOWING</u> | | |
| 200 | | <u>12" BROWNING NOZZLE COMPLETE, INCLUDES</u> | | |
| | 400675 | ITEM 201 THRU ITEM 225 | 1 | 62330527 |
| 201 | 400671 | AIR JET | 1 | 62330527 |
| 202 | 402704 | ELBOW | 1 | 62330527 |
| 203 | 913031 | AIR VALVE | 1 | 62330527 |
| 204 | 400560 | AIR LINE ASSEMBLY | 1 | 62330527 |
| 205 | 947073 | FEMALE SWIVEL INSERT - 1/4" | 1 | 62330527 |
| 206 | 928043 | HOSE CLAMP - 1/4" | 2 | 62330527 |
| 207 | 947041 | MALE BARBED INSERT - 1/4" | 1 | 62330527 |
| 208 | 400935 | AIR CONTROL BLOCK ASSEMBLY | 1 | 62330527 |
| 209 | 947030 | DISCONNECT PLUG - 1/4" | 2 | 62330527 |
| 210 | 947029 | DISCONNECT BODY - 1/4" | 3 | 62330527 |
| 211 | 911225 | AIR BLOCK PLUG | 1 | 62330527 |
| 212 | 400519 | AIR CONTROL BLOVK | 1 | 62330527 |
| 213 | 400572 | CLAMP | 1 | 62330527 |
| 214 | 912001 | NIPPLE | 1 | 62330527 |
| 215 | 913004 | SLIDE VALVE | 1 | 62330527 |
| 216 | 947028 | DISCONNECT PLUG - 1/8" | 1 | 62330527 |
| 217 | 400668 | NOZZLE CAP | 1 | 62330527 |
| 218 | 400689 | ORIFICE - 5/8" | 1 | 62330527 |
| 219 | 400690 | ORIFICE - 3/4" | 1 | 62330527 |
| 220 | 300575 | SHIM WASHER | A/R | 62330527 |
| 221 | 400670 | GUN BODY | 1 | 62330527 |
| 222 | 922027 | THUMB SCREW | 1 | 62330527 |
| 223 | 400672 | NOZZLE EXTENTION PIPE | 1 | 62330527 |
| 224 | 401036 | SWIVEL ASSEMBLY - 1 1/4" X 1 1/2" | 1 | 62330527 |
| 225 | 911328 | SWIVEL BUSHING | 1 | 62330527 |
| 238 | 402707 | WASHER | 1 | 62330527 |
| 239 | 915092 | "O" -RING | 1 | 62330527 |
| | | <u>OPTIONAL PARTS USED WITH BROWNIN</u> | | |
| | | <u>NOZZLE ABOVE</u> | | |
| 226 | 400685 | ORIFICE - 1/4" | 1 | 62330527 |
| 227 | 400686 | ORIFICE - 3/8" | 1 | 62330527 |
| 228 | 400687 | ORIFICE - 1/2" | 1 | 62330527 |
| 229 | 400688 | ORIFICE - 9/16" | 1 | 62330527 |
| 230 | 400691 | NOZZLE SHIELD | 1 | 62330527 |
| 231 | 400681 | 12" NOZZLE EXTENSION KIT | 1 | 62330527 |
| 232 | 400680 | HOSE ASSEMBLY COMPLETE | 1 | 62330527 |
| 233 | 947073 | FEMALE SWIVEL INSERT - 1/4" | 1 | 62330527 |
| 234 | 928043 | HOSE CLAMP - 1/4" | 2 | 62330527 |
| 235 | 947041 | MALE BARBED INSERT - 1/4" | 1 | 62330527 |
| 236 | 400673 | EXTENSION PIPE | 1 | 62330527 |
| 237 | 911363 | PIPE COUPLING | 1 | 62330527 |

FM-9 — FINISHING NOZZLE

250 36 INCH FINISHING NOZZLE



OPTIONAL PARTS FOR FINISHING NOZZLE

278 24 INCH NOZZLE EXTENSION ASSEMBLY

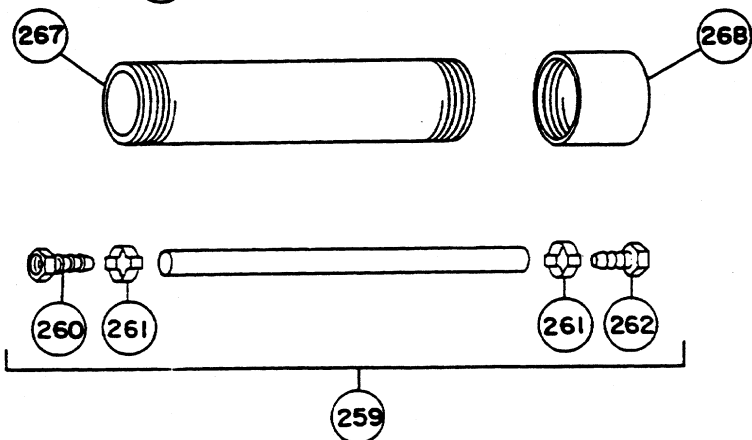
ORIFICE



275

276

277



FM-9 — FINISHING NOZZLE

| <u>NO.</u> | <u>PART NO.</u> | <u>PART NAME</u> | <u>QTY</u> | <u>REMARKS</u> |
|------------|-----------------|--|------------|----------------|
| | | <u>FOR FINISHING NOZZLE USE THE FOLLOWING:</u> | | |
| 250 | | 36" FINISHING NOZZLE COMPLETE, INCLUDES | | |
| | 400488 | ITEMS 251 THRU 274 | 1 | 62330527 |
| 251 | 400923 | AIR CONTROL BLOCK ASSEMBLY | 1 | 62330527 |
| 252 | 947029 | DISCONNECT BODY | 2 | 62330527 |
| 253 | 947028 | DISCONNECT PLUG | 1 | 62330527 |
| 254 | 947030 | DISCONNECT PLUG | 1 | 62330527 |
| 255 | 913004 | SLEEVE VALVE | 1 | 62330527 |
| 256 | 400519 | AIR CONTROL BLOCK | 1 | 62330527 |
| 257 | 400540 | CLAMP | 1 | 62330527 |
| 258 | 913054 | VALVE | 1 | 62330527 |
| 259 | 400490 | HOSE ASSEMBLY COMPLETE | 1 | 62330527 |
| 260 | 947073 | FEMALE SWIVEL INSERT - 1/4" | 2 | 62330527 |
| 261 | 928043 | HOSE CLAMP - 1/4" | 3 | 62330527 |
| 262 | 947041 | MALE BARBED INSERT - 1/4" | 1 | 62330527 |
| 263 | 400489 | HOSE ASSEMBLY COMPLETE | 1 | 62330527 |
| 264 | 928041 | CLAMP | 1 | 62330527 |
| 265 | 400534 | AIR JET | 1 | 62330527 |
| 266 | 400541 | NOZZLE SWIVEL | 1 | 62330527 |
| 267 | 400523 | EXTENSION TUBE | 1 | 62330527 |
| 268 | 911280 | COUPLING | 1 | 62330527 |
| 269 | 400486 | NOZZLE HEAD | 1 | 62330527 |
| 270 | 922027 | THUMB SCREW | 1 | 62330527 |
| 271 | 400557 | ORIFICE - 1/4" | 1 | 62330527 |
| 272 | 400556 | ORIFICE - 3/8" | 1 | 62330527 |
| 273 | 400552 | ORIFICE - 1/2" | 1 | 62330527 |
| 274 | 400520 | NOZZLE CAP | 1 | 62330527 |
| | | <u>OPTIONAL PARTS USED WITH FINISHING NOZZLE</u> | | |
| 275 | 400553 | ORIFICE - 9/16" | 1 | 62330527 |
| 276 | 400554 | ORIFICE - 5/8" | 1 | 62330527 |
| 277 | 400555 | ORIFICE - 3/4" | 1 | 62330527 |
| 278 | 400487 | 24" NOZZLE EXTENSION ASSEMBLY | 1 | 62330527 |
| 267 | 400523 | EXTENSION TUBE | 1 | 62330527 |
| 268 | 911280 | COUPLING | 1 | 62330527 |
| 259 | 400490 | HOSE ASSEMBLY COMPLETE | 1 | 62330527 |
| 260 | 947073 | FEMALE SWIVEL INSERT - 1/4" | 1 | 62330527 |
| 261 | 928043 | CLAMP - 1/4" | 2 | 62330527 |
| 262 | 947041 | MALE BARBED INSERT - 1/4" | 1 | 62330527 |