



MODEL eF
Full Circle
Tire Spreader

Installation, Operation
and Repair Parts
Information



Branick Industries, Inc. • 4245 Main Avenue • P.O. Box 1937 • Fargo, North Dakota 58103

CAUTION

- ◆ **Before using this product, read and fully understand the operating instructions and all decals on the product. This is necessary to prevent injury to the operator and damage to the product.**
- ◆ **This product is intended to be used to spread tire casings for inspection and/or repair only.**
- ◆ **Keep fingers and hands clear of all hooks and mechanisms during operation.**
- ◆ **Do not use this product if it is visibly worn, distorted or damaged.**
- ◆ **Always wear appropriate eye protection.**

WARNING

- ◆ **Keep feet clear of the tire lift when raising and lowering tire.**
- ◆ **All personnel must be clear of the spread arms during operation.**

INSTALLATION

- 1) Position the Model eF on a solid level floor leaving a minimum of 12 inches of clearance from rear and 24 inches of clearance from sides. The eF can be bolted down if desired using the four holes in bottom of frame.
- 2) Install the light post in socket on the top of cylinder housing and lock in place with set screw. Hang the light fixture assembly on the light post as shown on the cover of this manual. Lock in place with tee set screw. Cable tie the power cord to the light post and plug in to outlet on frame column.
- 3) Attach the loose spread arm spring to spread arm. Refer to the other spread arm for proper spring location.
- 4) Attach the lift cradle to the lower lift arms.
- 5) Install a 1/4 NPT quick coupler nipple (not provided) into the air filter located on frame column. Use 1/4 inch air hose with 100 p.s.i. minimum.

OPERATION

- 1) Roll tire onto lift cradle, and while balancing the tire with hands, step on left foot valve to raise tire just above inner bead hooks. Release lift valve to allow cradle to lower to floor and tire hanging on inner bead hooks.

- 2) While keeping tire on inner bead hooks, step on center foot valve to spread and fully engage all four hooks on inner bead of tire.
- 3) Grasp both outer bead hook arms by the handles and pull to center of tire. Push forward and allow bead hooks to engage outer bead of tire. **Make certain all hooks are securely engaged with tire beads before spreading tire.**
- 4) To spread the tire, step on right foot valve to obtain desired spread. Tire can now be rotated and inspected.

 **WARNING**

- ◆ **Do not release the inner bead hooks (center valve) until the outer bead hooks have been released (right valve) and removed from tire.**

- 5) To remove tire, release spread arm control valve (right valve) and remove outer bead hook.
- 6) Release pressure on inner bead hooks by stepping on diameter control valve (center valve).
- 7) With tire hanging on inner hooks, raise lift cradle (left valve) up to contact tire. While holding onto tire, raise tire slightly above inner bead hooks and lean tire outward and release pressure on lift valve to lower tire to floor.

MAINTENANCE

MONTHLY – Put a few ounces of 10 or 20 weight oil in all cylinders.

Lubricate all moving parts (bolts, hinges, rollers, etc.) with a lubricating oil.

Grease cylinder bearings through the grease zerk fittings. Apply some grease to the races of the bearings also.

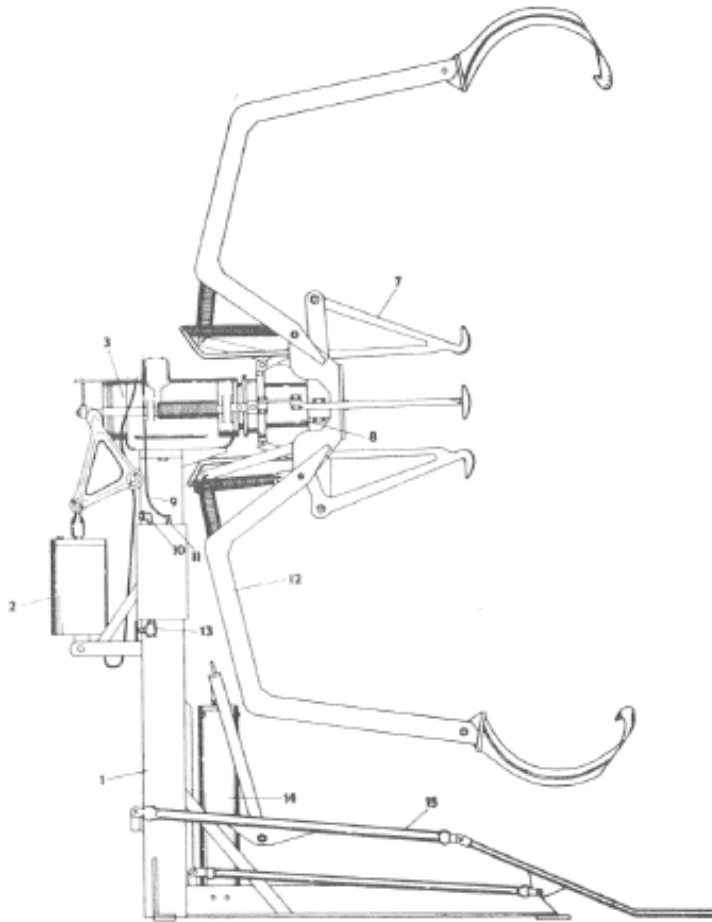
Branick

**Tire Handling
Equipment**

Repair Parts Information

Full Circle Type Tire Spreader

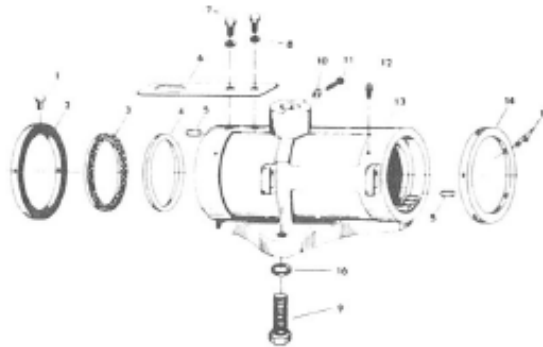
MODEL EF



MODEL "EF" GENERAL ASSEMBLY

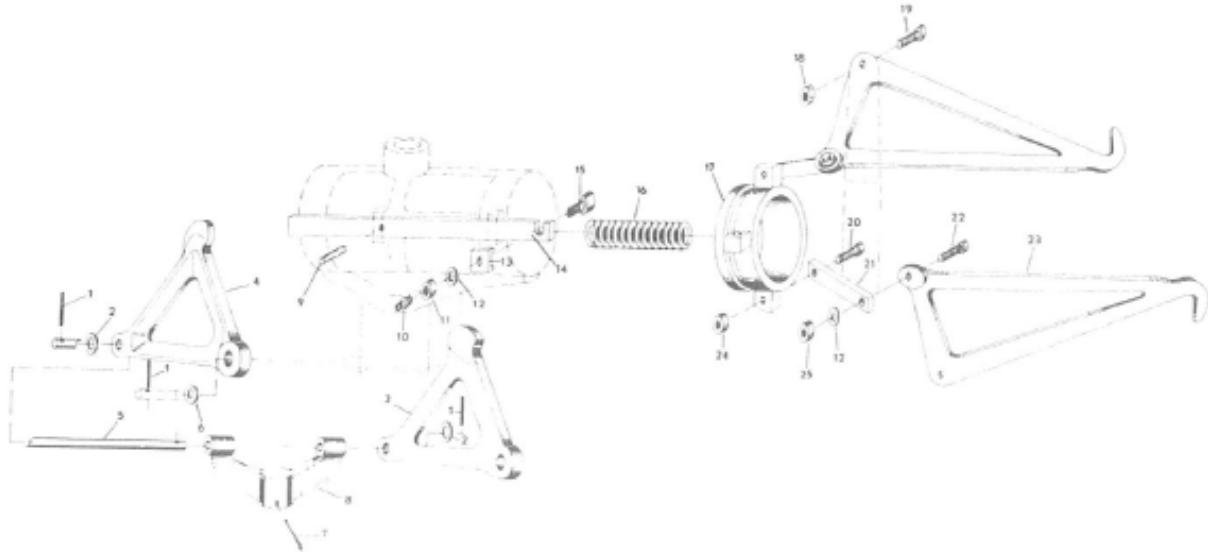
| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION | PAGE NO. |
|----------|------------|--------------|------------|------------------------------|----------|
| 1 | ND 3.900 | EF-50 | 1 | Base & Column | PG. 1 |
| 2 | | | 1 | Dia. Arm Cylinder Assy. | PG. 3 |
| 3 | ND 476.900 | | 1 | Housing Assembly | PG. 2 |
| 4 | | | | | PG. 6 |
| 5 | | | | | PG. 6 |
| 6 | | | | | PG. 7 |
| 7 | | | | Dia Arm & Linkage | PG. 2 |
| 8 | | | 1 | Spread Cylinder Assy. | PG. 3 |
| 9 | ND 11.268 | 1571 | 1 | 1/4" x 26" Impolene Air Line | PG. 1 |
| 10 | ND 38.096 | 216 | 1 | 1/4"-90° St. Ell. | PG. 1 |
| 11 | ND 34.096 | 3480 | 1 | 1/4 - 1/4 Male Elbow | PG. 1 |
| 12 | | | | Spread Arm Components | PG. 4 |
| 13 | ND 5.190 | 151 | 1 | 1/4 NPT Drain Cock | PG. 1 |
| 14 | | | 1 | Lift Cylinder Assembly | PG. 5 |
| 15 | | | | Lift Cradle & Linkage | PG. 5 |

REPAIR PARTS LIST FOR MODEL EF SPREADER



ND 476.900 HOUSING ASSEMBLY

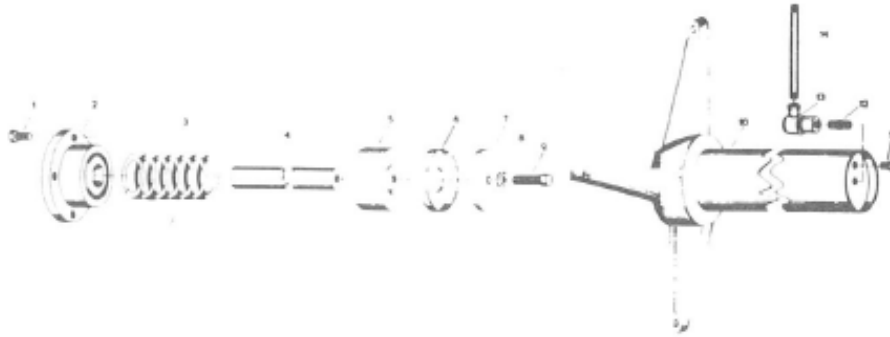
| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION | ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|-----------|--------------|------------|-----------------------------|----------|------------|--------------|------------|-------------------------------|
| 1 | ND 46.028 | | 4 | 3/8" x 1 1/4" H.H.C.S. | 10 | ND 2.055 | 311 | 1 | 5/16" N.C. H.H. Jam Nut |
| 2 | ND 1.107 | 77 | 1 | Rear Collar | 11 | ND 3.028 | 383 | 1 | 5/16" x 1 1/4" Set Screw |
| 3 | ND 4.107 | 122F | 1 | Ball Thrust Bearing | 12 | ND 8.096 | 123 | 2 | 1/4" Grease Zerk |
| 4 | ND 2.107 | 121 | 1 | Inner Ball Race | 13 | ND 27.950 | A52 | 1 | Housing |
| 5 | ND 1.281 | 120 | 80 | Bearing Roller | 14 | ND 3.107 | 76F | 1 | Front Collar |
| 6 | ND 15.111 | | 1 | Air Line Bracket | 15 | ND 4.028 | 380 | 10 | 5/16" x 1/4" Socket Set Screw |
| 7 | ND 2.028 | 326 | 2 | 5/16" x 5/8" N.C. H.H.C.S. | 16 | ND 26.108 | | 2 | 5/8" Shakeproof Washer |
| 8 | ND 67.108 | | 2 | 5/16" Shakeproof Washer | 17 | ND 210.055 | | 4 | 3/8" N.C. Hex Locknut |
| 9 | ND 16.028 | 356 | 2 | 5/8" x 1 3/4" N.C. H.H.C.S. | | | | | |



DIAMETER ARMS & LINKAGE

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION | ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|------------|--------------|------------|-------------------------|----------|-----------|--------------|------------|-------------------------------|
| 1 | ND 5.061 | 378 | 4 | 1/8" x 1" Drive Pin | 14 | ND 3.104 | 69F | 2 | Slide Bar |
| 2 | ND 3.039 | 296 | 2 | 7/16" Machine Bushing | 15 | ND 2.281 | 70F | 2 | 1" Cam Roller |
| 3 | ND 1.157 | 58R | 1 | Bell Crank R. H. | 16 | ND 2.110 | 101 | 2 | Spring |
| 4 | ND 2.157 | 58L | 1 | Bell Crank L. H. | 17 | ND 1.489 | 55 | 1 | Sliding Collar |
| 5 | ND 14.149 | 108FR | 1 | Pivot Shaft | 18 | ND 58.055 | | 4 | 1/2" N. C. H.H. Lock Nut |
| 6 | ND 2.039 | 298 | 2 | 3/4" Machine Bushing | 19 | ND 6.028 | 345 | 4 | 1/2" x 2" N. C. H.H.C.S. |
| 7 | ND 166.061 | | 1 | 3/16 x 2 1/2 Cotter Pin | 20 | ND 8.028 | 339 | 4 | 7/16" x 1-1/2" N. C. H.H.C.S. |
| 8 | ND 1.267 | 108FC | 1 | Diameter Cylinder Yoke | 21 | ND 1.062 | | 4 | Sliding Collar Link |
| 9 | ND 4.061 | 109 | 2 | Slide Bar Pin | 22 | ND 7.028 | 338 | 4 | 7/16" x 1-1/4" N. C. H.H.C.S. |
| 10 | ND 10.096 | 110 | 2 | 3/16" Grease Zerk | 23 | ND 7.103 | 59 | 4 | Diameter Arm |
| 11 | ND 5.055 | 314 | 2 | 7/16" N.F. H.H. Jam Nut | 24 | ND 21.055 | | 4 | 7/16" N. C. H.H. Lock Nut |
| 12 | ND 38.108 | | 6 | 7/16" Shakeproof Washer | 25 | ND 3.055 | 313 | 4 | 7/16" N. C. H.H. Jam Nut |
| 13 | ND 14.111 | 129F | 2 | Slide Bar Clip | | | | | |

REPAIR PARTS LIST FOR MODEL EF SPREADER

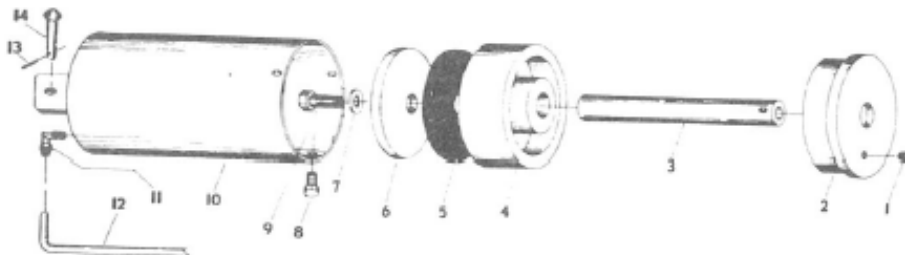


ND 20.900 SPREAD CYLINDER ASSEMBLY

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|------------|--------------|------------|-------------------------------|
| 1 | ND 14.028 | 327 | 4 | 5/16" x 1" N. C. H.H.C.S. |
| 2 | ND 29.950 | 56AR | 1 | Cover Plate |
| 3 | ND 3.110 | 104F | 1 | Spring |
| 4 | ND 5.149 | 67F | 1 | Piston Rod |
| 5 | ND 5.051 | | 1 | 4" Dia. Spread Piston |
| 6 | ND 7.041 | | 1 | Piston Cup |
| 7 | ND 10.108 | 3479 | 1 | Piston Cup Follower |
| 8 | ND 240.167 | G14M | 1 | 14 M.M. Gasket |
| 9 | ND 13.028 | 351 | 1 | 9/16" x 1-3/4" N. C. H.H.C.S. |
| 10 | ND 23.950 | 54S51 | | Spread Arm Cylinder |

RELATED PARTS NOT INCLUDED IN ND 20.900 ASSEMBLY

| | | | | |
|----|------------|------|---|------------------------------|
| 11 | ND 1.006 | 232B | 1 | 1/4" Oil Plug |
| 12 | ND 170.096 | | 1 | 1/4" Trueflute Nipple |
| 13 | ND 27.034 | | 1 | 1/4 - 90° Quick Coupler |
| 14 | ND 14.268 | | | 1/4" x 4" Pipe Nipple |
| | ND 135.643 | | | 1.038 Swivel Replacement Kit |



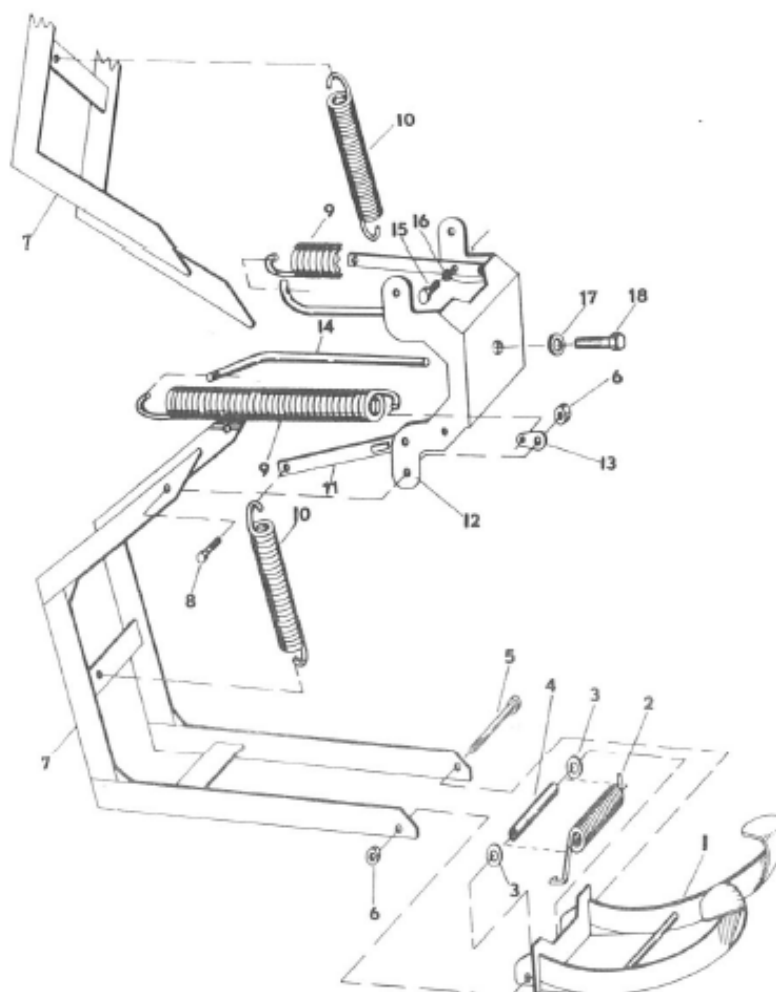
ND 43.900 DIAMETER ARM CYLINDER ASSEMBLY

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|------------|--------------|------------|-------------------------------|
| 1 | ND 4.006 | | 1 | #1 Caplug |
| 2 | ND 1.264 | 400M | 1 | Cylinder Head |
| 3 | ND 2.104 | 131 | 1 | Piston Rod |
| 4 | ND 16.051 | | 1 | 5-1/4" Dia. Piston |
| 5 | ND 9.041 | | 1 | Piston Cup |
| 6 | ND 33.101 | | 1 | Piston Cup Follower Plate |
| 7 | ND 240.167 | G14M | 1 | 14 M.M. Gasket |
| 8 | ND 5.028 | 336 | 3 | 7/16" x 3/4" N. C. H.H.C.S. |
| 9 | ND 13.028 | 351 | 1 | 9/16" x 1-3/4" N. C. H.H.C.S. |
| 10 | ND 64.950 | | 1 | Dia. Arm Cylinder |
| 11 | ND 34.096 | 3480 | 1 | 1/4 - 1/4 Male Elbow |

RELATED PARTS NOT INCLUDED IN ND 43.900 ASSEMBLY

| | | | | |
|----|-----------|-----|---|------------------------------|
| 12 | ND 6.268 | | 1 | 1/4" x 34" Impolene Air Line |
| 13 | ND 5.061 | 378 | 2 | 1/8" x 1" Drive Pin |
| 14 | ND 20.149 | | 1 | Diam. Cyl. Pin |

REPAIR PARTS LIST FOR MODEL EF SPREADER



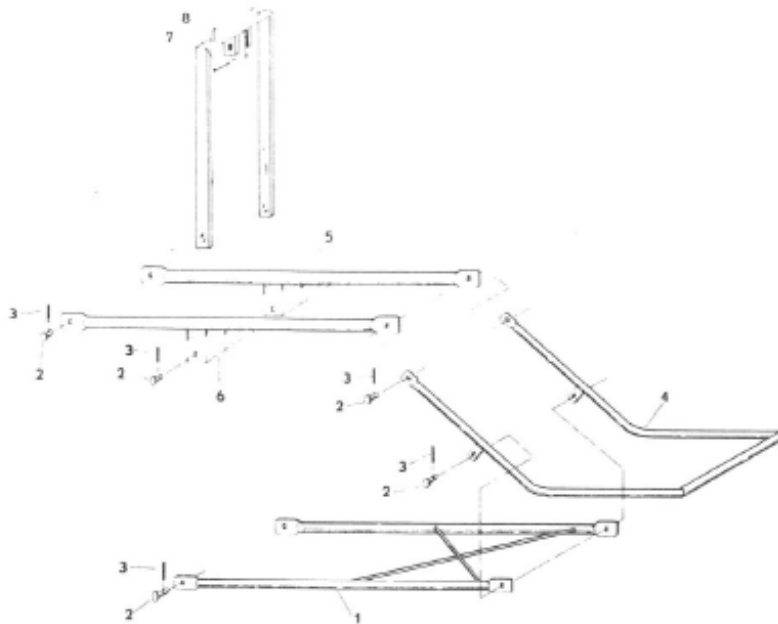
ND 19.900 SPREAD ARM ASSEMBLY (2 REQ'D)

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|-----------|--------------|------------|----------------------------------|
| 1 | ND 20.950 | 60R | 1 | Bead Hook |
| 2 | ND 6.110 | 254F | 1 | Bead Hook Spring |
| 3 | ND 9.108 | 194 | 2 | 1/2" Fiber Washer |
| 4 | ND 4.446 | 137 | 1 | Spring Sleeve |
| 5 | ND 3.242 | 375 | 1 | 1/2" x 7-1/2" N. C. Machine Bolt |
| 6 | ND 58.055 | | 1 | 1/2" N. C. H.H. Lock Nut |
| 7 | ND 18.900 | 64 | 1 | Spread Arm |

RELATED PARTS NOT INCLUDED IN ND 19.900 ASSEMBLY

| | | | | |
|----|------------|------|---|--------------------------------------|
| 6 | ND 58.055 | | 4 | 1/2" N. C. H.H. Lock Nut |
| 8 | ND 34.028 | 342 | 4 | 1/2" x 1-1/4" N. C. H.H.C.S. |
| 9 | ND 4.110 | 98 | 2 | Ext. Head Return Spring |
| 10 | ND 5.110 | 100 | 2 | Spread Arm Spring |
| 11 | ND 17.950 | 66FC | 2 | Spring Bar |
| 12 | ND 2.264 | 49FC | 1 | Extension Head |
| 13 | ND 5.017 | 127 | 2 | Return Spring Clip |
| 14 | ND 15.149 | 97 | 2 | Return Spring Rod |
| 15 | ND 10.028 | 275 | 4 | 1/4" x 3/4" N. C. H.H.C.S. |
| 16 | ND 63.108 | | 4 | 1/4" Shakeproof Washer |
| 17 | ND 7.108 | 295 | 1 | 3/4" Shakeproof Washer |
| 18 | ND 9.028 | 361 | 1 | 3/4" x 1-3/4" N. C. H.H.C.S. |
| 19 | ND 19.101 | | 1 | 3/16 x 3/8 x 7/8 Detent Plate }Not |
| 20 | ND 223.028 | | 1 | 3/8 NF x 5/8 Socket Set Screw }Shown |

REPAIR PARTS LIST FOR MODEL EF SPREADER

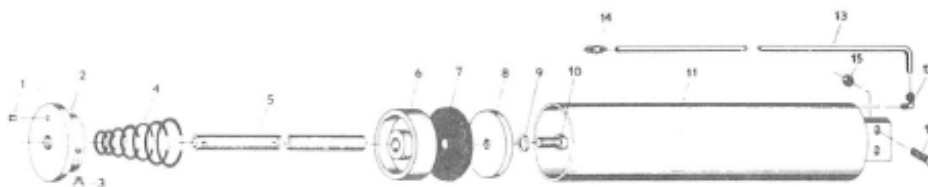


ND 5.900 LIFT ARM & CRADLE ASSEMBLY

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|-----------|--------------|------------|----------------------|
| 1 | ND 6.950 | 106 | 1 | Lower Arm Sub-Assy. |
| 2 | ND 1.003 | 1810 | 10 | Button Head Rivet |
| 3 | ND 9.061 | | 10 | 5/32" x 1" Drive Pin |
| 4 | ND 5.950 | 105 | 1 | Lift Cradle |
| 5 | ND 22.950 | 107R | 1 | Upper Arm - R.H. |
| 6 | ND 7.950 | 107L | 1 | Upper Arm - L.H. |

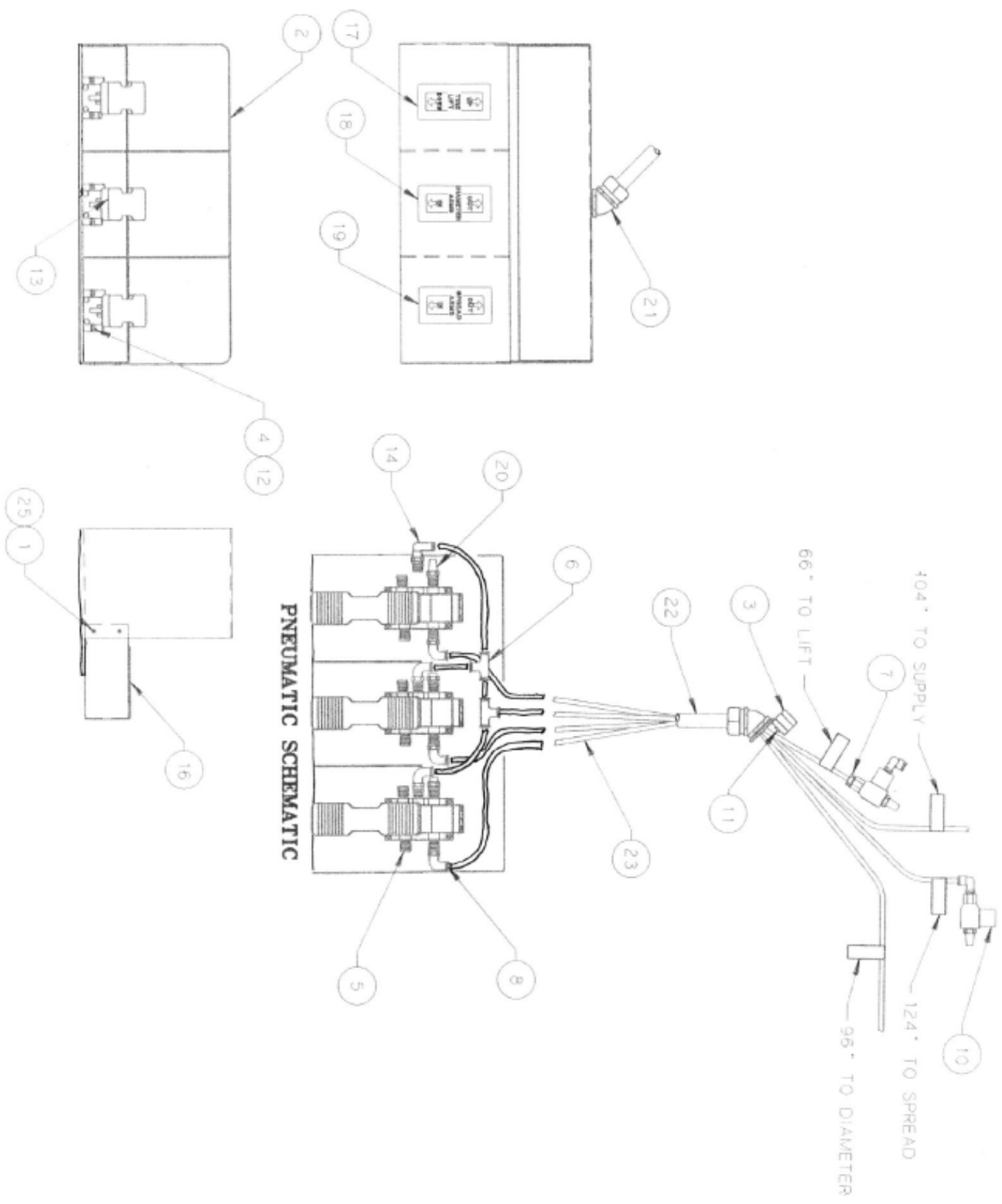
RELATED PARTS NOT INCLUDED IN ND 5.900 ASSEMBLY

| | | | | |
|---|-----------|-----|---|---------------------------|
| 7 | ND 11.950 | 134 | 1 | Lift Yoke |
| 8 | ND 3.061 | 390 | 1 | 5/32" x 1-1/2" Cotter Pin |



ND 8.900 LIFT CYLINDER ASSEMBLY

| ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION | ITEM NO. | PART NO. | OLD PART NO. | NO. REQ'D. | DESCRIPTION |
|----------|------------|--------------|------------|-----------------------------|---|------------|--------------|------------|-------------------------------|
| 1 | ND 4.006 | 1581 | 1 | #1 Caplug | 10 | ND 239.028 | 350 | 1 | 9/16" x 1-1/4" N. C. H.H.C.S. |
| 2 | ND 3.098 | 4 | 1 | Cylinder End Cap | 11 | ND 13.950 | 8 | 1 | Lift Cylinder |
| 3 | ND 2.028 | 326 | 3 | 5/16" x 5/8" N. C. H.H.C.S. | 12 | ND 34.096 | 3480 | 1 | 1/4 - 1/4 Male Elbow |
| 4 | ND 7.110 | 165 | 1 | Lift Cylinder Spring | 13 | ND 5.268 | | 1 | 1/4" x 60" Impolene Air Line |
| 5 | ND 3.149 | 5 | 1 | Piston Rod | 14 | ND 35.096 | 3482 | 1 | 1/4 - 1/4 Tube Union |
| 6 | ND 23.051 | | 1 | 3-1/2" Dia. Lift Piston | RELATED PARTS NOT INCLUDED IN ND 8.900 ASSEMBLY | | | | |
| 7 | ND 15.041 | | 1 | Piston Cup | 15 | ND 58.055 | | 2 | 1/2" N. C. H.H. Lock Nut |
| 8 | ND 32.108 | | 1 | Piston Cup Washer | 16 | ND 25.028 | 343 | 2 | 1/2" x 1-1/2" N. C. H.H.C.S. |
| 9 | ND 240.167 | G14M | 1 | 14 M.M. Gasket | | | | | |



| | | | |
|------|------|--|-------------|
| 25 | 4 | WASHER, INT TOOTH STAR | 52-0006 |
| 24 | 1 | INSTRUCTION SHEET | FORM 1032 |
| 23 | 400" | TUBE, 1/4 OD, PLASTIC | D20-007 |
| 22 | 45" | CONDUIT, 3/4 FELX | B40-003 |
| 21 | 2 | CONNECTOR, 3/4 X 45° CONDUIT | 980-085 |
| 20 | 5 | MUFFLER, VALVE | 885-035 |
| 19 | 1 | DECAL, SPREAD ARMS | 80-0033 |
| 18 | 1 | DECAL, DIAMETER ARMS | 80-0032 |
| 17 | 1 | DECAL, TIRE LIFT | 80-0031 |
| 16 | 1 | GUARD, AIRLINE | 72-0021 |
| 15 | 1 | CARTON, 21 X 10 X 12-1/2 | 625-044 |
| 14 | 1 | FITTING, 1/4 NPT SWIVEL X 1/4 TUBE ELBOW | 60-0010 |
| 13 | 3 | VALVE, TREADLE | 60-0009 |
| 12 | 12 | SCREW, #8-32 X 1 FLAT HEAD MACHINE | 50-0041 |
| 11 | 1 | SCREW, 5/16-18 X 3/8 SET | 50-0006 |
| 10 | 2 | VALVE, QUICK EXHAUST | 190-085 |
| 9 | | | |
| 8 | 7 | FITTING, 1/4 MALE ELBOW | 096-342 |
| 7 | 1 | FITTING, 1/4 NPT MALE | 096-340 |
| 6 | 2 | FITTING, 1/4 TUBE UNION TEE | 096-339 |
| 5 | 6 | FITTING, 1/4 NPT HEX PLUG | 096-004 |
| 4 | 12 | NUT, -32 NYLON LOCK | 055-082 |
| 3 | 1 | WELDMENT, FITTING MOUNT | 03-0052 |
| 2 | 1 | WELDMENT, FOOT VALVE GUARD | 03-0048 |
| 1 | 4 | SCREW, #8-32 X 3/8 SHH TAPPING | 50-0090 |
| ITEM | QTY | DESCRIPTION | PART NUMBER |

Notes:

COMMERCIAL WARRANTY

This product is warranted by BRANICK INDUSTRIES, INC. to the original user-owner against defective materials or workmanship for a period of one year from the date of delivery. During the warranty period, product found to be defective will be repaired or replaced at, BRANICK INDUSTRIES, INC.'s option, without charge. The product must be returned, with prior approval, transportation charges prepaid and with proof of original delivery date, to BRANICK INDUSTRIES, INC., 4245 Main Ave., Fargo, North Dakota 58107. The repaired or replacement product will be returned with transportation charges prepaid by Branick.

This warranty does not cover defects in the product caused by ordinary wear and tear, abuse, misuse, overloading, accident (including shipping damage), improper maintenance, alteration, or any other cause not the result of defective materials or workmanship.

REPAIR OR REPLACEMENT IS THE EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCT UNDER THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OF THIS PRODUCT. BRANICK INDUSTRIES, INC. SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

BRANICK INDUSTRIES, INC. reserves the right to make changes in the design or construction of our products without obligation to incorporate such changes in products already sold and without notice.

Service parts, warranty, and regular repair service for products are available from Branick authorized distributors or from:

BRANICK INDUSTRIES, INC.
4245 Main Ave.
Box 1937
Fargo, North Dakota 58107
701/281-8888

Branick®
INDUSTRIES, Inc.