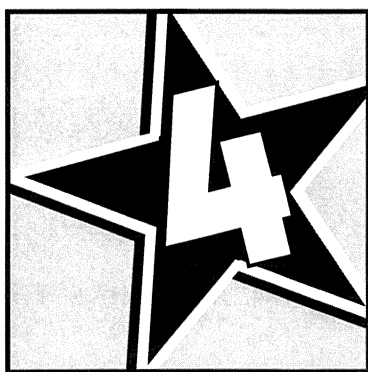
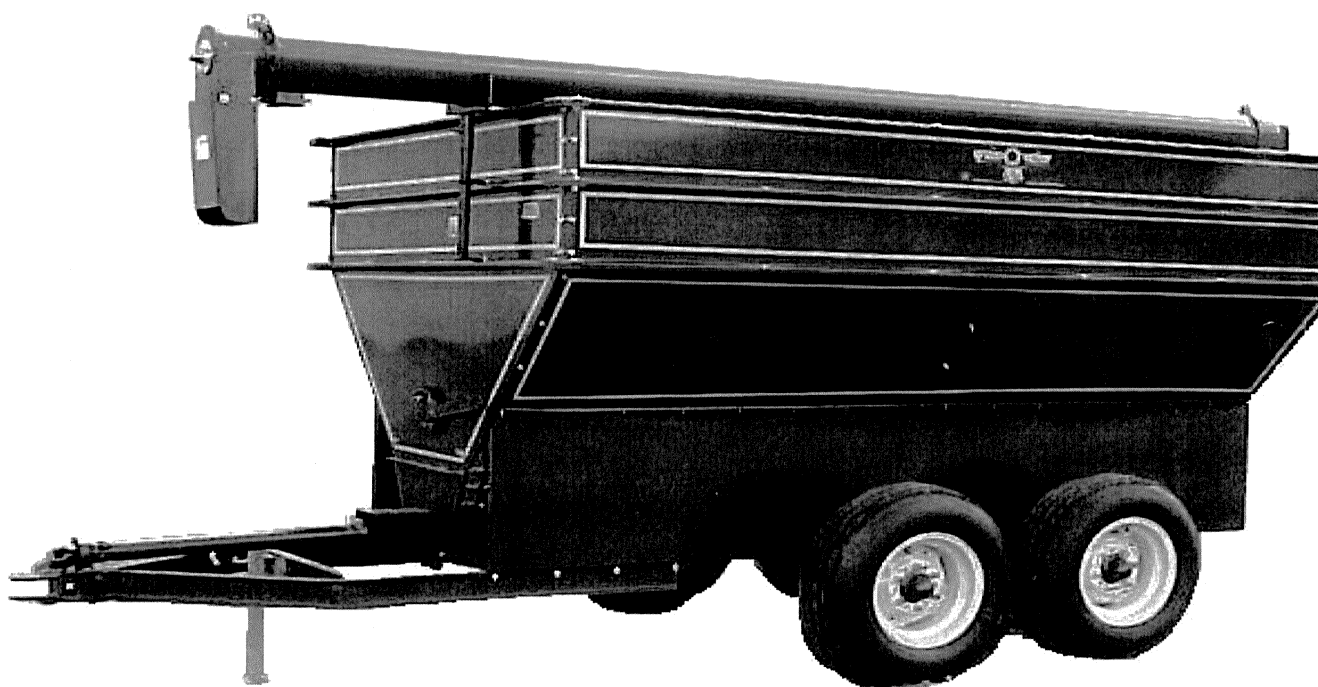


# grain-O-vator

## Parts Manual

10 & 20 Series



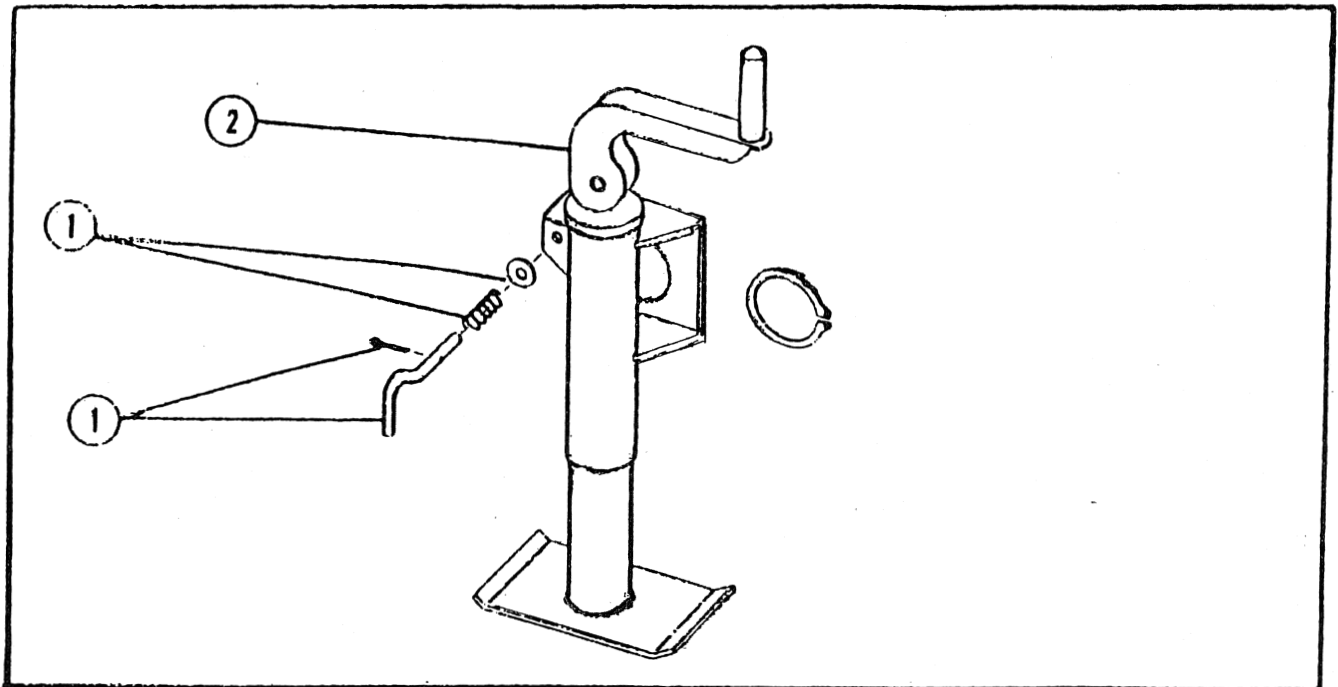
***Four Star***  
***Manufacturing, Inc.***

P. O. Box 1196  
1055 Higgs Road  
Lewisburg, TN 37091  
(800) 251-8051





## HITCH STAND



| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QUAN.</u> |
|-----------------|-----------------|--------------------|--------------|
| 1               | 21304           | Plunger Repair Kit | 1            |
| 2               | 21302           | Jack               | 1            |

### MAINTENANCE:

Grease universal joints hourly in operating, wheel bearings once a year under normal conditions and tandem bolsters daily. Box auger bearing needs no grease. Give elevator elbow three complete strokes with grease gun every 1,000 bushel. (Zerk fitting on bottom of elbow.) When using blower unit remove hub cap on back of blower and pack both bearings every 25,000 bushel. Fill Speed-step-up with SAE-30 motor oil to level of filler plug. Drain and refill once yearly.

### OPERATING:

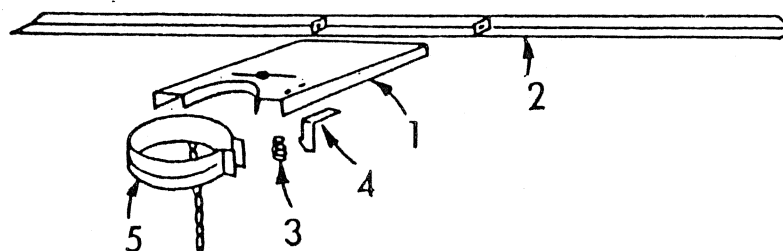
When loading any #20 the gate or gates over the box auger should be closed. To unload start augers running and open gate or gates to allow feed to fall to auger. If feed tends to bridge, work gates several times. When using blower, gates are used to regulate amount of feed to blower.

### MIXING:

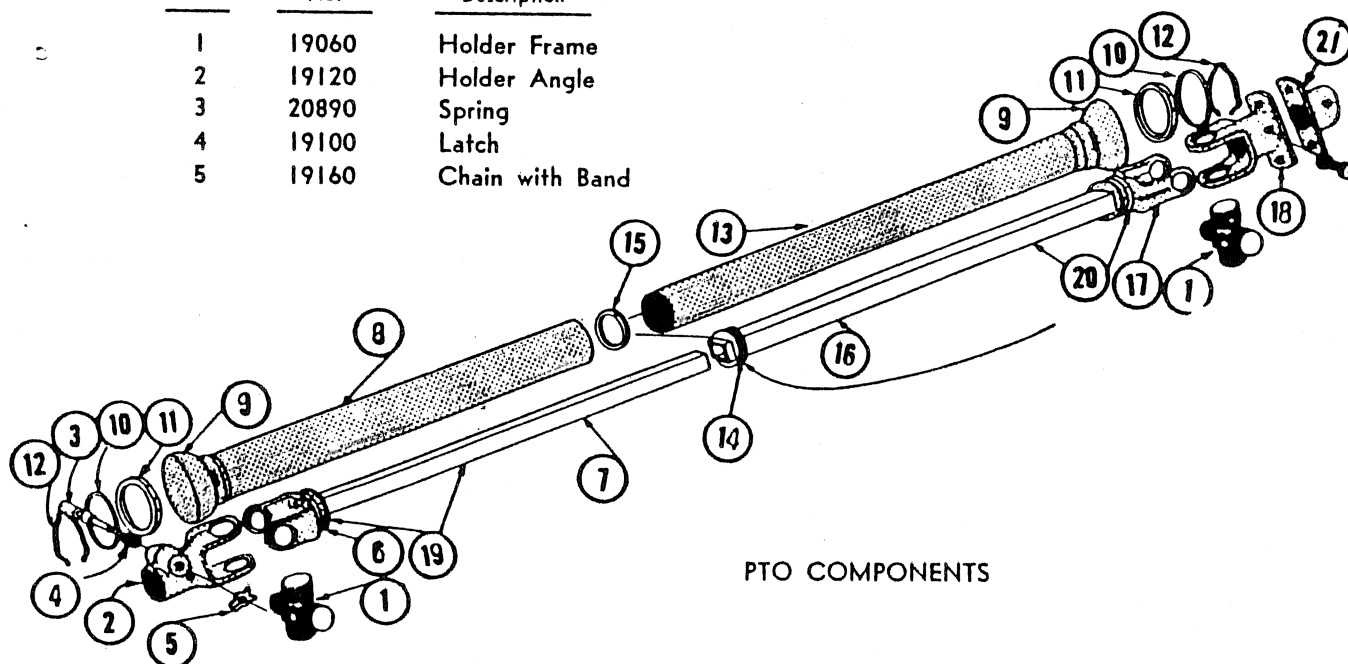
One compartment units mix by letting a vertical cross section of feed into augers. Always load in layers parallel to bottom of box. Mixing in two compartments is similar but allows ½ load to be recirculated until mix is complete. Leave mixed feed in one compartment and load unmixed feed in other compartment to carry full load. Unload mixed section first and mix other ½ load as before.

### TROUBLE SHOOTING:

Good maintenance avoids trouble. If shear pin shears in P.T.O. check for objects in auger system before replacing pin. Bent flighting and dirty augers will slow down unloading. Check periodically.

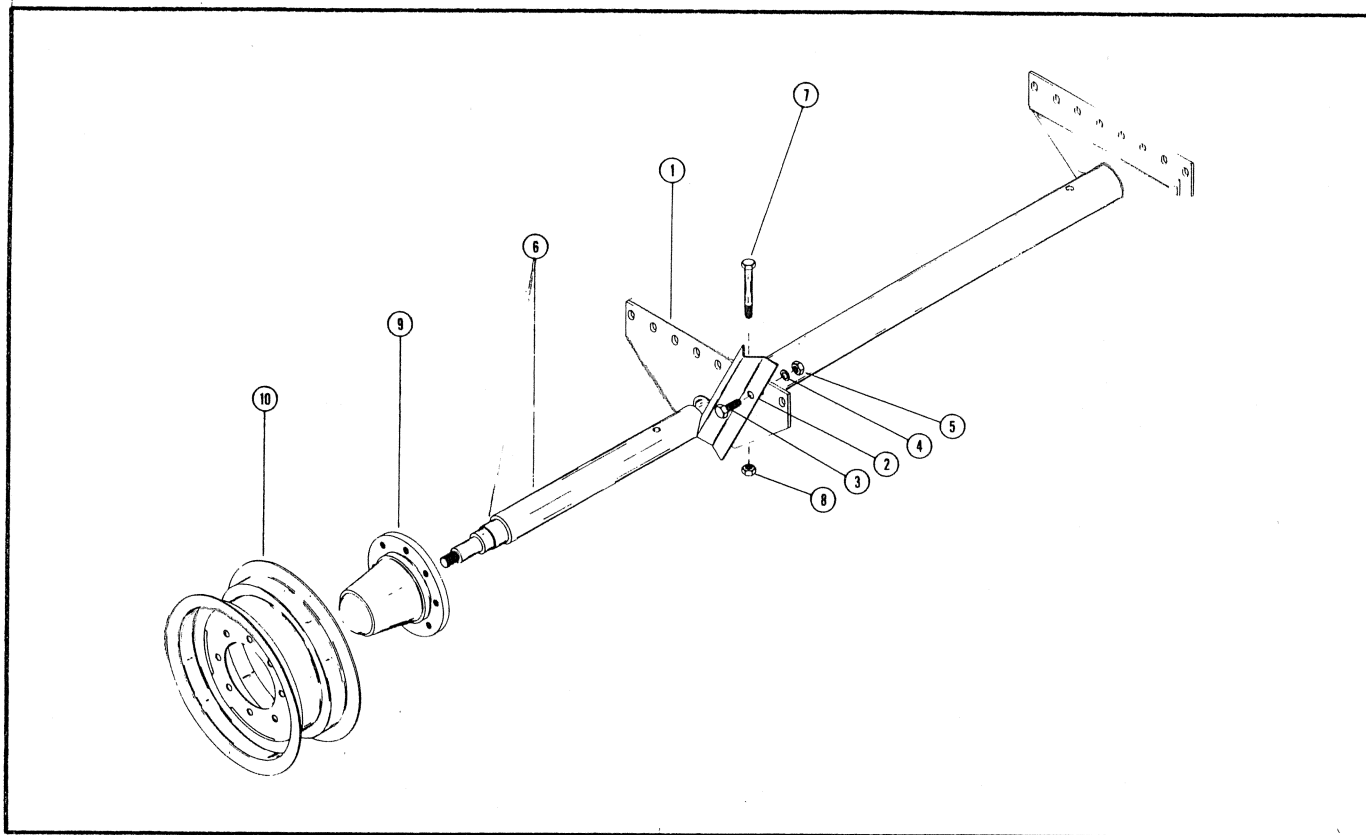


| Key No. | Part No. | Description     |
|---------|----------|-----------------|
| 1       | 19060    | Holder Frame    |
| 2       | 19120    | Holder Angle    |
| 3       | 20890    | Spring          |
| 4       | 19100    | Latch           |
| 5       | 19160    | Chain with Band |



PTO COMPONENTS

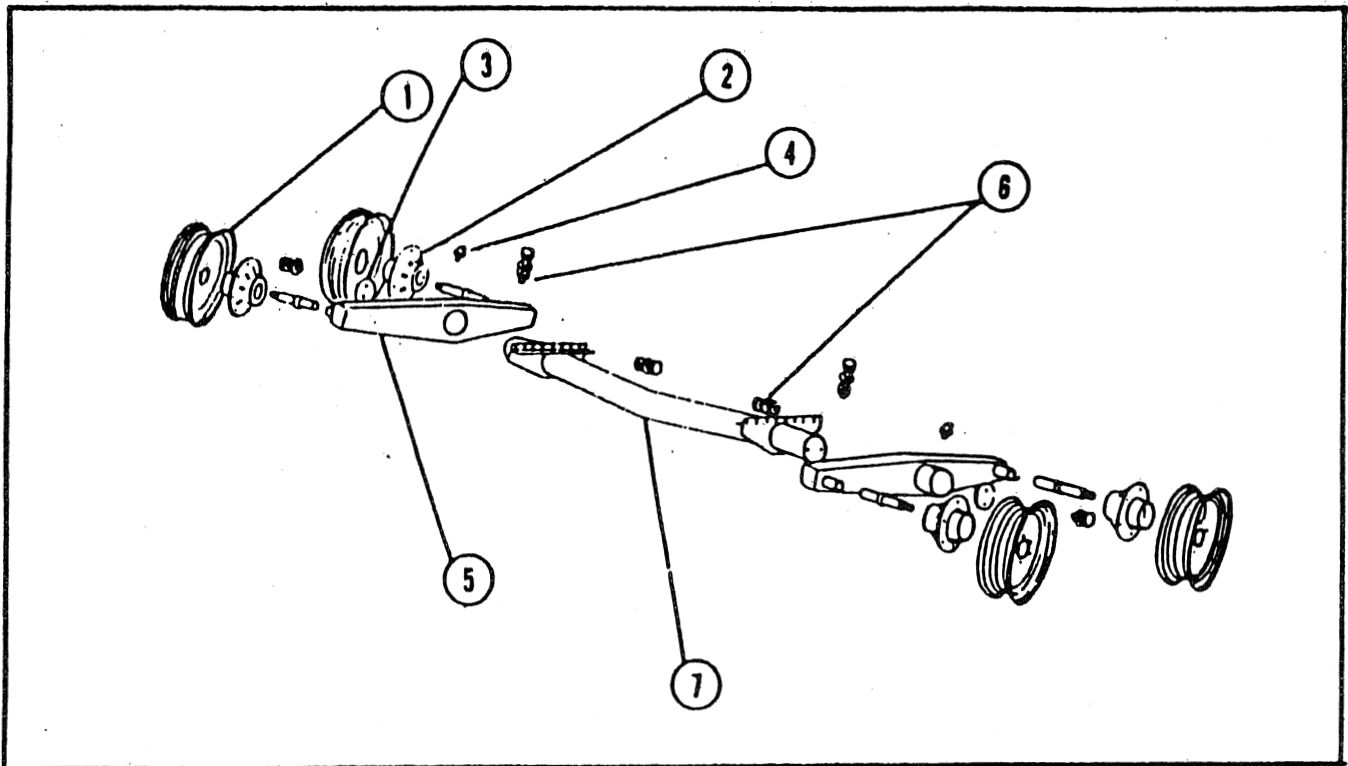
| Key No. | Part No. | Description                                                          |
|---------|----------|----------------------------------------------------------------------|
| A*      | 2075     | P.T.O. Complete (see unit price list)                                |
| B*      | 20101    | Tractor Half B* consists of 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 19      |
| C*      | 20102    | Machine Half C* consists of 1, 9, 10, 11, 12, 13, 14, 15, 18, 20, 21 |
| 1       | 20139    | Joint Repair Kit                                                     |
| 2       | 20737    | Q.D. Splined Yoke Assy.                                              |
| 3       | 20141    | Lock Pin                                                             |
| 4       | 20142    | Lock Pin Spring                                                      |
| 5       | 20143    | Lock Pin Washer                                                      |
| 6       | 20144    | Plain Yoke for Shaft                                                 |
| 7       | 20145    | Rectangular Shaft "30"                                               |
| 8       | 20146    | Outer Shield Tube 28"                                                |
| 9       | 20147    | Shield Bell                                                          |
| 10      | 20148    | Thrust Washer                                                        |
| 11      | 20149    | Nylon Bearing                                                        |
| 12      | 20150    | Snap Ring                                                            |
| 13      | 20151    | Inner Shield Tube 29"                                                |
| 14      | 20152    | Support Sleeve                                                       |
| 15      | 20153    | Nylon Support Brg.                                                   |
| 16      | 20154    | Rectangular Tube 30-3/4"                                             |
| 17      | 20155    | Plain Yoke Rectangular                                               |
| 18      | 20156    | Plain Yoke Round                                                     |
| 19      | 20157    | Rect. Shaft & Yoke Assy.                                             |
| 20      | 20158    | Rect. Tube & Yoke Assy.                                              |
| 21      | 22141    | Shear Hub                                                            |



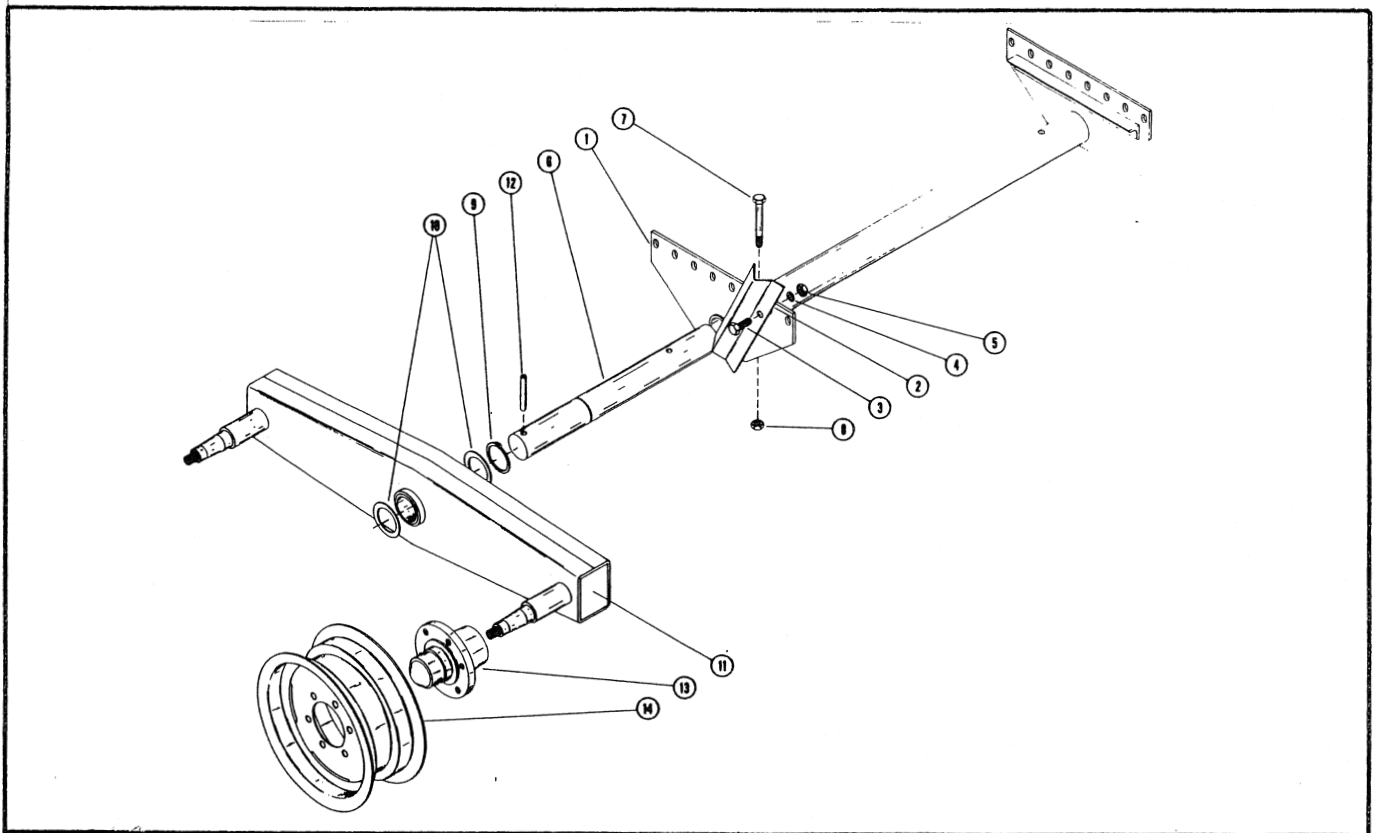
### HEAVY DUTY SINGLE AXLE

| <u>ITEM</u> | <u>PART #</u> | <u>DESCRIPTION</u>                | <u>QTY</u> |
|-------------|---------------|-----------------------------------|------------|
| 1           | 20436         | Axle Weldment                     | 1          |
| 2           | 20093         | Shield( <sup>W</sup> /Scale Only) | 2          |
| 3           | 902190        | 1/2-13 x 1 1/4 Cap Screw          | 6          |
| 4           | 900113        | 1/2 Lock Washer                   | 6          |
| 5           | 902450        | 1/2-13 Hex Nut                    | 6          |
| 6           | 20439         | Spindle                           | 2          |
| 7           | 901926        | 1/2-13 x 4 Cap Screw              | 2          |
| 8           | 900116        | 1/2-13 Hex Nut                    | 2          |
| 9           | 65807         | Old Style Hub for 2 3/4" Spindle  | 2          |
|             | 65705         | New Style Hub for 3" Spindle      | 2          |
| 10          | 901060        | 15 Inch Flotation Wheel           | 2          |
|             | 901058        | 20 Inch Flotation Wheel           | 2          |

# TANDEM AXLE, 6 HUBS , AND WHEELS



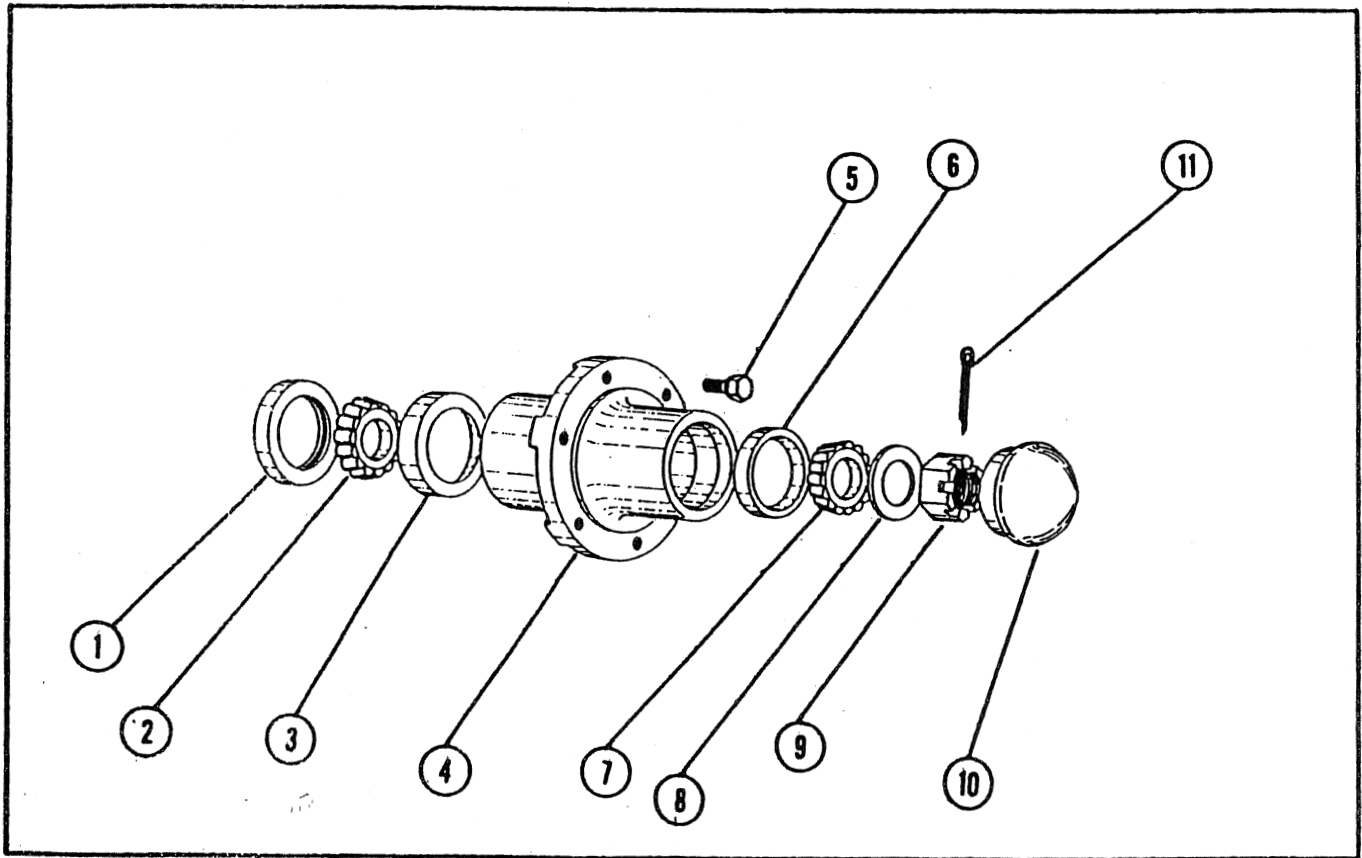
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                                     | <u>QUAN.</u> |
|-----------------|-----------------|--------------------------------------------------------|--------------|
| 1               | 20072           | 15 Inch Wheel                                          | 4            |
| 2               | 20073           | Wheel Hub (Complete) Fasteners Included                | 4            |
| 3               | 27200           | Thrust Plate                                           | 2            |
| 4               | 901001          | Grease Zerk (45 degrees 1/8 Inch)                      | 2            |
| 5               | 20045           | Bolster Assembly                                       | 2            |
| 6               |                 | 1/2-13 x 1 1/4 Cap Screw, Nuts, and<br>and Lockwashers | 6            |
| 7               | 27102           | Tandem Axle Assembly                                   | 1            |



### TANDEM WHEEL AXLE FOR SCALES

| <u>ITEM</u> | <u>PART #</u> | <u>DESCRIPTION</u>       | <u>QTY</u> |
|-------------|---------------|--------------------------|------------|
| 1           | 20436         | Axle Weldment            | 1          |
| 2           | 20093         | Shield(w/Scale Only)     | 2          |
| 3           | 902190        | 1/2-13 x 1 1/4 Cap Screw | 6          |
| 4           | 900113        | 1/2 Lock Washer          | 6          |
| 5           | 902450        | 1/2-13 Hex Nut           | 6          |
| 6           | 20440         | Axle Shaft               | 2          |
| 7           | 901926        | 1/2-13 x 4 Cap Screw     | 2          |
| 8           | 900116        | 1/2-13 Hex Nut           | 2          |
| 9           | 902386        | 2 1/2 External Snap Ring | 2          |
| 10          | 902388        | 2 1/2 Mach. Bushing      | 4          |
| 11          | 20442         | Bolster Weldment         | 2          |
| 12          | 902387        | 1/2 x 3 Roll Pin         | 2          |
| 13          | 20073         | Hub Assembly             | 4          |
| 14          | 20072         | 15 Inch Wheel            | 4          |

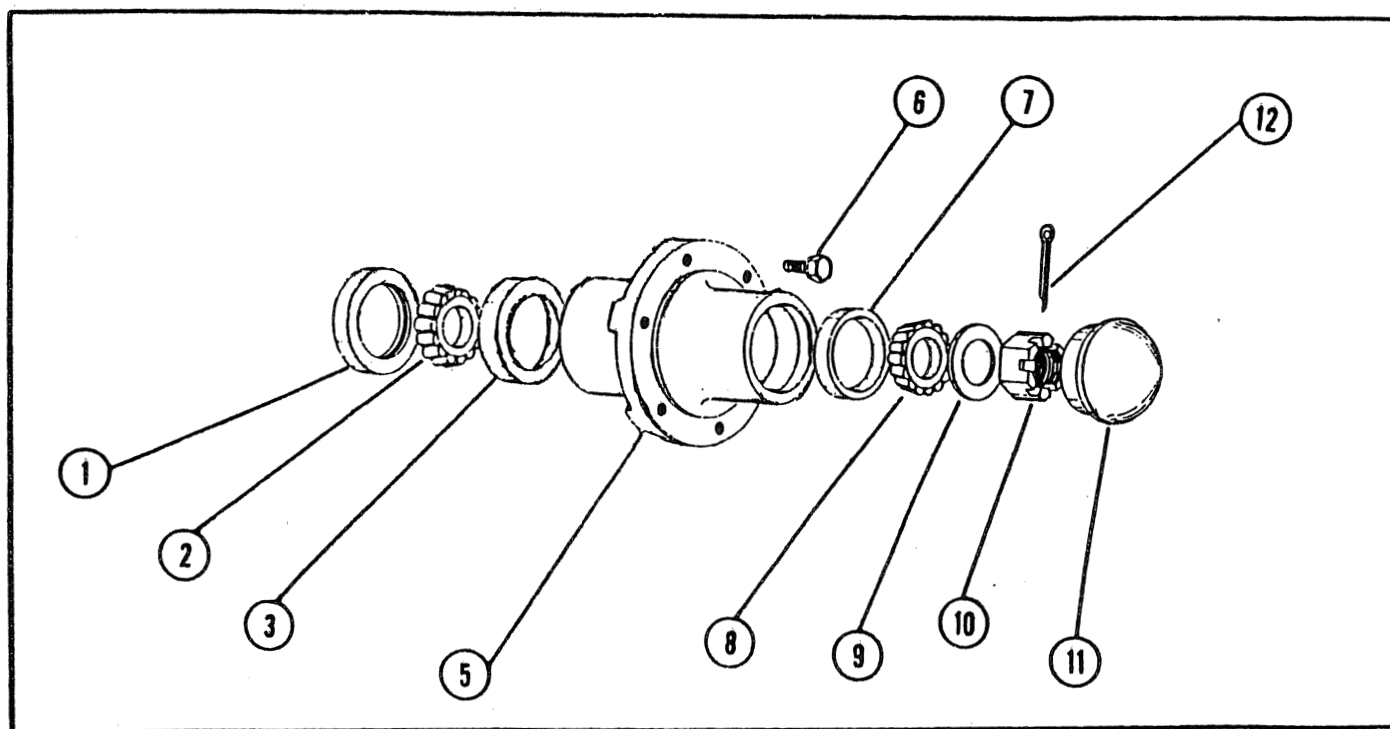
# 6 BOLT WHEEL HUB



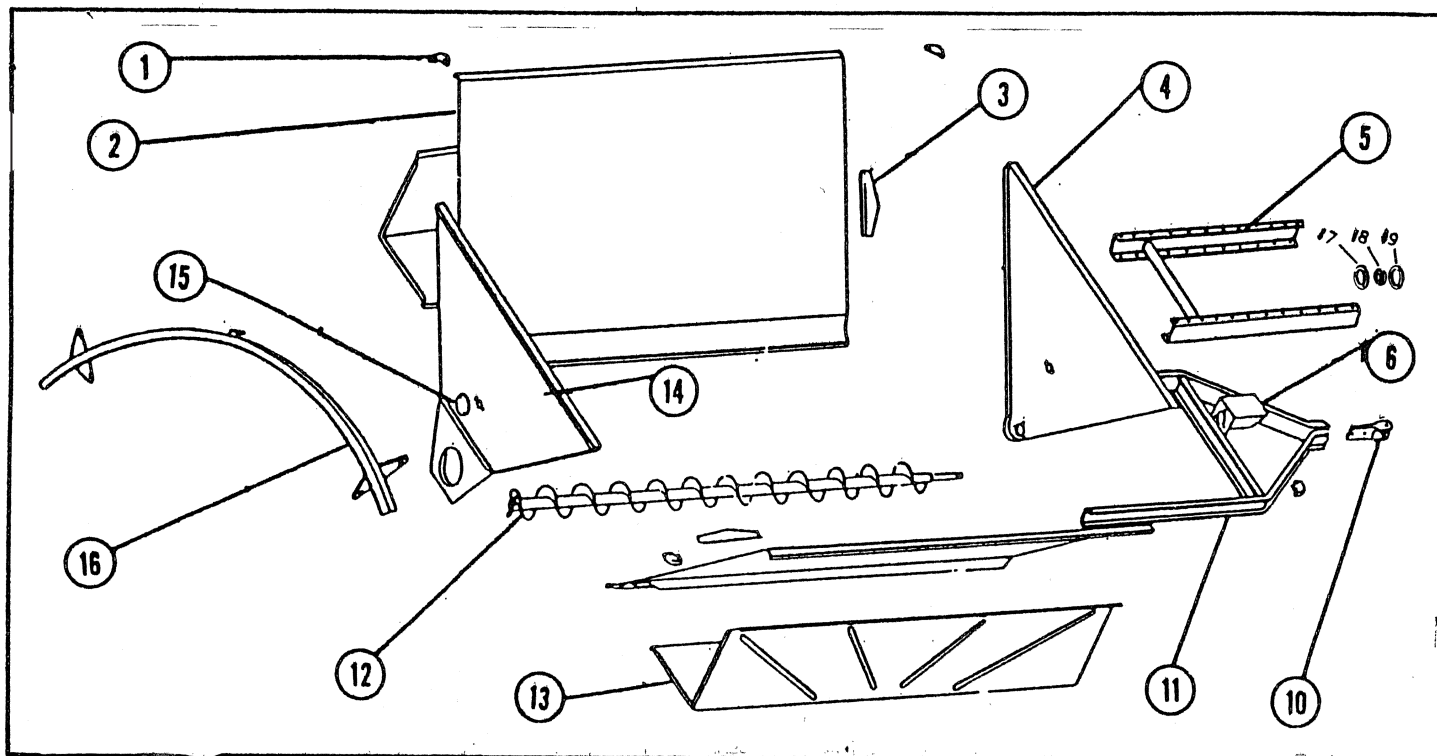
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           | <u>QUAN.</u> |
|-----------------|-----------------|------------------------------|--------------|
| 1               | 902543          | SEAL                         | 1            |
| 2               | 902541          | BEARING INNER                | 1            |
| 3               | 902545          | CUP BEARING INNER            | 1            |
| 4               | 20071           | HUB                          | 1            |
| 5               | 902539          | BOLT                         | 6            |
| 6               | 902546          | CUP BEARING OUTER            | 1            |
| 7               | 902542          | BEARING OUTER                | 1            |
| 8               | 902032          | WASHER                       | 1            |
| 9               | 902544          | NUT SLOTTED                  | 1            |
| 10              | 902540          | HUB CAP                      | 1            |
| 11              | 901009          | COTTER PIN 3/16 x 1 1/2 INCH | 1            |
|                 | 20073           | HUB COMPLETE                 | 1            |



# 8 BOLT WHEEL HUB

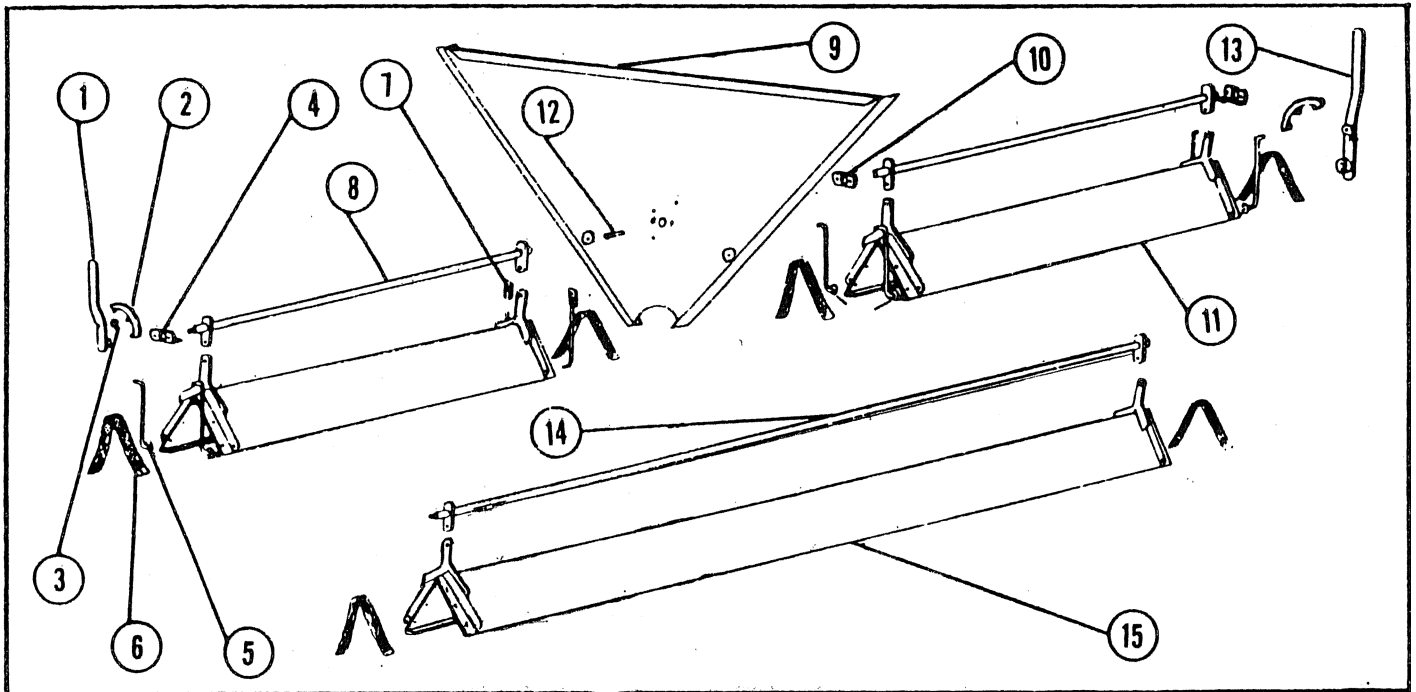


| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>            | <u>QUAN.</u> |
|-----------------|-----------------|-------------------------------|--------------|
| 1               | 902931          | SEAL                          | 1            |
| 2               | 902930          | BEARING INNER                 | 1            |
| 3               | 902927          | CUP BEARING INNER             | 1            |
| 4               | 902936          | WHEEL NUT                     | 8            |
| 5               | 65808           | HUB                           | 1            |
| 6               | 902935          | BOLT                          | 8            |
| 7               | 902928          | CUP BEARING OUTER             | 1            |
| 8               | 902929          | BEARING OUTER                 | 1            |
| 9               | 902933          | WASHER                        | 1            |
| 10              | 902932          | NUT SLOTTED                   | 1            |
| 11              | 902934          | HUB CAP                       | 1            |
| 12              | 902800          | COTTER PIN 5/32 .x 1 1/4 INCH | 1            |
|                 | 65807           | HUB COMPLETE                  | 1            |



| <u>ITEM</u>                                                                                                             | <u>PART NO.</u> | <u>DESCRIPTION</u>            | <u>QTY</u> |
|-------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------|------------|
| 1                                                                                                                       | 20120           | CORNER PIECE                  | 4          |
| 2                                                                                                                       | 20000           | 8 FT. SIDE                    | 2          |
|                                                                                                                         | 20400           | 10 FT. SIDE                   | 2          |
| 3                                                                                                                       | 28630           | STRESS PLATE                  | 4          |
| 4                                                                                                                       | 20421           | BEARING END                   | 1          |
| 5                                                                                                                       | 36400           | HITCH RISER                   | 1          |
| 6                                                                                                                       | 20030           | PTO SHIELD                    | 1          |
| 10                                                                                                                      | 21059           | HITCH YOKE CLEVIS             | 1          |
| 11                                                                                                                      | 21002           | HITCH LESS CLEVIS             | 1          |
|                                                                                                                         | 20476           | HITCH FOR SCALE UNIT          | 1          |
|                                                                                                                         | 20487           | PTO REST WELDMENT             | 1          |
|                                                                                                                         | 21302           | JACK                          | 1          |
|                                                                                                                         | 21303           | JACK PLATE                    | 1          |
| * 12                                                                                                                    | 10000           | BOX AUGER 8' (8" DISCHARGE)   | 1          |
|                                                                                                                         | 20056           | BOX AUGER 8' (11" DISCHARGE)  | 1          |
|                                                                                                                         | 20520           | BOX AUGER 10' (8" DISCHARGE)  | 1          |
|                                                                                                                         | 20456           | BOX AUGER 10' (11" DISCHARGE) | 1          |
| 13                                                                                                                      | 20048           | 8 FT. FRAME                   | 2          |
|                                                                                                                         | 20448           | 10 FT. FRAME                  | 2          |
| 14                                                                                                                      | 20422           | ELEVATOR END                  | 1          |
| 15                                                                                                                      | 10015           | FILLER PLATE                  | 2          |
| 16                                                                                                                      | 29480           | RACK                          | 1          |
| 17                                                                                                                      | 20031           | BEARING FLANGE                | 1          |
| 18                                                                                                                      | 20032           | 1 1/8 BEARING WITH COLLAR     | 1          |
| 19                                                                                                                      | 20029           | THRUST PLATE                  | 1          |
| FOR INSERTS TO LINE BOX 10' MACHINE                                                                                     |                 | 2-5' INSERTS                  |            |
| 8' MACHINE                                                                                                              |                 | 2-4' INSERTS                  |            |
| * TO DETERMINE THE BOX AUGER YOU NEED YOU HAVE TO KNOW WHAT DISCHARGE SYSTEM YOU HAVE 8" OR 11" ALSO THE LENGTH OF BOX. |                 |                               |            |

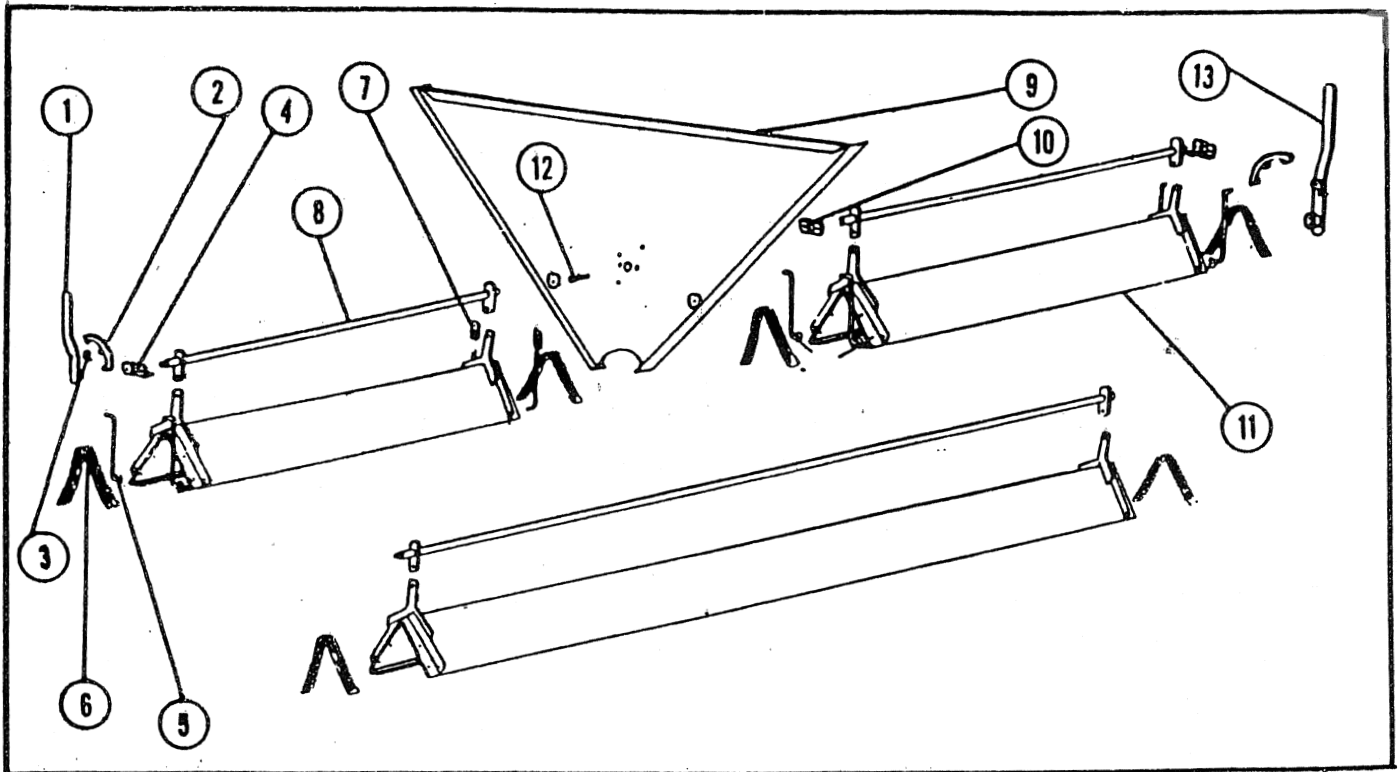
GATES and CENTER DIVIDER  
8 FT. BOX -(DIVIDED BOX)



GATES AND CENTER DIVIDER  
8FT. BOX - (DIVIDED BOX)

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>              | <u>QUANITIYS</u> |
|-----------------|-----------------|---------------------------------|------------------|
| 1               | 20222           | GATE LEVER SECONDARY            | 1                |
| 2               | 24980           | RATCHET                         | 2                |
| 3               | 24990           | LEVER DOG                       | 2                |
| 4               | 24880           | WEAR PLATE WITH STOP            | 2                |
| 5               | 24911           | HANGER ROD (SINGLE COMPARTMENT) | 4                |
|                 | 24911           | HANGER ROD (TWO COMPARTMENT)    | 6                |
| 6               | 24760           | GATE WEBBING (EACH GATE)        | 2                |
| 7               | 20210           | SECONDARY HANGER ROD            | 2                |
| 8               | 20202           | 4 FOOT GATE LIFT ROD            | 2                |
| 9               | 20340           | CENTER PARTITION                | 1                |
| 10              | 24860           | GATE HANGER PLATE               | 1                |
| 11              | 20190           | 4 FOOT GATE WITH WEB            | 2                |
| 12              | 20354           | STUD                            | 1                |
| 13              | 24941           | GATE LEVER                      | 1                |
| 14              | 24801           | 8 FOOT GATE LIFT ROD            | 1                |
| 15              | 24601           | 8FOOT GATE WITH WEB.            | 1                |

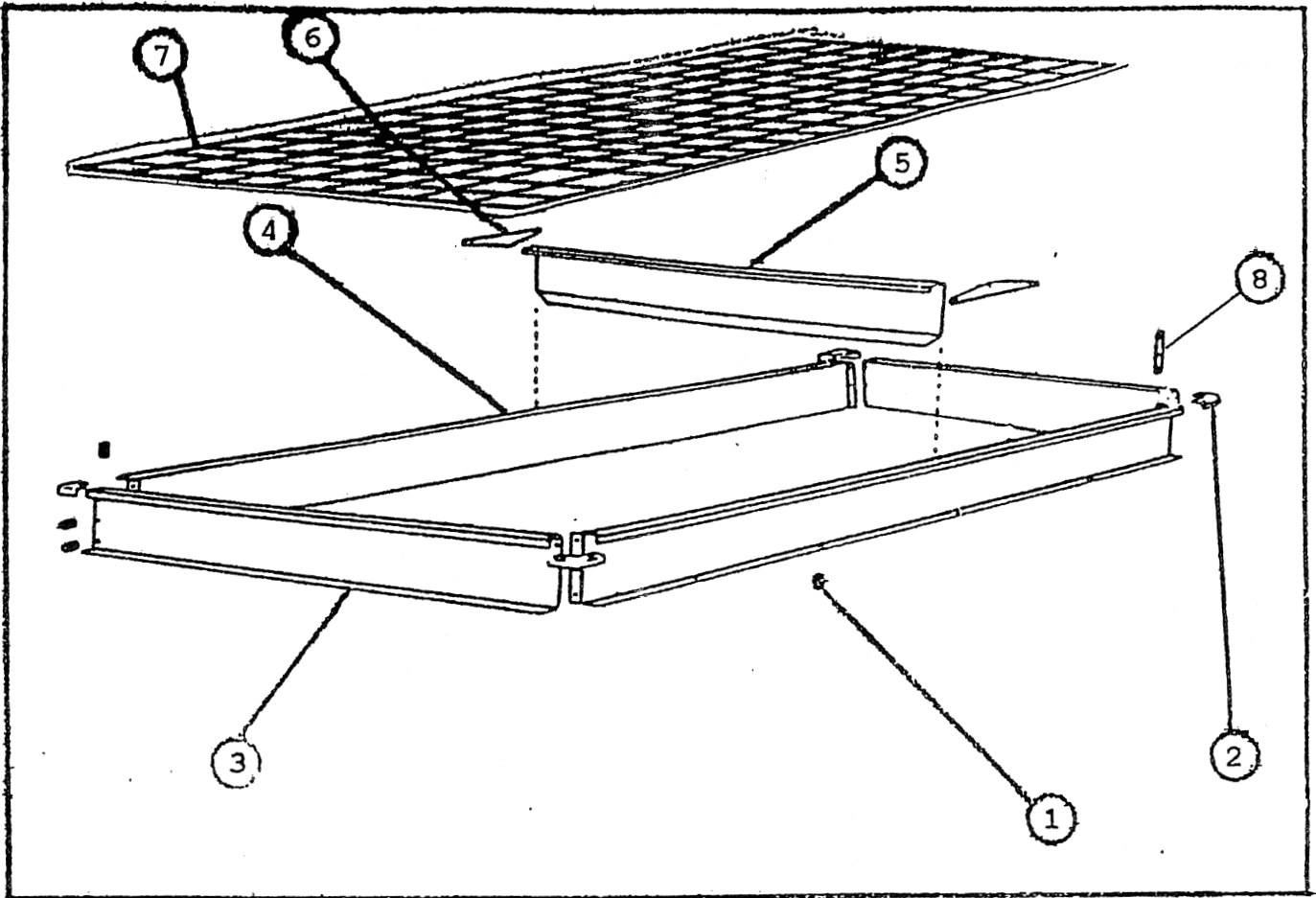
GATES and CENTER DIVIDER  
10 FT. BOX-(DIVIDED BOX)



GATES AND CENTER DIVIDER  
10FT. BOX - (DIVIDED BOX)

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>              | <u>QUANTITY</u> |
|-----------------|-----------------|---------------------------------|-----------------|
| 1               | 20222           | GATE LEVER SECONDARY            | 1               |
| 2               | 24980           | RATCHET                         | 2               |
| 3               | 24990           | LEVER DOG                       | 2               |
| 4               | 24880           | WEAR PLATE WITH STOP            | 2               |
| 5               | 24911           | HANGER ROD (SINGLE COMPARTMENT) | 4               |
|                 |                 | DIVIDER BOX                     |                 |
| 6               | 24760           | GATE WEBBING (EACH GATE)        | 6               |
| 7               | 20210           | SECONDARY HANGER ROD            | 2               |
| 8               | 20502           | 5 FOOT GATE LIFT ROD            | 2               |
| 9               | 20340           | CENTER PARTITION                | 1               |
| 10              | 24860           | WEAR PLATE                      | 1               |
| 11              | 20490           | 5 FOOT GATE WITH WEB.           | 2               |
| 12              | 20354           | STUD                            | 1               |
| 13              | 24941           | GATE LEVER                      | 1               |

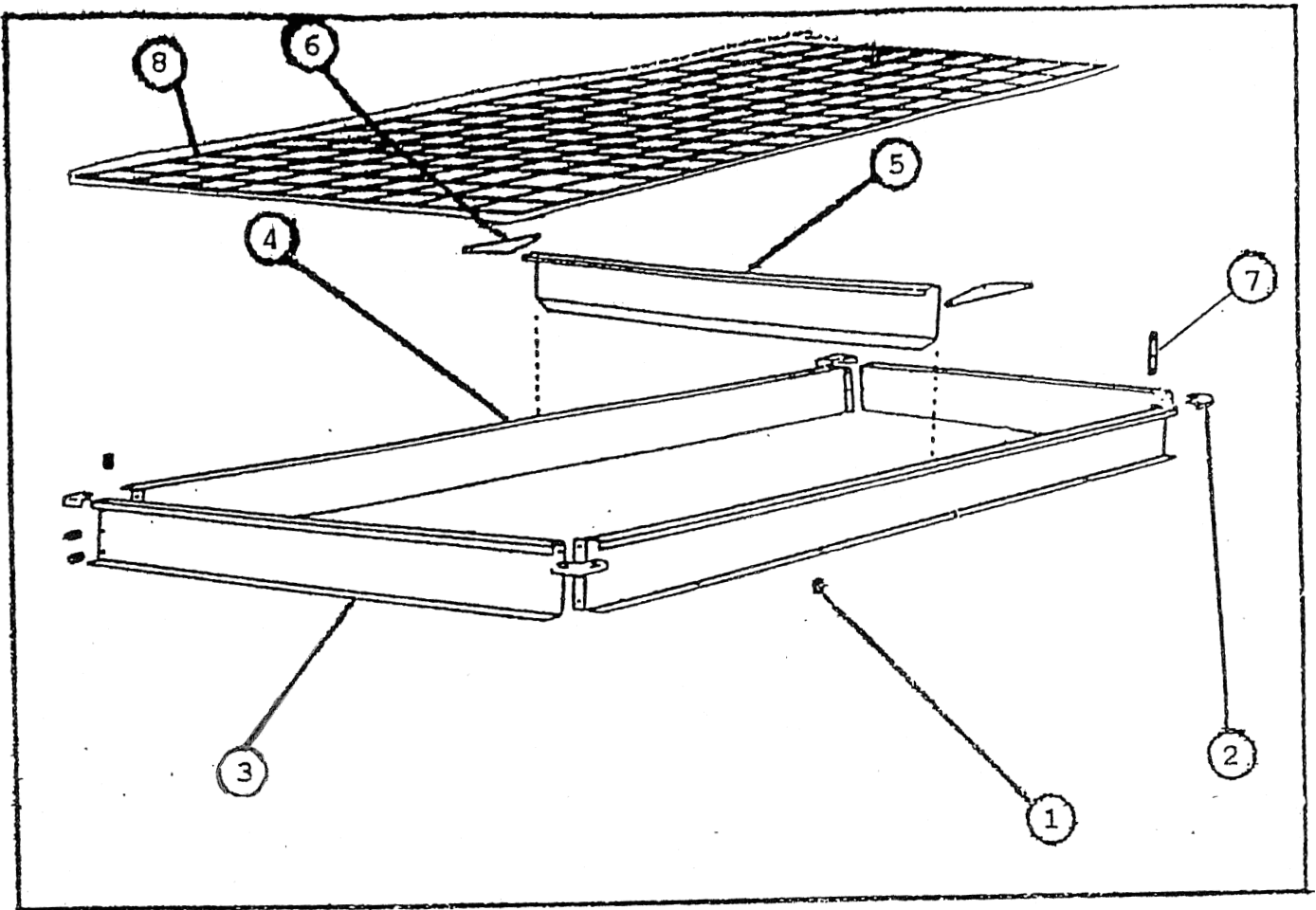
# 8 FT. BOX EXTENSION WITH DIVIDER



## 8FT. BOX EXTENSION WITH DIVIDER

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                                                                  | <u>QUANTITY</u> |
|-----------------|-----------------|-------------------------------------------------------------------------------------|-----------------|
| 1               |                 | FASTENERS (INCLUDES 5/16 X 3/4<br>PAN HEAD MACHINE BOLT WITH NUTS &<br>LOCKWASHER.) | 48              |
| 2               | 20120           | CORNER PIECES                                                                       | 4               |
| 3               | 20084           | TOP BOX END                                                                         | 2               |
| 4               | 20080           | TOP BOX SIDES (8 FT. )                                                              | 2               |
| 5               | 20350           | TOP BOX CENTER                                                                      | 1               |
| 6               | 20510           | DIVIDER PLATE                                                                       | 2               |
| 7               | 20189           | 8 FT. SCREEN                                                                        | 1               |
| 8               | 28640           | CORNER ANGLE                                                                        | 4               |

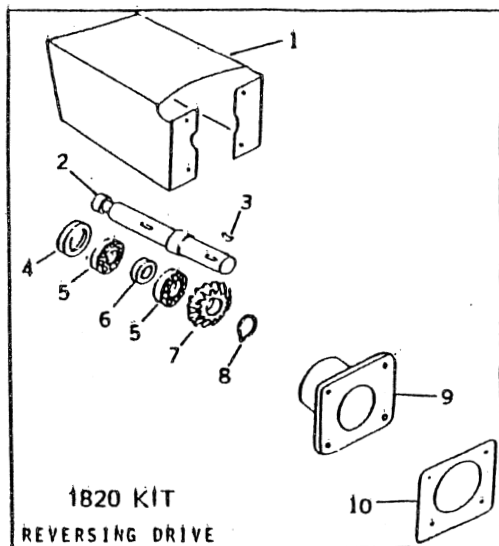
# 10 FT. BOX EXTENSION WITH DIVIDER



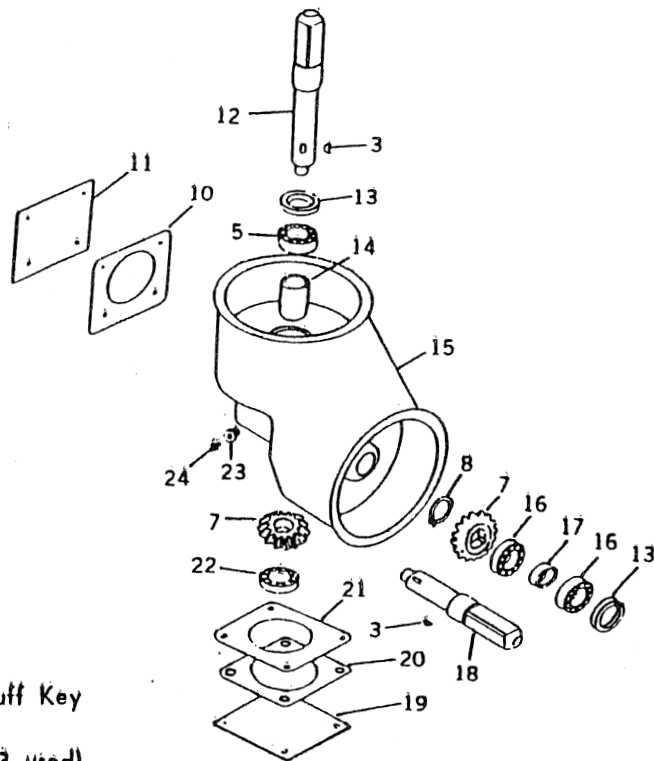
## 10FT. BOX EXTENSION WITH DIVIDER

| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                                                                   | <u>QUANTITY</u> |
|-----------------|-----------------|--------------------------------------------------------------------------------------|-----------------|
| <u>1</u>        |                 | FASTENERS (INCLUDES 5/16 X 3/4 PAN<br>HEAD MACHINE SCREWS WITH NUTS &<br>LOCKWASHER) | 48              |
| 2               | 20120           | CORNER PIECES                                                                        | 4               |
| 3               | 20084           | TOP BOX END                                                                          | 2               |
| 4               | 35820           | TOP BOX SIDES                                                                        | 2               |
| 5               | 20360           | TOP BOX CENTER                                                                       | 1               |
| 6               | 20510           | DIVIDER PLATE                                                                        | 2               |
| 7               | 26840           | CORNER ANGLE                                                                         | 4               |
| 8               | 20193           | 10 FT. SCREEN                                                                        | 1               |

# AUGER TUBE ELBOW AND REVERSING DRIVE (For 8-inch Delivery Elevators)

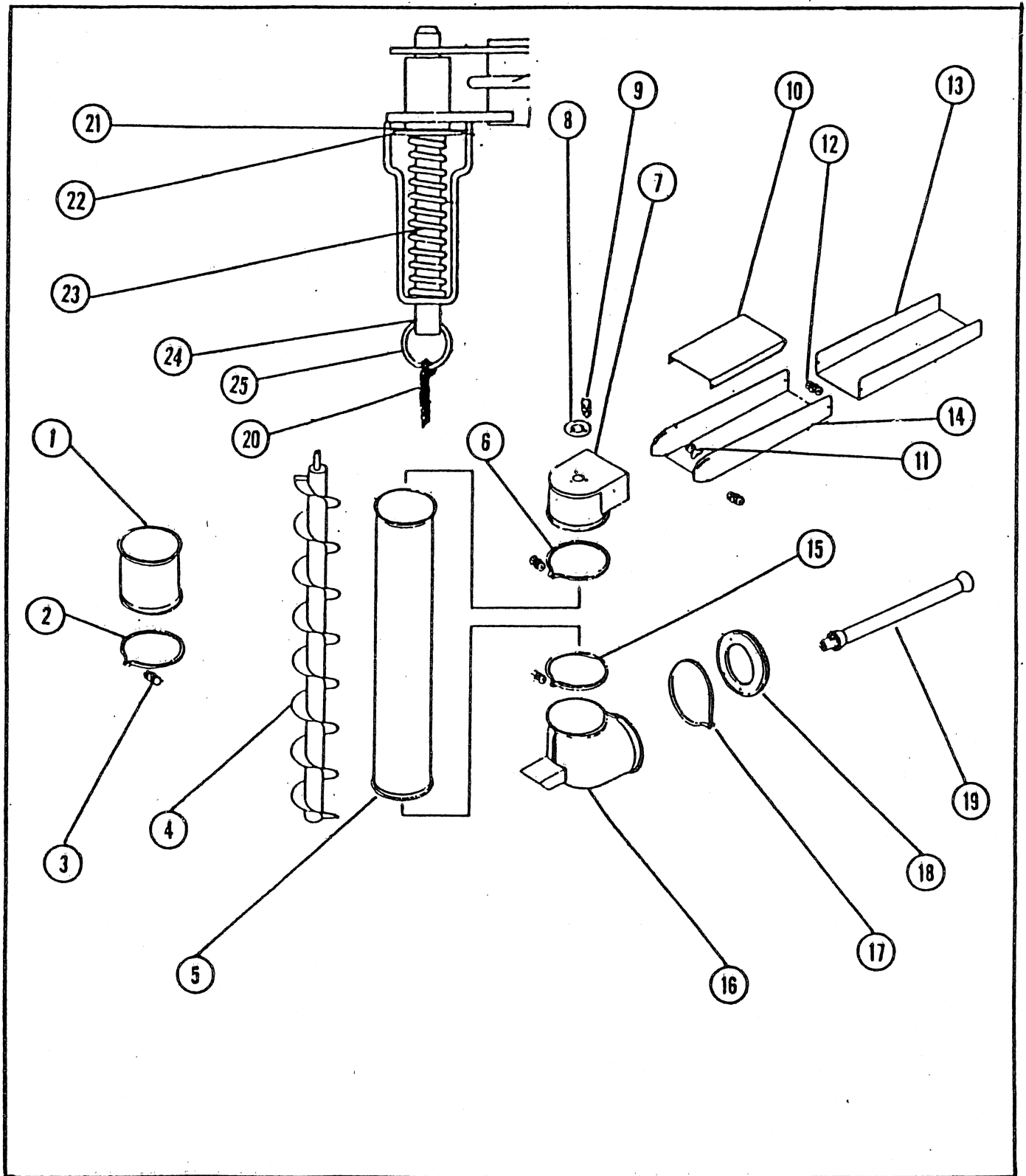


## 18202 ELBOW ASSY. COMPLETE



| Key No. | Part No. | Description                          |
|---------|----------|--------------------------------------|
| 1       | 18490    | P.T.O. Shield                        |
| 2       | 18480    | Input Shaft                          |
| 3       | 18350    | 1/4 x 1 Woodruff Key                 |
| 4       | 23090    | 1 1/4" Seal                          |
| 5       | 23060    | Bearing 7R18 (3 used)                |
| 6       | 18300    | Spacer                               |
| 7       | 18280    | 14T Gear                             |
| 8       | 16680    | Snap Ring                            |
| 9       | 18460    | Bearing Holder (Casting No. NAM102G) |
| 10      | 18340    | Rear Cover Gasket                    |
| 11      | 18321    | Rear Cover Plate                     |
| 12      | 18262    | Vertical Shaft                       |
| 13      | 23100    | 1 3/8" Seal (2 used)                 |
| 14      | 18270    | Long Gear Spacer                     |
| 15      | 18222    | Elbow Casting No. NAM153M            |
| 16      | 23020    | Bearing 3206                         |
| 17      | 18360    | Short Gear Spacer                    |
| 18      | 18242    | Horizontal Shaft                     |
| 19      | 18370    | Bottom Cover Plate                   |
| 20      | 18390    | Bottom Cover Shim (Use as required)  |
| 21      | 18380    | Bottom Cover Gasket                  |
| 22      | 23040    | Bearing 3305                         |
| 23      | 18290    | Reducing Bushing 1/2" to 1/8"        |
| 24      |          | Straight Zerk                        |

11 INCH DIAMETER DELIVERY ELEVATOR

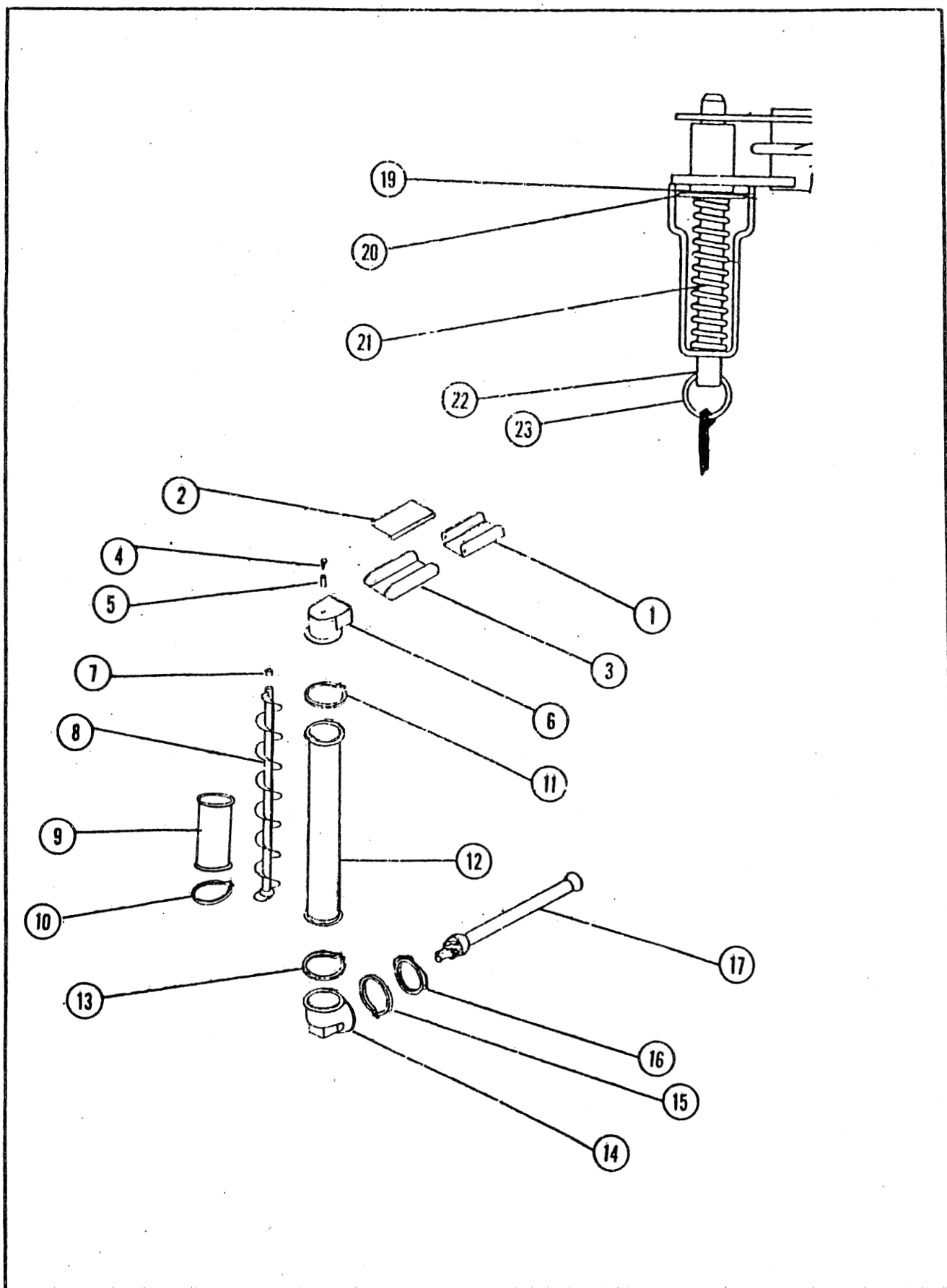




11 INCH  
DIAMETER DELIVERY ELVEATOR

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                | <u>QTY</u> |
|-------------|-----------------|-----------------------------------|------------|
| 1           | 20336           | 1 FOOT EXTENSION WITH LOCK SYSTEM | 1          |
|             | 20331           | 2 FOOT EXTENSION WITH LOCK SYSTEM | 1          |
|             | 20332           | 3 FOOT EXTENSION WITH LOCK SYSTEM | 1          |
| 2           | 20420           | NARROW CLAMP                      | 1          |
| 3           | 900049          | 5 /16 X 2 CAP SCREW               | 1          |
| 4           | 23900           | 7 FOOT AUGER                      | 1          |
|             | 24100           | 8 FOOT AUGER                      | 1          |
|             | 24200           | 9 FOOT AUGER                      | 1          |
|             | 21075           | 11 FOOT AUGER                     | 1          |
| 5           | 20219           | BASE TUBE 52"                     | 1          |
|             | 29350           | BASE TUBE 64"                     | 1          |
| 6           | 24022           | SWIVEL CLAMP                      | 1          |
| 7           | 29410           | SWIVEL HEAD                       | 1          |
| 8           | 23820           | 7/8 FLANGE BEARING                | 1          |
|             | 23822           | 7/8 FLANGE BEARING WOODEN         | 1          |
|             | 28300           | 1 1/8 FLANGE BEARING              | 1          |
| 9           | 900035          | 5/16 X 3/4 CAP SCREW              | 1          |
| 10          | 23800           | SPOUT COVER                       | 1          |
| 11          | 900035          | 5/16 X 3/4 CAP SCREW              | 1          |
| 12          | 900035          | 5/16 X 3/4 CAP SCREW              | 1          |
| 13          | 20016           | SPOUT EXTENSION                   | 1          |
| 14          | 20010           | SPOUT                             | 1          |
| 15          | 24000           | LOCK CLAMP                        | 1          |
| 16          | 22803           | FRONT DELIVERY ELBOW ASSY         | 1          |
| 17          | 20580           | WIDE CLAMP                        | 1          |
| 18          | 20034           | RING                              | 1          |
| 19          | 2075            | PTO COMPLETE                      | 1          |
| 20          | 20322           | 7FOOT ROPE                        | 1          |
|             | 20323           | 8 FOOT ROPE                       | 1          |
|             | 20324           | 9 FOOT ROPE                       | 1          |
| 21          | 902796          | SNAP RING                         | 1          |
| 22          | 900114          | 1/ 2 INCH FLAT WASHER             | 1          |
| 23          | 20377           | SPRING                            | 1          |
| 24          | 20375           | LOCK PIN                          | 1          |
| 25          | 20217           | RING                              | 1          |

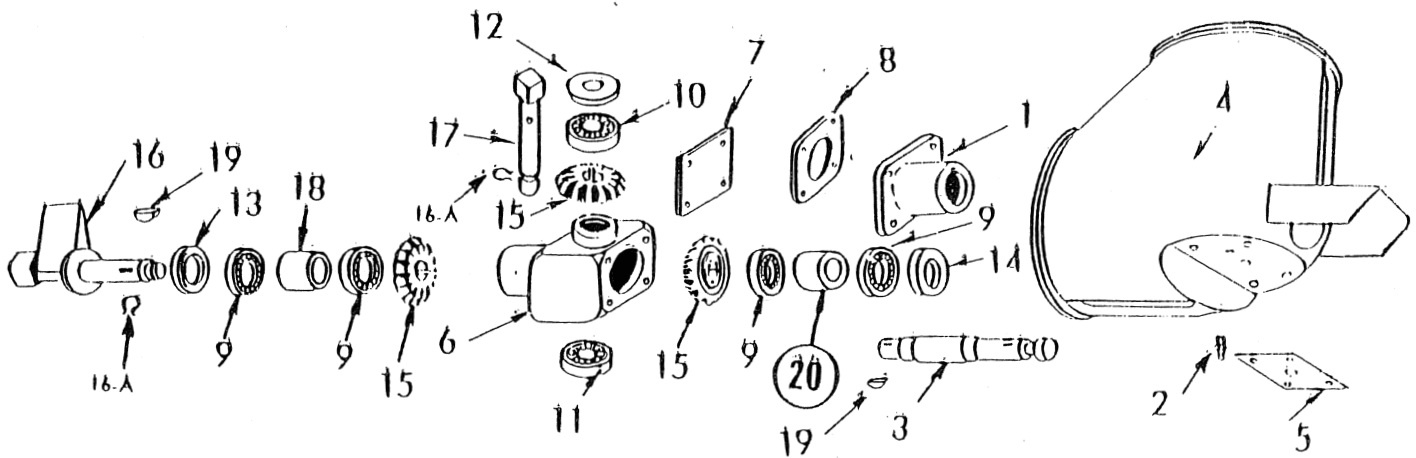
# 8 INCH DELIVERY ELEVATOR



# 8 INCH DIAMETER DELIVERY ELEVATOR

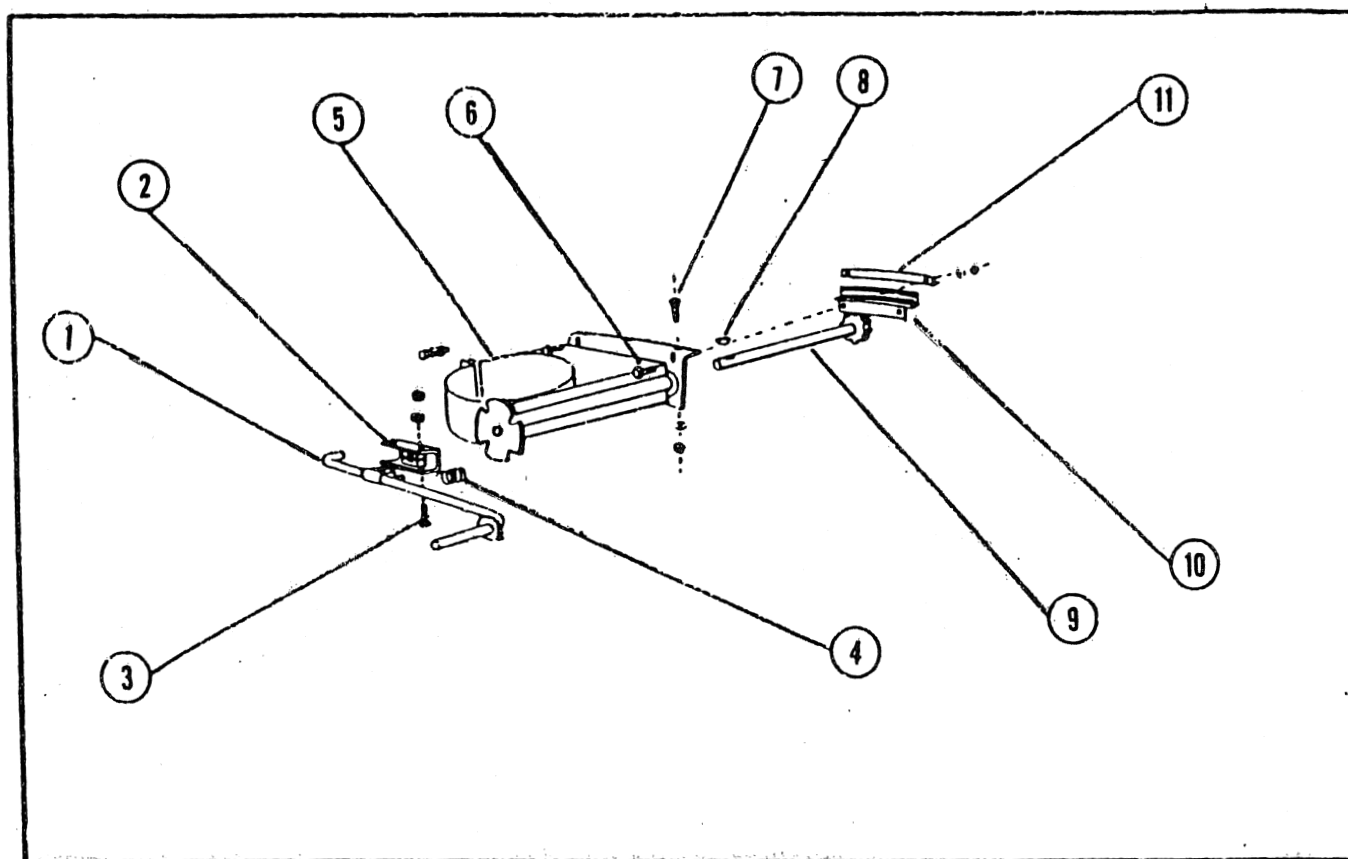
| <u>ITEM NO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                 | <u>QUANITIY</u> |
|-----------------|-----------------|------------------------------------|-----------------|
| 1               | 10042           | SPOUT EXTENSION                    | 1               |
| 2               | 17031           | SPOUT COVER                        | 1               |
| 3               | 10036           | LONG SPOUT                         | 1               |
| 4               | 15761           | 9/16 X 1 CAP SCREW                 | 1               |
| 5               | 15751           | BEARING SHAFT                      | 1               |
| 6               | 19392           | SWIVEL HEAD OLD STYLE              | 1               |
|                 | 19396           | SWIVEL HEAD WITH BEARING NEW STYLE | 1               |
|                 | 19394           | SWIVEL HEAD LESS BEARING NEW STYLE |                 |
|                 | 28300           | 1 1/8 BEARING FOR NEW STYLE HEAD   | 1               |
| 7               | 17281           | AUGER BUSHING                      | 1               |
| 8               | 18601           | 7 FOOT AUGER                       | 1               |
|                 | 18701           | 8 FOOT AUGER                       | 1               |
|                 | 18801           | 9 FOOT AUGER                       | 1               |
| 9               | 17052           | 1 FOOT EXTENSION                   | 1               |
|                 | 17082           | 2 FOOT EXTENSION                   | 1               |
|                 | 17122           | 3 FOOT EXTENSION                   | 1               |
| 10              | 17100           | NARROW RING CLAMP                  | 1               |
| 11              | 17102           | SWIVEL RING CLAMP                  | 1               |
| 12              | 19352           | BASE TUBE 54"                      | 1               |
|                 | 19350           | BASE TUBE 66"                      | 1               |
| 13              | 16840           | HEAVY RING CLAMP                   | 1               |
| 14              | 18202           | ELBOW GEARBOX COMPLETE             | 1               |
| 15              | 15580           | VEE RING CLAMP                     | 1               |
| 16              | 10024           | RING CASTING                       | 1               |
| 17              | 2075            | PTO COMPLETE                       | 1               |
| 18              | 10322           | 7' ROPE                            | 1               |
|                 | 10323           | 8' ROPE                            | 1               |
|                 | 10324           | 9' ROPE                            | 1               |
| 19              | 902796          | SNAP RING                          | 1               |
| 20              | 900114          | FLAT WASHER                        | 1               |
| 21              | 20377           | SPRING                             | 1               |
| 22              | 20375           | LOCK PIN                           | 1               |
| 23              | 20217           | RING                               | 1               |

# AUGER TUBE ELBOW (For 11-inch Delivery Elevator)



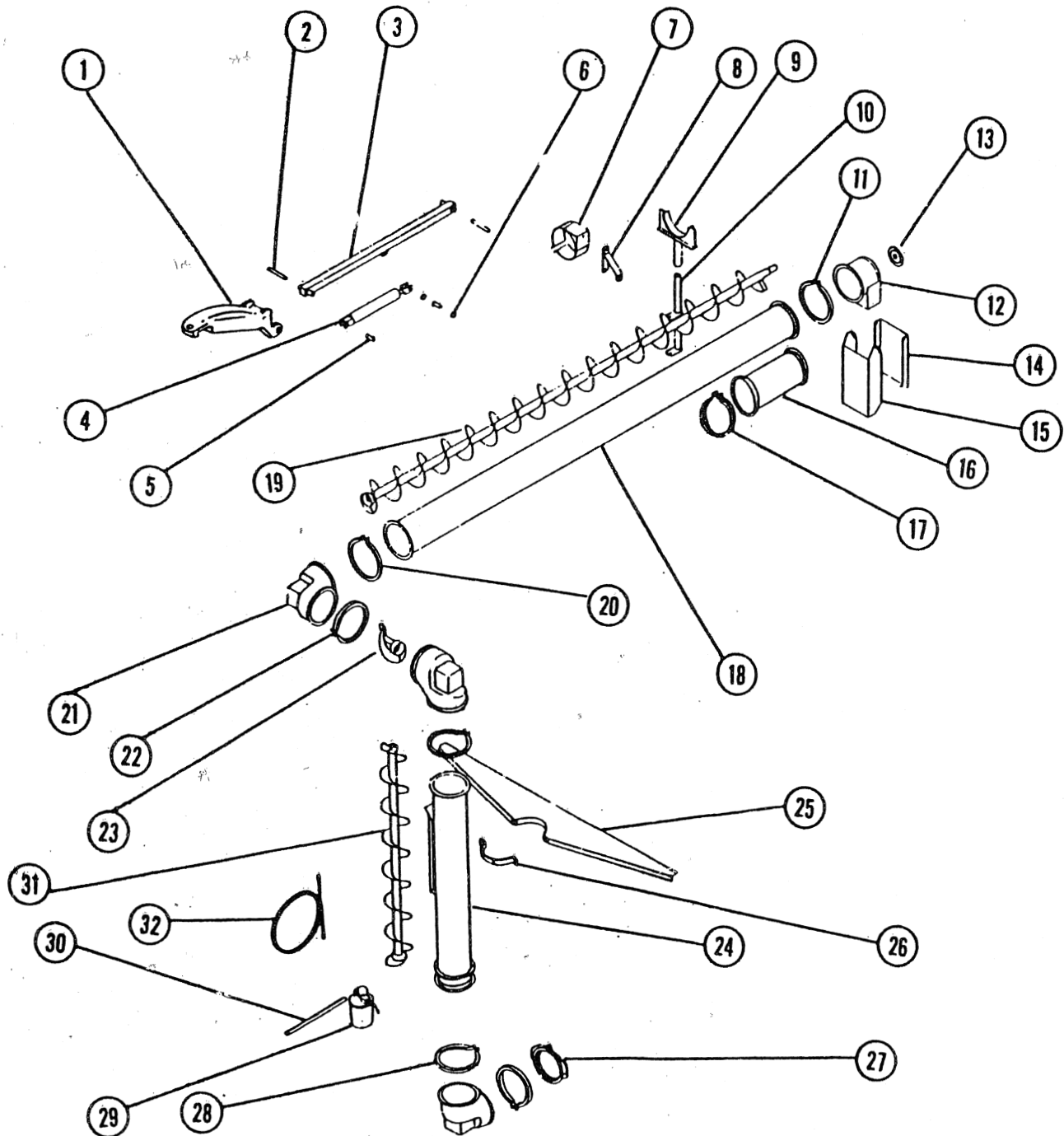
| Key No. | Part No. | Description                                                                                             |
|---------|----------|---------------------------------------------------------------------------------------------------------|
| A*      | 22802    | R.F. Elbow Assy.                                                                                        |
| B*      | 22603    | R (Only) Elbow Assy.                                                                                    |
| C*      | 22901    | R (Only) Gear Box Assy.                                                                                 |
| D*      | 23401    | R & F Gear Box Assy. (C & E Combined)                                                                   |
| E*      | 23411    | Bearing Holder Assy. (9-9-12-15-18-3-1)                                                                 |
| 1       | 23441    | Bearing Holder Casting (NAM107G)                                                                        |
| 2       |          | 1/8" Straight-Zerk                                                                                      |
| 3       | 23420    | Input Shaft                                                                                             |
| 4       | 22822    | R.F. Elbow Case Only                                                                                    |
|         | 22622    | R (Only) Elbow Case Only                                                                                |
| 5       | 22860    | Lock Plate                                                                                              |
| 6       | 22951    | Gear Box Casting (NAM106G)                                                                              |
| 7       | 22980    | Cover (Rear Only)                                                                                       |
| 8       | 22990    | Rear (only) Cover Plate Gasket                                                                          |
|         | 22991    | R. F. Gasket                                                                                            |
| 9       | 23020    | Bearing 3206                                                                                            |
| 10      | 23060    | Bearing 7R18                                                                                            |
| 11      | 23040    | Bearing 3305                                                                                            |
| 12      | 23080    | 1 1/8" Seal                                                                                             |
| 13      | 23090    | 1 1/4" Seal                                                                                             |
| 14      | 23080    | 1 1/8" Seal                                                                                             |
| 15      | 23140    | 17T Gear                                                                                                |
| 16      | 23160    | Horizontal Shaft                                                                                        |
| 16A     | 16680    | Snap Ring                                                                                               |
| 17      | 23260    | Vertical Shaft                                                                                          |
| 18      | 23320    | Spacer                                                                                                  |
| 19      | 16760    | Woodruff Key 5/16" x 1"                                                                                 |
| (20)    | 23330    | Gear Spacer Long                                                                                        |
|         |          | (For Repairs Only) If input shaft doesn't measure 1 3/8" at the largest diameter this spacer is needed. |

# AUGER TUBE CRANK



| ITEM | PART NO. | DESCRIPTION                         | QTY |
|------|----------|-------------------------------------|-----|
| 1    | 29940    | LOCK CRANK                          | 1   |
| 2    | 29990    | CRANK CONNECTOR                     | 1   |
| 3    | 900073   | 3/8 X 2 CAP SCREW                   | 4   |
|      | 900087   | 3/8 NUT                             | 4   |
|      | 900084   | 3/8 LOCK WASHER                     | 4   |
| 4    | 20890    | SPRING                              | 1   |
| 5    | 19740    | CRANK FRAME (8 INCH DISCHARGE ELE.) | 1   |
|      | 29740    | CRANK FRAME (11 IN. DISCHARGE ELE.) | 1   |
| 6    | 900035   | 5/16 X 3/4 CAP SCREW                | 2   |
|      | 900054   | 5/16 NUT                            | 2   |
|      | 900052   | 5/16 LOCK WASHER                    | 2   |
| 7    | 903016   | 5/16 X 2 CAP SCREW                  | 2   |
|      | 900035   | 5/16 NUT                            | 2   |
|      | 900054   | 5/16 LOCK WASHER                    | 2   |
| 8    | 902465   | WOODRUFF KEY ( 1/8 X 1/ 2)          | 1   |
| 9    | 19860    | GEAR SHAFT (8" DISCHARGE ELEVATOR)  | 1   |
|      | 29860    | GEAR SHAFT (11" DISCHARGE ELEVATOR) | 1   |
| 10   | 29681    | HOLDER GUIDE                        | 1   |
| 11   | 29700    | HOLDER SHOE                         | 1   |
| 12   | 19660    | CRANK ASSY 8" DISCHARGE             | 1   |
| 13   | 29960    | CRANK ASSY 11" DISCHARGE            | 1   |
| 14   | 900451   | BUSHING                             | 2   |

# 8 INCH DELIVERY BOOM ELEVATOR

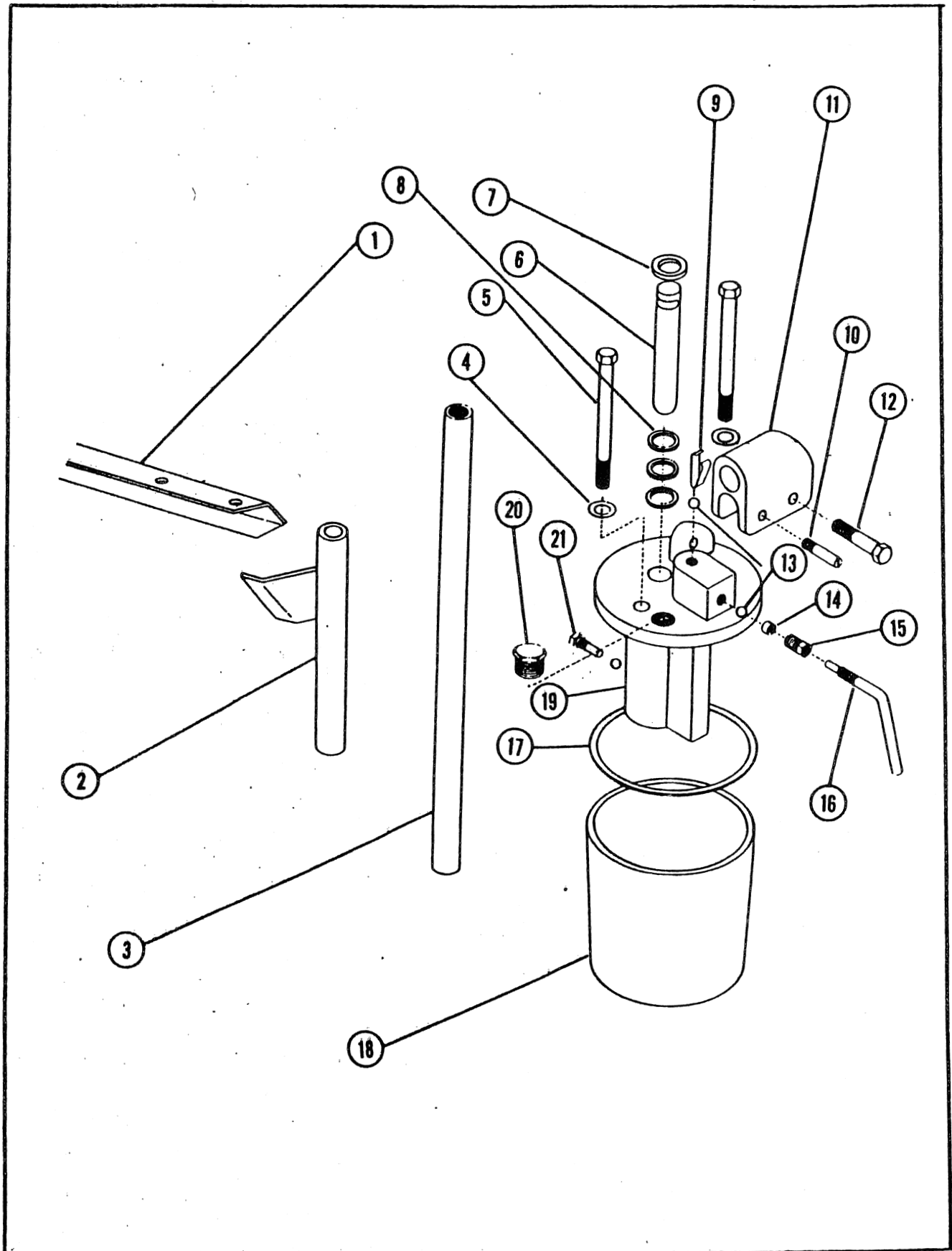


78090 Bearing for only 1990 discharge augers

# 8 INCH DELIVERY BOOM ELEVATOR

| ITEM | PART NO. | DESCRIPTION                                | QTY |
|------|----------|--------------------------------------------|-----|
| 1    | 28560    | LIFT MOUNT CASTING NAM 174                 | 1   |
| 2    | 28520    | LIFT MOUNT PIN                             | 2   |
| 3    | 75601    | LIFT ARM                                   | 1   |
| 4    | 70662    | LIFT CYLINDER                              | 1   |
| 5    | 28500    | RAM PIN                                    | 2   |
| 6    | 28510    | SPACER                                     | 2   |
| 7    | 28600    | LIFT BAND                                  | 1   |
| 8    | 28620    | BRACKET                                    | 1   |
| 9    | 27911    | CRADLE                                     | 1   |
| 10   | 27880    | CRADLE BRACKET                             | 1   |
| 11   | 17102    | SWIVEL CLAMP                               | 1   |
| 12   | 19394    | SWIVEL HEAD LESS BEARING                   | 1   |
|      | 19396    | SWIVEL HEAD WITH BEARING                   |     |
| 13   | 28300    | BEARING                                    | 1   |
| 14   | 17031    | SPOUT COVER                                | 1   |
| 15   | 17021    | SPOUT                                      | 1   |
| 16   | 17052    | 1 FT. EXTENSION W/LOCK SYSTEM              | 1   |
|      | 17082    | 2 FT. EXTENSION W/LOCK SYSTEM              | 1   |
|      | 17122    | 3 FT. EXTENSION W/LOCK SYSTEM              | 1   |
| 17   | 17100    | NARROW CLAMP                               | 1   |
| 18   | 13214    | 10 FOOT TUBE                               | 1   |
|      | 71162    | 14 FOOT TUBE                               | 1   |
|      | 71192    | 17 FOOT TUBE                               | 1   |
| 19   | 20236    | 12 FOOT AUGER                              | 1   |
|      | 20258    | 13 FOOT AUGER                              | 1   |
|      | 20260    | 14 FOOT AUGER                              | 1   |
|      | 20262    | 15 FOOT AUGER                              | 1   |
|      | 20268    | 16 FOOT AUGER                              | 1   |
|      | 20275    | 17 FOOT AUGER                              | 1   |
|      | 20276    | 18 FOOT AUGER                              | 1   |
|      | 20277    | 19 FOOT AUGER                              | 1   |
| 20   | 16840    | HEAVY CLAMP                                | 2   |
| 21   | 18202    | ELBOW GEARBOX ASSY                         | 3   |
| 22   | 15580    | VEE CLAMP                                  | 2   |
| 23   | 28420    | TRANSFER AUGER                             | 1   |
| 24   | 21000    | MANUAL VERTICAL TUBE                       | 1   |
|      | 20976    | REMOTE VERTICAL TUBE                       | 1   |
| 25   | 27840    | VERTICAL HOLDER                            | 1   |
| 26   | 27820    | HOLDER BAND                                | 1   |
| 27   | 10024    | RING                                       | 1   |
| 28   | 28280    | CLAMP WITH ZERK                            | 1   |
| 29   | 28680    | PUMP                                       | 1   |
| 30   | 28660    | PUMP HANDLE                                | 1   |
| 31   | 28260    | VERTICAL AUGER                             | 1   |
| 32   | 28650    | HYDRAULIC HOSE                             | 1   |
| 33   | 19760    | WEAR BAND                                  | 1   |
| 34   | 28230    | 1/2 x 11 BOLT 900112                       | 1   |
| 35   | 902796   | SNAP RING                                  | 1   |
| 36   | 900114   | FLAT WASHER                                | 1   |
| 37   | 20377    | SPRING                                     | 1   |
| 38   | 20375    | LOCK PIN                                   | 1   |
| 39   | 20217    | RING                                       | 1   |
| 40.  | 78090    | HANGER BEARING FOR AUGERS<br>OVER 14' LONG | 1   |

HYDRAULIC PUMP  
(For Delivery Boom Elevator)

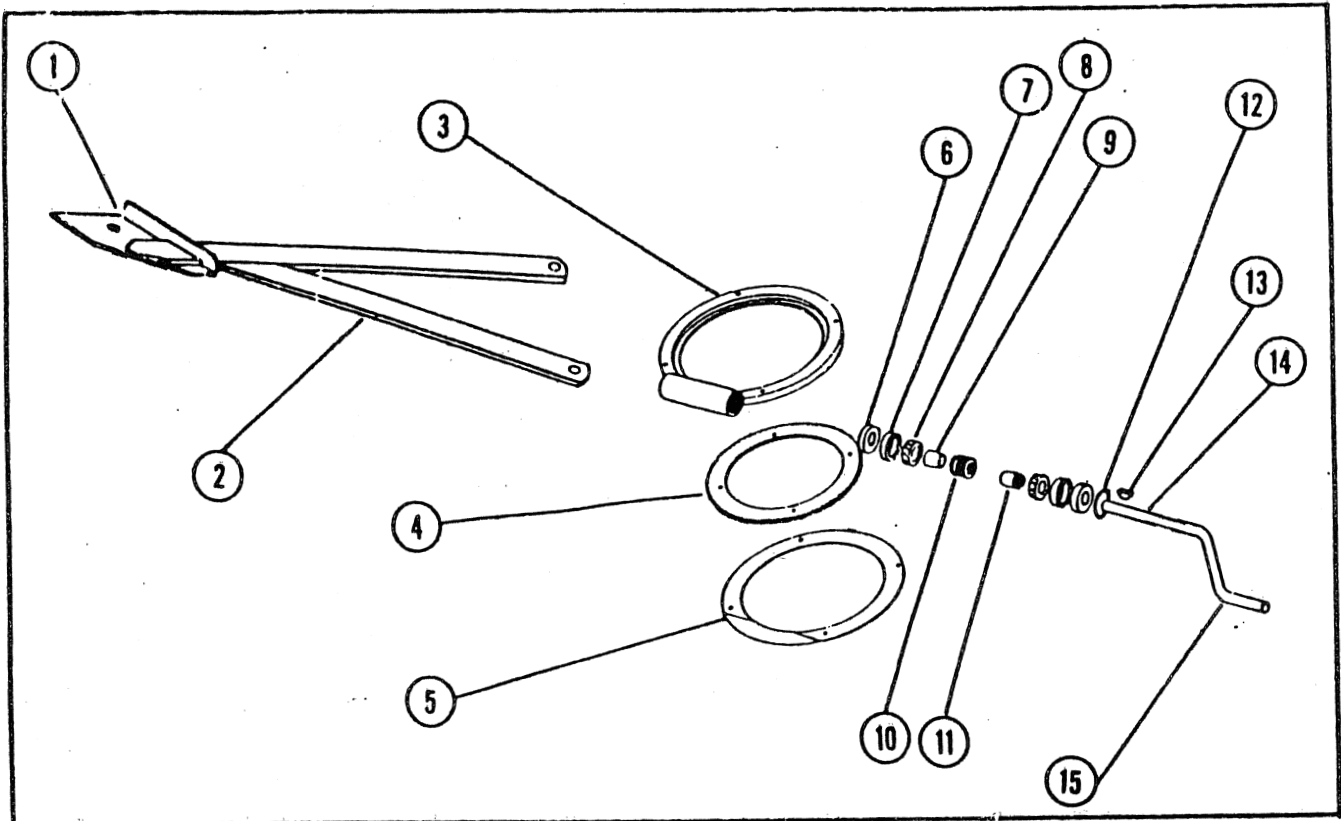




HYDRAULIC PUMP  
(FOR DELIVERY BOOM ELEVATOR)

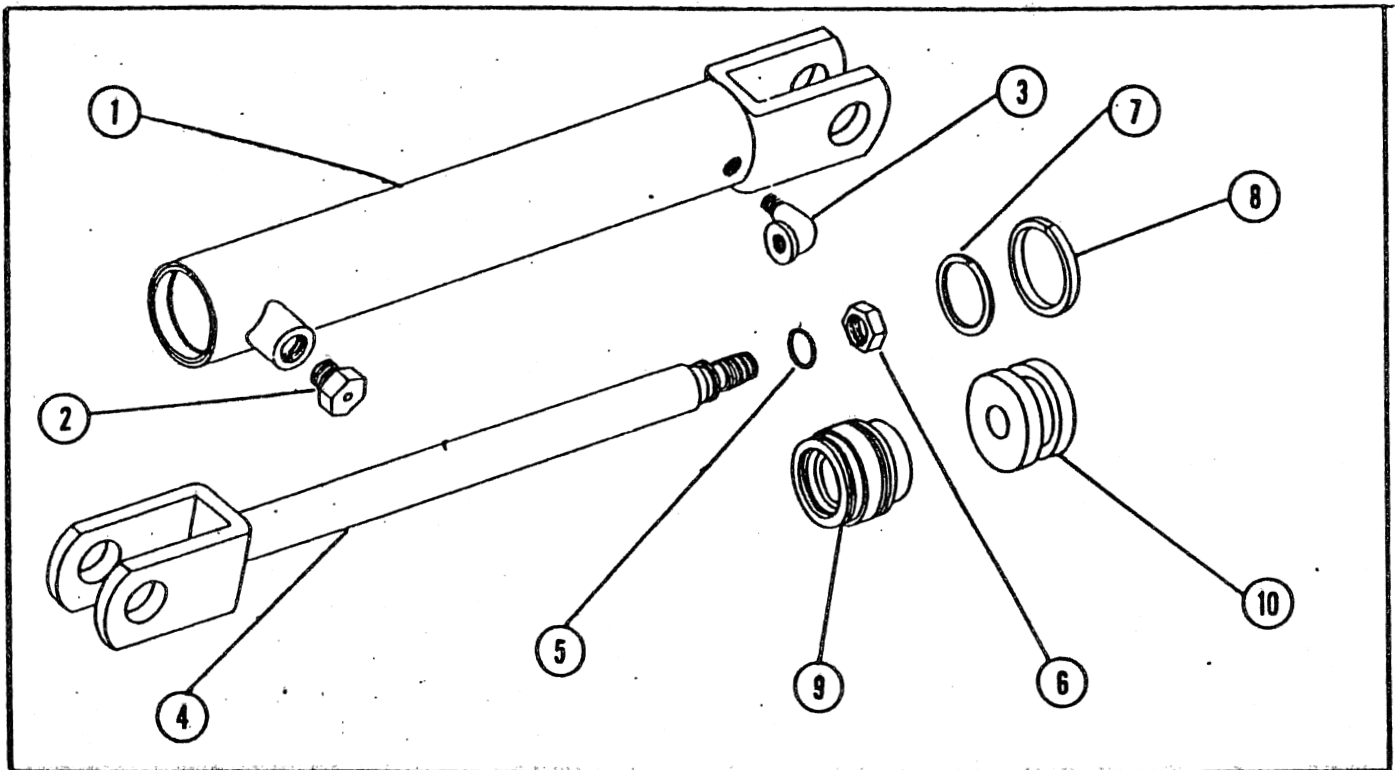
| <u>ITEMNO.</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           | <u>QUANITIY</u> |
|----------------|-----------------|------------------------------|-----------------|
| 1              | 21006           | PUMP BRACKET                 | 1               |
| 2              | 21016           | PUMP HANDLE SOCKET           | 1               |
| 3              | 28660           | PUMP HANDLE                  | 1               |
| 4              | 28690           | LEAD WASHER                  | 2               |
| 5              | 900081          | 3/8 X 5 INCH CAP SCREW       | 2               |
| 6              | 28840           | PUMP PISTON                  | 1               |
| 7              | 28821           | SEAL                         | 1               |
| 8              | 28720           | PISTON SEAL RING             | 3               |
| 9              | 28900           | CHECH VALVE SPRING           | 1               |
| 10             | 28950           | ROCKER STUD                  | 1               |
| 11             | 28940           | ROCKER & STUD                | 1               |
| 12             |                 | 3/8 X 2 INCH CAP SCREW       | 1               |
| 13             | 28740           | CHECK VALVE BALL             | 3               |
| 14             | 28730           | PACKING RING                 | 1               |
| 15             | 28890           | NEEDLE VALVE SLEEVE          | 1               |
| 16             | 28880           | NEEDLE VALVE                 | 1               |
| 17             | 28710           | RESERVOIR GASKET             | 1               |
| 18             | 28800           | PUMP FESERVOIR CASTING       | 1               |
| 19             | 28820           | PUMP BODY CASTING ONLY       | 1               |
| 20             | 28770           | ½ INCH FILLER PLUG 900914    | 1               |
| 21             | 28860           | LIMIT BOLT                   | 1               |
|                | 28670           | PUMP BODY ASSEMBLY           |                 |
|                | 28830           | PUMP REPAIR KIT              |                 |
|                |                 | (INDLUDES ITEMS 4,8,9,13,14) |                 |
|                | 28680           | COMPLETE HAND PUMP           |                 |

**SWING GEAR**  
(For Delivery Boom Elevator)



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>       | <u>QTY</u> |
|-------------|-----------------|--------------------------|------------|
| 1           | 21022           | STABILIZER ARM BRACKET   | 1          |
| 2           | 21010           | STABILIZER ARM           | 1          |
| 3           | 28100           | RING GEAR CASTING        | 1          |
| 4           | 28140           | RING GEAR                | 1          |
| 5           | 28120           | CASE COVER               | 1          |
| 6           | 21062           | SEAL                     | 2          |
| 7           | 21061           | BEARING CUP              | 2          |
| 8           | 21060           | BEARING CONE             | 2          |
| 9-11        | 21063           | WORM GEAR SPACER         | 2          |
| 10          | 28160           | WORM GEAR                | 1          |
| 12          | 28080           | SNAP RING (901038)       | 1          |
| 13          | 18350           | 1/4 X 1 WOODRUFF KEY     | 1          |
| 14          | 20076           | WORM GEAR SHAFT          | 1          |
|             | 902391          | 3/16 X 3/4 KEY FOR CRANK | 1          |
| 15          | 21082           | SWING GEAR CRANK         | 1          |
|             | 28060           | SWING GEAR ASSEMBLY      | 1          |

# **HYDRAULIC CYLINDER** (For Delivery Boom Elevator)

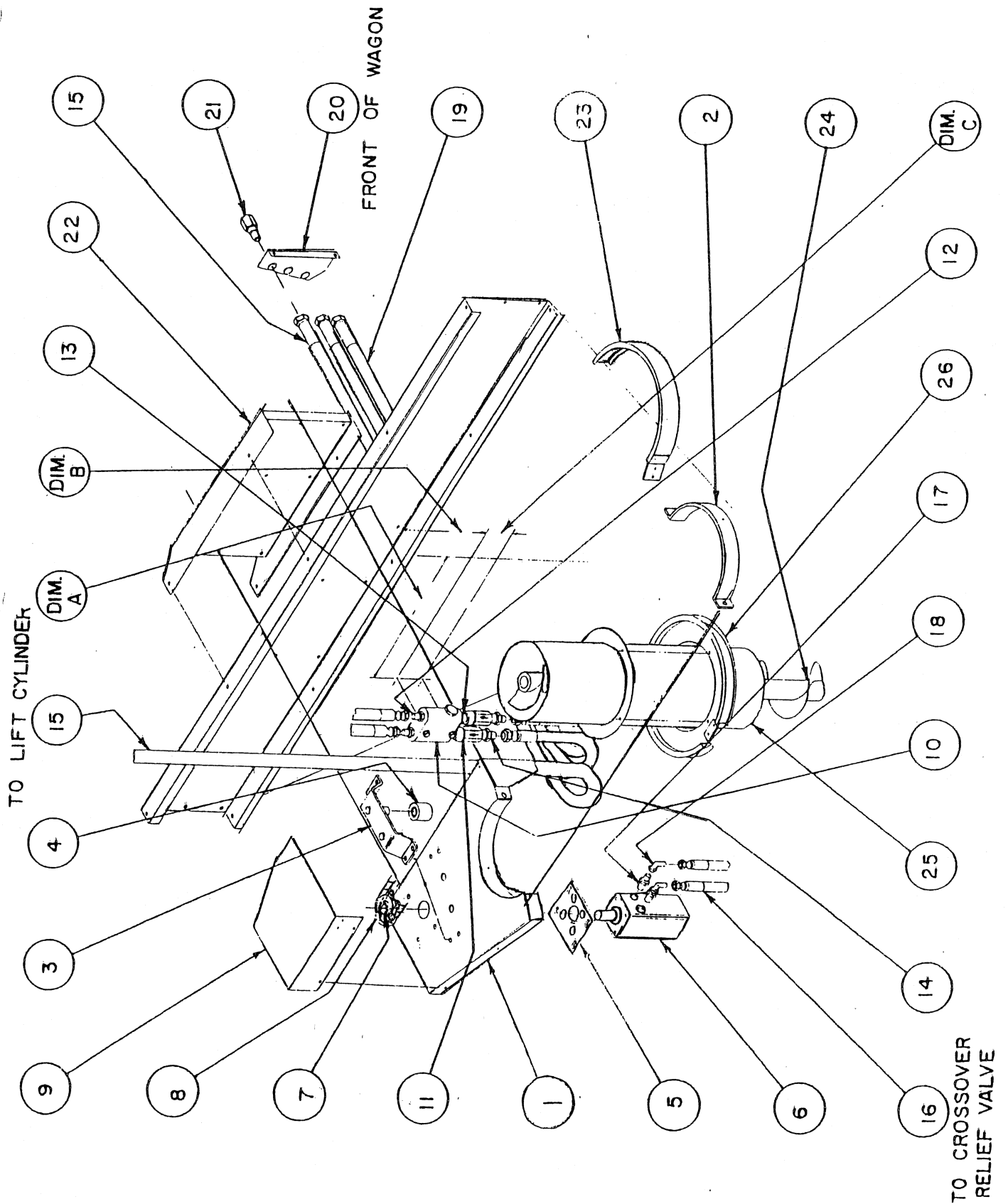


| <u>Item</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>          | <u>QTY</u> |
|-------------|-----------------|-----------------------------|------------|
| 1           | 29280           | TUBE                        | 1          |
| 2           | 28290           | BREATHER                    | 1          |
| 3           | 29130           | ELBOW FOR CYLINDER MANUAL   | 1          |
|             | 902468          | ELBOW FOR CYLINDER REMOTE   | 1          |
| 4           | 29270           | ROD                         | 1          |
| 5           | 29160           | ROD SEAL RING               | 1          |
| 6           | 29080           | JAM NUT                     | 1          |
| 7           | 29240           | SPACER LOCK RING            | 1          |
| 8           | 29070           | SPACER                      | 1          |
| 9           | 29060           | HEAD                        | 1          |
| 10          | 29050           | PISTON                      | 1          |
| 11          | 70662           | HYDRAULIC CYLINDER COMPLETE | 1          |
|             | 70663           | REPAIR KIT FOR NEW CYLINDER | 1          |
|             | 70778           | RESTRICTOR FOR REMOTE       | 1          |

29040

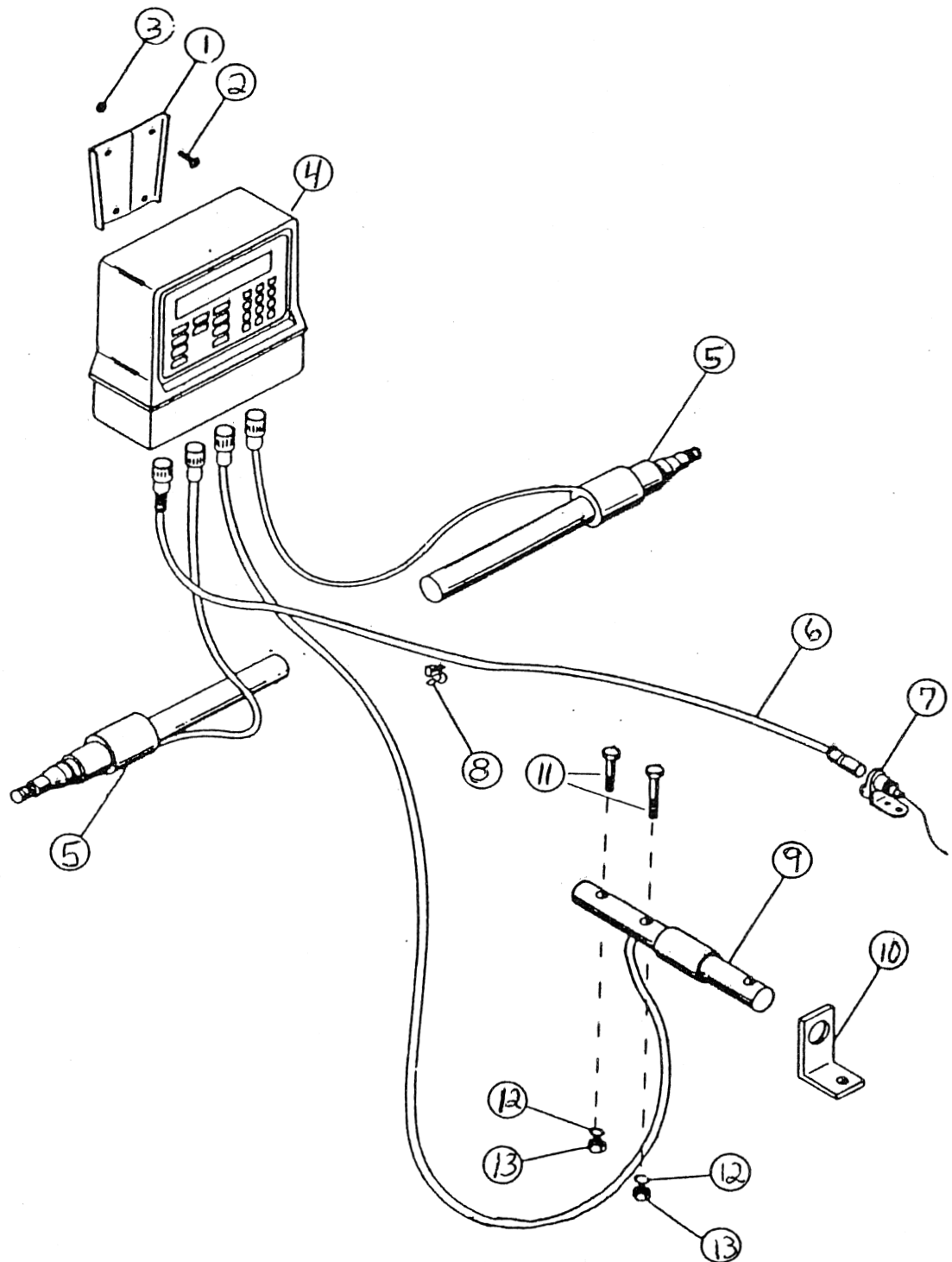
Repair Kit ( Old Style)

# HYDRAULIC REMOTE ASSEMBLY



| KEY NO. | PART NO. | DESCRIPTION                                        | QTY. | KEY NO. | PART NO. | DESCRIPTION                                                                               | QTY. |
|---------|----------|----------------------------------------------------|------|---------|----------|-------------------------------------------------------------------------------------------|------|
| 1       | 65192    | Elevator Holder Ass'y                              | 1    | 11      | 65184    | Flow Control                                                                              | 2    |
| 2       | 901003   | 1/4 inch - 28 St.- Zerk Band                       | 1    | 12      | 100519   | Adapter 9/16 inch - 18, 37 degree Flare to 3/4 inch - 16, 37 degree Flare                 | 2    |
|         | 902891   | 1/2 inch - 13 x 1 1/2 inch Cap Screw               | 1    | 13      | 904451   | St. Adapter 1/2 inch NPT to 3/4 inch - 16, 37 degree Flare                                | 2    |
|         | 900115   | 1/2 inch - 13 Hex Nut                              | 2    |         | 101151   | #8 O-Ring                                                                                 | 2    |
|         | 900114   | 1/2 inch Flat Washer                               | 4    | 14      | 902468   | St. Adapter 1/2 inch NPT to 9/16 inch - 18, 37 degree Flare                               | 2    |
|         | 900113   | 1/2 inch Lock Washer                               | 2    | 15      | 20387    | Hose Ass'y (Lift Cyl) 18 Foot 2 1/2 inch Valve) 24 1/2 inches                             | 2    |
| 3       | 901003   | 1/4 inch - 28 St.- Zerk                            | 1    | 16      | 70573    | Hose Ass'y (Hydraulic Motor to Relief Valve)                                              | 1    |
|         | 65186    | Roller Mount Ass'y                                 | 4    | 17      | 902468   | St. Adapter 1/2 inch NPT to 9/16 inch - 18, 37 degree Flare                               | 2    |
|         | 900064   | 3/8 inch - 16 x 1 inch Cap Screw                   | 2    | 18      | 902548   | 90 Degree Swivel Elbow 9/16 inch - 18, 37 Degree Flare to 9/16 inch - 18, 37 Degree Flare | 2    |
|         | 900087   | 3/8 inch - 16 Hex Nut                              | 2    | 19      | 20395    | Hose Ass'y (Relief Valve to Wagon Front) 10 Feet 9 1/2 inches                             | 2    |
|         | 900084   | 3/8 inch Lock Washer                               | 1    | 20      | 20389    | Bulk Head Bracket                                                                         | 2    |
| 4       | 901003   | 1/4 inch - 28 St.- Zerk                            | 1    | 21      | 902913   | Female Bulk Head Adapter Nut                                                              | 1    |
|         | 70912    | Guide Roller Ass'y                                 | 4    |         | 101876   | Reducer                                                                                   | 3    |
|         | 904321   | 3/4 inch I.D. x 7/8 inch O.D. x 1 1/2 inch Bushing | 4    | 22      | 902912   | Loom Clip                                                                                 | 3    |
| 5       | 65185    | Tightener Bracket                                  | 4    |         | 901238   | Brace Ass'y                                                                               | 1    |
| 6       | 70696    | Hydraulic Motor                                    | 4    |         | 20978    | 3/8 inch - 16 x 1 inch Cap Screw                                                          | 8    |
|         | 900392   | 3/8 inch - 16 x 3/4 inch Hex Socket                | 4    |         | 900059   | 3/8 inch - 16 Hex Nut                                                                     | 8    |
|         | 902297   | 3/8 inch - 16 x 1/4 inch Cap Screw                 | 4    |         | 900087   | 3/8 inch Lock Nut                                                                         | 8    |
|         | 900087   | 3/8 inch Lock Washer                               | 4    | 23      | 900084   | Guard Ass'y                                                                               | 1    |
|         | 900083   | 3/8 inch Flat Washer                               | 1    |         | 20981    | 1/4 inch x 1/2 inch Long Sheet Metal Screws                                               | 1    |
|         | 904041   | 1/2 inch - 13 x 2 inch Cap Screw                   | 1    |         | 904391   | 1/4 inch - 20 x 3/4 inch Cap Screw                                                        | 2    |
| 7       | 900115   | 1/2 inch - 13 Hex Nut                              | 2    |         | 900026   | 1/4 inch - 20 Hex Nut                                                                     | 1    |
| 8       | 900114   | 1/2 inch Flat Washer                               | 2    |         | 900025   | 1/4 Lock Washer                                                                           | 1    |
|         | 70594    | 11 Tooth Sprocket 1 inch Bore                      | 2    | 24      | 28260    | Vertical Auger Ass'y                                                                      | 1    |
|         | 70555    | Drive Chain                                        | 1    | 25      | 20976    | Vertical Tube Ass'y                                                                       | 1    |
|         | 901027   | #50 Chain Connector                                | 1    | 26      | 65197    | Chain Guide Ass'y                                                                         | 1    |
| 9       | 65190    | Guard                                              | 2    |         | 901898   | 5/16 inch - 18 x 1 inch Cap Screw                                                         | 4    |
|         | 900016   | 1/4 inch - 20 x 3/4 inch Cap Screw                 | 1    |         | 900054   | 5/16 inch - 18 Hex Nut                                                                    | 4    |
|         | 900026   | 1/4 inch - 20 Hex Nut                              | 2    |         | 900053   | 5/16 inch Flat Washer                                                                     | 12   |
|         | 900025   | 1/4 inch Lock Washer                               | 2    |         | 900052   | 5/16 inch Lock Washer                                                                     | 4    |
| 10      | 70575    | Crossover Relief Valve                             | 1    |         |          |                                                                                           |      |
|         | 901900   | 5/16 inch - 18 x 2 3/4 inch Hex Cap Screw          | 2    |         |          |                                                                                           |      |
|         | 900054   | 5/16 inch - 18 Hex Nut                             | 2    |         |          |                                                                                           |      |
|         | 900052   | 5/16 inch Lock Washer                              | 2    |         |          |                                                                                           |      |
| 20179   |          | restrictor for cylinder                            | 1    |         |          |                                                                                           |      |

MODEL 1000<sup>715</sup> SINGLE AXLE SCALE 8/10 GOV



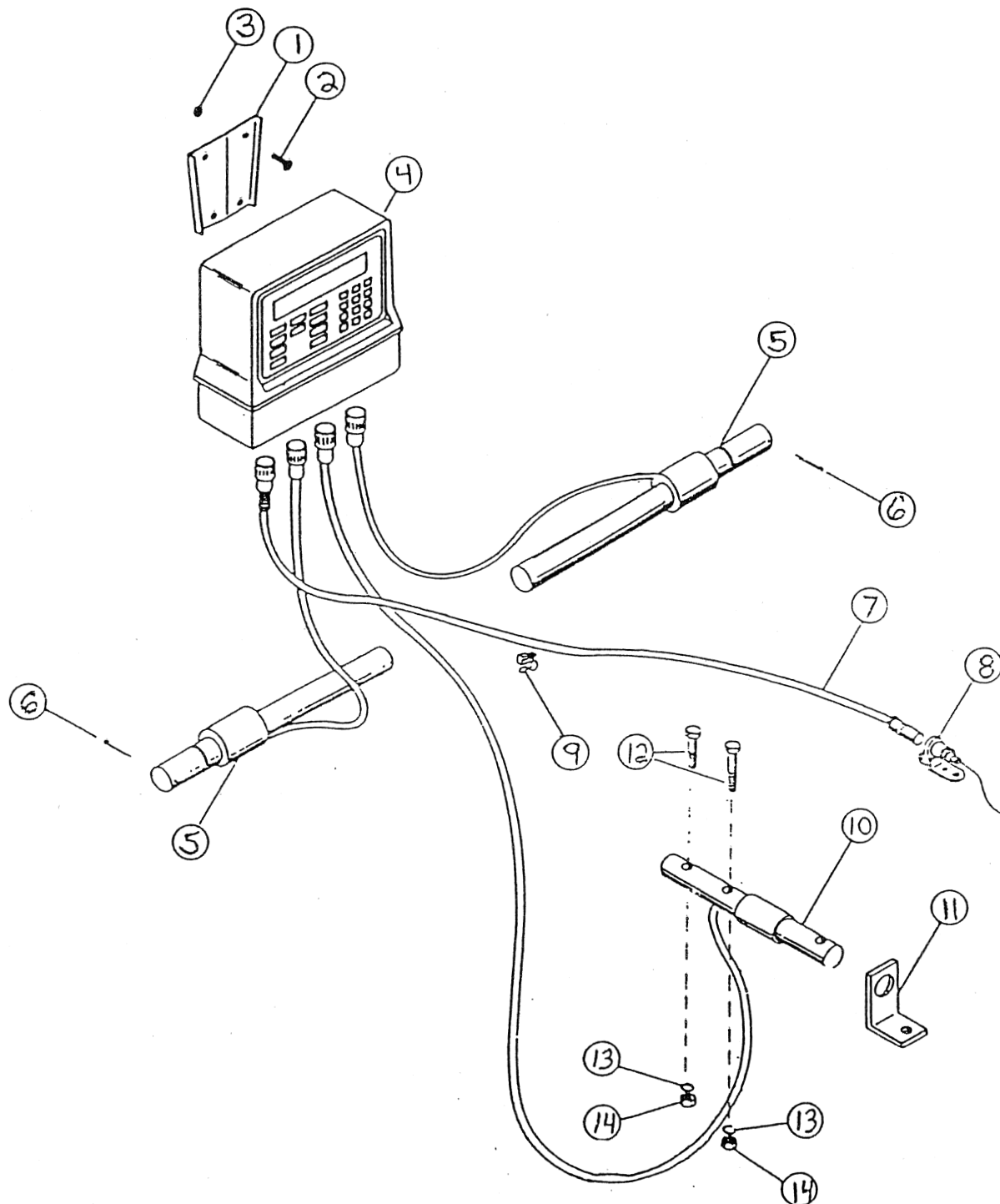
MODEL 715 & 1000 8/10 SINGLE AXLE SCALE

| <u>ITEM</u> | <u>PART #</u> | <u>DESCRIPTION</u>           | <u>QTY</u> |
|-------------|---------------|------------------------------|------------|
| 1           | 902485        | MOUNT BRACKET                | 1          |
| 2           | 902483        | 1/4-20X 1/2MACH.SCREW        | 4          |
| 3           | 902469        | 1/4-20 WHIZ-LOCK NUT         | 4          |
| 4           | 710           | MODEL 715 INDICATOR          | 1          |
|             | 906361        | MODEL 1000 INDICATOR         |            |
| 5           | 906364        | WEIGH BAR                    | 2          |
| 6           | 904182        | POWER CORD                   | 1          |
| 7           | 902498        | FEMALE CONNECTOR ASSEMBLY    | 1          |
| 8           | 902489        | WIRE CLIP(BAG, QTY 15)       | 1          |
| 9           | 906363        | HITCH BAR                    | 1          |
| 10          | 902495        | CLEVIS                       | 1          |
| 11          | 904136        | 3/4-10X 3 1/2 CAP SCREW      | 2          |
| 12          | 900134        | 3/4 LOCK WASHER              | 2          |
| 13          | 901933        | 3/4-10 HEX NUT               | 2          |
| 14          | 7150          | MODEL 715 OPERATOR'S MANUAL  | 1          |
|             | 906366        | MODEL 1000 OPERATOR,S MANUAL |            |

\*ORDER # 715 FOR THE 8/10 3PT. SCALE UNIT ONLY.

\*ORDER # 710 FOR INDICATOR ONLY.

MODEL 715 + TANDEM AXLE SCALE 8/10 G.O.V.  
1000





MODEL 715 & 1000 8/10 TANDEM AXLE SCALE

| <u>ITEM</u> | <u>PART #</u> | <u>DESCRIPTION</u>           | <u>QTY</u> |
|-------------|---------------|------------------------------|------------|
| 1           | 902485        | MOUNT BRACKET                | 1          |
| 2           | 902483        | 1/4-20X 1/2MACH.SCREW        | 4          |
| 3           | 902469        | 1/4-20 WHIZ-LOCK NUT         | 4          |
| 4           | 710           | MODEL 715 INDICATOR          | 1          |
|             | 906361        | MODEL 1000 INDICATOR         |            |
| 5           | 906364        | WEIGH BAR                    | 2          |
| 6           | 902387        | 1/2X 3 ROLL PIN              | 2          |
| 7           | 904182        | POWER CORD                   | 1          |
| 8           | 902498        | FEMALE CONNECTOR ASSEMBLY    | 1          |
| 9           | 902489        | WIRE CLIP(BAG, QTY 15)       | 1          |
| 10          | 906363        | HITCH BAR                    | 1          |
| 11          | 902495        | CLEVIS                       | 1          |
| 12          | 904136        | 3/4-10X 3 1/2 CAP SCREW      | 2          |
| 13          | 900134        | 3/4 LOCK WASHER              | 2          |
| 14          | 901933        | 3/4-10 HEX NUT               | 2          |
| 15          | 7150          | MODEL 715 OPERATOR'S MANUAL  | 1          |
|             | 906366        | MODEL 1000 OPERATOR,S MANUAL |            |

\*ORDER # 715 FOR THE 8/10 3PT. SCALE UNIT ONLY.

\*ORDER # 710 FOR INDICATOR ONLY.

## Four Star, Inc. Limited Warranty

Four Star Inc. warrants each new Four Star product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the product or components, not to exceed 90 days from the date of delivery of the new Four Star product to the original purchaser.

Genuine Four Star replacement parts and components will be warranted for 90 days from the date of purchase, or the remainder of the original equipment warranty period, whichever is longer. Under no circumstances will it cover any merchandise or components thereof, which, in the opinion of the company, has been subjected to misuse, unauthorized modifications, alteration, an accident or if repairs have been made with parts other than those obtainable through Four Star Inc.

Four Star Inc. in no way warrants engines, batteries, tires, or other trade accessories since these items are warranted separately by their respective manufacturers.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that, in our judgment, shall show evidence of such defect, provided further that such part shall be returned within 30 days from the date of failure to Four Star Inc., routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render Four Star Inc. liable for injury or damages of any kind or nature to person or property. This warranty does not extend to the loss of crops, loss because of delay in harvesting, or any expense or loss incurred for labor, substitute machinery, rental for any other reason.

Except as set forth above, Four Star Inc. shall have no obligation or liability of any kind on account of any of its equipment and shall not be liable for special or consequential damages. Four Star Inc. makes no other warranty, expressed or implied, and, specifically, Four Star Inc. disclaims any implied warranty or merchantability or fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties or incidental or consequential damages, so the limitations or exclusion in this warranty may not apply.

This warranty is subject to any existing conditions of supply which may directly affect our ability to obtain materials or manufacture replacement parts.

Four Star Inc. reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold.

No one is authorized to alter, modify or enlarge this warranty nor the exclusion, limitations and reservations.



