



CULTA-WEEDER

**1500 SERIES
ROD WEEDER**

Since 1923 . . . Constant Progress in Agricultural Machinery



PHONE (509) 928-7420

 **CALKINS** MANUFACTURING COMPANY

SPOKANE INDUSTRIAL PARK, BLDG. 15, SPOKANE, WA 99214



**CALKINS
3 SECTION
CULTA-WEEDER**

Available Sizes	Center Section	Wings	No. of Shanks (Standard)
26'	12'	7'	21
33'	12'	10½'	25
36'	12'	12'	27



**CALKINS
5 SECTION
CULTA-WEEDER**

Available Sizes	OUTER WING	INNER WING	CENTER SECTION	INNER WING	OUTER WING	NO. OF SHANKS (STANDARD)
47'	7'	10½'	12'	10½'	7'	34
50'	7'	12'	12'	12'	7'	37
54'	10½'	10½'	12'	10½'	10½'	41
57'	10½'	12'	12'	12'	10½'	43
60'	12'	12'	12'	12'	12'	45

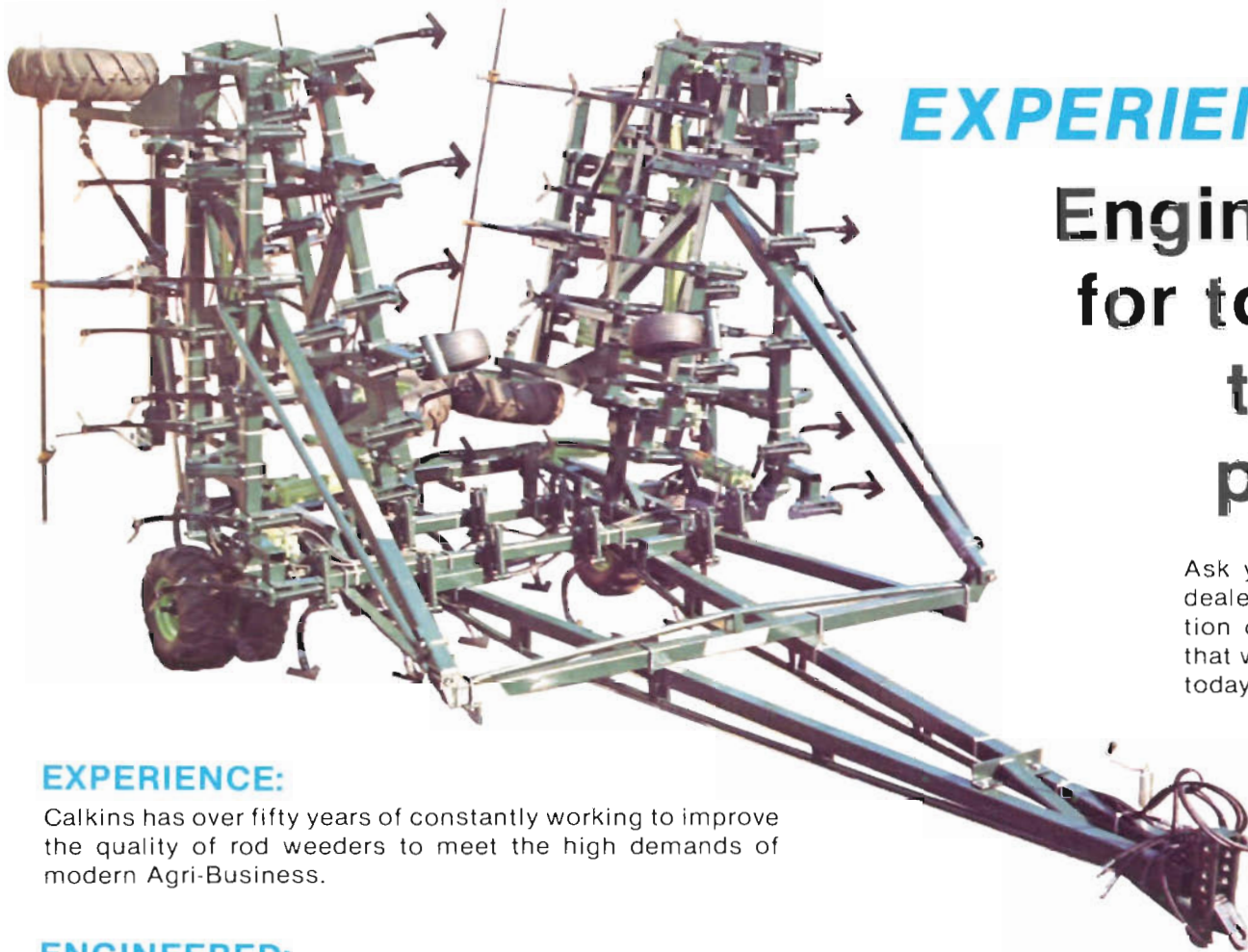


CALKINS MULTI-USE ROD WEEDER

Calkins Rod-Weeders are equipped with in line hydraulic lift cylinders allowing the same machine to be operated as a one, three or five section tool. By folding the outer wings and equipping the three center sections with shanks the machine may be used as a three section Culta-Weeder. For later Rod-Weeder operations rotate the shanks out of the ground and lower the outer wings for full five section use.

**Easy
wing fold
for
transport**

1. A unique wing-lift design; weight is carried low for easy transport.
2. Folds into transport position from the tractor cab.
3. Can be raised or lowered in any position.
4. Center section dual wheels for stable safe transport.
5. Positive wing and frame transport locks.



EXPERIENCE .

Engineered for today's tractor power!

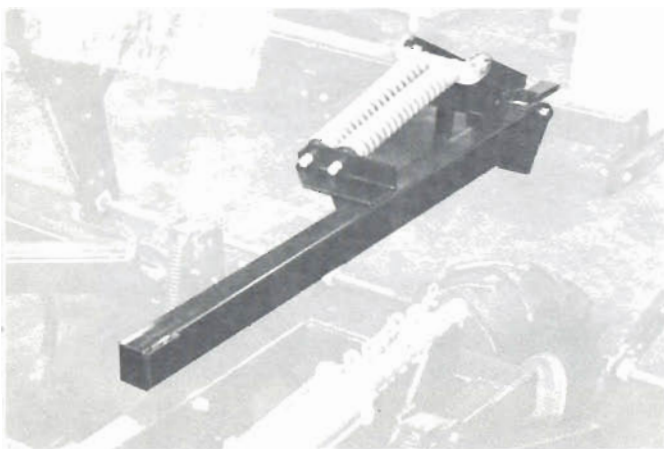
Ask your local Calkins dealer for a demonstration of the rod weeder that was engineered for today's farmer.

EXPERIENCE:

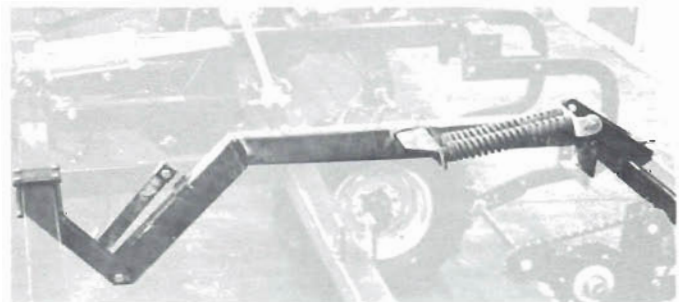
Calkins has over fifty years of constantly working to improve the quality of rod weeders to meet the high demands of modern Agri-Business.

ENGINEERED:

Field Engineered where the properly designed tool must have the strength to withstand the rugged conditions and speed encountered with today's big tractor power.



The Calkins Culta-Weeder is equipped with stiff lead arms and spring loaded backbones. With the lead arms bolted securely to the frame the weight of the machine can be utilized in hard ground conditions for superior penetration.



The 1500 Series Rod-Weeder is equipped with floating lead arms and spring loaded backbones. The floating lead arm allows the rod to follow the ground level over high spots and drop to weed the lower areas plus maintaining the proper depth in soft ground conditions.

CALKINS
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FIELD POSITION



ROTATED POSITION

CALKINS **CULTA-WEEDER**

Standard equipment . . . Two rows of heavy duty, spring loaded, rotating shanks

SPECIFICATIONS

- Frame and Tongue — 4" x 4" Square Tube with ¼" Wall
- Weeding Rod — 1" Square, High Carbon
- Clearance — 26" Frame to Rod
- Goosenecks — High Carbon, Heat-Treated Steel
- U-Joints — 1¼" 20 H.P.
- Drive Lines — 1¼" Square
- Boot Drive Chain — Special Hard Roller
- Hubs, Spindles, and Bearings — Extra Heavy Duty
- Drive Boots — One Each Section
- 6 Bolt Hubs — Wheels
- Tire Size: 12.5L x 15 hi-cleat tire
- Weeder Section: Spring loaded 4" x 4" sq. tubing
- Shank: ½" x 1¾" Spring Steel
- Shank Clearance: 24" Frame to Point
- Weight: 202 per ft.
- Transport Height: 15' 2"

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Why you need a NEW CALKINS CULTA-WEEDER OR 1500 SERIES ROD WEEDER

- Stiff hitch
- Simple quick transport
- Precise hydraulic control of rod depth
- High trash clearance
- Flexibility
- 7' 10½' or 12' sections
- Outstanding rock machine characteristics
- Common wear parts
- Large servicing dealer organization
- A half century of advanced Calkins engineering

CALKINS CULTA-WEEDER

WITH STIFF LEAD ARMS AND SPRING LOADED
BACK BONES, TWO ROWS OF CULTIVATOR SHANKS

STANDARD EQUIPMENT

4" x 4" Sq. Tube Frame and Tongue
Hyd. Wing Lift w/Hyd. Cyls.
12.5L x 15 Hi-Cleat Tires
In Line Series Hyd. Lift System
Two Rows Calkins Heavy Duty Rotating Shanks
with 3/16" x 9" Sweeps
Spring Loaded 4" x 4" Sq. Tube Weeder Sections
Dual Drive Boots
1" Sq. Weeder Rods
Hose Mast
Depth Stop Kit
Tongue Jack
Hose to Tractor

OPTIONAL EQUIPMENT

Point Reversible 3/8" x 1¾" x 12"
Sweep 1/4" x 9"
Sweep 1/4" x 9" Hard Surfaced
7/8" Rod (in lieu of 1")
Forward Mounted, Castoring, Wing Flotation Wheels
Boot Cover
High Chrome Wear Parts
Rock Boot Point and Gooseneck Shoes
Harrow Attaching Kits

1500 SERIES CALKINS ROD WEEDER

WITH FLOATING LEAD ARMS AND
SPRING LOADED BACK BONES

STANDARD EQUIPMENT

4" x 4" Sq. Tube Frame and Tongue
Hyd. Wing Lift w/Hyd. Cyls.
12.5L x 15 Hi-Cleat Tires
In Line Series Hyd. Lift System
Spring Loaded 4" x 4" Sq. Tube Weeder Sections
Dual Drive Boots
1" Sq. Weeder Rods
Hose Mast
Depth Stop Kit
Tongue Jack
Hose to Tractor

OPTIONAL EQUIPMENT

Tiller Wheel Brackets
Pneumatic Tiller Wheels 570 x 8 4-ply
Pneumatic Tiller Wheels 18-950 x 8 4-ply
7/8" Rod (in lieu of 1")
Forward Mounted, Castoring, Wing Flotation Wheels
Boot Cover
High Chrome Wear Parts
Rock Boot Point and Gooseneck Shoes
Harrow Attaching Kits

CALKINS
MANUFACTURING COMPANY

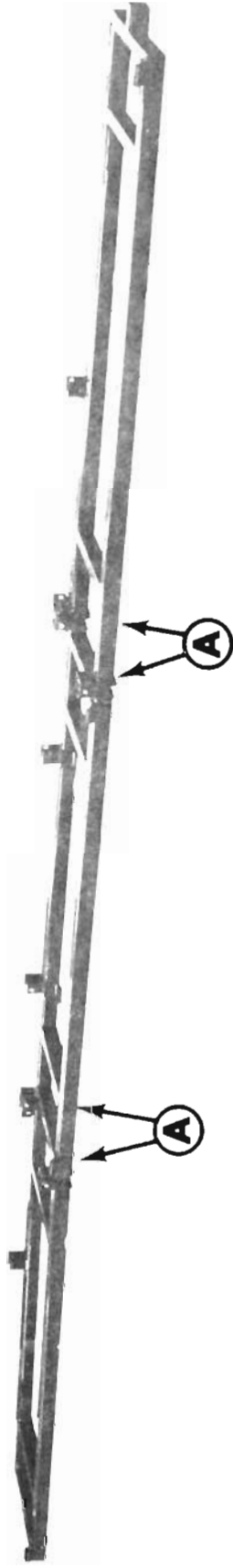
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ASSEMBLY INSTRUCTIONS

CULTA-WEEDER OR 1500 SERIES ROD WEEDER

The assembly of your new Calkins RODWEEDER is relatively simple. Some of the components have been preassembled to help speed your set up time. Following is the sequence that will make the final assembly easiest for you.



26' 410-122
33' 410-066
36' 410-003

Right Wing

410-001

Center Section

26' 410-123
33' 410-065
36' 410-002

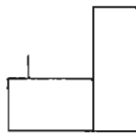
Left Wing

- 1) Suspend center frame and wings on mounts high enough that wheel legs can be lowered to down position.
- 2) Open frame and tongue bolt sack #410-500
- 3) A.) Attach wing to center section at hinge point with pivot pin 1" X 6 15/16" and 3/8" x 2" roll pin.

REAR

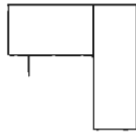


R.T. WING
Wheel Leg



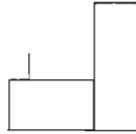
410-515

R.T. CENTER
Wheel Leg



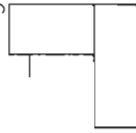
410-513

L.H. CENTER
Wheel Leg



410-514

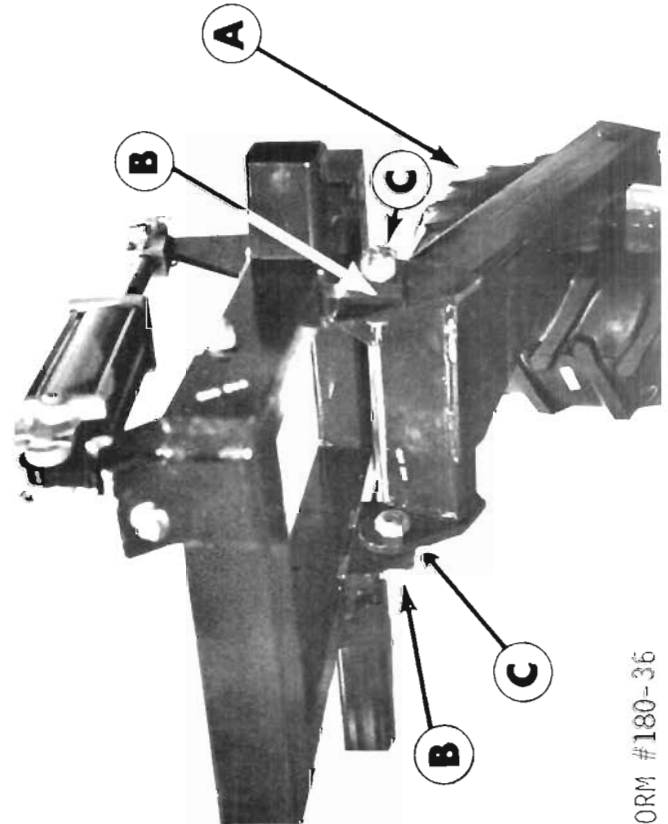
L.H. WING
Wheel Leg



410-516

4) Open wheel leg bolt sack #410-503

5) Install wheel legs and tires
When mounting tires to wheel legs, be sure to add drive basket to wing wheel legs with longer lug bolts which are provided in wheel hubs.

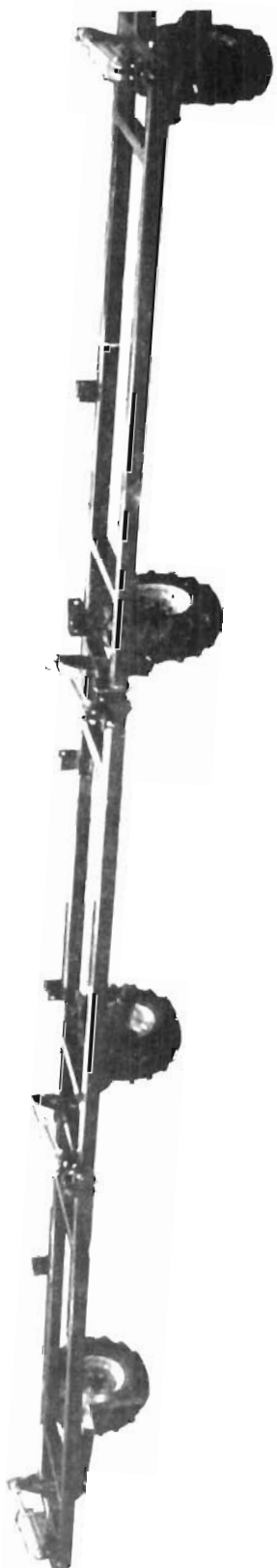


WARNING!

A) When mounting tires be sure tire cleats are all headed in the same direction on all wheel leg assemblies as shown in photo. Valve stem should be on lug bolt side when mounting.

B) Be sure to grease at time of assembly!
Advise customer to grease each wheel leg daily during normal field operations.

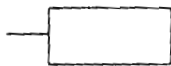
C) 1 1/4" x 3 1/4" N.F. Bolt
1 1/4" x NF Light Slotted Nut
3/16" x 1 3/4" Cotter Pin
1 1/4" 10 Ga. Bushing
1 1/2" O.D. x 1 7/16" L x 1 9/32" I.D. Bushing



MFG. #S-427
Calkins# 5-818-035



MFG. #R-608 or PMS 1451
Calkins #5-818-037



MFG. #S-422
Calkins #5-818-040



MFG. #R-610
Calkins #5-818-032

6) Install Hydraulic Cylinders.

- A. Do not add hoses or fittings to the cylinders until the shanks have been installed.
- B. This is an in-line hyd. system and hyd. cyls MUST be properly located.
- C. Be sure cylinder ports are on the top of the cylinder.
- D. Cylinder depth stops can be installed at this time in place of machine stands.



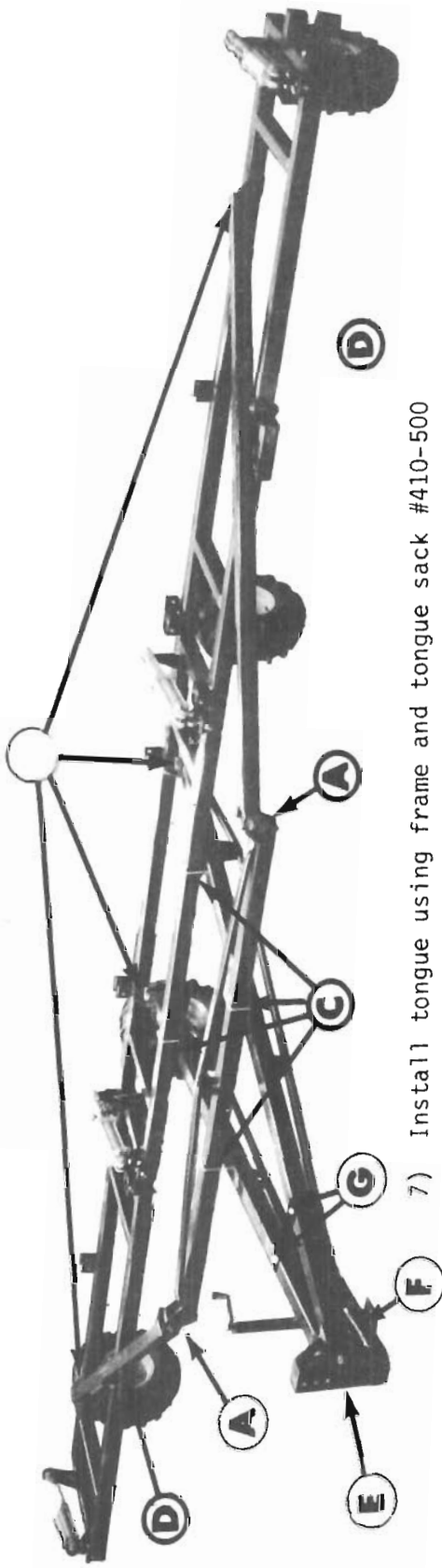
1" Cut Washers are used to reduce space in Cylinder Base Mount

Always install 410-581 adjustable linkage so the bushing is up tight against the clevis as in photo

1 - 7/8" Full N.C. Nut

2 - 7/8" Jam Nut

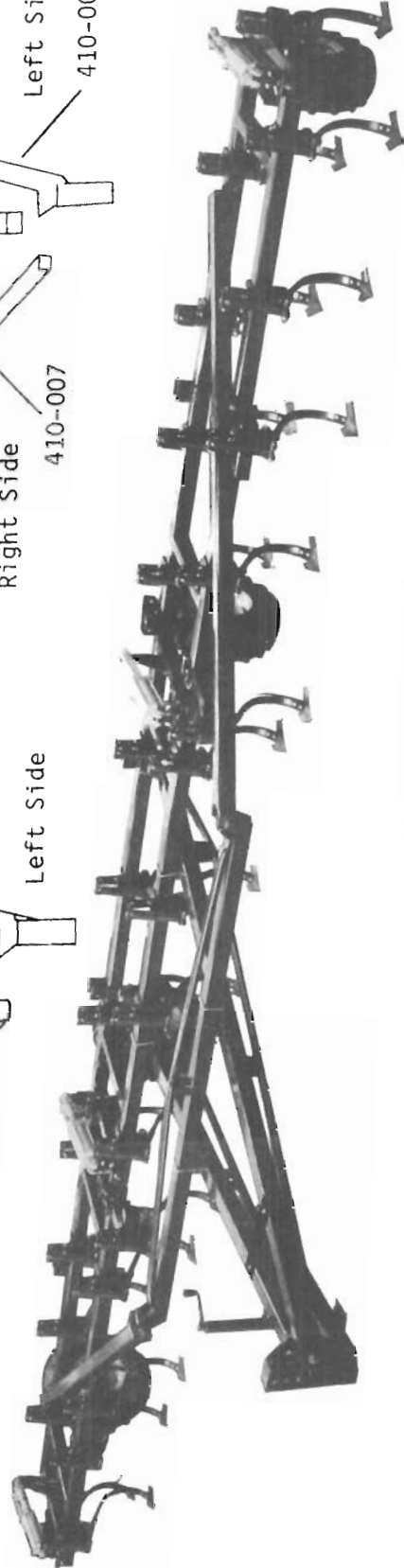
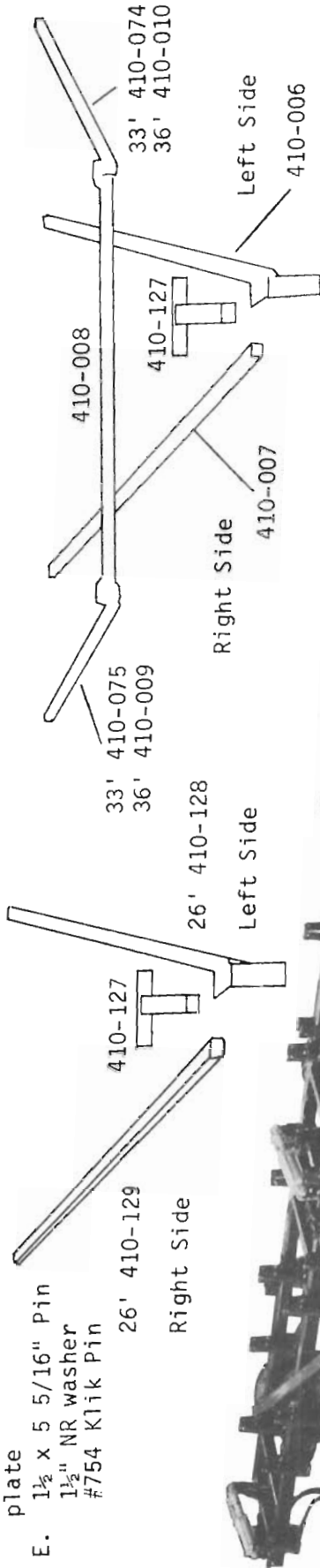
3/4" x 5" NC CS, Nut and Lockwasher



7) Install tongue using frame and tongue sack #410-500

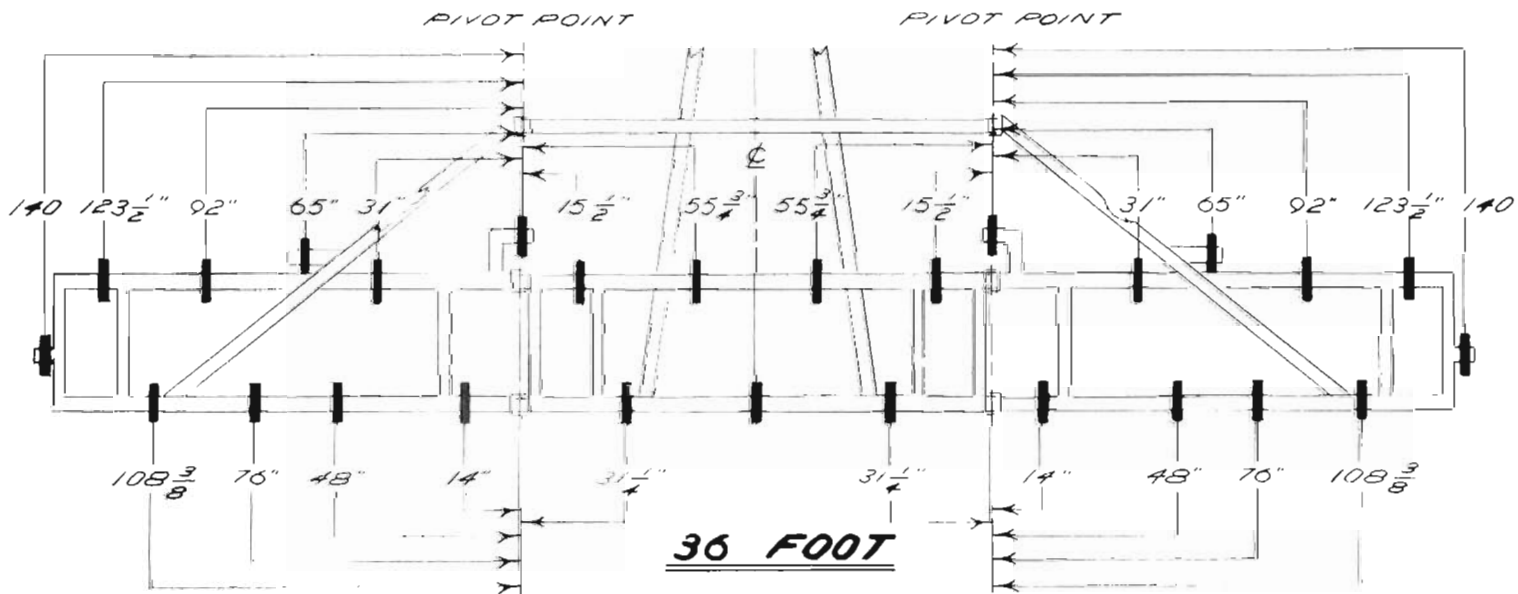
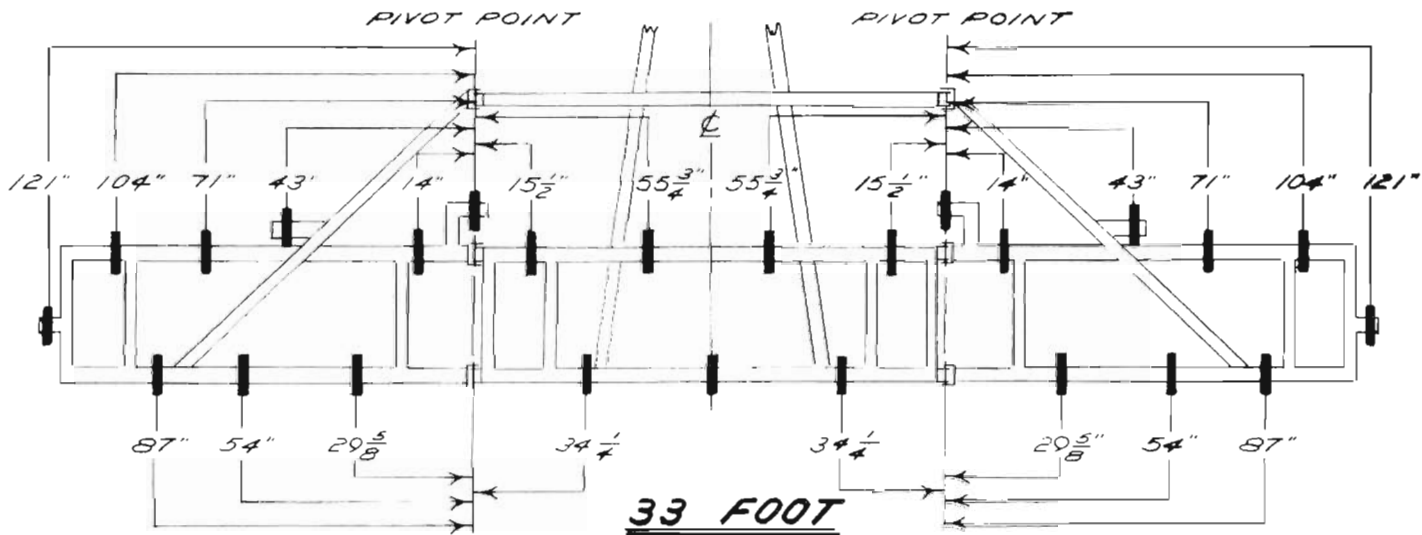
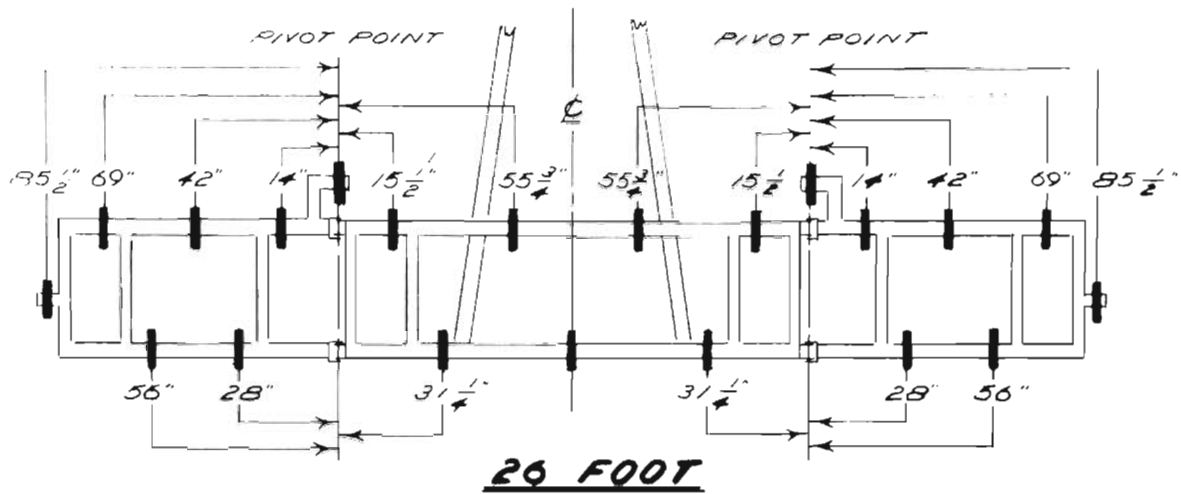
- A. 1 1/4" x 6 5/16" Pin and 3/8" x 2" Roll Pin
- B. 1" x 2 1/2" NC CS nut and lockwasher
- C. 5/8" x 5 1/4" NC U-Bolt
- D. 3/4" x 6" N.C. C.S. nut and lock-washer and 216-058 plate

- F. 1" x 6" N.F. C.S., nut and cotter pin
- G. 3/4" x 5" NC CS nut and lockwasher



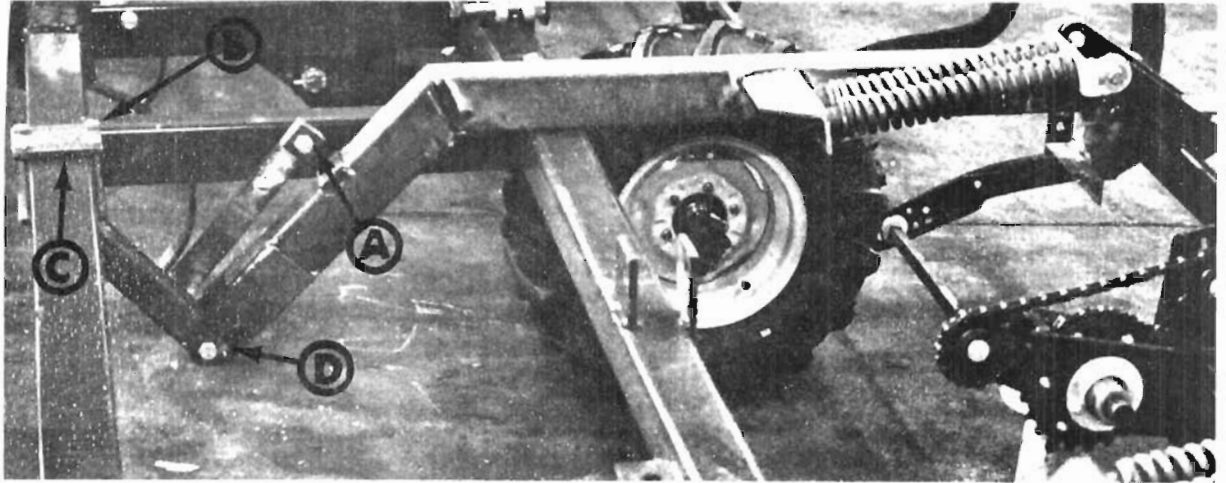
8) Install shanks as shown on layout sheet on next page

1500 SERIES CULTA-WEEDER SHANK LAYOUT



Bypass this step if setting up a stiff lead arm weeder

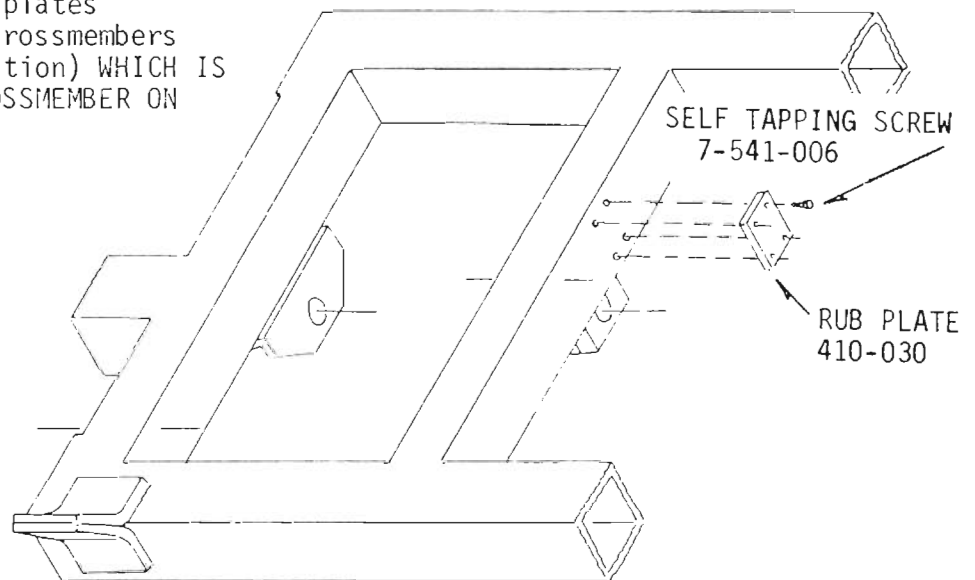
9)

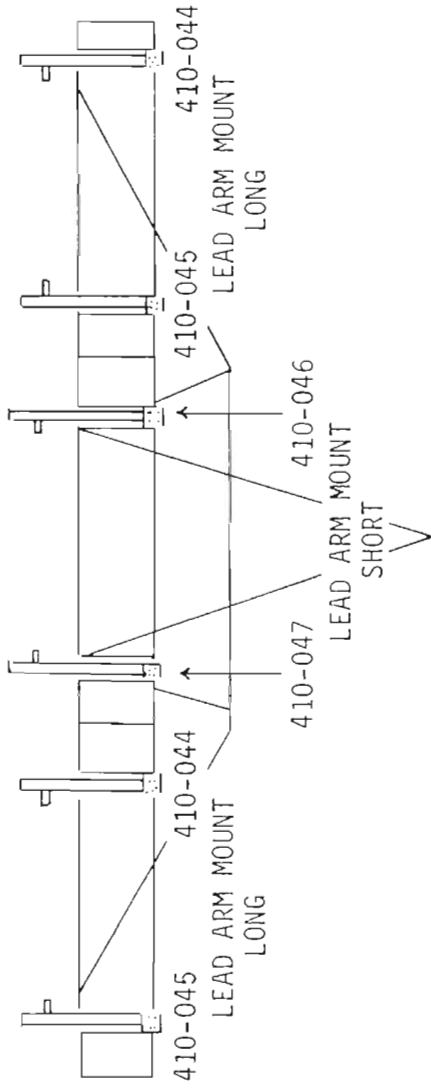


- A. 3/4" x 5" N.C. C.S., Nut and lockwasher
- B. 1/2" x 5 1/2" N.C. C.S., nut and lockwasher
- C. 201-855 Mount Plate
- D. 3/4" x 5" NC CS, Lock Nut

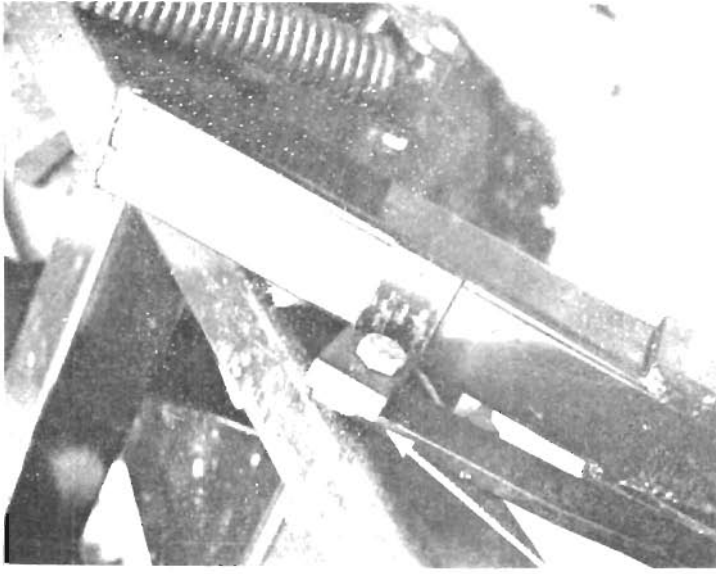
9a) OPEN WEAR PLATE SACK #410-534

Install polypropylene plates to Lead Arm Side of crossmembers as shown. (2 per section) WHICH IS THE INNER SIDE OF CROSSMEMBER ON EACH FRAME





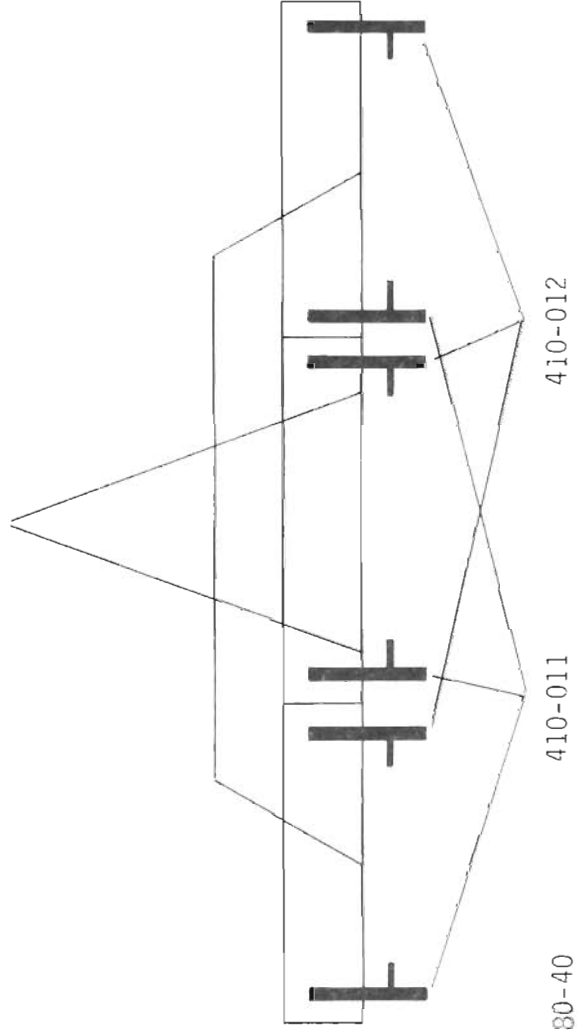
9b) Open bolt sack #410-539 26ft. or #410-600 33ft. and 36ft. weeders. Install lead arm mounting brackets as in drawing above using 1/2" x 5 1/2" NC bolts, lockwashers and nuts.



Lime Color Up

9c) Install stop block with lime color up on all sections by turning eccentric stop block to another color of paint will change the amount of lead arm float.

9d) Install floating lead arms using bolt sack #410-539 26ft. or #410-600 33ft. and 36ft. weeders. Follow drawing at left for proper location.

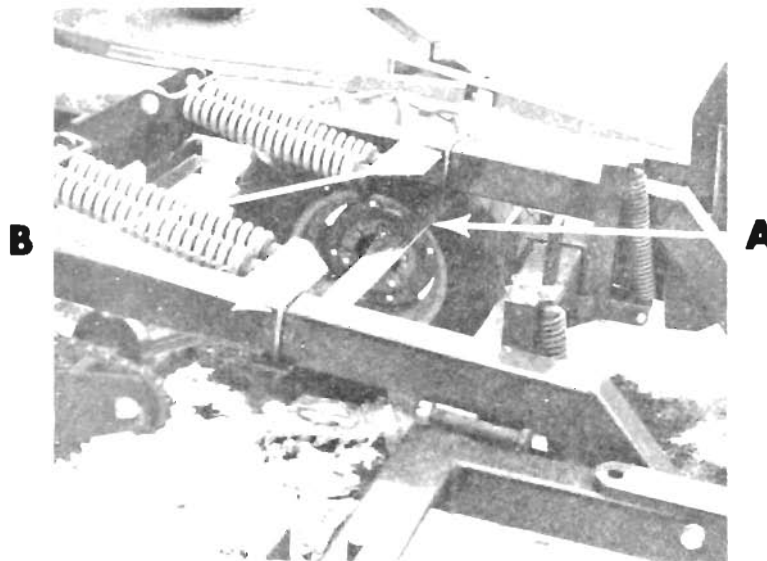


Bypass this step if setting up stiff lead arm 26 ft. Rod Weeder. Use on 26 ft. Floating lead arm machine only.

9e) Install lead arm stiffener as shown. Install floating lead arms using bolt sack #410-539.

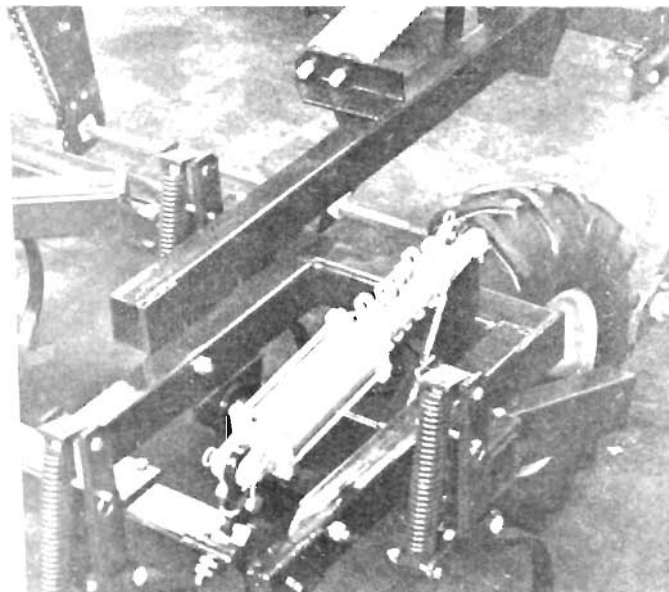
A. 410-134 Stiffener

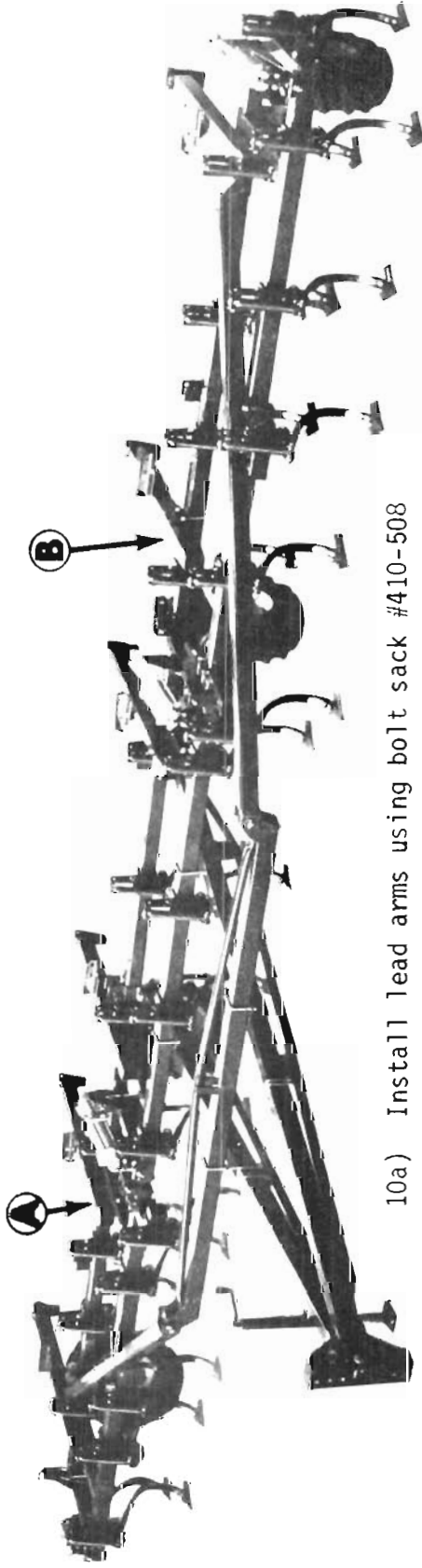
B. 1/2" x 4" U bolt w/lockwasher and nuts



By pass this step if setting up a floating lead arm Rod Weeder.

10) Cultivator stiff lead arm mounted to left hand wing frame





10a) Install lead arms using bolt sack #410-508

410-071
26' - 410-136

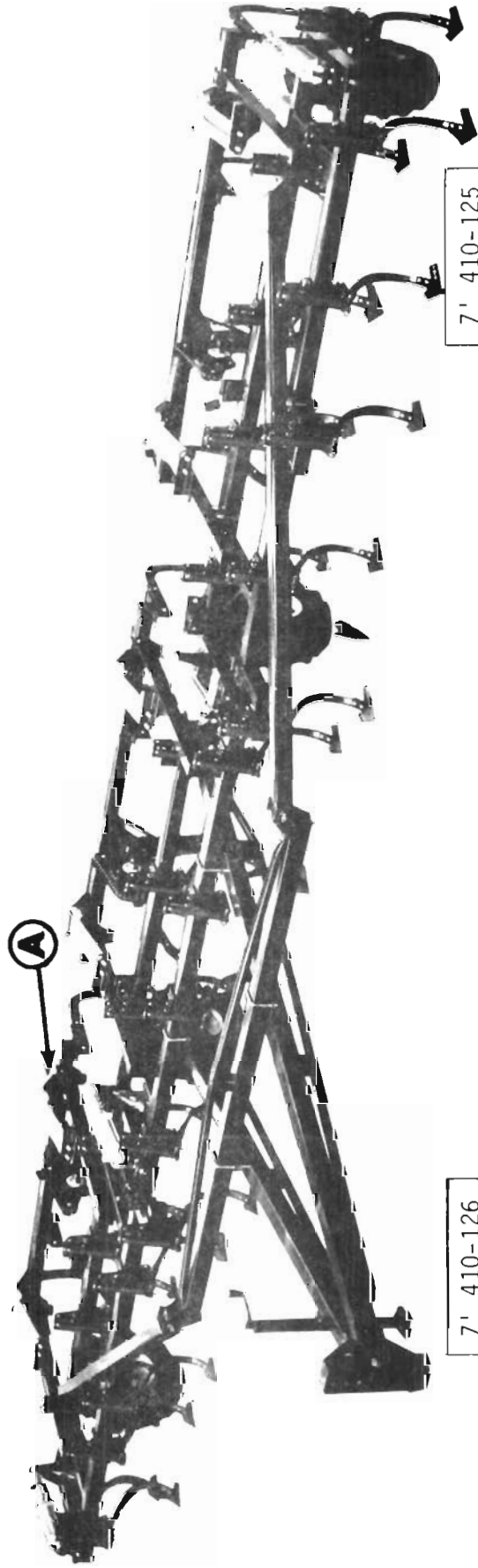
410-070 410-057
26' - 410-137

410-056

410-071
26' - 410-136

410-070
26' - 410-137

- A. Attach front end of lead arm to main frame using 3/4" x 4 1/2" N.C. C.S. nut and lockwasher.
- B. Then secure lead arm to main frame with 5/8" x 5 1/4" U-bolt nuts and lock-washers.



7' 410-126

10½' 410-073 12' 410-005

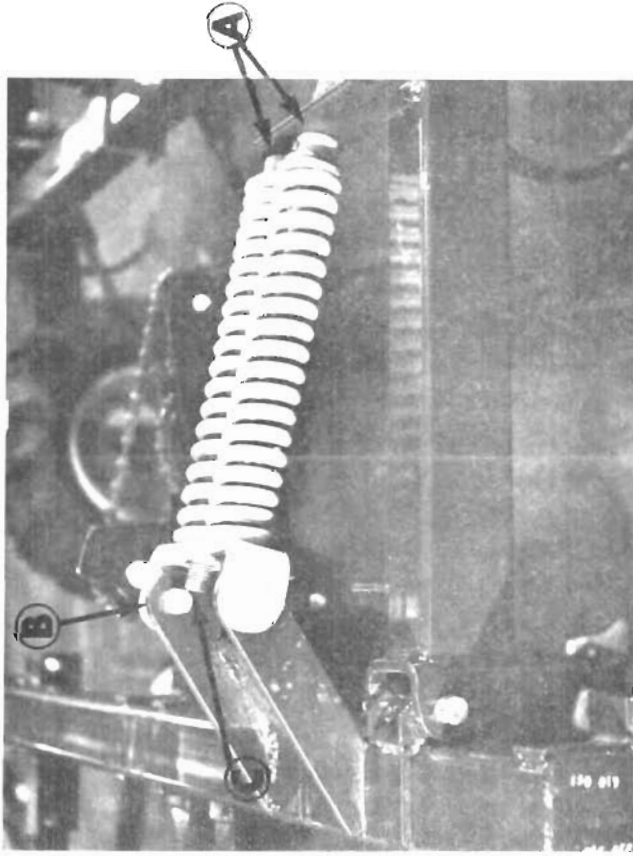
410-004

10½' 410-072

12' 410-068

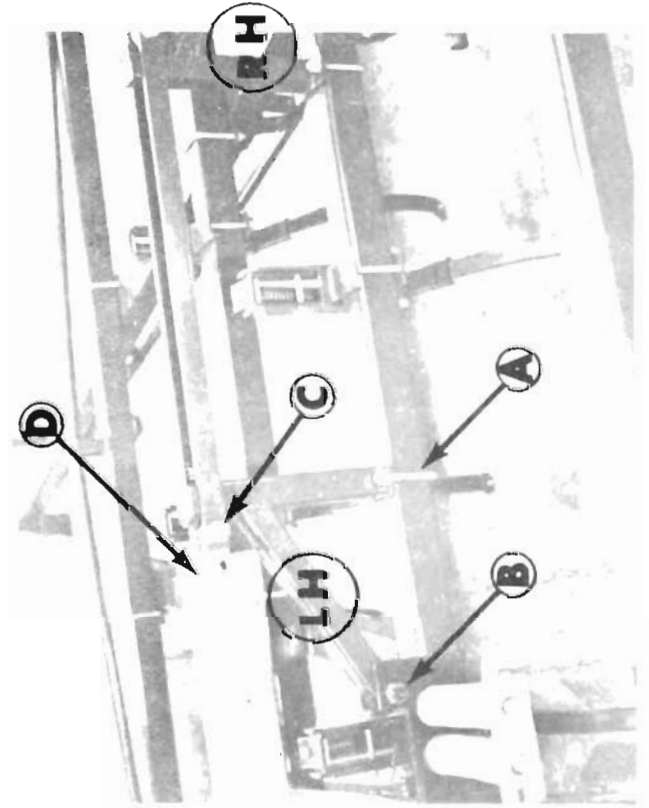
- 11) Install back-bones using bolt sack #410-508.
A.) Use 1" x 5 1/2" Pin and 3/8" x 2" roll pin.

WARNING- GREASE BACK-BONE PIVOT PINS DAILY. BE SURE TO ADVISE CUSTOMERS AT TIME OF DELIVERY.



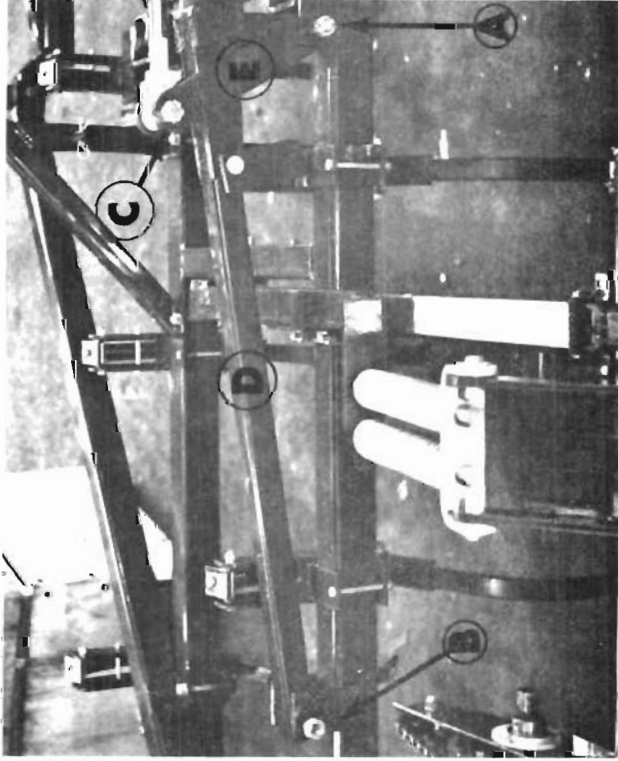
12) Install Spring Cushion

- A. With spring cushion laying flat and under weeder back bone ears. Slide spring cushion rods through holes on lead arms.
- B. Lift rear of spring cushion assembly up and install 1" OD x 3/16" x 9/16" bushing into ear of spring cushion base. Install grade #8 bolt into mounting plate on backbone and into ear of spring cushion base. Use flat-washer, lockwasher and lock nut.
- C. Now REMOVE the 1" jam nut on the spring cushion rods and the spring tension for the machine is set.



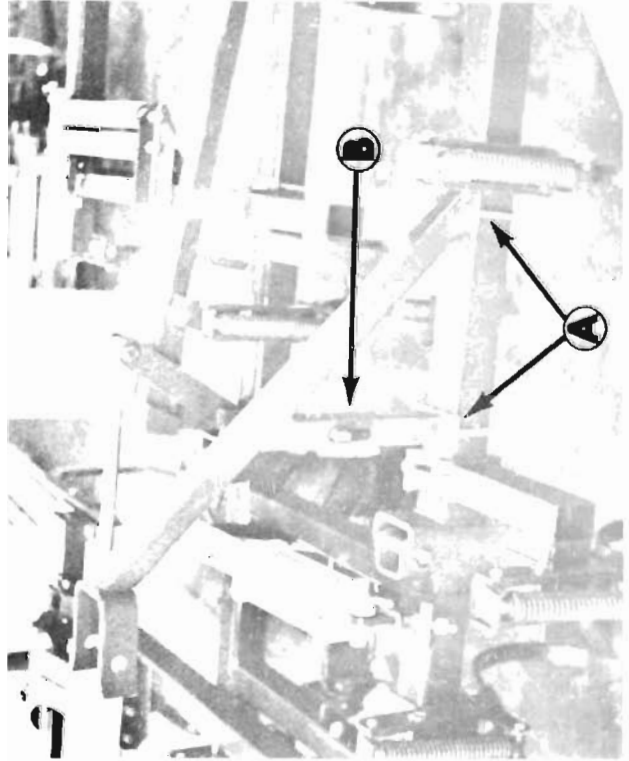
13) Install Cylinder Base Mount Support Open Bolt Sack #410-502

- A. Attach support mount brackets 410-033 Lefthand and 410-034 Righthand with 5/8" x 5 1/4" U-Bolt.
- B. 1" x 5" N.F. Bolt with 1" NF light slotted nut and 3/16" x 1 1/2" cotterpin.
- C. Attach the 410-043 support bars and wing lift cylinder with 1" x 5" NF CS, 1" NF light slotted nut and 3/16" x 1 1/2" cotterpin.
- D. Be sure cylinder ports point to the rear of machine.



14) Install Wing Lift Arm
Use Bolt Sack #410-502

- A. 1" x 6" N.F. bolt, 1" N.F. light slotted nut and 3/16" x 1 1/2" cotter pin.
- B. 1" x 5" N.F. C.S., 1" N.F. light slotted nut and 3/16" x 1 1/2" cotter pin.
- C. 1" x 5 1/2" N.F. C.S., 1" light slotted nut and 3/16" x 1 1/2" cotter pin.
- D. Attach wing lift assy. (26 ft. 410-429 or 33 ft. and 36 ft. 410-510)
- E. Toggle mount 410-032



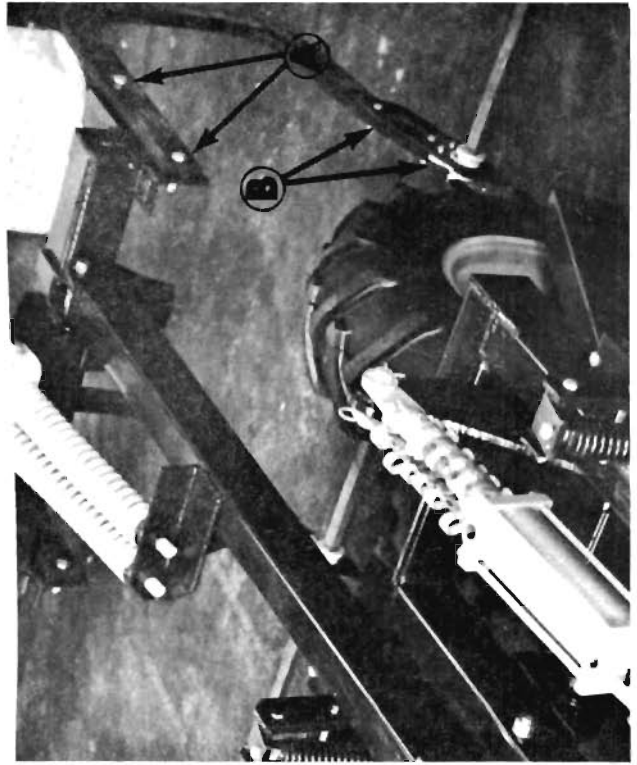
15) Wing Lift Transport Lock
Use Bolt Sack #410-501

- A. Attach transport lock 410-082 to wing frame with 5/8" x 5 1/4" U-bolts. Do not tighten until weeder wings are raised and transport lock is positioned properly. Then tighten.
- B. 1" x 5 1/2" L-pin and #8 hitchpin.



16) Forward Shank Mount

- Open Shank attachment and extension Bolt Sack #410-408 26 ft., 410-522 33 ft., and 410-511 36 ft.
- A. Use 5/8" x 5½" N.C. C.S., 5/8 nut, and 5/8 lockwasher also 410-079 base plates.



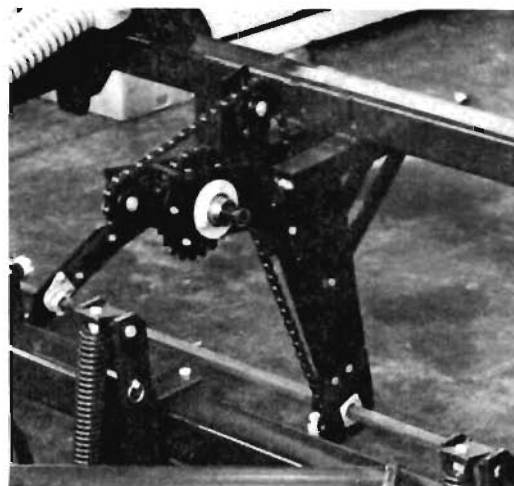
17) Assemble Goosenecks and Gooseneck Shoes.

- Open shoe and Gooseneck bolt sack #410-546 26 ft. standard, 410-571 26 ft. high chrome, 410-523 33 ft. standard, 410-583 high chrome, 410-507 36 ft. standard, or 410-566 36 ft. high chrome.
- A. 5/8" x 2½" N.C. C.S., nut and lockwasher
 - B. 7/16" x 2" N.C. C.S. nut and lockwasher
 - C. Be sure to mount the gooseneck shoes so that the short side of the shoe point is toward the ground.

18) Attach Boot Body to Weeder Back-bone

Open boot and drive line sack #410-584
26 ft., 33 ft., 36 ft. single drive,
#410-556 26 ft. dual drive line or,
#410-504 33 ft. and 36 ft. dual drive line.

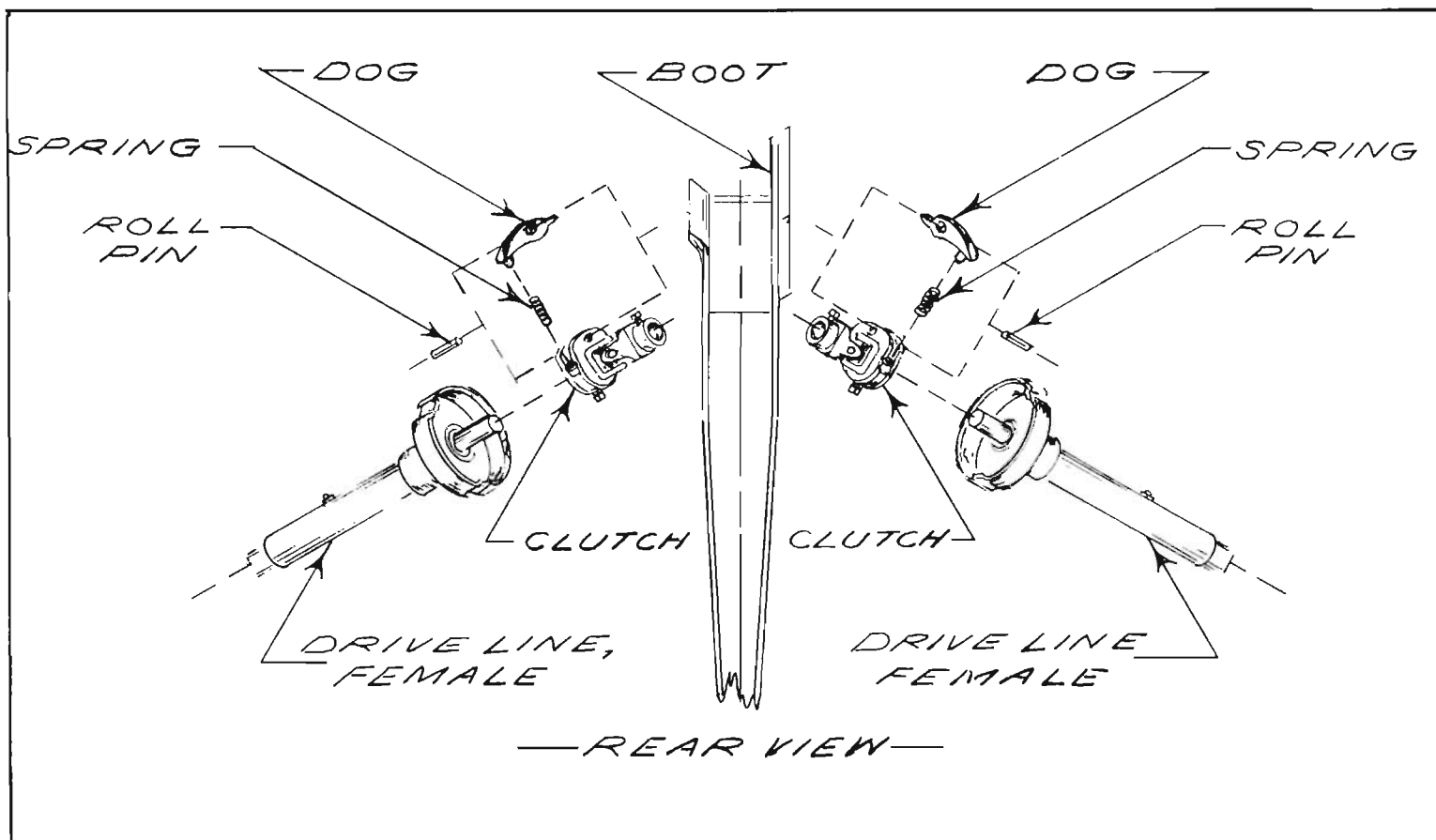
- A. 5/8" x 5" N.C. C.S., 5/8" nut and lockwasher
- B. Attach boot braces 105-016 to boot body with 1/2" x 3 1/2" N.C. C.S. and 1/2" jam nut.
- C. Attach boot braces to weeder back-bone with 5/8" x 1 3/4" N.C. C.S., nut and lockwasher. Place boot braces between the angle iron on back-bone.



19) Boot Drive Lines

Use bolt sack same as above

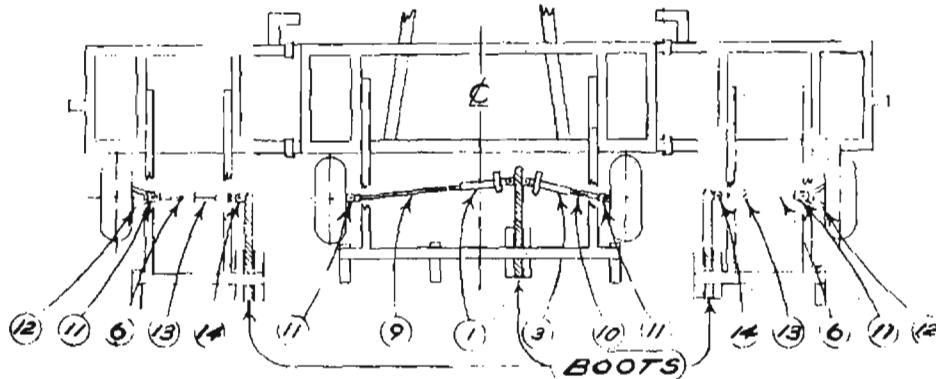
IMPORTANT! When placing drive lines on boot body be sure to follow number closely as they are right and left drive lines.
Do not hammer on the drive line U-joint.



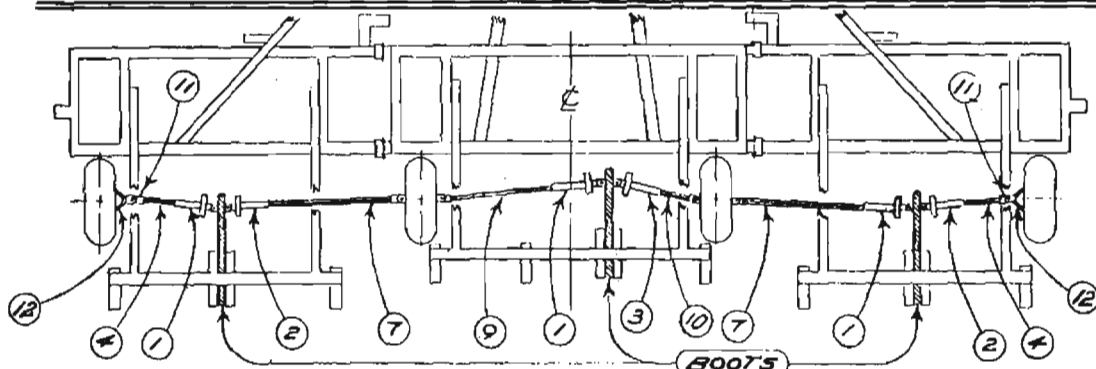
- A. Install female drive lines as per drawing with spring and tip of dog facing you from rear of weeder. Tighten set screws and set with hammer then retighten.
- B. Install male drive lines as per drawing using clip pins where shown.
- C. Please note and follow layout drawings for single or dual drive shafts for proper locations on next pages.

DUAL DRIVELINE LAYOUT

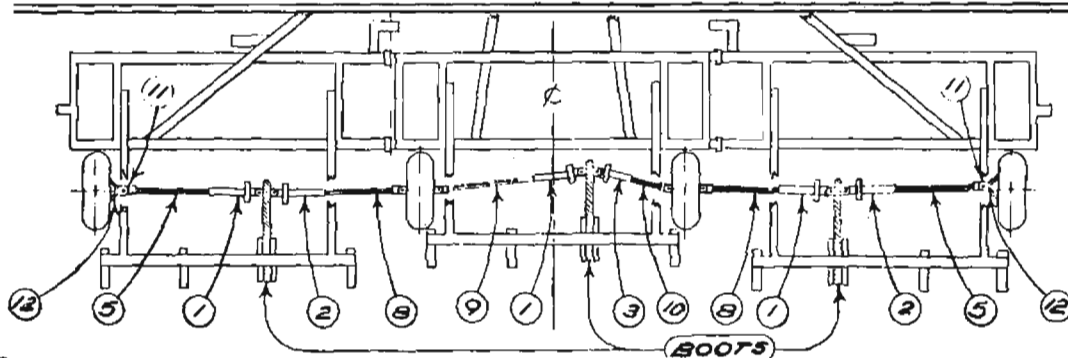
REF NO		26 FT	33 FT	36 FT
1	DRIVE LINE ASSY, FEMALE W/CLUTCH LH (18-1/4")	410-492	410-492	410-492
2	DRIVE LINE ASSY, FEMALE W/CLUTCH RH (18-1/4")	NA	410-493	410-493
3	DRIVE LINE ASSY, FEMALE W/CLUTCH RH (16-3/4")	410-488	410-488	410-488
4	DRIVE LINE, MALE, WINGS OUT BOARD 10-1/2 FT WING, SHAFT ONLY (20-1/4")	NA	206-047	NA
5	12 FT WING, SHAFT ONLY (45")	NA	NA	6-566-050
6	7 FT WING, SHAFT ONLY (30")	6-566-033	NA	NA
7	DRIVE LINE, MALE, WINGS INBOARD 10-1/2 FT WING, SHAFT ONLY (46-1/2")	NA	6-566-089	NA
8	12 FT WING, SHAFT ONLY (41")	NA	NA	6-566-090
9	DRIVE LINE MALE, CENTER, LEFT 12 FT CENTER, SHAFT ONLY (44")	6-566-088	5-566-088	6-566-088
10	DRIVE LINE MALE, CENTER, RIGHT 12 FT CENTER, SHAFT ONLY (16-1/2")	6-566-080	6-566-080	6-566-080
11	U-JOINT FOR MALE DRIVE ASSY 1-1/4 SQ. IN., SQ TO SQ	5-546-005	5-546-005	5-546-005
12	DRIVE BASKET	207-121	207-121	207-121
13	FEMALE DRIVE LINE W/G CLUTCH (21-1/8")	206-037	NA	NA
14	U-JOINT 1-7/16" RD TO 1-1/4 SQ	5-546-006	NA	NA



26 FOOT



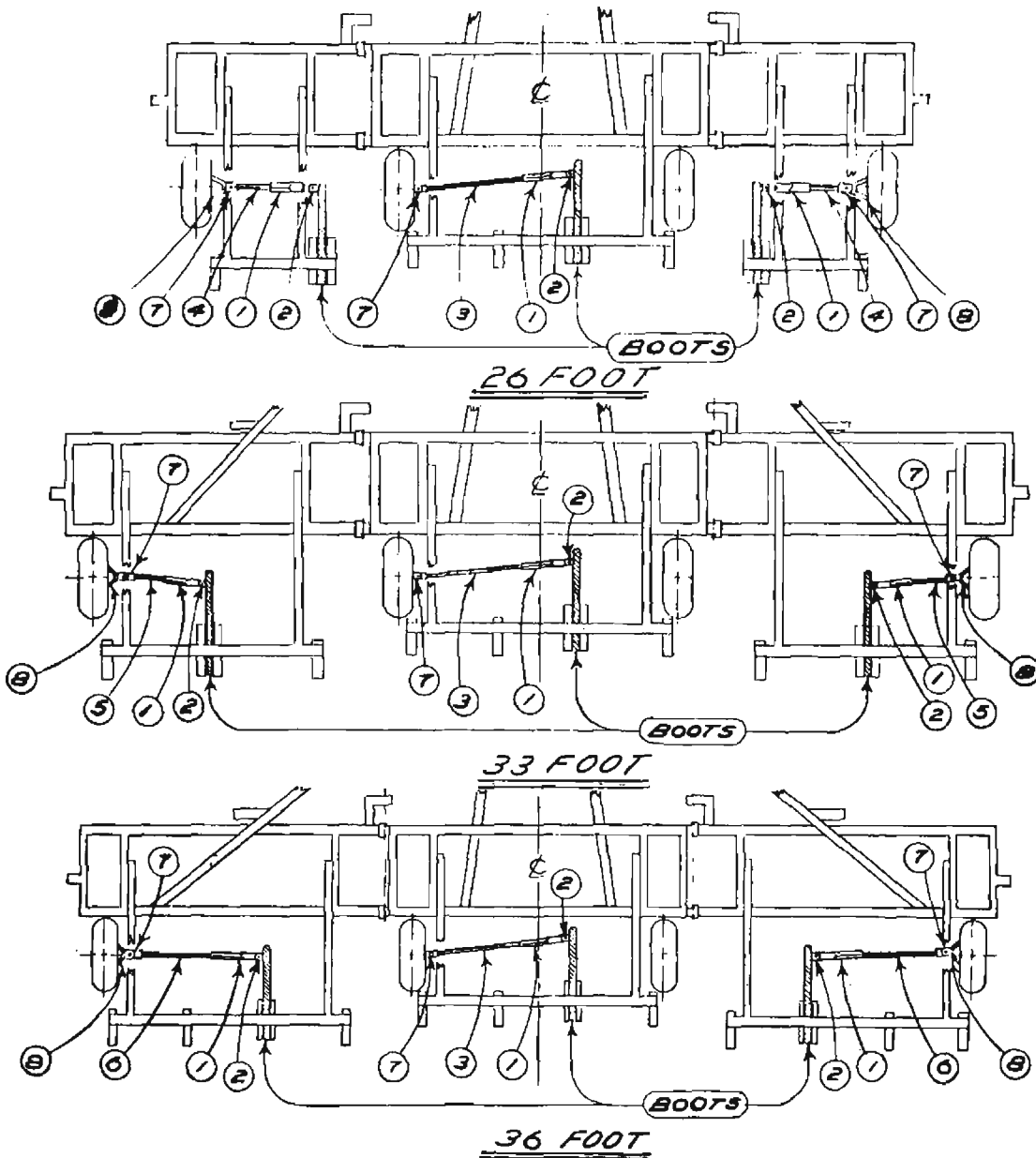
33 FOOT



36 FOOT

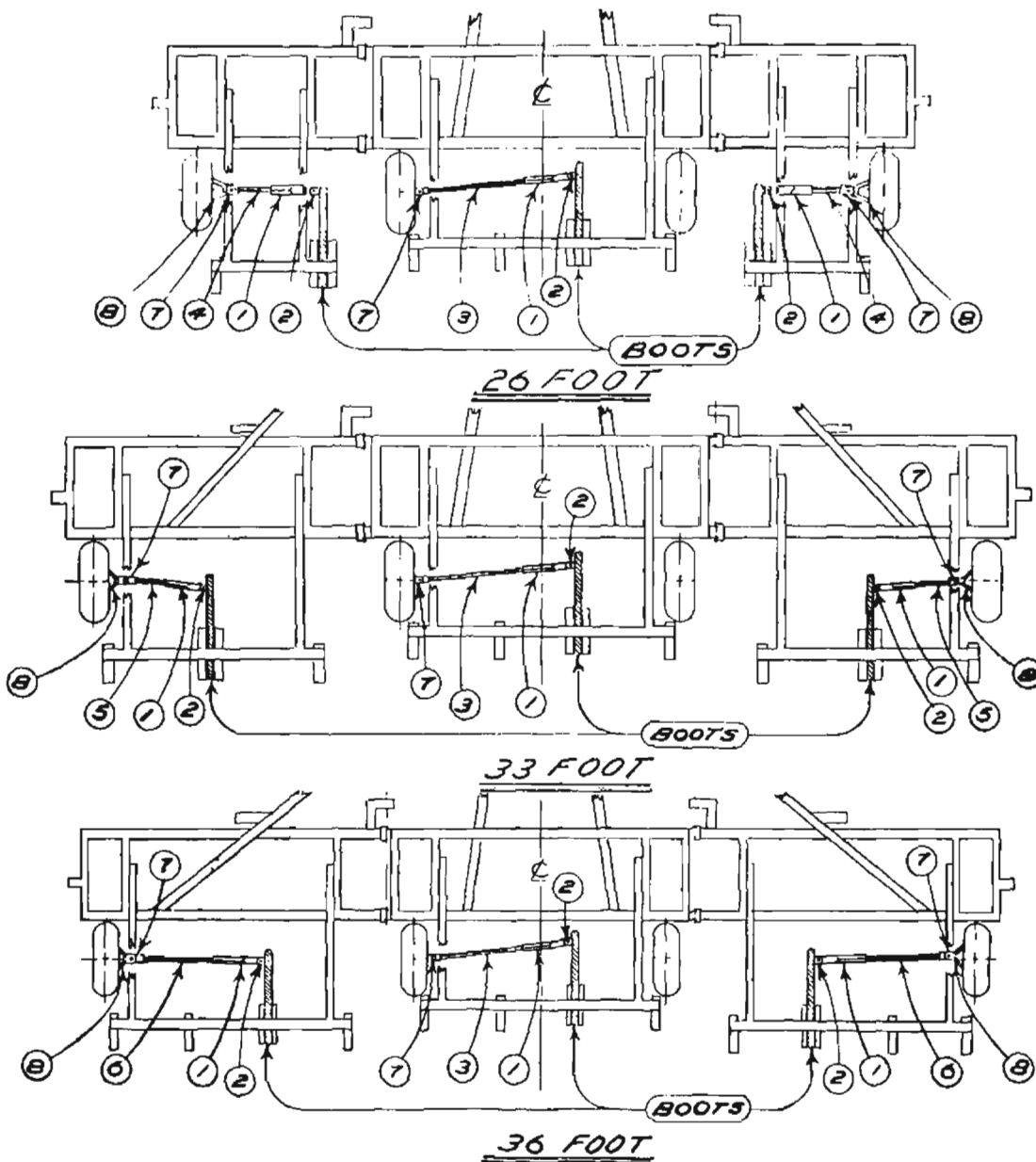
SINGLE DRIVELINE LAYOUT

REF. NO.	DESCRIPTION	26 Ft.	33 Ft.	36 Ft.
1	DRIVELINE ASSY, FEMALE 21-1/8" NO CLUTCH	206-037	206-037	206-037
2	U-JOINT 1-7/16" RD TO 1-1/4" SQ	5-546-006	5-546-006	5-546-006
3	MALE DRIVELINE 44" CENTER SECTION	6-566-088	6-566-088	6-566-088
4	MALE DRIVELINE 30" 7 FT. WINGS SHAFT ONLY	6-566-033	NA	NA
5	MALE DRIVELINE 20-1/4" 10-1/2 FT. WINGS SHAFT ONLY	NA	206-047	NA
6	MALE DRIVELINE 45" 12 FT. WINGS SHAFT ONLY	NA	NA	6-566-050
7	U-JOINT FOR MALE DRIVELINE SHAFTS 1-1/4" SQ TO 1-1/4" SQ	5-546-005	5-546-005	5-546-005
8	DRIVE BASKET	207-121	207-121	207-121



SINGLE DRIVELINE LAYOUT

REF. NO.	DESCRIPTION	26 Ft.	33 Ft.	36 Ft.
1	DRIVELINE ASSY, FEMALE 21-1/8" NO CLUTCH	206-037	206-037	206-037
2	U-JOINT 1-7/16" RD TO 1-1/4" SQ	5-546-006	5-546-006	5-546-006
3	MALE DRIVELINE 44" CENTER SECTION	6-566-088	6-566-088	6-566-088
4	MALE DRIVELINE 30" 7 FT. WINGS SHAFT ONLY	6-566-033	NA	NA
5	MALE DRIVELINE 20-1/4" 10-1/2 FT. WINGS SHAFT ONLY	NA	206-047	NA
6	MALE DRIVELINE 45" 12 FT. WINGS SHAFT ONLY	NA	NA	6-566-050
7	U-JOINT FOR MALE DRIVELINE SHAFTS 1-1/4" SQ TO 1-1/4" SQ	5-546-005	5-546-005	5-546-005
8	DRIVE BASKET	207-121	207-121	207-121



20) Attach Hoses, fittings, and fill hydraulic system.

- A. Note the hydraulic schematic for proper location on a following page.
- B. Add hydraulic couplers to hose ends and connect to tractor.
- C. Be sure to purge wing lift cylinder before wings are raised.
- D. To charge an in-line circuit for the first time the following steps are necessary:

<p>NOTE: WHEN CHARGING CIRCUIT RUN TRACTOR OR HYDRAULIC UNIT AT FAST IDLE TO SUPPLY OIL VOLUME AND PRESSURE REQUIRED TO PROPERLY CHARGE CIRCUIT.</p>

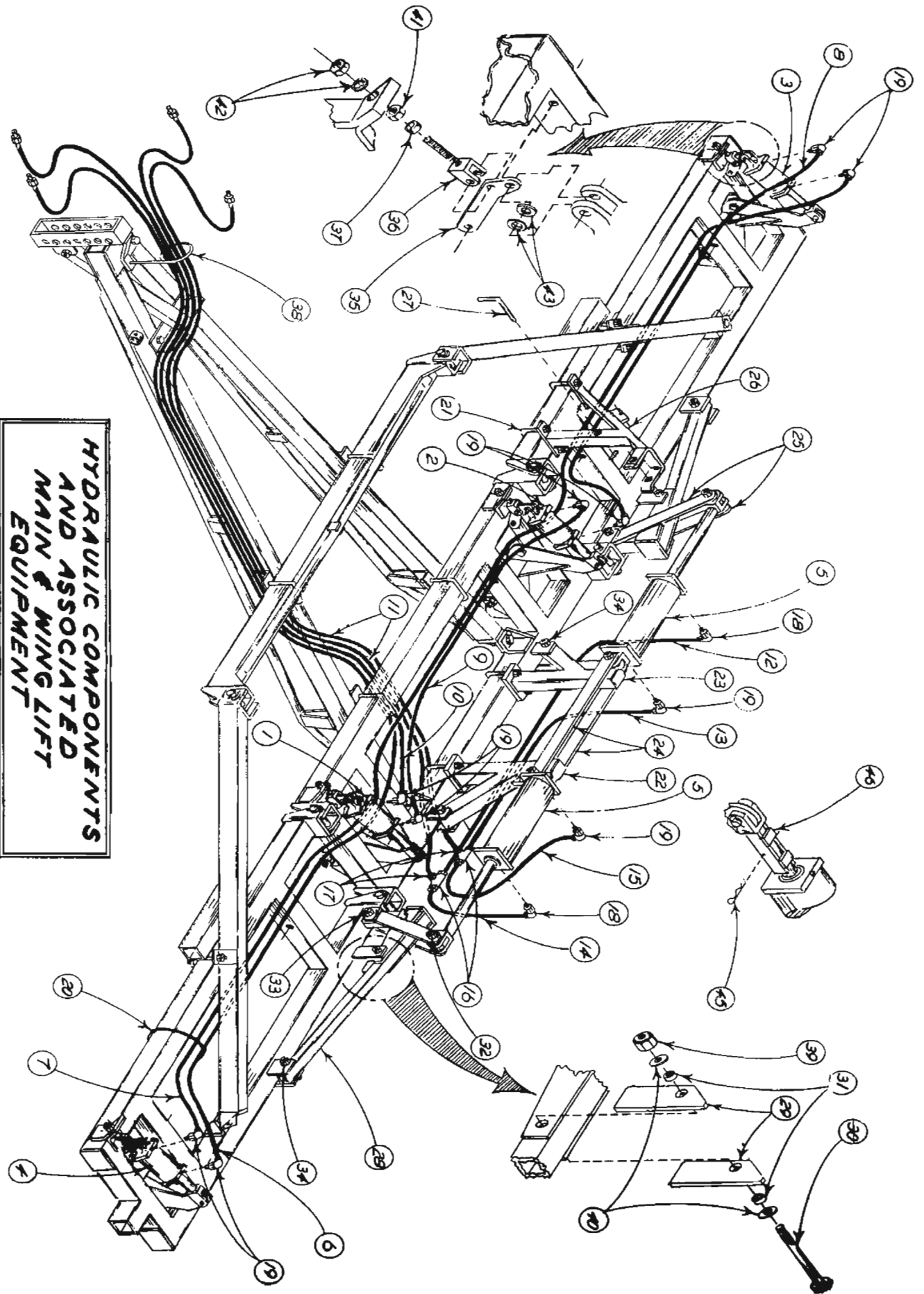
- 1. Plumb the circuit per Hydraulic Layout.
- 2. Leave the rod mountings free to extend without interference.
- 3. Operate the valve to extend the cylinders.
NOTE: They will extend erratically which is the reason for leaving them free to extend without interference.
- 4. Keep the valve open until all cylinders in the circuit are fully extended. Allow oil to flow through the circuit for a minimum of 3 minutes (3 section tools) 5 minutes (5 section tools) to purge the air from the circuit.
- 5. Retract the cylinders fully. (be sure all depth stops are removed from cylinders)
- 6. Repeat the above cycle to be certain that all cylinders extend evenly and in phase with each other.
- 7. Connect rod end mountings.

The system is now ready to operate. Should any cylinder get "out-of-phase", merely extend the cylinders fully to bring the out-of-phase cylinder into phase. If any cylinder gets out-of-phase with frequency or regularity, check the hose, connections and fittings. Any oil leak in system will allow cylinders to get out of phase.

HYDRAULIC COMPONENTS
 AND ASSOCIATED
 MAIN & WING LIFT
 EQUIPMENT

REF	DESCRIPTION	PART NO.	QDD
<u>CYLINDERS (MAIN LIFT SYSTEM)</u>			
1	4 x 8 S422 Lt Cntr	5-818-040	1
2	3-3/4 x 8 R608 or S1451 Rt Cntr	5-818-037	1
3	3-1/2 x 8 S427 Rt Wg	5-818-035	1
4	3-1/4 x 8 R610 Lt Wg	5-818-032	1
<u>CYLINDERS (WING LIFT SYSTEM)</u>			
5	4 x 24	5-818-481	2
<u>HOSE (MAIN LIFT SYSTEM)</u>			
6	3/8 x 24' 1/2 mm (26')	6-822-478	1
	3/8 x 30' 1/2 mm (33')	6-822-560	1
	3/8 x 31'6" 1/2 mm (36')	6-822-578	1
7	3/8 x 27' 1/2 mm (26')	6-822-529	1
	3/8 x 33' 1/2 mm (33')	6-822-633	1
	3/8 x 36' 1/2 mm (36')	6-822-632	1
8	3/8 x 8'2" 1/2 mm (26')	6-822-284	1
	3/8 x 11'2" 1/2 mm (33')	6-822-342	1
	3/8 x 12'8" 1/2 mm (36')	6-822-352	1
9	3/8 x 11'9" 1/2 mm (26', 33', 36')	6-822-343	1
10	3/8 x 17' 1/2 mm (26')	6-822-404	1
	3/8 x 20' 1/2 mm (33', 36')	6-822-440	1
<u>HOSE (WING LIFT SYSTEM)</u>			
11	3/8 x 15' 1/2 mm (26')	6-822-366	2
	3/8 x 18' 1/2 mm (33', 36')	6-822-416	2
12	3/8 x 90' 1/2 mm (26', 33', 36')	6-822-290	1
13	3/8 x 66" 1/2 mm (26', 33', 36')	6-822-266	1
14	3/8 x 32" 1/2 mm (26', 33', 36')	6-822-232	1
15	3/8 x 26' 1/2 mm (26', 33', 36')	6-822-226	1
16	Tee 1/2 x 1/2 (wing lift system)	5-833-100	2
17	Union St. 1/2" (wing lift system)	5-843-400	2
18	90 deg. Restrictor Union 1/16" orifice, 1/2" (wing lift system)	5-843-469	2
19	90 deg. Swivel Union Adapter, 1/2" (wg lift sys 2) (main lift sys 8)	5-843-460	10
20	Tie Strap, Nylon	5-229-006	25
21	U-Bolt 4-3/4 x 6 5/8-11 NC	5-214-002	2
22	Center Support Mount, Lt	410-033	1
23	Center Support Mount, Rt	410-034	1
24	Center Support Bar	410-043	2
25	Toggle, Wing lift	410-032	4
26	Transport Latch	410-082	2
27	Pin. L Shape 1"	8-036-006	2
28	Wing Lift (assembly 410-510) (33' & 36')	400-020	2
	Wing Lift (Assembly 410-429) (26')	410-124	2
29	Stop, Wing Lift	410-106	4
30	Bolt, Wing Lift Stop, 1/2-13 NC x 5	7-123-127	2
31	Bushing, Wing Lift Stop (.510 ID x 3/4 OD x 7/16)	6-133-007	4
32	Bolt, Toggle (upper) 1-14 NF x 5-1/2	8-116-601	2
33	Bolt, Toggle (lower) 1-14 NF x 6	8-116-003	2
34	Bolt, Wing Lift & Base Mount 1-14 NF x 5	8-116-018	6
35	Pivot Arm	400-025	4
36	Adjustable Link (assembly 410-581)	410-121	4
37	Bushing, Adj. Link (1" ID x 1.315xOD 9/16)	6-146-002	4
38	Rod, Hose Mast	101-037	1
39	Nut, Wing Lift Stop Bolt 1/2-13 NC Hex	7-723-015	2
40	Washer, Wing Lift Stop, 1/2" Flat	7-813-015	4
41	Nut, Cyl Adj Link 7/8 x 9 NC Hex	7-715-871	4
42	Nut, Cyl Adj Link 7/8 x 9 NC Jam	7-725-138	8
43	Washers, Cyl & Pivot Link, 1" cut washer	7-186-020	8
45	#8 Hitch Pin	7-920-002	2
46	Cylinder Lock	410-077	2

Form #1279-14

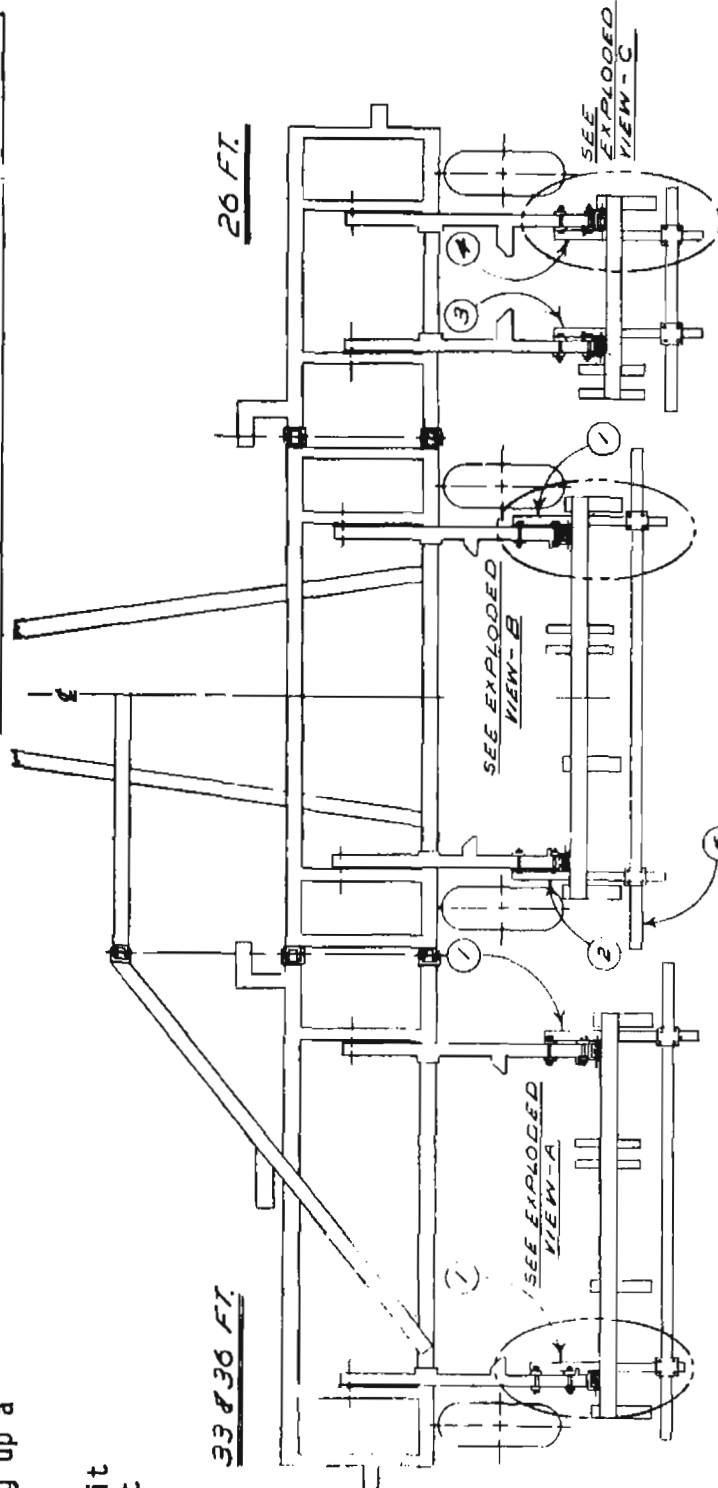


1500 SERIES WEEDER & CULTA-WEEDER

By pass this step if setting up a floatin, lead arm weeder

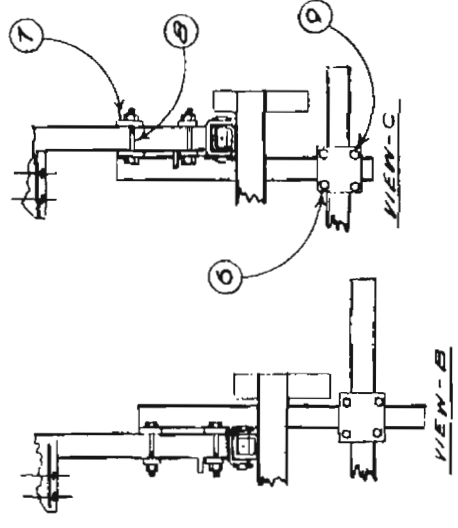
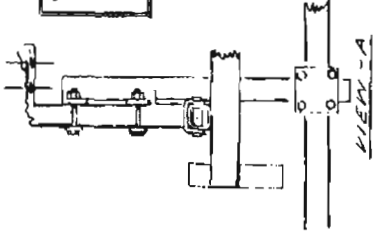
21) Install harrow mount kit as in drawing open bolt sack #410-562

HARROW MOUNTING ACCESSORIES
1500 SERIES CULTA-WEEDER



★ FOR ASSEMBLY OF HARROW MOUNTING ACCESSORIES ON 33 & 36 FT RIGHT WINGS, USE HARROW MOUNT ARMS REF NO ④, PART NO. 410-086 (2 REQD)

HARROW MOUNTING ACCESSORIES
1500 SERIES CULTA-WEEDER

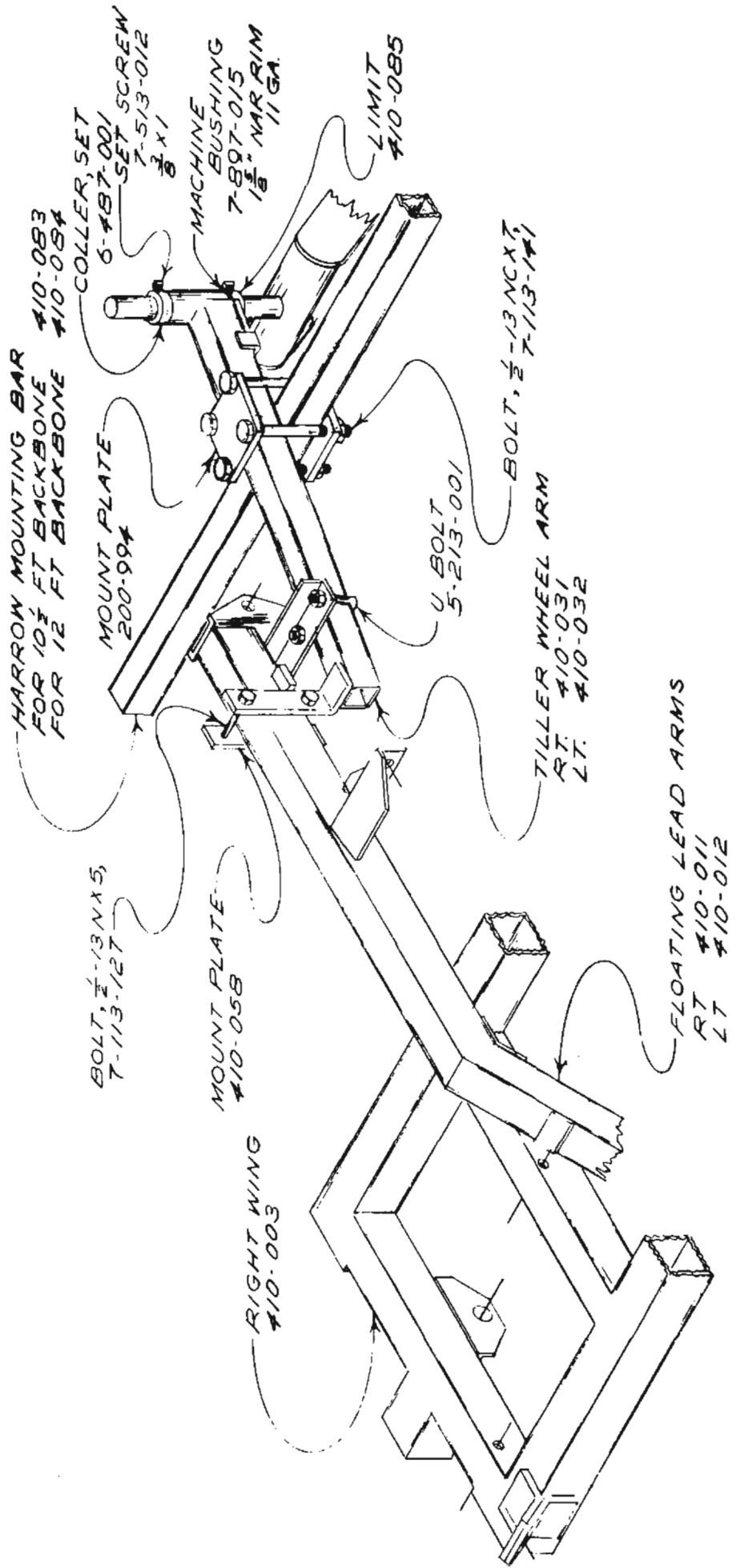


REF NO.	PART DESCRIPTION	PART NO.
1	HARROW MOUNT ARM (LEFT WING AND RIGHT SIDE CENTER FRAME ON 33 & 36 FT)	410-087
2	HARROW MOUNT ARM (RIGHT WING AND LEFT SIDE CENTER FRAME ON 33 & 36 FT)	410-086
3	HARROW MOUNT ARM (7 FT WING ONLY)	410-138
4	HARROW MOUNT ARM (7 FT WING ONLY)	410-139
5	HARROW MOUNTING BAR, FOR 7 FT BACKBONE (60") FOR 10-1/2 FT BACKBONE (102-1/2") FOR 12 FT BACKBONE (121")	410-135 410-083 410-084
6	MOUNT PLATE	200-994
7	MOUNT PLATE	410-058
8	BOLT, 1/2-13 NC x 5"	7-113-127
9	BOLT, 1/2-13 NC x 7"	7-113-141

**ASSEMBLY INSTRUCTIONS
TILLER WHEEL AND HARROW MOUNT
1500 SERIES ROD WEEDER**

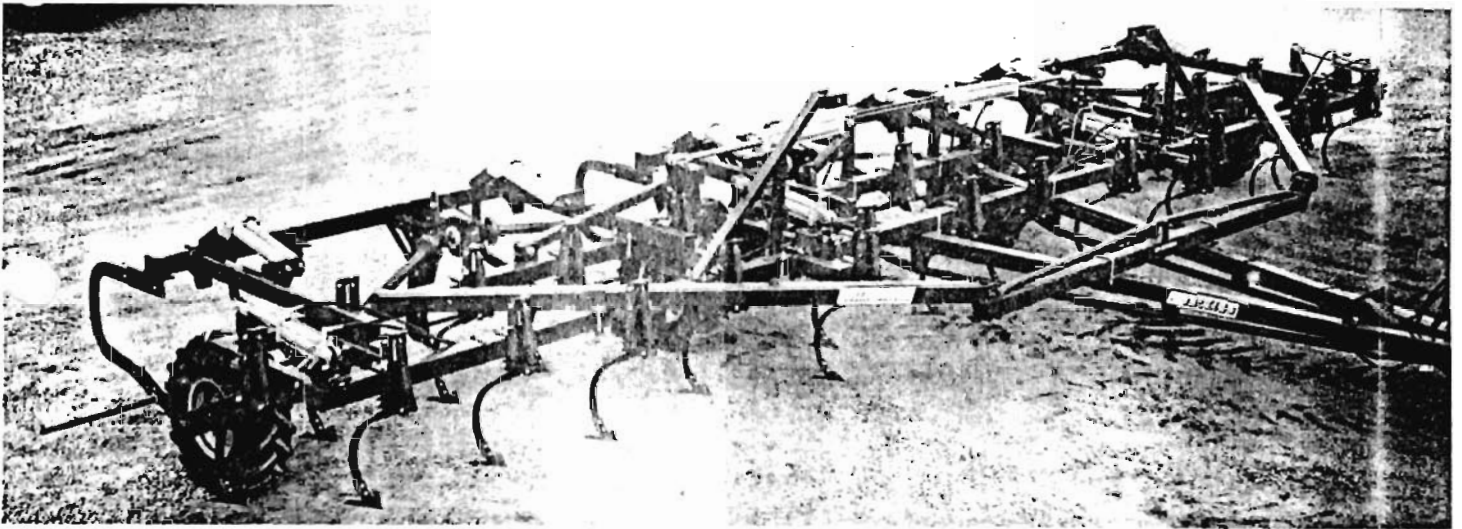
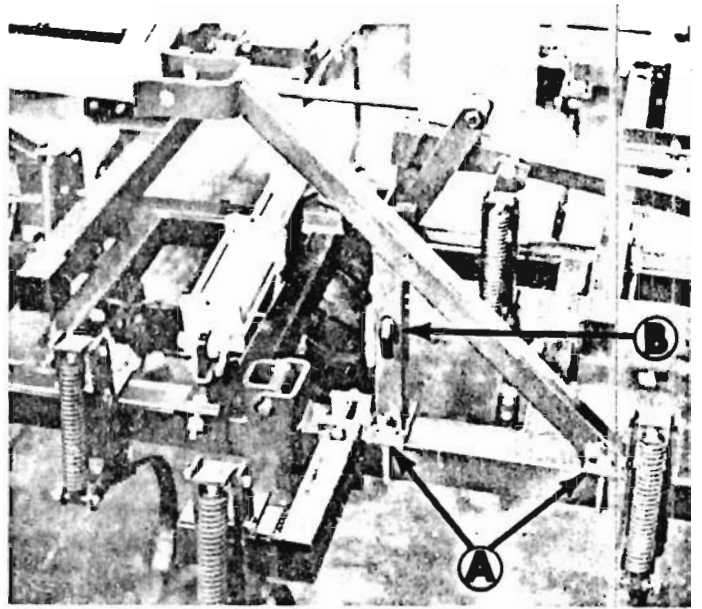
By pass this step if setting up a stiff lead arm weeder

- 22) Install tiller wheel brackets, tiller wheel and harrow mount kit as in drawing below if options are to be installed on weeder. Open bolt sacks #410-528 tiller wheel brackets, #410-529 harrow kit.



23) Raise weeder wings to transport position and adjust #410-082 transport latches. This should be done to allow easy removal of transport lock pins and to insure wing lift cylinders fully close.

- A. Adjusting U Bolts
- B. Transport lock pins



24) Paint any bad spots with touch up paint provided in set up box. Install decal set using instructions provided.

PARTS



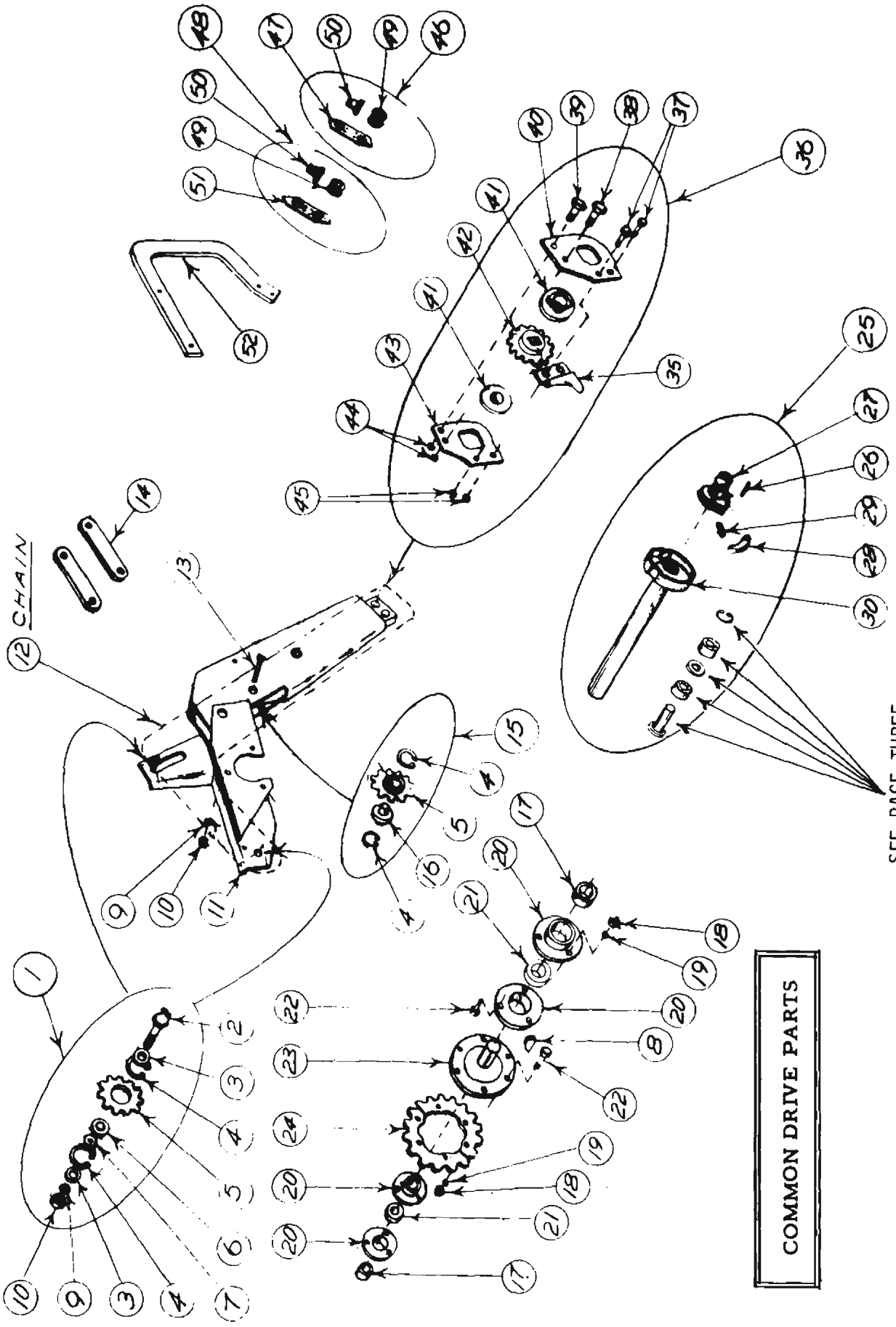
Calkins

CULTA-WEEDER OR 1500 SERIES ROD WEEDER

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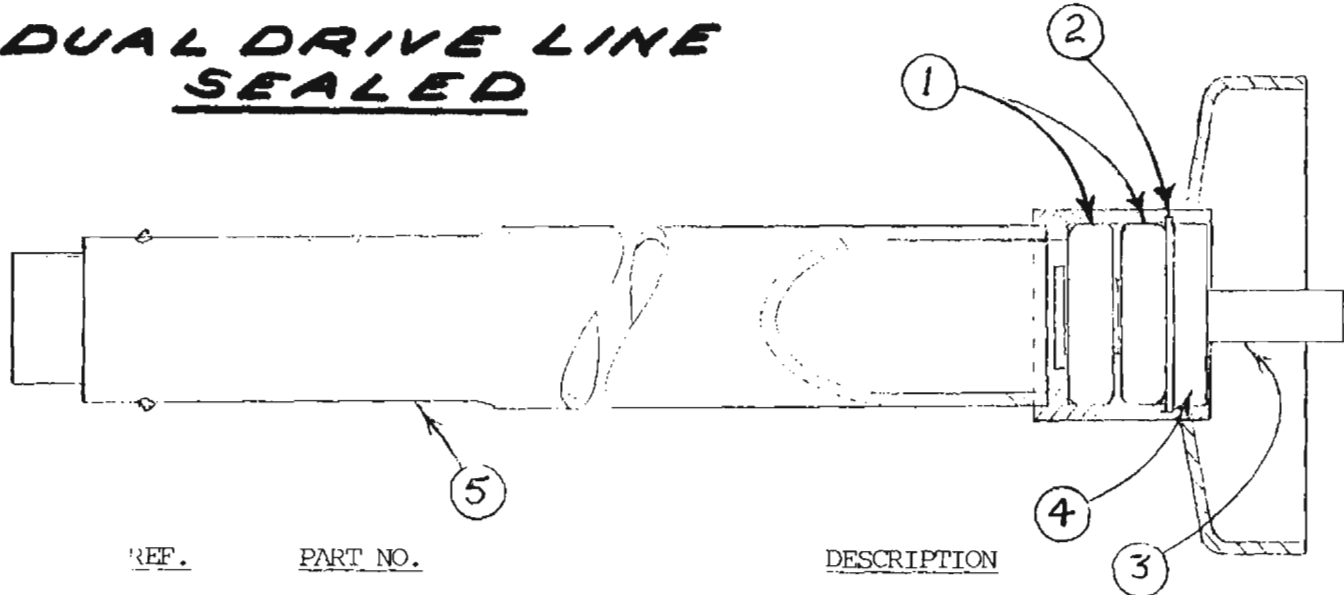
<u>REF.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>	<u>REF.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>
1	Sprocket, Idler Assy. 2 req'd	6-449-002	36	Boot Bottom Assy. Std. Speed Cpt.	103-501
2	Capscrew, 1/2-13 NC x 2-1/4	7-113-111		7/8" Std. Point	103-502
3	flat Washer 1/2	7-813-015		7/8" Rock Point - Narrow	103-503
4	Snap Ring	5-489-002		7/8" Rock Point - Wide	103-
5	Sprocket, Idler	6-919-184		7/8" Rock Point - Wedge	
6	Bearing only	5-449-020		7/8" High Chromium Assy	103-505
7	Bushing (use w/flat washer)	6-133-030		w/5-919-606	
8	Woodruff Key 3/8 x 1-1/4	7-932-115		7/8" High Chromium Assy	103-506
9	Lock washer 1/2"	7-843-015		w/5-919-607	103-511
10	Nut, Hex 1/2"-13 NC Std	7-723-015		1" Std. Point	103-512
11	Boot Shell	202-077		1" Rock Point - Narrow	103-513
12	Chain - Boot Drive			1" Rock Point - Wide	103-514
	Assy. 84 Links	6-019-001		1" Rock Point - Wedge	
	Connector Link	5-016-001		1" High Chromium	103-507
13	Capscrew, 1/2-13 NC x 3	7-113-115		w/5-919-606	
14	Brace, Boot to Crossmember			1" High Chromium	103-508
	2 req'd	105-016	37	Tapered head bolt, 3/8-16 NC x 1"	8-112-001
15	Sprocket, Idler, Boot Assy	6-449-009	38	Capscrew, special, 1/2-13 NC x1-1/4	8-113-003
16	Bearing & Bushing Assy	6-449-008	39	Capscrew, special, 1/2-13 NC x1-1/2	8-113-002
17	Lock, Eccentric 2 req'd	5-489-001	40	Boot Bottom Left	103-063
18	Nut, Hex 3/8 - 16 NC	7-722-010	41	Block Boot 2 req'd	5-919-209
19	Lock washer, 3/8"	7-842-010		High Chromium Block Boot	5-919-609
20	Flange, Bearing 4 req'd	5-499-004	42	Sprocket, 11 Tooth driven boot	
21	Bearing, Split Sprocket			Bottom, 7/8"	5-919-179
	for Boot Shaft 2 req'd	5-449-019		1"	5-919-379
22	Capscrew, 3/8-16 NC x 1-1/4	7-112-050		High Chromium 7/8" sprocket	5-919-579
23	Shaft, Hub, Split Sprocket	106-185	43	High Chromium 1" sprocket	5-919-679
24	Sprocket, Split Drive	6-919-198	44	Boot Bottom Right	103-062
25	Female Drive Assy, for Cultra		45	Tapered Nut, 1/2-13 NC, 2 req'd	8-723-001
	Wdr. Rt 18-1/4"	410-519		Tapered Nut, 3/8 NC, 2 req'd	8-722-001
	Lt 18-1/4"	410-518	46	Shoe Assy, Rock 7/8"	105-094
	Rt 16-3/4"	410-578		1"	105-
26	Roll Pin, 1/2" x 1-3/4"	7-023-001		7/8" High Chromium shoe assy., rock	105-
27	U-Joint w/welder Dog Assy		47	1" High Chromium shoe assy., rock	105-100
	Less Spring, Dog & Pin	6-596-002	48	Shoe, Rock	105-078
	U-Joint w/welded Dog Assy			Shoe Assy., Std. 7/8"	105-064
	w/Spring, Dog & Pin Right	6-546-001		1"	105-096
	Left	6-546-004		7/8" High Chromium shoe assy std.	105-098
	Repair Yoke w/welded ratchet	6-596-001	49	1" High Chromium shoe assy, std.	105-097
	Repair Yoke, 1-7/16 rd	5-546-009		Spool, yellow, 7/8"	5-919-216
	Journal Assy, Repair Kit	5-549-003		1"	5-919-217
28	Pawl, for Ratchet Drive	6-919-146		Spool, black, 7/8"	5-919-416
29	Spring	5-110-001		1"	5-919-417
30	Driveline, Female			7/8" High Chromium spool	5-919-616
	Long 18-1/4"	410-081	50	1" High Chromium spool	5-919-617
	Short 16-3/4"	410-078		Block, Std.	5-919-212
31	Bearing Assy Sealed	6-449-025	51	Block, Rock Point	5-919-412
	Bearing Assy Non Sealed	6-449-024	52	Block, High Chromium	5-919-612
	Parts Break Down See Page 3			Shoe, Std.	105-062
35	Boot Point, Std.	5-919-206		Gooseneck (106-063 w/o	
	Rock Narrow	5-919-207		sheared corner)	202-078
	Rock Wide	5-919-208			
	Rock Wedge	5-919-203			
	Std. High Chromium Rock Point	5-919-606			
	Narrow High Chrom. Rock Point	5-919-607			



COMMON DRIVE PARTS

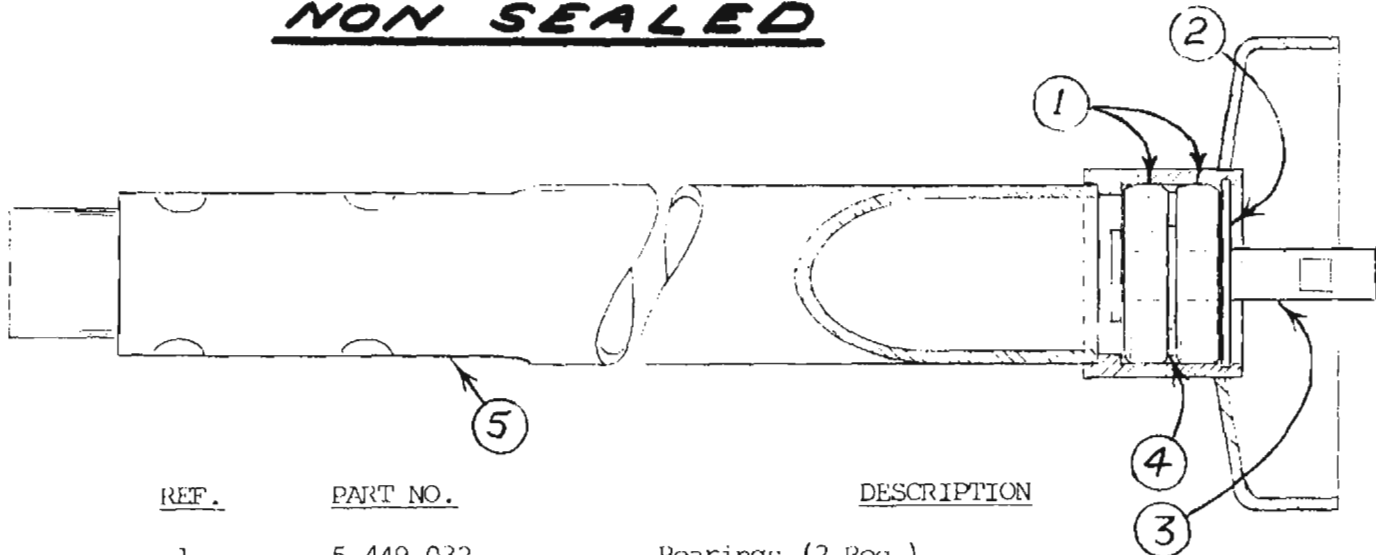
SEE PAGE THREE

DUAL DRIVE LINE SEALED



<u>REF.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	5-449-032	Bearings (2 Req.)
2	5-459-003	Snap Ring
3	6-449-025	Shaft with Bearings, Snap Ring, Seal
4	6-566-095	Shaft Only
	6-439-025	Seal
5	410-156	Driveline 18-1/4"
	410-519	Female Driveline Assy. (Right) 18-1/4"
	410-518	Female Driveline Assy. (Left) 18-1/4"

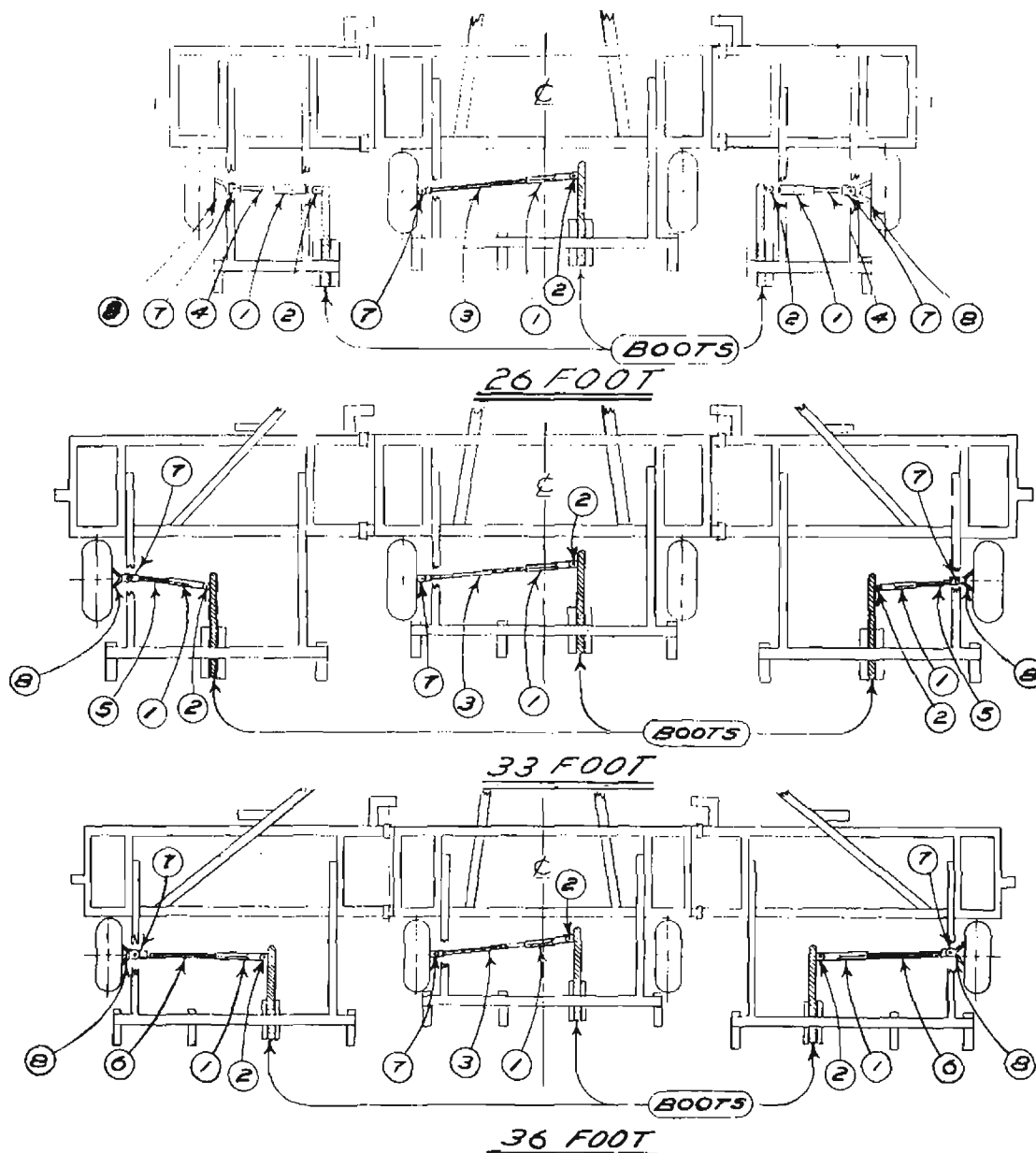
DUAL DRIVE LINE NON SEALED



<u>REF.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	5-449-032	Bearings (2 Req.)
2	5-459-003	Snap Ring
3	6-449-024	Shaft with Bearings, Snap Ring, Bushing
	6-566-083	Shaft Only
4	7-897-027	Spacer, Bearing
5	410-078	Driveline 16-3/4"
	410-081	Driveline 18-1/4"
	410-578	Female Driveline Assy. (Right) 16-3/4"
	410-519	Female Driveline Assy. (Right) 18-1/4"
	410-518	Female Driveline Assy. (Left) 18-1/4"

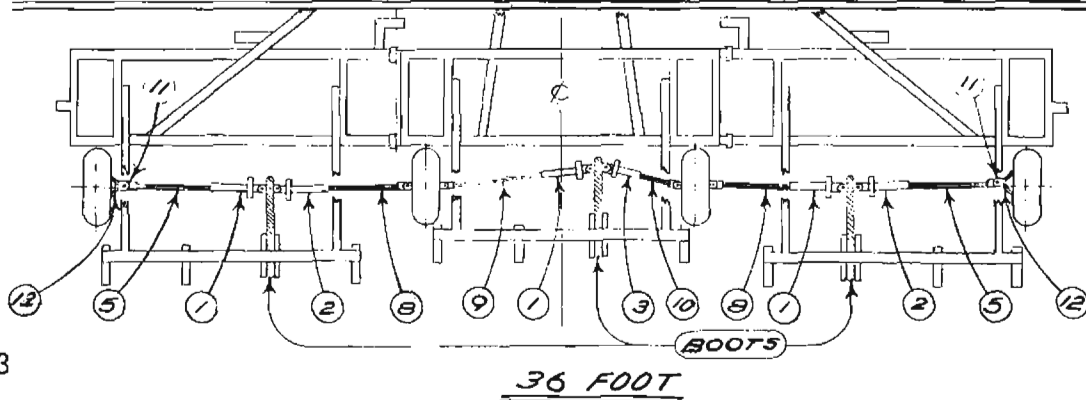
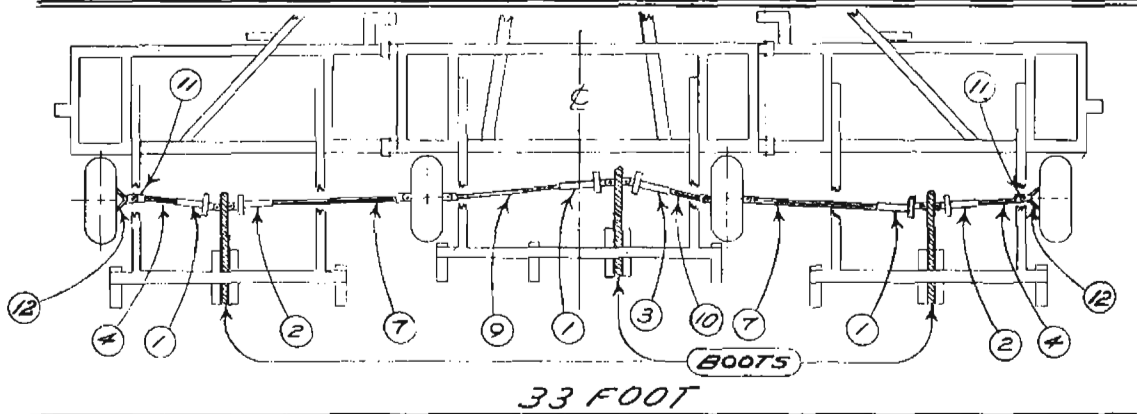
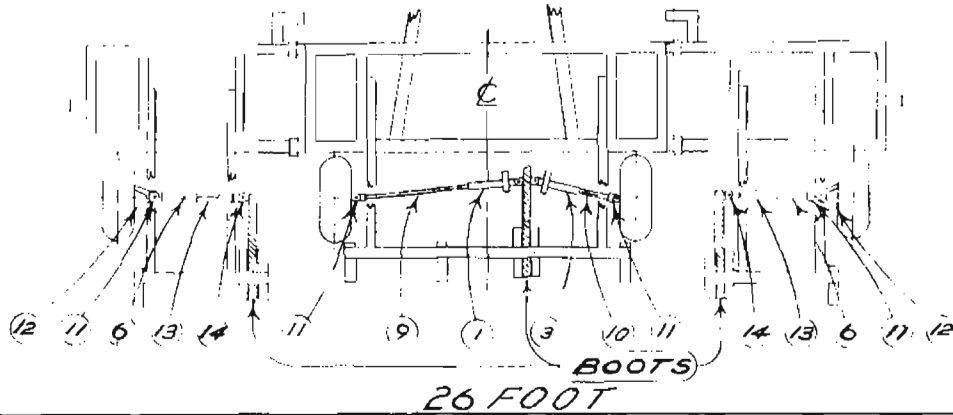
SINGLE DRIVELINE LAYOUT

REF. NO.	DESCRIPTION	26 Ft.	33 Ft.	36 Ft.
1	DRIVELINE ASSY, FEMALE 21-1/8" NO CLUTCH	206-037	206-037	206-037
2	U-JOINT 1-7/16" RD TO 1-1/4" SQ	5-546-006	5-546-006	5-546-006
3	MALE DRIVELINE 44" CENTER SECTION	6-566-088	6-566-088	6-566-088
4	MALE DRIVELINE 30" 7 FT. WINGS SHAFT ONLY	6-566-033	NA	NA
5	MALE DRIVELINE 20-1/4" 10-1/2 FT. WINGS SHAFT ONLY	NA	206-047	NA
6	MALE DRIVELINE 45" 12 FT. WINGS SHAFT ONLY	NA	NA	6-566-050
7	U-JOINT FOR MALE DRIVELINE SHAFTS 1-1/4" SQ TO 1-1/4" SQ	5-546-005	5-546-005	5-546-005
8	DRIVE BASKET	207-121	207-121	207-121

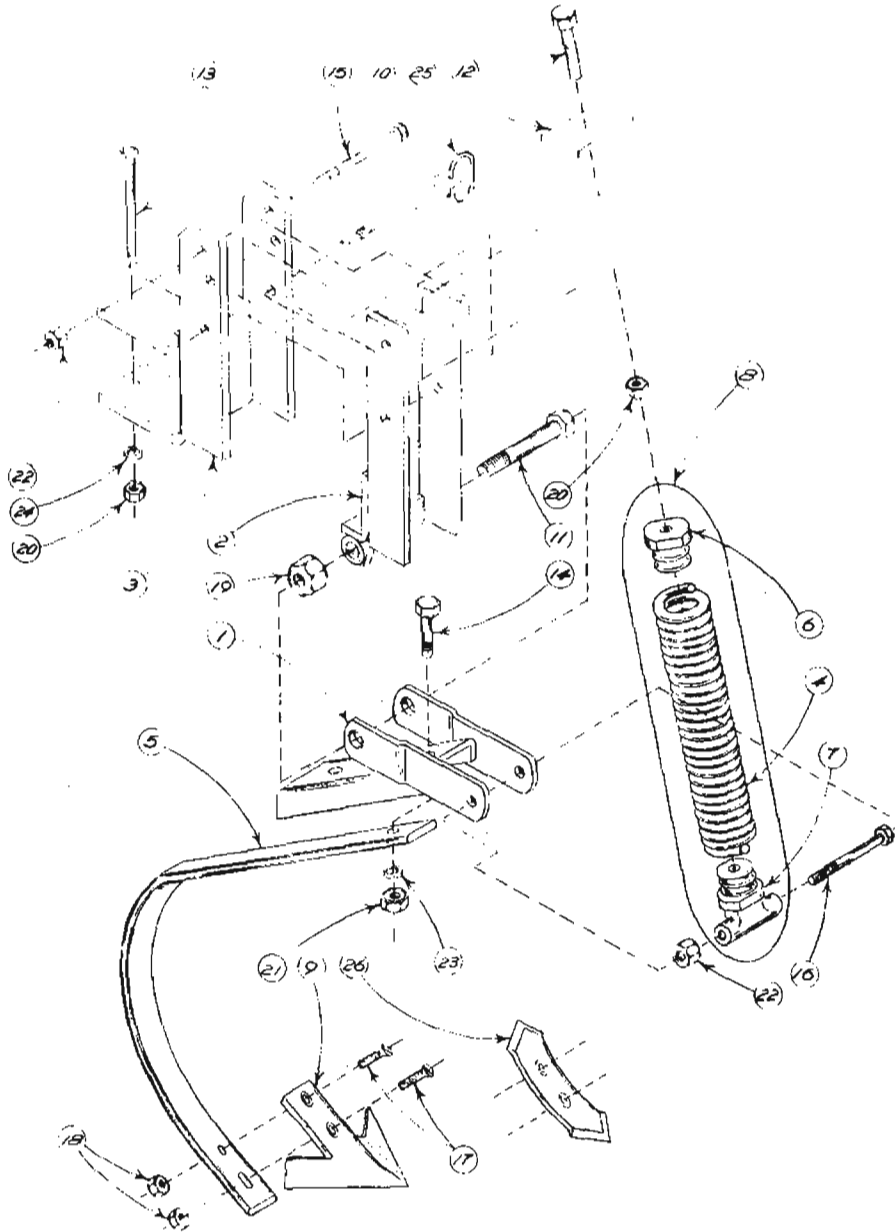


DUAL DRIVELINE LAYOUT

REF NO		26 FT	33 FT	36 FT
1	DRIVE LINE ASSY, FEMALE W/CLUTCH LH (18-1/4")	410-492	410-492	410-492
2	DRIVE LINE ASSY, FEMALE W/CLUTCH RH (18-1/4")	NA	410-493	410-493
3	DRIVE LINE ASSY, FEMALE W/CLUTCH RH (16-3/4")	410-488	410-488	410-488
4	DRIVE LINE, MALE, WINGS OUT BOARD 10-1/2 FT WING, SHAFT ONLY (20-1/4")	NA	206-047	NA
5	12 FT WING, SHAFT ONLY (45")	NA	NA	6-566-050
6	7 FT WING, SHAFT ONLY (30")	6-566-033	NA	NA
7	DRIVE LINE, MALE, WINGS INBOARD 10-1/2 FT WING, SHAFT ONLY (46-1/2")	NA	6-566-089	NA
8	12 FT WING, SHAFT ONLY (41")	NA	NA	6-566-090
9	DRIVE LINE MALE, CENTER, LEFT 12 FT CENTER, SHAFT ONLY (44")	6-566-088	5-566-088	6-566-088
10	DRIVE LINE MALE, CENTER, RIGHT 12 FT CENTER, SHAFT ONLY (16-1/2")	6-566-080	6-566-080	6-566-080
11	U-JOINT FOR MALE DRIVE ASSY 1-1/4 SQ. IN., SQ TO SQ	5-546-005	5-546-005	5-546-005
12	DRIVE BASKET	207-121	207-121	207-121
13	FEMALE DRIVE LINE W/C CLUTCH (21-1/8")	206-037	NA	NA
14	U-JOINT 1-7/16" RD TO 1-1/4 SQ	5-546-006	NA	NA



ROTATING SHANK ASSEMBLY



MATERIAL LISTING ROTATING SHANK ASSEMBLY

REF. NO.	ITEM DESCRIPTION	PART NO.	REF. NO.	ITEM DESCRIPTION	PART NO.
1	SHANK MOUNT	201-062	14	5/8-11 NC x 1-3/4", CS	7-114-006
2	SPRING MOUNT	410-055	15	1/2-13 NC x 4-1/2", CS	7-113-124
3	ROTATION MOUNT	410-054	16	1/2-13 NC x 3-3/4", CS	7-113-121
4	SPRING	5-123-002	17	3/8-16 NC x 1-1/2" NO. 3 PLOW BOLT (USED ON REVERSIBLE POINT AND 1/4" SWEEPS)	7-272-056
5	SHANK	6-939-008		3/8-16 NC x 1-1/4 NO.3 PLOW BOLT (USED ON STD SWEEP ONLY)	7-272-055
6	INSERT, TOP	6-919-050	18	3/8-16 NC, HEX NUT	7-722-010
7	INSERT, BOTTOM	6-919-051	19	3/4-16 NE TOP LOCK NUT PL	7-725-122
8	SPRING WITH INSERTS	6-123-002	20	1/2-13 NC, HEX NUT	7-723-015
9	SWEEP BLADE 3/16 x 9	5-952-601	21	5/8-11 NC, HEX NUT	7-724-005
	1/4 x 9	410-553	22	1/2-13 NC, CONE LOCK NUT	7-723-100
	1/4 x 9 HARD SURFACED	410-554	23	5/8 MED LOCK WASHER	7-844-020
10	LOCK PIN	7-920-012	24	1/2 MED LOCK WASHER	7-843-015
11	3/4-16 NF x 4-3/4", CS, MECH PL	7-115-067	25	ROTATION STOP PLATE	410-133
12	1/2-13 NC x 3", CS, FULL THRD	7-113-136	26	REVERSIBLE BOLT ON POINT	6-949-010
13	1/2-13 NC x 5-1/2", CS	7-113-129			

MATERIAL LISTING

1500 SERIES CULTA-WDR

REF NO.	NOMENCLATURE	26' 3SECTION 12' CTR SECTION 7' WINGS 26' WORKING WDTN	33' 3 SECTION 12' CTR SECTION 10 $\frac{1}{2}$ ' WINGS 33' WORKING WDTN	36' 3 SECTION 12' CTR SECTION 12' WINGS 36' WORKING WDTN
1	TONGUE, LT	410-128	410-006	410-006
2	TONGUE, RT	410-129	410-007	410-007
3	CROSS TONGUE	NA	410-008	410-008
4	WING PULL, LT	NA	410-074	410-010
5	WING PULL, RT	NA	410-075	410-009
6	FRAME, CENTER	410-001	410-001	410-001
7	FRAME, WING, LT	410-123	410-065	410-002
8	FRAME, WING, RT	410-122	410-066	410-003
9	BACKBONE, CENTER	410-004	410-004	410-004
	BACKBONE, LT	410-125	410-072	410-068
	BACKBONE, RT	410-126	410-073	410-005
10	WHEEL LEG ASSEMBLY, CNTR FRAME (COMPLETE WITH LIVE AXLE ASSEMBLY)			
	LT	410-514	410-514	410-514
	RT	410-513	410-513	410-513
	WHEEL LEG ONLY, CENTER FRAME			
	LT	410-014	410-014	410-014
	RT	410-013	410-013	410-013
11	WHEEL LEG ASSEMBLY, WING FRAME (COMPLETE WITH HUB)			
	LT	410-516	410-516	410-516
	RT	410-515	410-515	410-515
	WHEEL LEG ONLY, WING FRAME			
	LT	410-016	410-016	410-016
	RT	410-015	410-015	410-015
12	STIFF ARM, SHORT, LT. (CNTR FR.)	410-056	410-056	410-056
	STIFF ARM, LONG, LT (WING FR.)	410-136	410-070	410-070
13	STIFF ARM, SHORT, RT (CNTR FR.)	410-057	410-057	410-057
	STIFF ARM, LONG, RT (WING FR.)	410-137	410-071	410-071
14	TONGUE JACK	5-329-051	5-329-051	5-329-051
15	SPRING GUIDE	410-040	410-040	410-040
16	SPRING ROD	410-041	410-041	410-041
17	SPRING	5-114-001	5-114-001	5-114-001
18	STOP, SPRING GUIDE	410-042	410-042	410-042
19	WASHER, SPRING RETAINER	8-816-001	8-816-001	8-816-001
20	PULL EYE	410-020	410-020	410-020
21	PIN, BACKBONE & LEAD ARM HINGE (1 x 5-1/2)	8-026-028	8-026-028	8-026-028
22	PIN, CENTER FR & WING HINGE 1 x 6-15/16 (1 x 7-13/16 7' Wing)			
	PIN ONLY	8-026-032	8-026-029	8-026-029
	ROLL PIN	7-022-005	7-022-005	7-022-005
23	PIN, CROSS TONGUE HINGE 1-1/4 x 6-15/16			
	PIN ONLY	8-036-022	8-036-022	8-036-022
	ROLL PIN	7-022-005	7-022-005	7-022-005

FORM #1279-22

MATERIAL LISTING

1500 SERIES CULTA-WDR

REF NO.	NOMENCLATURE	26' 3 SECTION 12' CTR SECTION 7' WINGS 26' WORKING WDTH	33' 3 SECTION 12' CTR SECTION 10½' WINGS 33' WORKING WDTH	36' 3 SECTION 12' CTR SECTION 12' WINGS 36' WORKING WDTH
24	PIN, TONGUE JACK W/CHAIN 5/8 x 3-9/16	7-036-010	7-036-010	7-036-010
25	U-BOLT, 4-3/4 x 6, 5/8-11 NC	5-214-002	5-214-002	5-214-002
26	BUSHING, WHEEL LEG BOLT (1-9/32 ID x 1-1/2 OD x 1-7/16)	6-136-627	6-136-627	6-136-627
27	BUSHING, SPRING BASE (41/64 ID x 1 OD x 9/16)	6-143-007	6-143-007	6-143-007
28	BOLT, WHEEL LEG 1-1/4-12 NF x 3-1/4	8-116-802	8-116-802	8-116-802
29	PIN, PULL EYE	8-036-024	8-036-024	8-036-024
30	MOUNT PLATE, WING PULL	216-058	216-058	216-058
31	BOLT, TONGUE 1-14 NF x 6	8-116-003	8-116-003	8-116-003
32	ROLL PIN 3/8 x 2	7-022-005	7-022-005	7-022-005
33	HUB ASSEMBLY	5-619-021	5-619-021	5-619-021
34	SEAL, FELT	5-439-141	5-439-141	5-439-141
35	CONE	5-419-142	5-419-142	5-419-142
36	CUP	5-419-141	5-419-141	5-419-141
37	HUB	5-619-022	5-619-022	5-619-022
38	LUG, BOLT, BEVEL HD, 1/2-20 NF x 1 (3 REQD)	7-333-006	7-333-006	7-333-006
39	CUP	5-419-112	5-419-112	5-419-112
40	CONE	5-419-113	5-419-113	5-419-113
41	WASHER, FLAT 7/8"	7-815-025	7-815-025	7-815-025
42	NUT, HEX LIGHT SLOTTED 7/8-16 NF	7-715-880	7-715-880	7-715-880
43	COTTER PIN 1/8 x 1-3/4	7-910-155	7-910-155	7-910-155
44	DUST CAP	5-469-006	5-469-006	5-469-006
45	LOCK NUT, SPECIAL (2 REQD)	7-701-001	7-701-001	7-701-001
46	LOCK WASHER, SPECIAL (1 REQD)	7-807-001	7-807-001	7-807-001
47	SPACER, RING SEAL	6-137-012	6-137-012	6-137-012
48	SEAL (2 REQD)	5-439-020	5-439-020	5-439-020
49	CONE (1 REQD)	5-419-127	5-419-127	5-419-127
50	CUP (2 REQD)	5-419-125	5-419-125	5-419-125
51	CONE	5-419-126	5-419-126	5-419-126
52	RIM 15 x 8, 6 BOLT	5-639-421	5-639-421	5-639-421
53	AXLE W/STUDS	6-577-024	6-577-024	6-577-024
54	LUG BOLT	7-333-001	7-333-001	7-333-001
55	NUT, LUG BOLT	7-733-001	7-733-001	7-733-001
56	TIRE, 12.5L-15 HI CLEAT TUBELESS 6 PLY (2 REQD)	5-649-057	5-649-057	5-649-057
57	TIRE, 12.5L-15 HI CLEAT TUBELESS 8 PLY (2 REQD)	5-649-058	5-649-058	5-649-058
	BOOT, DRIVE ASSY. STD. COMPLETE 1" BOOT, DRIVE ASSY. STD. COMPLETE 7/8" (FOR COMPLETE BREAKDOWN SEE COMMON PARTS SHEET)	202-589 202-579	202-589 202-579	202-589 202-579
58	GOOSENECK	202-078	202-078	202-078

FORM #1279-23

1500 SERIES CULTA-WDR

MATERIAL LISTING

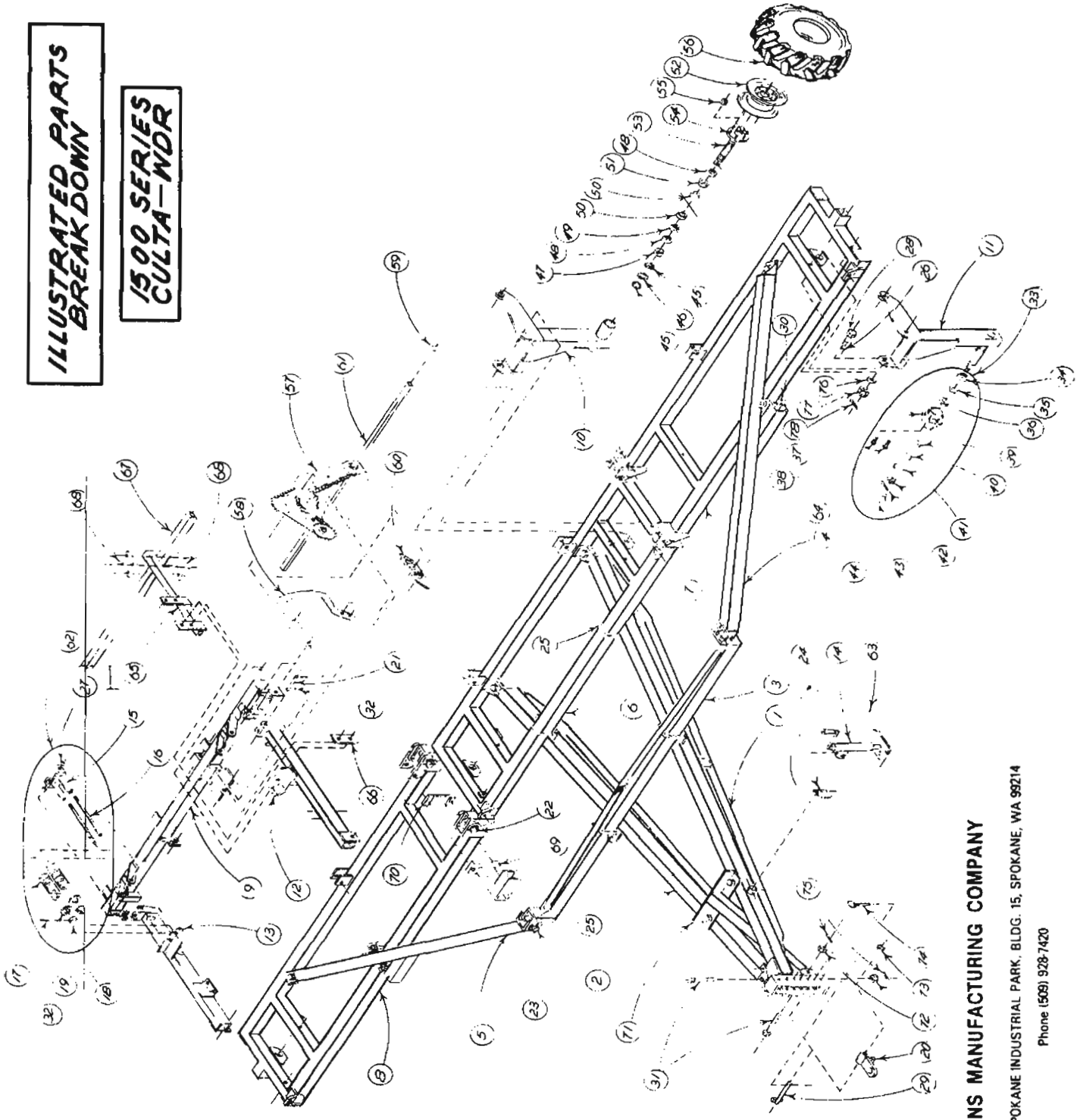
3 OF 3

REF NO.	NOMENCLATURE	26' 3 SECTION 12' CTR SECTION 7' WINGS 26' WORKING WDTH	33' 3 SECTION 12' CTR SECTION 10½' WINGS 33' WORKING WDTH	36' 3 SECTION 12' CTR SECTION 12' WINGS 36' WORKING WDTH
59	SET COLLAR, 1" (SEE BOOT DETAIL)	6-485-001	6-485-001	6-485-001
	SET COLLAR, 7/8" (SEE BOOT DETAIL)	6-486-002	6-486-002	6-486-002
60	SHOE ASSY STD 1" (SEE BOOT DETAIL)	105-096	105-096	105-096
	SHOE ASSY STD 7/8" (SEE BOOT DETAIL)	105-064	105-064	105-064
61	ROD 7/8", 7 FT	5-965-107	NA	NA
	ROD 1", 7 FT	5-966-107	NA	NA
	ROD 7/8", 10-1/2 FT	NA	5-965-110	NA
	ROD 1", 10-1/2 FT	NA	5-966-110	NA
	ROD 7/8", 12 FT	5-965-112	5-965-112	5-965-112
	ROD 1", 12 FT	5-966-112	5-966-112	5-966-112
62	SPRING CUSHION ASSY	410-525	410-525	410-525
63	TONGUE JACK ASSY	410-512	410-512	410-512
64	LUG BOLT, CS, 1/2-20 NF x 1-3/4 (3 REQD)	7-113-107	7-113-107	7-113-107
65	HARROW MOUNT ARM			
	LT	410-138	410-087	410-087
	RT	410-139	410-086	410-086
66	MOUNT PLATE (F/HARROW MT ARM)	410-058	410-058	410-058
67	HARROW MOUNTING BAR			
	60" FOR 7 FT BACKBONES	410-135	NA	NA
	102-1/2" FOR 10-1/2 FT BACKBONES	NA	410-083	NA
	121" FOR 12 FT BACKBONES	410-084	410-084	410-084
68	MOUNT PLATE (FOR MTG BAR)	200-994	200-994	200-994
69	SHANK MOUNT (2 REQD)	410-069	410-069	410-069
70	BASE PLATE F/SHANK MT (2 REQD)	410-079	410-079	410-079
71	TONGUE BRACE	410-127	410-127	410-127
72	NUT, 1-14 NF	7-716-850	7-716-850	7-716-850
73	1-1/2" MACHINE BUSHING, 10 GA NARROW RIM	7-896-500	7-896-500	7-896-500
74	PIN, PULL EYE BOLT	7-920-006	7-920-006	7-920-006
75	COTTER PIN 3/16 x 1-1/2	7-910-170	7-910-170	7-910-170
76	1-1/4 MACHINE BUSHING, 10 GA NARROW RIM	7-896-250	7-896-250	7-896-250
77	NUT, LIGHT SLOTTED, 1-1/4-12 NF	7-717-240	7-717-240	7-717-240
78	COTTER PIN 3/16 x 1-3/4	7-910-175	7-910-175	7-910-175

FORM #1279-24

**ILLUSTRATED PARTS
BREAK DOWN**

**1500 SERIES
CULTA—NDR**



CALKINS MANUFACTURING COMPANY
SPOKANE INDUSTRIAL PARK, BLDG. 15, SPOKANE, WA 99214
Phone (509) 928-7420



MATERIAL LISTING

1500 SERIES ROD WDR

1 OF 4

REF NO.	NOMENCLATURE	26' 3 SECTION	33' 3 SECTION	36' 3 SECTION
		12' CTR SECTION 7' WINGS 26" WORKING WDTH	12' CTR SECTION 10½' WINGS 33' WORKING WDTH	12' CTR SECTION 12' WINGS 36' WORKING WDTH
1	TONGUE, LT.	410-128	410-006	410-006
2	TONGUE, RT.	410-129	410-007	410-007
3	CROSSTONGUE	NA	410-008	410-008
4	WING PULL, LT.	NA	410-074	410-010
5	WING PULL, RT.	NA	410-075	410-009
6	FRAME, CENTER	410-001	410-001	410-001
7	FRAME, WING LT	410-123	410-065	410-002
8	FRAME, WING RT	410-122	410-066	410-003
9	BACKBONE, CENTER	410-004	410-004	410-004
	BACKBONE, LT	410-125	410-072	410-068
	BACKBONE, RT	410-126	410-073	410-005
10	WHEEL LEG ASSEMBLY, CENTER FRAME (COMPLETE WITH LIVE AXLE ASSY)			
	LT	410-514	410-514	410-514
	RT	410-513	410-513	410-513
	WHEEL LEG ONLY, CENTER FRAME			
	LT	410-014	410-014	410-014
	RT	410-013	410-013	410-013
11	WHEEL LEG ASSY, WING FRAME (COMPLETE WITH HUB)			
	LT	410-516	410-516	410-516
	RT	410-515	410-515	410-515
	WHEEL LEG ONLY, WING FRAME			
	LT	410-016	410-016	410-016
	RT	410-015	410-015	410-015
12	LEAD ARM, FLOATING, LT	410-012	410-012	410-012
13	LEAD ARM, FLOATING, RT	410-011	410-011	410-011
14	TONGUE JACK	5-329-051	5-329-051	5-329-051
15	SPRING GUIDE	410-040	410-040	410-040
16	SPRING ROD	410-041	410-041	410-041
17	SPRING	5-114-001	5-114-001	5-114-001
18	STOP, SPRING GUIDE	410-042	410-042	410-042
19	WASHER, SPRING RETAINER	8-816-001	8-816-001	8-816-001
20	PULL EYE	410-020	410-020	410-020
21	PIN, BACKBONE & LEAD ARM HINGE 1 x 5-1/2	8-026-028	8-026-028	8-026-028
22	PIN, CENTER FRAME & WING HINGE 1 x 5-15/16 (J x 7-13/16 7 FT WG)			
	PIN ONLY	8-026-032	8-026-029	8-026-029
	ROLL PIN	7-022-005	7-022-005	7-022-005
23	PIN, CROSS TONGUE HINGE, 1-1/4x6-15/16			
	PIN ONLY	8-036-022	8-036-022	8-036-022
	ROLL PIN	7-022-005	7-022-005	7-022-005
24	PIN, TONGUE JACK, W/CHAIN 5/8x3-9/16	7-036-010	7-036-010	7-036-010
25	U-BOLT 4-3/4 x 6, 5/8-11 NC	5-214-002	5-214-002	5-214-002
26	BUSHING, WHEEL LEG BOLT (1-9/32 ID x 1-1/2 OD x 1-7/16)	6-132-627	6-132-627	6-132-627

MATERIAL LISTING

1500 SERIES ROD WDR

REF NO.	NOMENCLATURE	26' 3 SECTION 12' CTR SECTION 7' WINGS 26' WORKING WDTH	33' 3 SECTION 12' CTR SECTION 10½' WINGS 33' WORKING WDTH	36' 3 SECTION 12' CTR SECTION 12' WINGS 36' WORKING WDTH
27	BUSHING SPRING BASE (11/64 IDx 1 OD x 9/16)	6-143-007	6-143-007	6-143-007
28	BOLT, WHEEL LEG (1-1/4x3-1/4) NF	8-116-802	8-116-802	8-116-802
29	PIN, PULL EYE	8-036-024	8-036-024	8-036-024
30	MOUNT PLATE, WING PULL	216-058	216-058	216-058
31	BOLT, TONGUE, 1-14 NF x 6	8-116-003	8-116-003	8-116-003
32	ROLL PIN, 3/8 x 2	7-022-005	7-022-005	7-022-005
33	HUB ASSEMBLY	5-619-021	5-619-021	5-619-021
34	SEAL, FELT	5-439-141	5-439-141	5-439-141
35	CONE	5-419-142	5-419-142	5-419-142
36	CUP	5-419-141	5-419-141	5-419-141
37	HUB	5-619-022	5-619-022	5-619-022
38	LUG BOLT, BEVEL HEAD, 1/2-20 NF x1 (3 REQD)	7-333-006	7-333-006	7-333-006
39	CUP	5-419-112	5-419-112	5-419-112
40	CONE	5-419-113	5-419-113	5-419-113
41	WASHER, FLAT 7/8"	7-815-025	7-815-025	7-815-025
42	NUT, HEX, LIGHT, SLOTTED 7/8-16 NF	7-715-880	7-715-880	7-715-880
43	COTTER PIN 1/8 x 1-3/4	7-910-155	7-910-155	7-910-155
44	DUST CAP	5-469-006	5-469-006	5-469-006
45	LOCKNUT, SPECIAL (2 REQD)	7-701-001	7-701-001	7-701-001
46	LOCK WASHER, SPECIAL (1 REQD)	7-807-001	7-807-001	7-807-001
47	SPACER, RING SEAL	6-137-012	6-137-012	6-137-012
48	SEAL (2 REQD)	5-439-020	5-439-020	5-439-020
49	CONE (1 REQD)	5-419-127	5-419-127	5-419-127
50	CUP (2 REQD)	5-419-125	5-419-125	5-419-125
51	CONE	5-419-126	5-419-126	5-419-126
52	RIM, 15 x 8, 6 BOLT	5-639-421	5-639-421	5-639-421
53	AXLE W/STUDS	6-577-024	6-577-024	6-577-024
54	LUG BOLT	7-333-001	7-333-001	7-333-001
55	LUB NUT	7-733-001	7-733-001	7-733-001
56	TIRE, 12.5L-15 HI CLEAT TUBELESS 6 PLY (2 REQD)	5-649-057	5-649-057	5-649-057
	TIRE, 12.5L-15 HI CLEAT TUBELESS 8 PLY (2 REQD)	5-649-058	5-649-058	5-649-058
57	BOOT, DRIVE ASSY. COMPLETE 1" STD	202-589	202-589	202-589
	BOOT, DRIVE ASSY. COMPLETE 7/8" (FOR COMPLETE BREAKDOWN SEE COMMON PARTS SHEET)	202-579	202-579	202-579
58	GOOSENECK	202-078	202-078	202-078
59	SET COLLAR 1" (SEE BOOT DETAIL)	6-485-001	6-485-001	6-485-001
	SET COLLAR 7/8" (SEE BOOT DETAIL)	6-486-002	6-486-002	6-486-002
60	SHOE ASSEMBLY 1" STD (SEE BOOT DETAIL)	105-096	105-096	105-096
	SHOE ASSEMBLY 7/8" STD (SEE BOOT DETAIL)	105-064	105-064	105-064

REF NO.	NOMENCLATURE	26' 3 SECTION 12' CTR SECTION 7' WINGS 26' WORKING WDTH	33' 3 SECTION 12' CTR SECTION 10½' WINGS 33' WORKING WDTH	36' 3 SECTION 12' CTR SECTION 12' WINGS 36' WORKING WDTH
61	ROD 7/8", 7 FT	5-965-107	5-965-107	5-965-107
	ROD 1", 7FT	5-966-107	5-966-107	5-966-107
	ROD 7/8", 10½ FT	NA	5-965-110	NA
	ROD 1", 10½ FT	NA	5-966-110	NA
	ROD 7/8", 12 FT	5-965-112	5-965-112	5-965-112
	ROD 1", 12' FT	5-966-112	5-966-112	5-966-112
62	SPRING CUSHION ASSY	410-525	410-525	410-525
63	TONGUE JACK ASSY	410-512	410-512	410-512
64	LUG BOLT, CS 1/2-20 NF x 1-3/4(3 REQD) FULL THRD	7-113-107	7-113-107	5-113-107
65	RUB PLATE	410-030	410-030	410-030
66	LEAD ARM MOUNTS			
	LT	410-044	410-044	410-044
	LT	410-046	410-046	410-046
	RT	410-045	410-045	410-045
67	MOUNT PLATE, LEAD ARM MTS.	410-047	410-047	410-047
		201-855	201-855	201-855
68	TILLER WHEEL ARM			
	LT	410-032	410-032	410-032
	RT	410-031	410-031	410-031
69	HARROW MOUNTING BAR FOR 7 FT BACKBONE	410-135	NA	NA
	102½" FOR 10-1/2 FT BACKBONE	NA	410-083	NA
	121" FOR 12 FT BACKBONE	410-084	410-084	410-084
70	MOUNT PLATE (F/MOUNTING BAR)	200-994	200-004	200-994
71	MOUNT PLATE (F/TILLER WHEEL ARM)	410-058	410-058	410-058
72	TILLER WHEEL ASSY 5.70 x 8	202-545	202-545	202-545
	TILLER WHEEL ASSY 18.950 x 8	202-541	202-541	202-541
73	TILLER FORK 5.70 x 8	202-113	202-113	202-113
	TILLER FORK 18.950 x 8	106-041	106-041	106-041
74	AXLE, TILLER FORK 5.70 x 8	8-115-005	8-115-005	8-115-005
	AXLE, TILLER FORK 18.950 x 8	8-115-003	8-115-003	8-115-003
75	CUPPED WASHER (2 REQD PER WHEEL)	8-885-001	8-885-001	8-885-001
76	BUSHING 9/16 x 3/4 PIPE, 5.70 x 8 (2 REQD PER WHEEL)	6-135-019	6135-019	6-135-019
	BUSHING (3/4 ID x 1-1/8 OD x 1/2 LONG) 18.950 x 8 (2 REQD PER WHEEL)	5-135-001	5-135-001	5-135-001
77	SEALED BALL BEARING (2 PER WHEEL)	5-449-012	5-449-012	5-449-012
78	HUB TILLER, 5.70 x 8, HUB ONLY	5-619-011	5-619-011	5-619-011
	HUB TILLER, 18.950 x 8, HUB ONLY	5-619-010	5-619-010	5-619-010
	HUB W/BEARINGS 5.70 x 8	5-619-016	5-619-016	5-619-016
	HUB W/BEARINGS 18.950 x 8	5-619-012	5-619-012	5-619-012
79	LUG BOLT	7-732-001	7-732-001	7-732-001
80	LUG NUT	7-733-001	7-733-001	7-733-001
81	RIM, 5.70 x 8	5-639-100	5-639-100	5-639-100
	RIM, 18.950 x 8	5-639-007	5-639-007	5-639-007
82	TIRE, 5.70 x 8 4 PLY	5-639-110	5-639-110	5-639-110
	TIRE, 18.950 x 8 4 PLY	5-649-015	5-649-015	5-649-015

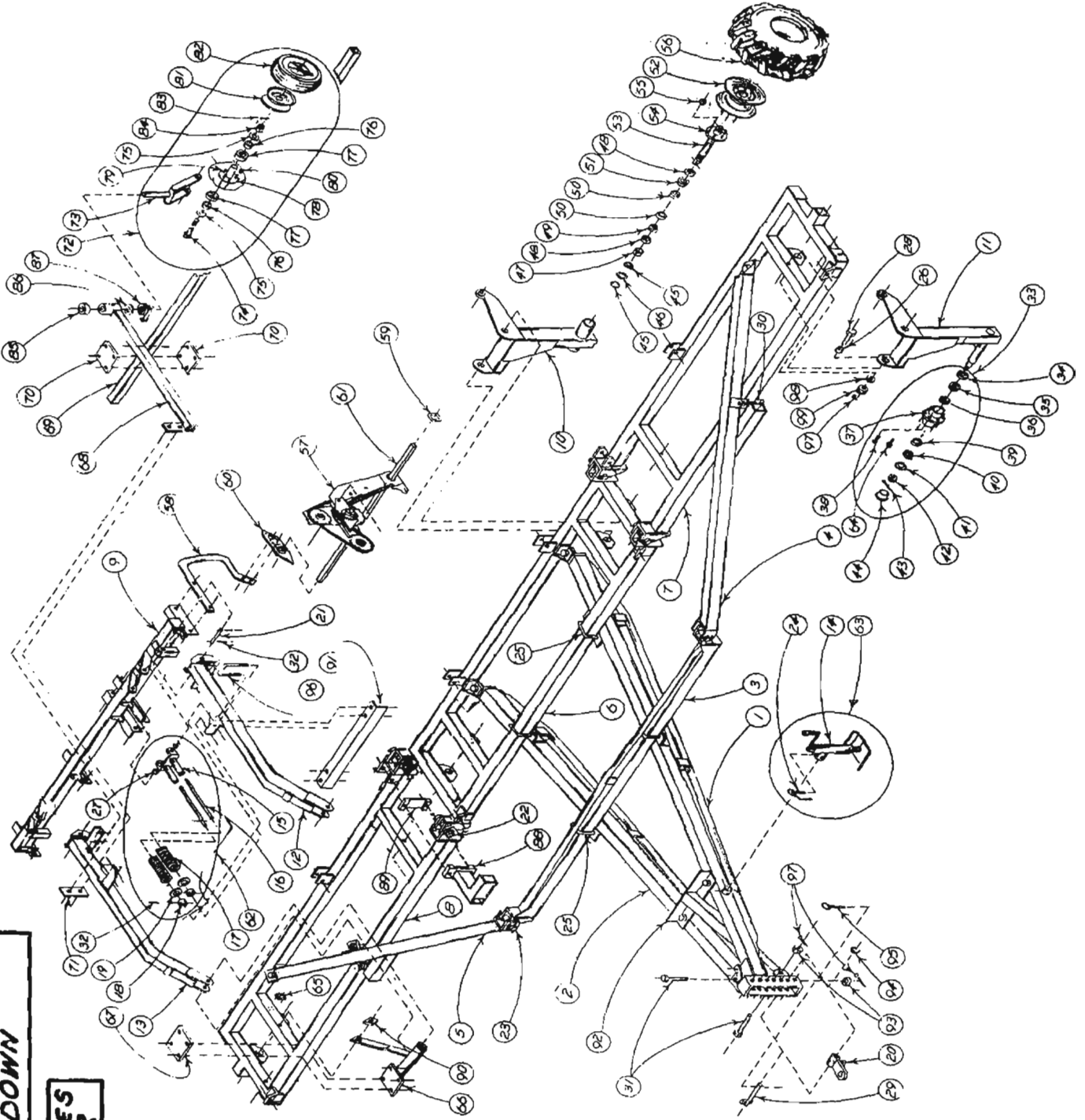
HYDRAULIC COMPONENTS
AND ASSOCIATED
MAIN & WING LIFT
EQUIPMENT

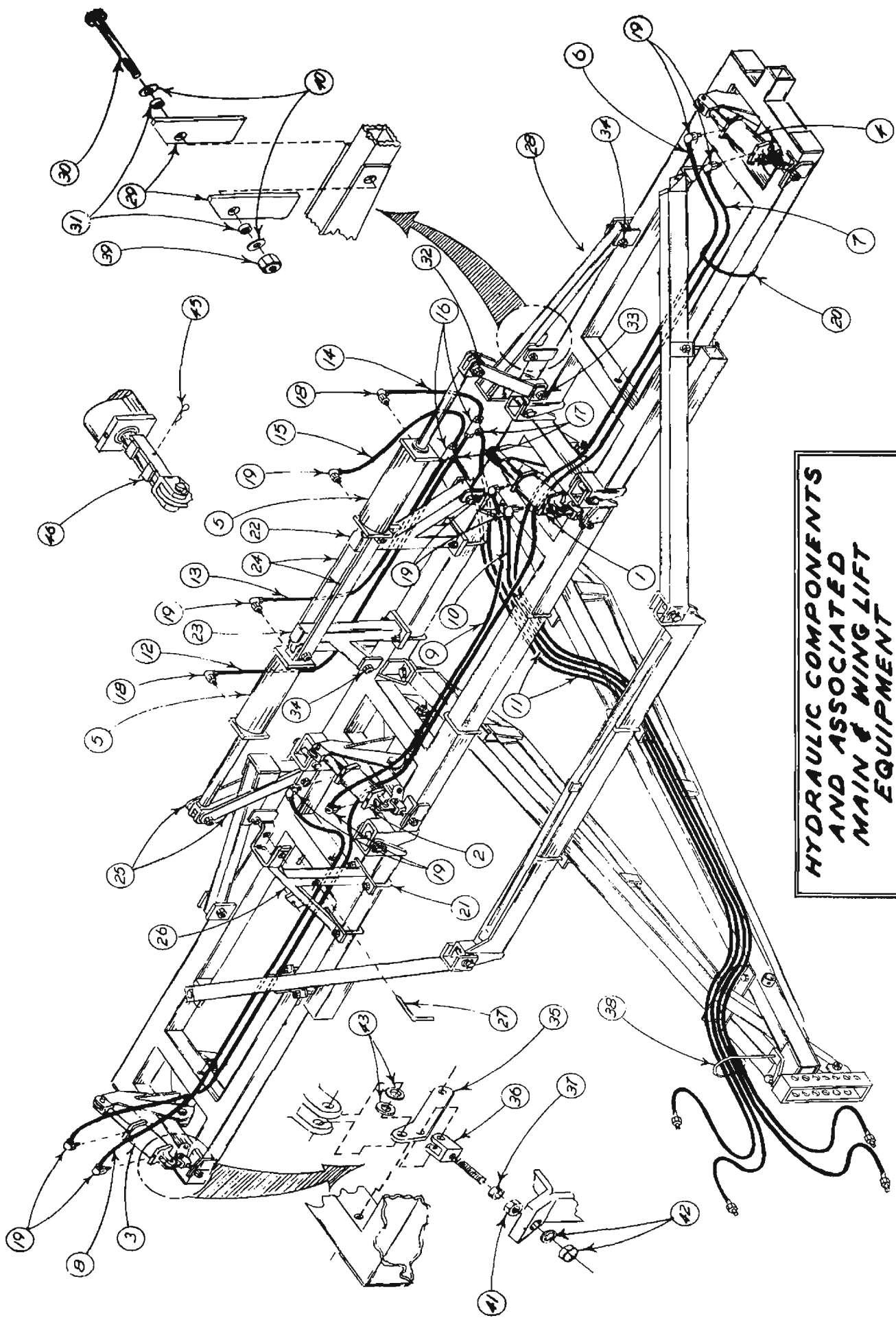
REF	DESCRIPTION	PART NO.	QTY
<u>CYLINDERS (MAIN LIFT SYSTEM)</u>			
1	4 x 8 S422 Lt Cntr	5-818-040	1
2	3-3/4 x 8 R608 or S1451 Rt Cntr	5-818-037	1
3	3-1/2 x 8 S427 Rt Wg	5-818-035	1
4	3-1/4 x 8 R610 Lt Wg	5-818-032	1
<u>CYLINDERS (WING LIFT SYSTEM)</u>			
5	4 x 24	5-818-481	2
<u>HOSE (MAIN LIFT SYSTEM)</u>			
6	3/8 x 24' 1/2 mm (26')	6-822-478	1
	3/8 x 30' 1/2 mm (33')	6-822-560	1
	3/8 x 31'6" 1/2 mm (36')	6-822-578	1
7	3/8 x 27' 1/2 mm (26')	6-822-529	1
	3/8 x 33' 1/2 mm (33')	6-822-633	1
	3/8 x 36' 1/2 mm (36')	6-822-632	1
8	3/8 x 8'2" 1/2 mm (26')	6-822-284	1
	3/8 x 11'2" 1/2 mm (33')	6-822-342	1
	3/8 x 12'8" 1/2 mm (36')	6-822-352	1
9	3/8 x 11'9" 1/2 mm (26', 33', 36')	6-822-343	1
10	3/8 x 17' 1/2 mm (26')	6-822-404	1
	3/8 x 20' 1/2 mm (33', 36')	6-822-440	1
<u>HOSE (WING LIFT SYSTEM)</u>			
11	3/8 x 15' 1/2 mm (26')	6-822-366	2
	3/8 x 18' 1/2 mm (33', 36')	6-822-416	2
12	3/8 x 90" 1/2 mm (26', 33', 36')	6-822-290	1
13	3/8 x 66" 1/2 mm (26', 33', 36')	6-822-266	1
14	3/8 x 32" 1/2 mm (26', 33', 36')	6-822-232	1
15	3/8 x 26" 1/2 mm (26', 33', 36')	6-822-226	1
16	Tee 1/2 x 1/2 (wing lift system)	5-833-100	2
17	Union St. 1/2" (wing lift system)	5-843-400	2
18	90 deg. Restrictor Union 1/16" orifice, 1/2" (wing lift system)	5-843-469	2
19	90 deg. Swivel Union Adapter, 1/2" (wg lift sys 2) (main lift sys 8)	5-843-460	10
20	Tie Strap, Nylon	5-229-006	25
21	U-Bolt 4-3/4 x 6 5/8-11 NC	5-214-002	2
22	Center Support Mount, Lt	410-033	1
23	Center Support Mount, Rt	410-034	1
24	Center Support Bar	410-043	2
25	Toggle, Wing lift	410-032	4
26	Transport Latch	410-082	2
27	Pin. L Shape 1"	8-036-006	2
28	Wing Lift (assembly 410-510) (33' & 36')	400-020	2
	Wing Lift (Assembly 410-429) (26')	410-124	2
29	Stop, Wing Lift	410-106	4
30	Bolt, Wing Lift Stop, 1/2-13 NC x 5	7-123-127	2
31	Bushing, Wing Lift Stop (.510 ID x 3/4 OD x 7/16)	6-133-007	4
32	Bolt, Toggle (upper) 1-14 NF x 5-1/2	8-116-601	2
33	Bolt, Toggle (lower) 1-14 NF x 6	8-116-003	2
34	Bolt, Wing Lift & Base Mount 1-14 NF x 5	8-116-018	6
35	Pivot Arm	400-025	4
36	Adjustable Link (assembly 410-581)	410-121	4
37	Bushing, Adj. Link (1" ID x 1.315xOD 9/16)	6-146-002	4
38	Rod, Hose Mast	101-037	1
39	Nut, Wing Lift Stop Bolt 1/2-13 NC Hex	7-723-015	2
40	Washer, Wing Lift Stop, 1/2" Flat	7-813-015	4
41	Nut, Cyl Adj Link 7/8 x 9 NC Hex	7-715-871	4
42	Nut, Cyl Adj Link 7/8 x 9 NC Jam	7-725-138	8
43	Washers, Cyl & Pivot Link, 1" cut washer	7-186-020	8
45	#8 Hitch Pin	7-920-002	2
46	Cylinder Lock	410-077	2

FORM #1279-14

**ILLUSTRATED PARTS
BREAKDOWN**

**1500 SERIES
ROU - WDR**





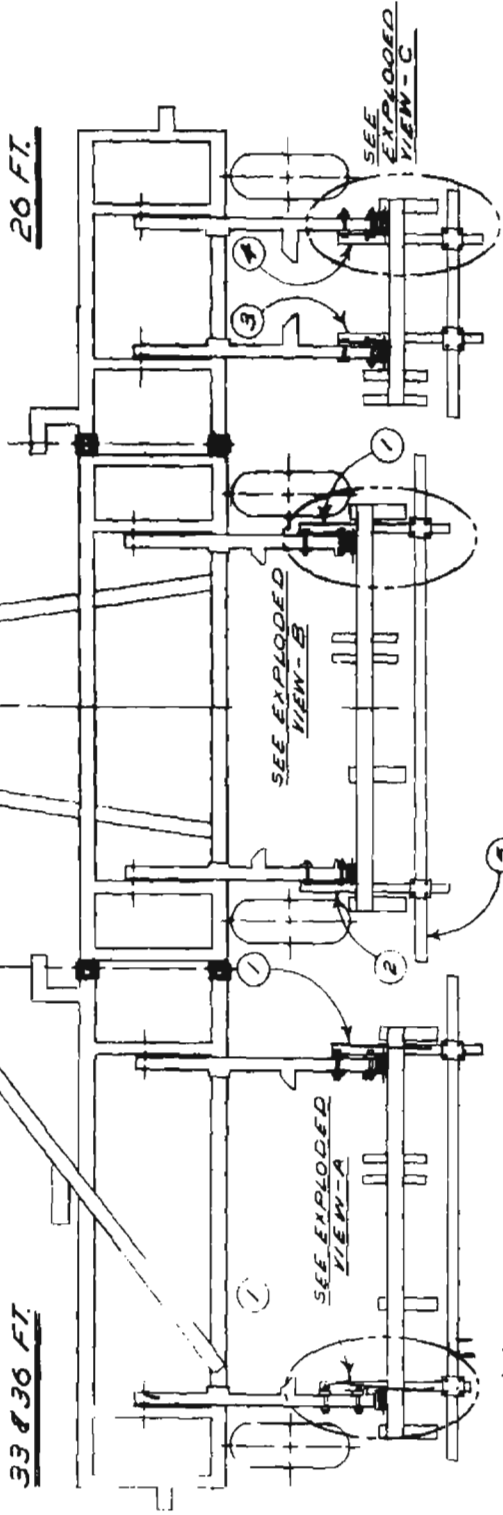
**HYDRAULIC COMPONENTS
AND ASSOCIATED
MAIN & WING LIFT
EQUIPMENT**

1500 SERIES WEEDER & CULTA-WEEDER

**HARRON MOUNTING ACCESSORIES
1500 SERIES CULTA-WEEDER**

33 & 36 FT.

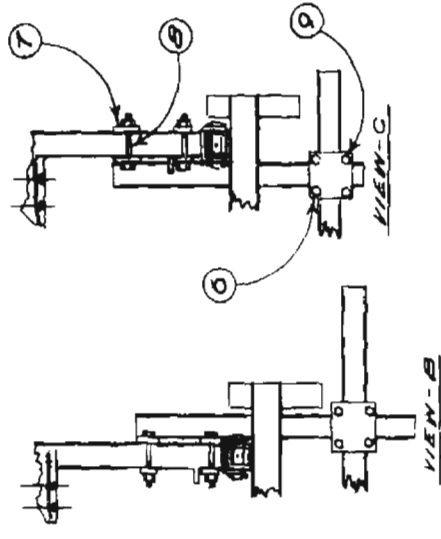
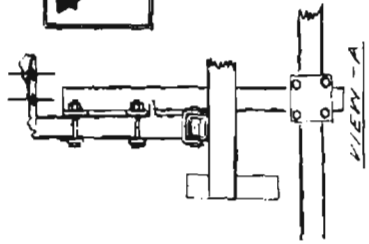
26 FT.



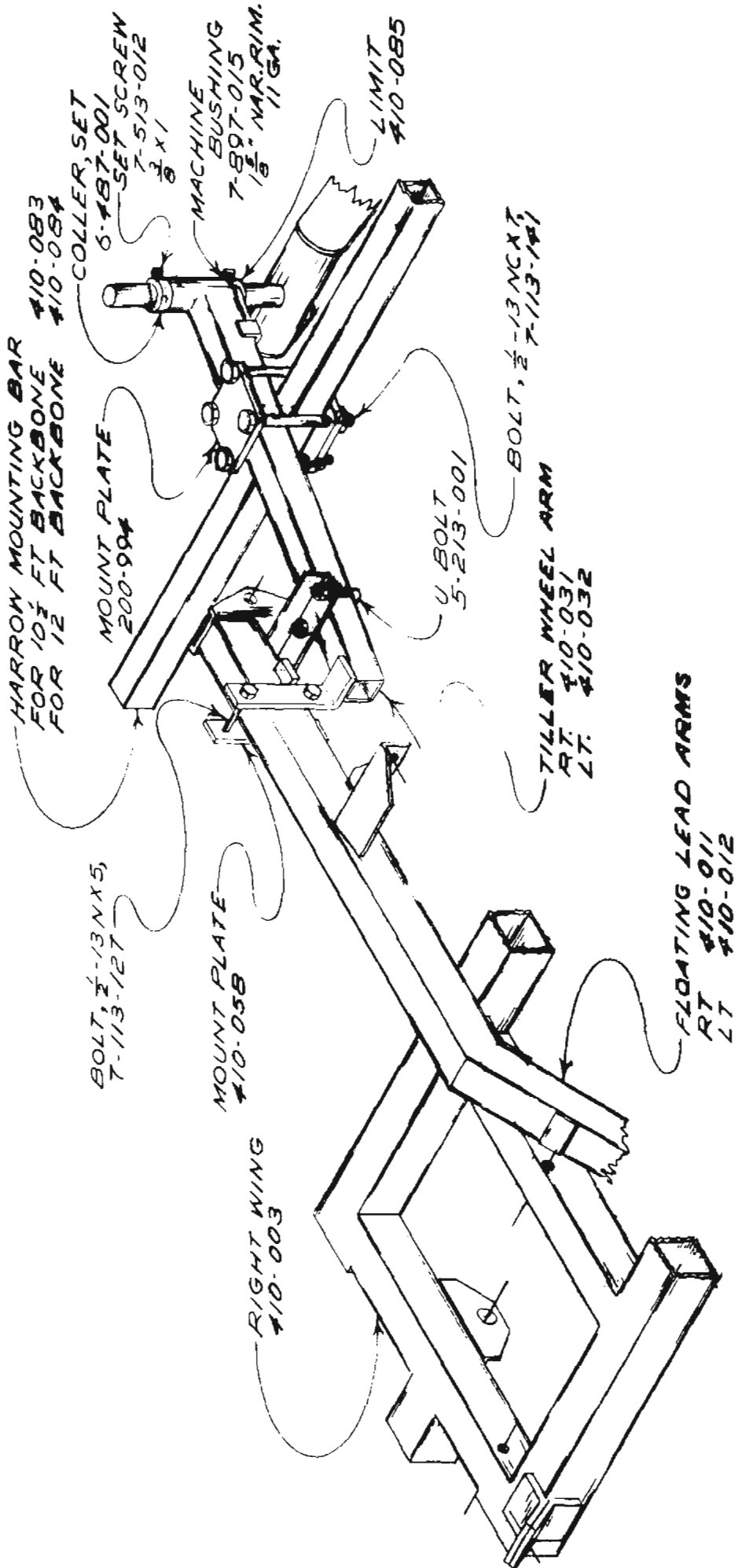
★ FOR ASSEMBLY OF HARRON MOUNTING ACCESSORIES ON 33 & 36 FT RIGHT WINGS, USE HARRON MOUNT ARMS REF NO (2), PART NO. 410-083 (2 REQD)

**HARRON MOUNTING ACCESSORIES
1500 SERIES CULTA-WEEDER**

REF NO.	PART DESCRIPTION	PART NO.
1	HARRON MOUNT ARM (LEFT WING AND RIGHT SIDE CENTER FRAME ON 33 & 36 FT)	410-087
2	HARRON MOUNT ARM (RIGHT WING AND LEFT SIDE CENTER FRAME ON 33 & 36 FT)	410-086
3	HARRON MOUNT ARM (7 FT WING ONLY)	410-138
4	HARRON MOUNT ARM (7 FT WING ONLY)	410-139
5	HARRON MOUNTING BAR, FOR 7 FT BACKBONE (60") FOR 10-1/2 FT BACKBONE (102-1/2") FOR 12 FT BACKBONE (121")	410-135 410-083 410-084
6	MOUNT PLATE	200-994
7	MOUNT PLATE	410-058
8	BOLT, 1/2-13 NC x 5"	7-113-127
9	BOLT, 1/2-13 NC x 7"	7-113-141



ASSEMBLY INSTRUCTIONS TILLER WHEEL AND HARROW MOUNT 1500 SERIES ROD WEEDER



CUSTOMER DELIVERY - CHECK LIST

_____ Show your customer the proper machines settings.
Cylinder adjustments, how to level machine from
front to rear, side to side.

_____ Show the farmer proper grease points and when
to grease.

_____ The delivery and warranty form should be gone
over with farmer. Then have the farmer sign
proper forms, return dealership form and
Calkins form.

_____ Also show customer proper transporting pro-
cedures. Make note of the transport main
cylinder locks and wing transport lock-ups.