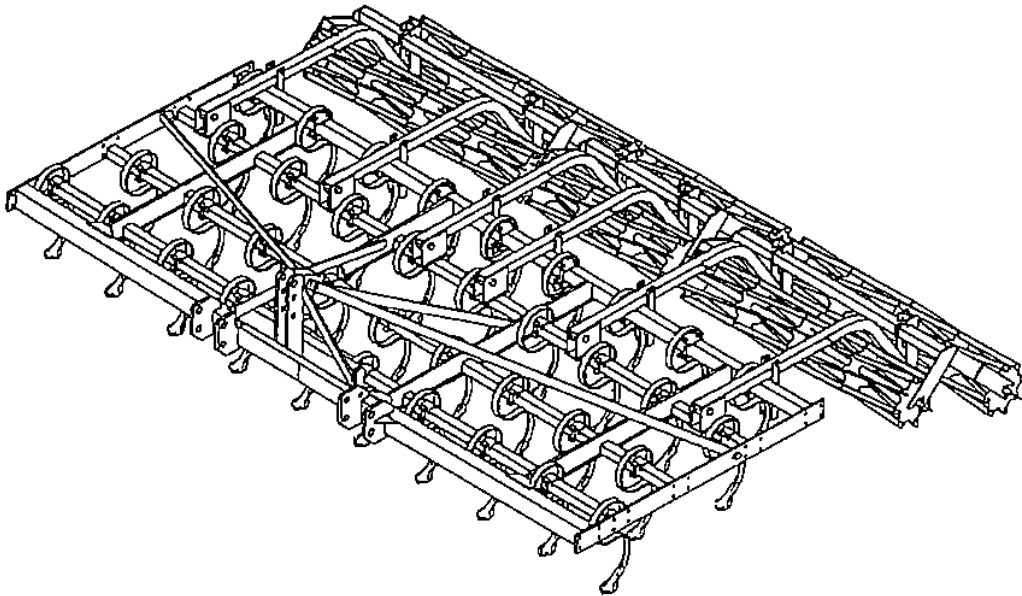




TAYLOR PITTSBURGH MFG., INC.  
P.O. BOX 1866  
ATHENS, TN 37371  
423-745-3110

# **SERIES 870 CULTIVATOR INCORPORATOR**



## **OWNER'S MANUAL**

MAY 2007

To our customers:

The employees at Taylor/Pittsburgh thank you for purchasing this product. Taylor/Pittsburgh products are engineered and fully field tested to provide our customers with the best quality and performance available today. Our employees, many who are farmers and use the equipment they manufacture, know the requirements to build quality products. Our products are backed by a complete service department to assist you with any field problems or adjustments. Our goal is to manufacture the best tillage tools on the market today.

Please take time to read the following assembly and operating instructions. Always keep in mind the safety precautions mentioned throughout this booklet.

### ***LIMITED WARRANTY***

*TAYLOR/PITTSBURGH DIVISION OF T.I.C. UNITED, the manufacturer, warrants only to the Original Purchaser that this equipment, under normal use and service, will be free from defects in material and workmanship for one year from date of purchase providing this equipment is purchased for individual and not for commercial use. This warranty does not apply to any equipment which has been damaged or which has been subjected to abuse, misuse, negligence, normal wear and tear, alterations, tampering, or failure to follow operating instructions. This warranty does not cover any product or parts not manufactured by Taylor/Pittsburgh Division.*

*Under this warranty, the manufacturer will repair or replace any part which the manufacturer determines has failed during the period of the warranty due to defects in material or workmanship. After written approval by the manufacturer, the equipment or defective part must be returned to Taylor/Pittsburgh Division, Athens, Tennessee 37303.*

*Warranty coverage and performance is expressly conditioned upon the return of the completed registration form to Taylor/Pittsburgh Division, Athens, Tennessee 37303.*

*PURCHASER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY, OTHER DEFECT, OR CONDUCT GIVING RISE TO LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT SOLD, AND THE MANUFACTURER UNDER NO CIRCUMSTANCES SHALL BE LIABLE FOR ECONOMIC LOSS OR INCIDENTAL CONSEQUENTIAL DAMAGES. EFFECTIVE UPON THE EXPIRATION OF THIS LIMITED WARRANTY (ONE YEAR FROM THE DATE OF PURCHASE), THE MANUFACTURER DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS.*

*Taylor/Pittsburgh Division reserves the right to make improvements and changes in specifications without notice or obligation to modify previously sold units.*

This manual describes the proper assembly procedures for your implement and furnishes operating and maintenance recommendations to help you obtain long and satisfactory service.

For your records, fill in the following information:

- DATE PURCHASED \_\_\_\_\_
- MODEL NUMBER \_\_\_\_\_
- DEALER \_\_\_\_\_

## TABLE OF CONTENTS

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SAFETY PRECAUTIONS.....	2
DECAL LOCATIONS .....	3
INTRODUCTION .....	4
ASSEMBLY.....	4
ATTACHING.....	8
HYDRAULIC SYSTEM CHECK .....	8
TRANSPORTING .....	8
ADJUSTMENTS.....	9
OPERATION .....	9
DETACHING, STORAGE, MAINTENANCE .....	9-10
SPECIFICATIONS.....	10
MISCELLANEOUS HARDWARE.....	10
TINE & BASKET LAYOUTS .....	11-16
PARTS INTRODUCTION .....	17
• Figure 5 Rigid Frame Components.....	18-19
• Figure 6 Folding Frame Components .....	20-21
• Figure 7 Basket Arm Components.....	22
• Figure 8 Basket Components .....	23
• Figure 9 Tine Components .....	24
• Figure 10 Turnbuckle Gauge Wheel Components.....	25
• Figure 11 Pin Type Gauge Wheel Components.....	26
• Figure 12 Gauge Wheel Hub Components .....	26
• Figure 13 Hydraulic Cylinder Components.....	27
• Figure 14 Hydraulic System Components.....	28

**LEARN TO RECOGNIZE THIS SYMBOL!**



**It means: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



## **SAFETY PRECAUTIONS**

The safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling machinery. You the operator can avoid many accidents by observing the following precautions. To avoid personal injury, study the following precautions and insist that those working with you or for you follow them.

### **Operating the Tractor/Equipment**

- 1) Do not start the engine or operate controls while standing beside the tractor. Always sit in the tractor seat when starting the engine or operating controls.
- 2) Do not allow anyone, except the operator, on the tractor or the implement while the unit is being operated or transported.
- 3) Beware of bystanders while operating the unit.
- 4) Avoid hitting an obstruction, causing personal injury or excessive strain on the tractor or implement.
- 5) Keep hands and feet away from all moving parts.
- 6) Be sure to note all "pinch point" areas of the implement. They are indicated by "pinch point" decals.
- 7) Note all buried wiring, pipes and other obstructions prior to working an area.
- 8) Do not allow children to operate unit and be sure the operator has a thorough understanding of the implement and safety precautions to be followed.
- 9) Use an approved rollbar and seat belt for safe operation. Overturning a tractor without a rollbar can result in death or injury. If your tractor is not equipped with a rollbar and seat belt, see your tractor equipment dealer.
- 10) Always use the seat belt when the rollbar is installed. Do not use the seat belt if the rollbar is not installed.
- 11) Do not operate the tractor engine in an enclosed building without adequate ventilation. Exhaust fumes can cause death.
- 12) Pull only from the swinging drawbar or the lower link drawbar in the down position. Use only a drawbar pin that locks in place. Pulling from the tractor rear axle or any point above the axle may cause the tractor to upset.
- 13) If the front end of the tractor tends to rise when heavy implements are attached to the three-point hitch, install front end or front wheel weights. Do not operate the tractor with a light front end.

14) Drive the tractor with care and at speeds compatible with safety, especially when operating over rough ground, crossing ditches or slopes, or when making turns to prevent overturning.

15) Use the flasher/turn signal lights and SMV emblem when traveling on public roads both day and night. Check local laws regarding transport on public roads.

16) Do not park tractor on a steep slope.

17) Do not get off tractor when it is in motion.

18) Before dismounting from the tractor seat, shut off tractor engine, lock tractor brakes, and lower the implement to the ground.

19) Do not leave equipment in the raised position.

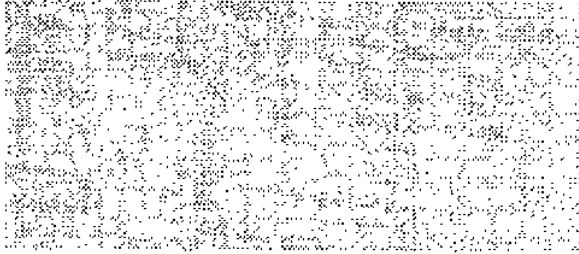
### **Maintenance**

- 1) Keep shields in place at all times.
- 2) Keep safety decals clean and intact. Replace illegible or missing decals.
- 3) When working on the implement in the raised position, **BLOCK IT SECURELY**. Do not work under the implement when supported only by the tractor hydraulic system.
- 4) Do not smoke when refueling the tractor. Keep any type of open flame away. Wait for engine to cool before refueling.
- 5) Keep open flame away from battery or cold weather starting aids to prevent fires or explosions. Use jumper cables according to instructions to prevent sparks which could cause explosion.
- 6) Use caution when working around sharp objects such as discs, blades, tines, etc.
- 7) Do not modify equipment in any way. Modification will void the manufacturer warranty.
- 8) Do not bypass the safety start switch. Consult your dealer if your safety start controls malfunction.

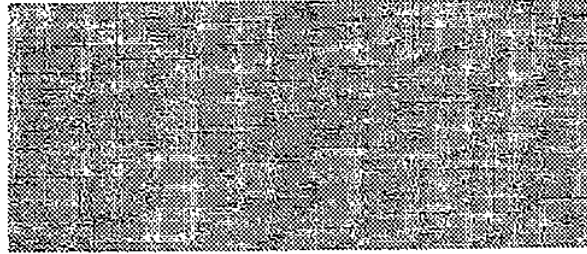


## DECAL LOCATIONS

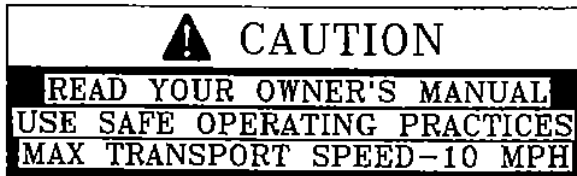
The following decals are located on your implement. Read them and follow their instructions for your safety. Keep all decals in place and legible. Replace worn or missing decals. Order by number listed.



029770 - amber reflector front corner of frame



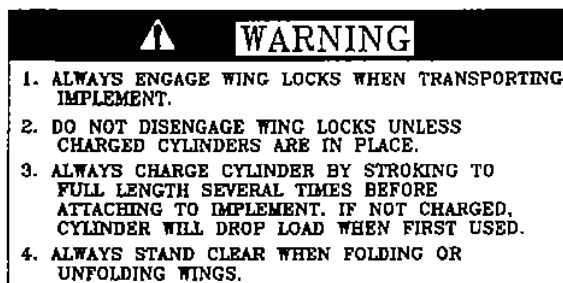
029771 - red reflector rear corners of frame



009537 - front of main frame



606936 - front of main frame



606935 - front of main frame

## INTRODUCTION

This manual covers the assembly, operation, and maintenance of the Taylor/Pittsburgh 870 Cultivator Incorporator. Studying and obeying these instructions will insure optimum product performance and longevity. Be sure to read all instructions carefully. Read all safety precautions prior to operation.

A repair parts section is provided at the end of this manual. Maintain your implement with original repair parts to insure safety and optimum performance.

## ASSEMBLY - GENERAL

Your Series 870 Cultivator is shipped in bundles for assembly. Remove all wiring from bundles as they are called for. Choose a level area to arrange the parts conveniently. Assemble parts for each step loosely to insure fit. Use flat washers with slotted holes. Always use lock washers unless a lock nut is called for. Tighten hardware after parts are installed according to the torque chart given. Unless otherwise stated, all hardware is grade 5. The following assembly steps are given to minimize the need for adjustment after assembly. Remember that LEFT and RIGHT are determined by standing at the rear of the implement and facing it.

### Frame & Tines refer to fig. 1

1) Choose a level area large enough to accommodate the assembled cultivator. Position the main frame bundle in the center of the assembly area for easy attaching with a tractor. Support the frame about 24" off the ground with supports at all four corners and at the middle of the frame in front and back. Be sure frame is stable on supports before proceeding.

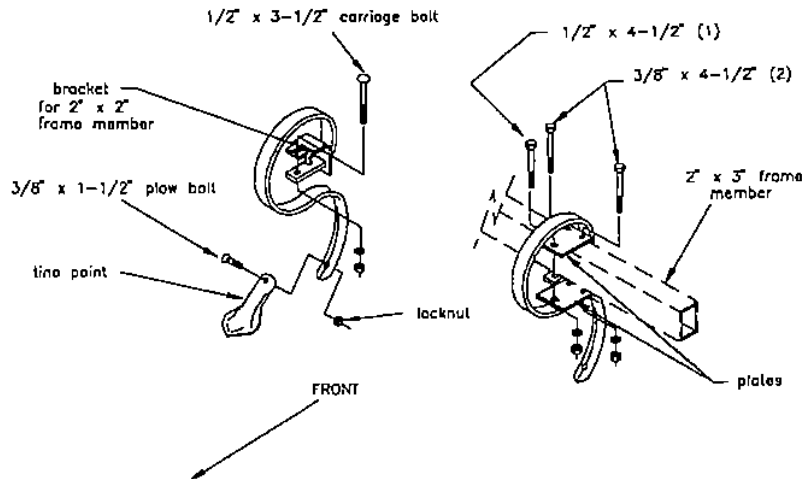


FIGURE 1 - TINE ASSEMBLY



### TORQUE IN FOOT POUNDS

BOLT DIA.	3/8	1/2	5/8	3/4	7/8	1
HEX HEAD	9/16	3/4	15/16	1-1/8	1-5/16	1-1/2
UNC						
GRADE 2	18	45	89	160	252	320
GRADE 5	30	68	140	240	360	544
GRADE 8	40	100	196	340	528	792
UNF						
GRADE 2	21	51	102	178	272	368
GRADE 5	32	70	168	264	392	572
GRADE 8	48	112	216	368	792	840

### TORQUE CHART

2) Assemble fine sweeps to tines using hardware provided.

3) Locate and mark the midpoint of the front and rear frame members. Extend the tape measure between the front and rear marks and mark the remaining frame members.

4) The tines bolt on the frame members as shown in fig. 1. Refer to the diagram for your model for tine locations and install all tines to the main frame. Do not tighten hardware until you are sure that tines are correctly positioned. Tines should be positioned 16" apart within the rows and offset by 4" from row to row.

**14' model only:** Install frame extensions as shown using hardware provided with each extension. Install tines to extensions.

**A-Frame refer to fig. 2 or 3**

1) Position A-frame between the brackets on the main frame. Attach using hardware provided but do not tighten.

2) Attach A-frame struts to top of A-frame as described below.

**10' - 14' models:**

Attach one strut to either side of A-frame as shown with a 7/8" x 6" bolt and locknut. Bolt other end of struts to rib of main frame using 7/8" x 2 1/2" bolt.

**19' & 22' models:**

Bolt one long and one short strut to either side of A-frame using a 7/8" x 7" bolt with locknut. This bolt is stored in the right hand wing frame on the rigid 19' model and in the center frame on the folding models.

Bolt other end of struts to ribs of main frame using 7/8" x 2 1/2" bolts. On the 19' rigid model, wait until wings are installed before bolting long struts to frame.

**19' rigid model only:**

Install tension rod beneath front member of main frame as shown. First bolt the center bracket to the main frame at the center line. Slide the tension rod through the bracket and install end brackets onto tension rod. Bolt end brackets to main frame.

**Installation of Wings - 19' rigid model**

1) Position wings against ends of main frame and support from below so that bolt holes are aligned. Be sure wing frames are stable on supports before proceeding.

2) Bolt each wing to main frame using hardware provided.

3) Bolt long A-frame struts to frame.

4) Install lines on wings. Position lines as shown in the diagram.

**Installation of Wings - folding models**

1) Remove hinge pins from main frame. Position wings on each side of main frame and align hinges. Support wings from below. Be sure wings are stable on supports before proceeding.

2) Install pins in hinges and secure with cotter pins.

3) Install lines on wings. Position lines as shown in the diagram for your model.

4) Install wing transport arms on the main frame at the top hole of each hydraulic cylinder anchor. Be sure to include flatwashers and secure with cotter pins.

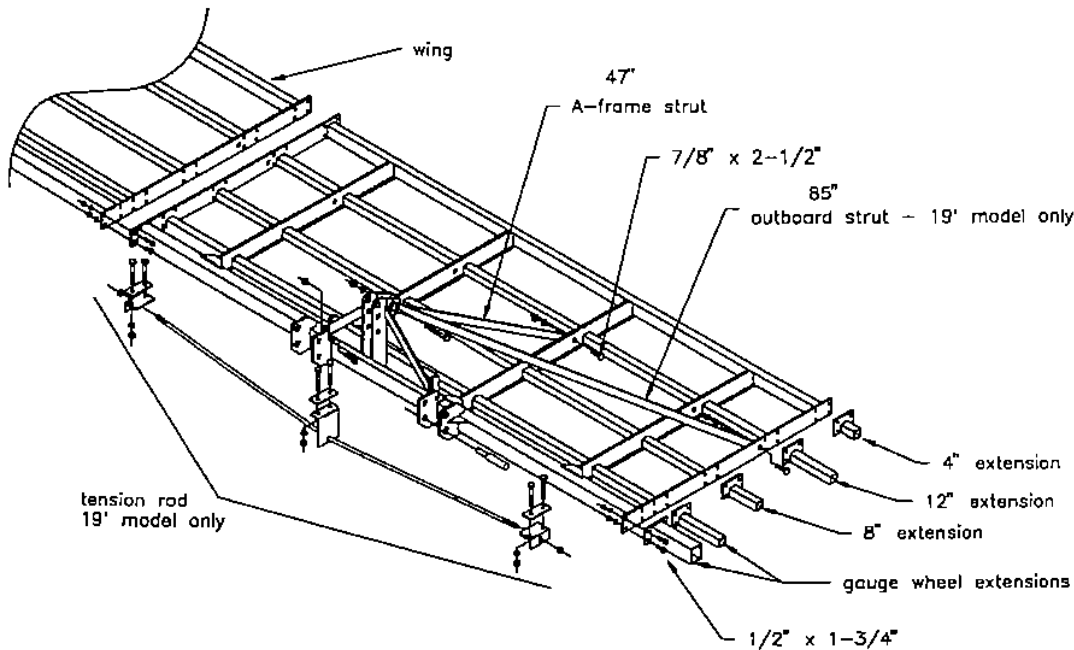
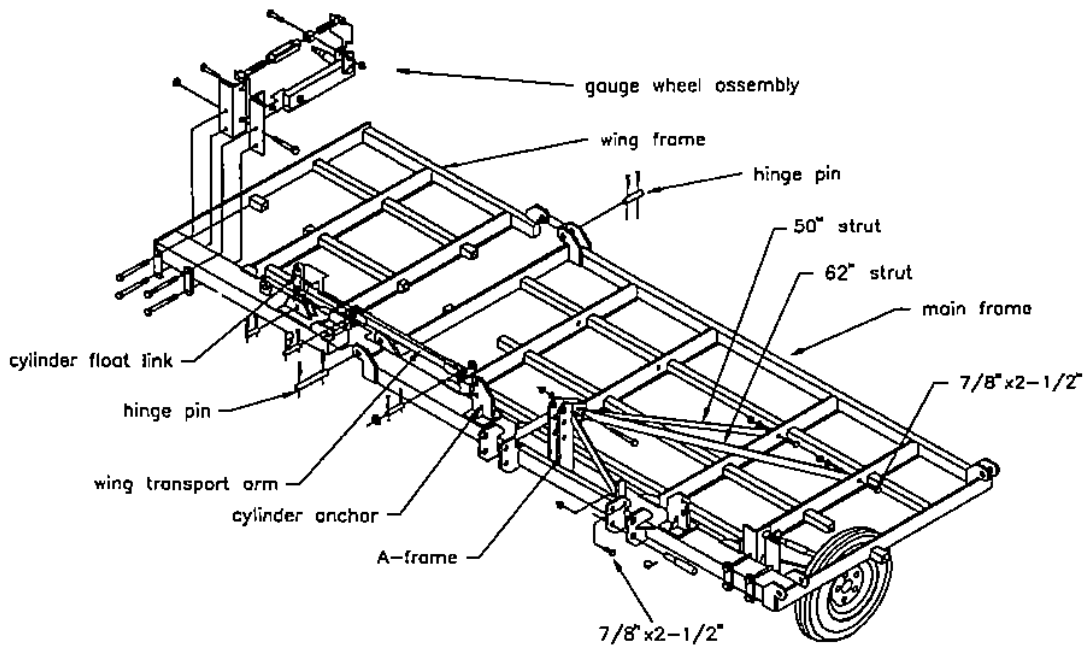


FIGURE 2 - RIGID FRAME ASSEMBLY



**FIGURE 3 - FOLDING FRAME ASSEMBLY**

### Gauge Wheels - rigid models

There are two types of gauge wheels available for the rigid 870 cultivators. The "pin" type adjusts by moving bolts up or down. The "turnbuckle" type adjusts by changing the length of a turnbuckle. Regardless of type, the gauge wheels normally bolt to the front outside corners of the main frame with the wheels to the outside. If your tractor's tires interfere with the gauge wheels in this position, see your dealer about ordering an extension kit.

Follow the instructions below for installing the gauge wheels you have.

#### Turnbuckle Type:

- 1) Remove the U-bolts from the turnbuckle and gauge wheel arm.
- 2) Determine the left and right-hand assemblies by positioning them with the hubs to the outside and the turnbuckles up.
- 3) Bolt each assembly to the front of the main frame using the two large U-bolts previously removed. Bolt the loose end of the turnbuckle to the 2" x 2" frame member between the two outside tires.
- 4) Bolt the wheels onto the wheel hubs and tighten lug bolts.

#### Pin Type:

- 1) Determine the left and right-hand assemblies by positioning them with the hubs to the outside and the angle brackets toward the rear.
- 2) Remove only the two bottom bolts from each assembly. Loosen the top two bolts but do not remove.
- 3) Lift the assembly over the front main frame member and lower it so that the large angle brackets go behind the frame member and the small brackets go in front. The assembly will rest on the two remaining bolts.
- 4) Replace the two bolts removed in step 2.
- 5) Be sure both gauge wheel assemblies are equally spaced on main frame and tighten all hardware.
- 6) Bolt wheels to wheel hubs and tighten lug bolts.

### Gauge wheels - folding models

The folding models are equipped with four gauge wheels that mount to the outside front corners of the main frame and wings. They mount to the front frame member on the back side so that the wheel is within the frame. The wheels must be positioned with the hub to the outside and the turnbuckle up.



1) With the gauge wheel assemblies positioned as described above, remove only the two lower bolts holding the straps to the angle brackets. Loosen the top bolts but do not remove.

2) Lift the assembly over the front frame member and lower into position so that the straps go on the front side of the frame and the angles go to the back side. The assembly will rest on the top remaining bolts.

3) Replace the bolts removed in step 1.

4) Check to be sure that all gauge wheels are equally positioned on the frame and tighten hardware.

5) Mount wheels to hubs and tighten lug bolts.

### Rolling Baskets

1) Refer to the tine layout diagram for your model and determine mounting locations for the rolling basket arms. There is no exact dimension for spacing the arms but they should be spaced as shown in relation to the tine locations. Mark each location on the rear frame member and the next 2" x 2" frame member forward.

2) On the back side of the rear frame member mount a spring anchor bracket (fig.4) at each arm location using a U-bolt with lockwashers and hex nuts. Be sure the small holes in the bracket are to the bottom.

3) Remove the U-bolts from the brackets in the arm assemblies. Position the arm assemblies on the spring anchor brackets. The front pivot bracket on the arm should be located on the mark made on the 2" x 2" frame member. Replace the U-bolt in the front pivot bracket to secure the arm to the frame.

4) Locate the basket assemblies behind the arms. If your model has 40" and 60" baskets be sure they are positioned as shown in the diagram.

5) Seat each basket frame cross member in the notches of the basket mount brackets on the arms. Secure each basket assembly to the arms using the U-bolts previously removed but do not tighten.

6) With all basket assemblies in place, check to be sure there is no interference between them. Tighten U-bolts.

7) Install two springs in the small holes in each spring anchor bracket.

8) Feed a retaining chain up through the chain tab on the side of the arm, over the top of the arm and down through the other chain tab. Evenly distribute the chain on each side of the arm.

9) Hook the ends of the chain to each spring. Remove the slack from the chain evenly on each side of the arm and lock the chain into position by moving the chain into the narrow portion of the key hole in the chain tabs.

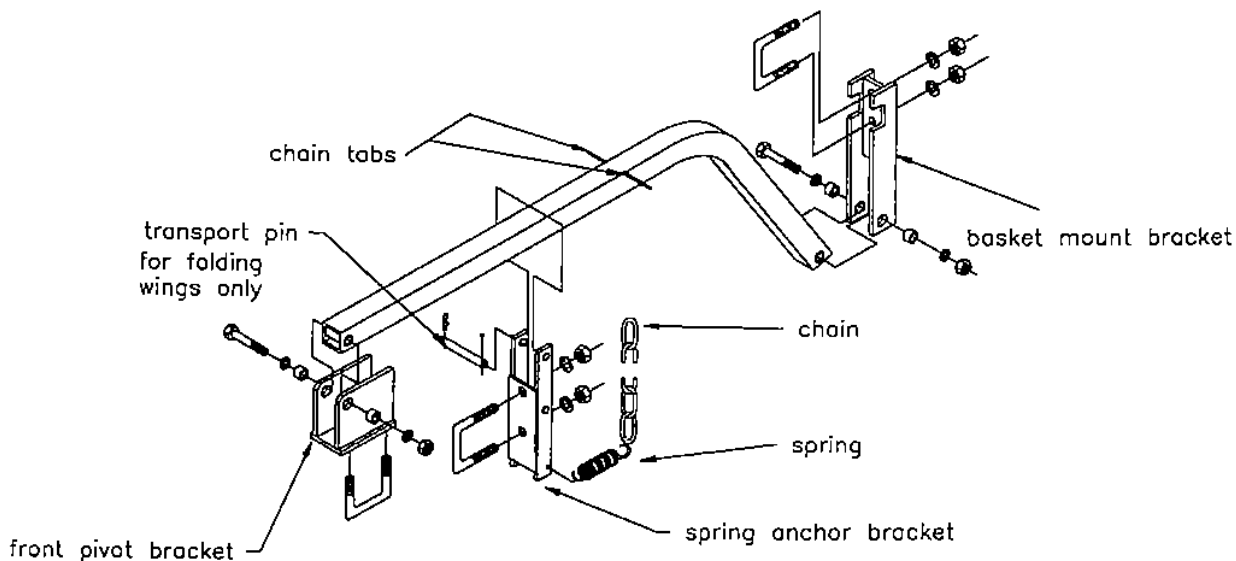


FIGURE 4 - BASKET ARM ASSEMBLY

**NOTE:** *With the machine raised so that the baskets are off the ground, there should be spring tension on the chains to keep them locked in place.*

#### Folding Models Only:

On the wing basket assemblies, install a transport pin through the top end of each spring anchor bracket. This pin keeps the basket assemblies in place when the wings are raised and must be installed before raising wings.

#### Hydraulics - folding units only

**NOTE:** *Always use a sealant when installing fittings and lines to prevent leaking. Do not over tighten fittings.*

- 1) Mount butt end of hydraulic cylinders to anchors on main frame. They must mount in the lower hole below the wing transport arms. Be sure the hydraulic line ports face forward.
- 2) Remove line port plugs and extend cylinder piston. Align piston clevis with float link on wing and install pin.
- 3) Cylinders should be equipped with flow restrictors in ports. If not, install flow restrictors at this time.
- 4) Install 90° elbows into flow restrictors. Point ends toward center of machine.
- 5) Install short lines into the inside elbows using ends without swivel fittings. Connect these lines using a tee fitting.
- 6) Install a long line into each of the outside elbows using the end without a swivel fitting. Connect these lines using a tee fitting.
- 7) Install remaining long lines into tees using ends with swivel fittings.
- 8) Tighten all fittings.

## ATTACHING

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- 1) Back tractor to align lower link arms with hitch points.



**CAUTION:** Be sure all bystanders are clear. Do not stand between tractor and implement. Shut off tractor, set parking brake, and remove key before dismounting.

- 2) Attach left-hand link arm using link pin provided. Secure with click pin.

- 3) Attach right-hand link arm. Adjust height of arm to achieve alignment if necessary using lower link arm crank.

- 4) Attach suitable top link between tractor and implement. Secure with top link pins and click pins.

Folding models only: Attach hydraulic lines to tractor.

## HYDRAULIC SYSTEM CHECK

### Folding Models Only

---



**CAUTION:** Before starting this check, be sure transport pins are in place. See Rolling Baskets step 9.

- 1) Start tractor engine. Slowly lift wings into transport position. Watch for any signs of interference at hinge points.
- 2) Lower wings back to operating position. Lift and lower wings several times to purge air from hydraulic system.
- 3) Check hydraulic system for leak at fittings. If leaks are noticed, shut tractor off, relieve pressure from system, and make repairs before proceeding.
- 4) Check tractor's hydraulic fluid reservoir and refill if necessary.

## TRANSPORTING

---

### Folding Models

- 1) Place rolling basket transport pins in transport locations on wing baskets.
- 2) Slowly lift wings into transport position. Install wing transport arms and secure.

### All Models

- 1) Slowly lift unit into transport position.
- 2) Transport at no more than 10 mph. Use caution on rough terrain.
- 3) Check local laws governing transport of farm equipment on public roads.
- 4) Use caution and beware of oncoming traffic and roadside obstructions.

5) Always use a Slow Moving Vehicle (SMV) emblem when transporting on roads.

6) DO NOT transport on public roads at night.

## ADJUSTMENTS

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**CAUTION:** Do not make any adjustment while the unit is in motion or while tractor engine is running.

### Leveling

The cultivator should be level from front to rear and from side to side. Position the tractor and cultivator on level ground and lower the unit to the ground.

1) To level your cultivator from side to side, adjust the height of the right-hand link arm using the crank. Make sure both arms are the same height above ground.

2) To level the cultivator from front to rear adjust the length of the top link. The cultivator is level when all lines touch the ground simultaneously as the unit is lowered.

### Gauge Wheels

1) Position the cultivator on level ground with the tine points not penetrating the surface.

2) Raise or lower the gauge wheel until the bottom of the wheel is at a height above the ground equal to the desired operating depth. With a turnbuckle wheel, adjustment is made by changing the length of the turnbuckle. On the pin type wheel, adjustment is made by relocating the bolts above and below the wheel arm.

3) Be sure all gauge wheels are adjusted to the same position.

### Rolling Baskets

Vertical movement of the rolling baskets during operation is restricted by virtue of the spring loaded chain on each arm. Tension should always be maintained on the chains even when the cultivator is lifted for transport. Do not place excessive tension on chains or baskets will not float properly.

1) Lift cultivator until baskets are off the ground.

2) Pull on chain above arm to remove any slack evenly on each side of the arm. Lock the chain in position by moving it into the narrow portion of the key hole.

3) Be sure all chains have equal tension by checking the length of chain from the spring to the chain tab.

## OPERATION

---

### Folding Models

1) Remove pins from wing transport arms and place in storage location.

2) Lower wings into operating position.

3) Remove basket arm transport pins and store in lower hole on spring anchor brackets.

### Front End Ballast

Front end ballast may be required for stability and steering control when weight is transferred to the back tires as the cultivator is raised. As a general guide:

- Ballast the tractor (less unit) so that approximately 1/3 of the tractor weight is on the front wheels.
- When mounted unit is raised, the reaction on the front wheels should be less than 20% of the tractor weight.
- Add ballast as required for stability during operation and transport. Tractor front end ballast may not always maintain tractor stability on rough terrain at high speeds. In such cases, reduce speed and exercise caution.

## DETACHING

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1) Park cultivator on level ground.

2) Lower cultivator to ground and shut off tractor.

3) Remove top link from cultivator and tractor.

4) Detach lower link arms and store link pins.

## STORAGE

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1) Clean unit thoroughly after use.

2) Store unit on level ground and under roof.

3) For storage between seasons, coat soil engaging surfaces with oil or other rust inhibitor.

4) Apply grease at all lubrication points.

5) Be sure that all gauge wheels are off the ground.

**Folding wing models:**

Store with wings in operating position whenever possible. Coat exposed portion of cylinder rod with grease.

**Folding models only:**

4) Check hydraulic lines for leaks before each use. Repair worn lines to prevent system failure.

**MAINTENANCE**

Clean grease fittings with a rag before applying grease. Use a good grade multipurpose lithium base lubricant.

1) Periodically check over unit for worn or missing parts. Make repairs before operating. Check tire points for wear and replace as necessary to maintain optimum performance.

2) Apply grease to basket bearings before each use.

3) As a general rule, maintain gauge wheel hubs on same maintenance schedule as front tires of tractor.



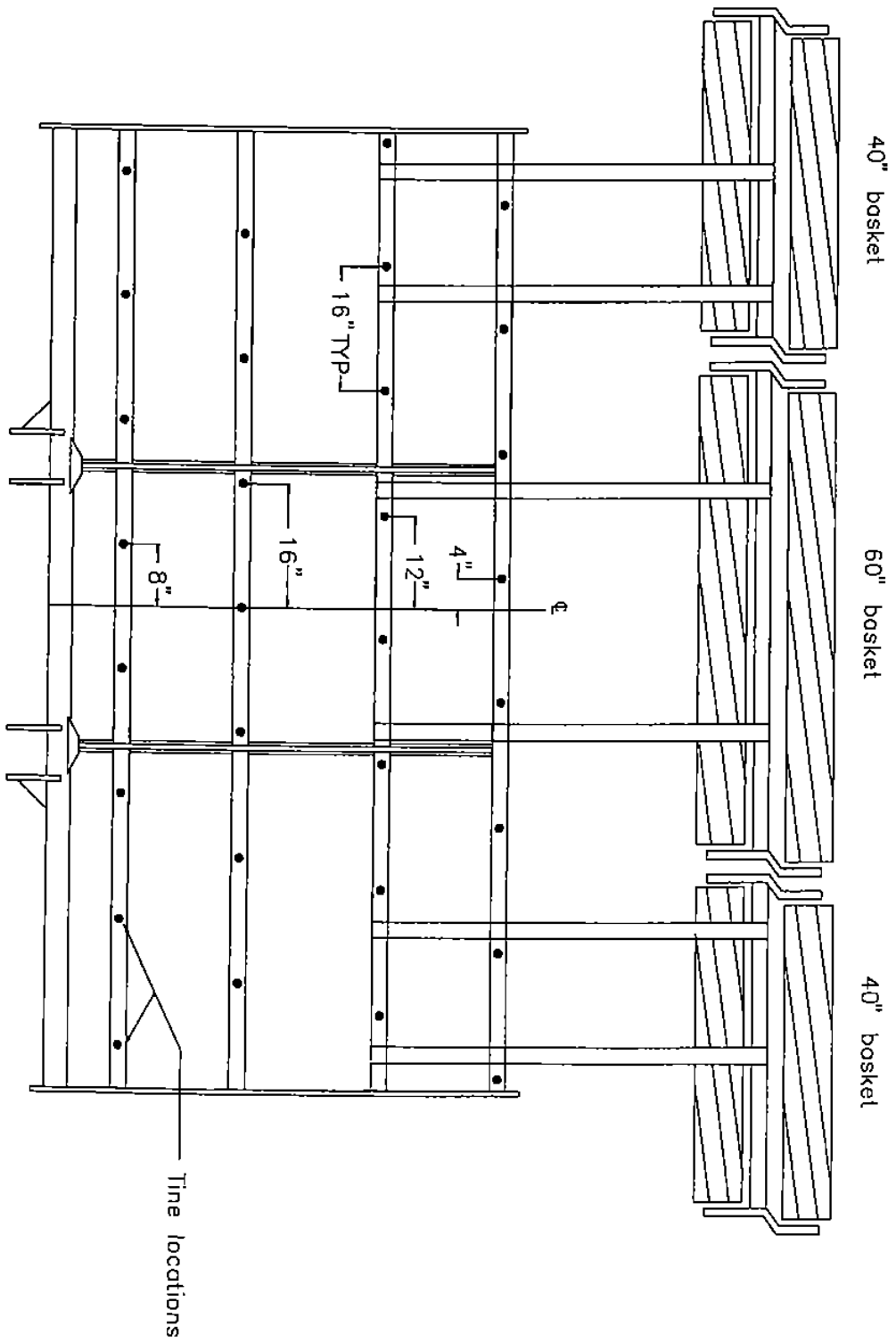
**CAUTION:** Check for small high pressure leaks by passing a piece of cardboard over the line. **DO NOT** use bare hand to detect leaks. High pressure oil can penetrate skin and can only be removed surgically.

5) Apply grease as needed to wing hinge pins to prevent wear.

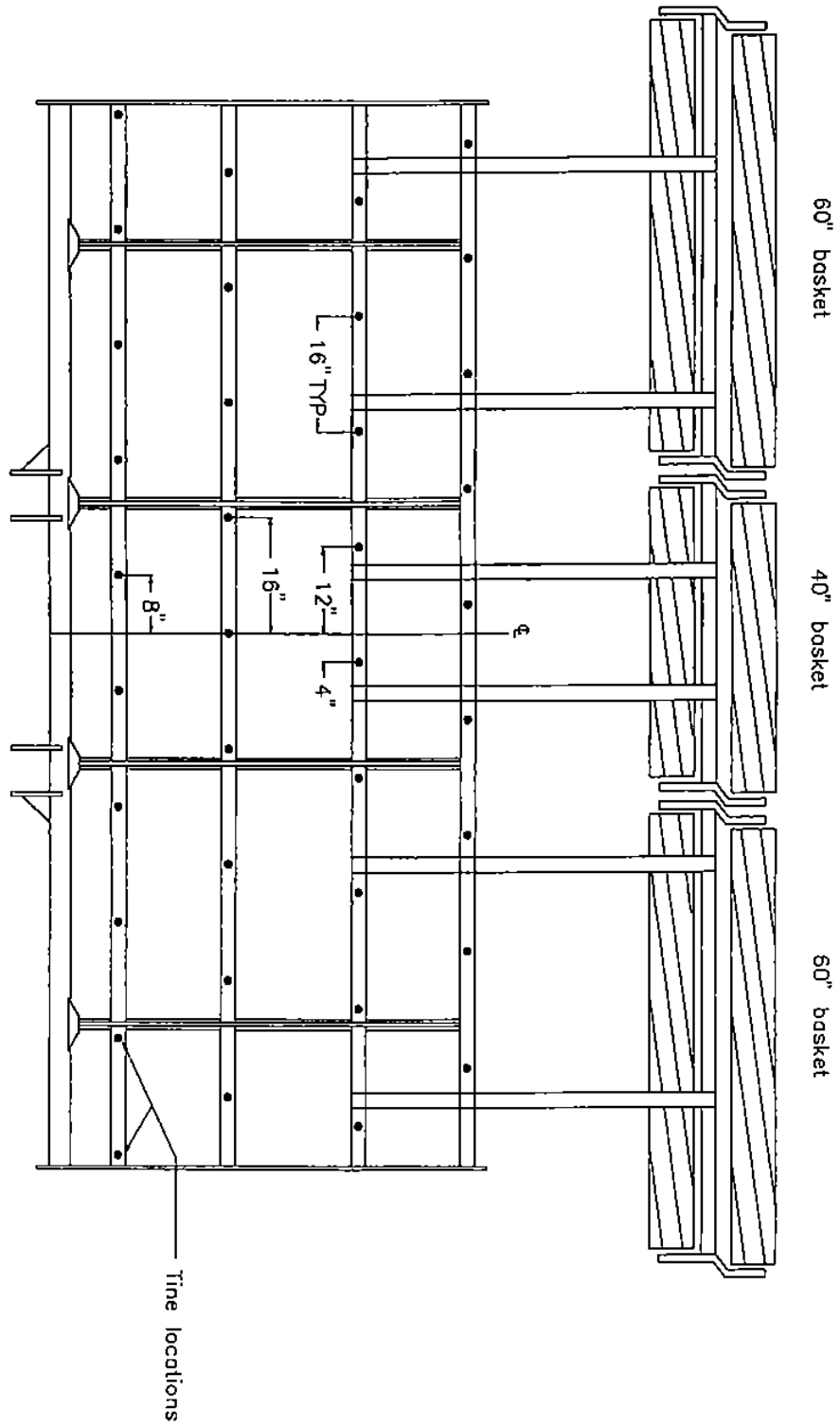
SPECIFICATIONS					
Model	Width	Drawbar HP	Tines	Dual Baskets	Weight (lbs)
87010	10'4"	60	31	2-40" 1-60"	1750
87012	12'4"	75	37	1-40" 2-60"	1944
87014	14'4"	85	43	3-60"	2078
87019	19'	115	57	4-60"	2839
87519	19'	130	57	4-60"	3850
87522	22'	145	67	4-40" 2-60"	4457

MISCELLANEOUS HARDWARE BY SIZE				
Size	Part Number By Item			
	lockwasher	flatwasher	regular hex nut	locknut
1/4"	303951	-	304003	-
5/16"	303952	303968	304004	-
3/8"	303953	303969	304005	304018
7/16"	303954	303970	304006	304019
1/2"	303955	303971	304007	304020
5/8"	303956	303972	304008	304021
3/4"	303957	303973	304009	304022
7/8"	303958	303974	304010	304023
1"	303959	303975	304011	304024
1 1/8"	303960	303976	304012	304025
1 1/4"	303961	303977	304013	304026

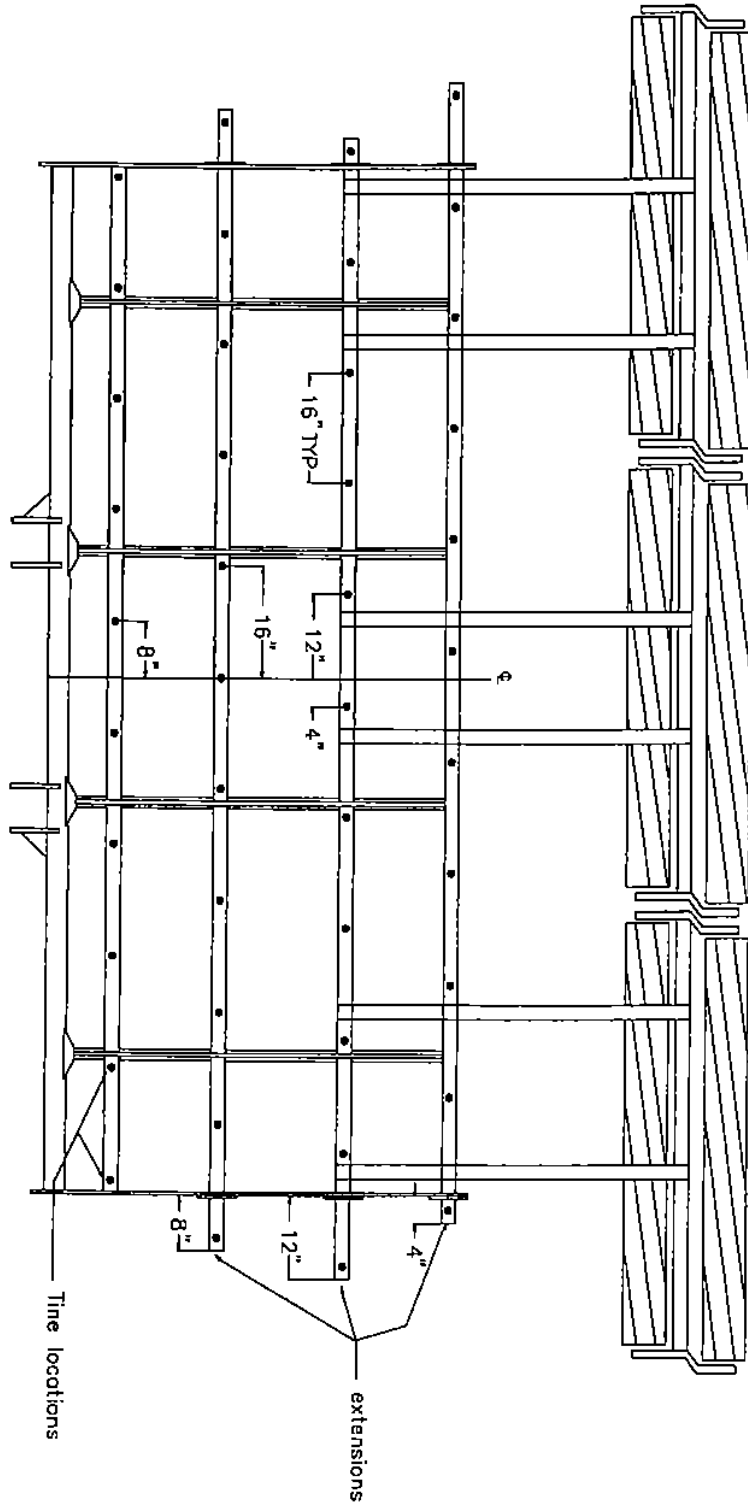
# Tine & Basket Layout - Model 87010



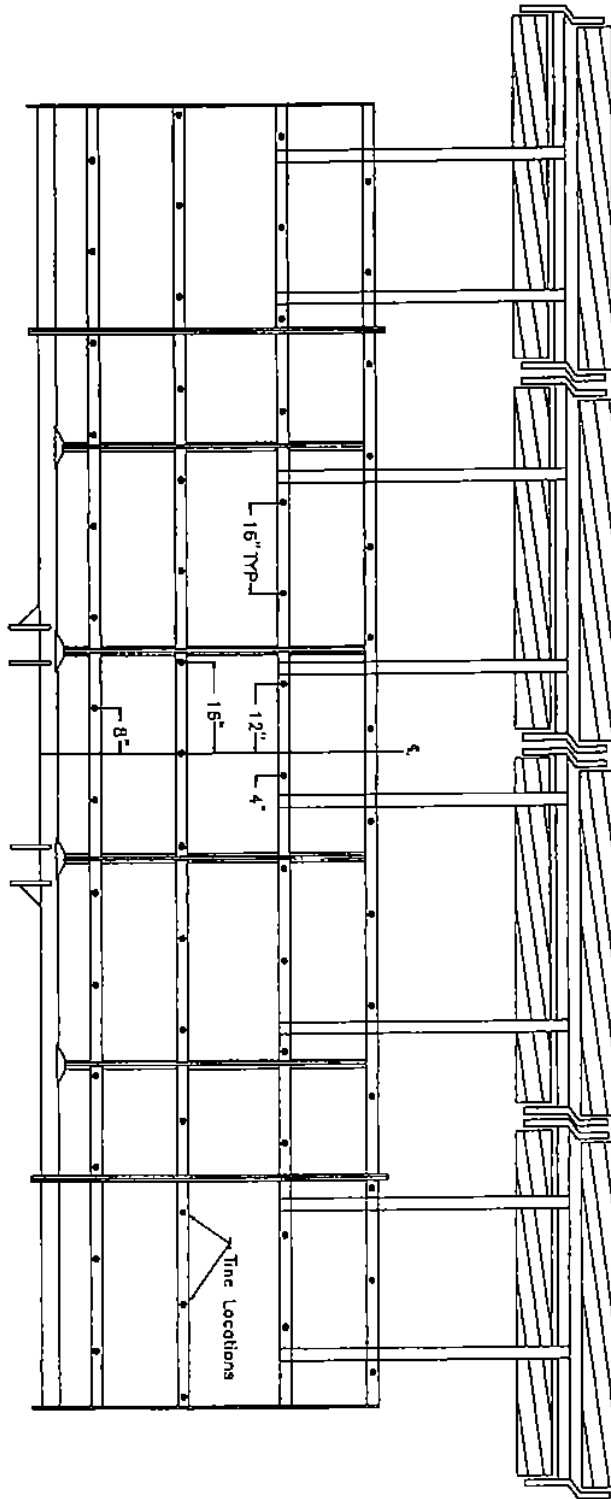
# Tine & Basket Layout - Model 87012



# Tine & Basket Layout - Model 87014

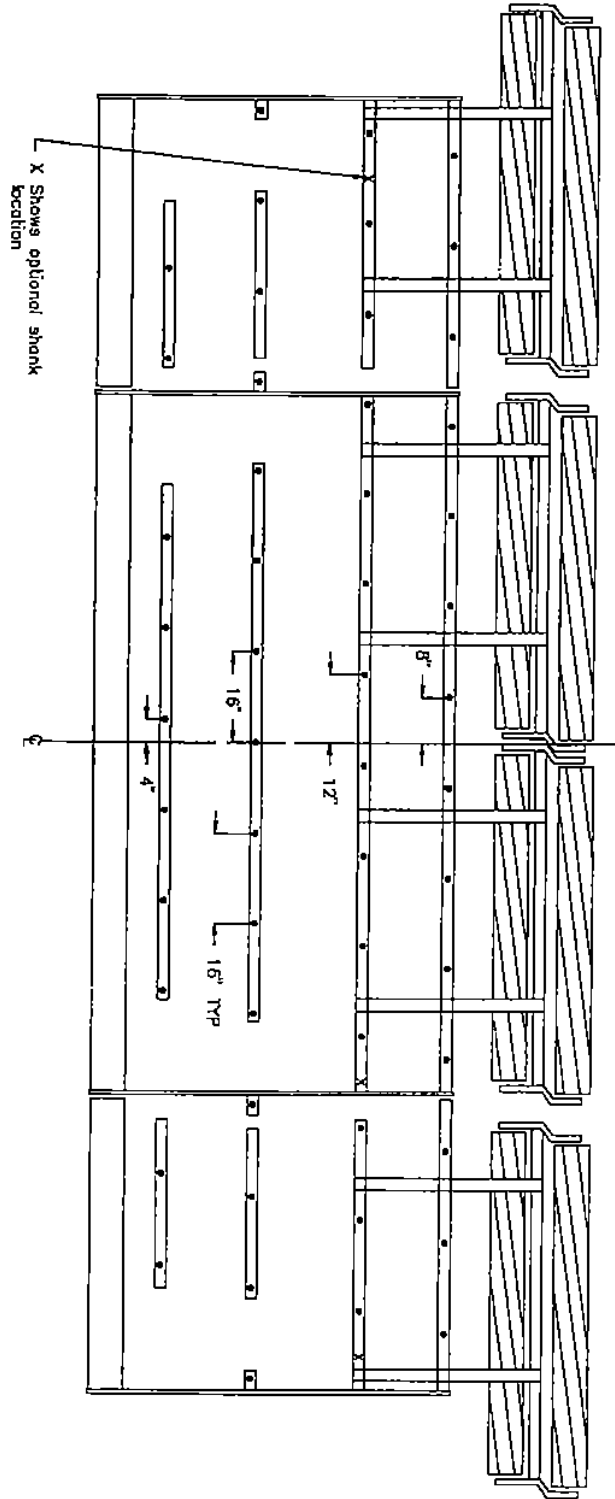


# Tine & Basket Layout - Model 87019

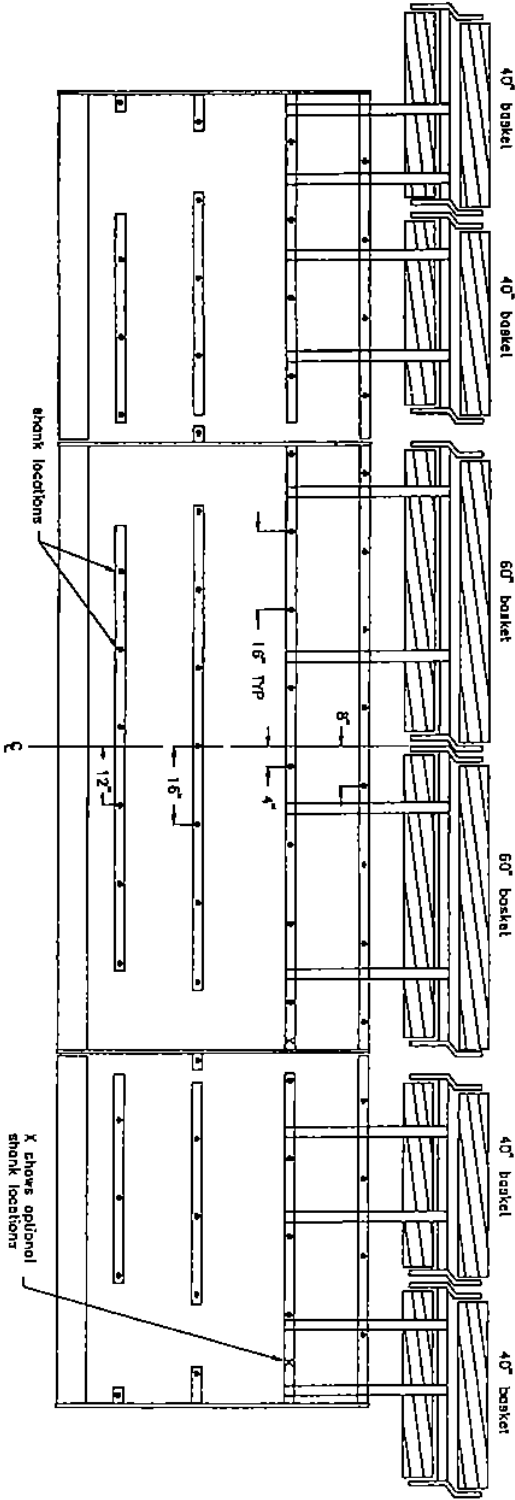




# Tine & Basket Layout - Model 87519



# Tine & Basket Layout - Model 87522



## PARTS INTRODUCTION

The following procedure has been outlined for your dealer to make the process of ordering parts more convenient for you our customer. Please follow these instructions so that we may serve you in an efficient manner.

Use the form below to provide information for parts to your dealer. (YOU MAY WISH TO MAKE COPIES OF THE BLANK FORM FOR FUTURE USE.)

**TO BE COMPLETED BY YOUR DEALER**

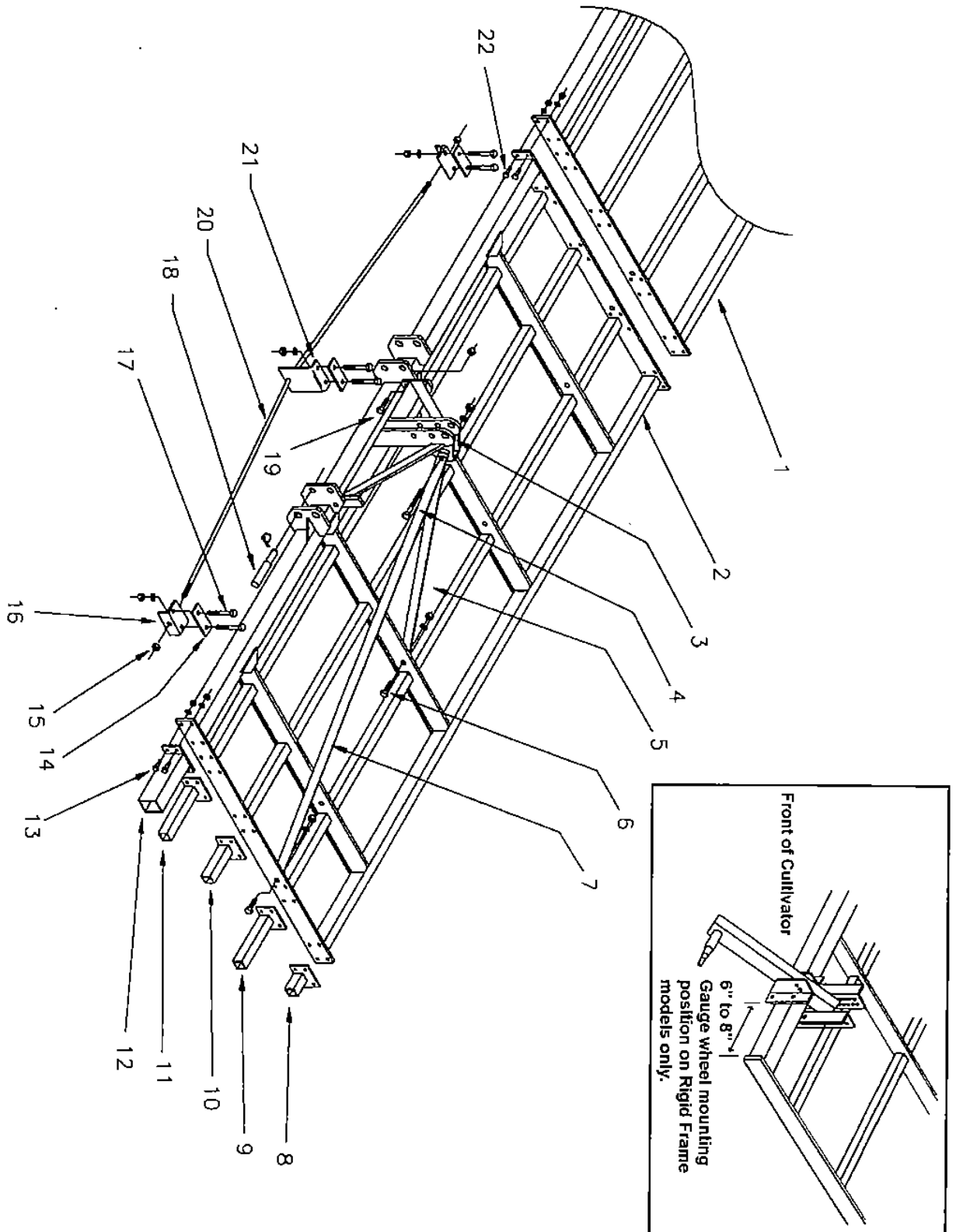
- **Customer number** \_\_\_\_\_
- **Dealer Name** \_\_\_\_\_
- **Dealer Address** \_\_\_\_\_

item	part no.	description	quantity	color*
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

\* **COLOR:** Indicate original color of part (if painted) Red, Yellow, or Black.

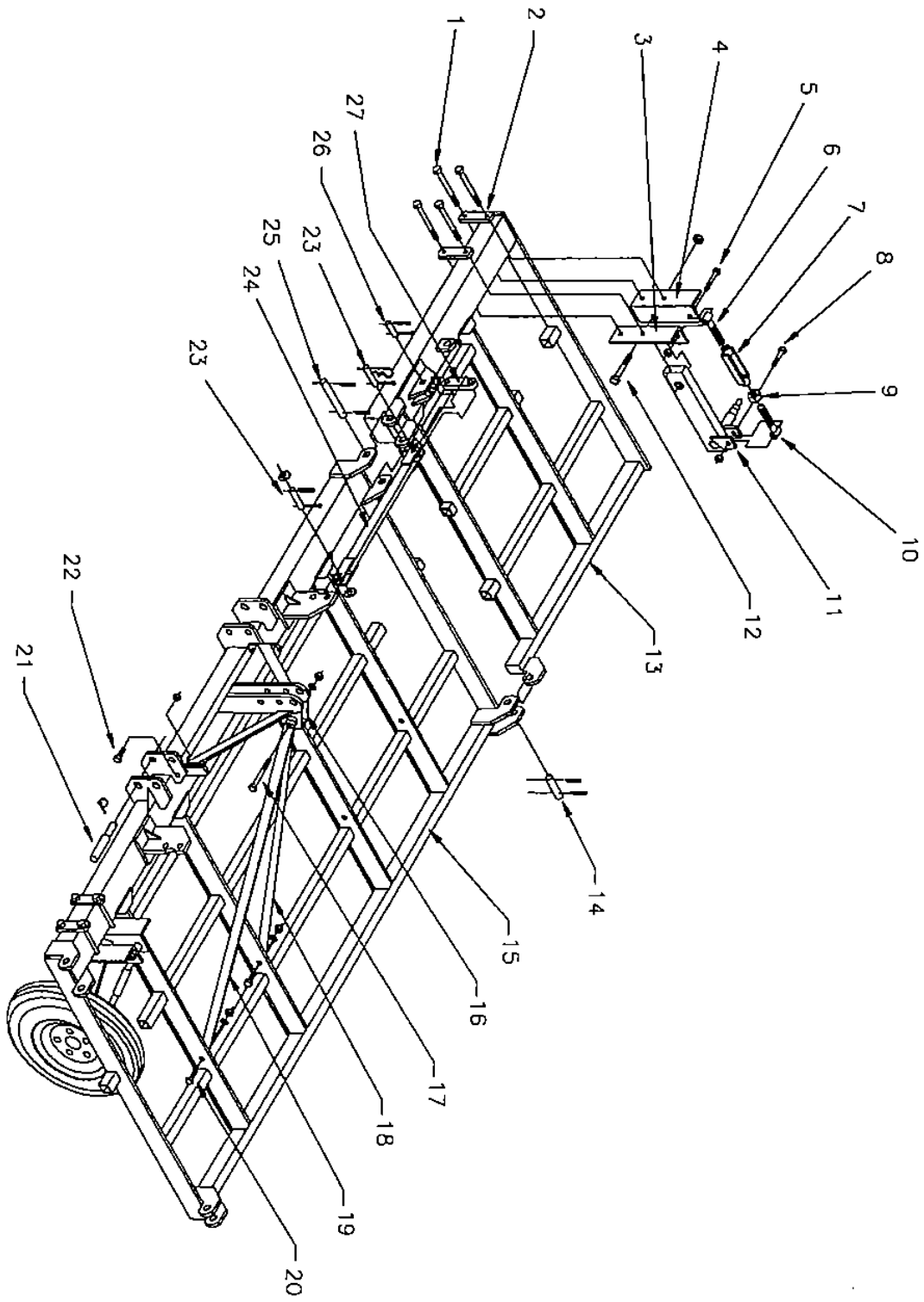
<b>RIGID FRAME COMPONENTS refer to fig. 5</b>						
<b>item</b>	<b>part no.</b>	<b>description</b>	<b>qty. 10'</b>	<b>qty. 12'</b>	<b>qty. 14'</b>	<b>qty. 19'</b>
1	606728	left-hand wing	0	0	0	1
	606729	right-hand wing	0	0	0	1
2	606820	main frame	1	0	0	0
	606670	main frame	0	1	1	1
3	606685	A-frame	1	1	1	1
4	303736	7/8" x 6" HH bolt	1	1	1	0
	303738	7/8" x 7" HH bolt	0	0	0	1
5	606693	A-frame strut 47"	2	2	2	2
6	303728	7/8" x 2 1/2" HH bolt	2	2	2	4
7	606737	A-frame strut 85"	0	0	0	2
8	606724	4" frame extension	0	0	2	0
9	606726	12" frame extension	0	0	2	0
10	606725	8" frame extension	0	0	2	0
11	606726	extension for gauge wheel	2	2	2	0
12	606768	gauge wheel mount extension	2	2	2	0
13	303652	1/2" x 1 3/4" HH bolt	as req'd.	as req'd.	as req'd.	0
14	606736	top strap	0	0	0	3
15	304022	3/4" locknut	0	0	0	2
16	606732	clamp	0	0	0	2
17	303686	5/8" x 6" HH bolt	0	0	0	6
18	042137	Cat. II link pin	2	2	2	2
	304264	roll pin	2	2	2	2
	303113	click pin	2	2	2	2
19	303728	7/8" x 2 1/2" HH bolt	2	2	2	2
20	606731	tension rod	0	0	0	1
21	606735	bracket	0	0	0	0
22	303652	1/2" x 1 3/4" HH bolt	0	0	0	24

**FIGURE 5 - RIGID FRAME COMPONENTS**



<b>FOLDING FRAME COMPONENTS refer to fig. 6</b>			
<b>item</b>	<b>part no.</b>	<b>description</b>	<b>qty.</b>
1	303691	5/8" x 8 1/2" HH bolt	16
2	603824	strap	8
3	606925	left-hand pivot angle	4
4	606926	right-hand pivot angle	4
5	303705	3/4" x 4" HH bolt	4
6	606745	left-hand screw	4
7	403133	turnbuckle body	4
8	303705	3/4" x 4" HH bolt	4
9	304064	1 1/8" jam nut	4
10	606746	right-hand screw	4
11	606914	left-hand gauge wheel arm (not shown)	2
	606915	right-hand gauge wheel arm (shown)	2
12	303760	1" x 4 1/2" HH bolt	4
	304024	1" locknut	4
13	606985	right-hand wing for 22' model	1
	606986	left-hand wing for 22' model	1
	606983	right-hand wing for 19' model	1
	606984	left-hand wing for 19' model	1
14	606929	1 1/4" x 4 3/4" rear hinge pin	2
	304123	1/4" x 1 3/4" cotter pin	4
15	606982	center frame	1
16	606685	A-frame	1
17	303738	7/8" x 7" HH bolt	1
18	606911	A-frame strut 50"	2
19	606912	A-frame strut 62"	2
20	303728	7/8" x 2 1/2" HH bolt	4
21	042137	Cat. II link pin	2
	304264	roll pin	2
	303113	click pin	2
22	303728	7/8" x 2 1/2" HH bolt	2
23	606927	1" x 4 1/2" transport arm pin	4
	303975	1" flatwasher	4
	304123	1/4" x 1 3/4" cotter pin	6
	205829	hairpin cotter	2
24	606979	wing transport arm	2
25	606928	1 1/4" x 8 3/4" front hinge pin	2
	304139	5/16" x 2" cotter pin	4
26	606930	1" x 3 1/4" float link pin	2
	304123	1/4" x 1 3/4" cotter pin	4
27	606913	float link	2

FIGURE 6 - FOLDING FRAME COMPONENTS



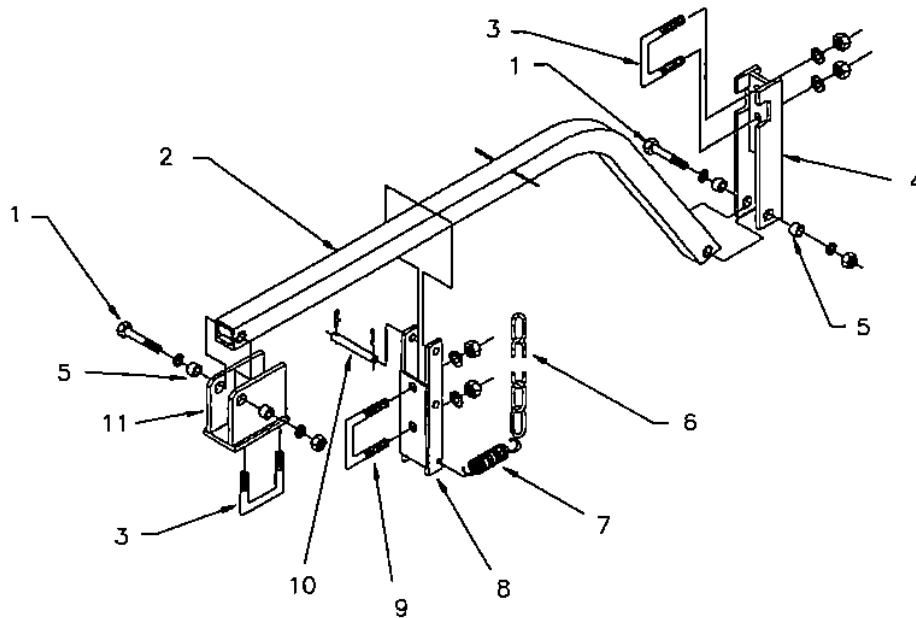


FIGURE 7 - BASKET ARM COMPONENTS

item	part no.	description	qty.
1	303682	5/8" x 4" HH bolt	2
2	606710	arm	1
3	606957	5/8" U-bolt 2" wide	2
4	606713	basket frame bracket	1
5	606719	bushing	4
6	603548	chain segment	1
7	606536	spring	2
8	606922	spring anchor bracket	1
9	606723	5/8" U-bolt 3" wide	1
10	606931	transport pin - folding models only	1
	304108	cotter pin	1
	205829	hairpin cotter	1
11	606716	front pivot bracket	1



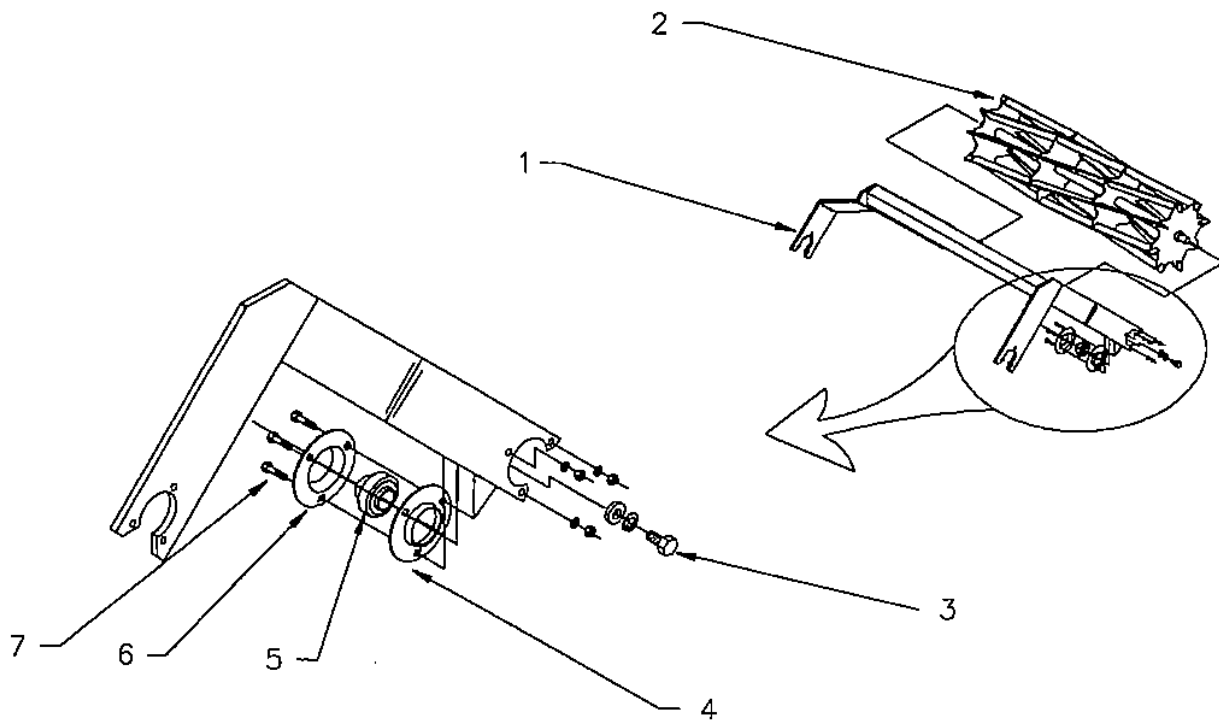


FIGURE 8 - BASKET COMPONENTS

Item	part no.	description	qty.
1	606694	40" basket frame	1
	606695	60" basket frame	1
2	606700	40" basket	1
	606701	60" basket	1
3	303648	1/2" x 3/4" HH bolt	2
4	606959	flange w/Alemite	2
5	606958	bearing	2
6	606960	flange wo/Alemite	2
7	303493	5/16" x 1" HH bolt	6

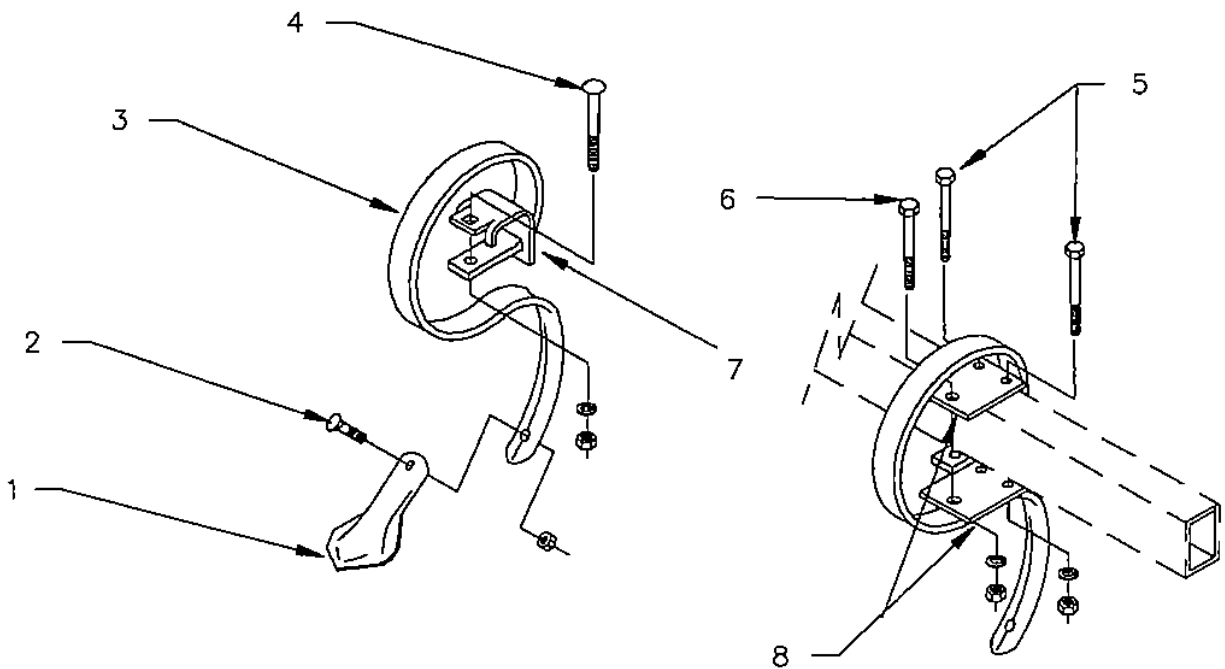


FIGURE 9 - TINE COMPONENTS

item	part no.	description	qty.
1	605367	2 3/4" shovel sweep	1
	605366	reversible point	1
	605370	4" shovel sweep	1
	605371	7" shovel sweep	1
2	303895	3/8" x 1 1/2" plow bolt	1
3	605350	danish tine	1
4	303867	1/2" x 3 1/2" carriage bolt	1
5	303623	3/8" x 4 1/2" HH bolt	2
6	303660	1/2" x 4 1/2" HH bolt	1
7	606767	tine clamp for 2" x 2" frame member	1
8	606720	tine strap for 2" x 3" frame member	2

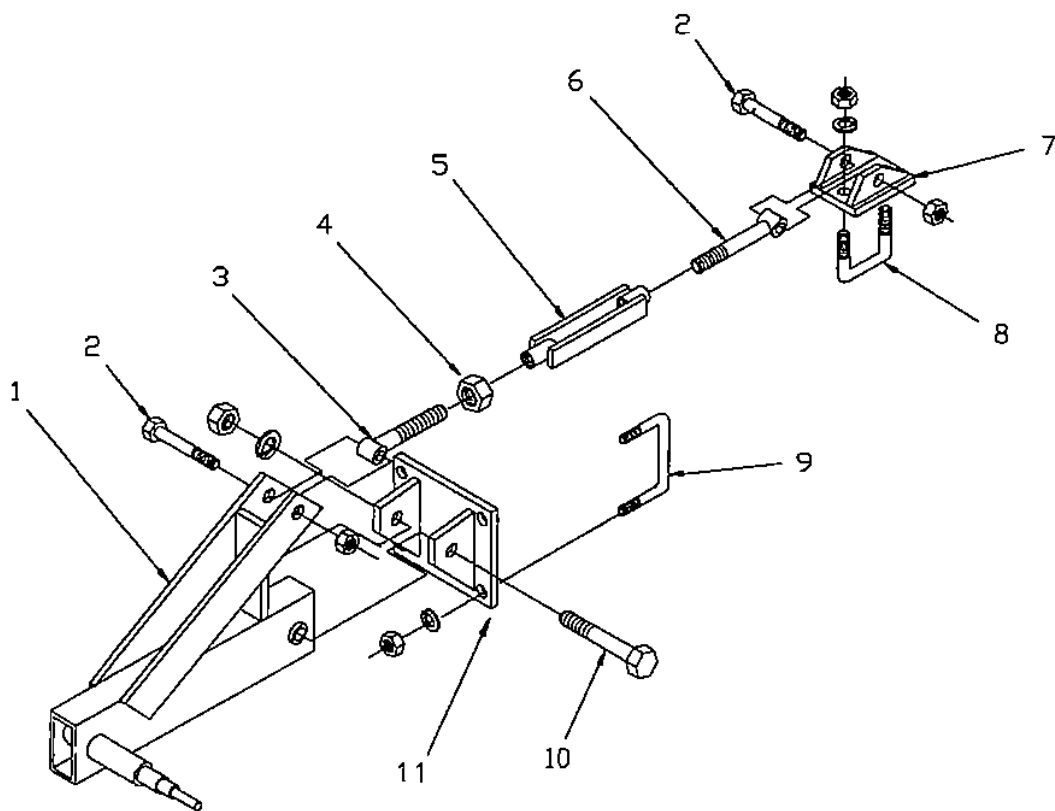


FIGURE 10 - TURNBUCKLE GAUGE WHEEL COMPONENTS - rigid frame

Item	part no.	description	qty.
1	606738	left-hand gauge wheel arm (shown)	1
	606739	right-hand gauge wheel arm (not shown)	1
2	303705	3/4" x 4" HH bolt	2
3	606746	right-hand screw	1
4	304064	1 1/8" jam nut	1
5	403133	turnbuckle body	1
6	606745	left-hand screw	1
7	606753	frame bracket	1
8	606957	5/8" U-bolt	1
9	605286	1/2" U-bolt	2
10	303760	1" x 4 1/2" HH bolt	1
11	606749	frame bracket	1
699231		complete kit incl. hubs & rims	-

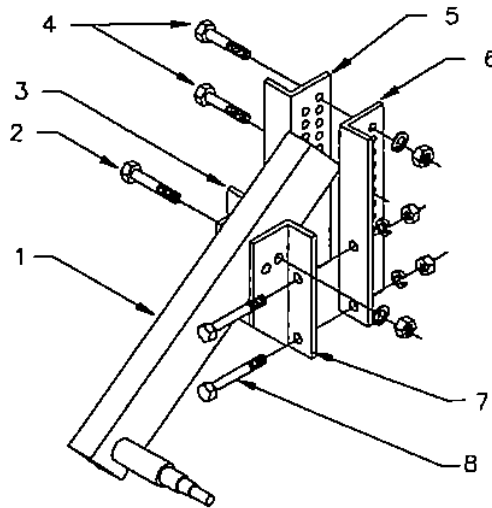


FIGURE 11 - PIN TYPE GAUGE WHEEL COMPONENTS - rigid frame

item	part no.	description	qty.	item	part no.	description	qty.
1	606818	gauge wheel arm left or right	1	6	606815	right-hand adjustment angle	1
2	303682	5/8" x 4" HH bolt	1	7	606816	right-hand pivot angle	1
3	606817	left-hand pivot angle	1	8	303684	5/8" x 5" HH bolt	4
4	303658	1/2" x 3 1/2" HH bolt	2				
5	606814	left-hand adjustment angle	1	699237		complete kit	-

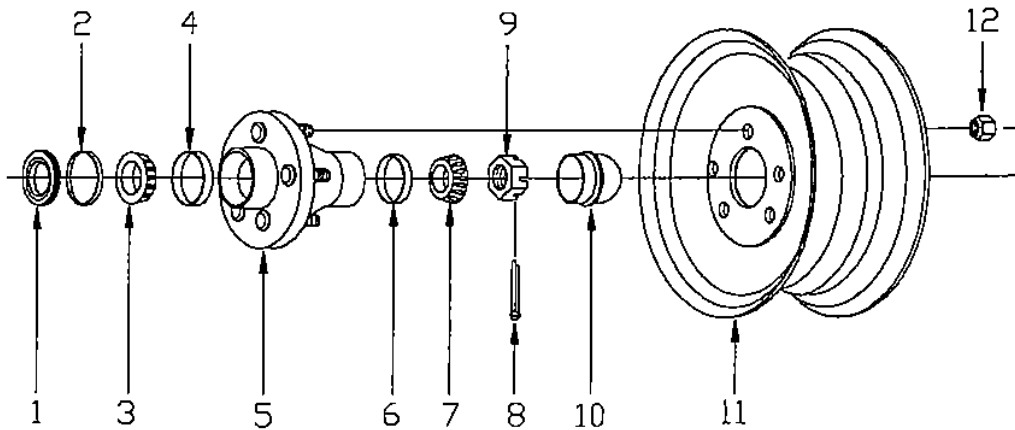


FIGURE 12 - GAUGE WHEEL HUB COMPONENTS

item	part no.	description	qty.	item	part no.	description	qty.
1	046178	seal	1	7	206335	small bearing	1
2	046177	wear sleeve	1	8	304094	5/32" x 1 1/4" cotter pin	1
3	206333	large bearing	1	9	403853	3/4" slotted hex nut	1
4	206332	large bearing cup	1	10	044797	hub cap	1
5	046176	hub w/cups	1	11	038608	15 x 5 rim	1
	304194	alemite	1	12	050843	1/2" lug nut	1
6	206334	small bearing cup	1				

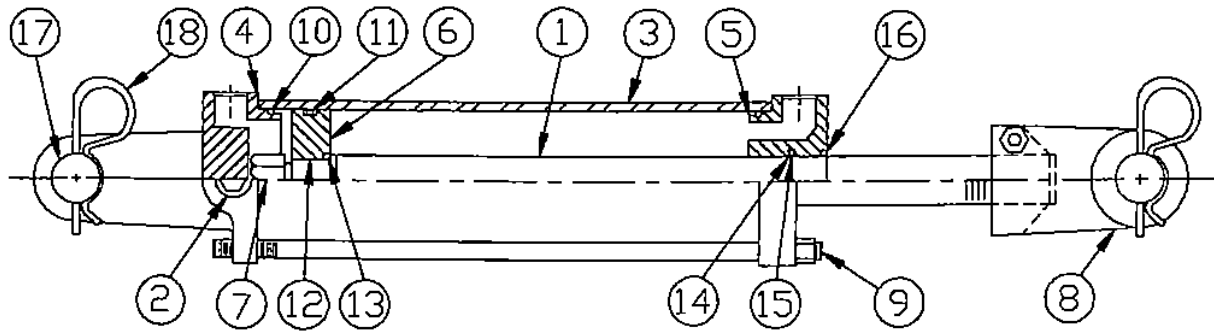


FIGURE 13 - HYDRAULIC CYLINDER COMPONENTS

item	part no.	description	qty.
1	606937	piston rod	1
2	606938	pipe plug	1
3	208824	tube	1
4	606939	butt	1
5	606940	gland	1
6	208823	piston	1
7	606941	locknut	1
8	208811	clevis assembly	1
9	606943	tie rod	4
10	**	O-ring	2
11	**	O-ring	1
12	**	Bu-washer	2
13	**	O-ring	1
14	**	O-ring	1
15	**	Bu-washer	1
16	**	wiper	1
17	606949	clevis pin	1
18	606950	hairpin clip	4
**	606956	packing kit (incl. 10-16)	1
606932		complete cylinder	-

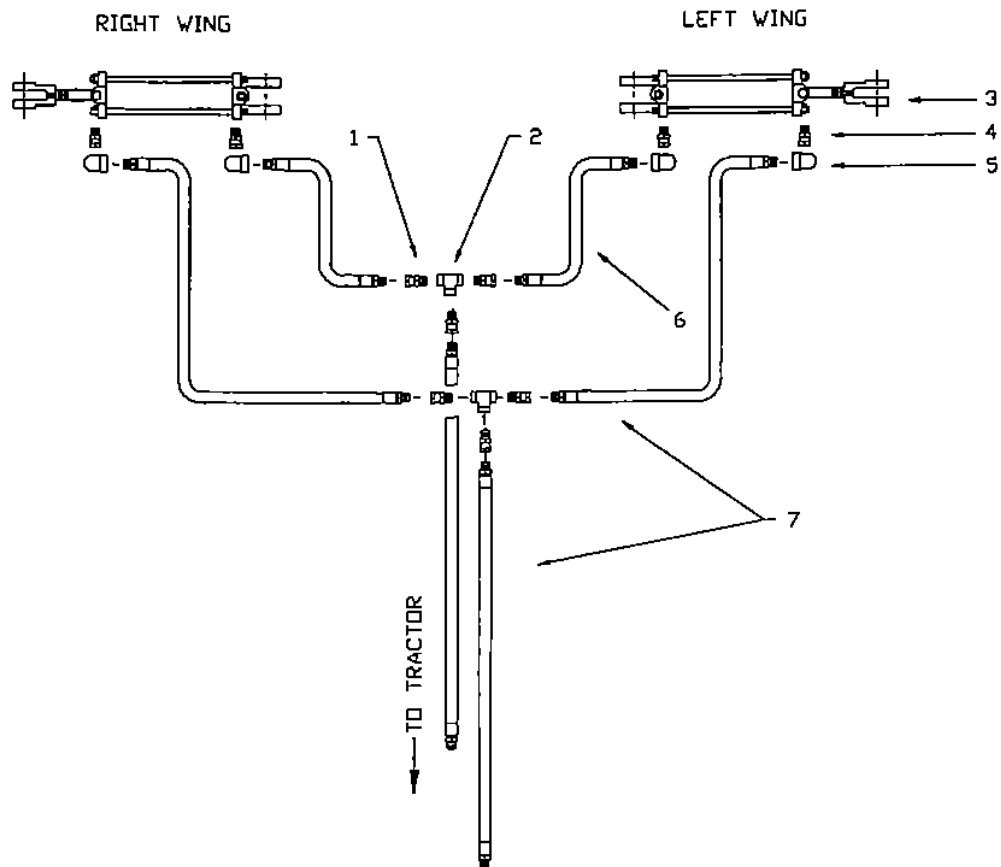


FIGURE 14 - HYDRAULIC SYSTEM COMPONENTS

Item	part no.	description	qty.
1	605399	swivel adaptor	4
2	207983	female tee	2
3	606932	hydraulic cylinder	2
4	208569	flow restrictor	4
5	207982	90° street elbow	4
6	207975	hydraulic line 43"	2
7	207976	hydraulic line 62"	4

