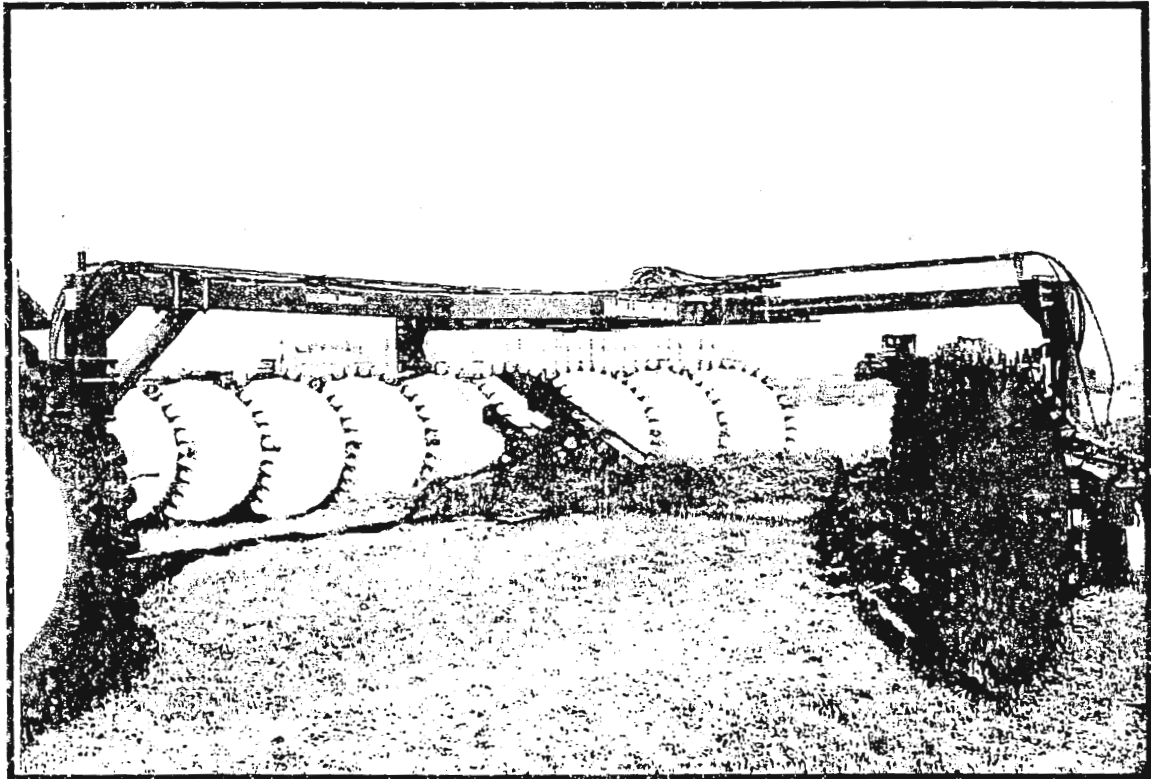


LMC

www.lmcarter.com



8794 WHEEL RAKE

OWNER/OPERATOR PARTS MANUAL

APRIL 2001

Lewis M. Carter Mfg. Co., Inc.
P.O. Box 428
Donalsonville, GA 39845
1-800-332-8232 FAX 229-524-2531

MANUFACTURED BY:

Lewis M. Carter Mfg. Co. Inc.

CALL: 1-800-332-8232 OR 229-524-2197

MAILING ADDRESS: P.O. BOX 428 DONALSONVILLE, GA 39845

SHIPPING ADDRESS: HIGHWAY 84 WEST DONALSONVILLE, GA 39845

MACHINE IMPROVEMENTS

The Manufacturer reserves the right to make changes and improvements in the product at any time without notice. The Manufacturer shall not be obligated to incorporate such changes and improvements in products previously sold to any customer, nor shall the Manufacturer be obligated to replace previously sold products with customers incorporating such changes and improvements.

(ALL RIGHTS RESERVED)

LMC 8794 RAKE OPERATOR'S MANUAL
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SAFETY SYMBOLS

RECOGNIZE SAFETY INFORMATION

This is the safety symbol. When you see this, it means:

**ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!**



Follow recommended precautions and procedures.

UNDERSTAND SIGNAL WORDS

A signal word –**DANGER, WARNING, or CAUTION** – is used with the safety-alert symbol.

DANGER indicates imminently hazardous situations that, if not avoided, will result in serious injury, or death.



DANGER

WARNING indicates potentially hazardous situations that, if not avoided, could result in serious injury, or death.

WARNING may also be used to alert against unsafe practices.



WARNING

CAUTION indicates potentially hazardous situations that, if not avoided, may result in minor or moderate injury.

CAUTION may also be used to alert against unsafe practices.



CAUTION

FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Remove missing or damaged safety signs. Contact **LMC** for replacement parts.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine or disrepair may impair safety, or the machine function.

SAFETY PRECAUTIONS

ACCIDENTS CAN BE PREVENTED

Without the complete cooperation of the implement operator, no accident prevention program can be successful. The operator anticipating the results before an accident occurs and taking action to remedy the situation can prevent many accidents. No power driven equipment, whether it be for transportation or processing, whether it is used on the highway, in the field, or in the shop, can be safer than the person at the controls. If accidents are to be prevented, the operators who accept these responsibilities seriously will accomplish it. Elimination of careless acts and unsafe operation will be help in getting your safety program off to a good start.

READ THE OPERATOR'S MANUAL – BE ALERT!

CAUTION: BEFORE APPROACHING OR ENTERING ANY MECHANISM TO SERVICE, INSPECT, OR MAKE ADJUSTMENTS:



- A. LOWER UNIT TO THE GROUND.
- B. SHUT THE TRACTOR OFF.
- C. LOCK THE TRACTOR'S PARKING BRAKE.
- D. REMOVE KEY.

PREPARE FOR EMERGENCES

Be prepared in the event of personal injury, fire, or environmental problem.

Keep handy, a first aid kit, tools, equipment, supplies, fire extinguisher, and proper attire for handling chemicals associated with the machinery usage.

Keep handy the emergency numbers for doctors, ambulance service, hospital, fire department, and any other needed emergency personnel.



WARNING: AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Shut off tractor before connecting or disconnecting hydraulic lines at tractor.

Relieve pressure before unhooking hydraulic or other lines. Tighten all connections before applying pressure. Keep hand and body away from pinholes and components that may eject fluids under pressure. Use a piece of cardboard to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury.



SAFETY PRECAUTIONS



1. Never connect hydraulic lines or operate any portion of the machine unless machine is hitched to tow vehicle or tractor.
2. Do not operate hydraulic systems when hydraulic leaks are present.
3. Never ride on the machine during transport or movement.
4. Always observe local traffic laws when transporting unit on public roads.
5. Always operate machine in a careful, controlled manner.
6. Personnel operating and working with this machinery and in any related duties must be properly trained and free of conditions or substances that may impair safety or good judgement.
7. Personnel operating and working with this machinery must not wear loose, dangling or unbuttoned clothing which could tangle in machinery..
8. Always stay clear of parts that can move and entangle, pinch or crush.
9. System Hydraulic pressure is to be set at minimum possible for proper operation. **DO NOT EXCEED 2000 psi WORKING PRESSURE OR 2700 psi MAXIMUM PRESSURE.**
10. Keep out of machine when in use.
11. Before starting machine, always check area around machine to verify that all personnel are clear.
12. Before transport or unhitching, always tie back hydraulic hoses.
13. Before transport or unhitching, always tie back wires or cable with attached control panel, and place in the storage box.
14. Daily inspect fasteners for tightness (bolts, pins, etc.)
15. Always use proper procedures and equipment for handling, transporting, and storing any chemical associated with the usage of the machinery.
16. Before transport, always verify that no part of the machine can swing or slide out into other traffic lanes, or drag on the roadway.
17. Before transport, inspect lug bolts and tire inflation.
18. Always park machine on flat ground for unhitching or storage. Before unhitching, place chocks in front and behind all transport wheels to prevent rolling when unhitched and parked.



SAFETY PRECAUTIONS



19. Stand clear of tongue, framework and tow vehicle or tractor when operating jack or working with hitch. Look around to be sure that if something slipped or accidentally moved that no harm would occur.
20. Always Lock brakes on tractor or towing vehicle, place in parking gear, and shut off tractor or vehicle before working with the rake jack or unhitching rake.
21. Do not attempt to use torch or welding arc around the machine when with the crop in the field, or around other flammable items.
22. Always wear proper safety attire for each usage condition or service procedure.
23. READ AND OBSERVE SAFETY SIGNS.
24. ALWAYS USE A PROPER HITCH PIN WITH A SAFETY CLIP INSTALLED TO HITCH THE RAKE TO THE DRAWBAR OF THE TRACTOR OR TOWING VEHICLE.
25. THIS EQUIPMENT DOES NOT HAVE BRAKES. DO NOT TOW AT SPEEDS OVER 20 MPH
26. OPERATOR IS TO TURN ON FLASHING WARNING LIGHTS WHNEVER TRAVELING ON A HIGHWAY, EXCEPT WHERE SUCH USE IS PROHIBITED BY LAW.
27. MAXIMUM FIELD NOT TO EXCEED 7 MPH.



SAFETY SIGNS CUSTOMER RESPONSIBILITY



Safety signs must be kept legible. Replace any safety sign that becomes illegible (unreadable) or is missing.

Safety signs are supplied separately from equipment parts. It is the responsibility of the customer to purchase and affix safety signs per the equipment manufacturer's current recommendation, to any equipment part to be used during repair.

When ordering new equipment parts to be used during repair, always be sure to order any safety sign(s) to be affixed to that part. Safety signs can be ordered for LMC components from:

LMC
P.O. Box 428
Donalsonville, GA 31745
Phone: (229-524-2197)
(800-332-8232)
Fax: (229-524-2531)

How to apply safety signs with self-adhesive backs:

1. Wash surface clean using a degreasing soap and water solution to remove all oil, solvent and dust.
2. Use a square and pencil to mark decal location.
3. Using a wet cloth or spray bottle, apply a film of water to decal location on machinery.
4. Position decal and apply to equipment. Use a wet cloth or squeegee to remove air bubbles from each decal immediately after application.

**MAXIMUM FIELD OPERATING
TIRE PRESSURE: 15 PSI**

DECALS and SAFETY SIGNS

P/N 79-159-88

**GREASE
DAILY**

CAUTION

KEEP LUGS TIGHT

Location: These three decals are grouped together, facing outward, on the framework above each wheel.

P/N 79-039-36

P/N 79-007-02



P/N 79-185-88

Location: Outwardly facing, on each side of the main frame, behind the main frame members that "Vee" outwards from the tongue.

MODEL 8794

Location: Outwardly facing, on each side of the main frame members that "Vee" outwards from the tongue.

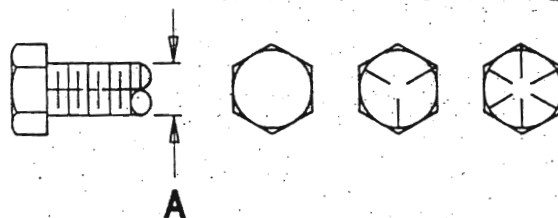
CHECKING BOLT TORQUE

The table shown below gives correct torque values for various bolts and cap screws. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically using bolt torque chart as a guide. Replace hardware with the same strength bolt.

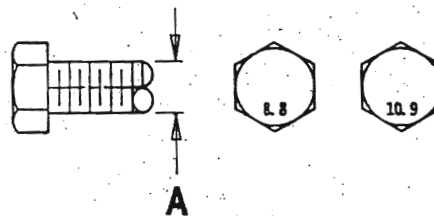
U.S. MEASUREMENT

BOLT DIAMET ER "A"	BOLT TORQUE IN N-M (ft-lb)		
	SAE2	SAE5	SAE8
¼	NOT USED	14 (10)	19 (14)
5/16	NOT USED	27 (20)	41 (30)
3/8	31 (23)	47 (35)	68 (50)
7/16	47 (35)	75 (55)	108 (80)
½	75 (55)	115 (85)	163 (120)
9/16	102 (75)	176 (130)	237 (175)
5/8	142 (105)	231 (170)	325 (240)
¾	217 (160)	407 (300)	576 (425)
7/8	251 (185)	603 (445)	929 (685)
1	339 (250)	910 (670)	1396 (1030)
1-1/4	450 (330)	1235 (910)	1979 (1460)

SAE-2 SAE-5 SAE-8



BOLT DIAMETER "A"	BOLT TORQUE IN N-M (ft-lb)	
	8.8	10.9
5mm	6 (5)	9 (7)
6mm	11 (9)	17 (13)
8mm	28 (20)	40 (30)
10mm	55 (40)	80 (59)
12mm	95 (70)	140 (103)
16mm	235 (173)	350 (258)
20mm	475 (350)	675 (498)
24mm	825 (608)	117 (863)
30mm	1630 (1201)	2320 (1712)



METRIC MEASUREMENT

NOTE: Bolts having locknuts with plated and wax finish should be tightened to approximately 50 percent of amounts shown in chart.

DESCRIPTION OF THE LMC 8794 RAKE

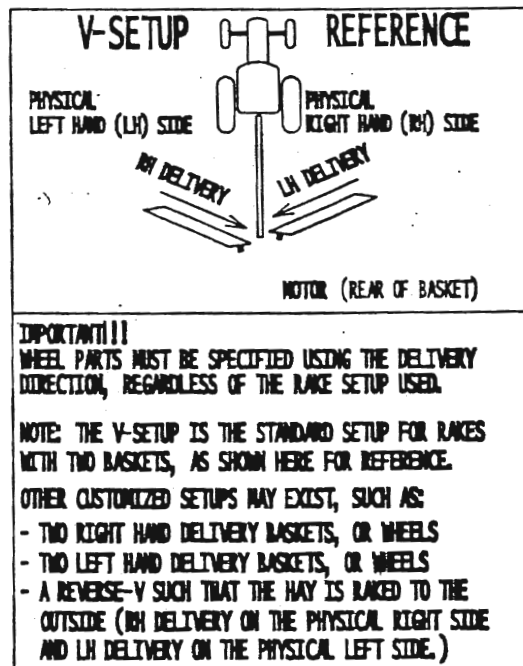
The LMC 8794 Rake is a crop driven rake used in many heavy and custom applications.

The unitized frame is extended outward to each side for raking hay and retracted for transport to and from the field.

The left-hand delivery and right hand delivery wheels are a crop driven method of moving hay into a windrow, the wheel speed is in relation to tractor ground speed.

Controls for the rake can be either manually operated levers or an electric control panel. The operator keeps the rake control console handy for easy access while in the tractor seat.

The following V-SETUP REFERENCE applies to the standard configuration of the LMC/ALLEN 8794 Rake.



Obtaining Assistance:

We, at LMC appreciate your choice of this rake. If you need assistance, you can reach LMC at:

LMC
P.O. Box 428
Donalsonville, GA 31745
Phone: (800) 332-8232 (229) 524-2197

SHIPPING, UNLOADING, SITE ASSEMBLY and DELIVERY of the LMC 8794 RAKE

The LMC 8794 Rake is shipped in a partially assembly condition. Before hoisting any component from the truck or container, be sure that it is secured in a manner that will not allow accidental movement or falling.



CAUTION

BEFORE ATTEMPTING TO UNLOAD, ASSEMBLE OR DELIVER THE RAKE, READ THE SAFETY SECTION OF THIS MANUAL. BE ESPECIALLY AWARE OF THE FOLLOWING PRECAUTIONS:

Always wear proper safety attire for each usage condition or service procedure.

During unloading and assembly, always stand clear. Look around to be sure that if something slipped or accidentally moved that no harm would occur.

Stand clear of tongue, framework and tow vehicle or tractor when operating jack or working with hitch. Look around to be sure that if something slipped or accidentally moved that no harm would occur.

Before transport, inspect lug bolts and tire inflation.

Before transport, always verify that no part of the machine can swing or slide out into other traffic lanes or drag on the roadway.

Pictures and instructions can be found throughout this manual to assist in the required site assembly.

Refer to the transport instructions in the manual prior to delivery of the rake to the customer or work site.

See the Delivery Checklist prior to delivery or operation of the rake.

PREDELIVERY AND DELIVERY LIST FOR THE DEALER, CUSTOMER AND OPERATOR LMC 8794 RAKE

1. Note: Dealer, Customer and Operator should review each item on this list together in order to know how each was accomplished



CAUTION

Review the Operator's Manual. Note especially the instructions for:

- Safety
- Unloading
- Assembly
- Operation
- Transporting
- Service and Maintenance
- Emergency Procedures

2. Check all fasteners for tightness. Refer to the suggested tightening torque values for SAE Grade 5 bolts, below:

Minimum Torque

Minimum Torque

<u>Size</u>	<u>(Foot-Lbs)</u>
1/4	7
5/16	15
3/8	25
7/16	41
1/2	63

<u>Size</u>	<u>(Foot-Lbs)</u>
5/8	125
3/4	225
7/8	340
1	510

3. THIS EQUIPMENT DOES NOT HAVE BRAKES. DO NOT TOW AT SPEEDS OVER 20 MPH. OPERATOR IS TO TURN ON FLASHING WARNING LIGHTS WHENEVER TRAVELLING ON A HIGHWAY, EXCEPT WHERE SUCH USE IS PROHIBITED BY LAW.

PREDELIVERY AND DELIVERY LIST FOR THE DEALER, CUSTOMER AND OPERATOR LMC 8794 RAKE

Note: Dealer, Customer and Operator should review each item on this list together in order to know how each was accomplished.

4. Inspection of rake systems:



CAUTION

BEFORE APPROACHING OR ENTERING ANY MECHANISM TO SERVICE, INSPECT OR MAKE ADJUSTMENTS:

- A. LOWER UNIT TO THE GROUND.**
- B. SHUT THE TRACTOR OFF.**
- C. LOCK THE TRACTOR'S PARKING BRAKE.**
- D. REMOVE THE KEY.**

- A. With the hydraulic hoses NOT connected to the tractor, turn the raking wheels by hand. All parts should move freely. Wheel hub bearings have been torqued to proper torque.
- B. With the hydraulic hoses NOT connected to the tractor, review the hydraulic system for proper tightness of all fittings.
- C. With the tractor engine shut off, connect the hydraulic hoses to the tractor.



WARNING: AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Shut off tractor before connecting or disconnecting hydraulic lines at tractor.

Relieve pressure before unhooking hydraulic or other lines. Tighten all connections before applying pressure. Keep hand and body away from pinholes and components that may eject fluids under pressure. Use a piece of cardboard to search for leaks.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

PREDELIVERY AND DELIVERY LIST FOR THE DEALER, CUSTOMER AND OPERATOR LMC 8794 RAKE

Note: Dealer, Customer and Operator should review each item on this list together in order to know how each was accomplished

5. Inspection of rake systems (cont'd):
(Note: See safety messages with this step on previous page.)
 - D. Slowly and carefully turn on the tractor hydraulics to begin operation.
 - E. With the tractor safely parked and while keeping clear of the rake, visually inspect for loose parts and hydraulic leaks. Should there be any problems, follow all safety procedures, especially the messages given with this step and remedy the problem.
 - F. For field representation, the main frame needs to be parallel to the ground when hitched to the towing machine
 - G. Adjust the wheel beams to be parallel to the main frame. This allows more equal adjustment on the raking wheels.
 - H. Adjust raking wheels to have as light a contact with the conditioned crop as ground condition and ground speed will allow.

(PHOTOCOPY THIS PAGE)
**PREDELIVERY AND DELIVERY LIST
FOR THE DEALER, CUSTOMER AND OPERATOR
LMC 8794 RAKE**

Note: Dealer, Customer and Operator should review each item on this list together in order to know how each was accomplished

6. Warranty Registration:

Customer must complete and send in the warranty registration card that is attached to the back of the manual. Warranty validation will not occur unless the warranty registration card is returned to:

LMC
P.O. Box 428
Donalsonville, GA 31745
Attn: Warranty Department
Phone: (229) 524-2197 (800) 332-8232

7. Record the serial number here for future reference.

Serial Number: _____

(PHOTOCOPY THIS PAGE)

LMC welcomes any comments regarding the condition of the rake upon arrival at the dealership or farm.

Comments: _____

Signature: _____

Mail to: LMC • P.O. Box 428 • Donalsonville, GA 31745

SET-UP and DESCRIPTION OF CONTROLS LMC 8794 RAKE



CAUTION

Read all SAFETY MESSAGES at the beginning of this manual before attempting any of the procedures described on this section.



NOTE

In order to set up your LMC/ALLEN rake, it may be necessary to utilize certain hydraulic functions.

If so, the rake will need a preliminary hydraulic setting. To achieve this preliminary setting, refer to the section of this manual, "PREDELIVERY AND DELIVERY LIST". Perform all the steps.

The hydraulic settings in the "PREDELIVERY AND DELIVERY LIST" will be sufficient to operate the rake functions during the set-up of the rake, Follow all of the safety precautions.

BEFORE RAKING HAY:

Instruct operator proper operation and safety of the 8794 Wheel Rake.

SET-UP PROCEDURES

1. Clear the set up area of all items, which will not be needed during the set up of the 8794 wheel rake. Be sure the area is safe and clean working area.
2. Inventory all parts and fasteners, using the enclosed list of fasteners and parts book.
3. Arrange the main frame, part #85-018-87 in the area first, leaving ample room to move around the unit with a fork lift or an overhead crane.
4. Elevate the tongue end of the main frame and position the lower tongue section, part # 85-024-87 (with jack stand installed) into place. Secure with, 4 – $\frac{3}{4}$ " x 2" grade 5, cap screws and lock nuts.
 - a) Allow tongue to rest on the floor or ground.
5. Install tongue gusset, part # 85-019-87. Secure into place with part # 98-008-87, clamp plates and cap screws, $\frac{7}{8}$ " x $8\frac{1}{2}$ " grade 5 and lock nuts.
6. Move to the center rear of the main frame, part # 85-018-87 and elevate until frame is parallel to the floor or ground.
7. Swing into place part # 85-013-87 vertical leg frame R.H. **NOTE:** offset is to be pointing to the rear. Secure with 1" x 3" grade 8 cap screws and lock nuts.
8. Repeat the above with part # 85-014-87, vertical leg frame L.H. Secure with 1" x 3" grade 8 cap screws and lock nuts.
9. Install all 4, 96-034-88 spindles and secure with $\frac{3}{8}$ " x $3\frac{1}{2}$ " grade 5 cap screws and lock nuts.
10. Install all 4, 79-018-88, 7/50 x 15 tires and wheels and secure with $\frac{1}{2}$ " lug bolts. Allow unit to rest on tires.
 - a) Install the hitch, part #85-074-88.
 - b) Unit can now be moved with a forklift or some other towing vehicle.

SET-UP PROCEDURES – con't.

11. Place wheel mount beams, part # 85-004-87 L.H. and part # 85-003-87 R.H. on the ground with raking wheel hub mounts facing each other with lift cylinders to the rear of the rake.
12. Back the assembly main frame over the top of the wheel mount beams.
 - a) Raise the beams into place and position into clamp part # 85-041-87.
 - b) Maintain 104" to 106" from rear of beam to rear of the clamp, part # 85-041-88.
 - c) Repeat above procedure on opposite side.
 - d) Secure with part # 85-028-87 and 5/8 x 6" cap screws.
13. Install tension rod referring to parts book for placement of long and short rods.
 - a) Adjust tongue jack to bring the main frame to a parallel position with floor or the ground.
 - b) Then adjust tension rods to position the wheel beams parallel to main frame.
 - c) Secure part # 85-041-87, adjusting clamp with 3/4" x 2 1/2" cap screw, flat and lock washers and nut.
14. Install swing cylinder lugs, part # 85-033-87 to wheel mount L.H. part # 85-004-87 and 85-003-87 to wheel mount R.H., as shown on page 28 (Wheel Mount Assembly).
15. Install swing cylinder lug rear mount to vertical frame legs. (**NOTE:** cylinder needs to be parallel to wheel beam) rear cylinder lug or (fixed lug) Part # 85-032-87, using 4 each 1/2" x 6 1/2" cap screws and lock nuts.
16. Install remaining hoses to swing cylinder and to wheel lift cylinder. Secure lift hose in double clamp, part # 77-024-36 to the side of wheel mounts 85-003-87 and 85-004-87 with top plate #77-032-38 and cap screw 2814-1013.
17. Hook to tractor or hydraulic supply and charge hydraulic system. Check out system to assure there are not any hydraulic leaks.

SET-UP PROCEDURES - con't.

18. Before field operation, level main frame in relation to the ground and wheel beams in location to the main frame.
19. Adjust wheel flotation to desired ground pressure of tines. **NOTE:** The lighter the contact the tines have with the ground, the less foreign material there will be in your crop. The heavier crop, the raking wheels will need to be on the crop.

BOLT CHECK LIST FOR 8794 WHEEL RAKE

QTY	DESCRIPTION
8	3/4 x 3 1/2" Truss Rod
8	3/4" Nylock Nuts
8	3/4" x 2 1/2" Pivot Oscillator
8	3/4 Nuts, Lock and Flat Washers
16	5/8" x 6" Clamp Plate
16	5/8" Stover Nuts
8	1/2" x 7 Clamp Plate Leg Mounts
8	1/2" Stover Nuts
8	7/8" x 8 1/2" Tongue Gusset
8	7/8" Stover Nuts
6	3/8" x 3 1/2" Spindle & Pin
6	3/8" Lock Nuts
4	3/4" x 2" Tongue Attachment
4	3/4" Lock Nuts
2	3/4" x 8" Hitch
2	3/4" Lock Nuts
12	1" x 3" Grade 8 Vert. Leg to Ext Arm
12	1" Lock Nuts

JACK OPERATION

LMC RAKE

Read the following safety precautions, and then sequentially follow the instructions given, below. A pictorial reference is provided.



CAUTION

Stand clear of tongue, framework and tow vehicle or tractor when operating jack or working with hitch. Look around to be sure that if something slipped or accidentally moved that no harm would occur.

Always park machine on flat ground for unhitching or storage. Before unhitching, place chocks in front and behind all transport wheels to prevent rolling when unhitched and parked.

Always lock brakes on tractor or tow vehicle, place in parking gear and shut off tractor or vehicle before working with the rake jack or unhitching rake.

ALWAYS USE A PROPER HITCH PIN WITH A SAFETY CLIP INSTALLED TO HITCH THE RAKE TO THE DRAWBAR OF THE TRACTOR OR TOWING VEHICLE. (See figure, next page.)

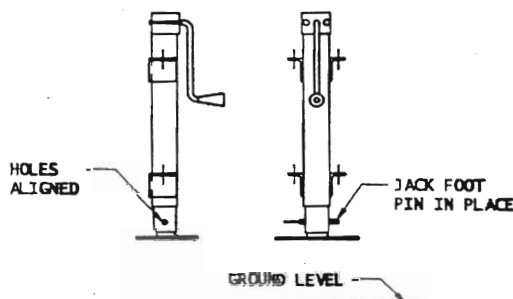
HITCHING

Using the jack's crank handle, raise or lower the rake tongue to align the rake hitch with the drawbar of the tractor or tow vehicle. Securely hitch rake to tractor using a proper hitch pin with a safety clip installed. Use the jack's crank handle to take the pressure off of the jack foot. Pull the jack foot pin and push the jack foot fully up inside the leg of the jack. Insert jack foot pin into the aligned holes in the leg of the jack and the raised foot. Use the jack's crank handle to fully retract the leg of the jack to the transport position.

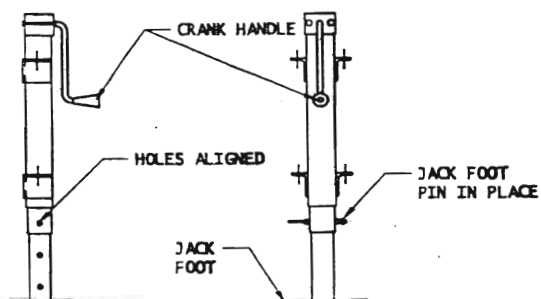
UNHITCHING

Before unhitching the rake from the tractor or tow vehicle, pull the jack foot pin and lower the jack foot as far as possible to have aligned holes in the side of leg and foot of the jack. Insert the jack foot pin into the aligned holes. Using the rake's crank handle, raise the rake hitch off of the drawbar of the tractor or tow vehicle. After chocking front and back of the rake wheels, unhitch the rake.

RAKE HITCHED: JACK FOOT FULLY RAISED FOR TRANSPORT



RAKE UNHITCHED: JACK FOOT LOWERED TO SUPPORT RAKE



FRAME HEIGHT LMC 8794 RAKE

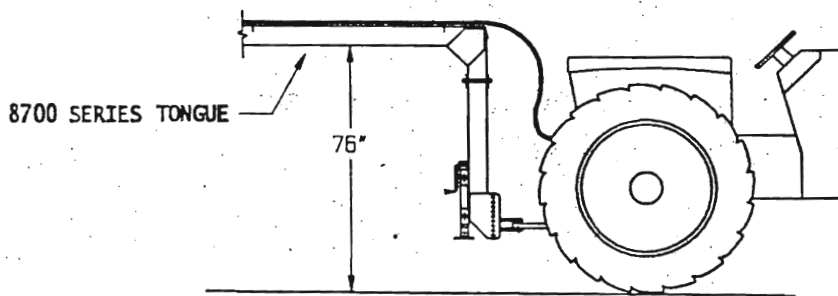


CAUTION

Stand clear of tongue, framework and tow vehicle or tractor when operating jack or working with hitch. Look around to be sure that if something slipped or accidentally moved that no harm would occur.

Always lock brakes on tractor or tow vehicle, place in parking gear and shut off tractor or vehicle before working with the rake jack or unhitching rake.

ALWAYS USE A PROPER HITCH PIN WITH A SAFETY CLIP INSTALLED TO HITCH THE RAKE TO THE DRAWBAR OF THE TRACTOR OR TOWING VEHICLE



FRAME HEIGHT:

For proper and consistent raking, the bottom surface of the tubing frame should be initially set level with the ground. The same measurement (76") is to be accomplished at the tongue and at the wheels.

To change the frame height:

First, support the rake with the jack. See "Jack Operation" in this manual.

Secondly, reposition the hitch height using the bolt holes provided on the rake tongue. Torque hitch bolts properly. See chart in "...Delivery List".

The 76" frame height is the nominal setting to start from as a reference. This height will vary depending on tire pressure, wear of the tines, etc. Setting a level frame height can reduce the amount of wheel readjustment required when changing from one raking position to another. (See "Raking Positions" in this manual.)

The frame height should be taken note of when:

- adjusting the overall rake to the individual raking preference.
- adjusting the raking wheels to the individual raking preference.
- changing to another raking tractor.

TRANSPORTING THE RAKE



CAUTION

Read all safety instructions at the beginning of the manual. Especially regard the following:

ALWAYS USE A PROPER HITCH PIN WITH A SAFETY CLIP INSTALLED TO HITCH THE RAKE TO THE DRAWBAR OF THE TRACTOR OR TOWING VEHICLE.

THIS EQUIPMENT DOES NOT HAVE BRAKES. DO NOT TOW AT SPEEDS OVER 20 MPH.

OPERATOR IS TO TURN ON FLASHING WARNING LIGHTS WHENEVER TRAVELLING ON A HIGHWAY, EXCEPT WHERE SUCH USE IS PROHIBITED BY LAW.

Never connect hydraulic lines or operate any portion of the machine unless machine is hitched to tow vehicle or tractor.

Never ride on the machine during transport or movement.

Always observe local traffic laws when transporting unit on public roads.

Personnel operating and working with this machinery and in any related duties must be properly trained and free of conditions or substances that may impair safety or good judgement.

Before transport or unhitching, always tie back hydraulic hoses.

Before transport or unhitching, always tie back wires or cable with attached control panel and place in the storage box.

Before transport, always verify that no part of the machine can swing or slide out into other traffic lanes or drag on the roadway.

Before transport, inspect lug bolts and tire inflation.

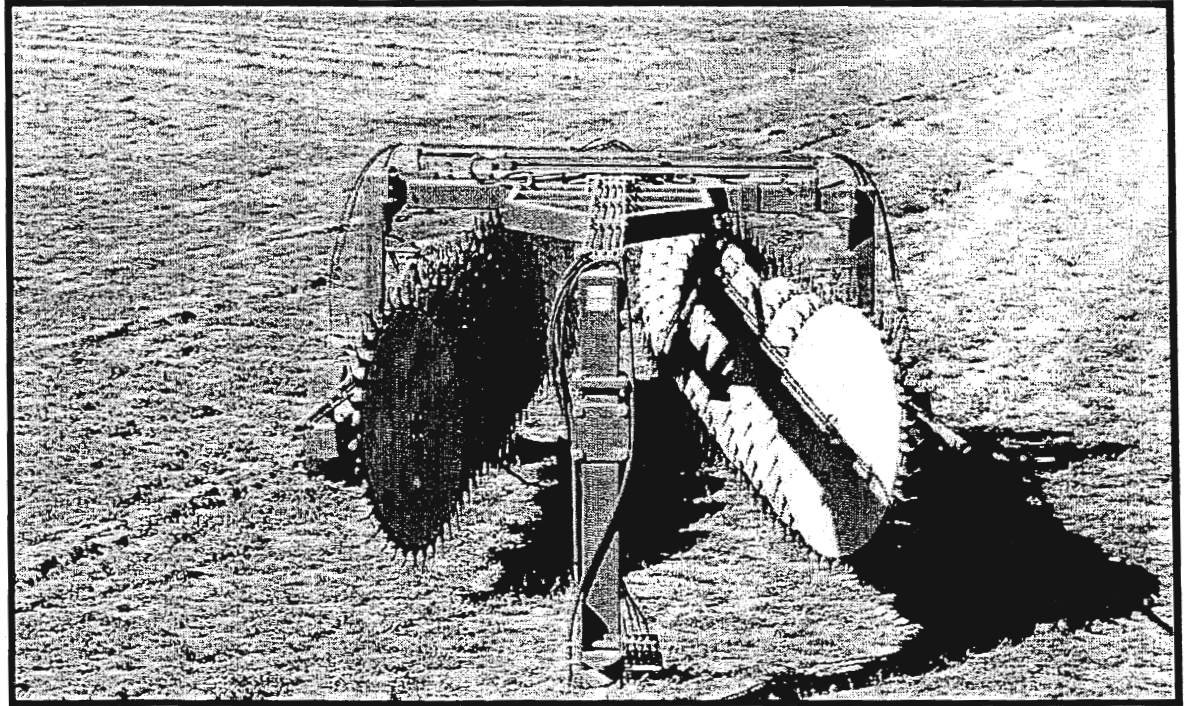
Always park machine on flat ground for unhitching or storage. Before unhitching, place chocks in front and behind all transport wheels to prevent rolling when unhitched and parked.

Stand clear of tongue, framework and tow vehicle or tractor when operating jack or working with hitch. Look around to be sure that of something slipped or accidentally moved that no harm would occur.

Always lock brakes on tractor or tow vehicle, place in parking gear and shut off tractor or vehicle before working with the rake jack or unhitching rake.

TRANSPORTING INSTRUCTIONS: While following safety procedures, put the rake into the compact transport position, as shown on the next page. Drive slowly (20 mph or less). Drive carefully, always being aware of the rake's position in relation to traffic and roadside objects.

RAKE TRANSPORT POSITION



MAIN FRAME MODEL 8794 RAKE

Installation of Poly Slide Bearing, Shim and Half-Shims



CAUTION

1. Wear safety goggles and gloves during this procedure.
2. Always stay clear of pinch points and potentially harmful areas. Make sure that if something slipped (jack, support, tool the machine, etc.) that nobody would be in harm's way.
3. When working with a hacksaw, file, etc., **DO NOT NICK THE RAKE FRAMEWORK.** A small nick could start a crack.
4. Always replace worn parts.
5. Always check often to be sure that shims and wear pads are staying in place during highway transport and raking

Tools Required Include: Safety goggles, work gloves, hammer (2 lb.), LMC Shim Driver Tool (p/n 85-139-88), pliers, hacksaw, flat file, aerosol oil that dries (Do not use heavy oil or grease).

1. Refer to "Extension Arm" section of this manual. The Poly Slide Bearings and Bearing Plate Shims must be installed onto the Extension Arm Prior to inserting the Extension Arm into the Main Frame.
2. Slide the Extension Arm into the main Frame, with about 3' remaining out.
3. Refer to the "Main Frame" section of this manual. Install the Poly Slide Bearing (Items 6) and the Bearing Shim Plates (Items 34), as shown in "Detail A and B".
4. Prepare the Half Shims (Items 43) for installation: With a file or grinder, round the leading edge to be driven in.
5. Place a jack under the front end of the Wheel Beam (See figure showing the Wheel Beam). Slightly jack-up to relieve the space for the Half Shim.
6. Spray aerosol oil into the area to receive the Half Shim and spray the Half Shim.
7. Insert the Half Shim into the deep slot of the Shim Driver Tool, leaving the leading edge out. Drive the shim into place. When the tool bottoms out, then use the shallow slot on the Shim Driver Tool. Finally, use a blunt surface of the tool to drive the Half Shim flush.

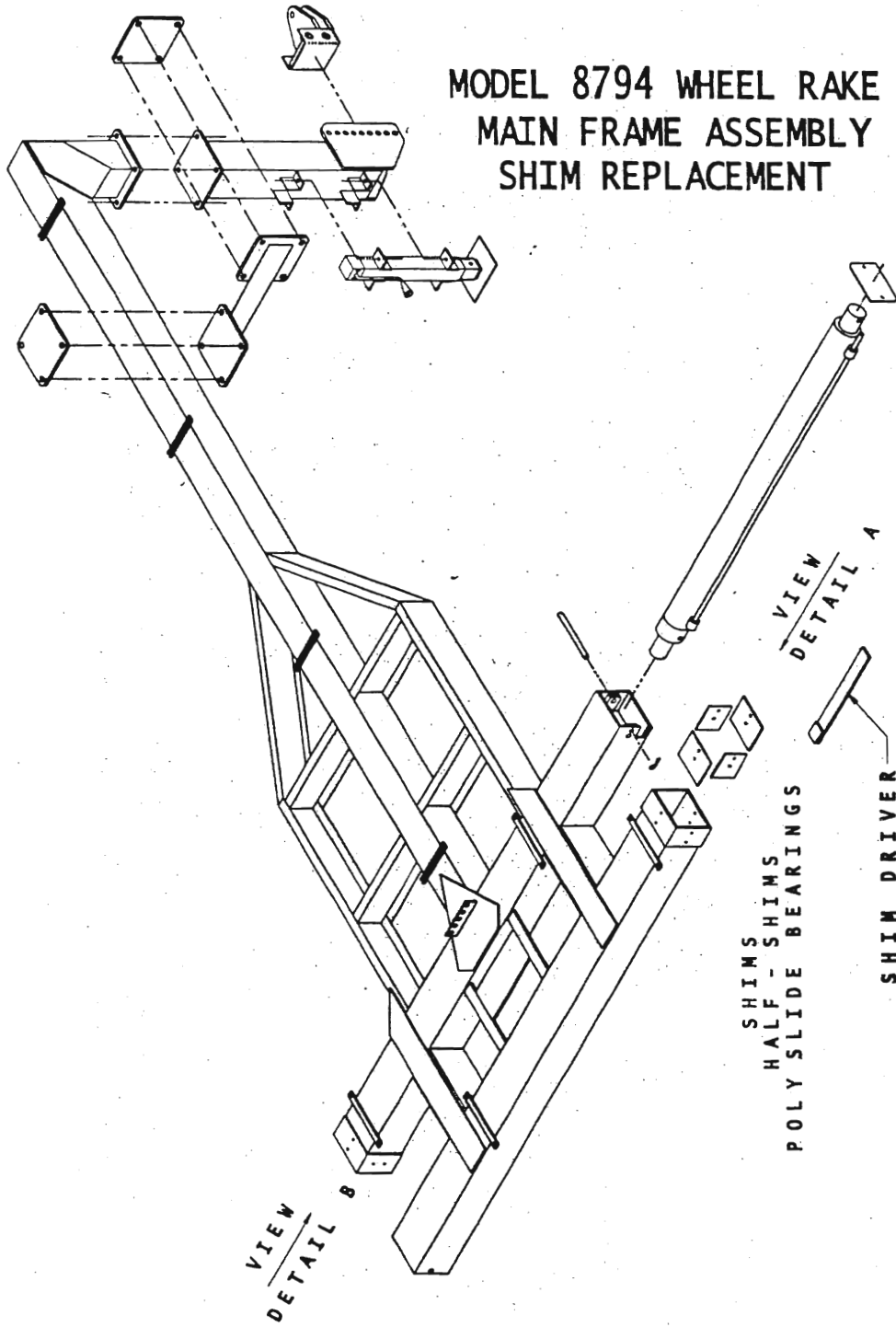


CAUTION

With a hacksaw, file, etc. DO NOT NICK THE RAKE FRAMEWORK. A small nick could start a crack.

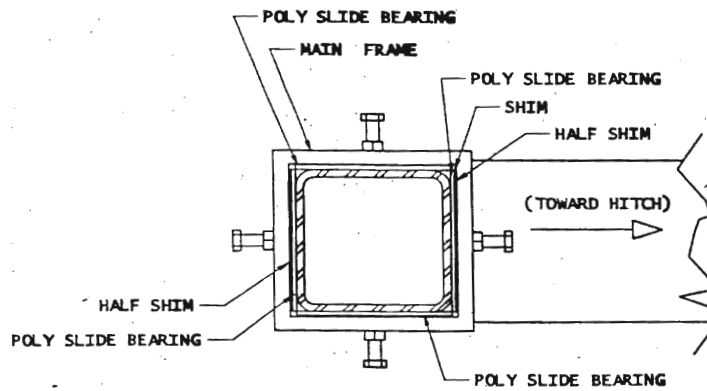
8. If a Half Shim installs most of the way, but will not drive fully flush, then use a hacksaw to cut a groove in the Half Shim flush with the end of the Poly Bearing Plate. Then break off the free end of the Half Shim with pliers. Use a file to remove all burrs.
9. Repeat Steps 4-8 until all Half Shims are installed, as shown.
10. Keep aerosol oil with rake to use on Extension Arms until Poly Slide Bearings are broken in and allow free extension/retraction without binding.

MODEL 8794 WHEEL RAKE
MAIN FRAME ASSEMBLY
SHIM REPLACEMENT

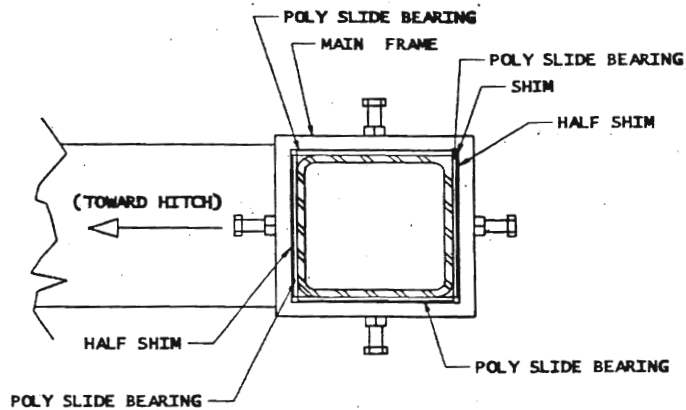


MAIN FRAME: Placement of Shims and Half-Shims.

Place shims where shown. Minimum shims shown, more may be required. Half shims MUST be installed to prevent damage to rake.



DETAIL A
from previous page



DETAIL B
from previous page

LMC/ALLEN RAKE WHEEL RAKE



CAUTION

Read all SAFETY MESSAGES at the beginning of this manual before attempting any of the procedures described on this section.

Telescoping Axle Cylinder Removal

- 1) Remove end plate, Item 1. See Fig. 29.
- 2) Remove hoses from fittings.
- 3) Remove fitting, Item 2, from cylinder.
- 4) Remove pins, Item 3, from cylinder.
- 5) Remove cylinder by sliding it out of main frame tube.
- 6) Repair if necessary.
- 7) Reverse the process to install.
- 8) CAUTION: Remove main cylinder with telescoping axle in close position ONLY.

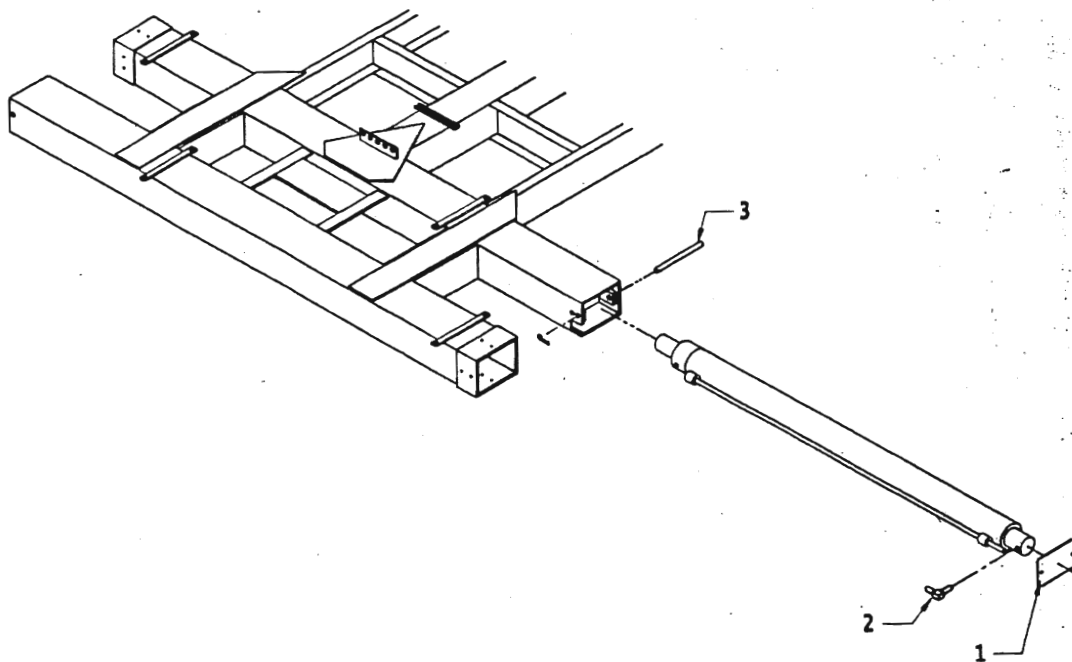
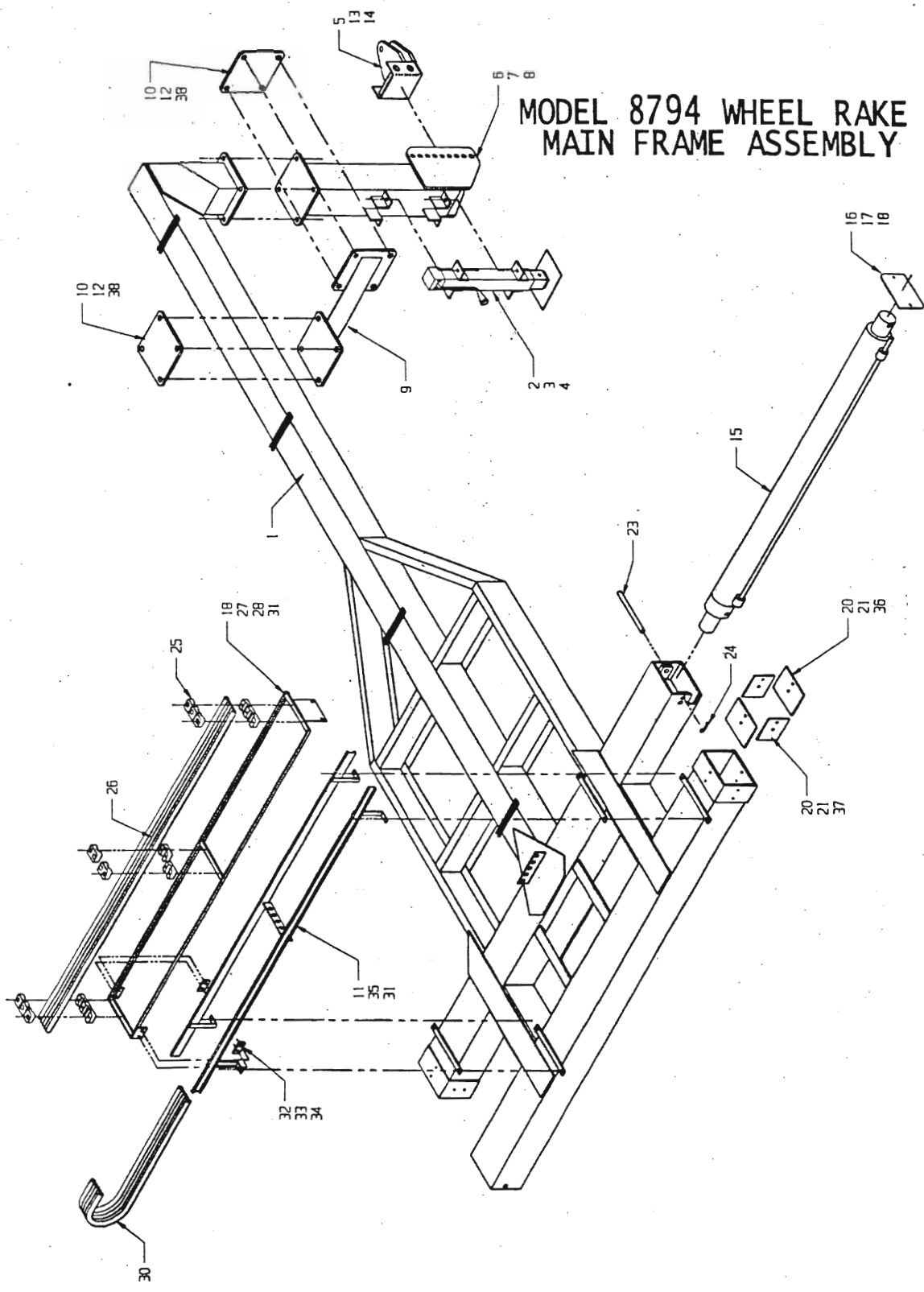


FIG. 29

MODEL 8794 WHEEL RAKE MAIN FRAME ASSEMBLY

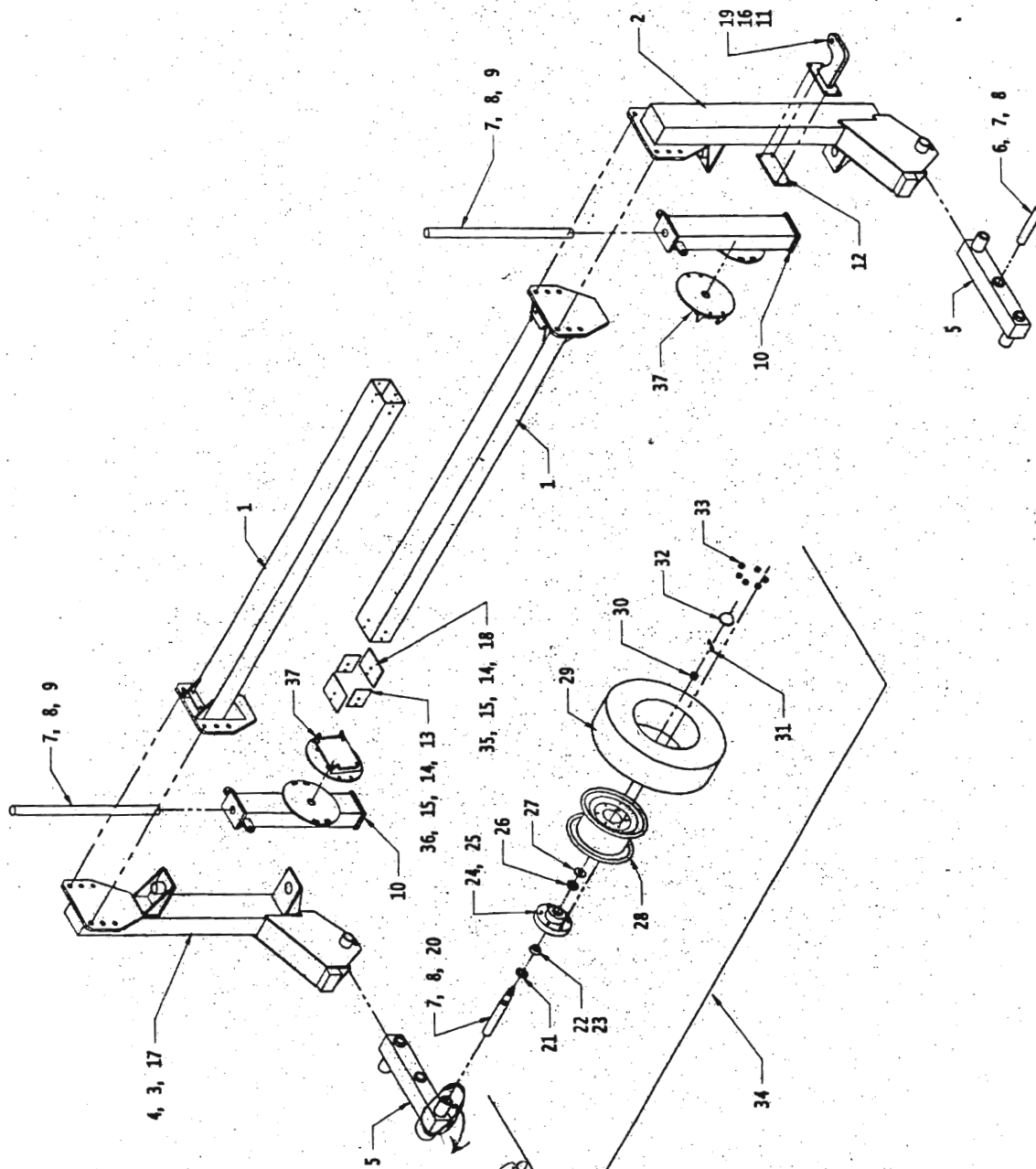


MAIN FRAME ASSEMBLY

Ref. No.	LMC No.	Description	Qty. Req.
1	85-018-87	Main Frame	1
2	85-077-88	Jack Stand	1
3	2816-1210	Hex Head Bolt 3/8"UNC x 1" Grade 5	4
4	1412-1200	Hex Lock Nut 3/8"UNC	4
5	85-074-88	Hitch	1
6	85-024-87	Tongue Lower Section	1
7	2816-2420	Hex Head Bolt 3/4"UNC x 2" Grade 5	4
8	1412-2400	Hex Lock Nut 3/4"UNC	4
9	85-019-87	Tongue Gusset	1
10	2816-2880	Hex Bolt 7/8" UNC x 8 1/2" Grade 5	8
11	2816-0810	Hex Head Bolt 1/4"UNC x 1"	8
12	1412-2800	Hex Lock Nut 7/8"UNC	8
13	2816-2480	Hex Head Bolt 3/4"UNC x 8" Grade 5	2
14	1412-2400	Hex Lock Nut 3/4"UNC	2
15	79-113-88	Telescoping Cylinder	2
16	93-010-87	Bolt-on End Cap	2
17	2816-0806	Hex Head Bolt 1/4"UNC x 3/4"	4
18	1702-0800	Flat Washer 1/4"	8
19	93-023-87	Poly Slide Bearing 8 1/2" x 4 7/8"	4
20	2816-1014	Hex Head Bolt 5/16"UNC x 1-1/2"	16
21	0812-1000	Hex Nut 5/16"UNC	16
22	93-021-87	Poly Slide Bearing 8 1/2" x 6 7/8"	4
23	96-005-87	Extension Cylinder Pin, Butt End	2
24	79-128-88	Hair Pin Clip	4
25	79-016-88	Tubing Clamp 3/8"	24
26	84-021-88	Tube Assembly 3/8" x 75 1/2"	8
27	85-028-88	Tubing Rack	2
28	2814-0804	Hex Head Bolt 1/4"UNC x 1/2"	4
29	1412-0800	Hex Head Nut 1/4"UNC	15
30	79-041-88	Hose Assembly AR-17 1/4 x 51	8
31	79-001-88	Poly Slide Bearing	4
32	3114-0810	Flat Head Screw 1/4"UNC x 1"	8
33	0812-0800	Hex Nut 1/4"UNC	8
34	1602-0800	Lock Washer 1/4"SAE	8
35	85-022-87	Lower Hose Rack	2
36	93-022-87	Shim 8 1/2" x 6 7/8" (For 93-021-87)	4
37	93-024-87	Shim 8 1/2" x 4 7/8" (For 93-023-87)	4
38	98-008-87	Clamp Plate	2

→ 2814-1014 HEX HEAD BOLT 5/16" UNC X 1 1/2"
 → 4216-0810 FLAT HEAD SCREW 1/4" UNC X 1"

MODEL 8794 WHEEL RAKE EXTENSION ARM ASSEMBLY



94-008-88
 LOWER SPINDLE BUSHING
 (THIS IS A WELDED IN PART
 BUT CAN ORDER AS A SEP-
 ERATE PART) APPROX 8 1/2" LONG

EXTENSION ARM ASSEMBLY

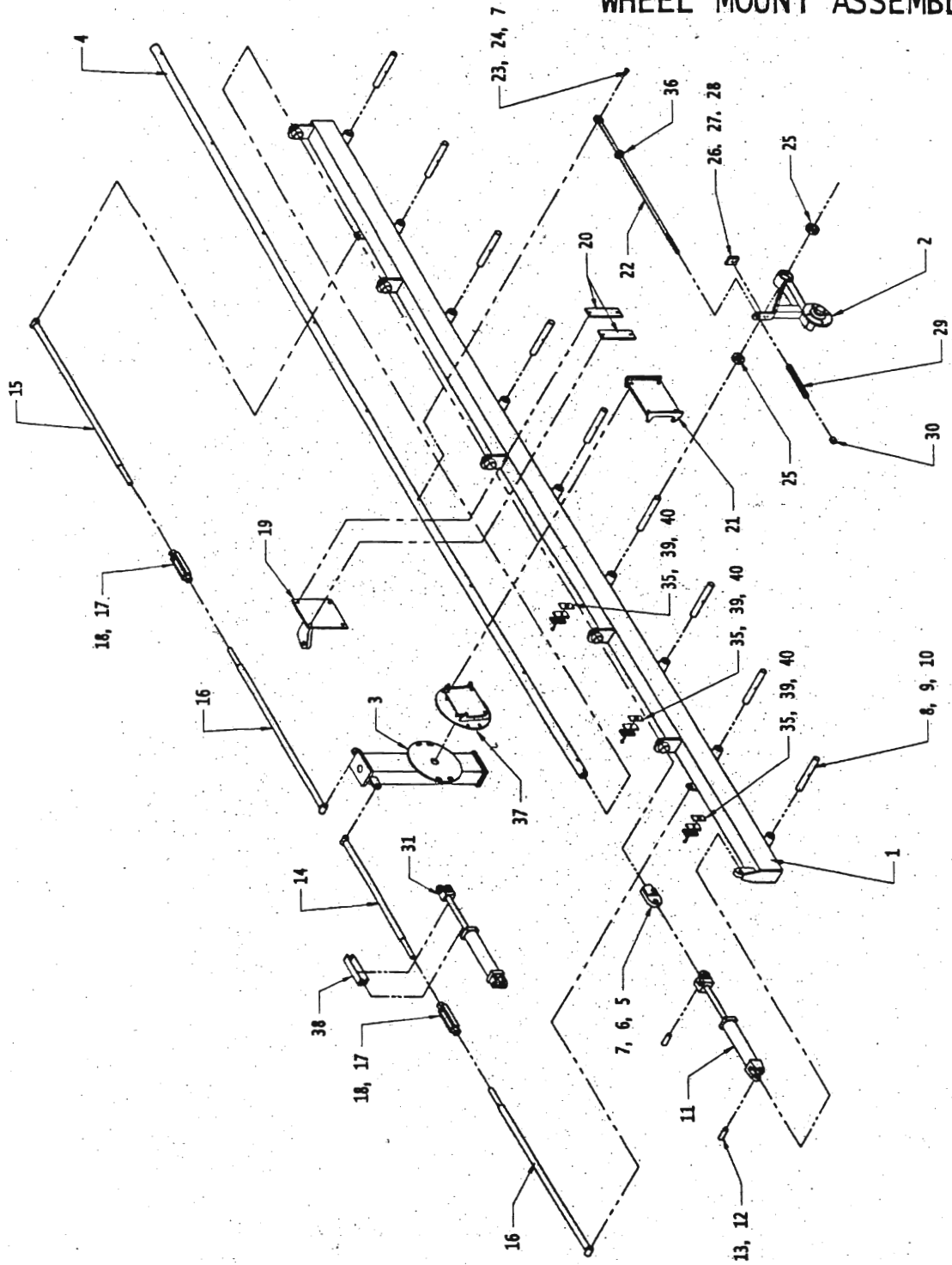
Ref. No.	LMC No.	Description	Qty. Req.
1	85-021-87	Extension Arm	2
2	85-013-87	Vertical Frame Leg, R.H.	1
3	2818-3230	Hex Head Bolt 1"UNC x 3" Grade 8	12
4	1412-3200	Hex Lock Nut 1"UNC	12
5	85-030-87	Oscillator	2
6	96-008-87	Oscillator Pivot Shaft	2
7	2816-1234	Hex Head Bolt 3/8"UNC x 3 1/2" Grade 5	8
8	1412-1200	Hex Lock Nut 3/8"UNC	8
9	96-004-87	Main Pivot Shaft	2
10	85-029-87	7 Degree Pivot Section	2
11	85-032-87	Fixed Lug	2
12	98-024-87	Mount Plate	2
13	93-023-87	Poly Slide Bearing 8 1/2" x 4 7/8"	4
14	2816-1006	Hex Head Bolt 5/16"UNC x 3/4"	16
15	0812-1000	Hex Nut 5/16" UNC	16
16	2816-1664	Hex Head Bolt 1/2"UNC x 6 1/2"	4
17	85-014-87	Vertical Frame Leg, L.H.	1
18	93-021-87	Poly Slide Bearing 8 1/2" x 6 7/8"	4
19	1412-1600	Hex Lock Nut 1/2"UNC	4
20	96-034-88	Spindle	4
21	77-006-02	Seal	4
22	77-007-02	Inner Bearing	4
23	77-010-02	Outer Race (Available as Separate Part)	4
24	77-001-02	Hub with Cups	4
25	77-009-02	Inner Race (Available as Separate Part)	4
26	77-008-02	Outer Bearing	4
27	77-005-02	Spindle Washer	4
28	79-017-88	6-Hole Wheel	4
29	79-018-88	Tire 750 x 15	4
30	77-004-02	Spindle Nut	4
31	77-011-02	Cotter Pin	4
32	77-012-02	Hub Cap	4
33	77-013-02	Lug Bolt 1/2"UNF	24
34	84-046-88	Hub Assy. (Includes #20-25 & 28-31)	4
35	93-022-87	Shim (8 1/2" x 6 7/8") for 93-021-87	4
36	93-024-87	Shim (8 1/2" x 4 7/8") for 93-028-87	4
37	85-041-87	Adjusting Clamp	2

SEE REFS

94-008-88 LOWER SPINDLE BUSHING

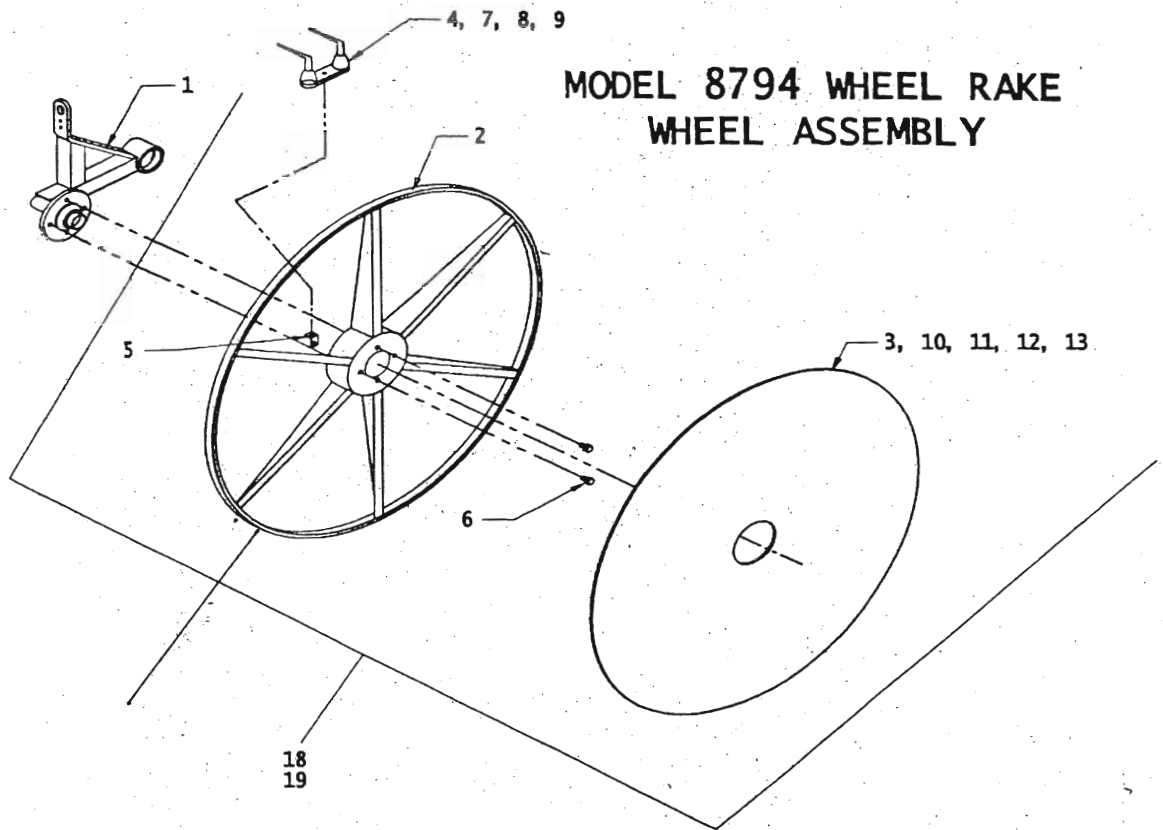
2814-1006 HEX HEAD BOLT 5/16" UNC X 3/4"

MODEL 8794 WHEEL RAKE WHEEL MOUNT ASSEMBLY



WHEEL MOUNT ASSEMBLY

Ref. No.	LMC No.	Description	Qty. Req.
1	85-004-87	Wheel Mount, L.H.	1
	85-003-87	Wheel Mount, R.H.	1
2	85-027-87	Pivot Arm, L.H.	8
	85-005-87	Pivot Arm, R.H.	8
3	85-040-87	7" Pivot Section	2
4	92-004-87	Lift Tube	2
5	85-008-87	Wheel Lift Tube End	2
6	2816-1630	Hex Head Bolt ½"UNC x 3" Grade 5	2
7	1412-1600	Hex Lock Nut ½"UNC	18
8	96-001-87	Pivot Arm Shaft	16
9	2816-1224	Hex Head Bolt 3/8"UNC x 2-1/2" Grade 5	16
10	1412-1200	Hex Lock Nut 3/8"UNC	16
11	79-007-87	Wheel Lift Cylinder	2
12	77-003-85	Clevis Pin	8
13	77-011-02	Cotter Pin	16
14	85-015-87	Truss Rod, Short	2
15	85-016-87	Truss Rod, Long	2
16	85-031-87	Tension Rod, Short L.H.	4
17	79-051-90	Turnbuckle	2
18	0812-3200	Hex Nut 1"UNC	2
19	85-033-87	Swinging Lug	2
20	93-012-87	Clamp Plate	2
21	85-028-87	Clamp	2
22	85-007-87	Pivot Link	16
23	94-006-87	Bolt Bushing	16
24	2816-1640	Hex Head Bolt ½"UNC x 4" Grade 5	16
25	79-002-87	Wheel Pivot Arm Bearing	32
26	79-014-87	Wear Pad	16
27	2816-0814	Hex Head Bolt ¼"UNC x 1-1/2" Grade 5	32
28	1412-0800	Hex Lock Nut ¼"UNC	32
29	79-015-87	Compression Spring	16
30	1412-2400	Hex Lock Nut ¾"UNC	4
31	79-018-87	Swing Cylinder	2
32	2816-2434	Hex Head Bolt ¾"UNC x 3 ½" Grade 5	4
33	79-020-87	Split Lock Collar (Used on Pivot Link Arm)	18
NS	77-152-88	Seal Kit (For Swing Cylinder)	1
35	77-024-36	Clamp Assembly for Hydr. Hoses to Lift Cylinder	6
36	79-020-87	Collar, Split Locking	9
37	85-041-87	Clamp, Adjusting	1
38	85-035-87	Lock, Transport	1
39	77-032-38	Top Plate	3
40	2814-1013	Hex Bolt 5/16 x 1 3/8"	3

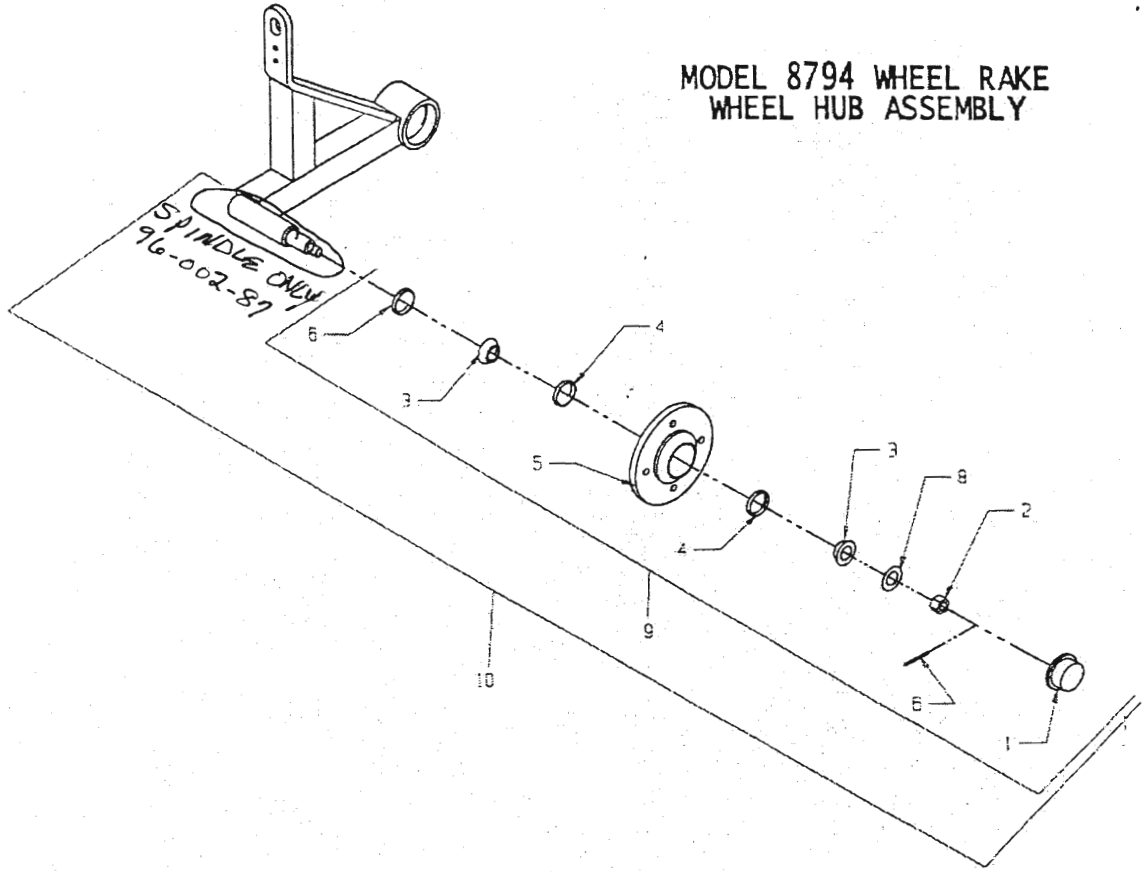


MODEL 8794 WHEEL RAKE WHEEL ASSEMBLY

Ref. No.	LMC No.	Description	Qty. Req.
1	85-005-87	Pivot Arm, R.H. (Does include Hub Assy but not Bearing) w/SPINDLE ONLY	1
	85-027-87	Pivot Arm, L.H. (Does Include Hub Assy but not Bearing) w/SPINDLE ONLY	1
2	85-001-87	Wheel	2
3	79-008-87	Wheel Disc	2
4	79-001-87	Wheel Rake Tine	18
5	98-023-87	Clip	6
6	77-009-36	Hub Bolt	4
7	2816-1214	Hex Head Bolt 3/8"UNC x 1-1/2"Grade 5	18
8	1412-1200	Hex Lock Nut 3/8"UNC	18
9	1702-1200	Flat Washer 3/8" SAE	18
10	0512-0806	Carriage Head Bolt 1/4"UNC x 3/4"	18
11	0811-0800	Hex Nut 1/4"UNC	18
12	1602-0800	Lock Washer 1/4"	18
13	1702-1000	Flat Washer 5/16" SAE	18
14	84-006-87	Pivot Arm Assy w/Hub & Bearing, R.H.	9
15	84-007-87	Pivot Arm Assy w/Hub & Bearing, L.H.	9
16	83-001-87	Wheel Bundle (R.H.) Complete Wheel w/Tines, Pivot arm, etc.	1 set
17	83-002-87	Wheel Bundle (L.H.) Complete Wheel w/Tines, Pivot arm, etc.	1 set
18	84-001-87	Wheel Assy. L.H.	18
19	84-004-87	Wheel Assy. R.H.	18

2 85-1001-87 FOR REINFORCED WHEEL FRAME
 5/18 1702-0800 ^{3A} FLAT WASHER 1/4"

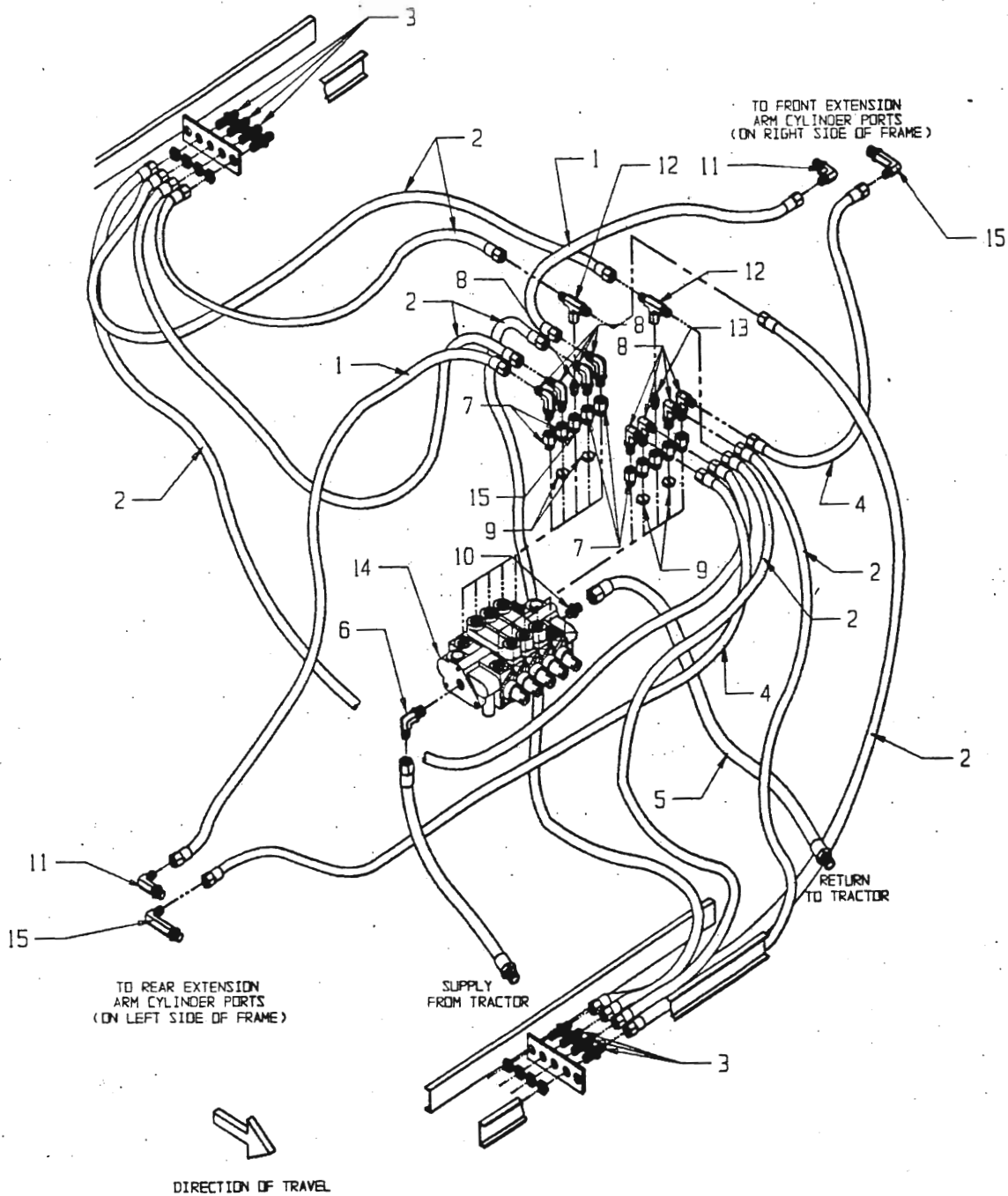
MODEL 8794 WHEEL RAKE
WHEEL HUB ASSEMBLY



Ref. No.	LMC No.	Description	Qty. Req.
1	77-007-87	Dust Cap	1
2	77-001-87	Spindle Nut	1
3	77-045-88	Bearing	2
4	77-005-87	Bearing Race	2
5	77-012-87	Hub with Pressed-in Cups	1
6	77-006-87	Rear Seal	1
7	77-002-87	Cotter Pin	1
8	77-003-87	Spindle Washer	1
9	79-004-87	Hub Assy w/o Spindle (Includes Parts 1-8)	1 set
10	84-018-87	Hub w/Spindle (Includes Parts 1-9)	1 set

NS 96-002-87 SPINDLE ONLY (CAN ORDER AS A SEPERATE WELD ON PART

MODEL 8794 WHEEL RAKE SPOOL & CHECK VALVE HYDRAULIC LINE ROUTING

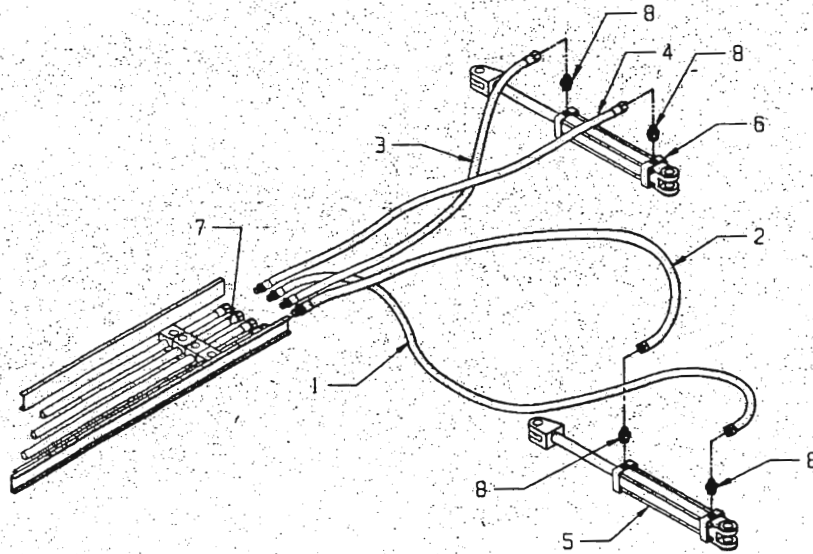


SPOOL & CHECK VALVE HYDRAULIC LINE ROUTING

Ref. No.	LMC No.	Description	Qty. Req.
1	79-144-88	Hose Assy. 1/4" x 56" – AR 19	2
2	79-101-88	Hose Assy. 1/4" x 27" – AR 13	8
3	79-013-88	#6 Bulkhead Fitting	8
4	79-145-88	Hose Assy. 1/4" x 58" – AR 20	2
5	79-102-88	Hose Assy. 1/2" x 30" – AR 8	1
6	79-094-88	Straight Thread 90 ° Elbow	1
7	79-054-88	Straight Thread Reducer	10
8	79-052-88	Straight Thread 90 ° Elbow	8
9	77-058-88	Restrictor (.032)	4
10	79-050-88	O-Ring Boss Adapter	1
11	77-041-06	Elbow 90 ° Pipe to JIC	2
12	79-099-88	JIC Swivel Branch Tee	2
13	79-124-88	Straight Thread Connector	2
14	79-103-88	Gresen 5 Spool Valve	1
15	79-009-88	Elbow 90 ° Pipe to JIC (X-Long)	2

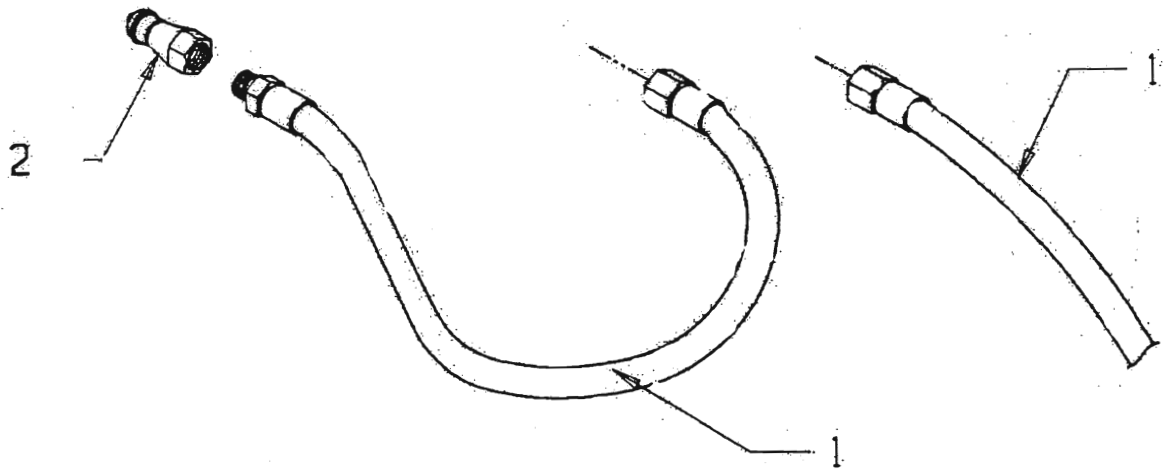
MODEL 8794 TWIN SWING & LIFT CYLINDER HYDRAULIC LINE ROUTING

Ref. No.	LMC No.	Description	Qty. Req.
1	79-011-87	Hose Assy. 180"	2
2	79-010-87	Hose Assy. 174"	4
3	79-017-87	Hose Assy. 64"	2
4	79-016-87	Hose Assy. 54"	2
5	79-007-87	Wheel Lift Cylinder	2
6	79-018-87	Swing Cylinder	4
7	84-021-88	Tubing Assy. 3/8" x 75 1/2"	8
8	79-169-88	Straight Thread Connector	4

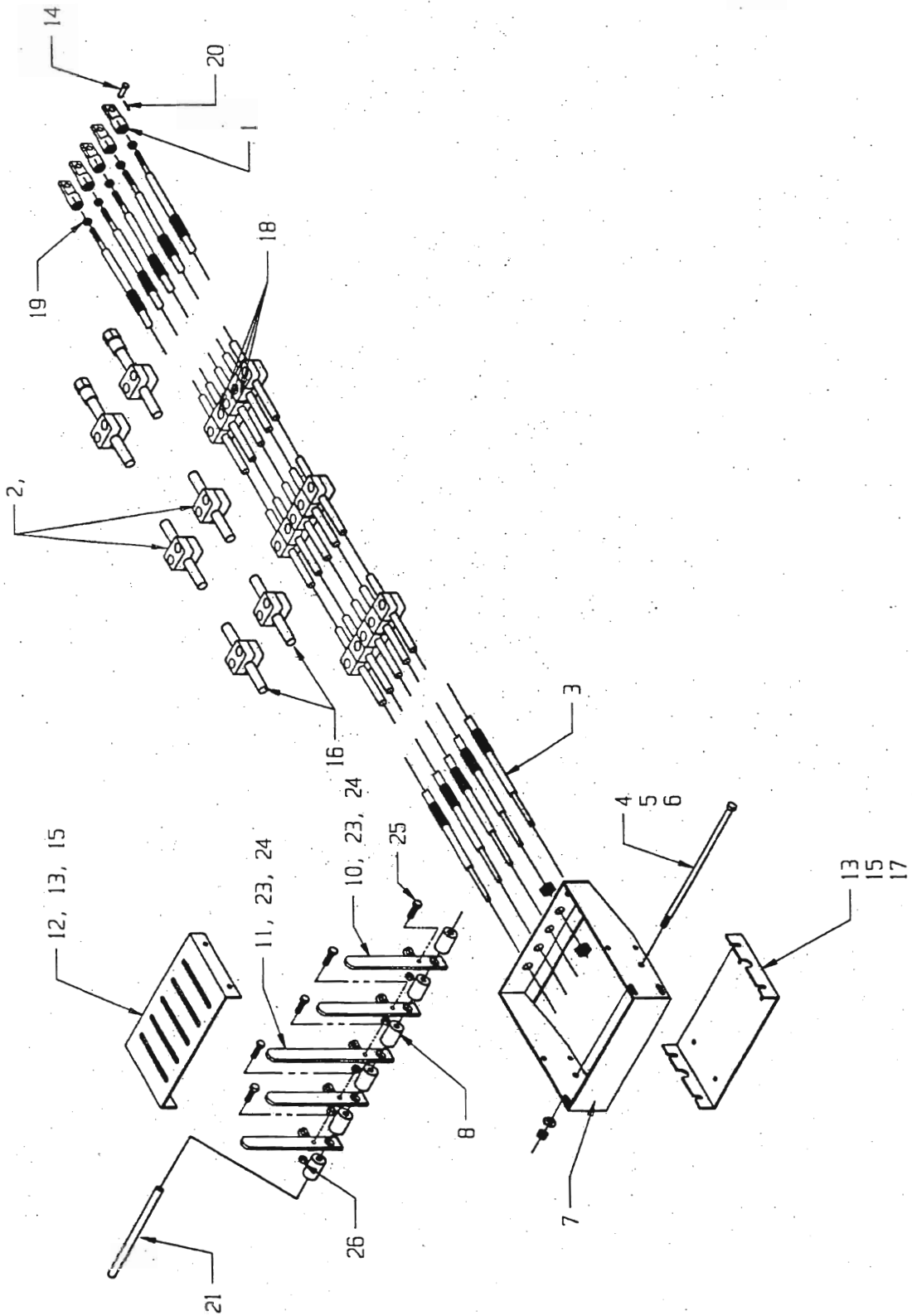


MODEL 8794 WHEEL RAKE OIL SUPPLY HOSES

Ref. No.	LMC No.	Description	Qty. Req.
1	79-009-87	Hose Assy. 102"	2
2	79-212-36	Quick Disconnect Adapter	2



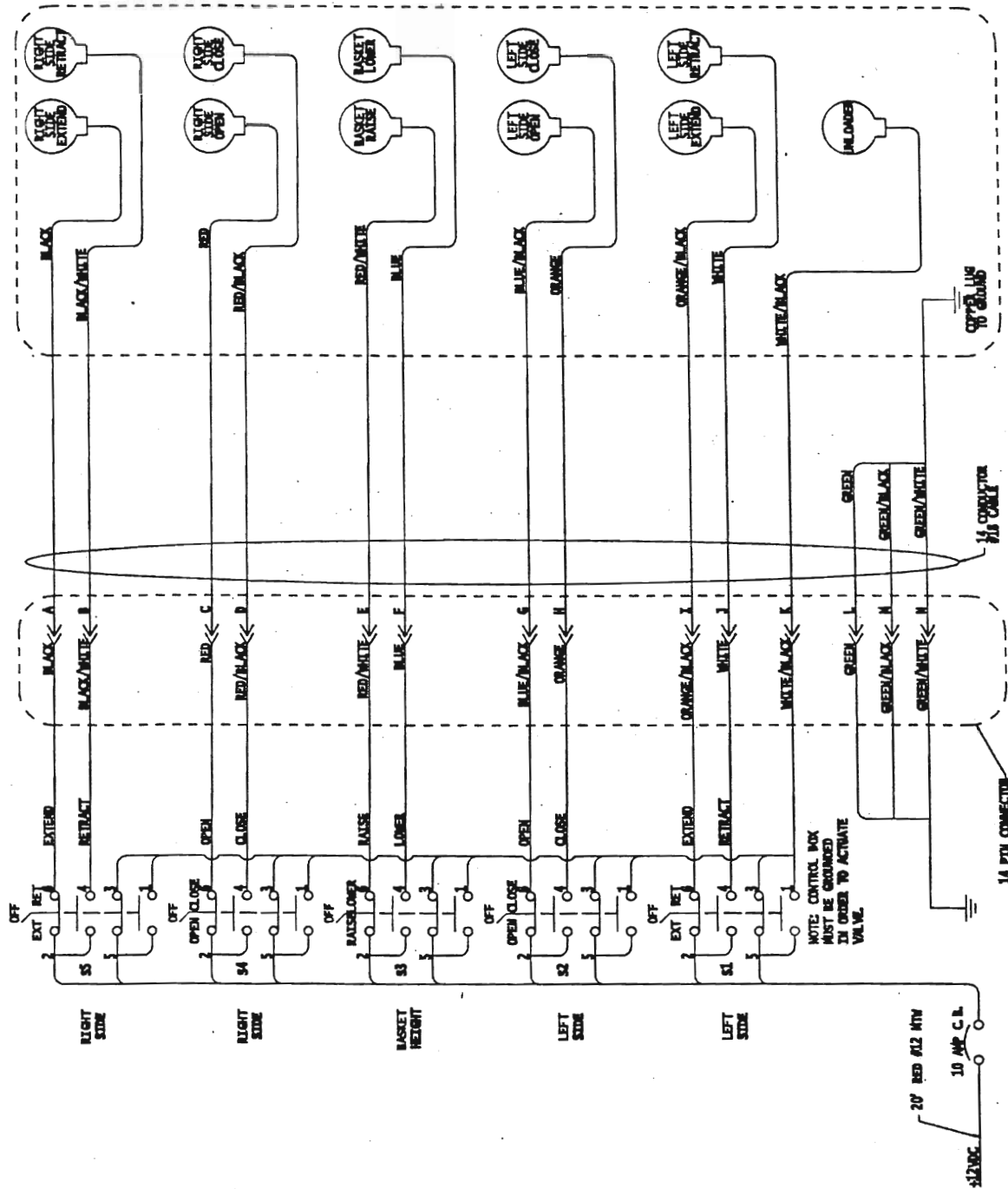
MODEL 8794 WHEEL RAKE CONTROL BOX



CONTROL BOX ASSEMBLY

Ref. No.	LMC No.	Description	Qty. Req.
1	96-048-88	Terminal Eyes TO valve w/1/4" Hose	5
2	79-118-88	Stacking Kit	6
3	79-021-87	Morse Cable (1998 & Later) 264"	5
4	2814-1290	Hex Bolt 3/8"UNC x 9"	1
5	1702-1200	Flat Washers 3/8" SAE	1
6	1412-1200	Hex Lock Nut 3/8" UNC	1
7	85-108-88	Control Box (5 Spool)	1
8	96-045-88	Spacer	6
9	2816-1013	Hex Bolt 5/16"UNC x 1-3/8" Gr. 5	12
10	98-076-88	Handle	4
11	98-073-88	Handle	1
12	93-110-88	Cover	1
13	1702-0800	Flat Washers 1/4" SAE	8
14	79-135-88	Clevis Pin	5
15	79-147-88	Thumbscrew	8
16	84-003-87	Hydraulic Tube Assy.	2
17	93-111-88	Bottom Plate	1
18	77-071-88	3/8" Hose Clamp	30
19	0832-0800	Hex Nut 1/4"UNF	15
20	79-136-88	Cotter Key	5
21	94-073-88	Control Box Bushing, 5 Spool	1
22	84-005-87	Control Box Assy. (Do Not Include #2,9, & 16)	1
23	79-175-88	Handle Grips	5
24	79-073-88	Cable End Clevis (To Control Box) w/ 5/16" Hole	5
25	2816-1010	Hex Bolt 5/16" UNC	5
26	1412-1000	Hex Lock Nut 5/16" UNF	5

ELECTRIC VALVE WIRING DIAGRAM



WARRANTY

LMC, as manufacturer, warrants its products against defective parts in workmanship and material, for a period of twelve consecutive months from the date of retail to the original purchaser, but does not warrant in any way other attachments or accessories manufactured by other companies which may be attached to and therefore becoming a part of the product manufactured and sold by **LMC**, such as other attachments and accessories are in general covered by the warranty or warranties of the company which manufactured them.

Under no circumstances will it cover any merchandise or components thereof, which, in the opinion of the company, has been subjected to misuse, unauthorized modifications, alterations, an accident or if repairs have been made with parts other than those obtained through **LMC**.

LMC in no way warrants engines, batteries, tires, electronics, or trade accessories since their respective manufacturer warrants these items separately.

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

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

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

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

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

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

Lewis M. Carter Mfg. Co., Inc.
P.O. Box 428
Donalsonville, GA 39845

2002

