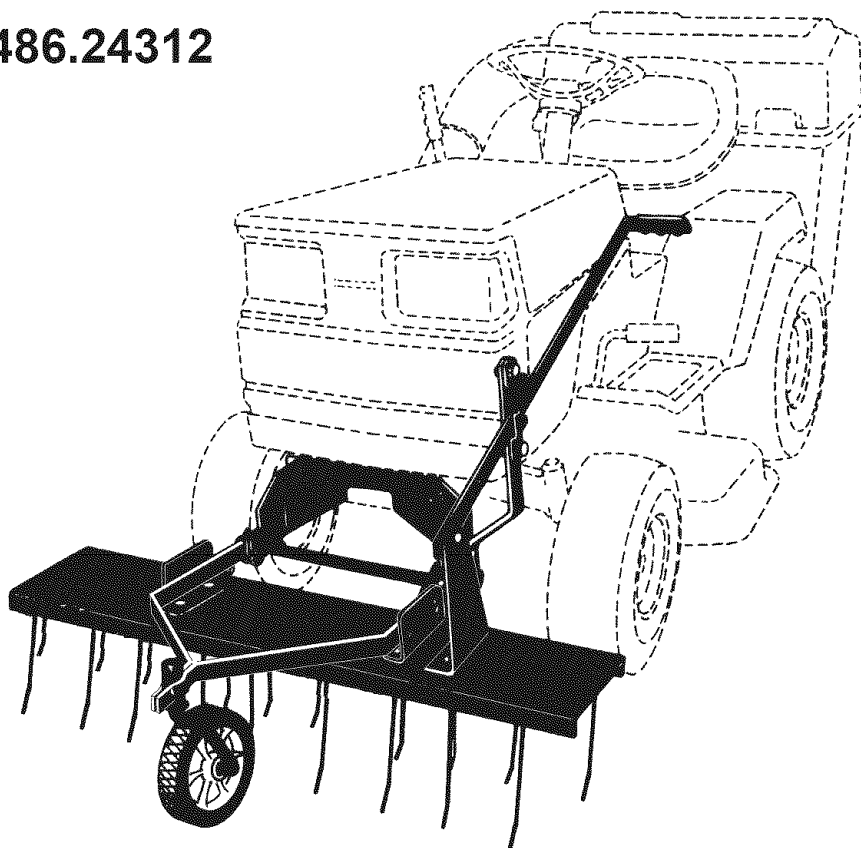


Owner's Manual

CRAFTSMAN[®]

40" FRONT MOUNT TINE DETHATCHER

Model No. 486.24312



CAUTION:

Before using this product, read this manual and follow all Safety Rules and Operating Instructions.

- Safety
- Assembly
- Operation
- Maintenance
- Parts

IMPORTANT - READ THIS FIRST!!!

For Missing Parts or Assembly Questions

Please Call 866-576-8388

Mon.-Fri. 7 am - 5 pm CST.

FAX 217-728-2032 or e-mail info@agri-fab.com

Missing parts will be sent UPS in 24 hours directly to your home.

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A.

www.sears.com/craftsman

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WARRANTY

LIMITED ONE YEAR WARRANTY ON

For one year from the date of purchase, when this dethatcher is maintained and lubricated according to the operating and maintenance instructions in the owner's manual, Sears will repair any defect in material or workmanship free of charge. If this dethatcher is used for commercial or rental purposes, this warranty applies for only 90 days from the date of purchase.

This warranty does not cover repairs necessary because of operator negligence or abuse, including the failure to maintain the equipment according to instructions contained in the owner's manual.

WARRANTY SERVICE IS AVAILABLE BY CONTACTING THE NEAREST SEARS SERVICE CENTER/DEPARTMENT IN THE UNITED STATES.

This warranty applies only while this product is in the United States.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Sears, Roebuck and Co. D/817 WA. Hoffman Estates, Chicago, IL 60179

<p>The model number and serial numbers will be found on a decal attached to the dethatcher.</p> <p>You should record both the serial number and the date of purchase and keep in a safe place for future reference.</p>	<table border="0"> <tr> <td>MODEL NUMBER:</td> <td style="text-align: right;">486.24312</td> </tr> <tr> <td>SERIAL NUMBER:</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>DATE OF PURCHASE:</td> <td style="text-align: right;">_____</td> </tr> </table>	MODEL NUMBER:	486.24312	SERIAL NUMBER:	_____	DATE OF PURCHASE:	_____
MODEL NUMBER:	486.24312						
SERIAL NUMBER:	_____						
DATE OF PURCHASE:	_____						



SAFETY



Any power equipment can cause injury if operated improperly or if the user does not understand how to operate the equipment. Exercise caution at all times, when using power equipment.

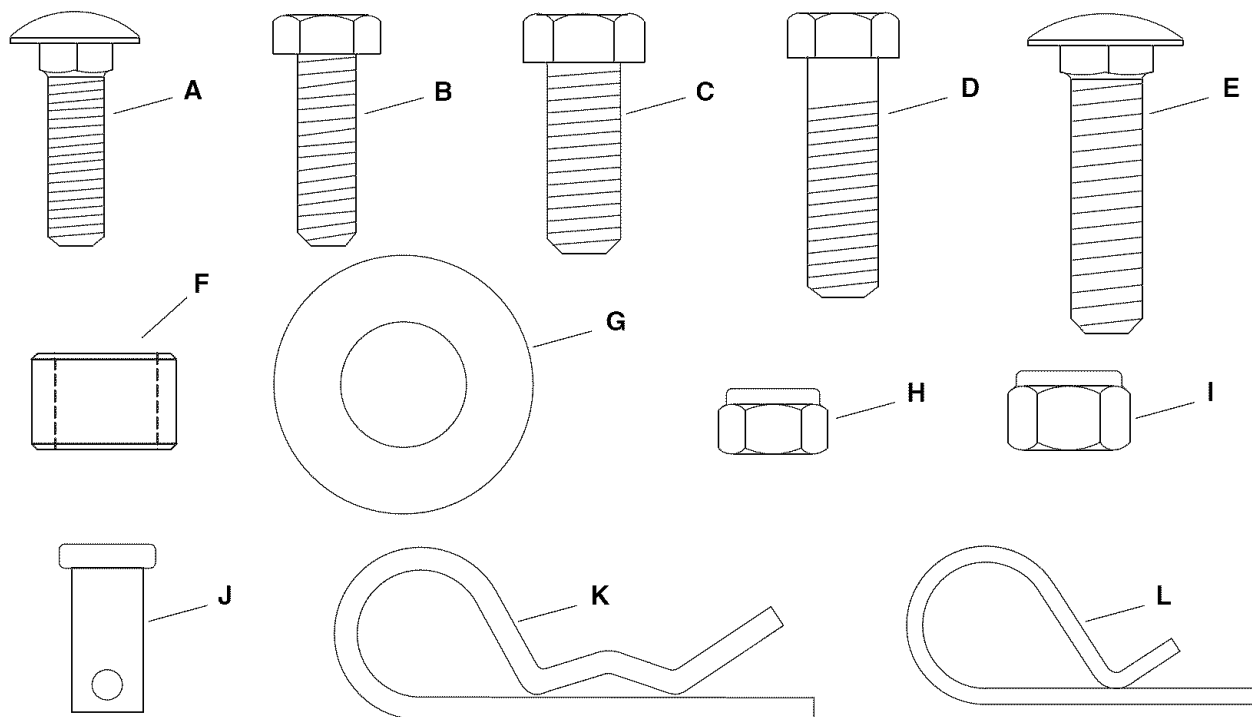
- Read safety rules in the vehicle owners manual and know how to operate your equipment, before using the tine dethatcher.
- Never operate vehicle and tine dethatcher attachment without wearing substantial footwear, and do not allow anyone to ride or sit on the tine dethatcher.
- Never allow children to operate the tractor or dethatcher attachment, and do not allow adults to operate without proper instructions.
- Eye Protection should be worn when operating the tine dethatcher.
- Always begin with transmission in first (low) gear, and gradually increase speed as conditions permit. Recommended maximum operating speed is 3 M.P.H.
- Always stop vehicle and lift dethatcher to transport position before making short turns.
- When de-thatching do not drive too close to a creek or ditch and be alert for holes and other hazards which could cause you to lose control of the vehicle.
- Before operating vehicle on any grade (hill) refer to the safety rules in the vehicle owners manual concerning safe operation on slopes. **STAY OFF STEEP SLOPES.**
- This equipment is not meant for street or highway use. Watch for traffic when de-thatching near highways.
- Vehicle and attachments should be stopped and inspected for damage after striking a foreign object.
- Check all nuts, bolts and screws frequently making sure they are tight and the equipment is in safe working condition.
- Follow the maintenance instructions as outlined in this owners manual.



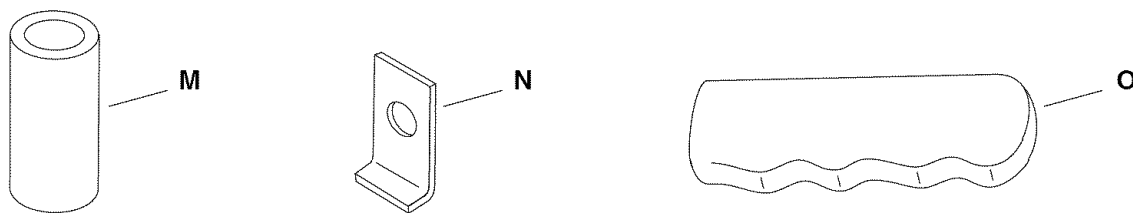
Look for this symbol to point out important safety precautions. It means — **Attention!! Become alert!! Your safety is involved.**

HARDWARE PACKAGE CONTENTS

SHOWN FULL SIZE



NOT SHOWN FULL SIZE

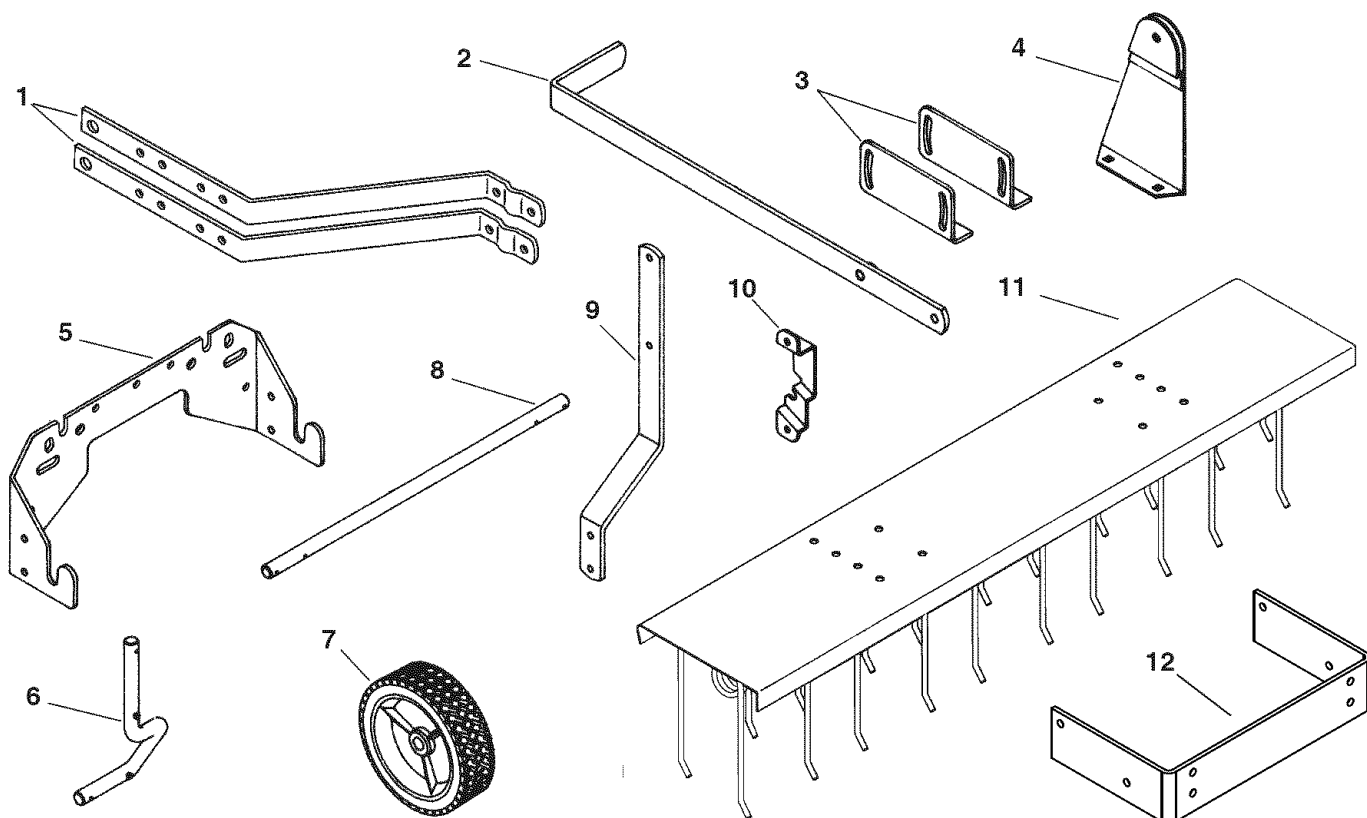


KEY	QTY	DESCRIPTION	KEY	QTY	DESCRIPTION
A	12	Carriage Bolt, 5/16-18 x 1" Lg.	I	10	Nylock Nut, 3/8-16
B	2	Hex Bolt, 5/16-18 x 1" Lg.	J	1	Clevis Pin, 3/8" x 3/4"
C	4	Hex Bolt, 3/8-16 x 1"	K	6	Hairpin Cotter, 1/8" (large)
D	2	Hex Bolt, 3/8-16 x 1-1/4"	L	1	Hairpin Cotter, 3/32" (small)
E	4	Carriage Bolt, 3/8-16 x 1-1/2"	M	1	Axle Bushing
F	4	Spacer, .53 x .75 x .5	N	2	Keeper Plate
G	4	Flat Washer, 5/8" SAE	O	1	Handle Grip
H	14	Nylock Nut, 5/16-18			

ASSEMBLY

CARTON CONTENTS

1. Mounting Arms (2)
2. Lift Handle
3. Angle Mounting Brackets (2)
4. Lift Handle Bracket
5. Hitch Bracket
6. Axle
7. Wheel
8. Mounting Shaft
9. Lift Handle Arm
10. Handle Lock Bracket
11. Tine Shield
12. Frame Mount Bracket



Stop engine and let muffler cool before attempting to install dethatcher hitch brackets.

TOOLS REQUIRED FOR ASSEMBLY

- (2) 1/2" Wrenches
- (2) 9/16" Wrenches

REMOVAL OF PARTS FROM CARTON

- Remove all parts and hardware packages from the carton. Lay out all parts and hardware and identify using the illustrations on pages 3 and 4.

REMOVAL OF PARTS FROM TRACTOR

- Remove any front mounted attachments which may be installed on your tractor.
- Mark all loose parts and save for reassembly.

ASSEMBLING DETHATCHER

1. Assemble handle lift bracket to forward set of holes on left end of tine shield. Use two 5/16" x 1" carriage bolts and 5/16" nylock hex nuts. **Tighten.** See figure 1.

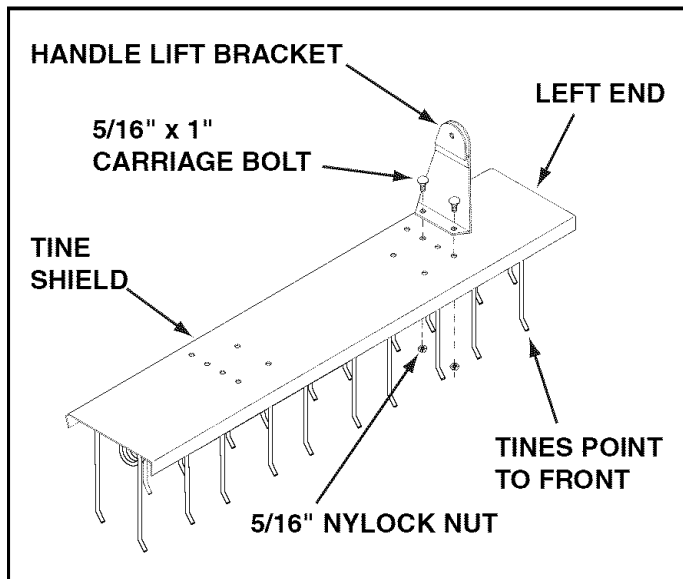


FIGURE 1

2. Assemble angle mounting brackets to tine shield using four 5/16" x 1" carriage bolts and 5/16" nylock hex nuts. **Tighten.** See figure 2.

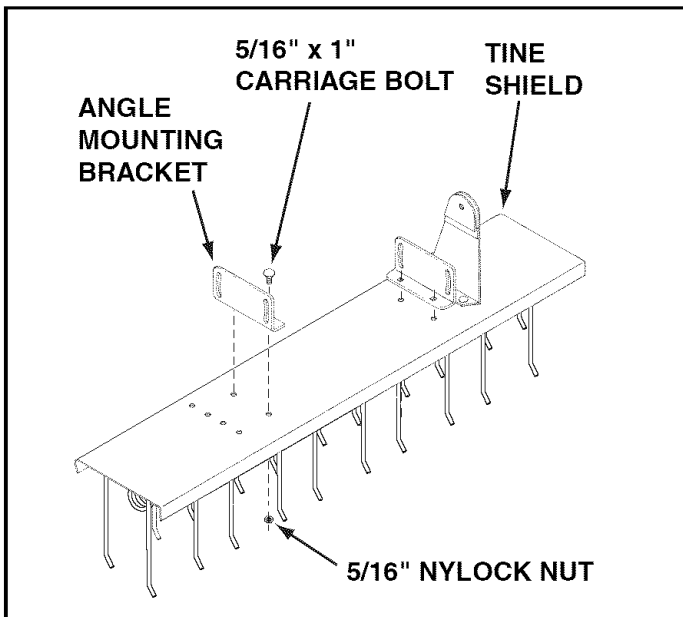


FIGURE 2

3. Assemble mounting arms to inside of angle mounting brackets using four 5/16" x 1" carriage bolts and 5/16" nylock hex nuts. Fasten through rear set of holes in mounting arms. **Do not tighten** until dethatcher is mounted to tractor. See figure 3.
4. Loosely assemble front ends of mounting arms together using two 3/8" x 1-1/4" hex bolts and 3/8" nylock hex nuts. Place axle bushing between front ends of mounting arms, centering bushing up and down. **Tighten bolts securely** in front ends of mounting arms. See figure 3.

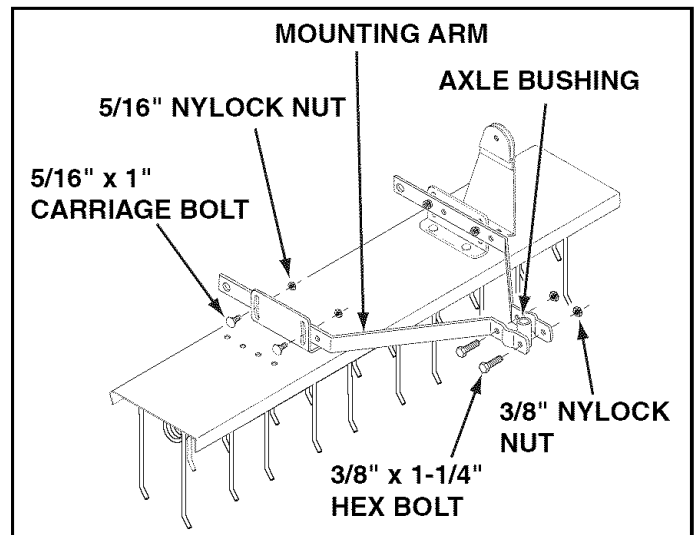


FIGURE 3

5. Apply a light coating of oil to the axle.
6. Assemble a 5/8" washer, the wheel (long end of hub first) and another 5/8" washer onto axle. Secure with a 1/8" hairpin cotter. See figure 4.

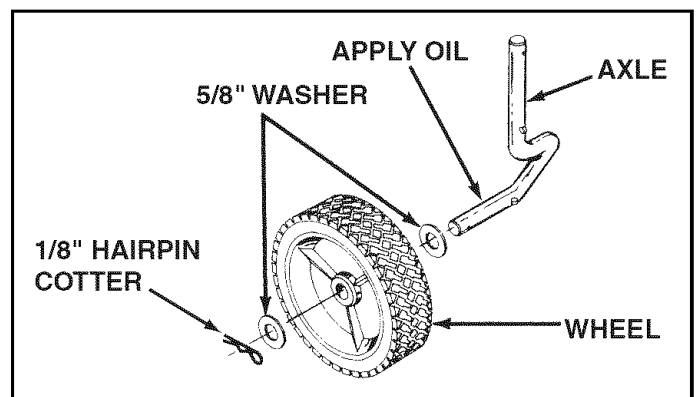


FIGURE 4

- Assemble a 5/8" washer onto axle. Insert axle up through axle bushing. Assemble another 5/8" washer onto axle and secure with a 1/8" hairpin cotter. See figure 5.

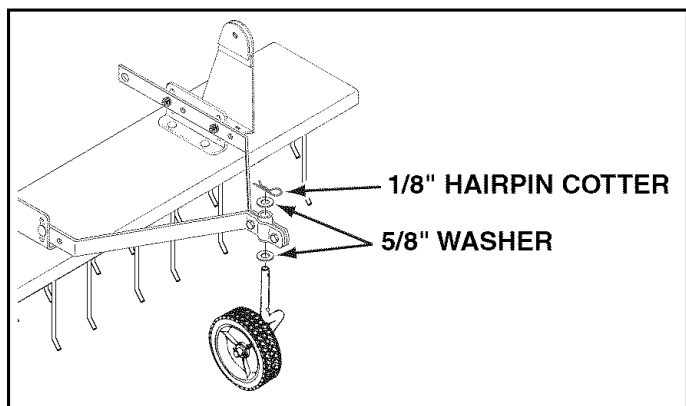


FIGURE 5

- Insert mounting shaft through holes in both mounting arms. Secure mounting shaft to mounting arms with two (large) 1/8" hairpin cotters assembled into inside holes of shaft. See figure 6.

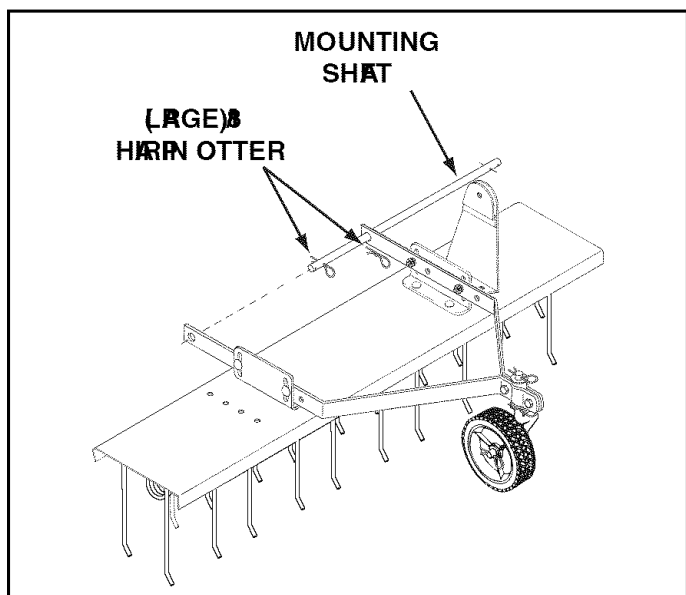


FIGURE 6

ATTACHING DETHATCHER TO TRACTOR

- If the front of your tractor has front mounting holes as shown in figure 7, continue on to step 11.
- If the front of your tractor **DOES NOT** have front mounting holes, go to step 14.

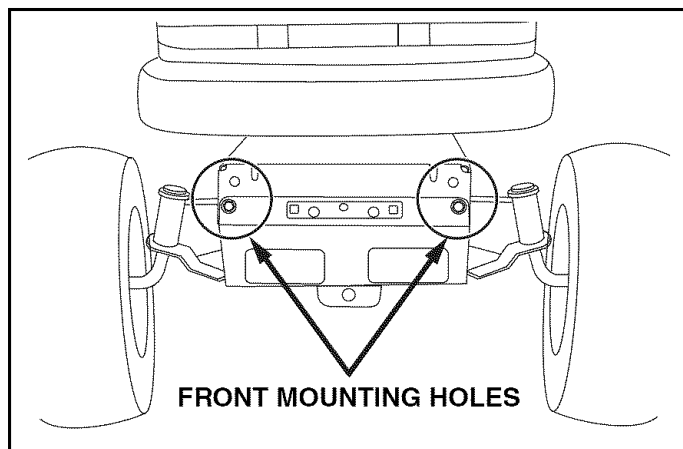


FIGURE 7

- Remove two self threading bolts (if present) from front cross-member of tractor. Assemble bolts through lower slots in hitch bracket, then reinstall them back into front crossmember. (Make sure notches at top of hitch bracket and crossmember are aligned.) See figure 8.
- From behind tractor's front crossmember, insert two 3/8" x 1" hex bolts through holes in crossmember (shown in figure 8) and through upper slots in hitch bracket. Secure with two 3/8" nylock hex nuts.
- Go to step 16 on page 7.

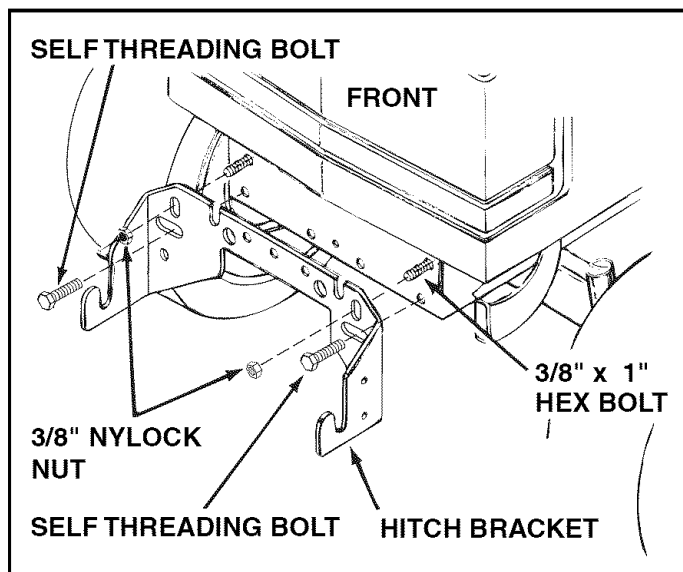


FIGURE 8

STEPS 14 AND 15 ARE ONLY FOR TRACTORS WITHOUT FRONT MOUNTING HOLES. FOR ALL OTHER TRACTORS CONTINUE TO STEP 16.

14. Assemble the hitch bracket to the frame mount bracket using four 3/8" x 1" hex bolts and 3/8" nylock nuts as shown in figure 9.

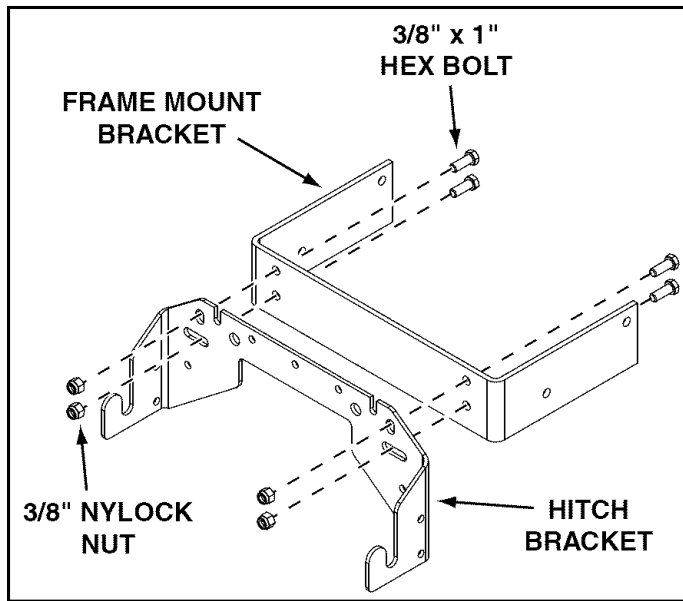


FIGURE 9

15. Assemble the frame mount bracket to the tractor frame using four 3/8" x 1-1/2" carriage bolts, spacers and 3/8" nylock nuts. The spacers go **between** the tractor frame and the frame mount bracket as shown in figure 10.

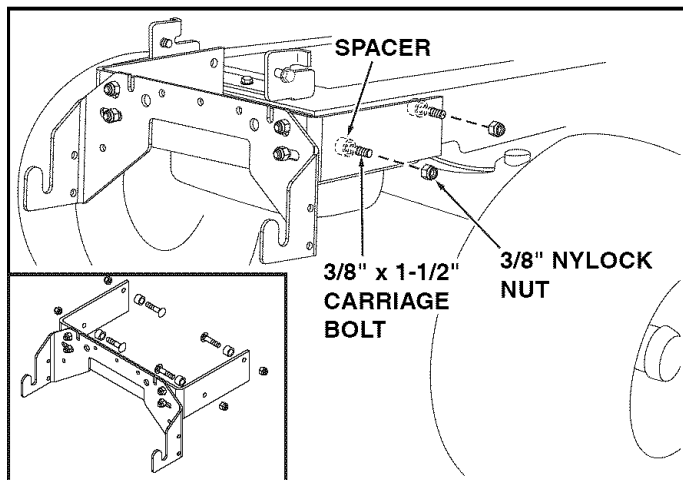


FIGURE 10

16. Assemble handle lock bracket to lift handle arm using two 5/16" x 1" carriage bolts and 5/16" nylock hex nuts. See figure 11.

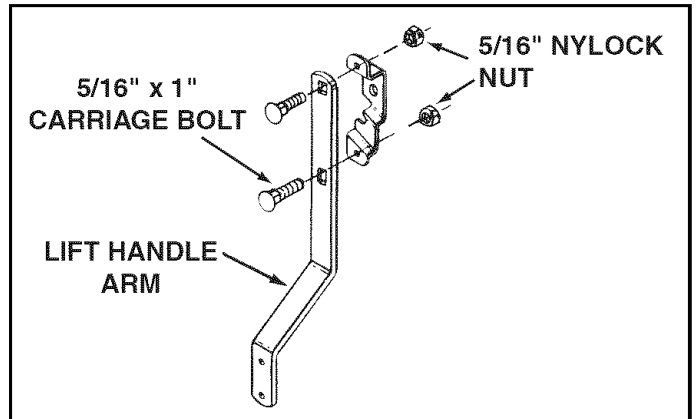


FIGURE 11

17. Assemble lift handle arm to left side of hitch bracket using two 5/16" x 1" hex bolts and 5/16" nylock hex nuts. See figure 12.

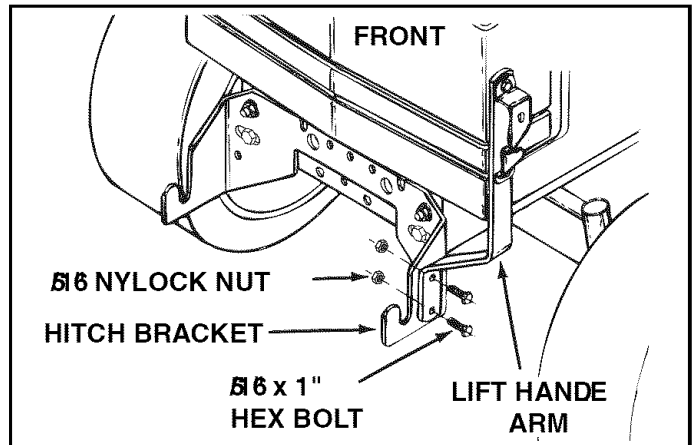


FIGURE 12

18. Attach dethatcher to hitch plate by placing mounting shaft into slots at front of hitch plate. Dethatcher mounting arms go to inside of hitch plate. Assemble keeper plates onto ends of mounting shaft and secure with (large) 1/8" hairpin cotter. See figure 13.

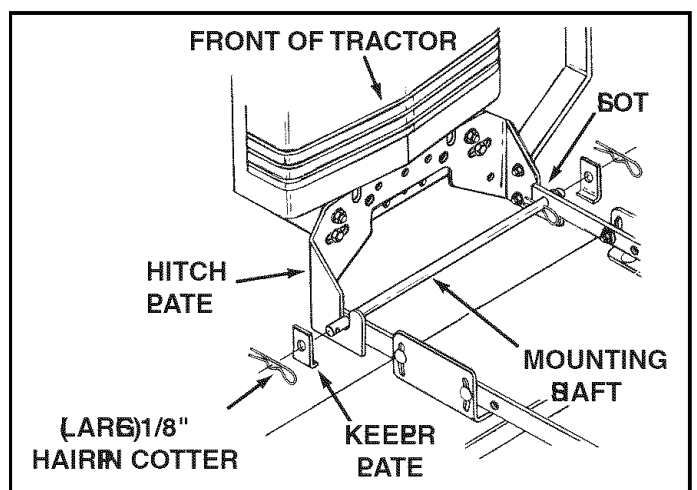


FIGURE 13

19. Install vinyl grip on lift handle as shown in figure 14.
20. Slide lift handle down between lift handle arm and handle lock bracket. See figure 14.
21. Assemble lift handle to lift handle bracket using 3/8" x 3/4" clevis pin and 3/32" (small) hairpin cotter. See figure 14.

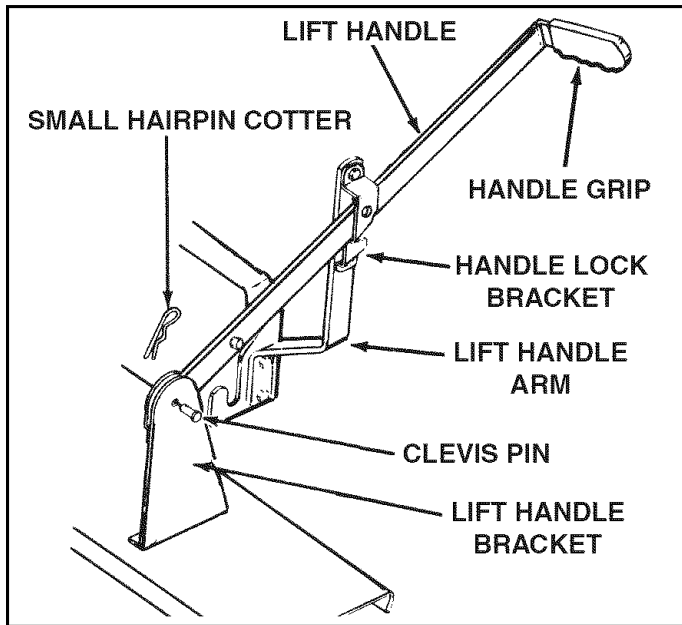


FIGURE 14

22. Raise and lock dethatcher in transport position (see operation instructions on pages 9 and 10). Move tractor with front mounted dethatcher onto a level surface, such as a drive or garage floor. Lower the tine dethatcher from transport position to rest on the level surface.
23. Adjust tine shield until spring tines come in contact with level surface, keeping front and back tines at the same height. **Tighten** carriage bolts securing mounting arms to angle brackets. See figure 15.
24. If you need more adjustment, try moving the axle bushing up or down between the mounting arms. Be sure to retighten the bolts securing the bushing.

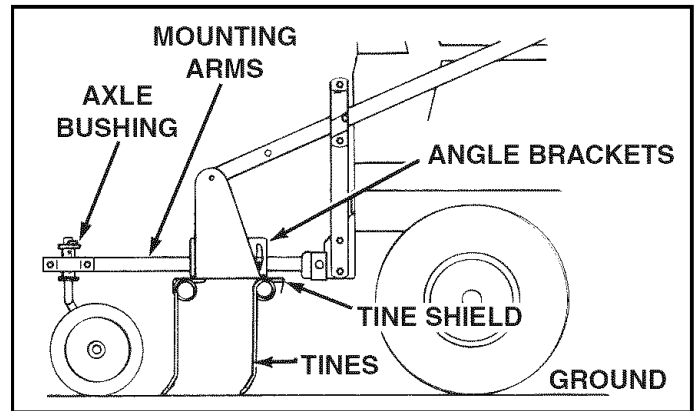


FIGURE 15

OPERATION / MAINTENANCE / STORAGE

CUSTOMER RESPONSIBILITIES

- Read and follow the maintenance schedule and the maintenance procedures listed in this section.

MAINTENANCE SCHEDULE Fill in dates as you complete regular service.	Service Dates											
	Before each use	After each use	Every season	Before storage								
Check for loose fasteners	X											
Lubrication	X											

CHECK FOR LOOSE FASTENERS

- Before each use check all nuts and bolts for tightness. Tighten loose fasteners before using.

LUBRICATION

- Before each use apply a small amount of motor oil between washer and wheel bearing and between washer and top of axle bushing. See figure 16.

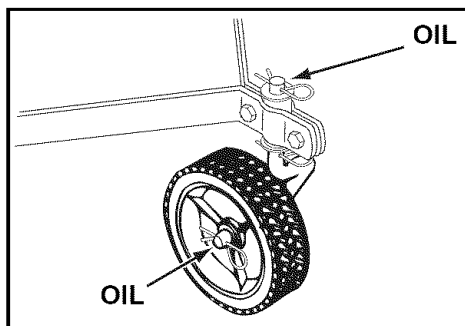


FIGURE 16

OPERATING TIPS

De-thatching is recommended for early spring, late fall and prior to fertilizing. It is not recommended to de-thatch with every mowing of the lawn. The tine dethatcher can be easily removed for storage (Maintenance/Storage).

- Always start with transmission in first (low) gear and gradually increase speed as conditions permit.
- Do not attempt to use dethatcher in field mowing.
- For best results, use a "criss-cross" pattern on your lawn.
- Vary vehicle speed to determine best speed.
- The front and rear tines should be kept level.
- Stop vehicle and lift dethatcher to transport position when making sharp turns.

STORAGE

- Always store in a dry area, and coat spring tines with light oil when not in use.

TO REMOVE DETHATCHER FROM TRACTOR

(Refer to figure 17).

- Lower dethatcher to ground.
- Remove 3/32" (small) hairpin cotter and 3/8" x 3/4" clevis pin from lift handle. Remove handle from handle lift bracket.
- Slide lift handle out between lift handle arm and handle lock bracket.

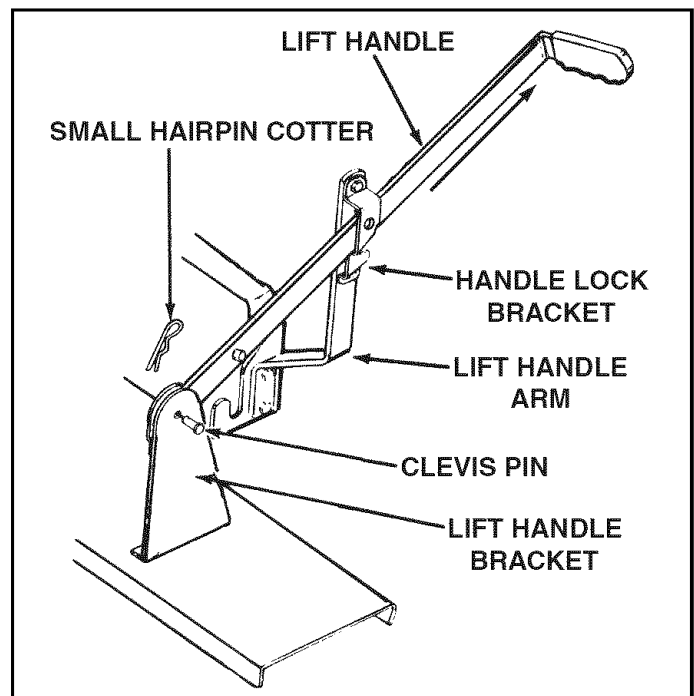


FIGURE 17

(Refer to figure 18).

- Remove the two outside (large) 1/8" hairpin cotters from mounting shaft and slide keeper plates off ends of mounting shaft.
- Lift dethatcher from hitch bracket slots.
- Reassemble hairpin cotters and keeper plates to mounting shaft for storage.

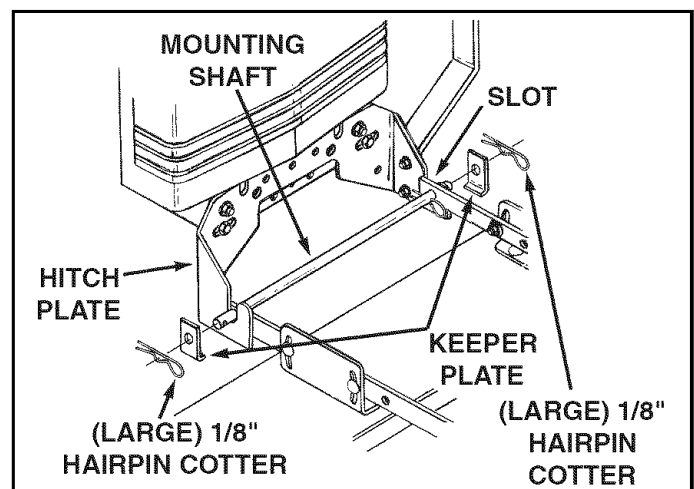
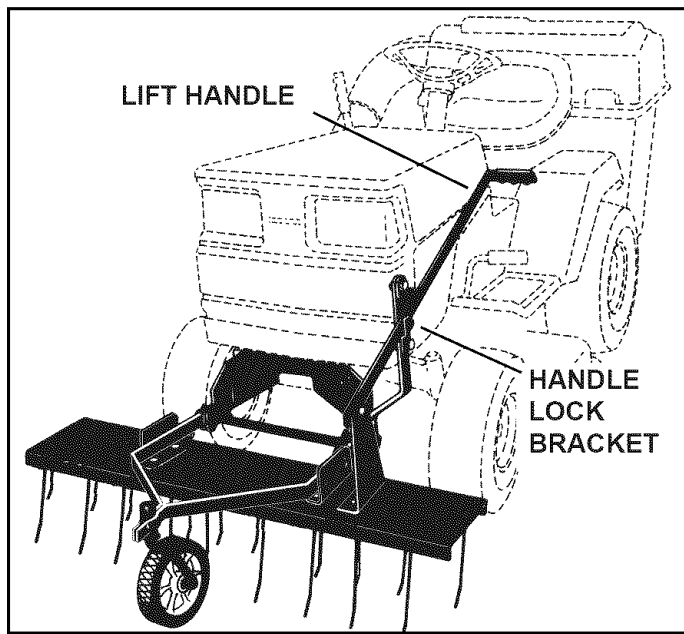


FIGURE 18

OPERATION / SERVICE / ADJUSTMENTS

KNOW YOUR DETHATCHER



LIFT HANDLE
Raises and lowers dethatcher.

HANDLE LOCK BRACKET
Locks lift handle in raised transport position.

HOW TO USE YOUR DETHATCHER

To raise dethatcher to transport position:

- Pull lift handle back so that stud in handle is pulled past handle lock bracket. Push down and forward on handle so that stud falls into notch on handle lock bracket to lock in position. See figure 19.

To lower dethatcher to work position:

- Pull back and up on handle to release stud from notch in handle lock bracket. Lower by holding up on handle and pushing forward, allowing stud to pass through lock bracket. See figure 19.

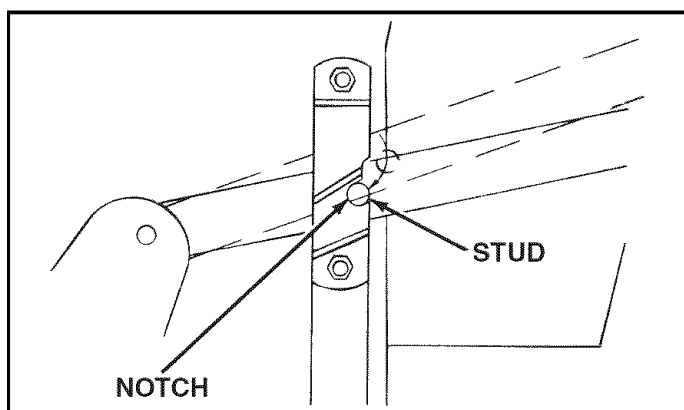


FIGURE 19

Leveling the dethatcher

- Move tractor with front mounted dethatcher onto a level surface, such as a drive or garage floor.
- Lower dethatcher from transport position to rest on level surface.
- Loosen carriage bolts through mounting arms and angle brackets. (Refer to figure 3 on page 5.)
- Adjust tine shield until spring tines come in contact with level surface, keeping front and back tines at same height. Tighten mounting arm carriage bolts on top of dethatcher shield to lock adjustment. See figure 20.
- If you need more adjustment, try moving the axle bushing up or down between the mounting arms. Be sure to retighten the bolts securing the bushing. See figure 20.

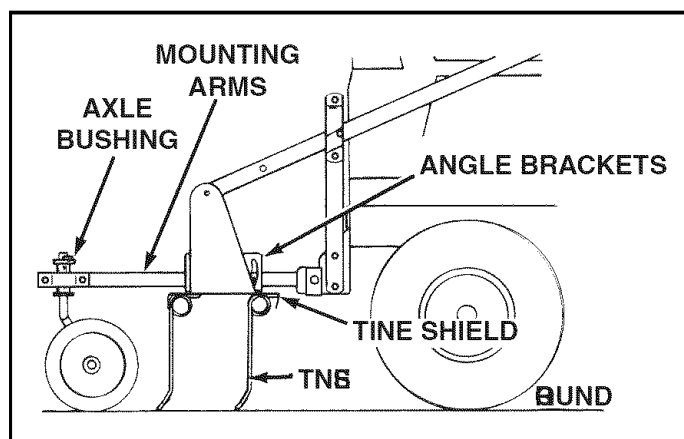


FIGURE 20

To replace a spring tine:

- Use a screw driver to pry the tabs up off of the spring tine.
- Remove old the spring tine from the tray.
- Slide a new spring tine under the locking tabs. Insert a screw driver and bend down the locking tabs until the ends of the tabs are bent down even with the surface of the tray. See figure 20.

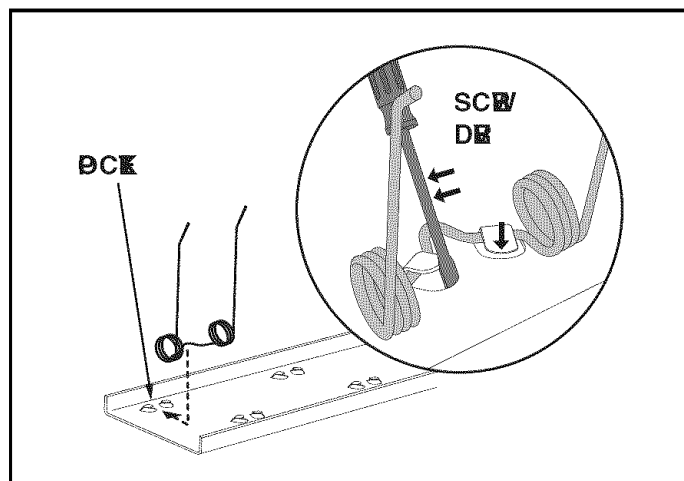
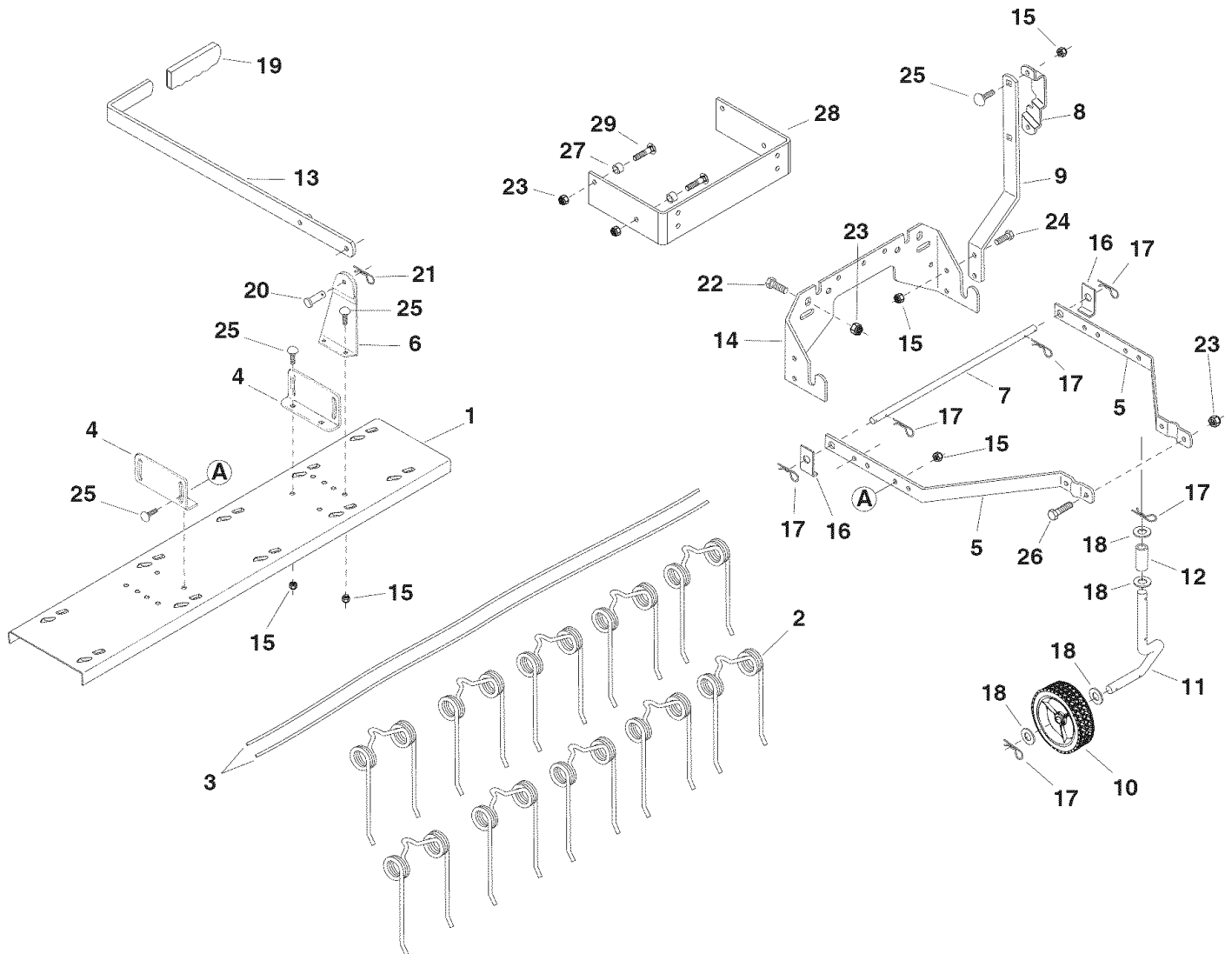


FIGURE 21

PARTS

40" TINE DETHATCHER MODEL 486.24312



REF NO.	PART NO.	QTY	DESCRIPTION	REF NO.	PART NO.	QTY	DESCRIPTION
1	24874	1	Tine Shield	16	23676	2	Keeper Plate
2	43783	10	Spring Tine	17	43343	6	Hairpin Cotter, 1/8"
3	47633	2	Wire, Spring Alignment	18	R19212113	4	Flat Washer, 5/8"
4	23666	2	Angle Mount Bracket	19	43943	1	Plastic Grip
5	24876	2	Mounting Arm	20	44044	1	Clevis Pin, 3/8" x 3/4"
6	62601	1	Lift Handle Bracket	21	43055	1	Hairpin Cotter, 3/32"
7	26043	1	Mounting Shaft	22	43001	4	Hex Bolt, 3/8-16 x 1"
8	23673	1	Handle Lock Bracket	23	HA21362	10	Nylock Nut, 3/8-16
9	24043	1	Lift Handle Arm	24	43063	2	Hex Bolt, 5/16-18 x 1"
10	44213	1	Wheel	25	44326	12	Carriage Bolt, 5/16-18 x 1"
11	44148	1	Axle	26	43087	2	Hex Bolt, 3/8-16 x 1-1/4"
12	23668	1	Pivot Bushing	27	24817	4	Spacer, .53" x .75" x .5"
13	62600	1	Lift Handle	28	26044	1	Frame Mount Bracket
14	26168	1	Hitch Bracket	29	43069	4	Carriage Bolt, 3/8-16 x 1-1/2"
15	47810	14	Nylock Nut, 5/16-18		40375	1	Owners Manual

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