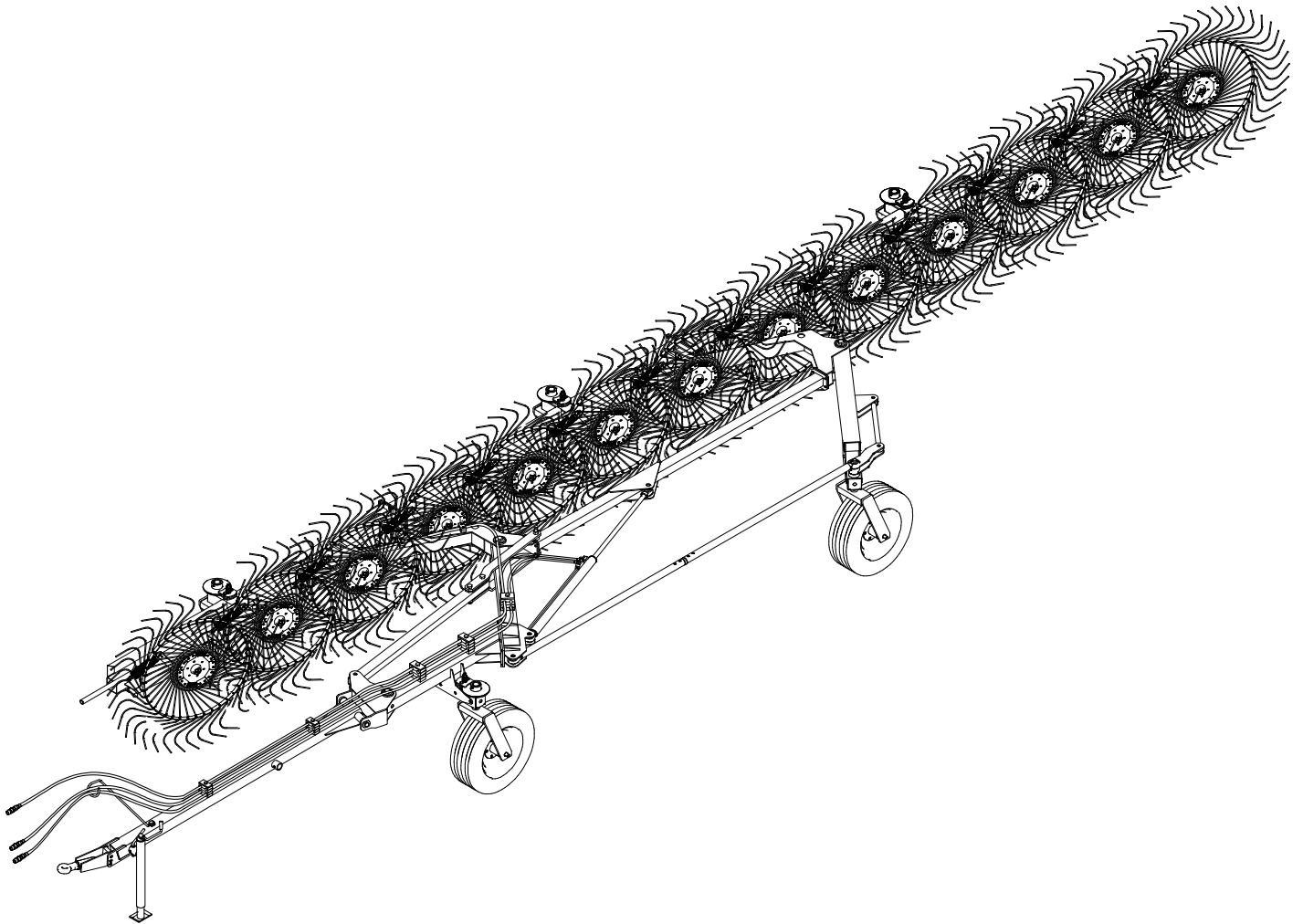


AGRICULTURAL MACHINERY

sitrex®
Spa

**ASSEMBLY,
USE AND MAINTENANCE**



**HAY RAKE, PULL TYPE
TR/11-13 S**

Introduction

This manual includes full instructions for the correct use and maintenance of the machinery, and also the recommended spare parts list.

In order to prevent any possible damage or injury to the machine and/or the operator(s), read this manual carefully for proper knowledge of the assembly of the implements, their use in the field, and their maintenance. If you have any doubts, please contact your local dealer or distributor.

Should the machine be resold, please supply this manual along with the machine to the new purchaser.

Warranty

The manufacturer warrants new machinery to be free from defects in materials and workmanship at the time of delivery to the original purchaser if correctly set up and operated according to this Operator's Manual.

The manufacturer will repair or replace free of charge any defective part which is returned by the purchaser (freight prepaid) and found to be defective on inspection authorized by the manufacturer during the warranty period.

This warranty shall be valid for 12 (twelve) months from the delivery of the goods to the original purchaser.

If the customer is unable to return the defective part to the manufacturer, the manufacturer cannot be held liable for any costs due for repair or replacement of any part of the machine. The manufacturer shall only supply the part(s) required for such repair and/or replacement.

The warranty shall be considered null and void when it is evident that the machine has been improperly used or has been repaired without authorization.

The manufacturer shall not be held liable for any obligation or agreement reached by any employers, agents or dealers who do not comply with the above warranty. The manufacturer cannot be held liable for the subsequent damages. This warranty replaces any other warranty, either explicit or implied, as well as any other obligation of the manufacturer.

NOTE:

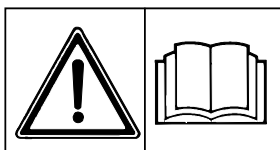
ALL WARRANTY WORK OR REPAIRS MUST BE APPROVED BY THE MANUFACTURER BEFORE WORK BEGINS. ANY WORK OR REPAIRS MADE BEFORE APPROVAL MAY NOT BE COVERED UNDER WARRANTY.

PLEASE NOTIFY YOUR SALES & SERVICE DEPARTMENT OF THIS POLICY.

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- 1) GENERAL INSTRUCTIONS**
- 2) GUIDE TO THE SIGNS AND SYMBOLS**
- 3) PRODUCT IDENTIFICATION**
- 4) DELIVERY AND ASSEMBLY INSTRUCTIONS**
- 5) INSTRUCTIONS FOR WORK AND TRANSPORT**
- 6) GENERAL MAINTENANCE INSTRUCTIONS**

1) General instructions for operation and maintenance



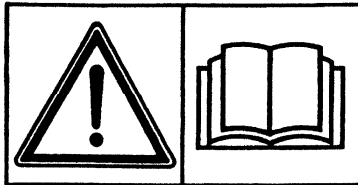
Read all the directions carefully before using the machine. When in doubt, seek advice from the manufacturers. The manufacturing company declines all liability for non-compliance with the following safety and accident-prevention instructions.

- 1- Pay attention to the danger signs and symbols in this manual and on the machine.
- 2- Do not touch moving parts.
- 3- All work on the machine (including adjustments) must always be carried out with the tractor immobilized and the engine switched off.
- 4- It is strictly prohibited to carry persons or objects on the machine and/or on the tractor.
- 5- Driving the tractor with the machine connected is absolutely forbidden to persons lacking suitable experience, or who are in poor health, or who do not have a suitable driving license.
- 6- All accident-prevention measures recommended in this manual should be strictly followed.
- 7- When a machine is attached to the tractor, always evaluate the suitability of the tractor for the purpose, in order to work safely. Keep in mind that when a machine is attached to the tractor – even if it is a towed type – it alters the tractor's stability, and therefore all the necessary precautions must be taken (ballast, tire pressure, etc.).
- 8- Before operating the tractor and machine, check that all transport and operational safety devices are complete and working.
- 9- When driving on public roads, you should comply with the Highway Code regulations for the country concerned.
- 10- Before starting work, familiarize yourself with the control devices and how they work.
- 11- Wear suitable clothes. Do not wear clothing which is loose or which could become entangled in rotating or moving parts.
- 12- Never leave the driving seat when the tractor is running.
- 13- It is extremely important to appreciate that road holding, steering and braking may be significantly affected with the machine attached.
- 14- Before connecting the unit, stop the engine, apply the parking brake and remove the ignition key from the instrument panel.
- 15- Spare parts must meet the requirements as defined by the manufacturer. Use only original spare parts.
- 16- Safety decals must always be clearly visible. They must be kept clean and replaced if they become too illegible (they can be ordered from the agent if necessary).

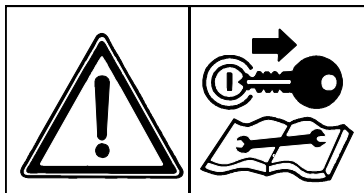
2) Guide to the signs and symbols used on the machine

IMPORTANT

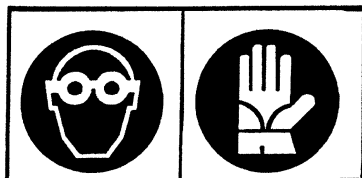
These signs and symbols give information to the operator on how to make the best use of the machine so as to prolong its life, avoid damage, optimize work and, above all, to avoid injury to the operator and anyone within range of the machine. Note: most of the symbols that you will find below are located on the machine, but some are only in this manual and indicate how to act or what must be done during assembly, when maintenance or repairs are being done, etc..



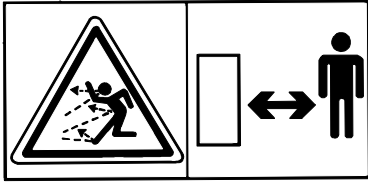
1) Before beginning operations, read the instruction manual carefully.



2) Before doing any maintenance or repair work, stop the machine at a suitable spot. Turn off the tractor motor, apply the brake, remove the key from the ignition and consult this manual.



3) This is a warning to wear proper personal protective equipment when carrying out maintenance and repairs



4) Risk of possible ejection of blunt objects. Keep a safe distance from the machine

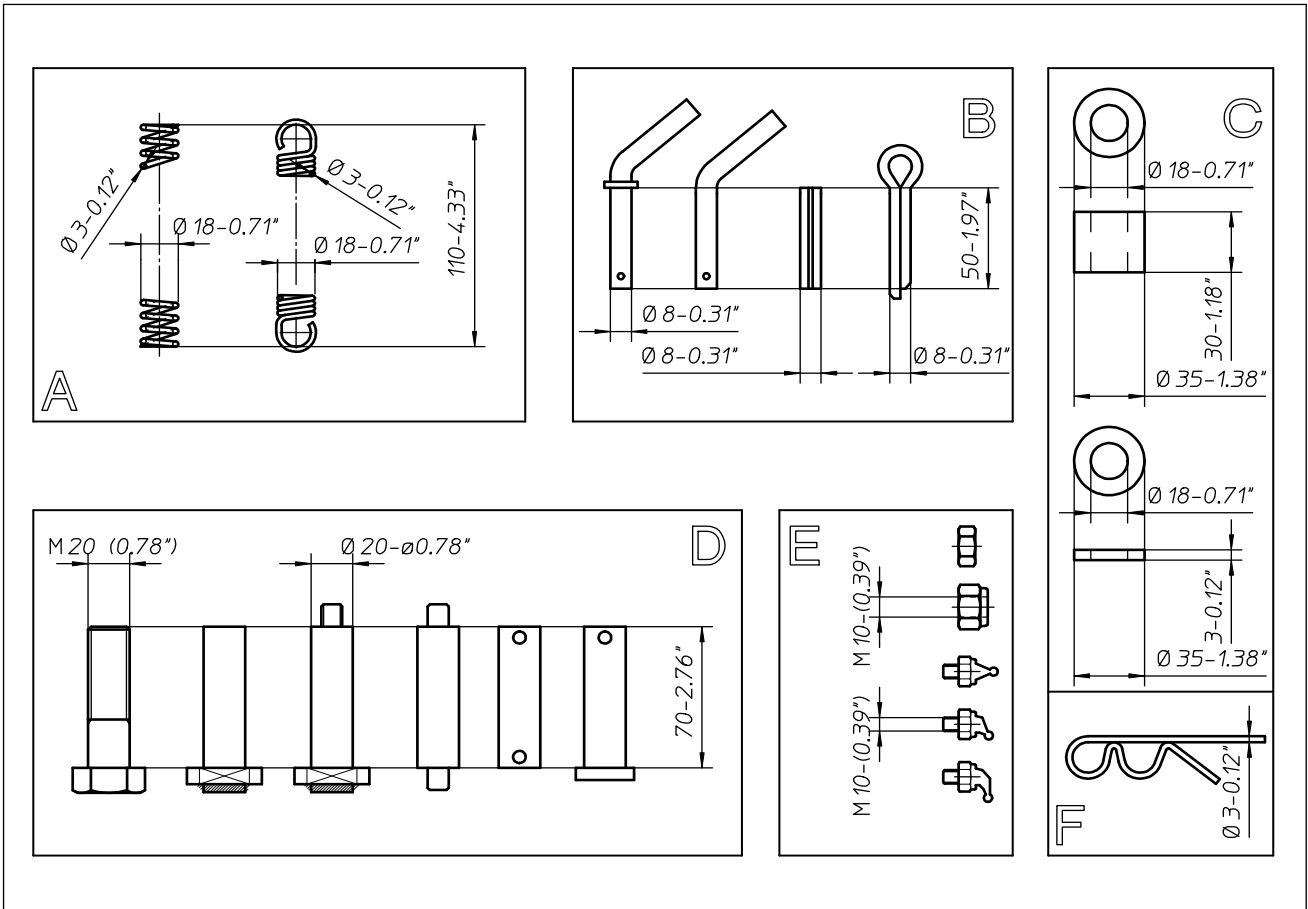


5) Indicates that there is a risk of crushing your hands. Keep your distance.



6) Indicates a greasing point.

Examples of general measurements for identifying the assembly accessories based on type.



When tightening the bolts refer to the tightening torque table (the class of the material is generally stamped on the head of the bolts).

MINIMUM HARDWARE TIGHTENING TORQUES							
IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS							
METRIC NON-FLANGED HARDWARE AND LOCKNUTS							
NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCKNUT CL.8 W/CL.8 BOLT
	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr	
M4	1.7 (15)*	2.2 (19)*	2.6 (23)*	3.4 (30)*	3.7 (33)*	4.8 (42)*	2.3 (20)*
M6	5.8 (51)*	7.6 (67)*	8.9 (79)*	12 (102)*	13 (115)*	17 (150)*	7.8 (69)*
M8	14 (124)*	18 (159)*	22 (195)*	28 (248)*	31 (274)*	40 (354)*	19 (169)*
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	38 (28)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	66 (49)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	164 (121)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	330 (243)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	572 (422)

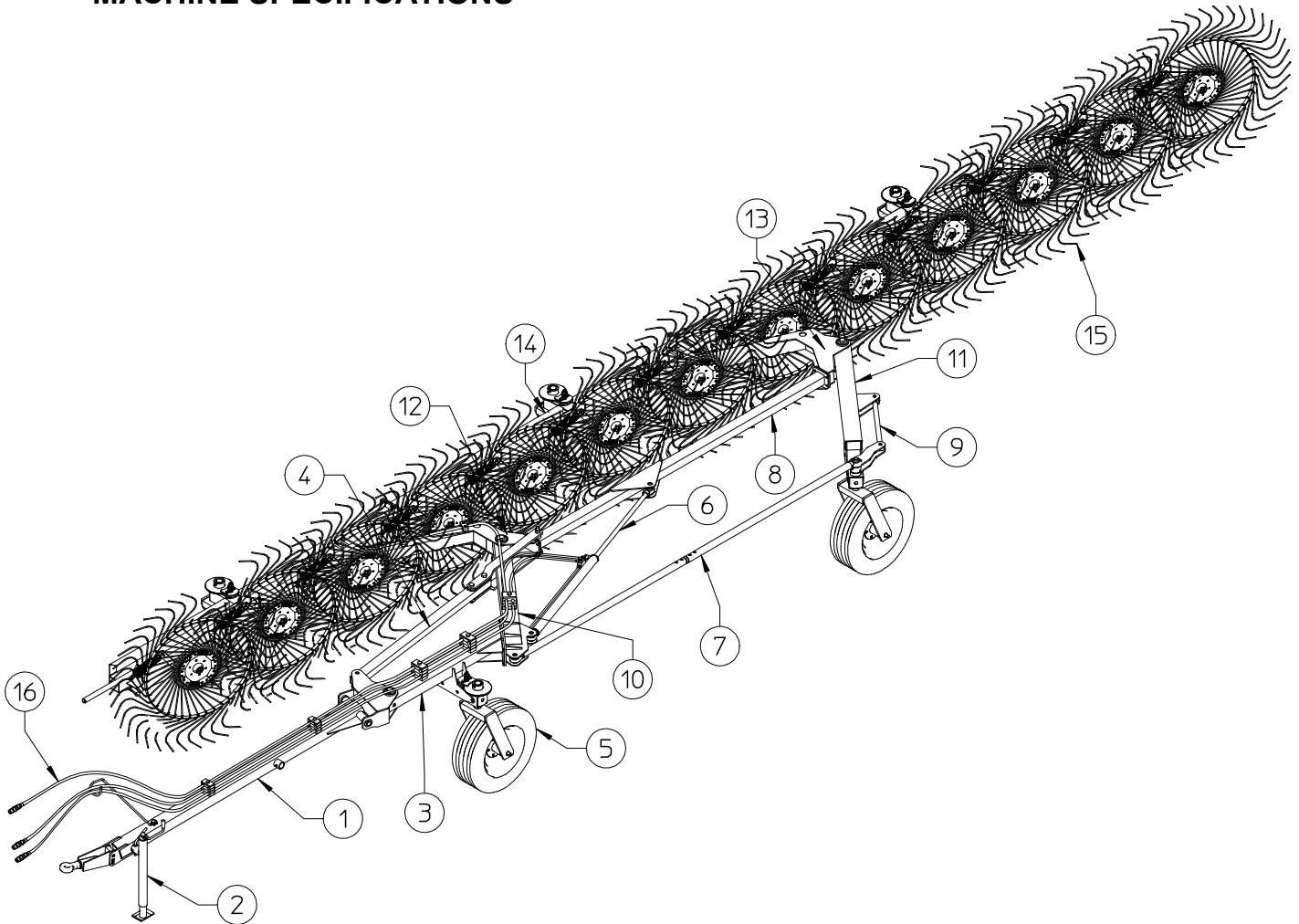
NOTE: Torque values shown with * are inch pounds.

3) Product identification

Please write below the type and serial number of the machine. This information is to be provided to the dealer for all spare parts orders.

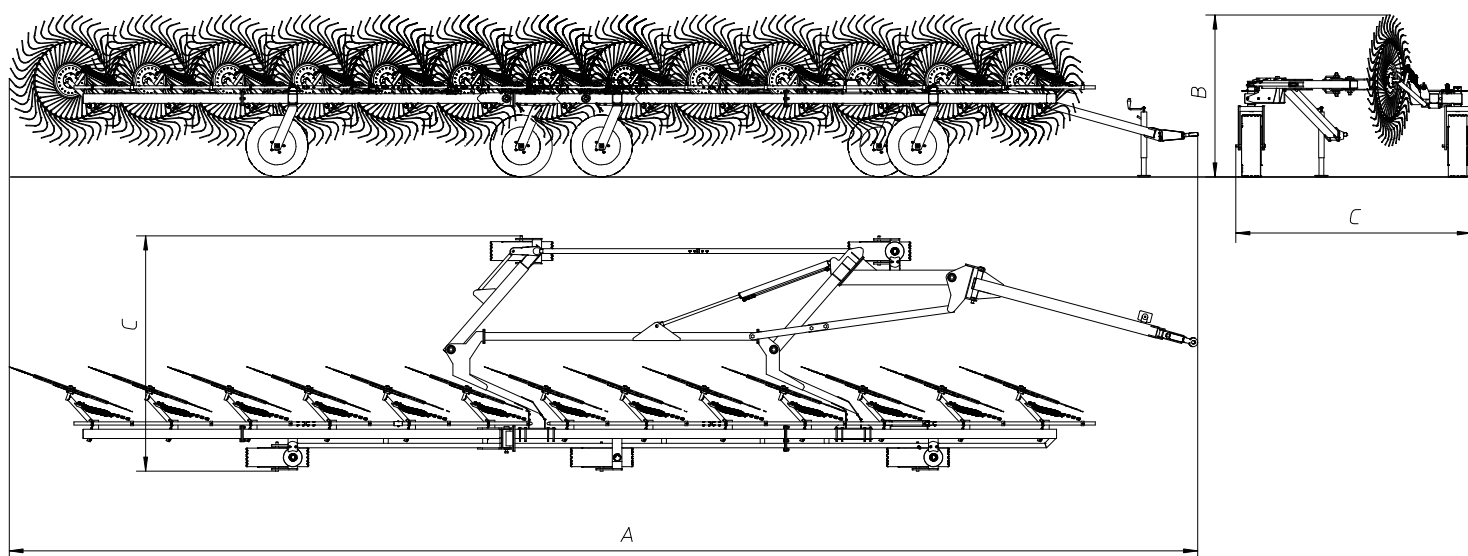
 AGRICULTURAL MACHINERY sitrex [®] <small>06018 TRESTINA-PERUGIA-ITALY</small> <small>TEL.075-8540021 FAX 075-8540523</small>	
SERIE <input type="text"/>	N° <input type="text"/>
MADE IN ITALY	

MACHINE SPECIFICATIONS



- | | | | |
|---|---------------|----|------------------|
| 1 | DRAWBAR | 9 | TIE ROD |
| 2 | PARKING STAND | 10 | ARM |
| 3 | SUPPORT | 11 | ARM |
| 4 | TIE ROD | 12 | FRONT ARM |
| 5 | WHEEL ASSY. | 13 | REAR ARM |
| 6 | CYLINDERS | 14 | SECTION |
| 7 | TIE ROD | 15 | RAKE WHEEL ASSY. |
| 8 | SUPPORT | 16 | HYDRAULIC KIT |

TECHNICAL SPECIFICATIONS



MODELS	TR/11	TR/13
Weight	1400 Kg / 3100 lb	1500 Kg / 3300 lb
Overall length (A)	10.3 m / 33'8"	12.8 m / 42'
Transport height (B)	1.750 m / 68.9"	1.750 m / 68.9"
Transport width (C)	2.48 m / 97.6"	2.48 m / 97.6"
Number of rake wheels	11	13
Number of tines on each rake wheel	40	40
Tines diam.	7.5mm / 0.3"	7.5mm / 0.3"
Wheel diam.	1.4 m. / 55"	1.4 m. / 55"
Raking working width	6.5 m. / 21' 3"	7.5 m. / 24' 7"
Working speed	22 kmh / 14 mph	22 kmh / 14 mph
HP required min.	35 HP / 26 kW	35 HP / 26 kW

4) Delivery and assembly

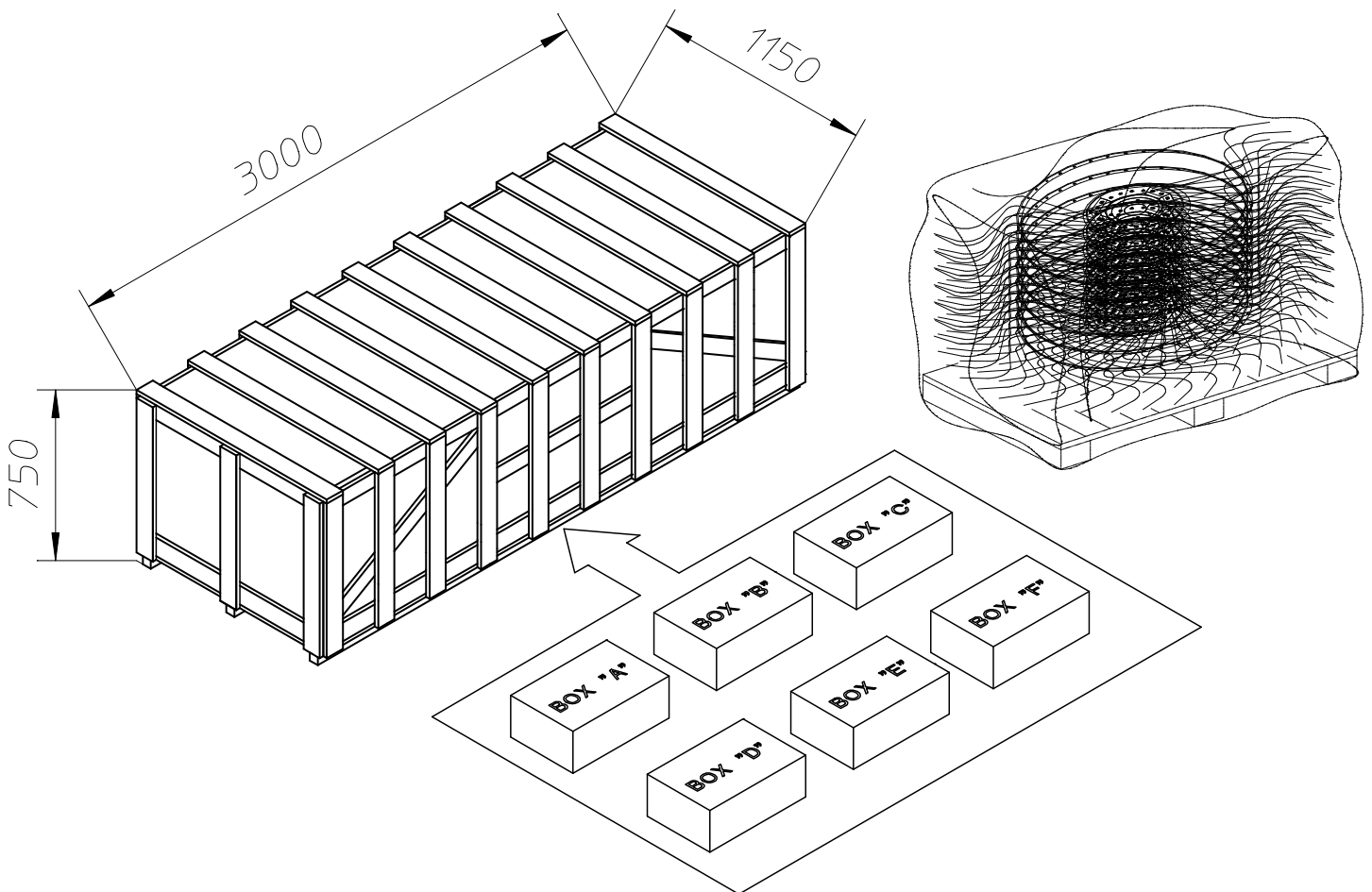
Delivery and unpacking

The machine is delivered partially assembled in 1 (one) box containing 6 (six) boxes and 1 (one) pallet. The boxes "A", "B", "C", "D", "E", and "F" are all the various mounting accessories (pins, screws, fittings, etc.). All components are inspected by the manufacturer before shipment. Upon receipt of the machine, ensure that the case is intact and that the contents have not been damaged during transport. If you detect damage and / or anomalies immediately report the matter to your vendor.

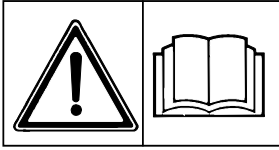
Note: The packaging is made from wood, plastic film, cardboard and steel, and must be disposed of according to applicable laws in your locality.

To unpack the boxes received by using suitable lifting is to lift the weight given to the banks to bring stability to the pallets because of their size and shape.

Each machine arrives packed in one crate and one pallet



Assembly instructions

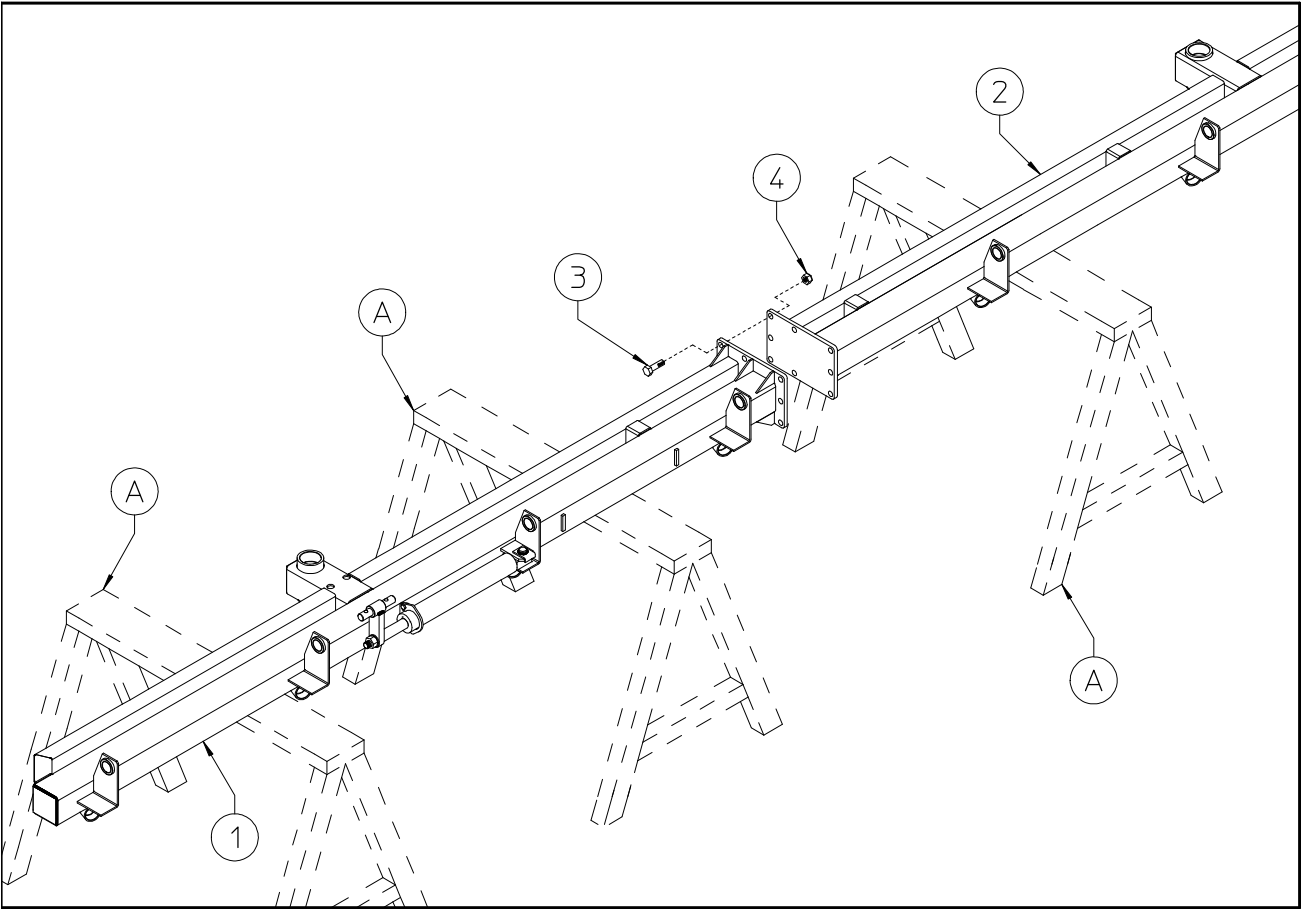


ATTENTION

Assembly must be done carefully and accurately, for the safety of the person(s) doing the assembling and to ensure proper machine operation.

Assembly should be done on a flat, solid surface, using the proper tools and wearing suitable clothing, making sure that all people not involved in the assembly are kept at a safe distance. Assemblers must provide suitable lifting mechanisms and supports for stabilizing the partially assembled units, so as to prevent them from falling and causing damage or injury. The steps for assembly are illustrated in following. Depending on the experience of the assemblers and the tools available, it is not necessary that the instructions be followed in the exact order given here, but the safety precautions described above must always be strictly and carefully followed.

Step 1



Step 1

Set sections 1 and 2 on supports A, then connect the two sections using bolts 3 and nuts 4.

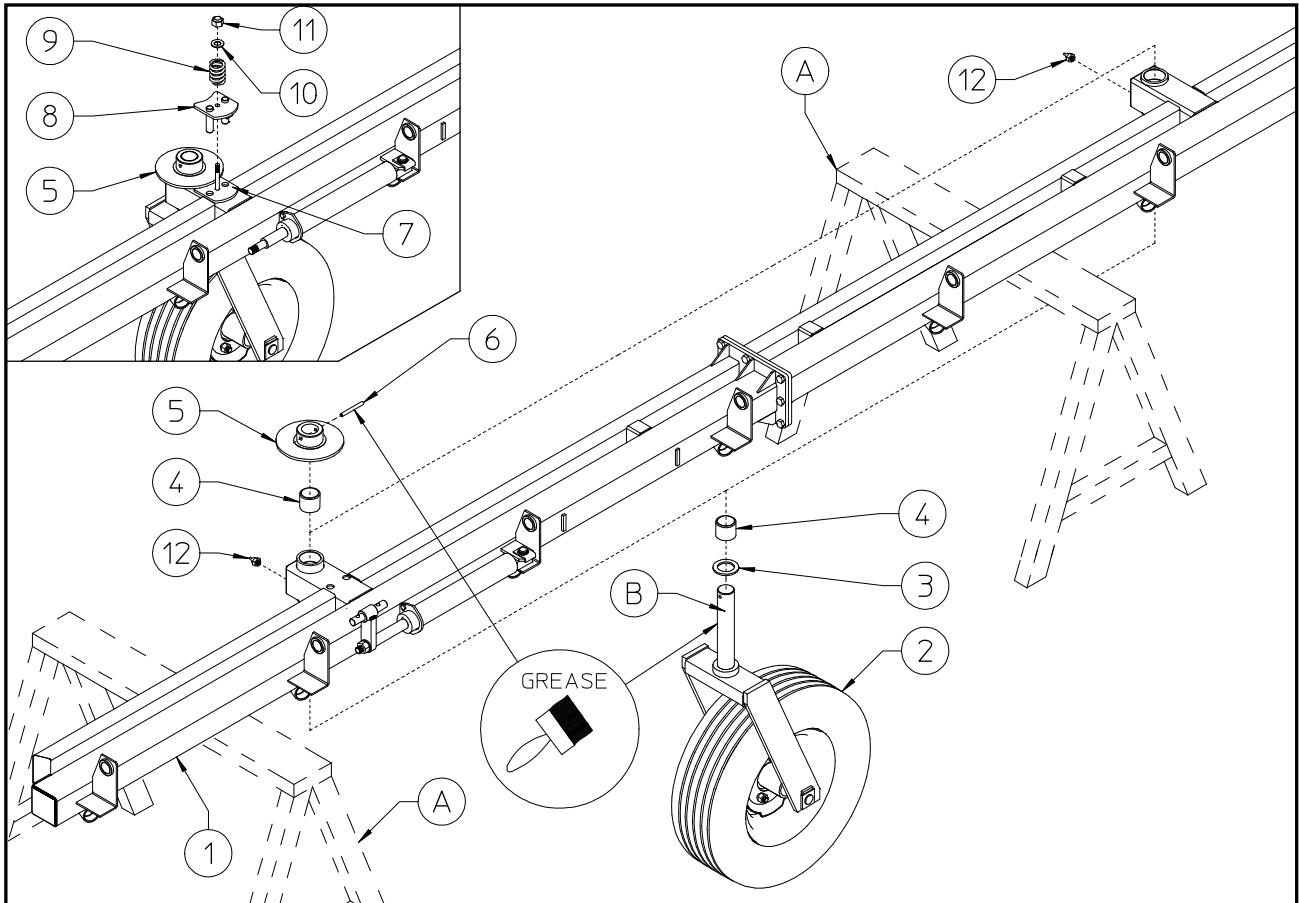
(If you do not have supports, the assembly can also be done on the ground.)

In this step use the following parts:

Position 3: 8 bolts M16x45 (0.63"x1.77")

Position 4: 8 nuts M16 (0.63")

Step 2



Step 2

Before attaching the wheel assembly 2, brush pin B and pin 6 with grease.

Insert nylon bushings 4 in the seats as shown. Place the shim 3 over the pins of the wheel assemblies 2.

Insert the preassembled wheel assemblies 2 into the seats in section 1.

Attach the flange 5 to the pin on wheel assemblies 2 using the spring pin 6.

Attach the grease nipples 12 to the seats in section 1.

Check to make sure that the wheel assemblies 2 turn freely in the seats in section 1.

Attach the plate with screw 7 underneath flange 5.

Attach the counterplate 8 over the flange 5, inserting its pins into the holes in plate with screw 7 and in section 1.

Attach the spring 9, washer 10 and nut 11 to the screw on plate 7.

IMPORTANT:

The more spring 4 is compressed by tightening nut 11, the more the wheel rotation is braked, therefore check that it is properly adjusted before using the machine.

In this step use the following parts:

Position 3: 2 shims $\varnothing 50-76 \times 5$ (1.97" x 3")

Position 4: 4 nylon bushings $\varnothing 50-60 \times 50$ (1.97"-2.36" x 1.97")

Position 6: 2 spring pins $\varnothing 10 \times 80$ (0.4" x 3.15")

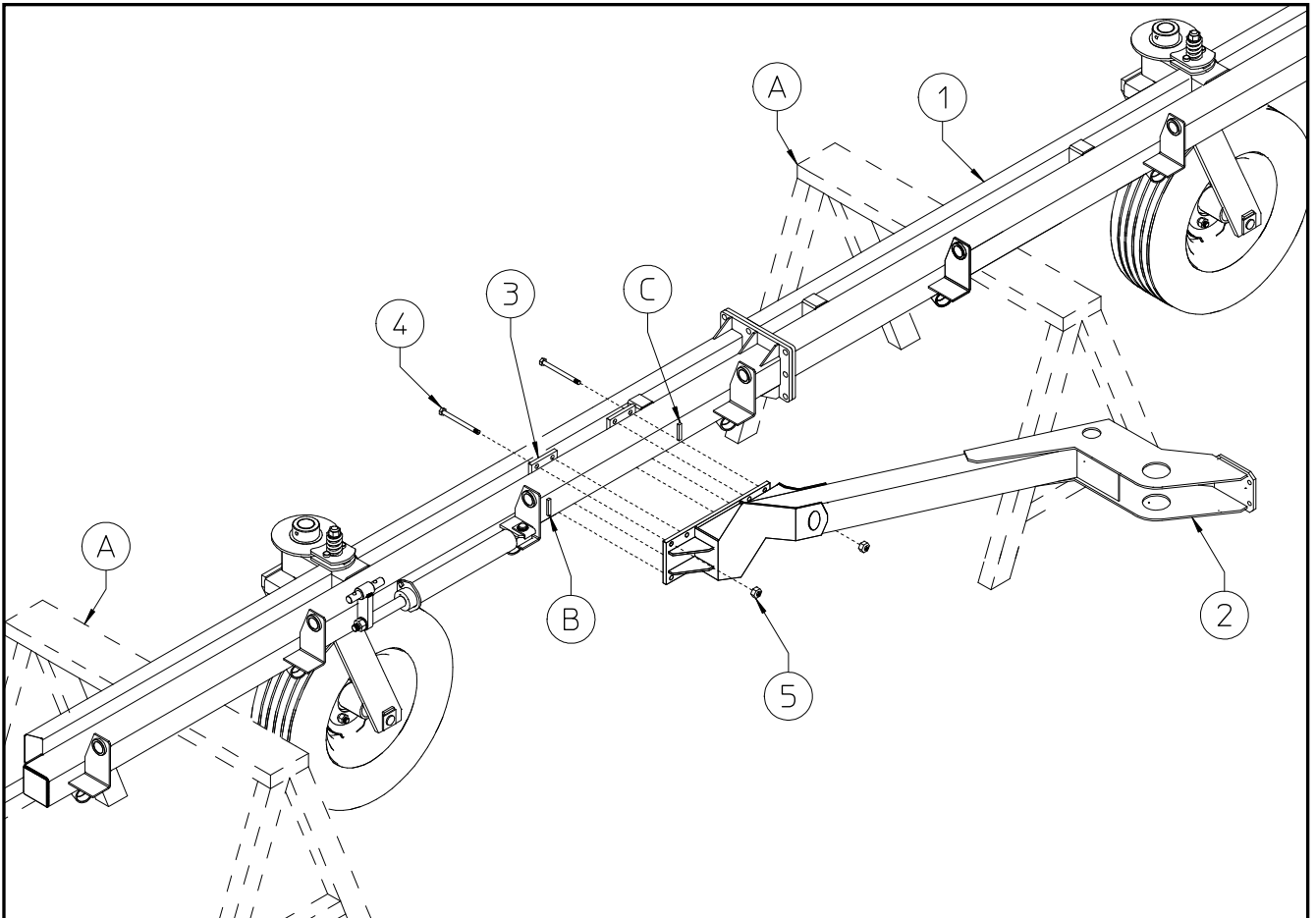
Position 9: 2 springs $\varnothing 5-30 \times 45$ (0.20"-1.42" x 0.1")

Position 10: 2 washers $\varnothing 12-36 \times 2.5$ (0.47"-1.42" x 0.1")

Position 11: 2 nuts (0.47")

Position 12: 2 grease nipples M8

Step 3



Step 3

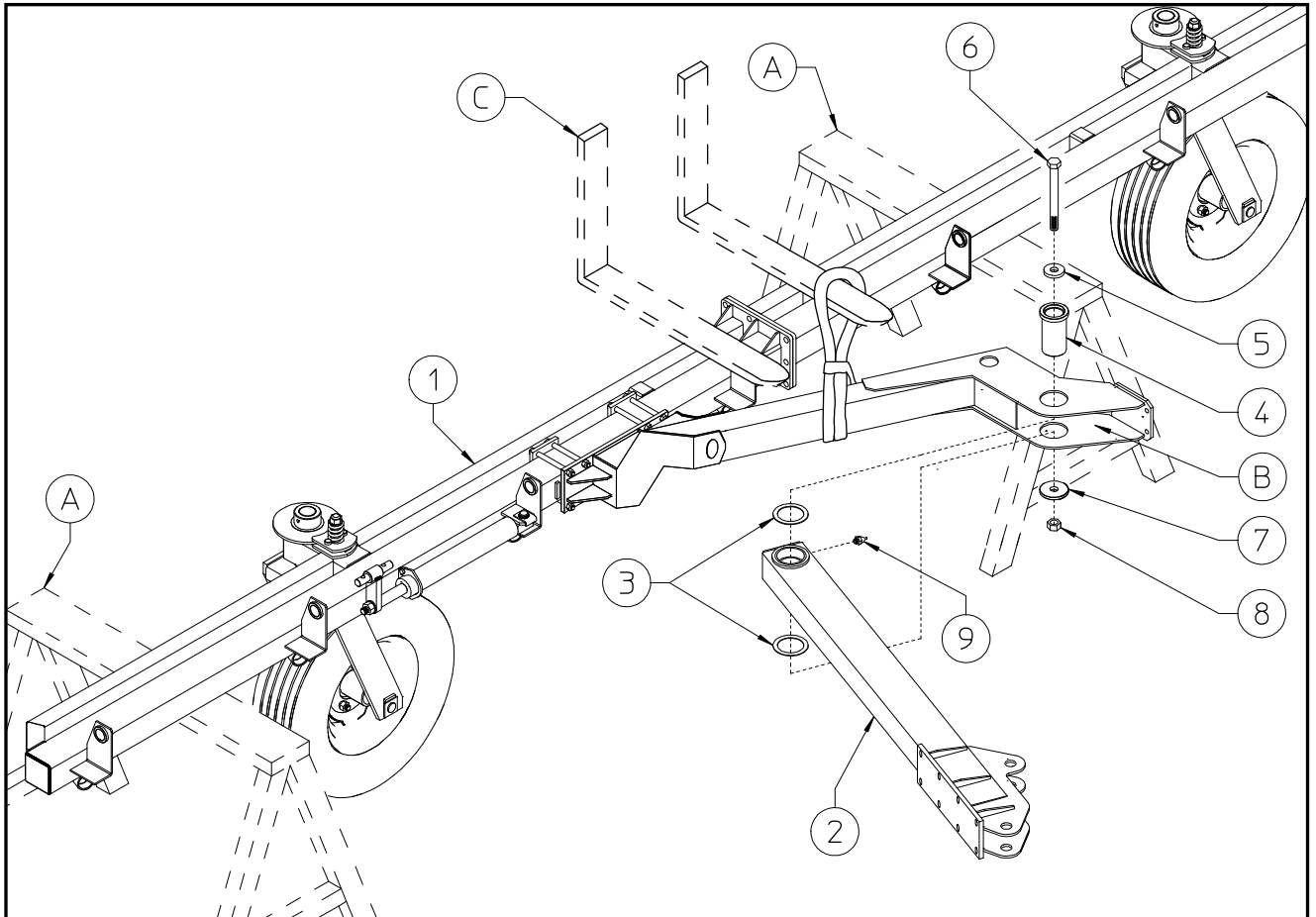
Attach arm 2 to section 1 between lugs B and C, using plates 3 bolts 4 and nuts 5.

In this step use the following parts:

Position 4: 8 bolts M14x140

Position 5: 8 nuts M14

Step 4



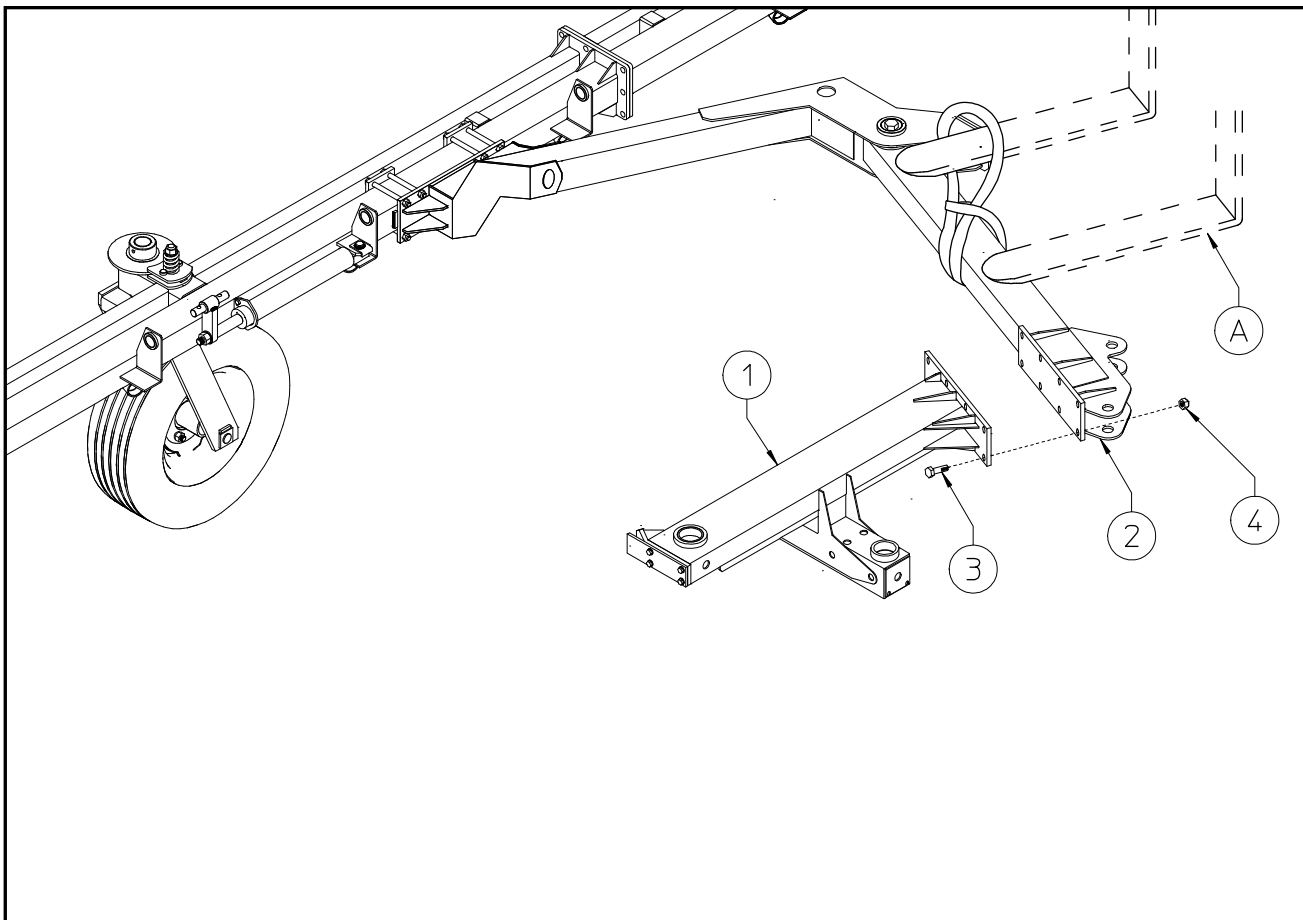
Step 4

With the section resting on supports A and kept in balance with a belt attached to the forks of the forklift C, attach the swiveling arm 2 to arm B, first placing shims 3 between the two plates, then pin 4, washer 5, bolt 6, washer 7 and nut 8. Insert grease nipple 9 into the seat on arm 2.

In this step use the following parts:

- Position 3: 2 shims $\varnothing 75-100 \times 1$
- Position 4: 1 pin $\varnothing 75 \times 127$
- Position 5: 1 washer $\varnothing 25-64 \times 10$
- Position 6: 1 bolt M24X180
- Position 7: 1 washer $\varnothing 25-90 \times 10$
- Position 8: 1 nut M24
- Position 9: 1 grease nipple M8

Step 5



Step 5

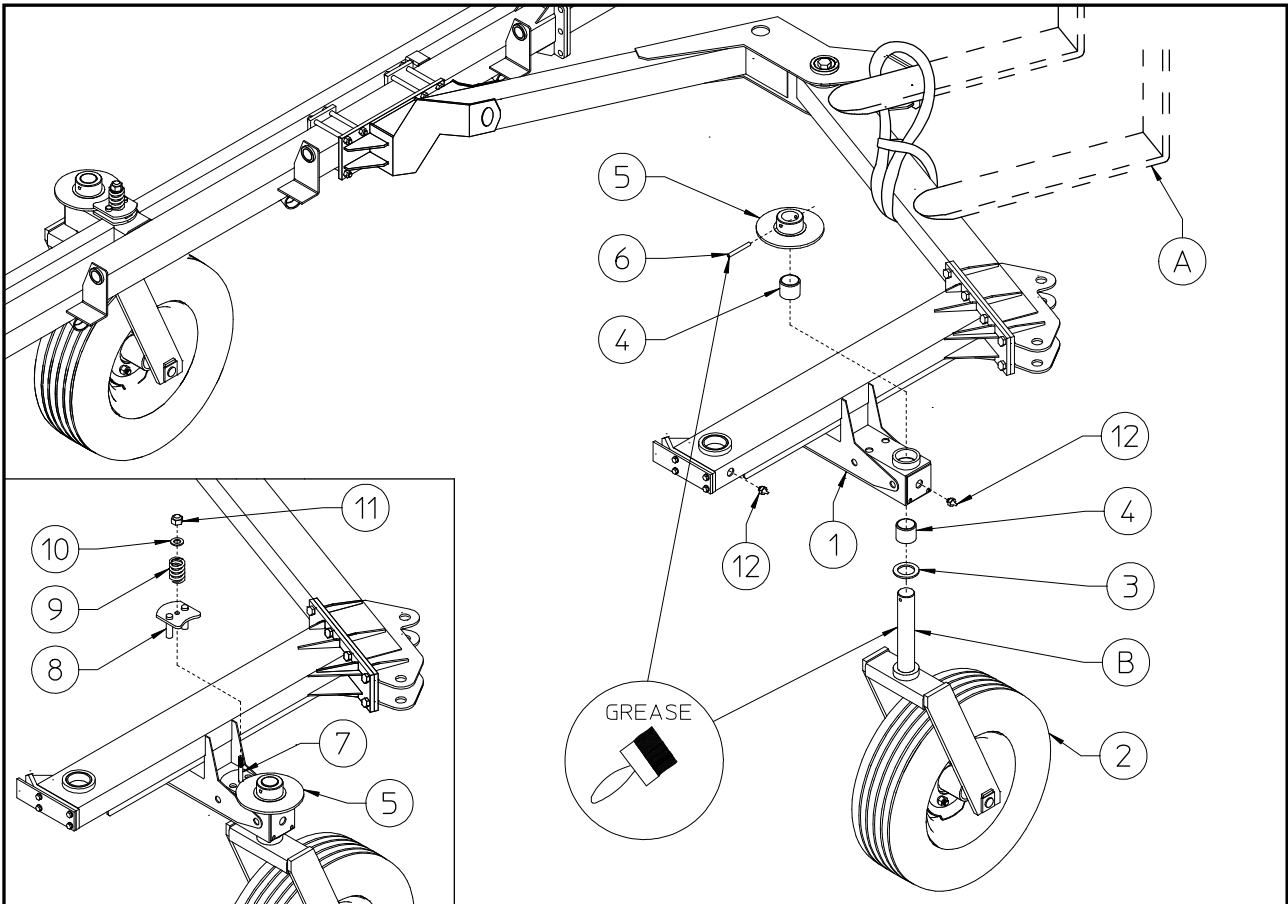
Keeping the machine in balance with a belt attached to arm 2 and to the forks of the forklift A, attach arm 1 to arm 2 with bolts 3 and nuts 4.

In this step use the following parts:

Position 3: 8 bolts M14x45

Position 4: 8 nuts M14

Step 6



Step 6

Before attaching the wheel assembly 2, brush pin B and pin 6 with grease.

Keeping the machine in balance with a belt attached to the forks of the forklift A, insert nylon bushings 4 in the seats in arm 1. Place the spacer 3 over the pin of the wheel assembly 2.

Insert the preassembled wheel assembly 2 into the seat in section 1.

Attach the flange 5 to the pin on wheel assembly 2 using the spring pin 6.

Attach the grease nipples 12 to the seats in section 1.

Check to make sure that the wheel assembly 2 turns freely in the seat in arm 1.

Attach the plate with screw 7 underneath flange 5.

Attach the counterplate 8 over the flange 5, inserting its pins into the holes in plate with screw 7 and in arm 1.

Attach the spring 9, washer 10 and nut 11 to the screw on plate 7.

IMPORTANT:

The more spring 4 is compressed by tightening nut 11, the more the wheel rotation is braked, therefore check that it is properly adjusted before using the machine.

In this step use the following parts:

Position 3: 1 shim $\varnothing 50-76 \times 5$ (1.97" x 3")

Position 4: 2 nylon bushings $\varnothing 50-60 \times 50$ (1.97"-2.36" x 1.97")

Position 6: 1 spring pin $\varnothing 10 \times 80$ (0.4" x 3.15")

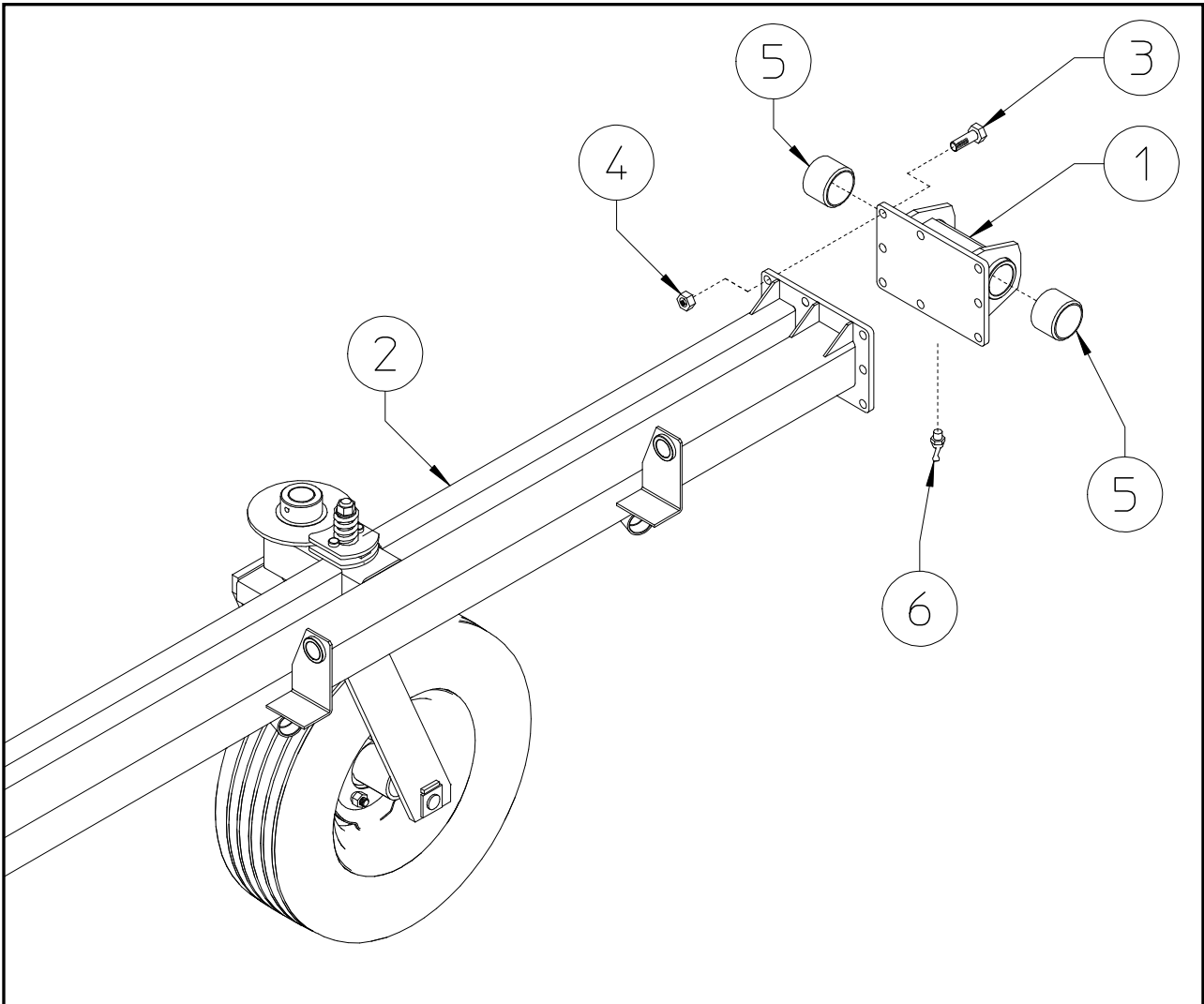
Position 9: 1 spring $\varnothing 5-30 \times 45$ (0.20"-1.42" x 0.1")

Position 10: 1 washer $\varnothing 12-36 \times 2.5$ (0.47"-1.42" x 0.1")

Position 11: 1 nut (0.47")

Position 12: 2 grease nipples M8

Step 7



Step 7

Fasten the swivel attachment section 1 to section 2 using bolts 3 and nuts 4.
Insert the nylon bushings 5 in the seats as shown.
Attach the grease nipple 6 to the seat in support 1.

IMPORTANT

Insert the bolts and nuts as shown in the drawing – do not reverse the positions for reasons of space.

In this step use the following parts:

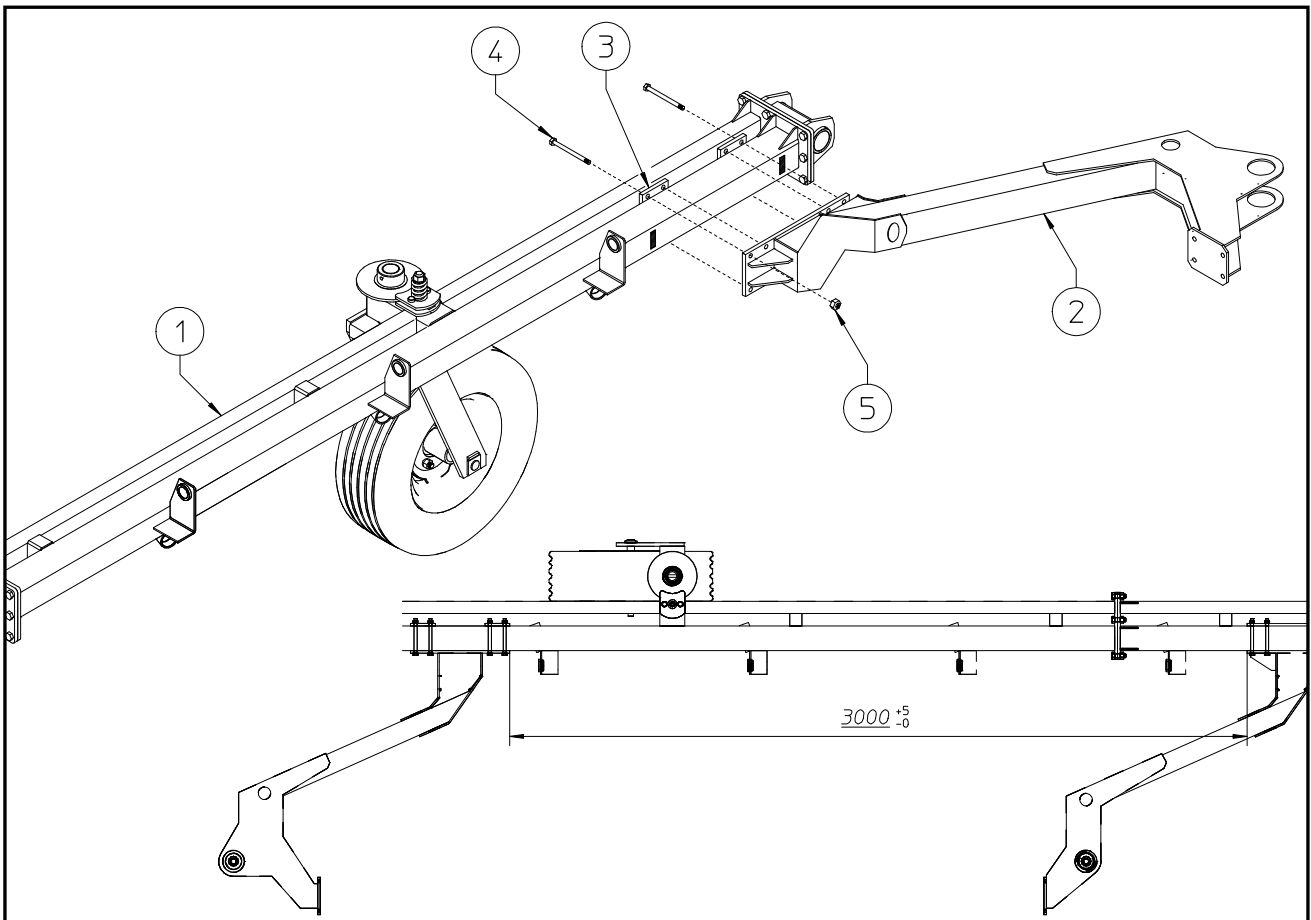
Position 3: 8 bolts M16x45 (0.63"x1.77")

Position 4: 8 nuts M16 (0.63")

Position 5: 2 nylon bushings \varnothing 50-60x50 (1.97"-2.36"x1.97")

Position 6: 1 grease nipple M8x45°

Step 8



Step 8

Attach rear arm 2 to section 1 within the spaces indicated with adhesive, using counterplates 3, bolts 4 and nuts 5.

IMPORTANT

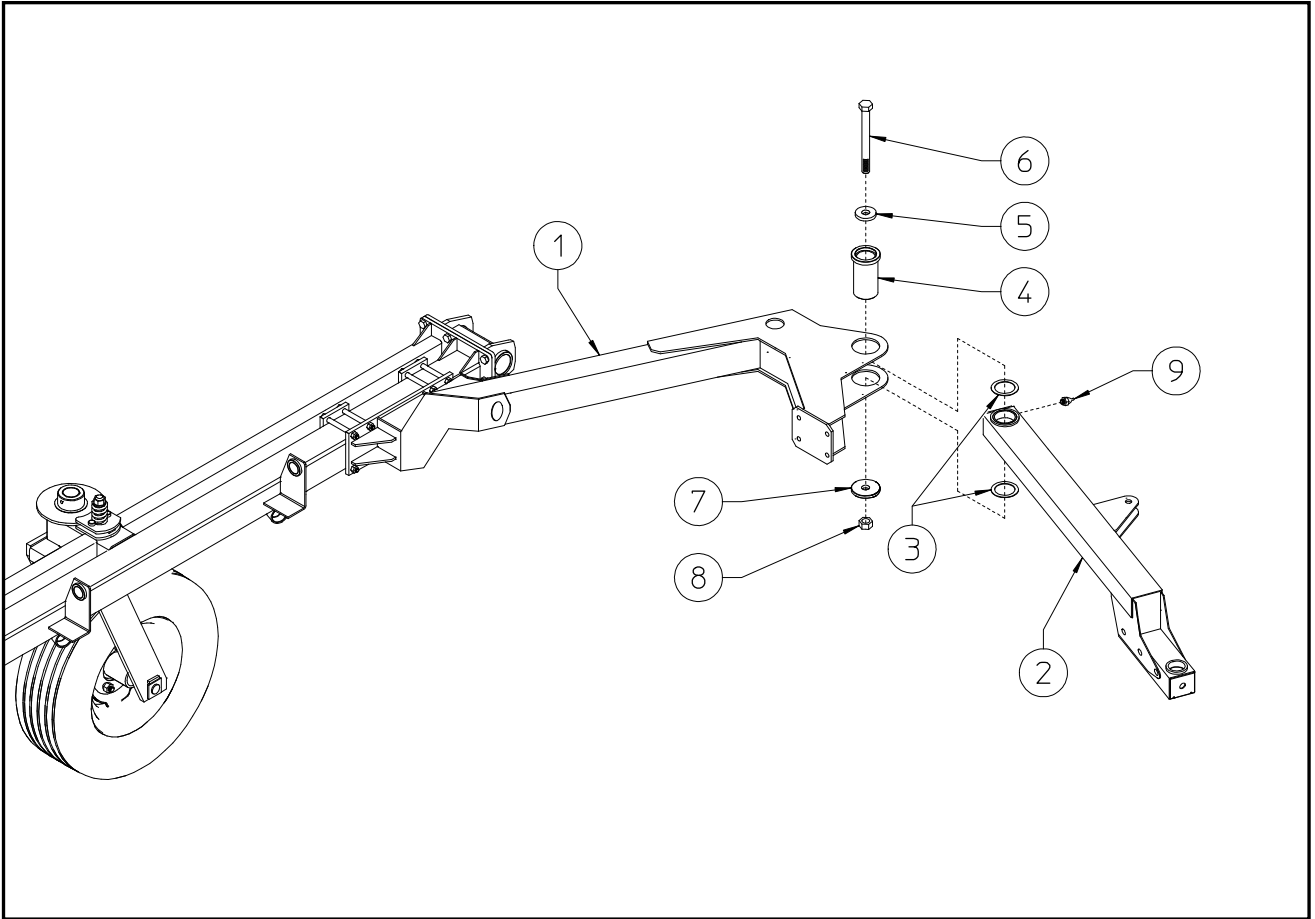
In order to facilitate the assembly of the next components, do not fully tighten the bolts.

In this step use the following parts:

Position 4: 8 bolts M14x140

Position 5: 8 nuts M14

Step 9



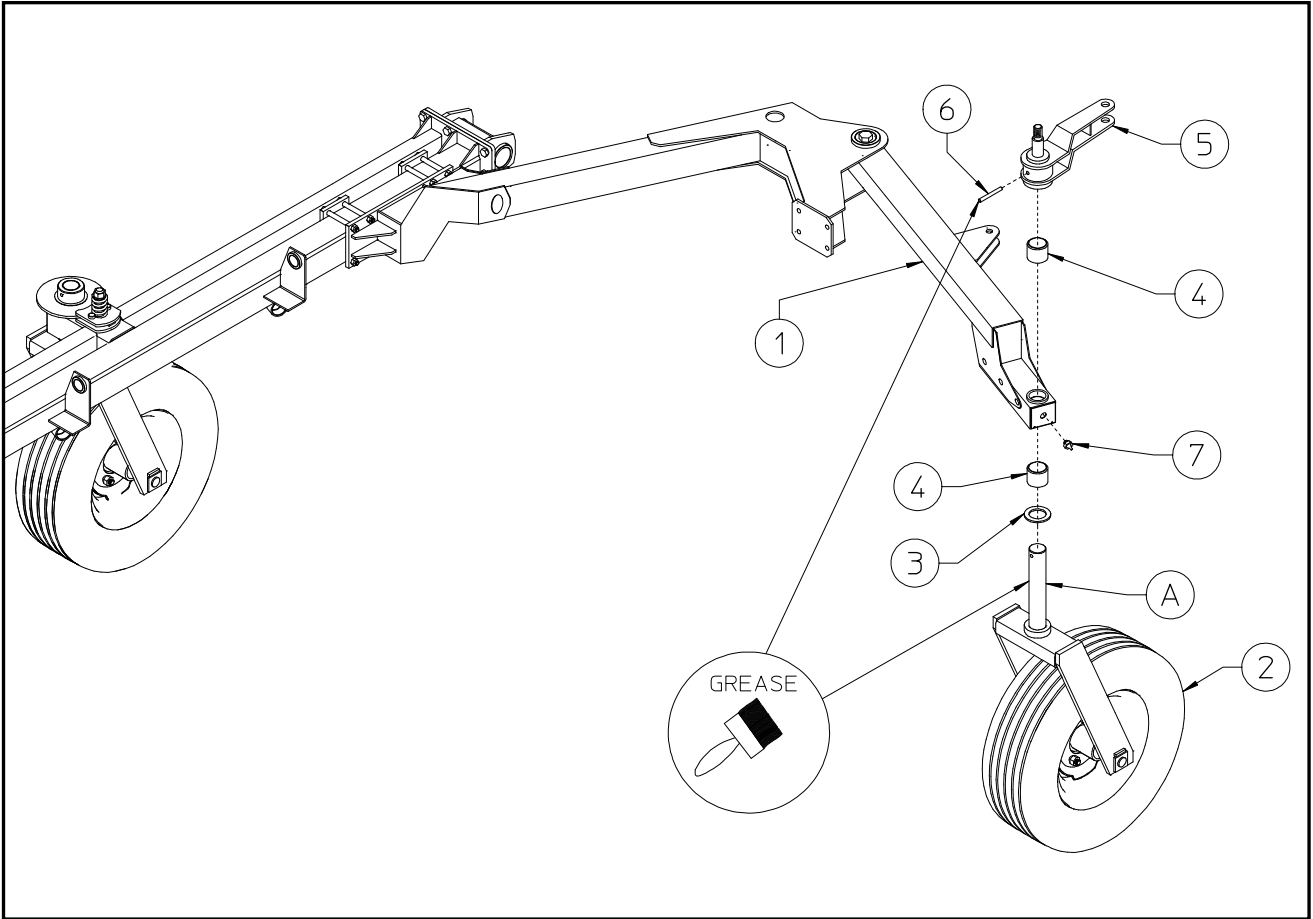
Step 9

Attach the rear swiveling arm 2 to arm 1, first inserting the shims 3 between the two plates on arm 1, then assemble the pin 4, washer 5, bolt 6, washer 7 and nut 8. Attach the grease nipple 9 to the seat in arm 2.

In this step use the following parts:

- Position 3: 2 shims $\varnothing 75-100 \times 1$
- Position 4: 1 pin $\varnothing 75 \times 127$
- Position 5: 1 washer $\varnothing 25-64 \times 10$
- Position 6: 1 bolt M24X180
- Position 7: 1 washer $\varnothing 25-90 \times 10$
- Position 8: 1 nut M24
- Position 9: 1 grease nipple M8

Step 10



Step 10

Before attaching the wheel assembly 2, brush pin A and pin 6 with grease.

Insert nylon bushings 4 in the seats in arm 1. Place the shim 3 over the pin of the wheel assembly 2.

Insert the preassembled wheel assembly 2 into the seat in arm 1.

Attach the connecting rod 5 to the pin on wheel assembly 2 using the spring pin 6.

Attach the grease nipple 7 to the seat in arm 1.

Check to make sure that the wheel assembly 2 turns freely in the seat in arm 1.

In this step use the following parts:

Position 3: 1 shim $\varnothing 50-76 \times 5$ (1.97"x3")

Position 4: 2 nylon bushings $\varnothing 50-60 \times 50$ (1.97"-2.36"x1.97")

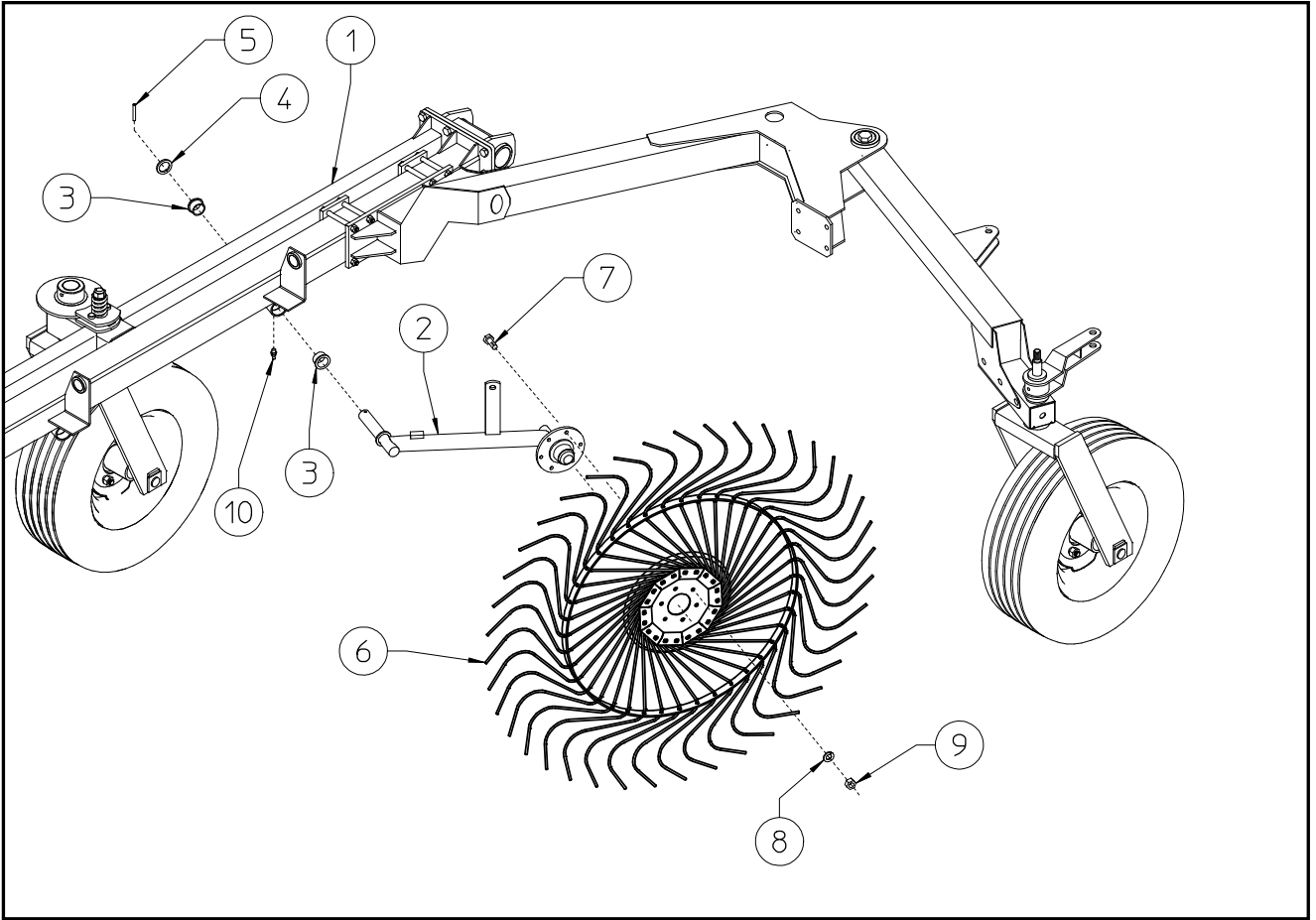
Position 6: 1 spring pin $\varnothing 10 \times 80$ (0.4"x3.15")

Position 7: 1 grease nipple M8

Note:

At this point, for reasons of space, it is recommended that you proceed by mounting the rake wheels.

Step 11



Step 11

Insert the nylon bushings 3 in the seat in section 1.

Insert the rake wheel arm 2 in the seat in section 1, insert the washer 4 and fasten with pin 5.

Attach rake wheel 6 to arm 2 using bolts 7, washers 8 and nuts 9.

Attach the grease nipple 10 to the rake wheel arm bushing.

Repeat the operation 11-13 times.

In this step use the following parts:

Position 3: 22-26 nylon bushings $\varnothing 35-42 \times 26$ ($\varnothing 1.38''-1.65'' \times 1''$)

Position 4: 11-13 washers $\varnothing 35-50 \times 5$ ($\varnothing 1.38''-1.97'' \times 0.19''$)

Position 5: 11-13 spring pins $\varnothing 8 \times 50$

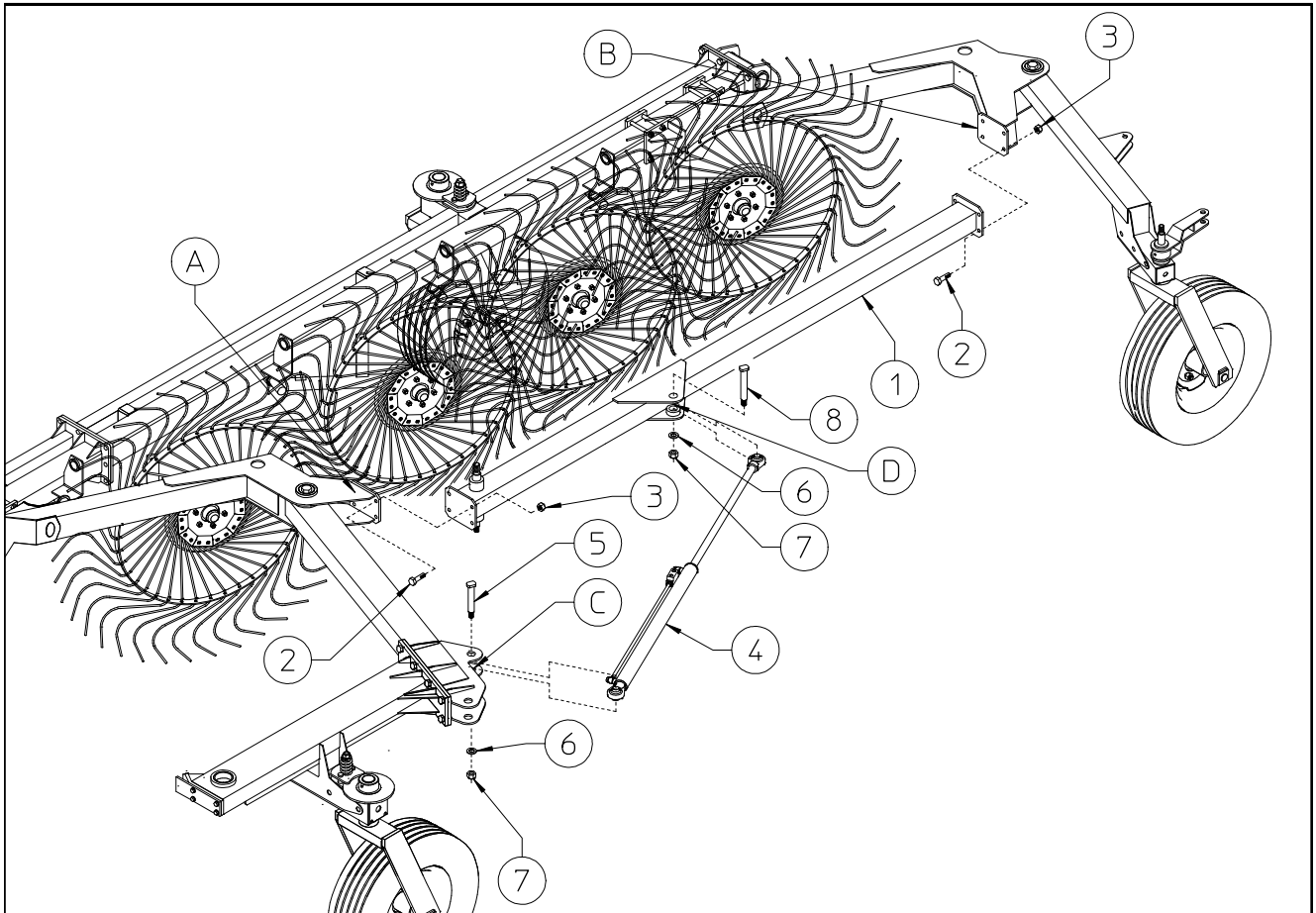
Position 7: 66-78 bolts M10x25 ($0.39'' \times 1''$)

Position 8: 66-78 split washers $\varnothing 10.5-17 \times 2.5$ ($\varnothing 0.41''-0.67'' \times 0.1''$)

Position 9: 66-78 nuts M10 ($0.39''$)

Position 10: 11-13 grease nipples M6x45°

Step 12



Step 12

Connect the tie rod 1 to the fixed arms A and B using the bolts 2 and nuts 3.
Connect cylinder 4 fastening the bottom at point C with pin 5, washer 6 and nut 7,
the head at point D with pin 8, washer 6 and nut 7.

IMPORTANT

Now fully tighten all bolts left loose in the preceding steps.

In this step use the following parts:

Position 2: 8 bolts M12x40

Position 3: 8 nuts M12

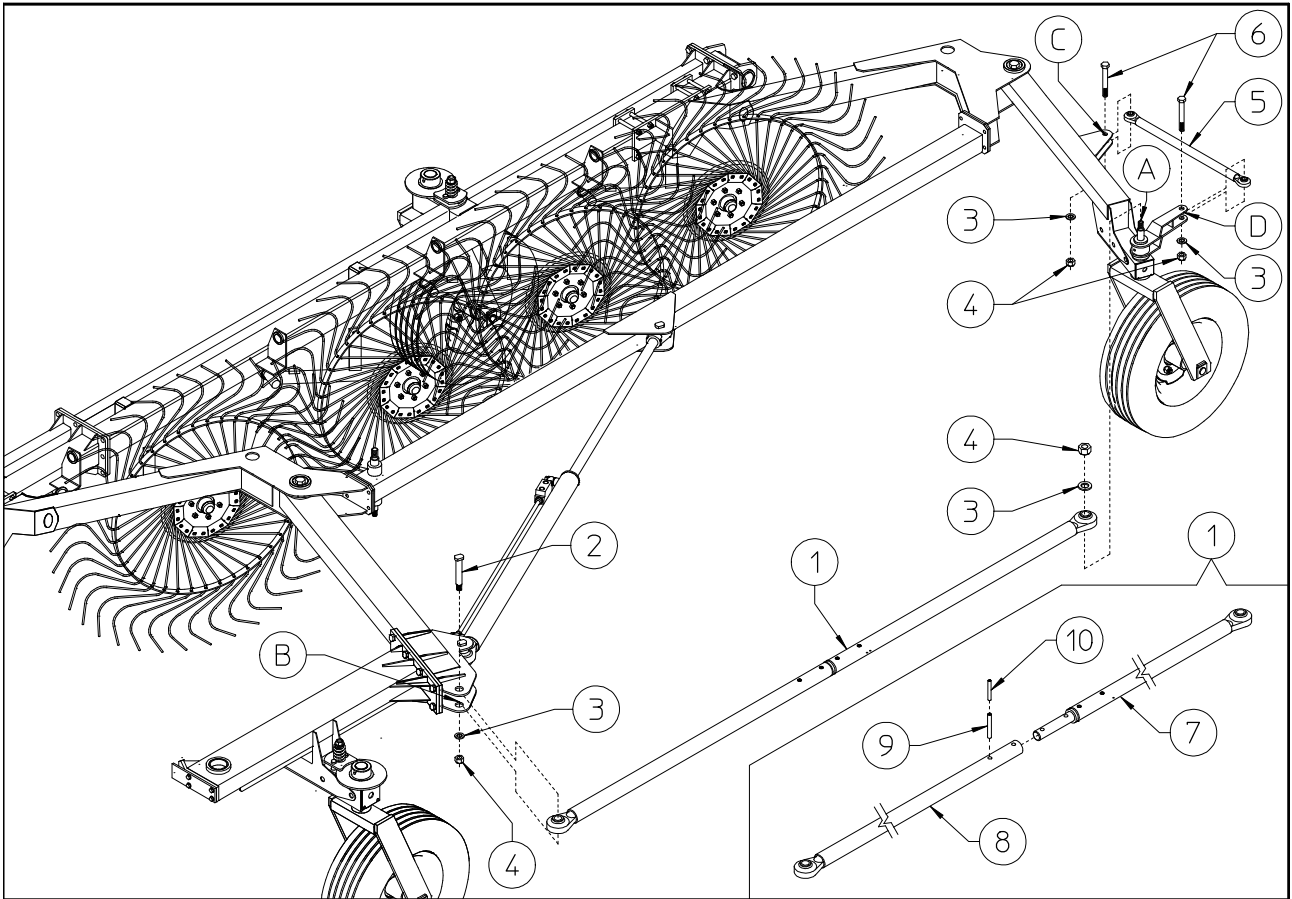
Position 5: 1 pin $\varnothing 30 \times 118$

Position 6: 2 washers $\varnothing 23-50 \times 4$

Position 7: 2 nuts M22

Position 8: 1 pin $\varnothing 30 \times 142$

Step 13



Step 13

Assemble tie rod 1, inserting part 8 into preassembled part 7 and fasten with pins 9 and 10, inserting one inside the other.

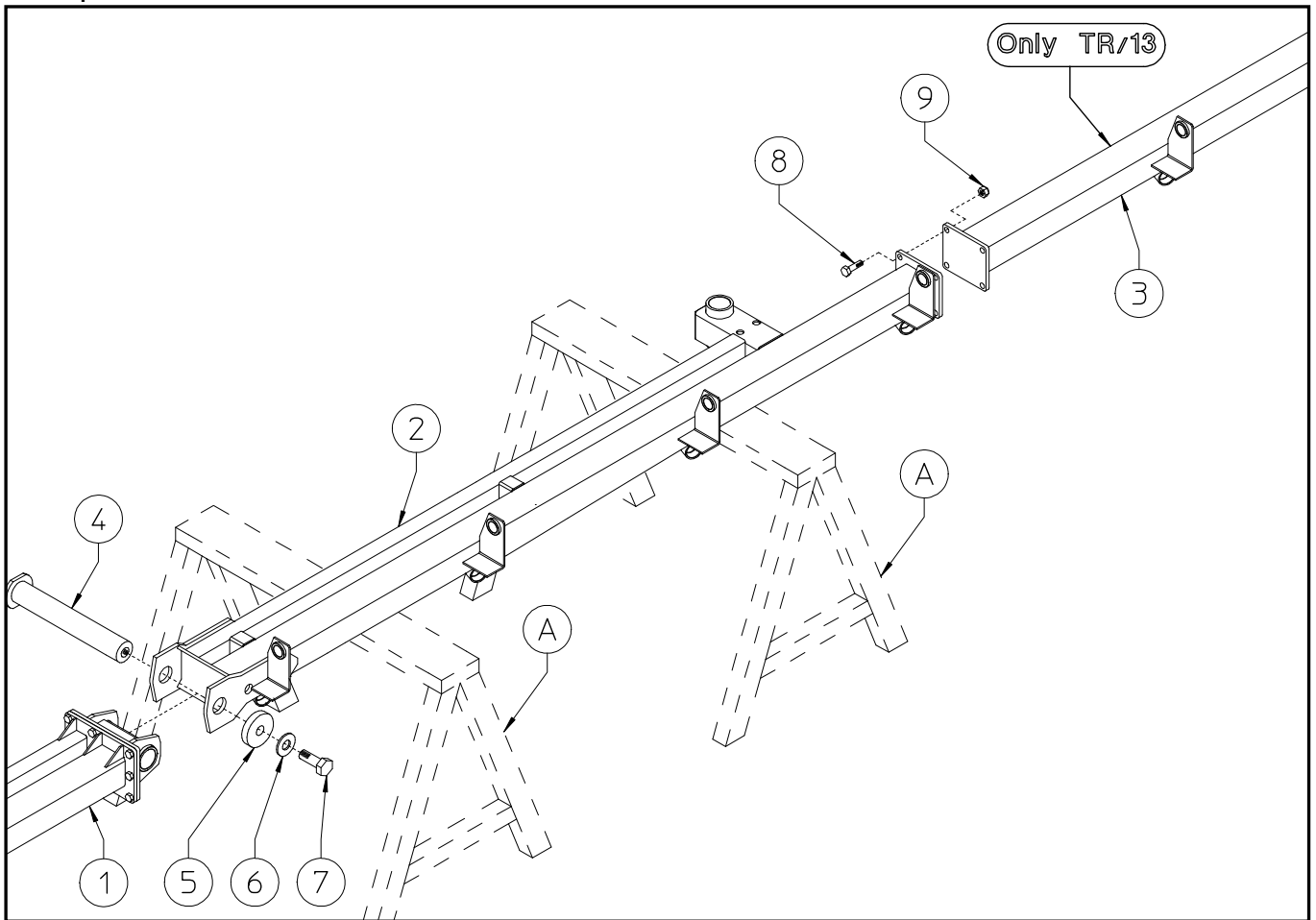
Connect tie rod 1, first inserting the swivel eye over pin A and fastening it in place with washer 3 and nut 4, then rotate it and insert it between the two plates B, fastening it with pin 2, washer 3 and nut 4.

Connect tie rod 5, inserting it first at point C and fastening it with bolt 6, washer 3 and nut 4, then rotate it until it reaches point D and fasten with bolt 6, washer 3 and nut 4.

In this step use the following parts:

- Position 2: 1 pin $\varnothing 30 \times 118$
- Position 3: 4 washers $\varnothing 23-50 \times 4$
- Position 4: 4 nuts M22
- Position 6: 2 bolts M22x80
- Position 9: 4 pins $\varnothing 12 \times 50$
- Position 10: 4 pins $\varnothing 7 \times 50$

Step 14



Step 14

Connect the swiveling section 2 (resting on supports A) to swivel attachment section 1 using pin 4, spacer 5, washer 6 and bolt 7.

For TR/13

Attach additional section 3 to section 2 with bolts 8 and nuts 9.

In this step use the following parts:

Position 4: 1 pin $\varnothing 50 \times 245$

Position 5: 1 spacer $\varnothing 23 - 75 \times 12$

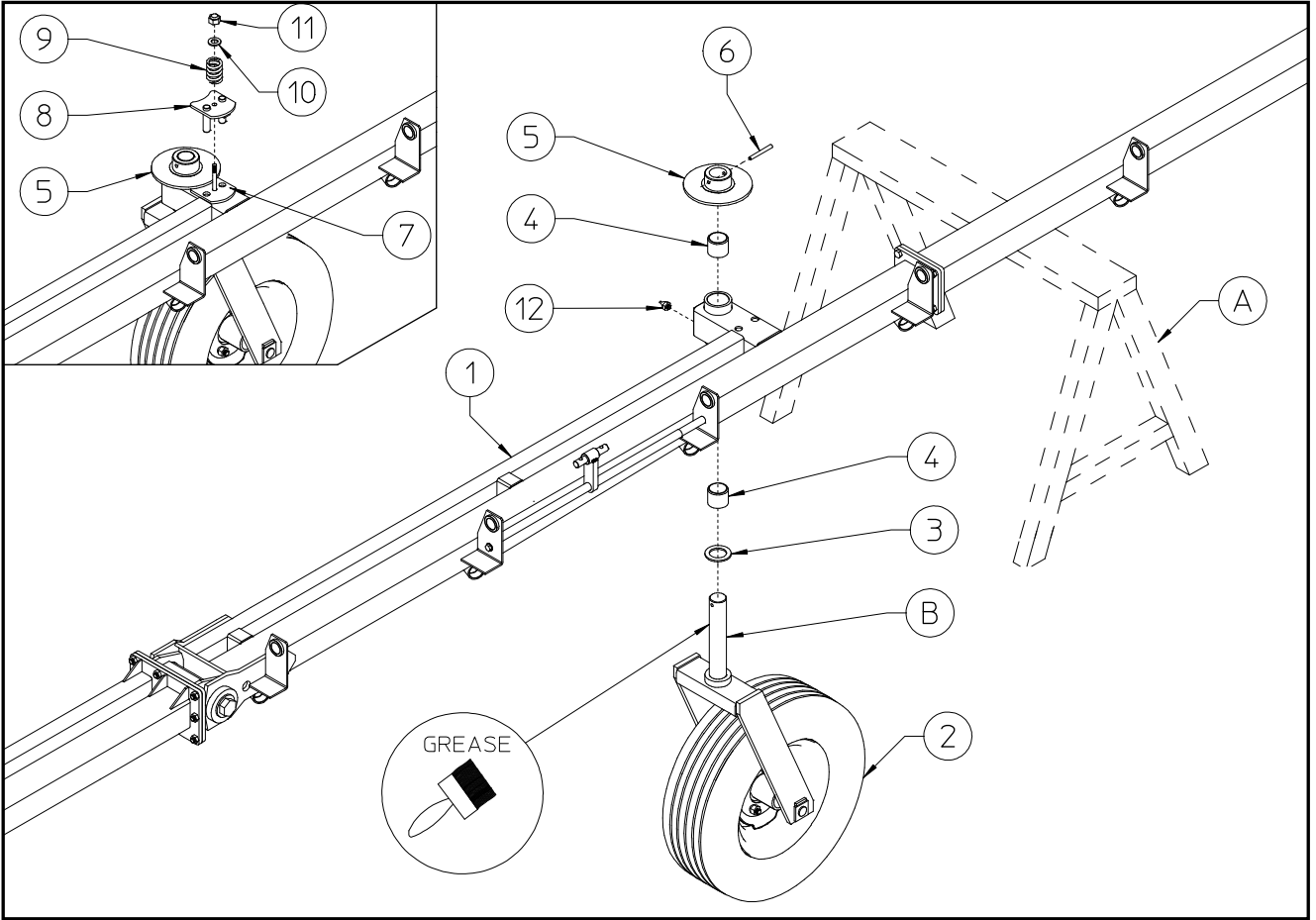
Position 6: 1 split washer $\varnothing 23$

Position 7: 1 bolt M22x50

Position 8: 6 bolts M16x45

Position 9: 6 nuts M16

Step 15



Step 15

Before attaching the wheel assembly 2, brush pin B and pin 6 with grease.

Insert nylon bushings 4 in the seats in section 1. Place the shim 3 over the pin of the wheel assembly 2.

Insert the preassembled wheel assembly 2 into the seat in section 1.

Attach the flange 5 to the pin on wheel assembly 2 using the spring pin 6.

Attach the grease nipple 12 to the seat in section 1.

Check to make sure that the wheel assembly 2 turns freely in the seat in section 1.

Attach the plate with screw 7 underneath flange 5.

Attach the counterplate 8 over the flange 5, inserting its pins into the holes in plate with screw 7 and in section 1.

Attach the spring 9, washer 10 and nut 11 to the screw on plate 7.

IMPORTANT:

The more spring 4 is compressed by tightening nut 11, the more the wheel rotation is braked, therefore check that it is properly adjusted before using the machine.

In this step use the following parts:

Position 3: 1 shim $\varnothing 50-76 \times 5$ (1.97"x3")

Position 4: 2 nylon bushings $\varnothing 50-60 \times 50$ (1.97"-2.36"x1.97")

Position 6: 1 spring pin $\varnothing 10 \times 80$ (0.4"x3.15")

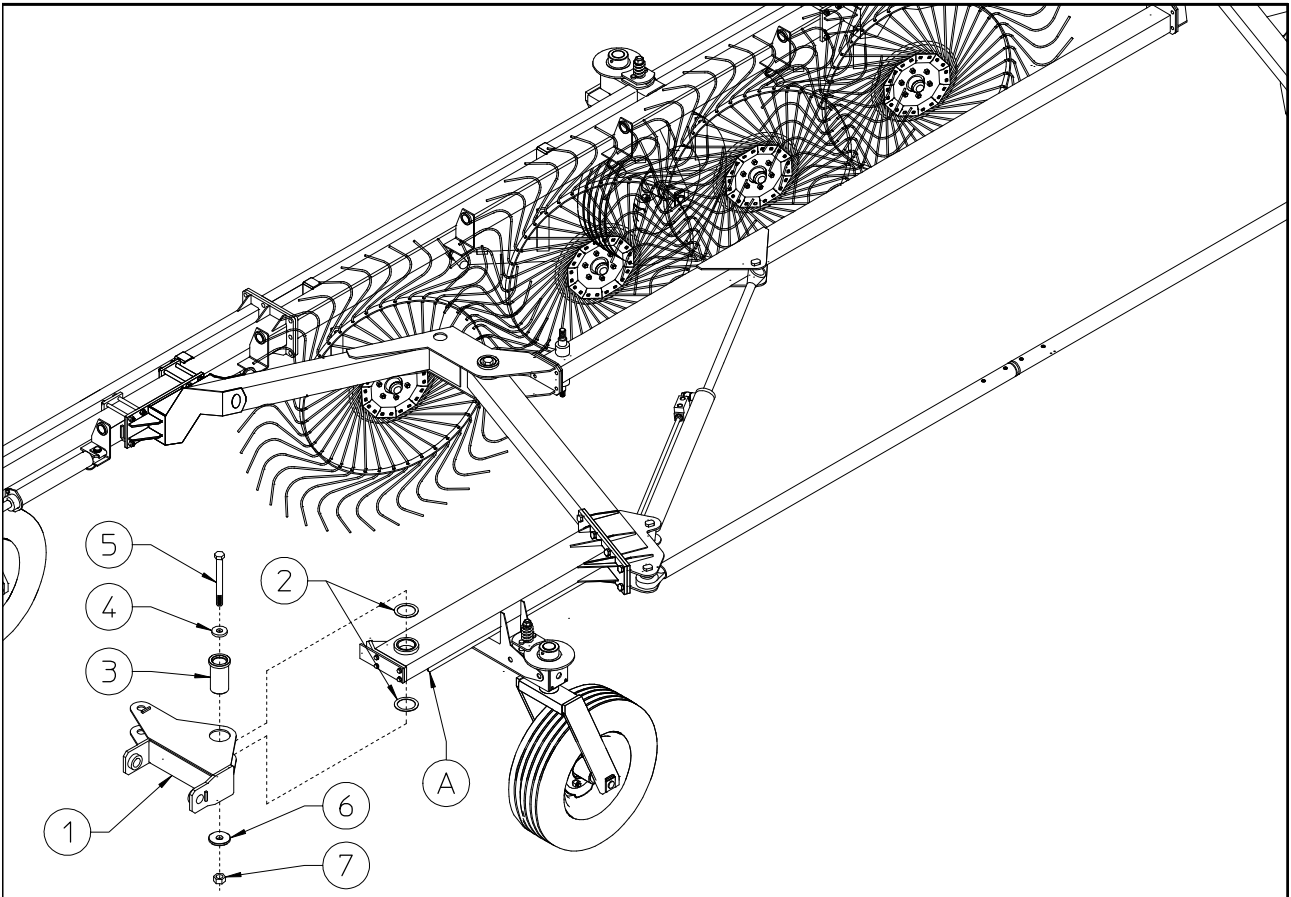
Position 9: 1 spring $\varnothing 5-30 \times 45$ (0.20"-1.42"x0.1")

Position 10: 1 washer $\varnothing 12-36 \times 2.5$ (0.47"-1.42"x0.1")

Position 11: 1 nut (0.47")

Position 12: 1 grease nipple M8

Step 16



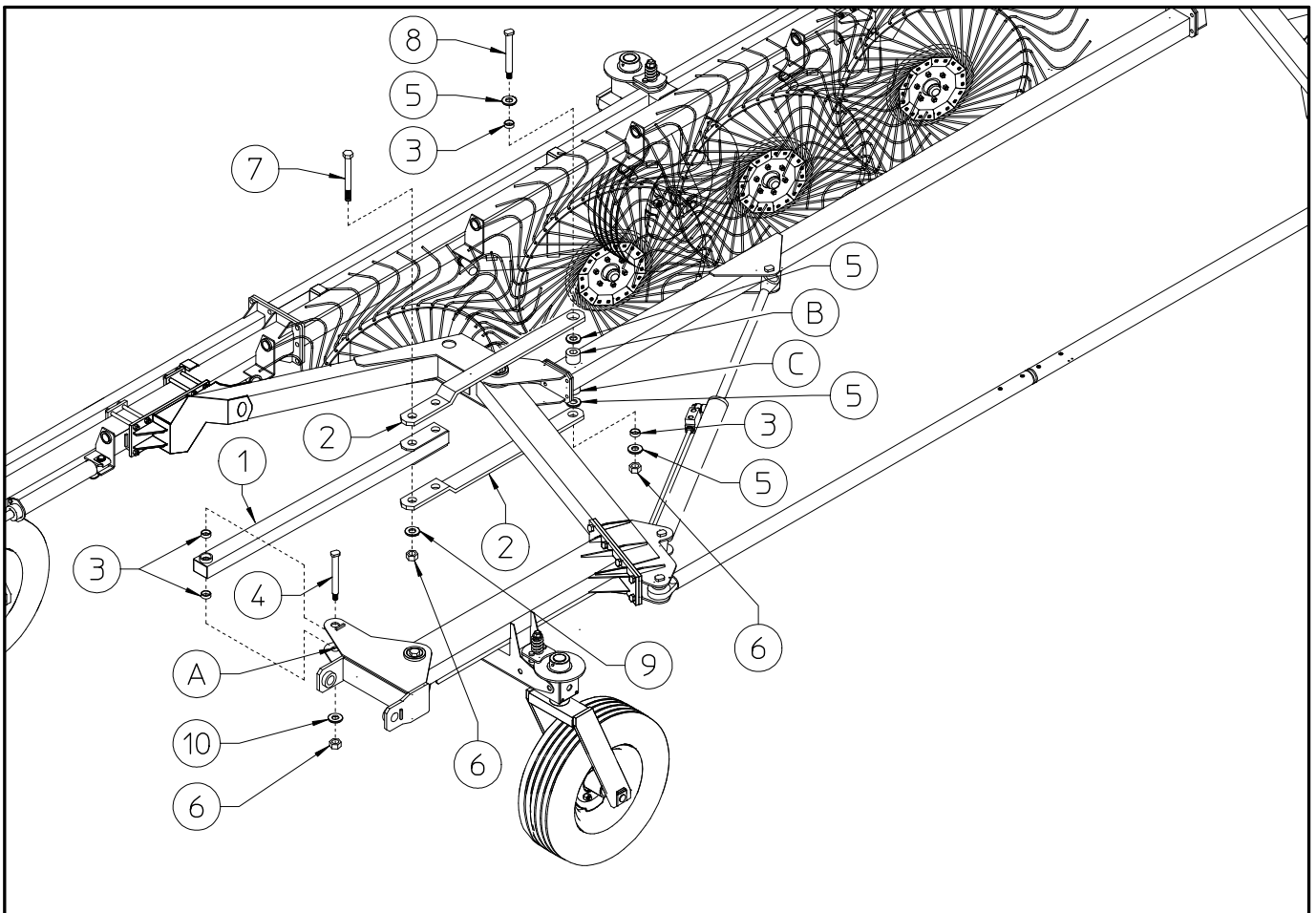
Step 16

Attach the swiveling bracket 1 to arm A, first inserting the two shims 2 between the two plates, then assemble the pin 3, washer 4, bolt 5, washer 6 and nut 7. Make sure that bracket 1 swivels freely in arm A.

In this step use the following parts:

- Position 2: 2 shims $\varnothing 75-100 \times 1$
- Position 3: 1 pin $\varnothing 75 \times 127$
- Position 4: 1 washer $\varnothing 25-64 \times 10$
- Position 5: 1 bolt M24X180
- Position 6: 1 washer $\varnothing 25-90 \times 10$
- Position 7: 1 nut M24

Step 17



Step 17

Connect the two bent brackets 2 at points B and C, insert bushings 3 and fasten with pin 8, washers 5 and nuts 6, without fully tightening.

Connect tie rod 1 between the two bent brackets and fasten it with bolts 7, washers 9 and nuts 6.

At this point tighten the nuts left previously loose.

Insert bushings 3 in tie rod 1, then rotate all as far as point A and fasten with pin 4, washer 10 and nut 6.

In this step use the following parts:

Position 3: 4 nylon bushings $\varnothing 25-40 \times 15$

Position 4: 1 pin $\varnothing 25 \times 162$

Position 5: 4 washers $\varnothing 25.5-50 \times 3$

Position 6: 4 nuts M22

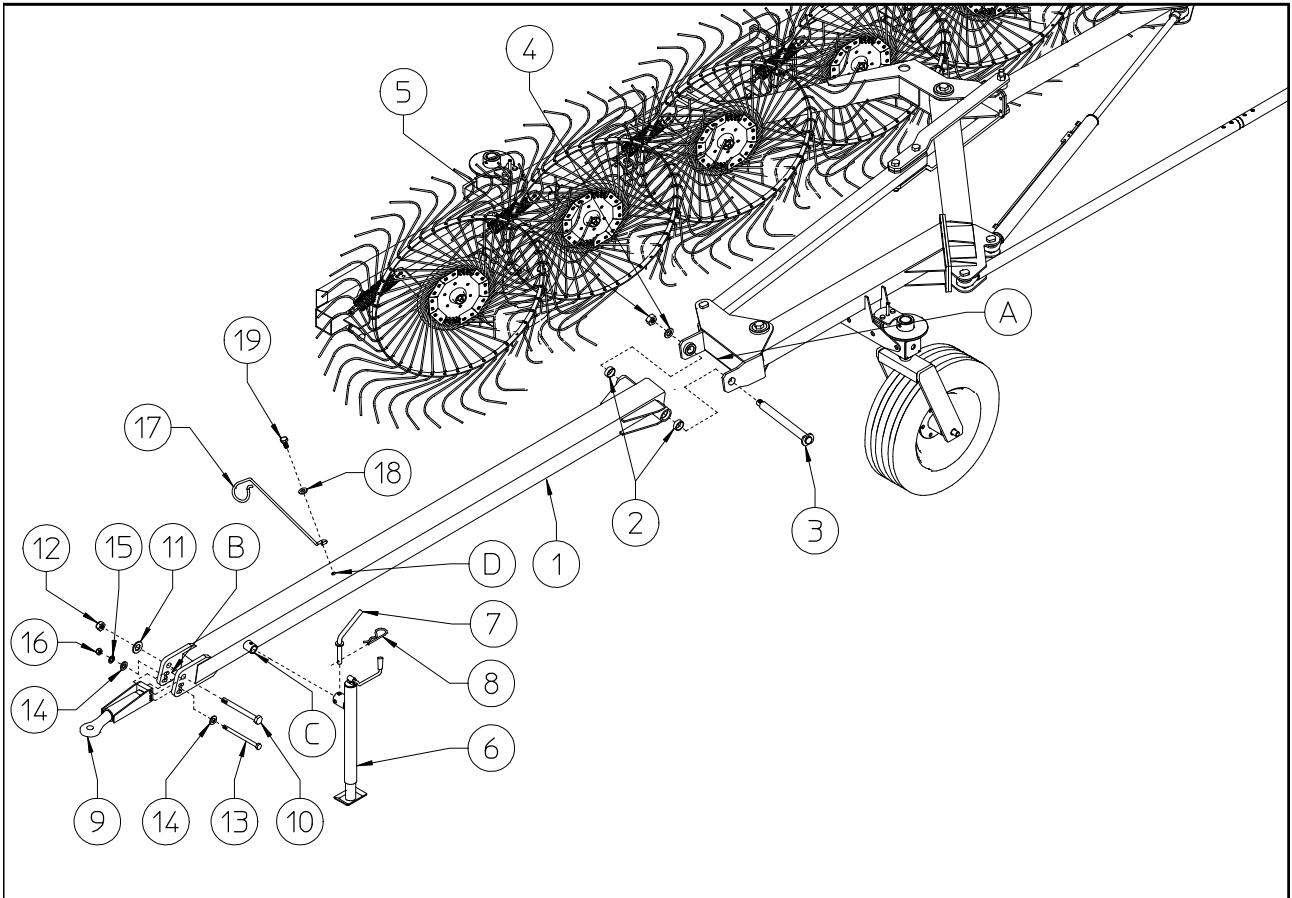
Position 7: 2 bolts M22x140

Position 8: 1 pin $\varnothing 25 \times 196$

Position 9: 2 washers $\varnothing 23$

Position 10: 1 washers $\varnothing 23-50 \times 4$

Step 18



Step 18

Insert bushings 2 in drawbar 1.

Connect drawbar 1 to bracket A and fasten with pin 3, washer 4 and nut 5.

Attach the package stand 6 at point C and fasten with pin 7 and R-clip 8.

Attach the tractor hitch 9 at point B and fasten in the upper hole with bolt 10, washer 11 and nut 12, in the lower hole with bolt 13, flat washers 14, split washer 15 and nut 16.

Attach hose bracket 17 to point D and fasten it with washer 18 and bolt 19.

In this step use the following parts:

Position 2: 2 bushings $\varnothing 35-39 \times 30$

Position 3: 1 pin $\varnothing 35 \times 400$

Position 4: 1 washer $\varnothing 23-50 \times 4$

Position 5: 1 nut M22

Position 7: 1 pin $\varnothing 15$

Position 8: 1 R-clip $\varnothing 3$

Position 10: 1 bolt M20x140

Position 11: 1 washer $\varnothing 21$

Position 12: 1 nut M20

Position 13: 1 bolt M12x140

Position 14: 2 washers $\varnothing 12-36 \times 2.5$

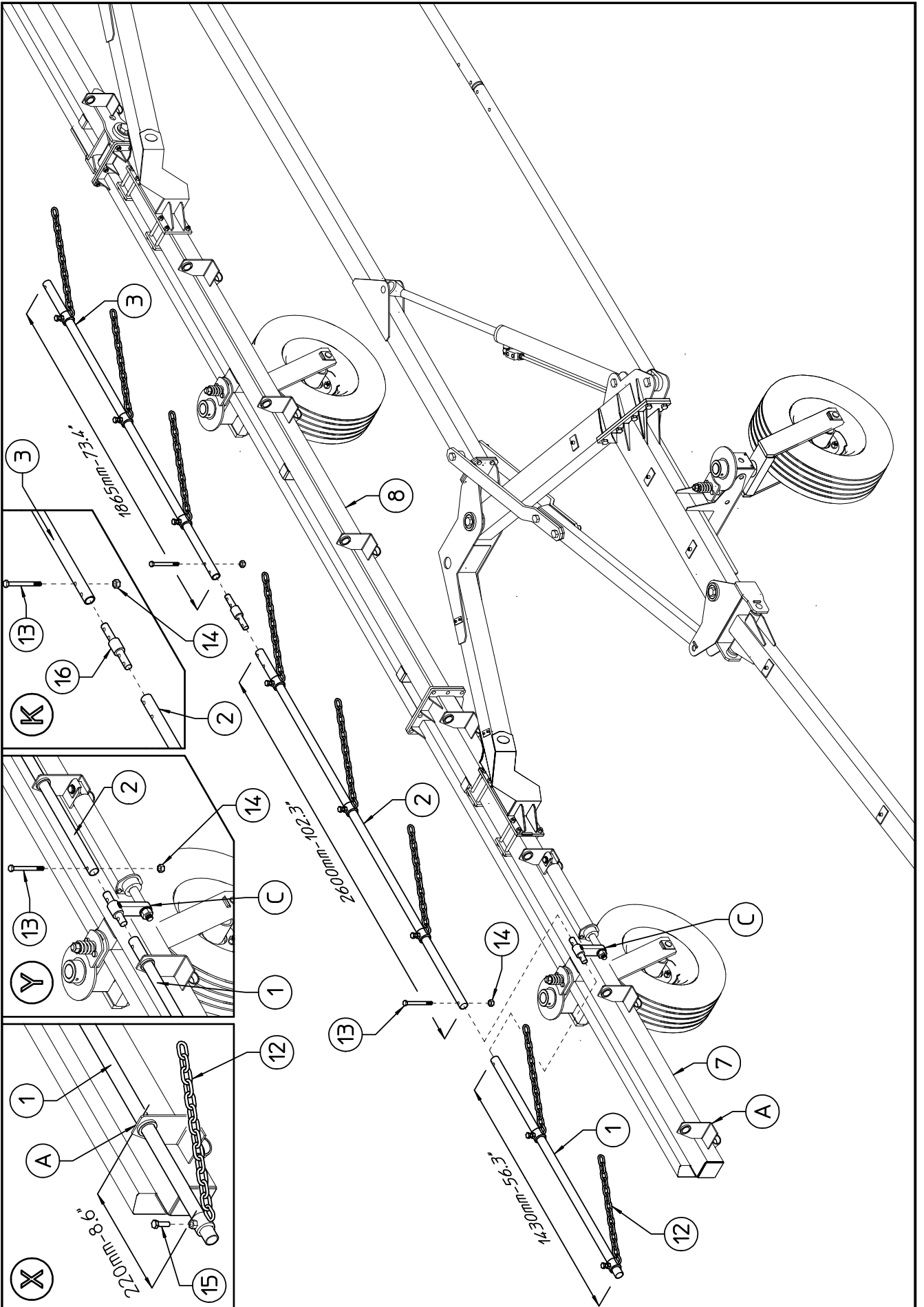
Position 15: 1 split washer $\varnothing 13$

Position 16: 1 nut M12

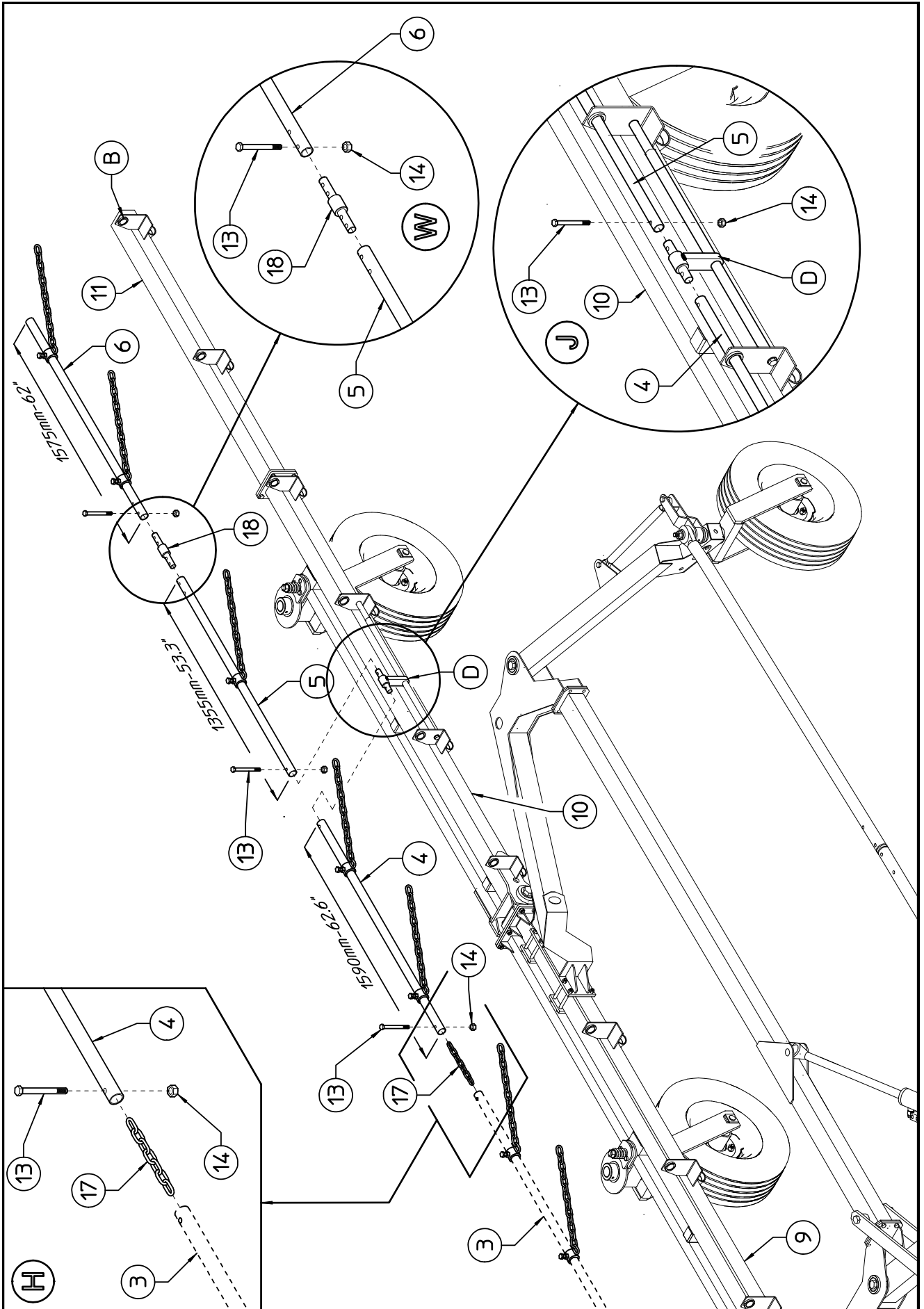
Position 18: 1 washer $\varnothing 12-40 \times 4$

Position 19: 1 bolt M12x25

Step 19



Step 19



Step 19

Insert pipes 1-2-3-4-5-6 in the proper places of sections 7-8-9-10-11.

The pipes can be inserted either from point A or from point B, following, however, the order shown above. At the same time the bushings with chain 12 must be put on the pipes (point X). To join pipe 1 to pipe 2, use pin C (already assembled by the manufacturer), bolts 13 and nuts 14 (point Y). To join pipe 2 to pipe 3, use the coupling pin 16, bolts 13 and nuts 14 (point K). To connect pipe 3 to pipe 4, insert the piece of chain 17 inside the pipes and fasten with bolts 13 and nuts 14 (point H). To connect pipe 4 to pipe , use pin D (already assembled by the manufacturer), bolts 13 and nuts 14 (point J). To connect pipe 5 to pipe 6 (for TR/13 only), use pin 18, bolts 13 and nuts 14 (point W). At this point fasten the bushings with chain 12 to the pipes at the position indicated using bolts 15.

IMPORTANT:

Once all this has been done, try to move the pipes manually forward and backward (removing the plastic cap on the oil port of the rear cylinder to facilitate movement) to see if everything has been assembled correctly. This is to avoid – in the case of incorrect assembly or wrong parts – causing damage to the structure when you go to actuate the cylinder with the tractor oil.

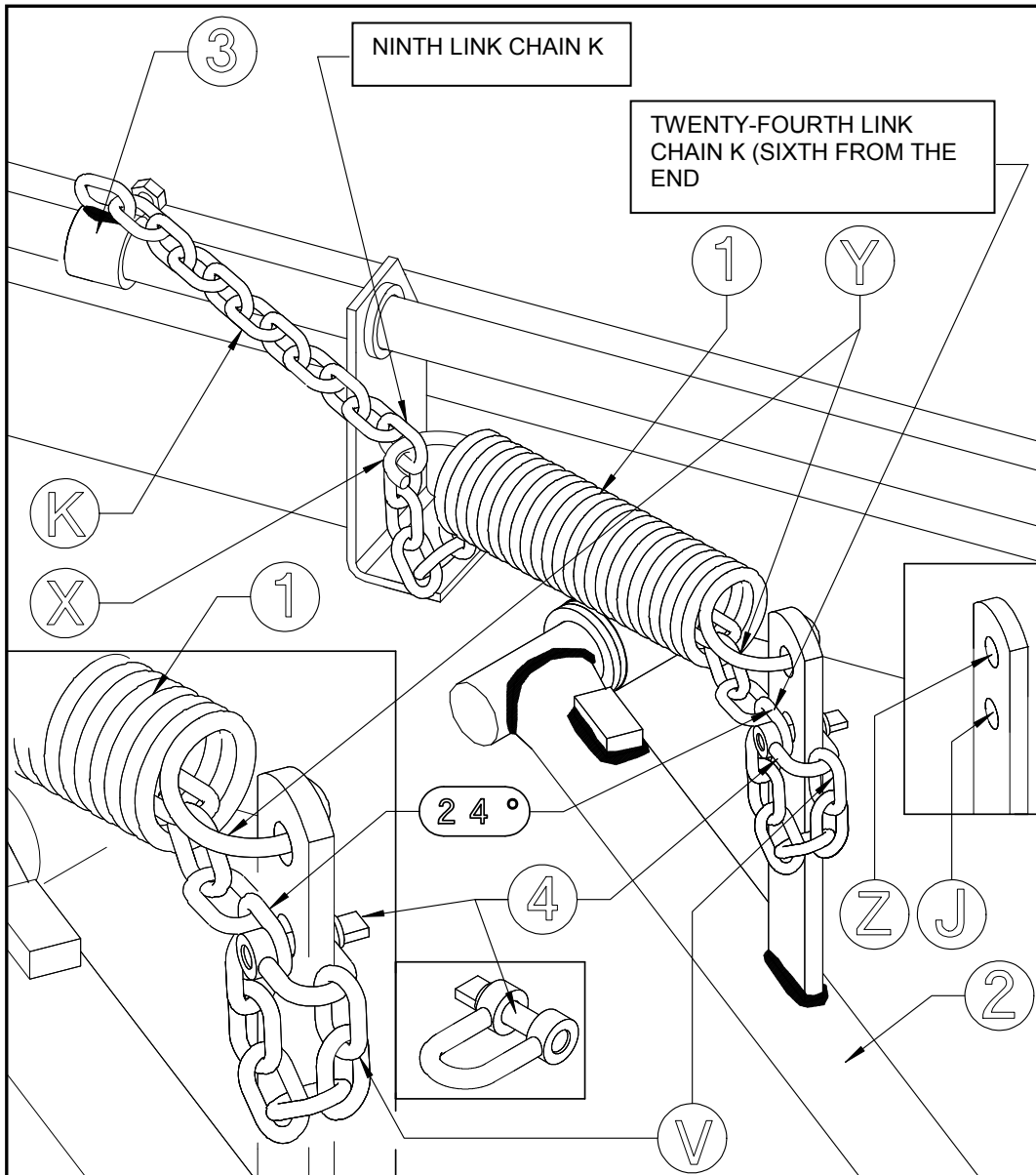
In this step use the following parts:

Position 13: 10-14 bolts M8x45 (0.31"x1.77")

Position 14: 10-14 nuts M8 (0.31")

Position 15: 11-13 bolts M10x25 (0.39"x1")

Step 20



Step 20

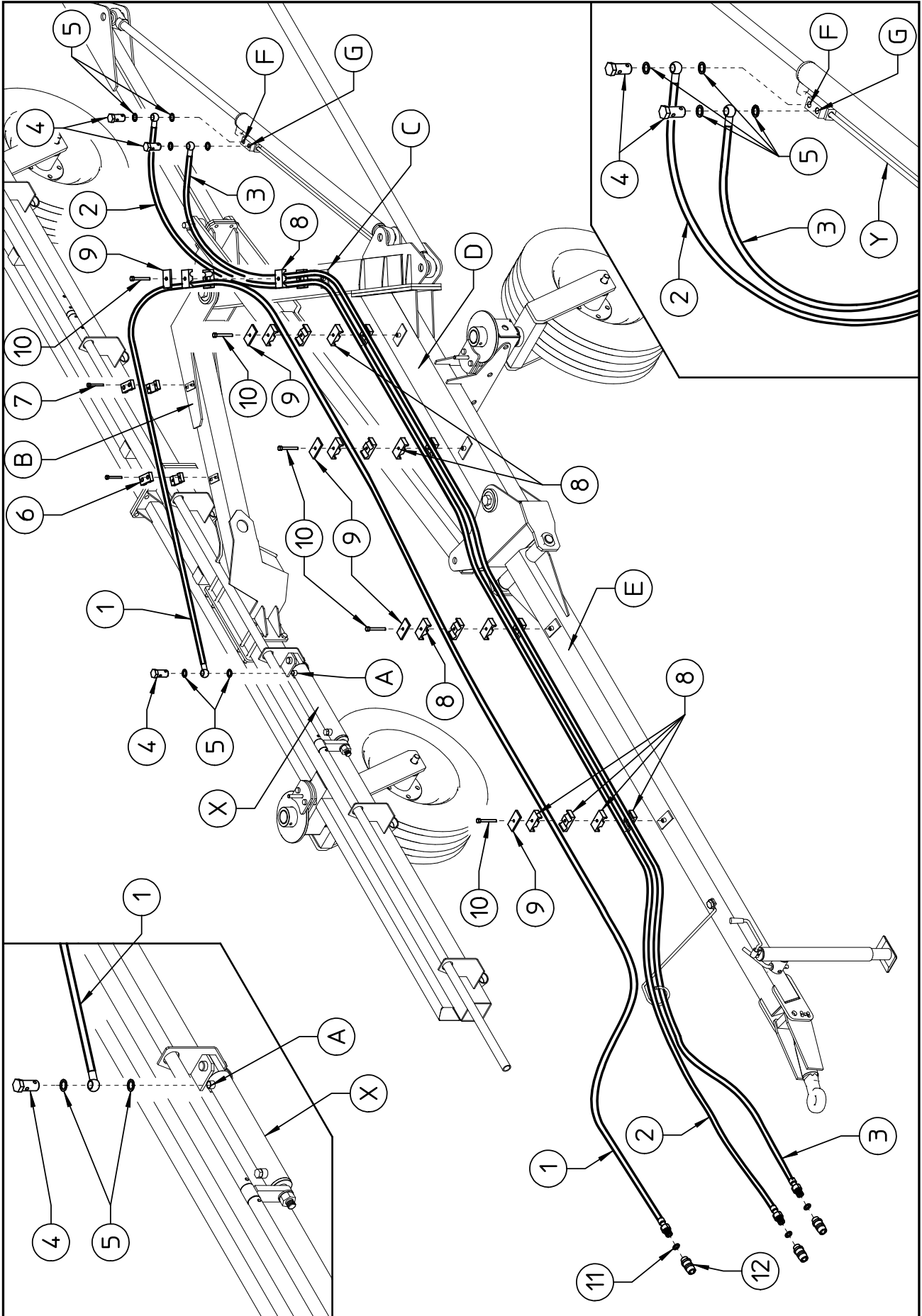
Hook X on spring 1 is more closed than hook Y. Hook Y (the more open one) should be inserted into hole Z in the lever of arms 2. First of all pass chain K welded to bushing 3 through the spring 1. Then hook Y on spring 1 to hole Z in the lever of arms 2. Hook the 9th link of chain K (counting from that welded to bushing 3) to hook X on spring 1. Hook the last link V of chain K onto U-bolt 4, then hook the 24th link of chain K (the 6th from the end) again by means of U-bolt 4 to hole J in the lever of arms 2. That described is the standard assembly of chain K to spring 1. The figure shows the correct position of the bushings with chain 3.

In this step use the following parts:

Position 1: 11-13 springs $\varnothing 7-56 \times 276$ ($\varnothing 0.27''-2.2'' \times 10.87''$)

Position 4: 11-13 U-bolts M8 (0.31'')

Step 21



Step 21

Connect the eye end of hose 2 to cylinder Y at point F using washers 5 and the screw-type coupling 4.

Connect the eye end of hose 3 to cylinder Y at point G using washers 5 and the screw-type coupling 4.

At this point do not fully tighten the screw-type coupling 4.

Secure the hoses to arm C at the positions shown using collars 8, then to arm D and lastly to the drawbar E.

Before fastening everything with plates 9 and bolts 10, place supports 8 one on top of the other so as to create another fastening point for hose 1.

Check that hoses 2 and 3 follow a line that is as even as possible and that they don't have any tight bends.

Connect the eye end of hose 1 to cylinder X at point A using washers 5 and the screw-type coupling 4.

At this point do not fully tighten the screw-type coupling 4.

Check that hose 1 follows a line that is as even as possible and that it doesn't have any tight bends.

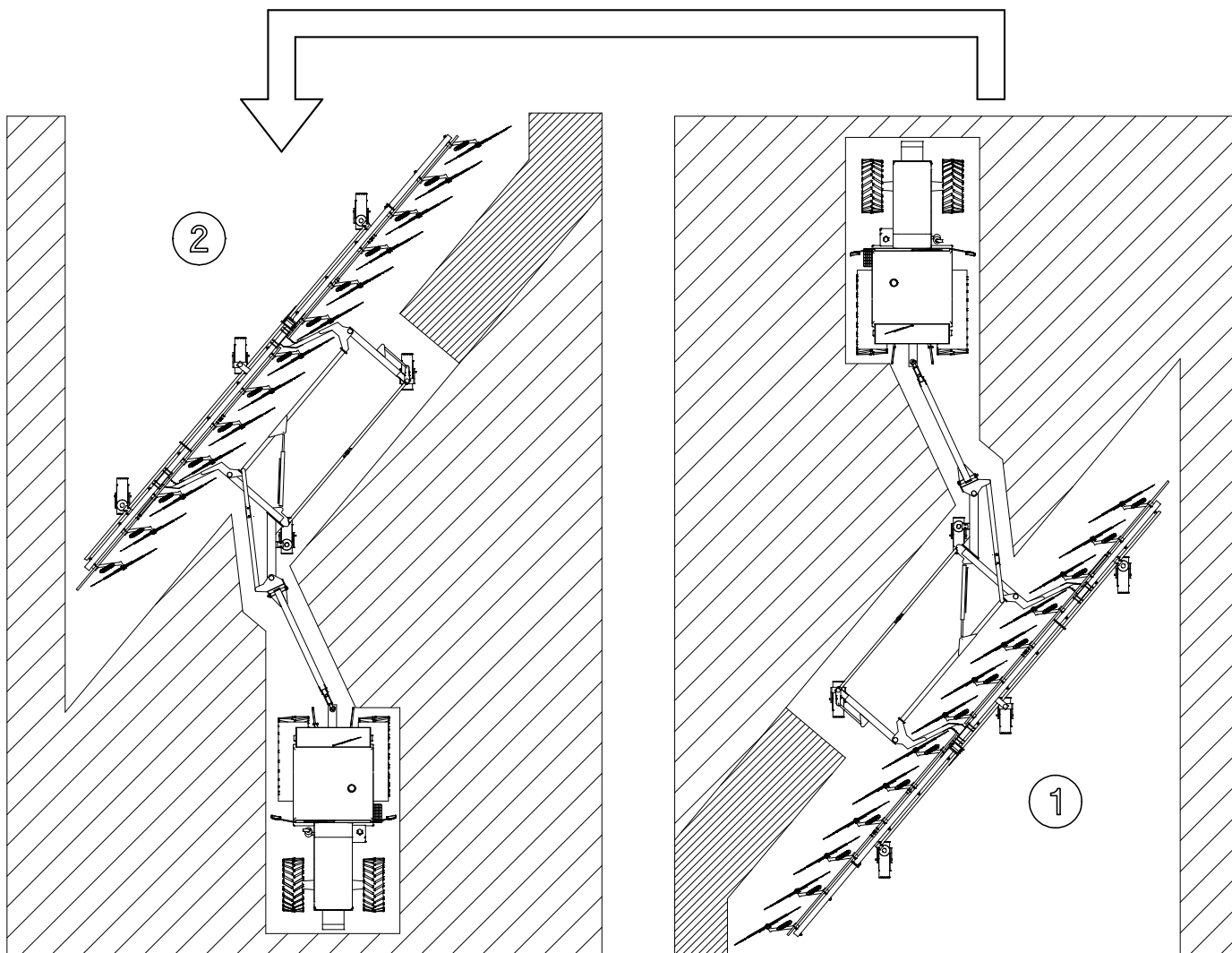
Fasten hose 1 to arm B in the positions shown using collars 6 and bolts 7.

Next following the line of the hose secure it to arm C at the position shown with collars 8, and then to arm D and lastly to the drawbar E.

At this point, with the line of the hoses established, all the collars 8 can be fully tightened with plates 9 and bolts 10, and then the screw-type couplings 4.

Lastly insert washers 11 and attach the quick-release couplings to hoses 1, 2 and 3.

5) INSTRUCTIONS FOR WORK AND TRANSPORT



IMPORTANT

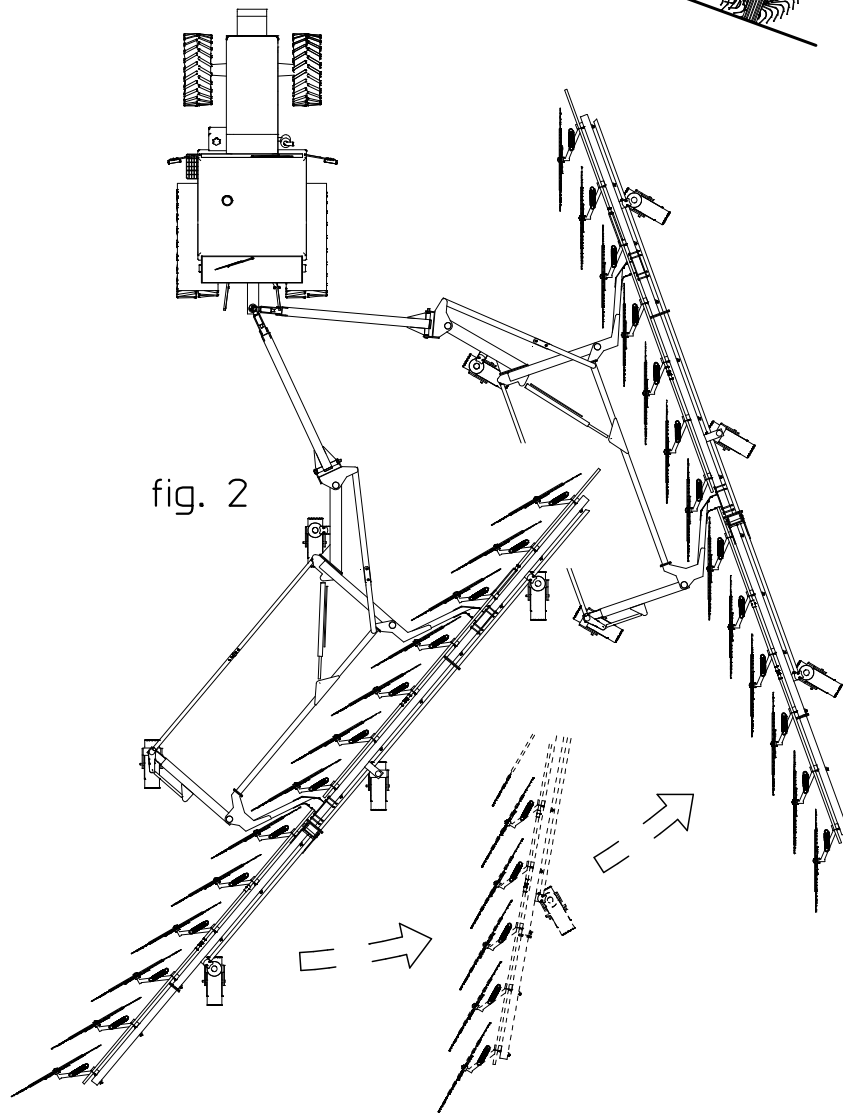
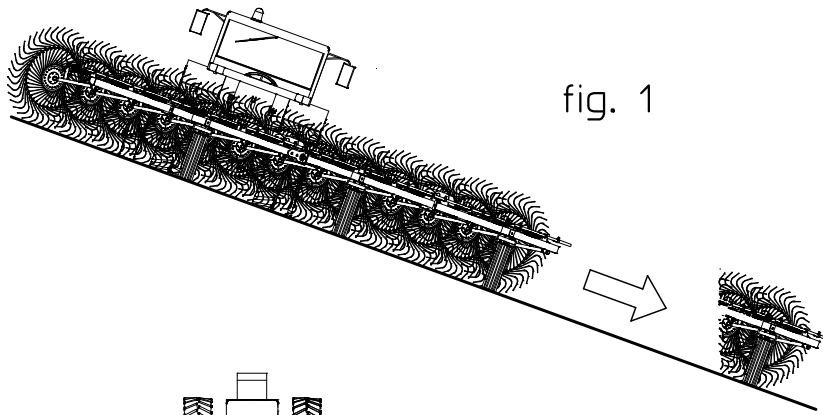
Start working from point 1.

Turn at the end of the field towards left and join the two swaths (point 2).

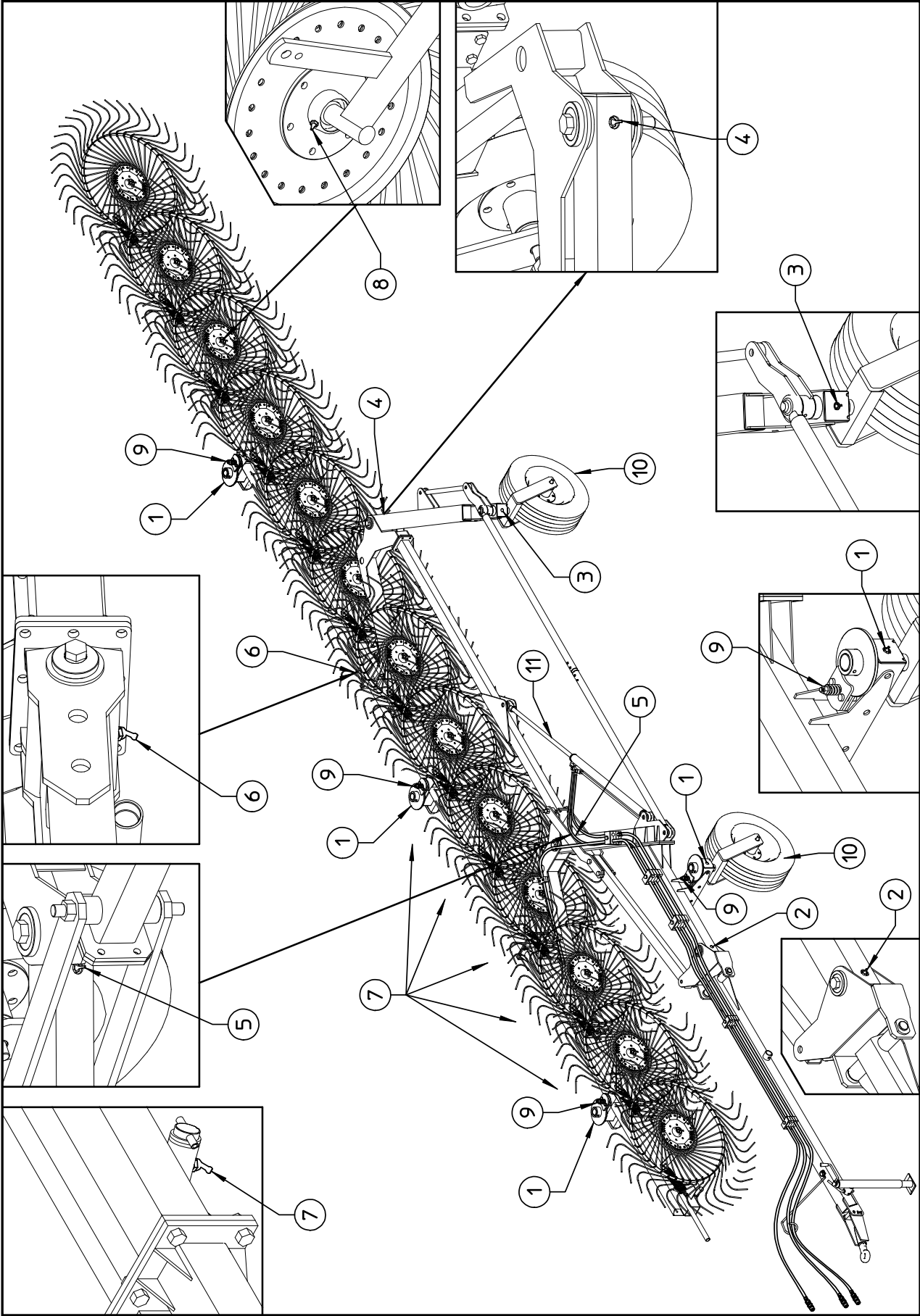
DANGER

Be very careful when working on slopes (Fig. 1)

The machine tends to rotate, pivoting at the tractor hitch (Fig. 2)



6) GENERAL MAINTENANCE INSTRUCTIONS



MAINTENANCE POINTS				
POS.	Qty.	DESCRIPTION	OPERATION	EVERY X HOURS
1	4	WHEEL SUPPORT	LUBRICATE	50(A)
2	1	FRONT DRAWBAR SUPP.	LUBRICATE	50(A)
3	1	WHEEL AXLE, SIDE REAR	LUBRICATE	50(A)
4	1	WHEEL AXLE, SIDE REAR	LUBRICATE	50(A)
5	1	FRONT AXLE DRAWBAR ATTACH.	LUBRICATE	50(A)
6	1	SECTION JOINT	LUBRICATE	25
7	11-13	RAKE WHEEL ARM JOINT	LUBRICATE	25
8	11-13	RAKE WHEEL HUB	LUBRICATE	25
9	4	PIVOTING WHEEL BRAKE	CHECK EFFICIENCY	C
10	5	TIRES	CHECK PRESSURE	D
11	2	CYLINDERS	CLEAN-LUBRICATE	B

GREASE TYPE: NLGI 1

A: Normally, lubricating the machine every 50 hours is sufficient, but to facilitate operation, it is a good practice to lubricate it when it has not been used a long period of time.

B: When exposed to weather these parts are subject to rusting, therefore each time that the machine is left unused for long periods (especially during the winter) brush the hydraulic cylinder piston rods with grease. When possible, keep the cylinders retracted so that a minimum part of the piston rod is exposed outside the cylinder barrel.

C: The wheels must pivot freely, but without becoming uncontrollable. Check disk wear each season.

D: Check the tire pressure each time the machine is used, especially when it has not been used a long period of time. if necessary inflate to the proper pressure according to the information printed on the tires.



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