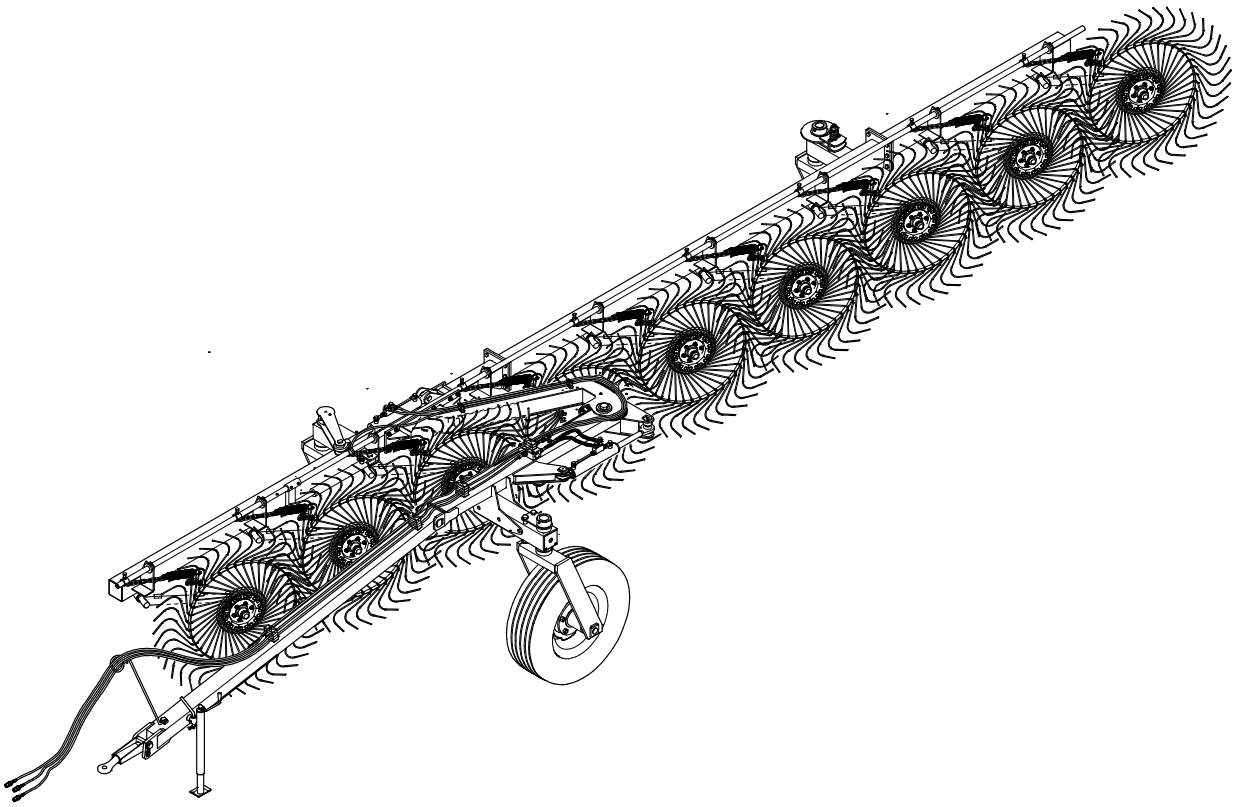
AGRICULTURAL MACHINERY

sitrex® Spa

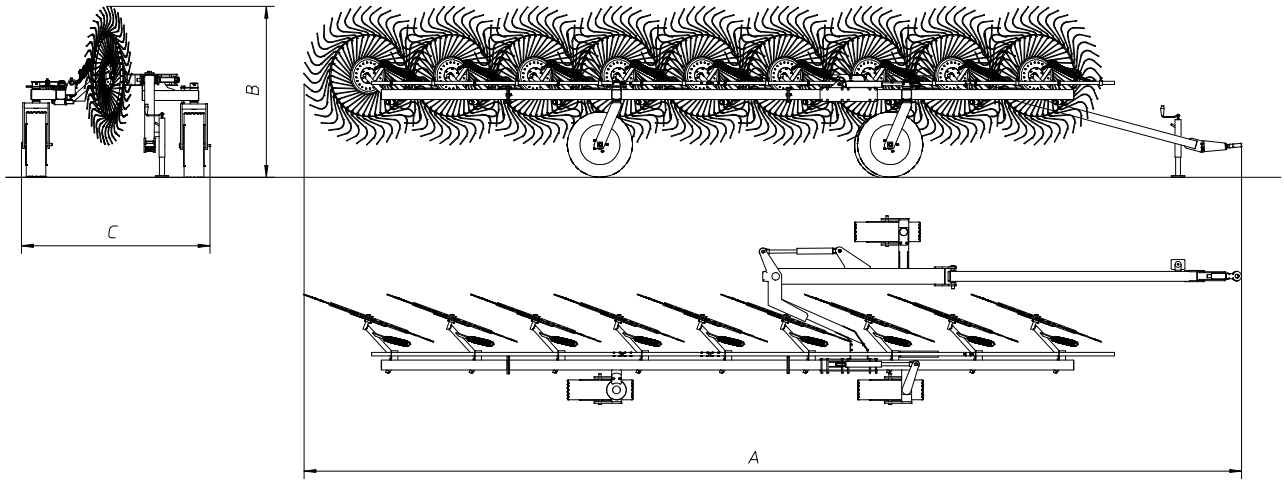
ASSEMBLY



TR/6-7-8-9 S

05/2014 TEMPORARY VERSION

TECHNICAL SPECIFICATIONS

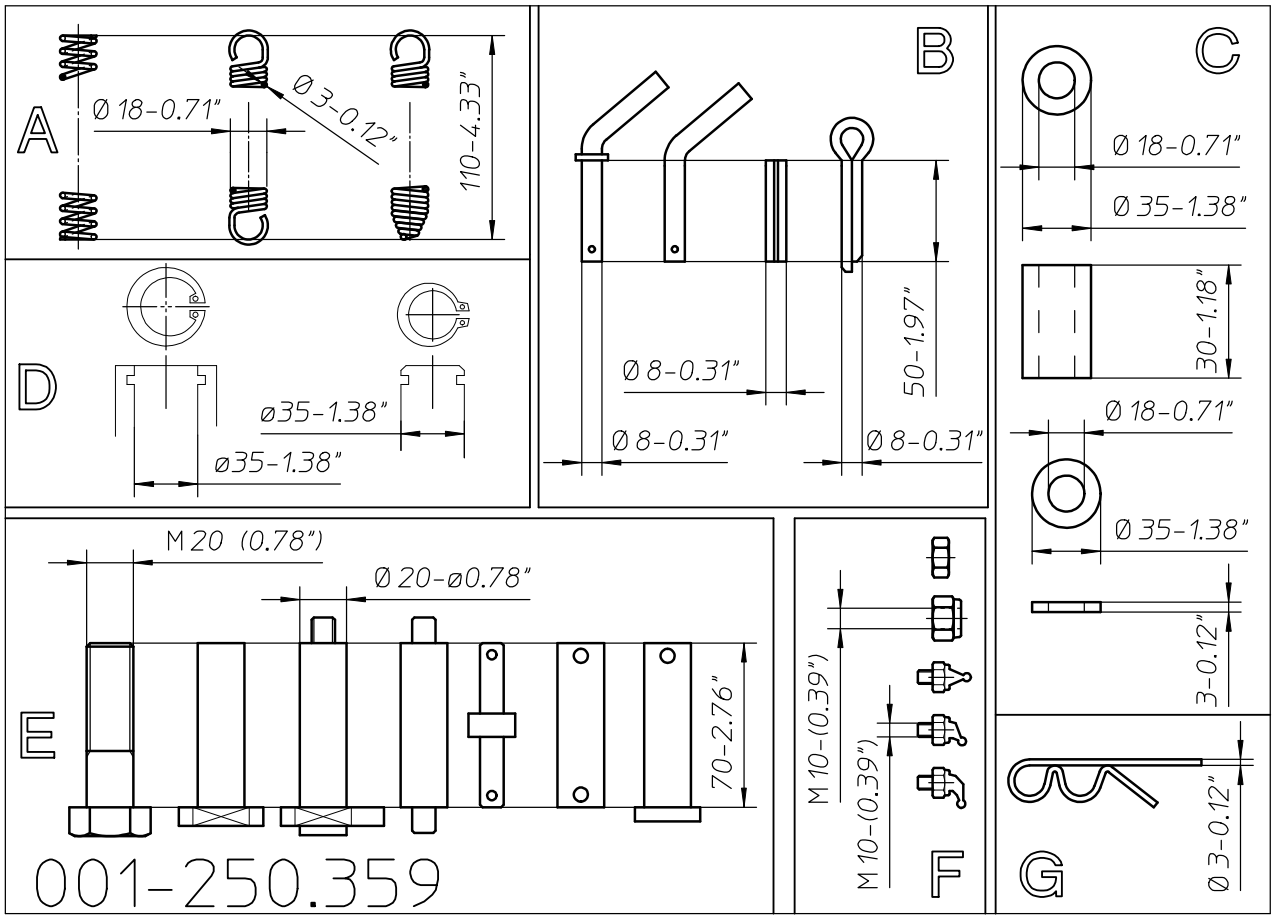


MODELS	TR/6-S	TR/8-S	TR/7-S	TR/9-S
Weight	675 Kg / 1485 lbs	745 Kg / 1640 lbs	700 Kg /1540 lbs	780 Kg /1720 lbs
Overall length (A)	7.1 m / 23'	8.75 m / 26'3"	7.95 m / 23'4"	9.65 m / 31'6"
Transport height (B)	1.7 m / 67"	1.7 m / 67"	1.7 m / 67"	1.7 m / 67"
Transport width (C)	1.95 m / 77"	1.95 m / 77"	1.95 m / 77"	1.95 m / 77"
Number of rake wheels	6	8	7	9
Number of tines on each rake wheel	40	40	40	40
Tines diam.	7mm/0.3"	7mm/0.3"	7mm/0.3"	7mm/0.3"
Wheel diam.	1.4 m / 55"	1.4 m / 55"	1.4 m / 55"	1.4 m / 55"
Raking working width	4 m / 13'2"	5 m / 16'5"	4.5 m / 14'9"	5.5 m / 18'
Working speed	22 kmh / 14 mph	22 kmh / 14 mph	22 kmh / 14 mph	22 kmh / 14 mph
HP required min.	30 Hp / 26 Kw	30 Hp / 26 Kw	30 Hp / 26 Kw	30 Hp / 26 Kw

The data are approximate. Sitrex reserves the right to change them at any time without notice.

Assembly Instructions

Examples of general measurements for identifying accessories for assembly according to type.



For tightening torques, see the table below (the class of the material is normally stamped on the head of the bolts).

MINIMUM HARDWARE TIGHTENING TORQUES

IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS

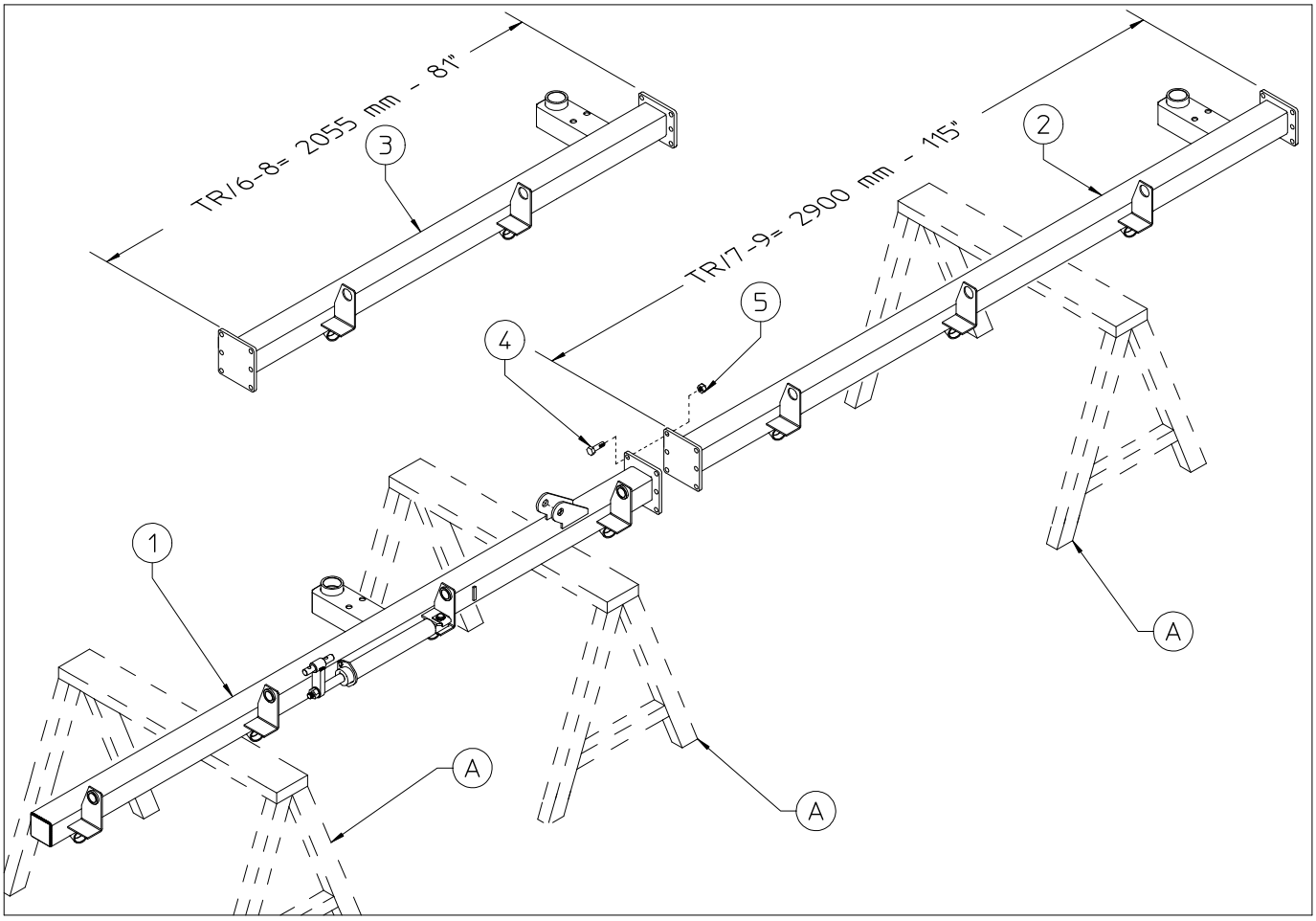
METRIC NON-FLANGED HARDWARE AND LOCKNUTS

NOMINAL SIZE	CLASS 5.8		CLASS 8.8		CLASS 10.9		LOCKNUT CL.8 W/CL8.8 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.

ASSEMBLY SEQUENCE

The machine must be assembled in a suitable area, done by qualified personnel equipped with the proper clothing, protective equipment and tools necessary for the job. Only authorized persons should be in the assembly area.
Always use great caution because the assembly steps are dangerous.

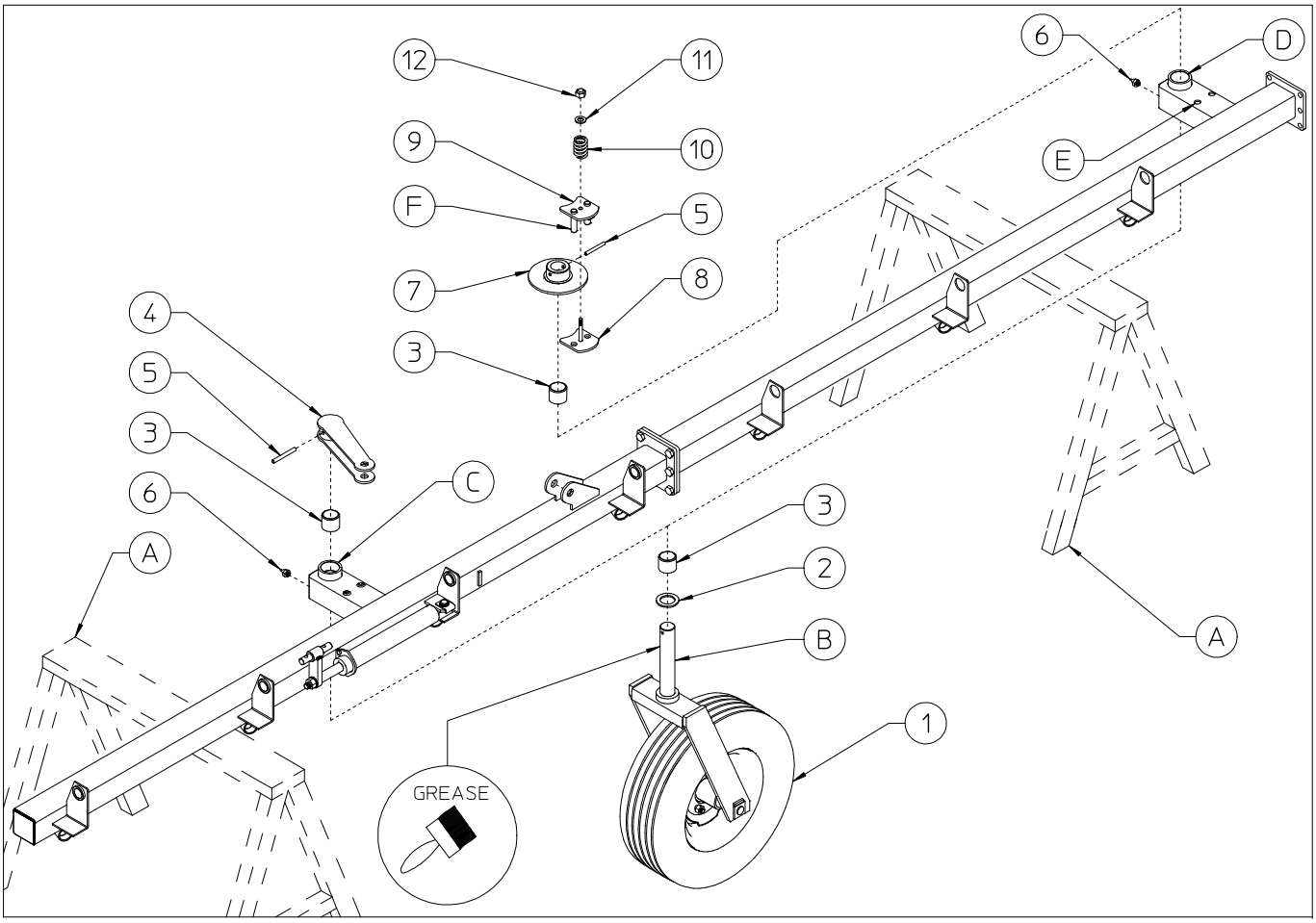


1) DANGER

Place the section 1 on the supports A.
Attach section 1 to section 2 (TR/7-9) or 3 (TR/6-8) using bolts 4 and nuts 5.
Place the section 2 (or 3) on support A.

In this step, you will use:

Item 4: 6 bolts M16x45 (0.63”x1.77”)
Item 5: 6 nuts M16 (0.63”)



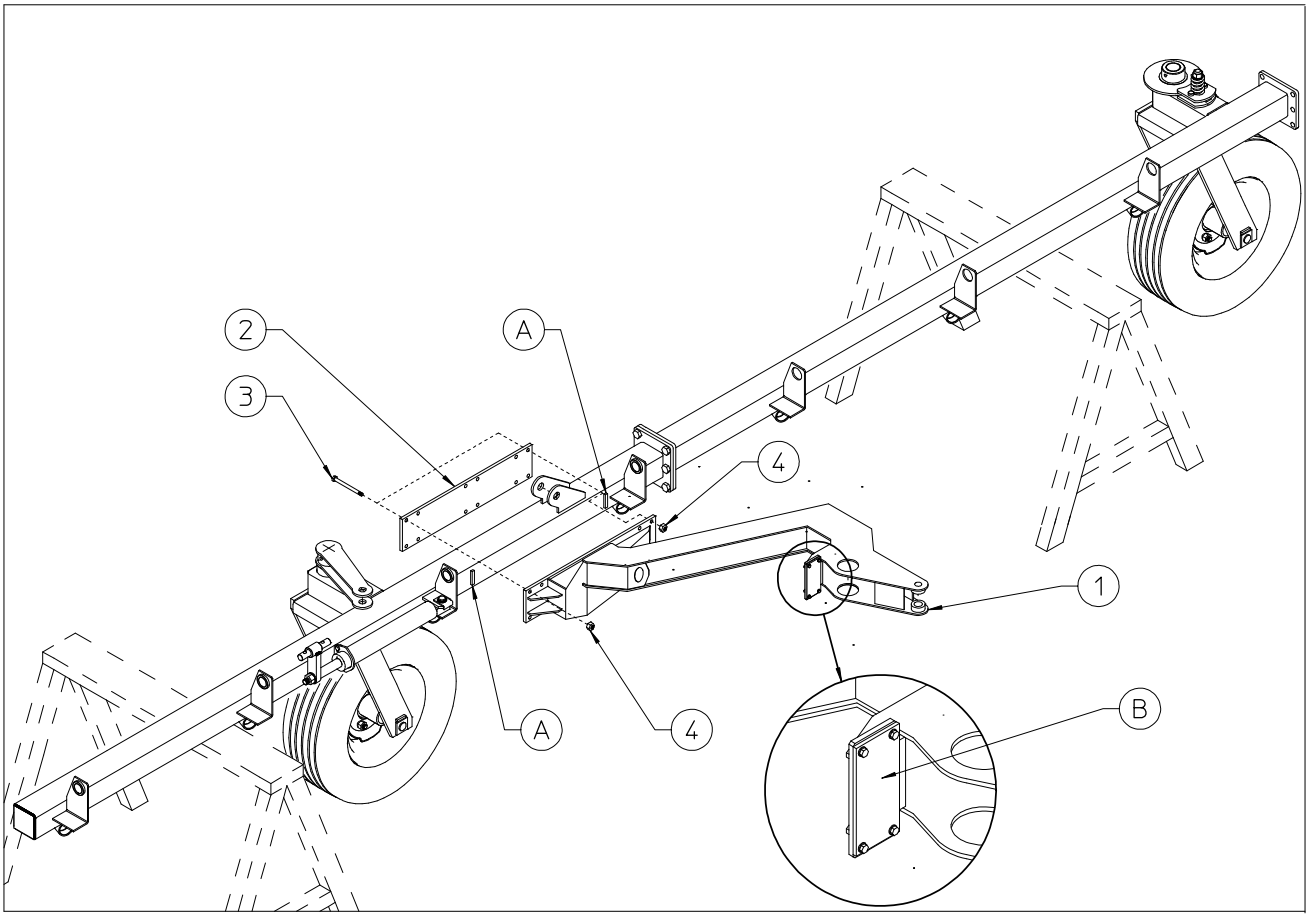
2) DANGER

Before attaching the wheel units 1, brush pin B and spring pins 5 with grease.

Insert the nylon bushings 3 into the proper seats C-D. Place spacer 2 on the pins B of the wheel units 1. Insert the wheel units 1 into the proper seat C. Attach the lever 4 into the pins B of the wheel units 1 using the spring pins 5. Attach the grease nipples 6 to the proper seat C.
Insert the wheel units 1 into the proper seat D. Attach the flange 7 into the pins B of the wheel units 1 using the spring pins 5. Attach the plate with bolt 8 underneath flange 7. Attach the counterplate 9 over flange 7, inserting the counterplate pins F into the holes in the plate with bolt 8 and into holes E in the sections. Place the spring 10, and washer 11 over the plate 8 bolt and put nut 12 on the bolt.
Note: the more spring 10 is compressed by tightening nut 12, the more the turning of the wheel is braked, therefore check that it is adjusted properly when the machine is to be operated . Attach the grease nipples 6 to the proper seat D.

In this step, you will use:

Item 2: 2 spacers ø50-76x5 (1.97”x3”)
Item 3: 4 nylon bushings ø50-60x50 (ø1.97”-2.36x1.97”)
Item 5: 2 spring pins ø10x80 (0.4”x3.15”)
Item 6: 2 grease nipples M8 (0.31”)
Item 10: 2 springs ø5-30x45 (0.20”-1.18”x1.77”)
Item 11: 2 washers ø12-36x4 (ø0.47”-1.42x0.16”)
Item 12: 2 nuts M12 (0.47”)



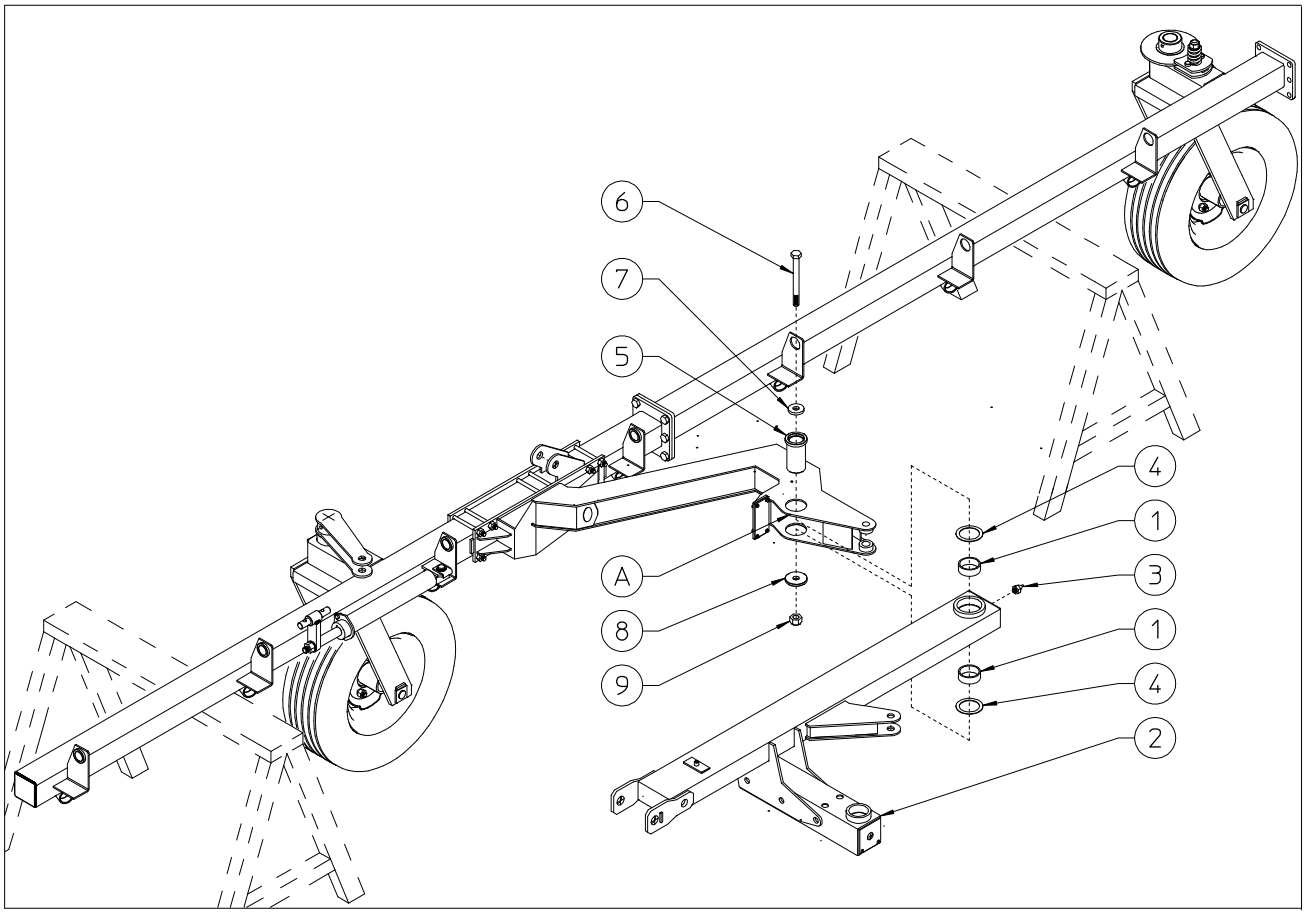
3) DANGER

Carry out this operation very carefully and with suitable lifting equipment because the support 1 is heavy and bulky.
Per prima cosa controllate che il costruttore abbia montato la battuta in gomma B sul supporto 1.
Il supporto 1 deve essere posizionato all'interno dei fermi A.

Attach the support 1 to sections by means of the counterplate 2, bolts 3 and nuts 4.

In this step, you will use:

Item 6: 12 bolts M14x140 (0.55"x5.51")
Item 7: 12 nuts M14 (0.55")

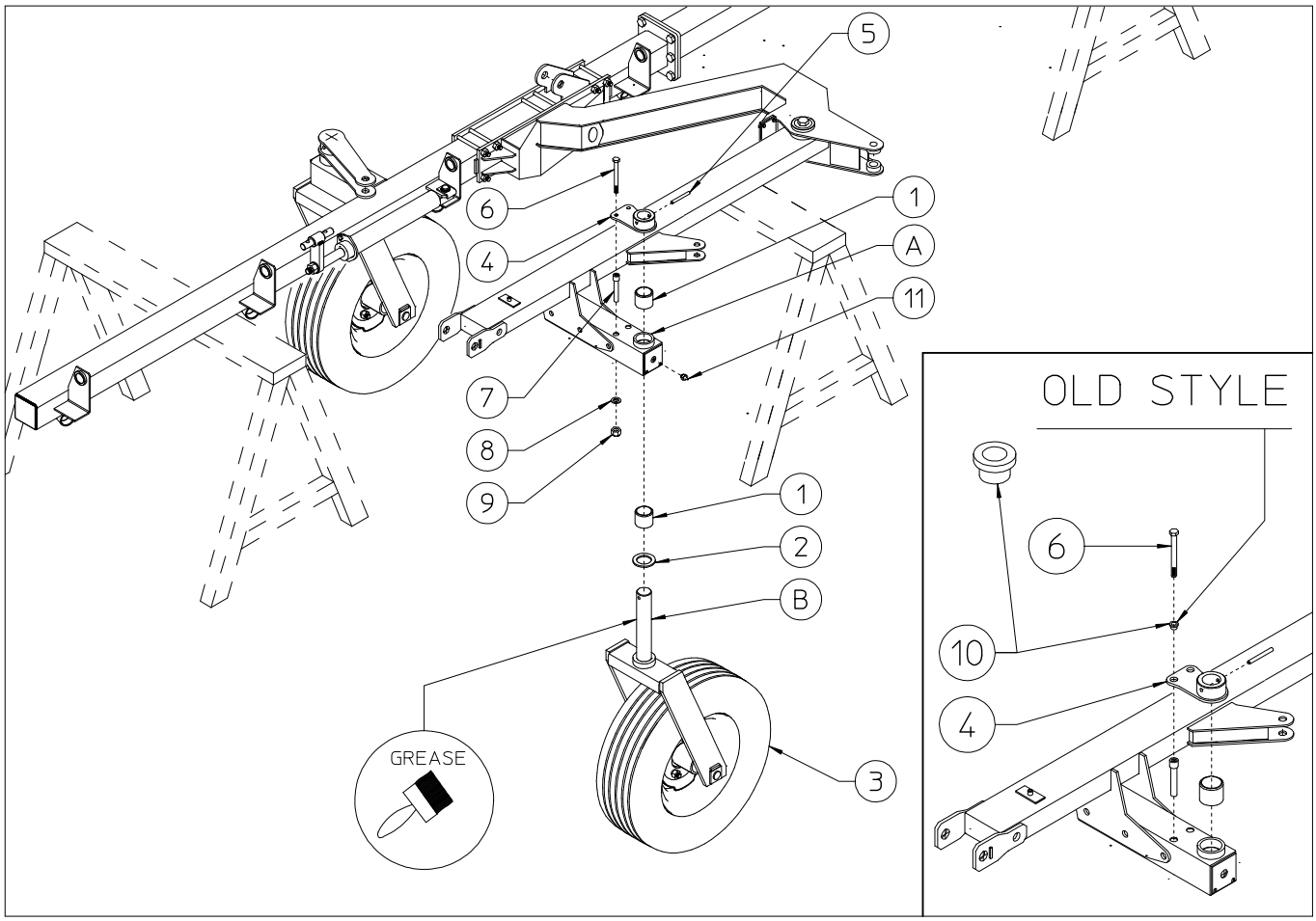


4)DANGER

Attach the nylon bushings 1 to the proper seats. Attach the grease nipple 3 to the proper seat.
Connect support 2 to seat A on the arm using pin 5, shims 4, bolt 6, washers 7-8 and nut 9.

In this step, you will use:

Item 1: 2 nylon bushings ø75-85x30 (ø2.95”-3.35”x1.18”)
Item 3: 1 grease nipple M8 (0.31”)
Item 4: 2 shims ø75-100x1 (ø2.95”-3.94”x0.04”)
Item 5: 1 pin ø 75x115 (2.95” x 4.53”)
Item 6: 1 bolt M24x165 (0.94”x6.5”)
Item 7: 1 washer ø25-64x10 (ø1”-2.52”x0.4”)
Item 8: 1 washer ø25-90x10 (ø1”-3.54”x0.4”)
Item 9: 1 nut M24 (0.94”)



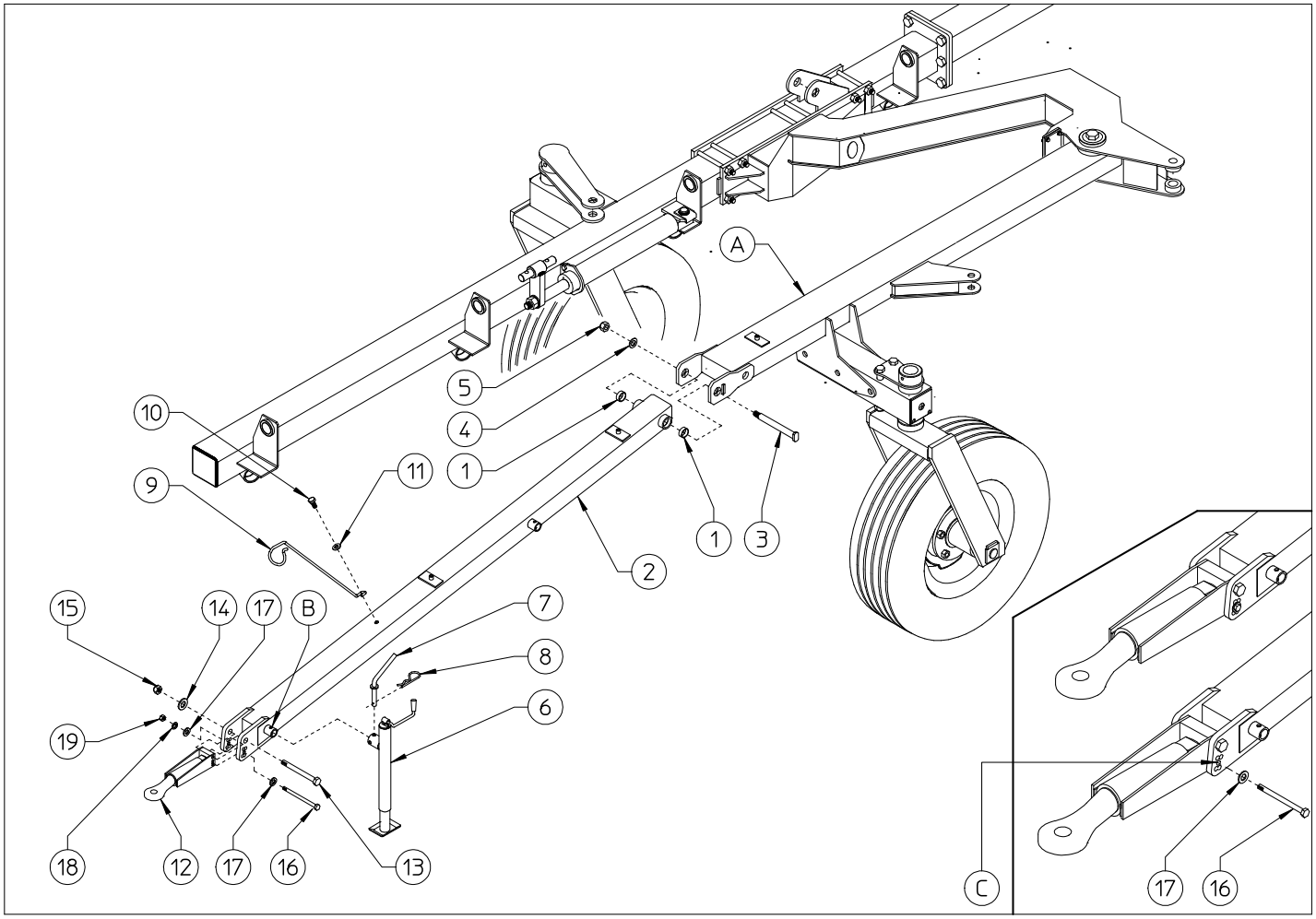
5) DANGER

Before attaching the wheel unit 3, brush pin B and spring pins 5 with grease.

Insert the nylon bushings 1 into the proper seats A. Place spacer 2 on the pins B of the wheel units 3. Insert the wheel units 1 into the proper seat A. Attach the lever 4 into the pins B of the wheel units 3 using the spring pins 5. Attach the lever 4 into the support using the screw 6, bushing 10 (old style only), bushing 7, washer 8 and nut 9.
Attach the grease nipple 10 to the proper seat.

In this step, you will use:

Item 1: 2 nylon bushings ø50-60x50 (ø1.97”-2.36x1.97”)
Item 2: 2 spacers ø50-76x5 (ø1.97”-3x0.2”)
Item 5: 1 spring pin ø10x80 (0.4”x3.15”)
Item 6: 2 screw M12x160 (0.4”x3.15”)
Item 7: 2 spacers ø21-30x134 (ø0.83”-1.18”x5.28”)
Item 8: 2 washers ø12-36x2.5 (ø0.47”-1.42x0.1”)
Item 9: 2 nuts M12 (0.47”)
Item 10: 2 spacers ø13-35x9 (ø1/2”-1.38”x0.35”) (old style only)
Item 11: 2 grease nipples M8 (0.31”)

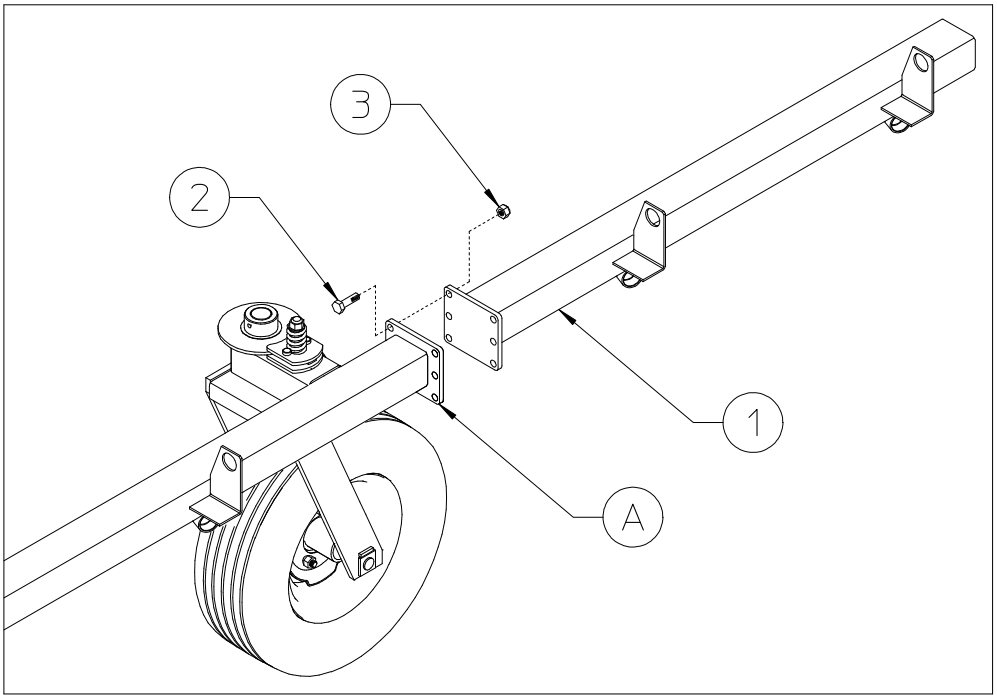


6) DANGER

Attach the bushings 1 to the proper seats. Now attach drawbar 2 to support A using pin 3, washer 4 and nuts 5. Attach the stand 6 to seat B on drawbar 2 using the pin 7 and clip 8. Assemble the hose support 9 with the screw 10 and nut 11.
Attach the tractor hitch 12 to the hole B on drawbar 2 using screw 16, washers 17-18 and nut 19.

In this step, you will use:

Item 1: 2 bushing ø35-39x30 (1.38”-1.54“x1.18”)
Item 3: 1 pin ø35x184 (1.38”x7.24”)
Item 4: 1 washer ø23-50x4 (0.91”-1.97”x0.16”)
Item 5: 1 nut M22 (0.87”)
Item 7: 1 pin ø15x78 (ø0.59x3.07”)
Item 8: 1 clip ø3 (ø0.12”)
Item 10: 1 bolt M12x25 (0.47”x1”)
Item 11: 1washer ø12-40x4 (0.47-1.57x0.16”)
Item 13: 1 bolt M20x140 (0.78”x5.51”)
Item 14: 1 spring washer ø21 (0.83”)
Item 15: 1 nut M20 (0.78”)
Item 16: 1 bolt M12x140 (0.47x5.51”)
Item 17: 2 washers ø12-36x2.5 (0.47-1.42x0.1”)
Item 18: 1 spring washer ø13 (0.94”)
Item 19: 1 nut M12 (0.47”)



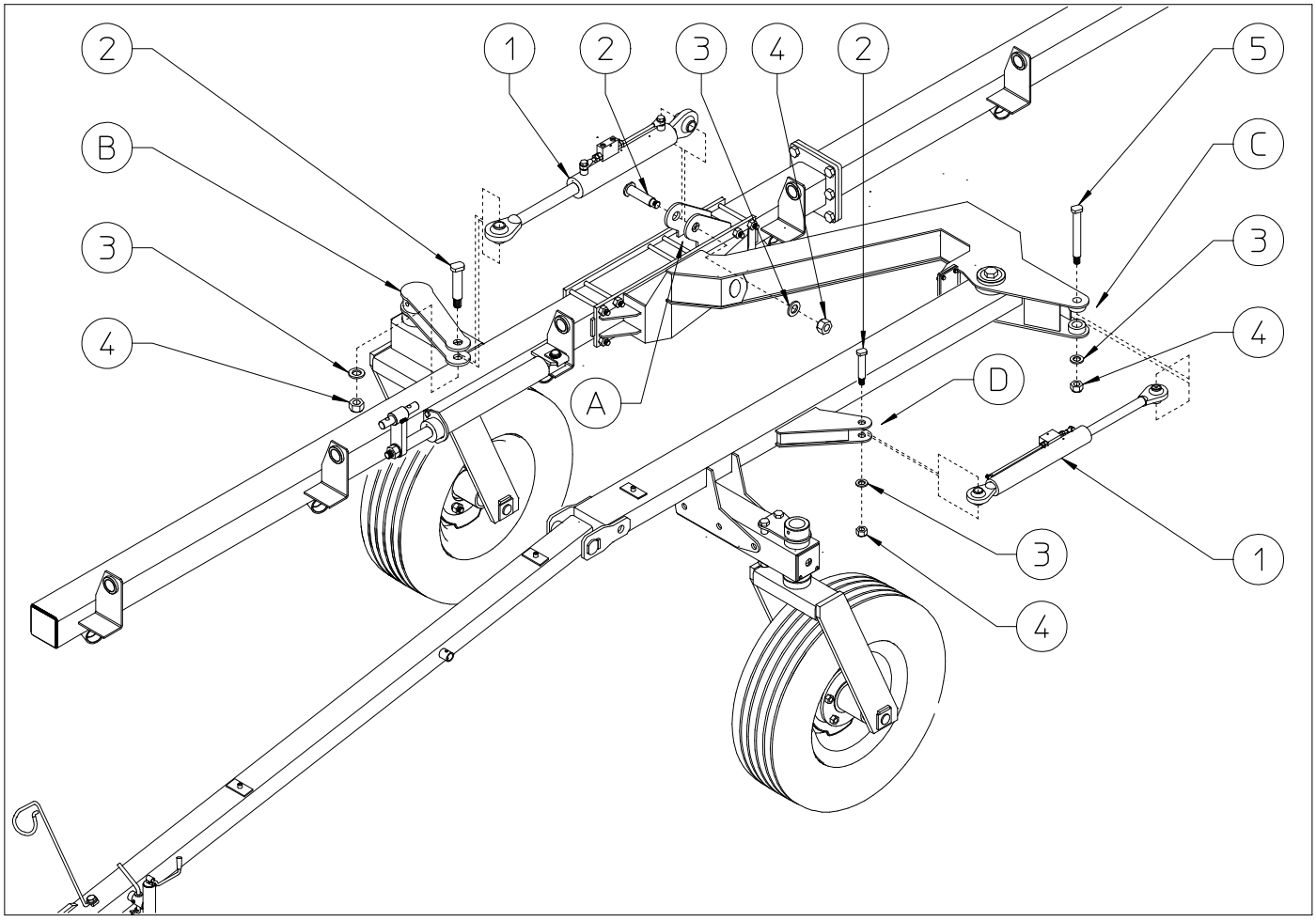
7) DANGER

For TR/8-9 only

Attach the section 1 to section A using screws 2 and nuts 3.

In this step, you will use:

Item 4: 6 bolts M16x45 (0.63”x1.77”)
Item 5: 6 nuts M16 (0.63”)



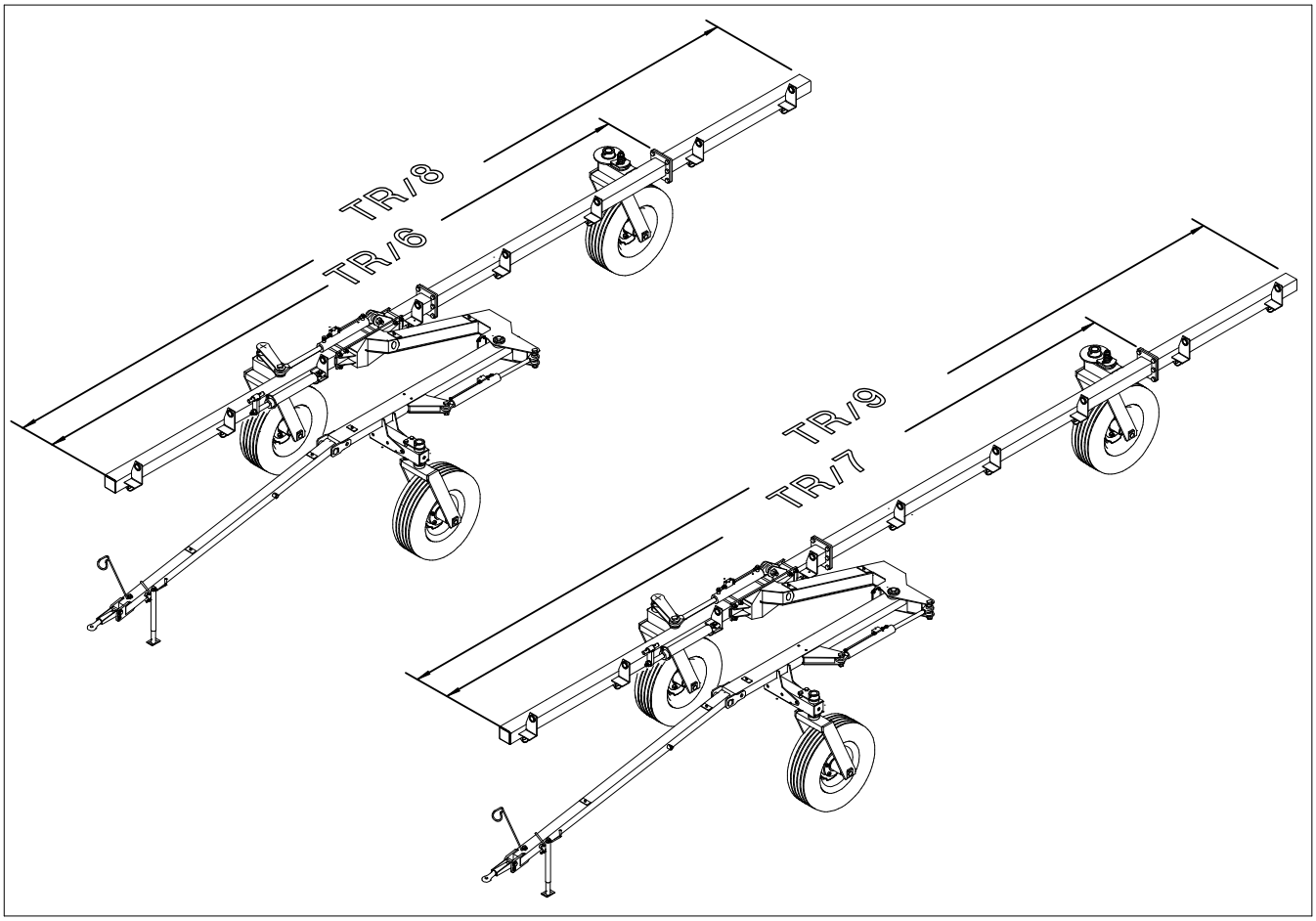
8) DANGER

(see drawing on preceding page)

Attach the cylinder 1 at seat A on the section and seat B on lever. Fasten them to seats A-B with pins 2, washers 3 and nuts 4. Attach the cylinder 1 at seat C on the arm and seat D on wheel support. Fasten them to seat D with pins 2, washers 3 and nuts 4 and to seat C with pins 5, washers 3 and nuts 4.

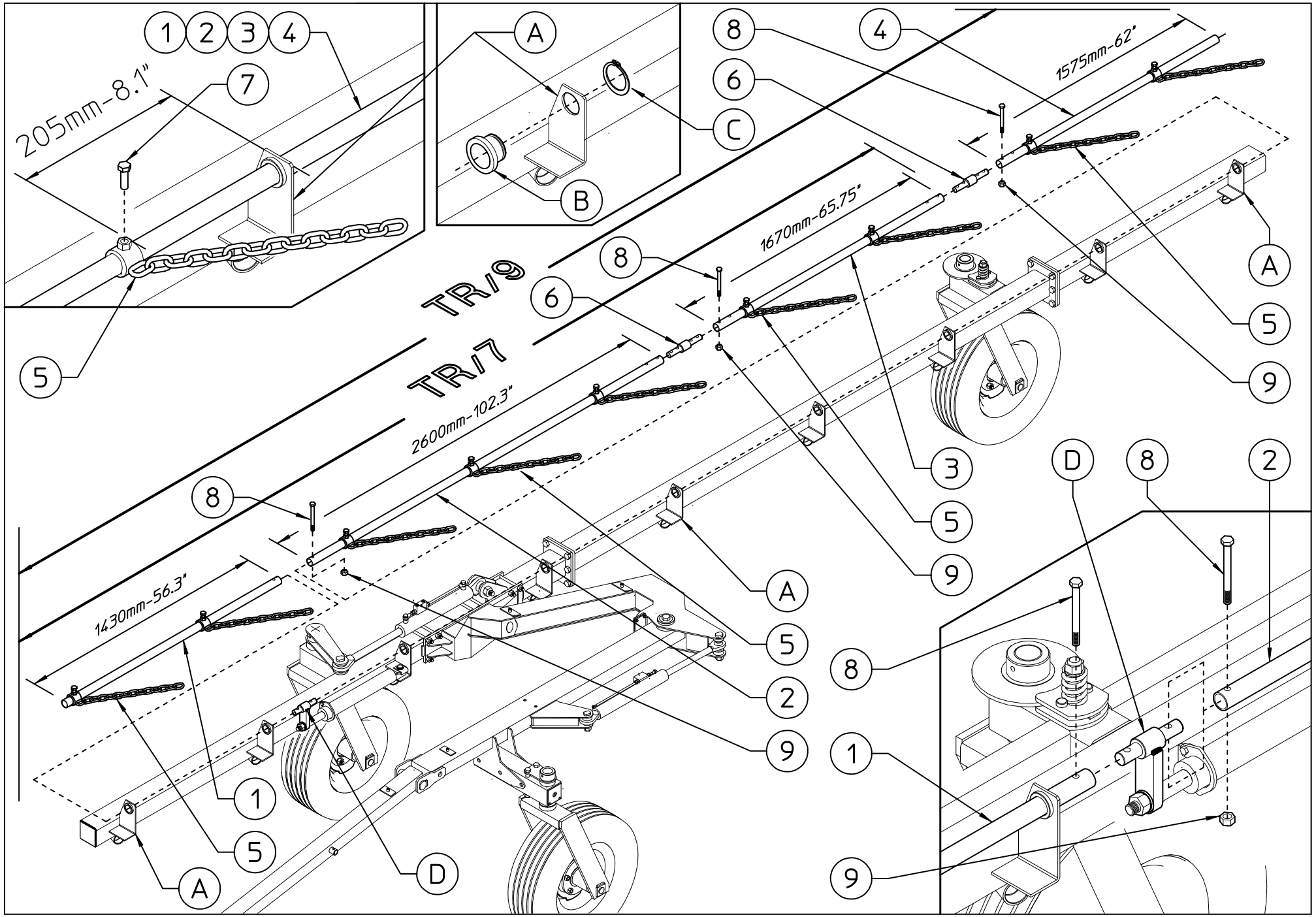
In this step, you will use:

Item 2: 3 pins ø25x58 (ø1"x2.28")
Item 3: 4 washers ø23-50x4 (ø0.91"-1.97"x0.16")
Item 4: 4 nuts M22 (0.87")
Item 5: 1 pin ø25x116 (ø1"x4.57")



9)

You have now reached this stage of the assembly. The machine rests on its wheels and thus has good stability. However, continue to use great caution during the rest of the assembly, so as to work safely. In order to work better, spread apart the right and left sections of the machine.


1 2 3 4
205mm-8.1"
7
5
A
B
C
8
4
6
1575mm-62"
TR/9
TR/7
1670mm-65.75"
2600mm-102.3"
1430mm-56.3"
D
2
1
9
3

10) DANGER

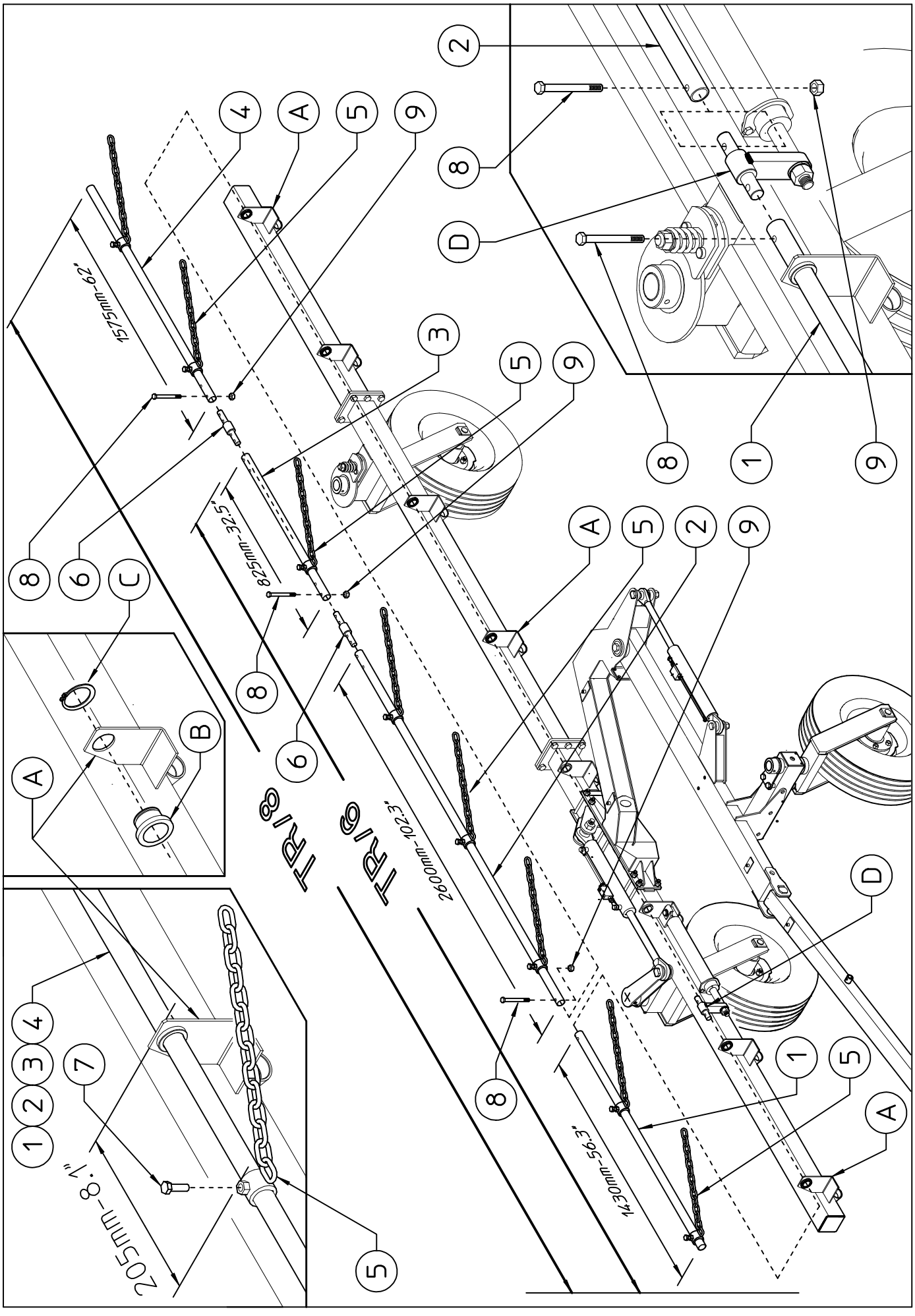
For TR/7-9 only

Check to make sure the manufacturer has correctly secured the bushings B with retaining rings C on brackets A on all the sections.

Il tubo 1 va inserito partendo dal supporto A sul davanti della macchina mentre i tubi 2-3-4 vanno inseriti dal supporto A sul dietro della macchina. At the same time the bushings with chain 5 must be put on the pipes at the positions shown (205 mm – 8.1" from A support). Join pipe 1 to pin D using bolt 8 and nut 9. Join pipe 2 to pin D using bolt 8 and nut 9. Join pipe 3 to pipe 2 using pin 6 ,bolts 8 and nuts 9. Join pipe 4 to pipe 3 using pin 6 ,bolts 8 and nuts 9.
At this point fasten the bushings with chain 5 to the pipes 1-2-3-4 at the position indicated using bolts 7.

In this step, you will use:

Item 6: n° 1-2 pins ø22-35x198 (ø0.877"-1.38"x7.8")
Item 7: n° 7-9 bolts M10x25 (0.39" x 1")
Item 8: n° 6-10 bolts M8x45 (0.31"x1.77")
Item 9: n° 6-10 nuts M8 (0.31")


TR18
TR19
1575mm-62"
825mm-32.5"
2600mm-102.3"
4300mm-169.3"
205mm-8.1"

10) DANGER

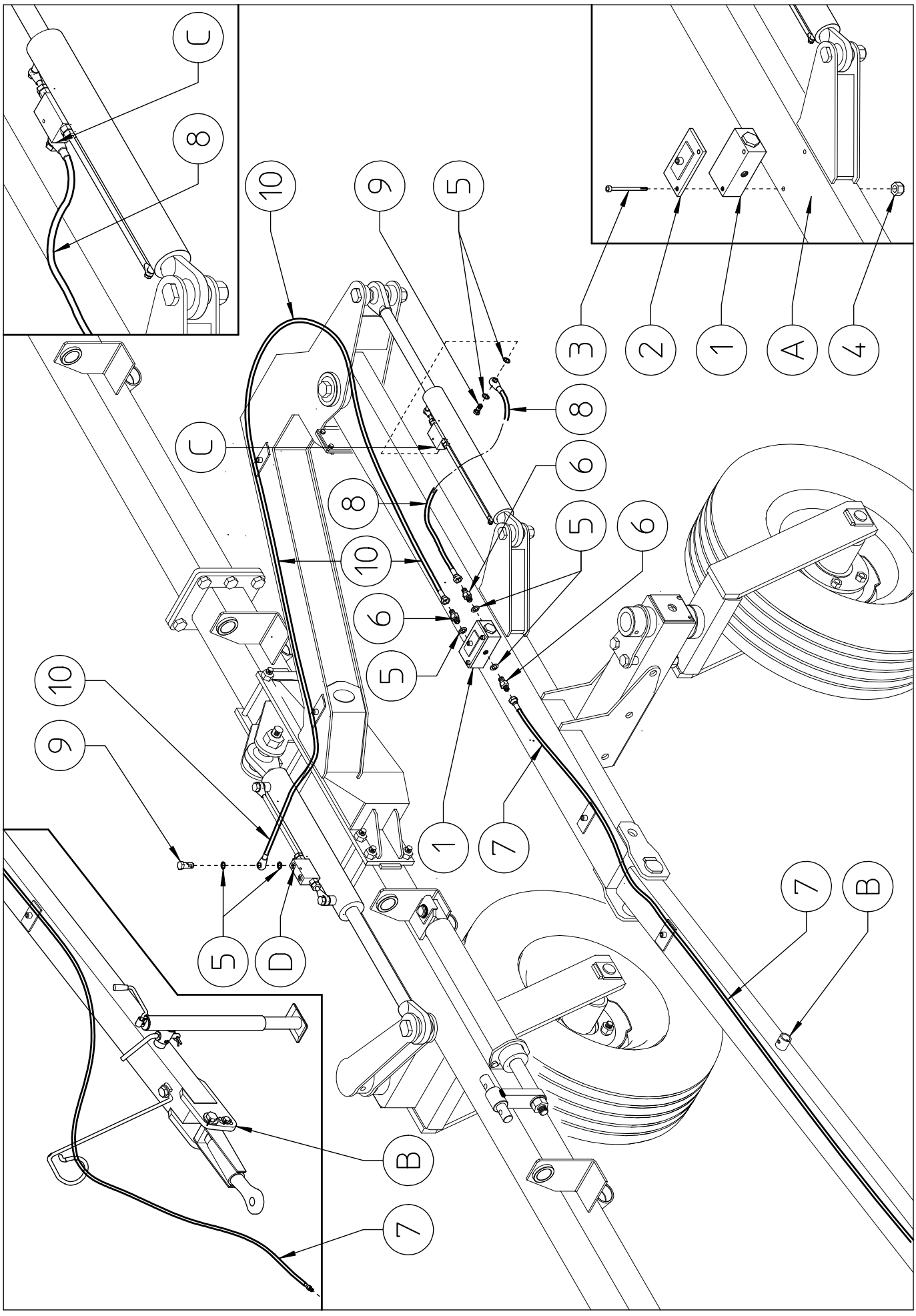
For TR/6-8 only

Check to make sure the manufacturer has correctly secured the bushings B with retaining rings C on brackets A on all the sections.

Il tubo 1 va inserito partendo dal supporto A sul davanti della macchina mentre i tubi 2-3-4 vanno inseriti dal supporto A sul dietro della macchina. At the same time the bushings with chain 5 must be put on the pipes at the positions shown (205 mm – 8.1" from A support). Join pipe 1 to pin D using bolt 8 and nut 9. Join pipe 2 to pin D using bolt 8 and nut 9. Join pipe 3 to pipe 2 using pin 6 ,bolts 8 and nuts 9. Join pipe 4 to pipe 3 using pin 6 ,bolts 8 and nuts 9.
At this point fasten the bushings with chain 5 to the pipes 1-2-3-4 at the position indicated using bolts 7.

In this step, you will use:

Item 6: n° 1-2 pins ø22-35x198 (ø0.877"-1.38"x7.8")
Item 7: n° 6-8 bolts M10x25 (0.39" x 1")
Item 8: n° 6-10 bolts M8x45 (0.31"x1.77")
Item 9: n° 6-10 nuts M8 (0.31")


C
8
10
9
5
3
2
1
A
4
C
8
6
8
10
6
5
5
6
10
9
1
7
5
D
7
B
B
7

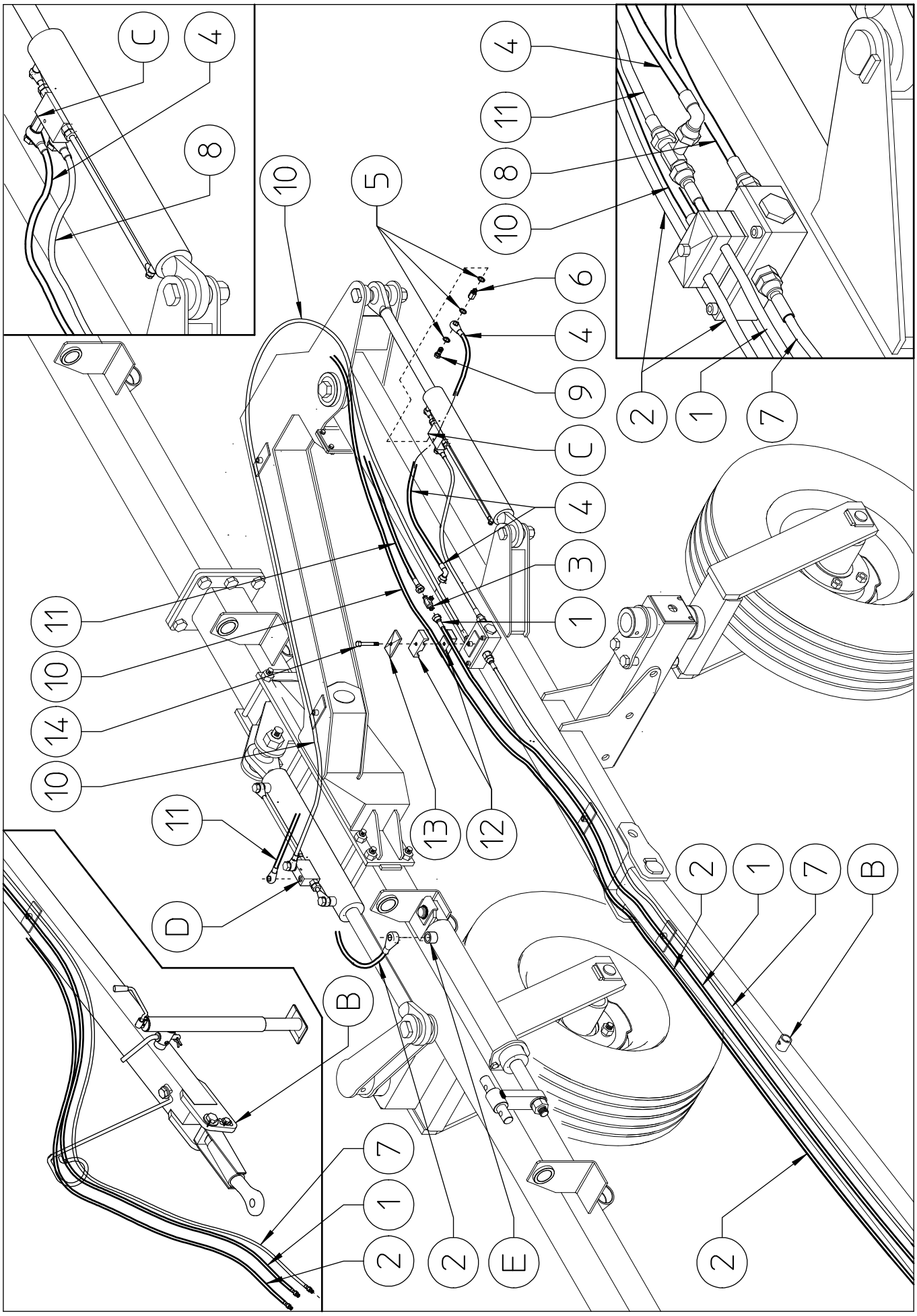
11) DANGER

Fasten the flow divider 1 and the hose support 2 to frame A using bolts 3 and nuts 4.
Apply washers 5 and nipples 6 to three holes on the flow divider 1. Connect the hose 7 to nipples 3. Extend the hose 7 along the drawbar B. Connect the hose 8 to nipples 3. Connect the hose 8 to cylinder check valves C using washers 5 and screw 9. Connect the hose 10 to nipples 3. Connect the hose 10 to cylinder check valves D using washers 5 and screw 9. Note: before fully fastening hoses 7-8-10, make sure that the line of each hose from one end to the other is not twisted and/or does not have sharp bends or kinks that cause it to be crushed or to have an unpleasant appearance.

Hoses 7-8-10 will also be in the following steps.

In this step, you will use:

Item 3: 2 bolts M6x140 (0.47”x5.51”)
Item 4: 2 nuts M6 (0.24”)
Item 5: 7 washers ø3/8”
Item 6: 3 nipples 3/8”-1/4”
Item 7: 1 hose, ¼”, length 5200 (205”)
Item 8: 1 hose, ¼”, length 460 (18.1”)
Item 9: 2 screw-type couplings 3/8”
Item 10: 1 hose, ¼”, length 2450 (97”)

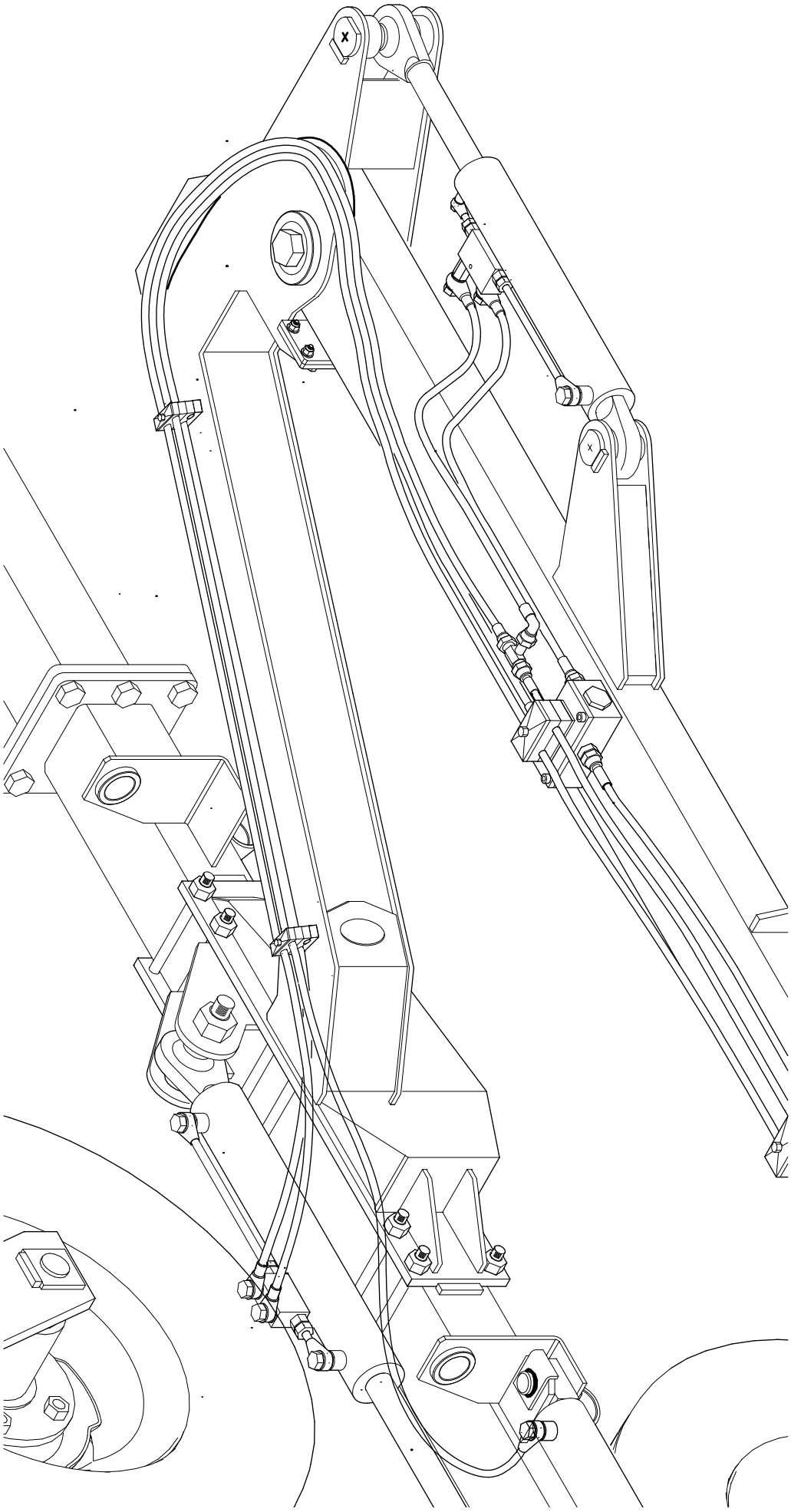

C
4
8
10
5
4
11
8
10
6
4
9
C
4
3
1
11
10
14
10
11
13
12
D
B
2
1
7
2
E
2
2
1
7
B

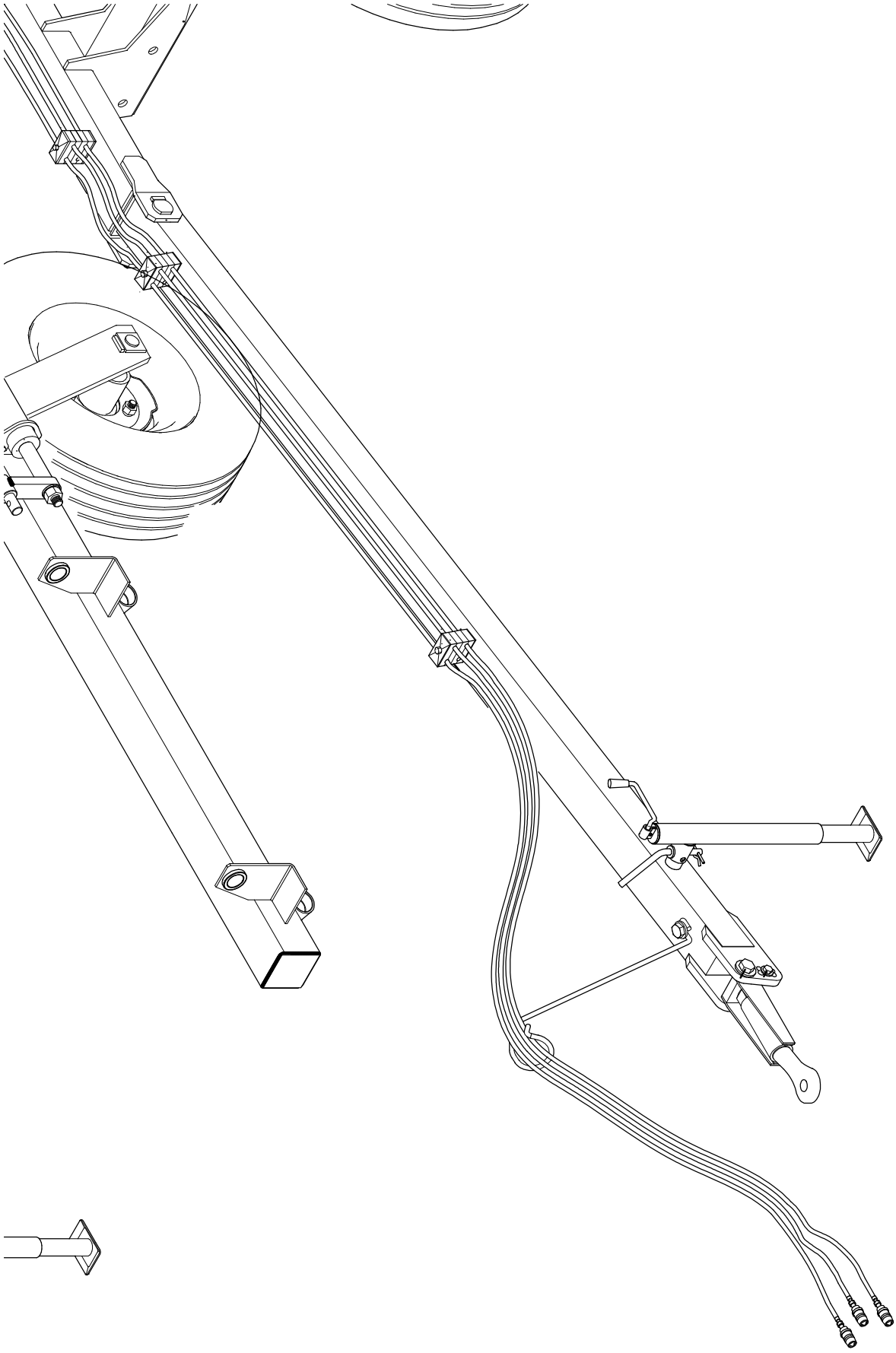
12) DANGER

Extend the hose 1 along drawbar B toward the front of the machine above to hose 1 already assembled. Extend the hose 2 along drawbar B toward the front of the machine parallel to hose 1. Extend the hose 2 along hose 10 already assembled toward the cylinder E. Fasten the hoses 1-2 using hose collars 12, plate 13 and screw 14. Connect the fitting 3 to the hose 1. Connect the hose 4 to the fitting 3.
Connect the hose 4 to cylinder check valves C using washers 5, fitting 6 and screw 9. Extend the hose 11 along hose 10 already assembled toward the cylinder check valves D. Connect the hose 11 to the fitting 3.

In this step, you will use:

Item 1: 1 hose, ¼", length 5350 (211")
Item 2: 1 hose, ¼", length 8100 (323")
Item 3: 1"T" fitting male ¼"
Item 4: 1 hose, ¼", length 420 (17")
Item 5: 3 washers ø3/8"
Item 6: 1 fitting male-female 3/8"
Item 7: see preceding step
Item 8: see preceding step
Item 9: 1 screw-type coupling 3/8"
Item 10: see preceding step
Item 11: 1 hose, ¼", length 2350 (93")
Item 12: 2 hose collars ø16 (0.63")
Item 13: 1 plate
Item 14: 1 screw M8x35 (0.31 x 1.38")





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