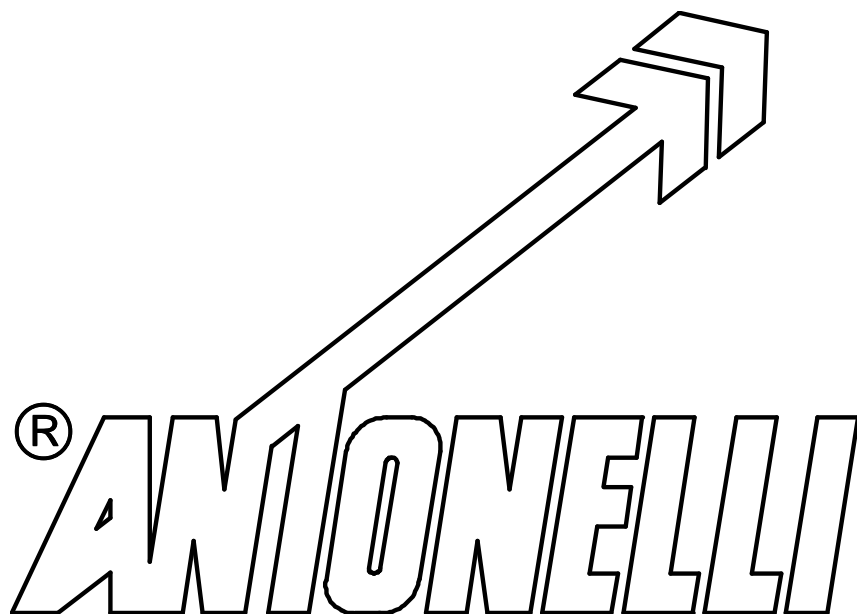




ARM PACKET FOR
CONCRETE DISTRIBUTOR BOOM
AZ-42.5/125

MANUAL VALIDITY
BOOM AZ-42.5/125
SERIAL N°4780



CONTENTS

USEFUL INFORMATIONS FOR THE INSTALLER

CHAPTER

01 - DESCRIPTION	
01.0 - IDENTIFICATION DETAILS	1
01.1 - OVERALL VIEW OF THE MACHINE	2
01.2 - BOOM OPENING AREA	3
02 - PRESCRIPTION	
02.1 - SAFETY INSPECTION	4
02.2 - IMPROPER USE	4
02.3 - PRESCRIPTIONS FOR MAKING THE CONCRETE DELIVERY LINE	4
03 - INSTALLATION	4
03.1 - TABLE PRESSURE AND MONOEUVRE TIMES	5
04 - TROUBLESHOOTING	
04.1 - TROUBLESHOOTING OF THE ARM PACKET	6

SPAREPARTS

10.1 - GLOSSARY OF COMPONENTS	7
11.1 - POSITION OF IDENTIFICATION DETAILS AND SIGNPLATES	8
13.2 - REVOLVING HEAD	9
15.1 - HYDRAULIC CYLINDER (1st BOOM OPENING)	10
15.2 - HYDRAULIC CYLINDER (2nd BOOM OPENING)	11
15.3 - HYDRAULIC CYLINDER (3rd BOOM OPENING)	12
15.4 - HYDRAULIC CYLINDER (4th BOOM OPENING)	13
15.5 - HYDRAULIC CYLINDER (5th BOOM OPENING)	14
16.6 - BOOM HYDRAULIC CYLINDER PILOT CHECK VALVE U/97	15
17.1 - FIRST BOOM SECTION	16
17.2 - SECOND BOOM SECTION	17
17.3 - THIRD BOOM SECTION	18
17.4 - FOURTH BOOM SECTION	19
18.1 - CONCRETE PIPELINE DIAGRAM	20
20.1 - HYDRAULIC SYSTEM DIAGRAM	21

01.0 - IDENTIFICATION DETAILS

CONCRETE BOOM TYPE: **AZ-42.5/125** SERIAL N°: **4780**

01.0.1 - BOOM IDENTIFICATION PLATE

The boom identification plate of fig. 1 is located on the turret structure as from pos. 6 of Pag. 8.

		ANTONELLI s.r.l. Via Malpasso,1441/1447 47842 - S. Giovanni in Marignano (RN) Italy Tel. 0541/955258 (4 linee) Fax 0541/957103	
BOOM TYPE	SERIAL NUMBER	DATE	
AZ-42.5/125			
HYDRAULIC OPERATING PRESSURE	bar	330	
CONCRETE PIPING ND	mm.	125	
MAX. HOSE LENGTH	m.	4	
ExxonMobil	HYDRAULIC SYSTEM WITH OIL	Esso Univis N 46 Mobil DTE 15 M	

Cod. 121058 DIS.01029512

Fig.1

01.0.2 - PUNCHING OF BOOM

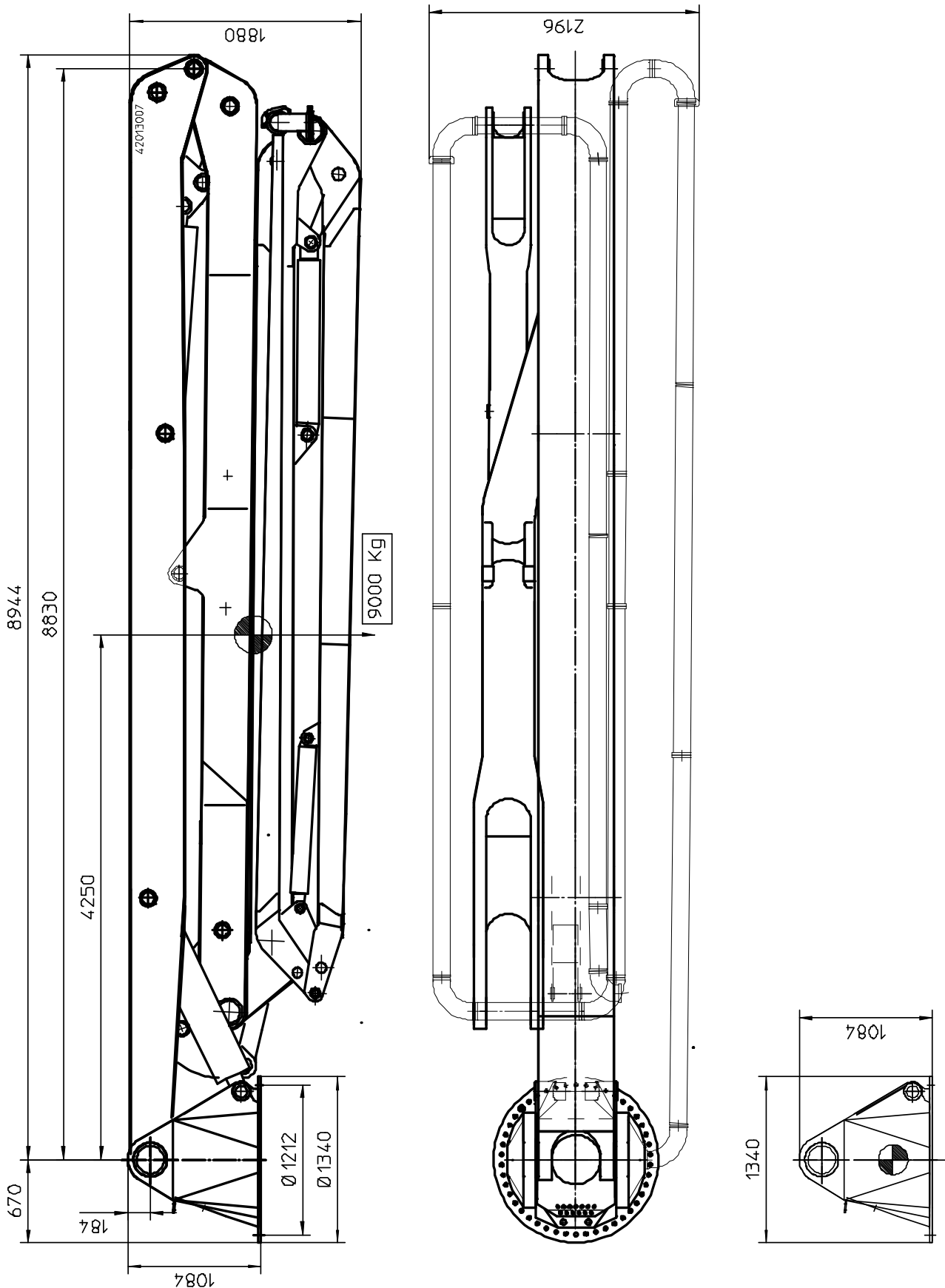
The manufacturer's name and the boom serial number are stamped near the boom identification plate on the edge of the base bearing support and on the upper steel sheet of the 1st section.

*** A 4780 ***

MANUFACTURER'S NAME

BOOM SERIAL NUMBER

01.1 - OVERALL VIEW OF THE MACHINE, DIMENSIONS AND WEIGHTS



01.2 - BOOM OPENING AREA

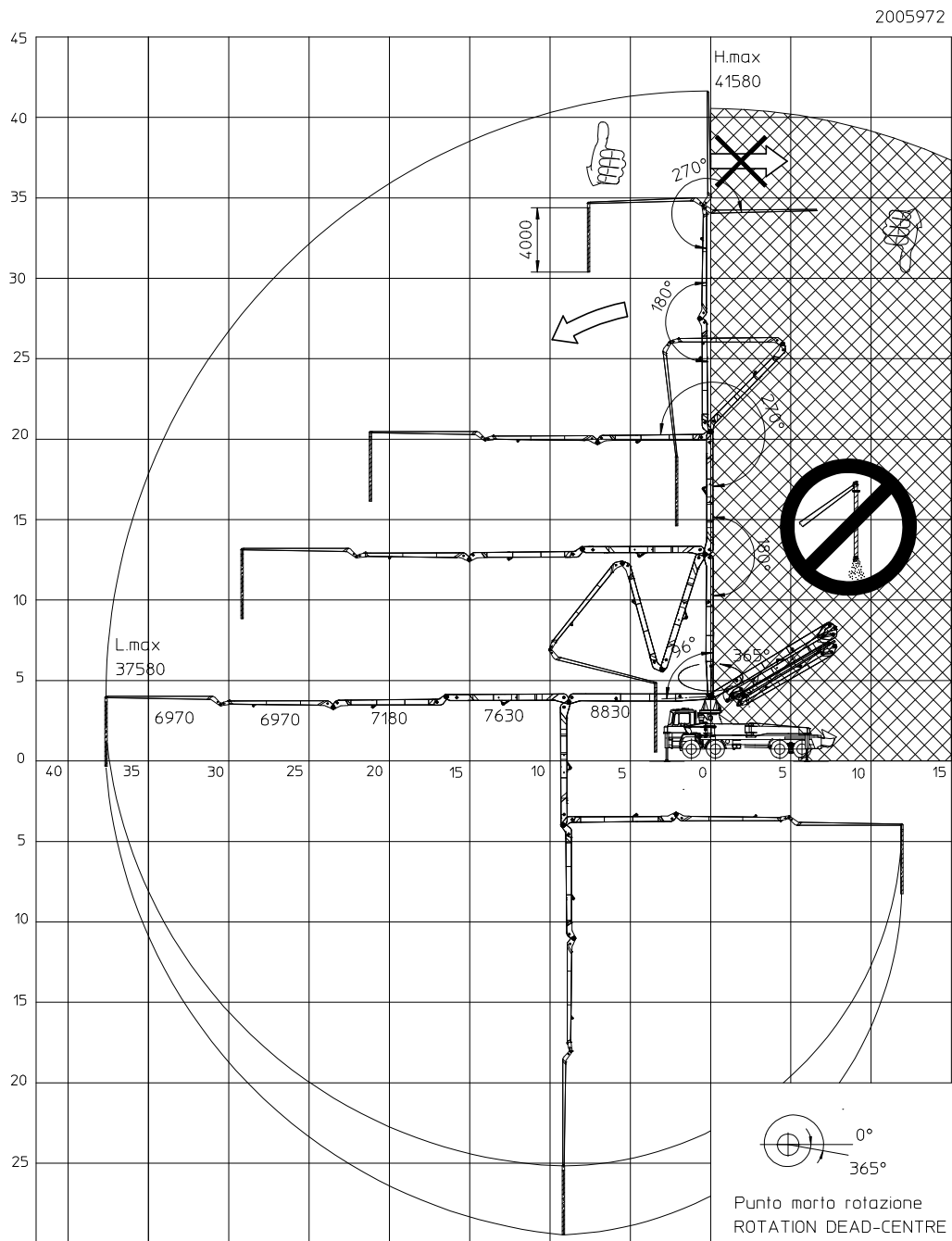
The figure below shows the boom opening area.

The need for large opening angles (so as to be able to work close to the turret) does not mean it is possible to work with the terminal pipe in all reachable positions.

WARNING!



It is forbidden to work with the end section of the pipe further back than the head rotation vertical axis.



02.1 - SAFETY INSPECTION

THE CONCRETE DISTRIBUTOR BOOMS, INCLUDING PIPING, MUST BE CHECKED AFTER 500 HOURS AND AT ONCE A YEAR BY AN EXPERT TO ENSURE THEY ARE WORKING CORRECTLY

02.2 - IMPROPER USE

IT IS FORBIDDEN:

- To use the machine for work different from that for which it was designed and built.
- To modify or remove any safety and accident-prevention devices such as warning plates, guards, seals, lead seals, etc.
- To extend the boom or end section.
- To alter the set pressure in any part of the system.
- To perform jerky movements, or sharply reverse the direction of the boom, especially in a continuous manner as this could cause dangerous swinging.
- To install a concrete pipe of greater diameter or of heavier weight.
- To use the boom as an elevator.
- To make structural changes to boom sections (Sections, head, turret, stabilizers).
- To modify software management programmes.
- To make changes to the hydraulic cylinders or rotation system.
- To make changes to the distributor and various controls.
- Not to carry out recommended maintenance, especially safety inspections.
- To work in the presence of electric storms.
- To work near power lines (see point 03.1.7)
- To operate the stabilizers when persons are standing in their range of action and with the boom not completely closed.
- To use the boom when persons are standing in the danger area.
- To start pumping when persons are standing near the end pipe, i.e., within a radius delimited by its length.
- To pump the concrete with the end pipe bent or emerged in the concrete.
- To use or leave the boom open when wind is blowing at over 60 km/h.
- To open the boom when the vehicle is not correctly stabilized.
- To use the boom outside the recommended temperature range (-20÷40°C).
- To leave the ignition key in the control panel after work and the diesel engine running.
- To work with the end pipe further back than the vertical axis passing through the head (boom turned backwards).

WARNING!



Failure to comply with the above will invalidate the warranty with declination of all responsibility on the part of Antonelli.

WARNING!



Improper use could damage the machine and create dangerous situations for persons.

02.3 - PRESCRIPTIONS FOR MAKING THE CONCRETE DELIVERY LINE

- MAX INNER DIAMETER OF THE PIPE 125 mm
- MAX WEIGHT OF THE PIPE 12,8 Kg/m
- MAX INNER DIAMETER OF THE HOSE 125 mm
- MAX LENGHT OF THE HOSE 4m



INSTALLATION MANUAL **AZ-42.5/125** **HAWE LOAD SENSING**

03

03.6 - TABLE OF PRESSURES AND MANOEUVRE TIMES

When the boom is fitted on the vehicle, a final test will have to be performed to check pressures and manoeuvre times of each boom section. The above test must be performed using hot oil (oil temp.: 50°C) and with the hydraulic pump operating at full speed. The maximum pressures shown must correspond to the values indicated in the following tables with a tolerance equal to $\pm 2\%$. The manoeuvre times shown must correspond to the values indicated in the following tables with a tolerance equal to $\pm 15\%$; in the event of the values being below 15%, it is necessary to check if the flow capacity of the hydraulic pump of the distributor sections and the throttles inside the check valves correspond with the values shown on the table. Action will have to be taken if the maximum pressure and manoeuvre times at top speed are outside tolerance limits.

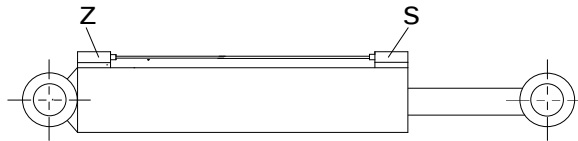
WARNING!

The boom should never be operated at pressures or at speeds higher than those set out in the beginning by Antonelli s.r.l and quoted below.

SYSTEM FEATURES AND SWIVEL SETTING PRESSURES

TAB.1:

DESCRIPTION	PRESSURE (BAR)
Swivel	120
Hydraulic distributor max. inlet pressure	350
Hydraulic distributor max. outlet pressure	10
Pressure max pump Load Sensing	330
Max. hydrostatic pump flow rate	80 l/1'



SETTING PRESSURES OF BOOM VALVES AND DISTRIBUTOR SECTIONS

TAB. 2:

BOOM HYDR. CYLINDER POS.	ARTIC. A		ARTIC. B		ARTIC. C		ARTIC. D		ARTIC. E	
CHECK VALVE POSITION	Z	S	Z	S	Z	S	Z	S	Z	S
Check valve throat d. (mm)	2.5	/	/	/	2,5	/	/	/	/	/
Check valve pressures (bar)	310*	340*	310*	340*	340*	340*	280*	310*	280*	310*
Pressures of distributor sect. (bar)	330	/	300	/	330	/	280	/	260	330

* valves adjusted on bench when they start to open and without counterpressure at the discharge

MANOEUVRE TIMES

TAB.4 - BOOM:

BOOM SECTIONS	Section Artic. A		Section Artic. B		Section Artic. C		Section Artic. D		Section Artic. E		Right Swivel	Left Swivel
	Open.	Clos.	Open.	Clos.	Open.	Clos.	Open.	Clos.	Open.	Clos.	1 Rev.	1 Rev.
TIME (sec.)	100	100	140	140	140	140	70	70	55	55	210	210



04.1 - TROUBLESHOOTING OF THE ARM PACKET

Despite the boom being carefully tested for hours, by simulating operating conditions, a number of faults can occur, mainly due to the presence of impurities in the hydraulic circuit or power contact problems.

PROBLEM	CAUSE	REMEDY
A single boom function fails to respond to the manual distributor	- Clogged restrictor. This restrictor is fitted in the valve applied to the cylinder on the oil drain-off side	Clean the restrictor with the boom closed.
A section of the arm drops despite not being activated.	- Non-return valve dirty	- Clean the valve at hydr. cylinder. Such operation must be done by an engineer. Set the valve after cleaning. The pressure to be set is printed on the valve body. - If this does not solve the problem, replace the valve.
The boom moves in jerks and/or irregularly.	- Air in the hydraulic circuit. - Insufficient fluid in circuit	- Check level of oil in sump. Increase the rpm of the hydraulic pump.
Noises in kinematic mechanisms	- Lack of or poor lubrication - Friction in concrete curve articulated joints	- Lubricate as indicated at chapter 07.1 of manual. - Dismantle coupling and, lubricate and replace gasket.

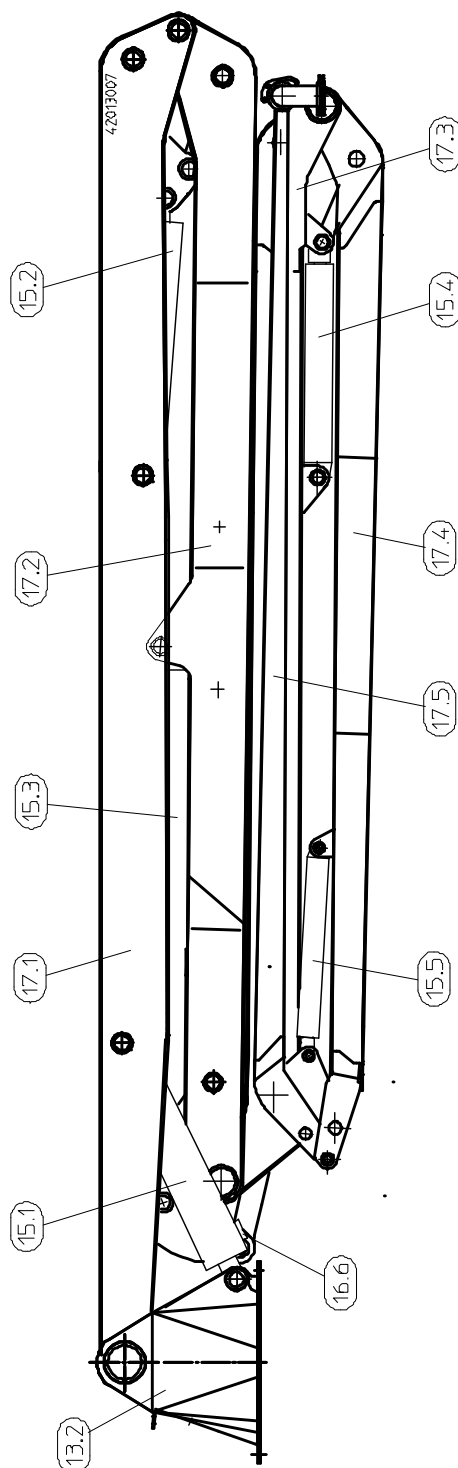


DESCRIPTION AZ-42.5/125

10

10.1 - GLOSSARY OF COMPONENTS

- 13.2 - REVOLVING HEAD
- 15.1 - HYDR. CYLINDER (1ST BOOM OP.)
- 15.2 - HYDR. CYLINDER (2ND BOOM OP.)
- 15.3 - HYDR. CYLINDER (3RD BOOM OP.)
- 15.4 - HYDR. CYLINDER (4TH BOOM OP.)
- 15.5 - HYDR. CYLINDER (5TH BOOM OP.)
- 16.6 - CHECK VALVE OF HYDRAULIC CYL.
- 17.1 - 1st BOOM SECTION
- 17.2 - 2nd BOOM SECTION
- 17.3 - 3rd BOOM SECTION
- 17.4 - 4th BOOM SECTION
- 17.5 - 5th BOOM SECTION





DESCRIPTION AZ-42.5/125

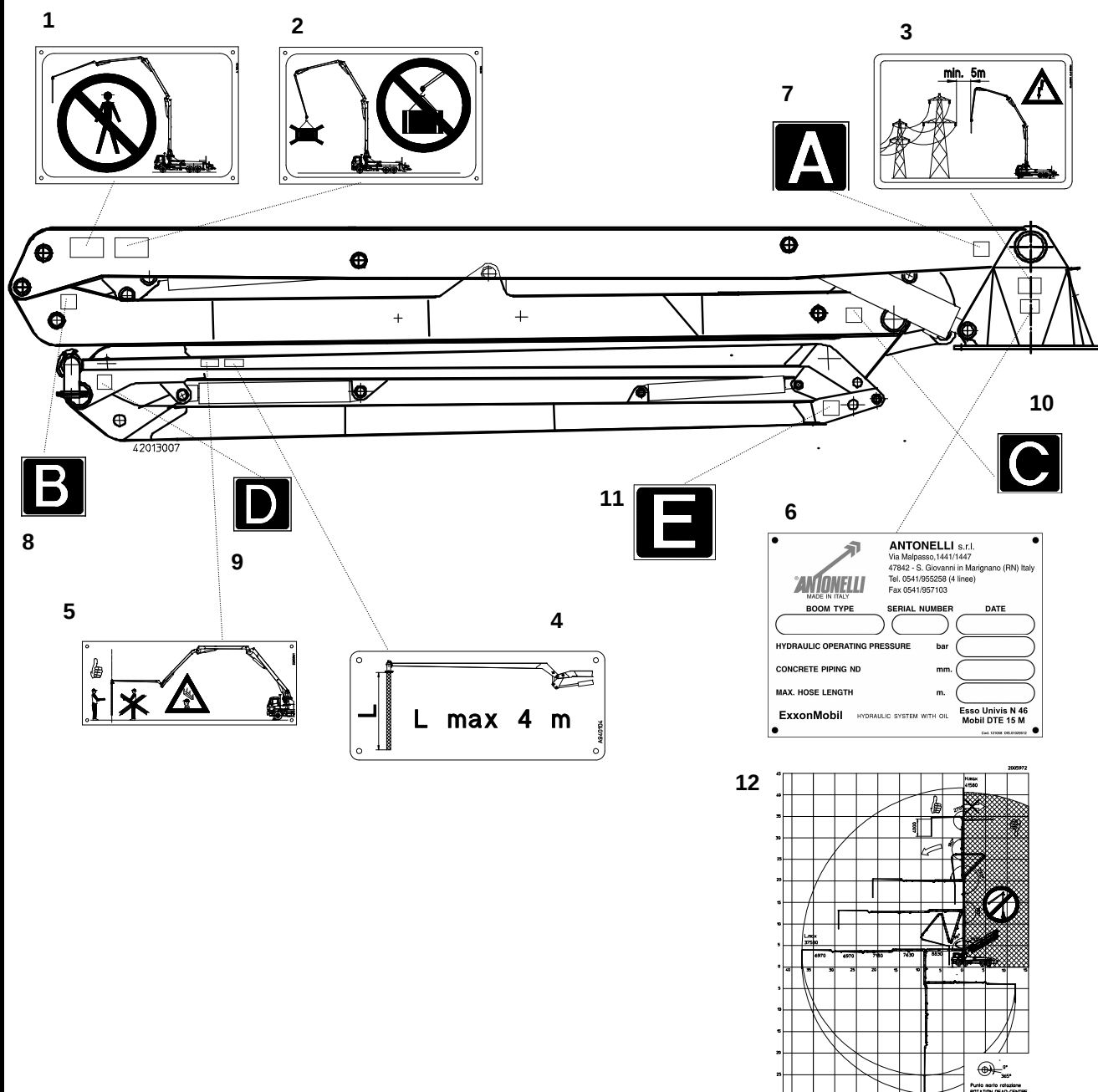
11

11.1 - POSITION OF IDENTIFICATION DETAILS AND SIGNPLATES

The identification plates 18 and are located on the right of the turret structure.

The manufacturer's name and boom serial number are stamped on the edge of the base bearing support.

The remaining signplates are located on both sides of the machine (excluding positions 6).



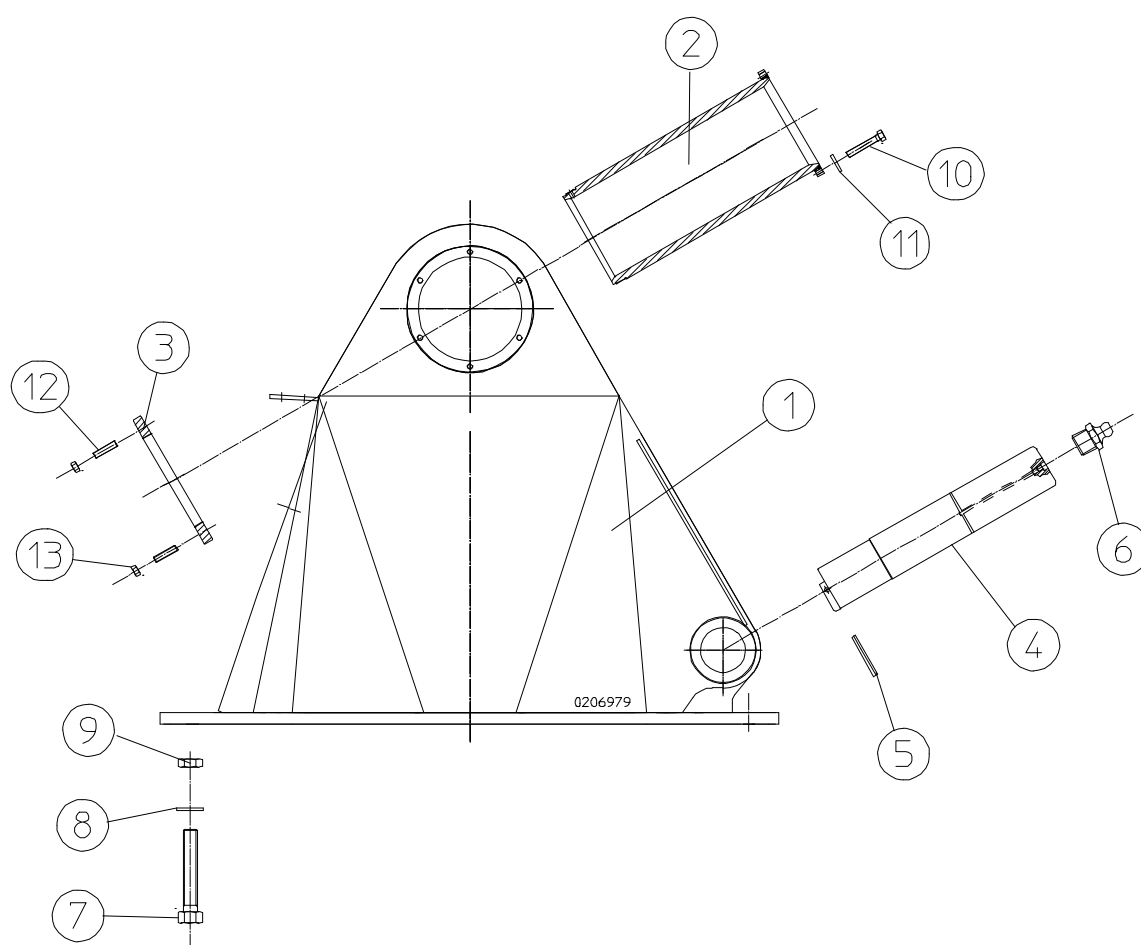
WARNING!



Every 6 months check the condition (wear and readability) of all the instruction plates fitted to the machine.



PAG. 8a



WARNING!

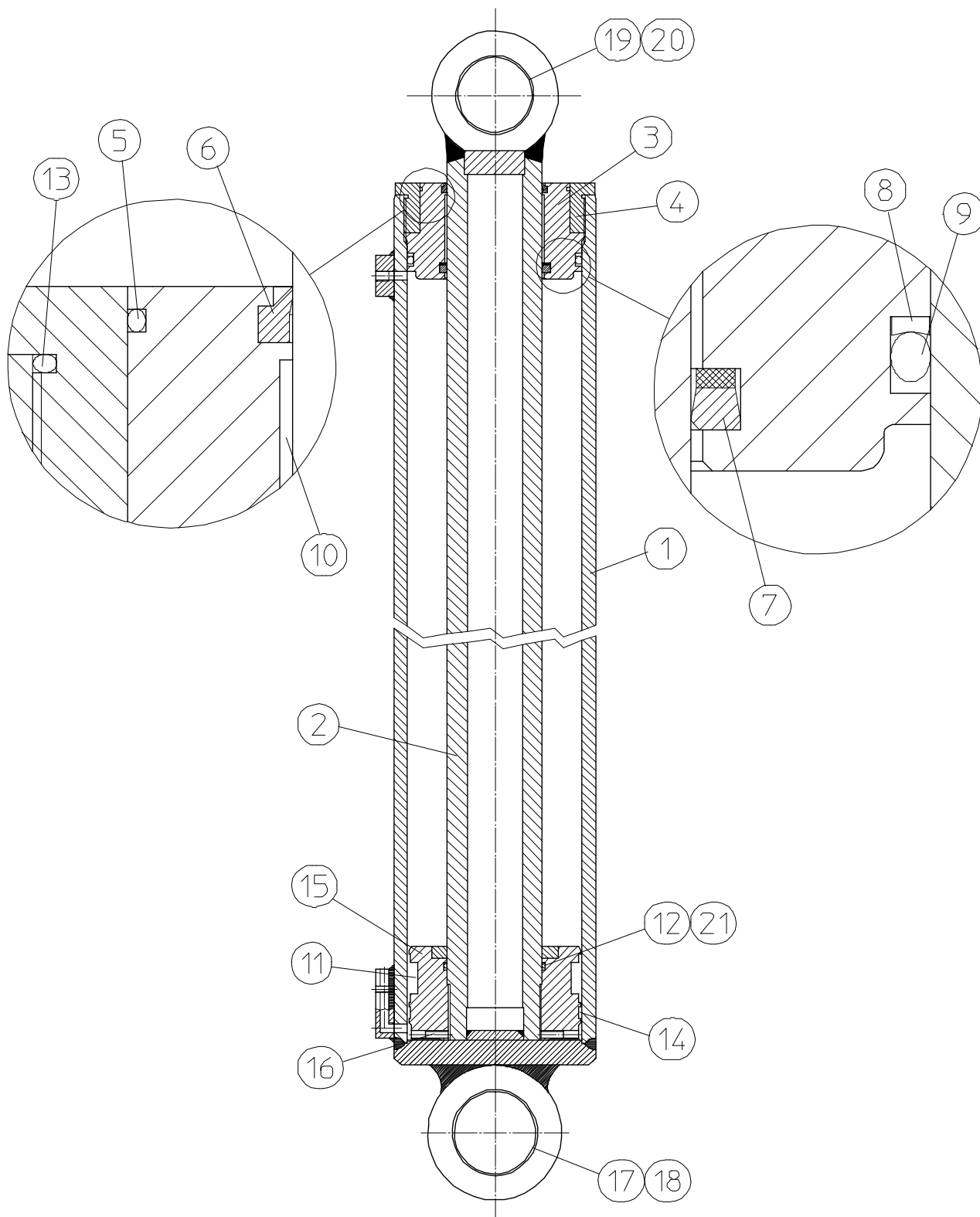
Before dismantling the head and the base bearing, mark the position to ensure correct re-assembly.

WARNING!

Tighten the screws of the base bearing (pos. 7) and the screws of the pin (pos. 10) with dynamometric key and right tightening torque (these screws belong to resistance class 10.9).

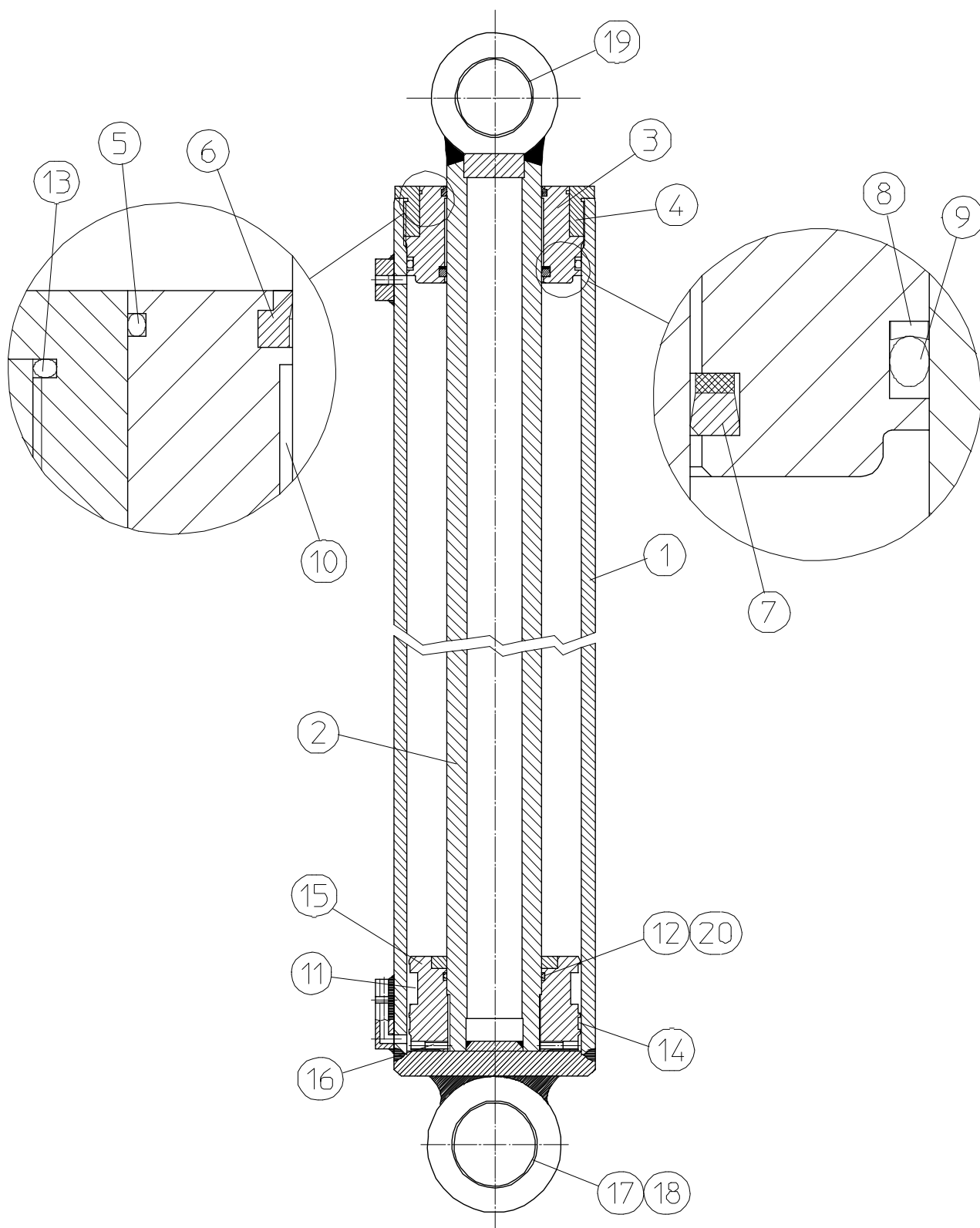


PAGE 9a



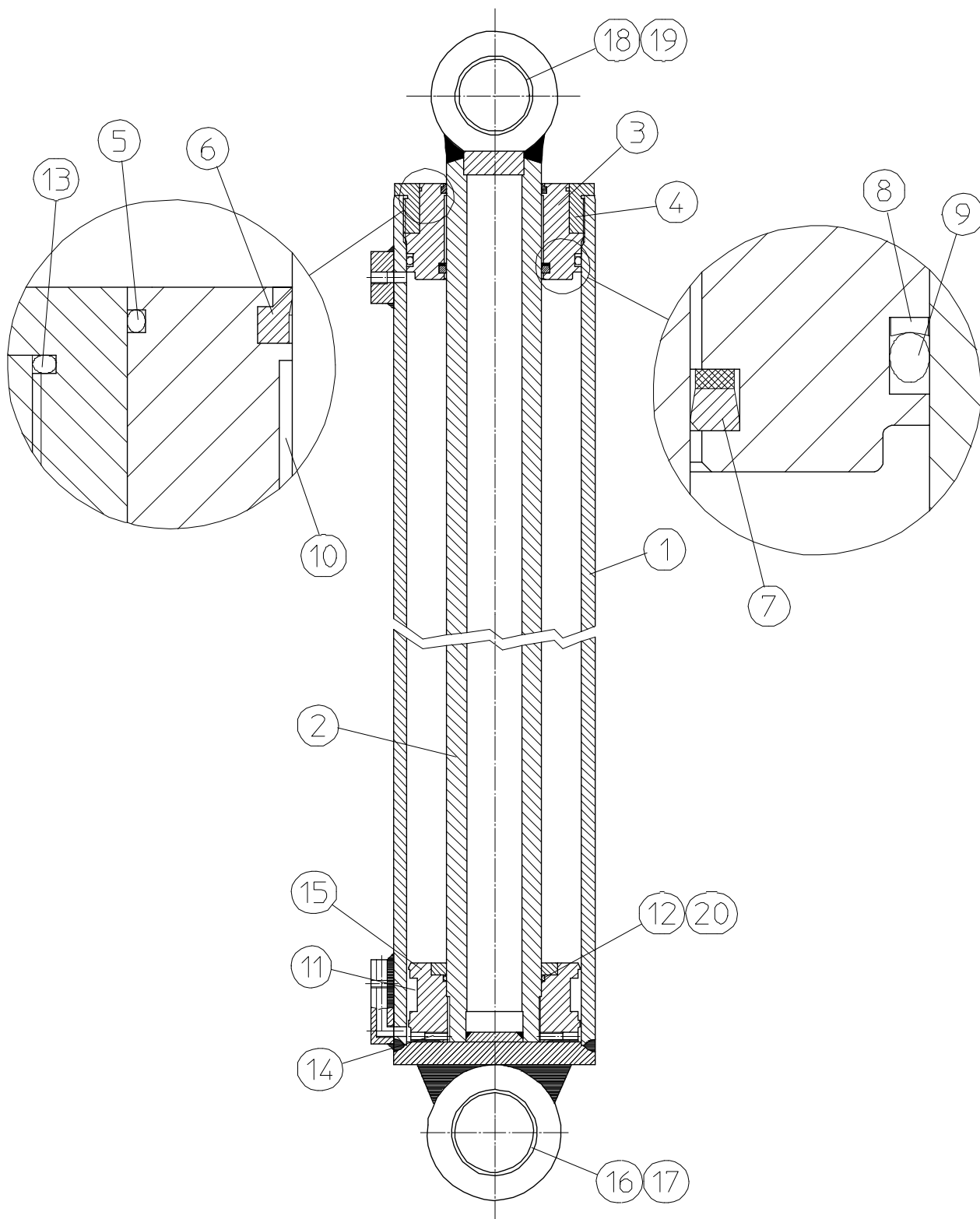


PAGE 10a

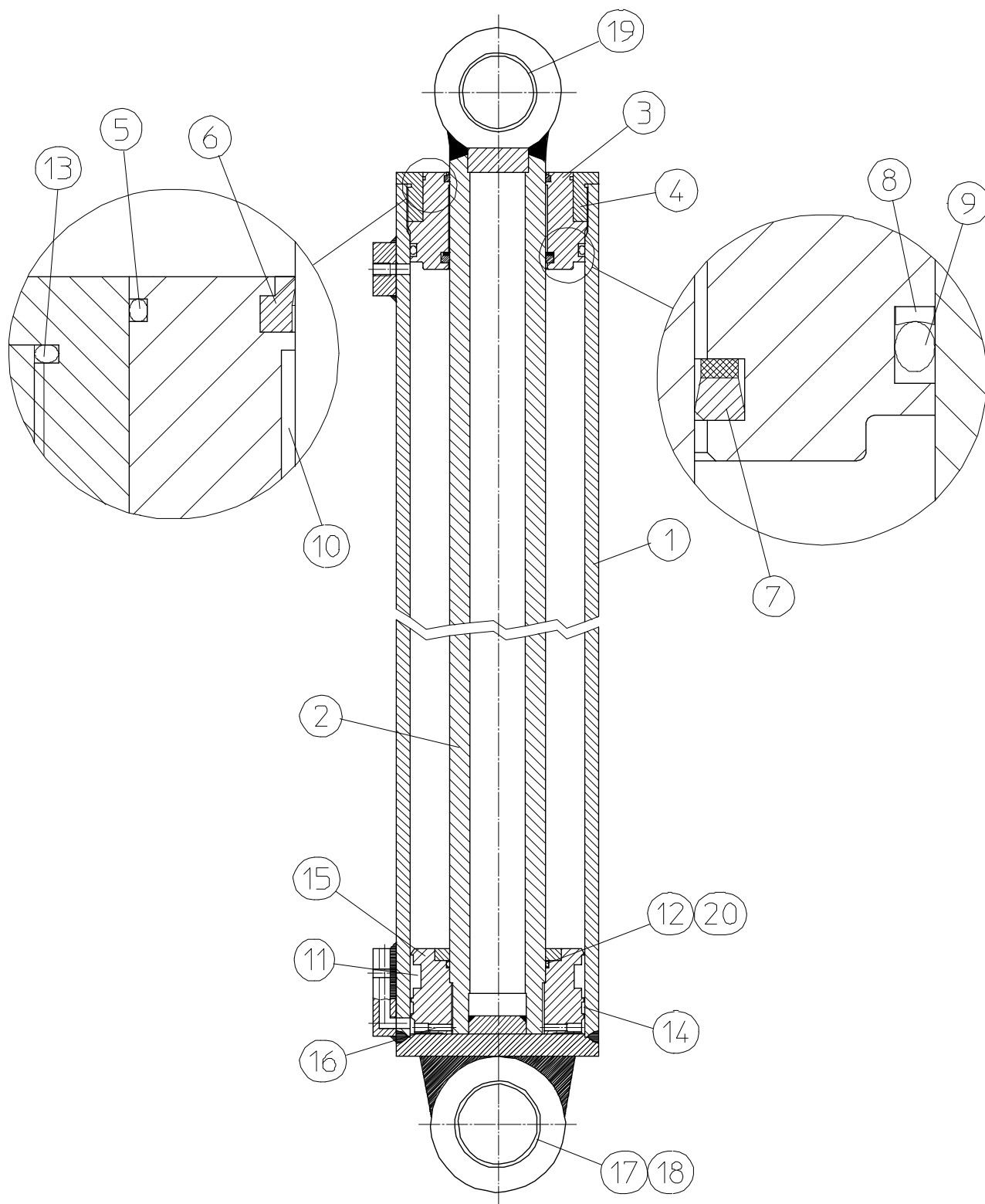




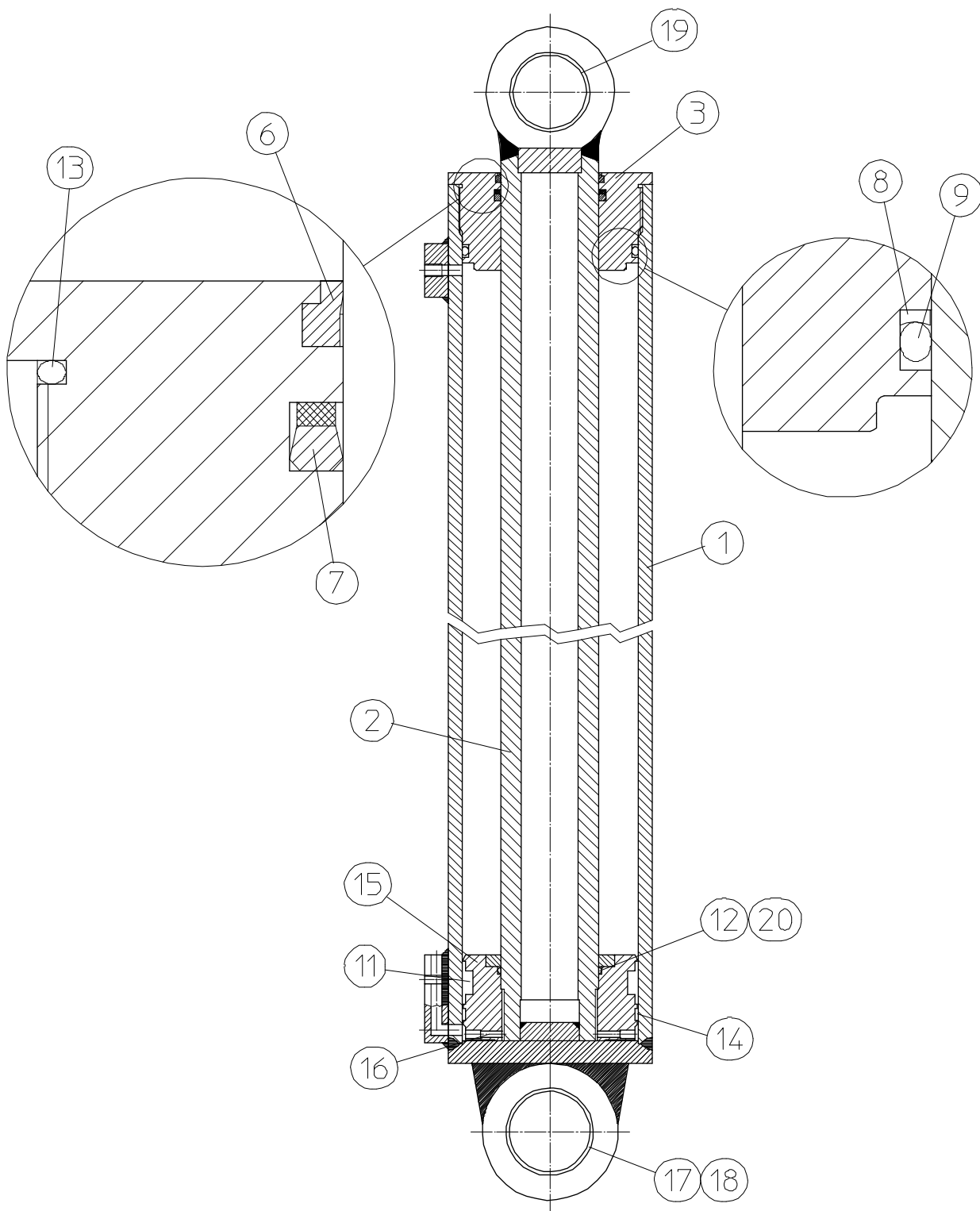
PAGE 11a

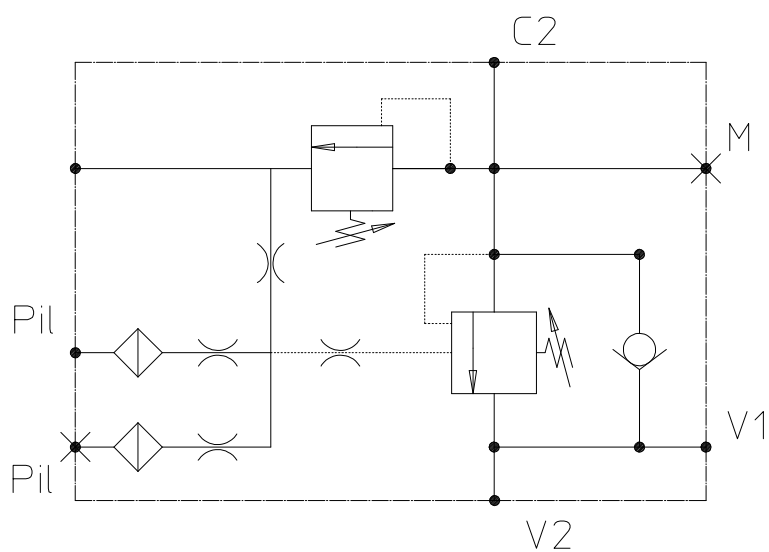
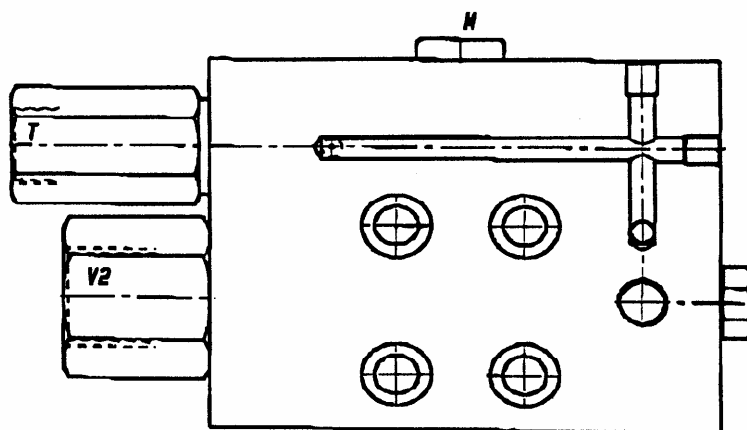
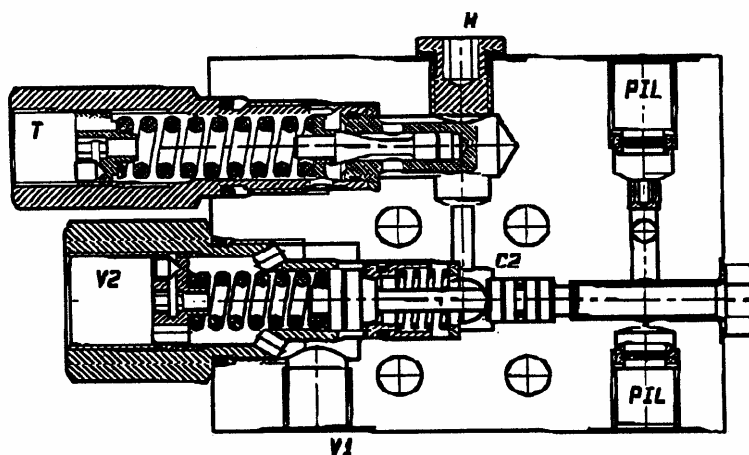


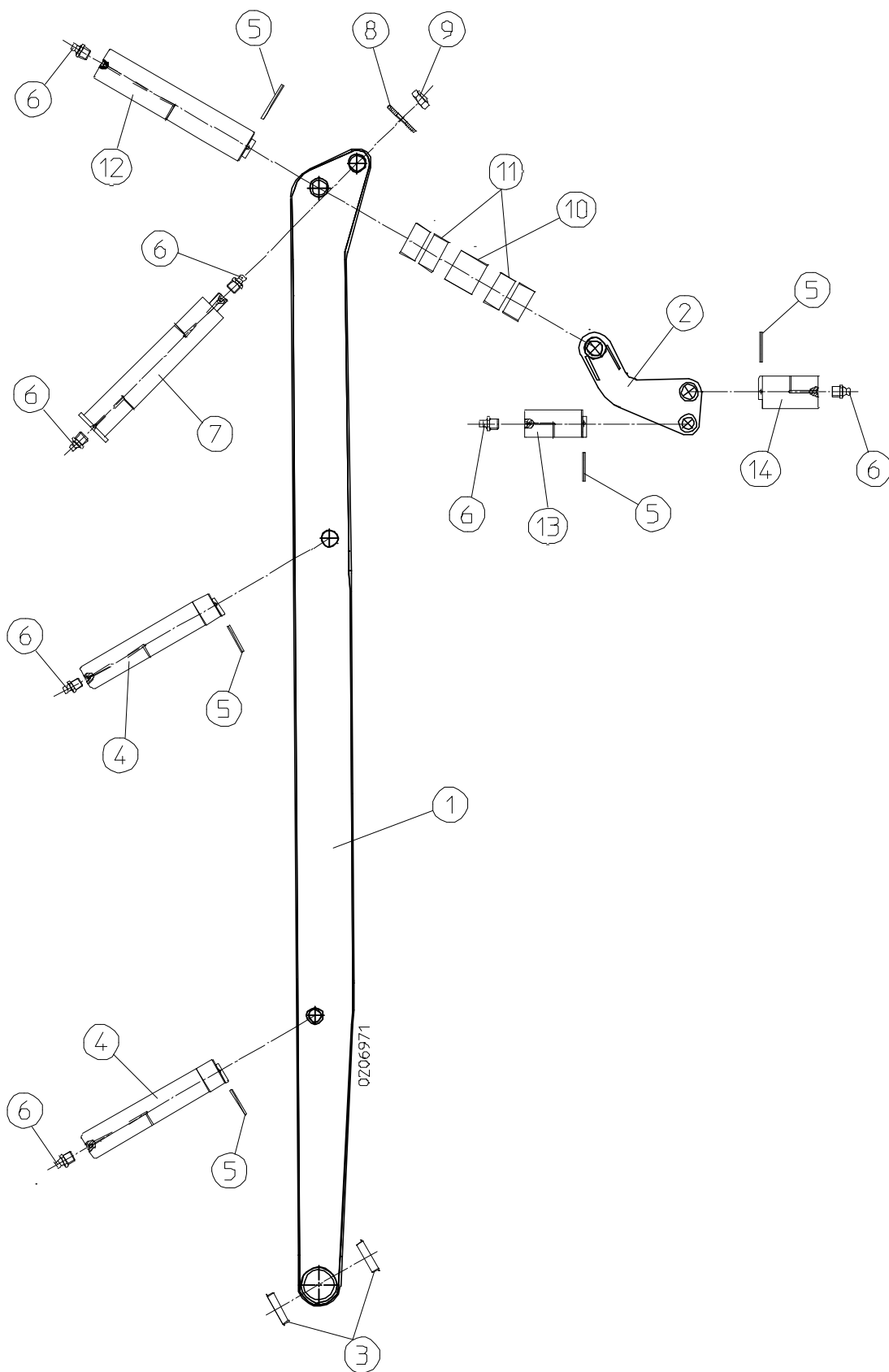
PAGE 12a



PAGE 13a

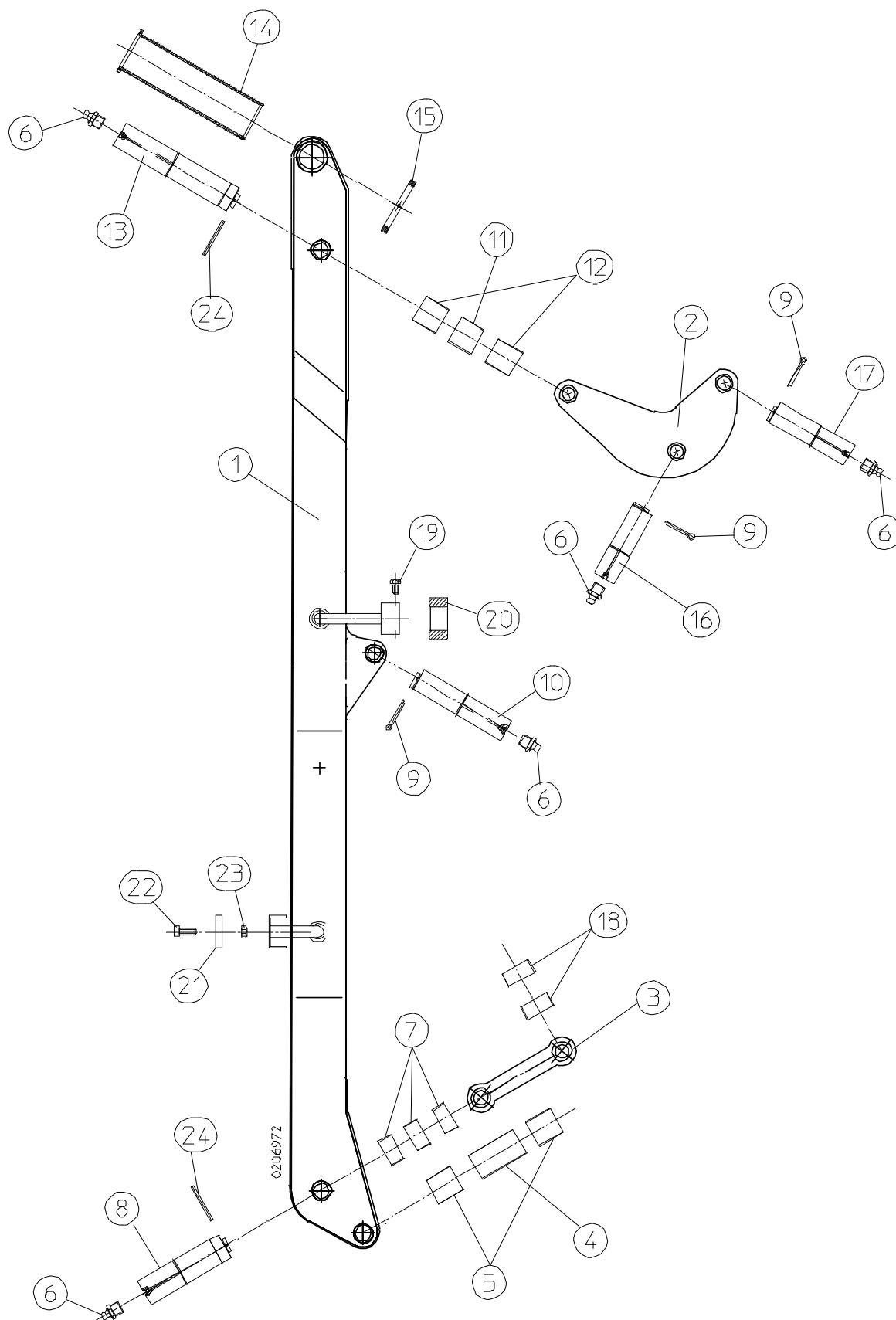




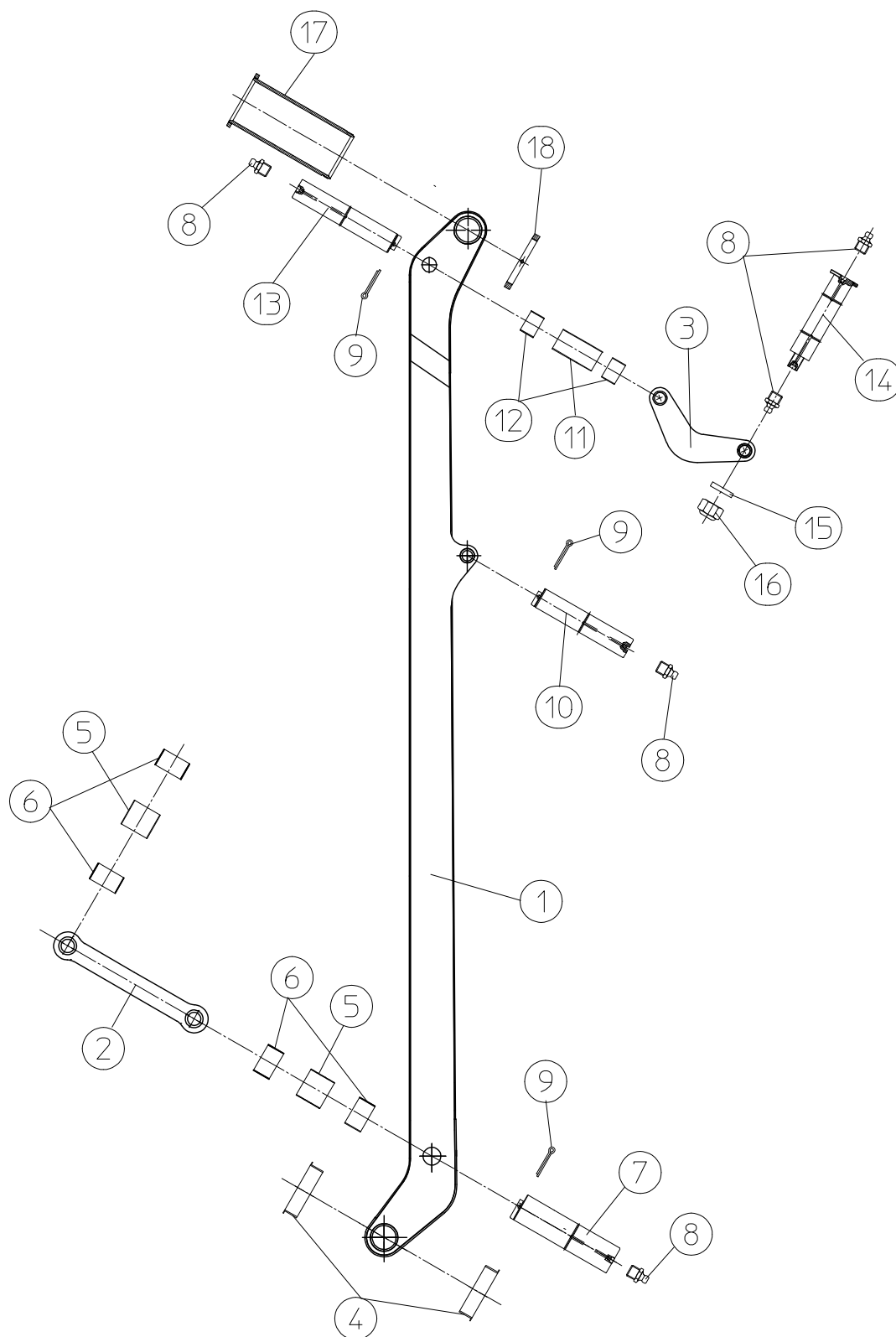




PAGE 16a



PAGE 17a

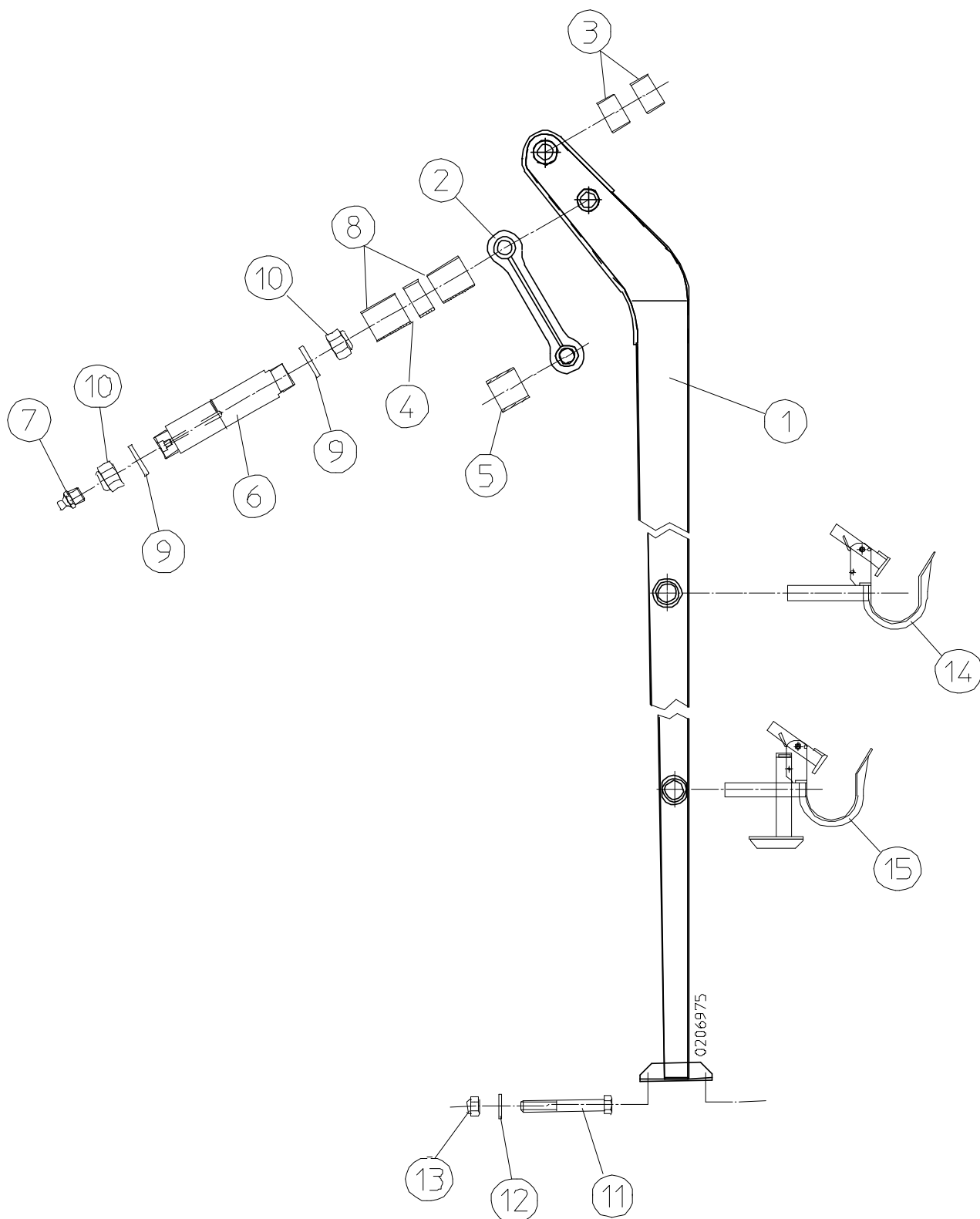




PAGE 18a

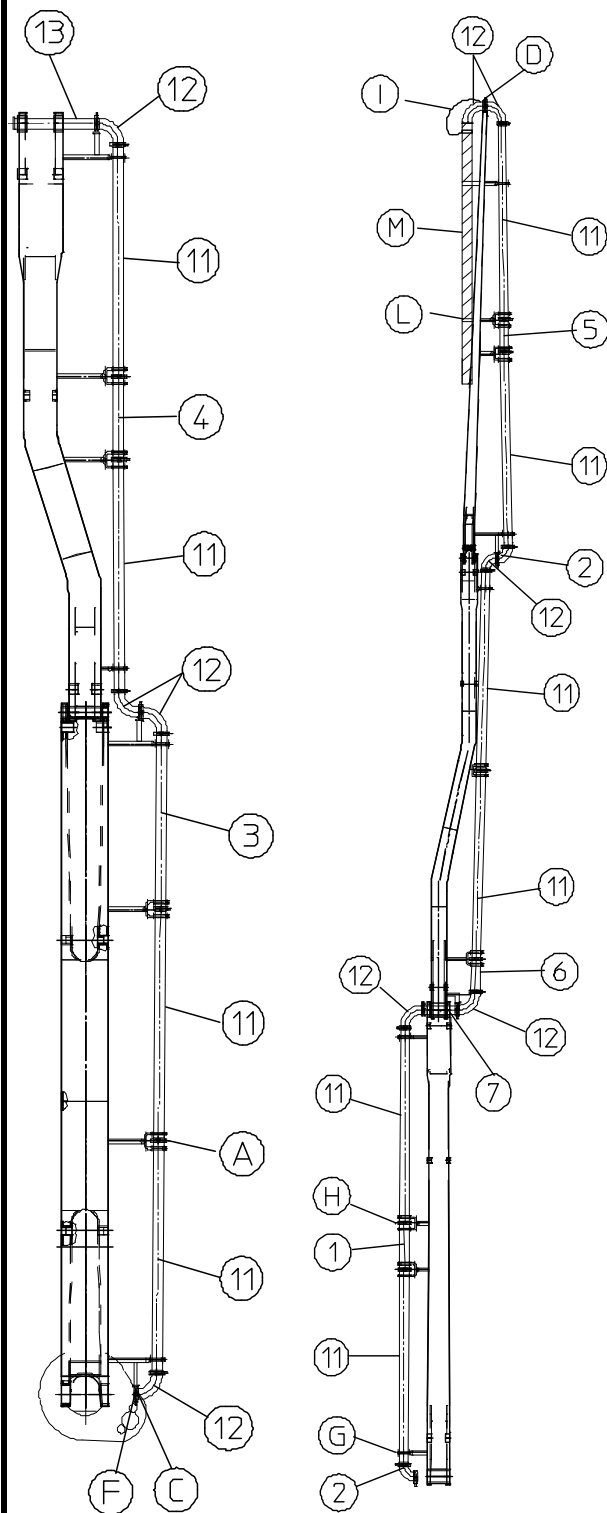


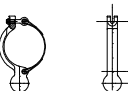
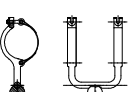
PAGE 19a

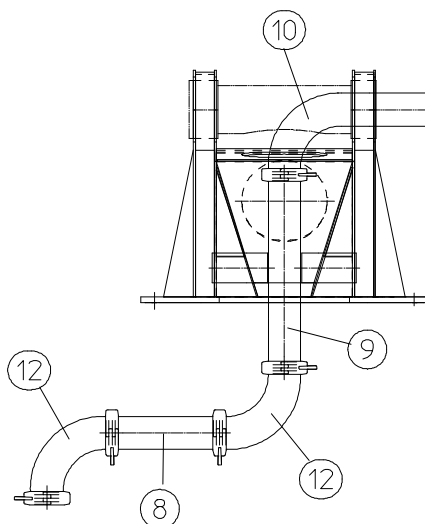




PAGE 20a

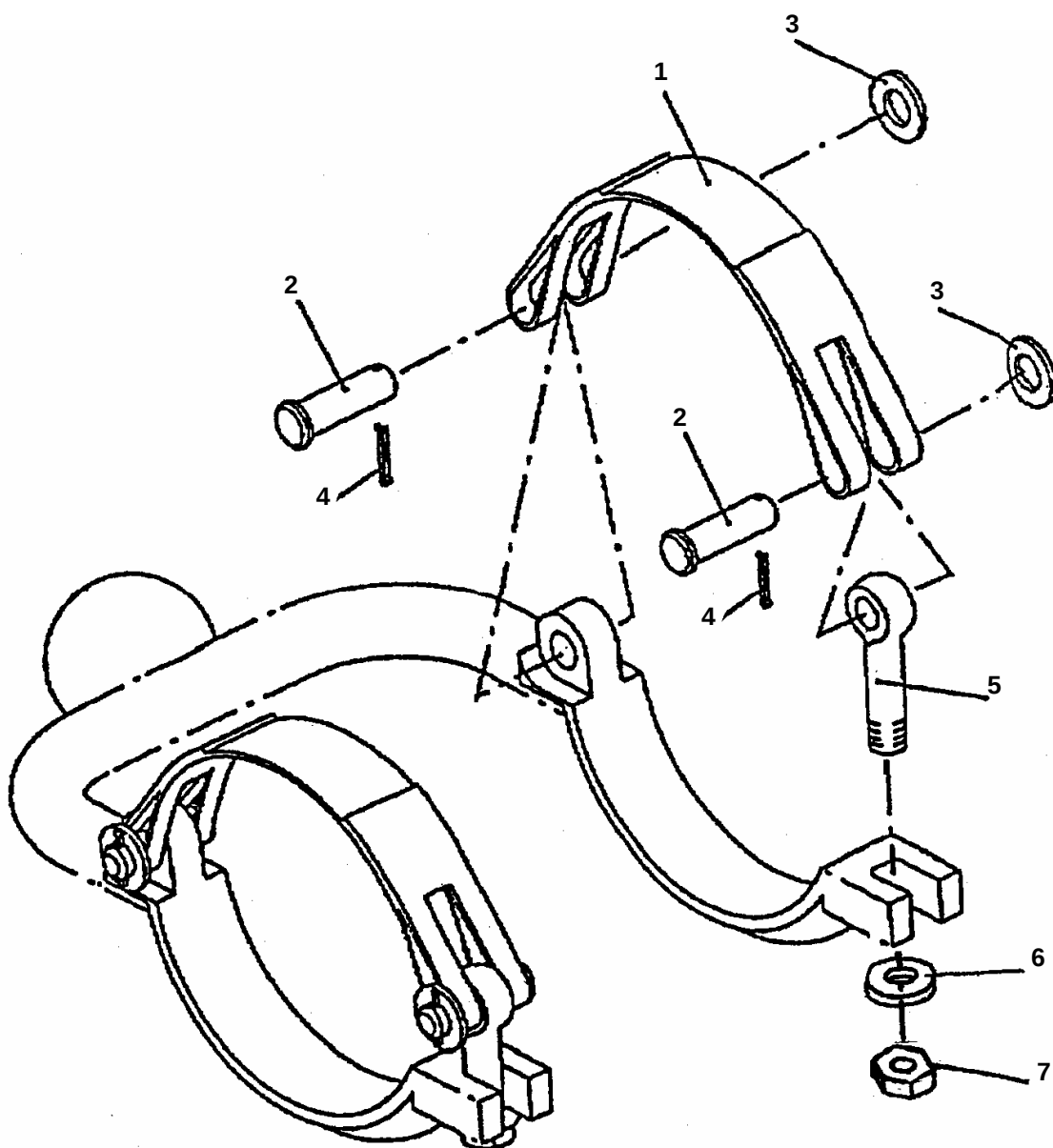


ACCESSORIES FOR CONCRETE PLANT				
A		LEVER JOINT	4"1/2	CODE 110240
			5"1/2	CODE 110270
B		BOLT JOINT	4"1/2	CODE 110287
			5"1/2	CODE 110267
C		SUPPORTING LEVER JOINT	4"1/2	CODE 110294
			5"1/2	CODE 110290
D		SUPPORTING BOLT JOINT	4"1/2	CODE 110292
			5"1/2	CODE 110289
E		SPECIAL BOLT JOINT	5"1/2	CODE 111242
F		GASKET FOR JOINT	4"1/2	CODE 356
			5"1/2	CODE 555
G		CLAMP AND SIMPLE SUPPORT	5"1/2	CODE 120541
H		CLAMP AND DOUBLE SUPPPORT	5"1/2	CODE 120542
I		Collar and safety cable		
L		End hose		
M		End hose support		



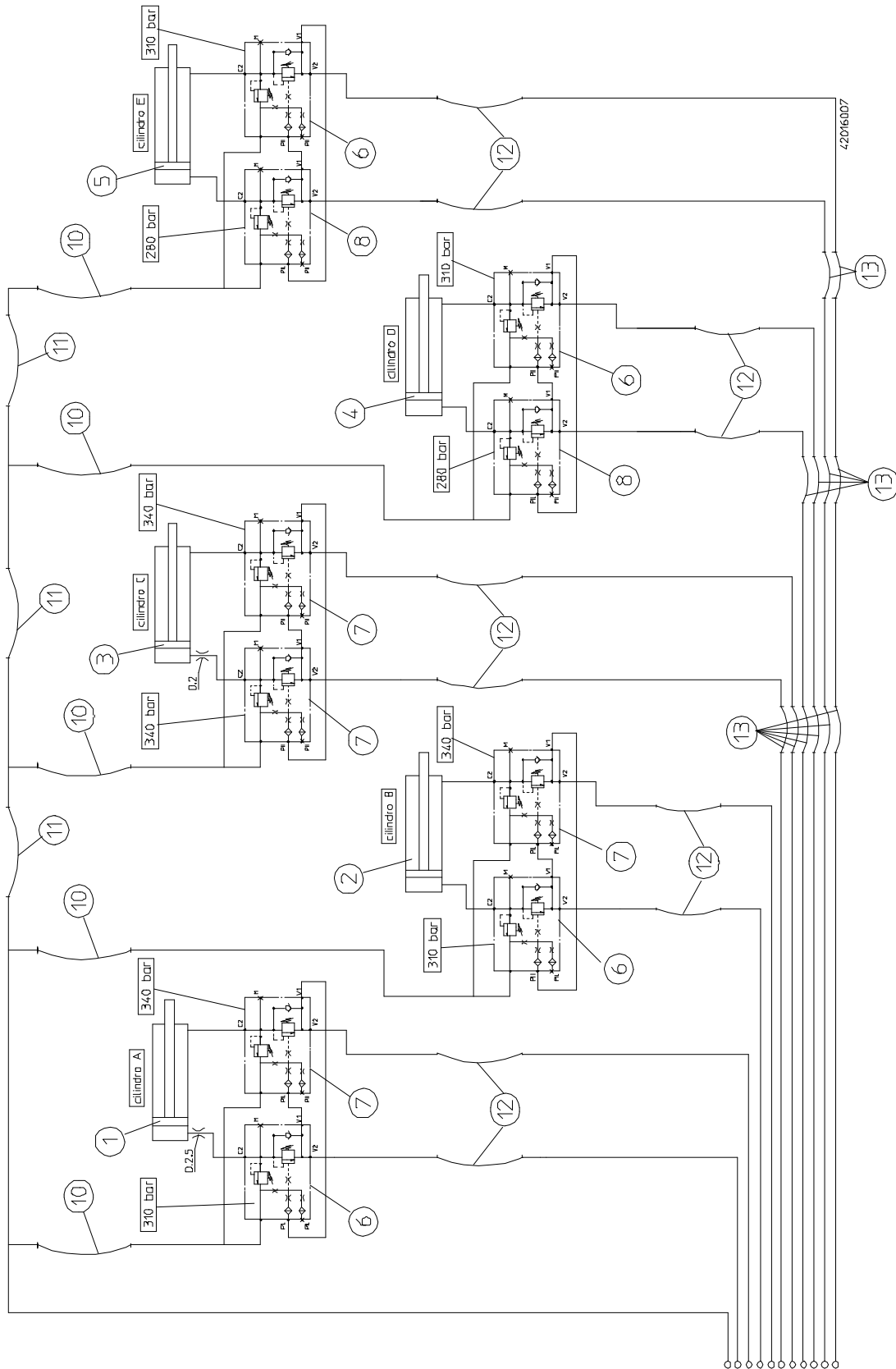


NB: For the exact length of the adapter pipes, see the exact value stamped on the plate of the pipe.



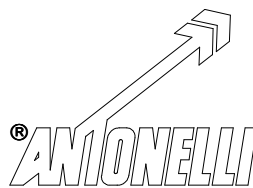


PAGE 22a





PAGE 23a



ANTONELLI S.R.L

V. MALPASSO,1441/1447

47048-S.GIOVANNI IN MAR. (RN) ITALY

TEL. (0541)955258 FAX (0541)957103

INTERNETADDRESS:<http://www.rimini.com/aziende/antonelli>

EMAIL: ANTONELLI@RIMINI.COM