MORIS
Macchine Oleodinamiche
Riduttori Impianti Speciali

Chapter 4

INSTALLING PISTONS

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Enclosed with this handbook and related production.

DRAWING	DESCRIPTION
9316	Assembly of a lateral ram
9320/1	Direct underground 1:1 ram
9320/2	Direct underground 1:1 ram
9325	Retracted ram
PROT/SDOPP	Piston two pieces protection for trasportation
9330/1	Cylinder assembly in two pieces
9330/MP2-1/2/3/4/5/6	Cylinder assembly in two pieces

1) PLACE THE LOWER FIXING PLATE ON THE CONCRETE OR WELDEDMETAL MADE CAISSON PREVIOUSLY ON LEVELED.

2) PUT THE CYLINDER HEAD SO THAT THE AXIS OF THE RAM IS IN THE POSITION PREVIEWED IN RELATION TO THE GUIDES.

3) SHIFT THE FFOT OF THE RAM IN A WAY THAT THE GENERATING LINE OF THE RAM BODY IS // TO THE GUIDES (THE RETRACTED ROD IS ALWAIS // TO THE BDY OF THE RAM).

4) SCREW THE UPPER FIXING PLATE BY COMPENSATING THE SIDE AND LEVEL VARIATIONS BY WEDGES.

5) SCREW THE UPPER FIXING PLATE FOLLOWING THE SAME PROCEDURE AND CONTROL // WITH A LEVEL.

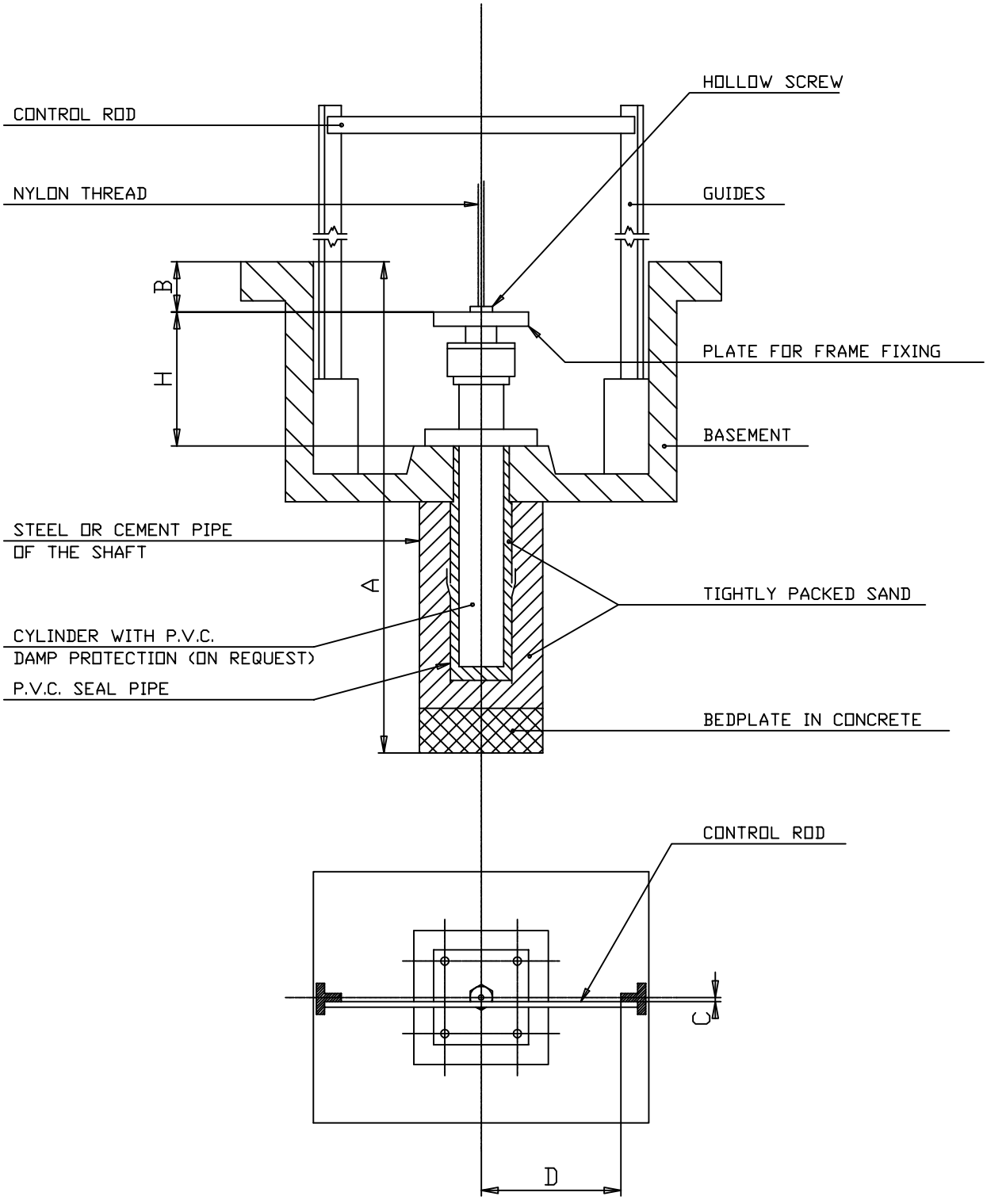
6) PLACE THE CAR ON THE RAM HEAD.

7) MARK ON THE BRACKET THE FIXATION HOLES OF THE RAM HEAD.

8) DRILL THE BRACKET AND FIX IT ON THE RAM.

9) DEMOUNT THE SLIDING GUIDES AND CHECK THE POSITIONING OF THE BRACKET IN RELATION TO THE GUIDES.

10) REASSEMBLE THE SLIDING GUIDES AND PROCEED, WITH THE HELP OF A HOIST, IN A COMPLETE MANOUVRE ON THE TOTAL RUN OF THE RAM.



A = MINIMUM SHAFT DEPTH (TOTAL LENGHT OF THE RAM + LOWER EXTRASTROKE + LOWER BASE OF THE CAR + FRAME + OTHERS)

B = LOWER EXTRASTROKE OF THE RAM + LOWER BASE OF THE CAR + FRAME

H = SEE SHEET N° 9150

	DIRECT UNDERGROUND 1:1 RAM	DATE 11/95
		DWG N. 9320/1

9320/1-ING

ASSEMBLY INSTRUCTIONS

1) CHECK WHETHER THE INTERRED PIPE IS PLUMB DOWN AND WELL DIMENSIONED TO HOLD THE CYLINDER.

2) INSERT THE CYLINDER IN THE HOLE, WITH RESPECT TO THE WISHED “B” DIMENSION, HOLDING IT PROPERLY.

3) CHECK, USING A SPRIT LEVEL, THE RIGHT CENTERING OF THE CYLINDER AXLE WITH RESPECT TO THE GUIDES.

4) CATCH FROM ROD HEAD THE PROJECTING NYLON WIRE AND FIX IT TO THE UPPER-STROKE SIDE OF THE EQUIPMENT, SO THAT IT RESULTS EQUIDISTANT FROM THE GUIDES AND ON THE RAM AXLE.

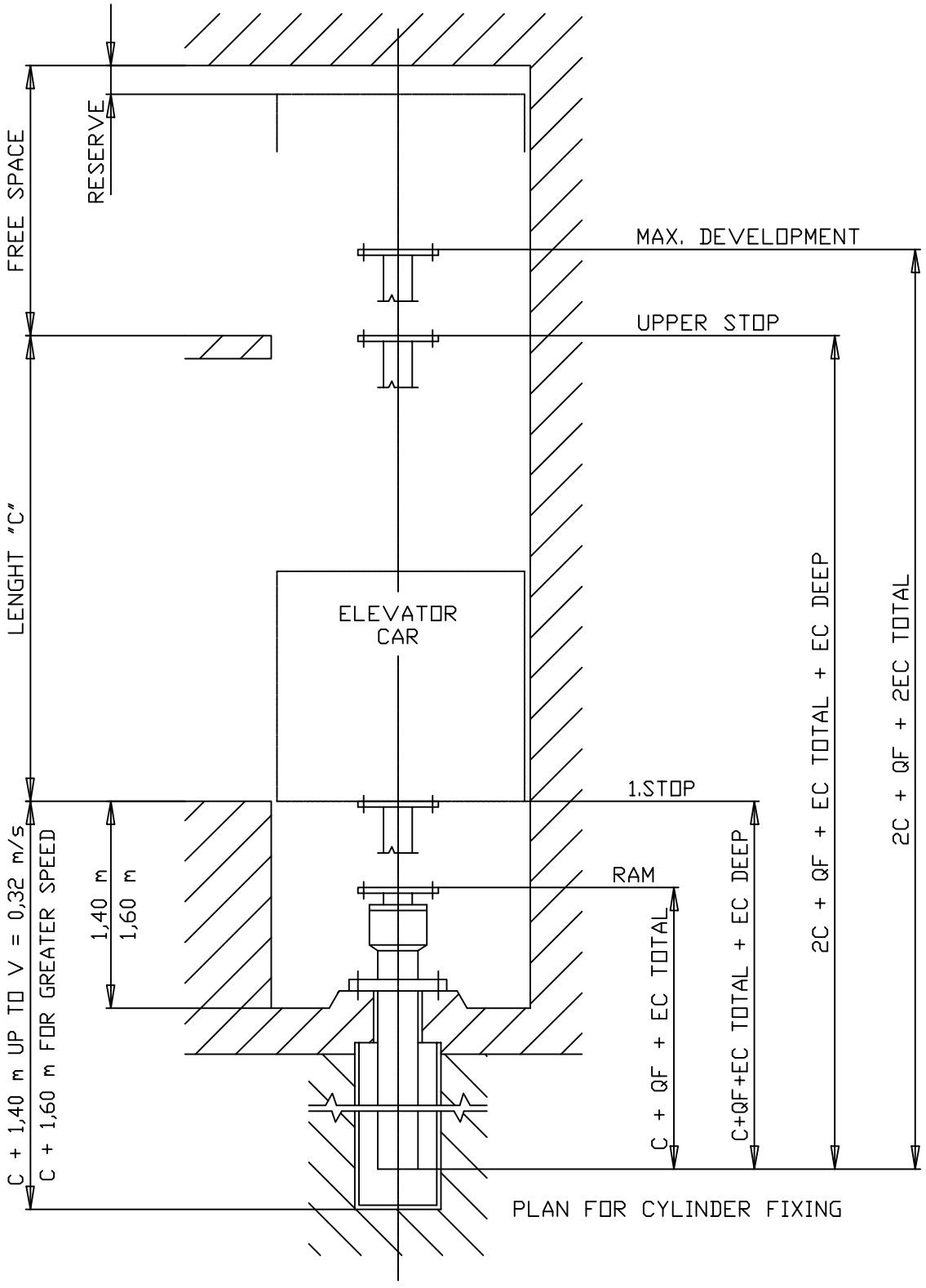
5) CHECK WHETHER THE NYLON WIRE IS RIGHT CENTRED WITH RESPECT TO THE HOLE IT’S COMING FROM, SHOULD THAT NOT BE THE CASE, WORK ON THE CYLINDER TO ADJUST ITS PERPENDICULARITY (SEE DRAWING ON SHEET N. 9320/1)

NOTE:
DUE TO PARTICULAR REASONS, THE CYLINDER CAN BE MOVED FROM THE IDEAL CENTRE OF 10 cm. IN BOTH DIRECTIONS.

6) AFTER CYLINDER LEVELING, THE BOTTOM OF THE HOLDER MUST BE FIXED WITH CEMENT OR WITH ADDITIONAL PLATES, SO THAT THE ADJUSTMENT SCREWS WON’T BEAR THE LOAD, THEN NUT AND COUNTER-NUT MUST BE BLOCKED (WHEN USING CEMENT WORK ONLY WHEN IT’S SOLIDIFICATED.

WHEN ASSEMBLY’S COMPLETED, CHECK:

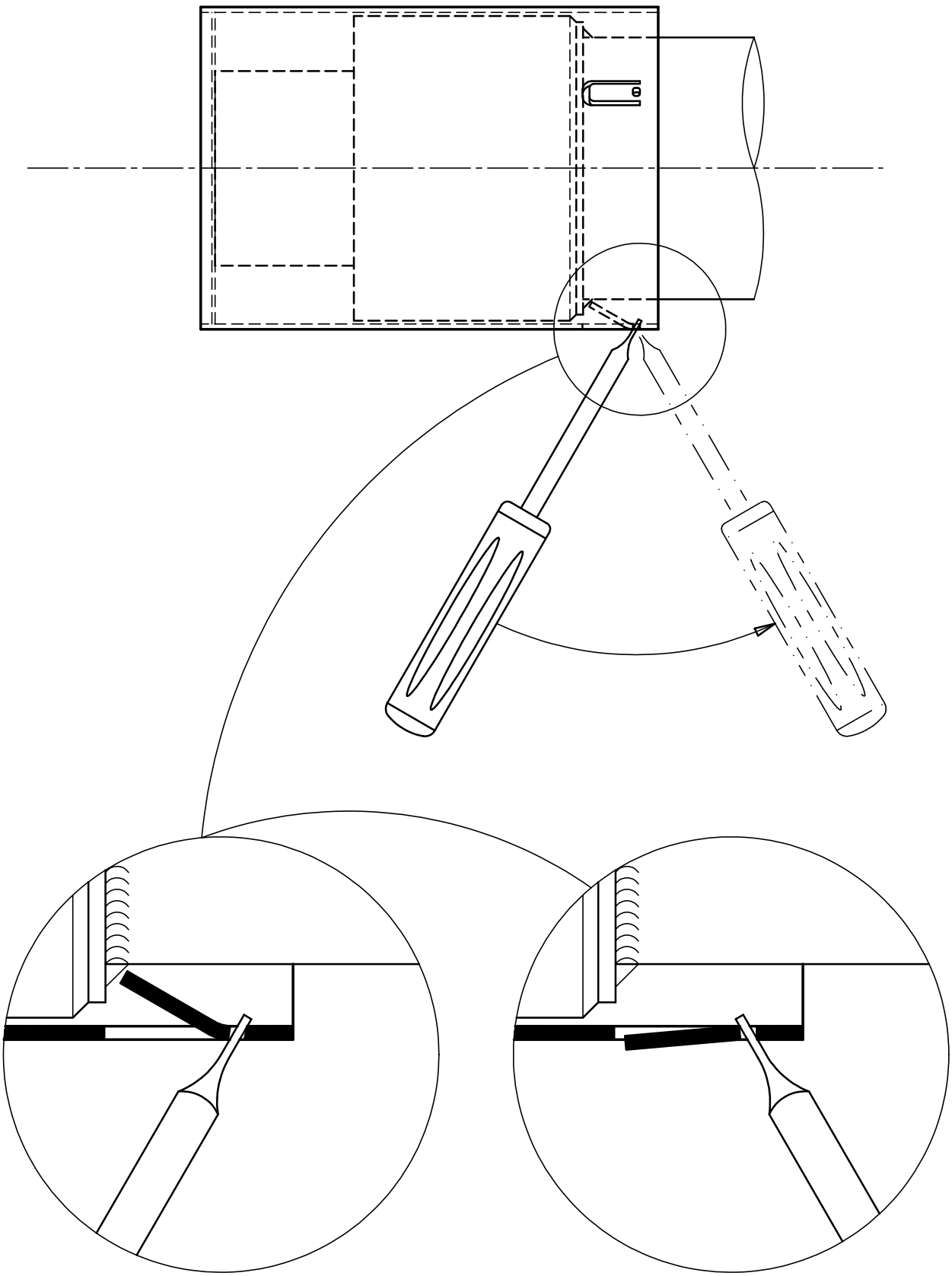
- WHETHER THE RAM SURFACE IS CLEAN, RULINGLESS, RUSTLESS, SCRATCHLESS ETC.
- WHETHER THE SEALS HAVE NO OIL LEAKAGES (SEE FOR EVENTUAL CHANGE).
- WHETHER THE OIL RECUPERATOR IS FUNCTIONAL.
- WHETHER THE PLATE FIXING SCREWS ARE RIGHT BLOCKED.



C = ELEVATOR RUN

EC = RAM EXTRA STROKE

	RETRACTED RAM	DATE 04/90
		DWG N. 9325



UT	**PROTEZIONE PISTONI SDOPPIATI PER TRASPORTO** *PISTON TWO PIECES PROTECTION FOR TRASPORTATION*	DATA *DATE* 17/01/08 N°DIS. *DWG Nr.* PROT/SDOPP

MORIS

THE MANUFACTURER RETAINS THE RIGHT TO REFUSE TO ISSUE THE WARRANTY IF THE ASSEMBLY HAS NOT BEEN CARRIED OUT ACCORDING TO THE INSTRUCTIONS REPORTED BELOW

1) INSERT THE SECTIONS OF THE PISTON IN THE SHAFT WITH CAUTION.

2) LEAN THE LOWER PART OF THE CYLINDER ON THE PIT FLOOR AND FIX IT IN ITS POSITION, PERFECTLY VERTICAL.

3) LIFT THE PISTON UPPER PART AND REMOVE THE METALLIC PROTECTION; REMOVE THE AIRBALL/BUBBLEWRAP PROTECTION. LEAN THE PISTON BACK ON THE FLOOR CAUTIOUSLY.

4) REMOVE THE TRANSPORT-AID HOOK AND THE GASKET FIXING HEAD; FIX THE AFOREMENTIONED HOOK ON THE ROD, USING THE M30-M60 HEAD SCREW

5) REMOVE WITH CAUTION THE JACK FROM THE CYLINDER, WITH THE AID OF A “BLOCK AN TACKLE” DEVICE, KEEPING THE CYLINDER IN POSITION. REMOVE THE PISTON TOP AND BOTTOM METAL PROTECTION; REMOVE THE BUBBLEWRAP PROTECTION.

6) SCREW THE ROD BY ABOUT 90% USING THE FIRST TIE. LIFT THE ROD BY ABOUT 500 mm, TO ALLOW THE CLAMP OF THE SECOND TIE. MAKE SURE THAT THE TIE IS POSITIONED RIGHT ABOVE THE CYLINDER JUNCTION, TO AVOID THE ROD FROM FALLING.

7) UNSCREW THE UPPER ROAD. CLEAN THE THREADS OF PISTON TOP AND BOTTOM PARTS (AFTER DISASSEMBLING THE OR SEAL), USING NITROBENZENE SOLVENT OR TRICHLOROETHYLENE AND DRY THE PARTS CAREFULLY. PLACE THE OR BACK IN PLACE. INSERT THE SUPPLIED THREAD CLAMP “LOXEAL 86-55” ON THE MALE THREADS SCREW TIGHTLY (WITHOUT REST), VERIFYING THE PERFECT SEALING (WITH LIGHT STRENGTH), UNSCREW BY 90° IN ORDER TO GIVE TH E FINAL RAPID TIGHTENING, USING THE TIE USING BOTH HANDS. MAKE SURE THAT JUNCTION-DRAWN REFERENCE LINES ARE PERFECTLY ALIGNED TO ENSURE FULL TIGTHENING.

8) AFTER SECURING THE ROD, MAKE SURE THAT THERE ARE NO SHARP EDGES OR ROUGHNESS IN THE JOINING POINT (IF PRESENT, REMOVE THEM, USING THE SUPPLIED CLOTH SANDPAPER).

9) REMOVE THE TIES FROM THE ROD AND DEPOSIT THE ROD ON THE BOTTOM OF THE CYLINDER; REMOVE THE TRANSPORT-AIDING HOOK.

10) FIX THE TRANSPORT-AIDING HOOK TO THE WELDED HEAD, USING THE TWO PROVIDED SCREWS.

11) PUT THE UPPER PART OF THE CYLINDER ON THE ROD, AND SCREW IT COMPLETELY. REMOVE THE HOOK (*)

*** :** ONLY FOR THE DIRECT UNDERGROUND PISTONS, CLEAN THE THREADS AND PUT ON THE MALE THREAD THE PROVIDED “LOXEAL 86-55”

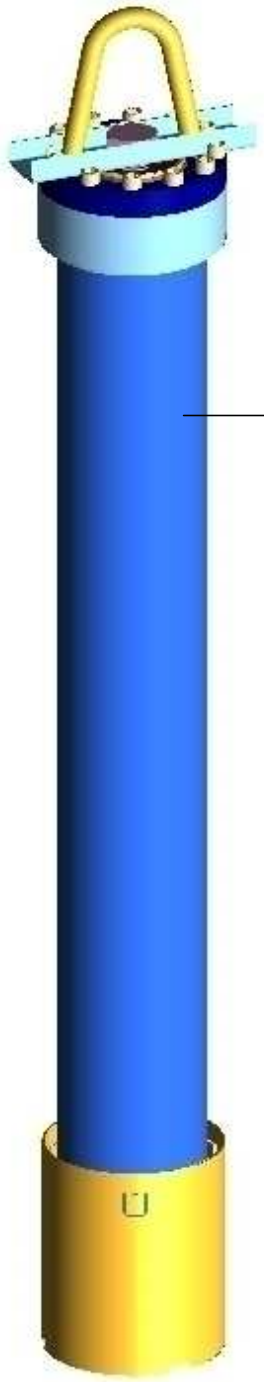
12) ASSEMBLE THE GASKET FIXING HEAD, MAKING SURE THE PERFECT LOCK OF THE SCREWS; INSERT THE FITTING WITH THE OIL RECOVERY HOSE. (*)

* : FOR THE CORRECT ASSEMBLING OF THE GASKET KIT, REFER TO THE RELATED INSTRUCTIONS

13) FIX THE UPPER CYLINDER IN PERFECTLY VERTICAL POSITION.

14) THE CYLINDER IS READY FOR USE (ONLY FOR CENTRAL DIRECT PISTON IT IS NECESSARY TO WAIT 24 HOURS BEFORE OIL INTRODUCTION)

NOTE.: DURING THE VERY FIRST ELEVATOR RUN, VERIFY THAT THERE ARE NO SURFACE MICRO-DAMAGES OR IMPERFECTIONS. IF ANY IS FOUND, REMOVE THEM USING THE SUPPLIED CLOTH SANDPAPER.



PISTONE
PARTE SUPERIORE
RAM UPPER PART
* - Ref. Point: 1

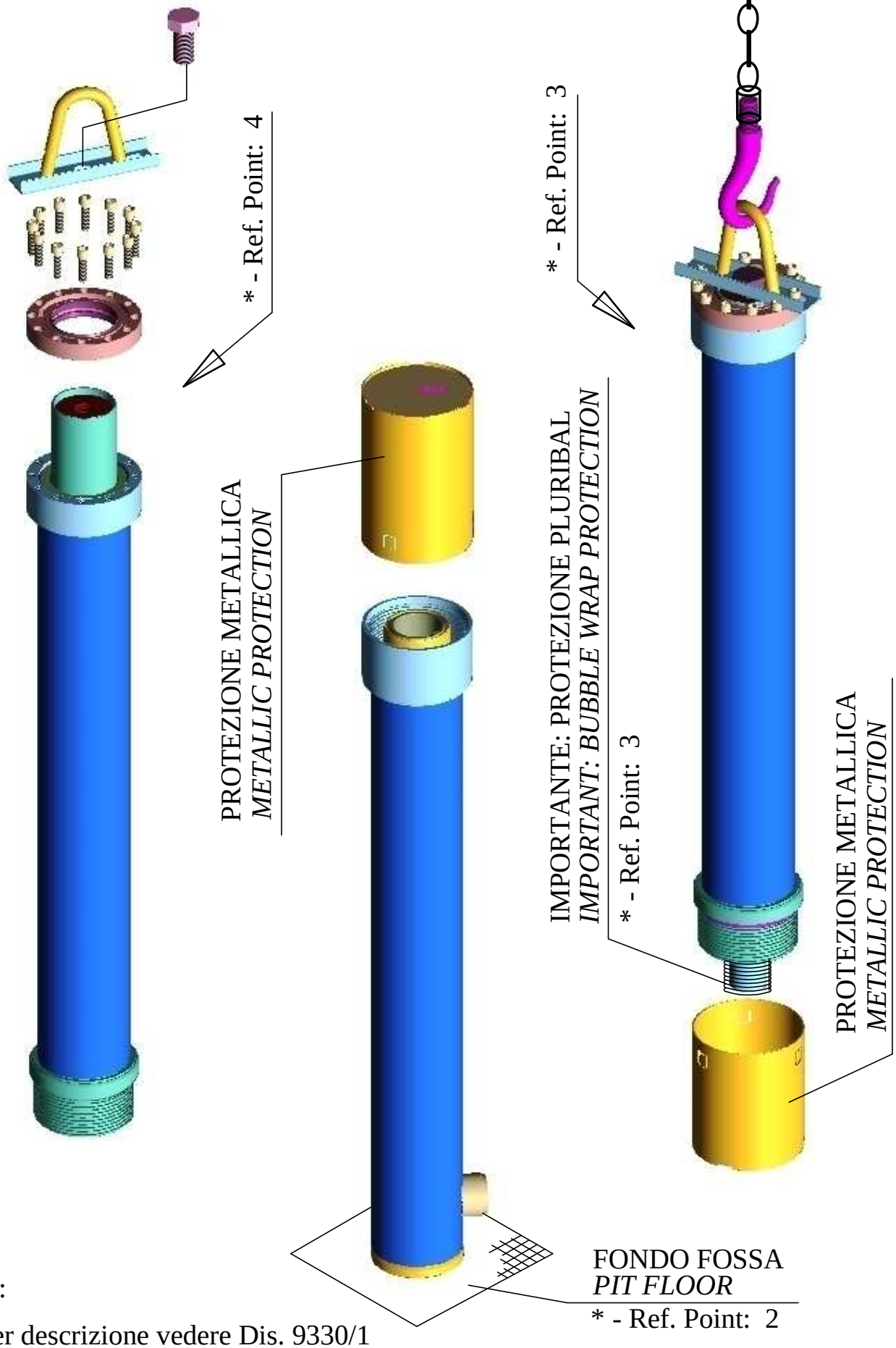


PISTONE
PARTE INFERIORE
RAM LOWER PART
* - Ref. Point: 1

NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

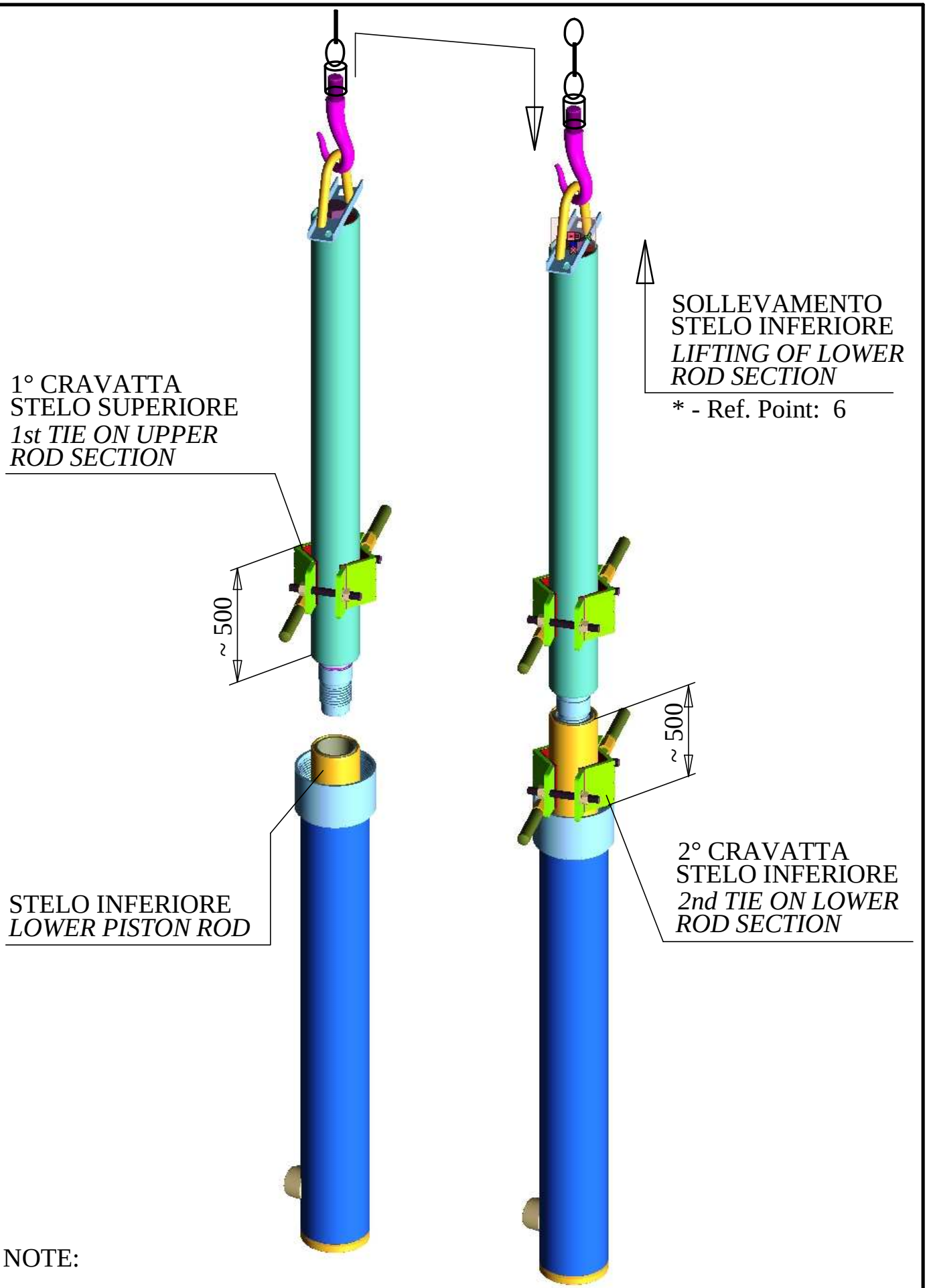
UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-1



NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

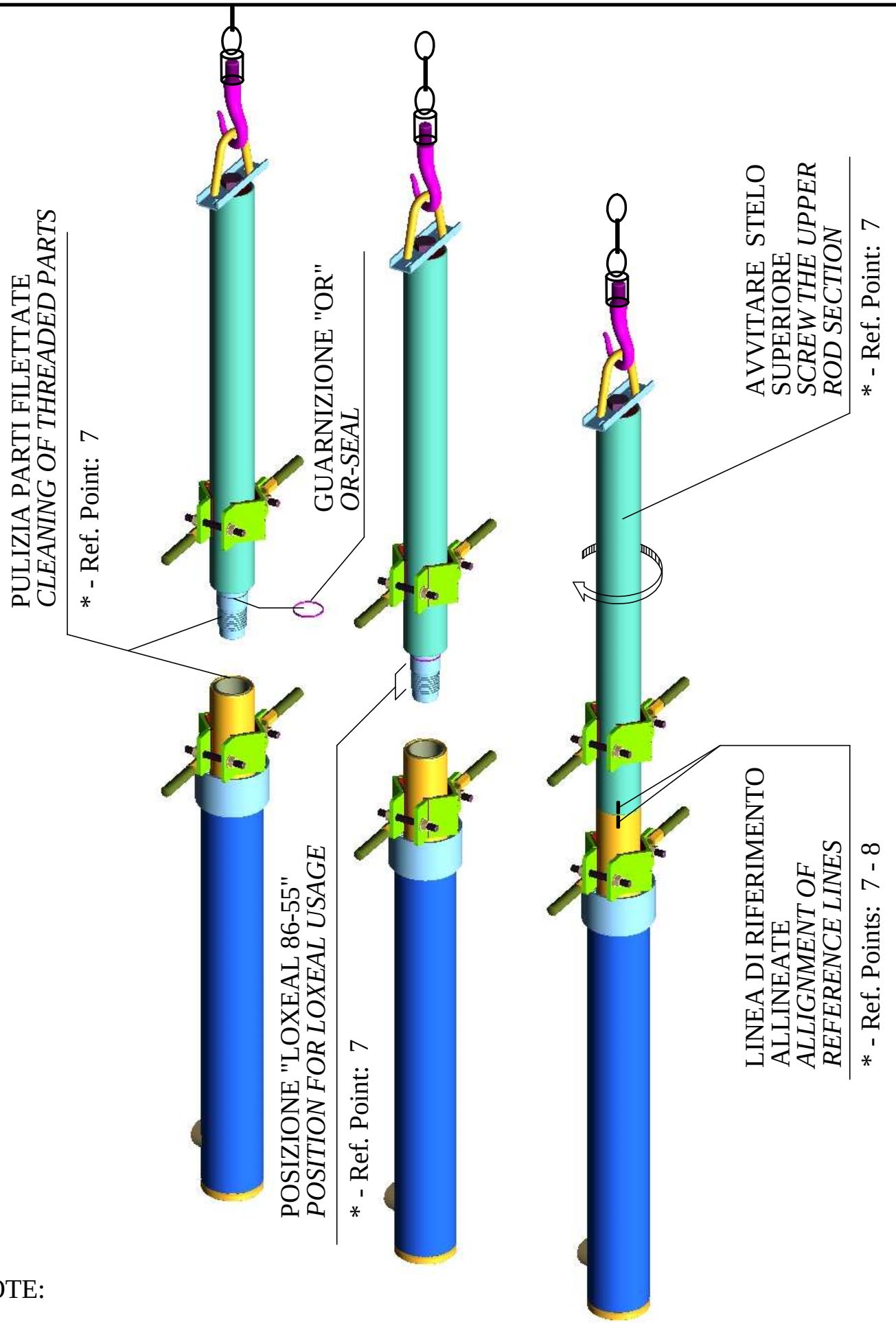
UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-2



NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

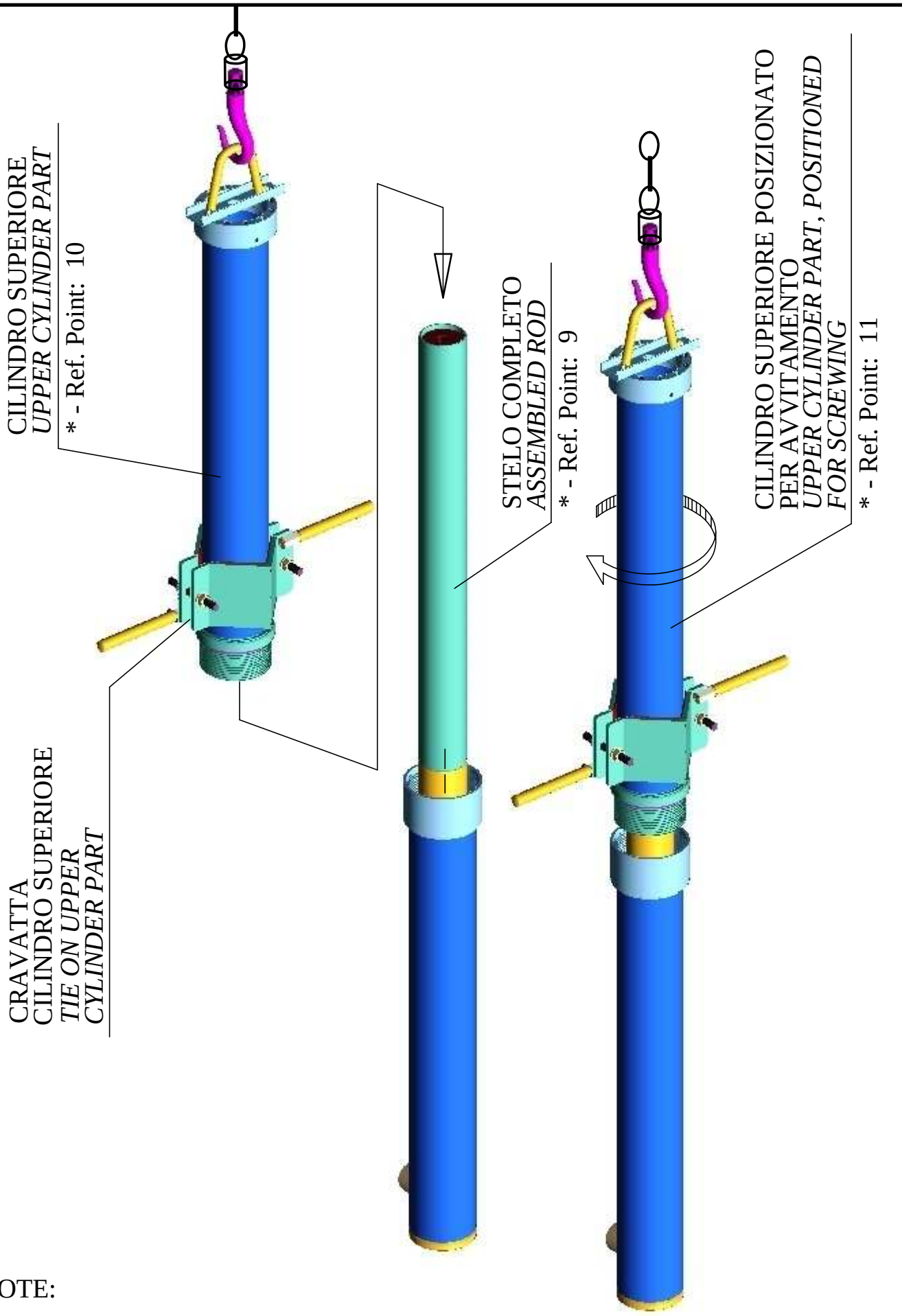
UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-3



NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-4



NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-5

VITI BLOCCAGGIO TESTATA
HEAD-FIXING SCREWS
* - Ref. Point: 12

TESTATA PORTA GUARNIZIONI
GASKET CYLINDER HEAD
* - Ref. Point: 12

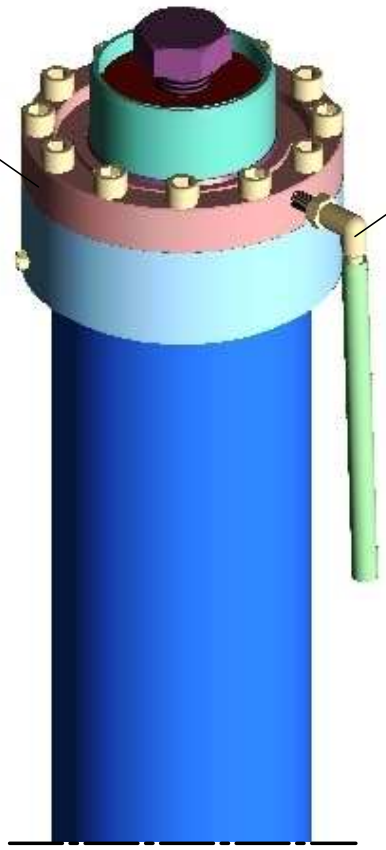
RACCORDO TUBO
RECUPERO OLIO
OIL-RECOVERY FITTING

TESTATA CILINDRO
COMPLETA
COMPLETE CYLINDER HEAD

VALVOLA
SPURGO ARIA
BLEEDER VENT
VALVE







NOTE:

* - Per descrizione vedere Dis. 9330/1
For a detailed description, see Table 9330/1

UT	MONTAGGIO PISTONE IN DUE PEZZI *ASSEMBLY INSTRUCTIONS FOR 2-PIECES CYLINDER*	DATA *Date* 09/09 DIS. N° *Dwg Nr.* 9330/MP2-6