



OPERATION AND MAINTENANCE HANDBOOK

DRILL C 70

MODEL : C 70 N C 70 I

REFERECE N°:.....

CONSTRUCTION YEAR : 2008

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DRILL MOD. C 70

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SECTION 1

DESCRIPTION AND MAIN SPECIFICATION

1.1 PRESENTATION

IN THIS HANDBOOK ARE REPORTED THE INFORMATIONS AND INSTRUCTIONS AND WHAT IS NECESSARY FOR A GOOD OPERATION AND THE NORMAL MAINTENANCE OF THE MACHINE “DRILL C 70” MANUFACTURED BY DALCERO METALWORKING SNC. OF RONCA’ (ITALY) AFTERWARDS CALLED MACHINE

(!)

THE PRESENT HANDBOOK IS INTEGRANT PART OF THE MACHINE AND HAVE TO BE ACCOMPANIED IT ALWAYS IN EVERY REPLACEMENT OR RESALE .IT MUST BE KEPT IN SURE PLACE WELL KNOWN BY THE APPOINTEES

1.2 SUBJECTS TO WHOM THE HANDBOOK IS ADDRESSED

THE PRESENT HANDBOOK IS THE BASIC TOOL FOR THE APPOINTEES WHO FOLLOW THE MACHINE ACCORDING TO THE DIFFERENT TASK AS :

- **APPOINTEE TO THE TRANSPORT OR TO THE HANDLING OF THE MACHINE**
- **APPOINTEES TO THE MACHINE OPERATIONS**
- **APPOINTEES TO THE MAINTENANCE**
- **APPOINTEES TO THE DEMOLITION**

1.3 WARRANTY

THE MANUFACTURER GUARANTEES HIS NEW PRODUCTS FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OR PURCHASE.

EVENTUAL COMPLAINTS SHOULD BE PRESENTED IN WRITING WHITIN EIGHT(8) DAYS FROM THE RECEIPT OF THE MACHINE. THE WARRANTY IS CARRIED ON THE REPAIRING OR REPLACEMENT FREE OF CHARGE OF THOSE PARTS THAT RESULT DEFECTIVE.

IN ANY CASE THE REPLACEMENTS AND REPAIRING OF THE PARTS UNDER WARRANTY DO NOT EXTEND THE LIMITS OF THE SAME.

1.3.1 WARRANTY EXCLUSIONS

THE WARRANTY EXPIRES (IN ADDITION WHAT MENTIONED IN SUPPLY CONTRACT):

- **IN CASE IT HAPPENS A MISTAKE OF MOTION IMPUTABLE TO THE OPERATOR**
- **IN CASE THE DAMAGES ARE RISEN BY AN INSUFFICIENT MAINTENANCE**
- **IN CASE OF REPAIRING CARRIED OUT BY THE USER WITHOUT THE AUTHORISATION OF MANUFACTURING COMPANY.**
- **ALSO THEY ARE EXCLUDED FROM THE WARRANTY THE DAMAGES IN CONSEQUENCE OF NEGLIGENCE,CARELESSNESS,BED USE OF THE MACHINE.**

1.4 IDENTIFICATION

EVERY MACHINE IS EQUIPPED BY AN IDENTIFICATION LABEL,WHER ARE INDICATED:

- **NAME AND ADDRESS OF THE MANUFACTURING COMPANY**
- **MCHINE MODEL**
- **REFERENCE NUMBER**
- **CONTRUCTION YEAR**

THE MACHINE IS EQUIPPED IN SERIES BY :

- **The operation and maintenance handbook**
- **CE conformity statement**

1.5 MACHINE DESCRIPTION AND USE

THE MACHINE IS MARKED CE CONFORMITY ACCORDING TO DIRECTIVE 98/37CE RECOGNIZED BY ITALY BY DPR 459/96 AS DESCRIBED IN THE CONFORMITY STATEMENT WHOSE THE MACHINE IS EQUIPPED.

THE MACHINE, IN PAINTED STEEL, IS COMPOSED BY PIPES STRUCTURE THAT SUPPORTS THE DRILL, THE REDUCTION GROUP AND THE COUPLING OF THE MOTION TRANSFER AND THE POSITION CONTROL .

THE DRILL IS MANUFACTURED IN THREE VERSIONS:

- 1. (N) FOR HOLES IN FERTILE GROUND**
- 2. (I) REDUCTION BY MECHANICAL MANUAL REVERSER**
- 3. (ID) REDUCTION BY HYDRAULIC REVERSER**

THE REVERSER ALLOWS TO ROTATE THE TOP SPIRAL IN COUNTERCLOCKWISE IN CASE OF LOCKING OWING TO THE PRESENCE OF STONES OR OTHER IN THE GROUND.

MANY TOP SPIRALS ARE AVAILABLE WITH DIFFERENT SHAPE AND HEIGHT. THE KNIFES ARE MANUFACTURED IN SPECIAL STEEL WEAR RESISTANT AND THEY ARE INTERCHANGEABLE (S. TYPE)

THE CARDAN IS SUPPLIED IN SERIES WITH CLUTCH

THE EQUIPMENT MUST BE CONNECTED WITH SELF-PROPELLED MACHINE FROM WHICH RECEIVES THE MOTION BY MEANS OF THE P.T.O. AND THE CARDAN JOINT (NOT SUPPLIED) IN CONFORMITY OF THE RULE EN 1152

THE DRILL IS USED BY ONLY ONE OPERATOR PLACED ON THE SEAT OF THE AGRICULTURAL TRACTOR

(!)

BEFORE CONNECTING THE MACHINE VERIFY THE FITNESS OF THE SELF-PROPELLED VEHICLE AND OF THE CARDAN TRANSMISSION.

1.6 MACHINE USE NOT PROVIDED

THE MACHINE IS SUITABLE TO CARRY OUT THE HOLES IN THE GROUND, ANY OTHER USE IS EXCLUDED AND IT CAN BE DANGEROUS FOR THE PERSONS AND FOR THE SAME MACHINE.

(!)

THE MACHINE IS NOT PROVIDED TO BE USED IN ZONE WITH DANGER OF EXPLOSION AND FIRE

1.7 TECHNICAL SPECIFICATION

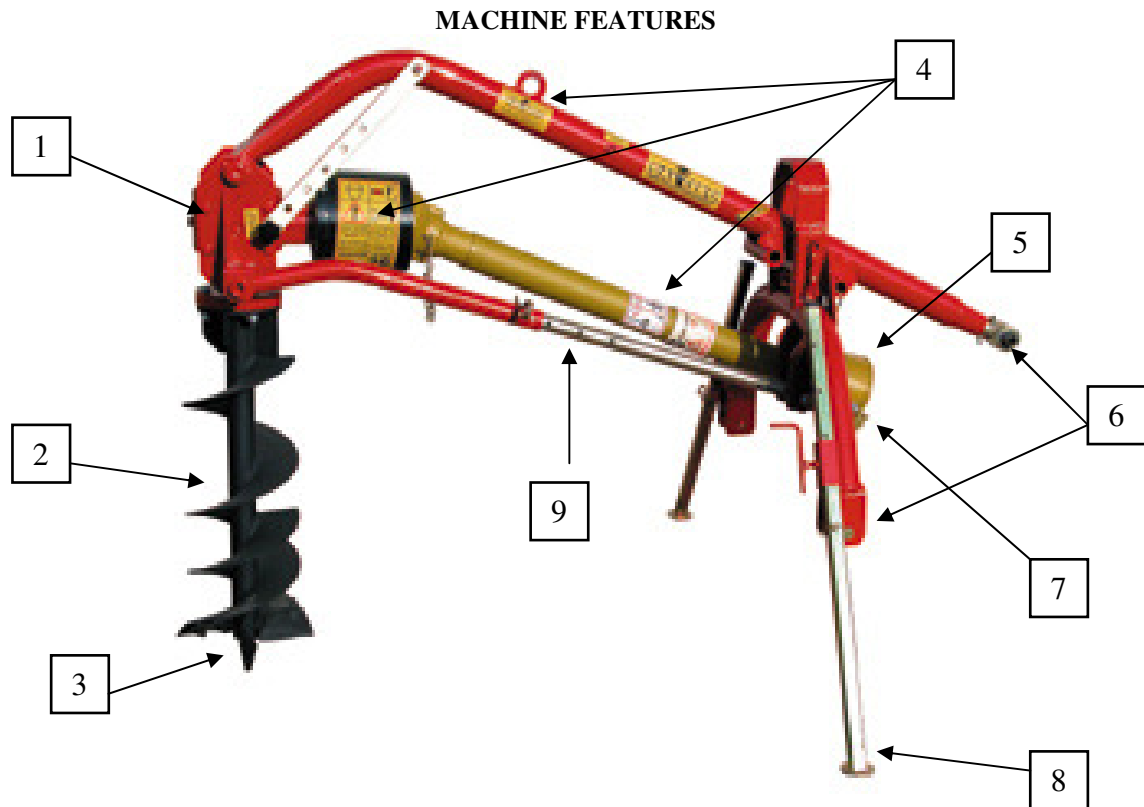


FIG.1 ASSEMBLY VIEW OF THE MACHINE WITH ITS MAIN GROUPS

- 1 REDUCTION GROUP
- 2 ROCK DRILL POINT
- 3 INTERCHANGEABLE KNIFES
- 4 SIGNALING PICTOGRAPHS RESIDUAL RISKS
- 5 TRANSMISSION CARDAN JOINT WITH CLUTCH
- 6 UNIVERSAL CONNECTION AT THREE POINTS
- 7 SHOCK ABSORBER AT DOUBLE ACTING
- 8 DRILL SUPPORT LEGS IF NOT CONNECTED TO THE TRACTOR
- 9 INCLINATION REGULATOR AT THREE HOLES

THE MACHINE IS APPLIED TO THE SELF PROPELLED MACHINE THROUGH THE THREE CONNECTIONS POINTS OF 1ST AND 2ND CATGORY.

THE TREANSMISSION PUTS INTO ROTATIO THE REDUCER IN THE DRILLING POINT,THE MASS PRODUCED CLUTCHES THAT ARE SUPOPLIED GUARANTEE THAT THEY ARE NOT BREAKAGE IN CASE OF POINT LOCKING DURING THE DRILLING.

IT IS POSSIBLE TO ADJUST THE HOLES INCLINATION BY A SYSTEM SHOED IN FUFURE, A DOUBLE ACTING SHOCKS ABSORBER ABSORBS EVENTUAL JERKS OWING TO THWE STONE OR ORHER.

THE REDUCER GROUP IS DIFFERENT ACCORDING THE VERSIONS ,AT OIL BATH(540G-C70N),OR WIYH MECHANICAL REVERSER(C 70 I)

(!)

NOT TAMPER THE PROTECTIONS THEY MUST BE ALWAYS AT THEIR PLACES DURING THE MACINE RUNNING.

SECTION 2

SAFETY AND PREVENTION

2.1 SAFETY

THE USER WILL PROVIDE TO INSTRUCT THE PERSONNEL ON RISKS FROM THE ACCIDENTS AND ON THE DEVICES ARRANGED FOR THE OPERATOR SAFETY AND ON GENERAL ACCIDENT PREVENTION RULES IN FORCE ON THE COUNTRY WHERE THE MACHINE IS USED.

(!)

THE NOTICE “ATTENTION” ADVISES THAT IF THE OPERATIONS ARE NOT CORRECTLY ACHIEVED THEY CAN BRING INJURIES, DEATH OR LONG TERMS RISKS FOR THE HEALTH.

2.1.1. GENERAL SAFETY RULES

THE LACK OF OBSERVANCE OF THAT IS DESCRIBED IN THE PRESENT SECTION 2 – SAFETY AND PREVENTION- AND EVENTUAL TAMPERING OF THE SAFETY DEVICES WILL ALLOW THE MANUFACTURING COMPANY NOT TO BE RESPONSIBLE IN CASE OF FIRE,EXPLOSION OR BEING RUNNING OF THE MACHINES.

GENERAL WARNINGS

- **THE USER BOUND HIMSELF TO ENTRUST THE MACHINE EXCLUSIVELY TO THE SKILLED AND TRAINED PERSONNEL AND KEEP HIMSELF TO TAKE ALL NECESSARY DECISIONS TO AVOID THAT PERSONS NOT AUTHORIZED CAN USE THE MACHINE.**
- **THE OPERATOR DURING THE MACHINE OPERATION MUST BE AT THE TRACTOR DRIVING AND NO OTHER PERSONS MUST BE NEAR THE WORK ZONE,IN THIS WAY IT IS POSSIBLE TO CONTROL THE WHOLE MACHINE AND TO BE READY FOR ALL NECESSITIES.**

(!)

WHEN A PERSON IS LOCATED IN DANGEROUS ZONE,THE OPERATOR MUST IMMEDIATELY ATTEND,STOPPING THE MACHINE AND EVENTUALLY TO PUT AWAYS THE RELEVANT PERSON.

(!)

THE OPERATOR MUST START THE MACHINE ONLY WHEN IS SEATED ON THE MACHINE AND THE WORKING ZONE IS FREE FROM PERSONS AND THINGS.

(!)

THIS HANDBOOK FOR OPERATION INSTRUCTIONS MUST BE READ ,MEMORIZED,AND PRESERVED FOR ALL THE LIFE OF THE SAME MACHINE.

2.2 SAFETY SIGNALS

FOR SHOWING THE RESIDUAL RISKS ON THE MACHINE MUST BE APPLIED THE PICTOGRAPHS IN WELL VISIBLE POSITION.



DANGER TRANSMISSION IN ROTATION



(!) KEEP THE PITTographs CLEAN AND ENTIRE, IN CASE OF THEIR DAMAGES RESTORE ITS.

SECTION 3 TRANSPORT AND HANDLING

THE EQUIPMENT IS SUPPLIED ALREADY ASSEMBLED AND READY TO BE USED
THE HANDLING MUST BE CARRIED OUT BY SUITABLE TOOLS AND LIFTING MEANS.

FOR LIFTING THE MACHINE CAN BE USED AS LIFTING POINTS THE BASE AND IN ANY CASE IT POSSIBLE TO CONNECT IT TO THE FRAME STRUCTURE.

WHEN THE MACHINE IS HANDLED BE SURE THAT IS WELL LOCKED IN IT POSITION BY A SUI ANCHORAGE SUITABLE TO THE MACHINE MASS.

DURING THE HANDLING THE LOADS WILL NOT LIFTED MORE OF 20 CM.FROM THE GROUND.

(!) THE DISCHARGING, LIFTING AND HANDLING OPERATIONS OF THE MACHINE MUST BE ACTED BY SKILLED PERONNEL.

(!)
THE USER AND HIS PERSONNEL BOUNDS HIMSELF TO READ IN ADVANCE AND TO FOLLOW THE PRESENT INSTRUCTIONS.

(!)
GET OUT THE NOT APPOINTEES, CLEAN AND DEFINE THE TRANSPORT AREA, VERIFY THE INTEGRITY AND SUITABILITY OF THE EQUIPMENT AT DISPOSAL, DO NOT TOUCH THE LIFTING.

SECTION 4

INSTRUCTIONS FOR USE

4.1 BEFORE THE USE

(!)
BEFORE SETTING THE MACHINE AT WORK, THE USER MUST VERIFY THAT THE ATTACHED OPERATOR HAS READ, MEMORIZED AND UNDERSTOOD ALL PARTS OF THIS HANDBOOK IN PARTICULAR SECTION 2 – SAFETY AND PREVENTION- THE OPERATOR MUST VERIFY THAT THE MACHINE IS ENTIRE, IN ORDER AND WITH ALL PARTS SUBJECT TO WEAR AND DETERIORATION ARE FULLY EFFICIENT.

4.1.1 DRILL USE

TRANSMISSION SPEED OF DRILL MOTION:
540 R.P.M.

THE EQUIPMENT IS FIXED TO THE TRACTOR USING THREE POINTS OF 1ST AND 2ND CATEGORY. THE TRACTOR ENGINE MUST BE SWITCHED OFF WITH THE WRENCH DRAWN OUT FROM THE STARTING BOARD.

FIXED THE DRILL ON THE TRACTOR IT IS POSSIBLE TO ADJUST THE HOLES INCLINATION ACTING ON THE SYSTEM SHOWN IN THE SECTION “TECHNICAL DATA”, CONNECT THE CARDAN TRANSMISSION AND LIFTING THE SUPPORT LEGS.

TO REPLACE THE DRILLING POINT BE SURE THAT THE ENGINE IS SWITCH OFF AND THE WRENCHES TAKE OFF FROM THE CONTROL PANEL AND AFTER DISASSEMBLED IT TO FIT THE VERSION SUITABLE ACCORDING TO THE GROUND.

GET INTO THE TRACTOR AND ONLY AT THIS MOMENT START THE ENGINE AND CONTROL THE MACHINE FROM THE STEERING PLACE CHECKING THAT NEAR TO THE WORKING ZONE (AT LEAST 10 MT.) THERE ARE NO PERSONS .

IN CASE STOP THE P.T.O.(POWER TAKE OFF) AND SWITCH OFF THE ENGINE TILL THEIR REMOVAL.

THE DRILLING OPERATIONS ARE EXECUTED FROM THE STEERING PLACE, PUT THE POINT IN COORISPONDENCE TO THE DRILLING POINT, ACT THE P.T.O. AND LOWER THE HYDRAILIC LIFTING MAKING ATTENTION TO INTERRUPT IF THE REQUIRED EFFORT IS EXCESSIVE.

WHEN THE HOLE IS ACHIVED LIFT THE POINT AND STOP THE ROTATION OF P.T.O.

(!)
NOT USE THE MACHINE NEAR THE PERSONS IN CASE SWITCH OFF THE TRACTOR AND TAKE AWAY THEM BEFORE PROCEEDING WITH THE DRILLING.

(!)
FOLLOW THE HANDBOOK INSTRUCTIONS FOR THE CARDAN TRANSMISSION AND THE AGRICULTURAL TRACTOR FOR USING THE MACHINE IN SAFETY WAY.

4.1.2 WORK POSITION

THE REQUIRED OPERATOR IS ONE AND HE USES THE DRILL SEATING ON THE TRACTOR. IT IS NOT POSSIBLE TO GO DOWN FROM THE TRACTOR WITH MACHINE IN OPERATION.

(!)
IN CASE IT IS NECESSARY TO DISMOUNT FROM THE TRACTOR AND/OR TO ACT THE DRILL IT IS INDISPENSABLE REMOVE THE P.T.O.,SWITCH OFF THE ENGINE AND TAKE AWAY THE WRENCH FROM CONTROL PANEL.

4.1.3 SAFETY SYSTEM

THE MACHINE HAS RESIDUAL RISKS THAT ARE NOT REMOVED WITHOUT MODIFYING THE FUNCTIONALITY OF THE SAME.

IT IS NOT POSSIBLE TO INTERVENE ON THE DRILL WITH MACHINE IN FUNCTION AND TRACTOR WORKING,IN CASE OF PROBLEMS OF RUNNING PLEASE CONTACT OUR AFTER SALES SERVICE.

(!)
NOT TRANSPORT THE DRILL WITH POINT IN ROTATION.

5 MAINTENANCE

5.1 ROUTINE MAINTENANCE

THE INTERVENTION TIMES QUOTED IN THIS HANDBOOK HAVE INFORMATIVE AIM AND THEY ARE RELATED TO THE NORMAL USE CONDITIONS

EVERY WORKING SHIFT:

WASH THE EQUIPMENT BY A WATER JET WITH THE TRACTOR ENGINE SWITCHED OFF,HAVING TAKED AWAY THE WRENCH FROM THE STARTING BOARD.

IT IS NOT NECESSARY TO PUT OIL ON THE MOTION PARTS AND ALSO TO GREASE HE REDUCER.

CHANGE OF THE WEARED KINVES

TAKE OFF THE MACHINE FROM THE SUPPORT AT THREE POINTS AND HOLD UP IT BY THE SUITABLE SUPPORT LEGS.

UNBOLTS THE KNIVES AND PEPLACE ITS BY THE NEWS ORIGINAL.

(!)
EVERY MAINTENANCE OPERATIONS MUST BE CARRIED OUT WITH MACHINE NOT CONNECTED FROM THE TRACTOR.

5.2 SPARE PARTS

TO ASK SPARE PARTS OF THE DRILL CONTACT OUR TECHNICAL SERVICE BY TELEPHONE, FAX, MAIL OR E.MAIL AT THE ADDRESS INDICATED IN THE PRESENT HANDBOOK .

TO REQUIRE THE SPARE PART INDICATE THE MODEL AND THE REFERENCE NUMBER OF MACHINE SHOWED IN THE SERIGRAPHED LABEL

(!)

THE WARRANTY EXPIRES IF THE SPARE PARTS USED ARE NOT ORIGINAL.

5.3 REST POSITION

IN CASE IT IS FORESEEN A LONG PERIOD OF MACHINE REST IT IS NECESSARY DIASSEMBLY THE MACHINE FROM THE SELF PROPELLED MEAN AND TO ACT FOLLWING:

- **CARRY OUR A CAREFULLY WASHING WITH WATER AND DETERGENT**
- **CARRY OUT A CAREFULLY CHECKING AND EVENTUALY REPLACE THE DAMAGED AND/OR WEARED PARTS.**

IF THESE OPERATIONS ARE CARRIED OUT WITH CARE THE ADVANTAGES WILL BE ONLY FOR THE USER AS WHEN THE JOB STARTS AGAIN HE WILL HAVE HIS EQUIPMENT IN EXCELLENT CONDITIONS .

5.3.1 DISMANTLING

IN CASE OF DISMANTLING OF THE MACHINE AND THE EMPLOYED PRODUCTS YOU MUST CONFORM THE ANTIPOLLUTION RULES IN FORCE.

SECTION 6

CE CONFORMITY STATEMENT

THE MANUFACTURING COMPANY :

DAL CERO METALWORKING S.N.C
di DAL CERO SERGIO & DIEGO
VIA MOSCHINA 4 -37030 RONCA'-VERONA- ITALY

**STATES UNDER ITS ESCLUSIVE RESPONSABILITY THAT THE MACHINE
DESCRIBED HERE UNDER**

NAME OF THE MACHINE: **DRILL**
MODEL/TYPE. **C 70 N C 70 I**

REFERENCE NUMBER

CONTRUCTUION YEAR: 2008

**IT'S CONFORM TO THE ESSENTIAL SAFETY REQUIREMENTS FORESEEN BY THE
FOLLOWING PROVISIONS OF THE LAW:**

DIRECTIVE 98/37/CE MACHINE DIRECTIVE

THEY ARE ALSO APPLIED THE FOLLWING RULES:

UNI EN 292-1 UNI EN 292-2
UNI EN 294 UNI EN 609 -1
UNI EN 1152 UNI EN 60204-1

DRAWN UP IN RONCA'(VR)

ISSUE DATE:

SIGNATURE
DAL CERO SERGIO - DAL CERO DIEGO

LEGAL REPRESENTATIVES