



# **Wheel Play Detector**

**(for Pit use)**

## **Classes IV, VL & VII**

**A2C8861540000**

**Operating Manual**

**I324070 Issue 2**

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## 1. THE MANUAL

## 1.1 HOW TO READ &amp; USE THE MANUAL

This manual is the official document that provides the necessary instructions for use and maintenance of the Machine to which it refers. The information contained in this Manual is correct at time of printing and can be changed without prior notification. The Manufacturer will not be held responsible for damage to property or persons due to any misuse of the Play Detector.

## 1.2 IMPORTANCE OF THE MANUAL

This manual must be considered as integral part of the Play Detector. The Manual should be kept for the entire useful life of the Play Detector. The Manual should accompany the Play Detector if sold or transferred. In this case the seller should inform the Manufacturer of the transfer by letter. In addition to all useful information for operators, the Manual contains in specific chapters all wiring, pneumatic and hydraulic diagrams, for any kind of control, maintenance and repair operations.

## 1.3 CONSERVATION OF THE MANUAL

The Manual should be kept in a safe place protected from humidity and excessive heat. Consult the Manual in such a way as not to damage all or part of its contents. Do not tear pages out of the Manual.

## 1.4 CONSULTING THE MANUAL

The Manual has been drawn up according to the indications in Machine Directive 2006/42/CE.

## It is basically composed of:

- A. The cover page with identification
- B. Index of chapters
- C. Alphabetical index by subjects
- D. Instructions for use of Play Detector.
- E. Drawings of single and assembled parts.
- F. Tables of Spare Parts
- G. Enclosures

## A - Cover page

The cover in stiff colored cardboard identifies the Play Detector that this Manual refers to.

## The cover contains:

- The Manufacturer's Logo
- Type of Play Detector
- Appointed Service Dealer

## B - Index of Chapters

The Index of Chapters lists the topics covered by the manual.

## C - Index

The Index details the chapters extending the research of subtitles topic by topic.

## D - Instructions for use of Play Detector

This part of the manual provides a detailed description of how the Play Detector functions, the operations to perform to use it properly, instructions for installation, safety recommendations, procedures for intervention of the operator.

## E - Drawings of single and assembled parts

This part contains the main construction drawings and assembled drawings relative to the various parts of the Play Detector.

## F - Tables of Spare Parts

These tables that refer to the drawings provided in the previous chapter, identify the parts of the relative sections, indicating the number installed and the recommended number of spare parts for replacement.

## G - Enclosures

This part contains all the technical documents relative to the parts purchased from suppliers and used by the M=manufacturer in the construction of the Play Detector. References in the text of the manual will facilitate their consultation.

## 1.5 UPDATING THE MANUAL

In case of substantial modifications to the Play Detector, the manufacturer will provide the customer with a new version of the manual in which all the modifications to the machine will be included.

The previous version will then be withdrawn by the manufacturer in order to ensure the proper congruence between the Play Detector and the manual.

## 1.6 REQUESTING A NEW MANUAL

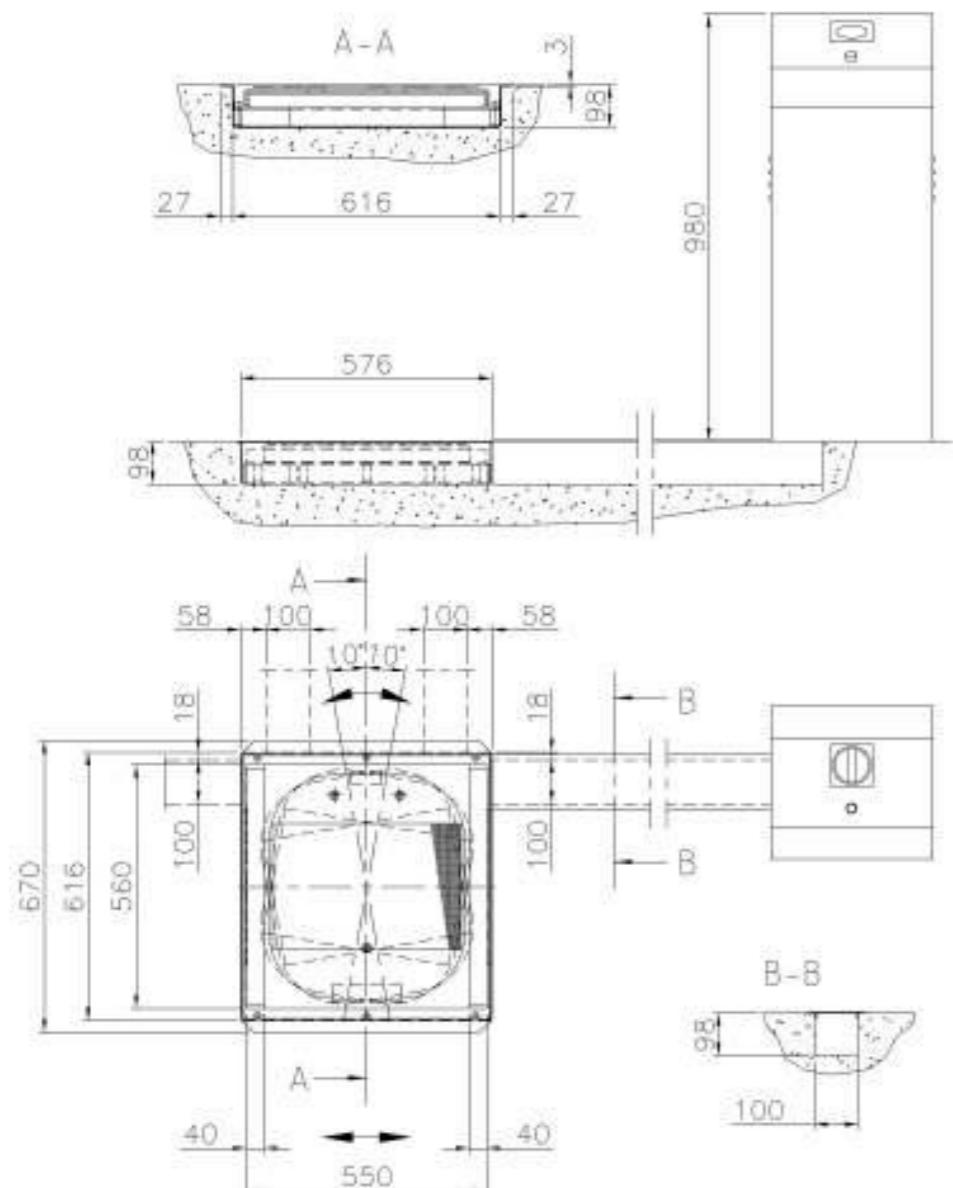
If this manual should be lost or damaged, the client can download a copy. Please visit [www.cryptotechnology.com/downloads](http://www.cryptotechnology.com/downloads)

## 2. GENERAL REMARKS

With the use of advanced technology and engineering, combined with reliable components make the Play Detector one of the best available in the market place today.

### 2.1 CHARACTERISTICS

Max. capacity of the plate	1,300kg
Max. stroke platform	±40mm
Max. angle platform	±10°
Max. thrust of the plate	8.00kN
Weight	75kg
Power supply	230/400V 50Hz
Motor	1.1kw (3Ph)
	2.2kw (1Ph)
Pump	2.5CC
Max. oil pressure	250 Bar
Nominal motors absorption	11A (3Ph)
Working temperature	-10 - 55°C
Humidity	30 - 95% (without condensation)
Noise	< 75 dB (A)



## 2.2 LIMITATIONS ON USE

The Play Detector should be used in environments free of explosion hazards.

### FLOOR

**The play detector must be installed on a horizontal concrete bed with a minimum thickness of 180mm built and a resistance minimum 25N/mm<sup>2</sup>.**

## 2.3 IDENTIFICATION DATA

The identification data for the Play Detector are displayed on an aluminum plate fastened in a readily visible place on the machine.

## 2.4 SERVICE

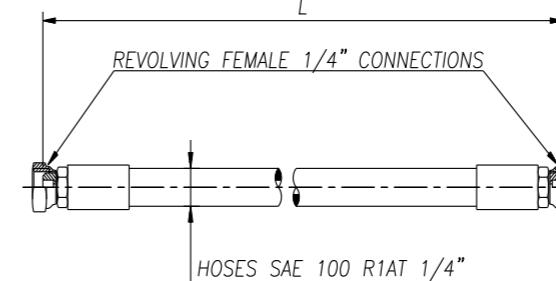
The Play Detector to which this manual refers is guaranteed by the manufacturer for a period of 12 months from the date of installation. Service is guaranteed by the manufacturer (or local distributor, if any).

## 3. INSTALLATION

For safe installation of the Play Detector, avoiding risks to third parties as well as to the personnel performing the work, we recommend to follow instruction below:

- Verify the max pressure of the main hydraulic unit do not exceed 185 bar.
- Verify that main supply line could deliver 400V - 50Hz - 3Ph
- Verify that inside the main control unit could deliver a voltage of 24V 50Hz.
- In order to fix both platforms of play detector to recess, verify that the following holes are provided in the base surface of each plate recess.

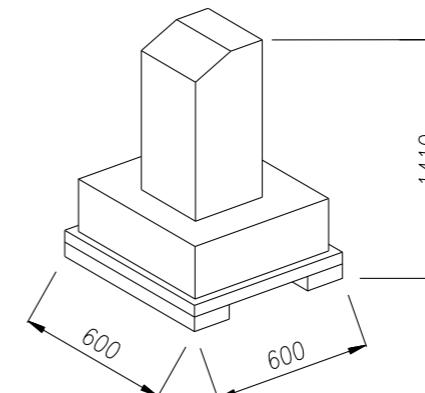
### HOSE LENGTH



LENGTH HOSES "L" IS DEFINITE FROM THE INSTALLATION DISTANCES

## 3.1 TRANSPORTATION OF PLAY DETECTOR

All operations of hoisting and unloading the Play Detector must be carried out in full respect of the regulations in effect. The figures illustrate the method recommended by the Manufacturer for loading and unloading the Play Detectors in case of delivery without the lift:



## 3.2. INSPECTION OF COMPONENTS

On receipt of the shipment, it is very important to inspect the material received.

**Particular attention should be given to:**

- **Documents vs. Goods**
  - No. of packages
  - Weight and dimensions
- **Physical state of goods**
  - Condition of packages
  - Absence of damage

The goods should be inspected with the maximum care in the presence of the carrier because, in spite of the extreme care used by the manufacturer in the selection of packing materials, there is always the possibility of damage occurring during shipment.

In this connection we point out that the goods are shipped at the buyer's risk, therefore the manufacturer is not responsible for damage during transport.

## 3.3 INSTALLING THE PLAY DETECTOR

Prepare the recess where set the plates of the play detector and the canal for the connections (see PLAY DETECTOR DIMENSIONS). After inspecting the shipment, the play detector can be moved plate by plate by handles, using 2 persons in order to reduce the weight lifted for each of them. Place platform in the recess. Place the control box with handlamp and selector + movement push buttons to previste distance from the play detector plate and to prepare to connect to the main central unit. Take out the electric cables rubber hoses (see to prepare the connection with end bornes in the control box. Pass the hydraulic rubber hoses, that you have prepared of the correct length for the installation (see picture HOSES LENGTH) from the canal to the central unit. Connecter the hoses to the electro-valve. Make sure all nipless are securely fastened with copper washers.

### CAUTION!

**Take care of electric cables. The personnel assigned to perform these operations should make sure no extraneous persons are standing in the way of movement.**

### 3.4 CONNECTION TO POWER MAINS

Before connecting the electric system, make sure that: the power supply plant is equipped with the protection devices required by current standards in the country where the machinery is installed. · the power supply line has the following cross-section:  
 ■ Voltage 400V, three-phase minimum 1,5 mmq

The voltage oscillations are within the tolerance range set forth by the specifications.

It is up to the user to ascertain that the power mains comply with international and local safety standards. The manufacturer is not responsible for damage due to "Non-Conformity" of the electrical system. The manufacturer will not be liable for any malfunctioning caused by disturbance from other equipment. It is essential to make the "EARTH CONNECTION", using a 0.03A differential switch, and checking its correct functioning (W) by means of an appropriate measuring device.

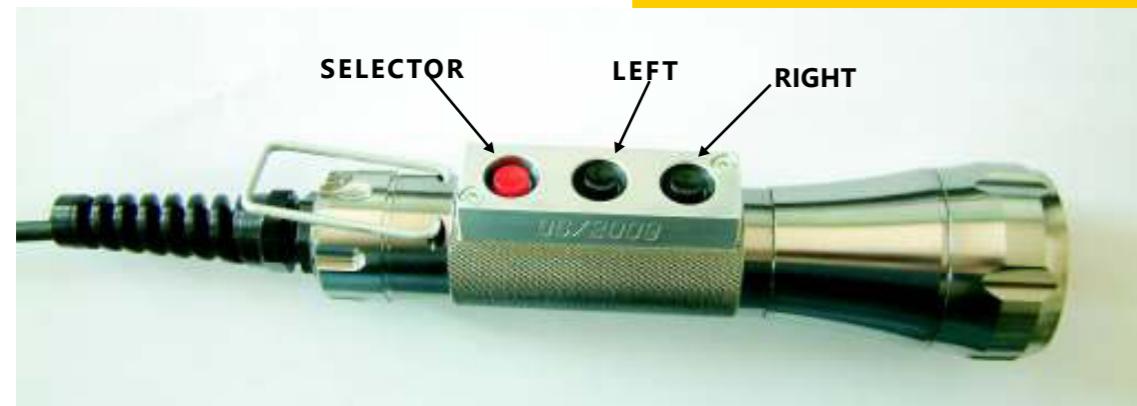
### 3.5 TAKING THE PLAY DETECTOR OUT OF SERVICE

In order to facilitate disposal of the different play detector components, they should be sorted into categories. Consider the units to be special waste that must be disposed of by specialized companies in compliance with current regulations.

## 4. DESCRIPTION OF THE PLAY DETECTOR

### 4.1 BEFORE STARTING OPERATION OF THE PLAY DETECTOR

Ensure all hydraulic connections are correct as per hydraulic circuit diagram.



#### Air bleeding

- Energise the right push button end partially open the connection "A" of the Play Detector cylinder, until no air bubbles are visible.
- Next repeat as above using the left button and open connection "B".
- Push the selector button.
- Energize the right push button end partially open the connection "C" of the Play Detector cylinder, until no air bubbles are visible.
- Next repeat as above using the left button and open connection "D".
- You are now ready to operate with the play detector.

### 4.2 OPERATION

Ensure a qualified operator to be the only person within the operating perimeter of the Play Detector is clear of park any obstructions.

#### The torch is fitted with 2 push buttons and a selector switch:

- one push button directional left (sliding/rotating plate)
- one push button directional right (sliding/rotating plate)
- the selector switch (sliding or rotating plate)

These push buttons operate solenoid C13 and C14 (see electric scheme). The selector switch is able to provide sliding or rotating plate selection. The sequence of operation is in accordance with the current issue of:

#### THE MOT INSPECTION MANUAL Car and Light Commercial Vehicle Testing

- **DO NOT** perform tests on the motor or do anything else that could apply traction to the wheels.
- **DO NOT** load any vehicle, exceeding the rated working capacity of the Play Detector.

## 5. SAFETY DEVICES

The Play Detector has been manufactured in compliance with the provisions issued by "Machine Directive 2006/42/CE" and all the following harmonized standards

### 5.1 PRECAUTIONS

For the safety of the operator the following general rules should be adhered to:

- The Play Detector should be under the control of authorized personnel only.
- It is important to remember that the sliding plates of the Play Detector are potentially dangerous for possible crushing, pinching and shearing, of limbs of operators as well as for anyone nearby.

**A.** Persons working underneath the vehicle, it is essential for the operator to have complete visibility of the working area.

**B.** Make sure the vehicles to be tested do not exceed the maximum capacity of the Play Detector.

■ Before lifting a vehicle, make sure the front wheels are straight.

■ The work area should be free of unauthorized personnel.

■ Do not apply external forces on the raised vehicle (Traction, lifting, etc.)

■ Check the stability of the vehicle in the raised position before any kind of operation.

### 5.3 TROUBLESHOOTING

Symptom	Possible Cause	Remedy
Plates are sliding very slowly, even without load.	Dirt in restrictor screw	Unscrew delivery hose "P" from the valve block. Remove M8 allen screw (with 0.8mm hole). Clean with cleaning, fluid and blow out with air gun. Check pressure of relief valve.
Platforms are sliding or rotating very slowly, even without load.	Dirty part into the orifice at the returning hoses from aluminium solenoid block	Unscrew nipple 1/4" from delivery hose from aluminium block (made in RILSAN plastic). There is inside a small black screw M8 with an hexagonal female key, which has an orifice diameter 0.8mm. Check whether this orifice is free or has some dirty part which create obstacle to oil flow.
One movement (sliding or rotating) working regularly, the other doesn't work at all.	Problem in the handlamp selector. It doesn't switch on C11 and C12.	Check whether with selector on handlamp you hear the "tic" which signals the on-switching of both C11 and C12. Check connection on board of solenoid valves, or into the main connector of handlamp.
Both plate work in one direction only.	One push button is broken or contacts are failing.	Open the handlamp and verify the push button and its contacts.
Sliding or rotating plate work is one direction only.	One of the push button is broken or contacts are failing.	Remove push button cover (on torch) and check push button switches.

## 6 MAINTENANCE

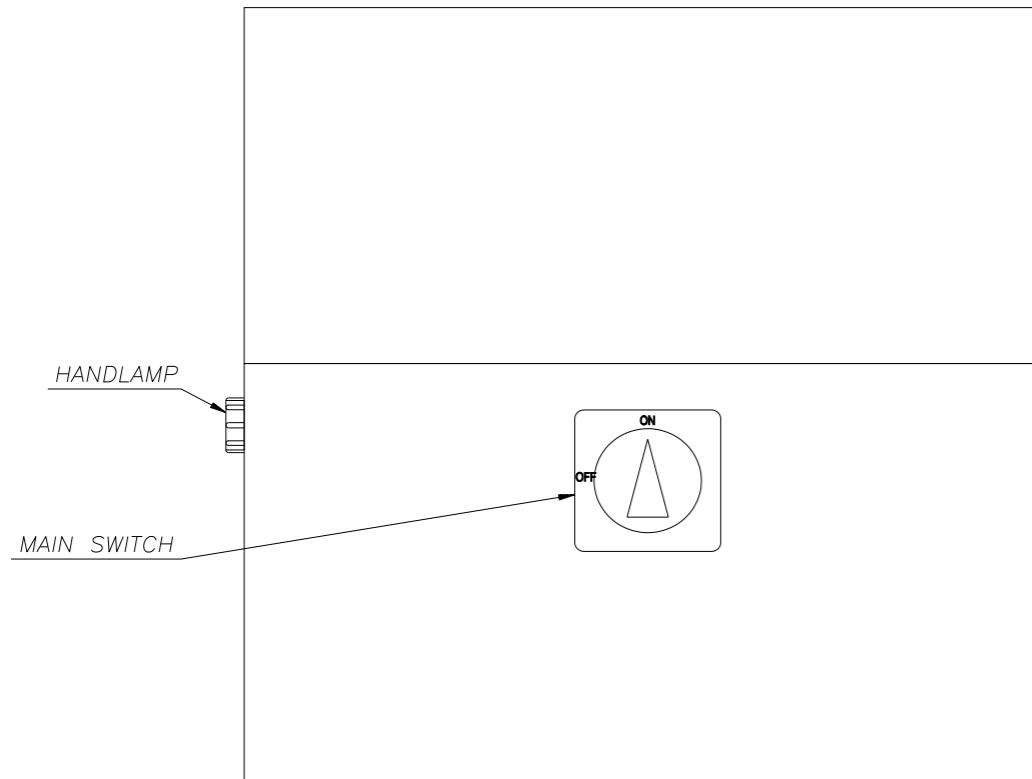
Due to the simplicity of construction and operation of the Play Detector, it requires very little maintenance.

It should be sufficient to follow the few simple rules as listed below to ensure reliable performance.

We strongly recommend for every 6 months operation for the Play Detector to be thoroughly cleaned, serviced and calibrated, sliders to be replaced as necessary to enhance safe and prolonged operation.

Check that other electrical and mechanical parts are in good condition, clean and lubricate as required.

**WHILE DISPOSING USED OILS AND LUBRICANTS REFER TO THE LOCAL RUNNING REGULATION.**



### 6.1 CONTROLS AND CALIBRATION

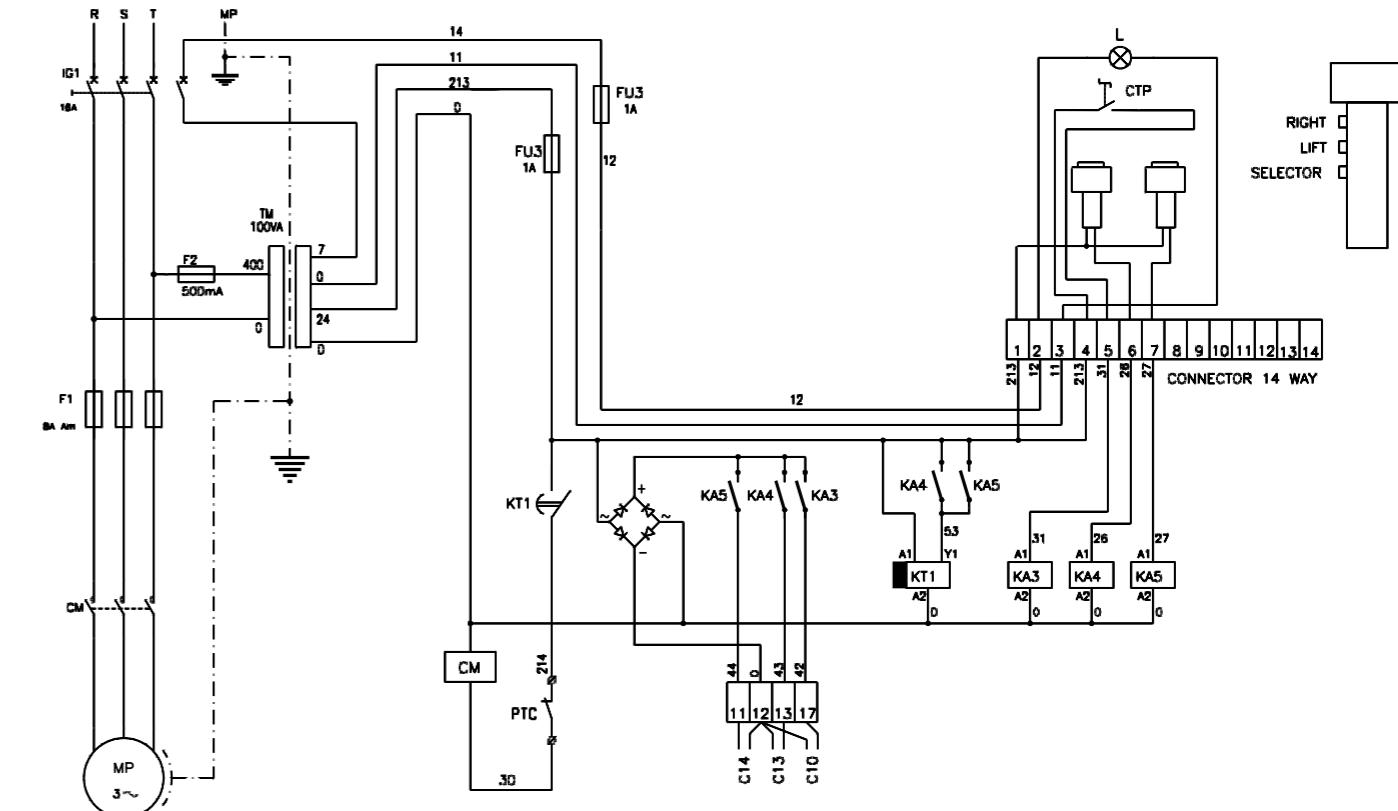
**The following checks must be made every 6 months:**

- Check solenoid connectors.
- Check all hydraulic hoses and connections.
- Check all internal electric connections are secured correctly.
- Check for any leaks, etc.
- Check pressure overload device.

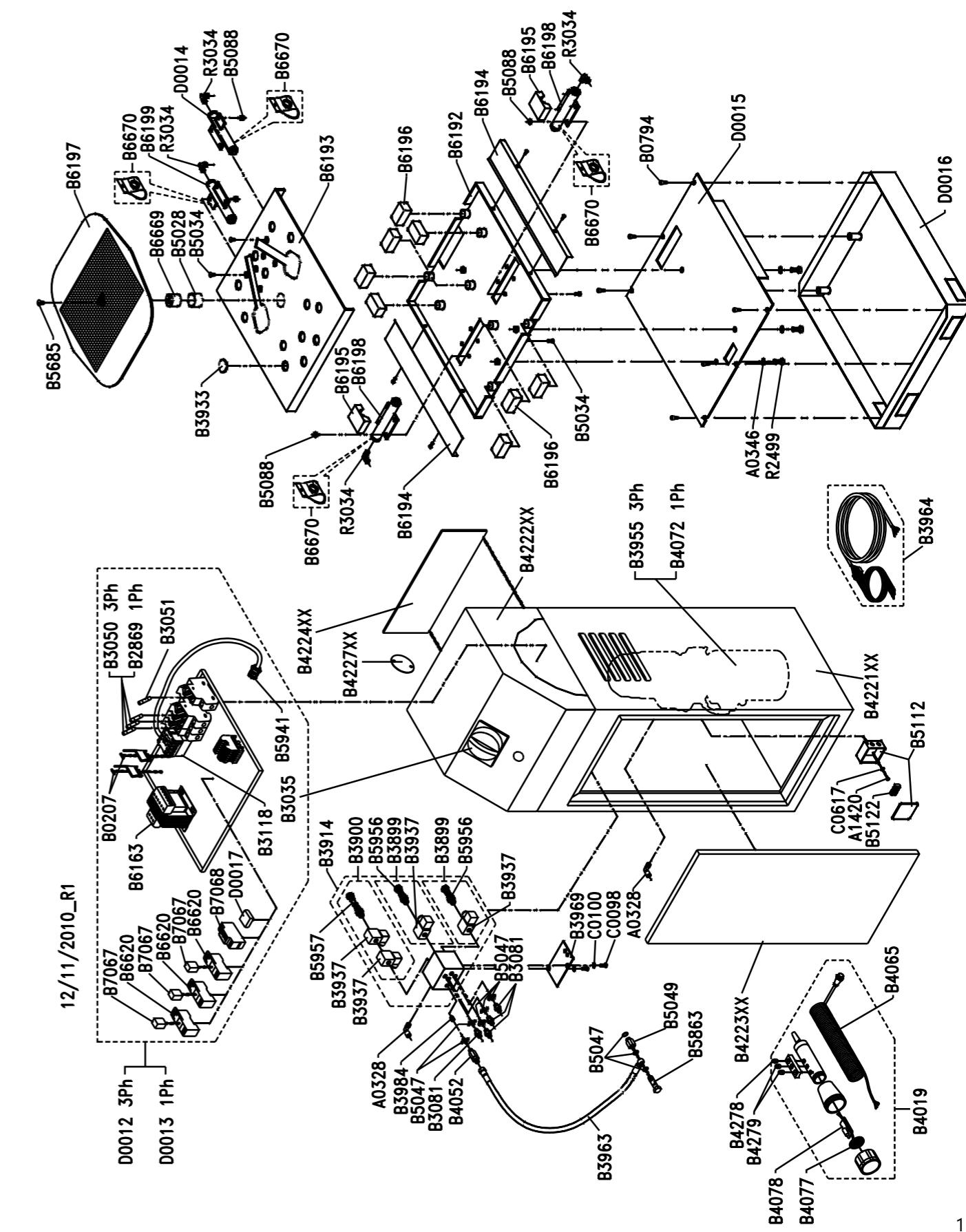
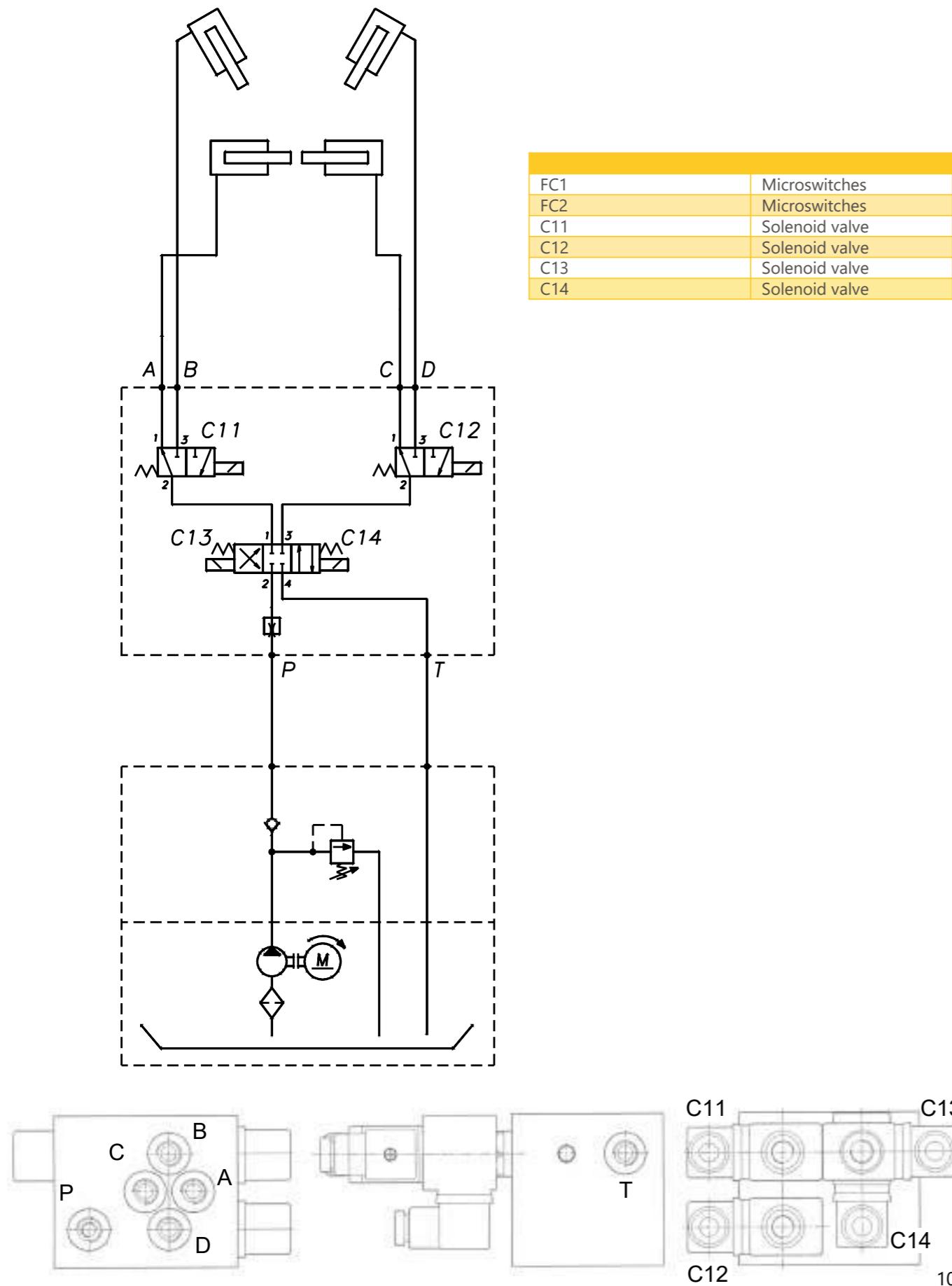
## 7. ANNEXES - PARTS LIST

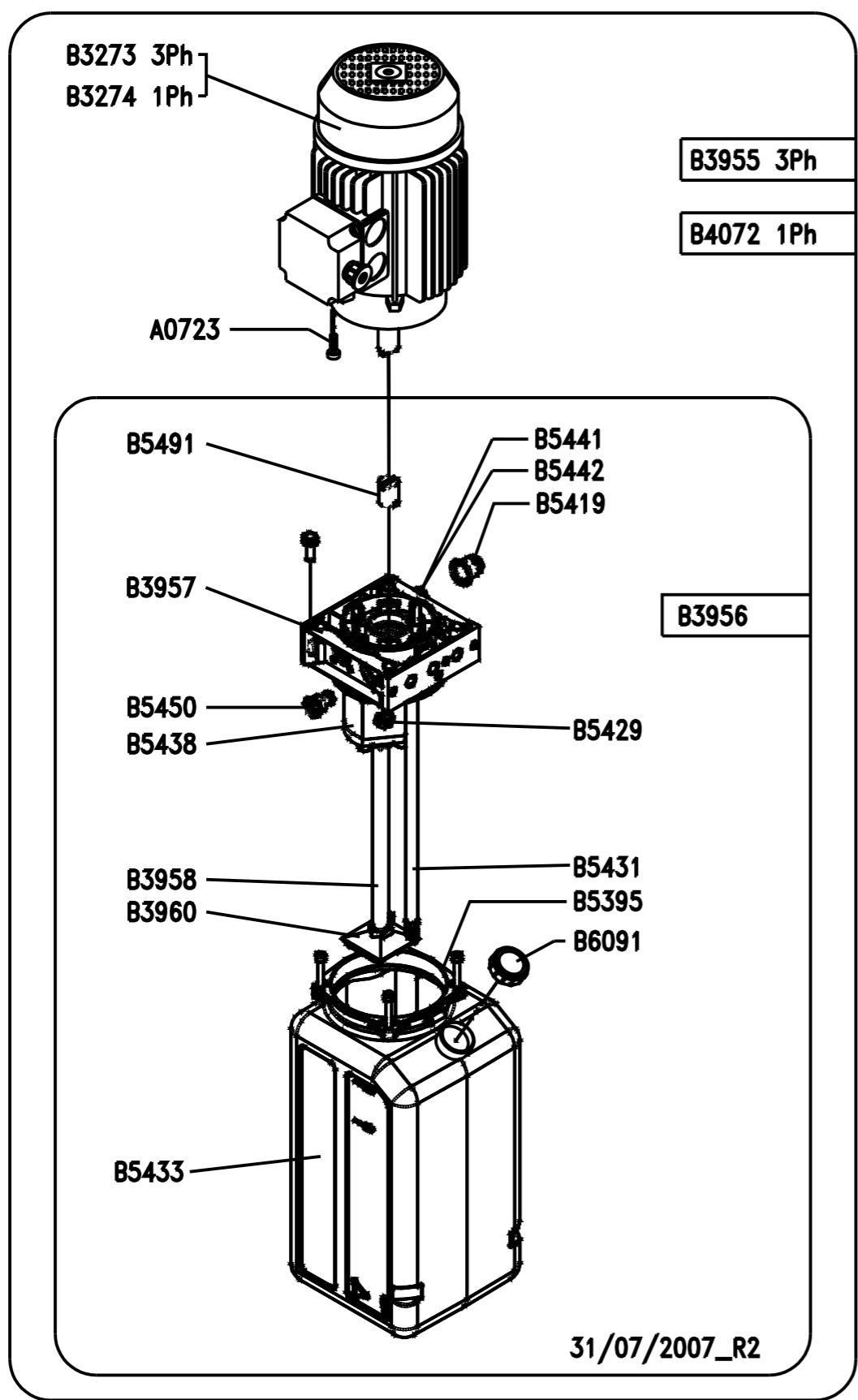
### WIRING DIAGRAMS AND HYDRAULIC

#### THREE-PHASE WIRING DIAGRAM



## HYDRAULIC CIRCUIT DIAGRAM





Part Number	Description
A0328	"L" MALE CONNECTION G1/4" Ø8
A0346	WASHER 12 X 24 UNI 6592
A0723	SCREW TCEI M8X20 UNI 5931
A1420	SCREW 6X12 8.8 UNI 5739
B0207	FUSE 5x20 1A
B0794	SCREW TCCE M10X20 UNI 5931 ZB
B2869	LINE FUSE 10X36 10A aM
B3035	MAIN SWITCH
B3050	LINE FUSE 10X36 8A aM
B3051	MAIN FUSE 10X36 0,5A GG
B3081	1/4" NIPPLES
B3118	CONTACTOR
B3273	MOTOR 1,1KW 4P C80 B5 230-400/50 3Ph
B3274	MOTOR 1,1KW 4P C80 B5 230/50 1Ph
B3899	COMPLETE ELECTRO-VALVE
B3900	COMPLETE ELECTRO-VALVE
B3914	COMPLETE MANIFOLD
B3933	SLIDE PAD
B3937	SOLENOID VALVE COIL
B3955	COMPLETE HYDRAULIC POWER UNIT 230/400V 50HZ 3PH
B3956	HYDRAULIC POWER UNIT
B3957	MANIFOLD
B3958	SUCTION PIPE
B3960	FILTER
B3963	OIL DELIVERY HOSE
B3964	ELECTRIC WIRES KIT
B3969	MANIFOLD SUPPORT
B3984	SCREW M8X8 UNI 5923 WITH HOLE Ø0,8
B4019	COMPLETE HANDLAMP
B4052	OIL FILTER
B4065	ELECTRIC CABLE
B4072	COMPLETE HYDRAULIC POWER UNIT 230V 50HZ 1PH
B4077	GLASS WITH LEDS
B4078	LAMP BOARD
B4221XX	CABINET
B4222XX	ELECTRICAL BOARD BOX
B4223XX	DOOR
B224XX	DOOR
B4227XX	COVER
B4278	TORCH RED SELECTOR
B4279	TORCH BLACK BUTTON
B5028	BUSHING Ø40X44X30MBI CB85 402
B5034	SCREW M8X12 UNI 5933
B5047	GASKET WITH 1/4" SEAL
B5049	EXTENSION

Part Number	Description
B5088	NUT M8 UNI 7474
B5112	CONNECTOR BLOCK
B5122	TERMINAL BOARD
B5292	RELAY
B5395	TANK FASTENING KIT
B5419	PLUG
B5429	PLUG
B5431	DRAIN PIPE
B5433	TANK
B5438	PUMP
B5441	CHECK VALVE
B5442	MAX. PRESSURE VALVE15 80-250BAR
B5450	PLUG
B5491	CONNECTING PUMP K3
B5685	SCREW M10X25 UNI 5933 INOX
B5863	HOLED SCREW FOR MANOMETER
B5941	TORCH CONNESCION
B5956	VALVE V3DS-2P
B5957	VALVE V3DS-3P
B6091	TANK PLUG
B6163	TRANSFORMER 0-230-400 0-24V 100VA
B6192	BASE
B6193	SLIDING PLATE
B6194	CASING
B6195	SLIDING PAD
B6196	SLIDING PAD
B6197	ROTATING PLATE
B6198	LOWER CYLINDER
B6199	RIGHT UPPER CYLINDER
B6620	RELAY SOCKET
B6669	PIN
B6670	CYLINDER GASKET KIT
B7067	RELAY
B7068	TIMER
C0098	SCREW M8X20 UNI 5739
C0100	WASHER Ø8,4X17 UNI 6592
C0617	WASHER Ø6,4X12,5 UNI 6592
D0012	COMPLETE ELECTRICAL BOX 3PH
D0013	COMPLETE ELECTRICAL BOX 1PH
D0014	LEFT UPPER CYLINDER
D0015	PLATE
D0016	RECTIFIER
D0017	SCREW M12X20 UNI 5739
R2499	"L" CONNECTION M/M 1/4"
Z_RICAMBI	= RECOMMENDED SPARE PARTS



**GARAGE EQUIPMENT ASSOCIATION LIMITED**  
2/3 Church Walk, Daventry, Northamptonshire NN11 4BL, UK  
tel: +44 (0) 1327 312616 fax: +44 (0) 1327 312606  
email: info@cea.co.uk website: www.cea.co.uk

## CERTIFICATE OF ACCEPTANCE

### PLAY DETECTORS FOR TESTING STEERING & SUSPENSION

Play Detector Make and Model:

**OMA 547 SP**

EINAP15240A0909036--

Suitable to test:

**Classes IV, VL & VII**

Service Period:

**12 monthly**

Must only be used when part of an Automated Test Lane (ATL)

This is to certify that the above Play Detectors meet the requirements of the VOSA 2005 MOT Play Detector Specification. They are therefore acceptable for performing steering and suspension tests when part of an Automated Test Lane (ATL).

Chief Executive

23 September 2009

Date

For and on behalf of the Garage Equipment Association (GEA), administrators of the VOSA equipment approval scheme

#### For Manufacturers/Importers use

I certify that the test equipment of the above make and model, bearing the serial number .....

is installed in VTS No: ..... and is suitable for MOT testing

#### VTS Details:

Name .....  
Address .....  
Postcode .....

#### Supplier's Details:

Name ..... Position .....  
Signature ..... Company .....



Registered in London No. 2891852

## 8. DISPOSAL OF EQUIPMENT

- Do not dispose of this equipment as miscellaneous solid municipal waste but arrange to have it collected separately.
- The re-use or correct recycling of electronic equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2002/96/EC, special collection points are available for the delivery of waste electrical and electronic equipment.
- The public administration and producers of electrical and electronic equipment are involved in facilitating the processes of the re-use and recovery of waste electrical and electronic equipment through the organisation of collection activities and the use of appropriate planning arrangements.
- Unauthorised disposal of waste electrical and electronic equipment is punishable by law with appropriate penalties.

### DISPOSAL OF BATTERIES

- Batteries must be recycled or disposed of properly
- Do not throw batteries away as part of normal refuse disposal
- Do not throw batteries into open flame

## 9. AFTER SALES SERVICE

Apart from the routine maintenance and adjustments stipulated in this manual the equipment must not be tampered with in any way. All further servicing must be carried out only by an engineer from an Authorised Agent. Failure to observe these conditions will invalidate the Guarantee.

### On-Site Service / Overhaul / Spare Parts

If you require a Service Engineer to attend ON SITE, either due to an equipment fault, or for machine calibration, or if the equipment covered by this manual requires to be sent back for factory overhaul, or if you need spare parts, please contact our Product Support Department.

### ■ Outside UK mainland

Service for export customers are provided by the agent from whom your equipment was purchased

### ■ UK After-Sales Service

Call Crypton Support for details of local service agents.

## 10. CONTACT DETAILS

### ■ SALES

**Tel:** 0121 725 1400  
**Email:** sales@cryptotechnology.com

### ■ SUPPORT

**Tel:** 0121 725 1366  
**Email:** support@cryptotechnology.com

Continental Automotive Trading UK Ltd.  
36 Gravelly Industrial Park  
Birmingham B24 8TA  
United Kingdom  
[www.cryptotechnology.com](http://www.cryptotechnology.com)

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