



PANDROL

HYDRAULIC ASSEMBLY REF 19511014

OPERATING AND MAINTENANCE MANUAL

With BOSCH ELECTRIC MOTOR GWS22.230
Type

REF 42111015



PANDROL

Siège Social et Usine : Z.I. du Bas Pré – B.P. 9 – 59590 RAISMES – FRANCE- Tél. : 33 (0) 3.27.22.26.26 - Fax : 33 (0) 3.27.22.26.00

Direction Générale et Commerciale Immeuble West Plaza – 9 rue du Débarcadère- CS90029 – 92707 COLOMBES Cedex

Tel 33.1.46.88.17.00 – Infos.pandrol@pandrol.com – Fax 33.1.46.88.17.00 et 17 66

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I –SAFETY LABELS EXPLANATION



WARNING ! The machine can be dangerous.



Careless and incorrect use results in injury to the operator.

II – GENERAL SAFETY INSTRUCTIONS

- Never use the hydraulic assembly until you have read and understood the directions for use
- Only authorised operators may operate and use the hydraulic assembly
- Do not expose electric equipment to rain, it should be stored in a dry place
- Verify that the main electricity supply is the same as the one necessary for the perfect running of the machine
- Never use the hydraulic assembly when you are tired or under influence of medicines, alcohol or substances which can alter your sight, dexterity or appreciation capacity
- All maintenance operations must be achieved by qualified staff
- The operator must ensure that no one can affect his work area (people, animals, flammable material)
- Flexible and components must be verified before every use. Any damaged element must be rejected
- -Under no circumstances the original design and configuration of the hydraulic assembly should be modify
- The personal protective equipment may be necessary !



III – DESCRIPTION

The hydraulic assembly is specially designed to supply with pressure and output :

The shearing machine EGH1 type reference 11332001

The shearing machine EGH2 type reference 11332002

ANY OTHER USE IS PROHIBITED EXCEPT IN CASE OF WRITTEN AGREEMENT OF PANDROL

An electric engine drive a pump with the help of a coupling

A set of flexible, equipped with quick couplings at the ends, makes possible the connection to the shearing machine

The ump maximum pressure is calibrated at 250 bars

The engine has an anti reboot system when power shut down.

IV - USE INSTRUCTIONS

1 – Storing

- Never lay down the hydraulic assembly otherwise an oil leak can happen
- The hydraulic assembly should be stored in a dry place

2 – Handling

- 20 Kg is the weight of an assembly in order to work
- One person can carry it by the handle on the frame

V - OPERATING

1 – Pre-operation check

It's very important to verify the assembly integrity before any use

- Carry out a visual control of the flexible : verify the absence of cuts or burns that would let appear the metallic part of the flexible
- Verify the absence of oil leakage
- Verify the pump tank oil level, if level is too low complete with recommended oil (See § V – 3.1)
- Verify the hydraulic couplings cleanliness before every connection
- If it is used with a generator, ensure that it is able to provide at least two times the power of the electric unit.

2 – Electric engine

2.1 Before starting up

- Check the oil level in the pump tank

Never run the engine without oil in the tank, as this can cause the pump destruction

If the level is too low top it up with recommended oil.

2.2 Starting up the engine

- Ensure that the urgency stop device is not engaged, otherwise unlock it

When the machine is connected to the electricity feeding, start it by pushing the black button on the electric box.

2.3 Caution by cold weather

At a temperature inferior to 5° C, a preheating of the hydraulic circuit is necessary :

- connect the flexible to each other
- run the engine for few minutes
- stop the engine and then connect the flexible to the shearing machine

Engine running can by that time starts as well as the shearing machine work

2.4 Stop the engine

- Move the tool distributor on neutral position
- Switch off the engine electricity supply
- Disconnect the flexible from the tool and connect them to each other so as to protect them from any pollution

**THIS HYDRAULIC ASSEMBLY IS NOT ADAPTED TO A CONTINUOUS USE
IT'S IMPERATIVE TO STOP IT AS SOON AS CUTTING OPERATION HAS BEEN PERFORMED**

2.5 Engine maintenance

Before any maintenance operation disconnect the machine from the electricity supply

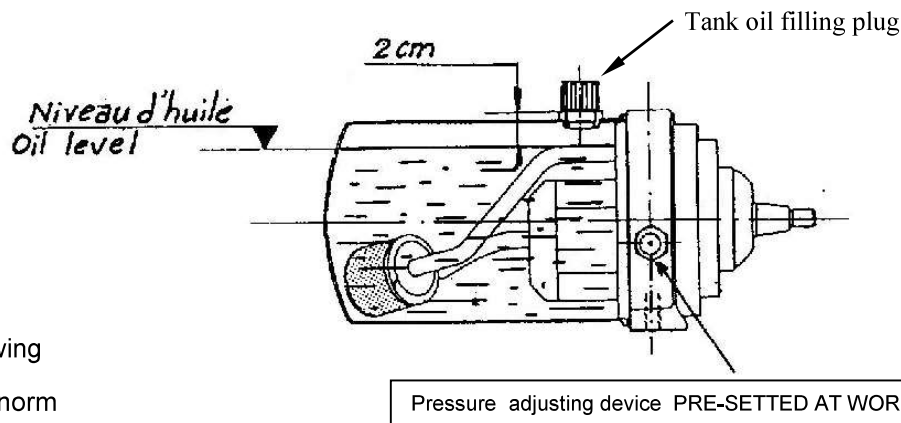
- Check regularly the electricity feeding cables
- Verify the engine cooling air slits cleanliness : clean them regularly using a jet of compressed air
- Control the carbon brushes wearing

Access to the carbon brushes is possible when the two lateral casings on handle side are dismantled.
The carbon brushes cut out automatically and stop the engine when they have to be changed.

3 – Hydraulic pump

3.1 Oil level and quality

Blades separated at maximum position, fill the hydraulic oil tank to 2 cm under the filling opening.



Oil Quality :

Hydraulic oil following

DIN 51524 part 3 norm

3.2 Flexible with couplings connection on a shearing machine

- Verify the hydraulic couplings cleanliness before every connection

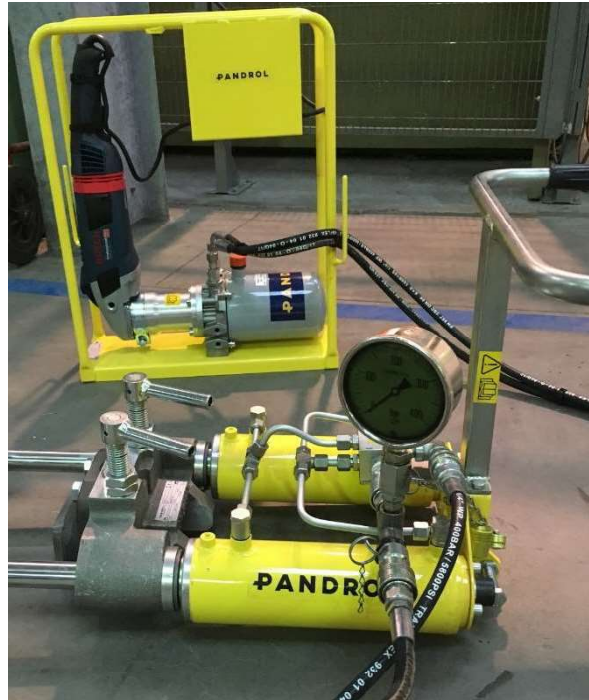
To realise the connections, move back and maintain the female couplings rings, connect them on the male couplings and release the rings.

To disconnect, move back and maintain the female couplings rings, pull out the flexible and release the rings

VI - MAINTENANCE

All maintenance operations must be achieved by a qualified staff.

Verify every year the pressure level of 250 bars by inserting a manometer between the shearing machine and the hydraulic assembly.



Take care of the cleanliness so as to make possible a good visual inspection of the components.

VII - TECHNICAL CHARACTERISTICS

Electric engine : 220 V – 50 Hz monophase engine
Power 2200W

Rotating speed 6600 rpm

Insulation class II  (double insulated)

Pump : HPI 2l tank
Maximum pressure 250 bars
Output 6.5l /min. at 6500 rpm

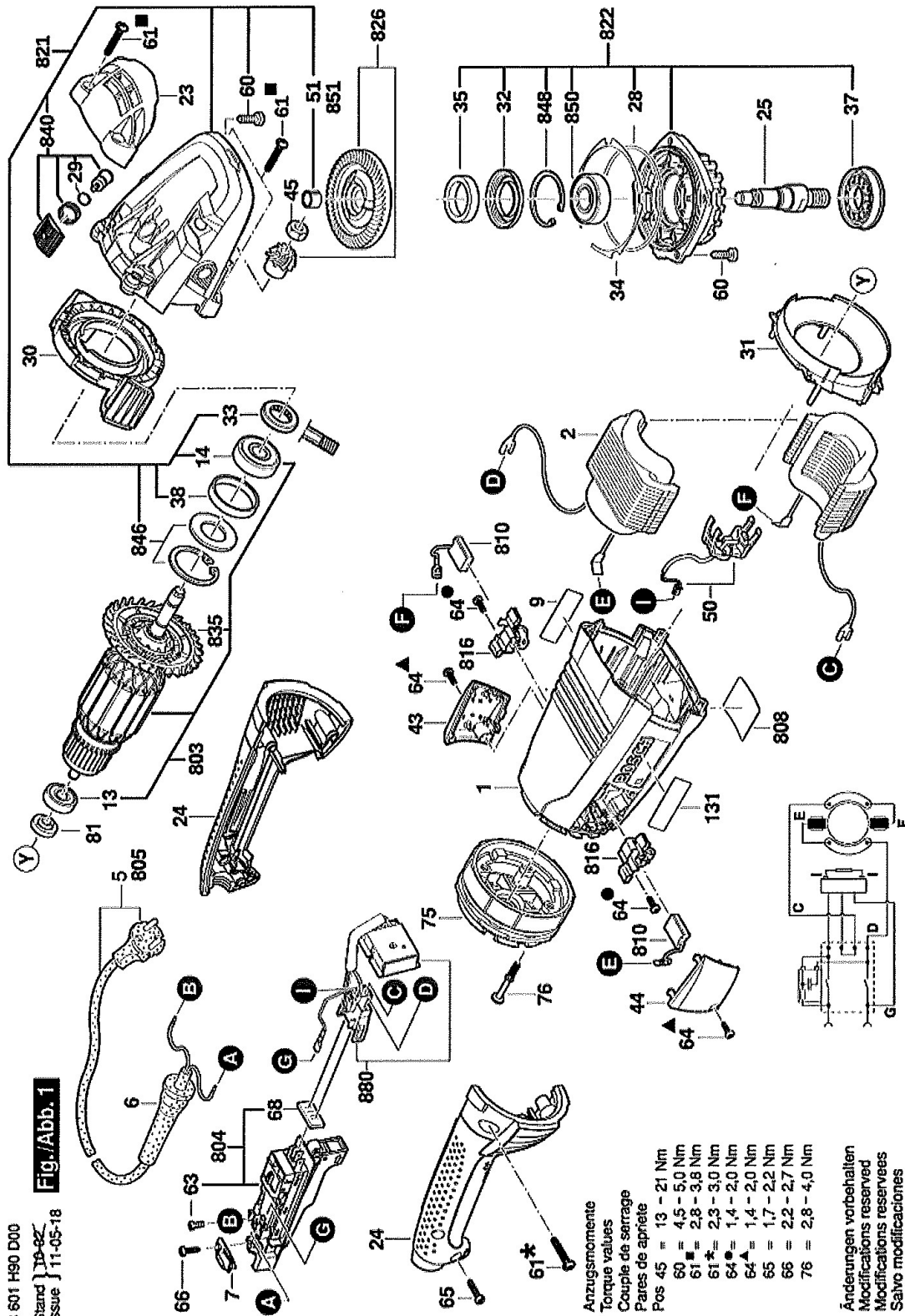
Dimensions : L x l x h 472 x 230 x 555 mm

Weight : 20 Kg with flexible

Acoustic pressure : Lpa 92 dB(A)
Acoustic power level : LWA 105 dB (A)

Vibration : 3 m/s⁻²

VIII – LISTE DES PIECES DETACHEES SPARE PARTS LIST

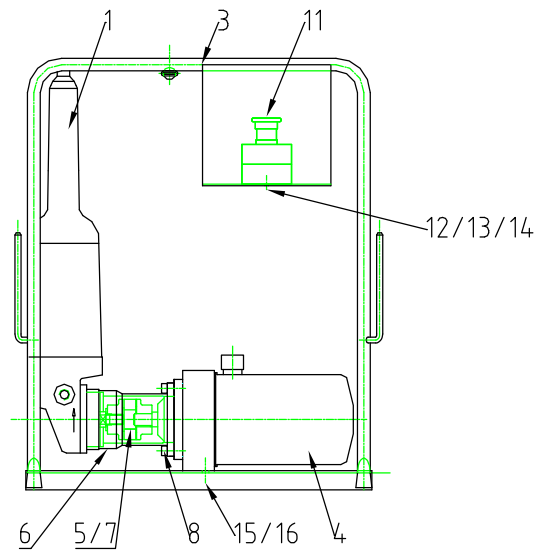


Article	Référence à 10 chiffres	Description	shéma	Prix	Quantité
1	1 605 108 264	Carter De Moteur BLEU	1	,-	1
2	1 604 220 429	Épanouissement Polaire 230V	1	,-	1
6	1 600 703 036	Manchon Ø10,5-Ø11,0x100 MM	1	,-	1
7	1 601 302 018	Collier De Fixation	1	,-	1
9	1 601 118 N46	Plaque De Marque GWS 22-230 LVI	1	,-	1
13	1 600 905 034	Roulement A Billes Rigide 9x26x8	1	,-	1
14	1 600 905 035	Roulement A Billes Rigide 12x37x12	1	,-	1
23	1 605 500 266	Capot NOIR	1	,-	1
24	1 605 132 155	Poignee BLEU	1	,-	1
25	1 603 523 113	Broche De Rectifieuse M14, SW17	1	,-	1
28	1 600 210 033	Joint torique 79,0x1,78 MM	1	,-	1
29	1 600 210 045	Joint torique 8,0x1,0 MM	1	,-	1
30	1 600 591 041	Distributeur D'air	1	,-	1
31	1 600 591 042	Deflecteur D'air	1	,-	1
32	1 600 290 019	Segment de retenue	1	,-	1
33	1 600 290 064	Bague D'etancheite 16mm BLEU	1	,-	1
34	1 600 190 020	Rondelle De Compensation 0,15 MM ÉPAIS	1	,-	1
34	1 600 190 021	Rondelle De Compensation 0,3 MM ÉPAIS	1	,-	1
34	1 600 190 022	Rondelle De Compensation 0,1 MM ÉPAIS	1	,-	1
34	1 600 190 037	Rondelle De Compensation 0,2 MM ÉPAIS	1	,-	1
34	1 600 190 038	Rondelle De Compensation 0,25 MM ÉPAIS	1	,-	1
34	1 600 190 039	Rondelle De Compensation 0,35 MM ÉPAIS	1	,-	1
34	1 600 190 040	Rondelle De Compensation 0,4 MM ÉPAIS	1	,-	1
35	1 600 205 034	Rondelle De Feutre	1	,-	1
37	1 600 290 036	Joint circulaire NOIR	1	,-	1
38	1 600 206 037	Bague En Caoutchouc	1	,-	1
43	1 605 500 264	Couvercle NOIR	1	,-	1
44	1 605 500 265	Couvercle NOIR	1	,-	1
45	1 603 300 019	Ecrou Hex M10, SW14	1	,-	1
50	1 607 001 007	Capteur de vitesse	1	,-	1
51	1 600 200 031	Palier-Glisseur Ø14 MM	1	,-	1
60	1 603 435 023	Vis autotaradeuse p. défo TT M5x18 MM	1	,-	4
61	1 603 490 005	Vis A Tete Bombée Torx	1	,-	6

63	1 603 410 014	Vis à tête cylindrique M4x10 MM	1	-	1
64	2 603 490 021	Vis A Tete Bombée Torx 4x12	1	-	4
65	2 603 490 023	Vis A Tete Bombée Torx 4x20	1	-	2
66	2 910 211 019	Vis à Tôle DIN 7971-ST3,9x16-F	1	-	1
68	1 601 006 011	Joint-Plaque	1	-	1
75	1 600 290 060	Bloc Amortisseur	1	-	1
76	1 603 414 025	Vis A Embase	1	-	4
81	1 600 190 048	Aimant	1	-	1
131	1 601 118 N47	Plaque De Marque GWS 22-230 LVI	1	-	1
651	1 605 510 398	Capot De Protection Ø230 MM	2	-	1
660	1 602 025 051	Poignée Auxiliaire M14 NOIR	2	-	1
803	1 604 011 297	Induit 230V	1	-	1
804	1 607 000 C13	Interrupteur	1	-	1
805	1 607 000 227	Câble d'alimentation EU 4,15m 2 x 1,0mm H07 RN-F	1	-	1
808	1 601 106 940	Plaque signalétique	1	-	1
810	1 607 014 171	Jeu De Balais	1	-	1
810	1 607 000 480	Jeu De Balais 10 x 1 607 014 171	1	-	1
816	1 604 336 053	Porte-Balais	1	-	2
821	1 607 000 C17	Carter D'engrenages	1	-	1
822	1 607 000 C24	Flasque De Palier Ø230 MM	1	-	1
826	1 607 000 429	Jeu De Pignons Coniques	1	-	1
835	1 606 610 150	Ventilateur	1	-	1
840	1 607 000 431	Bouton-Poussoir	1	-	1
846	1 607 000 432	Rondelle D'arrêt	1	-	1
848	1 600 119 010	Anneau de retenue	1	-	1
850	1 600 905 026	Roulement A Billes Rigide 17x40x12	1	-	1
851	2 600 910 001	Douille à aiguilles Ø14 MM	1	-	1
880	1 607 233 552	Module électronique	1	-	1
890	1 600 210 039	Joint torique 20,35x1,78 MM	2	-	1
891	1 602 025 022	Poignée Auxiliaire M14 NOIR	2	-	1
892	1 607 950 061	Cle A Ergots	2	-	1
893	2 605 703 014	Flasque Ø22,3xØ42 MM	2	-	1
894	1 603 345 043	Ecrou Cylindrique M14	2	-	1
896	1 603 340 027	Ecrou De Blocage Rapide M14, SDS-CLIC	2	-	1

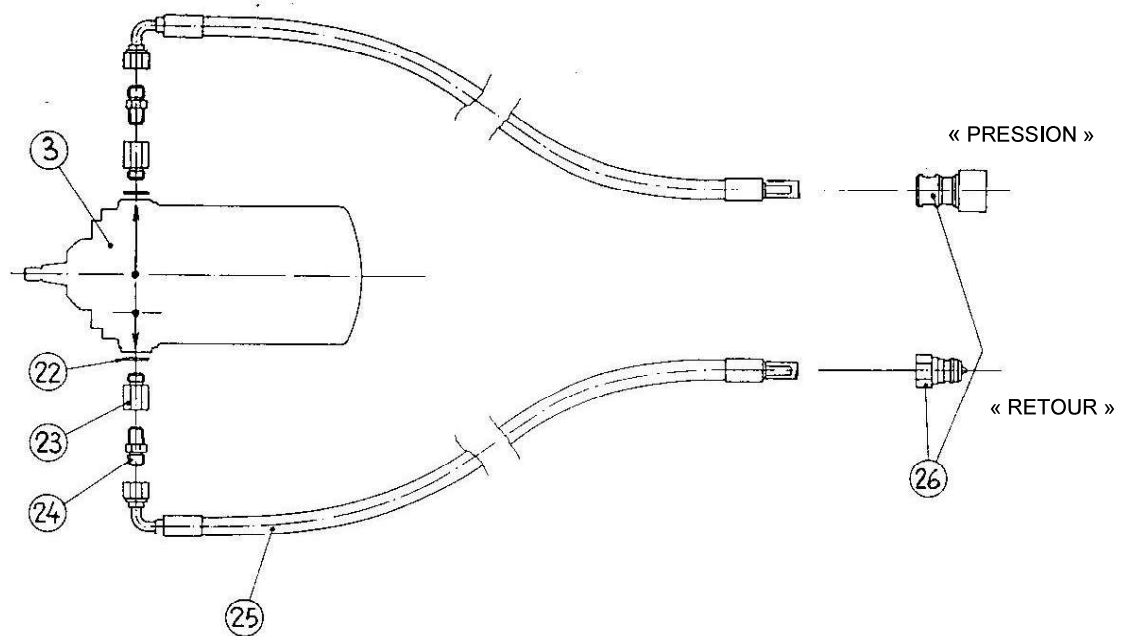
ENSEMBLE GROUPE HYDRAULIQUE

HYDRAULIC ASSEMBLY



SCHEMA DE L'APPAREILLAGE HYDRAULIQUE

HYDRAULIC FITTINGS DIAGRAM



Rep	Qté	Réf	Désignation	Description
1	1	548402024	Moteur Bosch GWS 22.230 LVI	Bosch Motor GWS 22.230 LVI
3	1	35910269	Châssis	Frame
4	1	47103001	Pompe HPI réservoir 2 litres	Pump HPI tank 2 liters
5	1	31230028	Accouplement complet	Coupling
6	1	31230054	Lanterne	Lantern
7	1	41004011	Vis Hc, M4x8	Screw Hc, M4x8
8	4	41008033	Vis CHc, M8x20	Screw CHc, M8x20
11	1	29511013	Bouton d'arrêt d'urgence complet	Emergency stop button
12	2	*	Vis CHc, M4x20	Screw CHc, M4x20
13	2	*	Rondelle M4N	Washer M4N
14	2	*	Ecrou frein M4	Nut M4
22	2	47701021	Joint cuivre	Seal
23	2	47701022	Raccord union 8x13	Fitting union 8x13
24	2	47701023	Adaptateur	Adaptator
25	2	47701110	Flexible Lg 4m PS 250bars	Flexible Lg 4m PS 250bars
26	1	47702009	Coupleurs Grommelle	Grommelle Coupling

* Livré avec bouton d'arrêt d'urgence

POCHETTE DE MAINTENANCE P

RECONISEE

(RECOMMENDED MAINTENANCE KIT)

(Non fournie avec la machine - Not supplied with the machine)

1	47701025	Filtre de pompe	Pump filter
1	47701110	Flexible Lg. 4m PS 250	Flexible hose 4m length
1	47701051	Flexible Lg. 6m PS 250	Flexible hose 6m length

FICHE DE CONTROLE
CLIENT

CONTROL CARD
CUSTOMER'S COPY

GROUPE HYDRAULIQUE ELECTRIQUE **ELECTRIC HYDRAULIC ASSEMBLY**
AVEC MOTEUR BOSCH GWS 22.230 LVI **REF 19511014** **WITH BOSCH GWS 22.230 LVI MOTOR**

N°	Désignation des opérations <i>Description of operation</i>	Contrôle <i>Checked by</i>
1	Pompe (pump) : Type (Type) HPI réservoir 2L (HPI with 2 liters tank) N° (Number) Tarée à 250 bars (Calibrated at 250 bars)	
2	Vérification des constituants hydrauliques et mécaniques des liaisons <i>Check all hydraulic and mechanical linkages</i> Raccords Bouchons Tuyauteries Couplings Niveau d'huile Plugs Hoses Oil level	
4	Aspect général <i>General aspect</i>	
5	Notice d'utilisation : REF 42111015 <i>User's manual</i>	

Date de fabrication *Date of manufacturing*

Fait à Raismes le *Drawn up in Raismes, the*

Nom *Name* :

Signature *Signature* :

Références à rappeler en cas de réclamation

In case of complaint, please quote these references

N° de moteur *Engine nbr.* :
N° de machine *Machine nbr* :



SAV / Commercial

Contacter votre représentant commercial / Contact your local representative

Ou / Or +33 (0) 1 46 88 17 00

Ou / Or Infos.pandrol-fr@pandrol.com

IV - ATTESTATION DE CONFORMITE

CERTIFICATE OF CONFORMITY

Le constructeur soussigné (the undersigned manufacturer)

PANDROL (DIVISION MATERIEL)

Z.I DU BAS PRE

59590 RAISMES



Certifie que le matériel neuf désigné ci-après

(certify that the under described products)

GROUPE HYDRAULIQUE ELECTRIQUE

ELECTRIC HYDRAULIC ASSEMBLY

Moteur BOSCH GWS 22.230 LVI

BOSCH motor GWS 22.230 LVI type

Référence 19511014

Référence 19511014

N° de machine (machine number) :

Est conforme (comply with)

- **A LA CONFORME EUROPEENE NF EN 13977**
(THE EUROPEENE NORM NF EN 13977)
- **AUX DISPOSITIONS REGLEMENTAIRES DEFINIES PAR LA DIRECTIVE 2006/42/CE**
(THE INFORMATION STATED IN THE LEGAL DOCUMENTATION OF THE DIRECTIVE 2006/42/CE)
- **Aux prescriptions de l'article R4313-20 (procedure d'auto certification)**
(the regulations of R4313-20 article – self certification procedure)
- **M. LISINSKI Aurélien est le détenteur du dossier technique**

Raismes, 05/2019
Bruno JOIRIS
Directeur Industriel

Aurélien LISINSKI
Responsable division matériel et équipement

PANDROL

Find out more at
pandrol.com

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