



epcatalogs.com

547983EN (20/11/2017)

AXLE 212

REPAIR MANUAL

DATE OF ISSUE	OBSERVATION
10 / 07 / 2007	- 1 st ISSUE
07 / 12 / 2007	- New reference MR
06 / 05 / 2011	- Modifications pages 20,21
24 / 04 / 2012	- New EDITION cut out by language
27 / 02 / 2013	- Integration of the gearbox 602
09 / 04 / 2014	- New edition
20 / 11 / 2017	- Added ADJUSTING THE STEERING GEAR p. 58.

MANITOU BF S.A Limited liability company with a Board of Directors.

Head office: 430, Rue de l'Aubinière - 44150 Ancenis - FRANCE

Share capital: 39,548,949 euros

857 802 508 RCS Nantes

Tel: +33 (0)2 40 09 10 11

www.manitou.com

This manual is for information purposes only. Any reproduction, copy, representation, recording, transfer, distribution, or other, in part or in whole, in any format is prohibited. The plans, designs, views, commentaries and instructions, even the document organization that are found in this document, are the intellectual property of MANITOU BF. Any violation of the aforementioned may lead to civil and criminal prosecution. The logos as well as the visual identity of the company are the property of MANITOU BF and may not be used without express and formal authorization. All rights are reserved.

CONTENTS

INTRODUCTION	7
VERSION TRACKING	8
MANUAL APPLICABILITY AND SUPPORTED MODELS	8
SPECIFICATIONS	9
DEFINITION OF VIEWPOINTS	9
DATA PLATE	9
CONVERSION TABLES	10
TORQUE SPECIFICATIONS	11
COARSE PITCH	11
FINE PITCH	11
WHEEL NUT TIGHTENING TORQUES	12
MAINTENANCE	13
MAINTENANCE POINTS	13
OIL DRAINING MANDATORY PROCEDURE	14
CENTRAL HOUSING	14
PLANETARY GEAR REDUCTION	14
MAINTENANCE INTERVALS	15
LUBRICANT & SEALANT SPECIFICATIONS	16
SAFETY PRECAUTIONS	17
CHECKING WEAR AND REPLACING THE BRAKING DISCS	19
EXPLODED VIEW	19
DISASSEMBLY	20
ASSEMBLY	22
SPECIAL TOOLS	24
T1	24
T2	24
COMPLETE STEERING CASE	25
EXPLODED VIEW	25
DISASSEMBLY	26
ASSEMBLY	27
DOUBLE U-JOINT	29
EXPLODED VIEW	29
DISASSEMBLY	30
ASSEMBLY	31
SPECIAL TOOLS	33
T1	33
T2	33
PLANETARY REDUCTION GEAR	35
EXPLODED VIEW	35
DISASSEMBLY	36
ASSEMBLY	40
SPECIAL TOOLS	44
T1	44
T2	44
T3	45
T4	46
T5	46
STEERING CYLINDER	47
EXPLODED VIEW	47
OPTICAL SENSOR AND MAGNETIC SENSOR	48
DISASSEMBLY	49
ASSEMBLY	52
ADJUSTING THE STEERING ANGLE	58
SPECIAL TOOLS	59
T1	59
T2	60

DIFFERENTIAL UNIT	61
EXPLODED VIEW	61
DISASSEMBLY	62
ASSEMBLY	64
SPECIAL TOOLS	66
T1	66
T2	66
BEVEL PINION	67
EXPLODED VIEW	67
DISASSEMBLY	68
ASSEMBLY	71
SPECIAL TOOLS	77
T1	77
T2	78
T3	78
T4	79
T5	79
T6	80
T7	81
T8	82
T9	82
MANUAL EMERGENCY RELEASE	83
EXPLODED VIEW	83
RELEASE	84
ADJUST	85
MECHANICAL PARKING BRAKE	87
EXPLODED VIEW	87
DISASSEMBLY	88
ASSEMBLY	90
EXTERNAL HYDRAULIC NEGATIVE BRAKE	93
EXPLODED VIEW	93
DISASSEMBLY	94
ASSEMBLY	95
EXTERNAL HYDRAULIC NEGATIVE BRAKE WITH QUICK RELEASE	97
EXPLODED VIEW	97
DISASSEMBLY	98
ASSEMBLY	100
INCOMING DRUM BRAKE	103
EXPLODED VIEW	103
DISASSEMBLY	104
ASSEMBLY	106
SPECIAL TOOLS	108
T1	108
T2	109
4" INCOMING BRAKE (2 AND 3 FUNCTION VERSIONS)	111
EXPLODED VIEW	111
DISASSEMBLY	112
ASSEMBLY	117
SPECIAL TOOLS	123
T1	123
T2	123
T3	124

NORMAL DIFFERENTIAL UNIT	125
EXPLODED VIEW	125
DISASSEMBLY	126
ASSEMBLY	128
SPECIAL TOOLS	131
T1	131
T2	131
T3	132
T4	132
LIMITED SLIP DIFFERENTIAL UNIT (25% AND 45%)	133
EXPLODED VIEW	133
DISASSEMBLY	134
ASSEMBLY	137
SPECIAL TOOLS	140
T1	140
T2	140
T3	141
T4	141
HYDRAULIC DIFFERENTIAL LOCK	143
EXPLODED VIEW	143
DISASSEMBLY	144
ASSEMBLY	147
SPECIAL TOOLS	149
T1	149
T2	149
HYDRAULIC NEGATIVE BRAKE	151
EXPLODED VIEW	151
DISASSEMBLY	152
ASSEMBLY	156
INCORPORATED REDUCTION GEAR AND PINION 602	163
EXPLODED VIEW	163
DISASSEMBLY	164
ASSEMBLY	168
SPECIAL TOOLS	171
T1	171
T2	172
T3	173
T4	174
T5	175
T6	176

[Buy now](#)

[Manitou AXLE 212 Repair Manual PDF](#)

[With Instant Download](#)