
WORKSHOP SERVICE MANUAL

FENDT

FENDT 8380 P

FENDT 8380 P AL

FENDT 8410 P

FENDT 8410 P AL



Workshop Manual for 7380 CENTORA Combine Series

1	Introduction - Specifications	13
1.1	Using the manual	15
1.1.1	Using the manual	15
1.2	General specifications	16
1.2.1	Dimensions and specifications	16
1.2.2	Specification table for tyres with equipment	25
1.3	Safety precautions	28
1.3.1	Safety precautions	28
1.3.2	Safety in the workshop	28
1.3.3	Safety - a word to the mechanic	28
1.3.4	Safety - danger, warning and caution	28
1.3.5	Safety decals	29
1.3.6	General	29
1.3.7	Personal safety	29
1.3.8	Considerations with regard to equipment	30
1.3.9	General considerations	31
1.3.10	Operational considerations	31
1.3.11	Maintenance techniques	32
1.4	Practical advice	34
1.4.1	Practical advice	34
1.5	Start-up instructions	38
1.5.1	General	38
1.5.2	Pre-delivery checks	38
1.5.3	Instruction of combine operator	39
1.6	Conversion tables	43
1.6.1	Conventional units of measurement	43
1.7	Locking and sealing agents	44
1.7.1	Locking and sealing agents	44
1.8	Wheel nut torques	45
1.8.1	Wheels	45
1.8.2	Bolts with metric threads	45
1.8.3	Nuts with metric threads	46
2	Cutting table	47
2.1	General	49
2.1.1	Table, general	49
2.2	Knife drive - wobble box 18-30 ft	50
2.2.1	Removal	50
2.2.2	Assembly	50
2.2.3	Reconditioning the wobble box	51
2.2.4	Positioning the double fingers, knife and crop lifters	57
2.3	Table auger, 18-30 ft	58
2.3.1	Removal	58
2.3.2	Assembly	59
2.3.3	Replacing the shaft on the right-hand side	59
2.3.4	Replacing the shaft on the left-hand side	60
2.3.5	Replacing the crankshaft	61
2.3.6	Replacing the feathering fingers, bearings and bushes	62
2.3.7	Adjusting the table auger and feathering fingers	63
2.4	Table body, 18-30 ft	64
2.4.1	Adjusting the cut-off strips	64
2.4.2	Adjusting and positioning the ground sensor - PowerFlow	65

2.5	Friction clutch and chain drive 18-30 ft	67
2.5.1	Removing the friction coupling	67
2.5.2	Assembly	67
2.5.3	Replacing the bearings and sprockets	68
2.6	Countershaft, 18-30 ft	69
2.6.1	Removing the countershaft	69
2.6.2	Fitting the countershaft	70
2.7	PowerFlow belts, 18-30 ft	71
2.7.1	PowerFlow belts	71
2.7.2	Removal, belts	71
2.7.3	Assembly, belts	74
2.7.4	Replacing the front rollers and bearings, scraper adjustment	75
2.7.5	Replacing the rear rollers and bearings, scraper adjustment	77
2.7.6	Replacing and aligning the bearing housing, rear rollers	78
2.7.7	Belt tensioning and running-in	79
3	Reel	83
3.1	Reel, 18-30 ft	85
3.1.1	Removal	85
3.1.2	Assembly	86
3.1.3	Replacing the reel tine bar and plastic bearings	87
3.1.4	Replacing the guide rollers, eccentric, guide ring and bearings	88
3.1.5	Replacing the reel plates	89
3.1.6	Replacing the reel tube, bearings	89
3.2	Oil motor and chain drive, 18-30 ft	90
3.2.1	Replacing the oil motor	90
3.2.2	Replacing the flow divider	90
3.3	Hydraulic cylinders, 18-30 ft	91
3.3.1	Replacing the cylinder – reel up/down	91
3.3.2	Replacing the cylinder – reel forward/back	92
3.3.3	Reconditioning of hydraulic cylinders	92
4	Main crop elevator	95
4.1	General	97
4.1.1	Main crop elevator, general	97
4.2	Main crop elevator	98
4.2.1	Removal of Crop Elevator	98
4.2.2	Fitting the crop elevator	99
4.2.3	Bearing block on machine frame	100
4.2.4	Replacing the lifting ram	100
4.2.5	Reconditioning the hydraulic cylinder	101
4.2.6	Replacing the cutting height preset sensor	102
4.3	Crop elevator chain	103
4.3.1	Crop elevator chain, general	103
4.3.2	Removing the crop elevator chain	103
4.3.3	Fitting the crop elevator chain	104
4.3.4	Replacement of slats	105
4.3.5	Replacing the slide rails in the crop elevator	105
4.3.6	Replacing the intermediate plate	106
4.4	Elevator chain top shaft	107
4.4.1	Removing the elevator chain top shaft	107
4.4.2	Fitting the elevator chain top shaft	108
4.4.3	Replacing the bearings	108
4.4.4	Replacing the sprockets and centre bearing	110
4.4.5	Replacing the shaft protection tube	113
4.5	Elevator chain front shaft	114
4.5.1	Removing the elevator chain front shaft	114
4.5.2	Fitting the elevator chain front shaft	115
4.5.3	Replacing the shaft bearings	116
4.6	Elevator countershaft	117
4.6.1	Removing the elevator intermediate shaft	117
4.6.2	Fitting elevator intermediate shaft	118

4.7	Friction clutch and belt drive	119
4.7.1	Removal of friction clutch	119
4.7.2	Fitting the friction clutch	119
4.7.3	Reconditioning of the friction clutch	120
4.8	Adapter	121
4.8.1	Removal of adapter	121
4.8.2	Fitting the adapter	122
4.8.3	Replacing the levelling cylinder	122
4.8.4	Reconditioning the hydraulic cylinder	122
4.8.5	Replacing the angle sensor	123
4.9	Hydraulic reversing	124
4.9.1	Removal of hydraulics motor	124
4.9.2	Removing the hydraulic cylinder	125
5	Threshing unit	127
5.1	General	129
5.1.1	Threshing unit, general	129
5.2	Stone trap	130
5.2.1	Removal	130
5.2.2	Assembly	131
5.3	Concave	132
5.3.1	Removing the concave	132
5.3.2	Fitting the concave	133
5.3.3	Adjusting the concave laterally	133
5.3.4	Concave setting - initial setting	134
5.3.5	Replacing the lead-in plate	135
5.3.6	Replacing the shaft for concave setting	135
5.4	Threshing cylinder	137
5.4.1	Removing the threshing cylinder	137
5.4.2	Fitting the threshing cylinder	138
5.4.3	Replacing the bearings	139
5.4.4	Replacing the rasp bars and backing bars	140
5.4.5	Replacing the shaft and cylinder spiders	140
5.5	Cylinder variator – table clutch	142
5.5.1	Removal, hydraulic variator	142
5.5.2	Assembly, hydraulic variator	143
5.5.3	Reconditioning the hydraulic variator pulley	143
5.5.4	Removal, mechanical variator	145
5.5.5	Assembly, mechanical variator	145
5.5.6	Reconditioning the mechanical variator pulley	146
5.5.7	Removal, hydraulic table clutch	147
5.5.8	Fitting the hydraulic table clutch	148
5.5.9	Reconditioning the hydraulic table clutch	149
5.6	Rear beater	154
5.6.1	Removing the rear beater	154
5.6.2	Fitting the rear beater	155
5.7	Rear beater concave	156
5.7.1	Removing the rear beater concave	156
5.7.2	Fitting the rear beater concave	156
5.8	Rotary separator cylinder	157
5.8.1	Removal, rotary separator cylinder	157
5.8.2	Fitting the rotary separator cylinder	158
5.8.3	Replacing the bearings	158
5.8.4	Replacing the rasp bars	159
5.9	Rotary separator concave	161
5.9.1	Removal, rotary separator concave	161
5.9.2	Fitting the rotary separator concave	162
5.9.3	Concave setting - initial setting	162
5.9.4	Replacing the shaft for concave setting	163

6	Straw walkers	165
6.1	General	167
6.1.1	Straw walkers, general	167
6.2	Straw walkers	168
6.2.1	Removal, straw walkers	168
6.2.2	Fitting the straw walkers	168
6.3	Crank - front	170
6.3.1	Removal, front crank	170
6.3.2	Fitting the front crank	171
6.3.3	Replacing the bearings	171
6.4	Crank - rear	173
6.4.1	Removal, rear crank	173
6.4.2	Fitting the rear crank	173
6.4.3	Replacing the bearings	173
7	Shaker shoe - Fanning mill	175
7.1	General	177
7.1.1	Shaker shoe - fanning mill, general	177
7.2	Fanning mill	178
7.2.1	Removing the fanning mill	178
7.2.2	Fitting the fanning mill	179
7.2.3	Replacing the fan blades	179
7.2.4	Replacing the fanning mill deflectors	180
7.2.5	Replacing the seals	181
7.3	Main grain pan frame	182
7.3.1	General	182
7.3.2	Removal, main grain pan frame	182
7.3.3	Fitting the main grain pan frame	183
7.3.4	Replacing the swivel arm and bearings	184
7.3.5	Replacing the seals	185
7.4	Second grain pan	186
7.4.1	Removal	186
7.4.2	Fitting the second grain pan	186
7.4.3	Replacing the swivel arm and bearings	187
7.4.4	Adjusting second grain pan	188
7.5	Top shaker shoe	190
7.5.1	Removing the top shaker shoe	190
7.5.2	Assembly	191
7.5.3	Replacing the swivel arm and bearings	192
7.5.4	Replacement of seals	193
7.5.5	Replacing and calibrating the actuator - sieves	193
7.6	Bottom shaker shoe	195
7.6.1	Removing the bottom shaker shoe	195
7.6.2	Assembly	196
7.6.3	Replacing the swivel arm and bearings	197
7.6.4	Replacing the seals	197
7.6.5	Electric sieve setting – initial setting	197
7.7	Bottom augers	198
7.7.1	Removing the grain auger	198
7.7.2	Fitting the grain auger	198
7.7.3	Removing the returns bottom auger	199
7.7.4	Fitting the returns bottom auger	200
7.8	Eccentric drive	201
7.8.1	Removing the eccentric drive	201
7.8.2	Fitting the eccentric drive	202
7.8.3	Adjusting the connecting rod / aligning the shaker shoes	203
7.8.4	Replacing the connecting rod bearing	204
7.8.5	Replacing the bearings and eccentric shaft	205
7.9	Transmissions	206
7.9.1	Replacing and reconditioning the fanning mill variator	206
7.9.2	Adjusting the fanning mill variator	207
7.9.3	Replacing and reconditioning the counter drive	208

8	Elevators - augers	209
8.1	Tank filling elevator	211
8.1.1	Removing the tank filling elevator	211
8.1.2	Fitting the tank filling elevator	212
8.1.3	Replacing the top shaft, bearings and sprockets	213
8.1.4	Replacing the bottom sprocket	214
8.1.5	Replacing the elevator chain	215
8.2	Returns auger	216
8.2.1	Removing the returns auger	216
8.2.2	Fitting the returns auger	218
8.2.3	Replacing the top bearing	219
8.2.4	Removing and reconditioning the right-angle gear	219
8.3	De-awner	221
8.3.1	Removing the de-awner	221
8.3.2	Fitting the de-awner	221
8.4	Tank filling auger	222
8.4.1	Removing the pivotable part	222
8.4.2	Replacing the top bearing	222
8.4.3	Removing the fixed part bearing	223
8.4.4	Reconditioning the right-angle gear	224
8.5	Transmission	226
8.5.1	Replacing the countershaft and bearings	226
9	Engine	227
9.1	General	229
9.1.1	Engine, general	229
9.2	Replacing the engine	230
9.2.1	Removing the engine assembly	230
9.2.2	Fitting the engine assembly	233
10	Unloading auger - Grain tank	235
10.1	Moisture sensor	237
10.1.1	Removing the moisture sensor	237
11	Drive unit	239
11.1	Radiator – intercooler	241
11.1.1	Removal, combined radiator	241
11.1.2	Fitting, combined radiator	242
11.2	Hydraulic oil cooler	244
11.2.1	Removing the oil cooler	244
11.2.2	Fitting the oil cooler	244
11.3	Fuel cooler	245
11.3.1	Removing the fuel cooler	245
11.3.2	Fitting the fuel cooler	245
11.4	Condenser – air conditioning	246
11.4.1	Removing the condenser	246
11.4.2	Fitting the condenser	246
11.5	Rotary screen	247
11.5.1	Removing the rotary screen	247
11.5.2	Fitting the rotary screen	248
11.5.3	Adjusting the radiator cleaning plate	249
11.5.4	Reconditioning the countershaft drive	250
11.6	Dust aspirator	251
11.6.1	Removing the dust aspirator	251
11.6.2	Fitting the dust aspirator	251
11.6.3	Reconditioning the dust aspirator	252
11.7	Hydrostatic pump	253
11.7.1	Removing the hydrostatic pump	253
11.7.2	Fitting the hydrostatic pump	254
11.8	Auxiliary hydraulic pump	255
11.8.1	Removing the hydraulic pump	255
11.8.2	Fitting the hydraulic pump	255

11.9 Hydraulic oil tank	256
11.9.1 Removing the hydraulic oil tank	256
11.9.2 Fitting the hydraulic oil tank	256
11.10 Fuel tank	257
11.10.1 Removing the fuel tank	257
11.10.2 Fitting the fuel tank	258
11.10.3 Tank gauge	258
11.11 SCR system	259
11.11.1 Removing the DEF tank	259
11.11.2 Fitting the DEF tank	259
11.11.3 Removing the DEF catalytic converter	260
11.11.4 Fitting the DEF catalytic converter	261
11.11.5 Supply module	261
11.11.6 Dosing module	262
11.11.7 Tank sensor, DEF	262
11.12 Compressor – air conditioning	263
11.12.1 Removing the A/C compressor	263
11.12.2 Fitting the A/C compressor	263
11.13 Power take-off	264
11.13.1 Removing the power take-off	264
11.13.2 Fitting the power take-off	266
11.13.3 Replacing the clutch	266
11.13.4 Replacing the output shaft/bearings	267
12 Transmissions	269
12.1 General	271
12.1.1 Transmissions, General	271
12.2 Countershaft	272
12.2.1 Removing the countershaft	272
12.2.2 Fitting the countershaft	274
12.2.3 Replacing the bearings	274
12.3 Replacing the belts, right-hand side	275
12.3.1 Elevator countershaft - hydraulic engine, reversing	275
12.3.2 Rear beater - counter drive, cylinder variator	276
12.3.3 Counter drive, variator - threshing cylinder	276
12.3.4 Rear beater - rotary separator	277
12.3.5 Rear beater - fanning mill variator	278
12.3.6 Fanning mill variator - fanning mill	279
12.3.7 Countershaft - dust aspirator, rotary screen counter drive	280
12.3.8 Countershaft - countershaft	280
12.3.9 Countershaft - tank filling elevator, tank filling auger	281
12.3.10 Countershaft - returns augers	281
12.3.11 Rotary screen counter drive - rotary screen	282
12.4 Replacing the chains, right-hand side	283
12.4.1 Reel drive	283
12.5 Replacing the belts, left-hand side	284
12.5.1 Table countershaft - knife drive	284
12.5.2 PTO shaft – table countershaft	284
12.5.3 Counter pulley - elevator countershaft	285
12.5.4 Rear beater - elevator chain top shaft - idler gear	286
12.5.5 Countershaft - rear beater	287
12.5.6 Engine - countershaft	288
12.5.7 Engine - unloading auger counter drive 1	290
12.5.8 Unloading auger counter drive 1 - unloading auger counter drive 2	292
12.5.9 Countershaft - counter drive, straw chopper	293
12.5.10 Counter drive, straw chopper - straw chopper	293
12.5.11 Rear beater - countershaft, shaker shoe drive	294
12.5.12 Countershaft, shaker shoe drive - eccentric shaft	294
12.5.13 Countershaft, shaker shoe drive - straw walker crank	295
12.5.14 Countershaft – hydraulic pump, chaff spreader	295
12.5.15 Engine - hydrostatic pump	296

12.6 Replacing the chains, left-hand side	297
12.6.1 Table countershaft - table auger	297
12.6.2 Table auger - belt rollers (PowerFlow)	297
12.6.3 Unloading auger counter drive 2 - bottom auger	298
13 Undercarriage	299
13.1 Auto Level final drive bracket	301
13.1.1 Removal	301
13.1.2 Assembly	302
13.1.3 Replacing the bushing	304
13.1.4 Replacing the hydraulic cylinder	305
13.1.5 Reconditioning of hydraulic cylinder	305
13.1.6 Adjusting the Auto Level potentiometer	306
13.2 Final drives	308
13.2.1 Removal	308
13.2.2 Assembly	309
13.2.3 Reconditioning the final drives	310
13.3 Gearbox	314
13.3.1 Removal	314
13.3.2 Assembly	315
13.3.3 Replacing the shifter cylinders and sensor	316
13.3.4 Adjusting the shifter cylinders and sensor	317
13.3.5 Replacing the lubrication pump	320
13.3.6 Replacing the shifter forks	321
13.3.7 Reconditioning the differential	322
13.3.8 Reconditioning the gearbox	325
13.4 Hydrostatic motor	329
13.4.1 Removal	329
13.4.2 Assembly	329
13.5 Brakes	331
13.5.1 Replacing the brake blocks	331
13.5.2 Replacing the brake discs	332
13.5.3 Bleeding the brakes	334
13.5.4 Replacing the parking brake shoes	334
13.5.5 Adjustment of hydraulic parking brake	335
14 Hydraulics	337
14.1 General	339
14.1.1 Hydraulics, general	339
14.1.2 Emptying and filling the hydrostatic system	339
14.1.3 Running in and bleeding the hydrostatic system 2WD	341
14.1.4 Running in and bleeding the hydrostatic system 4WD	343
14.1.5 Running in and bleeding the auxiliary hydraulics	345
14.2 Hydraulic diagrams	346
14.2.1 Standard Combines	346
14.2.2 Auto Level machines	354
14.3 Hydraulic components	364
14.3.1 Hydraulic valves	364
14.3.2 Hydraulic pumps	373
14.3.3 Hydraulic motors	379
14.4 Hydrostatic system	381
14.4.1 Transmission hydraulics 2WD	381
14.5 Gearshift	382
14.5.1 Gearshift	382
14.6 Parking brake	384
14.6.1 Parking brake	384
14.7 Auxiliary hydraulics	385
14.7.1 Auxiliary hydraulics, oil tank and oil cooler	385
14.8 Cutting table	387
14.8.1 Cutting table - hydraulics	387
14.9 Auto Level	390
14.9.1 Auto Level - hydraulics	390

14.10 Reel	392
14.10.1 Steering - hydraulics	392
14.11 Steering	395
14.11.1 Steering - hydraulics	395
14.12 Cutting table clutch	397
14.12.1 Cutting table engagement - hydraulics	397
14.13 Cylinder variator	398
14.13.1 Cylinder variator - hydraulics	398
14.14 Threshing unit	400
14.14.1 Threshing mechanism on/off - hydraulics	400
14.15 Unloading auger	401
14.15.1 Unloading auger out/in - hydraulics	401
14.15.2 Unloading auger on/off - hydraulics	403
14.16 Reversing	404
14.16.1 Reversing - hydraulics	404
14.17 Chaff spreader	406
14.17.1 Chaff spreader - hydraulics	406
15 Electrical system	407
15.1 General	409
15.1.1 Electrical system, general	409
15.2 Description of VarioDoc	410
15.2.1 Description of VarioDoc	410
15.3 CAN connections	411
15.3.1 CAN connections	411
15.4 Failure codes	414
15.4.1 Machine-related error codes	414
15.4.2 Engine-related error codes	423
15.5 Relays and fuses	449
15.5.1 Relays and fuses	449
15.6 Connectors	455
15.6.1 Front electric box	455
15.6.2 Rear electric box	457
15.7 Diagrams overview	460
15.7.1 Diagrams overview	460
15.8 Wiring diagrams	465
15.8.1 Electric diagrams, Standard Combine	465
15.8.2 Electric diagrams Auto Level machine	501
15.9 Components	536
15.9.1 Components	536
16 Straw chopper	595
16.1 General	597
16.1.1 Replacing and calibrating the electric actuator – straw deflectors	597
17 General assembly instructions	599
17.1 Fitting gib-head keys	601
17.1.1 Fitting gib-head keys	601
17.2 Fitting tightening pins	602
17.2.1 Fitting tightening pins	602
17.3 Fitting hydraulic pipes and screw connections	603
17.3.1 Fitting hydraulic pipes and screw connections	603
17.4 Fitting a flanged bearing with locking collar	605
17.4.1 Fitting a flanged bearing with locking collar	605
17.5 Fitting sliding bushings	606
17.5.1 Fitting sliding bushings	606
17.6 Removing the revolution sensor	607
17.6.1 Removing the revolution sensor	607
17.7 Fitting tightening rings	608
17.7.1 Fitting tightening rings	608

18 Miscellaneous data	609
18.1 General	611
18.1.1 Miscellaneous data, general	611
18.2 Speeds - adjustment values	612
18.2.1 Speeds - adjustment values	612
18.3 Maintenance	613
18.3.1 Lubrication chart, intervals	613
18.3.2 Lubrication chart, right- and left-hand sides	616
18.3.3 Lubrication chart, front axles	619
18.3.4 Lubrication points, left-hand machine side	620
18.3.5 Lubrication points, right-hand machine side	636
18.3.6 Lubricants and operating fluids	646
18.3.7 Gear	647
 Alphabetical index	 649

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com