

# Instructions manual

## Operating & Maintenance

**4812313232.pdf**

**Compact planer  
PL1000F (IIIA/T3)  
PL1000F (IV/T4f)**

**Diesel engine  
Cummins QSL9-C300  
Cummins QSL9-C333**

**Serial number  
10000908C0C004938  
10000909C0C005581**



---

Original instructions.  
Reservation for changes  
Printed in China



## Contents

<b>Instruction</b> .....	<b>1</b>
Warning symbols .....	1
Intended use .....	1
General .....	1
The machine.....	2
Technical modifications, attachments and conversions.....	3
<b>Safety – General instructions</b> .....	<b>5</b>
<b>Safety – when operating</b> .....	<b>7</b>
Risk zones on the machine .....	7
Slopes (Tip over risk).....	8
<b>Safety (Optional)</b> .....	<b>9</b>
Conveyor .....	9
Hydraulic chassis leg .....	10
Roof (option).....	10
<b>Special instructions</b> .....	<b>11</b>
Special instructions.....	11
Standard lubricants and other recommended oil and fluids.....	11
High ambient temperatures, above +40°C (104°F).....	11
Lower ambient temperature – Freeze risk.....	11
Temperatures.....	11
High pressure cleaning .....	12
Fire fighting .....	12
Battery handling.....	12
Jumping starting (24V) .....	14
<b>Technical specifications</b> .....	<b>15</b>
Vibrations – Operator station .....	15
Noise level .....	15
Dimensions, side view .....	16

## Contents

---

Dimensions, top view .....	17
Weights and volumes .....	18
Working capacity.....	18
General .....	19
Tightening torques .....	20
<b>Machine description.....</b>	<b>21</b>
<b>Descriptions of assemblies and functions .....</b>	<b>21</b>
<b>Machine description .....</b>	<b>23</b>
<b>Identification .....</b>	<b>26</b>
<b>Machine plate.....</b>	<b>26</b>
<b>Explanation of 17PIN serial number .....</b>	<b>26</b>
<b>Engine plate.....</b>	<b>27</b>
<b>Decals .....</b>	<b>28</b>
<b>Positioning of labels.....</b>	<b>28</b>
<b>Info decals .....</b>	<b>32</b>
<b>Instruments/Controls.....</b>	<b>33</b>
<b>Main console.....</b>	<b>33</b>
<b>Ergo control box .....</b>	<b>37</b>
<b>Remote control box.....</b>	<b>40</b>
<b>Screen structure for setting and display options .....</b>	<b>41</b>
<b>Description of error codes, dialog boxes .....</b>	<b>54</b>
<b>Electrical system .....</b>	<b>75</b>
<b>Main fuses .....</b>	<b>75</b>
<b>Fuses, machine.....</b>	<b>76</b>
<b>Fuses boxes .....</b>	<b>76</b>
<b>Relay, machine.....</b>	<b>77</b>
<b>Functional description.....</b>	<b>78</b>
<b>Scraper lock – B2.....</b>	<b>78</b>
<b>Milling safety – B3.....</b>	<b>78</b>
<b>Working lights.....</b>	<b>79</b>

Rotating beacon (Option) .....	79
Panel protection.....	80
Hydraulic front plate – Milling housing.....	80
Bits – Tool holder.....	81
Typical wear marks on tool holder .....	82
Typical wear marks on bits .....	82
Dismantling the bits .....	83
Mounting the bits .....	83
Removing the quick-charge tops (model1).....	83
Removing the quick-charge tops (model2).....	84
Mounting the quick-charge tops (model1).....	84
Mounting the quick-charge tops (model2).....	84
Replacing the bit box .....	85
Replacing the holder box.....	86
Roof (option).....	87
Raise/Lower the roof manually .....	88
Emptying/Filling water tank .....	89
Cleaning (Option).....	90
Locking device, scraper .....	91
<b>Operation .....</b>	<b>93</b>
<b>Before starting .....</b>	<b>93</b>
Checks before starting .....	93
Operator’s seat - Adjustment.....	93
Unlock the panel and ergo control box protection .....	94
Checking the working hours.....	94
View.....	95
Master switch – switching on.....	95
Roof adjustment (Option) .....	95
Instrument and lamp checks.....	95
<b>Starting .....</b>	<b>96</b>

Starting the engine .....	96
<b>Driving</b> .....	97
<b>Positioning</b> .....	97
<b>Driving the machine</b> .....	97
<b>Driving on the difficult surfaces</b> .....	99
<b>Swivel chassis leg, hydraulic</b> .....	99
<b>Pointer</b> .....	100
<b>Milling (not auto)/Leveling</b> .....	101
<b>Adjust</b> .....	101
<b>Milling preparation</b> .....	102
<b>Milling automatic leveling</b> .....	103
<b>Milling with automatic leveling (Option)</b> .....	103
<b>Milling instructions</b> .....	104
<b>Milling position</b> .....	104
<b>Resetting milling depth</b> .....	104
<b>Surface milling</b> .....	105
<b>Milling at edge of roadway or at shoulder</b> .....	105
<b>Milling at curb with folded out chassis leg</b> .....	106
<b>Milling at curb with folded in chassis leg</b> .....	106
<b>Stop milling</b> .....	107
<b>Manometer, scraper release pressure</b> .....	108
<b>Braking</b> .....	108
<b>Normal braking</b> .....	108
<b>Secondary brake</b> .....	108
<b>Emergency braking</b> .....	109
<b>Master switch</b> .....	109
<b>Parking</b> .....	110
<b>Parking/Switching off</b> .....	110
<b>Cleaning the machine</b> .....	110
<b>Folding/unfolding conveyor</b> .....	111

<b>Long-term parking .....</b>	<b>113</b>
Long-term parking .....	113
Battery .....	113
Engine .....	113
Watering system .....	113
Hoods, tarpaulin .....	113
Fuel tank .....	114
Hydraulic reservoir .....	114
<b>Miscellaneous .....</b>	<b>115</b>
Lifting .....	115
Lifting the planer .....	115
Towing the planer .....	116
Towing/Recovery .....	116
Release the brakes and pumps .....	117
<b>Transport .....</b>	<b>118</b>
Machine prepared for transport .....	118
Load carrier .....	119
<b>Operating instructions – Summary .....</b>	<b>120</b>
<b>Preventive maintenance .....</b>	<b>123</b>
<b>Maintenance – Lubricants and symbols .....</b>	<b>125</b>
Maintenance – Lubricants and symbols .....	125
Fluid volumes .....	125
<b>Maintenance – Maintenance schedule .....</b>	<b>127</b>
Maintenance – Maintenance schedule .....	127
Service and maintenance points .....	127
General .....	128
Every 10 hours of operation (Daily) .....	129
Every 50 hours of operation (Weekly) .....	130
After the FIRST 100 hours of operation .....	130
After the FIRST 250 hours of operation .....	130

## Contents

---

Every 250 hours of operation (Monthly).....	131
Every 500 hours of operation (Every three months).....	131
Every 1000 hours of operation (Every six months).....	132
Every 2000 hours of operation (Yearly).....	132
<b>Maintenance – 10h .....</b>	<b>133</b>
Diesel engine – Check oil level.....	133
Hydraulic reservoir – Check fluid level .....	134
Fuel tank – Filling .....	134
Check the high pressure hydraulic filter.....	135
Check return filter – suction side .....	135
Water tank – Filling.....	136
Sprinkler system/nozzle – Checking/Cleaning .....	137
Water filter – Checking/Replacing .....	137
Sprinkler system – Draining.....	138
Check of belt tension – belt rollers, conveyor belt .....	139
Milling drum – Drive belt – Replace .....	140
Diesel engine – Checking the drive belt.....	141
Brake function/Emergency stop – Check.....	142
Check hydraulic front plate – Milling housing.....	143
Side shield – Check.....	144
Scraper plate, milling housing – Check .....	144
Water separator, fuel prefilter – Draining.....	145
Clean cooler .....	145
Retaining ropes, catch ropes, shackles – Check.....	146
<b>Maintenance – 50h .....</b>	<b>147</b>
Air filter – Check.....	147
Rubber protection in milling housing – Check.....	148
Front chassis leg – lubrication points .....	148
Rear right chassis leg – lubrication points .....	149
Rear left chassis leg – lubrication points .....	149



Conveyor - Drive – lubrication points .....	150
Conveyor - Driven – lubrication points .....	150
Primary conveyor - Drive – lubrication points .....	150
Primary conveyor - Driven – lubrication points .....	150
Primary conveyor - Drive – lubrication points .....	150
Discharge conveyor – Folding cylinder – lubrication points .....	151
Crawler – lubrication points .....	151
Milling drum – lubrication points .....	152
Check of funnel rubber – sealing rubber, side guides .....	153
Milling drum, planetary gear – Check of oil level .....	153
Split gear box – Check oil level .....	154
<b>Maintenance – 250h .....</b>	<b>155</b>
Battery .....	155
Checking the electrolyte level.....	155
Coolant level – Check .....	156
Air filter – Cleaning.....	157
<b>Maintenance – 500h .....</b>	<b>159</b>
Diesel engine – Oil change – Filter replacement .....	160
Fuel filter – Replacement .....	161
Water separator, fuel prefilter – Replacement.....	162
Hydraulic reservoir cap – Check .....	163
Hydraulic hoses – Check .....	164
Water tank – Emptying/Cleaning .....	164
Clutch lining – Check.....	165
<b>Maintenance – 1000h .....</b>	<b>167</b>
Clutch bearing.....	167
Split gear box – Oil change .....	168
<b>Maintenance – 2000h .....</b>	<b>169</b>
Chassis leg, drive wheel – Planetary gear, oil draining .....	169
Diesel engine – Replacing the drive belt.....	170

## Contents

---

Return oil filter suction side – Replacement .....	170
High-pressure hydraulic – Replacement .....	171
Hydraulic reservoir – Fluid change .....	172
Milling drum – Planetary gear, change oil .....	172
Fuel tank – Drainage .....	173
Coupling – Check – Replacement of belt .....	174
Coupling gear box – Adjusting the belt tension .....	175
Air filter – Replace .....	176
<b>Disposal .....</b>	<b>177</b>
<b>Appendix .....</b>	<b>1</b>
<b>Appendix 1: Engine Fault Code .....</b>	<b>1</b>

## Introduction

### Warning symbols



**WARNING !** Marks a danger or a hazardous procedure that can result in life threatening or serious injury if the warning is ignored.

### Intended use

PL1000F is mainly intended to be used for roadworks:

- to remove layers of asphalt, asphalt concrete and concrete
- remove superficial irregularities in the form of ruts, lateral unevenness and distortions.
- to restore the correct surface profile
- roughen up and remove markings
- to carry out preparations in conjunction with laying piping and conduits

The above work requires the underlying surface to be sufficiently stable and strong to withstand the movement of the planer.

The machine is not designed to be used as a towing machine, a winch or lifting device. See "Safety Manual" for planing.

The machine is not intended for using in explosive atmosphere.

### General

This manual contains instructions for machine operation and maintenance.

The machine must be correctly maintained for maximal performance.

The machine should be kept clean so that any leakages, loose bolts and loose connections are discovered at as early a point in time as possible. Inspect the machine every day, before starting. Inspect the entire machine so that any leakage or other faults are detected.

Check the ground under the machine. Leakages are more easily detected on the ground than on the machine itself.



**THINK ENVIROMENT!** Do not release oil, fuel and other environmentally hazardous substances into the environment. Always send used filters, drain oil and fuel remnants to environmentally correct disposal.

This manual contains instructions for periodic maintenance normally carried out by the operator.



Additional instructions for the engine can be found in the manufacture's engine manual.



**CAUTION!** Marks a danger or hazardous procedure that can result in damage to the machine or property if the warning is ignored.

### **The machine**

Atlas Copco Planer PL1000F is a compact, hydraulically driven by four steerable crawler units. It has a front loading system which is used to remove asphalt and cement layers. The milling drums are driven mechanically by power-transmission belts.

As a result of its high planing performance, we would recommend that this cold planer is used in particular when carrying out extensive redevelopment work on large and spacious roads, such as motorways, urban and country roads, car parks, airports etc.

**Technical modifications, attachments and conversions:** The machine may only be operated with the extension parts, optional equipment and accessories, protection and safety devices authorized by the manufacturer as well as the setting values specified by the manufacture. The manufacture is not liable for damage resulting from unauthorized changes to the assemblies, their removal or their replacement with other, non-intended components or taking them completely or partially out of operation.

The attachment or installation of additional devices, which are used to intervene in the function of the cold planer or with which its function are supplemented, is only permitted with the written approval of the manufacturer. If necessary, approval should be sought from the local authorities.

Consent from the authorities is however no substitute for approval from the manufacturer.



**Safety - General instructions**  
(Also read the safety manual)

1. Read the entire manual before starting the machine and before carrying out any maintenance. Do not remove the manual from the machine. Replace the instruction manual if lost, damaged or unreadable.
2. The safety manual supplied with the machine must be read by all planer operators. Always follow the safety instructions. Do not remove the manual from the machine.
3. Only trained and/or experienced operators should be allowed to drive the planer. It is prohibited to take passengers on the planer.
4. Never use the planer if it is in need of adjustment or repair.
5. Only climb up or down from the planer when it is stationary. Use the intended grips and rails. Always use the three-point grip (both feet and one hand, or one foot and both hands) when mounting or dismounting from the machine. Never jump down from the machine.
6. Drive carefully on sharp bends.
7. Avoid driving across slopes. Drive straight up or straight down the slope.
8. Make sure that the underlying surface is sufficiently stable.
9. Make sure that there are no obstacles in the direction of travel, on the ground, in front of or behind the planer, or overhead.
10. Drive particularly carefully on uneven ground.
11. Use the safety equipment provided.
12. Keep the planer clean. Immediately remove any dirt or grease from the operator platform. Keep all signs and labels clean and fully legible. Replace damaged plates and labels.
13. Safety measures before refueling:
  - Shut off the engine
  - Do not smoke
  - No naked flame in the vicinity of the machine
  - Ground the filling device nozzle to the tank to avoid sparks
14. Before carrying out repairs or service:
  - Place chocks at the wheels
15. Hearing protection is recommended if the noise level exceeds 80 dB(A). The noise level can vary depending on the equipment on the machine and the surface the machine is being used on.

16. Do not make any changes or modifications to the planer, this could put safety at risk. Changes may only be made following the written approval of Atlas Copco Dynapac.

17. Avoid using the planer before the hydraulic fluid has reached its normal working temperature. Braking distances can be longer than normal when the fluid is cold. See instructions in the STOP section.

18. For your own safety, always wear:

- a helmet
- work shoes with steel toecaps
- hearing protection
- breathing protection while milling, if necessary
- reflective clothing/high visibility vest
- work gloves
- eye protection, if necessary

19. Ensure sufficient ventilation (extraction of air by fan) where the engine is run poorly ventilated spaces.



### Safety - when operating



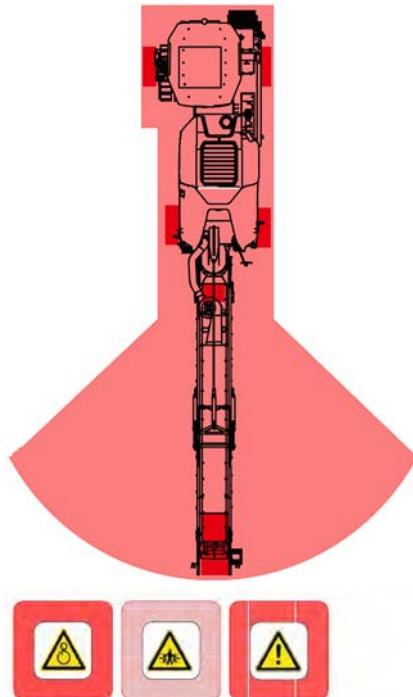
***Prevent persons from entering or remaining in the danger area, i.e. a distance of at least 7 m***

***(23 ft) in all directions from operating machines.***

***The operator may allow a person to remain in the danger area, but should then observe caution and operate the machine only when the person is visible or has given clear indications of where he or she is.***

### Risk zones on the machine

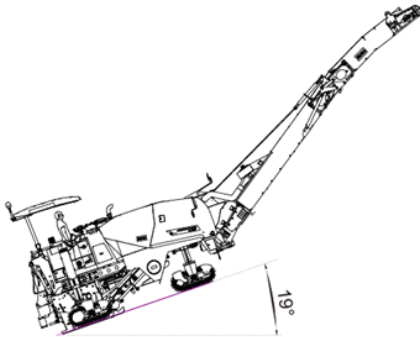
Within these areas there is a risk of being retracted or crushed as a result of rotating, feeding or moving parts.



***Fig. Risk zone***

**Slopes (Tip over risk)**

Permitted angle of inclination is measured with chassis leg folded out.



Maximum permitted angle of inclination 46% (25°)

Bear in mind that loose ground, and conveyor movements changes the center of gravity and can cause the machine to tip over on slopes lower than specified.



***Follow the stated recommendations for maximum permitted angle in the picture.***



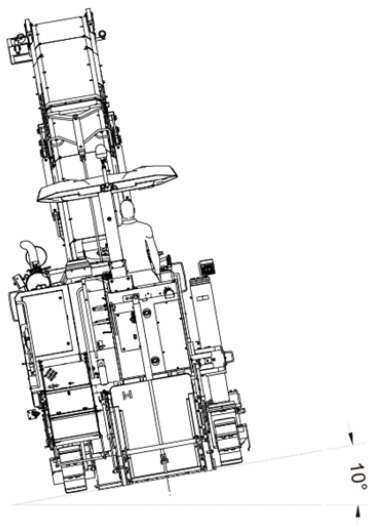
***Safety cannot be guaranteed when the max. permitted angle of inclination is exceeded.***



***Avoid driving in slopes with chassis leg folded in!***



Bear in mind that chassis leg folded in radically will change the machines stability and cause the machine to tip over on slopes lower than specified.



Maximum permitted angle of inclination 17% (10°)

***Fig. Operating on slopes***



***Where possible, avoid driving across slopes. Drive instead straight up and down sloping ground.***

## Safety – General instructions

---

### Safety (Optional)

#### Conveyor



***The machine must not be transported with material on the conveyor. The weight for the conveyor is specified on the unit rating plate. This weight is not included in the machine weight specified on the machine plate.***



***Fig. Conveyor***



***The operator must make sure that nobody is in the working area while the machine is in use.***



***Risk of body and crush injuries. The conveyor has rotating parts.***



***Risk of being retracted. Rotating conveyor.***



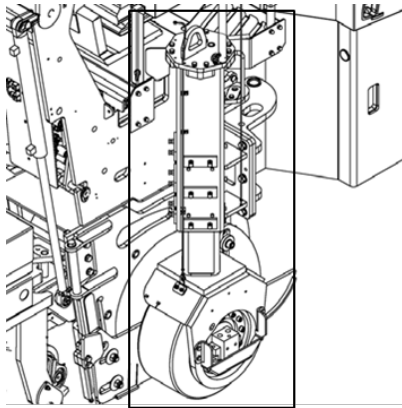
The conveyor must be returned to its transport position after it has been used.



The overall length of the machine is changed when the conveyor is fitted.

## Safety – General instructions

### Hydraulic chassis leg



**Fig. Hydraulic chassis leg**  
**Extended position**



*The operator must make sure that nobody is in the working area while the machine is in use.*



*The hydraulic chassis leg can be folded in, causing a risk of a crush injury.*



The chassis leg must be returned to the transport position (extended position) after use.

### Roof (Option)



**Fig. Roof**



*Risk of squeeze and crush injury.*