

PRODUCT SALES GUIDE

9027F ZTS



F-SERIES

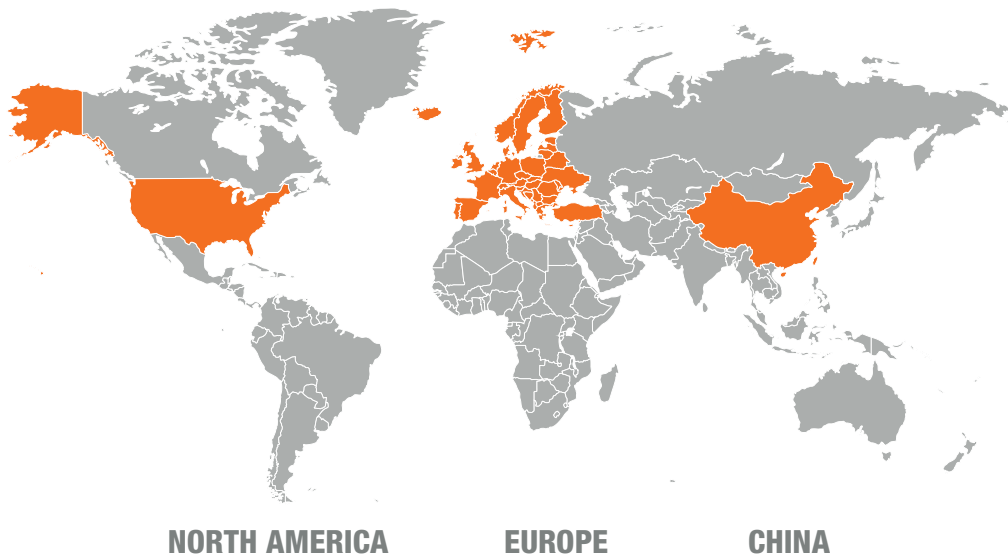
puts the operator at the **HEART** of the machine, **EASY** to operate,
with the ultimate in **CONTROL, COMFORT, PRODUCTIVITY & SAFETY**

TOUGH WORLD. TOUGH EQUIPMENT.

F-SERIES PRODUCT DEFINITION & DESIGN PROCESS

R&D & product management visited markets to research & collect customer requirements

Voice of the Customer



Product Definition



Customer-inspired designs enhance: **PRODUCTIVITY, COMFORT, MAINTENANCE & SAFETY.**

Liugong excavators strictly follow the LiuGong Development Processes to meet customer requirements for performance, comfort, safety, durability, reliability and cost targets.

**1 NEW
MINI**

**10 GREAT
FEATURES**



1. Spacious operator environment
2. Load sensing hydraulics for precise feel, & smooth control to excavate around utilities
3. Yanmar engine with auto-idle, low emissions and low noise
4. Zero tail swing, compact by design
5. Dig & Go, easy to trailer
6. 2 Speed tracking with auto kickdown
7. Boom & dozer cylinder guards
8. Go from backhoe to excavator style controls
9. Variable flow proportional auxiliary hydraulics
10. Swing boom & 360 deg rotation, dig in tight spaces

PRODUCT WALK AROUND



The ROPS certified cabin provide excellent visibility and a significant space for the operator in the class of machine. The ergonomic design of components and the layout makes operating the 9027F easy with simple, robust controls suitable for any application or worksite

Dual way proportional control high flow is standard with options for rotation circuit and quick hitch pipework. The Aux 1 and Aux 2 lines both come with adjustable flow control and flow lock functions to make using any attachment easy and comfortable for the operator.

With cast boom ends, a large 1.267L engine and high tear out forces, the 9027F has big machine performance in a zero- tail design. The load sensing hydraulic system provide smooth and powerful operation that really boosts productivity.

The zero-tail swing design allow the machine to work in tighter spaces and protect the tail of the excavator from damage. The dozer blade geometry is designed to meet the bucket allowing easy clearing up of material.

Daily maintenance is simple with fully opening large access panels. The 3-cylinder Yanmar engine meets the latest Stage V emissions regulations for Europe.

FLEXIBLE CONTROL

- Load-sensing hydraulic system for precise and smooth operation
- Electro proportional joystick with adjustable maximum oil flow on auxiliary circuit allows precise control of attachments
- Excellent grading performance

ENERGY EFFICIENT

- Low-noise and low-emission Yanmar engine with auto-idle function for energy efficiency
- Perfect matching hydraulic system with engine to lower energy consumption
- Lower fuel consumption than the benchmark; greater work efficiency than the benchmark up to 10%

THE KEY DRIVERS

Fuel Efficiency
Controllability
Convenience
Multi-Function

- Equipped with double actin auxiliary circuits, in which the pressure and flow are variable and optional rotation circuit for more attachments usage
- Optional hydraulic quick coupler circuit is applicable with different quick couplers
- Selectable steel tracks and rubber tracks for different tough conditions
- Touchable design of the blade and the bucket makes it easy to sweep away materials

GREATER VERSATILITY

- Compact design with zero tail-swing, as well as boom swing makes it possible to dig in tight environments
- Ergonomic design is applied in the spacious cab and easy operation
- Adjustable armrest for different operators
- Wide opening design of rear and right cover gives easy access to the daily maintenance for components

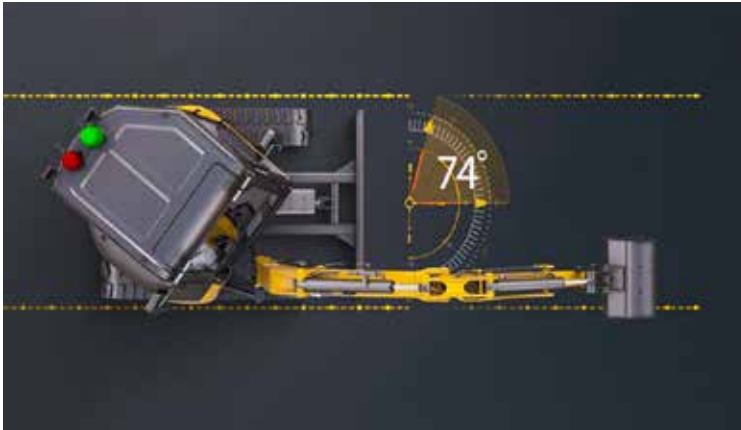
CONVENIENT DESIGN

STANDARD SPEC EUROPE

FEATURE	DETAIL
Heater	Cabin models only
Enclosed cabin with TOPS (ISO 12117) and ROPS (ISO 3471)	
Mechanical suspension seat with 2" red retractable seat belt	
Dual way auxiliary with proportional joystick	AUX 1
AM/FM Radio with MP3 audio input	Cabin models only
Load holding valves on the boom and arm cylinders	
Long dozer blade	
Track shoes	300 mm rubber track
Working lights: 1 on boom, 1 on cabin	LED
Standard Arm	1300 mm
Two speed travel with auto shift	
Travel Alarm	
Secondary electrical shut off switch (isolator)	
Automatic idle	
Rotating beacon electrical circuit	

OPTIONS

FEATURE	DETAIL
Attachment rotation lines with proportional joystick	AUX 2
Alternative Track shoes	3 option
Quick coupler lines	Hydraulic
Shorter dipper	1210 mm
Additional counterweight	+75 kg
Additional work light	Cab left
Additional work light	Cab right
Additional work light	Cab 4 front/2 rear
Canopy	No heater
Front guard	Bolt-on (cab only)
Fire extinguisher	
Greaser gun holder	



FEATURE

Dozer Float

The dozer is able to float over ground in reverse travel. (Option)

BENEFIT

Allows the blade to gradually level material to quickly and easily smooth a surface, making levelling easier for the operator.



FEATURE

Long Dozer

Long arms for the dozer blade reduce the gap to the bucket.

BENEFIT

Allows easy cleaning away of materials as the bucket can reach the blade to scoop up materials leaving a clean finish.



FEATURE

Track Options

2 different track options available. Rubber belt tracks come as standard.

BENEFIT

Rubber tracks protect the working surface below the machines reducing the potential for damage. Steel tracks provide more traction is softer.

FEATURES & BENEFITS



- | | |
|----------------------------------|------------------------------------|
| 1 Travel speed | 14 Hydraulic oil temperature alarm |
| 2 Preheating function | 15 Automatic idle speed switch |
| 3 Automatic idle speed function | 16 Mute switch |
| 4 Fuel level alarm | 17 Travel alarm switch |
| 5 Attachments flow adjustable | 18 Lifting function switch |
| 6 Collant temperature alarm | 19 Option |
| 7 Turn off travel alarm function | 20 Function switch F2 |
| 8 Engine oil pressure alarm | 21 Maintenance switch |
| 9 Maintenance | 22 Function switch F1 |
| 10 Charging indicator | 23 Coolant temperature indicator |
| 11 Quick change function | 24 Lcd screen |
| 12 Air filter alarm | 25 Fuel level indicator |
| 13 Lifting function | |

FEATURE

Informative Display

Informative display with the machine's status and function lights.

BENEFIT

The display is conveniently located within each reach of the operator. It provides key information on the status of the machine, the active functions and maintenance alarms.

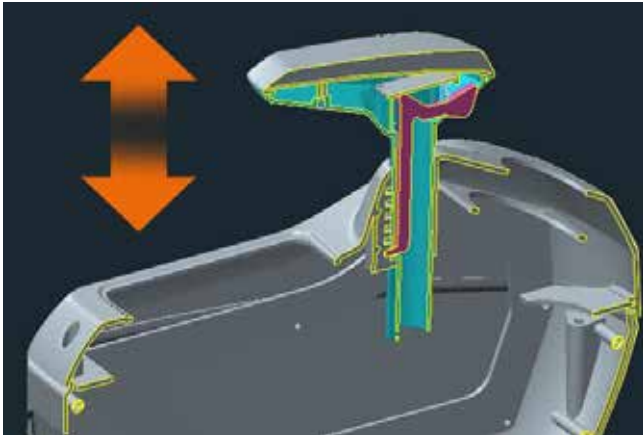


FEATURE

Comfortable Suspension Seat

A comfortable mechanical suspension seat with optional red seat belt.

The suspended seat softens the ride for the operator whilst tracking, operating and idling. An optional red seat belt allows clear view of operators wearing the belt to support awareness of safety on site.



FEATURE

Adjustable Arm Rest

A comfortable mechanical suspension seat with optional red seat belt.

BENEFIT

The suspended seat softens the ride for the operator whilst tracking, operating and idling. An optional red seat belt allows clear view of operators wearing the belt to support awareness of safety on site.



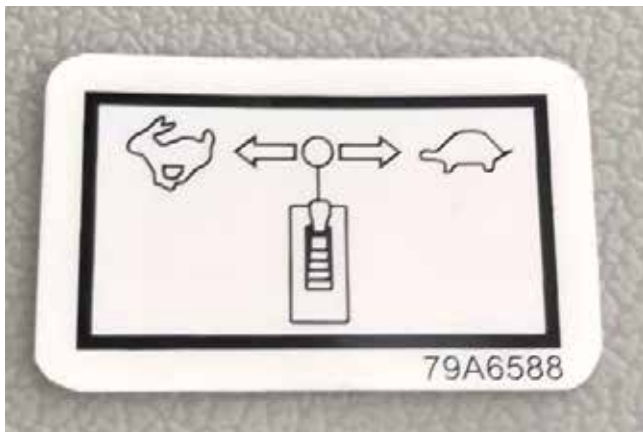
FEATURE

Easy to reach cupholder

Cup holder positioned at the front of the cabin by the RH joystick.

BENEFIT

Located conveniently at the front of the cab for easy reach to the operator.



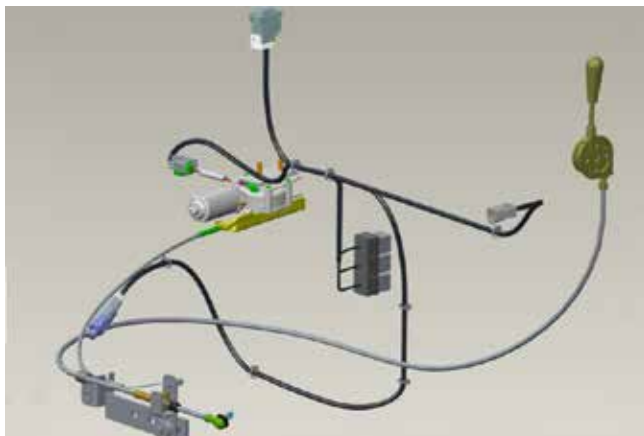
FEATURE

Travel Speed & Control

2 speed travel switch on the joystick with automatic kick down.

BENEFIT

Easy control of travel speed when dozing. Autokick automatically drops the gear down provides increased traction when up against resistance, helping the machine to continue tracking in tough conditions, thus increasing productivity.



FEATURE

Auto Idle

The auto idle function listens to the pressure sensor on the pump for when it becomes inactive.

BENEFIT

Reduce fuel consumption by running at low engine rpm when not in use.

Reduce noise emissions on the work site, improving safety around the machine.



FEATURE

Aux 1

The High flow, 2-way, attachment line is fitted as standard with proportional control.

BENEFIT

Easy to use controls for running attachments that require 1 flow input in either 1 direction such as a breaker or 2 directions such as tilting bucket.



FEATURE

Aux 2

An optional second auxiliary line (rotation circuit) is available with proportional control joystick. (Option)

BENEFIT

Additional attachment flow line to run multiple flow inputs such as a selector grab rotation circuit or 4-line tilt rotator.



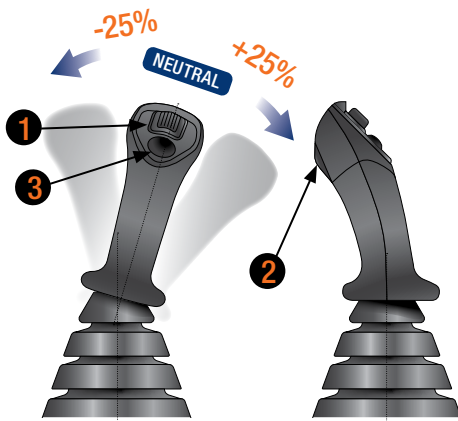
FEATURE

Aux Flow Control

The oil flow to the Aux 1 and Aux 2 lines can be controlled reduced via 2 separate dials below the display.

BENEFIT

Easy and convenient access for the operator to reduce the flow to an attachment depending on the input requirements providing excellent and safe attachment control.



FEATURE

Constant Attachment Flow

Aux 1 and 2 flows can be locked to a constant flow by pressing the flow lock button on the back of the joystick whilst the auxiliary service is active.

BENEFIT

By locking the flow, this enable the operator to release the thumb input and reduce hand fatigue when running attachments such as mowers/ flails / rock wheels over a long time period.



FEATURE

Dozer Float

The dozer is able to float over ground in reverse travel. (Option)

BENEFIT

Allows the blade to gradually level material to quickly and easily smooth a surface, making levelling easier for the operator.



FEATURE

Dozer Float

Hose burst check valves.

BENEFIT

Protection for services falling in the result of a hose bursting on boom, arm and dozer blade services.



FEATURE

Dozer Float

Hydraulic Quick Coupler Lines.

BENEFIT

Easily and safely change the attachments from the comfort of the cabin.



FEATURE

Canopy or Cabin

Canopy and cab options, TOPS & ROPS compliant.

BENEFIT

Canopy is great for low cost/damage free rental market.
Cab great for owner operators/ contractors.



FEATURE

Easy Refueling

Activate the high-level alarm when refueling.

BENEFIT

Avoid spilling fuel when filling the tank.



FEATURE

Easy Maintenance

Large, wide opening access side covers and rear covers.

BENEFIT

Easy inspection and maintenance of the engine, main pump and radiator for daily maintenance and service intervals.



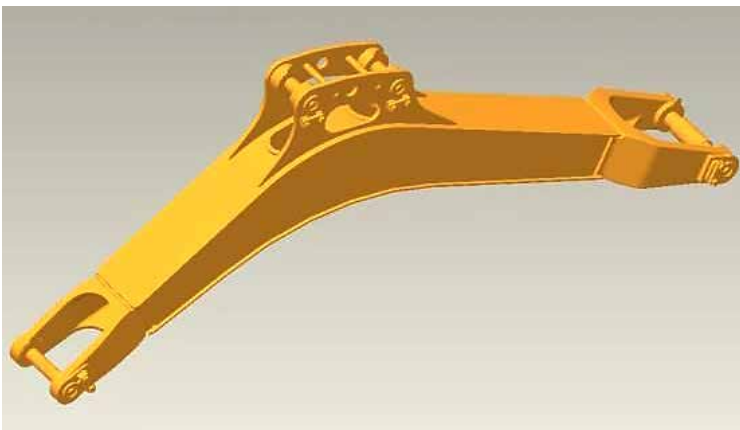
FEATURE

Protected Components

The hydraulic hoses are arranged in the interior cavity of the boom.

BENEFIT

Neat layout of hoses protected inside the robust cast structural components, protect the hoses from damage.



FEATURE

Cast Boom Ends

Cast boom ends designed in FEA (Finite Element Analysis) and verified by arduous reliability tests.

BENEFIT

Cast parts prevent componentry faults in high stress areas improve strength and integrity of the whole fabrication.

FEATURE

Competitor Comparison

Feature	LiuGong 9027F	VOLVO ECR 25 D Tier 4	HYUNDAI R 25 Z-9AK Tier 4	HITACHI ZX 26 U-6	KOMATSU PC-26 MR-3	DOOSAN DX 27 Z	KOBELCO SK 25 SR-6 Tier 4	JCB 8025 ZTS Tier 3	CATERPILLAR 302.7 D CR Tier 4	WACKER NEUSON EZ26 Tier 4	KUBOTA U27-4
CAB											
Mass	kg	2490 /5489.5/	2580 /5690/	2720 /5996.5/	2710 /5974.5/	2705 /5963.4/	2670 /5886.3/	2806 /6185/	2670 /5886/	2571 /5668/	2665
Power	kW	15.6 /21.2/	17.3 /23.2/	14.5 /19.4/	15.5 /20.7/	15.4	15.2 /20.3/	20 /26.8/	15.2 /20.7/	15.2	15.6
Torque	mM	71.4 /52.6/	81.4 /60.17/	64.1 /47.2/	66.7 /49.1/	71.2 /52.5/	66.2 /48.8/	96 /70.8/			71.2 /52.5/
Engine Capacity	Litres	1.123 /68.5/	1.261 /76.9/	1.115 /68/	1.115 /68/	1.123 /68.53/	1.115 /68/	1.469 /91/	1.115 /68/	1.116 /68.1/	1.123 /68.53/
Fuel Tank	Litres	28 /7.3/	30 /7.9/	31.3 /8.2/	28 /7.3/	34.4 /9/	30.5 /8/	40 /10.6/	35.2 /9.3/	36 /9.5/	33
Hydraulic Tank	Litres	23 /6/	27 /7.1/	24.1 /6.3/		10.2 /2.6/	25 /6.6/	45 /11.9/	26.5 /7/	26.5 /7/	22
Pump Flow	L/min	58 /15.3/	55.2 /14.5/	60 /15.8/	53.9 /14.2/	87 /22.9/	60 /15.8/	102 /26.9/	89.4 /23.6/	61.6 /16.2/	56.4
Tractive Effort	kN	19.84 /4460.2/	23.5 /5283/	20.1 /4518.6/	26 /5845/	29.02 /6523.9/	24.4 /5485.3/	24.6 /5530/			
Bucket Tearout	kN	22.33 /5019.9/	21.1 /4740/	22.3 /5013.2/	22 /4945.7/	23.7 /5327.9/	24.4 /5507.8/	24 /5395/	22.5 /5058.2/	22.5 /5058.2/	21
Arm Tearout	kN	17.76 /3992.6/	14.6 /3280/	14.5 /3259.7/	14 /3147.3/	16.2 /3641.9/	14.7 /3304.6/	15 /3372/	15.4 /3462/	15.3 /3439.5/	12.3
Travel Hi	km/h	4.5 /2.7/	4.3 /2.7/	4.5 /2.7/	4 /2.4/	4.3 /2.6/	4.5 /2.7/	4.3 /2.7/	3.8 /2.36/	3.8 /2.3/	4.5
Travel Lo	km/h	2.4 /1.4/	2.4 /1.6/	2.9 /1.8/	2.5 /1.5/	2.5 /1.5/	2.8 /1.7/	2.4 /1.5/	2.1 /1.3/		2.5
Swing Speed	rpm	9.4	9.1	9.1	8.9	9.3	10	9.6		10	9.8
Vertial Wall Dig Depth	mm	1832 /6ft/	1460 /4ft 9in/	2220 /7ft 3in/	1540 /5ft/	1567 /5ft 1in/	2240 /7ft 4in/	1542 /5ft/	1962 /6ft 5in/	1962 /6ft 5in/	2580
Ground Level Reach	mm	4313 /14" 1" /	4380 /14ft 3in/	4570 /14ft 11in/	4280 /14ft/	4518 /14ft 9in/	4400 /14ft 5in/	4691 /15ft 4in/	4481 /14ft 8in/	4481 /14ft 8in/	4630
Standard Dipper	mm	1050 /3ft 5in/	1120 /3ft 8in/	1300 /4ft 3in/	1115 /3ft 7in/	1200 /3ft 11in/		1100 /3ft 7in/			1360
Noise Incab	kg	78	75	78		77		77		79	
Noise External	dB	93	94	93		93		95		93	
Stability Front Max Reach	kg	699 /1541/*	680 /1500/*	770 /1697.5/*	600 /1322.7/*	684 /1507.9/*	360 /793.6/*	735 /1620.3/*	510 /1124/*	517 /1139.7/*	430
Side Max Reach	kg	290 /617.2/	260 /570/	250 /551.1/	290 /639.3/	298 /656.9/	300 /661.3/	207 /456.3/	320 /705/		250

FEATURE

Trusted Suppliers



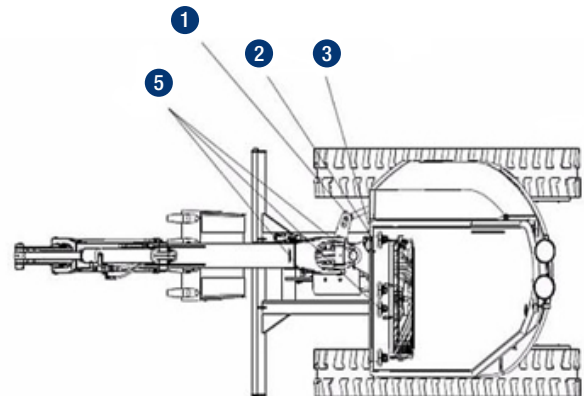
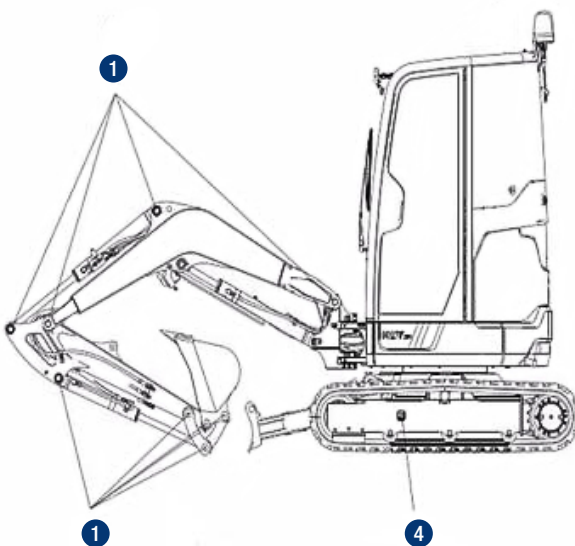
Engine	Yanmar
Pump	Inline
Valves	Inline
Track Motors	Nachi
Slew Motor	Eaton
Tracks	Shantui
Track Gear	Chuandi
Joysticks	Rexroth
Travel Pedals	Rexroth
Cylinders	Hengli

FEATURE

Greasing Intervals

Component	Q'ty	Lubrication Intervals (hours)						
		8	50	100	250	500	1000	2000
1. Work implement bushing	As required	*						
2. Swing bearing	As required							
3. Swing bearing gear	As required							
4. Track tensioner	As required	When required						

Note: * Lubricate every 8 hours at the first 100 hours.
Shorten the maintenance interval when operating the machine in water or mud or a bad environment.



FEATURE
Service Intervals

Display code	Maintenance contents	Service interval (h)
b-001	Check engine oil level	8
b-002	Check coolant level	
b-003	Check the hydraulic oil level	
b-004	Water separator drainage	
b-005	Lubricating the dozer pin and the implement pin	50
b-006	Lubricating the slewing ring gear	
b-007	Fuel tank drain water	
b-008	Check the tightness of the track and adjust it as required	100
b-009	Check the tightness of fan belt and adjust it as required	
b-010	Check the gear oil level of traveling reducer	250
b-011	Change engine oil	
b-012	Replace engine oil filter element	
b-013	Lubricating the slewing bearing ball	
b-014	Replace the diesel filter element	500
b-015	Replace the air filter element	
b-016	Check the gear oil level of traveling reducer	1000
b-017	Replace the hydraulic oil tank return filter element	
b-018	Change hydraulic oil	2000
b-019	Replace the hydraulic oil suction filter element	
b-020	Change coolant	

FEATURE
Service Speed

Function	Unit	Measurement
Max. travel speed, fwd - (kph)	km/h	4.5
Low. travel speed, fwd - (kph)	km/h	2.7
Travel Motors - 10 Rotations in Hare	s	6±1.5
Travel Motors - 10 Rotations in Tortoise	s	10±2
Swing speed	rpm	10
Swing - 5 Rotations (Min. radius)	s	30±2
Boom up	s	3.0±0.5
Boom down	s	/
Arm (Stick) in	s	2.80±0.5
Arm (Stick) out	s	2.7±0.5
Bucket in	s	1.8±0.5
Bucket out	s	1.8±0.5





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