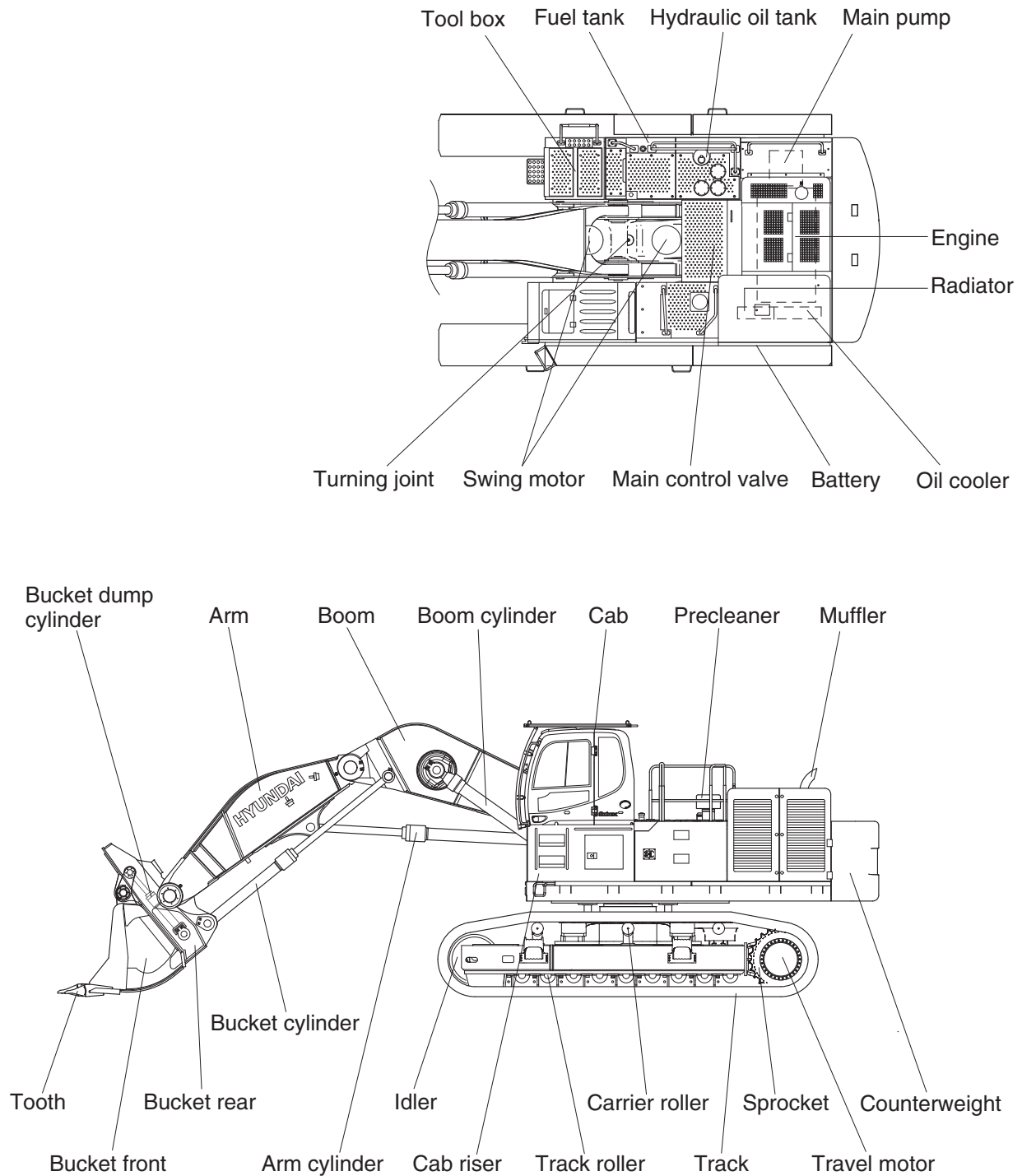


SPECIFICATIONS

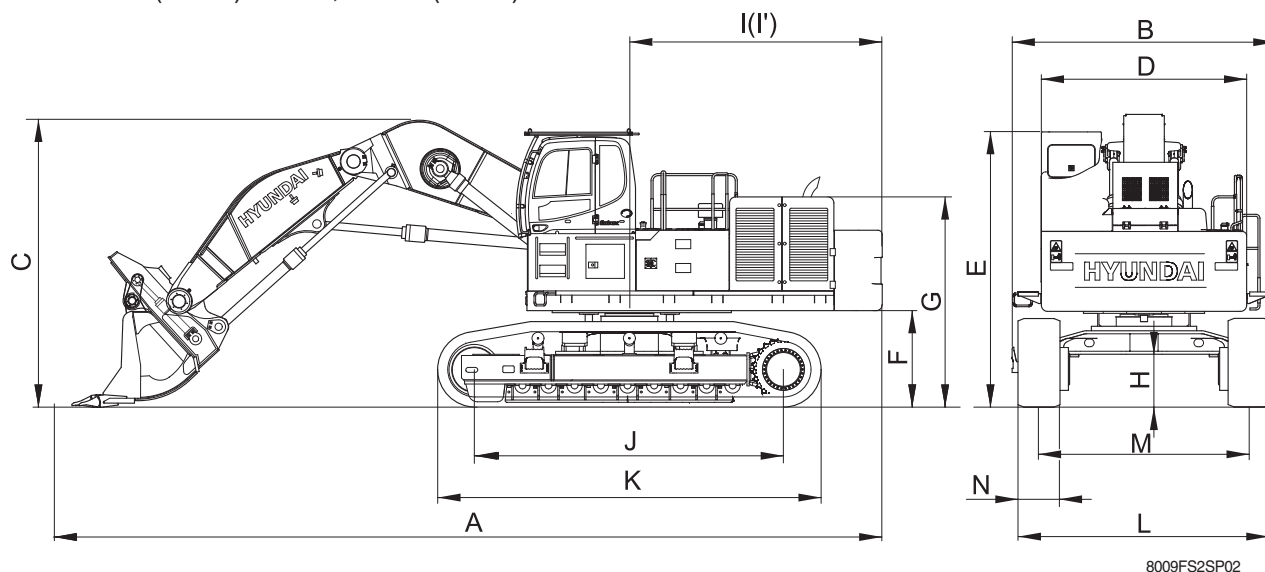
1. MAJOR COMPONENT



8009FS2SP01

2. SPECIFICATIONS

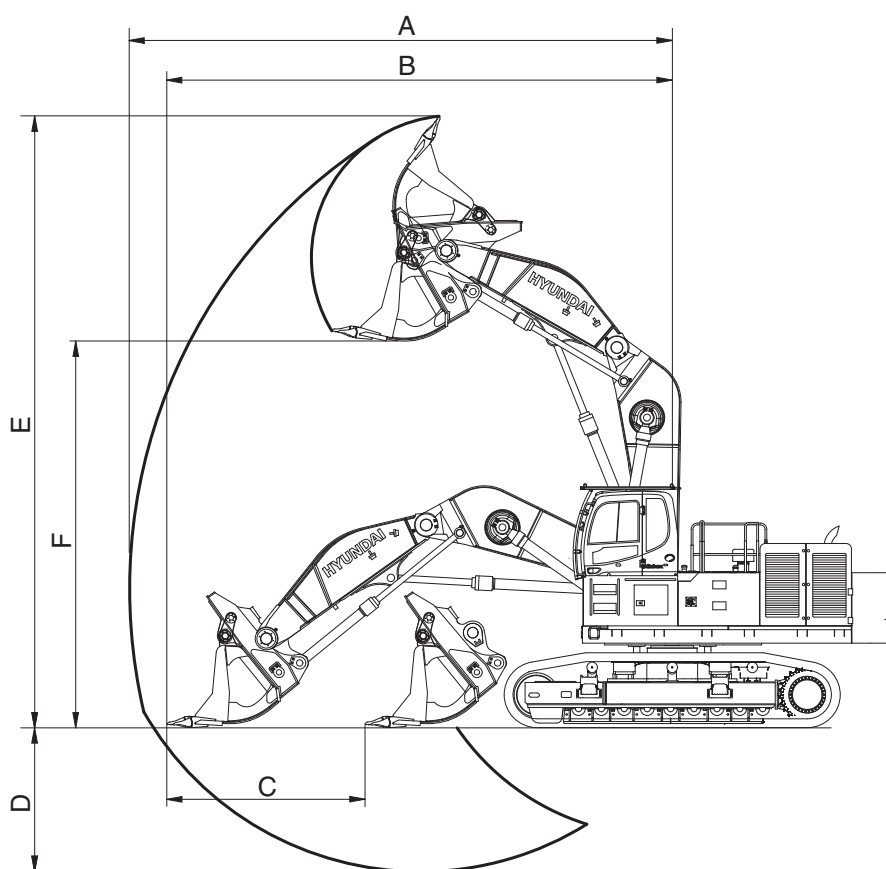
- 4.60 m (15' 1") BOOM, 3.50 m (11' 6") ARM



Description		Unit	Specification
Operating weight		kg (lb)	87800 (193560)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	4.50 (5.89)
Overall length	A	mm (ft-in)	14120 (46' 4")
Overall width, with 700 mm shoe (Transport position/Working position)	B		3675/4395 (12' 1 1/4"/14' 5")
Overall height	C		5100 (16' 9")
Superstructure width	D		3420 (11' 3")
Overall height of cab	E		4820 (15' 10")
Ground clearance of counterweight	F		1595 (5' 3")
Engine cover height	G		3460 (11' 4")
Minimum ground clearance	H		880 (2' 11")
Rear-end distance	I		4200 (13' 9")
Rear-end swing radius	I'		4315 (14' 2")
Distance between tumblers	J		5030 (16' 6")
Undercarriage length	K		6335 (20' 9")
Undercarriage width (Transport position/Working position)	L		3480/4200 (11' 5"/13' 9")
Track gauge (Transport position/Working position)	M		2780/3500 (9' 1 1/4"/11' 6")
Track shoe width, standard	N		700 (28")
Travel speed (Low/high)		km/hr (mph)	2.8/4.5 (1.7/2.8)
Swing speed		rpm	6.5
Gradeability		Degree (%)	35 (70)
Ground pressure (700 mm shoe)		kgf/cm ² (psi)	1.14 (16.21)
Max traction force		kg (lb)	59300 (130730)

3. WORKING RANGE

- 4.60 m (15' 1") BOOM



8009FS2SP03

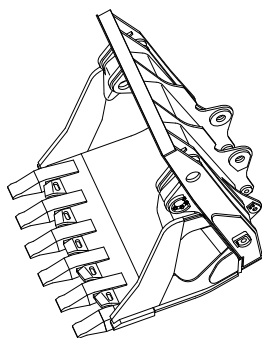
Description		3.50 m (11' 6") Arm
Max digging reach	A	10190 mm (33' 5")
Max digging reach on ground	B	9730 mm (31' 11")
Max level crowd distance	C	3730 mm (12' 3")
Max digging depth	D	2710 mm (8' 11")
Max digging height	E	11510 mm (37' 9")
Max dumping height	F	7270 mm (23' 10")

4. WEIGHT

Item	kg	lb
Upperstructure assembly	40040	88270
Main frame weld assembly	7620	16800
Engine assembly	1450	3200
Main pump assembly	300	660
Main control valve assembly	420	930
Swing motor assembly	360	790
Hydraulic oil tank assembly	1860	4100
Fuel tank assembly	1825	4020
Counterweight	12500	27560
Cab assembly	550	1210
Lower chassis assembly	27300	60190
Lower track frame assy	11960	26370
Swing bearing	1400	3090
Travel motor assembly	935	2060
Turning joint	75	165
Track recoil spring and tension body	840	1850
Idler	510	1120
Sprocket	210	460
Carrier roller	80	180
Track roller	190	420
Track-chain assembly (700 mm double grouser shoe)	4790	10560
Front attachment assembly (4.60 m boom, 3.50 m arm, 4.50m³ SAE heaped bucket)	20460	45110
4.60 m boom assembly	6640	14640
3.50 m arm assembly	4020	8860
4.50 m³ SAE heaped bucket	4190	9240
Boom cylinder assembly	1300	2870
Arm cylinder assembly	720	1590
Bucket cylinder assembly	1280	2820
Dump cylinder assembly	220	490

5. BUCKET SELECTION GUIDE

1) GENERAL BUCKET



4.50 m³ SAE heaped bucket

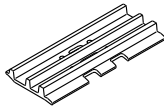
Capacity		Width		Weight	Recommendation
SAE heaped	CECE heaped	Without side cutter	With side cutter		4.60 m (15' 1") boom
					3.50m (11' 6") arm
4.50 m³ (5.89 yd³)	3.92 m³ (5.13 yd³)	2520 mm (8' 3")	-	7660 kg (16890 lb)	Applicable for materials with density of 1600kgf/m³ (2700 lbf/yd³) or less.

6. UNDERCARRIAGE

1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

2) TYPES OF SHOES

Model	Shapes		Double grouser		
					
R850LC-9 FS	Shoe width	mm (in)	700 (28)	800 (32)	900 (36)
	Operating weight	kg (lb)	87800 (193560)	88670 (195480)	89550 (197420)
	Ground pressure	kgf/cm ² (psi)	1.14 (16.21)	1.01 (14.36)	0.90 (12.80)
	Overall width	mm (ft-in)	4200 (13' 9")	4300 (14' 1")	4400 (14' 5")

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	3 EA
Track rollers	9 EA
Track shoes	51 EA

4) SELECTION OF TRACK SHOE

Suitable track shoes should be selected according to operating conditions.

Method of selecting shoes

Confirm the category from the list of applications in **table 2**, then use **table 1** to select the shoe.

Wide shoes (Categories B and C) have limitations on applications. Before using wide shoes, check the precautions, then investigate and study the operating conditions to confirm if these shoes are suitable.

Select the narrowest shoe possible to meet the required flotation and ground pressure. Application of wider shoes than recommendations will cause unexpected problem such as bending of shoes, crack of link, breakage of pin, loosening of shoe bolts and the other various problems.

※ **Table 1**

Track shoe	Specification	Category
700mm double grouser	Standard	A
800mm double grouser	Option	B
900mm double grouser	Option	C

※ **Table 2**

Category	Applications	Precautions
A	Rocky ground, river beds, normal soil	<ul style="list-style-type: none"> • Travel at low speed on rough ground with large obstacles such as boulders or fallen trees
B	Normal soil, soft ground	<ul style="list-style-type: none"> • These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees • Travel at high speed only on flat ground • Travel slowly at low speed if it is impossible to avoid going over obstacles
C	Extremely soft ground (Swampy ground)	<ul style="list-style-type: none"> • Use the shoes only in the conditions that the machine sinks and it is impossible to use the shoes of category A or B • These shoes cannot be used on rough ground with large obstacles such as boulders or fallen trees • Travel at high speed only on flat ground • Travel slowly at low speed if it is impossible to avoid going over obstacles

7. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSX 15
Type	4-cycle turbocharged charge air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	137 × 169 mm (5.39" × 6.65")
Piston displacement	15000 cc (915 cu in)
Compression ratio	17 : 1
Rated gross horse power (SAE J1995)	510 ps at 1800 rpm (380 kW at 1800 rpm)
Maximum torque	241 kgf · m (1743 lbf · ft) at 1400rpm
Engine oil quantity	43.5 l (11.5U.S. gal)
Dry weight	1451 kg (3200 lb)
High idling speed	1800 ± 50rpm
Low idling speed	800 ± 50rpm
Rated fuel consumption	165.5g/Hp · hr at 1800rpm
Starting motor	Prestolite MS7 (24V-9.0 kW)
Alternator	Delco Remy 24V-100A
Battery	4 × 12V × 200Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 280 cc/rev
Maximum pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5120 psi)]
Rated oil flow	2 × 504 l /min (133.1 U.S. gpm/110.9U.K. gpm)
Rated speed	1800 rpm

[] : Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15 cc/rev
Maximum pressure	40 kgf/cm ² (569 psi)
Rated oil flow	27 l /min (7.1 U.S. gpm/5.9 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5120 psi)]
Overload relief valve pressure	380 kgf/cm ² (5400 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	250 cc/rev
Relief pressure	290 kgf/cm ² (4120 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	107 kgf · m (774 lbf · ft)
Brake release pressure	30~50 kgf/cm ² (427~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	350 kgf/cm ² (4980 psi)
Capacity (max / min)	304.1/205.2 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	18 kgf/cm ² (256 psi)
Braking torque	114 kgf · m (825 lbf · ft)

7) REMOTE CONTROL VALVE

Item		Specification
Type		Pressure reducing type
Operating pressure	Minimum	6.5 kgf/cm ² (92 psi)
	Maximum	25 kgf/cm ² (360 psi)
Single operation stroke	Lever	61 mm (2.4 in)
	Pedal	123 mm (4.84 in)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 140 × ø 200 × 1415 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 150 × ø 215 × 1490 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 130 × ø 180 × 1250 mm
	Cushion	Extend and retract
Dump cylinder	Bore dia × Rod dia × Stroke	ø 120 × ø 160 × 400 mm
	Cushion	Extend only

※ Discoloration of cylinder rod can occur when the friction reduction additive of lubrication oil spreads on the rod surface.

※ Discoloration does not cause any harmful effect on the cylinder performance.

9) SHOE (Double grouser)

Item		Width	Ground pressure	Link quantity	Overall width
R850LC-9 FS	Standard	700 mm (28")	1.14 kgf/cm ² (16.21 psi)	51	4200 mm (13' 9")
	Option	800 mm (32")	1.01 kgf/cm ² (14.36 psi)	51	4300 mm (14' 1")
		900 mm (36")	0.90 kgf/cm ² (12.80 psi)	51	4400 mm (14' 5")

10) BUCKET

Item		Capacity		Tooth quantity	Without side cutter
		SAE heaped	CECE heaped		
R850LC-9 FS	Standard	4.50 m ³ (5.89 yd ³)	3.92 m ³ (5.13 yd ³)	6	2520 mm (8' 3")

8. RECOMMENDED OILS

Use only oils listed below. Do not mix different brand oil.

Please use HYUNDAI genuine oil and grease.

Service point	Kind of fluid	Capacity ℓ (U.S. gal)	Ambient temperature °C (°F)							
			-50 (-58)	-30 (-22)	-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)
Engine oil pan	Engine oil	43.5 (11.5)	★SAE 5W-40							
			SAE 30							
			SAE 10W							
			SAE 10W-30							
			SAE 15W-40							
Swing drive	Gear oil	6.0×2 (1.6×2)	★SAE 75W-90							
Final drive		25×2 (6.6×2)	SAE 80W-90							
Hydraulic tank	Hydraulic oil	Tank ; 450 (119) System ; 800 (210)	★ISO VG 15							
			ISO VG 32							
			ISO VG 46							
			ISO VG 68							
Fuel tank	Diesel fuel	940 (248)	★ASTM D975 NO.1							
			ASTM D975 NO.2							
Fitting (grease nipple)	Grease	As required	★NLGI NO.1							
			NLGI NO.2							
Radiator (reservoir tank)	Mixture of antifreeze and soft water★ ¹	56 (15)	Ethylene glycol base permanent type (50 : 50)							
			★Ethylene glycol base permanent type (60 : 40)							

SAE : Society of Automotive Engineers

API : American Petroleum Institute

ISO : International Organization for Standardization

NLGI : National Lubricating Grease Institute

ASTM : American Society of Testing and Material

★ : Cold region

Russia, CIS, Mongolia

★¹ : Soft water

City water or distilled water