SECTION 1 GENERAL

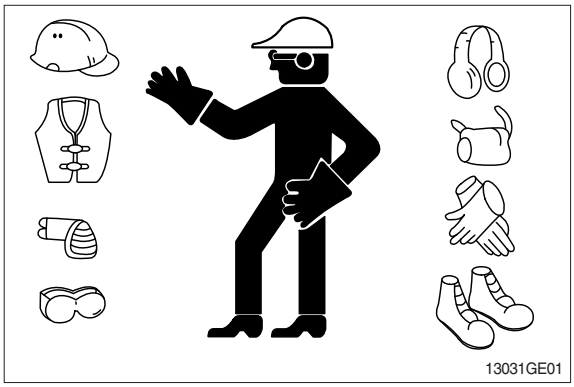
GROUP 1 SAFETY

FOLLOW SAFE PROCEDURE

Unsafe work practices are dangerous. Understand service procedure before doing work; Do not attempt shortcuts.

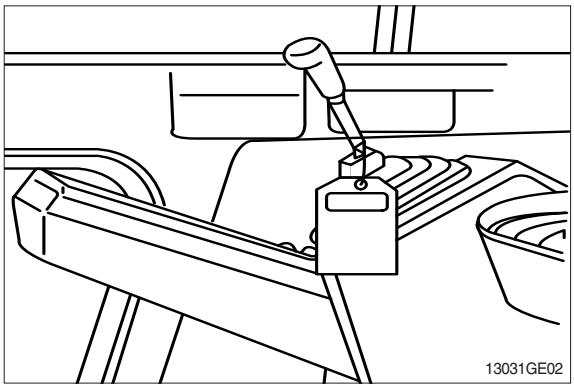
WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.



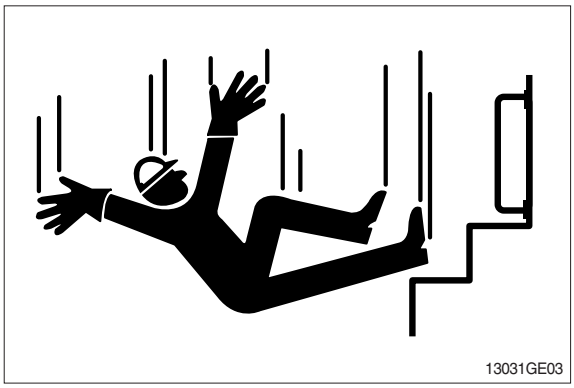
WARN OTHERS OF SERVICE WORK

Unexpected machine movement can cause serious injury.
Before performing any work on the excavator, attach a 「**Do Not Operate**」 tag on the right side control lever.



USE HANDHOLDS AND STEPS

Falling is one of the major causes of personal injury.
When you get on and off the machine, always maintain a three point contact with the steps and handrails and face the machine. Do not use any controls as handholds.
Never jump on or off the machine. Never mount or dismount a moving machine.
Be careful of slippery conditions on platforms, steps, and handrails when leaving the machine.

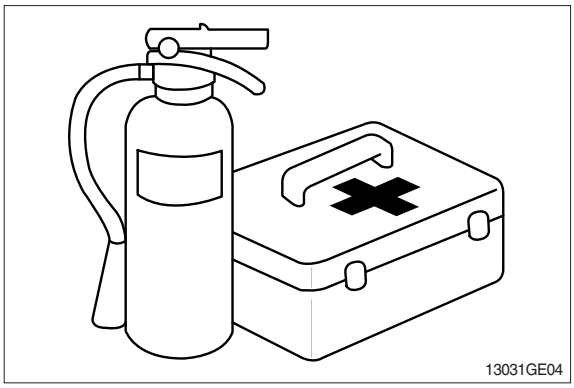


PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

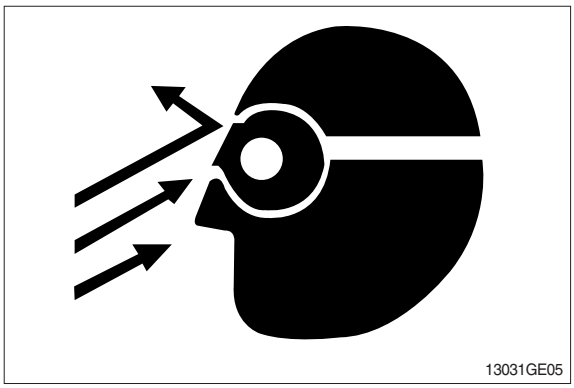
Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



PROTECT AGAINST FLYING DEBRIS

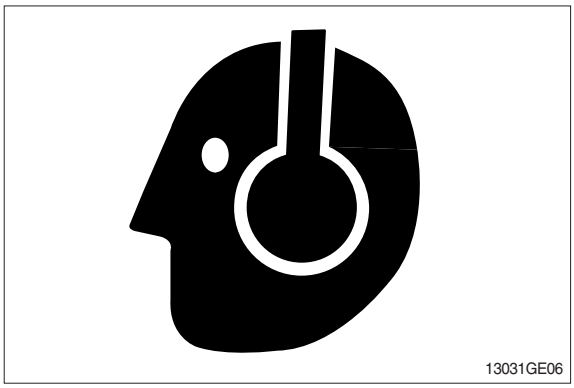
Guard against injury from flying pieces of metal or debris; Wear goggles or safety glasses.



PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

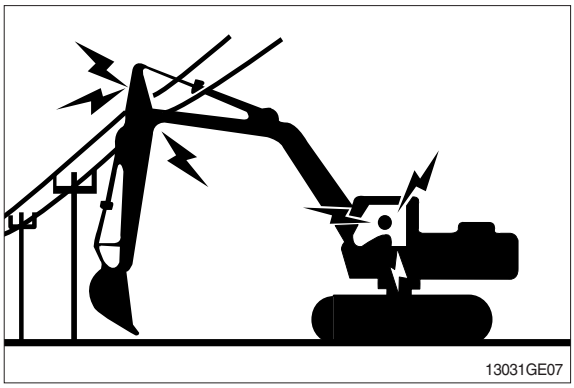
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



AVOID POWER LINES

Serious injury or death can result from contact with electric lines.

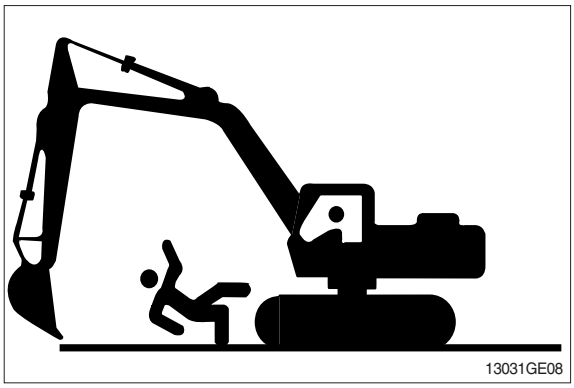
Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.



KEEP RIDERS OFF EXCAVATOR

Only allow the operator on the excavator. Keep riders off.

Riders on excavator are subject to injury such as being struck by foreign objects and being thrown off the excavator. Riders also obstruct the operator's view resulting in the excavator being operated in an unsafe manner.

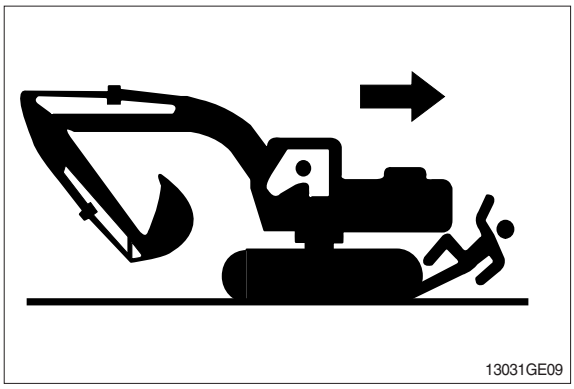

13031GE08

MOVE AND OPERATE MACHINE SAFELY

Bystanders can be run over. Know the location of bystanders before moving, swinging, or operating the machine.

Always keep the travel alarm in working condition. It warns people when the excavator starts to move.

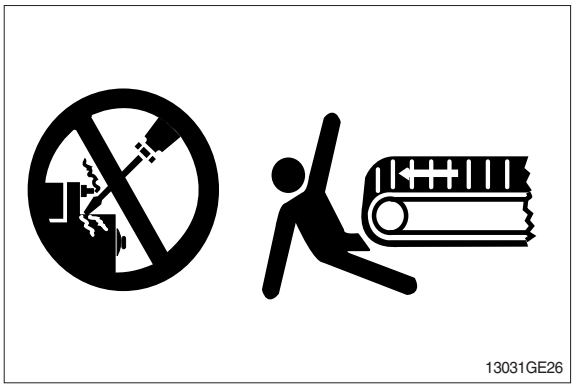
Use a signal person when moving, swinging, or operating the machine in congested areas. Coordinate hand signals before starting the excavator.


13031GE09

OPERATE ONLY FORM OPERATOR'S SEAT

Avoid possible injury machine damage. Do not start engine by shorting across starter terminals.

NEVER start engine while standing on ground. Start engine only from operator's seat.


13031GE26

PARK MACHINE SAFELY

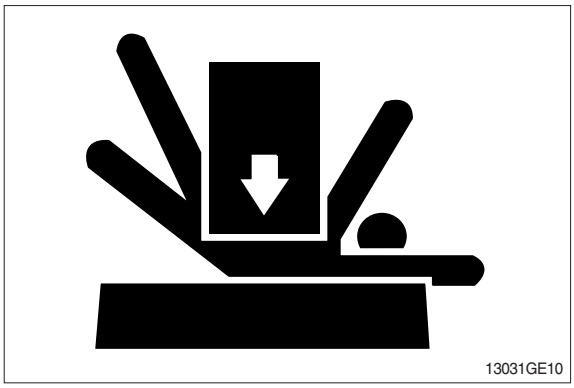
Before working on the machine:

- Park machine on a level surface.
- Lower bucket to the ground.
- Turn auto idle switch off.
- Run engine at 1/2 speed without load for 2 minutes.
- Turn key switch to OFF to stop engine. Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

SUPPORT MACHINE PROPERLY

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

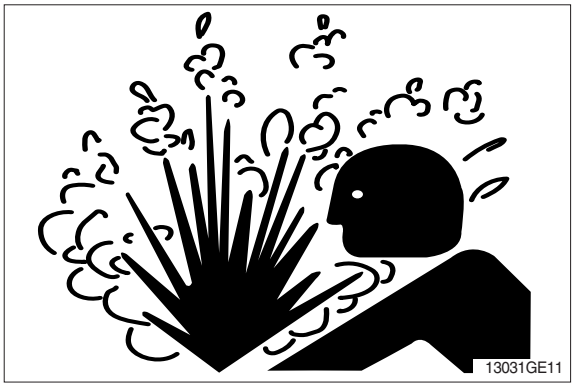
Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load.
Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.


13031GE10

SERVICE COOLING SYSTEM SAFELY

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands.


13031GE11

HANDLE FLUIDS SAFELY-AVOID FIRES

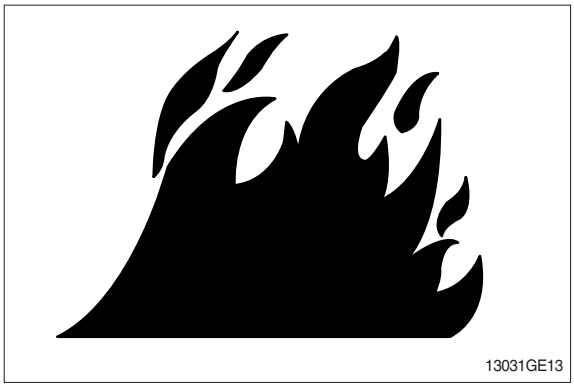
Handle fuel with care; It is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks. Always stop engine before refueling machine.
Fill fuel tank outdoors.


13031GE12

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

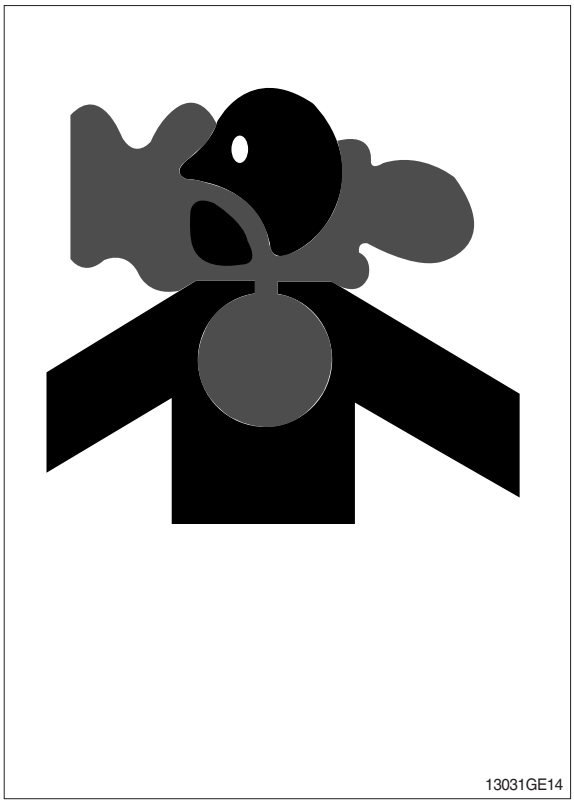
Do not store oily rags; They can ignite and burn spontaneously.


13031GE13

BEWARE OF EXHAUST FUMES

Prevent asphyxiation. Engine exhaust fumes can cause sickness or death.

If you must operate in a building, be positive there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring enough outside air into the area.


13031GE14

REMOVE PAINT BEFORE WELDING OR HEATING

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

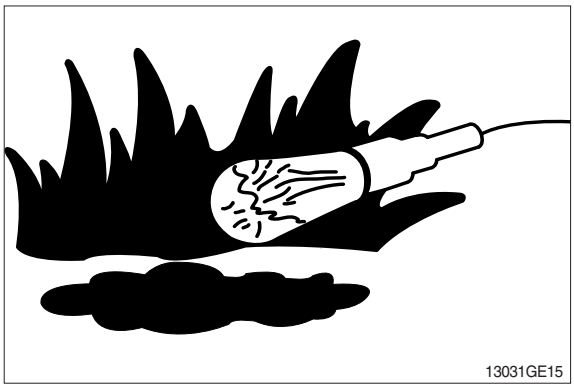
Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

Remove paint before welding or heating:

- If you sand or grind paint, avoid breathing the dust.
  Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

ILLUMINATE WORK AREA SAFELY

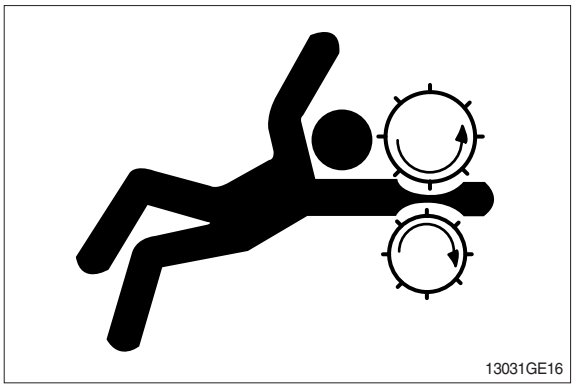
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.


13031GE15

SERVICE MACHINE SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

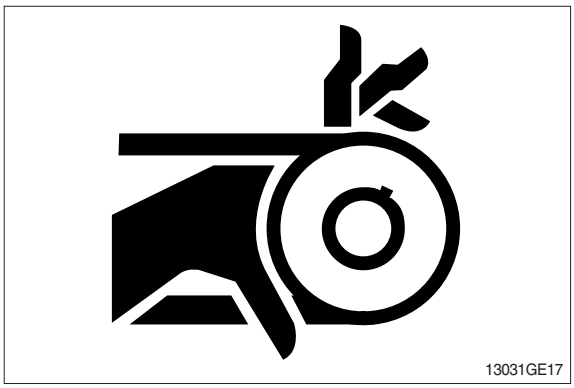
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



STAY CLEAR OF MOVING PARTS

Entanglements in moving parts can cause serious injury.

To prevent accidents, use care when working around rotating parts.



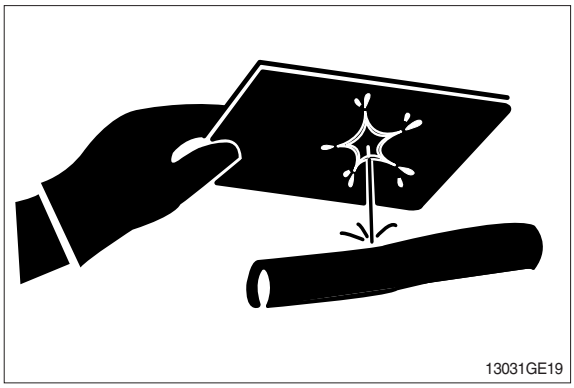
AVOID HIGH PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



AVOID HEATING NEAR PRESSURIZED FLUID LINES

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials.

Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area. Install fire resisting guards to protect hoses or other materials.

PREVENT BATTERY EXPLOSIONS

Keep sparks, lighted matches, and flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; It may explode. Warm battery to 16° C (60° F).

PREVENT ACID BURNS

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

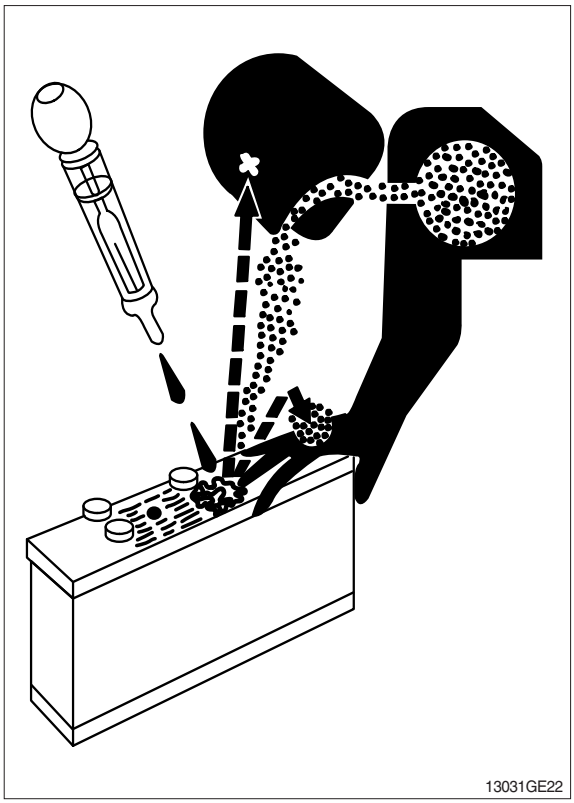
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling of dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10-15 minutes. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.



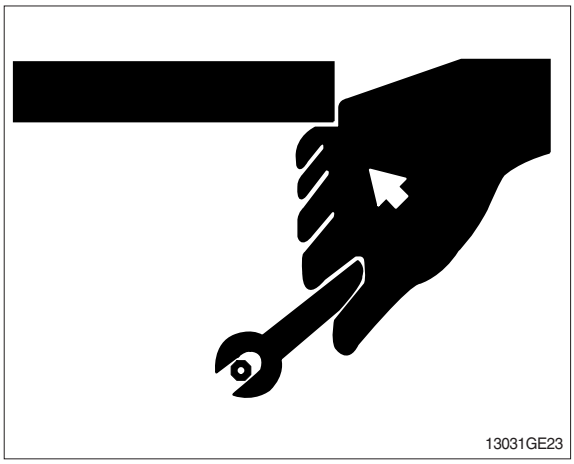
USE TOOLS PROPERLY

Use tools appropriate to the work. Makeshift tools, parts, and procedures can create safety hazards.

Use power tools only to loosen threaded tools and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only recommended replacement parts. (See Parts catalogue.)

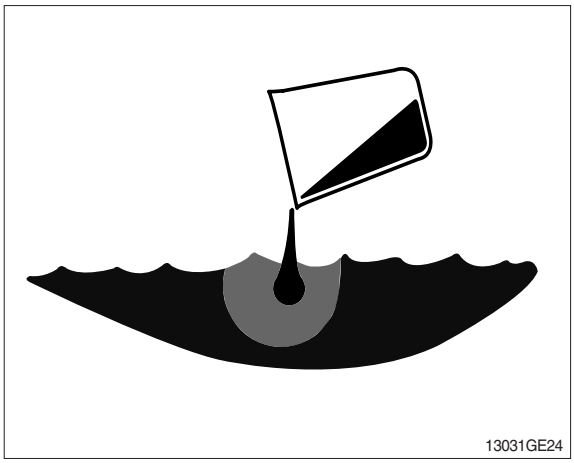


DISPOSE OF FLUIDS PROPERLY

Improperly disposing of fluids can harm the environment and ecology. Before draining any fluids, find out the proper way to dispose of waste from your local environmental agency.

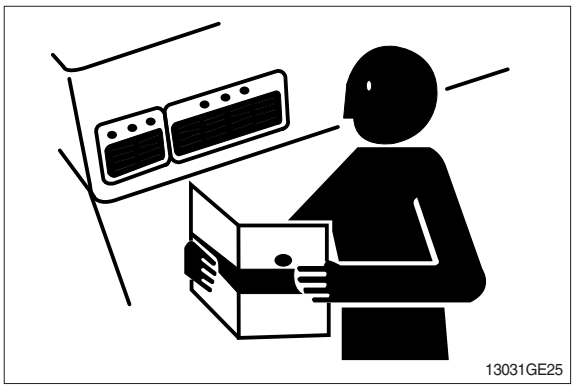
Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

DO NOT pour oil into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, brake fluid, filters, batteries, and other harmful waste.


13031GE24

REPLACE SAFETY SIGNS

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

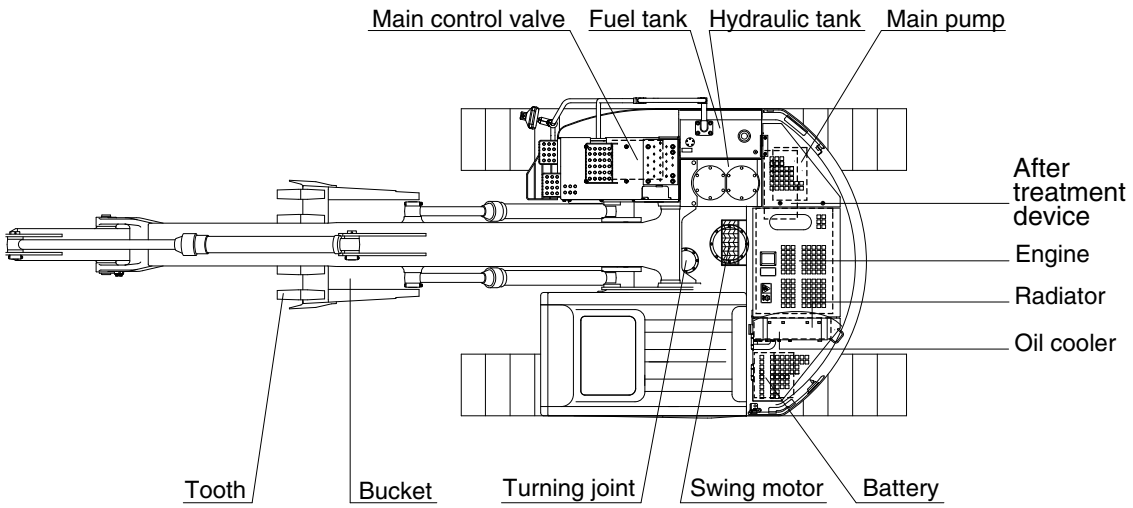

13031GE25

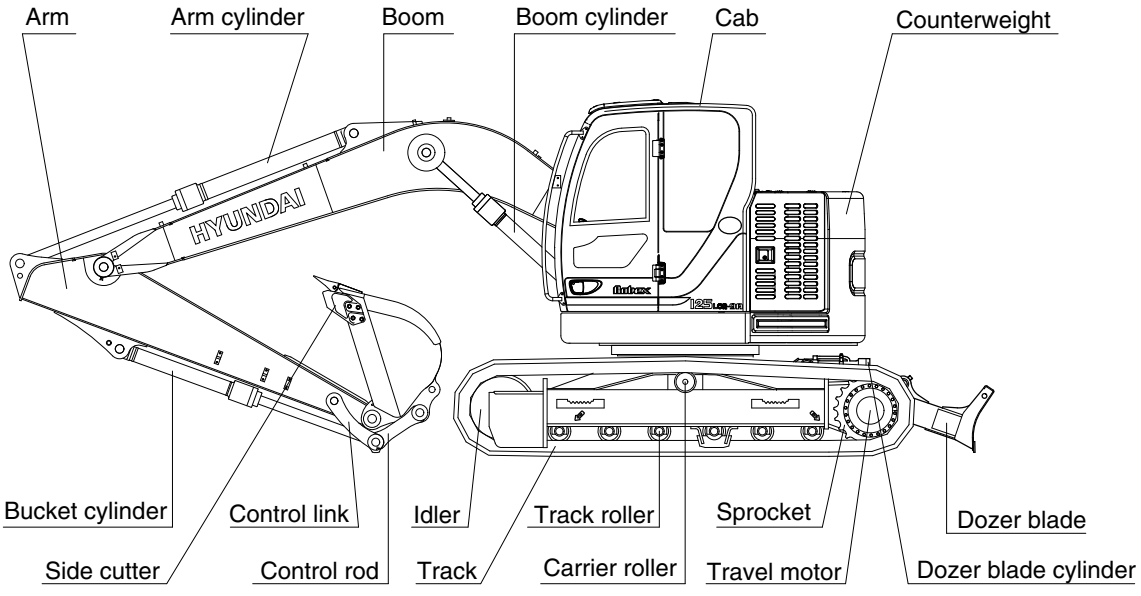
LIVE WITH SAFETY

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

GROUP 2 SPECIFICATIONS

1. MAJOR COMPONENT



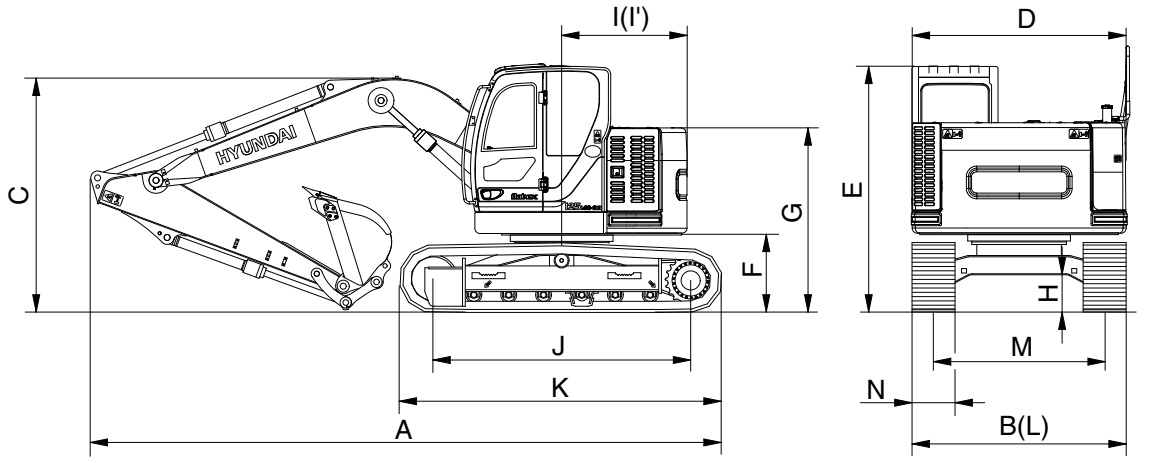


125CR9A2SP01

2. SPECIFICATIONS

1) R125LCR-9A

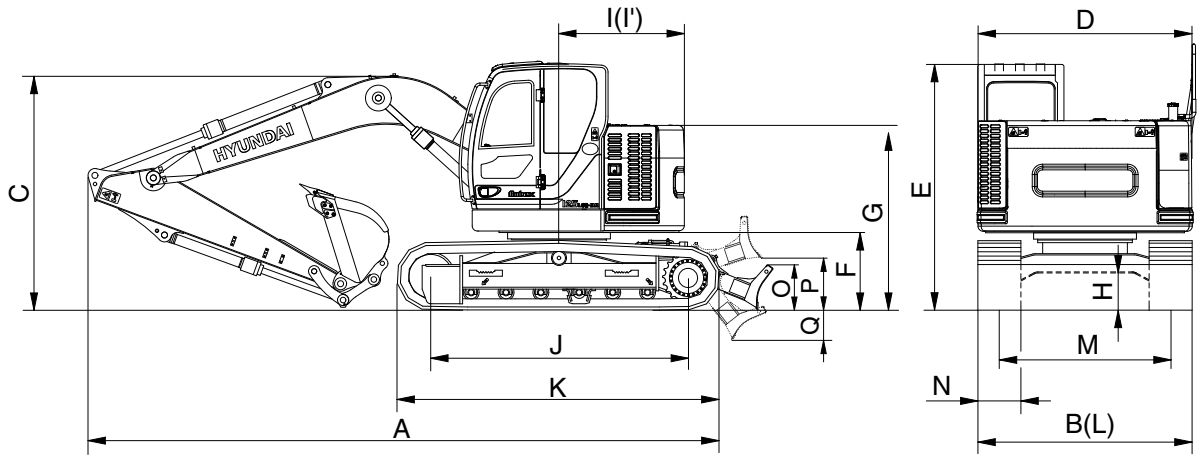
· 4.30 m (14' 1") BOOM and 2.26 m (7' 5") ARM



125CR9A2SP02

Description		Unit	Specification
Operating weight		kg (lb)	12500 (27560)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	0.40 (0.52)
Overall length	A	mm (ft-in)	6860 (22' 6")
Overall width, with 500 mm shoe	B		2500 (8' 2")
Overall height	C		2740 (9' 0")
Superstructure width	D		2490 (8' 2")
Overall height of cab	E		2900 (9' 6")
Ground clearance of counterweight	F		890 (2' 11")
Engine cover height	G		2215 (7' 3")
Minimum ground clearance	H		440 (1' 5")
Rear-end distance	I		1500 (4' 11")
Rear-end swing radius	I'		1500 (4' 11")
Distance between tumblers	J		2780 (9' 1")
Undercarriage length	K		3490 (11' 5")
Undercarriage width	L		2500 (8' 2")
Track gauge	M		1990 (6' 6")
Track shoe width, standard	N		500 (20")
Travel speed (low/high)		km/hr (mph)	3.6/6.1 (2.2/3.8)
Swing speed		rpm	12.6
Gradeability		Degree (%)	35 (70)
Ground pressure (500 mm shoe)		kgf/cm^2(psi)	0.42 (5.91)
Max traction force		kg (lb)	10300 (22710)

2) R125LCRD-9A



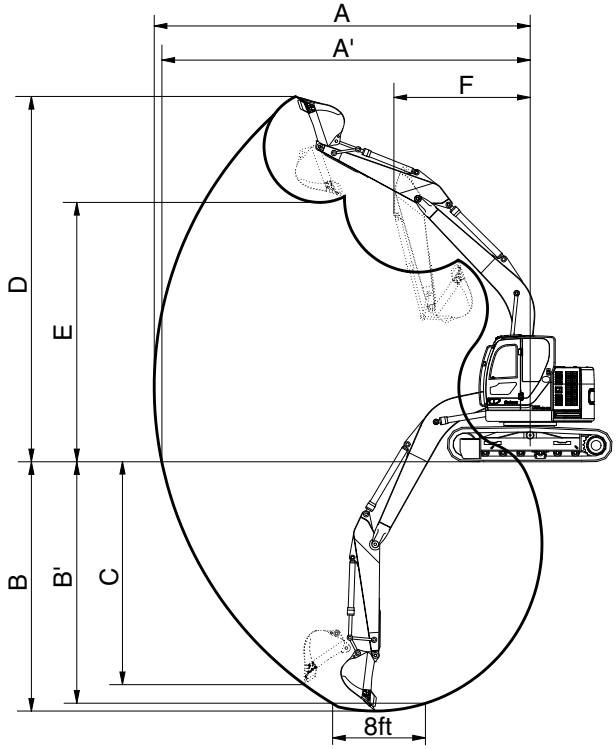
125CR9A2SP03

Description		Unit	Specification
Operating weight		kg (lb)	13200 (29100)
Bucket capacity (SAE heaped), standard		m^3 (yd^3)	0.40 (0.52)
Overall length	A	mm (ft-in)	7580 (24' 10")
Overall width, with 500 mm shoe	B		2500 (8' 2")
Overall height	C		2740 (9' 0")
Superstructure width	D		2490 (8' 2")
Overall height of cab	E		2900 (9' 6")
Ground clearance of counterweight	F		890 (2' 11")
Engine cover height	G		2215 (7' 3")
Minimum ground clearance	H		440 (1' 5")
Rear-end distance	I		1500 (4' 11")
Rear-end swing radius	I'		1500 (4' 11")
Distance between tumblers	J		2780 (9' 1")
Undercarriage length	K		3490 (11' 5")
Undercarriage width	L		2500 (8' 2")
Track gauge	M		1990 (6' 6")
Track shoe width, standard	N		500 (20")
Height of blade	O		580 (1' 11")
Ground clearance of blade up	P		540 (1' 9")
Depth of blade down	Q		530 (1' 9")
Travel speed (low/high)		km/hr (mph)	3.6/6.1 (2.2/3.8)
Swing speed		rpm	12.6
Gradeability		Degree (%)	35 (70)
Ground pressure (500 mm shoe)		kgf/cm^2(psi)	0.44 (6.24)
Max traction force		kg (lb)	10300 (22710)

3. WORKING RANGE

1) R125LCR/LCRD-9A

(1) 4.30 m (14' 1") MONO BOOM



125CR9A2SP04

Description		1.96 m (6' 5") Arm	※2.26 m (7' 5") Arm	2.81 (9' 3") Arm
Max digging reach	A	7410 mm (24' 4")	7690 mm (25' 3")	8220 mm (27' 0")
Max digging reach on ground	A'	7250 mm (23' 9")	7540 mm (24' 9")	8080 mm (26' 6")
Max digging depth	B	4720 mm (15' 6")	5020 mm (16' 6")	5570 mm (18' 3")
Max digging depth (8ft level)	B'	4460 mm (14' 8")	4790 mm (15' 9")	5380 mm (17' 8")
Max vertical wall digging depth	C	3960 mm (13' 0")	4290 mm (14' 1")	4830 mm (15' 10")
Max digging height	D	7920 mm (26' 0")	8110 mm (26' 7")	8480 mm (27' 10")
Max dumping height	E	5620 mm (18' 5")	5800 mm (19' 0")	6170 mm (20' 3")
Min swing radius	F	2310 mm (7' 6")	2340 mm (7' 8")	2470 mm (8' 1")
Bucket digging force	SAE	79.3 [86.5] kN	79.3 [86.5] kN	79.3 [86.5] kN
		8081 [8816] kgf	8081 [8816] kgf	8081 [8816] kgf
		17815 [19435] lbf	17815 [19435] lbf	17815 [19435] lbf
	ISO	91.8 [100.1] kN	91.8 [100.1] kN	91.8 [100.1] kN
		9358 [10209] kgf	9358 [10209] kgf	9358 [10209] kgf
		20631 [22507] lbf	20631 [22507] lbf	20631 [22507] lbf
Arm crowd force	SAE	60.6 [66.1] kN	56.1 [61.2] kN	48.3 [52.7] kN
		6178 [6739] kgf	5716 [6236] kgf	4928 [5376] kgf
		13619 [14857] lbf	12602 [13747] lbf	10865 [11852] lbf
	ISO	63.2 [68.9] kN	58.3 [63.6] kN	50.0 [54.5] kN
		6443 [7029] kgf	5943 [6484] kgf	5093 [5556] kgf
		14204 [15495] lbf	13103 [14294] lbf	12228 [12249] lbf

※ : STD [ ] : Power boost

4. WEIGHT

Item	R125LCR-9A		R125LCRD-9A	
	kg	lb	kg	lb
Upper structure assembly	6950	15320	←	
Main frame weld assembly	1253	2760	←	
Engine assembly	538	1190	←	
Main pump assembly	90	200	←	
Main control valve assembly	140	310	←	
Swing motor assembly	120	260	←	
Hydraulic oil tank assembly	125	280	←	
Fuel tank assembly	110	240	←	
Counterweight	2000	4410	←	
Cab assembly	450	990	←	
Lower chassis assembly	5230	11530	6030	13290
Track frame weld assembly	1280	1820	1430	3150
Swing bearing	195	430	←	
Travel motor assembly	140	310	←	
Turning joint	56	120	←	
Track recoil spring	95	210	←	
Idler	108	240	←	
Carrier roller	12	26	←	
Track roller	24	53	←	
Sprocket	40	88	←	
Track-chain assembly (500 ㎜ standard triple grouser shoe)	716	1580	←	
Dozer blade assembly	-		485	1070
Front attachment assembly (4.30 m boom, 2.26 m arm, 0.40 m^3 SAE heaped bucket)	1520	3350	←	
4.30 m boom assembly	710	1570	←	
2.26 m arm assembly	340	750	←	
0.40 m^3 SAE heaped bucket	410	910	←	
Boom cylinder assembly	200	440	←	
Arm cylinder assembly	120	270	←	
Bucket cylinder assembly	80	180	←	
Bucket control rod assembly	90	200	←	
Dozer blade cylinder assembly	-		55	120

5. LIFTING CAPACITIES

1) R125LCR-9A

(1) 4.30 m (14' 1") boom, 2.26 m (7' 5") arm equipped with 0.40 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2000 kg (4410 lb) counterweight.

· : Rating over-front · : Rating over-side or 360 degree

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m	kg					*1780	*1780			*1770	1550	5.97
(20.0 ft)	lb					*3920	*3920			*3900	3420	(19.6)
4.5 m	kg					*1820	*1820	*1480	1470	1690	1120	6.90
(15.0 ft)	lb					*4010	*4010	*3260	3240	3730	2470	(22.6)
3.0 m	kg			*2850	*2850	*2300	*2300	*2090	1430	1460	940	7.34
(10.0 ft)	lb			*6280	*6280	*5070	*5070	*4610	3150	3220	2070	(24.1)
1.5 m	kg			*4670	4290	*2980	2210	2030	1340	1390	890	7.41
(5.0 ft)	lb			*10300	9460	*6570	4870	4480	2950	3060	1960	(24.3)
Ground	kg			*5790	3890	3130	2030	1950	1260	1470	940	7.13
Line	lb			*12760	8580	6900	4480	4300	2780	3240	2070	(23.4)
-1.5 m	kg	*5690	*5690	*5970	3790	3040	1950	1920	1230	1760	1140	6.42
(-5.0 ft)	lb	*12540	*12540	*13160	8360	6700	4300	4230	2710	3880	2510	(21.1)
-3.0 m	kg	*8700	*8700	*5360	3860	3070	1980			*2290	1760	5.08
(-10 ft)	lb	*19180	*19180	*11820	8510	6770	4370			*5050	3880	(16.7)

Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited by hydraulic capacity.

(2) 4.30 m (14' 1") boom, 1.96 m (6' 5") arm equipped with 0.40 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2000 kg (4410 lb) counterweight.

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m	kg					*1780	*1780			*1900	1740	5.61
(20.0 ft)	lb					*3920	*3920			*4190	3840	(18.4)
4.5 m	kg					*2040	*2040			1840	1230	6.59
(15.0 ft)	lb					*4500	*4500			4060	2710	(21.6)
3.0 m	kg			*3270	*3270	*2500	2410	2110	1410	1570	1020	7.06
(10.0 ft)	lb			*7210	*7210	*5510	5310	4650	3110	3460	2250	(23.2)
1.5 m	kg			*5030	4200	*3160	2190	2030	1340	1500	970	7.13
(5.0 ft)	lb			*11090	9260	*6970	4830	4480	2950	3310	2140	(23.4)
Ground	kg			*5940	3870	3130	2030	1960	1270	1590	1030	6.83
Line	lb			*13100	8530	6900	4480	4320	2800	3510	2270	(22.4)
-1.5 m	kg	*6190	*6190	*5920	3820	3060	1970			1940	1270	6.08
(-5.0 ft)	lb	*13650	*13650	*13050	8420	6750	4340			4280	2800	(19.9)
-3.0 m	kg	*9140	*9140	*5120	3940	3130	2040					
(-10 ft)	lb	*20150	*20150	*11290	8690	6900	4500					

2) R125LCRD-9A (with dozer blade)

(1) 4.30 m (14' 1") boom, 2.26 m (7' 5") arm equipped with 0.40 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2000 kg (4410 lb) counterweight with dozer blade down.

· : Rating over-front · : Rating over-side or 360 degree

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg					*1780	*1780			*1770	*1770	5.97
	lb					*3920	*3920			*3900	*3900	(19.6)
4.5 m (15.0 ft)	kg					*1820	*1820	*1480	*1480	*1850	1350	6.90
	lb					*4010	*4010	*3260	*3260	*4080	2980	(22.6)
3.0 m (10.0 ft)	kg			*2850	*2850	*2300	*2300	*2090	1700	*1940	1150	7.34
	lb			*6280	*6280	*5070	*5070	*4610	3750	*4280	2540	(24.1)
1.5 m (5.0 ft)	kg			*4670	*4670	*2980	2630	*2370	1610	*2060	1090	7.41
	lb			*10300	*10300	*6570	5800	*5220	3550	*4540	2400	(24.3)
Ground Line	kg			*5790	4710	*3560	2440	*2630	1530	*2180	1150	7.13
	lb			*12760	10380	*7850	5380	*5800	3370	*4810	2540	(23.4)
-1.5 m (-5.0 ft)	kg	*5690	*5690	*5970	4600	*3770	2360	*2660	1500	*2300	1380	6.42
	lb	*12540	*12540	*13160	10140	*8310	5200	*5860	3310	*5070	3040	(21.1)
-3.0 m (-10 ft)	kg	*8700	*8700	*5360	4680	*3430	2390			*2290	2100	5.08
	lb	*19180	*19180	*11820	10320	*7560	5270			*5050	4630	(16.7)

Note 1. Lifting capacity are based on SAE J1097 and ISO 10567.
2. Lifting capacity of the ROBEX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.
3. The load point is a hook located on the back of the bucket.
4. *indicates load limited by hydraulic capacity.

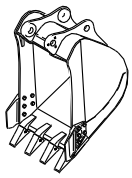
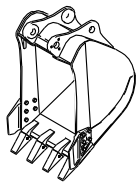
(2) 4.30 m (14' 1") boom, 1.96 m (6' 5") arm equipped with 0.40 m³ (SAE heaped) bucket and 500 mm (20") triple grouser shoe and 2000 kg (4410 lb) counterweight with dozer blade down.

Load point height		Load radius								At max. reach		
		1.5 m (5 ft)		3.0 m (10 ft)		4.5 m (15 ft)		6.0 m (20 ft)		Capacity		Reach
												m (ft)
6.0 m (20.0 ft)	kg					*1780	*1780			*1900	*1900	5.61
	lb					*3920	*3920			*4190	*4190	(18.4)
4.5 m (15.0 ft)	kg					*2040	*2040			*1970	1470	6.59
	lb					*4500	*4500			*4340	3240	(21.6)
3.0 m (10.0 ft)	kg			*3270	*3270	*2500	*2500	*2230	1690	*2070	1250	7.06
	lb			*7210	*7210	*5510	*5510	*4920	3730	*4560	2760	(23.2)
1.5 m (5.0 ft)	kg			*5030	5030	*3160	2610	*2480	1610	*2190	1180	7.13
	lb			*11090	11090	*6970	5750	*5470	3550	*4830	2600	(23.4)
Ground Line	kg			*5940	4690	*3660	2440	*2690	1540	*2320	1250	6.83
	lb			*13100	10340	*8070	5380	*5930	3400	*5110	2760	(22.4)
-1.5 m (-5.0 ft)	kg	*6190	*6190	*5920	4640	*3790	2380			*2420	1540	6.08
	lb	*13650	*13650	*13050	10230	*8360	5250			*5340	3400	(19.9)
-3.0 m (-10 ft)	kg	*9140	*9140	*5120	4750	*3240	2450					
	lb	*20150	*20150	*11290	10470	*7140	5400					

6. BUCKET SELECTION GUIDE

1) R125LCR-9A, R125LCRD-9A

(1) General bucket

	
0.40 m³ SAE heaped bucket	0.45 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation	
					4.3 m (14' 1") boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		1.96 m arm (6' 5")	2.26 m arm (7' 5")
0.40 m³ (0.52 yd³)	0.36 m³ (0.47 yd³)	760 mm (29.9")	870 mm (32.3")	410 kg (900 lb)		
0.45 m³ (0.59 yd³)	0.40 m³ (0.52 yd³)	830 mm (32.7")	940 mm (37.0")	430 kg (950 lb)		

Applicable for materials with density of 2000 kg/m³ (3370 lb/yd³) or less

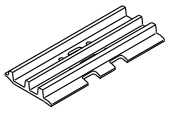
Applicable for materials with density of 1600 kg/m³ (2700 lb/yd³) or less

7. 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		Triple grouser		
					
R125LCR-9A	Shoe width	mm (in)	※ 500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	12500 (27560)	12600 (27910)	12820 (28260)
	Ground pressure	kgf/cm^2 (psi)	0.42 (5.91)	0.35 (4.99)	0.30 (4.33)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8' 10")
R125LCRD-9A	Shoe width	mm (in)	※ 500 (20)	600 (24)	700 (28)
	Operating weight	kg (lb)	13200 (29100)	13360 (29450)	13520 (29810)
	Ground pressure	kgf/cm^2 (psi)	0.44 (6.24)	0.37 (5.26)	0.32 (4.57)
	Overall width	mm (ft-in)	2500 (8' 2")	2600 (8' 6")	2700 (8' 10")

※ : Standard

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
	R125LCR-9A/R125LCRD-9A
Carrier rollers	1 EA
Track rollers	6 EA
Track shoes	43 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
500 mm triple grouser	Standard	A
600 mm triple grouser	Option	A
700 mm triple grouser	Option	B

※ **Table 2**

Category	Applications	Applications
A	Rocky ground, river beds, normal soil	· Travel at low speed on rough ground with large obstacles such as boulders or fallen trees
B	Normal soil, soft ground	· 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

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Perkins 1204E
Type	4-cycle turbocharged charge air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	4 cylinders, in-line
Firing order	1-3-4-2
Combustion chamber type	Direct injection type
Cylinder bore × stroke	105 × 127 mm (4.1" × 5.0")
Piston displacement	4400 cc (269 cu in)
Compression ratio	16.5 : 1
Rated gross horse power (SAE J1995)	100 Hp (74.3 kW) at 1900 rpm
Maximum torque	45.9 kgf · m (332 lbf · ft) at 1400 rpm
Engine oil quantity	10.5 ℓ (2.8 U.S. gal)
Dry weight	507 kg (1118 lb)
High idling speed	2000 ± 50 rpm
Low idling speed	800 ± 100 rpm
Rated fuel consumption	160 g/Hp · hr at 1900 rpm
Starting motor	24 V-4.5 kW
Alternator	24 V-85 A
Battery	2 × 12 V × 100 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 62.2 cc/rev
Maximum pressure	330 kgf/cm^2 (4690 psi) [360 kgf/cm^2 (5120 psi)]
Rated oil flow	2 × 123.5 ℓ /min (32.6 U.S. gpm / 27.2 U.K. gpm)
Rated speed	1900 rpm

[ ] : Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm^2 (570 psi)
Rated oil flow	28.5 ℓ /min (7.5 U.S. gpm / 6.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 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	71 cc/rev
Relief pressure	285 kgf/cm^2 (4050 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	31.4 kgf · m (227 lbf · ft)
Brake release pressure	19.2~50 kgf/cm^2 (273~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	350 kgf/cm^2 (4970 psi)
Capacity (max / min)	67.6/41.4 cc/rev
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	14.3 kgf/cm^2 (203 psi)
Braking torque	33 kgf · m (239 lbf · ft)

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 70 × 1015 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	ø 110 × ø 75 × 1070 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 95 × ø 65 × 855 mm
	Cushion	Extend only
Dozer cylinder (option)	Bore dia × Rod dia × Stroke	ø 100 × ø 70 × 240 mm
	Cushion	-

※ **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.**

8) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
R125LCR-9A	Standard	500 mm (20")	0.42 kgf/cm^2 (5.91 psi)	43	2500 mm (8' 2")
	Option	600 mm (24")	0.35 kgf/cm^2 (4.99 psi)	43	2600 mm (8' 6")
		700 mm (28")	0.30 kgf/cm^2 (4.33 psi)	43	2700 mm (8' 10")
R125LCRD-9A	Standard	500 mm (20")	0.44 kgf/cm^2 (6.24 psi)	43	2500 mm (8' 2")
	Option	600 mm (24")	0.37 kgf/cm^2 (5.26 psi)	43	2600 mm (8' 6")
		700 mm (28")	0.32 kgf/cm^2 (4.57 psi)	43	2700 mm (8' 10")

9) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
R125LCR-9A R125LCRD-9A	0.40 m^3 (0.52 yd^3)	0.36 m^3 (0.47 yd^3)	4	760 mm (29.9")	870 mm (34.3")
	0.45 m^3 (0.59 yd^3)	0.40 m^3 (0.52 yd^3)	4	830 mm (32.7")	940 mm (37.0")

9. 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) 40 (104)
Engine oil pan	Engine oil	10.5 (2.8)	★SAE 5W-40 SAE 30 SAE 10W SAE 10W-30 SAE 15W-40
Swing drive	Gear oil	3.4 (0.9)	★SAE 75W-90
Final drive	Gear oil	2.5×2 (0.7×2)	SAE 80W-90
Hydraulic tank	Hydraulic oil	Tank: 79 (20.9) System: 109 (28.8)	★ISO VG 15 ISO VG 32 ISO VG 46 ISO VG 68
Fuel tank	Diesel fuel★1	210 (55.5)	★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★2	14.5 (3.8)	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 Materia
UTTO : Universal Tractor Transmission Oil

★1 : Ultra low sulfur diesel
- sulfur content ≤ 15 ppm

★2 : Soft water
City water or distilled water

★ : Cold region
Russia, CIS, Mongolia