

SECTION 1 GENERAL



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SECTION 1 GENERAL

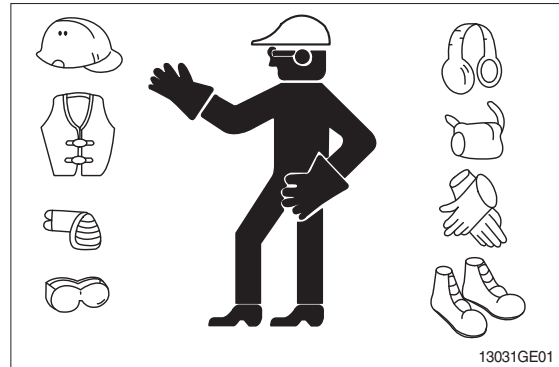
GROUP 1 SAFETY

FOLLOW SAFE PROCEDURE

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

WEAR PROTECTIVE CLOTHING

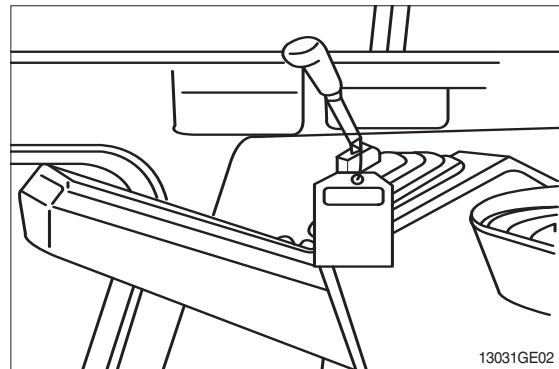
Wear close fitting clothing and safety equipment appropriate to the job.



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.



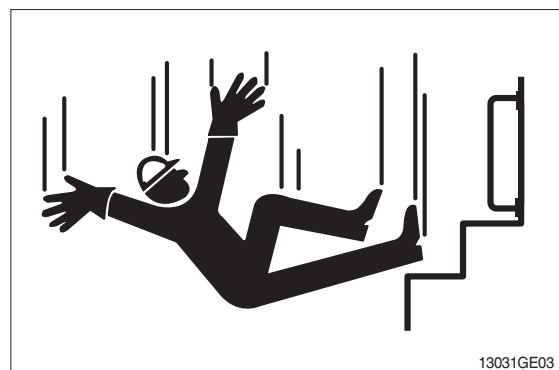
USE HANDHOLDS AND STEPS

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.

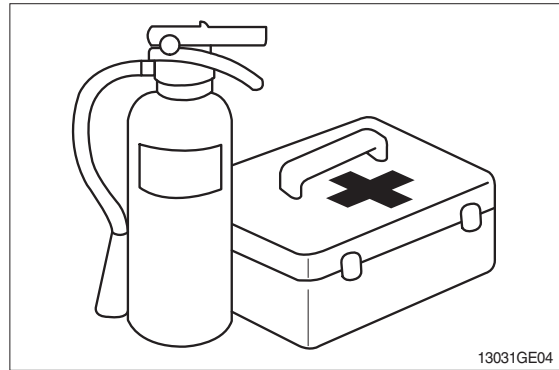


PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

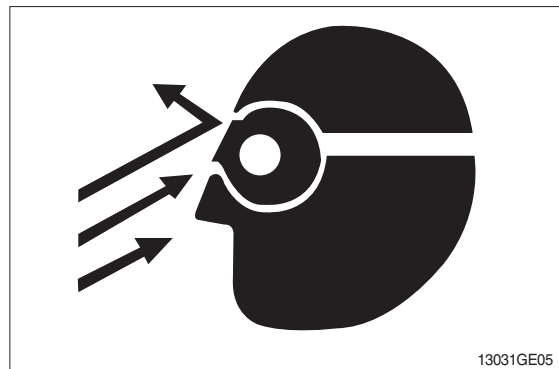
Keep a first aid kit and fire extinguisher handy.

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



PROTECT AGAINST FLYING DEBRIS

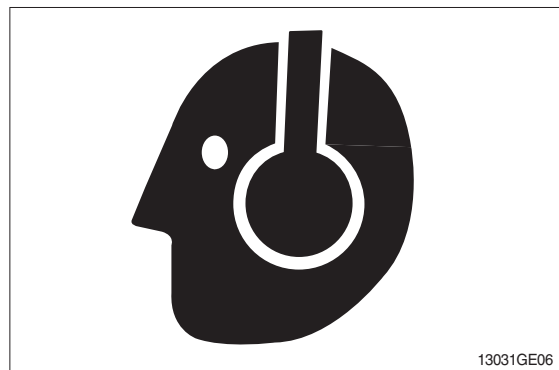
Guard against injury from flying pieces of metal or debris; Wear goggles or safety glasses.



PROTECT AGAINST NOISE

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

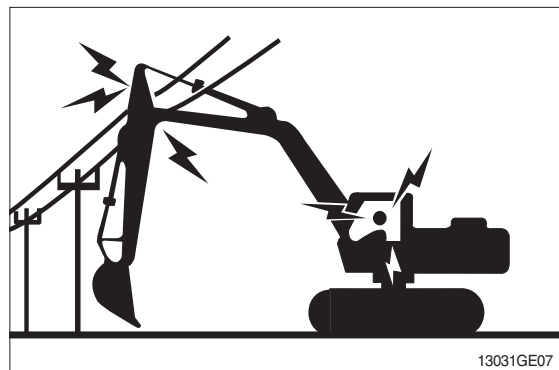
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



AVOID POWER LINES

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

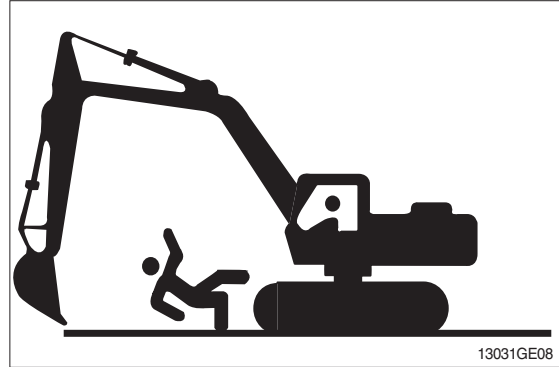
Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.



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.

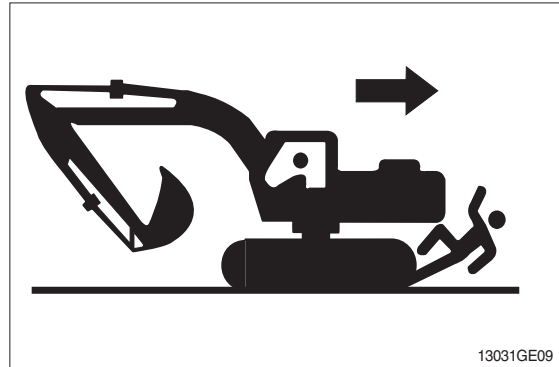


MOVE AND OPERATE MACHINE SAFELY

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.



OPERATE ONLY FROM 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.



PARK MACHINE SAFELY

Before working on the machine:

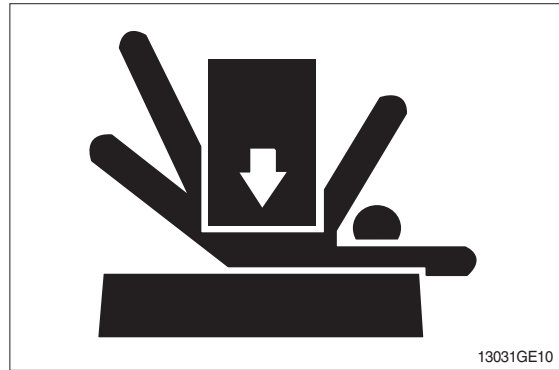
- Park machine on a level surface.
- Lower bucket to the ground.
- Turn auto idle switch off.
- Run engine at 1/2 speed without load for 2 minutes.
- Turn key switch to OFF to stop engine. Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

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.



SERVICE COOLING SYSTEM SAFELY

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

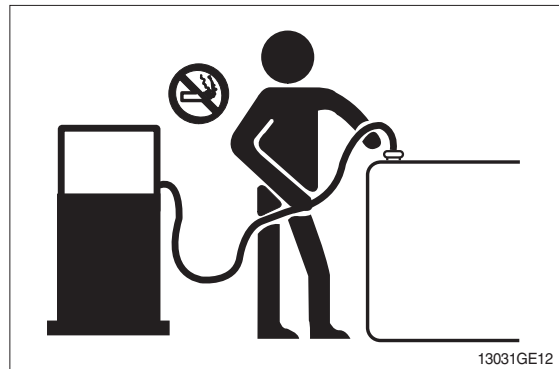
Shut off engine. Only remove filler cap when cool enough to touch with bare hands.



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.



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.



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.

REMOVE PAINT BEFORE WELDING OR HEATING

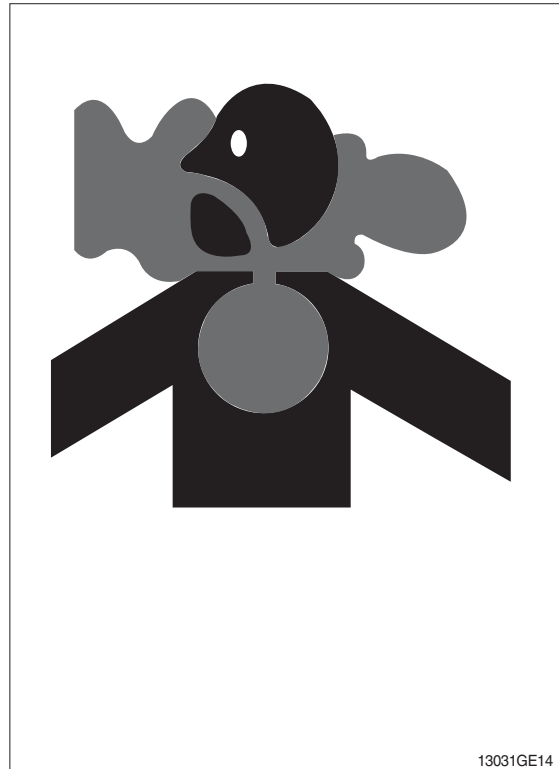
Avoid potentially toxic fumes and dust.

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

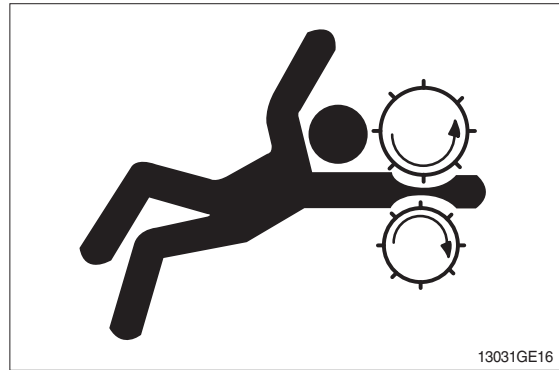
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



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.

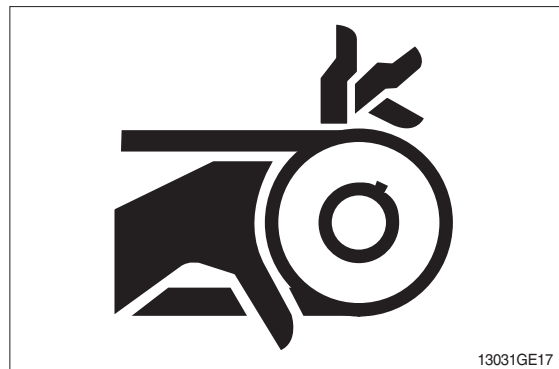


13031GE16

STAY CLEAR OF MOVING PARTS

Entanglements in moving parts can cause serious injury.

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



13031GE17

AVOID HIGH PRESSURE FLUIDS

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

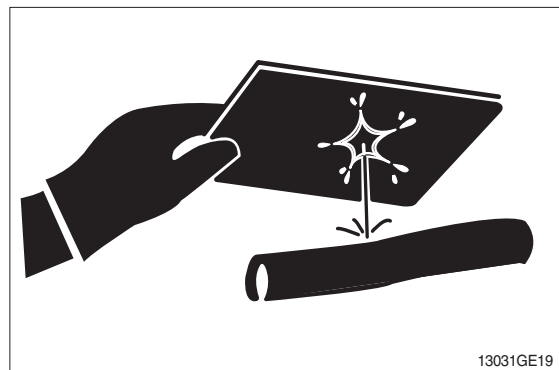
Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

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.



13031GE18



13031GE19

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:

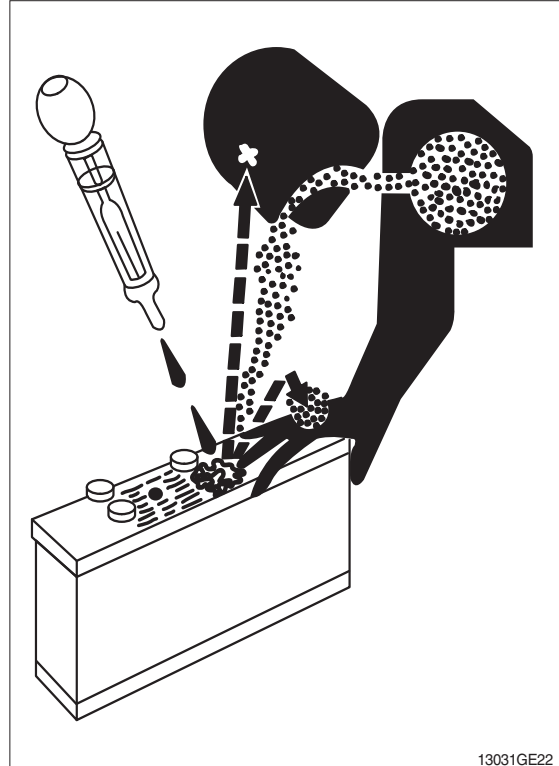
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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.



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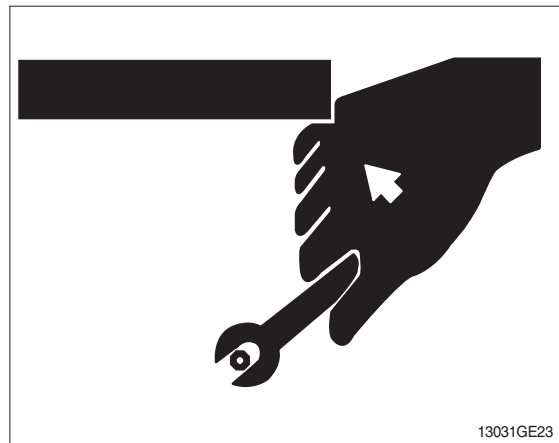
USE TOOLS PROPERLY

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.)



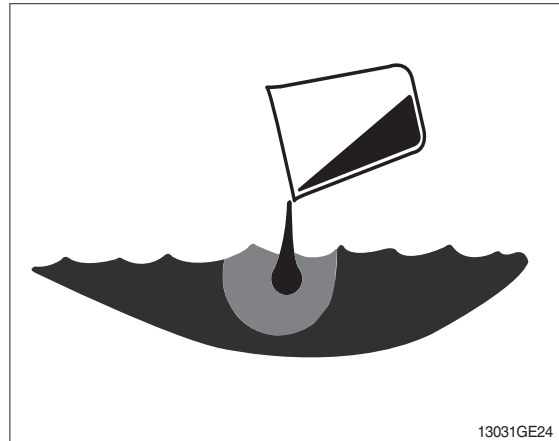
13031GE23

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.

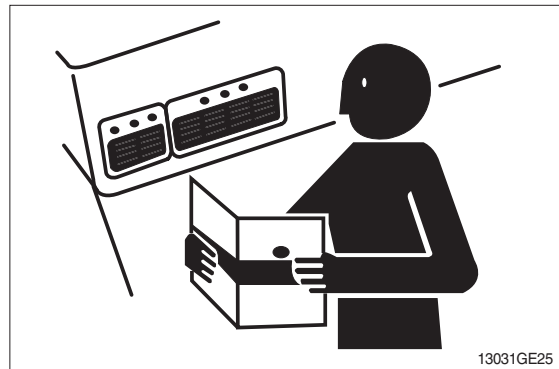
Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

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.



REPLACE SAFETY SIGNS

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

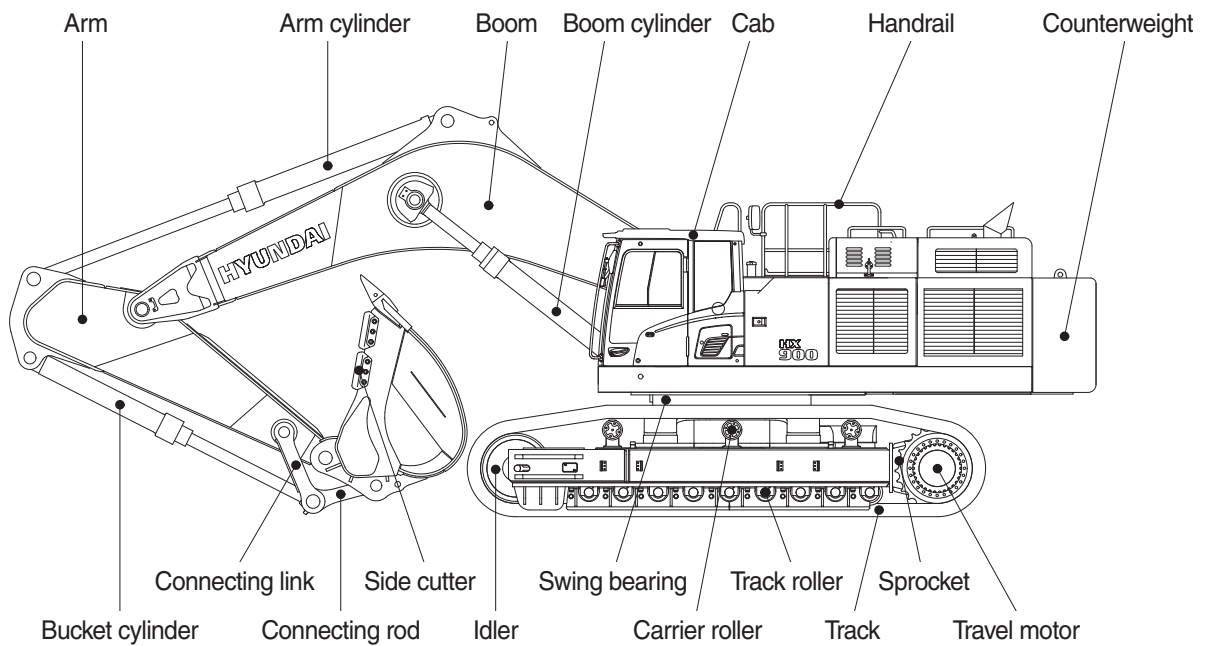
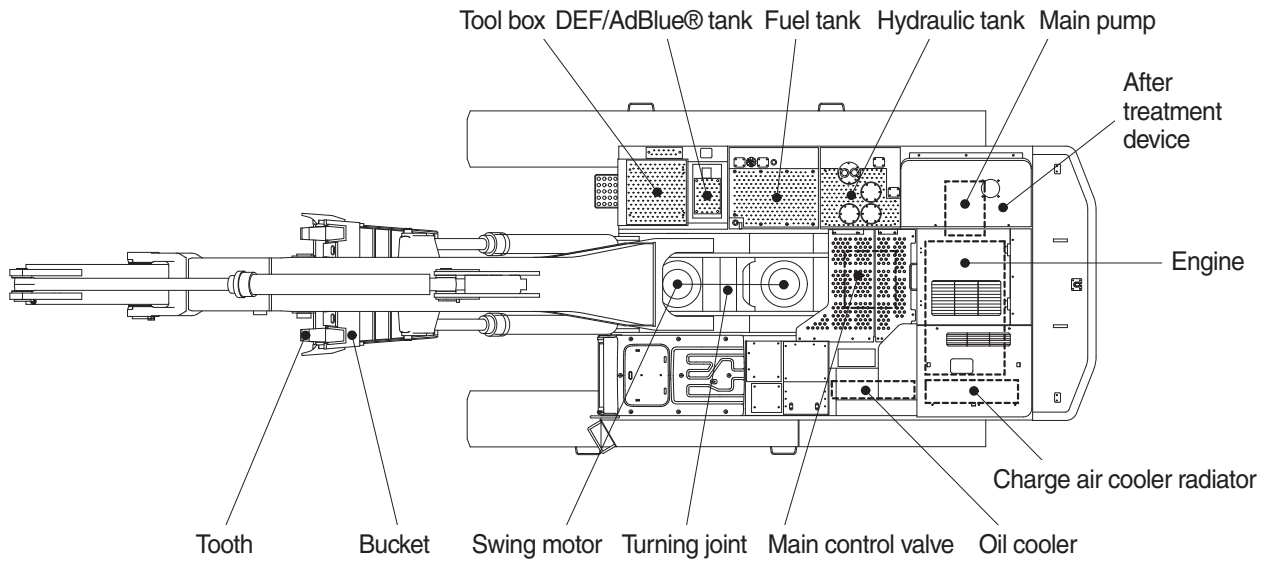


LIVE WITH SAFETY

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

GROUP 2 SPECIFICATIONS

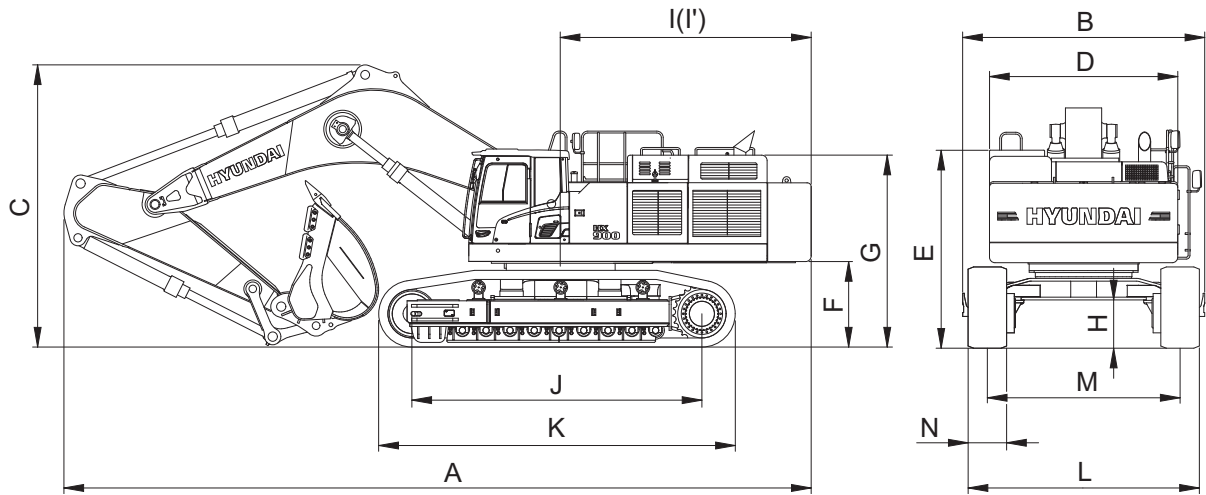
1. MAJOR COMPONENT



900F2SP01

2. SPECIFICATIONS

1) 7.20 m (23' 7") BOOM, 2.95 m (9' 8") ARM

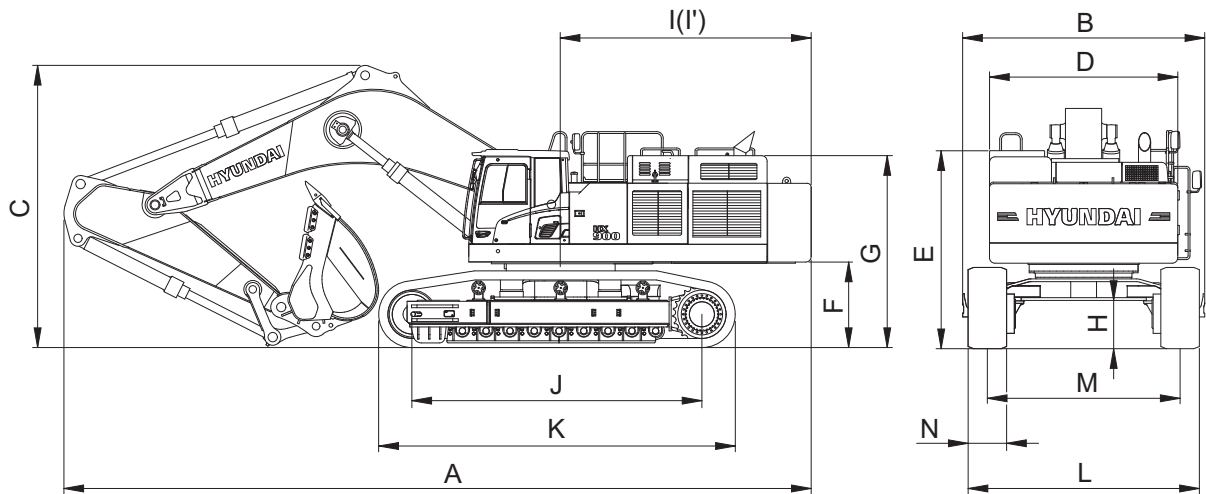


900F2SP03

Description		Unit	Specification
Operating weight		kg (lb)	88800 (195770) <89400 (197090)>
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	4.85 (6.34)
Overall length	A	mm (ft-in)	13580 (44' 7")
Overall width, with 700 mm shoe	B		3775/4495 (12' 5"/14' 9")
Overall height	C		5380 (17' 8")
Superstructure width	D		3420 (11' 3")
Overall height of cab	E		3620 (11' 11") <4630 (15' 2")>
Ground clearance of counterweight	F		1615 (5' 4")
Engine cover height	G		3500 (11' 6")
Minimum ground clearance	H		925 (3' 0")
Rear-end distance	I		4550 (14' 11")
Rear-end swing radius	I'		4645 (15' 3")
Distance between tumbler	J		5130 (16' 10")
Undercarriage length	K		6445 (21' 2")
Undercarriage width	L		4200 (13' 9")
Track gauge	M		3500 (11' 6")
Track shoe width, standard	N		700 (28")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	6.2
Gradeability		Degree (%)	35 (70)
Ground pressure (700 mm shoe)		kgf/cm ² (psi)	1.14 (16.3)
Max traction force		kg (lb)	66800 (147270)

< > : Cabin riser

2) 8.20 m (26' 11") BOOM, 3.60 m (11' 10") ARM



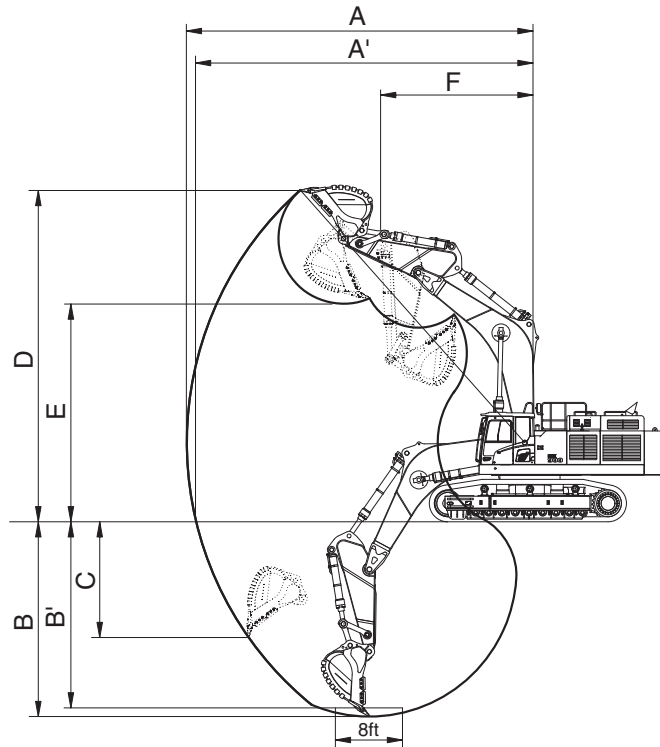
900F2SP03

Description		Unit	Specification
Operating weight		kg (lb)	88900 (195990) <89500 (197310)>
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	3.6 (4.71)
Overall length	A	mm (ft-in)	14380 (47' 2")
Overall width, with 700 mm shoe	B		3775/4495 (12' 5"/14' 9")
Overall height	C		5180 (17' 0")
Superstructure width	D		3420 (11' 3")
Overall height of cab	E		3620 (11' 11") <4630 (15' 2")>
Ground clearance of counterweight	F		1615 (5' 4")
Engine cover height	G		3500 (11' 6")
Minimum ground clearance	H		925 (3' 0")
Rear-end distance	I		4550 (14' 11")
Rear-end swing radius	I'		4645 (15' 3")
Distance between tumblers	J		5130 (16' 10")
Undercarriage length	K		6445 (21' 2")
Undercarriage width	L		4200 (13' 9")
Track gauge	M		3500 (11' 6")
Track shoe width, standard	N		700 (28")
Travel speed (low/high)			km/hr (mph)
Swing speed		rpm	6.2
Gradeability		Degree (%)	35 (70)
Ground pressure (700 mm shoe)		kgf/cm ² (psi)	1.14 (16.3)
Max traction force		kg (lb)	66800 (147270)

< > : Cabin riser

3. WORKING RANGE

1) 7.20 m (23' 7") BOOM

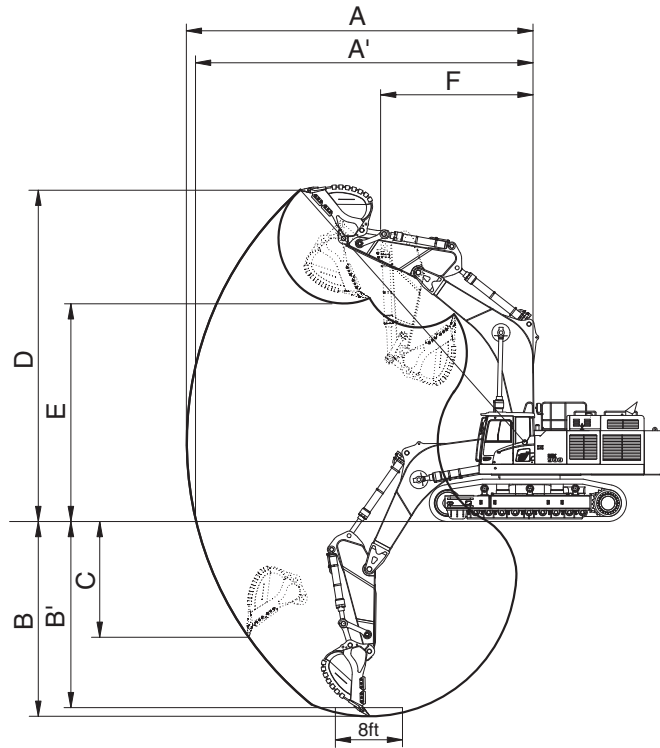


900F2SP04

Description		2.95 m (9' 8") Arm
Max digging reach	A	12300 mm (40' 4")
Max digging reach on ground	A'	12020 mm (39' 5")
Max digging depth	B	7230 mm (23' 9")
Max digging depth (8ft level)	B'	7090 mm (23' 3")
Max vertical wall digging depth	C	4370 mm (14' 4")
Max digging height	D	11910 mm (39' 1")
Max dumping height	E	7800 mm (25' 7")
Min swing radius	F	5100 mm (16' 9")
Bucket digging force	SAE	385.4 [420.4] kN
		39300 [42870] kgf
		86640 [94510] lbf
	ISO	439.3 [479.3] kN
		44800 [48870] kgf
		98770 [107740] lbf
Arm crowd force	SAE	372.7 [406.5] kN
		38000 [41450] kgf
		83780 [91380] lbf
	ISO	387.4 [422.6] kN
		39500 [43090] kgf
		87080 [95000] lbf

[] : Power boost

2) 8.20 m (26' 11") BOOM



900F2SP05

Description		2.95 m (9' 8") Arm	3.60 m (11' 10") Arm	4.40 m (14' 5") Arm
Max digging reach	A	13360 mm (43' 10")	13920 mm (45' 8")	14670 mm (48' 2")
Max digging reach on ground	A'	13090 mm (42' 11")	13670 mm (44' 10")	14430 mm (47' 4")
Max digging depth	B	8160 mm (26' 9")	8810 mm (28' 11")	9610 mm (31' 6")
Max digging depth (8ft level)	B'	8020 mm (26' 4")	8680 mm (28' 6")	9500 mm (31' 2")
Max vertical wall digging depth	C	5250 mm (17' 3")	6000 mm (19' 8")	6670 mm (21' 11")
Max digging height	D	12630 mm (41' 5")	12780 mm (41' 11")	13190 mm (43' 3")
Max dumping height	E	8490 mm (27' 10")	8690 mm (28' 6")	9030 mm (29' 8")
Min swing radius	F	5930 mm (19' 5")	5970 mm (19' 7")	5970 mm (19' 7")
Bucket digging force	SAE	385.4 [420.4] kN	334.4 [364.8] kN	334.4 kN
		39300 [42870] kgf	34100 [37200] kgf	34100 kgf
		86640 [94510] lbf	75180 [82010] lbf	75180 lbf
	ISO	439.3 [479.3] kN	381.5 [416.2] kN	381.5 kN
		44800 [48870] kgf	38900 [42440] kgf	38900 kgf
		98770 [107740] lbf	85760 [93560] lbf	85760 lbf
Arm crowd force	SAE	372.7 [406.5] kN	307.9 [335.9] kN	266.7 kN
		38000 [41450] kgf	31400 [34250] kgf	27200 kgf
		83780 [91380] lbf	69230 [75510] lbf	59970 lbf
	ISO	387.4 [422.6] kN	319.7 [348.7] kN	274.6 kN
		39500 [43090] kgf	32600 [35560] kgf	28000 kgf
		87080 [95000] lbf	71870 [78400] lbf	61730 lbf

[] : Power boost

4. WEIGHT

Item	HX900 L	
	kg	lb
Upperstructure assembly	30630	67530
Main frame weld assembly	7548	16640
Engine assembly	1490	3280
Main pump assembly	300	660
Main control valve assembly	424	930
Swing motor assembly	548	1210
Hydraulic oil tank assembly	706	1556
Fuel tank assembly	600	1323
Counterweight	13600	29980
Cab assembly	490	1080
Cab riser assy	600	1320
Lower chassis assembly	34790	76700
Track frame weld assembly	12809	28240
Swing bearing	1304	2875
Travel motor assembly	935	2060
Turning joint	75	165
Track recoil spring and tension body	742	1636
Idler	567	1250
Sprocket	240	530
Carrier roller	75	165
Track roller	199	439
Track-chain assembly (700 mm standard triple grouser shoe)	5038	11110
Front attachment assembly (7.20 m boom, 2.95 m arm, 4.85 m ³ SAE heaped bucket)	23380	51540
7.20 m boom assembly	7650	16870
8.20 m boom assembly	8220	18120
2.95 m arm assembly	3430	7560
3.60 m arm assembly	3770	8310
3.60 m ³ SAE heaped bucket	4620	10190
4.85 m ³ SAE heaped bucket	5420	11950
Boom cylinder assembly	862	1906
Arm cylinder assembly	1087	2400
Bucket cylinder assembly	754	1662
Bucket control linkage total	480	1060

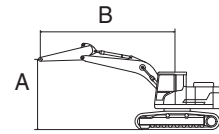
5. LIFTING CAPACITIES













Unit : mm

Model	Boom	Boom	Arm	Counterweight	Shoe	Dozer		Outrigger	
	Type	Length	Length	Weight (kg)	Width	Front	Rear	Front	Rear
HX900 L	Mono	7200	2950	13600	700	-	-	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)										At max. reach			
	3.0m (9.8ft)		4.5m (14.8ft)		6.0m (19.7ft)		7.5m (24.6ft)		9.0m (29.5ft)		Capacity		Reach	
													m (ft)	
9.0 m 29.5 ft	kg lb							*22440 *49470	*22440 *49470			*20960 *46210	*20960 *46210	7.63 (25.0)
7.5 m 24.6 ft	kg lb							*23970 *52840	*23970 *52840			*20020 *44140	19150 42220	8.68 (28.5)
6.0 m 19.7 ft	kg lb			*38200 *84220	*38200 *84220	*29660 *65390	*29660 *65390	*24980 *55070	23980 52870	*22110 *48740	17750 39130	*19840 *43740	16520 36420	9.38 (30.8)
4.5 m 14.8 ft	kg lb					*32700 *72090	32410 71450	*26400 *58200	22960 50620	*22560 *49740	17270 38070	*20240 *44620	15040 33160	9.79 (32.1)
3.0 m 9.8 ft	kg lb					*35050 *77270	30510 67260	*27590 *60830	21940 48370	*22980 *50660	16720 36860	*20640 *45500	14300 31530	9.96 (32.7)
1.5 m 4.9 ft	kg lb					*35620 *78530	29250 64490	*28010 *61750	21130 46580	*22900 *50490	16250 35830	*20260 *44670	14160 31220	9.90 (32.5)
0.0 m 0.0 ft	kg lb					*34230 *75460	28650 63160	*27230 *60030	20640 45500	*21890 *48260	15960 35190	*19740 *43520	14610 32210	9.60 (31.5)
-1.5 m -4.9 ft	kg lb			*37480 *82630	*37480 *82630	*31020 *68390	28520 62880	*24890 *54870	20490 45170	*19060 *42020	15960 35190	*18860 *41580	15870 34990	9.04 (29.7)
-3.0 m -9.8 ft	kg lb			*30370 *66950	*30370 *66950	*25700 *56660	*25700 *56660	*20210 *44560	*20210 *44560			*17140 *37790	*17140 *37790	8.17 (26.8)
-4.5 m -14.8 ft	kg lb			*19940 *43960	*19940 *43960	*16840 *37130	*16840 *37130					*13310 *29340	*13310 *29340	6.86 (22.5)

※ Note

- Lifting capacity are based on SAE J1097 and ISO 10567.
- 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.
- The lift-point is bucket pivot mounting pin on the arm (without bucket mass).
- * indicates load limited by hydraulic capacity.

※ Lifting capacities are based upon a standard machine conditions.

Lifting capacities will vary with different work tools, ground conditions and attachments.

The difference between the weight of a work tool attachment must be subtracted.

Consult your Hyundai dealer regarding the lifting capacities for specific work tools and attachments.

▲ Failure to comply to the rated load can cause possible personal injury or property damage.

Make adjustments to the rated load as necessary for non-standard configurations.

Unit : mm

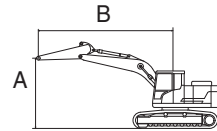
Model	Boom	Boom	Arm	Counterweight	Shoe	Dozer		Outrigger	
	Type	Length	Length	Weight (kg)	Width	Front	Rear	Front	Rear
HX900 L	Mono	8200	2950	13600	700	-	-	-	-



: Rating over-front



: Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)														At max. reach			
	3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		10.5 m (34.0 ft)		12.0 m (39.0 ft)		Capacity	Reach		
																	m (ft)	
10.5 m 34.4 ft	kg lb							*21570 *47550	*21570 *47550							*21500 *47400	*21500 *47400	7.67 (25.2)
9.0 m 29.5 ft	kg lb															*19770 *43590	18110 39930	8.98 (29.5)
7.5 m 24.6 ft	kg lb							*21980 *48460	*21980 *48460	*19660 *43340	17890 39440					*18850 *41560	15090 33270	9.89 (32.4)
6.0 m 19.7 ft	kg lb					*28820 *63540	*28820 *63540	*23450 *51700	23140 51010	*20270 *44690	17330 38210					*18290 *40320	13330 29390	10.50 (34.4)
4.5 m 14.8 ft	kg lb							*25090 *55310	21870 48220	*21060 *46430	16630 36660	*18440 *40650	13030 28730			*17920 *39510	12280 27070	10.87 (35.7)
3.0 m 9.8 ft	kg lb							*26350 *58090	20720 45680	*21720 *47880	15950 35160	*18600 *41010	12660 27910			*17650 *38910	11730 25860	11.02 (36.2)
1.5 m 4.9 ft	kg lb							*26780 *59040	19910 43890	*21950 *48390	15400 33950	*18450 *40680	12350 27230			*17400 *38360	11600 25570	10.96 (36.0)
0.0 m 0.0 ft	kg lb							*26210 *57780	19460 42900	*21510 *47420	15060 33200	*17640 *38890	12180 26850			*17070 *37630	11880 26190	10.70 (35.1)
-1.5 m -4.9 ft	kg lb					*29630 *65320	27100 59750	*24560 *54150	19330 42620	*20120 *44360	14960 32980					*16540 *36460	12690 27980	10.20 (33.5)
-3.0 m -9.8 ft	kg lb			*28720 *63320	*28720 *63320	*25840 *56970	*25840 *56970	*21630 *47690	19500 42990	*17200 *37920	15150 33400					*15550 *34280	14290 31500	9.44 (31.0)
-4.5 m -14.8 ft	kg lb			*22220 *48990	*22220 *48990	*20270 *44690	*20270 *44690	*16600 *36600	*16600 *36600							*13570 *29920	*13570 *29920	8.33 (27.3)
-6.0 m -19.7 ft	kg lb																	

Unit : mm

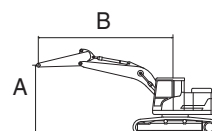
Model	Boom	Boom	Arm	Counterweight	Shoe	Dozer		Outrigger	
	Type	Length	Length	Weight (kg)	Width	Front	Rear	Front	Rear
HX900 L	Mono	8200	3600	13600	700	-	-	-	-



: Rating over-front



: Rating over-side or 360 degree



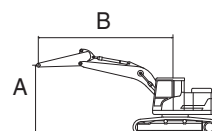
Lift-point height (A)		Lift-point radius (B)														At max. reach			
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		10.5 m (34.0 ft)		12.0 m (39.0 ft)		Capacity		Reach	
																		m (ft)	
10.5 m	kg																*14300	*14300	8.47
34.4 ft	lb																*31530	*31530	(27.8)
9.0 m	kg								*17910	*17910							*13440	*13440	9.67
29.5 ft	lb								*39480	*39480							*29630	*29630	(31.7)
7.5 m	kg								*18750	18280	*13220	*13220					*13070	*13070	10.51
24.6 ft	lb								*41340	40300	*29150	*29150					*28810	*28810	(34.5)
6.0 m	kg				*27270	*27270	*22480	*22480	*19540	17690	*17600	13630					*13040	12320	11.09
19.7 ft	lb				*60120	*60120	*49560	*49560	*43080	39000	*38800	30050					*28750	27160	(36.4)
4.5 m	kg				*30770	*30770	*24320	22430	*20510	16960	*18000	13240					*13300	11420	11.44
14.8 ft	lb				*67840	*67840	*53620	49450	*45220	37390	*39680	29190					*29320	25180	(37.5)
3.0 m	kg				*33410	29230	*25890	21200	*21390	16230	*18380	12820					*13850	10930	11.59
9.8 ft	lb				*73660	64440	*57080	46740	*47160	35780	*40520	28260					*30530	24100	(38.0)
1.5 m	kg				*34260	27890	*26730	20260	*21890	15610	*18500	12440					*14740	10790	11.53
4.9 ft	lb				*75530	61490	*58930	44670	*48260	34410	*40790	27430					*32500	23790	(37.8)
0.0 m	kg				*33450	27280	*26620	19660	*21790	15180	*18130	12180					*16110	11000	11.28
0.0 ft	lb				*73740	60140	*58690	43340	*48040	33470	*39970	26850					*35520	24250	(37.0)
-1.5 m	kg			*23630	*23630	*31380	27120	*25470	19400	*20860	14960	*16900	12090				*15970	11640	10.81
-4.9 ft	lb			*52100	*52100	*69180	59790	*56150	42770	*45990	32980	*37260	26650				*35210	25660	(35.5)
-3.0 m	kg	*24830	*24830	*33260	*33260	*28120	27280	*23140	19430	*18760	15000						*15350	12900	10.09
-9.8 ft	lb	*54740	*54740	*73330	*73330	*61990	60140	*51010	42840	*41360	33070						*33840	28440	(33.1)
-4.5 m	kg			*26990	*26990	*23290	*23290	*19160	*19160	*14380	*14380						*14080	*14080	9.07
-14.8ft	lb			*59500	*59500	*51350	*51350	*42240	*42240	*31700	*31700						*31040	*31040	(29.8)
-6.0m	kg					*15890	*15890	*11750	*11750								*11240	*11240	7.62
-19.7ft	lb					*35030	*35030	*25900	*25900								*24780	*24780	(25.0)

















Unit : mm

Model	Boom	Boom	Arm	Counterweight	Shoe	Dozer		Outrigger	
	Type	Length	Length	Weight (kg)	Width	Front	Rear	Front	Rear
HX900 L	Mono	8200	4400	16500	700	-	-	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree

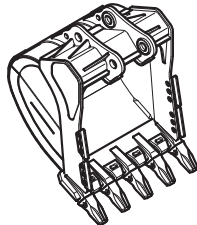
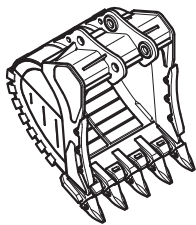
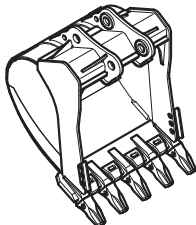
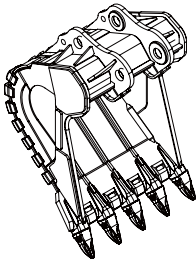


Lift-point height (A)	Lift-point radius (B)														At max. reach			
	3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		10.5 m (34.0 ft)		12.0 m (39.0 ft)		Capacity	Reach		
																	m (ft)	
10.5m 34.4ft	kg															*14300	*14300	8.47
	lb															*31530	*31530	(27.8)
9.0m 29.5ft	kg								*17910	*17910						*13440	*13440	9.67
	lb								*39480	*39480						*29630	*29630	(31.7)
7.5m 24.6ft	kg								*18750	18280	*13220	*13220				*13070	*13070	10.51
	lb								*41340	40300	*29150	*29150				*28810	*28810	(34.5)
6.0m 19.7ft	kg				*27270	*27270	*22480	*22480	*19540	17690	*17600	13630				*13040	12320	11.09
	lb				*60120	*60120	*49560	*49560	*43080	39000	*38800	30050				*28750	27160	(36.4)
4.5m 14.8ft	kg				*30770	*30770	*24320	22430	*20510	16960	*18000	13240				*13300	11420	11.44
	lb				*67840	*67840	*53620	49450	*45220	37390	*39680	29190				*29320	25180	(37.5)
3.0m 9.8ft	kg				*33410	29230	*25890	21200	*21390	16230	*18380	12820				*13850	10930	11.59
	lb				*73660	64440	*57080	46740	*47160	35780	*40520	28260				*30530	24100	(38.0)
1.5m 4.9ft	kg				*34260	27890	*26730	20260	*21890	15610	*18500	12440				*14740	10790	11.53
	lb				*75530	61490	*58930	44670	*48260	34410	*40790	27430				*32500	23790	(37.8)
0.0m 0.0ft	kg				*33450	27280	*26620	19660	*21790	15180	*18130	12180				*16110	11000	11.28
	lb				*73740	60140	*58690	43340	*48040	33470	*39970	26850				*35520	24250	(37.0)
-1.5m -4.9ft	kg				*23630	*23630	*31380	27120	*25470	19400	*20860	14960	*16900	12090		*15970	11640	10.81
	lb				*52100	*52100	*69180	59790	*56150	42770	*45990	32980	*37260	26650		*35210	25660	(35.5)
-3.0m -9.8ft	kg	*24830	*24830	*33260	*33260	*28120	27280	*23140	19430	*18760	15000					*15350	12900	10.09
	lb	*54740	*54740	*73330	*73330	*61990	60140	*51010	42840	*41360	33070					*33840	28440	(33.1)
-4.5m -14.8ft	kg				*26990	*26990	*23290	*23290	*19160	*19160	*14380	*14380				*14080	*14080	9.07
	lb				*59500	*59500	*51350	*51350	*42240	*42240	*31700	*31700				*31040	*31040	(29.8)
-6.0m -19.7ft	kg						*15890	*15890	*11750	*11750						*11240	*11240	7.62
	lb						*35030	*35030	*25900	*25900						*24780	*24780	(25.0)





6. BUCKET SELECTION GUIDE

1) HX900 L

(1) HEAVY DUTY AND ROCK-HEAVY DUTY BUCKET

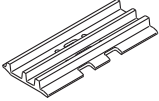
			
◇ Heavy duty	◆ Rock-heavy duty	◆ Light-heavy duty	★ Rock-special heavy duty (Cubic marble handling)

Capacity		Width	Weight	Tooth	Recommendation			
SAE heaped	CECE heaped				7.2 m (23' 7") boom	8.2 m (26' 11") boom		
					2.95 m (9' 8") arm	2.95 m (9' 8") arm	3.6 m (11' 10") arm	4.4 m (14' 5") arm
◇ 3.70 m ³ (4.84 yd ³)	3.30 m ³ (4.32 yd ³)	1845 mm (72.6")	4370 kg (9630 lb)	4 EA	●	◐	■	■
◇ 4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	2045 mm (80.5")	4730 kg (10430 lb)	5 EA	●	■	▲	▲
◇ 4.85 m ³ (6.34 yd ³)	4.25 m ³ (5.56 yd ³)	2245 mm (88.4")	5000 kg (11020 lb)	5 EA	◐	▲	▲	▲
◇ 5.40 m ³ (7.06 yd ³)	4.75 m ³ (6.21 yd ³)	2445 mm (96.3")	5275 kg (11630 lb)	5 EA	■			
◇ 5.80 m ³ (7.59 yd ³)	5.05 m ³ (6.61 yd ³)	2585 mm (101.8")	5555 kg (12250 lb)	6 EA	▲			
◆ 3.70 m ³ (4.84 yd ³)	3.30 m ³ (4.32 yd ³)	1845 mm (72.6")	4850 kg (10690 lb)	4 EA	●	◐	■	■
◆ 4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	2045 mm (80.5")	5235 kg (11540 lb)	5 EA	◐	■	▲	▲
◆ 4.85 m ³ (6.34 yd ³)	4.25 m ³ (5.56 yd ³)	2245 mm (88.4")	5530 kg (12190 lb)	5 EA	■	▲		
◆ 5.40 m ³ (7.06 yd ³)	4.75 m ³ (6.21 yd ³)	2445 mm (96.3")	5830 kg (12850 lb)	5 EA	■			
◆ 4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	2045 mm (80.5")	4150 kg (9150 lb)	5 EA	●	■	■	■
★ 3.60 m ³ (4.71 yd ³)	3.10 m ³ (4.05 yd ³)	1920 mm (75.6")	4600 kg (10140 lb)	5 EA	●	◐	■	■

-  Applicable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less
-  Applicable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less
-  Applicable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less
-  Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less

7. UNDERCARRIAGE

1) TRACKS

Model	Shapes		Double grouser		
					
HX900 L	Shoe width	mm (in)	700 (28)	800 (32)	900 (36)
	Operating weight	kg (lb)	88900 (195990)	89720 (197800)	90540 (199610)
	Ground pressure	kgf/cm ² (psi)	1.14 (16.3)	1.01 (14.4)	0.91 (12.9)
	Overall width	mm (in)	4200 (13' 9")	4300 (14' 1")	4400 (14' 5")

2) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	3 EA
Track rollers	9 EA
Track shoes	52 EA

3) 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
700 mm triple grouser	Option	A
800 mm triple grouser	Option	B
900 mm triple grouser	Option	C

※ **Table 2**

Category	Applications	Applications
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

8. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Scania DC16 084A
Type	Eco-friendly, 4-cycle turbocharged charger air cooled diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	8 cylinders
Firing order	1-5-4-2-6-3-7-8
Combustion chamber type	Direct injection type
Cylinder bore × stroke	130 × 154 mm (5.12" × 6.1")
Piston displacement	16400 cc (1000 cu in)
Compression ratio	17.4 : 1
Rated horse power	641 Hp at 2100 rpm (478 kW at 2100 rpm)
Maximum torque	321 kgf · m (2322 lbf · ft) at 1350 rpm
Engine oil quantity	49 ℓ (12.9 U.S. gal)
Dry weight	1490 kg (3280 lb)
Low idling speed	850 ± 100 rpm
High idling speed	1750 ± 50 rpm
Rated fuel consumption	155 g/HP · hr at 1800 rpm
Starting motor	24V-7kW
Alternator	24V-100A
Battery	4 × 12V × 160Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement axial 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 / 110.9 U.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 (570 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)]
Port relief valve pressure	380 kgf/cm ² (5400 psi)

[] : Power boost

5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	250cc/rev
Relief pressure	300 kgf/cm ² (3360 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	165.2 kgf · m (1195 lbf · ft) over
Brake release pressure	33.7~50 kgf/cm ² (479~711 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Axial piston motor
Relief pressure	350 kgf/cm ² (4980 psi)
Capacity (max / min)	337.2/228.6 cc/rev
Reduction gear type	3-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	18 kgf/cm ² (256 psi) below
Braking torque	114 kgf · m (825 lbf · ft) over

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø215 × Ø150 × 1935 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø225 × Ø160 × 2290 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø215 × Ø150 × 1593 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.

8) SHOE

Item		Width	Ground pressure	Link quantity	Overall width
HX900 L	Standard	★700 mm (28")	1.14 kgf/cm ² (16.3 psi)	52	4200 mm (13' 9")
	Option	★800 mm (32")	1.01 kgf/cm ² (14.4 psi)	52	4300 mm (14' 1")
		★900 mm (36")	0.91 kgf/cm ² (12.9 psi)	52	4400 mm (14' 5")

★ : Double grouser

9) BUCKET

Item	Capacity		Tooth quantity	Width
	SAE heaped	CECE heaped		
HX900 L	◇3.70 m ³ (4.84 yd ³)	3.30 m ³ (4.32 yd ³)	4	1845 mm (72.6")
	◇4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	5	2045 mm (80.5")
	◇4.85 m ³ (6.34 yd ³)	4.25 m ³ (5.56 yd ³)	5	2245mm (88.4")
	◇5.40 m ³ (7.06 yd ³)	4.75 m ³ (6.21 yd ³)	5	2445mm (96.3")
	◇5.80 m ³ (7.59 yd ³)	5.05 m ³ (6.61 yd ³)	6	2585mm (101.8")
	◆3.70 m ³ (4.84 yd ³)	3.30 m ³ (4.32 yd ³)	4	1845mm (72.6")
	◆4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	5	2045mm (80.5")
	◆4.85 m ³ (6.34 yd ³)	4.25 m ³ (5.56 yd ³)	5	2245mm (88.4")
	◆5.40 m ³ (7.06 yd ³)	4.75 m ³ (6.21 yd ³)	5	2445mm (96.3")
	◆4.25 m ³ (5.56 yd ³)	3.75 m ³ (4.90 yd ³)	5	2045mm (80.5")
	★3.60 m ³ (4.71 yd ³)	3.10 m ³ (4.05 yd ³)	5	1920mm (75.6")

◇ : Heavy duty

◆ : Rock-heavy duty

◆ : Light-heavy duty

★ : Rock-special heavy duty (Cubic marble handling)

9. RECOMMENDED OILS

HYUNDAI genuine lubricating oils have been developed to offer the best performance and service life for your equipment. These oils have been tested according to the specifications of HYUNDAI and, therefore, will meet the highest safety and quality requirements.

We recommend that you use only HYUNDAI genuine lubricating oils and grease officially approved by HYUNDAI.

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)
Engine oil pan	Engine oil	49 (12.9)	★SAE 5W-40						
			SAE 30						
			SAE 10W						
			SAE 10W-30						
			SAE 15W-40						
DEF/AdBlue® tank	Mixture of urea and deionized water	69 (18.2)	ISO 22241, High-purity urea + deionized water (32.5:67.5)						
Swing drive	Gear oil	14×2 (3.7×2)	★SAE 85W-140 (GL-4)						
Final drive		20×2 (5.3×2)	SAE 80W-90 (GL-5)						
Hydraulic tank	Hydraulic oil	Tank : 450 (119)	★ISO VG 15						
			ISO VG 32						
		System : 940 (248)	ISO VG 46, HBHO* ³						
			ISO VG 68						
Fuel tank	Diesel fuel* ¹	1110 (293)	★ASTM D975 NO.1						
			ASTM D975 NO.2						
Track roller	Gear oil	1.56 (0.41)	★SAE 75W-90						
Carrier roller		0.6 (0.16)	SAE 85W-140						
Idler		1.1 (0.29)							
Fitting (grease nipple)	Grease	As required	★NLGI NO.1						
			NLGI NO.2						
Radiator (reservoir tank)	Mixture of antifreeze and soft water* ²	70 (18.5)	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

UTTO : Universal Tractor Transmission Oil

DEF : Diesel Exhaust Fluid, DEF compatible with AdBlue®

★ : Cold region

Russia, CIS, Mongolia

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

*² : Soft water
City water or distilled water

*³ : Hyundai Bio Hydraulic Oil

- For more information, contact HYUNDAI dealers.

※ Using any lubricating oils other than HYUNDAI genuine products may lead to a deterioration of performance and cause damage to major components.

※ Do not mix HYUNDAI genuine oil with any other lubricating oil as it may result in damage to the systems of major components.

※ Do not use any engine oil other than that specified above, as it may clog the diesel particulate filter(DPF).

※ For HYUNDAI genuine lubricating oils and grease for use in regions with extremely low temperatures, please contact HYUNDAI dealers.