

SECTION 1 GENERAL



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SECTION 1 GENERAL

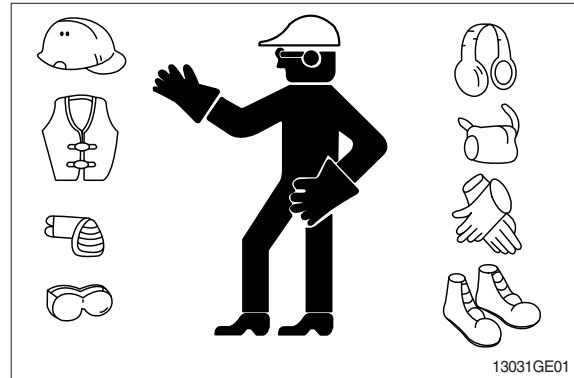
GROUP 1 SAFETY

FOLLOW SAFE PROCEDURE

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

WEAR PROTECTIVE CLOTHING

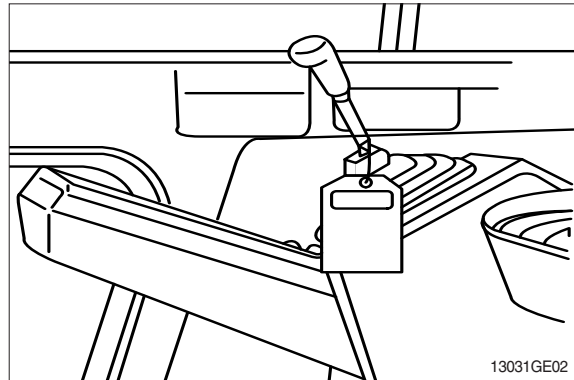
Wear close fitting clothing and safety equipment appropriate to the job.



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.



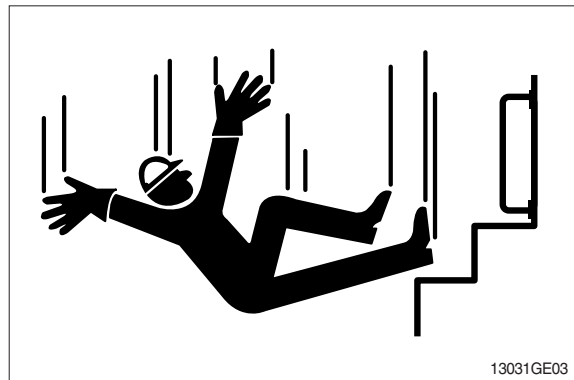
USE HANDHOLDS AND STEPS

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.

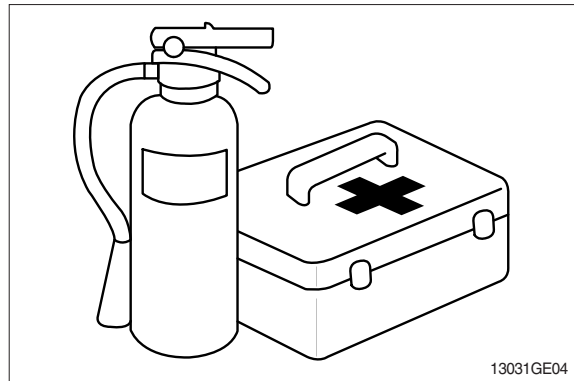


PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

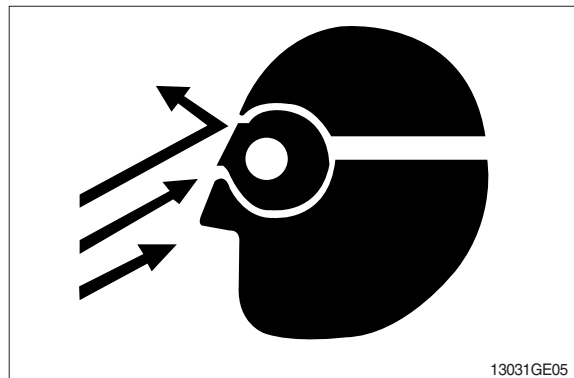
Keep a first aid kit and fire extinguisher handy.

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



PROTECT AGAINST FLYING DEBRIS

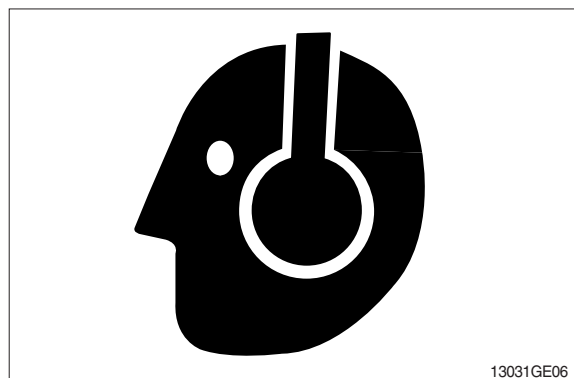
Guard against injury from flying pieces of metal or debris; Wear goggles or safety glasses.



PROTECT AGAINST NOISE

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

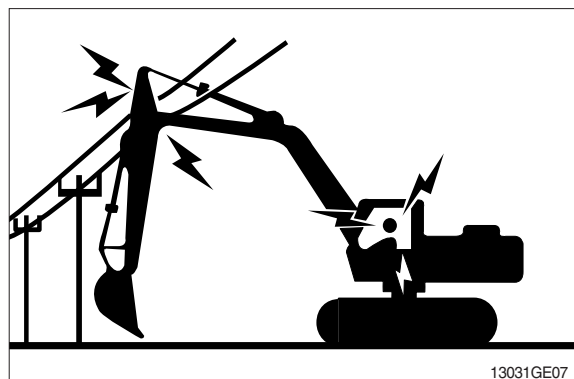
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



AVOID POWER LINES

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

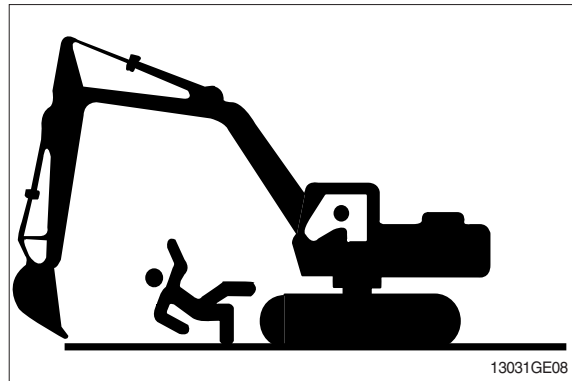
Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.



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.

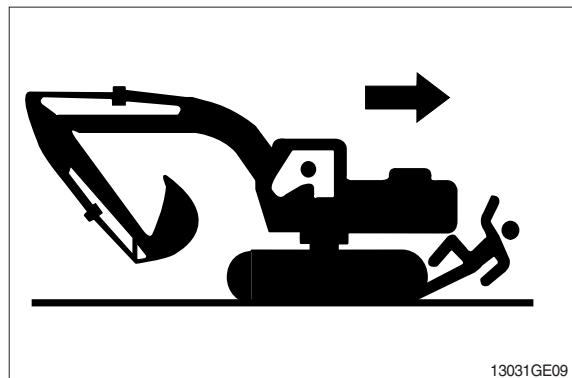


MOVE AND OPERATE MACHINE SAFELY

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:

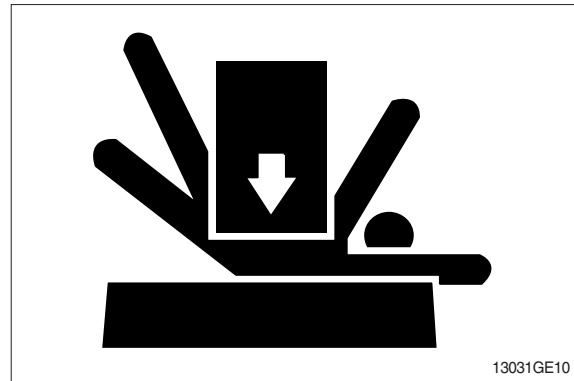
- Park machine on a level surface.
- Lower bucket to the ground.
- Turn auto idle switch off.
- Run engine at 1/2 speed without load for 2 minutes.
- Turn key switch to OFF to stop engine. Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

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.

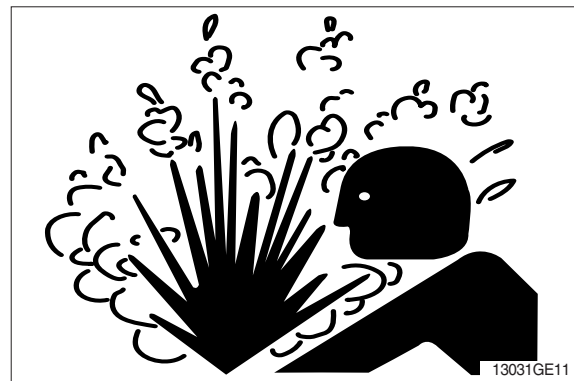
Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.



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

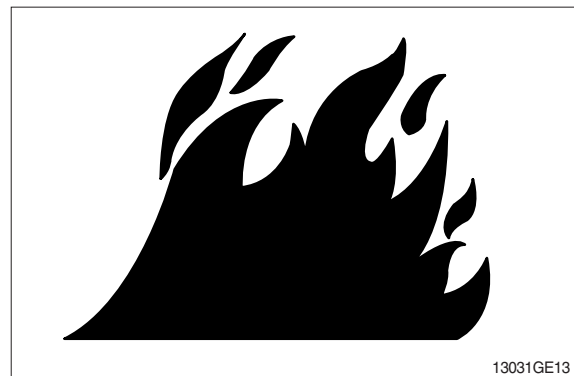
Handle fuel with care; It is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks. Always stop engine before refueling machine. Fill fuel tank outdoors.



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.

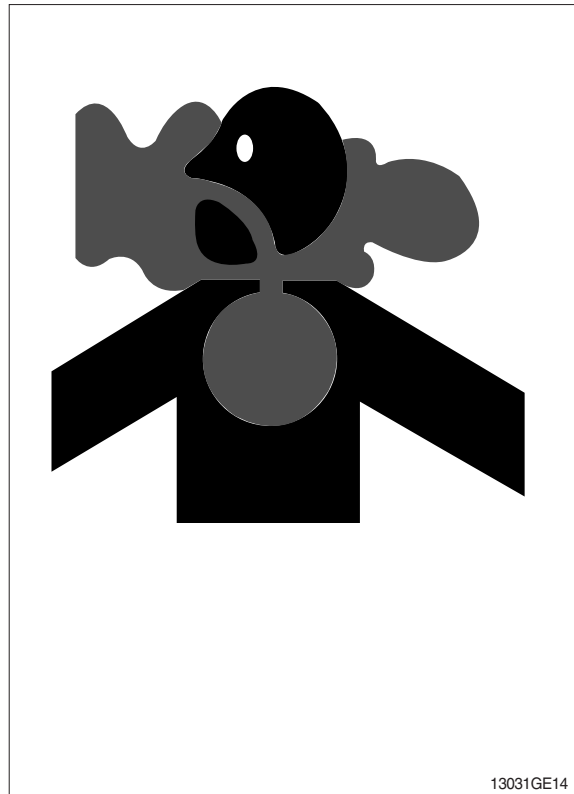
Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

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

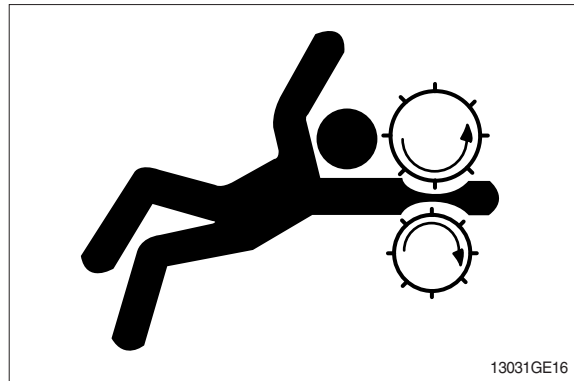
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



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.

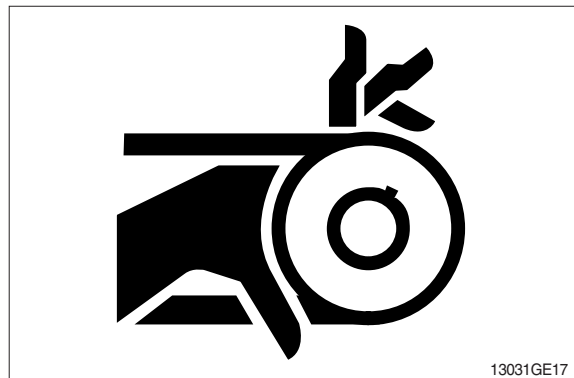
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



STAY CLEAR OF MOVING PARTS

Entanglements in moving parts can cause serious injury.

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



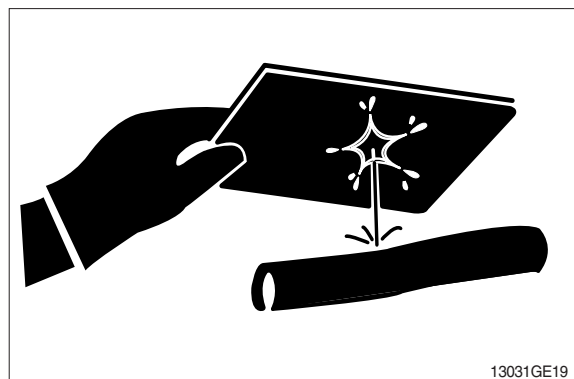
AVOID HIGH PRESSURE FLUIDS

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:

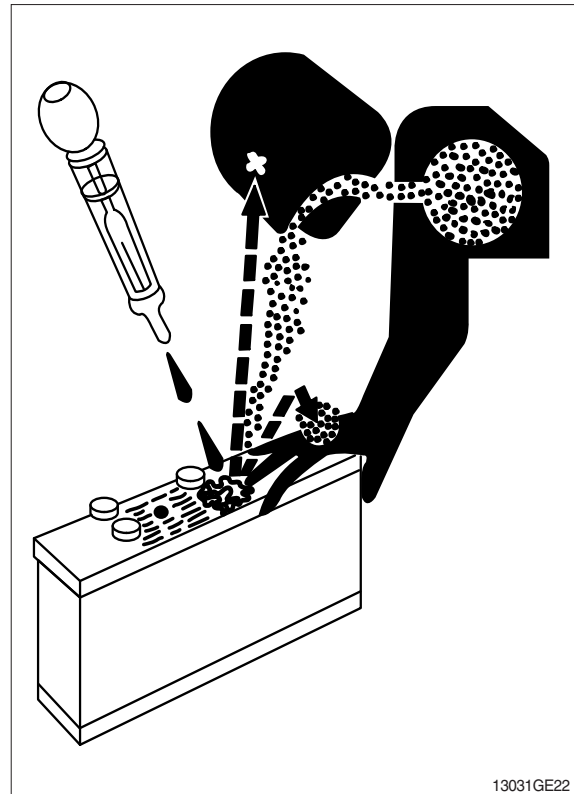
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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.



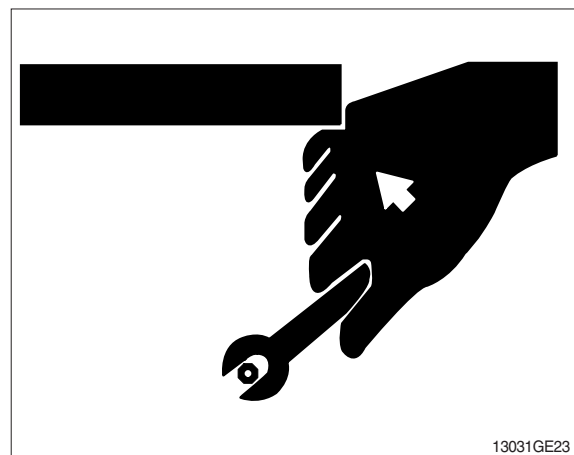
USE TOOLS PROPERLY

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.)

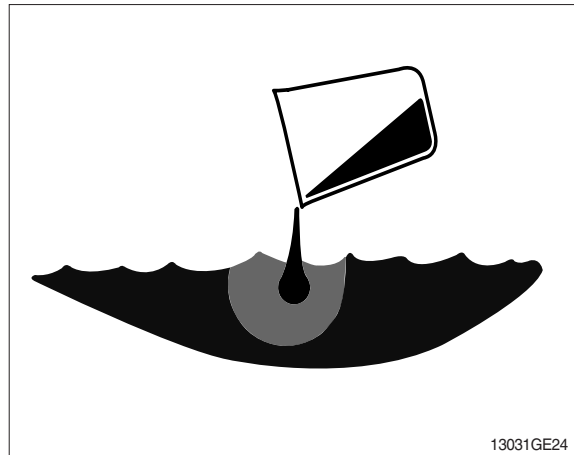


DISPOSE OF FLUIDS PROPERLY

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.

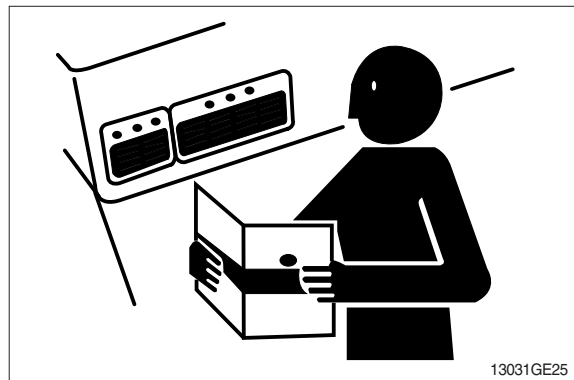
Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

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.



REPLACE SAFETY SIGNS

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

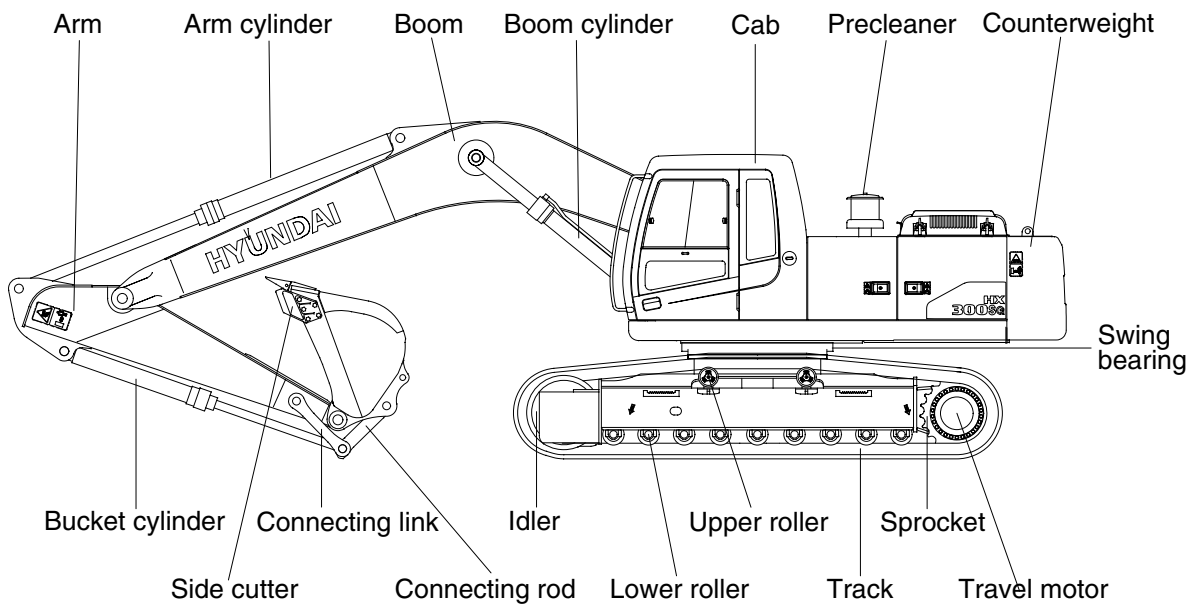
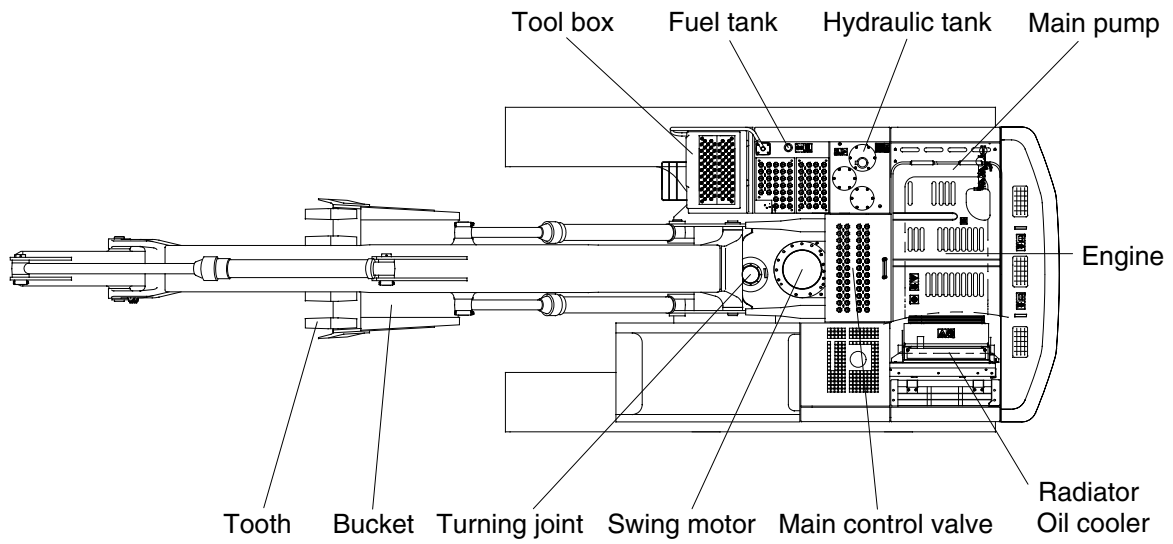


LIVE WITH SAFETY

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

GROUP 2 SPECIFICATIONS

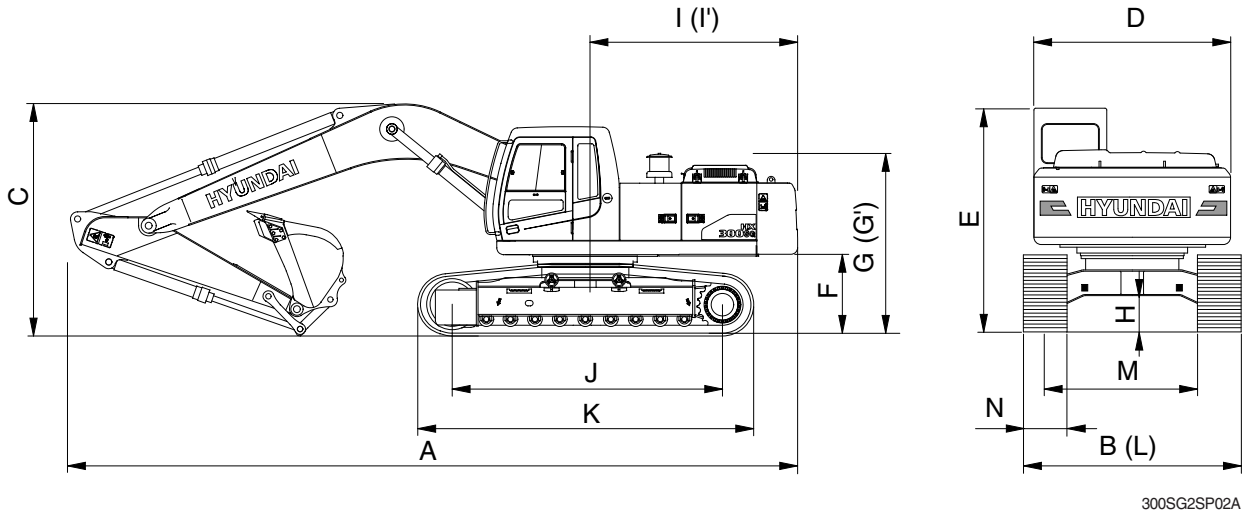
1. MAJOR COMPONENT



300SG2SP01

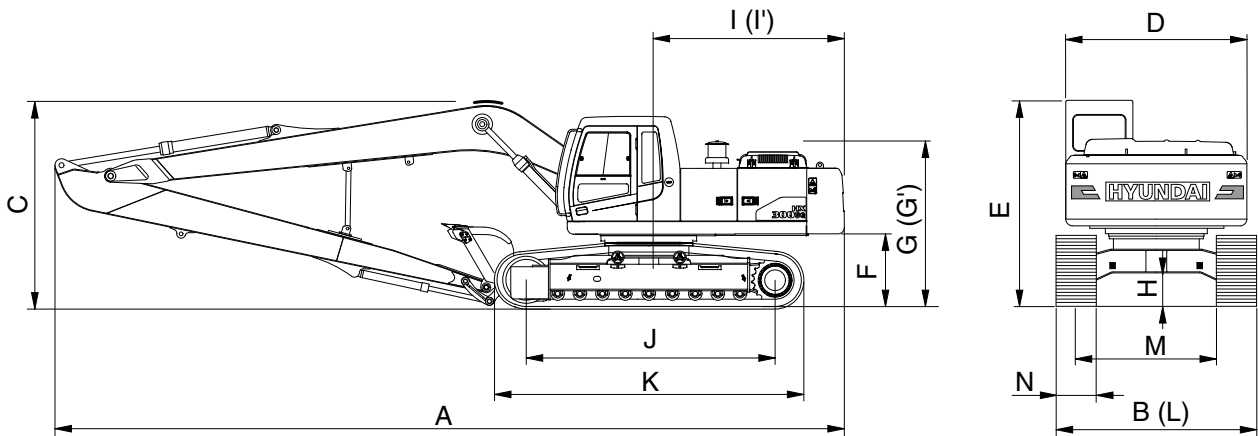
2. SPECIFICATIONS

1) HX300SG, MONO BOOM



Description	Unit		Specification			
	m (ft-in)	Boom	6.25 (20' 6")			
		Arm	3.05 (10' 0")	2.10 (6' 11")	2.50 (8' 2")	3.75 (12' 4")
	mm (in)	Shoe	600 (24")	600 (24")	600 (24")	600 (24")
Operating weight	kg (lb)		29540 (65125)	29340 (64684)	29530 (65103)	29850 (65808)
Bucket capacity (SAE heaped), standard	m ³ (yd ³)		1.27 (1.66)	1.27 (1.66)	1.27 (1.66)	1.27 (1.66)
Overall length	A	mm (ft-in)	10590 (34' 9")	10750 (35' 3")	10700 (35' 1")	10670 (35' 0")
Overall width	B		3200 (10' 6")	3200 (10' 6")	3200 (10' 6")	3200 (10' 6")
Overall height of boom	C		3330 (10' 11")	3660 (12' 0")	3520 (11' 7")	3530 (11' 7")
Superstructure width	D		2980 (9' 9")	2980 (9' 9")	2980 (9' 9")	2980 (9' 9")
Overall height of cab	E		3100 (10' 2")	3100 (10' 2")	3100 (10' 2")	3100 (10' 2")
Ground clearance of counterweight	F		1190 (3' 11")	1190 (3' 11")	1190 (3' 11")	1190 (3' 11")
Overall height of engine hood	G		3190 (10' 6")	3190 (10' 6")	3190 (10' 6")	3190 (10' 6")
Overall height of handrail	G'		3100 (10' 2")	3100 (10' 2")	3100 (10' 2")	3100 (10' 2")
Minimum ground clearance	H		500 (1' 8")	500 (1' 8")	500 (1' 8")	500 (1' 8")
Rear-end distance	I		3120 (10' 3")	3120 (10' 3")	3120 (10' 3")	3120 (10' 3")
Rear-end swing radius	I'		3200 (10' 6")	3200 (10' 6")	3200 (10' 6")	3200 (10' 6")
Distance between tumblers	J		4030 (13' 3")	4030 (13' 3")	4030 (13' 3")	4030 (13' 3")
Undercarriage length	K		4940 (16' 2")	4940 (16' 2")	4940 (16' 2")	4940 (16' 2")
Undercarriage width	L		3200 (10' 6")	3200 (10' 6")	3200 (10' 6")	3200 (10' 6")
Track gauge	M		2600 (8' 6")	2600 (8' 6")	2600 (8' 6")	2600 (8' 6")
Track shoe width, standard	N		600 (2' 0")	600 (2' 0")	600 (2' 0")	600 (2' 0")
Travel speed (low/high)	km/hr (mph)			3.2/5.7 (2.0/3.5)	3.2/5.7 (2.0/3.5)	3.2/5.7 (2.0/3.5)
Swing speed	rpm		11.1	11.1	11.1	11.1
Gradeability	Degree (%)		35 (70)	35 (70)	35 (70)	35 (70)
Ground pressure	kgf/cm ² (psi)		0.57 (8.11)	0.57 (8.11)	0.57 (8.11)	0.57 (8.11)
Maximum traction force	kgf (lbf)		25800 (56880)	25800 (56880)	25800 (56880)	25800 (56880)

2) HX300SG, LONG REACH

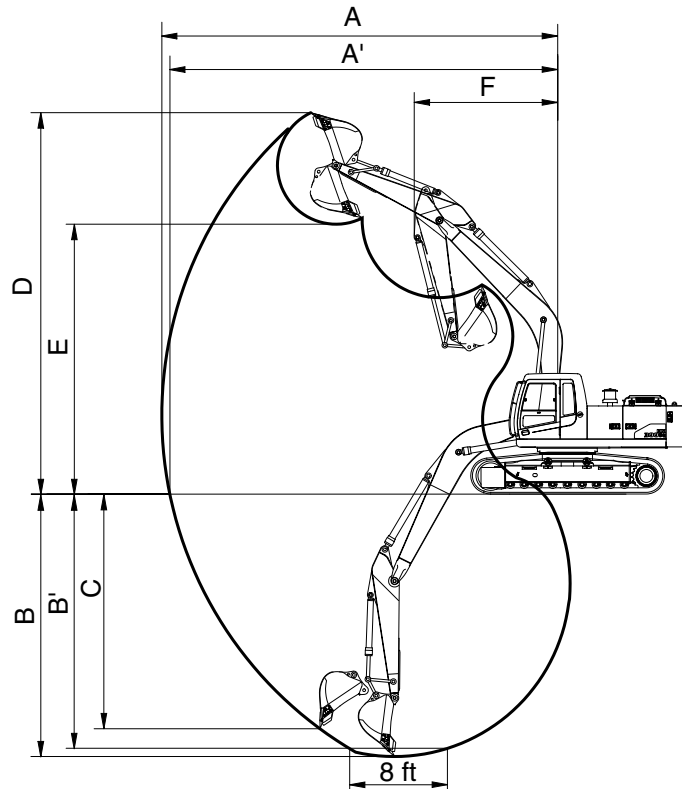


300SG2SP03A

Description	Unit		Specification	
	m (ft-in)	Boom	10.2 (33' 6")	
		Arm	7.85 (25' 9")	
mm (in)	Shoe	800 (32")		
Operating weight	kg (lb)		32610 (71893)	
Bucket capacity (SAE heaped), standard	m ³ (yd ³)		0.52 (0.68)	
Overall length	A	mm (ft-in)	14550 (47' 9")	
Overall width	B		3400 (11' 2")	
Overall height of boom	C		3550 (11' 8")	
Superstructure width	D		2980 (9' 9")	
Overall height of cab	E		3100 (10' 2")	
Ground clearance of counterweight	F		1190 (3' 11")	
Overall height of engine hood	G		3190 (10' 6")	
Overall height of handrail	G'		3100 (10' 2")	
Minimum ground clearance	H		500 (1' 8")	
Rear-end distance	I		3120 (10' 3")	
Rear-end swing radius	I'		3200 (10' 6")	
Distance between tumbler	J		4030 (13' 3")	
Undercarriage length	K		4940 (16' 2")	
Undercarriage width	L		3200 (10' 6")	
Track gauge	M		2600 (8' 6")	
Track shoe width, standard	N		800 (2' 7")	
Travel speed (low/high)	km/hr (mph)		3.2/5.7 (2.0/3.5)	
Swing speed	rpm		11.1	
Gradeability	Degree (%)		35 (70)	
Ground pressure	kgf/cm ² (psi)		0.47 (6.68)	
Maximum traction force	kgf (lbf)		25800 (56880)	

3. WORKING RANGE

1) HX300SG, MONO BOOM

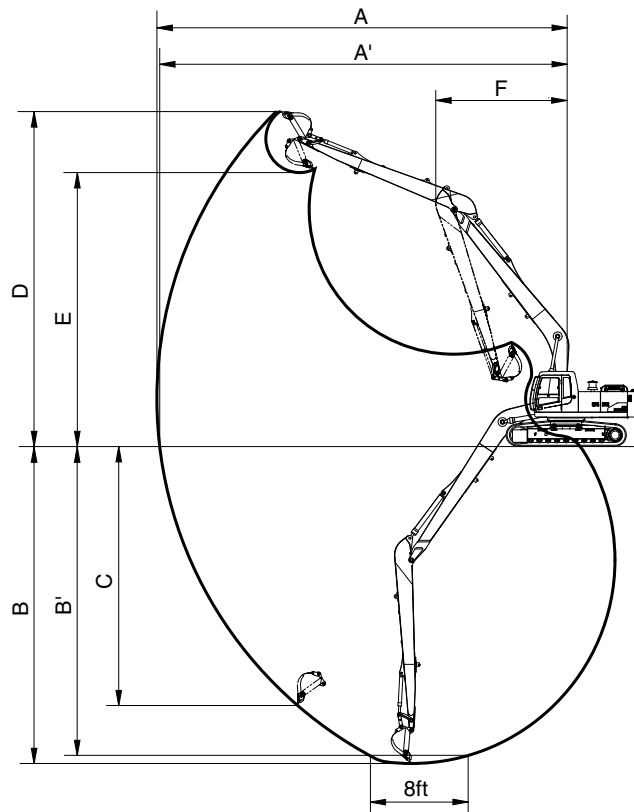


300SG2SP04

Description	m (ft-in)	Boom	6.25 (20' 6")			
		Arm	3.05 (10' 0")	2.10 (6' 11")	2.50 (8' 2")	3.75 (12' 4")
Max digging reach	mm (ft-in)	A	10810 (35' 6")	10040 (32' 11")	10310 (33' 10")	11420 (37' 6")
Max digging reach on ground		A'	10610 (34' 10")	9820 (32' 3")	10100 (33' 2")	11230 (36' 10")
Max digging depth		B	7330 (24' 1")	6380 (20' 11")	6780 (22' 3")	8030 (26' 4")
Max digging depth (8 ft level)		B'	7170 (23' 6")	6180 (20' 3")	6600 (21' 8")	7890 (25' 11")
Max vertical wall digging depth		C	6280 (20' 7")	5910 (19' 5")	5760 (18' 11")	6990 (22' 11")
Max digging height		D	10200 (33' 6")	10130 (33' 3")	9980 (32' 9")	10410 (34' 2")
Max dumping height		E	7150 (23' 5")	6990 (22' 11")	6930 (22' 9")	7360 (24' 2")
Min swing radius		F	4270 (14' 0")	4420 (14' 6")	4320 (14' 2")	4220 (13' 10")
Bucket digging force	kN		169 [184]	169 [184]	169 [184]	169 [184]
	kgf	SAE	17200 [18760]	17200 [18760]	17200 [18760]	17200 [18760]
	lbf		37920 [41370]	37920 [41370]	37920 [41370]	37920 [41370]
	kN	ISO	192 [210]	192 [210]	192 [210]	192 [210]
	kgf		19600 [21380]	19600 [21380]	19600 [21380]	19600 [21380]
	lbf		43210 [47140]	43210 [47140]	43210 [47140]	43210 [47140]
Arm digging force	kN	SAE	124 [135]	170 [185]	147 [161]	109 [119]
	kgf		12600 [13750]	17300 [18870]	15000 [16360]	11100 [12110]
	lbf		27780 [30310]	38140 [41610]	33070 [36080]	24470 [26690]
	kN	ISO	129 [140]	178 [194]	154 [168]	112 [122]
	kgf		13100 [14290]	18100 [19750]	15700 [17130]	11400 [12440]
	lbf		28880 [31510]	39900 [43530]	34610 [37760]	25130 [27410]

[] : Power boost

2) HX300SG, LONG REACH



300SG2SP05

Description	m (ft-in)	Boom	10.2 (33' 6")
		Arm	7.85 (25' 9")
Max digging reach	mm (ft-in)	A	18530 (60' 10")
Max digging reach on ground		A'	18410 (60' 5")
Max digging depth		B	14740 (48' 4")
Max digging depth (8 ft level)		B'	14660 (48' 1")
Max vertical wall digging depth		C	13700 (44' 11")
Max digging height		D	14590 (47' 10")
Max dumping height		E	12270 (40' 3")
Min swing radius		F	6270 (20' 7")
Bucket digging force	kN	SAE	70 [76]
	kgf		7100 [7750]
	lbf		15650 [17090]
	kN	ISO	80 [88]
	kgf		8200 [8950]
	lbf		18080 [19730]
Arm digging force	kN	SAE	43 [47]
	kgf		4420 [4820]
	lbf		9740 [10630]
	kN	ISO	44 [48]
	kgf		4500 [4910]
	lbf		9920 [10830]

[] : Power boost

4. WEIGHT

Item	HX300SG		HX300SG Long reach	
	kg	lb	kg	lb
Upperstructure assembly				
· Main frame weld assembly	2361	5210	2361	5210
· Engine assembly	485	1069	485	1069
· Main pump assembly	133	293	133	293
· Main control valve assembly	230	507	230	507
· Swing motor assembly	408	900	408	900
· Hydraulic oil tank assembly	224	494	224	494
· Fuel tank assembly	275	606	275	606
· Counterweight	5200	11460	7000	15450
· Cab assembly	310	680	310	680
Lower chassis assembly				
· Track frame weld assembly	3765	8300	3765	8300
· Swing bearing	433	950	433	950
· Travel motor assembly	433	950	433	950
· Turning joint	38	84	38	84
· Sprocket (2 EA)	141	311	141	311
· Track recoil spring (2 EA)	450	992	450	992
· Idler (2 EA)	500	1102	500	1102
· Upper roller (4 EA)	140	309	140	309
· Lower roller (18 EA)	972	2143	972	2143
· Track-chain assembly (600 mm triple grouser shoe) (2 EA)	3758	8285	-	-
· Track-chain assembly (800 mm triple grouser shoe) (2 EA)	3758	8285	4706	10375
Front attachment assembly				
· 6.25 m boom assembly	2200	4860	-	-
· 3.05 m arm assembly	1025	2260	-	-
· 1.27 m ³ SAE heaped bucket	1010	2230	-	-
· 10.2 m boom assembly	-	-	2960	6530
· 7.85 m arm assembly	-	-	1340	2960
· 0.52 m ³ SAE heaped bucket	-	-	460	1010
· Boom cylinder assembly	263	580	263	580
· Arm cylinder assembly	368	811	368	811
· 1.27 m ³ bucket cylinder assembly	224	494	-	-
· 0.52 m ³ bucket cylinder assembly	-	-	103	227
· Bucket control linkage total	112	248	112	248

※ This information is different with operating and transportation weight because it is not including harness, pipe, oil, fuel so on.

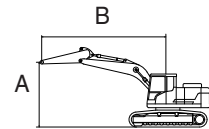
※ Refer to Transportation for actual weight information and Specifications for operating weight.











5. LIFTING CAPACITIES

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
		Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
HX300SG	MONO BOOM	6250	2100	5200	600	-	-	-	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)								At max. reach			
	3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach	
											m (ft)	
7.5 m (24.6 ft)	kg					*7150	*7150			*7350	7030	6.40
	lb					*15760	*15760			*16200	15500	(21.0)
6.0 m (19.7 ft)	kg					*7360	*7360			*7240	5430	7.44
	lb					*16230	*16230			*15960	11970	(24.4)
4.5 m (14.8 ft)	kg					*8330	7420	*7370	5280	7290	4670	8.06
	lb					*18360	16360	*16250	11640	16070	10300	(26.5)
3.0 m (9.8 ft)	kg					*9550	7010	*7900	5100	6770	4310	8.37
	lb					*21050	15450	*17420	11240	14930	9500	(27.5)
1.5 m (4.9 ft)	kg					*10560	6700	7850	4940	6640	4210	8.40
	lb					*23280	14770	17310	10890	14640	9280	(27.6)
0.0 m (0.0 ft)	kg					10810	6550	7750	4840	6890	4350	8.16
	lb					23830	14440	17090	10670	15190	9590	(26.8)
-1.5 m (-4.9 ft)	kg			*14440	9990	10800	6540	7780	4870	7650	4800	7.60
	lb			*31830	22020	23810	14420	17150	10740	16870	10580	(24.9)
-3.0 m (-9.8 ft)	kg	*17130	*17130	*13040	10180	*9850	6690			*8410	5860	6.66
	lb	*37770	*37770	*28750	22440	*21720	14750			*18540	12920	(21.9)
-4.5 m (-14.8 ft)	kg			*9810	*9810					*8120	*8120	5.12
	lb			*21630	*21630					*17900	*17900	(16.8)

Note 1. Lifting capacity are based on ISO 10567.

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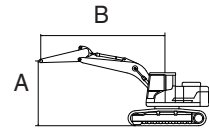
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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
		Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
HX300SG	MONO BOOM	6250	2500	5200	600	-	-	-	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)								At max. reach			
	3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach	
											m (ft)	
7.5 m (24.6 ft)	kg					*6510	*6510			*6350	*6350	6.74
	lb					*14350	*14350			*14000	*14000	(22.1)
6.0 m (19.7 ft)	kg					*6870	*6870	*6670	5440	*6040	5140	7.74
	lb					*15150	*15150	*14700	11990	*13320	11330	(25.4)
4.5 m (14.8 ft)	kg			*9930	*9930	*7880	7490	*6990	5310	*6030	4450	8.34
	lb			*21890	*21890	*17370	16510	*15410	11710	*13290	9810	(27.4)
3.0 m (9.8 ft)	kg			*12770	10610	*9150	7060	*7600	5110	*6240	4110	8.64
	lb			*28150	23390	*20170	15560	*16760	11270	*13760	9060	(28.3)
1.5 m (4.9 ft)	kg					*10270	6710	7850	4920	6320	4000	8.67
	lb					*22640	14790	17310	10850	13930	8820	(28.4)
0.0 m (0.0 ft)	kg			*15040	9840	*10790	6520	7710	4800	6530	4110	8.43
	lb			*33160	21690	23790	14370	17000	10580	14400	9060	(27.7)
-1.5 m (-4.9 ft)	kg	*10480	*10480	*14670	9870	10730	6470	7690	4790	7170	4490	7.89
	lb	*23100	*23100	*32340	21760	23660	14260	16950	10560	15810	9900	(25.9)
-3.0 m (-9.8 ft)	kg	*18430	*18430	*13520	10030	*10200	6570			*8350	5380	6.99
	lb	*40630	*40630	*29810	22110	*22490	14480			*18410	11860	(22.9)
-4.5 m (-14.8 ft)	kg	*14820	*14820	*10960	10410					*8540	7690	5.55
	lb	*32670	*32670	*24160	22950					*18830	16950	(18.2)

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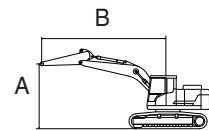
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










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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
		Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
HX300SG	MONO BOOM	6250	3050	5200	600	-	-	-	-	-

•  : Rating over-front

•  : Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)										At max. reach							
	3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		9.0 m (29.5 ft)		Capacity		Reach					
															m (ft)			
7.5 m (24.6 ft)	kg																	
	lb															*4120	*4120	7.38
6.0 m (19.7 ft)	kg														*9080	*9080	(24.2)	
	lb														*3940	*3940	8.30	
4.5 m (14.8 ft)	kg			*8800	*8800	*7220	*7220	*6480	5350					*8690	*8690	(27.2)		
	lb			*19400	*19400	*15920	*15920	*14290	11790					*3930	*3930	8.86		
3.0 m (9.8 ft)	kg			*11640	10880	*8560	7140	*7170	5130	*5140	3850	*4060	3740			9.14		
	lb			*25660	23990	*18870	15740	*15810	11310	*11330	8490	*8950	8250			(30.0)		
1.5 m (4.9 ft)	kg			*13860	10120	*9800	6740	7840	4910	*5800	3750	*4340	3640			9.17		
	lb			*30560	22310	*21610	14860	17280	10820	*12790	8270	*9570	8020			(30.1)		
0.0 m (0.0 ft)	kg			*14820	9790	*10630	6490	7670	4760			*4830	3720			8.94		
	lb			*32670	21580	*23440	14310	16910	10490			*10650	8200			(29.3)		
-1.5 m (-4.9 ft)	kg	*10440	*10440	*14830	9740	10650	6390	7600	4690			*5670	4010			8.44		
	lb	*23020	*23020	*32690	21470	23480	14090	16760	10340			*12500	8840			(27.7)		
-3.0 m (-9.8 ft)	kg	*16850	*16850	*14030	9850	*10490	6430	7680	4760			*7280	4680			7.61		
	lb	*37150	*37150	*30930	21720	*23130	14180	16930	10490			*16050	10320			(25.0)		
-4.5 m (-14.8 ft)	kg	*16800	*16800	*12100	10140	*8850	6670					*8160	6240			6.32		
	lb	*37040	*37040	*26680	22350	*19510	14700					*17990	13760			(20.7)		

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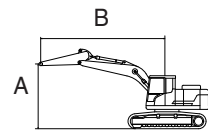
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
		Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
HX300SG	MONO BOOM	6250	3750	5200	600	-	-	-	-	-



: Rating over-front



: Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)												At max. reach			
	1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		9.0 m (29.5 ft)		Capacity		Reach	
															m (ft)	
9.0 m (29.5 ft)	kg													*3570	*3570	6.87
	lb													*7870	*7870	(22.6)
7.5 m (24.6 ft)	kg								*4790	*4790				*3260	*3260	8.14
	lb								*10560	*10560				*7190	*7190	(26.7)
6.0 m (19.7 ft)	kg								*5290	*5290				*3140	*3140	8.97
	lb								*11660	*11660				*6920	*6920	(29.4)
4.5 m (14.8 ft)	kg						*6340	*6340	*5830	5430	*4900	3990	*3140	*3140	9.50	
	lb						*13980	*13980	*12850	11970	*10800	8800	*6920	*6920	(31.2)	
3.0 m (9.8 ft)	kg				*10190	*10190	*7750	7280	*6590	5180	*5990	3860	*3250	*3250	9.76	
	lb				*22470	*22470	*17090	16050	*14530	11420	*13210	8510	*7170	*7170	(32.0)	
1.5 m (4.9 ft)	kg				*12770	10320	*9140	6820	*7380	4920	5940	3730	*3470	3260	9.79	
	lb				*28150	22750	*20150	15040	*16270	10850	13100	8220	*7650	7190	(32.1)	
0.0 m (0.0 ft)	kg			*6390	*6390	*14290	9810	*10190	6480	7650	4730	5820	3630	*3830	3310	9.58
	lb			*14090	*14090	*31500	21630	*22470	14290	16870	10430	12830	8000	*8440	7300	(31.4)
-1.5 m (-4.9 ft)	kg	*6630	*6630	*9930	*9930	*14790	9620	10580	6310	7520	4610	*5340	3580	*4440	3530	9.11
	lb	*14620	*14620	*21890	*21890	*32610	21210	23320	13910	16580	10160	*11770	7890	*9790	7780	(29.9)
-3.0 m (-9.8 ft)	kg	*10420	*10420	*14550	*14550	*14440	9650	10550	6290	7520	4610			*5520	4010	8.35
	lb	*22970	*22970	*32080	*32080	*31830	21270	23260	13870	16580	10160			*12170	8840	(27.4)
-4.5 m (-14.8 ft)	kg	*15040	*15040	*18840	*18840	*13120	9850	*9740	6420					*7630	5040	7.19
	lb	*33160	*33160	*41540	*41540	*28920	21720	*21470	14150					*16820	11110	(23.6)
-6.0 m (-19.7 ft)	kg			*14260	*14260	*10040	*10040							*8020	7950	5.38
	lb			*31440	*31440	*22130	*22130							*17680	17530	(17.6)

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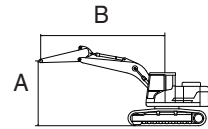
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HX300SG Long reach	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		10200	7850	7000	800	-	-	-	-	-



: Rating over-front



: Rating over-side or 360 degree



Lift-point height (A)	Lift-point radius (B)												At max. reach			
	1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		9.0 m (29.5 ft)		Capacity		Reach	
															m (ft)	
3.0 m (9.8 ft)	kg					*7270	*7270			*4130	*4130	*3510	*3510	*860	*860	17.26
	lb					*16030	*16030			*9110	*9110	*7740	*7740	*1900	*1900	(56.6)
1.5 m (4.9 ft)	kg					*4330	*4330	*6440	*6440	*4920	*4920	*4040	*4040	*910	*910	17.27
	lb					*9550	*9550	*14200	*14200	*10850	*10850	*8910	*8910	*2010	*2010	(56.7)
0.0 m (0.0 ft)	kg			*1390	*1390	*3240	*3240	*7450	6590	*5610	4960	*4530	3900	*970	*970	17.15
	lb			*3060	*3060	*7140	*7140	*16420	14530	*12370	10930	*9990	8600	*2140	*2140	(56.3)
-1.5 m (-4.9 ft)	kg	*1450	*1450	*1960	*1960	*3330	*3330	*6240	6110	*6160	4600	*4950	3620	*1050	*1050	16.90
	lb	*3200	*3200	*4320	*4320	*7340	*7340	*13760	13470	*13580	10140	*10910	7980	*2310	*2310	(55.4)
-3.0 m (-9.8 ft)	kg	*2110	*2110	*2620	*2620	*3800	*3800	*6180	5850	*6560	4360	*5270	3430	*1170	*1170	16.51
	lb	*4650	*4650	*5780	*5780	*8380	*8380	*13620	12900	*14460	9610	*11620	7560	*2580	*2580	(54.2)
-4.5 m (-14.8 ft)	kg	*2790	*2790	*3340	*3340	*4470	*4470	*6670	5750	*6800	4230	*5490	3320	*1310	*1310	15.96
	lb	*6150	*6150	*7360	*7360	*9850	*9850	*14700	12680	*14990	9330	*12100	7320	*2890	*2890	(52.4)
-6.0 m (-19.7 ft)	kg	*3510	*3510	*4130	*4130	*5310	*5310	*7520	5750	*6890	4200	*5600	3270	*1520	*1520	15.25
	lb	*7740	*7740	*9110	*9110	*11710	*11710	*16580	12680	*15190	9260	*12350	7210	*3350	*3350	(50.0)
-7.5 m (-24.6 ft)	kg	*4290	*4290	*5010	*5010	*6320	*6320	*8650	5830	*6830	4230	*5590	3280	*1830	1750	14.34
	lb	*9460	*9460	*11050	*11050	*13930	*13930	*19070	12850	*15060	9330	*12320	7230	*4030	3860	(47.0)
-9.0 m (-29.5 ft)	kg	*5160	*5160	*6030	*6030	*7570	*7570	*8260	6000	*6590	4330	*5420	3350	*2310	2030	13.19
	lb	*11380	*11380	*13290	*13290	*16690	*16690	*18210	13230	*14530	9550	*11950	7390	*5090	4480	(43.3)
-10.5 m (-34.4 ft)	kg	*6140	*6140	*7250	*7250	*9180	*9180	*7610	6240	*6120	4510	*5030	3500	*3210	2480	11.74
	lb	*13540	*13540	*15980	*15980	*20240	*20240	*16780	13760	*13490	9940	*11090	7720	*7080	5470	(38.5)
-12.0 m (-39.4 ft)	kg			*8780	*8780	*8430	*8430	*6570	*6570	*5290	4790	*4280	3740	*3750	3340	9.86
	lb			*19360	*19360	*18580	*18580	*14480	*14480	*11660	10560	*9440	8250	*8270	7360	(32.3)

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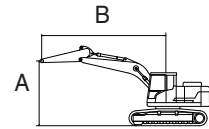
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












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Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HX300SG Long reach	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		10200	7850	7000	800	-	-	-	-	-

·  : Rating over-front

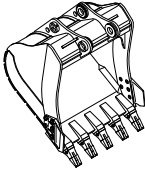
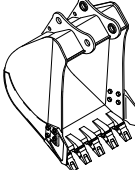
·  : Rating over-side or 360 degree



Lift-point height (A)		Lift-point radius (B)										At max. reach				
		10.5 m (34.4 ft)		12.0 m (39.4 ft)		13.5 m (44.3 ft)		15.0 m (44.3 ft)		16.5 m (54.1 ft)		Capacity		Reach		
																m (ft)
13.5 m (44.3 ft)	kg lb													*900 *1980	*900 *1980	12.91 (42.4)
12.0 m (39.4 ft)	kg lb					*1170 *2580	*1170 *2580							*850 *1870	*850 *1870	14.12 (46.3)
10.5 m (34.4 ft)	kg lb					*1470 *3240	*1470 *3240	*860 *1900	*860 *1900					*810 *1790	*810 *1790	15.07 (49.4)
9.0 m (29.5 ft)	kg lb					*1670 *3680	*1670 *3680	*1260 *2780	*1260 *2780					*800 *1760	*800 *1760	15.82 (51.9)
7.5 m (24.6 ft)	kg lb					*1850 *4080	*1850 *4080	*1520 *3350	*1520 *3350					*790 *1740	*790 *1740	16.40 (53.8)
6.0 m (19.7 ft)	kg lb			*2220 *4890	*2220 *4890	*2060 *4540	*2060 *4540	*1730 *3810	*1730 *3810	*1060 *2340	*1060 *2340			*800 *1760	*800 *1760	16.83 (55.2)
4.5 m (14.8 ft)	kg lb	*2740 *6040	*2740 *6040	*2560 *5640	*2560 *5640	*2330 *5140	*2330 *5140	*1950 *4300	*1950 *4300	*1290 *2840	*1290 *2840			*830 *1830	*830 *1830	17.11 (56.1)
3.0 m (9.8 ft)	kg lb	*3100 *6830	*3100 *6830	*2820 *6220	*2820 *6220	*2620 *5780	2380 5250	*2180 *4810	1940 4280	*1460 *3220	*1460 *3220			*860 *1900	*860 *1900	17.26 (56.6)
1.5 m (4.9 ft)	kg lb	*3470 *7650	3380 7450	*3090 *6810	2740 6040	*2820 *6220	2240 4940	*2430 *5360	1850 4080	*1570 *3460	1520 3350			*910 *2010	*910 *2010	17.27 (56.7)
0.0 m (0.0 ft)	kg lb	*3830 *8440	3140 6920	*3360 *7410	2560 5640	*3020 *6660	2120 4670	*2670 *5890	1760 3880	*1600 *3530	1470 3240			*970 *2140	*970 *2140	17.15 (56.3)
-1.5 m (-4.9 ft)	kg lb	*4150 *9150	2940 6480	*3600 *7940	2420 5340	*3200 *7050	2010 4430	*2850 *6280	1690 3730	*1500 *3310	1420 3130			*1050 *2310	*1050 *2310	16.90 (55.4)
-3.0 m (-9.8 ft)	kg lb	*4410 *9720	2790 6150	*3800 *8380	2300 5070	3310 7300	1930 4250	2840 6260	1630 3590	*1170 *2580	*1170 *2580			*1170 *2580	*1170 *2580	16.51 (54.2)
-4.5 m (-14.8 ft)	kg lb	*4600 *10140	2690 5930	3840 8470	2230 4920	3260 7190	1880 4140	*2620 *5780	1600 3530					*1310 *2890	*1310 *2890	15.96 (52.4)
-6.0 m (-19.7 ft)	kg lb	4570 10080	2640 5820	3800 8380	2200 4850	3240 7140	1860 4100	*1920 *4230	1610 3550					*1520 *3350	*1520 *3350	15.25 (50.0)
-7.5 m (-24.6 ft)	kg lb	4570 10080	2650 5840	3810 8400	2210 4870	3270 7210	1890 4170							*1830 *4030	1750 3860	14.34 (47.0)
-9.0 m (-29.5 ft)	kg lb	*4550 *10030	2710 5970	*3850 *8490	2270 5000									*2310 *5090	2030 4480	13.19 (43.3)
-10.5 m (-34.4 ft)	kg lb	*4180 *9220	2850 6280											*3210 *7080	2480 5470	11.74 (38.5)

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET

	
1.27 SAE heaped bucket	★0.52 m ³ SAE heaped bucket

Capacity		Width		Weight	Recommendation				
					6.25 m (20' 6") boom				10.2 m (33' 6") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.1 m arm (6' 11")	2.5 m arm (8' 2")	3.05 m arm (10' 0")	3.75 m arm (12' 4")	7.85 m arm (25' 9")
1.27 m ³ (1.66 yd ³)	1.11 m ³ (1.45 yd ³)	1325 mm (52")	1410 mm (56")	1135 kg (2500 lb)	●	●	◐	■	X
★ 0.52 m ³ (0.68 yd ³)	0.45 m ³ (0.59 yd ³)	945 mm (37")	1035 mm (41")	470 kg (1040 lb)	X	X	X	X	◐

★ : Long reach bucket

- Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less
- ◐ Applicable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less
- Applicable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less
- ▲ Applicable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less
- X Not recommended

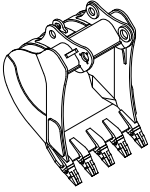
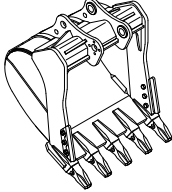
※ These recommendations are for general conditions and average use.

Work tools and ground conditions have effects on machine performance.

Select an optimum combination according to the working conditions and the type of work that is being done.

Consult your Hyundai dealer for information on selecting the correct boom–arm–bucket combination.

2) HEAVY DUTY AND ROCK-HEAVY DUTY BUCKET

	
<p>◆ 1.46 m³ SAE heaped bucket</p>	<p>◆ 1.50 m³ SAE heaped bucket</p>

Capacity		Width		Weight	Recommendation				
					6.25 m (20' 6") boom				10.2 m (33' 6") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.1 m arm (6' 11")	2.5 m arm (8' 2")	3.05 m arm (10' 0")	3.75 m arm (12' 4")	7.85 m arm (25' 9")
◆ 1.46 m ³ (1.91 yd ³)	1.28 m ³ (1.67 yd ³)	1535 mm (60")	-	1395 kg (3080 lb)	●	●	■	▲	X
◆ 1.50 m ³ (1.96 yd ³)	1.30 m ³ (1.70 yd ³)	1550 mm (61")	-	1575 kg (3470 lb)	●	■	■	▲	X

◆ : Heavy duty bucket

◆ : Rock-Heavy duty bucket

●	Applicable for materials with density of 2100 kg/m ³ (3500 lb/yd ³) or less
◐	Applicable for materials with density of 1800 kg/m ³ (3000 lb/yd ³) or less
■	Applicable for materials with density of 1500 kg/m ³ (2500 lb/yd ³) or less
▲	Applicable for materials with density of 1200 kg/m ³ (2000 lb/yd ³) or less
X	Not recommended

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	Description	Unit	Triple grouser		
	width	mm (in)	600 (24")	700 (28")	800 (32")
HX300SG	Operating weight	kg (lb)	29540 (65125)	30090 (66337)	30460 (67153)
	Ground pressure	kgf/cm ² (psi)	0.57 (8.09)	0.50 (7.11)	0.44 (6.26)
	Overall width	mm (ft-in)	3200 (10' 6")	3300 (10' 10")	3400 (11' 1")
HX300SG Long reach	Operating weight	kg (lb)	-	-	32610 (71893)
	Ground pressure	kgf/cm ² (psi)	-	-	0.47 (6.68)
	Overall width	mm (ft-in)	-	-	3400 (11' 2")

3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Upper rollers	2 EA
Lower rollers	9 EA
Track shoes	48 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
600 mm triple grouser	Standard	A
700 mm triple grouser	Option	B
800 mm triple grouser	Option	C
800 mm triple grouser (long reach)	Standard	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 or a wide range of general civil engineering work
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	Hyundai / HE6.7
Type	4-cycle, turbocharged, charge air cooled, electronic controlled diesel engine
Cooling method	Water cooled
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	107 × 124 mm (4.21 " × 4.88 ")
Piston displacement	6.7 ℓ (408 cu in)
Compression ratio	17.2 : 1
Gross power	227 Hp (169 kW) at 1900rpm
Net power	197 Hp (147 kW) at 1900 rpm
Peak torque	952 N·m (702 lbf·ft) at 1400 rpm
Engine oil quantity	23.1 ℓ (6.1 U.S. gal)
Wet weight	485 kg (1069 lb)
Starting motor	24 V - 4.8 kW
Alternator	24 V - 90 A
Battery	2 × 12V × 150Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 140 cc/rev
Maximum pressure	330 kgf/cm ² (4690 psi) [360 kgf/cm ² (5120 psi)]
Rated oil flow	2 × 266 ℓ /min (70.3 U.S. gpm/ 58.5 U.K. gpm)

[] : Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15 cc/rev
Maximum pressure	35 kgf/cm ² (500 psi)
Rated oil flow	28.5 ℓ /min (7.5 U.S. gpm/6.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification	
	HX300SG	HX300SG Long reach
Type	10 spools	
Operating method	Hydraulic pilot system	
Main relief valve pressure	330 kgf/cm ² (4695 psi) [360 kgf/cm ² (5120 psi)]	
Overload relief valve pressure	Boom	390 kgf/cm ² (5550 psi)
	Arm	390 kgf/cm ² (5550 psi)
	Bucket	390 kgf/cm ² (5550 psi)
		390 kgf/cm ² (5550 psi)
		In : 230 kgf/cm ² (3270 psi) Out : 260 kgf/cm ² (3700 psi)
		270 kgf/cm ² (3840 psi)

[] : Power boost

5) SWING MOTOR

Item	Specification
Type	Axial piston motor
Capacity	156.9 cc/rev
Relief pressure	300 kgf/cm ² (4267 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	84 kgf-m (608 lbf-ft)
Brake release pressure	22 kgf/cm ² (313 psi)
Reduction gear type	2 - stage planetary

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement axial piston motor
Relief pressure	350 kgf/cm ² (4978 psi)
Capacity (max/min)	282.6/156.9 cc/rev
Reduction gear type	2-stage planetary
Braking system	Automatic, spring applied hydraulic released
Brake release pressure	11 kgf/cm ² (156 psi)
Braking torque	115 kgf-m (832 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 (356 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	Ø140 × Ø100 × 1465 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø150 × Ø110 × 1765 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø140 × Ø95 × 1185 mm
	Cushion	Extend only
Bucket cylinder (Long reach)	Bore dia × Rod dia × Stroke	Ø100 × Ø70 × 870 mm
	Cushion	Extend and retract

- ※ 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. 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	23.1 (6.1)	★SAE 0W-30						
			SAE 5W-30						
			SAE 10W-30						
			SAE 15W-40						
Swing drive	Gear oil	11 (2.9)	★SAE 75W-90						
Final drive		7.8×2 (2.1×2)	SAE 80W-90						
Hydraulic tank	Hydraulic oil	Tank : 210 (55.5) System : 320 (84.5)	★ISO VG 15						
			ISO VG 32						
			ISO VG 46						
			ISO VG 68						
Fuel tank	Diesel fuel	480 (126.8)	★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	50 (13.2)	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

※ 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.

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