

SECTION 1 GENERAL



Group 1 Safety Hints ..... 1-1

Group 2 Specifications ..... 1-9

## SECTION 1 GENERAL

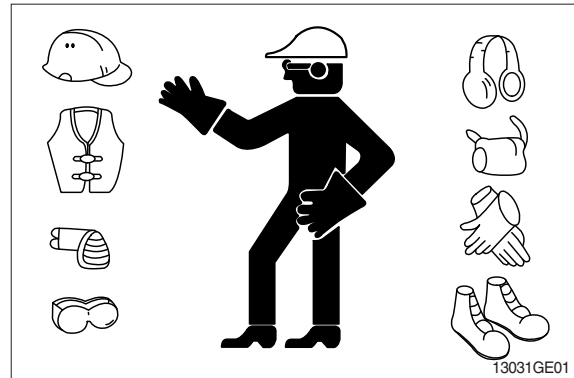
### GROUP 1 SAFETY

#### FOLLOW SAFE PROCEDURE

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

#### WEAR PROTECTIVE CLOTHING

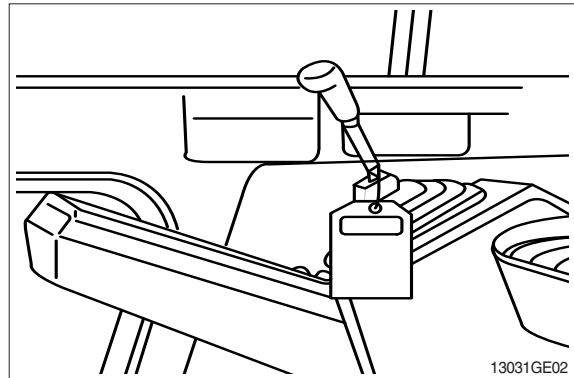
Wear close fitting clothing and safety equipment appropriate to the job.



#### 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.



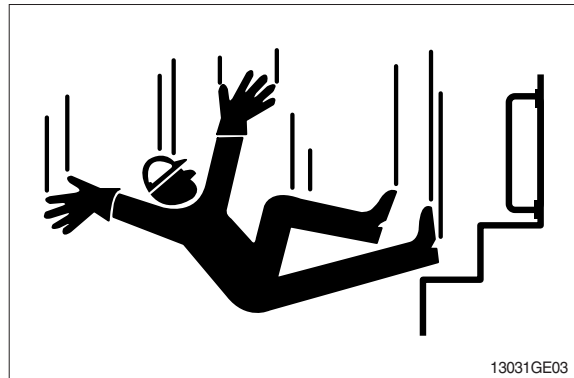
#### USE HANDHOLDS AND STEPS

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.

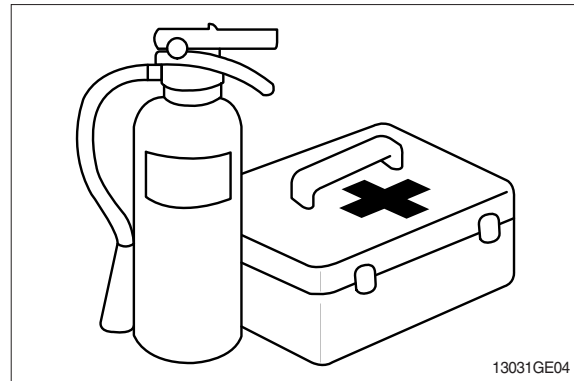


## PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

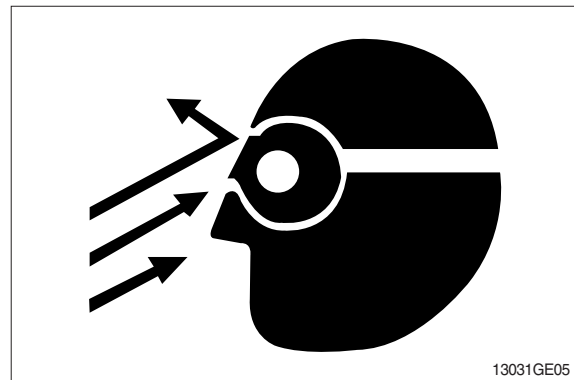
Keep a first aid kit and fire extinguisher handy.

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



## PROTECT AGAINST FLYING DEBRIS

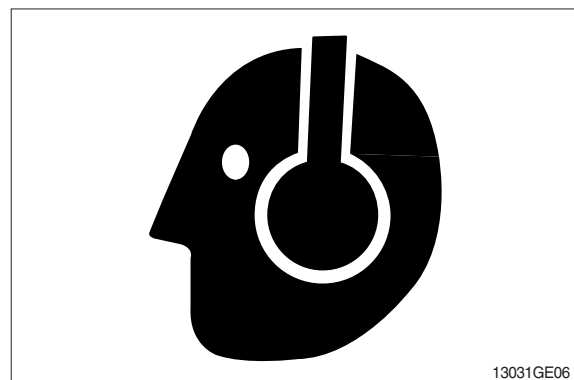
Guard against injury from flying pieces of metal or debris; Wear goggles or safety glasses.



## PROTECT AGAINST NOISE

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

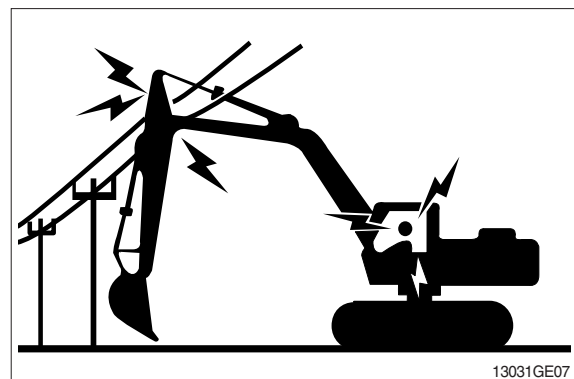
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



## AVOID POWER LINES

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

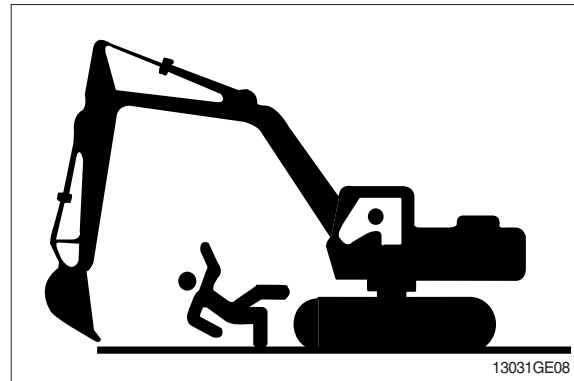
Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.



## 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.

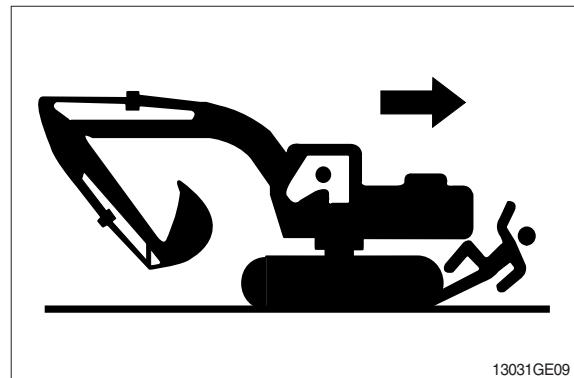


## MOVE AND OPERATE MACHINE SAFELY

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:

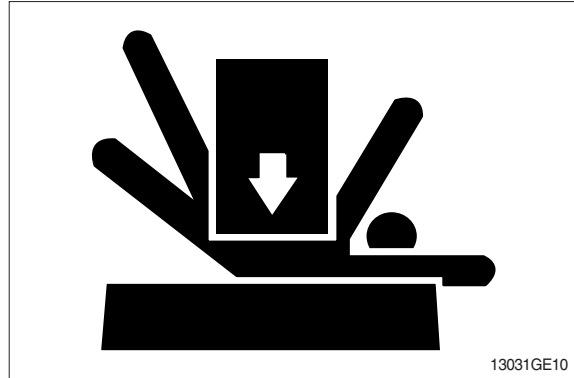
- Park machine on a level surface.
- Lower bucket to the ground.
- Turn auto idle switch off.
- Run engine at 1/2 speed without load for 2 minutes.
- Turn key switch to OFF to stop engine.  
Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

## 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.

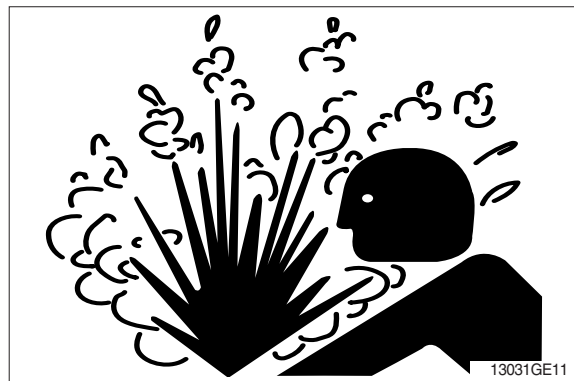
Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.



## SERVICE COOLING SYSTEM SAFELY

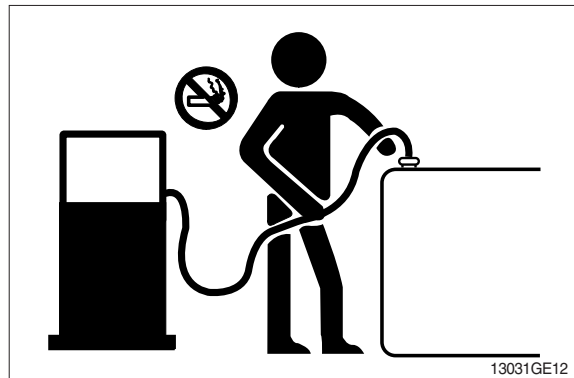
Explosive release of fluids from pressurized cooling system can cause serious burns.

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

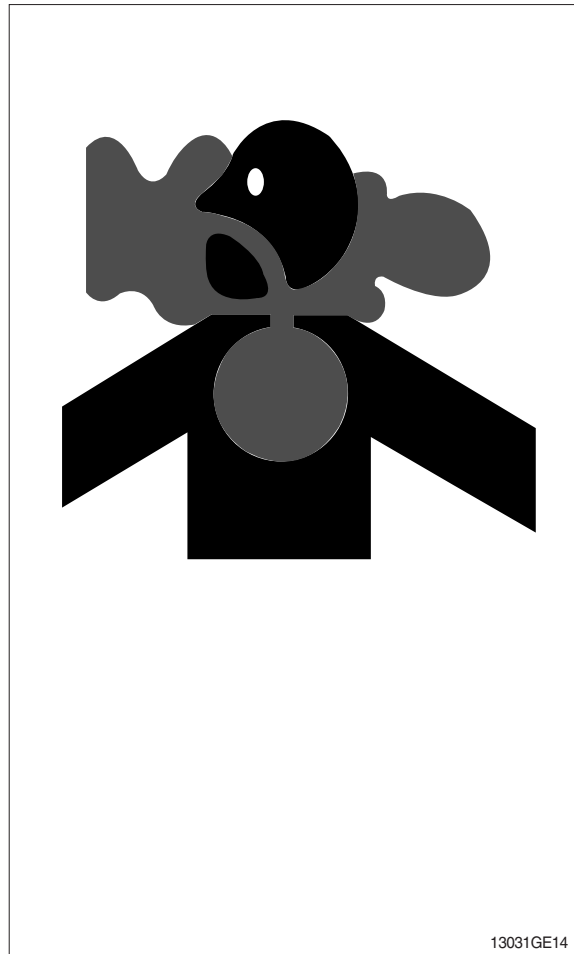
Avoid potentially toxic fumes and dust.

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

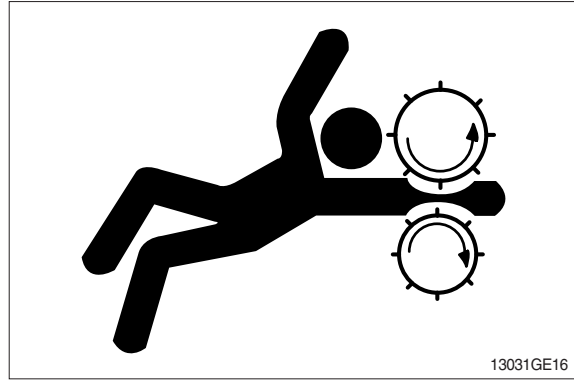
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



## 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.

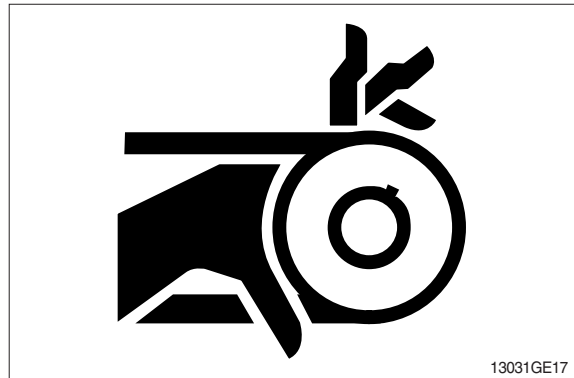
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



## STAY CLEAR OF MOVING PARTS

Entanglements in moving parts can cause serious injury.

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



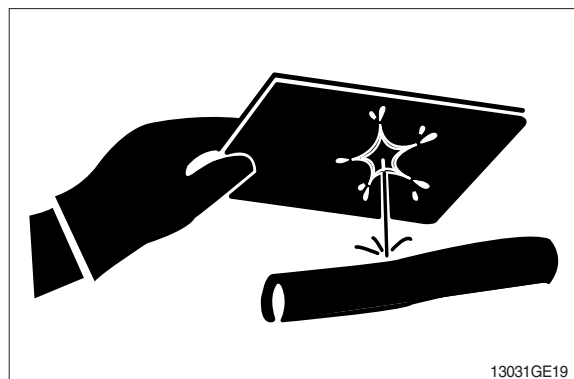
## AVOID HIGH PRESSURE FLUIDS

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:

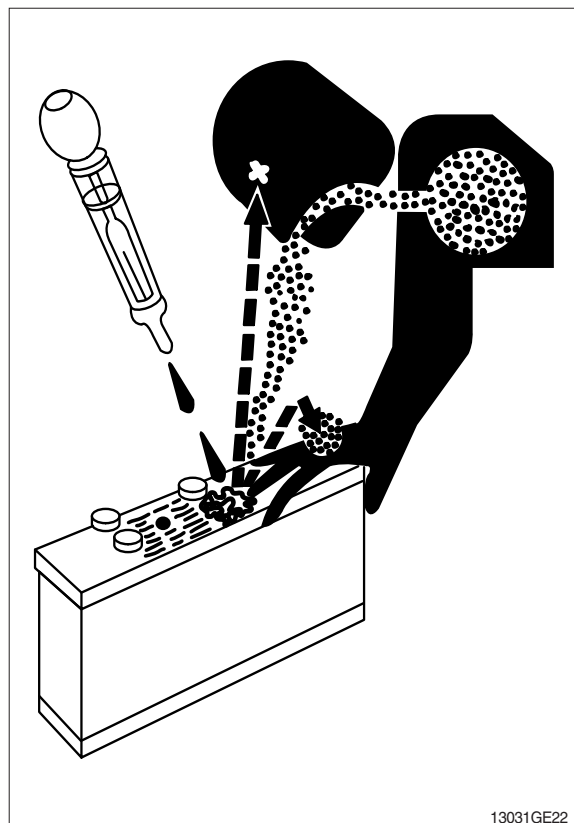
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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.





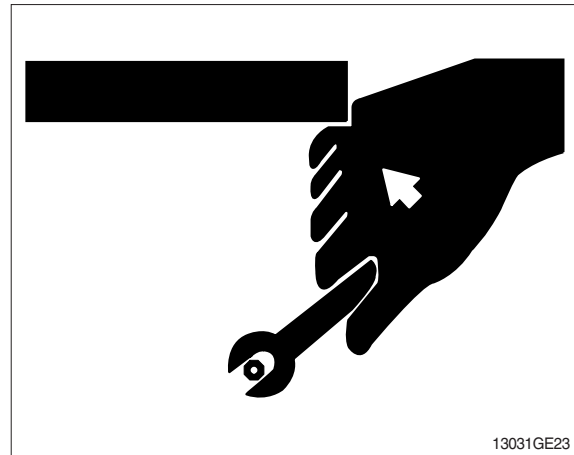
## USE TOOLS PROPERLY

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.)

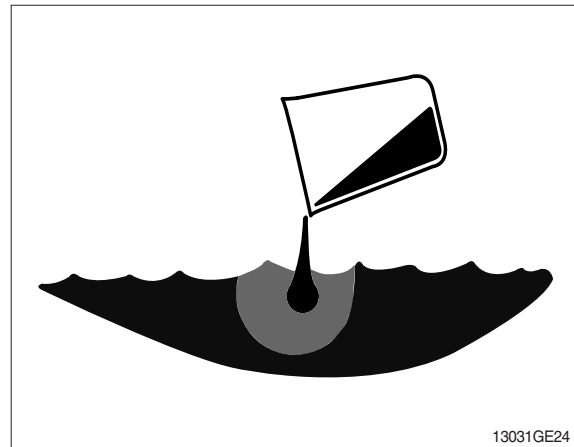


## DISPOSE OF FLUIDS PROPERLY

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.

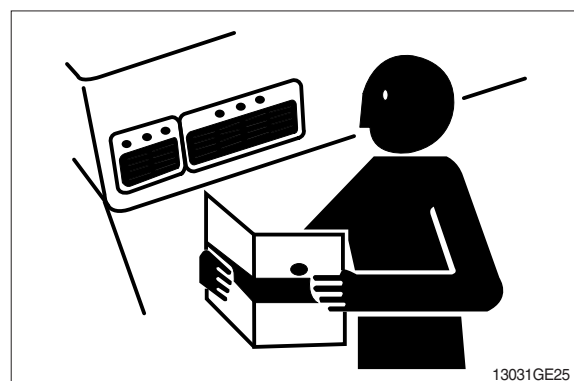
Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

**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.

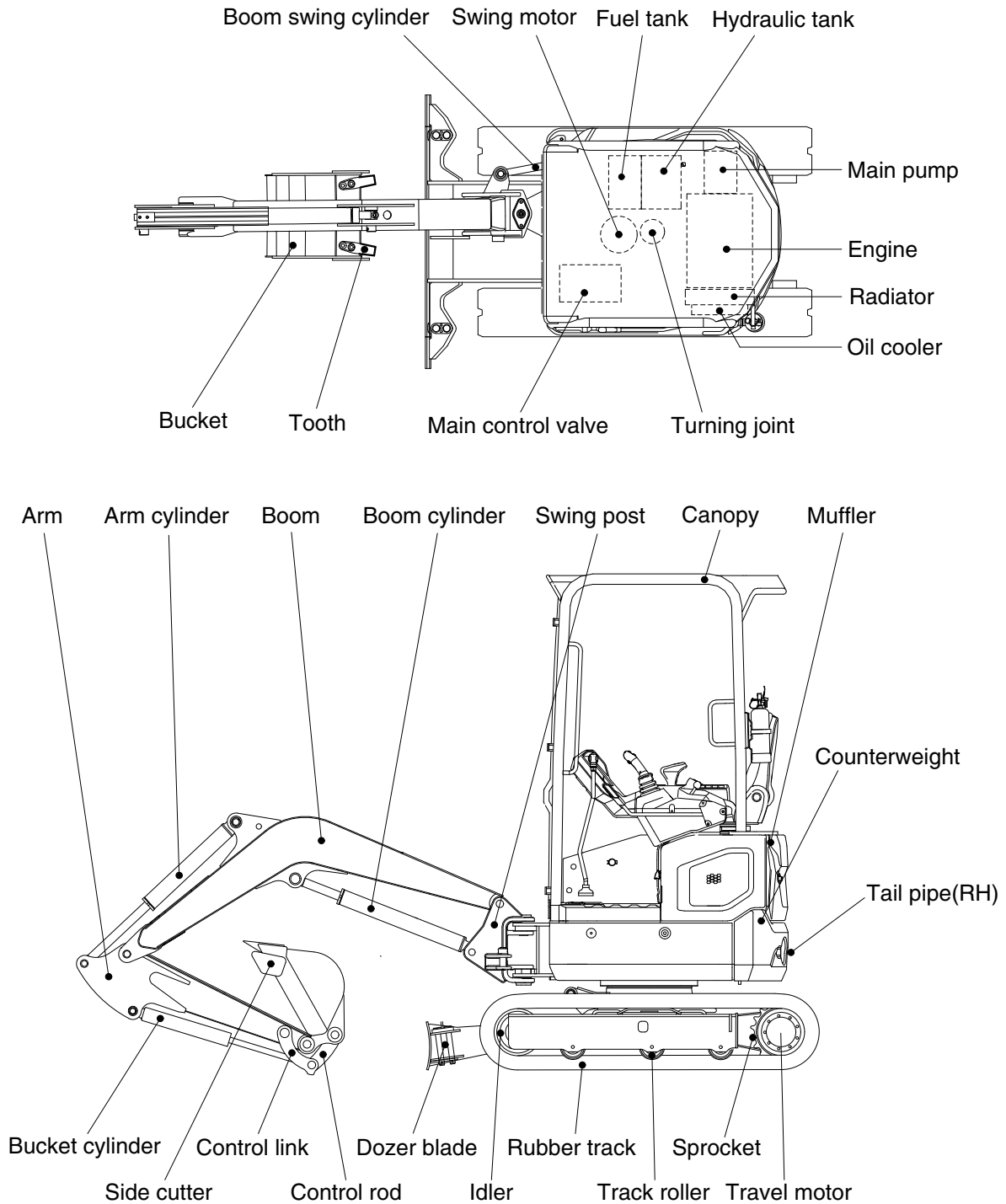


## LIVE WITH SAFETY

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

## GROUP 2 SPECIFICATIONS

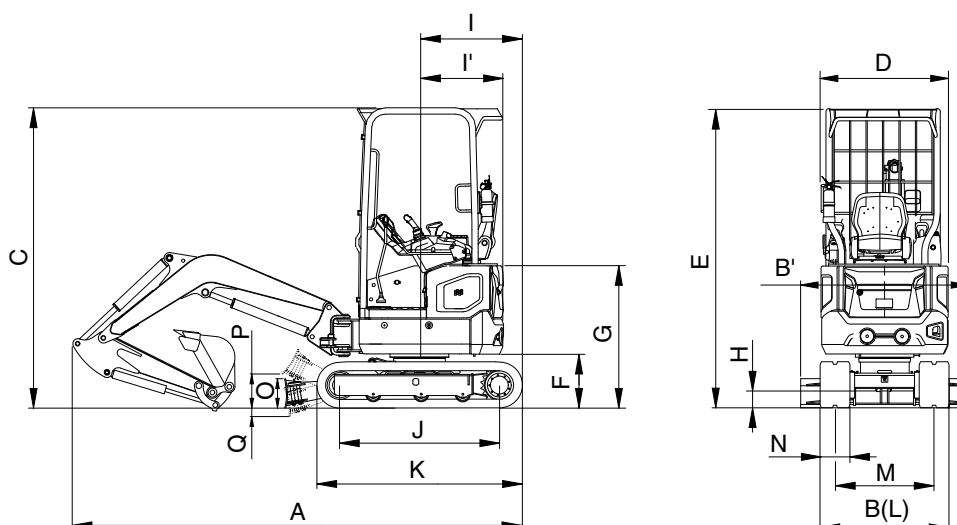
### 1. MAJOR COMPONENTS



17AZ2SP01

## 2. SPECIFICATIONS

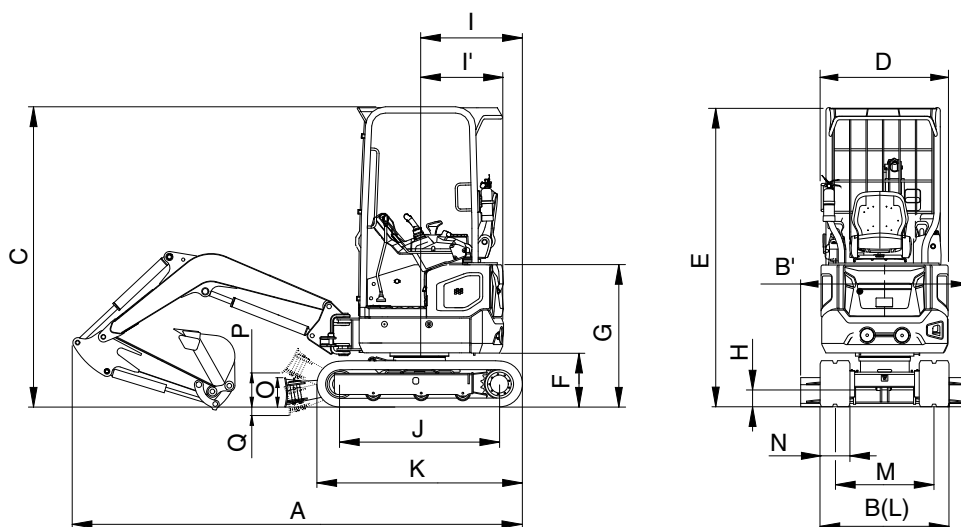
### 1) 1.75 m ( 5' 9") MONO BOOM, 1.03 m ( 3' 5") ARM, 180 kg CWT



17AZ2SP02

Description		Unit	Specification
Operating weight (canopy)		kg (lb)	1850 (4080)
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	0.04 (0.052)
Overall length	A	mm (ft-in)	3531 (11' 6")
Overall width (extension crawler)	B		994~1290 (3' 3"~4' 3")
Overall width (dozer blade)	B'		1294 (4' 3")
Overall height	C		2320 (7' 7")
Overall width of upperstructure	D		980 (3' 3")
Overall height of canopy	E		2320 (7' 7")
Ground clearance of counterweight	F		415 (1' 4")
Overall height of engine hood	G		1095 (3' 7")
Minimum ground clearance	H		150 (0' 6")
Rear-end distance	I		645 (2' 1")
Rear-end swing radius	I'		645 (2' 1")
Distance between tumblers	J		1230 (4' 0")
Undercarriage length	K		1580 (5' 2")
Undercarriage width (extension crawler)	L		994~1290 (3' 3"~4' 3")
Track gauge (extension crawler)	M		764~1060 (2' 6"~3' 6")
Track shoe width, standard	N		230 (0' 9")
Height of blade	O		225 (0' 9")
Ground clearance of blade up	P		183 (0' 7")
Depth of blade down	Q		222 (0' 9")
Travel speed (low/high)		km/hr (mph)	2.21/4.09 (1.37/2.54)
Swing speed		rpm	9.16
Gradeability		Degree (%)	35 (70)
Ground pressure 230 mm rubber shoe (canopy)		kgf/cm <sup>2</sup> (psi)	0.31 (4.38)
Max traction force		kg (lb)	1420 (3130)

2) 1.75 m ( 5' 9") MONO BOOM, 1.23 m ( 4' 0") LONG ARM, 260 kg ADD CWT

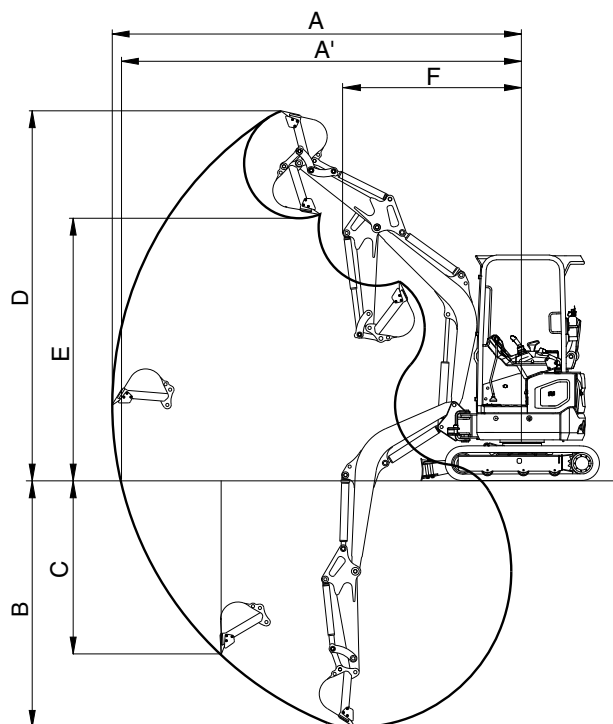


17AZ2SP02

Description		Unit	Specification
Operating weight (canopy)		kg (lb)	1980 (4370)
Bucket capacity (SAE heaped), standard		m <sup>3</sup> (yd <sup>3</sup> )	0.04 (0.052)
Overall length	A	mm (ft-in)	3528 (11' 6")
Overall width (extension crawler)	B		994~1290 (3' 3"~4' 3")
Overall width (dozer blade)	B'		1294 (4' 3")
Overall height	C		2320 (7' 7")
Overall width of upperstructure	D		980 (3' 3")
Overall height of canopy	E		2320 (7' 7")
Ground clearance of counterweight	F		415 (1' 4")
Overall height of engine hood	G		1095 (3' 7")
Minimum ground clearance	H		150 (0' 6")
Rear-end distance	I		720 (2' 4")
Rear-end swing radius	I'		720 (2' 4")
Distance between tumblers	J		1230 (4' 0")
Undercarriage length	K		1580 (5' 2")
Undercarriage width (extension crawler)	L		994~1290 (3' 3"~4' 3")
Track gauge (extension crawler)	M		764~1060 (2' 6"~3' 6")
Track shoe width, standard	N		230 (0' 9")
Height of blade	O		225 (0' 9")
Ground clearance of blade up	P		183 (0' 7")
Depth of blade down	Q		222 (0' 9")
Travel speed (low/high)		km/hr (mph)	2.21/4.09 (1.37/2.54)
Swing speed		rpm	9.16
Gradeability		Degree (%)	35 (70)
Ground pressure 230 mm rubber shoe (canopy)		kgf/cm <sup>2</sup> (psi)	0.33 (4.68)
Max traction force		kg (lb)	1420 (3130)

### 3. WORKING RANGE

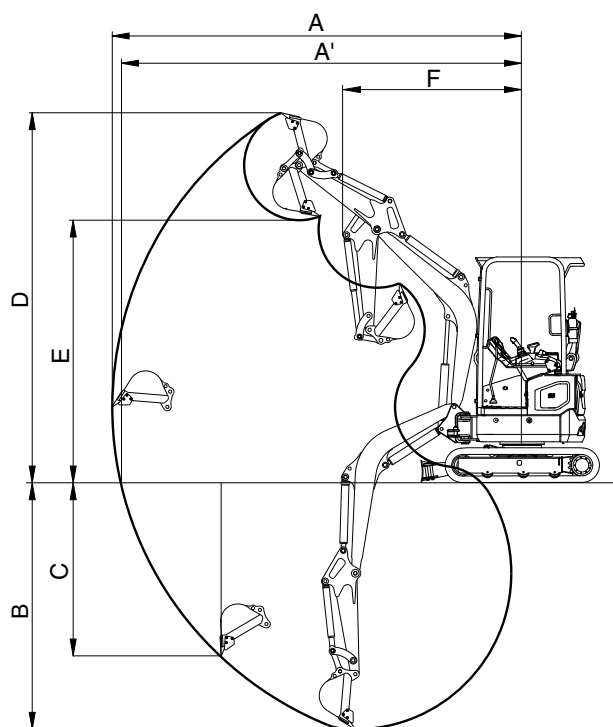
#### 1) 1.75 m (5' 9") MONO BOOM WITH 180 KG COUNTERWEIGHT



17AZ2SP05

Description		1.03 m (3' 5") Arm
Max digging reach	A	3910 mm (12' 10")
Max digging reach on ground	A'	3820 mm (12' 6")
Max digging depth	B	2240 mm (7' 4")
Max digging depth (8 ft level)	B'	1600 mm (5' 3")
Max vertical wall digging depth	C	1750 mm (5' 9")
Max digging height	D	3730 mm (12' 3")
Max dumping height	E	2670 mm (8' 9")
Min swing radius	F	1580 mm (5' 2")
Boom swing radius (left/right)		55°/59°
Bucket digging force	SAE	14 kN
		1436 kgf
		3167 lbf
	ISO	16 kN
		1664 kgf
		3668 lbf
Arm crowd force	SAE	9 kN
		899 kgf
		1981 lbf
	ISO	9 kN
		933 kgf
		2057 lbf

## 2) 1.75 m (5' 9") MONO BOOM WITH 260 KG COUNTERWEIGHT



17AZ2SP05

Description		1.23 m (4' 0") Long arm
Max digging reach	A	4100 mm (13' 5" )
Max digging reach on ground	A'	4010 mm (13' 2" )
Max digging depth	B	2440 mm ( 8' 0" )
Max digging depth (8 ft level)	B'	1880 mm ( 6' 2" )
Max vertical wall digging depth	C	1940 mm ( 6' 4" )
Max digging height	D	3870 mm (12' 8" )
Max dumping height	E	2810 mm ( 9' 3" )
Min swing radius	F	1645 mm ( 5' 5" )
Boom swing radius (left/right)		55°/59°
Bucket digging force	SAE	14 kN
		1436 kgf
		3167 lbf
	ISO	16 kN
		1664 kgf
		3668 lbf
Arm crowd force	SAE	8 kN
		796 kgf
		1754 lbf
	ISO	8 kN
		822 kgf
		1812 lbf

## 4. WEIGHT

Item	kg	lb
Upperstructure assembly		
· Main frame weld assembly	201	443
· Engine assembly (including DFP)	75	165
· Main pump assembly	13	29
· Main control valve assembly	14	31
· Swing motor assembly	23	51
· Hydraulic oil tank wa	16	35
· Fuel tank wa	5	10
· Counterweight	180	397
· Counterweight-add	260	573
· Cab assembly	190	419
Lower chassis assembly		
· Track frame weld assembly	206	454
· Dozer blade assembly	63	139
· Swing bearing	19	42
· Travel motor assembly	36	79
· Turning joint	14	31
· Sprocket	4	10
· Track recoil spring	11	24
· Idler	14	32
· Lower roller	5	10
· Track-chain assembly-rubber	71	157
Front attachment assembly		
· Boom assembly-1.75 m	72	159
· Arm assembly-1.03 m	37	83
· Arm assembly-1.03 m thumb bracket	40	88
· Arm assembly-1.23 m	47	104
· Arm assembly-1.23 m thumb bracket	49	109
· Bucket assembly	41	90
· Boom cylinder assembly	16	36
· Arm cylinder assembly	16	34
· Bucket cylinder assembly	12	25
· Swing cylinder assembly	10	22
· Cylinder assy-dozer	11	24
· Extension cylinder	7	15
· Bucket control linkage total	12	27

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

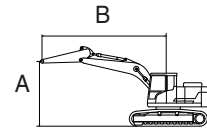
※ Refer to transportation for actual weight information and specifications for operating weight.









## 5. LIFTING CAPACITIES

### 1) STANDARD COUNTERWEIGHT (180 kg)

Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1030	180	230	-	Up	-	-	-

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



Load point height (A)		Load radius (B)						At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		Capacity		Reach
										m (ft)
3.0 m (9.8 ft)	kg lb	*390 *860	*390 *860					*410 *900	*410 *900	2.18 (7.2)
2.5 m (8.2 ft)	kg lb			*370 *820	360 790			320 710	300 660	2.74 (9.0)
2.0 m (6.6 ft)	kg lb	*380 *840	*380 *840	370 820	350 770	270 600	260 570	260 570	250 550	3.07 (10.1)
1.5 m (4.9 ft)	kg lb	*510 *1120	490 1080	360 790	340 750	270 600	260 570	230 510	220 490	3.27 (10.7)
1.0 m (3.3 ft)	kg lb	490 1080	460 1010	350 770	330 730	260 570	250 550	220 490	210 460	3.36 (11.0)
0.5 m (1.6 ft)	kg lb	470 1040	440 970	340 750	320 710	260 570	250 550	220 490	210 460	3.36 (11.0)
Ground Line	kg lb	460 1010	430 950	330 730	310 680	250 550	240 530	230 510	220 490	3.26 (10.7)
-0.5 m (-1.6 ft)	kg lb	450 990	420 930	330 730	310 680	250 550	240 530	250 550	240 530	3.05 (10.0)
-1.0 m (-3.3 ft)	kg lb	460 1010	430 950	330 730	310 680			300 660	280 620	2.70 (8.9)
-1.5 m (-4.9 ft)	kg lb	470 1040	440 970					*430 *950	410 900	2.11 (6.9)

Note 1. Lifting capacity are based on ISO 10567.

2. Lifting capacity of the HX series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).

4. \*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 with your local HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.

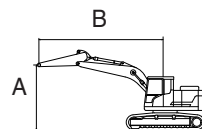
※ Please be aware of the local regulations and instructions for lifting operations.









▲ Failure to comply to the rated load can cause serious injury, death, or property damage. Make adjustments to the rated load as necessary for non-standard configurations.



Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1030	180	230	-	Down	-	-	-

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



Load point height (A)		Load radius (B)						At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		Capacity		Reach
										m (ft)
3.0 m	kg	*390	*390					*410	*410	2.18
(9.8 ft)	lb	*860	*860					*900	*900	(7.2)
2.5 m	kg			*370	*370			*350	330	2.74
(8.2 ft)	lb			*820	*820			*770	730	(9.0)
2.0 m	kg	*380	*380	*380	380	*390	280	*330	270	3.07
(6.6 ft)	lb	*840	*840	*840	840	*860	620	*730	600	(10.1)
1.5 m	kg	*510	*510	*440	370	*400	280	*330	240	3.27
(4.9 ft)	lb	*1120	*1120	*970	820	*880	620	*730	530	(10.7)
1.0 m	kg	*690	500	*520	360	*440	270	*340	230	3.36
(3.3 ft)	lb	*1520	1100	*1150	790	*970	600	*750	510	(11.0)
0.5 m	kg	*830	480	*590	340	*470	260	*370	220	3.36
(1.6 ft)	lb	*1830	1060	*1300	750	*1040	570	*820	490	(11.0)
Ground Line	kg	*880	460	*630	340	*490	260	*410	230	3.26
	lb	*1940	1010	*1390	750	*1080	570	*900	510	(10.7)
-0.5 m	kg	*850	460	*620	330	*460	260	*440	250	3.05
(-1.6 ft)	lb	*1870	1010	*1370	730	*1010	570	*970	550	(10.0)
-1.0 m	kg	*740	470	*530	340			*450	300	2.70
(-3.3 ft)	lb	*1630	1040	*1170	750			*990	660	(8.9)
-1.5 m	kg	*480	480					*430	*430	2.11
(-4.9 ft)	lb	*1060	1060					*950	*950	(6.9)

Note 1. Lifting capacity are based on ISO 10567.

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3. The lift-point is bucket pivot mounting pin on the arm (without bucket mass).

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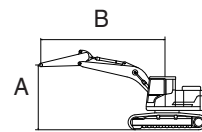
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


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Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1230	180	230	-	Up	-	-	-

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



Load point height (A)		Load radius (B)								At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		3.5 m (11.5 ft)		Capacity		Reach
												m (ft)
3.0 m (9.8 ft)	kg lb									*320 *710	*320 *710	2.50 (8.2)
2.5 m (8.2 ft)	kg lb			*310 *680	*310 *680					280 620	260 570	2.98 (9.8)
2.0 m (6.6 ft)	kg lb			*330 *730	*330 *730	280 620	260 570			230 510	220 490	3.28 (10.8)
1.5 m (4.9 ft)	kg lb	*420 *930	*420 *930	360 790	350 770	270 600	260 570			210 460	200 440	3.47 (11.4)
1.0 m (3.3 ft)	kg lb	500 1100	470 1040	350 770	330 730	260 570	250 550	210 460	200 440	200 440	190 420	3.55 (11.7)
0.5 m (1.6 ft)	kg lb	470 1040	440 970	340 750	320 710	260 570	240 530	200 440	190 420	200 440	190 420	3.55 (11.6)
Ground Line	kg lb	450 990	420 930	320 710	310 680	250 550	240 530			200 440	190 420	3.45 (11.3)
-0.5 m (-1.6 ft)	kg lb	440 970	420 930	320 710	300 660	250 550	230 510			220 490	210 460	3.26 (10.7)
-1.0 m (-3.3 ft)	kg lb	450 990	420 930	320 710	300 660					250 550	240 530	2.95 (9.7)
-1.5 m (-4.9 ft)	kg lb	460 1010	430 950							340 750	320 710	2.44 (8.0)

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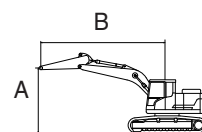
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Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1230	180	230	-	Down	-	-	-

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Load point height (A)		Load radius (B)								At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		3.5 m (11.5 ft)		Capacity		Reach
												m (ft)
3.0 m (9.8 ft)	kg lb									*320 *710	*320 *710	2.50 (8.2)
2.5 m (8.2 ft)	kg lb			*310 *680	*310 *680					*280 *620	*280 *620	2.98 (9.8)
2.0 m (6.6 ft)	kg lb			*330 *730	*330 *730	*340 *750	280 620			*270 *600	240 530	3.28 (10.8)
1.5 m (4.9 ft)	kg lb	*420 *930	*420 *930	*390 *860	370 820	*370 *820	280 620			*270 *600	220 490	3.47 (11.4)
1.0 m (3.3 ft)	kg lb	*600 *1320	500 1100	*470 *1040	360 790	*410 *900	270 600	*350 *770	210 460	*270 *600	210 460	3.55 (11.7)
0.5 m (1.6 ft)	kg lb	*770 *1700	480 1060	*550 *1210	340 750	*450 *990	260 570	*370 *820	210 460	*290 *640	200 440	3.55 (11.6)
Ground Line	kg lb	*860 *1900	460 1010	*610 *1340	330 730	*480 *1060	260 570			*330 *730	210 460	3.45 (11.3)
-0.5 m (-1.6 ft)	kg lb	*860 *1900	450 990	*620 *1370	330 730	*470 *1040	250 550			*390 *860	230 510	3.26 (10.7)
-1.0 m (-3.3 ft)	kg lb	*790 *1740	450 990	*570 *1260	330 730					*420 *930	260 570	2.95 (9.7)
-1.5 m (-4.9 ft)	kg lb	*610 *1340	460 1010							*420 *930	350 770	2.44 (8.0)

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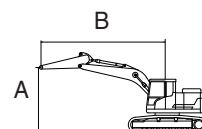
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## 2) ADD COUNTERWEIGHT (260 kg)

Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outrigger	
HX17A Z	CANOPY	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1230	260	230	-	Up	-	-	-

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



Load point height (A)		Load radius (B)								At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		3.5 m (11.5 ft)		Capacity		Reach
												m (ft)
3.0 m (9.8 ft)	kg lb									*320 *710	*320 *710	2.50 (8.2)
2.5 m (8.2 ft)	kg lb			*310 *680	*310 *680					*280 *620	*280 *620	2.98 (9.8)
2.0 m (6.6 ft)	kg lb			*330 *730	*330 *730	310 680	290 640			260 570	250 550	3.28 (10.8)
1.5 m (4.9 ft)	kg lb	*420 *930	*420 *930	*390 *860	380 840	300 660	290 640			240 530	230 510	3.47 (11.4)
1.0 m (3.3 ft)	kg lb	550 1210	520 1150	390 860	370 820	300 660	280 620	230 510	220 490	230 510	220 490	3.55 (11.7)
0.5 m (1.6 ft)	kg lb	520 1150	490 1080	380 840	350 770	290 640	270 600	230 510	220 490	220 490	210 460	3.55 (11.6)
Ground Line	kg lb	510 1120	470 1040	360 790	340 750	280 620	270 600			230 510	220 490	3.45 (11.3)
-0.5 m (-1.6 ft)	kg lb	500 1100	470 1040	360 790	340 750	280 620	260 570			250 550	240 530	3.26 (10.7)
-1.0 m (-3.3 ft)	kg lb	500 1100	470 1040	360 790	340 750					290 640	270 600	2.95 (9.7)
-1.5 m (-4.9 ft)	kg lb	510 1120	480 1060							380 840	360 790	2.44 (8.0)

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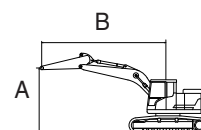
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Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1230	260	230	-	Down	-	-	-

 : Rating over-front    
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Load point height (A)		Load radius (B)								At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		3.5 m (11.5 ft)		Capacity		Reach
												m (ft)
3.0 m (9.8 ft)	kg lb									*320 *710	*320 *710	2.50 (8.2)
2.5 m (8.2 ft)	kg lb			*310 *680	*310 *680					*280 *620	*280 *620	2.98 (9.8)
2.0 m (6.6 ft)	kg lb			*330 *730	*330 *730	*340 *750	310 680			*270 *600	*270 *600	3.28 (10.8)
1.5 m (4.9 ft)	kg lb	*420 *930	*420 *930	*390 *860	*390 *860	*370 *820	310 680			*270 *600	240 530	3.47 (11.4)
1.0 m (3.3 ft)	kg lb	*600 *1320	560 1230	*470 *1040	400 880	*410 *900	300 660	*350 *770	240 530	*270 *600	230 510	3.55 (11.7)
0.5 m (1.6 ft)	kg lb	*770 *1700	530 1170	*550 *1210	380 840	*450 *990	290 640	*370 *820	230 510	*290 *640	230 510	3.55 (11.6)
Ground Line	kg lb	*860 *1900	510 1120	*610 *1340	370 820	*480 *1060	290 640			*330 *730	230 510	3.45 (11.3)
-0.5 m (-1.6 ft)	kg lb	*860 *1900	510 1120	*620 *1370	370 820	*470 *1040	280 620			*390 *860	250 550	3.26 (10.7)
-1.0 m (-3.3 ft)	kg lb	*790 *1740	510 1120	*570 *1260	370 820					*420 *930	290 640	2.95 (9.7)
-1.5 m (-4.9 ft)	kg lb	*610 *1340	520 1150							*420 *930	390 860	2.44 (8.0)

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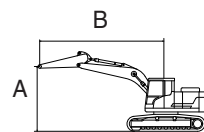
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Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1030	260	230	-	Up	-	-	-

 : Rating over-front     
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Load point height (A)		Load radius (B)						At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		Capacity		Reach
										m (ft)
3.0 m (9.8 ft)	kg lb	*390 *860	*390 *860					*410 *900	*410 *900	2.18 (7.2)
2.5 m (8.2 ft)	kg lb			*370 *820	*370 *820			*350 *770	340 750	2.74 (9.0)
2.0 m (6.6 ft)	kg lb	*380 *840	*380 *840	*380 *840	*380 *840	310 680	290 640	290 640	280 620	3.07 (10.1)
1.5 m (4.9 ft)	kg lb	*510 *1120	*510 *1120	400 880	380 840	300 660	290 640	260 570	250 550	3.27 (10.7)
1.0 m (3.3 ft)	kg lb	550 1210	510 1120	390 860	370 820	300 660	280 620	250 550	240 530	3.36 (11.0)
0.5 m (1.6 ft)	kg lb	520 1150	490 1080	380 840	360 790	290 640	280 620	250 550	230 510	3.36 (11.0)
Ground Line	kg lb	510 1120	480 1060	370 820	350 770	290 640	270 600	250 550	240 530	3.26 (10.7)
-0.5 m (-1.6 ft)	kg lb	510 1120	480 1060	370 820	350 770	280 620	270 600	280 620	260 570	3.05 (10.0)
-1.0 m (-3.3 ft)	kg lb	510 1120	480 1060	370 820	350 770			330 730	320 710	2.70 (8.9)
-1.5 m (-4.9 ft)	kg lb	*480 *1060	*480 *1060					*430 *950	*430 *950	2.11 (6.9)

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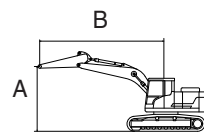
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


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Model	Type	Boom	Arm	Counterweight	Rubber shoe	Wheel	Dozer		Outtriger	
HX17A Z	Canopy	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		1750	1030	260	230	-	Down	-	-	-

 : Rating over-front     
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Load point height (A)		Load radius (B)						At max. reach		
		2.0 m (6.6 ft)		2.5 m (8.2 ft)		3.0 m (9.8 ft)		Capacity		Reach
										m (ft)
3.0 m	kg	*390	*390					*410	*410	2.18
(9.8 ft)	lb	*860	*860					*900	*900	(7.2)
2.5 m	kg			*370	*370			*350	*350	2.74
(8.2 ft)	lb			*820	*820			*770	*770	(9.0)
2.0 m	kg	*380	*380	*380	*380	*390	310	*330	300	3.07
(6.6 ft)	lb	*840	*840	*840	*840	*860	680	*730	660	(10.1)
1.5 m	kg	*510	*510	*440	410	*400	310	*330	270	3.27
(4.9 ft)	lb	*1120	*1120	*970	900	*880	680	*730	600	(10.7)
1.0 m	kg	*690	550	*520	400	*440	300	*340	250	3.36
(3.3 ft)	lb	*1520	1210	*1150	880	*970	660	*750	550	(11.0)
0.5 m	kg	*830	530	*590	380	*470	300	*370	250	3.36
(1.6 ft)	lb	*1830	1170	*1300	840	*1040	660	*820	550	(11.0)
Ground Line	kg	*880	520	*630	380	*490	290	*410	260	3.26
	lb	*1940	1150	*1390	840	*1080	640	*900	570	(10.7)
-0.5 m	kg	*850	510	*620	370	*460	290	*440	280	3.05
(-1.6 ft)	lb	*1870	1120	*1370	820	*1010	640	*970	620	(10.0)
-1.0 m	kg	*740	520	*530	380			*450	340	2.70
(-3.3 ft)	lb	*1630	1150	*1170	840			*990	750	(8.9)
-1.5 m	kg	*480	*480					*430	*430	2.11
(-4.9 ft)	lb	*1060	*1060					*950	*950	(6.9)

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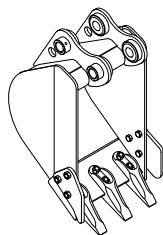
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## 6. BUCKET SELECTION GUIDE



0.040 m<sup>3</sup>  
SAE heaped bucket

Capacity		Width		Weight	Tooth (EA)	Recommendation	
						1750 m (5' 9") boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter			1.03 m (3' 5") arm	1.23 m (4' 0") arm
0.040 m <sup>3</sup> (0.052 yd <sup>3</sup> )	0.035 m <sup>3</sup> (0.046 yd <sup>3</sup> )	382 mm (15.0")	422 mm (16.6")	41 kg (90 lb)	3	●	●

● Applicable for materials with density of 2100 kg/m<sup>3</sup> (3500 lb/yd<sup>3</sup>) or less

※ 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 with your local HD Hyundai Construction Equipment dealer for information on selecting the correct boom-arm-bucket combination.

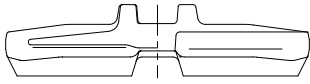


## 7. UNDERCARRIAGE

### 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 double grousers.

### 2) TYPES OF SHOES

Model	Shapes		Rubber track
			
HX17A Z	Shoe width	mm (in)	230 (10")
	Operating weight	kg (lb)	1850 (4080)
	Ground pressure	kgf/cm <sup>2</sup> (psi)	0.31 (4.38)
	Overall width	mm (ft-in)	994~1290 (3' 3"~4' 3")

### 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**

Model	Track shoe	Specification	Category
HX17A Z	T/chain-rubber for rail interlocking (230 mm)	Standard	A

**Table 2**

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

## 8. SPECIFICATIONS FOR MAJOR COMPONENTS

### 1) ENGINE

Item	Specification
Model	Kubota D902-E4B
Type	Vertical, water cooled 4-cycle, IDI diesel engine
Cooling method	Water cooling
Number of cylinders and arrangement	3 cylinders, in-line
Firing order	1-2-3
Combustion chamber type	Spherical type
Cylinder bore × stroke	72 × 73.6mm (2.83" × 2.90)
Piston displacement	898 cc (54.8 cu in)
Compression ratio	24:1 : 1
Rated gross horse power	16.2 hp (12.1 kW) at 2400 rpm
Rated net horse power	16.0 hp (11.9 kW) at 2400 rpm
Max. power	16.2 hp (12.1 kW) at 2400 rpm
Maximum torque at 1900 rpm	5.57 kgf · m (40.3 lbf · ft)
Engine oil quantity	3.7 ℓ (1.0 U.S. gal)
Dry weight	75 kg (165 lb)
Starting motor	12V-1.2 kW
Alternator	12V-40 A

### 2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 7.5 cc/rev
Maximum pressure	210 kgf/cm <sup>2</sup> (2990 psi)
Rated oil flow	2 × 17.3 ℓ /min (2 × 4.6 U.S. gpm / 2 × 3.8 U.K. gpm)
Rated speed	2300 rpm

### 3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	4.5/2.7 cc/rev
Maximum pressure	190/35 kgf/cm <sup>2</sup> (2702/498 psi)
Rated oil flow	10.4/6.2 ℓ /min (2.7/1.6 U.S. gpm / 2.3/1.4 U.K. gpm)

### 4) MAIN CONTROL VALVE

Item	Specification
Type	Sectional, 9 spools
Operating method	Hydraulic pilot system
Main relief valve pressure	210 kgf/cm <sup>2</sup> (2990 psi)
Overload relief valve pressure	230 kgf/cm <sup>2</sup> (3272 psi)
2-way (breaker piping) flow rate	27.7 ℓ /min (7.3 U.S. gpm / 6.1 U.K. gpm)

### 5) SWING MOTOR

Item	Specification
Type	Fixed displacement axial piston motor
Capacity	18.1 cc/rev
Relief pressure	165 kgf/cm <sup>2</sup> (2350 psi)
Braking system	Automatic, spring applied hydraulic released
Braking torque	69.7 kgf · m (504 lbf · ft)
Brake release pressure	20~50 kgf/cm <sup>2</sup> (284~711 psi)
Reduction gear type	2 - stage planetary

### 6) TRAVEL MOTOR

Item	Specification
Type	Two fixed displacement axial piston motor
Capacity	12.4/6.2 cc/rev
Relief pressure	210 kgf/cm <sup>2</sup> (2990 psi)
Reduction gear type	2-stage planetary

## 7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø60 × Ø40 × 476 mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø60 × Ø40 × 393 mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø55 × Ø35 × 345 mm
	Cushion	-
Boom swing cylinder	Bore dia × Rod dia × Stroke	Ø55 × Ø30 × 355 mm
	Cushion	-
Dozer cylinder	Bore dia × Rod dia × Stroke	Ø65 × Ø30 × 93 mm
	Cushion	-
Dozer cylinder (DPC)	Bore dia × Rod dia × Stroke	Ø65 × Ø30 × 93 mm
	Cushion	-
Extension cylinder	Bore dia × Rod dia × Stroke	Ø50 × Ø25 × 300 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.

## 9. RECOMMENDED OILS

HD Hyundai Construction Equipment 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 HD Hyundai Construction Equipment and, therefore, will meet the highest safety and quality requirements.

We recommend that you use only HD Hyundai Construction Equipment genuine lubricating oils and grease officially approved by HD Hyundai Construction Equipment.

Service point	Kind of fluid	Capacity ℓ (U.S. gal)	Ambient temperature °C( °F)							
			-50 (-58)	-30 (-22)	-20 (-4)	-10 (14)	0 (32)	10 (50)	20 (68)	30 (86)
Engine oil pan	Engine oil	3.7 (1.0)	★0W-40							
			SAE 5W-30							
			SAE 10W							
			SAE 15W-40							
Final drive	Gear oil	0.3×2 (0.1×2)	★SAE 75W-90							
			SAE 80W-90							
Hydraulic tank	Hydraulic oil	Tank: 12.1 (3.2) System:	★ISO VG 15							
			ISO VG 32							
			ISO VG 46, HBHO VG 46 ★3							
			ISO VG 68							
Fuel tank	Diesel fuel★1	19.5 (5.2)	★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	5.4 (1.4)	Ethylene glycol base permanent type (50 : 50)							
			★Ethylene glycol base permanent type (60 : 40)							

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

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

※ For HD Hyundai Construction Equipment genuine lubricating oils and grease for use in regions with extremely low temperatures, please contact your local HD Hyundai Construction Equipment dealer.

**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 : Ultra low sulfur diesel

- sulfur content ≤ 10 ppm

★2 : Soft water

City water or distilled water

★3 : HD Hyundai Construction Equipment Bio Hydraulic Oil