

SECTION 1 GENERAL



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SECTION 1 GENERAL

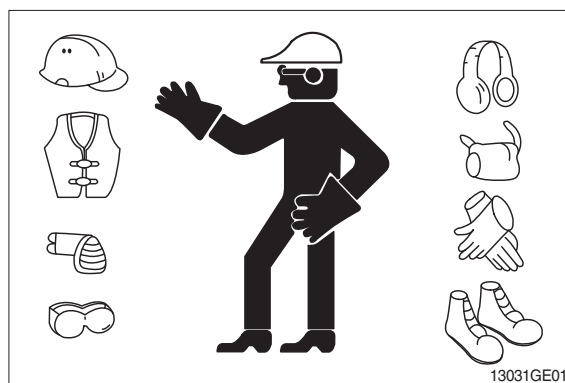
GROUP 1 SAFETY

FOLLOW SAFE PROCEDURE

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

WEAR PROTECTIVE CLOTHING

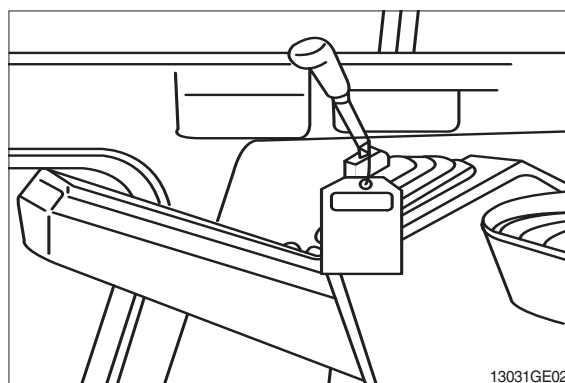
Wear close fitting clothing and safety equipment appropriate to the job.



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.



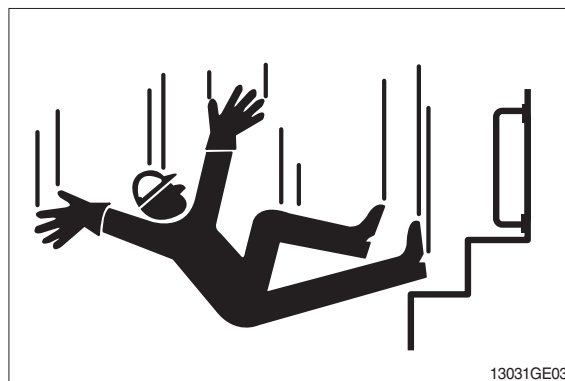
USE HANDHOLDS AND STEPS

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.

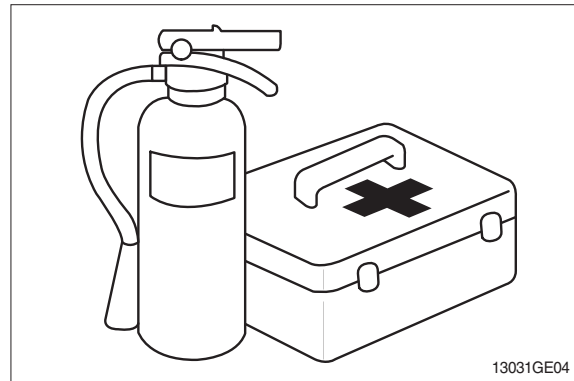


PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

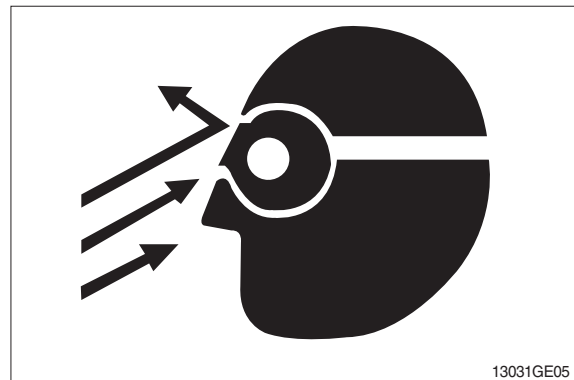
Keep a first aid kit and fire extinguisher handy.

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



PROTECT AGAINST FLYING DEBRIS

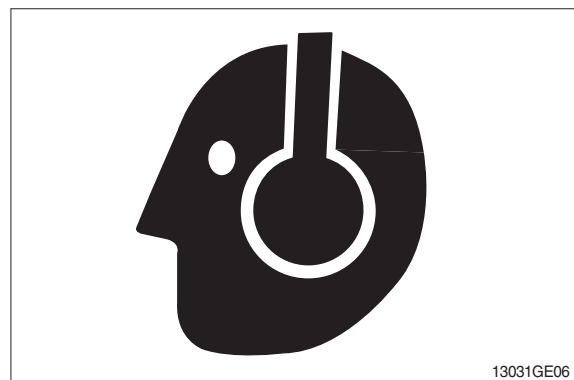
Guard against injury from flying pieces of metal or debris; wear goggles or safety glasses.



PROTECT AGAINST NOISE

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

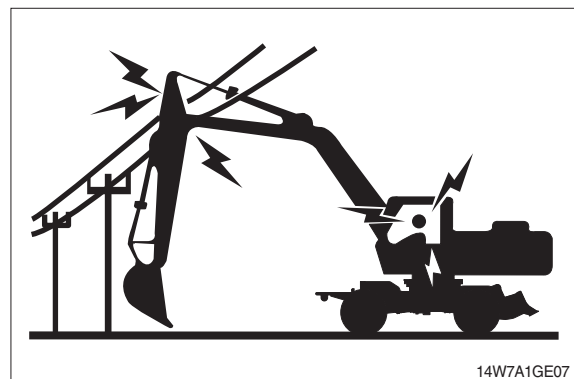
Wear a suitable hearing protective device such as ear-muffs or earplugs to protect against objectionable or uncomfortable loud noises.



AVOID POWER LINES

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

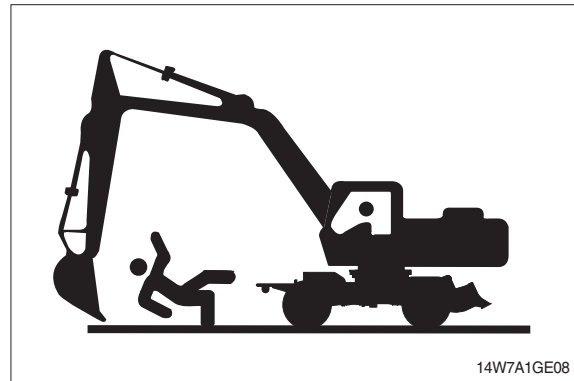
Never move any part of the machine or load closer to electric line than 3m(10ft) plus twice the line insulator length.



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.

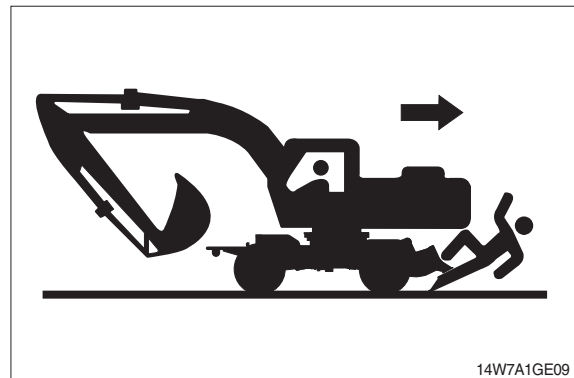


MOVE AND OPERATE MACHINE SAFELY

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:

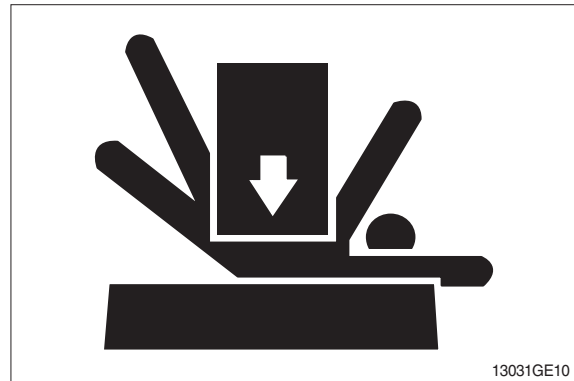
- Park machine on a level surface.
- Lower bucket to the ground.
- Turn auto idle switch off.
- Run engine at 1/2 speed without load for 2 minutes.
- Turn key switch to OFF to stop engine.
Remove key from switch.
- Move pilot control shutoff lever to locked position.
- Allow engine to cool.

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.

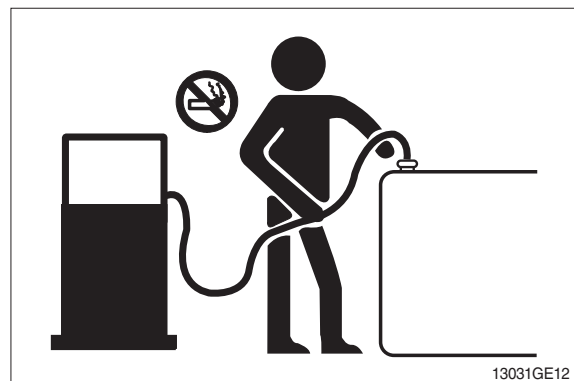
Shut off engine. Only remove filler cap when cool enough to touch with bare hands.



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

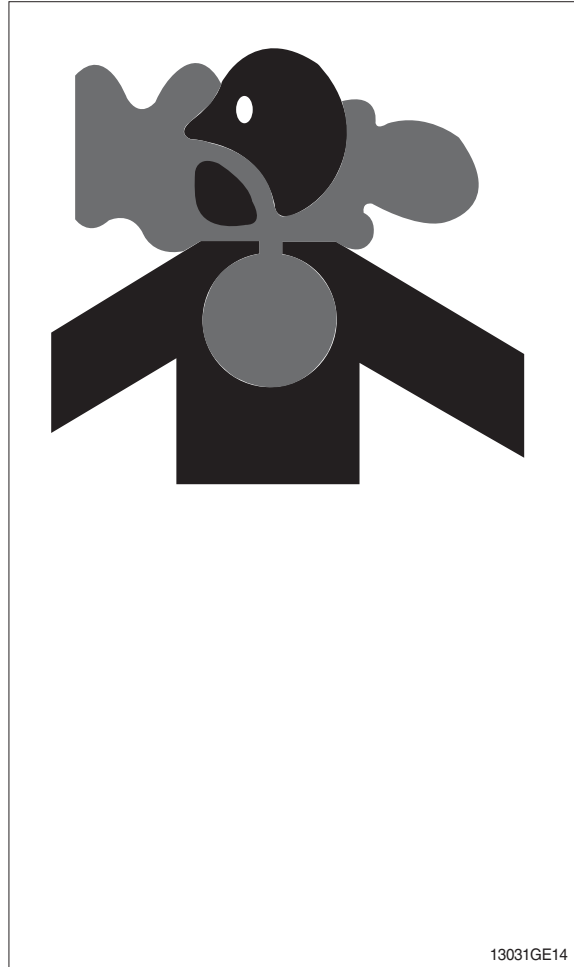
Avoid potentially toxic fumes and dust.

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

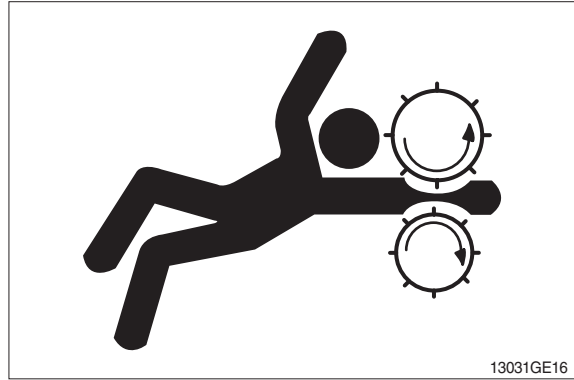
Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



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.

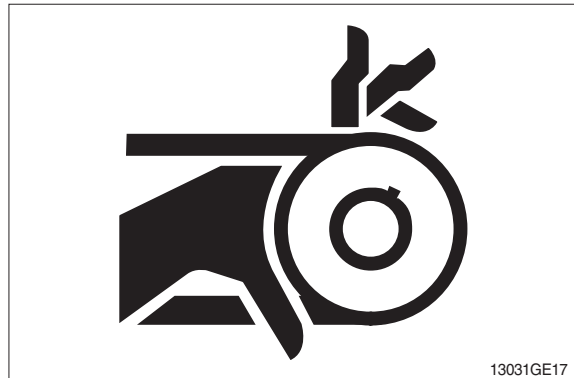
Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



STAY CLEAR OF MOVING PARTS

Entanglements in moving parts can cause serious injury.

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



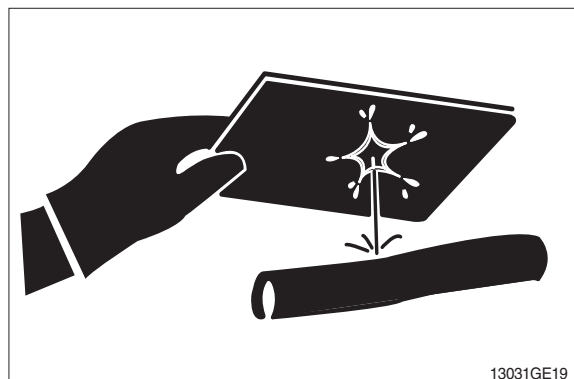
AVOID HIGH PRESSURE FLUIDS

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:

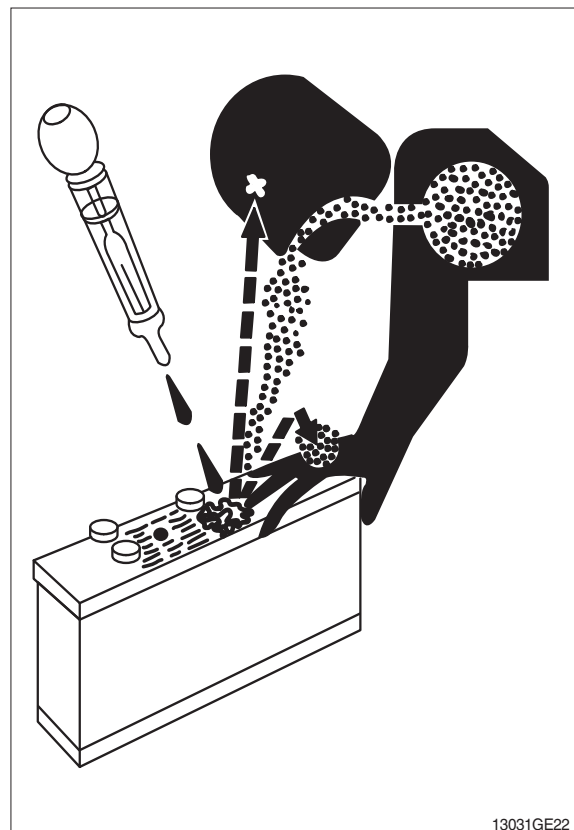
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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.



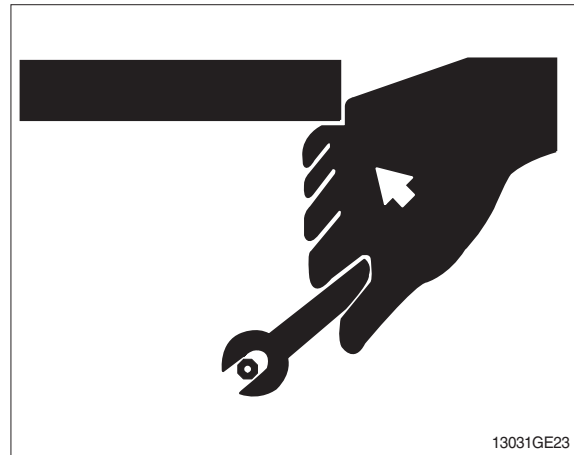
USE TOOLS PROPERLY

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 manual.)

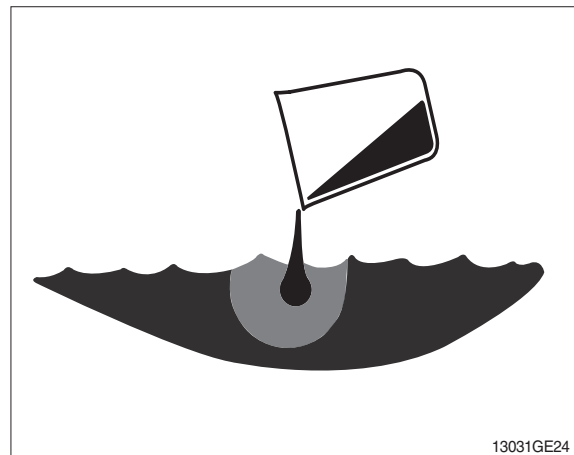


DISPOSE OF FLUIDS PROPERLY

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.

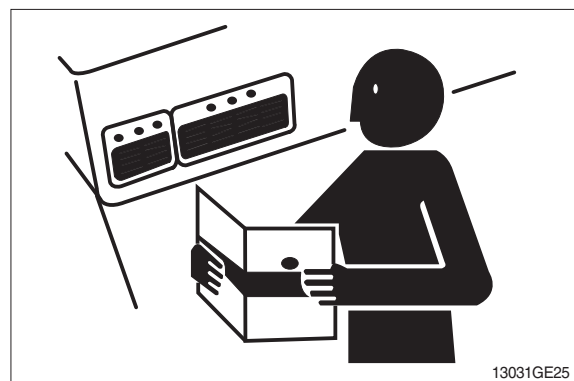
Use proper containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

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.

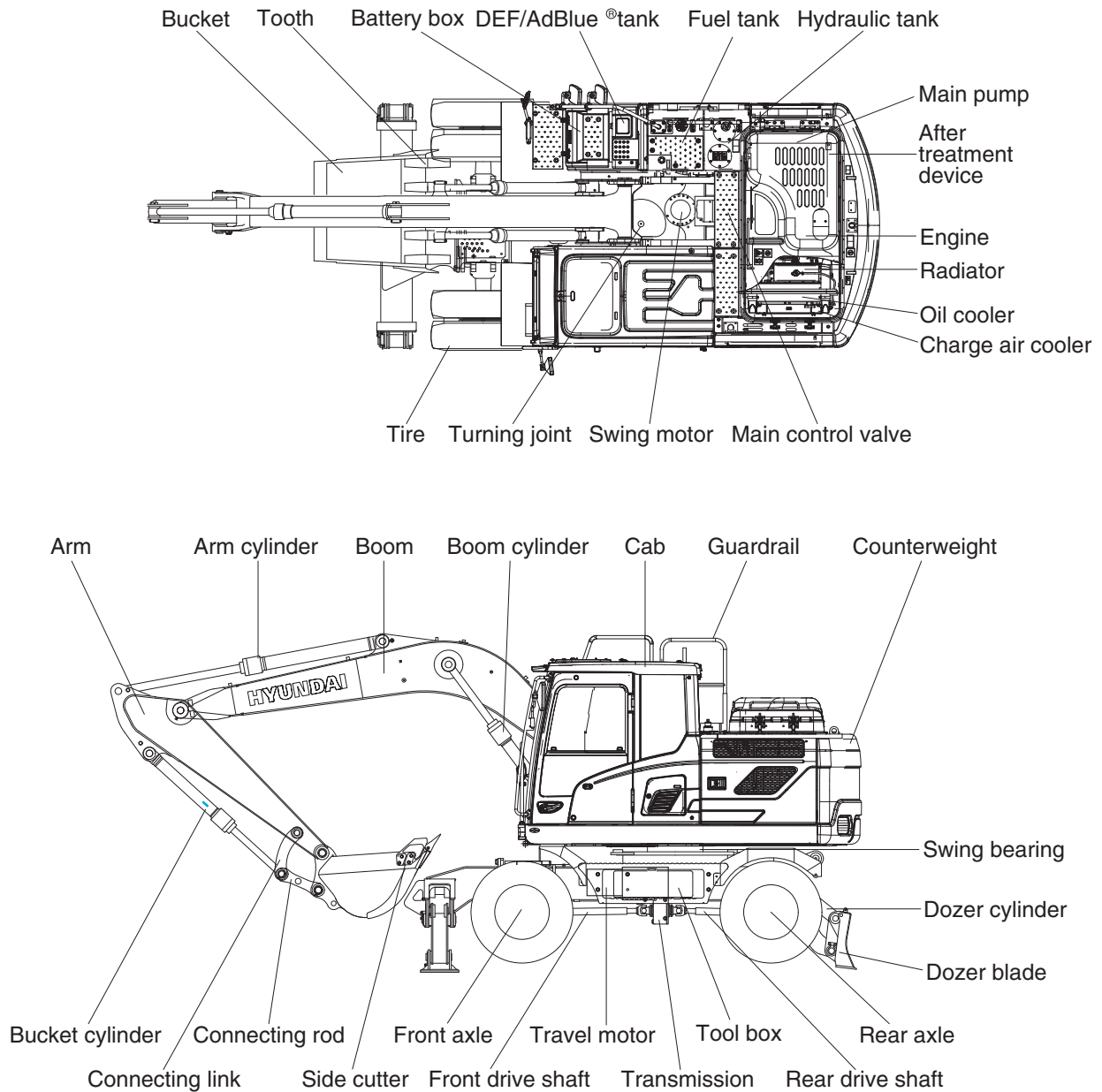


LIVE WITH SAFETY

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

GROUP 2 SPECIFICATIONS (HW160)

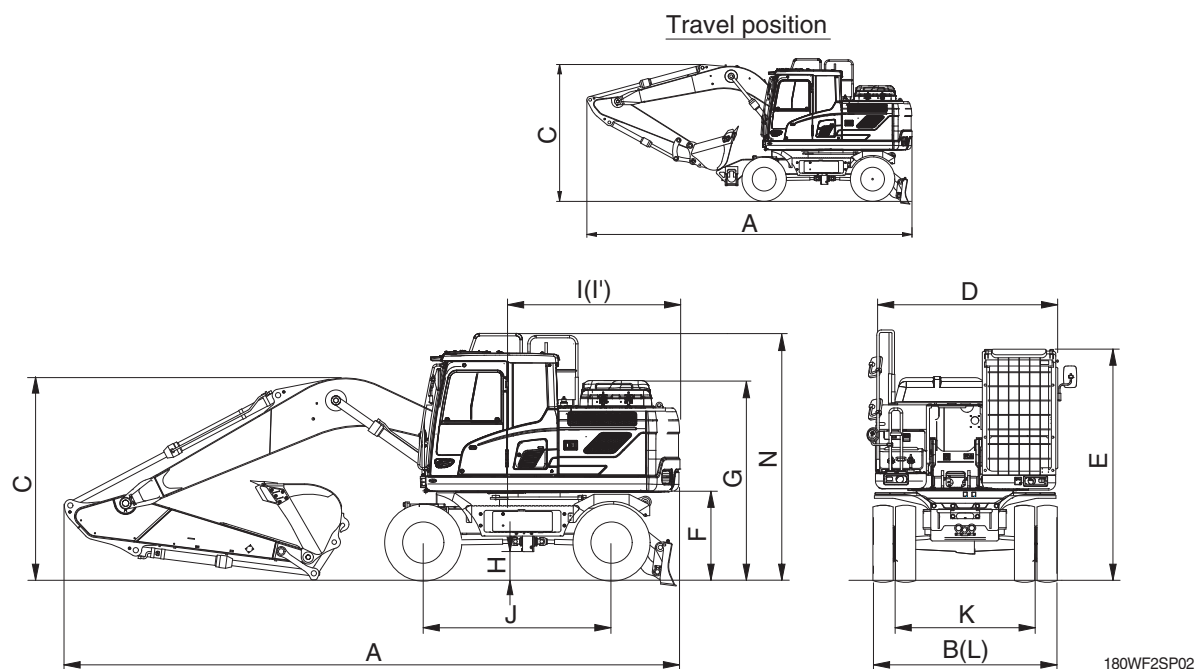
1. MAJOR COMPONENT



180WF2SP01

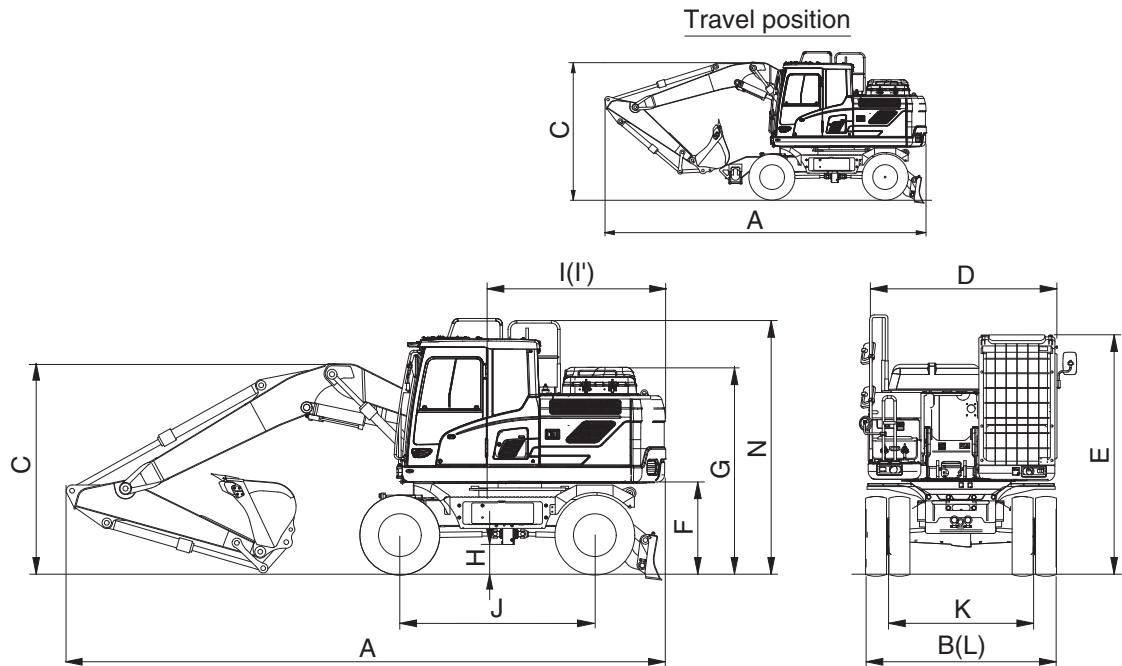
2. SPECIFICATIONS

1) 5.0 m (16' 5") MONO BOOM, 2.2 m (7' 3") ARM AND REAR DOZER BLADE



Description		Unit	Specification
Operating weight		kg (lb)	17100 (37700)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.70 (0.92)
Overall length (travel / shipping)	A	mm (ft-in)	8400 (27' 7") / 8490 (27' 7")
Overall width	B		2500 (8' 2")
Overall height of boom (travel / shipping)	C		3460 (11' 4") / 3180 (10' 5")
Upperstructure width	D		2475 (8' 1")
Cab height	E		3190 (10' 6")
Ground clearance of counterweight	F		1270 (4' 2")
Overall height of engine hood	G		2800 (9' 2")
Minimum ground clearance	H		340 (1' 1")
Rear-end distance	I		2430 (8' 0")
Rear-end swing radius	I'		2430 (8' 0")
Wheel base	J		2600 (8' 6")
Tread	K		1914 (6' 3")
Dozer blade width	L		2500 (8' 2")
Overall height of guardrail	N		3420 (11' 3")
Travel speed	Low	km/hr (mph)	9.5 (5.9)
	High		35 (21.7)
	Creep		3.0 (1.9)
Swing speed		rpm	9.3
Gradeability		Degree (%)	35 (70)
Max traction force		kgf (lbf)	10720 (23630)

2) 5.1 m (16' 9") 2-PIECE BOOM, 2.2 m (7' 3") ARM AND REAR DOZER BLADE

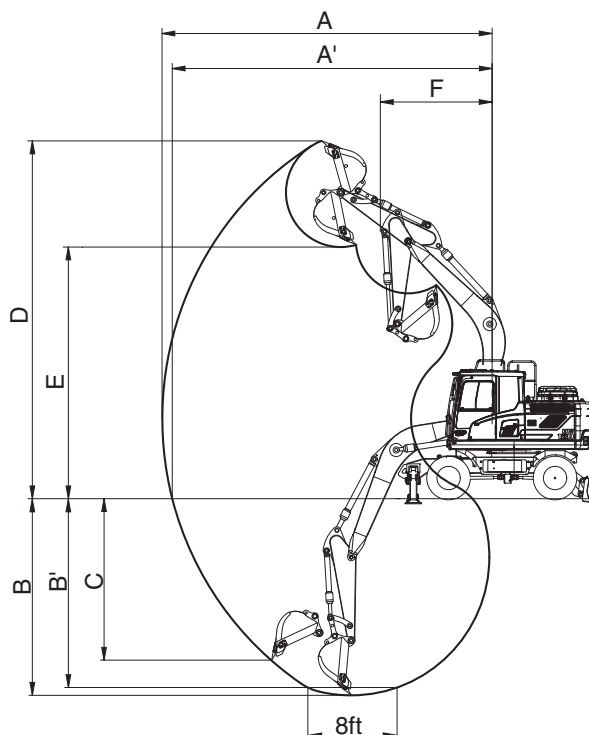


180WF2SP03

Description		Unit	Specification
Operating weight		kg (lb)	17570 (38740)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.70 (0.92)
Overall length (travel / shipping)	A	mm (ft-in)	6580 (21' 7") / 8520 (27' 11")
Overall width (axle / wide axle)	B		2500 (8' 2") / 2700 (8' 9")
Overall height of boom (travel / shipping)	C		3990 (13' 1") / 3010 (9' 11")
Upperstructure width	D		2475 (8' 1")
Cab height	E		3190 (10' 6")
Ground clearance of counterweight	F		1270 (4' 2")
Overall height of engine hood	G		2800 (9' 2")
Minimum ground clearance	H		340 (1' 1")
Rear-end distance	I		2430 (8' 0")
Rear-end swing radius	I'		2430 (8' 0")
Wheel base	J		2600 (8' 6")
Tread (axle / wide axle)	K		1914 (6' 3") / 2114 (6' 9")
Dozer blade width	L		2500 (8' 2")
Overall height of guardrail	N		3420 (11' 3")
Travel speed	Low	km/hr (mph)	9.5 (5.9)
	High		35 (21.7)
	Creep		3.0 (1.9)
Swing speed		rpm	9.3
Gradeability		Degree (%)	35 (70)
Max traction force		kgf (lbf)	10720 (23630)

3. WORKING RANGE

1) 5.0 m (16' 5") MONO BOOM

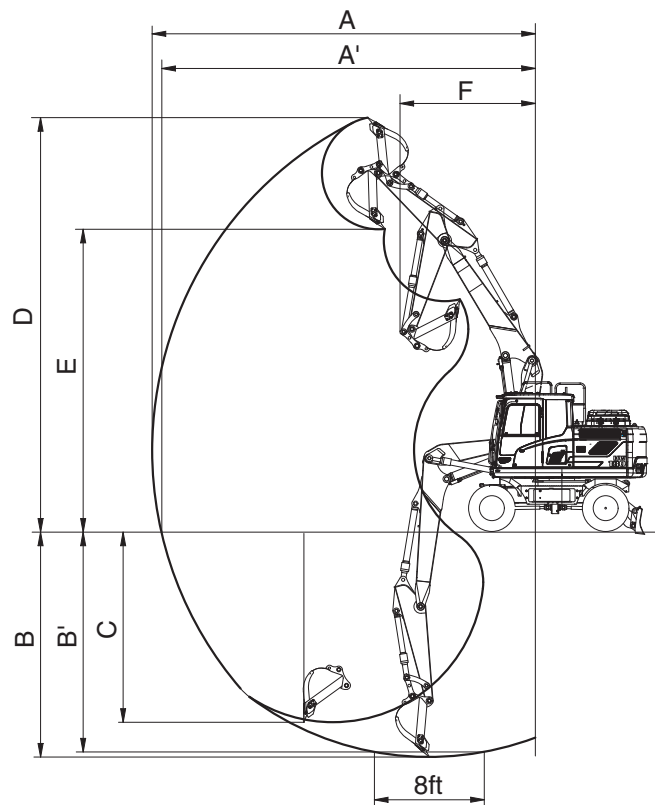


180WF2SP04

Description		2.2 m (7' 3") Arm	2.5 m (8' 2") Arm
Max digging reach	A	8570 mm (28' 1")	8860 mm (29' 1")
Max digging reach on ground	A'	8360 mm (27' 5")	8650 mm (28' 5")
Max digging depth	B	5350 mm (17' 7")	5650 mm (18' 6")
Max digging depth (8 ft level)	B'	5120 mm (16' 10")	5450 mm (17' 11")
Max vertical wall digging depth	C	4710 mm (15' 5")	5100 mm (16' 9")
Max digging height	D	8830 mm (29' 0")	9040 mm (29' 8")
Max dumping height	E	6210 mm (20' 4")	6400 mm (21' 0")
Min swing radius	F	3310 mm (10' 10")	3170 mm (10' 5")
Bucket digging force	SAE	98.1 [106.5] kN	98.1 [106.5] kN
		10000 [10860] kgf	10000 [10860] kgf
		22050 [23940] lbf	22050 [23940] lbf
	ISO	113.4 [123.1] kN	113.4 [123.1] kN
		11560 [12550] kgf	11560 [12550] kgf
		25490 [27670] lbf	25490 [27670] lbf
Arm digging force	SAE	76.0 [82.5] kN	66.4 [72.1] kN
		7750 [8410] kgf	6770 [7350] kgf
		17090 [18550] lbf	14930 [16210] lbf
	ISO	79.4 [86.2] kN	69.1 [75.1] kN
		8100 [8790] kgf	7050 [7650] kgf
		17860 [19390] lbf	15540 [16870] lbf

* : Standard [] : Power boost

2) 5.1 m (16' 9") 2-PIECE BOOM



180WF2SP05

Description		2.2 m (7' 3") Arm	2.5 m (8' 2") Arm
Max digging reach	A	8750 mm (28' 8")	9040 mm (29' 8")
Max digging reach on ground	A'	8540 mm (28' 0")	8840 mm (29' 0")
Max digging depth	B	5220 mm (17' 2")	5520 mm (18' 1")
Max digging depth (8 ft level)	B'	5100 mm (16' 9")	5410 mm (17' 9")
Max vertical wall digging depth	C	4400 mm (14' 5")	4740 mm (15' 7")
Max digging height	D	9610 mm (31' 6")	9860 mm (32' 4")
Max dumping height	E	6900 mm (22' 8")	7140 mm (23' 5")
Min swing radius	F	3380 mm (11' 1")	3130 mm (10' 3")
Bucket digging force	SAE	98.1 [106.5] kN	98.1 [106.5] kN
		10000 [10860] kgf	10000 [10860] kgf
		22050 [23940] lbf	22050 [23940] lbf
	ISO	113.4 [123.1] kN	113.4 [123.1] kN
		11560 [12550] kgf	11560 [12550] kgf
		25490 [27670] lbf	25490 [27670] lbf
Arm digging force	SAE	76.0 [82.5] kN	66.4 [72.1] kN
		7750 [8410] kgf	6770 [7350] kgf
		17090 [18550] lbf	14930 [16210] lbf
	ISO	79.4 [86.2] kN	69.1 [75.1] kN
		8100 [8790] kgf	7050 [7650] kgf
		17860 [19390] lbf	15540 [16870] lbf

[] : Power boost

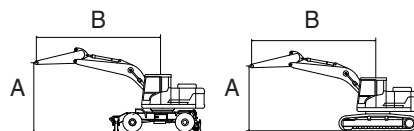
4. WEIGHT

Item	HW160	
	kg	lb
Upperstructure assembly	4445	9800
Main frame weld assembly	1390	3060
Engine assembly	520	1150
Main pump assembly	90	200
Main control valve assembly	135	300
Swing motor assembly	240	530
Hydraulic oil tank assembly	150	330
Fuel tank assembly	155	340
Counterweight	2650	5840
Cab assembly	500	1100
Lower frame weld assembly	1640	3620
Swing bearing	260	570
Travel motor assembly	80	176
Turning joint	120	265
Transmission assembly	135	298
Front axle assembly	637	1404
Front wide axle assembly	655	1444
Rear axle assembly	534	1177
Rear wide axle assembly	547	1206
Front attachment assembly (5.0 m boom, 2.2 m arm, 0.70 m ³ SAE heaped bucket)	2965	6540
5.0 m boom assembly	1040	2290
2.2 m arm assembly	490	1080
0.70 m ³ SAE heaped bucket assembly	600	1320
Boom cylinder assembly	155×2EA	340×2EA
Arm cylinder assembly	180	400
Bucket cylinder assembly	125	260
Bucket control link assembly	120	265
Oscillating cylinder assembly	30	70
Dozer blade assembly	830	1830
Blade cylinder assembly	55×2EA	120×2EA
Front outrigger assembly	1000	2200
Rear outrigger assembly	1010	2230
Outrigger cylinder assembly	80	180

5. LIFTING CAPACITIES

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2200	2650	-	500	-	Down	-	-

 : 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)		Capacity		Reach
												m (ft)
6.0 m (19.7 ft)	kg									*3330	*3330	5.88
	lb									*7340	*7340	(19.3)
4.5 m (14.8 ft)	kg					*4960	*4960	*4380	3300	*3180	2730	6.71
	lb					*10930	*10930	*9660	7280	*7010	6020	(22.0)
3.0 m (9.8 ft)	kg					*6080	4880	4390	3170	*3230	2430	7.12
	lb					*13400	10760	9680	6990	*7120	5360	(23.4)
1.5 m (4.9 ft)	kg					6610	4590	4250	3040	3240	2330	7.20
	lb					14570	10120	9370	6700	7140	5140	(23.6)
Ground Line	kg					6440	4440	4160	2960	3370	2420	6.95
	lb					14200	9790	9170	6530	7430	5340	(22.8)
-1.5 m (-4.9 ft)	kg	*5550	*5550	*10030	8540	6420	4420	4150	2950	3860	2760	6.33
	lb	*12240	*12240	*22110	18830	14150	9740	9150	6500	8510	6080	(20.8)
-3.0 m (-9.8 ft)	kg			*8130	*8130	*5730	4540			*4590	3710	5.21
	lb			*17920	*17920	*12630	10010			*10120	8180	(17.1)

Note 1. Lifting capacity are based on SAE J1097 and 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.

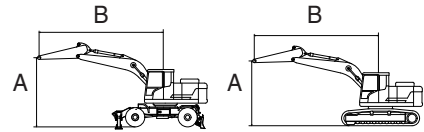
Consult your HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.

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

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

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2200	2650	-	500	-	Up	-	-

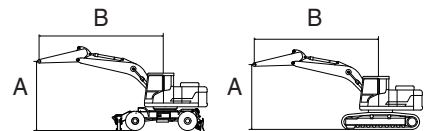
 : Rating over-front
  : Rating over-side or 360 degree



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)		Capacity		Reach
												m (ft)
6.0 m (19.7 ft)	kg lb									*3330 *7340	*3330 *7340	5.88 (19.3)
4.5 m (14.8 ft)	kg lb					*4960 *10930	*4960 *10930	*4380 *9660	3300 7280	*3180 *7010	2730 6020	6.71 (22.0)
3.0 m (9.8 ft)	kg lb					*6080 *13400	4880 10760	4390 9680	3170 6990	*3230 *7120	2430 5360	7.12 (23.4)
1.5 m (4.9 ft)	kg lb					6610 14570	4590 10120	4250 9370	3040 6700	3240 7140	2330 5140	7.20 (23.6)
Ground Line	kg lb					6440 14200	4440 9790	4160 9170	2960 6530	3370 7430	2420 5340	6.95 (22.8)
-1.5 m (-4.9 ft)	kg lb	*5550 *12240	*5550 *12240	*10030 *22110	8540 18830	6420 14150	4420 9740	4150 9150	2950 6500	3860 8510	2760 6080	6.33 (20.8)
-3.0 m (-9.8 ft)	kg lb			*8130 *17920	*8130 *17920	*5730 *12630	4540 10010			*4590 *10120	3710 8180	5.21 (17.1)

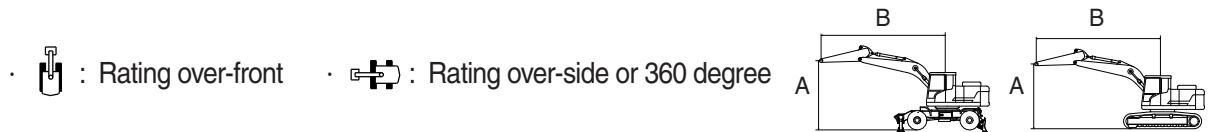
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2200	3150	-	500	-	Down	-	-

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



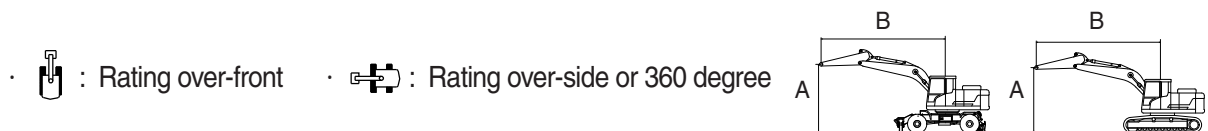
Lift-point height (A)		Lift-point radius (B)								At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
												m (ft)
6.0 m (19.7 ft)	kg lb									*3330 *7340	*3330 *7340	5.88 (19.3)
4.5 m (14.8 ft)	kg lb					*4960 *10930	*4960 *10930	*4380 *9660	3580 7890	*3180 *7010	2980 6570	6.71 (22.0)
3.0 m (9.8 ft)	kg lb					*6080 *13400	5300 11680	4730 10430	3460 7630	*3230 *7120	2660 5860	7.12 (23.4)
1.5 m (4.9 ft)	kg lb					*7070 *15590	5000 11020	4580 10100	3320 7320	*3450 *7610	2560 5640	7.20 (23.6)
Ground Line	kg lb					6950 15320	4850 10690	4490 9900	3240 7140	3650 8050	2660 5860	6.95 (22.8)
-1.5 m (-4.9 ft)	kg lb	*5550 *12240	*5550 *12240	*10030 *22110	9310 20530	6940 15300	4840 10670	4490 9900	3240 7140	4180 9220	3030 6680	6.33 (20.8)
-3.0 m (-9.8 ft)	kg lb			*8130 *17920	*8130 *17920	*5730 *12630	4950 10910			*4590 *10120	4050 8930	5.21 (17.1)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2200	3150	-	500	-	Up	-	-



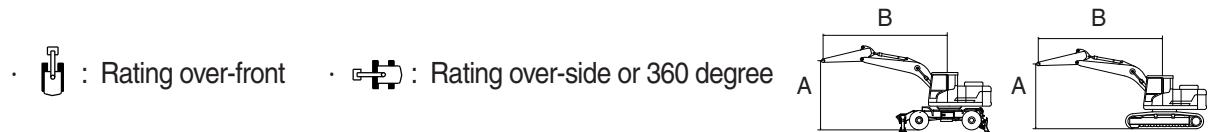
Lift-point height (A)		Lift-point radius (B)								At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
												m (ft)
6.0 m (19.7 ft)	kg lb									*3330 *7340	*3330 *7340	5.88 (19.3)
4.5 m (14.8 ft)	kg lb					*4960 *10930	*4960 *10930	*4380 *9660	3580 7890	*3180 *7010	2980 6570	6.71 (22.0)
3.0 m (9.8 ft)	kg lb					*6080 *13400	5300 11680	4730 10430	3460 7630	*3230 *7120	2660 5860	7.12 (23.4)
1.5 m (4.9 ft)	kg lb					*7070 *15590	5000 11020	4580 10100	3320 7320	*3450 *7610	2560 5640	7.20 (23.6)
Ground Line	kg lb					6950 15320	4850 10690	4490 9900	3240 7140	3650 8050	2660 5860	6.95 (22.8)
-1.5 m (-4.9 ft)	kg lb	*5550 *12240	*5550 *12240	*10030 *22110	9310 20530	6940 15300	4840 10670	4490 9900	3240 7140	4180 9220	3030 6680	6.33 (20.8)
-3.0 m (-9.8 ft)	kg lb			*8130 *17920	*8130 *17920	*5730 *12630	4950 10910			*4590 *10120	4050 8930	5.21 (17.1)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2500	2650	-	500	-	Down	-	-



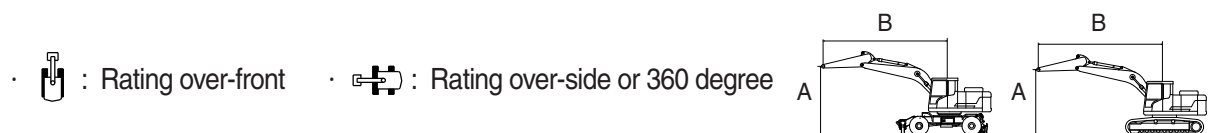
Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
6.0 m (19.7 ft)	kg lb							*3420 *7540	*3420 *7540			*2530 *5580	*2530 *5580	6.24 (20.5)
4.5 m (14.8 ft)	kg lb					*4770 *10520	*4770 *10520	*4280 *9440	3440 7580			*2430 *5360	*2430 *5360	7.02 (23.0)
3.0 m (9.8 ft)	kg lb					*5840 *12870	4980 10980	4500 9920	3270 7210			*2460 *5420	2370 5220	7.42 (24.3)
1.5 m (4.9 ft)	kg lb					6600 14550	4580 10100	4310 9500	3100 6830			*2600 *5730	2280 5030	7.49 (24.6)
Ground Line	kg lb			*5760 *12700	*5760 *12700	6360 14020	4360 9610	4180 9220	2980 6570			*2890 *6370	2340 5160	7.25 (23.8)
-1.5 m (-4.9 ft)	kg lb	*5600 *12350	*5600 *12350	*9590 *21140	8150 17970	6320 13930	4330 9550	4170 9190	2960 6530			*3480 *7670	2620 5780	6.66 (21.9)
-3.0 m (-9.8 ft)	kg lb	*9610 *21190	*9610 *21190	*8550 *18850	8420 18560	*6080 *13400	4460 9830					*4510 *9940	3360 7410	5.61 (18.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2500	2650	-	500	-	Up	-	-



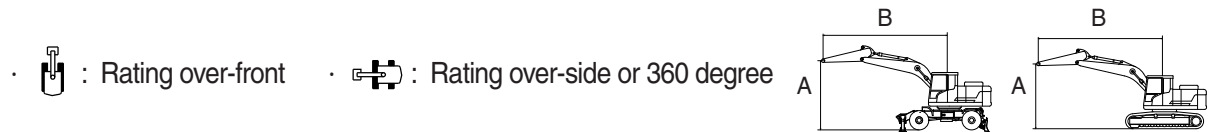
Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
6.0 m (19.7 ft)	kg lb							*3420 *7540	*3420 *7540			*2530 *5580	*2530 *5580	6.24 (20.5)
4.5 m (14.8 ft)	kg lb					*4770 *10520	*4770 *10520	*4280 *9440	3440 7580			*2430 *5360	*2430 *5360	7.02 (23.0)
3.0 m (9.8 ft)	kg lb					*5840 *12870	4980 10980	4500 9920	3270 7210			*2460 *5420	2370 5220	7.42 (24.3)
1.5 m (4.9 ft)	kg lb					6600 14550	4580 10100	4310 9500	3100 6830			*2600 *5730	2280 5030	7.49 (24.6)
Ground Line	kg lb			*5760 *12700	*5760 *12700	6360 14020	4360 9610	4180 9220	2980 6570			*2890 *6370	2340 5160	7.25 (23.8)
-1.5 m (-4.9 ft)	kg lb	*5600 *12350	*5600 *12350	*9590 *21140	8150 17970	6320 13930	4330 9550	4170 9190	2960 6530			*3480 *7670	2620 5780	6.66 (21.9)
-3.0 m (-9.8 ft)	kg lb	*9610 *21190	*9610 *21190	*8550 *18850	8420 18560	*6080 *13400	4460 9830					*4510 *9940	3360 7410	5.61 (18.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2500	3150	-	500	-	Down	-	-



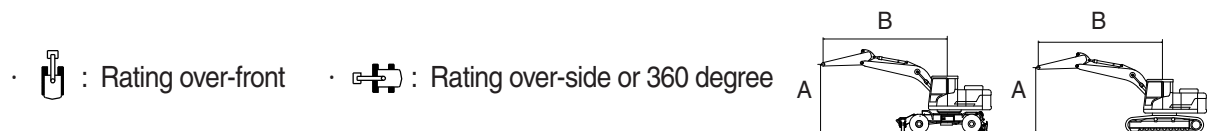
Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
6.0 m (19.7 ft)	kg lb							*3420 *7540	*3420 *7540			*2530 *5580	*2530 *5580	6.24 (20.5)
4.5 m (14.8 ft)	kg lb					*4770 *10520	*4770 *10520	*4280 *9440	3730 8220			*2430 *5360	*2430 *5360	7.02 (23.0)
3.0 m (9.8 ft)	kg lb					*5840 *12870	5400 11900	*4710 *10380	3560 7850			*2460 *5420	*2460 *5420	7.42 (24.3)
1.5 m (4.9 ft)	kg lb					*6850 *15100	4990 11000	4650 10250	3380 7450			*2600 *5730	2500 5510	7.49 (24.6)
Ground Line	kg lb			*5760 *12700	*5760 *12700	6870 15150	4780 10540	4520 9960	3260 7190			*2890 *6370	2570 5670	7.25 (23.8)
-1.5 m (-4.9 ft)	kg lb	*5600 *12350	*5600 *12350	*9590 *21140	8920 19670	6830 15060	4740 10450	4500 9920	3250 7170			*3480 *7670	2870 6330	6.66 (21.9)
-3.0 m (-9.8 ft)	kg lb	*9610 *21190	*9610 *21190	*8550 *18850	*8550 *18850	*6080 *13400	4870 10740					*4510 *9940	3670 8090	5.61 (18.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5000	2500	3150	-	500	-	Up	-	-



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)		Capacity		Reach
														m (ft)
6.0 m (19.7 ft)	kg lb							*3420 *7540	*3420 *7540			*2530 *5580	*2530 *5580	6.24 (20.5)
4.5 m (14.8 ft)	kg lb					*4770 *10520	*4770 *10520	*4280 *9440	3730 8220			*2430 *5360	*2430 *5360	7.02 (23.0)
3.0 m (9.8 ft)	kg lb					*5840 *12870	5400 11900	*4710 *10380	3560 7850			*2460 *5420	*2460 *5420	7.42 (24.3)
1.5 m (4.9 ft)	kg lb					*6850 *15100	4990 11000	4650 10250	3380 7450			*2600 *5730	2500 5510	7.49 (24.6)
Ground Line	kg lb			*5760 *12700	*5760 *12700	6870 15150	4780 10540	4520 9960	3260 7190			*2890 *6370	2570 5670	7.25 (23.8)
-1.5 m (-4.9 ft)	kg lb	*5600 *12350	*5600 *12350	*9590 *21140	8920 19670	6830 15060	4740 10450	4500 9920	3250 7170			*3480 *7670	2870 6330	6.66 (21.9)
-3.0 m (-9.8 ft)	kg lb	*9610 *21190	*9610 *21190	*8550 *18850	*8550 *18850	*6080 *13400	4870 10740					*4510 *9940	3670 8090	5.61 (18.4)

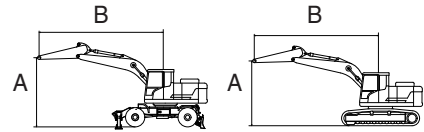
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	2650	-	500	-	Down	-	-



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 lb			*5170 *11400	*5170 *11400					*4710 *10380	*4710 *10380	4.71 (15.4)
6.0 m (19.7 ft)	kg lb			*4870 *10740	*4870 *10740	4590 10120	3330 7340			*3980 *8770	3210 7080	6.11 (20.0)
4.5 m (14.8 ft)	kg lb			*5640 *12430	5220 11510	4550 10030	3290 7250			3570 7870	2580 5690	6.90 (22.6)
3.0 m (9.8 ft)	kg lb			6950 15320	4850 10690	4390 9680	3150 6940			3210 7080	2300 5070	7.31 (24.0)
1.5 m (4.9 ft)	kg lb			6580 14510	4520 9960	4240 9350	3000 6610			3110 6860	2210 4870	7.38 (24.2)
Ground Line	kg lb			6410 14130	4370 9630	4140 9130	2910 6420			3240 7140	2300 5070	7.14 (23.4)
-1.5 m (-4.9 ft)	kg lb	*9770 *21540	8460 18650	6400 14110	4360 9610	4140 9130	2910 6420			3690 8140	2620 5780	6.54 (21.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	2650	-	500	-	Up	-	-

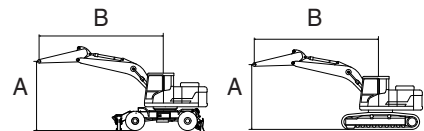
 : Rating over-front
  : Rating over-side or 360 degree



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 lb			*5170 *11400	*5170 *11400					*4710 *10380	*4710 *10380	4.71 (15.4)
6.0 m (19.7 ft)	kg lb			*4870 *10740	*4870 *10740	4590 10120	3330 7340			*3980 *8770	3210 7080	6.11 (20.0)
4.5 m (14.8 ft)	kg lb			*5640 *12430	5220 11510	4550 10030	3290 7250			3570 7870	2580 5690	6.90 (22.6)
3.0 m (9.8 ft)	kg lb			6950 15320	4850 10690	4390 9680	3150 6940			3210 7080	2300 5070	7.31 (24.0)
1.5 m (4.9 ft)	kg lb			6580 14510	4520 9960	4240 9350	3000 6610			3110 6860	2210 4870	7.38 (24.2)
Ground Line	kg lb			6410 14130	4370 9630	4140 9130	2910 6420			3240 7140	2300 5070	7.14 (23.4)
-1.5 m (-4.9 ft)	kg lb	*9770 *21540	8460 18650	6400 14110	4360 9610	4140 9130	2910 6420			3690 8140	2620 5780	6.54 (21.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	3150	-	500	-	Down	-	-

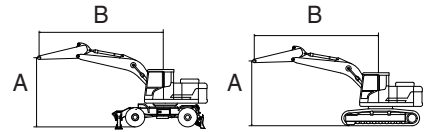
 : Rating over-front
  : Rating over-side or 360 degree



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 lb			*5170 *11400	*5170 *11400					*4710 *10380	*4710 *10380	4.71 (15.4)
6.0 m (19.7 ft)	kg lb			*4870 *10740	*4870 *10740	*4690 *10340	3610 7960			*3980 *8770	3490 7690	6.11 (20.0)
4.5 m (14.8 ft)	kg lb			*5640 *12430	5640 12430	4880 10760	3570 7870			*3730 *8220	2820 6220	6.90 (22.6)
3.0 m (9.8 ft)	kg lb			*6950 *15320	5260 11600	4730 10430	3430 7560			3470 7650	2520 5560	7.31 (24.0)
1.5 m (4.9 ft)	kg lb			7090 15630	4940 10890	4570 10080	3280 7230			3360 7410	2440 5380	7.38 (24.2)
Ground Line	kg lb			6920 15260	4780 10540	4480 9880	3200 7050			3500 7720	2530 5580	7.14 (23.4)
-1.5 m (-4.9 ft)	kg lb	*9770 *21540	9230 20350	6920 15260	4780 10540	4480 9880	3190 7030			3990 8800	2870 6330	6.54 (21.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	3150	-	500	-	Up	-	-

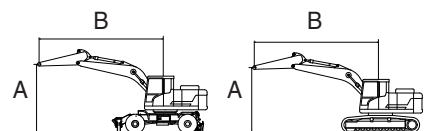
 : Rating over-front
  : Rating over-side or 360 degree



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 lb			*5170 *11400	*5170 *11400					*4710 *10380	*4710 *10380	4.71 (15.4)
6.0 m (19.7 ft)	kg lb			*4870 *10740	*4870 *10740	*4690 *10340	3610 7960			*3980 *8770	3490 7690	6.11 (20.0)
4.5 m (14.8 ft)	kg lb			*5640 *12430	5640 12430	4880 10760	3570 7870			*3730 *8220	2820 6220	6.90 (22.6)
3.0 m (9.8 ft)	kg lb			*6950 *15320	5260 11600	4730 10430	3430 7560			3470 7650	2520 5560	7.31 (24.0)
1.5 m (4.9 ft)	kg lb			7090 15630	4940 10890	4570 10080	3280 7230			3360 7410	2440 5380	7.38 (24.2)
Ground Line	kg lb			6920 15260	4780 10540	4480 9880	3200 7050			3500 7720	2530 5580	7.14 (23.4)
-1.5 m (-4.9 ft)	kg lb	*9770 *21540	9230 20350	6920 15260	4780 10540	4480 9880	3190 7030			3990 8800	2870 6330	6.54 (21.4)

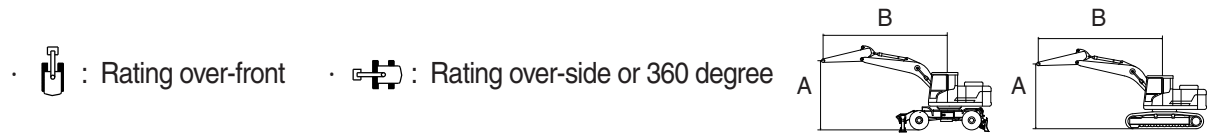
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2500	2650	-	500	-	Down	-	-

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



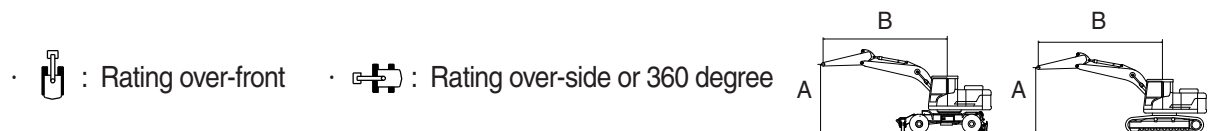
Lift-point height (A)		Lift-point radius (B)								At max. reach		
		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
												m (ft)
7.5 m (24.6 ft)	kg lb			*4790 *10560	*4790 *10560					*3430 *7560	*3430 *7560	5.17 (17.0)
6.0 m (19.7 ft)	kg lb			*4680 *10320	*4680 *10320	*4650 *10250	3510 7740			*2980 *6570	*2980 *6570	6.47 (21.2)
4.5 m (14.8 ft)	kg lb			*5420 *11950	*5420 *11950	4710 10380	3430 7560			*2810 *6190	2500 5510	7.22 (23.7)
3.0 m (9.8 ft)	kg lb			*6670 *14700	4940 10890	4510 9940	3250 7170	3190 7030	2310 5090	*2800 *6170	2250 4960	7.61 (25.0)
1.5 m (4.9 ft)	kg lb			6570 14480	4510 9940	4300 9480	3050 6720	3120 6880	2240 4940	*2900 *6390	2170 4780	7.68 (25.2)
Ground Line	kg lb			6320 13930	4280 9440	4160 9170	2930 6460			3120 6880	2230 4920	7.44 (24.4)
-1.5 m (-4.9 ft)	kg lb	*9520 *20990	8050 17750	6290 13870	4260 9390	4140 9130	2910 6420			3490 7690	2490 5490	6.87 (22.5)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2500	2650	-	500	-	Up	-	-



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 lb			*4790 *10560	*4790 *10560					*3430 *7560	*3430 *7560	5.17 (17.0)
6.0 m (19.7 ft)	kg lb			*4680 *10320	*4680 *10320	*4650 *10250	3510 7740			*2980 *6570	*2980 *6570	6.47 (21.2)
4.5 m (14.8 ft)	kg lb			*5420 *11950	*5420 *11950	4710 10380	3430 7560			*2810 *6190	2500 5510	7.22 (23.7)
3.0 m (9.8 ft)	kg lb			*6670 *14700	4940 10890	4510 9940	3250 7170	3190 7030	2310 5090	*2800 *6170	2250 4960	7.61 (25.0)
1.5 m (4.9 ft)	kg lb			6570 14480	4510 9940	4300 9480	3050 6720	3120 6880	2240 4940	*2900 *6390	2170 4780	7.68 (25.2)
Ground Line	kg lb			6320 13930	4280 9440	4160 9170	2930 6460			3120 6880	2230 4920	7.44 (24.4)
-1.5 m (-4.9 ft)	kg lb	*9520 *20990	8050 17750	6290 13870	4260 9390	4140 9130	2910 6420			3490 7690	2490 5490	6.87 (22.5)

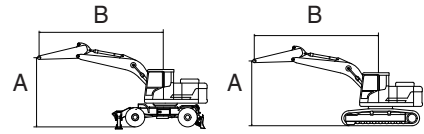
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2500	3150	-	500	-	Down	-	-



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 lb			*4790 *10560	*4790 *10560					*3430 *7560	*3430 *7560	5.17 (17.0)
6.0 m (19.7 ft)	kg lb			*4680 *10320	*4680 *10320	*4650 *10250	3800 8380			*2980 *6570	*2980 *6570	6.47 (21.2)
4.5 m (14.8 ft)	kg lb			*5420 *11950	*5420 *11950	*4830 *10650	3720 8200			*2810 *6190	2730 6020	7.22 (23.7)
3.0 m (9.8 ft)	kg lb			*6670 *14700	5360 11820	4840 10670	3530 7780	3440 7580	2520 5560	*2800 *6170	2460 5420	7.61 (25.0)
1.5 m (4.9 ft)	kg lb			7080 15610	4920 10850	4630 10210	3340 7360	3370 7430	2460 5420	*2900 *6390	2380 5250	7.68 (25.2)
Ground Line	kg lb			6830 15060	4700 10360	4500 9920	3210 7080			*3150 *6940	2450 5400	7.44 (24.4)
-1.5 m (-4.9 ft)	kg lb	*9520 *20990	8820 19440	6800 14990	4670 10300	4480 9880	3190 7030			*3650 *8050	2730 6020	6.87 (22.5)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW160	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2500	3150	-	500	-	Up	-	-

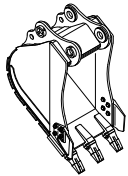
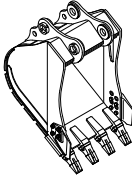
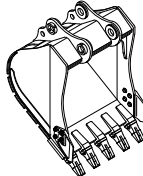
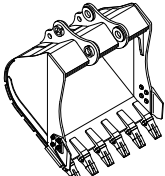
 : Rating over-front
  : Rating over-side or 360 degree



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	kg			*4790	*4790					*3430	*3430	5.17
(24.6 ft)	lb			*10560	*10560					*7560	*7560	(17.0)
6.0 m	kg			*4680	*4680	*4650	3800			*2980	*2980	6.47
(19.7 ft)	lb			*10320	*10320	*10250	8380			*6570	*6570	(21.2)
4.5 m	kg			*5420	*5420	*4830	3720			*2810	2730	7.22
(14.8 ft)	lb			*11950	*11950	*10650	8200			*6190	6020	(23.7)
3.0 m	kg			*6670	5360	4840	3530	3440	2520	*2800	2460	7.61
(9.8 ft)	lb			*14700	11820	10670	7780	7580	5560	*6170	5420	(25.0)
1.5 m	kg			7080	4920	4630	3340	3370	2460	*2900	2380	7.68
(4.9 ft)	lb			15610	10850	10210	7360	7430	5420	*6390	5250	(25.2)
Ground Line	kg			6830	4700	4500	3210			*3150	2450	7.44
	lb			15060	10360	9920	7080			*6940	5400	(24.4)
-1.5 m	kg	*9520	8820	6800	4670	4480	3190			*3650	2730	6.87
(-4.9 ft)	lb	*20990	19440	14990	10300	9880	7030			*8050	6020	(22.5)

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET

			
0.39 m³ SAE heaped bucket	0.50 m³ SAE heaped bucket	0.64, 0.70, 0.76 m³ SAE heaped bucket	0.89, 1.05 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation			
					5.0 m (16' 5") Mono boom		5.1 m (16' 9") 2-piece boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.5 m arm (8' 2")	2.2 m arm (7' 3")	2.5 m arm (8' 2")
0.39 m³ (0.51 yd³)	0.34 m³ (0.44 yd³)	650 mm (25.6")	740 mm (29.1")	410 kg (900 lb)	●	●	●	●
0.50 m³ (0.65 yd³)	0.44 m³ (0.58 yd³)	790 mm (31.1")	880 mm (34.6")	470 kg (1040 lb)	●	●	●	●
0.64 m³ (0.84 yd³)	0.55 m³ (0.72 yd³)	950 mm (37.4")	1040 mm (40.9")	510 kg (1120 lb)	●	●	●	●
0.70 m³ (0.92 yd³)	0.60 m³ (0.78 yd³)	1020 mm (40.2")	1110 mm (43.7")	600 kg (1320 lb)	●	◐	◐	◐
0.76 m³ (0.99 yd³)	0.65 m³ (0.85 yd³)	1090 mm (42.9")	1180 mm (46.5")	620 kg (1370 lb)	◐	○	◐	○
0.89 m³ (1.16 yd³)	0.77 m³ (1.01 yd³)	1250 mm (49.2")	1340 mm (52.8")	610 kg (1340 lb)	○	○	○	○
1.05 m³ (1.37 yd³)	0.90 m³ (1.18 yd³)	1430 mm (56.3")	1520 mm (59.8")	680 kg (1500 lb)	○		○	

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

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

○ Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

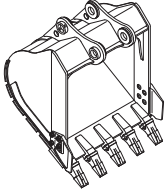
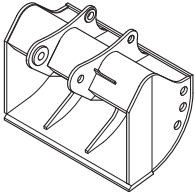
※ These recommendations are for general conditions and average use.

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

2) SPECIAL BUKET

Heavy duty bucket 	Ditch cleaning bucket 
◎ 0.69 m³, 0.72 m³, 0.87 m³ SAE heaped bucket	★ 0.75 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation			
					5.0 m (16' 5") Mono boom		5.1 m (16' 9") 2-piece boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.5 m arm (8' 2")	2.2 m arm (7' 3")	2.5 m arm (8' 2")
◎ 0.69 m ³ (0.90 yd ³)	0.62 m ³ (0.81 yd ³)	1050 mm (41.3")	-	720 kg (1590 lb)	●	●	●	●
◎ 0.72 m ³ (0.94 yd ³)	0.65 m ³ (0.85 yd ³)	940 mm (37.0")	985 mm (38.8")	640 kg (1410 lb)	●	●	●	●
◎ 0.87 m ³ (1.18 yd ³)	0.78 m ³ (1.02 yd ³)	1090 mm (42.9")	1140 mm (44.9")	680 kg (1500 lb)	○	○	○	○
★ 0.75 m ³ (0.98 yd ³)	0.65 m ³ (0.85 yd ³)	1820 mm (71.7")	-	540 kg (1190 lb)	●	●	●	●

◎ : Heavy duty bucket

★ : Ditch cleaning bucket

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

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

○ Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

7. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB 6.7
Type	4-cycle turbocharged diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	107 × 124 mm (4.2" × 4.9")
Piston displacement	6700 cc (409 cu in)
Compression ratio	17.3 : 1
Rated net horse power (SAE J1349)	171 Hp (127 kW) at 1800 rpm
Rated gross horse power (SAE J1995)	180 Hp (134 kW) at 1800 rpm
Maximum torque	85.7 kgf · m (620 lbf · ft) at 1500 rpm
Engine oil quantity	23.7 ℓ (6.3 U.S. gal)
Dry weight	520 kg (1150 lb)
High idling speed	2200 ± 50 rpm
Low idling speed	850 ± 100 rpm
Rated fuel consumption	163.0 g/Hp · hr at 2200 rpm
Starting motor	Nippon denso (24 V-4.8 kW)
Alternator	Nippon denso (24 V-95 A)
Battery	2 × 12 V × 100 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 80 cc/rev
Maximum pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 172 ℓ /min (45.4 U.S. gpm / 37.8 U.K. gpm)
Rated speed	2200 rpm

[]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm ² (570 psi)
Rated oil flow	33.0 ℓ /min (8.7 U.S. gpm/7.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools two-block
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Overload relief valve pressure	400 kgf/cm ² (5690 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification	
	Type 1	Type 2
Type	Fixed displacement axial piston motor	
Capacity	117.8 cc/rev	142.8 cc/rev
Relief pressure	285 kgf/cm ² (4054 psi)	
Braking system	Automatic, spring applied hydraulic released	
Braking torque	59 kgf · m (427 lbf · ft)	66.5 kgf · m (481 lbf · ft)
Brake release pressure	33~50 kgf/cm ² (469~711 psi)	22.3~36.6 kgf/cm ² (317~521 psi)
Reduction gear type	2 - stage planetary	

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Relief pressure	380 kgf/cm ² (5400 psi)
Counter balance valve	Applied
Capacity (max/min)	140 cc/rev

7) POWER TRAIN

Item	Description		Specification
Transmission	Type		2 speed power shift transmission
	Gear ratio	1st	4.87
		2nd	1.20
	Clutch pressure		30~32 kgf /cm ² (427~455 psi)
Parking brake	Type		Multi disc brake integrated in transmission
	Maximum braking torque		3044 kgf · m (22020 lbf · ft)
Axle (Wide axle)	Type		4 wheel drive with differential
	Gear ratio		16.0
	Brake		Multi disc brake
	Brake pressure		61.2 kgf /cm ² (870 psi)
	Steering pressure		204 kgf /cm ² (2900 psi)

8) POWER TRAIN GEAR PUMP

Item	Description
Type	Fixed displacement gear pump (tanedm)
Capacity	Steering + brake : 16.6 + 8.2 cc / rev (pump PTO) [22.4] + 8.2 cc / rev (pump PTO)
Rated flow	Steering + brake : 30.7 + 15.2 lpm (pump PTO) (8.1 + 4.0 U.S.gpm / 6.8 + 3.3 U.K.gpm) [41.4] + 15.2 lpm (pump PTO) ([10.9] + 4.0 U.S.gpm / [9.1] + 3.3 U.K.gpm)

※ [] Rotating option

9) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø 110 × Ø 75 × 1090mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø 115 × Ø 80 × 1235mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø 105 × Ø 75 × 995mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	Ø 110 × Ø 65 × 235mm
	Cushion	-
Outrigger cylinder	Bore dia × Rod dia × Stroke	Ø 125 × Ø 75 × 463mm
	Cushion	-
Adjust cylinder	Bore dia × Rod dia × Stroke	Ø 160 × Ø 95 × 650mm
	Cushion	-
2-piece boom cylinder	Bore dia × Rod dia × Stroke	Ø 110 × Ø 75 × 960mm
	Cushion	Extend only

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

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

10) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
HW160	0.70 m ³ (0.92 yd ³)	0.60 m ³ (0.78 yd ³)	5	1020 mm (40.2")	1110 mm (43.7")
	0.39 m ³ (0.51 yd ³)	0.34 m ³ (0.44 yd ³)	3	650 mm (25.6")	740 mm (29.1")
	0.50 m ³ (0.65 yd ³)	0.44 m ³ (0.58 yd ³)	4	790 mm (31.1")	880 mm (34.6")
	0.64 m ³ (0.84 yd ³)	0.55 m ³ (0.72 yd ³)	5	950 mm (37.4")	1040 mm (40.9")
	0.76 m ³ (0.99 yd ³)	0.65 m ³ (0.85 yd ³)	5	1090 mm (42.9")	1180 mm (46.5")
	0.89 m ³ (1.16 yd ³)	0.77 m ³ (1.01 yd ³)	6	1250 mm (49.2")	1340 mm (52.8")
	1.05 m ³ (1.37 yd ³)	0.90 m ³ (1.18 yd ³)	6	1430 mm (56.3")	1520 mm (59.8")
	◎ 0.69 m ³ (0.90 yd ³)	0.62 m ³ (0.81 yd ³)	5	1050 mm (41.3")	-
	◎ 0.72 m ³ (0.94 yd ³)	0.65 m ³ (0.85 yd ³)	5	940 mm (37.0")	985 mm (38.8")
	◎ 0.87 m ³ (1.18 yd ³)	0.78 m ³ (1.02 yd ³)	5	1090 mm (42.9")	1140 mm (44.9")
	★ 0.75 m ³ (0.98 yd ³)	0.65 m ³ (0.85 yd ³)	-	1820 mm (71.7")	-

◎ : Heavy duty bucket

★ : Ditch cleaning bucket

8. 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	23.7 (6.3)	★SAE 5W-40					SAE 30		
Transmission case		2.5 (0.7)	SAE 10W			SAE 10W-30				
			SAE 15W-40							
DEF/ AdBlue® tank	Mixture of urea and deionized water	27.0 (7.1)	ISO 22241, High-purity urea + deionized water (32.5:67.5)							
Swing drive	Gear oil	TYPE 1 : 5.0 (1.32)	★SAE 75W-90							
		TYPE 2 : 6.2 (1.64)	SAE 80W-90							
Front axle	Gear oil	Center : 10.5 (2.8) Hub : 2.5×2 (0.7×2)	SAE 85W-90 LSD or UTTO							
Rear axle		Center : 12.5 (3.3) Hub : 2.5×2 (0.7×2)								
Front wide axle	Gear oil	Center : 11.6 (3.06) Hub : 2.5×2 (0.7×2)	SAE 85W-90 LSD or UTTO							
Rear wid axle		Center : 14.0 (3.70) Hub : 2.5×2 (0.7×2)								
Hydraulic tank	Hydraulic oil	Tank: 125 (33.0)	★ISO VG 15							
		System: 270 (71.3)	ISO VG 32							
			ISO VG 46, HBHO VG 46★ ³							
			ISO VG 68							
Fuel tank	Diesel fuel★ ¹	290 (76.6)	★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	19.5 (5.2)	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

UTTO : Universal Tractor Transmission Oil

DEF : Diesel Exhaust Fluid, DEF compatible with AdBlue®

★ : Cold region

Russia, CIS, Mongolia

★¹ : Ultra low sulfur diesel

- sulfur content ≤ 15 ppm

★² : Soft water

City water or distilled water

★³ : HD Hyundai Construction Equipment
Bio Hydraulic Oil

※ 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.

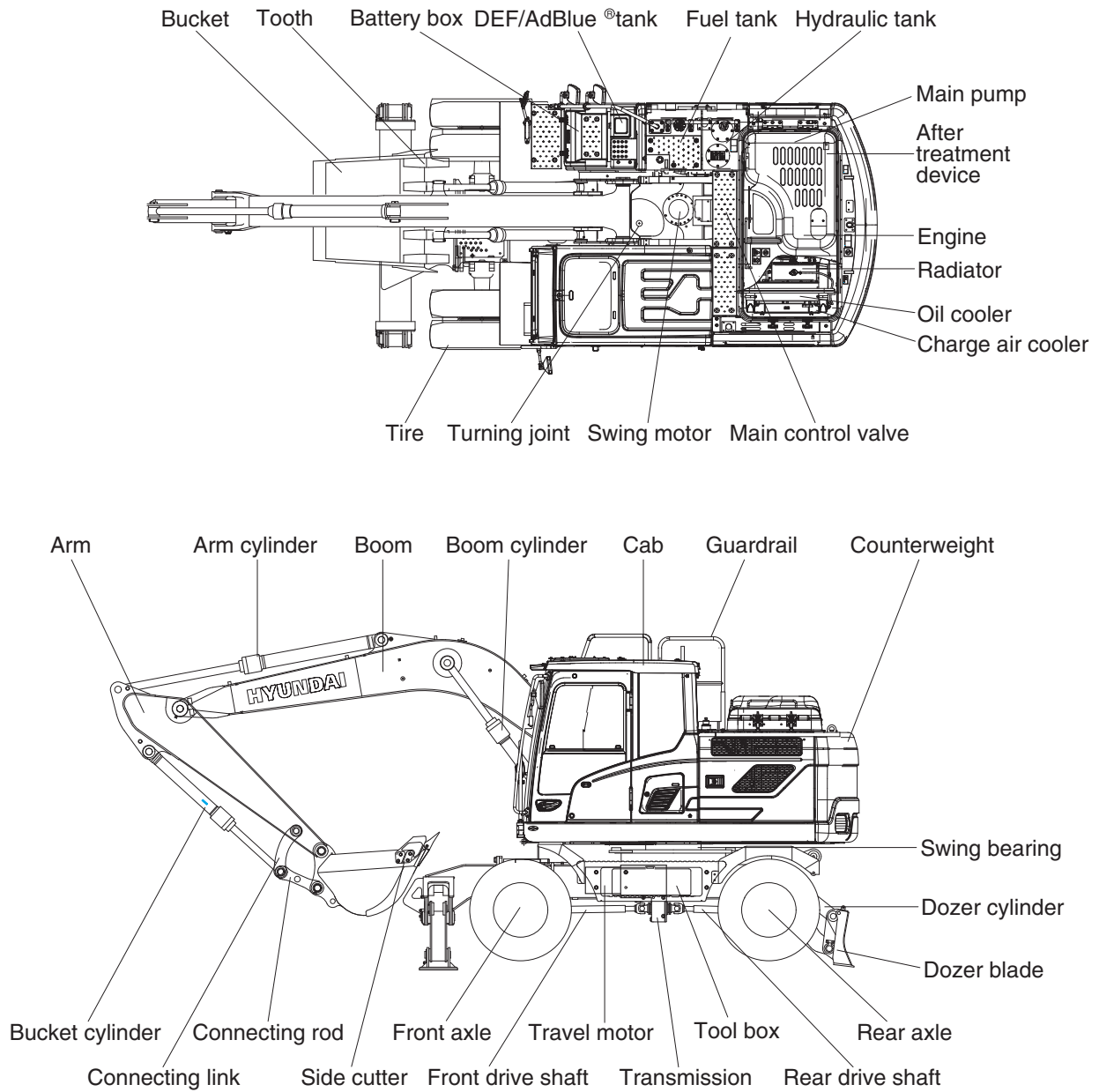
※ Do not mix HD Hyundai Construction Equipment genuine oil with any other lubricating oil as it may result in damage to the systems of major components.

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

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

GROUP 3 SPECIFICATIONS (HW180)

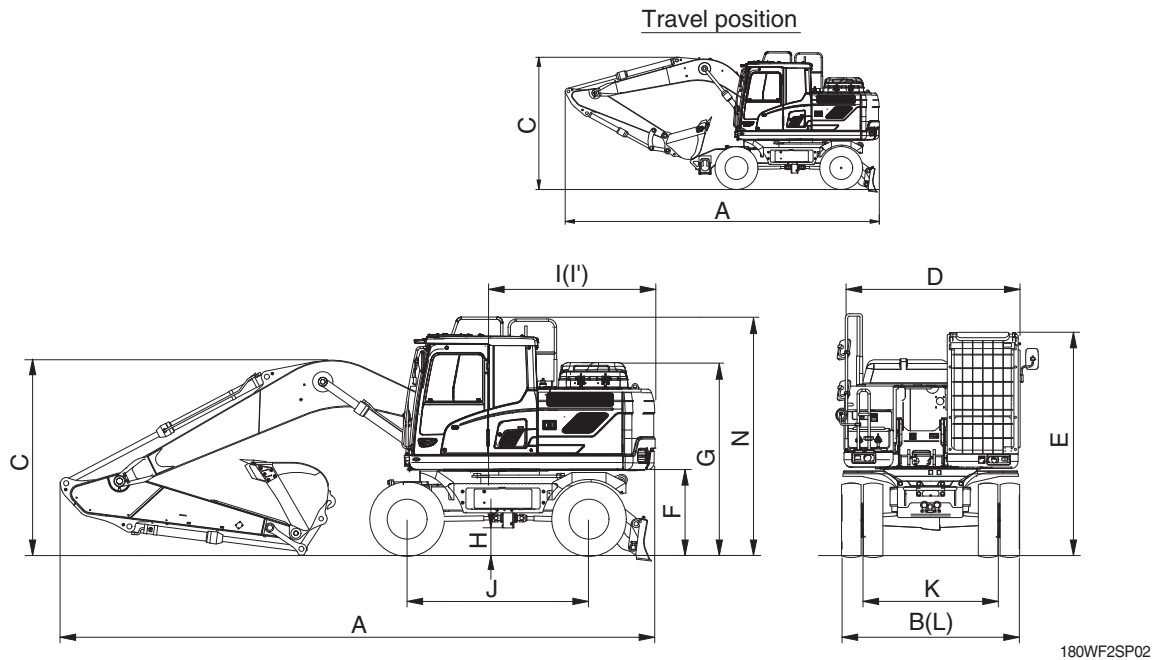
1. MAJOR COMPONENT



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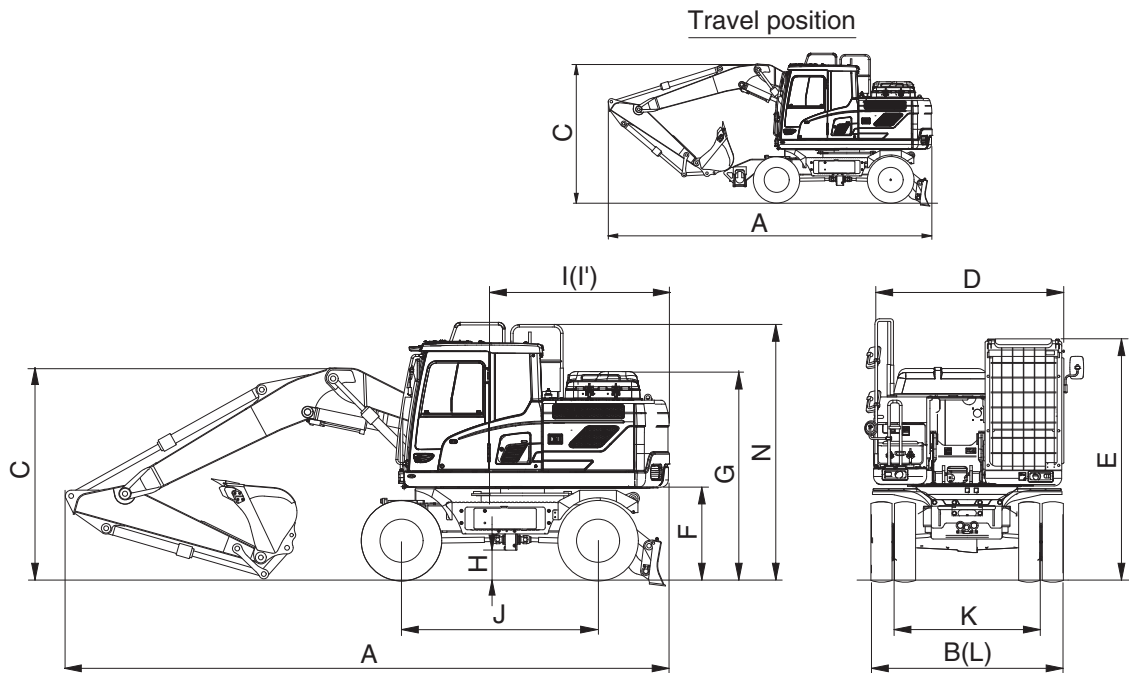
2. SPECIFICATIONS

1) 5.2 m (17' 1") MONO BOOM, 2.6 m (8' 6") ARM AND REAR DOZER BLADE



Description		Unit	Specification
Operating weight		kg (lb)	17800 (39240)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.76 (0.99)
Overall length (travel / shipping)	A	mm (ft-in)	8710 (28' 7") / 8760 (28' 9")
Overall width	B		2500 (8' 2")
Overall height of boom (travel / shipping)	C		3540 (11' 7") / 3180 (10' 5")
Upperstructure width	D		2475 (8' 1")
Cab height	E		3190 (10' 6")
Ground clearance of counterweight	F		1270 (4' 2")
Overall height of engine hood	G		2800 (9' 2")
Minimum ground clearance	H		340 (1' 1")
Rear-end distance	I		2430 (8' 0")
Rear-end swing radius	I'		2430 (8' 0")
Wheel base	J		2600 (8' 6")
Tread	K		1944 (6' 5")
Dozer blade width	L		2500 (8' 2")
Overall height of guardrail	N		3420 (11' 3")
Travel speed	Low	km/hr (mph)	9.5 (5.9)
	High		35 (21.7)
	Creep		3.0 (1.9)
Swing speed		rpm	9.3
Gradeability		Degree (%)	35 (70)
Max traction force		kgf (lbf)	10320 (22750)

2) 5.1 m (16' 9") 2-PIECE BOOM, 2.6 m (8' 6") ARM AND REAR DOZER BLADE

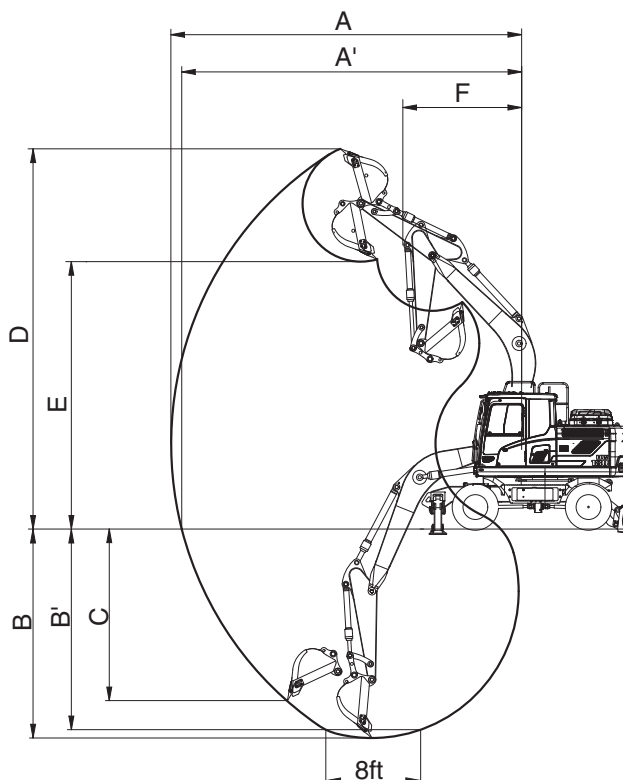


180WF2SP03

Description		Unit	Specification
Operating weight		kg (lb)	18270 (40280)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	0.76 (0.99)
Overall length (travel / shipping)	A	mm (ft-in)	6620 (21' 9") / 8750 (28' 8")
Overall width (axle / wide axle)	B		2500 (8' 2") / 2700 (8' 9")
Overall height of boom (travel / shipping)	C		3960 (13' 0") / 2920 (9' 7")
Upperstructure width	D		2475 (8' 1")
Cab height	E		3190 (10' 6")
Ground clearance of counterweight	F		1270 (4' 2")
Overall height of engine hood	G		2610 (8' 7")
Minimum ground clearance	H		340 (1' 1")
Rear-end distance	I		2430 (8' 0")
Rear-end swing radius	I'		2430 (8' 0")
Wheel base	J		2600 (8' 6")
Tread (axle / wide axle)	K		1914 (6' 3") / 2114 (6' 9")
Dozer blade width	L		2500 (8' 2")
Overall height of guardrail	N		3420 (11' 3")
Travel speed	Low	km/hr (mph)	9.5 (5.9)
	High		35 (21.7)
	Creep		3.0 (1.9)
Swing speed		rpm	9.3
Gradeability		Degree (%)	35 (70)
Max traction force		kgf (lbf)	10320 (22750)

3. WORKING RANGE

1) 5.2 m (17' 1") MONO BOOM

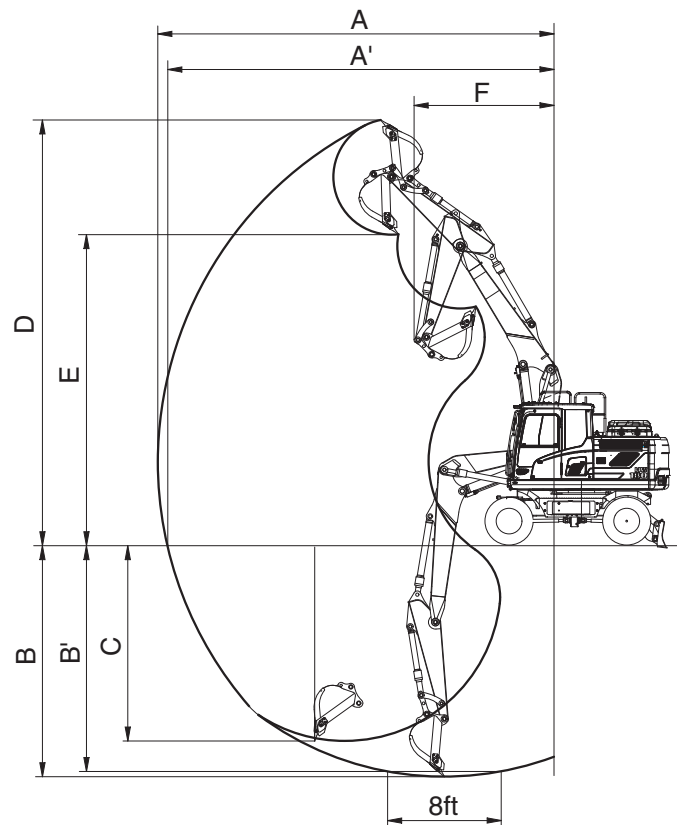


180WF2SP04

Description		2.2 m (7' 3") Arm	2.6 m (8' 6") Arm	3.1 m (10' 2") Arm
Max digging reach	A	8820 mm (29' 1")	9200 mm (30' 3")	9450 mm (31' 0")
Max digging reach on ground	A'	8615 mm (28' 4")	9000 mm (29' 7")	9250 mm (30' 4")
Max digging depth	B	5500 mm (18' 2")	5900 mm (19' 5")	6320 mm (20' 9")
Max digging depth (8 ft level)	B'	5280 mm (17' 5")	5700 mm (18' 9")	6130 mm (20' 1")
Max vertical wall digging depth	C	4850 mm (16' 1")	5310 mm (17' 6")	5470 mm (17' 11")
Max digging height	D	9180 mm (30' 3")	9300 mm (30' 7")	9220 mm (30' 3")
Max dumping height	E	6520 mm (21' 5")	6660 mm (21' 10")	6620 mm (21' 9")
Min swing radius	F	3290 mm (10' 9")	3230 mm (10' 8")	3160 mm (10' 4")
Bucket digging force	SAE	107.9 [117.2] kN	107.9 [106] kN	107.9 [117.2] kN
		11000 [11940] kgf	11000 [10860] kgf	11000 [11940] kgf
		24250 [26330] lbf	24250 [23940] lbf	24250 [26330] lbf
	ISO	123.6 [134.2] kN	123.6 [123] kN	123.6 [134.2] kN
		12600 [13680] kgf	12600 [12550] kgf	12600 [13680] kgf
		27780 [30160] lbf	27780 [27670] lbf	27780 [30160] lbf
Arm digging force	SAE	87.2 [94.7] kN	77.3 [72] kN	69.0 [74.9] kN
		8890 [9650] kgf	7880 [7350] kgf	7030 [7630] kgf
		19600 [21280] lbf	17370 [16210] lbf	15500 [16830] lbf
	ISO	91.0 [98.8] kN	80.3 [75] kN	71.4 [77.5] kN
		9280 [10080] kgf	8190 [7650] kgf	7280 [7900] kgf
		20460 [22210] lbf	18060 [16870] lbf	16050 [17430] lbf

[] : Power boost

2) 5.1 m (16' 9") 2-PIECE BOOM



180WF2SP05

Description		2.2 m (7' 3") Arm	2.6 m (8' 6") Arm
Max digging reach	A	8760 mm (28' 9")	9110 mm (29' 11")
Max digging reach on ground	A'	8550 mm (28' 1")	8910 mm (29' 3")
Max digging depth	B	5220 mm (17' 2")	5620 mm (18' 5")
Max digging depth (8 ft level)	B'	5120 mm (16' 10")	5520 mm (18' 1")
Max vertical wall digging depth	C	4430 mm (14' 6")	4780 mm (15' 8")
Max digging height	D	9630 mm (31' 7")	9820 mm (32' 3")
Max dumping height	E	6930 mm (22' 9")	7130 mm (23' 5")
Min swing radius	F	3100 mm (10' 2")	2970 mm (9' 9")
Bucket digging force	SAE	107.9 [117.2] kN	107.9 [117.2] kN
		11000 [11940] kgf	11000 [11940] kgf
		24250 [26330] lbf	24250 [26330] lbf
	ISO	123.6 [134.2] kN	123.6 [134.2] kN
		12600 [13680] kgf	12600 [13680] kgf
		27780 [30160] lbf	27780 [30160] lbf
Arm digging force	SAE	87.2 [94.7] kN	77.3 [83.9] kN
		8890 [9650] kgf	7880 [8560] kgf
		19600 [21280] lbf	17370 [18860] lbf
	ISO	91.0 [98.8] kN	80.3 [87.2] kN
		9280 [10080] kgf	8190 [8890] kgf
		20460 [22210] lbf	18060 [19600] lbf

[] : Power boost

4. WEIGHT

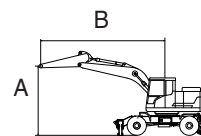
Item	HW180	
	kg	lb
Upperstructure assembly	4590	10120
Main frame weld assembly	1390	3060
Engine assembly	520	1150
Main pump assembly	90	200
Main control valve assembly	135	300
Swing motor assembly	240	530
Hydraulic oil tank assembly	150	330
Fuel tank assembly	155	340
Counterweight	3150	6940
Cab assembly	500	1100
Lower frame weld assembly	1640	3615
Swing bearing	260	570
Travel motor assembly	80	176
Turning joint	120	265
Transmission assembly	135	298
Front axle assembly	637	1404
Front wide axle assembly	655	1444
Rear axle assembly	534	1177
Rear wide axle assembly	547	1206
Front attachment assembly (5.2 m boom, 2.6 m arm, 0.76 m ³ SAE heaped bucket)	3060	6750
5.2 m boom assembly	1060	2340
2.6 m arm assembly	535	1180
0.76 m ³ SAE heaped bucket assembly	620	1370
Boom cylinder assembly	155 × 2EA	340 × 2EA
Arm cylinder assembly	180	400
Bucket cylinder assembly	125	260
Bucket control link assembly	120	265
Oscillating cylinder assembly	30	70
Dozer blade assembly	830	1830
Blade cylinder assembly	55 × 2EA	120 × 2EA
Front outrigger assembly	1000	2200
Rear outrigger assembly	1010	2230
Outrigger cylinder assembly	80	180

5. LIFTING CAPACITIES

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	2200	3150	500	-	-	Down	-	-

·  : 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)		Capacity		Reach
														m (ft)
7.5 m (24.6 ft)	kg									*2060	*2060	5.12	*2990	5.32
	lb									*4540	*4540	(16.8)	*6590	(17.4)
6.0 m (19.7 ft)	kg					*3240	*3240			*1790	*1790	6.43	*2640	6.59
	lb					*7140	*7140			*3950	*3950	(21.1)	*5820	(21.6)
4.5 m (14.8 ft)	kg			*4660	*4660	*4050	3240			*1730	*1730	7.19	*2540	7.34
	lb			*10270	*10270	*8930	7140			*3810	*3810	(23.6)	*5600	(24.1)
3.0 m (9.8 ft)	kg	*9320	9270	*5910	4880	*4570	3070	*2300	2070	*1780	*1780	7.58	2370	7.72
	lb	*20550	20440	*13030	10760	*10080	6770	*5070	4560	*3920	*3920	(24.9)	5220	(25.3)
1.5 m (4.9 ft)	kg			7030	4510	4410	2900	*3050	2010	*1940	1930	7.66	2290	7.79
	lb			15500	9940	9720	6390	*6720	4430	*4280	4250	(25.1)	5050	(25.6)
0.0 m (0.0 ft)	kg	*5670	*5670	6800	4320	4280	2790			*2270	2000	7.43	2350	7.57
	lb	*12500	*12500	14990	9520	9440	6150			*5000	4410	(24.4)	5180	(24.8)
-1.5 m (-4.9 ft)	kg	*9680	8400	6760	4280	4250	2760			*2910	2270	6.86	2610	7.01
	lb	*21340	18520	14900	9440	9370	6080			*6420	5000	(22.5)	5750	(23.0)
-3.0 m (-9.8 ft)	kg	*9080	8610	*6330	4370					*4390	2960	5.85	3250	6.03
	lb	*20020	18980	*13960	9630					*9680	6530	(19.2)	7170	(19.8)

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 your HD Hyundai Construction Equipment dealer regarding the lifting capacities for specific work tools and attachments.

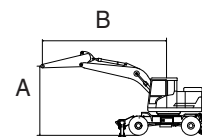
▲ Failure to comply to the rated load can cause possible personal injury or property damage.

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

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	2200	3150	500	-	-	Up	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree

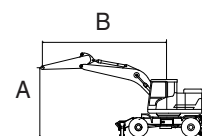


Lift-point height (A)		Lift-point radius (B)						At max. reach		
		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
										m (ft)
7.5 m	kg							*3180	*3180	4.85
(24.6 ft)	lb							*7010	*7010	(15.9)
6.0 m	kg					*4030	3460	*2680	*2680	6.22
(19.7 ft)	lb					*8880	7630	*5910	*5910	(20.4)
4.5 m	kg			*5470	5300	*4740	3410	*2510	*2510	7.01
(14.8 ft)	lb			*12060	11680	*10450	7520	*5530	*5530	(23.0)
3.0 m	kg			*6730	4950	4960	3270	*2500	2370	7.41
(9.8 ft)	lb			*14840	10910	10930	7210	*5510	5220	(24.3)
1.5 m	kg			7450	4650	4810	3130	*2610	2280	7.49
(4.9 ft)	lb			16420	10250	10600	6900	*5750	5030	(24.6)
0.0 m	kg			7280	4510	4710	3040	*2880	2360	7.25
(0.0 ft)	lb			16050	9940	10380	6700	*6350	5200	(23.8)
-1.5 m	kg	*9430	8420	7270	4490	4700	3030	*3430	2660	6.67
(-4.9 ft)	lb	*20790	18560	16030	9900	10360	6680	*7560	5860	(21.9)
-3.0 m	kg	*8980	8610	*6470	4600			*4630	3430	5.62
(-9.8 ft)	lb	*19800	18980	*14260	10140			*10210	7560	(18.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	2200	3150	500	-	-	Down	-	-

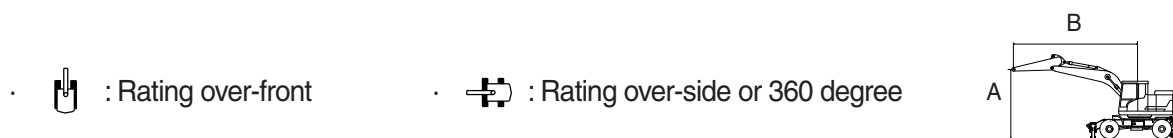
·  : Rating over-front

·  : Rating over-side or 360 degree



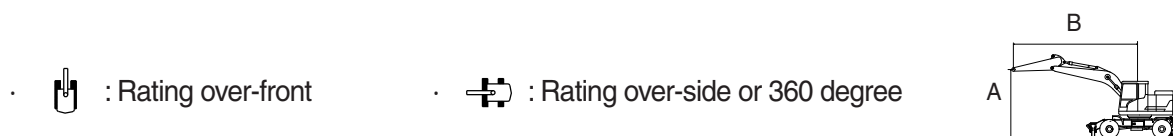
Lift-point height (A)		Lift-point radius (B)						At max. reach		
		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
										m (ft)
7.5 m	kg							*3180	*3180	4.85
(24.6 ft)	lb							*7010	*7010	(15.9)
6.0 m	kg					*4030	3650	*2680	*2680	6.22
(19.7 ft)	lb					*8880	8050	*5910	*5910	(20.4)
4.5 m	kg			*5470	*5470	*4740	3590	*2510	*2510	7.01
(14.8 ft)	lb			*12060	*12060	*10450	7910	*5530	*5530	(23.0)
3.0 m	kg			*6730	5250	4960	3450	*2500	*2500	7.41
(9.8 ft)	lb			*14840	11570	10930	7610	*5510	*5510	(24.3)
1.5 m	kg			7450	4940	4810	3310	*2610	2420	7.49
(4.9 ft)	lb			16420	10890	10600	7300	*5750	5340	(24.6)
0.0 m	kg			7280	4790	4710	3220	*2880	2500	7.25
(0.0 ft)	lb			16050	10560	10380	7100	*6350	5510	(23.8)
-1.5 m	kg	*9430	9060	7270	4780	4700	3210	*3430	2810	6.67
(-4.9 ft)	lb	*20790	19970	16030	10540	10360	7080	*7560	6190	(21.9)
-3.0 m	kg	*8980	*8980	*6470	4890			*4630	3630	5.62
(-9.8 ft)	lb	*19800	*19800	*14260	10780			*10210	8000	(18.4)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	2600	3150	500	-	-	Up	-	-



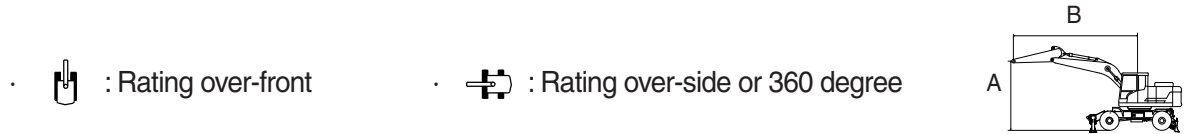
Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
7.5 m (24.6 ft)	kg											*2990	*2990	5.32
	lb											*6590	*6590	(17.4)
6.0 m (19.7 ft)	kg							*4230	3530			*2640	*2640	6.59
	lb							*9330	7780			*5820	*5820	(21.6)
4.5 m (14.8 ft)	kg					*5050	*5050	*4470	3460			*2540	2480	7.34
	lb					*11130	*11130	*9850	7630			*5600	5470	(24.1)
3.0 m (9.8 ft)	kg					*6360	5040	5010	3310	3540	2350	*2570	2240	7.72
	lb					*14020	11110	11050	7300	7800	5180	*5670	4940	(25.3)
1.5 m (4.9 ft)	kg					7520	4710	4840	3160	3470	2290	*2730	2160	7.79
	lb					16580	10380	10670	6970	7650	5050	*6020	4760	(25.6)
0.0 m (0.0 ft)	kg			*5200	*5200	7310	4530	4720	3050	3430	2250	*3040	2220	7.57
	lb			*11460	*11460	16120	9990	10410	6720	7560	4960	*6700	4890	(24.8)
-1.5 m (-4.9 ft)	kg	*5380	*5380	*9280	8380	7260	4490	4680	3020			*3660	2460	7.01
	lb	*11860	*11860	*20460	18470	16010	9900	10320	6660			*8070	5420	(23.0)
-3.0 m (-9.8 ft)	kg	*9680	*9680	*9840	8530	*6950	4550	*4760	3090			*4700	3070	6.03
	lb	*21340	*21340	*21690	18810	*15320	10030	*10490	6810			*10360	6770	(19.8)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	3100	3150	500	-	-	Up	-	-



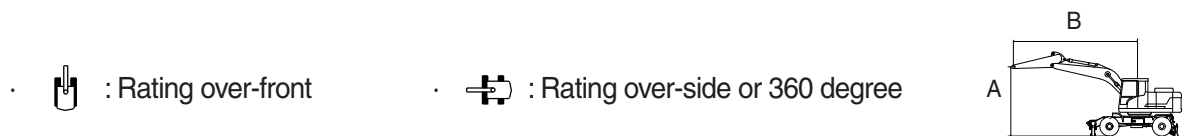
Lift-point height (A)		Lift-point radius (B)										At max. reach		
		1.5 m (4.9 ft)		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		7.5 m (24.6 ft)		Capacity		Reach
														m (ft)
7.5 m (24.6 ft)	kg											*2380	*2380	5.95
	lb											*5250	*5250	(19.5)
6.0 m (19.7 ft)	kg							*3760	3580			*2150	*2150	7.10
	lb							*8290	7890			*4740	*4740	(23.3)
4.5 m (14.8 ft)	kg							*4080	3490	*3060	2410	*2090	*2090	7.80
	lb							*8990	7690	*6750	5310	*4610	*4610	(25.6)
3.0 m (9.8 ft)	kg			*8740	*8740	*5800	5120	*4680	3330	3540	2350	*2120	2040	8.16
	lb			*19270	*19270	*12790	11290	*10320	7340	7800	5180	*4670	4500	(26.8)
1.5 m (4.9 ft)	kg					*7150	4750	4840	3160	3460	2270	*2250	1970	8.23
	lb					*15760	10470	10670	6970	7630	5000	*4960	4340	(27.0)
0.0 m (0.0 ft)	kg			*5890	*5890	7300	4520	4700	3020	3390	2210	*2510	2010	8.02
	lb			*12990	*12990	16090	9960	10360	6660	7470	4870	*5530	4430	(26.3)
-1.5 m (-4.9 ft)	kg	*5000	*5000	*8730	8250	7200	4430	4630	2960			*2990	2200	7.49
	lb	*11020	*11020	*19250	18190	15870	9770	10210	6530			*6590	4850	(24.6)
-3.0 m (-9.8 ft)	kg	*8300	*8300	*10660	8370	7230	4460	4660	2990			*3990	2650	6.59
	lb	*18300	*18300	*23500	18450	15940	9830	10270	6590			*8800	5840	(21.6)
-4.5 m (-14.8 ft)	kg			*7860	*7860	*5360	4630					*4390	3910	5.09
	lb			*17330	*17330	*11820	10210					*9680	8620	(16.7)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	MONO BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5200	3100	3150	500	-	-	Down	-	-



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)		Capacity		Reach
														m (ft)
7.5 m (24.6 ft)	kg lb											*2380 *5250	*2380 *5250	5.95 (19.5)
6.0 m (19.7 ft)	kg lb							*3760 *8290	*3760 *8290			*2150 *4740	*2150 *4740	7.10 (23.3)
4.5 m (14.8 ft)	kg lb							*4080 *8990	3670 8090	*3060 *6750	2540 5600	*2090 *4610	*2090 *4610	7.80 (25.6)
3.0 m (9.8 ft)	kg lb			*8740 *19270	*8740 *19270	*5800 *12790	5420 11950	*4680 *10320	3510 7740	3540 7800	2480 5470	*2120 *4670	*2120 *4670	8.16 (26.8)
1.5 m (4.9 ft)	kg lb					*7150 *15760	5040 11110	4840 10670	3340 7360	3460 7630	2400 5290	*2250 *4960	2080 4590	8.23 (27.0)
0.0 m (0.0 ft)	kg lb			*5890 *12990	*5890 *12990	7300 16090	4800 10580	4700 10360	3210 7080	3390 7470	2340 5160	*2510 *5530	2130 4700	8.02 (26.3)
-1.5 m (-4.9 ft)	kg lb	*5000 *11020	*5000 *11020	*8730 *19250	*8730 *19250	7200 15870	4710 10380	4630 10210	3140 6920			*2990 *6590	2330 5140	7.49 (24.6)
-3.0 m (-9.8 ft)	kg lb	*8300 *18300	*8300 *18300	*10660 *23500	9010 19860	7230 15940	4740 10450	4660 10270	3170 6990			*3990 *8800	2810 6190	6.59 (21.6)
-4.5 m (-14.8 ft)	kg lb			*7860 *17330	*7860 *17330	*5360 *11820	4920 10850					*4390 *9680	4150 9150	5.09 (16.7)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	3150	500	-	-	Up	-	-

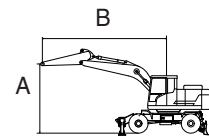


Lift-point height (A)		Lift-point radius (B)						At max. reach		
		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
										m (ft)
7.5 m (24.6 ft)	kg lb			*4820 *10630	*4820 *10630			*3860 *8510	*3860 *8510	4.73 (15.5)
6.0 m (19.7 ft)	kg lb			*4520 *9960	*4520 *9960	*4120 *9080	3440 7580	*3200 *7050	*3200 *7050	6.13 (20.1)
4.5 m (14.8 ft)	kg lb	*6850 *15100	*6850 *15100	*5220 *11510	*5220 *11510	*4580 *10100	3400 7500	*2960 *6530	2660 5860	6.93 (22.7)
3.0 m (9.8 ft)	kg lb			*6430 *14180	4960 10930	5000 11020	3260 7190	*2920 *6440	2380 5250	7.33 (24.1)
1.5 m (4.9 ft)	kg lb			7500 16530	4640 10230	4840 10670	3120 6880	*3020 *6660	2300 5070	7.41 (24.3)
0.0 m (0.0 ft)	kg lb			7320 16140	4490 9900	4740 10450	3030 6680	*3300 *7280	2390 5270	7.17 (23.5)
-1.5 m (-4.9 ft)	kg lb	*9130 *20130	8400 18520	7320 16140	4480 9880	4740 10450	3030 6680	*3870 *8530	2710 5970	6.58 (21.6)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2200	3150	500	-	-	Down	-	-

·  : Rating over-front

·  : Rating over-side or 360 degree

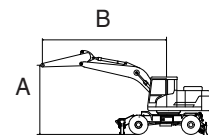


Lift-point height (A)		Lift-point radius (B)						At max. reach		
		3.0 m (9.8 ft)		4.5 m (14.8 ft)		6.0 m (19.7 ft)		Capacity		Reach
										m (ft)
7.5 m (24.6 ft)	kg lb			*4820 *10630	*4820 *10630			*3860 *8510	*3860 *8510	4.73 (15.5)
6.0 m (19.7 ft)	kg lb			*4520 *9960	*4520 *9960	*4120 *9080	3630 8000	*3200 *7050	*3200 *7050	6.13 (20.1)
4.5 m (14.8 ft)	kg lb	*6850 *15100	*6850 *15100	*5220 *11510	*5220 *11510	*4580 *10100	3590 7910	*2960 *6530	2810 6190	6.93 (22.7)
3.0 m (9.8 ft)	kg lb			*6430 *14180	5260 11600	5000 11020	3450 7610	*2920 *6440	2520 5560	7.33 (24.1)
1.5 m (4.9 ft)	kg lb			7500 16530	4940 10890	4840 10670	3300 7280	*3020 *6660	2440 5380	7.41 (24.3)
0.0 m (0.0 ft)	kg lb			7320 16140	4780 10540	4740 10450	3210 7080	*3300 *7280	2530 5580	7.17 (23.5)
-1.5 m (-4.9 ft)	kg lb	*9130 *20130	9060 19970	7320 16140	4770 10520	4740 10450	3210 7080	*3870 *8530	2870 6330	6.58 (21.6)

Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2600	3150	500	-	-	Up	-	-

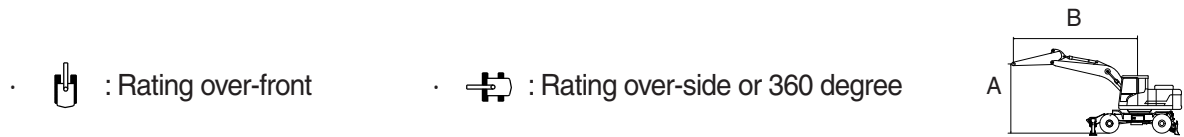
·  : Rating over-front

·  : 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 lb			*4190 *9240	*4190 *9240					*3450 *7610	*3450 *7610	5.24 (17.2)
6.0 m (19.7 ft)	kg lb					*4110 *9060	3530 7780			*3000 *6610	*3000 *6610	6.53 (21.4)
4.5 m (14.8 ft)	kg lb			*4820 *10630	*4820 *10630	*4310 *9500	3460 7630			*2850 *6280	2490 5490	7.28 (23.9)
3.0 m (9.8 ft)	kg lb			*6060 *13360	5060 11160	*4830 *10650	3310 7300	3550 7830	2330 5140	*2850 *6280	2250 4960	7.67 (25.2)
1.5 m (4.9 ft)	kg lb			*7280 *16050	4710 10380	4870 10740	3150 6940	3490 7690	2270 5000	*2990 *6590	2170 4780	7.74 (25.4)
0.0 m (0.0 ft)	kg lb	*4760 *10490	*4760 *10490	7350 16200	4510 9940	4750 10470	3040 6700	*3430 *7560	2240 4940	*3300 *7280	2230 4920	7.51 (24.6)
-1.5 m (-4.9 ft)	kg lb	*8980 *19800	8350 18410	7300 16090	4470 9850	4710 10380	3010 6640			3850 8490	2490 5490	6.95 (22.8)
-3.0 m (-9.8 ft)	kg lb			*7020 *15480	4550 10030							

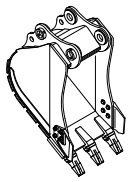
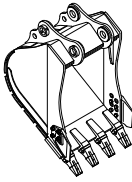
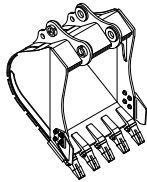
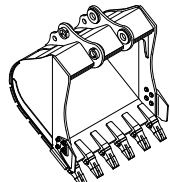
Model	Type	Boom	Arm	Counterweight	Shoe	Wheel	Dozer		Outrigger	
HW180	2-PIECE BOOM	Length [mm]	Length [mm]	weight [kg]	width [mm]	width [mm]	Front	Rear	Front	Rear
		5100	2600	3150	500	-	-	Down	-	-



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 lb			*4190 *9240	*4190 *9240					*3450 *7610	*3450 *7610	5.24 (17.2)
6.0 m (19.7 ft)	kg lb					*4110 *9060	3530 7780			*3000 *6610	*3000 *6610	6.53 (21.4)
4.5 m (14.8 ft)	kg lb			*4820 *10630	*4820 *10630	*4310 *9500	3460 7630			*2850 *6280	2490 5490	7.28 (23.9)
3.0 m (9.8 ft)	kg lb			*6060 *13360	5060 11160	*4830 *10650	3310 7300	3550 7830	2330 5140	*2850 *6280	2250 4960	7.67 (25.2)
1.5 m (4.9 ft)	kg lb			*7280 *16050	4710 10380	4870 10740	3150 6940	3490 7690	2270 5000	*2990 *6590	2170 4780	7.74 (25.4)
0.0 m (0.0 ft)	kg lb	*4760 *10490	*4760 *10490	7350 16200	4510 9940	4750 10470	3040 6700	*3430 *7560	2240 4940	*3300 *7280	2230 4920	7.51 (24.6)
-1.5 m (-4.9 ft)	kg lb	*8980 *19800	8350 18410	7300 16090	4470 9850	4710 10380	3010 6640			3850 8490	2490 5490	6.95 (22.8)
-3.0 m (-9.8 ft)	kg lb			*7020 *15480	4550 10030							

6. BUCKET SELECTION GUIDE

1) GENERAL BUCKET

			
0.39 m³ SAE heaped bucket	0.50 m³ SAE heaped bucket	0.64, 0.70, 0.76 m³ SAE heaped bucket	0.89, 1.05 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation				
					5.2 m (17' 1") Mono boom			5.1 m (16' 9") 2-piece boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.6 m arm (8' 6")	3.1 m arm (10' 2")	2.2 m arm (7' 3")	2.6 m arm (8' 6")
0.39 m³ (0.51 yd³)	0.34 m³ (0.44 yd³)	650 mm (25.6")	740 mm (29.1")	410 kg (900 lb)	●	●	●	●	●
0.50 m³ (0.65 yd³)	0.44 m³ (0.58 yd³)	790 mm (31.1")	880 mm (34.6")	470 kg (1040 lb)	●	●	●	●	●
0.64 m³ (0.84 yd³)	0.55 m³ (0.72 yd³)	950 mm (37.4")	1040 mm (40.9")	510 kg (1120 lb)	◉	◉	○	◉	◉
0.70 m³ (0.92 yd³)	0.60 m³ (0.78 yd³)	1020 mm (40.2")	1110 mm (43.7")	600 kg (1320 lb)	◉	◉	○	◉	○
0.76 m³ (0.99 yd³)	0.65 m³ (0.85 yd³)	1090 mm (42.9")	1180 mm (46.5")	620 kg (1370 lb)	◉	○	○	◉	○
0.89 m³ (1.16 yd³)	0.77 m³ (1.01 yd³)	1250 mm (49.2")	1340 mm (52.8")	610 kg (1340 lb)	○	○		○	○
1.05 m³ (1.37 yd³)	0.90 m³ (1.18 yd³)	1430 mm (56.3")	1520 mm (59.8")	680 kg (1500 lb)	○			○	

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

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

○ Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

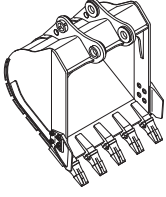
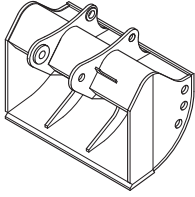
※ These recommendations are for general conditions and average use.

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

2) SPECIAL BUCKET

Heavy duty bucket 	Ditch cleaning bucket 
◎ 0.69 m³, 0.72 m³, 0.87 m³ SAE heaped bucket	★ 0.75 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation				
					5.2 m (17' 1") Mono boom			5.1 m (16' 9") 2-piece boom	
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.6 m arm (8' 6")	3.1 m arm (10' 2")	2.2 m arm (7' 3")	2.6 m arm (8' 6")
◎ 0.69 m ³ (0.90 yd ³)	0.62 m ³ (0.81 yd ³)	1050 mm (41.3")	-	720 kg (1590 lb)	●	○	○	●	○
◎ 0.72 m ³ (0.94 yd ³)	0.65 m ³ (0.85 yd ³)	940 mm (37.0")	985 mm (38.8")	640 kg (1410 lb)	●	○	○	●	○
◎ 0.87 m ³ (1.18 yd ³)	0.78 m ³ (1.02 yd ³)	1090 mm (42.9")	1140 mm (44.9")	680 kg (1500 lb)	○	○		○	○
★ 0.75 m ³ (0.98 yd ³)	0.65 m ³ (0.85 yd ³)	1820 mm (71.7")	-	540 kg (1190 lb)	●	●	●	●	○

◎ : Heavy duty bucket

★ : Ditch cleaning bucket

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

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

○ Applicable for materials with density of 1100 kg/m³ (1850 lb/yd³) or less

7. SPECIFICATIONS FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins QSB 6.7
Type	4-cycle turbocharged diesel engine, low emission
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	107 × 124 mm (4.2" × 4.9")
Piston displacement	6700 cc (409 cu in)
Compression ratio	17.3 : 1
Rated net horse power (SAE J1349)	171 Hp (127 kW) at 1800 rpm
Rated gross horse power (SAE J1995)	180 Hp (134 kW) at 1800 rpm
Maximum torque	85.7 kgf · m (620 lbf · ft) at 1500 rpm
Engine oil quantity	23.7 ℓ (6.3 U.S. gal)
Dry weight	520 kg (1150 lb)
High idling speed	2200 ± 50 rpm
Low idling speed	850 ± 100 rpm
Rated fuel consumption	163.0 g/Hp · hr at 2200 rpm
Starting motor	Nippon denso (24 V-4.8 kW)
Alternator	Nippon denso (24 V-95 A)
Battery	2 × 12 V × 100 Ah

2) MAIN PUMP

Item	Specification
Type	Variable displacement tandem axis piston pumps
Capacity	2 × 80 cc/rev
Maximum pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Rated oil flow	2 × 172 ℓ /min (45.4 U.S. gpm / 37.8 U.K. gpm)
Rated speed	2200 rpm

[]: Power boost

3) GEAR PUMP

Item	Specification
Type	Fixed displacement gear pump single stage
Capacity	15cc/rev
Maximum pressure	40 kgf/cm ² (570 psi)
Rated oil flow	33.0 ℓ /min (8.7 U.S. gpm/7.3 U.K. gpm)

4) MAIN CONTROL VALVE

Item	Specification
Type	11 spools two-block
Operating method	Hydraulic pilot system
Main relief valve pressure	350 kgf/cm ² (4980 psi) [380 kgf/cm ² (5400 psi)]
Overload relief valve pressure	400 kgf/cm ² (5690 psi)

[]: Power boost

5) SWING MOTOR

Item	Specification	
	Type 1	Type 2
Type	Fixed displacement axial piston motor	
Capacity	117.8 cc/rev	142.8 cc/rev
Relief pressure	285 kgf/cm ² (4054 psi)	
Braking system	Automatic, spring applied hydraulic released	
Braking torque	59 kgf · m (427 lbf · ft)	66.5 kgf · m (481 lbf · ft)
Brake release pressure	33~50 kgf/cm ² (469~711 psi)	22.3~36.6 kgf/cm ² (317~521 psi)
Reduction gear type	2 - stage planetary	

6) TRAVEL MOTOR

Item	Specification
Type	Variable displacement bent-axis axial piston motor
Relief pressure	380 kgf/cm ² (5400 psi)
Counter balance valve	Applied
Capacity (max/min)	140 cc/rev

7) POWER TRAIN

Item	Description		Specification
Transmission	Type		2 speed power shift transmission
	Gear ratio	1st	4.87
		2nd	1.20
	Clutch pressure		30~32 kgf /cm ² (427~455 psi)
Parking brake	Type		Multi disc brake integrated in transmission
	Maximum braking torque		3044 kgf · m (22020 lbf · ft)
Axle / Wide axle	Type		4 wheel drive with differential
	Gear ratio		16.0
	Brake		Multi disc brake
	Brake pressure		61.2 kgf /cm ² (870 psi)
	Steering pressure		204 kgf /cm ² (2900 psi)

8) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø 115 × 1090mm
	Cushion	Extend only
Arm cylinder	Bore dia × Rod dia × Stroke	Ø 120 × 1355mm
	Cushion	Extend and retract
Bucket cylinder	Bore dia × Rod dia × Stroke	Ø 110 × 995mm
	Cushion	Extend only
Dozer cylinder	Bore dia × Rod dia × Stroke	Ø 110 × 235mm
	Cushion	-
Outrigger cylinder	Bore dia × Rod dia × Stroke	Ø 125 × 463mm
	Cushion	-
Adjust cylinder	Bore dia × Rod dia × Stroke	Ø 160 × Ø 95 × 650mm
	Cushion	-
2-piece boom cylinder	Bore dia × Rod dia × Stroke	Ø 115 × Ø 80 × 960mm
	Cushion	Extend only

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

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

9) BUCKET

Item	Capacity		Tooth quantity	Width	
	SAE heaped	CECE heaped		Without side cutter	With side cutter
HW180	0.76 m ³ (0.99 yd ³)	0.65 m ³ (0.85 yd ³)	5	1090 mm (42.9")	1180 mm (46.5")
	0.39 m ³ (0.51 yd ³)	0.34 m ³ (0.44 yd ³)	3	650 mm (25.6")	740 mm (29.1")
	0.50 m ³ (0.65 yd ³)	0.44 m ³ (0.58 yd ³)	4	790 mm (31.1")	880 mm (34.6")
	0.64 m ³ (0.84 yd ³)	0.55 m ³ (0.72 yd ³)	5	950 mm (37.4")	1040 mm (40.9")
	0.70 m ³ (0.92 yd ³)	0.60 m ³ (0.78 yd ³)	5	1020 mm (40.2")	1110 mm (43.7")
	0.89 m ³ (1.16 yd ³)	0.77 m ³ (1.01 yd ³)	6	1250 mm (49.2")	1340 mm (52.8")
	1.05 m ³ (1.37 yd ³)	0.90 m ³ (1.18 yd ³)	6	1430 mm (56.3")	1520 mm (59.8")
	◆ 0.69 m ³ (0.90 yd ³)	0.62 m ³ (0.81 yd ³)	5	1050 mm (41.3")	-
	★ 0.75 m ³ (0.98 yd ³)	0.65 m ³ (0.85 yd ³)	-	1820 mm (71.7")	-

◆ : Heavy duty bucket ★ : Ditch cleaning bucket

8. 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)	40 (104)	
Engine oil pan	Engine oil	23.7 (6.3)	★SAE 5W-40									
Transmission case								SAE 30				
		SAE 10W										
		SAE 10W-30										
		2.5 (0.7)	SAE 15W-40									
DEF/ AdBlue® tank	Mixture of urea and deionized water	27.0 (7.1)	ISO 22241, High-purity urea + deionized water (32.5:67.5)									
Swing drive	Gear oil	See page 6-37	★SAE 75W-90									
				SAE 80W-90								
Front axle	Gear oil	Center : 10.5 (2.8) Hub : 2.5×2 (0.7×2)	SAE 85W-90 LSD or UTTO									
Rear axle		Center : 12.5 (3.3) Hub : 2.5×2 (0.7×2)										
Front wide axle	Gear oil	Center : 11.6 (3.06) Hub : 2.5×2 (0.7×2)	SAE 85W-90 LSD or UTTO									
Rear wid axle		Center : 14.0 (3.70) Hub : 2.5×2 (0.7×2)										
Hydraulic tank	Hydraulic oil	Tank: 125 (33.0)	★ISO VG 15									
			ISO VG 32									
		System: 270 (71.3)	ISO VG 46, HBHO VG 46★³									
			ISO VG 68									
Fuel tank	Diesel fuel★¹	290 (76.6)	★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	19.5 (5.2)	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
UTTO : Universal Tractor Transmission Oil
DEF : Diesel Exhaust Fluid, DEF compatible with AdBlue®

★ : Cold region
 Russia, CIS, Mongolia
 ★¹ : Ultra low sulfur diesel
 - sulfur content ≤ 15 ppm
 ★² : Soft water
 City water or distilled water
 ★³ : HD Hyundai Construction Equipment
 Bio Hydraulic Oil

- ※ 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.
- ※ Do not use any engine oil other than that specified above, as it may clog the diesel particulate filter(DPF).
- ※ For HD Hyundai Construction Equipment genuine lubricating oils and grease for use in regions with extremely low temperatures, please contact HD Hyundai Construction Equipment dealers.