CRAWLER EXCAVATOR

SERVICE MANUAL

HX10A

HYUNDAI

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2.15 Dimensions without ROPS rollbar

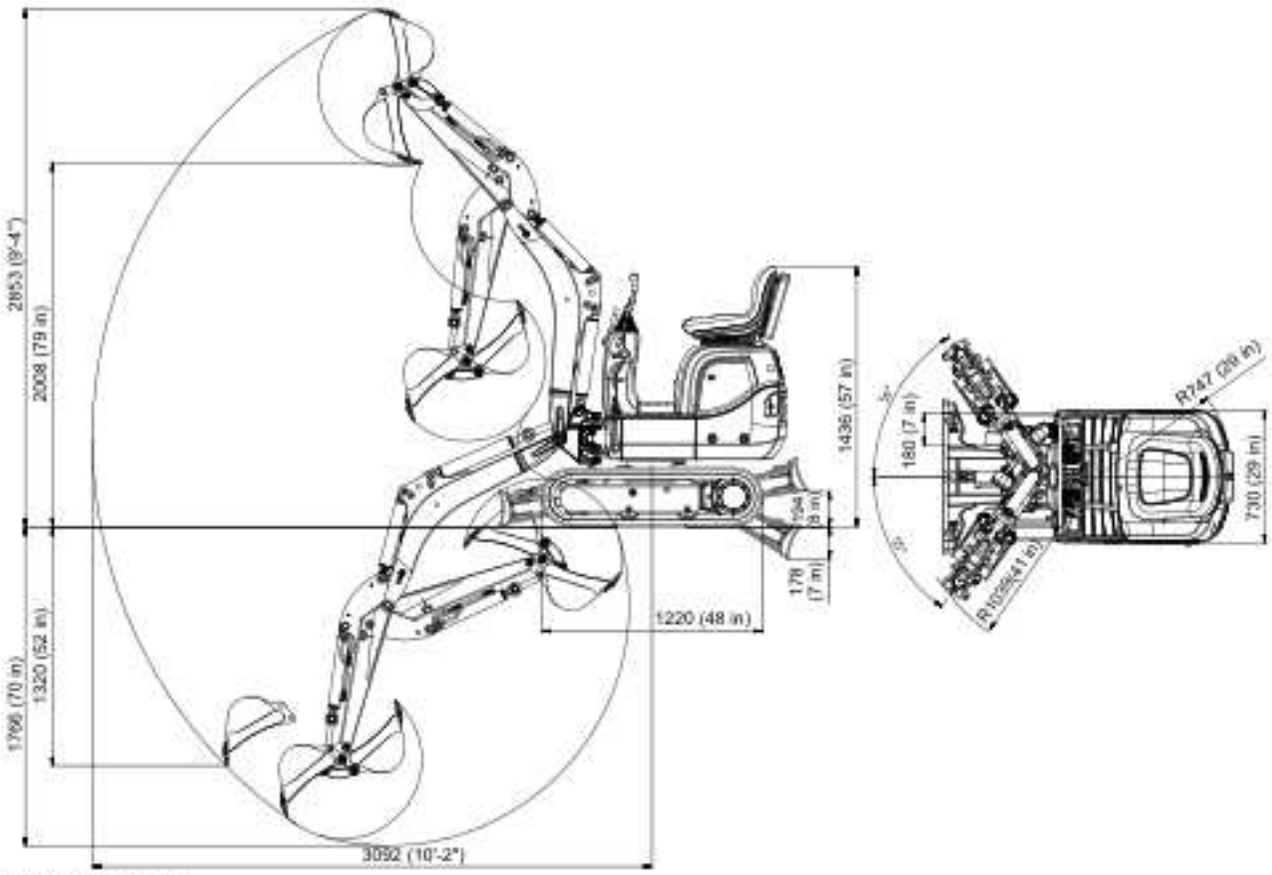


Fig. 17: Vehicle dimensions

Main data	
Operating weight	1029 kg (2268 lbs.)
Transport weight	932 kg (2055 lbs)
Height (transport position)	1436 mm (4'-9")
Upper carriage width	730 mm (2'-5")
Width of telescopic travel gear (retracted/extended)	700/860 mm (2'-4"/2'-10")
Width of stabilizer blade (folded in/out)	700/860 mm (2'-4"/2'-10")
Transport length	2747 mm (9 ft.)
Max. digging depth	1763 mm (5'-9")
Stick length	890 mm (2'-11")
Max. vertical digging depth	1320 mm (4'-4")
Max. digging height	2853 mm (9'-4")
Max. tilt-out height	2008 mm (6'-7")
Max. digging radius	3090 mm (10'-2")
Max. reach at ground level	3046 mm (10')
Max. breakout force at bucket tooth	8.99 kN (2021 lbf)
Max. tearout force	4.51 kN (1014 lbf)
Min. tail end slewing radius	747 mm (2'-5")
Max. tail end lateral projection (90° rotation of upper carriage) Retracted/extended telescopic travel gear Stabilizer blade folded in/out	 397/317 mm (1'-3"/1") 397/317 mm (1'-3"/1")
Max. boom displacement to bucket center (right side)	287 mm (0'-11")
Max. boom displacement to bucket center (left side)	242 mm (0'-10")

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4.4 Tightening order for cylinder head bolts

☞ *Install the cylinder-head bolts*

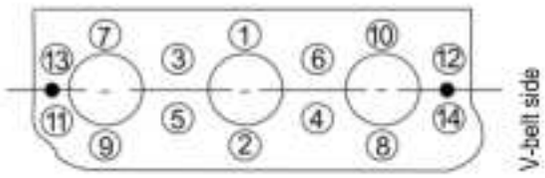
➥ Tightening torque:

1st position	26 – 30 Nm	19.1 – 22.1 ft lbs
2nd speed	53.9 – 57.9 Nm	39.75 – 42.7 ft lbs

Attention!

Bear in the mind the order for tightening the cylinder-head bolts!

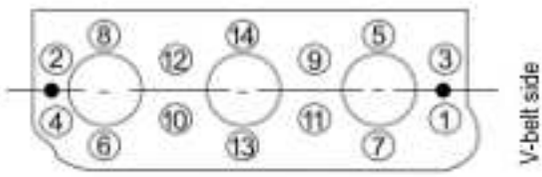
☞ *See figure*



Notice!

Apply oil to the threads and contact surfaces before installing.

☞ *Order for removing the cylinder-head bolts*

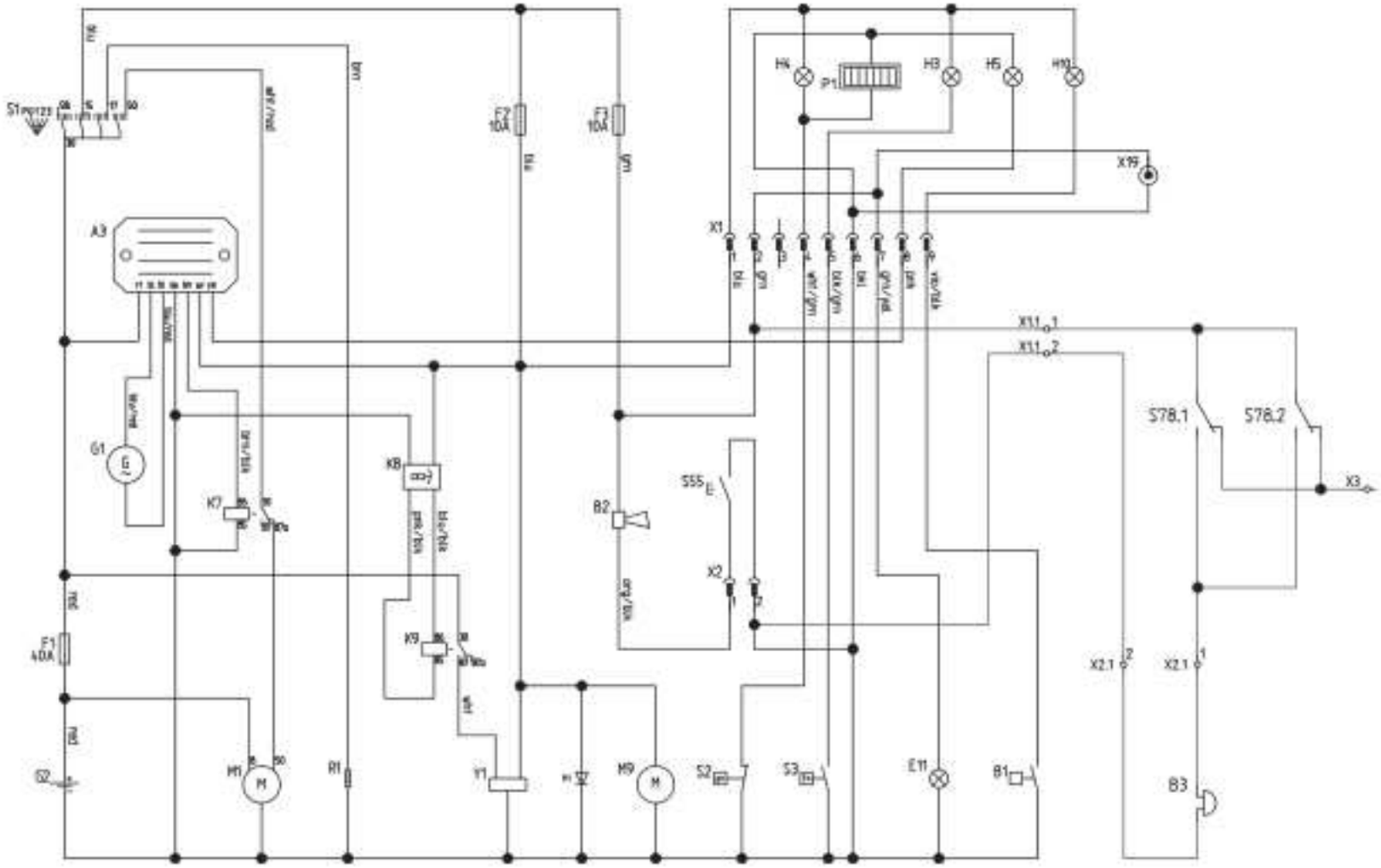


Notice!

Always perform work on the cylinder head on a cold engine!

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6.25 Wiring diagram

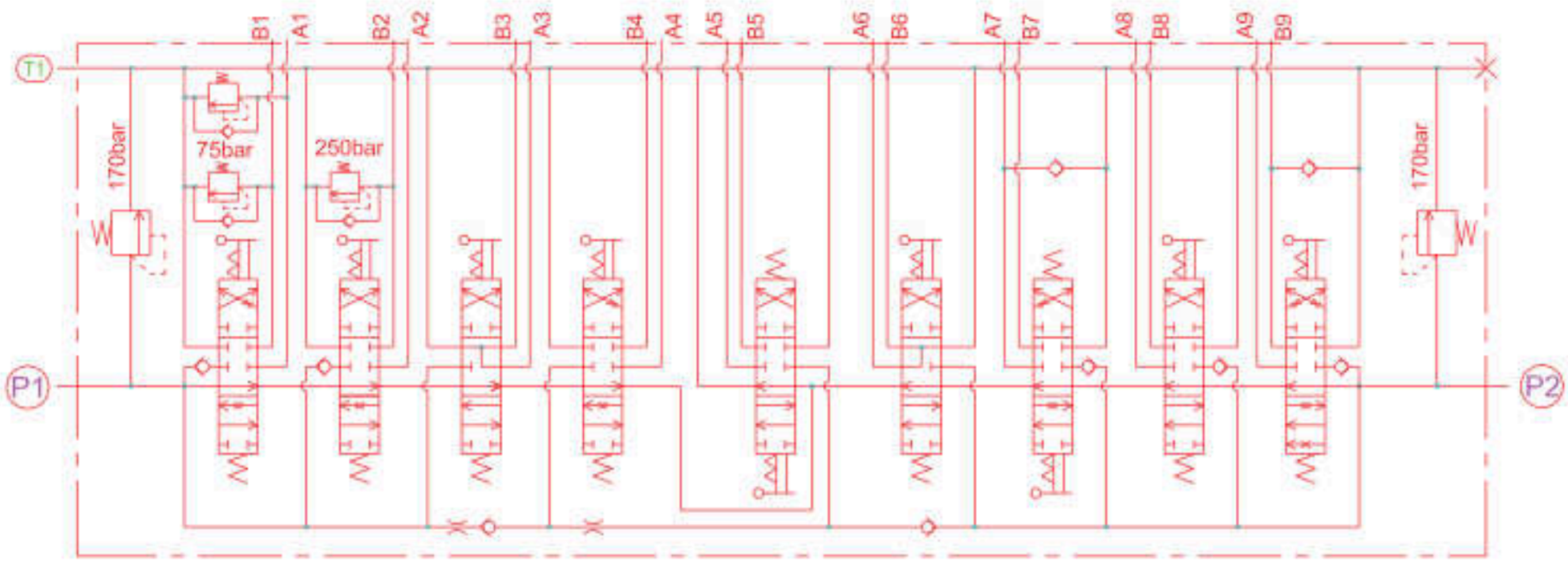


No.	Designation
A3	Regulator
B1	Fuel indicator
B2	Horn
E11	Working lights
F1	Master fuse
F2	Fuse, relay, indicator, cutoff solenoid
F3	Fuse, horn, working light
G1	Dynamo
G2	Battery
H1	Engine temperature indicator light
H4	Engine oil pressure indicator light
H5	Dynamo charge faccion indicator light
H10	Fuel level indicator light
K7	Start high-current relay
K8	Time lag relay "A cut-off solenoid
K9	Cutoff solenoid switching relay
M1	Starter
M9	Fuel pump
P1	Hour meter
R1	Glow plug
S1	Preheating start switch
S2	Engine oil pressure switch
S3	Engine temperature switch
S55	Horn push button
Y1	Cutoff solenoid

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5.14 Main valve block diagram



Main control lines

Connection	Legend
A1, B1	Swivel unit
A2, B2	Shovel arm
A3, B3	Traveling drive (left)
A4, B4	Stabilizer blade/telescopic undercarriage
A5	Auxiliary hydraulics
A6, B6	Traveling drive (right)
A7, B7	Swiveling cylinder
A8, B8	Bucket cylinder
A9, B9	Boom cylinder

Pump/tank lines

Connection	Legend
P1	Pump 1 connection
P2	Pump 2 connection
T1 and T2	Reservoir line via non-return valve and filter in reservoir

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4.7 Injection time

Checking and adjusting injection time



Fig. 6: Measuring equipment

- Preparations:

☞ *Mark the actual position of the fuel injection pump on the engine block.*

☞ *Trace the mark with a touch-up applicator.*

☞ *Set the throttle to work position.*

☞ *Unscrew only the injection line on the pump side and bend it a little to the side so that you can see the opening to the fuel injection pump.*

☞ *In order to be able to see better, you can use a section of an injection line or a transparent tube instead of the injection line (**as required**)*

- Measurement:

☞ *Slowly turn the engine clockwise, as seen from the radiator side.*

☞ *As you do so, carefully watch the opening where the injection line was.*

☞ *Stop turning as soon as fuel starts coming out.*

☞ *Wipe away the fuel and turn back to about 20° before top dead center.*

☞ *Repeat the measurement.*

☞ *Read the mark on the crankshaft (15°).*
Injection time is set correctly if it corresponds to this value.

☞ *If it does not correspond to this value, loosen the fuel injection pump (do not unscrew it completely) and rotate it a little.*

➥ Rotated toward the engine: earlier injection time

➥ Rotated away from the engine: later injection time

☞ *Screw the fuel injection pump firmly and check.*

☞ *Repeat the procedure as required.*



Fig. 7: Mark on housing

Notice!

Bend the injection lines as you install them so they are not subject to tension once they are installed. Bleed the injection lines once they are installed.



Fig. 8: Opening on fuel pump

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