LUBRICATION CHART FOR 225 SPIN ACE WITH BLADE

225 LUBRICATION CHART

REF NO.	DESCRIPTION		NO. POINTS	SPECIFICATION	INTERVAL (hr) 50	250	500	1000	2000	5000
①	FRONT ATTACHMENT PIN		13	EP. GREASE No. 2	○					
②	FRONT ATTACHMENT PIN(ENG)		4					○		
③	BLADE PIN		6							
④	TURNTABLE BEARING		2				○			
⑤	SWING RING GEAR		14kg 30.9lb				○			
⑥	SWING GEAR REDUCER		5.0ℓ 1.3gal	GEAR OIL		△		◎		
⑦			0.6kg 1.3lb	EP. GREASE No. 2					○	
⑧	ENGINE OIL PAN		20.5ℓ 5.4gal	ENGINE OIL			◎			
⑨	TRAVEL GEAR REDUCER		4.7ℓ×2 1.2gal×2	GEAR OIL		△		◎		
⑩	HYDRAULIC SUMP TANK		205ℓ 54.2gal	HYDRAULIC OIL						◎
⑪	ENGINE RADIATOR		26ℓ 6.9gal	WATER WITH LONG LIFE COOLANT	EVERY 2 YEARS					
⑫	FUEL TANK		265ℓ 70.0gal	LIGHT OIL	WHEN REQUIRED					
A	PILOT LINE FILTER		1			△	◎		◎	
B	FUEL FILTER		1				◎			
C	FUEL FILTER(PREFILTER)		1			◎				
D	ENGINE OIL FILTER		1				◎			
E	RETURN FILTER		1			△			◎	
F	SUCTION FILTER		1					□		◎
G	AIR CLEANER	OUTER	1			□		◎		
H		INNER	1			□		◎		
I	AIR BREATHER		1					◎		
J	AIR FILTER	OUTER	1		□				◎	
K		INNER	2		□					◎

○:LUBRICATE GREASE ◎:CHANGE OIL OR REPLACE ELEMENT △:CHANGE INITIALLY □:CLEAN

NOTES 1. LUBRICATION IS RECOMMENDED FOR THE FRONT ATTACHMENT PINS AFTER THE OPERATION IN THE WATER IS COMPLETED.
2. REFER TO RECOMMENDED OIL SPECIFICATIONS IN DETAIL SHOWN IN THE OPERATOR'S MANUAL.
3. THIS CHART IS PRIOR TO THE ENGINE INSTRUCTION MANUAL.
4. INTERVAL - HOURS ON THIS CHART ARE BASED ON FOLLOWING.
50 (OR WEEKLY) * 500 (OR 3 MONTHS) *
250 (OR MONTHLY) * 1000 (OR 6 MONTHS) *
2000 (OR 1 YEAR) * 5000 (OR 2.5 YEARS) *
* WHICHEVER OCCURS FIRST
5. REMOVE THE AIR DEFLATION PLUG IN LUBRICATING GREASE FOR SWING GEAR REDUCER REFER TO THE OPERATOR'S MANUAL FOR DETAILS.

RECOMMENDED GREASE AND OIL SPEC. ARE AS FOLLOWS.
EP. GREASE :LITHIUM GREASE NO.2
ENGINE OIL :SEE OPERATOR'S MANUAL
GEAR OIL :API GL-4 SAE 90
HYDRAULIC OIL:SEE OPERATOR'S MANUAL

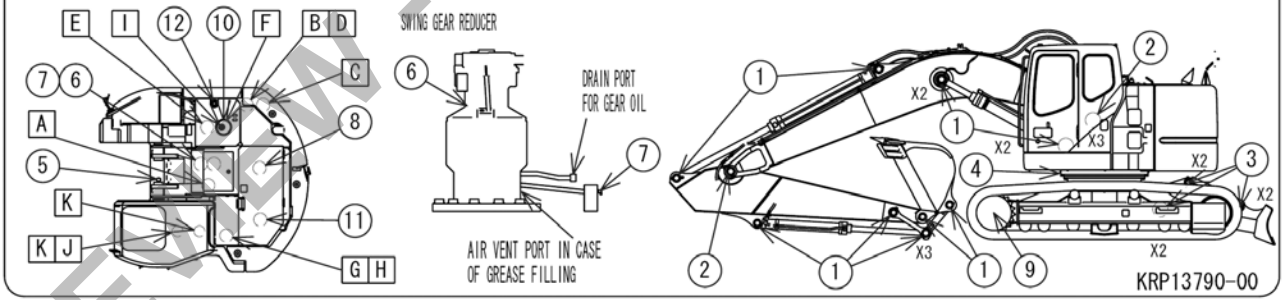


Figure 2

Commonly Replaced Filters

Filter	Part Number	Service Interval	Filter	Part Number	Service Interval
Engine Oil Filter	KHH0533	500 Hours	Outer Air Filter	KMH0781	1000 Hours
Fuel Main Filter	KHH0534	500 Hours	Inner Air Filter	KMH0830	1000 Hours
Fuel Pre-filter	KHH12030	250 Hours	Air Breather Filter	KRJ3461	1000 Hours
Pilot Oil Filter	KHJ17730	2000 Hours	Air Breather Packing	KRJ3463	
Return Filter	KRJ20710	2000 Hours	Suction Filter	KRJ6624	5000 Hours

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ENGINE

Make ..... ISUZU
Type AI-4HK1X
Number of cylinders 4
SAE net horsepower ..... 153 HP (114 kW) @ 1,800 rpm
Displacement ..... 317 cu in (616 Nm)
Maximum Torque ..... 454 lbf-ft (616 N-m)
Starter ..... 24 V-5.0 kW

ELECTRICAL SYSTEMS

Circuit ..... 24 volts
Battery ..... 92 amp hours
Alternator ..... 50 amp

HYDRAULIC SYSTEM

Open-center system, two variable displacement axial piston pumps and one gear pump for pilot controls, main control valve with one 4-spool valve and one 5-spool valve with auxiliary spool - stackable, oil cooler, boom and arm holding valves, o-ring face seals, 6 micron return filter, firewall.

Main pump max flow ..... 2 x 50.2 gpm (2 x 190 l/min)
Pilot pump max flow ..... 5.3 gpm (20 l/min)
Blade pump max flow ..... 18.2 gpm (69 l/min)

Relief valves pressures:

Boom/Arm/Bucket ..... 4,970 psi (343 bar)
In Power-boost mode ..... 5,410 psi (373 bar)
Swing ..... 4,410 psi (304 bar)
Travel ..... 4,970 psi (343 bar)
Blade (if equipped) ..... 3,280 psi (226 bar)

Hydraulic cylinders:

	Bore x Rod x Stroke
Boom	4.9" x 3.5" x 50.6"
Arm	5.3" x 3.7" x 58.0"
Bucket	4.5" x 3.1" x 39.8"
Blade (if equipped)	5.1" x 3.1" x 10.2"

Hydraulic Oil Filtration:

Return filter ..... 6 micron
Pilot filter ..... 8 micron
Suction screen ..... 150 micron

Control Valves:

Five control valve sections for left-hand travel, boom, arm, auxiliary circuit and swing acceleration.
Four control valve sections for right-hand travel, boom, arm and bucket acceleration.
Boom/arm load holding valves. One spool valve for blade.(if equipped)

Swing

Fixed flow, piston-type pump.

Upperstructure swing speed ..... 0-10.6 rpm
Tail Swing ..... 5' 8" (1.72 m)
Swing Torque ..... 48,679 lbf-ft (66.0 kN-m)

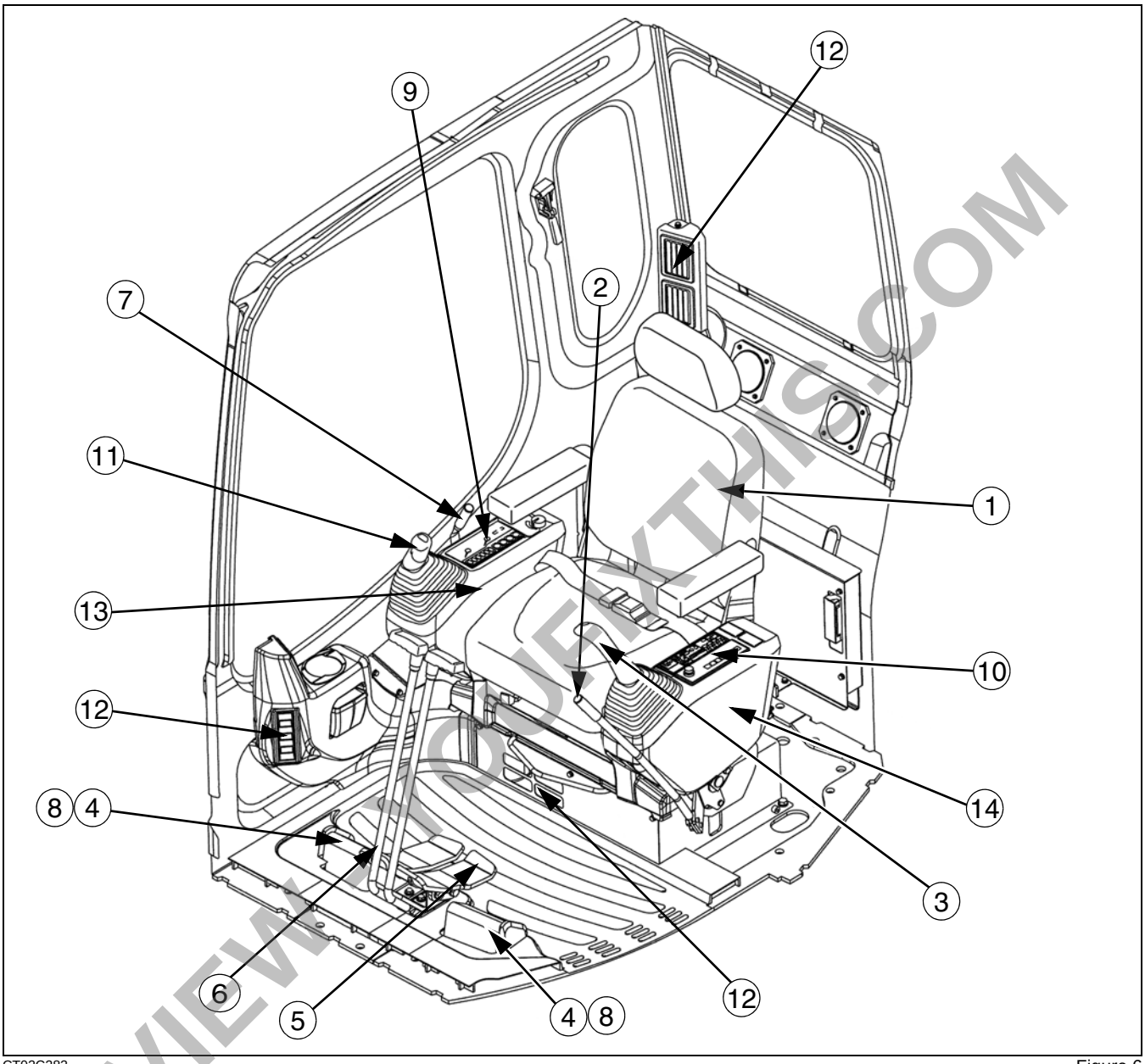
Travel

Variable flow hydraulic motors with axial pistons. Planetary reduction gears.
Two speeds controlled from the instrument panel.

Low speed ..... 0 to 1.9 mph (0 to 3.1 km/h)
High speed ..... 0 to 3.1 mph (0 to 5.0 km/h)
Drawbar pull ..... 42,039 lbf (187 kN)

Download full manual at youfixthis.com
PREVIEW - YOUFIXTHIS.COM

POSITION OF THE OPERATOR'S COMPARTMENT CONTROLS AND ACCESSORIES



CT02C282

Figure 6

1. OPERATOR'S SEAT
2. GATE LOCK LEVER
3. LEFT-HAND CONTROL LEVER
4. FOOT REST (PEDAL LOCKED)
5. LEFT-HAND TRAVEL CONTROL PEDAL AND LEVER
6. RIGHT-HAND TRAVEL CONTROL PEDAL AND LEVER
7. DOZER BLADE LEVER (IF EQUIPPED)
8. OPTION PEDALS
9. INSTRUMENT PANEL
10. HEATING, AIR-CONDITIONING, AND OPTIONAL CONTROL
11. RIGHT-HAND CONTROL LEVER
12. AIR VENTS
13. RIGHT-HAND CONTROL ARM
14. LEFT-HAND CONTROL ARM

WARNING: *Before starting the engine, make sure that you are fully aware of the location of and the function of each control. Incorrect operation of the controls can cause serious injuries.*

PREVIEW ONLY YOUFIXTHIS.COM

Download full manual at youfixthis.com

EXCAVATOR TRAVEL

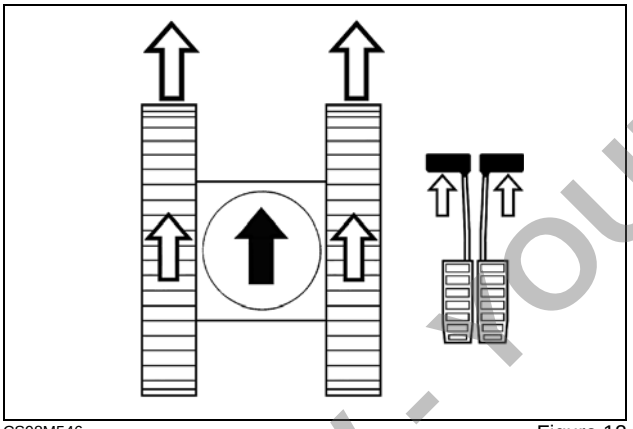
WARNING: *In the normal travel position, the operator's compartment is above the idler wheels and the travel reduction gears are to the rear of the upperstructure. If the upperstructure is turned 180 degrees in relation to the undercarriage, the controls are reversed.*

IMPORTANT: *Before any travel operation, raise the attachment and the dozer blade (if equipped).*

NOTE: *Travel speed depends on the tilting angle of the levers and the travel mode speed selected. See High Speed Travel Switch in Instruments and Controls.*

1. Straight line travel (Forward Travel)

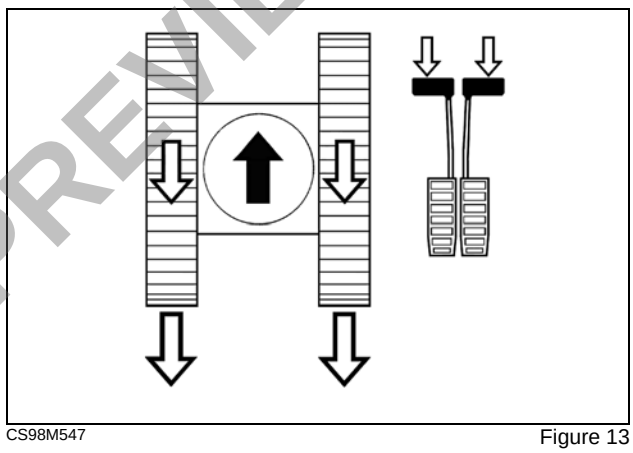
   Press the two pedals (or push the two levers) forwards at the same time.



CS98M546 Figure 12

2. Straight line travel (Reverse Travel)

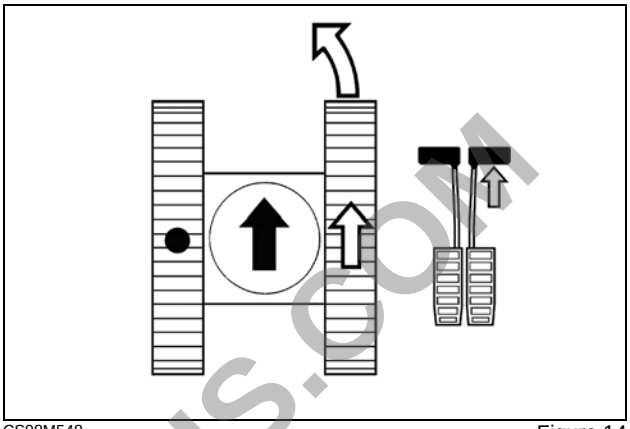
   Press the two pedals (or push the two levers) rearwards at the same time.



CS98M547 Figure 13

3. Turning to the left (Forward Travel)

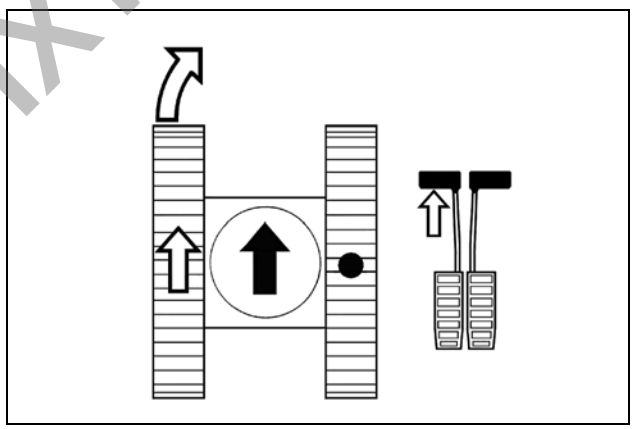
   Simply press the right-hand pedal or the right-hand lever forwards.



CS98M548 Figure 14

4. Turning to the right (Forward Travel)

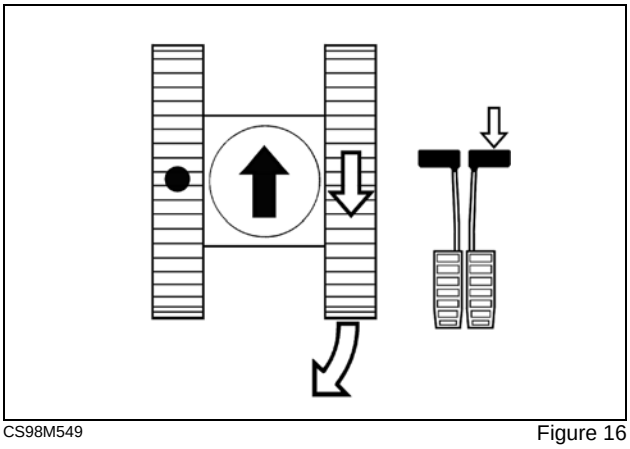
   Simply press the left-hand pedal or the left-hand lever forwards.



CS98M551 Figure 15

5. Turning to the left (Reverse Travel)

   Simply press the right-hand pedal or the right-hand lever rearwards.



CS98M549 Figure 16

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LUBRICATION CHART FOR 225 SPIN ACE WITHOUT BLADE

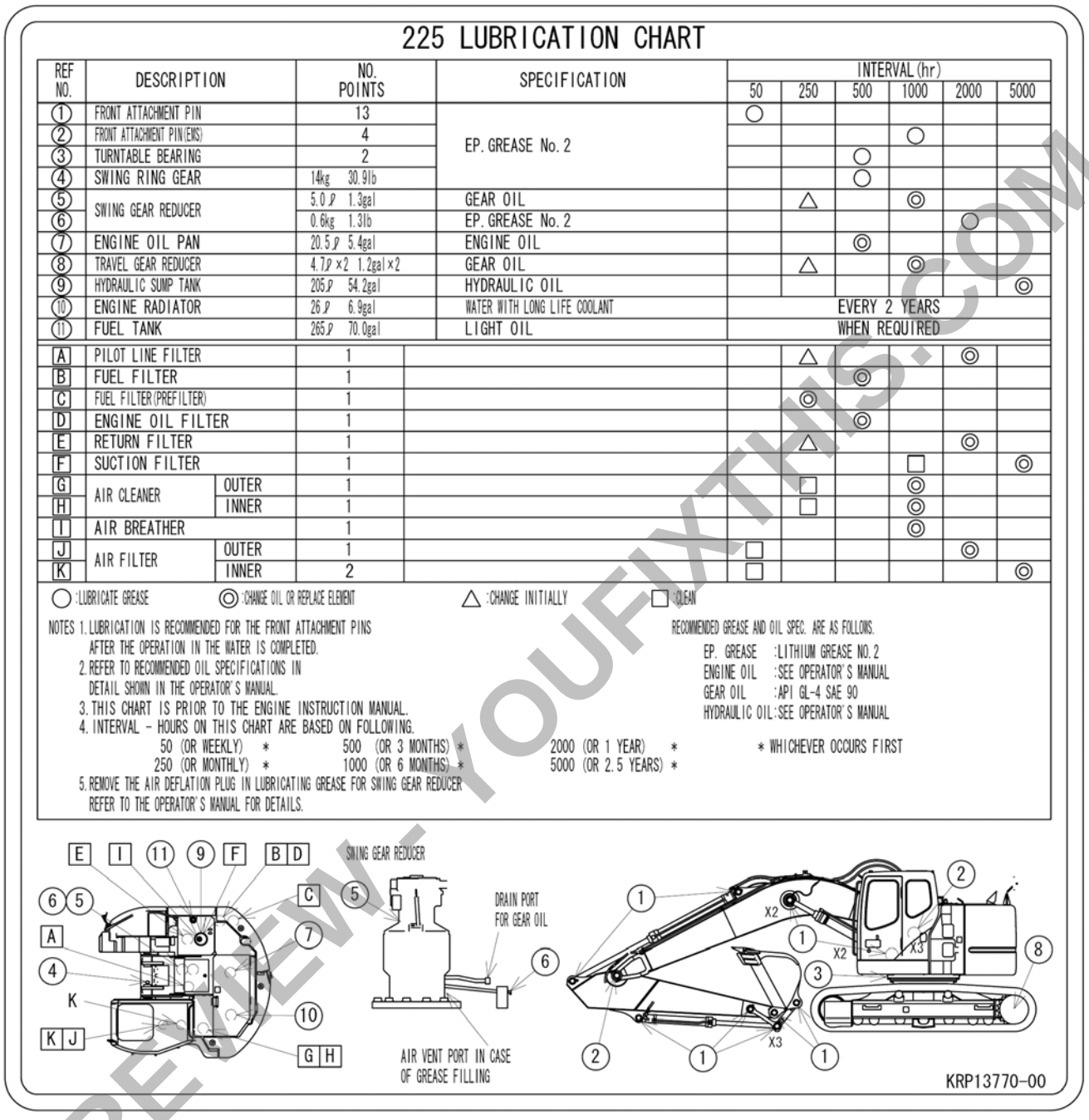


Figure 3

Commonly Replaced Filters

Filter	Part Number	Service Interval	Filter	Part Number	Service Interval
Engine Oil Filter	KHH0533	500 Hours	Outer Air Filter	KMH0781	1000 Hours
Fuel Main Filter	KHH0534	500 Hours	Inner Air Filter	KMH0830	1000 Hours
Fuel Pre-filter	KHH12030	250 Hours	Air Breather Filter	KRJ3461	1000 Hours
Pilot Oil Filter	KHJ17730	2000 Hours	Air Breather Packing	KRJ3463	
Return Filter	KRJ20710	2000 Hours	Suction Filter	KRJ6624	5000 Hours

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

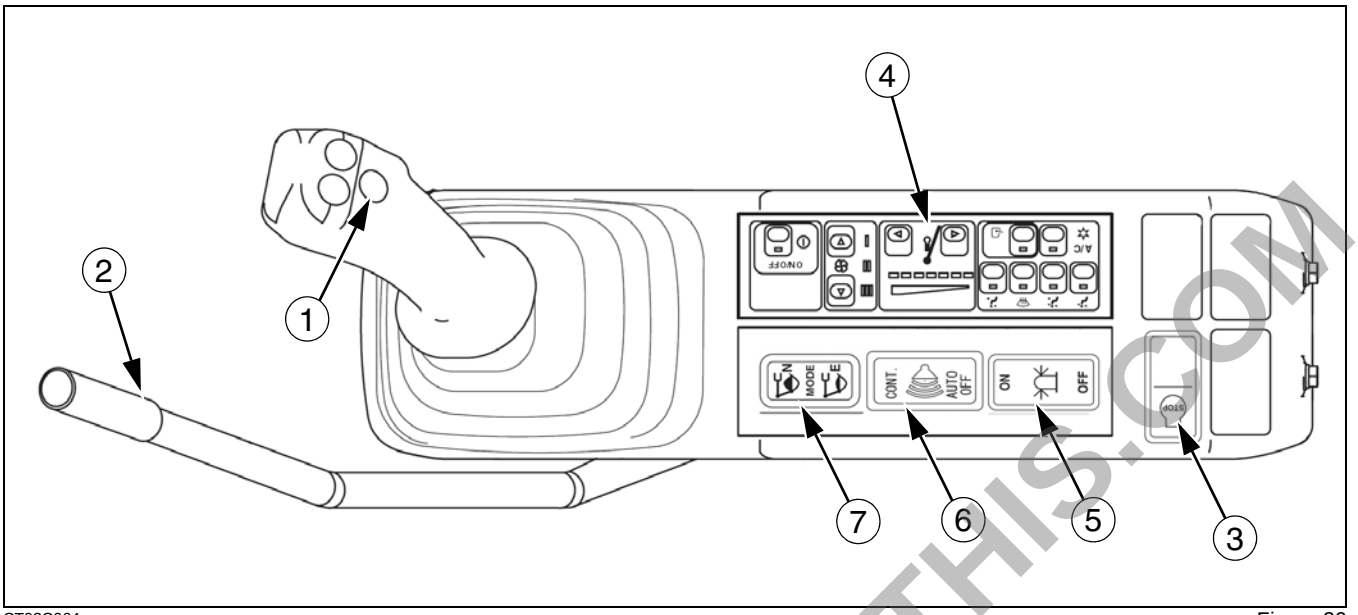
TRAVEL DIMENSIONS

	7' 10" (2.40 m) Arm	9' 10" (3.00 m) Arm
A. Overall length without blade	29' 4" (8.93 m)	29' 0" (8.85 m)
A. Overall length with blade	30' 7" (9.33 m)	30' 4" (9.25 m)
B. Overall width	10' 6" (3.19 m)	10' 6" (3.19 m)
B. Overall width with blade	9' 2" (2.80 m)	9' 2" (2.80 m)
C. Overall height	10' 4" (3.14 m)	9' 9" (2.97 m)
D. Distance between sprocket & idler	12' 0" (3.66 m)	12' 0" (3.66 m)
D. Distance between sprocket & idler with blade	11' 1" (3.37 m)	11' 1" (3.37 m)
E. Overall length of crawler	14' 8" (4.46 m)	14' 8" (4.46 m)
E. Overall length of crawler with blade	13' 9" (4.18 m)	13' 9" (4.18 m)
F. Overall width of crawler with std. shoe	10' 6" (3.19 m)	10' 6" (3.19 m)
F. Overall width of crawler with std. shoe with blade	9' 2" (2.80 m)	9' 2" (2.80 m)
G. Track gauge	7' 10" (2.39 m)	7' 10" (2.39 m)
G. Track gauge with blade	7' 3" (2.20 m)	7' 3" (2.20 m)
H. Minimum ground clearance	18.1" (460mm)	18.1" (460mm)
I. Shoe width	31.5" (800 mm)	31.5" (800 mm)
I. Shoe width with blade	23.6" (600 mm)	23.6" (600 mm)
J. Tail swing radius	5' 8" (1.72 m)	5' 8" (1.72 m)
K. Cab Height	9' 9" (2.97 m)	9' 9" (2.97 m)
L. Overall width of upperstructure	9' 2" (2.80 m)	9' 2" (2.80 m)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LEFT-HAND CONTROL ARM



CT02C064

Figure 20

1. HORN

   To sound the horn, press at the end of the Left-hand control lever.

   IMPORTANT: *Always sound the horn before operating the excavator.*

2. GATE LOCK LEVER

   The shape of the gate lock lever was designed to prevent the operator from leaving the operator's compartment without having raised the lever beforehand. See gate lock lever.

> **WARNING:** *To access or exit the operator's compartment, the gate lock lever must be in the raised position. Never try to avoid this basic requirement.*

3. EMERGENCY STOP

   By pressing the emergency stop button it will immediately kill the engine. The machine will not start unless the emergency stop button is returned to the middle position. If you try to start the machine with the Emergency Stop still engaged the engine will crank but will not start. The EMERGENCY STOP should not be used as a means of turning off the engine every day, it should only be used in an emergency.

4. HEATING AND VENTILATION CONTROL

   See Heating and ventilation control for its use.

5. ROATING BEACON

   If equipped with a rotating beacon press the button to activate the beacon. Press the switch again to de-activate it.

6. TRAVEL ALARM

   In the CONT. mode the travel alarm will sound continuously while traveling. In the AUTO OFF mode the travel alarm will sound for 10 seconds then go off. Each time you stop and start again the timer will reset and the travel alarm will go off again for 10 more seconds.

7. WORK MODE

   N MODE: normal mode is for standard to heavy duty digging.

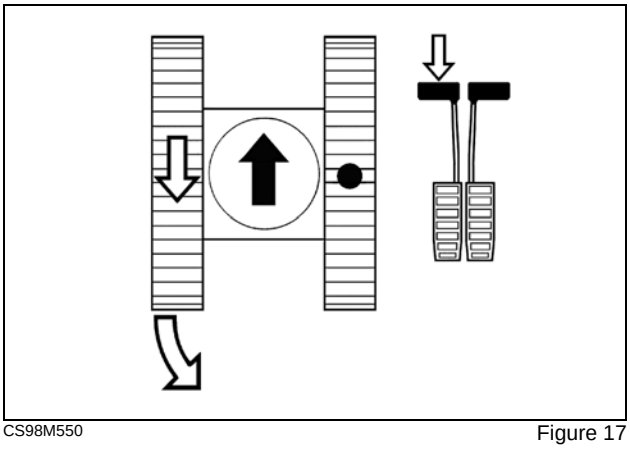
   E MODE: economy mode improves fuel consumption in

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

6. Turning to the right (Reverse Travel)

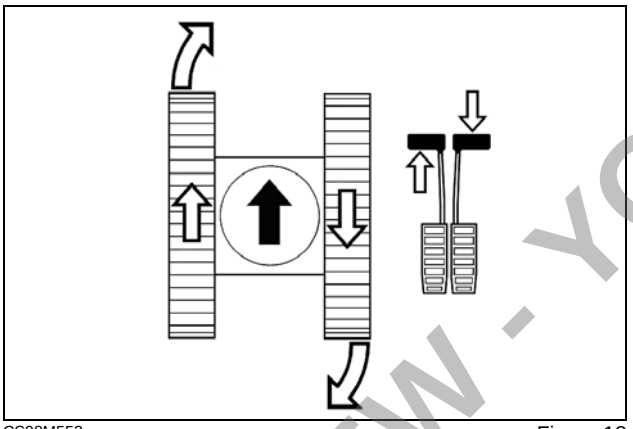
   Simply press the left-hand pedal or the left-hand lever rearwards.



CS98M550 Figure 17

7. Turning on the spot, to the right

   Press the left-hand pedal or the left-hand lever forwards and at the same time press the right-hand pedal or the right-hand lever rearwards.

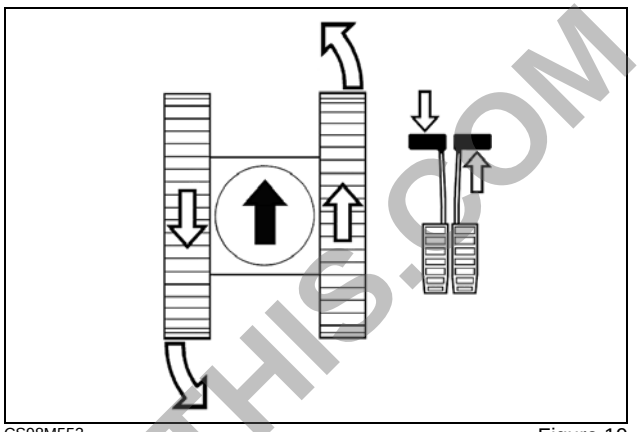


CS98M552 Figure 18

8. Turning on the spot, to the left

   Press the right-hand pedal or the right-hand lever forwards and at the same time press the left-hand pedal or the left-hand lever rearwards.

   IMPORTANT: *Turning on the spot cannot be done if high speed travel is selected.*



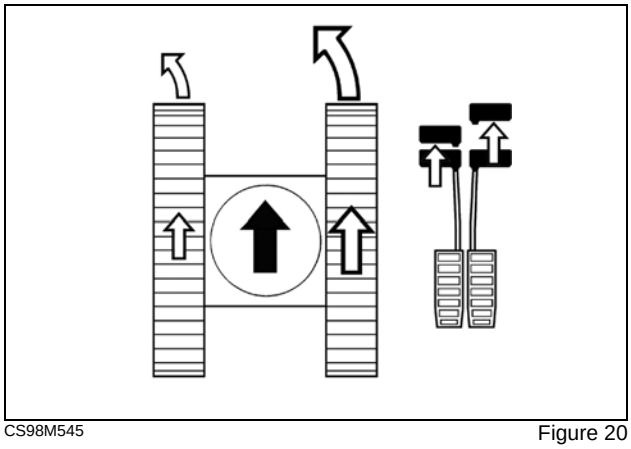
CS98M553 Figure 19

9. Gradual turn on the move

   Press one of the pedals or one of the levers and, at the same time, press the other pedal or the other lever in the same direction, but slightly harder.

   Stopping travel

   To come to a complete halt, simply release the levers or pedals and they will return to neutral.



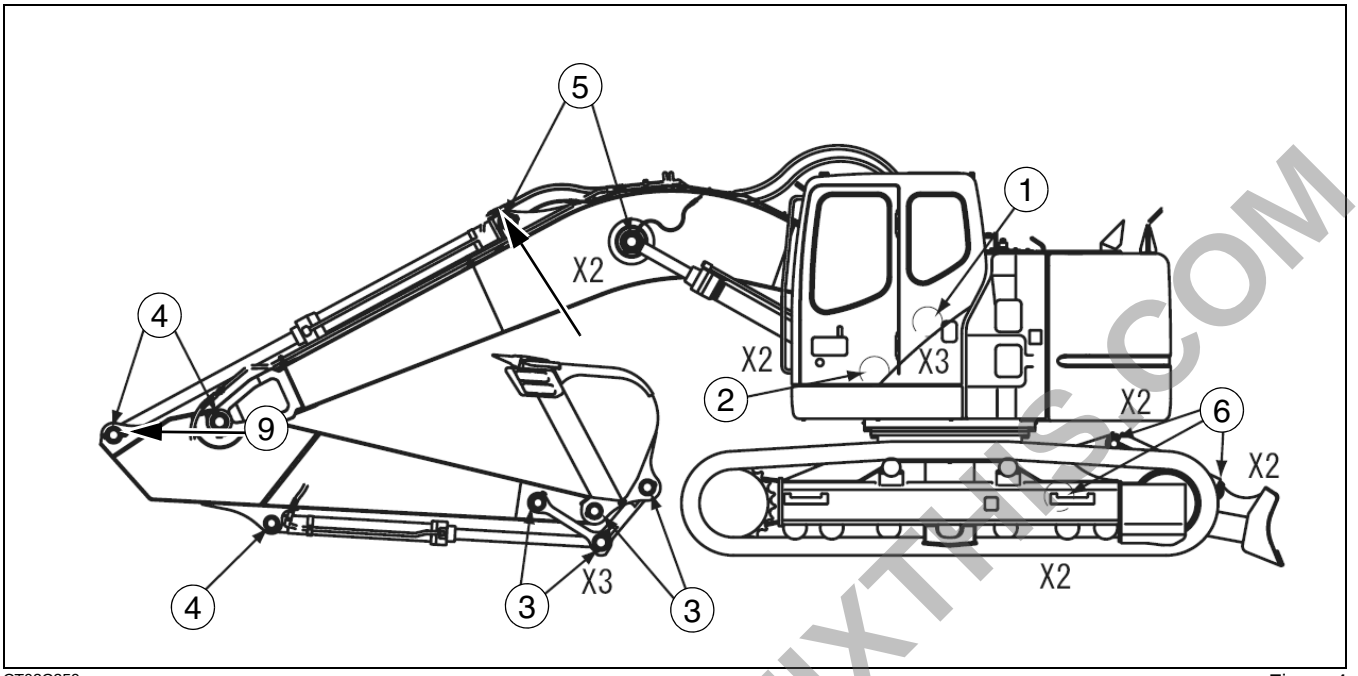
CS98M545 Figure 20

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LUBRICATION POINTS

Boom / Arm / Bucket Lubrication



CT02C259 Figure 4

Use the following grease:

EP NLGI grade 2 (for temperate and hot climates) -20°C to +60°C

EP NLGI grade 0 (for cold climates) -40°C to +20°C

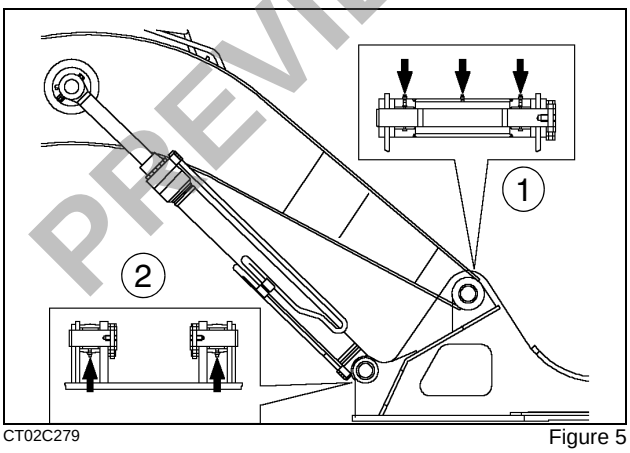
The numbers within brackets mentioned on the right of the description indicate the number of lubrication points.

EVERY 1000 HOURS

1. Boom bottom pin . . . . . (3)

EVERY 50 HOURS

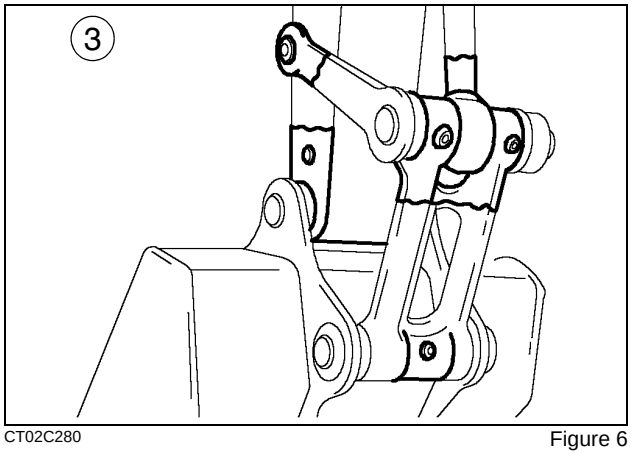
2. Boom cylinder bottom pin . . . . . (2)



CT02C279 Figure 5

EVERY 50 HOURS

3. Bucket connection . . . . . (6)
   Bucket cylinder top pin . . . . . (1)
   Bucket cylinder to bucket linkage . . . . . (2)
   Bucket linkage to bucket, ... (1)
   Arm to bucket linkage . . . . . (1)
   Arm to bucket . . . . . (1)



CT02C280 Figure 6

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

225 SPIN ACE WITH 9’ 10" (3.0 M) ARM WITH NO BLADE

Load (Lift) Point Height	Load Radius							
	End	**Side**	**End**	**Side**	**End**	**Side**	**End**	**Side**
	10 ft		15 ft		20 ft		25 ft	
30 ft								
25 ft								
20 ft					**9850**	**9850**		
15 ft			**12400**	**12400**	**10900**	**10550**	**10000**	7100
10 ft	**23550**	**23550**	**15750**	15600	**12450**	10000	**10700**	6850
5 ft	**21200**	**21200**	**19350**	14650	**14050**	9400	11150	6550
Ground Level	**18550**	**18550**	**21150**	13750	**15200**	8900	10850	6300
–5 ft	**24200**	**24200**	**21050**	13400	15100	8650	10700	6150
–10 ft	**28150**	**26650**	**19500**	13450	**14300**	8600	**10250**	6200
–15 ft	**22150**	**22150**	**15800**	13800	**11000**	8900		

Load (Lift) Point Height	Load Radius	
	End	**Side**
	Capacity @ Max Reach	
30 ft	**5950**	**5950**
25 ft	**5250**	**5250**
20 ft	**4950**	**4950**
15 ft	**4950**	4950
10 ft	**5100**	4550
5 ft	**5400**	4400
Ground Level	**6000**	4600
–5 ft	**6950**	5100
–10 ft	**8600**	6300
–15 ft	**6750**	**6750**

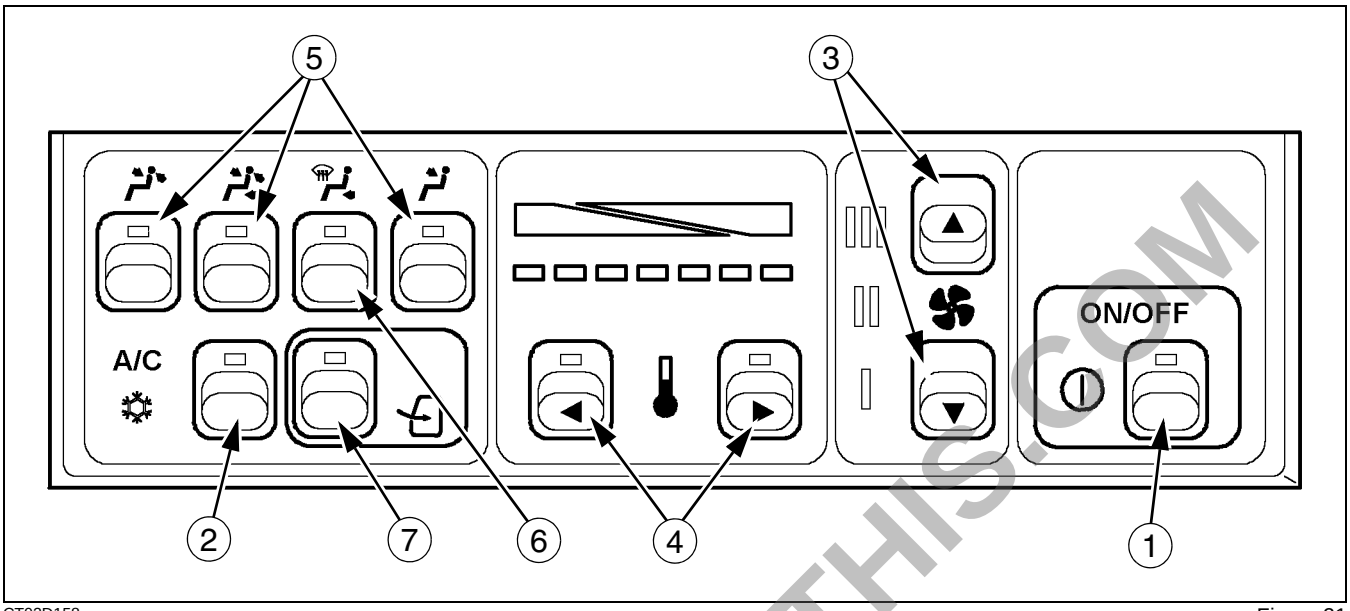
IMPORTANT: *All weights are in pounds.*

IMPORTANT: *Capacities in **BOLD** are limited by hydraulic capacities.*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

HEATING, VENTILATION AND AIR-CONDITIONING CONTROL



CT02D158

Figure 21

1. ON/OFF

   This push button (1) is for turning the system on or off.

   When the system is turned on it will operate at the same setting as selected for previous use.

2. AIR-CONDITIONING SWITCH

   This switch (2) turns the air-conditioning on/off. When it is on, the indicator lamp on the switch comes on.

3. VENTILATION

   These push buttons (3) allows the air flow to be increased or reduced. To increase the flow of air, press the top button. To decrease the flow of air, press the lower button. The segments increase or reduce depending on the flow selected.

4. TEMPERATURE

   These push buttons (4) help increase or reduce the temperature. To increase the temperature, press the Right-Hand button. To decrease the temperature, press the Left-Hand button. The temperature is controlled by the increase or reduction in the number of segments.

5. AIR FLOW DIRECTION

   These push buttons (5) are used for the selection of three types of air flow direction:

   Via the top front air vent.

   Via the top front and rear air vents.

   Via the top and lower rear air vents.

   To select the type of air flow, press the button (5) relating to the type of air flow desired. Depending on the selected type, a built-in indicator lamp comes on.

6. WINDSHIELD DEFROSTER

   This button (6) allows the windshield to be defrosted. Press the button, windshield defrosting is carried out and a built-in indicator lamp comes on. To stop, press the button again, the indicator lamp goes off.

7. AIR RECYCLING

   This button (7) allows two different types of air circulation to be selected:

   External air circulation.

   Internal air circulation.

   Each time the button is pressed, the type of circulation will be changed. Depending on the selected type, a built-in indicator lamp comes on.

PREVIEW - YOUFIXTHIS.COM

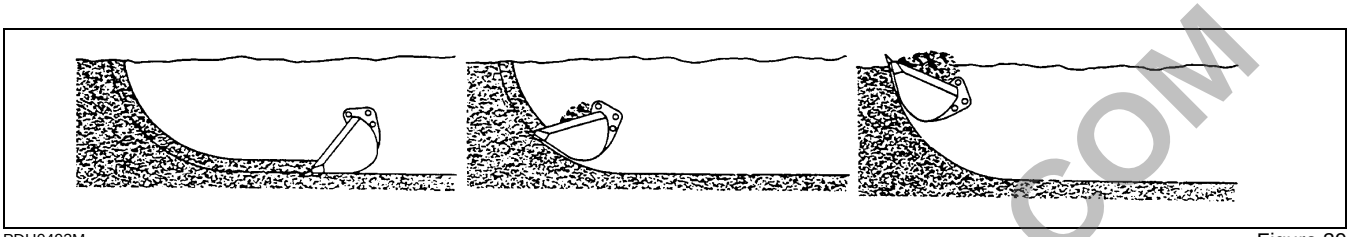
Download full manual at youfixthis.com

OPERATING THE BUCKET

FILLING

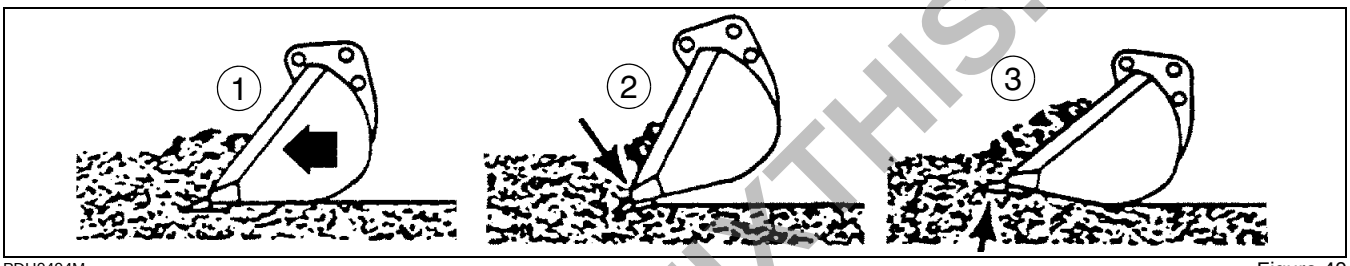
Fill the bucket by maneuvering the arm. Keep the bottom of the bucket parallel to the cut. The bucket teeth and blade must cut the ground like the blade of a knife. The depth of dig varies depending on the type of material.

EXCAVATING METHOD



PDH0493M

Figure 39



PDH0494M

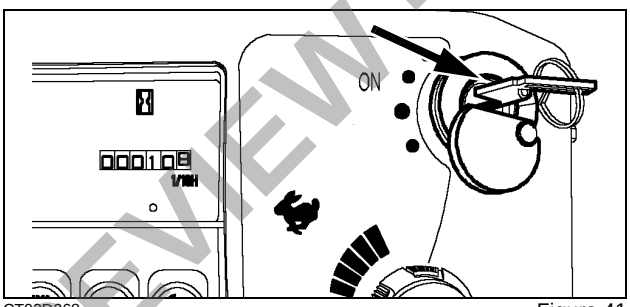
Figure 40

1. CORRECT
2. INCORRECT. THE BUCKET WILL DIG IN AND CAUSE A STALL
3. INCORRECT. THE BUCKET IS PUSHED UPWARDS. THIS WILL ALSO INCREASE THE CYCLE TIME

LOWERING THE ATTACHMENT IN THE EVENT OF A EXCAVATOR FAILURE

If the engine fails, use the following procedure to lower the attachment:

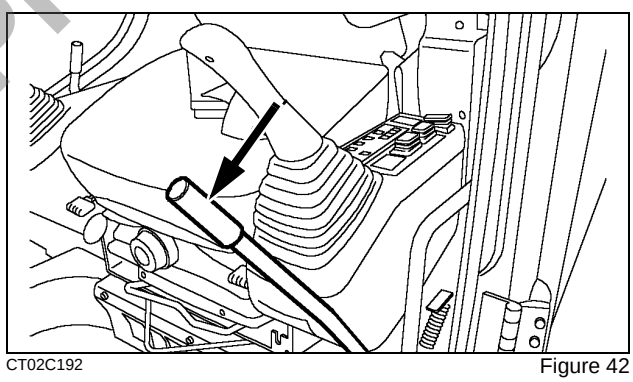
1. Turn the starter switch key to the ON position.



CT02D268

Figure 41

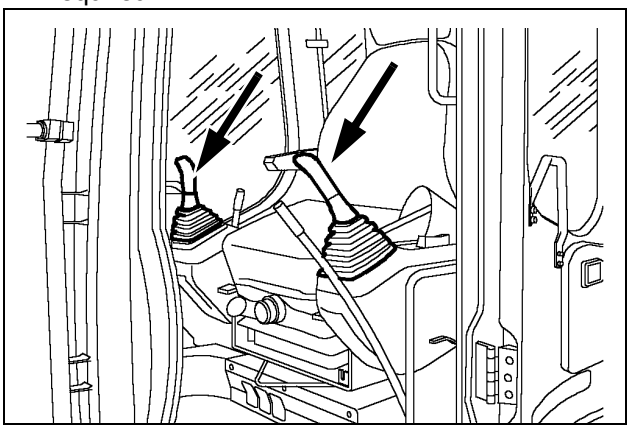
2. Lower the gate lock lever.



CT02C192

Figure 42

3. Place the control lever (s) in the position corresponding to the downward movement required.



CT02C199

Figure 43

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 158 pages

The full manual includes:

- All 158 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Link-Belt 225 Spin Ace, 225 SPIN ACE TIER III Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual