

Compact Excavators

48z-1/51R-1/55z-1/57c-1



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This Quick Reference Guide is to provide quick and simple information to the Operator and does not include any health and safety aspects. In addition, because of our continual development of machines, features described in this Quick Reference Guide may differ from those on your machine. Nor errors and emissions be entirely ruled out. This Quick Reference Guide **DOES NOT** replace the Operators Manual. You **MUST** read **ALL** the disclaimers and safety and other instructions in the Operators Manual before initially operating this product. Accordingly, no legal claims can be entertained on the basis of the data, illustrations or descriptions in this Quick Reference Guide. This machine should not be operated by any person who isn't appropriately qualified or had the appropriate training. Operation of this machine without periodic maintenance could cause it to malfunction. For more information please contact your JCB Dealer.

Intended Use

General

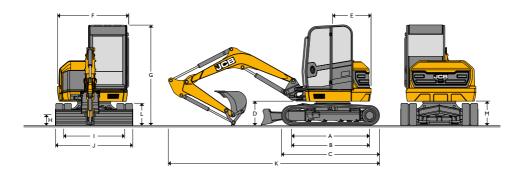
- > Machine type Compact Excavator
- > Self propelled machine with a tracked undercarriage
- > 360° revolving upper structure with boom, dipper, bucket and slew mechanism

Intended Use

- > Machine intended to be used in normal conditions as detailed in the operators manual
- With bucket fitted, machine work cycle consists of digging, elevating, slewing and discharging of materials
- > Applications include earthmoving, road construction, building and construction, landscaping etc.
- > Can be used for object handling
- > Not intended for use in mining and quarrying applications, demolition, forestry, any use underground and any explosive atmospheres.
- > Must not be used for forestry, used with attachments of unknown weight, used on surfaces with unknown stability list not exhaustive
- > PPE may be required in certain applications/environments e.g. high silica concentration or asbestos
- > The machine should not be operated by any person without appropriate qualifications, training or experience of using this type pf machine
- > Prior to use, the machines suitability should be considered with regards to the intended applications and any hazards which may be present

Dimensions

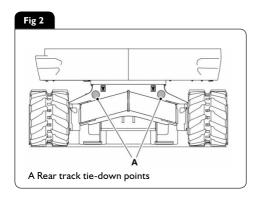
Fig I

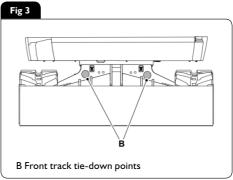


Ma	Machine model		48 z-ı	51 _{R-1}	55 z-ı	57 c-ı
Α	Sprocket idler centres	mm	1985			
В	Track length on ground	mm	1985			
С	Undercarriage overall length – rubber	mm	2490			
	Undercarriage overall length – steel	mm	2490			
D	Kingpost clearance	mm	631			
Ε	Tailswing radius	mm	n 975 1040		1000	1300
F	Overall width of superstructure	mm	1820 1850 1845		45	
G	Height over cab	mm	2551 2561		2561	
Н	Ground clearance	mm	300			
1	Track gauge	mm	1550			
J	Width over tracks	mm	1950			
K	Transport length with standard dipper	mm	5176 5091 5271 513		5125	
L	Track height	mm	560			
М	Counterweight clearance	mm	618			

^{*} Standard machine specification, please see data plate for specific machine weight.

Dimensions

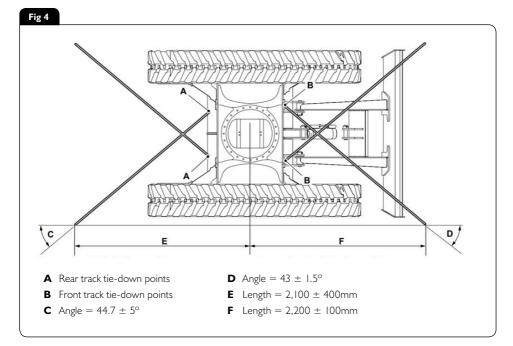




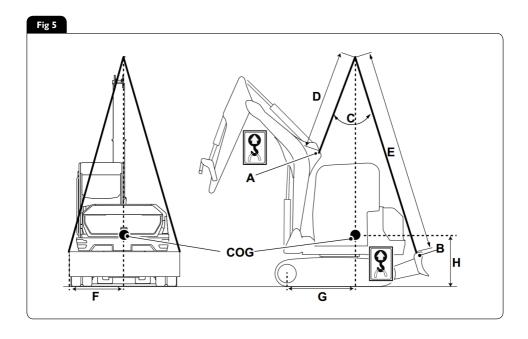
Note: These measurements are based on a 2500mm wide trailer bed. The correct tie down positions are identified on the machine by their labels.



Tie Down Position Decal



Lifting Points



Description	48z-ı	51r-ı	55z-ı	57 c₋ı	
A		Boom Lift Point			
В		Dozer Lift Point			
С		35°			
D mr	n 2400	2480	2320	2220	
E mr	1 4800	4850	4820	4700	
F mr	n 993	1003	993	955	
G mr	n 769	843	875	972	
H mr	n 947	934	961	859	

^{*}COG = Centre of Gravity

The correct lifting positions are identified on the machine by their labels:





Lifting point Position label.

Cab Switch and Panel

Fig 7

- A Track controls
- **B** Fire extinguisher
- C Instrument panel
- **D** Auxiliary power socket
- **E** USB port
- **F** Excavator controls
- **G** Dozer blade control
- **H** Switch panel
- J Rotary switch
- K Ignition key switch
- L HVAC controls
- M Radio
- N Glazing breaker
- P Operator seat

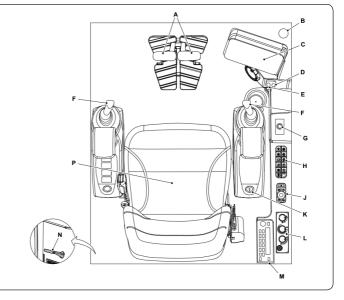
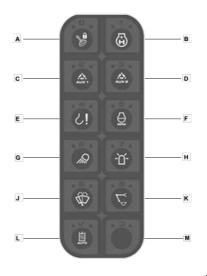


Fig 8

- **A** 2 Go
- **B** Heavy + mode
- C Aux I (high flow) selection switch
- **D** Aux 2 (low flow) selection switch (opt)
- **E** Lift overload on/off switch (opt)
- **F** Auto idle on/off switch (opt)
- **G** Worklights on/off switch
- **H** Beacon on/off switch (opt)
- J Wiper & washer on/off switch (opt)
- **K** Q-hitch sequence switch (opt)
- L Auto-hydraulic warming switch
- M Blank

Key

(opt) - Option



Instrument Panel

Fig 9

- A ICD screen
- **B** Warning and indicator lamps
- C Fuel level gauge
- **D** Coolant temperature gauge
- E Engine speed
- F Back button
- **G** Up button
- **H** Home button J Down button
- K Select button

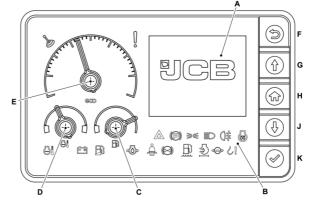
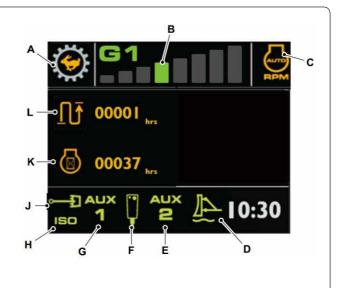


Fig 10

- A Travel speed status
- **B** Power band status
- C Auto idle status
- **D** Dozer float status
- **E** Low flow aux status
- F High flow aux mode
- **G** High flow aux status
- H ISO/SAE status
- J Swing / aux status
- K Engine hours status
- L Trip hours status

Green - Active / selected Orange - Status

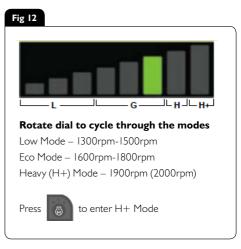
Grey - Inactive



Rotary Controller & Work Modes

The rotary controller can be used to both control the machines RPM and to scroll through the menu system on the machine display (dependant on mode). The rotary can also be used to override the need to crowd the attachment during the quick hitch sequence (depressing the enter button).





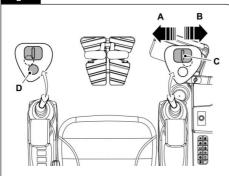




Joystick & Dozer Lever

Joysticks

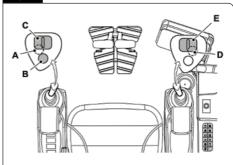
Fig 15



Swing Controls

- A Swing left
- **B** Swing right
- **C** Swing thumb wheel control
- **D** Swing/Aux change over button

Fig 16



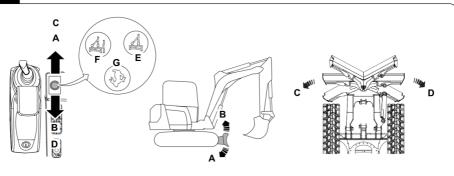
Auxiliary Controls

- A Tilt/grab changeover for tilt-rotator
- **B** Swing/Aux change over button
- **C** Thumb wheel control Aux 2 (Low flow)
- **D** Continuous flow button Hammer circuit
- **E** Thumb wheel control Aux 1 (High flow)

Note: **A** & **D** located underside of joystick

Dozer Lever

Fig 17

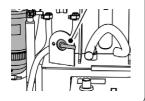


- A Lower the dozer
- **B** Raise the dozer
- **C** Angle the dozer (left side in)
- **D** Angle the dozer (right side in)
- E Dozer lift/angle changeover
- F Dozer float mode on/off
- **G** Travel speed selector

Start Up Sequence

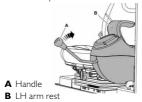
Insert Isolator Key

Insert isolator key (A) and turn in a clockwise direction.



Raise LH Arm Rest

Ensure the hydraulic isolation lever (left hand arm rest) is in the raised position.



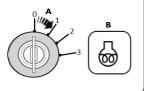
Engage Seat Belt

Engage seat belt (A) into latch (B) before starting machine.



Engine Pre Heat

Turn ignition to position 1 (A) to pre-heat engine before start. Wait until pre-heat symbol (B) on instrument panel goes off.



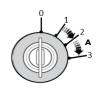
Disarm Immobiliser

If fitted disarm by entering PIN code using one of the below methods.



6 Start Machine

From ignition position 1 turn ignition to position 3 (A) to start the machine.



7 Lower LH Arm Rest

Lower the LH arm rest to activate the hydraulics.

Note: If 2 GO enabled go to step 8, if not go to step 9



A Handle

B LH arm rest

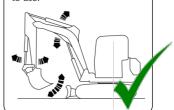
Press 2 GO Button

If enabled press 2 GO button (A) to activate hydraulics.
Instrument panel will illuminate (B) when active.



9 Operate Machine

All controls are now active and the machine is now ready to use.



Setting Auxiliary Flows

Enter Menu Mode

Press Menu mode button (A) on rotary dial to access menus, icons will illuminate when active.



Navigate Menus

Scroll through menus using the rotary dial (A) until on the aux setting menu (B).



Enter Aux Menu

To enter aux setting menu press rotary dial (A). Orange box will appear when menu active (B).





4 Select Aux Mode

Scroll through aux mode settings using the rotary dial (A) until on the Aux value you want to set (B).



5 Set Aux Flow

Press rotary dial (A) to select the required aux setting then rotate the dial to adjust setting (B).





6 Operate Machine

Auxiliary flows are now set to the desired settings and are now ready to be used.



Aux Activation



- A Aux I activation button / mode select
- **B** Aux 2 activation button

Aux I - High Flow



Aux 2 - Low Flow

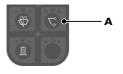


Aux 2 double acting – adjustable flow

Hydraulic Hitch Unlock Sequence

Start Unlock Process

To start quick hitch unlock process ensure hydraulics are live then press quick hitch sequence button (A).



Confirm Process

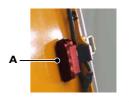
Instrument panel will indicate need to confirm process (A). To confirm process press 2 GO button (B).





Boom LED Indicator

When the sequence is confirmed the LED on the boom will flash red (A).



4 Remove Attachment

To disengage the pivot pin, crowd attachment for 3 seconds then remove attachment.



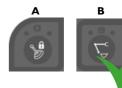
Change Attachment

Operate the machine to engage the jaw (A) with the attachment (B) and then full crowd the attachment to align latch.



6 Lock Quick Hitch

To engage the lock on the quick hitch press one of the following two buttons and visually check hitch is locked.



Specialised Attachments

4a Crowd Override

For large attachments where crowding is not possible press & hold rotary dial (A) for 5 seconds.



4b Remove Attachment

To disengage the pivot pin operate use the dozer lift lever (A) until the hitch unlocks then remove attachment.



Specialised attachments are any attachment that when crowded fully could foul doom/dipper.

When using a specialised attachment that requires this process to be followed, replace No.4 above with No.4 a & b then continue to follow steps 5 and 6 to finish.

Shutdown and Auxiliary Venting

Shutdown Sequence

Park Machine Up

Park machine on solid level ground with the attachment (A) and dozer (B) on the ground.



Leave & Secure

Switch off all switches. Leave machine using the handrails and footholds.

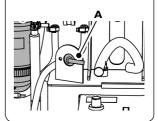
and footholds.

Close & lock
all doors and
windows to
secure machine.



3 Isolate Machine

Turn isolator key anti-clockwise and remove key.



Auxiliary Venting (Within I Minute of Shutdown)

Lower LH Arm Rest

While sitting in the operating station with engine off lower LH arm rest.



Turn Ignition On

Turn ignition to position I (A) so that the instrument panel and switches become active.



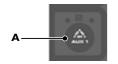
Press 2 GO Button

Press 2 GO button (A) to activate hydraulics. Instrument panel will illuminate (B) when active.



4 Activate Aux Venting

Aux I button on the switch panel will start to flash, press (A) to start auto-venting sequence.



5 Confirm Venting

Instrument panel will indicate need to confirm process (A). To confirm process press 2 GO button (B).





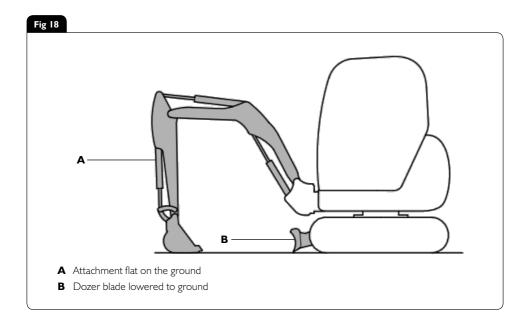
6 Auxiliary's Vented

During venting icon on instrument panel will be green (A) and buzzer will sound, once complete the buzzer will stop and the icon will disappear.



Maintenance Position

- I. Park the machine on solid, level ground
 - I. Release the two track levers
 - II. Set the hand throttle lever to the idle position
- 2. Lower the dozer blade (A)
- 3. Lower the excavator so the attachment is flat on the ground (B)



- 4. Stop the engine
- 5. Discharge the hydraulic pressure (see aux venting operation)
- 6. Isolate the controls and remove ignition key
- 7. Isolate the battery to prevent accidental operation of the engine

Service/Maintenance

Daily Checks (I0h)	Check
Check condition of attachments / optional equipment	Visual Check
Grease attachments / optional equipment as required	Lubricate
Clean bodywork and framework	Clean
Check condition of bodywork and framework	Visual Check
Check condition of cab/canopy including seat belt	Visual Check
Check engine for leaks and oil level	Visual Check
Check condition of drive belt	Visual Check
Check fuel system for leaks & contamination	Visual Check
Drain water from water separator on fuel filter	Clean
Check engine coolant for leaks, contamination and level	Visual Check
Check condition of cooling pack and system	Visual Check
Check hydraulic oil level	Visual Check
Check window washer fluid level	Visual Check
Check the condition of the fire extinguisher	Visual Check
Check operation of all services i.e. excavator, dozer etc.	Operate
Check operation of all electrical equipment i.e horn, alarms etc.	Operate
Check operation of the hour meter	Visual Check

Weekly Checks	Check
Grease slew ring bearing	Lubricate
Clean cooling pack	Clean
Check condition and tension of tracks	Visual Check
Check hydraulic hoses / pipework for leaks and damage	Visual Check
Check condition of the rams	Visual Check
Check the condition of the electrical wiring	Visual Check
Clean the battery terminals	Clean
Check the operation of the battery isolator	Operate

Access Covers – Kohler Engine

Fig 19

- A Air filter
- **B** Radiator
- C Hydraulic oil level indicator
- **D** Battery
- E Hydraulic oil filler cap
- F Fuel filler cap
- **G** Refuelling pump (option)
- **H** Fuel filter
- J Battery isolator

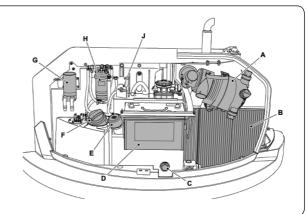


Fig 20

- K Coolant expansion bottle
- L Washer bottle
- M Engine fuel filter
- N Engine oil dipstick

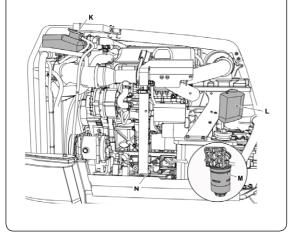
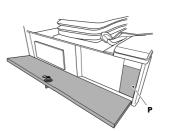


Fig 21

P Relays / fuses



Access Covers – Perkins Engine

Fig 22

- A Coolant expansion bottle
- **B** Radiator
- C Hydraulic oil level indicator
- **D** Battery
- E Hydraulic oil filler cap
- F Fuel filler cap
- **G** Refuelling pump (option)
- **H** Fuel filter
- J Battery isolator

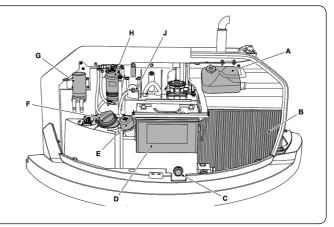


Fig 23

- K Air filter
- L Washer bottle
- M Engine oil dipstick

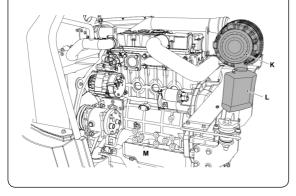
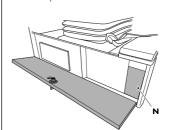


Fig 24

P Relays / fuses



Fluids and Lubricants

Item	Capacity	Fluid/lubricant	JCB Part Number	Container Size
Fuel Tank	76L	Diesel oil	-	-
Engine Oil (Stage 3A Perkins 404D-22)	9.IL	-30°C (-22°F) to 40°C (104°F): JCB Extreme performance 5W40	4001/2705	20L
	-20°C (-4°F) to 45°C (112.9°F): JCB Ultra performance 10W30		4001/3005	20L
Engine Oil (Tier 4 Final Kohler KDI 1903)	9.IL	Below -25°C (-13°F) to 30°C (86°F): JCB Ultra performance 5W30	4001/3105	20L
		Below -25°C (-13°F) to 45°C (113°F): JCB Ultra performance 5W40	4001/3405	20L
Engine Coolant	I2L	JCB Antifreeze HP / Coolant / Water	4006/1120	20L
Track Gearbox (each)	0.8L JCB Engine Oil HP SAE 30 (Not Multigrade)		4001/0305	20L
Track Idler Wheels	0.8L	JCB HD90 Gear Oil	4000/0305	20L
Track Rollers (top)	0.03L	JCB HD90 Gear Oil	4000/0305	20L
Track Rollers (bottom)	rack Rollers (bottom) 0.08L JCB HD90 Gear Oil		4000/0305	20L
Hydraulic System 100L -20°C (-4°F) to 46°C (114.7°F): JCB Hydraulic Fluid OP46		4002/2005	20L	
Hydraulic Tank	55L	-20°C (-4°F) to 46°C (114.7°F): JCB Hydraulic Fluid OP46	4002/2005	20L
Slew Ring Bearing	As required	JCB HP Grease	4003/2017	0.4kg
Slew Ring Gear Teeth	As required	JCB Special Slew Pinion Grease	4003/1619	0.4kg
All Other Grease	As required	JCB MPL-EP Grease	4003/1501	0.4kg

JCB part numbers are liable to change and may also vary by region. For the latest information, always check with your dealer/distributor.

Machine Attachments

Description	Weight (kg)	Intended Use	Hydraulic Requirements
Mechanical Quickhitch	29.3	Quick change of attachments	None
Hydraulic Quickhitch	65	Quick change of attachments	Quickhitch circuit
Bucket GP 250mm	60.2	General excavation / Bulk loading loose material	None
Bucket GP 300mm	55.4	General excavation / Bulk loading loose material	None
Bucket GP 350mm	59.4	General excavation / Bulk loading loose material	None
Bucket GP 400mm	63.3	General excavation / Bulk loading loose material	None
Bucket GP 450mm	67.3	General excavation / Bulk loading loose material	None
Bucket GP 600mm	79.1	General excavation / Bulk loading loose material	None
Bucket GP 750mm	91.1	General excavation / Bulk loading loose material	None
Bucket GP 800mm	95	General excavation / Bulk loading loose material	None
Bucket GP 900mm	103	General excavation / Bulk loading loose material	None
Grading / Ditching Bucket 1200mm	120	Grading, finishing, landscaping & ditching	None
Grading / Ditching Bucket 1500mm	142	Grading, finishing, landscaping & ditching	None
Grading / Ditching Bucket 1800mm	164	Grading, finishing, landscaping & ditching	None
Earth Drill – 3500Nm	119	Drilling 160mm – 460mm holes	I x Hi-Flow aux service
Earth Drill – 6000Nm	122	Drilling 160mm – 460mm holes	I x Hi-Flow aux service
Breaker – HM026T	260	Breaking up tarmac, concrete, rock	I x single acting Hi-Flow aux service
Breaker – HM033T	330	Breaking up tarmac, concrete, rock	l x single acting Hi-Flow aux service

Troubleshooting/FAQs

Issue / FAQ	Resolution/Answer
My machine will not start	Ensure the start up sequence has been followed (Page 11). Immobiliser pin from factory is 1945. If machine still will not start contact dealer
I can't activate the Hydraulics	There are many reasons as to why your 2Go may not work when pressing the button on the switch panel. Here are some of the possible reasons: • If the left hand pod is lifted and put back down when machine hydraulics are "on", machine hydraulics will disable and not function again until side pod down and machine in neutral. • The left hand pod is in the raised position • There is a fault on the keypad • Engine isn't switched on • If there is an error on the machine and an error code is displayed on the LCD screen – which would inhibit the hydraulics • If none of the above, contact dealer
Can I open the Quick Hitch with the attachment on the ground?	The Quick Hitch can be opened with the attachment on the ground. Follow the instructions previously (Page 13) and at step 4 follow 4a-4b
Why is there an audible buzzer in the cab when I'm lifting a large load?	The lift overload warning system has detected a load that is near the limits of the machine, reduce load to prevent machine overturn
Can I disable the lift overload warning indicator when not object handling?	To disable lift overload warning indicator when not object handling press button no 4 on switch panel

Troubleshooting/FAQs

Issue / FAQ	Resolution/Answer		
500hrs Greasing – Does it matter if greased every day?	No, this only prolongs the life further		
500hrs Greasing – Do the bush need to be replaced at 500hrs?	No, just grease and continue work		
500hrs Greasing – After the first 500hrs does the bush then need greasing daily?	No, the bush wont need greasing until the next 500hrs		
500hrs Greasing – Without daily greasing what cleans all the dirt out of the bush?	Machine is fitted with a one way seals stopping dirt entering the bush, but allows old grease out when greasing		
Can you dig to dozer?	Digging to dozer can not be done while machine dig end is central to the dozer. To dig to dozer slew machine over to the side then use the boom swing to offset the boom enabling digging up to the dozer		
Why do the tracks tread look different to other tracks?	The tread pattern on the tracks is intentional to give the below benefits: The Bridgestone tracks will last longer than any other brands The reduction in rubber retains life span but reduces waste material Reduces lateral slippage, safer operation when traversing slopes Allows efficient mud release for better grip and less cleaning Provides good ride comfort		

Troubleshooting/FAQs

Issue / FAQ		Resolution/Answer		
Are the old 8040-8065 attachments compatible?	att	The pick up geometry has changed to enable compatibility with competitor attachments. To enable pick up of old attachments the specific hydraulic quick hitch is required. Contact dealer for more details if required		
How is the "follow me home" lights system activated?	То	If LED lights are fitted the machine is capable of the follow me home function. To activate when shutting machine down the work light button on the switch panel will flash, press to activate for 3 minutes of light		
How to I activate continuous auxiliary flow?	Continuous flow button is located on the underside of the right hand joystick This button has two functions, the active function is set in the setup menu: 1) Latched auxiliary flow 2) Press & hold auxiliary flow			
What are the max flow of the Auxiliary circuits?	The maximum flow for the hydraulic circuits are as follows: • High flow – 90I/min • Low flow – 40I/min			
		Engine Power Band	% Max Aux Flow	Aux Flow L/min
		LI	30%	27
		L2	40%	36
M/hat are the auxilian discussition		L3	50%	45
What are the auxiliary flow settings when in Aux I double acting mode I?		GI	60%	54
III Aux 1 double acting filode 1:		G2	70%	63
		G3	80%	72
		Н	90%	81
		H+	100%	90





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