

506-36, 507-42, 509-42, 510-56, 512-56, 514-56

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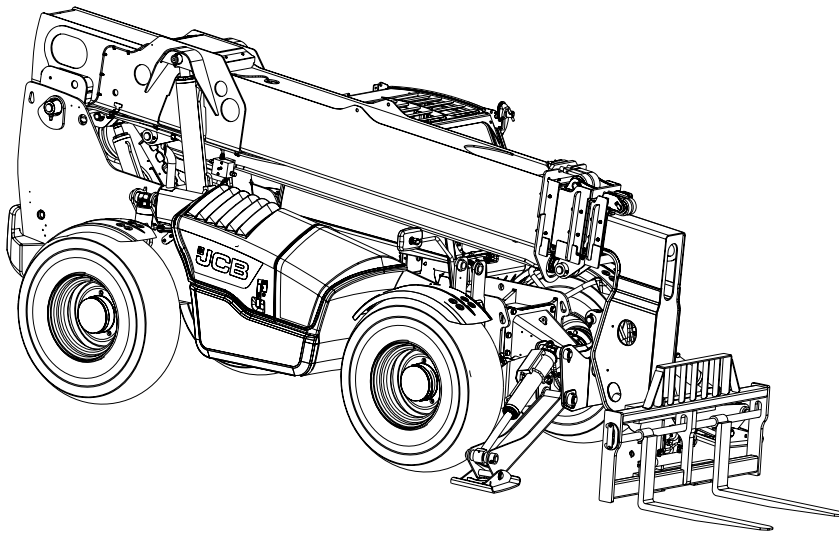
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General Information

Service Manual - 506-36, 507-42, 509-42, 510-56, 512-56, 514-56

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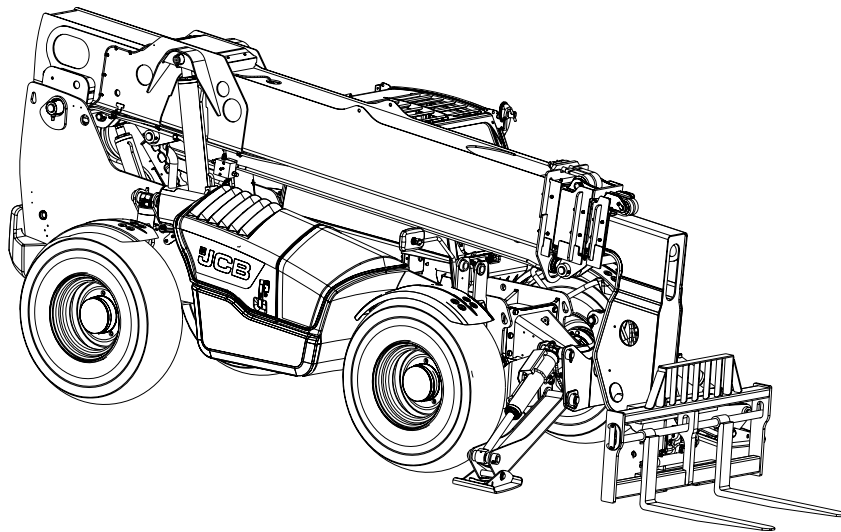
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Section 1 - General Information

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Applications

Introduction

This manual contains topics that relate to some or all JCB Loadall machines in the 5C group. There are several machine model codes in the family.	Machine Group	Model Code	Model Name
	5C	D	506-36
	5C	E	507-42
	5C	F	509-42
	5C	G	510-56
	5C	H	512-56
	5C	J	514-56
Machine variants: There are different machine variants within the same model name. This happens because of market requirements, or when the machine specification changes after a period of time.			
Use the applications tables to see which topics relate to which machine models and variants.			
Important: The machine model names are NOT referred to in the topics. You must refer to the applications tables for the applicable machine models			
Note: For full details of machine identification refer to Section 1 - Machine Identification .			

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Tables

Section 1 - General Information

Topic Ref	Title	Variant	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
1-2	<i>Use</i>		All Machines		
1-3	<i>Machine Identification</i>		All Machines		
1-4	<i>Torque Settings</i>		All Machines		
1-5	<i>Service Tools</i>		All Machines		
1-6	<i>Service Consumables</i>		All Machines		
1-7	<i>Fuel</i>		All Machines		
1-8	<i>Stall Speed Combinations</i>		All Machines		

Section 2 - Care and Safety

Topic Ref	Title	Variant	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
2-1	<i>Safety Notices</i>		All Machines		
2-2	<i>General Procedures</i>		All Machines		



Section 3 - Routine Maintenance

Topic Ref	Title	Variant	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
3-1	<i>Maintenance</i>		All Machines		

Section B - Body and Framework

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
B1	<i>Cab Heating and Ventilation SYSTEM</i>		●	●	●
B2	<i>Cab Air Conditioning SYSTEM</i>		●	●	●
B3	<i>Cab</i>		●	●	●
B4	<i>Air Conditioning Condenser</i>		●	●	●
B5	<i>Cab HV and HVAC Unit</i>		●	●	●
B6	<i>Air Conditioning Binary Switch</i>		●	●	●
B7	<i>Heater Valve</i>		●	●	●
B8	<i>Fuel Tank</i>		●	●	●
B9	<i>Engine Cover</i>		●	●	●
B10	<i>Mudguards</i>		●	●	●
B11	<i>Stabilisers</i>				●
B12	<i>RAS SYSTEM</i>			●	●
B13	<i>Interlock SYSTEM</i>			●	●
B14	<i>Boom</i>		●	●	●
B15	<i>RAS ECU</i>			●	●
B16	<i>Interlock Components</i>		●	●	●



Section C - Electrics

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
C1	<i>Fuses and Relays</i>		●	●	●
C2	<i>Schematics</i>		●	●	●
C3	<i>Electrical Harness SYSTEM</i>		●	●	●
C4	<i>Battery Charging SYSTEM</i>		●	●	●
C5	<i>Alternator (C-04-02)</i>	Engine serial number from U0193212	●	●	●
C6	<i>Battery</i>		●	●	●

Section E - Hydraulics

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
E1	<i>Systems and Schematics</i>		●	●	●
E2	<i>Parallel Hydraulic SYSTEM (E-01-32)</i>		●	●	●
E3	<i>LSP Hydraulic SYSTEM (E-01-31)</i>		●	●	●
E4	<i>Parallel Circuit Operation (E-60-01)</i>		●	●	●
E5	<i>LSP Circuit Operation (E-60-12)</i>		●	●	●
E6	<i>MRV/LSRV Operation</i>		●	●	●
E7	<i>ARV Operation</i>		●	●	●
E8	<i>Parallel Lift Operation</i>		●	●	●
E9	<i>Boom Pressure Balance System</i>		●	●	●
E10	<i>Universal Hydraulic Faults</i>		●	●	●
E11	<i>Parallel Circuit Faults</i>		●	●	●
E12	<i>Flowshare Servo Circuit Faults</i>		●	●	●
E13	<i>Hydraulic System Pressure Tests</i>		●	●	●
E14	<i>Pump Flow Tests - Gearpump</i>		●	●	●
E15	<i>Flowshare Control Valve</i>		●	●	●
E16	<i>Parallel Control Valve - 2 Section</i>		●	●	
E17	<i>Parallel Control Valve - 5 Section</i>				●
E18	<i>Pilot Pressure Supply Valve</i>		●	●	●
E19	<i>Servo Control Valves</i>		●	●	●
E20	<i>Gearpump Operation</i>		●	●	●
E21	<i>Gearpump Removal and Replacement</i>		●	●	●
E22	<i>Hydraulic Cooling Fan Motor - Fixed Speed</i>		●	●	●
E23	<i>Extension Ram</i>		●	●	●
E24	<i>Lift Rams</i>		●	●	●
E25	<i>Tilt Ram</i>		●	●	●
E26	<i>Displacement Ram</i>		●	●	●



Section 1-1 - General Information Applications

Tables

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
E27	<i>Sway Ram</i>		●	●	●
E28	<i>Stabiliser Rams</i>				●
E29	<i>RAS Rams</i>			●	●
E30	<i>Ram Maintenance</i>		●	●	●
E31	<i>Sway Ram Circuit - Bleed Procedure</i>		●	●	●

Section F - Transmission

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
F1	<i>Configuration</i>		●	●	●
F2	<i>Wheels and Tyres</i>		●	●	●
F3	<i>Front Axles</i>	SD80 3 Piece Steer Drive Axle		●	●
		SD70 3 Piece Steer Drive Axle	●		
F4	<i>Rear Axles</i>	SD80 3 Piece Steer Drive Axle		●	●
		SD55 1 Piece Steer Drive Axle	●		
F5	<i>PS750 Mk 4 Gearbox SYSTEM</i>		●	●	●
F6	<i>Torque Converter Operation</i>		●	●	●
F7	<i>Gearbox Systems Fault Finding</i>		●	●	●
F8	<i>Flushing The Transmission Oil</i>		●	●	●
F9	<i>Torque Converter Stall Tests</i>		●	●	●
F10	<i>PS750 Mk4 Gearbox - Hydraulic Testing</i>		●	●	●
F11	<i>Torque Converter</i>		●	●	●
F12	<i>PS750 Mk 4 Gearbox</i>		●	●	●
F13	<i>Bevel Gearbox</i>		●	●	●
F14	<i>Transmission Oil Cooler - Liquid to Liquid</i>	PS750	●	●	●
F15	<i>Propshafts</i>		●	●	●



Section G - Brakes

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
G1	<i>Single Axle Service Brakes SYSTEM</i>		●		
G2	<i>Twin Axle Service Brakes SYSTEM</i>			●	●
G3	<i>External Park Brake SYSTEM</i>		●	●	●
G4	<i>Park Brake Calliper</i>		●	●	●
G5	<i>Park Brake Disc</i>		●	●	●
G6	<i>Park Brake Switch</i>		●	●	●
G7	<i>Servo Exhauster Unit</i>		●	●	●
G8	<i>Servo Unit - Single Axle Brakes</i>		●		
G9	<i>Servo Unit - Twin Axle Brakes</i>			●	●
G10	<i>Master Cylinder</i>	Machines with Single Axle Service Brakes System	●		
		Machines with Twin Axle Service Brakes System		●	●



Section H - Steering

Topic Ref	Title	VARIANT	Machine models		
			506-36 5CD	507-42 5CE 509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
H1	<i>Steering SYSTEM</i>		●	●	●
H2	<i>Hydraulic Steering Unit</i>		●	●	●
H3	<i>Priority Valve</i>		●	●	●
H4	<i>Manual Steer Mode SYSTEM</i>		●	●	●
H5	<i>Manual Steer Mode Valve</i>		●	●	●
H6	<i>Steer Rams</i>		●	●	●
H7	<i>Steering Column</i>		●	●	●



Section K - Engine

Topic Ref	Title	VARIANT	Machine models			
			506-36 5CD	507-42 5CE	509-42 5CF	510-56 5CG 512-56 5CH 514-56 5CJ
K1	<i>Engine Start/Stop SYSTEM</i>		●	●	●	●
K2	<i>Cold Start Heater SYSTEM</i>		●	●	●	●
K3	<i>Starter Motor</i>		●	●	●	●
K4	<i>Cooling Pack (SH,SL,DH)</i>		●	●	●	●
K5	<i>Coolant Expansion Tank</i>		●	●	●	●
K6	<i>Throttle Position Sensor (TPS) (K-07-21)</i>		●	●	●	●
K7	<i>Air Cleaner Housing</i>		●	●	●	●
K8	<i>Exhaust Silencer</i>		●	●	●	●
K9	<i>Fuel Cooler Matrix</i>		●	●	●	●
K10	<i>JCB EcoMax</i>	55kW (SL)	●	●		
		81kW (SH)	●	●	●	●
		93kW (SH)				
		108kW (DH)				

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