Service Manual

3CX, 4CX, 214e, 214, 215, 217 & VARIANTS

Backhoe Loader

From M/c No. 930000 Onwards
From M/c No. 903000 Onwards (USA)

PUBLISHED BY THE
TECHNICAL PUBLICATIONS DEPARTMENT
OF JCB SERVICE; © WORLD PARTS CENTRE,
WATERLOO PARK, UTTOXETER, ST14 5PA
ENGLAND
Tel. ROCESTER (01889) 590312
PRINTED IN ENGLAND

Publication No. 9803/3280 Issue 4

General Information 1
Care & Safety 2
Routine Maintenance 3
Attachments A
Body & Framework B
Electrics C
Controls D
Hydraulics E
Transmission F
Brakes G
Steering H
Engine K

MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual | Pub... Order the manual at mid-west-tech.com >

www.WorkshopManuals.co.uk

Contents

	Page No.
Machine Identification Plate	1 - 1
Typical Vehicle Identification Number (VIN)	1 - 1
Typical Engine Identification Number	1 - 1
Serial Plates	1 - 2
Torque Settings	2 - 1
Service Tools Numerical List	3 - 1
Service Tools	
- Body & Framework	4 - 1
- Electrics	4 - 4
- Hydraulics	4 - 6
- Transmission	4 - 10
- Engine	4 - 19*
Sealing and Retaining Compounds	5 - 1

Purchased from www.WorkshopManuals.co.uk

MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual |... Order the manual at mid-west-tech.com >

www.WorkshopManuals.co.uk

Air Conditioning
- System Diagnosis (cont'd)

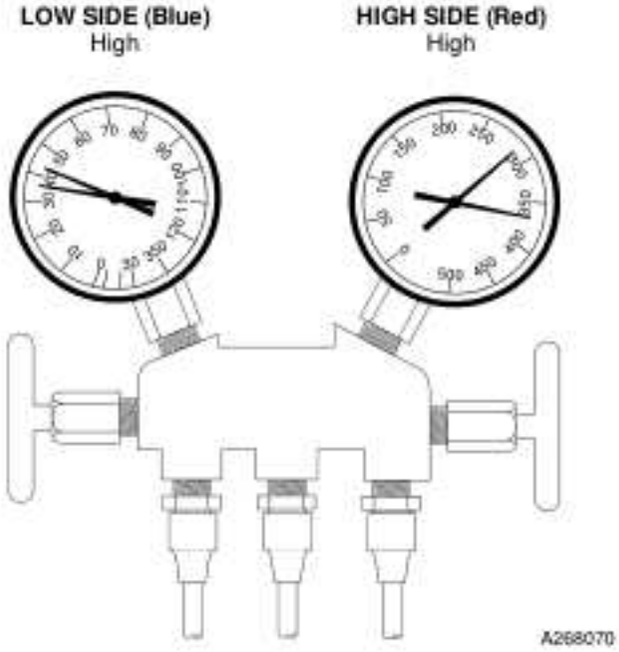
Air in System

Gauge Readings:
Low Side Gauge - High.
High Side Gauge - High.

Other symptoms:
Sight Glass - Bubbles visible during system operation.
Pipes - Low pressure pipes are hot to the touch.

Diagnosis:
Air is present in the system, possibly from inadequate evacuation procedure.

Correction:
1. Evacuate A/C system.
2. Check compressor oil for contamination. Check compressor for proper oil amount. Correct if necessary.
3. Charge system with R-134a.
4. Operate system and check performance.



LOW SIDE - 2.8 bar (2.8 kgf/cm²)(40 lbf/in²)
HIGH SIDE - 22.1 bar (22.5 kgf/cm²)(320 lbf/in²)

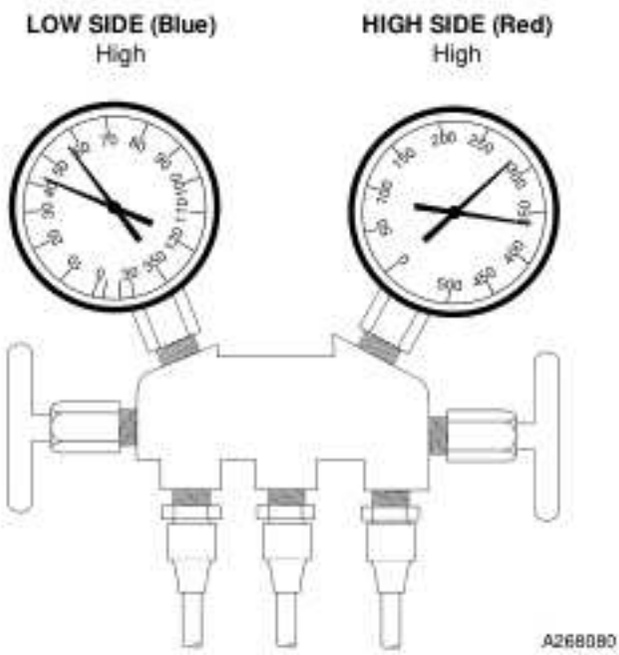
Expansion Valve Improperly Mounted or Heat Sensing Tube Defective (Opening Too Wide)

Gauge Readings:
Low Side Gauge - High.
High Side Gauge - High.

Other symptoms:
Pipes - Large amount of frost or moisture on low side pipes.

Diagnosis:
Excessive refrigerant in low side pipes possibly from expansion valve being opened too wide.

Correction:
1. Leak test system.
2. Evacuate A/C system.
3. Repair system leaks.
4. Charge system with R-134a.
5. Operate system and check performance.



LOW SIDE - 3.5 bar (3.5 kgf/cm²)(50 lbf/in²)
HIGH SIDE - 22.1 bar (22.5 kgf/cm²)(320 lbf/in²)

Purchased from www.WorkshopManuals.co.uk
MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual |... Order the manual at mid-west-tech.com >

www.WorkshopManuals.co.uk

892/00881 Valve Spool Seal Fitting Tool

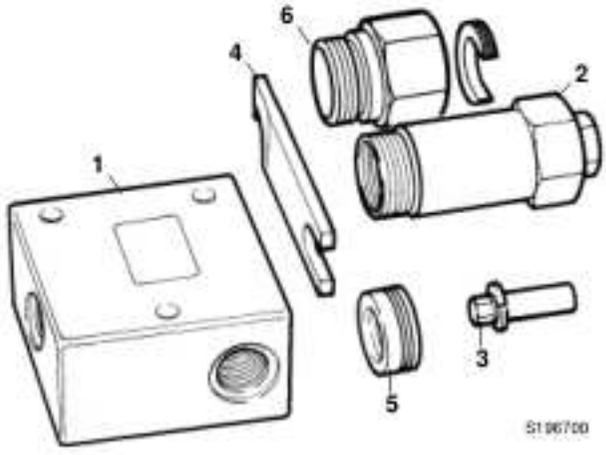


S261220

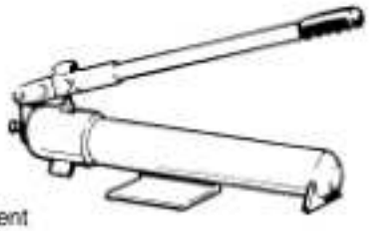
Components for Valve Block A.R.V. Testing

For 4CX Variable Flow machines use 25/201103

	892/00309	A.R.V. Pressure Test Kit
1	: 892/00340	Test Block Body
2	: 892/00341	Setting Body
3	: 993/68300	Adjusting Pin
4	: 892/00343	Spanner
5	: 892/00345	Anti-cavitation Lock Out Bung
6	892/00335	A.R.V. Cartridge Removal Tool



S196700



Hand Pump Equipment

892/00223	Hand Pump
892/00137	Micro-bore Hose 1/4 in BSP x 3 metres
892/00274	Adapter 1/4 in M BSP x 3/8 in M BSP Taper
892/00262	1/4 in M BSP x 1/4 in F BSP x Test Point
892/00706	Test Probe
892/00278	Gauge 0 - 40 bar (0 - 600 lbf/in²)
892/00279	Gauge 0 - 400 bar (0 - 6000 lbf/in²)

S193850

Bonded Washers

1406/0011	1/4 in. BSP
1406/0018	1/2 in. BSP
1406/0014	5/8 in. BSP
1406/0021	3/4 in. BSP
1406/0029	1.1/4 in. BSP



S188140

Male Adapters - BSP x NPT (USA only)

816/00439	3/8 in. x 1/4 in.
816/00440	1/2 in. x 1/4 in.
816/15007	3/8 in. x 3/8 in.
816/15008	1/2 in. x 3/8 in.



S193860

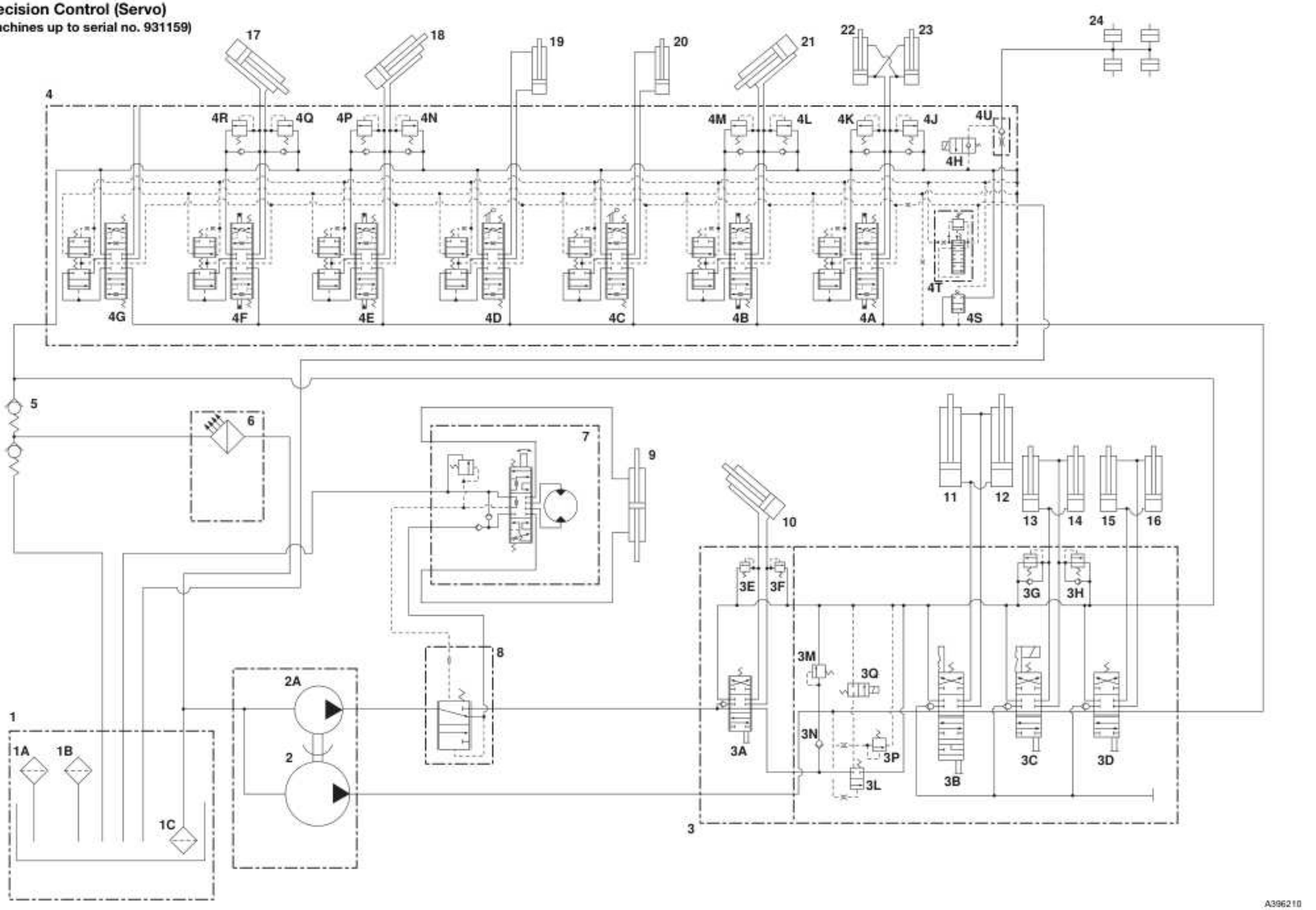
Male Adapters - BSP x BSP

1606/0003	3/8 in. x 1/4 in.
1604/0003	3/8 in. x 3/8 in.
892/00071	3/8 in. x 3/8 in. taper
1606/0004	1/2 in. x 1/4 in.
1606/0007	1/2 in. x 3/8 in.
1604/0004	1/2 in. x 1/2 in.
1606/0017	5/8 in. x 1/2 in.
1606/0008	3/4 in. x 3/8 in.
1606/0009	3/4 in. x 1/2 in.
1604/0006	3/4 in. x 3/4 in.
1606/0012	3/4 in. x 1 in.
1606/0014	3/4 in. x 1.1/4 in.
1606/0015	1 in. x 1.1/4 in.

Purchased from www.WorkshopManuals.co.uk
MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual |... Order the manual at mid-west-tech.com >

www.WorkshopManuals.co.uk

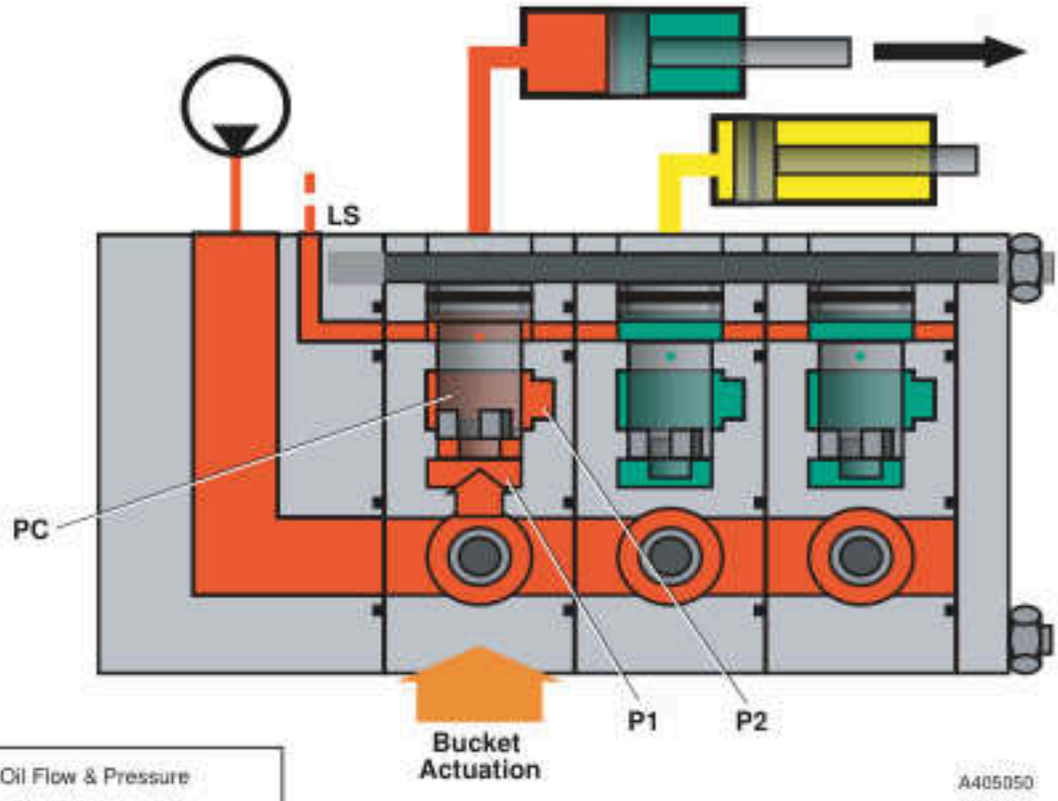
Precision Control (Servo)
* **(Machines up to serial no. 931159)**



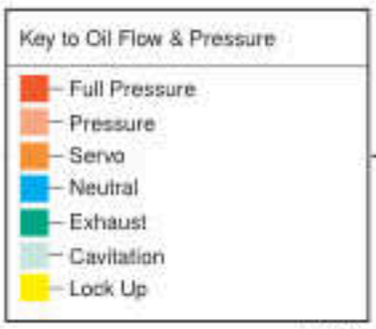
A396210

Purchased from www.WorkshopManuals.co.uk
MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual | Publication 9803-3280-3
Order the manual at mid-west-tech.com >

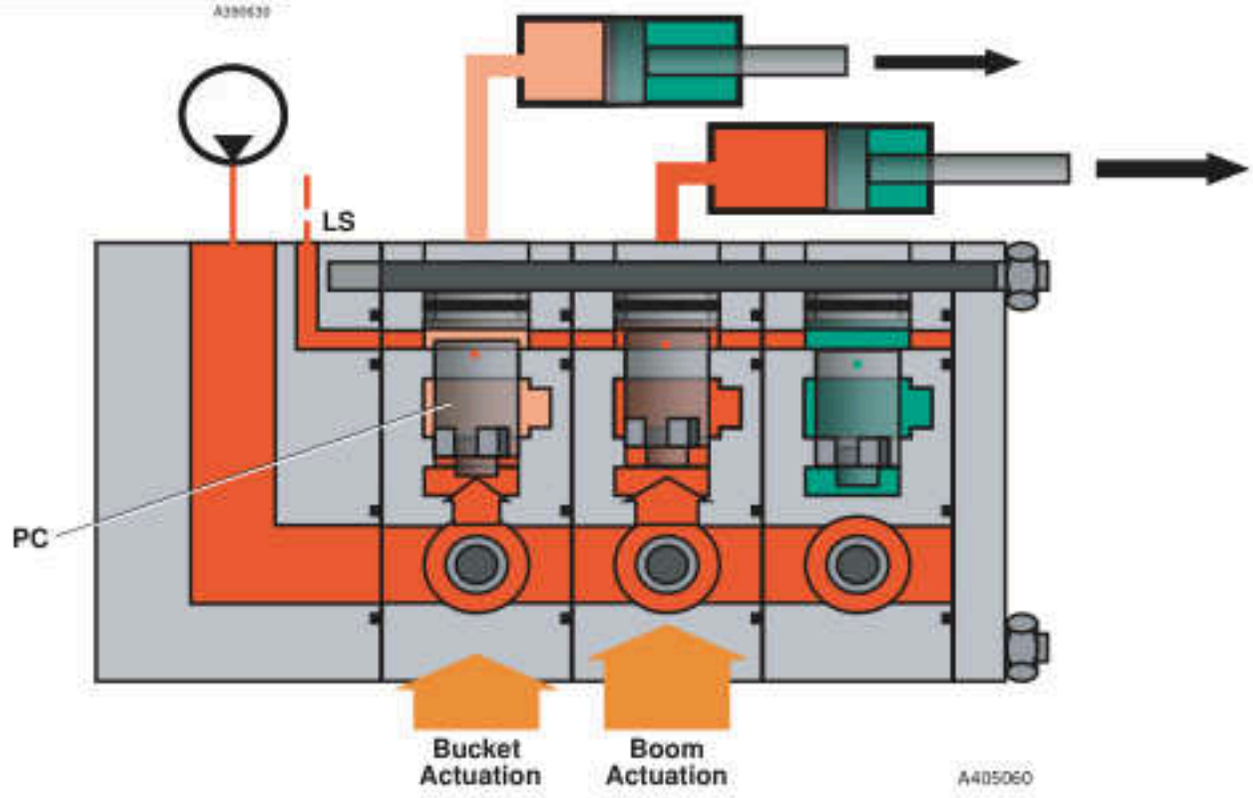
www.WorkshopManuals.co.uk



A405050



A390630

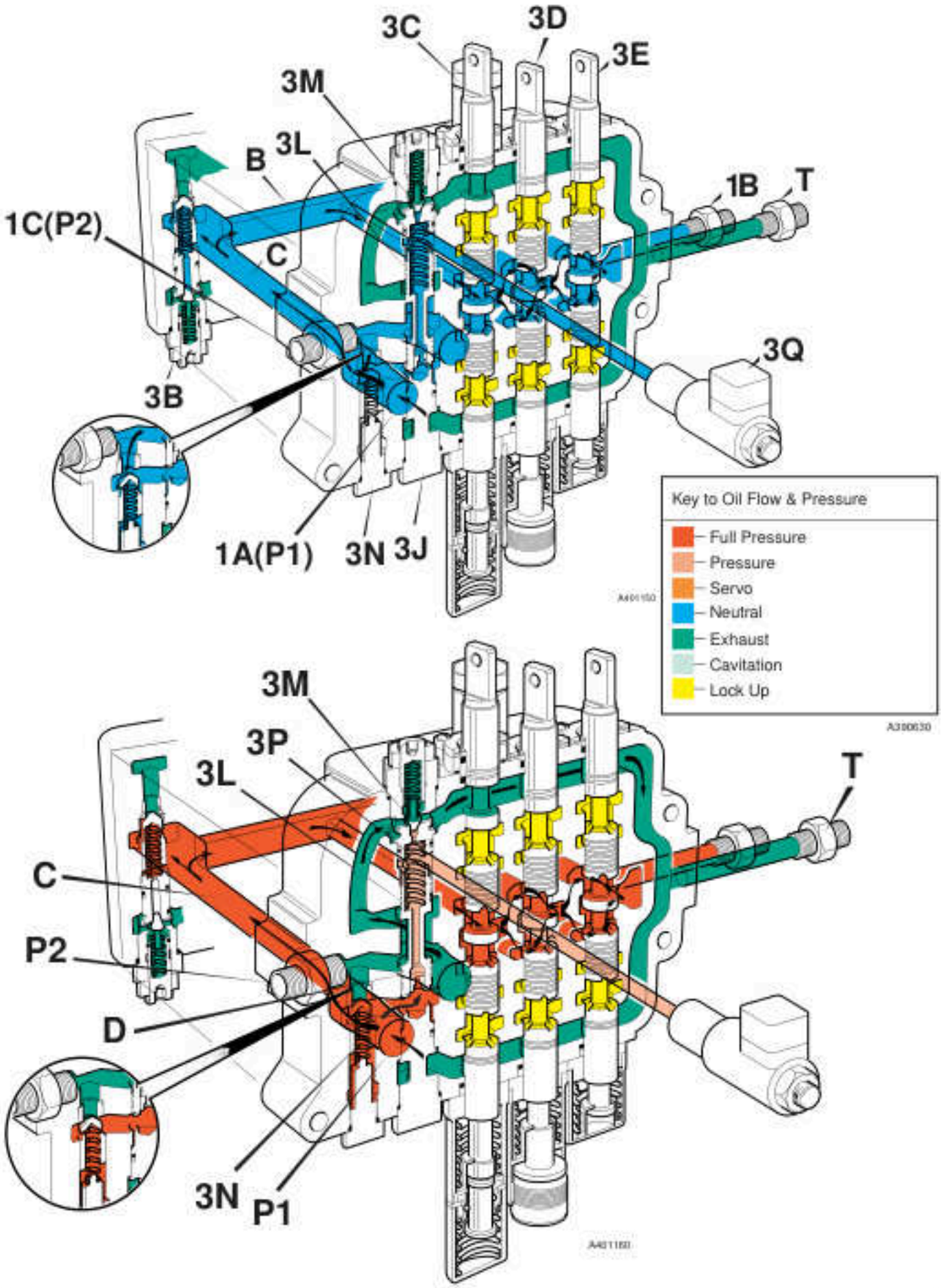


A405060

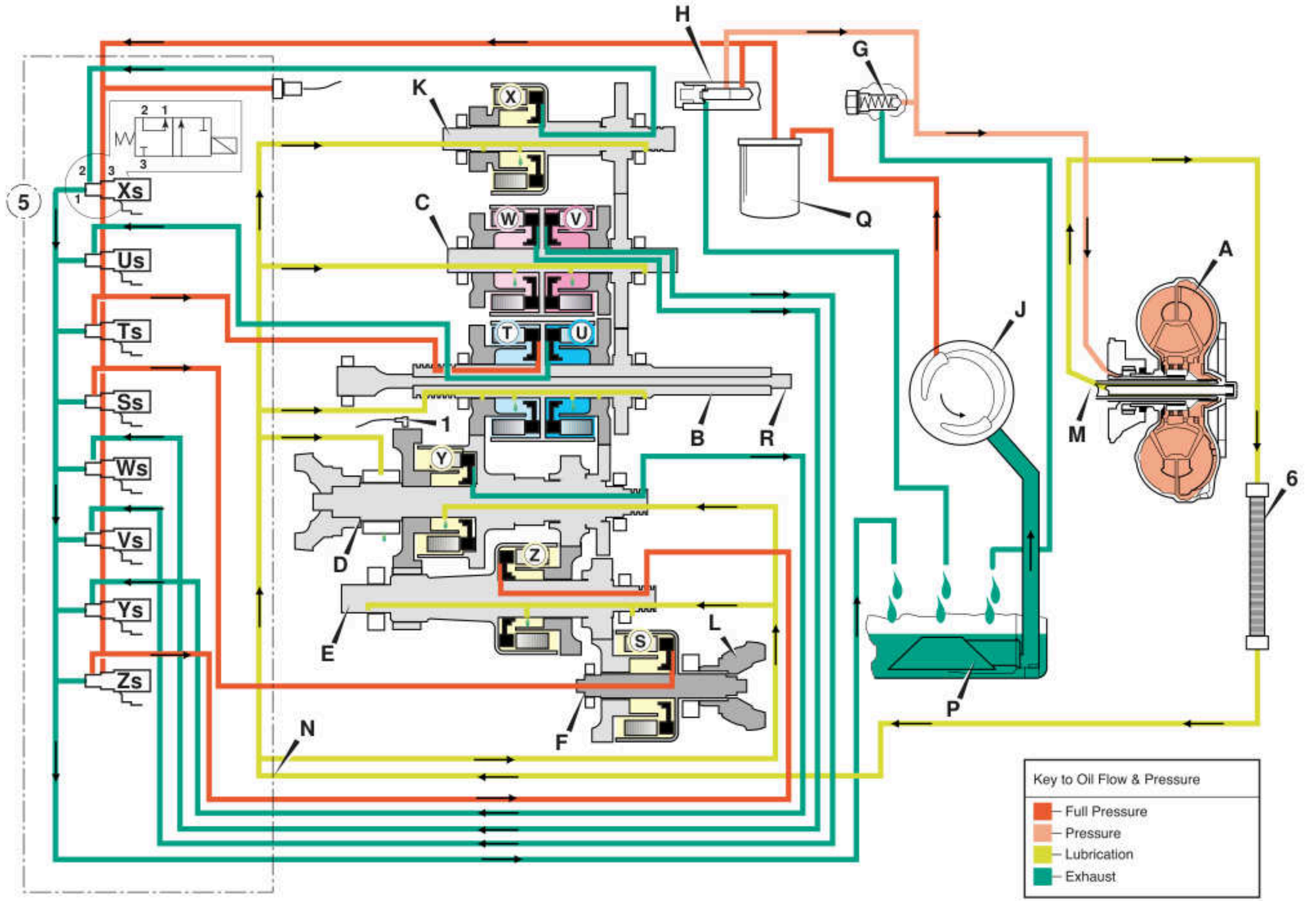
Purchased from www.WorkshopManuals.co.uk

MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual |... Order the manual at mid-west-tech.com >

www.WorkshopManuals.co.uk



Purchased from www.WorkshopManuals.co.uk
MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual |... Order the manual at mid-west-tech.com >



MidWestTech | JCB 3CX, 4CX, 214e, 214, 215, 217 Backhoe Loader Service Manual | Publication 9803-3280-3
Order the manual at mid-west-tech.com >