Service Manual

Mini CX

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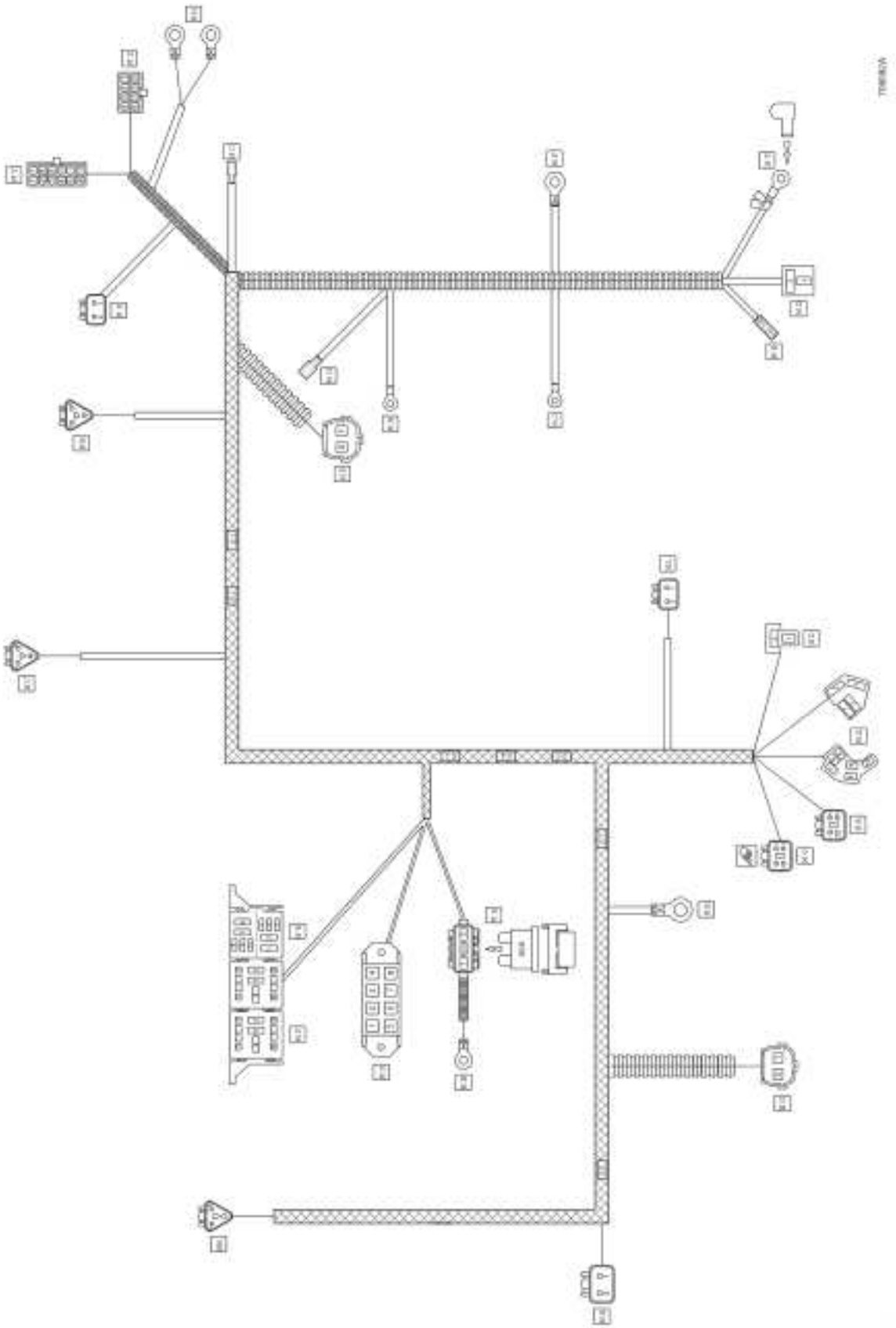


Fig 4. Main Harness Series 1 Machines

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Rams

Dimensions

Ram Location	Bore		Rod Diameter		Stroke	
	(mm)	(in)	(mm)	(in)	(mm)	(in)
Lift	50	1.97	30	1.18	482	18.98
Shovel	50	1.97	30	1.18	371	14.60
Boom	60	2.36	30	1.18	410	16.14
Dipper	60	2.36	30	1.18	410	16.14
Bucket	60	2.36	30	1.18	294	11.57
Stabiliser	60	2.36	30	1.18	294	11.57
Slew (swing)	60	2.36	35	1.38	188	7.40

Torque Settings

	Torque	
	Nm	(lbf ft)
Piston Head		
Lift	250	184
Shovel	250	184
Boom	300	222
Stabiliser	300	222
Dipper	300	222
Bucket	300	222
Slew (swing)	300	222
End Cap		
Lift	400	295
Shovel	400	295
Boom	450	332
Stabiliser	450	332
Dipper	450	332
Bucket	450	332

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Removal and Replacement

Removal

1 Stop the engine and turn the steering wheel to vent residual pressure.

2 Remove steering wheel **A** by prising out the centre boss and unscrewing the retaining nut.

3 Remove the instrument panel **B**. Unplug the electrical connections and disconnect the engine cover release cable.

4 Disconnect and plug the hydraulic hoses **C**, labelling each to ensure correct position on replacement.

5 Undo and remove bolts **D** and lift out steering unit **E**.

Replacement

Replace the control valve by reversing the removal procedure.

After replacement, check M.R.V. pressure ⇨ *Pressure Testing (□ E-140)*.

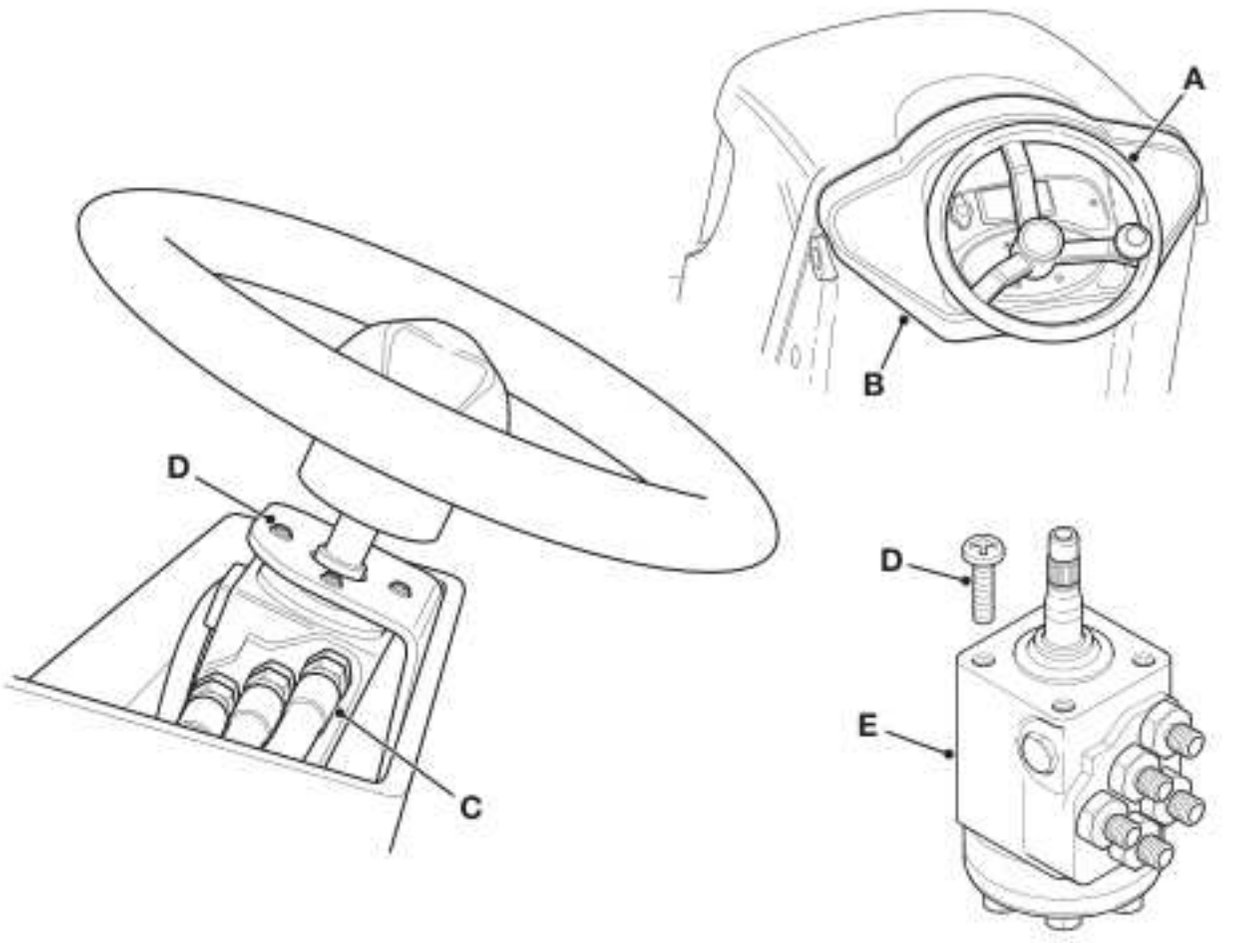


Fig 1.

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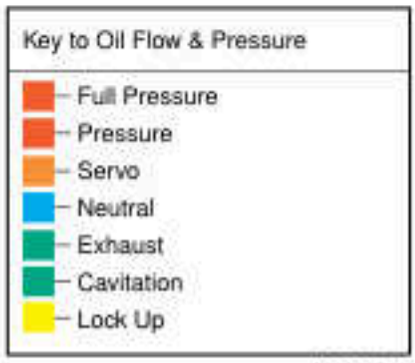
Numerical List

Part Number	Description	Tool Detail Reference
892/00055	Blanking Plug	⇨ Fig 9. (E-161)
892/00056	Blanking Plug	⇨ Fig 9. (E-161)
892/00057	Blanking Plug	⇨ Fig 9. (E-161)
892/00059	Blanking Plug	⇨ Fig 9. (E-161)
892/00060	Blanking Plug	⇨ Fig 9. (E-161)
892/00074	Female Connector	⇨ Fig 12. (E-162)
892/00075	Female Connector	⇨ Fig 12. (E-162)
892/00077	Female Connector	⇨ Fig 12. (E-162)
892/00137	Hose	⇨ Fig 6. (E-161)
892/00223	Hand Pump	⇨ Fig 6. (E-161)
892/00252	A.R.V. Test Block	⇨ Fig 5. (E-161)
892/00253	Pressure Test Kit	⇨ Fig 1. (E-160)
892/00255	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00256	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00257	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00258	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00259	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00260	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00261	Pressure Test Adapter	⇨ Fig 3. (E-160)
892/00262	Pressure Test 'T' Adapter	⇨ Fig 2. (E-160)
892/00263	Pressure Test 'T' Adapter	⇨ Fig 2. (E-160)
892/00264	Pressure Test 'T' Adapter	⇨ Fig 2. (E-160)
892/00265	Pressure Test 'T' Adapter	⇨ Fig 2. (E-160)
892/00268	Flow Monitoring Unit	⇨ Fig 4. (E-160)
892/00269	Sensor Head	⇨ Fig 4. (E-160)
892/00270	Load Valve	⇨ Fig 4. (E-160)
892/00271	Adapter	⇨ Fig 4. (E-160)
892/00272	Adapter	⇨ Fig 4. (E-160)
892/00274	Adapter	⇨ Fig 6. (E-161)
892/00275	Adapter	⇨ Fig 4. (E-160)
892/00276	Adapter	⇨ Fig 4. (E-160)
892/00277	Adapter	⇨ Fig 4. (E-160)
892/00278	Gauge	⇨ Fig 6. (E-161)
892/00279	Gauge	⇨ Fig 6. (E-161)
892/00706	Test Probe	⇨ Fig 6. (E-161)
892/01017	Seal Protection Sleeve for 30mm Rod Diameter	⇨ Fig 15. (E-163)
892/01018	Seal Protection Sleeve for 40mm Rod Diameter	⇨ Fig 15. (E-163)

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Typical Valve Spool Operation

The following illustrations show the bucket spool but the operation of other spools is similar.



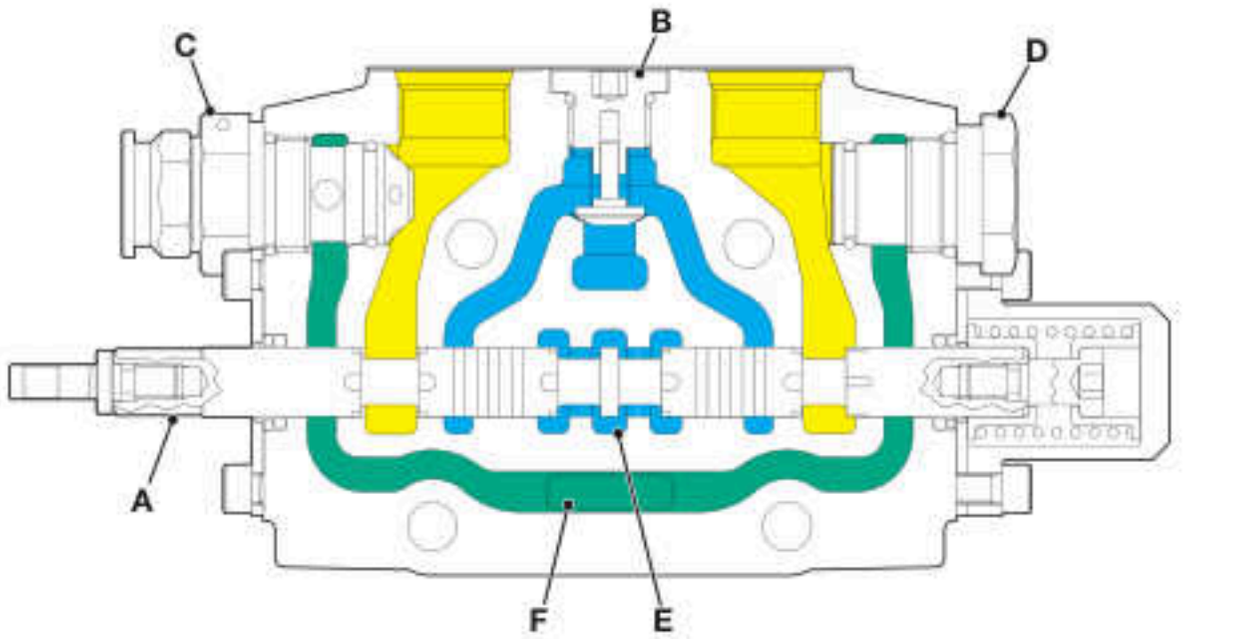
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Neutral Circuit

The illustration ⇨ *Fig 29. (E-37)* shows the oil flow through the valve section when no service is selected. Spool **A** is in the neutral position. Oil from the gear pump enters the valve through the inlet port **E**, flows through the galleries around the spool centres and exits at the exhaust port **F** where it returns to the tank.

The oil in the service lines is trapped by the spools.

Also shown on this illustration is an Auxiliary Relief Valve **C** and blanking plug **D** used when the Auxiliary Relief Valve is not required. Auxiliary Relief Valves are fitted to some services as required.



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Fig 29.

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