



## **Technical Bulletin / Safety Alert**

**Unique ID No:** GEN2011-TBSA-02

**Rev:** 0

**Subject:** JUG-A-0 UL/UV Steer Pressure Reducing Valve – Updated Schematic

**Date:** 1st February 2011

**Applicable to:** All JUG-A-0 UL/UV “V3” machines.

**Note:** Minimum PPE required to carry out any inspections contained in this TBSA shall be protective clothing & footwear, safety glasses, hearing protection & any site specific requirements. A JSA or equivalent should be carried out prior to performing these tasks.

### **Introduction:**

The purpose of this TBSA from Valley Longwall International Diesel Division (VLIDD) is to advise and distribute an updated hydraulic schematic for the steer circuit of JUG-A-0 UL/UV “V3” machines.

### **Overview and General Explanation:**

JUG-A-0 UL/UV “V3” machines have been manufactured with steer circuit pressure reducing valves (Part No. 0314-60001) installed. The purpose of this pressure reducing valve is to reduce the pressure on the steering valve when the valve is neutral. The pressure on the Orbitrol steer valve is reduced to 1750 psi only when in the neutral position. When the steering function is activated the full steer pressure is available at the valve so the speed and power of the circuit is not compromised. This circuit change has reduced the steering effort required to initiate steering. This change is an easy retrofit on all JUG-A-0 UL/UV models and it is recommended to be added when ever fitting a new steering Orbitrol valve.

**Supporting Documents:**

JUG-A-O UL/UV Hydraulic Schematic - Steering Valve Drawing Number 0314-001

Parts pages for the Steering Assembly and Orbitrol Section 03-09

Fitting of Orbitrol Steering Pressure Reducing Valve Procedure

**Immediate Action:**

None

**Future Action:**

None

**Conclusion:**

Please ensure this document is circulated to all relevant personnel within your organisation.

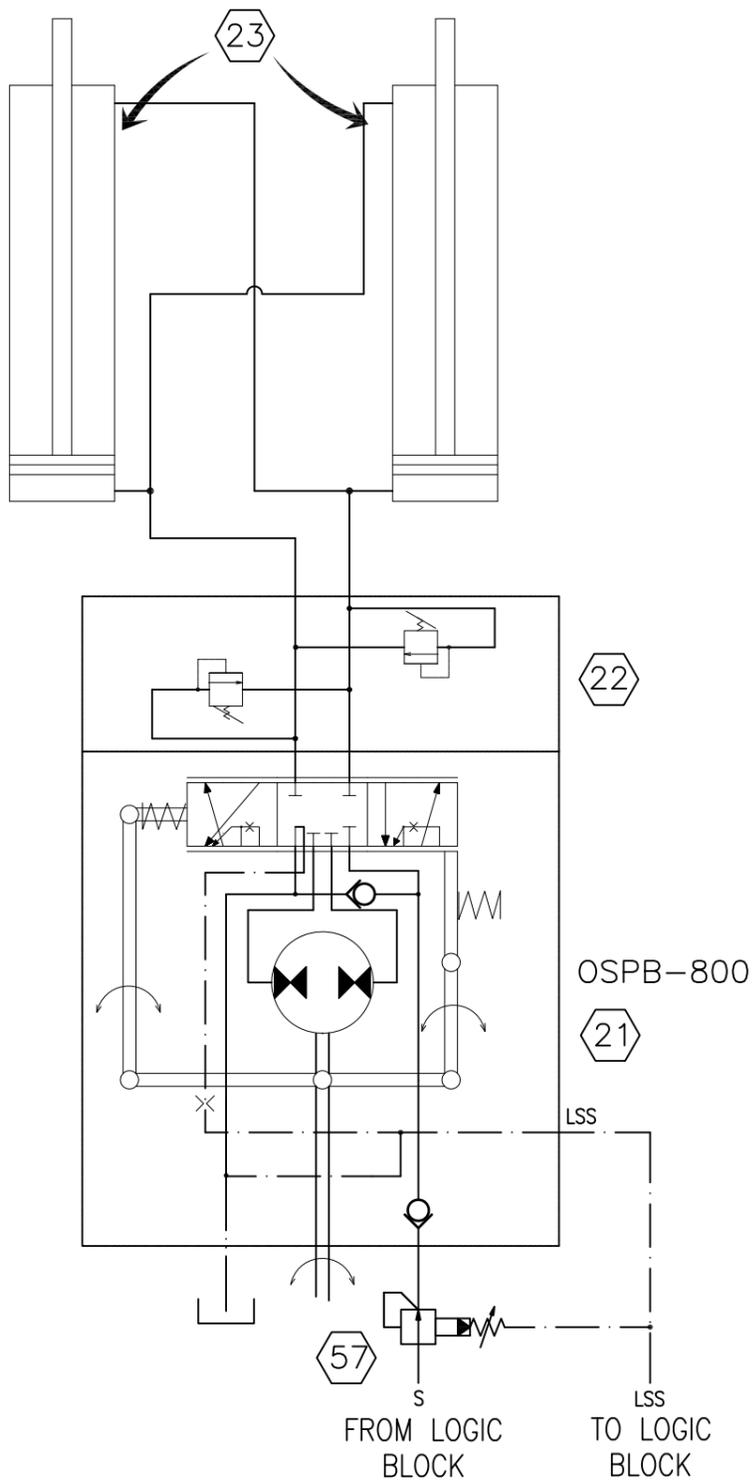
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SERIAL NUMBER			
01	19.11.10	RWK	ORIGINAL ISSUE
REV	DATE	BY	DESCRIPTION

SCHEMATIC LEGEND	
MAIN PRESSURE	—————
PILOT PRESSURE	—————
RETURN OIL	-----
SUCTION OIL	-----
AIR PRESSURE	-----
DRAIN	-----

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Drawn	Date	Checked	Approved	Date
RWK	19.11.10	RWK	BG	26.11.10
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Section 0314 HYDRAULIC SCHEMATICS				
Title JUG-A-0 UL/UV HYDRAULIC SCHEMATIC - STEERING VALVE				
Part No.	Rev	Scale(s)	Size	Sheet
0314-001-1080-000	01	NTS	A3	3 / 4

**SECTION 0314-001 HYDRAULIC SCHEMATIC**

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>PART#</u>	<u>QTY</u>
1	Transfer Tank	0304-10037	1
1A	Transfer Tank Cap	0304-10039	1
1B	Transfer Tank strainer	0304-10040	1
2	Transfer Pump	0304-10041	1
3	Shuttle Valve	0314-10003	2
4A	Transfer/Case Drain Filter Head Assy	0304-10051	1
4B	Transfer/Case Drain Filter Canister	0304-10044	1
5	Static Return Manifold	0313-10001	1
6	Hyd Tank Suction Manifold	0304-10025	1
7	Hydraulic Tank Assy	0314-10007	1
8	Breather	0102-50102	1
9	Hydraulic Boost Pump	0303-10002	1
10A	Return Filter Assy	0304-50000	1
10B	Filter Bypass Indicator	0314-10011	1
10C	Return Filter Element	0304-50001	1
11	Air Bleed Check Valves	0304-10019	2
12	Boost Tank Dropper Pipe	0314-10014	1
13	Relief Valve	0304-10022	1
14	Swing Check	0304-10020	1
15	Main Hyd Pump	0303-10001	1
16	Logic Block	0305-50001	1
17	Alternator Pressure Pilot Valve	0305-10005	1
18	Rig Throttle Pressure Pilot Valve	0305-10004	1
19	Park Brake Pilot Valve	0305-10003	2
20	Gauge - Steering Pressure	0401-10020	1
21	Orbitrol Steering Valve	0309-10014	1
22	Steering Cross Port Relief Valve	0309-10017	1
23	Steering Cylinders	0310-10000	2
24	4lt Accumulator - Steering 900-1500 psi	0310-10023	1
25	1lt Accumulator - Brake 900-1500 psi	0301-10033	2
26	Service Brake Valve	0301-10001	1
27	Gauge - Brake Head Pressure	0401-10019	1
28	Pilot Unloader Valve	0305-10006	1
29	Directional Control Valve	0312-10000	1
30	Joystick Pilot Control Valve	0312-10037	1
31	3rd Function Pilot Control Valve	0312-10044	1
32	Lift Cylinder Load Lock Valve	0307-10021	2
33	Lift Cylinders	0307-10001	2
34	Pilot/Drain Manifold	0313-10003	1
35	Tilt Cylinder Manifold	0313-10002	1
36	Tilt Cylinder Load Lock Valve	0307-10021	1
37	Tilt Cylinder	0308-10001	1
38	Boom Manifold	0313-10005	1
39	M.I.S. Lock Pilot Valve	0312-10060	1
40	M.I.S. Locking Cylinder	0311-10001	1
41	Alternator Drive Pump	0302-50001	1
42	Alternator Drive Motor	0302-50022	1
	Bucket Eject Cylinder (See section 09-02)		
44	Logic Block Pressure Filter	0303-60070	1
45	3/4 Quick disconnect couplers	0313-10043	4
46	Rear PTO Return 3/4 check valve	0314-10046	1
47	Rear PTO manifold	0501-10075	1
48	Winch Wheels Valve	0301-10055	1
49	Boom Manifold	0313-10005	1
50	PTO Depressurisation Switch	0401-10026	1
51	Supercharger Lube Pump Assembly	0102-50118	1
52	Test Tap - High pressure Ball Valve	0301-50066	2
53	Transition Plate	0305-10056	1
54	Load Limit Valve	0312-60001	1
55	Brake Pressure Manifold	0313-60001	1
56	35L/min Cylinder	0601-60005	1
57	Steering Pressure Reducing Valve	0314-60001	1



**JUG-A-0 UL/UV V3  
PARTS BOOK**

**SECTION 0309 STEERING ASSY & ORBITROL**

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>PART#</u>	<u>QTY</u>
1	Steering wheel	0309-10000	1
2	Knob	0309-10001	1
3	Knob screw	0309-10002	1
4	Cover screw	JUG316050CSK	3
5	Steering wheel cover	0309-10004	1
6	Nut	JUG58NYLOCNF	1
7	Washer	JUG58FLWSH	1
8	Steering shaft	0309-10007	1
9	Bearing housing	0309-10008	1
10	Bearing	0309-10009	1
11	Bolt	JUG38175	2
12	Washer	JUG38FLWSH	4
13	Nut	JUG38NYLOC	2
14	Fitting 45deg	JJB4M-02-07	1
15	Steering orbitrol	0309-10030	1
16	Fitting 90deg	JJU9M-07-07	1
17	Hose	0309-10016	1
18	Cross port relief block	incl with item 15	1
19	Fitting	JJP1M-08-12	4
20	Fitting 45deg	JJ4MFS-12-12	4
21	Mount bracket	0309-10020	1
22	Bolt	JUG12150	4
23	Washer	JUG12SPWSH	4
24	Bolt	JUG38125	4
25	Washer	JUG38SPWSH	4
26	Hose	0309-10025	1
27	Hose	0309-10026	1
28	Hose	0309-10027	1
29	Hose	0309-10028	1
30	Steering Bearing Assy	0309-10029	1
31	Steering Orbitrol with Cross Port Relief Block	0309-10030	1
32	Steering Pressure Reducing Valve	0314-60001	1

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I N T E R N A T I O N A L  
D I E S E L D I V I S I O N



*Fitting of Steering  
Orbitrol Pressure  
Reducing Valve*

**Valley Longwall International**  
**JUG-A-0 UL/UV Steering Pressure Reducing Valve Fitting Procedure.**

## Introduction:

The Purpose of this document is to outline the procedure for fitting of the Steering Orbitrol Pressure reducing valve to a JUG-A-0 UL/UV.

## Requirements:

- Competent Trades person
- Appropriate Personal Protective Equipment: Safety Glasses, Safety Footwear, Hearing Protection, Work clothing.
- General Hand tools, Hand drill, Drill bit, Thread tap.

### **Follow NOTES, CAUTIONS and WARNINGS**

#### **Found in this Handbook.**



**NOTE:** Indicates a procedure or condition that is essential for the Fitter to know.



**CAUTION:** Indicates an action or condition that, if not followed, could cause damage to the vehicle or other equipment.



**WARNING:** Indicates an action or condition that, if not followed, could cause injury to the Fitter or other personnel.

**Valley Longwall International**  
**JUG-A-0 UL/UV Steering Pressure Reducing Valve Fitting Procedure.**

## Fitting of Steering Orbitrol Pressure Reducer



**WARNING:** Appropriate PPE must be worn when undertaking this procedure to avoid possible injury.

- **Bill of materials required for procedure:**

1. 1 x 0314-60001 Pressure reducing valve assembly.
2. 1 x CP2-0407 Fitting
3. 1 x CP56-1212 Fitting
4. 1 x C65-070707 T Piece Fitting
5. 1 x CP2-1212 Fitting
6. 1 x CP27-1212 Fitting
7. 1 x ¼" 1 wire hydraulic hose 580mm overall length.

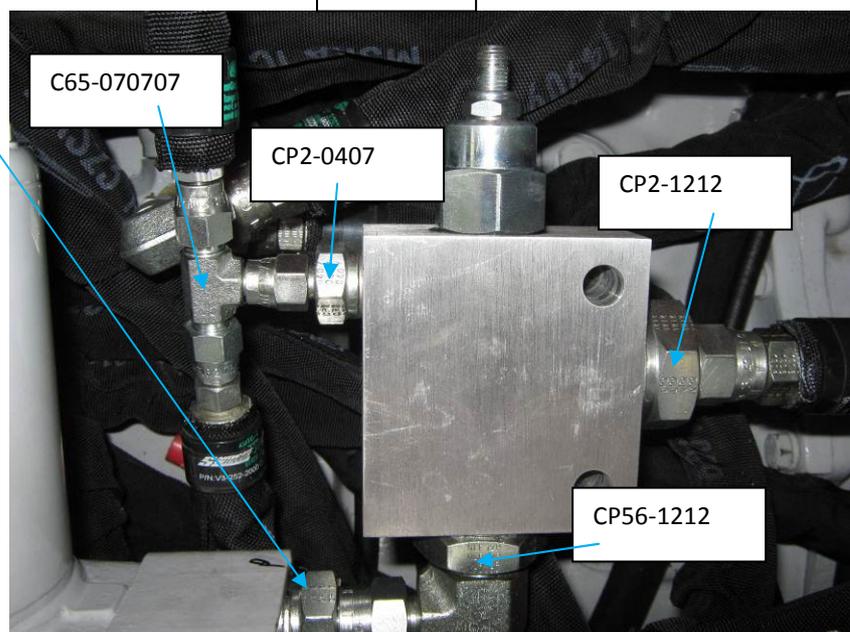
- Ensure machine is correctly isolated as per Valley Longwall International isolation procedures.
- Assemble the steering Orbitrol pressure reducing valve part# 0314-60001 with fittings as per picture 1.

- Remove existing fitting out of p port of steering Orbitrol and fit 1 x CP27-1212.

- Mount the pressure reducing valve block straight onto the steering Orbitrol valve P port.

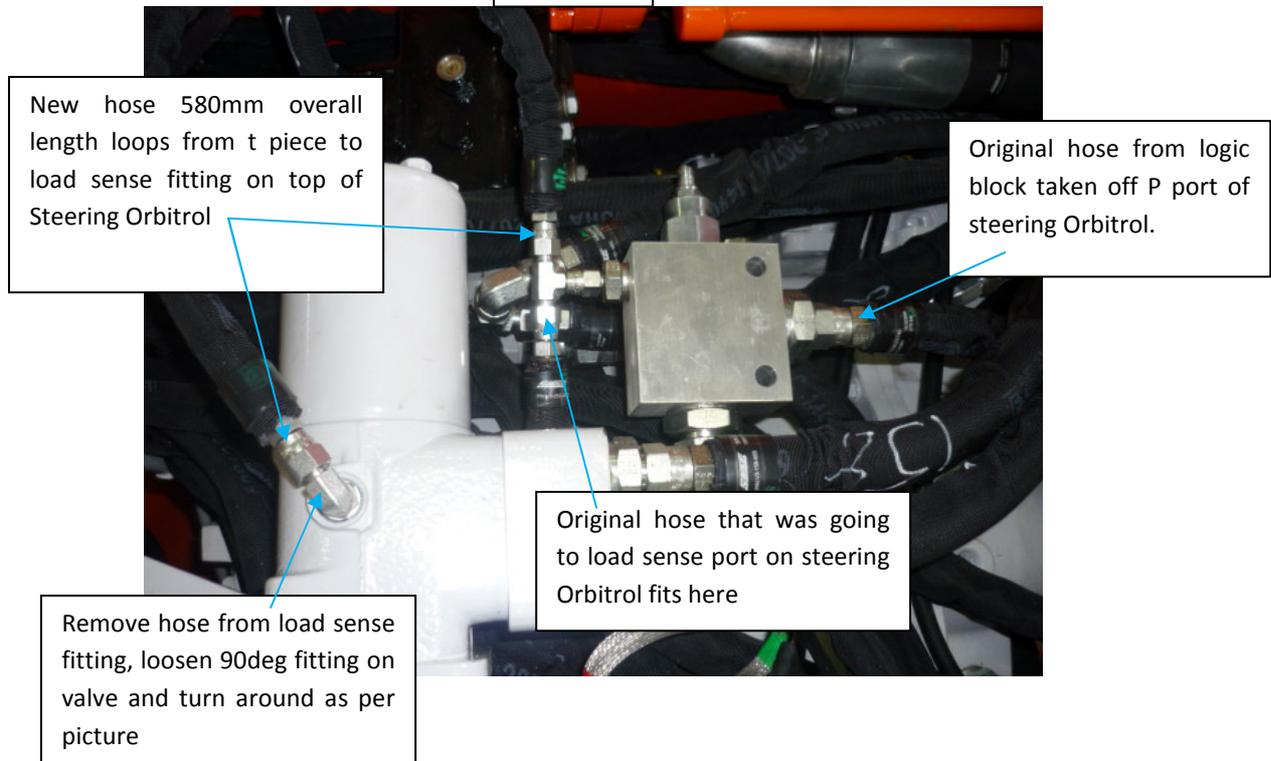
- Hose up the pressure reducing valve as per picture 2.

PICTURE 1



**Valley Longwall International**  
**JUG-A-0 UL/UV Steering Pressure Reducing Valve Fitting Procedure.**

PICTURE 2



- Pressure reducing valve should be pre set to 1700psi.
- If required to check, remove isolation device/locks from machine.
- Disconnect the pressure reducing valve from the Steering Orbitrol and fit in a T piece with a test fitting installed. Connect a 3500psi pressure gauge into the test point. Run machine and set pressure to 1700psi.
- Remove test T piece form valve.
- Re-isolate machine when completed setting valve pressures before continuing.

JOB COMPLETED BY: \_\_\_\_\_

SIGNED: \_\_\_\_\_