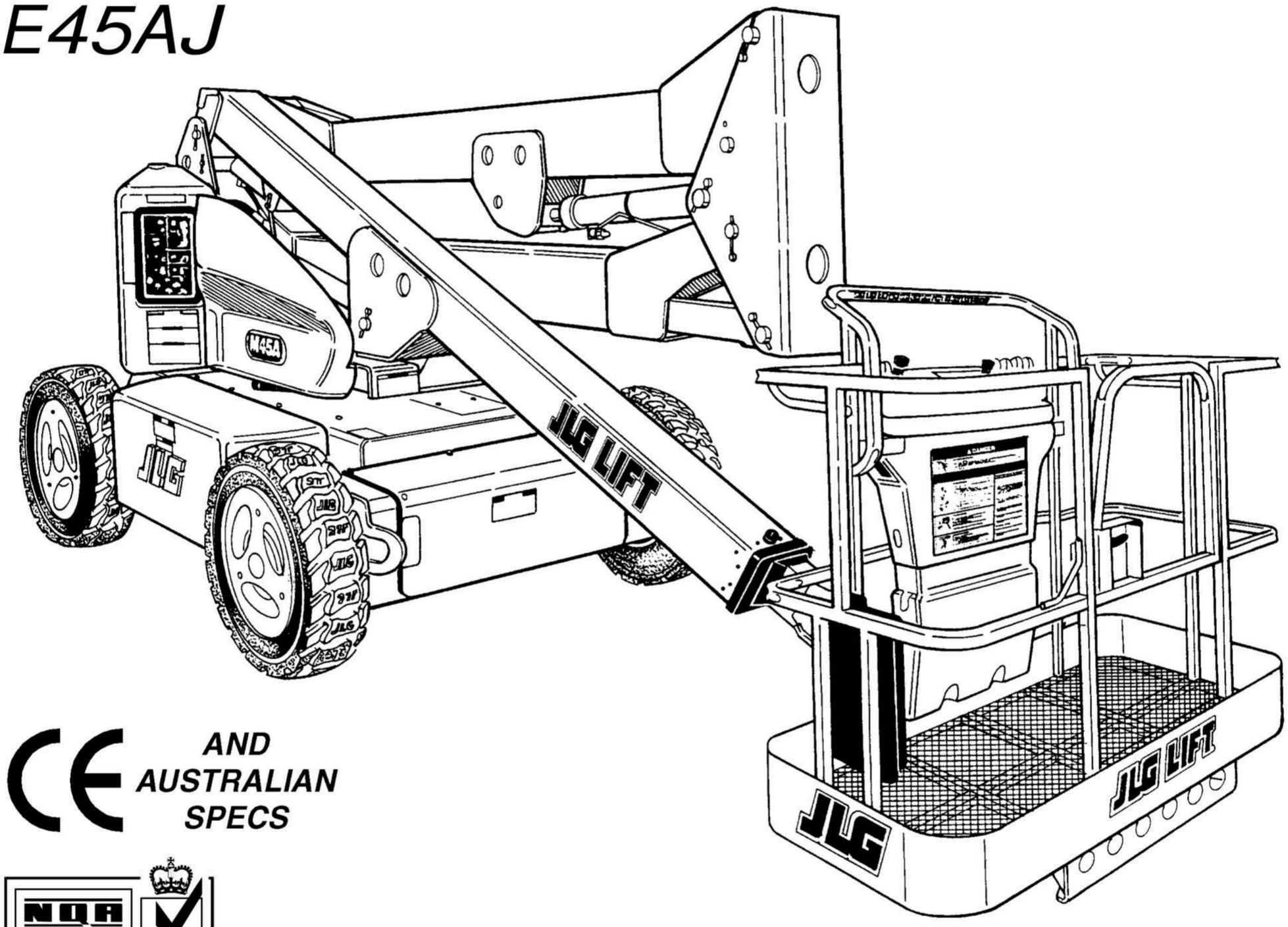
SERVICE & MAINTENANCE

Model
M45A
M45AJ
E45A
E45AJ



AND AUSTRALIAN SPECS

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1.8 PRESSURE SETTINGS

Main Valve

Upper Lift Down Relief - 38 bar (550 psi)

Mid/Lower Lift Down Relief - 117 bar (1700 psi)

Telescope In Relief - 148 bar (2150 psi)

Platform Level Up Relief - 172 bar (2500 psi)

Platform Level Down Relief - 83 bar (1200 psi)

Steer/Brake Valve

Steer Relief - 159 bar (2300 psi)

Main Relief - 221 bar (3200 psi)

Jib Valve

Jib Relief (Up and Down) - 103 bar (1500 psi)

1.9 CYLINDER SPECIFICATIONS

NOTE: *All dimensions are given in inches (in.), with the metric equivalent, millimeters (mm), given in parentheses.*

Table 1-5.Cylinder Specifications

Cylinder	Bore	Stroke	Rod Dia.
Upper Lift Cylinder	3.00 (76.2)	28.3125 (719.1)	1.50 (38.1)
Mid Lift Cylinder	3.00 (76.2)	21.25 (539.7)	1.50 (38.1)
Lower Lift Cylinder	4.00 (101.6)	23.25 (590.5)	2.25 (57.1)
Telescope Cylinder	2.00 (50.8)	92 (2337)	1.25 (31.8)
Master Cylinder	2.00 (50.8)	9.375 (238.1)	1.00 (25.4)
Slave Cylinder	2.00 (50.8)	9.375 (238.1)	1.00 (25.4)
Rotator Cylinder	1.875 (47.6)	15.250 (387.3)	1.00 (25.4)
Steer Cylinder (Double Rod)	2.50 (63.5)	4.06 (103.1)	1.75 (44.5)

1.10 MAJOR COMPONENT WEIGHTS

Table 1-6.Major Component Weights

Component	LB.	KG.
Platform and Support	215	97.5
Upper Boom Complete	810	367
Mid Boom Complete	550	249
Lower Boom Complete	550	249
Upper Lift Cylinder	89	40
Mid Lift Cylinder	95	43
Lower Lift Cylinder	110	50
Telescope Cylinder	85	38.5
Upper Upright	225	102
Lower Upright	97	44
Turntable	948	430
Battery Box (incl. batteries)	600	272
Chassis (w/ pneu. tires)	4,295	1948
Chassis (w/ foam-filled tires)	4,695	2130
Counterweight	3850	1746
Machine Complete (E45A)	14,000	6356
Machine Complete (M45A)	14,300	6492

⚠ WARNING

SELECT LIFTING EQUIPMENT WITH CAPACITY CAPABLE OF SAFELY SUPPORTING WEIGHT.

1.11 CRITICAL STABILITY WEIGHTS

Table 1-7.Critical Stability Weights

Component	LB.	KG.
Counterweight	3850	1746
Tire & Wheel (foam-filled)	207	94
Platform (4ft [1.2 m])	90	41
Platform (5 ft. [1.5 m])	100	45
Battery (each)	120	54

⚠ WARNING

DO NOT REPLACE ITEMS CRITICAL TO STABILITY WITH ITEMS OF DIFFERENT WEIGHT OR SPECIFICATION (FOR EXAMPLE: BATTERIES, FILLED TIRES, PLATFORM) DO NOT MODIFY UNIT IN ANY WAY TO AFFECT STABILITY.

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SECTION 3. TROUBLESHOOTING

3.1 GENERAL

This section contains troubleshooting information to be used for locating and correcting most of the operating problems which may develop. If a problem should develop which is not presented in this section or which is not corrected by listed corrective actions, technically qualified guidance should be obtained before proceeding with any maintenance.

3.2 TROUBLESHOOTING.

The troubleshooting procedures applicable to the aerial platform are listed and defined in Tables 3-1 through 3-6. As an aid to table use, the aerial platform is divided into four major groups, each covered separately within this section. These groups are as follows: elevation system, chassis assembly, hydraulic system and electrical system.

Each malfunction within an individual group or system is followed by a listing of probable causes which will enable determination of the applicable remedial action. The probable causes and the remedial action should, where possible, be checked in the order listed in the tables.

It should be noted that there is no substitute for a thorough knowledge of the equipment and related systems.

It should be recognized that the majority of the problems arising in the machine will be centered in the hydraulic and electrical systems. For this reason, every effort has been made to ensure that all likely problems in these areas are given the fullest possible treatment. In the remaining machine groups, only those problems which are symptomatic of greater problems which have more that one probable cause and remedy are included. This means that problems for which the probable cause and remedy may be immediately obvious are not listed in this section.

The first rule for troubleshooting any circuit that is hydraulically operated and electrically controlled is to determine if the circuit is lacking hydraulic oil and electrical control power. This can be ascertained by overriding the bypass valve so that oil is available to the function valve, then overriding the function valve mechanically. If the function performs satisfactorily, the problem exists with the control circuit.

3.3 HYDRAULIC CIRCUIT CHECKS.

The reference for improper function of a hydraulic system, where the cause is not immediately apparent, should be the Troubleshooting Chart. The best place to begin the problem analysis is at the power source (pump). Once it is determined that the pump is serviceable, then a systematic check of the circuit components, beginning with the control, would follow. For aid in troubleshooting, refer to the Illustrated Parts Manual for hydraulic diagrams of the various circuits

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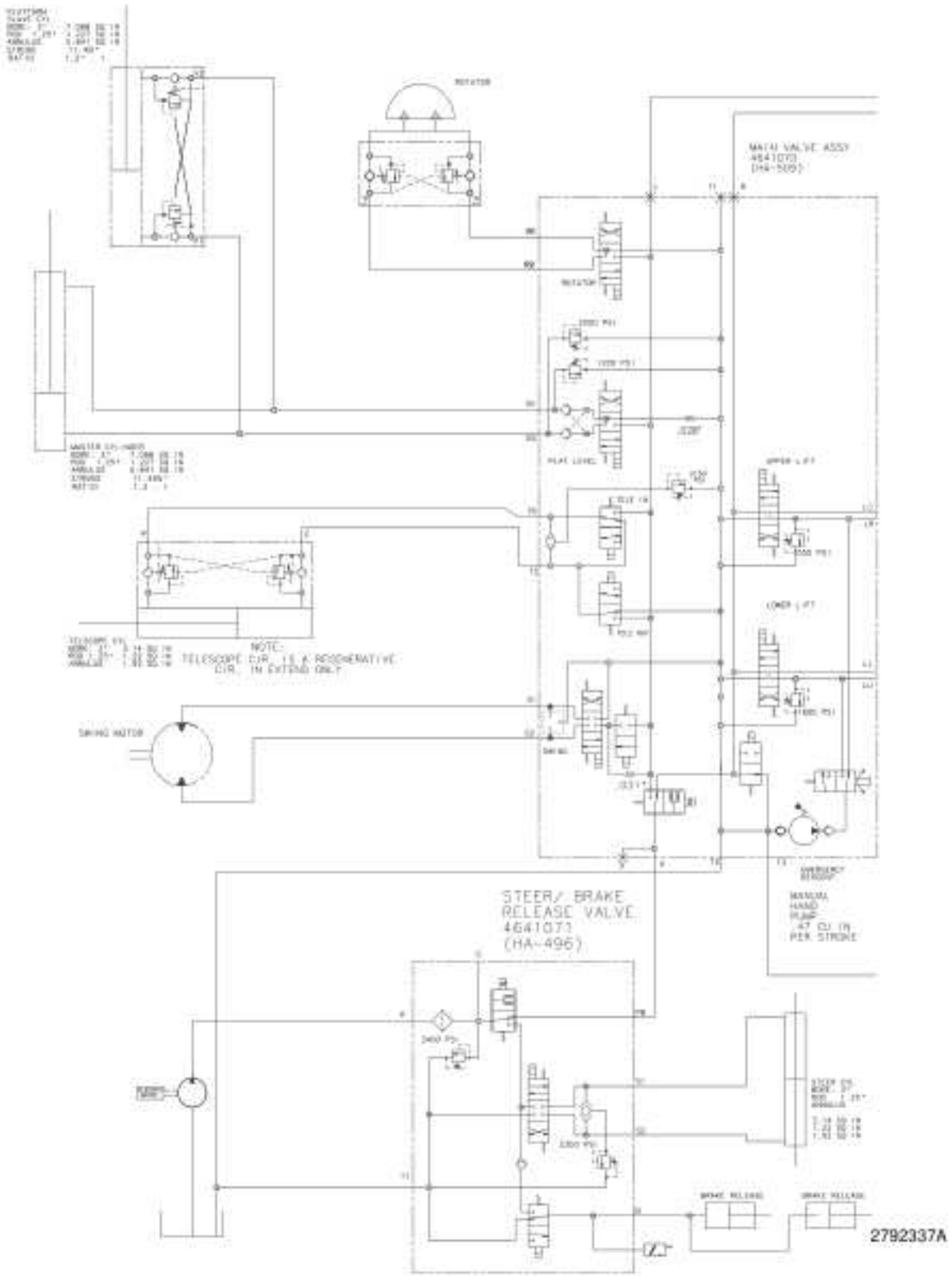


Figure 3-10. Hydraulic Schematic - M45AJ/E45AJ - Sheet 1 of 2

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