An Oshkosh Corporation Company

Service & Maintenance Manual

Models
400RTS
500RTS

3120829

November 12, 2007

ISO9001 REGISTERED COMPANY

UKAS QUALITY MANAGEMENT 015

An Oshkosh Corporation Company

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SECTION 1. SPECIFICATIONS

1.1 CAPACITIES

Hydraulic Oil Tank

Approximately 138.17 liters (36.5 U.S. gallons) w/10% air space.

Hydraulic System (Including Tank)

Approximately 166.56 liters (44 U.S. gallons).

Fuel Tank

Approximately 56.8 liters (15 U.S. gallons)

Engine Crankcase

Gasoline Engine

3.2 liters (3.4 quarts) w/filter

2.7 liters (2.9 quarts) w/o filter

Diesel Engine

6.0 liters (6.34 quarts) w/filter

5.5 liters (5.8 quarts) w/o filter

Coolant Capacity (Gasoline Engine)

13.2 liters (3.5 U.S. gallons)

1.2 COMPONENT DATA

Gasoline Engine

Displacement - 4.5 liter

Manufacturer/Model - Ford LRG-425

Oil Capacity

4.3 liters (4.5 quarts) w/ filter
3.8 liters (4.0 quarts) w/o filter

Low RPM - 750

Mid RPM - 2200

High RPM - 3000

Alternator - 55 Amp external

Battery - 85 Amphour, 550 Cold Cranking Amps

Fuel Consumption

Low RPM - 6.7 lph (1.8 gph)

High RPM - 11.4 lph (3.0 gph)

Horsepower - 70 @ 2800 RPM

Coolant Capacity - 13.2 liters (3.5 U.S. gallons)

Diesel Engine

Manufacturer/Model - Deutz F3L-1011

Oil Capacity

6.0 liters (6.34 quarts) w/filter

5.5 liters (5.8 quarts) w/o filter

Mid RPM - 2000

High RPM - 3000

Alternator - 60 Amphour

Battery - 60 Amphour, 1000 Cold Cranking Amps

Fuel Consumption

Low RPM - 7.19 lph (1.9 gph)

High RPM - 9.46 lph (2.5 gph)

Horsepower - 42 @ 3000 RPM

Drive/Steer System

Tires 400RTS

Standard - 31 - 15.5 x 15 NHS, 8 ply, pneumatic, inflate to 2.4 bar (35 PSI)

Optional - 12 - 16.5 NHS, 6 ply, foam filled

Tires 500RTS

Standard - 12 x 16.5 NHS, 8 ply, pneumatic, inflate to 3.1 bar (45 PSI)

Optional - 31 - 15.5 x 15 NHS, 8 ply, pneumatic, inflate to 2.4 bar (35 PSI)

Optional - 12 - 16.5 NHS, 6 ply, foam filled

Steer System

Toe-In - Adjust to 6.4 mm (1/4 in) overall

Drive Motors/Hubs/Brakes

Drive Motor - 6.3 cm^3 (2.48 $in.^3$) displacement

Drive Hub (2WD Gasoline and Diesel Engine - Rear) - Hub ratio 35:1

Drive Hub (4WD Rear) - Hub ratio 24:1

Drive Hub/Brake (4WD Front) - Hub ratio 24:1; brake - spring applied, hydraulic release, release pressure - 11 bar (160 psi) initial, 13 bar (190 psi) full

Drive Brake (2WD/4WD Rear) - Spring applied, hydraulic release, release pressure - 10 bar (150 psi) initial, 12 bar (170 psi) full

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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 in the aerial platform. 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.

Troubleshooting and maintenance information pertaining to the prime mover (engine/motor) that are not contained in this manual are contained in the applicable engine maintenance manual.

3.2 TROUBLESHOOTING INFORMATION

The troubleshooting procedures applicable to the aerial platform are listed and defined in Tables 3-1 through 3-4. As an aid to table use, the platform sizzor is divided into 4 major groups, each covered separately within this section. These groups are as follows: Platform, chassis, 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 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 have more than 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 power. This can be ascertained by overriding the bypass valve (mechanically or electrically) 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 first 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 diagram of the various circuits.

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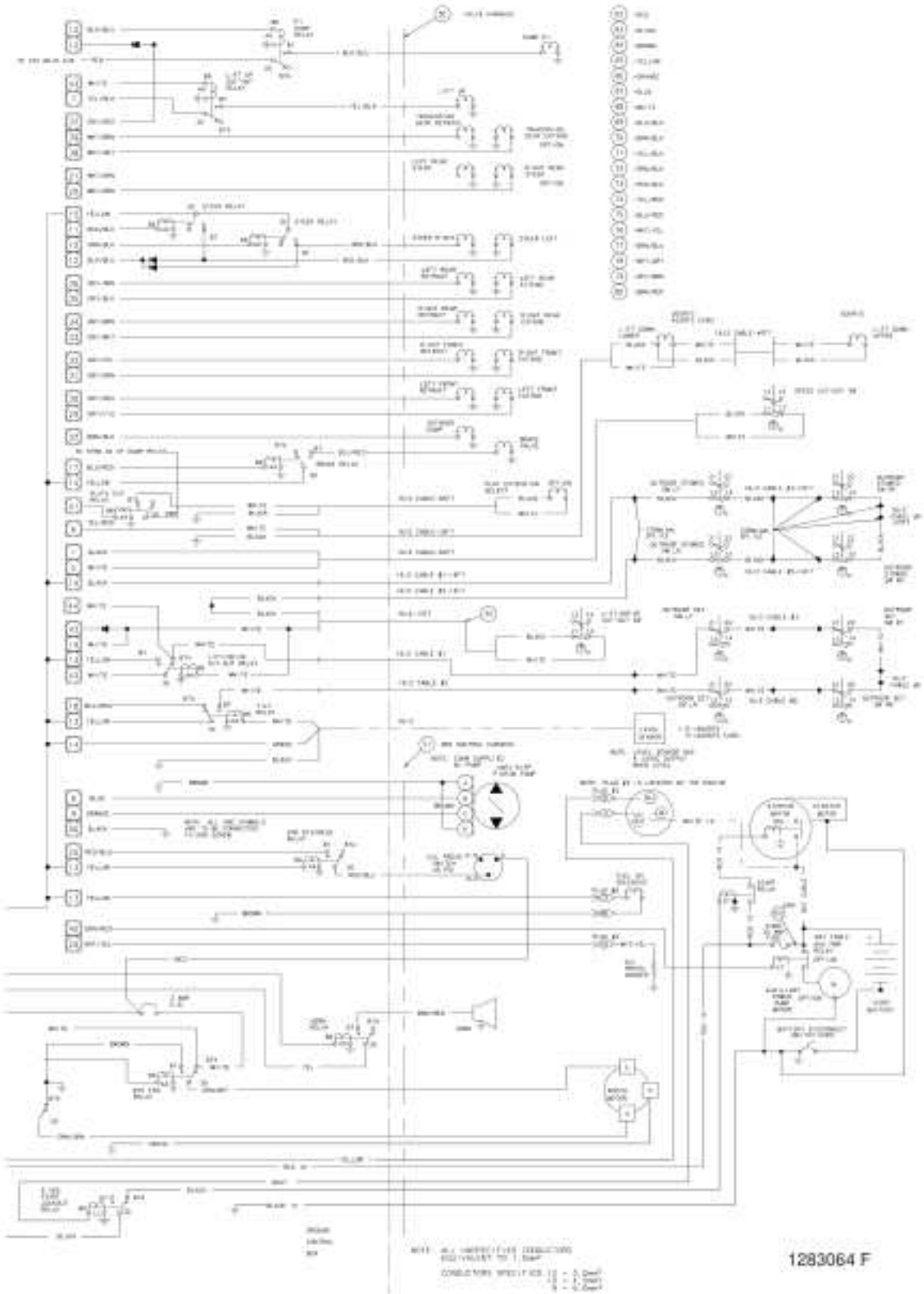


Figure 3-35. Electrical Schematic - 500RTS Duetz (Sheet 2 of 2)

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