2510 Cruz-Crane Carrier Mounted

Service Manual

S-406182M1

MidWestTech | Case Carrier Mounted 2510 Cruz Crane Service Manual | Publication S406182M1

Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

GENERAL

Safety Precautions 3,4
Introduction 5
Parts and Service 5
Nomenclature 6
General Description 7
Directional Reference 8

SECTION 1 - SCHEDULED PREVENTIVE MAINTENANCE

Introduction 9
Hydraulic Oil Recommendations 10
Hydraulic System Operating Pressures 10
Component Capacities 11
Preventive Maintenance Schedule 12,13
Service Chart . . . . . 14 thru 16
Pictorial Listing of Grease Fitting Locations 17,18

SECTION 2 - SERVICING THE CARRIER AND ENGINE

Carrier Servicing Introduction 19
Engine Maintenance and Service 19
Engine Cooling System Maintenance 19
Engine Air Cleaner Maintenance 20
Engine Performance Check 20
Throttle Linkage . . . . . 20 thru 23
Carrier Hydraulic System 24,25
Carrier Air System 25
Carrier Electrical System 25

SECTION 3 - THE MECHANICAL SYSTEM

Description, Maintenance and Troubleshooting . . . . . 26 thru 47
Pump Drive 26
Turntable Swing . . . . . 27 thru 32
Boom Assembly . . . . . 33 thru 36
Winches and Wire Rope . . . . . 37 thru 45
Counterweight 46
Decal Replacement 46
Heater 46,47
Disassembly and Repair . . . . . 48 thru 102
General Cleaning Instructions 48
Pump Disconnect 49,50
Accelerator and Swing Brake Master Cylinder 51,52
Accelerator Slave Cylinder 52
Swing Brake Slave Cylinder 53
Swing Brake 54
Swing Gearbox . . . . . 55 thru 61
Turntable Bearing Replacement . . . . . 61 thru 67
Center Swivel 68
Boom Removal and Repair . . . . . 69 thru 72
Gearmatic Winches . . . . . 72 thru 88
Braden Winches . . . . . 89 thru 98
Heater - Crane Cab . . . . . 99 thru 102

MidWestTech | Case Carrier Mounted 2510 Cruz Crane Service Manual | Publication S406... Order the manual at mid-west-tech.com >

SECTION 4 - THE AIR SYSTEM

General Description 103
Outrigger Air System 103,104

SECTION 5 - THE ELECTRICAL SYSTEM

Introduction 105
2510 Electrical System - General Description 105,106
Special Precautions 106,107
Crane Electrical . . . . . 108 thru 115
Disassembly and Repair 116

SECTION 6 - THE HYRAULIC SYSTEM

Description, Maintenance and Troubleshooting . . . . . 117 thru 142
Introduction 117,118
General Description and System Maintenance . . . . . 118 thru 121
Hydraulic System Flushing Procedure 121
Hydraulic System Troubleshooting 122,123
Main System Hydraulics . . . . . 123 thru 131
Hoist Hydraulics . . . . . 131 thru 134
Crowd Hydraulics . . . . . 134 thru 137
Swing Hydraulics . . . . . 137 thru 139
Winch Hydraulics . . . . . 139 thru 142
Disassembly and Repair . . . . . 143 thru 167
Main Pump . . . . . 143 thru 147
Main Control Valves . . . . . 148 thru 151
Flow Divider Valves 151
Hydraulic Swivel . . . . . 151 thru 153
Swing Motor . . . . . 153 thru 156
Winch Motor - Braden Winch . . . . . 157 thru 159
Hoist Cylinders . . . . . 159 thru 161
Crowd Cylinders . . . . . 161 thru 163
Proportionator Valve - (Crowd Circuit) . . . . . 163 thru 165
Sequencing Valve - (Crowd Circuit) 165
Counterbalance Valves 165
Hydraulic Oil Shutoff Valve 166
Freefall Control Valve 167

TORQUE CHARTS AND SCHEMATICS . . . . . 168 THRU 172

MidWestTech | Case Carrier Mounted 2510 Cruz Crane Service Manual | Publication S406... Order the manual at mid-west-tech.com >

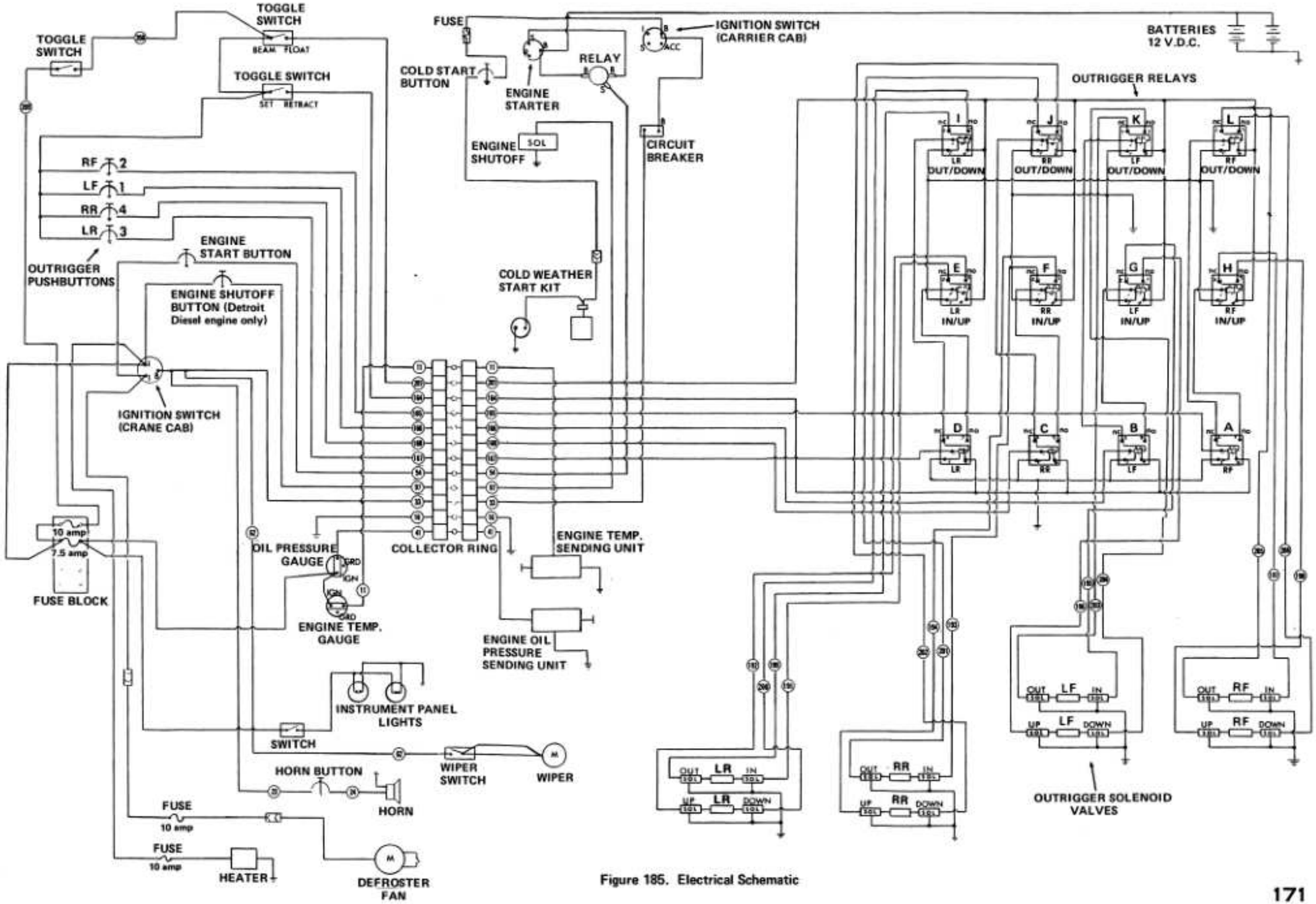


Figure 185. Electrical Schematic

MidWestTech | Case Carrier Mounted 2510 Cruz Crane Service Manual | Publication S406182M1

Order the manual at mid-west-tech.com >