

UpRight



XRT Series
WORK PLATFORM



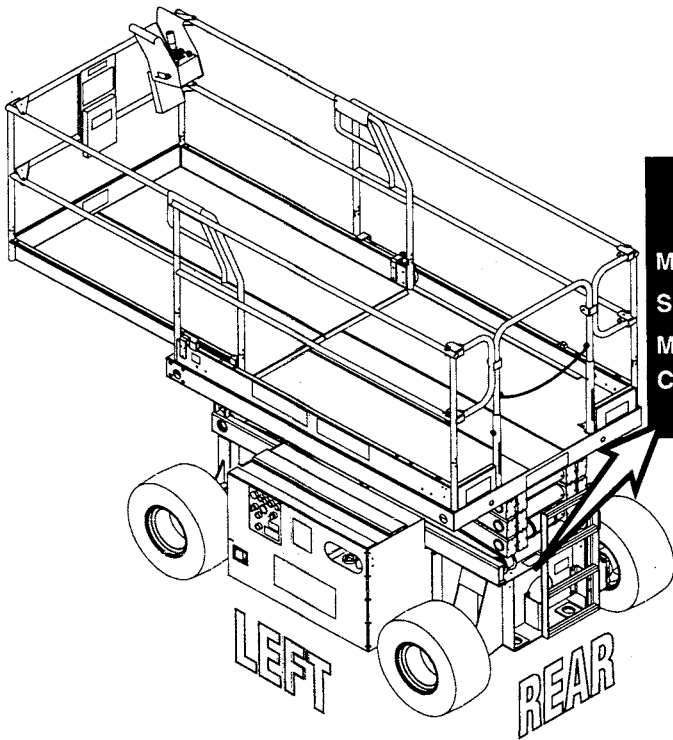
**Service &
Parts Manual**

SERVICE & PARTS MANUAL XRT27 & XRT33

Aerial Work Platform

Serial Numbers 1000 - Current

When contacting UpRight for service or parts information, be sure to include the MODEL and SERIAL NUMBERS from the equipment nameplate. Should the nameplate be missing, the SERIAL NUMBER is also stamped on top of the chassis above the front axle pivot.



UpRight, Inc.

1775 PARK ST. SELMA, CA 93662 USA

MODEL NO. MAX. PLATFORM HEIGHT

SERIAL NO. BATTERY VOLTAGE

MAX. DISTRIBUTED LOAD

CAUTION: CONSULT OPERATOR'S MANUAL BEFORE USE.

THIS PLATFORM IS NOT ELECTRICALLY INSULATED

P/N 61205-000-00

UpRight

Call Toll Free in U.S.A.

1-800-926-LIFT

UpRight, Inc.

1775 Park Street
Selma, California 93662

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P/N 066899-000
7/99 K

FORWARD

HOW TO USE THIS MANUAL

This manual is divided into 6 sections. The section number printed at the top corner of each page can be used as a quick reference guide.

Special information



Indicates the hazard or unsafe practice *will* result in severe injury or death.



Indicates the hazard or unsafe practice *could* result in severe injury or death.



Indicates the hazard or unsafe practice *could* result in *minor* injury or property damage

NOTES: Give helpful information.

WORKSHOP PROCEDURES

CAUTION: Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. Please note that this manual does contain warnings and cautions against some specific service methods which could cause personal injury, or could damage a machine or make it unsafe. Please understand that these warnings cannot cover all conceivable ways in which service, whether or not recommended by UpRight, Inc., might be done, or of the possible hazardous consequences of each conceivable way, nor could UpRight Inc. investigate all such ways. Anyone using service procedures or tools, whether or not recommended by UpRight Inc., must satisfy themselves thoroughly that neither personal safety nor machine safety will be jeopardized.

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice. No part of this publication may be reproduced, stored in retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. This includes text, figures and table.

Introduction & Specifications

General description and machine specifications.

1.0

Machine Preparation & Operation

Information on how to operate the work platform and how to prepare it for operation.

2.0

Maintenance

Preventative maintenance and service information.

3.0

Troubleshooting

Causes and solutions to typical problems.

4.0

Schematics

Schematics and valve block diagram with description and location of components.

5.0

Illustrated Parts Breakdown

Complete parts lists with illustrations.

6.0

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Section 1

INTRODUCTION & SPECIFICATIONS

1.1 INTRODUCTION

Purpose

The purpose of this service and parts manual is to provide instructions and illustrations for the operation and maintenance of the XRT Work Platform manufactured by UpRight, Inc. of Selma, California.

Scope

The manual includes procedures for proper operation, maintenance, adjustment, and repair of this product as well as recommended maintenance schedules and troubleshooting.

1.2 GENERAL DESCRIPTION

The XRT Work Platform consists of the platform, controller, elevating assembly, power module, control module, and chassis.

Platform

The platform has a reinforced steel floor, 44 inch (1.11 m) high guardrails with midrail, 6 inch (152 mm) toeboards and an entrance gate at the rear of the platform. The guardrails can be folded down for access through doors or for shipment.

! WARNING !

DO NOT use the maintenance platform without guardrails properly assembled and in place.

Controller

The controller contains the controls to operate the machine. It should be hung on the front, left, or right guardrail, but may be hand held if necessary. To operate the machine, the interlock lever must be depressed to operate any function. A complete explanation of control functions can be found in Section 2.

Elevating Assembly

The platform is raised and lowered by the elevating assembly;

XRT27: a four section scissor assembly powered by one single stage lift cylinder

XRT33: a five section scissor assembly powered by two single stage lift cylinders.

The hydraulic pump, driven by the engine, powers the cylinder(s). Solenoid operated valves control raising and lowering.

Power Module

The power module contains the engine, hydraulic pump, and starter solenoid.

Control Module

The control module contains the fuel tank, hydraulic reservoir, hydraulic valve manifold, horn/alarms, volt/hour meter, electrical terminal strips, and chassis control panel. A complete explanation of the chassis control functions is found in Section 2.

Roll-Out Tray

All models have a roll-out tray which contains the battery, and the LP fuel tank (dual fuel models).

Chassis

The chassis is a structural frame that supports all the components of the XRT Work Platform.

Purpose of Equipment

The objective of the XRT Work Platform is to provide a quickly deployable, self propelled, variable height work platform to elevate personnel and materials to overhead work areas. 4WD models can be driven over rough terrain.

Special Limitations

Travel with the platform raised is limited to a creep speed range.

Elevating of the Work Platform is limited to firm, level surfaces only. Any degree of slope greater than 3° will lockout the elevating circuits and sound a warning alarm.

FOUR WHEEL DRIVE MODELS: driving while elevated is limited to flat surfaces only.

! DANGER !

The elevating function shall ONLY be used when the work platform is level and on a firm surface. The work platform is NOT intended to be driven over uneven, rough or soft terrain when elevated.

1.3 SPECIFICATIONS

Table 1-1: Specifications

Specifications are subject to change without notice

Meets or exceeds all applicable requirements of OSHA and ANSI A92.6-1999

| ITEM | XRT27 | XRT33 |
|--|--|--|
| Platform Size (Outside) | Standard | 58 in. x 90.5 in. [1,47 m x 2,34 m] |
| | Slide Out Deck Extended | 58 in. x 103.5 in. [1,47 m x 2,62 m] |
| Max. Platform Capacity | Standard | 1,250 lbs. [567 kg] |
| | w/ Extension | 1,250 lbs. [567 kg] |
| | on Extension | 250 lbs. [113 kg] |
| Max. No. of occupants | Standard | 4 people |
| | on Extension | 1 people |
| Height | Working Height | 33 ft. [10,1 m] |
| | Max. Platform Height | 27 ft. [8,2 m] |
| | Max. Drive Height | 27 ft. [8,2 m] |
| Dimensions | Weight, Standard | 7,000 lbs. [3175 kg] |
| | Overall Width | 69in. [1,75 m] |
| | Overall Height (Rails Up) | 98.5[2,5 m] |
| | Overall Height (Rails Folded) | 69.5 in. [1,8 m] |
| Overall Length, Standard | 106 in. [2,72 m] | 106 in. [2,72 m] |
| Driveable Height | 27 ft. [8,2 m] | 33 ft. [11,1 m] |
| Surface Speed | Platform Lowered | 0 to 6.4 mph [0 to 4,0 km/h] |
| | Platform Raised | 0 to 0.45 mph [0 to 0,73 km/h] |
| System Voltage | 12 Volt DC | 12 Volt DC |
| Hydraulic Tank Capacity | 16.25 US Gallons [74 l] | 16.25 US Gallons [74 l] |
| Maximum Hydraulic System Pressure | 3200 psi [220,7 bar] | 3200 psi [220,7 bar] |
| Hydraulic Fluid | Normal use: Above 32° F [0° C] | ISO #46 |
| | Low Temp. use: Below 32° F [0° C] | ISO #32 |
| | Below 0° F [-17° C] | ISO #15 |
| Lift System | One Single Stage Lift Cylinder | Two Single Stage Lift Cylinders |
| Lift Speed | Raise, 30 sec./Lower, 31 sec. | Raise, 35 sec./Lower, 31 sec. |
| Power Source | Kubota D905E Diesel | Kubota D905E Diesel |
| | Kohler Gasoline | Kohler Gasoline |
| Drive Control - Horizontal Drive | Proportional | Proportional |
| | 2wd: 4wd: | 2 Hyd. Wheel Motors 4 Hyd. Wheel Motors |
| Air Filled Tires (except European, foam filled tires) | 26 X 12-10 ply, 65 psi [4,5 bar] | 26 X 12-10 ply, 65 psi [4,5 bar] |
| Parking Brakes | Spring Applied, Hydraulic Release, Multiple Disc | Spring Applied, Hydraulic Release, Multiple Disc |
| Turning Radius (inside) | 68 in. [1,7 m] | 68 in. [1,7 m] |
| Maximum Gradeability | 2wd: | 30% [16,7°] |
| | 4wd: | 40% [21,9°] |
| Ground Clearance | 7.6 in [194 mm] | 7.6 in [194 mm] |
| Wheel Base | 78 3/8 in. [2 m] | 78 3/8 in. [2 m] |
| Guardrails | 44 in. [1,1 m] high, Fold Down with gate. | 44 in. [1,1 m] high, Fold Down with gate. |
| Toeboard | 6 in. [152 mm] High | 6 in. [152 mm] High |

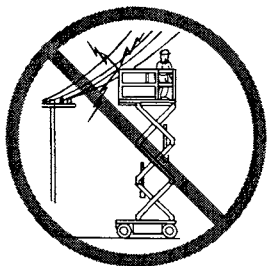
Section 2

MACHINE PREPARATION & OPERATION

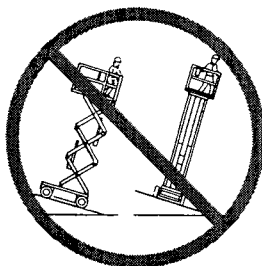
Safety Rules

Warning

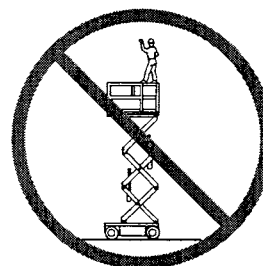
All personnel shall carefully read, understand and follow all safety rules, operating instructions, and the Scaffold Industry Association's *Manual of Responsibilities (ANSI A92.6)* before operating or performing maintenance on any Upright aerial work platform.



NEVER operate the machine within ten feet of power lines.
THIS MACHINE IS NOT INSULATED



NEVER elevate or drive elevated on uneven slopes or soft ground or elevate the platform unless the platform is level



NEVER sit, stand or climb on guardrail or midrail

NEVER operate the machine without first surveying the work area for surface hazards such as holes, drop-offs, bumps and debris.

NEVER operate the machine if all guardrails are not properly in place and secured with all fasteners properly torqued.

SECURE and lock gate after mounting platform.

KEEP all body parts clear of outriggers when extending or retracting (outrigger equipped machines only).

NEVER use ladders or scaffolding on the platform.

NEVER attach overhanging loads or increase platform size.

LOOK up, down and around for overhead obstructions and electrical conductors.

DISTRIBUTE all loads evenly on the platform. See the back cover for maximum platform load.

NEVER use damaged equipment. (Contact UpRight for instructions. See toll-free phone number on back cover.)

NEVER change operating or safety systems.

INSPECT the machine thoroughly for cracked welds, loose hardware, hydraulic leaks, damaged control cable, loose wire connections and wheel bolts.

NEVER climb down elevating assembly with the platform elevated.

NEVER perform service on machine while platform is elevated without blocking elevating assembly.

NEVER recharge battery near sparks or open flame; batteries that are being charged emit highly explosive hydrogen gas.

AFTER USE secure the work platform against unauthorized use by turning key switch off and removing key.

NEVER replace any component or part with anything other than original UpRight replacement parts without the manufacturer's consent.

California Proposition 65 Warning

Gasoline and diesel engine exhaust and some of their constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

NOTE: Read and familiarize yourself with all operating instructions before attempting to operate the XRT Work Platform.

2.1 PREPARATION FOR USE

⚠ CAUTION ⚠

STAND CLEAR when cutting the metal banding to avoid being cut if the banding snaps back.

1. Remove the metal banding from the module covers and elevating linkage.
2. Remove the banding from the control console.
3. Remove tie wraps holding guardrail gate.
4. Connect the negative (-) lead to the negative (-) battery terminal in the roll-out tray (see Figure 2-1).

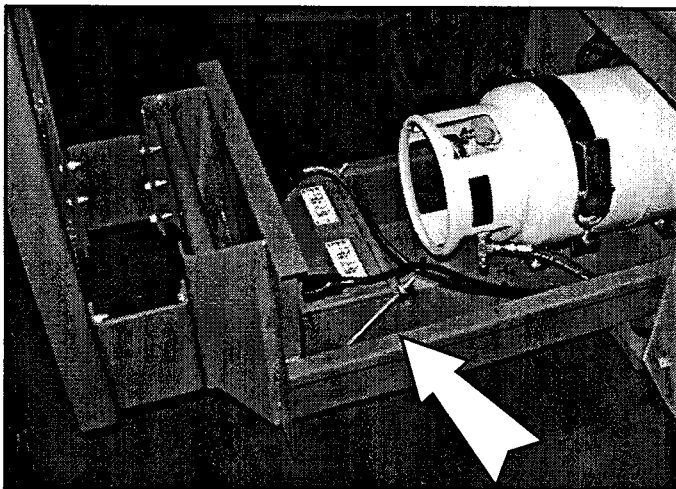


Figure 2-1: Battery (rear of machine)

2.2 TRANSPORTING WORK PLATFORM

By Crane

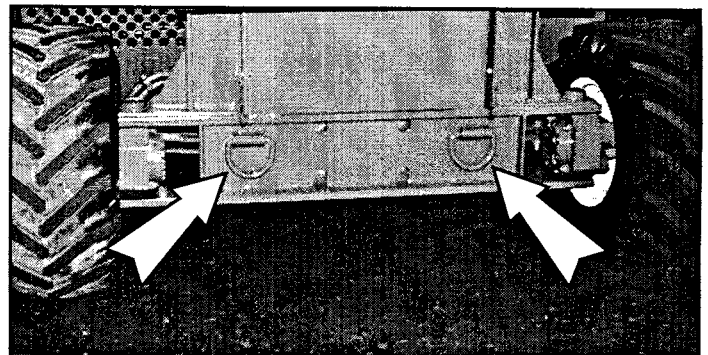
1. Secure straps to chassis tie down/lifting lugs only (see Figure 2-2).

By Truck

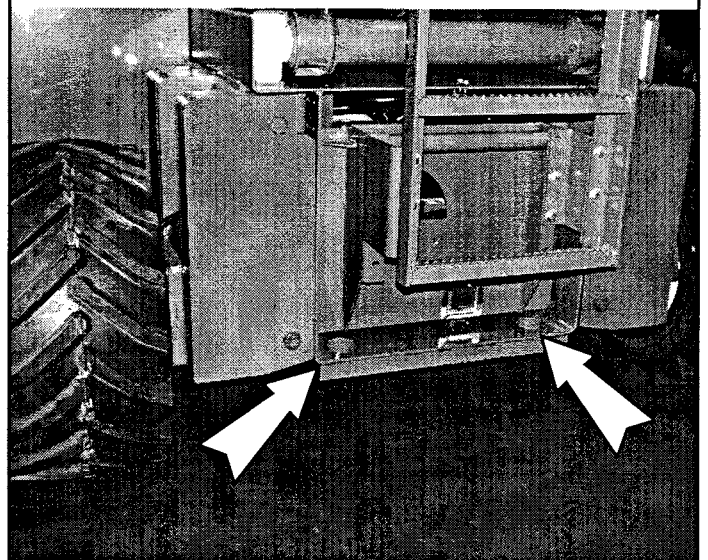
1. Maneuver the work platform into transport position and chock wheels.
2. Secure the work platform to the transport vehicle with chains or straps of adequate load capacity attached to the chassis tie down/lifting lugs.

⚠ CAUTION ⚠

Overtightening of chains or straps through tie down lugs may result in damage to work platform.



Lifting Lugs/Tie Downs - Front



Lifting Lugs/Tie Downs - Rear

Figure 2-2: Transporting Work Platform

2.3 PREPARATION FOR SHIPMENT

1. Grease all the grease fittings.
2. Fully lower the platform.
3. Disconnect the battery negative (-) lead from the battery terminal (see Figure 2-1).
4. Band the controller to the front guardrail.
5. Band the elevating linkage to the frame.

Preservation

1. Clean painted surfaces. If the paint is damaged, repaint.
2. Fill the hydraulic tank to operating level, fluid will be visible at the Sight Gauge. DO NOT fill the hydraulic tank while the platform is elevated.

NOTE: DO NOT drain the hydraulic system prior to long term storage.

3. Coat exposed portions of extended cylinder rods with a preservative such as multipurpose grease and wrap with barrier material.
4. Coat all exposed unpainted metal surfaces with preservative.
5. Service the engine according to the manufacturers recommendations.

Battery

1. Disconnect the battery negative (-) cable and secure to the chassis.
2. Disconnect the remaining battery leads and secure to the chassis.
3. Remove the battery and place in alternate service.

2.4 DESIGN FEATURES

The XRT has the following features to insure safe operation:

1. The Lift Valve will not energize unless the chassis is level.
2. A warning alarm sounds and Drive Valves are de-energized, if the work platform should become unlevel while elevated.
3. A motion alarm sounds when the work platform is lowering.
4. The platform descent rate is controlled by an orifice. The Lift Cylinder is equipped with a holding valve to prevent descent should a leak develop.
5. The drive speed is limited to "creep" speed when operating the work platform while elevated.
6. Holding brakes are automatically engaged when the Drive Valves are de-energized from the Controller or from a loss of power.
7. The Platform and Chassis controls are each equipped with an Emergency Stop Switch.
8. Up and Down Buttons are located in the Control Module on the chassis for lifting and lowering the work platform from ground level.
9. The Down Valve can be operated manually by means of a cable linkage in the event of powered function failure.
10. Dynamic braking, and runaway protection are provided by the use of Counterbalance Valves in the drive system.
11. A Level Sensor is used to sense when the machine is unlevel, disabling lift functions, and drive when elevated.

2.5 CONTROLS AND INDICATORS

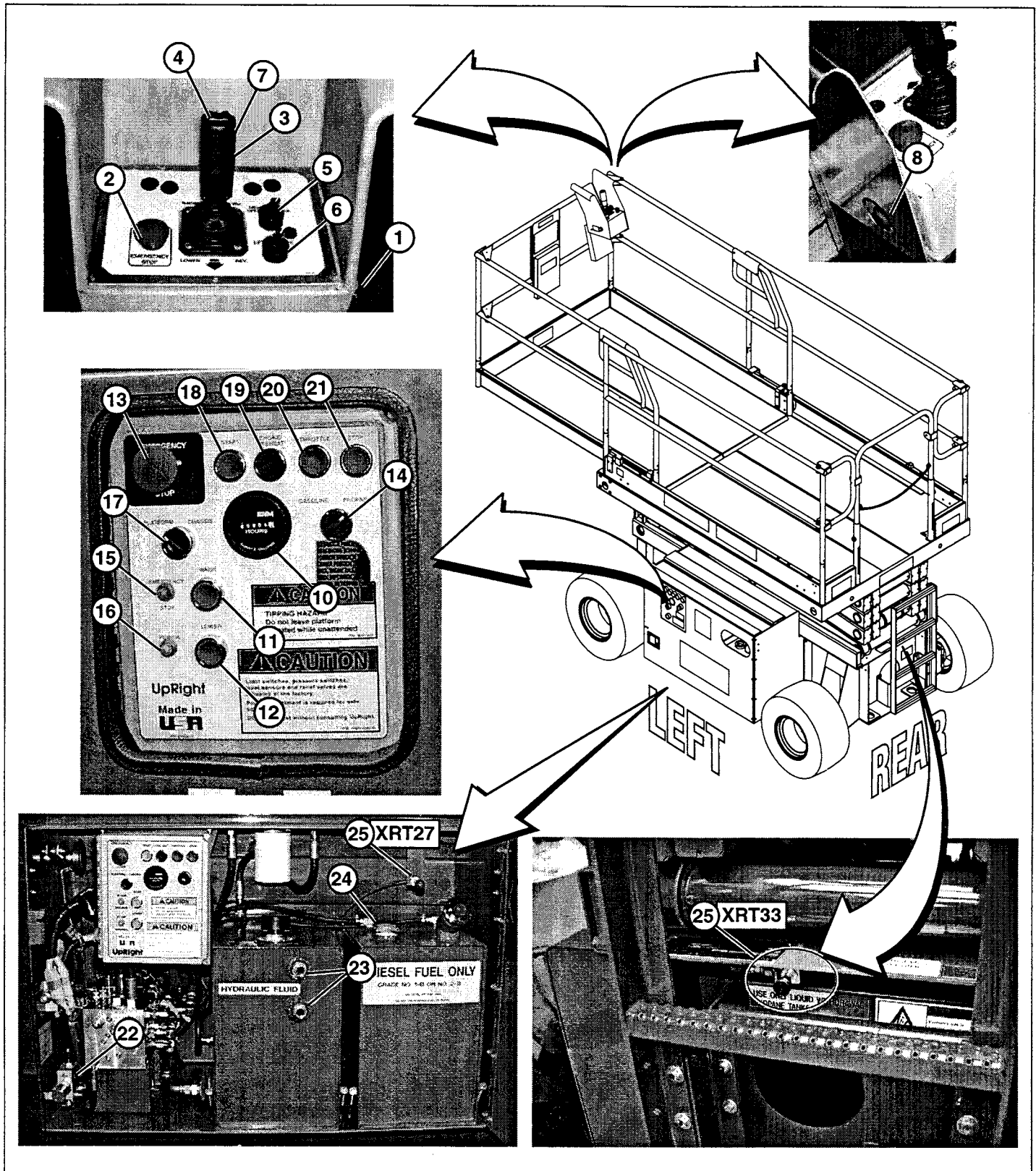
The controls and indicators for operation of the XRT 27 & XRT 33 Work Platform are shown in (see Figure 2-3). The name and function of each control and indicator are listed in Table 2-1. The index numbers

in Figure 2-3 correspond to the index numbers in Table 2-1. The operator shall know the location of each control and indicator and have a thorough knowledge of the function and operation of each before attempting to operate the unit.

Table 2-1: Controls and Indicators

| Controller | | | PlatformChassis | | |
|------------|--|--|-----------------|---------------------------------------|--|
| INDEX # | NAME | FUNCTION | INDEX # | NAME | FUNCTION |
| 1 | Key Switch (right side) | Turn key fully clockwise to start engine, when released key goes to RUN to provide power to the Interlock Switch. | 10 | Hourmeter (Optional) | Tracks the number of hours of engine powered operation. |
| 2 | Emergency Stop Switch | Push red button to cut power to all controls (off). Turn clockwise to provide power (on). | 11 | Raise Button | Press button to lift the platform and |
| 3 | Control Lever | Move joystick forward or backwards to control Drive and Lift Valves proportionally or Down Valve depending on position of Drive Lift Switch. | 12 | Lower Button | Press button to lower the platform. |
| 4 | Steering Switch | Moving the momentary rocker switch Right or Left steers the work platform in that direction. Although the Steering Switch is self centering the steering system is not. The wheels must be steered back to straight. | 13 | Emergency Stop Switch | Push red button to cut power to all controls (off). Turn clockwise to provide power (on). |
| 5 | Drive Speed/Torque Selector Switch | Provides three speed/torque ranges, in forward or reverse. - High Speed-low torque - Mid Range - High Torque-low speed. | 14 | Fuel Selector Switch (Dual Fuel Only) | Turning switch left or right changes the engine's fuel supply between Gasoline and Propane. Placing the switch in the center position purges the fuel lines prior to changing fuels. |
| 6 | Drive/lift Switch | Selecting Drive allows the work platform to move forward or reverse. Selecting Lift allows the work platform to raise or lower. | 15 | Emergency Stop Indicator | Illuminates when Emergency Stop is enabled, turns off when disabled. |
| 7 | Interlock Lever Switch (back of Control Lever) | Provides power to the Controller powered functions, only when depressed, preventing accidental activation of the Controller. | 16 | Power Indicator | Illuminates when power is on, turns off when power is off. |
| 8 | Choke Button (gasoline / dual fuel) | Press to engage choke when starting engine. | 17 | Platform / Chassis Switch | Turn switch to the left to enable platform controls. Turn switch to the right to enable chassis controls. |
| | Glow Plug Button (diesel) | Press and hold for 6 seconds to preheat glow plugs before starting. | 18 | Start Button | Press to start the engine. Release after engine starts. |
| | | | 19 | Choke Button (gasoline / dual fuel) | Press to engage choke when starting engine. |
| | | | | Glow Plug Button (Diesel) | Press and hold for 6 seconds to preheat glow plugs before starting. |
| | | | 20 | Throttle Button | Press to increase engine RPM when operating functions from the lower control panel. |
| | | | 21 | Stop Button | Press to kill the engine. |
| | | | 22 | Brake Release Pump | Releases the Parking Brake allowing the machine to be moved in the event power is lost or for winching onto a trailer. |
| | | | 23 | Hydraulic Fluid Sight Gauge | Indicates fluid level. |
| | | | 24 | Fuel Level | Indicates fluid level. |
| | | | 25 | Emergency Lowering Valve | Pull out to lower the platform in the event of powered function failure. |

* Down Alarm and Tilt Alarm are the same unit with different inputs.



2.6 PRE-OPERATION INSPECTION

Refer to Table 2-1 and Figure 2-3

NOTE: Carefully read, understand and follow all safety rules, operating instructions, labels and the Scaffold Industry Association's MANUAL OF RESPONSIBILITIES. Perform the following steps each day before use.

1. Open modules and inspect for damage, oil leaks or missing parts.
2. Check the hydraulic oil level sight gauge on the hydraulic tank with the platform fully lowered. Add specified hydraulic oil if necessary.
3. Check that fluid level in the battery is correct.
4. Check the engine oil level and fuel level.
5. Check that all guardrails are in place, the slide out deck extension is secured with the pin and all fasteners are properly tightened.
6. Check tire pressure; 65 psi (4,5 bar).
7. Carefully inspect the entire work platform for damage such as cracked welds or structural members, loose or missing parts, oil leaks, damaged cables or hoses, loose connections and tire damage.
8. Move machine, if necessary, to unobstructed area to allow for full elevation.

9. Place chassis and platform emergency stop switches in the ON position by pulling the buttons out.
10. Verify platform/chassis switch is on PLATFORM.
11. Dual Fuel Models: set dual fuel selector to desired position. Set to the center position to purge the system when switching fuels. If the machine is to be operated on propane, open the supply valve on the tank

Note: When using LP gas, use clean, water free liquid petroleum gas, preferably from a bulk storage tank. Follow the instructions located on the power module tray for filling the tank.

WARNING

If you smell propane, close the supply valve on the tank immediately until you have located and corrected the leak.

12. While the engine is cool check the engine coolant level.

CAUTION

DO NOT check coolant when engine or radiator is hot, hot coolant can cause severe burns.

System Function Inspection

! WARNING !

STAND CLEAR of the work platform while performing the following checks.

Before operating the work platform survey the work area for surface hazards such as holes, drop-offs, bumps and debris.

Check in ALL directions, including above the work platform, for obstructions and electrical conductors.

Protect control console cable from possible damage while performing checks.

1. Unhook controller from front guardrail. Firmly grasp controller hanger in such a manner that the interlock lever can be depressed, while performing the following checks from the ground.
2. Turn controller key switch clockwise to ON. Turn fully clockwise to start engine, releasing the key once the engine starts.
Note: If the engine is cold, on gasoline / propane models, hold the choke button in while starting the engine. On diesel models, depress the glow plug button and hold for 6 seconds to engage the glow plugs.
3. Position drive/lift switch to DRIVE position.
4. With the speed range switch first in HIGH TORQUE and then in HIGH SPEED depress the interlock lever and slowly push the control lever to FORWARD then REVERSE positions to check for speed and directional control. The farther you push or pull the control lever the faster the machine will travel.
5. Push steering switch RIGHT then LEFT to check for steering control.
6. Rehook controller on front guardrail.
7. Turn the platform/chassis switch to Chassis.
8. Push the throttle button in. Push chassis raise button to elevate platform while pushing the tilt sensor off of level. The platform should only partially elevate and the tilt alarm should sound. If the platform continues to elevate and/or there is no alarm STOP and remove the machine from service until it is repaired.
9. Release the tilt sensor and fully elevate platform.
10. Visually inspect the elevating assembly, lift cylinder, cables and hoses for damage or erratic operation. Check for missing or loose parts.
11. Lower the platform partially by pushing in on the chassis lower switch, and check operation of the audible lowering alarm.
12. Open the chassis emergency lowering valve to check for proper operation by pulling and holding the knob out. Once the platform is fully lowered, close the valve by releasing the knob.
13. Turn the platform/chassis switch to platform.
14. Mount the platform making sure the gate is latched.
15. Position drive/lift switch to LIFT.
16. Depress the interlock lever and slowly push the control lever to RAISE the platform, fully actuate the control lever to check proportional lift speed. Elevate the platform to 12 ft. (3,7 m).
17. Slowly pull control lever to DOWN position to lower platform. Check that lowering alarm sounds.
18. Turn controller key switch to OFF, push the emergency stop button and dismount the platform.
19. Close and secure module covers.

2.7 OPERATION

Before operating work platform, ensure that the pre-operation and safety inspection has been completed, any deficiencies have been corrected and the operator has been thoroughly trained on this machine.

Travel With Platform Lowered

1. Verify chassis emergency stop switch is in the ON position (turn counterclockwise), and that the platform/chassis switch is on platform.

Note: Verify that the platform is fully lowered.

2. After mounting platform, close and latch gate. Check that guardrails are in position and properly assembled with fasteners properly torqued.
3. Check that route is clear of persons, obstructions, holes and drop-offs and is capable of supporting the wheel loads.
4. Check clearances above, below and to the sides of the platform.
5. Pull controller emergency stop button out to ON position.
6. Turn controller key switch fully clockwise to start engine, releasing the key once the engine starts.

Note: If the engine is cold, on dual fuel models, depress and hold the choke button in while starting the engine. On diesel models, depress and hold the glow plug button for 6 seconds to engage the glow plugs.

7. Set the drive/lift speed range switch to HIGH TORQUE.
8. Grasp the control lever so the interlock lever is depressed (releasing the interlock lever cuts power to controller). Slowly push or pull the control lever to forward or REVERSE to travel in the desired direction. The farther you push or pull the control lever from center the faster the machine will travel.
9. While moving, push the drive/lift speed range switch to HIGH SPEED or MID RANGE for travel on level surfaces or to HIGH TORQUE for climbing grades or traveling in confined areas.

Steering

1. Push the steering switch RIGHT or LEFT to turn the wheels. Observe the tires while maneuvering to insure proper direction.

Note: Steering is not self-centering. Wheels must be returned to the straight ahead position by operating the steering switch.

Raising and Lowering the Platform

1. Position the drive/lift switch to LIFT.
2. While holding the control lever so the interlock lever is depressed, push the control lever slowly to UP to raise the platform. Pushing the control lever farther increases the lift speed.
3. When the work task is completed, position the drive/lift switch to LIFT and lower the platform by pulling back on the control lever until the platform is fully lowered.

Travel with Work Platform Elevated

Travel with platform elevated ONLY on firm and level surfaces.

Note: The work platform will travel at reduced speed when in the elevated position.

1. Check that the route is clear of persons, obstructions, holes and drop-offs, is level and capable of supporting the wheel loads.
2. Check clearances above, below and to the sides of platform.
3. Position the drive/lift switch to the DRIVE position.
4. Push the control lever to FORWARD or REVERSE for the desired direction of travel.

Note: If the machine quits driving and the tilt alarm sounds, immediately lower the platform and move the machine to a level location before re-elevating the platform. Emergency Lowering

The emergency lowering control is located;

- XRT27 - in the Control Module at the fuel filler access hole.
- XRT33 - at the rear of the machine at the base of the scissor assembly.

(see Figure 2-4)

1. Open the emergency lowering valve by pulling on the knob and holding it.
2. Once the platform is fully lowered, release the knob to close the valve.

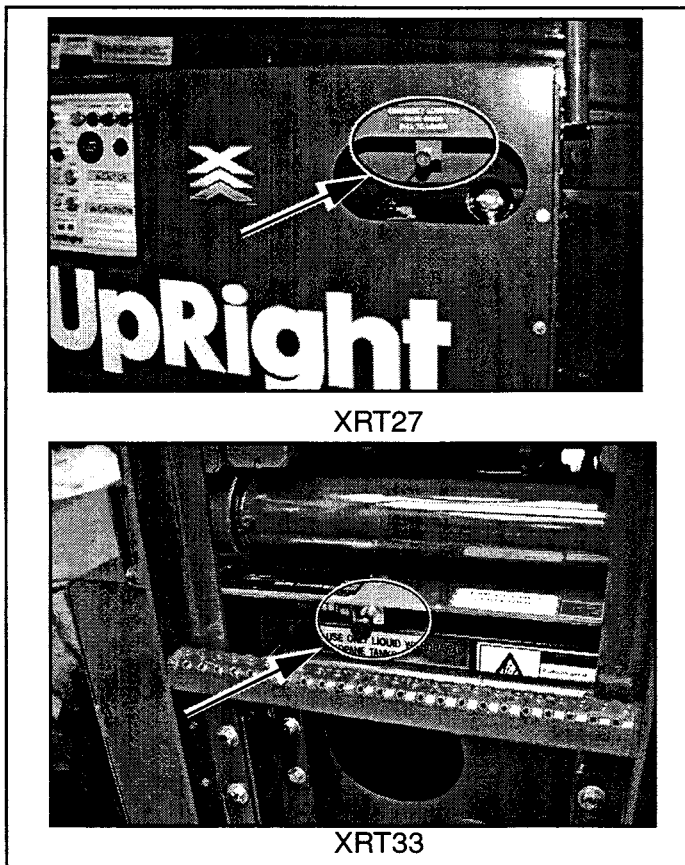


Figure 2-4: Emergency Lowering Down Valve

Switching Fuels (Dual Fuel Only)

1. With engine running turn the fuel selector switch to the center position (see Figure 2-3).
2. After the engine has quit running select the appropriate fuel supply.
3. Restart the engine.

After Use Each Day

1. Ensure that the platform is fully lowered.
2. Park the machine on level ground, preferably under cover, secure against vandals, children or unauthorized operation.

3. Turn the key switch to OFF and remove the key to prevent unauthorized operation.

Parking Brake Release

Perform the following only when the machine will not operate under its own power and it is necessary to move the machine or when winching onto a trailer to transport (see Figure 2-5).

The hand pump is located in lower left corner of the control module.

1. Close the needle valve by turning the knob clockwise.
2. Pump the brake release pump until the parking brakes release and the wheels can be turned.
3. The machine will now roll when pushed or pulled.
4. Be sure to open the needle valve and verify that the parking brakes have engaged before the machine is operated.

⚠ WARNING ⚠

Never operate work platform with the parking brakes released. Serious injury or damage could result.

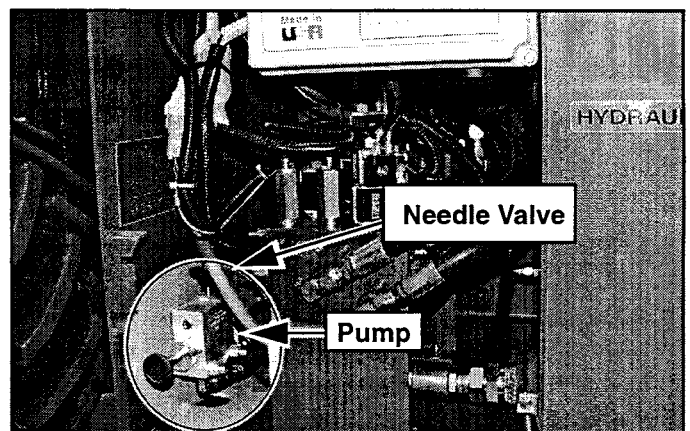


Figure 2-5: Parking Brake Release

2.8 FOLD DOWN GUARDRAILS

This procedure is only for passing through doorways. Guardrails must be returned to proper position before using the machine (see Figure 2-6).

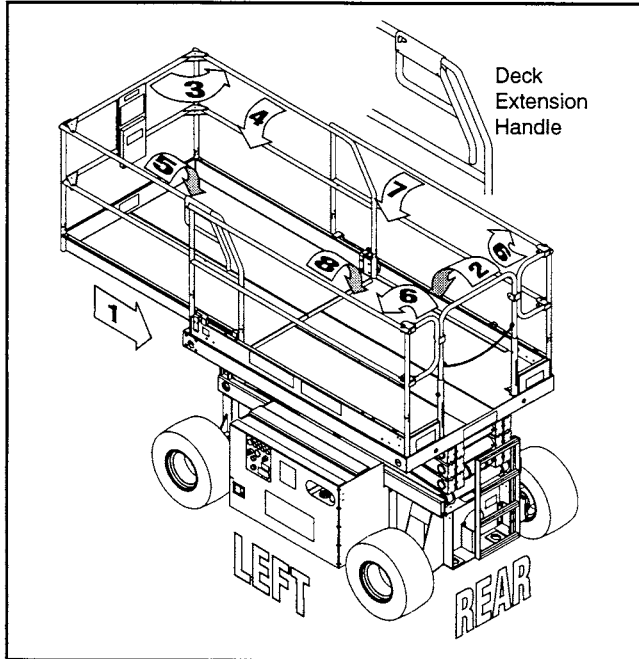


Figure 2-6: Fold Down Guardrails

Fold Down Procedure

Note: When performing the following procedures retain all fasteners.

1. Ensure that the platform is fully retracted and deck pin is locked. Place the controller on the platform.
2. Pull the pins on the two end gate arms. Lower the rear gate to the floor. Replace the pins.
3. Pull the pins (2) on the left side of the front rail and swing the front rail back against the right handrail. Insert pins into right handrail.
4. Push the right deck extension into locked position. Lift the right handrail up, then lower it to the extension deck floor.
5. Push the left deck extension into locked position. Lift the left handrail up, then lower it on top of the right handrail.
6. Rotate the arms in against handrails.
7. Lift the right main handrail and lower to the floor.
8. Lift the left main handrail and lower it on top of right hand rail.

Erection Procedure

1. Reverse the fold down procedure.
2. Hang the controller from front guardrail.
3. Before operating the work platform, check that all fasteners are in place.

Section 3

MAINTENANCE

3.1 INTRODUCTION

! WARNING !

Be sure to read, understand and follow all information in the Operation Section of this manual before attempting to operate or perform service on any Work Platform.

Note: For Information on the engine refer to your local engine dealer.

This section contains instructions for the maintenance of the Work Platform. Procedures for the operation inspection, adjustment, scheduled maintenance, and repair/removal are included.

Referring to Section 2 will aid in understanding the operation and function of the various components and systems of the work platform, and help in diagnosing and repair of the machine.

Refer to "Table 3-1: Preventative Maintenance Check list" on page 3-5 for recommended maintenance intervals.

Note: Unless otherwise specified, torque all fittings according to "Table 3-5: Torque Specifications for Fasteners" on page 3-30, and "Table 3-6: Torque Specifications for Hydraulic Components" on page 3-30.

3.2 DATE CODE IDENTIFICATION ON HOSES

GATES uses a five digit code: Year, Month, Day.

i.e.: 6 11 29 - means 1996, month 11 (November), day 29.

PARKER uses a ten digit code: Plant, Year, Month, Day.

i.e.: XXXX 6 11 29 - means Plant XXXX, 1996, month 11 (November), day 29.

DAYCO stamps month, day and year on each hose.

3.3 SPECIAL TOOLS

The following is a list of special tools which may be required to perform certain maintenance procedures on the work platform.

- 0-1000 psi (0-69 bar) Hydraulic Pressure Gauge with Adapter Fittings
- 0-3000 psi (0-207 bar) Hydraulic Pressure Gauge with Adapter Fittings
- 0-6000 psi (0-414 bar) Hydraulic Pressure Gauge with Adapter Fittings
- Small Deutsch Connector Field Kit (UpRight P/N 030899-000)
- Large Deutsch Connector Field Kit (UpRight P/N 030898-000)
- Inclinometer

3.4 DEUTSCH CONNECTORS

Deutsch connectors are designed so that connector parts, contacts or electrical cables may be replaced without replacing the entire connector.

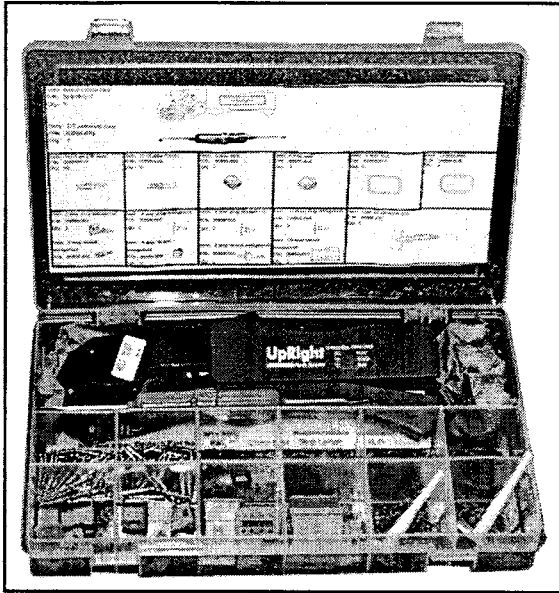


Figure 3-1: Deutsch Connector Kit, Small

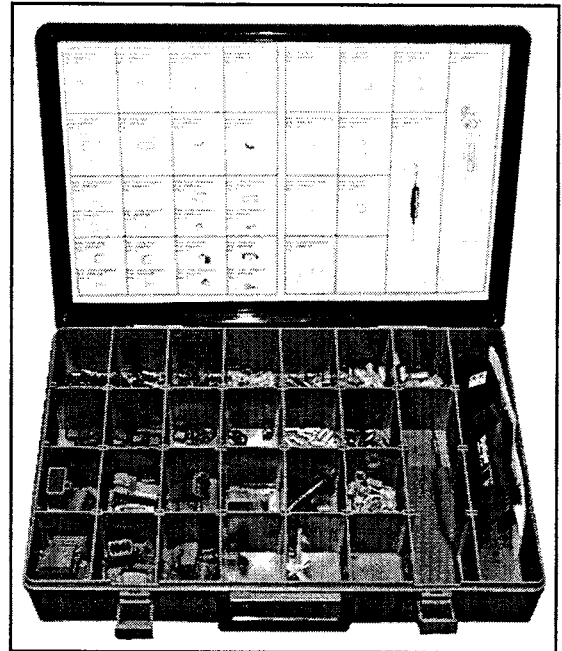


Figure 3-2: Deutsch Connector Kit, Large

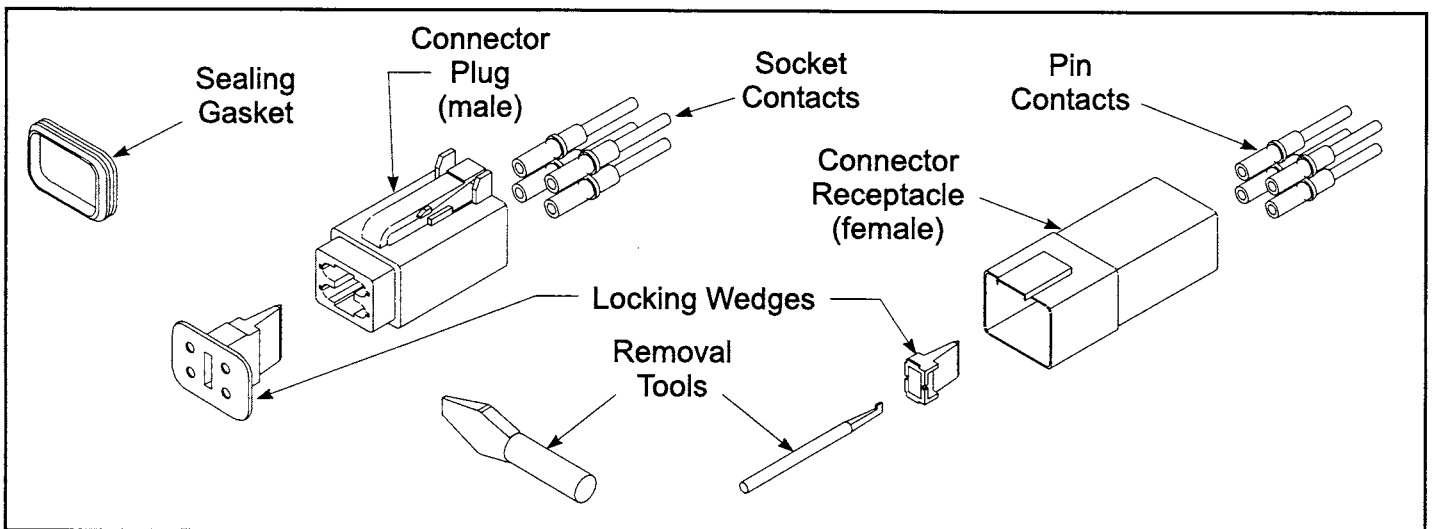


Figure 3-3: Plugs and Receptacles, Deutsch Connectors

Male Connector (Plug)

1. Disconnect the male connector (plug) from the female connector (receptacle).
2. Using the flat end of the Removal Tool (or flat blade screwdriver), pry the Locking Wedge from the Male Connector. Care should be taken that the Silicon Gasket is not damaged during this procedure.
3. Check all parts for damage. Replace all parts which are damaged or worn.
4. Replace or recrimp the wires and contacts. Refer to "Crimping" procedure.

Female Connector (Receptacle)

1. Disconnect the male connector (plug) from the female connector (receptacle).
2. Using the notched end of the Removal Tool (or a wire hook), pull the Locking Wedge from the Female Connector.
3. Check all parts for damage. Replace all parts which are damaged or worn.
4. Replace or recrimp the wires and contacts. Refer to "Crimping" procedure.

Releasing Locking Fingers

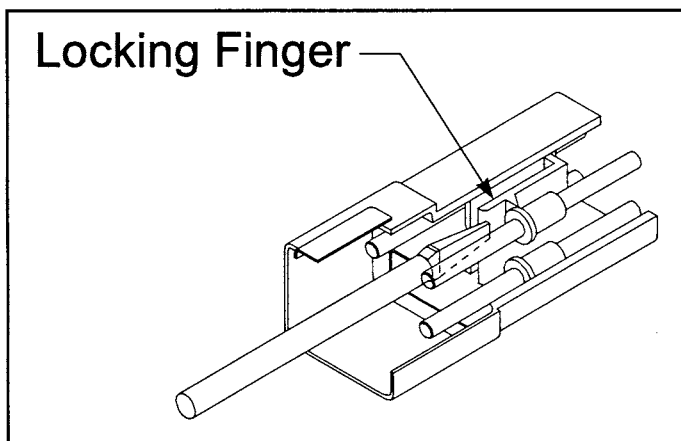


Figure 3-4: Locking Finger, Deutsch Connector

1. The Locking Fingers can be released following the removal of the Locking Wedge of either the male or female connector.
2. Use the removal tool (or flat bladed screwdriver) to push the Locking Fingers aside. This will release the grip on the contact.
3. Pull the wire and contact out of the connector.

Crimping

Note: Complete crimping instructions are included in each Field Kit.

1. Strip 1/4" (6 mm) from the wire.
2. Insert the contact into the crimping tool.
3. Insert the stripped wire into the contact. Copper strands should be visible in the bleed hole of the contact and no copper strands should be loose (outside) of the contact barrel.
4. Completely close the handles of the crimping tool. Release the handles of the crimping tool and remove the crimped contact.
5. Inspect the crimped contact to ensure that all strands are secure in the crimp barrel.

Removing Contact from Heavy Duty Plug

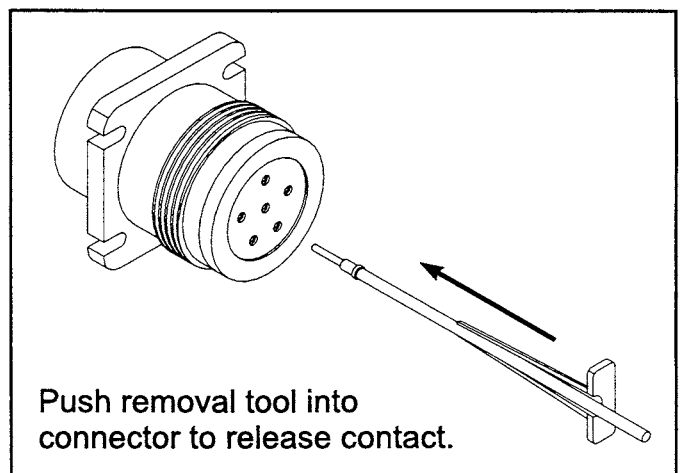


Figure 3-5: Heavy Duty Deutsch Connector

1. Slip the removal tool along the wire to be replaced.
2. Push the removal tool into the connector until the contact is released.
3. Pull the wire and contact out of the plug.

3.5 PREVENTATIVE MAINTENANCE

The Complete inspection consists of periodic visual and operational checks, together with all necessary minor adjustments to assure proper performance. Daily inspection will prevent abnormal wear and prolong the life of all systems. The inspection and maintenance schedule is to be performed at regular intervals. Inspection and maintenance shall be performed by personnel who are trained and familiar with mechanical and electrical procedures.

The preventative maintenance table has been designed to be used primarily for machine service and maintenance repair. Please photocopy the following page and use the table as a checklist when inspecting the machine for service.

W A R N I N G

Before performing preventative maintenance, familiarize yourself with the operation of the machine.

Always block the elevating assembly whenever it is necessary to enter the scissor assembly to perform maintenance while the platform is elevated.

MAINTENANCE

Section 3.5

Preventative Maintenance Table Key

Interval

Daily=each shift or every day

50h/30d=every 50 hours or 30 days

250h/6m=every 250 hours or 6 months

1000h/2y=every 1000 hours or 2 years

Y=Yes/Acceptable N=No/Not Acceptable

R=Repaired/Acceptable

Preventative Maintenance Report

Date: _____

Owner: _____

Model No: _____

Serial No: _____

Serviced By: _____

Service Interval: _____

Table 3-1: Preventative Maintenance Check list

| COMPONENT | INSPECTION OR SERVICES | INTERVAL | Y | N | R |
|----------------------------|---|----------|---|---|---|
| Battery | Check electrolyte level | 6m | | | |
| | Check specific gravity | 6m | | | |
| | Clean exterior | 6m | | | |
| | Check battery cable condition | Daily | | | |
| | Clean terminals | 6m | | | |
| Engine Oil and Filter | Check level and condition | Daily | | | |
| | Check for leaks | Daily | | | |
| | Change oil filter | 200h | | | |
| Engine Fuel System | Check fuel level | Daily | | | |
| | Check for leaks | Daily | | | |
| | Replace fuel filter | 400h/6m | | | |
| | Check air cleaner | Daily | | | |
| | Replace air cleaner element (Diesel) | Yearly | | | |
| Engine Coolant | Check Intake Air Line (Diesel) | 200h | | | |
| | Check coolant level (with engine cold) | Daily | | | |
| | Replace coolant | 3m | | | |
| Hydraulic Oil | Check Hoses and Clamps | 200h | | | |
| | Check oil level | Daily | | | |
| | Change filter | 6m | | | |
| Hydraulic System | Drain and replace oil | 2y | | | |
| | Check for leaks | Daily | | | |
| | Check hose connections | 30d | | | |
| Emergency Hydraulic System | Check hoses for exterior wear | 30d | | | |
| | Operate the emergency lowering valve and check for serviceability | Daily | | | |
| Controller | Check switch operation | Daily | | | |
| Control Cable | Check the exterior of the cable for pinching, binding or wear | Daily | | | |
| Platform Deck and Rails | Check fasteners for proper torque | Daily | | | |
| | Check welds for cracks | Daily | | | |
| | Check condition of deck | Daily | | | |
| Tires | Check for damage | Daily | | | |
| | Check lug nuts (torque to 90 ft. lbs.) | 30d | | | |
| Hydraulic Pump | Wipe clean | 30d | | | |
| | Check for leaks at mating surfaces | 30d | | | |
| | Check for hose fitting leaks | Daily | | | |
| Drive Motors | Check mounting bolts for proper torque | 30d | | | |
| | Check for operation and leaks | Daily | | | |

| COMPONENT | INSPECTION OR SERVICES | INTERVAL | Y | N | R |
|--------------------|--|----------|---|---|---|
| Steering System | Check hardware & fittings for proper torque | 6m | | | |
| | Grease pivot pins | 30d | | | |
| | Oil king pins | 30d | | | |
| | Check steering cylinder for leaks | 30d | | | |
| Elevating Assembly | Inspect for structural cracks | Daily | | | |
| | Check pivot points for wear | 30d | | | |
| | Check mounting pin pivot bolts for proper torque | 30d | | | |
| Chassis | Check elevating arms for bending | 6m | | | |
| | Check hoses for pinch or rubbing points | Daily | | | |
| | Check component mounting for proper torque | 6m | | | |
| Lift Cylinder | Check welds for cracks | Daily | | | |
| | Check the cylinder rod for wear | 30d | | | |
| | Check mounting pin pivot bolts for proper torque | 30d | | | |
| | Check seals for leaks | 30d | | | |
| | Inspect pivot points for wear | 30d | | | |
| Entire Unit | Check fittings for proper torque | 30d | | | |
| | Check for and repair collision damage | Daily | | | |
| | Check fasteners for proper torque | 3m | | | |
| | Check for corrosion-remove and repaint | 6m | | | |
| Labels | Lubricate | 30d | | | |
| | Check for peeling, missing, or unreadable labels & replace | Daily | | | |

3.6 SUPPORTING ELEVATING ASSEMBLY

⚠ WARNING ⚠

Never perform service on the work platform in the elevating assembly area while platform is elevated without first blocking the elevating assembly.

DO NOT stand in elevating assembly area while deploying or storing brace.

1. Park the work platform on firm level ground.
2. Verify both Emergency Stop Switches are ON.
3. Turn Chassis Key Switch to CHASSIS.
4. Position Chassis Lift Switch to UP and elevate platform approximately 9 feet (2,7 m).

XRT27 Brace Installation

(see Figure 3-6)

1. Rotate the Scissors Brace so that it hangs vertically.
2. Push Chassis Lift Switch to DOWN position and gradually lower platform until the Scissors Brace rests on the weldment cross member.

XRT27 Brace Removal

1. Push Chassis Lift Switch to UP position and gradually raise platform until the Scissors Brace is clear.
2. Rotate the Scissors Brace until it rests on the weldment.
3. Push Chassis Lift Switch to DOWN position and completely lower platform.

XRT33 Brace Installation

(see Figure 3-7)

1. Pull out on the retaining pin and rotate the Scissors Brace into vertical position.
2. Push Chassis Lift Switch to DOWN position and gradually lower platform until the upper and lower pivot pins rest on the Scissors Brace.

XRT33 Brace Removal

1. Push Chassis Lift Switch to UP position and gradually raise platform until the Scissors Brace is clear.
2. Rotate the Scissors Brace until it locks into position parallel with the scissor arm.
3. Push Chassis Lift Switch to DOWN position and completely lower platform.

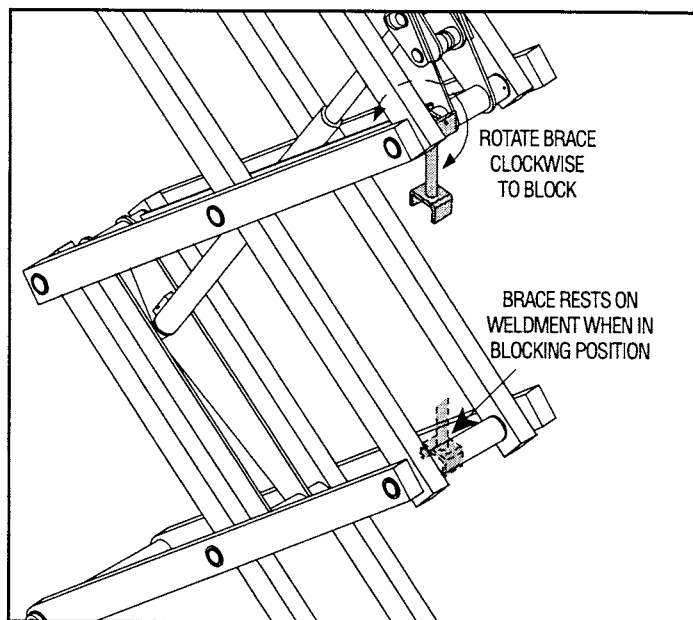


Figure 3-6: Blocking the XRT27 Elevating Assembly

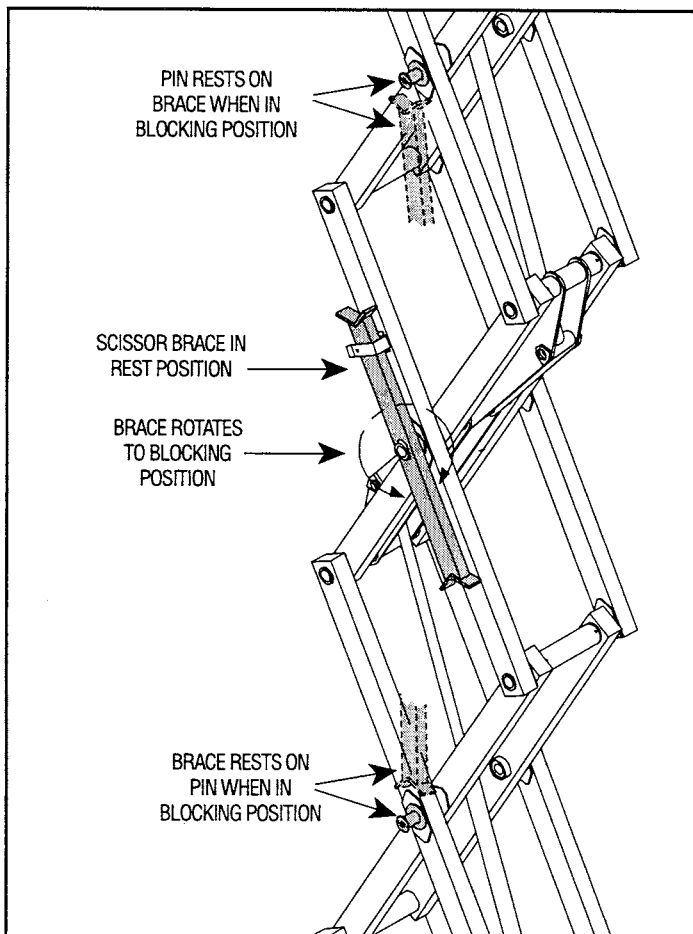


Figure 3-7: Blocking the XRT33 Elevating Assembly

3.7 BATTERY MAINTENANCE

! WARNING !

Hazard of explosive gas mixture. Keep sparks, flame, and smoking material away from battery. Always wear safety glasses when working with batteries.

Battery fluid is highly corrosive. Thoroughly rinse away any spilled fluid with clean water.

Battery Inspection and Cleaning

The battery is located in the roll-out tray at the rear of the machine (see Figure 3-8).

Check battery fluid level daily, especially if work platform is being used in a warm, dry climate. If required, add distilled water ONLY. Use of tap water with high mineral content will shorten battery life.

The battery and cables should be inspected regularly for signs of cracks in the case, electrolyte leakage and corrosion of the terminals. Inspect cables for worn spots or breaks in the insulation and for broken cable terminals.

Clean the battery when it shows signs of corrosion at the terminals or when electrolyte has overflowed during charging. Use a baking soda solution to clean the battery, taking care not to get the solution inside the cells. Rinse thoroughly with clean water. Clean battery and cable contact surfaces to a bright metal finish whenever a cable is removed.

! WARNING !

Before disconnecting the battery negative (-) lead, make sure all switches are OFF. If ON, a spark will occur at the ground terminal which could cause an explosion if hydrogen gas or fuel vapors are present.

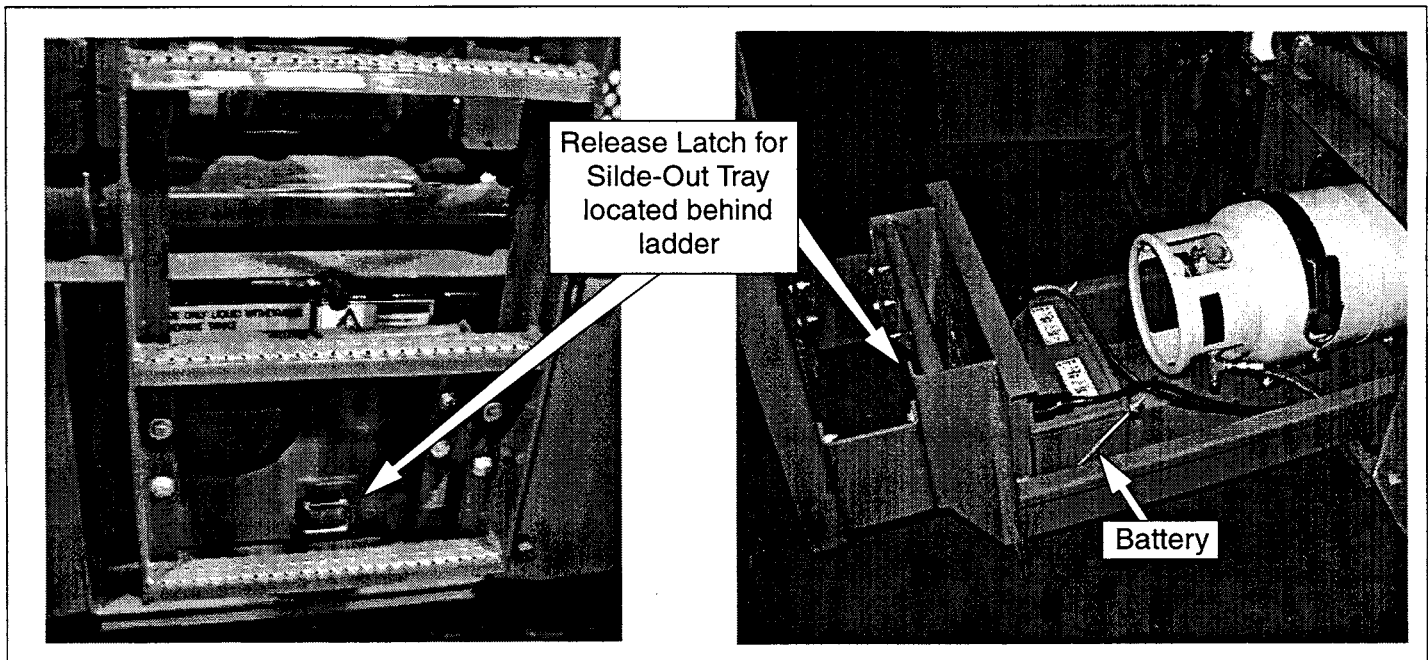


Figure 3-8: Battery Location (battery cover not shown)

3.8 LOWER CONTROLS

Refer to Section 5 for wiring diagram. Refer to Figure 3-9 for component locations.

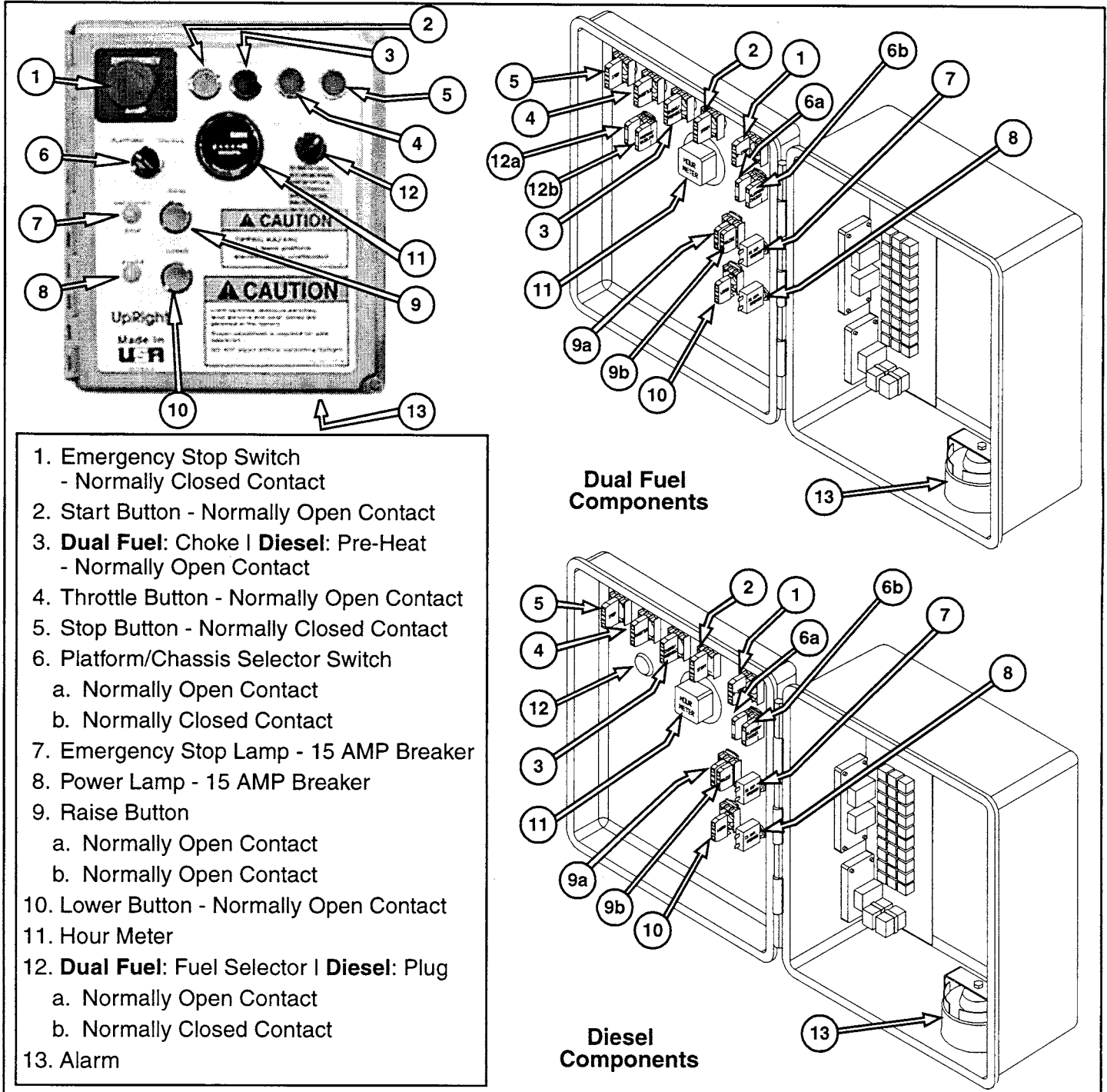


Figure 3-9: Lower Controls - Switches and Components

3.9 UPPER CONTROLS

Proportional Control Adjustment

Refer to Figure 3-10.

Lay out a twenty foot course, on level ground, free from potholes or other obstructions. Mark a starting line and finish line visible from the platform of the machine.

Potentiometers are sealed to protect sensitive adjustments from vibrations, or from tampering. Remove sealant prior to adjustment, and replace after.

Use a small screwdriver or special adjustment tool to set adjustment pots. Pots can be easily damaged.

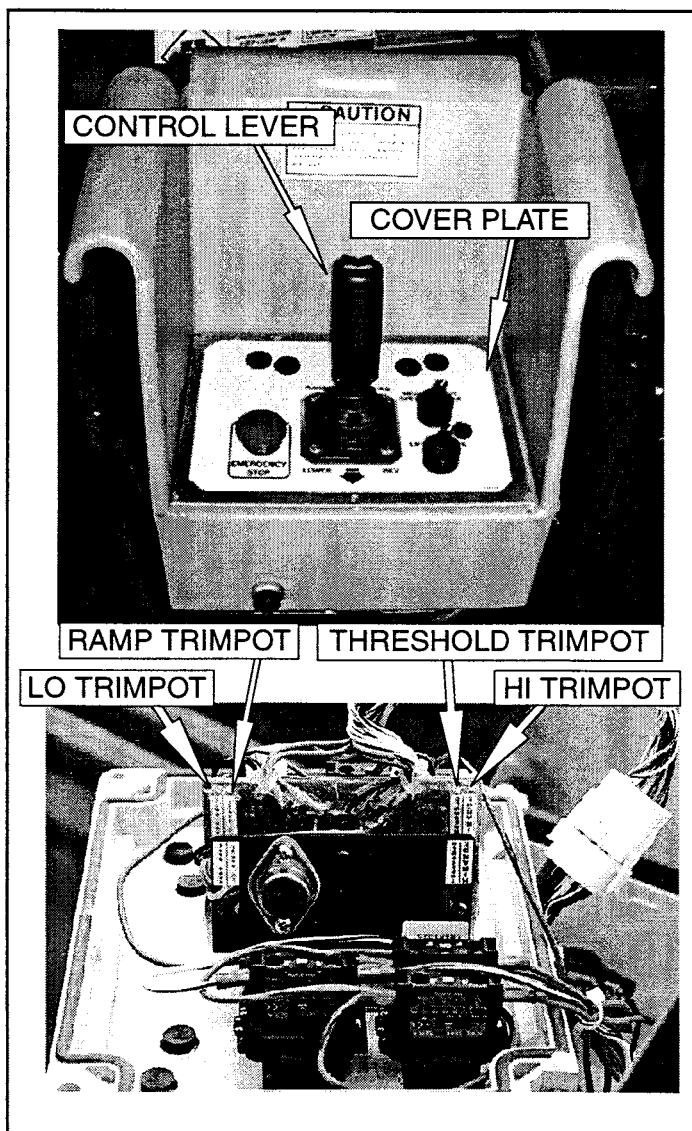


Figure 3-10: Proportional Controller

Pots have 15 turns of adjustment, more than one turn will often be required to complete the adjustment. If pots have been previously set, reset by turning no more than One turn at a time. If they have not been previously set, preset to about mid range and start from there.

- Turn pot clockwise (CW) to increase settings.
- Turn pot counterclockwise (CCW) to decrease settings.
- Adjust pots only in sequence as outlined in this procedure.

Procedure

1. Lower machine fully to insure that controller is in high speed range.
2. Turn Ramp Trimpot fully counterclockwise until a click is heard with each revolution.
3. Push Control Handle slightly forward, just enough to illuminate the red L.E.D. on the P.C.B.
4. Adjust the Threshold Trimpot so that the machine just begins to move.
5. Push the Control Handle fully forward and drive the machine over the 20 ft. (6 m) course.
6. Note: Do not steer the wheels during speed test, insure that the front wheels are straight prior to this operation. Allow the machine to rise to full speed, and mark time from second that the Front Wheels cross the starting line, until the second that the Front Wheels cross the finish line.
7. Adjust the Hi Trimpot to the proper high speed.
8. Elevate the platform enough to put the machine into low speed range.
9. Push the Control Handle fully forward and drive the machine over the 20 ft. (6 m) course.
10. Adjust the Lo Trimpot to the proper low speed .
11. Lower the machine fully and turn the Ramp Trimpot 8 to 10 turns clockwise. Adjust for smooth acceleration.
12. Recheck speeds to insure proper adjustment. Reset as necessary.

3.10 POWER

The XRT is powered by an internal combustion engine mounted on a swing-out tray inside the power module. There are three possible engine configurations; Kubota Diesel, Kubota Dual Fuel (Liquefied Petroleum Gas/Gasoline), and Kohler Dual Fuel.

For detailed service information, refer to the engine manufacturer's manual supplied with your UpRight work platform.

3.11 ENGINE SAFETY ISSUES

Rotating Parts



Rotating parts can cause severe injury.

Keep hands, feet, hair and clothing away from all moving parts to prevent injury. Never operate the engine with covers, shrouds or guards removed.

Electrical Shock



Electrical shock can occur if you touch wires while engine is running.

Never touch electrical wires or components while the engine is running. Electrical shock can occur.

Hot Parts



Hot parts can cause severe burns.

Never touch engine components while engine is running, or immediately after shut-down. Hot surfaces can cause severe burns. Never operate the engine with heat shields or guards removed.

Accidental Starting



Accidental starts can cause severe death or injury.

Disconnect and ground spark plug leads before servicing.

Disable Engine - LPG/Gasoline

To avoid accidental starting, disable engine before servicing.

1. Disconnect the spark plug leads.
2. Remove battery cables
 - a. remove negative lead first
 - b. reconnect negative lead last when reconnecting the battery.

IMPORTANT! Before disconnecting the negative (-) lead, make sure all switches are OFF. If ON, a spark will occur at the ground terminal which could cause an explosion if hydrogen gas or fuel vapors are present.

Fuel

! WARNING !

*Stop engine before filling fuel tank.
Explosive Fuel can cause fires and severe burns.*

Fuel is extremely flammable. vapors settle in low areas where a spark or flame can ignite the gas. Spilled gasoline can ignite if it comes in contact with hot parts or sparks.

- Do not start or operate the engine in a poorly ventilated area.
- Do not fill the fuel tank while the engine is hot or running.

Do not start engine near spilled fuel.

DIESEL: Do not mix gasoline or alcohol with diesel fuel. The mixture can cause a fire.

Do not allow the fuel tank to empty, or it may be necessary to bleed the fuel system.

Do not bleed the fuel system when the engine is hot.

LPG: Installation and repair of LPG systems should be performed by qualified technicians. Improperly maintained or installed LPG components can cause components to malfunction and/or leak.

Exhaust

! WARNING !

*Carbon Monoxide can cause severe nausea, fainting or death.
Do not operate engine in a closed or confined area.*

Engine exhaust gases contain poisonous carbon monoxide, an odorless, colorless gas which can cause death. Avoid inhaling exhaust fumes. Never run the engine in a closed building or confined area.

Radiator

! WARNING !

Never remove the radiator cap while the engine is hot. Severe burns can occur.

Check coolant level before operating equipment. Insufficient coolant can cause the engine to overheat.

- Do not stop an engine suddenly. Allow a hot engine to idle for five (5) minutes.
- Do not remove the radiator cap from a hot radiator. Rushing steam can result in severe burns.
- Allow the radiator to cool for 30 minutes before removing radiator cap. Rotate cap to first stop to allow pressure to escape, then remove cap.

Kubota Diesel

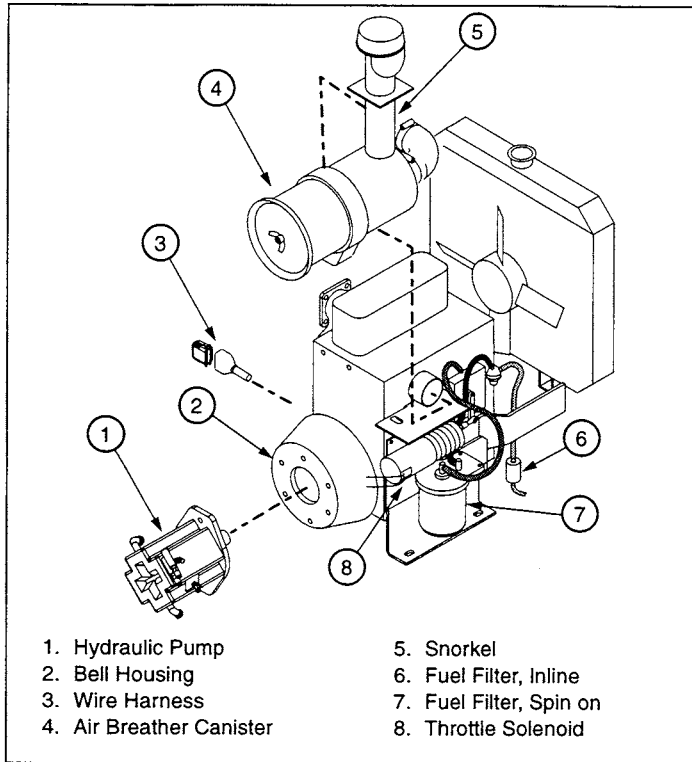


Figure 3-11: Kubota Diesel Engine

Maintenance

Refer to the Engine Service Manual included with your UpRight Work Platform for detailed Maintenance instructions.

Fuel System

If the fuel supply is allowed to empty, air may be introduced into the fuel system, and bleeding of the system will be required.

Table 3-2: Engine Maintenance, Kubota Diesel

| INTERVAL | ITEM |
|------------|--------------------------------------|
| DAILY | Check Engine Oil |
| | Check Engine Coolant |
| 50 HOURS | Check Fuel Pipes |
| | Clean Air Filter |
| 100 HOURS | Clean Fuel Filter |
| | Check Fan Belts |
| | Check Radiator Hoses and Clamps |
| 200 HOURS | Replace Engine Oil & Filter |
| | Check Air Intake Line |
| 400 HOURS | Replace Fuel Filter Cartridge |
| 500 HOURS | Remove Sediment from Fuel Tank |
| | Clean Radiator |
| | Replace Fan Belt |
| 800 HOURS | Check Valve Clearance |
| 1500 HOURS | Check Fuel Injection Nozzle Pressure |
| | Check Turbo Charger |
| | Check Fuel Injection Pump |
| 3000 HOURS | Check Fuel Injection Timer |
| | Replace Air Cleaner Element |
| | Check Electrical Wiring |
| YEARLY | Replace Radiator Coolant |
| | Replace Radiator Hoses and Clamps |
| 2 YEARS | Replace Fuel Pipes and Clamps |
| | Replace Intake Air Line |

Kubota Dual Fuel

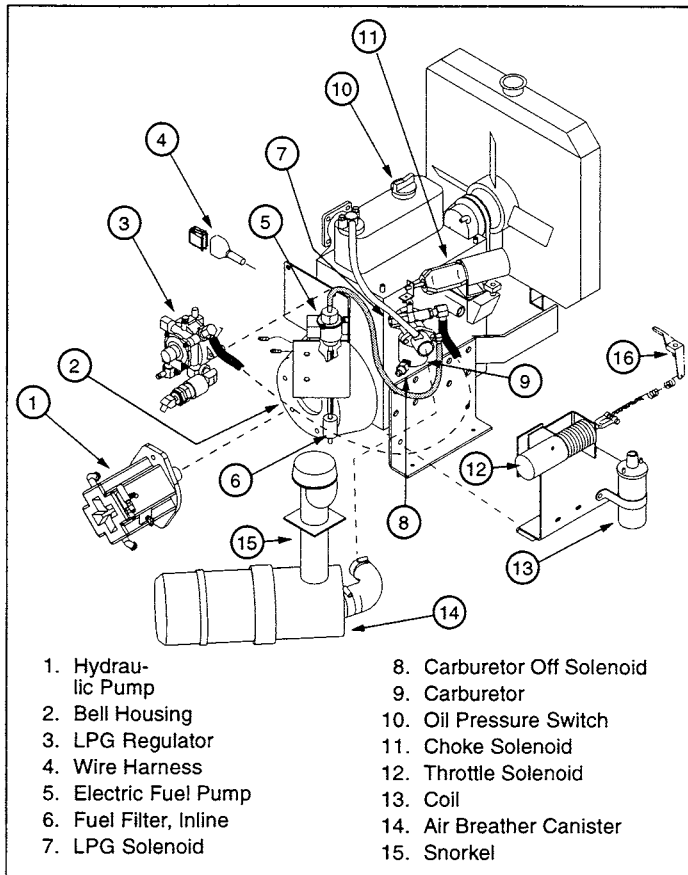


Figure 3-12: Kubota Dual Fuel

Maintenance

Refer to the Engine Service Manual included with your UpRight Work Platform for detailed maintenance instructions.

Table 3-3: Engine Maintenance, Kubota Dual Fuel

| INTERVAL | ITEM |
|-----------|---|
| DAILY | Check Engine Oil |
| | Check Engine Coolant |
| | Check LPG Carburetor & Line Connections |
| | Check LPG Regulator Connections |
| 50 HOURS | Check Air Cleaner Element |
| | Check LPG Tank Connection for Leakage |
| | Check Gasoline Lines & Clamps |
| 100 HOURS | Change Engine Oil |
| | Clean/Adjust Spark Plugs |
| | Clean Gasoline Fuel Line |
| | Check LPG Fuel to Filter Connection |
| | Check Spark Arrestor |
| | Check Fan Belts |
| 200 HOURS | Check Radiator Hoses and Clamps |
| | Replace Engine Oil & Filter |
| | Check LPG Fuel Tank Settings |
| 500 HOURS | Clean Radiator |
| | Replace Fan Belt |
| 800 HOURS | Change Spark Plugs |
| | Check LPG Regulator Hot Water Lines |
| | Check LPG Regulator Vacuum Lock Pipe |
| | Check Valve Clearance |
| | Clean Cylinder Head |
| | Check/Relap Valve Seats |
| | Replace Air Cleaner Element |
| YEARLY | Change Fuel Filter (Gasoline & LPG) |
| | Clean Fuel Tank (Gasoline) |
| | Change Gasoline Line & Clamps |
| | Change Radiator Coolant |
| | Clean Radiator |
| 2 YEARS | Change Ignition Wires |
| | Change Air Intake Pipe & Clamps |
| | Change LPG Line & Clamps |
| | Inspect LPG Regulator (internal parts) |
| | Replace Radiator Hoses and Clamps |

Kohler Dual Fuel

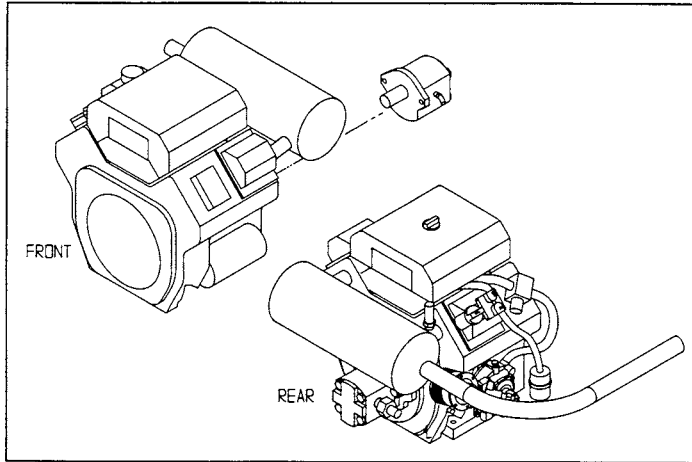


Figure 3-13: Kohler Gasoline Engine

Maintenance

Refer to the Engine Service Manual included with your UpRight Work Platform for detailed maintenance instructions.

Table 3-4: Engine Maintenance, Kubota Dual Fuel

| INTERVAL | ITEM |
|-----------|---|
| DAILY | Check Engine Oil |
| | Check Engine Coolant |
| | Check LPG Carburetor & Line Connections |
| 50 HOURS | Check LPG Regulator Connections |
| | Check Air Cleaner Element |
| | Check LPG Tank Connection for Leakage |
| 100 HOURS | Check Gasoline Lines & Clamps |
| | Change Engine Oil |
| | Clean/Adjust Spark Plugs |
| | Clean Gasoline Fuel Line |
| | Check LPG Fuel to Filter Connection |
| 200 HOURS | Check Spark Arrestor |
| | Check Fan Belts |
| | Check Radiator Hoses and Clamps |
| 500 HOURS | Replace Engine Oil & Filter |
| | Check LPG Fuel Tank Settings |
| 800 HOURS | Clean Radiator |
| | Replace Fan Belt |
| | Change Spark Plugs |
| | Check LPG Regulator Hot Water Lines |
| | Check LPG Regulator Vacuum Lock Pipe |
| YEARLY | Check Valve Clearance |
| | Clean Cylinder Head |
| | Check/Relap Valve Seats |
| | Replace Air Cleaner Element |
| | Change Fuel Filter (Gasoline & LPG) |
| 2 YEARS | Clean Fuel Tank (Gasoline) |
| | Change Gasoline Line & Clamps |
| | Change Radiator Coolant |
| | Clean Radiator |
| | Change Ignition Wires |
| 2 YEARS | Change Air Intake Pipe & Clamps |
| | Change LPG Line & Clamps |
| | Inspect LPG Regulator (internal parts) |
| | Replace Radiator Hoses and Clamps |

3.12 FUEL SUPPLY

Diesel or Gasoline

The fuel tank for Gasoline or Diesel is located in the Control Module.

FUEL LEVEL The fuel gauge is located on top of the fuel tank (see Figure 3-14).

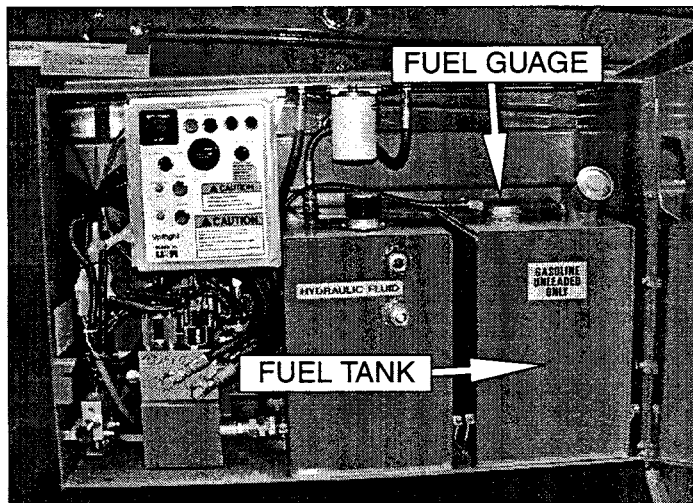


Figure 3-14: Fuel Tank

Liquefied Petroleum Gas (Dual Fuel)

The LPG tank is located in the roll-out tray behind the ladder in the rear of the machine.

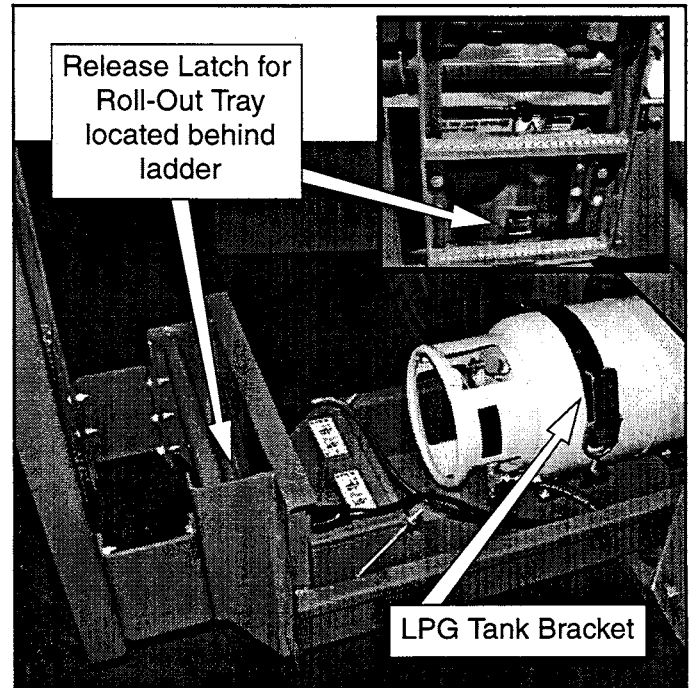


Figure 3-15: LPG Tank

Access Roll-Out Tray

Facing the rear of the machine, look through the lower rungs of the ladder to locate the release latch (see Figure 3-15). Pull the latch with one hand, and pull the tray towards you with the other hand.

Remove & Replace LPG Tank

1. Open the roll-out tray.
2. Close the valve on the LPG tank.
3. Carefully disconnect the fuel supply line.
4. Release the latches on the LPG tank brackets.
5. Carefully lift the LPG tank from the roll-out tray.
6. Installation is reverse of removal.

Manual Brake Pump

The manual brake pump is located in the lower left corner of the Control Module (see Figure 3-16). It is used to release the brakes when the machine must be moved in a power-down situation. Refer to Section 2, "Parking Brake Release", for operation instructions.

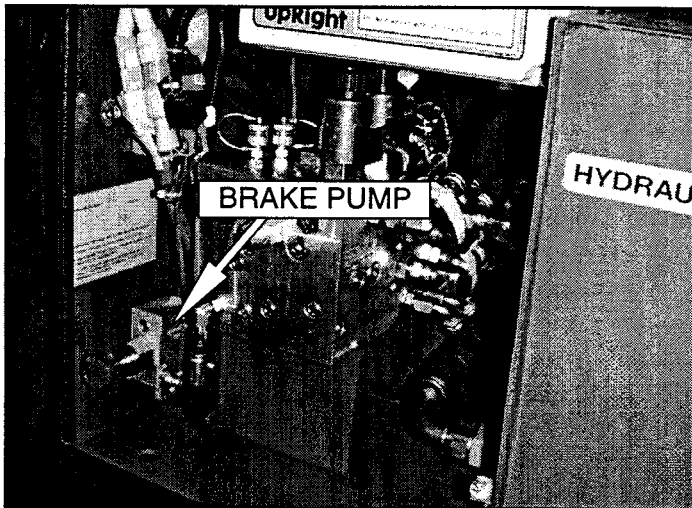


Figure 3-16: Manual Brake Pump

Emergency Lowering Valve

The Emergency Lowering Valve Handle is located;

- XRT27 - in the control module at the fuel filler access hole.
- XRT33 - at the rear of the machine, behind the ladder weldment.

(see Figure 3-17)

It is used to lower the scissor assembly under a power-down, or emergency situation. Refer to Section 2, "Emergency Lowering" for operation instructions.

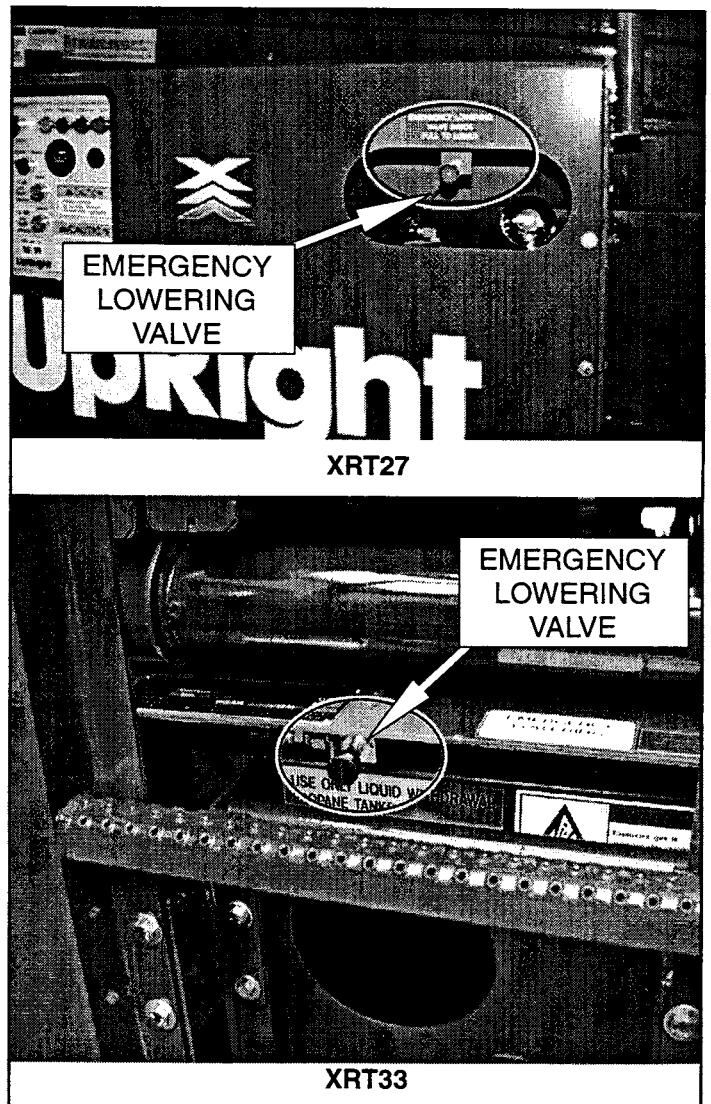


Figure 3-17: Emergency Lowering Valve Handle

Hydraulic Pump

The Hydraulic Pump is located in the Power Module, and is mounted on the rear of the engine.

NOTE: If the hydraulic tank has not been drained, suitable means for plugging the hoses should be provided to prevent excessive fluid loss.

Removal

1. Mark, disconnect and plug the hose assemblies.
2. Loosen the capscrews and remove the pump assembly from the engine.

Installation

1. Torque each capscrew a little at a time until both capscrews are torqued to 20 ft. lbs. (27 N-m).
2. Unplug and reconnect the hydraulic hoses.
3. Fill the pump completely with clean hydraulic oil by pouring it into the drain line cavity.
4. Check the oil level in the hydraulic tank before operating the work platform.

NOTE: Hydraulic pump pressure is factory set. Adjusting pump pressure may cause damage to hydraulic components.

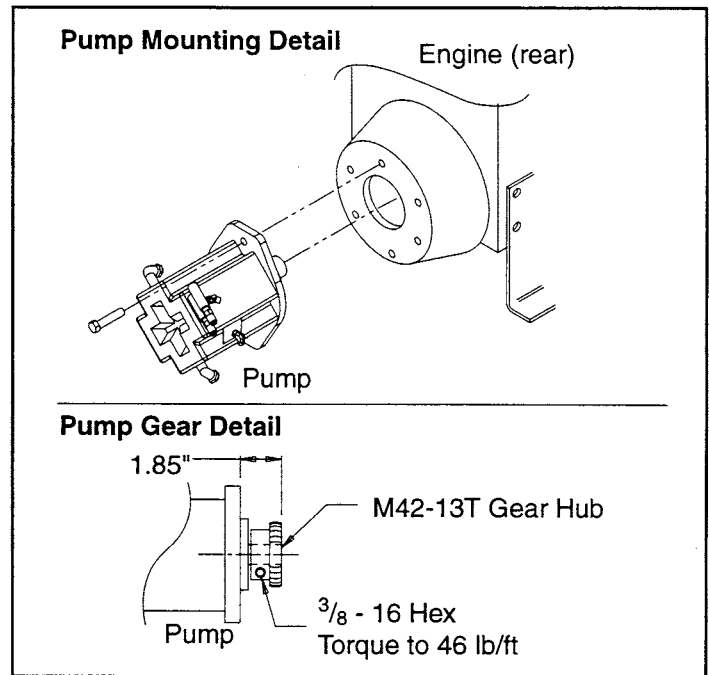


Figure 3-18: Hydraulic Pump

Hydraulic Oil Tank

The Hydraulic Oil Tank is located in the center of the Control Module (see Figure 3-19).

FLUID LEVEL With the platform *fully lowered*, check sight gauge. Oil should be visible through top sight gauge (see Figure 3-19).

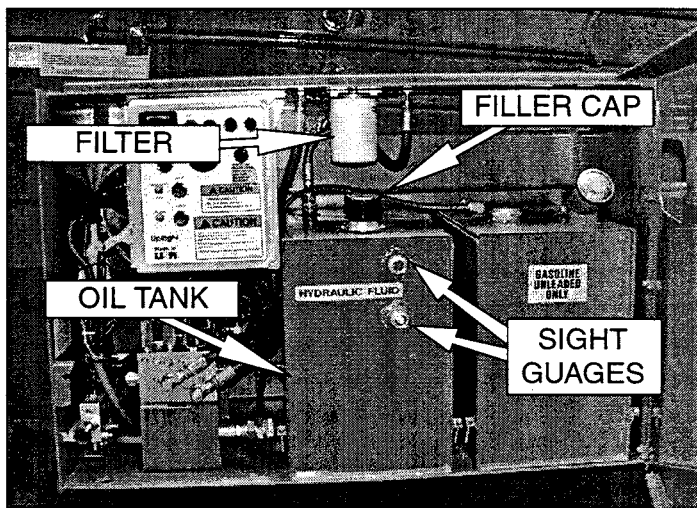


Figure 3-19: Hydraulic Oil Filter Replacement

Hydraulic Oil and Filter Replacement

1. Operate the work platform for 10-15 minutes to bring the hydraulic oil up to normal operating temperature.

⚠ CAUTION ⚠

The hydraulic oil may be hot enough to cause burns. Wear safety gloves and safety glasses when handling hot oil.

2. Provide a suitable container to catch the drained oil. The hydraulic tank has a capacity of 16.25 U.S. gallons (74 l).
3. Open the module door.
4. Remove the magnetic drain plug and allow all oil to drain into the container, be sure to dispose of oil properly.
5. Clean and reinstall the drain plug.
6. Unscrew the filter from the filter assembly.
7. Apply a thin film of clean hydraulic oil to the gasket of the replacement filter.
8. Screw the replacement filter onto the filter head until the gasket makes contact, then rotate the filter $\frac{3}{4}$ of a turn further.

9. Fill the hydraulic reservoir with the appropriate hydraulic oil until the oil is visible through the top sight gauge.

Clean/Replace Hydraulic Tank and Screens

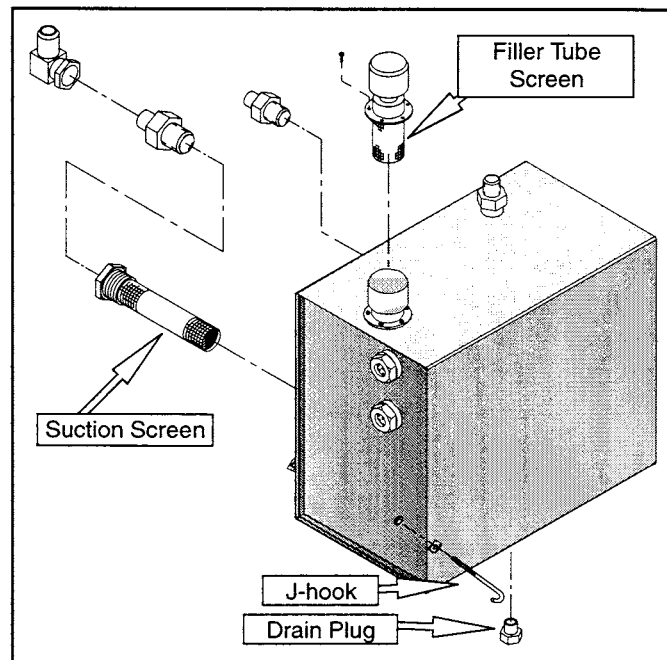


Figure 3-20: Hydraulic Tank Oil Screens

1. Perform steps 1-4 from "Hydraulic Oil and Filter replacement".
2. Mark, disconnect, and plug the hydraulic hoses.
3. Remove the locknuts from the J-hooks.
4. Remove the tank from the control module.
5. Remove the six screws around the filler tube and remove the filler tube and screen.
6. Unscrew and remove the suction screen.
7. Flush the tank with a suitable solvent. Dispose of solvent properly.
8. Clean or replace the filler tube screen as necessary, and reinstall.
9. Clean or replace the suction screen as necessary, and reinstall.
10. Clean and reinstall the drain plug.
11. Place the clean tank into the control module and reinstall the J-hooks and locknuts.
12. Connect the hydraulic hoses.
13. Fill the hydraulic reservoir with the appropriate hydraulic oil until the oil is visible through the top sight gauge.

Main Hydraulic Manifold

Refer to "Figure 3-21: Hydraulic Manifold, Exploded View" on page 3-20

Though it is not necessary to remove the manifold to perform all maintenance procedures, a determination should be made prior to beginning as to whether or not the manifold should be removed before maintenance procedures begin.

Removal

1. Disconnect the battery ground cable.
2. Unplug valve block wiring harness.
3. Tag, disconnect and plug hydraulic hoses.
4. Remove the bolts that hold the manifold mounting bracket to the module floor.
5. Remove manifold block.

Disassembly

(see Figure 3-21).

Note: Mark all components as they are removed so as not to confuse their location during assembly.

1. Remove coils from solenoid valves.
2. Remove spool valve cover and spool valve.
3. Remove solenoid valves, lift relief valve, counter-balance valves and divider combiner valve.
4. Remove fittings, plugs, springs, balls and orifices.

Cleaning and Inspection

1. Wash the manifold in cleaning solvent to remove built up contaminants and then blow out all passages with clean compressed air.
2. Inspect the manifold for cracks, thread damage and scoring where O-rings seal against internal and external surfaces.
3. Wash and dry each component and check for thread damage, torn or cracked O-rings and proper operation.
4. Replace parts and O-rings found unserviceable.

Assembly

Note: Lubricate all O-rings before installation to prevent damage to O-rings. Seat all balls in manifold block by lightly tapping on the ball with a brass drift punch.

1. Install fittings, plugs, springs, balls and orifices. Use one drop of Loctite #242 on each screw-in orifice.
2. Install solenoid valves, lift relief valve, counter balance valves, divider combiner valve, and spool valve.
3. Install coils on solenoid valves.

Installation

1. Attach manifold assembly to module floor with bolts.
2. Plug in the valve block wiring harness.
3. Operate each hydraulic function and check for proper operation and leaks.

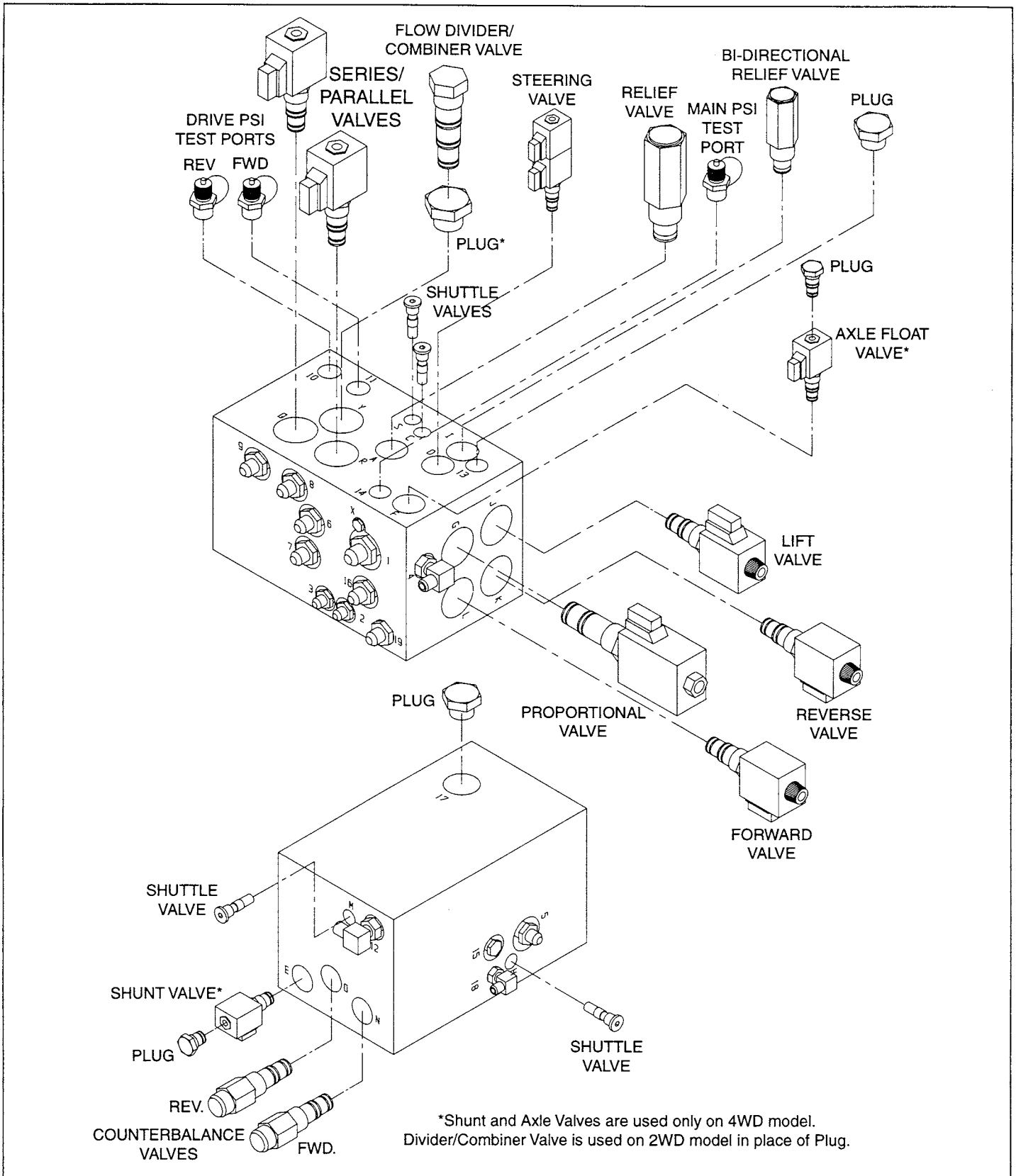


Figure 3-21: Hydraulic Manifold, Exploded View

Setting Hydraulic Pressures

(see Figure 3-21).

Note: Follow Pump Set - Up procedure whenever Pump has been replaced, or when testing performance to isolate possible failure.

Lift Relief Valve

1. Operate the hydraulic system 10 to 15 minutes to warm the oil.
2. Remove the cap or loosen the locknut on the Lift Relief Valve.
3. Turn the Lift Relief Valve adjustment screw counterclockwise two full turns.
4. Place rated load on the platform (Refer to specifications).
5. Depress the Throttle Button, and the Raise Button to lift the platform.
6. Slowly turn the Lift Relief Valve adjustment screw clockwise until the platform begins to rise.
7. Replace the cap, or tighten the locknut on the Lift Relief Valve, and remove the load from the platform

Counterbalance Valves

1. Operate the hydraulic system 10 to 15 minutes to warm the oil.
2. Elevate the Drive Wheels to allow them to spin freely, and place on jackstands suitable to support the weight of the machine.

**Note: 2WD - drive wheels are in front
4WD - all wheels are drive wheels**

3. Remove the Green/White wire from terminal 7 in the Control Panel Assembly.
4. Install a 0-1000 psi (0-69)bar pressure gauge at the Forward Drive Pressure Test Port.
5. Loosen the locknut on the Reverse Counterbalance Valve, push the control handle forward, and adjust the valve until the gauge reads 800 psi (55 bar) (CW to decrease psi, CCW to increase psi) Tighten the locknut.
6. Install a 0-1000 psi (0-69)bar pressure gauge at the Reverse Drive Pressure Test Port.
7. Loosen the locknut on the Forward Counterbalance Valve, push the control handle reverse, and adjust the valve until the gauge reads 800 psi (55 bar).
 - a. **Sterling valves;** CCW to decrease psi, CW to increase psi.
 - b. **Compact Valves;** CW to decrease psi, CCW to increase psi.

Tighten the locknut.

8. Recheck the pressures and adjust as necessary.
9. Remove the gauge and replace the cap. Replace the Green/White wire to terminal. Lower the machine off of the jackstands.

Steering Relief Valves

1. Operate the hydraulic system 10 to 15 minutes to warm the oil.
2. Install a 0-3000 psi (207 bar) gauge at the Main Pressure Test Port.
3. Loosen the locknut or remove the cap on the Steer Relief Valve.
4. Turn the adjustment screw two full turns counterclockwise.
5. Press the Steering Switch to the left and hold until the system bypasses.
6. Turn the Steering Relief Valve adjustment screw clockwise until the gauge reads 1400 psi (96,5 bar).
7. Tighten locknut or replace cap on Left Steering Relief Valve.
8. Press the steering switch to the right and hold to check pressure in that direction.

Series Parallel Valve Bodies

The Series Parallel Valve Bodies are located inside the chassis toward the front of the machine (see Figure 3-22).

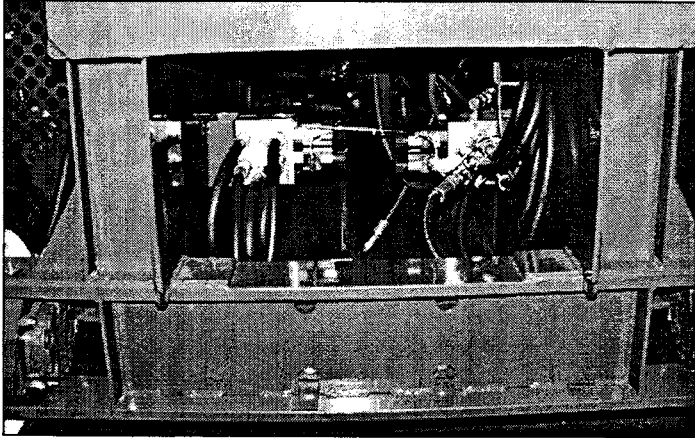


Figure 3-22: Valve Bodies

Brake Pressure Reducing Valve

Adjustment

1. **2 WHEEL DRIVE** - Using two 1-ton jack stands and a 2-ton jack, jack the work platform up to raise the rear wheels off the ground and block the machine securely.
2. **4 WHEEL DRIVE** - Using four 1-ton jack stands and a 2-ton jack, jack the work platform up to raise all four wheels off the ground.
2. Remove the outlet hose from the backside of the Brake Release Pump and install a 0-600 psi (41.4 bar) gauge assembly in-line with a tee fitting.
3. Remove the plug on the end of the Brake Relief Valve.
4. With the engine running, position the Control Lever to **REVERSE** and hold.
5. While holding the Control Lever in **REVERSE**, set the pressure to 800 psi (55 bar) maximum by slowly turning the adjusting screw, clockwise to increase pressure.
6. Replace the valve plug.
7. Remove the gauge and tee fitting and reinstall the hose.
8. Remove the jack stands and lower the machine.

3.13 CYLINDER REPAIR

Removal

1. Remove cylinder from machine.

Note: Refer to “Illustrated Parts Section” for location of cylinder and list of parts which secure cylinder.

Note: If necessary, refer to “3.6 Supporting Elevating Assembly” on page 3-6.

2. Mark and disconnect hoses and IMMEDIATELY cap the openings to prevent contamination.

! WARNING !

Cylinders may be very heavy. Support heavy cylinders before removing pins which secure cylinder to machine.

Disassembly

1. Remove head from cylinder body.
2. Carefully slide rod assembly out of cylinder.
3. remove seal kit components (wipers, rod seals, o-rings and backup rings) from head and piston.
4. Inspect parts for scratches, pits or polishing. Check seal grooves and sealing surfaces. Scratches or pits deep enough to catch the fingernail are unacceptable; replace the cylinder. Polishing is a sign of uneven loading. when this occurs, the surface should be checked for roundness. Cylinders not round within .007” (0,18 mm) should be replaced.

Assembly

Note: Torque all hardware to torques listed on page 30 unless otherwise specified.

1. Lubricate all components with clean hydraulic fluid.

Note: To avoid cutting the seals, do not use sharp edged tools during seal replacement. After installing seals allow at least one hour for the seals to elastically restore to their original shape before assembling cylinder.

2. Install new seal kit components.
3. Lubricate rod wiper and seal with hydraulic fluid and slide head onto rod.
4. Lubricate seals on piston and head.
5. Carefully slide rod assembly into cylinder.
6. Secure head into cylinder.

Installation

1. Installation is reverse of removal.
 2. Carefully remove elevating assembly support.
 3. Slowly cycle cylinder several times to remove air from the hydraulic system.
- Check for proper cylinder operation. Check hydraulic connections for leaks.

Steering Cylinder

Removal

1. Remove the capscrews securing the rod ends to the steering linkage.
2. Remove the capscrews and locknuts that fasten the cylinder assembly to the chassis.
3. Remove the cylinder from the chassis.

Repair

Refer to "3.13 Cylinder Repair" on page 3-23.

Installation

1. Install jam nut on rod end, then thread onto steering cylinder. Do not tighten jam nut.
2. Position the cylinder assembly in the chassis and install with fasteners and locknuts.
3. Adjust the cylinder rod ends in or out to line up with holes in the steering links. Then tighten jam nut to lock rod end into position.
4. Connect the hose assemblies to the fittings.
5. Operate the steering circuit several times throughout its entire range of travel to expel trapped air and check for leaks.

Steering Adjustment

1. Disconnect the cylinder rod ends (if connected).
2. Operate steering so that both ends of the cylinder rod are equal length (1/32 in. [0,8 mm]).
3. Position both tires so they are parallel with the frame and with each other.
4. Adjust the rod ends until they align with the holes on the steering linkage bars.
5. Reinstall the bolts through the steering linkage bars and rod ends. Tighten the jam nuts on the rod ends and all hardware.
6. When properly adjusted, the wheels must turn the same amount in each direction.

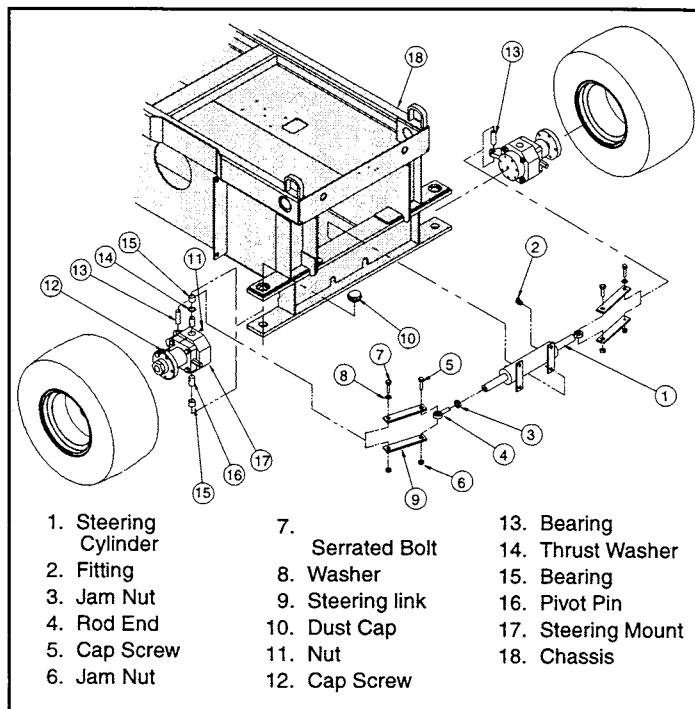


Figure 3-23: Steering Cylinder Removal & Installation

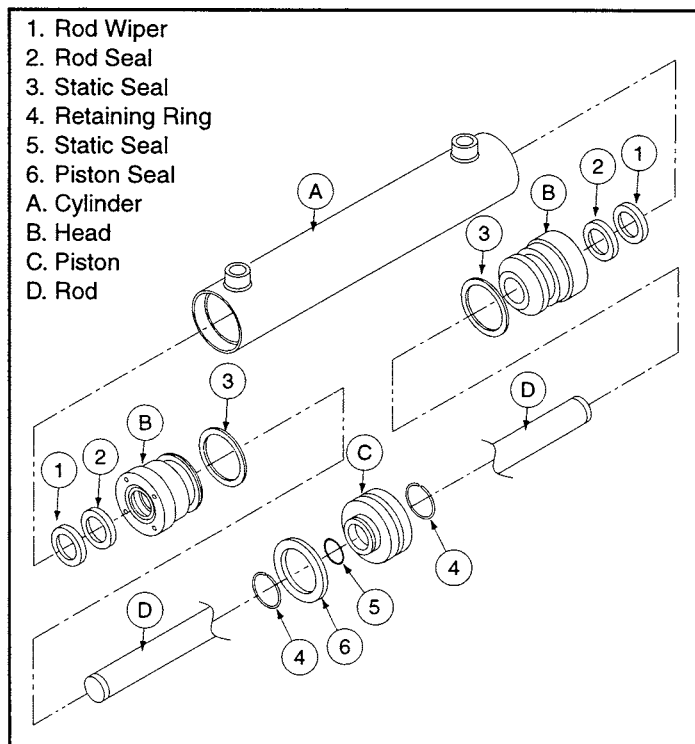


Figure 3-24: Steering Cylinder Seal Kit

Lift Cylinders

Removal

1. Elevate platform and install brace.
2. Remove Emergency Lowering Valve Cable and Down Valve wires from the Emergency Lowering/Down Valve.
3. Remove retaining rings securing Lift Cylinder Pivot Pins. On XRT27 machines remove the left roll pin in the Upper Pivot Pin.
4. Remove lower Pivot Pin by driving pin towards locking pin side. Lower cylinder to rest on chassis.
5. Attach a suitable hoisting device and sling to the cylinder and remove upper Pivot Pin.
6. Carefully remove cylinder.

Repair

Refer to "3.13 Cylinder Repair" on page 3-23.

Installation

1. Attach a suitable hoisting device and sling to the cylinder. Carefully position cylinder in the Elevating Assembly and install the upper Pivot Pin.
2. Make sure the Locking Pin fully engages the pivot and pin and install the retaining ring.
3. Install a new roll pin (if equipped).
4. Carefully lift the cylinder and align the lower mount and install the Pivot Pin. Make sure Locking Pin is properly installed then install the retaining ring.
5. Connect the Emergency Lowering Valve cable and Down Valve wires.
6. Unplug hydraulic hoses and attach to the cylinder.
7. Replace hydraulic fluid removed from Lift Cylinder.
8. Test with weight at rated platform load to check system operation. Check for leaks and level of fluid.

3.14 DRIVE MOTORS & BRAKES

Removal

Refer to Figure 3-25, Figure 3-26, or Figure 3-27.

! CAUTION !

ONLY use a wheel puller to remove the hub. Using any other method of removal may damage the drive motor housing and void the warranty.

Clean all fittings before disconnecting the hose assemblies.

Plug all port holes and hose assemblies IMMEDIATELY to prevent contamination from dust and debris.

1. Park the work platform on firm level ground and block the wheels to prevent the work platform from rolling.
2. Loosen the wheel lug bolts on the motor to be removed.
3. Raise the work platform using a 2-ton jack.
4. Position two 1-ton jack stands under the axle to prevent the work platform from falling if the jack fails.
5. Remove the wheel lug bolts and wheel.
6. Remove the cotter pin, nut, hub, and shaft key.
7. Tag and disconnect the hose assemblies.
8. Remove the capscrews and nuts and then remove the drive motor from the motor mount.

Installation

1. Position the drive motor into the motor mount and secure with capscrews and nuts.
2. Reinstall the hose assemblies.
3. Reinstall the shaft key, hub, and nut. Torque each wheel hub nut to 350 ft. lbs. (475 N-m). Align the slot in the nut with the hole in the shaft and insert the cotter pin. DO NOT back off the nut to align.
4. Reinstall the wheel and lug bolts onto the hub. Torque the lug bolts to 90 ft. lbs. (122 N-m).
5. Remove the jack stands used to block the wheels. Lower the jack and remove.
6. Operate the drive system to check for leaks.
7. FRONT: Adjust steering. See "Steering Adjustment" on page 3-24.

Front Axle

Motor Assemblies

The front motor assemblies are common to all XRT models.

Remove and Replace

See "Drive Motors & Brakes" on page 3-26.

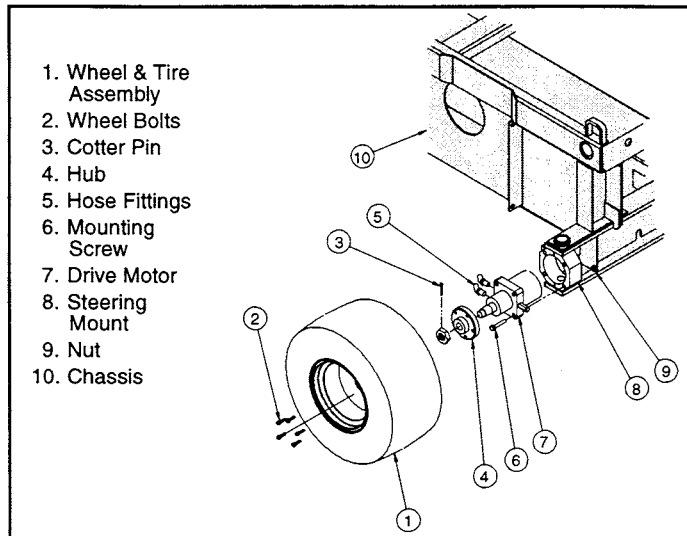


Figure 3-25: Front Motor, All Models

Rear Axle

2 Wheel Drive - Brake Assemblies

Two wheel drive models are equipped with brake assemblies in the rear.

Remove and Replace

See "Drive Motors & Brakes" on page 3-26.

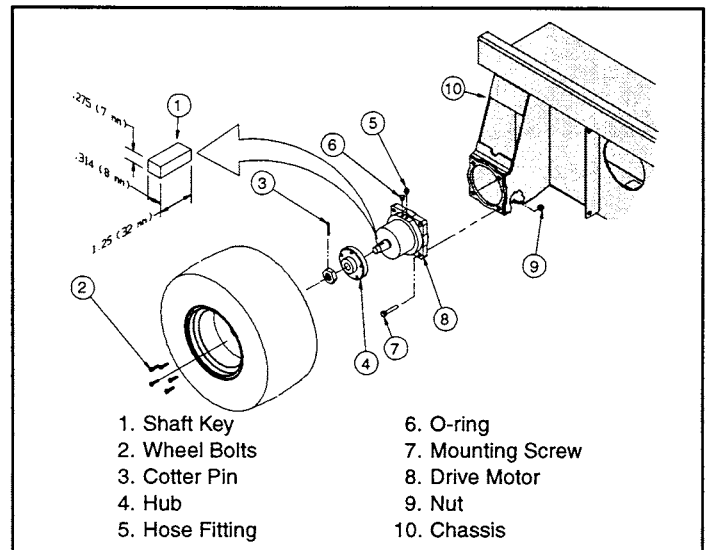


Figure 3-26: Rear Brake Assembly

4 Wheel Drive - Rear Motor Assemblies

Four wheel drive models are equipped with brake/drive motor assemblies in the rear, and drive motors in the front.

Remove and Replace

See "Drive Motors & Brakes" on page 3-26.

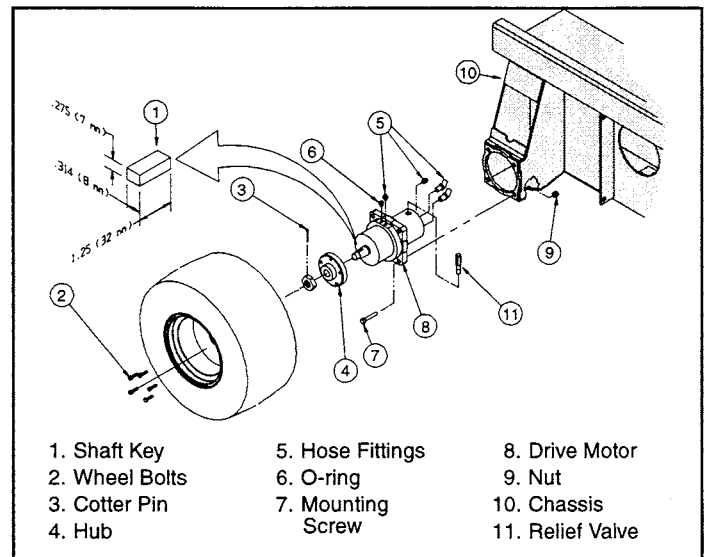


Figure 3-27: Rear Motor and Brake Assembly

3.15 ELEVATING ASSEMBLY

Refer to "Lift Cylinders" on page 3-25 for cylinder repair instructions.

XRT27

The XRT27 is equipped with a four section scissor assembly, and one Lift Cylinder.

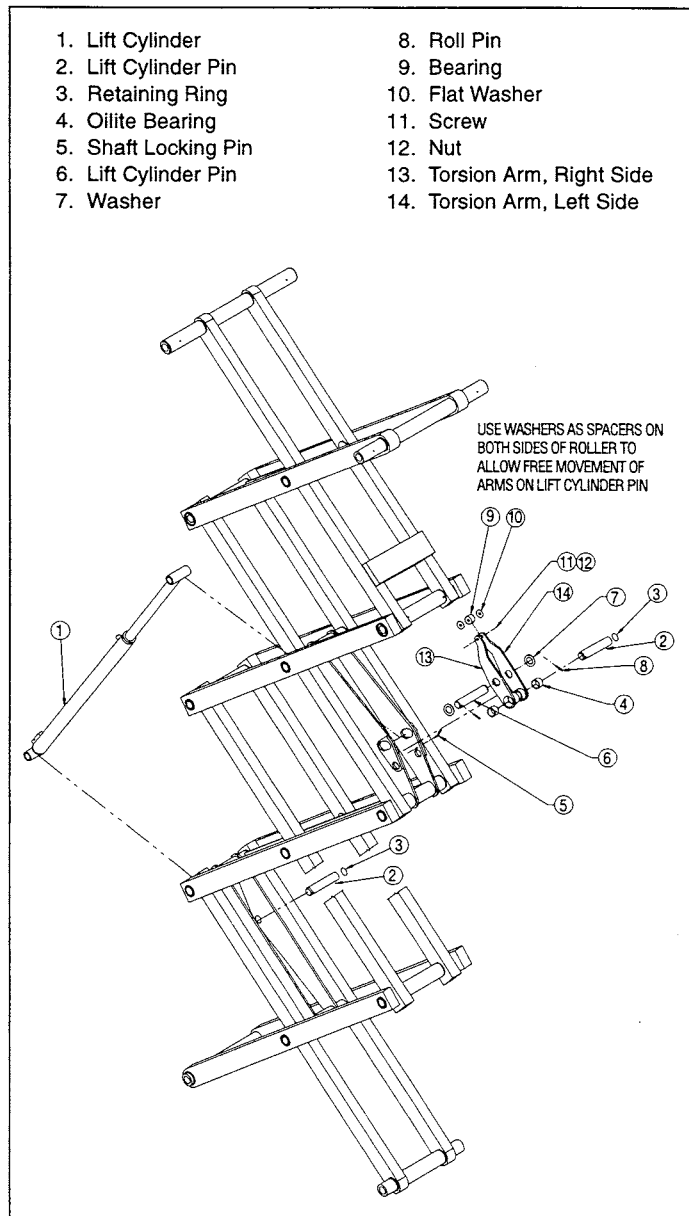


Figure 3-28: Lift Cylinder Remove and Replace, XRT27

XRT33

The XRT33 is equipped with a five section scissor assembly and two Lift Cylinders.

! DANGER !

Use a suitable maintenance stand to access the upper Lift Cylinder on the XRT33. DO NOT stand on the Elevating Assembly

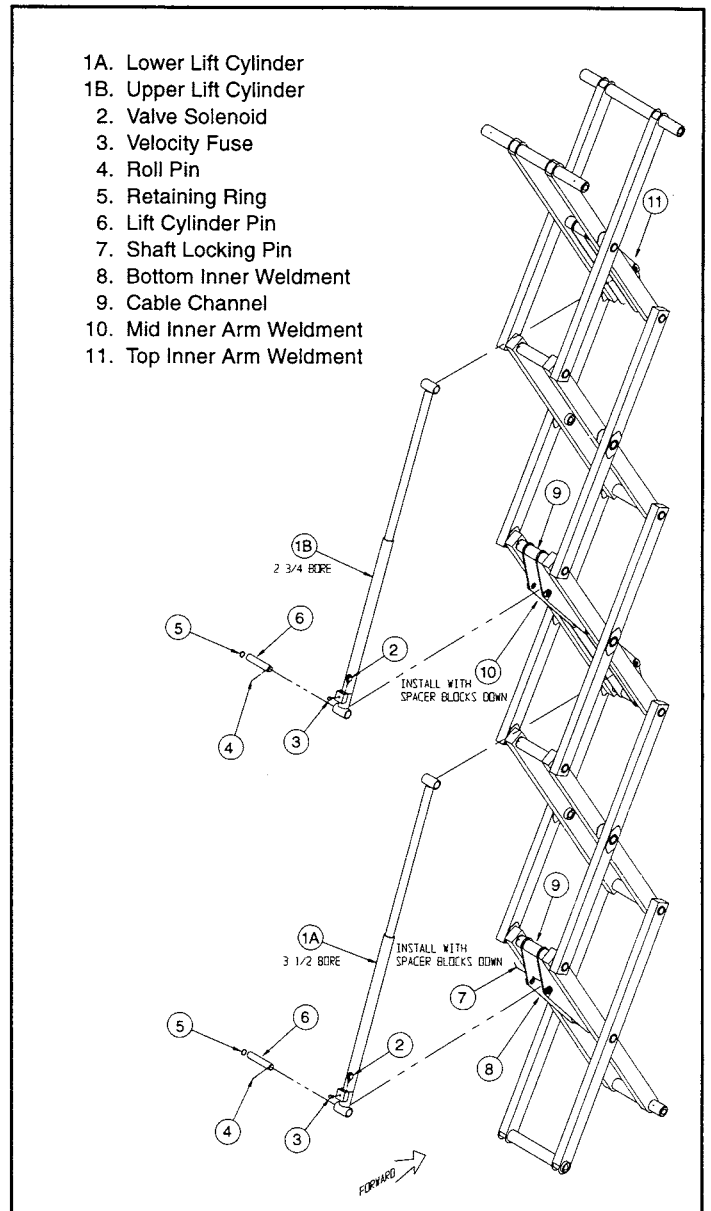


Figure 3-29: Lift Cylinder Remove and Replace, XRT33

3.16 CHASSIS

Control Module

The Control module is located on the left side of the machine, and contains the following;

1. Lower Controls (see "Lower Controls" on page 3-8)
2. Main Hydraulic Manifold (see "Main Hydraulic Manifold" on page 3-19)
3. Pressure Reducing Valve (see "Brake Pressure Reducing Valve" on page 3-22)
4. Brake Release Pump (see "Manual Brake Pump" on page 3-16)
5. Hydraulic Oil Tank (see "Hydraulic Oil Tank" on page 3-18)
6. Hydraulic Oil Filter (see "Hydraulic Oil and Filter Replacement" on page 3-18)
7. Fuel tank (see "Fuel Supply" on page 3-15)
8. Emergency Down Control
9. Horn (Optional)

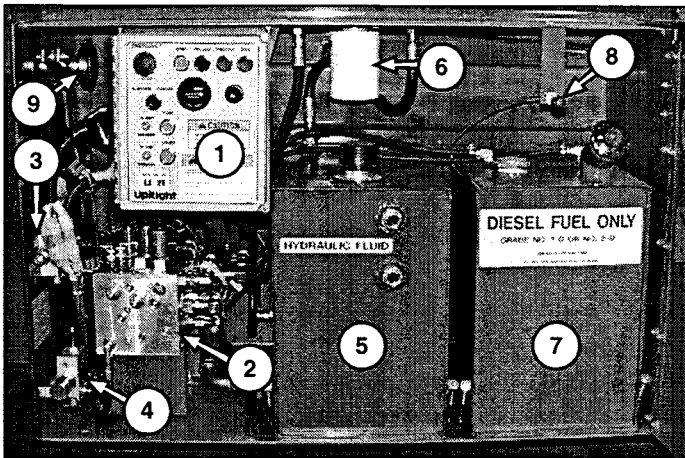


Figure 3-30: Control Module

Power Module

The Power Module is located on the right side of the machine, and contains the following;

1. Engine (see "Power" on page 3-10)
2. Hydraulic Pump (see "Hydraulic Pump" on page 3-17)

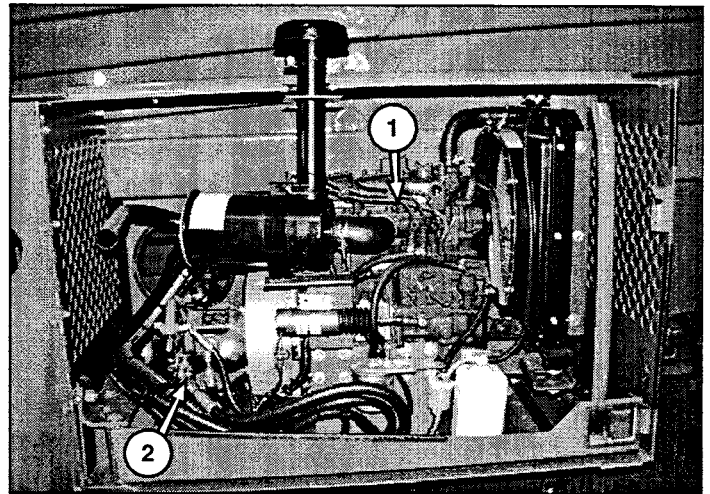


Figure 3-31: Power Module

Platform Down Limit Switch

The Platform Down Switch closes the circuit to

- the Cutout Relay, bypassing the Tilt Sensor when the platform is lowered;
- and to the Platform Down Relay, which provides power to the Drive Relay, Proportional Controller high speed circuit, and Series/Parallel Relay.

! WARNING !

DO NOT attempt to adjust Limit Switches without first blocking the elevating assembly (see section 2).

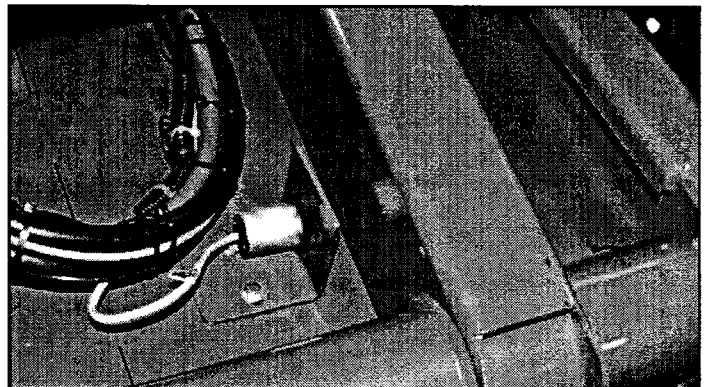


Figure 3-32: Platform Down Limit Switch

3.17 TORQUE SPECIFICATIONS

Fasteners







Use the following values to torque fasteners used on UpRight Work Platforms unless a specific torque value is called out for the part being installed.

Hydraulic Components

Use the following values to torque hydraulic components used on UpRight Work Platforms.

Note: Always lubricate threads with clean hydraulic oil prior to installation

Table 3-5: Torque Specifications for Fasteners

| AMERICAN STANDARD CAP SCREWS | | | | | | | | | | METRIC CAP SCREWS | | | | | | | |
|------------------------------|---|------|------|------|---|-----|------|------|------------------------------|---|------|------|------|---|------|------|------|
| SAE GRADE | 5 | | | | 8 | | | | METRIC GRADE | 8.8 | | | | 10.9 | | | |
| Cap Screw Size (inches) |  | | | |  | | | | Cap Screw Size (millimeters) |   | | | |   | | | |
| | TORQUE | | | | TORQUE | | | | | TORQUE | | | | TORQUE | | | |
| | Ft./Lbs | | Nm. | | Ft./Lbs. | | Nm. | | | Ft./Lbs. | | Nm. | | Ft./Lbs. | | Nm. | |
| | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX |
| 1/4 - 20 | 6.25 | 7.25 | 8.5 | 10 | 8.25 | 9.5 | 11 | 13 | M6 x 1.00 | 6 | 8 | 8 | 11 | 9 | 11 | 12 | 15 |
| 1/4 - 28 | 8 | 9 | 11 | 12 | 10.5 | 12 | 14 | 16 | M8 x 1.25 | 16 | 20 | 21.5 | 27 | 23 | 27 | 31 | 36.5 |
| 5/16 - 18 | 14 | 15 | 19 | 20 | 18.5 | 20 | 25 | 27 | M10 x 1.50 | 29 | 35 | 39 | 47 | 42 | 52 | 57 | 70 |
| 5/16 - 24 | 17.5 | 19 | 23 | 26 | 23 | 25 | 31 | 34 | M12 x 1.75 | 52 | 62 | 70 | 84 | 75 | 91 | 102 | 123 |
| 3/8 - 16 | 26 | 28 | 35 | 38 | 35 | 37 | 47.5 | 50 | M14 x 2.00 | 85 | 103 | 115 | 139 | 120 | 146 | 163 | 198 |
| 3/8 - 24 | 31 | 34 | 42 | 46 | 41 | 45 | 55.5 | 61 | M16 x 2.50 | 130 | 158 | 176 | 214 | 176 | 216 | 238 | 293 |
| 7/16 - 14 | 41 | 45 | 55.5 | 61 | 55 | 60 | 74.5 | 81 | M18 x 2.50 | 172 | 210 | 233 | 284 | 240 | 294 | 325 | 398 |
| 7/16 - 20 | 51 | 55 | 69 | 74.5 | 68 | 75 | 92 | 102 | M20 x 2.50 | 247 | 301 | 335 | 408 | 343 | 426 | 465 | 577 |
| 1/2 - 13 | 65 | 72 | 88 | 97.5 | 86 | 96 | 116 | 130 | M22 x 2.50 | 332 | 404 | 450 | 547 | 472 | 576 | 639 | 780 |
| 1/2 - 20 | 76 | 84 | 103 | 114 | 102 | 112 | 138 | 152 | M24 x 3.00 | 423 | 517 | 573 | 700 | 599 | 732 | 812 | 992 |
| 9/16 - 12 | 95 | 105 | 129 | 142 | 127 | 140 | 172 | 190 | M27 x 3.00 | 637 | 779 | 863 | 1055 | 898 | 1098 | 1217 | 1488 |
| 9/16 - 18 | 111 | 123 | 150 | 167 | 148 | 164 | 200 | 222 | M30 x 3.00 | 872 | 1066 | 1181 | 1444 | 1224 | 1496 | 1658 | 2027 |
| 5/8 - 11 | 126 | 139 | 171 | 188 | 168 | 185 | 228 | 251 | | | | | | | | | |
| 5/8 - 18 | 152 | 168 | 206 | 228 | 203 | 224 | 275 | 304 | | | | | | | | | |
| 3/4 - 10 | 238 | 262 | 322 | 355 | 318 | 350 | 431 | 474 | | | | | | | | | |
| 3/4 - 16 | 274 | 302 | 371 | 409 | 365 | 402 | 495 | 544 | | | | | | | | | |
| 7/8 - 9 | 350 | 386 | 474 | 523 | 466 | 515 | 631 | 698 | | | | | | | | | |
| 7/8 - 14 | 407 | 448 | 551 | 607 | 543 | 597 | 736 | 809 | | | | | | | | | |
| 1 - 8 | 537 | 592 | 728 | 802 | 716 | 790 | 970 | 1070 | | | | | | | | | |
| 1 - 14 | 670 | 740 | 908 | 1003 | 894 | 987 | 1211 | 1337 | | | | | | | | | |

NOTE: These values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or molydisulphide greases or other extreme pressure lubricants are used

Table 3-6: Torque Specifications for Hydraulic Components

| Type: SAE Part Series - | Cartridge Poppet | | Fittings | | Hoses | |
|-------------------------|------------------|---------|----------|---------|-----------|---------|
| | Ft/Lbs | Nm | Ft/Lbs | Nm | Ft/Lbs | Nm |
| #4 | N/A | N/A | N/A | N/A | 135-145 | 15-16 |
| #6 | N/A | N/A | 10-20 | 14-27 | 215-245 | 24-28 |
| #8 | 25-30 | 34-41 | 25-30 | 34-41 | 430-470 | 49-53 |
| #10 | 35-40 | 47-54 | 35-40 | 47-54 | 680-750 | 77-85 |
| #12 | 85-90 | 115-122 | 85-90 | 115-122 | 950-1050 | 107-119 |
| #16 | 130-140 | 176-190 | 130-140 | 176-190 | 1300-1368 | 147-155 |

Section 4

TROUBLESHOOTING

4.1 INTRODUCTION

This section contains troubleshooting Truth Tables for the Work Platform.

W A R N I N G

When troubleshooting, ensure that the work platform is resting on a firm, level surface.

When performing any service on, or in the Elevating Assembly area, which requires the platform to be raised, the Elevating Assembly must be blocked.

Disconnect the battery ground cable when replacing or testing the continuity of any electrical component.

4.2 GENERAL PROCEDURE

Thoroughly study hydraulic and electronic schematics in **Section 5**. Check for loose connections and short circuits. Check/repair/replace each component in the Truth Table which is listed under each machine function which does not operate properly.

Upright Product Support

UPRIGHT USA TEL: 1-559-891-5200
FAX: 1-559-896-9244

UPRIGHT IRELAND TEL: 353-1-202-4100
FAX: 353-1-202-4105

4.3 ELECTRICAL TROUBLE SHOOTING

Two Wheel Drive, Dual Fuel

Table 4-1: Electronic Truth Table - Two Wheel Drive, Dual Fuel

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOFF |
|------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| ALM | Alarm | | | | OPT | OPT | OPT | | | | X | OPT | | | | X |
| ALT | Alternator | | | | | | | | | X | | | | | | |
| BAT | Battery | | X | X | | | | | | | | | | X | X | |
| C/D | Coil/Distributor | | | | | | | | | | | | | X | X | |
| D1 | Diode, Upper Controller | | X | | | X | X | | | | | X | | | | |
| D2 | Diode, Coil/Distributor | | | | | | | | | | | | | X | X | |
| D3 | Diode, Throttle Solenoid | | | | | | | | | | | | | X | X | |
| D4 | Diode, Throttle Relay | | | | | | | | | | | | | X | X | |
| F1 | Emergency Stop Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F2 | Power Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MOT1 | Starter and Solenoid | | | | | | | | | | | | | X | | |
| MOT2 | Fuel Pump | | | | | | | | | | | | | X | X | |
| PS1 | Oil Pressure Switch | | | | | | | | | | | | | X | X | |
| R1 | Throttle Relay | | | | | | | | | | | | | X | X | |
| R2 | Down Relay | | | | | | | | | | X | | | | | |
| R3 | Ignition Relay | | | | | | | | | | | | | X | X | |
| S1 | Controller Micro Switch, Upper Controls | | X | | X | X | X | | | | | X | | | | |
| S2 | Reverse Micro Switch, Upper Controls | | | | | | | | | | X | X | | | | |
| S3 | Forward Micro Switch, Upper Controls | | | | X | X | | | | | | | | | | |
| S4 | Interlock Micro Switch, Upper Controls | | X | | X | X | X | X | X | | X | X | | | | |
| S5 | Steering Micro Switch, Upper Controls | | | | | | X | X | | | | | | | | |
| S6 | Drive Switch, Upper Controls | | | | | X | X | | | | | X | | | | |
| S7 | Lift Switch, Upper Controls | | | | X | | | | | | X | | | | | |
| S8 | Torque Switch, Upper Controls | | | | | X | | | | | | X | | | | |
| S9 | Ignition Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S10 | Choke Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S11 | Emergency Stop Switch, Upper Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S12 | Starter Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S13 | Choke Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S14 | Engine Stop Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S15 | Emergency Stop Switch, Lower Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S16 | Chassis Platform Switch, Lower Controls | | X | X | | | | | | | | | | | | |
| S17 | Down Switch, Lower Controls | | | X | | | | | | | X | | | | | |
| S18 | Lift Switch, Lower Controls | | | X | X | | | | | | | | | | | |
| S19 | Gasoline Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S20 | Propane Switch, Lower Controls | | | | | | | | | | | | | X | X | |

TROUBLESHOOTING

Table 4-1: Electronic Truth Table - Two Wheel Drive, Dual Fuel (Continued)

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOUT |
|-------|---------------------------------------|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| S21 | Throttle Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S22 | Proximity Switch | | | | X | X | | | | | | X | | | | |
| S23 | Up Limit Switch | | | | X | | | | | | | | | | | |
| SEN | Level Sensor | | X | X | X | X | X | X | X | | | X | | | | X |
| SOL1 | Throttle Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL2 | LP Shutoff Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL3 | LP Valve Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL4 | Gasoline Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL5 | Choke Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL6 | Proportional Solenoid, Valve Block | | X | | X | X | X | | | | | X | | | | |
| SOL7 | Forward Solenoid, Valve Block | | | | | X | | | | | | | | | | |
| SOL8 | Reverse Solenoid, Valve Block | | | | | | | | | | | X | | | | |
| SOL9 | Lift Solenoid, Valve Block | | | | X | | | | | | | | | | | |
| SOL10 | Series Parallel Solenoid, Valve Block | | | | | X | X | | | | | | | X | | |
| SOL11 | Series Parallel Solenoid, Valve Block | | | | | X | X | | | | | | | X | | |
| SOL12 | Down Solenoid, Lift Cylinder | | | | | | | | | | X | | | | | |
| SOL13 | Steer Right Solenoid, Valve Block | | | | | | | | X | | | | | | | |
| SOL14 | Steer Left Solenoid, Valve Block | | | | | | | X | | | | | | | | |

Four Wheel Drive, Dual Fuel

Table 4-2: Electronic Truth Table - Four Drive Wheel, Dual Fuel

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOUT |
|------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| ALM | Alarm | | | | OPT | OPT | OPT | | | | X | OPT | | | | X |
| ALT | Alternator | | | | | | | | | X | | | | | | |
| BAT | Battery | | X | X | | | | | | | | | | X | X | |
| C/D | Coil/Distributor | | | | | | | | | | | | | X | X | |
| D1 | Diode, Upper Controller | | X | | | X | X | | | | | X | | | | |
| D2 | Diode, Coil/Distributor | | | | | | | | | | | | | X | X | |
| D3 | Diode, Throttle Solenoid | | | | | | | | | | | | | X | X | |
| D4 | Diode, Throttle Relay | | | | | | | | | | | | | X | X | |
| F1 | Emergency Stop Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F2 | Power Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F3 | Series Parallel Circuit Breaker | | | | | X | | | | | | X | | | | |
| MOT1 | Starter and Solenoid | | | | | | | | | | | | | X | | |
| MOT2 | Fuel Pump | | | | | | | | | | | | | X | X | |
| PS1 | Oil Pressure Switch | | | | | | | | | | | | | X | X | |
| R1 | Throttle Relay | | | | | | | | | | | | | X | X | |
| R2 | Down Relay | | | | | | | | | | X | | | | | |
| R3 | Ignition Relay | | | | | | | | | | | | | X | X | |
| R5 | Time Delay Relay | | | | | X | | | | | | X | | | | |
| R6 | Series Parallel Relay | | | | | X | X | | | | | X | | | | |
| S1 | Controller Micro Switch, Upper Controls | | X | | X | X | X | | | | | X | | | | |
| S2 | Reverse Micro Switch, Upper Controls | | | | | | | | | | X | X | | | | |
| S3 | Forward Micro Switch, Upper Controls | | | | X | X | | | | | | | | | | |
| S4 | Interlock Micro Switch, Upper Controls | | X | | X | X | X | X | X | | X | X | | | | |
| S5 | Steering Micro Switch, Upper Controls | | | | | | X | X | | | | | | | | |
| S6 | Drive Switch, Upper Controls | | | | | X | X | | | | | X | | | | |
| S7 | Lift Switch, Upper Controls | | | | X | | | | | | X | | | | | |
| S8 | Torque Switch, Upper Controls | | | | | X | | | | | | X | | | | |
| S9 | Ignition Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S10 | Choke Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S11 | Emergency Stop Switch, Upper Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S12 | Starter Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S13 | Choke Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S14 | Engine Stop Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S15 | Emergency Stop Switch, Lower Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S16 | Chassis Platform Switch, Lower Controls | | X | X | | | | | | | | | | | | |
| S17 | Down Switch, Lower Controls | | | X | | | | | | | X | | | | | |
| S18 | Lift Switch, Lower Controls | | | X | X | | | | | | | | | | | |
| S19 | Gasoline Switch, Lower Controls | | | | | | | | | | | | | X | X | |

TROUBLESHOOTING

Section 4.3

Table 4-2: Electronic Truth Table - Four Drive Wheel, Dual Fuel (Continued)

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOFF |
|-------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| S20 | Propane Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S21 | Throttle Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S22 | Proximity Switch | | | | | X | X | | | | | X | | | | |
| S23 | Up Limit Switch | | | | X | | | | | | | | | | | |
| SEN | Level Sensor | X | X | X | X | X | X | X | X | | | X | | | | X |
| SOL1 | Throttle Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL2 | LP Shutoff Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL3 | LP Valve Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL4 | Gasoline Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL5 | Choke Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL6 | Proportional Solenoid, Valve Block | X | | X | X | X | | | | | | X | | | | |
| SOL7 | Forward Solenoid, Valve Block | | | | X | | | | | | | | | | | |
| SOL8 | Reverse Solenoid, Valve Block | | | | | | | | | | | X | | | | |
| SOL9 | Lift Solenoid, Valve Block | | | X | | | | | | | | | | | | |
| SOL10 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL11 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL12 | Down Solenoid, Lift Cylinder | | | | | | | | | X | | | | | | |
| SOL13 | Steer Right Solenoid, Valve Block | | | | | | | | X | | | | | | | |
| SOL14 | Steer Left Solenoid, Valve Block | | | | | | | X | | | | | | | | |
| SOL15 | Shunt Solenoid, Valve Block | | | | X | X | | | | | | X | | | | |
| SOL16 | Series Parallel Solenoid, Front Valve Block | | | | X | X | | | | | | X | | | | |
| SOL17 | Series Parallel Solenoid, Front Valve Block | | | | X | X | | | | | | X | | | | |
| SOL18 | Series Parallel Solenoid, Rear Valve Block | | | | X | X | | | | | | X | | | | |
| SOL19 | Series Parallel Solenoid, Rear Valve Block | | | | X | X | | | | | | X | | | | |

Two Wheel Drive, Diesel

Table 4-3: Electronic Truth Table - Two Wheel Drive, Diesel

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOUT |
|------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| ALM | Alarm | | | | OPT | OPT | OPT | | | | X | OPT | | | | X |
| ALT | Alternator | | | | | | | | | X | | | | | | |
| BAT | Battery | | X | X | | | | | | | | | | X | X | |
| D1 | Diode, Upper Controller | | X | | | X | X | | | | | X | | | | |
| D2 | Diode, Glow Plug Relay | | | | | | | | | | | | | X | X | |
| D3 | Diode, Throttle Solenoid | | | | | | | | | | | | | X | X | |
| D4 | Diode, Throttle Relay | | | | | | | | | | | | | X | X | |
| D5 | Diode, Glow Plug Power | | | | | | | | | | | | | X | X | |
| F1 | Emergency Stop Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F2 | Power Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F3 | Series Parallel Circuit Breaker | | | | | X | | | | | | X | | | | |
| MOT1 | Starter and Solenoid | | | | | | | | | | | | | X | | |
| MOT2 | Fuel Pump | | | | | | | | | | | | | X | X | |
| PS1 | Oil Pressure Switch | | | | | | | | | | | | | X | X | |
| R1 | Throttle Relay | | | | | | | | | | | | | X | X | |
| R2 | Down Relay | | | | | | | | | | X | | | | | |
| R3 | Ignition Relay | | | | | | | | | | | | | X | X | |
| R4 | Glow Plug Relay | | | | | | | | | | | | | X | X | |
| RES1 | Glow Plug | | | | | | | | | | | | | X | X | |
| S1 | Controller Micro Switch, Upper Controls | | X | | X | X | X | | | | | X | | | | |
| S2 | Reverse Micro Switch, Upper Controls | | | | | | | | | | X | X | | | | |
| S3 | Forward Micro Switch, Upper Controls | | | | X | X | | | | | | | | | | |
| S4 | Interlock Micro Switch, Upper Controls | | X | | X | X | X | X | X | | X | X | | | | |
| S5 | Steering Micro Switch, Upper Controls | | | | | | | X | X | | | | | | | |
| S6 | Drive Switch, Upper Controls | | | | | X | X | | | | | X | | | | |
| S7 | Lift Switch, Upper Controls | | | | X | | | | | | X | | | | | |
| S8 | Torque Switch, Upper Controls | | | | | X | | | | | | X | | | | |
| S9 | Ignition Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S10 | Glow Plug Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S11 | Emergency Stop Switch, Upper Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S12 | Starter Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S13 | Glow Plug Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S14 | Engine Stop Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S15 | Emergency Stop Switch, Lower Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S16 | Chassis Platform Switch, Lower Controls | | X | X | | | | | | | | | | | | |
| S17 | Down Switch, Lower Controls | | | X | | | | | | | X | | | | | |
| S18 | Lift Switch, Lower Controls | | | X | X | | | | | | | | | | | |
| S19 | Gasoline Switch, Lower Controls | | | | | | | | | | | | | X | X | |

TROUBLESHOOTING

Section 4.3

Table 4-3: Electronic Truth Table - Two Wheel Drive, Diesel (Continued)

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOFF |
|-------|---------------------------------------|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| S20 | Propane Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S21 | Throttle Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S22 | Proximity Switch | | | | X | X | | | | | | X | | | | |
| SEN | Level Sensor | X | X | X | X | X | X | X | X | | | X | | | | X |
| SOL1 | Throttle Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL5 | Glow Plug Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL6 | Proportional Solenoid, Valve Block | X | | X | X | X | | | | | | X | | | | |
| SOL7 | Forward Solenoid, Valve Block | | | | X | | | | | | | | | | | |
| SOL8 | Reverse Solenoid, Valve Block | | | | | | | | | | | X | | | | |
| SOL9 | Lift Solenoid, Valve Block | | | X | | | | | | | | | | | | |
| SOL10 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL11 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL12 | Down Solenoid, Lift Cylinder | | | | | | | | | | X | | | | | |
| SOL13 | Steer Right Solenoid, Valve Block | | | | | | | | X | | | | | | | |
| SOL14 | Steer Left Solenoid, Valve Block | | | | | | | X | | | | | | | | |

Four Wheel Drive, Diesel

Table 4-4: Electronic Truth Table - Four Wheel Drive, Diesel

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOFF |
|------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| ALM | Alarm | | | | OPT | OPT | OPT | | | | X | OPT | | | | X |
| ALT | Alternator | | | | | | | | | X | | | | | | |
| BAT | Battery | | X | X | | | | | | | | | | X | X | |
| C/D | Coil/Distributor | | | | | | | | | | | | | X | X | |
| D1 | Diode, Upper Controller | | X | | | X | X | | | | | X | | | | |
| D2 | Diode, Glow Plug Relay | | | | | | | | | | | | | X | X | |
| D3 | Diode, Throttle Solenoid | | | | | | | | | | | | | X | X | |
| D4 | Diode, Throttle Relay | | | | | | | | | | | | | X | X | |
| D5 | Diode, Glow Plug Power | | | | | | | | | | | | | X | X | |
| F1 | Emergency Stop Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F2 | Power Circuit Breaker | | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| F3 | Series Parallel Circuit Breaker | | | | | X | | | | | | X | | | | |
| MOT1 | Starter and Solenoid | | | | | | | | | | | | | X | | |
| MOT2 | Fuel Pump | | | | | | | | | | | | | X | X | |
| PS1 | Oil Pressure Switch | | | | | | | | | | | | | X | X | |
| R1 | Throttle Relay | | | | | | | | | | | | | X | X | |
| R2 | Down Relay | | | | | | | | | | X | | | | | |
| R3 | Ignition Relay | | | | | | | | | | | | | X | X | |
| R5 | Time Delay Relay | | | | | X | | | | | | X | | | | |
| R6 | Series Parallel Relay | | | | | X | X | | | | | X | | | | |
| S1 | Controller Micro Switch, Upper Controls | | X | | X | X | X | | | | | X | | | | |
| S2 | Reverse Micro Switch, Upper Controls | | | | | | | | | | X | X | | | | |
| S3 | Forward Micro Switch, Upper Controls | | | | X | X | | | | | | | | | | |
| S4 | Interlock Micro Switch, Upper Controls | | X | | X | X | X | X | X | | X | X | | | | |
| S5 | Steering Micro Switch, Upper Controls | | | | | | | X | X | | | | | | | |
| S6 | Drive Switch, Upper Controls | | | | | X | X | | | | | X | | | | |
| S7 | Lift Switch, Upper Controls | | | | X | | | | | | X | | | | | |
| S8 | Torque Switch, Upper Controls | | | | | X | | | | | | X | | | | |
| S9 | Ignition Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S10 | Glow Plug Switch, Upper Controls | | | | | | | | | | | | | X | X | |
| S11 | Emergency Stop Switch, Upper Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S12 | Starter Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S13 | Glow Plug Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S14 | Engine Stop Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S15 | Emergency Stop Switch, Lower Controls | | X | X | X | X | X | X | X | | X | X | | X | X | X |
| S16 | Chassis Platform Switch, Lower Controls | | X | X | | | | | | | | | | | | |
| S17 | Down Switch, Lower Controls | | | X | | | | | | | X | | | | | |
| S18 | Lift Switch, Lower Controls | | | X | X | | | | | | | | | | | |

TROUBLESHOOTING

Section 4.3

Table 4-4: Electronic Truth Table - Four Wheel Drive, Diesel (Continued)

| | COMPONENT | FUNCTION | UPPER CONTROL FUNCTIONS | LOWER CONTROL FUNCTIONS | LIFT | DRIVE FORWARD | CREEP | STEER LEFT | STEER RIGHT | BATTERY CHARGE | DOWN | DRIVE REVERSE | BRAKES | ENGINE START | ENGINE RUN | TILT WARNING CUTOUT |
|-------|---|----------|-------------------------|-------------------------|------|---------------|-------|------------|-------------|----------------|------|---------------|--------|--------------|------------|---------------------|
| S21 | Throttle Switch, Lower Controls | | | | | | | | | | | | | X | X | |
| S22 | Proximity Switch | | | | X | X | | | | | | X | | | | |
| S23 | Up Limit Switch | | | X | | | | | | | | | | | | |
| SEN | Level Sensor | X | X | X | X | X | X | X | X | | | X | | | | X |
| SOL1 | Throttle Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL5 | Glow Plug Solenoid, Power Module | | | | | | | | | | | | | X | X | |
| SOL6 | Proportional Solenoid, Valve Block | X | | X | X | X | | | | | | X | | | | |
| SOL7 | Forward Solenoid, Valve Block | | | | X | | | | | | | | | | | |
| SOL8 | Reverse Solenoid, Valve Block | | | | | | | | | | | X | | | | |
| SOL9 | Lift Solenoid, Valve Block | | | X | | | | | | | | | | | | |
| SOL10 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL11 | Series Parallel Solenoid, Valve Block | | | | X | X | | | | | | | | X | | |
| SOL12 | Down Solenoid, Lift Cylinder | | | | | | | | | | X | | | | | |
| SOL13 | Steer Right Solenoid, Valve Block | | | | | | | | X | | | | | | | |
| SOL14 | Steer Left Solenoid, Valve Block | | | | | | | X | | | | | | | | |
| SOL15 | Shunt Solenoid, Valve Block | | | | X | X | | | | | | X | | | | |
| SOL16 | Series Parallel Solenoid, Front Valve Block | | | | X | X | | | | | | X | | | | |
| SOL17 | Series Parallel Solenoid, Front Valve Block | | | | X | X | | | | | | X | | | | |
| SOL18 | Series Parallel Solenoid, Rear Valve Block | | | | X | X | | | | | | X | | | | |
| SOL19 | Series Parallel Solenoid, Rear Valve Block | | | | X | X | | | | | | X | | | | |

4.4 HYDRAULIC TROUBLE SHOOTING

XRT27, Two Wheel Drive

Table 4-5: Hydraulic Truth Table - XRT27, Two Wheel Drive

| COMPONENT | | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|-----------|---------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| CV | Check Valve | | | X | X | X | | | | |
| CYL1 | Steering Cylinder | | | | | | X | X | | |
| CYL2 | Lift Cylinder | | X | | | | | | X | |
| CYL4, 5 | Brakes | | | | | | | | | X |
| M1 | Front Drive Motor, Left Side | | | X | X | X | | | | |
| M2 | Front Drive Motor, Right Side | | | X | X | X | | | | |
| ORF1 | Steering Orifice | | | | | | X | X | | |
| ORF2 | Down Orifice | | | | | | | | X | |
| ORF4 | Brake Orifice | | | | | | | | | X |
| P1 | Hydraulic Pump | | X | X | X | X | X | X | | X |
| P2 | Brake Release Pump | | | | | | | | | X |
| RV1 | Steer Relief Valve | | | | | | X | X | | |
| RV2 | Lift Relief Valve | | X | | | | | | | |
| RV3 | Motor Relief Valve, Left Front | | | X | X | X | | | | |
| RV4 | Motor Relief Valve, Right Front | | | X | X | X | | | | |
| RV7 | Pressure Reducing Valve | | | | | | | | | X |
| SV1 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV2 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV3 | Steering Shuttle Valve | | | | | | X | X | | |
| SV4 | Brake Shuttle Valve | | | | | | | | | X |
| V1 | Steering Valve | | | | | | X | X | | |
| V2 | Emergency Down Valve | | | | | | | | X | |
| V3 | Proportional Valve | | X | X | X | X | | | | |
| V4 | Lift Valve | | X | | | | | | | |
| V5 | Forward valve | | | X | | X | | | | |
| V6 | Reverse valve | | | | X | X | | | | |
| V7 | Reverse Counter Balance Valve | | | | X | X | | | | |
| V8 | Forward Counter Balance Valve | | | X | | X | | | | |
| V9 | Series Parallel Valve | | | X | X | X | | | | |
| V10 | Series Parallel Valve | | | X | X | X | | | | |
| V18 | Down Valve, Lower Cylinder | | | | | | | | X | |

TROUBLESHOOTING

Section 4.4

XRT33, Two Wheel Drive

Table 4-6: Hydraulic Truth Table - XRT33, Two Wheel Drive

| COMPONENT | | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|-----------|---------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| CV | Check Valve | | | X | X | X | | | | |
| CYL1 | Steering Cylinder | | | | | | X | X | | |
| CYL2 | Lower Lift Cylinder | | X | | | | | | X | |
| CYL3 | Upper Lift Cylinder | | X | | | | | | X | |
| CYL4, 5 | Brakes | | | | | | | | | X |
| M1 | Front Drive Motor, Left Side | | | X | X | X | | | | |
| M2 | Front Drive Motor, Right Side | | | X | X | X | | | | |
| ORF1 | Steering Orifice | | | | | | X | X | | |
| ORF2, 3 | Down Orifice | | | | | | | | X | |
| ORF4 | Brake Orifice | | | | | | | | | X |
| P1 | Hydraulic Pump | | X | X | X | X | X | X | | X |
| P2 | Brake Release Pump | | | | | | | | | X |
| RV1 | Steer Relief Valve | | | | | | X | X | | |
| RV2 | Lift Relief Valve | | X | | | | | | | |
| RV3 | Motor Relief Valve, Left Front | | | X | X | X | | | | |
| RV4 | Motor Relief Valve, Right Front | | | X | X | X | | | | |
| RV7 | Pressure Reducing Valve | | | | | | | | | X |
| SV1 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV2 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV3 | Steering Shuttle Valve | | | | | | X | X | | |
| SV4 | Brake Shuttle Valve | | | | | | | | | X |
| V1 | Steering Valve | | | | | | X | X | | |
| V2 | Emergency Down Valve | | | | | | | | X | |
| V3 | Proportional Valve | | X | X | X | X | | | | |
| V4 | Lift Valve | | X | | | | | | | |
| V5 | Forward valve | | | X | | X | | | | |
| V6 | Reverse valve | | | | X | X | | | | |
| V7 | Reverse Counter Balance Valve | | | | X | X | | | | |
| V8 | Forward Counter Balance Valve | | | X | | X | | | | |
| V9 | Series Parallel Valve | | | X | X | X | | | | |
| V10 | Series Parallel Valve | | | X | X | X | | | | |
| V18 | Down Valve, Lower Cylinder | | | | | | | | X | |
| V19 | Down Valve, Upper Cylinder | | | | | | | | X | |
| V20 | Velocity Fuse, Lower Cylinder | | X | | | | | | X | |
| V21 | Velocity Fuse, Upper Cylinder | | X | | | | | | X | |

XRT27, Four Wheel Drive

Table 4-7: Hydraulic Truth Table - XRT27, Four Wheel Drive

| | COMPONENT | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|---------|---------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| CV | Check Valve | | | X | X | X | | | | |
| CYL1 | Steering Cylinder | | | | | | X | X | | |
| CYL2 | Lift Cylinder | | X | | | | | | X | |
| CYL4, 5 | Brakes | | | | | | | | | X |
| FD1 | Flow Divider, Main Valve Block | | | X | X | X | | | | |
| FD2 | Flow Divider, Front Valve Block | | | X | X | X | | | | |
| FD3 | Flow Divider, Rear Valve Block | | | X | X | X | | | | |
| M1 | Front Drive Motor, Left Side | | | X | X | X | | | | |
| M2 | Front Drive Motor, Right Side | | | X | X | X | | | | |
| M3 | Rear Drive Motor, Left Side | | | X | X | X | | | | |
| M4 | Rear Drive Motor, Right Side | | | X | X | X | | | | |
| ORF1 | Steering Orifice | | | | | | X | X | | |
| ORF2 | Down Orifice | | | | | | | | X | |
| ORF4 | Brake Orifice | | | | | | | | | X |
| ORF5 | Slip Orifice, Front | | | X | X | X | | | | |
| ORF6 | Slip Orifice, Rear | | | X | X | X | | | | |
| P1 | Hydraulic Pump | | X | X | X | X | X | X | | X |
| P2 | Brake Release Pump | | | | | | | | | X |
| RV1 | Steer Relief Valve | | | | | | X | X | | |
| RV2 | Lift Relief Valve | | X | | | | | | | |
| RV3 | Motor Relief Valve, Left Front | | | X | X | X | | | | |
| RV4 | Motor Relief Valve, Right Front | | | X | X | X | | | | |
| RV5 | Motor Relief Valve, Left Rear | | | X | X | X | | | | |
| RV6 | Motor Relief Valve, Right Rear | | | X | X | X | | | | |
| RV7 | Pressure Reducing Valve | | | | | | | | | X |
| SV1 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV2 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV3 | Steering Shuttle Valve | | | | | | X | X | | |
| SV4 | Brake Shuttle Valve | | | | | | | | | X |
| V1 | Steering Valve | | | | | | X | X | | |
| V2 | Emergency Down Valve | | | | | | | X | | |
| V3 | Proportional Valve | | X | X | X | X | | | | |
| V4 | Lift Valve | | X | | | | | | | |
| V5 | Forward valve | | | X | | X | | | | |
| V6 | Reverse valve | | | | X | X | | | | |
| V7 | Reverse Counter Balance Valve | | | | X | X | | | | |
| V8 | Forward Counter Balance Valve | | | X | | X | | | | |
| V9 | Series Parallel Valve | | | X | X | X | | | | |
| V10 | Series Parallel Valve | | | X | X | X | | | | |
| V11 | Shunt Valve | | | X | X | X | | | | |

TROUBLESHOOTING

Section 4.4

Table 4-7: Hydraulic Truth Table - XRT27, Four Wheel Drive (Continued)

| | COMPONENT | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|---------|-------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| V12, 13 | Series Parallel Valves, Front | | | X | X | X | | | | |
| V14, 15 | Diverter Valves, Rear | | | X | X | X | | | | |
| V16, 17 | Series Parallel Valves, Rear | | | X | X | X | | | | |
| V18 | Down Valve, Lower Cylinder | | | | | | | | X | |

XRT33, Four Wheel Drive

Table 4-8: Hydraulic Truth Table - XRT33, Four Wheel Drive

| COMPONENT | | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|-----------|---------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| CV | Check Valve | | | X | X | X | | | | |
| CYL1 | Steering Cylinder | | | | | | X | X | | |
| CYL2 | Lower Lift Cylinder | | X | | | | | | X | |
| CYL3 | Upper Lift Cylinder | | X | | | | | | X | |
| CYL4, 5 | Brakes | | | | | | | | | X |
| FD1 | Flow Divider, Main Valve Block | | | X | X | X | | | | |
| FD2 | Flow Divider, Front Valve Block | | | X | X | X | | | | |
| FD3 | Flow Divider, Rear Valve Block | | | X | X | X | | | | |
| M1 | Front Drive Motor, Left Side | | | X | X | X | | | | |
| M2 | Front Drive Motor, Right Side | | | X | X | X | | | | |
| M3 | Rear Drive Motor, Left Side | | | X | X | X | | | | |
| M4 | Rear Drive Motor, Right Side | | | X | X | X | | | | |
| ORF1 | Steering Orifice | | | | | | X | X | | |
| ORF2, 3 | Down Orifice | | | | | | | | X | |
| ORF4 | Brake Orifice | | | | | | | | | X |
| ORF5 | Slip Orifice, Front | | | X | X | X | | | | |
| ORF6 | Slip Orifice, Rear | | | X | X | X | | | | |
| P1 | Hydraulic Pump | | X | X | X | X | X | X | | X |
| P2 | Brake Release Pump | | | | | | | | | X |
| RV1 | Steer Relief Valve | | | | | | X | X | | |
| RV2 | Lift Relief Valve | | X | | | | | | | |
| RV3 | Motor Relief Valve, Left Front | | | X | X | X | | | | |
| RV4 | Motor Relief Valve, Right Front | | | X | X | X | | | | |
| RV5 | Motor Relief Valve, Left Rear | | | X | X | X | | | | |
| RV6 | Motor Relief Valve, Right Rear | | | X | X | X | | | | |
| RV7 | Pressure Reducing Valve | | | | | | | | | X |
| SV1 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV2 | Shuttle Valve | | X | X | X | X | X | X | | |
| SV3 | Steering Shuttle Valve | | | | | | X | X | | |
| SV4 | Brake Shuttle Valve | | | | | | | | | X |
| V1 | Steering Valve | | | | | | X | X | | |
| V2 | Emergency Down Valve | | | | | | | | X | |
| V3 | Proportional Valve | | X | X | X | X | | | | |
| V4 | Lift Valve | | X | | | | | | | |
| V5 | Forward valve | | | X | | X | | | | |
| V6 | Reverse valve | | | | X | X | | | | |
| V7 | Reverse Counter Balance Valve | | | | X | | | | | |
| V8 | Forward Counter Balance Valve | | | X | | | | | | |
| V9 | Series Parallel Valve | | | X | X | X | | | | |
| V10 | Series Parallel Valve | | | X | X | X | | | | |

TROUBLESHOOTING

Section 4.4

Table 4-8: Hydraulic Truth Table - XRT33, Four Wheel Drive (Continued)

| COMPONENT | | FUNCTION | LIFT | DRIVE FORWARD | DRIVE REVERSE | CREEP | STEER LEFT | STEER RIGHT | DOWN | BRAKES |
|-----------|-------------------------------|----------|------|---------------|---------------|-------|------------|-------------|------|--------|
| | | | | | | | | | | |
| V11 | Shunt Valve | | | X | X | X | | | | |
| V12, 13 | Series Parallel Valves, Front | | | X | X | X | | | | |
| V14, 15 | Diverter Valves, Rear | | | X | X | X | | | | |
| V16, 17 | Series Parallel Valves, Rear | | | X | X | X | | | | |
| V18 | Down Valve, Lower Cylinder | | | | | | | | X | |
| V19 | Down Valve, Upper Cylinder | | | | | | | | X | |
| V20 | Velocity Fuse, Lower Cylinder | | X | | | | | | X | |
| V21 | Velocity Fuse, Upper Cylinder | | X | | | | | | X | |

NOTES

Section 5

SCHEMATICS

5.1 INTRODUCTION

This section contains electrical and hydraulic power schematics and associated information for maintenance purposes.

The diagrams are to be used in conjunction with the ***Troubleshooting Truth Tables*** in **Section 4**. They allow understanding of the makeup and functions of the systems for checking, tracing, and faultfinding during troubleshooting analysis.

The components that comprise the electrical and hydraulic systems are given a reference designation and are explained as to function and location in the following tables.

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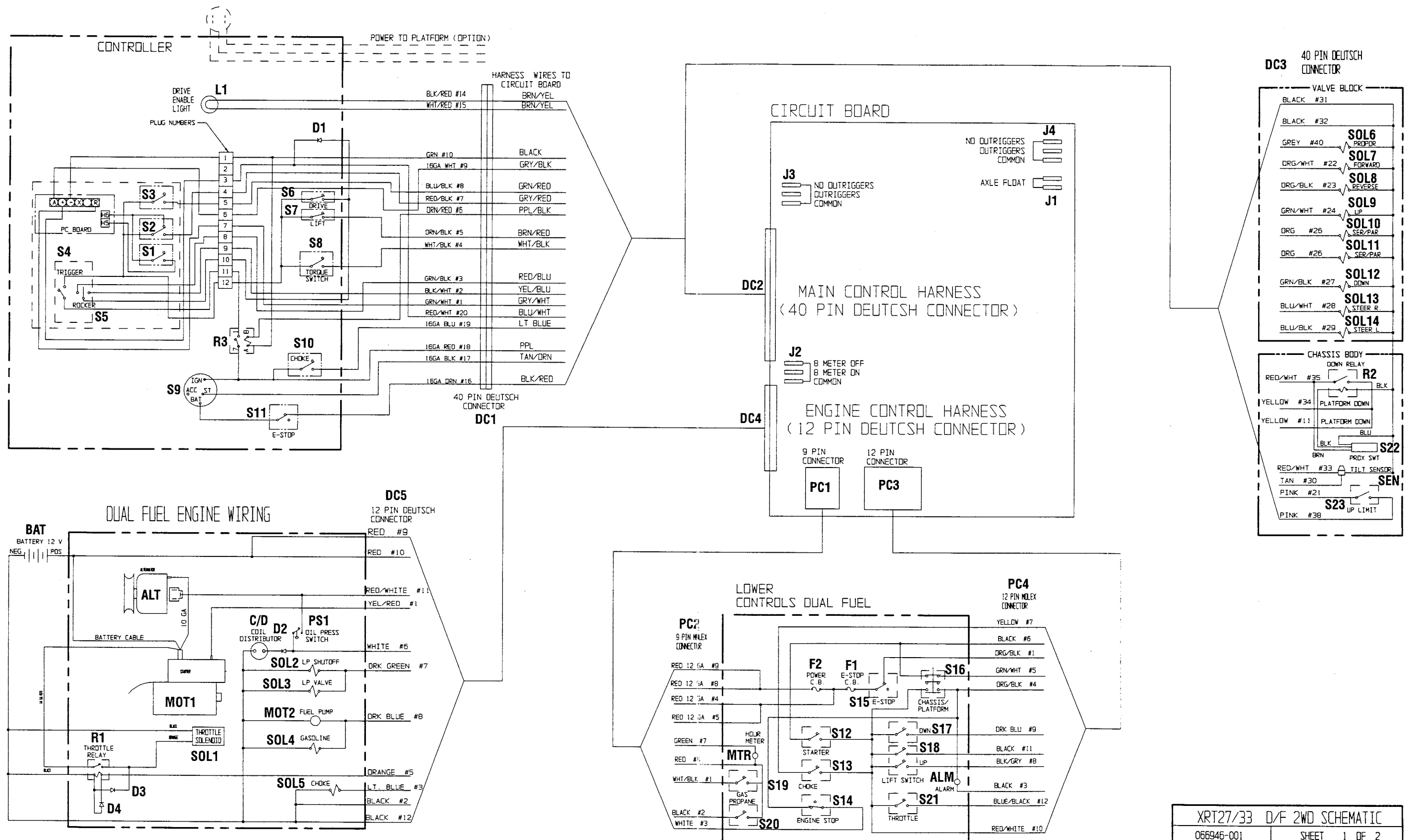
5.2 ELECTRICAL SCHEMATIC - XRT 27 & 33 2-WHEEL DRIVE, DUAL FUEL

Table 5-1: Legend, Electrical Schematic, 2-Wheel Drive Dual Fuel

| Reference Designation | Name | Function | Location |
|-----------------------|--------------------------------|--|-------------------|
| ALM | Alarm | Warning Sound | Lower Control Box |
| ALT | Alternator | Maintain Current | Power Module |
| BAT | Battery | Starting Power | |
| C/D | Coil/Distributor | Provide Spark to Engine | Power Module |
| D1 | Diode | Power to Upper Controller PC Board | Upper Controls |
| D2 | Diode | Power to Coil/Distributor | Power Module |
| D3 | Diode | Power to Throttle Solenoid | Power Module |
| D4 | Diode | Power to Throttle Relay | Power Module |
| DC1 | Deutsch Connector | Connect Upper Controller to Circuit Board | Upper Controls |
| DC2 | Deutsch Connector | Connect Upper Controller, Valve Block and Chassis to Circuit Board | Circuit Board |
| DC3 | Deutsch Connector | Connect Valve Block and Chassis to Circuit Board | Control Module |
| DC4 | Deutsch Connector | Connect Power Module to Circuit Board | Circuit Board |
| DC5 | Deutsch Connector | Connect Power Module to Circuit Board | Power Module |
| F1 | Emergency Stop Circuit Breaker | Power to Upper Control Ignition Switch | Lower Controls |
| F2 | Power Circuit Breaker | Power to all function solenoids | Lower Controls |
| L1 | Drive Enable Light | Indicates Drive Enabled | Upper Controls |
| J1 | Jumper | Axle Float Setting | Circuit Board |
| J2 | Jumper | 8 Meter Limit Setting | Circuit Board |
| J3 | Jumper | Outrigger Option | Circuit Board |
| J4 | Jumper | Outrigger Option | Circuit Board |
| MOT1 | Starter and Solenoid | Start Engine | Power Module |
| MOT2 | Fuel Pump | Supplies Gasoline to Engine | Power Module |
| MTR | Hour Meter | Displays Operating Time | Lower Controls |
| PC1 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC2 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PC3 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC4 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PS1 | Oil Pressure Switch | Cut Power to Engine when Oil Pressure Too Low | Power Module |
| R1 | Throttle Relay | Power to Throttle Solenoid | Power Module |
| R2 | Down Relay | Power to Down Solenoid | Control Module |
| R3 | Ignition Relay | Enable Engine Start | Upper Controls |
| S1 | Micro Switch | Power to Controller | Upper Controls |
| S2 | Reverse Micro Switch | Power to Drive/Lift Relay, Reverse/Down Contacts | Upper Controls |
| S3 | Forward Micro Switch | Power to Drive/Lift Relay, Forward/Up Contacts | Upper Controls |

| Reference Designation | Name | Function | Location |
|-----------------------|--------------------------|---|------------------------------------|
| S4 | Interlock Micro Switch | Interrupts Power to Controller when Not Engaged | Upper Controls, In Joystick Handle |
| S5 | Steering Micro Switch | Power to Left and Right Steer Relays | Upper Controls, In Joystick Handle |
| S6 | Drive Switch | Power to S5 (Drive) | Upper Controls |
| S7 | Lift Switch | Power to Drive/Lift Relay | Upper Controls |
| S8 | Torque Switch | Power to Series Parallel Relay | Upper Controls |
| S9 | Ignition Switch | Power to Upper Controls, Engine and Starter Motor | Upper Controls |
| S10 | Choke Switch | Power to Choke Relay | Upper Controls |
| S11 | Emergency Stop Switch | Cut Power to Upper Controls and Engine | Upper Controls |
| S12 | Starter Switch | Power to Starter Motor | Lower Controls |
| S13 | Choke Switch | Power to Choke Relay | Lower Controls |
| S14 | Engine Stop Switch | Cut Power to Power Relay | Lower Controls |
| S15 | Emergency Stop Switch | Cut Power to Lower Controls and Engine | Lower Controls |
| S16 | Chassis Platform Switch | Power to Either Upper or Lower Controls | Lower Controls |
| S17 | Down Switch | Power to Down Relay | Lower Controls |
| S18 | Lift Switch | Power to Up Relay | Lower Controls |
| S19 | Gasoline Switch | Power to Fuel Pump Solenoid | Lower Controls |
| S20 | Propane Switch | Power to Propane Valve Solenoids | Lower Controls |
| S21 | Throttle Switch | Power to Throttle Relay | Lower Controls |
| S22 | Proximity Switch | Limits Drive Height to Eight Meters | Chassis |
| S23 | Up Limit Switch | Prevents Full Extension of Lift Cylinders | Chassis |
| SEN | Level Sensor | Power to Cutout Relay when Machine is Level | Chassis |
| SOL1 | Throttle Solenoid | Control Engine Speed | Power Module |
| SOL2 | LP Shutoff Solenoid | Control Propane Valve | Power Module |
| SOL3 | LP Valve Solenoid | Control Propane Valve | Power Module |
| SOL4 | Gasoline Solenoid | Control Gasoline Valve | Power Module |
| SOL5 | Choke Solenoid | Control Choke | Power Module |
| SOL6 | Proportional Solenoid | Control Proportional Valve | Valve Block |
| SOL7 | Forward Solenoid | Control Forward Valve | Valve Block |
| SOL8 | Reverse Solenoid | Control Reverse Valve | Valve Block |
| SOL9 | Lift Solenoid | Control Lift Valve | Valve Block |
| SOL10, 11 | Series/Parallel Solenoid | Control Series/Parallel Valves | Valve Block |
| SOL12 | Down Solenoid | Control Down Valve | Lift Cylinder |
| SOL13 | Steer Right Solenoid | Control Steering Valve | Valve Block |
| SOL14 | Steer Left Solenoid | Control Steering Valve | Valve Block |

SCHEMATICS



XRT27/33 D/F 2WD SCHEMATIC
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Figure 5-1: Electrical Schematic, 2-Wheel Drive, Dual Fuel

5.3 PRINTED CIRCUIT BOARD - XRT 27 & 33 2-WHEEL DRIVE, DUAL FUEL

Table 5-2: Legend, Printed Circuit Board, 2-Wheel Drive Dual Fuel

| Reference Designation | Name | Function |
|------------------------------|--------------------------------|--|
| DS1 | Dip Switch | Configure Circuit Board for proper operation |
| J1 | Jumper - Axle Float Setting | Configure Circuit Board for Axle Float |
| J2 | Jumper - 8 Meter Limit Setting | Configure Circuit Board for 8 Meter Limit Switch |
| J3 | Jumper - Outrigger Option | Configure Circuit Board for Outrigger Option |
| J4 | Jumper - Outriggers | Configure Circuit Board for Outrigger Functions |

SCHEMATICS

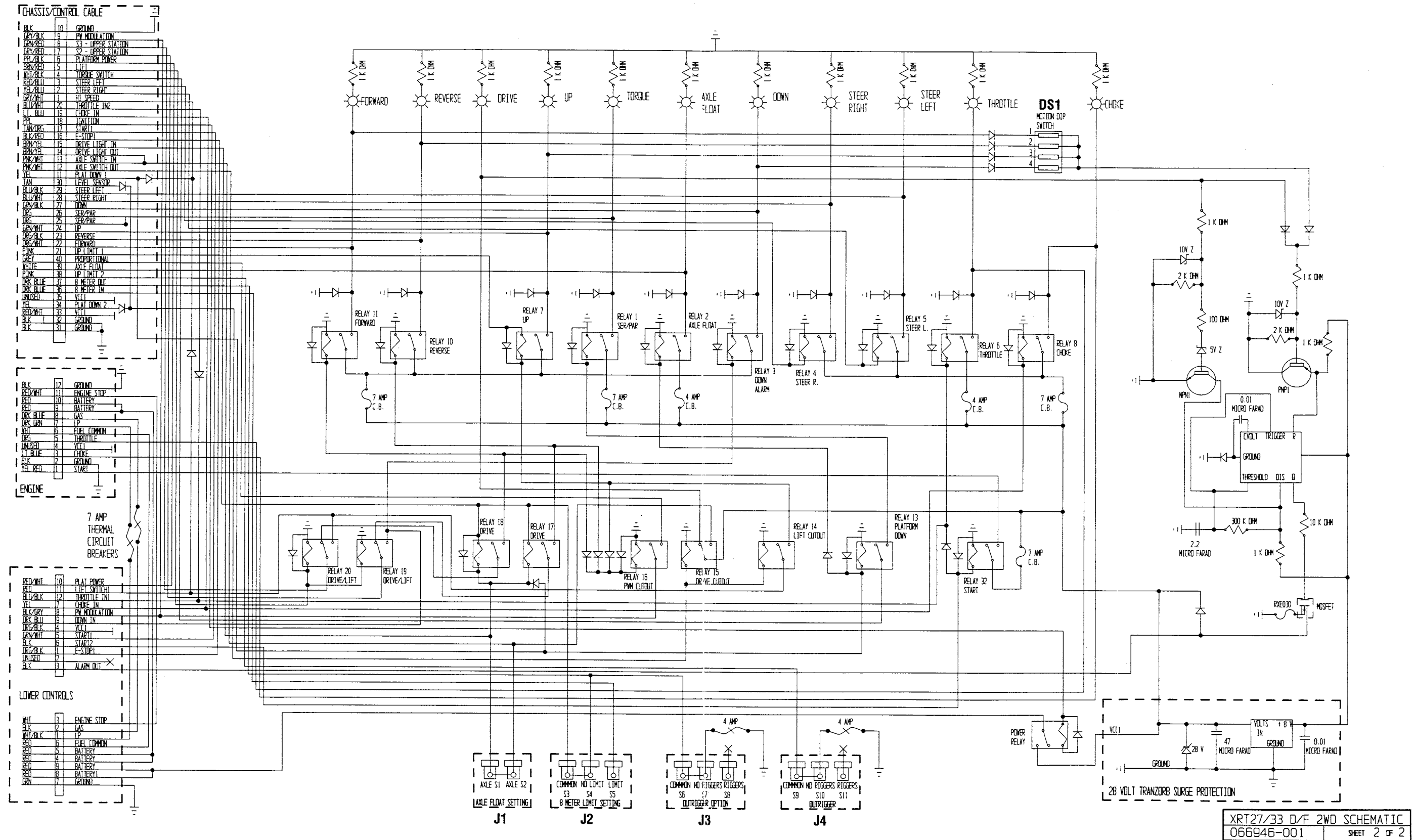


Figure 5-2: Printed Circuit Board, 2-Wheel Drive Dual Fuel

XRT27/33 D/F 2WD SCHEMATIC
066946-001 SHEET 2 OF 2

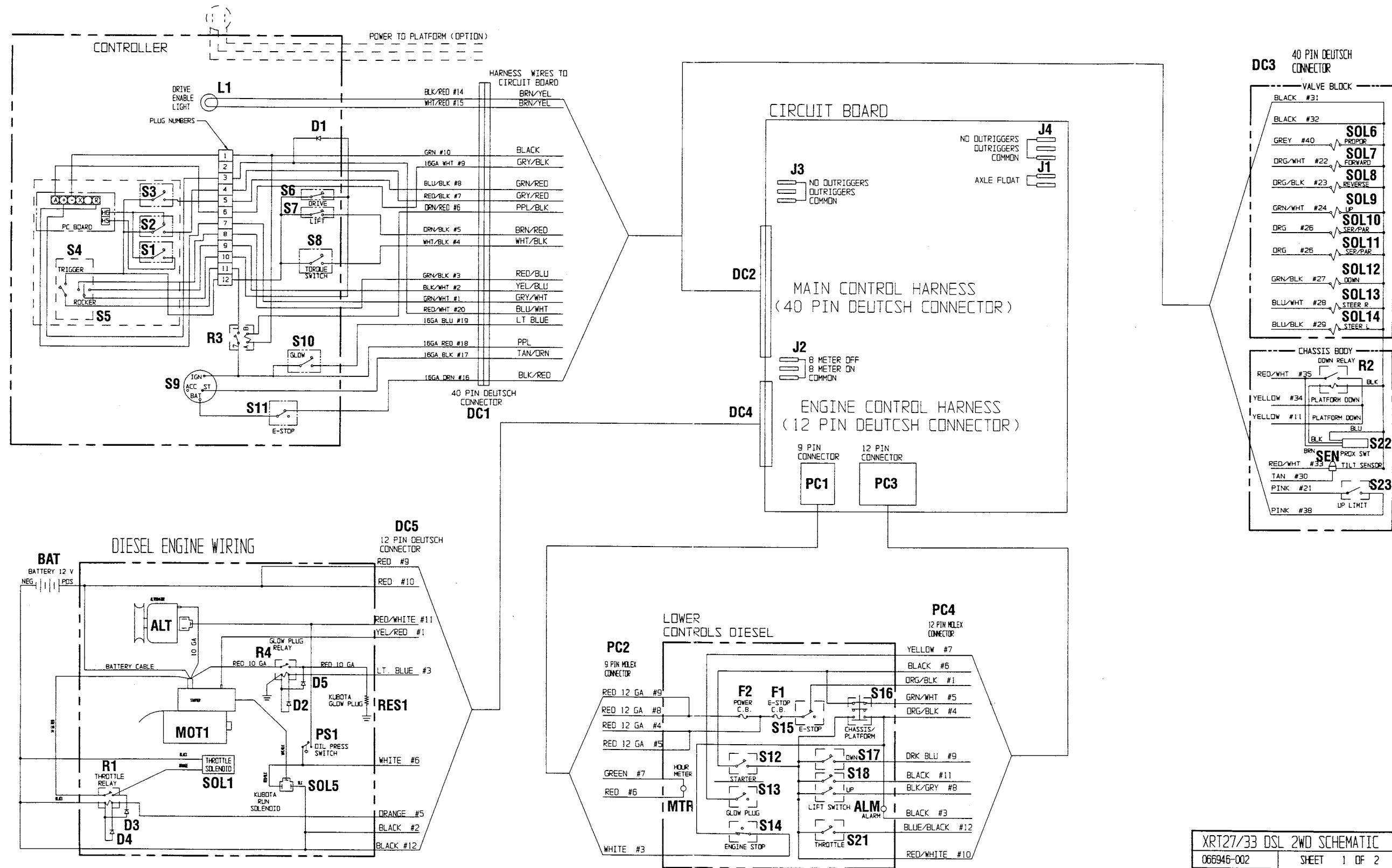
5.4 ELECTRICAL SCHEMATIC - XRT 27 & 33 2-WHEEL DRIVE, DIESEL

Table 5-3: Legend, Electrical Schematic, 2-Wheel Drive Diesel

| Reference Designation | Name | Function | Location |
|-----------------------|--------------------------------|--|------------------------------------|
| ALM | Alarm | Warning Sound | Lower Control Box |
| ALT | Alternator | Maintain Current | Power Module |
| BAT | Battery | Starting Power | |
| D1 | Diode | Power to Upper Controller PC Board | Upper Controls |
| D2 | Diode | Power to Glow Plug Relay | Power Module |
| D3 | Diode | Power to Throttle Solenoid | Power Module |
| D4 | Diode | Power to Throttle Relay | Power Module |
| D5 | Diode | Power to Glow Plug | Power Module |
| DC1 | Deutsch Connector | Connect Upper Controller to Circuit Board | Upper Controls |
| DC2 | Deutsch Connector | Connect Upper Controller, Valve Block and Chassis to Circuit Board | Circuit Board |
| DC3 | Deutsch Connector | Connect Valve Block and Chassis to Circuit Board | Control Module |
| DC4 | Deutsch Connector | Connect Power Module to Circuit Board | Circuit Board |
| DC5 | Deutsch Connector | Connect Power Module to Circuit Board | Power Module |
| F1 | Emergency Stop Circuit Breaker | Power to Upper Control Ignition Switch | Lower Controls |
| F2 | Power Circuit Breaker | Power to all function solenoids | Lower Controls |
| L1 | Drive Enable Light | Indicates Drive Enabled | Upper Controls |
| J1 | Jumper | Axle Float Setting | Circuit Board |
| J2 | Jumper | 8 Meter Limit Setting | Circuit Board |
| J3 | Jumper | Outrigger Option | Circuit Board |
| J4 | Jumper | Outrigger Option | Circuit Board |
| MOT1 | Starter and Solenoid | Start Engine | Power Module |
| MTR | Hour Meter | Displays Operating Time | Lower Controls |
| PC1 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC2 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PC3 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC4 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PS1 | Oil Pressure Switch | Cut Power to Engine when Oil Pressure Too Low | Power Module |
| R1 | Throttle Relay | Power to Throttle Solenoid | Power Module |
| R2 | Down Relay | Power to Down Solenoid | Control Module |
| R3 | Ignition Relay | Enable Engine Start | Upper Controls |
| R4 | Glow Plug Relay | Power to Glow Plug | Power Module |
| RES1 | Glow Plug | Heat to Start Engine | Engine |
| S1 | Micro Switch | Power to Controller | Upper Controls |
| S2 | Reverse Micro Switch | Power to Drive/Lift Relay, Reverse/Down Contacts | Upper Controls |
| S3 | Forward Micro Switch | Power to Drive/Lift Relay, Forward/Up Contacts | Upper Controls |
| S4 | Interlock Micro Switch | Interrupts Power to Controller when Not Engaged | Upper Controls, In Joystick Handle |
| S5 | Steering Micro Switch | Power to Left and Right Steer Relays | Upper Controls, In Joystick Handle |

| Reference Designation | Name | Function | Location |
|-----------------------|--------------------------|---|----------------|
| S6 | Drive Switch | Power to S5 (Drive) | Upper Controls |
| S7 | Lift Switch | Power to Drive/Lift Relay | Upper Controls |
| S8 | Torque Switch | Power to Series Parallel Relay | Upper Controls |
| S9 | Ignition Switch | Power to Upper Controls, Engine and Starter Motor | Upper Controls |
| S10 | Glow Plug Switch | Power to Glow Plug Relay | Upper Controls |
| S11 | Emergency Stop Switch | Cut Power to Upper Controls and Engine | Upper Controls |
| S12 | Starter Switch | Power to Starter Motor | Lower Controls |
| S13 | Glow Plug Switch | Power to Glow Plug Relay | Lower Controls |
| S14 | Engine Stop Switch | Cut Power to Power Relay | Lower Controls |
| S15 | Emergency Stop Switch | Cut Power to Lower Controls and Engine | Lower Controls |
| S16 | Chassis Platform Switch | Power to Either Upper or Lower Controls | Lower Controls |
| S17 | Down Switch | Power to Down Relay | Lower Controls |
| S18 | Lift Switch | Power to Up Relay | Lower Controls |
| S21 | Throttle Switch | Power to Throttle Relay | Lower Controls |
| S22 | Proximity Switch | Limits Drive Height to Eight Meters | Chassis |
| S23 | Up Limit Switch | Prevents Full Extension of Lift Cylinders | Chassis |
| SEN | Level Sensor | Power to Cutout Relay when Machine is Level | Chassis |
| SOL1 | Throttle Solenoid | Control Engine Speed | Power Module |
| SOL5 | Run Solenoid | Allows Engine to Run with Proper Oil Pressure | Power Module |
| SOL6 | Proportional Solenoid | Control Proportional Valve | Valve Block |
| SOL7 | Forward Solenoid | Control Forward Valve | Valve Block |
| SOL8 | Reverse Solenoid | Control Reverse Valve | Valve Block |
| SOL9 | Lift Solenoid | Control Lift Valve | Valve Block |
| SOL10, 11 | Series/Parallel Solenoid | Control Series/Parallel Valves | Valve Block |
| SOL12 | Down Solenoid | Control Down Valve | Lift Cylinder |
| SOL13 | Steer Right Solenoid | Control Steering Valve | Valve Block |
| SOL14 | Steer Left Solenoid | Control Steering Valve | Valve Block |

SCHEMATICS



XRT27/33 DSL 2WD SCHEMATIC
066945-002 SHEET 1 OF 2

Figure 5-3: Electrical Schematic, 2-Wheel Drive Diesel

5.5 PRINTED CIRCUIT BOARD - XRT 27 & 33 2-WHEEL DRIVE, DIESEL

Table 5-4: Legend, Printed Circuit Board, 2-Wheel Drive Diesel

| Reference Designation | Name | Function |
|-----------------------|--------------------------------|----------|
| DS1 | Dip Switch | |
| J1 | Jumper - Axle Float Setting | |
| J2 | Jumper - 8 Meter Limit Setting | |
| J3 | Jumper - Outrigger Option | |
| J4 | Jumper - Outriggers | |

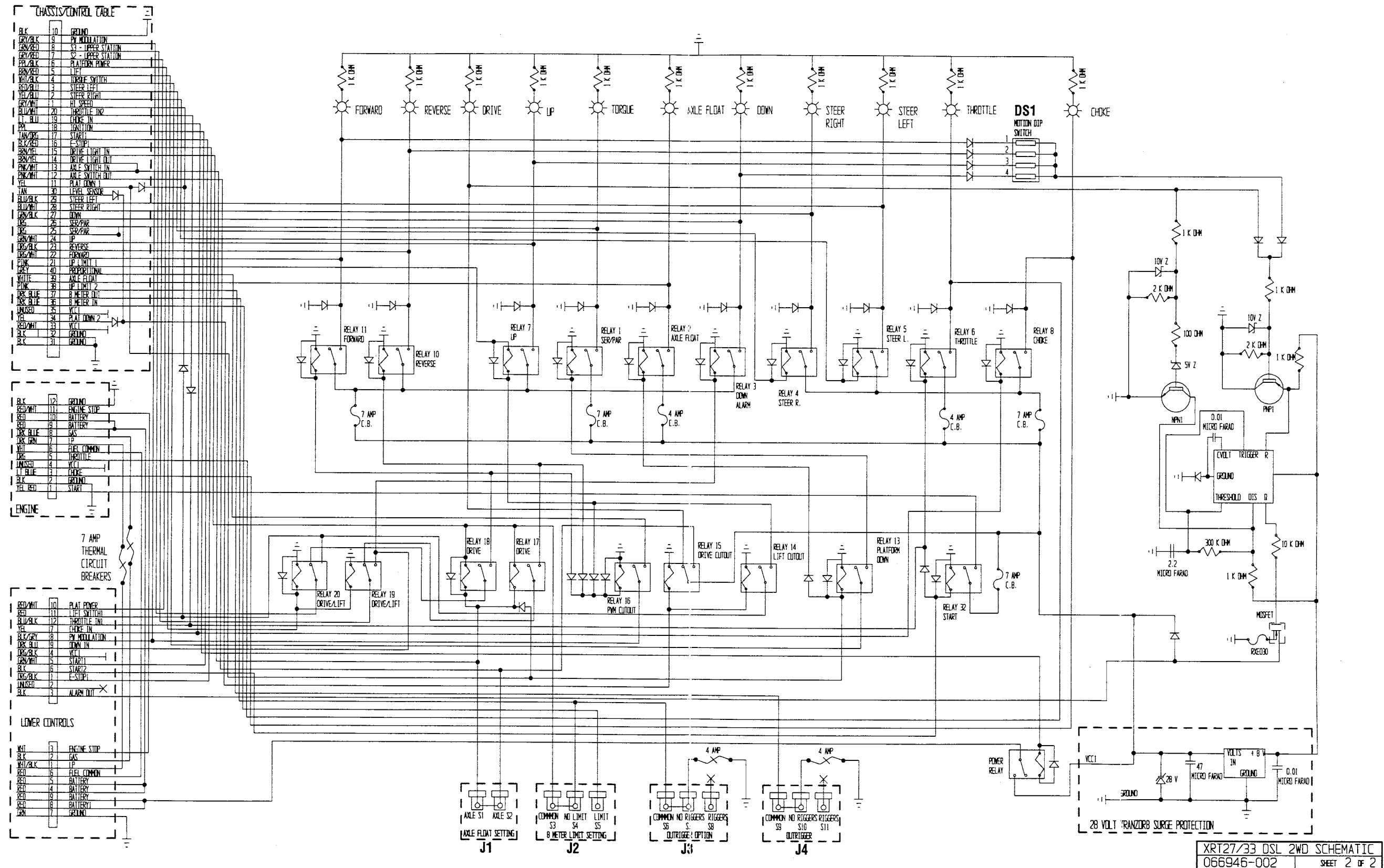


Figure 5-4: Printed Circuit Board, 2-Wheel Drive Diesel

XRT27/33 DSL 2WD SCHEMATIC
066946-002 SHEET 2 OF 2

5.6 ELECTRICAL SCHEMATIC - XRT 27 & 33 4-WHEEL DRIVE, DUAL FUEL

Table 5-5: Legend, Electrical Schematic, 4-Wheel Drive, Dual Fuel

| Reference Designation | Name | Function | Location |
|-----------------------|---------------------------------|--|-------------------|
| ALM | Alarm | Warning Sound | Lower Control Box |
| ALT | Alternator | Maintain Current | Power Module |
| BAT | Battery | Starting Power | |
| C/D | Coil/Distributor | Provide Spark to Engine | Power Module |
| D1 | Diode | Power to Upper Controller PC Board | Upper Controls |
| D2 | Diode | Power to Coil/Distributor | Power Module |
| D3 | Diode | Power to Throttle Solenoid | Power Module |
| D4 | Diode | Power to Throttle Relay | Power Module |
| DC1 | Deutsch Connector | Connect Upper Controller to Circuit Board | Upper Controls |
| DC2 | Deutsch Connector | Connect Upper Controller, Valve Block and Chassis to Circuit Board | Circuit Board |
| DC3 | Deutsch Connector | Connect Valve Block and Chassis to Circuit Board | Control Module |
| DC4 | Deutsch Connector | Connect Power Module to Circuit Board | Circuit Board |
| DC5 | Deutsch Connector | Connect Power Module to Circuit Board | Power Module |
| F1 | Emergency Stop Circuit Breaker | Power to Upper Control Ignition Switch | Lower Controls |
| F2 | Power Circuit Breaker | Power to all function solenoids | Lower Controls |
| F3 | Series Parallel Circuit Breaker | Power to Series Parallel Relay | Lower Controls |
| L1 | Drive Enable Light | Indicates Drive Enabled | Upper Controls |
| J1 | Jumper | Axle Float Setting | Circuit Board |
| J2 | Jumper | 8 Meter Limit Setting | Circuit Board |
| J3 | Jumper | Outtrigger Option | Circuit Board |
| J4 | Jumper | Outtrigger Option | Circuit Board |
| MOT1 | Starter and Solenoid | Start Engine | Power Module |
| MOT2 | Fuel Pump | Supplies Gasoline to Engine | Power Module |
| MTR | Hour Meter | Displays Operating Time | Lower Controls |
| PC1 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC2 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PC3 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC4 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PS1 | Oil Pressure Switch | Cut Power to Engine when Oil Pressure Too Low | Power Module |
| R1 | Throttle Relay | Power to Throttle Solenoid | Power Module |
| R2 | Down Relay | Power to Down Solenoid | Control Module |
| R3 | Ignition Relay | Enable Engine Start | Upper Controls |
| R5 | Time Delay relay | | Upper Controls |
| R6 | Series Parallel Relay | Power to Series Parallel Solenoids | Lower Controls |
| S1 | Micro Switch | Power to Controller | Upper Controls |
| S2 | Reverse Micro Switch | Power to Drive/Lift Relay, Reverse/Down Contacts | Upper Controls |
| S3 | Forward Micro Switch | Power to Drive/Lift Relay, Forward/Up Contacts | Upper Controls |

| Reference Designation | Name | Function | Location |
|-----------------------|---------------------------|---|------------------------------------|
| S4 | Interlock Micro Switch | Interrupts Power to Controller when Not Engaged | Upper Controls, In Joystick Handle |
| S5 | Steering Micro Switch | Power to Left and Right Steer Relays | Upper Controls, In Joystick Handle |
| S6 | Drive Switch | Power to S5 (Drive) | Upper Controls |
| S7 | Lift Switch | Power to Drive/Lift Relay | Upper Controls |
| S8 | Torque Switch | Power to Series Parallel Relay | Upper Controls |
| S9 | Ignition Switch | Power to Upper Controls, Engine and Starter Motor | Upper Controls |
| S10 | Choke Switch | Power to Choke Relay | Upper Controls |
| S11 | Emergency Stop Switch | Cut Power to Upper Controls and Engine | Upper Controls |
| S12 | Starter Switch | Power to Starter Motor | Lower Controls |
| S13 | Choke Switch | Power to Choke Relay | Lower Controls |
| S14 | Engine Stop Switch | Cut Power to Power Relay | Lower Controls |
| S15 | Emergency Stop Switch | Cut Power to Lower Controls and Engine | Lower Controls |
| S16 | Chassis Platform Switch | Power to Either Upper or Lower Controls | Lower Controls |
| S17 | Down Switch | Power to Down Relay | Lower Controls |
| S18 | Lift Switch | Power to Up Relay | Lower Controls |
| S19 | Gasoline Switch | Power to Fuel Pump Solenoid | Lower Controls |
| S20 | Propane Switch | Power to Propane Valve Solenoids | Lower Controls |
| S21 | Throttle Switch | Power to Throttle Relay | Lower Controls |
| S22 | Proximity Switch | Limits Drive Height to Eight Meters | Chassis |
| S23 | Up Limit Switch | Prevents Full Extension of Lift Cylinders | Chassis |
| SEN | Level Sensor | Power to Cutout Relay when Machine is Level | Chassis |
| SOL1 | Throttle Solenoid | Control Engine Speed | Power Module |
| SOL2 | LP Shutoff Solenoid | Control Propane Valve | Power Module |
| SOL3 | LP Valve Solenoid | Control Propane Valve | Power Module |
| SOL4 | Gasoline Solenoid | Control Gasoline Valve | Power Module |
| SOL5 | Choke Solenoid | Control Choke | Power Module |
| SOL6 | Proportional Solenoid | Control Proportional Valve | Valve Block |
| SOL7 | Forward Solenoid | Control Forward Valve | Valve Block |
| SOL8 | Reverse Solenoid | Control Reverse Valve | Valve Block |
| SOL9 | Lift Solenoid | Control Lift Valve | Valve Block |
| SOL10, 11 | Series/Parallel Solenoids | Control Series/Parallel Valves | Valve Block |
| SOL12 | Down Solenoid | Control Down Valve | Lift Cylinder |
| SOL13 | Steer Right Solenoid | Control Steering Valve | Valve Block |
| SOL14 | Steer Left Solenoid | Control Steering Valve | Valve Block |
| SOL15 | Shunt Solenoid | | Valve Block |
| SOL16, 17 | Series Parallel Solenoids | Control Front Series/Parallel Valves | Front Series Parallel Valve Block |
| SOL18, 19 | Series Parallel Solenoids | Control rear Series/Parallel Valves | Rear Series Parallel Valve Block |
| SOL20, 21 | Axle Float Solenoids | Control Axle Float Valves | Rear Series Parallel Valve Block |

SCHEMATICS

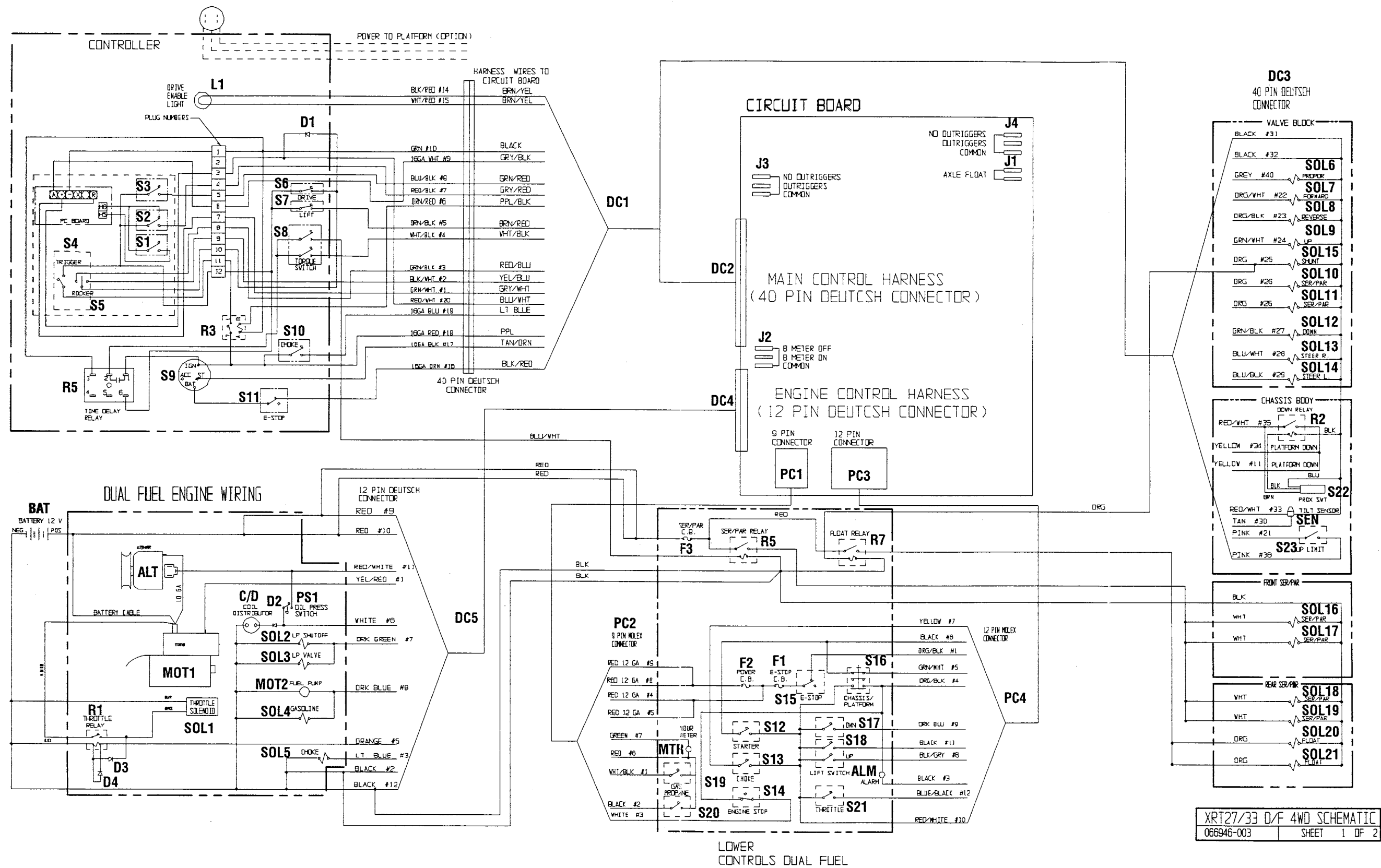


Figure 5-5: Electrical Schematic, 4-Wheel Drive Dual Fuel

5.7 PRINTED CIRCUIT BOARD - XRT 27 & 33 4-WHEEL DRIVE, DUAL FUEL

Table 5-6: Legend, Printed Circuit Board, 4-Wheel Drive, Dual Fuel

| Reference Designation | Name | Function |
|-----------------------|--------------------------------|----------|
| DS1 | Dip Switch | |
| J1 | Jumper - Axle Float Setting | |
| J2 | Jumper - 8 Meter Limit Setting | |
| J3 | Jumper - Outtrigger Option | |
| J4 | Jumper - Outriggers | |

SCHEMATICS

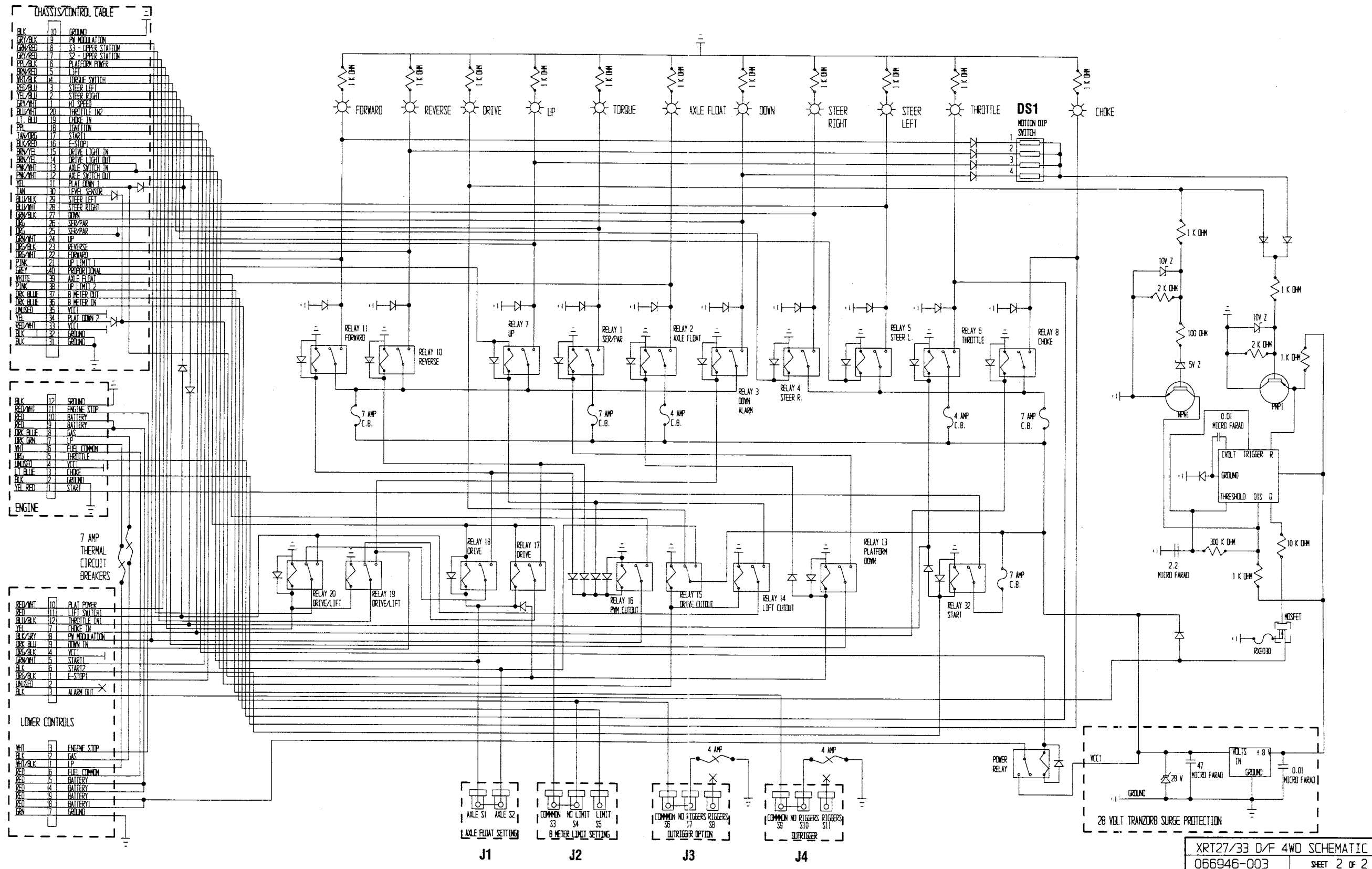


Figure 5-6: Printed Circuit Board, 4-Wheel Drive, Dual Fuel

XRT27/33 D/F 4WD SCHEMATIC
066946-003 SHEET 2 OF 2

5.8 ELECTRICAL SCHEMATIC - XRT 27 & 33 4-WHEEL DRIVE, DIESEL

Table 5-7: Legend, Electrical Schematic, 4-Wheel Drive Diesel

| Reference Designation | Name | Function | Location |
|-----------------------|---------------------------------|--|-------------------|
| ALM | Alarm | Warning Sound | Lower Control Box |
| ALT | Alternator | Maintain Current | Power Module |
| BAT | Battery | Starting Power | |
| D1 | Diode | Power to Upper Controller PC Board | Upper Controls |
| D2 | Diode | Power to Glow Plug Relay | Power Module |
| D3 | Diode | Power to Throttle Solenoid | Power Module |
| D4 | Diode | Power to Throttle Relay | Power Module |
| D5 | Diode | Power to Glow Plug | Power Module |
| DC1 | Deutsch Connector | Connect Upper Controller to Circuit Board | Upper Controls |
| DC2 | Deutsch Connector | Connect Upper Controller, Valve Block and Chassis to Circuit Board | Circuit Board |
| DC3 | Deutsch Connector | Connect Valve Block and Chassis to Circuit Board | Control Module |
| DC4 | Deutsch Connector | Connect Power Module to Circuit Board | Circuit Board |
| DC5 | Deutsch Connector | Connect Power Module to Circuit Board | Power Module |
| F1 | Emergency Stop Circuit Breaker | Power to Upper Control Ignition Switch | Lower Controls |
| F2 | Power Circuit Breaker | Power to all function Solenoids | Lower Controls |
| F3 | Series Parallel Circuit Breaker | Power to Series Parallel Solenoids | Lower Controls |
| L1 | Drive Enable Light | Indicates Drive Enabled | Upper Controls |
| J1 | Jumper | Axle Float Setting | Circuit Board |
| J2 | Jumper | 8 Meter Limit Setting | Circuit Board |
| J3 | Jumper | Outrigger Option | Circuit Board |
| J4 | Jumper | Outrigger Option | Circuit Board |
| MOT1 | Starter and Solenoid | Start Engine | Power Module |
| MTR | Hour Meter | Displays Operating Time | Lower Controls |
| PC1 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC2 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PC3 | Pin Connector | Connect Lower Controls to Circuit Board | Circuit Board |
| PC4 | Pin Connector | Connect Lower Controls to Circuit Board | Lower Controls |
| PS1 | Oil Pressure Switch | Cut Power to Engine when Oil Pressure Too Low | Power Module |
| R1 | Throttle Relay | Power to Throttle Solenoid | Power Module |
| R2 | Down Relay | Power to Down Solenoid | Control Module |
| R3 | Ignition Relay | Enable Engine Start | Upper Controls |
| R4 | Glow Plug Relay | Power to Glow Plug | Power Module |
| R5 | Time Delay Relay | | Upper Controls |
| R6 | Series Parallel Relay | Power to Series Parallel Solenoids | Lower Controls |
| RES1 | Glow Plug | Heat to Start Engine | Engine |
| S1 | Micro Switch | Power to Controller | Upper Controls |
| S2 | Reverse Micro Switch | Power to Drive/Lift Relay, Reverse/Down Contacts | Upper Controls |

| Reference Designation | Name | Function | Location |
|-----------------------|---------------------------|---|------------------------------------|
| S3 | Forward Micro Switch | Power to Drive/Lift Relay, Forward/Up Contacts | Upper Controls |
| S4 | Interlock Micro Switch | Interrupts Power to Controller when Not Engaged | Upper Controls, In Joystick Handle |
| S5 | Steering Micro Switch | Power to Left and Right Steer Relays | Upper Controls, In Joystick Handle |
| S6 | Drive Switch | Power to S5 (Drive) | Upper Controls |
| S7 | Lift Switch | Power to Drive/Lift Relay | Upper Controls |
| S8 | Torque Switch | Power to Series Parallel Relay | Upper Controls |
| S9 | Ignition Switch | Power to Upper Controls, Engine and Starter Motor | Upper Controls |
| S10 | Glow Plug Switch | Power to Glow Plug Relay | Upper Controls |
| S11 | Emergency Stop Switch | Cut Power to Upper Controls and Engine | Upper Controls |
| S12 | Starter Switch | Power to Starter Motor | Lower Controls |
| S13 | Glow Plug Switch | Power to Glow Plug Relay | Lower Controls |
| S14 | Engine Stop Switch | Cut Power to Power Relay | Lower Controls |
| S15 | Emergency Stop Switch | Cut Power to Lower Controls and Engine | Lower Controls |
| S16 | Chassis Platform Switch | Power to Either Upper or Lower Controls | Lower Controls |
| S17 | Down Switch | Power to Down Relay | Lower Controls |
| S18 | Lift Switch | Power to Up Relay | Lower Controls |
| S21 | Throttle Switch | Power to Throttle Relay | Lower Controls |
| S22 | Proximity Switch | Limits Drive Height to Eight Meters | Chassis |
| S23 | Up Limit Switch | Prevents Full Extension of Lift Cylinders | Chassis |
| SEN | Level Sensor | Power to Cutout Relay when Machine is Level | Chassis |
| SOL1 | Throttle Solenoid | Control Engine Speed | Power Module |
| SOL5 | Run Solenoid | Allows Engine to Run with Proper Oil Pressure | Power Module |
| SOL6 | Proportional Solenoid | Control Proportional Valve | Valve Block |
| SOL7 | Forward Solenoid | Control Forward Valve | Valve Block |
| SOL8 | Reverse Solenoid | Control Reverse Valve | Valve Block |
| SOL9 | Lift Solenoid | Control Lift Valve | Valve Block |
| SOL10, 11 | Series/Parallel Solenoids | Control Series/Parallel Valves | Valve Block |
| SOL12 | Down Solenoid | Control Down Valve | Lift Cylinder |
| SOL13 | Steer Right Solenoid | Control Steering Valve | Valve Block |
| SOL14 | Steer Left Solenoid | Control Steering Valve | Valve Block |
| SOL15 | Shunt Solenoid | | Valve Block |
| SOL16, 17 | Series Parallel Solenoids | Control Front Series/Parallel Valves | Front Series Parallel Valve Block |
| SOL18, 19 | Series Parallel Solenoids | Control rear Series/Parallel Valves | Rear Series Parallel Valve Block |
| SOL20, 21 | Axle Float Solenoids | Control Axle Float Valves | Rear Series Parallel Valve Block |

SCHEMATICS

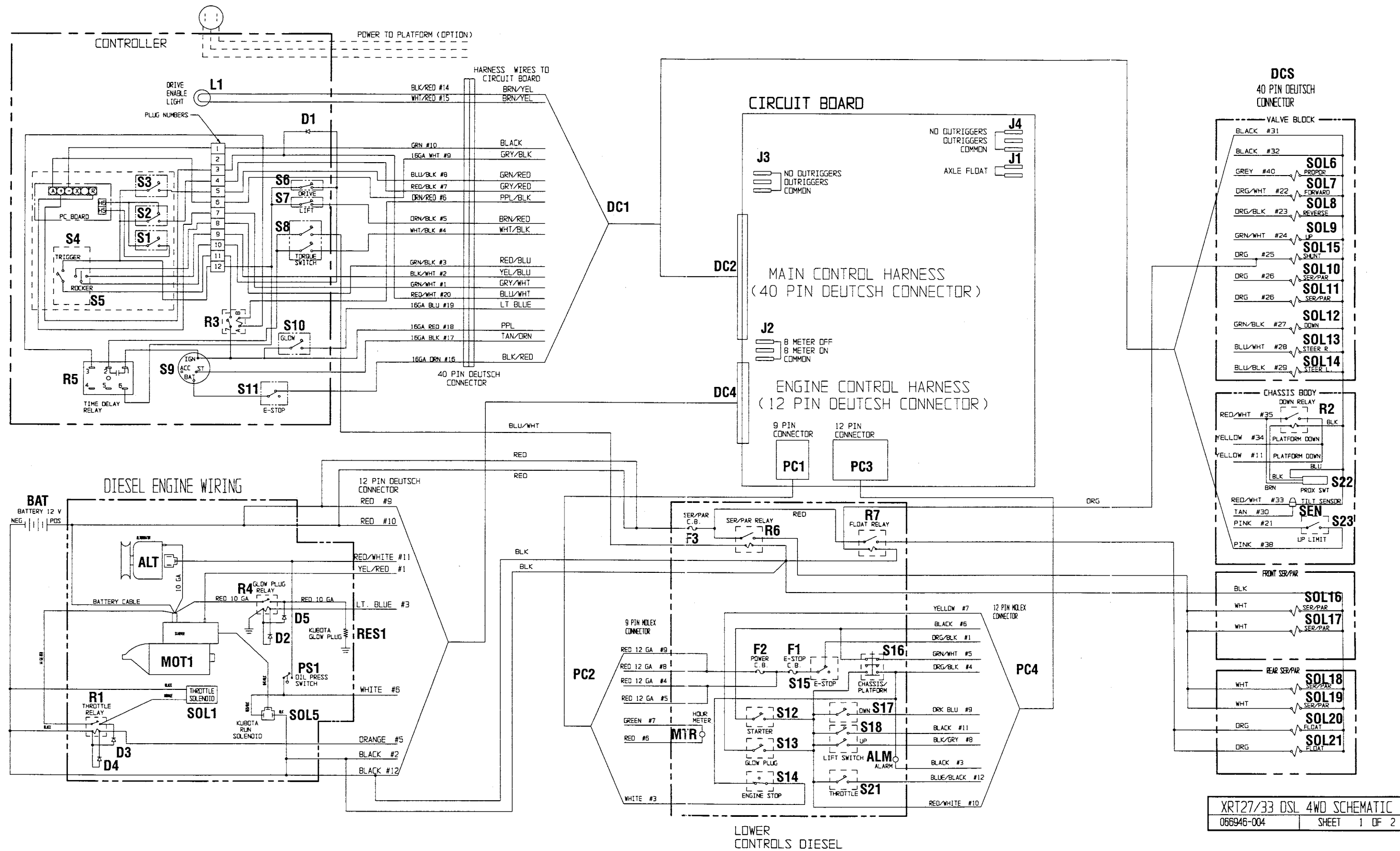


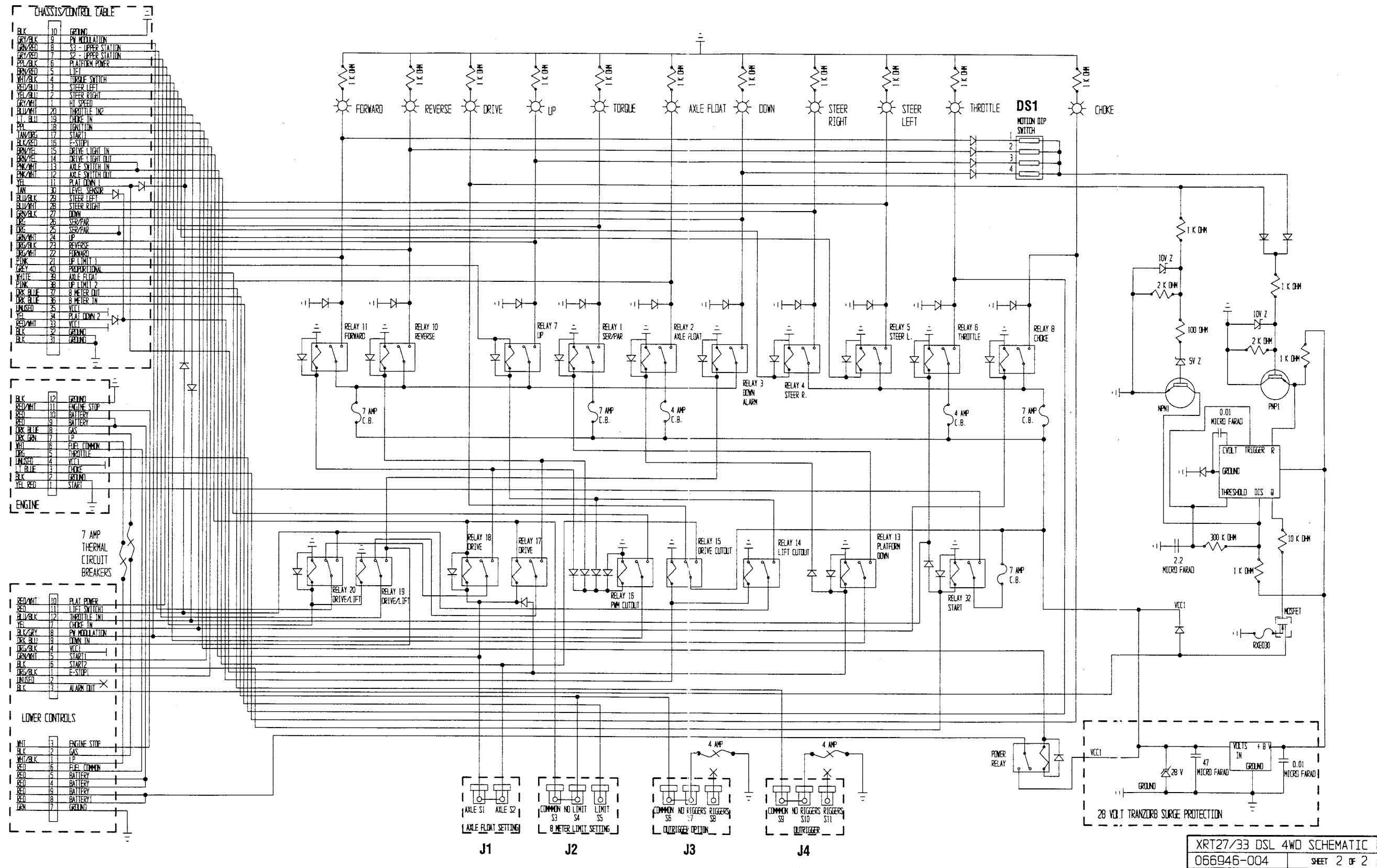
Figure 5-7: Electrical Schematic, 4-Wheel Drive Diesel

5.9 PRINTED CIRCUIT BOARD - XRT 27 & 33 4-WHEEL DRIVE, DIESEL

Table 5-8: Legend, Printed Circuit Board, 4-Wheel Drive Diesel

| Reference Designation | Name | Function |
|-----------------------|--------------------------------|----------|
| DS1 | Dip Switch | |
| J1 | Jumper - Axle Float Setting | |
| J2 | Jumper - 8 Meter Limit Setting | |
| J3 | Jumper - Outrigger Option | |
| J4 | Jumper - Outriggers | |

SCHEMATICS



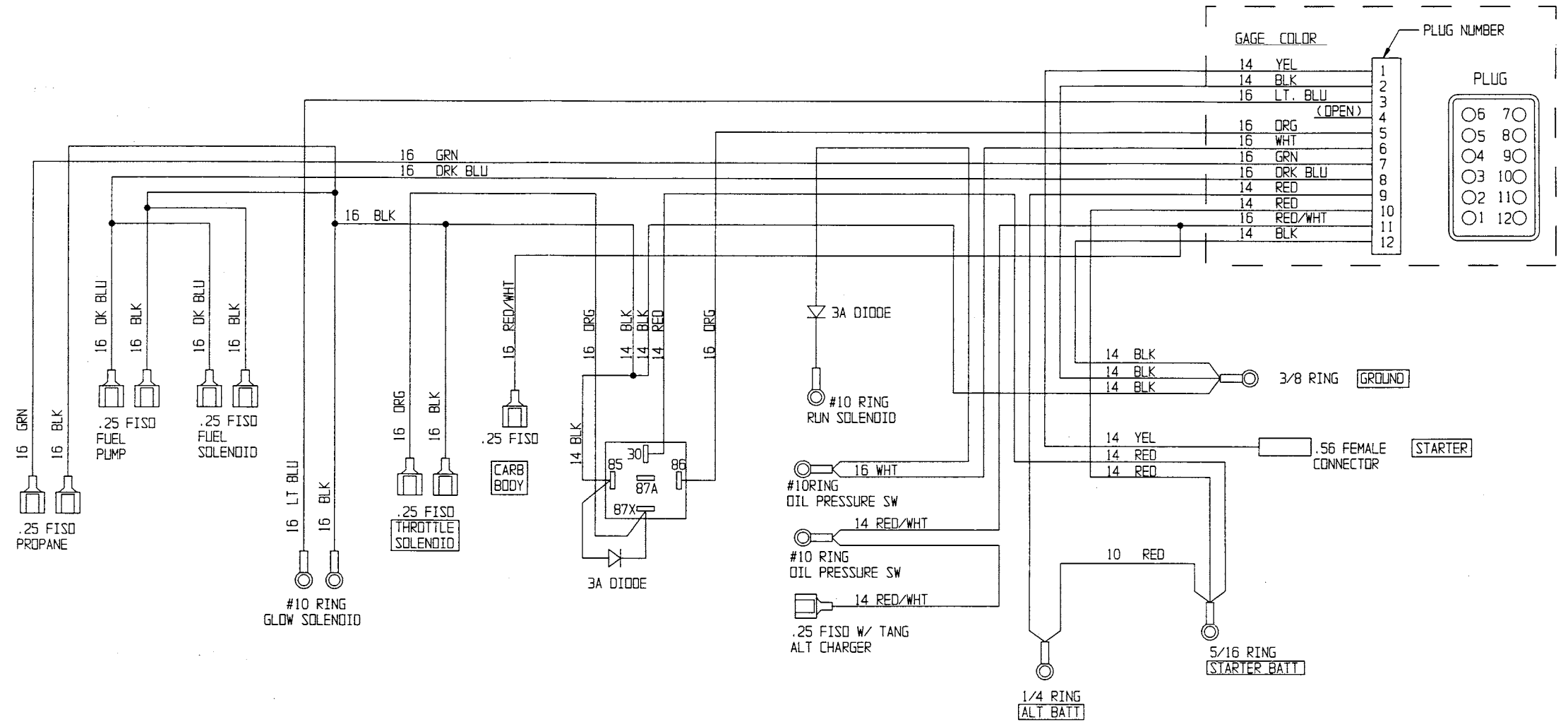
XRT27/33 DSL 4WD SCHEMATIC
066946-004 SHEET 2 OF 2

Figure 5-8: Printed Circuit Board, 4-Wheel Drive Diesel

5.10 ENGINE WIRING DIAGRAM - KUBOTA DIESEL

Table 5-9: Legend, Kubota Diesel Wiring Harness

| PIN | GAUGE | COLOR | FUNCTION |
|-----|-------|--------------|----------------------|
| 1 | 14 | Yellow / Red | Start |
| 2 | 14 | Black | Ground |
| 3 | 16 | Light Blue | Glow Plug |
| 4 | OPEN | | |
| 5 | 16 | Orange | Throttle |
| 6 | 16 | White | Oil Pressure |
| 7 | 16 | Green | Alternator / Fuel |
| 8 | 16 | Dark Blue | Fuel Pump |
| 9 | 14 | Red | Alternator / Battery |
| 10 | 14 | Red | Power |
| 11 | 14 | Red / White | Oil Pressure Switch |
| 12 | 14 | Black | Ground |



KUBOTA DIESEL ENGINE WIRE HARNESS
066947-001 SHEET 2

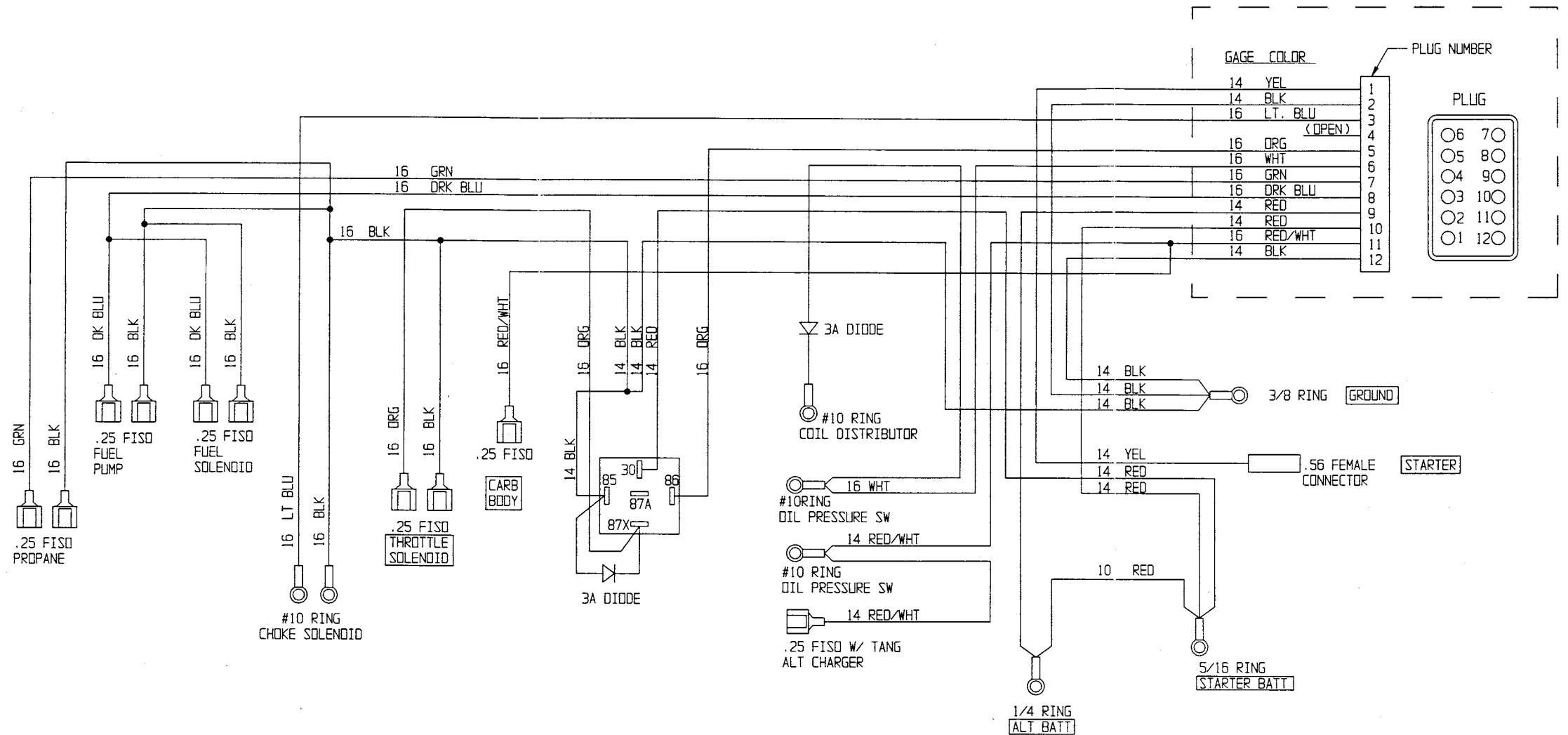
Figure 5-9: Engine Wiring, Kubota Diesel

SCHEMATICS

5.11 ENGINE WIRING DIAGRAM - KUBOTA DUAL FUEL

Table 5-10: Legend, Kubota Dual Fuel Wiring Harness

| PIN | GAUGE | COLOR | FUNCTION |
|-----|-------|--------------|----------------------|
| 1 | 14 | Yellow / Red | Start |
| 2 | 14 | Black | Ground |
| 3 | 16 | Light Blue | Choke |
| 4 | OPEN | | |
| 5 | 16 | Orange | Throttle |
| 6 | 16 | White | Oil Pressure |
| 7 | 16 | Green | Alternator / Fuel |
| 8 | 16 | Dark Blue | Fuel Pump |
| 9 | 14 | Red | Alternator / Battery |
| 10 | 14 | Red | Power |
| 11 | 14 | Red / White | Oil Pressure Switch |
| 12 | 14 | Black | Ground |



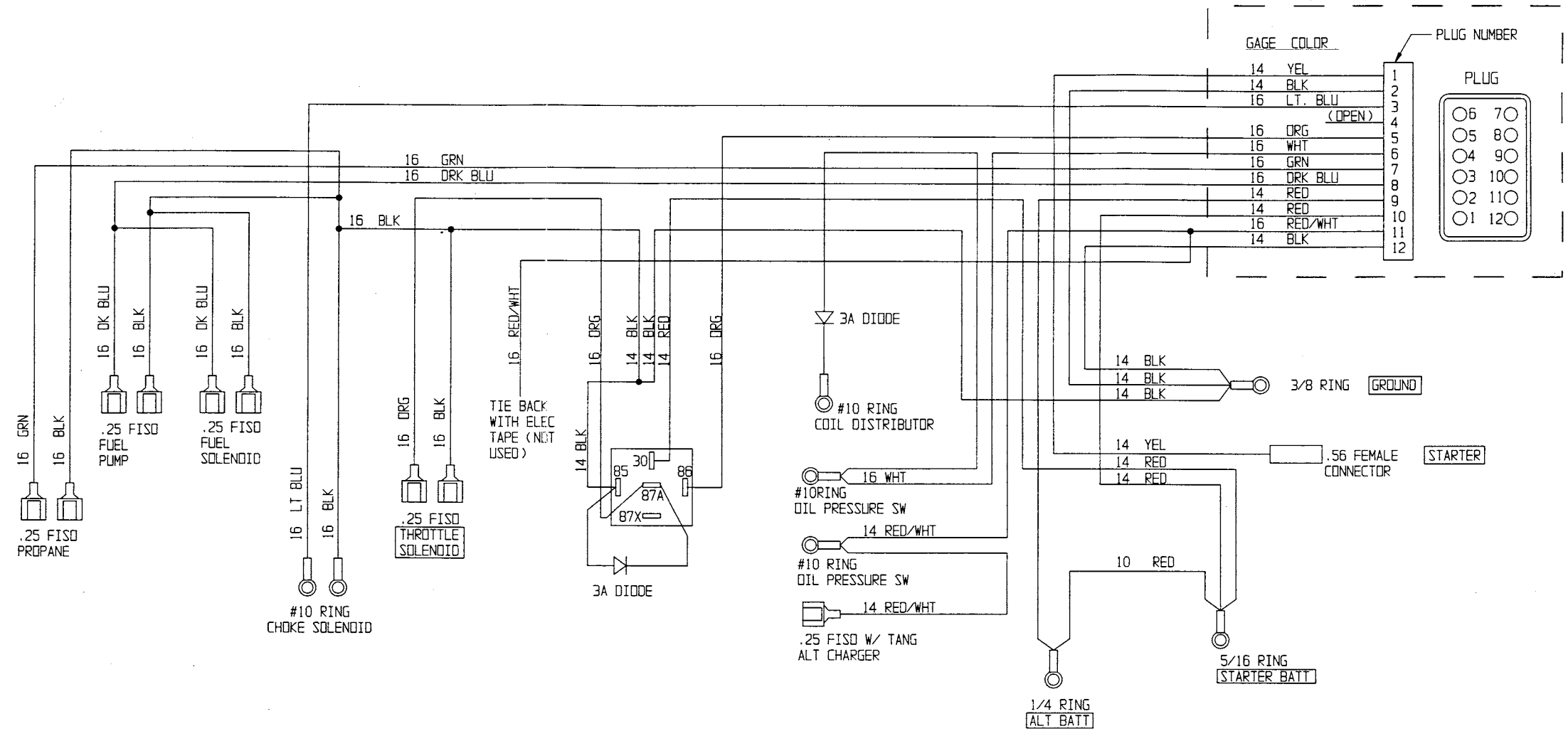
KUBOTA ENGINE WIRE HARNESS
066947-002 SHEET 2

Figure 5-10: Engine Wiring, Kubota Dual Fuel

5.12 ENGINE WIRING DIAGRAM - KOHLER DUAL FUEL

Table 5-11: Legend, Kohler Gasoline Wiring Harness

| PIN | GAUGE | COLOR | FUNCTION |
|-----|-------|--------------|----------------------|
| 1 | 14 | Yellow / Red | Start |
| 2 | 14 | Black | Ground |
| 3 | 16 | Light Blue | Choke |
| 4 | OPEN | | |
| 5 | 16 | Orange | Throttle |
| 6 | 16 | White | Oil Pressure |
| 7 | 16 | Green | Alternator / Fuel |
| 8 | 16 | Dark Blue | Fuel Pump |
| 9 | 14 | Red | Alternator / Battery |
| 10 | 14 | Red | Power |
| 11 | 14 | Red / White | Oil Pressure Switch |
| 12 | 14 | Black | Ground |



KOHLER ENGINE WIRE HARNESS
066947-000 SHEET 2

Figure 5-11: Engine Wiring, Kohler Gasoline

Notes

5.13 HYDRAULIC SCHEMATIC - XRT27 2-WHEEL DRIVE

Table 5-12: Legend, Hydraulic Schematic, XRT27 - 2-Wheel Drive

| Reference Designation | Name | Function | Location |
|-----------------------|-------------------------|---|---------------------------------|
| CV | Check Valve | Prevent Cavitation of Downstream Motors | Valve Block |
| CP1 | Cavity Plug | Plug unused Port | Main Valve Block, Port F |
| CP2 | Cavity Plug | Plug unused Port | Main Valve Block, Port E |
| CYL1 | Steering Cylinder | Steer Machine | Front Axle Assembly |
| CYL2 | Lift Cylinder | Lift Platform | Scissor Assembly |
| CYL4, 5 | Brakes | Parking Brakes | Rear Axle Assembly |
| M1, 2 | Front Drive Motors | Drive Front Wheels | Front Axle Assembly |
| ORF1 | Steering Orifice | Limit Oil Flow to Steering Cylinder | Main Valve Block, Port T |
| ORF2 | Down Orifice | Limit Platform Descent Speed | Under Down Valves |
| ORF4 | Brake Orifice | Control Oil Flow from Brakes | Main Valve Block Port 12 |
| P1 | Hydraulic Pump | Provide Fluid Power for Hydraulic System | Power Module, Engine Assembly |
| P2 | Brake Release Pump | Manual Brake Release | Control Module |
| RV1 | Steer Relief Valve | Pressure Protection for Steering Components | Main Valve Block |
| RV2 | Lift Relief Valve | Limit Load of Elevating Assembly | Main Valve Block |
| RV3, 4 | Motor Relief Valve | Pressure Protection for Drive Motor | Front of Each Front Drive Motor |
| RV7 | Pressure Reducing Valve | Pressure Protection for Brake Assemblies | Control Module |
| SV1 | Shuttle Valve | Sense Line Shuttle | Main Valve Block, Port S |
| SV2 | Shuttle Valve | Sense Line Shuttle | Main Valve Block, Port H |

| Reference Designation | Name | Function | Location |
|-----------------------|-------------------------------|---|---------------------------------|
| SV3 | Steering Shuttle Valve | Allow Pilot Pressure to Pump Sense Line form Steering | Main Valve Block, Port C |
| SV4 | Brake Shuttle Valve | Allow Oil Pressure from Drive to Release Brakes | Main Valve Block, Port M |
| V1 | Steering Valve | Control Oil Flow to Steering Cylinder | Main Valve Block, Port D |
| V2 | Emergency Down Valve | Emergency Lowering | Rear of Chassis |
| V3 | Proportional Valve | Regulates Drive and Lift Speed | Main Valve Block, Port G |
| V4 | Lift Valve | Allow Oil Flow to Lift Cylinders | Main Valve Block, Port J |
| V5 | Forward Valve | Control Oil Flow for Forward Drive System | Main Valve Block, Port K |
| V6 | Reverse Valve | Control Oil Flow for Reverse Drive System | Main Valve Block, Port L |
| V7 | Reverse Counter Balance Valve | Provide Dynamic braking for Machine in Forward | Main Valve Block, Port N |
| V8 | Forward Counter Balance Valve | Provide Dynamic braking for Machine in Reverse | Main Valve Block, Port O |
| V9, 10 | Series Parallel Valves | Directs Oil Flow to Drive Motors in either Series or Parallel Configuration | Main Valve Block, Ports Q and R |
| V18 | Down Valve | Lower Cylinder | Base of Cylinder |

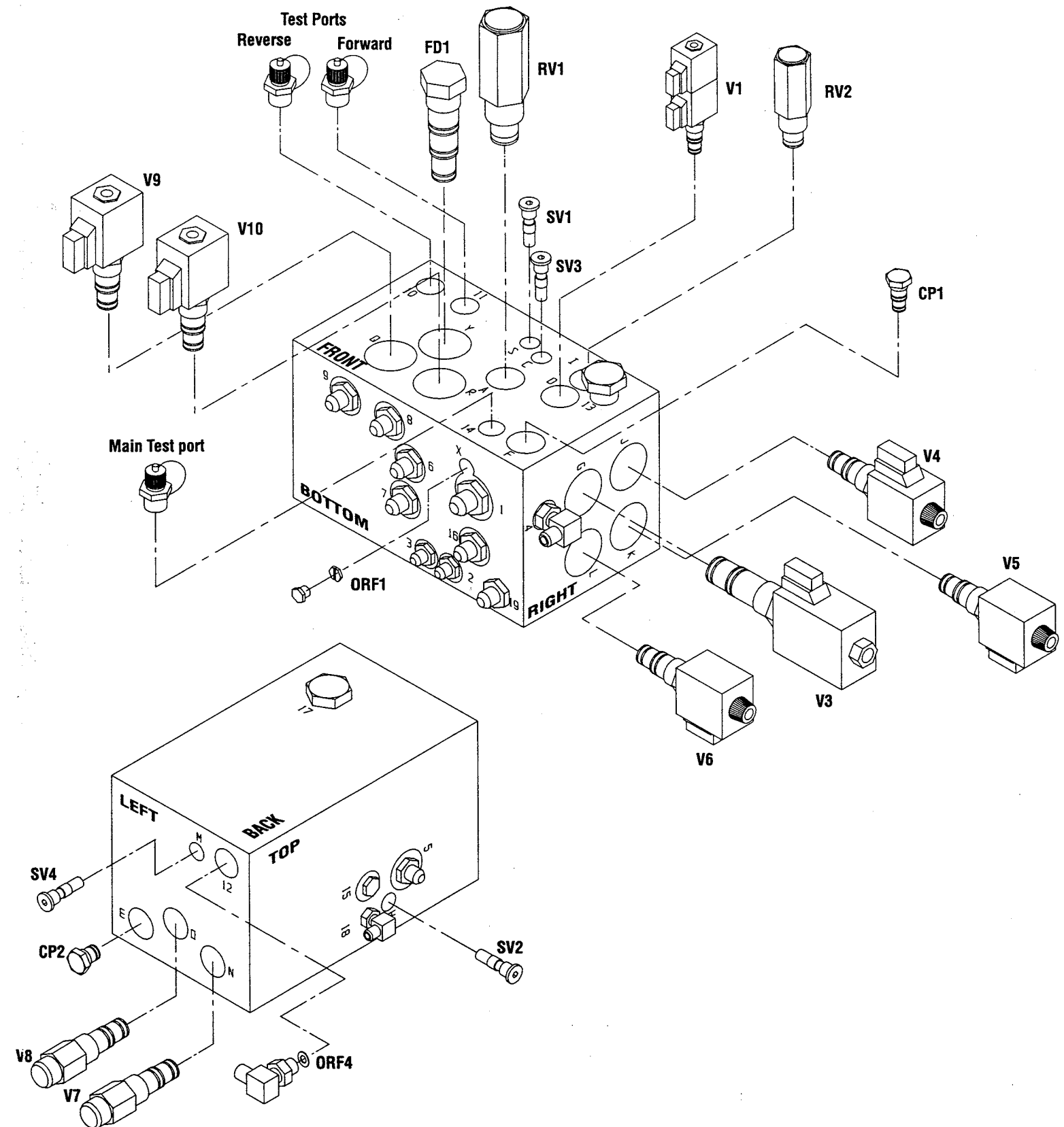
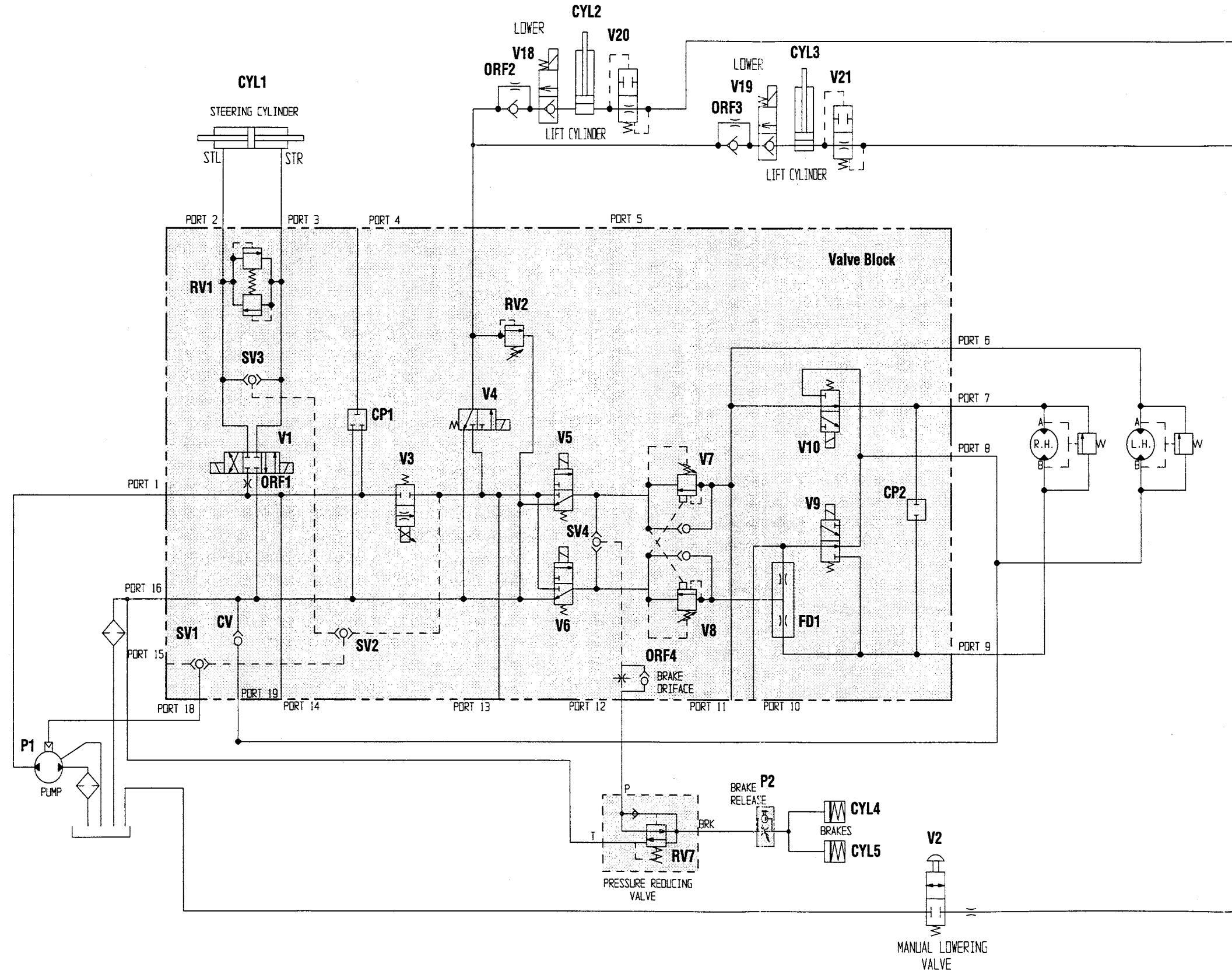


Figure 5-12: Main Valve Block, 2-Wheel Drive

SCHEMATICS



HYDRAULIC SCHEMATIC
XRT33 2WD DOM | 066945-002

Figure 5-17: Hydraulic Schematic, XRT33 - 2-Wheel Drive

5.16 HYDRAULIC SCHEMATIC - XRT33 4-WHEEL DRIVE

Table 5-15: Legend, Hydraulic Schematic, XRT33 - 4-Wheel Drive

| Reference Designation | Name | Function | Location |
|-----------------------|-------------------------------|---|---------------------------------|
| CV | Check Valves | Prevent Cavitation of Downstream Motors | Rear Valve Block |
| CP1 | Cavity Plug | Plug unused Port | Main Valve Block, Port F |
| CYL1 | Steering Cylinder | Steer Machine | Front Axle Assembly |
| CYL2, 3 | Lift Cylinder | Lift Platform | Scissor Assembly |
| CYL4, 5 | Brakes | Parking Brakes | Rear Axle Assembly |
| FD1 | Flow Divider | Limited Slip Drive | Main Valve Block |
| FD2 | Flow Divider | Limited Slip Drive | Series Parallel Block, Front |
| FD3 | Flow Divider | Limited Slip Drive | Series Parallel Block, Rear |
| M1, 2 | Front Drive Motors | Drive Front Wheels | Front Axle Assembly |
| M3, 4 | Rear Drive Motors | Drive rear Wheels | Rear Axle Assembly |
| ORF1 | Steering Orifice | Limit Oil Flow to Steering Cylinder | Main Valve Block, Port T |
| ORF2, 3 | Down Orifice | Limit Platform Descent Speed | Under Down Valves |
| ORF4 | Brake Orifice | Control Oil Flow from Brakes | Main Valve Block Port 12 |
| ORF5 | Slip Orifice | Allow Slippage for Turning | Front Valve Block |
| ORF6 | Slip Orifice | Allow Slippage for Turning | Rear Valve Block |
| P1 | Hydraulic Pump | Provide Fluid Power for Hydraulic System | Power Module, Engine Assembly |
| P2 | Brake Release Pump | Manual Brake Release | Control Module |
| RV1 | Steer Relief Valve | Pressure Protection for Steering Components | Main Valve Block |
| RV2 | Lift Relief Valve | Limit Load of Elevating Assembly | Main Valve Block |
| RV3, 4 | Motor Relief Valve | Pressure Protection for Drive Motor | Front of Each Front Drive Motor |
| RV5, 6 | Motor Relief Valve | Pressure Protection for Drive Motor | Beneath Each Rear Drive Motor |
| RV7 | Pressure Reducing Valve | Pressure Protection for Brake Assemblies | Control Module |
| SV1 | Shuttle Valve | Sense Line Shuttle | Main Valve Block, Port S |
| SV2 | Shuttle Valve | Sense Line Shuttle | Main Valve Block, Port H |
| SV3 | Steering Shuttle Valve | Allow Pilot Pressure to Pump Sense Line form Steering | Main Valve Block, Port C |
| SV4 | Brake Shuttle Valve | Allow Oil Pressure from Drive to Release Brakes | Main Valve Block, Port M |
| V1 | Steering Valve | Control Oil Flow to Steering Cylinder | Main Valve Block, Port D |
| V2 | Emergency Down Valve | Emergency Lowering | Rear of Chassis |
| V3 | Proportional Valve | Regulates Drive and Lift Speed | Main Valve Block, Port G |
| V4 | Lift Valve | Allow Oil Flow to Lift Cylinders | Main Valve Block, Port J |
| V5 | Forward Valve | Control Oil Flow for Forward Drive System | Main Valve Block, Port K |
| V6 | Reverse Valve | Control Oil Flow for Reverse Drive System | Main Valve Block, Port L |
| V7 | Reverse Counter Balance Valve | Provide Dynamic braking for Machine in Forward | Main Valve Block, Port N |

| Reference Designation | Name | Function | Location |
|-----------------------|-------------------------------|---|---------------------------------|
| V8 | Forward Counter Balance Valve | Provide Dynamic braking for Machine in Reverse | Main Valve Block, Port O |
| V9, 10 | Series Parallel Valves | Directs Oil Flow to Drive Motors in either Series or Parallel Configuration | Main Valve Block, Ports Q and R |
| V11 | Shunt Valve | Allows oil Flow Past Rear Drive Motors During High Speed Travel | Main Valve Block, Port E |
| V12, 13 | Series Parallel Valves | Directs Oil Flow to Front Drive Motors in either Series or Parallel Configuration | Front Valve Block |
| V14, 15 | Diverter Valves | Float Rear Motors in High Speed | Rear Valve Block |
| V16, 17 | Series Parallel Valves | Directs Oil Flow to Rear Drive Motors in either Series or Parallel Configuration | Rear Valve Block |
| V18, 19 | Down Valve | Lower Cylinders | Base of Cylinders |
| V20, 21 | Velocity Fuse Valve | Lock Cylinder if Hose Breaks | Inside Lift Cylinders |

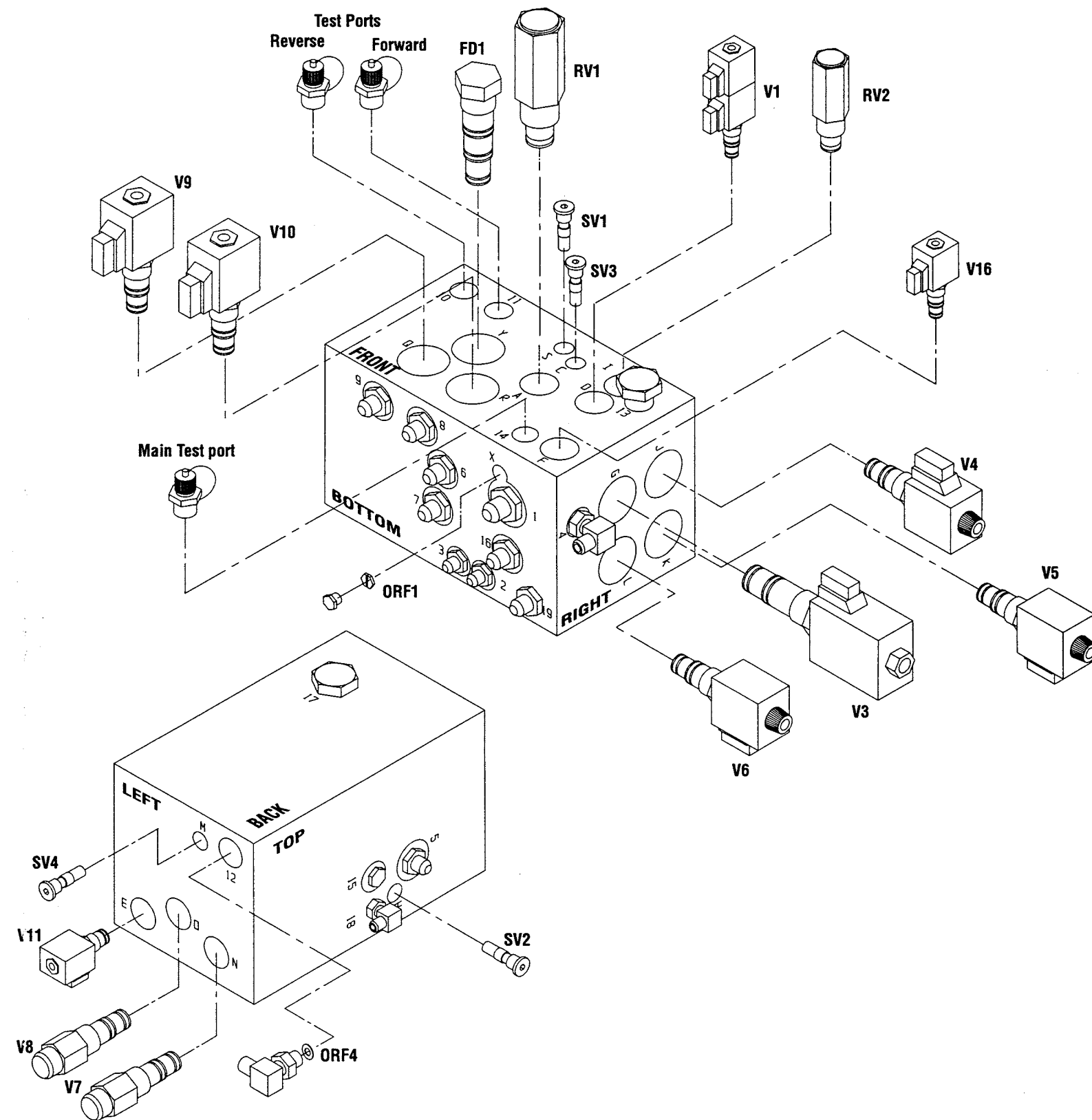


Figure 5-18: Main valve Block, 4-Wheel Drive

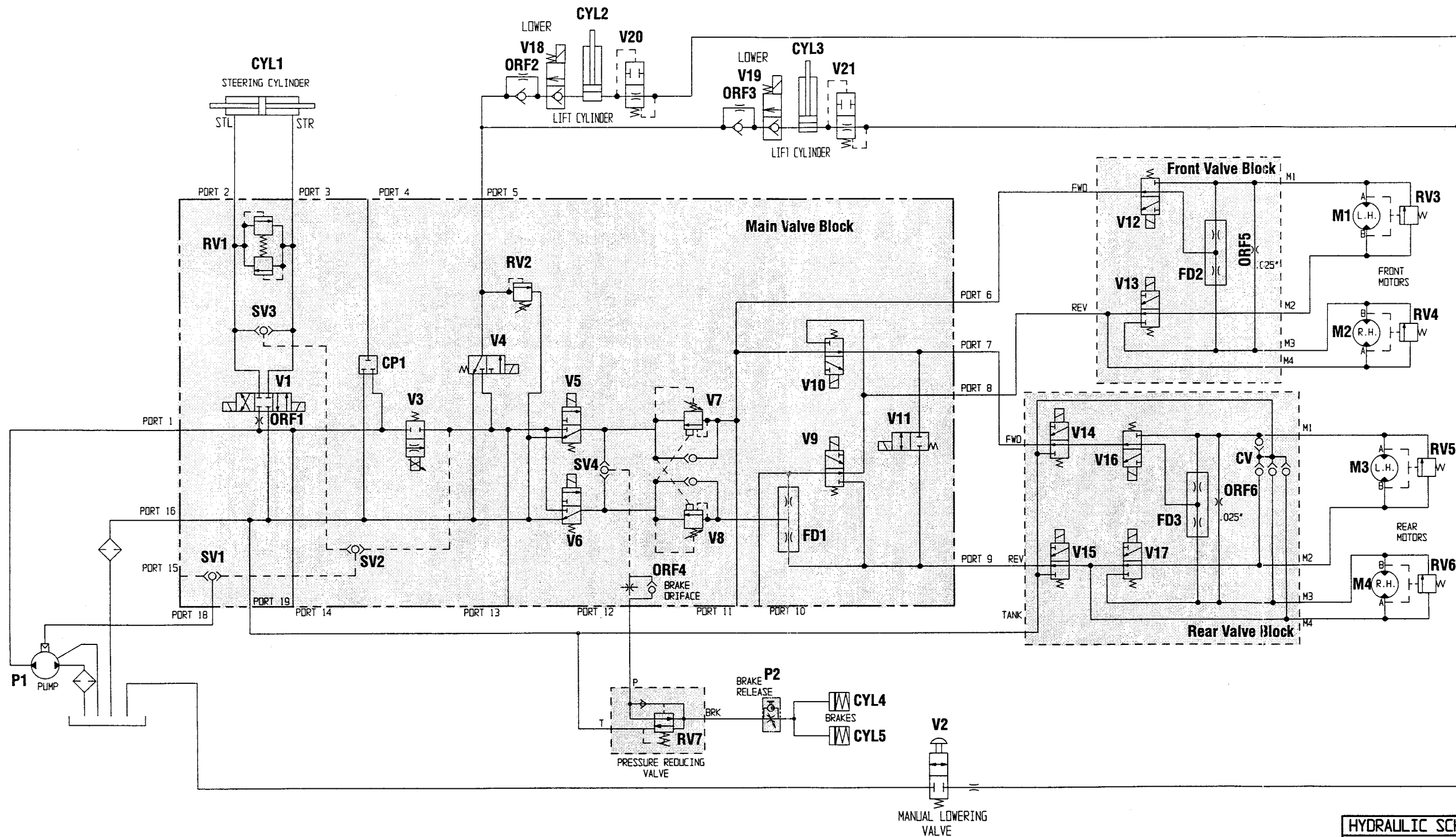


Figure 5-19: Hydraulic Schematic, XRT33 - 4-Wheel Drive

5.17 HOSE ROUTING - XRT27 2-WHEEL DRIVE

Table 5-16: Legend, Hose Routing, XRT27 2-Wheel Drive,

| Reference Designation | Name |
|-----------------------|---------------------------------|
| CYL1 | Steering Cylinder |
| CYL2 | Lift Cylinder |
| CYL4 | Brake Cylinder, Right Side |
| CYL5 | Brake Cylinder, Left Side |
| FLT | Hydraulic Oil Filter |
| M1 | Drive Motor, Left Front |
| M2 | Drive Motor, Right Front |
| P1 | Hydraulic Pump |
| P2 | Manual Brake Release Pump |
| RES | Hydraulic Reservoir |
| RV7 | Pressure Reducing Valve, Brakes |
| VB1 | Main Valve Block |
| VB2 | Lift Cylinder Valve Block |

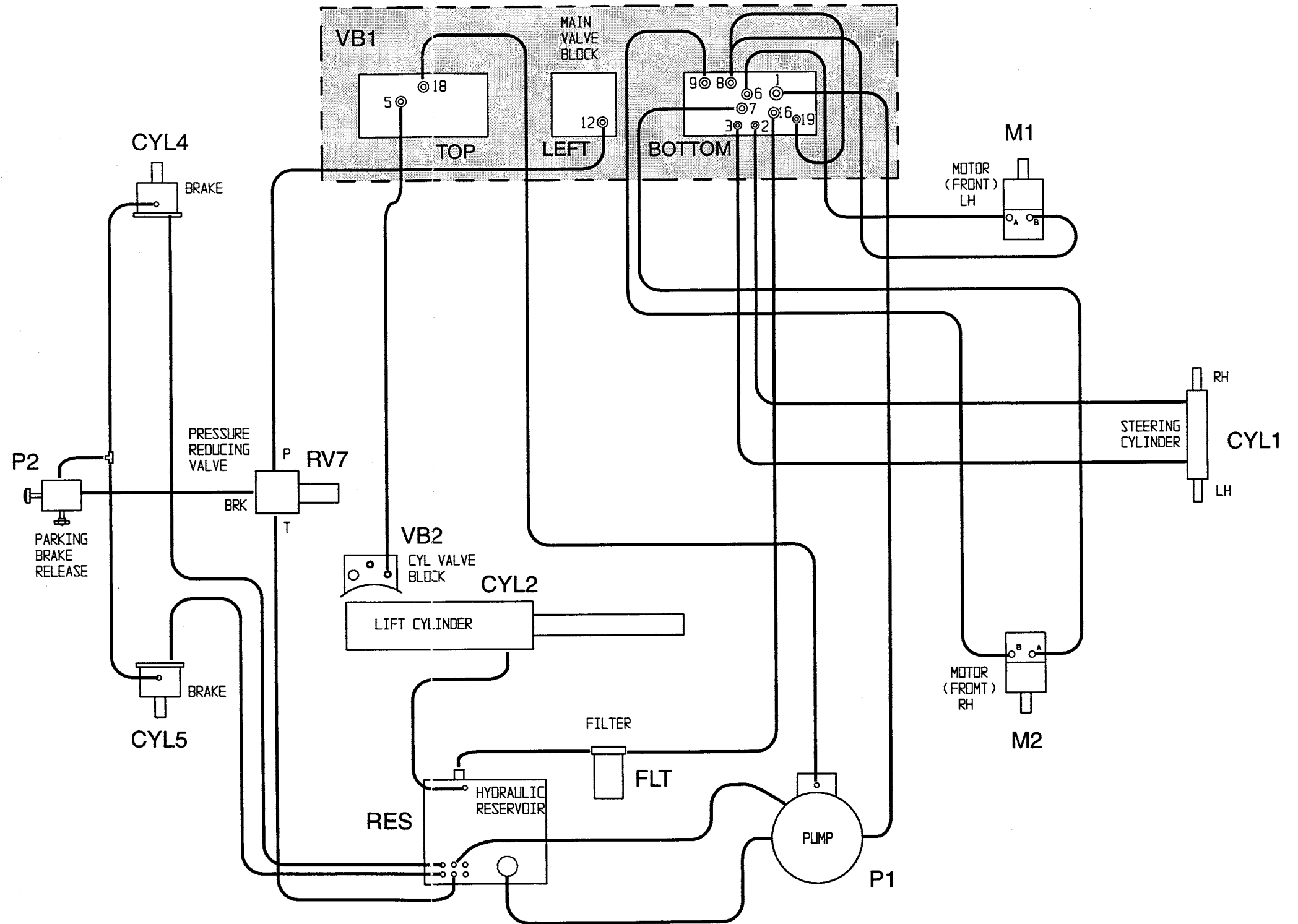


Figure 5-20: Hose Routing, XRT27 2-Wheel Drive

5.18 HOSE ROUTING - XRT27 4-WHEEL DRIVE

Table 5-17: Legend, Hose Routing, XRT27 4-Wheel Drive,

| Reference Designation | Name |
|-----------------------|------------------------------------|
| CYL1 | Steering Cylinder |
| CYL2 | Lift Cylinder |
| FLT | Hydraulic Oil Filter |
| M1 | Drive Motor, Left Front |
| M2 | Drive Motor, Right Front |
| M3 | Drive Motor, Left Rear |
| M4 | Drive Motor, Right Rear |
| P1 | Hydraulic Pump |
| P2 | Manual Brake Release Pump |
| RES | Hydraulic Reservoir |
| RV7 | Pressure Reducing Valve, Brakes |
| VB1 | Main Valve Block |
| VB2 | Lift Cylinder Valve Block |
| VB4 | Series Parallel Valve Block, Rear |
| VB5 | Series Parallel Valve Block, Front |

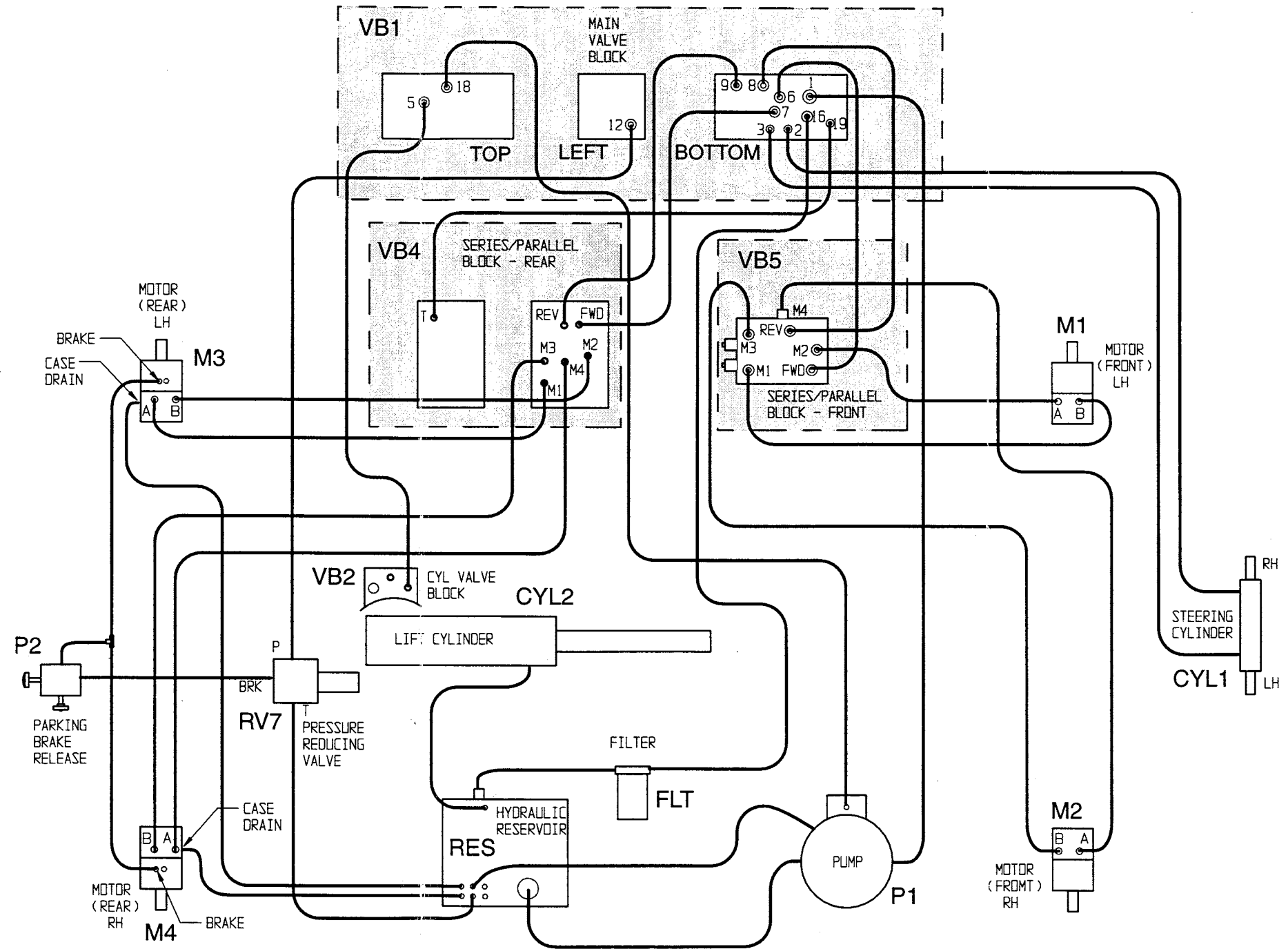


Figure 5-21: Hose Routing, XRT27 4-Wheel Drive

5.19 HOSE ROUTING - XRT33 2-WHEEL DRIVE

Table 5-18: Legend, Hose Routing, XRT33 2-Wheel Drive,

| Reference Designation | Name |
|-----------------------|----------------------------------|
| CYL1 | Steering Cylinder |
| CYL2 | Lift Cylinder, Lower |
| CYL3 | Lift Cylinder, Upper |
| CYL4 | Brake Cylinder, Right Side |
| CYL5 | Brake Cylinder, Left Side |
| FLT | Hydraulic Oil Filter |
| M1 | Drive Motor, Left Front |
| M2 | Drive Motor, Right Front |
| P1 | Hydraulic Pump |
| P2 | Manual Brake Release Pump |
| RES | Hydraulic Reservoir |
| RV7 | Pressure Reducing Valve, Brakes |
| V2 | Down Valve |
| VB1 | Main Valve Block |
| VB2 | Lift Cylinder Valve Block, Lower |
| VB3 | Lift Cylinder Valve Block, Upper |

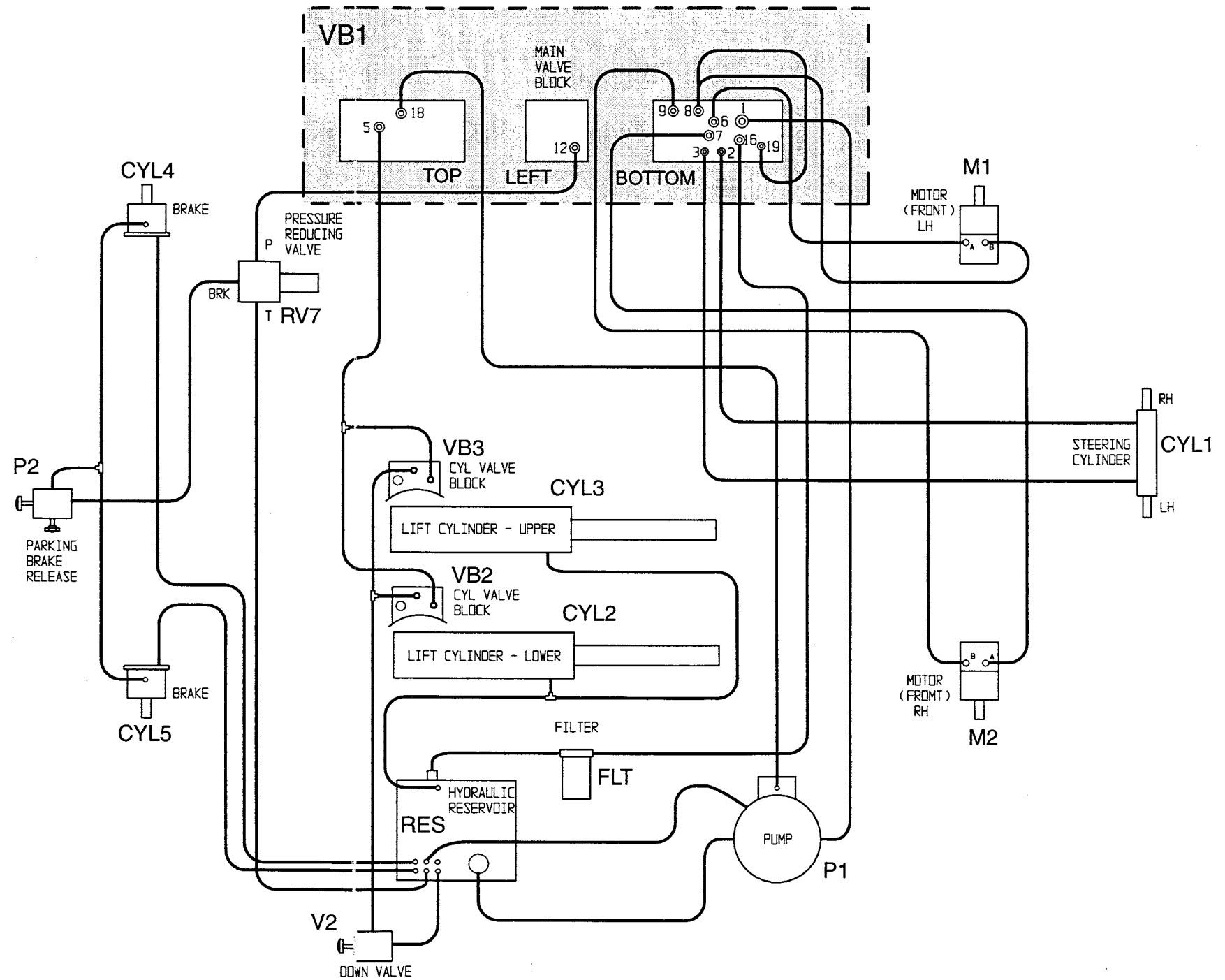


Figure 5-22: Hose Routing, XRT33 2-Wheel Drive

5.20 HOSE ROUTING - XRT33 4-WHEEL DRIVE

Table 5-19: Legend, Hose Routing, XRT33 4-Wheel Drive,

| Reference Designation | Name |
|-----------------------|------------------------------------|
| CYL1 | Steering Cylinder |
| CYL2 | Lift Cylinder, Lower |
| CYL3 | Lift Cylinder, Upper |
| FLT | Hydraulic Oil Filter |
| M1 | Drive Motor, Left Front |
| M2 | Drive Motor, Right Front |
| M3 | Drive Motor, Left Rear |
| M4 | Drive Motor, Right Rear |
| P1 | Hydraulic Pump |
| P2 | Manual Brake Release Pump |
| RES | Hydraulic Reservoir |
| RV7 | Pressure Reducing Valve, Brakes |
| V2 | Down Valve |
| VB1 | Main Valve Block |
| VB2 | Lift Cylinder Valve Block, Lower |
| VB3 | Lift Cylinder Valve Block, Upper |
| VB4 | Series Parallel Valve Block, Rear |
| VB5 | Series Parallel Valve Block, Front |

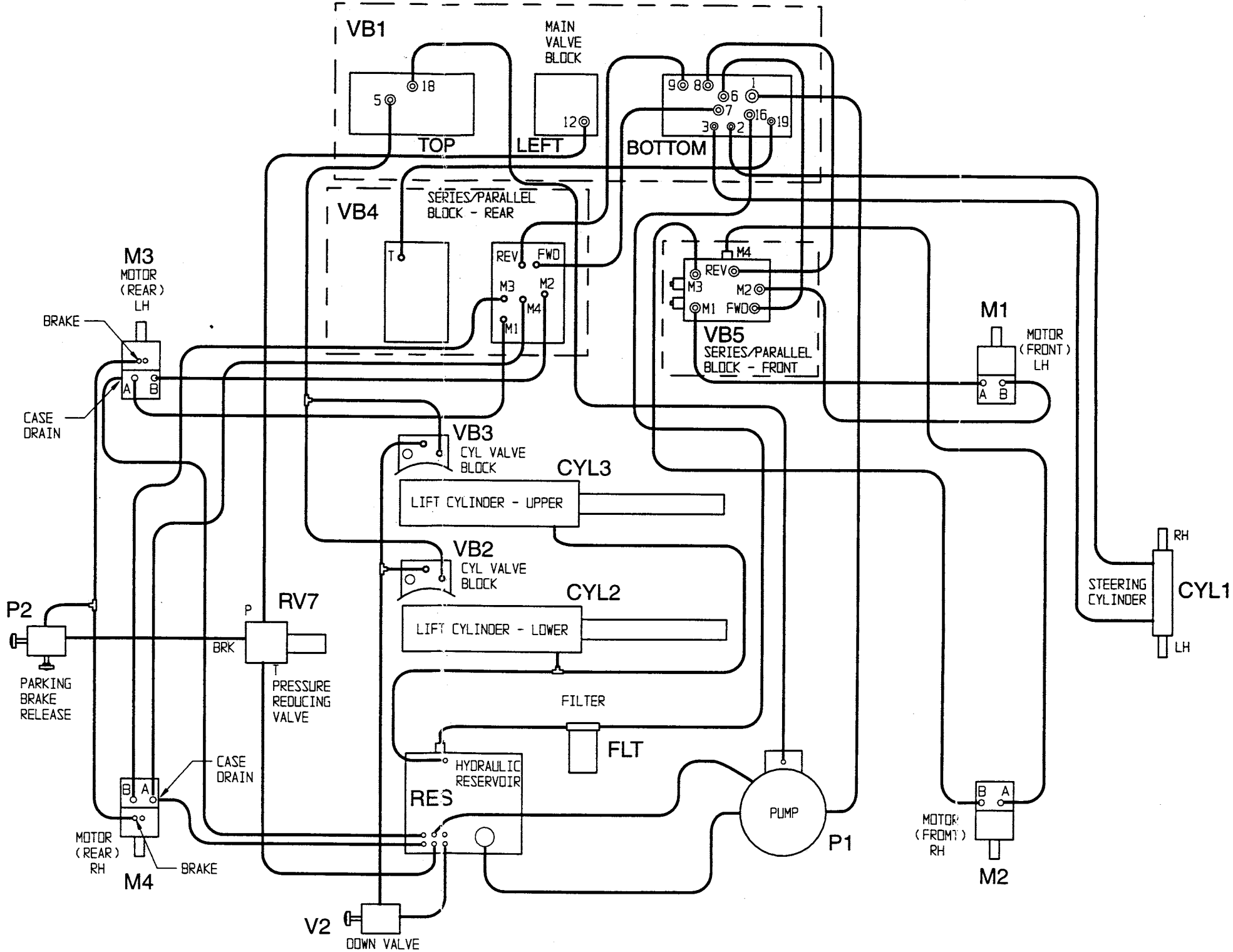


Figure 5-23: Hose Routing, XRT33 4-Wheel Drive

5.21 LOWER CONTROL BOX COMPONENTS - DUAL FUEL

Table 5-20: Legend, Lower Control Box Components, Dual Fuel

| Reference Designation | Name |
|-----------------------|--|
| ALM | Alarm |
| B1 | Emergency Stop Button |
| B2 | Start Engine Button |
| B3 | Pre-Heat (glow plug) Button |
| B4 | Throttle Button |
| B5 | Stop Engine Button |
| B6 | Raise Platform Button |
| B7 | Lower Platform Button |
| C1 | Start Engine Contact, Normally Closed |
| C2 | Throttle Contact, Normally Open |
| C3 | Pre-Heat (glow plug) Contact, Normally Open |
| C4 | Start Engine Contact, Normally Open |
| C5 | Emergency Stop Contact, Normally Closed |
| C6 | Platform/Chassis Selector Contact, Normally Open |
| C7 | Platform/Chassis Selector Contact, Normally Closed |
| C8&9 | Raise Platform Contact, Normally Open |
| C10 | Lower Platform Contact, Normally Open |
| C11 | Fuel Selector Contact, Normally Open |
| C12 | Fuel Selector Contact, Normally Closed |
| CB1 | Emergency Stop Lamp Circuit Breaker |
| CB2 | Power Lamp Circuit Breaker |
| L1 | Emergency Stop Lamp |
| L2 | Power Lamp |
| MTR | Hour Meter |
| S1 | Platform/Chassis Selector Switch |
| S2 | Fuel Selector Switch |

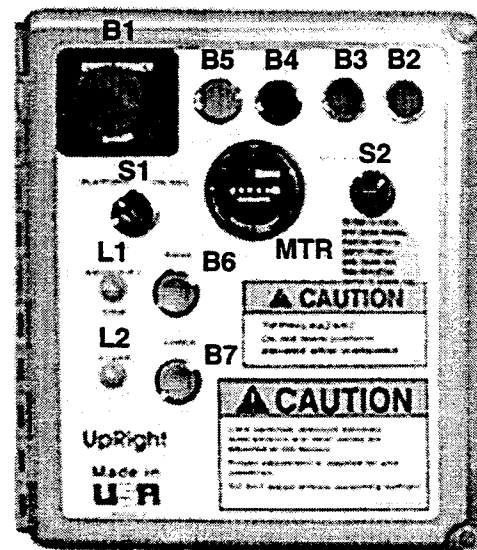
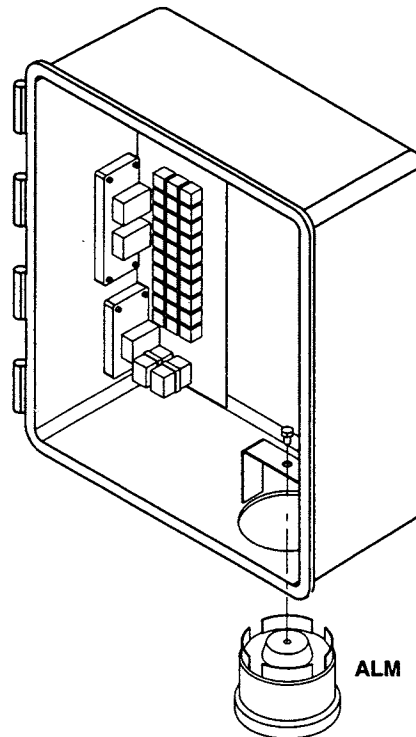
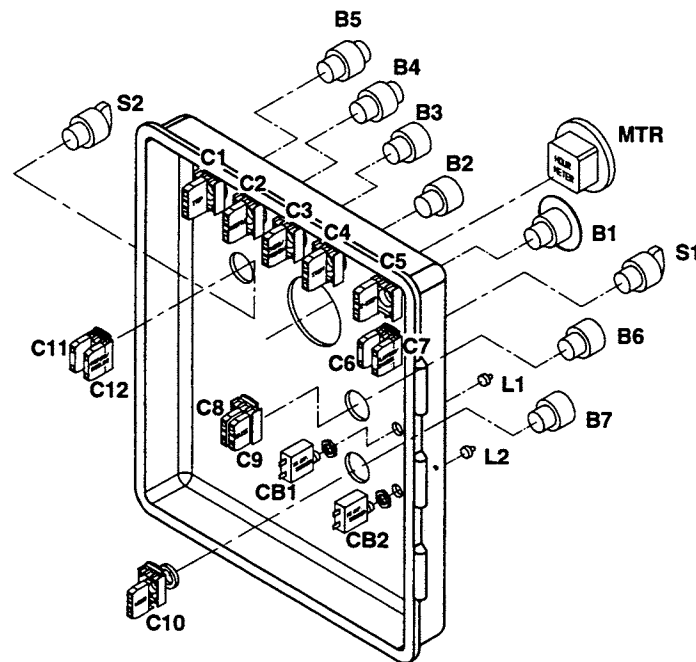


Figure 5-24: Lower Controls, Dual Fuel

Figure 5-25: Lower Controls Components, Dual Fuel

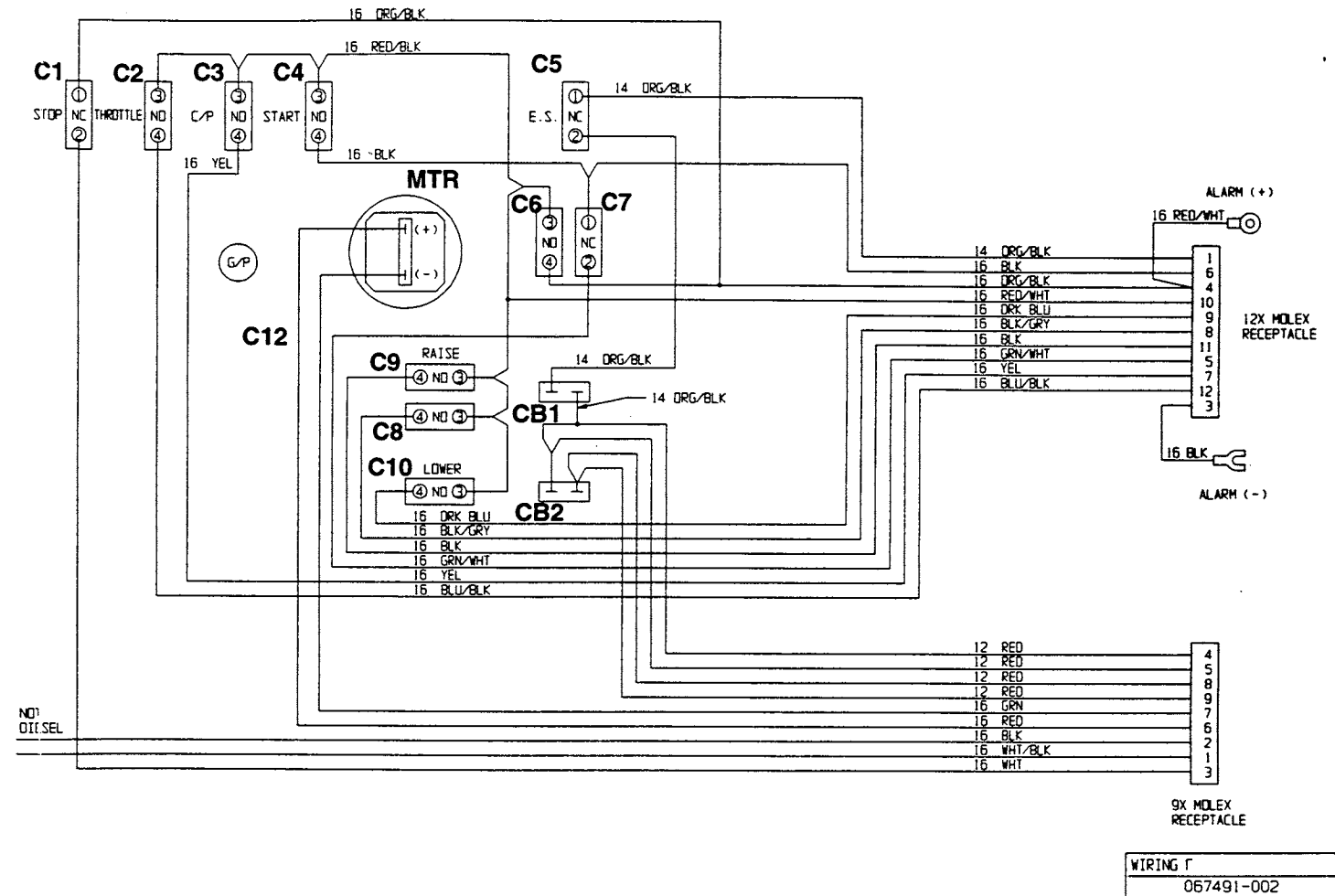


Figure 5-26: Lower Controls Wiring, Dual Fuel

5.22 LOWER CONTROL BOX COMPONENTS - DIESEL

Table 5-21: Legend, Lower Control Box Components, Diesel

| Reference Designation | Name |
|-----------------------|--|
| ALM | Alarm |
| B1 | Emergency Stop Button |
| B2 | Start Engine Button |
| B3 | Pre-Heat Button |
| B4 | Throttle Button |
| B5 | Stop Engine Button |
| B6 | Raise Platform Button |
| B7 | Lower Platform Button |
| C1 | Start Engine Contact, Normally Closed |
| C2 | Throttle Contact, Normally Open |
| C3 | Pre-Heat Contact, Normally Open |
| C4 | Start Engine Contact, Normally Open |
| C5 | Emergency Stop Contact, Normally Closed |
| C6 | Platform/Chassis Selector Contact, Normally Open |
| C7 | Platform/Chassis Selector Contact, Normally Closed |
| C8&9 | Raise Platform Contact, Normally Open |
| C10 | Lower Platform Contact, Normally Open |
| CB1 | Emergency Stop Lamp Circuit Breaker |
| CB2 | Power Lamp Circuit Breaker |
| L1 | Emergency Stop Lamp |
| L2 | Power Lamp |
| MTR | Hour Meter |
| P1 | Plug (to fill unused hole) |
| S1 | Platform/Chassis Selector Switch |

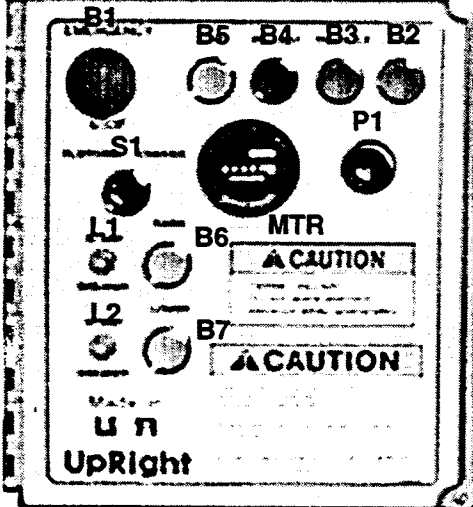
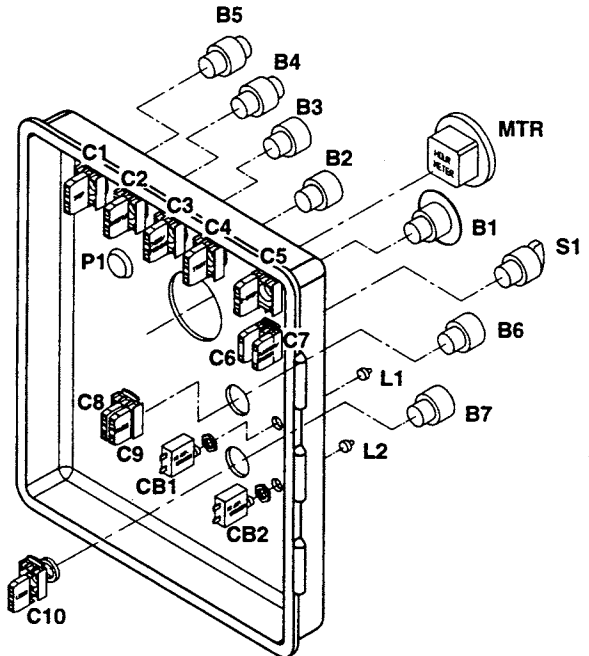


Figure 5-27: Lower Controls, Diesel

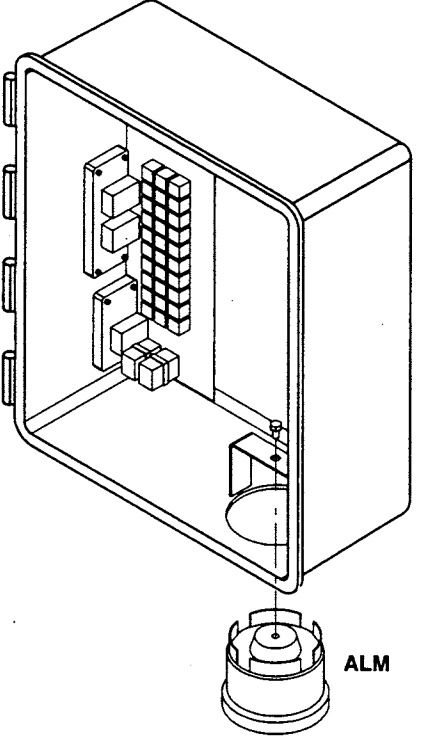


Figure 5-28: Lower Controls Components, Diesel

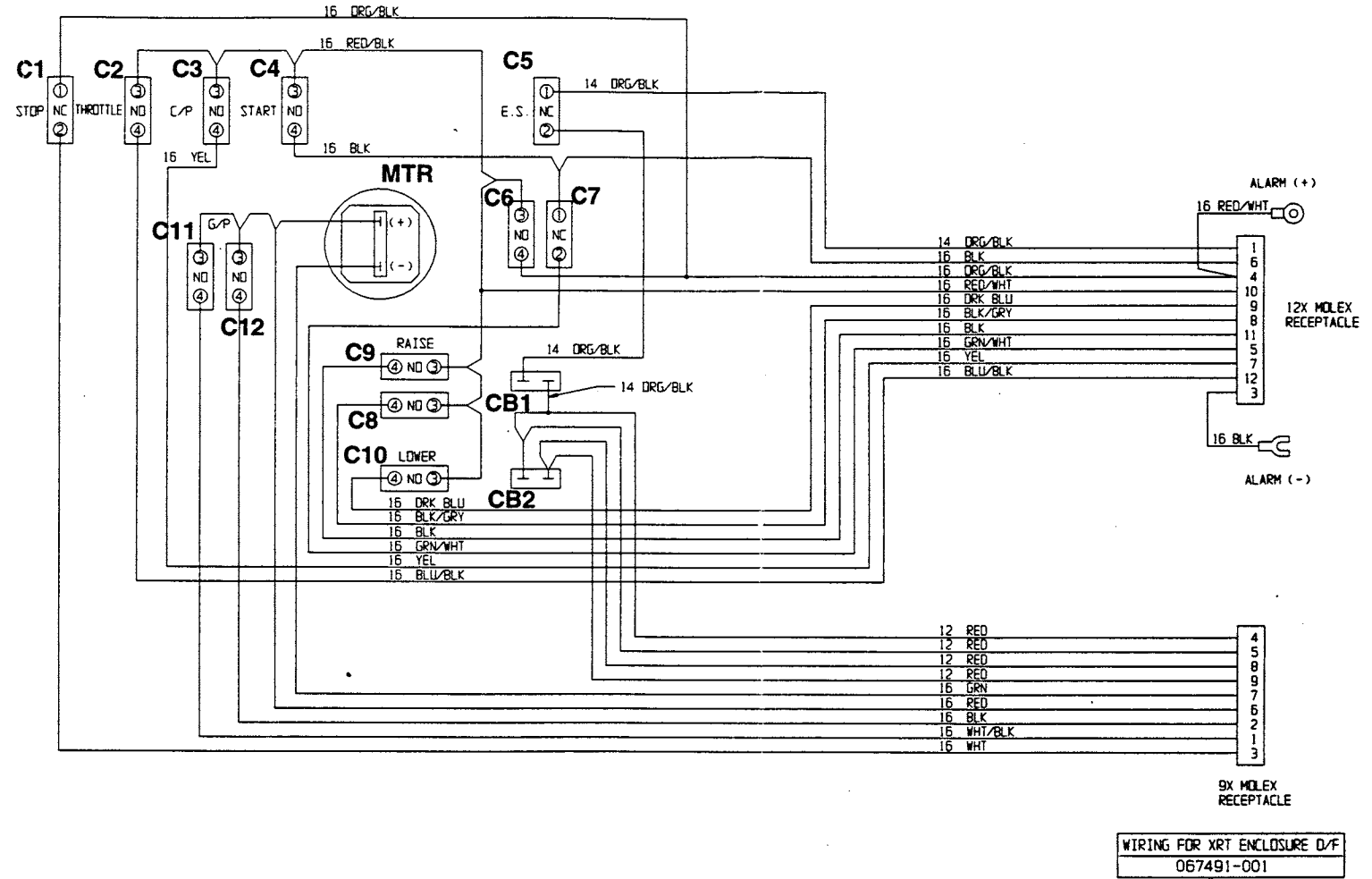


Figure 5-29: Lower Controls Wiring, Diesel

5.23 UPPER CONTROL BOX COMPONENT LOCATION

Table 5-22: Legend, Upper Control Box Components

| Reference Designation | Name |
|-----------------------|-------------------------------------|
| B1 | Emergency Stop Button |
| B2 | Choke/Pre-heat Button |
| C1 | Emergency Stop Contact |
| C2 | Choke/Pre-heat Contact |
| C3 | Drive/Lift Contact, Normally Open |
| C4 | Drive/Lift Contact, Normally Closed |
| C5 | Torque Contact, Normally Open |
| C6 | Torque Contact, Normally Closed |
| CONT | Proportional Controller (Joystick) |
| K1 | Key |
| L1 | Drive Enable Light |
| R1 | Relay |
| R2 | Time Relay (067194-000) |
| S1 | Key Switch |
| S2 | Lift/Drive Selector Switch |
| S3 | Speed Selector Switch |

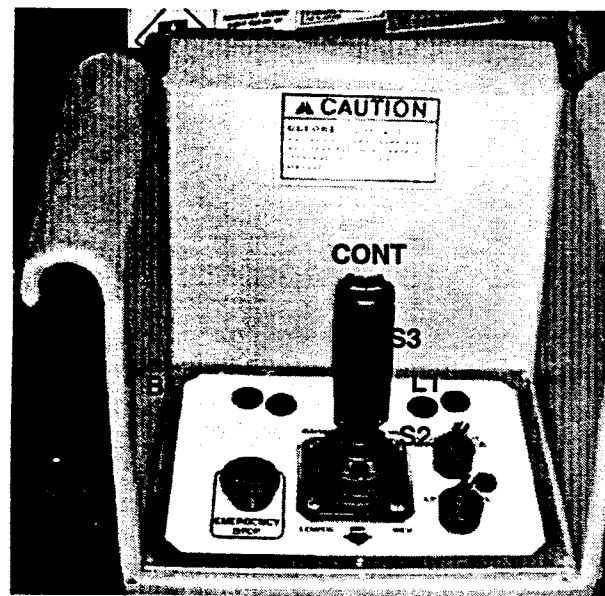


Figure 5-30: Upper Controls

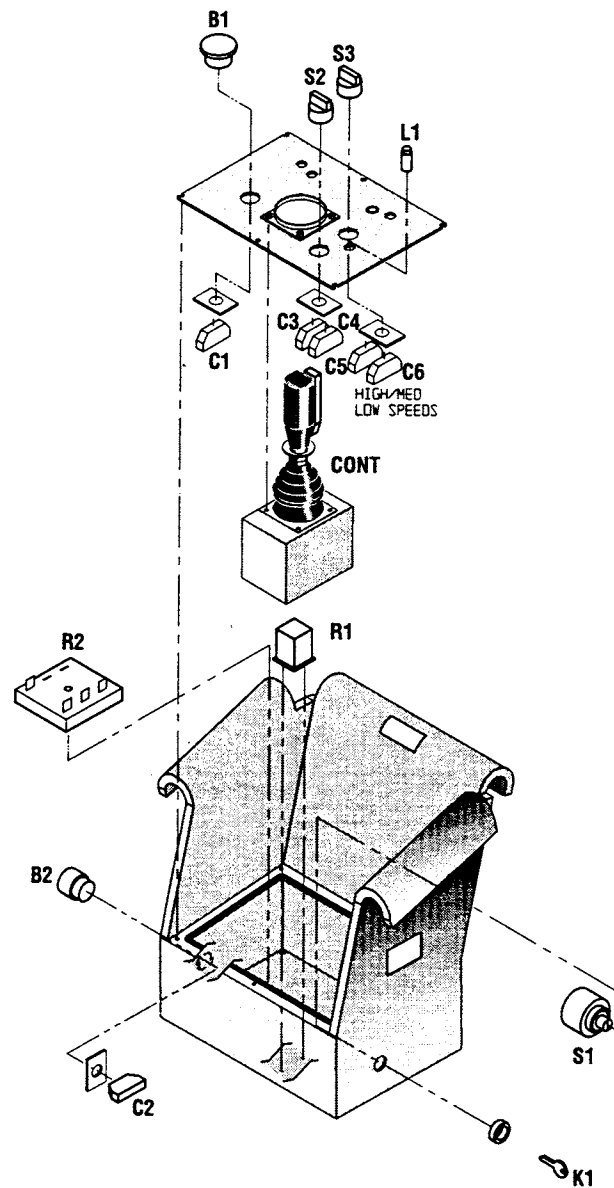


Figure 5-31: Upper Controls Components

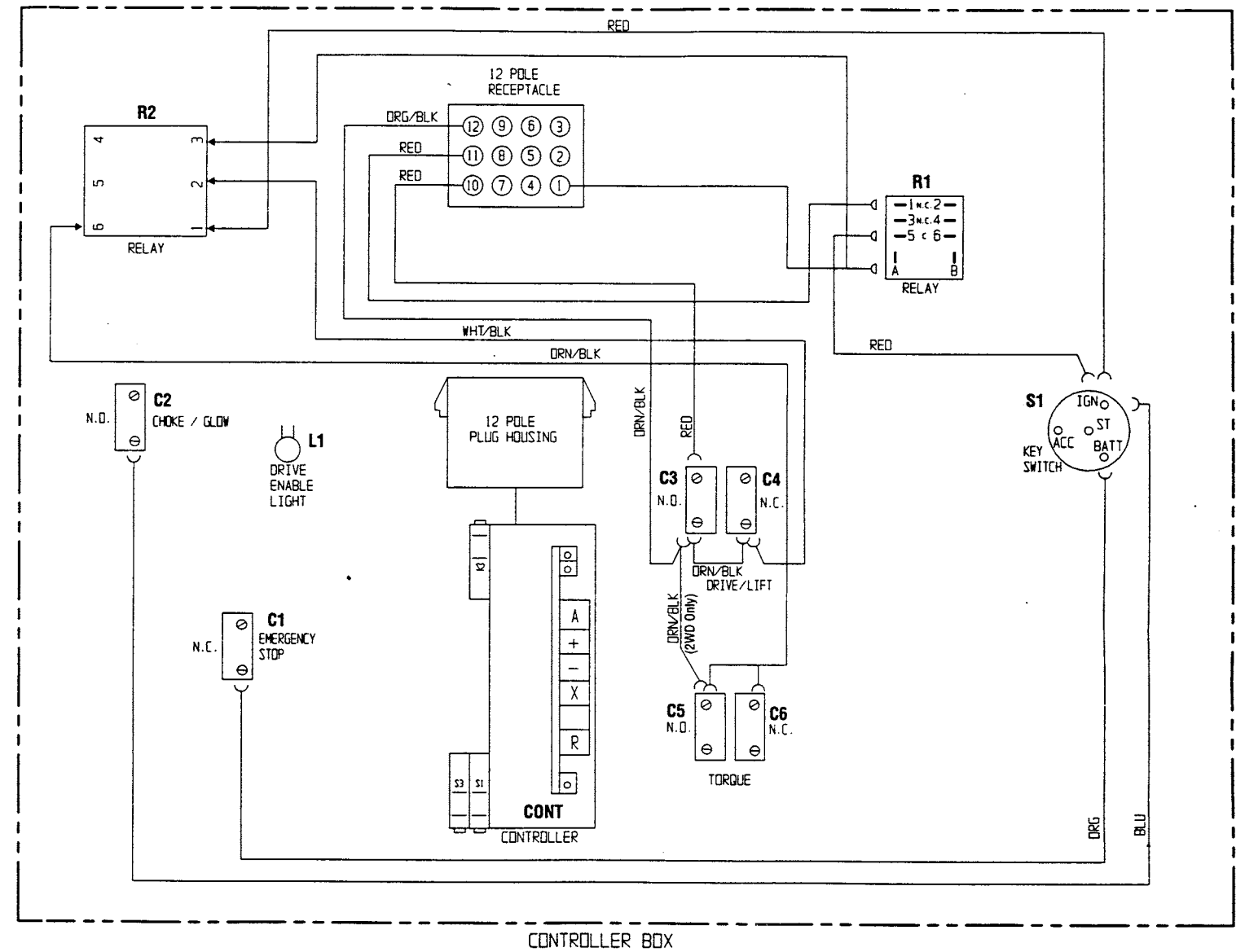


Figure 5-32: Upper Controls Wiring

Section 6

ILLUSTRATED PARTS BREAKDOWN

Introduction

This section lists and illustrates the replaceable assemblies and parts of this product, as manufactured by UpRight, Inc. Each parts list contains the component parts for that assembly.

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ILLUSTRATED PARTS BREAKDOWN

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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT27 2WD Dual Fuel Kohler

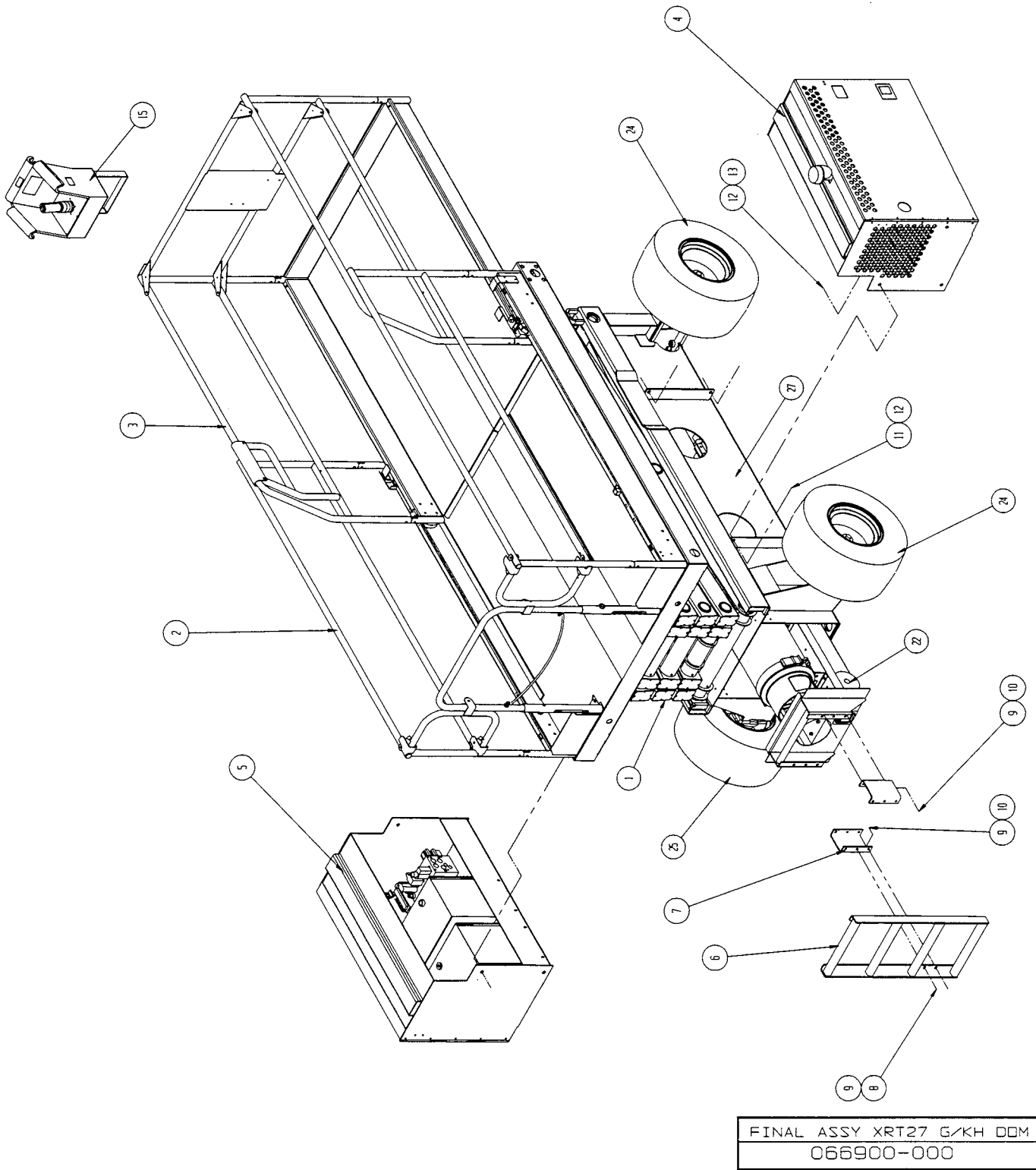
066900-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-000 | POWER MODULE | 1 |
| 5 | 066935-000 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 15 | 067942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-000 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-000 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-001 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-000 | HYDRAULIC SCHEMATIC | REF |
| 22 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-000 | CHASSIS ASSY, XRT 27, 2WD | 1 |

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ILLUSTRATED PARTS BREAKDOWN

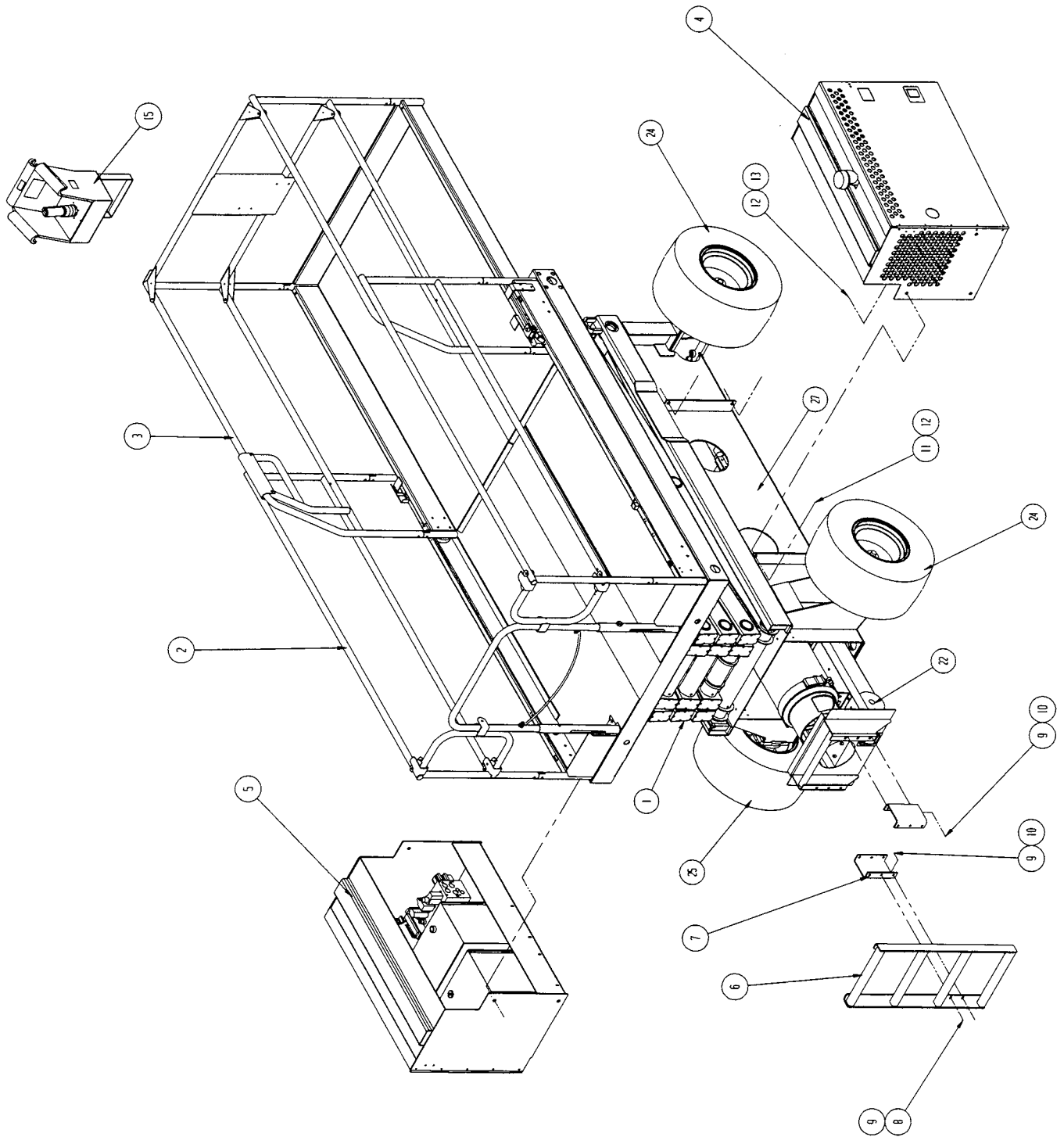
Final Assembly XRT27 2WD Diesel Kubota
066901-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-001 | POWER MODULE | 1 |
| 5 | 066935-001 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 15 | 066942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-001 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-000 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-00? | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-000 | HYDRAULIC SCHEMATIC | REF |
| 22 | 066936-001 | ROLL-OUT TRAY INSTALLATION | 1 |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-000 | CHASSIS ASSEMBLY | 1 |

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FINAL ASSY XRT27 G/KH DOM
066900-000

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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT27 2WD Dual Fuel Kubota

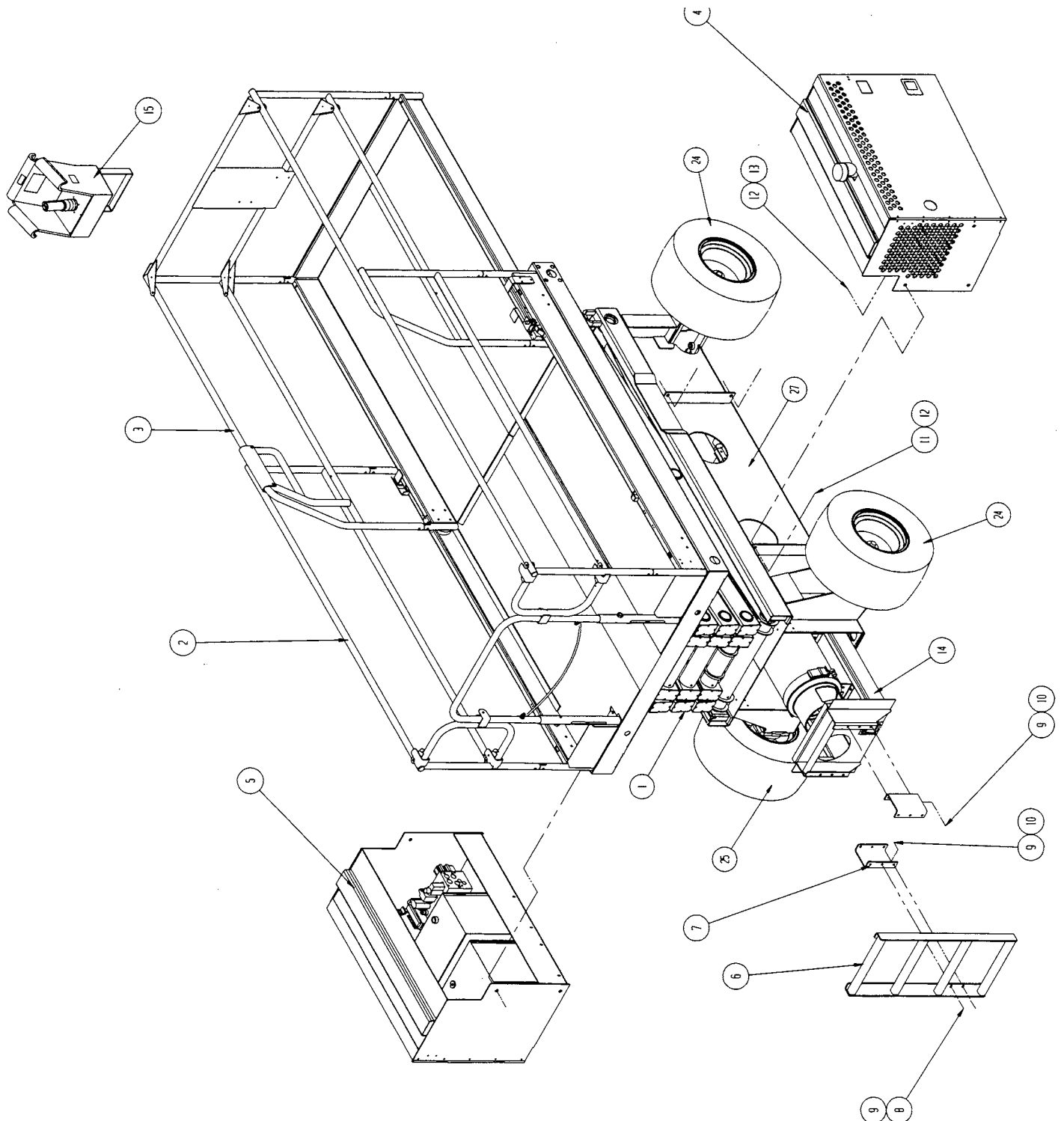
066902-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-002 | POWER MODULE | 1 |
| 5 | 066935-000 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-003 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-000 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-00? | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-000 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-000 | CHASSIS ASSEMBLY, XRT-27 | 1 |

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FINAL ASSY XRT27 G/KB DDM
066902-000

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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT27 4WD Dual Fuel Kohler

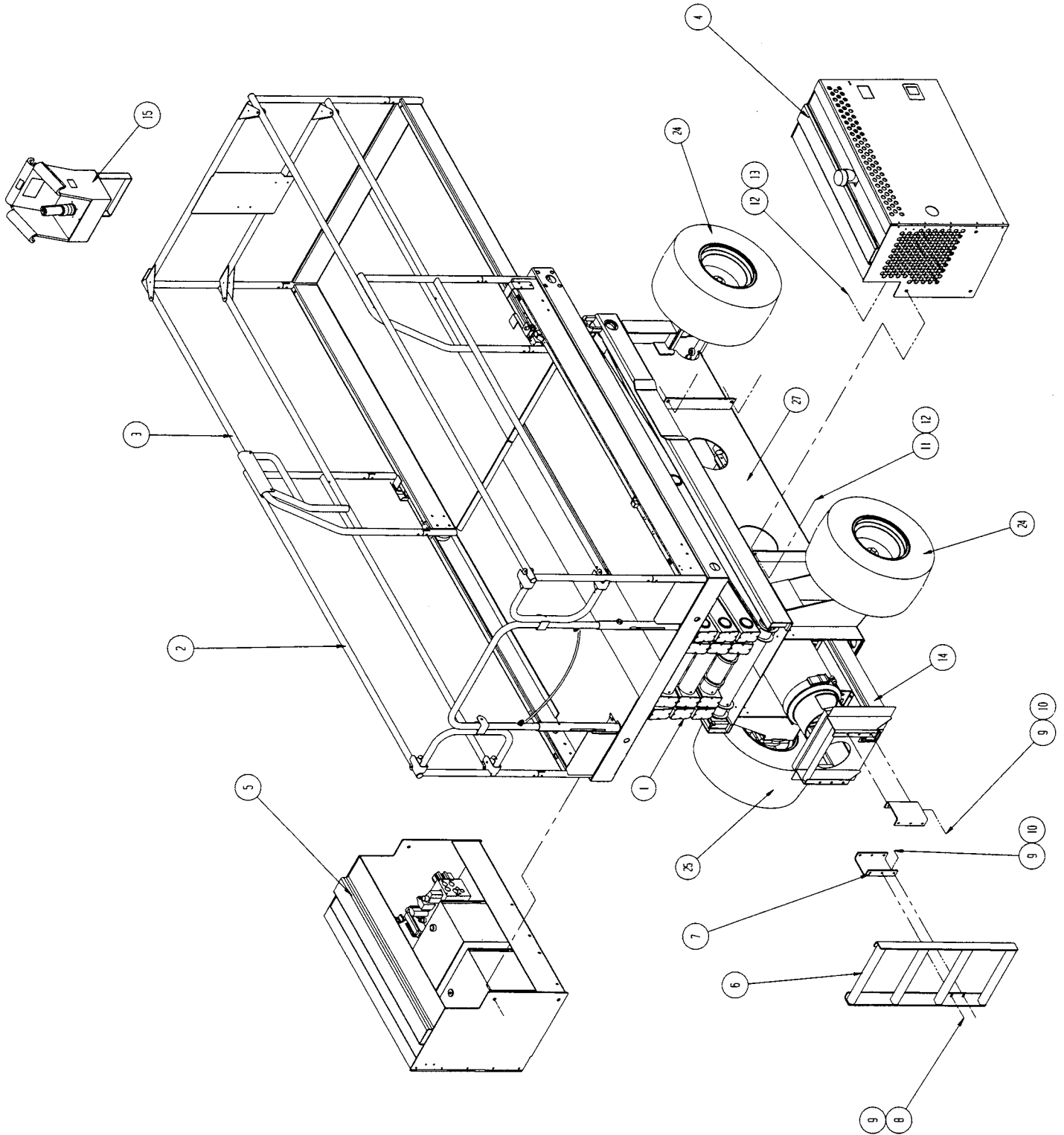
066906-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-000 | POWER MODULE | 1 |
| 5 | 066935-002 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-004 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-001 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-00? | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-001 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 066932-001 | CHASSIS ASSEMBLY, XRT-27 | 1 |

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FINAL ASSY XRT27-4WD G/KH DDM
066906-000

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Final Assembly XRT27 4WD Diesel Kubota

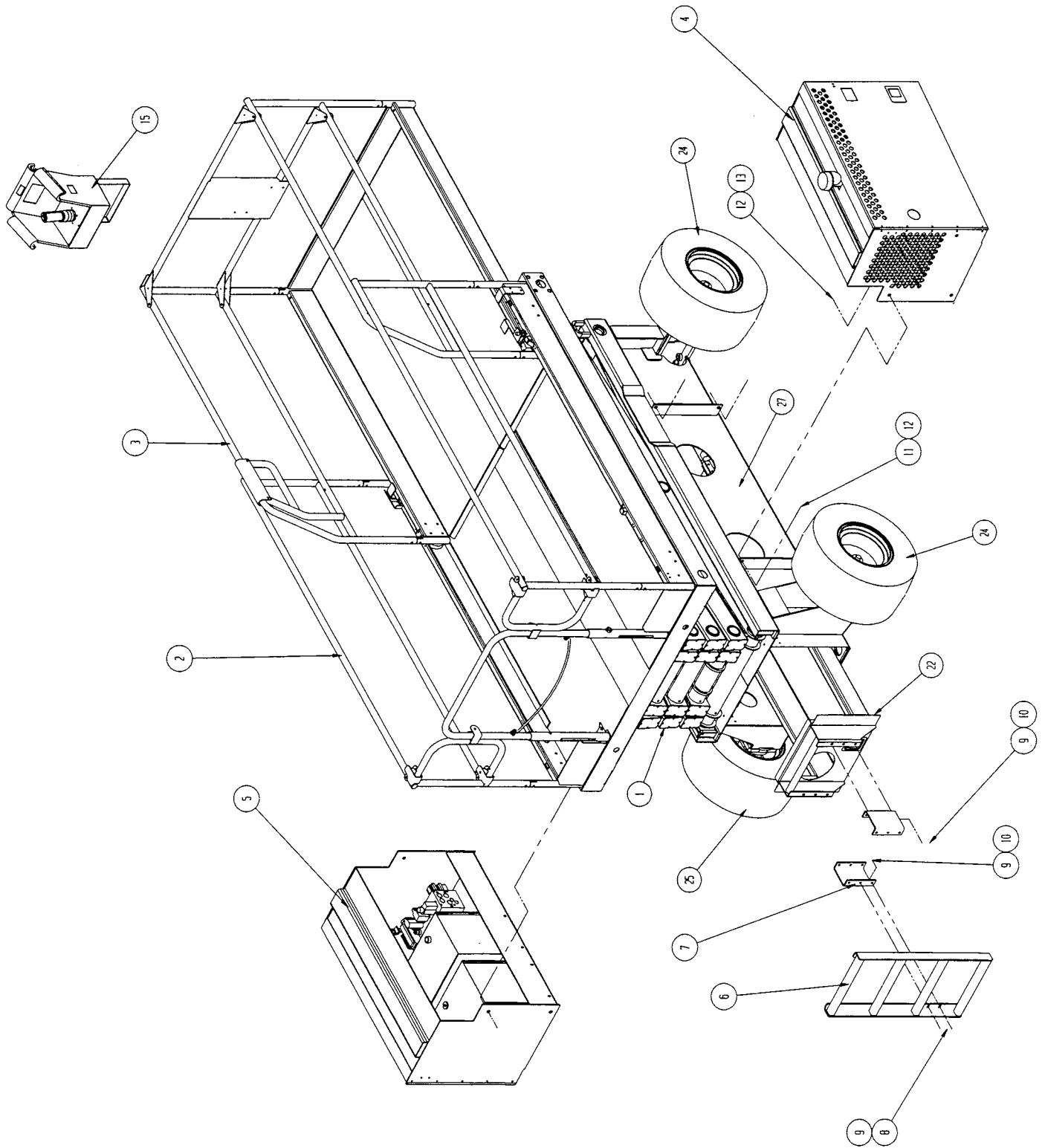
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| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-001 | POWER MODULE | 1 |
| 5 | 066935-003 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-005 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-001 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-004 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-001 | HYDRAULIC SCHEMATIC | REF |
| 22 | 066936-001 | ROLL-OUT TRAY INSTALLATION | 1 |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-001 | CHASSIS ASSEMBLY, XRT | 1 |

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066907-000

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Final Assembly XRT27 4WD Dual Fuel Kubota

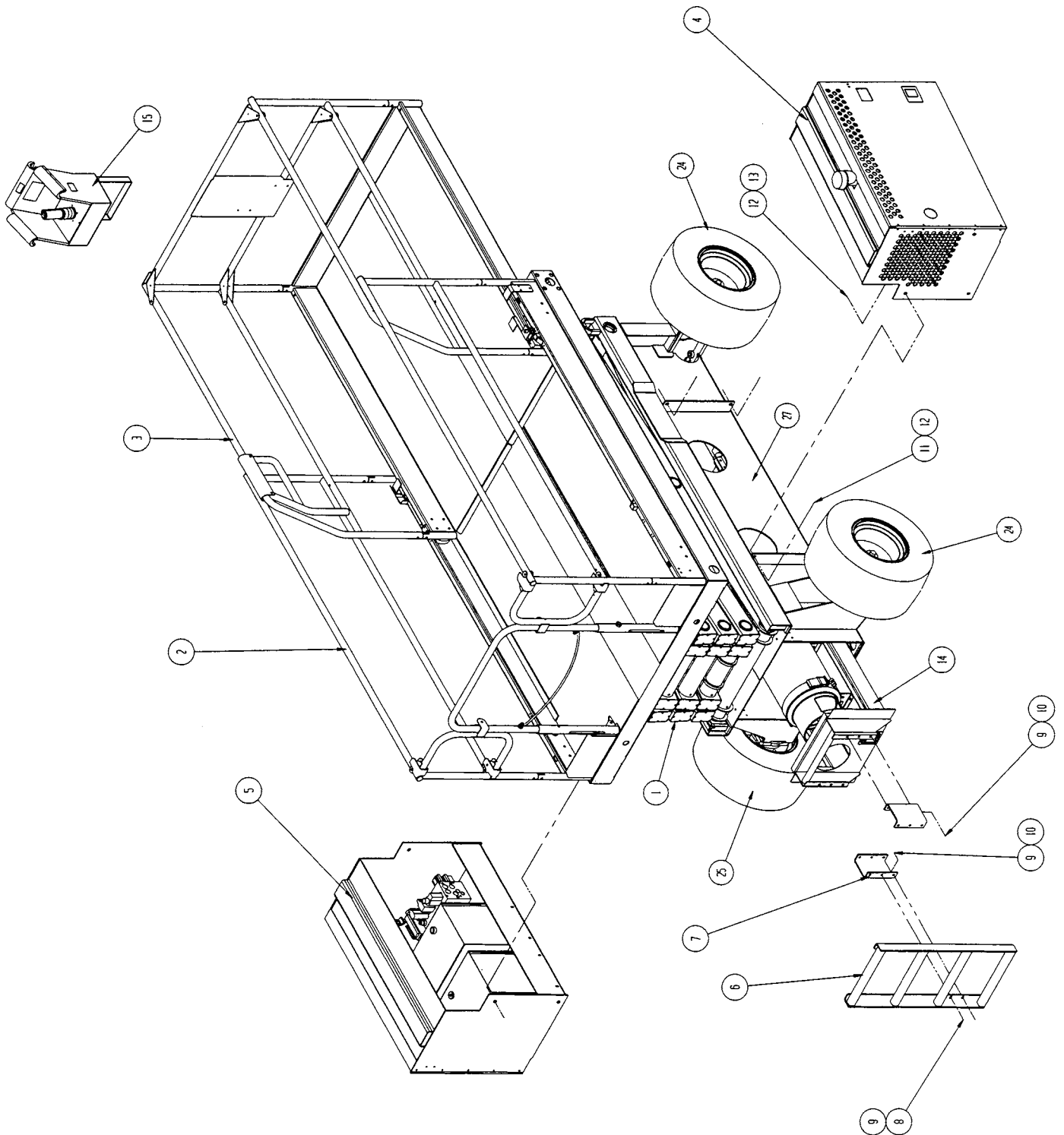
066908-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066927-000 | SCISSOR/PLATFORM INSTALLATION, XRT-27 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-002 | POWER MODULE | 1 |
| 5 | 066935-002 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-000 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-007 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-001 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-003 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-001 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-001 | CHASSIS ASSEMBLY, XRT-27 | 1 |

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Section 6.1



FINAL ASSY XRT27-4WD G/KB DDM
066908-000

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Final Assembly XRT33 2WD Dual Fuel Kohler

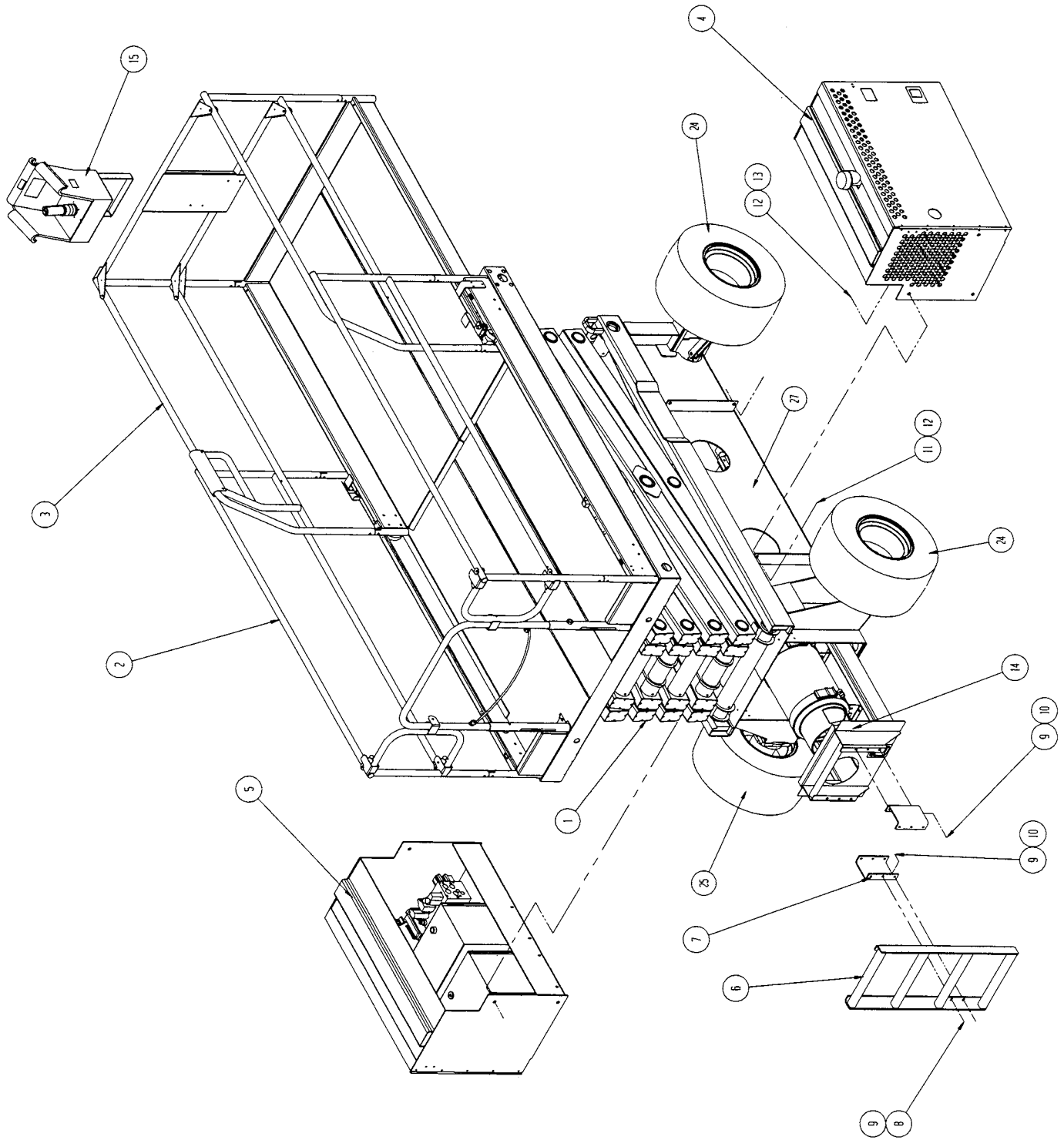
066912-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INSTALLATION, XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-000 | POWER MODULE | 1 |
| 5 | 066935-000 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-008 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-002 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-003 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-002 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-002 | CHASSIS ASSEMBLY, XRT-33 | 1 |

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FINAL ASSY XRT33 G/KH DDM
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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT33 2WD Diesel Kubota

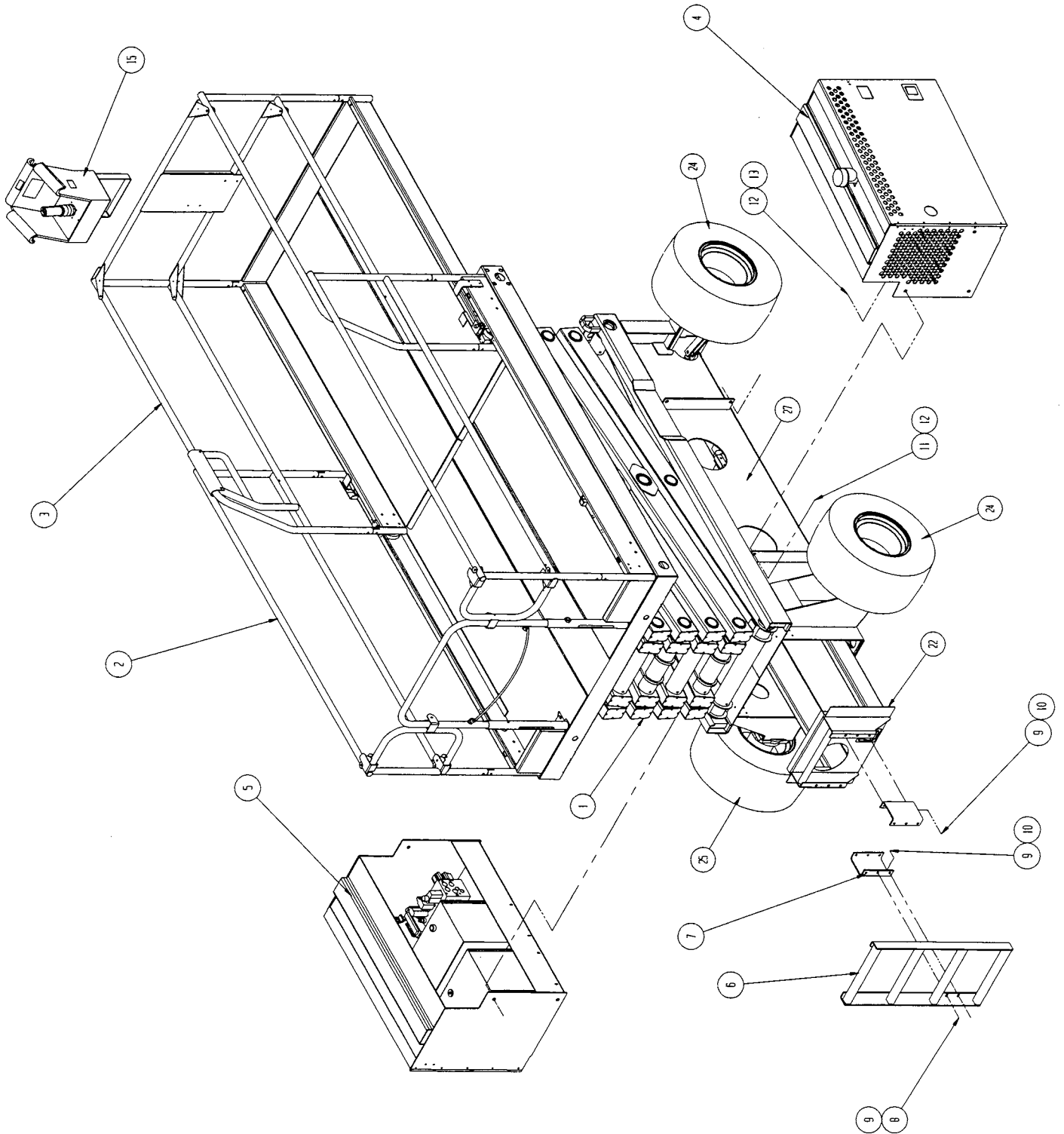
066913-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INSTALLATION, XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-001 | POWER MODULE | 1 |
| 5 | 066935-001 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 15 | 066942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-009 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-002 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-002 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-002 | HYDRAULIC SCHEMATIC | REF |
| 22 | 066936-001 | ROLL-OUT TRAY INSTALLATION | 1 |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-002 | CHASSIS ASSEMBLY, XRT-33 | 1 |

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FINAL ASSY XRT33 DIES ODM
066913-000

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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT33 2WD Dual Fuel Kubota

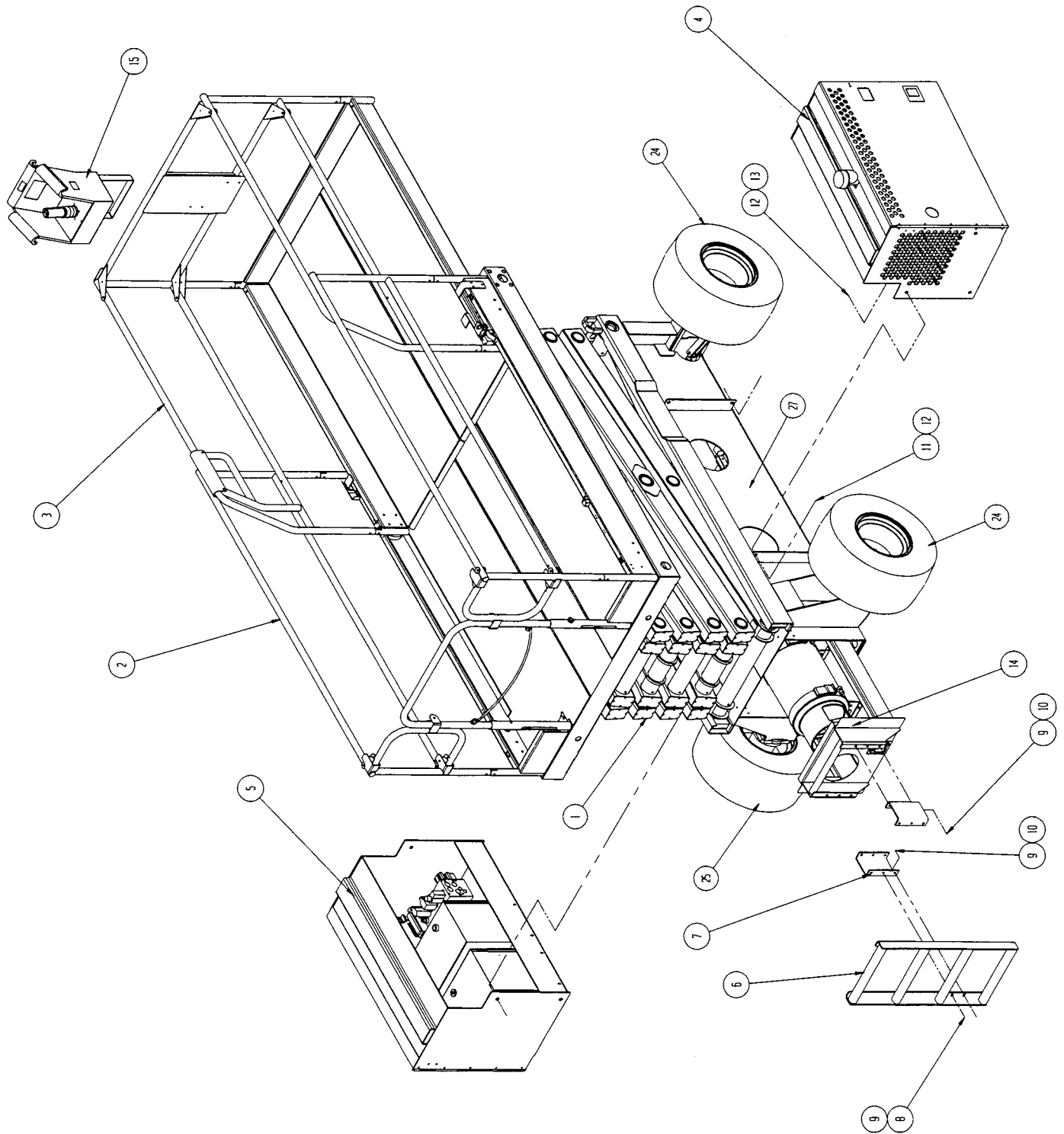
066914-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INST., XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-002 | POWER MODULE | 1 |
| 5 | 066935-000 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-000 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-011 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-002 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-003 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-002 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-002 | CHASSIS ASSEMBLY, XRT-33 | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



FINAL ASSY XRT33 G/KB DDM
066914-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT33 4WD Dual Fuel Kohler

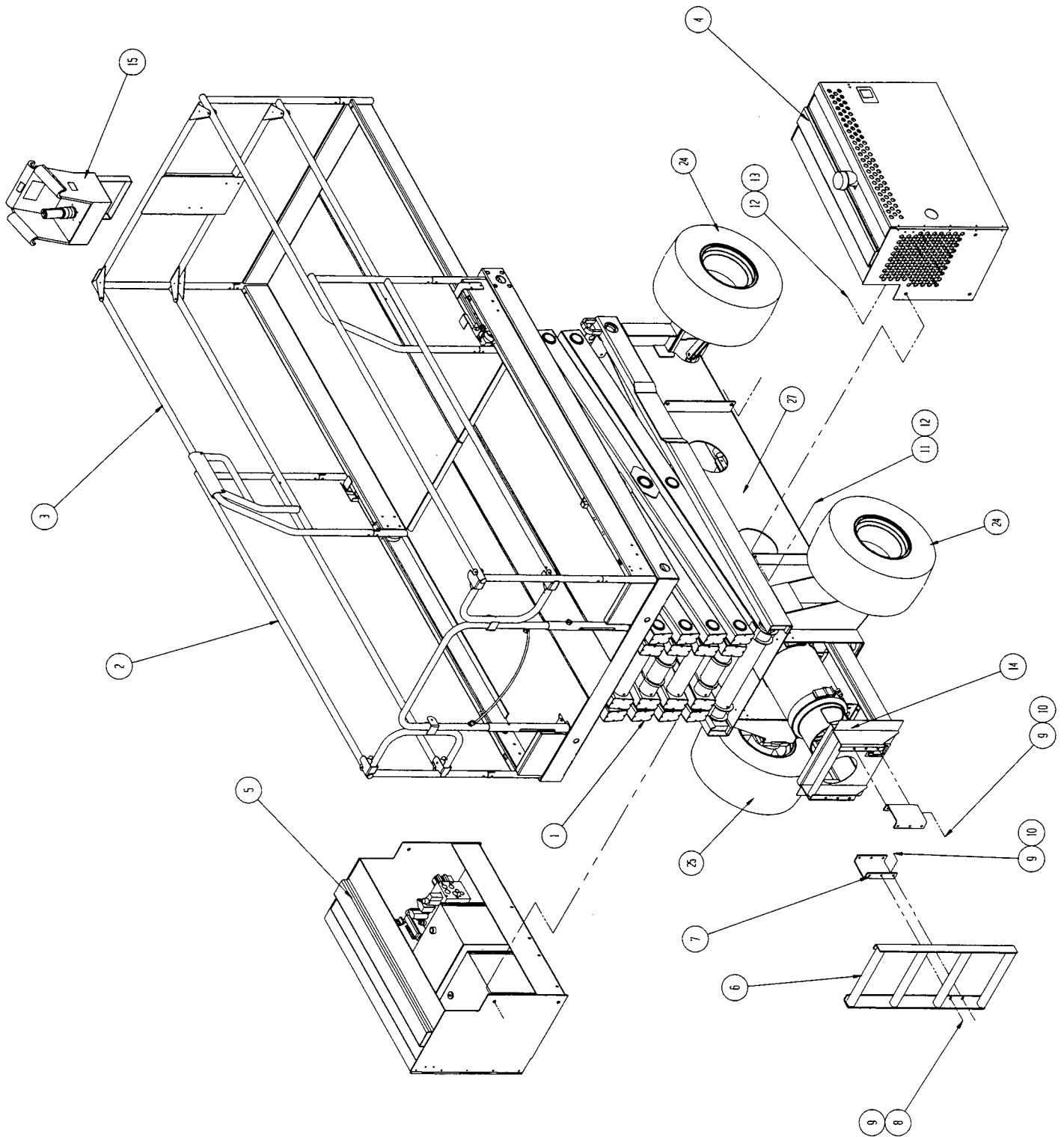
066918-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INST., XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-000 | POWER MODULE | 1 |
| 5 | 066935-002 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-012 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-003 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-003 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-003 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-003 | CHASSIS ASSEMBLY, XRT-33 | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



FINAL ASSY XRT33-4WD G/KH DOM
066918-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT33 4WD Diesel Kubota

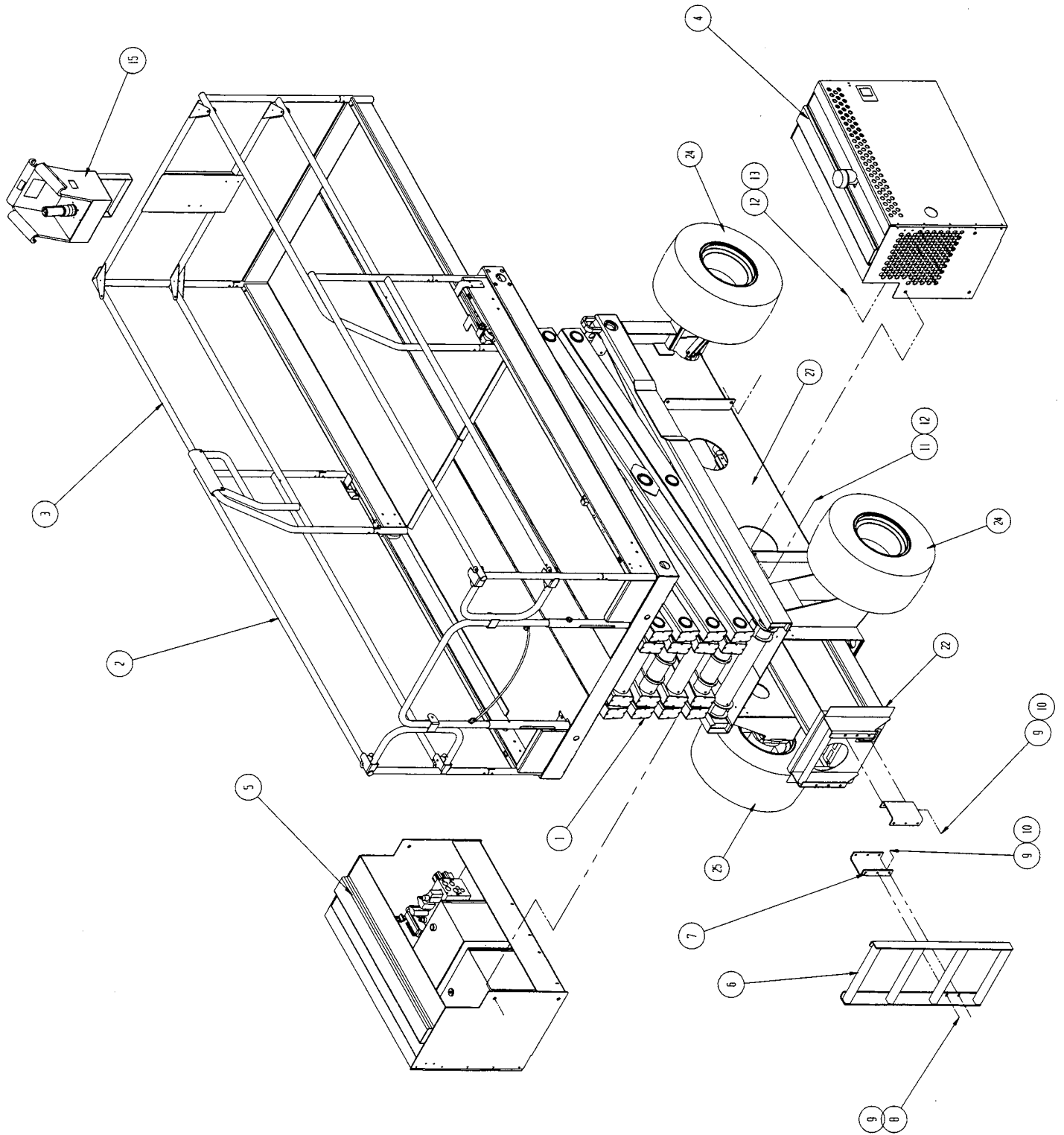
066919-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INSTAL., XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-001 | POWER MODULE | 1 |
| 5 | 066935-003 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-013 | LABEL KIT / INSTALLATION | 1 |
| 18 | 067941-003 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-004 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-003 | HYDRAULIC SCHEMATIC | REF |
| 22 | 066936-001 | ROLL-OUT TRAY INSTALLATION | 1 |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-003 | CHASSIS ASSEMBLY, XRT-33 | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



FINAL ASSY XRT33-4WD DIES DOM
066919-000

**Section
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ILLUSTRATED PARTS BREAKDOWN

Final Assembly XRT33 4WD Dual Fuel Kubota

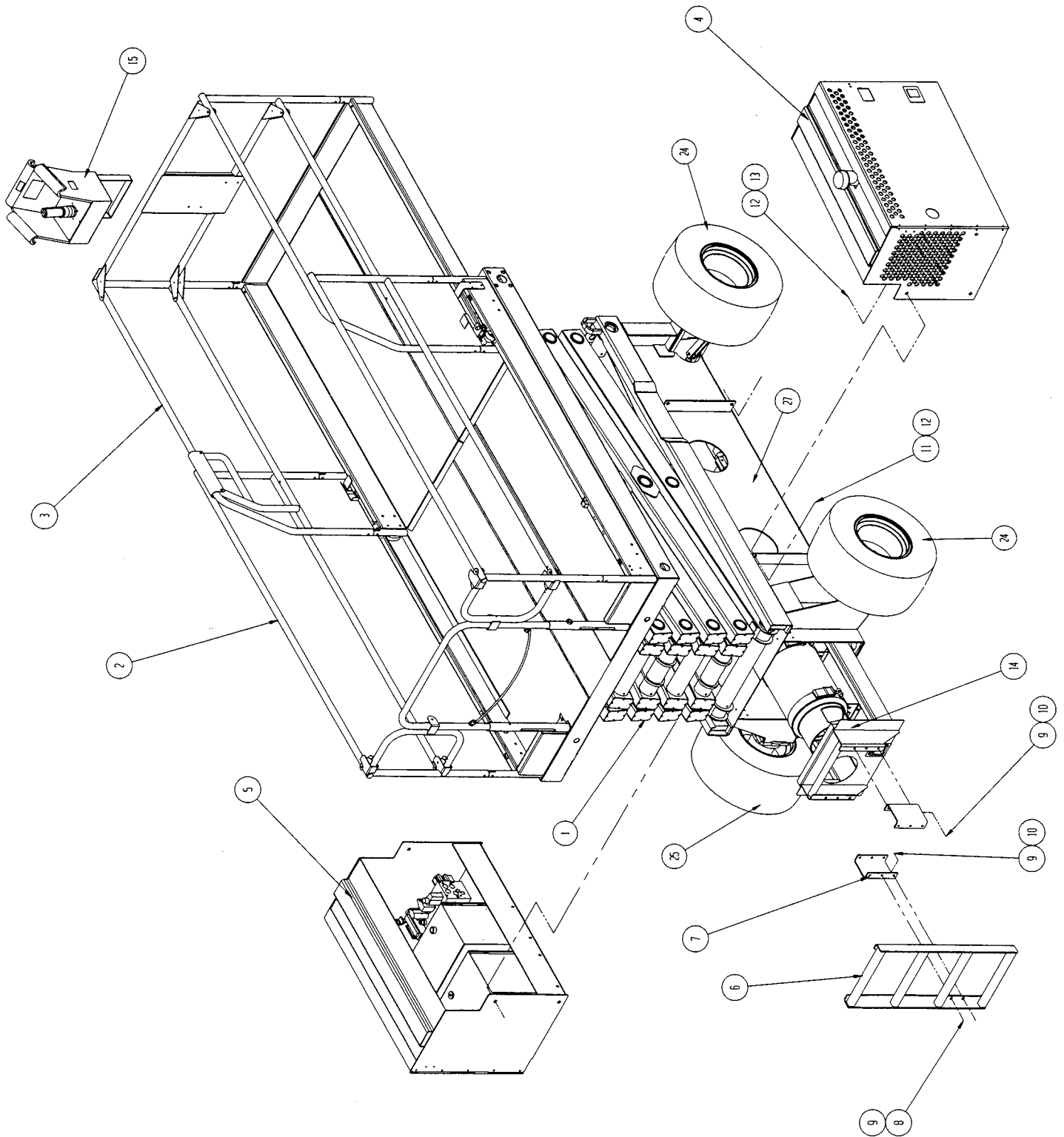
066920-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 066929-000 | SCISSOR/PLATFORM INSTAL., XRT-33 | 1 |
| 2 | 066938-000 | GUARD RAIL INSTALLATION | 1 |
| 3 | 066939-000 | EXTENSION PLATFORM INSTALLATION | 1 |
| 4 | 066937-002 | POWER MODULE | 1 |
| 5 | 066935-002 | CONTROL MODULE | 1 |
| 6 | 066964-000 | WELDMENT, LADDER | 1 |
| 7 | 067259-000 | BRACKET, LADDER STANDOFF | 2 |
| 8 | 011254-008 | SCREW HHC 3/8-16 x 1 | 8 |
| 9 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 10 | 011248-006 | NUT 3/8-16 HEX ESNA | 8 |
| 11 | 011256-008 | SCREW HHC 1/2-13 x 1 | 8 |
| 12 | 011240-008 | WASHER 1/2 FLAT | 16 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 13 | 011248-008 | NUT 1/2-13 HEX ESNA | 8 |
| 14 | 066936-000 | ROLL-OUT TRAY INSTALLATION | 1 |
| 15 | 066942-001 | CONTROLLER ASSEMBLY | 1 |
| 16 | 066944-001 | CONTROL CABLE ASSEMBLY | 1 |
| 17 | 066940-015 | LABEL KIT / INSTALLATION | 1 |
| 18 | 066941-003 | HOSE KIT / INSTALLATION | 1 |
| 20 | 066946-003 | ELECTRICAL SCHEMATIC | REF |
| 21 | 066945-003 | HYDRAULIC SCHEMATIC | REF |
| 24 | 064054-010 | TIRE/WHEEL ASSY RH-TRAC SEAL | 2 |
| 25 | 064054-011 | TIRE/WHEEL ASSY LH-TRAC SEAL | 2 |
| 27 | 066932-003 | CHASSIS ASSEMBLY, XRT-33 | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



FINAL ASSY XRT33-4WD G/KB DDM
066920-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Scissor / Platform Installation XRT27

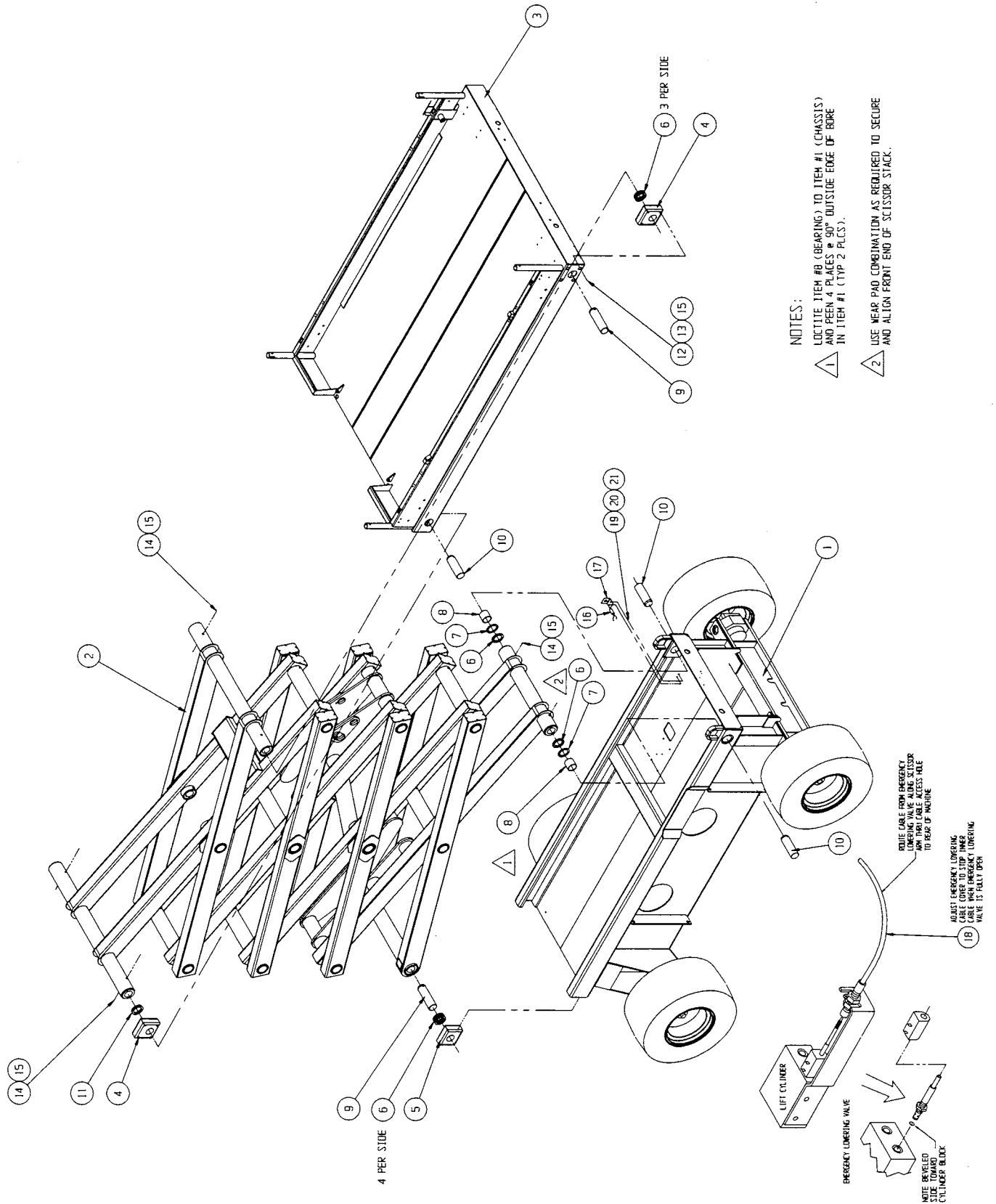
066927-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 1 | 066932-000 | CHASSIS ASSEMBLY 2WD 27FT | REF |
| 2 | 066933-000 | SCISSOR ASSEMBLY | 1 |
| 3 | 066954-000 | PLATFORM WELDMENT | 1 |
| 4 | 066191-000 | SLIDE BLOCK | 4 |
| 5 | 066191-001 | SLIDE BLOCK - BOTTOM | 2 |
| 6 | 066189-000 | WEAR PAD 1/4 | 16 |
| 7 | 066189-004 | WEAR PAD 1/8 | 2 |
| 8 | 066183-001 | BEARING EAGLE PICHER #323632 | 2 |
| 9 | 066222-001 | MOUNTING PIN | 4 |
| 10 | 066222-002 | MOUNTING PIN | 4 |
| 11 | 066189-001 | WEAR PAD 3/8 | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 12 | 011254-032 | SCREW HHC 3/8-16 x 4 LG | 8 |
| 13 | 011240-006 | WASHER 3/8 FLAT | 8 |
| 14 | 011287-032 | SCREW SOC HD CAP 3/8-16 x 4 LG | 8 |
| 15 | 011248-006 | NUT 3/8-16 UNC ESNA | 16 |
| 16 | 067193-000 | PROXIMITY SWITCH | 1 |
| 17 | 067318-000 | SWITCH BRACKET | 1 |
| 18 | 065754-003 | CABLE ASSEMBLY-EMERGENCY LOWERING | 1 |
| 19 | 011253-006 | SCREW, HHC 5/16 X 3/4 | 2 |
| 20 | 011240-005 | WASHER, 5/16 FLAT | 2 |
| 21 | 011248-005 | NUT, 5/16-18 UNC ESNA | 2 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



SCISSOR/PLATFORM INSTALLATION XRT-27
066927-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Scissor / Platform Installation XRT33

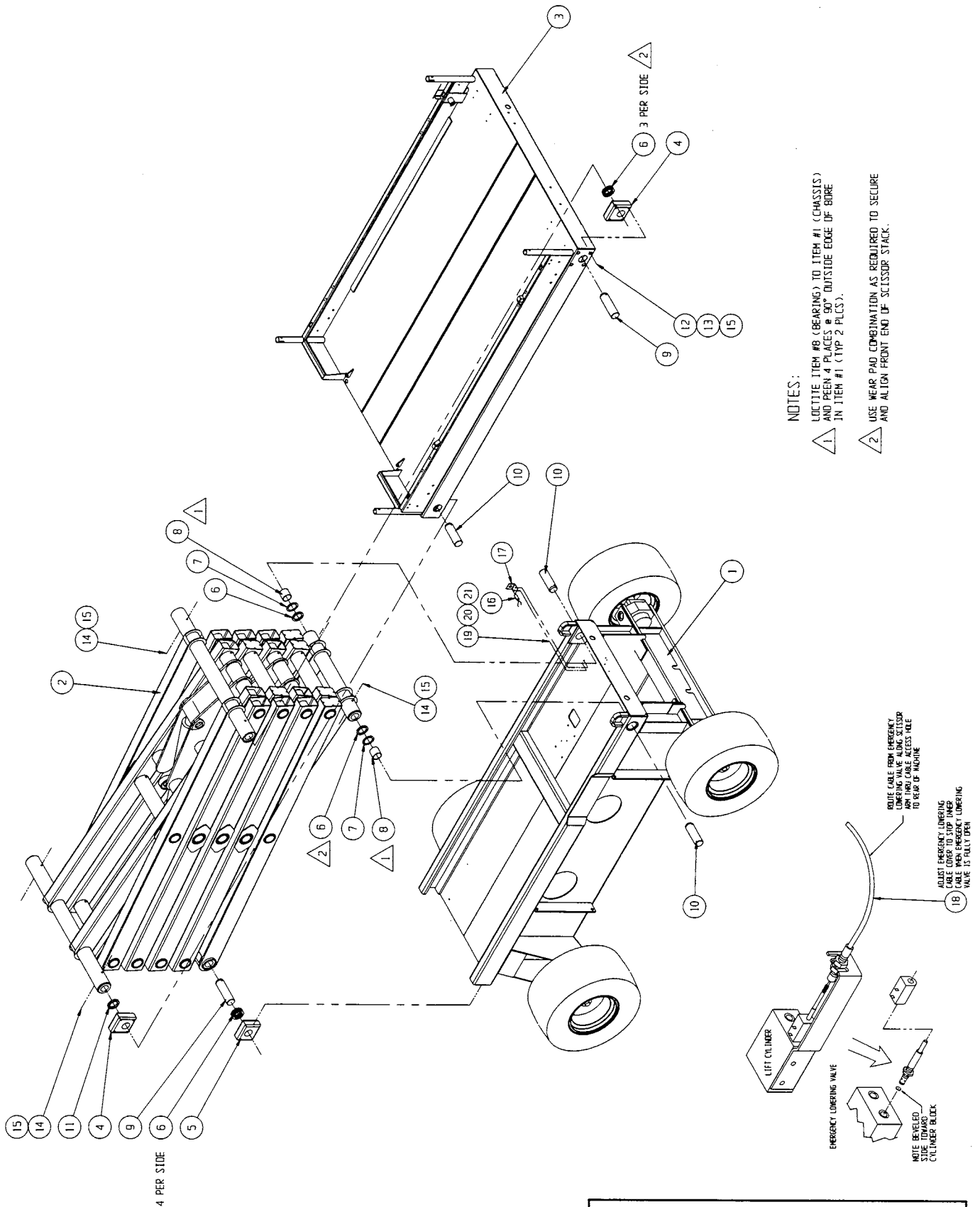
066929-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 1 | 066932-002 | CHASSIS ASSEMBLY 2WD 33FT | REF |
| 2 | 066934-000 | SCISSOR ASSEMBLY | 1 |
| 3 | 066954-000 | PLATFORM WELDMENT | 1 |
| 4 | 066191-000 | SLIDE BLOCK | 4 |
| 5 | 066191-001 | SLIDE BLOCK - BOTTOM | 2 |
| 6 | 066189-000 | WEAR PAD 1/4 | 16 |
| 7 | 066189-004 | WEAR PAD 1/8 | 2 |
| 8 | 066183-001 | BEARING EAGLE Picher #323632 | 2 |
| 9 | 066222-001 | MOUNTING PIN | 4 |
| 10 | 066222-002 | MOUNTING PIN | 4 |
| 11 | 066189-001 | WEAR PAD 3/8 | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 12 | 011254-032 | SCREW HHC 3/8-16 x 4 LG | 8 |
| 13 | 011240-006 | WASHER 3/8 FLAT | 8 |
| 14 | 011287-032 | SCREW SOC HD CAP 3/8-16 x 4 LG | 8 |
| 15 | 011248-006 | NUT 3/8-16 UNC ESNA | 16 |
| 16 | 067193-000 | PROXIMITY SWITCH | 1 |
| 17 | 067318-000 | SWITCH BRACKET | 1 |
| 18 | 065754-003 | CABLE ASSEMBLY-EMERGENCY LOWERING | 1 |
| 19 | 011253-006 | SCREW, HHC 5/16 X 3/4 | 2 |
| 20 | 011240-005 | WASHER, 5/16 FLAT | 2 |
| 21 | 011248-005 | NUT, 5/16-18 UNC ESNA | 2 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



SCISSOR/PLATFORM INSTALLATION XRT-33
066929-000

**Section
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ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT27 2wd

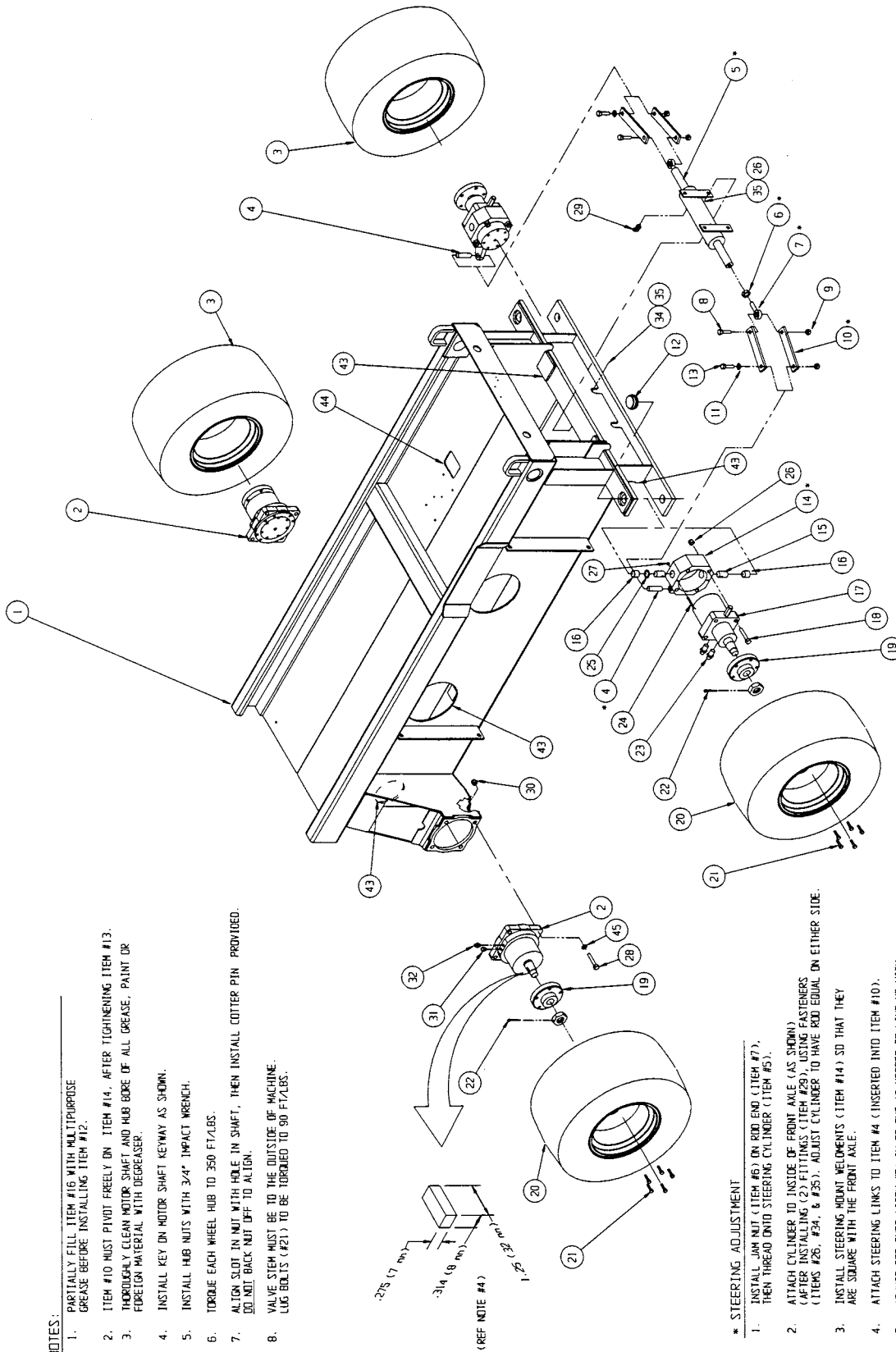
066932-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-005 | CHASSIS WEIGHT INST'L 27' XRT WELDMENT | 1 |
| 2 | 067171-000 | REAR BRAKE (2WD) | 2 |
| 3 | 064054-011 | WHEEL & TIRE ASSY T/S (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|----------|
| 20 | 064054-010 | WHEEL & TIRE ASSY T/S (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 37 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 Ft |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 Ft |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



- NOTES:**
- PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
 - ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13.
 - THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FOREIGN MATERIAL WITH DEGREASER.
 - INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
 - INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
 - TORQUE EACH WHEEL HUB TO 350 FT/LBS.
 - ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ACTION.
 - VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LOG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

- * STEERING ADJUSTMENT**
- INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD ONTO STEERING CYLINDER (ITEM #5).
 - ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (AFTER INSTALLING (2) FITTINGS (ITEM #29), USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD EQUAL ON EITHER SIDE.
 - INSTALL STEERING MOUNT WELDMENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
 - ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
 - ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
 - WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

CHASSIS ASSY - 2WD - XRT 27 FT
066932-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT27 4WD

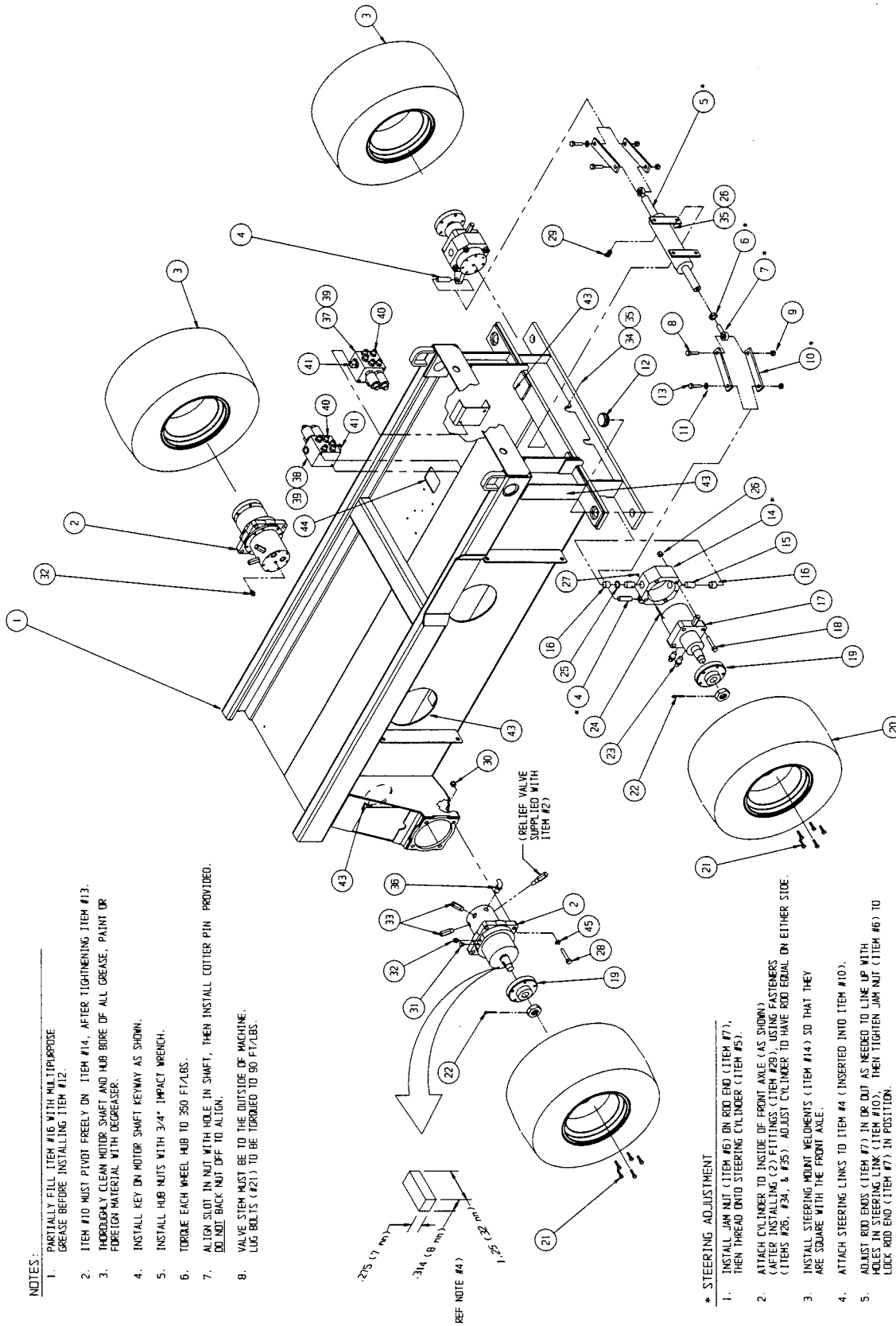
066932-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-005 | CHASSIS WEIGHT INST'L 27' XRT WELDMENT | 1 |
| 2 | 067184-000 | REAR DRIVE MOTOR W/BRAKE | 2 |
| 3 | 064054-011 | WHEEL & TIRE ASSY T/S (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |
| 20 | 064054-010 | WHEEL & TIRE ASSY T/S (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----------|
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 33 | 011941-014 | FITTING, 10MB-8MJ | 4 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 011934-001 | FITTING, 90° 4MB-4MJ | 2 |
| 37 | 067183-000 | SERIES PARALLEL VALVE BLOCK | 1 |
| 38 | 067183-001 | SERIES PARALLEL VALVE BLOCK | 1 |
| 39 | 011254-044 | SCREW, HHC GR5 3/8 X 5" | 4 |
| 40 | 011941-010 | FITTING, 8MB-8MJ | 10 |
| 41 | 011940-015 | FITTING, 8MB-8MJ, 90° | 2 |
| 42 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | FT. 14.25 |
| 44 | 061692-099 | GROMMET, TRIM | FT. 1.25 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



NOTES:

1. PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
2. ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13.
3. THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FOREIGN MATERIAL WITH DEGREASER.
4. INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
5. INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
6. TORQUE EACH WHEEL HUB TO 350 FT/LBS.
7. ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED.
8. VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. DO NOT BACK NUT OFF TO ALIGN. LOG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

*** STEERING ADJUSTMENT**

1. INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD ONTO STEERING CYLINDER (ITEM #5).
2. ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (AFTER INSTALLING (2) FITTINGS (ITEM #29) USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD EQUAL ON EITHER SIDE.
3. INSTALL STEERING MOUNT WELDNENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
4. ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
5. ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH LOCK ROD ENDS (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
6. WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

CHASSIS ASSY - 4WD - XRT 27 FT
066932-001

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT33 2WD

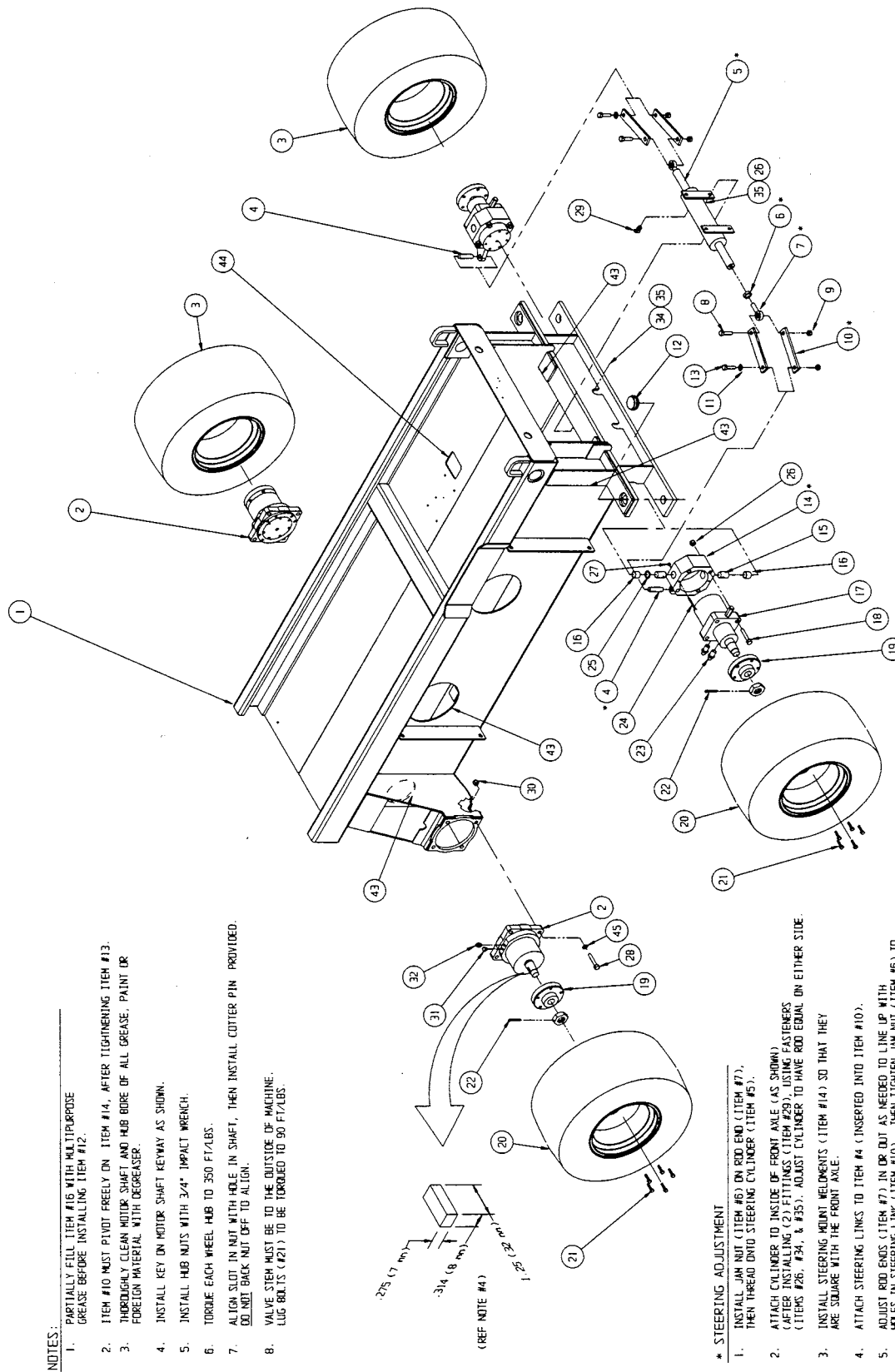
066932-002

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-007 | CHASSIS WEIGHT INST'L 33' XRT WELDMENT | 1 |
| 2 | 067171-000 | REAR BRAKE (2WD) | 2 |
| 3 | 064054-011 | WHEEL & TIRE ASSY T/S (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----------|
| 20 | 064054-010 | WHEEL & TIRE ASSY T/S (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 FT. |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 FT. |
| 45 | 011239-010 | WASHER, ASTM FLAT 5/8" | 8 |

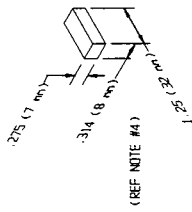
ILLUSTRATED PARTS BREAKDOWN

Section 6.1



NOTES:

1. PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
2. ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13.
3. THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FOREIGN MATERIAL WITH DEGREASER.
4. INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
5. INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
6. TORQUE EACH WHEEL HUB TO 350 FT/LBS.
7. ALIGN SLOT IN NOT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NOT OFF TO ALIGN.
8. VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LUG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.



*** STEERING ADJUSTMENT**

1. INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD OVER STEERING CYLINDER (ITEM #5).
2. ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (AFTER INSTALLING (2) FITTINGS (ITEM #29) USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD EQUAL ON EITHER SIDE.
3. INSTALL STEERING MOUNT BUSHINGS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
4. ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
5. ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH AXLES STEERING SHOCK LINK RODS. THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
6. WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

CHASSIS ASSY - 2WD - XRT 33 FT
066932-002

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT33 4WD

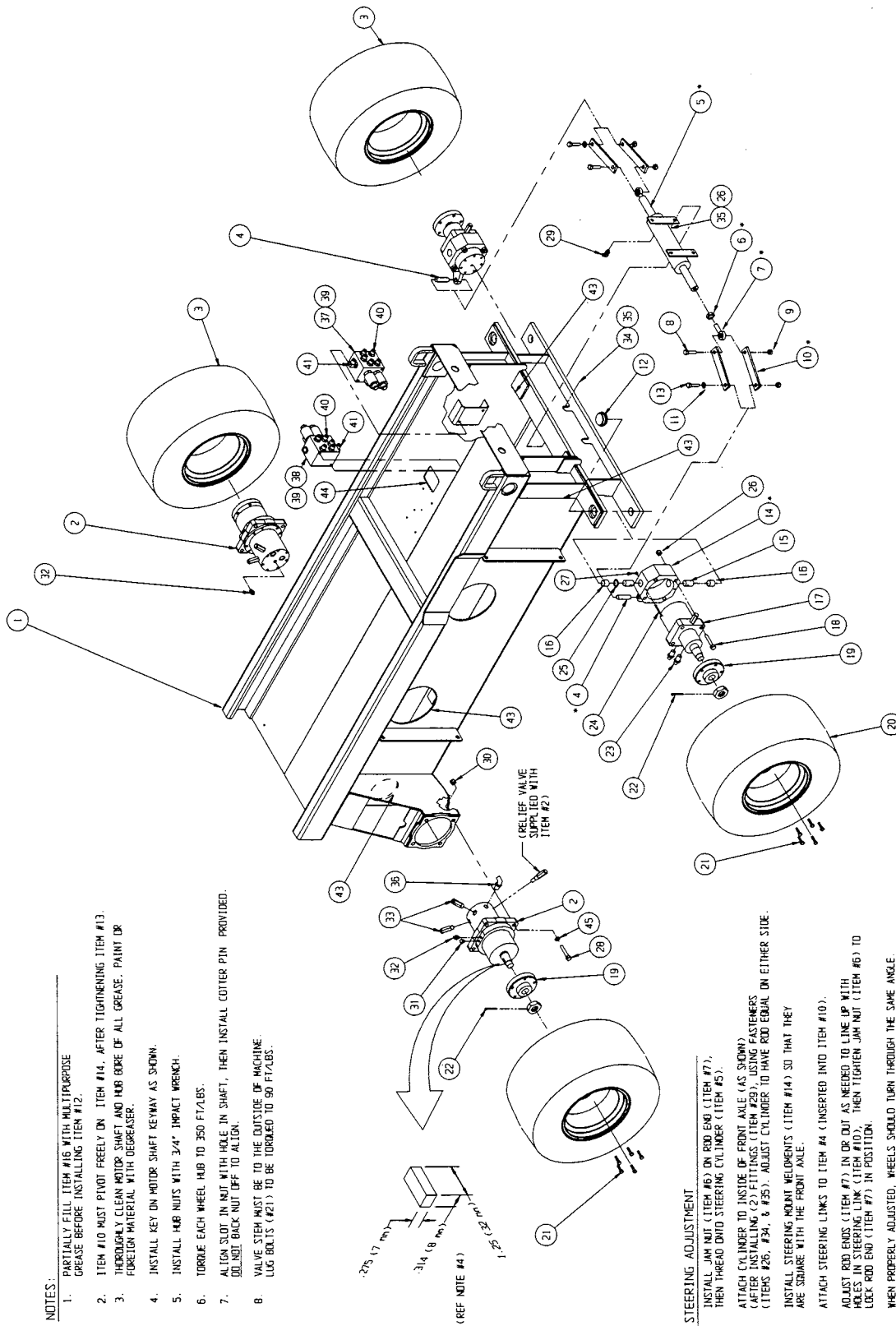
066932-003

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 1 | 066950-007 | CHASSIS WEIGHT INSTALLMENT - 33XRT | 1 |
| 2 | 067184-000 | REAR DRIVE MOTOR W/BRAKE | 2 |
| 3 | 064054-011 | WHEEL & TIRE ASSY T/S (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR2-13UNC X 5 | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |
| 20 | 064054-010 | WHEEL & TIRE ASSY T/S (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----------|
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 33 | 011941-014 | FITTING, 10MB-8MJ | 4 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 011934-001 | FITTING, 90° 4MB-4MJ | 2 |
| 37 | 067183-000 | SERIES PARALLEL VALVEBLOCK | 1 |
| 38 | 067183-001 | SERIES PARALLEL VALVEBLOCK | 1 |
| 39 | 011254-044 | SCREW, HHC GR5 3/8 X 5" | 4 |
| 40 | 011941-010 | FITTING, 8MB-8MJ | 10 |
| 41 | 011940-015 | FITTING, 8MB-8MJ, 90° | 2 |
| 42 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 FT. |
| 44 | 067805-099 | GROMMET, TRIM | 1.25 FT. |
| 45 | 011239-010 | WASHER, ASTM FLAT 5/8" | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



NOTES:

1. PARTIALLY FILL ITEM #15 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
2. ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13, THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE. PAINT OR FOREIGN MATERIAL WITH DEGREASER.
3. INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
4. INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
5. TORQUE EACH WHEEL HUB TO 350 FT/LBS.
6. ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ALIGN.
7. VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LOG BOLTS (#21) TO BE TORQUED TO 50 FT/LBS.

*** STEERING ADJUSTMENT**

1. INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD D/D STEERING CYLINDER (ITEM #5).
2. ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN). AFTER INSTALLING (2) FITTINGS (ITEM #20) USING FASTENERS (ITEMS #26, #34, & #35), ADJUST CYLINDER TO HAVE ROD ENDIAL ON EITHER SIDE.
3. INSTALL STEERING MOUNT WELDMENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
4. ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
5. ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
6. WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

CHASSIS ASSY - 4WD - XRT 33 FT
066932-003

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT33 2WD P/F

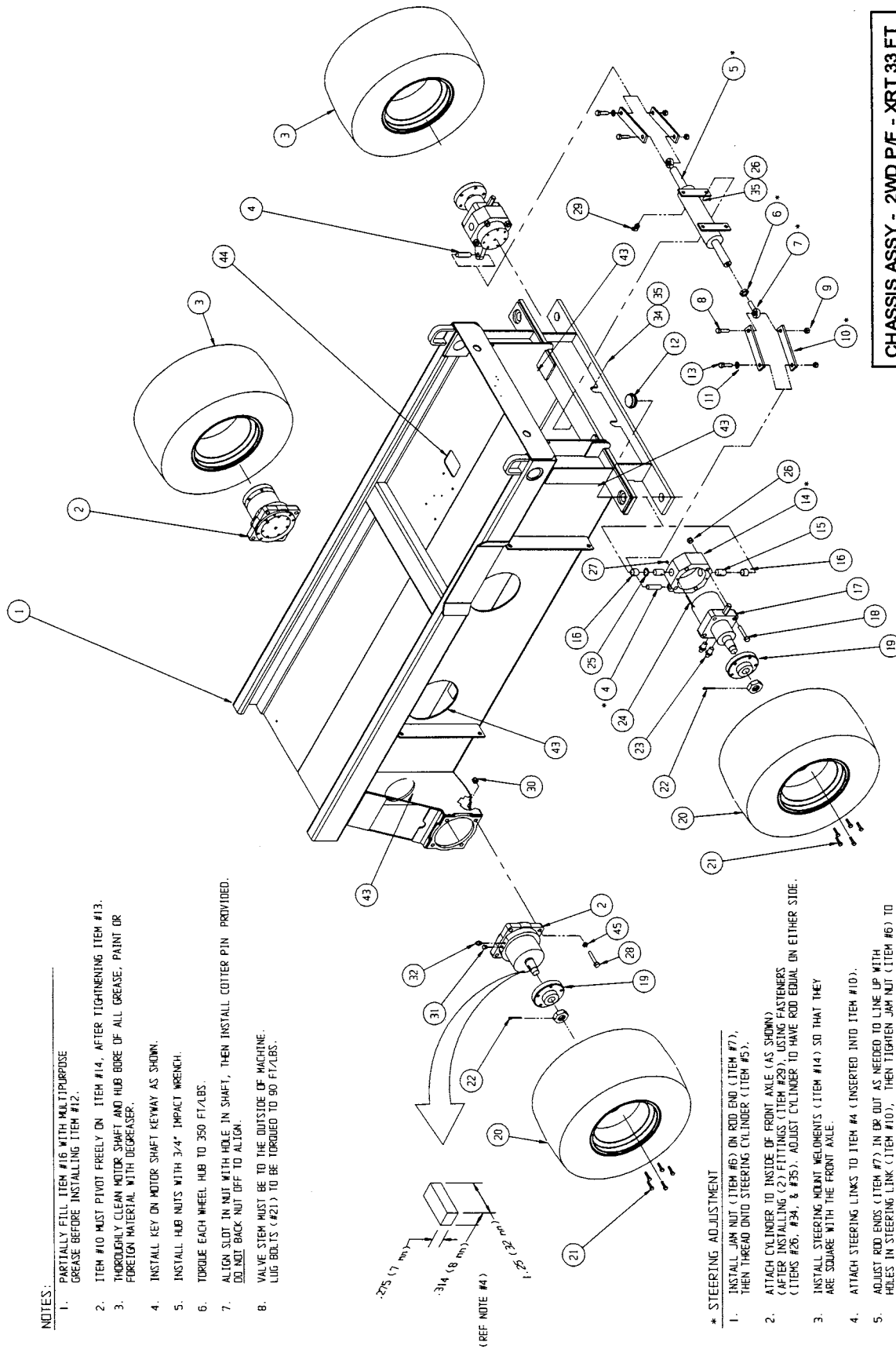
066932-004

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-008 | CHASSIS WEIGHT INST'L 27' XRT P/F WELDMENT | 1 |
| 2 | 067171-000 | REAR BRAKE (2WD) | 2 |
| 3 | 064187-011 | WHEEL & TIRE ASSY POLYFILL (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----------|
| 20 | 064187-010 | WHEEL & TIRE ASSY POLYFILL (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC X 1-3/4 | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 FT. |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 FT. |
| 45 | 011238-010 | WASHER, FLAT ASTM 5/8" | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



CHASSIS ASSY - 2WD P/F - XRT 33 FT
066932-004

- NOTES:**
- PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
 - ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13.
 - THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE. PAINT OR FOREIGN MATERIAL WITH DEGREASER.
 - INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
 - INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
 - TORQUE EACH WHEEL HUB TO 350 FT/LBS.
 - ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ALIGN.
 - VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LUG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

- * STEERING ADJUSTMENT**
- INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD ONTO STEERING CYLINDER (ITEM #5).
 - ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (AFTER INSTALLING (2) FITTINGS (ITEM #29), USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD END ON EITHER SIDE.
 - INSTALL STEERING MOUNT BUSHINGS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
 - ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
 - ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
 - WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT33 4WD P/F

066932-005

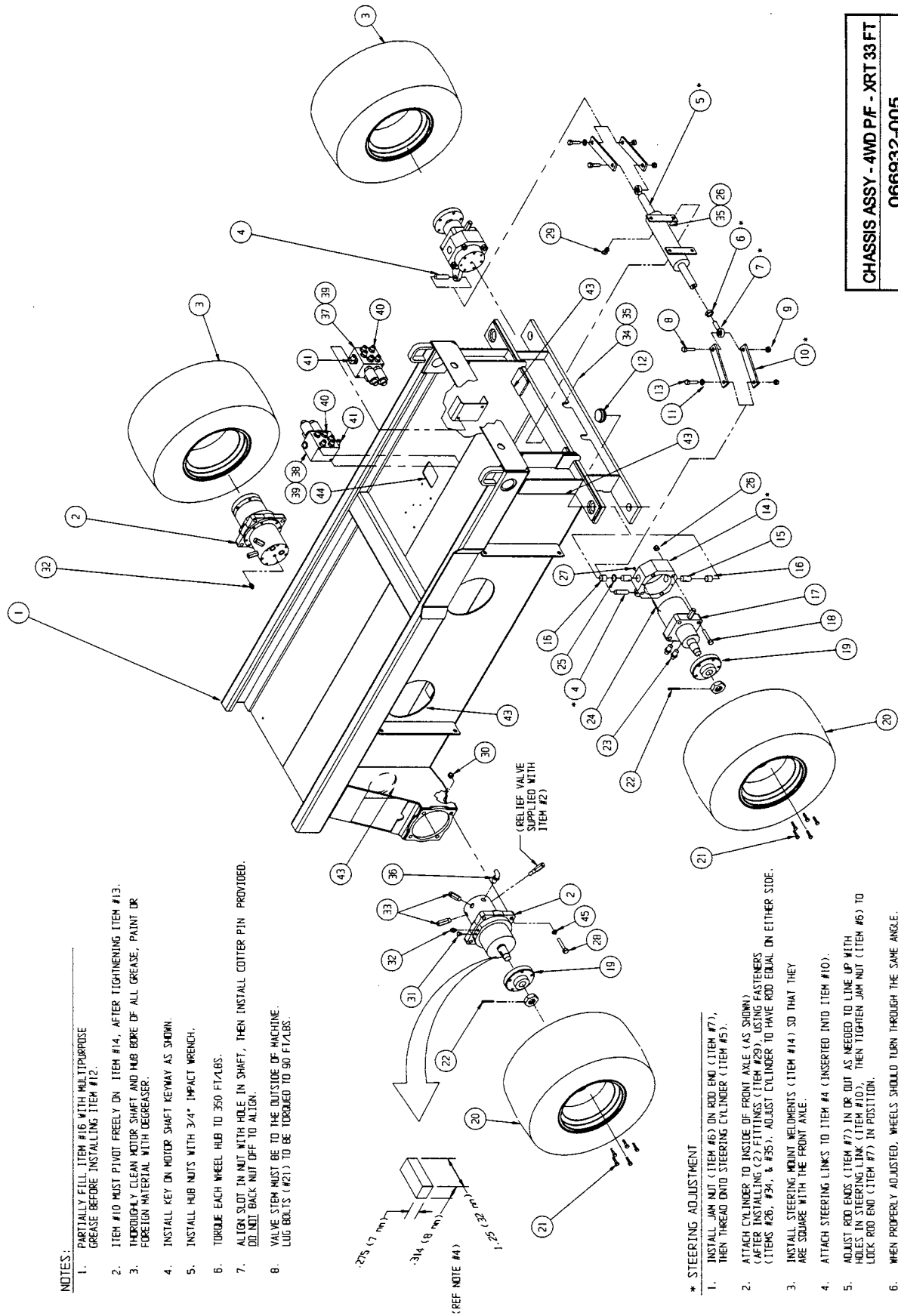
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-008 | CHASSIS WEIGHT INST'L 33 X-RT P/F WELDMT | 1 |
| 2 | 067184-000 | REAR DRIVE MOTOR W/BRAKE | 2 |
| 3 | 064187-011 | WHEEL & TIRE ASSY POLYFILL (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |
| 20 | 064187-010 | WHEEL & TIRE ASSY POLYFILL (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----------|
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 33 | 011941-014 | FITTING, 10MB-8MJ | 4 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 011934-001 | FITTING, 90° 4MB-4MJ | 2 |
| 37 | 067183-000 | SERIES PARALLEL VALVE BLOCK | 1 |
| 38 | 067183-001 | SERIES PARALLEL VALVE BLOCK | 1 |
| 39 | 011254-044 | SCREW, HHC GR5 3/8 X 5" | 4 |
| 40 | 011941-010 | FITTING, 8MB-8MJ | 10 |
| 41 | 011940-015 | FITTING, 8MB-8MJ, 90° | 2 |
| 42 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 FT. |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 FT. |
| 45 | 011239-010 | WASHER, FLAT ASTM 5/8" | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1

CHASSIS ASSY - 4WD P/F - XRT 33 FT
066932-005



NOTES:

1. PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
2. ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13, THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FOREIGN MATERIAL WITH DEGREASER.
3. INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
4. TORQUE EACH WHEEL HUB TO 350 FT/LBS.
5. ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ALIGN.
6. VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LUG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

*** STEERING ADJUSTMENT**

1. INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD ONTO STEERING CYLINDER (ITEM #5).
2. ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (AFTER INSTALLING (2) FITTINGS (ITEM #29), USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD EQUAL ON EITHER SIDE.
3. INSTALL STEERING MOUNT REINFORCEMENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
4. ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
5. ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
6. WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT27 2WD P/F

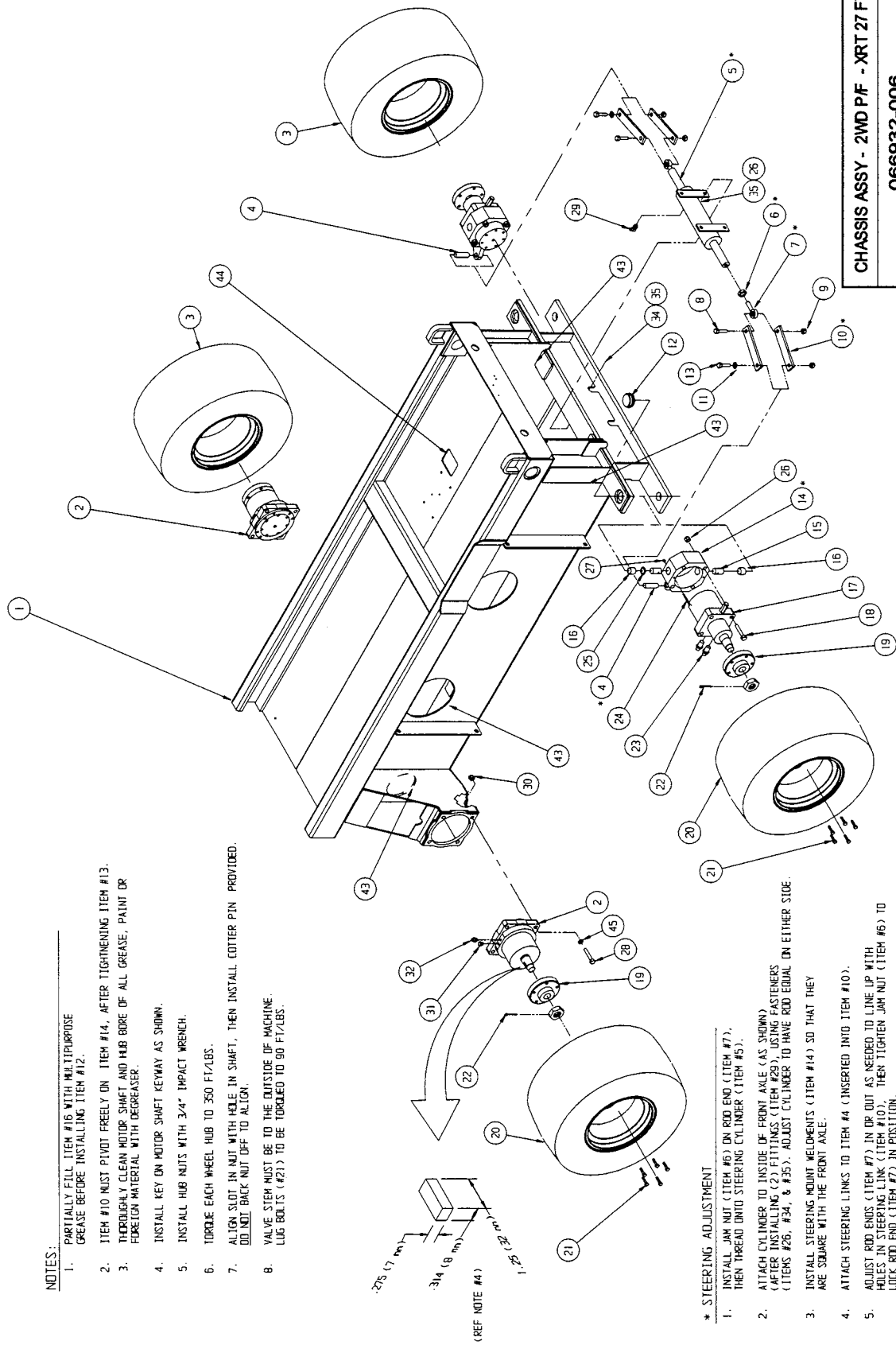
066932-006

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---|-----|
| 1 | 066950-006 | CHASSIS WEIGHT INST'L 27"XRT P/F WELDMENT | 1 |
| 2 | 067171-000 | REAR BRAKE (2WD) | 2 |
| 3 | 064187-011 | WHEEL & TIRE ASSY POLYFILL (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----------|
| 20 | 064187-010 | WHEEL & TIRE ASSY POLYFILL (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 37 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 Ft. |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 ft. |
| 45 | 011239-010 | WASHER, FLAT ASTM 5/8" | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



CHASSIS ASSY - 2WD P/F - XRT 27 FT
066932-006

- NOTES:**
- PARTIALLY FILL ITEM #16 WITH MULTIPURPOSE GREASE BEFORE INSTALLING ITEM #12.
 - ITEM #10 MUST PIVOT FREELY ON ITEM #14, AFTER TIGHTENING ITEM #13. THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FRICTION MATERIAL WITH DEGREASER.
 - INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
 - INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
 - TORQUE EACH WHEEL HUB TO 350 FT/LBS.
 - ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ALIGN.
 - VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LUG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

- * STEERING ADJUSTMENT**
- INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD INTO STEERING CYLINDER (ITEM #5).
 - ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) AFTER INSTALLING 2 PITCHING CYLINDERS USING FASTENERS (ITEMS #26, #34, & #35). ADJUST CYLINDER TO HAVE ROD ENDAL ON EITHER SIDE.
 - INSTALL STEERING MOUNT MELOMENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
 - ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
 - ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10). THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
 - WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Chassis Assembly XRT27 4WD P/F

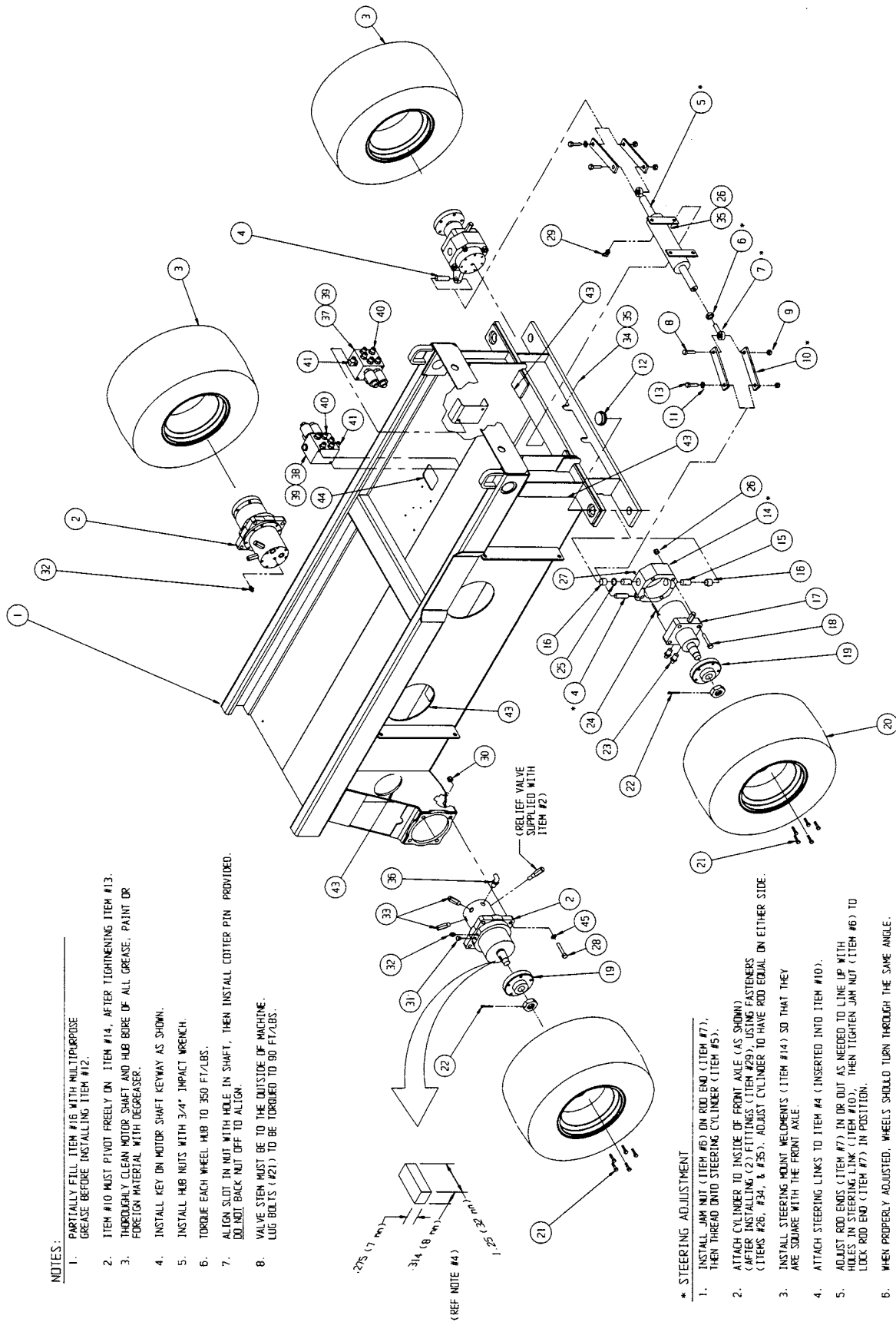
066932-007

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | 066950-006 | CHASSIS WEIGHT INST'L 27' XRT P/F WELDMENT | 1 |
| 2 | 067184-000 | REAR DRIVE MOTOR W/BRAKE | 2 |
| 3 | 064187-011 | WHEEL & TIRE ASSY POLYFILL (LH) | REF |
| 4 | 062642-001 | BEARING | 2 |
| 5 | 067168-000 | CYLINDER - STEERING | 1 |
| 6 | 020495-010 | NUT,HEX JAM 5/8-18 UNF | 2 |
| 7 | 063927-001 | ROD END 5/8-18 UNF | 2 |
| 8 | 011257-024 | SCREW HHC GR5 5/8-11UNC X 3 | 2 |
| 9 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 4 |
| 10 | 067221-000 | STEERING LINK | 4 |
| 11 | 011240-010 | WASHER, FLAT STD 5/8 DIA. | 2 |
| 12 | 005078-000 | CAP, DUST | 2 |
| 13 | 064150-000 | SERRATED BOLT | 2 |
| 14 | 064030-001 | STEERING MOUNT WELDMENT | 2 |
| 15 | 064034-001 | PIVOT PIN | 4 |
| 16 | 067606-013 | BEARING, GARLOCK #020DXR012 | 4 |
| 17 | 067169-000 | FRONT DRIVE MOTOR | 2 |
| 18 | 011256-040 | SCREW, HHC GR5 1/2-13UNC X 5 | 8 |
| 19 | 064029-001 | HUB, DRIVE MOTOR | 4 |
| 20 | 064187-010 | WHEEL & TIRE ASSY POLYFILL (RH) | REF |
| 21 | 014122-001 | WHEEL BOLT, 1/2-20UNF 90° X 1" LG | 20 |
| 22 | 011754-012 | COTTER PIN 5/32 DIA X 1 1/2 | 4 |
| 23 | 011941-014 | FITTING, STR 10MB-8MJ | 4 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----------|
| 24 | 011252-024 | SCREW HHC GR5 1/4-20UNC X 3 | 4 |
| 25 | 011782-001 | BEARING, THRUST WASHER | 2 |
| 26 | 011248-008 | NUT, HEX ESNA 1/2-13UNC | 8 |
| 27 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 4 |
| 28 | 011257-014 | SCREW HHC GR5 5/8-11UNC X 1-3/4 | 8 |
| 29 | 011934-004 | FITTING 90° 4MB-4MJ | 2 |
| 30 | 011248-010 | NUT HEX ESNA 5/8-11UNC | 8 |
| 31 | 020021-004 | PLUG, O-RING -4 | 2 |
| 32 | 011941-001 | FITTING, 4MB-4MJ | 2 |
| 33 | 011941-014 | FITTING, 10MB-8MJ | 4 |
| 34 | 011256-008 | SCREW, HHC GR5 1/2-13UNC X 1 | 4 |
| 35 | 011239-008 | WASHER, ASTM FLAT 1/2" | 8 |
| 36 | 011934-001 | FITTING, 90° 4MB-4MJ | 2 |
| 37 | 067183-000 | SERIES PARALLEL VALVE BLOCK | 1 |
| 38 | 067183-001 | SERIES PARALLEL VALVE BLOCK | 1 |
| 39 | 011254-044 | SCREW, HHC GR5 3/8 X 5" | 4 |
| 40 | 011941-010 | FITTING, 8MB-8MJ | 10 |
| 41 | 011940-015 | FITTING, 8MB-8MJ, 90° | 2 |
| 42 | 067313-000 | COVER, FRONT CHASSIS | 1 |
| 43 | 067805-099 | GROMMET, TRIM | 14.25 Ft. |
| 44 | 061692-099 | GROMMET, TRIM | 1.25 Ft. |
| 45 | 011239-010 | WASHER, 5/8 ASTM FLAT | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



- NOTES:
- PARTIALLY FILL ITEM #16 WITH MULTIGRADE GREASE BEFORE INSTALLING ITEM #12.
 - ITEM #10 MUST PIVOT FREELY ON ITEM #14. AFTER TIGHTENING ITEM #13, THOROUGHLY CLEAN MOTOR SHAFT AND HUB BORE OF ALL GREASE, PAINT OR FOREIGN MATERIAL WITH DEGREASER.
 - INSTALL KEY ON MOTOR SHAFT KEYWAY AS SHOWN.
 - INSTALL HUB NUTS WITH 3/4" IMPACT WRENCH.
 - TORQUE EACH WHEEL HUB TO 350 FT/LBS.
 - ALIGN SLOT IN NUT WITH HOLE IN SHAFT, THEN INSTALL COTTER PIN PROVIDED. DO NOT BACK NUT OFF TO ALIGN.
 - VALVE STEM MUST BE TO THE OUTSIDE OF MACHINE. LUG BOLTS (#21) TO BE TORQUED TO 90 FT/LBS.

- * STEERING ADJUSTMENT
- INSTALL JAM NUT (ITEM #6) ON ROD END (ITEM #7), THEN THREAD ONTO STEERING CYLINDER (ITEM #5).
 - ATTACH CYLINDER TO INSIDE OF FRONT AXLE (AS SHOWN) (PART #29), USING FASTENERS (ITEMS #29, #34, & #35). ADJUST CYLINDER TO HAVE ROD EQUAL ON EITHER SIDE.
 - INSTALL STEERING MOUNT WELDOMENTS (ITEM #14) SO THAT THEY ARE SQUARE WITH THE FRONT AXLE.
 - ATTACH STEERING LINKS TO ITEM #4 (INSERTED INTO ITEM #10).
 - ADJUST ROD ENDS (ITEM #7) IN OR OUT AS NEEDED TO LINE UP WITH HOLES IN STEERING LINK (ITEM #10), THEN TIGHTEN JAM NUT (ITEM #6) TO LOCK ROD END (ITEM #7) IN POSITION.
 - WHEN PROPERLY ADJUSTED, WHEELS SHOULD TURN THROUGH THE SAME ANGLE.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Linkage Assembly XRT27

066933-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-------------------------------|-----|
| 1 | 066183-000 | BEARING, OILITE #EP3236-24 | 42 |
| 2 | 066601-000 | LIFT CYLINDER | 1 |
| 3 | 066201-001 | WELDMENT, MID INNER TUBE 1/8 | 1 |
| 4 | 066961-000 | WELDMENT, BOTTOM OUTER 3/16 | 2 |
| 5 | 066962-000 | WELDMENT, BOTTOM INNER 3/16 | 1 |
| 6 | 066211-002 | WELDMENT, MID OUTER 1/4 | 2 |
| 7 | 066210-000 | WELDMENT, PIVOT PIN | 19 |
| 8 | 066224-000 | PIN, LIFT CYLINDER | 2 |
| 9 | 066225-000 | PIN, SHAFT LOCKING | 2 |
| 10 | 011764-032 | RET RING TRUARC #5100-200 | 2 |
| 11 | 066214-000 | WELDMENT, SAFETY STAND | 1 |
| 12 | 011248-005 | NUT HEX 5/16-18 | 20 |
| 13 | 011248-006 | NUT HEX 3/8-16 | 1 |
| 14 | 015936-023 | SCREW SHOULDER 3/8-16 X 3 1/2 | 20 |
| 15 | 011254-044 | SCREW HHC GR5 3/8-16 X 5 1/2 | 1 |
| 16 | 066240-001 | WELDMENT, TOP OUTER 3/16 | 1 |
| 17 | 066211-001 | WELDMENT, MID OUTER ARM 1/8 | 2 |
| 18 | 066199-000 | PIPE RING | 4 |

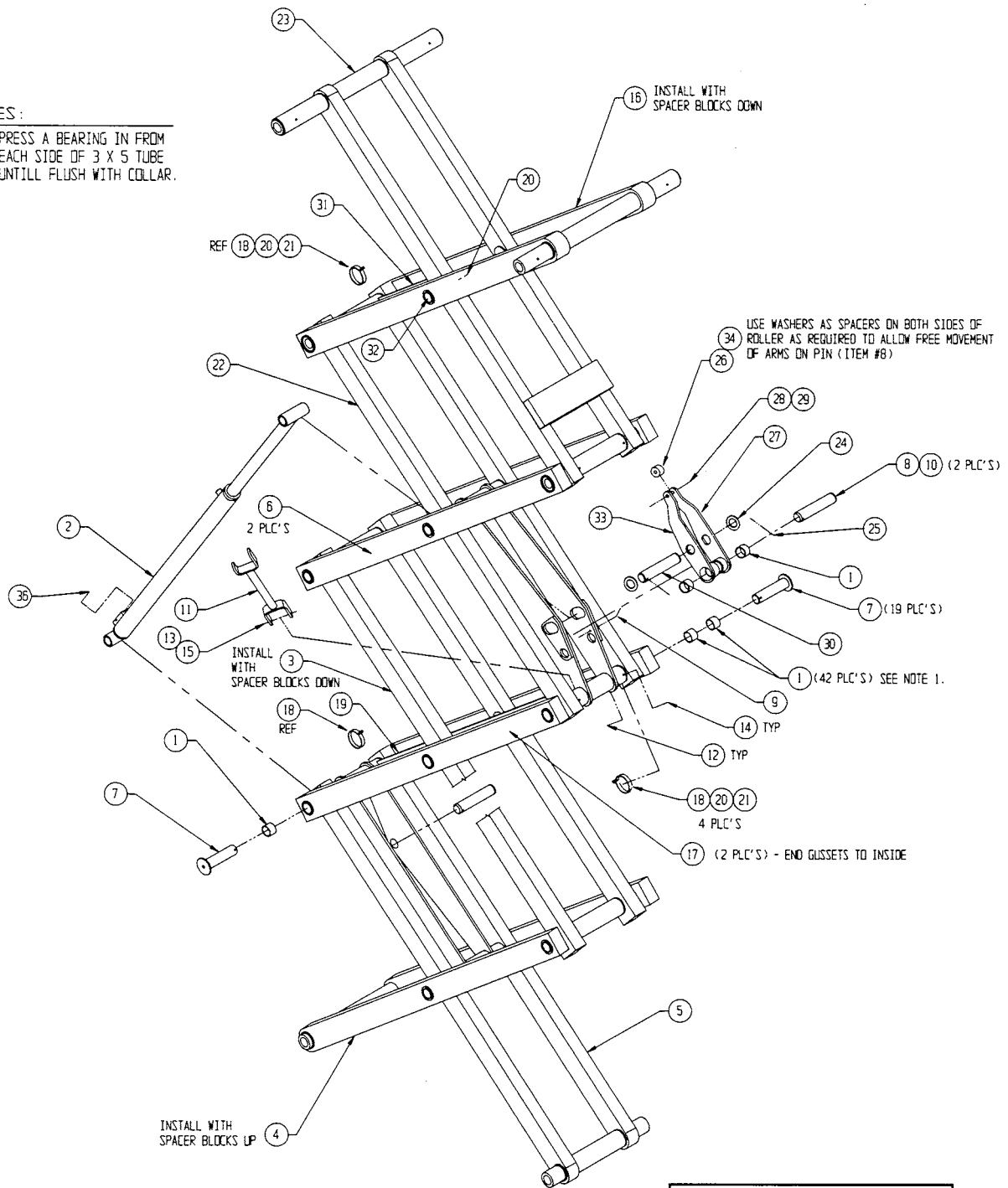
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 19 | 066226-000 | CHANNEL, CABLE | 1 |
| 20 | 011248-004 | NUT HEX 1/4-20 | 4 |
| 21 | 011252-008 | SCREW HHC GR5 1/4-20 X 1 | 3 |
| 22 | 066120-000 | WELDMENT, MID INNER ARM 3/16 | 1 |
| 23 | 066121-000 | WELDMENT, TOP INNER ARM 1/8 | 1 |
| 24 | 011239-002 | WASHER 2 DIA ASTM | 2 |
| 25 | 011740-024 | ROLL PIN 1/2 X 3 | 2 |
| 26 | 065367-001 | BEARING TORRINGTON #YCRS32 | 1 |
| 27 | 066574-001 | WELDMENT, TORSION ARM L.H. | 1 |
| 28 | 011257-028 | SCREW HHC 5/8-11 X 3 1/2 | 1 |
| 29 | 011246-010 | NUT 5/8-11 THIN HEX | 1 |
| 30 | 066224-001 | PIN, LIFT CYLINDER | 1 |
| 31 | 066226-001 | CHANNEL, CABLE | 1 |
| 32 | 066210-002 | WELDMENT, PIVOT PIN | 1 |
| 33 | 066574-002 | WELDMENT, TORSION ARM R.H. | 1 |
| 34 | 011239-010 | WASHER, FLAT 5/8 ASTM | 4 |
| 35 | 067318-000 | BRACKET, PLATFORM DOWN | 1 |
| 36 | 066179-001 | VALVE - LOWERING | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1

NOTES:

1. PRESS A BEARING IN FROM EACH SIDE OF 3 X 5 TUBE UNTILL FLUSH WITH COLLAR.



ASSEMBLY, SCISSOR ARM X27 RT
66933-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Linkage Assembly XRT33

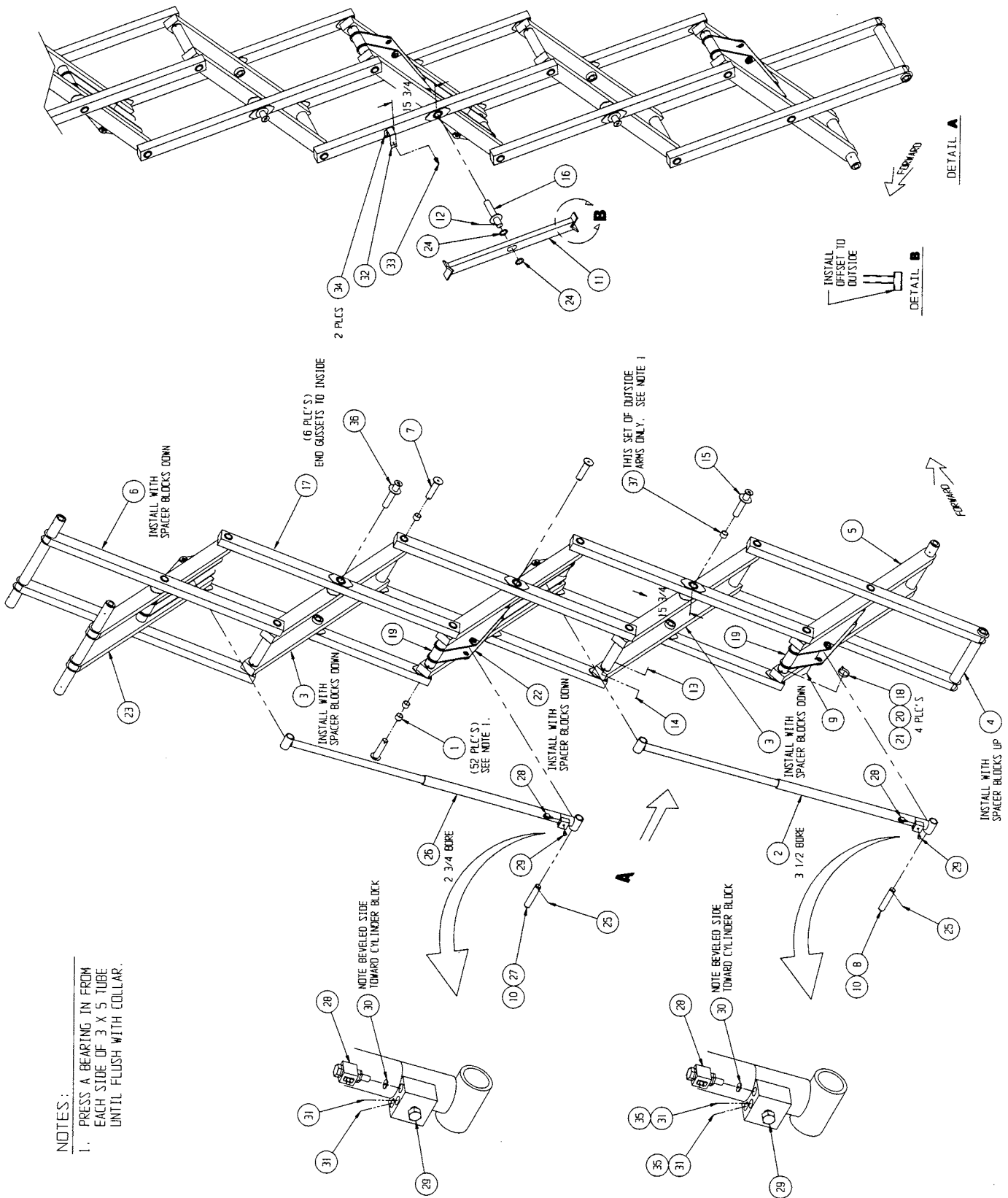
066934-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 1 | 066183-000 | BEARING, OILITE #EP3236-24 | 40 |
| 2 | 066601-000 | LIFT CYLINDER 3-1/2" BORE | 1 |
| 3 | 066201-001 | WELDMENT, MID INNER TUBE 1/8 | 2 |
| 4 | 066961-000 | WELDMENT, BOTTOM OUTER 3/16 | 1 |
| 5 | 066962-000 | WELDMENT, BOTTOM INNER 3/16 | 1 |
| 6 | 066240-001 | WELDMENT, TOP OUTER 3/16 | 1 |
| 7 | 066210-000 | WELDMENT, PIVOT PIN | 23 |
| 8 | 066224-000 | PIN, LIFT CYLINDER | 2 |
| 9 | 066225-000 | PIN, SHAFT LOCKING | 4 |
| 10 | 011764-032 | RET RING TRUARC #5100-200 | 4 |
| 11 | 067591-000 | WELDMENT, SAFETY STAND | 1 |
| 12 | 011757-028 | COTTER PIN 3/8 DIA X 3-1/2 | 1 |
| 13 | 011248-005 | NUT HEX 5/16-18 | 26 |
| 14 | 015936-023 | SCREW SHOULDER 3/8 X 3 1/2 | 26 |
| 15 | 066210-010 | WELDMENT, PIVOT PIN | 1 |
| 16 | 066210-011 | WELDMENT, PIVOT PIN | 1 |
| 17 | 066211-001 | WELDMENT, MID OUTER ARM 1/8 | 6 |
| 18 | 066199-000 | PIPE RING | 4 |
| 19 | 066226-000 | CHANNEL, CABLE | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------|-----|
| 20 | 011248-004 | NUT HEX 1/4-20 | 4 |
| 21 | 011252-008 | SCREW HHC GR5 1/4-20 X 1 | 4 |
| 22 | 066120-011 | WELDMENT, MID INNER ARM 1/4 | 1 |
| 23 | 066121-010 | WELDMENT, TOP INNER ARM 1/8 | 1 |
| 24 | 011786-017 | MACHINERY BUSHING 2" ID X 14GA | 2 |
| 25 | 011740-024 | ROLL PIN 1/2 X 3 | 2 |
| 26 | 066168-000 | LIFT CYLINDER 2-3/4" BORE | 1 |
| 27 | 066224-010 | PIN LIFT CYLINDER | 2 |
| 28 | 066179-001 | VALVE SOLENOID - LOWERING | 2 |
| 29 | 066811-000 | FITTING, VELOCITY FUSE | 2 |
| 30 | 063664-008 | ORIFICE HYDRFORCE #7051070 | 2 |
| 31 | 011941-005 | FITTING STR 6MB-6MJ | 4 |
| 32 | 066814-000 | WELDMENT, SCISSOR BRACE | 1 |
| 33 | 03570-001 | RETAINING RING | 1 |
| 34 | 026554-002 | RIVET 1/4 POP | 2 |
| 35 | 011937-003 | FITTING 6FJX-6MJ 90 | 2 |
| 36 | 066210-012 | WELDMENT, PIVOT PIN | 1 |
| 37 | 068899-001 | BEARING, GAR MAX 3236-24 | 12 |
| 38 | 067318-000 | BRACKET, PLATFORM DOWN SWITCH | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



ASSEMBLY, SCISSOR ARM X33RT (US)
66934-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Control Module Assembly 2WD Dual Fuel

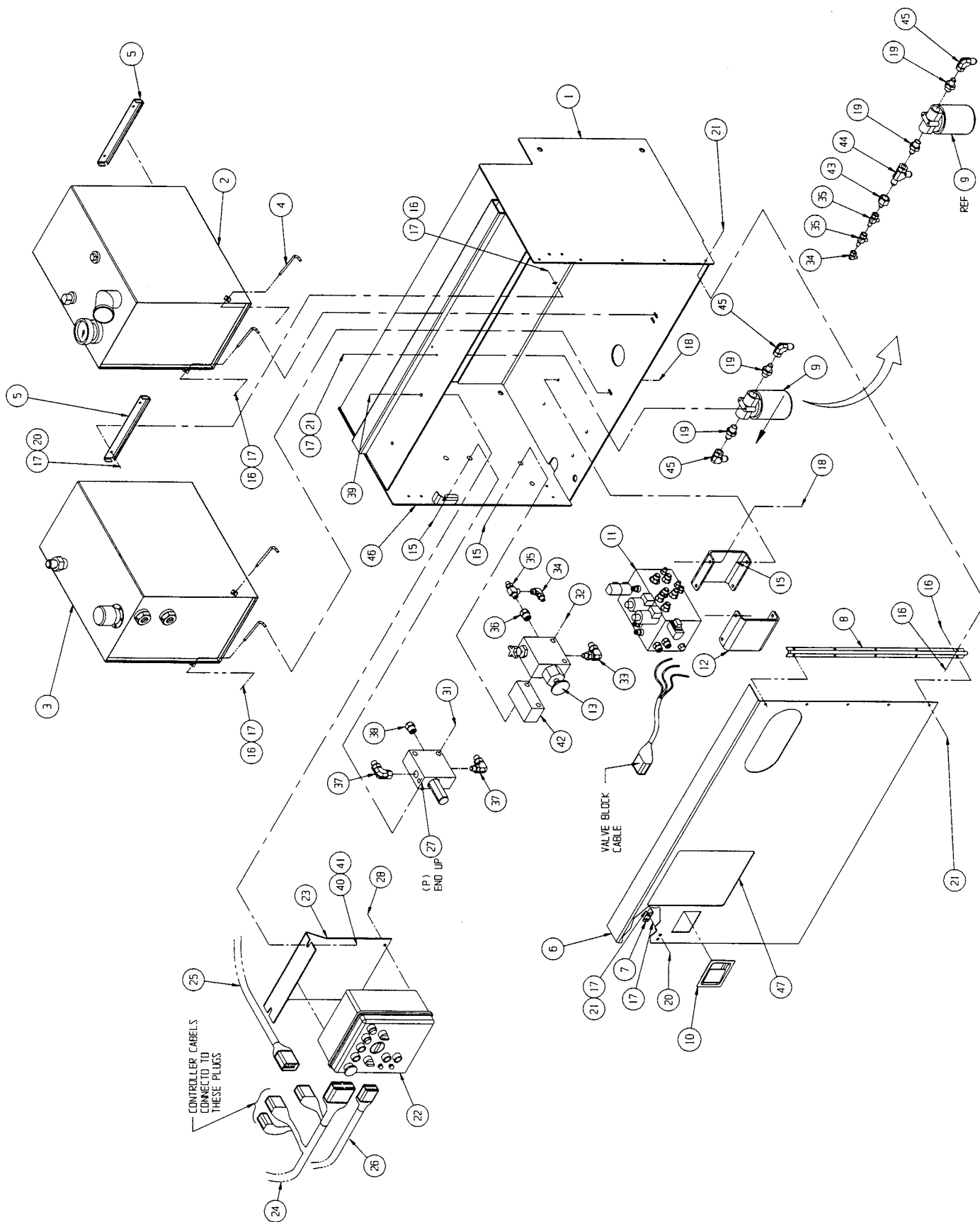
066935-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------|-----|
| 1 | 066951-000 | WELDMENT, CONTROL MODULE | 1 |
| 2 | 066999-000 | FUEL TANK ASSY (X-RT) GAS | 1 |
| 3 | 066998-000 | HYDRAULIC TANK ASSY (X-RT) | 1 |
| 4 | 067174-000 | J- HOOK (X-RT) | 4 |
| 5 | 066960-000 | TANK BRACKET, REAR | 2 |
| 6 | 067233-001 | DOOR, POWER MODULE (X-RT) | 1 |
| 7 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |
| 8 | 067232-000 | HINGE, DOOR | 1 |
| 9 | 005154-001 | FILTER, HYDRAULIC W/MOUNT | 1 |
| 10 | 062791-002 | LATCH, DOOR | 1 |
| 11 | 067489-000 | MAIN VALVE BLOCK ASSEMBLY (LX) | 1 |
| 12 | 100267-002 | BRACKET, VALVE BLOCK | 2 |
| 13 | 063978-000 | BRAKE PUMP | 1 |
| 14 | 011254-004 | SCREW, HHC 3/8-16 UNC x 1/2 | 6 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 10 |
| 16 | 011248-004 | LOCKNUT, HEX 1/4-20UNC | 18 |
| 17 | 011240-004 | WASHER, STD FLAT 1/4" | 10 |
| 18 | 011254-008 | SCREW, HHC 3/8-16 UNC X 1" | 8 |
| 19 | 011939-019 | FITTING, 12MP-8MJ | 2 |
| 20 | 011252-006 | SCREW HHC 1/4-20UNC X 3/4" | 16 |
| 21 | 011248-004 | NUT, HEX, ESNA, 1/4-20UNC | 2 |
| 22 | 067491-001 | CONTROL BOX XRT | 1 |
| 23 | 067283-000 | MOUNT, LOWER CONTROL BOX | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|----------|
| 24 | 067492-010 | WIRE HARNESS - MAIN | 1 |
| 25 | 067492-002 | WIRE HARNESS - VALVE BLOCK (XRT) | 1 |
| 26 | 067492-012 | WIRE HARNESS, ENGINE EXTENSION | 1 |
| 27 | 067477-000 | PRESSURE REDUCING VALVE | 1 |
| 28 | 011826-006 | SCREW, RD HD 10-32UNC X 3/4 | 4 |
| 31 | 011254-016 | SCREW HHC 3/8UNC X 2" | 2 |
| 32 | 011254-028 | SCREW HHC 3/8UNC X 3 1/2" | 2 |
| 33 | 011934-004 | FITTING, 6MB-6MJ, 90° | 2 |
| 34 | 011937-001 | FITTING, 4FJ-4MJ 90° | 2 |
| 35 | 020733-001 | FITTING, TEE, 4MJ-4MJ-4FJ | 3 |
| 36 | 011941-001 | FITTING, 4MB-4MJ | 1 |
| 37 | 011934-003 | FITTING, 6MB-4MJ, 90° | 2 |
| 38 | 011941-004 | FITTING, 6MB-4MJ | 1 |
| 39 | 011253-008 | SCREW HHC 5/16-18UNC X 1" | 2 |
| 40 | 011248-005 | NUT, HEX 5/16-18UNC ESNA | 2 |
| 41 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 42 | 065183-000 | BRAKE PUMP SPACER | 1 |
| 43 | 013969-002 | FITTING, REDUCER, 8MJ-4MJ | 1 |
| 44 | 020733-003 | FITTING, TEE, 8MJ-8MJ-8FJ | 1 |
| 45 | 011937-004 | FITTING, 8FJ-8MJ, 90° | 2 |
| 46 | 061692-099 | GROMMIT, TRIM LOCK | 1.67 Ft. |
| 47 | 100395-099 | TRIM SEAL, 3/4 BULB | 3.75 Ft. |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Control Module Assembly 2WD Diesel

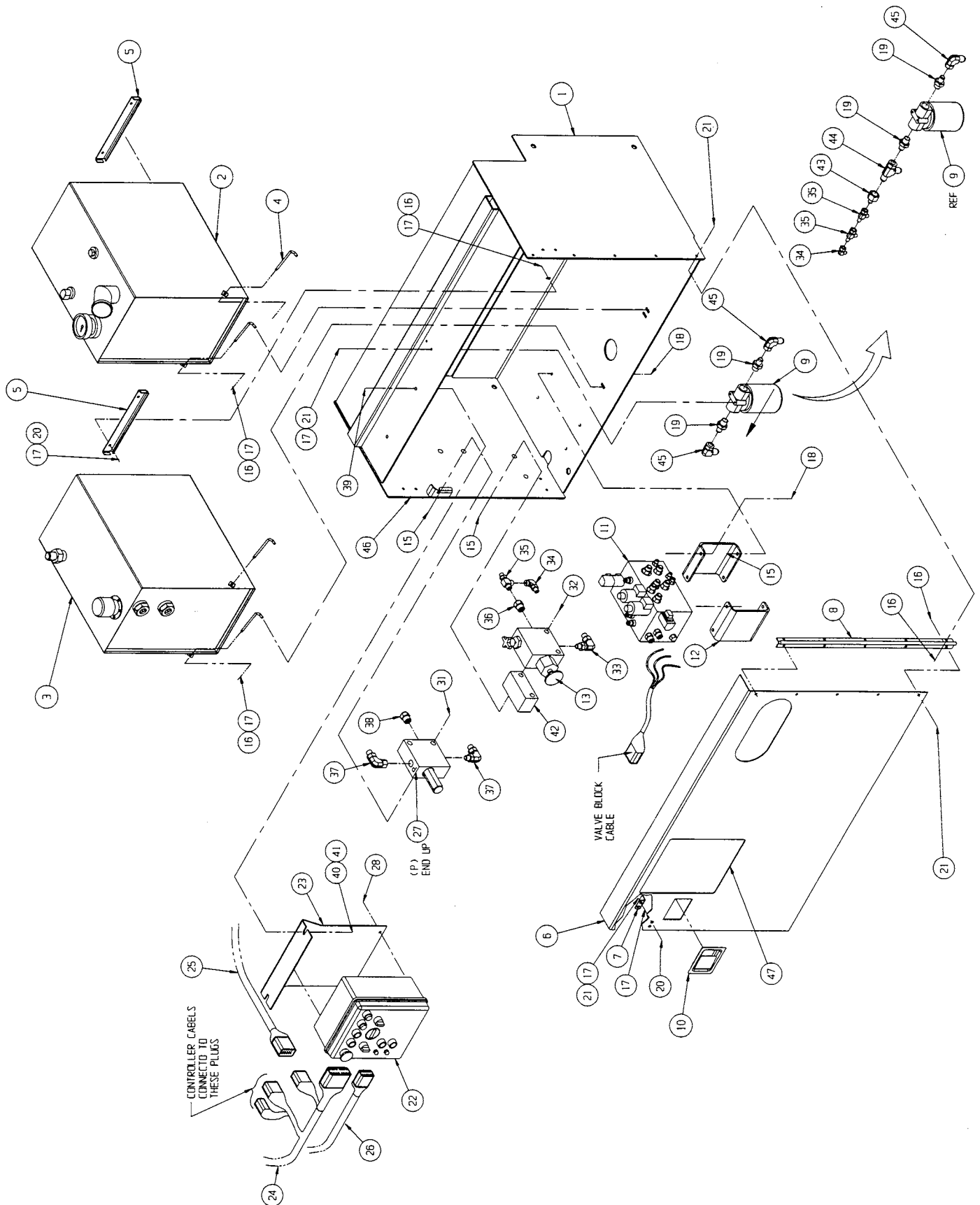
066935-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 1 | 066951-000 | WELDMENT, CONTROL MODULE | 1 |
| 2 | 066999-001 | FUEL TANK ASSY (X-RT) DIESEL | 1 |
| 3 | 066998-000 | HYDRAULIC TANK ASSY (X-RT) | 1 |
| 4 | 067174-000 | J- HOOK (X-RT) | 4 |
| 5 | 066960-000 | TANK BRACKET, REAR | 2 |
| 6 | 067233-001 | DOOR, POWER MODULE (X-RT) | 1 |
| 7 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |
| 8 | 067232-000 | HINGE, DOOR | 1 |
| 9 | 005154-001 | FILTER, HYDRAULIC W/MOUNT | 1 |
| 10 | 062791-002 | LATCH, DOOR | 1 |
| 11 | 067489-000 | MAIN VALVE BLOCK ASSEMBLY | 1 |
| 12 | 100267-002 | BRACKET, VALVE BLOCK | 2 |
| 13 | 063978-000 | BRAKE PUMP | 1 |
| 14 | 011254-004 | SCREW, HHC 3/8-16 UNC x 1/2 | 6 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 6 |
| 16 | 011248-004 | LOCKNUT, HEX 1/4-20UNC | 18 |
| 17 | 011240-004 | WASHER, STD FLAT 1/4" | 12 |
| 18 | 011254-008 | SCREW, HHC 3/8-16 UNC X 1" | 8 |
| 19 | 011939-019 | FITTING, 12MP-8MJ | 2 |
| 20 | 011252-006 | SCREW HHC 1/4-20UNC X 3/4" | 6 |
| 21 | 011248-004 | NUT, HEX, ESNA, 1/4-20UNC | 2 |
| 22 | 067491-002 | CONTROL BOX XRT (DIESEL) | 1 |
| 23 | 067283-000 | MOUNT, LOWER CONTROL BOX | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|----------|
| 24 | 067492-010 | WIRE HARNESS - MAIN | 1 |
| 25 | 067492-002 | WIRE HARNESS - VALVE BLOCK (XRT) | 1 |
| 26 | 067492-012 | WIRE HARNESS, ENGINE EXTENSION | 1 |
| 27 | 067477-000 | PRESSURE REDUCING VALVE | 1 |
| 28 | 01826-006 | SCREW, RD HD 10-32UNC X 3/4 | 4 |
| 31 | 011254-016 | SCREW HHC 3/8UNC X 2" | 2 |
| 32 | 011254-028 | SCREW HHC 3/8UNC X 3 1/2" | 2 |
| 33 | 011934-004 | FITTING, 6MB-6MJ, 90° | 2 |
| 34 | 011937-001 | FITTING, 4FJ-4MJ 90° | 2 |
| 35 | 020733-001 | FITTING, TEE, 4MJ-4MJ-4FJ | 3 |
| 36 | 011941-001 | FITTING, 4MB-4MJ | 1 |
| 37 | 011934-003 | FITTING, 6MB-4MJ, 90° | 2 |
| 38 | 011941-004 | FITTING, 6MB-4MJ | 1 |
| 39 | 011253-008 | SCREW HHC 5/16-18UNC X 1" | 2 |
| 40 | 011248-005 | NUT, HEX 5/16-18UNC ESNA | 2 |
| 41 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 42 | 065183-000 | BRAKE PUMP SPACER | 1 |
| 43 | 013969-002 | FITTING, REDUCER, 8MJ-4MJ | 1 |
| 44 | 020733-003 | FITTING, TEE, 8MJ-8MJ-8FJ | 1 |
| 45 | 011937-004 | FITTING, 8FJ-8MJ, 90° | 2 |
| 46 | 061692-099 | GROMMIT, TRIM LOCK | 1.67 Ft. |
| 47 | 100395-099 | TRIM SEAL, 3/4 BULB | 3.75 Ft. |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Control Module Assembly 4WD Dual Fuel

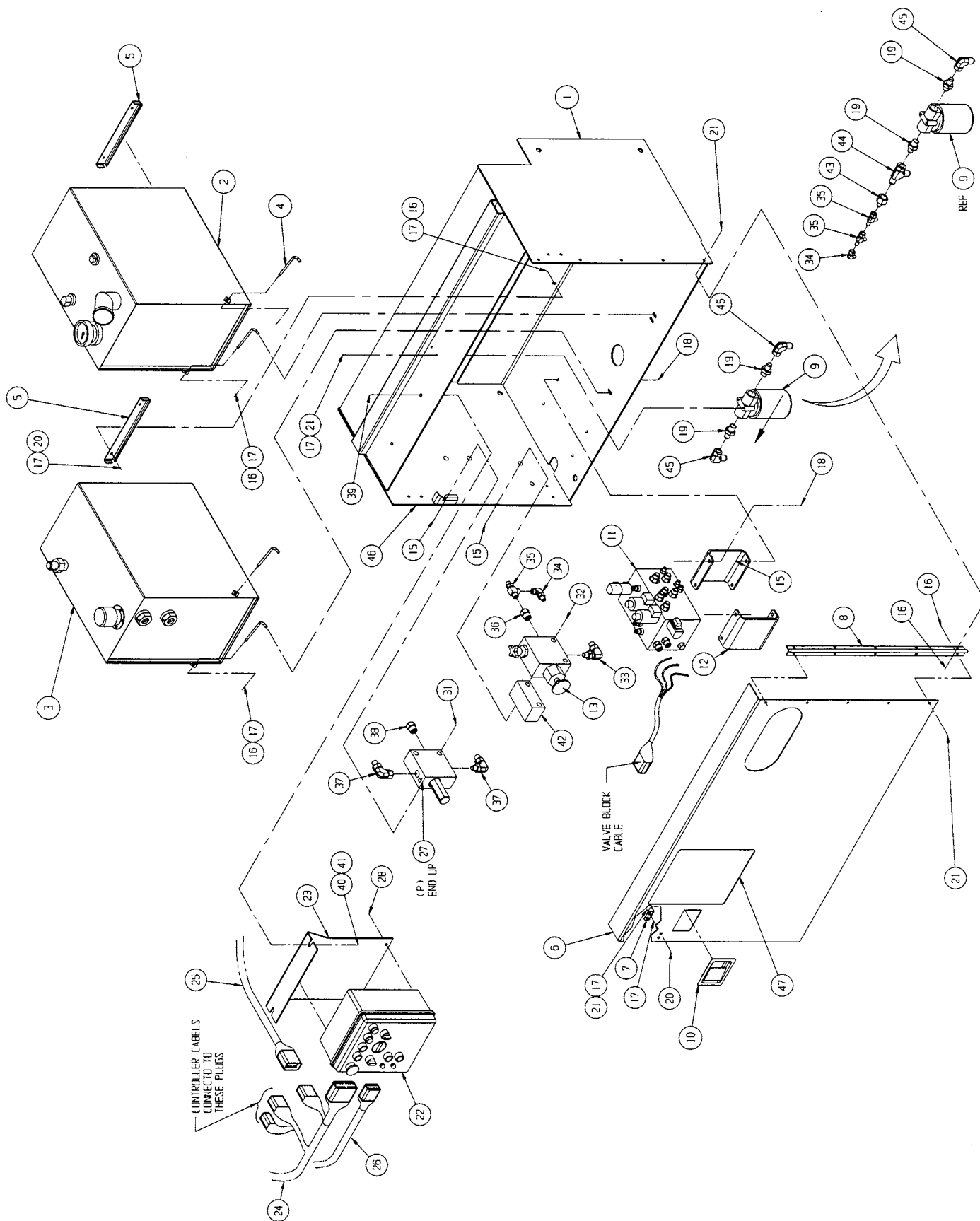
066935-002

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 1 | 066951-000 | WELDMENT, CONTROL MODULE | 1 |
| 2 | 066999-000 | FUEL TANK ASSY (X-RT) GAS | 1 |
| 3 | 066998-000 | HYDRAULIC TANK ASSY (X-RT) | 1 |
| 4 | 067174-000 | J- HOOK (X-RT) | 4 |
| 5 | 066960-000 | TANK BRACKET, REAR | 2 |
| 6 | 067233-001 | DOOR, POWER MODULE (X-RT) | 1 |
| 7 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |
| 8 | 067232-000 | HINGE, DOOR | 1 |
| 9 | 005154-001 | FILTER, HYDRAULIC W/MOUNT | 1 |
| 10 | 062791-002 | LATCH, DOOR | 1 |
| 11 | 067489-002 | MAIN VALVE BLOCK ASSEMBLY (4WD) | 1 |
| 12 | 100267-002 | BRACKET, VALVE BLOCK | 2 |
| 13 | 063978-000 | BRAKE PUMP - HAND | 1 |
| 14 | 011254-004 | SCREW, HHC 3/8-16 UNC x 1/2 | 6 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 6 |
| 16 | 011248-004 | LOCKNUT, HEX 1/4-20UNC | 20 |
| 17 | 011240-004 | WASHER, STD FLAT 1/4" | 8 |
| 18 | 011254-008 | SCREW, HHC 3/8-16 UNC X 1" | 8 |
| 19 | 011939-019 | FITTING, 12MP-8MJ | 2 |
| 20 | 011252-006 | SCREW, HHC 1/4-20UNC X 3/4" | 8 |
| 21 | 011248-004 | NUT, HEX, ESNA, 1/4-20UNC | 2 |
| 22 | 067491-001 | CONTROL BOX XRT (D/F) | 1 |
| 23 | 067283-000 | MOUNT, LOWER CONTROL BOX | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|----------|
| 24 | 067492-010 | WIRE HARNESS - MAIN | 1 |
| 25 | 067492-002 | WIRE HARNESS - VALVE BLOCK (XRT) | 1 |
| 26 | 067492-012 | WIRE HARNESS - ENGINE EXTENSION | 1 |
| 27 | 067477-000 | PRESSURE REDUCING VALVE | 1 |
| 28 | 011826-006 | SCREW RD HD 10-32UNC X 3/4 | 4 |
| 31 | 011254-016 | SCREW HHC 3/8UNC X 2" | 2 |
| 32 | 011254-028 | SCREW HHC 3/8UNC X 3 1/2" | 2 |
| 33 | 011934-004 | FITTING, 6MB-6MJ, 90° | 2 |
| 34 | 011937-001 | FITTING, 4FJ-4MJ 90° | 2 |
| 35 | 020733-001 | FITTING, TEE, 4MJ-4MJ-4FJ | 3 |
| 36 | 011941-001 | FITTING, 4MB-4MJ | 1 |
| 37 | 011934-003 | FITTING, 6MB-4MJ, 90° | 2 |
| 38 | 011941-004 | FITTING, 6MB-4MJ | 1 |
| 39 | 011253-008 | SCREW HHC 5/16-18UNC X 1" | 2 |
| 40 | 011248-005 | NUT, HEX 5/16-18UNC ESNA | 2 |
| 41 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 42 | 065183-000 | BRAKE PUMP SPACER | 1 |
| 43 | 013969-002 | FITTING, REDUCER, 8MJ-4MJ | 1 |
| 44 | 020733-003 | FITTING, TEE, 8MJ-8MJ-8FJ | 1 |
| 45 | 011937-004 | FITTING, 8FJ-8MJ, 90° | 2 |
| 46 | 061692-099 | GROMMIT, TRIM LOCK | 1.67 Ft. |
| 47 | 100395-099 | TRIM SEAL, 3/4 BULB | 3.75 Ft. |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Control Module Assembly 4WD Diesel

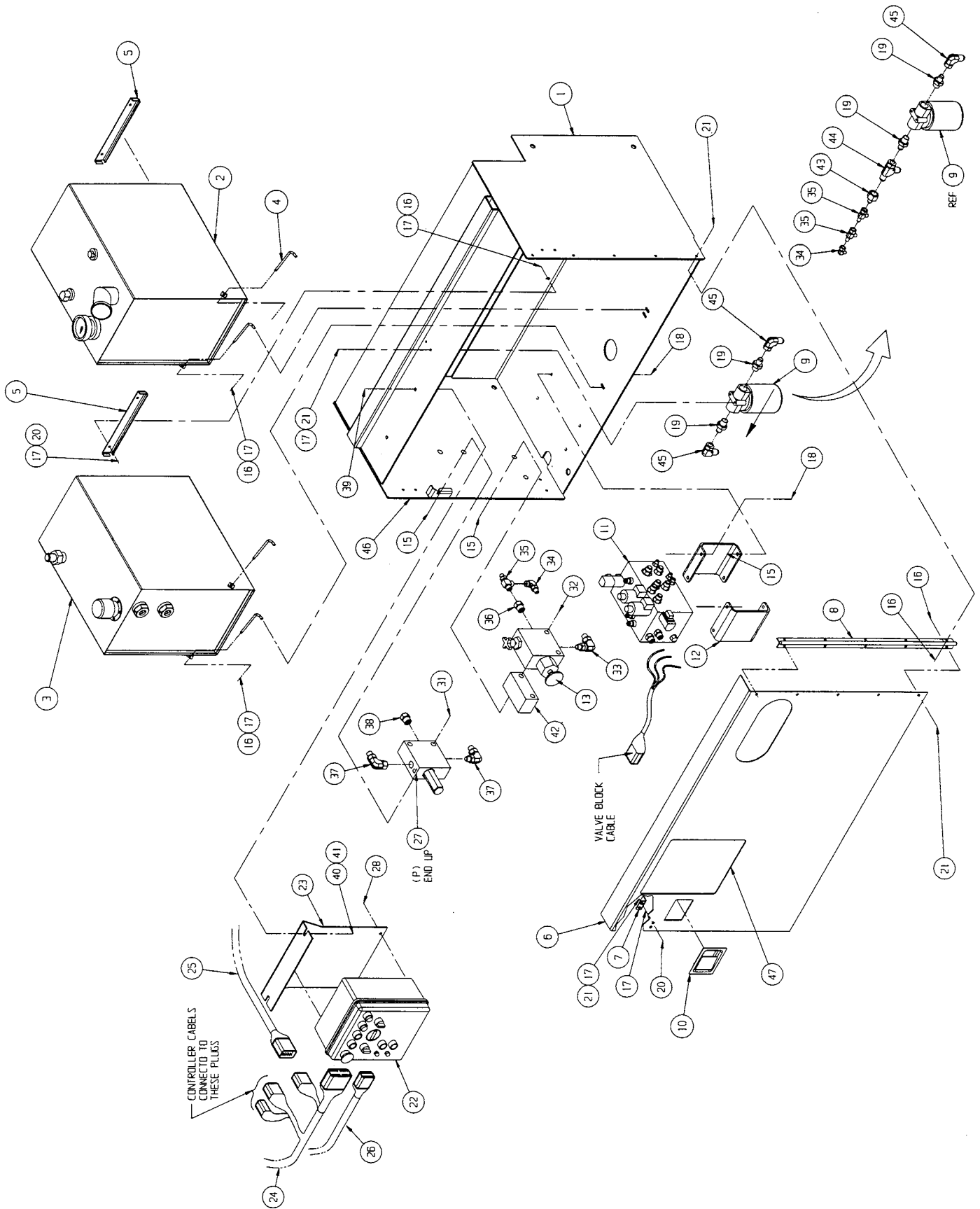
066935-003

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 1 | 066951-000 | WELDMNT, CONTROL MODULE | 1 |
| 2 | 066999-001 | FUEL TANK ASSY (X-RT) DIESEL | 1 |
| 3 | 066998-000 | HYDRAULIC TANK ASSY (X-RT) | 1 |
| 4 | 067174-000 | J- HOOK (X-RT) | 4 |
| 5 | 066960-000 | TANK BRACKET, REAR | 2 |
| 6 | 067233-001 | DOOR, POWER MODULE (X-RT) | 1 |
| 7 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |
| 8 | 067232-000 | HINGE, DOOR | 1 |
| 9 | 005154-001 | FILTER, HYDRAULIC W/MOUNT | 1 |
| 10 | 062791-002 | LATCH, DOOR | 1 |
| 11 | 067489-000 | MAIN VALVE BLOCK ASSEMBLY | 1 |
| 12 | 100267-002 | BRACKET, VALVE BLOCK (4WD) | 2 |
| 13 | 063978-000 | BRAKE PUMP - HAND | 1 |
| 14 | 011254-004 | SCREW, HHC 3/8-16 UNC x 1/2 | 6 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 6 |
| 16 | 011248-004 | LOCKNUT, HEX 1/4-20UNC | 20 |
| 17 | 011240-004 | WASHER, STD FLAT 1/4" | 8 |
| 18 | 011254-008 | SCREW, HHC 3/8-16 UNC X 1" | 8 |
| 19 | 011939-019 | FITTING, 12MP-8MJ | 2 |
| 20 | 011252-006 | SCREW, HHC 1/4-20UNC X 3/4" | 8 |
| 21 | 011248-004 | NUT, HEX, ESNA, 1/4-20UNC | 2 |
| 22 | 067491-002 | CONTROL BOX XRT (DIESEL) | 1 |
| 23 | 067283-000 | MOUNT, LOWER CONTROL BOX | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|----------|
| 24 | 067492-010 | WIRE HARNESS - MAIN | 1 |
| 25 | 067492-002 | WIRE HARNESS - VALVE BLOCK (XRT) | 1 |
| 26 | 067492-012 | WIRE HARNESS - ENGINE EXTENSION | 1 |
| 27 | 067477-000 | PRESSURE REDUCING VALVE | 1 |
| 28 | 011826-006 | SCREW RD HD 10-32UNC X 3/4 | 4 |
| 31 | 011254-016 | SCREW HHC 3/8UNC X 2" | 2 |
| 32 | 011254-028 | SCREW HHC 3/8UNC X 3 1/2" | 2 |
| 33 | 011934-004 | FITTING, 6MB-6MJ, 90° | 2 |
| 34 | 011937-001 | FITTING, 4FJ-4MJ 90° | 2 |
| 35 | 020733-001 | FITTING, TEE, 4MJ-4MJ-4FJ | 3 |
| 36 | 011941-001 | FITTING, 4MB-4MJ | 1 |
| 37 | 011934-003 | FITTING, 6MB-4MJ, 90° | 2 |
| 38 | 011941-004 | FITTING, 6MB-4MJ | 1 |
| 39 | 011253-008 | SCREW HHC 5/16-18UNC X 1" | 2 |
| 40 | 011248-005 | NUT, HEX 5/16-18UNC ESNA | 2 |
| 41 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 42 | 065183-000 | BRAKE PUMP SPACER | 1 |
| 43 | 013969-002 | FITTING, REDUCER, 8MJ-4MJ | 1 |
| 44 | 020733-003 | FITTING, TEE, 8MJ-8MJ-8FJ | 1 |
| 45 | 011937-004 | FITTING, 8FJ-8MJ, 90° | 2 |
| 46 | 061692-099 | GROMMIT, TRIM LOCK | 1.67 Ft. |
| 47 | 100395-099 | TRIM SEAL, 3/4 BULB | 3.75 Ft. |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Roll Out Tray Assembly Dual Fuel

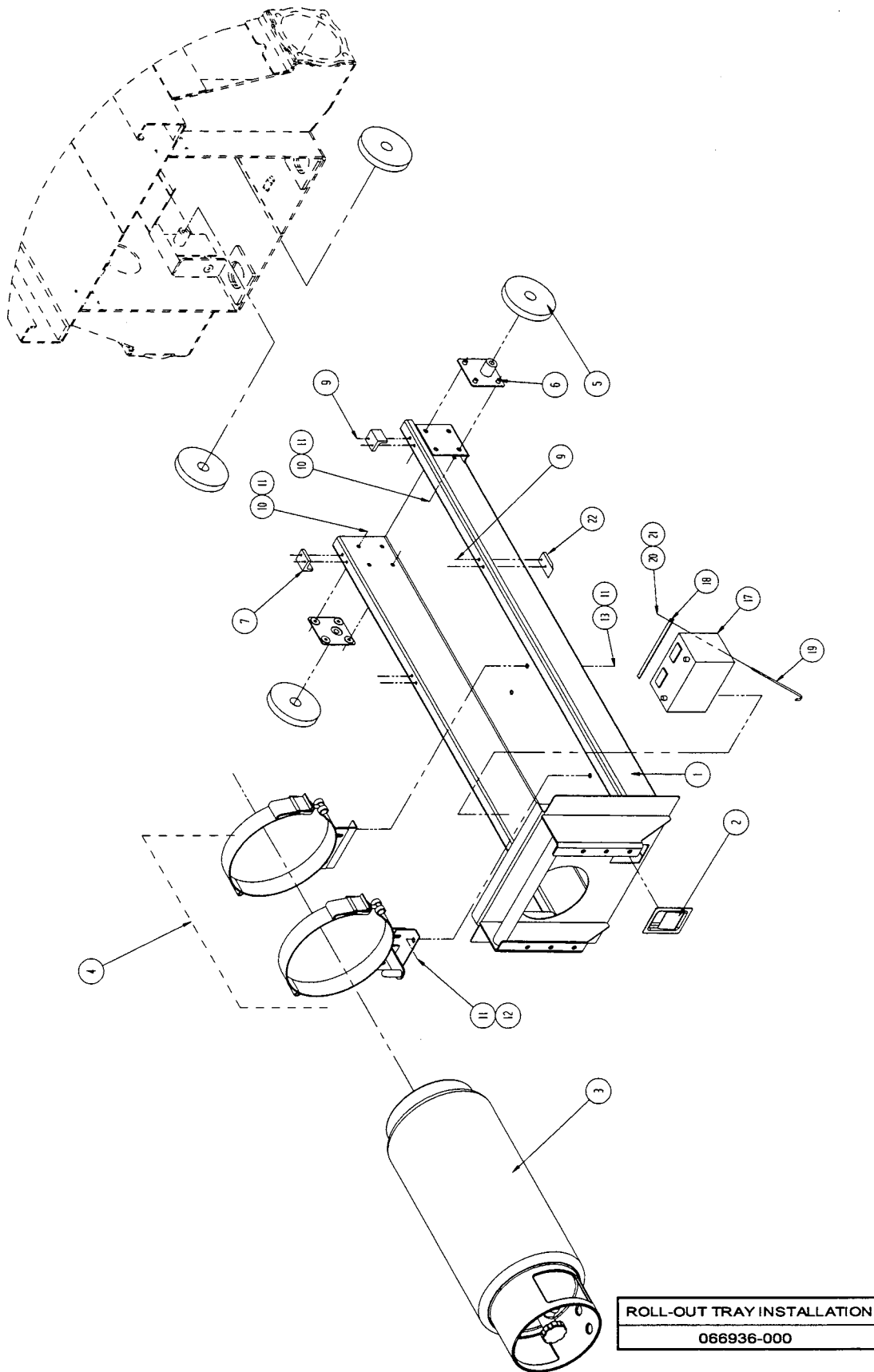
066936-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 066963-001 | WELDMENT, ROLL-OUT TRAY | 1 |
| 2 | 062791-002 | LATCH | 1 |
| 3 | 027934-009 | PROPANE TANK 7 GAL. LIQUID | 1 |
| 4 | 027823-000 | BRACKET, PROPANE TANK SET | 1 |
| 5 | 066195-000 | ROLLER | 4 |
| 6 | 066256-001 | WELDMENT, ROLLER MOUNT | 2 |
| 7 | 066170-000 | WEAR PAD | 2 |
| 9 | 026553-010 | RIVET 3/16 DIA. x 5/8 GRIP | 8 |
| 10 | 011254-014 | SCREW HHC 3/8-16 x 1 3/4 | 9 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 11 | 011240-006 | WASHER 3/8 FLAT | 16 |
| 13 | 011254-008 | SCREW HHC 3/8-16 x 1 | 4 |
| 15 | 011238-006 | WASHER 3/8 LOCK | 8 |
| 17 | 062292-002 | BATTERY 12 VDC GROUP | 1 |
| 18 | 064040-000 | ANGLE BATTERY HOLD DOWN | 1 |
| 19 | 012039-000 | ROD BATTERY HOLD DOWN | 2 |
| 20 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 21 | 011248-005 | NUT HEX ESNA 5/16-18UNC | 2 |
| 22 | 066193-000 | STOP | 2 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Roll Out Tray Assembly Diesel

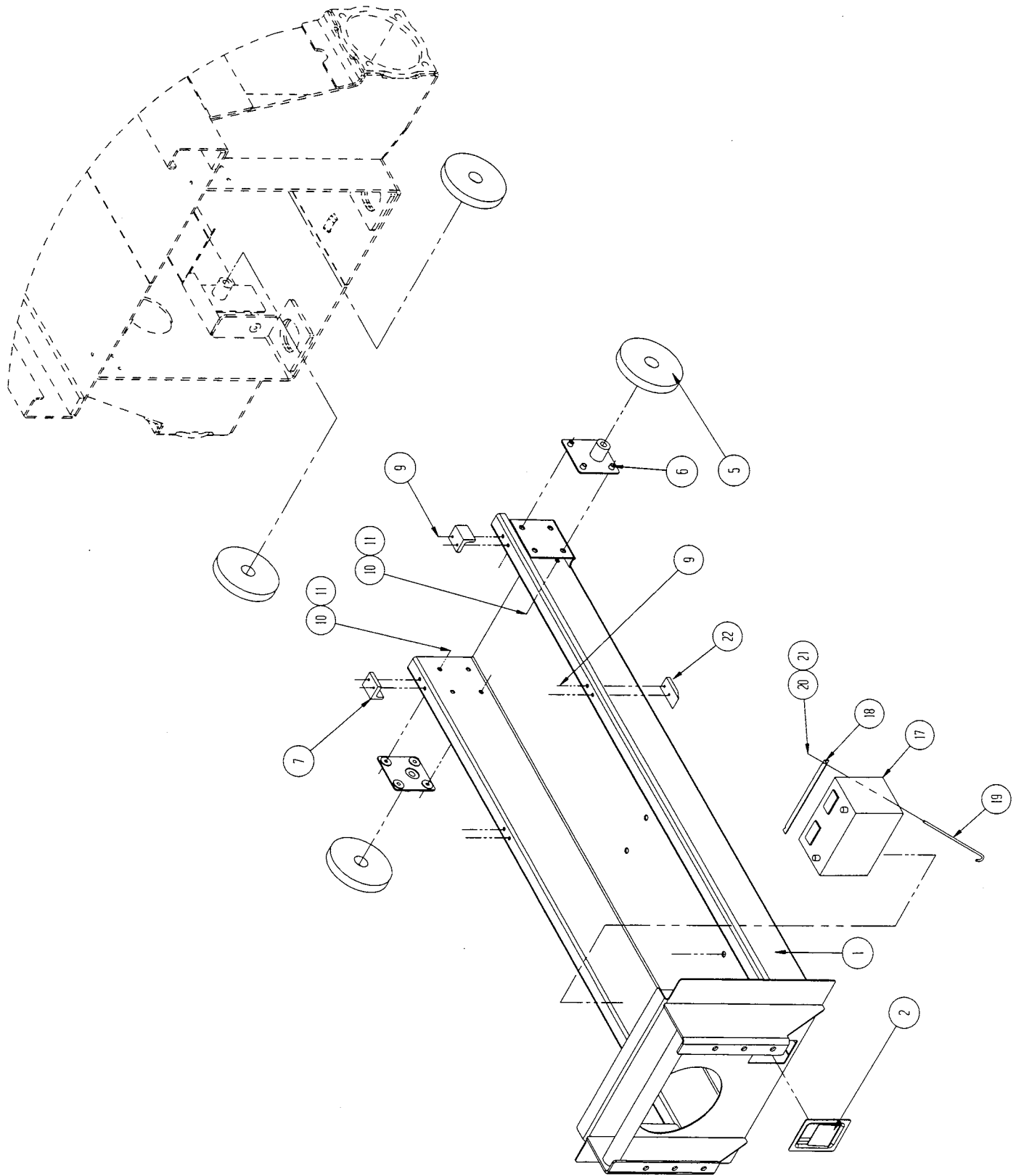
066936-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 066963-001 | WELDMENT, ROLL-OUT TRAY | 1 |
| 2 | 062791-002 | LATCH | 1 |
| 5 | 066195-000 | ROLLER | 4 |
| 6 | 066256-001 | WELDMENT, ROLLER MOUNT | 2 |
| 7 | 066170-000 | WEAR PAD | 2 |
| 9 | 026553-010 | RIVET 3/16 DIA. x 5/8 GRIP | 8 |
| 10 | 011254-014 | SCREW HHC 3/8-16 x 1 3/4 | 9 |
| 11 | 011240-006 | WASHER 3/8 FLAT | 8 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 15 | 011238-006 | WASHER 3/8 LOCK | 8 |
| 17 | 062292-002 | BATTERY 12 VDC GROUP | 1 |
| 18 | 064040-000 | ANGLE BATTERY HOLD DOWN | 1 |
| 19 | 012039-000 | ROD BATTERY HOLD DOWN | 2 |
| 20 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 21 | 011248-005 | NUT HEX ESNA 5/16-18UNC | 2 |
| 22 | 066193-000 | STOP | 2 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



ROLL-OUT TRAY INSTALLATION (DIESEL)
066936-001

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Power Module Assembly Dual Fuel Kohler

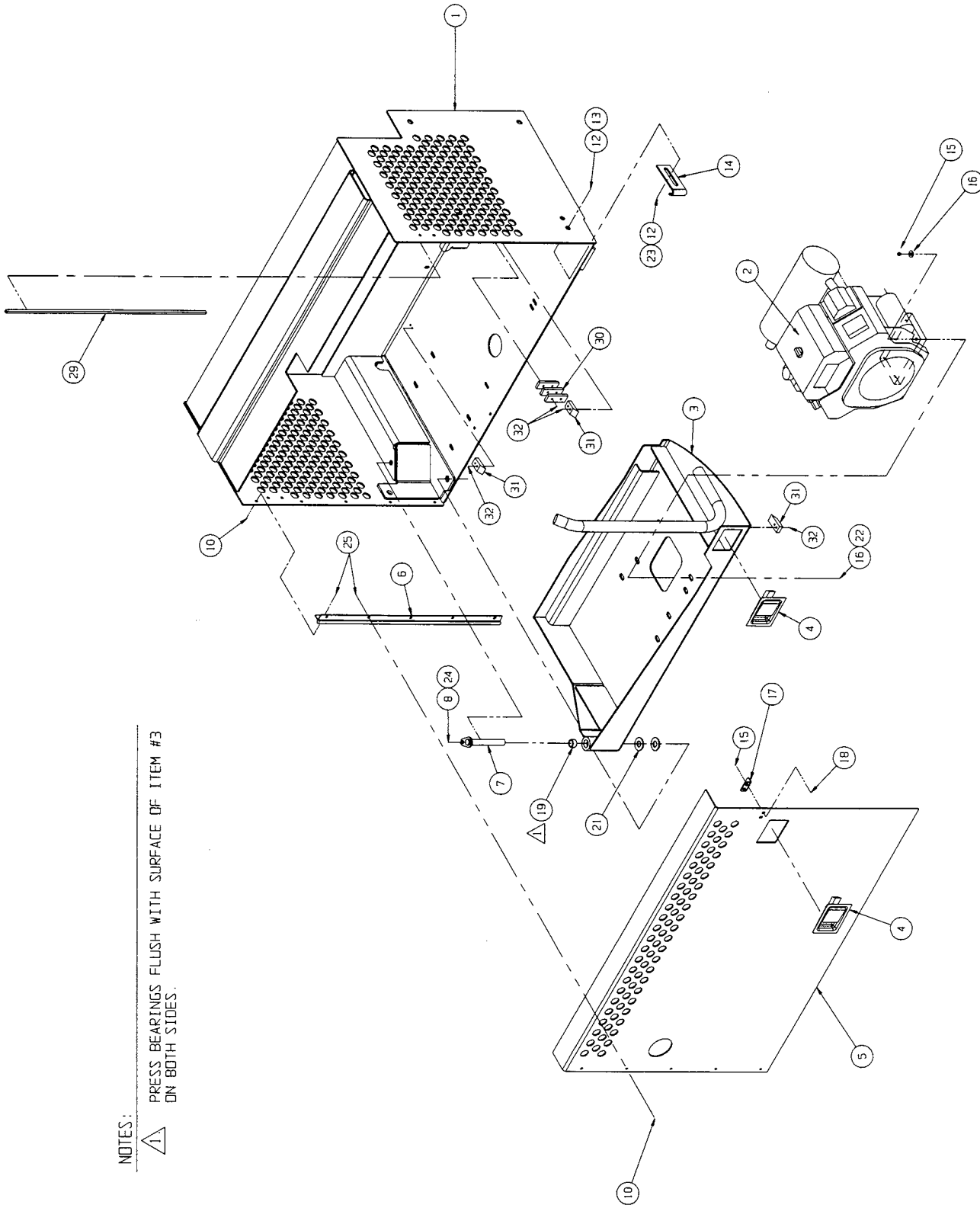
066937-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 066953-001 | POWER MODULE WELDMENT (XRT) | 1 |
| 2 | 066947-000 | ENGINE ASSY, KOHLER CH25 (XRT) | 1 |
| 3 | 066948-001 | SWING OUT TRAY SUB-WELDMENT (KOHLER) | 1 |
| 4 | 062791-002 | SLAM LATCH | 2 |
| 5 | 067233-000 | DOOR, POWER MODULE XRT | 1 |
| 6 | 067232-000 | HINGE | 1 |
| 7 | 066958-000 | WELDMENT, PIN SWING OUT PIVOT | 1 |
| 8 | 011254-006 | SCRW HHC GR5 3/8-16UNC X 3/4"LG | 1 |
| 10 | 011252-004 | SCRW HHC 1/4-20UNC X 1/2 | 10 |
| 12 | 011240-008 | WASHER, 1/2" FLAT STD | 4 |
| 13 | 011256-008 | SCREW, 1/2-13UNC X 1" | 2 |
| 14 | 067231-000 | PLATE, LATCH | 1 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 6 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|------|
| 16 | 011240-006 | WASHER, 3/8 FLAT STD | 12 |
| 17 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |
| 18 | 011254-004 | SCREW, HHC 3/8-16UNC X 1/2 | 2 |
| 19 | 027931-016 | BUSHING, OILITE AA-1049-14 | 2 |
| 21 | 011154-020 | THRUST WASHER | 2 |
| 22 | 011254-010 | SCREW, HHC 3/8-16UNC X 1-1/4 | 4 |
| 23 | 011248-008 | NUT HEX 1/2-13UNC ESNA | 2 |
| 24 | 011238-006 | WASHER, SPLIT LOCK 3/8" | 1 |
| 25 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 14 |
| 29 | 061692-099 | GROMMIT, TRIM LOCK | 1.83 |
| 30 | 066198-000 | WEAR PAD | 3 |
| 31 | 066193-000 | STOP WEAR PAD | 3 |
| 32 | 026553-008 | RIVOT POP, 3/16 DIA .501-.625 GRIP | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



POWER MODULE ASSY X-RT KOHLER
066937-000

NOTES:
 (1) PRESS BEARINGS FLUSH WITH SURFACE OF ITEM #3 ON BOTH SIDES.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Power Module Assembly Diesel Kubota

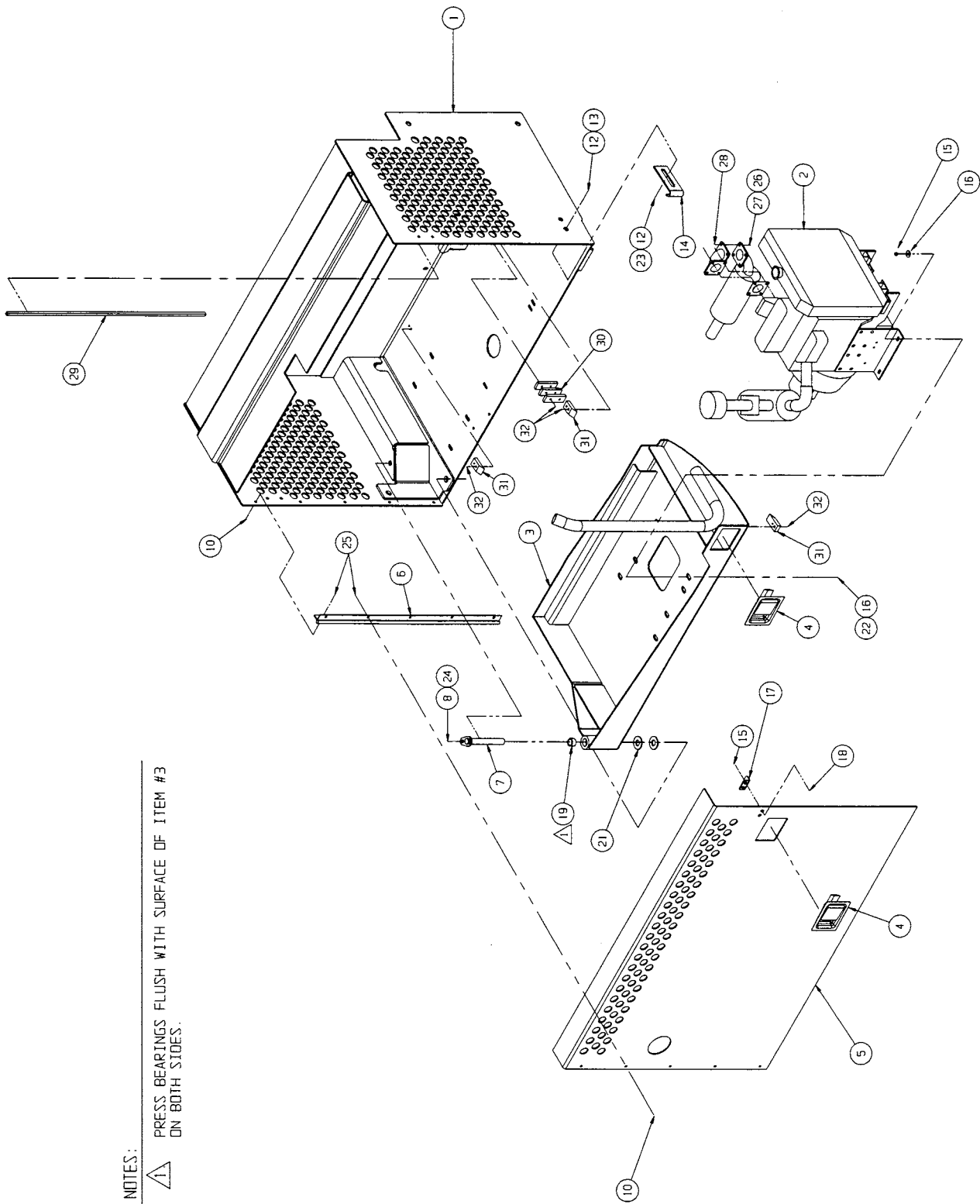
066937-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 066953-001 | POWER MODULE WELDMENT (XRT) | 1 |
| 2 | 066947-001 | ENGINE ASSY, KUBOTA DIESEL (XRT) | 1 |
| 3 | 066948-001 | SWING OUT TRAY SUB-WELDMENT (KUBOTA) | 1 |
| 4 | 062791-002 | SLAM LATCH | 2 |
| 5 | 067233-000 | DOOR, POWER MODULE XRT | 1 |
| 6 | 067232-000 | HINGE | 1 |
| 7 | 066958-000 | WELDMENT, PIN SWING OUT PIVOT | 1 |
| 8 | 011254-006 | SCRW HHC GR5 3/8-16UNC X 3/4"LG | 1 |
| 10 | 011252-004 | SCRW HHC 1/4-20UNC X 1/2 | 10 |
| 12 | 011240-008 | WASHER, 1/2" FLAT STD | 4 |
| 13 | 011256-008 | SCREW, 1/2-13UNC X 1" | 2 |
| 14 | 067231-000 | PLATE, LATCH | 1 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 6 |
| 16 | 011240-006 | WASHER, 3/8 FLAT STD | 12 |
| 17 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|----------|
| 18 | 011254-004 | SCREW, HHC 3/8-16UNC X 1/2 | 2 |
| 19 | 027931-016 | BUSHING, OILITE AA-1049-14 | 2 |
| 21 | 011154-020 | THRUST WASHER | 2 |
| 22 | 011254-010 | SCREW, HHC 3/8-16UNC X 1-1/4 | 4 |
| 23 | 011248-008 | NUT HEX 1/2-13UNC ESNA | 2 |
| 24 | 011238-006 | WASHER, SPLIT LOCK 3/8" | 1 |
| 25 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 14 |
| 26 | 011248-005 | NUT, HEX, ESNA, 5/16-18UNC | 4 |
| 27 | 011238-005 | SPLIT LOCK WASHER, 5/16 | 4 |
| 28 | 011253-010 | SCREW, HHC, 5/16-18UNC X 1 1/4 | 4 |
| 29 | 061692-099 | GROMMIT, TRIM LOCK | 1.83 Ft. |
| 30 | 066198-000 | WEAR PAD | 3 |
| 31 | 066193-000 | STOP WEAR PAD | 3 |
| 32 | 026553-008 | RIVOT POP, 3/16 DIA .501-.625 GRIP | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



POWER MODULE ASSY X-RT KUBOTA DIESEL
066937-001

NOTES:

▲ PRESS BEARINGS FLUSH WITH SURFACE OF ITEM #3 ON BOTH SIDES.

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

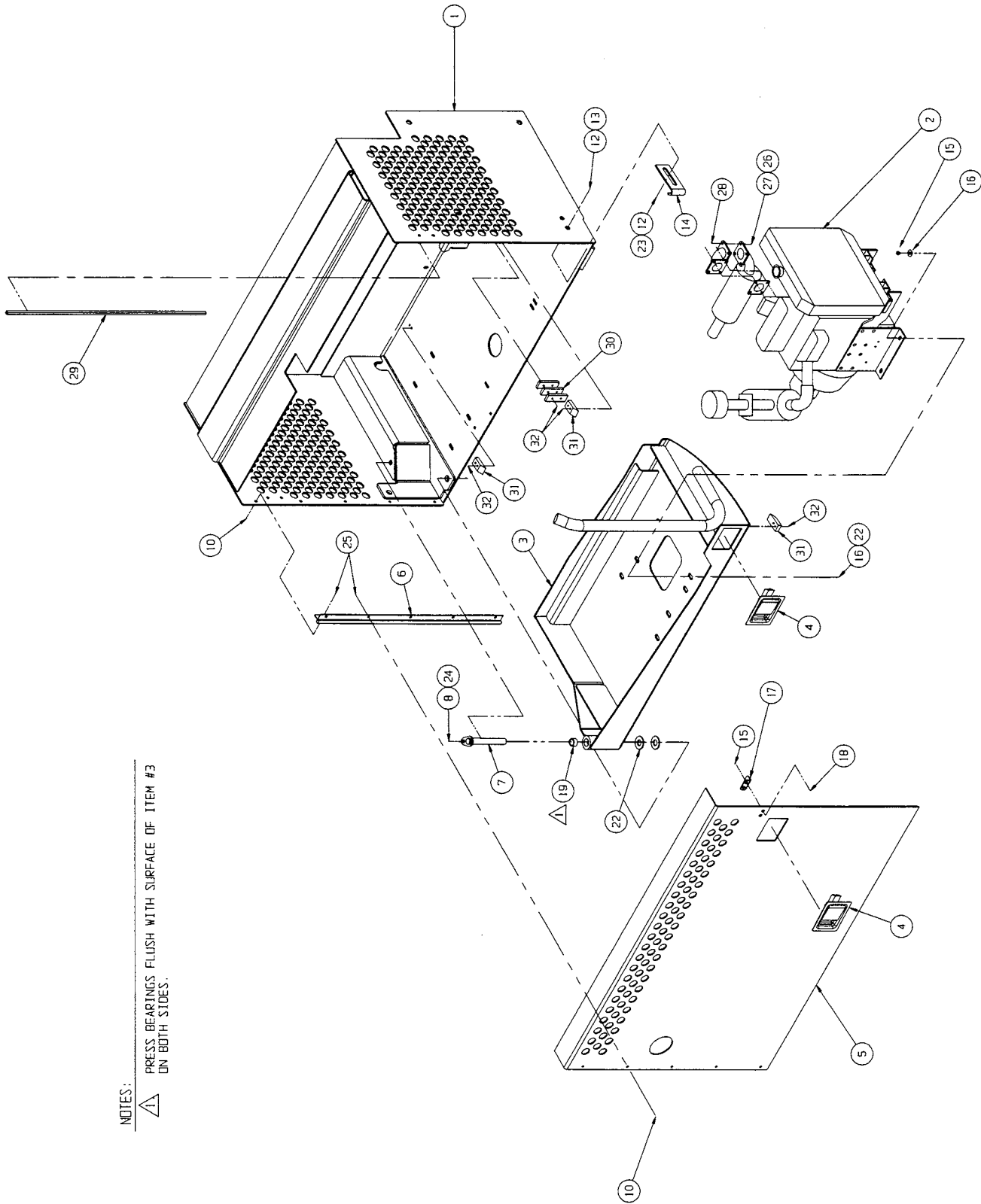
**Power Module Assembly Dual Fuel Kubota
066937-002**

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 066953-001 | POWER MODULE WELDMENT (XRT) | 1 |
| 2 | 066947-002 | ENGINE ASSY, KUBOTA DF750-E (XRT) | 1 |
| 3 | 066948-001 | SWING OUT TRAY SUB-WELDMENT (KUBOTA) | 1 |
| 4 | 062791-002 | SLAM LATCH | 2 |
| 5 | 067233-000 | DOOR, POWER MODULE XRT | 1 |
| 6 | 067232-000 | HINGE | 1 |
| 7 | 066958-000 | WELDMENT, PIN SWING OUT PIVOT | 1 |
| 8 | 011254-006 | SCRW HHC GR5 3/8-16UNC X 3/4"LG | 1 |
| 10 | 011252-004 | SCRW HHC 1/4-20UNC X 1/2 | 10 |
| 12 | 011240-008 | WASHER, 1/2" FLAT STD | 4 |
| 13 | 011256-008 | SCREW, 1/2-13UNC X 1" | 2 |
| 14 | 067231-000 | PLATE, LATCH | 1 |
| 15 | 011248-006 | NUT, HEX 3/8-16UNC ESNA | 62 |
| 16 | 011240-006 | WASHER, 3/8 FLAT STD | 12 |
| 17 | 067236-000 | SUPPORT, DOOR LATCH END | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|----------|
| 18 | 011254-004 | SCREW, HHC 3/8-16UNC X 1/2 | 2 |
| 19 | 027931-016 | BUSHING, OILITE AA-1049-14 | 2 |
| 21 | 011154-020 | THRUST WASHER | 2 |
| 22 | 011254-010 | SCREW, HHC 3/8-16UNC X 1-1/4 | 4 |
| 23 | 011248-008 | NUT HEX 1/2-13UNC ESNA | 2 |
| 24 | 011238-006 | WASHER, SPLIT LOCK 3/8" | 1 |
| 25 | 011248-004 | NUT, HEX ESNA 1/4-20UNC | 14 |
| 26 | 011248-005 | NUT, HEX, ESNA 5/16-18UNC | 4 |
| 27 | 011238-005 | SPLIT LOCK WASHER, 5/16 | 4 |
| 28 | 011253-010 | SCREW, HHC, 5/16-18UNC X 1 1/4 | 4 |
| 29 | 061692-099 | GROMMIT, TRIM LOCK | 1.83 Ft. |
| 30 | 066198-000 | WEAR PAD | 3 |
| 31 | 066193-000 | STOP WEAR PAD | 3 |
| 32 | 026553-008 | RIVOT POP, 3/16 DIA .501-.625 GRIP | 8 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



POWER MODULE ASSY XRT KUBOTA DUAL FUEL
066937-002

NOTES:

▲ PRESS BEARINGS FLUSH WITH SURFACE OF ITEM #3 ON BOTH SIDES.

**Section
6.1**

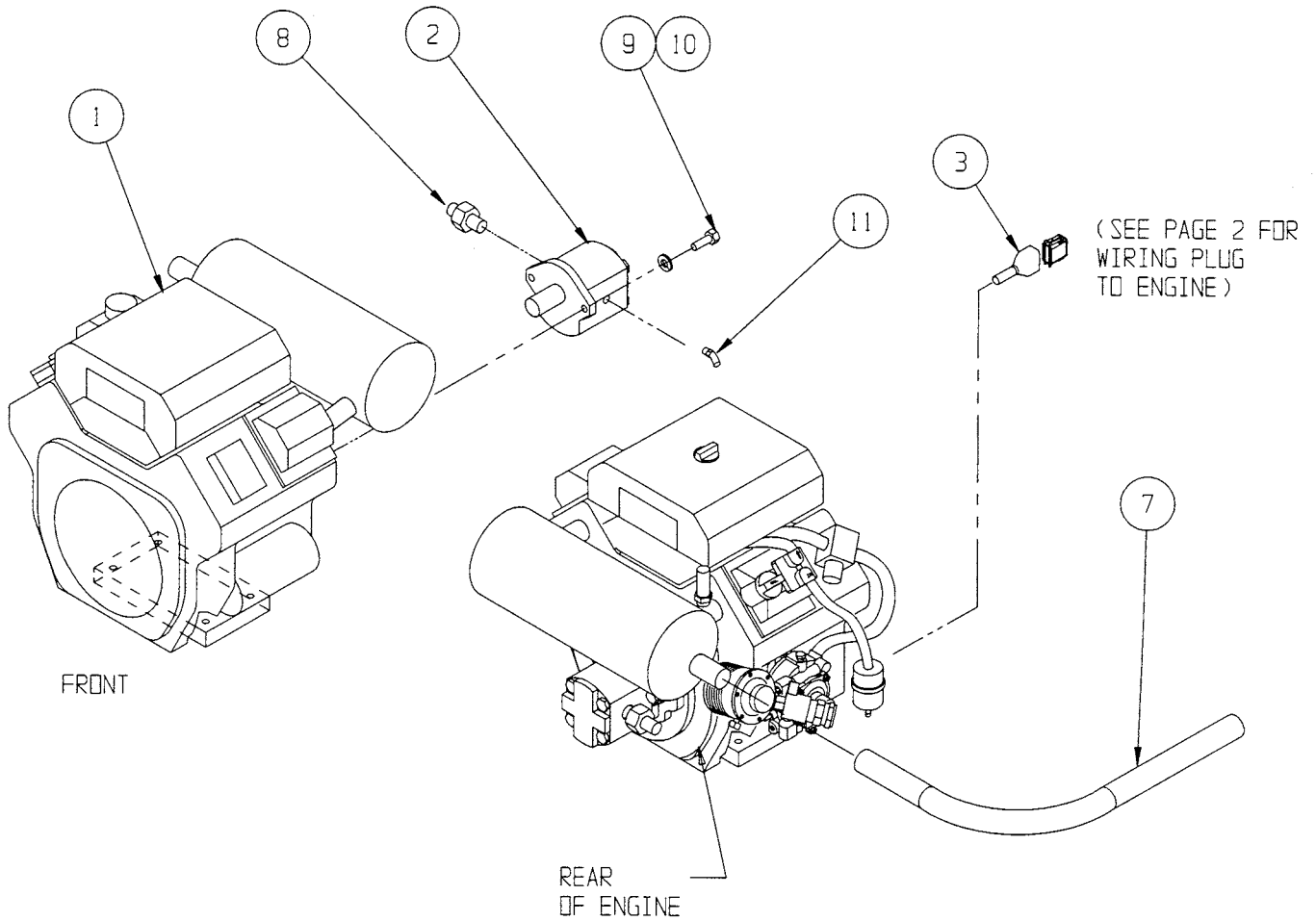
ILLUSTRATED PARTS BREAKDOWN

Engine Assembly Dual Fuel Kohler

066947-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 1 | 064849-001 | ENGINE, KOHLER CH25 DUAL FUEL X-RT | 1 |
| 2 | 063902-014 | PUMP, HYDRAULIC | 1 |
| 3 | 067492-013 | WIRE HARNESS - KOHLER ENGINE | 1 |
| 7 | 0- | EXHAUST PIPE | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-------------------------------|-----|
| 8 | 011941-028 | FITTING, ADAPTER | 1 |
| 9 | 011238-006 | LOCKWASHER, 3/8" SPLIT | 2 |
| 10 | 011254-010 | SCREW, HHC 3/8-16UNC X 1 1/4" | 2 |
| 11 | 011934-010 | FITTING, ADAPTER | 1 |

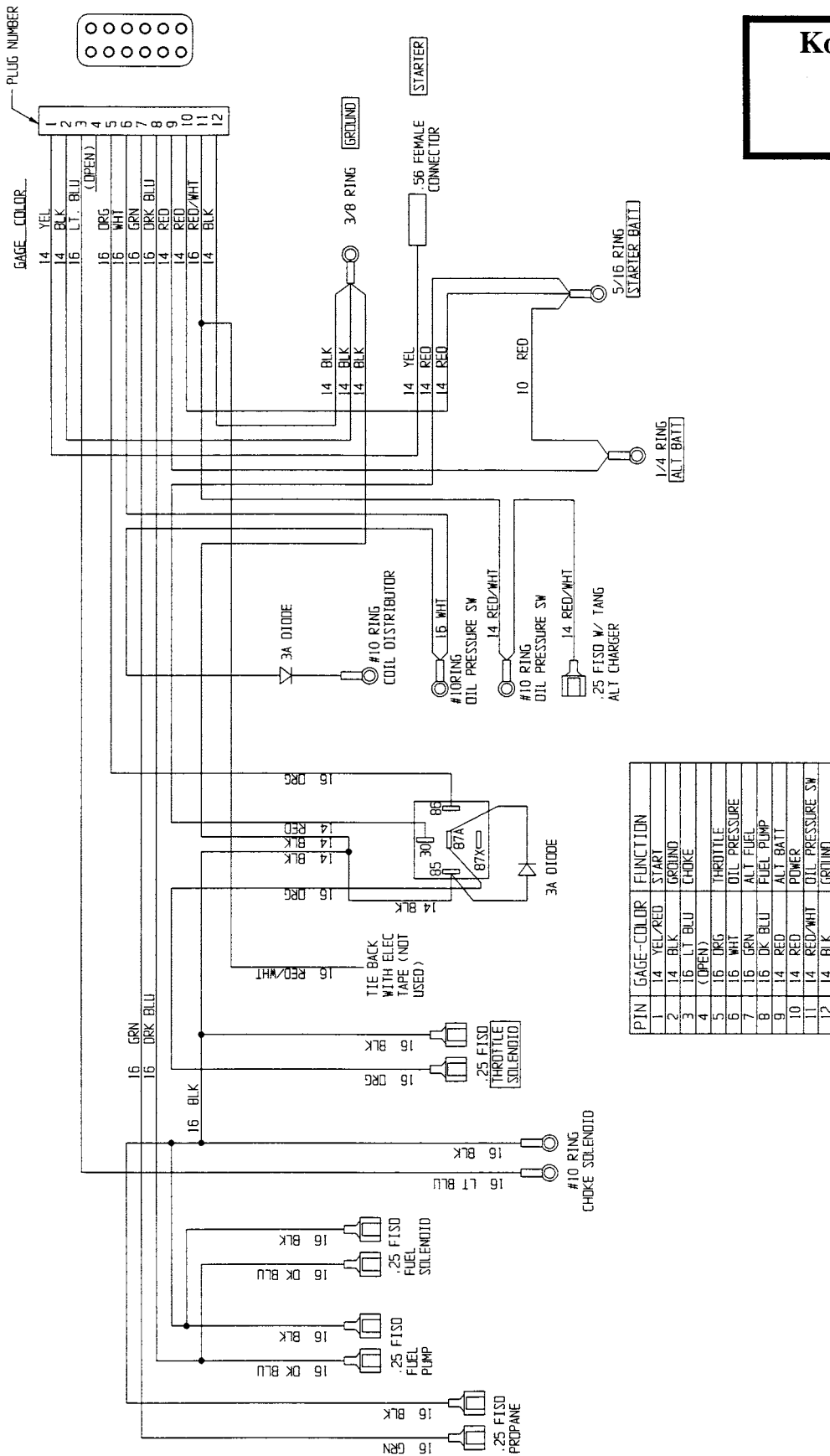


**Kohler Dual Fuel
066947-000
1 of 2**

ILLUSTRATED PARTS BREAKDOWN

Kohler Dual Fuel 066947-000

2 of 2



| PIN | GAGE-COLOR | FUNCTION |
|-----|------------|-----------------|
| 1 | 14 YEL/RED | START |
| 2 | 14 BLK | GROUND |
| 3 | 16 LT BLU | CHOKE |
| 4 | (OPEN) | |
| 5 | 16 DRG | THRITTLE |
| 6 | 16 WHI | OIL PRESSURE |
| 7 | 16 GRN | ALT FUEL |
| 8 | 16 DK BLU | FUEL PUMP |
| 9 | 14 RED | ALT BATT |
| 10 | 14 RED | POWER |
| 11 | 14 RED/WHI | OIL PRESSURE SW |
| 12 | 14 BLK | GROUND |

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Engine Assembly Diesel Kubota

066947-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-------------------------------------|-------|
| 1 | 067614-001 | ENGINE, KUBOTA DIESEL D905B-0 | 1 |
| 3 | 067599-000 | SOLENOID, THROTTLE | 1 |
| 4 | 012733-099 | HOSE, FUEL LINE Ø 5/16 | 10 FT |
| 5 | 020541-001 | HOSE CLAMP | 6 |
| 6 | REF. | FUEL FILTER, INLINE | 1 |
| 7 | 063945-001 | OIL PRESSURE SWITCH | 1 |
| 9 | 064180-001 | ENGINE MOUNT BRACKET | 2 |
| 10 | REF | FUEL FILTER MOUNT - SPIN ON | 1 |
| 11 | 067859-000 | BRACKET, AIR CLEANER | 1 |
| 12 | REF | FUEL FILTER - SPIN ON | 1 |
| 13 | 011935-001 | FITTING, 4MB-4MJ, 45° | 1 |
| 14 | 014338-005 | FITTING FLANGE, 16MJ 90° | 1 |
| 15 | 067323-000 | BRACKET, DIESEL FUEL FILTER | 1 |
| 16 | 064423-000 | INLINE SWIVEL - 1/4 | 1 |
| 17 | 011760-004 | ROD END BEARING - 1/4-28 | 1 |
| 18 | 067670-012 | SPLIT FLANGE HALF, S12 | 2 |
| 19 | 015724-012 | FITTING FLANGE - 12MJ 45° | 1 |
| 20 | 067190-000 | PUMP, HYDRAULIC - LOAD SENSE | 1 |
| 21 | 067670-016 | SPLIT FLANGE HALF, S16 | 2 |
| 22 | 067492-005 | WIRE HARNESS - KUBOTA DIESEL ENGINE | 1 |
| 23 | 011252-008 | SCREW HHC 1/4-20UNC X 1 | 1 |
| 24 | 067671-012 | O-RING, BUNA-N, S12 | 1 |
| 25 | 011943-004 | FITTING, AERO, 500024-16S, 90° | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-------------------------------------|------|
| 26 | 011238-006 | LOCKWASHER, 3/8" SPLIT | 10 |
| 27 | 011254-010 | SCREW, HHC 3/8-16UNC X 1 1/4" | 2 |
| 28 | 011934-010 | FITTING, ADAPTER | 1 |
| 29 | 011252-006 | SCREW HHC 1/4-20UNC X 3/4 | 2 |
| 30 | 011253-008 | SCREW HHC 5/16-18UNC X 1 | 3 |
| 31 | 011240-004 | WASHER FLAT STD 1/4 | 2 |
| 32 | 067671-016 | O-RING, BUNA-N, S16 | 1 |
| 33 | 011248-005 | NUT HEX 5/16 ESNA | 3 |
| 34 | 067824-010 | KTR BELL HOUSING KIT | 1 |
| 35 | 067691-000 | SNORKEL WELDMENT (LX DIESEL) | 1 |
| 36 | 011254-010 | SCREW, HHC, .375-16UNC X 1 1/4 | 8 |
| 37 | 064183-000 | SPACER, ENGINE | 2 |
| 38 | 013259-007 | U-BOLT BRACKET | 1 |
| 40 | 063946-030 | SCREW HHC M10 X 1.25 GR5 X 30MM | 12 |
| 41 | REF | SCREW (SUPPLIED W/ AIR CLEANER) | 2 |
| 42 | REF | SCREW MANIFOLD (SUPPLIED W/ ENGINE) | 2 |
| 43 | 03142-001 | ADAPTER, 2MP-2FP | 1 |
| 44 | 029601-039 | CONN. RING, 12-10GA., 5/16Ø | 1 |
| 46 | 011240-007 | WASHER FLAT STD 7/16 | 12 |
| 47 | 029416-099 | WIRE, 12AWG, RED | 1 FT |
| 48 | 029601-020 | CONN. RING, 12-10GA., 1/4Ø | 1 |
| 49 | 014914-001 | CONN. MALE PUSH, 16-14 AWG, .25 TAB | 5 |

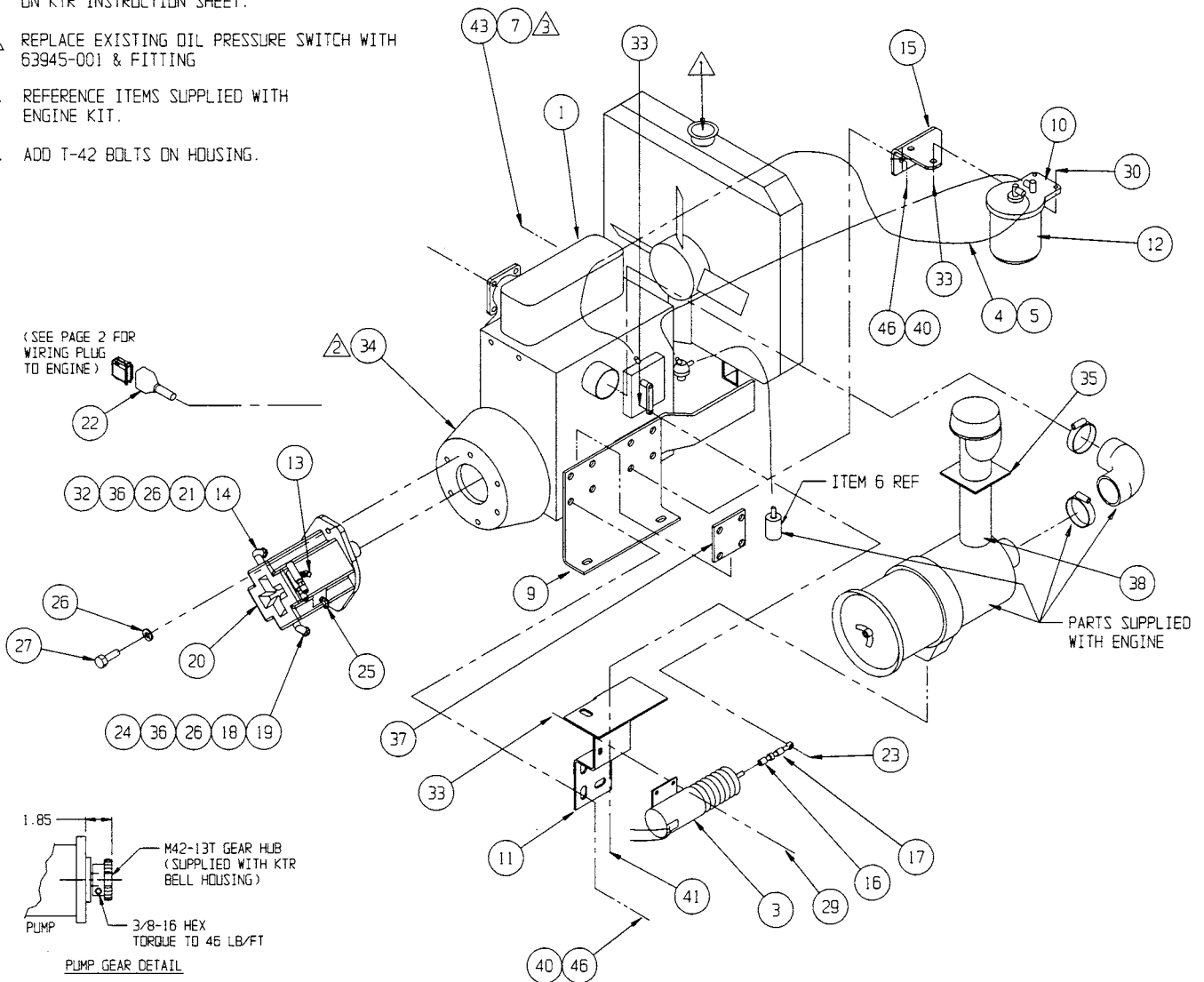
ILLUSTRATED PARTS BREAKDOWN

Kubota Diesel
066947-001

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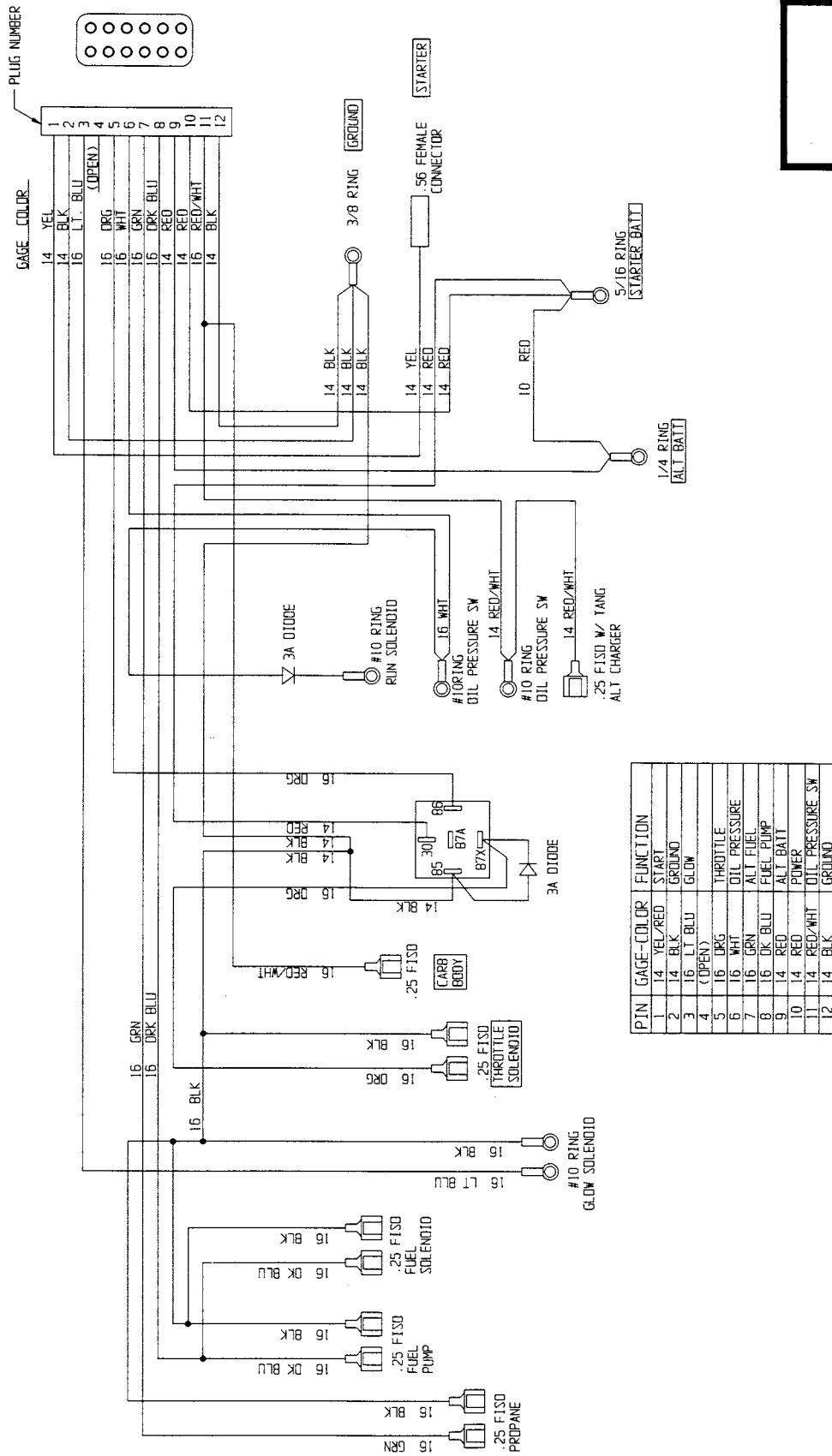
NOTES: UNLESS OTHERWISE SPECIFIED

- 1. FILL COOLING SYSTEM WITH 50% WATER AND 50% ANTIFREEZE SOLUTION.
- 2. TORQUE BELL HOUSING FASTENERS PER SPECS ON KTR INSTRUCTION SHEET.
- 3. REPLACE EXISTING OIL PRESSURE SWITCH WITH 63945-001 & FITTING
- 4. REFERENCE ITEMS SUPPLIED WITH ENGINE KIT.
- 5. ADD T-42 BOLTS ON HOUSING.



ILLUSTRATED PARTS BREAKDOWN

Kubota Diesel
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ILLUSTRATED PARTS BREAKDOWN

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ILLUSTRATED PARTS BREAKDOWN

Engine Assembly Dual Fuel Kubota

066947-002

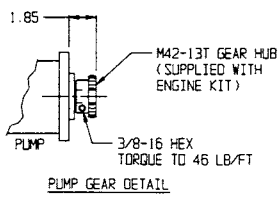
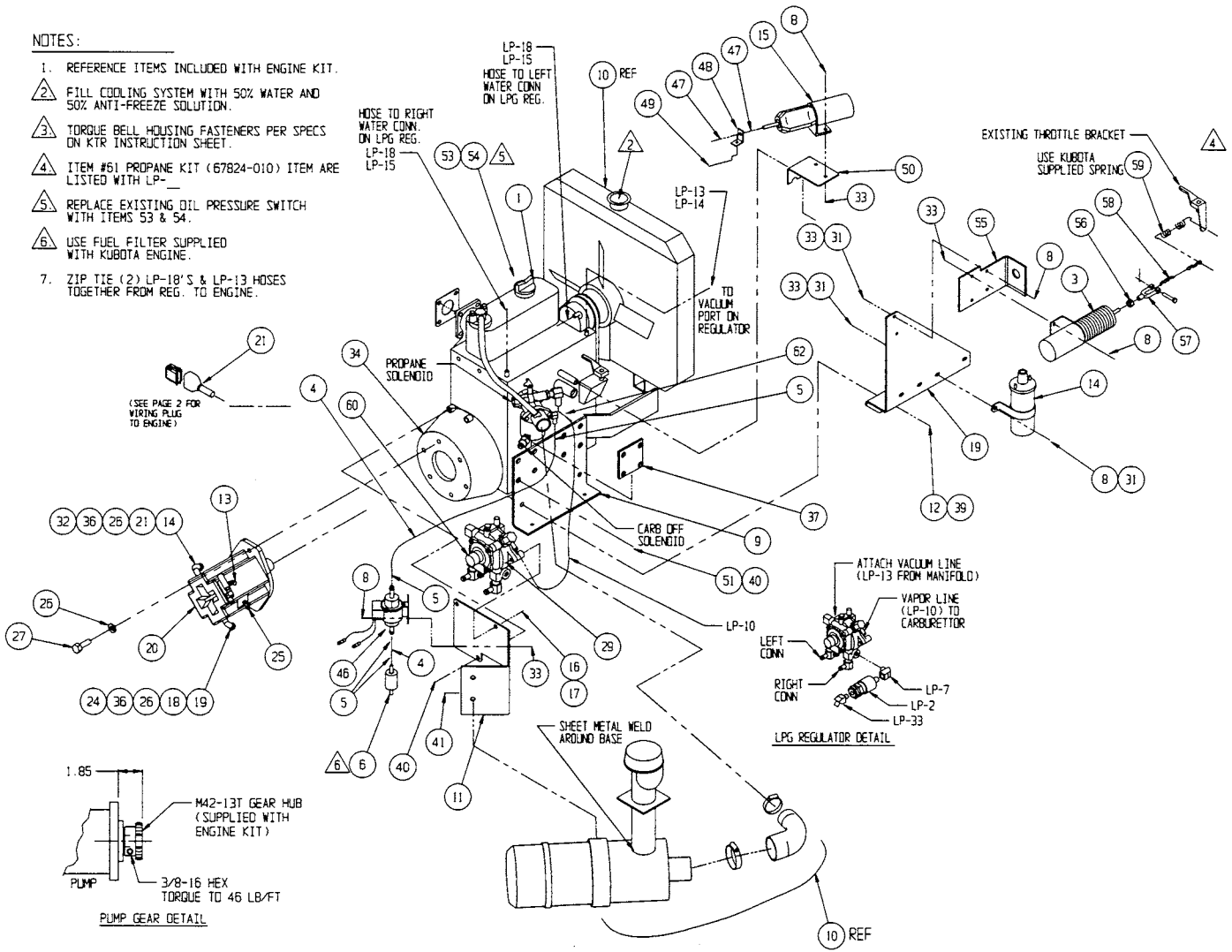
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|-------------|------------------------------------|------|
| 1 | 067824-000 | ENGINE, KUBOTA DUEL FUEL (D/F750E) | 1 |
| 3 | 063941-000 | SOLENOID, THROTTLE | 1 |
| 4 | 012733-099 | HOSE, FUEL LINE Ø 5/16 | FT 9 |
| 5 | 020541-001 | HOSE CLAMP | 6 |
| 6 | REF | FUEL FILTER, INLINE | 1 |
| 8 | 011252-006 | SCREW HHC 1/4-20 X 3/4 | 10 |
| 9 | 067874-000 | BRACKET, ENGINE MOUNT GAS | 2 |
| 10 | 067615-042 | ENGINE ACCESSORY KIT | 1 |
| 11 | 067872-001 | BRACKET, AIR CLEANER | 1 |
| 12 | 011254-008 | SCREW HHC 3/8-16 X 1 | 2 |
| 13 | 011935-001 | FITTING, 4MB-4MJ, 45° | 1 |
| 14 | REF | COIL, IGNITION | 1 |
| 15 | 067599-000 | SOLENOID, CHOKE | 1 |
| 16 | 011240-005 | WASHER FLAT STD 5/16 | 2 |
| 17 | 011248-005 | NUT HEX 5/16-18 ESNA | 2 |
| 18 | 067670-012 | SPLIT FLANGE HALF, S12 | 2 |
| 19 | 067871-000 | BRACKET, SOLENOID | 1 |
| 20 | 067190-000 | PUMP, HYDRAULIC LOAD SENSING | 1 |
| 21 | 067492-004 | WIRE HARNESS - KUBOTA GAS ENGINE | 1 |
| 22 | 014338-0052 | FITTING FLANGE, 16MJ 90° | 1 |
| 23 | 015724-012 | FITTING FLANGE - 12MJ 45° | 1 |
| 24 | 067671-012 | O-RING, BUNA-N, S12 | 1 |
| 25 | 011941-028 | FITTING, ADAPTER | 1 |
| 26 | 011238-006 | LOCKWASHER, 3/8" SPLIT | 10 |
| 27 | 011254-010 | SCREW, HHC 3/8-16UNC X 1 1/4" | 2 |
| 28 | 011934-010 | FITTING, ADAPTER | 1 |
| 29 | 011253-014 | SCREW HHC 5/16-18UNC X 1 3/4 | 2 |
| 30 | 011252-008 | SCREW HHC 1/4-20UNC X 1 | 2 |
| 31 | 011240-004 | WASHER FLAT STD 1/4 | 6 |
| 32 | 011238-004 | WASHER SPLIT LOCK 1/2 | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-------------------------------------|-----|
| 33 | 011248-004 | NUT HEX 1/4-20 ESNA | 10 |
| 34 | 067617-020 | KTR BELL HOUSING KIT D/F #0034 | 1 |
| 35 | 011256-010 | SCREW HHC 1/2-13UNC X 1-1/4 | 2 |
| 36 | 011254-010 | SCREW, HHC, .375-16UNC X 1 1/4 | 8 |
| 37 | 064183-000 | SPACER, ENGINE | 2 |
| 38 | 067670-016 | SPLIT FLANGE HALF, S16 | 2 |
| 39 | 011240-006 | WASHER FLAT STD 3/8 | 2 |
| 40 | 063946-030 | SCREW HHC M10 X 1.25 GR5 X 30MM | 14 |
| 41 | REF | SCREW (SUPPLIED W/ AIR CLEANER) | 2 |
| 42 | REF | SCREW MANIFOLD (SUPPLIED W/ ENGINE) | 2 |
| 43 | 011709-004 | SCREW RD HD 10-24UNC X 1/2 | 2 |
| 44 | 011248-003 | NUT HEX ESNA 10-24UNC | 2 |
| 45 | 014914-001 | CONN. MALE PUSH, 16-14 AWG, .25 TAB | 9 |
| 46 | REF | ELECTRIC FUEL PUMP | 1 |
| 47 | 011261-004 | SCREW HHC 1/4-28 UNF | 2 |
| 48 | 030624-019 | CHOKE ANGLE | 1 |
| 49 | 030624-020 | CHOKE ROD | 1 |
| 50 | 030624-008 | CHOKE SOLENOID BRACKET | 1 |
| 51 | 011240-007 | WASHER FLAT STD 7/16 | 12 |
| 52 | 067671-016 | O-RING, BUNA-N, S16 | 1 |
| 53 | 063945-001 | OIL PRESS SWITCH | 1 |
| 54 | 003142-001 | FITTING 2MP-2FP | 1 |
| 55 | 067807-000 | SOLENOID BRACKET | 1 |
| 56 | 020495-004 | NUT HEX JAM 1/4-28UNF | 1 |
| 57 | 011847-004 | YOKE END | 1 |
| 58 | 020731-005 | CHAIN 4 LINKS | 1 |
| 59 | REF | SPRING LINKAGE | 1 |
| 60 | REF | LPG REGULATOR | 1 |
| 61 | 067824-010 | DUAL FUEL KIT (PROPANE) | 1 |
| 62 | 020541-004 | HOSE CLAMP (#8) | 2 |

ILLUSTRATED PARTS BREAKDOWN

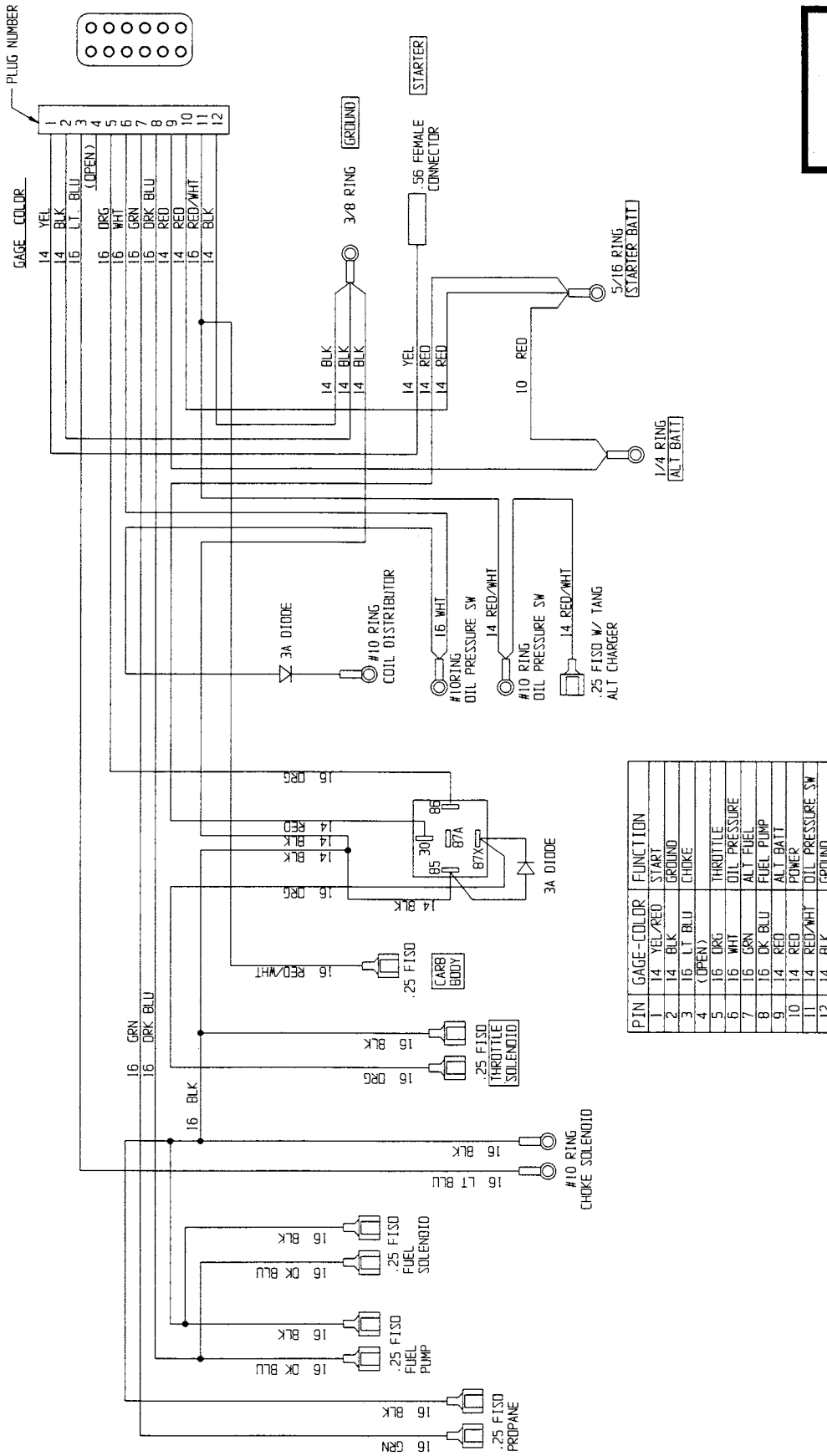
NOTES:

1. REFERENCE ITEMS INCLUDED WITH ENGINE KIT.
2. FILL COOLING SYSTEM WITH 50% WATER AND 50% ANTI-FREEZE SOLUTION.
3. TORQUE BELL HOUSING FASTENERS PER SPECS ON KTR INSTRUCTION SHEET.
4. ITEM #61 PROPANE KIT (67824-010) ITEM ARE LISTED WITH LP-__
5. REPLACE EXISTING OIL PRESSURE SWITCH WITH ITEMS 53 & 54.
6. USE FUEL FILTER SUPPLIED WITH KUBOTA ENGINE.
7. ZIP TIE (2) LP-18'S & LP-13 HOSES TOGETHER FROM REG. TO ENGINE.



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066947-002**

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ILLUSTRATED PARTS BREAKDOWN

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ILLUSTRATED PARTS BREAKDOWN

Control Cable Assembly XRT27

066944-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|--------|
| 1 | 067645-099 | CABLE, 16/6, 18/12 MULTICONDUCTOR | FT 50 |
| 2 | 029601-013 | CONN RING TERM 16-14 GA #10 | 2 |
| 3 | 063956-002 | PIN, CONTACT MALE 20-14 GA | 7 |
| 4 | 029610-002 | CONN FORK TERM 16-14 GA #8 | 7 |
| 5 | 029457-099 | WIRE, 16GA GRN X 12 IN | FT 1 |
| 6 | 029620-002 | CONN, BUTT 16-14GA | 2 |
| 7 | 029616-001 | CONN, FEMALE PUSH 16-14GA X .188 | 2 |
| 8 | 029483-099 | WIRE 16 GA RD/WHT X 14 IN | FT 1.2 |
| 9 | 068760-001 | DT CONNECTOR, RECEPTACLE, # DT04-12P | 1 |
| 10 | 067990-001 | DT CONNECTOR, RECEPTACLE, # DT04 6P | 1 |
| 11 | 068761-000 | LOCKING WEDGE, RECEPTACLE, # W12P | 1 |
| 12 | 067990-003 | LOCKING WEDGE, RECEPTACLE, # W6P | 1 |
| 13 | 015790-004 | CONTACT PIN, 16-18 AWG | 18 |
| 14 | 068908-001 | BOOT ELECT. RECEPTACLE, # DT-12-P-BT | 1 |
| 15 | 068908-002 | BOOT ELECT. RECEPTACLE, # DT-6-P-BT | 1 |

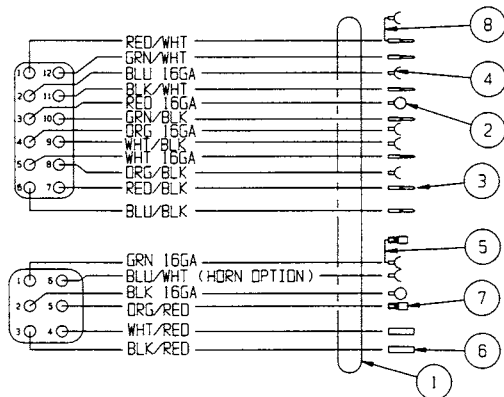
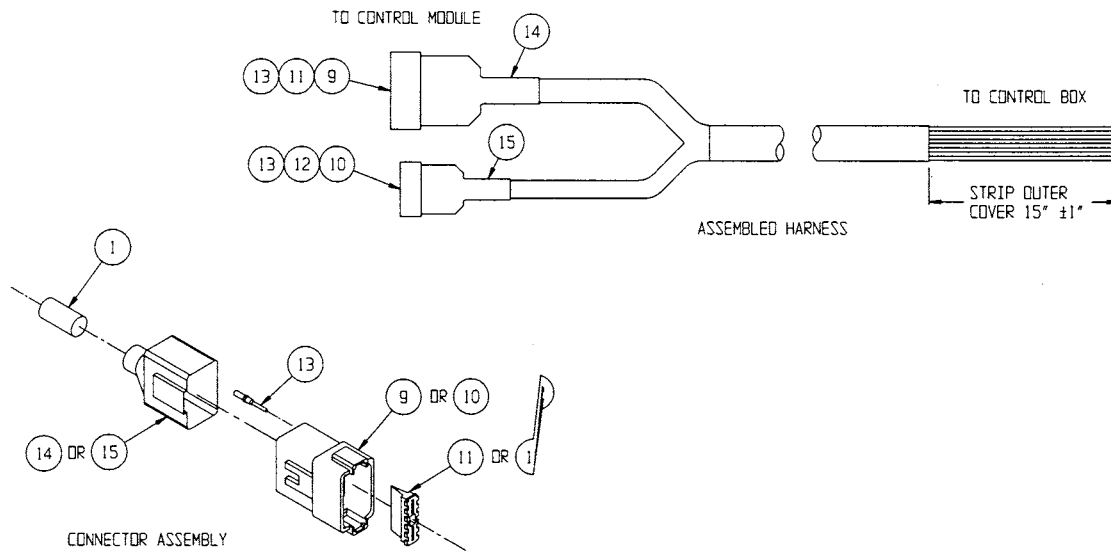
Control Cable Assembly XRT33

066944-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|--------|
| 1 | 067645-099 | CABLE, 16/6, 18/12 MULTICONDUCTOR | FT 60 |
| 2 | 029601-013 | CONN RING TERM 16-14 GA #10 | 2 |
| 3 | 063956-002 | PIN, CONTACT MALE 20-14 GA | 7 |
| 4 | 029610-002 | CONN FORK TERM 16-14 GA #8 | 7 |
| 5 | 029457-099 | WIRE, 16GA GRN X 12 IN | FT 1 |
| 6 | 029620-002 | CONN, BUTT 16-14GA | 2 |
| 7 | 029616-001 | CONN, FEMALE PUSH 16-14GA X .188 | 2 |
| 8 | 029483-099 | WIRE 16 GA RD/WHT X 14 IN | FT 1.2 |
| 9 | 068760-001 | DT CONNECTOR, RECEPTACLE, # DT04-12P | 1 |
| 10 | 067990-001 | DT CONNECTOR, RECEPTACLE, # DT04 6P | 1 |
| 11 | 068761-000 | LOCKING WEDGE, RECEPTACLE, # W12P | 1 |
| 12 | 067990-003 | LOCKING WEDGE, RECEPTACLE, # W6P | 1 |
| 13 | 015790-004 | CONTACT PIN, 16-18 AWG | 18 |
| 14 | 068908-001 | BOOT ELECT. RECEPTACLE, # DT-12-P-BT | 1 |
| 15 | 068908-002 | BOOT ELECT. RECEPTACLE, # DT-6-P-BT | 1 |

ILLUSTRATED PARTS BREAKDOWN

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NOTES: UNLESS OTHERWISE SPECIFIED

1. CRIMP ON PINS AND CONNECTORS ARE INSTALLED AFTER CABLES ARE ROUTED THRU SCISSOR ARMS AND INTO CONTROL BOXES.

CONTROL CABLE ASSY (XRT SERIES KIT)

066944-000

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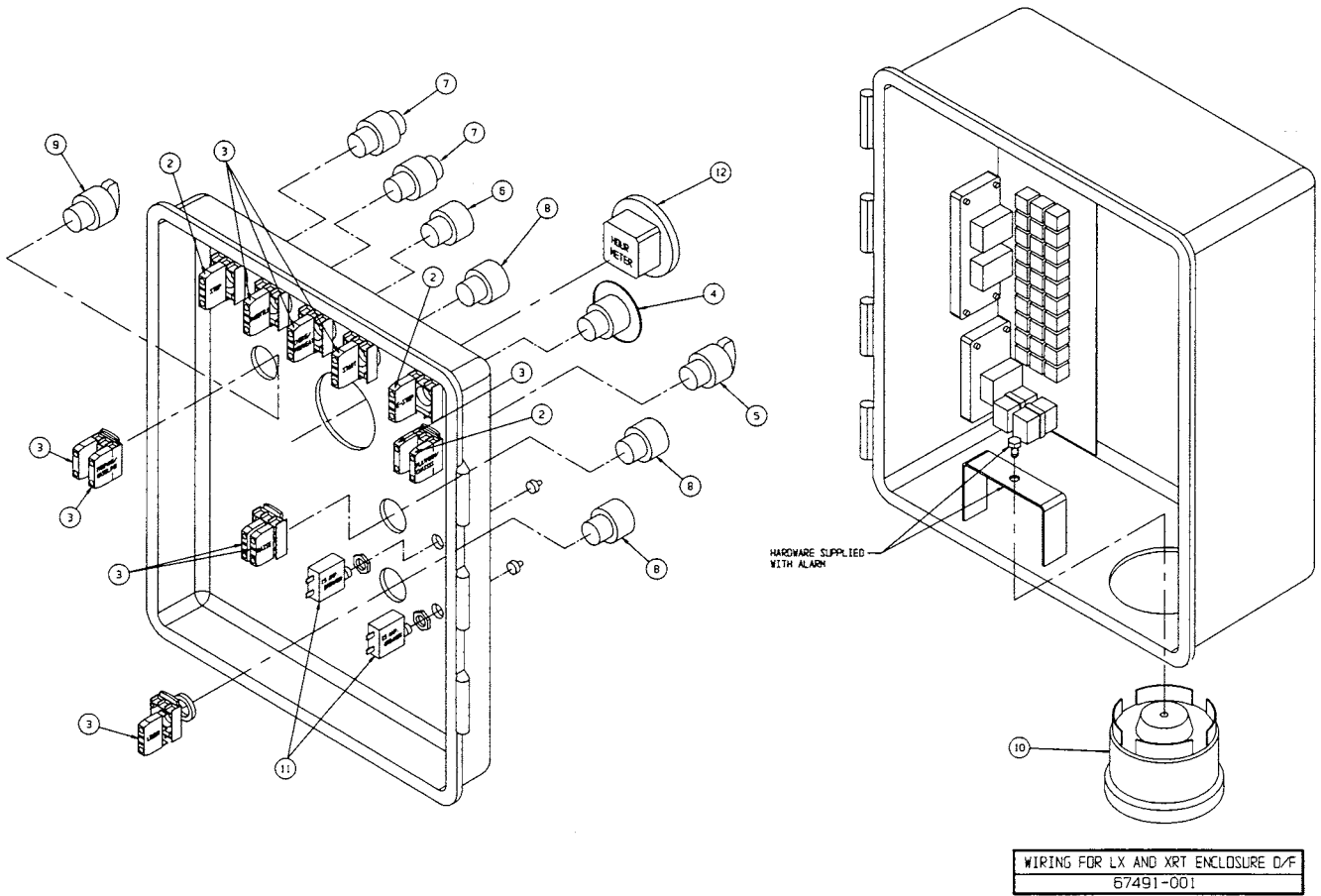
ILLUSTRATED PARTS BREAKDOWN

Controller Assembly, Dual Fuel Lower Controls

067491-001#1

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | REF | ENCLOSURE | 1 |
| 2 | 066805-011 | CONTACT BLOCK N.C. | 3 |
| 3 | 066805-010 | CONTACT BLOCK N.O. | 9 |
| 4 | 066805-006 | EMERGENCY STOP | 1 |
| 5 | 066805-002 | 2 POSITION SELECTOR SWITCH | 1 |
| 6 | 066805-018 | BLK STANDARD PUSH BUTTON | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 7 | 066805-017 | RED STANDARD PUSH BUTTON | 2 |
| 8 | 066805-016 | GRN STANDARD PUSH BUTTON | 3 |
| 9 | 066805-003 | 3 POSITION SELECTOR | 1 |
| 10 | 066807-001 | ALARM, 107DB | 1 |
| 11 | 029868-007 | 15 AMP-CIRCUIT BREAKER | 2 |
| 12 | 015752-000 | HOUR-METER | 1 |



ILLUSTRATED PARTS BREAKDOWN

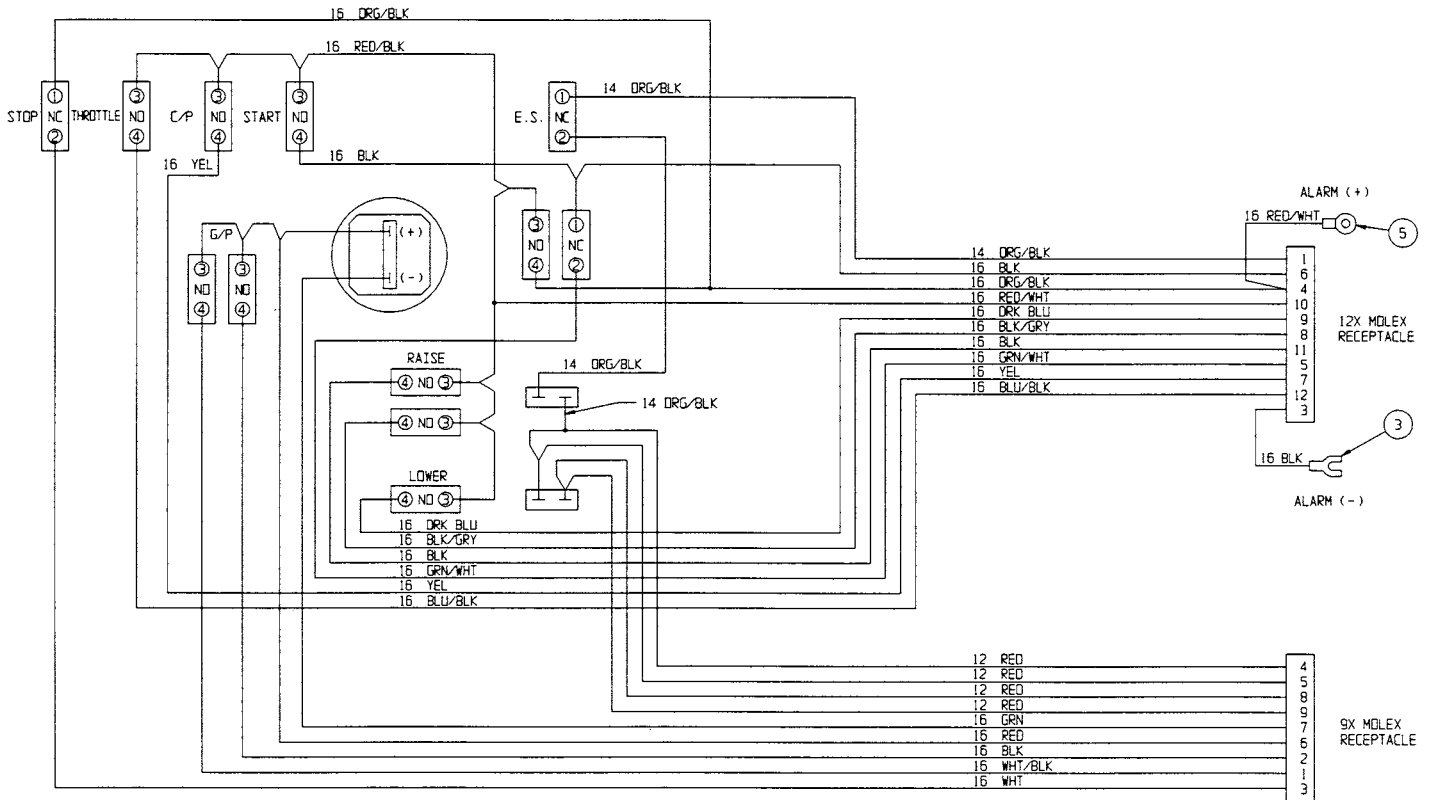
Section 6.1

Controller Assembly Wiring, Dual Fuel Lower Controls

067491-001#2

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|--------|
| 1 | 029616-002 | CONN. FEMALE PUSH 16-14 .25 TAB | 12 |
| 2 | 029616-003 | CONN. FEMALE PUSH 10-12 .25 TAB | 2 |
| 3 | 029610-002 | CONN. FORK 16-14 #8 | 21 |
| 5 | 029601-012 | CONN. RING TERM 16-14 #8 | 1 |
| 6 | 029470-099 | WIRE, 12 AWG RED | 5 FT |
| 7 | 029457-099 | WIRE, 16 AWG GREEN | 1.5 FT |
| 8 | 029454-099 | WIRE, 16 AWG RED | 1.5 FT |
| 9 | 029452-099 | WIRE, 16 AWG BLACK | 5 FT |
| 10 | 029479-099 | WIRE, 16 AWG WHITE/BLACK | 1.5 FT |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|--------|
| 11 | 029451-099 | WIRE, 16 AWG WHITE | 1.5 FT |
| 12 | 029352-099 | WIRE, 16 AWG RED/WHITE | 2.5 FT |
| 13 | - | WIRE, 14 AWG ORANGE/BLACK | 2.5 FT |
| 14 | 029450-099 | WIRE, 16 AWG DARK BLUE | 1.5 FT |
| 15 | 029477-099 | WIRE, 16 AWG ORANGE/BLACK | 3 FT |
| 16 | - | WIRE, 16 AWG BLACK/GREY | 1.5 FT |
| 17 | 029353-099 | WIRE, 16 AWG GREEN/WHITE | 1.5 FT |
| 18 | 029456-099 | WIRE, 16 AWG YELLOW | 1.5 FT |
| 19 | 029475-099 | WIRE, 16 AWG BLUE/BLACK | 1.5 FT |



WIRING FOR LX AND XRT ENCLOSURE D/F
67491-001

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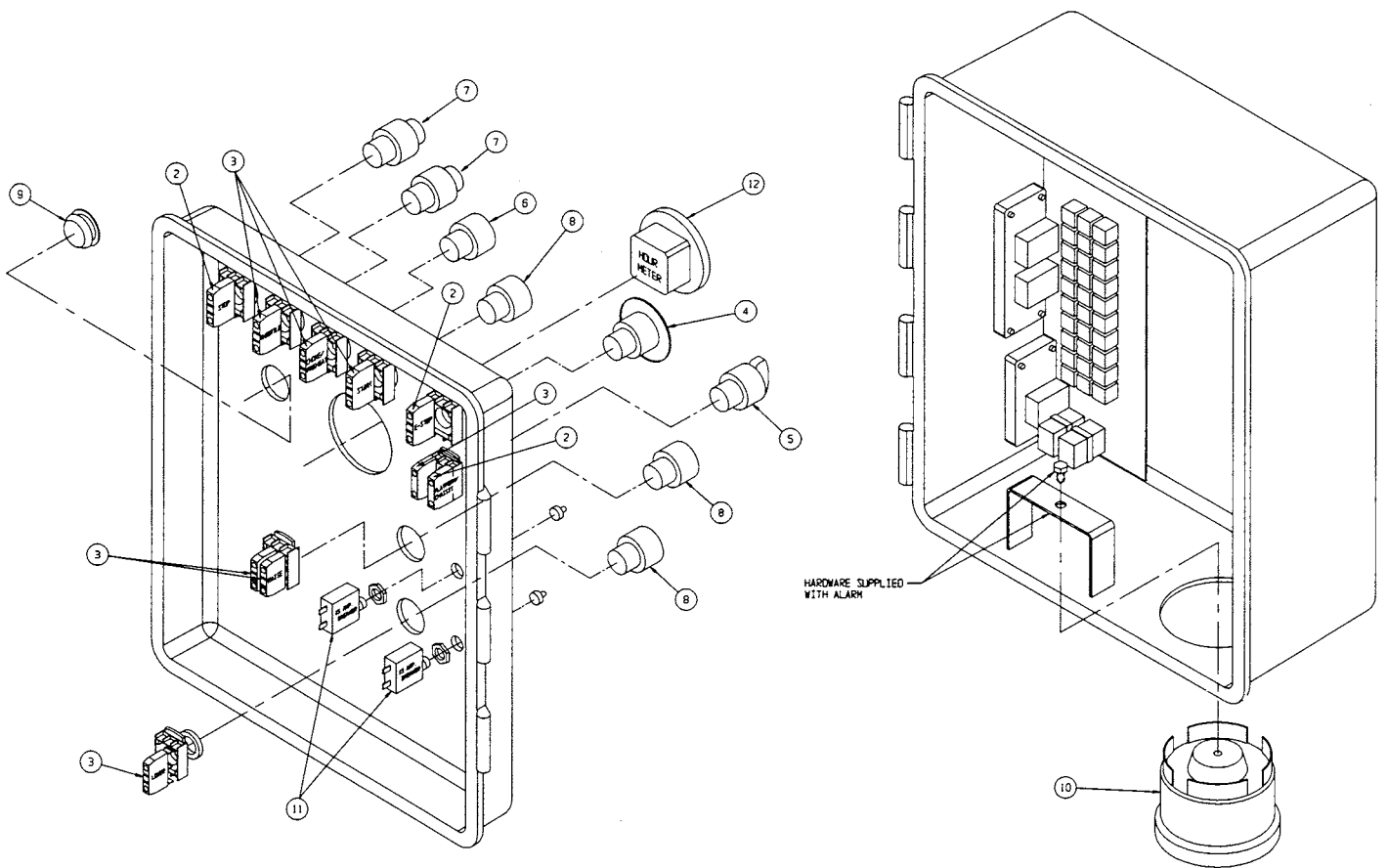
ILLUSTRATED PARTS BREAKDOWN

Controller Assembly, Diesel Lower Controls

067491-002#1

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 2 | 066805-011 | CONTACT BLOCK N.C. | 3 |
| 3 | 066805-010 | CONTACT BLOCK N.O. | 7 |
| 4 | 066805-006 | EMERGENCY STOP | 1 |
| 5 | 066805-002 | 2 POSITION SELECTOR SWITCH | 1 |
| 6 | 066805-018 | BLK STANDARD PUSH BUTTON | 1 |
| 7 | 066805-017 | RED STANDARD PUSH BUTTON | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 8 | 066805-016 | GRN STANDARD PUSH BUTTON | 3 |
| 9 | 064462-007 | CAP PLUG, Ø 7/8 | 1 |
| 10 | 066807-001 | ALARM, 107DB | 1 |
| 11 | 029868-007 | 15 AMP-CIRCUIT BREAKER | 2 |
| 12 | 015752-000 | HOUR-METER | 1 |



WIRING FOR LX AND XRT ENCLOSURE DIESEL
67491-002

ILLUSTRATED PARTS BREAKDOWN

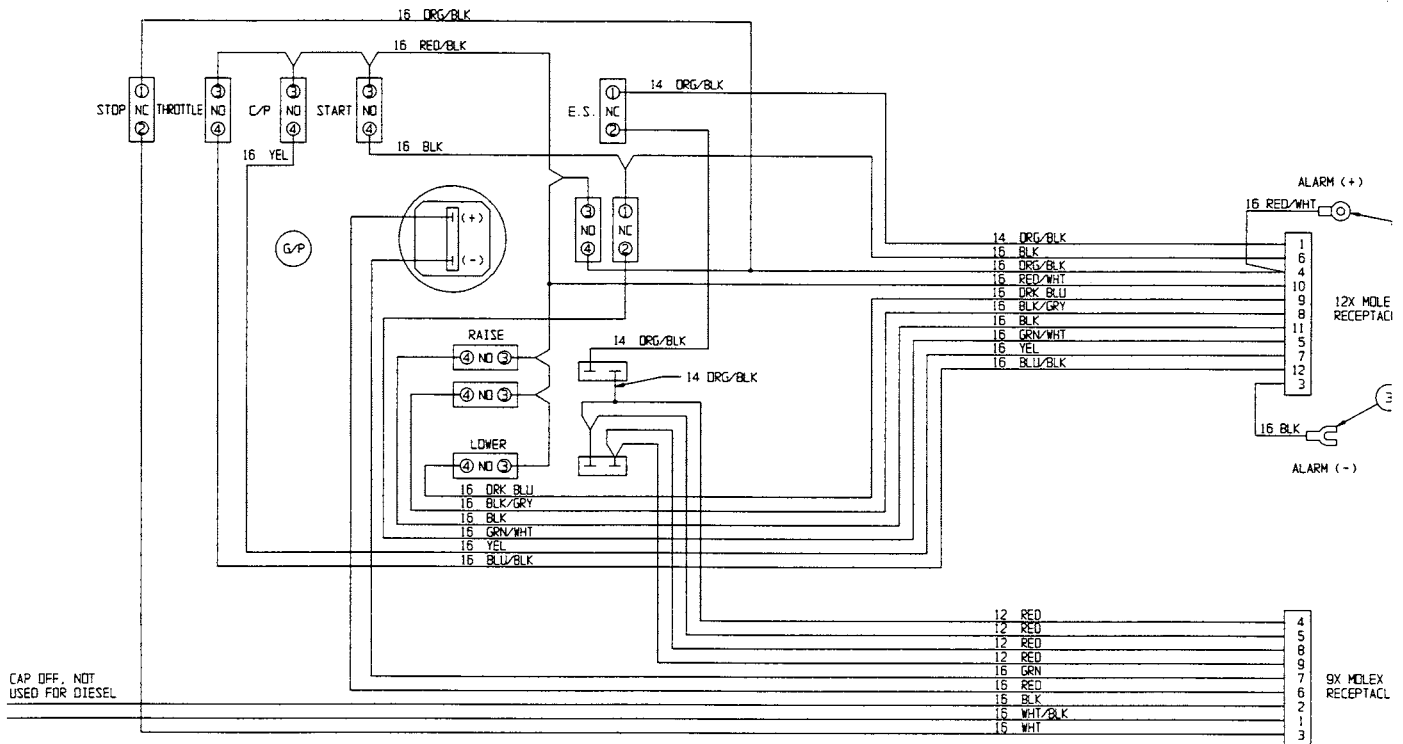
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Controller Assembly Wiring, Diesel Lower Controls

067491-002#1

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|--------|
| 1 | 029616-002 | CONN. FEMALE PUSH 16-14 .25 TAB | 12 |
| 2 | 029616-003 | CONN. FEMALE PUSH 10-12 .25 TAB | 2 |
| 3 | 029610-002 | CONN. FORK 16-14 #8 | 21 |
| 5 | 029601-012 | CONN. RING TERM 16-14 #8 | 1 |
| 6 | 029470-099 | WIRE, 12 AWG RED | 5 FT |
| 7 | 029457-099 | WIRE, 16 AWG GREEN | 1.5 FT |
| 8 | 029454-099 | WIRE, 16 AWG RED | 1.5 FT |
| 9 | 029452-099 | WIRE, 16 AWG BLACK | 5 FT |
| 10 | 029479-099 | WIRE, 16 AWG WHITE/BLACK | 1.5 FT |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|--------|
| 11 | 029451-099 | WIRE, 16 AWG WHITE | 1.5 FT |
| 12 | 029352-099 | WIRE, 16 AWG RED/WHITE | 2.5 FT |
| 13 | - | WIRE, 14 AWG ORANGE/BLACK | 2.5 FT |
| 14 | 029450-099 | WIRE, 16 AWG DARK BLUE | 1.5 FT |
| 15 | 029477-099 | WIRE, 16 AWG ORANGE/BLACK | 3 FT |
| 16 | - | WIRE, 16 AWG BLACK/GREY | 1.5 FT |
| 17 | 029353-099 | WIRE, 16 AWG GREEN/WHITE | 1.5 FT |
| 18 | 029456-099 | WIRE, 16 AWG YELLOW | 1.5 FT |
| 19 | 029475-099 | WIRE, 16 AWG BLUE/BLACK | 1.5 FT |



WIRING FOR LX AND XRT ENCLOSURE DIESEL
67491-002

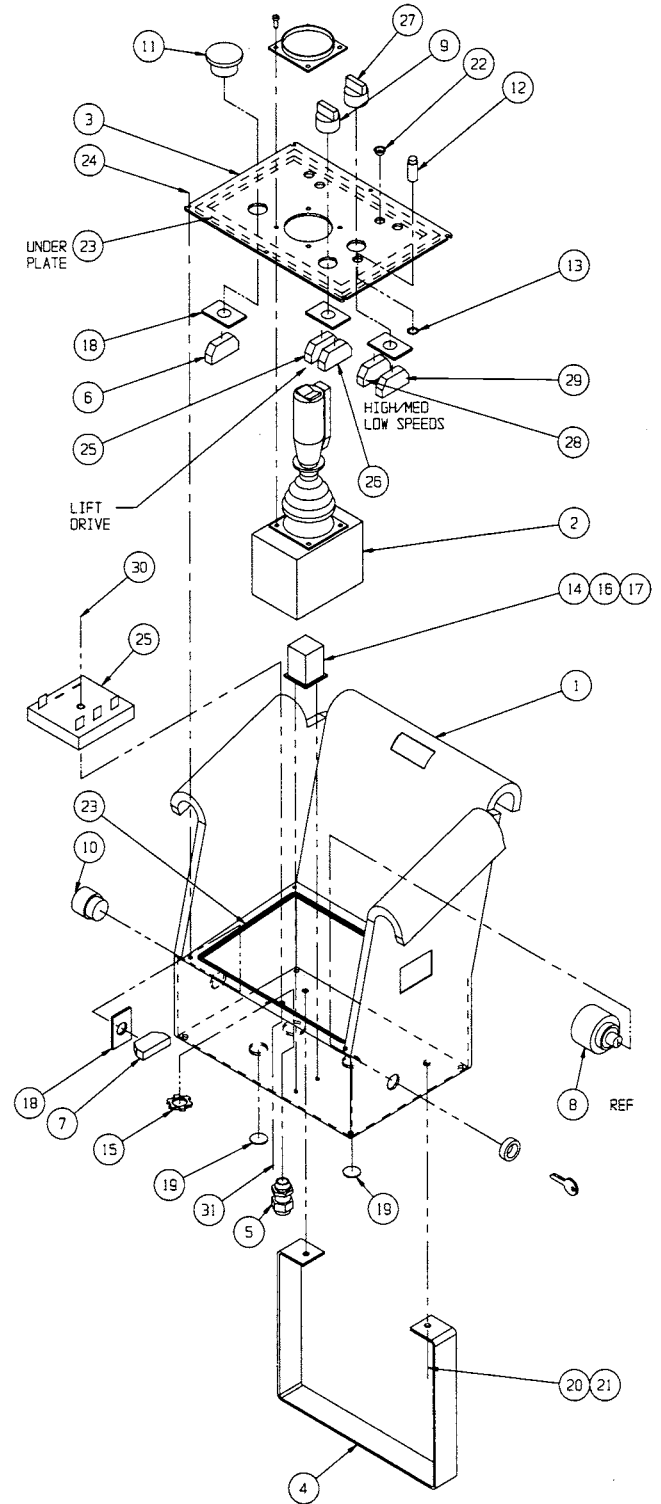
**Section
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ILLUSTRATED PARTS BREAKDOWN

Controller Assembly Upper Controls

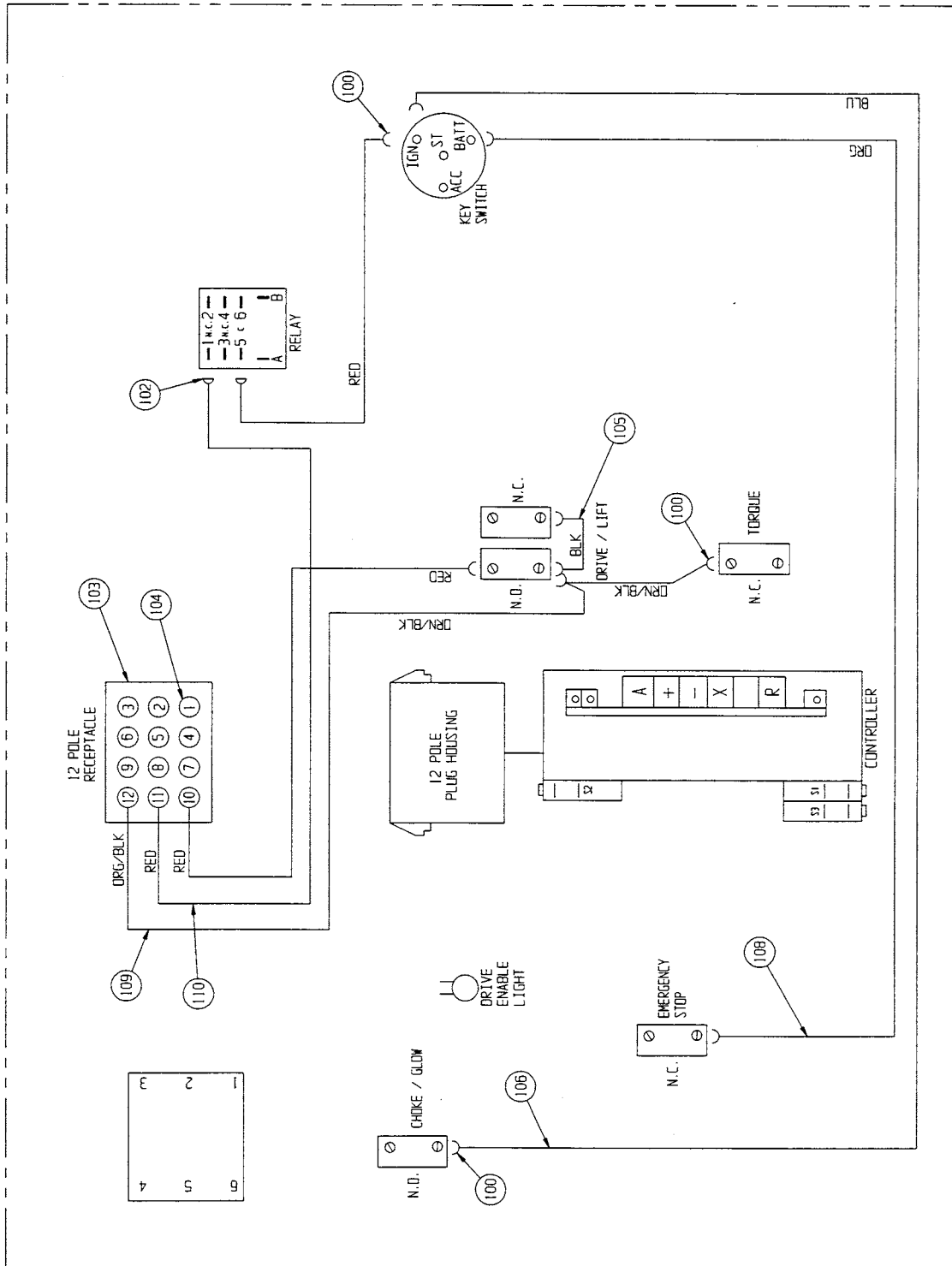
067528-013

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--|-------|
| 1 | 067487-000 | LX CONTROL BOX | 1 |
| 2 | 067643-001 | CONTROLLER, PROPORTIONAL 12V | 1 |
| 3 | 067486-000 | COVER PLATE, CONTROLLER BOX | 1 |
| 4 | 067483-000 | CONTROLLER SUPPORT | 1 |
| 5 | 029925-010 | CABLE CONNECTOR, 3/4" | 1 |
| 6 | 064443-002 | CONTACT BLOCK, N.C. | 2 |
| 7 | 064443-001 | CONTACT BLOCK, N.O. | 1 |
| 8 | 064666-000 | KEY SWITCH | 1 |
| 9 | 066805-002 | SELECTOR SWITCH | 1 |
| 10 | 067653-000 | PUSH BUTTON | 1 |
| 11 | 064446-003 | MUSHROOM BUTTON | 1 |
| 12 | 068133-000 | INDICATOR LIGHT | 1 |
| 13 | 067806-000 | RING, RETAINING | 1 |
| 14 | 063951-001 | RELAY | 1 |
| 15 | 029939-003 | CONDUIT NUT, 3/4" | 1 |
| 16 | 011248-047 | LOCKNUT, #6-32 | 2 |
| 17 | 011715-004 | SCREW, #6-32 X 1/2 | 2 |
| 18 | 064417-001 | MOUNTING LATCH | 2 |
| 19 | 064462-007 | CAP PLUG Ø 7/8 | 2 |
| 20 | 011252-006 | SCREW, 1/4-20 UNC, HEX HD CAP X 3/4 | 2 |
| 21 | 011248-004 | LOCKNUT, 1/4-20 UNC, HEX | 2 |
| 22 | 064462-002 | CAP PLUG Ø 1/2" | 4 |
| 23 | 68889-099 | WEATHERSTRIP 1/2 X 3/16 FOAM | 3 FT. |
| 24 | 010952-004 | SCREW, BUTT. HD, TORX, 10-24 UNC X 1/2 | 6 |
| 25 | 067194-000 | TIME RELAY SSAC | - |
| 27 | 066805-003 | SWITCH, 3 POSITION | 1 |
| 28 | 066805-010 | CONTACT BLOCK N.O. | 1 |
| 29 | 066805-011 | CONTACT BLOCK N.C. | 1 |
| 30 | 011248-004 | NUT, HEX 1/4" ESNA | 1 |
| 31 | 011252-010 | SCREW HHC 1/4-20 X 1 1/4 | 1 |
| 100 | 029610-004 | CONNECTOR FORK TERM 12-10 GA. #10 | 11 |
| 102 | 029615-002 | CONNECTOR FEMALE PUSH 16-14 GA. | 2 |
| 103 | 063956-003 | PLUG, HOUSING | 1 |
| 104 | 063956-010 | PIN, CONTACT MALE | 3 |
| 105 | 029452-099 | WIRE 16 GA. BLACK | 2 FT |
| 106 | 029450-099 | WIRE 16 GA. BLUE | 3 FT |
| 108 | 029453-099 | WIRE 16 GA. ORG | 1 FT |
| 109 | 029477-099 | WIRE 16 GA. ORG/BLK | 1 FT |
| 110 | 029454-099 | WIRE 16 GA. RED | 2 FT |



ILLUSTRATED PARTS BREAKDOWN

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Controller Assembly
067528-013
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ILLUSTRATED PARTS BREAKDOWN

Guardrail Assembly With Extension Deck

066938-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 066967-000 | WELDMENT, SIDE RAIL MAIN DECK RH | 1 |
| 2 | 066967-001 | WELDMENT, SIDE RAIL MAIN DECK LH | 1 |
| 3 | 066969-000 | WELDMENT, SLIDE TUBE (U.S.) RH | 1 |
| 4 | 066969-001 | WELDMENT, SLIDE TUBE (U.S.) LH | 1 |
| 5 | 066978-000 | WELDMENT, REAR SWING TUBE | 2 |
| 6 | 066970-000 | WELDMENT, SLIDE TUBE U.S. | 1 |
| 7 | 063133-000 | CHAIN ASSEMBLY | 1 |

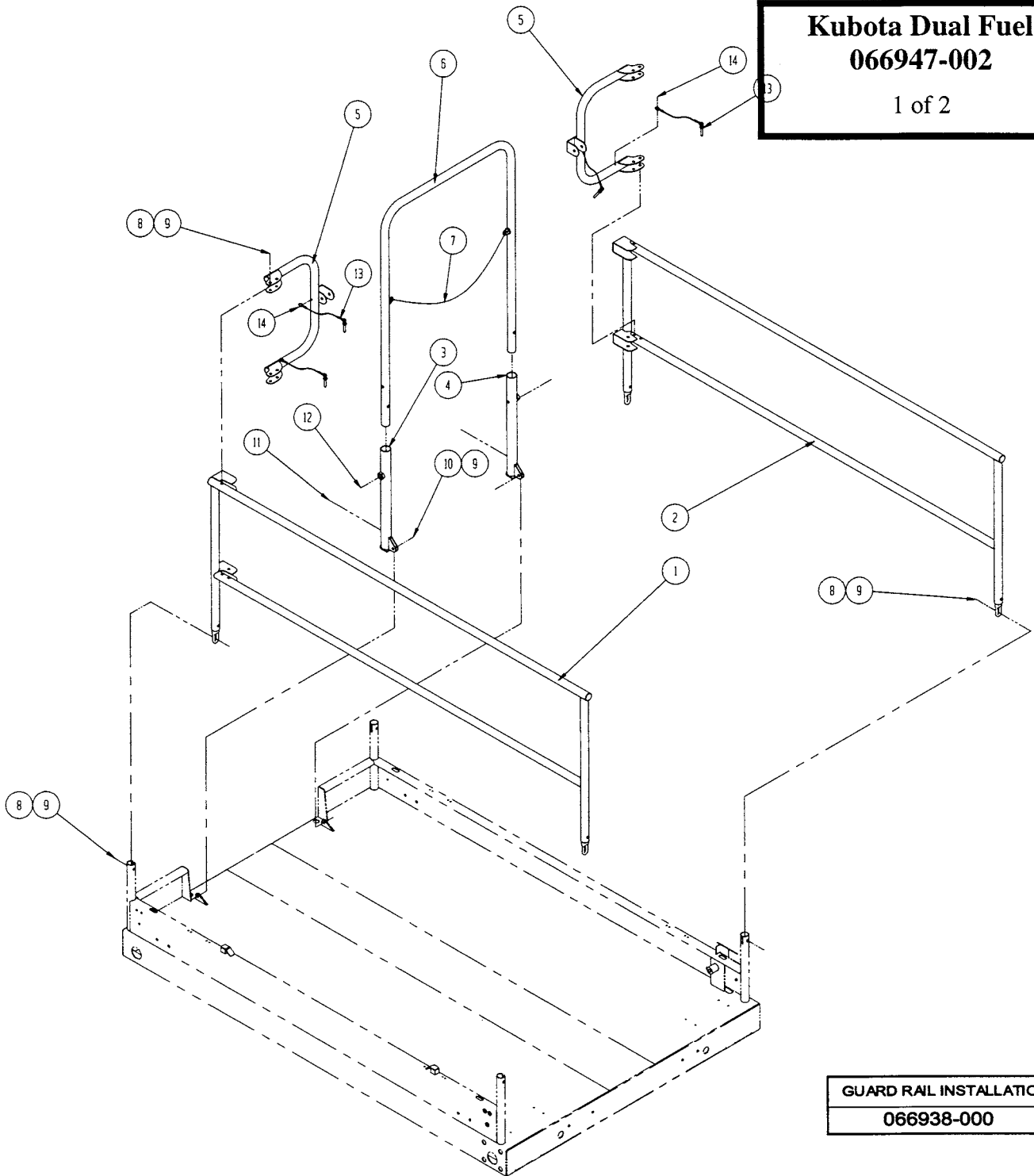
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 8 | 011254-014 | SCREW HHC 3/8-16 x 1 3/4 | 8 |
| 9 | 011248-006 | NUT 3/8-16 UNC ESNA | 10 |
| 10 | 011254-008 | SCREW HHC 3/8-16 x 1 | 2 |
| 11 | 011287-006 | SCRW SOC HD 3/8-16 x 3/4 | 2 |
| 12 | 003570-000 | RETAINING PIN ASSEMBLY | 2 |
| 13 | 010414-006 | LOCKING PIN ASSEMBLY | 4 |
| 14 | 026553-004 | RIVET 3/16 DIA. x 1/4 GRIP | 4 |

ILLUSTRATED PARTS BREAKDOWN

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066947-002

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GUARD RAIL INSTALLATION
066938-000

**Section
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ILLUSTRATED PARTS BREAKDOWN

Guardrail Assembly Without Extension Deck

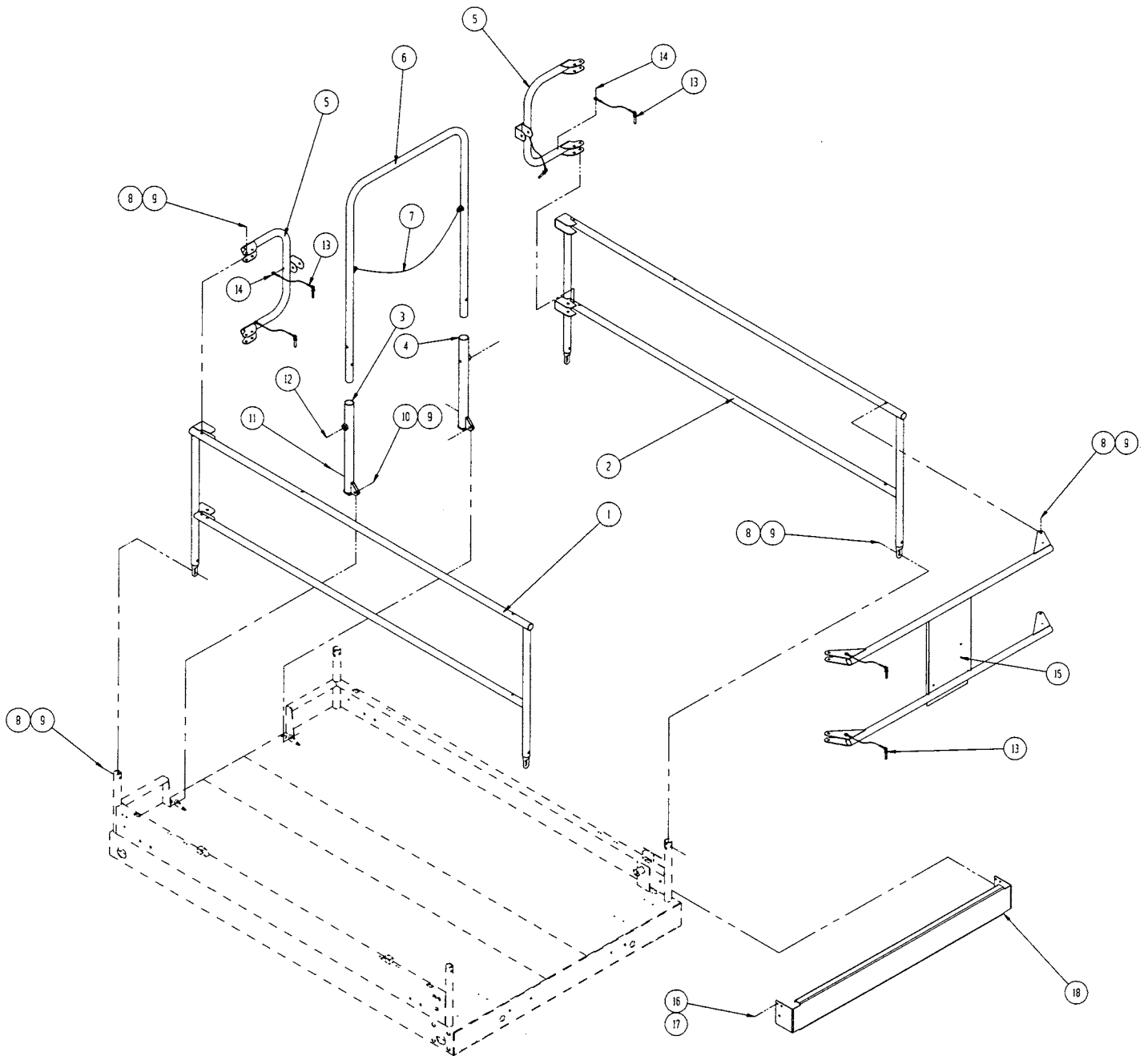
066938-002

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 066967-000 | WELDMENT, SIDE RAIL MAIN DECK RH | 1 |
| 2 | 066967-001 | WELDMENT, SIDE RAIL MAIN DECK LH | 1 |
| 3 | 066969-000 | WELDMENT, SLIDE TUBE (U.S.) RH | 1 |
| 4 | 066969-001 | WELDMENT, SLIDE TUBE (U.S.) LH | 1 |
| 5 | 066978-000 | WELDMENT, REAR SWING TUBE | 2 |
| 6 | 066970-000 | WELDMENT, SLIDE TUBE U.S. | 1 |
| 7 | 063133-000 | CHAIN ASSEMBLY | 1 |
| 8 | 011254-014 | SCREW HHC 3/8-16 x 1 3/4 | 10 |
| 9 | 011248-006 | NUT 3/8-16 UNC ESNA | 12 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 10 | 011254-008 | SCREW HHC 3/8-16 x 1 | 2 |
| 11 | 011287-006 | SCREW SOC 3/8-16 x 3/4 | 2 |
| 12 | 003570-000 | RETAINING PIN ASSEMBLY | 2 |
| 13 | 010414-006 | LOCKING PIN ASSEMBLY | 6 |
| 14 | 026553-004 | RIVET 3/16 DIA. x 1/4 GRIP | 6 |
| 15 | 066966-001 | FRONT RAIL, MAIN DECK | 1 |
| 16 | 011252-006 | SCREW, HHC 1/4-20 x 3/4 | 6 |
| 17 | 011240-004 | WASHER 1/4 FLAT | 6 |
| 18 | 066518-012 | KICK PLATE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



GUARD RAIL INST. W/O EXT DECK
066938-002

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Roll Out Deck Installation

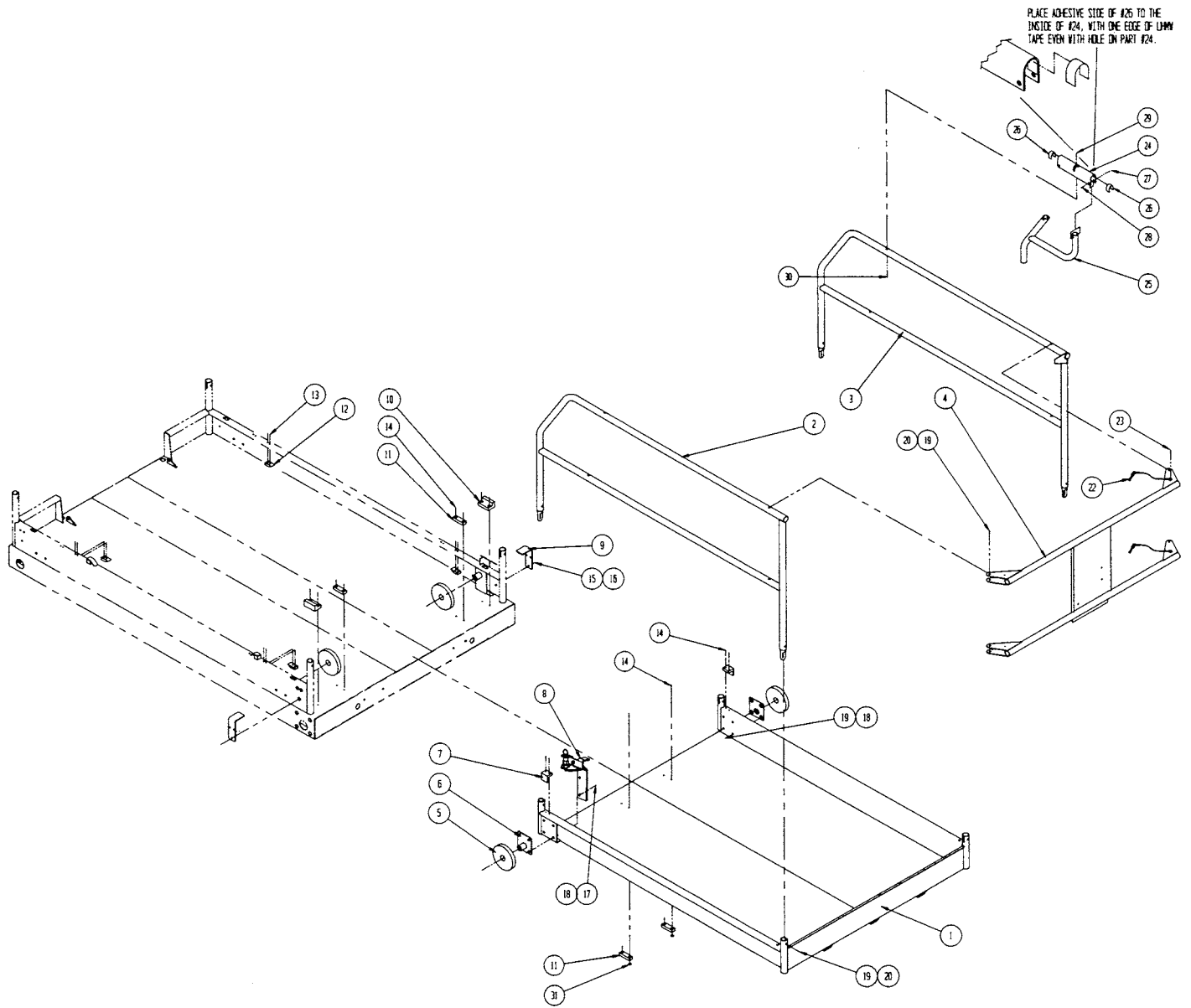
066939-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 066955-000 | EXTENSION DECK WELDMENT | 1 |
| 2 | 066965-001 | WELDMENT, SIDE RAIL - RIGHT | 1 |
| 3 | 066965-000 | WELDMENT, SIDE RAIL - LEFT | 1 |
| 4 | 066966-000 | FRONT GATE, SLIDE OUT DECK | 1 |
| 5 | 066195-000 | PLATFORM ROLLER | 4 |
| 6 | 066127-000 | WELDMENT, ROLLER MOUNT | 2 |
| 7 | 066170-001 | WEAR PAD | 2 |
| 8 | 067185-000 | DECKLOCK, SLIDE OUT ASSY | 1 |
| 9 | 066407-011 | BRACKET | 2 |
| 10 | 066176-002 | WEAR PAD - XRT | 2 |
| 11 | 066198-002 | WEAR PAD - XRT | 4 |
| 12 | 066193-000 | STOP | 4 |
| 13 | 026553-008 | RIVET 3/16 DIA. x 1/2 GRIP | 16 |
| 14 | 026553-010 | RIVET 3/16 DIA. x 5/8 GRIP | 12 |
| 15 | 011252-006 | SCREW HHC 1/4-20 x 3/4 | 6 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|--------|
| 16 | 011240-004 | WASHER 1/4 FLAT | 6 |
| 17 | 011254-016 | SCREW HHC 3/8-16 x 2 | 2 |
| 18 | 011238-006 | WASHER 3/8 LOCK | 8 |
| 19 | 011254-014 | SCREW HHC 3/8-16 x 1 3/4 | 12 |
| 20 | 011248-006 | NUT 3/8-16 UNC ESNA | 6 |
| 22 | 010414-006 | LOCKING PIN ASSEMBLY | 2 |
| 23 | 026553-004 | RIVET 3/16 DIA. x 1/4 GRIP | 2 |
| 24 | 067761-001 | PIVOT, PUSH BAR XRT | 1 |
| 25 | 067310-000 | WELDMENT, HANDLE DECK EXTENTION | 1 |
| 26 | 066520-099 | TAPE, UHMW 2" WIDE W/ ADHESIVE | FT .75 |
| 27 | 011250-005 | NUT, HEX ESNA 5/16-18 | 2 |
| 28 | 011253-018 | SCREW, HHC 5/16-18 X 2-1/4" | 2 |
| 29 | 014339-014 | SCREW SOC HD SSTL 5/16-18 X 1-3/4" | 1 |
| 30 | 011248-005 | NUT, HEX ESNA 5/16-18 | 1 |
| 31 | 002186-000 | WASHER, 3/16" SS FLAT | 4 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



DECK EXTENSION INSTALLATION
066939-000

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Hose Kit Installation XRT27 2WD

066941-000

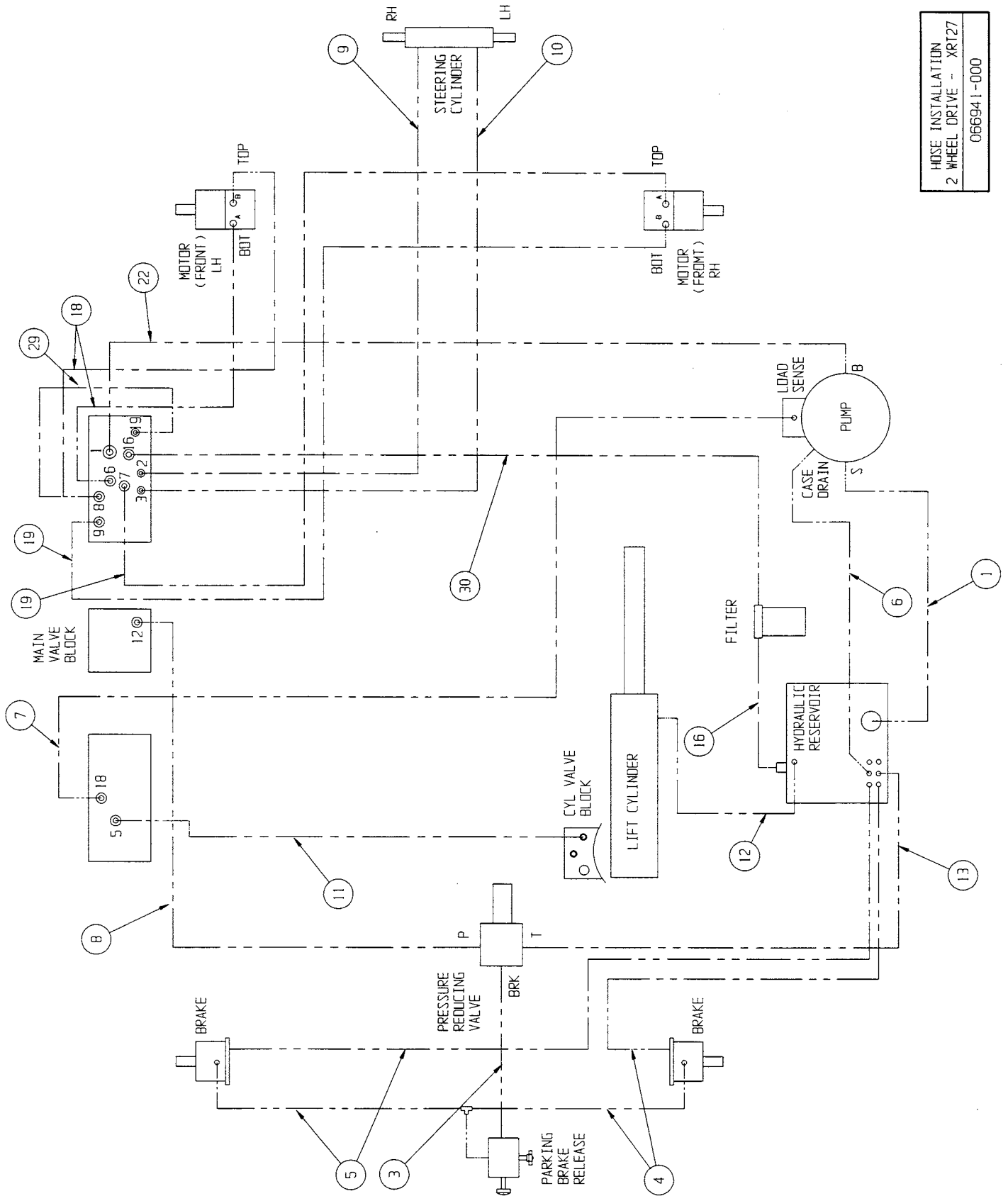
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 067198-132 | 1 HOSE ASSY X 132 16FJX-16FJX 90 | 1 |
| 3 | 068737-023 | 1/4 HOSE ASSY X 23 4FJX-4FJX | 1 |
| 4 | 068737-096 | 1/4 HOSE ASSY X 96 4FJX-4FJX | 2 |
| 5 | 068737-110 | 1/4 HOSE ASSY X 110 4FJX-4FJX | 2 |
| 6 | 068745-136 | 3/8 HOSE ASSY X 136 6FJX-6FJX | 1 |
| 7 | 068737-132 | 1/4 HOSE ASSY X 132 4FJX-4FJX | 1 |
| 8 | 068737-032 | 1/4 HOSE ASSY X 32 4FJX-4FJX | 1 |
| 9 | 068965-068 | 3/8 HOSE ASSY X 68 6FJX-6FJX 90 | 1 |
| 10 | 068965-063 | 3/8 HOSE ASSY X 63 6FJX-6FJX 90 | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 11 | 068745-126 | 3/8 HOSE ASSY X 156 6FJX-6FJX | 1 |
| 12 | 068745-130 | 3/8 HOSE ASSY X 190 6FJX-6FJX | 1 |
| 13 | 068737-057 | 1/4 HOSE ASSY X 57 4FJX-4FJX | 1 |
| 16 | 064156-051 | 1/2 HOSE ASSY X 21 8FJX-8FJX | 1 |
| 18 | 067312-084 | 1/2 HOSE ASSY X 84 8FJX-8FJX90 | 2 |
| 19 | 067312-093 | 1/2 HOSE ASSY X 93 8FJX-8FJX90 | 2 |
| 22 | 067667-132 | 5/8 HOSE ASSY X 132 12FJX-12FJX90 | 1 |
| 29 | 064156-039 | 1/2 HOSE ASSY X 15 8FJX-8FJX | 1 |
| 30 | 067682-033 | 1/2 HOSE ASSY X 33 8FJX-8FJX90° | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1

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|-----------------------|
| HOSE INSTALLATION |
| 2 WHEEL DRIVE - XRT27 |
| 066941-000 |



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Hose Kit Installation XRT33 2WD

066941-001

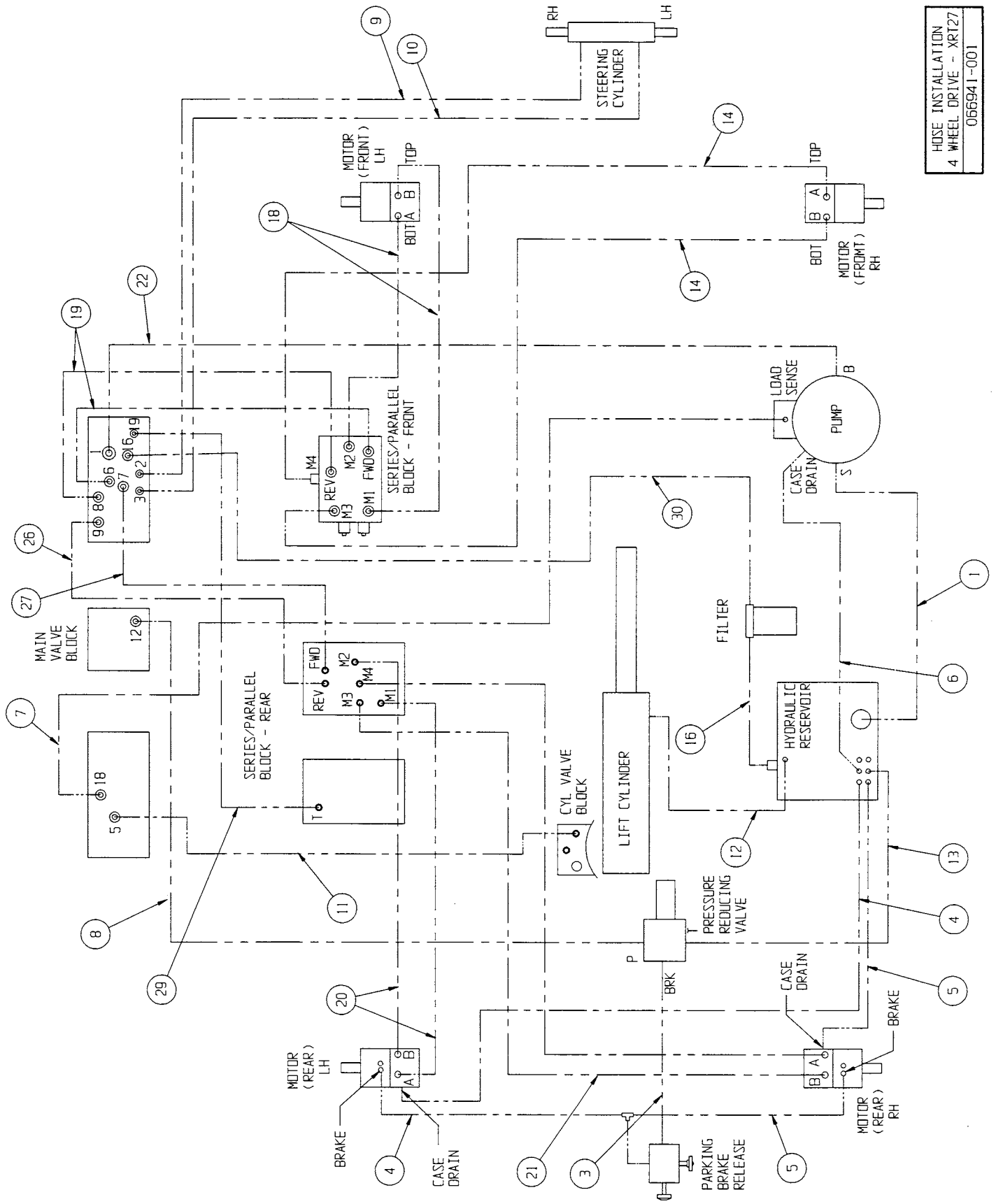
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 1 | 067198-132 | 1 HOSE ASSY X 132 16FJX-16FJX90 | 1 |
| 3 | 068737-023 | 1/4 HOSE ASSY X 23 4FJX-4FJX | 1 |
| 4 | 068737-096 | 1/4 HOSE ASSY X 96 4FJX-4FJX | 2 |
| 5 | 068737-110 | 1/4 HOSE ASSY X 110 4FJX-4FJX | 2 |
| 6 | 068745-136 | 3/8 HOSE ASSY X 136 6FJX-6FJX | 1 |
| 7 | 068737-132 | 1/4 HOSE ASSY X 132 4FJX-4FJX | 1 |
| 8 | 068737-032 | 1/4 HOSE ASSY X 32 4FJX-4FJX | 1 |
| 9 | 068965-068 | 3/8 HOSE ASSY X 68 6FJX-6FJX90 | 1 |
| 10 | 068965-063 | 3/8 HOSE ASSY X 63 6FJX-6FJX90 | 1 |
| 11 | 068745-126 | 3/8 HOSE ASSY X 156 6FJX-6FJX | 1 |
| 12 | 068745-130 | 3/8 HOSE ASSY X 190 6FJX-6FJX | 1 |
| 13 | 068737-057 | 1/4 HOSE ASSY X 57 4FJX-4FJX | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 14 | 067312-060 | 1/2 HOSE ASSY X 60 8FJX-8FJX90 | 2 |
| 16 | 064156-051 | 1/20HOSE ASSY X 21 8FJX-8FJX | 1 |
| 18 | 067312-051 | 1/2 HOSE ASSY X 51 8FJX-8FJX90 | 2 |
| 19 | 067682-055 | 1/2 HOSE ASSY X 55 8FJX-8FJX90 | 2 |
| 20 | 064156-065 | 1/2 HOSE ASSY X 125 8FJX-8FJX | 2 |
| 21 | 064156-069 | 1/2 HOSE ASSY X 99 8FJX-8FJX | 2 |
| 22 | 067667-132 | 5/8 HOSE ASSY X 132 12FJX-12FJX90 | 1 |
| 24 | 020032-001 | FITTING 4MJ-4MJ TEE | REF |
| 26 | 067682-088 | 1/2 HOSE ASSY X 88 8FJX-8FJX90 | 1 |
| 27 | 067682-078 | 1/2 HOSE ASSY X 78 8FJX-8FJX90 | 1 |
| 29 | 064156-021 | 1/2 HOSE ASSY X 42 8FJX-8FJX | 1 |
| 30 | 067682-033 | 1/2 HOSE ASSY X 33 8FJX-8FJX90 | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1

HOSE INSTALLATION
4 WHEEL DRIVE - XRT27
066941-001



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Hose Kit Installation XRT27 4WD

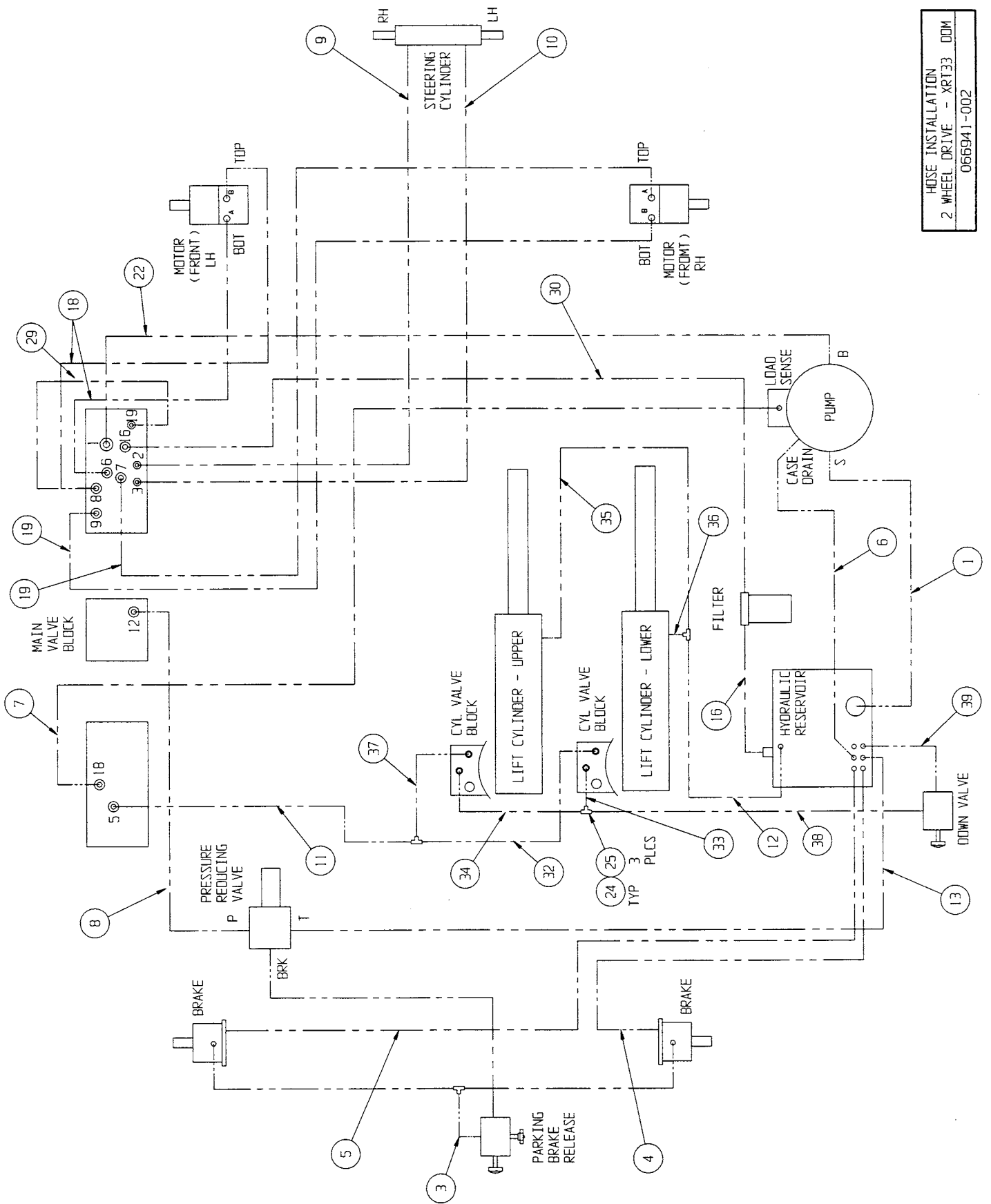
066941-002

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|----------------------------------|-----|
| 1 | 067198-132 | 1 HOSE ASSY X 132 16FJX-16FJX 90 | 1 |
| 3 | 068737-023 | 1/4 HOSE ASSY X 23 4FJX-4FJX | 1 |
| 4 | 068737-096 | 1/4 HOSE ASSY X 96 4FJX-4FJX | 2 |
| 5 | 068737-110 | 1/4 HOSE ASSY X 110 4FJX-4FJX | 2 |
| 6 | 068745-136 | 3/8 HOSE ASSY X 136 6FJX-6FJX | 1 |
| 7 | 068737-132 | 1/4 HOSE ASSY X 132 4FJX-4FJX | 1 |
| 8 | 068737-032 | 1/4 HOSE ASSY X 32 4FJX-4FJX | 1 |
| 9 | 068965-068 | 3/8 HOSE ASSY X 68 6FJX-6FJX 90 | 1 |
| 10 | 068965-063 | 3/8 HOSE ASSY X 63 6FJX-6FJX 90 | 1 |
| 11 | 066824-005 | 3/8 HOSE ASSY X 84 6FJX-6FJX | 1 |
| 12 | 066825-015 | 1/4 HOSE ASSY X 115 6FJX-6FJX | 1 |
| 13 | 068737-057 | 1/4 HOSE ASSY X 57 4FJX-4FJX | 1 |
| 16 | 064156-051 | 1/2 HOSE ASSY X 21 8FJX-8FJX | 1 |
| 18 | 067312-084 | 1/2 HOSE ASSY X 84 8FJX-8FJX90 | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 19 | 067312-093 | 1/2 HOSE ASSY X 93 8FJX-8FJX90 | 2 |
| 22 | 067667-132 | 5/8 HOSE ASSY X 132 12FJX-12FJX90 | 1 |
| 24 | 020032-003 | FITTING 6MJ-6MJ-6MJ TEE | REF |
| 25 | 011937-003 | FITTING 90 6FJX - 6MJ | REF |
| 29 | 064156-039 | 1/2 HOSE ASSY X 15 8FJX-8FJX | 1 |
| 30 | 067682-033 | 1/2 HOSE ASSY X 33 8FJX-8FJX90 | 1 |
| 32 | 066823-002 | 3/8 HOSE ASSY X 60 6JFX-6JFX90 | 1 |
| 33 | 066822-001 | 1/4 HOSE ASSY X 51 6JFX-6JFX90 | 1 |
| 34 | 066825-005 | 1/4 HOSE ASSY X 215 6FJX-6FJX | 1 |
| 35 | 066824-003 | 1/4 HOSE ASSY X 245 6FJX-6FJX | 1 |
| 36 | 066825-007 | 1/4 HOSE ASSY X 71 6FJX-6FJX | 1 |
| 37 | 066825-004 | 1/4 HOSE ASSY X 245 6FJX-6FJX | 1 |
| 38 | 066825-008 | 1/4 HOSE ASSY X 127 6FJX-6FJX | 1 |
| 39 | 066825-014 | 1/4 HOSE ASSY X 74 6FJX-6FJX | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



HOSE INSTALLATION
 2 WHEEL DRIVE - XRT33 DDM
 066941-002

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Hose Kit Installation XRT33 4WD

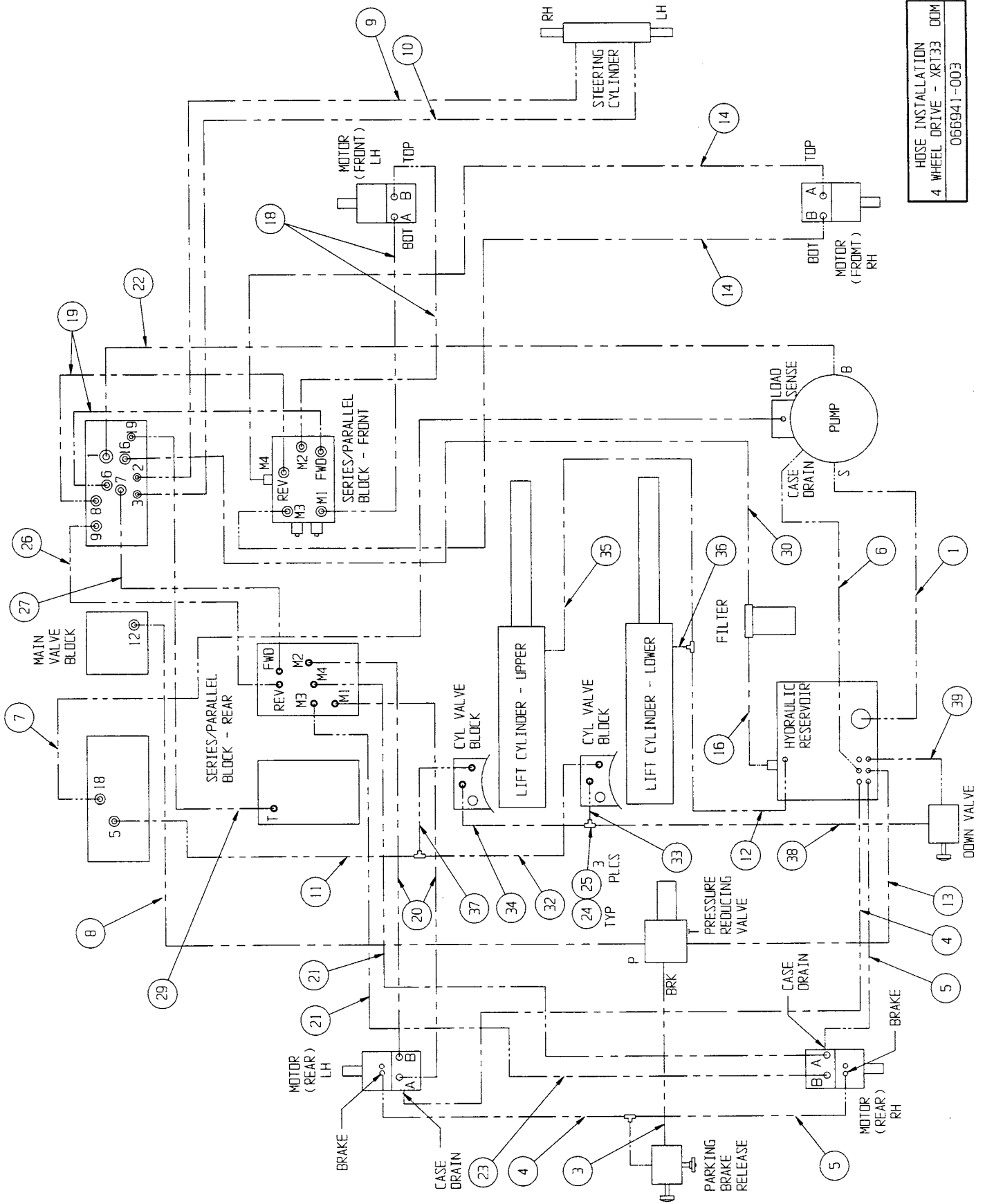
066941-003

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 1 | 067198-132 | 1 HOSE ASSY X 132 16FJX-16FJX90 | 1 |
| 3 | 068737-023 | 1/4 HOSE ASSY X 23 4FJX-4FJX | 1 |
| 4 | 068737-096 | 1/4 HOSE ASSY X 96 4FJX-4FJX | 2 |
| 5 | 068737-110 | 1/4 HOSE ASSY X 110 4FJX-4FJX | 2 |
| 6 | 068745-136 | 3/8 HOSE ASSY X 136 6FJX-6FJX | 1 |
| 7 | 068737-132 | 1/4 HOSE ASSY X 132 4FJX-4FJX | 1 |
| 8 | 068737-032 | 1/4 HOSE ASSY X 32 4FJX-4FJX | 1 |
| 9 | 068965-068 | 3/8 HOSE ASSY X 68 6FJX-6FJX90 | 1 |
| 10 | 068965-063 | 3/8 HOSE ASSY X 63 6FJX-6FJX90 | 1 |
| 11 | 066824-005 | 3/8 HOSE ASSY X 84 6FJX-6FJX | 1 |
| 12 | 066825-015 | 1/4 HOSE ASSY X 115 6FJX-6FJX | 1 |
| 13 | 068737-057 | 1/4 HOSE ASSY X 57 4FJX-4FJX | 1 |
| 14 | 067312-060 | 1/2 HOSE ASSY X 60 8FJX-8FJX90 | 2 |
| 16 | 064156-051 | 1/2 HOSE ASSY X 21 8FJX-8FJX | 1 |
| 18 | 067312-051 | 1/2 HOSE ASSY X 51 8FJX-8FJX90 | 2 |
| 19 | 067682-055 | 1/2 HOSE ASSY X 55 8FJX-8FJX90 | 2 |
| 20 | 064156-065 | 1/2 HOSE ASSY X 125 8FJX-8FJX | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------------|-----|
| 21 | 064156-069 | 1/2 HOSE ASSY X 99 8FJX-8FJX | 2 |
| 22 | 067667-132 | 5/8 HOSE ASSY X 132 12FJX-12FJX90 | 1 |
| 24 | 020032-003 | FITTING 6MJ-6MJ-6MJ TEE | REF |
| 25 | 011937-003 | FITTING 90 6FJX - 6MJ | REF |
| 26 | 067682-088 | 1/2 HOSE ASSY X 88 8FJX-8FJX90 | 1 |
| 27 | 067682-078 | 1/2 HOSE ASSY X 78 8FJX-8FJX90 | 1 |
| 29 | 064156-021 | 1/2 HOSE ASSY X 42 8FJX-8FJX | 1 |
| 30 | 067682-033 | 1/2 HOSE ASSY X 33 8FJX-8FJX90 | 1 |
| 32 | 066823-002 | 3/8 HOSE ASSY X 60 6JFX-6JFX90 | 1 |
| 33 | 066822-001 | 1/4 HOSE ASSY X 51 6JFX-6JFX90 | 1 |
| 34 | 066825-005 | 1/4 HOSE ASSY X 215 6FJX-6FJX | 1 |
| 35 | 066824-003 | 1/4 HOSE ASSY X 245 6FJX-6FJX | 1 |
| 36 | 066825-007 | 1/4 HOSE ASSY X 71 6FJX-6FJX | 1 |
| 37 | 066825-004 | 1/4 HOSE ASSY X 245 6FJX-6FJX | 1 |
| 38 | 066825-008 | 1/4 HOSE ASSY X 127 6FJX-6FJX | 1 |
| 39 | 066825-014 | 1/4 HOSE ASSY X 74 6FJX-6FJX | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



HOSE INSTALLATION
4 WHEEL DRIVE - XRT33 ODM
066941-003

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT27 Dual Fuel

066940-000

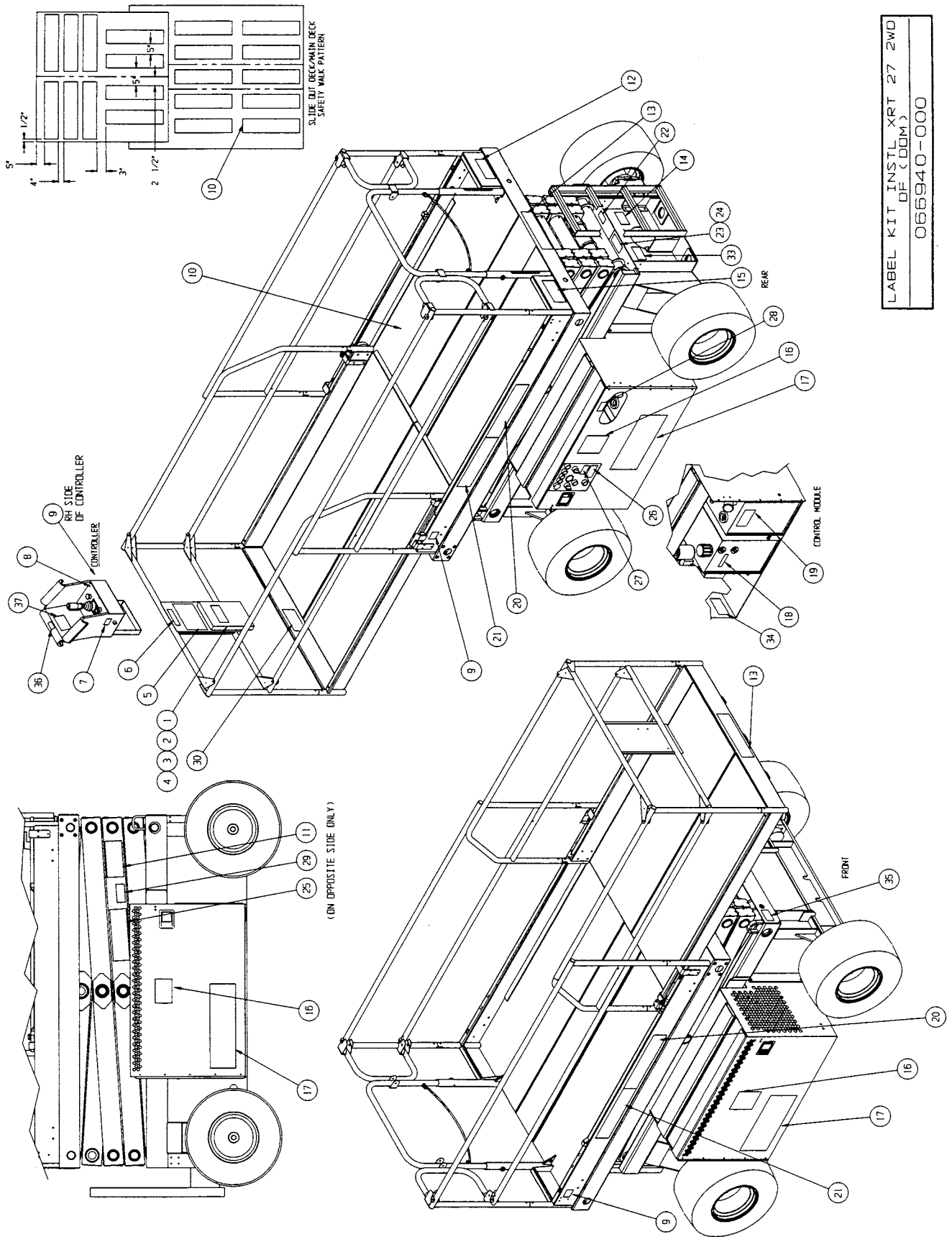
| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 030624-024 | LABEL - CHOKE | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-016 | LABEL - WARNING MAX LOAD (1250 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (28" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 064166-000 | LABEL - UNLEADED GAS ONLY | 1 |
| 20 | 066957-002 | LABEL - XRT 27 | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 33 | 064189-001 | LABEL - LIQUID WITHDRAWAL | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |
| 37 | 066554-000 | LABEL - CAUTION READ INSTRUCTIONS | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1

LABEL KIT INSTL XRT 27 2WD
 OF (DDM)
 066940-000



**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT27 Diesel

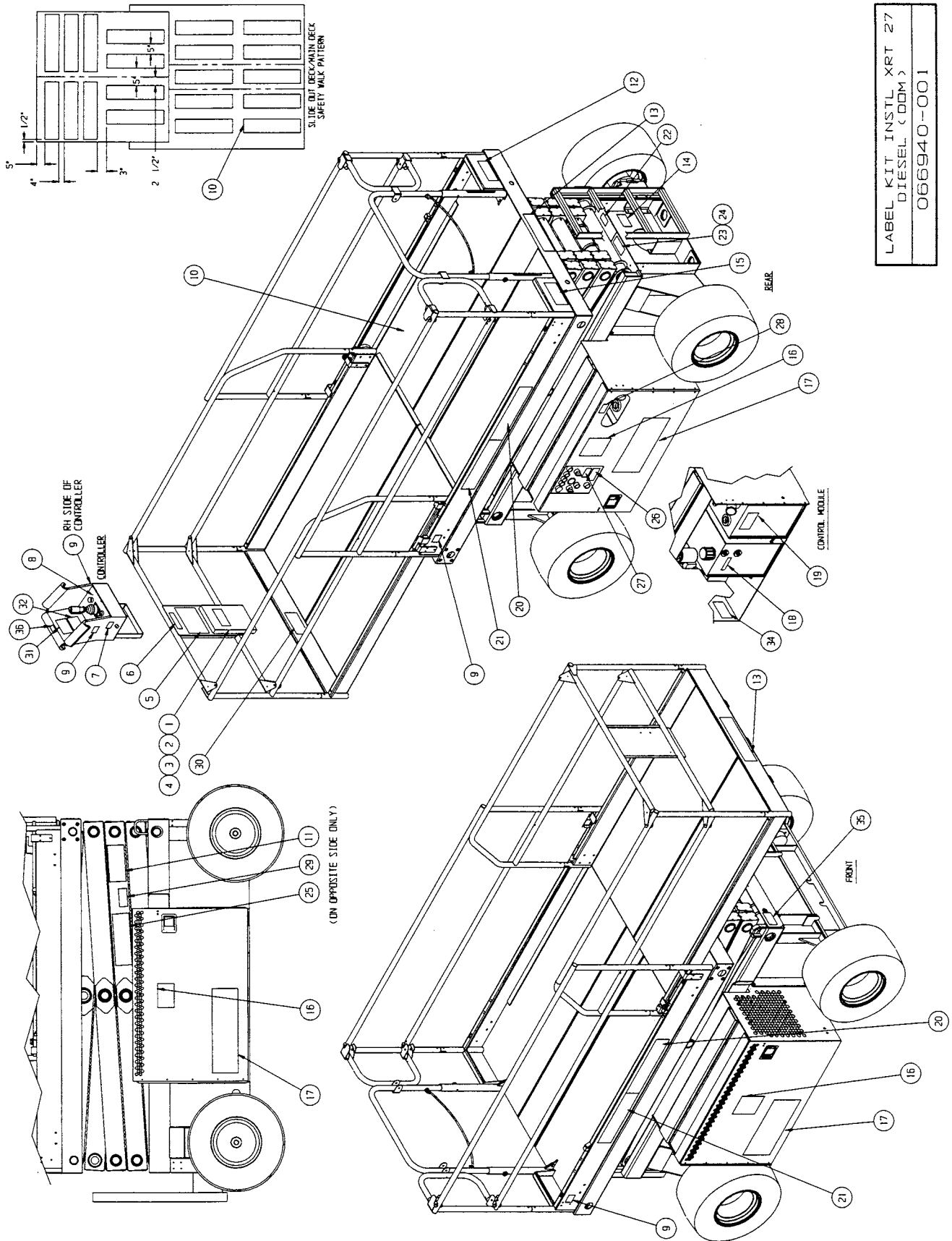
066940-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 067822-000 | LABEL - GLOW | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-016 | LABEL - WARNING MAX LOAD (1250 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (28" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 027898-000 | LABEL - DIESEL FUEL | 1 |
| 20 | 066957-002 | LABEL - XRT 27 | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 31 | 067822-001 | LABEL - GLOW PLUG | 1 |
| 32 | 067554-000 | LABEL - CAUTION | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 27
 DIESEL (DOM)
 066940-001

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT27 4WD Dual Fuel

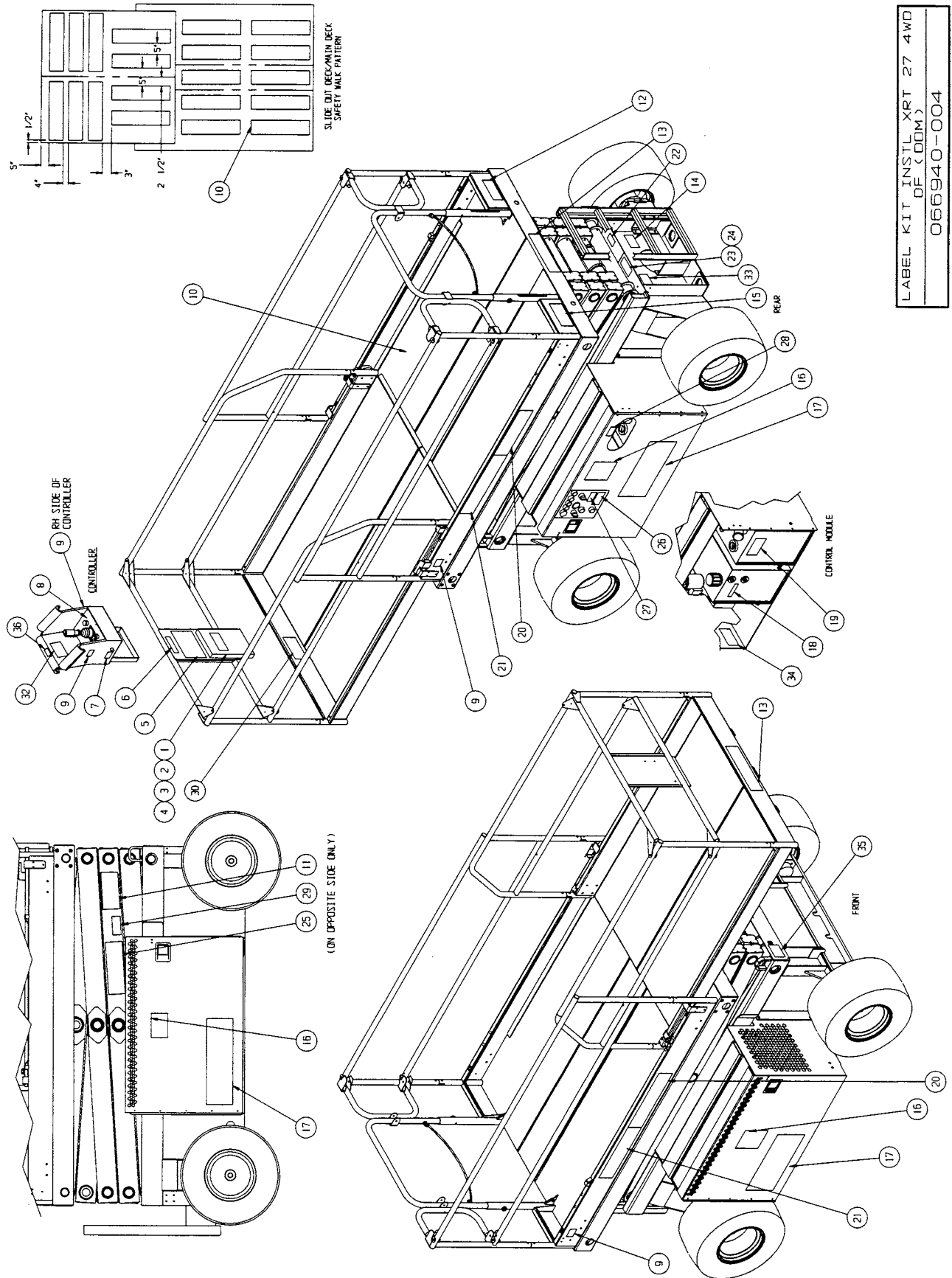
066940-004

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASERIAL DESCRIPTION | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 030624-024 | LABEL - CHOKE | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-016 | LABEL - WARNING MAX LOAD (1250 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 064166-000 | LABEL - UNLEADED GAS ONLY | 1 |
| 20 | 066957-000 | LABEL - XRT 27 4WD | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 32 | 066554-000 | LABEL - CAUTION | 1 |
| 33 | 064189-001 | LABEL - LIQUID WITHDRAWL | 1 |
| 34 | 063432-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 27 4WD
 DE (DOM)
 066940-004

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT27 4WD Diesel

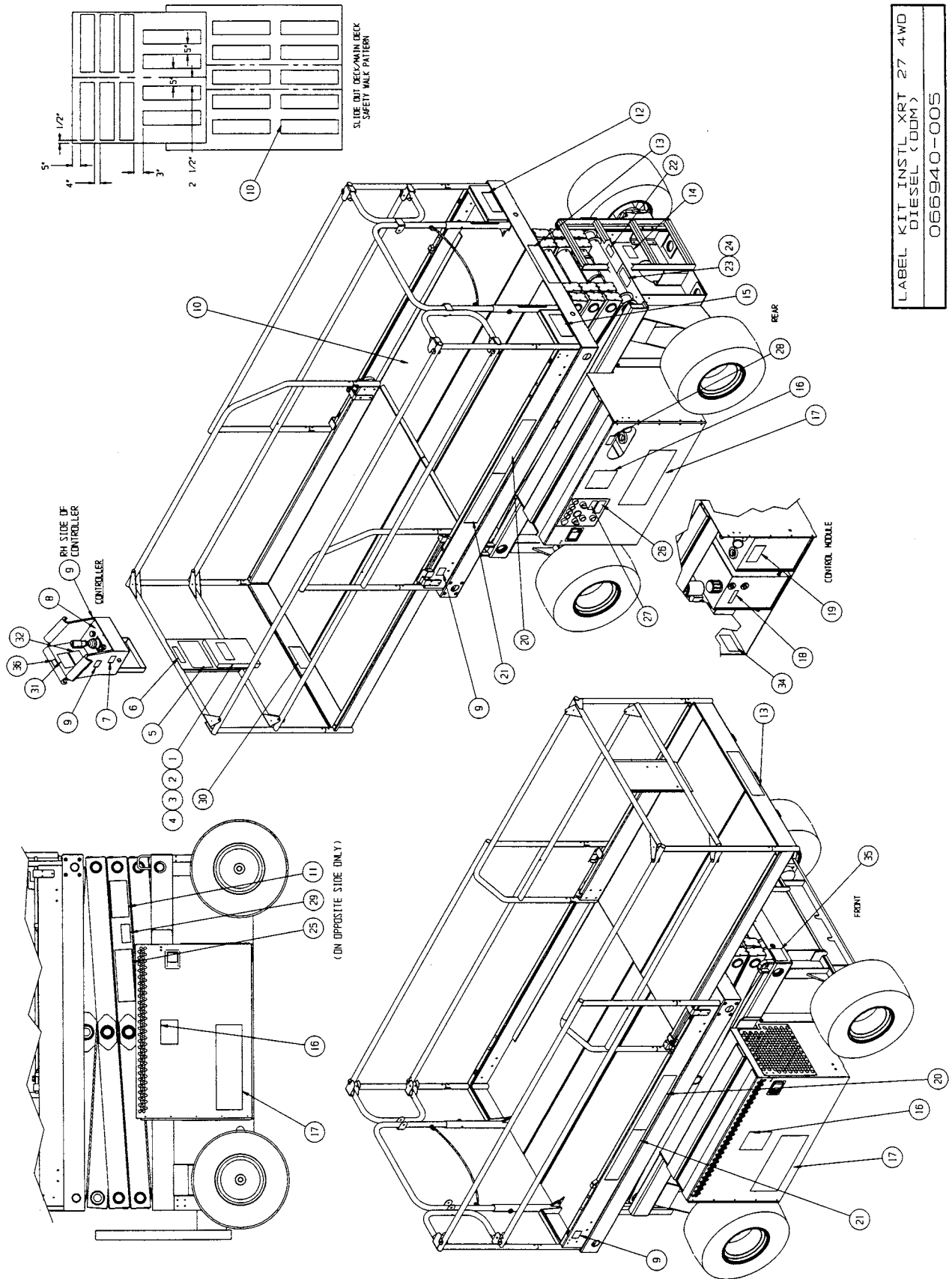
066940-005

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTIONDESCRIPTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 067822-000 | LABEL - GLOW | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-016 | LABEL - WARNING MAX LOAD (1250 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 027898-000 | LABEL - DIESEL FUEL | 1 |
| 20 | 066957-000 | LABEL - XRT 27 4WD | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 31 | 067822-001 | LABEL - GLOW PLUG | 1 |
| 32 | 066554-000 | LABEL - CAUTION | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 27 4WD
DIESEL (DDM)
066940-005

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT33 Dual Fuel

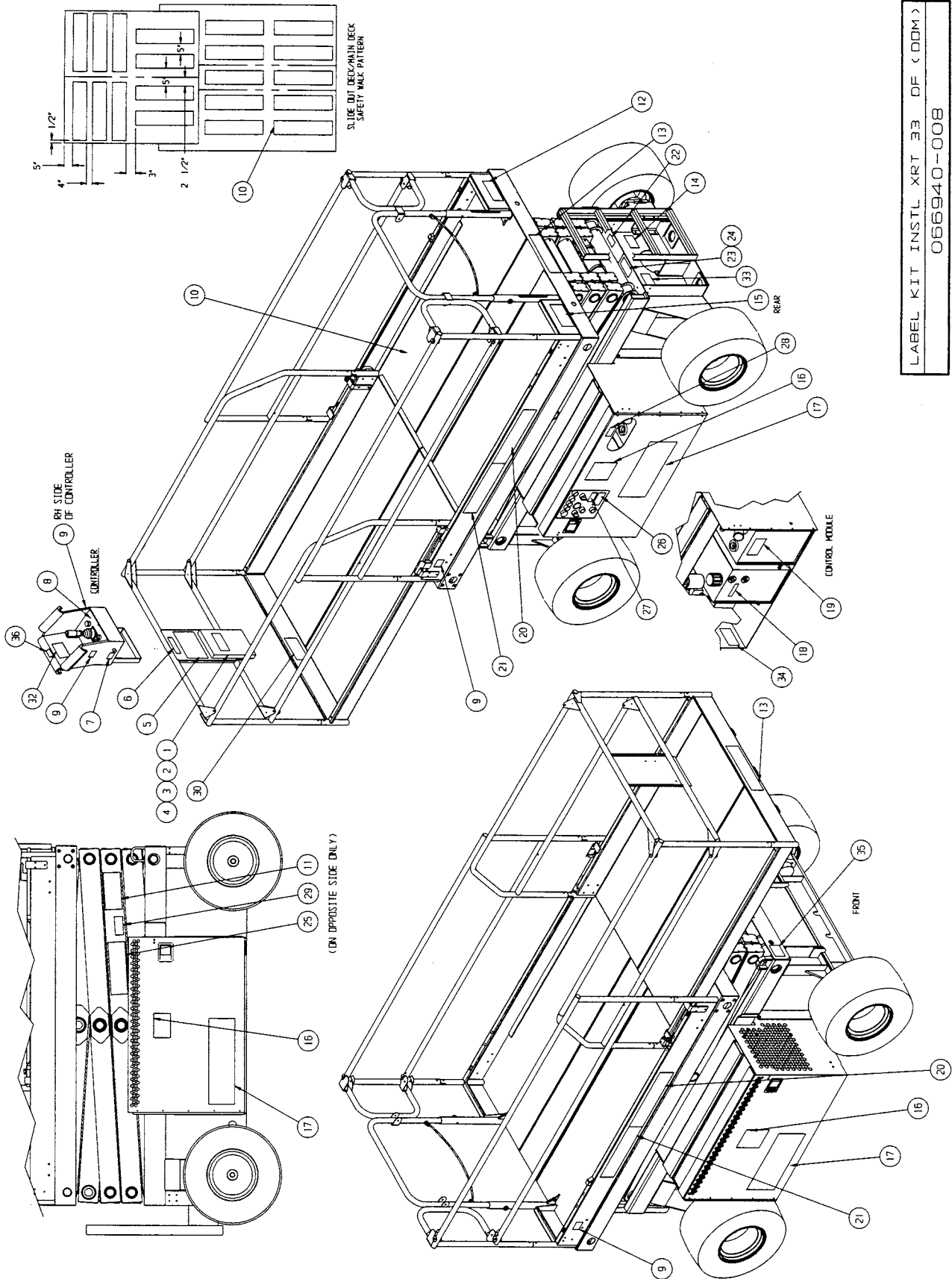
066940-008

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 030624-024 | LABEL - CHOKE | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-017 | LABEL - WARNING MAX LOAD (1000 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 064166-000 | LABEL - UNLEADED GAS ONLY | 1 |
| 20 | 066957-003 | LABEL - XRT 33 | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 32 | 066554-000 | LABEL - CAUTION | 1 |
| 33 | 064189-001 | LABEL - LIQUID WITHDRAWL | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 33 OF (DDM)
066940-008

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT33 Diesel

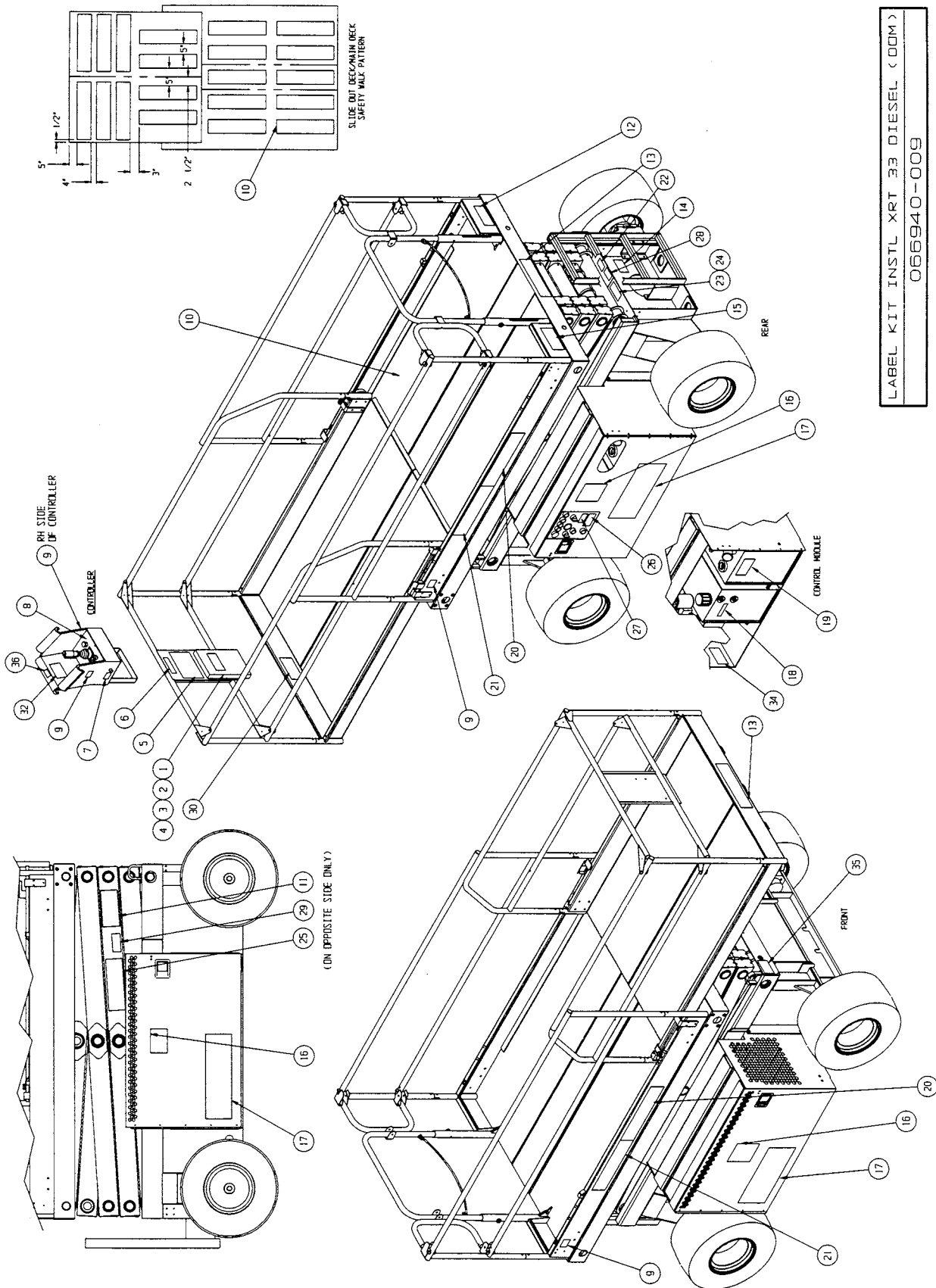
066940-009

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 067822-000 | LABEL - GLOW | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-017 | LABEL - WARNING MAX LOAD (1000 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |
| 19 | 027898-000 | LABEL - DIESEL FUEL | 1 |
| 20 | 066957-003 | LABEL - XRT 33 | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 32 | 066554-000 | LABEL - CAUTION | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 33 DIESEL (OOM)
066940-009

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT33 4WD Dual Fuel

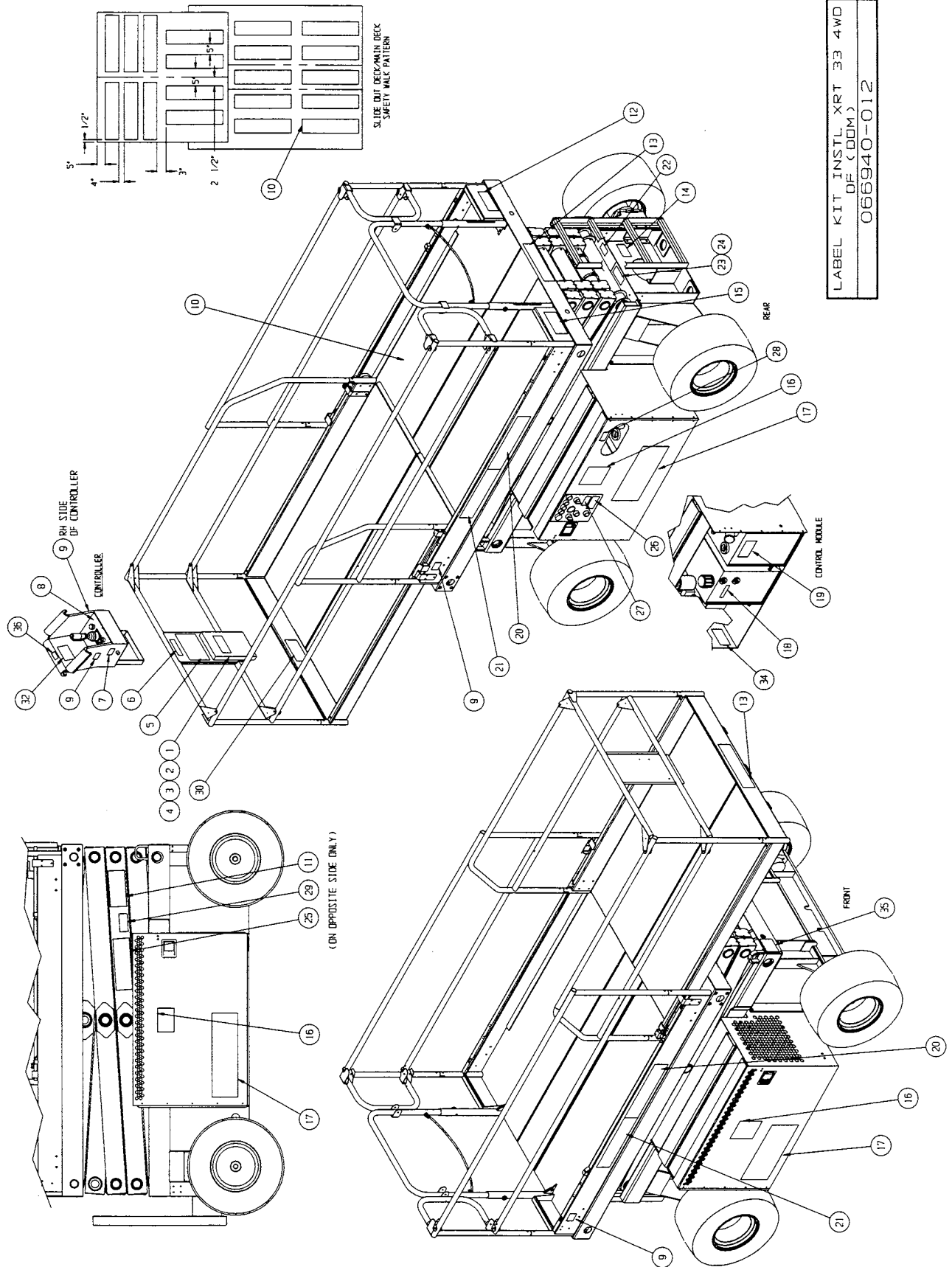
066940-012

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 030624-024 | LABEL - CHOKE | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-017 | LABEL - WARNING MAX LOAD (1000 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 064166-000 | LABEL - UNLEADED GAS ONLY | 1 |
| 20 | 066957-001 | LABEL - XRT 33 4WD | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 32 | 066554-000 | LABEL - CAUTION | 1 |
| 33 | 064189-000 | LABEL - LIQUID WITHDRAWL | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT INSTL XRT 33 4WD
OF (DOM)
066940-012

**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Label Kit Installation XRT33 4WD Diesel

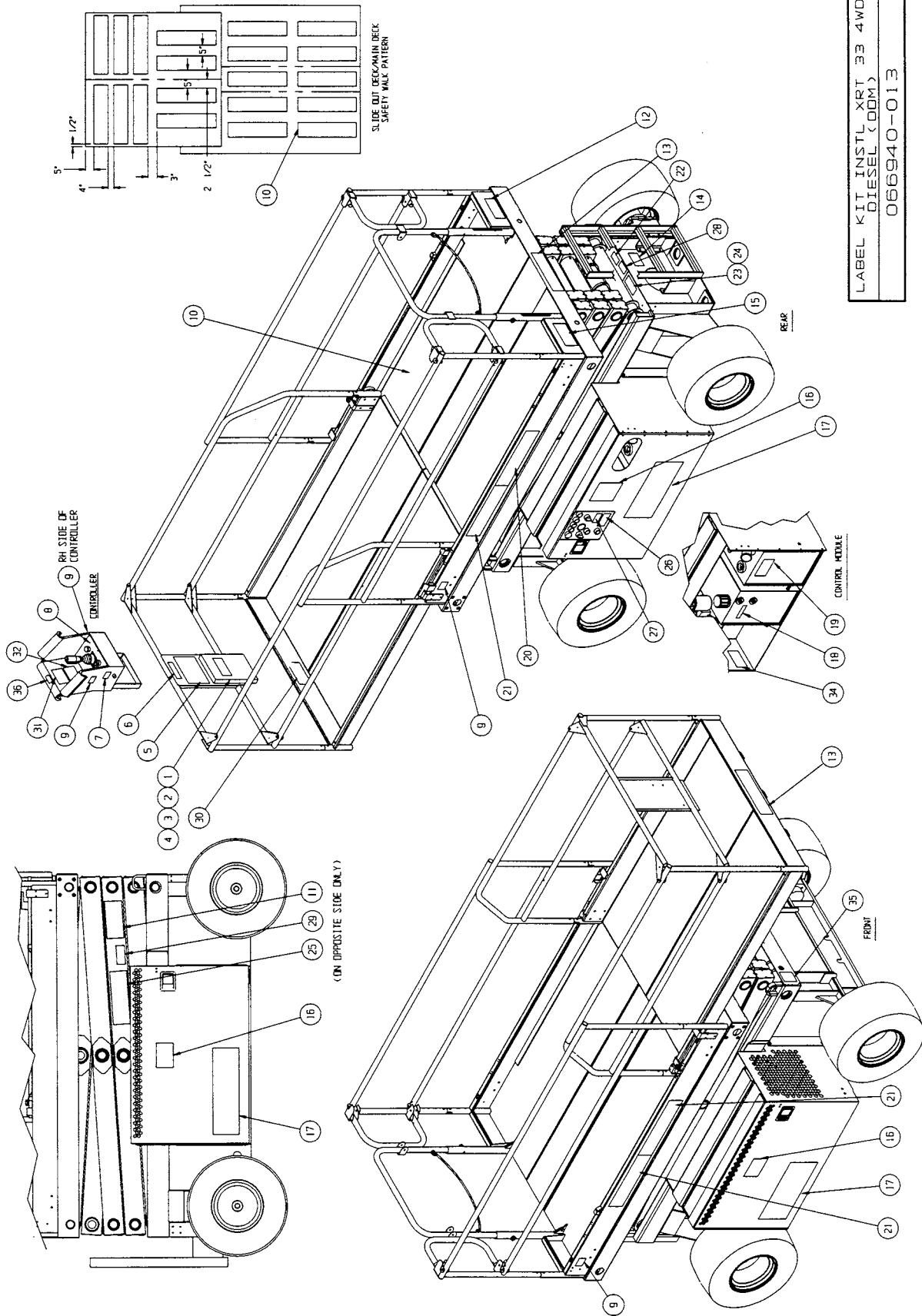
066940-013

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|--------------------------------------|-----|
| 1 | 010076-000 | MANUAL CASE | 1 |
| 2 | 010076-001 | LABEL - ATTENTION | 1 |
| 3 | 066898-000 | USER MANUAL - XRT SERIES (DOMESTIC) | 1 |
| 4 | 060577-000 | ANSI MANUAL | 1 |
| 5 | 066550-009 | LABEL - DANGER | 1 |
| 6 | 066551-003 | LABEL - DANGER TIPPING | 1 |
| 7 | 067822-000 | LABEL - GLOW | 1 |
| 8 | 067642-003 | LABEL - CONTROLLER (XRT) | 1 |
| 9 | 064444-000 | LABEL - USA | 4 |
| 10 | 027966-005 | FLEX TREAD (NO SLIP) | 20 |
| 11 | 066568-000 | LABEL - WARNING CRUSHING HAZARD | 2 |
| 12 | 066562-007 | LABEL - WARNING TIRE PRESSURE 65 PSI | 1 |
| 13 | 061683-013 | LABEL - UPRIGHT (4 X 17.69) | 2 |
| 14 | 066552-000 | LABEL - WARNING BATTERY | 1 |
| 15 | 066557-017 | LABEL - WARNING MAX LOAD (1000 LBS) | 2 |
| 16 | 061684-016 | LABEL - X SERIES | 2 |
| 17 | 061683-006 | LABEL - UPRIGHT (32.25" LG) | 2 |
| 18 | 060197-000 | LABEL - HYDRAULIC FLUID | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------------|-----|
| 19 | 027898-000 | LABEL - DIESEL FUEL | 1 |
| 20 | 066957-001 | LABEL - XRT 33 4WD | 2 |
| 21 | 061683-005 | LABEL - UPRIGHT (5.5" X 21.63") | 2 |
| 22 | 061220-001 | LABEL - ANSI -1990 | 1 |
| 23 | 061205-000 | NAME PLATE | 1 |
| 24 | 065368-000 | TACK | 4 |
| 25 | 066561-002 | LABEL - SAFETY STAND | 1 |
| 26 | 066555-000 | LABEL - CAUTION LIMIT SWITCH | 1 |
| 27 | 066551-002 | LABEL - CAUTION TIPPING | 1 |
| 28 | 066558-000 | LABEL - EMERGENCY LOWERING | 1 |
| 29 | 066561-003 | LABEL - CAUTION STRUCTURAL DAMAGE | 1 |
| 30 | 066551-000 | LABEL - DANGER WEIGHT LIMIT | 1 |
| 31 | 067822-001 | LABEL - GLOW PLUG | 1 |
| 32 | 066554-000 | LABEL - CAUTION READ INSTRUCTIONS | 1 |
| 34 | 063423-000 | LABEL - BRAKE RELEASE | 1 |
| 35 | 066556-000 | LABEL - CAUTION DECENDING PLATFORM | 1 |
| 36 | 061515-000 | LABEL - LIFT HERE | 1 |

ILLUSTRATED PARTS BREAKDOWN

Section 6.1



LABEL KIT - INSTL XRT 33 4WD
 DIESEL (DDM)
 066940-013

**Section
6.1**

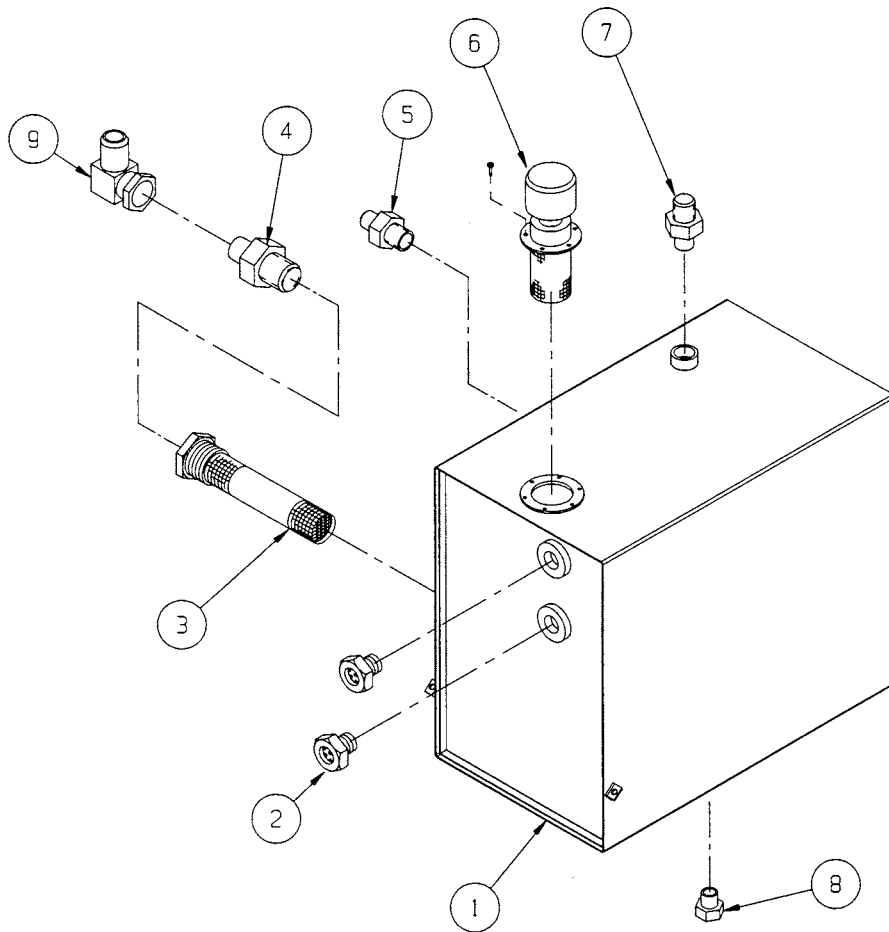
ILLUSTRATED PARTS BREAKDOWN

Hydraulic Tank Assembly

066998-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 067172-000 | HYDRAULIC OIL TANK X-RT | 1 |
| 2 | 063979-006 | SIGHT GLASS | 2 |
| 3 | 100286-001 | SUCTION SCREEN (32MP) | 1 |
| 4 | 011939-029 | FITTING, 20MP-16MJ | 1 |
| 5 | 011939-010 | FITTING, 6MP-6MJ | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|-----|
| 6 | 068840-000 | FILLER BREATHER CAP & SCREEN | 1 |
| 7 | 011939-019 | FITTING, 12MP-8MJ | 1 |
| 8 | 021305-006 | PLUG, MAGNETIC (1/2-14NPT) | 1 |
| 9 | 011937-008 | FITTING, 16FJ-16MJ 90° | 1 |



HYDRAULIC TANK ASSEMBLY X-RT
066998-000

ILLUSTRATED PARTS BREAKDOWN

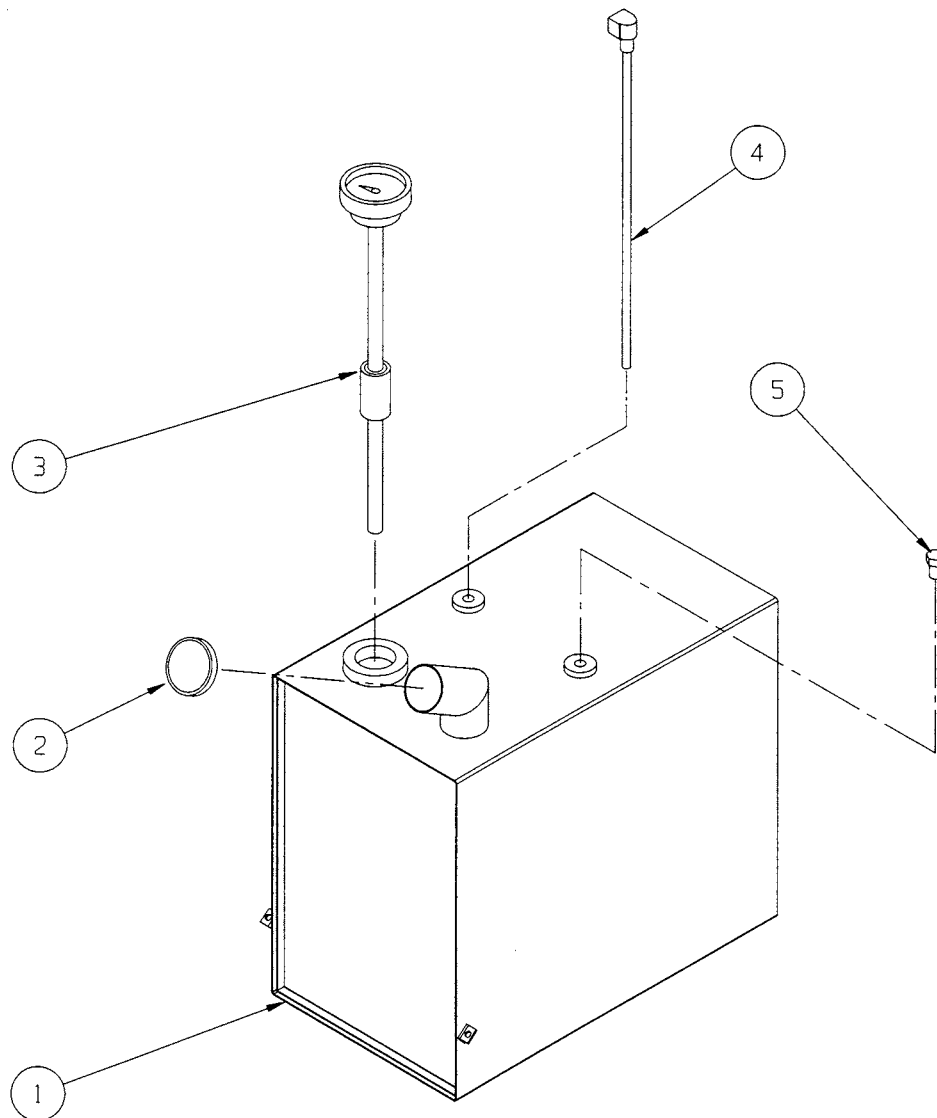
Section 6.1

Fuel Tank Assembly Gasoline

066999-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 067173-000 | TANK, FUEL (STEEL) | 1 |
| 2 | 063929-001 | GAS CAP | 1 |
| 3 | 063982-001 | FUEL LEVEL GAUGE | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 4 | 066971-000 | WITHDRAWL TUBE WELDMENT | 1 |
| 5 | 011919-002 | FITTING PLUG 4MP | 1 |



| |
|--------------------------|
| FUEL TANK ASSY, GAS X-RT |
| 066999-000 |

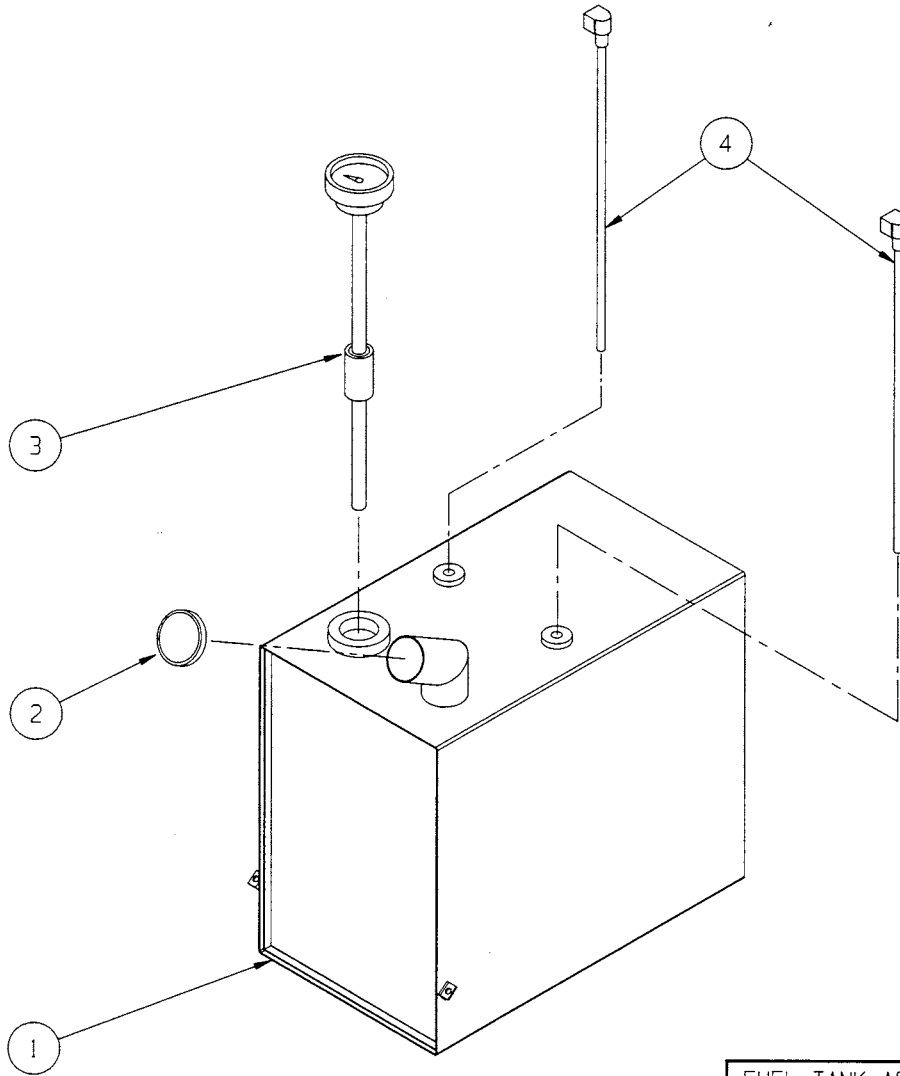
Section
6.1

ILLUSTRATED PARTS BREAKDOWN

Fuel Tank Assembly Diesel

066999-001

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 067173-000 | TANK, FUEL (STEEL) | 1 |
| 2 | 063929-001 | FUEL GAP | 1 |
| 3 | 063982-001 | FUEL LEVEL GAUGE | 1 |
| 4 | 066971-000 | WITHDRAWL TUBE WELDMENT | 2 |



FUEL TANK ASSY, DIESEL X-RT
066999-001

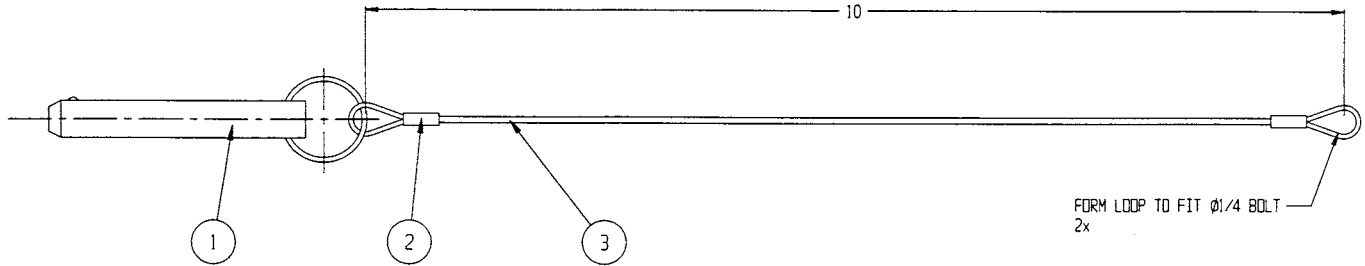
ILLUSTRATED PARTS BREAKDOWN

Section
6.1

Locking Pin Assembly

010414-006

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|------------------------------|---------|
| 1 | 012791-002 | PIN BALL DETENT 3/8 DIA. X 2 | 1 |
| 2 | 03195-000 | SLEEVE - NICOPRESS | 2 |
| 3 | 03192-099 | WIRE CABLE | FT 1.12 |



LOCKING PIN ASSEMBLY

010414-006

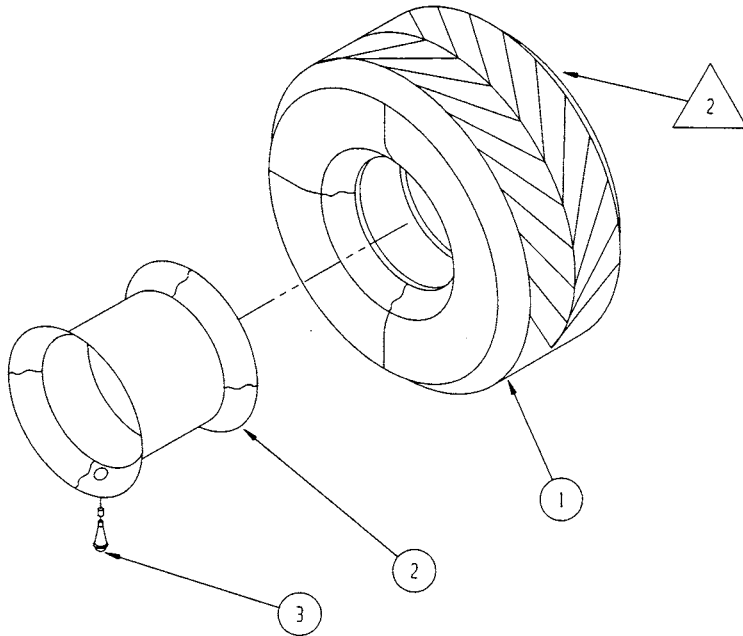
**Section
6.1**

ILLUSTRATED PARTS BREAKDOWN

Tire/Wheel Assembly Trac Seal RT/RH

064054-010

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 008596-002 | TIRE | 1 |
| 2 | 063910-011 | WHEEL | 1 |
| 3 | 012282-001 | VALVE STEM | 1 |



NOTES:

1. FILL TIRE WHEEL ASSY WITH 60 FL. OZ. OF TRAC SEAL (OR EQUIV.) TIRE SEALANT.
 -TIRE & WHEEL ASSY DRY WT.= 51 LBS.
 -TRAC SEAL WEIGHT/GAL = 14 LBS
 -TRAC SEAL REG.(WT) = 6.5 LBS (REF)



BRAND BACKSIDE OF TIRE/WHEEL ASSY AS FOLLOWS:

"UPRIGHT 6KT"
 SPACE TIRE SEALANT
 LAST DIGIT OF YEAR WHEN TIRE WAS FILLED.
 LETTER CORRESPONDING TO MONTH: (JAN-A, ETC)

| |
|-----------------------------------|
| TIRE/WHEEL ASSY RH TRAC SEAL- XRT |
| 064054-010 |

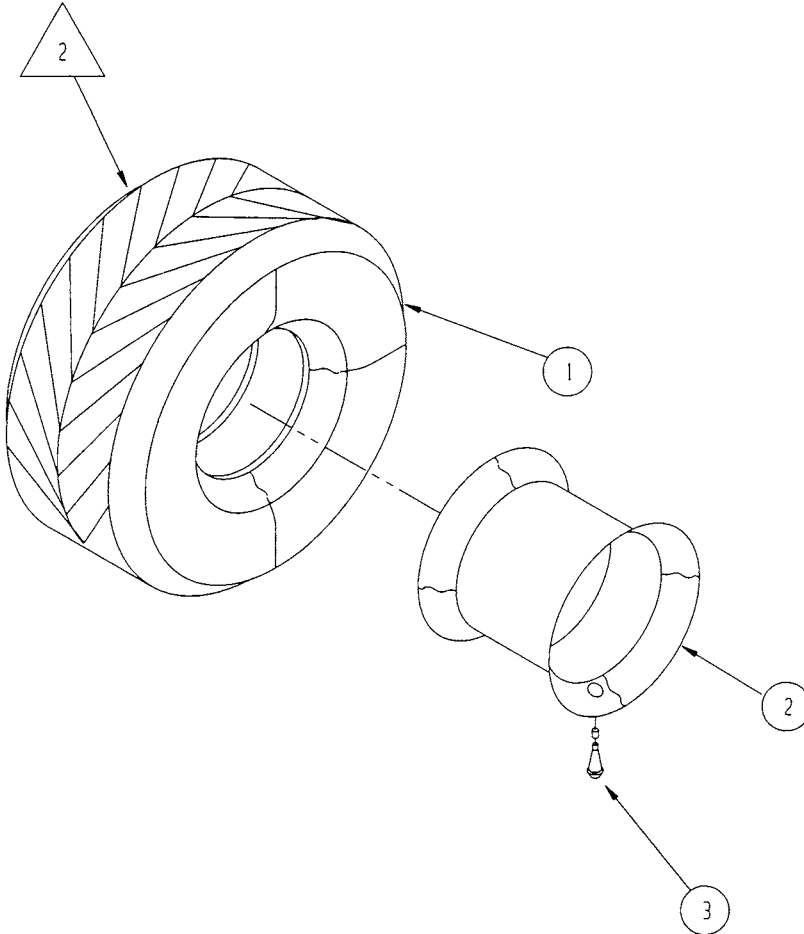
ILLUSTRATED PARTS BREAKDOWN

Section 6.1

Tire/Wheel Assembly Trac Seal RT/LH

064054-011

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 008596-002 | TIRE | 1 |
| 2 | 063910-011 | WHEEL | 1 |
| 3 | 012282-001 | VALVE STEM | 1 |



NOTES:

1. FILL TIRE WHEEL ASSY WITH 60 FL. OZ. OF TRAC SEAL (OR EQUIV.) TIRE SEALANT.
 -TIRE & WHEEL ASSY DRY WT. = 51 LBS.
 -TRAC SEAL WEIGHT/GAL = 14 LBS
 -TRAC SEAL RED.(WT) = 6.5 LBS (REF)

2. BRAND BACKSIDE OF TIRE/WHEEL ASSY AS FOLLOWS:
 "UPRIGHT 6KT"
 SPACE TIRE SEALANT
 LAST DIGIT OF YEAR WHEN TIRE WAS FILLED. LETTER CORRESPONDING TO MONTH: (JAN=A, ETC)

| |
|-------------------------------------|
| TIRE/WHEEL ASSY LH -TRAC SEAL - XRT |
| 064054-011 |

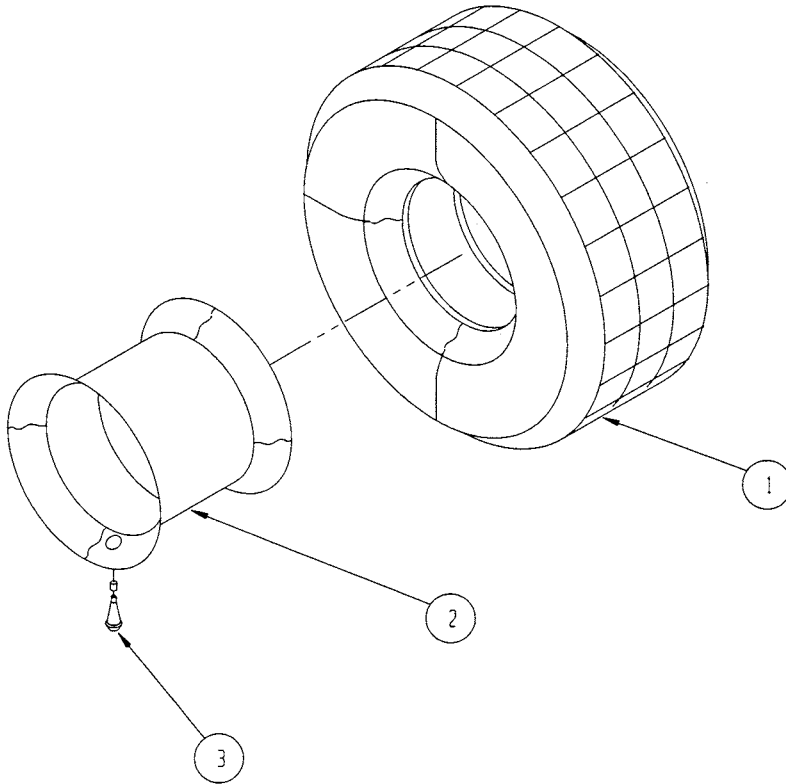
Section
6.1

ILLUSTRATED PARTS BREAKDOWN

Tire/Wheel Assembly Softrac Polyfill /RH

064186-010

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 060209-000 | TIRE | 1 |
| 2 | 063910-010 | WHEEL | 1 |
| 3 | 012282-000 | VALVE STEM | 1 |



NOTE: AFTER ASSEMBLY FILL TIRE WITH POLYFILL

| |
|---|
| TIRE WHEEL ASSY R/T SOFTRAC FRONT POLY-FILLED |
| 064186-010 |

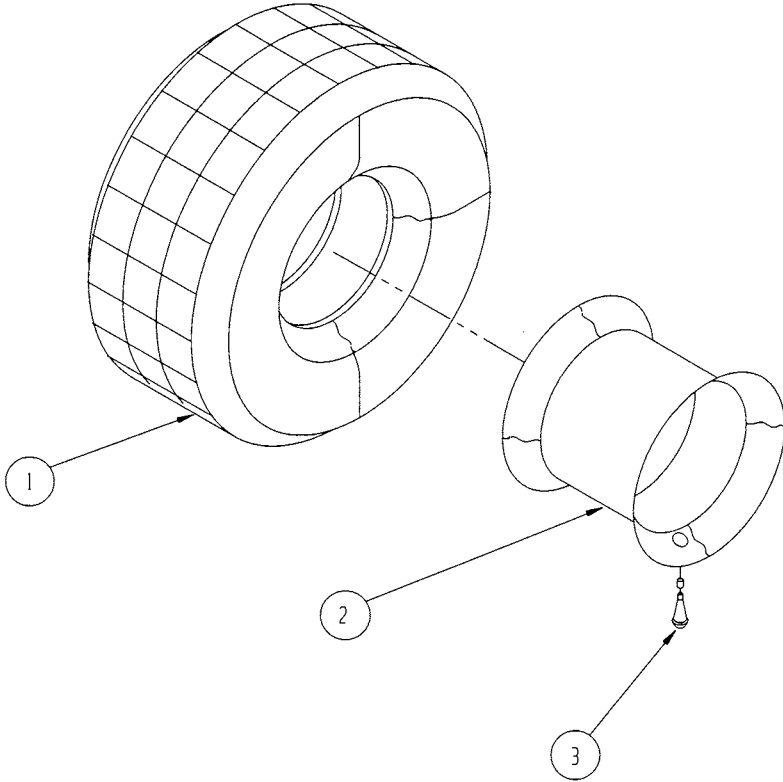
ILLUSTRATED PARTS BREAKDOWN

Section 6.1

Tire/Wheel Assembly Softrac Polyfill /LH

064186-011

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 060209-000 | TIRE | 1 |
| 2 | 063910-010 | WHEEL | 1 |
| 3 | 012282-000 | VALVE STEM | 1 |



NOTE: AFTER ASSEMBLY FILL TIRE WITH POLYFILL

| |
|---|
| TIRE WHEEL ASSY R/T SOFTRAC FRONT POLY-FILLED |
| 064186-011 |

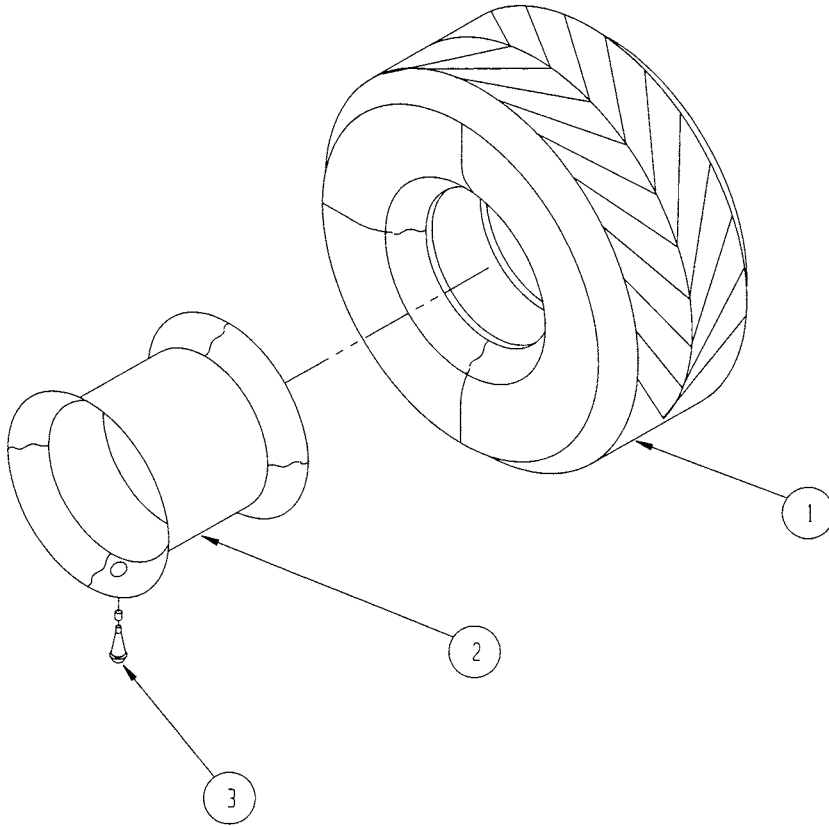
Section
6.1

ILLUSTRATED PARTS BREAKDOWN

Tire/Wheel Assembly Polyfill RT/RH

064187-010

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 008596-002 | TIRE | 1 |
| 2 | 063910-011 | WHEEL | 1 |
| 3 | 012282-001 | VALVE STEM | 1 |



NOTE: AFTER ASSEMBLY FILL TIRE WITH POLYFILL

| |
|-------------------------------------|
| TIRE/WHEEL ASSY RH - POLYFILL - XRT |
| 064187-010 |

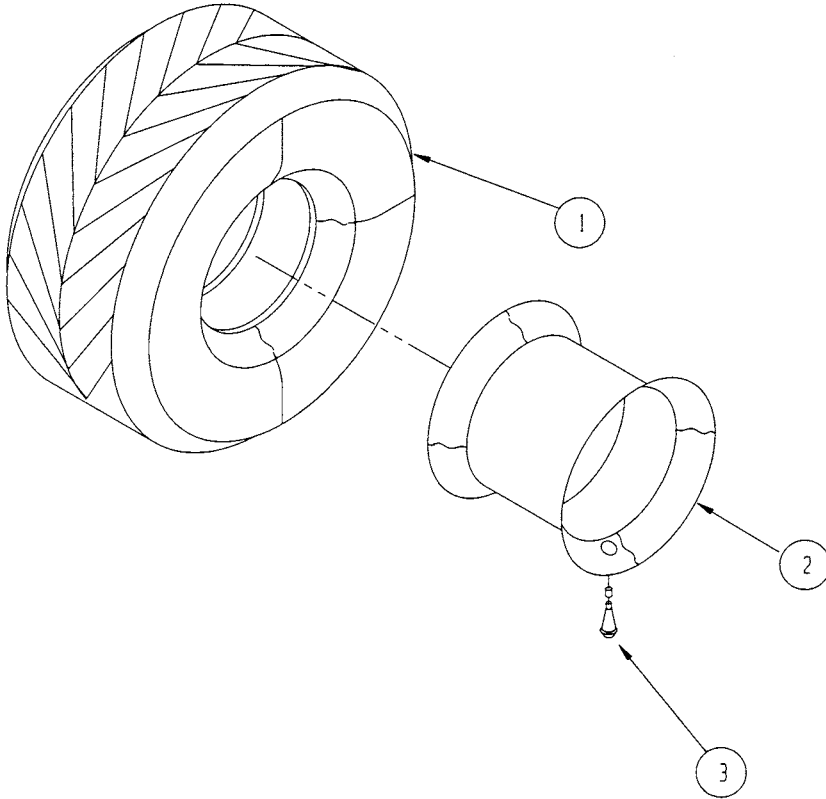
ILLUSTRATED PARTS BREAKDOWN

Section 6.1

Tire/Wheel Assembly Polyfill RT/LH

064187-011

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 008596-002 | TIRE | 1 |
| 2 | 063910-011 | WHEEL | 1 |
| 3 | 012282-001 | VALVE STEM | 1 |



NOTE: AFTER ASSEMBLY FILL TIRE WITH POLYFILL

TIRE/WHEEL ASSY LH - POLYFILL - XRT
064187-011

**Section
6.1**

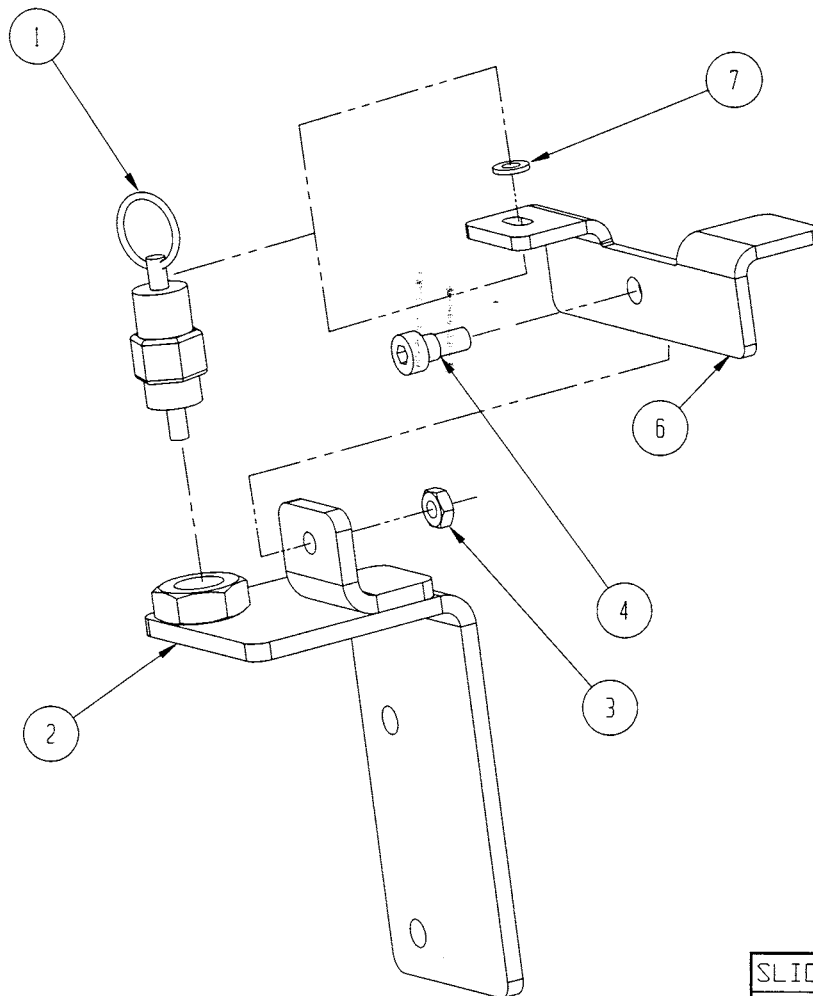
ILLUSTRATED PARTS BREAKDOWN

Deck Lock Assembly Slideout

067185-000

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 1 | 003570-002 | RETAINING PIN ASSEMBLY | 1 |
| 2 | 067186-000 | BRACKET WELDMENT | 1 |
| 3 | 011273-005 | JAM NUT 5/16-18 | 1 |

| ITEM | PART NO. | PART / MATERIAL DESCRIPTION | QTY |
|------|------------|-----------------------------|-----|
| 4 | 015936-003 | SHOULDER SCREW 3/8 X 1/4 | 1 |
| 6 | 067189-000 | LEVER | 1 |
| 7 | 014996-005 | WASHER 5/16 FLAT | 1 |



SLIDE OUT DECK LOCK ASSY
67185-000

UpRight

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Upright, Inc.

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Selma, California 93662

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FAX: 559/891-9012

PARTS: 1-888-UR-PARTS
PARTSFAX: 559/896-9244

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7/99 K