RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-18-007
November 28, 2018

Models
4250 S/N 50501 Up w/5K TT Mast
All 4250 S/N 55501 Up w/TT Mast

SUBJECT: Carriage Stop Replacement

GENERAL INFORMATION: A new carriage stop is available.

SERVICE INFORMATION: If existing carriage stop bolt is bent or broken, replace it with new carriage stop plate P/N 1270906 per the following procedure:

1. Raise the mast slightly to gain access to the upper portion of the inner telescopic.
2. Block the mast. Turn the key switch OFF and disconnect the battery connector.
3. Take measures to protect mast components from grinding and welding operations.
4. Remove damaged stop bolt and existing "welded on" block. See **Figure 1**.

   NOTE: *Do NOT use a cutting torch – grind off only.*

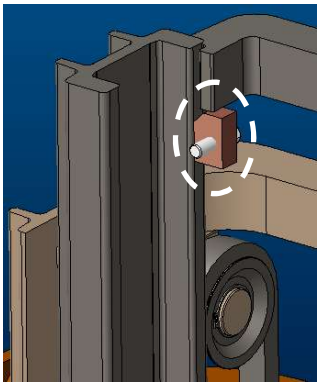


Figure 1

5. Observing all safety precautions in the maintenance manual, attach the welder ground cable as close to the weld area as possible.

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-18-002
April 30, 2018

Models
5K 4250 w/TT mast S/N 50501 Up
All 4250 w/TT mast S/N 55501 Up

SUBJECT: Incorrect Mast Staging

GENERAL INFORMATION: The trucks referenced above may stage incorrectly when lifting in temperatures below 70°F when using standard oil (P/N 990-616). A larger sized crossover tube and fittings is available. The most likely OACH's where this may occur are 83 to 88 inches, however, the new hardware can be installed on all TT mast OACH's.

SERVICE INFORMATION: Replace crossover tube P/N 1216820/001 with P/N 1297428/001 along with the associated hose and fittings (see Figure 1 and Table 1). The required hose is based on OACH (see Table 2).

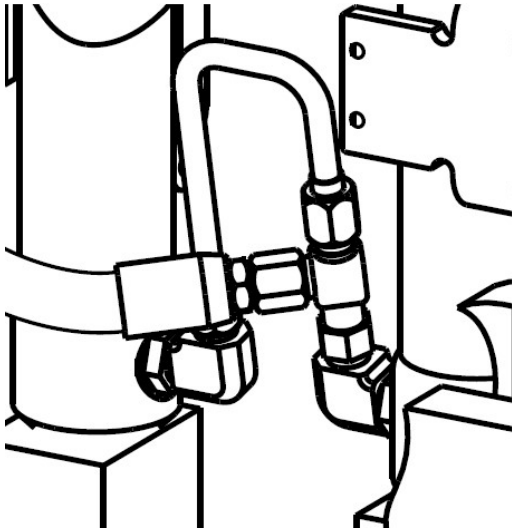


Figure 1

Qty.	Description	P/N
1	Tee Fitting	790-808
2	90° Elbow	792-511
1	Crossover Tube	1297428/001
1	Hose	See Table 2

Table 1

OACH (in.)	Hose P/N
83	1297318/014
84	1297318/015
88	1297318/019
95	1297318/026
99	1297318/030
107	1297318/039

Table 2

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI MUL-17-001 **Models**
August 15, 2017 **Multiple**

SUBJECT: Scheduled Maintenance Changes

GENERAL INFORMATION:

The **Initial 90 Day/250 Deadman Hour** Hydraulic Reservoir oil change is no longer required for the following models:

- 4150/4250
- 5200
- 5400/5500/5600
- 7200/7300/7310
- 7500/7520
- 7700/7720
- 9300/9400
- 9600/9700

Note: The filter change is still required at the Initial 90 Day/250 Deadman Hour service interval.

The **Initial 90 Day/250 Deadman Hour** Drive Unit oil change is no longer required for the models listed below:

- 3010/3020
- 4150/4250
- 5200
- 5400/5500/5600
- 7200/7300/7310
- 7500/7520
- 7700/7720
- 6210
- 8210/8250
- 8310/8410/8510/8610/8900
- 9600/9700
- 9800

FOTP-0060/1-2-17/H

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI MUL-16-001 **Models**
February 19, 2016 **Multi-Product**

SUBJECT: New Horn Available

GENERAL INFORMATION: A new horn (P/N 1233519/XXX), designed to perform better in cold storage environments, is available to replace horn P/N 1047433/XXX.

SERVICE INFORMATION: Order and install P/N 1233519/XXX. Refer to Figure 1 for correct bracket configuration.

To install the new horn:
Connect Horn(+) and Horn(–) wires to the new horn. Make sure the horn bracket is isolated from the truck frame.

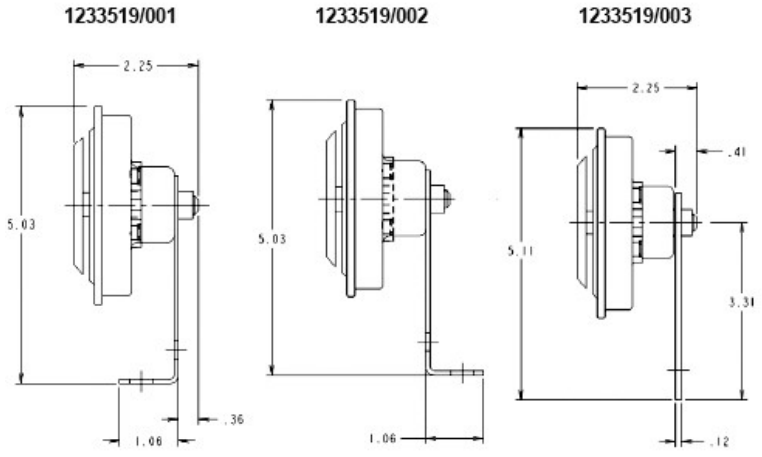


Figure 1

NOTE: If necessary (3-wire to 2-wire conversion), install ½ in. heat shrink tubing (P/N 611-013) over the unused spade connector and wire. Fasten the unused wire back to the harness using a ty-rap (P/N 611-029) or equivalent.

FOTP-0060/1-7-15/F

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-15-006
September 10, 2015

Model
4150- C30TT

SUBJECT: Flow Control Bracket

GENERAL INFORMATION: Trucks shipped before June 2014 with a C30TT mast may leak due to a loose T-fitting at the bottom of the left main cylinder.

SERVICE INFORMATION: Install a clamp and bracket to secure the flow control valve/T-fitting.

1. Drill two 11/32 in. holes in the cylinder support bracket as shown in **Figure 1**.
2. Install bracket P/N 1221653 as shown.
3. Install the U-bolt as shown.

   NOTE: Do not use the nuts supplied with the U-bolt. Use the lock nuts listed in the table below.
4. Adjust the flow control valve so that it sits flat against the bracket.

Part Number	Qty.	Description
710-076	2	Bolt, 5/16-18 X 1¼
771-119	2	Washer, 5/16
760-013	4	Nut, 5/16-18
1221624/001	1	U-Bolt
1221653	1	Bracket

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI MUL-15-001
March 17, 2015

Models
Multi-Product

SUBJECT:	Recommended Lift Chain Lubrication
GENERAL INFORMATION:	The chain lubricant specified in maintenance manuals may not adequately penetrate and lubricate the joints of the chain.
SERVICE INFORMATION:	Use P/N 1151877/001 (Rexoil) or 1151877/002 (Rocol) when lubricating lift chains on all trucks.
PARTS AVAILABILITY:	Now available through the Parts Distribution Center.
FILING INSTRUCTIONS:	Remove and discard RPIN GEN-10-R004. File this notice in the Appendix of all maintenance manuals for trucks that have lift chains *(that do not already reflect this information)* next to the Lubrication Specification Chart. Cross out the information presently in the chart.

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-14-006
August 19, 2014

Models
4250, 4450 with Quad Mast

SUBJECT: Quad Mast Flow Control Valve Removal and Installation

GENERAL INFORMATION: A removal and installation procedure for the Quad Mast Flow Control Valve was not included in the maintenance manual.

SERVICE INFORMATION: Perform the following steps when removing/installing the Flow Control Valve on a Quad Mast.

1. Tilt mast forward completely.
2. Lower carriage completely.
3. Turn key switch OFF and disconnect battery.
4. Place a small pan under the Flow Control Valve.
5. Remove the hose attached to the Flow Control Valve.
6. Remove the Flow Control Valve.
7. Install new fuse and torque to 44 to 48 ft. lb. (60 to 65 Nm).
8. Re-attach hose and torque to 44 to 48 ft. lb. (60 to 65 Nm).
9. Bleed the hydraulic system.
10. Test lift function and check for leaks.

PARTS AVAILABILITY: Not applicable.

FILING INSTRUCTIONS: File in Maintenance Manuals:

- 1119828C before page 7-103 (Model 4250 S/N 30,000 to 42,066)
- 1193671A before page 7-107 (Model 4250 S/N 42,067 and Up)
- 1113065A before page 7-60 (Model 4450)

FOTP-0060/1-8-14/E

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-13-010
July 25, 2013

Models
4150/4250

SUBJECT: New Software Release

GENERAL INFORMATION: VM S/W Version 6.1 is now available. Changes include the following:

- All T series error codes have been removed and will no longer be displayed.
- Previously, on trucks with the Electronic Key option, if "SERIAL" was entered on the display and the Enter key was pushed twice, the truck would enter Run Mode. It now returns the Display to the blank Electronic Key screen.
- Test A80 scrolling message text has been updated to display the correct information (refer to RSI CTB-13-006 for further information).
- When the Maintenance Minder (MM) option is enabled and the MM Lift Cutout setting is disabled (*set to message only*), the MM alarm and scrolling message should alert the operator at Key ON for approximately 30 seconds and then shut off. Shut off was not occurring and the MM alarm and message continued with the alarm activating at 30 second intervals. With the MM Lift Cutout setting enabled, the message and alarm is now continuous as the truck cannot be used in this condition.

PARTS AVAILABILITY: Now available on iNET.

FILING INSTRUCTIONS: File this notice in Maintenance Manual 1119828B next to page 4-3 and make notes on pages 6-29 and 6-30 for the T Codes.

FOTP-0060/6-28-13/D

FILING INSTRUCTIONS: File this notice in Maintenance Manual 1060345B next to page 6-78 and 1119828B next to page 6-62.

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-12-001B
January 29, 2013

Models
4100/4150/4200/4250

SUBJECT: Proportional Lowering Valve Adjustment

GENERAL INFORMATION: If the carriage hesitates when being lowered, or cannot be feathered, adjust the proportional valve using the procedure below.

SERVICE INFORMATION:

Verify correct lowering *with and without* a load using Test A23 in Active Service Mode.

- Carriage movement should start at approx. –3 to –6% request.
- If the reading is correct, run Test O11 in Maintenance Mode and activate SOL2. The carriage should not move.

If not, perform the following procedure.

1. With a full rated load on the forks or the customers heaviest load (if less than a full rated load), elevate the carriage to eye level.
2. Remove the top cover.
3. Remove the protective cap from the top of SOL2 (Proportional Valve) and loosen the locknut holding the adjusting screw. Refer to page 7-79 of Maintenance Manual 1119828B (4150/4250) or page 7-65 of Maintenance Manual 1060345B (4100/4200).
4. Energize SOL1 (Load Holding) by running Output Test O11. Refer to page 6-95 of Maintenance Manual 1119828B (4150/4250) or page 6-89 of Maintenance Manual 1060345B (4100/4200). Adjust the SOL2 adjusting screw clockwise until the carriage begins to move. Once carriage movement begins, turn the adjusting screw counterclockwise until carriage movement stops.
5. Tighten the lock nut and torque to 20 in. lb. (2.26 Nm).
6. Replace the protective cap and torque to 20 in. lb. (2.26 Nm).
7. Check for correct lowering without a load and loaded using Test A23 in Active Service Mode. Carriage movement should start at approx. –3 to –6% request.
8. Reinstall the top cover.

FILING INSTRUCTIONS: File this notice in Maintenance Manual P/N 1119828B next to page 7-85 and Maintenance Manual P/N 1060345B next to page 5-17.

FOTP-0060/12-15-10/A

RAYMOND SERVICE INFORMATION

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSI CTB-11-011
February 28, 2012

Models
EAS*i Pacer*™/4100/4150/4200/4250

SUBJECT: Warning Light Deflector

GENERAL INFORMATION: One of the application considerations relative to the use of the special feature Warning Light is that it may distract or annoy forklift operators. In certain applications, the Warning Light must be mounted under the overhead guard. For those applications, the installation of a deflector may assist in reducing the distraction and annoyance to the forklift operator caused by the Warning Light.

SERVICE INFORMATION: The deflector mounts between the Overhead Guard and Warning Light. See **Figure 1**. Order and install P/N 1142959 using original hardware.

Figure 1

PARTS AVAILABILITY: Now available through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice in Maintenance Manuals PDMM-0089, 1060345, and 1119828.

FOTP-0060/12-15-10/A

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN CTB-10-R006
January 11, 2011

Models
4100/4200/4150/4250

SUBJECT: Software Improvements

IMPROVEMENTS:

1. When a VM or control handle is replaced, the display may reset prior to the entire message scrolling across. If the display shows "Release C", it means Release Control Handle. Learn is required to clear the message.
2. Issues with FlashWare connecting to the VM on trucks with *iWarehouse* have been corrected.
3. Solenoid 5 relief pressure has been increased from 2000 PSI to 2300 PSI.
4. When the FlashWare option of Lift Limit w/Bypass is selected, the 4200 on-board configuration menu displays the "LftLimit" option that can now be set to "No Byp", "Std Byp", or "Alt Byp". "No Byp" is the same as off. "Std Byp" is the way the 4200 bypass option previously worked, and "Alt Byp" is the new option which allows the operator to hit and release the up arrow before the limit switch is reached and continue lifting through the bypass height without stopping.
5. The Lift-Limit Switch and Two Speed Tilt switch connect to the same input on the VM. Input Test I05 will now be active when the Two Speed Tilt option is selected as well as the Lift-Limit option.
6. The delay between requesting lift and lift actually starting has been reduced on the Model 42XX.
7. **NOTE**: Recent versions of software do not allow Traction Amp software to be loaded.

PROCEDURE: Download VM software version 5.1 (10360051.s19) from iNET and install in the truck.

PARTS AVAILABILITY: Now Available from the iNET.

FILING INSTRUCTIONS: File this notice in Maintenance Manuals 1119828A and 1060345 and make notes in the sections affected by the improvements.

FOTP-0005/jwr/01-11-10/F

WARRANTY: Within normal Raymond policy guidelines.

Bolt Inspection

Flat Rate Book Reference	
Model	EASi Pacer/ Dockstocker HP
Code	2111
Time	0.2 hr.

Bolt Replacement

Flat Rate Book Reference	
Model	EASi Pacer/ Dockstocker HP
Code	2113
Time	0.4 hr.

FILING INSTRUCTIONS: File this bulletin in PDMM-0089 next to page A4.

FOTP-0006/jwr/01-11-10/F

RAYMOND SERVICE BULLETIN

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSB CTB-08-011
December 2, 2008

Models
4200, 4400, and 4700

SUBJECT: Mast Drifting on Quad Masts S/N MQ2710 and up (35D), MQ8565 and up (45D), MQ284 and up (55D)

DESCRIPTION: It has been identified that some Quad Masts may experience drift due to the check valve(s) in the right-hand main lift cylinder becoming loose.

REMEDY: Should this condition exist, and troubleshooting has led you to the right-hand main cylinder, perform the following procedure:

PROCEDURE:

1. Remove the right-hand main cylinder and remove the piston from the cylinder.
2. Remove check valve. See Figure 1.

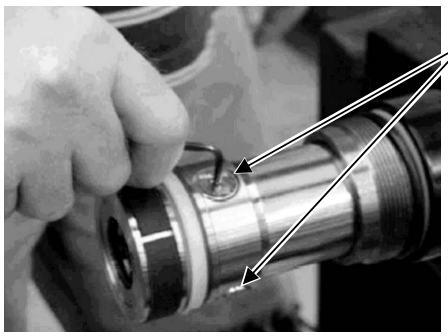


Figure 1

3. Inspect check valve. If the O-ring is blown off or appears damaged, replace the check valve (P/N 223-001-569/L14).
4. Clean check valve and apply thread-locking compound P/N 990-403 to thread circumference of check valve.

FOTP-0006/jwr/03-16-07/D

PROCEDURE (CONT.) *Electrical check of diode 1016321/001:* (See Figure 2.)

1. Disconnect and remove the TP9 bus bar in order to electrically isolate the diode from Q3 collector (C).
2. Disconnect and remove the bus bar from capacitor to diode.
3. Measure the resistance from diode connection 1 (+ lead) to 3 (–.lead). It should now read continuity.
4. Measure the resistance from diode connection 3 (+ lead) to 1 (–.lead). It should now read open circuit.

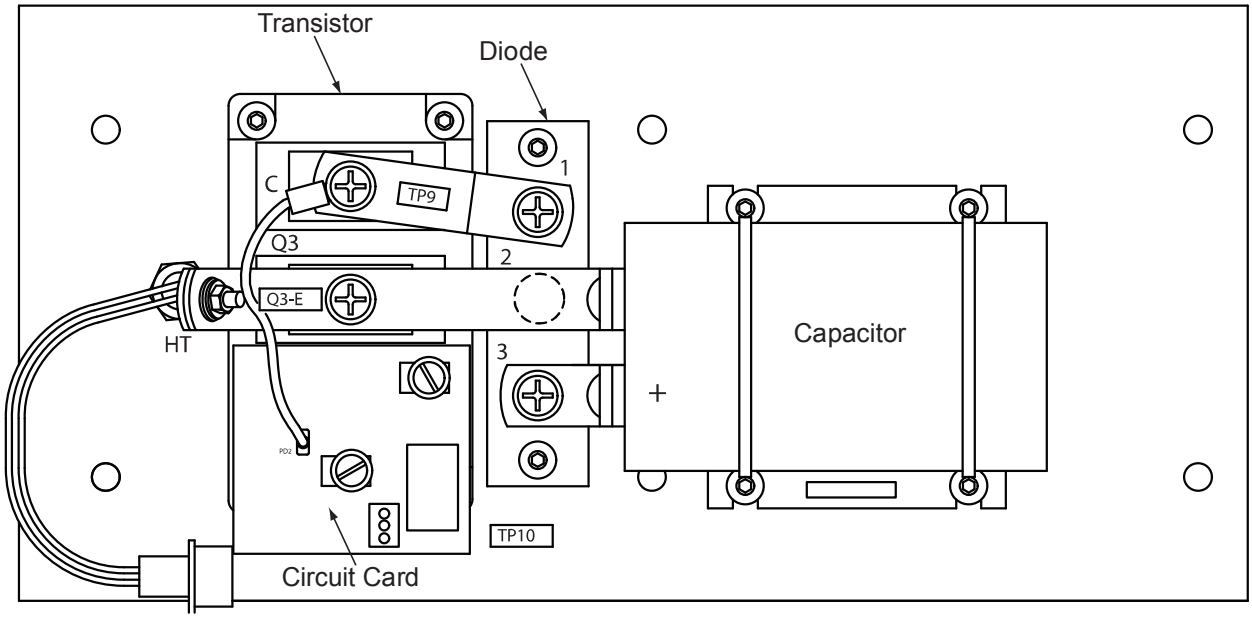


Figure 2

PARTS AVAILABILITY: Now available through the Parts Distribution Center.

WARRANTY: Within normal Raymond policy guidelines.

Flat Rate Book Reference	
Model	DSS 300/350
Code	9050
Time	.6

FILING INSTRUCTIONS: File this notice in Maintenance Manual PDMM-0093 next to page 5-31 and make a note on page 1-18 for the scheduled maintenance checks.

FOTP-0006/jwr/03-16-07/D

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN GEN-08-R001 **Model**
February 25, 2008 **General**

SUBJECT: Warning Light Failures

DESCRIPTION: There have been a number of warning light assemblies, P/N 591-569/xxx, returned under warranty when only the bulb has failed. This normally happens when the light is described as having intermittent operation or excessive time between the light flashing.

REMEDY: Troubleshoot the light assembly per the procedure below. Warranty will be denied for warning light assemblies when it is determined that only the bulb has failed. Light bulbs are considered a wearable component as per the Original Equipment Warranty Policy (FOWR-0004) and are only covered for 4 months or 695 hours.

PROCEDURE: When the light does not function properly, inspect the bulb, P/N 591-569/111, using the attached Figures 1 and 2 as a guide. If the bulb is dark on the end as indicated in Figure 2, measure the voltage as described. If the voltages are correct, only the bulb should be replaced.

PARTS AVAILABILITY: Now available through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice in all manuals that use warning lights.

FOTP-0005/jwr/03-16-07/D

PROCEDURE (CONT.):

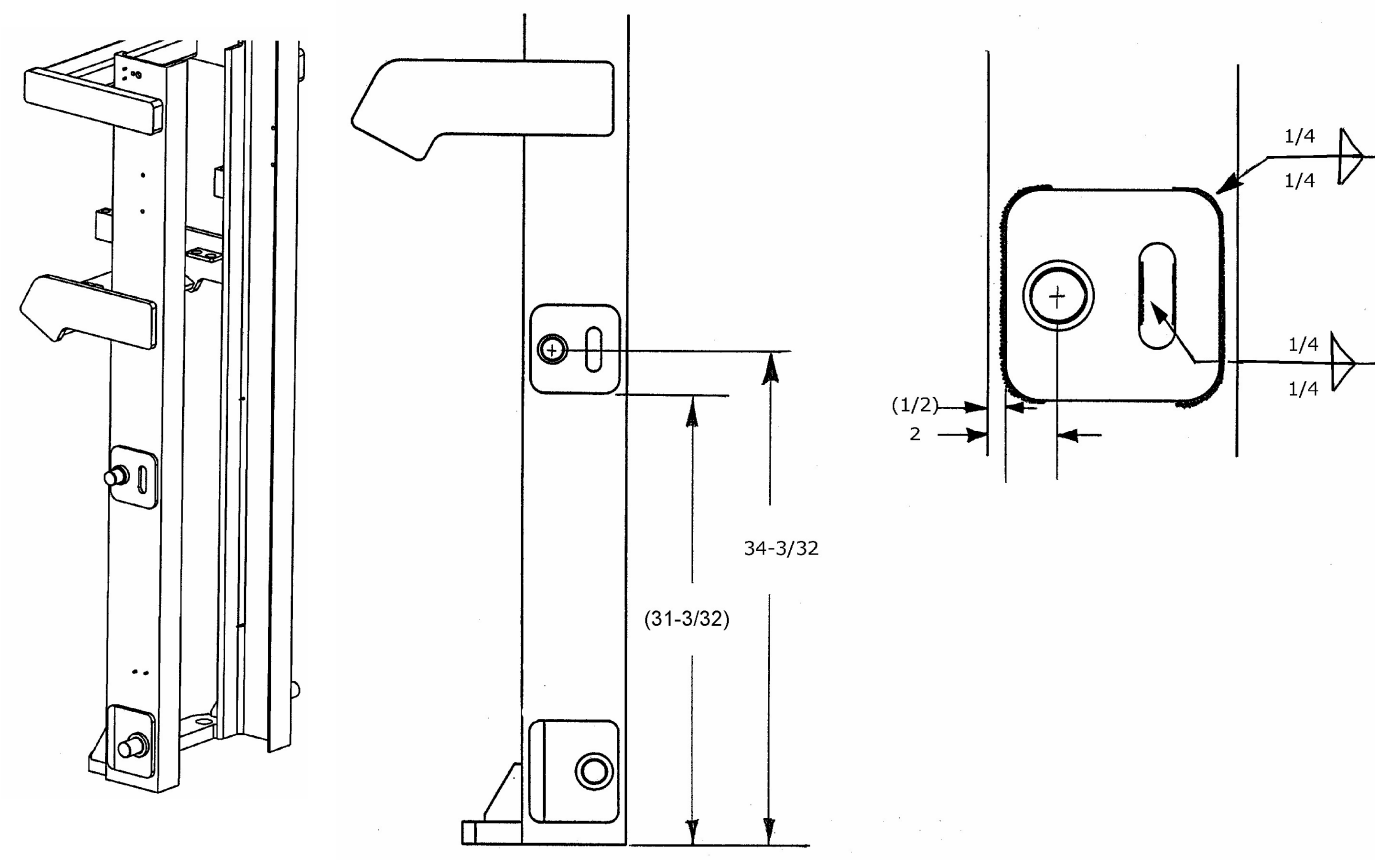


Figure 1: Tilt Pivot Bracket Location

PARTS AVAILABILITY: Now available through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice in the front of Maintenance Manual PDMM-0089.

FOTP-0005/jwr/03-16-07/D

PARTS AVAILABILITY: August 11, 2006

WARRANTY: Within normal Raymond policy guidelines.

Flat Rate Book Reference		
Model	R30/R35/R40/R50	
Code	6815	
Time	1.0	.75

FILING INSTRUCTIONS: File this Service Bulletin in Maintenance Manual PDMM-0089 issued 6/24/02, directly after page 7-78.

FOTP-0006/mlc/01-01–03/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN PCR-05-R010
February 22, 2006

Models
EASi™ *Pacer* truck, R30, R35, R40, R50

SUBJECT: Rapid Charge Connector Bracket Option Now Available On EAS*i Pacer* trucks. (Ref. Sales Bulletin No. 133, dated December 15, 2005.)

DESCRIPTION: Rapid Charging makes use of high powered, specialized battery chargers to recharge lift trucks in lieu of traditional battery changing.

Trucks equipped with the Rapid Charge Connector Bracket Option are built and shipped with the brackets, console and tractor modifications required to install a Rapid Charge Connector System on trucks in the field. See Figures 1 and 2.

NOTE: Trucks will *not* be shipped with rapid charge battery connectors, battery connector levers or battery cables as shown in Figure 3. These parts must be installed by a Raymond Dealer Technician or a Rapid Charge System supplier. However, the standard gray SB350 battery connector is shipped with the truck, which is used before and after the modifications are made.

EAS*i Pacer* trucks can now be ordered with the Rapid Charge Connector Bracket Option. Trucks equipped with this option can be outfitted with a Rapid Charge Connector System by following the instructions in this notice.

Figure 1: Connector Compartment

Figure 2: As shipped from factory with option

FOTP-0005/mlc/01-01-03/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN PCR-05-R008
November 11, 2005

Models
EASi™ *Pacer* and DSS HP

SUBJECT: Drive Unit Transmission / Drive Motor Endbell Sealant

DESCRIPTION: If sealant is found to be leaking at the interface between the drive unit transmission and drive motor endbell, you can replace the sealant with a paper gasket. This is the same gasket used on Orderpickers and some *Reach-Fork* trucks.

REMEDY: Install the gasket (P/N 828-013-978) 1 per drive unit.

To perform the installation, follow the procedures found on page 2 of this notice.

FOTP-0005/mlc/02-13-02/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN PCR-05-R002
May 23, 2005

Models
EASi™ *Pacer* R30, R35, R40, R50

SUBJECT: Auxiliary Hose Clamp (Screws) on TT Mast Fork Carriage

DESCRIPTION: The screws that secure the auxiliary hoses to the fork carriage may loosen and break. This condition is more likely to occur on trucks equipped with attachments.

REMEDY: New hose clamp that uses (1) large M10 screw is available.

PROCEDURES: Order 1 hose clamp for the truck you are working on. Use the table below to determine the correct hose clamp to order.

Qty.	Clamp Hose	With Attachment	With Sideshift
1	1029029/001	for -08 Hose Size 1/2 inch ID	—
1	1029029/002	—	for -06 Hose Size 3/8 inch ID
Additional hardware for either configuration			
1	5-001-015 – Hex Head Cap Screw M10 x 20		
1	5-018-007 – Flat Washer M10		

FOTP-0005/mlc/01-01-03/B

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN PCR-05-R009
January 9, 2005

Models
EAS*i*™ *Pacer* truck

SUBJECT: Software Version 5.9

DESCRIPTION: Multiple versions of software for EAS*i Pacer*™ trucks made it difficult to know what version to use in a particular truck or application.

REMEDY: Software Versions 5.2, 5.7 and 5.8 have been merged together to become version 5.9.

NOTE: Output tests in versions 5.5, 5.6, 5.8, and new version 5.9, do not function correctly. Troubleshooting must be done by operating the truck functions. This will be corrected in a future version of this software.

NOTE: There are a limited number of trucks with version 5.6 being tested for use with quick disconnects. Trucks using version 5.6 should continue with that version.

PROCEDURES: Download the FlashWare application package (version 2.2) from the iNET, and install version 5.9 into EAS*i Pacer* trucks.

Configuration items are no longer reset back to default after changing an option using FlashWare.

PARTS AVAILABILITY: FlashWare application version 2.2 is now available via iNET.

FILING INSTRUCTIONS: File this notice in the front portion of Maintenance Manual PDMM-0089.

FOTP-0005/mlc/01-01-03/C

Figure 1

PARTS AVAILABILITY: Available as of June 30, 2004 through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice after Figure 7-27c in Parts Catalog 1012609.

FOTP-0005/mlc/01-01-03/C

FAILURES AND CORRECTIVE ACTIONS

No sideshifting:	▪ check that the feeding pressure conforms to established requirements ▪ check that the mobile frame has not been deformed ▪ check that clearance between lower hook and bar of truck carriage is correct as shown in Figure 3 on page 2 ▪ check that there are no oil leaks from the hydraulic circuit or from the cylinder
Very slow sideshifting:	▪ carry out all the checks as described under “No sideshifting” above ▪ check the oil level in the lift truck tank ▪ check for pad wear as described under “Pads Replacement” on page 6
Irregular sideshifting:	▪ check that there is no air in the hydraulic circuit ▪ check for pads wear as described under “Pads Replacement” on page 6

FOTP-0005/mlc/01-01-03/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
PO Box 130
Greene, New York 13778-0130

RPIN PCR-04-R004
June 11, 2004

Models
DSS 300/350

SUBJECT: Service Instructions for New Bolzoni Sideshift Carriage

DESCRIPTION: DSS 300/350 trucks, with the 32 inch carriage, manufactured after May 14, 2004 will be equipped with a new Bolzoni model HN sideshift carriage.

All trucks with the Bolzoni sideshift option will change over depending on the availability of carriages.

Fit-up, use, and servicing of the new carriage is different from the previous version.

REMEDY: Refer to the following pages of this Improvement Notice for up-to-date maintenance and service instructions for this new carriage.

PROCEDURES: NA

PARTS AVAILABILITY: NA

FILING INSTRUCTIONS: File this notice in front of Maintenance Manual PDMM-0093.

FOTP-0005/mlc/01-01-03/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
PO Box 130
Greene, New York 13778-0130

RPIN PCR-04-R002
May 13, 2004

Model
EAS*i* ™ *Pacer*

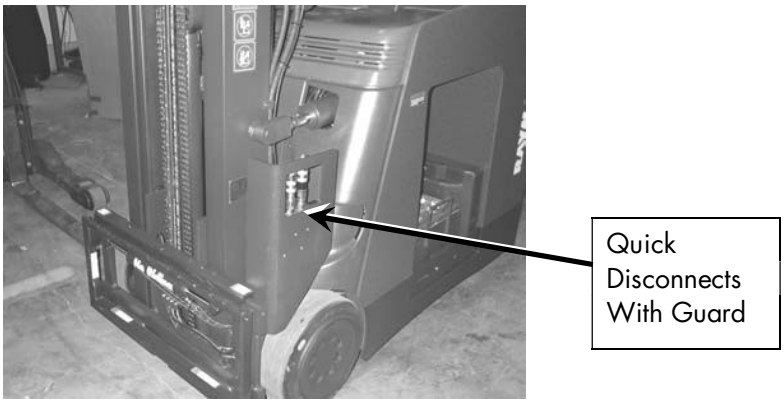
SUBJECT: Quick Disconnect Guard

DESCRIPTION: Damage may be caused to quick disconnect fittings/auxiliary manifold when maneuvering in a trailer or an overseas container. Operators may be able to catch the quick disconnect fittings on low overhead doors or trailers either in forks first direction (with no load backrest or a short attachment) or in tractor-first direction when elevated.

REMEDY: In applications where this can occur, a guard can be added to protect the quick disconnect fittings.

PROCEDURES: Order (P/N 223-001-802/102). See attached picture and install using original hardware.

NOTE: Depending on the configuration of the truck, the addition of this bracket may lower the available free lift on the truck.



PARTS AVAILABILITY: Parts are now available through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice after figure 7-27c in Parts Catalog, PDPM-0191.

FOTP-0005/mlc/01-01-03/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
PO Box 130
Greene, New York 13778-0130

RPIN PCR-03-R005
September 26, 2003

Models
EAS*i Pacer* ™, R30, R35, R40, and R50

SERIAL NUMBERS: Above R40-2003-05258

SUBJECT: Two Speed Tilt On Quad Mast Equipped EAS*i* ™ *Pacer* Trucks

DESCRIPTION: EAS*i* Pacer trucks equipped with Quad Masts now come with two speed tilt.

Two speed tilt is an option enabled with PC Loader and is available in version 5.1 which may be downloaded from the iNET. A four digit code is required to enable the option. The code is visible in the options screen when the option is enabled. Please make a note of the code for future reference.

If the option is inadvertently turned off and no note of the code was made by the technician, the code can be obtained from Raymond Field Service or the Parts Distribution Center for trucks that already have the option installed.

OPERATION: When the fork height is less than 223 in., a proximity switch mounted on the right side main lift cylinder is activated by a rail welded to the telescopic. Activation of the proximity switch puts the truck into a mode where tilt speeds are normal.

When the forks are raised above 223 in., the proximity switch is deactivated and the truck is put into a slow speed tilt mode.

The proximity switch uses the lift limit switch input at JPC12, pin 5. Refer to the electrical schematic in Maintenance Manual PDMM-0089.

NOTE: Both two speed tilt and lift limit with bypass can be enabled. However, the height of the switch must be at 223 in. or below.

FOTP-0005/mlc/02-13-02/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN DSD-03-R005
August 28, 2003

Models
DSD30, DSD35, DSD40, DSD50, DSD5E

SUBJECT: Incorrect Torque Specification in Maintenance Manual

DESCRIPTION: Maintenance Manual PDMM-0115 contains an incorrect torque specification for the M6 bolts used to mount the traction control module and the optional hydraulic control module.

REMEDY: Correct the torque values on page 3-11 of PDMM-0115.

The correct values are: 1st pass: 4 foot pounds, 2nd pass: 8 foot pounds

FILING INSTRUCTIONS: File this notice just ahead of page 3-11 in Maintenance Manual PDMM-0115.

FOTP-0005/mlc/01-01-03/C

Theory of Operation:

The thermostat is designed to turn the heater on within the handle when the temperature falls bellow 50 +/- 6 degrees F (10 +/- 3 degrees C) and turn it OFF when the temperature reaches 68 +/- 6 degrees F (20 +/- 3 degrees C) as long as the battery is plugged in.

CODE 81

Troubleshooting:

1. Enter test A11.
2. Move the lift knob to full lower. The voltage should be between 3.50 and 4.66 volts.
3. Move the lift knob to full lift. The voltage should be between 0.5 and 1.4 volts.
4. Move the lift knob to full lift and let it return to neutral. The voltage should be between 2 and 3 volts.
5. Move the lift knob to full lower and let it return to neutral. The voltage should be between 2 and 3 volts.

The difference between the two neutral voltages in steps 4 and 5 should not be more than 0.12 volts.

RAYMOND SERVICE BULLETIN

The Raymond Corporation
Corporate Headquarters
PO Box 130
Greene, New York 13778-0130

RSB PCR-02-010
September 5, 2002

Models
630, 640, 650

SUBJECT: Steer caster top plate

DESCRIPTION: The current version of the steer caster top plate (P/N 223-000-603) may have the chain anchor mounting block protruding down enough to interfere with the operation of the steer switches.

REMEDY: Trucks with serial numbers higher than 640-02-08324 may have this condition.
NOTE: Replacement steer plates (P/N 1001627) may also have this condition.

PROCEDURES: Until a new steer plate can be developed, check all trucks with serial numbers higher than that listed above during scheduled maintenance. If this condition is found, remove the plate and grind down or cut the block. Note: Do not grind more than .35". Make sure there is enough clearance to allow the steer switches to operate properly.

In addition, new plates, received from the Parts Distribution Center, will also have to be checked for clearance whenever they are installed on models 630, 640, or 650.

EAS*i Pacer™* trucks and DSS 300/350 trucks may use the plate as is.

PARTS AVAILABILITY: Parts are now available through the Parts Distribution Center.

FOTP-0006/mlc/02-13-02/C

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN DSD-02-R011 **Models**
June 27, 2002 **DSD**

SUBJECT: Service Reminder for Chassis Wash Downs

DESCRIPTION: Electric model lift trucks should *not* be power washed or steam cleaned. Use of compressed air, with a maximum air pressure of 30 psi, is the only generally recommended method for cleaning these models.

However, it is recognized that some customers may be required by government regulation to sanitize equipment used in food processing and handling operations, and that the cleaning methods employed may involve the use of liquids and/or steam.

PROCEDURE: If an electric truck is washed or steam cleaned, precautions must be taken to avoid directing high pressure water or steam near any electrical components, such as motors, converters, contactors, control panels, and battery connectors.

1. Before starting the cleaning process, the battery must be disconnected and removed from the chassis.
2. All open cracks and gaps at the control panel, motors, external electrical components, connections and devices, as well as the drive axle and hydraulic tank breathers, must be sealed off to avoid contact with the water or steam.
3. After cleaning with water or steam, compressed air, set at a maximum pressure of 30 psi, should be used to blow any excess moisture off the truck.
4. Allow the truck to dry *completely*.

FOTP-0005/mlc/02-13–02/C

Pivot Hub Bearing If the pivot hub bearing is not installed correctly it may not have been fully seated into the race when the steer plate was installed. The weight of the truck, plus driving over bumps, can cause the bearing to fully seat, which in turn causes the large hex nut to work loose. Tighten the hex nut as described on page 7-34 in Maintenance Manual PDMM-0068.

Chain sprocket Inspect the chain sprocket. If it is cracked or showing excessive wear, replace it with a new one (P/N 401-165/001). Replace the existing set screws with a higher grade cup point (P/N 724-445) and torque to 13 ft. lb. using medium strength thread locking compound (P/N 990-536).

To properly align the chain sprocket, place a level, or a flat edge, on the steer chain and add or remove spacers (P/N 771-033) below the steer sprocket as needed. Generally, the EAS*i Pacer*™ will not need any spacers and the bottom of the sprocket will be level with the bottom of the hydraulic motor shaft. Install one large washer (P/N 223-000-531) and screw (P/N 5-001-003) in the bottom of the sprocket.

On DSS 300/350 trucks, you will generally need two spacers (P/N 771-033) to space the sprocket up, then install one flat washer (P/N 771-049) and the screw (P/N 5-001-003) in the bottom of the sprocket.

Steer Pivot Check the backlash between the upper hub and the steer pivot. There should be no noticeable play between the upper hub and the key. If there is excessive play, inspect the upper hub and steer pivot keyways for wear. If necessary, replace the steer pivot with a new one (P/N 223-000-207).

Steer Pressure The steer pressure should be approximately 1600 psi as set from the factory. This is sufficient to turn a *Pacer*, Model R50, with no load, on a rough floor with the red steer tire. This represents the application that requires the most steer pressure.

Lighter trucks with smoother floors will require less pressure to turn. In most cases, 1100 to 1400 psi will be sufficient.

Note: Remember: EAS*i Pacer* uses a 10" Diameter Steer Tire.
DSS 300/350 uses a 9" Diameter Steer Tire.

FOTP-0006/mlc/02-13-02/C

PROCEDURES Cont.

1. Disconnect the battery before starting this rework.
2. Remove one bolt from the top mount position on a two bolt design and the middle bolt on a three bolt design. NOTE: Depending on the motor model, there will be 2 or 3 bolts in a row located in four places on the motor frame that hold the field windings.
3. Measure the bolt removed in step 2, then add 5/8 inch to that length. Match the length as close as possible to a bolt in the kit without going over length. AN OVER LENGTH BOLT MAY DAMAGE THE MOTOR. NOTE: The kit contains three different length bolts, but only one will be used.
4. Place two washers (provided) in the counterbore of the motor frame, then assemble the thermostat block using the new bolt. Tighten to 13-17 ft.lb. DO NOT OVER TIGHTEN.
5. Disconnect the leads from the harness to the old thermostat and connect them to the new thermostat. NOTE: Leave the old thermostat in place. There is no need to remove it.
6. Test for proper operation.

PARTS AVAILABILITY: Now available through the Parts Distribution Center.

FILING INSTRUCTIONS: File this notice just ahead of page 7-28 in Maintenance Manual 308625-002.

FOTP-0005/mlc/02-13-02/C

RAYMOND SERVICE BULLETIN

The Raymond Corporation
Corporate Headquarters
PO Box 130
Greene, New York 13778-0130

RSB PCR-01-025
February 21, 2002

Models
EAS*i Pacer*™, Dockstocker HP

SUBJECT: Intermittent fault codes

DESCRIPTION: The power or control cables may short to frame on the left side of tractor, where the cables go down to the motors, and may cause intermittent fault codes.

REMEDY: Add cable guard (P/N 360-031/004) to the inside of the hole cut in the tractor frame where the cables go down to the motors.

PROCEDURES: Apply the cable guard around the hole and crimp in place. Make sure smaller cables are on top of the larger cables.

PARTS AVAILABILITY: Available as of 02/25/02 through the Parts Distribution Center.

WARRANTY: Within normal Raymond Policy Guidelines

Flat Rate Book Reference	
Model	EAS*i*™ *Pacer*, Dockstocker HP
Code	9960
Time	.10

FILING INSTRUCTIONS: File this bulletin at the front of section 6, just ahead of page 6-5 in Maintenance Manual PDMM-0068.

FOTP-0006/mlc/02-13-02/C

Enter the appropriate input test for the suspected switch. If the test fails, proceed to the steps below.

1. Turn the key to the OFF position, unplug the handle from the module and the module from the vehicle manager.
2. Plug the handle directly into the vehicle manager, turn the key to the ON position and re-run the input test.

NOTE: A code 80 or 81 will appear during selftest.

3. If the test now passes, go to step 4. If the test fails, go to step 6.
4. Check continuity of the cable between the module and the vehicle manager.
5. If the cable checks good, replace the module. If the cable checks bad, replace the cable.
6. Using the switch table above, check the continuity of the handle from pin 14 to the appropriate connection with the switch depressed and released.
7. If the handle fails the continuity test, replace the handle. If it passes, replace the vehicle manager.

PARTS AVAILABILITY: Now available through the Syracuse Parts Distribution Center.

WARRANTY: Within normal Raymond Policy Guidelines

Flat Rate Book Reference	
Model	R30, R35, R40, R50, D35HP, D40HP, D50HP
Code	5097
Time	0.6

FILING INSTRUCTIONS: File pages 3 and 4 after page 6-44, in Maintenance Manual PDMM-0068.
File page 5 before page 6-87. Make a note on pages 103, 104, 105, 106, 122, 120, and 121 to refer them to this page.

FOTP-0006/mlc/7-11-01/A

RAYMOND PRODUCT IMPROVEMENT NOTICE

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RPIN No. PCR-99-R008A
October 17, 2000

Models
EASi™ *Pacer*

NOTE: This Notice supersedes RPIN No. PCR-99-R008, dated October 8, 1999.

SUBJECT: Slip-Sheet Conversion Kit

DESCRIPTION: Slip-Sheet attachments on model 630, 640 and 650 do not directly interchange with the EASi *Pacer*™ products built today.

REMEDY: A Slip-Sheet Conversion kit is available and is required to insure a proper fit-up.

PROCEDURES: Order and install the kit (P/N 4-007-500) from The Raymond Parts Distribution Center.

PARTS AVAILABILITY: Parts will be available as of 11/17/00 through the Syracuse Parts Distribution Center.

FILING INSTRUCTIONS: After Page 7-2 in Maintenance Manual PDMM-0068

FOTP/djm/5-12-00/A

Comp. Size	Adjusted Comp. size	Spacer width (in.)	Roller Assembly Order qty 5	Roller Support Order qty 5	Spacer	Hex Head Cap Screw Order qty 2	Washer Order qty 2
18.50	16.25	2.25	223-001-784/001	040-206	223-001-783/001	5-001-039	5-018-008
18.50	13.62	4.88	223-001-784/002	040-206	223-001-783/004	7-711-012/120	5-018/008
21.25	18.5	2.75	223-001-784/003	040-206	223-001-783/003	5-001-039	5-018-008
21.25	16.25	5.00	223-001-784/004	040-206	223-001-783/005	7-711-012/120	5-018-008
23.75	21.25	2.50	223-001-784/005	040-206	223-001-783/002	5-001-039	5-018-008
21.25	20.50	0.75			223-001-783/007	5-001-023	5-018-008
23.75	22.75	1.00			223-001-783/007	5-001-024	5-018-008
23.75	22.50	1.25			223-001-783/008	5-001-024	5-018-008

Install the required parts per Figure 2

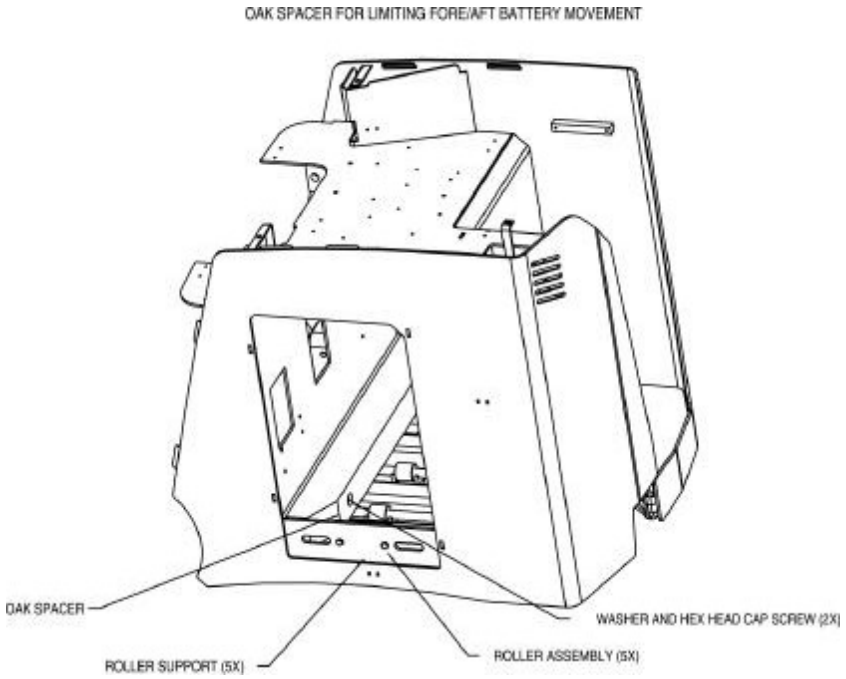


Figure 2

2b. For Fore and Aft Movement with Weighted Battery Spacers:

1. Measure the battery width and choose the adjusted battery compartment length closest to, but greater than the battery width.
2. Order and install the Oak spacer, 5 battery roller supports, 5 battery roller assemblies and 2 washers and hex head cap screws per the chart below.

RAYMOND SERVICE BULLETIN

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSB No. PCR-99-003
July 26, 1999

Models
EAS*i Pacer*™

SUBJECT: New Software Version 2.8

DESCRIPTION: New Software is available for the EAS*i Pacer*. This version has the following improvements:

- For trucks equipped with the variable pressure clamp function, the truck will now remember the last pressure setting used on power up.
- Smoother plugging action preventing one wheel from locking up during a plug.
- A blank display being installed would not always except the uploaded vehicle information from the vehicle manager. This has been corrected.
- Widened the neutral range on the lift pot to correct the pot not always returning to electrical/neutral after a lift.

PROCEDURES: Order PC Loader software (P/N 074-302-001/020) and Flash the truck with version 2.8

PARTS AVAILABILITY: Now Available

WARRANTY: Within normal Raymond Policy Guidelines

Flat Rate Book Reference	
Model	EAS*i Pacer*
Code	9920
Time	.50

FILING INSTRUCTIONS: File in the front of PDMM 0068

RAYMOND SERVICE BULLETIN

The Raymond Corporation
Corporate Headquarters
P O Box 130
Greene, New York 13778-0130

RSB No. PCR-98-002
August 20, 1998

Models
060, 630, 640, 650

SUBJECT: Hose reels leaking

DESCRIPTION: Hose reels may leak in some applications and replacing the seals may not resolve the problem.

REMEDY: A new redesigned reel spindle is available providing greater wear resistance. New improved reels are available as a complete replacement, new replacement spindles are also available.

Replace Old Hose Reel P/N	With New Hose Reel P/N
870-460/200	870-460/300
870-461/200	870-461/300
870-462/200	870-462/300
870-463/200	870-463/300
Replace Old Spindle P/N	With New Spindle P/N
870-460/211	870-460/311

PROCEDURES: When servicing a leaking hose reel, check for wear on the spindle and in the manifold hub. If grooves are found greater than .010″ replace both the spindle and hub manifold.

PARTS AVAILABILITY: August 18, 1998

WARRANTY: Within normal Raymond Policy Guidelines

PROCEDURES (Cont'd.):

6. Clean both the bus bars on the disconnect switch and the cable terminals with finer than 200 grit sandpaper or an equivalent grade of steel wool.
7. Reinstall the cable terminals on the disconnect switch and tighten to a torque value of 100 +/- 10 inch pounds.
8. Reinstall the Power Disconnect Switch in the truck using the screws removed in step 4.
9. Reinstall the knob removed in step 3.
10. Test the Power Disconnect Switch for proper operation.

FILING INSTRUCTIONS: Maintenance manual: MM100 between pages 5.98 & 5.99 and PDMM-0037 between pages 72 & 73

is. 090". Install one 1/16" (.062") shim and one 1/32" (.031").

1. Line the upper carriage bearings up with the telescopic cross tie.
2. Pry the carriage over so that one of the upper bearings is touching the telescopic.
3. Using a feeler gage, measure the gap between the opposite bearing and the telescopic. The bearing is canted at an angle to the telescopic. Be sure to measure the side of the bearing closest to the telescopic.
4. Install shims as required so that the bearings interfere with the uprights by .015" or less. Be sure to have approximately the same amount of shims on both sides.
5. Repeat steps 1 through 4 for the bottom carriage bearings

PARTS AVAILABILITY: Now Available

Warranty: This bulletin is for informational purposes only. Normal Warranty guidelines apply.

SERVICE

ATTENTION: Service Managers, Service Personnel, and Parts Managers

DATE: August 8, 1997

MODEL: DSS 300/350

SUBJECT: Lift pump failures

DESCRIPTION: Some lift pump failures have occurred in applications where very slow speed lifting occurs regularly.

RESOLUTION: If the lift pump (P/N DS225083) has failed, replace it with a new lift pump (P/N DS225869). Lift pump (P/N DS225083) is no longer recommended for use in DSS 300/350 trucks.

PROCEDURES: If the installed lift pump has failed, replace it with (P/N DS225869).

Follow the procedures on page 7-36 of the DSS 300 and DSS 350 Maintenance Manual (S/N 1000 and UP), or page 7-12 of the DSS 300 and DSS 350 Maintenance Manual (S/N below 1000).

When installing the new lift pump, verify it is the correct pump by locating the manufacturer's part number stamped on the pump. The last two digits of the manufacturer's part number for the new pump are 88. The old pump has 21 as the last two digits.

PARTS AVAILABILITY: Available 9-8-97.

PARTS AVAILABILITY:

Warranty: Normal Warranty Applies

Flat Rate Book Reference		
	Code	**Time**
Setup	Setup	.5
Cover	0005	.2
Cover	0005	.2
R/R Valve	5140	.2
R/R Prop Valve Spring	5142	.1

PROCEDURES Cont'd.:

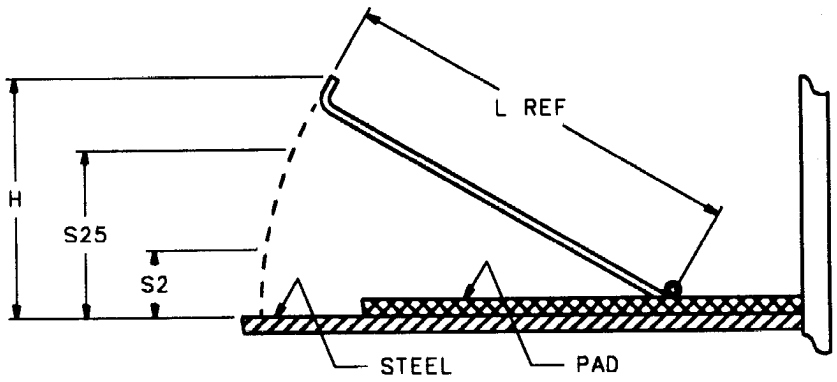
11. Connect the rod from the deadman pedal to the cam actuator.
12. Connect the tubing to the master cylinder. Some bending may be required to make the connection.
13. Adjust the deadman bracket so the access cover can be installed. The end with the return spring must be in farther than the reservoir end.
14. Fill the reservoir and bleed the brakes.
15. Adjust the deadman pedal height per instructions included in this bulletin.
16. Check the routing of the wires. Make sure they do not hit the steering plate when it is rotated. Add plastic ties as needed to hold the wires in place.
17. Check the adjustment of the brake calipers.
18. Install the covers
19. Test the operation of the brakes and deadman switches.
20. Return the truck to service

PEDAL ADJUSTMENT:

The deadman switching arrangement is made up of two switches (S2 and S25). As the pedal is released, the first switch to deactivate (S2) disconnects travel circuits. The second switch (S25) disconnects auxiliary and lift pump motors.

All measurements should be taken on the top lip of the deadman pedal from the steel floor of the operator's compartment. (See sketch below)

Adjust the length of the pedal rod so that the pedal height (H) and switch activations for S2 and S25 fall within the ranges specified below. In addition there should be a minimum of .5 inch travel left in the pedal when S25 deactivates.



	L = 9.25	L = 13.87
H	4 - 4 ¼	5 ¾ - 6 ¼
S25	3 ¼ - 3 ¾	4 7/8 - 5 3/8
S2	1 ¼ - 2	2 - 3

3. Lay the handle on a flat surface with the screws facing upward and cable positioned off to the right. (Fig. 2)

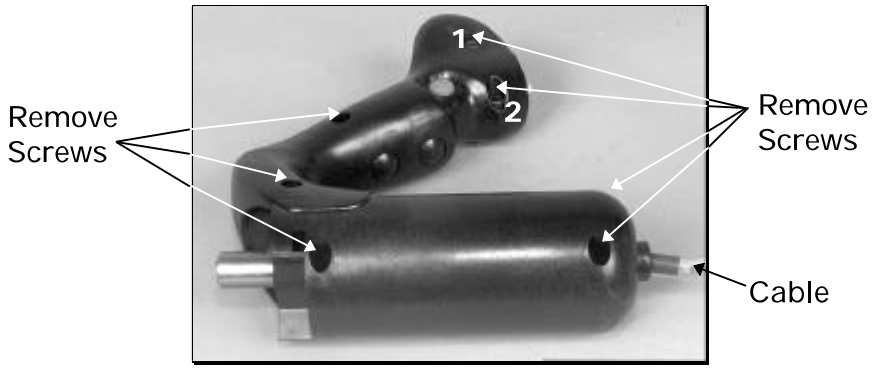


Figure 2

4. Remove all seven screws.
5. Flip the handle from top to bottom so that the lift potentiometer is toward you and the screw holes face down. (Fig. 3)

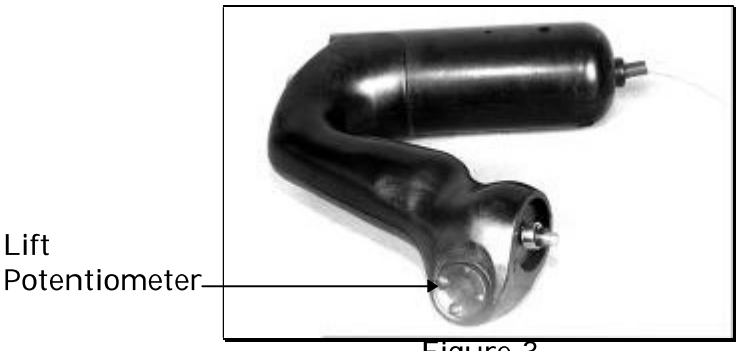


Figure 3

6. Separate the two halves of the handle. (Fig. 4)

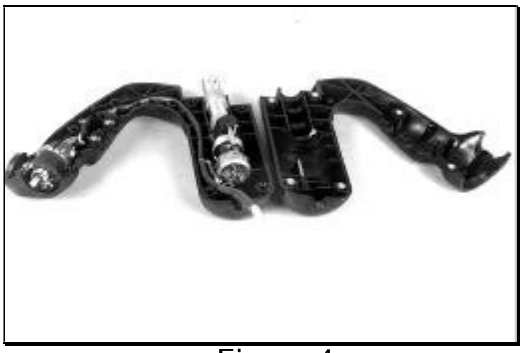


Figure 4

7. Loosen the throttle positioner in the handle and slide the spring to the right exposing the set screw that holds

SERVICE

ATTENTION: Service Managers, Service Personnel, and Parts Managers

DATE: September 27, 1996

MODEL: DSS 300 / 350

SUBJECT: Drive Unit Seal Replacement

DESCRIPTION: An axle seal tool has been created to allow the replacement of the drive unit's axle seal

RESOLUTION: Use the following procedure to replace the Drive unit axle seal.

PROCEDURES:

1. Remove the Drive unit by following the instructions for removal under "Replacement of a Drive Unit" per the Maintenance Manual.
2. Remove the Drive Unit cover by removing the screws that secure it and break the adhesive bond.
3. Loosen the clamp nut locking screw and then back off the clamp nut (DS223279). Remove the axle from the drive unit housing using a rubber mallet if necessary. Be sure not to damage the gear surfaces.
4. Remove excess Loctite from the threads of the axle and clamp-nut so that one turns easily on the other.
5. A- If the bearing (DS224185, DS224186) and seal (DS224187) came out with the axle, remove the bearing from the axle with a puller. Remove the seal. Install a new seal on the axle. Press the bearing onto the axle. Be sure the bearing is properly seated against the shoulder.

   B- If the bearing (DS224185, DS224186) and seal (DS224187) did not come out with the axle, carefully tap the bearing out from the inside of the