



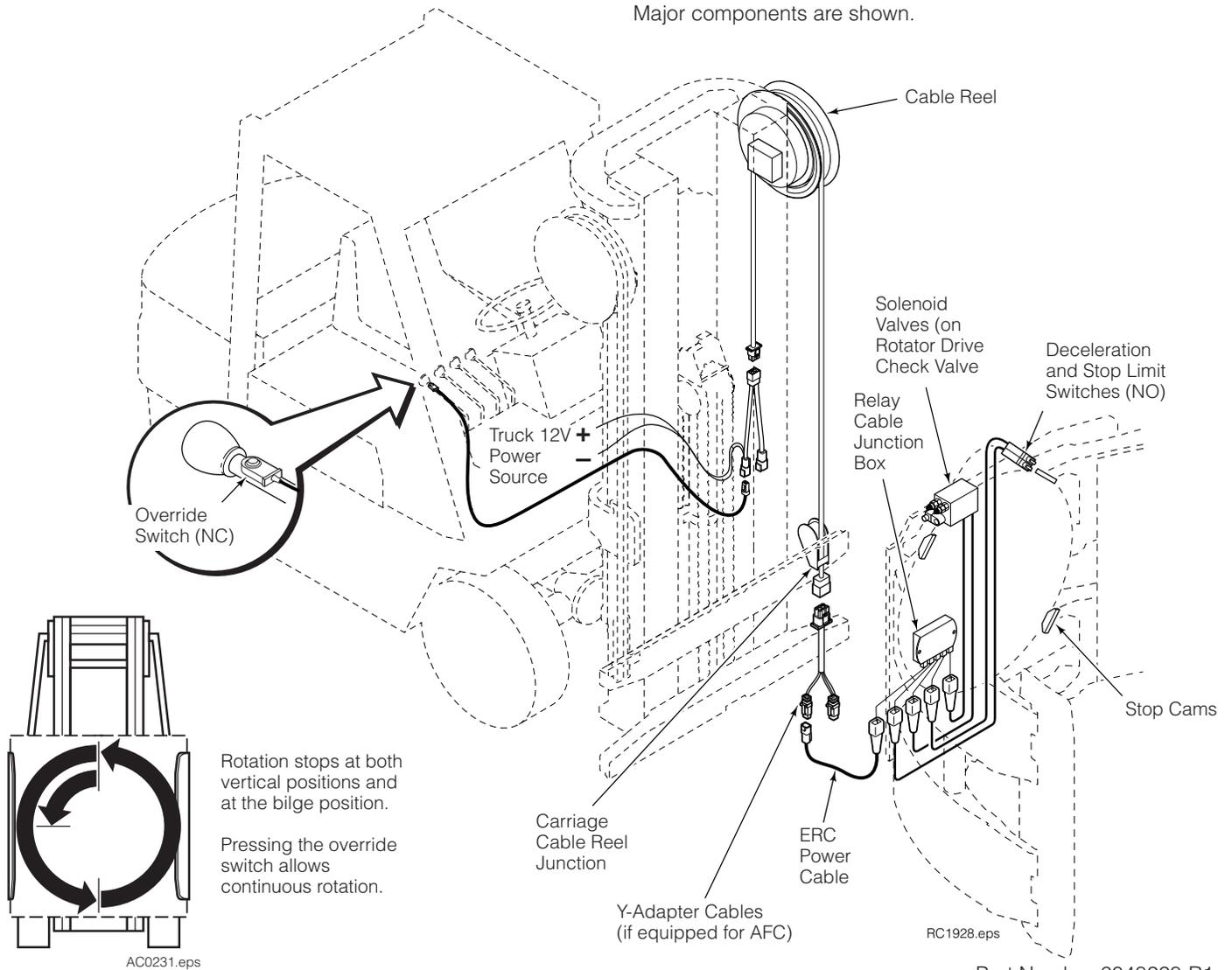
Installation Instructions

Electronic Rotational Control Group - UL[®]

This manual provides installation instructions for Cascade electronic Rotational Control (ERC) Kits. Rotational Control provides accurate stops during rotation to position the attachment arms at true vertical or bilge position to reduce product damage of misclamped loads. An electrical supply

circuit using a cable reel is required to provide an electrical connection between the Electrical Rotational Control on the attachment and the truck electrical system. A normally closed pushbutton switch mounted on the truck ROTATE control lever is provided to override the stop positions for continuous rotation.

Major components are shown.



cascade[®]
corporation

For Technical Support . . .

Call: 1-800-227-2233 Fax: 1-888-329-8207
Internet: www.cascorp.com
Write: Cascade Corporation, PO Box 20187, Portland, OR 97294

To Order Parts . . .

Call: 1-888-227-2233 Fax: 1-888-329-0234
Internet: www.cascorp.com
Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH 45505

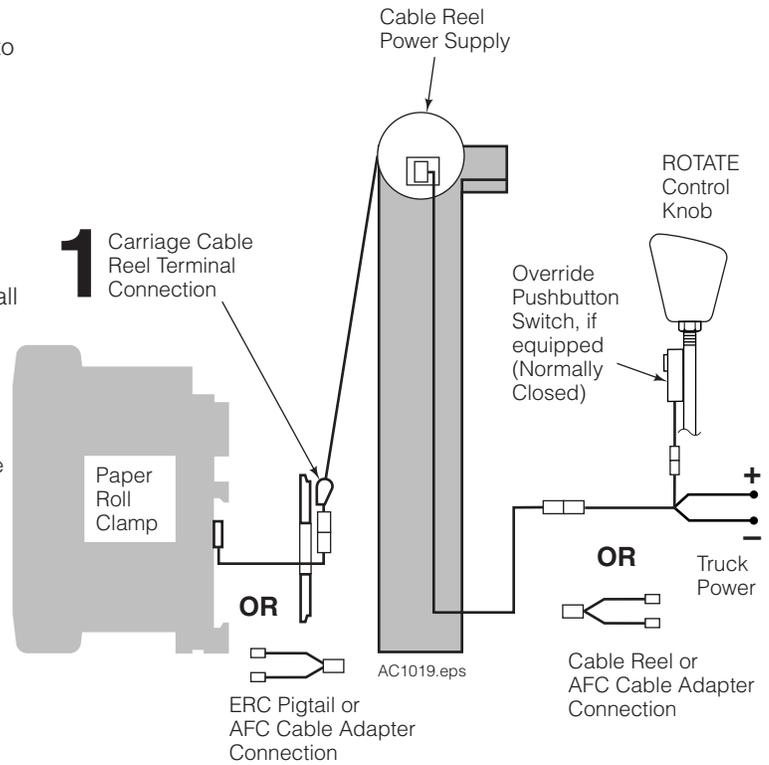
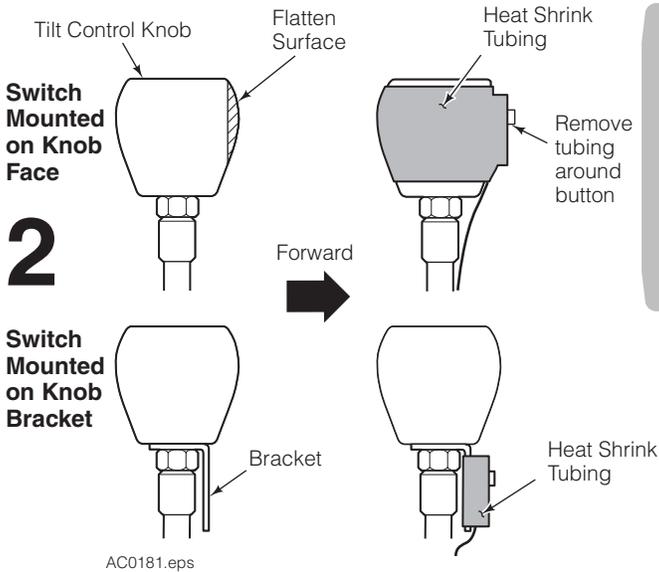
Cable, Switch Installation

- 1 Connect the power cable from the electronic rotational control (ERC) enclosure on the back of the attachment to the cable reel carriage cable junction.

NOTE: Cable Y-adapters used if adaptive force control (AFC) equipped.

- 2 Install pushbutton switch on ROTATE control lever.

NOTE: The installation shows connection to Cascade Cable Reel Kit 679061 which includes components for over-the-mast electrical supply from the truck to the attachment. Refer to Installation Manual 679932 to install the cable reel on the mast.



Operation and Adjustment

- 1 Test the installation before putting the truck in service. When rotating, attachment travel should stop at the vertical and bilge handling positions. Wait 3 seconds to rotate after stopping **OR** press the rotate override button to continue rotating.

- If rotation **stops** at the vertical or bilge position, continue with step 2.
- If rotation **stops momentarily and then continues** at the vertical or bilge positions:

A Reduce the hydraulic input pressure for the rotate function.

OR

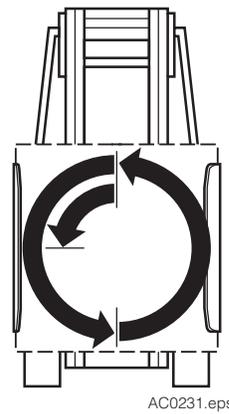
B Adjust both counterbalance cartridges CCW in 1/2 turn increments until rotation stop at the vertical and bilge position.

- If rotation **does not stop** at the vertical or bilge positions:

A Inspect the wiring installation. Look for loose connection or pinches cables.

B The limit switch end rollers are not fully engaging the deceleration ramp in the vertical or bilge position. Adjust the limit switch actuators to engage the ramp. The ramp can also be adjusted for precision of the stop position.

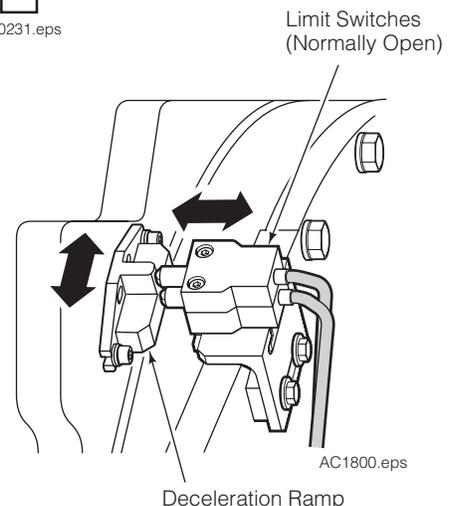
- 2 To continue rotation, wait 3 seconds after stopping or the rotate override button must be pressed to continue rotation. To rotate without stopping, press the override button.



Rotation stops at both vertical position and at the bilge position.

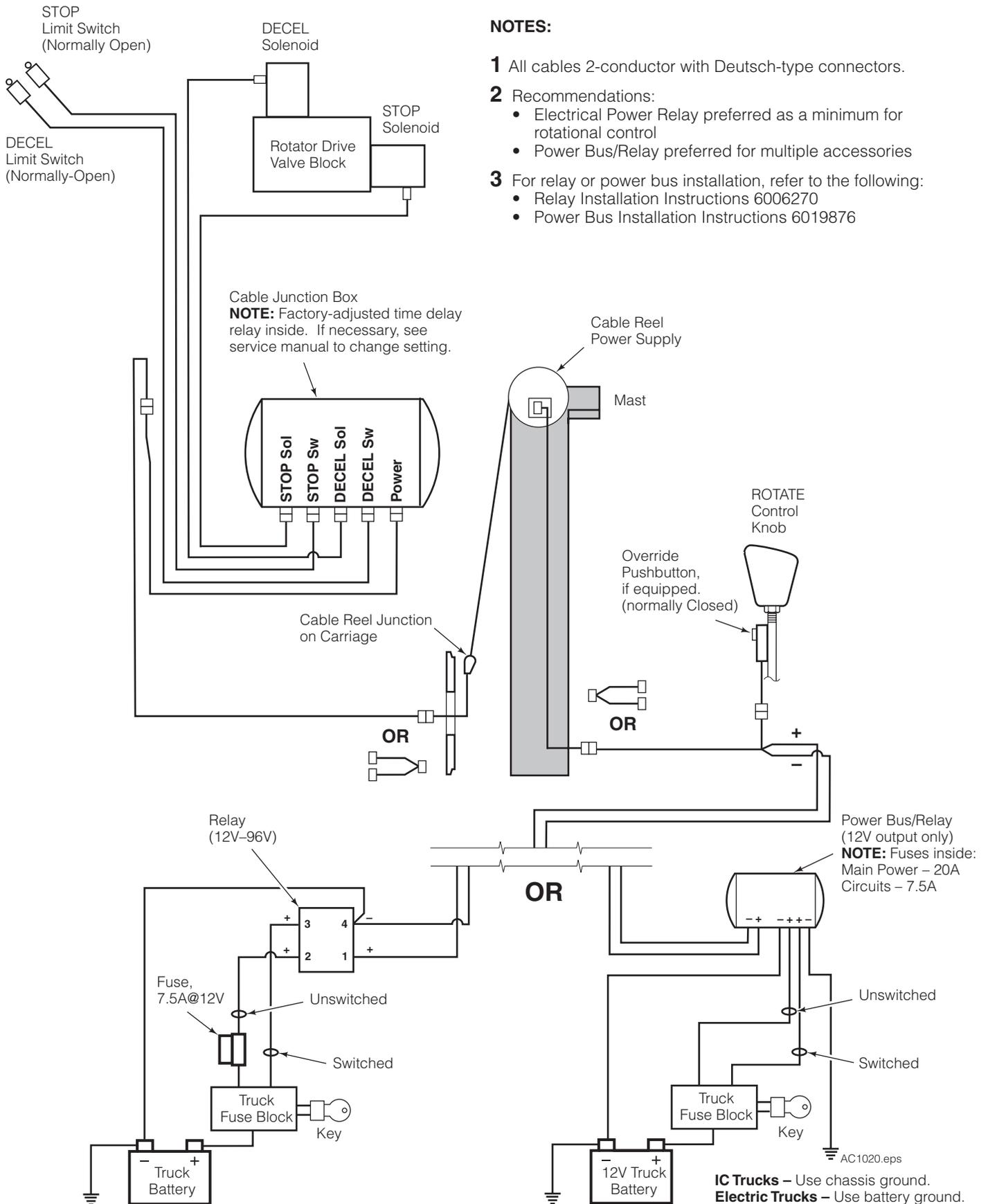
Pressing the override switch allows continuous rotation.

Wait 3 seconds or press override button to continue rotating.



Deceleration Ramp

Rotational Control Electrical Hookup



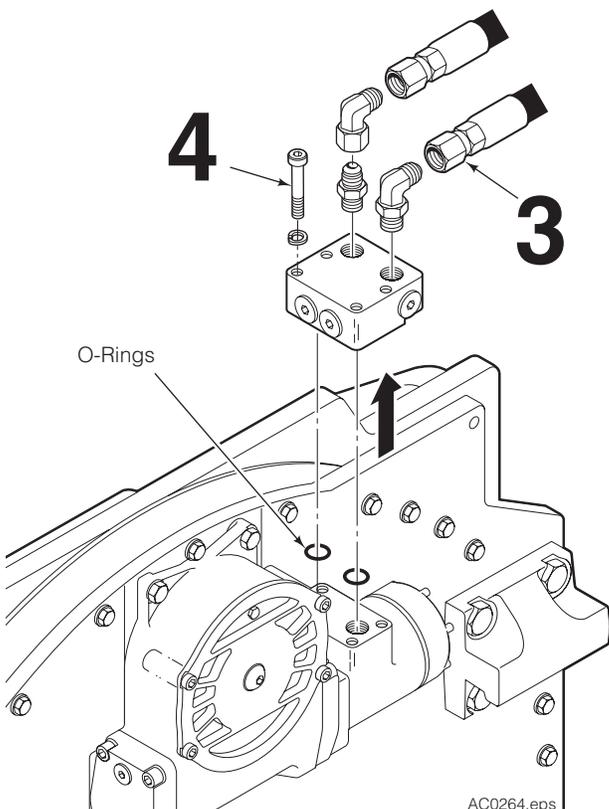
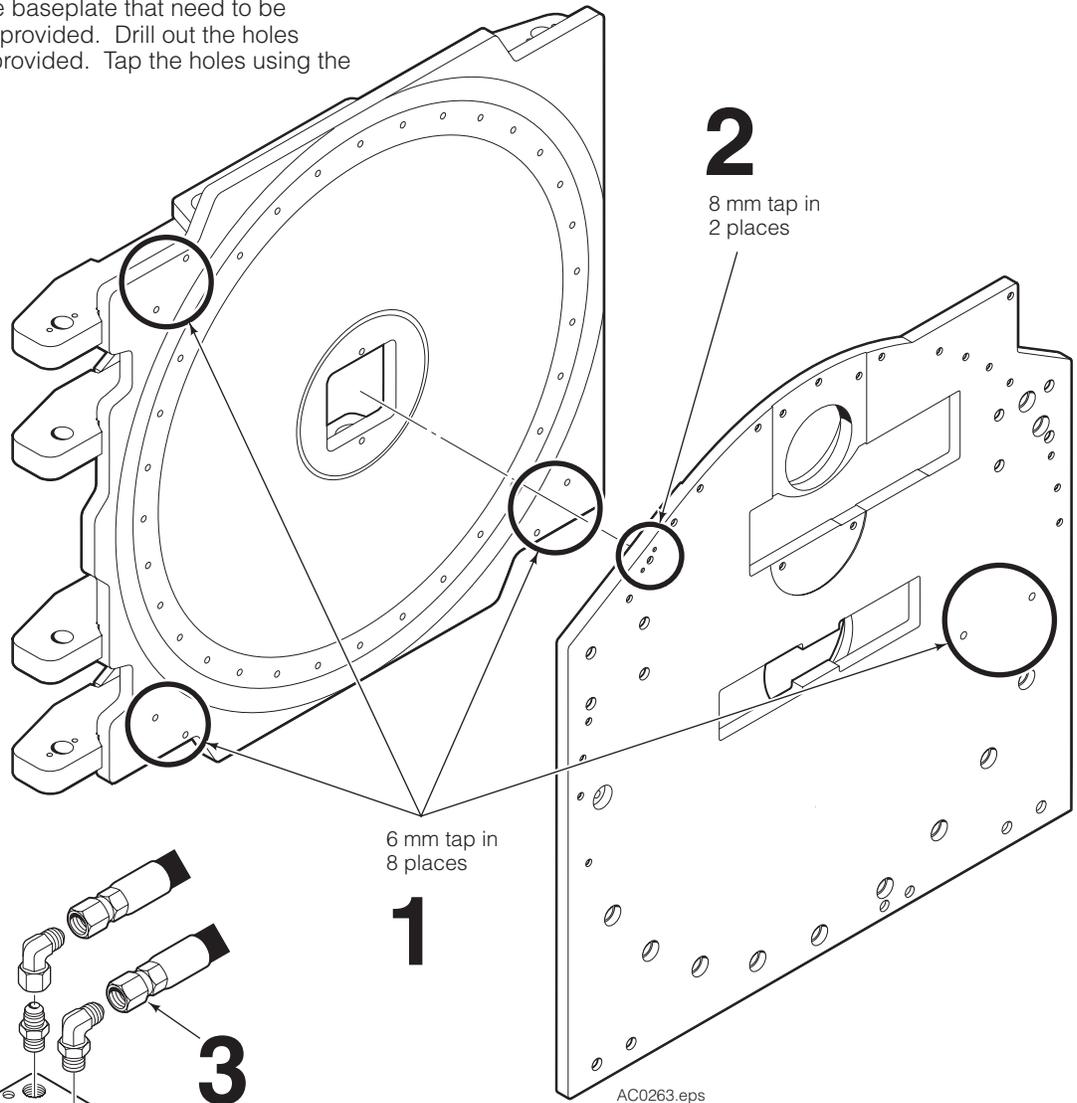
NOTES:

- 1** All cables 2-conductor with Deutsch-type connectors.
- 2** Recommendations:
 - Electrical Power Relay preferred as a minimum for rotational control
 - Power Bus/Relay preferred for multiple accessories
- 3** For relay or power bus installation, refer to the following:
 - Relay Installation Instructions 6006270
 - Power Bus Installation Instructions 6019876

Retrofit Installation

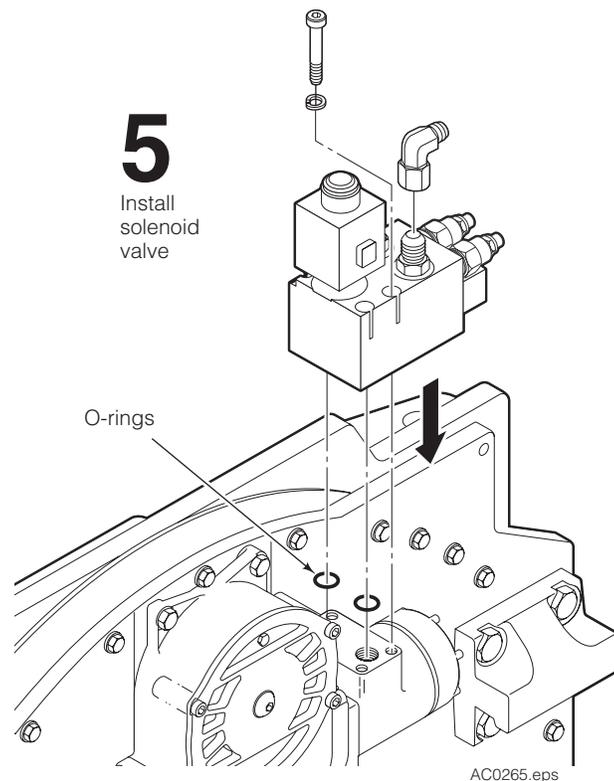
Rotational control is also available as a field installation kit for attachments that have predrilled faceplates and baseplate.

- 1** Locate the eight holes that need to be tapped with the 6 mm tap provided. Six holes are location in the faceplate and two hole are located in the baseplate. Drill out the holes using the 5.3 mm drill bit provided. Tap the holes using the 6 mm tap.
- 2** Locate the two holes in the baseplate that need to be tapped with the 8 mm tap provided. Drill out the holes using the 7.3 mm drill bit provided. Tap the holes using the 8 mm tap.



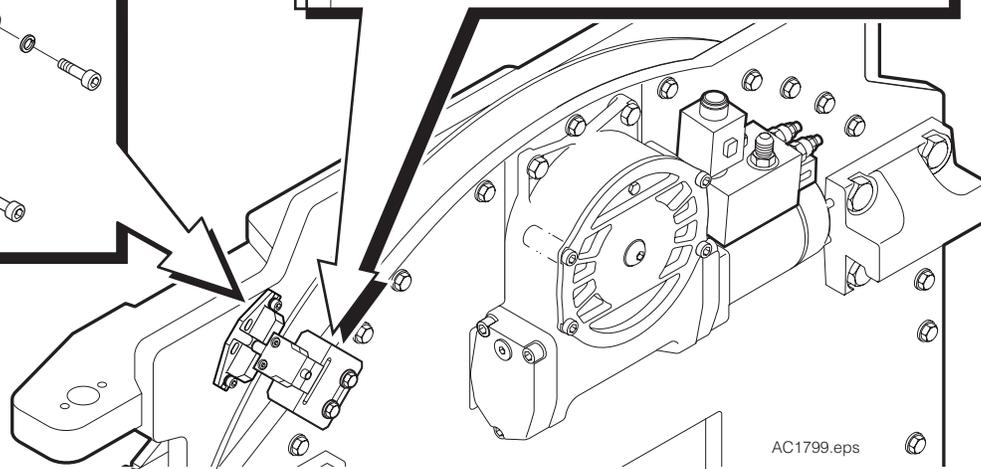
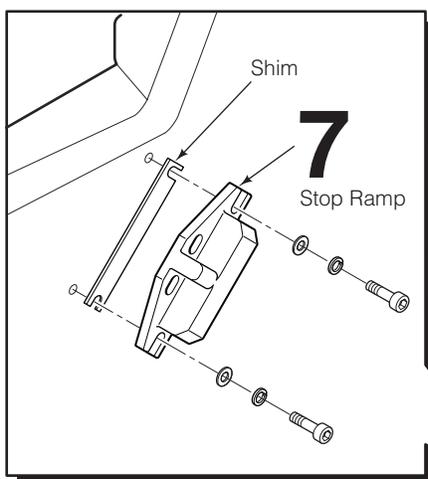
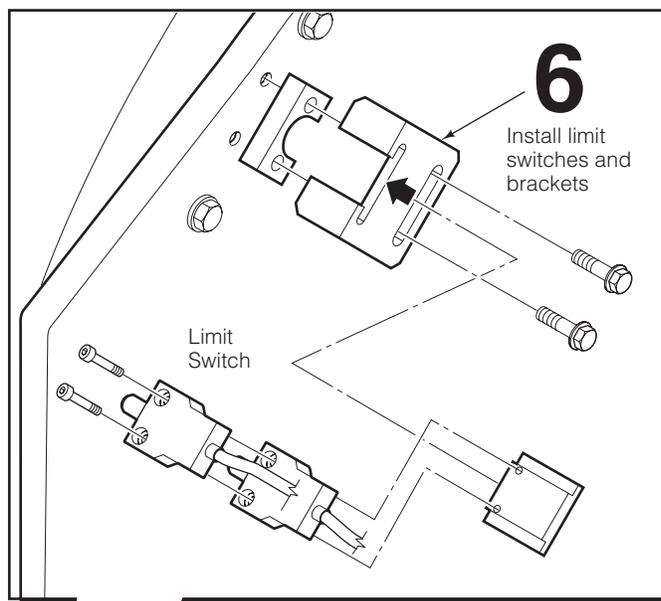
- 3** Disconnect hydraulic hoses to the drive group. Tag the hoses for reassembly.
- 4** Remove the four capscrews fastening the check valve to the drive group. Keep track of the two O-rings between the check valve and drive motor.

- 5** Install the new solenoid valve to the drive group. Place the two O-rings between the solenoid valve and drive motor. Install the four capscrews and tighten to 20 ft.-lbs.

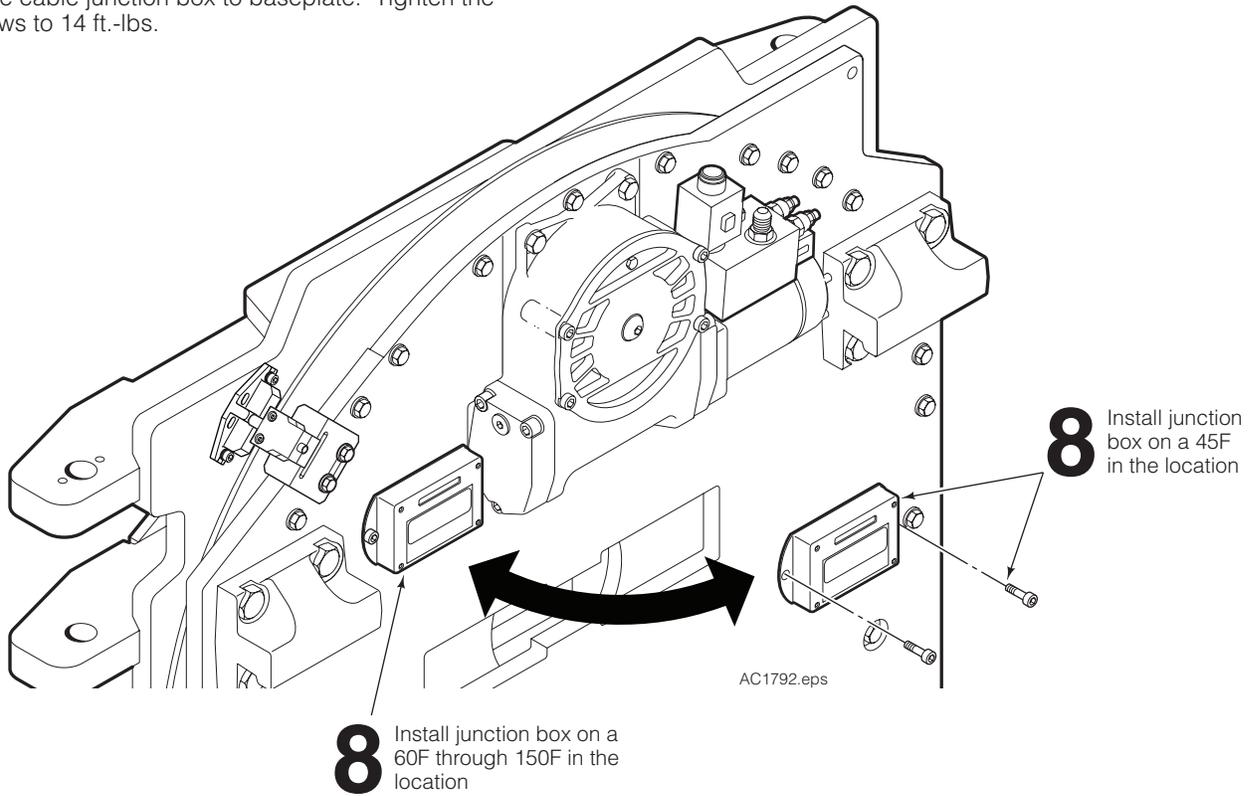


- 6** Install the limit switches and brackets to the baseplate. Tighten the baseplate bracket capscrews to 14 ft.-lbs.

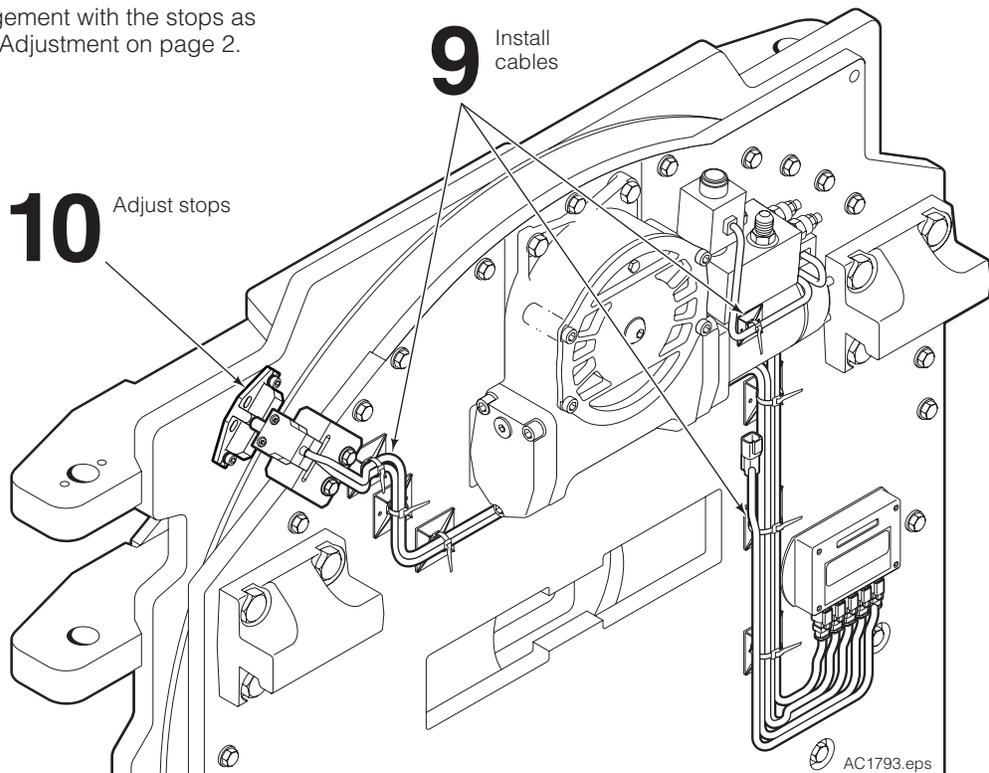
- 7** Install the stop ramps to the faceplate. Tighten the stop capscrews to 3 ft.-lbs. Shim as required.



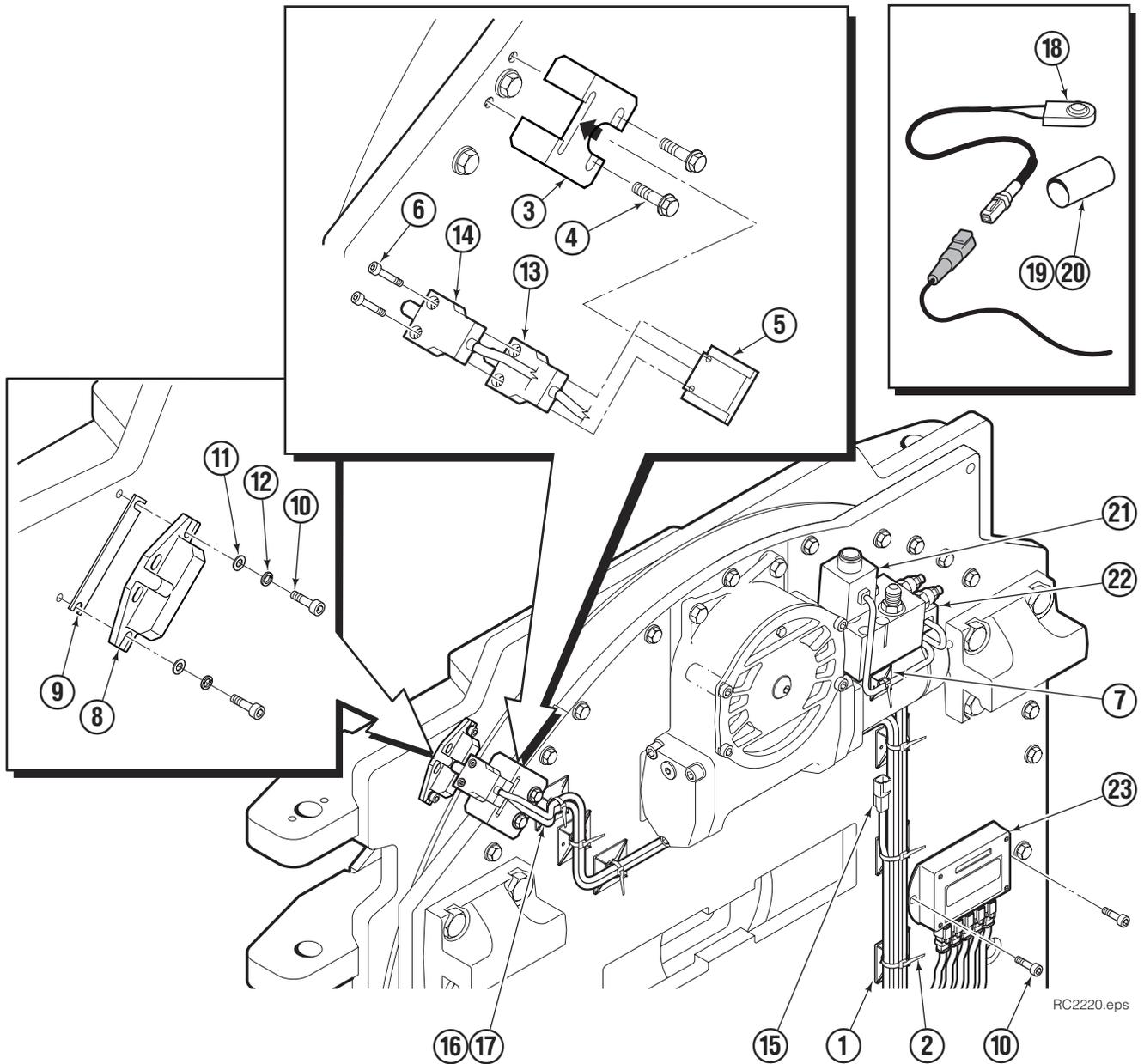
- 8** Install the cable junction box to baseplate. Tighten the capscrews to 14 ft.-lbs.



- 9** Install the cables. Use the adhesive blocks and wire ties to secure the wiring.
- 10** Adjust the limit switch engagement with the stops as described in Operation and Adjustment on page 2.



Rotational Control Group



REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
		6048215	Rotational Control Group, 12V, UL	14	1	6048219	UL Switch/Cable Assembly
1	7	6002451	Cable Tie Anchor	15	1	222023	Power Cable
2	9	6002479	Cable Tie	16	1	228720	Extension Cable Assembly
3	1	222021	Switch Mounting Bracket	17	1	228721	Extension Cable Assembly
4	2	6002668	Capscrew, M8 X 20	18	1	6048222	UL Switch Assembly
5	1	222020	Switch Mounting Plate	19	1	6001641	Shrink Tubing, 25 mm dia.
6	2	768784	Capscrew, M5 X 35	20	1	221728	Shrink Tubing, 50 mm dia.
7	2	6002501	Cable Tie Anchor	21	1	6048223	UL Solenoid/Cable Assembly – 12V
8	3	6047884	Casting, ERC Ramp	22	1	6048226	UL Solenoid/Cable Assembly – 12V
9	3	6009228	Shim	23	1	6048229	UL Relay Enclosure Assembly
10	8	761170	Capscrew, M6 X 20			6009181	Thread Cutting Tap, M6 (not shown)
11	6	202346	Washer, M6			6009182	Thread Cutting Tap, M8 (not shown)
12	6	206323	Lockwasher			6009185	Twist Drill, 5.3 mm (not shown)
13	1	6048221	UL Switch/Cable Assembly			6009186	Twist Drill, 7.3 mm (not shown)

Reference: Common Parts Groups 6048217, 6048224.

Do you have questions you need answered right now? Call your nearest Cascade Service Department. Visit us online at www.cascorp.com

AMERICAS

**Cascade Corporation
Parts Sales**

2501 Sheridan Ave.
Springfield, OH 45505
Tel: 888-CASCADE (227-2233)
Fax: 888-329-0234

Cascade Canada Inc.

5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
Fax: 905-629-7785

Cascade do Brasil

Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA

**Cascade Italia S.R.L.
European Headquarters**

Via Dell'Artigianato 1
37050 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

Cascade (Africa) Pty. Ltd.

PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
Fax: 27-11-394-1147

ASIA-PACIFIC

Cascade Japan Ltd.

2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea

121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, Korea
Tel: +82-32-821-2051
Fax: +82-32-821-2055

Cascade-Xiamen

No. 668 Yangguang Rd.
Xinyang Industrial Zone
Haicang, Xiamen City
Fujian Province
P.R. China 361026
Tel: 86-592-651-2500
Fax: 86-592-651-2571

**Cascade India Material
Handling Private Limited**

No 34, Global Trade Centre
1/1 Rambaugh Colony
Lal Bahadur Shastri Road,
Navi Peth, Pune 411 030
(Maharashtra) India
Phone: +91 020 2432 5490
Fax: +91 020 2433 0881

Cascade Australia Pty. Ltd.

1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand

15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: +64-9-273-9136
Fax: +64-9-273-9137

**Sunstream Industries
Pte. Ltd.**

18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

