

**Universal Rudder
Kit Prowler 15
(2005&Newer)
Drifter and Zest**



125 Gilman Falls Road
Building B
Old Town, ME 04468
800-8-KAYAKS
www.oceankayak.com

Please read kit instructions carefully prior to installation.

Many of our kit installations can be viewed at www.youtube.com/paddleoceankayak.

Before getting started we recommend sorting out and separating the rudder parts for easy access during assembly.

KIT CONTENTS:

ITEM	PART #	DESCRIPTION	QTY
RUDDER ASSEMBLY			
A	07.2685.0000	Aluminum Rudder Body	1
B	07.2684.0000	Rudder Blade	1
C	07.2689.0000	Black Rudder Bracket	1
D	07.2136.0000	10-32x1/2" PH PHIL Screw	9
E	07.3300.0050	Rudder Lines Kit	1 Set
V	07.2694.0000	Rudder Catcher/Rabbit Ears	1
W	07.2191.0000	Top Flat Rudder Bracket	1
X	07.2192.0000	Bottom Bent Rudder Bracket	1
RUDDER PEDAL ASSEMBLY			
F	01.1315.1573	1/4-20 3/4" SS Truss Bolt	4
G	01.1315.0967	22" Right Rudder Pedal	1
H	01.1315.0967	22" Left Rudder Pedal	1
I	07.2842.0000	Neoprene Cluster Washer	4
J	07.2591.0000	1/4x20 Heavy Hex Nut	4
CLAM CLEAT ASSEMBLY			
K	07.2480.0000	Clam Cleat	1
L	07.2063.0000	Screw #8 5/8" Self Tapping	2
KAYAK PAD EYE ASSEMBLY			
M	01.1315.0459	Cherry Rivet	2
N	01.1315.0430	Kayak Pad Eye	1
STEERING CABLE ASSEMBLY			
O	07.2090.0000	Rubber Grommets	4
P	01.1315.0356	Tubing 1/8ID X 1/4OD PE	14'
Q	07.2507.0000	Copper Oval Crimp 1/16	4
R	07.2776.0000	1/4" Black Tube Shrink	6"
HATCH ASSEMBLY			
S	07.3014.0000	6" Hatch w/ Cat Bag	1
T	07.2119.0000	Screw 10-32 5/8" PH Screw	6
U	07.2116.0000	10-32 Nylock Nut	6

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TOOLS REQUIRED:

Drill, 13/64" Drill Bit, 3/8" Drill Bit, Rivet Gun, Strip of Wire, 1/4" Drill Bit, Lighter, Wire Crimpers, Pliers, Wire Cutter, Hot Glue Gun, Soapy Water Lubricant, Phillips Head Screwdriver, 7/16" Wrench, Knife or Scissors, Safety Goggles, 3/8" Wrench, 1/4" Wrench, Jigsaw, and Multi Purpose Jig Saw Blade.

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PROCEDURE:

Cut out Center Hatch

1. Lay the foam gasket from the 6" Hatch Kit (S) centered over the small circular tray in front of the seat area. Trace the inside of the gasket creating a circle around the tray.
2. With a drill and a 1/4" bit drill two holes next to each other so that you can start cutting with your jig saw.
3. Using your jig saw with a multi purpose blade, cut out the circular hatch by following the line you traced in step #1. After cutting, smooth down the edges of the hatch using a rasp.



Fig.#A Gasket



Fig.#B Jig Saw

Prepare Cable Holes

4. With a 3/8" drill bit, drill two holes on the Stern end for the rudder cables – See Fig. #C. Drill two more holes with a 3/8" bit on the Stern end of each Foot Pedal area – See Fig. #D.



Fig.#C Stern Cable Holes



Fig.#D Foot Pedal Cable Holes

5. Insert Rubber Grommets (O) into the four holes you drilled in the last step. Ensure that the grommet fits into the hole smoothly and is not bound up.

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Fig.#E Grommets

Install Tubing:

1. Using scissors cut the ends of the Tubing (P) at an angle to make inserting the tubing easier.



Fig.#F Tubing Ends

2. Straighten a coat hanger (or use a length of straight wire), and insert it through the tubing to keep it straight as you are inserting it. Spray the tubing with soapy water (or another lubricant) and insert it into one of the stern grommets. *See Fig.# G.* Continue pushing the tubing through the grommet, keeping it in the space between the tank well and the outside wall of the kayak. *See Fig.# H* (Tilting the boat to the side that you are working on may help keep the tubing in place.) Spray tubing with lubricant as needed.



Fig.#G Insert Wire and Tubings

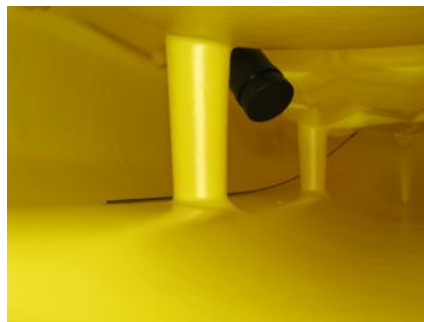


Fig.#H Tubing outside the scuppers

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3. Reach inside the 6” hatch opening to pull the tubing through the hull and guide it through the grommet at the foot pedal area. Hold your fingers over the grommet as you pull the tubing through so the grommet stays in place. Remove the wire.
4. Pull tubing taut. Rub the tubing immediately in front of the grommets with a dry cloth to remove the lubricant and finish, creating a dull, sticky area. Position the tubing so the dull part is at the grommets. This will prevent the tubing from sliding through the grommets. Cut tubing 1” from grommets on both ends. Repeat for other side.

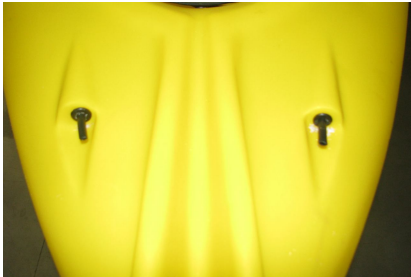


Fig.#I Cut Tubing Stern End



Fig.#J Cut Tubing

Install Foot Pedals:

5. Place one Foot Pedal (G & H) assembly on the ledge above the foot well making sure the adjustment strap is to the Stern of the boat. The bungee knot at the Bow end of the Foot Pedal rail should be on the bottom of the rail. Position the assembly so the front edge of the track is even with the front wall of foot well. *See Fig.#K.* Mark the two mounting holes and drill the mounting holes using ¼” drill bit.



Fig.#K Pedal Alignment

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- Put 1/4"x 3/4" Truss Bolts (F) through the track and add a Neoprene Washer (I) to the backside of the pedal rail, around the mounting holes. The washer will be between the track and the boat. Secure the track to the boat with 1/4" Hex Nuts (J). Repeat for other Foot Pedal.

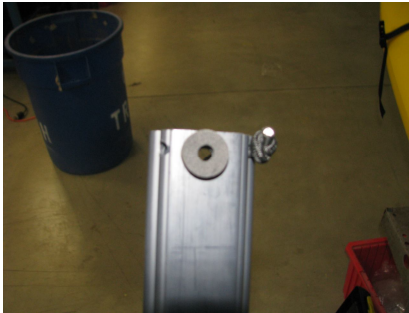


Fig.#L Neoprene Washer



Fig.#M Installed Foot Pedal

Steering Cables:

- Unwind and straighten steering cables. Feed cable through tubing so all excess is out the stern grommet.
- Tighten the straps on the foot pedal so that there is 3" of cable showing between the end of the tubing and the end of the foot pedal rail. *See Fig.# N*

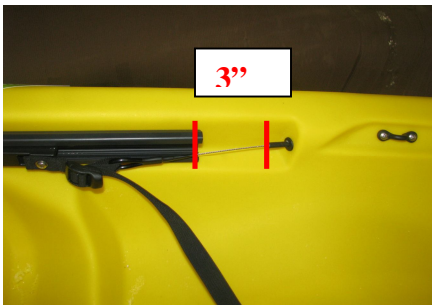


Fig.#N Installed Foot Pedal

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Mounting Rudder Body:

9. Remove the four small black nylon screws from the Stern end of the boat. Attach a Rudder Bracket (C) to the Stern end using 10-32 x1/2" Screws (D). Ensure that the extended part of the bracket is on the bottom. *See Fig.# O*
10. Remove nut, washer, and 4" screw from front of Rudder Body (A). Insert rudder body onto the bracket. Put 4" screw, washer, and nut back in place. Using 7/16" wrench and screwdriver, tighten self-locking nut until screw is flush with nut. Do not over-tighten. The rudder body should be able to swivel freely. *See Fig.# P*



Fig.#O Rudder Bracket

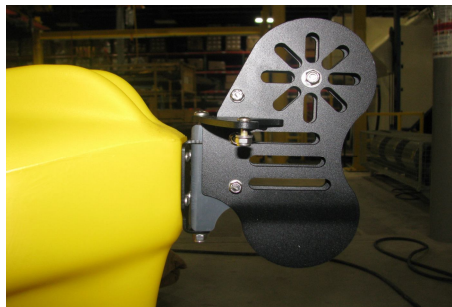


Fig.#P Rudder Body

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*** Please Note – For older model boats with a pointed Stern end follow the steps below for mounting the Rudder Body.**

1. Remove all black nylon screws from the inserts on the Stern end. Attach Rabbit Ears (V) to stern of kayak by placing the rabbit ears in the recessed mounting area 2” from the end of the boat. The mounting platform should be towards the rear of the boat. (See Fig. # JJ), and the ears towards the front. Use 10-32x1/2” PH Screws (D) to attach rabbit ears into the two gold colored gold inserts.
2. Attach flat bracket (W) to top of rudder platform using two 10-32x1/2” PH Screws (D). Lightly tighten, allowing for adjustments. See Fig. # JJ
3. Attach the bent bracket (X) to bottom of rudder platform using a Use 10-32x1/2” PH Screw (D). Lightly tighten, allowing for adjustments. See Fig. # JJ

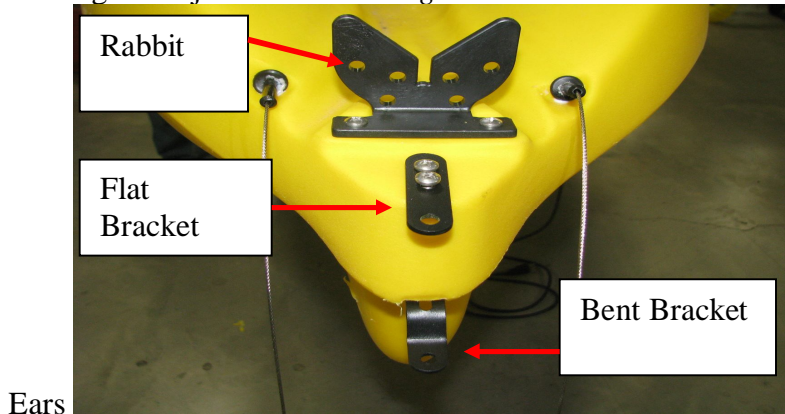


Fig.#JJ Rabbit Ears

4. Remove nut, washer, and 4” screw from front of rudder body. Insert rudder body between brackets. Put 4” screw, washer, and nut back in place. Using 7/16” wrench and screwdriver, tighten self-locking nut until screw is flush with nut. Do not over-tighten. The rudder body should be able to swivel freely.
5. Position the rudder body so that it is straight, in line with the rabbit ears. See Fig. # KK. Also make sure that the rudder body is parallel with the rudder platform. See Fig. # LL. When the rudder body is properly aligned, tighten the 3 machine screws that are holding the flat and stepped brackets



Fig.#KK Alignment



Fig.#LL Alignment.2

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Attaching Steering Cables

11. Cut the piece of Black Shrink Tube (R) in half. Take one of the pieces of black Shrink Tube and insert it onto the cable that is on the left side. Insert two of the Copper Crimps (Q) onto the same cable. Take the end of the cable and re-insert it through the copper crimps creating a loop. Place this loop around the screw on the wing. Tighten loop using copper crimp until crimp is just in front of the wing. *See Fig.# Q*. Make sure rudder body is still properly aligned and that the cable is pulled straight.



Fig.#Q Steering Cable

12. Hold crimp in place and remove the loop from the screw. Using the crimpers (or pliers), crimp in 3 places, both ends and the middle, to secure the cable. *See Fig. #R*. Cut the loose cable end, close to the copper crimp.



Fig.#R Crimping

13. Slide the black shrink tube over the copper crimp and the cut end of the cable. Using the lighter, heat the shrink tube until it shrinks and molds over the crimp and the cut end of the cable. Do not overheat!

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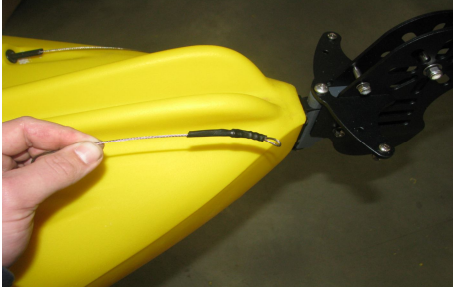


Fig.#S Shrink Tube

14. Put one washer back onto screw. Place cable loop on the screw. Add the other washer and self-locking nut, and tighten using 3/8" wrench and screwdriver. Do not over-tighten. Stop when the screw is flush with the nut. *See Fig.# T.* Tighten the pedal strap, using the tri-glide, to take up any loose cable, keeping the cable loop at the end of the track. Attach the other side the same way.

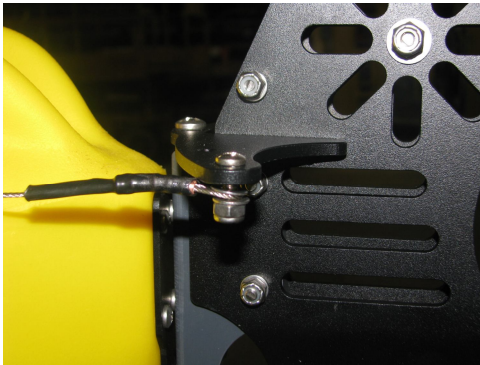


Fig.#T Attached Cable

Attaching Rudder Blade

15. Disassemble the larger screw/nut/washer/bushing found at the center of the Rudder Body. Insert the Rudder Blade (B) into the rudder body, lining up the center holes of the body and the cam. Insert the bushing through the center hole.
16. Insert the screw through the bushing, and tighten washer and self-locking nut with 7/16" wrench and screwdriver. Do not over-tighten. Stop when the screw is flush with the nut. *See Fig.# U.* Tighten up the roller on the Bow side of the rudder body so the screw is flush with the nut. *See Fig.#V.*

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Fig.#U Rudder Blade



Fig.#V Tighten Roller

Deck Fittings

17. Line up a Pad Eye (N) on the left side of the boat even with the Stern end of the Stern most Pad Eye next to the cockpit and 2 ½” toward the outside of the boat. Using the Pad Eye as a jig, drill the two holes with a 13/64” drill bit. *See Fig. #X.* Insert Cherry Rivets (M) into holes and pop with a Cherry Rivet gun. (Note: If the rivet post does not break flush, grab post with a pair of pliers and bend back and forth so post will break. It may be necessary to file post down flush after breaking).
18. Position Clam Cleat (K) 3 ½” toward the Stern from the Pad Eye you just installed. The high point of the cleat is to the Bow. Attach using 5/8” Self Tapping Screws (L). Drill the screw into place. Do not over-tighten.

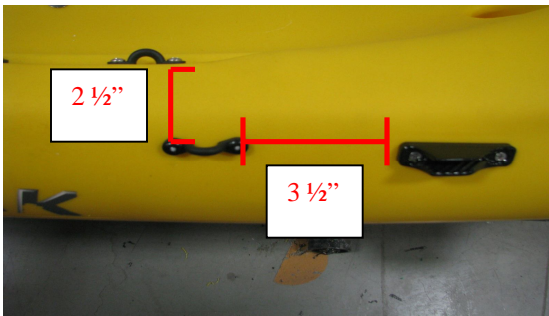


Fig.#W Pad Eye and Cleat

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*** Please Note – For the Zest, follow the instructions below to mount the Pad Eye and Clam Cleat.**

1. Line up a Pad Eye (N) on the left side of the boat even with the Deck Fitting closest to the Cockpit. Place the Pad Eye 5" toward the Stern from the Deck Fitting. Using the Pad Eye as a jig, drill the two holes with a 13/64" drill bit. Insert Cherry Rivets (M) into holes and pop with a Cherry Rivet gun. (Note: If the rivet post does not break flush, grab post with a pair of pliers and bend back and forth so post will break. It may be necessary to file post down flush after breaking).
2. Position Clam Cleat (K) 5" toward the Stern from the Pad Eye you just installed. The high point of the cleat is to the Bow. Attach using 5/8" Self Tapping Screws (L). Drill the screw into place. Do not over-tighten. *See Fig.# MM*

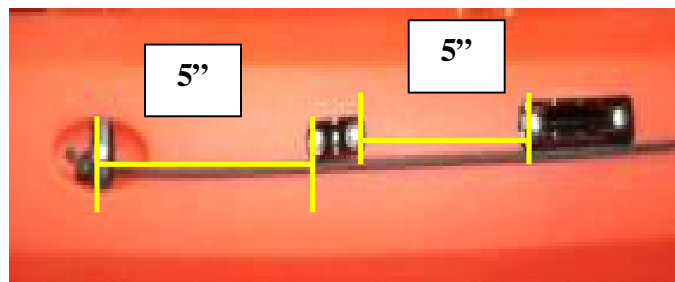


Fig.#MM Pad Eye and Cleat

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Retraction Line and Bungee

*** Please Note – For the Zest and older models that take the rabbit ears, follow the step listed below.**

1. Run the Retraction Line (E) towards the rudder and pass it through the left hole of the rabbit ears as shown in *Fig.#00*.

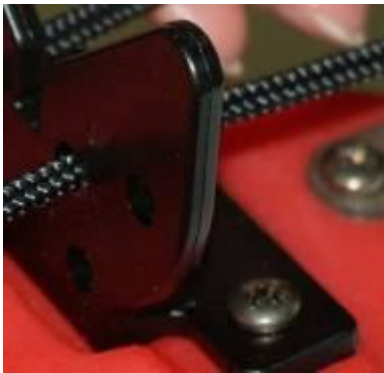


Fig.#00 Line through Rabbit Ears

19. Feed the Retraction Line (E) under the roller guide on the rudder body. Keep the retraction line to the left side of the rudder blade. Bring it under and then up and around the gray cam (on the rudder blade). See *Fig.# X*.



Fig.#X Retraction line & Rudder

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20. Thread the retraction line through the holes on the top of the rudder blade. Starting on the left hand side, insert the retraction line from left to right through the middle hole. Then insert the line from right to left through the front hole. Then insert the line a final time from left to right through the rear hole. *See Fig. #Y.* Thread the retraction line back under the roller guide. Insert the bottom line in the clam cleat.



Fig.#Y Retraction line & Rudder.2

*** Please Note – For the Zest and older models that take the rabbit ears, follow the step listed below.**

1. After running the Retraction line through the Rudder Blade bring it towards the Jam Cleat after passing it through the right side hole of the Rabbit Ears as shown in *Fig.#PP*.



Fig.#PP Line through Rabbit Ears

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21. There will be two knots that will hold the Bungee (E) and retraction line together: one on the top retraction line (knot #2) and one on the bottom (knot #1). Each knot is made up of two knots which are positioned side by side. *Fig.#Z* shows what the finished attachment will look like.



Fig.#Z Retraction line & Rudder.3

22. With rudder blade in down position, begin first knot by taking the bungee and looping over the bottom retraction line two times, from left to right. *See Fig.#AA*. Then take bungee and insert it through the loops, from left to right. *See Fig.#BB*. Then take right loop and place over the top of the left loop and tighten. The first half of knot #1 is finished. *See Fig.#CC*.



Fig.#AA Knot.1



Fig.#BB Knot.2



Fig.#CC Knot.3

23. Slide the knot along the retraction line until it is about one inch in front of the clam cleat. *See Fig.#DD*. Working to the left of the previous knot, begin the second half of knot #1 by taking the retraction line and looping it over the bungee two times, from right to left. Then take retraction line and insert it through the loops, from right to left. *See Fig.#EE*.



Fig.#DD Knot.4



Fig.#EE Knot.5

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24. Then take the left loop and place it over the top of the right loop and tighten. Slide this knot over so it is snug up to the previous knot. Pull long ends of retraction line and bungee to tighten. *See Fig.#FF.* Take the bungee on the left side (long end) and insert it through the bottom of the strap eye, up through the top. *See Fig.#GG.*

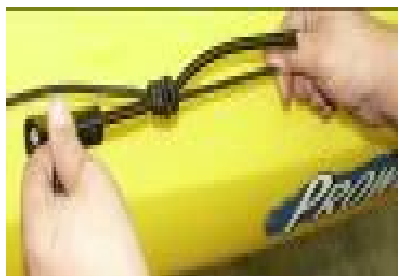


Fig.#FF Knot.6

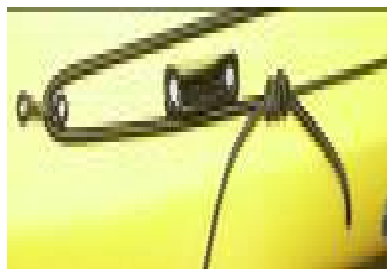


Fig.#GG



Fig # HH Hot Glue

25. Move the rudder blade to the up position. Take the bungee that has passed through the strap eye back to the clam cleat and begin the second knot (which is the same as the first knot). Take bungee and loop it over the top retraction line two times, from left to right. Then take bungee and insert it through the loops, from left to right.
26. Then take right loop and place over the top of the left loop and tighten. The first half of knot #2 is finished. To tighten, slide knot towards the rear, along the retraction line until it is about one inch past the clam cleat. Move the rudder blade to the down position.
27. Working to the left of the previous knot, take retraction line and loop it over the bungee two times, from right to left. Then take retraction line and insert it through the loops, from right to left. Then take the left loop and place it over the top of the right loop and tighten.
28. Slide this knot over so it is snug up to the previous knot. Pull retraction line and bungee to tighten.
29. Cut the excess retraction line and bungee about one inch from each knot. Use a lighter to seal the ends of the retraction lines and bungees to keep them from fraying. Then use a hot glue gun to seal ends of the bungee. *See Fig.#HH.* Note: You can see samples of this hot glue on other bungee already installed on boat.

Fig.#HH Hot Glue

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Complete Hatch Install

30. Peel the backing off of the same Hatch Gasket you used to trace your hatch hole and adhere it to the underside of the hatch ring with the cover screwed in. Make sure the hatch fits in the hole you cut with the jigsaw. Remove the backing from the exposed side of the hatch ring and set the unit back into the hatch hole. Drill out the six holes around the rim with a 13/64" bit. Remove hatch cover and insert 10-32x5/8" PH Screws (T) into the holes. Add 10-32 Nylock Nuts (U) to the underside of the screws and tighten the same way you would lug nuts on a tire – partially tighten each screw until all of them are attached, then re-tighten. *See Fig.#II.*



Fig.#II Install Hatch

31. Take the free end of the hatch rope that is hanging from the hatch cover and insert it up through the small hole in the bottom lip of the hatch ring you installed in the last step. Once through the hole tie a double overhand knot. Screw on hatch cover. *See Fig.#NN.*



Fig.#NN Hatch Rope

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Revision History			
Date	Rev From	Rev To	Summary
12/2/09		Original.	Complete re-write of old obsolete instruction
12/08/2010	Original	A	Changed header and added pic for parts list
10/02/2011	A	B	Per E-0234 Removed Slotted Footbraces (from # 01.1315.0959 to # 01.1315.0967)

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