

INSTALLATION - SERVICE INSTRUCTIONS

765 South Pierce Avenue Louisville, Colorado 80027

303-665-6901 Phone 800-525-1963
www.markwilliams.com



Bulletin #104 page 1 of 3

50290/50295 WELD CUP

August '19

PART NUMBERS:

50290... Weld Cup, 3.5" Tube OD (Each)
50295... Weld Cup, 4" Tube OD (Each)

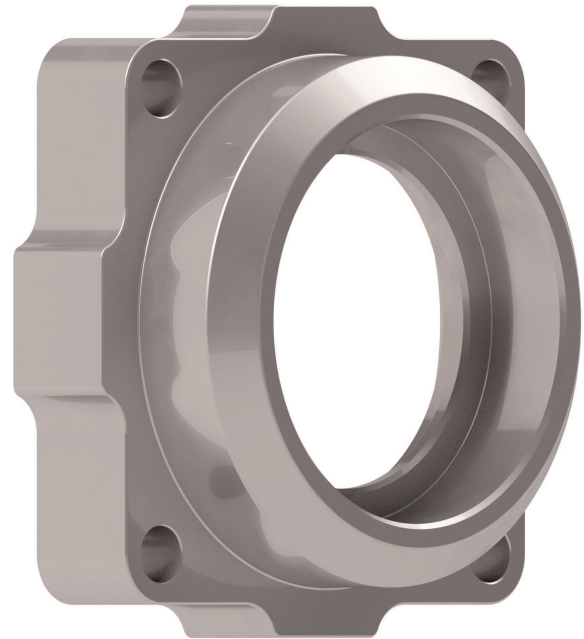
DESCRIPTION

PARTS INCLUDED:

FRR-014... Outboard Oil Seal
50290/50295... Weld Cup

PRIMARY APPLICATIONS:

Rock Crawling, Ultra4, General Off-Road Use



ASSEMBLY OVERVIEW:

- 1) Cut housing to required length and ensure the cut is square with the tube. See service bulletin #100 for housing and axle lengths.
- 2) Orient weld cup so the top face of the cup will be level when the housing is in the vehicle. This ensures brake calipers will be at exact 12:00, 3:00, or 9:00 positions. see Figure 1.
- 3) Remove any paint from housing tube and clean thoroughly. Chamfer the OD edge of the housing tube to roughly 0.06" X 45°. see Figure 2.
- 4) Check housing for light press to tight slip fit. The ID of the weld cup should measure 0.002"-0.004" smaller than the OD of the housing tube. Weld cups are bored to accept either a 3.5" OD housing (Part # 50290) or a 4.0" OD housing (Part # 50295). It may be necessary to enlarge the weld cup bore to achieve the proper fit.
- 5) Heat weld cup with a torch to expand and slide onto housing. Ensure weld cup is square to the tube and the tube has bottomed out in the weld cup. Double check tube length from step 1.
- 6) Tack weld the inside of the tube to the weld cup in 6-8 places. Tig process preferred for all welding operations.
- 7) Weld around the inside and outside of the tube. See Figures 3 and 4. Be careful to not get weld splatter in seal bore or shoulder.
- 8) Press FRR-014 seal(s) into outboard side of weld cup. See Figure 2 for seal orientation.
- 9) If using MW axle kit, part number 50255/50265, continue to service bulletin #102
- 10) If using MW brake kit, part number 71900, continue to service bulletin #103

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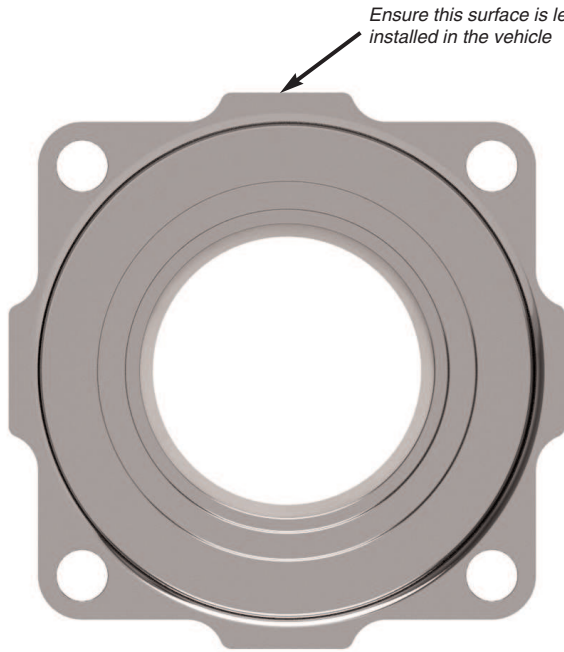


Figure 1: Weld Cup Orientation

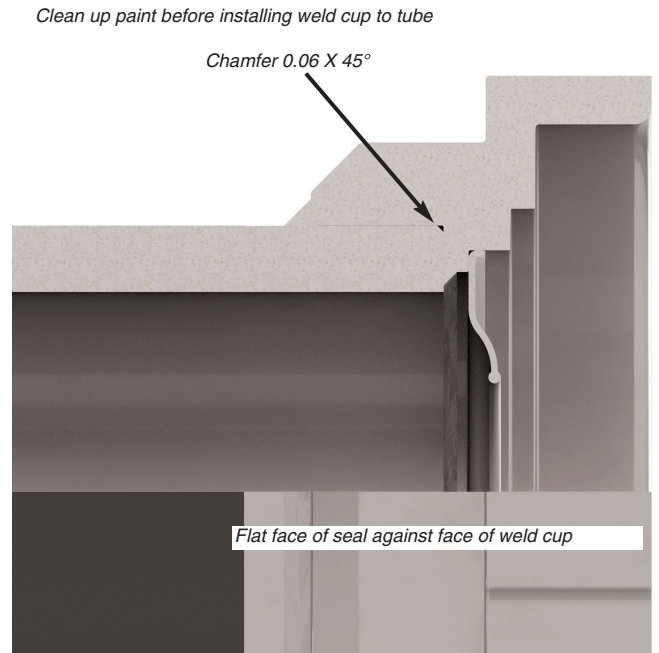


Figure 2: Housing Tube Cleanup

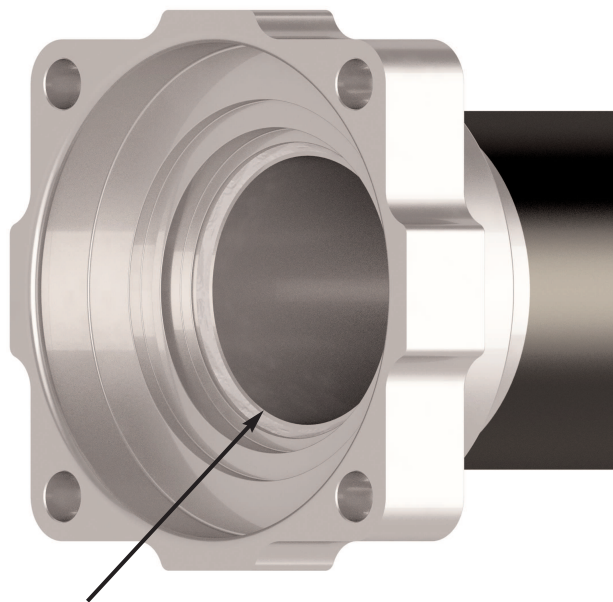


Figure 3: Inside Weld Area

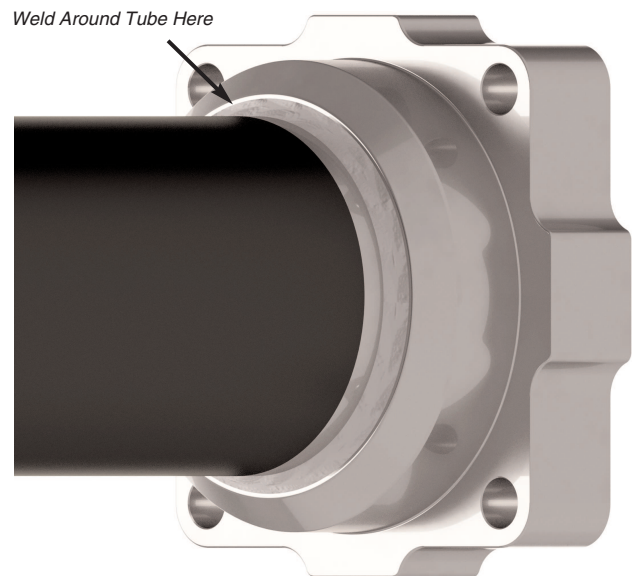
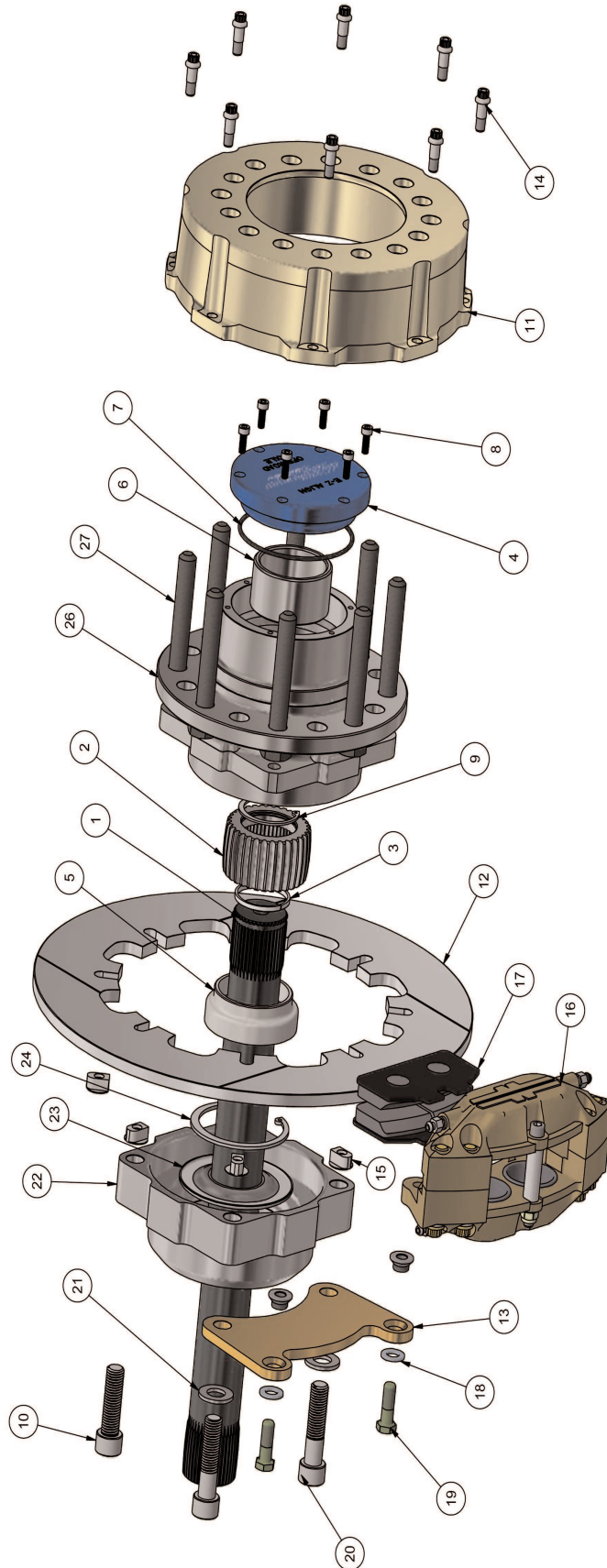


Figure 4: Outside Weld Area



50290/50295 Weld Cup Kit

(Kit quantity is for one corner, same as shown below)

ITEM	QTY	PART NUMBER	DESCRIPTION
22	1	50295	WELD CUP, F3500 HUB TO 4" TUBE (EA)
23	1	FRR-014	SEAL, LIQUID TIGHT NASCAR FLOATER
24	1	HO-295	INTERNAL RETAINING RING 2.95" (.75mm)
25	1	NOT INCLUDED PARTS BELOW	
26	1	50289	REDRILLED TIMKEN F350 UNIT BEARING

71900 Brake Kit

(Kit quantity is for entire rear end, quantity shown below is for one corner)

ITEM	QTY	PART NUMBER	DESCRIPTION
11	1	71028	ADAPTOR, BRAKE HAT F350-CUP
12	1	71029	DISC, F350 HUB-WELD CUP
13	1	71031	BRACKET, CALIPER MOUNT, F350 HUB TO WELD CUP
14	8	71033	BOLT, 12 POINT BRAKE ADAPTOR
15	8	71037	DRIVE BUTTON FOR 340 SLOTTED DISK
16	1	81100-F350	CALIPER, THIN DISC, RADIUS MOD ASSEMBLY
17	2	81130-F350	FERODO HI-FRICTION LINING
18	2	ANI22584	WASHER, HARD 3/8 X 1.078
19	2	AN6-10A	BOLT, AIRFRAME 3/8 X 1.078
20	2	216.14.60.1.50	SCOKET CAP, 14mm X 80mm 1.5mm PITCH
21	2	227.14.28WA	WASHER, M14 SCREW SIZE, 15MM ID X 28MM OD

50255/50265 EZ-Align Axle Kit

(Kit quantity is for entire rear end, quantity shown below is for one corner)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	50297/50298	40 SPLINE AXLE, F350 HUB
2	1	50292	SPLINED BUSHING, F350 HUB
3	1	50293	SPLIT RING, 1.96, F350 HUB
4	1	50294	HUB COVER, F350 HUB
5	1	50296	LOCATING SPACER REAR, F350 HUB
6	1	50297	LOCATING SPACER FRONT, F350 HUB
7	1	-153	3.693 OD O-RING
8	6	216.05.15.0.8	BOLT, METRIC SOCKET HEAD M5-0.8 X 15mm
9	1	HO-175	INTERNAL RETAINING RING, 1.75" BORE
10	2	216.14.50.1.50	SCOKET CAP, 14mm X 50mm 1.5mm PITCH