



Service Bulletin

Bulletin Number: **SB 22-356**
Release Date: **October 6th, 2022**
Distribution: **Heil Dealers, Heil Technical Services, Heil Customer Care**
Subject: **Half/Pack® Vertical Arm Welds**

NOTE: READ THIS BULLETIN IN ITS ENTIRETY BEFORE BEGINNING ANY REPAIR WORK.

This Service Bulletin is for all Half/Pack® Automated Front Loader (“AFL”) units that may have missing vertical welds on the AFL arms. The unit(s) that should be inspected are identified in the Products Affected section of this Service Bulletin. **The vertical arm welds MUST be inspected.** If some welds are determined to be missing after inspection, follow the proper welding installation steps listed in this Service Bulletin.

1. PLANNING INFORMATION

A. Products Affected

This Service Bulletin applies to all Half/Pack® AFL units using the serial numbers listed below:

HPE4965839	HPE4966441	HPE4966874	HPS4966636	HPS5016568	LRE6001111
HPE4965840	HPE4966455	HPE4966875	HPS4966637	HPS5016570	LRE6001112
HPE4965841	HPE4966456	HPE4966899	HPS4966642	HPS5016572	LRE6001113
HPE4965842	HPE4966459	HPE4966911	HPS4966645	HPS5016574	LRE6001114
HPE4965843	HPE4966460	HPE5016431	HPS4966666	HPS5016575	LRE6001115
HPE4965844	HPE4966461	HPE5016470	HPS4966676	HPS5016599	LRE6001116
HPE4965845	HPE4966496	HPE5016473	HPS4966699	HPS5016600	LRE6001117
HPE4965846	HPE4966513	HPE5016486	HPS4966700	HPS5016601	LRE6001118
HPE4965847	HPE4966520	HPE5016490	HPS4966729	HPS5016603	LRE6001119
HPE4965848	HPE4966544	HPE5016503	HPS4966759	HPS5016616	LRE6001120
HPE4965849	HPE4966545	HPE5016559	HPS4966774	HPS5016623	LRE6001123
HPE4965850	HPE4966552	HPE5016562	HPS4966796	HPS5016624	LRE6001125
HPE4965851	HPE4966582	HPE5016564	HPS4966797	HPS5016625	LRE6001127
HPE4965852	HPE4966589	HPE5016565	HPS4966822	HPS5016626	LRE6001128
HPE4965853	HPE4966604	HPE5016569	HPS4966844	HPS5016641	LRE6001130
HPE4965854	HPE4966627	HPE5016573	HPS4966862	HPS5016651	LRE6001131
HPE4965855	HPE4966644	HPE5016586	HPS4966863	HPS5016659	LRE6001133
HPE4965856	HPE4966646	HPE5016592	HPS4966864	HPS5016670	LRE6001134
HPE4965857	HPE4966648	HPE5016593	HPS4966865	HPS5016671	LRE6001136
HPE4965858	HPE4966654	HPE5016598	HPS4966866	HPS5016726	LRE6001137
HPE4965859	HPE4966677	HPE5016620	HPS4966868	HPS5016761	LRE6001138
HPE4965860	HPE4966680	HPE5016628	HPS4966909	HPS5016762	LRE6001140
HPE4965861	HPE4966681	HPE5016630	HPS4966910	HPS5016763	LRE6001141



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HPE4965862	HPE4966694	HPE5016650	HPS4966912	HPS5016943	LRE6001142
HPE4966356	HPE4966698	HPE5016683	HPS4966918	LRE6001078	LRE6001143
HPE4966358	HPE4966707	HPE5016717	HPS4966939	LRE6001084	LRE6001144
HPE4966359	HPE4966743	HPE5016769	HPS4966977	LRE6001085	LRE6001147
HPE4966360	HPE4966744	HPE5016855	HPS5016251	LRE6001086	LRE6001148
HPE4966367	HPE4966745	HPE5016856	HPS5016378	LRE6001097	LRE6001149
HPE4966373	HPE4966746	HPE5016859	HPS5016436	LRE6001098	LRE6001150
HPE4966374	HPE4966747	HPE5016870	HPS5016437	LRE6001099	LRE6001151
HPE4966379	HPE4966748	HPE5016871	HPS5016492	LRE6001100	LRS6001080
HPE4966380	HPE4966749	HPE5016900	HPS5016523	LRE6001101	LRS6001081
HPE4966381	HPE4966751	HPS4966231	HPS5016534	LRE6001102	LRS6001083
HPE4966384	HPE4966754	HPS4966233	HPS5016535	LRE6001103	LRS6001121
HPE4966385	HPE4966757	HPS4966234	HPS5016550	LRE6001104	LRS6001122
HPE4966389	HPE4966767	HPS4966388	HPS5016551	LRE6001105	LRS6001124
HPE4966390	HPE4966768	HPS4966408	HPS5016563	LRE6001106	LRS6001129
HPE4966403	HPE4966770	HPS4966416	HPS5016566	LRE6001109	LRS6001132
HPE4966438	HPE4966771	HPS4966495	HPS5016567	LRE6001110	LRS6001145
					LRS6001146

B. Compliance

Each Dealer must perform these tasks as outlined in this Service Bulletin for each unit identified above in the Products Affected section no later than 12/31/2023. The tasks outlined in this Service Bulletin must be performed by a qualified technician.

C. Labor Hours

The labor effort required to accomplish the tasks in this Service Bulletin is shown in **Table 1**.



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Table 1. Labor Hours

OPTION	TASK PERFORMED	LABOR HOURS PER UNIT
B22-356A	Inspection Only	1.0 for Inspection
B22-356B	Inspection and Repair One Arm	1.0 for Inspection 4.0 for Welding Repairs
B22-356C	Inspection and Repair Both Arms	1.0 for Inspection 8.0 for Welding Repairs
B22-356D (Residential Units Only)	Inspection and Replace Left Arm	1.0 for Inspection 8.0 to Replace Left Arm
B22-356E (Residential Units Only)	Inspection and Replace Right Arm	1.0 for Inspection 8.0 to Replace Right Arm
B22-356F (Residential Units Only)	Inspection, Repair One Arm, and Replace Left Arm	1.0 for Inspection 4.0 for Welding Repairs 8.0 to Replace Left Arm
B22-356G (Residential Units Only)	Inspection, Repair One Arm, and Replace Right Arm	1.0 for Inspection 4.0 for Welding Repairs 8.0 to Replace Right Arm
B22-356H (Residential Units Only)	Inspection and Replace Both Arms	1.0 for Inspection 16.0 to Replace Both Arms

D. Tools, Materials and Parts Needed

The tools and parts necessary to perform the rework are outlined in **Table 2** and **Table 3**.

Table 2. Tools and Materials

Item	Part Number	Application
Personal Protective Equipment	Commercially available	Safety protection as required by employer
General Tools (If Required)	Commercially available	
Grinder, Sander, Wire Brush, Needle Gun Scaler	Commercially available	To remove debris and paint from the weld area
Four Weld Blankets	Commercially available	Two blankets for cab coverage. One blanket to cover each cylinder.
Porter Power	Commercially available	To maintain distance between each plate while welding.
Two Arm Prop Stands or Floor Jacks	Commercially available	Two stands or floor jacks per unit.
2" x 15" Ratchet Strap – Tie Down 5000 Lbs.	Commercially available	
Two J Hooks	Commercially available	Two J Hooks per unit.
Cutting Wheel	Commercially available	Remove spacer block.
Welder	Commercially available	To correctly weld the cylinder brackets on the arms.
Torch	Commercially available	To burn out old caulking for prep cleaning.
Primer and Paint	Commercially available	
Paint Remover	Commercially available	

Table 3. Parts (If Required)

PART NUMBER	DESCRIPTION	QTY PER UNIT	SPECIAL INSTRUCTIONS
093-3473-001	RH Arm Weldment	1	
093-3473-002	LH Arm Weldment	1	

2. PREPARING THE UNIT AND WORK AREA

Make sure that the unit is in **Lock-Out/Tag-Out mode** before performing re-work. Refer to and follow your company's Lock-Out/Tag-Out policies and procedures. At a minimum, refer to and follow the Lock-Out/Tag-Out procedure found in your Heil Service Manual. Always wear appropriate Personal Protective Equipment as required by your employer (but to always include at a minimum, safety glasses and OSHA approved hard-toed boots) when repairing a unit or performing scheduled maintenance on a unit. Clear the work area around the unit of all unnecessary people and equipment.

3. CORRECTIVE ACTIONS

With the unit prepared as described in step 2 of this Service Bulletin, in **Lock-Out/Tag-Out mode**, carefully follow the steps below.

A. Inspect Vertical Arm Welds

Inspect the weld area(s) on the Half/Pack® AFL arms to make sure that they are properly welded. See **Figure 1 Area of Missing Welds**.

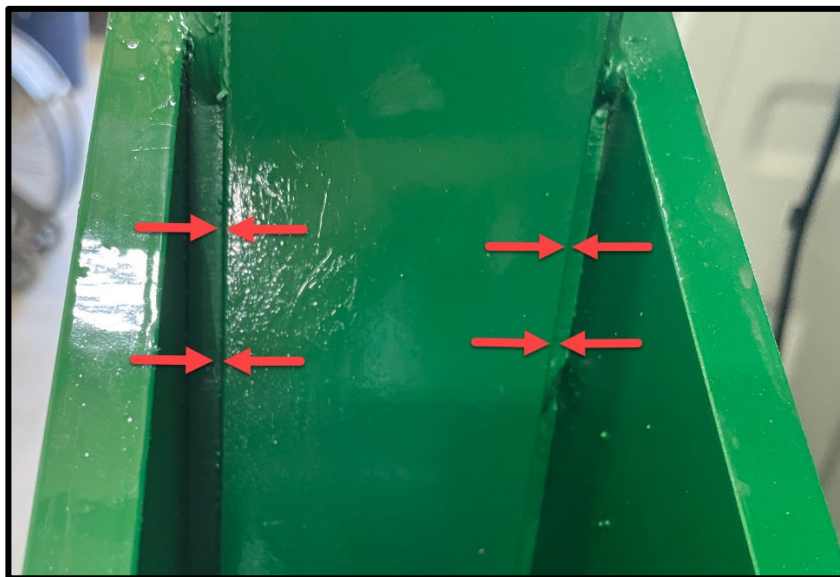


Figure 1 Area of Missing Welds

NOTE: If the side plates on the Half/Pack® AFL arms are cracked as seen below DO NOT attempt to repair. Lift arms will need to be replaced. See **Table 3. Parts (If Required)**. Contact Parts Central to file a Failed Part Warranty. Parts Central phone number is 800-528-5308, choose Option #2. See **Figure 2 Damaged Arm**.



Figure 2 Damaged Arm

B. Vertical Arm Weld Procedure

- (1) If upon inspection, the correct welds are not located on the arms, cover the painted areas (outside of repair area) on the unit as much as possible for minimal rework.
- (2) Keep arms attached to the body. With the arms down, remove the cylinder pins to drop the arms to the ground.
- (3) Brace the cylinder brackets with steel to keep the brackets from pulling in towards each other. See **Figure 3 Welded Spacer**.

NOTE: Use Porter Power to readjust the cylinder mounting plates as needed.

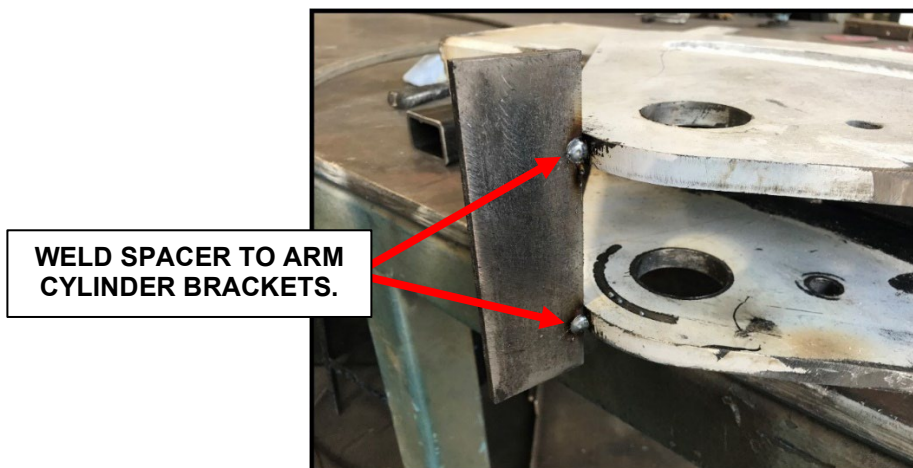


Figure 3 Welded Spacer

- (4) Remove spacer block for clearance. Use cutting wheel to remove the spacer. **DO NOT use a torch or plasma to remove the spacer.** This will minimize the heat input. See **Figure 4 Remove Spacer Bracket** and **Figure 5 Removed Spacer Bracket**.

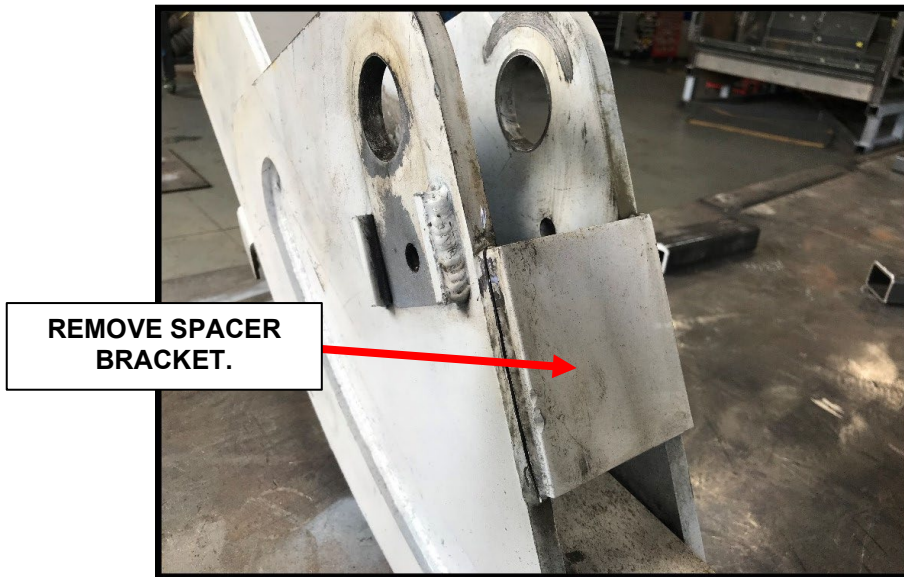


Figure 4 Remove Spacer Bracket



Figure 5 Removed Spacer Bracket

- (5) Grind out the weld 2 inches at a minimum from the end (4 places per arm). Remove caulk as needed. See **Figure 6 Grind Back 2 Inch Minimum**.

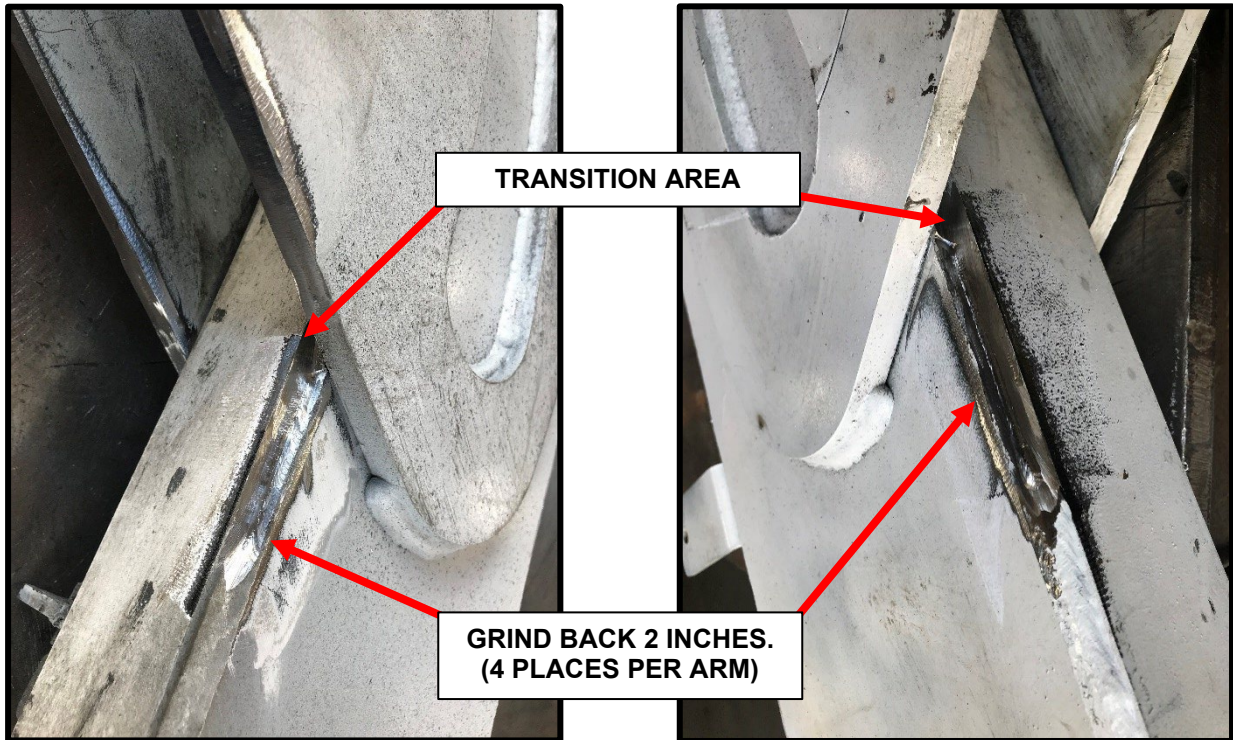


Figure 6 Grind Back 2 Inch Minimum

- (6) Remove all paint, grease, and debris from the weld area to be repaired. Use paint remover, wire brush, and rags to clean thoroughly. Clean using solvents and then let the area dry completely. See **Figure 7 Cleaned Weld Area**.



Figure 7 Cleaned Weld Area

- (7) Weld in the vertical position to ensure proper penetration and side wall fusion. Start from the bottom and weld all the way up. **DO NOT STOP** your weld. If there is a need to stop for repositioning, stop in the center of the bracket. See **Figure 8 Start and Stop Weld Directions** and **Figure 9 No Starts / Stops at Transition Weld**.

NOTE: Ensure the weld is continuous through the transition.

NOTE: Weld Repair Procedure – MIG Welding Parameters

- .045 ER70S-6
- 26V to 28V
- 450 IPM to 500 IPM
 - Horizontal – Overhead – Vertical Up
 - NO Vertical Down Welding

Weld Repair Procedure – If MIG is Not Available

- 1/8" Electrode
- DC Electrode Positive
- E6010 or E6011
- 80 Amps to 90 Amps
 - Horizontal – Overhead – Vertical Up

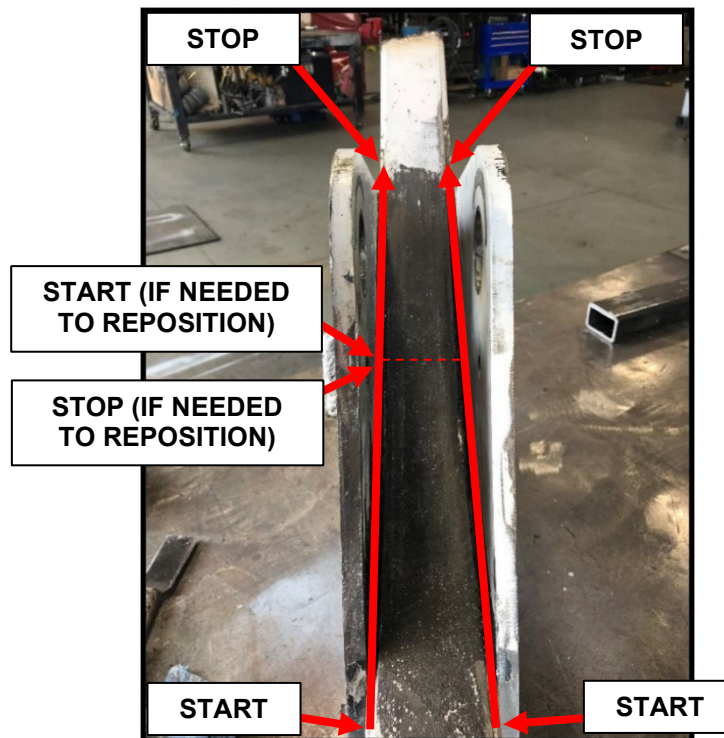


Figure 8 Start and Stop Weld Directions



Figure 9 No Starts / Stops at Transition Weld

- (8) Tack and weld the spacer block into original place.
- (9) Remove tacked steel spacer. See **Figure 10 Weld Spacer Bracket and Remove Steel Spacer.**



Figure 10 Weld Spacer Bracket and Remove Steel Spacer



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- (10) Clean, prime, and paint the welded area.
- (11) Welds must be visually and thoroughly inspected by your quality department and/or Supervisor that the crack has been removed.
- (12) Position the cylinders and place the cylinder pins back into the correct position.

NOTE: Re-weld according to the weld procedure in this service bulletin. If a different weld process is used, contact Tom Wilding at (256) 304-2137 or twilding@heil.com for the updated weld procedure.



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4. WARRANTY REIMBURSEMENT

A campaign has been created in the ESG Online Warranty System for payment of claims using the following code options depending upon the extent of work required:

Table 4. Warranty

OPTION	TASK PERFORMED	WARRANTY FILING CODE	HOURS	PARTS	EXPIRATION
B22-356A	Inspection Only	SB 22-356 A	1.0		12/31/2023
B22-356B	Inspection and Repair One Arm	SB 22-356 B	5.0	Included	12/31/2023
B22-356C	Inspection and Repair Both Arms	SB 22-356 C	9.0	Included	12/31/2023
B22-356D (Residential Units Only)	Inspection and Replace Left Arm	SB 22-356 D	9.0	Included	12/31/2023
B22-356E (Residential Units Only)	Inspection and Replace Right Arm	SB 22-356 E	9.0	Included	12/31/2023
B22-356F (Residential Units Only)	Inspection, Repair One Arm, and Replace Left Arm	SB 22-356 F	13.0	Included	12/31/2023
B22-356G (Residential Units Only)	Inspection, Repair One Arm, and Replace Right Arm	SB 22-356 G	13.0	Included	12/31/2023
B22-356H (Residential Units Only)	Inspection and Replace Both Arms	SB 22-356 H	17.0	Included	12/31/2023

NOTE: Labor hours and parts cost are pre-loaded in the campaign template based upon the option chosen when claim is filed.

You must have the Go Canvas App for your Heil Field Campaign Report. This must be completed with pictures of each cracked, missing, or incorrect weld on each unit. Please discard any parts of the unit that need to be replaced.

If you have any questions regarding the information detailed in this Bulletin, please contact Heil Technical Service at 866-310-4345 or 256-297-4631.

*Heil Environmental Service Bulletin procedures are intended for use by professional technicians, NOT a "do-it-yourselfer." They are written to inform experienced technicians of conditions that may occur on some units, or to provide information that could assist in the proper servicing of a unit. Properly trained technicians have **access to and are familiar with the applicable Heil Operation Manual and Heil Parts and Service Manuals** and have the equipment, tools, safety training, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the Bulletin instructions apply to your unit, or that your unit will have that condition. See your Heil Dealer to determine whether your unit may benefit from the information in this Service Bulletin.*

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