Trendsetter VLF AL

Pcup Arm Upgrade Procedure

DRAFT

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Creo
3700 Gilmore Way
Burnaby, BC
Canada V5G 4M1
(604) 451-2700

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Revision History

Revision	Date	Author	Comments
A	Oct 2001	Jon Dahlgren	Initial release

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VLF Trendsetter AL
Wedgemaster Upgrade

1. OVERVIEW

The purpose of this upgrade is to improve reliability and safety. Also a sensor has been added to increase functionality.

The improvements are:

1) a new pcup arm with better swivels for the pcups.
2) a new sensor with grating to sense arm motion.
3) the pcup arm is now sprung to one side to make sure the up sensor trips reliably.
4) a new and bigger air cylinder. We've had lift force problems in the past.
5) a picker arm safety switch. When the picker is up on its service strut, this switch will prevent firmware commands from moving the picker.

Note: This upgrade is not essential for all machines. It should only be done for the following reasons:

a) The site is running with no slip sheets.
In this situation it is essential to install a motion sensor with grating. This sensor allows the firmware to know when the pcup arm is down and thus to determine the best timing for the air knives. Without slip sheets, the timing of when the air knives turn on/off is very important.

b) The slip sheets are often getting blown to the back of the bay.
The motion sensor and grating help solve this.

c) An existing pcup arm has failed.

d) The pcup arm air cylinder is failing to raise plates (usually due to leaking) .

For further information refer to ECO E358.

2. TOOLS NEEDED

Upgrade kit: 05-0238

90 degree counter sink, around ½" in diameter

drill (preferably cordless)

7/16" deep socket and ratchet with extension

Drawings: 50-1742D: schematic diagram and assembly drawing

50-1747C: pcup arm assembly drawing

50-1888C: manifold assembly drawing

50-2299B: pcup air cylinder assembly drawing

3. UPGRADE PROCEDURE

Refer to the assembly drawings for detailed information and follow the steps below.

1. Remove the old pcup arm and its air cylinder and set them aside. Drawing 50-1742D shows how it goes together.
2. Install the new air cylinder with its new plastic mount blocks
3. Assemble the new pcup arm onto its mount bracket using the spring (item 353) to keep the arm pushed towards the sensor. Make sure to follow the assembly procedure and keep the plastic washers, steel washers and spring in the right order. Check to make sure that the pcup arm is horizontal when it is raised. If it rises too high it will hit the plastic cover. If it is too low, plates will not be raised high enough to make it onto the picker deck. If necessary, adjust the length of the rod end in the cylinder and re-tighten as per drawing 50-2299B.
4. The fittings that control the pcup cylinder on the manifold have to be changed. Take the old fittings off and install the 0.1mm type B and 0.15mm type B fittings as shown on drawing 50-1888C.

   Note: Make sure that the fittings are installed in the correct positions.

   A 7/16" socket is the best tool to use. After the new fittings are installed, the new 5/32" hoses can be run connecting the manifold to the pcup air cylinder.
5. A safety switch has been added to the top of the picker arm. When the arm is up on the service strut the firmware is prevented from moving the picker, so that the picker will not fall down. Page 1 of Drawing 50-1742D shows how to install the parts. Before item 582 can be installed, the holes in the mount bracket have to be countersunk as shown. They must be countersunk enough that the screws will sit flush or below the surface; otherwise the picker will not lower properly.

50-1742D Item Number	Creo Part Number	Description
340	50-1747C	pcup arm
350	52-4752	M8 belleville washer
351	52-5063	M10 nylon washer
352	52-4319	3/8” flat washer
353	59-3483	spring
354	52-5033	3/8” x 1.5” shoulder bolt
360	52-4689	3/8” x 0.75” shoulder bolt
581	15-3355	switch
582	57-9147A	switch mount plate
583	52-4461	m4 x 20 SHC screw
584	52-3147	m4 x 12 flat head screw