CREO

Creo Products Inc.

Engineering Change Order

ECO#: C433

Originator: D Huber **Page:** 1

Department: Prod Eng **Date: 12/4/98**

Engineering Changes

Part #	Rev/Status From	To	Description	Product	ECRs	Back Comp?	Prod. Class	Serv. Class	Reason for chg.
11-0483A	L	M	KIT,EM,TS RECORDER,VLF	TSV	B970	Y	3	F	7
50-1413A	D	E	ASSY,MECH,CLAMP PLATE,PULY,5880,TSV	TSV	B970	Y	3	F	7
50-1414A	D	E	ASSY,MECH,CLAMP PLATE,MOT,5080,TSV	TSV	B970	Y	3	F	7

Copies To:	Title:	Signature:	Date:	Code Descriptions			
	Design Eng.			Status	Service	Production	Reason
	Production Eng.	D HUBER	06AUG98	AC - ACTIVE IN - INACTIVE OB - OBSOLETE PR - PREREL.	R-RETROFIT S-NEXT CALL F-NEXT FAIL T-THEIR COST N-NOT UP-GRADABLE NA-NOT APPL.	1-RETROFIT ALL UNITS 2-FINISHED GOODS 3-WIP 4-FUTURE 5-DOCUMENT ONLY	1-DESIGN 2-MANUFACT 3-ASSEMBLY 4-DOCUMENT 5-COST 6-MAINT. 7-RELAIBIL. 8-SOFTWARE 9-OTHER
	Field Service Eng.						
	Project Eng.						
	Project Manager						
	Product Manager						

Details of Problem and the Changes

It has been found that the air jets located on the Trendsetter VLF Load/Unload Table do not always provide airflow sufficient to adequately float a plate off the table during the plate loading sequence. Over time the Teflon coating applied to the table surface may wear such that the dynamics of the plate drop sequence are affected.

This ECO replaces the 5/32" throttle valve (55-0180) currently used to regulate table airflow with a ¼" version (55-0713) in order to increase the flow rate to the table air jets. DP A515

Documentation Changes

Part #	Rev/Status		Documents							
	From	To	Type	Status/Resp.	Type	Status/Resp	Type	Status/Resp	Type	Status/Resp
11-0483A	L	M	BOM	RL/RHOR						
50-1413A	D	E	BOM	RL/RHOR	DWG	AT/DHUB				
50-1414A	E	F	BOM	RL/RHOR	DWG	AT/DHUB				

Status Codes: AT- Udated document is attached RL- Redlined document is attached UP- No document attached, update will follow NC- No changes required to document
Resp.: NAME-four letter Creo employee who is/was responsible for updating the document

Production Implementation

Part #	Qty in Stock	Action	Qty in Process	Job #/ P.O. #	Action	Comments

Action Codes: USE AS IS- parts can be used without modification SCRAP-parts must be scrapped REWORK- parts must be reworked as specified
CANCEL- cancel P.O. or job UPDATE- update P.O. or job to new version/revision TRANSFER- parts available to be transferred to production

Field Service Implementation

Field Upgrade Kit: 05-0061 Description Kit,Upgrade,Table Air Jets,TSV
For units: As Required

Part No.	Description	Qty	Std. Unit Cost	Total Cost
55-0713	VALVE,THROTTLE UNION,STRAIGHT,1/4",TUBE	1.00	$8.76	$8.76
52-4327	SCRW,M3*35,SOCK-CAP,S-BLK	1.00	$0.07	$0.07
52-3197	NUT,M3,NYLOCK,S-PLATED	1.00	$0.01	$0.01
56-1039	TUBE,AIR,1/4"OD,BLUE,POLYUTRETHANE	0.35	$0.95	$0.33
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
	Material Cost:			**9.17**
		Hours	**Rate**	**Total**
	Labour Cost:	0.25	$ 80.00	$ 20.00

Special Tools Required:

None

Field Upgrade Instructions:

Components:

55-0713	VALVE,THROTTLE UNION,STRAIGHT,1/4",TUBE	QTY 1
52-4327	SCRW,M3*35,SOCK-CAP,S-BLK	QTY 1
52-3197	NUT,M3,NYLOCK,S-PLATED	QTY 1
56-1039	TUBE,AIR,1/4"OD,BLUE,POLYUTRETHANE	QTY .35 m

Refer to installation schematic on following page.

Setup and Test Procedure for Table Airjets:

Place plate on Load/Unload table. Ensure all three vacuum pads are covered.

Enter: "TABLE VAC ON"
Enter: "TABLE"
Confirm: Unload/Load Table Status:

Table up:	False
Table down:	True
Upper plate sensor:	True
Lower plate sensor:	False
Unload Table Vacuum level =	350 (above Threshold)*

*The Vacuum level will vary.

With the plate still blocking the vacuum holes, adjust the newly installed throttle valve until the Load/Unload Table Vacuum level reads 270 +/- 10 units.

Enter: "Table VAC OFF"

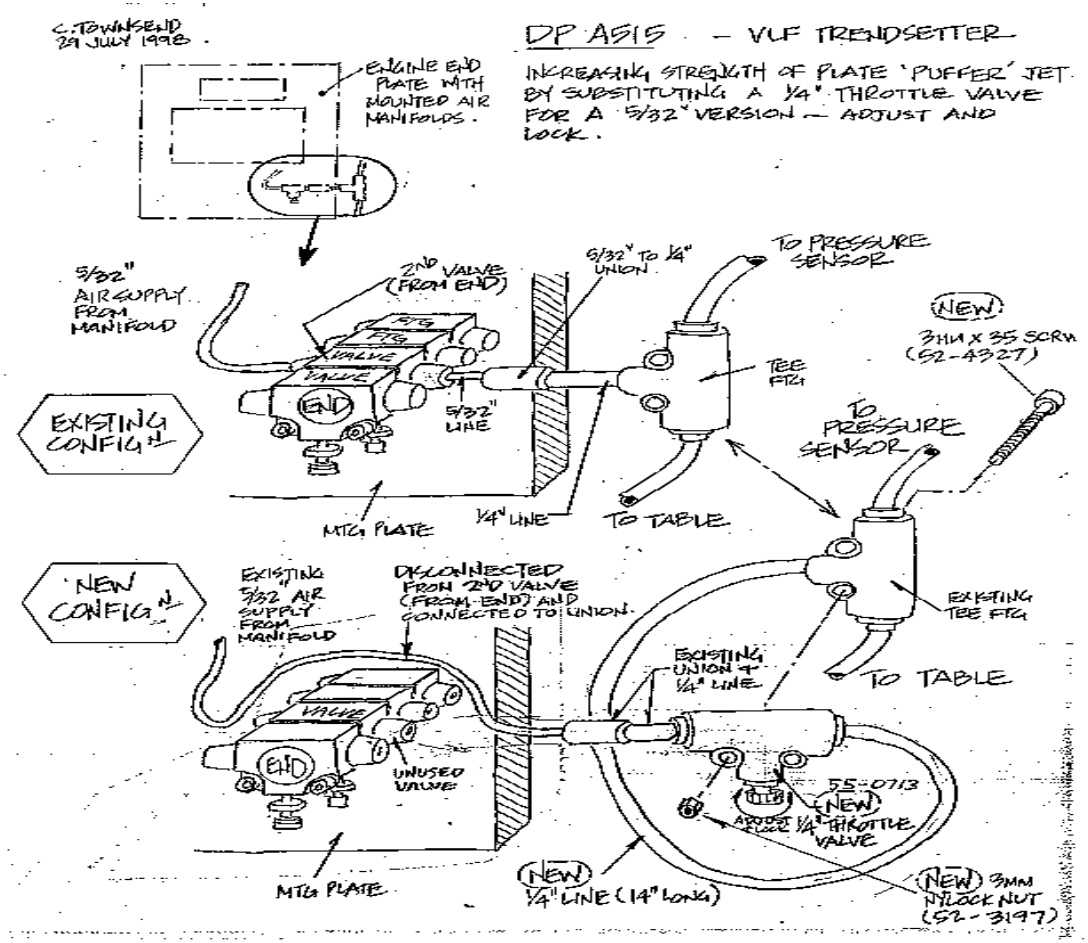
Remove the plate from the Load/Unload table.

Set Load/Unload table air blow to activate for 3 seconds once the table vacuum has been discontinued

Enter: "SET ALTIM VRD 3"
Enter: "NVS SAVE ALTIM"

Turn on the table airjet by typing < table vac off ↵ > repeatedly and ensuring that the airjet is working effectively.

Installation



Cost/Payback Analysis

		Lifetime Product Cost Reduction (Increase):		
		Std Cost Reduction (Increase):		
$150.00		Labour [$50/hr]	($5.00)	
$0.00		Material	($9.17)	
$150.00		Overhead (0.75*labour + 0.15*material)	($5.13)	
		Total Std Unit Cost Savings (Increase):	($19.30)	
		# of units that will ship w/ changes in the next year:	100	
		Total Production Life Savings (cost):	($1,929.55)	
		Service Cost Reduction (Increase):		
		Unit MTBF Before Change [yrs]	1.00	
$0.00		Unit MTBF After Change [yrs]	1.03	
		Unit Cost of Repair	$200.00	
		Unit Service Life [yrs]	7.0	
$0.00		Total Unit Service Savings (Cost)	$34.15	
		# of units field units to be upgraded:	$20.00	
		# of units that will ship w/ changes:	$100.00	
		Total Service Life Savings (cost):	$4,097.56	
		Other Product Life Cost Reduction (Increase):		
$0.00		**Total**	$0.00	
		Total Product Life Cost Reduction (Increase)	$2,168.01	
$0.00				
$150.00		**Total Net Value (Cost) of Change:**		
		Total Product Life Cost Reduction (Increase)	$2,168.01	
		- Total One Time Costs (Revenue)	($150.00)	
		Net Present Value (Cost) of Change:	**$2,018.01**	

Actions

Ron Hori	Update SAP/MRP	
Derrick Huber	Supply updated hard and soft copies of drawings (50-1413A & 50-1414A) to Kathy Lavergne for filing	
Kathy Lavergne	File hard and soft copies of drawings (50-1413A & 50-1414A)	
Anita Radman	FYI	Note new P/N 55-0713
Marek Zgrych	FYI	Production
Tim Tunshell	FYI	Production
Steve Froese	FYI	Service