



10985 PENROSE STREET
SUN VALLEY, CALIFORNIA 91352

Work Order No. **66502**

Date: 09/24/18	Date Needed: 10/08/18
P.O.: MIKE HODGES	Rec'd VIA.:
File: 131569-66502-1	

Name.....:	Attn: Mike Hodges
Customer Name:	National Transportation Safety Board
Address.....:	4760 Oakland Street
Address.....:	Suite 500
	Denver, CO 80239-2793

Part No: 41103650-009	Serial No: 431	Nomenclature: Servo Assy	
Mfg....: HRT	Work Req.: FT	T.T.: NK	T.S.O.: NK
Receiving and Preliminary Inspection: G.C. Rec'd box unopened from FAA Dan Tisher * Jerry Dees, unit involved A/c accident N352CT, unit dirty, rec'd with hoses * clevis, input free, shroud bolts free			

Part Number	Description	Qty.	Qty.	Qty.	Insp.	Price	Evaluation Report	Final Disposition
		Req.	Iss.	B/O	By		Accepted: X	Acceptable: X
							Rejected:	Rejected:
							Report No: 66502	
							Remarks: Note: cotter pins + safety	
							wire light green torque seal + wire-	
							drive adjuster nut. Different	
							cotter pin input link bolt + cyl	
							safety wire "no torque seal". Remove	
							Hyd lines, fittings, clevis for test.	
							Hyd lines + fittings dry, no oil, cycle	
							cyl for oil sample, very little, dirty.	
							Complete functional test I.A.W.	
							Mfg. specs HRT 67-32-05 Rev 2	
							Aug 20/04, passed all tests, see	
							Test Procedure form for	
							results.	
							Return unit ASIS to	
							customer	
							Approval	Dates
							Assembled:	1 1
Parts.....						0.00	Functional Test:	9 24/18
Labor.....						0.00	N. D. Test:	1 1
Total.....						0.00	Final Insp:	9 12/18

Information verified by: _____ Date: _____ The aircraft component identified above was repaired and inspected in accordance with Federal Aviation Regulations
Invoice No.: _____ Date: _____ and was found airworthy for return to service.



F.A.A. REPAIR STATION XJ2R294L

INSPECTION REJECTION REPORT

DATE Sept 24, 2018 CUSTOMER NTSB Denver Co. VENDOR _____
WORK ORDER 66502 P/N 41103650-009 DESCRIPTION T/R Servo
P/O CEN18LA290 S/N 431 T.T. NK T.S.O. NK
DEFECT REPORT NO. 66502 MANUFACTURER HRT
DATE OF MFG. NK DATE OF LAST REPAIR NK

REASON FOR REJECTION Requires inspection & functional test, A/C
accident Bell 206 "N352CT"

EVALUATION Opened seal box, unit dirty, rec'd with hoses/fittings & clevis, servo input
smooth no binding, should bolts rotate freely input. Light green torque seal cotter pins,
safety wire & wire drive input adjuster. Note: input link bolt had different cotter pin, no
torque seal & cyl nut safety wire no torque seal. Removed hyd lines & fittings & clevis.
hyd lines dry, no oil inside, clear inside. Note: rec'd without lines capped. Drained
servo cyl for oil sample, oil dirty and very little oil in servo cyl. Complete
functional test servo unit, passed all tests.

CORRECTIVE ACTION Return unit AS IS to Customer

REJECTED PARTS

P/N

DESCRIPTION

QTY.

Note: unit was not disassembled

DATE Sept 24, 2018 INSPECTOR'S SIGNATURE _____

HAS

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HELICOPTER
ACCESSORY
SERVICE, INC.

"HELICOPTER HYDRAULIC SPECIALISTS"
BELL • SIKORSKY • EUROCOPTER

FAA/JAA Repair Station XJ2R294L

Approve

Date Oct 6, 2004

TEST PROCEDURE

Part# 41103650-005,-007,-009

Test Per HRT M & O 67-32-05, Aug. 20/04 Rev. 2

1. 78°F All tests shall be conducted at an ambient room temperature of 70° F to 90° F.

2. 79°F Test fluid shall be at temperature of 70° F to 100° F. *Gauge #52*

3. ✓ All leakage tests shall have a 3 minute waiting period prior to obtaining measurements, unless otherwise stated.

1. ✓ NULL POSITION ADJUSTMENT- With the servo actuator unit installed in test fixture, apply 300 PSI to pressure port, cycle unit to expel all air.

2. .032
.016 Apply 600 PSI. Position dial indicator. Measure to the nearest thousandth inch. Divide total reading by two and set indicator zero to read equal stroke dimension each side of zero.

3. N/A Measure flow at return port when input arm is placed in fully actuated positions in each direction. Adjust wiredrive in or out of link until flow from return port is equal from both positions of input arm. Torque locknut 20 to 25 inch lbs. against link. Bend three tabs of washer over flats of jam nut, and remaining over link.

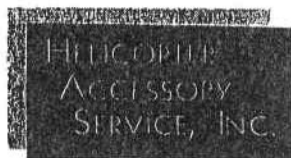
.002 REQUIREMENT - No flow shall occur when spool is in zero reading of dial indicator. Flow from return port shall be the same for fully actuated position of input arm on both sides of zero. Hydraulic null shall be within .005 of mechanical null.

1. OK
Zero PROOF PRESSURE - Apply 600 PSI and cycle unit to expel all air. Cap return port and increase pressure to 1000 PSI. Hold input arm in full extend, full retract and neutral for one minute in each position.

OK
Zero REQUIREMENT - There shall be no evidence of permanent deformation, external leakage or loosening of parts.

HAS

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FAA/JAA Repair Station X12R294L



1. 100 cyl's **CYCLING FUNCTION** – Apply 600 PSI to pressure port. Return port open. Shift input lever and cycle actuator 100 complete cycles.

Zero
External
leakage
Cyl seals

REQUIREMENT – Leakage at external sealing surface at each end of cylinder shall not exceed one drop for the 25 cycles. Cylinder shall move away from housing (extend) when input arm is moved away from housing. Cylinder shall move towards housing (retract) when input arm is moved towards housing.

1. ✓
Null Ext 30z
Ret 40z
Ext 60z
Ret 30z

INPUT FORCE – Apply 600 PSI to pressure port. Install spring scale adapter to trunnions of input arm. Apply force to input arm in extend direction and note force required to move input arm to full extend. Repeat in opposite direction.

Requirement – Force required to move input arm through full stroke shall not exceed 8 ounces in either direction. *Smooth no binding*

1. ✓
Ext 0cc
Ret 0cc
Null 33cc

INTERNAL LEAKAGE – Apply 600 PSI to pressure port. Hold input arm in neutral, full extend and full retract positions for one minute in each position and note leakage at return.

REQUIREMENT – Leakage flow rate from return port after one minute shall not exceed 10cc per minute in full extend or retract positions and shall not exceed 40cc per minute in neutral.

1. N/A

FINAL ASSEMBLY – Complete post test assembly as called out in M & O paragraph 4 steps A – J.

WORK ORDER# 66502

SERIAL# 431

MECHANIC [REDACTED]

DATE Sept 24, 2018

INSPECTOR [REDACTED]

DATE Sept 24, 2018

VERIFIED Dan Tysler VNY PSDO

VERIFIED [REDACTED] VNY PSDO