

ROBINSON HELICOPTER COMPANY

R22 ILLUSTRATED PARTS CATALOG

RTR 060 VOLUME II

Production Certificate Number 424WE

Type Certificate Number H10WE



Robinson Helicopter Company
2901 Airport Drive
Torrance, California 90505-6115
United States of America

Phone: (310) 539-0508
Fax: (310) 539-5198
Web: www.robinsonheli.com

OFFICE HOURS

Monday through Friday, 7:30 a.m. to 4:30 p.m., Pacific Time.
Lunch hour is 11:30 a.m. to 12:30 p.m.

HOLIDAYS

Please visit www.robinsonheli.com for a complete list of holidays and company shutdowns.

CUSTOMER SUPPORT AND ORDERS

Please visit www.robinsonheli.com for a complete service directory.

Procure parts from any R22 Dealer or Service Center, or order directly from assigned [RHC Customer Service Representative](#) via email, fax, or phone.

PUBLICATIONS

Please visit www.robinsonheli.com to view our publications electronically.

SUBSCRIPTION ORDER AND RENEWAL FORM

Name: _____ Phone: _____
 Address: _____ Fax: _____
 _____ Email: _____

I Own R22 Serial Number(s): _____
 I Own R44/R44 II/R44 Cadet
 Serial Number(s): _____
 I Own R66 Serial Number(s): _____

Covers updates during the subscription period only. Requests for revisions produced before the subscription period are subject to an additional charge at the full subscription rate for each past year requested.

MODEL/CLASS	DESCRIPTION	PRICE/2YR.	QTY.	TOTAL
R22				
C	Future updates to R22 Pilot's Operating Handbook & Safety Notices, R22 Service Bulletins, Service Letters, & R22 Maintenance Manual/Illustrated Parts Catalog revisions	\$65.00	_____	_____
R44				
S	Future updates to R44 Pilot's Operating Handbook & Safety Notices, R44 Service Bulletins, Service Letters, & R44 Maintenance Manual/Illustrated Parts Catalog revisions	\$65.00	_____	_____
R44 II				
X	Future updates to R44 II Pilot's Operating Handbook & Safety Notices, R44 Service Bulletins, Service Letters, & R44 Maintenance Manual/Illustrated Parts Catalog revisions	\$65.00	_____	_____
R44 Cadet				
F	Future updates to R44 Cadet Pilot's Operating Handbook & Safety Notices, R44 Service Bulletins, Service Letters, & R44 Maintenance Manual/Illustrated Parts Catalog revisions	\$65.00	_____	_____
R66				
L	Future updates to R66 Pilot's Operating Handbook & Safety Notices, R66 Service Bulletins, Service Letters, & R66 Maintenance Manual/Illustrated Parts Catalog revisions	\$65.00	_____	_____
				TOTAL _____

Method of Payment: No cash or CODs. We cannot be responsible for cash sent by mail. For faster processing, order online.

- U.S. Check, Money Order, payable to Robinson Helicopter Company
- Wire Transfer (subscription will not take effect until wire transfer has been received)
- VISA, MasterCard or American Express

Credit Card Number: _____ Month / Year: _____
 Cardholder Signature: _____ Verification Code: _____
 Billing Zip: _____

Return to: **ROBINSON HELICOPTER COMPANY**
 Attn: Subscriptions
 2901 Airport Drive
 Torrance, CA 90505
 U.S.A.
 Or: Fax: (310) 539-5198

CHAPTER LIST

	Introduction
Chapter 6	Dimensions and Descriptions
Chapter 8	Weight and Balance
Chapter 9	Ground Handling
Chapter 10	Parking and Storage
Chapter 11	Placards and Markings
Chapter 12	Servicing
Chapter 18	Track and Balance
Chapter 21	Environment Control
Chapter 25	Furnishings
Chapter 28	Fuel System
Chapter 32	Landing Gear
Chapter 33	Lights
Chapter 52	Doors and Windows
Chapter 53	Fuselage
Chapter 62	Main Rotor
Chapter 63	Main Rotor Drive System
Chapter 64	Tail Rotor
Chapter 65	Tail Rotor Drive System
Chapter 67	Flight Controls
Chapter 71	Powerplant
Chapter 76	Engine Controls
Chapter 79	Engine Oil System
Chapter 90	Police Version
Chapter 95	Instrument System
Chapter 96	Electrical System
Chapter 97	Avionics
Chapter 99	Special Tools
Chapter 100	Revision Log
Appendix A	Alphabetical Index
Appendix B	Numerical Index

CATALOG FEATURES**INTRODUCTION**

The catalog features:

1. A table of contents located in the front of the catalog.
2. Alphabetical and numerical indexes located in the back of the catalog.

PART DESIGNATION

Robinson parts are designated with a part number prefix "A", "B", "C", etc., followed by three digits and a dash number, such as A101-1. Robinson special tools are designated with a part number prefix "MT". For standard hardware items such as bolts, nuts, screws, etc., "AN", "MS", and "NAS" part numbers are used. When a rivet length is not specified, length must be determined by the installer. In some instances, vendor part numbers are also used.

PARTS AVAILABILITY

"X" indicates part is available as a separate spares item.

"O" indicates part is no longer available , or only available as part of a higher assembly.

CHANGE BARS

Change bars are located on the outside edge of the page, and indicate new or revised data. Change bars between lines indicate data was removed, and parts renumbered as required. Change bars on figure pages indicate changes to the figure somewhere across the page in the area of the change bar. A change bar encompassing the figure title and item 1 indicates the figure number changed. Change bars that are the full length of the page indicate all new data, usually a new figure and parts data.

ABBREVIATIONS

Assy – assembly	max – maximum	RH – right hand
A/R – as required	min – minimum	RHC – Robinson Helicopter Company
A.O.G. – Aircraft On Ground	MM – Maintenance Manual	§ – Section
Cont'd – continued	MR – main rotor	TR – Tail Rotor
Incl – includes	Ref – Part(s) "referenced" for clarity	TRDS – Tail Rotor Drive Shaft
LH – left hand	rev. – Revision	

ORDERING AND SHIPPING

All orders must include instructions for shipping. All parts or components shipped to RHC must include a signed Component Return/Authorization Form. Return shipments must be paid for by the dealer or distributor. NOTE: Handling fees will be applied to all orders received which are under \$1,000.00. Orders shipped on an A.O.G. basis (24 hours domestic, 48 hours foreign) will be assessed additional charges.

WARRANTY

RHC will apply the same 1-year or 1000-hour RHC limited warranty to all parts and components purchased from RHC.

RETURNS

No unused parts may be returned to RHC for credit if the parts show any indication whatsoever of use or damage, or if the cost of the individual part was less than \$25 (U.S.). Parts returned within 30 days of purchase will be assessed a 20% restocking fee. No parts may be returned after 30 days without prior RHC approval. Any parts approved for return after 30 days will be assessed a 50% restocking fee.

CATALOG FEATURES (Cont'd)

REVISIONS

Before using this catalog, be sure it is current. A list of pages is located in Chapter 100, Revision Log, at the back of this catalog. If a new parts catalog is purchased, be sure to complete and mail the Subscription Order and Renewal Form found on page ii of this catalog; this will ensure receipt of revisions for a two-year period. Revision status of Robinson Technical Publications is at www.robinsonheli.com.

RHC reserves the right to cancel, add, or change the parts and assemblies described in this catalog without notice.

Intentionally Blank

PART INTERCHANGEABILITY

The following parts are interchangeable. Unless noted otherwise, whenever one part is referred to in this manual, its substitute part is also permitted.

<u>PART:</u>	<u>INTERCHANGEABLE WITH:</u>
110-__ Telatemp	F110-__ Telatemp
22K1-048 Cap nut	B340-10 Cap nut
22K1-82 Cap nut	B340-4 Cap nut
354601 Fuse block	D262-1 Fuse block
354602 Fuse block	D262-2 Fuse block
4509 & Q4509 Lamp	B196-26 Lamp
4591 Lamp	B196-27 Lamp
511TS1-3 Switch	B300-4 Switch
94830A030 Nut	21FKF-518 Nut
AN340 Nut	MS35649 Nut per NASM35649 except AN340B8 Nut
AN340B8 Nut	B301-8 Nut
AN345 Nut	MS35650 Nut per NASM35650
AN364 Nut	MS21083 Nut per NASM21083
AN507 Screw	MS24693 Screw per NASM24693
AN509 Screw	MS24694 Screw per NASM24694
AN515 Screw	MS35206 Screw per NASM35206
AN515C Screw	MS51957 Screw
AN515UB8R10 Screw	B567-43 Screw
AN515UB8R12 Screw	B567-44 Screw
AN515UB8R20 Screw	MS35214-47 Screw per NASM35214
AN525 & AN526 Screw	MS27039C Screw per NASM27039, or B526-6 or -8 Screw and B527-08 Washer per R22 SL-65. Except where noted.
AN814 & MS24391 Plug	AS5169 Plug
AN815 & MS24392 Union	AS5174 Union
AN818-__D Nut	AN818-__W Nut
AN819 & MS20819 Sleeve	AS5176 Sleeve
AN822 & MS20822 Elbow	AS5195 Elbow
AN823 & MS20823 Elbow	AS5196 Elbow
AN825 & MS20825 Tee	AS5197 Tee
AN826 & MS20826 Tee	AS5198 Tee
AN894 & MS24398 Bushing	AS5173 Bushing
AN900 Gasket	MS35769 Gasket per AS35769
AN924 & MS24400 Nut	AS5178 Nut
AN931 Grommet	MS35489 Grommet
AN935 Lockwasher	B332-__ Lockwasher, dash number per MS35338
AN936 Lockwasher	MS35335 Lockwasher
AN960-4L Washer	NAS1149FN416P Washer
AN960-4 Washer	NAS1149FN432P Washer
AN960-6L Washer	NAS1149FN616P Washer
AN960-6 Washer	NAS1149FN632P Washer
AN960-8L Washer	NAS1149FN816P Washer
AN960-8 Washer	NAS1149FN832P Washer
AN960-10L Washer	NAS1149F0332P Washer
AN960-10 Washer	NAS1149F0363P Washer

PART INTERCHANGEABILITY (continued)

<u>PART:</u>	<u>INTERCHANGEABLE WITH:</u>
AN960-416L Washer	NAS1149F0432P Washer
AN960-416 Washer	NAS1149F0463P Washer
AN960-516L Washer	NAS1149F0532P Washer
AN960-516 Washer	NAS1149F0563P Washer
AN960-616L Washer	NAS1149F0632P Washer
AN960-616 Washer	NAS1149F0663P Washer
AN960-816L Washer	NAS1149F0832P Washer
AN960-816 Washer	NAS1149F0863P Washer
AN960-1016L Washer	NAS1149F1032P Washer
AN960-1016 Washer	NAS1149F1063P Washer
AN960PD8L Washer	NAS1149DN816J Washer
AN960PD416L Washer	NAS1149D0416J Washer
AN960PD516L Washer	NAS1149D0516J Washer
AN960PD616L Washer	NAS1149D0616J Washer
AVDEL 16__ Rivet	B204-__ Rivet
MS26574-__ Circuit breaker	B297-__ Circuit breaker, except B297-25 and B297-120
MS3320-20 Circuit breaker	B297-120 Circuit breaker
LW-18959-150-25 Clamp	B444-1 Clamp
LW-18959-163-25 Clamp	B444-2 Clamp
LW-18959-175-25 Clamp	B444-3 Clamp
MS20604ML4W1 Rivet	MS20604M4W1 Rivet per NASM20604
MS21042L3 thru L6 Nut	D210-3 thru -6 Nut*
MS21209__ Insert	MS21209__ L or NAS1130__ Insert
MS21919__ Clamp	AS21919__ Clamp
MS24665 CAD plated steel cotter pin	MS24665 CRES cotter pin per NASM24665
MS27039C080__ Screw	B526-__ screw and B527-08 washer (see R22 SL-65)
MS27151-__ Palnut	B330-__ Palnut
NAS1067 Nutplate	MS21086 Nutplate per NASM21086
NAS1068A__ Nutplate	MS21075L__ E Nutplate per NASM21075
NAS1291-04 thru -08 Nut	MS21042 Nut per NASM21042
NAS1291-3 thru -10 Nut	D210-3 thru -10 Nut*
NAS1303 thru NAS1320 Bolt, except 1307 Bolt	NAS6603 thru NAS6620** Bolt, except 6607 Bolt
NAS1919B0__ S0__ Rivet	NAS9301B-__ 0__ Rivet
NAS1921B0__ S0__ Rivet	NAS9302B-__ 0__ Rivet
NAS428-__ -__ Bolt	NAS428-__ A__ Bolt
NAS487 Instrument nut	MS33737 Instrument nut per NASM33737
NAS679A__ Nut	NAS1291-__ Nut
NAS679C__ M Nut	NAS1291C__ M Nut
NAS696 Nutplate	MS21071 Nutplate per NASM21071
NAS697 Nutplate	MS21069 & MS21070 Nutplate per NASM21069 & NASM21070
NAS698 Nutplate	MS21073 Nutplate per NASM21073

* One-way interchangeability, only D210 nut shall be used for listed sizes.

** The following bolts must be NAS1300 series only: NAS1304-17 and NAS1305-35.

**ROBINSON HELICOPTER COMPANY, INC.
LIMITED AIRCRAFT WARRANTY**

Effective R22 S/N 3318 & on; R44 S/N 1202 & on

Robinson Helicopter Company, Inc. (hereafter referred to as RHC) warrants each new helicopter to be free from defects in material and workmanship appearing within two years from the date of delivery from the RHC factory or during the first one thousand (1000) hours of operation, whichever event occurs first; provided, the aircraft has been subjected to normal use and service. This Warranty is limited to repair or replacement on an exchange basis, as selected by RHC, of any part, which upon examination by RHC is deemed to have been defective when the aircraft left the factory. A new warranty period is not established for parts replaced under the terms of this Warranty. Such replacement parts are warranted only for the remainder of the original warranty period. This Warranty shall not apply to any helicopter or part which has been repaired or altered outside the factory, and which, in RHC's judgment, has affected the performance or reliability of the helicopter or part. This Warranty shall not apply to any helicopter or part which has been subject to corrosion, misuse, negligence or accident, nor to any parts normally replaced during routine maintenance, such as, air cleaners, skid shoes, rod end or spherical bearings, light bulbs, etc. This Warranty shall not apply to any helicopter which has been crated for shipping unless such crating is performed by RHC. RHC is not responsible for the cost of shipping parts under the terms of this Warranty. However, RHC will credit the RHC Dealership, which sold and delivered the new helicopter to its original owner, with an allowance for labor performed by that Dealership for removing and reinstalling the defective part. No credit will be issued for trouble-shooting.

RHC makes no Warranty with respect to batteries, instruments, avionics or other trade accessories since they are usually warranted separately by their respective manufacturers. New aircraft are equipped with new engines which have a separate Lycoming limited warranty.

ADDITIONAL WARRANTY FOR MAIN & TAIL GEARBOXES

In addition to the warranty specified above, an extended pro-rated warranty shall apply to the main and tail gearboxes for the first 2200 hours of service or three years from the date of manufacture, whichever event occurs first. During this period, if a gearbox must be overhauled due to failure of a part which was defective when it left the factory, RHC will pro-rate the cost of the overhaul by dividing the hours in service by 2200 or the months in service by thirty-six (36), whichever fraction is greater.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESS, IMPLIED, OR STATUTORY, WHETHER WRITTEN OR ORAL, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR TRADE USAGE, THE REMEDIES OF THE BUYER SHALL BE LIMITED TO THOSE PROVIDED HEREIN. IN NO EVENT WILL THE MANUFACTURER BE LIABLE FOR LOSSES RESULTING FROM LOSS OF USE OF THE HELICOPTER, COLLATERAL, CONSEQUENTIAL OR SPECIAL DAMAGES, OR ANY OTHER COSTS.

Warranty adjustments with respect to any helicopter or parts manufactured by RHC will be made only upon compliance with the following procedure:

- (1) The defective part or assembly, together with a written Warranty Claim, must be returned to RHC not later than thirty (30) days after discovery of the defect nor more than thirty (30) days after expiration of the Warranty period.*
- (2) RHC will, after inspection, determine whether the material or part was defective when it left the factory and will respond accordingly. Final determination of a Warranty adjustment rests with RHC.*

**ROBINSON HELICOPTER COMPANY, INC.
2901 Airport Drive
Torrance, California 90505 U.S.A.**

Effective 1 February 2003

**ROBINSON HELICOPTER COMPANY, INC.
LIMITED PARTS WARRANTY**

Robinson Helicopter Company, Inc. (hereafter referred to as RHC) warrants each new and factory overhauled helicopter part to be free from defects in material and workmanship appearing within one year from the date of delivery from the RHC factory or during the first one thousand (1000) hours of operation, whichever event occurs first; provided, the part has been subjected to normal use and service. This Warranty is limited to repair or replacement on an exchange basis, as selected by RHC, of any part, which upon examination by RHC is deemed to have been defective when the part left the factory. A new warranty period is not established for parts replaced under the terms of this Warranty. Such replacement parts are warranted only for the remainder of the original warranty period. RHC is not responsible for the cost of removing, shipping or reinstallation of parts under the terms of this Warranty. This Warranty shall not apply to any part which has been repaired or altered outside the factory, and which, in RHC's judgment, has affected the performance or reliability of the part. This Warranty shall not apply to any part which has been subject to corrosion, misuse, negligence or accident, nor to any parts normally replaced during routine maintenance, such as, air cleaners, skid shoes, rod end or spherical bearings, light bulbs, etc.

RHC makes no Warranty with respect to engines, batteries, instruments, avionics or other trade accessories since they are usually warranted separately by their respective manufacturers.

ADDITIONAL WARRANTY FOR MAIN & TAIL GEARBOXES

In addition to the warranty specified above, an extended pro-rated warranty shall apply to new and factory overhauled main and tail gearboxes installed, on all R22 & R44 helicopters for the first 2200 hours of service, on all R44 Cadet helicopters for the first 2400 hours of service, on all R66 helicopters for the first 2000 hours of service, or three years from the date of manufacture, whichever event occurs first. During this period, if a gearbox must be overhauled due to failure of a part which was defective when it left the factory, RHC will pro-rate the cost of the overhaul by the hours in service or the months in service, whichever fraction is greater.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESS, IMPLIED, OR STATUTORY, WHETHER WRITTEN OR ORAL, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR TRADE USAGE, THE REMEDIES OF THE BUYER SHALL BE LIMITED TO THOSE PROVIDED HEREIN. IN NO EVENT WILL THE MANUFACTURER BE LIABLE FOR LOSSES RESULTING FROM LOSS OF USE OF THE HELICOPTER, COLLATERAL, CONSEQUENTIAL OR SPECIAL DAMAGES, OR ANY OTHER COSTS.

Warranty adjustments with respect to any parts manufactured by RHC will be made only upon compliance with the following procedure:

- (1) The defective part or assembly, together with a written Warranty Claim, must be returned to RHC not later than thirty (30) days after discovery of the defect nor more than thirty (30) days after expiration of the Warranty period.
- (2) RHC will, after inspection, determine whether the material or part was defective when it left the factory and will respond accordingly. Final determination of a Warranty adjustment rests with RHC.

**ROBINSON HELICOPTER COMPANY, INC.
2901 Airport Drive
Torrance, California 90505 U.S.A.**

Effective 01 June 2016

Intentionally Blank

CONTENTS

INTRODUCTION

<u>Figure</u>	<u>Title</u>	<u>Page</u>
—	Cover Page	i
—	Subscription Order and Renewal Form	ii
—	Chapter List	iii
—	Recommended Change Report	iv
—	Catalog Features	v
—	Part Interchangeability	viii
—	Limited Aircraft Warranty	x
—	Limited Parts Warranty	xi
—	Contents	xiii

CHAPTER 6 – DIMENSIONS AND DESCRIPTIONS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
6-1	Access Panels – Belly	6.0
6-3	Belly Antennas	6.2
6-5	FM/DME/Transponder Antennas	6.4
6-7	DME Installation	6.6
6-9	NAV Antenna Installation	6.8
6-11	ADF/Marker Beacon Antennas	6.10
6-13	Kannad ELT Antenna Installation	6.12
6-15	Kannad ELT Antenna Installation	6.14
6-17	GPS Antenna Installation	6.16
6-19	LORAN Antenna Installation	6.18
6-21	Forward Upper Tailcone Antennas	6.20
6-23	Aft Upper Tailcone Antennas	6.22
6-25	Lower Tailcone Antenna	6.24

CHAPTER 8 – WEIGHT AND BALANCE

<u>Figure</u>	<u>Title</u>	<u>Page</u>
8-1	Ballast Installation	8.0

CHAPTER 9 – GROUND HANDLING

<u>Figure</u>	<u>Title</u>	<u>Page</u>
9-1	Ground Handling Wheel Assembly	9.0
9-3	Ground Handling Wheel Assembly – Fixed Floats	9.2
9-5	Ground Handling Ball Installation	9.4

CHAPTER 10 – PARKING AND STORAGE

<u>Figure</u>	<u>Title</u>	<u>Page</u>
10-1	Main Rotor Blade Tie Downs	10.0
10-3	Cabin Cover	10.2
10-5	Tie-Down Installation	10.4

CHAPTER 10 – PARKING AND STORAGE (Cont'd)

<u>Figure</u>	<u>Title</u>	<u>Page</u>
10-7	Hardpoint Hinge and Tie-Down Ring Installations	10.6
10-9	Mariner Accessories	10.8

CHAPTER 11 – PLACARDS AND MARKINGS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
11-1	Placards and Markings	11.0
11-7	Placards and Markings (Japanese)	11.6

CHAPTER 12 – SERVICING

<u>Figure</u>	<u>Title</u>	<u>Page</u>
—	Lubricants	12.1

CHAPTER 18 – TRACK AND BALANCE

<u>Figure</u>	<u>Title</u>	<u>Page</u>
18-1	TEC ACES Balancing System	18.0
18-3	TEC ACES Balancing System	18.2
18-5	Chadwick-Helmuth Balancing System	18.4

CHAPTER 21 – ENVIRONMENT CONTROL

<u>Figure</u>	<u>Title</u>	<u>Page</u>
21-1	Cabin Vent Control	21.0
21-3	Cabin Heater – Forward Outlet	21.2
21-7	Cabin Heater – Dual Forward Outlet	21.6
21-9	Cabin Heater – Aft Outlet	21.8

CHAPTER 25 – FURNISHINGS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
25-1	Interior Furnishings	25.0
25-5	Interior Furnishings	25.4
25-9	Seat Support and Floor Installation	25.8
25-13	Seat Compartment Covers	25.12
25-15	Fire Extinguisher Installation	25.14
25-17	Fire Extinguisher Installation	25.16
25-19	Kannad ELT Installation	25.18
25-23	Kannad ELT Installation	25.22
25-25	Pointer ELT Installation	25.24

CHAPTER 28 – FUEL SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
28-1	Fuel System Installation	28.0

CONTENTS

CHAPTER 28 – FUEL SYSTEM (Cont'd)

<u>Figure</u>	<u>Title</u>	<u>Page</u>
28-5	Main Tank Assembly	28.4
28-7	Main Tank Assembly	28.6
28-9	Auxiliary Tank Assembly	28.8
28-13	Vent Lines Installation	28.12
28-15	Fuel System (All-Aluminum Tanks)	28.14
28-19	Auxiliary Tank Assembly (All-Aluminum Tanks)	28.18
28-23	Primer System	28.22

CHAPTER 32 – LANDING GEAR

<u>Figure</u>	<u>Title</u>	<u>Page</u>
32-1	Landing Gear Assembly	32.0
32-5	Landing Gear Assembly	32.4
32-9	Fixed Floats – Tube Assemblies Installation	32.8

CHAPTER 33 – LIGHTS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
33-1	Strobe Light Installation	33.0
33-5	Navigation Lights Installation – Right and Left Position	33.4
33-7	Navigation Lights Installation – Tail Position	33.6
33-9	Landing Lights Installation (HID)	33.8
33-11	Landing Lights Installation	33.10
33-13	Spotlight Installation (LED)	33.12
33-15	Spotlight Installation	33.14

CHAPTER 52 – DOORS AND WINDOWS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
52-1	Door Assembly	52.0
52-5	Windshield Assembly	52.4
52-7	Door and Windshield Support	52.6

CHAPTER 53 – FUSELAGE

<u>Figure</u>	<u>Title</u>	<u>Page</u>
53-1	Engine Skirts	53.0
53-3	Mast Fairing Assembly	53.2
53-5	Main Gearbox Compartment Access Doors and Cowling	53.4
53-7	Main Gearbox Compartment Access Door and Cowling	53.6
53-9	Frame Assemblies	53.8
53-13	Horizontal Firewall	53.12
53-17	Tailcone Assembly (LED Strobe)	53.16

CHAPTER 53 – FUSELAGE (Cont'd)

<u>Figure</u>	<u>Title</u>	<u>Page</u>
53-21	Tailcone Assembly	53.20
53-25	Empennage Assembly	53.24
53-27	Float Stabilizer Installation	53.26

CHAPTER 62 – MAIN ROTOR

<u>Figure</u>	<u>Title</u>	<u>Page</u>
62-1	Main Rotor Blade Assembly	62.0
62-3	Main Rotor Blade Assembly	62.2
62-5	Main Rotor Hub Assembly	62.4
62-7	Main Rotor Hub Assembly	62.6

CHAPTER 63 – MAIN ROTOR DRIVE SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
63-1	Main Rotor Gearbox and Mast Assembly . . .	63.0
63-5	Main Rotor Gearbox Installation	63.4
63-7	Rotor Brake Assembly	63.6
63-11	Drive System	63.10
63-15	Clutch Assembly	63.14
63-17	Clutch Assembly	63.16
63-19	Belt Tension Actuator	63.18

CHAPTER 64 – TAIL ROTOR

<u>Figure</u>	<u>Title</u>	<u>Page</u>
64-1	A008-4 Tail Rotor Assembly	64.0
64-3	A008-2 Tail Rotor Assembly	64.2

CHAPTER 65 – TAIL ROTOR DRIVE SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
65-1	Tail Rotor Drive Shaft Installation	65.0
65-5	Damper Assembly	65.4
65-7	B021 Tail Rotor Gearbox Installation	65.6
65-11	A021 Tail Rotor Gearbox Installation	65.10

CHAPTER 67 – FLIGHT CONTROLS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
67-1	Cyclic Control System	67.0
67-7	Cyclic Grip Assembly	67.6
67-11	Cyclic Control System	67.10
67-15	Cyclic Friction Assembly	67.14
67-17	Adjustable Cyclic Spring Assembly	67.16
67-21	Collective Control System	67.20

CONTENTS

CHAPTER 67 – FLIGHT CONTROLS (Cont'd)

<u>Figure</u>	<u>Title</u>	<u>Page</u>
67-27	A121-7 Push-Pull Tube Guide Installation . .	67.26
67-29	Swashplate Installation	67.28
67-33	Swashplate Installation	67.32
67-37	Swashplate Ball Installation	67.36
67-41	Tail Rotor Control System	67.40

CHAPTER 71 – POWERPLANT

<u>Figure</u>	<u>Title</u>	<u>Page</u>
71-1	Engine Installation	71.0
71-5	Air Induction System	71.4
71-9	Air Induction System	71.8
71-13	Air Induction System	71.12
71-17	Exhaust Muffler Assembly	71.16
71-19	Cooling System	71.18
71-23	Alternator and Starter Installation	71.22
71-27	Kelly Aerospace Starter installation	71.26
71-29	Sky-Tec Starter Installation	71.28

CHAPTER 76 – ENGINE CONTROLS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
76-1	Engine Controls	76.0
76-5	Engine Controls	76.4
76-9	Carb Heat Assist and Mixture Control	76.8
76-13	Carb Heat Assist and Vernier Mixture Control	76.12
76-17	Carb Heat Assist Bellcrank Assembly	76.16

CHAPTER 79 – ENGINE OIL SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
79-1	Oil Cooler Installation	79.0
79-5	Oil Cooler Installation	79.4
79-7	Oil Filter Installation	79.6

CHAPTER 90 – POLICE VERSION

<u>Figure</u>	<u>Title</u>	<u>Page</u>
90-1	Searchlight Installation	90.0
90-5	Searchlight Components	90.4
90-7	Searchlight Installation	90.6
90-11	PA/Siren Installation	90.10

CHAPTER 95 – INSTRUMENT SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
95-1	Six-Instrument Console Assembly	95.0
95-5	Six-Instrument Console Assembly – Lower Panel, High Console	95.4
95-9	Six-Instrument Console Assembly – Components, High Console	95.8
95-13	Six-Instrument Console Assembly – Lower Panel, Low Console	95.12
95-17	Six-Instrument Console Assembly – Components, Low Console	95.16
95-21	Aspen PFD Installation	95.20
95-23	Aspen PFD Installation – Pitot/Static Lines	95.22
95-25	Upper Console – Seven-Instrument	95.24
95-29	Lower Panel – Seven-Instrument	95.28
95-33	Upper Console – Nine-Instrument	95.32
95-35	Upper Console – Ten-Instrument/IFR Trainer	95.34
95-39	Upper Panel – Ten-Instrument/IFR Trainer	95.38
95-43	Upper Console – Five-Instrument	95.42
95-47	Lower Instrument Panel	95.46
95-51	Tachometer and Low RPM Warning Unit	95.50
95-53	Pictorial Navigation System (HSI)	95.52
95-55	Digital Clock Installation	95.54
95-57	Engine Instrument Senders and Test Switches	95.56
95-61	Pitot/Static Lines Installation	95.60
95-65	Compass Installation	95.64

CHAPTER 96 – ELECTRICAL SYSTEM

<u>Figure</u>	<u>Title</u>	<u>Page</u>
96-1	Aft Battery Installation	96.0
96-5	Nose Battery Installation	96.4
96-9	Nose Battery Relay Installation	96.8
96-11	Circuit Breaker Panel	96.10
96-15	Electrical Components	96.14
96-19	Electrical Wire Harness	96.18
96-21	RPM Governor Installation	96.20
96-25	Hourmeter & Collective-Activated Switches	96.24
96-27	Carbon Monoxide Detector Installation	96.26
96-29	Strobe Power Supply Installation	96.28
96-31	Floor Transmit Switch Installation	96.30
96-33	Accessory Bars Installation	96.32

CHAPTER 97 – AVIONICS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
97-1	Avionics Options for R22	97.0

CONTENTS

CHAPTER 97 – AVIONICS (Cont'd)

<u>Figure</u>	<u>Title</u>	<u>Page</u>
97-5	C831 GPS Installation – Garmin GTN 600 Series	97.4
97-9	Lower Console and Radio Installation	97.8
97-13	Transponder and Blind Encoder Installation	97.12
97-17	Solid-State Blind Encoder Installation	97.16
97-19	Flux Gate Installation	97.18

CHAPTER 99 – SPECIAL TOOLS

<u>Figure</u>	<u>Title</u>	<u>Page</u>
–	Minimum Spare Parts Kit	99.1
–	2200-Hour Field Overhaul Kit	99.7
–	2200-Hour Field Overhaul Kit	99.11
–	Supplemental Overhaul Kits	99.15
–	Overhaul Exchange Components	99.19
–	Field Installation Kits	99.23
–	Technical Publications	99.27
99-29	KI-18 Vertical Firewall Doubler Inst'l	99.28
99-31	KI-40 Dual Tachometer Inst'l Kit	99.30
99-33	KI-65 Altitude Indicator and KI-66 Directional Gyro Installation Kits	99.32
99-35	Maintenance Tools	99.34
99-37	Maintenance Tools	99.36
99-39	Maintenance Tools	99.38
99-41	Shipping Crates	99.40
99-43	Shipping Crates	99.42

CHAPTER 100 – REVISION LOG

<u>Figure</u>	<u>Title</u>	<u>Page</u>
–	Revision Log	100.1

APPENDIX A – ALPHABETICAL INDEX

<u>Figure</u>	<u>Title</u>	<u>Page</u>
–	Alphabetical Index	A3

APPENDIX B – NUMERICAL INDEX

<u>Figure</u>	<u>Title</u>	<u>Page</u>
–	Numerical Index	B3