

CHAPTER 99  
SPECIAL TOOLS

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FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
FIELD KITS*				
99-1-1	R7983	R44-series C017-5 Swashplate Installation Field Kit		
2	KI-4401	R44-series Minimum Spare Parts Kit Instructions		
3	KI-4402	R44 (Raven I & Clipper I) 2200-Hour Inspection Kit Instructions		
4	KI-4403	R44 II (Raven II & Clipper II) 2200-Hour Inspection Kit Instructions		
5	KI-4405	R44 O-540 Engine Installation Provisions Kit & Instructions		
6	KI-4406	R44 II IO-540 Engine Installation Provisions Kit & Instructions		
7	KI-4407-1	R44-series Interior Furnishings Installation Kit Instructions (Velour)		
8	KI-4407-2	R44-series Interior Furnishings Installation Kit Instructions (Leather)		

NOTES \* See [www.robinsonheli.com](http://www.robinsonheli.com) for the latest kit contents.

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FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>R44 TECHNICAL PUBLICATIONS</b>				
99-3-1	R7204	R44 Maintenance Manual (Incl items 2 thru 4) . . . . .	X	1
2	R7205	R44 Maintenance Manual — Binder . . . . .	X	1
3	R7211	R44 Maintenance Manual — Tabs . . . . .	X	1
4	R7207	R44 Maintenance Manual — Inserts . . . . .	O	1
* * *				
5	R7281	R44 Illustrated Parts Catalog (Incl items 6 thru 8) . . . . .	X	1
6	R7216	R44 Illustrated Parts Catalog — Binder . . . . .	X	1
7	R7214	R44 Illustrated Parts Catalog — Tabs . . . . .	X	1
8	R7215	R44 Illustrated Parts Catalog — Insert . . . . .	O	1
* * *				
9	R8656	Maintenance Record — Binder . . . . .	X	1
10	R8650	Maintenance Record — Tabs . . . . .	X	1
11	R8478	Maintenance Record — Insert (Incl item 12) . . . . .	X	1
12	R8479	Maintenance Record — Component Cards (pack of 20) . . . . .	X	1
* * *				
13	R7282	R44 POH (Incl items 14 thru 16) . . . . .	X	1
14	R7219	R44 POH — Binder . . . . .	X	1
15	R7226	R44 POH — Tabs . . . . .	X	1
16	R7218	R44 POH — Insert . . . . .	O	1
* * *				
17	R8188	R44 II POH (Incl items 18 thru 20) . . . . .	X	1
18	R8189	R44 II POH — Binder . . . . .	X	1
19	R7226	R44 II POH — Tabs . . . . .	X	1
20	R8190	R44 II POH — Insert . . . . .	O	1
* * *				
21	R8670	R44 Cadet POH (Incl items 22 thru 24) . . . . .	X	1
22	R8671	R44 Cadet POH — Binder . . . . .	X	1
23	R7226	R44 Cadet POH — Tabs . . . . .	X	1
24	R8672	R44 Cadet POH — Insert . . . . .	O	1
<b>NOTES</b>				

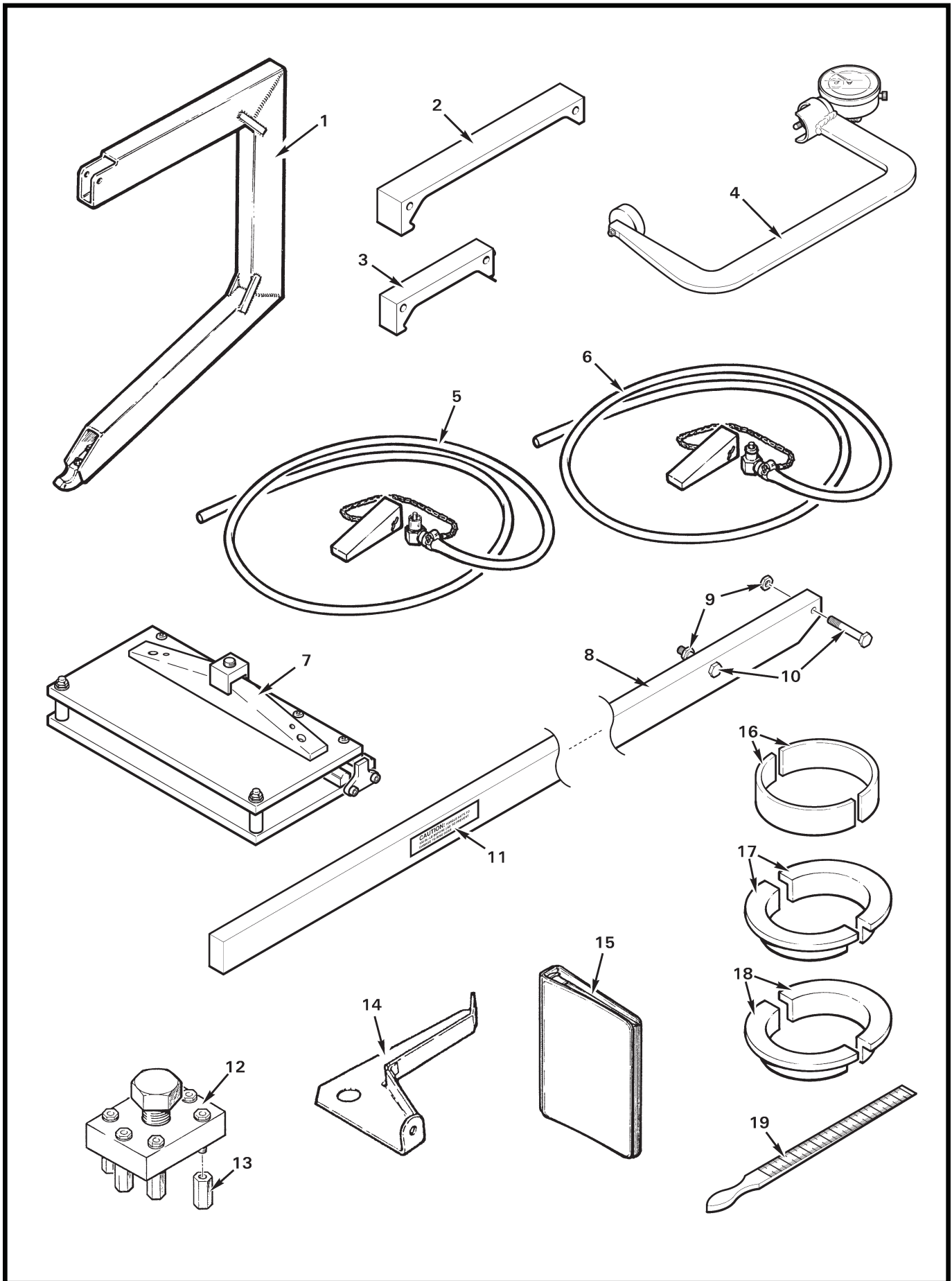


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SPECIAL TOOLS</b>				
99-5-1	MT548-1	Engine Hoist Adapter (includes fitting, bolt, washers and nuts)	X	1
	MT548-7	Fitting . . . . .	X	1
	NAS6604-17	Bolt . . . . .	X	2
	NAS1149F0432P	Washer ([1] under head, [1] under nut) . . . . .	X	4
	D210-4	Nut (or MS21042L4) . . . . .	X	2
2	MT525-1	Main Rotor Rigging Fixture . . . . .	X	1
3	MT525-2	Tail Rotor Rigging Fixture (includes clip and [2] screws) . . . . .	X	1
	MT050-8	Clip . . . . .	X	1
	91251A144	Screw . . . . .	X	2
4	MT122-6	Main Rotor Hub Bolt Stretch Measuring Tool (includes MT200-1 indicator and attaching hardware) . . . . .	X	1
	MT200-1	Indicator . . . . .	X	1
	MS27039C0809	Screw . . . . .	X	1
	NAS1149FN832P	Washer . . . . .	X	1
	MS21042L08	Nut . . . . .	X	1
5	MT053-1	Main Rotor Gearbox Drain Valve Tool (use only with old-style A7260* chip detector) . . . . .	X	1
6	MT054-1	Main Rotor Gearbox Drain Valve Tool (use only with B566-1 "quick release" chip detector) . . . . .	X	1
7	MT526-1	Main Rotor Blade Trim Tab Bender (C016-2 AND C016-5 STAINLESS STEEL BLADES ONLY) . . . . .	X	1
	MT526-8	Main Rotor Blade Trim Tab Bender (C016-7 ALUMINUM BLADES ONLY) . . . . .	X	1
8	MT091-1	Engine Ring Gear Holder Assembly (Incl items 9 thru 11) . . . . .	X	1
9	AN316-4	Nut . . . . .	O	2
10	NAS6604-19	Bolt . . . . .	X	2
11	MT091-3	Decal ("Caution: Torque nuts to 100 in-LB...") . . . . .	X	1
12	MT592-1	Fan Puller (Incl item 13 and [6] NAS6605-16 bolts) . . . . .	X	1
13	MT092-3	Spacer (Rev. H, 1.200-inches long) . . . . .	X	6
14	MT121-1	Bracket Assembly – Magnetic Pickup . . . . .	X	1
15	60297-10	O-540 & IO-540 Engine Operator's Manual (Lycoming part no.; available online at <a href="http://www.lycoming.com">www.lycoming.com</a> ) . . . . .	O	1
16	MT146-4	Blocks – Lower Swashplate Rigging (Set of [2]; use with F198-1 swashplate.) . . . . .	X	1
17	MT146-3	Blocks – Lower Swashplate Rigging (Set of [2]; use with C198-2 swashplate.) . . . . .	X	1
18	MT146-2	Blocks – Lower Swashplate Rigging (Set of [2]; use with C198-1 swashplate.) . . . . .	X	1
19	MT357-9	Taper Gage . . . . .	X	1
<p>NOTES * No longer available.</p>				

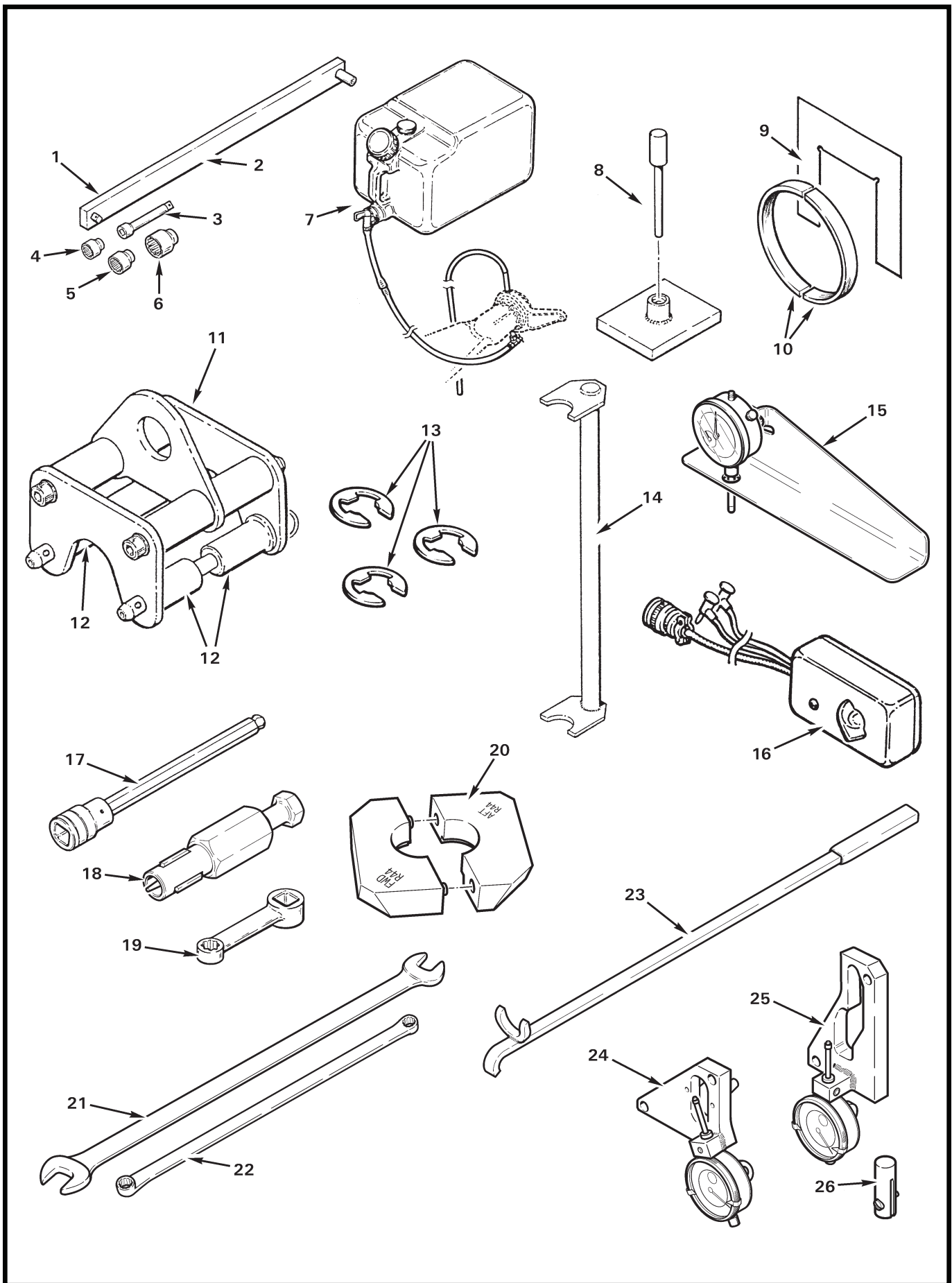




FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SPECIAL TOOLS</b>				
99-7-1	MT173-5	Torque Wrench Extension Tool Set – Fan Nut (R22 and R44; includes items 2 thru 6; no longer available) . . . . .	O	1
2	MT173-6	Torque Wrench Welded Assembly (no longer available) . . . . .	O	1
3	MT173-9	Extension Bar (3/4" drive, 8" length) . . . . .	X	1
4	MT173-7	Socket (3/4" drive, 1-1/2" 12 pt) . . . . .	X	1
5	MT173-4	Socket (3/4" drive, 1-11/16" 12 pt) . . . . .	X	1
6	MT173-8	Socket (3/4" drive, 2" 12 pt) . . . . .	X	1
7	MT147-1	Air Bleed Tool Assembly – Main Rotor Spindle . . . . .	X	1
8	MT252-1	Bearing Pressing Tool – Tail Rotor Hub . . . . .	X	1
9	MT549-2	Flat Plate . . . . .	X	1
10	MT549-1	Spacer – Spindle Boot Adjustment . . . . .	X	2
11	MT527-1	Helicopter Lifting Fixture (Incl item 12) . . . . .	X	1
12	MT527-5	Bushing (nylon; type 6/6) . . . . .	X	4
13	MS16633-2018	Retaining Ring ([3] required for removal or installation of collective spring assembly. Not for in-flight use. See also Figure 67-25.) . . . . .	X	3
14	MT544-2	Spring Retainer – Trim . . . . .	X	1
15	MT352-1	Main Rotor Blade Trim Tab Gage (includes MT200-1 dial indicator) . . . . .	X	1
	MT200-1	Dial Indicator (dial indicator only) . . . . .	X	1
16	MT547-1	Cyclic Trim Set-Up Box (no longer available) . . . . .	O	1
17	MT357-4	Hex Driver (FABL8*; 3/8" square drive) . . . . .	X	1
18	MT357-8	Nipple Chuck . . . . .	X	1
19	MT357-5	Torque Adapter (FRDH101*; 3/8" square drive) . . . . .	X	1
20	MT559-1	Blocks – Main Rotor Rigging (set; holds cyclic in neutral position) . . . . .	X	1
21	MT357-6	Wrench – Open End (3/8" & 7/16"; LTA1214*) . . . . .	X	1
22	MT357-7	Wrench – Box End (7/32" & 1/4"; XDH78A*) . . . . .	X	1
23	MT516-1	Valve Spring Compressor Tool . . . . .	X	1
24	MT133-5	Engine Valve Clearance Check Tool (angle valve) . . . . .	X	1
25	MT133-1	Engine Valve Clearance Check Tool (parallel valve) . . . . .	X	1
26	MT133-9	Adapter Assembly (used with items 24 and 25) . . . . .	X	1

NOTES \* Snap-On part no.

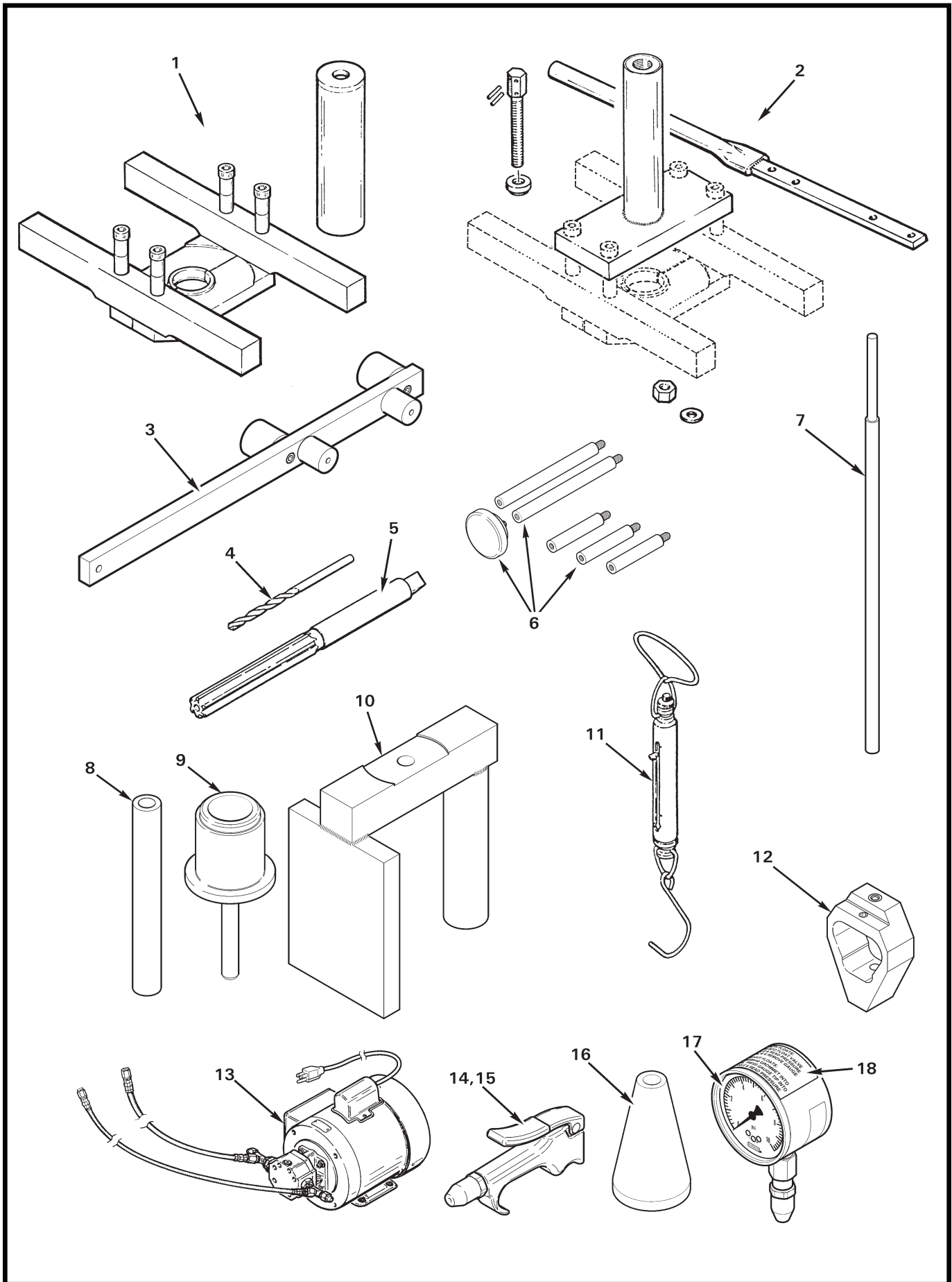


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SPECIAL TOOLS</b>				
99-9-1	MT528-1	Clutch Bearing (C184) Removal/Installation Tool (For use with hydraulic press.) . . . . .	X	1
2	MT528-2	Clutch Bearing (C184) Removal/Installation Tool (For use when hydraulic press is not available; order also item 1.) . . . .	X	1
3	MT354-7	Teeter Moment Tool . . . . .	X	1
4	MT357-3	Drill Bit (steel, cobalt; 0.156 in. dia.) . . . . .	X	1
5	MT357-2	Reamer (0.375 in. dia.) . . . . .	X	1
6	MT260-6	Tail Rotor Drive Shaft Runout Indicator Kit . . . . .	X	1
	MT260-5	Foot . . . . .	X	1
	MT260-2	Extension (1.00 inch long) . . . . .	X	3
	MT260-3	Extension (2.00 inches long) . . . . .	X	2
7	MT331-4	Sheave Alignment Bar . . . . .	X	1
8	MT329-10	Tube – Press Extension (used with items 9 and 10) . . . . .	X	1
9	MT329-6	Plug (MR hub bearing installation) . . . . .	X	1
10	MT643-1	Support (MR hub bearing installation) . . . . .	X	1
11	MT359-1	Spring Scale . . . . .	X	1
12	MT569-2	Guide Assembly – Drill (main rotor hub nut) . . . . .	X	1
13	MT384-1	Hydraulic Test Pump (U.S. / Canada / Mexico – 110 V) . . . . .	X	1
	MT384-2	Hydraulic Test Pump (Outside North America – 220 V) . . . . .	X	1
14	MT340-1	Float Gage and Fill Gun Kit (Incl items 15, 17, and [2] MS35489-40 grommets; not shown) . . . . .	X	1
15	MT340-2	Airgun Assembly . . . . .	X	1
16	MT401-1	Topping Valve Adapter . . . . .	X	1
17	MT340-3	Gage Assembly (Incl item 18) . . . . .	X	1
18	MT340-4	Decal (air pressure gage instructions) . . . . .	X	1

NOTES

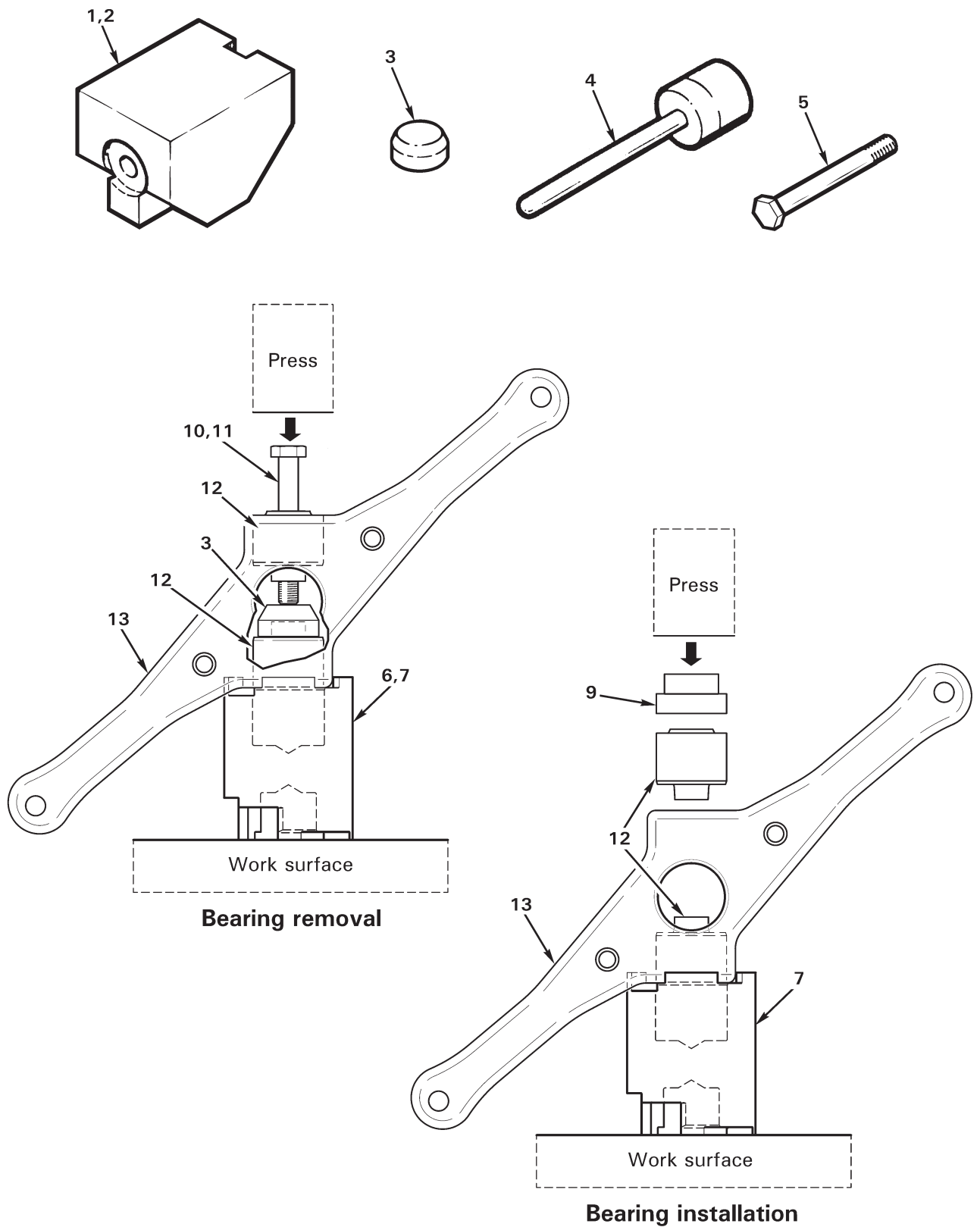


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SPECIAL TOOLS</b>				
99-11-1	MT556-11	Kit – Tail Rotor Elastomeric Bearing Removal and Installation Tools (Incl items 2 thru 5; no longer available.) . . . . .	O	1
2	MT556-15	Support . . . . .	O	1
3	MT556-16	Cap (R44 and R66) . . . . .	X	1
4	MT556-12	Mandrel Assembly . . . . .	O	1
5	AN6-34A	Bolt . . . . .	X	1
6	MT556-17	Kit – Tail Rotor Elastomeric Bearing Removal and Installation Tools (Incl items 3, 7 thru 11) . . . . .	X	1
7	MT556-18	Support . . . . .	X	1
8	MT556-6	Cap (R22; not shown) . . . . .	X	1
9	MT556-19	Driver . . . . .	X	1
10	NAS6604-26	Bolt . . . . .	X	1
11	NAS6604-36	Bolt . . . . .	X	1
12	B361-2	Bearing (Ref; see Figure 64-5)		
13	D062-2	Tail Rotor Hub (Ref; see Figure 64-5)		
<b>NOTES</b>				

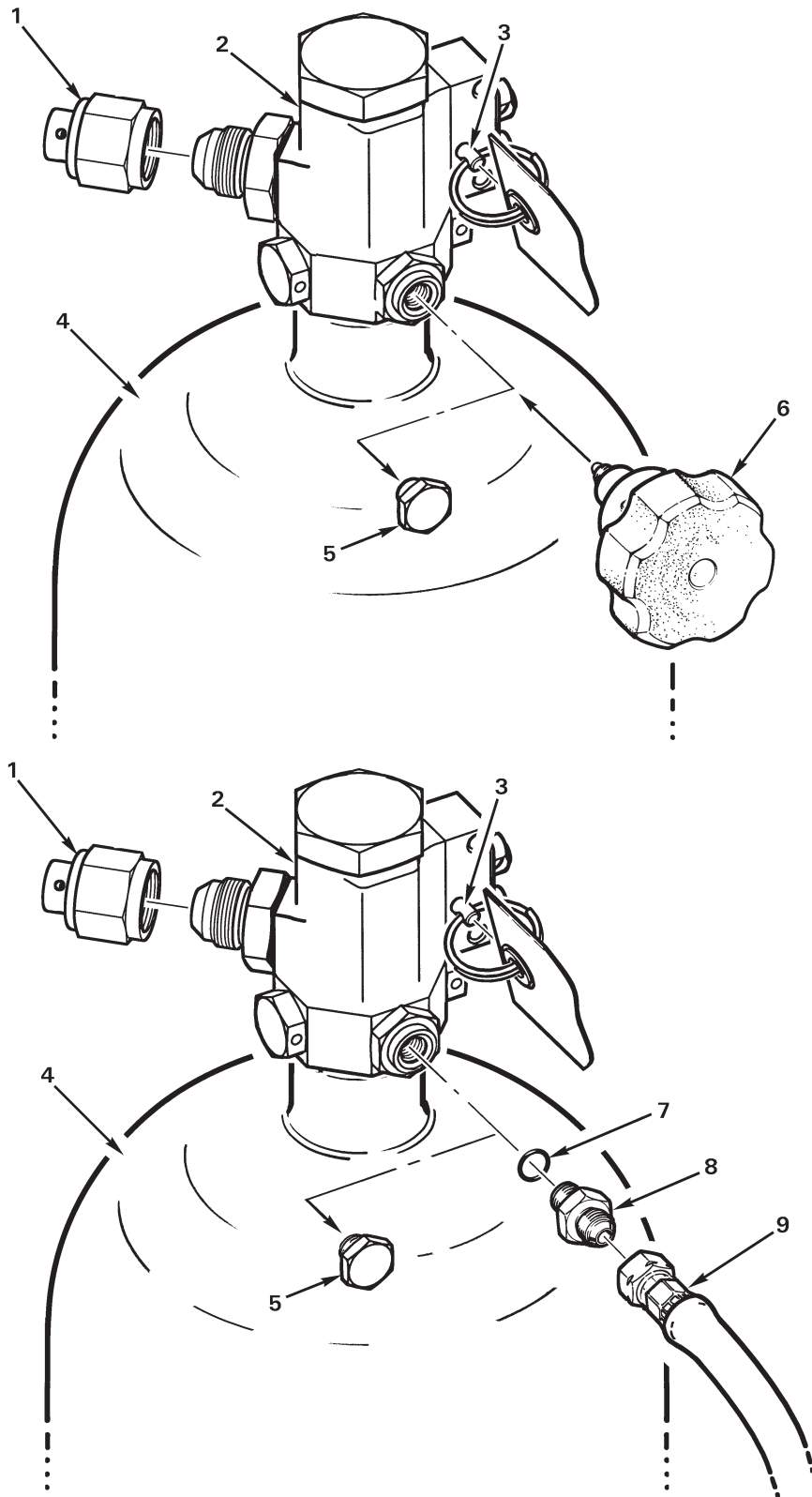


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>POP-OUT FLOAT CYLINDER ASSEMBLY TOOLS*</b>				
99-13-1	MT546-1	Diffuser . . . . .	X	1
2	D757-1 * *	Valve Assembly . . . . .	O	1
3	MT545-1	Pin Assembly (Ref; see Figure 32-13)		
4	D679-3	Cylinder Assembly (Ref; see Figure 32-13)		
5	D767-7	Fill-port cap (Ref)		
6	MT546-6	Bleed Fitting Assembly . . . . .	X	1
7	MS28778-2	Packing (o-ring) . . . . .	X	1
8	MT546-2	Adapter Assembly (Incl item 7) . . . . .	X	1
9	—	Fill Hose (Ref)		
10	KI-151	Cylinder Bleed-off Kit (Incl items 1, 3, 6 thru 8) . . . . .	X	1

NOTES \* Refer to R44 Service Bulletin SB-80.  
 \*\* Order KI-211 to replace.

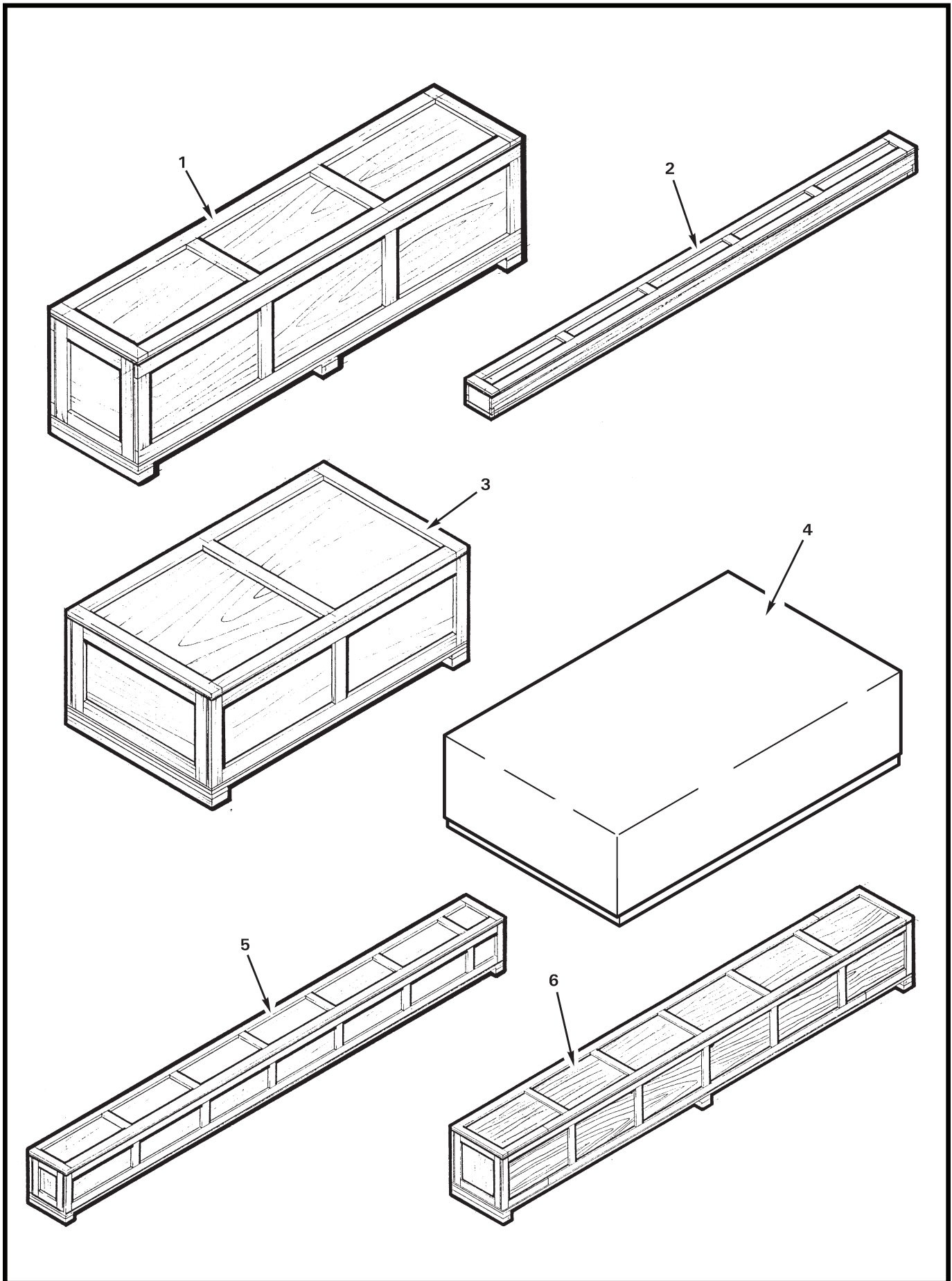




FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SHIPPING CRATES*</b>				
99-15-1	R5384	Main Rotor Gearbox Crate (90" X 24" X 27", 265 lbs) . . . . .	X	1
2	R5385	Push-Pull Tube/Tail Rotor Drive Shaft Crate (192" X 11" X 16", 165 lbs; holds [4] push/pull tubes or [4] TR driveshafts)	X	1
3	R5386	Cabin Door Crate (60" X 34" X 23"; 25 lbs; holds [1] bubble or [2] regular doors) . . . . .	X	1
4	R5170	Windshield Box (63" X 40" X 17"; 45 lbs; cardboard. Holds up to [3] windshields.) . . . . .	X	1
5	R5352	Main Rotor Blade Crate (207" X 17" X 21"; 390 lbs) . . . . .	X	1
6	R5388	Tailcone Crate (194" X 24" X 28"; 290 lbs) . . . . .	X	1

**NOTES** \* Dimensions are approximate and expressed in inches. Dimensions given describe length, width, and height. Weight stated is approximate and includes crate and contents.

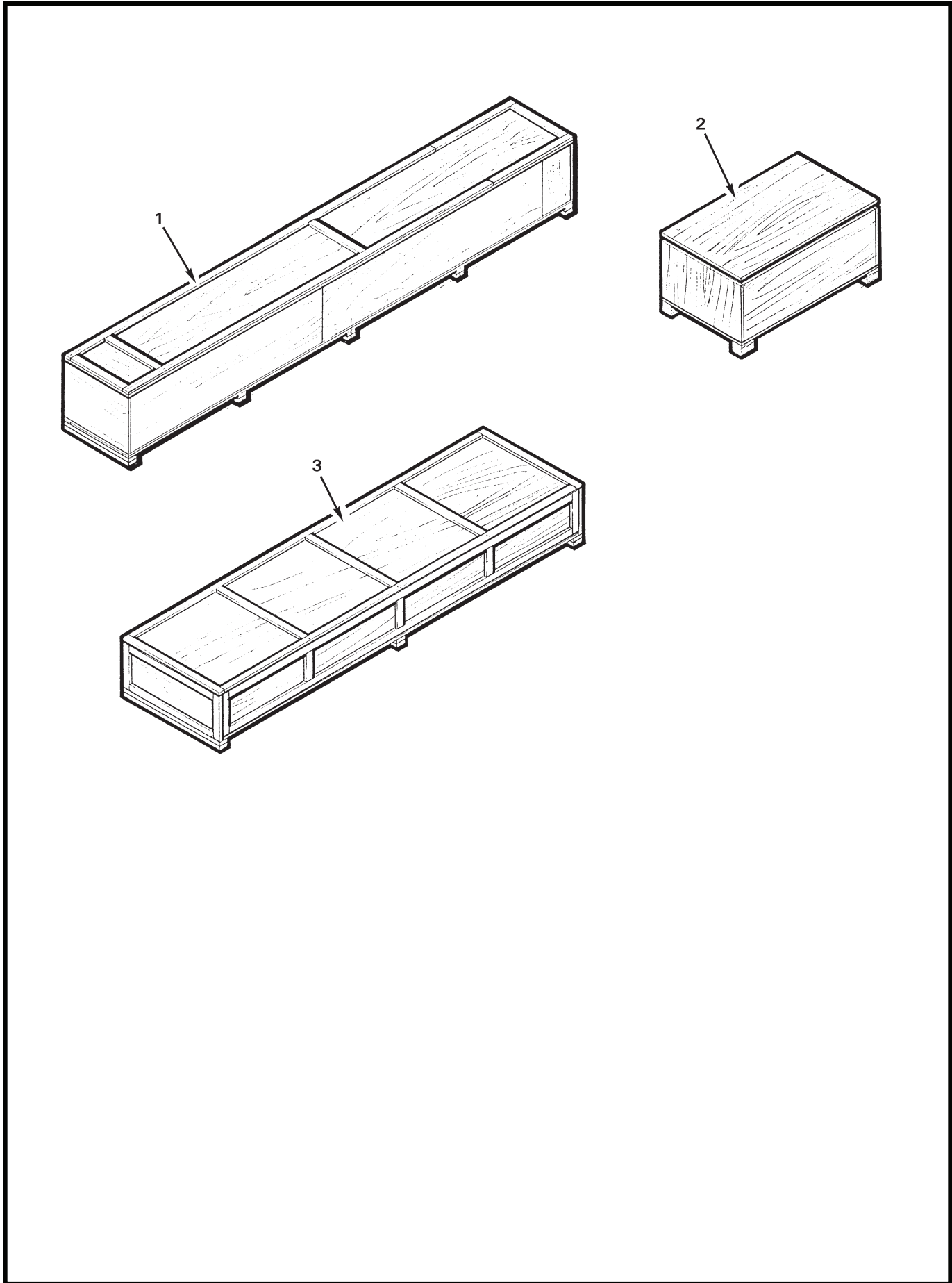


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
<b>SHIPPING CRATES*</b>				
99-17-1	R5702	Main Rotor Blade [2] / Tailcone [1] Crate (208" X 30" X 29"; 695 lbs) . . . . .	X	1
2	MT899-1	Tow Cart Crate (67" X 38" X 31"; 572 lb) . . . . .	X	1
3	R7423	Float Crate (172" X 45" X 22"; 485 lb) . . . . .	X	1

**NOTES** \* Dimensions are approximate and expressed in inches. Dimensions given describe length, width, and height. Weight stated is approximate and includes crate and contents.

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