

New Jigs to Close Space Nurlock Adapter Tips, Liners, Locating Lock Screws and TLC Clamps

UTK-LJU-44 JIG KIT UNIVERSAL LOCATING JIG

New Universal Locating and Spacing Fixtures, Nurlock Shanks, Collars, Lock Screws and TLC Clamps. Spacing and location of lock screws and TLC clamps is achieved instantly!
THREE SIMPLE STEPS:

**UTK-LJU-44
MASTER
JIG KIT 44
COMPONENTS**

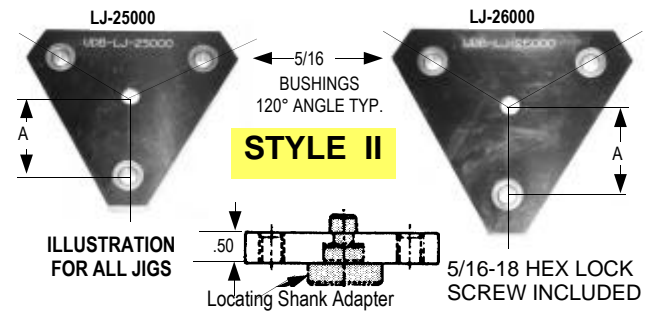
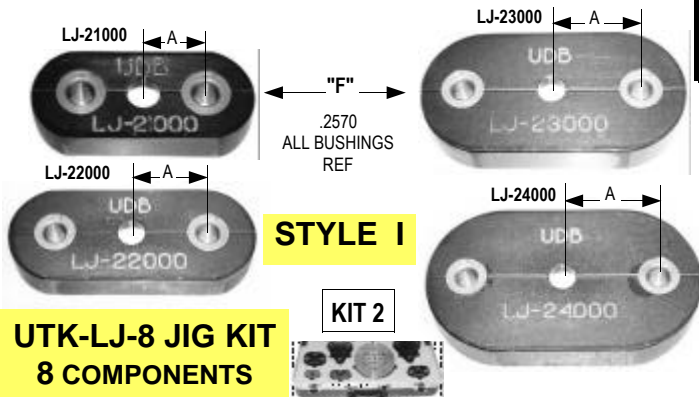
REF UTK-200118

1. Select Locating Shanks and Adapters (LSA) that match your shank O.D.'s.
2. Select the Locating Jig that matches your Nurlock Adapter Tip Collar Series. Attach the Locating Shank Adapter to the Locating Jig with the 5/16-18 UNC Socket Head Screw. Your Jig is now complete!
3. Insert the Jig with the Locating Shank Adapter O.D. into the I.D. of your fixture hole or liner. Align to your drill line. Clamp, drill and tap thru jig bushing for correct spacing and lock screw or TLC location.



Rib-I
Stacker
Case

**UTK-LJU-44 KIT CONTAINS ALL 44 COMPONENTS ON THIS PAGE:
SHANKS, ADAPTERS, BUSHINGS, JIGS, SCREWS & CUSTOM CASE.**

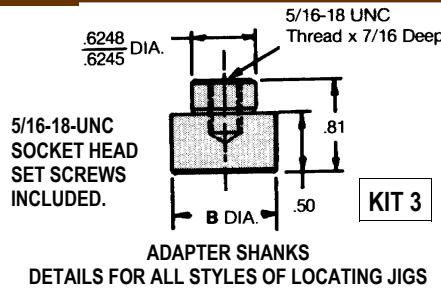


**UTK-LJ-8 JIG KIT
8 COMPONENTS**

UDB-LJ-8 KIT CONTAINS ALL 7 JIGS SHOWN THIS PAGE IN A CUSTOM-FITTED CASE WITH TOP & BOTTOM LAYOUT INSERTS.

UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.	UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.	UNITED PART NO.	A DIM	STYLE	LOCKSCREW TLC CLAMP NO.
LJ-21000	.625	I	16531 - TLC 2	LJ-23000	1.078	I	16532 - TLC 2	LJ-25000	1.562	II	16530 - TLC 3
LJ-22000	.953	I	16532 - TLC 2	LJ-24000	1.203	I	16532 - TLC 2	LJ-26000	1.687	II	16530 - TLC 3

UNITED PART NO.	B DIA.	UNITED PART NO.	B DIA.
LSA-1	.3745	LSA-10	1.1245
LSA-2	.4370	LSA-11	1.2495
LSA-3	.4995	LSA-12	1.3745
LSA-4	.5620	LSA-13	1.4995
LSA-5	.6245	LSA-14	1.6245
LSA-6	.7495	LSA-15	1.7495
LSA-7	.8120	LSA-16	1.9995
LSA-8	.8745	LSA-17	2.3745
LSA-9	.9995	LSA-18	2.4995

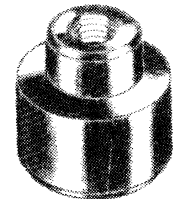


**UTK-LSA-37 KIT
37 COMPONENTS**

LOCATING SHANK ADAPTER

SPECIFY LSA-37 FOR KIT

CONTENTS: ALL 18 LOCATING SHANK ADAPTERS, LSA-1 THRU LSA-18, AND ALL 18 OF THE 5/16-18 UNC SOCKET HEAD SCREWS IN A CASE.



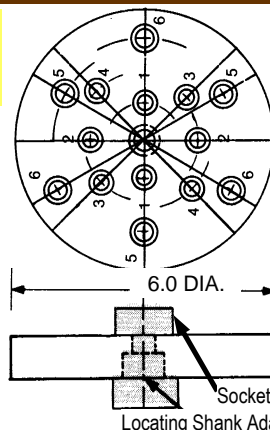
STYLE III

**UTK-ULJK-38 JIG KIT
38 COMPONENTS**

SCRIBED NUMBERS	COLLAR SERIES
1	21000
2	22000
3	23000
4	24000
5	25000
6	26000

CONTENTS: ALL 18 LOCATING SHANK ADAPTERS: LSA-1 THRU LSA-18, ALL 5/16-18 UNC SOCKET HEAD SCREWS AND THE LJU-1 UNIVERSAL LOCATING JIG, IN A CASE.

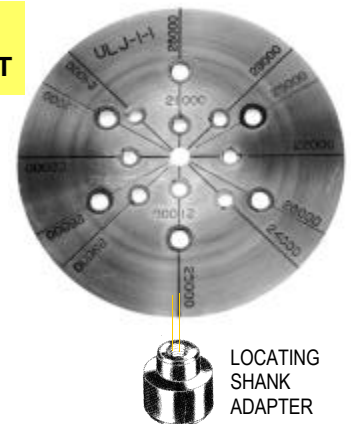
KIT 4



**ULJ-1 JIG
1 COMPONENT**

UNIVERSAL LOCATING JIG

LOCKING COLLAR SIZES SCRIBED TO LOCATE ALL LOCK SCREWS OR TLC CLAMPS, 21000 THRU 26000.



LOCATING SHANK ADAPTER

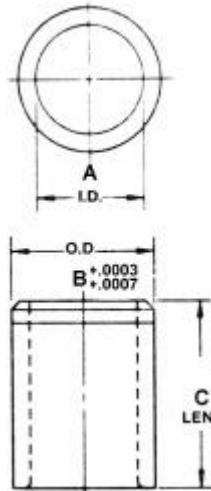
CONTAINS ALL LOCKING SERIES SIZES. LOCATING NUMBERS DENOTE LOCKING SERIES.

4-5-04

Liners, Lock Screws, Spindle Guards

Liners, Lock Screws & Fluid Swivel Guides

HEADLESS LINERS

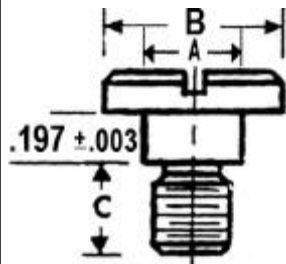


LINER PART NO.	A I.D.	B O.D.	C LENGTH
19936	3/8	5/8	1"
19937	7/16	3/4	1"
19938	1/2	3/4	1"
19939	9/16	7/8	1"
19940	5/8	7/8	1"
19941	3/4	1"	1"
19942	3/4	1"	1-3/8
19943	13/16	1-3/8	1-3/8
19944	7/8	1-3/8	1-3/8
19945	1	1-3/8	1-3/8
19946	1-1/8	1-3/4	1-3/4

LINER PART NO.	A I.D.	B O.D.	C LENGTH
19947	5/8	7/8	1-3/4
19949	3/4	1"	1-3/4
19950	7/8	1-3/8	1-3/4
19951	1	1-3/8	1-3/4
19952	1-1/4	1-3/4	1-3/4
19953	1-1/4	1-3/4	2-1/2
19954	13/8	1-3/4	2-1/2
19955	1-1/2	2-1/4	2-1/2
19956	1-3/4	2-1/4	2-1/2
19957	2	2-1/2	2-1/2
19958	2-1/4	2-3/4	2-1/2

LOCK SCREWS

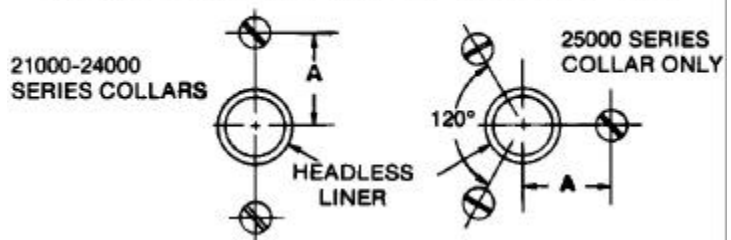
SLOTTED



HEAT TREATED — BLACK OXIDE FINISH

LOCK SCREW PART NO.	A	B	C	THREAD
16530	7/16	3/4	5/8	3/8 - 16
16531	3/8	5/8	5/16	5/16 - 18
16532	3/8	5/8	7/16	5/16 - 18

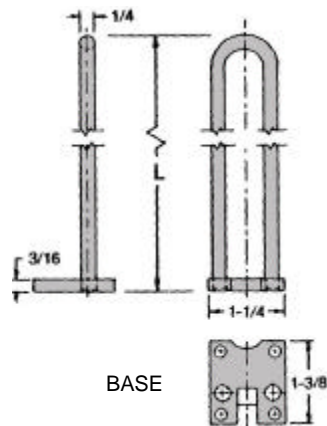
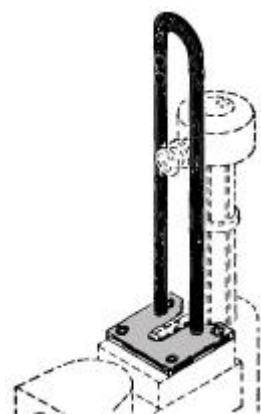
LOCK SCREW INSTALLATION DATA



Use **UNITED** Locating Jigs on Page P39.

ADAPTER TIP SERIES	A	LOCK SCREW PART NO.	NO. OF SCREWS REQUIRED
21000	.625	16531	2
22000	.922	16532	2
23000	1.047	16532	2
24000	1.172	16532	2
25000	1.562	16530	3

SPINDLE GUARD FOR FLUID SWIVEL GUIDES



PROTECTION FOR

- SPINDLES
- COOLANT LINES
- AIR FLUID CHUCKS

FITS QUACKENBUSH, ROCKWELL AND COOPER RIGHT ANGLE MOTORS.

PART NO.	L HEIGHT
UDB-170906	6
UDB-170995	8-7/8
UDB-170996	4-1/4

Adapters for Small Holes

for Fiberglass and Plastic Tooling requiring use of automatic feed drill motors

Adapter Tips AT-LL

UNITED INCLUSIVE FEATURE — FITS ALL

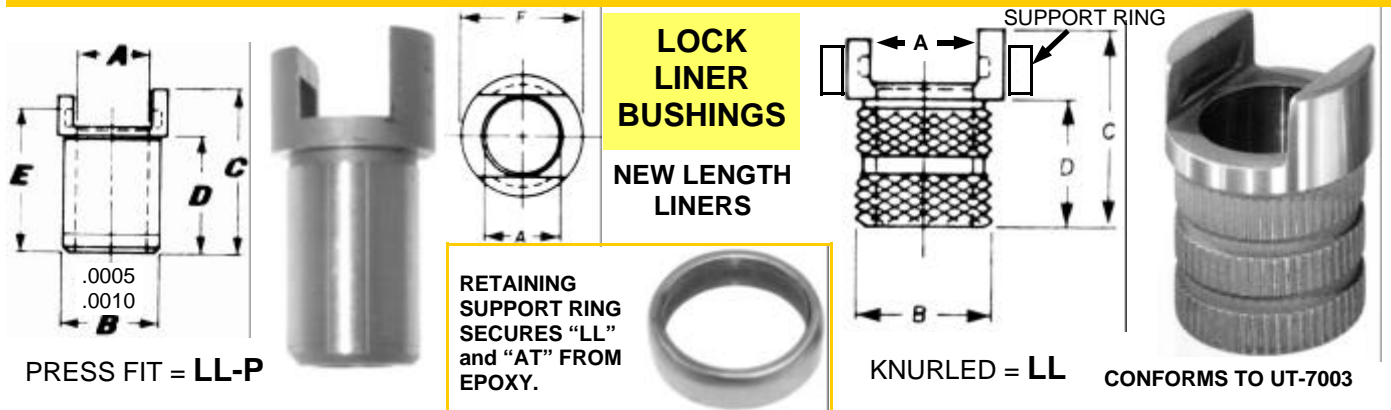
UNITED's Adapter Tips fit all standard automatic feed drill motors, including Gardner-Denver, Keller, Aro, Buckeye, Quackenbush, Zephyr, etc. A close tolerance is maintained when drilling rivet holes in titanium, stainless steel, nickel and other hard metals.

NOTE: UNITED Adapter Tips (AT) and Lock Liner (LL) Bushings listed are not interchangeable with UNITED's Nurlock drill bushing tips and liners. "AT" Adapter Tips will only fit the "LL" Lock Liners shown on this page.

ANOTHER UNITED EXCLUSIVE

UNITED's Adapter Tips now feature two piece construction and longer lengths. The shank is hardened for wear protection and the collar for toughness.

UNITED ADAPTER TIPS



ADAPTER TIPS						LOCK LINERS							
ADAPTER TIP PART NO.	A ^{+ .0001} I.D. RANGE	B ^{+ .0000} - .0002	C	D	L.H. THREAD	LOCK LINER PART NO.	A ^{+ .0003} - .0000	B	C	D	E	F	RETAINING RING
AT 22 25	.1875 - .2055	.3437	2.7/16	1.9/16	3/4 - 16	LL-36-14	.3440	9/16	1.3/8	7/8	1.3/16	11/16	LL-36-R UT-7003A-1
AT 22 34	↓	↓	3"	2.1/8	↓	LL-36-14 P	.3440	.5625	1.3/8	7/8	1.3/16	11/16	
AT 22 42	↓	↓	3.1/2	2.5/8	↓								
AT 22 50	↓	↓	4"	3.1/8	↓								
AT 28 25	.1910 - .2812	.4375	2.7/16	1.9/16	3/4 - 16	LL-44-14	.4377	11/16	1.3/8	7/8	1.3/16	13/16	LL-44-R UT-7003A-2
AT 28 34	↓	↓	3"	2.1/8	↓	LL-44-14 P	.4377	.6875	1.3/8	7/8	1.3/16	13/16	
AT 28 42	↓	↓	3.1/2	2.5/8	↓								
AT 28 50	↓	↓	4"	3.1/8	↓								
AT 36 25	.2812 - .4130	.5625	2.7/16	1.9/16	3/4 - 16	LL-52-14	.5627	13/16	1.3/8	7/8	1.3/16	15/16	LL-52-R UT-7003A-3
AT 36 34	↓	↓	3"	2.1/8	↓	LL 52 14 P	.5627	.8125	1.3/8	7/8	1.3/16	15/16	
AT 36 42	↓	↓	3.1/2	2.5/8	↓								
AT 36 50	↓	↓	4"	3.1/8	↓								
AT 48 25	.2812 - .5250	.7500	2.7/16	1.9/16	1" - 14	LL-64-14	.7503	1"	1.3/8	7/8	1.3/16	1.1/8	LL-64-R UT-7003A-4
AT 48 34	↓	↓	3"	2.1/8	↓	LL 64 14 P	.7503	1.0000	1.3/8	7/8	1.3/16	1.1/8	
AT 48 42	↓	↓	3.1/2	2.5/8	↓								
AT 48 50	↓	↓	4"	3.1/8	↓								

Helical Nurlock Liner Fixtures

Helical Nurlock Liner Ideal For Drill Bar Fixtures

Solid, Adjustable or Swivel Types

UCC-268002-192 and -193 SERIES SOLID ADJUSTABLE DRILL BARS

Durable, precision-designed to hold Positive Feed Drill Motors with Nurlock Adapter Tips, Collars and Shanks (See page P10). Attractive hard anodized blue finish and alloy steel heat treated. Nurlock Liners are black oxide finished. Clearly visible stamped Part No. and Series.



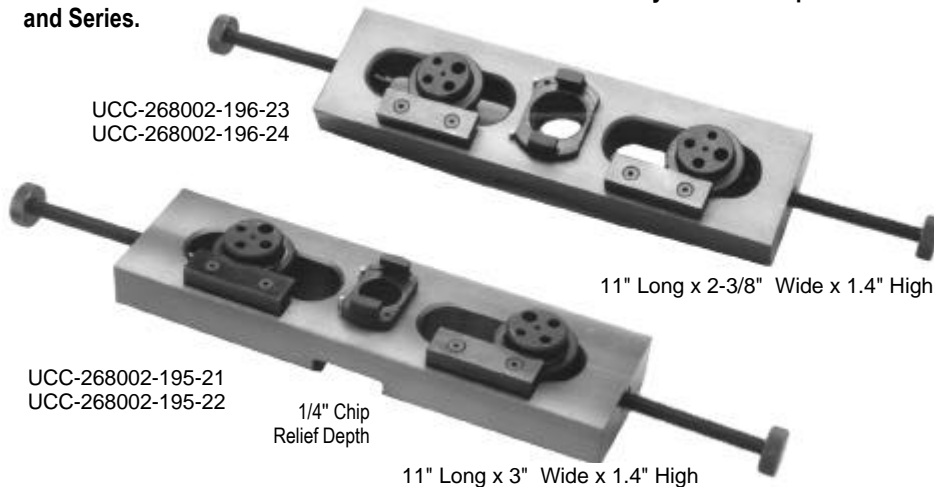
21000 and 22000 Series are 1.4" High x 1.6" Wide x 11" Long with 1/4" Chip Relief depth. 23000 and 24000 Series are 1.4" High x 2.1" Wide x 11" Long with 1/4" Chip Relief depth. Special 25000 Series available on request.

UCC-268002-192 / -193 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-192-211		A211XXX	3/8
UCC-268002-192-212		A212XXX	7/16
UCC-268002-192-213		A213XXX	1/2
UCC-268002-192-221		A221XXX	7/16
UCC-268002-192-222		A222XXX	1/2
UCC-268002-192-223		A223XXX	9/16
UCC-268002-192-224		A224XXX	5/8
UCC-268002-192-225		A225XXX	3/4
UCC-268002-193-231		A231XXX	3/4
UCC-268002-193-232		A232XXX	13/16
UCC-268002-193-233		A233XXX	7/8
UCC-268002-193-234		A234XXX	1
UCC-268002-193-235		A235XXX	1-1/8
UCC-268002-193-241		A241XXX	5/8
UCC-268002-193-243		A243XXX	3/4
UCC-268002-193-242		A242XXX	13/16
UCC-268002-193-244		A244XXX	7/8
UCC-268002-193-245		A245XXX	1
UCC-268002-193-246		A246XXX	1-1/8
UCC-268002-193-247		A247XXX	1-1/4
UCC-268002-193-249		A249XXX	1-3/8
UCC-268002-193-248		A248XXX	1-1/2

UCC-268002-195 and -196 DRILL BAR SERIES

Universal Adjustable Drill Bars to work for Positive Feed Drill Motors with Nurlock Adapter Tips, Collars and Shanks (See page P10). Designed with Twin Revolving Bushings for Fasteners, Clamping or Support Guides. Guide Holes are 1/8, 5/32, 3/16 and 1/4 with Counter-bore Relief. Attractive hard anodized blue finish and alloy steel heat treated. Nurlock Liners are black oxide finished. Clearly visible stamped Part No. and Series.



21000 and 22000 Series are 1.4" High x 2-3/8" Wide x 11" Long with 1/4" Chip Relief depth. 23000 and 24000 Series are 1.4" High x 3" Wide x 11" Long with 1/4" Chip Relief depth. Special 25000 Series available on request.

UCC-268002-195 / -196 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-195-211		A211XXX	3/8
UCC-268002-195-212		A212XXX	7/16
UCC-268002-195-213		A213XXX	1/2
UCC-268002-195-221		A221XXX	7/16
UCC-268002-195-222		A222XXX	1/2
UCC-268002-195-223		A223XXX	9/16
UCC-268002-195-224		A224XXX	5/8
UCC-268002-195-225		A225XXX	3/4
UCC-268002-196-231		A231XXX	3/4
UCC-268002-196-232		A232XXX	13/16
UCC-268002-196-233		A233XXX	7/8
UCC-268002-196-234		A234XXX	1
UCC-268002-196-235		A235XXX	1-1/8
UCC-268002-196-241		A241XXX	5/8
UCC-268002-196-243		A243XXX	3/4
UCC-268002-196-242		A242XXX	13/16
UCC-268002-196-244		A244XXX	7/8
UCC-268002-196-245		A245XXX	1
UCC-268002-196-246		A246XXX	1-1/8
UCC-268002-196-247		A247XXX	1-1/4
UCC-268002-196-249		A249XXX	1-3/8
UCC-268002-196-248		A248XXX	1-1/2

Swivel-Adjustable-Universal

Fixtures with Helical Nurlock Liners

Swivel Adjustable Helical Nurlock Liners

UCC-268002-201 / -202 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-201-211		A211XXX	3/8
UCC-268002-201-212		A212XXX	7/16
UCC-268002-201-213		A213XXX	1/2
UCC-268002-201-221		A221XXX	7/16
UCC-268002-201-222		A222XXX	1/2
UCC-268002-201-223		A223XXX	9/16
UCC-268002-201-224		A224XXX	5/8
UCC-268002-201-225		A225XXX	3/4
UCC-268002-202-231		A231XXX	3/4
UCC-268002-202-232		A232XXX	13/16
UCC-268002-202-233		A233XXX	7/8
UCC-268002-202-234		A234XXX	1
UCC-268002-202-235		A235XXX	1-1/8
UCC-268002-202-241		A241XXX	5/8
UCC-268002-202-243		A243XXX	3/4
UCC-268002-202-242		A242XXX	13/16
UCC-268002-202-244		A244XXX	7/8
UCC-268002-202-245		A245XXX	1
UCC-268002-202-246		A246XXX	1-1/8
UCC-268002-202-247		A247XXX	1-1/4
UCC-268002-202-249		A249XXX	1-3/8
UCC-268002-202-248		A248XXX	1-1/2

Universal Adjustable Swivel Fixture Features

High strength Swivels in all directions Adjustments can be made for alignment location clamping 3/8" chip clearance below Helical Nurlock Liner Use on irregular surfaces, corners and difficult locations Control perpendicularity All alloy heat treated steel fixture

Simply locate with pin or Nurlock shank Align Lock up swivel Clamp to work piece Insert appropriate Nurlock Adapter tip, collars and shanks Drill Ream Counterbore Countersink.

UCC-268002-201 Series



10" to 12" Long x 4" Wide x 1-3/4" High

Available in A21000 - A22000 - A23000 - A24000 Collars and Shank Series Nurlock Adapter Tips. Fixtures are manufactured to close tolerances with strong heat treated black oxide finish and clear identification on each drill bar. Will hold Positive Feed Motors. UNITED Kits are available with fixtures and swivels for each size Nurlock Collar and Adapter Tip. 25000 Series are available on special request.

UCC-268002-198 / -199 DRILL BARS

PART NO.	-LOCK	FITS COLLAR & SHANK	SHANK OD & LINER ID
UCC-268002-198-211		A211XXX	3/8
UCC-268002-198-212		A212XXX	7/16
UCC-268002-198-213		A213XXX	1/2
UCC-268002-198-221		A221XXX	7/16
UCC-268002-198-222		A222XXX	1/2
UCC-268002-198-223		A223XXX	9/16
UCC-268002-198-224		A224XXX	5/8
UCC-268002-198-225		A225XXX	3/4
UCC-268002-199-231		A231XXX	3/4
UCC-268002-199-232		A232XXX	13/16
UCC-268002-199-233		A233XXX	7/8
UCC-268002-199-234		A234XXX	1
UCC-268002-199-235		A235XXX	1-1/8
UCC-268002-199-241		A241XXX	5/8
UCC-268002-199-243		A243XXX	3/4
UCC-268002-199-242		A242XXX	13/16
UCC-268002-199-244		A244XXX	7/8
UCC-268002-199-245		A245XXX	1
UCC-268002-199-246		A246XXX	1-1/8
UCC-268002-199-247		A247XXX	1-1/4
UCC-268002-199-249		A249XXX	1-3/8
UCC-268002-199-248		A248XXX	1-1/2

Universal Adjustable Swivel Fixture Features

Swivels in all directions Location, Alignment, Clamping and Angular Adjustments Excellent for contoured or irregular surfaces Adjustable for alignment or clamping from both ends 3/8" chip clearance below Helical Nurlock Liner Attractive aluminum blue hard anodized finish and alloy steel Swivel Black oxide Liners and Clamps

Adjust height and width by leveling screw pads in four locations Adjust 1-7/8" to 3-3/8" Clamp and adjust vertically and horizontally Swivels Expand Baseup to three inches Drill Ream Countersink Counterbore.

UCC-268002-198 Series



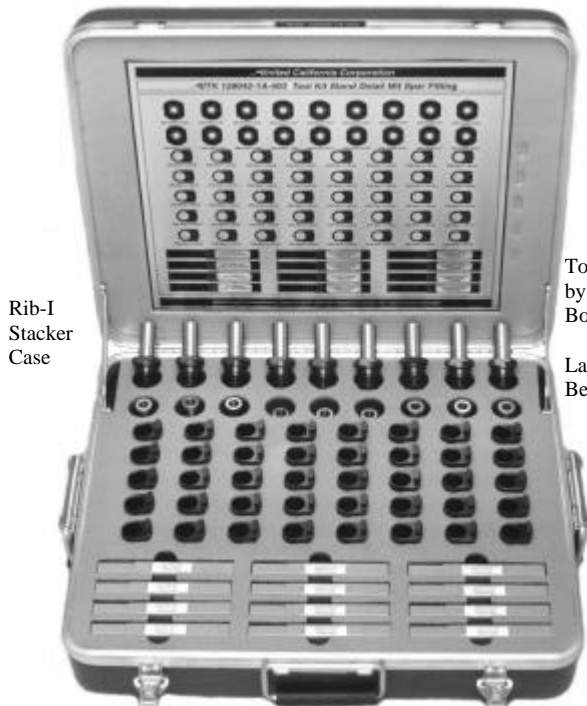
Chip Clearance 3/8
13-1/2" Long closed Adjusts to 16-1/2" Long x 6" Wide x 1-7/8" High

Will hold, align and lock in A21000 - A22000 - A23000 - A24000 - A25000 Nurlock Collars and Shank Series with I.D. ranges from 3/32" to 1-1/2". See page T14. Fixtures are manufactured to close tolerances with clear identification on each drill bar. Available in Aluminum or Steel. UNITED Kits are available with fixtures and swivels for each size Nurlock Collar and Adapter Tip. Kits with all sizes of slipfit sleeves to align all Nurlock Shank O.D. sizes to Nurlock Liners can also be provided. Call or Fax UNITED for further details.

**Nurlock Liners in
Retrofit Kits**

Helical Nurlock Liners in Retrofit- Mod-Repair & A.O.G. Custom Kits

Tool Kit Drill Stand MIT Spar Fitting



Rib-I
Stacker
Case

Tool Design
by L. Ledoux,
Boeing.

Layout by Don
Bedell, United.

Rib-I Case UCC-128042-2 is
22" L x 18" W x 6-1/2" H

This handsome Navy Blue Rib-I Stacker Case contains Lasting Latch and Heavy Duty Hardware, including self-retracting rubber grip handles and quarter-turn pressurized latch clamps.

With quantity order and reasonable lead time, **UNITED** will provide your company logo molded in the case.

A large detailed metal contents tag is mounted inside the lid listing each tool with Part No. and location. Inside hard foam is light blue hard foam for ease of part location.

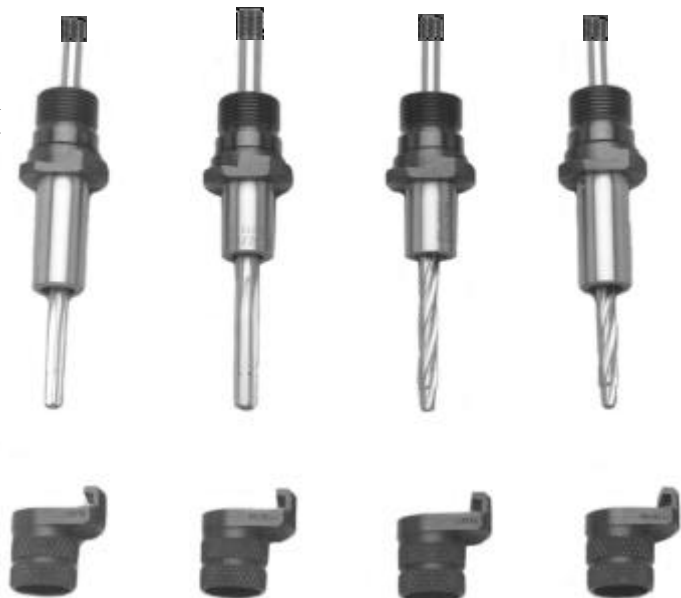
Kit Contents

12	UDBA-22615 15/32 thru 37/64 Nurlock Adapter Tips
6	UDBA-22608 15/32 thru 3-3/64 Nurlock Adapter Tips
40	UDB-HNLP-1 Single Ear Helical Nurlock Liners
2	UCC-796B-15/32 and 7/32 Custom Threaded Shanks
2	UCC-7110-1/2, 17/32, 9/16 & 37/64 Custom Piloted Oil Hole Threaded Shank Reamers

UTK-128042-1A-403 KIT

Modification, Retrofit Repair and A.O.G. Kits are manufactured with speed and alacrity for our preferred customer requirements. This Kit was designed by Senior Tool Engineer Lenny Ledoux, Boeing Everett, and manufactured for their 757 customer rework.

Coolant Oil Hole Threaded Shank Reamers



ADAPTABILITY KITS

Positive Feed Air Tools, Nosepieces, Adapters, Chucks and Accessories are kitted separately for use with those tools.

CUSTOM COMBINATION KITS

UNITED can supply you with a custom combination kit with tools for your particular needs.

A **UNITED** Engineer, experienced in Retrofit - Modification - Repair and A.O.G. Kit Design, is available to assist in selecting the correct tools, design layout, application data and case.

We will provide your requirements at reasonable cost and will guide you in any special kit conditions you require. Call or Fax us for further details. "Just in time!" Call **UNITED** — You'll be glad you did!