

Caliber	Lyman Part No.	Mandrel Diameter	Cartridge	Maximum Cartridge Neck Diameter (with bullet seated)
22*	7810151	.2195"	218 Bee	.242"
			219 Zipper	.252"
			220 Swift	.260"
			222 Rem.	.253"
			222 Rem. Mag.	.253"
			223 Rem.	.253"
			224 Weatherby Mag.	.248"
			22-250 Rem.	.255"
			22 Hornet	.2425"
			225 Winchester	.260"
243/6mm*	7810152	.240"	240 Weatherby Mag.	.271"
			243 Win.	.276"
			244/6mm Rem.	.276"
25*	7810153	.2535"	250 Sav.	.2855"
			25-06 Rem.	.290"
			257 Weatherby Mag.	.285"
			257 Roberts	.290"
6.5(.264)	7810154	.2595"	256 Newton	.290"
			264 Win. Mag.	.298"
			6.5 Jap.	.293"
			6.5 Rem. Mag.	.300"
270*	7810155	.2735"	270 Win.	.308"
			270 Weatherby Mag.	.305"
7mm*	7810156	.2795"	7mm Weatherby Mag.	.312"
			7mm Mauser	.3205"
			7mm-08 Rem.	.315"
			7mm Rem. Mag.	.315"
			280 Rem.	.315"
284 Win.	.320"			
30*	7810157	.3045"	30-30 Win.	.330"
			300 Weatherby Mag.	.336"
			300 H+H Mag.	.338"
			30-40 Krag	.338"
			300 Sav.	.339"
			30-06	.3397"
			308 Win.	.3435"
			300 Win. Mag.	.3397"
			303(.311)	7810158
303 Sav.	.334"			
7.62 x 39	.340"			
7.62 x 54R	.332"			
8mm	7810159	.3195"	8mm Mauser	.3493"
8mm Rem. Mag.			.354"	
338	7810160	.3345"	338 Win. Mag.	.369"
340 Weatherby Mag.			.366"	
358	7810161	.353"	35 Rem.	.3838"
			350 Rem. Mag.	.388"
			358 Win.	.388"
375	7810162	.3715"	375 H+H Mag.	.402"
			378 Weatherby Mag.	.403"

*Mandrel Multi-Pack (Includes these Mandrels)

Lyman®

OUTSIDE NECK TURNER INSTRUCTIONS

Introduction

The Lyman Outside neck Turner is designed for use on the Lyman Acculine and Lyman Universal Case Trimmer. It is not, however, adaptable to the Power Trimmer.

Case necks thicken from reforming and resizing operations. This can lead to inaccuracy and may produce unsafe pressures due to a lack of chamber clearance. The Lyman Outside Neck Turner accessory produces uniform neck wall thickness and exact outside neck diameter. Utilizing a cutter screw which can be adjusted for any diameter between .195 inch and .405 inch, a precisely ground mandrel centers and guides the case for cutting in caliber sizes from .22 to .375. In operation, the cutter passes progressively over the case neck as it is guided over the mandrel, reducing the neck wall of the case to a uniform thickness. Rate of feed is controlled by rotating a fine pitch lead screw, and an adjustable mechanical stop controls the length of the cut. To change calibers, simply insert the desired mandrel and adjust the cutter height. Please note the cases to be turned must be resized, trimmed, neck expanded and chamfered first.

1. Setting up the Outside Neck Turner

- a. Unthread the cutter head from the trimmer shaft.
- b. Slide the trimmer shaft from the trimmer body.
- c. Loosen set screw which locks stop collars onto the trimmer shaft and remove stop collars from the trimmer shaft. The cutter head and stop collars will not be used.
- d. Slide the outside neck turner feed screw assembly onto the shaft so that the ring which contains set screws faces the handle of the trimmer shaft. (See Figure A).
- e. Insert the trimmer shaft back into the trimmer body.
- f. Thread the outside neck turner cutter head body into the trimmer shaft.
- g. Refer to the mandrel specification chart and find the mandrel for your caliber to be turned. After choosing the proper mandrel for the caliber to be neck turned, insert the mandrel into the center hole of the Outside Neck Turner cutter head body, making sure there is clearance between the mandrel and the cutter screw.
- h. Tighten set screw that is closest to the trimmer shaft. This will lock the mandrel in position. Use the hex wrench supplied with the set.

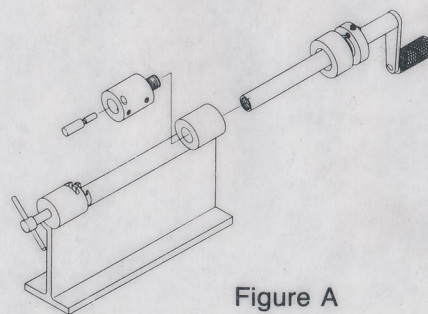


Figure A

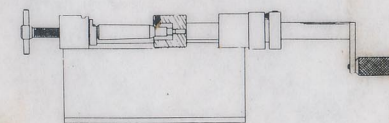


Figure B

2. Case Neck Turning Adjustments

- a. Place a case to be turned into the shellholder/chuck head, however, do not lock the case into position yet.
- b. Slide the trimmer shaft forward until the mandrel enters the case mouth. Check to be sure that there is clearance between the case neck and cutter screw. Position the cutter head body so that the cutter screw is over the case neck as close to the case shoulder as you desire.
- c. Turn the cutter screw # 7 until it just contacts the case neck and lock it in place. (See figure B). Leave the cutter head in this position.
- d. Adjust the feed screw # 5 and feed screw collar # 4 until they are about 1/16" apart. This will enable corrections to the length of cut if required at a later time. Adjust the stop set screw # 6, which is in line with the trimmer shaft, to maintain this spacing and lock the stop set screw into position with set screw # 3.
- e. Slide the feed screw assembly up against the trimmer body. Position a thread locking nylon ball # 8 under the feed screw assembly lockscrew. (See drawing).
- f. Lock the feed screw assembly onto the trimmer shaft.
- g. Slide the trimmer shaft back until the cutter screw is off the case neck, leaving the case on the end of the mandrel. (See figure C).
- h. Lock the case into position in the trimmer at this time.

3. Case Neck Turning

- a. Turn the feed screw collar on the feed screw assembly into contact with the trimmer body.
- b. With one hand, hold this collar in position against the trimmer body.
- c. With the other hand, crank the trimmer handle in a clockwise motion. This will feed the cutter screw across the case neck until the feed screw stop # 6 contacts the feed screw collar # 4.
- d. When contact is made, release the feed screw collar and continue turning in the same direction while slowly pulling the cutter off the case neck.
- e. Check the case neck for proper depth and length of cut. Cases should be turned just deep enough to remove brass from the entire diameter of the case neck.

At this point, case necks are concentric and need not be turned any deeper unless a smaller diameter neck is desired for chamber clearance. Make any adjustments for depth or length of cut. Repeat the above steps for the remainder of cases after any needed adjustments have been made.

Caution: Neck diameters should not be smaller than manufacturers specifications.

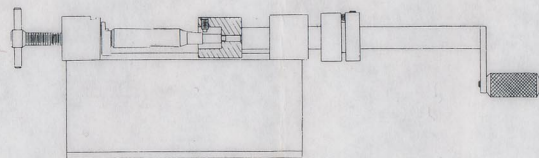
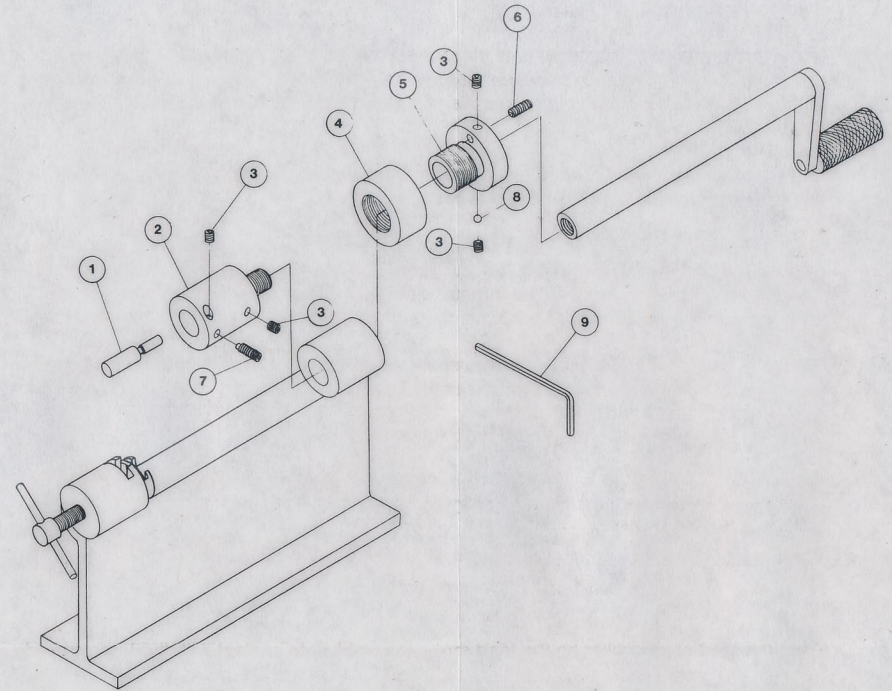


Figure C



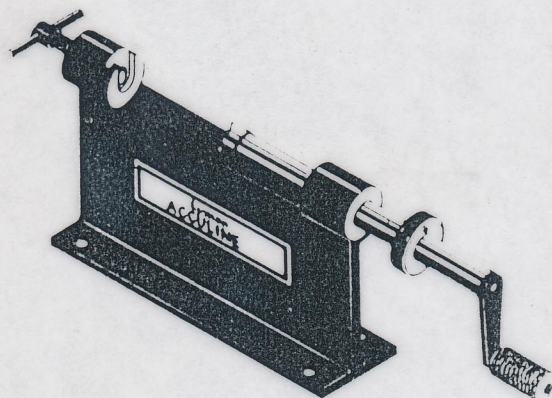
OUTSIDE NECK TURNER
(Shown on an Accutrimmer)

KEY	PART DESCRIPTION	PART #
1	Mandrel	See Mandrel Chart
2	Cutterhead Body	7990953
3	Set Screw 8-32 x 1/8 (4)	7994418
4	Feed Screw Collar	7990951
5	Feed Screw	7990952
6	Set Screw 8-32 x 3/8	7993008
7	Cutter Screw	7990954
8	Nylon Ball	7990076
9	Hex Wrench 5/64	2992876

LYMAN ACCUTRIMMER INSTRUCTIONS FOR USE

A metallic cartridge case will stretch after a number of firings and it then becomes necessary to trim it back to its proper length so it will chamber properly.

The Lyman AccuTrimmer will accept all popular metallic cases. To convert to another caliber, you need only change to the proper size shellholder and pilot. Lyman offers a complete line of shellholders and pilots.



MOUNTING: The base of your trimmer is drilled with offset holes for mounting directly to the top of your reloading bench without splitting the wood. This is the recommended method of mounting. Some reloaders prefer to clamp their trimmer in a vise when using it. If the trimmer is to be used in this manner, Lyman recommends that it be fastened to a block of wood. The wooden block can then be held firmly in the vise jaws without damaging the base.

INSTALLING THE CUTTER AND PILOT:

Thread the cutter onto the AccuTrimmer shaft until tight to the shaft. An easy method we use to ensure tightness is to finger tighten the cutter to the shaft. We then insert the hex head wrench into the pilot set screw and apply clockwise pressure on the handle while holding the wrench firmly. When tight the cutter is secure and ready to use.



Figure A.
Insert pilot into cutter head and lock in place with allen wrench.

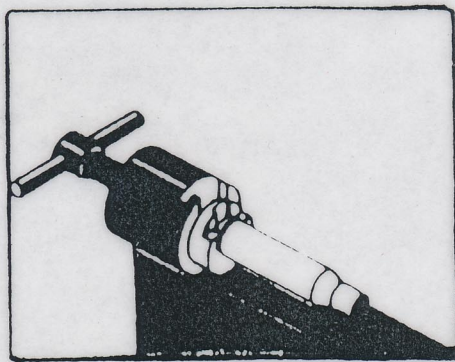
The pilot is inserted into the hole at the center of the cutter. Loosen the set screw with the wrench provided until the pilot sits flush to the cutter. Tighten the set screw. Use caution, as the cutter edges are extremely sharp. **IMPORTANT:** Use the proper pilot as specified for use with your cartridge case. See chart.

PREPARING THE CASES: Before trimming, cases must be full-length or neck resized and deprimed. Pilots are designed to be used with sized necks only.

MEASURING THE CASES: You will need an accurate means of measuring case length. We recommend Lyman precision calipers. When your cases have lengthened to the point where they exceed the maximum case length allowable for your cartridge, they must be trimmed. For a list of "maximum case lengths" and suggested "trim-to lengths" see your Lyman handbook.

LOCKING THE CASE IN PLACE:

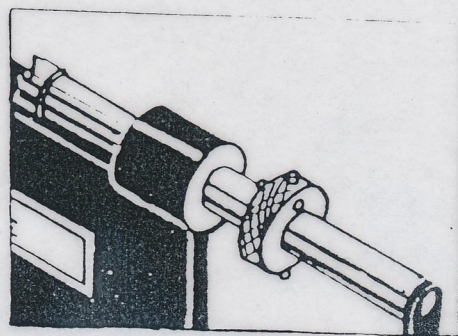
Place the appropriate shellholder into the shellholder retainer slot.



Place your case into the shellholder. Advance the crank handle with the pilot attached until the pilot is entered into the mouth of the case and has pushed it flush to the shellholder. Now, exerting slight pressure on the shaft, handle side, tighten the case in place by turning the "T" handle clockwise until the case is tight. NOTE: Excessive pressure is not required. You are now ready to trim your case.

ADJUSTING THE CUT: A knurled lock ring with a set screw through the side provide for both fine and coarse trimming adjustments.

Advance the lock ring until somewhat close and tighten the set screw into place with your hex wrench. To adjust the fine cutting attachment, take your hex wrench and advance or retract the side set screw until you reach the proper amount of desired trimming.



HINTS: Adjust the cut a little at a time, checking your case length with your caliper after each cut. When the correct "trim-to length" has been reached, you are now ready to begin processing all your cases.

PROCESSING YOUR CASES: Once your AccuTrimmer is in adjustment, your entire lot of cases may be processed to bring them all to the correct length. As you turn the crank handle, keep an inward pressure on the cutter so that it is always bearing against the case mouth, but do not force it. After trimming, small burrs will be present on the case mouth. These can be easily removed from both inside and outside the case mouth with Lyman Deburring tools.

KEEP A MASTER CASE: When a reloader is working with several different calibers, it is wise to retain a master case of the correct length for each cartridge.

This reduces adjustment time since the master case can be snapped into the shellholder and the cutter quickly brought into adjustment against its mouth.

LYMAN SHELLHOLDER AND CASE TRIMMER PILOT REFERENCE CHART

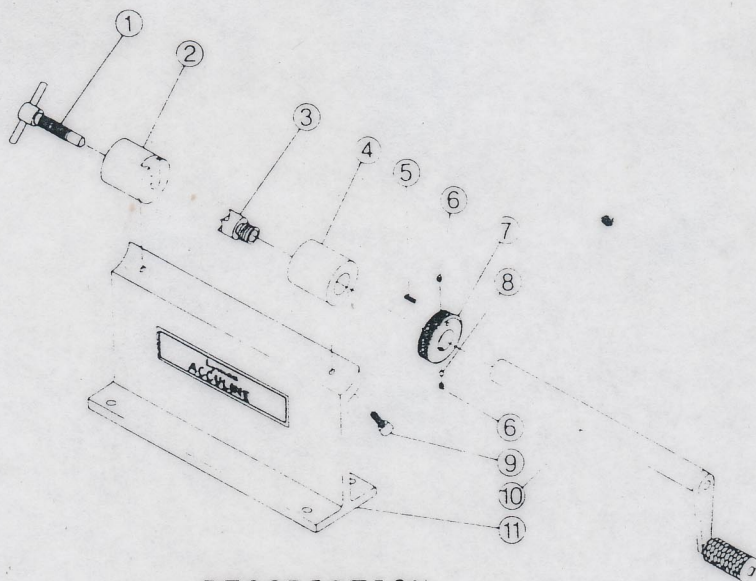
This handy chart can direct you to the correct die sets and accessories needed for reloading any of the cartridges listed.

<u>PISTOL CARTRIDGE</u>	<u>SHELLHOLDER #</u>	<u>CASE TRIMMER PILOT #</u>	<u>MAX CASE LENGTH</u>	<u>TRIM-TO LENGTH</u>
.221 Remington Fireball	26	22	1.400"	1.395"
.25 ACP	32	25A	.615"	.610"
.7 mm T/C-U	26	28	1.750"	1.740"
.30 Mauser	12	30	.990"	.985"
.30 Herrett	6	30	1.605"	1.595"
.32 ACP	23	30	.680"	.672"
.32 Smith & Wesson Long	9	31	.920"	.915"
.32 H&R Magnum	9	31	1.075"	1.070"
.38 Super Auto	12	9mm	.900"	.895"
.38 Smith & Wesson	21	35	.775"	.765"
.380 Auto	26	9mm	.680"	.677"
.9mm Luger	12	9mm	.754"	.751"
.38 Special	1	35	1.155"	1.149"
.357 Magnum	1	35	1.290"	1.28
.357 Remington Maximum	1	35	1.605"	1.600"
.41 Magnum	30	41	1.290"	1.285"
.44 Remington Magnum	7	44	1.285"	1.280"
.44 S & W Special	7	44	1.160"	1.152"
.44-40 Winchester	14B	44A	1.305"	1.300"
.45 ACP	2	45A	.898"	.895"
.45 Colt	11	45A	1.285"	1.280"
.45 Winchester Magnum	2	45A	1.198"	1.193"

RIFLE CARTRIDGE

.17 Remington	26	17	1.796"	1.786"
.22 Hornet	4	22	1.403"	1.393"
.22/.250 Remington	2	22	1.912"	1.902"
.220 Swift	5	22	2.205"	2.195"
.222 Remington	26	22	1.700"	1.690"
.222 Remington Magnum	26	22	1.850"	1.840"
.223 Remington (5.56mm)	26	22	1.760"	1.750"
5.6 mm x 50R Magnum	1	22	1.968"	1.958"
.243 Winchester	2	24	2.045"	2.035"
6mm Remington (.244 Rem.)	2	24	2.233"	2.225"
.25-06 Remington	2	25	2.494"	2.484"
.250 Savage (.250-3000 Sav.)	2	25	1.912"	1.902"
.257 Roberts	2 or 8	25	2.233"	2.223"
6.5mm x 55 Swedish Mauser	27	26	2.160"	2.150"
6.5mm x 57 Mauser	2	26	2.230"	2.220"
6.5mm x 57R Mauser	14B	26	2.230"	2.220"
.270 Winchester	2	27	2.540"	2.530"
7mm-08 Remington	2	28	2.035"	2.025"
7-30 Waters	6	28	2.040"	2.030"
7mm Remington Magnum	13	28	2.500"	2.490"
7mm Weatherby Magnum	13	28	2.550"	2.540"
7mm x 57 Mauser (7mm Mauser)	2	28	2.235"	2.225"
7mm x 57R Mauser	13	28	2.235"	2.225"
7mm x 64 Brenneke	2	28	2.510"	2.500"

RIFLE CARTRIDGE	SHELLHOLDER #	TRIMMER #	PILOT #	CASE LENGTH	TRIM-TO LENGTH
7mm x 65R Brenneke	14B		28	2.559"	2.549"
.280 Remington (7mm Rem.Exp)	2		28	2.540"	2.530"
.30 M1 Carbine	19	17 44A	30	1.290"	1.286"
.30-30 Winchester (.30 WCF)	6	22 45A	30	2.0395"	2.028"
.300 Savage	2	24 45	30	1.871"	1.865"
.307 Winchester	6	25A	30	2.010"	2.005"
.308 Winchester (7.62mm NATO)	2	25	30	2.015"	2.005"
.30-06 Springfield (7.62mm x63)	2	26	30	2.494"	2.484"
.300 Winchester Magnum	13	27	30	2.620"	2.610"
.300 Weatherby Magnum	13	28	30	2.825"	2.815"
7.65mm Argentine Mauser	2	30	31	2.105"	2.100"
.303 British	7	31	31	2.222"	2.212"
.32 Winchester Special	6	32	32	2.040"	2.035"
8mm Mauser		32			
(8mm x 57 - 8mm x 57JS - 7.9mm x57)	2	8mm	8mm	2.240"	2.235"
8mm x 57JRS	14B	33	8mm	2.240"	2.235"
8mm Remington Magnum	13	35	8mm	2.850"	2.840"
.338 Winchester Magnum	13	37M	33	2.500"	2.490"
.35 Remington	8 or 2	37	35	1.920"	1.910"
.356 Winchester	6	41	35	2.010"	2.005"
.38 Winchester	2	44	35	2.015"	2.005"
.375 Winchester	6		37	2.020"	2.010"
.375 H & H Magnum	13		37	2.850"	2.840"
.444 Marlin	14B		44	2.225"	2.220"
.45-70 Government	17		45	2.105"	2.100"
.50-70 Government	22		NA	1.750"	NA



KEY	DESCRIPTION	PART NO
1	T-Handle Screw Ass'y	7993013
2	Shellholder Retainer	7993003
3	Cutter Head Ass'y	7822011
4	Cutter Shaft Boss	7993005
5	8-32 x 3/8 Set Screw	7993008
6	8-32 x 1/8 Set Screw (2)	7994418
7	Adjustable Stop Collar	7993007
8	Nylon Ball	7990076
9	10-32 Socket Head Cap Screw (2)	7993006
10	Cutter Shaft Assembly	7994432
11	Accutrimmer Base	7993001