

Tiger Tools - A Field Guide Jan. 2021 Update Words and photos by Bill Rogers

As the price of Tigers has increased, more and more are appearing from barns, sheds and from beneath piles of junk in the back of garages, to be restored and flipped for a profit. The best ones from our well-known restorers are better than when they rolled off the Jensen line. If you are one of the people that drives your car, fine, but if you are interested in a concours machine, the car must be as close to the original production car as possible. That means complete with the tools as delivered. Unfortunately many original owners back in the day kept the tool kit when they sold the car on and those tools disappeared into the bottom of a tool box, separated forever from their original home in the trunk.

Prior Bibliography: There have been several articles about the tools published in the past; Norm Miller's "The Book of Norman" does not give many details; but covers the trunk components in a short paragraph (Pg 154) and includes a black and white photograph of a Mk II tool kit (Pg 175). Mark Olsen wrote a more definitive piece which is available on the Tigers United website (http://www.tigersunited.com/techtips/tech_threads/tt-toolkit.asp); he also provided a version of that article to STOC (the Brit Tiger Club) for their magazine, Cats Whiskers, that was, for some time, viewable on their website but it has since been removed. Classic Tiger (Mark Olsen's own site) has a listing; (<http://www.classictiger.com/techtips/toolroll/toolroll.html>) with clickable images that are better than those on Tigers United. It is likely that the CAT (LA Tiger Club), STOA (Bay Area Tiger Club) or TE/AE (Eastern US Club) will have had articles in their magazines in Tech Tips over the years.

Contemporary Documents: These are usually more reliable than 50-year-old memories and the first three illustrations are the Rootes Parts List entries for the tool kits. The Alpine list is first and the Tiger lists (Alpine 260 and Alpine 260, 289) that follow were supplements to the Alpine list.

Caveat: My research is based on four cars, widely separated in the production run and it is statistically invalid to extrapolate from a small sample size to a population of about 7,000 Tigers. A larger sample would have validated the information presented here. I asked Dave McDermott, owner of the Targa Florio Tiger, who has done extensive research on tool kits, to review this article. His comments follow: "For what it is worth I closely examined the tool kits in 2 different cars that were owned locally from new and they corroborate what is in the article. One of those was a late Mk II and did indeed have the extra oil cooler spanner. However, just because a few cars had the same exact tools does not necessarily mean that all cars in between had the same exact tools. We don't know the ordering process used at Rootes to know whether they ordered parts from suppliers in batches of 1,000, 2,000 or all 7,000. If, as I suspect, in smaller batches, then there could be some minor differences and if in smaller batches then were they just dumped into the parts bin on top of the remaining stock? However, with the consistency we have found so far it probably is safe to make the assumption that all the tool kits were identical except for extremely minor differences". Given the fact that part numbers were unchanged except for the Jack, Nave Plate Remover and Tommy Bar, it is fairly safe to assume that we are on the right track.

TOOLS

Plate Ref.	Part Number	DESCRIPTION	No. per Veh.	REMARKS
	P.100976 s/d by 1219610	Tool roll	1	
	1219610	Tool roll	1	
	P.113516	Wheel brace	1	
	P.45610	Grease gun	1	No longer available
	1201342	Lifting jack	1	Up to B395000595
	5220473	Lifting jack	1	From B395000596
	P.49330	Distributor key	1	
	P.42165	Tyre valve key	1	
	9222123	Valve and spark plug gauge	1	
	P.79758	Screwdriver	1	
	P.79756	Pliers	1	
	P.41399	Spanner—Adjustable	1	
	9221515	Spanner (box)—Sparking plugs	1	
	P.53782	Tommy bar—Box spanner	1	
	9221020	Spanner, 1/2" x 7/16" UNF.	1	
	9221021	Spanner, 7/16" x 3/8" UNF.	1	
	9221024	Spanner, 7/16" (bolt) x 1/2" UNF.	1	
	9221025	Spanner, 7/16" (nut) x 3/8" (bolt) UNF.	1	
	1201332 s/d by 1224441	Starting handle	1	Up to 1224441
	1224441	Starting handle	1	From B94100001 BU, B94600001 CKD up to Series V
	P.102286	Nave plate extractor	1	
	1201623 s/d by 1206425	Hammer (Copper and nylon)	1	
	1206068 s/d by 1206425	Hammer (Double headed copper)	1	
	1206425	Hammer (Alloy)	1	For use with "Ear" type hub nuts
	1206003	Spanner	1	For use with "Octagonal type hub nuts

Alpine Parts List (late), Publication 6600992, Page ZV1

If you compare this with the following Tiger lists, you can see that many items were common with the Tiger. We have good examples here of Brit vs American terminology; to reduce confusion I have used Brit terminology - Americans can refer to the dictionary below. You will notice that some parts have 7-digit numbers which indicates that they probably had Humber-Hillman (Rootes drawing office) numbered drawings. I have not been able to find any of these drawings (except for the Tool Roll, Spanners, Jack and Nave Plate Tool) in searches of the Rootes archive drawings and microfiche. I think the other numbers with P prefixes are part numbers from outside suppliers.

Many items are not common with the Tiger such as Starting Handles and Hammers for knock-on wheels, however, for future reference take note of the item with part # P.49330 the Distributor Key.

TOOLS

Plate Ref.	Rootes Part Number	DESCRIPTION	No. per Veh.	REMARKS
	1219610	Tool roll	1	
	P.113516	Wheel brace	1	
	1201342	Lifting jack	1	
	P.42165	Tyre valve key	1	
	P.79758	Screwdriver	1	
	P.79756	Pliers	1	
	P.41399	Spanner—Adjustable	1	
	1224751	Spanner—Sparking plugs	1	
	1224817	Tommy bar—Sparking plug spanner	1	
	9221020	Spanner, $\frac{1}{2}$ " x $\frac{7}{16}$ " UNF.	1	
	9221021	Spanner, $\frac{7}{16}$ " x $\frac{3}{8}$ " UNF.	1	
	9221024	Spanner, $\frac{7}{16}$ " (bolt) x $\frac{1}{2}$ " UNF.	1	
	9221025	Spanner, $\frac{7}{16}$ " (nut) x $\frac{7}{16}$ " (bolt) UNF.	1	
	P.102286	Nave plate extractor	1	

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2nd Issue

Alpine 260 Parts List Supplement, Publication 6601131, Page ZVF1 2nd Issue.

TOOLS

Plate Ref.	Rootes Part Number	DESCRIPTION	No. per Veh.	REMARKS
	1219610	Tool roll	1	
	P.113516	Wheel brace	1	
	1201342	Lifting jack	1	Up to B9473324
	5220473	Lifting jack	1	From B9473325
	P.42165	Tyre valve key	1	
	P.79758	Screwdriver	1	
	P.79756	Pliers	1	
	P.41399	Spanner—Adjustable	1	
	1224751	Spanner—Sparking plugs	1	
	1224817	Tommy bar } Sparking	1	Superseded by 1224750
	1224750	Tommy bar } plug spanner	1	
	9221020	Spanner, $\frac{1}{2}$ " x $\frac{7}{16}$ " UNF.	1	
	9221021	Spanner, $\frac{7}{16}$ " x $\frac{3}{8}$ " UNF.	1	
	9221024	Spanner, $\frac{7}{16}$ " (bolt) x $\frac{1}{2}$ " UNF.	1	
	9221025	Spanner, $\frac{7}{16}$ " (nut) x $\frac{7}{16}$ " (bolt) UNF.	1	
	P.102286	Nave plate extractor— $\frac{3}{4}$ " wide	1	Up to B382000080
	1214254	Nave plate extractor— $\frac{3}{4}$ " wide	1	From B382000001

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Alpine 260 and 289 Parts List Supplement, Publication 6601334, Page ZVF1

From the Tiger lists you can see that during production the tool kit contents changed. The Lifting Jack was lengthened and installed first on B9473325, which necessitated a rearrangement of the clips holding the jack and wheel brace in place in the RHS of the trunk floor. The Tommy Bar was changed (I have not discovered in what way) and the first Mk 1A had the 3/4" wide Nave Plate Extractor in place of the more complicated 1/2" wide item found with the Mk 1.

You will notice that the notation for the spanners describes the nuts and bolts that they fit, rather than the AF (Across Flats) designation that appears on the wrenches themselves. A useful cross reference is found here:

<http://www.byles.net/www.oka4wd.com/images/pdfs/techdocs/WorkshopInfo/Spanner%20Jaw%20Sizes.pdf>. This allows you to compare nut and bolt sizes with the equivalent AF dimension.

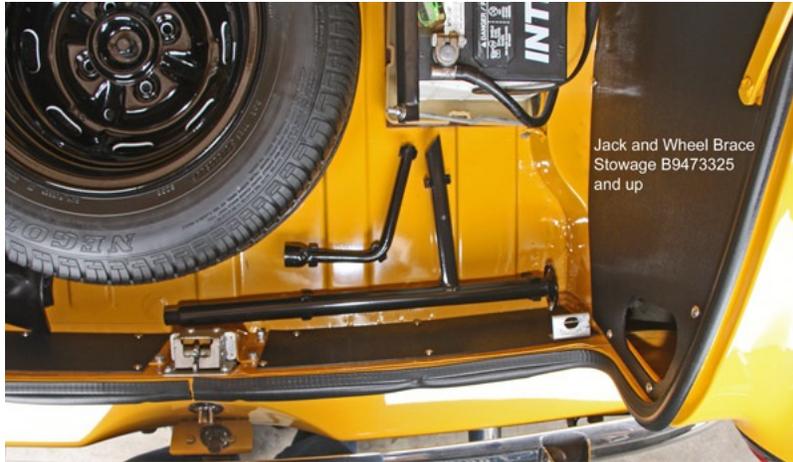
By all accounts the Mk II had one additional spanner for the oil cooler, but that does not appear in the parts list for some reason. Note that there is no reference anywhere to the Lucas Distributor Key, but the Tire Valve Key is listed.

Most of the following information and illustrations for this article are from two cars that have been in the family from new. The Mk 1 was built in Feb 1965 and sold as new in 1966; I became its custodian in 1978. It was unmolested when I began work on it and the tool set was complete except for the Tire Valve Key and Lucas Points Tool. The original purchaser did not remember either part coming with the car. I also had access to an earlier Mk I (Dec '64) original kit.

The Mk 1A was built in May of 1966 and purchased in that year. Although the car is personalized, it retains all the tools as delivered. The original owner assured me that the tool roll contained the Lucas Points Tool but could not remember the tire valve tool being present. These two cars with similar kits cover about half of Tiger production, and it would be interesting to compare them with original earlier and later cars.

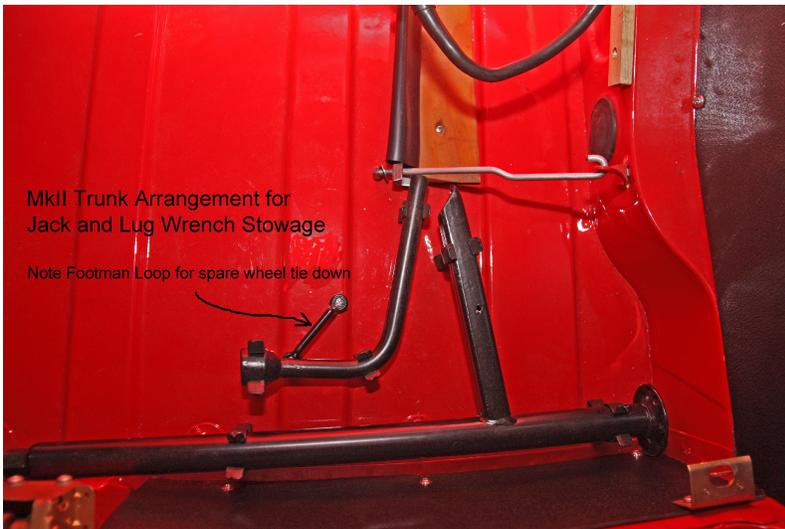


The arrangement of the short Jack and Wheel Brace in a Mk 1



Jack and Wheel Brace Stowage B9473325 and up

The arrangement of the long Jack and Wheel Brace in a Mk 1A



MkII Trunk Arrangement for Jack and Lug Wrench Stowage

Note Footman Loop for spare wheel tie down

Tiger Mk II Jack arrangement - same as Mk 1A



Tiger Jack up to B9473324 (Mk 1)

Tiger Jack B9473325 and Up Late Mk 1s, All Mk 1As and II



Sunbeam Tiger Wheel Brace P/N P.113516

The early and late Jacks, and the common Wheel Brace

Jack

It is generally accepted that the jacks used on the Tiger were manufactured by Shelley in Birmingham. Shelley also manufactured the longer ones, but a similar longer one was made by Metallifacure in Nottingham; the longer jacks were used on B9473325 and subsequent cars. An interesting website covers these jacks and the information on the two lengths matches the information above. Norm Miller and other authorities contend that jacks were black, but gray jacks have been reported.



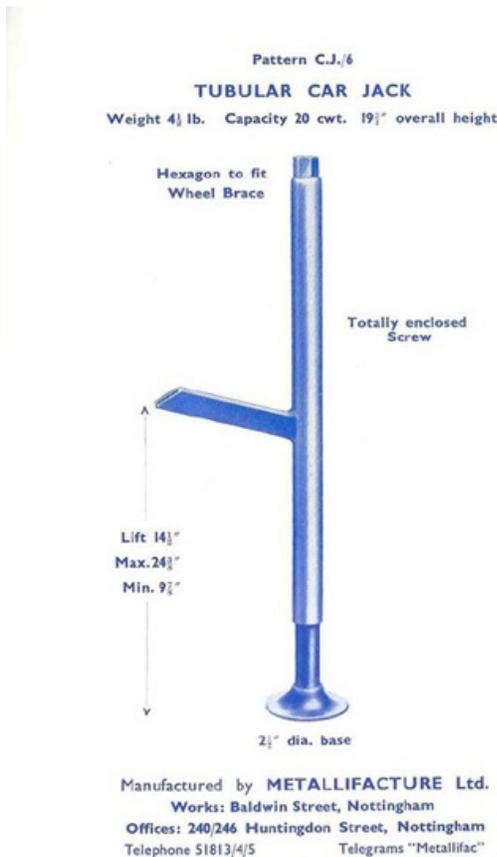
http://www.classic-british-car-jacks.uk/shelley_jacks_4.htm#Shelley_Sunbeam_Alpine_&_Tiger

There has been discussion about the Shelley sticker that was apparently attached about an inch above the arm that is inserted into the sockets under the bumpers. Several unmolested jacks have been examined and show signs of residual dried up adhesive; apparently the glue did not hold up

well and the stickers fell off. Reproductions of these stickers are available on Ebay.



Some jacks have feet that are more convex like the one shown here, rather than the flattish ones shown above, but I do not know if these were used on the Tiger.



Images courtesy of classic British Car Jacks



Metallifacure jacks have the name and Pat. No. stamped on the rectangular arm outboard of the stop.

Tool Roll

The tool roll is stowed in the left rear corner of the trunk and secured with a black fabric strap, which is clamped and riveted to the trunk floor with the buckle to the rear. The tool roll itself is a flimsy black vinyl piece with five pockets, secured with a piece of greyish black fabric tape heat welded to the roll. This tape seems to fade to tan over time.



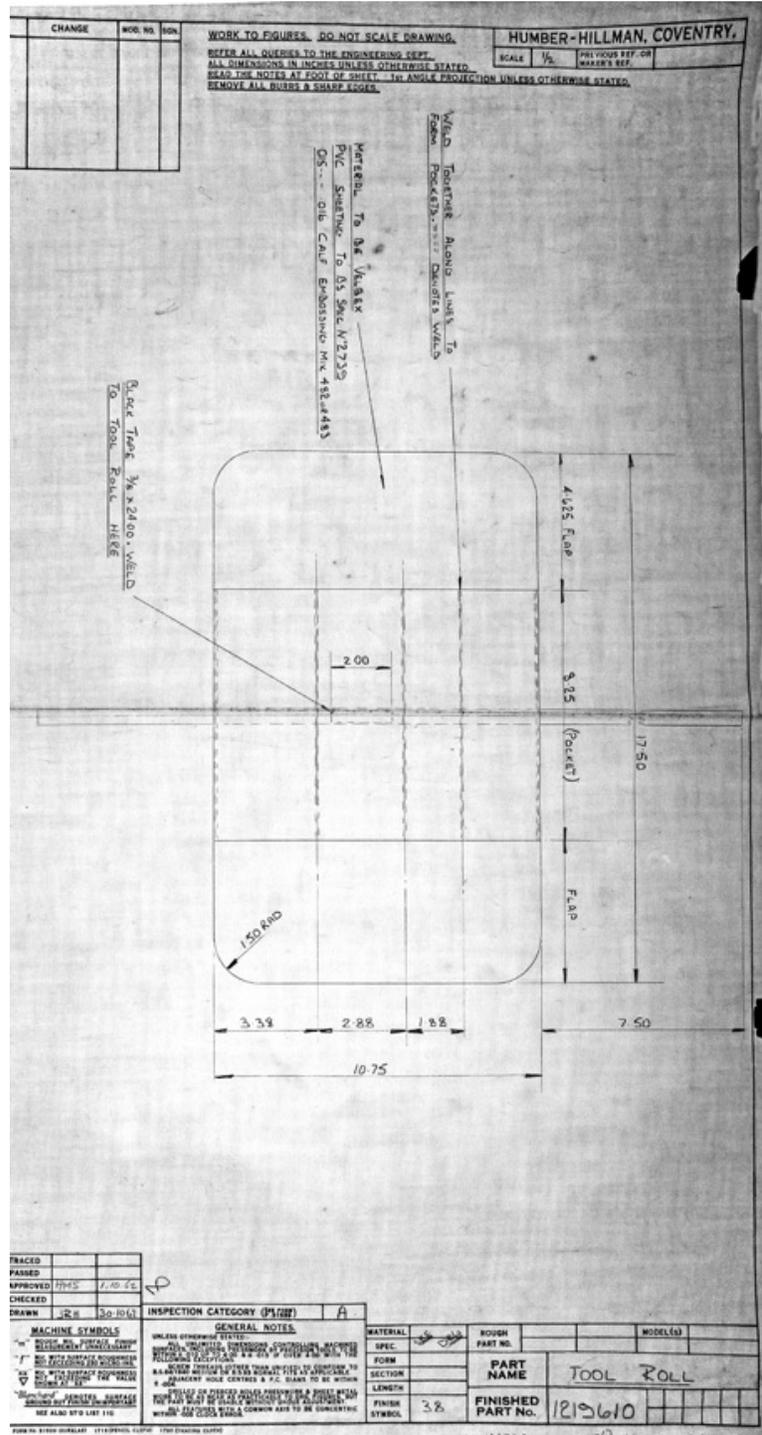
Tool Roll Stowage - all Tigers



Tool Roll Interior 5 Pockets



Tool Roll Exterior (Tapes fade to tan)



Tool Roll Drawing 1219610 available from Rootes Archive

If someone should wish to reproduce this item, the center piece is about 2 ½” longer than the basic outer cover width of 10.75” to allow for the pockets. Other dimensions are on the drawing.

Tool Roll Contents

Spanners.

The Mk 1 and Mk 1A came with four TW “Superslim” spanners in the following AF (Across Flat) sizes.

7/16 AF X 1/2 AF
9/16 AF X 1/2 AF
3/4 AF X 5/8 AF
11/16 AF X 13/16 AF

The Mk II had one additional 15/16 AF X 7/8 AF to fit the oil cooler that looks similar.

The Spanners have “Made In England” and the TW logo on one side and the “Superslim” trade mark on the other. The ends have the AF sizes on both sides - no BSF or Whitworth! Finish is an oil baked black color. Some have various small letters and numbers as well, but these are not consistent and an artifact of the manufacturing process, perhaps to track forging tool wear. T. Williams spanners were made in Birmingham and were supplied to many British car manufacturers for tool kits.



Tiger Mk 1, Mk 1A Spanner Set - Reverse



Pliers.

Pliers have "Made in Sheffield England" in small shallow letters around the pivot, which are sometimes almost obscured by the coating, no wire cut slots and a round hole. The finish is similar to the spanners.





These TW pliers are from an earlier car. These pliers are slightly less than 6" long, have TW and Made in England on the arms on both sides and a square-ish hole.

Screwdriver.

The Screwdriver is a little over ten inches long with a wood handle, tapered silvery metal ferrule or sleeve, and a round shanked, dark metal blade. The wooden ball is not round but flatter on two sides.



King Dick Adjustable Spanner.

This little-over-four-inch-long version of the King Dick Adjustable has the name stamped on the slide. Dark metal color. Tool Trivia - there are left and right-handed versions of this!



Nave Plate Extractor.

The Extractor is shaped sheet metal with normal dark coloring. A 3/8" wide item with less than 90 degree bend and a subtle shape was used on the Mk 1, while the Mk 1A and Mk II use a 3/4" wide, flat tool with a 90 degree bend.





Rootes drawing of the tool P/N 1214254 available from the Rootes Archive

Tire Valve Tool.



This yellow plastic device is about 3/16" in diameter and easily lost!. Although the valve key is an item in the parts list, I have not met an owner that remembers them in the tool kit.

Tommy Bar and Sparking Plug Spanner.

These items are unique to the Tiger and thus very rare. They have a dull black metal finish like the other items, except the shiny silver ball detents at the end of the Tommy Bar. However silver colored cad plated items have been reported in Mk II tool kits Both items have stamped part numbers as indicated in the photos; Z5798 and Z5799. The spring-loaded ball detents fit into a machined groove inside the Spanner. Note the distortion created as the bar was bent.



Sunbeam Tiger
Sparking Plug Spanner
P/N1224751
stamped Z5798



Sunbeam Tiger Tommy Bar for Spark Plug Spanner P/N 1224817
stamped Z5799



This Tommy Bar is from a Mk II B3821000482 built about two months from the end of production. It is identical in dimensions to the Mk 1 and Mk IA parts and also carries the same Z5799 vendor part number. The only difference is that the steel appears to be cadmium plated. It is unlikely that this would trigger a part number change.

Tommy Bar from a Mk II

Brian Nickels photo

This bar has functional detents.

Lucas Distributor Key.

I have left this to last since it is not listed in the Rootes Tiger documents, only the Alpine list. Other authorities and some owners insist that the item was delivered with the car. It is stamped .014 .016 Lucas. According to Mark Olsen, the Lucas P/N is 400935 RD 5 4.



Remaining Questions.

1. The Tommy Bar P/N 1224 817 was replaced by P/N 1224 750. Since the Alpine 260 Parts List gives the 4817 number for the Mk 1 and the Mk 1A, and the two kits that I checked had an identical part, the change over must have occurred subsequent to B382002035. This would happen at no fixed cut-in point since the car itself was not changed. The jack change required repositioning of the mounting clips in the trunk and thus had a fixed cut-in point. What is the difference between the two part numbers - possibly material?
2. The Lucas Distributor Key measures a points gap of .014 - .016 but per the workshop manual the 260 distributor requires a gap of .015". It appears the tool would be useful as a go - no go gauge, even though the distributor was a Ford-supplied part. The Mk II points gap should be .017". Why were some cars delivered with an Alpine tool? Perhaps the same person assembled Tiger and Alpine kits and just threw them in from a stock pile of Lucas-provided items.
3. Why was the additional Mk II spanner not included in the parts list? Probably Publications had not caught up with Mk II production when development was cancelled.
4. The tire valve tool is included in the Parts List but no reports of any actually included in kits.

Parts Availability

I was given an original plastic tool roll in excellent condition and decided to try to reconstruct an authentic tool kit as part of this 2017 project. The wheel brace, lifting jack, screwdriver, pliers, spanners and nave plate tool are common with the Alpine, thus should be more readily available since over 100K were made. We have not tried to source the Jack and Wheel Brace since these generally stayed with the cars, and are often available.

Plastic Tool Roll.

Original tool rolls are fragile and most were discarded, so they are extremely rare in good condition. I have seen very few of these for sale and our best bet is to have someone reproduce it.

Spanners.

The spanners are easy to find since they were used by many British manufacturers as well as Rootes. Ebay is the best source, especially the UK version, and expect to double your cost with shipping which is expensive. Buy a lot if possible, even if you end up with a couple of odd sizes left over. The Mk II 15/16 AF X 7/8 AF is also available, but most sellers know who needs it and it is usually more expensive than a basic spanner.

Pliers

The pliers are hard to find; look for a round opening for the wire-cutter feature and the small "Made in Sheffield England" lettering around the pivot. The shape and style are very distinctive as shown in the pictures, and quite different to most, if not all, of the pliers in other non-Tiger/Alpine kits. Early cars apparently had the TW "Made in England" branded pliers with a square-ish hole.

Screwdriver.

Also hard to find; look for the round shank and a slightly tapered ferrule blending into the wood handle. Many other screwdrivers out there have a flat section where the shank enters the handle.

King Dick Spanner.

Easy to find, but they come in 2", 4", and 6" lengths. You need the 4" version with "King Dick" stamped on the slider. Adjustable spanners with "Abingdon" stamped on the jaws are not correct.

Nave Plate Extractors.

These are usually available from Sunbeam Specialties under P/Ns VT53 and VT 54.

<http://www.rootes.com/catalog3color.pdf#page=1>. The wide one can be made from Rootes dwg # 1214254 available from Rootes Archive.

Tire Valve Tool.

This is available from Moss Motors, if you decide you need it.

<https://mossmotors.com/catalogsearch/result/?cat=&q=valve+core+tool>

They also have a metal version but we need the plastic part P/N C993P.

Lucas Distributor Key.

If you decide you need this, it is available from Moss and Moss Europe.

<http://www.mossmotors.com/Shop/ViewProducts.aspx?PlateIndexID=29171&SortOrder=770>
as part number 031-985.

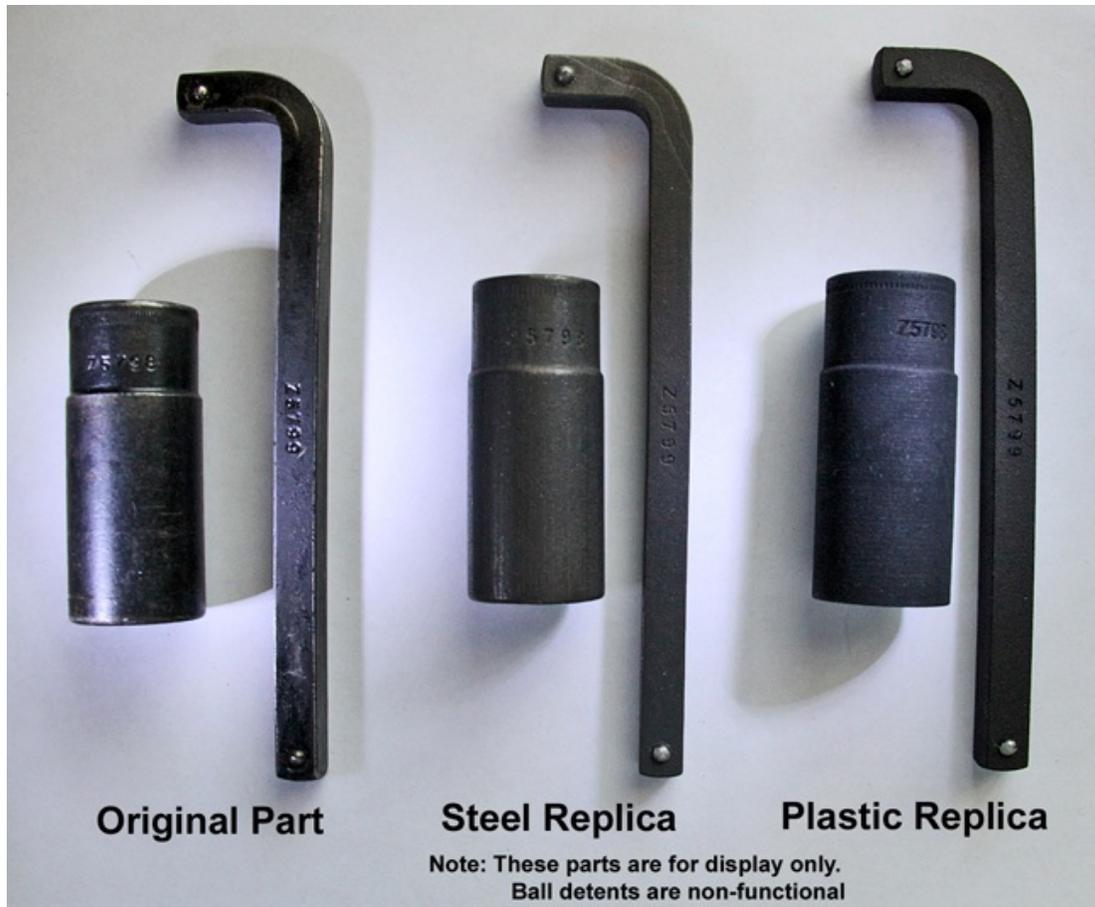
Tommy Bar and Sparking Plug Spanner.

These items are very rare and seldom seen for sale. The few I have seen on Ebay were very expensive.

To address this, we have been working on 3D printed items; the process involves reverse-engineering original parts to produce detailed drawings similar to what Rootes would have done in the '60s. These are then developed into 3D surfaced models in a format that the printers can read. We had a company make black plastic replicas and steel reproduction parts. The metal parts are made by 3D printing a wax replica and using that to make a mold. The wax is melted out and metal is poured into the cavity (lost wax process), the mold is then broken away revealing the finished

part. Additive manufacturing has some limitation in reproducing very small machined details, so we went through several prototypes developing the optimum look. For these reasons we have not attempted to replicate the spring loaded detents on the Tommy Bar.

The dimensionally-accurate parts shown below are plastic and the bare surface is rougher than the machined original; a little polishing/paint might improve the look.



These pieces can be place holders in your kit until you find original items. We do not make many because the cost is more than most people are prepared to pay. Other people are also making parts using conventional manufacturing methods as shown below.



Brian Nickels made T Bar Brian Nickels photo

This bar has functional detents.

For more information on repro tools or to provide more information on the subject of tool kits contact me at:
www.motorsportmemories.com/contact

British/American Dictionary.

Wheel Brace = Lug Wrench

Tyre Valve Key = Tire Valve Key

Spanner - Adjustable = Adjustable Wrench

Nave Plate Extractor = Hub Cap Remover

Spanner - Sparking Plug = Spark Plug Socket

Tommy Bar = Spark Plug Socket Handle

Spanner = Wrench



For a Mk 1A, replace the Nave Plate Tool with the wider one.

For the Mk II replace the Nave Plate Tool and add the 15/16 AF X 7/8 AF “Superslim” Spanner.

Can I assemble a Kit?

As a graduation exercise, I decided to collect a tool kit from scratch. It took a while to do but the image below shows a kit for a Mk II that was built mostly from Ebay purchases. They were primarily from Ebay UK and some vendors were not willing to ship to the US so I had them sent to a friend there for trans shipment to me. The Plug Spanner and Tommy Bar are my 3D printed versions, the Nave Plate Remover came from Sunbeam Specialties, and the pliers were from Ebay but had slots for wire cutters. I filled the slots with JB Weld, smoothed it and shot a little black paint on it to make it match the Rootes part. Total cost was less than \$500.



A kit assembled from the open market.

This kit is for a Mk II but removing the largest spanner would make it correct for a Mk IA.

I would like to acknowledge previous authors of tool articles including Norm Miller and Mark Olsen, Brian Nickels for information about Mk II tools, Karen Foster and Buck Trippel for sharing info on original Mk I and Mk IA tool kits, James Spencer and Matt Ollman of the Rootes Archive, and give special thanks to Dave McDermott for reviewing the piece, adding some vital detail and setting me straight on several items.

Updated January 2021.