

**CHARTS**  
As of  
October 13, 2006

**Note: All charts are according to the dates set forth by the Model A/AA Ford Engineering Release dates and are not to be confused with actual production dates. They still give one an idea about the different part assemblies and about when the parts went into production given the time to get the information from the Engineering Department to the production areas and out to the assembly lines and assembly plants.**

A-4513: Universal joint housing cap--inner

	1928	1929	1930	1931
<b>ITEM</b>	<b>OND JFMAMJJASON</b>	<b>D JFMAMJJASON</b>	<b>D JFMAMJJASON</b>	<b>D JFMAMJJASON</b>
Type 1:	----			
Type 2:	-----			
Type 3:		-----		
	<b>OND JFMAMJJASON</b>	<b>D JFMAMJJASON</b>	<b>D JFMAMJJASON</b>	<b>D JFMAMJJASON</b>

Type 1: **Equally** spaced holes *with no* side holes for lubrication in bell.

A-4513, A-4513-A, A-4513-AR, AA-4513

REASON: Was specified to use on the first "1000" cars but changed due to the December 19, 1927, Release # 5926, which changed the usage from first "1000" cars to first "3400" cars. The 3400<sup>th</sup> engine was stamped on December 21, 1927. Another reason would be that part number A-7085, Transmission main shaft bearing retainer, Type 1, would of already been on the transmission which would have been attached to the engine before being assembled in the chassis.

***Used October to mid-December, 1927—Used on first 3400 units.***

Type 2: **Unequally** spaced holes *with no* side holes for lubrication in bell.

A-4513-B, A-4513-BR

REASON: Due to the December 19, 1927, Release # 5926, it specified that this part was to be used **after** 3400 cars. Again, as above, the 3400<sup>th</sup> engine was stamped on December 21, 1927. On March 15-18, 1929, Release # 12326, this part was replaced by the reintroduction of A-4513-A, except now, this part had two holes drilled in the bell for lubrication.

***Used from mid-December, 1927 to mid-March, 1929.***

Type 3: **Equally** spaced holes *with 2* side holes for lubrication in bell.

AA-4513, A-4513-A

REASON: On March 15-18, 1929, Release # 12326, specified that two 3/8" holes be punched for lubrication and that it was to replace A-4513-B.

***Used from mid-March, 1929 through production.***

A-4520: Universal joint housing cap—outer assembly

	1928	1929	1930	1931
ITEM	OND JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND
Type 1:	----			
Type 2:	-----			
Type 3:		-----		
Type 4:			-----	
	OND JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND	JFMAMJJASOND

Type 1: **Equally** spaced holes; **variety 1**: upper half has safety lug WITH a raised rib going up the center of the lug itself, the lower half has a “T” shaped raised area where safety lug was not welded on; **variety 2**: upper half has revised safety lug with NO raised rib going up the center and the lower half has a “D” shaped raised area where the safety lug was not welded on; arms; and used with “Service Brake Equalizer” brake system and Forged Design. Both varieties have ¼ inch wide oil grooves in the lower half. The reinforcement ribs in the corners of the arms on Variety 2 were 1-1/16 inch in height, upper and lower, but were 1-3/16 inch in height on Variety 1 lower and unknown on the upper.

A-4514-C (No known part numbers on these parts)

REASON: Was first specified to use on the first “1000” cars but changed due to the December 19, 1927, Release # 5926, which changed the usage from first “1000” cars to first “3400” cars. The 3400<sup>th</sup> engine was stamped on December 21, 1927. Another reason would be that part number A-7085, Transmission main shaft bearing retainer, Type 1, would of already been on the transmission which was attached to the engine before being assembled in the chassis.

***Used October to mid-December, 1927—Used on the first 3400 units.***

Type 2: **Unequally** spaced holes; upper half has the revised safety lug (as Type 1 **variety 2**) as the “rib” was removed; the lower half has no indication of a safety lug boss as the “T” and/or “D” area was removed; arms; and used with “Service Brake Equalizer” brake system and Forged Design. Early oil grooves in the lower half may be ¼-1/8 inch wide. On February 13, 1928 the oil grooves went from 1/8 inch to 3/16 inch. The ribs in the corner of the arms were 15/16 inch in height to start with but were reduced to 13/16 inch on December 30, 1927 on the upper part. Rib height on the lower part were ¾ inch.

Part number continued as A-4520. Included upper part: A-4518 with “Ford” script, A-4518-AR and AA-4518 or no part number and lower part: A-4514 with “Ford” script or no part number.

REASON: Due to the change in the assembly from **equal** to **unequal** hole spacing on the upper half only. The lower half was also redesigned by eliminating the boss for attaching the safety lug. It was also specified that this assembly was to be used on all vehicles after 3400 units.

***Used from mid-December, 1927 through mid-October, 1928 (when the service brake system changed from the “Service Brake Equalizer” brake system to the “Solid Service Brake Cross Shaft” brake system).***

Type 3: **Unequally** spaced holes; top lug; no arms; and used with the “Service Brake Cross Shaft” brake system.

A-4520-B including upper part: A-4518-B with “Ford” script, A-4517-B1 and A-4517-B2. The lower part: A-4514-B with “Ford” script, A-4514-B1 or A-4514-B2.

REASON: Since the service brake system was redesigned and the “Service Brake Equalizer” braking parts were changed to the “Solid Service Brake Cross Shaft” brake system, there was no need to have the extended arms on the Universal joint housing caps—outer assembly. However since the assembly remained **unequal** spaced, the safety lug on the upper part remained a fixed item until March, 1929 when it became obsolete. This was during the change from Forged parts to Malleable Iron parts.

***Used from mid-October, 1928 to mid-March, 1929.***

Type 4: **Equally** spaced holes; no lug; no arms; used with the “Service Brake Cross Shaft” brake system and Malleable Iron Design.

Part assembly number: A-4520-C.

Both halves, upper and lower, are the same part number A-4514-B2.

REASON: Since no safety lug was needed, and it was found out that the both halves could be the same, Ford made the switch but required a change in the Transmission main shaft bearing retainer thus becoming **equal** spaced holes.

***Used from mid-March, 1929 through production.***

A-7085: Transmission main shaft bearing retainer

	1928	1929	1930	1931
<b>ITEM</b>	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>
Type 1:	----			
Type 2:	-----			
Type 3:		-----		
Type 4:			-----	
Type 5:				-----
	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>	<b>OND JFMAMJJASON</b>

Type 1: **Equally** spaced holes, **thin** flanges, large center hole, grease zerk on side, and Forging Design.

A-7085, A-7085-A (No part numbers on known original examples).

REASON: Was specified to use on the first "1000" cars but changed due to the December 19, 1927, Release # 5926, which changed the usage from first "1000" cars to first "3400" cars. The 3400<sup>th</sup> engine was stamped on December 21, 1927. Use six bolts, A-20931, to attach the Universal joint housing—outer assembly.

***Used October to mid-December, 1927—Used on first 3400 units.***

Type 2: **Unequally** spaced holes, **thin** flanges, large center hole, grease zerk on bottom, and Forging Design.

A-7085-B (No part numbers on known original examples)

REASON: Was to be used after the first "3400" cars. On October 9, 1928, Release # 10529, the part became "Obsolete". Use six bolts, A-20931, to attach the Universal joint housing—outer assembly.

***Used mid-December, 1927 through mid-October, 1928 (when the service brake system changed from the "Service Brake Equalizer" brake system to the "Solid Service Brake Cross Shaft" brake system).***

Type 3: **Unequally** spaced holes, **thick** flanges, large center hole, grease zerk on bottom, and Forging Design (may be Malleable Iron Design also).

A-7085-C

REASON: On October 9, 1928, Release # 10529, A-7085-C was adopted and replaced A-7085-B. During this time, bolt A-20931 was replaced with bolt A-20953 due to the thickness change of the flanges on the retainer from ¼ inch to 5/16 inch.

***Used from mid-October, 1928 to mid-March, 1929.***

Type 4: **Equally** spaced holes, **thick** flanges, large center hole, grease zerk on bottom, and Malleable Iron Design.

A-7085-A, A-7085-A1

REASON: On March 15-18, 1929, Release # 12326, A-7085-C was redesigned and replaced by A-7085-A, A-7085-A1. Use six bolts, A-20953, to attach the Universal joint housing—outer assembly.

***Used from mid-March, 1929 through late June, 1929.***

Type 5: **Equally** spaced holes, **thick** flanges, small center hole, grease zerk on bottom, and Malleable Iron Design.

A-7085-A1

REASON: On June 22, 1929, Release # 13297, A-7085-A1 had a flange added at the center which changed the diameter of the bearing retainer from 2-1/2 to 1-27/32 inches. Use six bolts, A-20953, to attach the Universal joint housing—outer assembly.

***Used from late June, 1929 through production.***

**OVERALL COMPLETE ASSEMBLY CHART ACCORDING TO ENGINEERING RELEASE DATES**

- A-4513: Universal joint housing cap—inner. -----
- A-4520: Universal joint housing cap—outer. ....
- A-7085: Transmission main shaft bearing retainer. \*\*\*\*\*
- T-1, -2, -3, -4, and -5 refer to the “types’ of parts or assemblies.

ITEM	1928		1929		1930		1931	
	OND	JFMAMJJASON	OND	JFMAMJJASON	OND	JFMAMJJASON	OND	JFMAMJJASON
A-4513-T1:	----							
A-4520-T1:	....							
A-7085-T1:	****							

**Equal** spacing of the six attachment holes.

**Used October to mid-December, 1927—Used on the first 3400 units.**

A-4513-T2:	-----							
A-4520-T2:	.....							
A-7085-T2:	*****							

**Unequal** spacing of the six attachment holes.

**Used mid-December, 1927 through mid-October, 1928 (when the service brake system changed from the “Service Brake Equalizer” brake system to the “Solid Service Brake Cross Shaft” brake system).**

There was a bolt change due to the increase in the **thickness** of the six flanges on the Transmission main shaft bearing retainer, A-7085, Type 3.

A-4513-T2:	-----							
A-4520-T3:	.....							
A-7085-T3:	*****							

**Unequal** spacing of the six attachment holes.

**Used mid-October, 1928 to mid-March, 1929.**

A-4513-T3:	-----							
A-4520-T4:	.....							
A-7085-T4:	*****							

**Equal** spacing of the six attachment holes.

**Used mid-March, 1929 through late June, 1929.**

A-4513-T3:	-----							
A-4520-T4:	.....							
A-7085-T5:	(thick flanged)	*****						

**Equal** spacing of the six attachment holes.

**Used late June, 1929 through production.**

**OND JFMAMJJASON**

## SOME FACTS ABOUT ASSEMBLY NUMBER 1

Assembly Number 1:

A-4513 (Type 1) (A-4513, A-4513-A, A-4513-AR, AA-4513)  
 A-4520 (A-4514-C) (Type 1) (A-4518—upper, A-4514—lower)  
 (No known part numbers on these parts)  
 A-7085 (Type 1) (A-7085, A-7085-A)  
 Short Bolts

This assembly had six (6) **equally** spaced holes around the perimeter of the assembly.

The Universal joint housing cap—inner, A-4513 (Type 1): Had no side holes for lubrication. The center hole of the part was 2-5/32 inches in diameter and “disc grinds” may be seen on the front face of the flange. Was to be used on first 3400 cars.

The Universal joint housing cap—outer, A-4520 (A-4514-C) (Type 1): Consisted of two (2) parts. An upper, which was A-4518, and a lower, which was A-4514. Along with this, there were two (2) varieties of A-4520 (Type 1) Universal joint housing cap—outer assembly. With **variety 1**, there is a raised rib going up the center of the safety lug of the top half and with the lower half, showing a “T” shape boss in the center. With **variety 2**, the “rib” on the safety lug was removed from the upper half and with the lower half, showing a “D” shape boss in the center. Most, if not all, safety lugs, A-4519, were welded onto the “T” or “D” shaped boss after forging (the “D” for sure, not known about the “T”). The ribs in the corner of the arms were 1-1/16 inch in height on both upper and lower halves of Variety 2 and 1-3/16 inch in height on the lower half of Variety 1 as the upper half is unknown at this time. The two oil or grease grooves on both arms on the lower half were ¼ inch in width. Parts were forged. Was to be used on first 3400 cars.

The Transmission main shaft bearing retainer, A-7085 (Type 1): Had **thin** flanges, raised “hump like” center areas on all four sides of the retainer with large center hole and “Ford” script. The grease zerk was located on the middle right side of the retainer. In November, 1927 it became part number A-7085-A. Part was forged.

The assembly used six (6) bolts, A-20931, 3/8—24 S.A.E. x 1-5/32 hex head bolt (W/cotter hole).

No part numbers were seen on the original examples viewed.

According to the part releases, this assembly was to be used on the first 1000 cars. However on December 19, 1927 with Release # 5926, the “ first 1000 car” designation was changed to the “first 3400 cars”. It just so happened that on December 21, 1927, engine number \*A 3400\* was stamped.

***Used October to mid-December 1927—Used on first 3400 units.***

## SOME FACTS ABOUT ASSEMBLY NUMBER 2

Assembly Number 2:

A-4513 (Type 2) (A-4513-B, A-4513-BR)  
 A-4520 (Type 2) (Upper—A-4518 with “Ford Script, A-4518-AR, AA-4518  
 or no part number; Lower—A-4514 with “Ford” script, or no part  
 number)  
 A-7085 (Type 2) (A-7085-B)  
 Short Bolts

This assembly had six (6) **unequally** spaced holes around the perimeter of the assembly.

The Universal joint housing cap—inner, A-4513 (Type 2): **Unequal** spacing and given a new part number of A-4513-B and was specified to be used after 3400 vehicles. In late March of 1928 it was specified that the “disc grind” be removed from the face of the flange and that the center hole be increased from 2-5/32 inch diameter to 2-9/32 inch diameter (an increase of about 1/8<sup>th</sup> of an inch). By mid-March, 1929, the part number was changed to A-4513-BR.

The Universal joint housing cap—outer assembly, A-4520 (Type 2): Consisted of two (2) parts. The upper half, A-4518, retained the “half round”, “D” shaped safety lug, A-4519, which was still being welded onto the upper half. In mid December, 1927, the height of the ribs on the upper arms were 15/16 inch. However on December 30, 1927 they were reduced to 13/16 inches. The lower half, A-4514, discontinued the “D” shaped boss on it. Sometime between December, 1927 and February, 1928, the oil or grease grooves in the lower half were changed from ¼ inch to 1/8 inch in width. However on February 13, 1928, yet another change was made from 1/8 inch to 3/16 inch in width. In mid-December, 1927, the height of the ribs on the lower arms were reduced from 1-1/16 inch to ¾ inch. By October, 1928, the assembly became “Obsolete”. Parts were forged.

The Transmission main shaft bearing retainer, A-7085 (Type 2): Had **thin** flanges, raised “hump like” center areas on all four sides of the retainer with large center hole, **unequally** spaced and was given a new part number of A-7085-B. “Ford” script on early parts but then it was removed in late March, 1928 “for the convenience of exporting”. The grease zerk was located on the bottom of the retainer. By October 9, 1928, the part was “Obsolete”. The part was forged.

The assembly used six (6) bolts, A-20931, 3/8—24 S.A.E. x 1-5/32 hex head bolt (W/cotter hole).

***Used mid-December, 1927 through mid-October, 1928 (when the service brake system changed from the “Service Brake Equalizer” brake system to the “Solid Service Brake Cross Shaft” brake system).***

### SOME FACTS ABOUT ASSEMBLY NUMBER 3

Assembly Number 3:

A-4513 (Type 2) (A-4513-B, A-4513-BR)  
 A-4520 (Type 3) (A-4520-B: Upper—A-4518-B with “Ford” script, A-4517-B1, A-4517-B2; Lower—A-4514-B with “Ford” script, A-4514-B1, A-4514-B2)  
 A-7085 (Type 3) (A-7085-C)  
 Long Bolts

This assembly had six (6) **unequally** spaced holes around the perimeter of the assembly.

The Universal joint housing cap—inner, A-4513 (Type 2): **Unequal** spacing and given a new part number of A-4513-B and was specified to be used after 3400 vehicles. In late March of 1928 it was specified that the “disc grind” be removed from the face of the flange and that the center hole be increased from 2-5/32 inch diameter to 2-9/32 inch diameter (an increase of about 1/8<sup>th</sup> of an inch). By mid-March, 1929, the part number was changed to A-4513-BR.

The Universal joint housing cap—outer, A-4520 (Type 3): Was changed and on September 10, 1928 the assembly of the two halves was “adopted” to a new part number, A-4520-B. The upper half had three different part numbers. They were A-4518-B with “Ford” script which was a forging; A-4517-B1 (unknown); and A-4517-B2 which was the Malleable Iron Design. The lower half had three different part numbers. They were A-4514-B with “Ford” script which was a forging; A-4514-B1 which was a forging; and A-4514-B2 which was the Malleable Iron Design. Both parts had the extended arms removed which were used for the Service Brake Equalizer braking system. On September 19, 1928, both parts had the thickness of the web between the bolt boss and the rear corner changed making it the same thickness as the boss. The edge between the bolt boss and the rear corner was also changed from being curved to being straight.

The Transmission main shaft bearing retainer, A-7085 (Type 3): Had **thick** flanges, flat areas on all four sides of the retainer with large center hole and **unequally** spaced holes. On October 9, 1928, it was given a new part number of A-7085-C and was “adopted”. The grease zerk was located on the bottom of the retainer. By mid-March, 1929, the part was “Obsolete”. The part was forged.

The assembly used six (6) bolts, A-20953, 3/8—24 S.A.E. x 1-7/32 hex head bolt (W/cotter hole).

**Note: Although the Universal joint housing cap—outer assembly was changed on September 19, 1928, it was not until October 9, 1928 that it’s counterpart, the Transmission main shaft bearing retainer (Type 3) was adopted putting this change in mid-October or November, 1928.**

**Note: There might have been some assemblies that were of A-4513 (Type 2), A-4520 (Type 3) and A-7085 (Type 2) which would have been *unequal* spacing and *thin* flanges on A-7085 (Type 2), and the use of the smaller bolts. These would have only been used in only a small window of production maybe in September/October, 1928. But then again...maybe not.**

***Used mid-October, 1928 to mid-March, 1929.***

## SOME FACTS ABOUT ASSEMBLY NUMBER 4

Assembly Number 4:

A-4513 (Type 3) (A-4513-A, AA-4513)  
A-4520 (Type 4) (A-4520-C: upper—A-4514-B2; lower—A-4514-B2)  
A-7085 (Type 4) (A-7085-A/A-7085-A1)  
Long Bolts

This assembly had six (6) **equally** spaced holes around the perimeter of the assembly.

The Universal joint housing cap—inner, A-4513 (Type 3): **Equal** spacing and given a new part number of A-4513-A in mid-March, 1929. Two 3/8 inch holes were also punched out in the bell for lubrication and remained as such through production.

The Universal joint housing cap—outer, A-4520 (Type 4): This assembly was changed in mid-March, 1929. The upper housing with the safety lug was “obsoleted” and was replaced with the same type of part as the lower half. When this was done, it made the assembly **equally** spaced. Both halves were of the Malleable Iron Design. This assembly remained as such through production. However, some caps may still have the “D” shaped boss on them where the “obsoleted” lug was once welded on

The Transmission main shaft bearing retainer, A-7085 (Type 4): Had **thick** flanges, flat areas on all four sides of the retainer with large center hole. The grease zerk was located on the bottom of the retainer. Due to the change in the Universal joint housing cap—outer, which became **equally** spaced when the two halves were put together, it then required that the Transmission main shaft bearing retainer be redesigned to **equally** spaced holes. The part number was also changed to A-7085-A/A-7085-A1. The part was now of the Malleable Iron Design.

The assembly used six (6) bolts, A-20953, 3/8—24 S.A.E. x 1-7/32 hex head bolt (W/cotter hole).

***Used mid-March, 1929 through late June, 1929.***

## SOME FACTS ABOUT ASSEMBLY NUMBER 5

Assembly Number 5:

A-4513 (Type 3) (A-4513-A, AA-4513)  
 A-4520 (Type 4) (A-4520-C: upper—A-4514-B2; lower—A-4514-B2)  
 A-7580 (Type 5) (A-7085-A1)  
 Long Bolts

This assembly had six (6) **equally** spaced holes around the perimeter of the assembly.

The Universal joint housing cap—inner, A-4513 (Type 3): **Equal** spacing and given a new part number of A-4513-A in mid-March, 1929. Two 3/8 inch holes were also punched out in the bell for lubrication and remained as such through production.

The Universal joint housing cap—outer, A-4520 (Type 4): The assembly was changed in mid-March, 1929. The upper housing with the safety lug was “obsoleted” and was replaced with the same type of part as the lower half, A-4514-B2. When this was done, it made the assembly **equally** spaced. Both halves were of the Malleable Iron Design. This assembly remained as such through production.

The Transmission main shaft bearing retainer, A-7580 (Type 5): Was redesigned. In June, 1929, a flange was added to the center which changed the bearing retainer hole from 2-1/2 inches to 1-27/32 inches. Part was of Malleable Iron Design.

The assembly used six (6) bolts, A-20953, 3/8—24 S.A.E. x 1-7/32 hex head bolt (W/cotter hole).

***Used late June, 1929 through production:***

### ***The difference between equally and unequally spaced hole assemblies***

***There were two bolt hole configurations pertaining to the 6 bolt holes which surrounded the circumference of the Universal Joint Housing Cap—inner (A-4513), and outer (A-4520), and the Transmission Main Shaft Bearing Retainer (A-7085) assemblies and related gaskets.***

***The equally spaced holes, from the top hole around the assembly clockwise hole to hole, are 2-3/4 inches respectively.***

***The unequally spaced holes, from the top hole around the assembly clockwise hole to hole, are 3 inches, 2-1/2 inches, 2-3/4 inches, 2-3/4 inches, 2-1/2 inches, and 3 inches respectively.***

**With this in mind, only the top half of each part was affected as far as the unequal hole spacing was concerned.**

**The reason Ford did this is pointed out in the June, 1929, Ford Service Bulletin on page 350 which related that the change “eliminates the necessity of unequally spacing the bolt holes in both this part and its corresponding gaskets as the unequal spacing was used simply to insure that the housing cap being assembled with the extension lug toward the top”.**