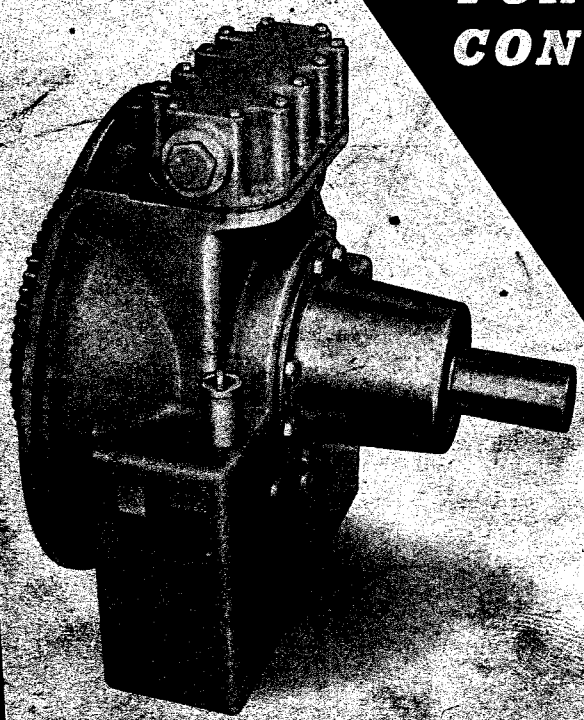
# PARTS CATALOG

## Allison

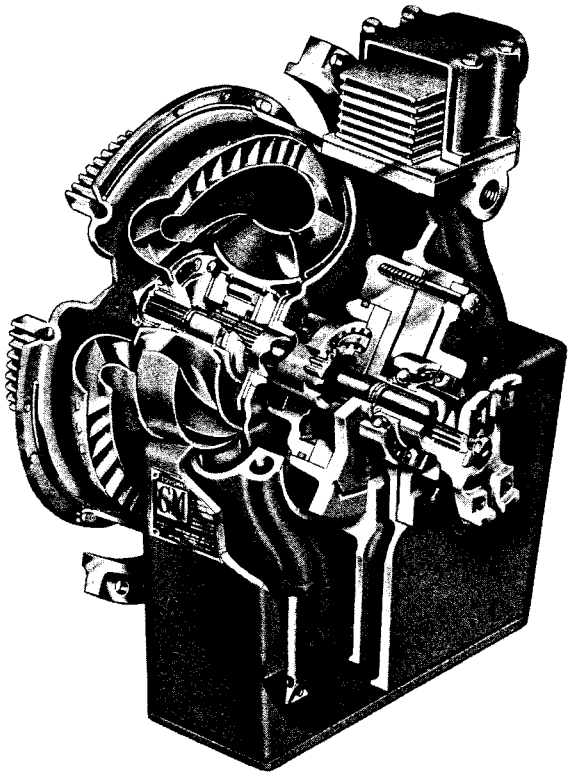
200-300 SERIES

TORQMATIC CONVERTERS

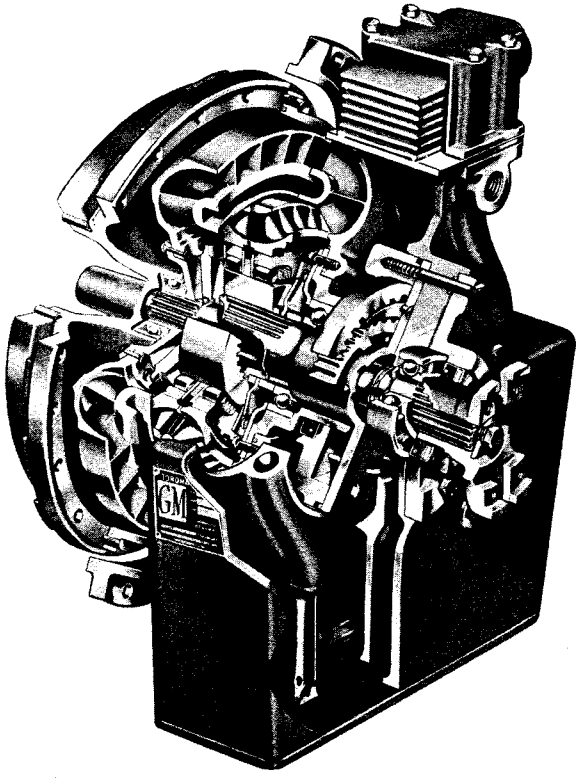


TORQMATIC

ALLISON DIVISION • GENERAL MOTORS CORPORATION • INDIANAPOLIS 6, INDIANA



TC-200 Series
Torqmatic Converter



TC-300 Series
Torqmatic Converter

## FOREWORD

This catalog contains parts information for all models of the TC 200-300 Series Allison Torqmatic Converters.

Information not covered in this catalog can be obtained by writing to the Transmission Service Manager, Allison Division, GMC, Indianapolis 6, Indiana.

January 15, 1958

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Allison TORQMATIC® Drives

The complete line of Allison Torqmatic Drives includes the Torqmatic Converter and the Torqmatic Transmission. Literature on these products is available. Address requests for this information to the Transmission Sales Manager.

ALLISON DIVISION
GENERAL MOTORS CORPORATION
Indianapolis 6, Indiana

Important

## HOW TO FIND THE RIGHT PARTS WITH THIS PARTS CATALOG

FIRST, you must know the assembly part number of your Torqmatic converter in order to find the correct part number of the part you require.

This Torqmatic converter assembly part number, and option number appear on the name plate attached to the housing. The name plate is illustrated below.

Facsimile of Name Plate attached to the Allison Torqmatic Converter housing.

NEXT, turn to the "Pictorial Index" on pages 9, 10, and 11, which will aid you in locating the parts you want. Each group listing is preceded by the Torqmatic converter assembly part numbers (A/N). Be sure the parts you want are right for your model converter. Check your Torqmatic converter assembly part number with the numbers preceding each group listing. Do not use the figure reference numbers when ordering parts.

To find detail parts of options for your Torqmatic converter, first reconcile the option number (found on the name plate after the assembly part number) to the option list on page 4, then turn to the section and group indicated opposite the option number.

For example, if your model number is TCA 325-119 and your assembly part number is 6755390, locate option 119 in listing on page 4. You will find:

— xxx-119 - Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D); 10-inch input-disconnect clutch (see section V, group A); cooler (see section VII, group B). For the detail parts of the SAE 2 manual input-disconnect clutch housing, turn to section VI, group D, for the parts listing. For the detail parts of the manual input-disconnect clutch assembly, turn to section V, group A, for parts listing. To find the oil cooler parts, turn to section VII, group B.

Pages 4, 5, and 6 will further help you in ordering correctly the parts you need.

## MODEL DESIGNATION CHART
(Series 200-300 Torqmatic Converters)

### BASIC TORQMATIC CONVERTERS: LETTERS

TC = Converter assembly
TCA = Converter with accessory drive
TCRD = Converter with rear-disconnect clutch

### SERIES DESIGNATION: FIRST TWO DIGITS

— 24x = 240 Series
— 32x = 320 Series

### CONVERTER BASIC VARIATIONS: THIRD DIGIT

— xx4 = Automotive flange
— xx5 = Industrial shaft - standard bearing
— xx6 = SAE 3 rear-disconnect clutch housing
— xx7 = Industrial shaft - extra-duty bearings
— xx8 = Industrial shaft - bevel pinion mounting
— xx9 = SAE 2 rear-disconnect clutch housing

### CONVERTER OPTIONS: LAST THREE DIGITS

— xxx-101 = Series 200: Cooler (see section VII, group A)
— xxx-102 = Series 300: Cooler (see section VII, group B), Drive ring bolts (see section VI, group L)
— xxx-103 = Unassigned
— xxx-104 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group C)
— xxx-105 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group C); 10-inch input-disconnect clutch (see section V, group A)
— xxx-106 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group C); cooler (see section VII, group A)
— xxx-107 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group C); 10-inch input-disconnect clutch (see section V, group A); cooler (see section VII, group A)
— xxx-108 = Series 200: SAE 3 housing with 10-inch drive ring (see section VI, group E)
— xxx-109 = Series 200: SAE 3 housing with 10-inch drive ring (see section VI, group E); 10-inch input-disconnect clutch (see section V, group A)
— xxx-110 = Series 200: SAE 3 housing with 10-inch drive ring (see section VI, group E); cooler (see section VII, group A)
— xxx-111 = Series 200: SAE 3 housing with 10-inch drive ring (see section VI, group E); 10-inch input-disconnect clutch (see section V, group A); cooler (see section VII, group A)
— xxx-112 = Series 200 or 300: Rear-disconnect clutch adapter (see section VII, group G), Drive ring bolts (see section VI, group L)
— xxx-113 = Series 200: Rear-disconnect clutch adapter (see section VII, group G); cooler (see section VII, group A)
— xxx-114 = Series 200: 10-inch input drive ring (see section VI, group B)
— xxx-115 = Series 200: 10-inch input drive ring (see section VI, group B); cooler (see section VII, group A)

(Continued on next page)

MODEL DESIGNATION CHART - Continued

CONVERTER OPTIONS: LAST THREE DIGITS - Continued

— xxx-116 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D)

— xxx-117 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D); 10-inch input disconnect clutch (see section V, group A)

— xxx-118 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D); cooler (see section VII, group B)

— xxx-119 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D); 10-inch input disconnect clutch (see section V, group A); cooler (see section VII, group B)

— xxx-120 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F)

— xxx-121 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F); 10-inch input-disconnect clutch (see section V, group A)

— xxx-122 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F); cooler (see section VII, group B)

— xxx-123 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F); 10-inch input-disconnect clutch (see section V, group A); cooler (see section VII, group B)

— xxx-124 = Series 300: Rear-disconnect clutch adapter (see section VII, group G); cooler (see section VII, group B) (drive ring bolts, see section VI, group L)

— xxx-125 = Series 300: 11 1/2 in. drive ring (see section VI, group A)

— xxx-126 = Series 300: 11 1/2 in. drive ring (see section VI, group A), cooler (see section VII, group B)

— xxx-127 = Series 200-300: Accessory drive adapter (see section VII, group C), Drive ring bolts (see section VII, group L)

— xxx-129 = Series 200-300: Rear-disconnect clutch adapter (see section VII, group G) Drive ring bolts (see section VI, group L)

— xxx-130 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group D)

— xxx-131 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group C)

— xxx-132 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F); 10-inch input disconnect clutch (see section V, group A); accessory drive adapter (see section VII, group C)

— xxx-133 = Series 300: SAE 3 housing with 11 1/2-inch drive ring (see section VI, group F)

— xxx-134 = Series 200: SAE 2 housing with 10-inch drive ring (see section VI, group H)

— xxx-136 = Series 300: SAE 2 housing with 11 1/2-inch drive ring (see section VI, group G)

— xxx-137 = Series 300: SAE 3 housing (see section VI, group K)

— xxx-140 = Series 300: Drive ring bolts (see section VI, group L)

## EXAMPLE OF PARTS LIST ORGANIZATION

Here is an example of the parts list organization used in this catalog. Understanding this example will help you to order the right parts.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | Assembly | 6700001 | 1 |
| 2 | Subassembly | 6754002 | 1 |
| 3 | Detail part | 676003 | 1 |
| 4 | Detail part | 67543004 | 1 |
| 5 | Detail part | 67090005 | 2 |
| 6 | Detail part | 4597006 | 3 |
| 7 | Detail part | 3285007 | 1 |
| 8 | Subassembly | 6765008 | 1 |
| 9 | Detail part | 5950009* | 4 |
| 10 | Detail part | 6759010* | 1 |
| 11 | Subassembly | 67521011 | 1 |
| 12 | Detail part | 67573012 | 1 |
| 13 | Subassembly | 67094013 | 1 |
| 14 | Detail part | 67048014 | 1 |
| 15 | Detail part | 6750015 | 2 |
| 16 | Detail part | 67076016 | 1 |
| 17 | Detail part | 67854017 | 1 |
| 18 | Subassembly | 5759018 | 1 |
| 19 | Subassembly | 4399019 | 1 |
| 20 | Detail part | 7550020 | 1 |

*Serviced in assembly only - not as a detail part.

Explanation

If you order part number 6700001, you will receive parts 6754002 through 6750015.

If you order part number 6754002, you will receive parts 676003 through 67090005.

If you order part number 676003, you will receive part 676003 only.

If you order part numbers 5950009 or 6759010, you will receive part 6765008 which is the assembly composed of parts 5950009 and 6759010. The star after part numbers 5950009 and 6759010 indicates that these parts are not serviced alone.

If you order part number 4597006, you will receive part 4597006 only.

If you order part number 67076016, you will receive part 67076016 only.

The numbers appearing in the column under REF are the item reference numbers appearing in the illustrations.

Summary

If an assembly or subassembly is ordered, all subassemblies and detail parts indented beneath it will be included.

If a detail part is ordered, only the detail part will be sent unless its part number is starred (*). A starred (*) part number means that such a part is not serviced alone. This is necessary because certain parts require factory installation or adjustment. If an order is received for a starred (*) part, the assembly or subassembly under which it is indented will be sent.

## HOW TO ORDER PARTS

Be sure to give the Torqmatic Converter Assembly Part Number, the Model, and the Serial Number found on the Torqmatic Converter housing name plate.

Always give the part name and quantity desired as well as the part number.

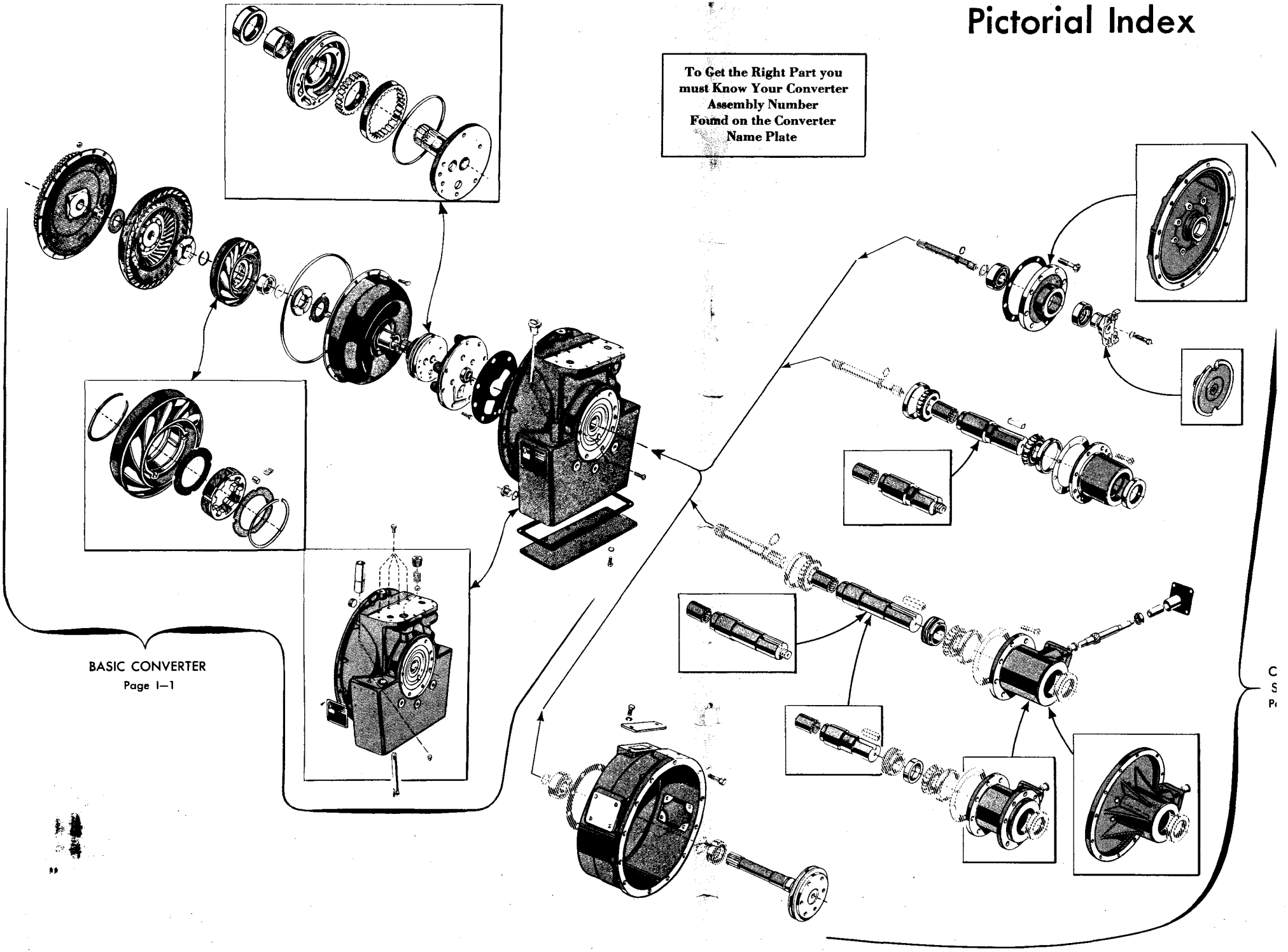
All parts orders should be placed with the distributor or dealer from whom you purchased your equipment. Do not place orders directly with Allison Division.

### NOTE

You will find a quick reference form on page 14 for listing your Allison Torqmatic Converter model and assembly part numbers. Fill it in now — it may save you many hours later.

# Pictorial Index

**To Get the Right Part you must Know Your Converter Assembly Number Found on the Converter Name Plate**

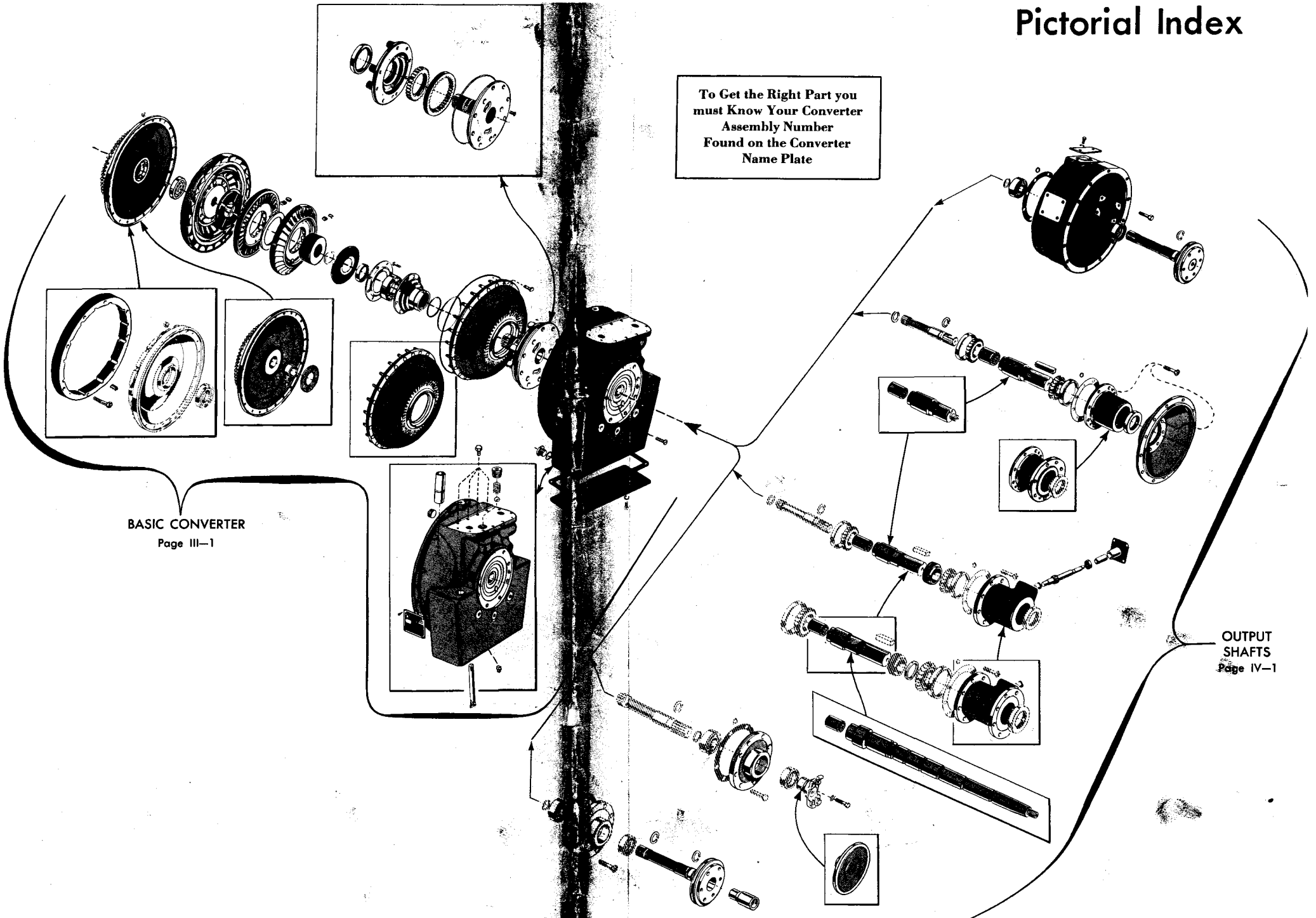


BASIC CONVERTER
Page I–1

PICTORIAL INDEX, TC-200 SERIES BASIC TORQMATIC CONVERTER AND OUTPUT SHAFTS

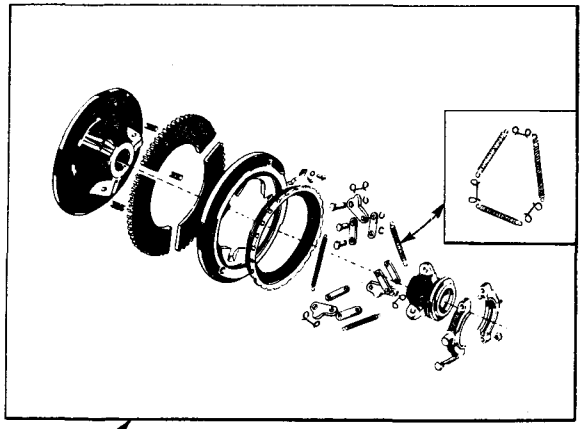
# Pictorial Index

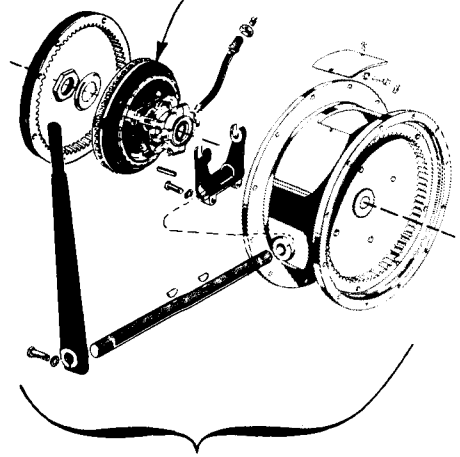
**To Get the Right Part you must Know Your Converter Assembly Number Found on the Converter Name Plate**



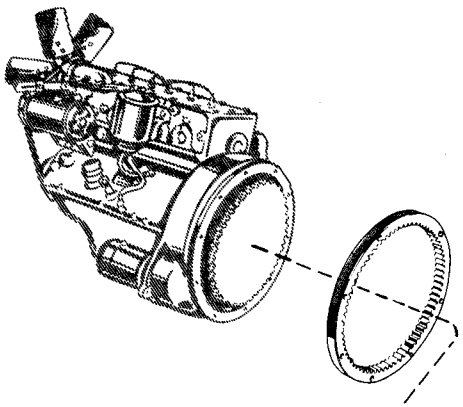
BASIC CONVERTER
Page III—1

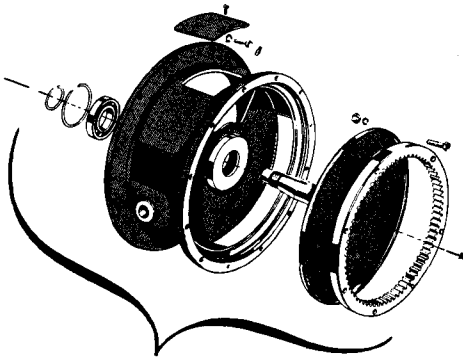
OUTPUT SHAFTS
Page IV—1



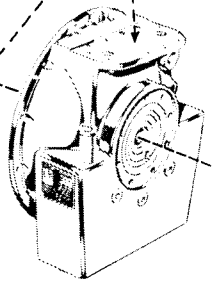


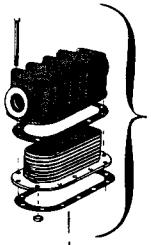
MANUAL INPUT
DISCONNECT CLUTCH
ASSEMBLY OPTION
Page V—1





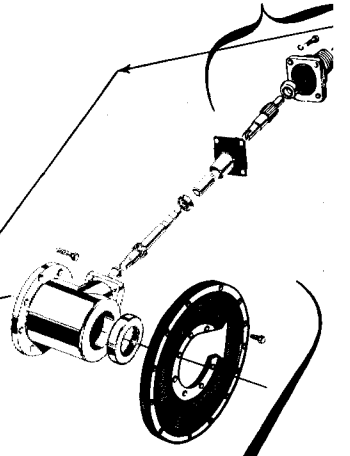
MANUAL INPUT DISCONNECT
CLUTCH HOUSING OPTION
Page VI—1

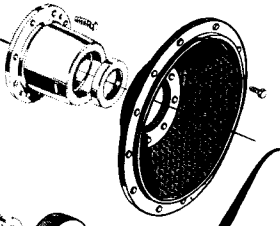


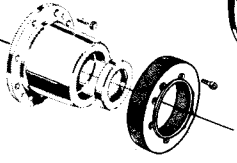


OIL
COOLER
OPTION
Page VII—1

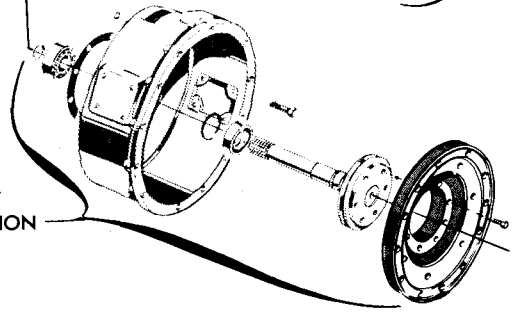
CABLE DRIVE
ADAPTER OPTION
Page VII—1







MOUNTING
PLATE
OPTIONS
Page VII—1



REAR DISCONNECT
CLUTCH ADAPTER OPTION
Page VII—1

**To Get the Right Part you must Know Your Converter Assembly Number Found on the Converter Name Plate**

# Pictorial Index

## GLOSSARY OF ABBREVIATIONS

| | |
|---|---|
| adptr | adapter |
| & | and |
| assy | assembly |
| A/N | Assembly Number |
| ar | as required |
| avail | available |
| brng | bearing |
| brkt | bracket |
| brk | brake |
| bshng | bushing |
| ctr | center |
| cls | class |
| cl | cluster |
| clu | clutch |
| C/o | consists of |
| c-pin | cotter pin |
| c'sunk | countersunk |
| dia | diameter |
| div | division |
| drv | drive |
| drvn | driven |
| drvng | driving |
| ea | each |
| exc | except |
| exch | exchange |
| expn | expansion |
| extrnl | external |
| fil hd | fillister head |
| flng | flange |
| flx | flexible |
| flywhl | flywheel |
| frt | front |
| gskt | gasket |
| gov | governor |
| hd | head |
| hx | hexagon |
| hsng | housing |
| hydr | hydraulic |
| incl | includes |
| ID | inside diameter |
| instr | instrument |
| inter | intermediate |
| intrnl | internal |
| lng | long |
| mnfld | manifold |
| med | medium |
| mntg | mounting |
| NC | National Coarse Thread |
| NF | National Fine Thread |
| NPT | National Taper Pipe Thread |
| ND | New Departure |
| no | number |
| OD | outside diameter |
| OL | overall length |
| OS | oversize |
| pack | packing |
| pinn | pinion |
| pln | plain |
| plnt | planetary |
| presr | pressure |
| regltr | regulator |
| rtnr | retainer |
| rnd | round |
| S/N | Serial Number |
| srvc | service |
| SIL | Service Information Letter |
| SK | Service Kit |
| sltd | slotted |
| spcr | spacer |
| spcl | special |
| speedo | speedometer |
| sq | square |
| sq-sckt | square socket |
| std | standard |
| temp | temperature |
| thrd | thread |
| trns | transmission |
| undrsz | undersize |
| upr | upper |
| wshr | washer |
| W/ | with |
| W/out | without |

## QUICK REFERENCE LISTING FOR YOUR TORQMATIC DRIVE

**Fill In Now**

ALLISON TORQMATIC CONVERTER

1. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

2. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

3. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

4. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

5. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

6. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

7. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

8. Model No._____Assy Part No._____

   Serial No._____Installation_____

   ALLISON TORQMATIC CONVERTER

9. Model No._____Assy Part No._____

   Serial No._____Installation_____

# TC-200 SERIES BASIC TORQMATIC CONVERTER

To find detail parts for your Allison Torqmatic Converter, turn to the group and page listed opposite the assembly part number of your converter.

| A/N* | MODEL | GROUP | PAGE |
|---|---|---|---|
| 6755291 | TC 244 | A | I-3 |
| 6755292 | TC 245 | A | I-3 |
| 6755386 | TCA 245 | A | I-3 |
| 6755387 | TCRD 246 | A | I-3 |
| 6756320 | TCA 248 | A | I-3 |
| 6756733 | TC 248 | A | I-3 |
| 6756751 | TCA 247 | A | I-3 |
| 6757848 | TC 248 | A | I-3 |
| 6757850 | TC 244 | A | I-3 |
| 6758071 | TCA 248 | A | I-3 |
| 6758320 | TCA 248 | A | I-3 |
| 6758586 | TCRD 246 | A | I-3 |

*A/N (Assembly number) found on your converter name plate.

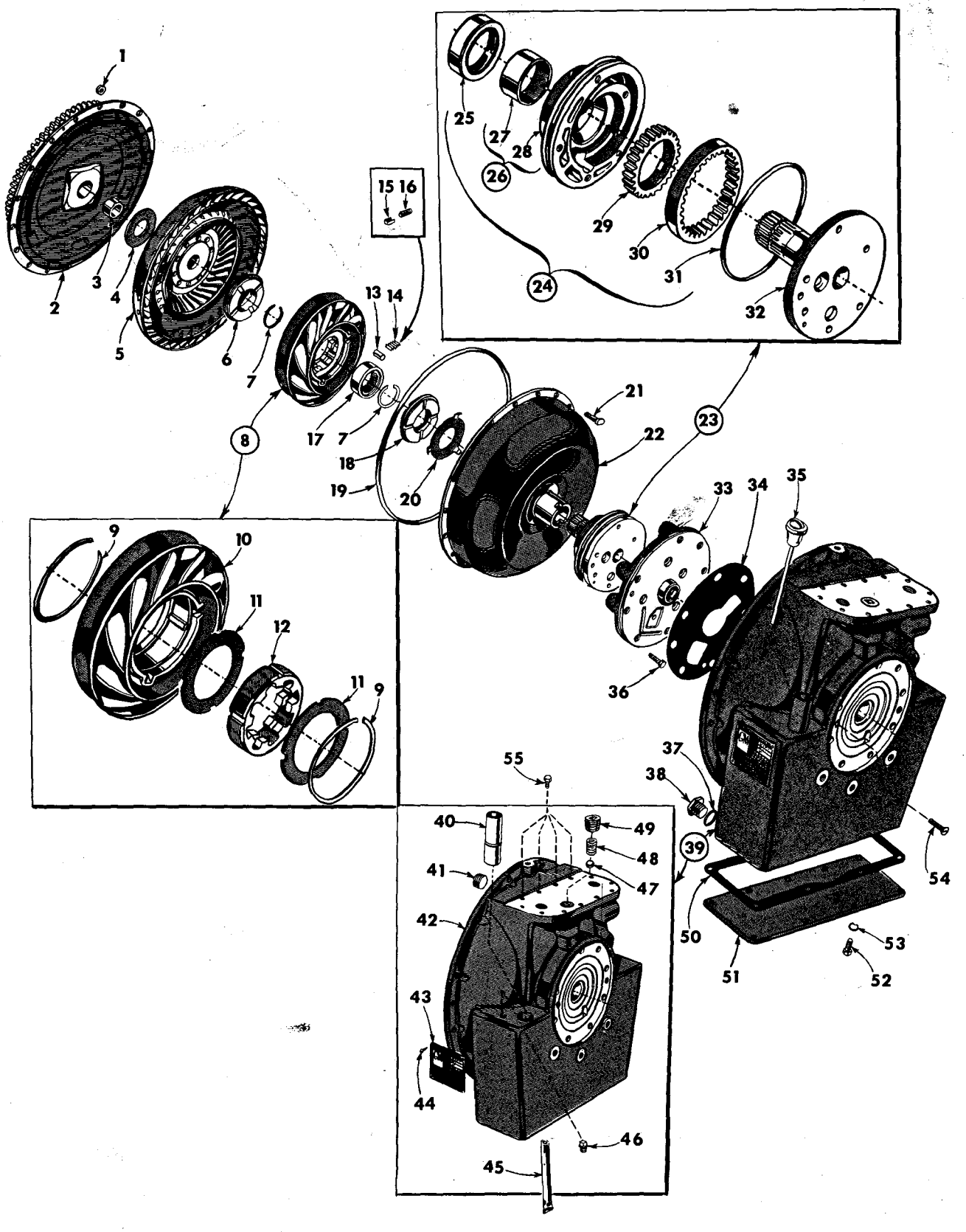



Fig I. TC-200 SERIES BASIC TORQMATIC CONVERTER, EXPLODED VIEW

# TC-200 SERIES BASIC TORQMATIC CONVERTER GROUP A, FIGURE I

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | NUT | 451006 | 18 |
| 2 | GEAR & COVER ASSY | 6755221 | 1 |
| 3 | BUSHING | 3702079 | 1 |
| 4 | WASHER, Turbine thrust | 3719262 | 1 |
| 5 | TURBINE ASSY | 3702724 | 1 |
| 6 | WASHER, Stator frnt thrust | 3709094 | 1 |
| 7 | RING, Extrnl snap, 1 1/4 OD | 6750046 | 2 |
| 8 | STATOR ASSY (See SIL 280) | 6769234 | 1 |
| 9 | RING, Snap | 3702104 | 2 |
| 10 | STATOR | 3702688 | 1 |
| 11 | WASHER, Cam thrust | 3702103 | 2 |
| 12 | CAM, Stator freewheel | 3719260 | 1 |
| 13 | ROLLER, Stator freewheel | 3702101 | 8 |
| 14 | SPRING, Roller | 3719261 | 8 |
| 15 | GUIDE, Roller (use prior to S/N 19439 only) | 3691806 | 8 |
| 16 | SPRING, Roller (use prior to S/N 19439 only) | 3689751 | 8 |
| 17 | RACE, Freewheel roller | 6754958 | 1 |
| 18 | WASHER, Stator rear thrust (See SIL 127.) | 6756233 | 1 |
| 19 | RING, Seal, 12 ID x .139 dia (See SIL 150.) | 3713622 | 1 |
| 20 | WASHER, Converter pump thrust | 6756629 | 1 |
| 21 | BOLT, Spcl | 3717166 | 18 |
| 22 | PUMP ASSY, Converter | 3702742 | 1 |
| 23 | PUMP ASSY, Charging oil | 6755266 | 1 |
| 24 | GEAR & BODY ASSY | 6756644 | 1 |
| 25 | SEAL, Oil (See SIL 165) | 3737894 | 1 |
| 26 | BODY ASSY, Oil pump | 3702066 | 1 |
| 27 | BUSHING | 3702069 | 1 |
| 28 | BODY, Oil pump | 3702067* | 1 |
| 29 | GEAR, Charging oil pump drv | 3702070* | 1 |
| 29 | GEAR, Charging oil pump drv (optional) | 3719252* | 1 |
| 30 | GEAR, Charging oil pump drvn | 3689760* | 1 |
| 31 | RING, Seal | 3689826 | 1 |
| 32 | SUPPORT, Stator (ground sleeve) | 6754964 | 1 |
| 33 | ADAPTER, Charging oil pump | 6754968 | 1 |
| 34 | GASKET, (See SIL 137.) | 6756872 | 1 |
| 35 | INDICATOR, Oil lever | 6755786 | 1 |
| 36 | BOLT, Hx hd self-locking, 1/4-20x1 | 9409062 | 5 |
| 37 | GASKET, Annular | 105456 | 1 |
| 38 | PLUG, Drain | 6701230 | 1 |
| 39 | HOUSING ASSY, Converter (See SIL 136) | 6768955 | 1 |
| 40 | SLEEVE, Oil filler | 6755789 | 1 |
| 41 | PLUG, Sq-sckt hd, 3/4 NPT | 444672 | 2 |
| 42 | HOUSING, Converter (See SIL 137) | 6768942* | |
| 43 | PLATE, Torqmatic converter name | 6768267 | 1 |
| 44 | SCREW, Rnd hd drv, #4 x 1/4 | 142862 | 4 |
| 45 | TUBE, Oil cooler return | 6756693 | 1 |
| 46 | PLUG, Pipe, 1/4 | 444576 | 1 |
| 47 | BALL | 453621 | 1 |
| 48 | SPRING | 6758597 | 1 |
| 49 | PLUG, Sq hd pipe, 1 | 444678 | 1 |
| 50 | GASKET, Sump plate | 6754490 | 1 |
| 51 | PLATE, Sump | 6754495 | 1 |
| 52 | BOLT, Hx hd, 5/16-18x7/8 | 179817 | 9 |
| 53 | WASHER, Lock, 5/16 | 103320 | 9 |
| 54 | SCREW, Flat 1/4-20x1 3/4 (See SIL 161.) | 113998 | 2 |
| 55 | BOLT, Hx hd, 5/16-18 x 1/2 (See SIL 196.) | 179812 | 4 |

* Serviced as an assy only - not as a detail part.

## TC-200 SERIES BASIC TORQMATIC CONVERTER OUTPUT SHAFTS

To find detail parts for your Allison Torqmatic Converter, turn to the group and page listed opposite the assembly part number of your converter.

| A/N* | MODEL | GROUP | PAGE |
|---|---|---|---|
| 6755291 | TC 244 | A | II-3 |
| 6755292 | TC 245 | B | II-3 |
| 6755386 | TCA 245 | E | II-4 |
| 6755387 | TCRD 246 | D | II-4 |
| 6756320 | TCA 248 | F | II-4 |
| 6756733 | TC 248 | C | II-3 |
| 6756751 | TCA 247 | H | II-5 |
| 6757848 | TC 248 | C | II-3 |
| 6757850 | TC 244 | G | II-5 |
| 6758071 | TCA 248 | K | II-5 |
| 6758320 | TCA 248 | F | II-4 |
| 6758586 | TCRD 246 | J | II-5 |

*A/N (Assembly number) found on your converter name plate.

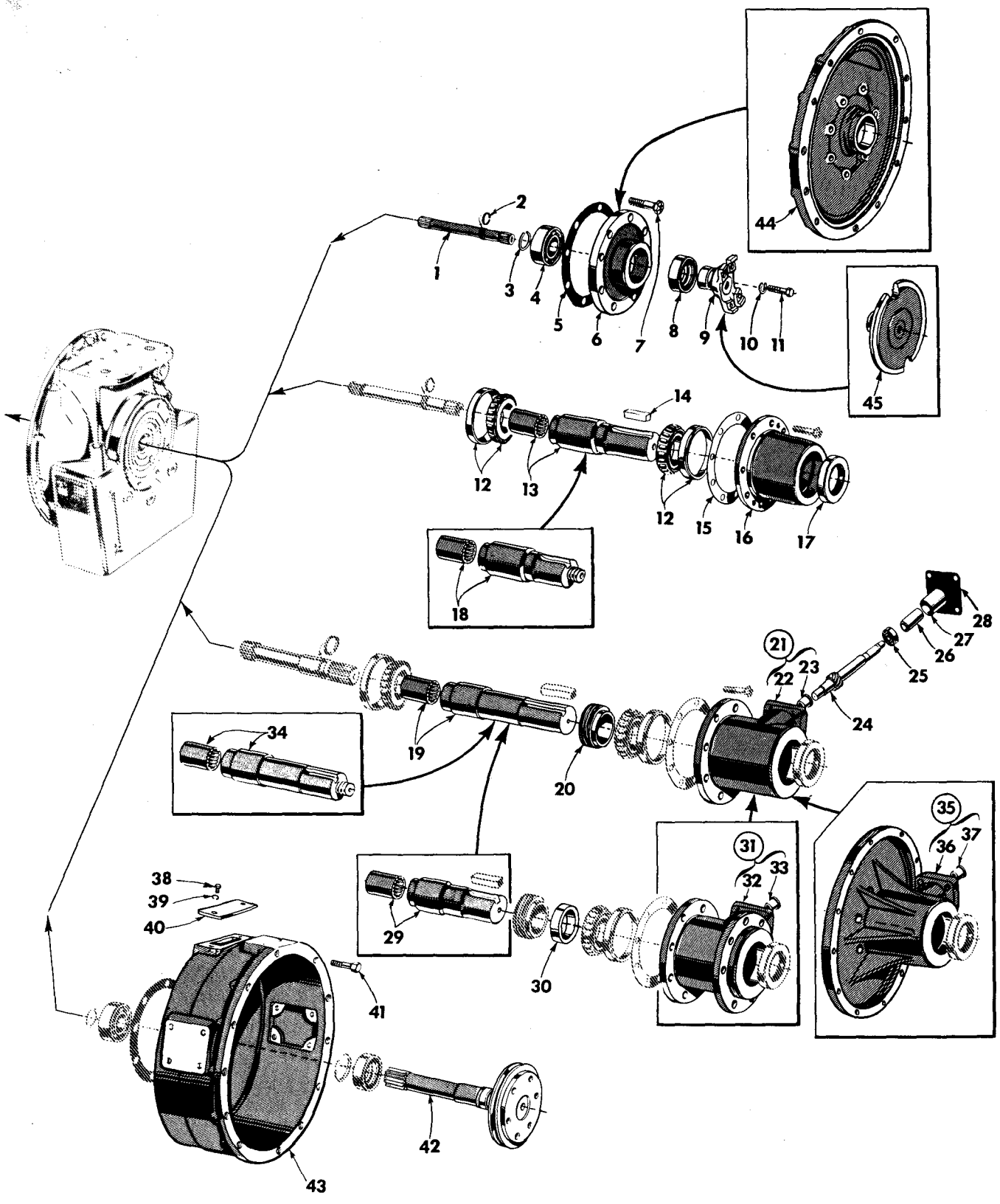



**Fig II. TC-200 SERIES BASIC TORQMATIC CONVERTER OUTPUT SHAFTS, EXPLODED VIEW**

## TC-200 SERIES OUTPUT SHAFT GROUP A (AUTOMOTIVE), FIGURE II

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | SHAFT, Turbine (See SIL 221.) | 6759462 | 1 |
| 2 | RING, Hook type seal | 3689838 | 1 |
| 3 | RING, Extrnl snap, 1.250 ID | 6750046 | 1 |
| 4 | BEARING ASSY, Single row ball | 903307 | 1 |
| 5 | GASKET, Brng rtnr | 6753966 | 1 |
| 6 | RETAINER, Brng | 6755302 | 1 |
| 7 | BOLT, Hx hd self-locking, 1/2-13x2 1/2 | 9409055 | 8 |
| 8 | SEAL, Oil, 2.750 x 1.750 ID x .75 thick | 6753857 | 1 |
| 9 | FLANGE ASSY (M4C) | 6754963 | 1 |
| 10 | WASHER, Lock, 1/2 | 103323 | 1 |
| 11 | BOLT, Hx hd, 1/2-20x1 1/4 | 181429 | 1 |
| 12-45 | Not used in this group. | | |

## TC-200 SERIES OUTPUT SHAFT GROUP B (INDUSTRIAL), FIGURE II

Same as Group A, except for parts listed below.

| | | | |
|---|---|---|---|
| 3-6 | Not used in this group. | | |
| 8-11 | Not used in this group. | | |
| 12 | BEARING ASSY, Tapered roller | 6751541 | 2 |
| 13 | SHAFT ASSY, Converter output | 6755032 | 1 |
| 14 | KEY, 5/8x5/8x3 | 6751531 | 1 |
| 15 | SHIM, Brng hsng, .003 | 6753859 | AR |
| 15 | SHIM, Brng hsng, .010 | 6753860 | AR |
| 16 | HOUSING, Brng | 6754508 | 1 |
| 17 | SEAL, Oil, 3.378 OD x 2.35 ID x .483 wide | 6754506 | 1 |
| 18-45 | Not used in this group. | | |

## TC-200 SERIES OUTPUT SHAFT GROUP C (BEVEL PINION MOUNTING), FIGURE II

Same as Group B except for parts listed below.

| | | | |
|---|---|---|---|
| 13-14 | Not used in this group. | | |
| 18 | SHAFT ASSY, Converter output | 6756856 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP D (SAE #3 REAR DISCONNECT CLUTCH HOUSING), FIGURE II

Same as Group A, except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | Not used in this group. | | |
| 6-7 | Not used in this group. | | |
| 9-37 | Not used in this group. | | |
| 38 | BOLT, Hx hd, 3/8-16x3/4 | 179837 | 2 |
| 39 | WASHER, Lock, 3/8 | 103321 | 2 |
| 40 | SHIELD, Dust | 6757426 | 1 |
| 41 | BOLT, Hx hd self-locking, 1/2-13x2 3/4 | 9409203 | 8 |
| 42 | SHAFT, Turbine | 6755469 | 1 |
| 43 | HOUSING, SAE #3 rear disconnect clu | 6754349 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP E (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE), FIGURE II

Same as Group B except for parts listed below.

| | | | |
|---|---|---|---|
| 13 | Not used in this group. | | |
| 16 | Not used in this group. | | |
| 18 | Not used in this group. | | |
| 19 | SHAFT ASSY, Converter output | 6755383 | 1 |
| 20 | GEAR, Accessory drv | 6755619 | 1 |
| 21 | HOUSING ASSY, Brng | 6755377 | 1 |
| 22 | HOUSING, Brng | 6755384* | 1 |
| 23 | BUSHING | 2222424 | 1 |
| 24 | GEAR, Accessory drvn | 6755618 | 1 |
| 25 | BEARING ASSY, Single row ball | 954498 | 1 |
| 26 | SLEEVE, Accessory drv | 3224085 | 1 |
| 27 | SPACER, 1.38 OD x .06 wall x 2.16 | 6751524 | 1 |
| 28 | GASKET | 3224773 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP F (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE AND BEVEL PINION MOUNTING), FIGURE II

Same as Group E, except for parts listed below.

| | | | |
|---|---|---|---|
| 7 | BOLT, Hx hd, 1/2-13x2 3/4 | 9409203 | 8 |
| 14 | Not used in this group. | | |
| 19 | Not used in this group. | | |
| 29-33 | Not used in this group. | | |
| 34 | SHAFT ASSY, Converter output | 6756321 | 1 |
| 35 | HOUSING ASSY, Brng | 6757521 | 1 |
| 36 | HOUSING, Brng | 6757115 | 1 |
| 37 | BUSHING | 2222424 | 1 |

* Serviced as an assy only - not as a detail part.

## TC-200 SERIES OUTPUT SHAFT GROUP G (COUPLING), FIGURE II

Same as Group A except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 6 | Not used in this group. | | |
| 7 | BOLT, Hx hd, 1/2-13 x 2 3/4 | 9409240 | 8 |
| 9 | Not used in this group. | | |
| 44 | RETAINER, Brng | 6757737 | 1 |
| 45 | COUPLING, Output drv | 6757757 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP H (INDUSTRIAL), FIGURE II

Same as Group E, except for parts listed below.

| | | | |
|---|---|---|---|
| 7 | BOLT, Hx hd, self-locking | 9409240 | 8 |
| 12 | BEARING ASSY, Tapered roller | 456635 | 2 |
| 18-19 | Not used in this group. | | |
| 21-23 | Not used in this group. | | |
| 29 | SHAFT ASSY, Converter output | 6758295 | 1 |
| 30 | SPACER, Converter output shaft | 6756689 | 1 |
| 31 | HOUSING ASSY, Brng | 6756706 | 1 |
| 32 | HOUSING | 6756698 | 1 |
| 33 | BUSHING | 2222424 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP J (SAE #3 REAR DISCONNECT CLUTCH HOUSING), FIGURE II

Same as Group D except for parts listed below.

| | | | |
|---|---|---|---|
| 42 | SHAFT, Turbine | 6758592 | 1 |

## TC-200 SERIES OUTPUT SHAFT GROUP K (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE), FIGURE II

Same as Group E except for parts listed below.

| | | | |
|---|---|---|---|
| 19 | SHAFT ASSY, Converter output | 6758124 | 1 |

# TC-300 SERIES BASIC TORQMATIC CONVERTER

**To find detail parts for your Allison Torqmatic Converter, turn to the group and page listed opposite the assembly part number of your converter.**

| A/N* | MODEL | GROUP | PAGE | A/N* | MODEL | GROUP | PAGE |
|---|---|---|---|---|---|---|---|
| 6755060 | TC 324 | A | III-3 | 6759643 | TC 376 | C | III-4 |
| 6755061 | TC 325 | A | III-3 | 6759657 | TC 324 | D | III-5 |
| 6755062 | TCRD 326 | A | III-3 | 6759658 | TC 325 | D | III-5 |
| 6755390 | TCA 325 | A | III-3 | 6759659 | TC 327 | D | III-5 |
| 6755395 | TC 374 | E | III-5 | 6759660 | TCA 327 | D | III-5 |
| 6755396 | TC 375 | E | III-5 | 6759661 | TCA 325 | D | III-5 |
| 6755397 | TCA 375 | E | III-5 | 6759663 | TCA 378 | B | III-4 |
| 6755398 | TCRD 376 | E | III-5 | 6759664 | TCRD 326 | D | III-5 |
| 6756752 | TC 327 | A | III-3 | 6759666 | TC 374 | B | III-4 |
| 6756753 | TCA 327 | A | III-3 | 6759667 | TC 374 | B | III-4 |
| 6756754 | TC 377 | E | III-5 | 6759668 | TC 375 | B | III-4 |
| 6756755 | TCA 377 | E | III-5 | 6759669 | TC 377 | B | III-4 |
| 6756789 | TCA 377 | E | III-5 | 6759672 | TCA 377 | B | III-4 |
| 6756914 | TCRD 329 | A | III-3 | 6759674 | TCRD 376 | B | III-4 |
| 6756937 | TCRD 379 | E | III-5 | 6759676 | TCRD 379 | B | III-4 |
| 6757844 | TCRD 379 | E | III-5 | 6759677 | TCA 377 | B | III-4 |
| 6757846 | TC 374 | E | III-5 | 6759706 | TCA 377 | E | III-5 |
| 6757847 | TC 378 | E | III-5 | 6759730 | TC 378 | B | III-4 |
| 6758048 | TCA 328 | A | III-3 | 6759741 | TC 328 | D | III-5 |
| 6759137 | TCA 378 | E | III-3 | 6759759 | TCRD 329 | D | III-5 |
| 6759598 | TCA 377 | E | III-5 | 6759767 | TCA 377 | B | III-4 |

*A/N (Assembly number) found on your converter name plate.

6755395

11332

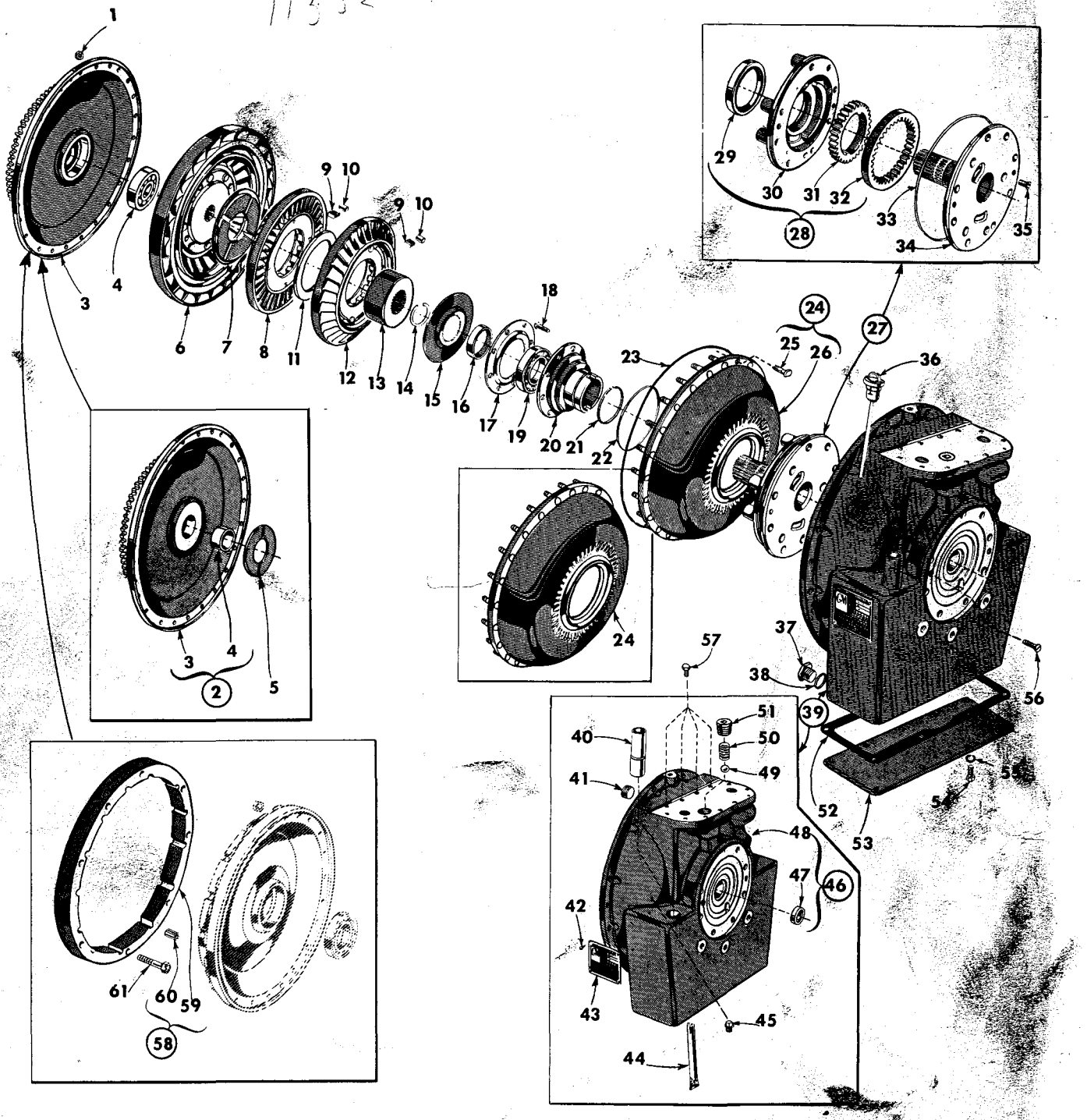



Fig III. TC-300 SERIES BASIC TORQMATIC CONVERTER, EXPLODED VIEW

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP A, FIGURE III

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | NUT, Hx lock, 5/16-24 . . . . . | 451006 | 24 |
| 2 | COVER ASSY, Converter pump (Use prior to S/N 13596. See SIL 224.) . . . | 6755325 | 1 |
| 3 | COVER, Converter pump (Use prior to S/N 13596. See SIL 224.) . . . . | 6755317* | 1 |
| 4 | BUSHING (Use prior to S/N 13596. See SIL 224.) . . . . . | 6754922 | 1 |
| 3 | COVER, Converter pump (Use 6757712 Cover starting with S/N 13596. See SIL 224.) . . . | 6757712 | 1 |
| 4 | BEARING ASSY, Single row ball (Use 903208 Bearing starting with S/N 13596. See SIL 224.) . . . | 903208 | 1 |
| 5 | WASHER, Turbine thrust (Use prior to S/N 13596. See SIL 224.) | 6755004 | 1 |
| 6 | TURBINE ASSY (Prior to S/N 13596 use Turbine 6755467) | 6769453 | 1 |
| 7 | WASHER, Stator thrust (use prior to S/N 12227 only) (See SIL 206) | 6757753 | 1 |
| 8 | STATOR ASSY, First (prior to S/N 12227 use stator 6755463) (See SIL 302) | 6768903 | 1 |
| 9 | SPRING, Freewheel roller . . . . . | 6754999 | 16 |
| 10 | ROLLER, Stator freewheel . . . . . | 7450737 | 16 |
| 11 | WASHER, Spcr, 4.62 OD x 3.5 ID x .22 wide . . . | 6754994 | 1 |
| 12 | STATOR ASSY, Second (See SIL 302) . . . . . | 6768902 | 1 |
| 13 | RACE, Freewheel roller . . . . . | 6755892 | 1 |
| 14 | RING, Extrnl snap, 1.61 ID . . . . . | 6755897 | 1 |
| 15 | SPACER, Freewheel roller race . . . . . | 6769091 | 1 |
| 16 | SPACER, 2.00 OD x 1.81 ID x .493 wide (Used only on trns prior to S/N 7144. See SIL 157.) . . | 6755896 | 1 |
| 17 | RETAINER, Brng . . . . . | 6757634 | 1 |
| 18 | BOLT, Hx hd self-locking, 1/4-20x5/8, cls 2 . . | 9409073 | 8 |
| 19 | BEARING ASSY, Double row ball (See SIL 157.). . | 6757374 | 1 |
| 20 | HUB, Converter pump (See SIL 292) . . . . . | 6768714 | 1 |
| 21 | RING, Hook type seal, 2.906 dia . . . . . | 6754488 | 1 |
| 22 | RING, Seal . . . . . | 6758296 | 1 |
| 23 | RING, Seal . . . . . | 6753866 | 1 |
| 24 | PUMP ASSY, Converter (for TC-320 Series) . . . | 6756847 | 1 |
| 25 | BOLT, Spcl, 5/16-24x1.30 . . . . . | 6755988 | 24 |
| 26 | PUMP, Converter (for TC-320 series) . . . . | 6755457* | 1 |
| 27 | PUMP ASSY, Charging oil (use 6757621 prior to S/N 19085) (See SIL 292) | 6768707 | 1 |
| 28 | GEAR & BODY ASSY (use 6757086 prior to S/N 19085) (See SIL 292) | 6768706 | 1 |
| 29 | SEAL, 3.00 ID . . . . . | 6768644 | 1 |
| 30 | BODY, Oil pump (use 6768349 prior to S/N 19085) (See SIL 161 & 292) | 6768704* | 1 |
| 31 | GEAR, Oil pump drv . . . . . | 6768351* | 1 |
| 32 | GEAR, Oil pump drvn . . . . . | 6768350* | 1 |
| 33 | RING, Seal, 8.00 ID x 1/8 dia . . . . . | 6702958 | 1 |
| 34 | SLEEVE, Converter ground . . . . . | 6757599 | 1 |
| 35 | SCREW, Flat hd, slotted, 1/4-20x5/8 . . . . | 113989 | 3 |

* Serviced as an assy only - not as a detail part.

(CONTINUED ON NEXT PAGE)

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP A, (CONT'D) FIGURE III

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 36 | INDICATOR, Oil level | 6755786 | 1 |
| 37 | PLUG, Drain | 6701230 | 1 |
| 38 | GASKET, Annular | 105456 | 1 |
| 39 | HOUSING ASSY, Converter (See SIL 136) | 6768956 | 1 |
| 40 | SLEEVE, Oil filler | 6755789 | 1 |
| 41 | PLUG, Sq sckt hd, 3/4 NPT | 444672 | 2 |
| 42 | SCREW, Rnd hd drv, #4x1/4 | 142862 | 4 |
| 43 | PLATE, Torqmatic converter name | 6768267 | 1 |
| 44 | TUBE, Oil cooler return | 6756693 | 1 |
| 45 | PLUG, Pipe, 1/4 | 444576 | 1 |
| 46-47 | Not used in this group. | | |
| 48 | HOUSING, Converter | 6768942* | 1 |
| 49 | BALL | 453621 | 1 |
| 50 | SPRING | 6758597 | 1 |
| 51 | PLUG, Sq sckt pipe, 1 | 444678 | 1 |
| 52 | GASKET, Sump plate | 6754490 | 1 |
| 53 | PLATE, Sump | 6754495 | 1 |
| 54 | BOLT, Hx hd, 5/16-18x7/8, cls 2 | 179817 | 9 |
| 55 | WASHER, Lock, 5/16 | 103320 | 9 |
| 56 | SCREW, Flat hd, 1/4-20x1 3/4 | 113998 | 2 |
| 57 | BOLT, Hx hd, 5/16-18x1/2 (See SIL 196) | 179812 | 4 |
| 58-61 | Not used in this group. | | |

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP B, Figure III

Same as Group A, except for parts listed below.

| | | | |
|---|---|---|---|
| 3 | COVER, Converter pump | 6769071 | 1 |
| 58 | RING ASSY, Converter drive | 6769070 | 1 |
| 59 | RING, Converter drive | 6769069 | 1 |
| 60 | PIN, Roll | 453675 | 12 |

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP C, Figure III

Same as Group A, except for parts listed below.

| | | | |
|---|---|---|---|
| (e) | COVER ASSY, Converter pump | 6769049 | 1 |
| 3 | COVER, Converter pump | 6769056 | 1 |
| (e) | PLUG | 6756348 | 1 |
| 4 | BEARING ASSY, Single row ball | 903011 | 1 |
| 6 | TURBINE ASSY | 6769060 | 1 |
| 8 | STATOR ASSY, First | 6769105 | 1 |
| 13 | RACE, Freewheel roller | 6769048 | 1 |
| 14 | RING, External snap | 6758777 | 1 |
| 15 | SPACER, Freewheel roller race | 6769045 | 1 |
| 18 | BOLT, Hx hd, 1/4-20x5/8 | 179793 | 8 |
| (e) | LOCKSTRIP | 6769053 | 4 |
| 20 | HUB, Converter pump | 6769062 | 1 |
| 24 | PUMP ASSY, Converter (for TC 370 series) | 6756001 | 1 |
| 26 | PUMP, Converter | 6755468 | 1 |

(e) Not illustrated.

* Serviced as an assy only - not as a detail part.

(CONTINUED ON NEXT PAGE)

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP C (CONT'D), Figure III

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 27 | PUMP ASSY, Charging oil | 6769061 | 1 |
| 34 | SLEEVE, Converter ground | 6769055 | 1 |
| 36 | INDICATOR, Oil level | 6769090 | 1 |
| 39 | HOUSING ASSY, Converter | 6769044 | 1 |
| 40 | SLEEVE, Oil filler | 6769089 | 1 |
| 46 | HOUSING ASSY, Converter | 6769073 | 1 |
| 47 | SLEEVE, Converter housing | 6769052 | 1 |
| 48 | HOUSING, Converter | 6769054 | 1 |
| 58 | RING ASSY, Converter drive | 6769070 | 1 |
| 59 | RING, Converter drive | 6769069 | 1 |
| 60 | PIN, Spring | 453675 | 12 |
| 61 | BOLT, Drive ring | 9409231 | 8 |

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP D, Figure III

Same as Group B except for parts listed below.

| | | | |
|---|---|---|---|
| 24 | PUMP ASSY, Converter (for TC 370 series) | 6756001 | 1 |
| 26 | PUMP, Converter (for TC 370 series) | 6755468 | 1 |

## TC-300 SERIES BASIC TORQMATIC CONVERTER GROUP E, Figure III

Same as Group A, except for parts listed below.

| | | | |
|---|---|---|---|
| 24 | PUMP ASSY, Converter (for TC 370 series) | 6756001 | 1 |
| 26 | PUMP, Converter (for TC 370 series) | 6755468 | 1 |

# TC-300 SERIES BASIC TORQMATIC CONVERTER OUTPUT SHAFTS

**To find detail parts for your Allison Torqmatic Converter, turn to the group and page listed opposite the assembly part number of your converter.**

| A/N* | MODEL | GROUP | PAGE | A/N* | MODEL | GROUP | PAGE |
|---|---|---|---|---|---|---|---|
| 6755060 | TC 324 | L | IV-6 | 6759643 | TC 376 | P | IV-6 |
| 6755061 | TC 325 | C | IV-3 | 6759657 | TC 324 | L | IV-6 |
| 6755062 | TCRD 326 | A | IV-3 | 6759658 | TC 325 | C | IV-3 |
| 6755390 | TCA 325 | G | IV-5 | 6759659 | TC 327 | D | IV-4 |
| 6755395 | TC 374 | L | IV-6 | 6759660 | TCA 328 | J | IV-5 |
| 6755396 | TC 375 | C | IV-3 | 6759661 | TCA 325 | G | IV-5 |
| 6755397 | TCA 375 | G | IV-5 | 6759663 | TCA 378 | J | IV-5 |
| 6755398 | TCRD 376 | A | IV-3 | 6759664 | TCRD 326 | A | IV-3 |
| 6756752 | TC 327 | D | IV-4 | 6759666 | TC 374 | M | IV-6 |
| 6756753 | TCA 327 | H | IV-5 | 6759667 | TC 374 | L | IV-6 |
| 6756754 | TC 377 | D | IV-4 | 6759668 | TC 375 | C | IV-3 |
| 6756755 | TCA 377 | H | IV-5 | 6759669 | TC 377 | D | IV-4 |
| 6756914 | TCRD 329 | B | IV-3 | 6759672 | TCA 377 | H | IV-5 |
| 6756937 | TCRD 379 | B | IV-3 | 6759674 | TCRD 376 | A | IV-3 |
| 6756789 | TC 378 | E | IV-4 | 6759676 | TCRD 379 | B | IV-3 |
| 6757844 | TCRD 379 | B | IV-3 | 6759677 | TCA 377 | K | IV-5 |
| 6757846 | TC 374 | M | IV-6 | 6759706 | TCA 377 | N | IV-6 |
| 6757847 | TC 378 | F | IV-4 | 6759730 | TC 378 | E | IV-4 |
| 6758048 | TC 328 | J | IV-5 | 6759741 | TC 328 | E | IV-4 |
| 6759137 | TCA 378 | K | IV-5 | 6759759 | TCRD 329 | B | IV-3 |
| 6759598 | TCA 377 | L | IV-6 | 6759767 | TCA 377 | N | IV-6 |

*A/N (Assembly number) found on your converter name plate.

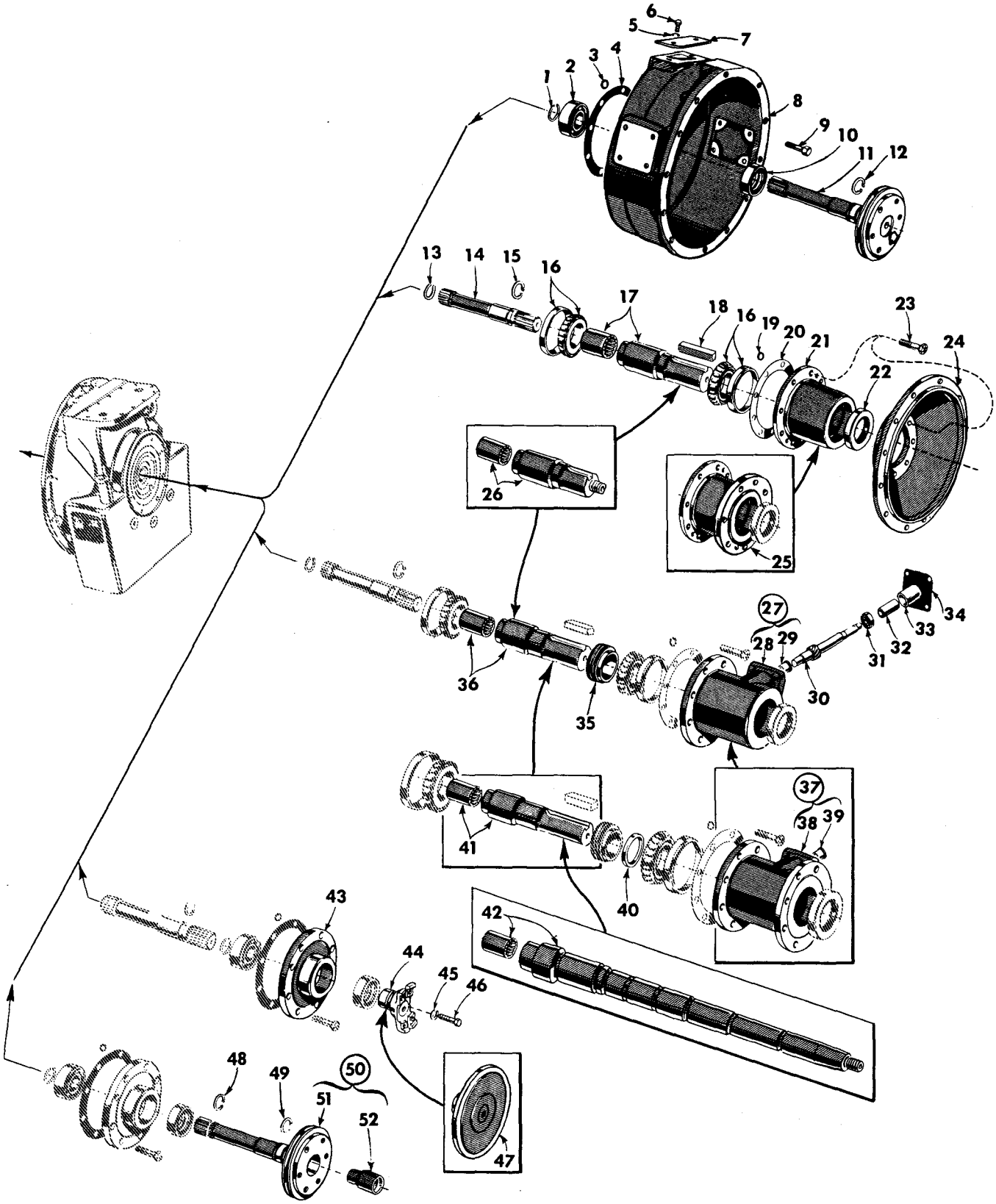



**Fig IV. TC-300 SERIES BASIC TORQMATIC CONVERTER OUTPUT SHAFTS, EXPLODED VIEW**

## TC-300 SERIES OUTPUT SHAFT GROUP A (SAE #3 REAR DISCONNECT CLUTCH HOUSING), FIGURE IV

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | RING, Extrnl snap, 1.250 ID | 6750046 | 1 |
| 2 | BEARING ASSY, Single row ball | 903307 | 1 |
| 3 | RING, Seal, .487 ID x .103 (See SIL 137.) | 6763013 | 1 |
| 4 | GASKET, Brng rtnr | 6753966 | 1 |
| 5 | WASHER, Lock, 3/8 | 103321 | 2 |
| 6 | BOLT, Hx hd, 3/8-16x3/4 | 179837 | 2 |
| 7 | SHIELD, Dust | 6757426 | 1 |
| 8 | HOUSING, SAE #3 rear disconnect clu | 6754349 | 1 |
| 9 | BOLT, Hx hd self-locking, 1/2-13x3.00, cls 2 | 9409240 | 8 |
| 10 | SEAL, Oil, 2.750 x 1.75 ID x .75 thick | 6753857 | 1 |
| 11 | SHAFT, Turbine | 6759948 | 1 |
| 12 | RING, Hook type seal, 1.406 bore | 6751839 | 1 |
| 13-47 | Not used in this group. | | |

## TC-300 SERIES OUTPUT SHAFT GROUP B (SAE #2 REAR DISCONNECT CLUTCH HOUSING), FIGURE IV

Same as Group A except for parts listed below.

| | | | |
|---|---|---|---|
| 8 | HOUSING, SAE #2 rear disconnect clu | 6756913 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP C (INDUSTRIAL SHAFT), FIGURE IV

| | | | |
|---|---|---|---|
| 1-12 | Not used in this group. | | |
| 13 | RING, Extrnl snap, 1.10 ID | 8347316 | 1 |
| 14 | SHAFT, Turbine | 6759947 | 1 |
| 15 | RING, Hook type seal, 1.406 bore | 6751839 | 1 |
| 16 | BEARING ASSY, Tapered roller | 6751541 | 2 |
| 17 | SHAFT ASSY, Converter output | 6755031 | 1 |
| 18 | KEY, 5/8x5/8x3 | 6751531 | 1 |
| 19 | RING, Seal, .487 ID x .103 (See SIL 137) | 6763013 | 8 |
| 20 | SHIM, Brng hsng, .003 | 6753859 | AR |
| 20 | SHIM, Brng hsng, .010 | 6753860 | AR |
| 21 | HOUSING, Brng | 6754508 | 1 |
| 22 | SEAL, Oil, 3.378 OD x 2.35 ID x .483 wide | 6754506 | 1 |
| 23 | BOLT, Hx hd self-locking, 1/2-13x3.00, cls 2 | 9409240 | 8 |
| 24-47 | Not used in this group. | | |

## TC-300 SERIES OUTPUT SHAFT GROUP D (INDUSTRIAL SHAFT WITH EXTRA DUTY BEARINGS), FIGURE IV

Same as Group C except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 16 | BEARING ASSY, Tapered roller | 456635 | 2 |
| 17 | SHAFT ASSY, Converter output | 6756869 | 1 |
| 21 | Not used in this group. | | |
| 25 | HOUSING, Brng | 6756865 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP E (INDUSTRIAL SHAFT WITH BEVEL PINION MOUNTING), FIGURE IV

Same as Group C except for parts listed below.

| | | | |
|---|---|---|---|
| 13 | Not used in this group. | | |
| 15 | RING, Hook type seal | 3689838 | 1 |
| 17 | Not used in this group. | | |
| 18 | Not used in this group. | | |
| 23 | BOLT, Hx hd self-locking, 1/2-13x2 1/2, cls 2 | 9409055 | 8 |
| 25 | HOUSING, Brng | 6756865 | 1 |
| 26 | SHAFT ASSY, Converter output | 6756946 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP F (INDUSTRIAL SHAFT WITH BEVEL PINION MOUNTING), Figure IV

Same as Group C, except for parts listed below.

| | | | |
|---|---|---|---|
| 13 | Not used in this group. | | |
| 17 | Not used in this group. | | |
| 23 | BOLT, Hx hd, 1/2-13x3 1/4 | 9409227 | 8 |
| 24 | PLATE, Trns adptr | 6756947 | 1 |
| 26 | SHAFT ASSY, Converter output | 6756946 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP G (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE), FIGURE IV

Same as Group C except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 17 | Not used in this group. | | |
| 21 | Not used in this group. | | |
| 27 | HOUSING ASSY, Brng | 6755377 | 1 |
| 28 | HOUSING, Brng | 6755384* | 1 |
| 29 | BUSHING | 2222424 | 1 |
| 30 | GEAR, Accessory drvn | 6755618 | 1 |
| 31 | BEARING ASSY, Single row ball | 954498 | 1 |
| 32 | SLEEVE, Accessory drv | 3224085 | 1 |
| 33 | SPACER, 1.38 OD x .06 wall x 2.16 | 6751524 | 1 |
| 34 | GASKET | 3224773 | 1 |
| 35 | GEAR, Accessory drv | 6755619 | 1 |
| 36 | SHAFT ASSY, Converter output | 6755380 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP H (INDUSTRIAL SHAFT WITH EXTRA DUTY BEARINGS AND ACCESSORY DRIVE), FIGURE IV

Same as Group G, except for parts listed below.

| | | | |
|---|---|---|---|
| 16 | BEARING ASSY, Tapered roller | 456635 | 2 |
| 27-29 | Not used in this group. | | |
| 36 | Not used in this group. | | |
| 37 | HOUSING ASSY, Brng | 6756706 | 1 |
| 38 | HOUSING, Brng | 6756698* | 1 |
| 39 | BUSHING | 2222424 | 1 |
| 40 | SPACER, Converter output shaft | 6756689 | 1 |
| 41 | SHAFT ASSY, Converter output | 6756691 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP J (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE), FIGURE IV-A

Same as Group G, except for parts listed below.

| | | | |
|---|---|---|---|
| 18 | Not used in this group. | | |
| 26 | SHAFT ASSY | 6758054 | 1 |
| 36 | Not used in this group. | | |

## TC-300 SERIES OUTPUT SHAFT GROUP K (INDUSTRIAL SHAFT WITH ACCESSORY DRIVE), FIGURE IV

Same as Group G except for parts listed below.

| | | | |
|---|---|---|---|
| 18 | Not used in this group. | | |
| 41 | Not used in this group. | | |
| 42 | SHAFT ASSY, Converter output | 6768346 | 1 |

* Serviced as an assy only - not as a detail part.

## TC-300 SERIES OUTPUT SHAFT GROUP L (AUTOMOTIVE SHAFT), FIGURE IV

Same as Group A, except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 5-8 | Not used in this group. | | |
| 10 | BOLT, Hx hd self-locking, 1/2-13x2 3/4, cls 2 | 9409203 | 8 |
| 11 | Not used in this group. | | |
| 14 | SHAFT, Turbine | 6759946 | 1 |
| 43 | RETAINER, Brng | 6755302 | 1 |
| 44 | FLANGE ASSY (M4C) | 6755333 | 1 |
| 45 | WASHER, Lock, 1/2 | 103323 | 1 |
| 46 | BOLT, Hx hd, 1/2-20x1 1/4, cls 2 | 181429 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP M (Coupling), Figure IV

Same as Group L, except for parts listed below.

| | | | |
|---|---|---|---|
| 44 | Not used in this group. | | |
| 47 | COUPLING, Output drv | 6757758 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP N (INDUSTRIAL SHAFT WITH EXTRA DUTY BEARINGS AND ACCESSORY DRIVE), Figure IV

Same as Group H, except for parts listed below.

| | | | |
|---|---|---|---|
| 30 | GEAR, Accessory drvn | 6768425 | 1 |
| 35 | GEAR, Accessory drv | 6768426 | 1 |

## TC-300 SERIES OUTPUT SHAFT GROUP P, Figure IV

| | | | |
|---|---|---|---|
| 1 | SNAPRING | 6703023 | 1 |
| 2 | BEARING, Single row ball | 954528 | 1 |
| 3 | SEALRING, .487 ID x .103 dia | 6763013 | 8 |
| 4 | GASKET, Bearing hsng | 6753966 | 1 |
| 5-8 | Not used in this group. | | |
| 9 | BOLT, 1/2-13x2 3/4 | 9409203 | 8 |
| 10 | SEAL, Lip type | 6754947 | 1 |
| 11-42 | Not used in this group. | | |
| 43 | RETAINER, Bearing | 6769057 | 1 |
| 44-47 | Not used in this group. | | |
| 48 | SEALRING, Hook type | 6764025 | 1 |
| 49 | SEALRING, Hook type | 6700296 | 1 |
| 50 | SHAFT ASSY, Output | 6769051 | 1 |
| 51 | SHAFT, Output | 6769058 | 1 |
| 52 | PLUG | 6769050 | 1 |

# TC 200-300 SERIES OPTIONAL EQUIPMENT

## MANUAL INPUT DISCONNECT CLUTCH ASSEMBLY OPTION

To find detail parts for your Allison Torqmatic Converter Option, turn to the group and page listed opposite the series number of your converter.

| SERIES | GROUP | PAGE |
|---|---|---|
| TC 200 (Option 6757004) | A | V-3 |
| TC 300 (Option 6757004) | A | V-3 |

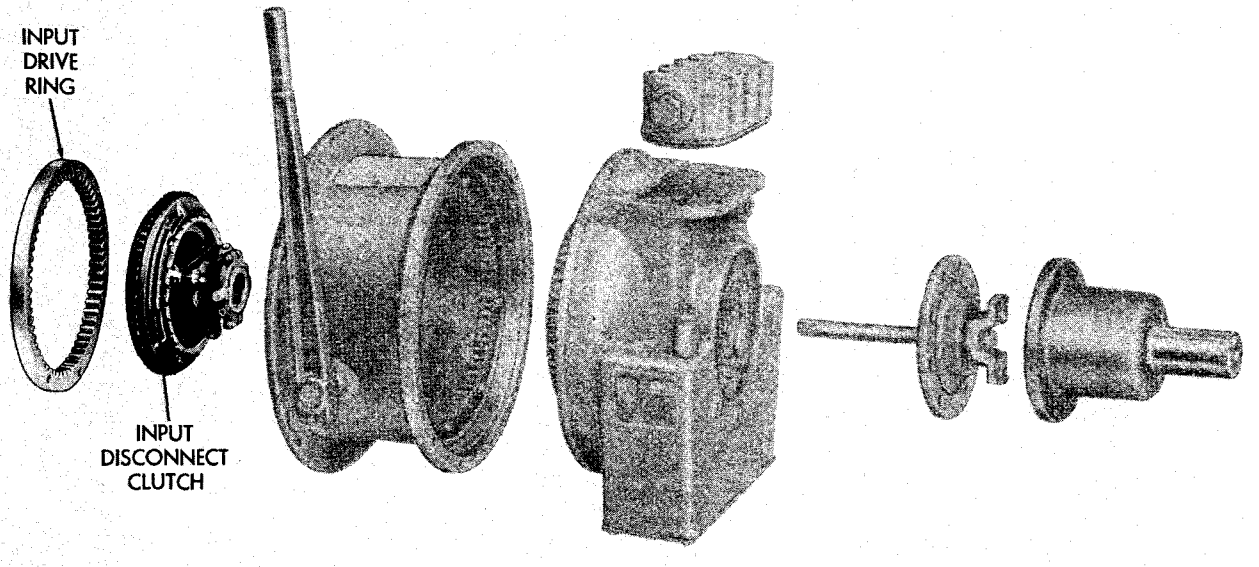



**Fig V. TC 200-300 SERIES MANUAL INPUT DISCONNECT CLUTCH ASSEMBLY OPTION**

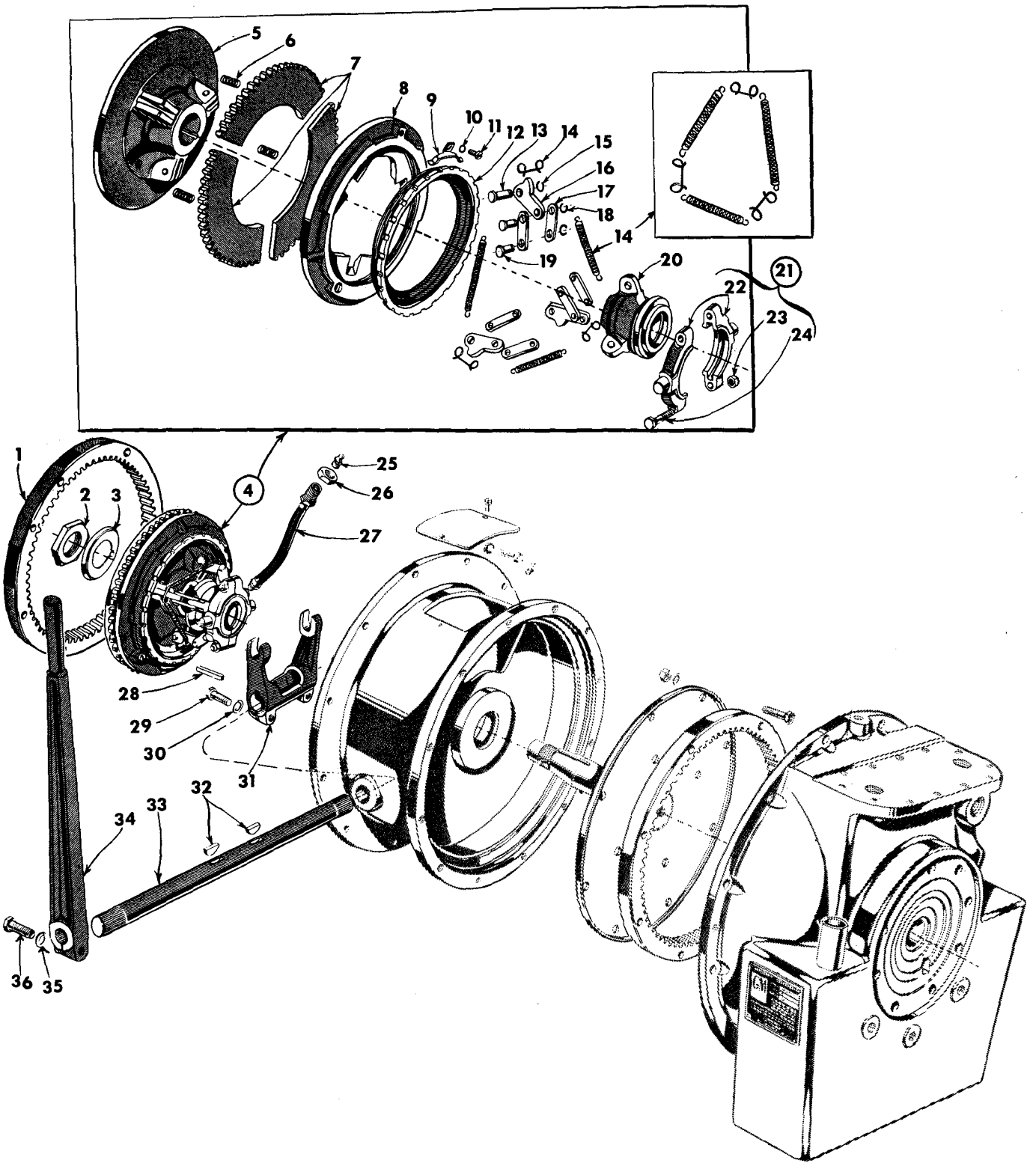



Fig V-A. TC 200-300 SERIES MANUAL INPUT DISCONNECT CLUTCH ASSEMBLY OPTION, EXPLODED VIEW

## GROUP A — MANUAL INPUT DISCONNECT CLUTCH ASSEMBLY (OPTION 6757004), FIGURE V-A

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | RING, Drv, 10 | 5192180 | 1 |
| 2 | NUT | 5192153 | 1 |
| 3 | WASHER | 5194671 | 1 |
| 4 | CLUTCH ASSY, Manual input disconnect, 10 | 5194365 | 1 |
| 5 | BODY, Clu | 5193258 | 1 |
| 6 | SPRING, Separator | 5193431 | 3 |
| 7 | FACING ASSY | 5192182 | 1 |
| 8 | PLATE, Presr | 5194294 | 1 |
| 9 | LOCK, Adjusting | 5194291 | 1 |
| 10 | WASHER, Shakeproof, 1/4 | 114604 | 1 |
| 11 | SCREW, Fillister hd, 1/4-20x3/8 | 114351 | 1 |
| 12 | NUT, Adjusting | 5193430 | 1 |
| 13 | PIN, Clevis | 5193422 | 3 |
| 14 | SPRING, Lever | 5194138 | 1 |
| 15 | RING, Rtnr | 5192142 | 1 |
| 16 | LEVER | 5194140 | 3 |
| 17 | LINK, Connecting | 5193421 | 6 |
| 18 | RING, Rtnr | 5192176 | 6 |
| 19 | PIN, Clevis | 5193420 | 6 |
| 20 | SLEEVE, Release | 5193259 | 1 |
| 21 | BEARING ASSY, Release | 5193260 | 1 |
| 22 | BEARING, Release (Serviced in assy 5193260 only)* | | 1 |
| 23 | NUT, Elastic stop, 5/16-24 | 214279 | 2 |
| 24 | BOLT, Hx hd, 5/16-24x1 3/4 | 181345 | 2 |
| 25 | FITTING, Grease | 111296 | 1 |
| 26 | NUT, Jam, 5/8-18 | 114498 | 1 |
| 27 | TUBE ASSY, Flx lube | 5193064 | 1 |
| 28 | KEY, 1/4x1/4x2 | 5192489 | 1 |
| 29 | BOLT, Hx hd, 3/8-16x1 1/4, cls 3 | 179841 | 2 |
| 30 | WASHER, Lock, 3/8 | 103321 | 2 |
| 31 | YOKE, Clu shifter | 5193255 | 1 |
| 32 | KEY, Woodruff | 113782 | 2 |
| 33 | SHAFT, Clu shifter | 5194244 | 1 |
| 34 | LEVER, Clu control hand | 6756637 | 1 |
| 35 | WASHER, Lock, 1/2 | 103323 | 1 |
| 36 | BOLT, Hx hd, 1/2-13x1 5/8, cls 2 | 179887 | 1 |

* Serviced in assy only - not as a detail part.

# TC 200-300 SERIES OPTIONAL EQUIPMENT

## MANUAL INPUT DISCONNECT CLUTCH HOUSING OPTIONS AND DRIVE RING OPTIONS

To find detail parts for your Allison Torqmatic Converter Option, turn to the group and page listed opposite the series number of your converter.

| SERIES | GROUP | PAGE |
|---|---|---|
| TC 200 (Option 5192180) | B | VI-3 |
| TC 200 (Option 6757000) | C | VI-3 |
| TC 200 (Option 6757002) | E | VI-4 |
| TC 200 (Option 6759249) | H | VI-4 |
| TC 300 (Option 5192163) | A | VI-3 |
| TC 300 (Option 6757001) | D | VI-3 |
| TC 300 (Option 6757003) | F | VI-4 |
| TC 300 (Option 6759251) | G | VI-4 |
| TC 300 (Option 6759252) | J | VI-4 |
| TC 300 (Option 6768580) | G | VI-4 |
| TC 300 (Option 6768581) | K | VI-4 |
| TC 300 (Option 6768582) | F | VI-4 |
| TC 300 (Option 6768583) | D | VI-3 |
| TC 300 (Option 6769108) | L | VI-4 |

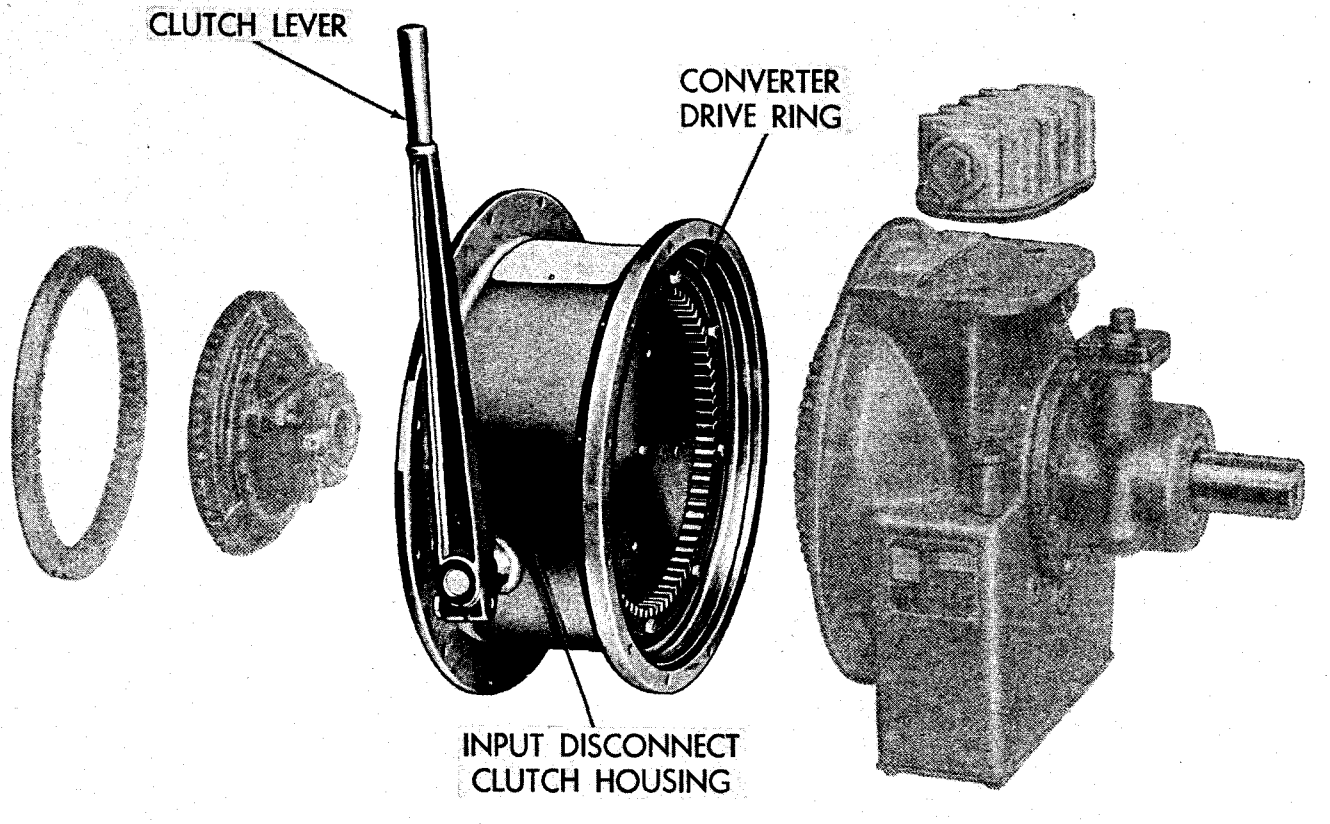



Fig VI. TC 200-300 SERIES MANUAL INPUT DISCONNECT CLUTCH HOUSING OPTIONS AND DRIVE RING OPTIONS

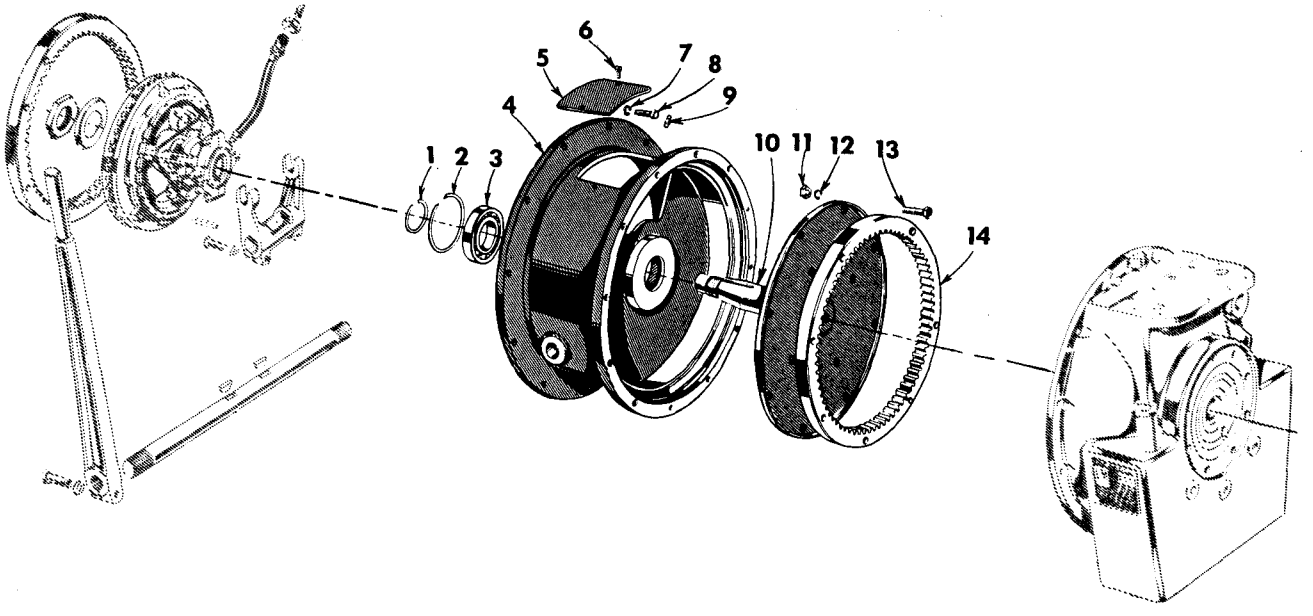



**Fig VI-A. TC 200-300 SERIES MANUAL INPUT DISCONNECT CLUTCH HOUSING OPTIONS AND DRIVE RING OPTIONS, EXPLODED VIEW**

## GROUP A — 11 1/2-INCH DRIVE RING (OPTION 5192163), FIGURE VI-A

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1-13 | Not used in this group. | | |
| 14 | RING, Drv, 11 1/2 dia (use prior to S/N 17314 only) | 5192163 | 1 |

## GROUP B — 10-INCH DRIVE RING (OPTION 5192180), FIGURE VI-A

| | | | |
|---|---|---|---|
| 1-13 | Not used in this group. | | |
| 14 | RING, Drv, 10 dia . . . . . | 5192180 | 1 |

## GROUP C — SAE #2 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6757000), FIGURE VI-A

| | | | |
|---|---|---|---|
| 1 | RING, Snap . . . . . | 7709143 | 1 |
| 2 | RING, Snap . . . . . | 6753487 | 1 |
| 3 | BEARING ASSY, Single row ball . . . . . | 954551 | 1 |
| 4 | HOUSING, SAE #2 manual input disconnect clu . . | 6756620 | 1 |
| 5 | COVER, Manual input disconnect clu hsng . . . . | 6756618 | 1 |
| 6 | SCREW, #10-24 x 7/16 . . . . . | 113903 | 2 |
| 7 | WASHER, Lock, 3/8 . . . . . | 103321 | 12 |
| 8 | BOLT, Hx hd, 3/8-16x1 1/8, cls 2 . . . . . | 179840 | 12 |
| 9 | FITTING, Grease . . . . . | 111296 | 1 |
| 10 | SHAFT ASSY, Converter input . . . . . | 6756615 | 1 |
| 11 | NUT, 3/8-24 . . . . . | 103026 | 8 |
| 12 | WASHER, Lock, 3/8 . . . . . | 103321 | 8 |
| 13 | BOLT, Hx hd, 3/8-16x1 1/2, cls 2 . . . . . | 181374 | 8 |
| 14 | RING, Drv, 10 . . . . . | 5192180 | 1 |

## GROUP D — SAE #2 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6768583), Figure VI-A

Same as Group C except for parts listed below.

| | | | |
|---|---|---|---|
| 10 | SHAFT ASSY, Converter input . . . . . | 6756616 | 1 |
| 14 | RING, Drv, 11 1/2 (use prior to S/N 17314 only) | 5192163 | 1 |

## GROUP E — SAE #3 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6757002), FIGURE VI-A

Same as Group C except for parts listed below.

| | | | |
|---|---|---|---|
| 4 | HOUSING, SAE #3 manual input disconnect clu . . | 6756627 | 1 |

## GROUP F — SAE #3 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6768582), Figure VI-A

Same as Group D, except for parts listed below.

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 4 | HOUSING, SAE #3 manual input disconnect clu . . | 6756627 | 1 |

## GROUP G — SAE #2 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6768580), Figure VI-A

Same as Group C, except for parts listed below.

| | | | |
|---|---|---|---|
| 1 | RING, Snap . . . . . | 6751822 | 1 |
| 10 | SHAFT ASSY, Converter input . . . . . | 6758987 | 1 |
| 14 | RING, Drv, 11 1/2 (use prior to S/N 17314 only) | 5192163 | 1 |

## GROUP H — SAE #2 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6759249), Figure VI-A

Same as Group C, except for parts listed below.

| | | | |
|---|---|---|---|
| 10 | SHAFT ASSY, Converter input . . . . . | 6758988 | 1 |

## GROUP J -- SAE #3 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6759252), Figure VI-A

Same as Group G, except for parts listed below.

| | | | |
|---|---|---|---|
| 4 | HOUSING, SAE #3 manual input disconnect clu . . | 6756627 | 1 |

## GROUP K — SAE #3 MANUAL INPUT DISCONNECT CLUTCH HOUSING (OPTION 6768581), Figure VI-A

Same as Group G, except for parts listed below.

| | | | |
|---|---|---|---|
| 4 | HOUSING, SAE #3 manual input disconnect clu . . | 6756627 | 1 |
| 14 | Not used in this group. | | |

## GROUP L — DRIVE RING BOLTS (OPTION 6769108), Figure VI-A

| | | | |
|---|---|---|---|
| 1-12 | Not used in this group. | | |
| 13 | BOLT, Drive ring . . . . . | 9409231 | 8 |
| 14 | Not used in this group. | | |

# TC 200-300 SERIES OPTIONAL EQUIPMENT

## OIL COOLER OPTIONS, CABLE DRIVE ADAPTER OPTION FOR ACCESSORY DRIVE, REAR DISCONNECT CLUTCH ADAPTER OPTION, AND MOUNTING PLATE OPTIONS

To find detail parts for your Allison Torqmatic Converter Option, turn to the group and page listed opposite the series number of your converter.

| SERIES | GROUP | PAGE |
|---|---|---|
| TC 200 (Option 6757005) | A | VII-3 |
| TC 200 (Option 6756685) | G | VII-4 |
| TC 200 (Option 6755877) | C | VII-3 |
| TC 248 (Option 6757008 Used on A/N 6757848 only) | F | VII-4 |
| TCA 248 (Option 6757007) | D | VII-3 |
| TC 300 (Option 6756685) | G | VII-4 |
| TC 300 (Option 6757006) | B | VII-3 |
| TCA 300 (Option 6755877) | C | VII-3 |
| TC 378 (Option 6757009) | E | VII-4 |

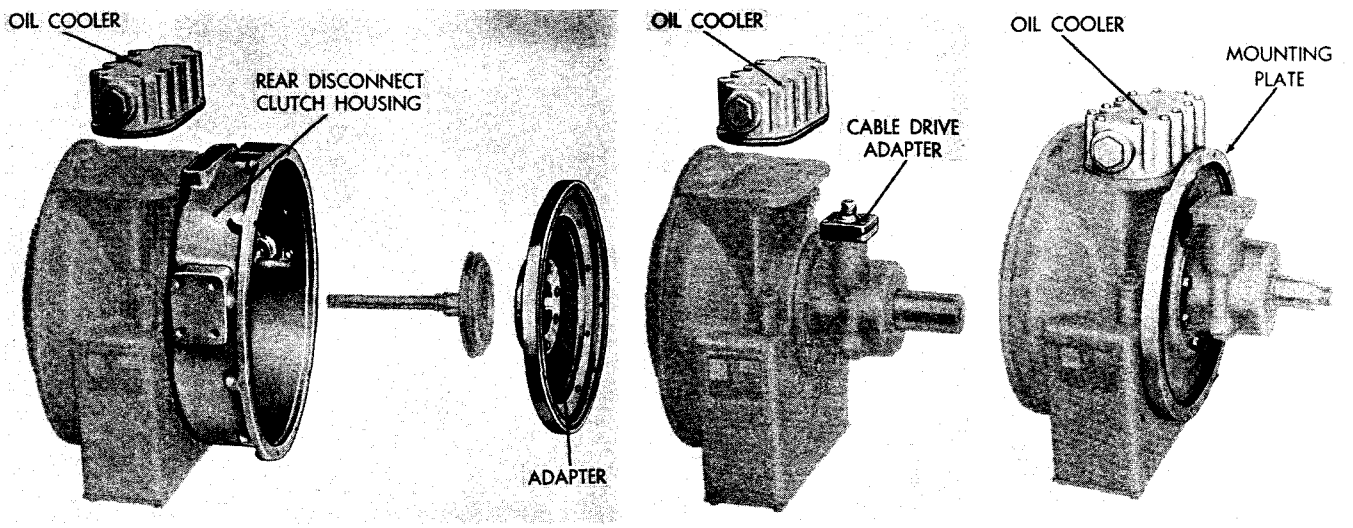



Fig VII. TC 200-300 SERIES OIL COOLER OPTIONS, CABLE DRIVE ADAPTER OPTION, REAR DISCONNECT CLUTCH ADAPTER OPTION, AND MOUNTING PLATE OPTIONS

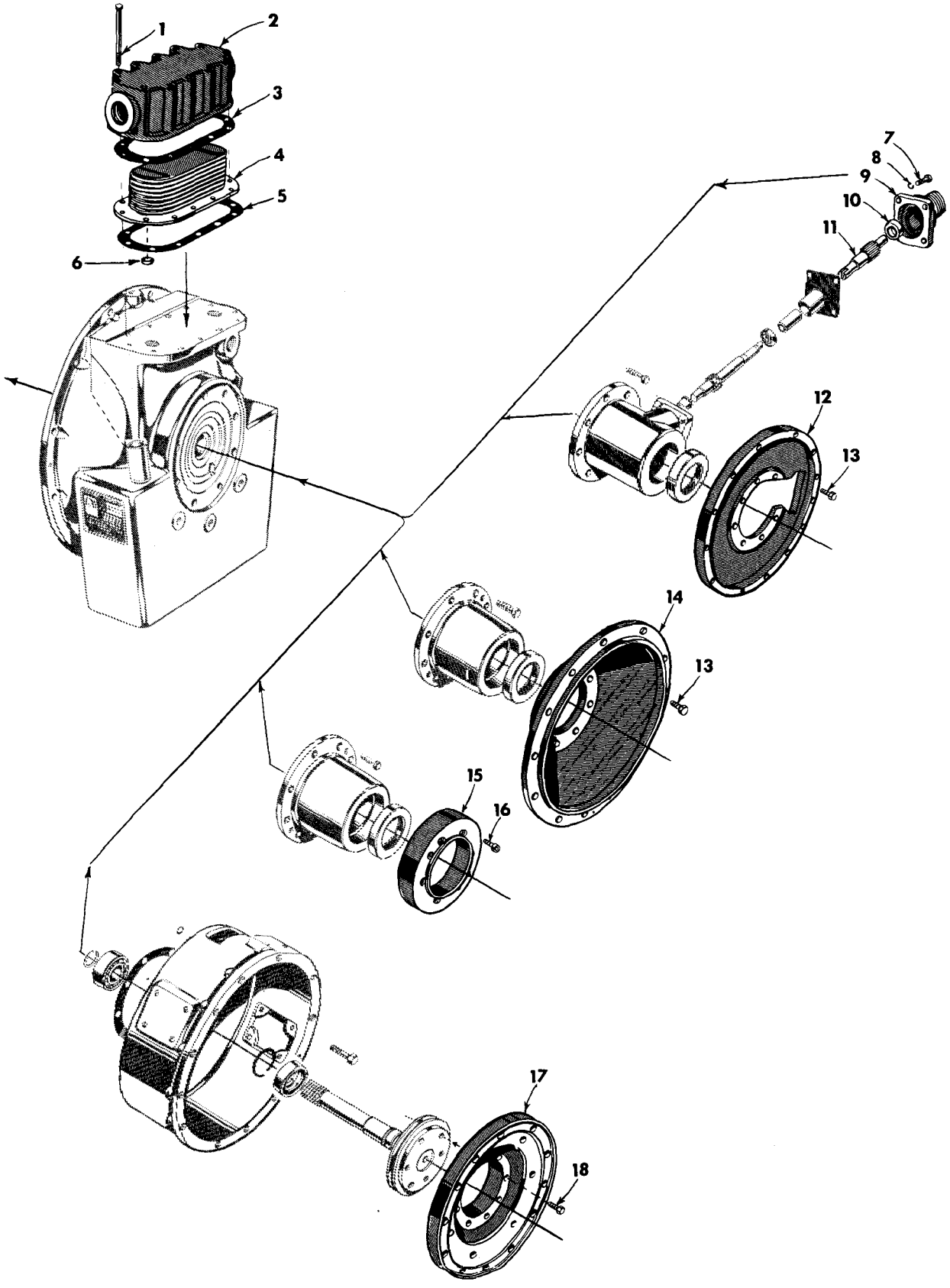



**Fig VII-A. TC 200-300 SERIES OIL COOLER OPTIONS, CABLE DRIVE ADAPTER OPTION, REAR DISCONNECT CLUTCH ADAPTER OPTION, AND MOUNTING PLATE OPTIONS, EXPLODED VIEW**

## GROUP A — OIL COOLER (OPTION 6757005), FIGURE VII-A

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1 | BOLT, Hx hd, 5/16-18x3 3/4, cls 2 | 186271 | 12 |
| 2 | COVER, Oil cooler | 6755488 | 1 |
| 3 | GASKET, Oil cooler cover | 6754299 | 1 |
| 4 | CORE ASSY, Oil cooler | 8522609 | 1 |
| 5 | GASKET, Oil cooler | 6754314 | 1 |
| 6 | PLUG, Orifice, .218 dia (See SIL 136) | 6756658 | 1 |
| 7-18 | Not used in this group. | | |

## GROUP B — OIL COOLER (OPTION 6757006), FIGURE VII-A

Same as Group A except for parts listed below.

| | | | |
|---|---|---|---|
| 6 | PLUG, Orifice, .312 dia (See SIL 136) | 6756659 | 1 |

## GROUP C — CABLE DRIVE ADAPTER FOR ACCESSORY DRIVE (OPTION 6755877), FIGURE VII-A

| | | | |
|---|---|---|---|
| 1-6 | Not used in this group. | | |
| 7 | BOLT, Hx hd, 5/16-18x1 1/8, cls 2 | 179819 | 4 |
| 8 | WASHER, Lock, 5/16 | 103320 | 4 |
| 9 | ADAPTER, Cable drv | 6752033 | 1 |
| 10 | SEAL, Oil, .50 ID | 6752035 | 1 |
| 11 | SHAFT, Cable drv adptr | 6752034 | 1 |
| 12-18 | Not used in this group. | | |

## GROUP D — MOUNTING PLATE (OPTION 6757007), FIGURE VII-A

| | | | |
|---|---|---|---|
| 1-11 | Not used in this group. | | |
| 12 | PLATE, Mntg (Use on converters prior to S/N 6482) | 6756362 | 1 |
| 13 | BOLT, Hx hd self-locking, 1/2-13x3 1/4, cls 2 (Use on converters prior to S/N 6482.) | 9409227 | 8 |
| 14-18 | Not used in this group. | | |

## GROUP E — MOUNTING PLATE (OPTION 6757009), FIGURE VII-A

| REF | NOMENCLATURE | PART NO | REQ |
|---|---|---|---|
| 1-12 | Not used in this group. | | |
| 13 | BOLT, Hx hd self-locking, 1/2-13x3 1/4, cls 2 . | 9409227 | 8 |
| 14 | PLATE, Mntg . . . . . | 6756947 | 1 |
| 15-18 | Not used in this group. | | |

## GROUP F — MOUNTING PLATE (FOR TC-248), FIGURE VII-A

| | | | |
|---|---|---|---|
| 1-14 | Not used in this group. | | |
| 15 | PLATE, Mntg . . . . . | 6756864 | 1 |
| 16 | BOLT, Hx sckt hd, 1/2-13x3 3/4 . . . . . | 147465 | 8 |
| 17-18 | Not used in this group. | | |

## GROUP G — REAR DISCONNECT CLUTCH ADAPTER (OPTION 6756685), FIGURE VII-A

| | | | |
|---|---|---|---|
| 1-16 | Not used in this group. | | |
| 17 | ADAPTER, Rear disconnect clu . . . . . | 6756119 | 1 |
| 18 | BOLT, Hx hd self-locking, 1/2-20x1 1/2, cls 2 . | 9409060 | 6 |

# SERVICE INFORMATION LETTERS

SUBJECT: TORQMATIC CONVERTERS - ALL 200 SERIES MODELS. SERVICE REPLACEMENT STATOR THRUST WASHERS OF CERTAIN EARLY PRODUCTION UNITS.

REFERENCE: Transmission Engineering Memorandum, Serial No. 434 A-B, dated April 12, 1954.

In order to improve the wear characteristics of the stator thrust washers where high torque multiplication for long periods is involved, improved thrust washers have been incorporated on the 200 Series Torqmatic Converters.

All 200 Series Torqmatic Converters, S/N 4803 and below, except 4768, should have both thrust washers replaced in the event disassembly should be required for any reason.

Parts Involved:

| Name | Old Part No. | New Part No. |
|---|---|---|
| Washer, Rear Thrust | CEX-7990 | 6756233 |
| Washer, Pump Thrust | 3709044 | 6756629 |

The following unit serial numbers are affected by this change:

| | | | |
|---|---|---|---|
| 4600 | 4691 | 4779 | 4790 |
| 4601 | 4714 | 4780 | 4791 |
| 4602 | 4721 | 4781 | 4792 |
| 4625 | 4725 | 4782 | 4799 |
| 4668 | 4776 | 4783 | 4800 |
| 4669 | 4777 | 4788 | 4801 |
| 4672 | 4778 | 4789 | 4802 |
| | | | 4803 |

Service Manager - Transmissions

SUBJECT: TORQMATIC CONVERTERS — TC-200 AND 300 SERIES — MODEL CONSOLIDATION

Effective August 1, 1954, the TC-200 and 300 Series Torqmatic Converters will be broken down into Basic Converters and Option Kits.

A Basic Converter will consist of a Torqmatic Converter, Torqmatic Converter with accessory drive, or Torqmatic Converter with rear disconnect clutch. Such items as coolers, housings, drive rings, etc., are no longer part of a Basic Converter, but will be considered as options. Option Kits will contain all of the necessary parts to be completely assembled to a Basic Converter. This new system should simplify the process of ordering and stocking the units by the customer. At the same time, it will reduce the number of TC-200 and 300 models.

## BASIC CONVERTERS

A. Each Basic Converter will have an assembly number such as 675XXXX. For example, the assembly number of the TC-244 Basic Converter is P/N 6755291.

B. Each Basic Converter will also have a model number such as TC-245. This is the portion of the model number that defines the Basic Converter. The letters and digits used are explained thus:

   a. The letters refer to the type of Basic Converter:

| | | |
|---|---|---|
| TC | - | Converter Assembly |
| TCA | - | Converter with Accessory Drive |
| TCRD | - | Converter with Rear Disconnect Clutch |

b. The first two digits will describe the Series:

| | | |
|---|---|---|
| TC-24X | - | 240 Series |
| TC-32X | - | 320 Series |
| TC-37X | - | 370 Series |

c. The third digit will refer to variations such as:

| | | |
|---|---|---|
| TC-XX4 | - | Flange Output - Mechanics 4C |
| TC-XX5 | - | Industrial Output - Standard Bearings |
| TC-XX6 | - | SAE #3 Rear Disconnect Clutch Housing |
| TC-XX7 | - | Industrial Shaft - Extra Duty Bearings |
| TC-XX8 | - | Industrial Shaft - Bevel Pinion Mounting |
| TC-XX9 | - | SAE #2 Rear Disconnect Clutch Housing |

OPTION KITS

A. Each Option Kit will have an assembly number such as 675XXXX. For example, the assembly number for one Cooler Option Kit is P/N 6757005.

Customers who want to assemble options to the basic converter in their own plant, must order these options thus:

The customer wants to assemble a TCA-245 with a cooler, SAE #2 clutch housing with 10" ring and a 10" disconnect clutch. He should order:

TCA-245 Basic Converter P/N 6755386
Cooler Option Kit P/N 6757005
SAE #2 Clutch Housing and 10" Ring
Option Kit P/N 6757000
10" Disconnect Clutch Option Kit P/N 6757004

B. Each Option Kit will also have a Specification Number. The Option Kit Specification Number will begin with Serial Number 101. For example, the specification number for one cooler option kit is #101.

a. Customers who want a Basic Converter with the options already assembled to it by Allison, should order thus:

Customer who wants the same Basic Converter with options as listed above would order - TCA-245-107.

b. In cases where Basic Converter assemblies must be partially disassembled to add special attaching parts, these parts will be classified as Special Options and must be assembled to the Basic Converter by Allison. All Special Options will be given Specification Numbers beginning with Serial Number 201. Example: TCA-248-201.

201-6757008 - Transmission Mounting Plate Option

Due to the adoption of the Basic Converter and Option system, the models listed below are duplications and therefore will be cancelled. They will be released under this system as follows:

| Cancelled Part Number | Order now as: |
|---|---|
| 6754956 | TC-244-101 |
| 6755063 | TC-245-101 |
| 6755388 | TCA-245-101 |
| 6755389 | TCRD-246-101 |
| 6755391 | TC-324-102 |
| 6755392 | TC-325-102 |
| 6755393 | TCA-325-102 |
| 6755394 | TCRD-326-102 |
| 6755399 | TC-374-102 |
| 6755400 | TC-375-102 |
| 6755401 | TCA-374-102 |
| 6755402 | TCRD-375-102 |

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Note: This letter supersedes and replaces S. I. L. #136 dated August 9, 1954, Rev. "A" dated 1-24-55 and Rev. "B" dated 3-16-55.


August 9, 1954
Rev. "A" 1-24-55
Rev. "B" 3-16-55
Rev. "C" 6-17-55

SUBJECT: TORQMATIC CONVERTER - TC-200 & 300 SERIES - HYDRAULIC CIRCUITS AND OPERATING PRESSURES.

There are three (3) types of approved hydraulic circuits that are recommended for the subject converters.

1. Integral Heat Exchanger with or without the Integral By-Pass Valve (See S. I. L. No. 175 for Information on Integral By-Pass Valve).

   The integral heat exchanger is approved for all applications and will maintain pressures within required limitations. Use of an integral heat exchanger requires use of an orifice in the converter "in" (see sketch) line. Orifice P/N 6756658 with a 7/32" diameter hole, is used with all TC-200 Series Converters. Orifice P/N 6756659 with a 5/16" diameter hole, is used with all TC-300 Series Converters. See sketch for correct flow of water through heat exchanger.

2. Remote Heat Exchanger and External By-Pass Valve (Units below Serial No. 8073).

   The remote heat exchanger circuit must have a minimum oil line size of 5/8" I.D., and must have an approved * pressure by-pass valve set for initial opening at 55 plus-minus 5 psi, mounted at the converter oil "out" connection (see below for exceptions) and piped to discharge into the converter oil "in" line. This is for the purpose of controlling converter charging pressure during cold weather starts. This is necessary in order to prevent excessive converter pressure when starting at low ambient temperatures, which could damage the converter.

   *Kunkle Fig. 286, 3/4" pressure relief valve set for initial opening at 55 plus-minus 5 psi.

Exception to location of pressure relief valve

On Detroit Diesel Engine applications, due to peculiarities in the installation, it has been necessary to locate the by-pass valve at the cooler instead of at the converter. The relocation of the by-pass valve in this case has been approved by Allison.

On other installations, if remote mounting of the by-pass valve is necessary, the installation must first be approved by Allison.

3. Remote Heat Exchange and Integral By-pass Valve (Units above Serial No. 8073 see S.I.L. No. 175 ).

The remote heat exchanger circuit must have a minimum oil line size of 5/8" I.D. in addition to satisfying the cooling requirements for the particular installation. The heat exchanger must have a pressure drop that is compatible with the pressure requirements at stall. In these units the integral by-pass valve will properly control the pressure throughout the remainder of the operating range.

Pressure Limitation on TC-200 & 300 Series Converters.

1. The following oil "out" pressures must be provided at 225 degrees to 250 degrees F. oil temperatures:

TC-200

| | |
|---|---|
| Minimum at full throttle stall | 15 psi |
| Maximum at full throttle stall | 30 psi |
| Maximum at full throttle no load | 60 psi |

TC-300

| | |
|---|---|
| Minimum at full throttle stall | 25 psi |
| Maximum at full throttle stall | 35 psi |
| Maximum at full throttle no load | 60 psi |

2. The following methods should be used to attain the required pressure limitations:

2.1 Pressure at Stall too High

If the converter pressure at stall is too high, the pressure drop in the cooler circuit must be reduced. If an increase in oil line size does not reduce the pressure to the required limits, then a heat exchanger with less restriction must be used.

2.2 Pressure at Stall too Low

If the converter pressure at stall is too low, the pressure drop in the cooler circuit must be increased. The simplest way to do this is to install an orifice of the proper size to provide the minimum pressure shown above.

4. Oil recommendations for units incorporating the integral by-pass valve (units Serial No. 8073 and above).

-10° F and higher:

Hydraulic transmission fluid type C where available, otherwise SAE 10 heavy duty (MIL-L-2104).

-10° F and lower:

Hydraulic transmission fluid type C where available, otherwise SAE 10 heavy duty (MIL-L-2104).

5. Oil recommendations for units using the external by-pass valve (units below Serial No. 8073).

+ 10° F and higher:

Hydraulic transmission fluid type C where available, otherwise SAE 10 heavy duty (MIL-L-2104).

+ 10° F and lower:

A mineral base oil meeting the following specifications:

| | |
|---|---|
| Viscosity at 100° F | 55-65 SSU |
| Viscosity at 210° F | 35-38 SSU |
| Pour Point | -30° F |
| Flash Point | 300° F Min. |
| Copper Strip Test ASTM #D 130 | Negative |
| Cabinet Humidity Test (Anti-rust and anti-corrosion) | Corrosion around edge of panel only |
| L-4 Test | Pass |
| Foam Test | Pass |

At temperatures below the pour point of the special light weight oils, auxiliary heat must be applied to raise the oil temperature to its pour point.

The following oils are represented by the respective suppliers as meeting the above specifications. Responsibility for the quality of a lubricating oil and its performance in service must remain with the oil company marketing the lubricant. This list should, therefore, not be construed as a recommendation of the products by the Allison Division of General Motors.

| Brand | Type |
|---|---|
| Esso | Torque Fluid 35 |
| Texas Co. | Texaco Torque Fluid |
| Cities Service | Torque Fluid #4 |
| Socony-Vacuum | Mobile Fluid #62 |
| Standard Oil of Calif. | RPM Torque Fluid #3 |
| Standard Oil | Stanotorque Conv. Fluid |

Since new products are continuously being tested by the oil industry, the listing may not contain all products marketed at the time of issue. Revised lists will be made available from time to time, as additional information is developed.

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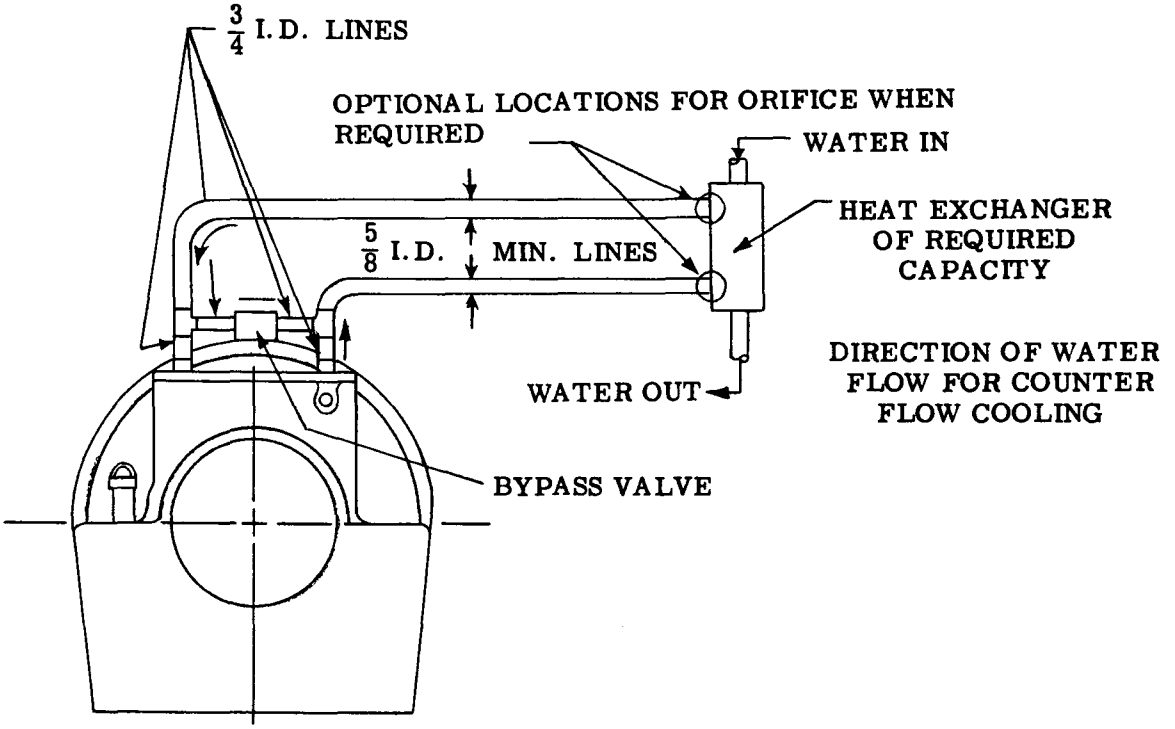
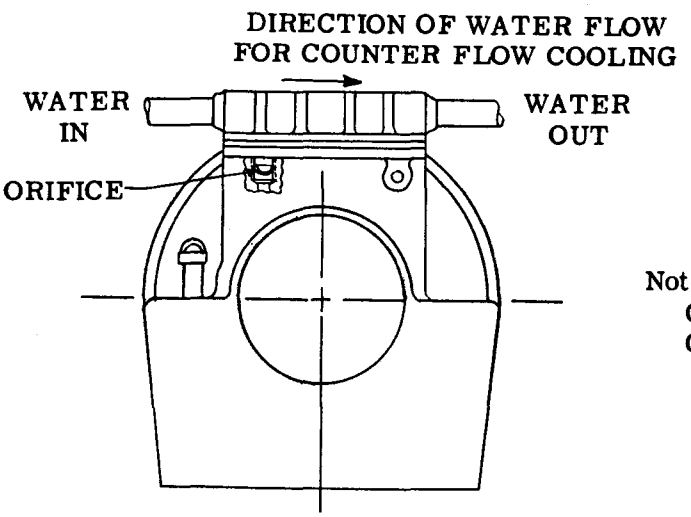
# TC 200-300 SERIES CONVERTER HYDRAULIC CIRCUIT RECOMMENDATIONS

## REMOTE HEAT EXCHANGER

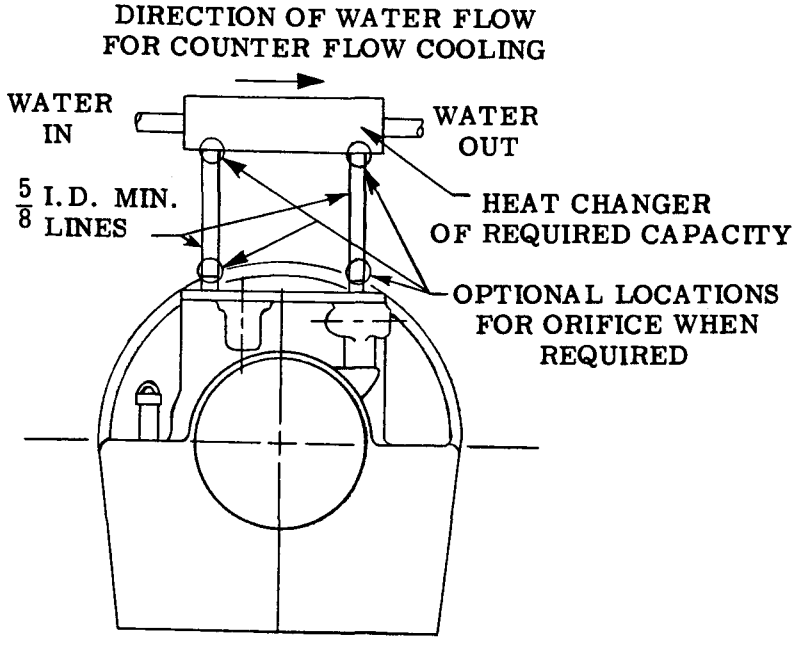



## INTEGRAL HEAT EXCHANGER




Note:
Cooler Oil Circuit
Contained in Unit

# REMOTE HEAT EXCHANGER WITH INTEGRAL BYPASS VALVE



SUBJECT: TORQMATIC CONVERTERS - ALL MODELS OF TC-300 SERIES - ADDITION OF "O" RINGS P/N 7374627 TO THE CONVERTER HOUSING P/N 6754489.

Starting with Torqmatic Converter Serial Number 5165, counterbores and seal rings were added to the eight (8) mounting holes at the rear of the Converter Housing P/N 6754489.

The "O" Rings P/N 7374627 are recessed in the counterbores and were added in order to preclude the possibility of oil leakage around the mounting bolts.

Note: This same converter Housing P/N 6754489 is used with the TC-200 Series Converters. The "O" Rings are not necessary with the TC-200 Series Converters because of the addition of Gasket P/N 6756872 (Ref.: Service Bulletin #25). Interchangeability is not affected.

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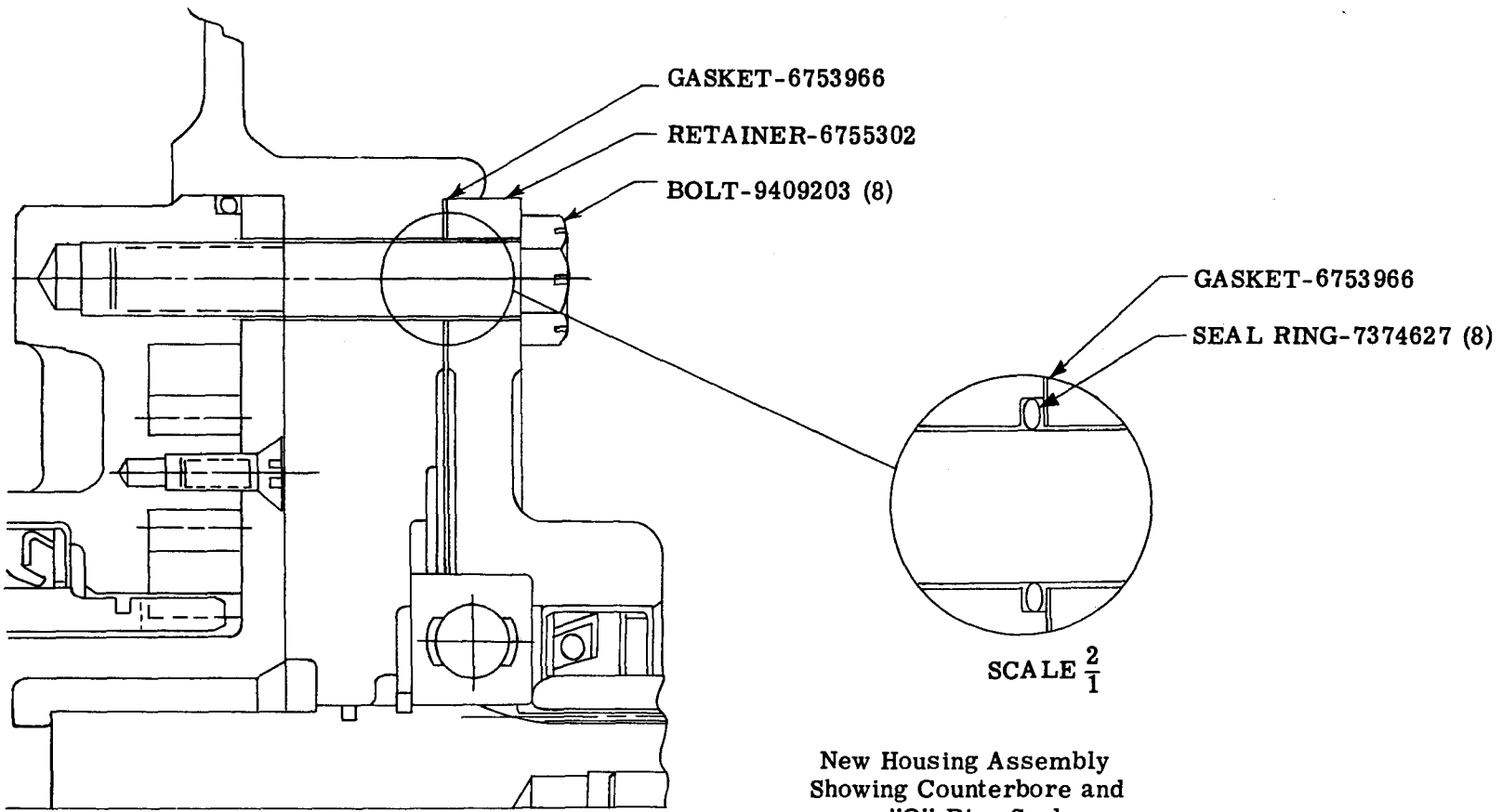


Old Housing Assembly
No Counterbore or
"O" Ring Seal

New Housing Assembly
Showing Counterbore and
"O" Ring Seal

Note: Gasket P/N 6753966
is Retained

S.I.L. 137