



**GENERAL MOTORS**

**MUNCIE**

**4-SPEED MANUAL TRANSMISSION**

**ASSEMBLIES, GEARS & PARTS**

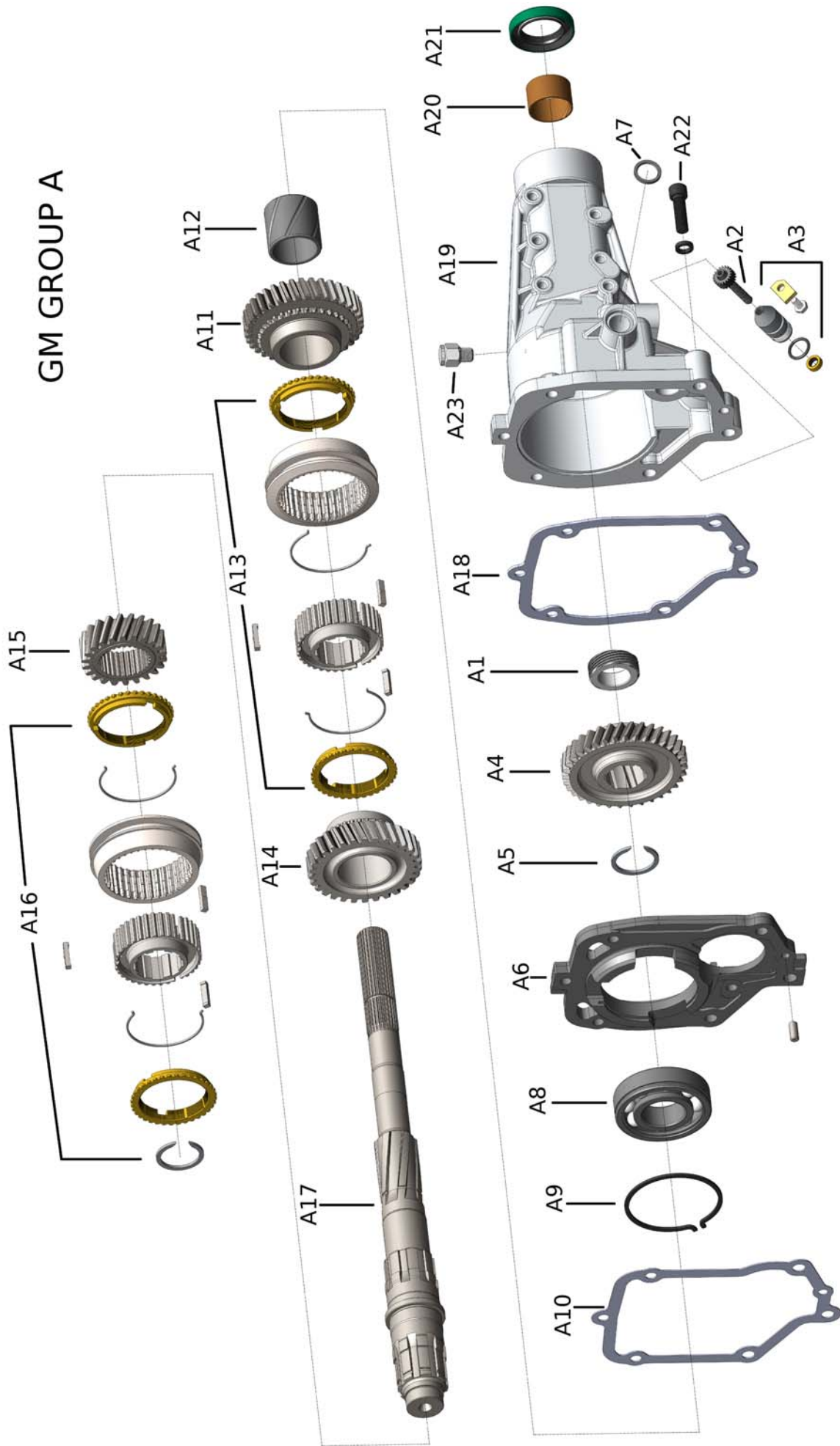
SERVICE, PARTS AND NEW TRANSMISSIONS  
**MEDATRONICS CORPORATION**  
208 N. US HWY 1 - UNIT 1  
TEQUESTA, FL 33469  
EMAIL: [support@5speeds.com](mailto:support@5speeds.com)  
WEBSITE: [M22POWER.COM](http://M22POWER.COM)  
PHONE: 561-743-5600

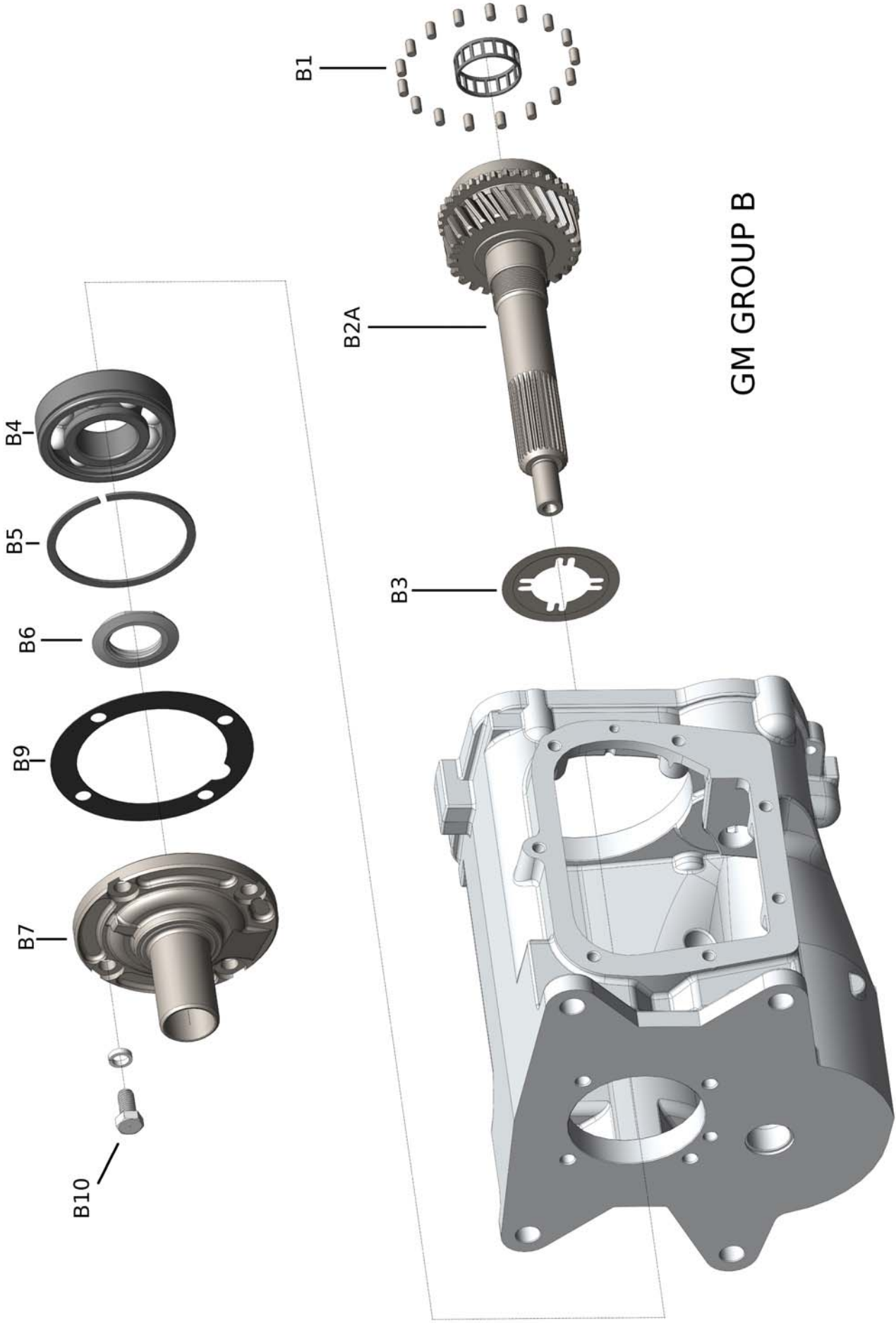


**M22POWER.COM**

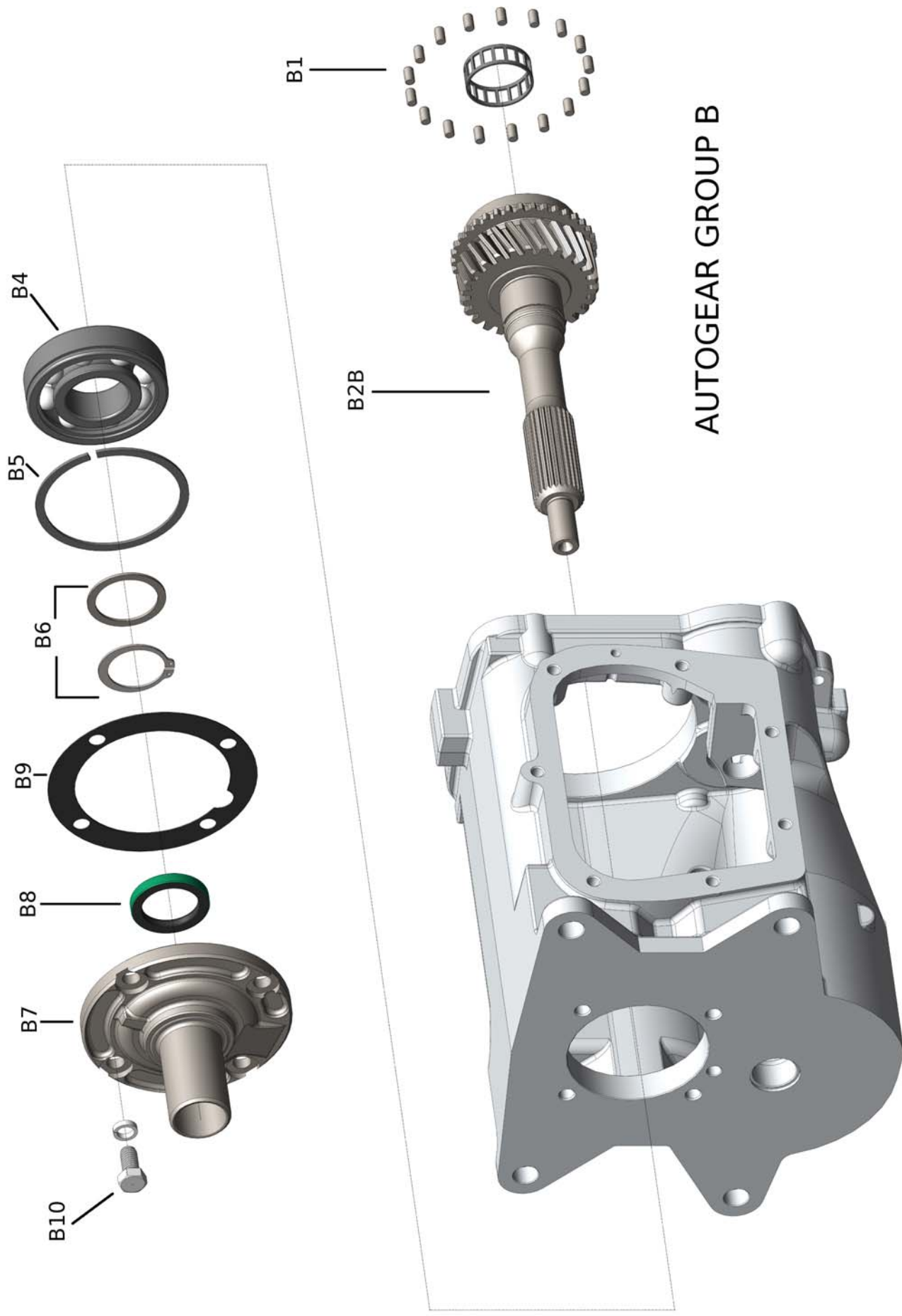
(C) 2014 Medatronics Corporation  
All Rights Reserved

# GM GROUP A

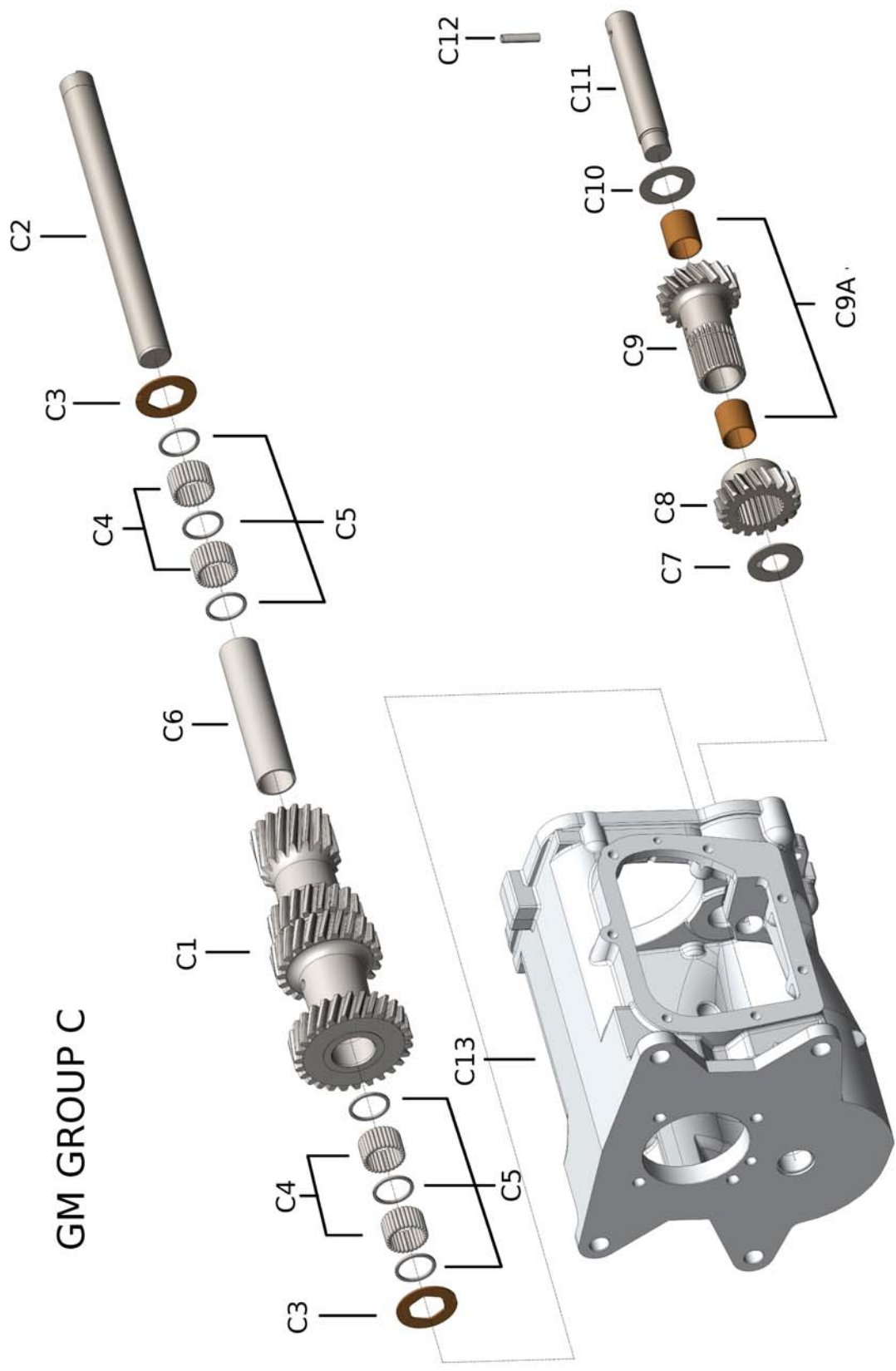




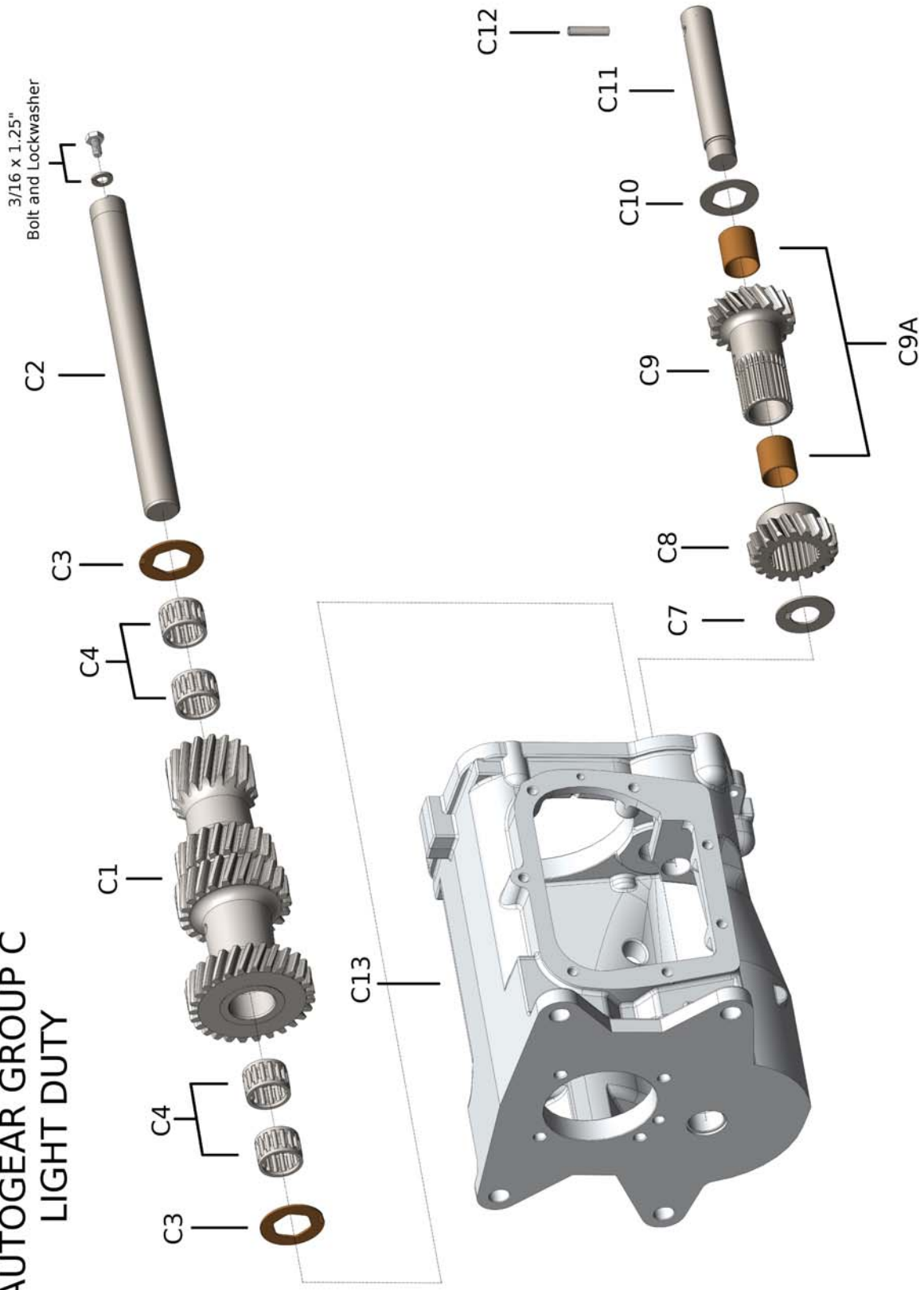
GM GROUP B



AUTOGEAR GROUP B

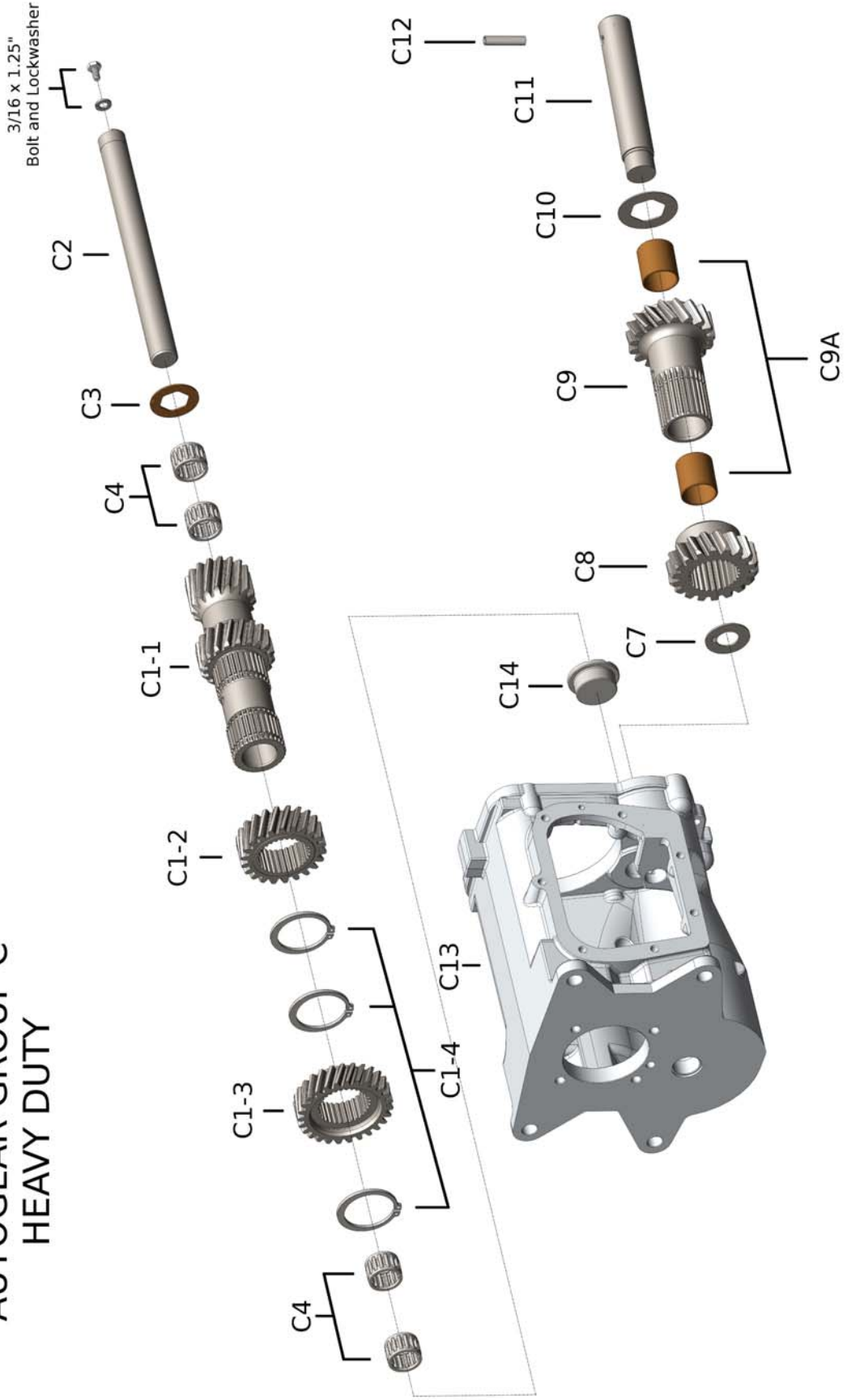


# AUTOGEAR GROUP C LIGHT DUTY



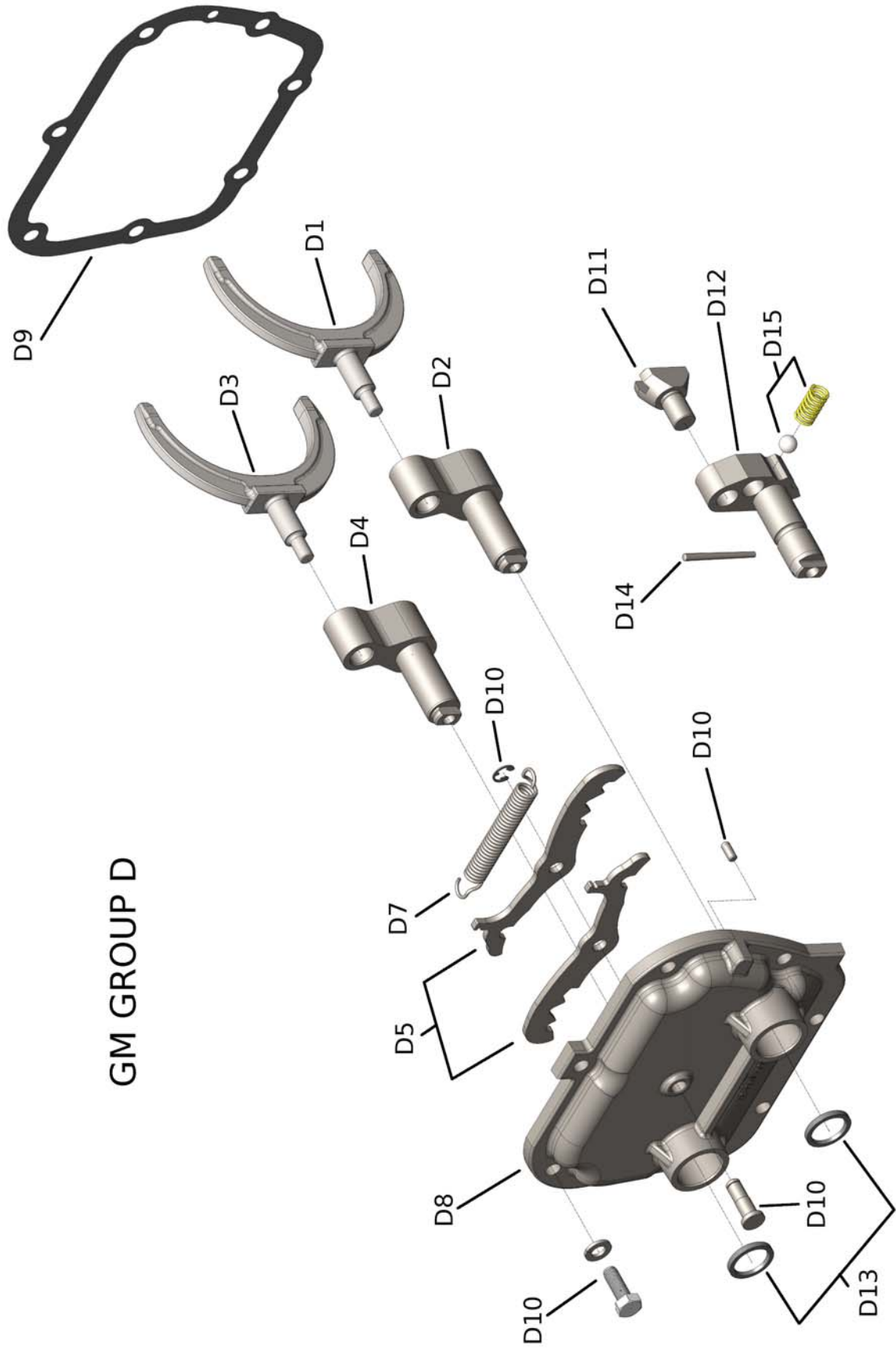


# AUTOGEAR GROUP C HEAVY DUTY





# GM GROUP D





## PART NUMBERING

I wanted to combine the latest parts alongside some of the older part numbers in one reference section. It took a great deal of time and research to find original GM part numbers. Although most of these numbers are no longer available having them as a reference can be valuable for those looking for used parts on the internet or at automotive swap meets. George Sollish and Eric Malinowski of AutoGear were extremely helpful with creating 3D illustrations as well as giving me their library of new part numbers. For questions or comments please use the contact information on the front of this booklet.

Aftermarket parts for Muncies are not something new. Borg Warner had developed a numbering system for manual transmission parts since they started making replacement parts. Each transmission became a numbered series. The Muncie series was #297. Other examples were the Ford Toploader (#296) and the Chrysler A833 (#294). Other companies such as Perfection HY-TEST, the people who made the Zoom ring and pinions also made replacement Muncie gears. They used the number 312 in their series. The main number is simply then followed by another number representing a case, extension housing, speed gear, reverse gear, etc. They have 2 basic systems. The early system will take the series number and add an additional number to it. The number 297-12 is a Muncie 1st speed gear. Any variation of that gear will have a letter after the 12. So 297-12, 297-12A, 297-12B, are all first gears for Muncies but for different applications.

Here are some helpful numbers:

### **BORG WARNER SUFFIX DESIGNATOR**

First Gear	12
Second Gear	21
Third Gear	11
Maindrive	16
Countergear	8
Countershaft	3
Mainshaft	2
Reverse Gear	36
Idler Shaft	35
Shift Fork	23
Front Retainer	6
Main Case	1
Extension Housing	7
Idler Gears	10
Synchro Rings	14
Synchro Sliders	15
Synchro Hubs	2.5
Synchro Assemblies	80
Strut Keys	13
Side Covers	148
Mid Plates	107
O Rings	108

By 1970 this system was replaced with a 10 digit system that was in use until the company was sold to Tremec in the 1990's. The first 4 numbers were the model designator, followed by a 3 digit component part category, followed by a 3 digit unique identifier.

The example number 13-52-085-025 decodes as a T5 5speed (13-52), a maindrive input (085) and the specific input ID (025). Autogear now uses a similar system for the Muncie. The format is the same but is scaled down to an eight digit system. The Autogear system uses a model number. The Muncie is model # 18, followed by a 3 digit component part category, followed by the unique 3 digit part identifier.

Here is a list of component part categories.

<b><u>Number</u></b>	<b><u>Part Type</u></b>
027	Bearing caps and retainers
031	Flanges and yokes
037	Shims
039	Covers
065	Transmission Cases
066	Extension Housings
566	Extension assemblies
067	Intermediate Shafts
567	Intermediate Shaft Assemblies
068	Intermediate shafts ( not torque carrying)
070	Gears that are splined or keyed
077	Countergears
080	Gears, Free Running, 1st, 2nd, 3rd gears
083	Third Gears, free running
084	Idler gears
584	Idler gear assemblies
085	Input shafts
089	Synchro sleeves
090	Synchro hubs
091	Synchro rings
096	Shift forks
097	Shift Covers
098	Shift Levers
100	Shift Rails
127	Bushings and Wear Pads
171	Mainshafts
671	Mainshaft Assemblies
410	Kits

What you will notice in looking at the chart is that usually when a 5 is placed in front of a category number, it becomes an assembly. For example, a front reverse idler for a Muncie is an 18-084-002. The idler is a stand alone gear,

## GROUP A: MAINSHAFT AND EXTENSION HOUSING

<u>GROUP#</u>	<u>DESCRIPTION</u>	<u>YEAR</u>	<u>OEM#</u>	<u>REPLACEMENT #</u>
<b>A1</b>	<b>SPEEDOMETER CIRCLE GEAR</b>			
	<i>NOTE: these gears have 30mm bore: used with 27 spline mainshaft.</i>			
	L6T steel: 1.92" OD	(1963-70)	3845079	N/A
	L7T steel: 1.76" OD	(1963-70)	9785023	N/A
	L8T steel: 1.76" OD	(1963-70)	3708145	3708145
	L7T steel: 1.84" OD	(1963-70)		18-110-006
	L8T steel: 1.84" OD	(1963-70)	3708144	18-110-007
	L8T nylon 1.84" OD	(1969-70)	6261794	6261794
	L9T steel: 1.84" OD	(1963-70)		18-110-010
	<i>NOTE: these gears have a 35mm bore: used with 32 spline mainshaft.</i>			
	L7T steel: 1.84" OD	(1971-74)		18-110-008
	L8T steel: 1.84" OD	(1971-74)	3978758	18-110-009
	L9T steel: 1.84" OD	(1971-74)		18-110-011
	Speedometer Circle Gear Retainer Clip used w/ 8T nylon gear only	(1969-70)	6261781	6261781
<b>A2</b>	<b>SPEEDOMETER PENCIL GEAR</b>			
	<i>NOTE: this gear used with 1.92" outside diameter circle gear.</i>			
	L20T steel		3860329	N/A
	<i>NOTE: these gears used with 1.76" outside diameter circle gears.</i>			
	L22T green nylon		3860345	3860345
	L23T black nylon		3860346	3860346
	L24T yellow nylon		3860347	3860347
	L25T orange nylon		3860348	3860348
	<i>NOTE: these gears used with 1.84" outside diameter circle gears.</i>			
	L17T purple nylon		3987917	3987917
	L18T brown nylon		3987918	3987918
	L19T natural nylon		3987919	3987919
	L20T blue nylon		3987920	3987920
	L21T red nylon		3987921	3987921
	L22T grey nylon		3987922	3987922
<b>A3</b>	<b>SPEEDOMETER ADAPTER ASSEMBLY</b>			
	Bullit Fitting with seal and O ring		345215	345215
	Fitting oil seal		3869910	3999L
	Fitting hold down bracket		3708148	3708148
	Bolt 1/4-20 x 5/8 HHCS			87914719
	Fitting O ring		6264903	3410L
	Optional block off plug			550-014

<b>A4</b>	<b>MAINSHAFT REVERSE GEAR</b>			
	R35 - 6 spline upper gear		3831748	WT297-36
	Anti Lash Circular Spline Spring (2 req'd)		3890532	N/A
<b>A5</b>	<b>MAINSHAFT REAR BEARING SNAP RING</b>			
	<i>NOTE: These snap rings are selective fit.</i>			
	Snap ring .070" Thick		3831755	3831755
	Snap ring .085" Thick		3831756	3831756
	Snap ring .095" Thick		3831757	3831757
	Snap ring .100" Thick		3831758	3831758
	Snap ring .105" Thick		3831759	3831759
<b>A6</b>	<b>MAINSHAFT REAR BEAR SUPPORT</b>			
	Factory Aluminum		3831752	N/A
	Ductile Iron (Heavy Duty)			18-672-003
	Dowel Pin 5/16 dia. X 1 inch long			06025100
<b>A7</b>	<b>EXTENSION HOUSING SHAFT SEAL</b>			
	Oil Seal		3831716	7410CR
<b>A8</b>	<b>MAINSHAFT REAR BEARING</b>			
	Open Type (SKF 6308NR)		907474	6308NR
	Sealed Type (Nachi 6308-2NSE9NR)			0-130-020
<b>A9</b>	<b>MAINSHAFT BEARING SUPPORT SNAP RING</b>			
	all		3831749	3831749
<b>A10</b>	<b>MAINSHAFT BEARING SUPPORT GASKET</b>			
	Gasket	(1963-74)	3911900	18-045-103
<b>A11</b>	<b>MAINSHAFT 1<sup>st</sup> GEAR</b>			
	<i>NOTE: these are for M20 and M21 Transmissions</i>			
	Thrust Washer	(1963 only)	3831745	N/A
	Gear L36T - S36T (snap ring counterbore, used with washer)	(1963 only)	3831743	WT297-12
	Gear L36T - S36T (used with bushing)	(1964-74)	3849388	18-080-025
	Gear L36T - S36T ( used with roller bearing - road race)	(1964-74)		18-080-023
	<i>NOTE: these are for M22 Transmissions</i>			
	Gear L36T - S36T (used with bushing)	(1965-72)	3924786	18-080-026
	Gear L36T - S36T (used with roller bearing - road race)			18-080-024
	<i>NOTE: these are for M23 Extreme Duty Transmissions</i>			
	Gear L34T - S36T (used with bushing)	(1965-72)	3924786	18-080-027
	Gear L34T - S36T (used with roller bearing - road race)			18-080-028

NOTE: these are complete 1<sup>st</sup> gear rollerized bearing kits

	Kit w/ M20 / M21 1 <sup>st</sup> gear and roller bearing assembly (1964-74)		18-410-032
	Kit w/ M22 1 <sup>st</sup> gear and roller bearing assembly (1965-72)	3965752	18-410-014
	Kit w/ M23 1 <sup>st</sup> gear and roller bearing assembly		18-410-039
<b>A12</b>	<b>MAINSHAFT 1<sup>st</sup> GEAR BUSHING / BEARING</b>		
	Plain Bushing with oil grooves (1964-74)	3978781	18-103-001
	Factory M22 bushing w/ oil flats (use 18-103-001) (1965-72)	3932228	N/A
	Roller Bearing Race (1965-72)	326578	18-103-002
	Roller Bearing (1965-72)	9433516	0-132-012
	Roller Bearing Spacer (1965-72)	326579	18-053-001
<b>A13</b>	<b>MAINSHAFT 1-2 SYNCHRONIZER PARTS</b>		
	Snap Ring 1-2 Synchro Hub (1963)	3832626	N/A
	Synchro ring w/o support shoulder 2 req'd. (1963-65)	3831733	WT297-14
	Synchro ring w/ support shoulder 2 req'd. (1966-74)	3880850	WT297-14A
	Synchro ring w/ support shoulder (Forged HD),2 req'd. (1966-74)	344243	WT297-14D
	Synchro hub (1963-65)	NSS	NSS
	Synchro hub (standard replacement) (1965-74)	NSS	WT297-2.5A
	Synchro hub (hardened)		18-090-002
	Synchro hub (hardened - oversize)		18-090-003
	Synchro hub (hardened - oversize no key slots)		18-090-004
	Strut Dog 3 req'd.	3915050	WT297-77
	Strut Spring (2 req'd. - Thin) (1963)	591914	N/A
	Strut Spring (2 req'd. - Medium) (1964-65)	3853805	N/A
	Strut Spring (2 req'd. - Wide) (1966-74)	3920775	N/A
	Strut Spring (2 req'd. - Modern Replacement) (1963-74)		4682AJ
	Sliding Clutch (36 Spline) (1963-74)	NSS	T85B-15
	Sliding Clutch (36 Spline "Torque Locking")		T85B-15A
	Sliding Clutch (18 Spline "Slick Shift Lightened")		18-089-001
	1-2 Synchronizer Assembly (1963-74)	357238	18-590-011
	1-2 Synchronizer Assembly (Torque Locking) (1963-74)	344241	18-590-013
<b>A14</b>	<b>MAINSHAFT 2<sup>nd</sup> GEAR</b>		
	Gear L30-s36T: M20 / M21 (1963-74)	357226	18-080-018
	Gear L30-s36T: M22 (1965-72)	3879999	18-080-019
	Gear L29-s36T: M22W Autogear		18-080-020
<b>A15</b>	<b>MAINSHAFT 3<sup>rd</sup> GEAR</b>		
	Gear L27-s36T: M20 / M21 (1963-74)	3831747	18-080-007
	Gear L27-s36T: M22 (1965-72)	3880845	18-080-008
	Gear L26-s36T: M22W Autogear		18-080-009
	Gear L25-s36T: M22Z Autogear		18-080-012



**A16 MAINSHAFT 3-4 SYNCHRONIZER PARTS**

Mainshaft Synchronizer snap ring	(ALL)	3831741	3831741
Synchro ring w/o support shoulder 2 req'd.	(1963-65)	3831733	WT297-14
Synchro ring w/ support shoulder 2 req'd.	(1966-74)	3880850	WT297-14A
Synchro ring w/ support shoulder (Forged HD),2 req'd.	(1966-74)	344243	WT297-14D
Synchro hub	(1963-65)	NSS	NSS
Synchro hub (standard replacement)	(1965-74)	NSS	WT297-2.5A
Synchro hub (hardened)			18-090-002
Synchro hub (hardened - oversize)			18-090-003
Synchro hub (hardened - oversize no key slots)			18-090-004
Strut Dog 3 req'd.	(all)	3915050	WT297-77
Strut Spring (2 req'd. - Thin)	(1963)	591914	N/A
Strut Spring (2 req'd. - Medium)	(1964-65)	3853805	N/A
Strut Spring (2 req'd. - Wide)	(1966-74)	3920775	N/A
Strut Spring (2 req'd. - Modern Replacement)	(1963-74)		4682AJ
Sliding Clutch (36 Spline)	(1963-74)	NSS	T85B-15
Sliding Clutch (36 Spline "Torque Locking")			T85B-15A
Sliding Clutch (18 Spline "Slick Shift Lightened")			18-089-001
3-4 Synchronizer Assembly	(1963-74)	357238	18-590-012
3-4 Synchronizer Assembly (Torque Locking)	(1963-74)		18-590-014

**A17 MAINSHAFT**

NOTE: this shaft used with 1<sup>st</sup> gear thrust washer.

Mainshaft 27 spline 21.13" long	(1963)	3831753	WT297-2
---------------------------------	--------	---------	---------

NOTE: these shafts used with 1<sup>st</sup> gear bushing or roller bearing

Mainshaft 27 spline 27.50" long (Pontiac)	(1964-65)	388838	N/A
Mainshaft 27 spline 21.13" long	(1964-70)	3915087	297-2A
Mainshaft 27 spline 21.13" long (lightened)	(1964-70)		18-171-001
Mainshaft 32 spline 21.75" long	(1971-75)	3978759	297-2G
Mainshaft 32 spline 21.75" long (lightened)	(1971-75)		18-171-002

**A18 MAINSHAFT EXTENSION GASKET**

Gasket	(1963-74)	3911901	18-045-104
--------	-----------	---------	------------

**A19 MAINSHAFT EXTENSION HOUSING ASSEMBLY**

NOTE: This is for GM Casting # 3831731 # 3846429

Housing: Driver Side Speedo, 27 spline	(1963-70)	3846428	N/A
--	-----------	---------	-----

NOTE: This is for GM Casting # 9779246

Housing: Long 27 spline mainshaft Pontiac	(1965-68)	9779245	N/A
---	-----------	---------	-----

NOTE: This is for GM Casting # 3857584

Housing: Passenger Side Speedo, 27 spline	(1966-70)	3857583	N/A
Housing: 27 Spline Heavy Duty Autogear	(1971-74)		18-410-21

NOTE: This is for GM Casting # 3978764

Housing: Passenger Side Speedo, 32 spline	(1971-74)	3978763	N/A
15 Housing: 32 Spline Heavy Duty Autogear	(1971-74)		18-410-22

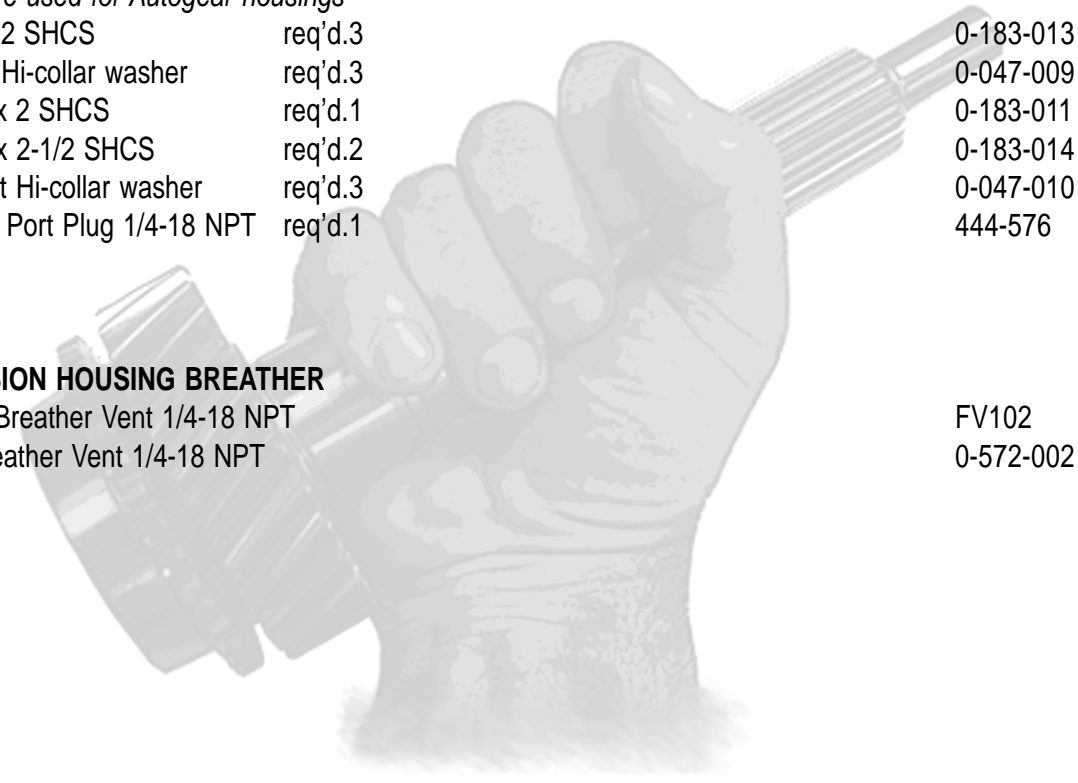
<b>A20</b>	<b>EXTENSION HOUSING BUSHING</b>			
	27 spline mainshaft	(1963-70)	6260048	6260048
	32 spline mainshaft	(1971-74)	3978765	3978765

<b>A21</b>	<b>EXTENSION HOUSING REAR SEAL</b>			
	27 spline mainshaft	(1963-70)	1243402	15041CR
	32 spline mainshaft	(1971-74)	8626009	18992CR

<b>A22</b>	<b>EXTENSION HOUSING FASTENERS</b>			
<i>NOTE: These are used for stock housings</i>				
	3/8-16 x 1-3/4 HHCS (SAE 5) req'd.3			88181995
	7/16-14 x 1-7/8 HHCS (SAE 5) req'd.2			67435206
	7/16-14 x 2-1/2 HHCS (SAE 5) req'd.1			67435321

<i>NOTE: These are used for Autogear housings</i>				
	3/8-16 x 2 SHCS req'd.3			0-183-013
	3/8 Split Hi-collar washer req'd.3			0-047-009
	7/16-14 x 2 SHCS req'd.1			0-183-011
	7/16-14 x 2-1/2 SHCS req'd.2			0-183-014
	7/16 Split Hi-collar washer req'd.3			0-047-010
	Breather Port Plug 1/4-18 NPT req'd.1			444-576

<b>A23</b>	<b>EXTENSION HOUSING BREATHER</b>			
	Filtered Breather Vent 1/4-18 NPT			FV102
	Alloy Breather Vent 1/4-18 NPT			0-572-002



## GROUP B: MAINDRIVE AND RETAINER

<u>GROUP#</u>	<u>DESCRIPTION</u>	<u>YEAR</u>	<u>OEM#</u>	<u>REPLACEMENT #</u>
<b>B1</b>	<b>MAINSHAFT PILOT BEARING ASSEMBLY</b> 17 rollers with steel cage	(1963-74)	9419248	JV44-1419
<b>B2A</b>	<b>MAINDRIVE GEAR - THREADED BEARING NUT</b>			
	<i>NOTE: These gears used with 10 spline clutch (GM standard)</i>			
	Gear: L24-s36T early M20	(1963-65)	3831767	WT297-16A
	Gear: L21-s36T later M20	(1966-70)	357241	WT297-16B
	Gear: L26-s36T M21	(1963-70)	357242	WT297-16
	Gear: L26-s36T M22	(1963-70)	3925691	WT297-16U
	<i>NOTE: These gears are Autogear 10 spline clutch M22 Gears</i> <i>They have longer pilots to work with block plates and Supercases</i>			
	Gear: L22-s36T M22Z			18-085-011
	Gear: L24-s36T M22W			18-085-009
	Gear: L26-s36T M22			18-085-007
	<i>NOTE: These gears used with 26 spline clutch (GM standard)</i>			
	Gear: L21-s36T: M20	(1971-74)	3978772	WT297-16C
	Gear: L26-s36T: M21	(1971-74)	357244	WT297-16
	Gear: L26-s36T: M22	(1971-72)	3978761	WT297-16Z
	<i>NOTE: These gears are Autogear 26 spline clutch M22 Gears</i> <i>They have longer pilots to work with block plates and Supercases</i>			
	Gear: L22-s36T M22Z			18-085-012
	Gear: L24-s36T M22W			18-085-010
	Gear: L26-s36T M22			18-085-008
<b>B2B</b>	<b>MAINDRIVE GEAR - FRONT SEAL TYPE</b>			
	<i>NOTE: These gears are Autogear 26 spline clutch M22 Gears</i> <i>They have longer pilots to work with block plates and Supercases and use a front seal.</i>			
	Gear: L22-s36T M22Z oil seal			33-085-007
	Gear: L24-s36T M22W oil seal			33-085-006
	Gear: L26-s36T M22 oil seal			33-085-005
<b>B3</b>	<b>MAINDRIVE OIL SLINGER</b> Slinger - used with threaded nut maindrives only (1965-74)	(1965-74)	3925692	18-036-001

<b>B4</b>	<b>MAINDRIVE FRONT BEARING</b>			
	NDH 47207	(1963)	907930	6207NR
	NDH 41307B	(1964-74)	907572	N307LOE

NOTE: These are used with Autogear Supercase only

	SKF #6307NR (Open Style)			6307NR
	Nachi #6307-2NSEN (Sealed)			0-130-019

<b>B5</b>	<b>MAINDRIVE BEARING/CASE SNAP RING</b>			
	Bearing outer locating snap ring	(1963)	3707174	3707174
	Bearing outer locating snap ring	(1964-74)	2830050	2830050

<b>B6</b>	<b>BEARING RETAINING NUT / SNAP RING</b>			
	Retaining Nut	(1963-74)	591150	591150
	Snap Ring w/ oil seal maindrives			0-139-29
	Snap Ring Spacer w/ oil seal maindrives ( .062 Thick)		3709350	3709350

<b>B7</b>	<b>MAINDRIVE FRONT BEARING RETAINER</b>			
	with 6207NR bearing and nut	(1963)	907930	N/A
	with N307LOE bearing and nut	(1964-74)	3915020	3915020
	with 6307NR and oil seal			18-027-002
	5.125" Truck adapter w/nut			18-027-003
	5.125" Truck adapter w/ seal			18-027-004
	machined for 3/8-16 SHCS (includes 4 cap screws)			18-027-007

<b>B8</b>	<b>MAINDRIVE OIL SEAL</b>			
	Front Oil Seal		3987936	12363CR

<b>B9</b>	<b>MAINDRIVE RETAINER GASKET</b>			
	Gasket for 6207NR bearing	(1963)	591023	591023
	Gasket .030" Thick		3915019	18-045-101
	Gasket .015" Thick			18-045-105

**B10 MAINDRIVE RETAINER HARDWARE**

NOTE: These are used with standard retainers only.

Hardware for the 1963 retainer is not available.

	3/8-16 x 1" HHCS (SAE 5) 4 req'd.	(1964-74)	186678	05727102
	Bolt retainer lock plate left	(1964-74)	3849937	3849937
	Bolt retainer lock plate right	(1964-74)	3849938	3849938
	Lock plate kit ( both plates )	(1964-74)		TSP-937

NOTE: These are used with Autogear Supercases

	3/8-16 x 1 1/8" HHCS (SAE 8) 4 req'd			67521047
--	--------------------------------------	--	--	----------

## GROUP C: COUNTERSHAFTS AND CASE

<u>GROUP#</u>	<u>DESCRIPTION</u>	<u>YEAR</u>	<u>OEM#</u>	<u>REPLACEMENT #</u>
---------------	--------------------	-------------	-------------	----------------------

### C1 COUNTERSHAFT CLUSTER GEAR

NOTE: these gears are used with 7/8 inch countershaft.

R27- 22-19-17T M21	(1963-65)	3831727	WT297-8
R29- 22-19-17T M20	(1963-65)	3831728	WT297-8A

NOTE: these gears are used with 1 inch countershaft.

R25-22-19-17T M20	(1966-74)	357235	WT297-8C
R27-22-19-17T M21	(1966-74)	357236	WT297-8D
R27-22-19-17T M22	(1966-74)	3905466	WT297-8E

NOTE: these M22 gears are Autogear design w/ no spacer tube

R27-22-19-17T (2.199/1.640/1.274/1.000) M22	18-077-001
R27-23-20-17T (2.199/1.506/1.174/1.000) M22X	18-077-002
R29-23-20-17T (2.559/1.752/1.366/1.000) M22W	18-077-003
R31-24-20-17T (2.984/2.043/1.468/1.000) M22Z	18-077-004

Note: these M22 gears are Modular design w/ variable ratios

R27-22-19-17T (2.199/1.640/1.274/1.000)	18-567-111
R27-22-20-17T (2.199/1.506/1.274/1.000)	18-567-112
R27-23-19-17T (2.199/1.640/1.174/1.000)	18-567-121
R27-23-20-17T (2.199/1.506/1.174/1.000)	18-567-122
R27-24-19-17T (2.199/1.640/1.082/1.000)	18-567-131
R27-24-20-17T (2.199/1.506/1.082/1.000)	18-567-132
R29-22-19-17T (2.559/1.908/1.483/1.000)	18-567-211
R29-22-20-17T (2.559/1.752/1.483/1.000)	18-567-212
R29-23-19-17T (2.559/1.908/1.366/1.000)	18-567-221
R29-23-20-17T (2.559/1.752/1.366/1.000)	18-567-222
R29-24-19-17T (2.559/1.908/1.259/1.000)	18-567-231
R29-24-20-17T (2.559/1.752/1.259/1.000)	18-567-232
R31-22-19-17T (2.984/2.225/1.729/1.000)	18-567-311
R31-22-20-17T (2.984/2.043/1.729/1.000)	18-567-312
R31-23-19-17T (2.984/2.225/1.593/1.000)	18-567-321
R31-23-20-17T (2.984/2.043/1.593/1.000)	18-567-322
R31-24-19-17T (2.984/2.225/1.468/1.000)	18-567-331
R31-24-20-17T (2.984/2.043/1.468/1.000)	18-567-332

Note: these M22 gears are Modular design, variable ratios, extreme duty 8620 alloy

R27-22-19-16T	(2.207/1.640/1.274/1.000)	18-567-113
R27-23-19-16T	(2.207/1.640/1.174/1.000)	18-567-123
R27-24-19-16T	(2.207/1.640/1.082/1.000)	18-567-133
R29-22-19-16T	(2.568/1.908/1.483/1.000)	18-567-213
R29-23-19-16T	(2.568/1.908/1.366/1.000)	18-567-223
R29-24-19-16T	(2.568/1.908/1.259/1.000)	18-567-233
R31-22-19-16T	(2.994/2.225/1.729/1.000)	18-567-313
R31-23-19-16T	(2.994/2.225/1.593/1.000)	18-567-323
R31-24-19-16T	(2.994/2.225/1.468/1.000)	18-567-333

Note: these M22 gears are Modular design, variable ratios, extreme duty 9310 alloy 1-2 section

R27-22-19-16T	(2.207/1.640/1.274/1.000)	18-567-114
R27-22-20-16T	(2.207/1.506/1.274/1.000)	18-567-115
R27-23-19-16T	(2.207/1.640/1.174/1.000)	18-567-124
R27-23-20-16T	(2.207/1.506/1.174/1.000)	18-567-125
R27-24-19-16T	(2.207/1.640/1.082/1.000)	18-567-134
R27-24-20-16T	(2.207/1.506/1.082/1.000)	18-567-135
R29-22-19-16T	(2.568/1.908/1.483/1.000)	18-567-214
R29-22-20-16T	(2.568/1.752/1.483/1.000)	18-567-215
R29-23-19-16T	(2.568/1.908/1.366/1.000)	18-567-224
R29-23-20-16T	(2.568/1.752/1.366/1.000)	18-567-225
R29-24-19-16T	(2.568/1.908/1.259/1.000)	18-567-234
R29-24-20-16T	(2.568/1.752/1.259/1.000)	18-567-235
R31-22-19-16T	(2.994/2.225/1.729/1.000)	18-567-314
R31-22-20-16T	(2.994/2.043/1.729/1.000)	18-567-315
R31-23-19-16T	(2.994/2.225/1.593/1.000)	18-567-324
R31-23-20-16T	(2.994/2.043/1.593/1.000)	18-567-325
R31-24-19-16T	(2.994/2.225/1.468/1.000)	18-567-334
R31-24-20-16T	(2.994/2.043/1.468/1.000)	18-567-335

**C1-1 COUNTERSHAFT 1ST/2ND GEAR (M22 HEAVY DUTY)**

S30-R19-17T	18-067-001
S30-R20-17T	18-067-002

**C1-1 COUNTERSHAFT 1ST/2ND GEAR (M23 EXTREME DUTY)**

S30-R19-16T (SAE 8620 EQUIVALENT)	18-067-003
S30-R19-16T (SAE 9310 EQUIVALENT)	18-067-004
S30-R20-16T (SAE 9310 EQUIVALENT)	18-067-005

**C1-2 COUNTERSHAFT 3RD GEAR**

R22-S30T	18-070-010
R23-S30T	18-070-020
R24-S30T	18-070-030

**C1-3 COUNTERSHAFT DRIVE GEAR**

R27-S30T	18-070-100
R29-S30T	18-070-200
R31-S30T	18-070-300

<b>C1-4</b>	<b>COUNTERSHAFT GEAR/SHAFT SNAPRINGS</b> Retaining Ring req'd. 3			0-139-031
<b>C2</b>	<b>COUNTERSHAFT</b> 7/8" diameter	(1963-65)	3831725	WT297-3
	1" diameter	(1966-74)	3864850	WT297-3A
	1" diameter (locks to Autogear midplate)			18-068-014
<b>C3</b>	<b>COUNTERSHAFT THRUST WASHER</b> 7/8" diameter req'd 2	(1963-65)	3831729	3831729
	1" diameter req'd 2 (babbitt)	(1966-74)	3864860	3864860
	1" diameter req'd 2 (steel backed bronze)	(1966-74)		18-193-001
<b>C4</b>	<b>COUNTERSHAFT BEARINGS</b> 7/8" diameter shaft req'd. 80	(1963-65)	3709328	S443Q
	1" diameter shaft req'd. 112	(1966-74)	435847	C407Q
	unit cages req'd. 4			18-132-001
<b>C5</b>	<b>COUNTERSHAFT ROLLER SPACER</b> 7/8" diameter req'd. 6	(1963-65)	3709324	3709324
	1" diameter req'd. 6	(1966-74)	3864856	3864856
<b>C6</b>	<b>COUNTERSHAFT SPACER TUBE</b> 7/8" diameter	(1963-65)	N/A	N/A
	1" diameter	(1966-74)	3912195	3912195
<b>C7</b>	<b>IDLER GEAR (FRONT) THRUST WASHER</b> Steel Backed Bronze	(1963-74)	3834739	18-193-003
<b>C8</b>	<b>IDLER GEAR (FRONT)</b> L18-s27T: M20 / M21	(1963-74)	3831762	WT297-10
	L18-s27T: M22	(1965-72)	3879997	18-084-003
	L17-s27T: M23			18-084-004
<b>C9</b>	<b>IDLER GEAR (REAR)</b> L17-27T (with bushings)	(1963-74)	3831764	18-584-001
<b>C9A</b>	<b>IDLER GEAR BUSHINGS</b> Bronze Bushing ( 2 Req'd)	(1963-74)	N.S.S.	T10-85A
<b>C10</b>	<b>IDLER GEAR (REAR) THRUST WASHER</b> Steel washer	(1963-74)	3774909	3774909
<b>C11</b>	<b>REVERSE IDLER SHAFT</b> Shaft w/o lock pin	(1963-74)	3831761	WT297-35
<b>C12</b>	<b>IDLER SHAFT LOCK PIN</b> Split Pin ( 1/4" dia x 1.5" long)	(1963-74)	590832	590832



**C13 MAIN CASE ASSEMBLY**

*NOTE: these cases are used with a 7/8 inch countershaft.*

Casting #3831704 w/ 6207N bearing	(1963)	3831702	N/A
Casting #3851325	(1964-65)	3851324	N/A
Autogear Supercase for 7/8" shaft			18-065-001

*NOTE: these cases are used with a 1 inch countershaft.*

Casting #3885010	(1966-67)		3925659
#3925660	(1968-70)		3925659
#3925661	(1970-74)		3925659
Autogear Supercase for 1" shaft			18-065-002
Autogear Supercase for 1" shaft w/ thrust button			18-565-001

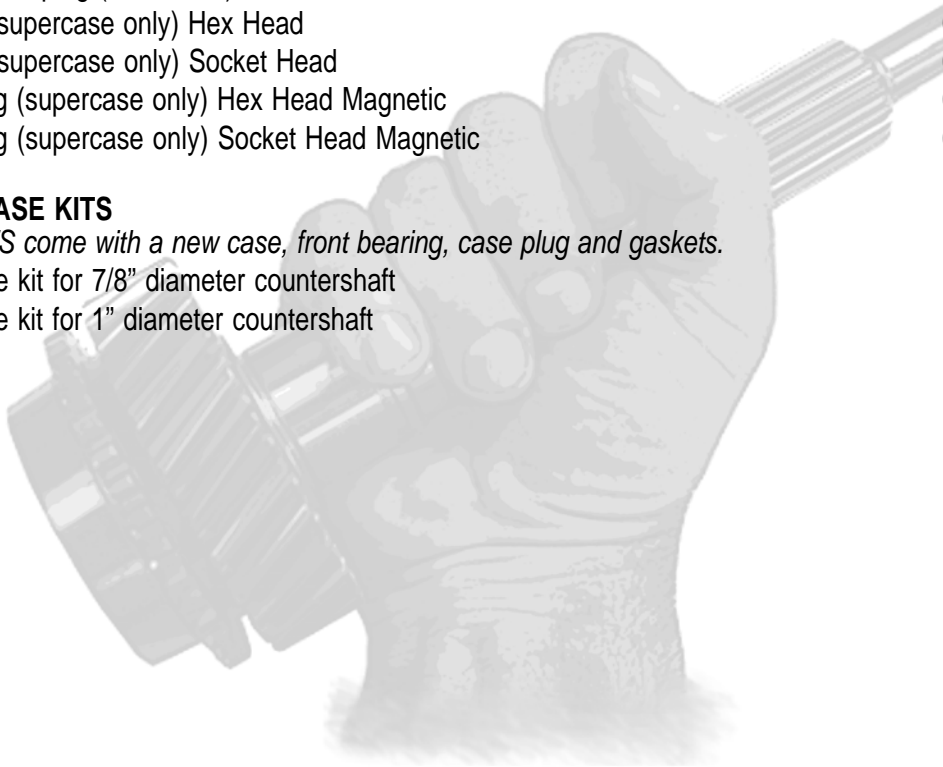
**C14 CASE HARDWARE**

Thrust Button			18-193-004
Countershaft plug (1 1/8" dia.)			0-113-011
Fill Plug (supercase only) Hex Head			0-052-014
Fill Plug (supercase only) Socket Head			0-052-012
Drain Plug (supercase only) Hex Head Magnetic			0-052-015
Drain Plug (supercase only) Socket Head Magnetic			0-052-013

**SUPERCASE KITS**

*NOTE: these KITS come with a new case, front bearing, case plug and gaskets.*

Supercase kit for 7/8" diameter countershaft			18-410-001
Supercase kit for 1" diameter countershaft			18-410-002



## GROUP D: INTERNAL SHIFT LINKAGE

<u>GROUP#</u>	<u>DESCRIPTION</u>	<u>YEAR</u>	<u>OEM#</u>	<u>REPLACEMENT #</u>
<b>D1</b>	<b>1st &amp; 2nd SHIFT FORK</b>			
	Nodular Iron ( OEM Style)	(1963-74)	3831717	3831717
	Investment Cast Steel ( Autogear design)	(all)		18-096-005
<b>D2</b>	<b>1st &amp; 2nd LEVER ASSEMBLY</b>			
	5/16-18 external thread (STUD)	(1963-68)	3831709	N/A
	3/8-16 internal thread w/o switch	(1969)	3950308	N/A
	3/8-16 internal thread w/ switch	(1969-74)	3952649	N/A
	5/16-24 internal thread welded universal HD	(all)		18-598-001-2x
D2A	Linkage arm adapter (for older 3/8 bolt on arms)			18-040-001
D2B	5/16-24 x 1 HHCS (Grade 8) for use with welded lever			67531483
D2C	5/16 Grade 8 Split Lock Washer			05724810
D2D	Bushing			6454045
D2E	Roller Bearing			B-126
<b>D3</b>	<b>3rd &amp; 4th SHIFT FORK</b>			
	Nodular Iron ( OEM Style)	(1963-74)	3831717	3831717
	Investment Cast Steel ( Autogear design)	(all)		18-096-005
<b>D4</b>	<b>3rd &amp; 4th LEVER ASSEMBLY</b>			
	5/16-18 external thread (STUD)	(1963-68)	3831709	N/A
	3/8-16 internal thread w/ switch	(1968)	3950472	N/A
	3/8-16 internal thread w/o switch	(1969)	3950308	N/A
	3/8-16 internal thread w/ switch	(1969-74)	3952649	N/A
	5/16-24 internal thread welded universal HD	(all)		18-598-001-2x
D4A	Linkage arm adapter (for older 3/8 bolt on arms)			18-040-001
D4B	5/16-24 x 1 HHCS (Grade 8) for use with welded lever			67531483
D4C	5/16 Grade 8 Split Lock Washer			05724810
D4D	Bushing			6454045
D4E	Roller Bearing			B-126
<b>D5</b>	<b>DETENT CAM LEVERS</b>			
	Detent cam req'd. 2	(all)	3905462	18-014-001
<b>D6</b>	<b>DETENT CAM WASHER</b>			
	Hardened flat washer ( Autogear cover only)			18-047-001
<b>D7</b>	<b>DETENT CAM SPRING</b>			
	20Lb. Detent Spring	(1963-74)	3831718	18-156-002

**D8 SHIFT COVER ASSEMBLY***NOTE: these covers used with externally threaded shift lever assemblies.*

Casting #3831707	(1963-65)	3831707	N/A
Casting #3884685	(1966-70)	3895778	N/A

*NOTE: these covers used with internally threaded shift lever assemblies.*

Casting #3950306: short boss w/o TCS switch	(1970-74)	3977618	N/A
Casting #3952648: short boss w/ TCS switch	(1970-74)	3952647	N/A
Casting #3952642: long boss w/ TCS switch	(1970-74)	335308	N/A

*NOTE: Use Autogear Universal Cover Assembly to replace above.*

Autogear Cover Assembly (includes cams, shafts, seals, pivot, spring)			18-410-023-3x
---	--	--	---------------

**D9 SHIFT COVER GASKET**

Cover Gasket	(1963-74)	3831705	3831705
--------------	-----------	---------	---------

**D10 SHIFT COVER HARDWARE**

Cover Bolts 5/16-18 x 3/4 HHCS req'd. 7	(all)		05726070
Split Lockwashers 5/16 diameter req'd. 7	(all)	NSS	05724810
Cover Shift Shaft Seal req'd. 2	(1963-74)	3831716	7410CR
Pivot Pin	(1963-74)	3884686	18-043-002
C-Clip		NSS	0-139-020
Dowel Pin (3/16" diameter x 3/8" long)		NSS	40630212
TCS switch plug		3906448	N/A
TCS switch plug gasket		3906462	N/A

**D11 REVERSE SHIFT FORK**

Reverse Fork	(1963-74)	3832786	18-096-003
--------------	-----------	---------	------------

**D12 REVERSE SHIFT LEVER ASSEMBLY**

5/16-18 external thread	(1963-68)	3850086	N/A
3/8-16 internal thread	(1969-74)	3950312	N/A
Autogear Universal Lever Assembly	(all)		18-598-002-2x

**D13 LEVER OIL SEAL**

Oil Seal ( 2 for cover, 1 for extension)	(1963-74)	3831716	7410CR
--	-----------	---------	--------

**D14 REVERSE SHIFTER LOCK PIN**

Tapered Lock Pin #0 size 1 1/4" Long	(1963-74)	103565	0-125
--------------------------------------	-----------	--------	-------

**D15 REVERSE DETENT BALL AND SPRING**

Detent Spring	(1963-74)	3773017	3773017
Detent Ball (3/8" Diameter)	(1963-74)	NSS	00072744

## **GROUP E: SERVICE KITS**

### **E1 SMALL PARTS KIT**

*NOTE: Small parts include needle bearings, snap rings, thrust washers, pins and spacers.*

7/8" diameter countershaft	(1963-65)	NSS	SP297-50
1" diameter countershaft	(1966-74)	NSS	SP297-50A

### **E2 GASKET & SEAL KIT**

Gasket and seal kit fits all years		NSS	297-GS1
------------------------------------	--	-----	---------

### **E3 OVERHAUL KIT**

*NOTE: Kits include main bearings, countershaft, synchro rings, all small parts, struts and springs, gaskets, bushing and seals.*

Kit with 7/8" countershaft w/6207NR Bearing	(1963)		BK-297-63
Kit with 7/8" countershaft w/N307LOE Bearing	(1964-65)		BK-297
Kit with 1" countershaft	(1966-74)		BK-297A



# NOTES

