

Roadranger®

Eaton® Fuller® Mid-Range Transmissions

FS-6105 Series
FS-6005 Series

**EAT•N**

One Great Drivetrain from Two Great Companies

Illustrated Parts List TRIP-0140 May 1990



For the most current information, visit the Roadranger web site at www.roadranger.com

HOW TO USE THE ILLUSTRATED PARTS LIST

All Lists are arranged the same; available kits, assemblies, drivers' instructions, and technical service literature are listed in the front. Cases, clutch housings, bar housings, mainshafts, countershafts, drive gears and idler follow in order.

Use of Kits and Assembly Listing (Page 2)

The first column shows on which page kit or assembly is found.

The second column shows Kit References used to identify components of kits on that page.

If you do not have kit or assembly in stock, kit references will allow you to either put kit or assembly together from individual parts in your stock or find an individual part you may need that is in your inventory as part of a kit or assembly.

The third and fourth columns show part number and description.

Page	Kit Ref.	Part #	Description
9	Y ³	3316210	Yoke Assembly 4th-5th

Illustrated Index

Pages 4 and 5 are an Illustrated Index for this Illustrated Parts List. The isometric drawing is a typical Eaton single countershaft transmission. The proper page on which to find these items is noted.

Notes On Illustrations

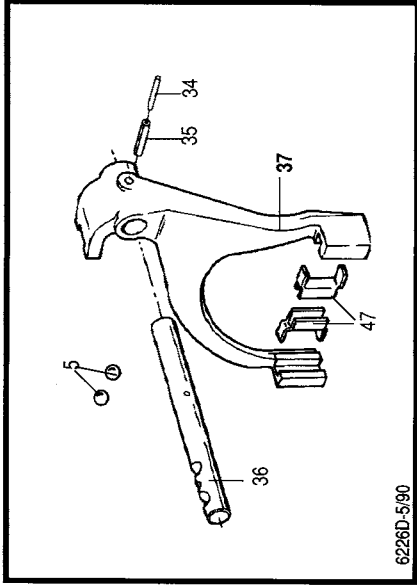
Illustrations show parts in assembly groups.

Various notes are used where appropriate.

- Current production
- Not used in current production
- Use of lockwire
- Transmission model information

How to Identify Parts and Obtain Part Numbers.

Example: Yoke 4th-5th



Determine item number of Yoke Assembly 4th-5th

Example: Item Number is 37

ITEM	QTY. USED	PART NO.	DESCRIPTION	KIT REFERENCE
34	4	1JM6028	Lock pin	
35	4	1JM3528	Lock pin	
37	1	3316211	Yoke assembly 4th-5th order assembly 3316210	Y ³
36	1	3315763	Yoke bar 4th-5th replaced by 23299	
or 1	23299		Yoke bar 4th-5th	
47	6	227695	Pad	Y ¹⁻²³
5	13	10J14	Ball	S ²

Purposes of Kit Reference

- A. To denote the parts included in a kit or an assembly,
B. Used for notes.

Kit and Assembly Identification for Service Parts

- A — Denotes Production Assemblies
K — Denotes Service Kit (Unassembled)
S — Denotes Service Assembly

Use of Kit Reference

Items 37 has reference Y³. Item 47 has reference Y¹⁻²³. Assembly 3316210 has reference Y³. This shows that items 37 and 47 are components of assembly 3316210.

ITEM	QTY. USED	PART NO.	DESCRIPTION	KIT REFERENCE
34	4	1JM6028	Lock pin	
35	4	1JM3528	Lock pin	
37	1	3316211	Yoke assembly 4th-5th order assembly 3316210	Y ³
36	1	3315763	Yoke bar 4th-5th replaced by 23299	
or 1	23299		Yoke bar 4th-5th	
47	6	227695	Pad	Y ¹⁻²³
5	13	10J14	Ball	S ²

PART NO.	KIT NAME	KIT REFERENCE
3316207	Yoke Assembly 2nd-3rd	Y ¹
A-5595	Yoke Assembly Rev.	Y ²
3316210	Yoke Assembly 4th-5th	Y ³
K-2012	Small parts kit	S ²

For parts or service call us
Pro Gear & Transmission, Inc.



1 (877) 776-4600

(407) 872-1901

parts@eprogear.com

906 W. Gore St.

Orlando, FL 32805



2 THIS BOOKLET IS DESIGNED TO IDENTIFY ALL PARTS IN THE FS-6005 AND FS-6105 SERIES TRANSMISSIONS.

Service Kits and Assemblies available for the FS-6105 Series

Page	Kit Ref.	Part #	Description
—	—	K-2181	Gasket kit
11	S ¹	K-2183	Shim kit
9,11,13	S ²	K-2012	Small parts kit
15	S ³	K-2257	Synchronizer kit
15	S ⁴	K-2017	Synchronizer kit
11	S ⁵	S1702	Shift bar housing Assembly
13	Y ¹	3316207	Yoke Assembly 2nd-3rd
13	Y ²	A-5595	Yoke Assembly Rev.
13	Y ³	3316210	Yoke Assembly 4th-5th

Basic Rebuild

Part #	Description	Kit Ref.
K-2131	Basic Rebuild Kit	RK
Above kit also include gaskets		

Sealants and Lubricants

Part #	Description
71203	Silicone Lubricant 8 oz. size (236.59 cc)-(fleet size)
71204	Adhesive Sealant 0.5 cc size (single application size)
71205	Sealant 2 cc size (single application size)
71206	Silicone Lubricant 4 cc size (single application size)
71231	Gasket Sealant 8 milliliter tube (single application size)
71232	Liquid Thread Adhesive 10 milliliter bottle (single application size)

Operating Labels and Instructions

Part #	Description
21789	Shift label

Maintenance and Repair

Part #	Description
FS-6105	Series Service Manual - Form Number 196

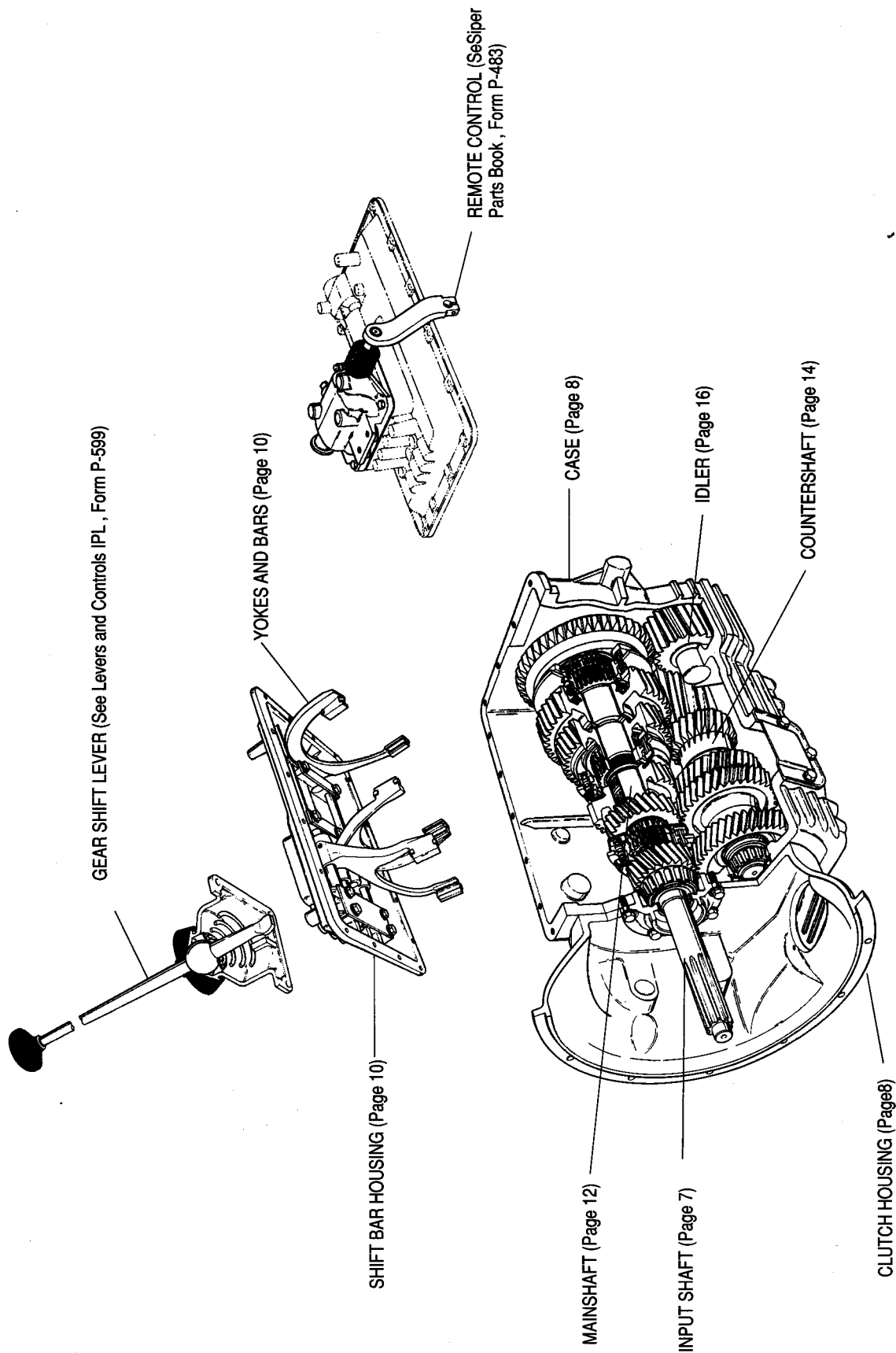
Miscellaneous

For Lever / Control information please see Illustrated Parts List form P-599.
For information on the following options please see the Super Parts Book form P-583:

- Speedometer Drives • Yokes & Flanges

Every effort has been made to ensure the accuracy of all information in this brochure. However, Eaton Transmission Division makes no expressed or implied warranty or representation based on the enclosed information. Any errors or omissions may be reported to Training & Publications. Eaton Transmission Division, P.O. Box 4013, Kalamazoo, MI 49003.

4 ILLUSTRATION OF A TYPICAL EATON TRANSMISSION



INDEX FOR ILLUSTRATION

DESCRIPTION	PAGE NO.
Main Case	Page 8
Clutch Housing	Page 8
Countershaft.....	Page 14
Mainshaft.....	Page 12
Idler	Page 16
Input Shaft	Page 17
Shift Bar Housing	Page 10
Yokes and Bars	Page 10

CLUTCH HOUSING

Assembly	Housing	SAE No.	Depth	Drive Gear Cover Pedal Pilot Dia.	Shaft Type	Push or Pull	Material	Dimensions for Mounting Pedal Shaft See Figure A				Nodal Mount
								A	B	C	D	
230548	230549	2	6 1/2	7.22	B	Push	Iron	—	—	2.500	3.590	Lower
227049	226981	2	6	6.25	D	Push	Iron	—	—	2.500	3.625	Upper
235651	235647	2	6 5/8	6.25	A	Pull	Iron	3.750	1.500	—	—	—
3316236	3316237	2	6 5/8	6.25	A	Pull	Alum.	3.750	1.500	—	—	—
A-5205	21646	2	6 5/8	6.25	E	Push	Alum.	—	—	3.000	2.563	—
3316233	3316234	2	6 5/8	7.22	A	Pull	Alum.	3.750	1.500	—	—	—
—	3316241	2	4 3/4	7.25	Fork	Push	Alum.	—	—	—	—	—

Note: Assemblies listed are complete with Bushings and Grease Fittings.

SAE Numbers: denote clutch housing size. See Figure C.

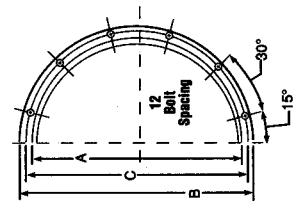
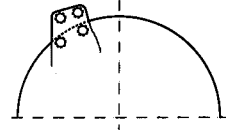


Figure C

Nodal Mounts: used for support of transmission and engine. See Figure D.

Upper Nodal Mount



Lower Nodal Mount

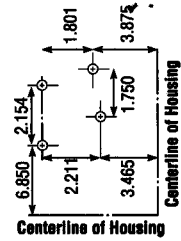
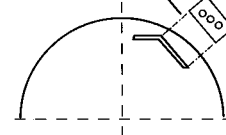


Figure D

SAE	Pilot Diameter	Outside Diameter	Bolt Circle Diameter	Qty.	Size
1	20 1/8	21 3/4	20 7/8	12	7/16 - 14
2	17 5/8	19 1/4	18 3/8	12	3/8 - 16

INPUT SHAFT AND DRIVE GEAR

Model Series Application: FS-6105

Shaft		Dimensions: Figure A					Dimensions: Figure B	
Part No.	Type	A	B	C	D	E	Use Seal #	Use Cover #
3316168	Pull	1 3/4"	1.18	.69	10.44	3.50	3315623	3316171
or								
21909	Push	1 1/2"	.98	.75	8.61	2.63	3315625	23106
21900	Pull	1 3/4"	.98	.81	10.50	3.75	235393	3316313
21899	Push	1 1/2"	.98	.81	10.50	3.50	3315623	3316171
21989	Push	1 1/2"	.98	.75	10.35	3.50	21893	3316313
21990	Push	1 1/2"	.98	.75	9.85	2.87	235393	3316313
21944	Push	1 3/4"	1.18	.75	9.88	3.50	20651	21992

Oil Seal No. # 3315623 is available in K-2131 Basic Rebuild Kit

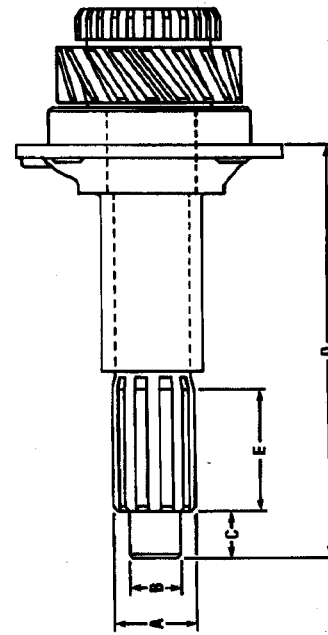


Figure E

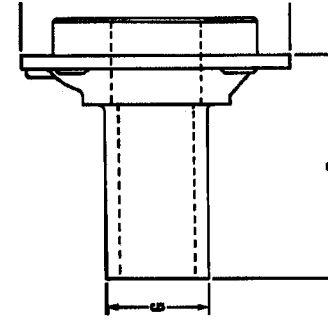
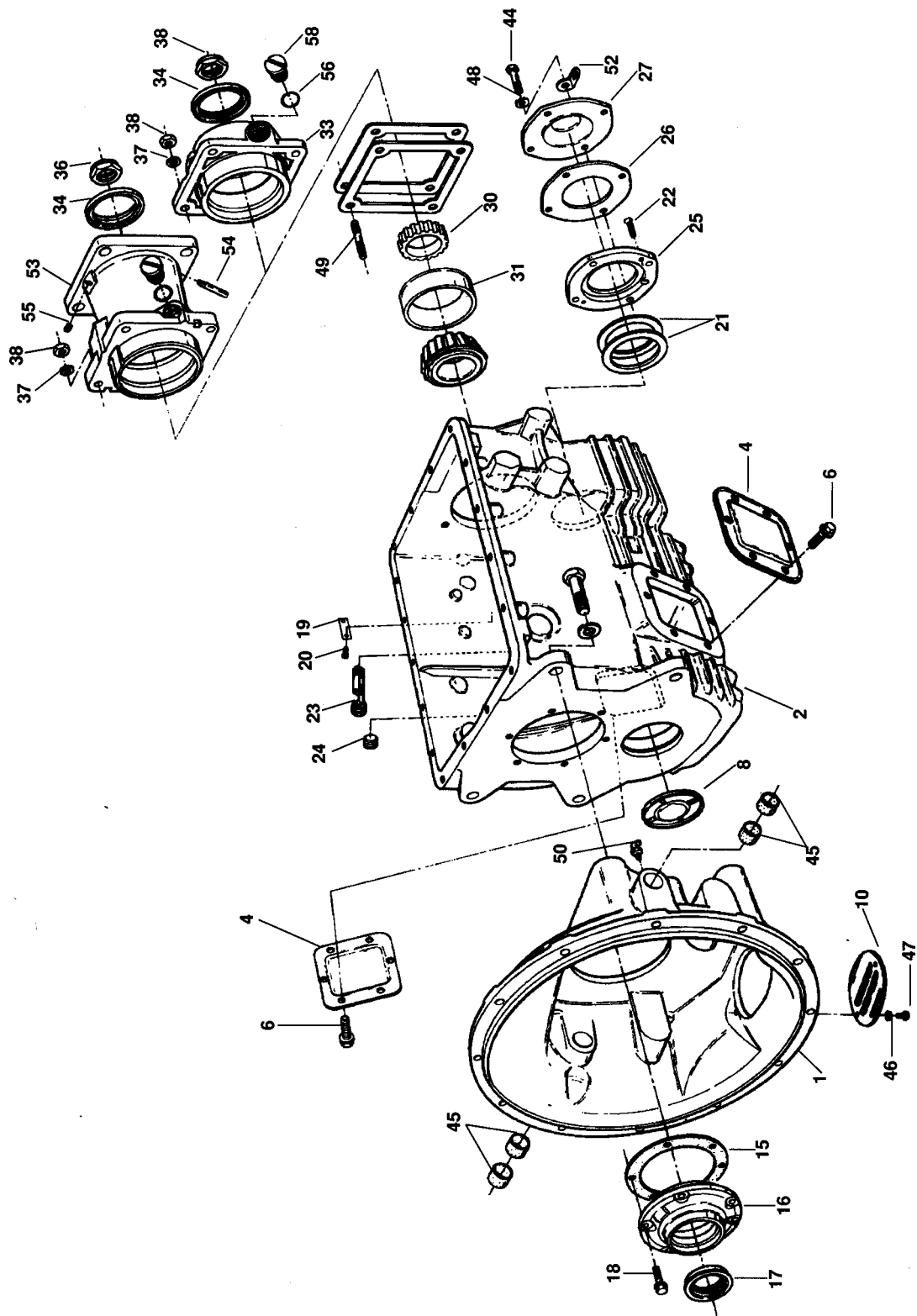


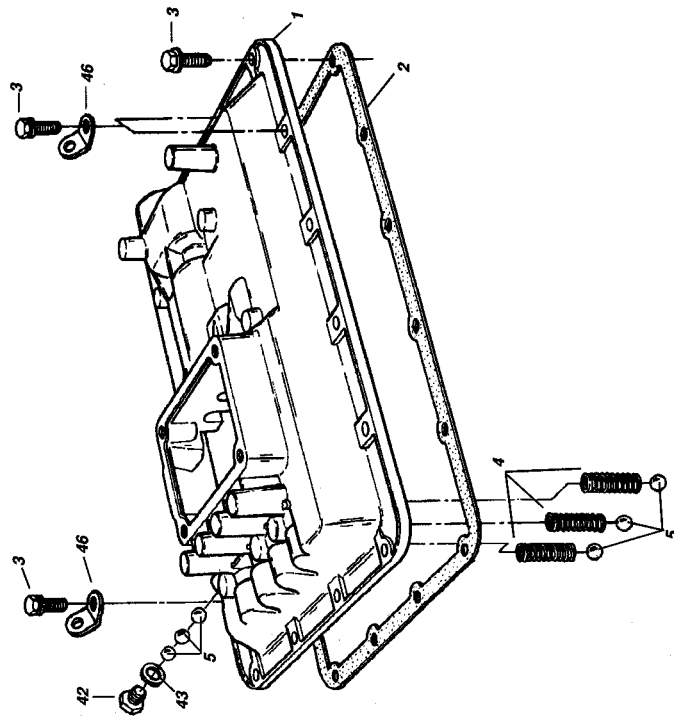
Figure F

8 CLUTCH HOUSING - CASE

CLUTCH HOUSING-CASE

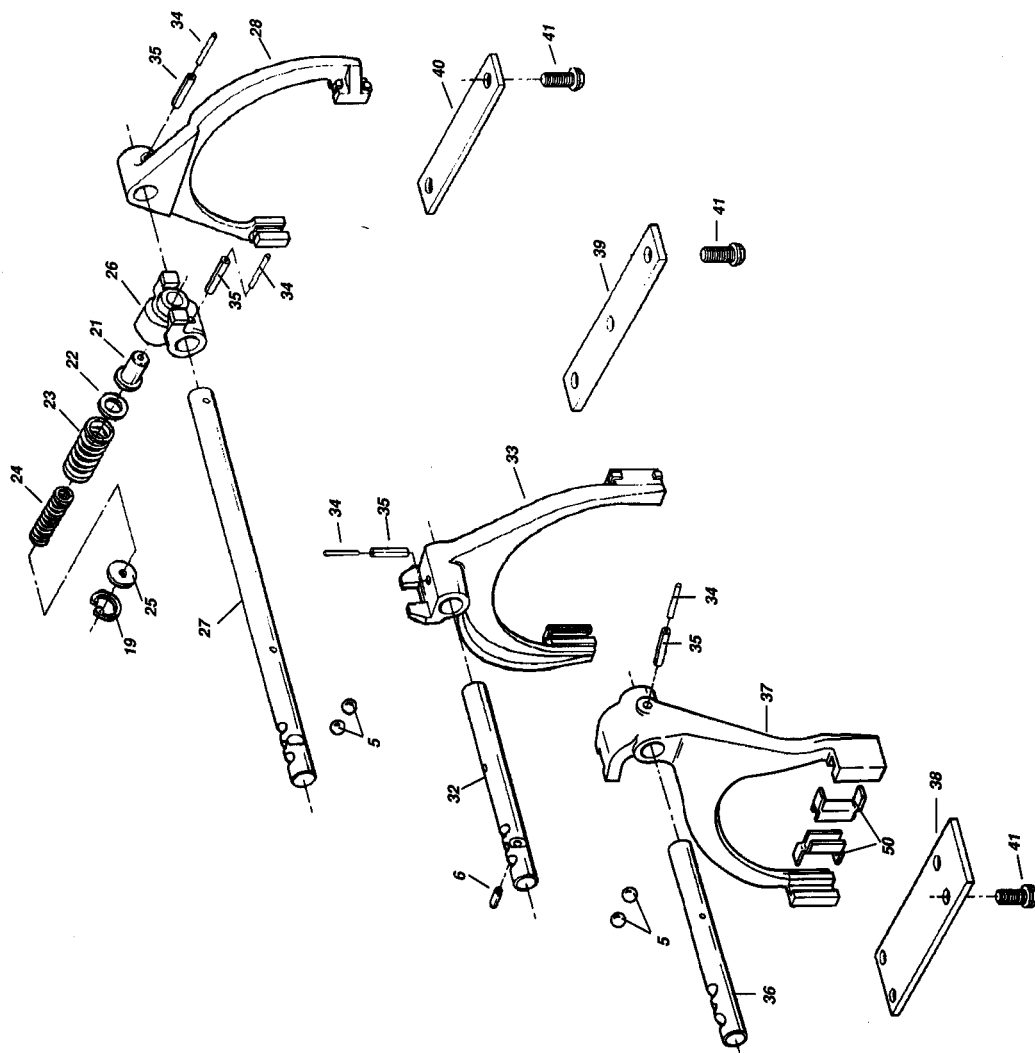


BAR HOUSING



Cut 6225A-11/86C

YOKES AND BARS



Cut 6226C-10/87C

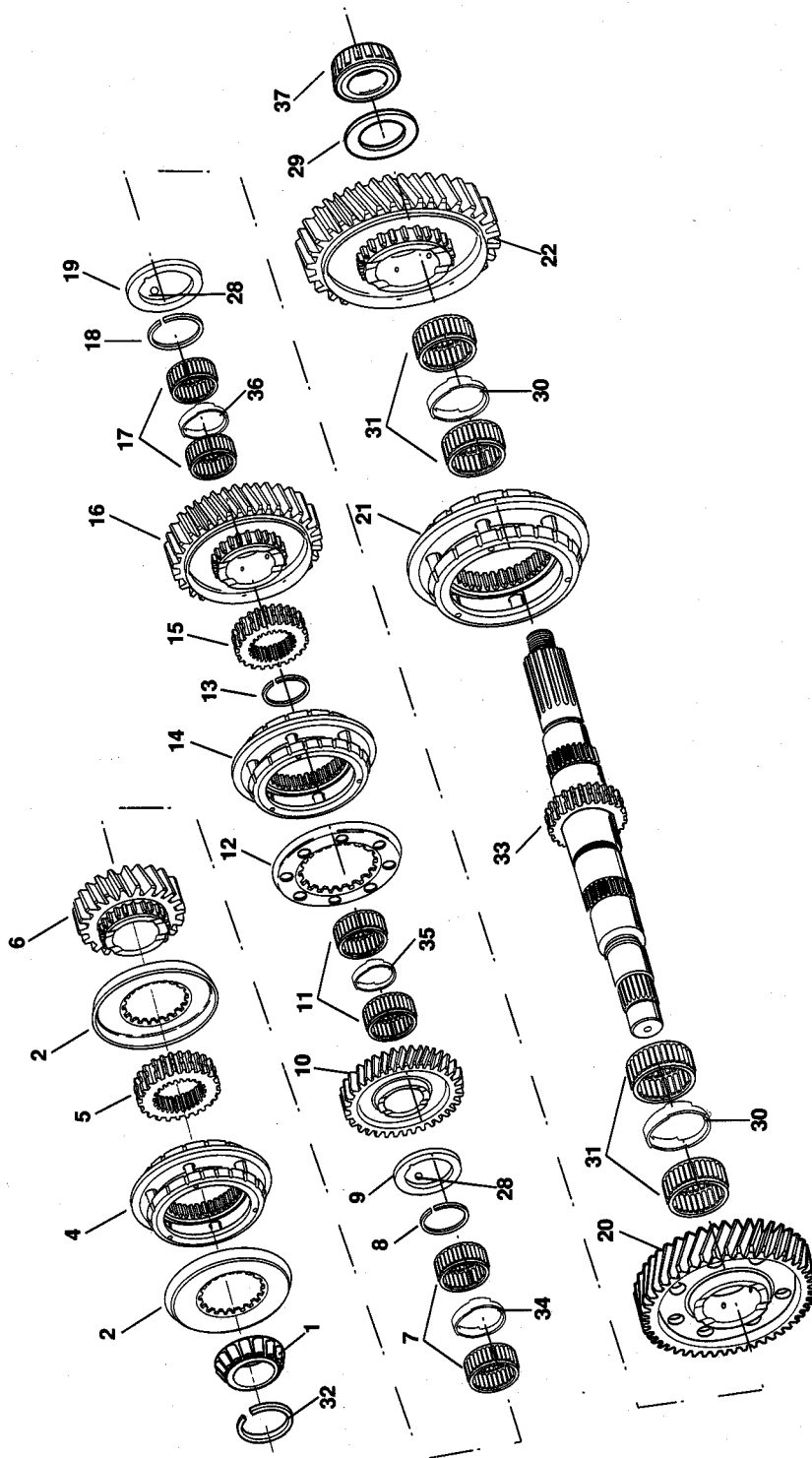
ITEM	QTY.	PART NO.	DESCRIPTION	KIT REFERENCE	QTY. USED	ITEM	PART NO.	DESCRIPTION	KIT REFERENCE
1	1	3315760	Shift bar housing	S ⁵	32	1	21804	Yoke bar 2nd-3rd	
2	1	3315678	Gasket	S ⁵				replaced by 23298	
3	17	239611	Capscrew		or 1	23298		Yoke bar 2nd-3rd	Y ¹
4	4	3315765	Spring	RK	33	1	3316208	Yoke 2nd-3rd	
5	13	10J14	Ball	S ²				order 3316207	
6	2	201044	Pin		34	4	1JM6028	Lock pin	
19	1	7JM23	Snap ring		35	4	1JM3528	Lock pin	
			replaced by 21736		36	1	3315763	Yoke bar 4th-5th	
or 1	21736		Snap Ring					replaced by 23299	
21	1	3316296	Plunger		or 1	23299		Yoke bar 4th-5th	
22	1	3316298	Washer		37	1	3316211	Yoke 4th-5th	Y ³
23	1	21725	Spring - Use with transmission					order 3316210	
			mounted shift lever and remote control		38	1	3315755	Retainer front	
or 1	21723		Spring - Use with remote control					replaced by 23306	
24	1	21726	Spring - Use with transmission		39	1	3315756	Retainer middle	
			mounted shift lever and remote control		40	1	3315757	Retainer rear	
or 1	21724		Spring - Use with remote control		41	9	233043	Capscrew w/3315755 Retainer	
25	1	3316295	Washer		or 11	233043		Capscrew w/23306 Retainer	S ⁵
26	1	3316300	Block reverse		42	1	229467	Plug	S ⁵
27	1	3316204	Yoke bar reverse		43	1	229488	Gasket	
			replaced by 23296		46	3	238370	Lifting eye	
or 1	23296		Yoke bar reverse	Y ²	50	6	227675	Pad	Y ¹⁻²⁻³
28	1	3316214	Yoke reverse						
			replaced by A-5595						
or 1	23510		Yoke reverse	Y ²					
			order A-5595						

BASIC REBUILD KIT

RK K-2131

NOTE: KIT S-1702 ALSO INCLUDES 233113 SHIFT
LEVER HOUSING GASKET.

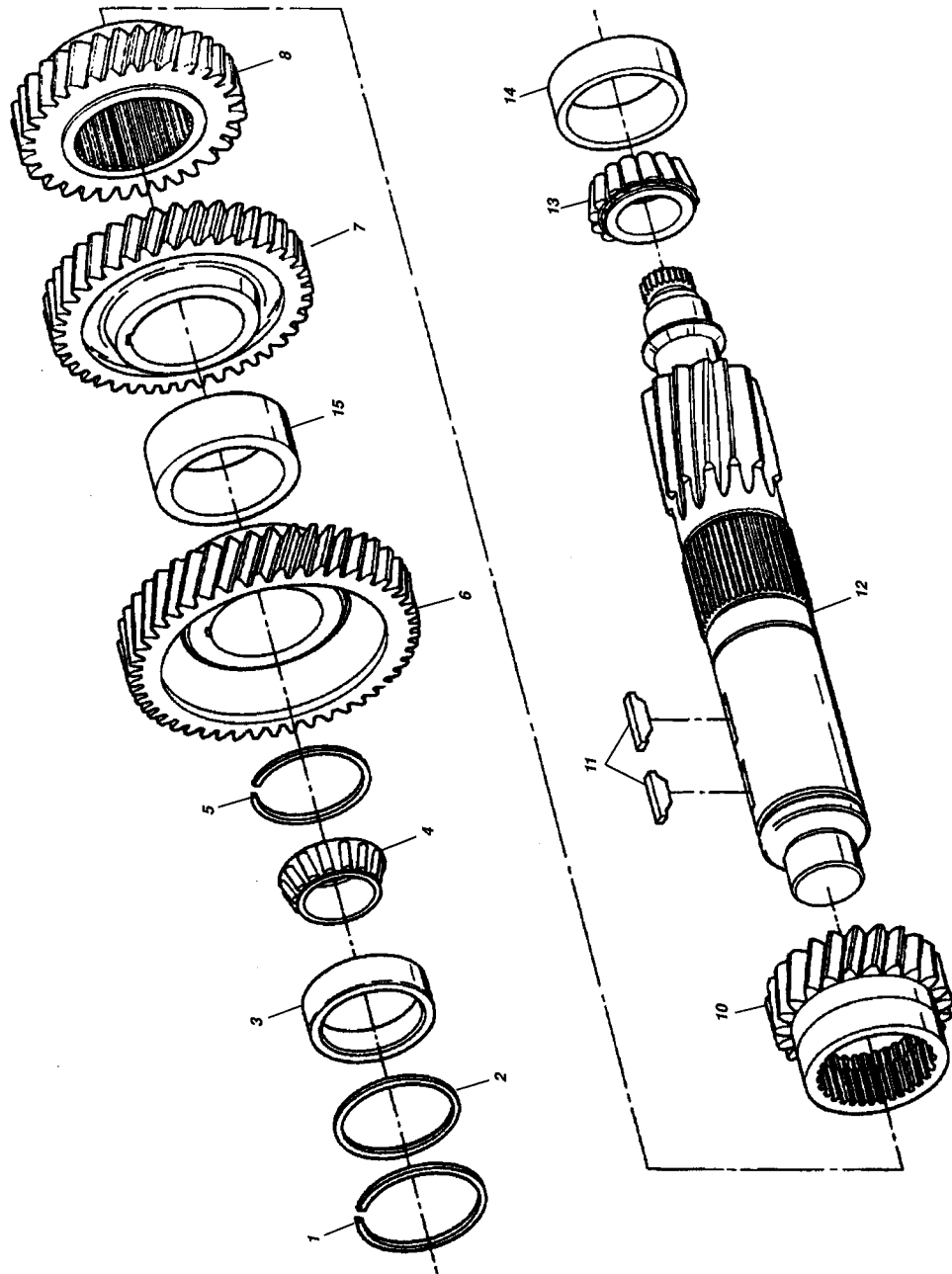
MAINSHAFT
ASSEMBLY



QTY. ITEM USED	PART NO.	DESCRIPTION	KIT REFERENCE	QTY. ITEM USED	PART NO.	DESCRIPTION	KIT REFERENCE	PART NO.	KIT NAME	KIT REFERENCE
1	1 710787	Bearing cone	RK	17	2 3315722	Bearing	RK	K-2257	Synchronizer kit	S ³
2	2 228306	Synchronizer cup	S ⁴	18	1 3315717	Retainer ring (2.415mm)		K-2017	Synchronizer kit	S ⁴
4	1 A-5254	Synchronizer assembly 4th-5th	S ⁴	or 1	3315718	Retainer ring (2.515mm)		K-2012	Small parts kit	S ²
5	1 3315738	Clutch hub		19	1 3315719	Washer	S ²			
6	1 3316189	Gear mainshaft 4th ("A")		20	1 3316178	Gear mainshaft 1st				
or 1	3316319	Gear mainshaft 4th ("B")		21	1 A-5246	Synchronizer assembly 1st-reverse				
7	2 3315737	Bearing	RK	or 1	A-5542	replaced by A-5542				
8	1 3315728	Retainer ring (2.415mm)		or 1	A-5542	Synchronizer assembly 1st-reverse				
or 1	3315729	Retainer ring (2.515mm)		or 1	23547	Sliding clutch				
9	1 3315727	Washer		22	1 3316176	Gear mainshaft reverse	S ²			
10	1 3316187	Gear mainshaft 3rd		28	2 10J06	Ball				
11	2 4124075	Bearing	RK	29	1 3315704	Washer				
12	1 3315730	Synchronizer cup	S ³	30	2 21738	Bearing Spacer				
13	1 3315725	Snap ring	RK	31	4 3315703	Bearing	RK			
14	1 A-5215	Synchronizer assembly		32	1 3313798	Snap ring	RK			
or 1	A-5541	2nd-3rd (order A-5541)	S ³	33	1 3316173	Mainshaft				
15	1 3315723	Clutch hub	S ³	or 1	23320	Mainshaft				
16	1 3316182	Gear mainshaft 2nd	S ³	34	1 21741	Bearing spacer				
				35	1 21740	Bearing spacer				
				36	1 21739	Bearing spacer				
				37	1 5202047	Bearing cone	RK			
BASIC REBUILD KIT										
RK K-2131										

14 COUNTERSHAFT

COUNTERSHAFT ASSEMBLY



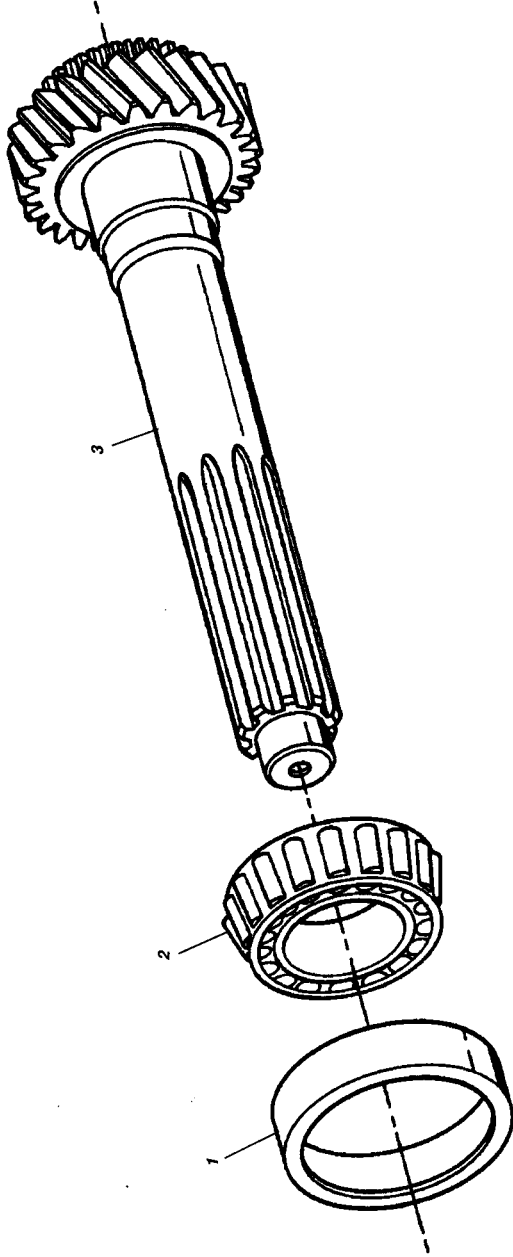
ITEM	QTY. USED	PART NO.	DESCRIPTION	KIT REFERENCE
1	1	3315686	Snap ring	RK
2	1	3315687	Washer	
3	1	1313645	Bearing cup	RK
4	1	791943	Bearing cone	RK
5	1	3315751	Retainer ring (2.64mm)	
	or	3315752	Retainer ring (2.415mm)	
6	1	3316196	Gear countershaft drive	
7	1	3316198	Gear countershaft 4th ("A")	

ITEM	QTY. USED	PART NO.	DESCRIPTION	KIT REFERENCE
8	1	3316321	Gear countershaft 4th ("B")	
10	1	3316200	Gear countershaft 3rd	
11	2	3316202	Gear countershaft 2nd	
12	2	230292	Key	S ²
13	1	3316194	Countershaft	
14	1	658981	Bearing cone	RK
15	1	660181	Bearing cup	RK
	15	3316251	Spacer	

PART NO.	KIT NAME	KIT REFERENCE
K-2012	Small parts kit	S ²
BASIC REBUILD KIT		
RK	K-2131	

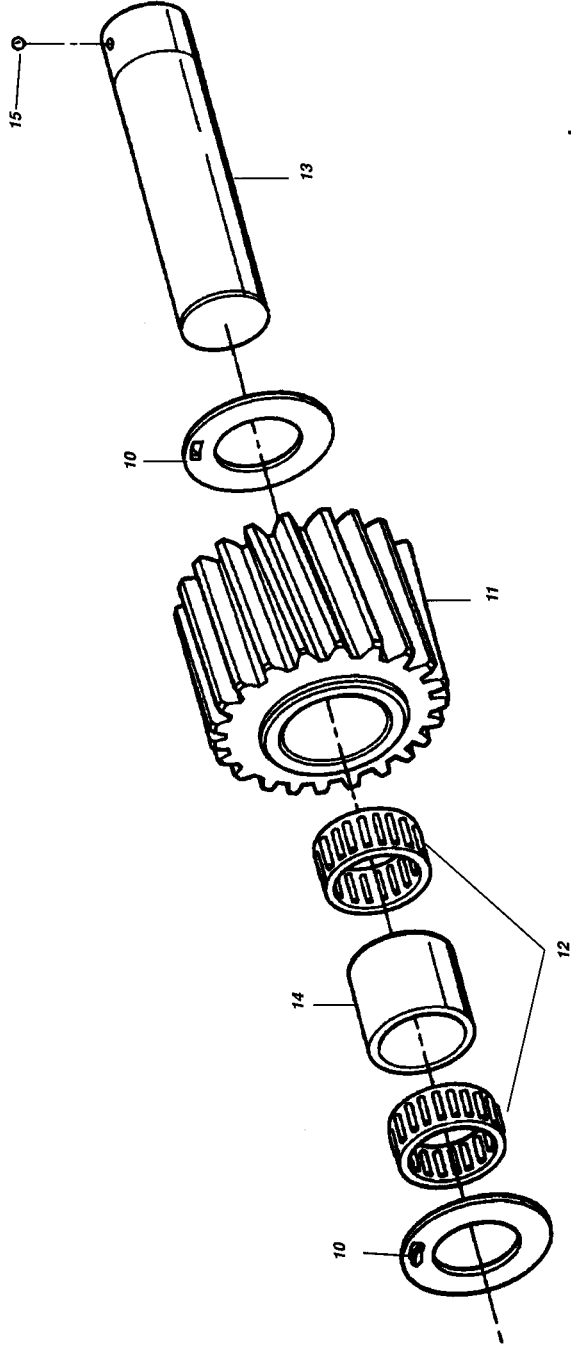
16 DRIVE GEAR - IDLER

DRIVE GEAR ASSEMBLY



Cut 6392-4/86C

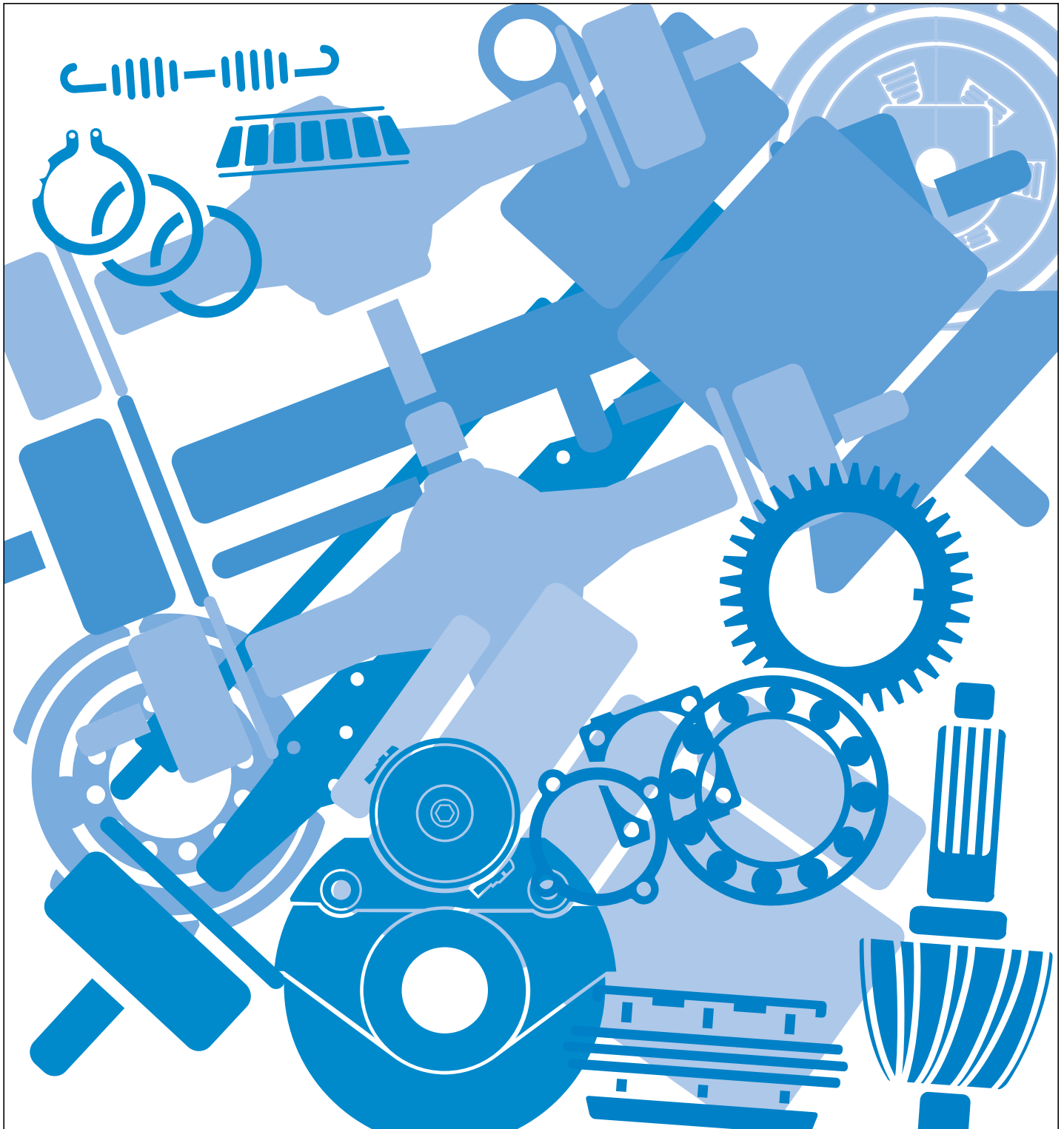
REVERSE IDLER GEAR ASSEMBLY



Cut 6378-6/86C

ITEM	QTY. USED	PART NO.	DESCRIPTION	KIT REFERENCE
1	1	675250	Bearing cup	RK
2	1	742259	Bearing cone	RK
3	1	—	For input shaft and drive gear information see page 7	
10	2	3315673	Washer	
11	1	3316163	Gear idler	
12	2	3315674	Bearing	RK
13	1	3315672	Idler shaft	
14	1	3315676	Spacer	
15	1	10J06	Ball	

BASIC REBUILD KIT
RK K-2131



Copyright Eaton and Dana Corporation, 2002. EATON AND DANA CORPORATION hereby grants its customers, vendors, or distributors permission to freely copy, reproduce and/or distribute this document in printed format. THIS INFORMATION IS NOT INTENDED FOR SALE OR RE-SALE, AND THIS NOTICE MUST REMAIN ON ALL COPIES.



National Institute for
**AUTOMOTIVE
SERVICE
EXCELLENCE**

Roadranger®

MORE TIME ON THE ROAD

The Roadranger® System is an unbeatable combination of the best products from Eaton and Dana – partnering to provide you the most advanced, most trouble-free drivetrain in the industry. And it's backed by the Roadrangers – the most experienced, most expert, most accessible drivetrain consultants in the business.

For spec'ing or service assistance, call 1-800-826-HELP (4357) 24 hours a day, 7 days a week, (Mexico: 001-800-826-HELP (4357)) for more time on the road. Or visit our web site at www.roadranger.com.



EAT•N

One Great Drivetrain from Two Great Companies

TRIP-0140
11/02 PDF
Printed in USA