



## Eaton Fuller RTO-14109A-ATE Transmission Parts Manual

This is Eaton Fuller RTO-14109A-ATE Transmission parts manual brought to you by Pro Gear and Transmission to assist you identifying the parts for your Eaton / Fuller transmission unit.

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# Illustrated Parts List

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**RTO-14109A-ATE**  
**November 2008**

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## How To Use The Illustrated Parts List

The information contained in this document is subject to frequent updates. Therefore, for the latest information available, please visit the interactive Electronic Parts Catalog at [www.roadranger.com/epc](http://www.roadranger.com/epc).

### Model Designation or Nomenclature

- For information regarding Model Designation and Nomenclature, visit [www.roadranger.com](http://www.roadranger.com).

### Kits and Assemblies (K/A's)

- Kits and Assemblies contain groups of individual or assembled parts developed for optimal replacement or repair of a service problem.
- Kits and Assemblies are shown with applicable parts groupings in the parts listings.

### Identifying Kits and Assemblies

A- Part numbers beginning with the letter 'A' are pre-assembled Production Assemblies

K- Part numbers beginning with the letter 'K' are kits that are not assembled

S- Part numbers beginning with the letter 'S' are pre-assembled Service Assemblies

- Note: Some Production Assemblies do not begin with a letter prefix (Midrange only).

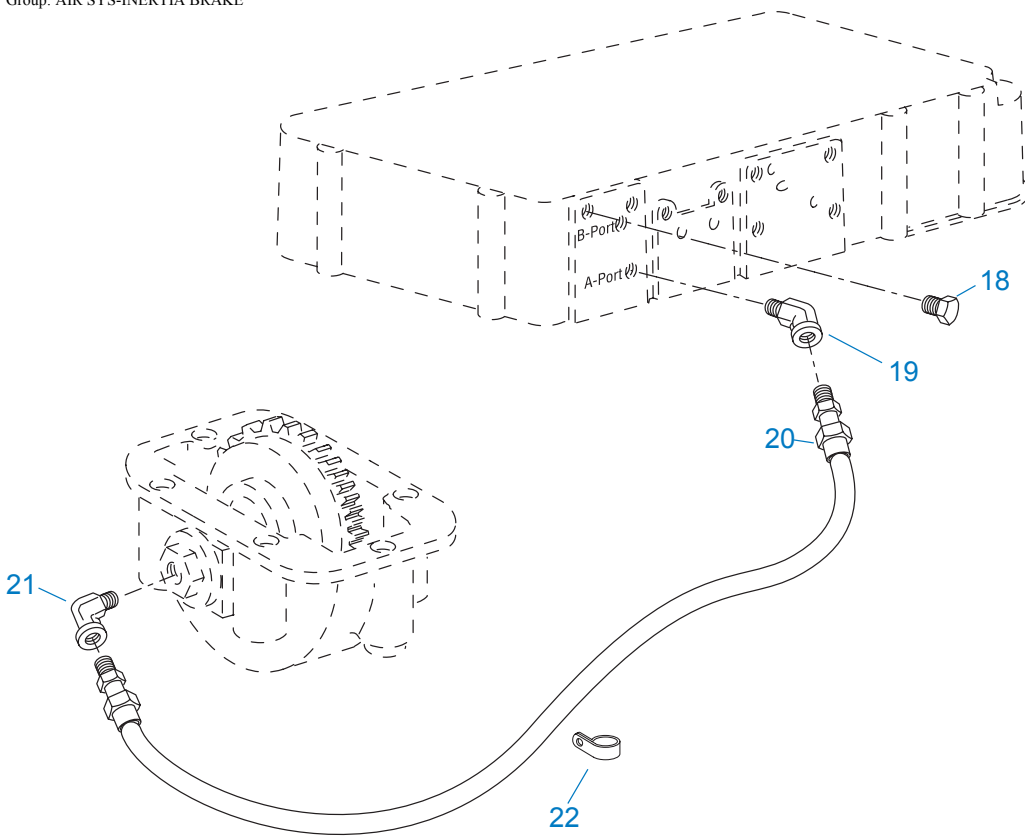
### Illustrations

- Illustrations show parts in assembly groups.
- Item numbers on illustrations correspond with parts listings on pages adjacent to the illustration.
- Notes are included on illustrations where additional information is needed.

### Parts Listing

Parts listings are defined by parts groupings and are broken down by service assemblies. Parts listings identify a part for servicing with the following categories

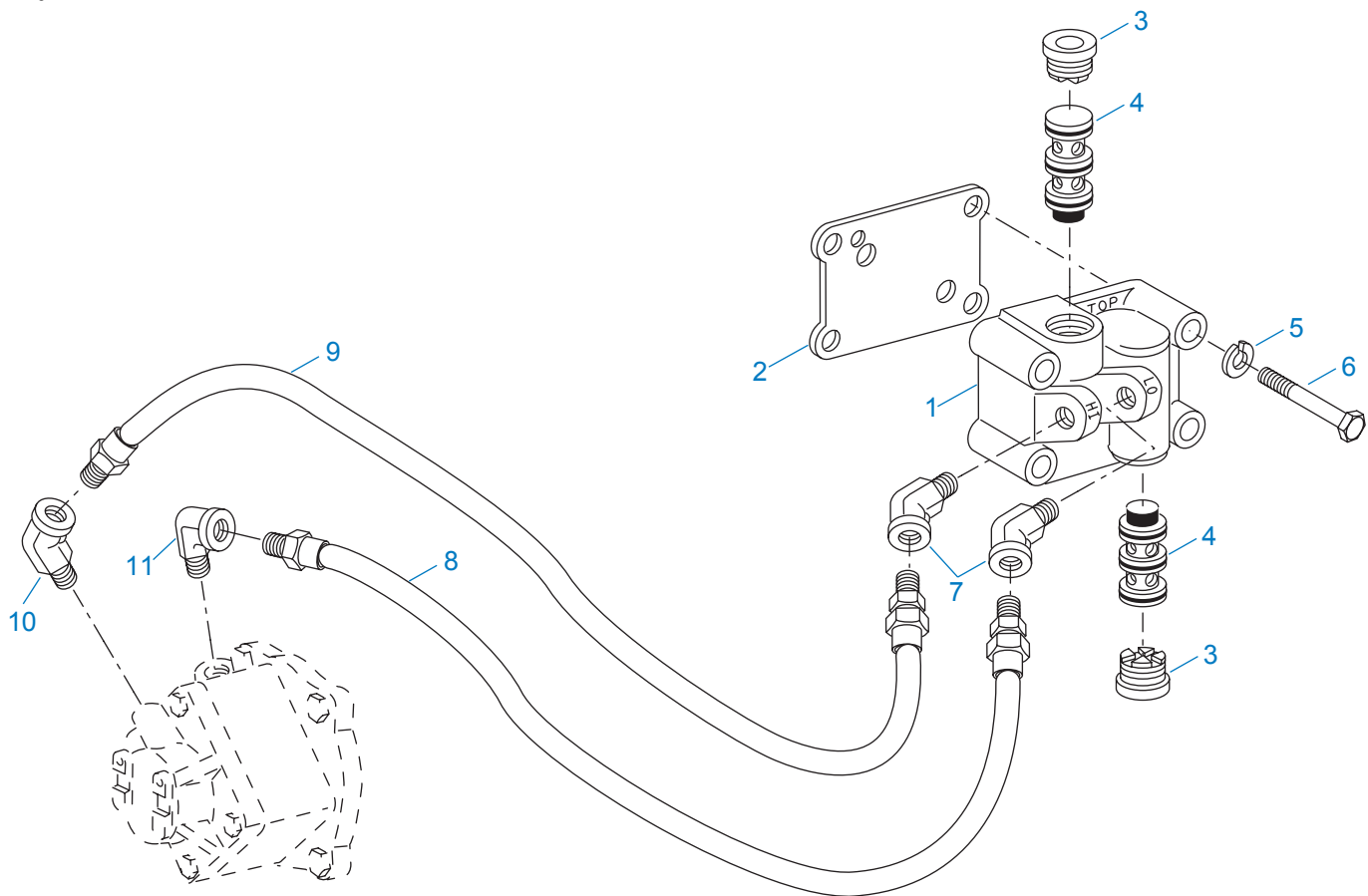
- **Item Number** - corresponding with numbers on illustrations for part identification.
- **Current Part** - identifies part as it is available for service.
- **Description** - specifies part name or description.
- **Replaced Part** - quantity quantity required for assembly.
- **Quantity** - defines unique characteristics or requirements.
- **Notes** - indicates Kits or Assemblies that contain a particular part.
- **Kits/Assy's Where Used**



Note: 3 options are available for mounting Inertia Brake – Hose Assy requirements differ.  
 See parts listing for more information  
 20120-11-93

**AIR SYS-INERTIA BRAKE**

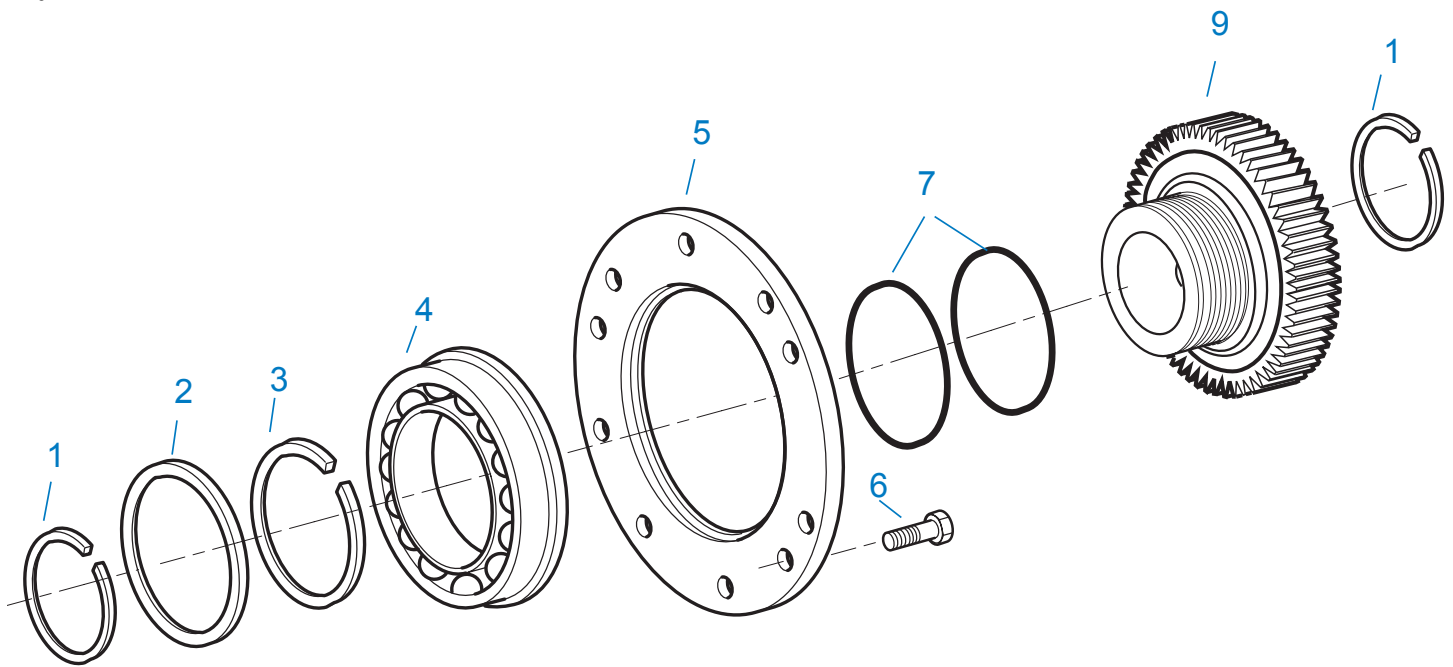
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
18	X-12-210	PIPE PLUG		1	1/8"	
19	12880	ELBOW		1	1/8"	
20	55506	HOSE ASSY		1	18" - ROTATED 6 BOLT POSITION	
20	55508	HOSE ASSY		1	30" - 8 BOLT POSITION	
20	55525	HOSE ASSY		1	17" - 6 BOLT POSITION	
21	12845	ELBOW		1	1/8"	
22	11665	CLAMP		1		



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### AIR SYS-RANGE

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	K-2979	RANGE VALVE KIT	A - 5363	1		
2	22551	GASKET		1		K-2172,K-2979
3	22639	PLUG		2		
4	4300810	INSERT VALVE	22641 ,4303615	2		
5	X-3-500	LOCKWASHER		4	5/16"	
6	X-8-546	SCREW		4	5/16"-18X2"	
7	12880	ELBOW		2	1/8"	
8	55525	HOSE ASSY		1	17"	
9	55506	HOSE ASSY		1	18"	
10	12880	ELBOW		1	1/8"	
11	12845	ELBOW		1	1/8"	

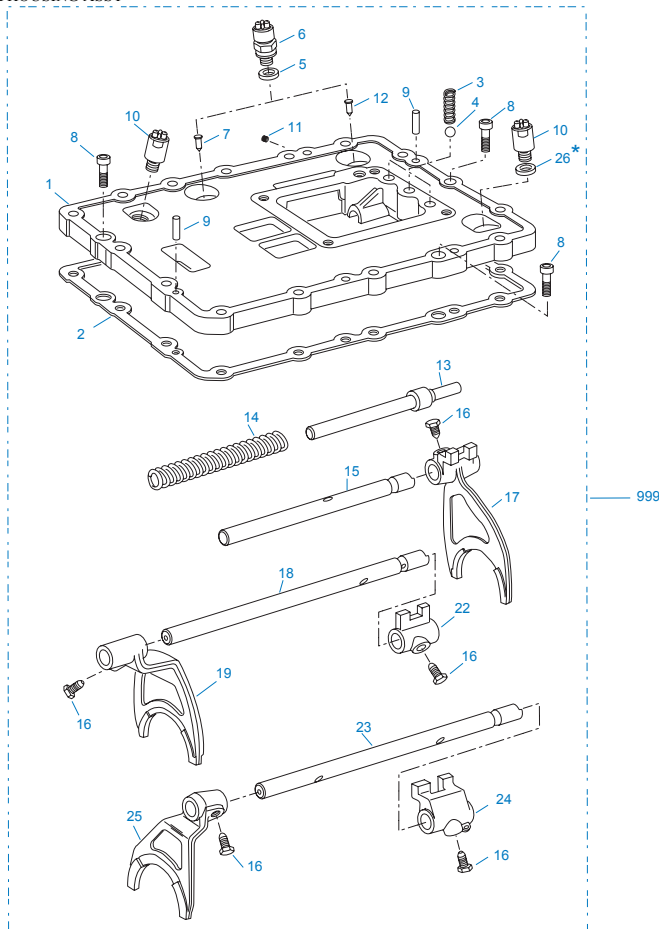


10482-12/92 Aux DG

### AUXILIARY DRIVE GEAR

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	16763	SNAP RING		2		K-2289,K-2775,K-2776,K-2830
2	21320	SNAP RING RETAINER		1	RTO ONLY	K-2830
3	16628	SNAP RING		1		K-2830
4	5566507-BOX	BEARING	5566504,5566507	1		K-2289,K-2775,K-2776
5	16138	BEARING RETAINER		1		
6	X-8-645	CAPSCREW		6	3/8"-16X1"	
7	17453	-O- RING		2		K-2289,K-2426,K-2630,K-2775,K-2776
9	K-2426	NO LONGER AVAILABLE	4300657	1		

Group: BAR HOUSING ASSY



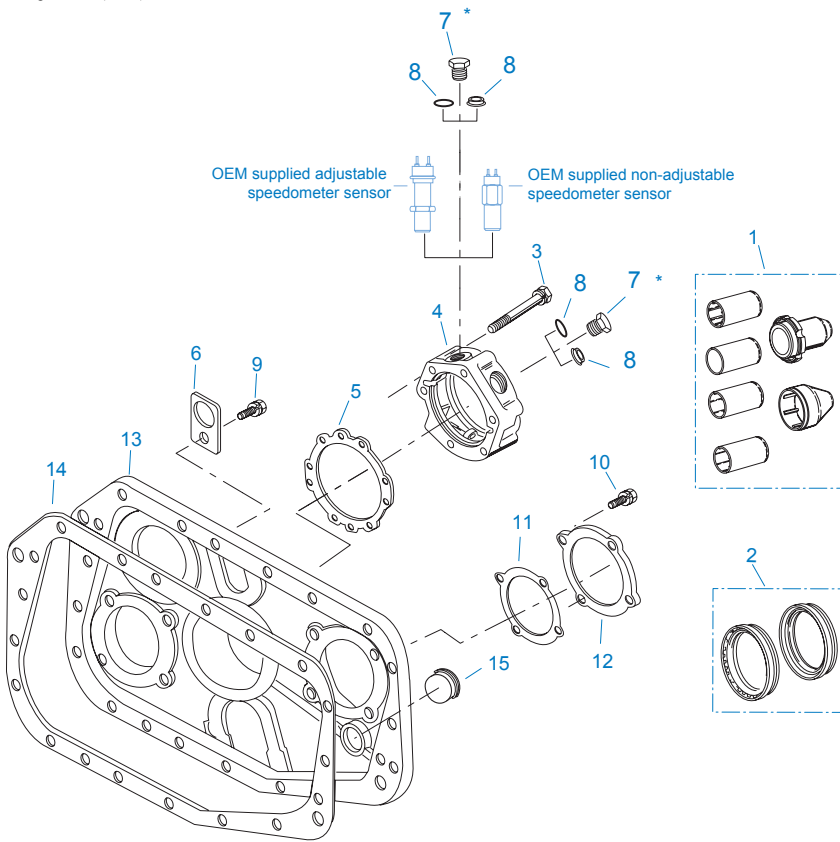
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\* Spacer not applicable to all models - refer to parts listing.

## BAR HOUSING ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	K-2754	SHIFT BAR HSG ASSY	22596	1	HOUSING ONLY	
2	4302676	GASKET	14918	1		K-2172,K-2754,S-1876
3	1069	SPRING		3		K-2775,K-2776,K-2830,S-1876
4	X-14-800	STEEL BALL		3	1/2"	
5	15900	GASKET		2		K-2633,S-1876
6	691744	SHIFT SENSOR SWITCH	22565	2		K-2633,S-1876
7	691316	ACTUATING SWITCH PIN	23112	1		S-1876
8	X-8-691	CAPSCREW		3	3/8"-16X1"	
9	62516	ROLL PIN	62521	2		S-1876
10	K-2980	SENSOR UPDATE KIT	22567 ,K - 2631	2		
11	X-12-102	PLUG		1		
12	K-3271	NEUTRAL SWITCH KIT	22603	1		
13	691314	ACTUATING SHAFT	22601	1		K-3271,S-1876
14	22604	SPRING		1		S-1876
15	22600	YOKE BAR		1	LOW/REVERSE	S-1876
16	3220	LOCKSCREW		5		S-1876
17	22434	YOKE		1	LOW/REVERSE	S-1876
18	22593	YOKE BAR		1	1ST/2ND	S-1876
19	691600	SHIFT YOKE	4302994	1	1ST/2ND	S-1876
22	14658	SHIFT BLOCK		1	1ST/2ND	S-1876
23	22594	YOKE BAR		1	3RD/4TH	S-1876
24	4303273	SHIFT BLOCK	22602	1	3RD/4TH	S-1876
25	691601	SHIFT YOKE	4302212	1	3RD/4TH	S-1876
26	23166	SPACER		1	USE FOR RTO,B-RATIO,ATE MODELS ONLY	K-2980
999	S-1876	SHIFT BAR HSG ASSY	22596	1	COMPLETE	



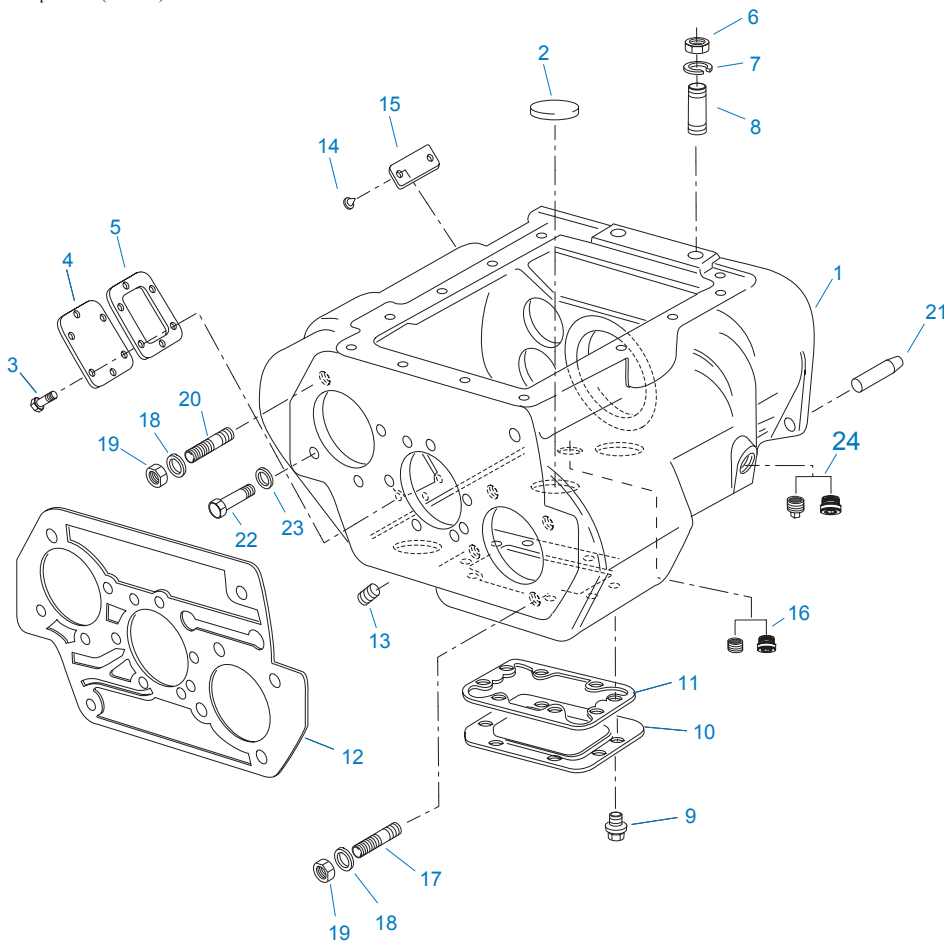


\* Note — Items 7 & 8 / Magnetic Speedometer Openings:  
 Use 13679 "O" ring w/ OEM supplied adjustable speedometer sensor  
 and 20225 "O" ring w/ OEM supplied non-adjustable speedometer sensor or Eaton part #20224 Plug  
 20525-11-93

## CASE (AUX)

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	K-3651	OIL SEAL TOOL KIT		1		
2	K-2262	OIL SEAL W/SLINGER	19109 20807 20808	1	"FOR MECHANICAL COVER"	K-2289,K-2775,K-2776
3	X-8L-611	CAPSCREW		6	3/8"-16X3-1/4"	
4	S-2119	REAR BRG COVER ASSY	20048 ,22045 ,4302009 ,4302031 ,S - 1558 S - 1560	1	EXTENDED	
5	15532	GASKET		1		K-2172,K-2262,S- 2113,S-2119
6	23646	LIFTING EYE		1		
7	20224	PLUG-MAGNETIC		2		S-2113,S-2119,S- 2195,S-2199,S-2203
8	20225	-O- RING		2	USE W/20224 PLUG OR OEM SUPPLIED NON-ADJUSTABLE SPEEDOMETER SENSOR NOT TO BE USED WITH 4301954 SEAL	
8	4301954	SENSOR SEAL		2	O-RING NOT REQUIRED	S-2113,S-2119
9	X-8L-602	CAPSCREW		16	3/8"-16X1-1/2"	
9	X-8L-605	CAPSCREW		1	3/8"-16X3"	
9	X-8L-614	CAPSCREW		2	3/8"-16X2"	
10	X-8L-602	CAPSCREW		8	3/8"-16X1-1/2"	
11	22420	GASKET		2		K-2172
12	16770	REAR BEARING COVER		2		
13	21156	REAR HOUSING		1		
14	14335	GASKET		1		K-2172,S-2195,S- 2199,S-2203
15	21073	EXPANSION PLUG		1		

Group: CASE (FRONT)



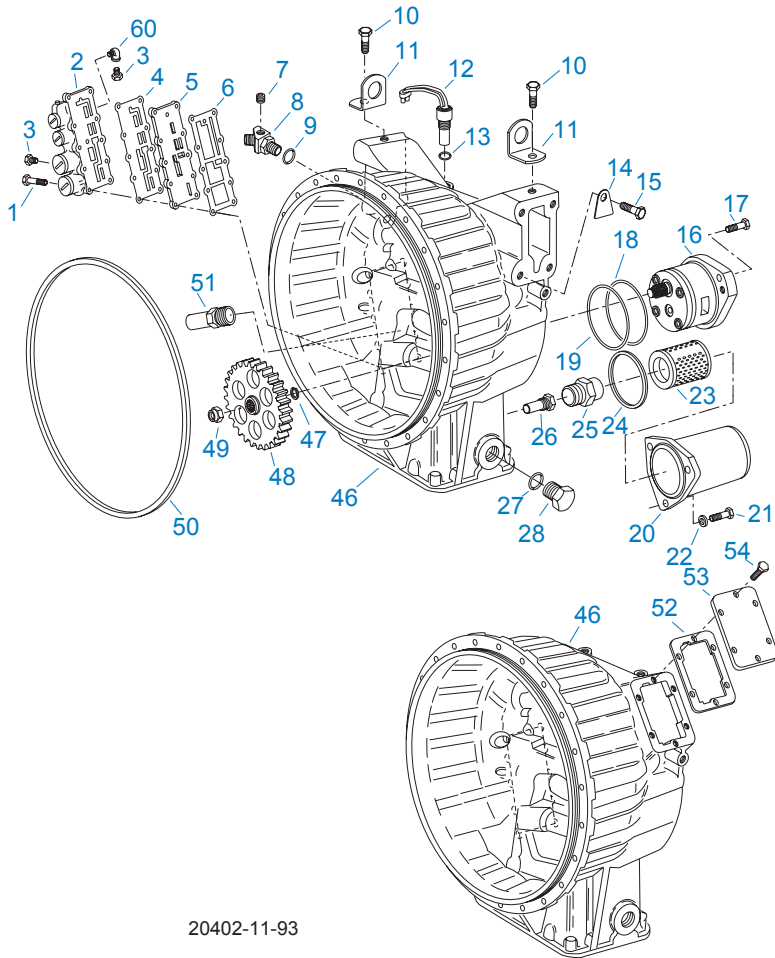
20445-11-93

## CASE (FRONT)

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	S-1785	CASE ASSY	23583	1		
2	14373	MAGNET		3		S-1785
3	X-8-686	CAPSCREW		6	3/8"-16X3/4"	
4	14575	PTO COVER	4302254	1		
5	4305309	GASKET	1684	1		K-2172,K-2388,K-2906
6	X-1-1005	NUT	X 1 1000	2	5/8"-18	
7	X-10-1005	WASHER	X 3 1000 ,X10 1000 ,X10 1004	2	1.23 X 6.60	
8	14554	STUD	1632 ,6579	2	5/8" X 2-3/16"	
9	X-8-725	CAPSCREW		8	7/16"-14X7/8" NOT USED ON ATE MODELS NOT USED ON ATE MODELS	
10	4302809	PTO COVER	16596 ,4300571	1		
11	4305310	GASKET	4302810	1		K-2172
12	22507	GASKET		1		K-2172,K-2388,K- 2504,K-2625
13	X-12-802	PIPE PLUG		1	1/2"	
16	4304023	PLUG	4303747	1	1-1/16" MAGNETIC, O-RING INCLUDED	S-1785
16	X-12-1207	PIPE PLUG	X12 1202 ,X12 1206	1	3/4" MAGNETIC	
17	4302708	STUD	5966	4		
18	X-10-1005	WASHER	X 3 1000 ,X10 1000 ,X10 1004	6	1.23 X 6.60	
19	X-1-1005	NUT	X 1 1000	6	5/8"-18	
20	22916	STUD		2		
21	14334	DOWEL		2		
22	X-8-808	CAPSCREW		4	1/2"-13X1-1/4"	
23	X-10-802	NO LONGER AVAILABLE		4	1/2" PLAIN	
24	4304023	PLUG	4303747	1	1-1/16" MAGNETIC, O-RING INCLUDED	S-1785
24	X-12-2007	PIPE PLUG	X12 2006	1		



Group: CONVERTER HOUSING ASSY

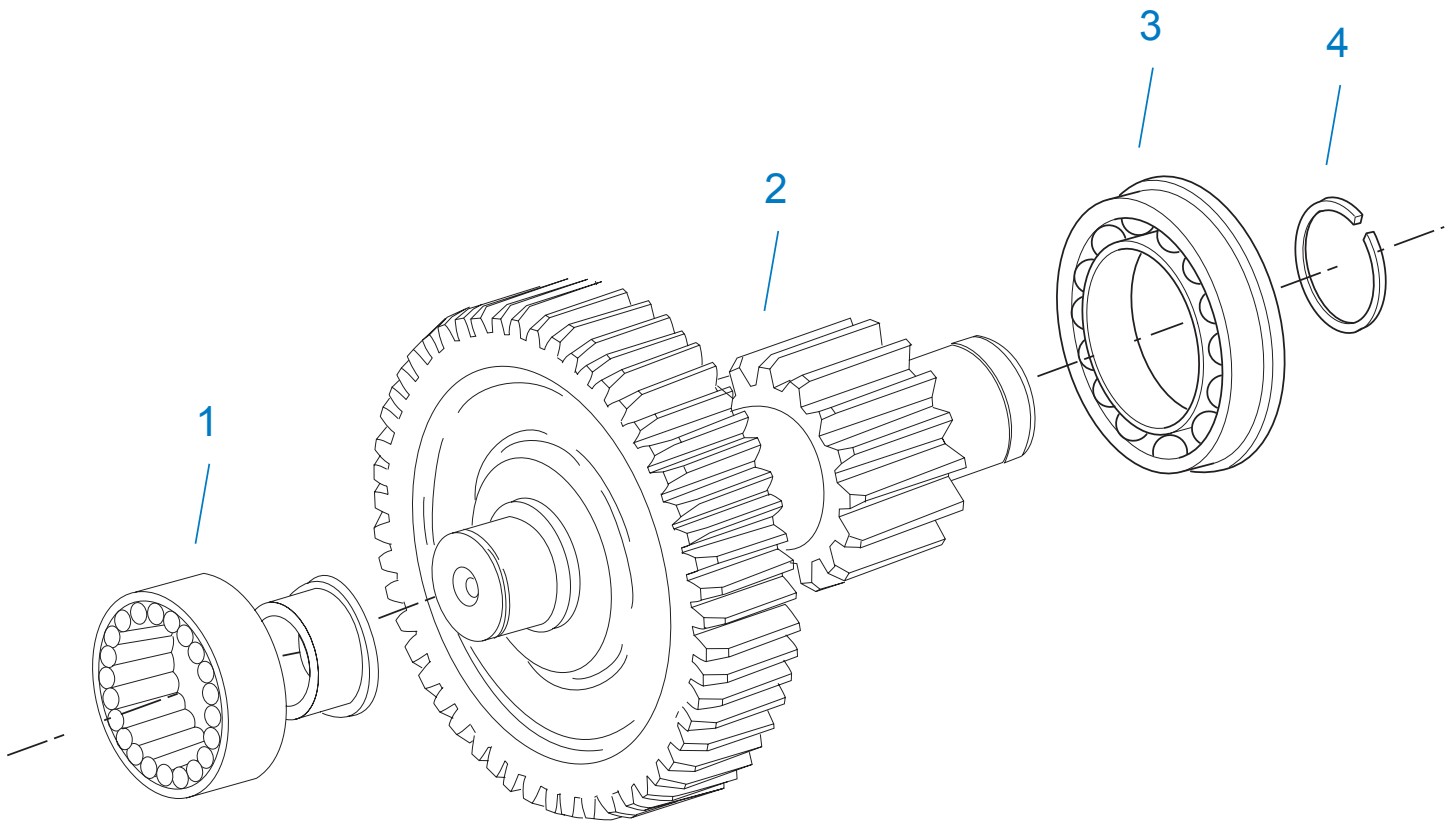


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## CONVERTER HOUSING ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	X-8-6104	CAPSCREW		2	3/8"-16X2-3/4"	
1	X-8L-672	CAPSCREW		6	3/8"-16X3-1/4"	
1	X-8L-681	CAPSCREW		2	3/8"-16X2-3/4"	
2	A-5587	VALVE ASSY		1		
3	X-12-210	PIPE PLUG		4	1/8"	
4	22532	GASKET		1		K-2172,K-2387R,K-2388,K-2625
5	23612	PLATE		1		
6	22534	GASKET		1		K-2172,K-2387R,K-2388,K-2625
7	X-12-802	PIPE PLUG		1	1/2"	
8	K-3226	ELBOW KIT	4300307	1		
9	23109	-O- RING		1		K-2388,K-2625,K-2877,K-2914,K-2915
10	X-8L-601	CAPSCREW		2	3/8"-16X3/4"	
11	23645	LIFTING EYE		2	90 DEG.	
12	K-2632	ENG SPEED SENSOR KIT	22569	1		
13	22504	-O- RING		1		K-2388,K-2625,K-2632
14	23573	INSTRUCTION TAG		3		
15	X-8-1202	SCREW		3	3/4"-10X1"	
16	K-2911	OIL PUMP KIT	4300747 ,4302714	1		
17	X-8C-604	CAPSCREW		2	3/8"-16X1-1/4"	
18	691342	SEAL RING	5568503	1		K-2388,K-2504,K-2625,K-2911
19	22430	-O- RING		1		K-2388,K-2504,K-2625,K-2911
20	23220	FILTER BOWL		1		
21	X-8-6105	SCREW	X 8 6106	3	3/8"-16X1-1/4"	
22	X-3-607	CONICAL WASHER		3	3/8"	
23	22510	OIL FILTER		1		K-2314

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
24	23108	-O- RING		1		K-2314,K-2388,K-2625
25	22512	NIPPLE		1		
26	A-5732	RELIEF VALVE ASSY		1		K-2625,S-2015
27	23029	-O- RING		1		K-2388,K-2625,K-2914
28	23028	PLUG		1		K-2914
46	K-2388	CONVERTER HOUSING KIT	4300323 ,4300377	1	6 BOLT ACCESS	
46	K-2625	#1 CONVERTER HSG KIT		1		
47	4302219	SNAP RING		1		K-2911
48	4302216	PUMP GEAR		1		
49	X-1-1008	NUT		1	5/8"-18	
50	23487	SEAL RING		1		K-2172,K-2388,K-2398,K-2504,K-2990
51	A-7119	FILTER BYPASS VALVE ASSY	A - 6067 A - 6393	1		K-2387R,K-2625,S-2015
52	4305309	GASKET	1684	1		K-2172,K-2388,K-2906
53	14575	PTO COVER	4302254	1		
54	X-8-686	CAPSCREW		6	3/8"-16X3/4"	
60	12845	ELBOW		2	1/8"	



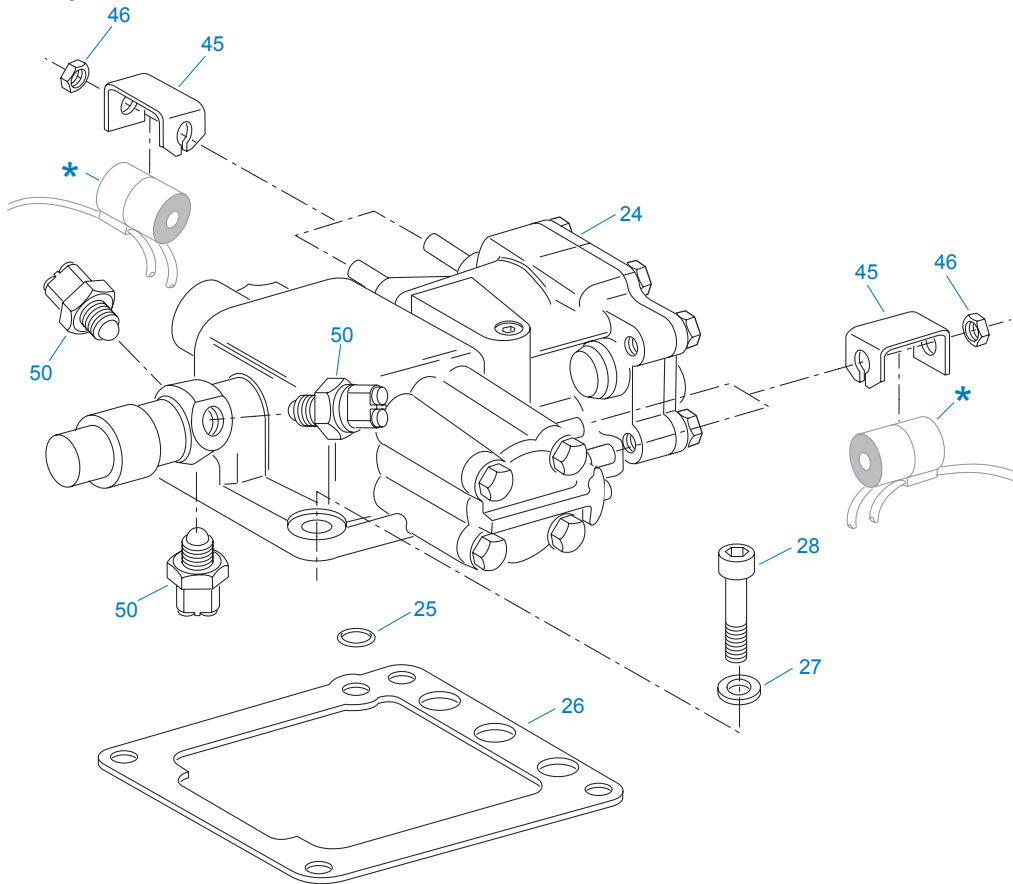
10442-4/92 Aux CS

**COUNTERSHAFT & BRGS(AUX)**

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	8879	BEARING		2		K-2289,K-2775,K-2776,S-2195,S-2199,S-2203
2	A-4723	WELDED COUNTERSHAFT ASSY		2	C/S 19278 - D/G 19255	
3	81012	BEARING		2		K-2289,K-2776
4	11364	SNAP RING		2		K-2289,K-2776



Group: ECU CONTROLS  
 Sub-Group: AUTO SHIFTER ASSY



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\* Indicates connection for Auto Shifter Harness Assembly

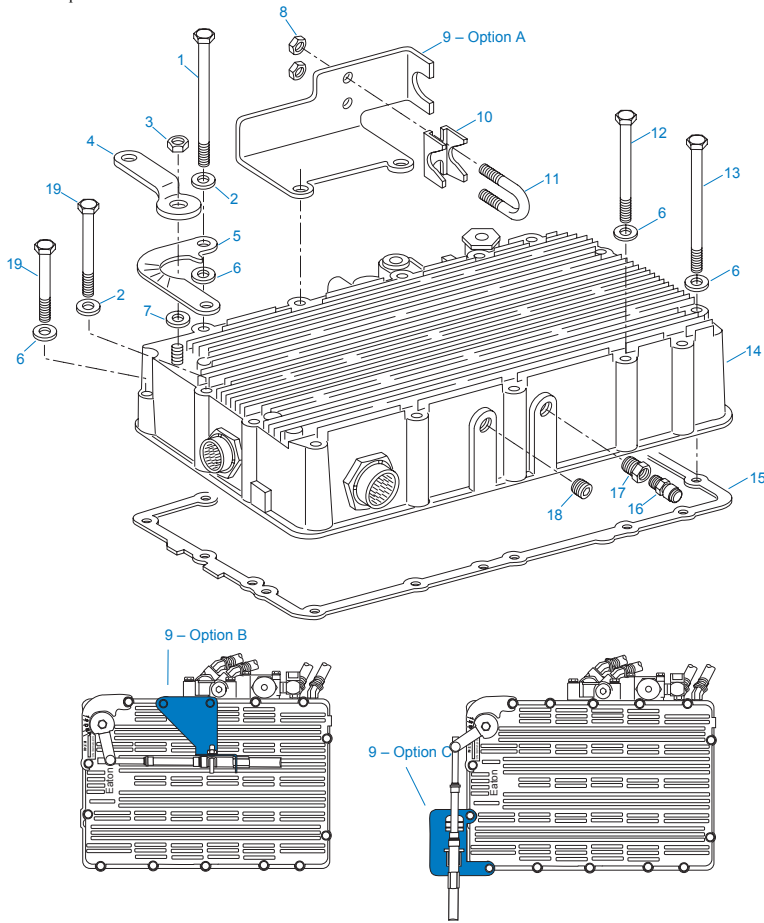
## ECU CONTROLS

### AUTO SHIFTER ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
24	K-2983	AUTO SHIFTER KIT	A - 5517 ,K - 2635	1		
24	K-2983R	REMAN AUTOSHIFTER KIT	K - 3080	1		
25	14197	-O- RING		1		
26	691303	GASKET	22592	1		
27	X-10-600	WASHER		4	3/8"	
28	X-8-6101	CAPSCREW		4	3/8"-16X1-1/2"	
45	22867	YOKE		4		
46	X-16-700	NUT		4	7/16"-20	
50	691744	SHIFT SENSOR SWITCH	22565	3		



Group: ECU CONTROLS  
 Sub-Group: BAR HOUSING COVER ASSY



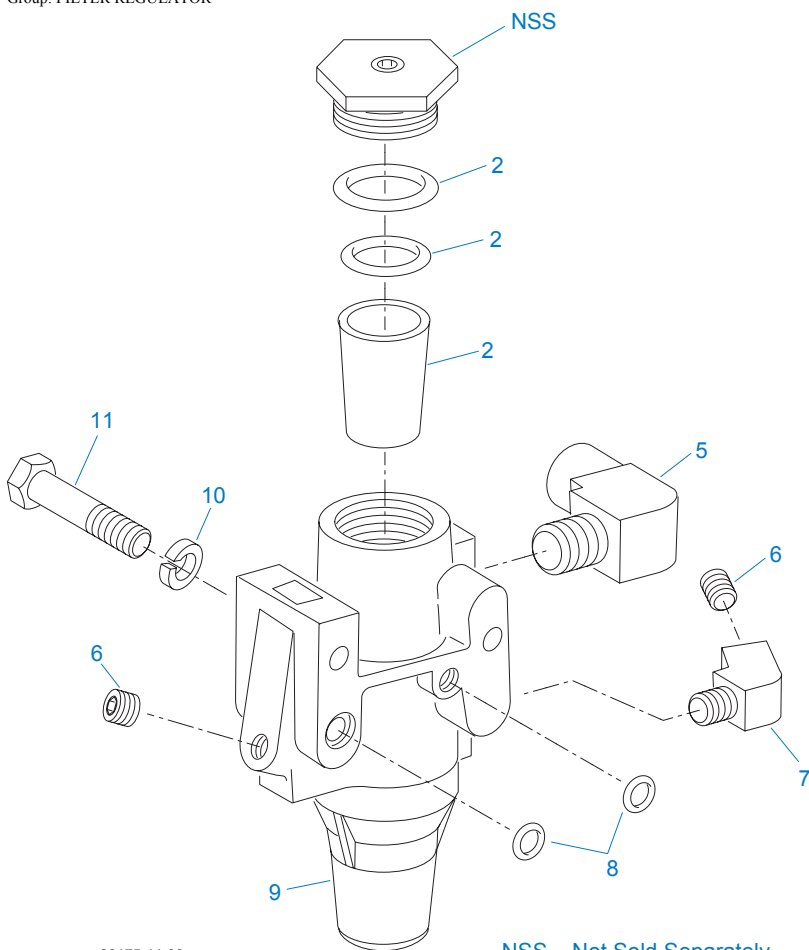
Note: Three bracket options are available for mounting shift cable – item 9.  
 20200-11-93

## ECU CONTROLS

### BAR HOUSING COVER ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
	28.001	CEEMAT ECU P/N CHART		1		
1	X-8-690	CAPSCREW		3	3/8"-16X5"	
2	X-10-605	WASHER		2	3/8"	
3	X-1-604	NUT		1	3/8"-24	
4	4300049	SHIFT CONTROL LEVER		1	5/6 POSITION	
4	4300074	SHIFT CONTROL LEVER		1	7 POSITION	
5	4300042	SHIFT INDICATOR PLATE		1	5 POSITION	
5	4300044	SHIFT INDICATOR PLATE		1	6 POSITION	
5	4300045	SHIFT INDICATOR PLATE		1	7 POSITION	
6	23473	WASHER		15		
7	22544	WASHER		1		
8	X-1-405	NUT	X 9 402	2		
9	4300054	BRACKET		1	OPTION A - USE X-8-690 CAPSCREWS	
9	4300055	BRACKET		1	OPTION C - USE X-8-690 CAPSCREWS	
9	4300056	BRACKET		1	OPTION B - USE 2 PCS 4300051 AND X-8-6103 CAPSCREWS W/THIS BRACKET	
10	4300053	CLAMP		1		
11	4300092	-U- BOLT		1		
12	X-8-6100	CAPSCREW		1	3/8"-16X4-1/8"	
13	X-8-647	CAPSCREW		9	3/8"-16X4-3/4"	
15	4301116	GASKET		1		
16	7935	BREATHER		1		
17	9332	BUSHING		1		
18	X-12-405	PIPE PLUG		1		

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
19	X-8-615	CAPSCREW		2	3/8"-16X4-1/4"	

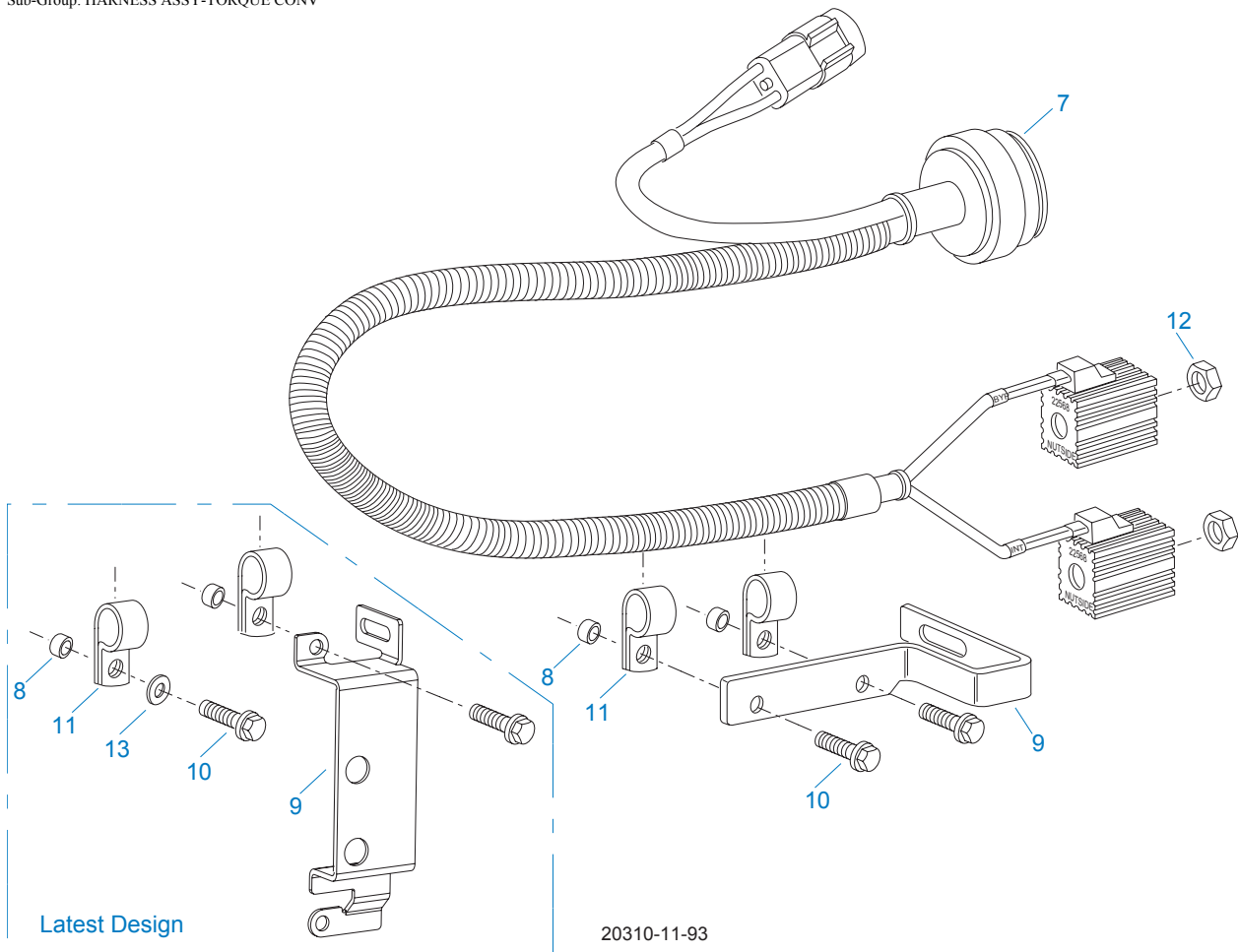


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NSS – Not Sold Separately

## FILTER REGULATOR

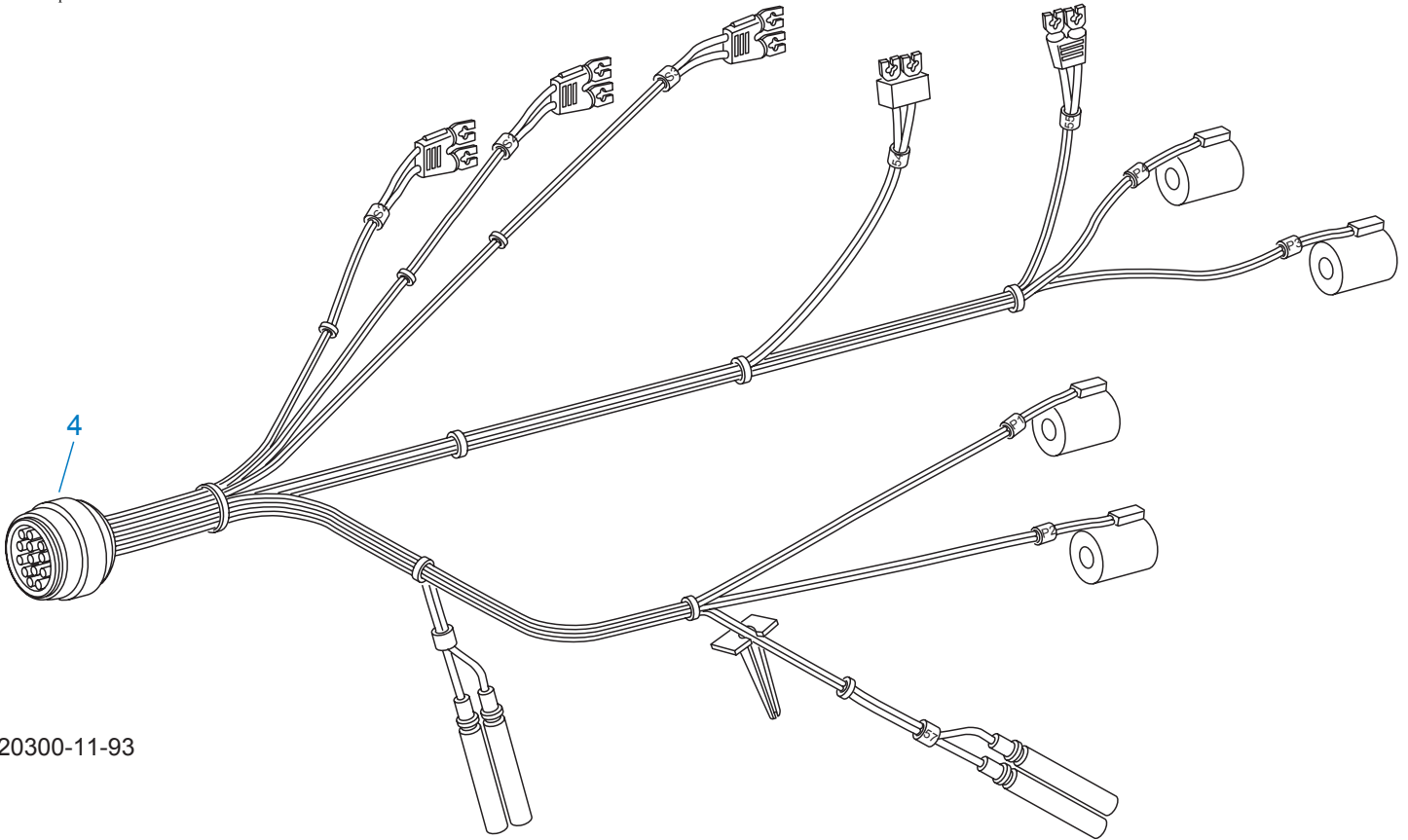
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
2	K-1698	-O- RING/ELEMENT KIT		1	FOR FILTER REGULATOR	
5	23607	ELBOW		1		
6	X-12-208	PIPE PLUG		2	1/8" NPT	
7	12880	ELBOW		1	1/8"	
8	15114	-O- RING		2		K-2301
9	A-5373	FILTER REGULATOR ASSY	22677	1	77 - 82 PSI	K-2301
10	X-3-400	LOCKWASHER		2	1/4"	
11	X-8-440	SCREW		2	1/4"-20X2-1/4"	



## HARNESES & HARDWARE

### HARNESS ASSY-TORQUE CONV

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
7	A-5519	HARNESS ASSY		1		
8	4300689	SPACER		2		
9	K-3201	BRACKET KIT	4300625 ,4303346	1		
10	X-8L-681	CAPSCREW		2	3/8"-16X2-3/4"	
11	11665	CLAMP		2		
12	X-1-809	JAM NUT		2	1/2"-20	
13	X-10-605	WASHER		1	3/8"	
14	K-3201	BRACKET KIT	4300625 ,4303346	1		



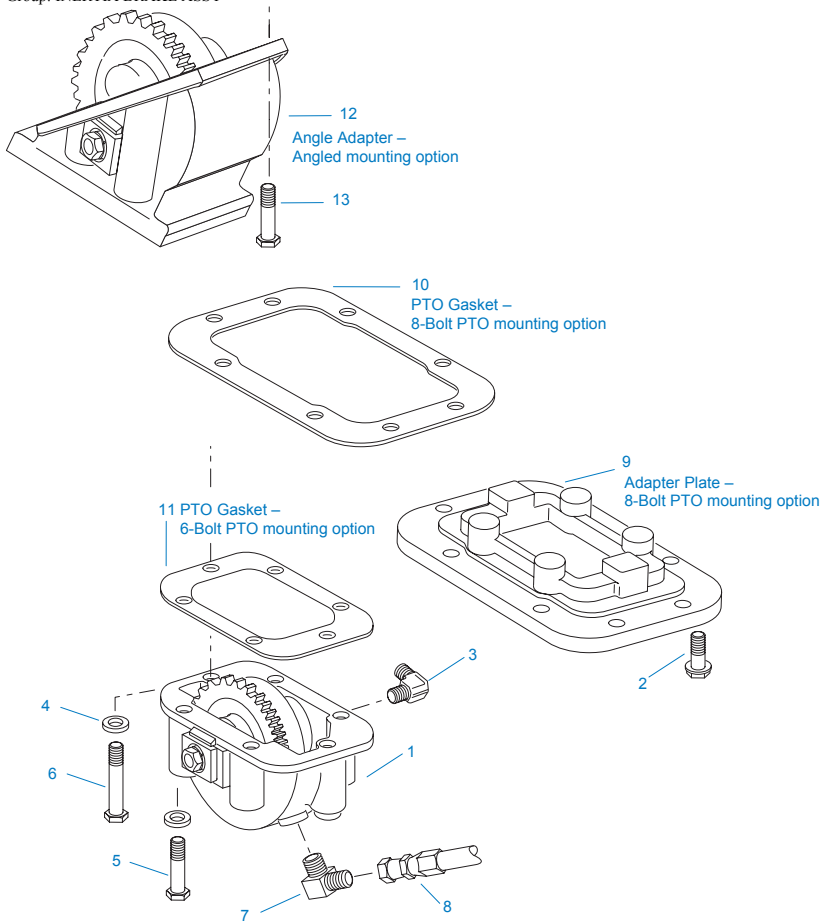
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## HARNESES & HARDWARE

### HARNESS ASY-AUTO SHIFTER

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
4	K-2981	AUTO SHIFTER KIT	A - 5518 ,K - 2384	1		

Group: INERTIA BRAKE ASSY

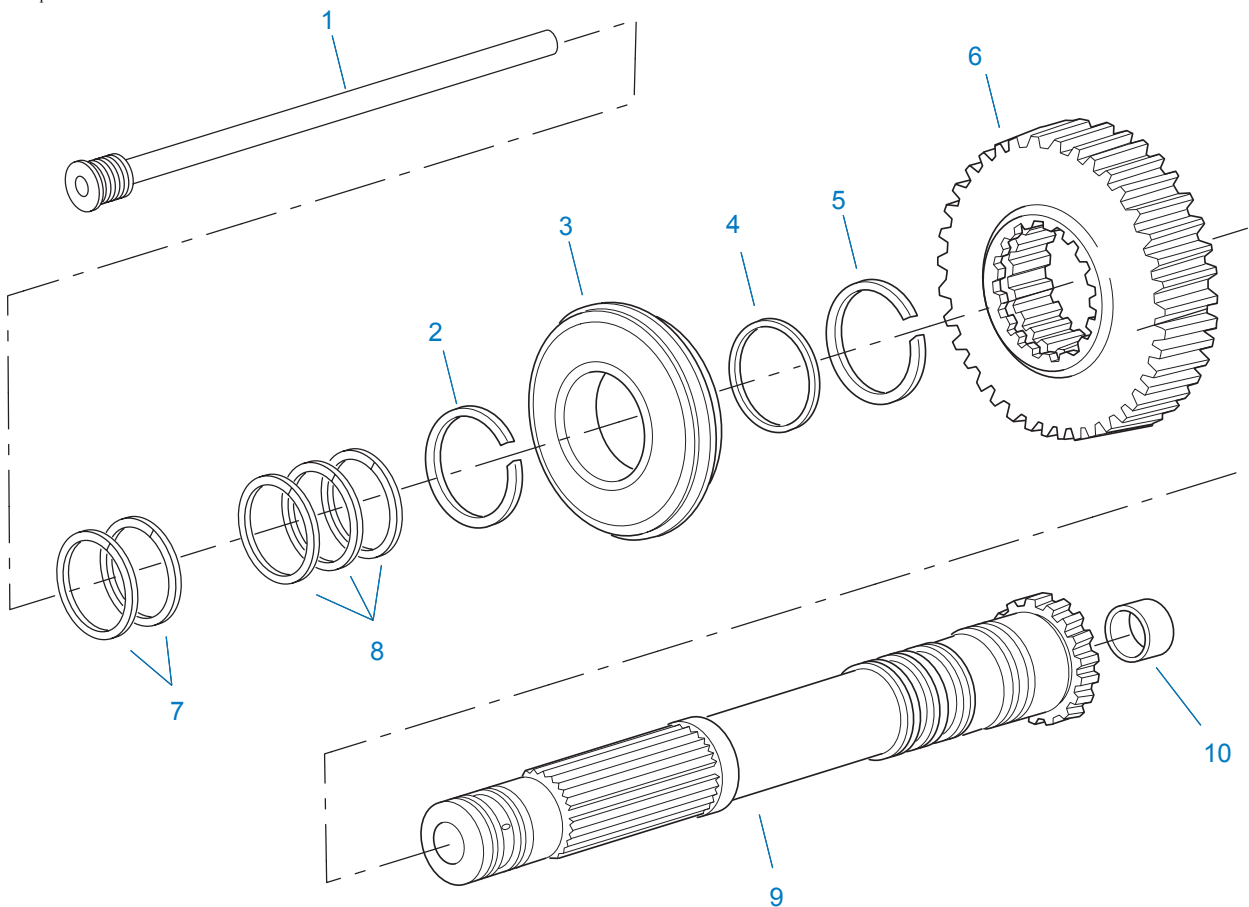


Note: Three mounting options are available for Inertia Brake – See Parts Listing for more information.  
20425-11-93

## INERTIA BRAKE ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	K-2906	INERTIA BRAKE KIT	A - 6200 ,A - 6437	1		
2	X-8L-722	CAPSCREW	X 8L 721	8	7/16"-14X1-1/4"	
3	12845	ELBOW		1	1/8"	
4	23473	WASHER		6		K-2385,K-2633,K-2906,K-2980,K-2981,K-2982,K-2983,S-1876
5	X-8-636	SCREW		4	3/8"-16X3-3/4"	
6	X-8-624	CAPSCREW		2	3/8"-16X4"	
7	22424	ELBOW		1	90 DEGREE	K-2621,K-2642,K-2643,K-2644
7	23486	CONNECTOR		1	STRAIGHT	K-2621,K-2642,K-2643
8	22427	HOSE ASSY		1	6 BOLT POSITION	K-2621,K-2643
8	4302098	HOSE ASSY		1	8 BOLT POSITION	K-2644
8	4302099	HOSE ASSY		1	ROTATED 6 BOLT POSITION	K-2642
9	18471	ADAPTER PLATE		1	8 BOLT POSITION	
10	4305310	GASKET	4302810	1		K-2172
11	4305309	GASKET	1684	1		K-2172,K-2388,K-2906
12	4302464	ANGLE ADAPTER		1	ROTATED 6 BOLT POSITION	
13	X-8L-604	CAPSCREW		6	3/8"-16X1-1/4"	

Group: INPUT SHAFT & DRIVE GEAR



20465-11-93

## INPUT SHAFT & DRIVE GEAR

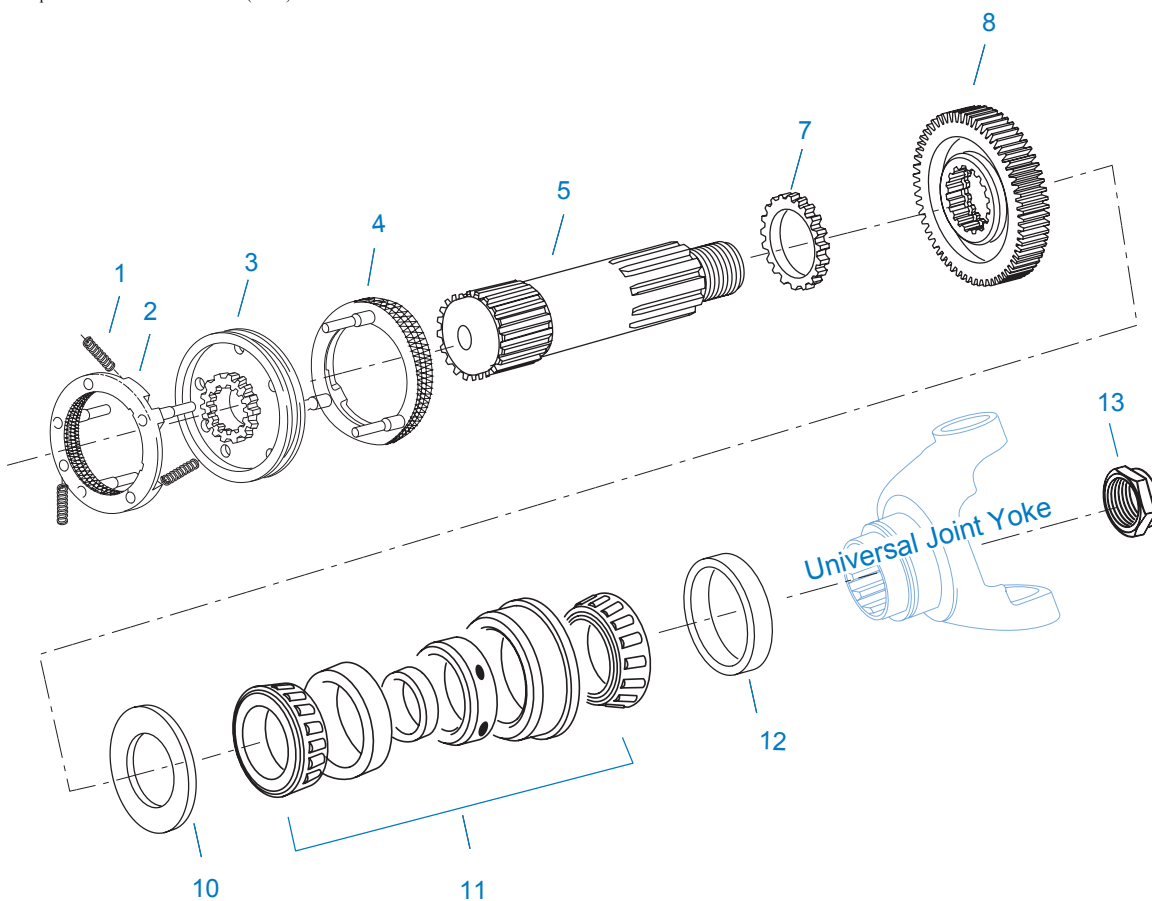
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	23402	INPUT SHAFT OIL TUBE		1		S-1670
2	16980	SNAP RING		1		K-2775,K-2776,K-2830
3	81504	BEARING		1		K-2289,K-2775,K-2776
4	16463	SPACER		1		
5	14750	SNAP RING		1		K-2289,K-2775,K-2776,K-2830
6	21021	DRIVE GEAR	19241	1		
7	22428	PISTON RING		2		K-2398,K-2504,K-2990
8	23438	PISTON RING		3		K-2398,K-2504
9	S-1670	INPUT SHAFT ASSY	23395	1		K-2391,K-2775,K-2776
10	20171	BUSHING		1		K-2289,S-1670

## KITS & ASSEMBLIES

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
K-1698		-O- RING/ELEMENT KIT		1	FOR FILTER REGULATOR	
K-2172		GASKET KIT		1		K-2289,K-2775,K-2776
K-2262		OIL SEAL W/SLINGER	19109 20807 20808	1	"FOR MECHANICAL COVER"	K-2289,K-2775,K-2776
K-2289		BASIC REBUILD KIT		1	ATE	
K-2301		FILTER REGULATOR KIT		1		
K-2314		OIL FILTER KIT		1		K-2990
K-2385		AUTO-SHIFTER KIT		1		
K-2387R		REMAN HYDRA VALVE KIT	K - 2387 ,K - 3085	1		
K-2388		CONVERTER HOUSING KIT	4300323 ,4300377	1		
K-2390		STATOR SUPPORT KIT		1		
K-2391		INPUT SHAFT KIT		1		
K-2392R		REMAN PWR SYNCHRO KIT	K - 3079	1	B-RATIO-AT/ATS	
K-2398		CONVERTOR SEAL KIT		1		K-2390,K-2391,K-2625,K-2646R,K-2647R
K-2403		OIL PAN RETRO KIT		1	STANDARD	
K-2439		KEY & WASHER KIT		1	CONTAINS 3-SIDED KEY	
K-2504		OIL PUMP KIT		1		
K-2621		POWER SYNCO LUBE KIT		1		
K-2625		#1 CONVERTER HSG KIT		1		
K-2630		REPL KIT-DRIVE GEAR	4300548	1	B-RATIO	
K-2632		ENG SPEED SENSOR KIT	22569	1		
K-2633		BALL SWITCH KIT		1		
K-2642		6 BOLT ROTATED LINE KIT		1		
K-2643		6 BOLT OIL LINE KIT		1		
K-2644		8 BOLT OIL LINE KIT		1		
K-2646R		REMAN 16-D CNVTR KIT	K - 3083	1		
K-2647R		REMAN 16-C CNVTR KIT	K - 3082	1		
K-2754		SHIFT BAR HSG ASSY	22596	1	HOUSING ONLY	
K-2775		BASIC OVERHAUL KIT		1	AT/ATS	
K-2776		BASIC OVERHAUL KIT		1	ATE	
K-2781R		REMAN PWR SYNCHRO KIT	K - 3078	1	A-RATIO-AT/ATS	
K-2802		-O- RING KIT-RANGE		1		K-2289,K-2775,K-2776
K-2830		SMALL PARTS KIT		1		
K-2831		CYLINDER KIT-RANGE		1		
K-2874		THROTTLE SENSOR KIT	K - 2325	1	45" CABLE	
K-2875		THROTTLE SENSOR KIT	K - 2505	1	60" CABLE	
K-2876		THROTTLE SENSOR KIT	K - 2324	1	30" CABLE	
K-2877		SUMP TUBE RETURN KIT	K - 2620	1		
K-2911		OIL PUMP KIT	4300747 ,4302714	1		
K-2914		OIL PAN RETRO KIT		1	LOW PROFILE	
K-2915		OIL PAN RETRO KIT		1	OFFSET	
K-2937		COUNTERSHAFT REPL KIT	4300244	1		
K-2980		SENSOR UPDATE KIT	22567 ,K - 2631	1		
K-2981		AUTO-SHIFTER HARNESS KIT	A - 5518 ,K - 2384	1		
K-2982		AUTO-SHIFTER HARNESS KI	K - 2396	1	24 VOLT	
K-2983		AUTO SHIFTER KIT	A - 5517 ,K - 2635	1		
K-2983R		REMAN AUTOSHIFTER KIT	K - 3080	1		
K-2990		16" CONV. REBUILD KIT		1		
K-3651		OIL SEAL TOOL KIT		1		
K-3783		COUNTERSHAFT REPL KIT	20804 ,22411, 4301054, K-2935	1		
S-1670		INPUT SHAFT ASSY	23395	1		K-2391,K-2775,K-2776
S-1676		STATOR SUPPORT ASSY	23397	1		K-2390
S-1785		CASE ASSY	23583	1		
S-1876		SHIFT BAR HSG ASSY	22596	1	COMPLETE	
S-2015		CONVERTER HOUSING ASSY		1		
S-2113		REAR BRG COVER ASSY	4302027	1		
S-2119		REAR BRG COVER ASSY	20048 ,22045 ,4302009	1	EXTENDED	



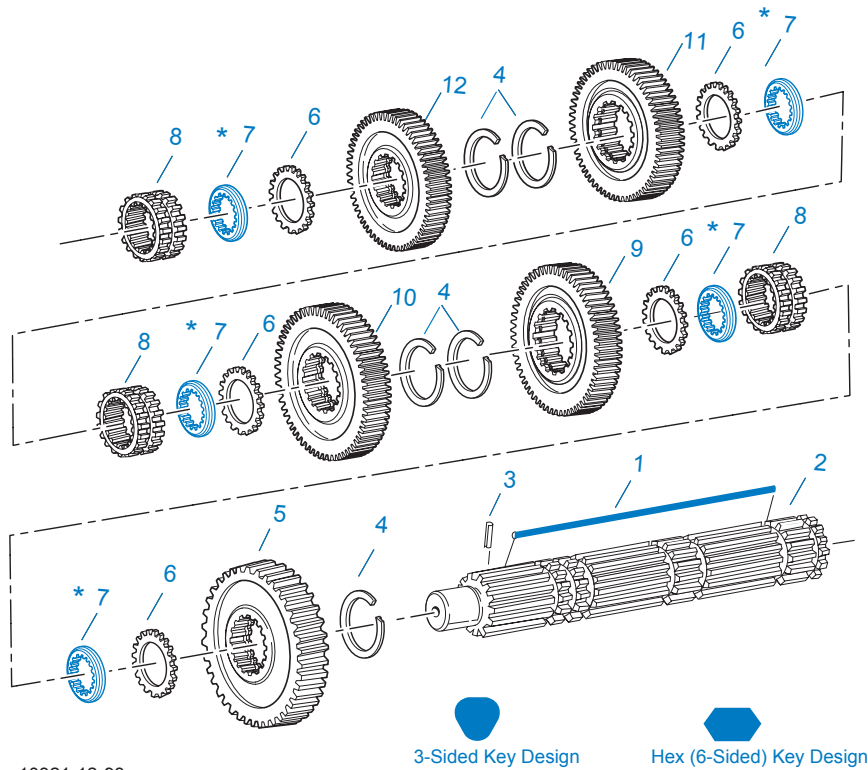
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
			,4302031 ,S - 1558 S - 1560			
	S-2195	RANGE SECTION ASSY		1	B-RATIO-ATE	
	S-2199	RANGE SECTION ASSY		1	A-RATIO-ATE	
	S-2203	RANGE SECTION ASSY		1	B-RATIO-AT/ATS	
	S-2369	OIL PAN COVER ASSY		1	LOW PROFILE	K-2914
	S-2370	OIL PAN ASSY		1	OFFSET	K-2915
	S-2688	MAINSHAFT ASSY	4303404 ,4303913	1		



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### MAINSHAFT & SYNCHRO(AUX)

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	14897	SPRING		3		K-2289,K-2775,K-2776,K-2830
2	A-7331	SYNCHRONIZER ASSY	4304396 ,4304397 ,A - 5917	1	HI RANGE	
3	22915	SLIDING CLUTCH		1		
4	A-7254	SYNCHRONIZER ASSEMBLY	A - 4937 ,A - 5876	1	LO RANGE	
5	19202	MAINSHAFT	4302460	1		
7	23411	SPACER		1		K-2830
8	4300659	REDUCTION GEAR		1		
10	16772	WASHER		1		K-2830
11	15260	BEARING		1		K-2289,K-2775,K-2776
12	20191	ROTOR	16295	1		
13	22254	NUT	11956	1		



10321-12-93

3-Sided Key Design

Hex (6-Sided) Key Design

\* Updating to 3-Sided Key is Recommended.

When Updating to 3-Sided Key Replace all Washers to Match Key Design

Always Use Matching Key and Washer Sets (See Appendix - Mainshaft Washers)

## MAINSHAFT ASSY

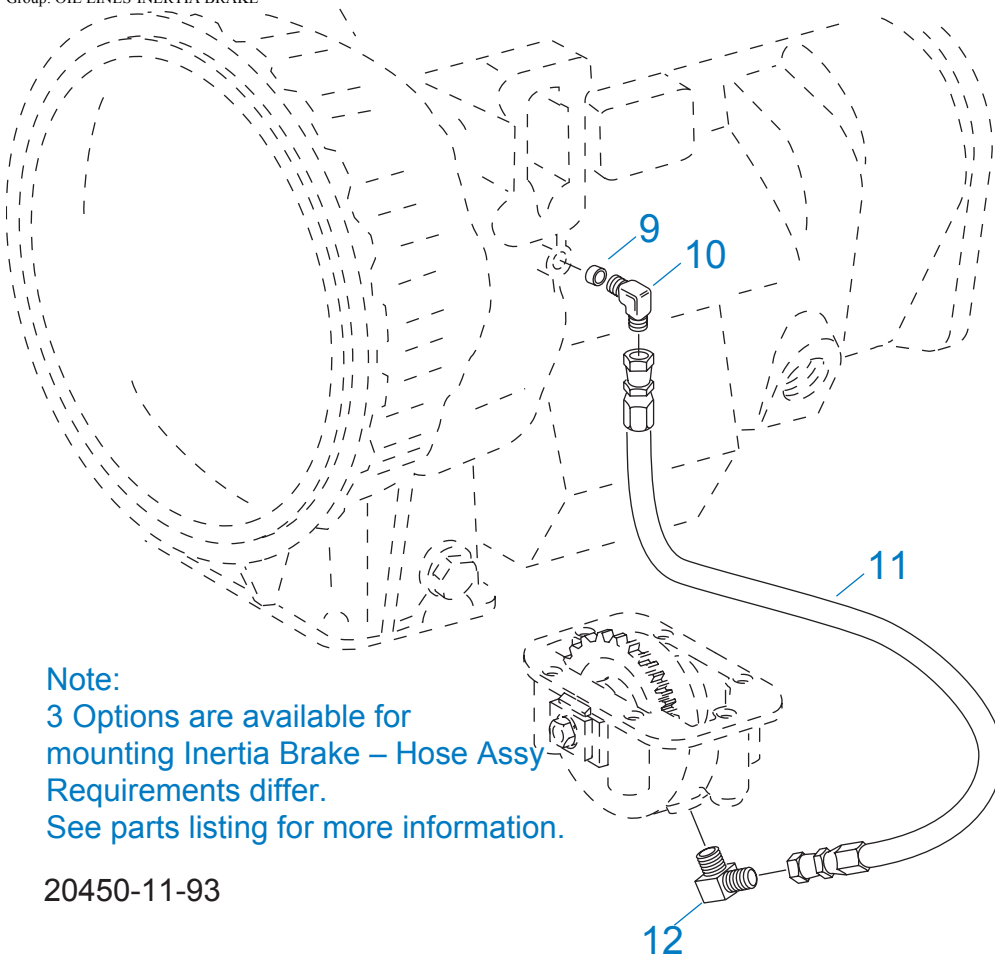
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	4304615	3-SIDED KEY	4300120	1		K-2439,K-2830
1	K-2439	KEY & WASHER KIT		1	CONTAINS 3-SIDED KEY	
2	S-2688	MAINSHAFT ASSY	4303404 ,4303913	1		
3	62504	ROLL PIN		1		S-2688
4	14750	SNAP RING		5		K-2289,K-2775,K-2776,K-2830
5	16756	REVERSE GEAR-MAINSHAFT	22408	1		
6	14749	SPACER		5		K-2830
7	4300382	WASHER .249-WHITE		5		K-2439,K-2830
7	4300383	WASHER .254-GREEN		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	K-2439,K-2830
7	4300384	WASHER .259-ORANGE		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	K-2439,K-2830
7	4300385	WASHER .264-PURPLE		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	
7	4300386	WASHER .269-YELLOW		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	
7	4300387	WASHER .274-BLACK		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	
7	4300830	WASHER .244-BLUE		5	OPTIONAL 4300382-4300387 OR 4300830 USE ANY 5 WASHERS. USE WITH 3-SIDED KEY	K-2439,K-2830
8	22412	SLIDING CLUTCH		3		K-2775,K-2776
9	21502	LO GEAR-MAINSHAFT		1		
10	20389	1ST GEAR-MAINSHAFT	19246	1		
11	20390	2ND GEAR-MAINSHAFT	19614	1		

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
12	20480	OD GEAR-MAINSHAFT		1		

## MISCELLANEOUS

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
	4301065	SHIFT DIAGRAM LABEL		1	5 POS REVERSE FORWARD	
	4301066	SHIFT DIAGRAM LABEL		1	5 POS REVERSE REARWARD	
	4301067	SHIFT DIAGRAM LABEL		1	6 POS REVERSE FORWARD	
	4301068	SHIFT DIAGRAM LABEL		1	6 POS REVERSE REARWARD	
	4301120	SHIFT DIAGRAM LABEL		1	7 POS REVERSE FORWARD	
	4301121	SHIFT DIAGRAM LABEL		1	7 POS REVERSE REARWARD	
	71203	SILICONE LUBE		1	8 OZ (236.59 CC)-FLEET SIZE	
	71204	ADHESIVE SEALANT		1	0.5 CC (SINGLE APPLICATION SIZE)	
	71205	SEALANT		1	2 CC (SINGLE APPLICATION SIZE)	K-2314,K-2775,K-2776,K-2980,K-2990
	71206	SILICONE LUBE		1	4 CC (SINGLE APPLICATION SIZE)	K-2314,K-2802,K-2831

Group: OIL LINES-INERTIA BRAKE



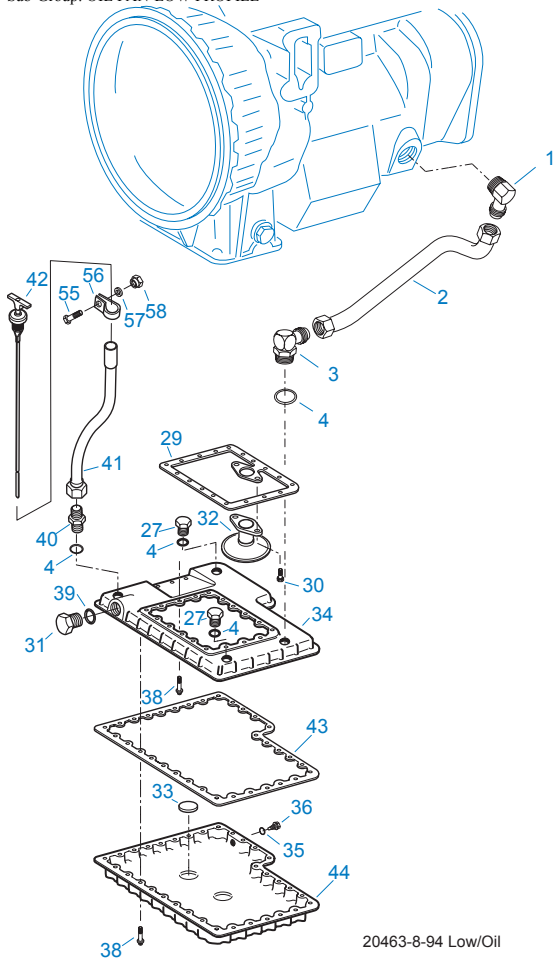
**Note:**  
 3 Options are available for  
 mounting Inertia Brake – Hose Assy  
 Requirements differ.  
 See parts listing for more information.

20450-11-93

**OIL LINES-INERTIA BRAKE**

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
9	22627	OIL RESTRICTOR		1		K-2621,K-2642,K-2643,K-2644
10	4302077	ELBOW		1		
11	22427	HOSE ASSY		1	6 BOLT POSITION	K-2621,K-2643
11	4302098	HOSE ASSY		1	8 BOLT POSITION	K-2644
11	4302099	HOSE ASSY		1	ROTATED 6 BOLT POSITION	K-2642
12	22424	ELBOW		1	90 DEGREE	K-2621,K-2642,K-2643,K-2644

Group: OIL PANS & OIL LINES  
 Sub-Group: OIL PAN-LOW PROFILE

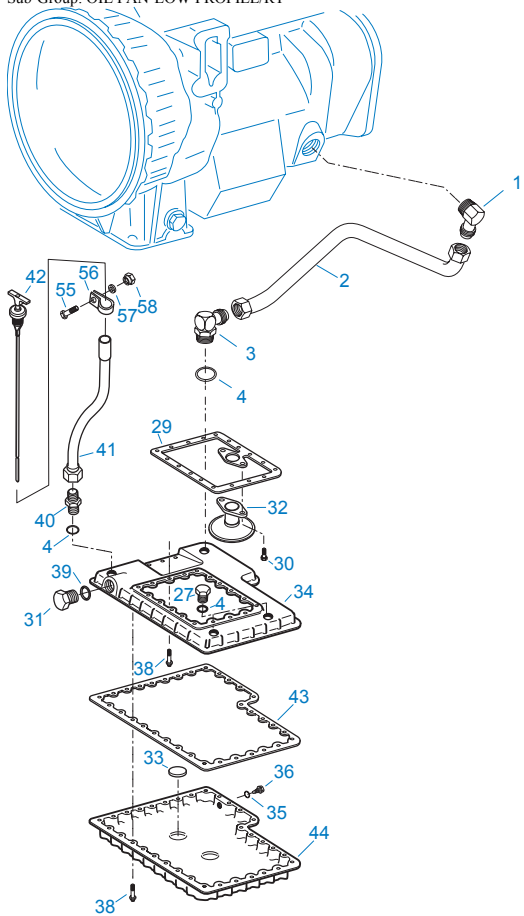


## OIL PANS & OIL LINES

### OIL PAN-LOW PROFILE

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	4301100	ELBOW	23597	1		
2	4302599	SUMP RETURN TUBE LH		1		
3	4302597	ELBOW		1	90 DEGREES	
4	23109	-O- RING		4		
27	22478	PLUG		2		
29	22474	GASKET		1		
30	X-8C-500	CAPSCREW		2	18X1-1/4"	
31	23028	PLUG		1		
32	4302596	OIL TRANSFER TUBE		1		
33	14373	MAGNET		2		
34	4302591	OIL PAN		1		
35	4300484	WASHER		1		
36	4300438	DRAIN PLUG		1		
38	X-8C-550	CAPSCREW		53	5/16"-18X1"	
39	23029	-O- RING		1		
40	22431	CONNECTOR		1		
41	5500511	OIL FILL TUBE		1	STANDARD	
42	5501028	DIPSTICK	5501016	1	STANDARD	
43	4302595	OIL PAN GASKET		1		
44	4302593	OIL COVER		1		
55	X-8-601	CAPSCREW		1	3/8"-16X3/4"	
56	4300626	CLAMP		1		
57	X-10-605	WASHER		1	3/8"	
58	X-9-604	NUT		1	3/8"-16	

Group: OIL PANS & OIL LINES  
 Sub-Group: OIL PAN-LOW PROFILE/RT



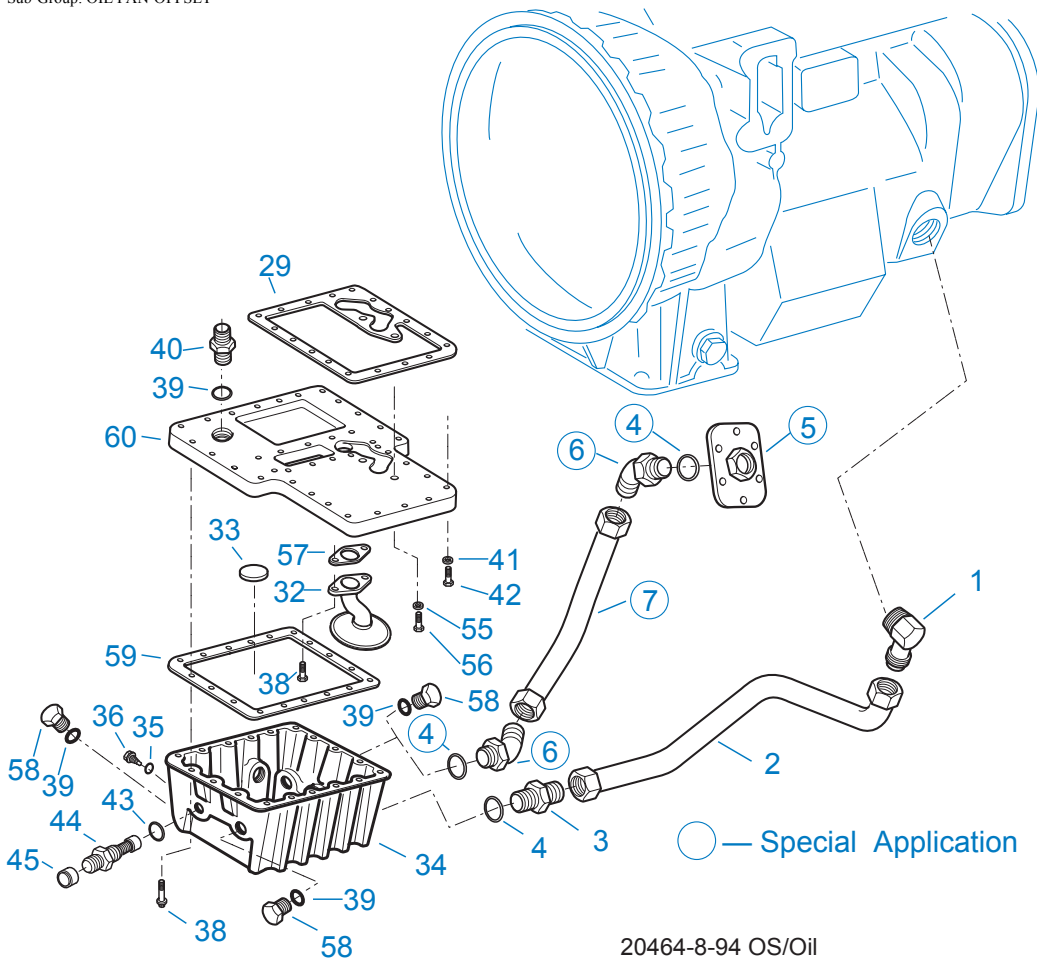
20462-8-94 Low/Rt

## OIL PANS & OIL LINES

### OIL PAN-LOW PROFILE/RT

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	4301100	ELBOW	23597	1		
2	4302598	SUMP RETURN TUBE RH		1		
3	22478	PLUG		1		
4	23109	-O- RING		4		
27	22478	PLUG		2		
29	22474	GASKET		1		
30	X-8C-500	CAPSCREW		2	18X1-1/4"	
31	23028	PLUG		1		
32	4302596	OIL TRANSFER TUBE		1		
33	14373	MAGNET		2		
34	4302591	OIL PAN		1		
35	4300484	WASHER		1		
36	4300438	DRAIN PLUG		1		
38	X-8C-550	CAPSCREW		53	5/16"-18X1"	
39	23029	-O- RING		1		
40	22431	CONNECTOR		1		
41	5500511	OIL FILL TUBE		1	STANDARD	
42	5501028	DIPSTICK	5501016	1	STANDARD	
43	4302595	OIL PAN GASKET		1		
44	4302593	OIL COVER		1		
55	X-8-601	CAPSCREW		1	3/8"-16X3/4"	
56	4300626	CLAMP		1		
57	X-10-605	WASHER		1	3/8"	
58	X-9-604	NUT		1	3/8"-16	



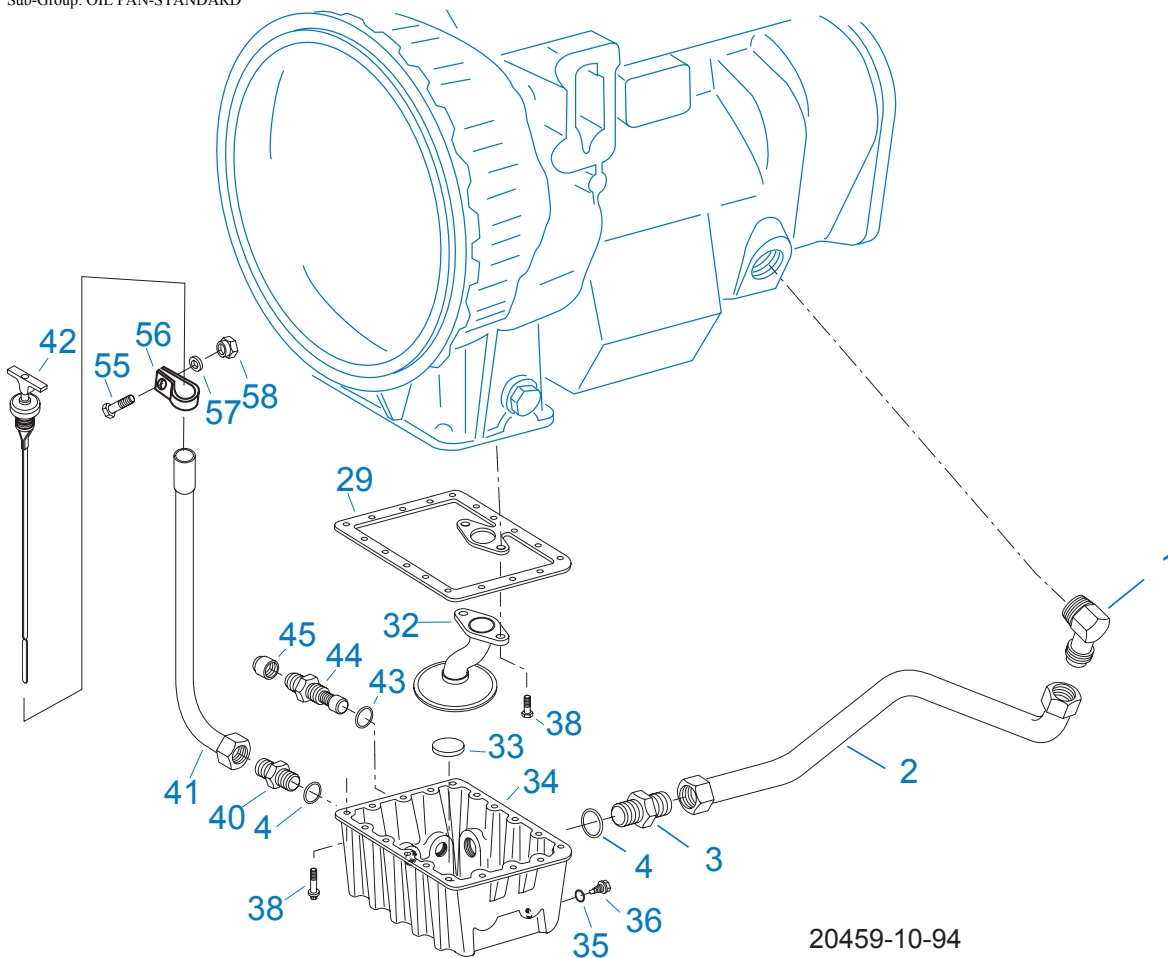


## OIL PANS & OIL LINES

### OIL PAN-OFFSET

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	4301100	ELBOW	23597	1		
2	4301101	TUBE	23778	1		
3	23596	CONNECTOR		1		
4	23109	-O- RING		1	QUANTITY AS REQUIRED	
5	4301113	COVER		1		
6	22413	ELBOW		2		
7	4301112	SIDE SLOPE TUBE		1		
29	4301106	GASKET		1		
32	4301601	OIL TRANSFER TUBE		1		
33	14373	MAGNET		1		
34	4301110	OIL PAN		1		
35	4300484	WASHER		1		
36	4300438	DRAIN PLUG		1		
38	X-8C-550	CAPSCREW		22	5/16"-18X1"	
39	23109	-O- RING		4		
40	22431	CONNECTOR		1		
41	X-3-507	CONICAL WASHER		20	5/16"	
42	X-8L-540	CAPSCREW		20	5/16"-18X1-7/8"	
43	23029	-O- RING		1		
44	A-5754	VALVE ASSY		1		
45	4300452	CAP		1		
55	4301114	SEALING WASHER		2		
56	X-8L-540	CAPSCREW		2	5/16"-18X1-7/8"	
57	4301109	GASKET		1		
58	22478	PLUG		3		
59	4301108	GASKET		1		
60	4301107	ADAPTER		1		



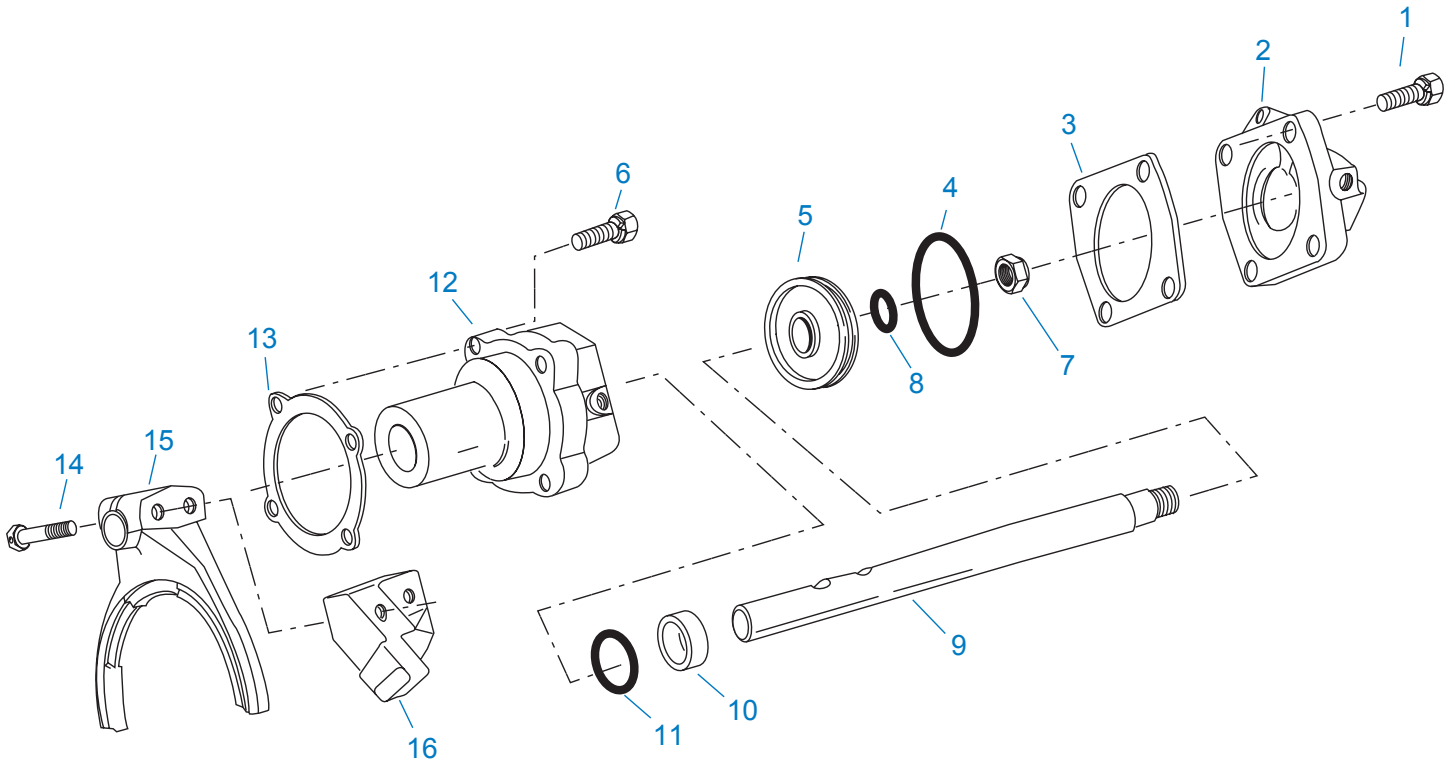


20459-10-94

## OIL PANS & OIL LINES

### OIL PAN-STANDARD

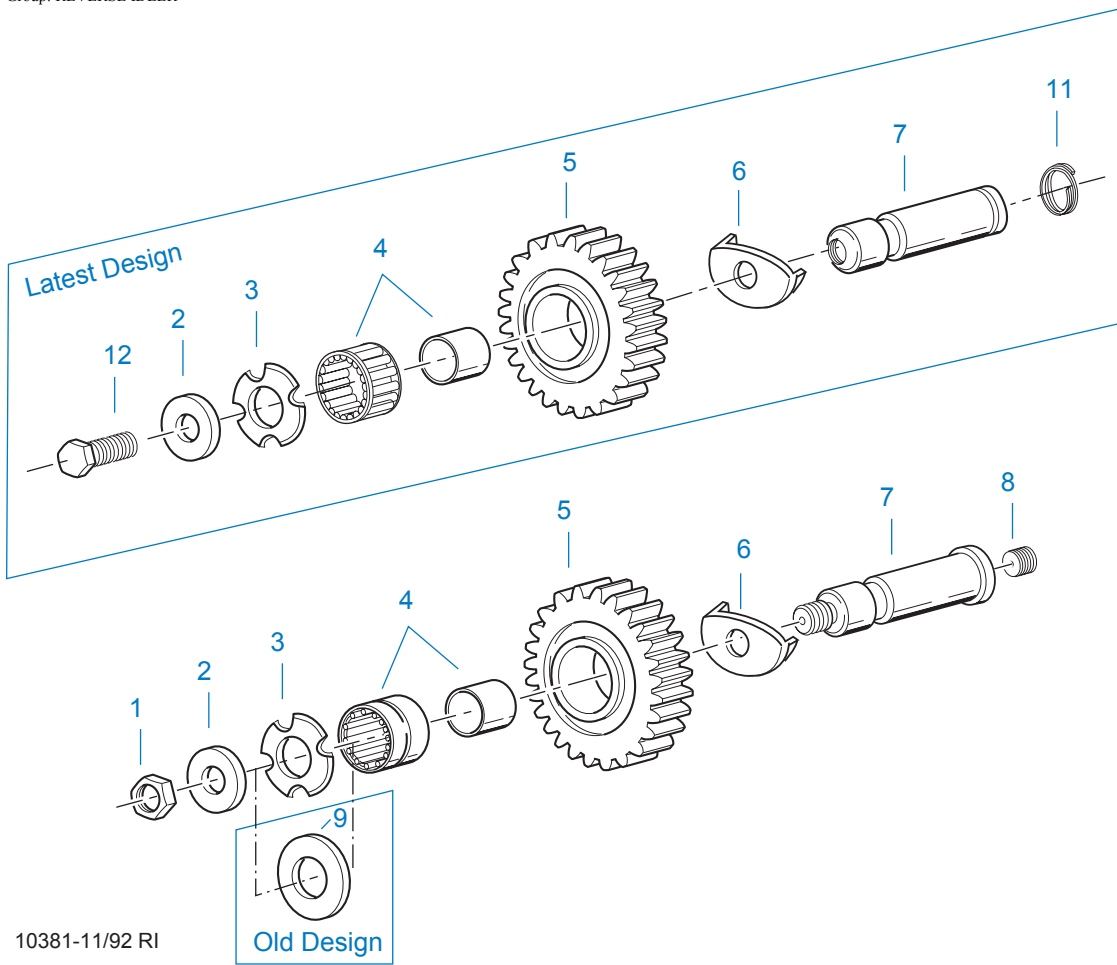
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	4301100	ELBOW	23597	1		
2	4301101	TUBE	23778	1		
3	23596	CONNECTOR		1		
4	23109	-O- RING		2		
29	22474	GASKET		1		
32	4301601	OIL TRANSFER TUBE		1		
33	14373	MAGNET		1		
34	4300432	OIL PAN		1		
35	4300484	WASHER		1		
36	4300438	DRAIN PLUG		1		
38	X-8C-550	CAPSCREW		22	5/16"-18X1"	
40	22431	CONNECTOR		1		
41	5500503	OIL FILL TUBE		1	STANDARD	
42	5501021	DIPSTICK	5501004	1	STANDARD	
43	23029	-O- RING		1		
44	A-5754	VALVE ASSY		1		
45	4300452	CAP		1		
55	X-8-601	CAPSCREW		1	3/8"-16X3/4"	
56	4300626	CLAMP		1		
57	X-10-605	WASHER		1	3/8"	
58	X-9-604	NUT		1	3/8"-16	



20536-11-93

## RANGE CYLINDER

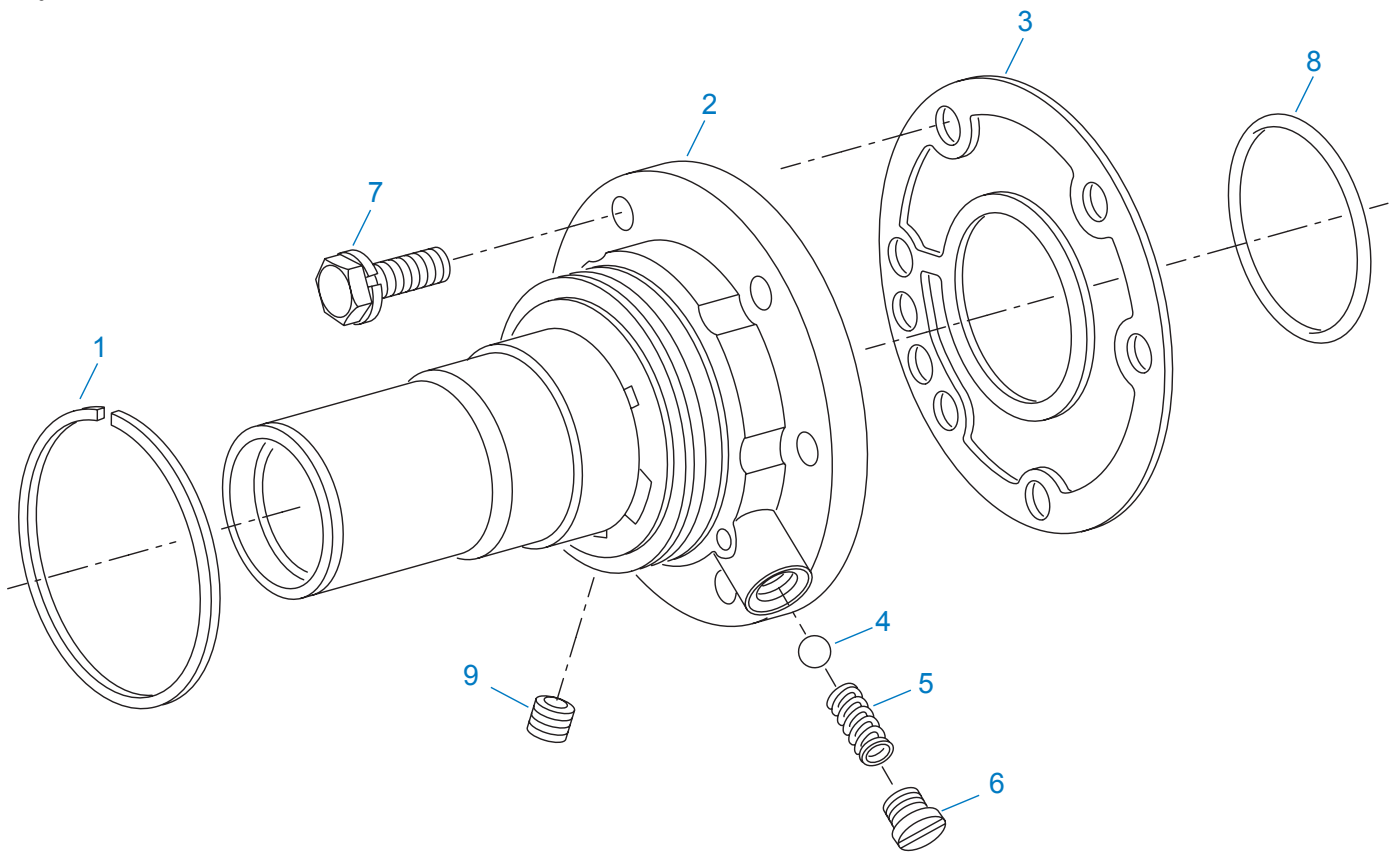
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	X-8L-604	CAPSCREW		4	3/8"-16X1-1/4"	
2	19690	CYLINDER COVER		1		
3	14349	GASKET		1		K-2172,K-2802,K-2831
4	14344	-O- RING		1		K-2802,K-2831
5	14341	PISTON	23353	1		K-2831
6	X-8L-604	CAPSCREW		4	3/8"-16X1-1/4"	
7	X-1-1010	NUT		1	5/8"-18	
8	14345	-O- RING		1		K-2802,K-2831
9	19652	YOKE BAR		1		
10	22542	BUSHING		1		A-5371
11	14765	-O- RING		1		K-2802,K-2831
12	A-5371	RANGE CYLINDER ASSY	22543	1		K-2831
13	14347	GASKET		1		K-2172,K-2802,K-2831
14	X-8-825	CAPSCREW		2	1/2"-13X2-3/8"	
15	4301642	SHIFT YOKE		1		
16	23408	BRACKET		1		



10381-11/92 RI

## REVERSE IDLER

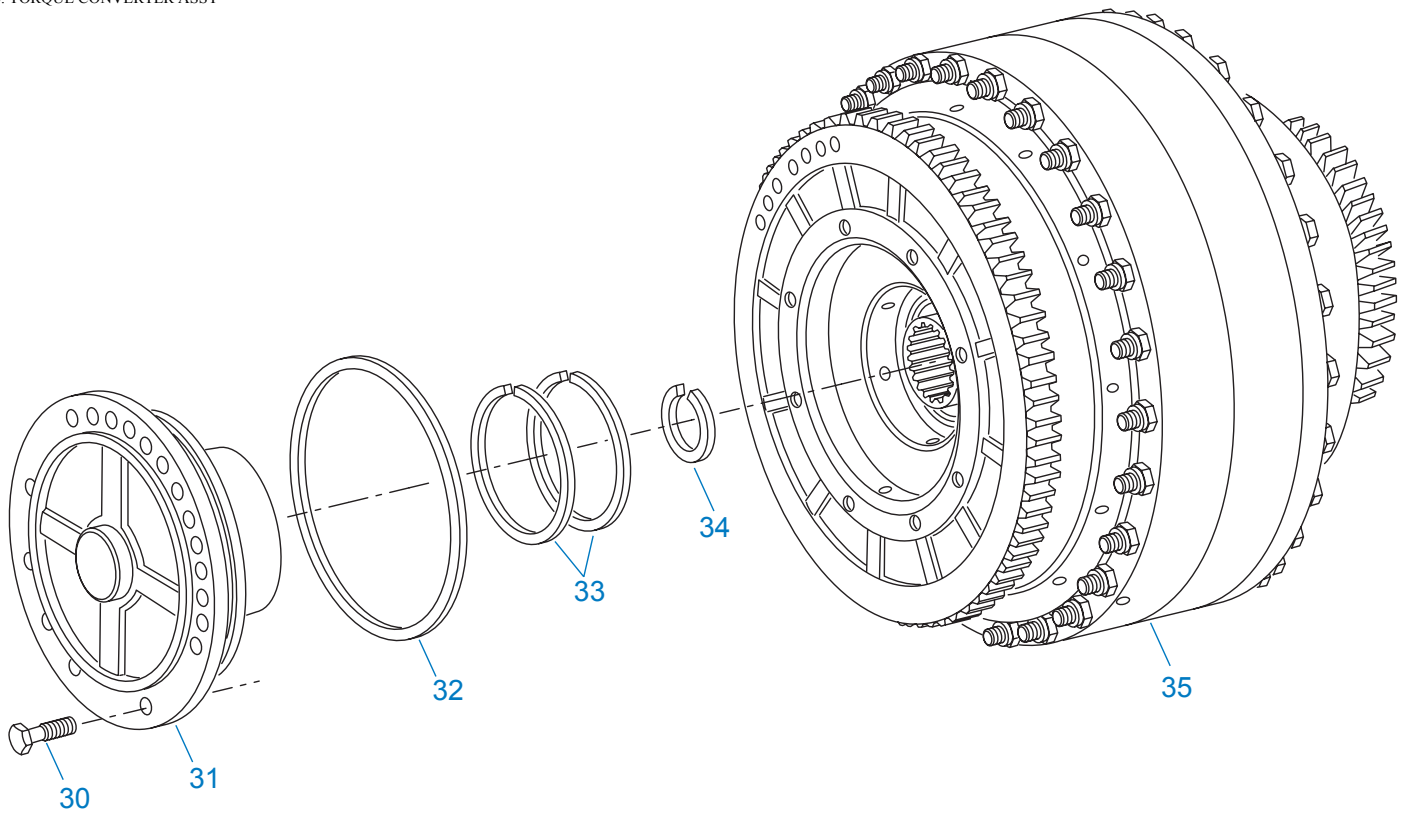
Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	X-1-1008	NUT		2	5/8"-18	
2	14283	WASHER		2		K-3217
3	4302982	WASHER	14282	2		K-3217,S-1785
4	14287	BEARING	4305020	2		K-2289,K-2775,K-2776
5	16757	REVERSE IDLER GEAR	22409	2		
6	16403	WASHER		2		K-3217
7	K-3217	IDLER SHAFT REPL KIT	4302981	2		
8	5202	PLUG		2		
9	14282	NO LONGER AVAILABLE		2		
11	4303336	RETAINING RING		2		K-3217
12	X-7-1008	CAPSCREW		2	5/8"-18X1-1/4	



20421-11-93

### STATOR SUPPORT ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
1	22496	SEAL RING		1		K-2398,K-2504,K-2990
2	S-1676	STATOR SUPPORT ASSY	23397	1		K-2390
3	23398	GASKET		1		K-2172,K-2391,K-2504,K-2625,S-1676
4	X-14-700	STEEL BALL		1	7/16"	
5	22464	SPRING		1		
6	23616	PLUG		1		
7	X-8L-616	CAPSCREW		6	3/8"-16X2-3/4"	
8	23401	-O- RING		1		K-2391
9	X-12-208	PIPE PLUG		1	1/8" NPT	



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### TORQUE CONVERTER ASSY

Item	Current Part	Description	Replaced Part	Qty.	Notes	Kits/Assys Where Needed
30	X-8-645	CAPSCREW		8	3/8"-16X1"	
31	4301426	PILOT		1		
32	22463	-O- RING		1		K-2398,K-2504,K-2990
33	22497	SEAL RING		2		K-2398,K-2504,K-2990
34	22429	SNAP RING		1		K-2398,K-2990
35	K-2646R	REMAN 16-D CNVTR KIT	K - 3083	1		
35	K-2647R	REMAN 16-C CNVTR KIT	K - 3082	1		

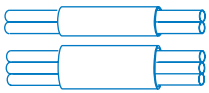
## Appendix



### Air Line Tubing

#### Choosing nylon tubing for air lines

Use the following chart to specify the Eaton Fuller nylon tube appropriate to your vehicle's air system.

 <b>5/32" Air Line and Harness Combinations</b>			
Line Type	Line Color	Order Part No.	Length
Supply + Port	Red (S) + Black (P)	52601	50 ft
Splitter + Deep Reduction	Blue (SP) + Green (H/L)	52701	50 ft
Supply + Splitter + Port	Red(S)+Blue(SP)+ Black(P)	74601	50 ft

<b>5/32" Air Lines</b>			
Line Type	Line Color	Order Part No.	Length
Supply	Red (S)	75120	50 ft
Port	Black (P)	75320	50 ft
Splitter	Blue (SP)	75720	50 ft
Deep Reduction	Green (H/L)	75520	50 ft
Sheathing		80120	50 ft

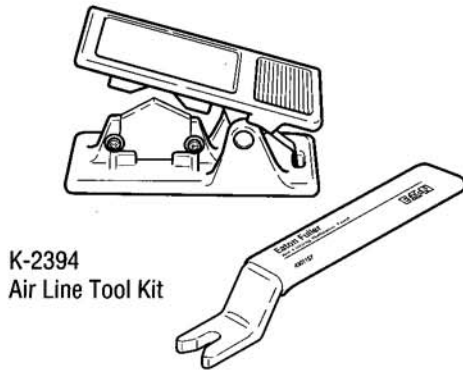
<b>1/8" Air Lines</b>			
Line Type	Line Color	Order Part No.	Length
Supply	White	68526	50 ft
Port	Black	82013	50 ft
Sheathing		80000	50 ft

10650-1/92 AL Chart

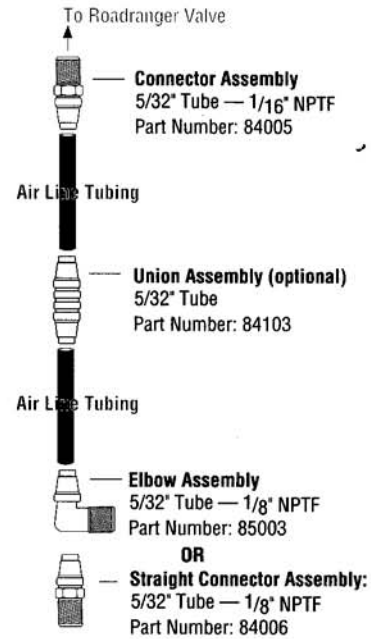


## Identifying fittings

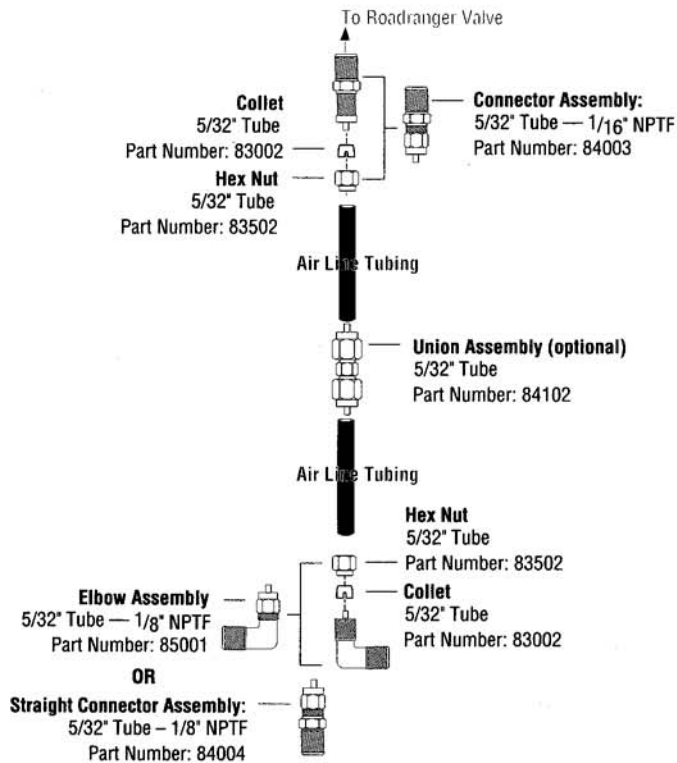
Fittings are available in 5/32" and 1/8" sizes as appropriate for vehicle air line sizes. 5/32" fittings are available as 'push to connect' or compression fittings. 1/8" fittings are available as compression fittings.



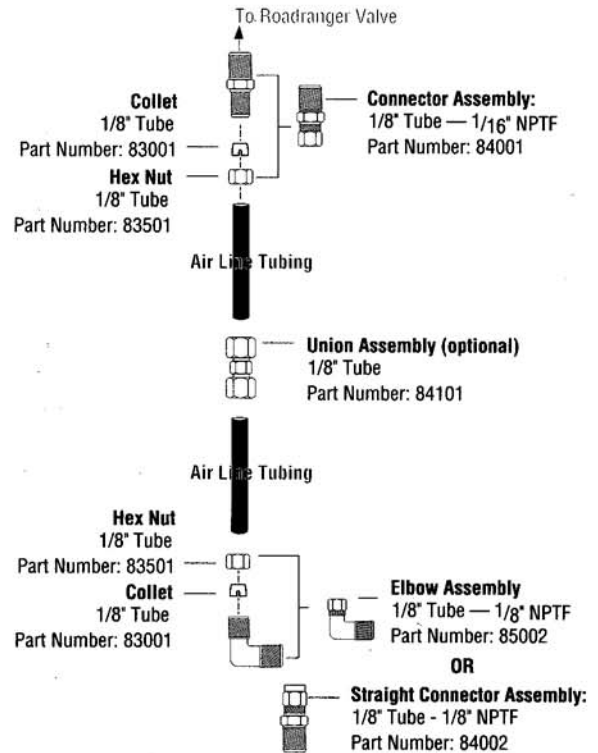
### 5/32" 'Push-to-Connect' Fittings



### 5/32" Compression Fittings



### 1/8" Compression Fittings



10656-10/92 Fittings RRV

