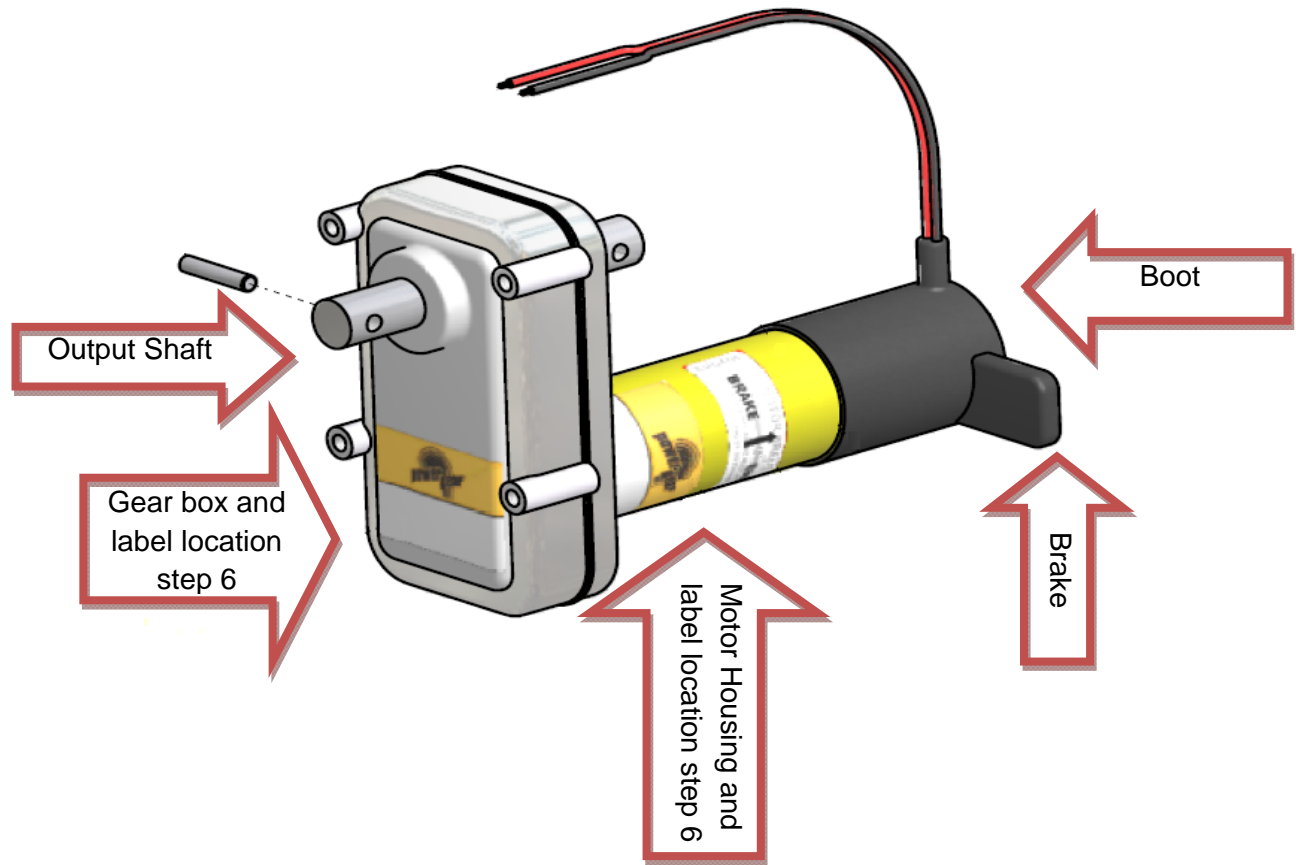


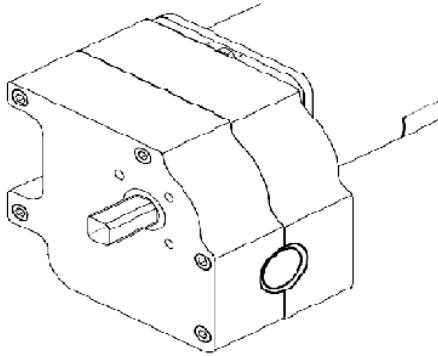
# Helpful hints to identify the Slide Out Motor Assembly:

Rev: Apr-11

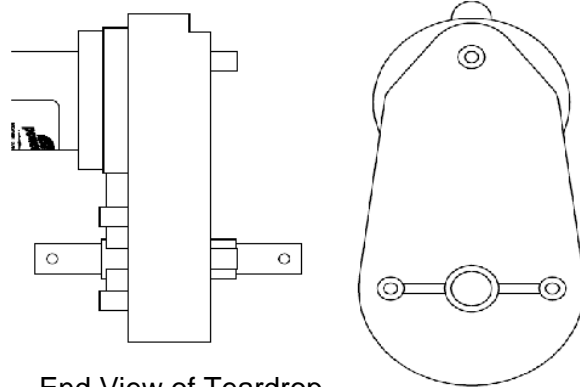


1. The Boot (*Not sold separately*) covers the brake assembly. Boots have different colors such as red, white, black, orange and gray. Usually the boot color indicates the torque rating of the motor assembly. Gray (low torque), Black (high torque to ultra torque) and White (ultra torque). This is a visual help when identifying a motor assembly and does not guarantee the torque rating.
2. The Brake Lever (*Not sold separately*) is under the boot on the end of the motor assembly and is proprietary to Power Gear only. This should be in the engaged position (see label on motor housing) when operating the motor assembly.
3. The Motor Housing (*Not sold separately*) holds the labels for identification of the brake lever (engaged or released) and the Power Gear part number label (p/n= part number) and the base motor label located on the opposite side of the Power Gear part number label. The circumference of the housing can vary from diameters such as 2 ½" to 3" and larger; however the larger diameter does not indicate higher torque.

4. The Gear Box (*Not sold separately*) can come in many different shapes such as square, round, rectangle, teardrop (see example below/ far right) and one that looks like a profile of a tape measure (see example below/ far left). This part houses all the reduction gears and the output shaft and or shafts. The mounting holes are located at different dimensions depending on the shape of the gear box.



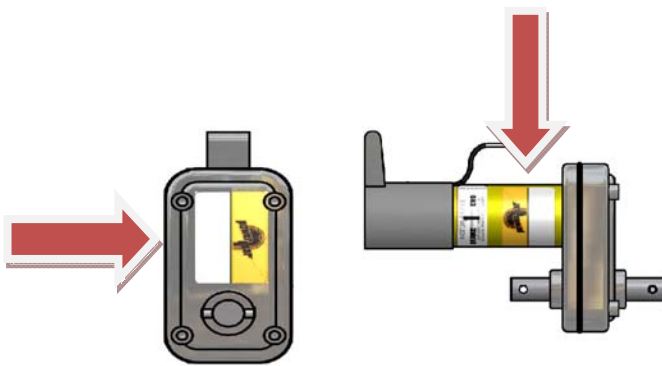
Profile of a tape measure style



End View of Teardrop

5. The Output Shaft (*Not sold separately*) can be a single shaft or a double shaft. Single shaft will mount directly to the slide out rail. Double shaft can be mounted on the slide out rail or centered in between the rails with drive tubes going to the slide rails. See [Direct Drive](#) (which has a pin in the output shaft) and [Center Drive](#) **SEE STEP 8** below for mounting orientation.

6. Locate the label Motor Assembly Number (P/N) either on the motor housing or end of the gear box (2004-present on gear box). The part numbers are either 6 digits long starting with a 5 (*example 523900*) or 10 digits long starting with a 1 (*example 10100000010*).

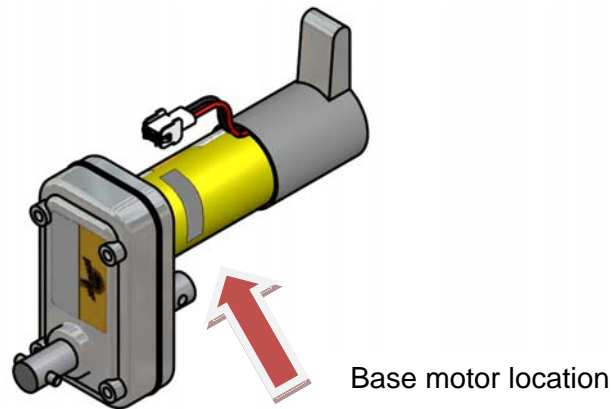


End View Shown



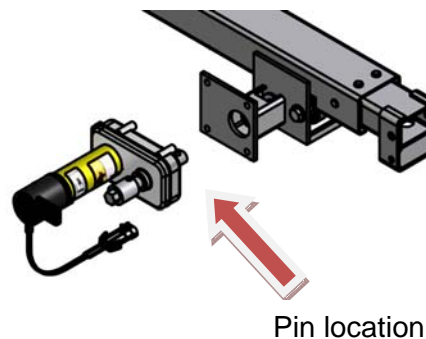
Example Motor Assembly Label

7. Locate the Base Motor Number on the silver label on the motor housing. The part numbers are either 7 digits long with a dash between the third and fourth number (*example 130-1146*) or a 6 digit number with a dash between the second and third numbers (*example 13-1086*) or a 10 digit number starting with a 1 (*example 1510000006*). There may also be a 9 digit reference number starting with a letter (*example B00610182*) or a 10 digit number starting with a letter (*example KO1265G300*).

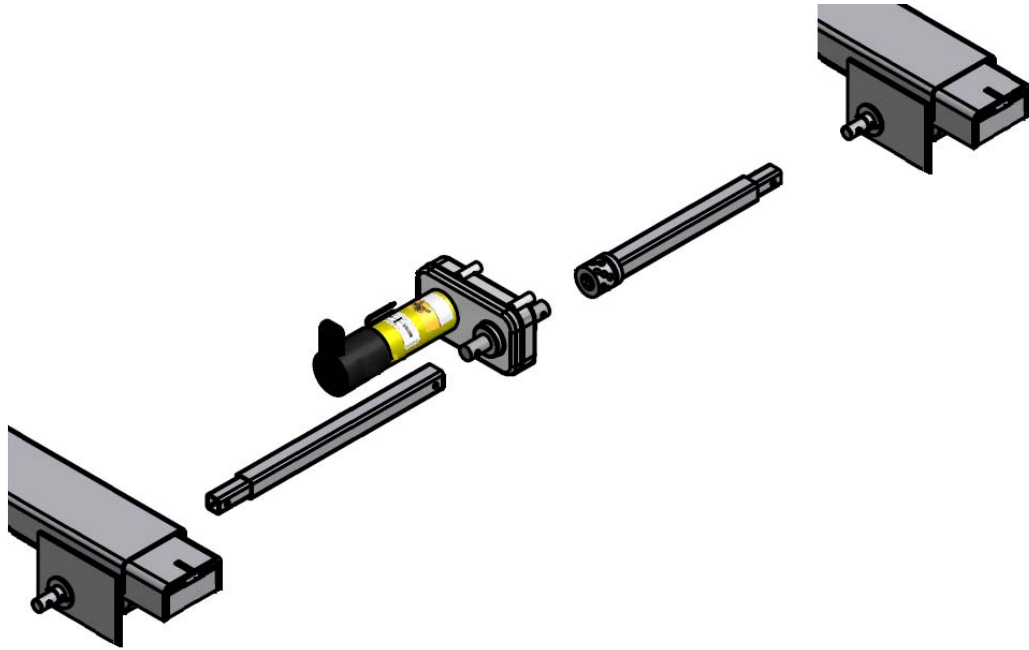


8. Verify how the motor attaches to the coach. (**Direct drive**) mounts directly to the slide out rail. (**Center drive**) has the motor assembly mounted between the rails with drive shafts going from the output shafts to the rails. **Direct drive motors have a pin** in the output shaft of the motor assembly where it mounts to the rail. **Center drive motor assemblies do not** have a pin in the output shaft of the motor assembly where it mounts to the rail.

### Direct Drive motor assembly example



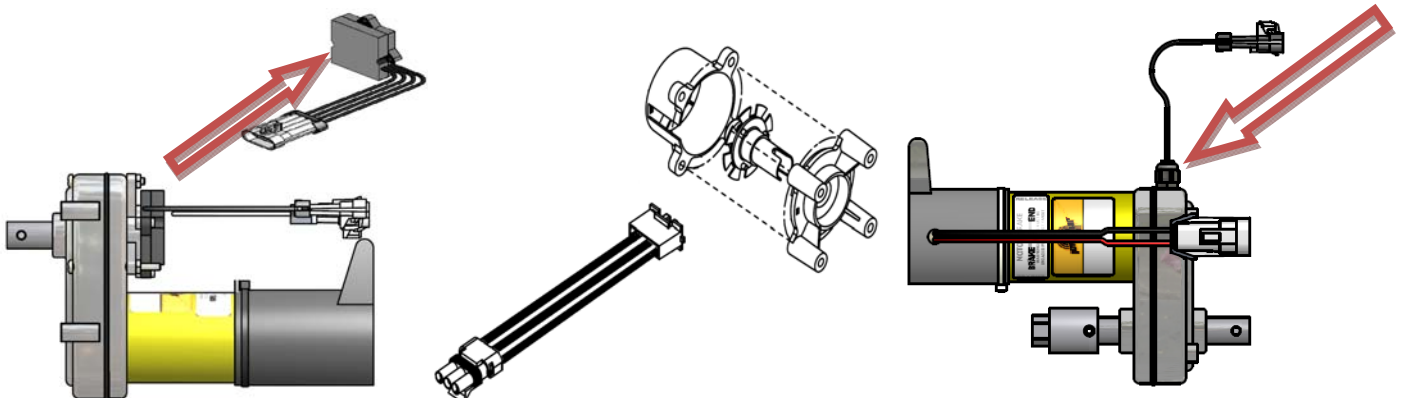
## Center Drive assembly example



9. Transfer the information from above to use the chart to identify the correct motor assembly.

10. If all identifying marks are gone or non-legible contact the Original Equipment Manufacturer (OEM or the coach manufacturer) to get the Power Gear system number and/or the motor assembly part number. This number is not posted anywhere on the system itself or in the coach. Contact Power Gear with the system number so the motor assembly number can be found.

11. Identifying motors with an encoder: An Encoder is a part on the motor that sends information to the control box when there is one motor per rail and there are multiple rails. There are three different types of encoders. There is an external 4 wire encoder (square in shape/shown on far left), there is an external 3 wire (2" round in diameter/shown center) and an internal 4 wire encoder (1/2" round in diameter/shown far right). **Do not mix motors with different encoders.**



For Reference Only. Motors are only sold by ASSEMBLY MOTOR NUMBER.									
Assembly Motor Number		Base Motor Number	Torque Rating	Pin	Conn	Run Amps (Approx)	Replacement Assy. Motor	Higher Torque Assembly Motor Option Number *	Notes
*522582	Single Shaft	522583			No	20	522788S	See 522788	
*522652	Single Shaft	522651					522788S	See 522788	
*DN13826		522787		No	Yes	20	522788S		
*522651	Single Shaft	522788				20	522788S	See 522788	
522583	Single Shaft	522788				20		See 522788	
1010001132	Double Shaft	1010000100	MX2	No	Yes				
1010000010	Double Shaft	1510000006	MX2	No	Yes			None	
522462	Double Shaft	1510000006	MX2	No	Yes			None	
523013	Double Shaft	1510000006	MX2	Yes	No			524377	Male AMP
523529	Double Shaft	1510000006	MX2	No	AMP			523982	
523900	Double Shaft	1510000006	MX2	No	TPA			None	Male AMP
524094	Double Shaft	1510000006	MX2	No	AMP			None	Male AMP
524327	Double Shaft	1510000006	MX2	No	AMP			None	Male AMP
524377	Double Shaft	1510000006	MX2	Yes	No			None	Male AMP
524411	Double Shaft	1510000006	MX2	Yes	TPA			None	Male AMP
1010000037	Double Shaft	1510000007	MX2	Yes	Yes			None	Hall sensor on motor
1010001025	Double Shaft	1510000042	MX	Yes	Yes				
1010002069	Double Shaft	1510000042	MX	Yes	Yes				
1010000803	Single Shaft	1510000047	MX2	Yes	Yes			None	Q-Sync.
1010001102	Double Shaft	1510000074	MT	Yes	Yes			None	Assassin rail. Sensor not used.
1010001556	Double Shaft	1510000078	UT	No	Yes			None	Sensor connection not used.
1010001942	Double Shaft	1510000100	MX2	Yes/Gear	Yes				
1010001663	Double Shaft	1510000150	MT	No	Yes				
1010001789	Double Shaft	1510000150	MT	Yes	No				
1010001874	Double Shaft	1510000167	MX2	No	Yes				
*522916	Double Shaft	130-1146	MT	Yes	Yes	15	522895S		
*522802	Double Shaft	130-1146	MT	Yes	No	15	522895S	521271	Remove connector
523499	Double Shaft	130-1146	MT			15		See 523498	

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Assembly Motor Number		Base Motor Number	Torque Rating	Pin	Conn	Run Amps (Approx)	Replacement Assy. Motor	Higher Torque Assembly Motor Option Number *	Notes
522895	Double Shaft	130-1146	MT	Yes	AMP	15		521271	
523091	Double Shaft	130-1146	MT	Yes	AMP	15		521271	
523498	Double Shaft	130-1146	MT	No	AMP	15		521066 523725	
523518	Double Shaft	130-1146	MT	Yes	AMP	15		521271	520223 coupler
523833	Double Shaft	130-1146	MT	Yes	No	15		524065 524066	520223 coupler
524276	Double Shaft	130-1146	MT	Yes	AMP			523912 524179	520223 coupler
523504	Double Shaft	130-1147				15		See 523505	
*522735	Double Shaft	130-1147	HT	No	No	15	522735S	None	3 wire motor (brake release)
523505	Double Shaft	130-1147	HT	Yes	No	15		None	3 wire motor (brake release)
522609	Double Shaft	130-1148	MT	Yes	NA	15		None	E-Sync w/encoder
*522756	Double Shaft	130-1149	HT	No		15	523143	See 523143	
522919	Double Shaft	130-1154	MT	Yes	No	15		521292 524065	
523548	Double Shaft	130-1154	MT	No	No	15		None	3 wire motor (brake release)
523143	Double Shaft	130-1161	HT	No	No	15		523982	
523387	Double Shaft	130-1161	HT	Yes	No	15		524235	
523725	Double Shaft	130-1161	HT	No	AMP	15		523529	
523766	Double Shaft	130-1161	HT	Yes	TPA	15		523013	Remove connector, splice motor leads
523823	Double Shaft	130-1161	HT	No	TPA	15		523529 523982	Remove connector, splice motor leads
524065	Double Shaft	130-1161	HT	Yes	No	15		522176	Remove connector, splice motor leads
524066	Double Shaft	130-1161	HT	No	No	15		521976	
524179	Double Shaft	130-1161	HT	Yes	AMP	15		523013	Remove connector, splice motor leads
*523036	Double Shaft	130-1164				8	523900	See 523900	
*523037	Double Shaft	130-1165				15	523900	See 523766	Splice motor leads
*523432	Double Shaft	130-1187				8	523900	See 523900	
*523551	Double Shaft	130-1197				8	1010001556		Sensor connection not used.
*524120	Double Shaft	130-1200					101000803	See 524907	Q-synch motor
523982	Double Shaft	130-1205	MX	No	No			None	
523983	Double Shaft	130-1205	MX	No	AMP			524327	
524021	Double Shaft	130-1205	MX	Yes	No			524377	
524137	Double Shaft	130-1205	MX	No	Amp			524097 524327	
524235	Double Shaft	130-1205	MX	Yes	No			None	



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Assembly Motor Number		Base Motor Number	Torque Rating	Pin	Conn	Run Amps (Approx)	Replacement Assy. Motor	Higher Torque Assembly Motor Option Number *	Notes
523931	Double Shaft	130-1219	MX	No	No			523900	Remove connector, splice motor leads
524246	Double Shaft	130-1235	MX	No	No			523900	Remove connector, splice motor leads
524908	Single Shaft	130-1270						See 524377	
*524907	Single Shaft	130-1271	UT	Yes	TPA		1010000803	None	Q-synch motor
524361	Double Shaft	130-1288	MT	No	No			520819 524066	
524667	Double Shaft	130-1305	MT	No	No			520819	
1010000188	Double Shaft	130-1305	MT	Yes	No			520819	
524664	Double Shaft	130-1305	MT	Yes	AMP			523912 524179	Assasin rail
524793	Double Shaft	130-1305	MT	Yes	No			521292 524065	520233 coupler
524864	Double Shaft	130-1305	MT	Yes	No			521292 524065	
*520576	Single Shaft	13-1083	HT	Yes	No	20	520317S	See 520317	
*510109	Single Shaft	13-1083	HT	No	No	20	523449S		
*510151	Single Shaft	13-1083	HT	No	No	20	523449S	523449	
*520084	Single Shaft	13-1084	HT	Yes	No	15	520317S		
*510184	Single Shaft	13-1086	HT	Yes	No	16	520317S		
*520015	Single Shaft	13-1086	HT	Yes	No	16	520317S	See 520317	
*520488	Single Shaft	13-1086	HT	Yes	Yes	16	523912	See 523912	
*521072	Single Shaft	13-1086	HT	Yes	Yes	16	523912	See 523912	
*510198	Single Shaft	13-1089	HT	Yes	No	11	520317S	See 520317	
*520229	Single Shaft	13-1089	HT	Yes	No	11	520317S	See 520317	
*520491	Single Shaft	13-1089	HT	No	Yes	11	523912	See 523912	
520317	Single Shaft	13-1090	HT	Yes	No	16		523013	Only if room for DS motor
523449	Single Shaft	13-1090	HT	No	AMP	16		None	
523647	Single Shaft	13-1090	HT	No	No			521976	Only if room for DS motor
523912	Single Shaft	13-1090	HT	Yes	AMP	16		531087	Only if room for DS motor
*520430	Single Shaft	13-1096	MT	No	No	11	522895	See 522895	
*520554	Single Shaft	13-1096	MT	No	Yes	11	522895	See 522895	
*520555	Single Shaft	13-1105	HT	No	No	15	524179	See 524179	
*521065	Single Shaft	13-1105	HT	Yes	Yes	15	521271	See 521271	
*532049	Double Shaft	13-1106		Yes	Yes	15	521769	See 521769	Teardrop gearbox
*521066	Double Shaft	13-1109	HT	No	Yes	15	523725	See 523725	
*520819	Double Shaft	13-1109	HT	No	No	15	523143	523900	Remove connector, splice motor leads.
521271	Double Shaft	13-1109	HT	Yes	Yes	15		523013	Splice motor leads
521652	Double Shaft	13-1109	HT	No	Yes	15		523983	
550020	Single Shaft	13-1110		Yes		15			

For Reference Only. Motors are only sold by ASSEMBLY MOTOR NUMBER.									
Assembly Motor Number		Base Motor Number	Torque Rating	Pin	Conn	Run Amps (Approx)	Replacement Assy. Motor	Higher Torque Assembly Motor Option Number *	Notes
*520783	Single Shaft	13-1111	HT	No	Yes	16	523449S	See 523449	
*521291	Double Shaft	13-1115	MT	No	Yes	15	523498	See 523498	
*521290	Double Shaft	13-1115	MT	No	No	15		See 523498	
521272	Double Shaft	13-1115	MT	No	Yes	15		523725	
523853	Double Shaft	13-1115	MT	Yes	AMP			523912 524179	520223 coupler
*521103	Double Shaft	13-1116	MT	Yes	No	15	522895S	See 522895	
*521286	Double Shaft	13-1116	MT	Yes	Yes	15	522895S	See 522895	
*521342	Double Shaft	13-1116	MT	Yes	Yes	15	523091S	See 523091	
*521293	Double Shaft	13-1117	MT	No	No	15	523498	See 523498	
*521301	Double Shaft	13-1117	MT	No	Yes	15	523498	See 523498	
*521288	Double Shaft	13-1118	MT	Yes	No	15	522895S		
*521297	Double Shaft	13-1118	MT	Yes	Yes	15	522895S	See 522895	
*521292	Double Shaft	13-1119	HT	Yes	No	15	524179	See 523387	
*522967	Double Shaft	13-1119				15		See 523900	
*521472	Double Shaft	13-1121	HT	Yes	No	15	524179	See 524179	
*521556	Double Shaft	13-1122	MT	No	Yes	15	523498	See 523498	
*521470	Double Shaft	13-1123	MT	Yes	Yes	15	522895S	See 522895	
*521471	Double Shaft	13-1123	MT	Yes	No	15	522895S	See 522895	
*521654	Double Shaft	13-1126	MX	No	No	15	522462S	See 522462	
521769	Double Shaft	13-1126	MX	No	AMP	15		None	Teardrop gearbox
531087	Double Shaft	13-1126	MX	Yes	AMP			None	Teardrop gearbox
*521748	Double Shaft	13-1127	HT	Yes	No	15	523387	See 523387	
*521749	Double Shaft	13-1129	MT	Yes	No	15	522895	See 522895	
*522002	Double Shaft	13-1132	HT	No	No	15			
*522341	Double Shaft	13-1133	MX	No	Yes	8	523983		
*522176	Double Shaft	13-1133	MX	No	Yes	8	523983	See 523983	
*521976	Double Shaft	13-1133	MX	No	No	8	523983	523900	
*522787	Single Shaft	DN 14666	MX	No	No		522788S	None	
*DN13461		DN13461		No	No	20	522788S		4-Jun-08
*DN14115		DN14116		No	No	20	522788S		
*522866	Single Shaft	DN14122					522788S	See 522788	
522917	Single Shaft	DN14122						See 522788	
DN14123		DN14122		No	No	20			
522791	Single Shaft	DN14369						See 522787	
*DN14370		DN14369		No	No	20	522787S		



