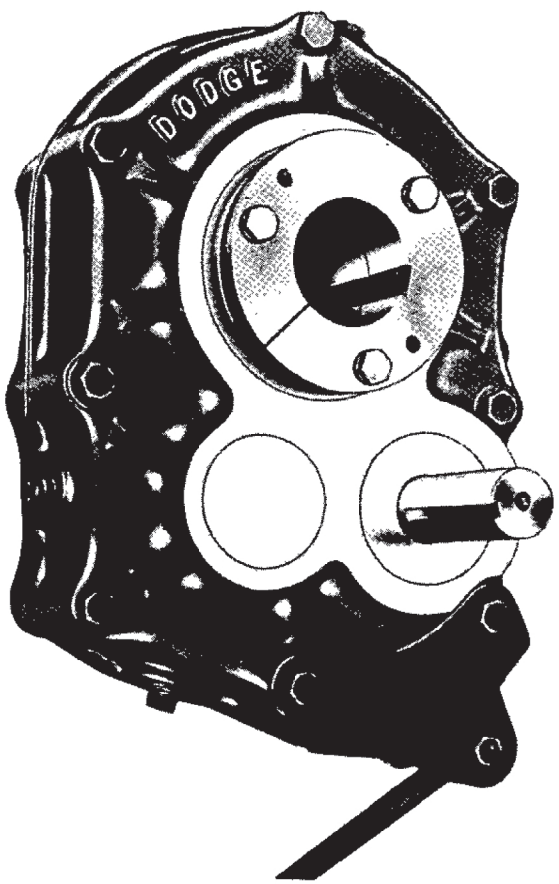
Parts Replacement Manual

For

DODGE® TORQUE-ARM™ Speed Reducers Straight Bore & Taper Bushed



SIZES: TXT815 - TXT825
TXT915 - TXT926
TXT1015 - TXT1024

WARNING : Because of the possible danger to persons(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric nor are the responsibility of Baldor Electric. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

BALDOR
BALDOR • DODGE • RELIANCE

World Headquarters
P.O. Box 2400, Fort Smith, AR 72902-2400 U.S.A., Ph: (1) 479.646.4711, Fax (1) 479.648.5792, International Fax (1) 479.648.5895

Baldor - Dodge
6040 Ponders Court, Greenville, SC 29615-4617 U.S.A., Ph: (1) 864.297.4800, Fax: (1) 864.281.2433

www.baldor.com

499347

06/01/08 POD

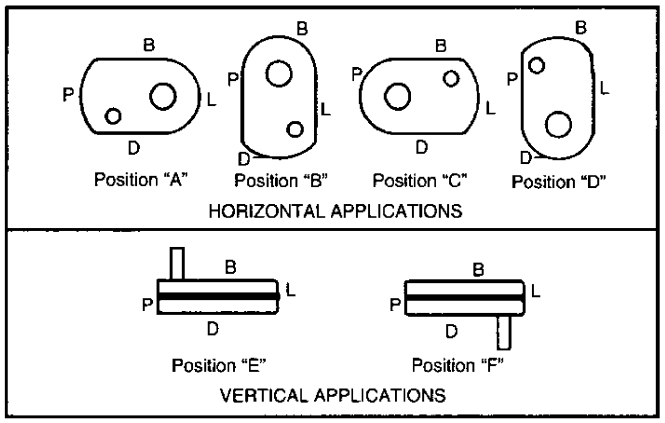
INSTALLATION

1. Replace the plastic plugs that protect the threaded holes in the reducer housing with the eyebolt supplied with the reducer.

2. Determine the running position of the reducer. (See Fig. 1.) Note that the reducer is supplied with either 4 or 7 plugs; 4 around the sides for horizontal installations and 1 on each face for vertical installations. These plugs must be arranged relative to the running positions as follows:

Horizontal Installations—Install the magnetic drain plug in the hole closest to the bottom of the reducer. Throw away the tape that covers the filler/ventilation plug in shipment and install plug in topmost hole. Of the 3 remaining plugs on the sides of the reducer, the lowest one is the minimum oil level plug. If output rpm is lower than 10, consult factory for oil level.

Vertical Installations—Install the filler/ventilation plug in the hole provided in the top face of the reducer housing. Use the hole in the bottom face for the magnetic drain plug. Of the 5 remaining holes on the sides of the reducer, use a plug in the upper housing half for the minimum oil level plug.



B: Breather; D: Drain; L: Oil Level Plug; P: Plug

Fig. 1 — Mounting Positions

The running position of the reducer in a horizontal application is not limited to the four positions shown in Figure 1. However, if running position is over 20° in positions "B" and "D" or 5° in positions "A" and "C" either way from sketches, the oil level plug cannot be safely used to check the oil level, unless during the checking the torque arm is disconnected and the reducer is swung to within 20° of the positions shown in Figure 1. Because of the many possible positions of the reducer, it may be necessary or desirable to make special adaptions using the lubrication fitting holes furnished along with other standard pipe fittings, stand pipes and oil level gages as required.

3. Mount reducer on driven shaft as follows:

WARNING

To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

For Straight Bore: Mount reducer on driven shaft as close to bearing as practical. If bushings are used, assemble bushing in reducer first. A set of bushings for one reducer consists of one keyseated bushing and one plain bushing. Extra length setscrews are furnished with the reducer. Driven shaft should extend through full length of speed reducer. Tighten both setscrews in each collar.

For Taper Bushed: Mount reducer on driven shaft per instruction sheet No. 499629 packed with tapered bushings.

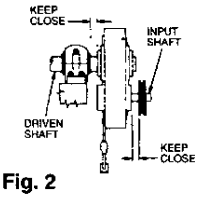


Fig. 2

4. Install sheave on input shaft as close to reducer as practical. (See Fig. 2.)

5. Install motor and V-belt drive so belt pull will approximately be at right angles to the center line between driven and input shaft. (See Fig. 3.) This will permit tightening the V-belt drive with the torque arm.

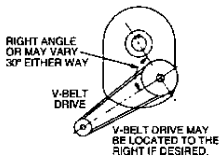


Fig. 3

6. Install torque arm and adapter plates using the long reducer bolts. The bolts may be shifted to any of the holes on the input end of the reducer.

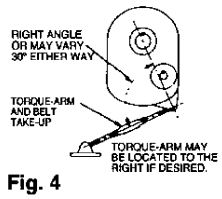


Fig. 4

7. Install torque arm fulcrum on a rigid support so that the torque arm will be approximately at right angles (±30°) to the center line through the driven shaft and the torque arm anchor screw. (See Fig. 4.) Make sure that there is sufficient take-up in the turnbuckle for belt tension adjustment when using V-belt drive.

LUBRICATION

Caution: Reducer is shipped without oil. Add the proper amount of oil before running.

Use a high grade petroleum base, rust and oxidation inhibited (R & O) gear oil—see tables. Follow instructions on reducer nameplate, warning tags, and in the installation manual.

Under average industrial operating conditions, the lubricant should be changed every 2500 hours of operation or every 6 months, whichever occurs first. Drain reducer and flush with kerosene, clean magnetic drain plug and refill to proper level with new lubricant.

Caution: Too much oil will cause overheating and too little will result in gear failure. Check oil level regularly.

Under extreme operating conditions, such as rapid rise and fall of temperature, dust, dirt, chemical particles, chemical fumes, or oil sump temperatures above 200°F, the oil should be changed every 1 to 3 months depending on severity of conditions.

CAUTION

Extreme pressure (EP) lubricants are not recommended for average operating conditions.

WARNING

Do not use EP oils or oils containing slippery additives such as graphite or molybdenum disulphide in the reducer when backstop is used. These additives will destroy sprag action.

Table 1 — Oil Volumes

Reducer Size	Volume of Oil Required to Fill Reducer to Oil Level Plug																	
	† Position A			† Position B			† Position C			† Position D			† Position E			† Position F		
	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)	Fluid Ounces (Approx)	▲ Quarts (Approx)	Liters (Approx)
TXT815 TXT825	272	8 1/2	8.0	352	11	10.41	336	10 1/2	9.9	272	8 1/2	8.0	612	19 1/8	18.10	612	19 1/8	18.10
TXT915 TXT926	416	13	12.2	416	13	12.30	400	12 1/2	11.8	456	14 1/4	13.5	812	25 3/8	24.01	812	25 3/8	24.01
TXT1015 TXT1024	736	23	21.8	448	14	13.25	504	15 3/4	14.9	600	18 3/4	17.7	1312	41	38.80	1312	41	38.80

† Refer to Fig. 1 on page 2 for mounting positions.
▲ U.S. Measure: 1 quart = 32 fluid ounces = .94646 liters.

Note: If reducer position is to vary from those described in paragraph 2, either more or less oil may be required. Consult factory.

Table 2 — Minimum Oil Recommendations for Average Operating Conditions

Lubrication Recommendations — ISO Grades for Ambient Temperatures of 15° to 60°

Output RPM	Reducer Size													
	1	2	3	4	5	6	7	8	9	10	12	13	14	15
301-400	220	220	150	150	150	150	150	150	150	150	150	150	150	150
201-300	220	220	150	150	150	150	150	150	150	150	150	150	150	150
151-200	220	220	150	150	150	150	150	150	150	150	150	150	150	150
126-150	220	220	220	150	150	150	150	150	150	150	150	150	150	150
101-125	220	220	220	220	150	150	150	150	150	150	150	150	150	150
81-100	220	220	220	220	220	150	150	150	150	150	150	150	150	150
41-80	220	220	220	220	220	150	150	150	150	150	150	150	150	150
11-40	220	220	220	220	220	220	220	220	220	220	150	150	150	150
1-10	220	220	220	220	220	220	220	220	220	220	220	220	220	220

Below – 23°F call application engineering.

Lubrication Recommendations — ISO Grades for Ambient Temperatures of 50° to 125°

Output RPM	Reducer Size													
	1	2	3	4	5	6	7	8	9	10	12	13	14	15
301-400	320	320	220	220	220	220	220	220	220	220	220	220	220	220
201-300	320	320	220	220	220	220	220	220	220	220	220	220	220	220
151-200	320	320	220	220	220	220	220	220	220	220	220	220	220	220
126-150	320	320	320	220	220	220	220	220	220	220	220	220	220	220
101-125	320	320	320	320	220	220	220	220	220	220	220	220	220	220
81-100	320	320	320	320	320	220	220	220	220	220	220	220	220	220
41-80	320	320	320	320	320	220	220	220	220	220	220	220	220	220
11-40	320	320	320	320	320	320	320	320	320	320	220	220	220	220
1-10	320	320	320	320	320	320	320	320	320	320	320	320	320	320

20°F to –22°F use Mobil SHC 627.
Above 125°F use Mobil SHC 634.

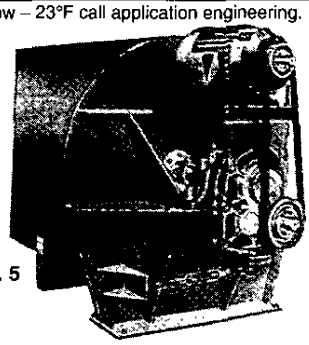


Fig. 5

Note: Belt guard removed for photographic purposes

Warning: Do not operate if belt guard is not in place.

MOTOR MOUNTS

The motor mount must be installed on output end of reducer as shown in Figure 5. Note: The T-A motor mount cannot be used in applications requiring the use of TRI-MATIC® overload release.

Remove two or three (as required) housing bolts on output end of reducer. Place the motor mount in position and install the longer housing bolts supplied with the motor mount. Tighten bolts to torque specified in Table 3.

Install motor, drive sheave and driven sheave so that driven sheave is as close to the reducer housing as practical. Install V-belt and tension with the four adjusting screws provided on T-A motor mount.

Check all bolts to see that they are securely tightened.

GUIDELINES FOR TORQUE-ARM REDUCER LONG-TERM STORAGE

During periods of long storage, or when waiting for delivery or installation of other equipment, special care should be taken to protect a gear reducer to have it ready to be in the best condition when placed into service.

By taking special precautions, problems such as seal leakage and reducer failure due to the lack of lubrication, improper lubrication quantity, or contamination can be avoided. The following precautions will protect gear reducers during periods of extended storage:

Preparation

1. Drain the oil from the unit. Add a vapor phase corrosion inhibiting oil (VC1-105 oil by Daubert Chemical Co.) in accordance with Table 3.

2. Seal the unit air tight. Replace the vent plug with a standard pipe plug and wire the vent to the unit.

3. Cover the shaft extension with a waxy rust preventative compound that will keep oxygen away from the bare metal (Non-Rust X-110 by Daubert Chemical Co.).

4. The instruction manuals and lubrication tags are paper and must be kept dry. Either remove these documents and store them inside or cover the unit with a durable waterproof cover which can keep moisture away.

5. Protect the reducer from dust, moisture, and other contaminants by storing the unit in a dry area.

6. In damp environments, the reducer should be packed inside a moisture-proof container or an envelop of polyethylene containing a desiccant material. If the reducer is to be stored outdoors, cover the entire exterior with a rust preventative.

When Placing the Reducer into Service

1. Assemble the vent plug into the proper hole

2. Clean the shaft extensions with a suitable solvent.

3. Fill the unit to the proper oil level using a recommended lubricant. The VCI oil will not affect the new lubricant.

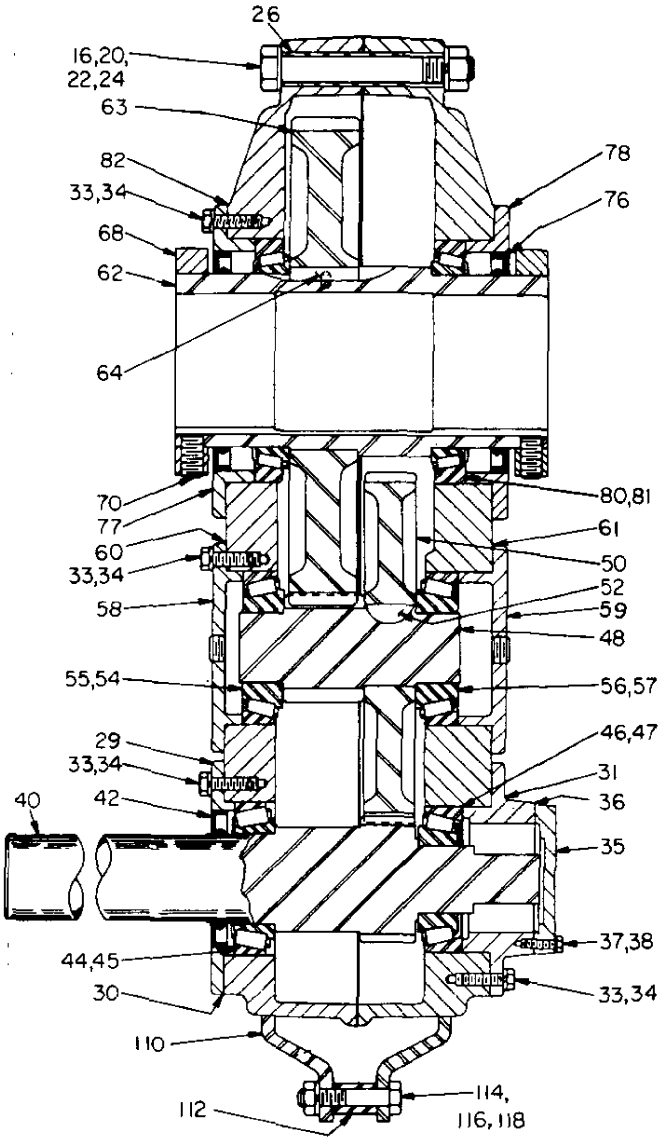
4. Follow the installation instructions provided in this manual.

Table 3—Quantities of VCI #105 Oil

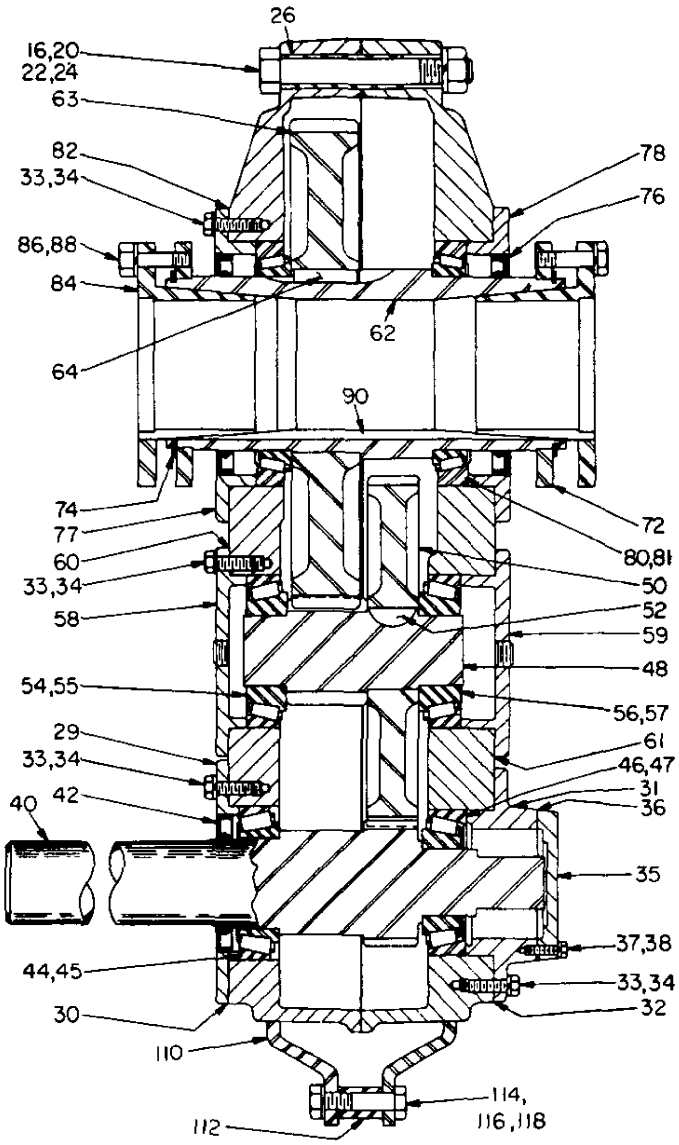
Case Size	Quarts or Liters
TXT8	.75
TXT9	1.0
TXT10	1.5

VCI #105 & #10 are interchangeable.
VCI #105 is more readily available.

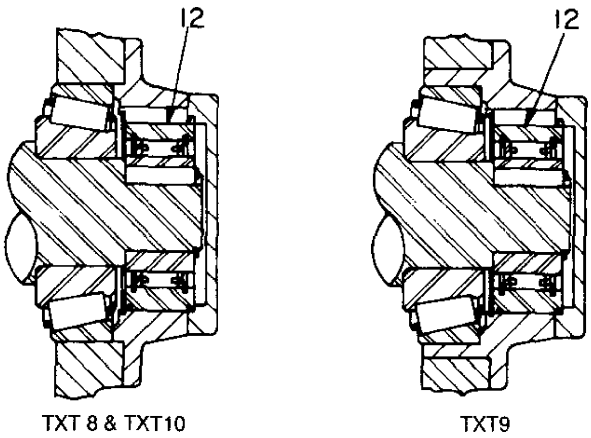
PARTS FOR TXT8 thru TXT10 STRAIGHT BORE & TAPER BUSHED SPEED REDUCERS



Straight Bore

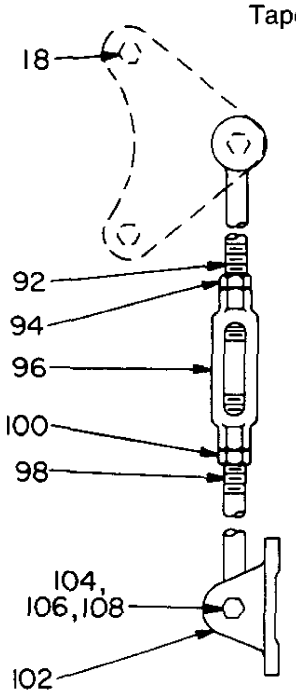


Taper Bushed



TXT 8 & TXT10 TXT9

Backstop Assembly



Note: The two-digit numbers are for reference only. Order *parts by the six-digit* numbers in the Parts List. Each six-digit number is a complete identification of the part or assembly.

Reference	Name of Part	No. Req'd.	TXT8 Part No.	TXT9 Part No.	TXT10 Part No.
12	Backstop Assembly	1	249260	249260	250260
	HOUSING	1	248180	249160	250174
♣	Air Vent with Bushing	1	390061	390061	390061
16	Housing Bolt	Δ	411499	411500	411502
18	Housing Bolt—Adapter	2	411502	411502	411506
20	Lockwasher	◘	419016	419016	419016
22	Plain Washer	2	419082	419082	419082
24	Hex Nut	◘	407095	407095	407095
26	*Dowel Pin*	*2*	*420128*	*420128*	*420132*
♣	Pipe Plug	+	430035	430035	430035
♣	Magnetic Plug	1	430064	430064	430064
29	Input Shaft Seal Carrier	1	258023	249211	249211
30*	Input Shaft Bearing Shim Pack	2 Sets ‡	390038	390168	390168
31	*Backstop Carrier*	*1*	*258022*	*249222*	*250022*
32	Backstop Carrier Gasket	1	.....	248216	248216
33	Carrier and Cover Screws	48	411408	411408	411408
34	Lockwasher	48	419011	419011	419011
35	Backstop Cover	1	248010	249015	250012
37	Backstop Cover Screw	6	411402	411402	411402
38	Lockwasher	6	419009	419009	419009
40*	Input Shaft 15:1 Ratio	1	248370	272074	250300
	with Pinion § Ratio	1	248371	272106	250004
	Input Shaft Key	1	443133	443123	443123
	Input Shaft Bearing—				
	Input Side				
44*	Cone	1	402098	402114	402114
45*	Cup	1	403072	403080	403080
	Input Shaft Bearing—				
	Backstop Side				
46*	Cone	1	402097	402107	402112
47*	Cup	1	403072	403076	403080
	COUNTERSHAFT 15:1 Ratio	1	391184	390124	390983
	ASSEMBLY★ § Ratio	1	391185	390139	390998
48	▲Countershaft with Pinion	1	248002	249006	272249
*50**	▲*First*				
	Reduction 15:1 Ratio	1	248213	249008	250301
	Gear § Ratio	1	248214	249005	250005
52*	▲Key	2	248218	248218	248218
	Countershaft Bearing—				
	Input Side				
54*	Cone	1	402057	402109	402232
55*	Cup	1	403143	403078	402231
	Countershaft Bearing—				
	Backstop Side				
56*	Cone	1	402148	402109	402232
57*	Cup	1	4031 06	403078	402231
58	Countershaft Bearing Cover—				
	Input Side	1	248223	249225	272251
59	Countershaft Bearing Cover—				
	Backstop Side	1	248373	249224	250245
60*	Countershaft Bearing				
	Shim Pack—				
	Input Side	♥ Sets ‡	391182	390168	390575
61*	Countershaft Bearing				
	Shim Pack—				
	Backstop Side	♥ *Sets ‡*	*390419*	*390168*	*390575*

Reference	Name of Part	No. Req'd.	TXT8 Part No.	TXT9 Part No.	TXT10 Part No.
	OUTPUT HUB ASSEMBLY★				
	Straight Bore	1	390993	390159	390160
	Taper Bushed	1	390944	390949	390954
62*	▲*Output Hub*—				
	Straight Bore	1	248332	250090	250008
	Taper Bushed	1	272036	249140	272241
63*	▲Output Gear	1	248215	021784	250007
64*	▲Output Gear Key &				
	Roll Pin	2	390112	390112	390113
	Max Bore Key	1	246258	249255	250270
68	Output Hub Collar♦	2	248209	249209	250009
70	Collar Screw♦	4	400190	400194	400194
72	Bushing Back-up Plate ■	2	272037	272082	272242
74	Retaining Ring ■	2	421098	421097	421069
	Output Hub Seal Carrier—				
77	Input Side	1	258021	249221	250011
78	Backstop Side	1	258020	249220	250011
	Output Hub Bearing				
80*	Cone	2	402147	402160	402168
81*	*Cup*	*2*	*4031 05*	*4031 1 0*	*4031 1 6*
82*	Output Hub Shim Pack	2 Sets †	390048	390171	390172
	SEAL KIT★ *	1	248340	249340	272460
36*	▲Backstop Cover Gasket	1	246220	248220	248220
42*	▲Input Shaft Seal	1	248211	248211	248211
76*	▲*Output Hub Seal*	*2*	*258019*	*249210*	*250010*
♣	RTV Sealant, Tube	1	485044	465044	465044
84	BUSHING ASSEMBLY★ ■ — $2^{15}/_{16}$" Bore	1	272048	.....	.....
	— $3^{3}/_{16}$" Bore	1	272045	.....	.....
	— $3^{7}/_{16}$" Bore	1	272032	272056	.....
	— $3^{15}/_{16}$" Bore	1	272033	272077	272214
	— $4^{3}/_{16}$" Bore	1	272034	272078	272237
	— $4^{7}/_{16}$" Bore	1	272035	272079	272238
	— $4^{15}/_{16}$" Bore	1	.....	272080	272239
	— $5^{7}/_{16}$" Bore	1	.....	.....	272240
86	▲Bushing Screw	6	411457	411484	411484
88	▲Lockwasher	6	419013	419014	419014
90	▲Key, Bushing to Shaft — $2^{15}/_{16}$" Bore	1	443247	.....	.....
	— $3^{3}/_{16}$" Bore	1	443247	.....	.....
	— $3^{7}/_{16}$" Bore	1	443171	443249	.....
	— $3^{15}/_{16}$" Bore	1	443173	272119	443192
	— $4^{3}/_{16}$" Bore	1	443174	272108	443192
	— $4^{7}/_{16}$" Bore	1	443196	272066	443193
	— $4^{15}/_{16}$" Bore	1	.....	443161	443194
	— $5^{7}/_{16}$" Bore	1	.....	.....	443195
♣	▲Key, Bushing to *Output Hub*	1○	443162	443121	443191
	TORQUE-ARM ASSEMBLY★	1	390129	390129	390129
92	▲Rod End	1	271050	271050	271050
94	▲Hex Nut	1	407104	407104	407104
96	▲Turnbuckle	1	271051	271051	271051
98	▲Extension	1	271052	271052	271052
100	▲L.H. Hex Nut	1	407250	407250	407250
102	▲Fulcrum	1	271054	271054	271054
104	▲Fulcrum Screw	1	411516	411516	411516
106	▲Lockwasher	1	419020	419020	419020
108	▲Hex Nut	1	407099	407099	407099
	ADAPTER ASSEMBLY★	1	248110	249110	250110
110	▲Adapter Plate	2	272053	249241	250041
112	▲Adapter Bushing	1	271046	271046	211046
114	▲Adapter Bolt	1	411510	411512	411512
116	▲Lockwasher	1	419020	419020	419020
118	▲Hex Nut	1	407099	407099	407099

★ Includes parts listed immediately below marked "▲." Housing assembly also includes a two-piece housing. Bushing assembly includes 2 bushings.
▲ Parts Marked "▲" make up the assemblies under which they are listed.
♣Not shown on drawing.
§ Ratios are 24:1 on TXT10; 25:1 on TXT8; 26:1 on TXT9.
Δ 9 required for sizes TXT8 & TXT9; 11 required for size TXT10.
◘ 11 required for sizes TXT8 & TXT9; 13 required for TXT10.
+ 3 required for size TXT8; 2 required for size TXT9; 4 required for size TXT10.
*Recommended spare parts.
♥2 sets required for size TXT8; 1 set required for sizes TXT9 & TXT10.
‡ One set consists of one each of the shims listed immediately below marked "†."
† See last paragraph under "ORDERING PARTS."
♦ Straight bore only.
■ Taper bushed only.
○Size TXT8 for $2^{15}/_{16}$" thru $3^{7}/_{16}$" bores only; size TXT9 for $3^{7}/_{16}$" thru $4^{3}/_{16}$" bores only; size TXT10 for $3^{15}/_{16}$" thru $4^{7}/_{16}$" bores only.

REPLACEMENT OF PARTS

Using tools normally found in a maintenance department, a DODGE TORQUE-ARM Speed Reducer can be disassembled and reassembled by careful attention to the instructions following.

Cleanliness is very important to prevent the introduction of dirt into the bearings and other parts of the reducer. A tank of clean solvent, an arbor press, and equipment for heating bearings and gears should be available for shrinking these parts on shafts.

Our factory is prepared to repair reducers for customers who do not have proper facilities or who for any reason desire factory service.

The oil seals are of the rubbing type and considerable care should be exercised during disassembly and reassembly to avoid damage to surfaces on which the seals rub.

The keyseat in the input shaft as well as any sharp edges on the output hub should be covered with tape or paper before disassembly or reassembly. Also be careful to remove any burrs or nicks on surfaces of the input shaft or output hub before disassembly or reassembly.

ORDERING PARTS:

When ordering parts for reducer, specify reducer size number, reducer serial number, part name, part number and quantity.

It is strongly recommended that when a pinion or gear is replaced, the mating gear or pinion also be replaced.

If the large gear on the output hub must be replaced, it is recommended that an output hub assembly of a gear assembled on a hub be ordered to secure undamaged surfaces on the output hub where the oil seals rub. However, if it is desired to use the old output hub, press the gear and bearing off and examine the rubbing surface under the oil seal carefully for possible scratching or other damage resulting from the pressing operation. To prevent oil leakage at the oil seals, the smooth surface of the output hub must not be damaged.

If any parts must be pressed from a shaft or from the output hub, this should be done before ordering parts to make sure that none of the bearings or other parts are damaged in removal. Do not press against outer race of any bearing.

Because old shaft oil seals may be damaged in disassembly, it is advisable to order replacements for these parts.

REMOVING REDUCER FROM SHAFT:

WARNING: Remove all external loads from drive before removing or servicing drive or accessories.

WARNING

To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

STRAIGHT BORE—

Loosen screws in both output hub collars. Remove the collar next to end of shaft. This exposes three puller holes in output hub to permit use of wheel puller. In removing reducer from shaft be careful not to damage ends of hub.

TAPER BUSHED—

1. Remove bushing screws.

2. Place the screws in the threaded holes provided in the bushing flanges. Tighten the screws alternately and evenly until the bushings are free on the shaft. For ease of tightening screws make sure screw threads and threaded holes in bushing flanges are clean.

3. Remove the outside bushing, the reducer and then the inboard bushing.

DISASSEMBLY:

1. Remove retaining rings from output hub. Remove bushing back-up plates.

2. Remove all bolts from housing. Open housing evenly to prevent damage to parts inside.

3. Lift shaft, gear, and bearing assemblies from housing.

4. Remove seals, bearing covers, seal carriers, backstop carrier and bearing cups from housing.

REASSEMBLY:

1. **Output Hub Assembly:** Heat gear to 325°F to 350°F to shrink onto hub. Heat bearing cones to 270°F to 290°F to shrink onto hub. Any injury to the hub surfaces where the oil seals rub will cause leakage, making it necessary to use a new hub.

2. **Countershaft Assembly:** Heat gear to 325°F to 350°F and bearing cones to 270°F to 290°F to shrink on shaft.

3. **Input Shaft Assembly:** Heat bearing cones to 270°F to 290°F to shrink on shaft.

4. Place a .010" shim on output hub seal carrier, countershaft cover and backstop carrier for right hand half of housing (as viewed in drawing). Place a 1/8" dia. bead of Dow Corning RTV732 sealant on the face around the I.D. of the shim (seal is to be between reducer housing and shim). Install right-hand carriers and cover in housing half and torque screws to torque values in Table 3. Place bearing cups in right-hand housing half. Make certain the cups are properly seated in housing and are pressed against carriers and cover. Place housing half on blocks to allow for protruding end of output hub.

CAUTION: If too much sealant is used it will run into bearing and too little sealant will result in an ineffective seal.

5. Mesh output hub assembly and countershaft assemblies together and place in housing half. Place input shaft assembly in housing half. Tap lightly with a soft hammer (rawhide, not a lead hammer) until bearings are properly seated in the housing.

6. Place a 1/8" dia. bead of Dow Corning RTV732 on the flange of the housing half. Place other half of housing (without covers or carriers installed), insert dowel pins, and draw together evenly to prevent damage to parts. The final wrench torque should be per Table 4.

7. Place output bearing cup in housing and tap in place. Install output seal carrier and draw down with two (2) bolts 180° apart to 50 inch pounds of torque, loosen bolts and retighten finger tight. Measure clearance between housing and carrier flange at each bolt and average. Add .010 to average and make-up shim pack. Install shim pack and torque down all seal carrier bolts to 360 in-lb. Use dial indicator to check end play. Add or remove shims until indicator reads .001" to .003".

8. Adjust the countershaft bearings using the same method as in step 7. The axial end play should be .001" to .003".

9. Again using the same procedure as in step 7, adjust the input shaft bearings to an end play of .002" to .003".

10. Total shim thickness per carrier or cover should not include more than .009" plastic shims. All other shims should be metal and each plastic shim should be inserted between two metal shims. Place 1/8" dia. bead of Dow Corning RTV732 sealant on face around the I.D. of the last shim and install the carriers or covers in the reducer housings. Torque carrier bolts to torque values in Table 4.

11. Extreme care should be used in installing seals to avoid damage due to contact with sharp edges of the keyseat in the input shaft and holes in the output hub. This danger of damage and consequent oil leakage can be decreased by covering the keyseat and the holes with paper or tape which can be removed after seals are in place. Chamfer or burr housing bore if end of bore is sharp or rough. Fill cavity between lips of seal with grease. Seals should be pressed or tapped with a soft hammer evenly into place in the housing, applying force only on the outer corner of the seals. A slight oil leakage at the seal may be evident during initial running in, but will disappear unless the seals have been damaged.

Table 4 — Torque Values

Reducer Size	Recommended Torque (lb.-ins.)			
	Housing Bolts	Ctrshft. Carrier Screws	Output Hub Seal Carrier Screws	Input Brg. Cover Screws
TXT8	1620	360	360	120
TXT9	1620	360	360	120
TXT10	1650	360	360	120

Table 5 — Manufacturers' Part Numbers For Replacement Output Hub Bearings

TORQUE-ARM Reducer Drive Size	Output Hub Bearing	
	DODGE Part Number	Timken Part Number
TXT815	402147	36690
TXT825	403105	36620
TXT915	402160	46790
TXT925	403110	46720
TXT1015	402168	67790
TXT1025	403116	67720

Timken Brg. Cone
Cup

Table 6 — Manufacturers' Part Numbers For Replacement Countershaft Bearings

TORQUE-ARM Reducer Drive Size	Countershaft Bearing Input Side		Countershaft Bearing Adapter Side	
	DODGE Part No.	Timken Part No.	DODGE Part No.	Timken Part No.
TXT815	402057	JH211749	402148	39585
TXT825	403143	JH211710	403106	39520
TXT915	402109	655	402109	655
TXT925	403078	652A	403078	652A
TXT1015	402232	JH415647	402232	JH415647
TXT1025	402231	JH415610	402231	JH415610

Table 7 — Manufacturers' Part Numbers For Replacement Input Shaft Bearings

TORQUE-ARM Reducer Size	Input Bearing Input Side		Input Bearing Adapter Side	
	DODGE Part No.	Timken Part No.	DODGE Part No.	Timken Part No.
TXT815	402098	566	402097	565
TXT825	403072	563	403072	563
TXT915	402114	745A	402107	639
TXT925	403080	742	403076	633
TXT1015	402114	745A	402112	745S
TXT1025	403080	742	403080	742

Viscosity Classification Equivalents