Installation and Parts Replacement Manual for DODGE® Double Reduction Screw Conveyor and Hydroil Screw Conveyor Drive

SCXT / HSCXT 1A
SCXT / HSCXT 2A
SCXT / HSCXT 3B
SCXT / HSCXT 4B
SCXT / HSCXT 5C
SCXT / HSCXT 6A
SCXT / HSCXT 7A
SCXT 8A

These instructions must be read thoroughly before installation or operation.

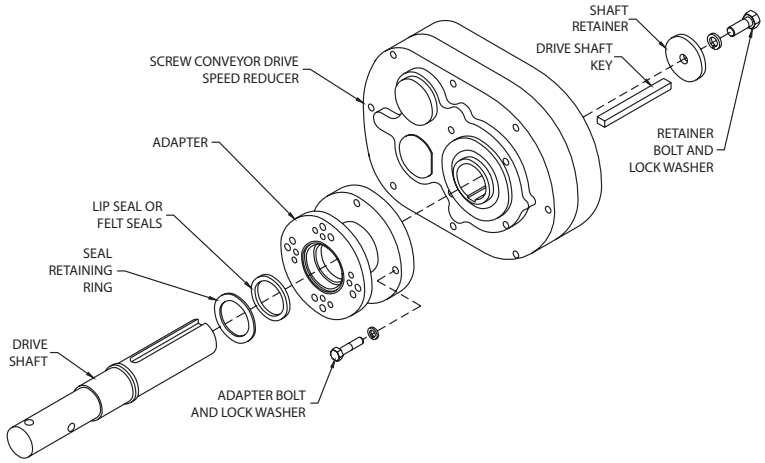


Figure 1 - Assembly

WARNING: To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Remove all external loads from drive before removing or servicing drive or accessories. Failure to observe these precautions could result in bodily injury.

Note: A screw conveyor drive consists of three sub- assemblies listed below.

1. Reducer – Includes speed reducer, shaft retainer, retainer bolt and lockwasher.
2. Adapter Assembly – Includes adapter bolts, lockwashers, a lip type seal and a seal retaining ring.
3. Drive Shaft – Includes shaft and key.

Make certain none of the parts have been damaged in shipment. Any shipping damage should be promptly reported to the carrier. Read all instructions in this manual before attempting to assemble or install the Screw Conveyor Drive. It is important that assembly be performed in the following sequence and that each step be completed before continuing to the next.

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 Company nor are the responsibility of Baldor Electric Company. 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.

ASSEMBLY

1. Place reducer on blocks so that is lays flat with the input shaft down.
2. Position adapter on reducer output hub so that small end (end with 12 holes) rests on the reducer. Select the 4 mounting holes to match the shaft used (see Fig. 1).
3. Place adapter screws and lockwashers through adapter and thread into reducer. Do no tighten.
4. **Lip Type Seals** – Place seal in adapter so that spring faces out. Seal should be tapped evenly into place in the adapter with a small hammer, applying force only on the outer corner of the seal. Fill cavity between lips of seal with grease. Install seal retainer ring by tapping with a hammer. Apply grease to adapter section of shaft (middle section). Slide shaft, keyseated end first, into adapter and through reducer.

   Note: Be extremely careful when sliding adapter section of shaft through seal to prevent seal lips from being damaged or rolled over.

5. Carefully place the reducer on its side. Rotate shaft to align keyseats in shaft and output hub and install key. Install shaft retainer, lockwasher, and bolt. Tighten bolt to torque specified in Table 5.
6. Lay reducer on blocks with input shaft down and tighten adapter bolts to torque specified in Table 5.
7. If waste packing is to be used, it may be installed through access hole provided in the adapter. Waste packing, not furnished with the screw conveyor drive, may be used as a separate seal option or in combination with the lip seals.

OPTIONAL ADJUSTABLE PACKING ADAPTER – ASSEMBLY

1. Place reducer on blocks so that is lays flat with the input shaft down.
2. Position adapter on reducer output hub so that small end (end with 12 holes) rests on the reducer. Select the 4 mounting holes to match the shaft used (see Fig. 1).
3. Place adapter screws and lockwashers through adapter and thread into reducer. Do not tighten.
4. Install 2 screws in studs in the adapter. Use Loctite on threads. See Fig. 2.
5. Flatten both seals with a soft hammer. Place seals in adapter, one on top of the other with joints offset from each other. Lay retaining ring loosely on top of the seals. Slide shaft, keyseated end first, into adapter and through reducer. Take care to clear the seals with the adapter section of the shaft. Once shaft has bottomed, seat retainer ring by tapping with a hammer. Install adjustable flange and secure with hex nuts provided.
6. Carefully place the reducer on its side. Rotate shaft to align keyseats in shaft and output hub and install key. Install shaft retainer, lockwasher, and bolt. Tighten bolt to torque specified in Table 5.
7. Lay reducer on blocks with input shaft down and tighten adapter bolts to torque specified in Table 5

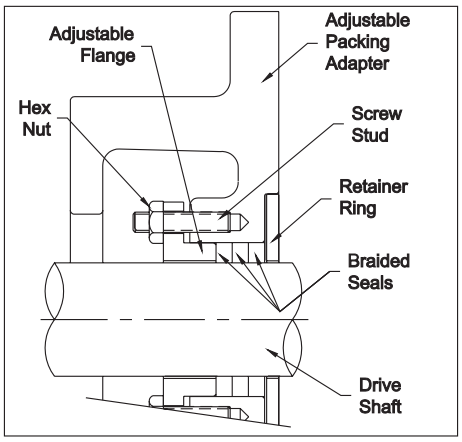


Figure 2 - Optional Adjustable Packing Adapter

INSTALLATION

1. Use lifting bracket where applicable to lift reducer.
2. Determine the running positions of the reducer. (See Fig. 3) Note that the reducer is supplied with 6 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. Install the filter/ventilation plug in topmost hole. Of the 2 remaining plugs on the sides of the reducer, the lowest one is the minimum oil level plug.
   Vertical Installations - Install the filter/ventilation plug in the hole provided in the upper face of the reducer housing as installed. If space is restricted on the upper face, install the vent in the highest hole on the side of the reducer per Figure 3 using the optional vertical vent kit. Install a plug in the hole in the bottom face of the reducer. Do not use this hole for the magnetic drain plug. Install the magnetic drain plug in the lowest hole on the sides of the reducer. Of the remaining holes on the sides of the reducer, use the plug in the upper housing half for the minimum oil level plug.

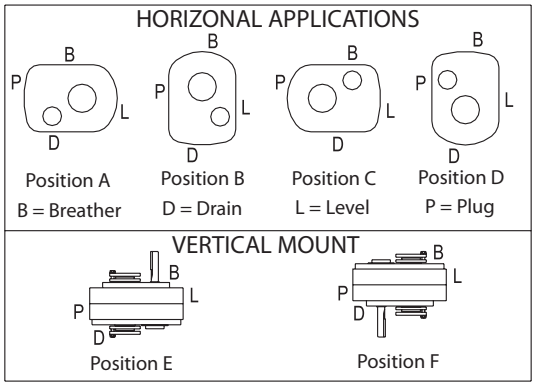


Figure 3 - Mounting Positions

Below 15 RPM output speed, oil level must be adjusted to reach the highest oil level plug. If reducer position is to vary from those shown in Figure 1, either more or less oil may be required. Consult Dodge.

The running position of the reducer in a horizontal application is not limited to the four positions shown in Fig. 3. However, if running position is over 20° in position “B” & “D” or 5° in position “A” & “C”, either way from sketches, the oil level plug cannot be used safely to check the oil level, unless the reducer is swung to within 20° for position “A” & “C” or 5° for position “B” & “D” of the positions shown in Fig. 3. Because of the many possible positions of the reducer, it may be necessary or desirable to make special adaptations using the lubrication filling holes furnished along with other standard pipe fittings, stand pipes and oil level gauges as required.

Note: If motor mount, motor, and sheaves are to be installed on reducer before mounting screw conveyor drive to trough end, bypass step 3; perform steps 4 and 5, and then return to step 2.

3. Use lifting tab to hoist screw conveyor drive into position. Slide shaft into screw and adapter over trough end studs. Only one set of adapter holes will fit over the trough end studs. If the mounted position of the screw conveyor drive varies more than 15° from any of the four horizontal mounting positions shown in Fig. 3, an incorrect set of holes has been selected for coupling adapter to reducer. This can be corrected by removing adapter screws and rotating the reducer to its proper position. Reinstall and tighten adapter screws to torque specifed in Table 5. Install lockwashers and tighten nuts on trough end studs. Attach drive shaft to screw.
4. **Motor Mount Installation:**

   The motor mount must be installed on the reducer as shown in Figure 4.

   Remove the required housing bolts on the side of the reducer. Place the motor mount brackets in position and install the longer housing bolts supplied with the motor mount assembly. Do not fully tighten the housing bolts at this time.
   Install the bottom plate to the motor mount brackets and tighten with the hardware provided. Next, tighten the housing bolts to the torque values listed in Table 5.

   Install the four adjusting studs to the bottom plate using the jam nuts provided and securely tighten. These nuts will not require any further adjustment. Add one additional jam nut to each stud and thread approximately to the middle of the stud. Install the top motor plate on top of the jam nuts. Assemble the remaining jam nuts on studs to secure top motor plate. Do not fully tighten these nuts yet.

Mount motor, drive and driven sheaves, and v-belts.

Note: Mount driven sheave as close to the reducer housing as practical.

Adjust v-belts to the proper tension by adjusting the jam nuts and securely tighten.

Check all bolts to insure that they are securely tightened.

5. Install sheave on input shaft as close to reducer as practical.

CAUTION: Unit is shipped without oil. Add proper amount of recommended lubricant before operating. Failure to observe this precaution could result in damage to or destruction of the equipment.

6. Fill gear reducer with the recommended volume of lubricant per table 1.

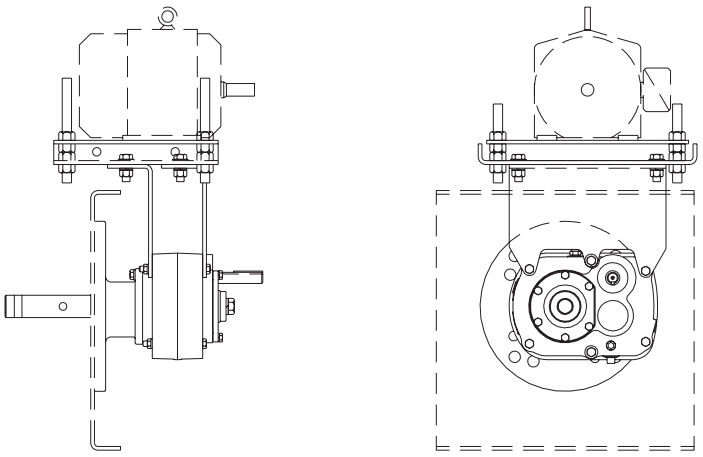


Figure 4 - Complete Drive

LUBRICATION

IMPORTANT: Because Torque-Arm reducers are shipped without oil, it is extremely important to add the proper amount of lubricant prior to operating reducer. For most applications a high-grade petroleum-base rust and oxidation inhibited (R&O) gear oil is suitable. Under severe conditions EP type oils can be used. See Table 1 for proper oil volume and viscosity requirement.

Follow instructions on reducer warning tags.

Lubrication is very important for satisfactory operation. The proper oil level must be maintained at all times. Frequent inspection, at least monthly, with the unit not running and allowing sufficient time for the oil to cool and the entrapped air to settle out of the oil should be made by removing the level plug and verifying the level is being maintained. If oil level is low, add the proper lubricant until the oil volume is increased to the correct level.

After an initial operation of about two weeks, the oil should be changed. If desired, this oil may be filtered and reused. After the initial break in period, under average industrial operating conditions, the lubricant should be changed every 2500 hours of operation. At every oil change, drain reducer and flush with kerosene, clean magnetic drain plug and refill to proper level with new lubricant.

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: Too much oil will cause overheating and too little will result in gear failure. Check oil level regularly. Failure to observe this recaution could result in bodily injury.

Heating is a natural characteristic of enclosed gearing. A maximum gear case temperature approaching 200°F is not uncommon for some units operating in normal ambient temperatures of 80°F. When operating at the rated capacity with proper lubrication, no damage will result from this temperature. This maximum temperature was taken into consideration during the design of the reducer.

Table 1 - Oil Volumes													
Reducer		Approximate Volume of Oil to Fill Reducer to Oil Level Plug ① ⑤											
		② Position A		② Position B		② Position C		② Position D		② Position E		② Position F	
Size	Ratio	③ Qt	④ L	③ Qt	④ L	③ Qt	④ L	③ Qt	④ L	③ Qt	④ L	③ Qt	④ L
SCXT1A	9,15,25	1/2	.47	1/2	.47	5/8	.59	3/4	.71	1	.95	1-1/4	1.2
SCXT2A	9,15,25	7/8	.83	1	.95	5/8	.59	1	.95	1-5/8	1.54	1-3/4	1.66
SCXT3B	9,15,25	1-1/2	1.42	1-1/2	1.42	3/4	.71	2-1/4	2.13	2-5/8	2.48	3	2.84
SCXT4B	9,15,25	1-7/8	1.77	2-1/4	2.13	1-1/4	1.18	1-3/4	1.66	3-3/8	3.19	4-1/4	4.02
SCXT5C	9,15,25	3-1/2	3.31	4	3.79	3-1/4	3.08	4	3.79	7	6.62	8-5/8	8.16
SCXT6A	9,15,25	4-1/4	4.00	5	4.70	4-1/4	4.00	5	4.70	8-5/8	8.20	9-1/8	8.60
SCXT7A	9,15,25	6-1/2	6.15	8	7.57	7-1/4	6.86	9-1/4	8.75	15-3/8	14.6	16-3/8	15.5
SCXT8A	15,25	8-1/2	8.00	11	10.4	10-1/2	9.9	8-1/2	8.00	19-1/8	18.1	19-1/8	18.1

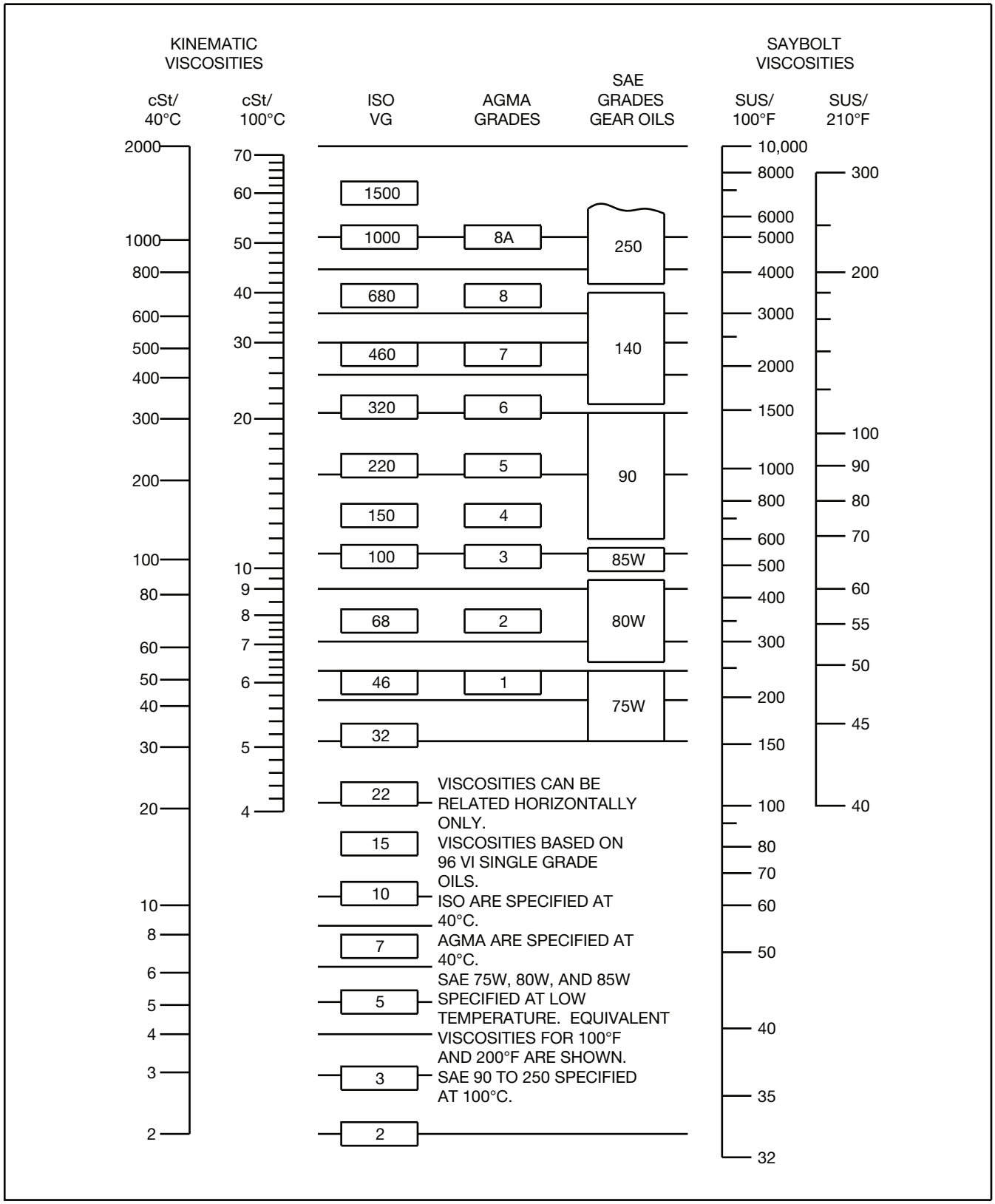
① Oil quantity is approximate. Service with lubricant until oil runs out of oil level hole.
② Refer to Figure 3 for mounting positions.
③ US measure: 1 quart = 32 fluid ounces = .94646 liters.
④ Conversion from quarts rounded values.
⑤ Below 15 RPM output speed, oil level must be adjusted to reach the highest oil level plug. If reducer position is to vary from those shown in Figure 3, either more or less oil may be required. Consult Dodge.

Table 2 - Oil Recommendations								
ISO Grades For Ambient Temperatures of 15˚F to 60˚F								
Output RPM	(H)SCXT Reducer Size							
	1A	2A	3B	4B	5C	6A	7A	8A
201 – 300	320	320	220	220	220	220	220	220
151 – 200	320	320	220	220	220	220	220	220
126 – 150	320	320	320	220	220	220	220	220
101 – 125	320	320	320	320	320	220	220	220
81 – 100	320	320	320	320	320	220	220	220
41 – 80	320	320	320	320	320	220	220	220
11 – 40	320	320	320	320	320	320	320	320
1 – 10	320	320	320	320	320	320	320	320

ISO Grades For Ambient Temperatures of 15˚F to 60˚F								
Output RPM	(H)SCXT Reducer Size							
	1A	2A	3B	4B	5C	6A	7A	8A
201 – 300	220	220	150	150	150	150	150	150
151 – 200	220	220	150	150	150	150	150	150
126 – 150	220	220	220	150	150	150	150	150
101 – 125	220	220	220	220	150	150	150	150
81 – 100	220	220	220	220	220	150	150	150
41 – 80	220	220	220	220	220	150	150	150
11 – 40	220	220	220	220	220	220	220	220
1 – 10	220	220	220	220	220	220	220	220

Notes:
1. Assumes auxiliary cooling where recommended in the catalog.
2. Pour point of lubricant selected should be at least 10°F lower than expected minimum ambient starting temperature.
3. Extreme pressure (EP) lubricants are not necessary for average operating conditions.
4. Special lubricants may be required for food and drug industry applications where contact with the product being manufactured may occur. Consult a lubrication manufacturer's representative for his recommendations.
5. For reducers operating in ambient temperatures between -22°F (-30°C) and 20°F (–6.6°C) use a synthetic hydrocarbon lubricant, 100 ISO grade or AGMA 3 grade (for example, Mobil SHC627). Above 125°F (51°C), consult DODGE Gear Application Engineering (864) 288-9050 for lubrication recommendation.
6. Mobil SHC630 Series oil is recommended for high ambient temperatures.

OIL VISCOSITY EQUIVALENCY CHART



GUIDELINES FOR SCXT 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 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 oil from the unit. Add a vapor phase corrosion inhibiting oil (VCI-105 oil by Daubert Chemical Co.) in accordance with Table 3.
2. Seal the unit airtight. Replace the vent plug with a standard pipe plug and wire the vent to the unit.
3. Cover all unpainted exterior parts with a waxy rust preventative compound that will keep oxygen away from the bare metal. (Non-Rust X-110 by Daubert Chemical Co. or equivalent)
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 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 envelope 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. Fill the unit to the proper oil level using a recommended lubricant. The VCI oil will not affect the new lubricant.
2. Clean the shaft extensions with petroleum solvents.
3. Assemble the vent plug into the proper hole.

Follow the installation instructions provided in this manual.

Table 3 – Quantities of VCI #105 Oil

Reducer Size	Quantity (Ounces / Milliliter)
SCXT1A	1 / 30
SCXT3B	1 / 30
SCXT2A	1 / 30
SCXT4B	1 / 30
SCXT5C	1 / 30
SCXT6A	2 / 59
SCXT7A	2 / 59
SCXT8A	3 / 89

REPLACEMENT OF PARTS

IMPORTANT: Using tools normally found in a maintenance department, a Dodge SCXT 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 (for shrinking these parts on shafts) should be available.

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 contact lip seals. Considerable care should be used during disassembly and reassembly to avoid damage to the surface 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 model number, part name, part number, and quantity.

It is strongly recommended that, when a pinion or gear is replaced, the mating pinion or gear is replaced also. If the large gear on the output hub must be replaced, it is recommended that an output hub assembly consisting of a gear assembled on a hub be ordered to ensure undamaged surfaces on the output hub where the output 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 shaft 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 rollers or cage of any bearing.

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

Removing Screw Conveyor Drive from Trough End

Disconnect an electrical power to the drive. Drain lubricant from reducer. Uncouple drive shaft and screw. Remove nuts from trough end studs. Support drive by means of hoist and carefully pull unit away from trough end to slide drive shaft out of screw.

Disassembly:

1. Remove retainer bolt, lockwasher, and shaft retainer from drive shaft. Pull drive shaft out of reducer from adapter side. Remove adapter.
2. Position the reducer on its side and remove all housing bolts. Drive dowel pins from housing. Using the three pry slots around the periphery of the flange, gently separate the housing halves. Open housing evenly to prevent damage to the parts inside.
3. Lift input shaft, all gear assemblies, and bearing assemblies from housing.
4. Remove seals from housing.
5. Remove bearings from shafts and hubs. Be careful not to scratch or damage any assembly or seal area during bearing removal. The hub assembly can be disassembled for gear replacement but if scratching or grooving occurs on the hub, seal leakage will occur and the hub will need to be replaced.

Reassembly:

1. Output Hub Assembly: Heat gear to 325°F to 350°F to shrink onto hub. Heat bearings to 270°F to 290°F to shrink onto hub. Any damage to the hub surfaces where the oil seals rub will cause leakage, making it necessary to replace the hub.
2. Countershaft Assembly: Heat gear to 325°F to 350°F and bearings to 270°F to 290°F to shrink onto shaft.
3. Input Shaft Assembly: Heat bearings 270°F to 290°F to shrink onto shaft. Press bearings on shaft.

4. Drive the two dowel pins into place in the right-hand housing half (backstop side).
5. Place R.H. housing half on blocks to allow for protruding end of output hub.
6. Install all bearing cups in right-hand housing half, making sure they are properly seated. SCXT1 and SCXT2 reducers use ball bearings on input and countershaft, tapered roller bearing cups are only used on the output bearings on these two sizes.
7. Mesh output hub gear and small countershaft gear together and set in place in housing. Set input shaft assembly in place in the housing. Make sure bearing rollers (cones) are properly seated in their cups.
8. Make sure both housing halves are clean. Apply a continuous 1/8" diameter bead of Dow Corning RTV732 sealant on the flange surface of the R.H. housing (make sure RTV is placed around all bolt holes). Set the left-hand housing half into position onto the dowel pins and gently tap with a soft hammer (rawhide, not lead hammer) until housing bolts can be used to draw housing halves together. Make sure reducer shafts do not bind while tightening housing bolts. Torque housing bolts per torque values listed in Table 5.
9. Place the output bearing cup into the housing and tap into place. Install the output seal carrier and draw down with two bolts 180° apart to 50 inch pounds of torque. Loosen both bolts then retighten finger tight only. Measure the clearance between the housing and carrier flange at each bolt and average the two values. Add 0.010" to the average reading and make up shim pack. Install shim pack between the carrier flange and the reducer housing. Torque the bolts to the value shown in Table 5. Using a magnetic base and dial indicator, check the axial end play. Add or remove shims until the axial endplay reading of the output hub is per Table 4.
10. Repeat step 9 above for installing and adjusting the countershaft and input bearings on sizes 3 through 8. Adjust the axial endplay per Table 4.
11. Install input and output seals. Lightly coat the seal lips with Mobilith AW2 All-Purpose grease or equivalent. The possibility of damage and consequent oil leakage can be decreased by covering all sharp edges with tape prior to seal installation. Seals should be pressed or tapped with a soft hammer evenly into place in the reducer housing, applying pressure only on the outer edge of the seals.

    Extreme care should be used when installing seals to avoid damage due to contact with sharp edges on the input shaft or output hub. A slight oil leak at the seals may be evident during initial running, but should disappear unless seals have been damaged.
12. Install backstop cover. Make sure all bolts are tightened to the correct torque values listed in Table 5.

Table 4 - Bearing Adjustment Tolerances

Reducer Size	Bearing Endplay Values		
	Input	Countershaft	Output
SCXT1A	N/A	N/A	.0005-.003 Loose
SCXT2A	N/A	N/A	.0005-.003 Loose
SCXT3B	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose
SCXT4B	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose
SCXT5C	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose
SCXT6A	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose
SCXT7A	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose
SCXT8A	.002-.004 Loose	.0005-.003 Loose	.0005-.003 Loose

Table 5 – Recommended Bolt Torque Values

Reducer Size	Recommended Torque (ft. lbs.)			
	Housing Bolts	Output Seal Carrier	C/S Bearing Cover	Input Seal Carrier
SCXT1A	30 - 27	N/A	N/A	N/A
SCXT2A	30 - 27	N/A	N/A	N/A
SCXT3B	50 - 45	17 – 15	17 – 15	17 – 15
SCXT4B	50 - 45	30 – 27	30 – 27	30 – 27
SCXT5C	75 - 68	30 – 27	30 – 27	30 – 27
SCXT6A	75 - 68	30 – 27	30 – 27	30 – 27
SCXT7A	150 - 135	50 - 45	50 - 45	50 - 45
SCXT8A	150 - 135	30 – 27	30 – 27	30 – 27

Reducer Size	Recommended Torque (ft. lbs.)		
	Drive Shaft	Adapter Bolts	Backstop Cover
SCXT1A	150-135	30-27	5 – 4
SCXT2A	150-135	50-45	5 – 4
SCXT3B	260-234	75-68	5 – 4
SCXT4B	260-234	150-135	8 – 7
SCXT5C	260-234	150-135	8 – 7
SCXT6A	640-576	150-135	8 – 7
SCXT7A	640-576	150-135	8 – 7
SCXT8A	640-576	183-165	8 – 7

REPLACEMENT PART AND KIT NUMBERS

Table 6 – Part Numbers for Replacement Bearings, Single and Double Reduction Reducers	
Reducer Size	**Output Hub Bearing – LH and RH Sides Part Number**
SCXT1A	402246 / 403149
SCXT2A	402247 / 403150
SCXT3B	402272 / 403127
SCXT4B	402268 / 403163
SCXT5C	402193 / 403016
SCXT6A	402050 / 403140
SCXT7A	402058 / 403111
SCXT8A	402147 / 403105
Reducer Size	**Countershaft Bearing – LH Side Part Number**
SCXT1A	424006
SCXT2A	424000
SCXT3B	402273 / 403094
SCXT4B	402000 / 403000
SCXT5C	402203 / 403027
SCXT6A	402054 / 403159
SCXT7A	402256 / 403053
SCXT8A	402057 / 403143
Reducer Size	**Countershaft Bearing – Backstop (RH) Side Part Number**
SCXT1A	424006
SCXT2A	424000
SCXT3B	402273 / 403094
SCXT4B	402000 / 403000
SCXT5C	402203 / 403027
SCXT6A	402052 / 403142
SCXT7A	402256 / 403053
SCXT8A	402148 / 403106
Reducer Size	**Input Shaft Bearing – LH Side Part Number**
SCXT1A	424112
SCXT2A	424019
SCXT3B	402204 / 403139
SCXT4B	402280 / 403027
SCXT5C	402144 / 403104
SCXT6A	402196 / 403091
SCXT7A	402150 / 403106
SCXT8A	402098 / 403072

Reducer Size	**Input Shaft Bearing – RH Side Part Number**
SCXT1A	424111
SCXT2A	424090
SCXT3B	402273 / 403094
SCXT4B	402142 / 403102
SCXT5C	402266 / 403073
SCXT6A	402197 / 403091
SCXT7A	402088 / 403047
SCXT8A	402097 / 403072

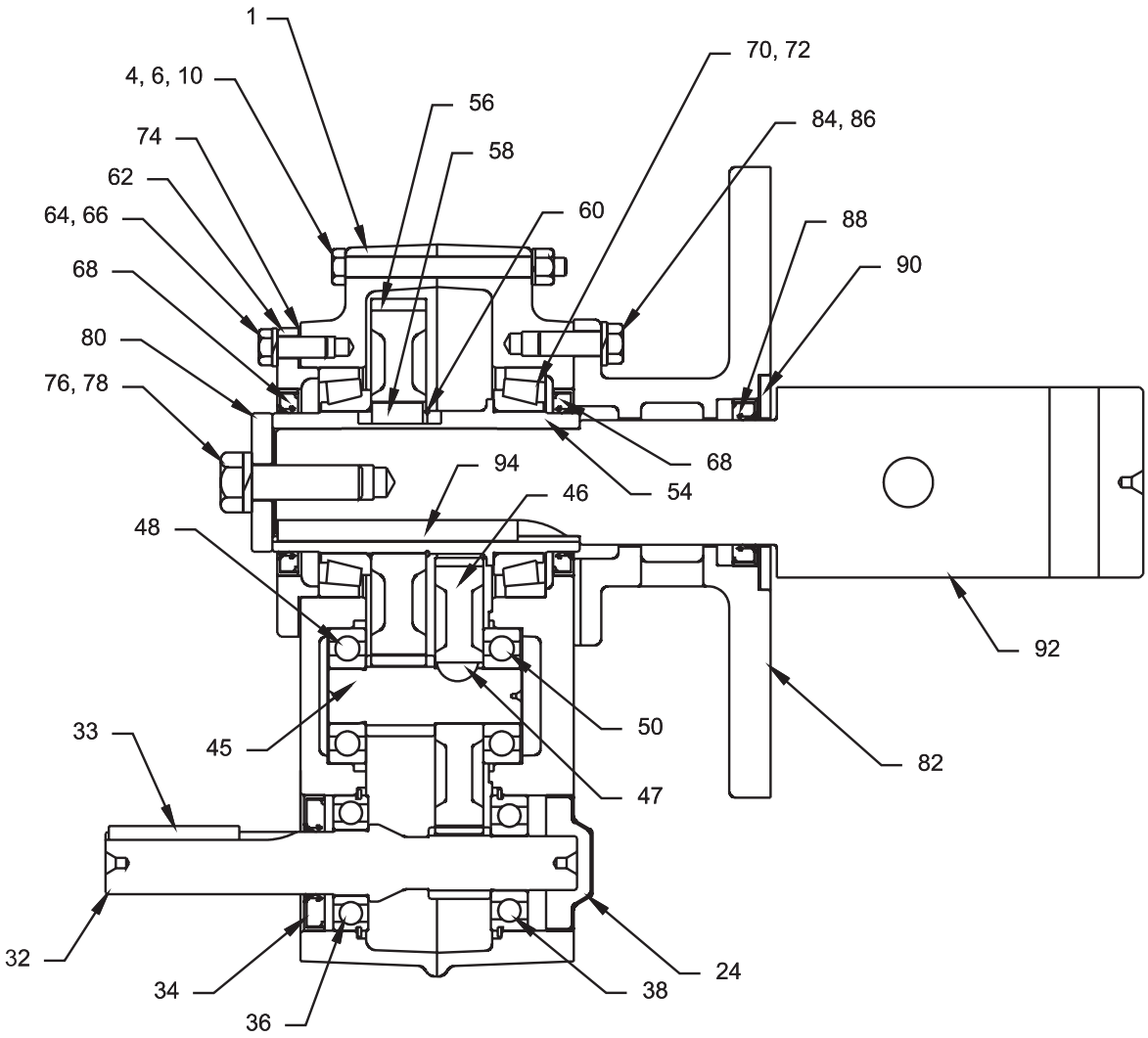
Note: LH is input side of reducer, and RH is backstop or output side of reducer. Bearing part numbers refer to Cup/Cone combinations, respectively, and apply to all ratios unless otherwise specified. For actual reducer ratios, refer to Table 7.

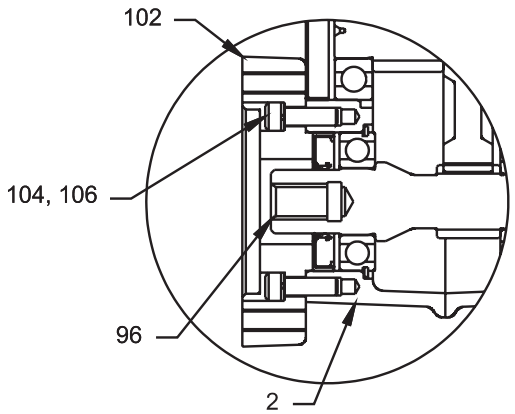
Table 7 - Replacement Parts Kit Numbers					
Reducer Size	**Ratio**	**Seal Kit**	**Ouput Hub Assembly**	**Countershaft Assembly**	**Bearing Kit(s)**
SCXT1A	9:1	272711	391029	392100	N/A
	15:1			392090	
	25:1			392091	
SCXT2A	9:01	272712	392105	392101	N/A
	15:1			392092	
	25:1			392093	
SCXT3B	9:1	389720	389702	389729	389587 Input 389588 C/S 389589 Output
	15:1			389700	
	25:1			389701	
SCXT4B	9:1	389721	389709	389730	389590 Input 389591 C/S 389592 Output
	15:1			389707	
	25:1			389708	
SCXT5C	9:1	389722	389716	389731	389593 Input 389595 C/S 389596 Output
	15:1			389714	
	25:1			389715	
SCXT6A	9:1	246340	390988	392140	N/A
	15:1			391171	
	25:1			391186	
SCXT7A	9:1	247345	390990	392141	N/A
	15:1			391196	
	25:1			391197	
SCXT8A	15:1	248340	390993	391184	N/A
	25:1			391185	
	24:1			390998	

Seal Kit consists of Input Seal, Output Seals, Backstop Cover Gasket and RTV Sealant.
Output Hub Assembly consists of Output Hub, Output Gear and Gear Key.
Countershaft Assembly consists of Countershaft Pinion, Countershaft Gear and Gear Key.
Bearing Kit consists of LH and RH Output Bearing Cup/Cone, LH and RH Countershaft Bearing Cup/Cone (double reduction only) and LH and RH Input Bearing Cup/Cone.

Table 8 - Actual Ratios			
Reducer Size	**Nominal Ratio**		
	9:1	**15:1**	**25:1**
SCXT1A	9.44	15.35	25.64
SCXT2A	9.25	14.10	23.46
SCXT3B	8.91	14.88	24.71
SCXT4B	9.67	15.13	24.38
SCXT5C	8.95	15.40	25.56
SCXT6A	9.20	15.33	25.13
SCXT7A	9.61	15.23	24.59
SCXT8A	N/A	15.08	24.62

Parts for SCXT / HSCXT 1A and 2A Double Reduction Screw Conveyor and Hydroil Screw Conveyor Drive



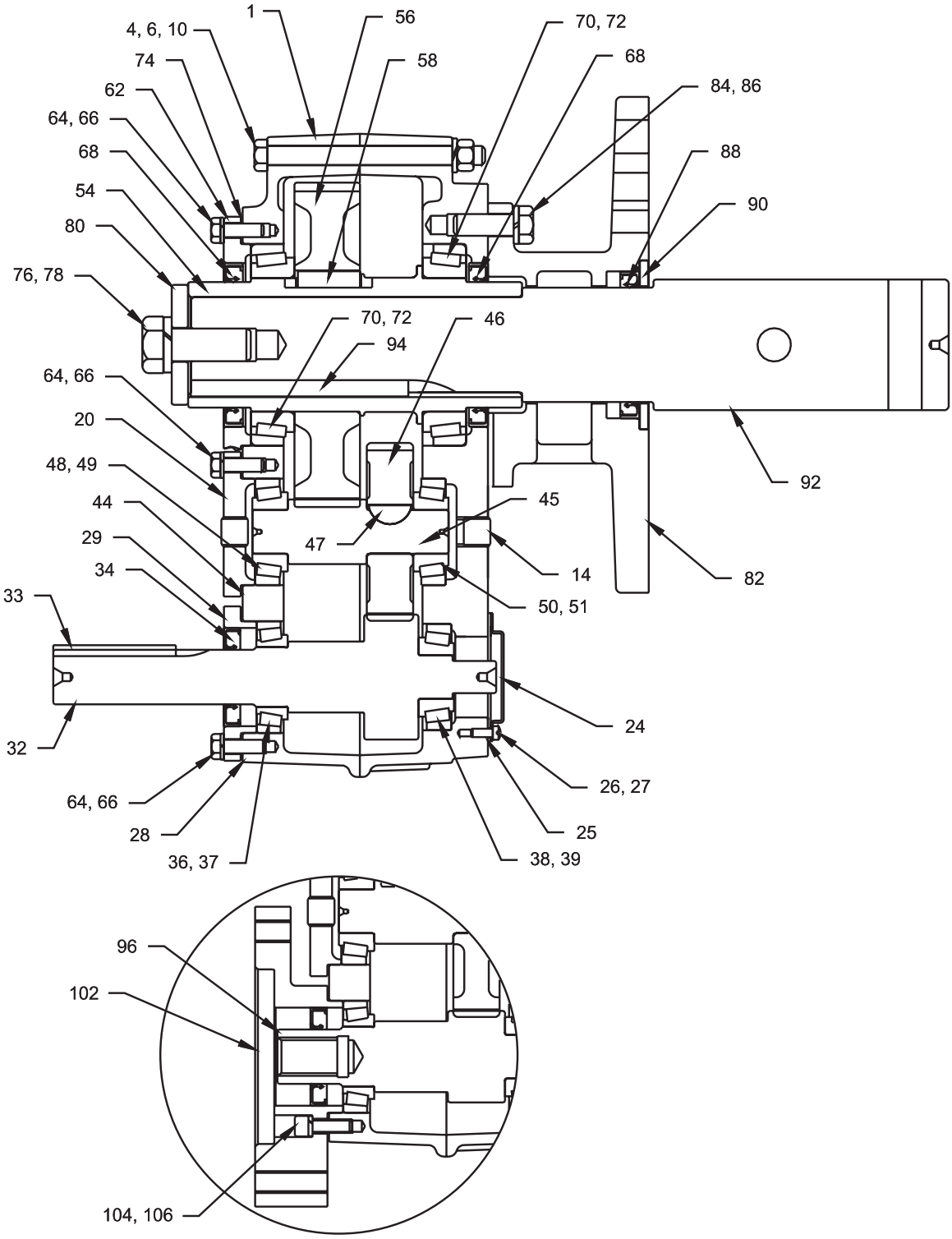


Ref.	Description	Qty.	(H)SCXT 1A	(H)SCXT 2A
1	SCXT Housing Assembly	1	351225	352219
2	HSCXT Housing Assembly	1	351240	352245
①	RTV Sealant, Tube	1	465044	465044
①	Air Vent	1	900287	900287
4	Housing Bolt	④	411418	411418
6	Lock-Washer	④	419011	419011
10	Hex Nut	④	407087	407087
①	Dowel Pin ⑤	2	420063	420063
①	Magnetic Oil Plug	1	430060	430060
22	Oil Plug	4	430031	430031
24	Input Shaft Bearing Cover	1	361062	354112
32	Input Pinion			
	9:1 Ratio ③	1	241481	241481
	15:1 Ratio ③	1	241302	242186
	25:1 Ratio ③	1	241200	242187
33	Input Pinion Key	1	443008	443013
36	Input Pinion Bearing-LH	1	424112	424019
38	Input Pinion Bearing-RH	1	424111	424090
	Countershaft Pinion Assembly ②			
	9:1 Ratio ③	1	392100	392101
	15:1 Ratio ③	1	392090	392092
	25:1 Ratio ③	1	392091	392093
45	Countershaft Pinion ⑥	1	241216	242185
46	First Reduction Gear ⑥			
	9:1 Ratio ③	1	241482	242482
	15:1 Ratio ③	1	241170	242008
	25:1 Ratio ③	1	241171	242005
47	Gear Key ⑥	1	241309	242218
48	Countershaft Bearing (Input Side)		424006	424000
50	Countershaft Bearing (Output Side)		424006	424000
	Output Hub Assembly ②		391029	392105
54	Output Hub ⑥		351112	352112
56	Output Gear ⑥		241007	242181
58	Output Gear Key ⑥		241217	443399
60	Output Hub Snap Ring ⑥		421013	421017
62	Output Hub Seal Carrier		351114	352114
64	Carrier Screw		441405	411407
66	Lockwasher		419010	419011
70	Output Hub Bearings — Cone		402246	402247
72	Cup		403149	403150
74	Output Hub Shim Pack	1 Set	391056	391059
76	Retainer Bolt	1	411549	411549
78	Lockwasher	1	419014	419014
80	Shaft Retainer	1	351116	352116

Ref.	Description		Qty.	(H)SCXT 1A	(H)SCXT 2A
	Adapter Assembly ②		1	351086	352052
82	Adapter ⑥		1	351117	352117
84	Bolt ⑥		4	411408	411433
86	Lockwasher ⑥		4	419011	419012
88	Lip Seal ⑥		1	351123	352122
①	Braided Seal ⑥		2	427663	427659
90	Seal Retaining Ring ⑥		1	351121	352121
	Adjustable Adapter Assembly ②		1	356168	356112
①	Adjustable Adapter ⑥			356169	356113
84	Bolt ⑥			411408	411433
86	Lockwasher ⑥			419011	419012
①	Adjustable Packing Retainer ⑥			356134	356115
①	Stud ⑥			400404	400404
①	Hex Nut ⑥			407202	407202
①	Braided Seal ⑥			427663	427659
90	Seal Retaining Ring ⑥			351121	352121
92	Drive	1-1/2” Dia.	1	351094	352090
	Shaft ②	2” Dia.	1	351095	352091
		2-7/16” Dia.	1	351096	352092
		3” Dia.	1	351097	352093
		3-7/16” Dia.	1	---	---
94	Key ⑥		1	443287	443223
	Seal Kit ②		1	272711	272712
34	Input Seal ⑥		1	241457	242211
68	Output Seal ⑥		2	351113	352113
96	Hydroil Input Pinion ③	15:1 Ratio	1	241455	242188
	③	25:1 Ratio	1	241449	242189
102	Hydroil Motor Adapter		1	C11762	352240
104	Adapter Screw		5	417081	417081
106	Lockwasher		5	419046	419046

Notes:
① Not shown on drawing.
② Includes Parts Listed Immediately Below
③ See Table 7 for actual ratio.
④ 6 required on SCXT1A, 7 required on SCXT2A
⑤ Included in Housing Assembly
⑥ Included In Kit

Parts for SCXT / HSCXT 3B, 4B and 5C Double Reduction Screw Conveyor and Hydroil Screw Conveyor Drive

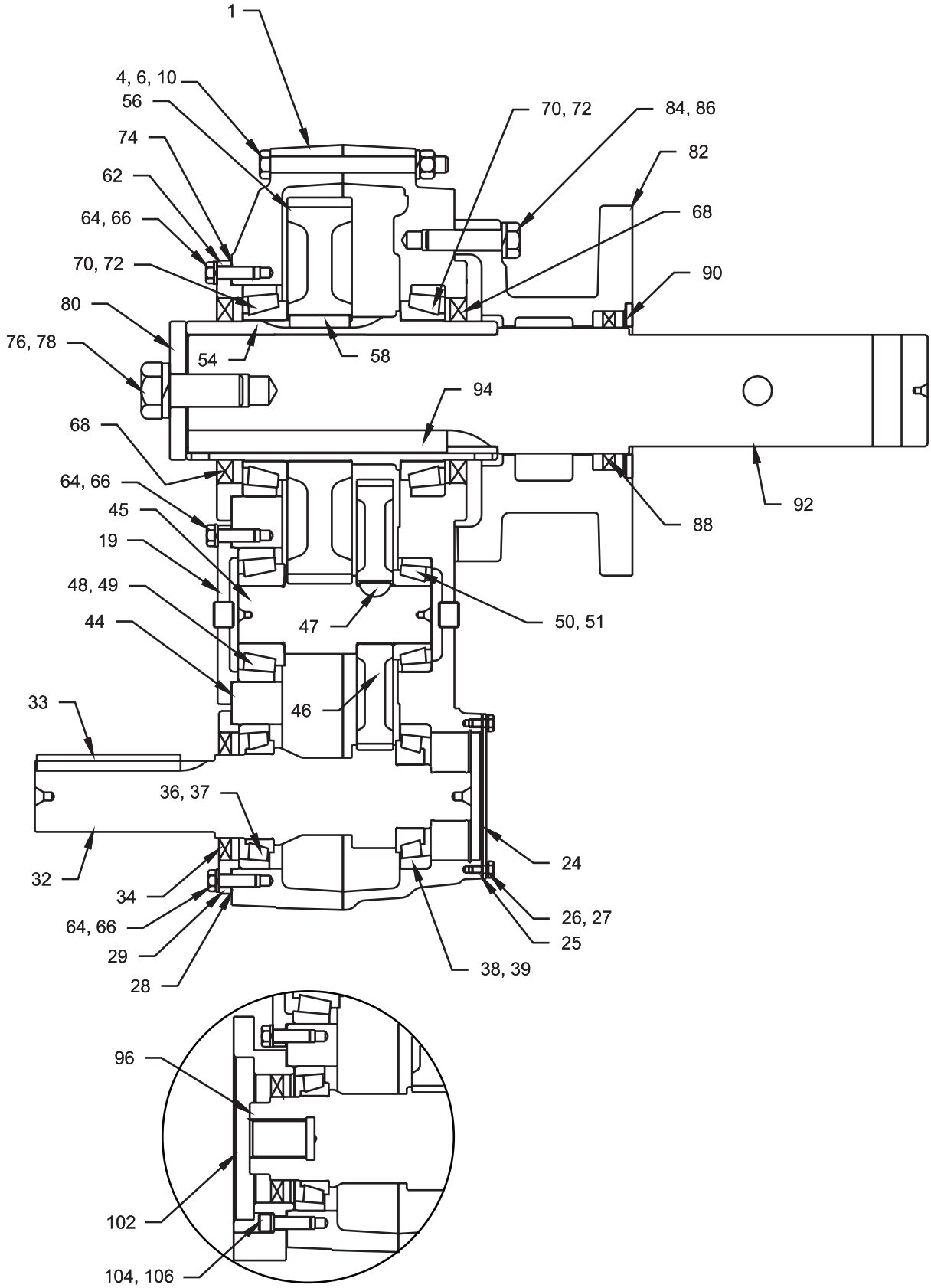


Ref.	Description		Qty.	(H)SCXT 3B	(H)SCXT 4B	(H)SCXT 5C
1	Housing Assembly		1	243538	244569	245589
①	RTV Sealant, Tube		1	465044	465044	465044
①	Air Vent		1	900287	900287	904287
4	Housing Bolt		8	411440	411442	411464
6	Lock-Washer		8	419012	419012	419013
10	Hex Nut		8	407089	407089	407091
①	Dowel Pin ④		2	420063	420063	304624
①	Magnetic Oil Plug		1	430060	430060	430062
14	Oil Plug		4	430031	430031	430033
24	Input Shaft Bearing Cover		1	243560	244493	245226
26	Bearing Cover Screw		4	416524	411035	411394
27	Lockwasher		4	---	419009	419009
28	Input Bearing Shim Pack		2 Sets	389704	389711	389732
29	Input Shaft Seal Carrier		1	243543	244577	245597
32	Input Pinion					
	9:1 Ratio ③		1	243549	244579	245599
	15:1 Ratio ③		1	243550	244580	245600
	25:1 Ratio ③		1	243551	244581	245601
33	Input Pinion Key		1	443032	443082	443096
	Input Bearing Kit ②			389587	389590	389594
36	Input Bearing-LH	⑤ Cone	1	402204	402280	402144
37		⑤ Cup	1	403139	403027	403104
38	Input Bearing-RH	⑤ Cone	1	402273	402142	402266
39		⑤ Cup	1	403094	403102	403073
44	Countershaft Bearing Shim Pack		2 Sets	389705	389712	389718
	Countershaft Assembly ②					
	9:1 Ratio ③		1	389729	389730	389731
	15:1 Ratio ③		1	389700	389707	389714
	25:1 Ratio ③		1	389701	389708	389715
45	Countershaft with Pinion ⑤		1	243555	244590	245596
	First Reduction Gear ⑤					
	9:1 Ratio ③		1	243237	244482	245482
	15:1 Ratio ③		1	243238	244214	245214
	25:1 Ratio ③		1	243239	244212	245212
47	Gear Key ⑤		1	D8242	D8243	D8243
	Countershaft Bearing Kit ②		1	389588	389591	389595
48	Countershaft Bearing - LH	⑤ Cone	1	402273	402000	402203
49		⑤ Cup	1	403094	403000	403027
50	Countershaft bearing - RH	⑤ Cone	1	402273	402000	402203
51		⑤ Cup	1	403094	403000	403027
	Output Hub Assembly ②		1	389702	389709	389716
54	Output Hub ⑤		1	243557	244589	245591
56	Output Gear ⑤		1	243570	244188	245186
58	Output Gear Key ⑤		1	243216	354087	355064
62	Output Hub Seal Carrier		1	243547	244591	245592
64	Carrier Screw		6	411390	411407	411407
66	Lockwasher		6	419010	419011	419011

Ref.	Description		Qty.	(H)SCXT 3B	(H)SCXT 4B	SCXT 5C
	Output Bearing Kit ②		1	389589	389592	389596
70	Output Hub Bearings	⑤ Cone	2	402272	402268	402193
72		⑤ Cup	2	403127	403163	403016
74	Output Hub Shim Pack		2 Sets	389706	389713	389719
76	Retainer Bolt		1	411551	411551	411551
78	Lockwasher		1	419016	419016	419016
80	Shaft Retainer		1	353053	354088	355065
	Adapter Assembly ②		1	353047	354121	355072
82	Adapter ⑤		1	353081	354081	355047
84	Bolt ⑤		4	411456	411483	411483
86	Lockwasher ⑤		4	419013	419014	419014
88	Lip Seal ⑤		1	353085	354115	355067
①	Braided Seal ⑤		2	427658	427664	427674
90	Seal Retaining Ring ⑤		1	353054	354089	355066
	Adjustable Adapter Assembly ②		1	356163	356149	356158
①	Adjustable Adapter ⑤		1	356164	356150	356159
84	Bolt ⑤		4	411456	411483	411483
86	Lockwasher ⑤		4	419013	419014	419014
①	Adjustable Packing Retainer ⑤		1	356166	356152	356161
①	Stud ⑤		2	400404	400404	400404
①	Hex Nut ⑤		2	407202	407202	407202
①	Braided Seal ⑤		3	427658	427664	427674
90	Seal Retaining Ring ⑤		1	353054	354089	355066
92	Drive	1-1/2" Dia.	1	243562	244594	---
	Shaft ②	2" Dia.	1	243563	244595	355175
		2-7/16" Dia.	1	243564	244596	355176
		3" Dia.	1	243565	244597	355177
		3-7/16" Dia.	1	---	244598	355178
94	Key ⑤		1	443089	443114	443239
	Seal Kit ②		1	389720	389721	389722
34	Input Seal ⑤		1	243558	244524	355011
68	Output Seal ⑤		2	243578	244673	245545
25	Input Bearing Cover Gasket ⑤		1	243561	244593	245220
96	Hydroil Input Pinion					
	15:1 Ratio ③		1	243553	244583	245603
	25:1 Ratio ③		1	243554	244584	245604
102	Hydroil Motor Adapter					
	15:1 Ratio ③		1	243539	244572	245606
	25:1 Ratio ③		1	243541	244572	245607
104	Adapter Screw		4	417081	417108	415023
106	Lockwasher					
	15:1 Ratio ③		4	419046	419047	---
	25:1 Ratio ③		4	419046	419047	419047

Notes:
① Not shown on drawing.
② Includes Parts Listed Immediately Below
③ See Table 7 for actual ratio.
④ Included in Housing Assembly
⑤ Part of Kit Listed above

Parts for SCXT / HSCST 6A thru 8A Double Reduction
Screw Conveyor and Hydroil Screw Conveyor Drive



Ref.	Description		Qty.	(H)SCXT 6A	(H)SCXT 7A	SCXT 8A
1	Housing Assembly		1	356279	356280	248487
①	RTV Sealant, Tube		1	465044	465044	465044
①	Air Vent		1	904287	904287	904287
①	Air Vent Bushing		1	---	430079	430079
4	Housing Bolt		⑤	411466	411498	411499
6	Lock-Washer		⑤	419013	419016	419016
10	Hex Nut		⑤	407091	407095	407095
12	Dowel Pin ⑦		2	304624	304624	304624
①	Magnetic Oil Plug		1	430062	430064	430064
①	Oil Plug		1	430033	430035	430035
24	Input Shaft Bearing Cover		4	246226	246226	248226
26	Bearing Cover Screw		6	411394	411394	411394
27	Lockwasher		6	419009	419009	419009
28	Input Bearing Shim Pack		2 Sets	391164	390420	390038
29	Input Shaft Seal Carrier		1	246184	247320	258023
32	Input Pinion					
	9:1 Ratio ③		1	246481	247479	248482
	15:1 Ratio ③		1	246290	247370	248370
	25:1 Ratio ③		1	246291	247371	248371
33	Input Pinion Key		1	443113	443127	443133
36	Input Bearing-LH	Cone	1	402196	402150	402098
37		Cup	1	403091	430106	403072
38	Input Bearing-RH	Cone		402197	402088	402097
39		Cup		403091	403047	403072
44	Countershaft Bearing Shim Pack		2 Sets	391165	390429	391182
	Countershaft Assembly ②					
	9:1 Ratio ④		1	392140	392141	---
	15:1 Ratio ④		1	391171	391196	391184
	25:1 Ratio ④		1	391186	391197	391185
45	Countershaft with Pinion ③		1	246294	247002	248002
46	First Reduction Gear ③					
	9:1 Ratio ④		1	246482	247478	248483
	15:1 Ratio ④		1	246292	247008	248213
	25:1 Ratio ④		1	246293	247005	248214
47	Gear Key ③		1	245218	247218	248218
48	Countershaft Bearing-LH	Cone	1	402054	402256	402057
49		Cup	1	403159	403053	403143
50	Countershaft Bearing-RH	Cone	1	402052	402256	402148
51		Cup	1	403142	403053	403106
	Output Hub Assembly ②			390988	390990	390993
54	Output Hub ③			246338	247338	248332
56	Output Gear ③			246295	247215	248215
58	Output Gear Key ③			245217	245217	248217

Ref.	Description		Qty.	(H)SCXT 6A	(H)SCXT 7A	SCXT 8A
62	Output Hub Seal Carrier		1	246187	247315	258021
64	Carrier Screw		⑥	411408	411433	411408
66	Lockwasher		⑥	419011	419012	419011
	Output Hub Bearings	Cone	2	402050	402058	402147
		Cup	2	403140	403111	403105
	Output Hub Shim Pack		2 Sets	391187	390444	390048
76	Retainer Bolt		1	411552	411552	411552
78	Lockwasher		1	419020	419020	419020
80	Shaft Retainer		1	356047	356191	248486
	Adapter Assembly ②		1	356055	356187	248470
82	Adapter ②		1	356049	356189	248471
84	Bolt ②		4	411487	411496	411496
86	Lockwasher ②		4	419014	419016	419016
88	Lip Seal ②		1	355054	355054	355054
①	Braided Seal ②		2	427687	427687	---
90	Seal Retaining Ring ②		1	356054	356054	248481
	Adjustable Adapter Assembly ②		1	356154	356192	---
①	Adjustable Adapter ③		1	356155	356193	---
84	Bolt ③		4	411487	411496	---
86	Lockwasher ③		4	419014	419016	---
①	Adjustable Packing Retainer ③		1	356157	356157	---
①	Stud ③		2	400404	400404	---
①	Hex Nut ③		2	407202	407202	---
①	Braided Seal ③		3	427687	427687	---
90	Seal Retaining Ring ③		1	356054	356054	---
92	Drive	1-1/2" Dia.	1	356040	356180	---
	Shaft ②	2" Dia.	1	356041	356181	---
		2-7/16" Dia.	1	356042	356182	---
		3" Dia.	1	356043	356183	248473
		3-7/16" Dia.	1	356044	356184	248474
94	Key ③		1	443288	443289	443289
	Seal Kit ②		1	246340	247345	248340
	Input Seal ③		1	242210	242210	248211
	Output Seal ③		2	246310	247310	258019
	Input Bearing Cover Gasket ③		1	246220	246220	248220
96	Hydroil Input Pinion Ratio ④	15:1	1	246230	247463	---
	Ratio ④	25:1	1	246286	247462	---
102	Hydroil Motor Adapter		1	246465	247464	---
104	Adapter Screw		6	417108	417141	---
106	Lockwasher		6	419047	419048	---

Notes:
① Not shown on drawing.
② Includes Parts Listed Immediately Below
③ Included in Kit
④ See Table 7 for actual ratio.
⑤ 8 required on SCXT6A and SCXT7A, 11 required on SCXT8A,
⑥ 18 Required on SCXT6A, 20 Required on SCXT7A, and 24 Required on SCXT8A.
⑦ Included in Housing Assembly

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