



Double-Reduction Screw Conveyor and Hydroil Screw Conveyor Drive Instruction Manual

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

These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see dodgeindustrial.com for updated instruction manuals.

WARNING: To ensure the 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.

WARNING: All products over 25 kg (55 lbs) are noted on the shipping package. Proper lifting practices are required for these products.

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.

NOTE: This reducer is compatible with the Dodge sensor that can be installed in the adapter plug labeled "smart sensor." The plug and sensor can be moved to different locations as required by mounting position.

WARNING: Because of the possible danger to person(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 Dodge® nor are the responsibility of Dodge. 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.

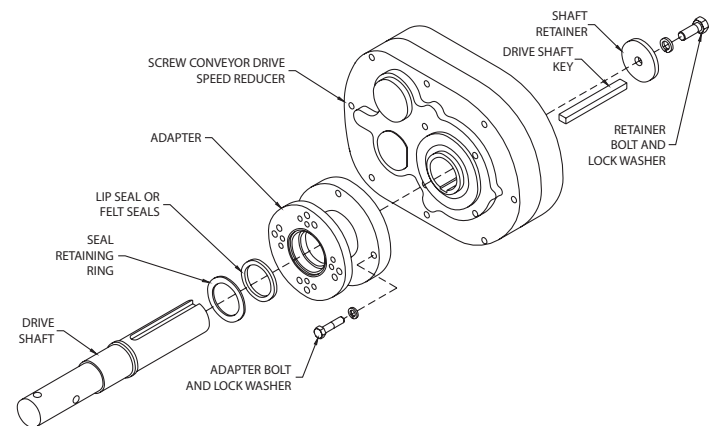


Figure 1 - Screw Conveyor Drive

ASSEMBLY

1. Place reducer on blocks so that it 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 four mounting holes to match the shaft used (see Figure 1).
3. Place adapter screws and lockwashers through adapter and thread into reducer. Do not tighten.
4. **Lip Type Seals** – Place seal in adapter so that the 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 retaining 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.

- Lay reducer on blocks with input shaft down and tighten adapter bolts to torque specified in Table 5.
- 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

- Place reducer on blocks so that it lays flat with the input shaft down.
- Position adapter on reducer output hub so that small end (end with 12 holes) rests on the reducer. Select the four mounting holes to match the shaft used (see Figure 1).
- Place adapter screws and lockwashers through adapter and thread into reducer. Do not tighten.
- Install two screws in studs in the adapter. Use Loctite on threads (see Figure 2).
- 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.
- 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.
- Lay reducer on blocks with input shaft down and tighten adapter bolts to torque specified in Table 5.

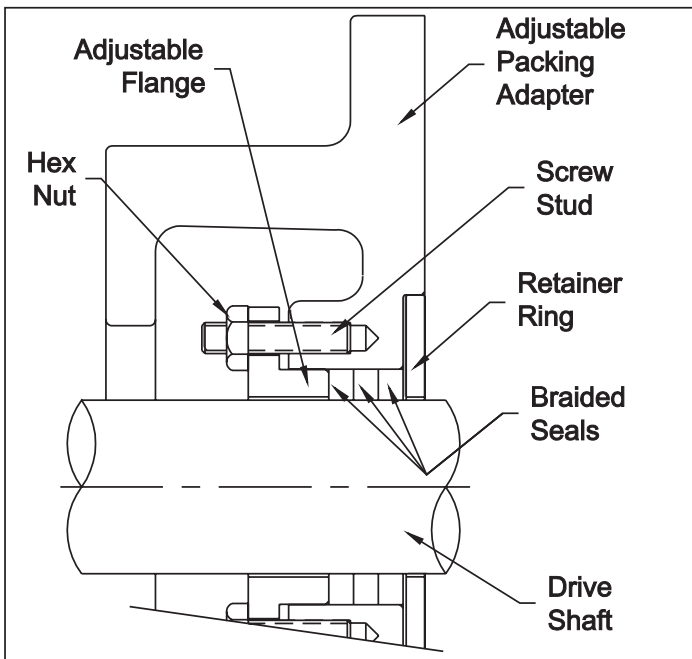


Figure 2 - Optional Adjustable Packing Adapter

INSTALLATION

- Use lifting bracket where applicable to lift reducer.
- Determine the running positions of the reducer (see Figure 3). Note that the reducer is supplied with six plugs: four around the sides for horizontal installations and one 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 two 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.

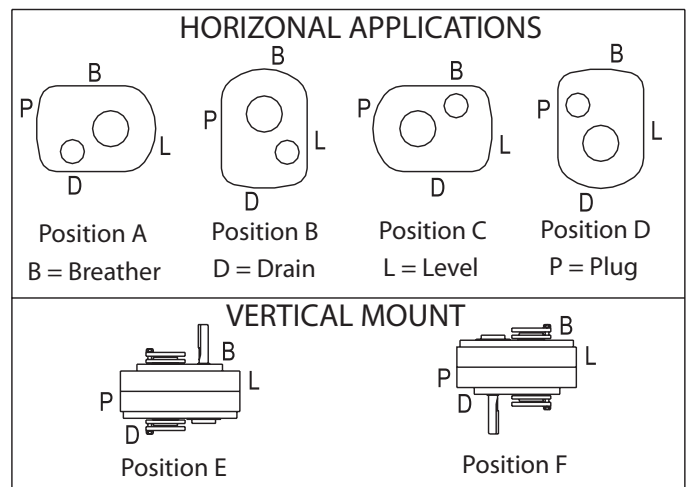


Figure 3 - Mounting Positions

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 Figure 3. However, if running position is over 20° in position B and D or over 5° in position A and 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 and C or to within 5° for position B and D of the positions shown in Figure 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.

- 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 degrees from any of the four horizontal mounting positions shown in Figure 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 specified in Table 5. Install lockwashers and tighten nuts on trough end studs. Attach drive shaft to screw.

- 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.

- 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.
- Fill gear reducer with the recommended volume of lubricant per Table 1.

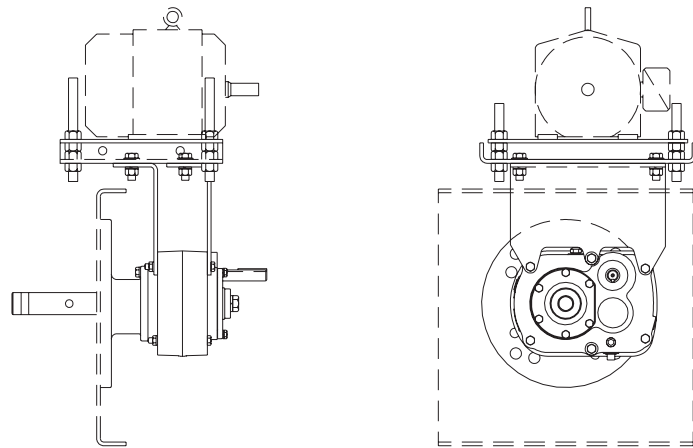


Figure 4 - Complete Drive

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 2,500 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 one to three 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 precaution 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 ①⑤											
		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.

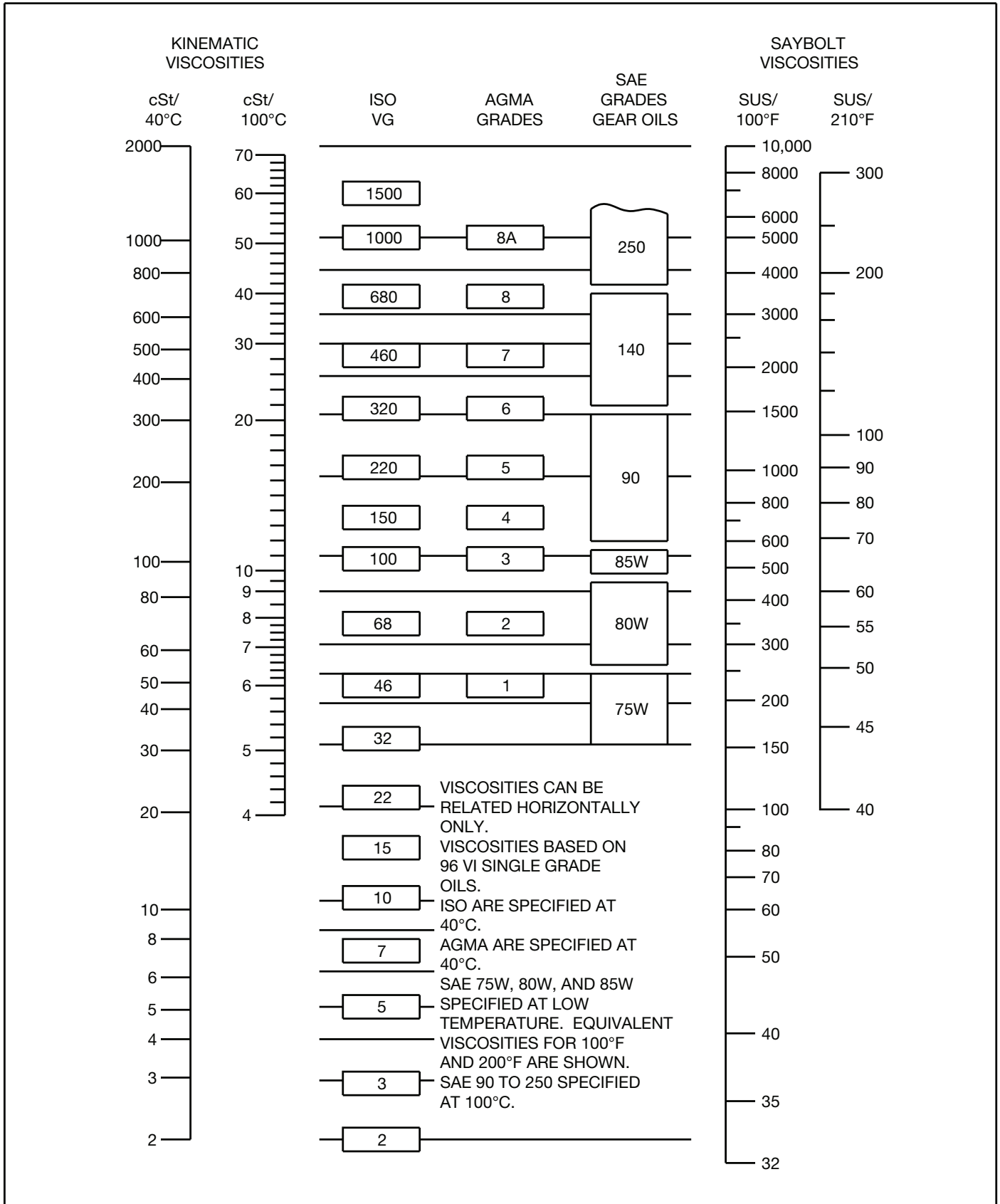
Table 2 – Oil Recommendations

ISO Grades For Ambient Temperatures of 50°F to 125°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

- 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 Application Engineering at +1.864.288.9050 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 SCXT speed reducer can be disassembled and reassembled by careful attention to the following instructions.

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 also replaced. 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–350°F to shrink onto hub. Heat bearings to 270°F–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–350°F and bearings to 270°F–290°F to shrink onto shaft.
3. Input Shaft Assembly: Heat bearings 270°F–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 right-hand 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. (H)SCXT1A and (H)SCXT2A 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 the 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. Set bearing cups for left-hand housing half in place on their rollers.
8. Make sure both housing halves are clean and free of RTV residue. For (H)SCXT sizes 1A, 2A, and 5C–8A, apply a continuous 1/8 inch diameter bead of Dow Corning RTV732 sealant on the flange surface of the right-hand housing (make sure RTV is placed around all bolt holes). Do not apply RTV sealant to (H)SCXT size 3C and 4C reducers at this time. Set the left-hand housing half in position onto the dowel pins and gently tap with a soft hammer until housing bolts can be used to draw housing halves together. Make sure reducer shafts do not bind when tightening housing bolts. Torque housing bolts per torque values listed in Table 5.
9. For (H)SCXT sizes 3C and 4C, rotate the input shaft and set all bearings with a soft hammer. Using a magnetic base and indicator, measure and record the endplay of the input shaft, countershaft, and output hub. Remove the left housing half and shim behind the bearing cup as required to achieve the correct bearing endplay per Table 4. Repeat this process and check endplay until proper endplay is obtained.

For (H)SCXT sizes 1A, 2A, and 5C–8A, install the output seal carrier and draw down with two bolts 180 degrees 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 inches to the average reading and make up shim pack. Install shim pack between the carrier flange and reducer housing. Torque the bolts to the value shown in Table 5. Using a magnetic base and dial indicator, check the axial endplay reading of the output hub per Table 4.

10. For (H)SCXT 1A and (H)SCXT2A reducers, skip to step 11. For (H)SCXT 3C and 4C reducers, follow assembly instructions for housing halves, including sealant, then continue to step 11. For (H)SCXT 5C–8A reducers, repeat step 9 for installing and adjusting the countershaft and input bearings. Adjust the axial endplay per Table 4, then continue to step 11.
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 as 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
SCXT3C	.002–.004 Loose	.0005–.003 Loose	.0005–.003 Loose
SCXT4C	.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
SCXT3C	50–45	17–15	17–15	17–15
SCXT4C	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
SCXT3C	260–234	75–68	5–4
SCXT4C	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 applies to all ratios unless otherwise specified. For actual reducer ratios, refer to Table 7.

Table 7 – Replacement Parts Kit Numbers

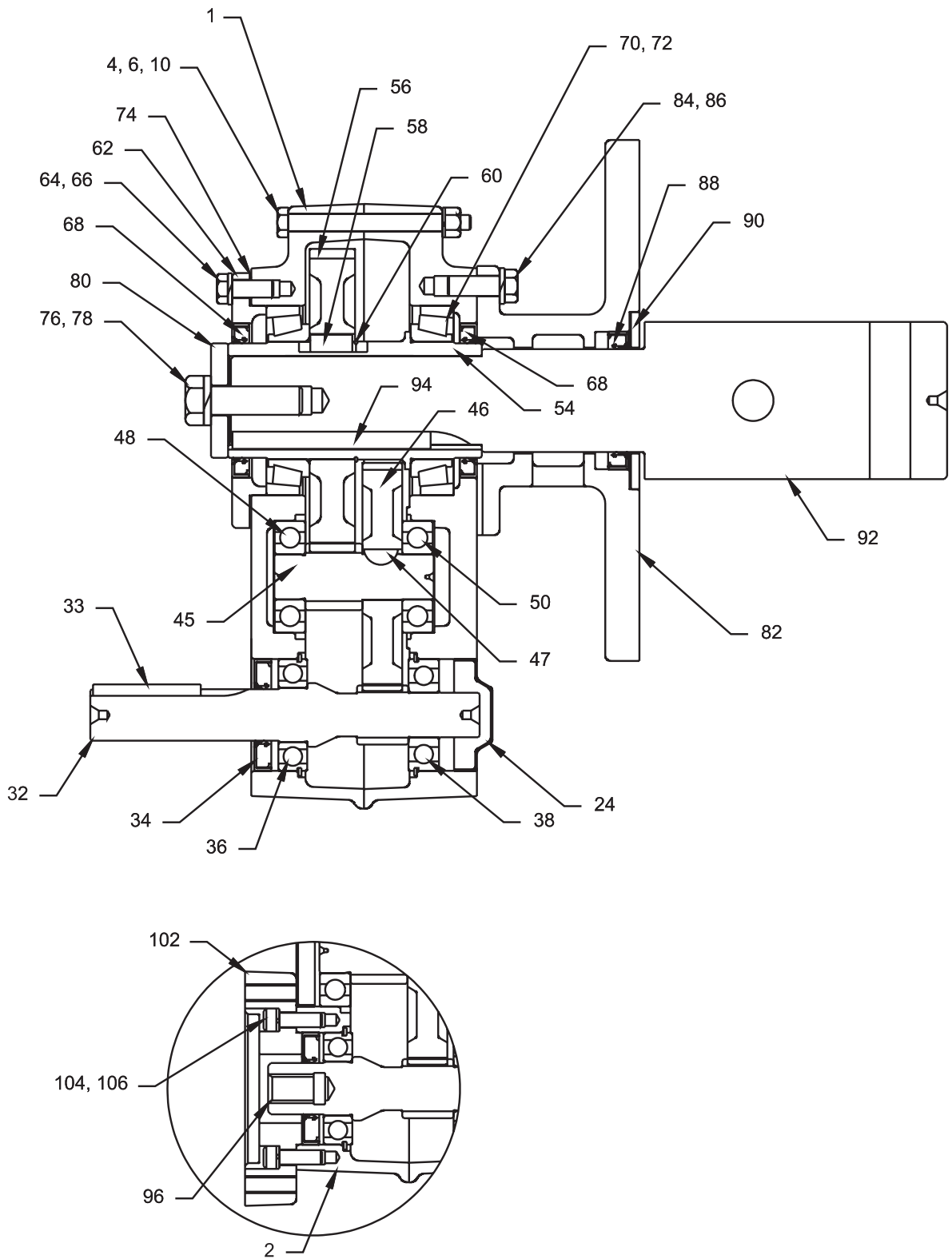
Reducer Size	Ratio	Seal Kit	Ouput Hub Assembly	Countershaft Assembly	Bearing Kit(s)	Complete Shim Kit
SCXT1A	9:1	272711	391029	392100	N/A	391056
	15:1			392090		
	25:1			392091		
SCXT2A	9:01	272712	392105	392101	N/A	391059
	15:1			392092		
	25:1			392093		
SCXT3C	9:1	389720	389702	389729	389587 Input 389588 C/S 389589 Output	243800
	15:1			389700		
	25:1			389701		
SCXT4C	9:1	389721	389709	389730	389590 Input 389591 C/S 389592 Output	244800
	15:1			389707		
	25:1			389708		
SCXT5C	9:1	389722	389716	389731	389593 Input 389595 C/S 389596 Output	245139
	15:1			389714		
	25:1			389715		
SCXT6A	9:1	246340	390988	392140	N/A	246166
	15:1			391171		
	25:1			391186		
SCXT7A	9:1	247345	390990	392141	N/A	247138
	15:1			391196		
	25:1			391197		
SCXT8A	15:1	248340	390993	391184	N/A	248111
	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.
 Complete shim kit consists of all input, countershaft, and output bearing shims.

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
SCXT3C	8.91	14.88	24.71
SCXT4C	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 Pin⑤	2	420063	420063
①	Magnetic Oil Plug	1	430060	430060
22	Oil Plug	3	430031	430031
22	Smart Sensor Adapter	1	966905	966905
24	Input Shaft Bearing Cover	1	361062	354112
32	Input Pinion			
	9:1 Ratio③	1	241481	241481
	15:1 Ratio③	1	241302	242186
	25:1 Ratio③	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 Assembly②			
	9:1 Ratio③	1	392100	392101
	15:1 Ratio③	1	392090	392092
	25:1 Ratio③	1	392091	392093
45	Countershaft Pinion⑥	1	241216	242185
46	First Reduction Gear⑥			
	9:1 Ratio③	1	241482	242482
	15:1 Ratio③	1	241170	242008
	25:1 Ratio③	1	241171	242005
47	Gear Key⑥	1	241309	242218
48	Countershaft Bearing (Input Side)		424006	424000
50	Countershaft Bearing (Output Side)		424006	424000
	Output Hub Assembly②		391029	392105
54	Output Hub⑥		351112	352112
56	Output Gear⑥		241007	242181
58	Output Gear Key⑥		241217	443399
60	Output Hub Snap Ring⑥		421013	421017
62	Output Hub Seal Carrier		351114	352114
64	Carrier Screw		441405	411407
66	Lockwasher		419010	419011

Ref.	Description	Qty.	(H)SCXT 1A	(H)SCXT 2A
70	Output Hub Bearings	Cone	402246	402247
72		Cup	403149	403150
74	Complete Shim Kit		391056	391059
76	Retainer Bolt	1	411549	411549
78	Lockwasher	1	419014	419014
80	Shaft Retainer	1	351116	352116
	Adapter Assembly②	1	351086	352052
82	Adapter⑥	1	351117	352117
84	Bolt⑥	4	411408	411433
86	Lockwasher⑥	4	419011	419012
88	Lip Seal⑥	1	351123	352122
①	Braided Seal⑥	2	427663	427659
90	Seal Retaining Ring⑥	1	351121	352121
	Adjustable Adapter Assembly②	1	356168	356112
①	Adjustable Adapter⑥		356169	356113
84	Bolt⑥		411408	411433
86	Lockwasher⑥		419011	419012
①	Adjustable Packing Retainer⑥		356134	356115
①	Stud⑥		400404	400404
①	Hex Nut⑥		407202	407202
①	Braided Seal⑥		427663	427659
90	Seal Retaining Ring⑥		351121	352121
92	Drive	1-1/2" Dia.	1	351094
	Shaft②	2" Dia.	1	351095
		2-7/16" Dia.	1	351096
		3" Dia.	1	351097
		3-7/16" Dia.	1	---
94	Key⑥		1	443287
	Seal Kit②		1	272711
34	Input Seal⑥		1	241457
68	Output Seal⑥		2	351113
96	Hydroil Input Pinion③	15:1 Ratio	1	241455
	③	25:1 Ratio	1	241449
102	Hydroil Motor Adapter		1	C11762
104	Adapter Screw		5	417081
106	Lockwasher		5	419046

① Not shown on drawing

② Includes parts listed immediately below

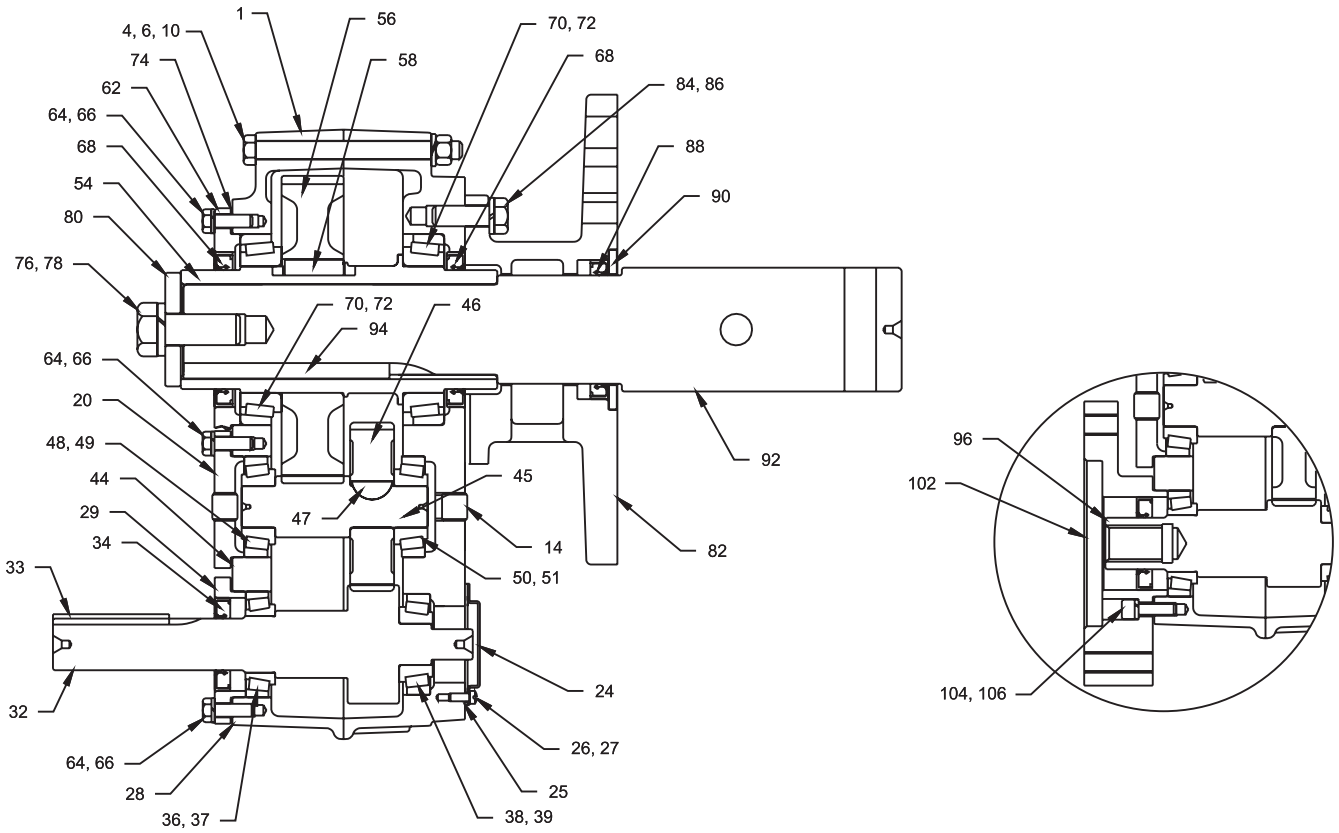
③ See Table 7 for actual ratio

④ Six required on SCXT1A, seven required on SCXT2A

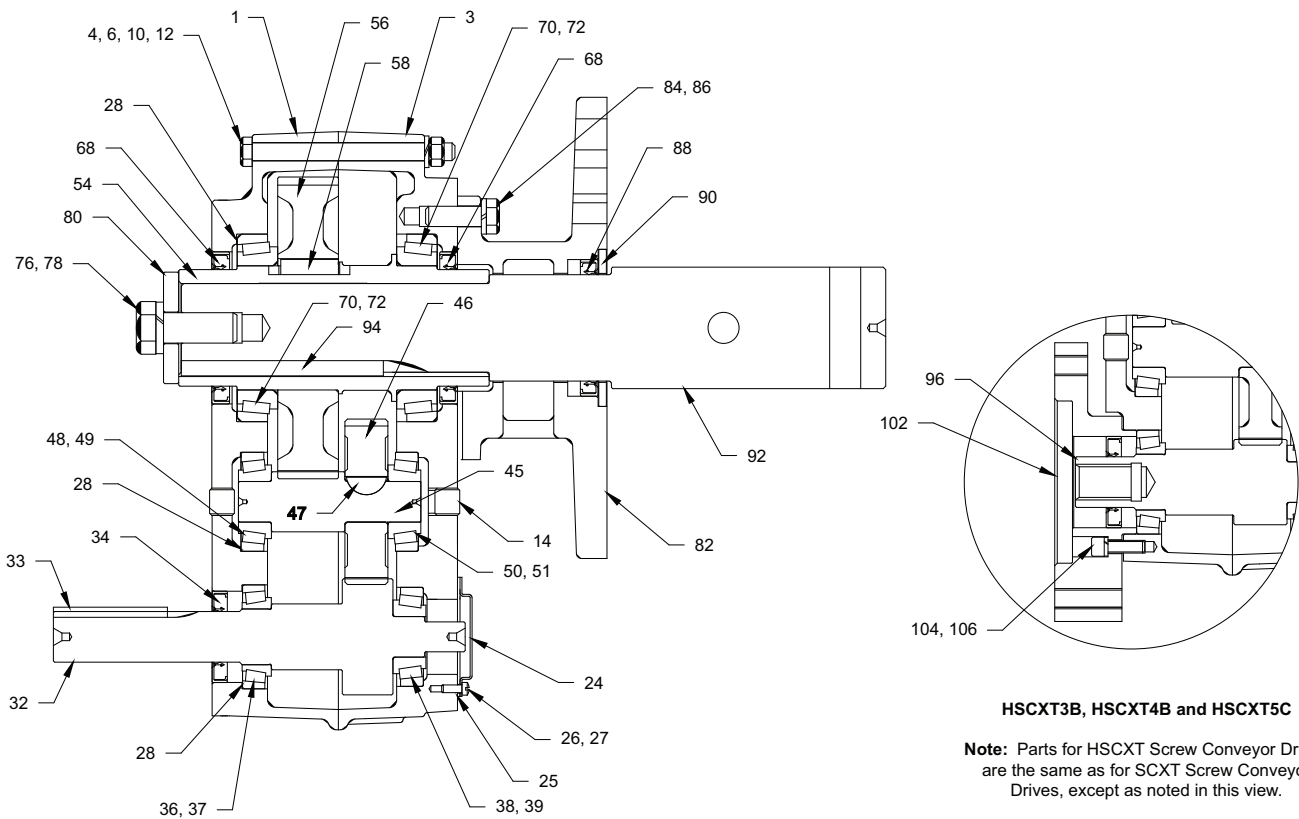
⑤ Included in Housing Assembly

⑥ Included in Kit

**Parts for SCXT / HSCXT 5C Double-Reduction
Screw Conveyor and Hydroil Screw Conveyor Drive**



**Parts for SCXT / HSCXT 3C and 4C Double-Reduction
Screw Conveyor and Hydroil Screw Conveyor Drive**



HSCXT3B, HSCXT4B and HSCXT5C

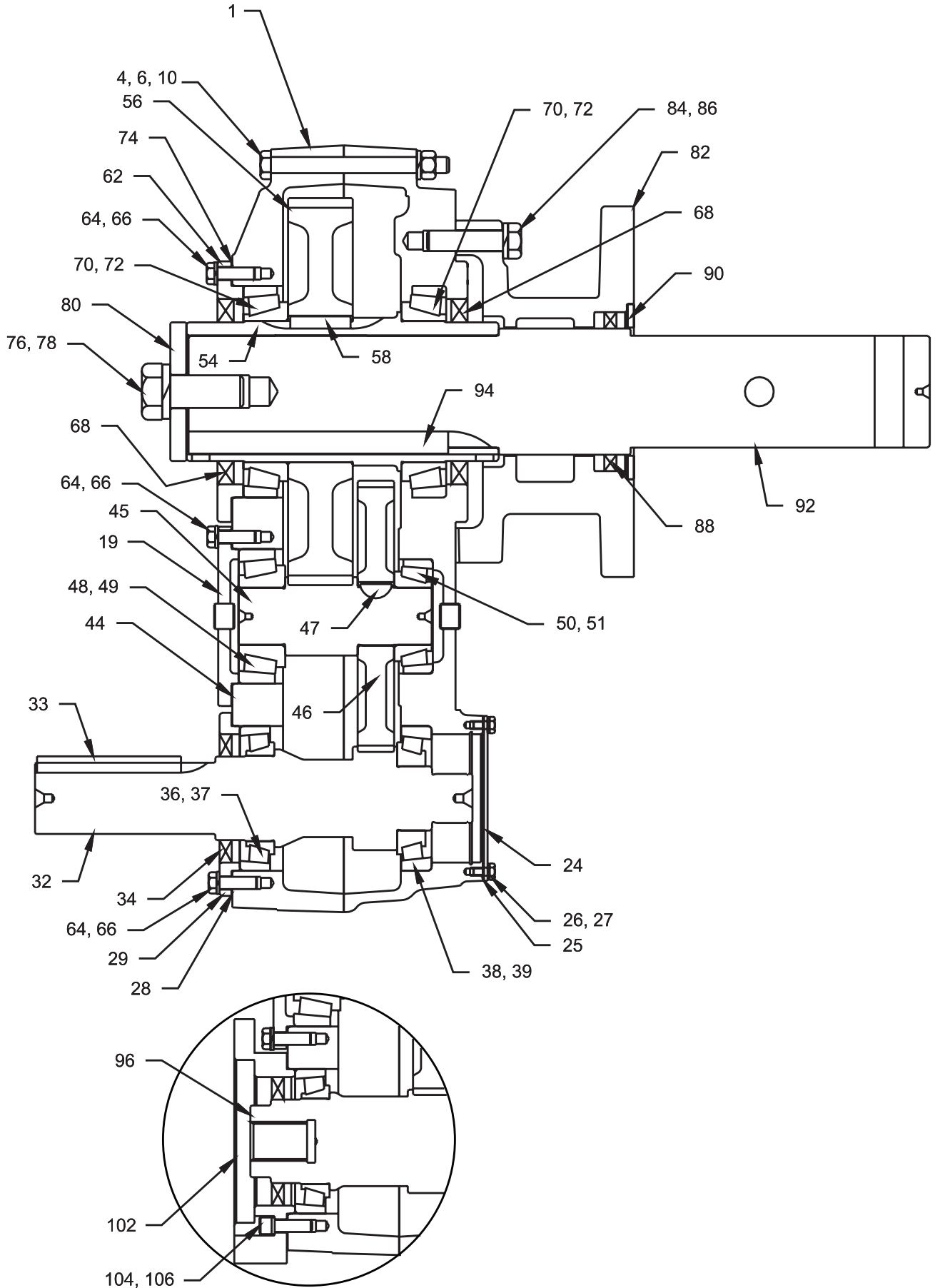
Note: Parts for HSCXT Screw Conveyor Drives are the same as for SCXT Screw Conveyor Drives, except as noted in this view.

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	3	430031	430031	430033	
14	Smart Sensor Adapter	1	966905	966905	966906	
24	Input Shaft Bearing Cover	1	243560	244493	245226	
26	Bearing Cover Screw	4	416524	411035	411394	
27	Lockwasher	4	---	419009	419009	
28	Complete Shim Kit	1	243139	244153	245139	
29	Input Shaft Seal Carrier	1	N/A	N/A	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
	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	N/A	N/A	245592	
64	Carrier Screw	6	N/A	N/A	411407	
66	Lockwasher	6	N/A	N/A	419011	
	Output Bearing Kit ②	1	389589	389592	389596	

Ref	Description	Qty	(H)SCXT 3B	(H)SCXT 4B	(H)SCXT 5C	
70	Output Hub Bearings	⑤ Cone	2	402272	402268	402193
72		⑤ Cup	2	403127	403163	403016
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	

- 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-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	
1	Smart Sensor Adapter	1	966906	966907	966907	
24	Input Shaft Bearing Cover	4	246226	246226	248226	
26	Bearing Cover Screw	6	411394	411394	411394	
27	Lockwasher	6	419009	419009	419009	
28	Complete Shim Kit	1	246166	287138	248111	
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
	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
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	---	

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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