

**Installation
Operation &
Maintenance Data**

I S S U E D

**ENGINEERING DEPT.
COTTA TRANSMISSION CO.**



THIS SYMBOL MEANS A WARNING OR CRITICAL INFORMATION.



THIS SYMBOL IS USED TO LIST ADDITIONAL INFORMATION AND TIPS.



PLEASE READ AND OBSERVE ALL THE INFORMATION IN THIS MANUAL. FAILURE TO COMPLY WITH THE RECOMMENDATIONS AND PROCEDURES DESCRIBED HEREAFTER CAN RESULT IN PREMATURE COMPONENT FAILURE AND/OR WARRANTY DENIAL.



ALL PERSONNEL SERVICING THIS UNIT SHOULD EMPLOY SAFE OPERATING PROCEDURES. COTTA TRANSMISSION CO, LLC (COTTA) WILL NOT BE RESPONSIBLE FOR PERSONAL INJURY RESULTING FROM CARELESS USE OF HAND TOOLS, LIFTING EQUIPMENT, POWER TOOLS, OR UNACCEPTED MAINTENANCE/WORKING PRACTICES. BECAUSE OF THE POSSIBLE DANGER TO PERSON(S) OR PROPERTY FROM ACCIDENTS WHICH MAY RESULT FROM THE USE OF MANUFACTURED PRODUCTS, IT IS IMPORTANT THAT CORRECT PROCEDURES BE FOLLOWED. PRODUCTS MUST BE USED IN ACCORDANCE WITH THE ENGINEERING INFORMATION SPECIFIED. PROPER INSTALLATION, MAINTENANCE, AND OPERATION PROCEDURES MUST BE OBSERVED. INSPECTIONS SHOULD BE MADE AS NECESSARY TO ASSURE SAFE OPERATION UNDER PREVAILING CONDITIONS. PROPER GUARDS AND OTHER SUITABLE SAFETY DEVICES OR PROCEDURES THAT MAY BE DESIREABLE OR SPECIFIED IN SAFETY CODES SHOULD BE PROVIDED. THESE DEVICES ARE NEITHER PROVIDED BY COTTA, NOR ARE THEY THE RESPONSIBILITY OF COTTA.

NOTE: This manual provides information about the installation of Cotta Transmissions. Detailed overhaul, assembly, and repair information is not part of this manual. For repair information, consult the applicable blueprint drawing. To request the latest revision blueprint, call the Customer Service department at (608) 368-5600. Operation and maintenance personnel responsible for this equipment should have this manual at their disposal and be familiar with its contents. Applying the information in the manual will result in consistent performance from the unit and help reduce downtime.

6. LUBRICATION

The gearbox is shipped from the factory empty except some residual oil from testing and must be filled to the proper level with lubrication specified on the nameplate. Cotta technical bulletin TB97-101 (Lubrication of Cotta Transmissions) lists recommended oil viscosities. In addition, the nameplate lists the recommended oil viscosity based upon the ambient temperature in which the gearbox will be operated. The 80VX1023 and 80VX1048 nameplates are not superceded by TB97-101. In other cases, the oil viscosity is listed on the nameplate. Fill the gearbox to the proper level as indicated by sight glass, dipstick, or level plug, and run the gearbox for 5 minutes. (This will ensure that all of the hoses and manifolds are full.) Check the oil level in the box, and add any additional oil needed to achieve the proper oil level. **(AVOID ANY CONTAMINATION OF THE OIL WHEN FILLING THE GEARBOX)** A good grade of clean hose or pipe should be used if user is supplying any plumbing.



DO NOT CHECK THE OIL LEVEL WITH THE UNIT RUNNING. SOME GEARBOXES HAVE INTERNAL OIL RESERVOIRS THAT REQUIRE A DRAIN BACK PERIODS. GEARBOXES OF THIS TYPE HAVE A SPECIAL NAMEPLATE ADJACENT TO THE LEVEL GAGE.



DO NOT USE SEALANT TAPE TO SEAL PIPE THREADS OR FITTINGS. *THE USE OF SEALANT TAPE VOIDS ANY WARRANTY!*

7. LUBRICATION PUMP

Some gearboxes are supplied with lube pumps. A variety of different pumps are supplied depending on the requirements of the gearbox. If removing the pump for services, note the orientation of the pump inlet and outlet parts relative to the shaft centerline. Improper orientation will result in the suction and pressure ports to be reversed, which can cause damage to the gearbox.

8. HEAT EXCHANGER

A heat exchanger is used on some gearboxes to keep the lube oil temperature within operating range. If the lube system include a heat exchanger, the customer is to furnish an adequate coolant supply at the proper temperature. In some areas, raw water is extremely corrosive and should be treated to prevent damage to the heat exchanger. Treating the water will also increase the time interval between cleanings of the heat exchanger. It is the users responsibility to insure that the coolant is compatible with the heat exchanger.



IF USING SALT WATER FOR COOLANT, MAKE SURE THAT THE HEAT EXCHANGER AND ALL PLUMBING ARE DESIGNED FOR USE WITH SALT WATER.

9. FILTER

An oil filter will be supplied with a gearbox if the lube system requires the filtration of larger particles from the oil. Replace the filter element when the pressure drop through is greater than the bypass pressure. Read bypass pressure when oil is at normal operating temperature. When element replacement is required, do not substitute a different filtration level without written approval from Cotta.



USE OF THE WRONG SIZE FILTER COULD RESTRICT OR BLOCK THE OIL FLOW IN THE GEARBOX. POOR OIL CIRCULATION CAN SEVERELY DAMAGE THE GEARBOX.

10. ELECTRICAL

Some gearboxes may be supplied with an interlock switch to protect the unit from damage caused by a pressure lube system failure or improper cooling. The switch may be wired by the user to shut off the rotating equipment, operate a warning light, or sound an alarm.

11. START UP

Prior to starting the gearbox, make sure that the oil level is correct. Some gearboxes with a pressurized lube oil system will be supplied with a lube manifold. The pressure at the manifold is set at the factory, bu should be checked and adjusted at the relief valve by the user if necessary. The pressure should only be checked after the gearbox has reached the normal operating temperature. If starting the gearbox below 50°F, Cotta recommends the gearbox be run with no load or a slight load until the lube oil temp has reached 90°F. If this is not possible, oil sump heaters maybe required.

12. BREAK-IN OPERATION

After 100 hours or 3 months of operation, whichever occurs first, the oil should be drained, the case flushed with a fluid that is compatible with the gearbox oil, and the case refilled with clean oil of the proper specification. After the first oil change, the oil should be changed every 2,500 hours or 6 months, whichever occurs first.

(UNLESS OTHERWISE NOTED ON THE NAMEPLATE)

When operating in a severe environment (i.e. moist, dusty, outdoors, or in a hazardous environment) more frequent oil changes may be necessary.

13. SAFETY NOTICE

Safe operating practices should be employed by all personnel servicing this unit. Cotta will not be responsible for personal injury resulting from careless use of tools, lifting equipment, or unaccepted maintenance/working practices. Because of possible danger to person(s) or property from accidents which may result from the use of manufactured products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified. Proper installation, maintenance, and operation procedures must be observed. Daily and/or periodic inspection should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures that may be desirable or specified in safety codes should be provided. These devices are neither provided by Cotta nor are they the responsibility of Cotta.

14. OPERATION

It is the customer's responsibility to install, maintain, and operate the unit in accordance with the manufacturer's specifications and recommendations. It is up to the customer to ensure that:

- 14.1 Maximum operating speeds are not exceeded.
- 14.2 Maximum acceleration/deceleration rates are not exceeded.
- 14.3 Maximum operating torques are not exceeded.
- 14.4 Only lubricants specified on the nameplate are use.



THE USE OF SUBSTITUTE LUBRICANTS MAY GENERATE UNACCEPTABLE HEAT AND INSUFFICIENTLY LUBRICATE INTERNAL COMPONENTS. THIS MAY RESULT IN IMMEDIATE COMPONENT DAMAGE.

- 14.5 Appropriate warm-up procedures are adhered to.



IT IS REQUIRED TO WARM UP THIS EQUIPMENT TO MAINTAIN PROPER OPERATION. LACK OF A WARM -UP PERIOD MAY RESULT IN IMMEDIATE COMPONENT DAMAGE. SEE START UP SECTION.

15. MAINTENANCE

Operational maintenance consists of routine care at regular intervals.

- 15.1 Inspect oil level at startup and add oil as required.
- 15.2 Check shaft alignment occasionally and correct if necessary.
- 15.3 Keep all bolts and fittings properly torqued.
- 15.4 Replace leaky gaskets and seals.
- 15.5 Prevent inside and outside corrosion.
- 15.6 Should any adverse operating conditions occur, internal inspection may be required. Consult with Cotta in this instance. *Note that any disassembly without prior express written consent from Cotta voids any warranty.*
- 15.7 Maintain proper oil change intervals, see section 12.

16. SERVICING

No attempt should be made to service this unit with any substitute parts without written approval from Cotta. The main Case and Cover of the gearbox are sometimes manufactured as a set and should not be individually replaced. Contact Cotta with the unit serial number for part availability.

17. GENERAL NOTES

- 17.1 Oil with aerate in the gearbox under normal operating conditions.
- 17.2 The temperature of the gearbox casing should not exceed 220°F
- 17.3 Cotta manufactures many different models of gearboxes, so step by step assembly and disassembly instructions are not part of this manual. The following is a list of general assembly comments.



THE USE OF SUBSTITUTE LUBRICANTS MAY GENERATE UNACCEPTABLE HEAT AND INSUFFICIENTLY LUBRICATE INTERNAL COMPONENTS. THIS MAY RESULT IN IMMEDIATE COMPONENT DAMAGE.

- 17.3.1 Assembly and disassembly of the gearbox should be done with the shafts vertical. The case and cover are dowel pinned together, threaded puller holes are provided to aid separation.
- 17.3.2 Cotta uses a silicone rubber sealant or Loctite 515 instead of gaskets on newer designs where possible. Gaskets cannot be replaced with sealant or vice versa.
- 17.3.3 Most gearboxes use tapered roller bearings. These bearings must be shimmed to achieve the end play setting noted on the assembly drawing. End play setting and checking should be done with the shaft vertical.
- 17.3.4 Most gears are assembled to mating shafts using a key and interface to fit. A hydraulic press will be required to separate them. Heating the gear to re-assemble is recommended. Do not heat bearing and two spacers. Do not replace individual components in the kit without insuring proper bench endplay. Contact Cotta for more information.
- 17.3.6 Bearing locknuts and lockwashers should not be reused.

Cotta Transmission Company

Technical Bulletin

TB97-101

Lubrication of Cotta Gearboxes

Approved:

Manager of Eng'g

Rev.:4

Rev. Date:4/99

Note: Products listed in this bulletin are typical lubricants. Cotta does not recommend any specific manufacturer's oil for use in our gearboxes.

CAUTION: USE OF OIL ADDITIVES IN A COTTA GEARBOX IS STRICTLY PROHIBITED EXCEPT BY PRIOR WRITTEN AUTHORIZATION BY COTTA TRANSMISSION COMPANY.

CAUTION: SOME EXTREME PRESSURE (EP) ADDITIVES ARE CORROSIVE TO COPPER, BRASS, BRONZE, AND/OR ALUMINUM. IF THE OIL WILL COME INTO CONTACT WITH THESE METALS (e.g. heat exchangers), CONSULT YOUR OIL MANUFACTURER TO VERIFY THAT THE EP ADDITIVES WILL NOT DAMAGE THE SYSTEM COMPONENTS.

Standard Product Line Lubrication Guidelines:

NOTE: This bulletin is an update to the green Speed Reducer nameplate and the oil viscosities listed on this bulletin should be used instead of the printed oils on the nameplate. The oil requirements stamped on the blue Speed Increaser or yellow nameplate supersede this table.

The following lubrication viscosities listed are guidelines for Cotta standard gearboxes. All values listed are AGMA lubricant numbers.

	Ambient Temperature			
	-40°F to +14°F -40°C to -10°C	14°F to 50°F -10°C to +10°C	50°F to 95°F 10°C to 35°C	50°F and above 35°C and above
Speed Reducers AR2053, SR2, SR3, SR972, GR15, GR16, GR1600, GR3200, GR975, & others	3S	3S	5	6
Speed Reducers AO2053, S12,S13, GO1500, GO1700, GO1900 & others	1S	2S	2	2
Transfer Cases and Pump Drives TR2059, TR2171, PD100's, PD200's PD300's & others	Input<2300 2S Input>2300 1S	Input<2300 3S Input>2300 2S	Input<2300 5 Input>2300 3	Input<2300 6 Input>2300 4
NOTES: 1) The pour point of the lubricant must be at least 9°F (5°C) below the minimum ambient temperature. If the ambient temperature approaches the pour point, oil sump heaters may be required to facilitate starting and ensuring proper lubrication				

Cotta Transmission Company

Technical Bulletin

TB97-101

Lubrication of Cotta Gearboxes

Revision:4

Rev. Date:4/99

Petroleum R&O oils:

The Cotta standard oil recommendation is a petroleum based rust and oxidation inhibited gear oil. These are oils that have been formulated to include chemical additives which provide system rust protection and oil oxidation resistance. Acceptable R&O oils are listed in Table 1. Maximum sump temperature for these oils is 203°F (95°C). If a unit's sump temperature exceeds this value, an oil cooler and/or synthetic lubricant will need to be used.

AGMA Viscosity Grade	0	1	2	3	4
ISO Viscosity Grade	32	46	68	100	150
Viscosity @ 104°F (40°C) (cSt)	28.8-35.2	41.4-50.6	61.2-74.8	90-110	135-165
Manufacturer	Lubricant	Lubricant	Lubricant	Lubricant	Lubricant
Chevron	Machine Oil R&O 32	Machine Oil R&O 46	Machine Oil R&O 68	Mach. Oil R&O 100	Mach. Oil R&O 150
Citgo	Pacemaker 32	Pacemaker 46	Pacemaker 68	Pacemaker 100	Pacemaker 150
Conoco	Hydroclear 32	Hydroclear 46	Hydroclear 68	Hydroclear 100	Hydroclear 150
Mobil	DTE Light	DTE Medium	DTE Heavy Medium	DTE Heavy	DTE Extra Heavy
Shell	Hydraulic 32	Hydraulic 46	Hydraulic 68	Hydraulic 100	Hydraulic 150
Texaco	Regal R&O 32	Regal R&O 46	Regal R&O 68	Regal R&O 100	Regal R&O 150

AGMA Viscosity Grade	5	6
ISO Viscosity Grade	220	320
Viscosity @ 104°F (40°C) (cSt)	198-242	282-352
Manufacturer	Lubricant	Lubricant
Chevron	Machine Oil AW 220	Machine Oil AW 320
Citgo	Pacemaker 220	Pacemaker 320
Conoco	Hydroclear 220	Hydroclear 320
Mobil	DTE BB	DTE AA
Shell	Morlina 220	Morlina 220
Texaco	Regal R&O 220	Regal R&O 320

Table 1-Petroleum R&O Oils

Cotta Transmission Company

Technical Bulletin

TB97-101

Lubrication of Cotta Gearboxes

Revision:4

Rev. Date:4/99

Synthetic gear lubricants:

Synthetic oils differ from petroleum based liquids in that they are not found in nature, but are manufactured chemically with special properties to enhance performance or accommodate severe operating conditions. In general, synthetic oils have the advantage of being stable over a wider range of operating temperatures, having a higher viscosity index, and in some cases having greater load carrying capacity and better lubricity. Acceptable synthetic oils are listed in Table 2. Maximum sump temperature for synthetic oils is 225°F (107°C). If the unit's sump exceeds this temperature, an oil cooler will need to be added to the system.

AGMA Viscosity Grade	0S	1S	2S	3S	4S
ISO Viscosity Grade	32	46	68	100	150
Viscosity @ 104°F (40°C) (cSt)	28.8-35.2	41.4-50.6	61.2-74.8	90-110	135-165
Manufacturer	Lubricant	Lubricant	Lubricant	Lubricant	Lubricant
Chevron	Tegra Compressor 32	-----	Tegra Compressor 68	Tegra Compressor 100	Tegra Compressor 150
Conoco	Syncon 32	Syncon 46	Syncon 68	Syncon 100	-----
Mobil	SHC 624	SHC 525	SHC 626	SHC 627	SHC 629
Pennzoil	-----	-----	-----	-----	-----
Texaco	Pinnacle 32	Pinnacle 46	Pinnacle 68	Pinnacle 100	Pinnacle 150

Table 2-Synthetic Gear Oils

Extreme Pressure lubricants:

These lubricants are petroleum or synthetic based liquids with chemical additives such as sulfur-phosphorus which produce a protective film to provide anti-scuffing properties. EP Lubricants may be used instead of the R&O lubricants **providing there is no copper, brass, or bronze components that will be damaged by the additives in the oil.** Items such as spray nozzles, heat exchangers, labyrinth seals, or some bearings may be significantly damaged by the EP additives. Consult your oil manufacturer and Cotta Transmission before using EP oil.



18. CONTACT INFORMATION

COTTA TRANSMISSION COMPANY, LLC
1301 PRINCE HALL DRIVE
BELOIT, WI USA 53511-4439
(608) 368-5600 (PHONE)
(608) 368-5605 (FAX)
www.cotta.com

PART NUMBER.....	DESCRIPTION.....	QPA.....	USE ITM	REF.	COMMENTS.....
			ABS NBR	DESG	
			QTY		
TR2237-5	SPLIT SHAFT PTO	0.0000			
0616440B	KEY, 3/4X1/2X1.2	2.0000	6		DWG: TR2237-5 (F)
0620577B	PLATE-LIFTING	2.0000	7		
0622678D	ENDCOVER	1.0000	10		
0622693D	GEAR 40T	1.0000	11		
0624762B	COVER PLATE	1.0000	13		
0628016B	PLATE-CLAMP	2.0000	15		
0628639D	CLUTCH	1.0000	18		
0629429F	COVER	1.0000	22		
0629430F	CASE	1.0000	23		
0629431D	SHAFT	1.0000	24		
0629432D	SHAFT	1.0000	25		
0629433D	GEAR, 43T	1.0000	26		
0629434D	SHAFT	1.0000	27		
0629435B	SPACER	1.0000	28		
0629436D	GEAR, 43T	1.0000	29		
0629456D	SHAFT	1.0000	30		
0629438D	SHIFTRD	1.0000	31		
0629440D	ENDCOVER	1.0000	33		
0629443B	SPACER	1.0000	36		
0629451B	SHIFT TOWER	1.0000	44		
0629455D	FORK	1.0000	47		
0629457D	SEALHSG	1.0000	48		
0629458A	SPACER	1.0000	49		
80AX117	HHCS 5/8-11X1-1/2 PLN G5	2.0000	55		
80AX120	HHCS 3/8-16X1-1/4 PLN G5	16.0000	56		
80AX127	HHCS 5/16-18X5/8 PLN G5	4.0000	57		
80AX167	HHCS 1/2-13X2 PLN G5	14.0000	58		
80AX212	HHCS 1/2-13X2-1/2 PLN G5	2.0000	62		
80AX279	SHCS 1/4-20X2-1/4 PLN	3.0000	63		
80AX543	SHCS 10-24X1 PLN	4.0000	66		
80BX161	NUT-FLEXLOC 20FAF813 1/2-13	16.0000	70		
80BX172	NUT-STOP 49NTE202 1 1/4-12	1.0000	71		
80DX103	LOCKWASHER 5/16 MED	4.0000	74		
80DX104	LOCKWASHER 3/8 MED	16.0000	75		
80GX948	BRG CONE 482	2.0000	79		
80GX1088	BRG-SPHER 22214 C/3 W33	1.0000	81		
80GX1764	BRG-NEEDLE TORR WJ283412	2.0000	82		
80GX1287	BRG-BALL 6214	2.0000	83		
80GX1427	BRG CUP 472	2.0000	84		
80GX1741	BRG CONE L319249	2.0000	86		
80GX1742	BRG CUP L319210	2.0000	87		
80GX1749	BRG-BALL 7215BEGAY	2.0000	88		
80IX159	ROLLPIN 1/2DIA X 1-1/4LG	2.0000	92		

PART NUMBER.....	DESCRIPTION.....	QPA.....	USE ITM REF.	COMMENTS.....
			ABS NBR	DESG
			QTY	
80JX10	ELBOW 1X90DEG STREET BM	1.0000	95	
80JX337	PLUG-3/8 STL CSNK HEX HD PIPE	1.0000	96	
80JX547	PLUG-1/8 STL CSNK HEX HD PIPE	4.0000	98	
80JX610	PLUG-3/4-16 O-RING	1.0000	99	
80JX638	PLUG-1-1/16-12 O-RING	4.0000	102	
80JX897	PLUG-1-1/16-12 MAG 7574051	1.0000	107	
80LX176	SETSCREW 3/8-16X1/2 HX CUP	1.0000	112	
80RX119	WASHER-SAE 1-1/4	1.0000	113	
80SX127	SNAPRING 5100-400	1.0000	115	
80SX173	SNAPRING N5000-500	4.0000	118	
80SX185	SNAPRING 5100-325	1.0000	119	
80TX157	SEAL C/R 35083	2.0000	125	
80TX484	SEAL C/R 27269	1.0000	126	
80TX705	SEAL C/R 7414	1.0000	128	
80TX978	SEAL C/R 10515	1.0000	130	
80VX744	SHIM SET AL-22	1.0000	133	
80VX1210	PLUG-9/16-18 O-RING	3.0000	137	
80VX1544	WINDOW-OIL LEVEL 1"NPT	1.0000	138	
80VX1692	TAG-OIL EMPTY	1.0000	139	
80VX2195	NAMEPLATE	1.0000	143	
80VX640	FLANGE SIM. TO DANA 6-1-951	1.0000	144	
80VX2254	BREATHER, 1" NPT	1.0000	146	
80VX2442	AIR CYLINDER SMC 1-1/2X2	1.0000	147	
80VX2447	POSITION SWITCH SMC PNP	2.0000	151	
80VX582	SHIM SET AL-20	1.0000	158	

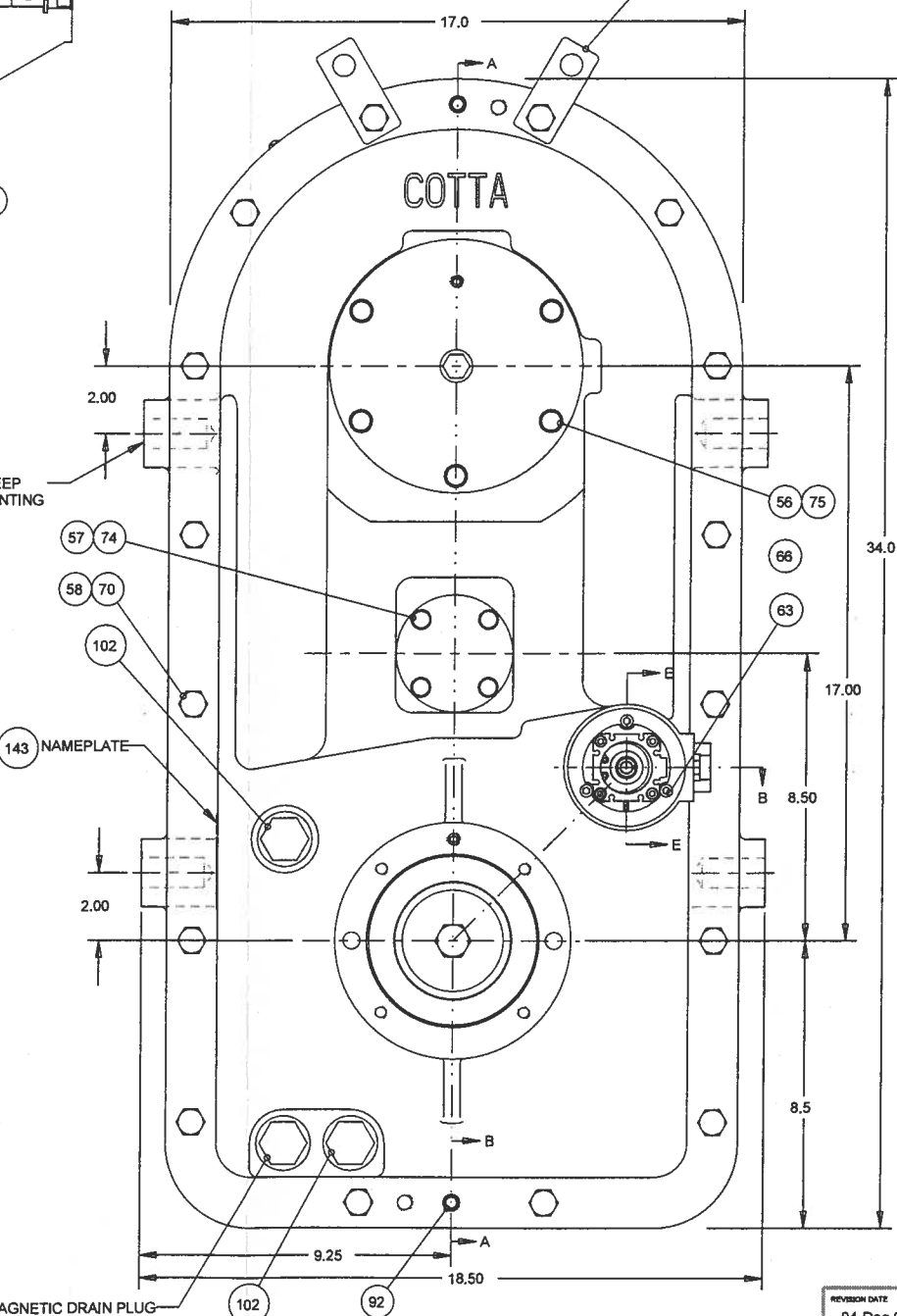
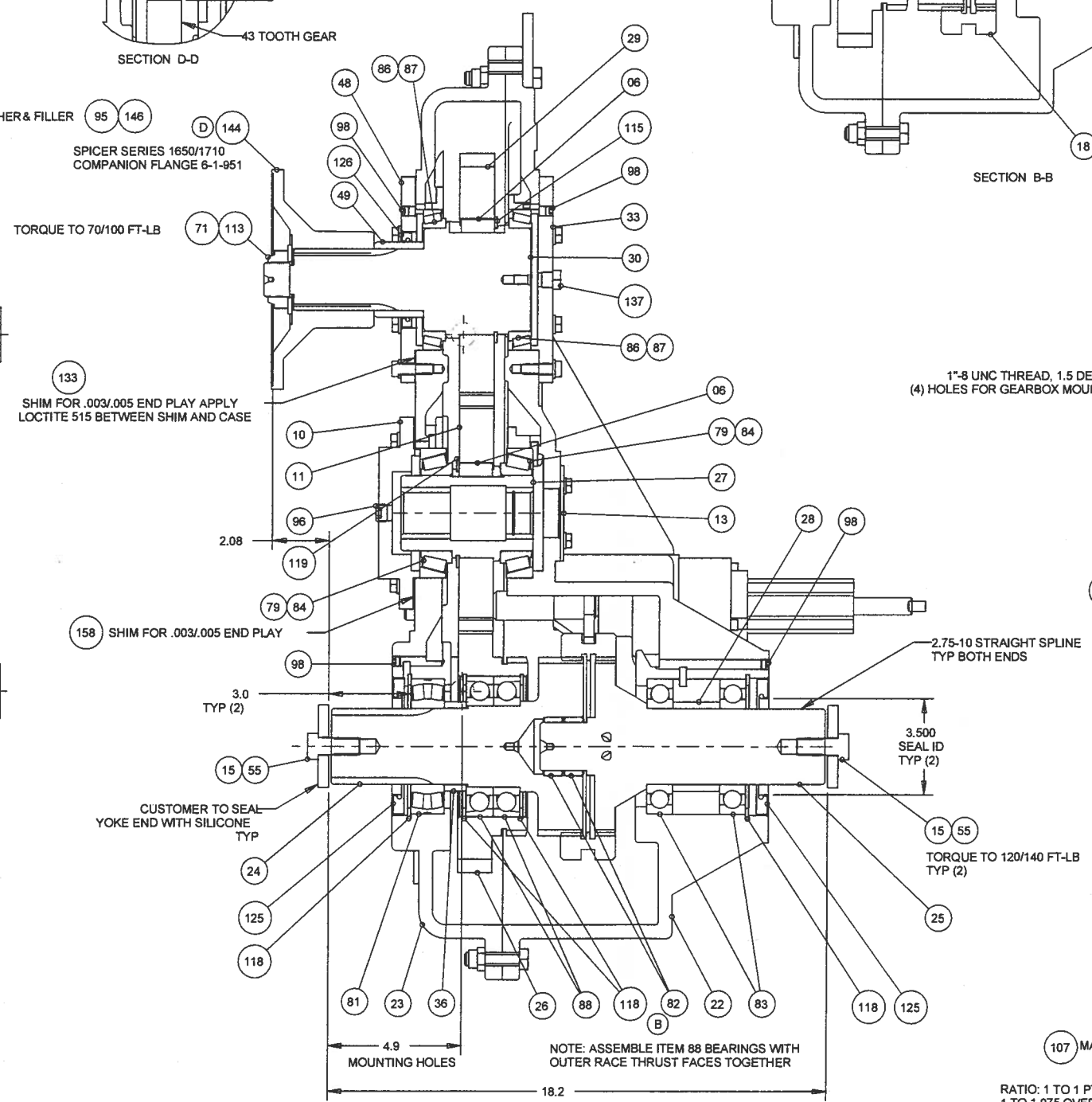
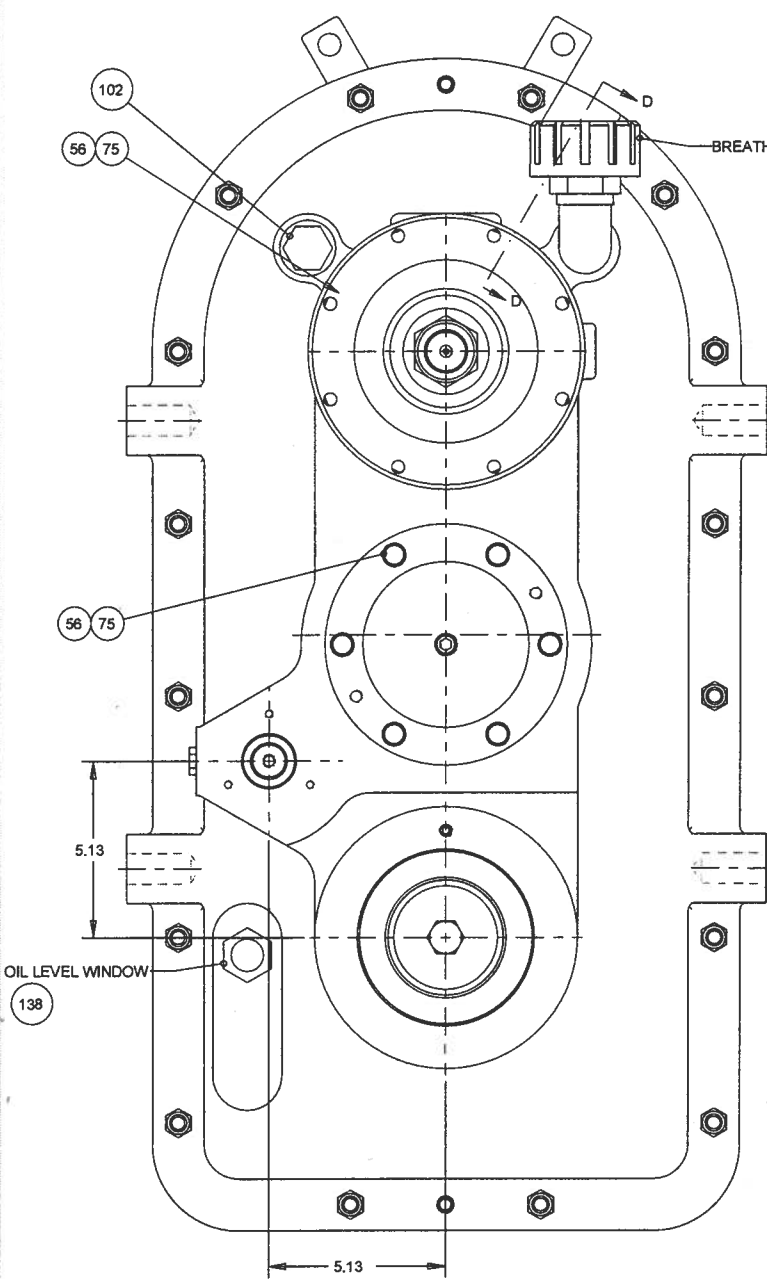
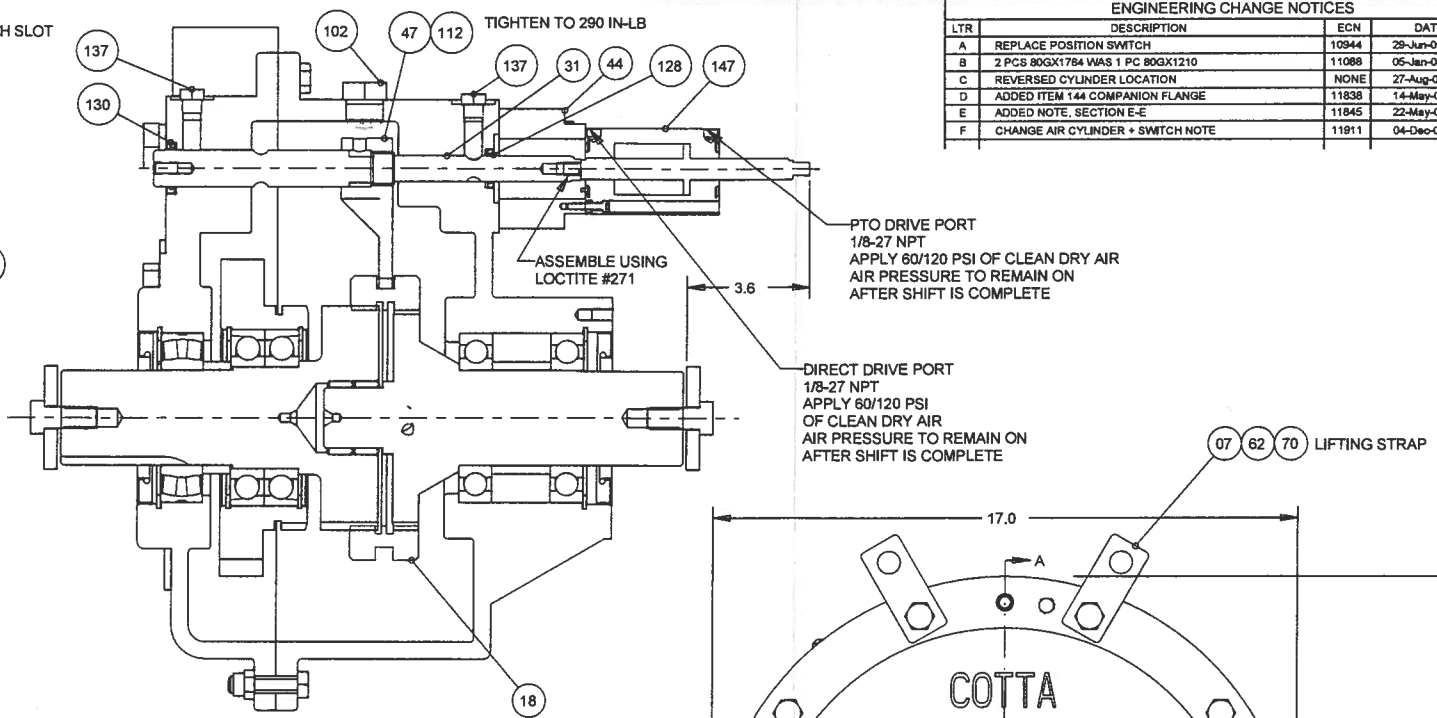
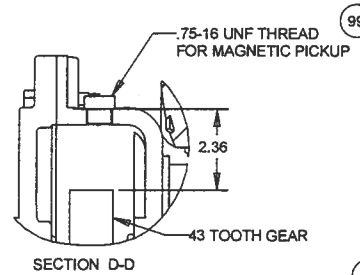
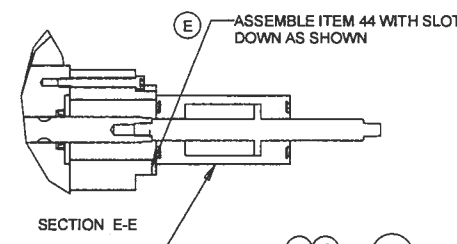
69 records listed.

ENGINEERING CHANGE NOTICES

LTR	DESCRIPTION	ECN	DATE	BY
A	REPLACE POSITION SWITCH	10944	29-Jun-05	BPA
B	2 PCS 80GX1784 WAS 1 PC 80GX1210	11088	06-Jun-06	JPH
C	REVERSED CYLINDER LOCATION	NONE	27-Aug-07	R.J.L.
D	ADDED ITEM 144 COMPANION FLANGE	11838	14-May-08	A.J.S.
E	ADDED NOTE, SECTION E-E	11845	22-May-08	A.J.S.
F	CHANGE AIR CYLINDER + SWITCH NOTE	11911	04-Dec-08	TAP

FORK ADJUSTMENT:

1. PRIOR TO CYLINDER ASSEMBLY, SHIFT ROD TO PUSH CLUTCH AGAINST GEAR SHOULDER. BACK SHIFT ROD AWAY FROM GEAR 0.19"
2. ROTATE SHIFT ROD IN FORK UNTIL A 0.12 OFFSET BETWEEN THE CYLINDER SPACER #44 & THE SHIFT ROD IS ACHIEVED (SHIFT ROD FACE BELOW SPACER FACE)
3. ROTATE ROD EITHER DIRECTION UNTIL THE FLAT IN THE ROD LINES UP WITH THE SETSCREW IN THE FORK. MAXIMUM ROTATION IS 45°.
4. TIGHTEN SETSCREW IN FORK TO NOTED TORQUE USING LOCTITE THREADLOCKER



NOTE: INSTALL LOCTITE #515 OR EQUIVALENT AT ALL MACHINED SPLITLINES UNLESS A GASKET IS FURNISHED. SEAL ALL NON-MACHINED INTERFACES WITH SILICONE SEALANT.

INSTALL LOCTITE THREAD LOCK ON ALL FASTENERS USED TO INSTALL ITEMS 10, 13, 33 & 48

RATIO: 1 TO 1 PTO DRIVE
1 TO 1.075 OVERSPEED PUMP PAD
MAX INPUT SPEED: 3000 RPM
MAX TORQUE: 1200 FT-LB THRU GEARS
THRU-DRIVE TORQUE: 12500 FT-LB
APPX WEIGHT: 540 LB

MODEL	TR2237	COTTA TRANSMISSION COMPANY, LLC 1301 PRINCE HALL DRIVE BELLEVILLE, WI 53511	
DRAWN	BPA	DATE	05-May-05
CHECKED	TAP	DATE	05-May-05
APPROVED		DATE	
SCALE	0.375	SHEET	10F 1
DIMENSIONS ARE IN INCHES		PART NUMBER TR2237-5	

REVISION DATE
04-Dec-08



COTTA TRANSMISSION COMPANY, LLC

1301 Prince Hall Drive
Beloit, WI 53511-4439
Phone: (608) 368-5600
Fax: (608) 368-5605
www.cotta.com

This page left intentionally blank