

Automation Robohand FERGUSON CAMCO

SERVICE MANUAL RGD/RGS SERIES INDEX DRIVES MODELS 350RGD/RGS, 500RGD/RGS & 600RGD/RGS

WARNING

This is a controlled document. It is your responsibility to deliver this information to the end user of the CAMCO or FERGUSON product. Failure to deliver this could result in your liability for injury to the user or damage to the machine. For copies of this manual, call your Customer Service Representative at 800-645-5207

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INTRODUCTION

This service manual pertains to the disassembly and assembly of CAMCO's RGD/RGS Series Index Drive MODELS 350RGD/RGS, 500RGD/RGS & 600RGD/RGS.

The manual is to be used in conjunction with the General Service Manual which describes the lubrication and general maintenance of CAMCO Index Drives.

An exploded view of your specific Index Drive is included in this manual. Also included is a complete Bill of Materials (for all standard index drives, for special index drives, please supply serial#) for your convenience in identifying and ordering spare or replacement parts.

Some users of Index Drives have the facilities and trained personnel to accomplish service repair. You must determine the extent to which intricate servicing should be done in your own facility. When in doubt, CAMCO recommends that CAMCO trained servicemen make the repairs.

WARNINGS AND CAUTIONS

Statements in this manual preceded by the words *WARNING* or *CAUTION* and printed in italics are very important. We recommend you take special notice of these during service or repair.

WARNING

Means there is the possibility of personal injury to yourself or others.

CAUTION

Means there is the possibility of damage to the CAMCO unit.

OIL SEAL REMOVAL

The only repair possible without disassembly of the indexer is replacement of oil seals. To remove oil seals, drill a number of holes into the case of the seal. The seal may then be removed with a pointed tool. Be sure to remove all metallic chips created during the drilling of removal holes. A new seal may be installed as outlined in the "Oil Seal Installation Recommendations" section of the "General Service Manual".

SPARE PARTS KIT

CAMCO offers a Spare Parts Kit for all CAMCO index drive models CAMCO builds. These kits include oil seals, bearings, shims and cam followers. These are components that will most likely require replacement during repair of your index drive. CAMCO recommends a Spare Parts Kit be purchased and kept on hand prior to any disassembly of your CAMCO drive.

A compete list of components supplied in the Spare Parts Kit can be found in the parts list located in the rear of this manual. The asterisk behind the item number indicates those parts supplied with the Spare Parts Kit.

BEFORE STARTING

Before starting disassembly of your CAMCO unit you should read and review the following instructions. These provide important information on parts and procedures necessary to successfully complete your repair.

Comply with all Warnings and Cautions.

Read the "Trouble Shooting Guide" section of your "General Service Manual" before disassembling CAMCO units. CAMCO recommends returning defective equipment for inspection and repair whenever possible.

CAMCO uses Loctite[™] to secure all screws and setscrews, If you encounter a fastener that is difficult to remove, apply heat to the screw and remove while still warm.

DISASSEMBLY

- Remove all accessory equipment such as clutches, reducers, sprockets, etc. If equipped with a CAMCO R250 Reducer see disassembly instruction pertaining to this reducer prior to removal from unit.
- Drain oil and flush unit with flushing solvent.
 Retain any chips or broken pieces you may find.
 These may aid in diagnosis.
- 3. Remove the access cover.
- 4. REMOVAL OF OUTPUT SHAFT.
 - A. Rotate the input shaft until the output is in dwell (Where the rotation of the input shaft does not effect the rotation of the output).
 - B. Remove all output bearing cartridge capscrews.
 - C. Remove the output cartridge.

NOTE: Keep shims with the cartridge. You will be asked to reinstall or replace with same shim thickness during assembly.

Pull the shaft out through the cartridge opening.

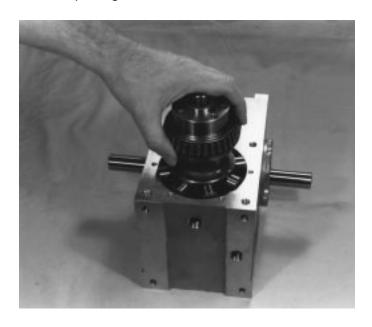


Fig.1 Removing output shaft.

5. INSPECTION OF CAM FOLLOWERS.

Inspect followers for damage or radial looseness. It should not exceed .001 inch. Do not confuse radial looseness with axial endplay. Endplay will be from .03 to .06 as a normal condition. If it exceeds .06 it may require replacement.

NOTE: Generally, followers are replaced as added insurance against eventual failure.



Fig.2 Inspecting Follower.

6. FOLLOWER REMOVAL.

- A. Remove the setscrews. Apply heat to the setscrews holding the follower studs and remove while still warm.
- B. Threaded holes have been provided in the ends of the follower for ease of removal. Use a slide hammer or a simple self made pull tool. The slide made pull tool consists of a short piece of round tubing large enough to clear the follower diameter and a small flat bar with a clearance hole large enough to insert a capscrew of equal thread size as the follower pull hole. Slip the tube over the follower, place the bar over the tube and thread a capscrew into the follower tightening the capscrew will remove the follower.



Fig.3 Removing follower

7. Check the follower holes for roundness. These holes may be worn out due to overloads. The holes should be round within .0005 to permit reuse of the follower wheel.

8. REMOVAL OF BEARINGS.

A. Remove the large output bearing cone from the output shaft with a small diameter aluminum bar and a hammer. Place the bar against the protruding edge of the cone and tap with the hammer, working around the perimeter to prevent binding. Continue this until the cone is free of the shaft.

Fig.4 Removing bearing cone.

B. Remove the output bearing cups from the cartridges and housing with puller, by prying or by drilling and tapping for jack screws.

9. INPUT SHAFT / CAM REMOVAL.

NOTE: The output shaft must be removed prior to input shaft removal.

- A. Rotate the input shaft and inspect all parts for wear or damage. Endplay in the input shaft is not permissible.
- B. Match mark all input cartridges relative to the housing. These must be reinstalled in the same side and position since they are eccentric.
- C. Remove all input bearing cartridge capscrews.
- D. Tap on the end of the input shaft to drive the opposite cartridge from the housing. Then drive the shaft in the opposite direction for removal of other cartridge.

NOTE: Keep shims with their respective cartridges. You will be asked to reinstall or replace with same shim thickness during assembly.

- E. Use a wheel puller to remove the bearing cones from the input shaft.
- F. Remove the cam locknuts with a spanner wrench, if applicable. Be sure to bend the washer locking tang away from the nut prior to removal.
- G. Press the shaft through the hole previously occupied by the input cartridge (removed in Step D). This will automatically remove the cam from the input shaft. The use of an arbor press is recommended but this procedure can be accomplished by driving the shaft through with a soft faced hammer.



Fig. 5 Pressing out shaft.

- H. Remove cam through the access opening.
- 10. Remove the input bearing cups from the cartridges with a pulley puller, by prying or by drilling and tapping for jack screws.

ASSEMBLY

PRIOR TO REASSEMBLY

Clean and deburr all parts before reassembling Follow tightening torque and Loctite[™] recommendations as outlined in the "General Service Manual".

- Use an arbor to press the bearing cups into the cartridges. Coat the outside of the cup and the bore of the cartridge with an anti-seize lubricant prior to pressing. Fill cavity of cartridges with bearing grease recommended in the "General Service Manual".
- 2. ASSEMBLING INPUT SHAFT.

NOTE: Assembly of the cam and bearings to the input shaft must be done inside the housing.

- A. Use arbor to press the cam onto shaft. Be sure key is installed into shaft first. Apply anti-sieze lubricant to shaft and bore prior to pressing. The bore of the cam should be heated prior to pressing, if a heat gun is available.
- B. Use a spanner wrench to install the cam locknuts. Adjust nuts to center cam on shaft (if applicable).

- C. Use an arbor to press bearing cones onto shaft. Coat shaft and bearing bore with antisieze lubricant prior to pressing. The bore of the bearing should be heated prior to pressing, if a heat gun is available.
- D. Install the input cartridges. Be sure to install the same exact shims or equivalent height as was removed in disassembly Step 11D.
- E. Line up match marks.
- F. Tighten cartridge mounting screws.
- G. If endplay exists remove an equal amount of shims from each side until there is a small amount of drag from preloading the bearings. In rare instances it may be necessary to remachine the cartridges if all shims have been removed and endplay still exists.
- H. Loosen input cartridge screws and rotate the cartridge top to the most rearward position attainable within the slots provided in the cartridge.

3. ASSEMBLING OUTPUT SHAFT.

- A. Install the bearings cones on the output shaft. Coat the bore of the cone with an antisieze lubricant prior to installation. Tap in place.
- B. Install new followers with an arbor press.

CAUTION: Be sure to press the followers in straight as damage to the follower and wheel could occur if improperly aligned during installation. Be sure that the notches are aligned with the setscrew holes.

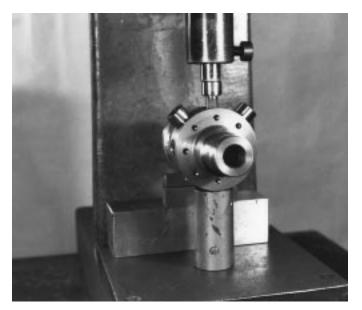


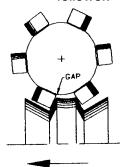
Fig.6 Installing new followers.

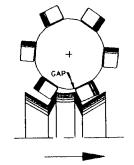
- C. Install the setscrews. The cone point setscrews lock into the "V" notch. The cup point setscrews lock against the flat. The oval point setscrews are used when only one flat is provided on the follower stud. Be sure to use Loctite thread locking liquid as recommended in the "General Service Manual".
- D. Use an arbor to press the bearing cup into the housing. Coat the outside of the cup and the bore of the housing with an anti-sieze lubricant prior to pressing.
- E. Insert the output shaft/follower wheel assembly into the housing.
- F. Install the output cartridge with the equivalent shim thickness removed in disassembly.
- G. Tighten cartridge mounting screws.
- H. If endplay exists, remove shims until there is a small amount of drag from preloading the bearings. In rare instances it may be necessary to remachine the cartridges if all shims have been removed and endplay still exists.

4. SETTING CAM.

CAUTION: This mechanism is designed to operate with adjacent followers in close contact along their entire width with the surface of the cam during the dwell period. Unless this condition is achieved by proper installation, the mechanism will not transmit its rated load, and furthermore, serious damage to the cam and output shaft will occur.

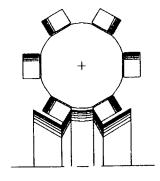
- A. Place the cam in dwell (keyway facing rearward).
- B. Rotate the tops of both input cartridges toward the output until the cam followers touch the cam.
- C. Shift the cam axially until two adjacent followers are in full contact with the cam rib. (This will also require adjustment of the eccentric input cartridges along with axial adjustment of the cam.)
 - If there is a gap at the root of the follower the cam should be shifted toward the follower.
 - 2) If there is a gap at the tip of the follower the cam should be shifted away from the follower.





SHIFT CAM IN DIRECTION OF ARROW

SHIFT CAM IN DIRECTION OF ARROW



CORRECT POSITION Fig.8 Centering cam

- D. Apply "Prussian Blue" to entire cam track.
- E. Rotate the camshaft slowly with a small handcrank to ensure that:

- Both rollers are in contact with the cam rib in dwell. Look for uniform bluing pattern.
- 2) The follower is free at the center of the crossover track.
- 3) You do not encounter unusual resistance in motion. The bluing pattern should be fairly uniform from side to side during motion. If a patch of bluing id worn off the side of the cam rib on one side of the cam and not the other, shift the cam a .002 to .005 inches in the direction of the worn side. Do not overshift the cam or knocking will occur.
- 4) The cam bluing should never be worn off the leading or exit edges of the cam ribs. If so this is an indication that the cam is not adjusted properly.
- There should be no looseness in any dwell. If there is adjust the eccentric input cartridges to slightly preload the loosest dwell.
- F. Tighten the locknuts and secure with Loctite #242 as specified in the "General Service Manual". If lockwashers are used on your model, bend the tangs over the nut to insure locking.
- G. Tighten the input cartridge capscrews and dowel the cartridges to the housing.
- H. Double check for endplay in output shaft. Endplay is not permissible in the output shaft.
 - 5. Reinstall the access cover with a new gasket. To insure leakage it is recommended you also apply "General Electric Silicone Rubber RTV-6" to the housing and cover. CAUTION: If your access cover is plexiglass be sure not to over tighten or cracking will result.
 - 6. Grease pack the main output bearing with lubricant specified in the "General Service Manual".
 - 7. Install new oil seals as described in the "General Service Manual".
 - Fill the index with the recommended oil to level indicator. See "General Service Manual". Too high an oil level will cause no damage. Too low a level may result in unit failure.

HOW TO ORDER PARTS

Please refer to parts list shown in this manual. This parts list is for a standard Index Drive. If you feel your drive is nonstandard or you are in doubt you should contact CAMCO Customer Service at (847) 459-5200 and request a Bill of Materials for your specific unit based on serial number. CAMCO maintains records on all units for a period of ten years.

You may order parts per the standard Bill of Material even if your unit is nonstandard. CAMCO's order entry people will review the closed order file based on the following information and supply you with the correct part.

REQUIRED INFORMATION

- 1. Original purchase order number (if available)
- 2. Customer name (original purchaser of drive)
- 3. Model number (location on name plate)
- 4. Serial number (location on name plate)
- 5. Approximate date of purchase.

TO ORDER PARTS contact CAMCO "Order Entry Department" Wheeling, Illinois

Phone (847) 459-5200 or Fax (847) 459-3064

- A. Describe the parts required and the 14 digit part number as listed in the Standard Bill of Materials or a Special Bill of Materials pertaining to your unit. State in you are using a Standard or Specific bill of material.
- B. Give as much of the above required information as possible.

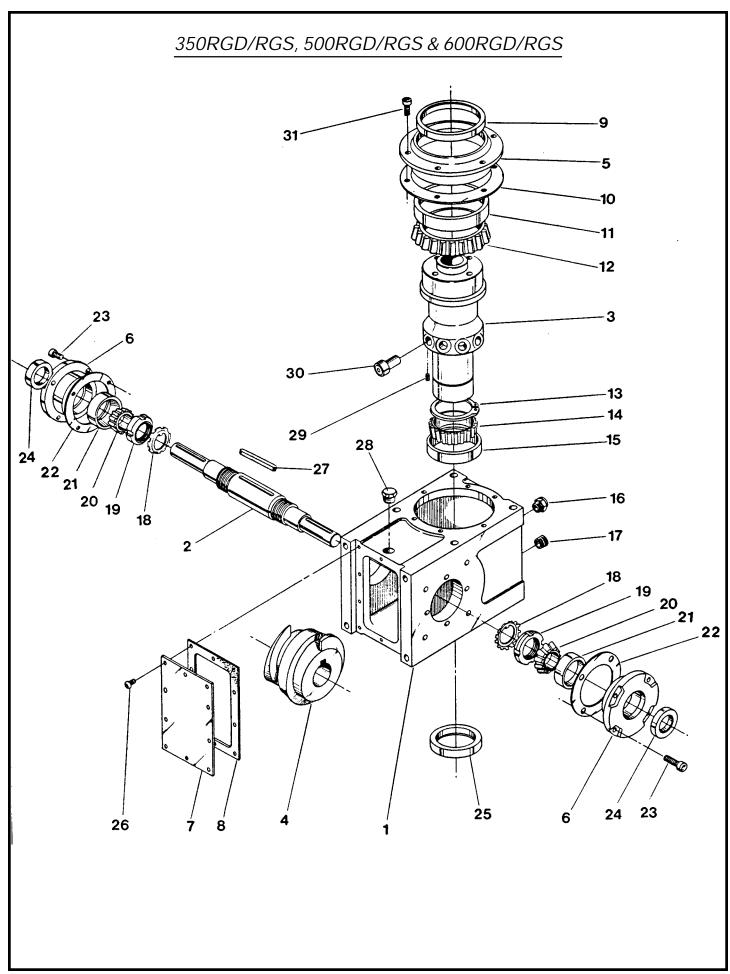
ON WARRANTY

Replacement parts CAMCO will send freight prepaid via most practical means.

CAMCO will issue a "Returned Material Authorization Number" (RMA#) for the return of defective parts for inspection. CAMCO will bill customer for repair parts. When inspection of returned parts has been completed and determined to be a warranty problem, CAMCO will issue a credit to the customer for the repair parts and freight charges.

ON NON-WARRANTY

Replacement or spare parts, with approved credit, are F.O.B. our plant Wheeling, Illinois.



PARTS LIST FOR 350RGD INDEX DRIVE (STANDARD CONFIGURE) PART NUMBER DESCRIPTION

ITEM NO.	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	48D43074001002	HOUSING
2	48B43059007002	INPUT SHAFT DBL EXT (W/O REDUCER)
	48B43059007002	INPUT SHAFT DBL EXT (W/R180 RED)
	48C63670007002	INPUT SHAFT DBL EXT (W/R225 RED)
	48C42987014006	OUTPUT SHAFT FOLL WHL 6 HOLE 3/4 FOLL
	48C42987024008	OUTPUT SHAFT FOLL WHL 8 HOLE 3/4 FOLL
	48C42987034010	OUTPUT SHAFT FOLL WHL 10 HOLE 5/8 FOLL
	48C42987044012	OUTPUT SHAFT FOLL WHL 12 HOLE 5/8 FOLL
4		CAM. SPECIFY NUMBER OF STOPS AND INDEX TIME
		(CONTACT CAMCO FOR ASSISTANCE IN CAM SELECTION)
	48B43056003021	CARTRIDGE, UPPER OUTPUT
	26B01048003122	CARTRIDGE, ECCENTRIC INPUT (387P)
	48B30138009600	ACCESS COVER
	48B30139008700	GASKET, ACCESS COVER
	84D07329420000	OIL SEAL C/R 24954
	48B06081018800	SHIM .002 THK
		SHIM .005 THK
		SHIM .010 THK
		BEARING CUP L610510
	86D07328530021	BEARING CONE L610549
13		NOT USED ON 350RGD OR 350RGS
	86D07328300021	BEARING CONE 13687
	86D07328300022	BEARING CUP 13621
	95A33001010000	SIGHT GLASS
	95A33002060000	DRAIN PLUG
18		NOT USED ON 350RGD OR 350RGS
	48A43078009000	SPACER, CAM
	86D07328170021	BEARING CONE 07100
	86D07328170022	BEARING CUP 07196
	26B01052008800	SHIM SET, INPUT (387P)
	95A0808900000	SPECIAL LARGE HEAD CAPSCREW
24*	84D07329130000	OIL SEAL C/R 9838
25*	84D07329330000	OIL SEAL 13739
26	95A26003090000	BHCS 8-32 X 3/8
27	031K194	KEY 5/16 SQ. X 1 15/16 LARGE
28	95A33000010000	AIR VENT (BREATHER)
29	95A26012070000	SSS OVL PT 10-24 X 3/8
30	82C33150020003	FOLLOWER 3/4 DIA
	82C33150010003	FOLLOWER 5/8 DIA
31	95A26000380000	SHCS 1/4-20 X 1/2
32*	48A06080018800	SHIM .002 THK, LOWER OUTPUT
	48A06080028800	SHIM .005 THK, LOWER OUTPUT
	48A06080038800	SHIM .010 THK, LOWER OUTPUT
	48B44707003002	
		- ·····, - · · · · · · · · · · · ·
	48B44707003002 es with Spare Parts Kit #350RGD SPK	CARTRIDGE, LOWER OUTPUT

PARTS LIST FOR 350RGS INDEX DRIVE (STANDARD CONFIGURATION)

ITEM NO.	PART NUMBER	<u>DESCRIPTION</u>
1	48D43074001002	HOUSING
2	48B43059007002	INPUT SHAFT DBL EXT (W/O REDUCER)
	48B43059007002	INPUT SHAFT DBL EXT (W/R180 RED)
	48C63670007002	INPUT SHAFT DBL EXT (W/R225 RED)
3	48C42996014006	OUTPUT SHAFT SGL EXT 6 HOLE 3/4 FOLL
	48C42996024008	OUTPUT SHAFT SGL EXT 8 HOLE 3/4 FOLL
	48C42996034010	OUTPUT SHAFT SGL EXT 10 HOLE 5/8 FOLL
	48C42996044012	OUTPUT SHAFT SGL EXT 12 HOLE 5/8 FOLL
	48C42998014006	OUTPUT SHAFT DBL EXT 6 HOLE 3/4 FOLL
	48C42998024008	OUTPUT SHAFT DBL EXT 8 HOLE 3/4 FOLL
	48C42998034010	OUTPUT SHAFT DBL EXT 10 HOLE 5/8 FOLL
	48C42998044012	OUTPUT SHAFT DBL EXT 12 HOLE 5/8 FOLL
4		CAM, SPECIFY NUMBER OF STOPS AND INDEX TIME. (CONTACT CAMCO FOR ASSISTANCE IN CAM SELECTION)
5	48B43056003021	CARTRIDGE, UPPER OUTPUT
6	26B01048003122	CARTRIDGE, ECCENTRIC INPUT (387P)
7	48B30138009600	ACCESS COVER
8*	48B30139008700	GASKET, ACCESS COVER
9*	84D07329420000	OIL SEAL C/R 24954
10*	48B06081018800	SHIM .002 THK
*	48B06081028800	SHIM .005 THK
*	48B06081038800	SHIM .010 THK
11*	86D07328530022	BEARING CUP L610510
12*	86D07328530021	BEARING CONE L610549
13		NOT USED ON 350RGD OR 350RGS
14*	86D07328300021	BEARING CONE 13687
15*	86D07328300022	BEARING CUP 13621
16	95A33001010000	SIGHT GLASS
17	95A33002060000	DRAIN PLUG
18		NOT USED ON 350RGD OR 350RGS
19	48A43078009000	SPACER, CAM
20*	86D07328170021	BEARING CONE 07100
21*	86D07328170022	BEARING CUP 07196
22*	26B01052008800	SHIM SET, INPUT (387P)
23	95A08089000000	SPECIAL LARGE HEAD CAPSCREW
24*	84D07329130000	OIL SEAL C/R 9838
25*	84D07329330000	OIL SEAL 13739
26	95A26003090000	BHCS 8-32 X 3/8
27	031K194	KEY 5/16 SQ. X 1 15/16 LARGE
28	95A33000010000	AIR VENT (BREATHER)
29	95A26012070000	SSS OVL PT 10-24 X 3/8
30		FOLLOWER 3/4 DIA
		FOLLOWER 5/8 DIA
31	95A26000380000	SHCS1/4-20 X 1/2
32*		SHIM .002 THK
*		SHIM .005 THK
*		SHIM .010 THK
33		CARTRIDGE, LOWER OUTPUT
* Indicates parts supplied with Spa	re Parts Kit #350RGS SPK	
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PARTS LIST FOR 500RGD INDEX DRIVE (STANDARD CONFIGURATION)

ITEM NO.	PART NUMBER	<u>DESCRIPTION</u>
 1		HOUSING
2		INPUT SHAFT DBL EXT (W/O REDUCER)
		INPUT SHAFT DBL EXT (W/225/R260 RED)
		INPUT SHAFT DBL EXT (W/3" CONE RED)
3		OUTPUT SHAFT FOLL 6 HOLE 1 1/4" FOLL
		OUTPUT SHAFT FOLL 8 HOLE 1 1/4" FOLL
		OUTPUT SHAFT FOLL 10 HOLE 1" FOLL
		OUTPUT SHAFT FOLL 12 HOLE 7/8" FOLL
4		CAM, SPECIFY NUMBER OF STOPS AND
		INDEX TIME. (CONTACT CAMCO FOR
		ASSISTANCE IN CAM SELECTION)
5		CARTRIDGE, OUTPUT
6	28K26335003022	CARTRIDGE, ECCENTRIC INPUT
7	50B4257800000	ACCESS COVER
8*	50B42579000000	GASKET, ACCESS COVER
9*	84D07329660000	OIL SEAL C/R 42426
10*	57B40958018800	SHIM .002 THK, UPPER OUTPUT
*	57B40958028800	SHIM .005 THK, UPPER OUTPUT
*	57B40958038800	SHIM .010 THK, UPPER OUTPUT
11*	86D07328750022	BEARING CUP L521910
12*	86D07328750021	BEARING CONE L521949
13	95A33031540000	RETAINING RING 5100-225
14	86D07328500021	BEARING CONE 3979
15	86D07328500022	BEARING CUP 3920
16	96A33001010000	SIGHT GLASS
17	95A33002010000	DRAIN PLUG
18	95A26010100000	LOCKWASHER W-10
19	95A26009100000	LOCKNUT PN-10
20*	86D07328360021	BEARING CONE 26885
21*	86D07328280022	BEARING CUP 26822
22*	28A02522018800	SHIM .002 THK, INPUT
*	28A02522028800	SHIM .005 THK, INPUT
*	28A02522038800	SHIM .010 THK, INPUT
23	95A0808900000	SPECIAL LARGE HEAD CAPSCREW
24*	84D07329290000	OIL SEAL C/R 16368
25*	84D07329400000	OIL SEAL 22424
26	95A26003150000	BHCS 10-24 X 1/2
27	050K275	KEY 1/2 SQ. X 2 3/4 LARGE
28	95A33000010000	AIR VENT (BREATHER)
29	95A26012140000	SSS OVL PT 1/4-20 X 1/2
30	82C33150030003	FOLLOWER 7/8 DIA
	82C33150040003	FOLLOWER 1" DIA
	82A4372400000	FOLLOWER 1 1/4 DIA
31		SHCS 3/8-16 X 7/8
32*	50B45872018800	SHIM .002 THK, LOWER OUTPUT
*	50B45872028800	SHIM .005 THK, LOWER OUTPUT
*	50B45872038800	SHIM .010 THK, LOWER OUTPUT
33	50B44805003002	CARTRIDGE, LOWER OUTPUT
* Indicates parts supplied with Spa	are Parts Kit #500RGD SPK	

PARTS LIST FOR 500RGS INDEX DRIVE (STANDARD CONFIGURATION)

ITEM NO.	PART NUMBER	DESCRIPTION
1	50D42543001002	HOUSING
2		INPUT SHAFT DBL EXT (W/O REDUCER)
		INPUT SHAFT DBL EXT (W/225/R260 RED)
		INPUT SHAFT DBL EXT (W/3" CONE RED)
3		OUTPUT SHAFT SGL EXT 6 HOLE 1 1/4" FOLL
		OUTPUT SHAFT SGL EXT 8 HOLE 1 1/4" FOLL
		OUTPUT SHAFT SGL EXT 10 HOLE 1" FOLL
		OUTPUT SHAFT SGL EXT 12 HOLE 7/8" FOLL
		OUTPUT SHAFT DBL EXT 6 HOLE 1 1/4" FOLL
		OUTPUT SHAFT DBL EXT 8 HOLE 1 1/4" FOLL
		OUTPUT SHAFT DBL EXT 10 HOLE 1" FOLL
		OUTPUT SHAFT DBL EXT 12 HOLE 7/8" FOLL
4		CAM, SPECIFY NUMBER OF STOPS ANDINDEX TIME.
4		(CONTACT CAMCO FOR ASSISTANCE IN CAM SELECTION)
5		CARTRIDGE, OUTPUT
6		CARTRIDGE, ECCENTRIC INPUT
7		ACCESS COVER
8*		GASKET, ACCESS COVER
9*		OIL SEAL C/R 22424
10*		SHIM .002 THK, UPPER OUTPUT
*		SHIM .002 THK, OFFER OUTPUT
*		SHIM .000 THK, OFFER OUTFUT
11*		BEARING CUP 3920
12*		BEARING COP 3920 BEARING CONE 3979
13		RETAINING RING 5100-225
14		
		BEARING CONE 3979
15 16		BEARING CUP 3920 SIGHT GLASS
17		DRAIN PLUG
18		LOCKWASHER W-10
19		
20*		LOCKNUT PN-10
21*		BEARING CONE 26885
		BEARING CUP 26822
22*		SHIM .002 THK
*		SHIM .005 THK
*		SHIM .010 THK
23		SPECIAL LARGE HEAD CAPSCREW
24*		OIL SEAL C/R 16368
25*		OIL SEAL 22424
26		BHCS 10-24 X 1/2
27		KEY 1/2 SQ. X 2 3/4 LARGE
28		AIR VENT (BREATHER)
29		SSS OVL PT 1/4-20 X 1/2
30		FOLLOWER 7/8 DIA
		FOLLOWER 1" DIA
		FOLLOWER 1 1/4 DIA
31		SHCS 3/8-16 X 7/8
32*		SHIM .002 THK, LOWER OUTPUT
*		SHIM .005 THK, LOWER OUTPUT
*		SHIM .010 THK, LOWER OUTPUT
33		CARTRIDGE, LOWER OUTPUT
* Indicates parts supplied with Spare Pa	arts Kit #500RGS SPK	

PARTS LIST FOR 600RGD INDEX DRIVE (STANDARD CONFIGURATION)

ITEM NO. PART NUMBER DESCRIPTION 1 53D45466001002 HOUSING 2 53C45547007002 INPUT SHAFT DBL EXT (W/O REDUCER) 53C45548007002 INPUT SHAFT DBL EXT (W/3" CONE RED) 53C45549007002 INPUT SHAFT DBL EXT (W/3 1/2 RED)	
2 53C45547007002 INPUT SHAFT DBL EXT (W/O REDUCER) 53C45548007002 INPUT SHAFT DBL EXT (W/3" CONE RED) 53C45549007002 INPUT SHAFT DBL EXT (W/3 1/2 RED)	
,	
3	
4 CAM, SPECIFY NUMBER OF STOPS AND	
INDEX TIME. (CONTACT CAMCO FOR	
ASSISTANCE IN CAM SPACER SELECTION)	
5	
6	
7	
8*	
*	
9*	
10* 53A24372018800 SHIM .002 THK	
*53A24372028800 SHIM .005 THK	
*53A24372038800 SHIM .010 THK	
11*	
12*	
13	
14	
15	
16	
17	
18	
19	
20*	
21*	
22*	
*	
*	
23	
24*	
25*	
26	
27	
28	
29	
95A26006290000 SSS CONE PT 5/16-18 X 3/4	
30	
82C33150050003 FOLLOWER 1 1/4" DIA	
82J24564000000 FOLLOWER 1 1/2" DIA (USE SSS 95A26006290	000)
31	
32* 53A45495018800 SHIM .002 THK.	
33	
* Indicates parts supplies with Spare Parts Kit #600RGD SPK	

PARTS LIST FOR 600RGS INDEX DRIVE (STANDARD CONFIGURATION)

ITEM NO.	PART NUMBER	DESCRIPTION
1		HOUSING
2		INPUT SHAFT DBL EXT (W/O REDUCER)
-		INPUT SHAFT DBL EXT (W/3" CONE RED)
		INPUT SHAFT DBL EXT (W/3 1/2 RED)
3		OUTPUT SHAFT FOLL WHL 6 HOLE 1 1/2 FOLL SE
		OUTPUT SHAFT FOLL WHL 8 HOLE 1 1/4 FOLL SE
		OUTPUT SHAFT FOLL WHL 12 HOLE 1" FOLL SE
		OUTPUT SHAFT FOLL WHL 6 HOLE 1 1/2 FOLL DE
		OUTPUT SHAFT FOLL WHL 8 HOLE 1 1/4 FOLL DE
		OUTPUT SHAFT FOLL WHL 12 HOLE 1" FOLL DE
4		CAM, SPECIFY NUMBER OF STOPS AND INDEX TIME.
		(CONTACT CAMCO FOR ASSISTANCE IN CAM SPACER
		SELECTION)
5		CARTRIDGE, OUTPUT
6		CARTRIDGE, ECCENTRIC INPUT
7	53C24365009999	ACCESS COVER (OUTPUT END)
		ACCESS COVER (INPUT END)
8*		GASKET, ACCESS COVER (OUTPUT END)
*		GASKET, ACCESS COVER (OUTPUT END)
9*		OIL SEAL C/R 32540
10*		SHIM .002 THK
*		SHIM .005 THK
*		SHIM .010 THK
11*		BEARING CUP JM716610
12*		BEARING CONE JM716649
13		SSS53/16-16 X 1/2
14		BEARING CONE JM716649
15		BEARING CUP JM716610
16		SIGHT GLASS
17	95A33002060000	DRAIN PLUG
18		LOCKWASHER W-10
19		LOCKNUT PN-10
20*		BEARING CONE HM803145
21*		BEARING CUP HM803110
22*		SHIM .002 THK
*		SHIM .005 THK
*		SHIM .010 THK
23		SPECIAL LARGE HEAD CAPSCREW
24*		OIL SEAL C/R 15215
25*		OIL SEAL 32540
26		SHCS 10-24 X 1/2
27		KEY 1/2 SQ. X 3 1/2 LONG
28		AIR VENT (BREATHER)
29		SSS OVL PT 1/4-20 X 3/4
		SSS CONE PT 5/16-18 X 3/4
30	82C33150040003	FOLLOWER 1" DIA
	82C33150050003	FOLLOWER 1 1/4" DIA
		FOLLOWER 1 1/2" DIA (USE SSS 95A26006290000)
31		SHCS 3/8-16 X 7/8
32*	53A45495018800	SHIM .002 THK.
	53A45495028800	SHIM .005 THK.
	53A45495038800	SHIM .010 THK.
33		CART, LOWER OUTPUT
* Indicates parts supplies with Sp	are Parts Kit #600RGS SPK	



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