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Part of ORR
(IP-353A)

ANTI-FRICTION BEARINGS
IN USE IN SOME SOVIET EQUIPMENT

~~Central Intelligence Agency
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INTRODUCTION

Purpose

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The purpose of this report is to make available a list of the types and sizes of the antifriction bearings used in certain Soviet equipment, and to equate the Soviet types and sizes into western standard types and sizes such as SKF, Fafair, RIV, etc. The criteria of selecting the Soviet equipment is whether or not the equipment has military value or can support a war economy.

Source of Material

Ideally, the list should encompass all the weapons, vehicles, machine tools that use anti-friction bearings and are in accordance with the above criteria, but it is necessarily limited at this time by the availability of information. The present list is derived from translations of open Soviet literature and from actual physical examination of a few sample pieces of equipment. Where possible each bearing has been checked in Soviet anti-friction bearing catalogues.

An extension of this list will have to wait upon further exploitation of some pieces of equipment now in our hands and by selecting U.S. and other western equipment similar to known pieces of Soviet equipment and deriving the types and sizes of strategic anti-friction bearings by inference. Steps have already been taken to derive in this manner the bearings for Soviet artillery pieces.

Explanation of Tables

Each table is headed by the name and model of the piece of equipment and a short description.

In the original data the description of the bearing was frequently inadequate and it has been supplemented from the Soviet catalogue.

The Soviet bearing number was stamped on each bearing in those cases where the equipment was physically examined. In each case it is in accordance with the new Soviet numbering system which was established in 1950.

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The SKF number is used where possible because the SKF company catalogues the greatest assortment of bearings among the western manufacturers.

Dimensions are in millimeters unless otherwise noted.

Quantities listed, where known, are per piece of equipment.

Where information is lacking, or where it was not possible to find the western equivalent of a Soviet bearing, the space has been left blank.

Coordination

~~Mr. H. M. Gillespie, Chief, and Mr. A. J. Russell of the Bearings and Oil Seal Branch of BuShips requested the Soviet bearings to SKF number; and the Industrial Division, CIB, provided the material on the machine tools.~~

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TABLE I

SOVIET TANK

T 34/85 tank manufactured in 1945

TYPE OF BEARING	SOVIET NO.	SHT NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY
				BORE	O.D.	WIDTH	
Ball thrust	6120	51120	Countershaft thrust	100	135	25	1
Ball	303	6303	Oil pump drive idler	17	47	24	1
Double ball, self align	1207	1207	Main access drive shaft, lever and Main clutch	35	72	17	1
Ball			Main clutch	110	174	30	1
Ball thrust	500		Main clutch				1
Double ball, self align	10412		Steering clutch	110	174	30	2
Ball	205	6205	Steering clutch	60	150	35	2
Ball	303	6303	Fuel injector pump camshaft	25	52	15	2
Ball	305	6305	Water pump	17	47	24	1
Ball	205	6205	Generator, drive end	25	62	17	1
Ball	205	6205	Generator, commut end	25	52	15	1
Double ball, self align	1209	1209	Starter, commut end	25	52	15	1
Ball, tapered	7218	30218	Starter, drive end	45	85	19	2
Ball thrust	1-8320	51324	Transmission pinion	40	156	26	1
			Transmission pinion	100	170	55	1

U.S. manufactured

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TABLE ~~1~~

SOVIET TANKS (CONTINUED)

BEARING APPLICATION
IN EQUIPMENT

DIMENSIONS
BORE O.D. WIDTH

QUANTITY

REMARKS

SOVIET NO.	GRP NO.	DESCRIPTION	BORE	O.D.	WIDTH	QUANTITY	REMARKS
2117	K-317	Transm. on pinion	85	180	40	1	
7216	Talman 590/592 D	Transm. drive cross shaft	80	160	41	1	
7216	"	Transm. drive cross shaft	80	160	41	1	
2218	H-218	Transm. drive cross shaft	90	160	30	2	
92412	"	Transm. drive cross shaft	60	150	35	2	
567	"	Transm. reverse idler gear	52	90	70	2	
3522	22222	Pinial drive	110	200	53	2	
95511	73104 95511/95905	Pinial drive	130	230	48	2	
7230	30230	Pinial drive	130	270	50	2	
864915	"	Pinial drive, pinion	75	109	57	2	
3317	6317	Track idler	46	150	40	2	
2220	"	Track idler, inner brg.	106	180	34	2	
316	6316	Beale wheel	32	170	29	20	
201	6201	Turntable rotating mechanism element	12	32	10	1	
203	6203	Turntable rotating mechanism element	12	32	10	1	

3.119 x 6.000 x 2.500

One is U.S. manufactured

Hyatt type

5.1101 x 9.0551 x 1.9375
U.S. manufactured

U.S. manufactured

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TABLE 1
SOVIET TANK (CONTINUED)

TYPE OF BEARING	SOVIET NO.		BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
	NO.	SEP NO.		BORE	O.D.	WIDTH		
Ball	305	6305	Turret rotat mechn. worm shaft, drive end	25	62	1 1/2	1	
Ball	304	6304	Turret rotat. mechn. worm shaft, pilot end	20	52	1 1/2	1	
Ball	304	6304	Turret rotat mechn. spur gear shaft	20	52	1 1/2	1	
Ball	201	6201	Ventilating fan, drive end	12	32	1 0	1	
Ball bearings	6015	6-15	Vent. fan, comm. end	15	35	8	1	
Ball, see other rows			Technometer brgs.				5	
Ventilating worm gear			Governor thrust arm				1	
Ball, see other rows			Fuel pump tappet assy's.				12	
Ball bearings			Governor				1	
Ball bearings			Turret ring				1	
Ball bearings			Commander's hatch				1	
Separate balls & a con. shafts			Clutch release mechn				9	

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TABLE II
MIG AIRCRAFT ENGINE

MIG 15

TYPE OF PART	SOWIT NO.	SER NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS*			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball, caged	6005		Accessory case	0.978	1.85	1.724	2	9105 X PAFNIK
Ball, caged	6206		"	1.18	2.44	.629	1	206
Ball, caged			"	1.25	2.165	3/8	5	8 12 K
Ball, caged			"	1.37	2.44	.551	5	
Ball, caged, no outer race	RLS 24		Main bearings	5.374	1.176		1	6107 NOBNA HOPFNAY
Ball, caged, no outer race	CHL 16		"	4	13/16		1	LS 19
Ball, caged, no outer race			"	3 1/2	3/4		1	RLS 15
Ball, caged, no outer race			"	3 1/2	3/4		1	RLS 31

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8-80 TRACTOR (CATERPILLAR)

Most powerful Soviet tractor - 80 horsepower
 Copy of U.S. Caterpillar Co.'s D7 Tractor.

TABLE III

TYPE OF BEARING	SOVIET NO.	ENT. NO.	BEARING APPLICATION IN EQUIPMENT	BORE	O.D.	WIDTH	QUANTITY
Ball	203	6203	Gov. of diesel engine	17	60	12	1
Ball	208	6208	Start motor clutch sleeve shaft and reducing gear	60	80	18	2
Roller, spzl, cyl, rol- lowe single split cut ring			Start motor crankshaft	20	34	25	1
Ball	210	6210	Start motor crankshaft	50	90	20	1
Ball	211	6211	Start motor crankshaft	55	100	21	1
Roller, spzl ring, no inner ring	35924	Spztl 521178	Main friction clutch	68	100	24	1
Roller, tapered	7312	30312	Side friction clutch	60	130	24	2
Ball	215	6215	Side friction clutch	75	130	25	2
Ball	213	6213	Transm. up shaft and crankshaft	65	120	23	1
Roller, graphittised steel grooved for lock ring		8110 Spec	Transm. up shaft and crankshaft	50	110	27	2
Roller, graphittised steel two flanges on cut ring, no outer ring, pressed cage.		502208	Transm. inner gear shift	40	70	17	2

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TABLE III (CONTINUED)
S-80 TRACTOR (CATERPILLAR)

Most powerful Soviet tractor - 80 horsepower.
Copy of U.S. Caterpillar Col's D7 Tractor.

ITEM OR PART	PART NO.	QTY. NO.	HEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Roller, groove for lock ring, processed eggs	422715	215	Transm. lower shaft	75	160	37	2	
Roller	310	6310	Transm, crankshaft & lower shaft	50	110	27	2	
Roller	305	6305	Diesel fan	30	62	16	2	
Roller, one flange on in. ring, cold brass eggs	42312	42312	Gear	60	130	31	6	
Roller, as above	42312	42312	Gear	60	130	31	6	
Roller, as above	42314	42314	Side reduct. gear	70	150	35	2	
Roller, tapered, lock flange on out ring	67728	67728	Side reduct gear	110	230	58	2	
Roller, tapered, not std.	7729	7729	Side reduct gear	115	190	49	2	
Roll, thrust	8103	8103	Start motor gear	17	30	9	1	
Handle, cam processed outer ring	84704	84704	Diesel gear	15	20	12	2	
Roll, thrust	808205	808205	Diesel gear	25	48	15.5	1	

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TABLE 11

DT 54 TRACTOR

See classed asterisk (*) for general purpose tractor based upon Hercules EDLIT-WATI tractor design. S4 horsepower

ITEM NO.	PART NO.	SER. NO.	HEAVY APPLICATION ITEM	DIMENSIONS			
				NO. OF	O.D.	WIDTH	HEIGHT
Ball	205	6205	Ball shaft gear, end of tension pulley, water pump, drive shaft of reverse of starting engine	25	52	15	
Ball, end shaft	6206	6206-6	Crankshaft ends of tension pulley of water pump and ventilator	30	62	16	
Ball	305	6207	Water pump shaft	30	72	19	
Ball, end shaft	5307	6207	Ventilator pulley	35	80	21	
Ball	408	6208	Main coupling shaft, and reverse shaft, and power take-off	40	110	27	
Ball, register contact	926713	-	Main coupling clutch	63	102	27	
Ball, High Range on lower ring	204	6204	Crankshaft of start engine	20	47	14	
Ball	202	6202	End-plate of crankshaft of start engine	15	35	11	
Ball, gears	1305	1305	Base	25	62	17	
Ball	203	6203	Shaft of Bendix of reducer of starting engine	40	80	18	
Ball	209	6209	Reducer of start engine	45	85	19	

Equivalent to HO-1567-2
Equivalent to HO-1567-2

DT-4 TRACTOR

See attached on separate General purpose tractor based upon Karpov's SHDZ-400 tractor design. 4 horsepower

TYPE OF BEARING	SOVIN NO.	SER NO.	DIMENSIONS			QUANTITY	REMARKS
			BORE	O.D.	WIDTH		
Ball, double, spheric	1204	1204	20	47	14		
Roller, tapered	7909		15	100	38.5		
Roller, tapered	1513	32213	5	20	33		
Roller, tapered	7609	32209	45	100	38.5		
Ball	607	6407	35	100	25		
Ball	908	6308	40	90	23		
Ball, grooves for lock ring	50408	64088	40	110	27		
Ball, grooves for lock ring	50409	64098	45	130	29		
Ball, c/lin, brass cage	2722		60	110	51		
Ball, spherical	1610	2310	50	110	40		
Ball, angular contact, non detain	26216	7216	55	110	26.5		
Roller, tapered	7312	3122	55	130	34		
Roller, cylindrical	92112	NPT112	55	150	35		
Roller, tapered, brass cage	3518	RIV 07 07/21.8					

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S-65 AND S-65 TRACTORS (CAMPELLIAN)

TYPE *X*

No longer produced. Were prime movers used in World War II. Still in use and requiring spare parts. 48-50 H.P. drawbar horsepower. S-60 used Mervin fuel and S-65 is diesel powered.

TYPE OF PART	SOVIET NO.	SKP NO.	DESCRIPTION	EQIP. NO.	EQIP. NAME	EQIP. NO.	DIMENSIONS	QUANTITY	REMARKS
							EQIP. NO., O.D., WIDTH		
Balls, tapered	8206	51206	Regulator				30 53 16		S-60 only
Balls, tapered, special, grooved, steel ring	958726		Clutch				130 235 41		
Balls, double, angular contact, 1 phase outer ring, 2 inner rings	86713		Upper shaft, front				65 110 58.74		
Balls, tapered	7616	32316	Lower shaft, rear				80 170 62		
Balls, tapered, not std.	7712	REV 03/06/3263	Same, front				60 120 46		
Balls, tapered, not std.	7721		Shaft of hand gear				105 215 78		
Balls, tapered, not std.	7718		Thrust gear				90 160 50		
Balls, tapered, not std.	7618	REV 05/10/3262					30 170 62		
Roller, spiral rollers	5306	REV 2876, 05/11 5306	Went for				30 72 30		
Roller, spiral rollers, inner ring w/ increased height	985713		Upper shaft gear				65 110 44/55		
Roller, spiral rollers, w/ single silt outer ring	48512		Four rollers of tractor				55 100 100		

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TABLE V
(continued)

S-60 AND S-65 TRACTORS (CATERPILLAR)

No longer produced. Were prime movers used in World War II. Still in use and requiring spare parts. 18-50 h.p. drawbar horsepower. S-60 used kerosene fuel and S-65 is diesel powered.

NORTH NO.	SERV NO.	REPAIR APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REPAIRS
			WGT. LBS.	HGT. IN.	WIDE IN.		
15213		Tightening wheel	65	120	100		
202	6202	Generator	15	35	11		
203	6203	Diesel gov.	17	40	12		S-65 only
204	6204	Generator	20	47	14		S-65 only
205	6205	Clutch coupling and shaft of starter	40	80	18		S-65 only
15204		Clutch coupling	19,895	24	25		S-65 only
210	6210	Crankshaft of starter	50	90	20		S-65 only
211	6211	Crankshaft of starter	55	100	21		S-65 only

of weight for items added from Gov. catalogues.

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52 Horsepower Kerosene Generator.
 of new Soviet D-514 diesel tractor.

TYPE OF BELLEID	SOVIET NO.	SKF NO.	DESCRIPTION	DI. INCHES	QTY.	QUANTITY	REMARKS
Ball	309	6309	Driver, front	100	25		
Ball	407	6407	Driver, rear	100	25		
Ball	411	6411	Driver	114	33		
Ball, start	8109	51109	Starting crank (shaft)	65	14		
Ball, regulator contact	6015	E-15	Armature rotor, front	95	8		
Ball, regulator contact	6017	L-17	Armature rotor, rear	40	10		
Ball	203	6203	Generator	17	12		

Notes: Original data did not contain dimensions; added from Sov. catalogue.

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TABLE VI
(Continued)

SKITZ-MAYT TRACTOR LTD.

52 Horsepower kerosene engine rollers. Prototype
of new Soviet DT-54 diesel tractor

TYPE OF BEARING	SOFTENING NO.	SEV. NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY
				BORE O.D.	WIDTH	HEIGHT	
Ball, groove on 100% ring on outer ring	20112	6112AMB	Small final drive gear, universal	60	150	35	
Ball, tapered	8106	5106A	Oil pump shaft support bearing?	20	35	10	
Roller, tapered	7909	32309	Support?	45	100	38.5	
Roller, special rollers	307	6307	Support?	35	80	21	
Ball	7513	32113	Support?	65	120	33	
Roller, tapered	7609	32309	Steering wheel, inner	45	100	38.5	
Roller, tapered	1205	1205	Steering wheel, outer	25	52	15	
Ball, double, spherical	1308	1308	Power take-off	40	90	23	
Ball, double	916913		Power take-off, rear	63	102	27	
Ball, angular contact, high flange on outer ring	205	6205	Main coupling, middle	25	52	15	
Ball, angular contact, high flange on outer ring	6012	E-12	Governor gear	12	32	7	
Ball, angular contact	208	C308	Governor shaft, rear	40	80	18	
Ball	305	6305	Vertical fan & water pump	25	62	17	
Ball	308	6308	Axle of tension pulley	40	90	23	

Vertical and water pump

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TABLE VII

ZIB 5

3 ton 2 axle truck, Gross produced in 1935

TYPE OF PARTS	QUANTITY	UNIT PRICE	TOTAL PRICE	REMARKS
Ball, thrust, in housing	50	0.21	10.50	Clutch coupling
Ball	52	0.28	14.56	Shaft coupling
Ball thrust, tapered, 7/16 x 1 1/2	50	0.34	17.00	Front axle king pin
Ball	50	0.34	17.00	Drive gear of reductor, rear bridge
Ball	110	0.24	26.40	Diff.
Ball, tapered	125	0.18	22.50	Ventilator
Ball, tapered	47	0.33	15.51	Gear box
Ball, tapered	80	0.20	16.00	Reductor of rear bridge
Ball, tapered, non-std 7/16 x 1 1/2	100	0.20	20.00	Rear wheel
Ball, tapered	120	0.42	50.40	Front wheel, outer
Ball, tapered, non-std 7/16 x 1 1/2	72	0.29	20.88	Front wheel, inner
Ball, thrust w/cas ring 9/16 x 1 1/4	90	0.39	35.10	Worm of steer coil.
Ball, w/o rings 6/16 x 1 1/4	60.3	0.14	8.44	Main shaft transmission
Ball	30	0.42	12.60	Internal shaft of transm.
Ball	30	0.77	23.10	

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TABLE V/111
ZIS 150 TRUCK

Std. 3 ton truck, equivalent to ZIS 51 but heavier.
Currently involved in development to increase payload

TYPE OF PARTS	SOVIET NO.	REF. NO.	HEARING APPLICATION IN EQUIPMENT	BORE	O.D.	WIDTH	QUANTITY	REMARKS
Ball, end shaft	60805	6205-4	Pr. trans. primary shaft	25	52	15	?	
Ball, top groove for lock ring, ball groove cage	50813	6213-42	Trans. primary shaft	65	120	23		
Ball, splin. short release	672-12307	8307/4	Pr. trans. o' shaft	35	80	21		
Ball, top groove for lock ring (release) rings	50497	6207-42	Pr. trans. o' shaft	35	100	25		
Ball, ring release	63705		Trans. Main shaft pilot brg. and reverse gear	30	42	44.1		
Ball, top groove for lock ring	50911	6311-42	Trans. Main shaft rear	55	120	29		
Ball, equal. con. in housing, equip outer ring	508711	8112 1206	Clutch release	55	90	23		
Ball, top gear ring 678 624705	8	8	Univ. joint	25.15	39	28		
Ball, tapered, support pin.	7610-4	8210/57	Diff. axle drive level pin 50 and spur gear	50	110	42.5		
Roller, tapered, support pin	7613-4	8213/57	Diff axle drive level pin, rear	65	140	51.5		

TABLE VIII CONTINUED
EIS 150 TRUCK

Std. 3 ton truck, equivalent to EIS 21 but heavier.
Currently involved in development to increase payload.

TYPE OF BEARING	SPARE NO.	STY NO.	PART NO.	BEARING APPLICATION IN			DIMENSIONS	QUANTITY
				EQUIPMENT	HOSE	O.P.		
Roller, tapered spur rim.	7215		30215/22	DIFF	75	130	27.5	
Roller, tapered no-std.	7215			Hub, rear wheel	75	135	44.5	
Roller, tapered	7608		20308	Hub, fr. wheel, outer	60	90	35.5	
Roller, tapered	7611		20311	Hub, fr. wheel, inner	55	120	46	
Roller, tapered no inner ring	97709			Steer gear worm	66.673	72	14	?
Ball, angular no edge	63606			Steer gear	28	42	26	
Needles				Steer gear shaft rollers				
Ball, up groove for lock ring	50207		6807-22	Compressor cr. shaft, fr.	35	72	17	
Ball	207		6207	Compr. cr. shaft, rear	35	72	17	
Ball, felt seal on one side	20603		RD 8603	Water pump shaft, fr.	17	47	15.5	
Ball, felt ring on one side	20703		RD 8503	Water pump shaft, rear	17	60	14	

Rollers 16 x 3 1/2

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TABLE 1X
ZIS 151 TRUCK

Military version of ZIS 150 3 ton truck. Has 3 axle drive. Resembles US Army 2 1/2 ton G65 (G65 or Stridebaker)

ITEM OR PART NO.	QUANTITY	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			REMARKS
			BORE	O.D.	WIDTH	
Balls, taper, v/eng large ends	27709	Transfer Case	45	100	32	3
Balls, taper	75087	Transfer Case	60	80	33.3	5
Balls, taper	7308	Transfer Case	60	90	25.5	2
Balls v/locking groove and ring	50311	Transmission	55	120	29	1
Balls	50813	Transmission	65	120	23	1
Balls	50807	Transmission	35	100	25	1
Balls w/eng #12307 K. Ex. Balls in cage	7307	Transm. Main Shaft Brk.	35	80	21	1
Balls	54705	Mainshaft & Idler	30	41.3	43.7	3
Balls? Balls?		Clutch Release	897	547		1
Balls	204705	Unit, Joint	24.6	44.5 & 19.8		60
Balls, felt seal case side	208037	Water Pump Impeller Shaft	17	47	17	1
Balls,	2070317	Water Pump Impeller Shaft Liner Brk	17	60	14	1

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TABLE IX CONTINUED
ZIS 151 TRUCK

Military version of ZIS 150 3 ton truck. Has 3 axle drive. Resembles US Army 2 1/2 ton G65 (G6C or Studelbauer)

DATE	SERIAL NO.	EQ. NO.	EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
10/26/47	6097-42	6107-N/R	Air compressor crank-shaft main Brg.	35	72	17	2	
2/10/47	8093	2-2076	Steering Knuckle Brg.	30	72	24.5	4	
4/22/46	RIV57044	8093	Pinion Brg, Inner Drive	21.8	62	27	3	
2/7/49	27770-9	8093	Pinion Shaft, Inner Drive	45	100	32	6	
8/18/37	8093	8093	Pinion Brg.	65	102.4		6	
8/18/37	8093	8093	Ball. carrier	65	102.4		6	
8/18/37	8093	8093	Wheel Brgs	70	125	33.5	6	
8/18/37	8093	8093	Outside Transmission Shaft	40	80	25	2	
8/18/37	8093	8093	Inside Transmission Shaft	55	100	20	2	

R/V 01/02/324 C

TABLE X
JAZ 51

Std. of construction - 4 wheel, single drive, first produced in 1946

TYPE OF BEARING	SOVIET NO.	SVP NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball, one shield	60203	6203 Z	Transmission, main drive gear, guide end	17	40	12	1	
Ball	209	6209	Trans. main drive gear	45	45	19	1	
Roller, long rollers, w/o rings	884904	RIV 9394a	Trans. main shaft pilot guide end	20.612	33.325	36.7	1	
Ball	307	6307	Trans. main shaft brg	35	80	21	1	
Roller, long rollers, w/o rings	64904		Trans. c' shaft gear brg	25.410	41.288	60.4	2	
Ball thrust, in bearing, cup shaped outer	788911	RIV 4526	Clutch release sleeve brg	52.387	84.55	20.74	1	
Needle, ring, no inner ring	864764		Undr joint, needle brg assem'd	22	35	20.5	12	
Ball, large angle cone, not std.	208	6208	C' shaft support brg	40	80	18	1	
Roller, tapered, no inner ring, not std.	27709		R. axle drive pinion brg	45	100	29	2	
Roller, cylin, short rollers	922906	RIV 5407a	H. axle drive pinion rear	31.766	62.024	26.975	2	
Roller, tapered	7113	Timken 3984/3920a	Differ case brg	65	110	30	2	
Roller, tapered	7514	32214	rear wheel hub, inner	70	125	31	2	

6045" x 1.111" x 1.111"

(2.6" x 4.4" x .6) 2.685" x 1.880"

Roller bly 3984/3920

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TABLE X (CONTINUED)

342 51

TYPE OF BEARING	SOVIET NO.	SNP NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball thrust in housing	98206	RIV 53106	Steer knuckle pivot brg	30.1 30(2)	53	14	2	
Roller, tapered	7608	32308	Fr. wheel hub, inner	40	90	33 35.5(2)	2	
Roller, tapered, tapered	7605	32305	Fr. wheel hub, outer	25	62	24 25.5(2)	2	
Rollers, tapered, no rings	977908	Trakon 35 BC1 Trakon 387	Steering work (upper)	40.6	66.7	12	1	Should go w/ th Trakon
Roller, tapered, outer rings alone	987910	Trakon 387	Steering worm (upper)	48	66	19.5	1	Should go w/ th Trakon #35 BC
Roller, tapered, inner (part)	922205	Hvatt 130418	Steer gear shaft, end	25	52	15	1	
Roller, tapered, full length	64704	Hvatt 93312	Steer gear shaft, upper	20	30	18 18.3(2)	1	
Ball, female, (no scale)	330078		Water pump shaft	16	30(2)	40(2)	1	
Roller, tapered	807813		Spider pinion housing	70 65	120 110	45 30.5	2	2.7559 x 4.3307 x 1.1
Rolling sleeve	—	—	Needle brg of tension lever of clutch pressure disk	—	1.6	9	57	
Roller	—	—	Roller brg as above	—	5.5	9	3	
Ball thrust in housing special	688911	RIV 5723	Clutch release sleeve brg	52.38	84.5	20.7	1	
Roller, 47mm, no cage, two splines	102605	R-2304	End of axle drive pinion	25	62	24	1	
Ball, double, outer ring, equal, contract, spec. 776901	—	—	Steer gear shaft	12.75	47.6	24	1	
Roller, 102	—	—	Generator, lower shaft	15	35	22	1	

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TABLE XI
GAZ 63 TRUCK

Military version of GAZ 51, 2 1/2 ton truck.
Has a 2-axle drive, higher ground clearance

TYPE OF BEARING	SOVIET NO.	SER. NO.	SEARCH, APPLICATION IN EQUIPMENT	DIMENSIONS			REMARKS
				BORE	O.D.	WIDTH	
Roller	22207	--	Steering col. sector col.	26	51		
Roller thrust	9679707	--	Bottom brg., steering col	48	68		1
Roller thrust	9770067	--	Upper brg., steering col.	48	66		1
Needles w/o rings	61704	--	Lower sector col.	20	30	18	1
Ball	3300787	--	Srg. bushing w/pipe (water pump)	15	27		1
Ball	50309	6309-AB	Main shaft drive gear brg.	45	100	25	1
Ball	307	6307	Idler shaft brg.	35	80	21	1
Ball	206	6206	Idler shaft brg.	40	80	18	1
Roller, tapered	7307	30307	Input & output shaft brgs.	35	80	23	1
Needles w/o rings	861904	RIV 9394 A	Front main shaft brg.	20.612	33.325	36.7	4 sets
Needles " "	61904	RIV 9395	Cluster gear shaft brg.	19.1	28.6	43	2
Ball	208	6208	Front transmission brg.	40	80	18	1
Ball	307	6307	Rear transmission brg.	35	80	21	1
Needle, w/o inner ring, cup shaped outer ring	804704	--	Univ. joint brg.	22	35	20.5	1
Ball, single thrust	788911	RIV 5723	Clutch release throw out brg.	52.4	84.6	20.7	1

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TABLE X (CONTINUED)
QAZ 63 TRUCK

TYPE OF BEARING	SOVIET NO.	SHE NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QTY	REMARKS
				BORE	O.D.	WIDTH		
Roller	807813	--	Diff. carrier brgs.	65	Cup 109.5	32	2	
Roller, tapered, large made same w/ozg	27709	--	Pinion shaft brg.	115	100	32	2	
Roller w/2 rollers w/o flanges on shaft	100665	Byalt U 530573	Pinion shaft end brg	25	62	21	1	
Roller	7514	KIV 01/02/71114	Rear wheel inner brg	70	125 Cup 109.5	33.5	2 sets	
Roller	807813?	--	Rear wheel outer brg.	65	109.5		2 sets	
Roller	804704	--	Universal joint brgs.	22	35	20.5	8	
Roller	807813	--	Front diff. carrier brgs.	65	Cup 109.5		2 sets	
Roller	7514	KIV 01/02/71114	Inside front wheel brg	70	125 Cup 109.5	33.5	2 sets	
Roller, tapered, large	807813?	--	Outside front wheel brg	65	109.5		2 sets	
Roller, tapered, large	27709	--	Upper diff. pinion brg	115	100	32	2	
Roller, tapered	27705	Tikhan 119/313	Steer knuckle brg.	30	72	24.5	1	
Roller, w/o flanges roller made w/2 rollers w/o flanges	102665	Byalt V 5305 73	Pinion shaft end brg	25	62	21	1	

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Soviet army jeep, very similar to US jeep - wheel drive.

8-67

TITLE OF PART	SOVIET NO.	SNP NO.	REMARKS	QUANTITY
Roller, w/o rings	64703	6201-2	Drive end of shaft of Transm. box & gear	45 12
Roller, w/o rings	64906	6306-NR	Distributor	28 19
Roller, w/o rings	209	6209	Transm. box, & front wheel inner	85 19
Roller, w/o rings	7309-1	11306	Clutch throw-out	52 88 84.58 20.74
Roller, w/o rings	7906	7906	Transm. box	30 72 21
Roller, w/o rings	7309-1	7309-1	Front & rear bridge	30.2 61.5 20.5
Roller, w/o rings	885904	885904	Transm. box	20.6 33.3 35.7
Roller, w/o rings	64905	64905	Transm. box	25.4 44.285 60.1
Roller, w/o rings	64701	64701	Steering wheel	20 30 18
Roller, w/o rings	64906	64906	Drive shaft, rear	27.71 42.825 44.1
Roller	865910	865910	Rear wheels	52.4 41.25 43.5

1-188976 x 2.500

Could be 87707 (3)

Sold roller assembly

Sold roller assembly

Sold roller assembly

Roller assembly

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TABLE XII (continued)

GAE 9-67

Soviet army jeep, very similar to US jeep—manual drive.

ITEM OR BEARING	SOVIET NO.	SKF NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball race w/o inner ring. propeller cage, non-std.	922205	Hyatt 1304-7S	Front & back bridge	25	52	15		
Roller w/o flanges outer propeller cage	2207	M-207/M	Front bridge	35	72	17		
Ball race, standard, no inner ring	977907	Timken Egdy. 11-BA	Steer gear	33	49.2	11	Cones less IH	
Roller roller brgs	987900	Timken Egdy. 11-C	Steer gear	33.8	58	17	Cup	
Ball race, prop. cage, outer ring	804704		Front universal joint	22	35	20.5	Torr. style (?)	

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VAL 200 and VAL 205

TABLE XIII

This table series consists of 5, 7, and 12-ton trucks with several variations of drive-axles. Only a few thousand of each produced.

TYPE OF BEARING	SOCKET NO.	SKF NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball, one steel, single row on outer ring	60205	6205-2	Trans. box & ventilator	25	52	15		
Ball, grooves for locking on outer ring	50217	6017-MR	" " "	85	150	26		
" " " " " "	50811	6111-MR	" " "	55	140	33		
" " " " " "	30811		Drive shaft	55	100	21/27		
" " " " " "	304	6304	Ventilator	20	52	15		
" " " " " "	301	6301	Regulator	12	37	12		
" " " " " "	200	6200	" " "	16	30	9		
" " " " " "	201	6201	Cylinder head?	12	32	10		
" " " " " "	205	6205	Supercharger? Fan?	25	52	15		
With grooves for locking on outer ring	50409	6409-MR	Trans. box	45	120	29		
" " " " " "	207	6207	Compressor	35	72	17		
Thrust, in housing	986711		Coupling	55	90	22		
Ground, non-std, filling solid brass cage	70218	6218/M/W/PS	Rear bridge	90	160	30		

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TABLE XIII

LAZ AND MAZ 205 (CONTINUED)

TYPE OF BEARING	SOVIET NO.	SKF NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball, thrust, in housing	108710	RTV 4458	Front bridge	50	80.5	22.8		
" spec. lt. series	8102	51102	Regulator	15	28	9		
" spec. w/ case-pc rings double row thrust	568051	3205	Supercharger fan	25	52	20.6		
" double w/2 seals	330088		Water pump	16	30	10		
Roller, 2 flanges outer ring, no inner ring, solid brass cage	292308	BU 3/8/M W/O inner	Transmission box					
Roller, no rings	64907		Transmission box	32	52.1	4.9		
" condonal non-std	7712	RTV 03/06/3265	Rear bridge	60	120	4.6		
" "	807713		"	65	150	5.1		
" "	7718	32313	Wheel hub	90	160	5.0		
" "	7613	32313	"	65	140	51.5		
" "	7610	32313	"	50	110	42.5		
" "	7307	30307	Steer wheel	35	80	23		
" "	7306	30306	"	30	72	21		
Needle, w/ case pressed outer ring	94701	RTV 6295-15	Regulator	12	17	12		
" "	94709		Steer wheel	45	55	18		
" cup outer ring, no inner ring	804907		Drive shaft	33.7	50	28.1		

TABLE 1308 IS

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TABLE XIV
M 72 AIRCRAFT

Not further identified

PART NO.	SOFTEN NO.	SER NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS		QUANTITY	REMARKS
				BORE	O.D. WIDTH		
18004	207	6207	Transm rear main cup & shaft brg	20	47	13.5	1
	206	6206	Trans. front main shaft	35	72	17	1
			Centershaft brg	30	62	16	2
			Pilot brg shaft & plug	6.3	22		1
			Crankshaft	35	71.5	17.5	1
			Front pinion brg	20	51.5	22	1
			Flange brg	35	72	17	1
			Rear generator brg	12	32-	10	1
			Front generator brg	8	22	7	2
			Univ. joint brg	10	19	9	1
			Steering column brg	31	51	12.1	2
			Wheel brgs	20	47	11	4

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TABLE XV

Model 1415, 1700 Engine Parts

Similar to U. S. Army 1700000000 drive engine parts

TYPE OF BEARING	SOVIET NO.	SIP NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Ball	(6) dia?		Headstock				1	
Ball	112.6?		Headstock				1	
Ball	204	6204/c 152	Headstock	20	47	14	1	
Ball	205	6205	Headstock	25	52	15	2	
Ball	60205	6205 Z	Headstock	25	52	15	1	
Ball	12-6305	6305	Headstock	25	62	17	2	
Ball, tapered, P Olive, tapered, P Olive, tapered, P	P 67714 S.P.	XIV 01/02/3157	Headstock	70	120	45	1	
Ball, thrust	8104	51104	Headstock	20	35	10	1	
Ball	1204	1204	Feed rod	20	47	14	1	
Ball	1204	1204	Lead screw	20	47	14	1	
Ball	202	6202	Feed gear	15	35	11	1	
Ball, thrust	80417							
Ball	Z10	6210		50	90	20	1	

Could be replacement for
Russian Standard 60205
60205.

Notes: This is only a partial list because the sample machine is incomplete—possibly about 6 bearings are missing.

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TABLE XV
MODEL 1A62 16" ENGINE LATHE
Similar to U.S. heavy duty Lodge and Shipley 16" lathes

PART NO.	GOVERN. NO.	SER. NO.	REARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY
				BORE	O.D.	WIDTH	
2182190			Reedstock				1
8118		8118	Reedstock	90	120	22	1
8116		8116		80	105	19	1
8215		81715		75	110	27	1
7394		32214					2
7393		30393		40	90	25.5	1
7392		30095		25	62	18.5	2
7391		32211		70	125	38.5	1
821		6207		35	72	17	1
813		6213		65	120	23	2
8297		?	Drive Pulley				1
825		6205	Ball stock				1
822		6202	Gear Quadrant	25	52	15	1
807		6307		15	35	11	2
807		6207		35	80	21	1
7205		30205		35	72	17	1
				25	62	16.5	1

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TABLE XII (CONTINUED)

MODEL 1A62 16" ENGINE LATHES

Similar to U.S. heavy duty Lodge and Shopley 16" lathes.

TYPE OF PARTS	ORDER NO.	SQY NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
Belted, tapered	7308	20800	?	40	80	20	1	
Belted, tapered	7307	20307		35	80	23	1	
Belted, tapered							1	

Notes: Size is only a partial list because the sample machine is incomplete. Probably only 5 or 6 bearings are missing.

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TABLE XLV
Model 1336 H Turret Lathes

1/2" bar capacity (Pittler type); no U. S. equivalent;
same capacity as Warner-Brossey #3 ram type turret lathes

TYPE OF BEARING	SOVIET NO.	SEP NO.	BEARING APPLICATION IN EQUIPMENT	DIMENSIONS			QUANTITY	REMARKS
				BORE	O.D.	WIDTH		
	212	6212	Headstock	60	110	22	1	
	205	6205	Headstock	25	52	15	1	
	202	6202	Headstock	15	35	11	1	
	205	6305	Headstock	25	62	17	1	
	205	6305	Headstock	25	62	17	1	
	210	6210	Headstock	50	90	30	1	
	208	6208	Headstock	60	110	22	1	
	205	6205	Headstock	25	80	21	1	
	204	6204	Headstock	70	125	33.5	1	
	210	6210	Drive Pulley	50	90	20	1	

Made in Italy

Headstock type is only a partial list because the sample machine is incomplete—possibly about 6 bearings are missing.

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TABLE XVII
EXCAVATOR TB 2

A power excavator that can be fitted with a shovel or a pair of long jaws for clearing dense underwater growth in swamps previous to peat removal

TYPE OF REARING	SOYLET NO.	SER NO.	BEARING APPLICATIONS		DIMENSIONS			QUANTITY	REMARKS
			ID	EQUIPMENT	BORE	L	WIDTH		
BALL	307	6307	Net given		35	80	21	3	
BALL	308	6308	"		40	90	23	3	
BALL	412	6412	"		50	150	35	2	
BALL	210	6210	"		50	90	20	8	
BALL	409	6409	"		45	120	29	4	
BALL	410	6410	"		50	130	31	2	
BALL	6213	61213	"		65	100	27	2	
BALL	6211	61211	"		55	90	25	2	
BALL	216	6216	"		80	140	26	4	
BALL	7518	32218	"		90	160	43	8	
BALL	7312	30312	"		60	130	34	4	

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