



ALTO PRODUCTS CORP.

Alto Way • Atmore • AL • 36502 • USA • Tel: 251.368.7777 • Fax: 251.368.7774 • www.altousa.com



2015

Material Handling

FRICITION & STEEL
TRANSMISSION PLATES

Table of Contents

Categorized Listing

ALLISON	1	WARNER GEAR	4
BENATI	1	YALE	4
BORG WARNER	1	ZF	5
BRAY EQUIPMENT	1	<hr/>	
CASE	1		
CATERPILLAR	1		
CLARK	2		
DAEWOO	2		
DAVID BROWN	2		
DRESSER	2		
FIAT ALLIS	2		
FORD	3		
FUNK	3		
HITACHI	3		
HYSTER	3		
INTERNATIONAL	3		
J C BAMFORD	3		
JOHN DEERE	3		
KOMATSU	3		
MITSUI TCM	4		
NISSAN	4		
SKYTRAK	4		
TOYOTA	4		
VOLVO	4		

Alto Material Handling

ALLISON

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
352702-520	23041616	Friction	72 INT	371.68	302.74	5.18	14.633	11.92	.204
352704-388	6768446	Friction Bronze	60 INT	253.59	187.81	3.91	9.984	7.39	.154

BENATI

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023719	3212112	Steel	60 EXT	154.1	114.05	1.73	6.067	4.49	.068
049700BR235	3213744	Friction Bronze	45 INT	133.35	92.79	2.36	5.25	3.65	.093

BORG WARNER

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701A	10-16-166-001	Steel	51 EXT	138.99	99.01	1.73	5.472	3.90	.068
023703	3-65	Steel	54 EXT	138.99	99.01	1.73	5.472	3.90	.068
023738	10-17-666-001	Friction	59 INT	190.19	146.76	2.92	7.488	5.78	.115
023738BR155	72-A66	Friction Bronze	59 INT	190.61	147.17	1.57	7.504	5.79	.062
023739	72-176	Steel	3 EXT	214.83	155.58	1.75	8.458	6.13	.069
049722	W-1597A	Friction	45 INT	133.35	92.79	1.55	5.25	3.65	.061
308701A170	NA	Steel	64 EXT	205.59	145.47	1.65	8.094	5.73	.065

BRAY EQUIPMENT

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
311712	P11294/22	Friction	22 INT	223.77	53.52	3.1	8.81	2.11	.122

CASE

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701-300	E159987	Steel	54 EXT	138.99	99.01	3.01	5.472	3.90	.119
023712-295	86029058	Friction	52 INT	148.5	107.72	2.95	5.85	4.24	.116
023767	D50047	Steel	8 INT	134.34	73.74	1.85	5.289	2.90	.073
049700BR	N7217	Friction Bronze	45 INT	128.6	92.79	1.55	5.063	3.65	.061
049720-200	E159992	Friction	45 INT	133.35	92.79	2.08	5.25	3.65	.082
310727-225	A175806	Steel	26 EXT	143.46	89.51	2.24	5.649	3.52	.088

CATERPILLAR

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
053701	6T6277	Steel	24 EXT	107.82	76.17	1.8	4.245	3.00	.071
053703-120	6T6481	Steel	12 EXT	156.03	119.13	1.19	6.143	4.69	.047
079730A365	101-5162	Friction	41 INT	124.54	68.83	3.66	4.907	2.71	.144
308700	3T3400	Friction	44 INT	197.03	138.3	2.79	7.757	5.45	.11
308700A	7G8107	Friction	44 INT	196.6	138.2	2.79	7.73	5.43	.11
308701	643847	Steel	64 EXT	205.59	145.47	1.65	8.094	5.73	.065
308701A170	NA	Steel	64 EXT	205.59	145.47	1.65	8.094	5.73	.065
308703	3T2567	Steel	43 EXT	205.49	145.42	3.53	8.09	5.73	.139

Alto Material Handling

CLARK

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701	234109	Steel	54 EXT	138.99	99.01	1.73	5.472	3.90	.068
023712BR260	234727	Friction Bronze	52 INT	148.5	107.72	2.62	5.85	4.24	.103
023719	224772	Steel	60 EXT	154.1	114.05	1.73	6.067	4.49	.068
049720	999736	Friction	45 INT	133.35	92.79	1.55	5.25	3.65	.061
049740-230	234108	Friction	45 INT	133.35	92.79	2.31	5.25	3.65	.091
310701	224246	Steel	4 EXT	162.03	115.93	1.7	6.379	4.56	.067
310703	219393	Steel	42 EXT	160.63	103.3	1.5	6.324	4.07	.059
310706	232778	Friction	60 INT	195.15	145.08	3.96	7.683	5.71	.156
310708	245935	Friction	72 INT	233.17	175.54	3.89	9.18	6.91	.153
310713	217140	Steel	16 EXT	257.2	190.5	2.7	10.11	7.49	.106
310716	216677	Friction	19 INT	165.07	74.3	3.99	6.499	2.93	.157
310721-180	243691	Steel	76 EXT	182.88	118.21	1.75	7.2	4.65	.069
310722	244979	Friction	52 INT	175.77	107.59	2.9	6.92	4.24	.114
310723	242717	Steel	35 EXT	228.19	159	2.64	8.984	6.26	.104
310726-270	2821953	Friction	40 INT	127.25	82.19	2.69	5.01	3.24	.106
310728-215	245239	Friction	33 INT	117.58	68.28	2.16	4.629	2.69	.085
310728A215	246744	Friction	33 INT	117.58	68.28	2.16	4.629	2.69	.085
310729-150	245238	Steel	4 EXT	129.16	76	1.52	5.085	2.99	.06
310733-200	927620	Steel	6 EXT	152.4	95	2.01	6	3.74	.079
310734-236	927619	Friction	36 INT	134.11	87.88	2.36	5.28	3.46	.093
311702	473725	Friction	45 INT	133.35	92.79	2.03	5.25	3.65	.08
318701	215296	Steel	20 EXT	191.5	117.5	2.1	7.53	4.62	.083
319722IR	234336	Friction Iron	45 INT	133.35	92.79	2.49	5.25	3.65	.098

DAEWOO

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023719-310	6T9456	Steel	60 EXT	154.1	114.05	3.1	6.067	4.49	.122
308708-460	D141112	Friction	54 INT	215.87	135.08	4.57	8.499	5.32	.18

DAVID BROWN

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701-300	E159987	Steel	54 EXT	138.99	99.01	3.01	5.472	3.90	.119
023767	D50047	Steel	8 INT	134.34	73.74	1.85	5.289	2.90	.073
049700BR	N7217	Friction Bronze	45 INT	128.6	92.79	1.55	5.063	3.65	.061
049720-200	4913985	Friction	45 INT	133.35	92.79	2.08	5.25	3.65	.082
310727-225	A175806	Steel	26 EXT	143.46	89.51	2.24	5.649	3.52	.088

DRESSER

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
352711-495	313807R1	Steel	30 EXT	386.94	322.78	4.95	15.234	12.71	.195

FIAT ALLIS

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
053700	4917896	Friction	34 INT	99.85	68.17	1.55	3.931	2.68	.061
053703	4917871	Steel	12 EXT	156.03	119.13	1.8	6.143	4.69	.071
329708	790 72918	Friction	35 EXT	177.32	109.22	2.01	6.981	4.30	.079
352701	73058782	Steel	6 EXT	274.32	202.49	2.72	10.8	7.97	.107

Alto Material Handling

FORD									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
311713	E9NN2N315CB	Steel	1 EXT	228.17	147.32	2.64	8.983	5.80	.104

FUNK									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023712A170	4002787	Friction	52 INT	148.5	107.72	1.7	5.85	4.24	.067
049700-180	4005524	Friction	45 INT	133.35	92.79	1.8	5.25	3.65	.071
079741	YZ121323	Steel	60 EXT	154.23	113.87	1.75	6.072	4.48	.069

HITACHI									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
329708	790 72918	Friction	35 EXT	177.32	109.22	2.01	6.981	4.30	.079

HYSTER									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701-250	1311653	Steel	54 EXT	138.99	99.01	2.5	5.472	3.90	.098
023712-180	299646	Friction	52 INT	148.5	107.72	1.78	5.85	4.24	.07
023712BR295	382263	Friction Bronze	52 INT	148.5	107.72	2.95	5.85	4.24	.116
049730-250	1469300	Friction	45 INT	133.35	92.79	2.51	5.25	3.65	.099
318700	113486	Friction	20 INT	169.14	78.44	3.29	6.659	3.09	.13
318703	292989	Steel	12 EXT	304.8	214.12	2.46	12	8.43	.097

INTERNATIONAL									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
352711-495	313807R1	Steel	30 EXT	386.94	322.78	4.95	15.234	12.71	.195

J C BAMFORD									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
049720A235	456/01001	Friction	45 INT	133.35	92.79	2.36	5.25	3.65	.093
049740-230	445/30011	Friction	45 INT	133.35	92.79	2.31	5.25	3.65	.091
324700A385	458/20383	Friction	15 INT	221.95	49.61	3.89	8.738	1.95	.153
324701-385	458/20285	Steel	3 EXT	238.02	140.08	3.89	9.371	5.52	.153
324702-240	331/16520	Friction	45 INT	140.21	92.48	2.39	5.517	3.64	.094

JOHN DEERE									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
049700	AT26632BR	Friction	45 INT	128.6	92.79	1.55	5.063	3.65	.061
049700-180	4005524	Friction	45 INT	133.35	92.79	1.8	5.25	3.65	.071

KOMATSU									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
079731-310	3EA1511180	Steel	4 EXT	137.82	80.09	3.18	5.426	3.15	.125
306710R	381-922541-1	Friction Red	32 INT	166.98	78.74	1.8	6.574	3.10	.071
306712R	381-922551-1	Friction Red	34 INT	167.18	104.82	1.8	6.582	4.13	.071
325702BR	3EC1519270	Friction Bronze	47 INT	147.19	90.42	3	5.795	3.56	.118
325703	3EC1519280	Steel	8 EXT	157.02	100.3	1.4	6.182	3.95	.055
325709-200	3EC-15-31280	Steel	8 EXT	168.3	100.2	2	6.62	3.94	.079
330700B300	3EA-15-11171	Friction	41 INT	124.64	68.83	3.05	4.907	2.71	.12

Alto Material Handling

MITSUI TCM

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
079731	64323-45200	Steel	4 EXT	137.82	80.09	2.26	5.426	3.15	.089
308705-230	9182408200	Steel	6 EXT	170.38	99.97	2.09	6.708	3.94	.09
308707-160	134G-382121	Steel	24 EXT	131.7	80.09	1.6	5.185	3.15	.063
330700A260	AE-602-893-105	Friction	41 INT	124.64	68.83	2.59	4.907	2.71	.102
334712	BK7031009000	Friction	38 INT	133.7	77.3	2.8	5.26	3.04	.11

NISSAN

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
312701-160	31536-25H00	Steel	42 EXT	131.55	79.96	1.6	5.179	3.15	.063
312701A180	31536 22H00	Steel	42 EXT	131.55	77.34	1.78	5.179	3.05	.07
330701A160	31536-L1002	Steel	8 EXT	131.67	80.16	1.6	5.184	3.16	.063

SKYTRAK

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
328700	R30WA120	Friction	23	177.62	69.42	3.81	6.993	2.73	.15
328701	R30WA109	Steel	61	200.1	102.1	6.1	7.87	4.01	.087
328750	8033096 8034688	Friction and Steel Kit	NA	0	0	0	0	0.00	.

TOYOTA

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
330700BR	406152006071	Friction Bronze	41 INT	124.64	68.83	2.64	4.907	2.71	.104
330702-250	324322203071	Friction	37 INT	155.7	87.86	2.54	6.13	3.46	.1
330703-200	324122203071	Steel	12 EXT	165.5	100	2	6.51	3.93	.079
330704-257	32461-23830-71	Friction	30 INT	130.63	79.27	2.6	5.143	3.12	.102
330705-230	323443052071	Steel	52 EXT	161.5	100	2.3	6.358	3.94	.09
330706-260	32432-22030-71	Friction	37 INT	155.7	87.86	2.59	6.13	3.46	.102
330707-203	32425U217071	Steel	8 EXT	139.14	88.55	2.03	5.477	3.49	.079
330709-200	324312363071	Steel	6 EXT	143.1	88.7	2	5.633	3.49	.079
330710	324321203071	Friction	42 INT	149.66	107.67	2.62	5.892	4.24	.103
330711	324311205071	Steel	8 EXT	161.11	114.15	1.8	6.343	4.49	.071
330713-200	324133171071	Friction	18 INT	165.5	100	2.03	6.51	3.93	.079

VOLVO

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
330718-200	11037196	Friction	76 EXT	163.8	99.24	2.01	6.449	3.91	.079

WARNER GEAR

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023701A	10-16-166-001	Steel	51 EXT	138.99	99.01	1.73	5.472	3.90	.068
023703	3-65	Steel	54 EXT	138.99	99.01	1.73	5.472	3.90	.068
023738	10-17-666-001	Friction	59 INT	190.19	146.76	2.92	7.488	5.78	.115
023738BR155	72-A66	Friction	59 INT	190.61	147.17	1.57	7.504	5.79	.062
023739	72-176	Steel	3 EXT	214.83	155.58	1.75	8.458	6.13	.069
049722	W-1597A	Friction	45 INT	133.35	92.79	1.55	5.25	3.65	.061

YALE

ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
308701A170		Steel	64 EXT	205.59	145.47	1.65	8.094	5.73	.065
319722G	580019516	Steel	45 INT	133.35	92.79	2.49	5.25	3.65	.098

Alto Material Handling

ZF									
ALTO REF	OE REF	DESCRIPTION	SPLINE	OD (MM)	ID (MM)	Thick (MM)	OD (IN)	ID (IN)	Thick (IN)
023719-310	6T9456	Steel	60 EXT	154.1	114.05	3.1	6.067	4.49	.122