



2010

HEAVY DUTY

FRICITION MATERIAL & TRANSMISSION PARTS



TRUCK | BUS | OFF HIGHWAY | AGRICULTURAL | PTO | WINCH | MATERIAL HANDLING | MARINE



ALTO PRODUCTS CORP.

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

THE COMPANY ...

Alto Products Corp. is the oldest and largest independently owned and operated manufacturer of clutches, brakes and gears for Automatic, Power-Shift and Standard Transmissions in the world. We specialize in the complete design and manufacturing of bonded friction materials, stamped steel separator reaction discs, brake bands, gasket & seal kits. Our capabilities include bonding, stamping, gear cutting, engineering, in-house tooling and design services. Alto has manufactured more than a billion clutches over the last 50 years. manufacturing and distributing begins at the corporate offices in Atmore, AL. Distribution facilities are located throughout North America in New Jersey, Los Angeles, Miami, Toronto and Mexico City. Export sales are handled by the Latin American Headquarters in Miami and supported by sales offices in Germany, Australia and Brazil



Corporate Office AL, USA



Alto's Clutch Manufacturing Plant



Research and Development Center



HEAVY DUTY & MARINE PRODUCTS ...

Featured in this catalog is our line of Transmission Parts for Heavy-Duty & Marine Applications. We manufacture clutches, gears and gasket & seal kits for truck, bus, agricultural, material handling, earth moving, construction equipment and for pleasure, work and fishing boats.



DRIVE TRAIN PRODUCTS ...

Alto Automatic Transmission Clutches:

The most complete line of clutches available anywhere in the industry. Our coverage includes the 1940's vintage Hydramatic to the most up to date 2010 applications.



Red Eagle® Hi-Performance:

Friction Material has an unique dual saturation which imparts high performance friction properties and high heat resistance. Also featured are PowerBands®, PowerPacks® and Kolene® Steels.

Alto Standard:

Manufacture and distribute a complete line of standard clutch systems for automotive, agricultural and heavy duty applications





HEAVY DUTY FRICTION MATERIAL AND TRANSMISSION PARTS

OFF-HIGHWAY/HEAVY DUTY

ALLISON	5
ALLISON OVERHAUL KITS	5
ALLIS CHALMERS	5
BOBCAT	6
BORG WARNER T-22	6
BRODERSON	6
J.I. CASE/I. H .C./DRESSER IND.	7
CATERPILLAR/TOWMOTOR	8
CLARK	10
EATON FULLER/CEEMAT	14
EUCLID	14
EXEDY	14
FIAT-ALLIS	14
FORD INDIST./NEW HOLLAND	15
FUNK	16
GALION	16
CHAMPION GRADER (GEARCO)	16
GROVE	17
HYSTER	17
JCB	19
KOMATSU	20
KUBOTA	21
MACK TRUCK	21
MASSEY-FERGUSON	22
MELROSE	22
MITSUBISHI	22
NISSAN	23
PETTIBONE	23
PLYMOUTH	23
RENK	23
ROCKFORD POWERTRAIN	24
SKYTRACK	24
SPICER	24
TEREX	24
TOYOTA	24
TWIN DISC	25
VOLVO	25
WAGNER	26
YALE	26
ZF	26
MISCELLANEOUS	26

AGRICULTURE

ALLIS CHALMERS	5
FORD INDUST./NEW HOLLAND	15
INTERNATIONAL HARVESTER	18
HOUGH	18
J. I. CASE	18
JOHN DEERE	11
BRAKE	12
DIFFERENTIAL	12
POWERSHIFT	12
PTO	13
SYNCHRO	13
MISCELLANEOUS	14
MASSEY-FERGUSON	22
MINN-MOLINE (WHITE TRACTOR)	22
MISCELLANEOUS	26

ON-HIGHWAY/TRUCK & BUS

ALLISON	
AT540, 542, 543, 545, 1545, VS	29
MT640, 643, 644 - 4 SPEED	34
MT650, 653, 654 - 5 SPEED	34
HT740, 747,750, 754, V730	40
MD3060, 3066, 3070, 3560,	44
B300, 400, 300MH	44
1000, 2000, 2400 SERIES	47
500, 500P, 500R, 500PR	49
ZF ECOMAT	
4HP500, 5HP500, 4HP590	50
5HP590, 4HP600, 5HP600, 6HP600	50
VOITH	51



MARINE FRICTION MATERIAL & TRANSMISSION PARTS

BORG WARNER VELVET DRIVE ®

71 & 72	52
71 & 72 V DRIVE	55
1500	56
7000	57
CR-2 Velvet Drive	56
S500	56
S5000, S5000 V Drive	52
T-22	55
Damper Assemblies	55
PRM-Newage	55

CAPITOL MARINE

Hydrasmooth	62
5HD-200, HD 10200, 10700, 11200, 11720	62
HY400, 6900, HY7700, 24000, 25000	62
M105, 125	62

HURTH MARINE / ZF

HBW 5, 50, 100	63
HBW 10, 150	64
HBW 150V	65
HBW 20, 220, 250	65
HBW 360, 450, 630	66
HSW 450A-2	67
HSW 630A-1 Hydraulic & V Drive	67
HSW 800 Series Reduction & V Drive	66
ZF IRM 220, 220A	68
ZF IRM 301, 301A	68
Damper Assemblies	66

MERCUISER

II-TR, S	61
----------	----

PARAGON

HF7 (Direct Drive)	60
HJ7	60
P200, 300, 400	60
P21, P31, OW1	57
P22-P25	57
P32A-P35B	57
P34-P35, P42-P45	58
P41	59
OW2-OW5	57

TWIN DISC

MG-502	63
MG-506	63
MG-509, MG-512	63
MG-514A, 514B, 514C	63

YAMAHA

7.4 Liter Hydra-Drive	62
-----------------------	----

YANMAR

KBW-10, KBW-20	62
----------------	----

DAMPER ASSEMBLIES

Hurth	69
Velvet Drive®	69
Volvo Penta	69

Item Specifications:	Groove Types	
OD- Outer Diameter ID – Inner Diameter	PL – Parallel Lines PLI – Parallel Lines Intersecting WF - Waffle	PLNI – Parallel Lines Non-Intersecting SPRL - Spiral

Material:		
BRZ - Bronze FIBER GR – Green GRAPH - Graphite	HEG – Hi-Energy Graphitic HEGHD – Hi-Energy Graphitic Heavy Duty KEV – Kevlar® RED – Hi-Performance	TAN

ALTO OFF-HIGHWAY CATALOG

ALLISON

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
23010122	352704A388	FRICTION HEG WF	60 INT	9.981 x 7.390 x .154	253.52 x 187.71 x 3.91
23010123	317720-390	FRICTION HEGHD	57 INT	11.950 x 9.250 x .153	303.80 x 235.20 x 3.90
23010438	352702-520	FRICTION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
23041615	352706-520	FRICTION HEG PLI	89 INT	17.058 x 14.618 x .204	433.27 x 371.30 x 5.18
23041616	352702-520	FRICTION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
23500781	352720-540	FRICTION FORWARD CLUTCH PLATE (LESS DAMPER ASSEMBLY) Fits Applications 601HP up to 710HP	N/A	14.323 x 7.125 x .212	363.80 x 180.98 x 5.38
31348	352709-760	STEEL	4 EXT	00.000 X 6.213 X .300	000.00 X 157.80 X 7.62
51004697	352720-540	FRICTION FORWARD CLUTCH PLATE (LESS DAMPER ASSEMBLY) Fits Applications 511HP up to 600HP	N/A	14.323 x 7.125 x .212	363.80 x 180.98 x 5.38
5101603	352720-540	FRICTION FORWARD CLUTCH PLATE (LESS DAMPER ASSEMBLY) Fits Applications up to 510HP	N/A	14.323 x 7.125 x .212	363.80 x 180.98 x 5.38
6768446	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
6769326	352711-495	STEEL	30 EXT	15.234 x 12.708 x .195	386.94 x 322.78 x 4.95
6770590	352708-450	FRICTION	100 INT	16.100 x 12.360 x .181	409.50 x 314.30 x 4.60
6770865	352703	STEEL STEPPED - APPLY PRESSURE PLATE	8 EXT	10.125 x 6.915 x .314	257.18 x 175.64 x 7.98
6770916	352707-500	STEEL	8 EXT	8.250 x 6.200 x .196	209.55 x 157.48 x 4.97
6770917	178721	STEEL Mating plate to 352710-385 Friction	8 EXT	8.256 x 6.182 x .095	209.70 x 157.02 x 2.41
6772093	352707-755	STEEL	8 EXT	8.250 x 6.200 x .297	209.55 x 157.48 x 7.54
6775541	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
6776092	317721-300	STEEL	8 EXT	12.980 x 9.990 x .118	330.20 x 254.00 x 3.00
6776610	352711-300	STEEL	30 EXT	15.234 x 12.708 x .118	386.94 x 322.78 x 3.00
6777796	352713-500	STEEL CLBT58, 59, 60 TRANSMISSION CLUTCH	35 EXT	17.710 x 15.310 x .197	450.30 x 389.40 x 5.00
6830293	317720-390	FRICTION HEGHD	57 INT	11.950 x 9.250 x .153	303.80 x 235.20 x 3.90
6830368	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
6830920	352702-520	FRICTION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
6830950	352710-385	FRICTION BRONZE Mating plate to 178721 Steel	59 INT	7.860 x 5.690 x .153	200.00 x 144.80 x 3.90
6832138	352700-510	FRICTION BRONZE	89 INT	17.067 x 14.635 x .210	433.50 x 371.73 x 5.33
6837565	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
6837690	352701	STEEL	6 EXT	10.800 x 7.972 x .107	274.32 x 202.49 x 2.72

ALLISON OVERHAUL KITS

REF	ALTO	DESCRIPTION
23012606	352800	OVERHAUL KIT CLBT 700 SERIES
23019152	352808	OVERHAUL KIT CLBT 5000 SERIES
29544490	352802	OVERHAUL KIT CLBT 5000/6000 SERIES
6884505	352810	OVERHAUL KIT CRT-5563 SERIES

ALLIS CHALMERS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
1004876	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
1018224	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
1018238	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
1018239	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75

ALTO OFF-HIGHWAY CATALOG

ALLIS CHALMERS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
11018222	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
11018222 SEL	023701-140	STEEL (Selective Thickness)	54 EXT	5.472 x 3.898 x .055	138.99 x 99.01 x 1.40
4913971	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
4913985	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
4917871	053703	STEEL (MATES WITH 053702)	12 EXT	6.143 x 4.690 x .071	156.03 x 119.13 x 1.80
4917873	053702	FRICTION (PAPER FACE VERSION) TAN PL	24 INT	5.629 x 4.334 x .061	142.98 x 110.08 x 1.55
4917896	053700	FRICTION (PAPER FACE VERSION) HEG SMOOTH	34 INT	3.931 x 2.684 x .061	99.85 x 68.17 x 1.55
70256524	302702BR	FRICTION PTO BRONZE (8 PER UNIT)	28 INT	5.997 x 3.380 x .120	152.32 x 85.85 x 3.05
70261212	302704BR	FRICTION BRONZE	32 INT	6.991 x 3.917 x .120	177.57 x 99.49 x 3.05
70265486	302703	STEEL PTO	3 EXT	6.962 x 3.842 x .075	176.83 x 97.59 x 1.91
70265487	302767	WAVE SPRING	N/A	6.485 x 6.174 x .030	164.72 x 156.82 x .76
70734526	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
71004876	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
71005843	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
73047703	317720-390	FRICTION HEGHD	57 INT	11.950 x 9.250 x .153	303.80 x 235.20 x 3.90
73077153	317720-390	FRICTION HEGHD	57 INT	11.950 x 9.250 x .153	303.80 x 235.20 x 3.90
9502757	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73

BOBCAT

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
6502424	179706-327	FRICTION (NO TEETH) TAN PLI	N/A	7.500 x 5.390 x .128	190.50 x 136.91 x 3.25
6649871	179706-327	FRICTION (NO TEETH) TAN PLI	N/A	7.500 x 5.390 x .128	190.50 x 136.91 x 3.25

BORG WARNER T-22

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
10-08-166-001	308703	STEEL	43 EXT	8.090 x 5.725 x .139	205.49 x 145.42 x 3.53
10-08-666-001	308700A	FRICTION BRONZE	44 INT	7.730 x 5.430 x .110	196.60 x 138.20 x 2.79
10-08-666-004	308700	FRICTION HEG	44 INT	7.757 x 5.445 x .110	197.03 x 138.30 x 2.79
10-17-666-001	023738	FRICTION TAN PLI	59 INT	7.488 x 5.778 x .115	190.19 x 146.76 x 2.92
NA	023738A	FRICTION HEG PLI	59 INT	7.488 x 5.778 x .115	190.19 x 146.76 x 2.92
1021-166-001	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
1021-166-001 SEL	023701-140	STEEL (Selective Thickness)	54 EXT	5.472 x 3.898 x .055	138.99 x 99.01 x 1.40
1021-666-002	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
1021-666-003	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
1021-666-005	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
22-176	308701	STEEL	64 EXT	8.094 x 5.727 x .065	205.59 x 145.47 x 1.65
AT-220-66	308700A	FRICTION BRONZE	44 INT	7.730 x 5.430 x .110	196.60 x 138.20 x 2.79

BRODERSON

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
910700148	049700BR	FRICTION BRONZE (SMALL)	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
910700163	023738BR	FRICTION BRONZE (LARGE)	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
910700164	023739	STEEL (LARGE)	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
NA	023701	STEEL (SMALL)	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73

ALTO OFF-HIGHWAY CATALOG

J.I. CASE / I.H.C. / DRESSER IND.

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
125505H1	306707	STEEL	12 EXT	6.870 x 3.370 x .071	174.60 x 85.70 x 1.80
1342285C1	306702-467	FRICTION - BRONZE	19 INT	7.990 x 2.250 x .185	203.20 x 57.20 x 4.70
181158A1	049700A175	FRICTION BRONZE	45 INT	5.250 x 3.653 x .069	133.35 x 92.79 x 1.75
181159A1	306705-250	STEEL	6 EXT	5.943 x 3.888 x .098	150.95 x 98.76 x 2.50
1981314-C1	900-CP15	FRICTION RED SB - POWERSHIFT CLUTCH DISC (Partial Assembly-without Hub and Retainer)	N/A	11.880 x 2.498 x .078	301.75 x 63.45 x 1.98
324122R1	306725-180	STEEL 3 LUGS	N/A	6.703 x 4.004 x .071	170.26 x 101.70 x 1.80
324123R1	306722-280	FRICTION BRONZE	17 INT	6.498 x 2.000 x .110	165.05 x 50.80 x 2.79
324241R1	306709	STEEL	8 EXT	5.615 x 3.903 x .063	142.62 x 99.14 x 1.60
324452R1	306721A308	STEEL (MATES WITH 306720A)	8 EXT	9.603 x 6.787 x .121	243.92 x 172.39 x 3.07
327186R1	306723-240	STEEL 3 LUGS	N/A	7.226 x 4.001 x .094	183.54 x 101.63 x 2.39
327187R1	306724-330	FRICTION BRONZE	20 INT	7.007 x 2.383 x 1.30	177.98 x 60.53 x 3.30
381489R3	306701	STEEL	6 EXT	5.750 x 4.067 x .068	146.05 x 103.30 x 1.73
381490R-4	306704	FRICTION TAN PLI	51 INT	5.318 x 3.741 x .100	135.08 x 95.02 x 2.54
381490R-1HD	306704A	FRICTION PTO - HEAVY DUTY HEG PLI	51 INT	5.318 x 3.741 x .100	135.08 x 95.02 x 2.54
381-922-539C1	306711	STEEL	85 EXT	7.129 x 3.379 x .067	181.08 x 85.83 x 1.70
381-922-541C1	306710	FRICTION TAN WF	32 INT	6.574 x 3.100 x .071	166.98 x 78.74 x 1.80
381-922-541C1	306710R	FRICTION RED WF	32 INT	6.574 x 3.100 x .071	166.98 x 78.74 x 1.80
381-922-549C1	306713	STEEL	85 EXT	7.129 x 4.440 x .067	181.08 x 112.78 x 1.70
381-922-551C1	306712	FRICTION TAN PLI	34 INT	6.582 x 4.127 x .071	167.18 x 104.82 x 1.80
381-922-551C1	306712R	FRICTION RED PLI	34 INT	6.582 x 4.127 x .071	167.18 x 104.82 x 1.80
381-922-913C1	320767	SPRING	N/A	7.080 x 6.820 x .014	180.00 x 173.40 x 0.35
464-430-8328	329709-150	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .060	171.15 x 103.07 x 1.52
464-430-8329	329709-200	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .079	171.15 x 103.07 x 2.01
464-430-8330	329709-245	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .097	171.15 x 103.07 x 2.46
615559C1	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
615911C1	352702-520	FRICTION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
619200C	306720A	FRICTION BRONZE	39 INT	9.004 x 6.372 x .112	228.70 x 161.85 x 2.84
627305C1	306724-330	FRICTION BRONZE	20 INT	7.007 x 2.383 x 1.300	177.98 x 60.53 x 3.30
627306C1	306722-280	FRICTION BRONZE	17 INT	6.498 x 2.000 x .110	165.05 x 50.80 x 2.79
630516C2	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.1 x 114.05 x 1.73
634534C1	049700A150	FRICTION BRONZE	45 INT	5.250 x 3.653 x .059	133.35 x 92.79 x 1.50
634535C1	307702-250	FRICTION BRONZE	29 INT	6.637 x 4.702 x .100	168.58 x 119.43 x 2.54
635384R-2	306715-230	STEEL MODEL 500 (8 PER SIDE)	9 EXT	9.816 x 5.656 x .088	249.33 x 143.66 x 2.24
654594C3	306742	FRICTION GRAPHITIC	34 INT	7.790 x 5.520 x .098	198.10 x 140.50 x 2.50
658354C2	306744	FRICTION	45 INT	10.490 x 7.360 x .110	266.70 x 187.20 x 2.80
659592C-1	306745	STEEL	54 EXT	10.860 x 7.890 x .090	276.10 x 200.70 x 2.30
659611C-1	306743	STEEL	41 EXT	8.260 x 5.990 x .083	210.10 x 150.40 x 2.10
676833R-1	306717-250	STEEL MODEL 500C, 500D, 500E (8 PER SIDE)	9 EXT	10.815 x 7.040 x .089	274.70 x 178.82 x 2.26
705105C-2	306720A	FRICTION BRONZE	39 INT	9.004 x 6.372 x .112	228.70 x 161.85 x 2.84
70977C-2	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
716719C-1	306719-120	STEEL	28 EXT	5.662 x 3.942 x .048	143.81 x 100.13 x 1.22
886934C1	306706B168	FRICTION BRONZE	34 INT	5.740 x 4.130 x .066	146.00 x 105.00 x 1.68
886938C1	306706A150	FRICTION BRONZE	32 INT	5.740 x 3.090 x .059	146.00 x 78.60 x 1.50
9398112	329708	FRICTION BRONZE	35 EXT	6.981 x 4.300 x .079	177.32 x 109.22 x 2.01
A17921	023701	STEEL (SMALL)	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
A17921	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
A188946	310726A250	FRICTION HEG WF	40 INT	5.010 x 3.236 x .100	127.25 x 82.19 x 2.54
A41005	306709	STEEL	8 EXT	5.615 x 3.903 x .063	142.62 x 99.14 x 1.60

ALTO OFF-HIGHWAY CATALOG

J.I. CASE / I.H.C. / DRESSER IND.

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
A52252	306703-300	STEEL 580K BACKHOE (1 LUG)	N/A	8.238 x 4.746 x .120	209.25 x 120.55 x 3.05
D50040	023738BR	FRICTION BRONZE (LARGE)	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
D50041	023739	STEEL (LARGE)	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
D50047	023767	STEEL (BELLEVILLE)	8 INT	5.289 x 3.940 x .073	134.34 x 100.08 x 1.85
D50082	049700BR	FRICTION BRONZE (SMALL)	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
D55252	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
A52253	306702-467	FRICTION - BRONZE	19 INT	7.990 x 2.250 x .185	203.20 x 57.20 x 4.70
A52393	306702-467	FRICTION - BRONZE	19 INT	7.990 x 2.250 x .185	203.20 x 57.20 x 4.70
D70672	049740	FRICTION RED SMOOTH	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
D77063	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
D80064	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99
G101711	306729-320	STEEL Models 450, 850, 1150, 1 450, B,C,D,	46 EXT	7.906 x 5.498 x .125	200.81 x 139.65 x 3.18
G102354	306708-480	FRICTION BRONZE	29 INT	7.501 x 4.609 x .187	190.53 x 117.07 x 4.75
N-7217	049700BR235	FRICTION BRONZE (SMALL)	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
N-7219	049700BR235	FRICTION BRONZE (SMALL)	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
S-73416	023738BR	FRICTION BRONZE (LARGE)	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
S73872	023712BR	FRICTION BRONZE	52 INT	5.850 x 4.241 x .060	148.50 x 107.72 x 1.52
S73873	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
S73873	023701	STEEL (SMALL)	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
S-94326	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
NA	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73

CATERPILLAR

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
1A-3987	308727-230	STEEL	88 INT	15.020 x 10.700 x .090	382.00 x 272.00 x 2.30
2F-8621	308724-470	FRICTION BRONZE	120 Ext	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
2H-6936	308709-230	STEEL	8 INT	11.347 x 7.660 x .090	288.21 x 194.56 x 2.29
2J-5513	308724-470	FRICTION BRONZE	120 Ext	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
2P-3719	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
2P-4472	308713-640	STEEL	5 EXT	16.180 x 12.490 x .252	411.50 x 317.50 x 6.40
2Y-5134	308730	FRICTION BRONZE	95 EXT	11.990 X 8.370 X .169	304.80 X 212.90 X 4.30
3F-5504	308706-470	FRICTION BRONZE	95 EXT	11.990 x 8.370 x .185	304.55 x 212.60 x 4.70
3L-8440	332706	FRICTION BRONZE MG-514 ALL MODELS	12 EXT	9.293 x 5.400 x .122	236.04 x 139.67 x 3.10
3P-0337	308711-280	STEEL	24 INT	8.490 x 6.130 x .110	215.90 x 155.80 x 2.80
3P-0805	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
3P-5955	308702-500	FRICTION BRONZE	101 Int	12.240 x 9.930 x .197	311.20 x 252.50 x 5.00
3T-2567	308703	STEEL	43 EXT	8.090 x 5.725 x .139	205.49 x 145.42 x 3.53
3T-3400	308700	FRICTION (PAPER) HEG	44 INT	7.757 x 5.445 x .110	197.03 x 138.30 x 2.79
3T-9293	332702	FRICTION BRONZE	68 EXT	4.415 x 2.807 x .085	112.14 x 71.30 x 2.16
4B-4982	308724-470	FRICTION BRONZE	120 Ext	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
4K-1333	308730	FRICTION BRONZE	95 EXT	11.990 X 8.370 X .169	304.80 X 212.90 X 4.30
4S-5891	308725-290	STEEL	64 INT	10.550 x 7.860 x .114	268.20 x 199.80 x 2.90
5D-8526	308723	STEEL	44 EXT	4.475 x 3.388 x .032	113.67 x 86.06 x .81
5K-8617	308728-380	FRICTION	95 EXT	11.990 x 8.370 x .149	304.80 x 212.90 x 3.80
5M-1199	308724-470	FRICTION BRONZE	120 Ext	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70

ALTO OFF-HIGHWAY CATALOG

CATERPILLAR

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
5N-6137	332709	STEEL STEPPED MG-514A, MG-514B LATE & MG-514C	40 INT	7.995 x 4.847 x .186	203.70 x 123.11 x 4.72
5S-0071	308724-470	FRICTION BRONZE	120 EXT	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
5V-0593	308730	FRICTION BRONZE	95 EXT	11.990 X 8.370 X .169	304.80 X 212.90 X 4.30
6L-2179	332705	STEEL	45 INT	6.002 x 3.640 x .061	152.45 x 92.46 x 1.55
6L-9719	332703	STEEL	42 INT	4.000 x 2.547 x .063	101.60 x 64.69 x 1.59
6T-5099	023712-180	FRICTION TAN PL	52 INT	5.850 x 4.241 x .070	148.50 x 107.72 x 1.78
6T-6277	053701	STEEL	24 EXT	4.245 x 2.999 x .071	107.82 x 76.17 x 1.80
6T-6283	053700	FRICTION (PAPER) HEG SMOOTH	34 INT	3.931 x 2.684 x .061	99.850 x 68.17 x 1.55
6T-6432	053702	FRICTION (PAPER) TAN PL	24 INT	5.629 x 4.334 x .061	142.98 x 110.08 x 1.55
6T-6481	053703	STEEL	12 EXT	6.143 x 4.690 x .071	156.03 x 119.13 x 1.80
6T-8686	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
6T-9456	023719-310	STEEL	60 EXT	6.067 x 4.490 x .122	154.10 x 114.05 x 3.10
6T-9462	023722-180	FRICTION HEG WF	52 INT	5.850 x 4.240 x .071	148.59 x 101.70 x 1.80
6Y-5911	308716-550	FRICTION	75 INT	13.570 x 10.660 x .216	345.10 x 271.00 x 5.50
6Y-7160	308724-470	FRICTION BRONZE	120 EXT	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
6Y-7914	308728-380	FRICTION	95 EXT	11.990 x 8.370 x .149	304.80 x 212.90 x 3.80
6Y-7915	308710-280	FRICTION	54 INT	10.050 x 6.620 x .110	255.60 x 168.40 x 2.80
6Y-7916	308712-350	FRICTION	64 INT	12.030 x 7.810 x .138	306.00 x 198.60 x 3.50
6Y-7917	308736	FRICTION	88 INT	16.040 x 10.770 x .149	408.00 x 274.00 x 3.80
6Y-7918	308734	FRICTION TAN PLI	152 EXT	12.412 x 10.000 x .114	315.26 x 254.00 x 2.90
6Y-7929	023736	FRICTION TAN WF	45 INT	5.250 x 3.653 x .088	133.35 x 92.79 x 2.24
6Y-7933	023712-180	FRICTION TAN PL	52 INT	5.850 x 4.241 x .070	148.50 x 107.72 x 1.78
6Y-7935	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
6Y-7950	308708-460	FRICTION TAN PLI	54 INT	8.499 x 5.318 x .180	215.87 x 135.08 x 4.57
6Y-7951	308732	FRICTION	128 INT	11.984 x 8.998 x .120	304.39 x 228.55 x 3.05
6Y-7962	308722	FRICTION TAN	18 INT	4.167 x 1.710 x .100	105.84 x 43.43 x 2.54
6Y-7965	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
6Y-7977	308724-470	FRICTION BRONZE	120 EXT	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
7D-8434	308717-190	STEEL	100 EXT	12.690 x 8.910 x .075	322.80 x 226.60 x 1.90
7G-5377	023719-310	STEEL	60 EXT	6.067 x 4.490 x .122	154.10 x 114.05 x 3.10
7G-8107	308700A	FRICTION BRONZE	44 INT	7.730 x 5.430 x .110	196.60 x 138.20 x 2.79
7G-8542	049702	FRICTION TAN PL	45 INT	5.250 x 3.653 x .080	133.35 x 92.79 x 2.03
7L-7782	332704	FRICTION BRONZE	76 EXT	6.466 x 4.087 x .113	164.24 x 103.81 x 2.87
8B-2684	308724-470	FRICTION BRONZE	120 EXT	15.130 x 11.510 x .185	384.70 x 292.60 x 4.70
8D-1648	308737	STEEL	132 EXT	16.620 x 11.900 x .090	422.60 x 302.60 x 2.30
8D-8794	308715-150	STEEL	86 EXT	10.890 x 7.370 x .059	276.90 x 187.50 x 1.50
8E-8832	023722-180	FRICTION HEG WF	52 INT	5.850 x 4.240 x .071	148.59 x 101.70 x 1.80
8M-8651	308713-640	STEEL	5 EXT	16.180 x 12.490 x .252	411.50 x 317.50 x 6.40
8P-1656	308721-635	STEEL	5 EXT	13.890 x 10.350 x .250	353.10 x 263.10 x 6.35
8P-8682	308714-290	FRICTION	54 INT	8.490 x 6.630 x .114	215.80 x 168.50 x 2.90
9G-8542	049702	FRICTION TAN PL	45 INT	5.250 x 3.653 x .080	133.35 x 92.79 x 2.03
9N-1655	308732	FRICTION TAN PLI	128 INT	11.984 x 8.998 x .120	304.39 x 228.55 x 3.05
9N-1656	179701-266	STEEL	172 EXT	12.426 x 10.000 x .105	315.61 x 254.00 x 2.67
9N-2671	308734	FRICTION TAN PLI	152 EXT	12.412 x 10.000 x .114	315.26 x 254.00 x 2.90
9N-2672	308733	STEEL	128 INT	11.984 x 8.998 x .061	304.39 x 228.55 x 1.55
9S-8789	308713-640	STEEL	5 EXT	16.180 x 12.490 x .252	411.50 x 317.50 x 6.40
9W-1735	023736	FRICTION TAN WF	45 INT	5.250 x 3.653 x .088	133.35 x 92.79 x 2.24
9W-1735	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
9W-4954	023712-295	FRICTION TAN PL	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
9W-8901	023712A170	FRICTION TAN PL	52 INT	5.850 x 4.241 x .067	148.50 x 107.72 x 1.70
9Y-7929	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08

ALTO OFF-HIGHWAY CATALOG

CLARK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
208772	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99
208773	310707	STEEL	32 EXT	7.240 x 3.640 x .102	184.10 x 92.60 x 2.60
209087	310703	STEEL DISH	42 EXT	6.324 x 4.067 x .059	160.63 x 103.30 x 1.50
209928	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99
215178	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
215296	318701	STEEL	20 EXT	7.530 x 4.620 x .083	191.50 x 117.50 x 2.10
216050	310724	FRICTION BRONZE	34 INT	8.077 x 4.617 x .156	205.16 x 117.27 x 3.96
216084	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
216163	318702G	FRICTION HEG WF Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .137	269.80 x 197.36 x 3.48
216677	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99
217163	310704	FRICTION BRONZE	60 INT	7.685 x 5.713 x .156	195.20 x 145.11 x 3.96
217757	310704	FRICTION BRONZE	60 INT	7.685 x 5.713 x .156	195.20 x 145.11 x 3.96
219393	310703	STEEL	42 EXT	6.324 x 4.067 x .059	160.63 x 103.30 x 1.50
222391	310700	FRICTION BRONZE	25 INT	5.797 x 2.928 x .156	147.24 x 74.37 x 3.96
222605	310703	STEEL	42 EXT	6.324 x 4.067 x .059	160.63 x 103.30 x 1.50
224246	310701	STEEL	4 EXT	6.379 x 4.564 x .067	162.03 x 115.93 x 1.70
224246X	310701A	STEEL(Short Tooth Version)	4 EXT	6.379 x 4.564 x .067	162.03 x 115.93 x 1.70
224772	023719	STEEL (5 per unit)	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
227495	310704	FRICTION BRONZE	60 INT	7.685 x 5.713 x .156	195.20 x 145.11 x 3.96
227496	310708	FRICTION BRONZE	72 INT	9.180 x 6.911 x .153	233.17 x 175.54 x 3.89
228114	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
230911	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
232285	310713	STEEL	16 EXT	10.110 x 7.490 x .106	257.20 x 190.50 x 2.70
232316	310704	FRICTION BRONZE	60 INT	7.685 x 5.713 x .156	195.20 x 145.11 x 3.96
232394	310715	STEEL	14 EXT	8.621 x 6.257 x .108	218.97 x 158.93 x 2.73
232395	310717	STEEL	21 EXT	12.360 x 8.310 x .106	314.20 x 211.20 x 2.70
232778	310706	FRICTION GRAPHITE WF	60 INT	7.683 x 5.712 x .156	195.15 x 145.08 x 3.96
232779	310708	FRICTION BRONZE	72 INT	9.180 x 6.911 x .153	233.17 x 175.54 x 3.89
232780	310718	FRICTION GRAPHITIC	60 INT	11.500 x 8.130 x .157	292.40 x 206.80 x 4.00
233166	023712-260	FRICTION TAN PL	52 INT	5.850 x 4.241 x .102	148.50 x 107.72 x 2.59
233166	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
234108	049740-230	FRICTION RED PL	45 INT	5.250 x 3.653 x .091	133.35 x 92.79 x 2.31
234336	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
234727	023712-260	FRICTION TAN PL	52 INT	5.850 x 4.241 x .102	148.50 x 107.72 x 2.59
234727	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
235161	023712-260	FRICTION TAN PL	52 INT	5.850 x 4.241 x .102	148.50 x 107.72 x 2.59
235161	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
236989	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
237016	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
238313	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
238609	023712-295	FRICTION TAN PL	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
238260	310719	STEEL	12 EXT	10.120 x 7.513 x .102	257.05 x 190.83 x 2.59
242530	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
242717	310723	STEEL	35 EXT	8.984 x 6.260 x .104	228.19 x 159.00 x 2.64
243691	310721-180	STEEL	76 EXT	7.200 x 4.654 x .069	182.88 x 118.21 x 1.75
243767	310725	STEEL 16 HOLES	N/A	13.999 x 12.359 x .183	355.57 x 319.92 x 4.65
244134	310728-215	FRICTION BRONZE	33 INT	4.629 x 2.688 x .085	117.58 x 68.28 x 2.16
244979	310722	FRICTION HEG WF	52 INT	6.920 x 4.236 x .114	175.77 x 107.59 x 2.90
244980	310721-180	STEEL	76 EXT	7.200 x 4.654 x .069	182.88 x 118.21 x 1.75
245238	310729-150	STEEL	4 EXT	5.085 x 2.992 x .060	129.16 x 76.00 x 1.52
245239	310728-215	FRICTION BRONZE	33 INT	4.629 x 2.688 x .085	117.58 x 68.28 x 2.16

ALTO OFF-HIGHWAY CATALOG

CLARK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
245741	049740-230	FRICTION RED PL	45 INT	5.250 x 3.653 x .091	133.35 x 92.79 x 2.31
246744	310728-215	FRICTION BRONZE	33 INT	4.629 x 2.688 x .085	117.58 x 68.28 x 2.16
247273	310721-180	STEEL	76 EXT	7.200 x 4.654 x .069	182.88 x 118.21 x 1.75
247274	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
2787359	310727-225	STEEL	26 EXT	5.649 x 3.524 x .088	143.46 x 89.51 x 2.24
2794675	310726-270	FRICTION TAN WF	40 INT	5.010 x 3.236 x .106	127.25 x 82.19 x 2.69
2810118	023712A295	FRICTION HEG WF	52 INT	5.850 x 4.241 x .116	148.5 x 107.72 x 2.95
2812288	310701A228	STEEL	4 EXT	6.124 x 4.567 x .090	155.55 x 116.00 x 2.29
291580A1	310731-198	STEEL	45 INT	5.063 x 3.653 x .078	128.60 x 92.79 x 1.98
291579A1	310732-262	FRICTION HEG WF	54 EXT	5.472 x 3.898 x .103	138.99 x 99.01 x 2.62
291578A1	310730-170	FRICTION HEG WF 1 SIDE	54 EXT	5.472 x 3.898 x .067	138.99 x 99.01 x 1.70
3734356	023712BR260	FRICTION BRONZE (5 per unit)	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
878364	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
878373	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.6 x 92.79 x 1.55
878374	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
887983	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
887984	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
888027	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
907566	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
907567	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
999736	049720	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
999736	049700B155	FRICTION BRONZE	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55

JOHN DEERE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
YZ106-060	314700A280	FRICTION TAN PLI	60 INT	6.680 x 4.909 x .110	169.67 x 124.69 x 2.79
Not Available	314701-190	STEEL	69 EXT	6.972 x 5.193 x .076	177.09 x 131.90 x 1.93
AL38240	049700	FRICTION (SMALL) TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
AR-108105	049700-250	FRICTION TAN PL	45 INT	5.250 x 3.653 x .098	133.35 x 92.79 x 2.49
AR39128	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
AT100837	023738BR	FRICTION BRONZE (LARGE)	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
AT101001	049700	FRICTION (SMALL) TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
AT26632	049700	FRICTION (SMALL) TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
CE20586	319733-375	STEEL	8 EXT	5.748 X 3.976 X .148	146.00 X 101.00 X 3.74
M3293T	313704-400	FRICTION (FIBER)	26 INT	8.505 x 4.935 x .155	216.03 x 125.35 x 3.94
M-872T	313713	STEEL	6 EXT	9.725 x 6.377 x .087	235.59 x 161.98 x 2.21
R-31404-R	319710	FRICTION	54 INT	6.993 x 4.440 x .115	177.62 x 112.78 x 2.92
T100680	023701	STEEL (SMALL)	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
T100681	023739	STEEL (LARGE)	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
T-140926	023701A	STEEL (3 TEETH REMOVED)	51 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
T-14339	313715	STEEL	6 EXT	10.859 x 7.004 x .104	275.82 x 177.90 x 2.64
T-14340	313706-480	FRICTION (FIBER)	38 INT	10.899 x 7.420 x .193	276.83 x 188.47 x 4.90
T-20716	313708-490	FRICTION (FIBER)	38 INT	10.899 x 7.420 x .193	276.83 x 188.47 x 4.90
T-20717	313711-240	STEEL	6 EXT	11.860 x 8.120 x .094	301.60 x 206.50 x 2.40
T-20790	313702-450	FRICTION (FIBER)	30 INT	8.972 x 5.826 x .177	227.89 x 147.98 x 4.50
T-211817	313714-480	FRICTION RED PLI	38 INT	10.805 x 7.415 x .192	274.45 x 188.34 x 4.88
T-21315	313701	STEEL	6 EXT	9.681 x 6.888 x .095	245.90 x 174.96 x 2.41
T-31732	313711	STEEL	6 EXT	11.860 x 8.128 x .103	301.24 x 206.45 x 2.62

ALTO OFF-HIGHWAY CATALOG

JOHN DEERE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
T-40018	351708	FRICTION BRONZE	12 EXT	5.998 x 4.249 x .082	152.35 x 107.92 x 2.08
T-44128	313712-450	FRICTION BRONZE	30 INT	8.930 x 5.820 x .177	147.90 x 147.90 x 4.50
T-44129	313710-475	FRICTION	22 INT	8.060 x 2.107 x .189	204.72 x 53.52 x 4.80
T-44804	330717-150	STEEL	40 INT	5.982 x 3.216 x .060	151.94 x 81.69 x 1.52
T-44805	332704	FRICTION BRONZE	76 EXT	6.466 x 4.087 x .113	164.24 x 103.81 x 2.87
T-82355	313714-480	FRICTION RED PLI	38 INT	10.805 x 7.415 x .192	274.45 x 188.34 x 4.88

JOHN DEERE BRAKE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
R-110464	099722K	FRICTION BRAKE PAD 7" KEVLAR Also fits 50 SERIES Tractors	N/A	.126	3.200
R-111122	099720K	FRICTION BRAKE PAD 6" KEVLAR Also fits 50 SERIES Tractors	N/A	.126	3.200
R-90090	099724K	FRICTION BRAKE PAD 7-1/4" KEVLAR Also fits 50 SERIES Tractors	N/A	.126	3.200

JOHN DEERE DIFFERENTIAL

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
R-34857	319731A300	STEEL	12 EXT	9.924 x 6.188 x .120	252.06 x 157.18 x 3.05
R-34858	319731-300	STEEL (ROUND TOOTH)	9 EXT	10.060 x 6.188 x .120	255.52 x 157.18 x 3.05
RE-53823	319730A325	FRICTION TAN WF (47 TOOTH COUNT)	42 INT	8.998 x 5.762 x .128	228.55 x 146.35 x 3.25
N L	319730-325	FRICTION TAN WF (42 TOOTH COUNT)	42 INT	8.998 x 5.762 x .128	228.55 x 146.35 x 3.25
T-21547	313351	GEAR	N/A	N/A	N/A
KIT	319750	MODULE, FRICTION & STEEL Contains: 3 319730-325, 2-319731-300, 1-319731A300	N/A	N/A	N/A

JOHN DEERE POWERSHIFT

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
AR-40896	319714-330	FRICTION POWERSHIFT HEG PLI	104 INT	12.279 x 10.349 x .130	323.32 x 262.86 x 3.30
AR-68345	319714-330	FRICTION POWERSHIFT HEG PLI	104 INT	12.279 x 10.349 x .130	323.32 x 262.86 x 3.30
AR-94515	319714-330	FRICTION POWERSHIFT HEG PLI	104 INT	12.279 x 10.349 x .130	323.32 x 262.86 x 3.30
AR-94516	319700	FRICTION HEG WF	54 INT	7.000 x 4.440 x .115	177.80 x 112.78 x 2.92
AR-94517	319702	FRICTION HEG WF	42 INT	7.770 x 5.135 x .130	197.36 x 130.43 x 3.30
AT-179473	313716-160	FRICTION HEG WF	40 INT	4.714 x 3.120 x .063	119.74 x 79.25 x 1.60
R-46391	319701	STEEL	6 EXT	7.680 x 4.750 x .120	195.07 x 120.65 x 3.05
R-46416	319715-310	STEEL POWERSHIFT	4 EXT	13.590 x 10.603 x .121	345.19 x 269.32 x 3.07
R-46418	319703	STEEL	6 EXT	8.537 x 5.434 x .117	216.84 x 138.02 x 2.97
R-48236	319705-300	STEEL POWERSHIFT	4 EXT	12.109 x 9.708 x .120	307.57 x 246.58 x 3.05
R-56547	319701A310	STEEL POWERSHIFT 1 NOTCHED LUG	6 EXT	7.680 x 4.750 x .120	195.07 x 120.65 x 3.05
R-77671	319709-200	STEEL	6 EXT	7.740 x 4.761 x .078	196.60 x 120.93 x 1.98
R-86308	319711-300	STEEL	8 EXT	14.010 x 10.590 x .121	355.86 x 268.99 x 3.07
RE-17162	319704-300	FRICTION POWERSHIFT HEG PLI	94 INT	11.624 x 9.441 x .120	295.25 x 239.80 x 3.05
RE-239059	319716A360	FRICTION POWERSHIFT 4955	48 INT	11.000 x 6.000 x .142	279.70 x 152.60 x 3.60
RE-27995	319710	FRICTION BRONZE	54 INT	6.993 x 4.440 x .115	177.62 x 112.78 x 2.92

ALTO OFF-HIGHWAY CATALOG

JOHN DEERE POWERSHIFT

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
RE-28023	319712	FRICTION BRONZE	42 INT	7.770 x 5.135 x .130	197.36 x 130.43 x 3.30
RE-29816	049720B186	FRICTION DIFF LOCK FWD Fits 50, 55, 60, Mid 80 to 90 Series (2 Teeth Removed)	43 INT	5.250 x 3.653 x .073	133.35 x 92.79 x 1.86
RE-35512	319706-370	FRICTION HEG WF	50 INT	8.861 x 4.921 x .145	225.07 x 124.99 x 3.68
RE-35517	319708-330	FRICTION HEG PL	88 EXT	9.242 x 7.367 x .131	234.75 x 187.12 x 3.33
RE-62897	319714-330	FRICTION POWERSHIFT HEG PLI	104 INT	12.279 x 10.349 x .130	323.32 x 262.86 x 3.30
T-158801	313717-180	STEEL POWERSHIFT FWD/REV Plus 1,2,3,4 and FORWARD	30 EXT	5.160 x 3.390 x .071	131.10 x 86.30 x 1.80

JOHN DEERE PTO

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
AL-69559	319722IR	FRICTION PTO IRON	45 INT	5.250 x 3.653 x .098	133.35 x 92.79 x 2.49
AR-108105	319722G	FRICTION PTO HEG PLI	45 INT	5.250 x 3.653 x .098	133.35 x 92.79 x 2.49
R-61066	319723-560	STEEL QUAD RANGE WITH PTO Models: 4030, 4040, 4050, 4230, 4240, 4250, 4350, 4430, 4440, 4450, 4455, 4475, 4560, 4630, 4640, 4650, 4755, 4760, 4850, 4955, 4960	3 EXT	14.230 x 6.920 x .220	361.90 x 176.00 x 5.60
RE-234264	319724A350	FRICTION QUAD RANGE WITH PTO HEG WF (22 HOLES around ID) Models: 4030, 4040, 4050, 4230, 4240, 4250, 4350, 4430, 4440, 4450, 4455, 4475, 4560, 4630, 4640, 4650, 4755, 4760, 4850, 4955, 4960	48 INT	12.036 x 5.880 x .147	305.71 x 149.35 x 3.73
RE-234306	319724-350	FRICTION HEG WF Models: 4030, 4040, 4050, 4230, 4240, 4250, 4350, 4430, 4440, 4450, 4455, 4475, 4560, 4630, 4640, 4650, 4755, 4760, 4850, 4955, 4960	48 INT	12.036 x 5.880 x .147	305.71 x 149.35 x 3.73
RE-37011	319720	FRICTION PTO TAN	45 INT	5.250 x 3.653 x .063	133.35 x 92.79 x 1.60
T-28664	319721	STEEL PTO	10 EXT	5.620 x 3.900 x .090	142.80 x 99.10 x 2.30

JOHN DEERE SYNCHRO

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
AR-27727	321701	STEEL SYNCHRO (REVERSE, LOW, HIGH)	4 INT	4.123 x 2.815 x .047	104.72 x 71.50 x 1.19
AR-44997	321700	FRICTION TAN WF SYNCHRO(REVERSE, LOW, HIGH)	6 EXT	4.528 x 3.249 x .079	115.01 x 82.52 x 2.01
AR-69154	321700	FRICTION TAN WF SYNCHRO (REVERSE, LOW, HIGH)	6 EXT	4.528 x 3.249 x .079	115.01 x 82.52 x 2.01
RE-37119	321750	KIT, SYNCHRO (REVERSE, LOW, HIGH) NOTE: 3 KITS/FULL SYNCHRO Contains: 3-321700, 2-321701	N/A	N/A	N/A
T-158801	313717-180	STEEL SYNCHRO FWD/REV Plus 1,2,3,4 and FORWARD	30 EXT	5.160 x 3.390 x .071	131.10 x 86.30 x 1.80

ALTO OFF-HIGHWAY CATALOG

JOHN DEERE MISC.

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
T-141566	319501	WASHER J DEERE DIFFERENTIAL	N/A	N/A	N/A
T-21418	319325UP23	ROLLER/BEARINGG J DEERE DIFFERENTIAL (23 PER PACK)	N/A	N/A	N/A
T-21547	313351	GEAR	N/A	N/A	N/A
T-35791	319250	SNAP RING J DEERE DIFFERENTIAL	N/A	N/A	N/A

EATON FULLER / CEEMAT

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
22450	353706-340	FRICTION TAN WF - CONVERTER CLUTCH LARGE	99 INT	15.204 x 12.265 x .133	386.18 x 311.53 x 3.38
224546	353704-410	FRICTION TAN PLNI- CONVERTER CLUTCH SMALL	66 INT	10.258 x 9.130 x .163	260.55 x 206.50 x 4.14
22466	353705-310	STEEL - CONVERTER CLUTCH SMALL	66 EXT	10.949 x 8.428 x .124	278.10 x 214.83 x 3.15
4303471	353707-310	STEEL - CONVERTER CLUTCH LARGE (NOTCHED OD)	N/A	17.792 x 12.689 x .123	451.92 x 322.30 x 3.12

EUCLID

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
E4059006	310711	STEEL	20 EXT	26.390 x 18.420 x .122	670.31 x 467.87 x 3.10
E4059008	310712	FRICTION GRAPHITE	52 INT	25.470 x 16.990 x .208	646.94 x 431.55 x 5.28
E4095205	310715	STEEL	14 EXT	8.621 x 6.257 x .108	218.97 x 158.93 x 2.73
E4095206	310704	FRICTION BRONZE	60 INT	7.685 x 5.713 x .156	195.20 x 145.11 x 3.96

EXEDY

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
TBA	354700-300	FRICTION HEG WF	32 INT	9.287 x 7.582 x .117	235.89 x 192.58 x 2.97
TBA	354701-270	STEEL	6 EXT	10.385 x 7.876 x .106	263.78 x 200.05 x 2.69

FIAT - ALLIS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
4955520	317700	FRICTION BRONZE	64 INT	14.020 x 7.800 x .280	356.52 x 198.35 x 7.12
508053	330717-150	STEEL	40 INT	5.982 x 3.216 x .060	151.94 x 81.69 x 1.52
575812	317700	FRICTION BRONZE	64 INT	14.020 x 7.800 x .280	356.52 x 198.35 x 7.12
586599	317700	FRICTION BRONZE	64 INT	14.020 x 7.800 x .280	356.52 x 198.35 x 7.12
70629863	317712-250	FRICTION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49
70629864	317711-210	STEEL	8 EXT	8.290 x 5.990 x .083	210.80 x 152.40 x 2.10
70675510	317712-250	FRICTION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49
71010964	317702-360	FRICTION BRONZE	25 INT	9.865 x 4.885 x .143	250.57 x 124.08 x 3.63
73021191	352701	STEEL	6 EXT	10.800 x 7.972 x .107	274.32 x 202.49 x 2.72
73021215	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
73044593	352704-388	FRICTION BRONZE	60 INT	9.984 x 7.394 x .154	253.59 x 187.81 x 3.91
73058782	352701	STEEL	6 EXT	10.800 x 7.972 x .107	274.32 x 202.49 x 2.72
73118088	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
73118089	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
73118133	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36

ALTO OFF-HIGHWAY CATALOG

FIAT - ALLIS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
9433405	332702	FRICTION BRONZE	68 EXT	4.415 x 2.807 x .085	112.14 x 71.30 x 2.16
9435217	332703	STEEL	42 INT	4.000 x 2.547 x .063	101.60 x 64.69 x 1.59
9502757	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.1 x 114.05 x 1.73

FORD INDUSTRIAL / NEW HOLLAND

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
13474AM	049720	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
13474AM	049700B155	FRICTION BRONZE	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
1804831	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
1808604	023703	STEEL FRONT DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
1816970	311702	FRICTION PTO BRONZE	45 INT	5.250 x 3.653 x .080	133.35 x 92.79 x 2.03
83964289	311720-230	FRICTION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .090	133.40 x 90.30 x 2.29
86962386	311720-244	FRICTION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .096	133.40 x 90.30 x 2.44
86962387	311721-175	STEEL 555C / 555D	54 EXT	5.480 x 3.900 x .069	139.40 x 99.30 x 1.75
86964288	311720-260	FRICTION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .102	133.40 x 90.30 x 2.59
B5AZ-7B164A	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
B85-77573	023719	STEEL FRONT	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
C5NN-2A097B	311710A	FRICTION BRAKE BRONZE - EARLY STYLE	22 INT	8.051 x 2.107 x .192	204.50 x 53.52 x 4.88
C5NN-2N315A	311713	STEEL BRAKE 1 LUG	1 Lug	8.983 x 5.800 x .104	228.17 x 147.32 x 2.64
C5NN-2N315B	311711	STEEL BRAKE 1 LUG	1 Lug	8.241 x 4.500 x .103	209.32 x 114.30 x 2.62
C5NN-P743B	311702	FRICTION PTO BRONZE	45 INT	5.250 x 3.653 x .080	133.35 x 92.79 x 2.03
C7NN-2A097B	311712	FRICTION BRAKE BRONZE 5 SLOTS	22 INT	8.810 x 2.107 x .122	223.77 x 53.52 x 3.10
C8AP-7B442A	023701	STEEL PTO	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
C8AP-7B442A	023701	STEEL FRONT	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
C9NN-2A097BA	311712	FRICTION BRAKE BRONZE 5 SLOTS	22 INT	8.810 x 2.107 x .122	223.77 x 53.52 x 3.10
C9NN-P743A	023712-230	FRICTION PTO TAN WF	52 INT	5.850 x 4.241 x .090	148.5 x 107.72 x 2.29
C9NN-P743B	311702	FRICTION PTO BRONZE	45 INT	5.250 x 3.653 x .080	133.35 x 92.79 x 2.03
C9NN-P743D	311700A	FRICTION PTO BRONZE	52 INT	5.849 x 4.241 x .0895	148.56 x 107.72 x 2.29
CONN-7B164A	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
DOAP-N5861	049720	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
DOAP-N5861	049700B155	FRICTION BRONZE	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
D1NN-P743A	023712-230	FRICTION PTO TAN WF	52 INT	5.850 x 4.241 x .090	148.50 x 107.72 x 2.29
D2NN-7R174A	023719	STEEL FRONT	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
D3NN-P743A	311700	FRICTION PTO BRONZE	52 INT	5.849 x 4.241 x .090	148.56 x 107.72 x 2.29
D6NN-C730A	023719	STEEL PTO	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
D6NN-C730A	023719	STEEL FRONT	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
D8NN-P743JA	023712-230	FRICTION PTO TAN WF	52 INT	5.850 x 4.241 x .090	148.50 x 107.72 x 2.29
E6NN-2N315AA	311713	STEEL BRAKE 1 LUG	1 Lug	8.983 x 5.800 x .104	228.17 x 147.32 x 2.64
E9NN-2A097AA	311710	FRICTION BRAKE BRONZE - LATE STYLE	22 INT	8.060 x 2.107 x .122	204.72 x 53.52 x 3.10
E9NN-2A097BA	311712	FRICTION BRAKE BRONZE 5 SLOTS	22 INT	8.810 x 2.107 x .122	223.77 x 53.52 x 3.10
E9NN-2N315CB	311711A	STEEL BRAKE	4 EXT	8.970 x 5.780 x .106	228.00 x 147.00 x 2.70
IP-77518A	023703	STEEL FRONT DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
IP-77573A-1	023701	STEEL FRONT	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
PBB-77519A	023712BR	FRICTION BRONZE	52 INT	5.850 x 4.241 x .060	148.50 x 107.72 x 1.52
PBB-77573A	023719	STEEL PTO	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
PBB-77573A	023719	STEEL FRONT	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73

ALTO OFF-HIGHWAY CATALOG

FUNK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
4002254	023719-310	STEEL	60 EXT	6.067 x 4.490 x .122	154.10 x 114.05 x 3.10
4002787	023712A170	FRICTION TAN PL	52 INT	5.850 x 4.241 x .067	148.50 x 107.72 x 1.70
4005522	023722-180	FRICTION HEG WF	52 INT	5.850 x 4.240 x .071	148.59 x 101.70 x 1.80
4005523	023712-295	FRICTION TAN PL	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
4005524	049700-180	FRICTION TAN PL	45 INT	5.250 x 3.653 x .071	133.35 x 92.79 x 1.80
4010556	029701	STEEL	44 EXT	4.468 x 3.134 x .068	113.49 x 79.60 x 1.73
4010595	029712BR	FRICTION BRONZE	36 INT	4.247 x 2.904 x .062	107.87 x 73.76 x 1.57
40121315	023712A170	FRICTION TAN PL	52 INT	5.850 x 4.241 x .067	148.50 x 107.72 x 1.70
40121323	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
40121323	079741	STEEL - OE Style	60 EXT	6.072 x 4.483 x .069	154.23 x 113.87 x 1.75
4050498	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
40RC-7683	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
40RC-7727	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
40RC-7951	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
40RC-7951	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
4TRC-7173	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
4TRC-7174	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
YZ102-938	079743	STEEL	69 EXT	6.973 x 5.497 x .075	177.11 x 139.16 x 1.90
YZ103-269	314700	FRICTION BRONZE	60 INT	6.670 x 4.900 x .126	169.70 x 124.70 x 3.20
ZY105-481	023712-279	FRICTION TAN PL	52 INT	5.850 x 4.241 x .110	148.50 x 107.72 x 2.79
YZ105-493	079744-275	FRICTION HEG PLI	52 INT	6.677 x 4.224 x .110	169.60 x 107.29 x 2.79
YZ106-060	314700A280	FRICTION TAN PLI	60 INT	6.680 x 4.909 x .110	169.67 x 124.69 x 2.79
YZ501-1026	079749	STEEL	66 EXT	8.343 x 5.827 x .075	211.92 x 148.00 x 1.90
YZ501-539	079749	STEEL	66 EXT	8.343 x 5.827 x .075	211.92 x 148.00 x 1.90
YZ502-309	079749	STEEL	66 EXT	8.343 x 5.827 x .075	211.92 x 148.00 x 1.90
Not Available	314701-190	STEEL	69 EXT	6.972 x 5.193 x .076	177.09 x 131.90 x 1.93

GALION

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
630515C2	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
72327	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
72330	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
72372	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
72378	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
77576	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
D139209	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
D139309	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
D72327	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
D72330	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
D72372	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
D72378	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
D80064	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99

CHAMPION GRADER (GEARCO)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
11299	306709-155	STEEL INPUT & REVERSE (52 PER UNIT)	8 EXT	5.615 x 3.903 x .061	142.62 x 99.14 x 1.55
11300	049700A150	FRICTION BRONZE	45 INT	5.250 x 3.653 x .059	133.35 x 92.79 x 1.50
16780N	307709-340	STEEL	16 EXT	12.710 x 7.250 x .134	323.30 x 184.3 x 3.40

ALTO OFF-HIGHWAY CATALOG

CHAMPION GRADER (GEARCO)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
19435	317712-250	FRICTION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49
19436	317711-210	STEEL	8 EXT	8.290 x 5.990 x .083	210.80 x 152.4 x 2.10
28305	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
28310	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
37170	307704-500	FRICTION HEG PLI	53 INT	13.495 x 8.681 x .205	342.77 x 220.5 x 5.21
37171X	307705-343	STEEL (Thinner for more capacity)	83 EXT	13.978 x 9.385 x .135	355.04 x 238.38 x 3.43
37171	307705-630	STEEL	83 EXT	13.978 x 9.385 x .248	355.04 x 238.38 x 6.30
37934	307706-350	FRICTION HEG PLI	54 INT	14.130 x 8.932 x .138	358.93 x 226.87 x 3.51
37935	307707-300	STEEL	89 EXT	14.900 x 10.000 x .122	378.46 x 254.00 x 3.10
41112	307703-210	STEEL OUTPUT (18 PER UNIT)	8 EXT	7.095 x 5.101 x .083	180.21 x 129.57 x 2.11
48525N	307708-520	FRICTION	35 INT	11.010 x 4.630 x .208	279.90 x 117.70 x 5.30
49987X	307705-343	STEEL (Thinner for more capacity)	83 EXT	13.978 x 9.385 x .135	355.04 x 238.38 x 3.43
49987	307705-630	STEEL	83 EXT	13.978 x 9.385 x .248	355.04 x 238.38 x 6.30
53950	307700-160	FRICTION INPUT & REVERSE BRONZE (52 PER UNIT)	45 INT	5.250 x 3.653 x .098	133.35 x 92.79 x 2.49
53951	307702-250	FRICTION OUTPUT BRONZE (20 PER UNIT)	29 INT	6.637 x 4.702 x .100	168.58 x 119.43 x 2.54
D72803	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
D77576	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95

GROVE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
9904101482	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
9904101483	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
9904101523	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
9904105541	049700	FRICTION TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
9904100634	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73

HYSTER

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
106375	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
109604	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
113486	318700	FRICTION BRONZE	20 INT	6.659 x 3.088 x .130	169.14 x 78.44 x 3.29
114254	318701	STEEL	20 EXT	7.530 x 4.620 x .083	191.50 x 117.50 x 2.10
119729	318700	FRICTION BRONZE	20 INT	6.659 x 3.088 x .130	169.14 x 78.44 x 3.29
119751	318701	STEEL	20 EXT	7.530 x 4.620 x .083	191.50 x 117.50 x 2.10
1311645	049740-230	FRICTION RED PL	45 INT	5.250 x 3.653 x .091	133.35 x 92.79 x 2.31
1311652	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
1311662	049700BR235	FRICTION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
136083	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
1387235	023701-250	STEEL	54 EXT	5.472 x 3.898 x .098	138.99 x 99.01 x 2.50
1469300	049730-250	FRICTION KEVLAR® PLI	45 INT	5.250 x 3.653 x .099	133.35 x 92.79 x 2.51
148895	318700	FRICTION BRONZE	20 INT	6.659 x 3.088 x .130	169.14 x 78.44 x 3.29
175198	318702G	FRICTION Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .137	269.8 x 197.36 x 3.48
180287	318702G	FRICTION Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .137	269.8 x 197.36 x 3.48
180287	318702	FRICTION BRONZE Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .135	269.8 x 197.36 x 3.43

ALTO OFF-HIGHWAY CATALOG

HYSTER

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
261542	318711	STEEL	50 INT	8.490 x 6.060 x .079	215.90 x 154.00 x 2.00
292989	318703	STEEL	12 EXT	12.000 x 8.430 x .097	304.80 x 214.12 x 2.46
292990	318702	FRICITION BRONZE Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .135	269.80 x 197.36 x 3.43
298025	318702	FRICITION BRONZE Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .135	269.80 x 197.36 x 3.43
319596	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
328154	318708	FRICITION HEG PLI	64 INT	10.625 x 7.763 x .134	269.88 x 197.19 x 3.40
328715	318712	FRICITION	72 EXT	8.960 x 6.490 x .134	227.80 x 165.10 x 3.40
334409	049700-216	FRICITION TAN PLI	45 INT	5.250 x 3.653 x .085	133.35 x 92.79 x 2.16
334417	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
346796	049720-200	FRICITION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
346796BR	049700BR200	FRICITION BRONZE	45 INT	5.250 x 3.653 x .081	133.35 x 92.79 x 2.06
449273	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
449461	049700BR235	FRICITION BRONZE	45 INT	5.250 x 3.653 x .093	133.35 x 92.79 x 2.36
77808	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
77888	049700BR	FRICITION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
77898	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
78803	318703	STEEL WAVE	12 EXT	12.000 x 8.430 x .097	304.80 x 214.12 x 2.46
78804	318702	FRICITION BRONZE Replaced by Alto# 318708	64 INT	10.622 x 7.770 x .135	269.80 x 197.36 x 3.43
878364	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
PC2407	318710	FRICITION BRONZE	N/A	N/A	N/A

INTERNATIONAL HARVESTER - HOUGH

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
1342285C1	306702-467	FRICITION - BRONZE	19 INT	7.990 x 2.250 x .185	203.20 x 57.20 x 4.70
156320H1	317711-210	STEEL	8 EXT	8.290 x 5.990 x .083	210.80 x 152.40 x 2.10
157021H1	317712-250	FRICITION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49
324483R1	317711-210	STEEL	8 EXT	8.290 x 5.990 x .083	210.80 x 152.40 x 2.10
40882D	319707-250	STEEL	77 EXT	15.672 x 12.005 x .098	398.07 x 304.93 x 2.49
634536C1	317712-250	FRICITION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49

INTERNATIONAL HARVESTER - J. I. CASE (Agricultural)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
NL	351750X	BRAKE KIT, WHEEL TYPE TRACTORS Contains: 6-351700, 7-351701, Orings & Metal clad seal Fits Models: 786, 886, 986, 1086, 1486, 3088, 3288, 3388, 3488, Hydro 3588, 3688, 3788, 6388. 6588. 6788 Hydro 186	N/A	N/A	N/A
702874C1	317712-250	FRICITION BRONZE	34 INT	7.801 x 5.533 x .098	198.15 x 140.54 x 2.49
104712C21	351700	FRICITION BRAKE TAN PLI (6 PER UNIT)	12 INT	8.000 x 1.854 x .183	203.20 x 47.09 x 4.65
104713C21	351701	STEEL (7 PER UNIT)	3 EXT	9.825 x 4.936 x .090	249.56 x 125.37 x 2.29
196680H-1	306718	FRICITION BRONZE	52 INT	11.496 x 8.427 x .201	292.00 x 214.05 x 5.11
1981246C1	351706	FRICITION PTO HEG PLI	24 EXT	5.269 x 3.765 x .075	133.83 x 95.63 x 1.91
313807R-1	352711-495	STEEL	30 EXT	15.234 x 12.708 x .195	386.94 x 322.78 x 4.95

ALTO OFF-HIGHWAY CATALOG

INTERNATIONAL HARVESTER - J. I. CASE (Agricultural)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
3427270M1	306761	BELLEVILLE SPRING PTO (DRY APPLICATION)		8.690 x 5.901 x .122	220.73 x 149.89 x 3.10
3711395M1	306760	BELLEVILLE SPRING PTO (DRY APPLICATION)		8.099 x 6.034 x .104	205.71 x 153.26 x 2.64
380249R-3	351702	FRICTION TAN PLI TORQUE AMPLIFIER	26 INT	5.745 x 2.507 x .155	146.15 x 63.68 x 3.94
380261R-1	306381	SHAFT IHC PTO fits Models: 706, Early 756, 806, Early 856, 1206, 1256, 2706, Early 2856, 4100, 21206, 21256	N/A	N/A	N/A
381489R-3	306701	STEEL PTO	6 EXT	5.750 x 4.067 x .068	146.05 x 103.30 x 1.73
381490R-1	306704	FRICTION PTO TAN PLI	51 INT	5.318 x 3.741 x .100	135.08 x 95.02 x 2.54
381490R-1HD	306704A	FRICTION PTO - HEAVY DUTY HEG PLI	51 INT	5.318 x 3.741 x .100	135.08 x 95.02 x 2.54
382343R	351704BR	FRICTION BRONZE TORQUE AMPLIFIER	47 INT	6.590 x 4.611 x .114	167.39 x 117.12 x 2.90
382342R1	351705-378	STEEL TORQUE AMPLIFIER	6 EXT	5.588 x 5.128 x .148	192.74 x 130.25 x 3.76
382344R1	351709-375	STEEL TORQUE AMPLIFIER LOCKUP	6 EXT	7.600 x 5.120 x .148	193.04 x 130.05 x 3.75
384430R-2	351703A	STEEL PISTON BACKING (1 PER UNIT)	12 EXT	6.875 x 3.375 x .100	174.63 x 85.73 x 2.54
384431R-2	351703B	STEEL DRIVE (2 PER UNIT)	12 EXT	6.876 x 3.375 x .100	174.65 x 85.73 x 2.54
528696R-1	306379	SHAFT IHC PTO fits Models: 756, 766, 856, 966, 986, 1066, 1086, 1456, 1466, 1486, 2856, 3088, 3288, 3688	N/A	N/A	N/A
67596C9-1	306380	SHAFT IHC PTO fits Models: Late 766, Late 966, Late 1066, Late 1466 Late 1468, Late 1486	N/A	N/A	N/A
68802C91	306750	MODULE, FRICTION & STEEL PTO Contains: 5-306704, 12-306701	N/A	N/A	N/A
68803C91	306750A	MODULE, FRICTION & STEEL PTO Contains: 7-306704, 9-306701	N/A	N/A	N/A
68803C91HD	306750AHD	MODULE, FRICTION & STEEL PTO HEAVY DUTY Contains: 7-306704A, 9-306701	N/A	N/A	N/A
A-175806	310727-225	STEEL (MATES WITH 351708)	26 EXT	5.649 x 3.524 x .088	143.46 x 89.51 x 2.24
A33012	351706BR	FRICTION PTO BRONZE	24 EXT	5.269 x 3.765 x .056	133.83 x 95.63 x 1.42
A59013	351767	SPRING PTO	N/A	3.389 x 3.030 x .050	86.08 x 76.96 x 1.27
A66365	351707	STEEL PTO	17 INT	4.996 x 2.750 x .044	126.90 x 69.85 x 1.12
SBA320461550	306762	DIAPHRAGM SPRING		10.542 X 7.175 X .127	267.77 X 182.25 X 3.23

JCB Overhaul Kit

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
NA	023812	T72 Short Overhaul Kit contains Rubber Seals, Metal Clad Seals and Orings	N/A	N/A	N/A

ALTO OFF-HIGHWAY CATALOG

JCB Clutches

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
04-500230	049700	FRICION TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
04-500231	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
331-31560	023761-400	STEEL	18 EXT	5.478 x 3.887 x .160	139.14 x 98.73 x 4.06
331-31561	023761-600	STEEL	18 EXT	5.463 x 3.864 x .235	138.76 x 98.15 x 5.97
331-16516	324703-200	STEEL	57 EXT	5.793 x 3.917 x .080	147.14 x 99.49 x 2.03
331-16519	324707-120	STEEL	57 EXT	5.790 x 3.910 x .047	147.30 x 99.40 x 1.20
331-16520	324702-240	FRICION TAN SB	45 INT	5.520 x 3.655 x .095	140.21 x 92.84 x 2.41
445-03205	049700BR	FRICION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
445-03205	049720	FRICION HEG PLI	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
445-03205	049700B155	FRICION BRONZE	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
445-03206	023751A	STEEL	6 EXT	5.943 x 3.888 x .071	150.95 x 98.76 x 1.80
445-12314	023701-120	STEEL	54 EXT	5.472 x 3.898 x .047	138.99 x 99.01 x 1.19
445-19808	023150-353	WASHER BLACK OXIDE .030 CHAMFER	N/A	2.360 x 1.580 x .139	59.94 x 40.13 x 3.53
445-30011	049740-230	FRICION RED PL	45 INT	5.250 x 3.653 x .091	133.35 x 92.79 x 2.31
449-05501/15661	023769	STEEL - SPRING ASSEMBLY (6 external crimped sections)	N/A	N/A	N/A
449-10501	023768	STEEL - DISH	18 EXT	5.463 x 3.864 x .075	138.76 x 98.15 x 1.90
450-10224	324700-385	FRICION (8 HOLES) HEG WF	15 INT	8.738 x 1.953 x .153	221.95 x 49.61 x 3.89
450-10226	324701-385	STEEL	3 EXT	9.371 x 5.515 x .153	238.02 x 140.08 x 3.89
453-15301	324705-378	STEEL	9 EXT	9.459 x 5.120 x .150	240.26 x 130.05 x 3.81

KOMATSU

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
120-22-31221	325705-260	STEEL	74 INT	11.300 x 8.456 x .101	287.02 x 214.78 x 2.57
120-22-31233	325704-425	FRICION RED PLI	99 EXT	11.860 x 9.062 x .168	301.24 x 230.17 x 4.27
235-25-11360	320718-380	FRICION - BRAKE DISC HEG PLI Model & Qty: WA350-1 (4), 420-3 (5), 450-1 (6), 450-3 (6), 500-3 (8)	105 INT	15.571 x 12.185 x .150	399.31 x 309.50 x 3.81
235-25-51430	320719	STEEL - BRAKE DISC MATING PLATE Model & Qty: WA350-1 (5), 420-3 (6), 450-1 (7), 450-3 (7), 500-3 (9)	138 EXT	16.533 x 12.778 x .091	419.94 x 324.56 x 2.31
3EA-15-11172	330700B300	FRICION HEG WF	41 INT	4.907 x 2.710 x .120	124.64 x 68.83 x 1.70
3EA-15-11173	330700B300	FRICION HEG WF	41 INT	4.907 x 2.710 x .120	124.64 x 68.83 x 1.70
3EA-15-11180	079731-310	STEEL	4 EXT	5.426 x 3.153 x .125	137.82 x 80.09 x 3.18
3EC-15-19270	325702BR	FRICION BRONZE	47 INT	5.795 x 3.560 x .118	147.19 x 90.42 x 3.00
3EC-15-19280	325703	STEEL	8 EXT	6.182 x 3.949 x .055	157.02 x 100.30 x 1.40
3EC-15-29280	325703	STEEL	8 EXT	6.182 x 3.949 x .055	157.02 x 100.30 x 1.40
3EC-15-31280	325709-200	STEEL	8 EXT	6.620 x 3.940 x .079	168.30 x 100.20 x 2.00
3EC-16-31490	079731-310	STEEL	4 EXT	5.426 x 3.153 x .125	137.82 x 80.09 x 3.18
3FD-15-21570	330702-250	FRICION GRAPHITE WF (Fits 4G45T27 Type M)	37 INT	6.130 x 3.459 x .100	155.70 x 87.86 x 2.54
34C-15-11350	325706-300	FRICION BRONZE	47 INT	5.971 x 3.564 x .119	151.66 x 90.53 x 3.02
381-299-549C1	306713	STEEL	85 EXT	7.129 x 4.440 x .067	181.08 x 112.78 x 1.70
381-922-539C1	306711	STEEL	85 EXT	7.129 x 3.379 x .067	181.08 x 85.83 x 1.70
381-922-541C1	306710R	FRICION RED WF	32 INT	6.574 x 3.100 x .071	166.98 x 78.74 x 1.80
381-922-551C1	306712R	FRICION RED PLI	34 INT	6.582 x 4.127 x .071	167.18 x 104.82 x 1.80
381-922-913C1	320767	SPRING	N/A	7.080 x 6.820 x .014	180.00 x 173.40 x 0.35
418-33-21340	320706-670	FRICION - BRAKE DISC WA LOADER SERIES	15 INT	11.930 x 2.290 x .264	303.02 x 68.20 x 6.70

ALTO OFF-HIGHWAY CATALOG

KOMATSU

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
419-15-12290	325700	FRICION RED WF	26 INT	6.298 x 3.834 x .086	159.97 x 97.38 x 2.18
419-15-12133	325767	SPRING - WAVE	N/A	6.870 x 6.630 x .031	174.80 x 168.50 x 0.80
419-15-12133	325767C	SPRING - WAVE OE STYLE	N/A	6.870 x 6.630 x .031	174.80 x 168.50 x 0.80
419-15-12310	325701	STEEL	68 EXT	6.850 x 4.331 x .067	173.99 x 110.01 x 1.70
419-33-11243	320708-830	FRICION - BRAKE DISC WA300-1 LOADER SERIES	15 INT	12.580 x .530 x .322	320.00 x 64.40 x 8.20
419-33-21240	320708A830	FRICION - BRAKE DISC WA320-3 LOADER SERIES	15 INT	12.580 x .530 x .322	320.00 x 64.40 x 8.20
423-33-21240	320710-800	FRICION - BRAKE DISC WA380 LOADER SERIES	18 INT	13.760 x 3.060 x .315	349.50 x 77.72 x 8.00
425-33-11510	320714-510	FRICION - BRAKE DISC HEG PLI Model & Qty: WA400-1 (4), 500-1 (6), 600-1 (13), 600-3 (9)	112 INT	18.921 x 13.012 x .202	480.59 x 330.50 x 5.13
444-971C1	056705	STEEL	11 EXT	11.495 x 8.825 x .100	291.97 x 224.16 x 2.54
56D-15-12710	325767	SPRING - WAVE	N/A	6.870 x 6.630 x .031	174.80 x 168.50 x 0.80
56D-15-12710	325767C	SPRING - WAVE OE STYLE	N/A	6.870 x 6.630 x .031	174.80 x 168.50 x 0.80
561-33-61230	325707-240	STEEL	226 EXT	26.808 x 20.063 x .095	682.75 x 509.69 x 2.41
566-33-41242	320714-510	FRICION - BRAKE DISC Model & Qty: WA400-1 (4), 500-1 (6), 600-1 (13), 600-3 (9)	112 INT	18.921 x 13.012 x .202	480.59 x 330.50 x 5.13
566-33-41230	320715-240	STEEL - BRAKE DISC MATING PLATE (18 TEETH CLIPPED) Model & Qty: WA400-1 (5), 500-1 (7), 600-1 (14), 600-3 (10)	146 EXT	19.470 x 13.622 x .095	494.54 x 346.00 x 2.41
714-07-12670	325710-320	FRICION WA LOADER HEG WF	26 INT	7.088 x 4.346 x .128	180.04 x 110.39 x 3.25
714-07-12680	325711-200	STEEL WA LOADER	70 EXT	7.797 x 50.390 x .079	198.04 x 127.99 x 2.01
714-07-12781	325768	STEEL WA LOADER WAVE RELEASE SPRING	N/A	7.680 x 7.330 x .071	195.30 x 186.40 x 1.80
714-07-12690	325769	STEEL WA LOADER WAVE RELEASE SPRING	N/A	7.700 x 7.360 x .071	195.80 x 187.20 x 1.80
714-12-19711	325700A220	FRICION POWERSHIFT HEG WF	26 INT	6.298 x 3.834 x .086	159.97 x 97.38 x 2.18
714-16-19730	325701	STEEL	68 EXT	6.850 x 4.331 x .067	173.99 x 110.01 x 1.70

KUBOTA

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
K366022361	311720-244	FRICION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .096	133.40 x 90.30 x 2.44
K3660223691	023701	STEEL 555C / 555D	54 EXT	5.480 x 3.900 x .069	139.40 x 99.30 x 1.75
K3660223911	311720-260	FRICION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .102	133.40 x 90.30 x 2.59
K3660223921	311720-230	FRICION 555C / 555D BRONZE	36 INT	5.252 x 3.555 x .090	133.40 x 90.30 x 2.29

MACK TRUCK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
308SH108	352702-520	FRICION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
308SH133	352702-520	FRICION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18
308SH135	352702-520	FRICION HEG PLI	72 INT	14.633 x 11.919 x .204	371.68 x 302.74 x 5.18

ALTO OFF-HIGHWAY CATALOG

MASSEY-FERGUSON

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
125504H1	306706A150	FRICTION BRONZE	32 INT	5.740 x 3.090 x .059	146.00 x 78.60 x 1.50
1669474M1	323704	FRICTION BRAKE BRONZE	27 INT	8.806 x 2.165 x .190	223.67 x 54.99 x 4.83
1672626M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
1754344M1	023703	STEEL DISH	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
1754345M1	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
1804831M1	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
185062M3	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
185464M1	033711	STEEL PTO	6 EXT	5.672 x 3.720 x .069	144.07 x 94.49 x 1.75
1860964M2	323704	FRICTION BRAKE BRONZE	27 INT	8.806 x 2.165 x .190	223.67 x 54.99 x 4.83
1862289M2	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
1870074M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
1870879M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
190177M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
216084	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
224772	023719	STEEL	60 EXT	6.067 x 4.490 x .068	154.10 x 114.05 x 1.73
230911	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
233166	023712-260	FRICTION TAN PL	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.59
233166	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
235161	023712BR260	FRICTION BRONZE	52 INT	5.850 x 4.241 x .103	148.50 x 107.72 x 2.62
236989	023712BR295	FRICTION BRONZE	52 INT	5.850 x 4.241 x .116	148.50 x 107.72 x 2.95
2757328M91	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
513242M1	033711A	STEEL PTO	33 EXT	5.677 x 3.720 x .055	144.20 x 94.49 x 1.40
514276M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
521282M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
523551M1	033711B220	STEEL PTO	11 EXT	5.672 x 3.720 x .087	144.07 x 94.49 x 2.21
523552M1	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
533326M-2	323702	FRICTION PTO BRONZE	57 INT	5.050 x 3.461 x .100	128.27 x 87.91 x 2.54
772813M1	033711B	STEEL PTO	11 EXT	5.672 x 3.720 x .056	144.07 x 94.49 x 1.42

MINN - MOLINE (WHITE TRACTOR)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
10P1459	331700BR	FRICTION BRONZE	12 EXT	6.564 x 4.569 x .081	166.73 x 116.05 x 2.06
10P2664	331701-155	STEEL	6 INT	6.000 x 3.521 x .061	152.43 x 89.43 x 1.55

MELROSE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
6649871	179706-327	FRICTION (NO TEETH) TAN PLI	N/A	7.500 x 5.390 x .128	190.50 x 136.91 x 3.25

MITSUBISHI / TCM

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
65425-13800	079731	STEEL	4 EXT	5.426 x 3.153 x .089	137.82 x 80.09 x 2.26
65425-23800	079731	STEEL	4 EXT	5.426 x 3.153 x .089	137.82 x 80.09 x 2.26
91224-16500	079730A365	FRICTION MITS TCM HEG PLI	41 INT	4.907 x 2.710 x .144	124.54 x 68.83 x 3.66
91324-12600	308707-160	STEEL	24 EXT	5.185 x 3.153 x .063	131.70 x 80.09 x 1.60
91324-12601	308707-160	STEEL	24 EXT	5.185 x 3.153 x .063	131.70 x 80.09 x 1.60
91824-08100	330702-250	FRICTION GRAPHITE WF	37 INT	6.130 x 3.459 x .100	155.70 x 87.86 x 2.54
91824-08200	308705-230	STEEL	6 EXT	6.708 x 3.936 x .090	170.38 x 99.97 x 2.09

ALTO OFF-HIGHWAY CATALOG

MITSUBISHI / TCM

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
91224-06500	079730A365	FRICTION HEG PLI	41 INT	4.907 x 2.710 x .144	124.54 x 68.83 x 3.66
91224-16500	079730A365	FRICTION HEG PLI	41 INT	4.907 x 2.710 x .144	124.54 x 68.83 x 3.66
91324-02700	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
91324-02701	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
91324-02702	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
91324-12600	308707-160	STEEL	24 EXT	5.185 x 3.153 x .063	131.70 x 80.09 x 1.60
91324-12601	308707-160	STEEL	24 EXT	5.185 x 3.153 x .063	131.70 x 80.09 x 1.60
10433-40091	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99
90209-92800	310716	FRICTION BRONZE	19 INT	6.499 x 2.925 x .157	165.07 x 74.30 x 3.99

NISSAN

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
31532-22H01	330700BR	FRICTION BRONZE	41 INT	4.907 x 2.710 x .104	124.64 x 68.83 x 2.64
31532-25H01	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
31532-40K00	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
31532-LI000	330700BR	FRICTION BRONZE	41 INT	4.907 x 2.710 x .104	124.64 x 68.83 x 2.64
31532-LI500	330700A260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
31536-22H00	312701A180	STEEL	42 EXT	5.179 x 3.045 x .070	131.55 x 77.34 x 1.78
31536-25H00	312701-160	STEEL	42 EXT	5.179 x 3.148 x .063	131.55 x 79.96 x 1.60
31536-LI002	330701A160	STEEL	8 EXT	5.184 x 3.156 x .063	131.67 x 80.16 x 1.60
31536-LI500	330701A160	STEEL	8 EXT	5.184 x 3.156 x .063	131.67 x 80.16 x 1.60

PETTIBONE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
44238-65	049700	FRICTION TAN PL	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55
44238-65	049740	FRICTION RED SMOOTH	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
44238-66	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
44238-80	023738BR	FRICTION BRONZE	59 INT	7.504 x 5.794 x .115	190.61 x 147.17 x 2.92
44238-81	023739	STEEL	3 EXT	8.458 x 6.125 x .069	214.83 x 155.58 x 1.75
44367-10	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
44367-9	023736	FRICTION TAN WF	45 INT	5.250 x 3.653 x .088	133.35 x 92.79 x 2.24

PLYMOUTH (LOCOMOTIVE)

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
2-05193	328711-320	STEEL	8 EXT	9.618 x 6.811 x .123	244.30 x 173.00 x 3.12
2-05194	328713-320	STEEL	8 EXT	11.128 x 7.917 x .124	282.65 x 201.09 x 3.15
3-08491	328712-285	FRICTION BRONZE	39 INT	8.977 x 6.394 x .113	228.06 x 162.41 x 2.87
3-08492	328710-285	FRICTION BRONZE	45 INT	10.514 x 7.391 x .112	267.06 x 187.73 x 2.84

RENK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
50.67.011/2	330714-400	FRICTION BRONZE	53 INT	10.857 x 8.352 x .157	275.77 x 212.14 x 3.99
50.67.314/2	330712-400	FRICTION BRONZE	53 INT	14.357 x 10.435 x .157	364.67 x 265.05 x 3.99
50.71.206/2	330714-400	FRICTION BRONZE	53 INT	10.857 x 8.352 x .157	275.77 x 212.14 x 3.99

ALTO OFF-HIGHWAY CATALOG

ROCKFORD POWERTRAIN

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
C-305193	306709-155	STEEL	8 EXT	5.615 x 3.903 x .061	142.62 x 99.14 x 1.55
C317753-X1	049700A150	FRICTION BRONZE	45 INT	5.250 x 3.653 x .059	133.35 x 92.79 x 1.50
C-317754-X1	307702-250	FRICTION BRONZE	29 INT	6.637 x 4.702 x .100	168.58 x 119.43 x 2.54

SKYTRAK

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
8033096	328750	KIT - FRICTION & STEEL Contains: 4-328700, 4-328701	N/A	N/A	N/A

SPICER

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
727429	328705-267	STEEL 1 EXTERNAL NOTCH	N/A	6.416 x 3.149 x .105	162.97 x 79.98 x 2.67
727443	328704-488	FRICTION AXLE BRAKE HEG PLI with 8 Holes	19 INT	5.634 x 1.343 x .192	143.10 x 34.11 x 4.88
8033096	328750	KIT - FRICTION & STEEL Contains: 4-328700, 4-328701	N/A	N/A	N/A
CKC-66118	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
CKC-66409	023736	FRICTION TAN WF	45 INT	5.250 x 3.653 x .088	133.35 x 92.79 x 2.24
R30WA109	328701	STEEL	61 EXT	7.870 x 4.010 x .087	200.10 x 102.10 x 6.10
R30WA120	328700	FRICTION BRONZE	23 INT	6.993 x 2.733 x .150	177.62 x 69.42 x 3.81

TEREX

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
15000719	329701-250	STEEL BRAKE PLATE	141 EXT	29.139 x 21.255 x .095	740.13 x 539.88 x 2.41
15000720	329702-690	BRAKE DAMPER (1 side cork facing)	140 EXT	29.020 x 21.220 x .271	738.00 x 539.50 x 6.90
15235882	329700-520	FRICTION BRAKE PLATE TAN PLI	99 INT	28.147 x 20.127 x .203	714.93 x 511.23 x 5.16
464-430-8328	329709-150	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .060	171.15 x 103.07 x 1.52
464-430-8329	329709-200	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .079	171.15 x 103.07 x 2.01
464-430-8330	329709-245	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .097	171.15 x 103.07 x 2.46
9255150	329704	FRICTION BRONZE	84 INT	16.420 x 13.740 x .204	417.60 x 349.30 x 5.20
9398081	329706	FRICTION BRONZE	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
9398112	329708	FRICTION BRONZE	35 EXT	6.981 x 4.300 x .079	177.32 x 109.22 x 2.01

TOYOTA

REF	ALTO	DESCRIPTION	Spline	Inch (ODxDxThk)	MM (ODxDxThk)
32412-22030	330703-200	STEEL	12 EXT	6.510 x 3.930 x .079	165.50 x 100.00 x 2.00
32418-31941	330703A455	STEEL	10 EXT	6.520 x 3.944 x .178	165.61 x 100.18 x 4.52
32431-12050- 71	330711	STEEL	8 EXT	6.343 x 4.494 x .071	161.11 x 114.15 x 1.80
32432-22030- 71	330702-250	FRICTION GRAPHITE WF	37 INT	6.130 x 3.459 x .100	155.70 x 87.86 x 2.54
32432-32890	330702-250	FRICTION GRAPHITE WF	37 INT	6.130 x 3.459 x .100	155.70 x 87.86 x 2.54
32461-23030- 71	330710	FRICTION HEG PLI	42 INT	5.892 x 4.239 x .103	149.66 x 107.67 x 2.62
32461-23630- 71	330704-257	FRICTION HEG WF	30 INT	5.143 x 3.121 x .066	130.63 x 79.27 x 1.68
40615-20060- 71	330700BR	FRICTION BRONZE	41 INT	4.907 x 2.710 x .104	124.64 x 68.83 x 2.64
40616-20060- 71	330701	STEEL	8 EXT	5.184 x 3.038 x .068	131.67 x 77.17 x 1.73

ALTO OFF-HIGHWAY CATALOG

TWIN DISC

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
204097	332703	STEEL FOR/REV MG-506	42 INT	4.000 x 2.547 x .063	101.60 x 64.69 x 1.59
206106X	332712	FRICTION HEG WF MG-518	100 EXT	8.462 x 5.966 x .125	214.93 x 151.54 x 3.18
206177M	332708	FRICTION BRONZE	88 EXT	9.442 x 6.754 x .122	239.83 x 171.55 x 3.10
215736	332711-228	STEEL MG518	56 INT	7.990 x 5.440 x 9.000	203.20 x 138.4 x 2.30
A4480A,B,M	332704	FRICTION BRONZE FOR/REV MG-509 & MG-512	76 EXT	6.466 x 4.087 x .113	164.24 x 103.81 x 2.87
A4481A	330717-150	STEEL	40 INT	5.982 x 3.216 x .060	151.94 x 81.69 x 1.52
A4939	332705	STEEL FOR/REV MG-509	45 INT	6.002 x 3.640 x .061	152.45 x 92.46 x 1.55
A4939B	332705	STEEL FOR/REV MG-509	45 INT	6.002 x 3.640 x .061	152.45 x 92.46 x 1.55
A6566E	332706	FRICTION BRONZE MG-514 ALL MODELS	12 EXT	9.293 x 5.400 x .122	236.04 x 139.67 x 3.10
A6567C	332707	STEEL MG-514A, MG-514B EARLY	40 INT	7.995 x 4.847 x .091	203.07 x 123.11 x 2.31
A6567E	332709	STEEL STEPPED MG-514A, MG-514B LATE & MG-514C	40 INT	7.995 x 4.847 x .186	203.70 x 123.11 x 4.72
B1432	332501UP12	BEARING RETAINER TWIN DISC (12 PER PACK)	N/A	N/A	N/A
B3060B	332702	FRICTION BRONZE FOR/REV MG-506	68 EXT	4.415 x 2.807 x .085	112.14 x 71.30 x 2.16
B3336A	332700	FRICTION BRONZE FOR/REV MG-502	79 EXT	4.042 x 2.765 x .085	102.67 x 70.23 x 2.16
B3337	332701	STEEL FOR/REV MG-502	52 INT	3.715 x 2.507 x .051	94.360 x 63.68 x 1.30
P4251A,B,C	332704	FRICTION FOR/REV BRONZE MG-509 & MG-512	76 EXT	6.466 x 4.087 x .113	164.24 x 103.81 x 2.87
P4371	332705	STEEL FOR/REV MG-509	45 INT	6.002 x 3.640 x .061	152.45 x 92.46 x 1.55
T-22176A	023712	FRICTION TAN PL	52 INT	5.850 x 4.241 x .061	148.50 x 107.72 x 1.55
T-44804	330717-150	STEEL	40 INT	5.982 x 3.216 x .060	151.94 x 81.69 x 1.52

VOLVO

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
0501-208-457	329710-450	FRICTION HEG PLI	34 INT	10.939 x 6.571 x .177	277.85 x 166.9 x 4.50
0501-309-329	329706	FRICTION BRONZE	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
0501-309-600	329706	FRICTION BRONZE	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
0750-140-009	329706	FRICTION BRONZE	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
11037030-1	330720A480	FRICTION HEG	23 INT	8.800 x 2.250 x .190	223.52 x 69.85 x 4.83
11037196-0	330718-200	FRICTION BRONZE	76 EXT	6.449 x 3.907 x .079	163.80 x 99.24 x 2.01
11703652-5	310715	STEEL	14 EXT	8.621 x 6.257 x .108	218.97 x 158.93 x 2.73
11703845-7	310708	FRICTION BRONZE	72 INT	9.180 x 6.911 x .153	233.17 x 175.54 x 3.89
11703854-7	310719	STEEL	12 EXT	10.120 x 7.513 x .102	257.05 x 190.83 x 2.59
464-430-8328	329709-150	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .060	171.15 x 103.07 x 1.52
464-430-8329	329709-200	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .079	171.15 x 103.07 x 2.01
464-430-8330	329709-245	STEEL (Mates with 329708)	35 INT	6.738 x 4.058 x .097	171.15 x 103.07 x 2.46
4715178	330716-290	FRICTION PTO BRONZE	76 EXT	6.462 x 3.506 x .116	164.13 x 89.05 x 2.95
4718216	330717-150	STEEL PTO	40 INT	5.982 x 3.216 x .060	151.94 x 81.69 x 1.52
4720762	332705-200	STEEL Shifting Clutch - all ranges	45 INT	6.002 x 3.640 x .079	152.45 x 92.46 x 2.00
4720763	332705	STEEL	45 INT	6.002 x 3.640 x .061	152.45 x 92.46 x 1.55
4720763-4	330719-155	STEEL	45 INT	6.086 x 3.647 x .061	154.58 x 92.63 x 1.55
47800C57	049700A150	FRICTION BRONZE	45 INT	5.250 x 3.653 x .059	133.35 x 92.79 x 1.50
4871966	023701	STEEL	54 EXT	5.472 x 3.898 x .068	138.99 x 99.01 x 1.73
4873042-7	049720	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
4873042-7	049700B155	FRICTION BRONZE	45 INT	5.250 x 3.653 x .061	133.35 x 92.79 x 1.55
4873043-6	049700BR	FRICTION BRONZE	45 INT	5.063 x 3.653 x .061	128.60 x 92.79 x 1.55

ALTO OFF-HIGHWAY CATALOG

VOLVO

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
795322	306709-155	STEEL	8 EXT	5.615 x 3.903 x .061	142.62 x 99.14 x 1.55

WAGNER

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
378858	341701	STEEL (ROUND TOOTH)	12 EXT	16.065 x 9.475 x .126	408.05 x 240.66 x 3.20

YALE

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
0592179-00	308701	STEEL	64 EXT	8.094 x 5.727 x .065	205.59 x 145.47 x 1.65
0592180-00	308700A	FRICTION BRONZE	44 INT	7.730 x 5.430 x .110	196.60 x 138.20 x 2.79
4907850	308701	STEEL	64 EXT	8.094 x 5.727 x .065	205.59 x 145.47 x 1.65
505971578	023701-300	STEEL	54 EXT	5.472 x 3.898 x .119	138.99 x 99.01 x 3.01
5184708-19	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
5800145-55	049720-200	FRICTION HEG PLI	45 INT	5.250 x 3.653 x .082	133.35 x 92.79 x 2.08
58001956	319722G	FRICTION PTO HEG PLI	45 INT	5.250 x 3.653 x .098	133.35 x 92.79 x 2.49
630243	334710	FRICTION BRONZE	37 EXT	7.550 x 4.620 x .094	192.00 x 117.60 x 2.40
643847	308701	STEEL	64 EXT	8.094 x 5.727 x .065	205.59 x 145.47 x 1.65
643848	308700A	FRICTION BRONZE	44 INT	7.730 x 5.430 x .110	196.60 x 138.20 x 2.79
900-952-804	334712	FRICTION	38 INT	5.260 x 3.040 x .110	133.70 x 77.30 x 2.80

ZF

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
Not Available	330700C260	FRICTION HEG WF	41 INT	4.907 x 2.710 x .102	124.64 x 68.83 x 2.59
Not Available	330701A160	STEEL	8 EXT	5.184 x 3.156 x .063	131.67 x 80.16 x 1.60
0501-309-329	329706	FRICTION BRONZE	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
0501-309-330	329708	FRICTION BRONZE	35 EXT	6.981 x 4.300 x .079	177.32 x 109.22 x 2.01
0501-309-541	329708	FRICTION BRONZE	35 EXT	6.981 x 4.300 x .079	177.32 x 109.22 x 2.01
0501-309-600	329706	FRICTION BRONZE Model 6WG-200	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
0750-140-009	329706	FRICTION	27 EXT	5.405 x 3.592 x .079	137.29 x 91.24 x 2.01
0750-140-010	329708	FRICTION BRONZE	35 EXT	6.981 x 4.300 x .079	177.32 x 109.22 x 2.01
464-230-8330	329707-150	STEEL - KOLENE Model 6WG-200	29 EXT	5.165 x 3.356 x .059	131.19 x 85.24 x 1.50
464-230-8331	329707-250	STEEL - KOLENE Model 6WG-200	29 EXT	5.165 x 3.356 x .098	131.19 x 85.24 x 2.49
464-230-8332	329707-200	STEEL - KOLENE Model 6WG-200	29 EXT	5.165 x 3.356 x .079	131.19 x 85.24 x 2.01
7302726	053703	STEEL	12 EXT	6.143 x 4.690 x .071	156.03 x 119.13 x 1.80
7302727	053702	FRICTION (PAPER TYPE) TAN PL	24 INT	5.629 x 4.334 x .061	142.98 x 110.08 x 1.55
7302752	053700	FRICTION (PAPER TYPE) HEG SMOOTH	34 INT	3.931 x 2.684 x .061	99.850 x 68.170 x 1.55
7302753	053701	STEEL	24 EXT	4.245 x 2.999 x .071	107.82 x 76.17 x 1.80

MISCELLANEOUS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
089-1280-00045CG	320701	STEEL	4 EXT	5.500 x 2.992 x .062	139.70 x 76.00 x 1.57
09-1280-00046-CG	320700	FRICTION TAN WF	28 INT	4.250 x 2.712 x .105	107.95 x 68.88 x 2.67
UCL10107-14	DA-501	DAMPER CARRIER PLATE	N/A	11.878 x 2.018 x .062	301.70 x 51.26 x 1.57

ALTO OFF-HIGHWAY CATALOG

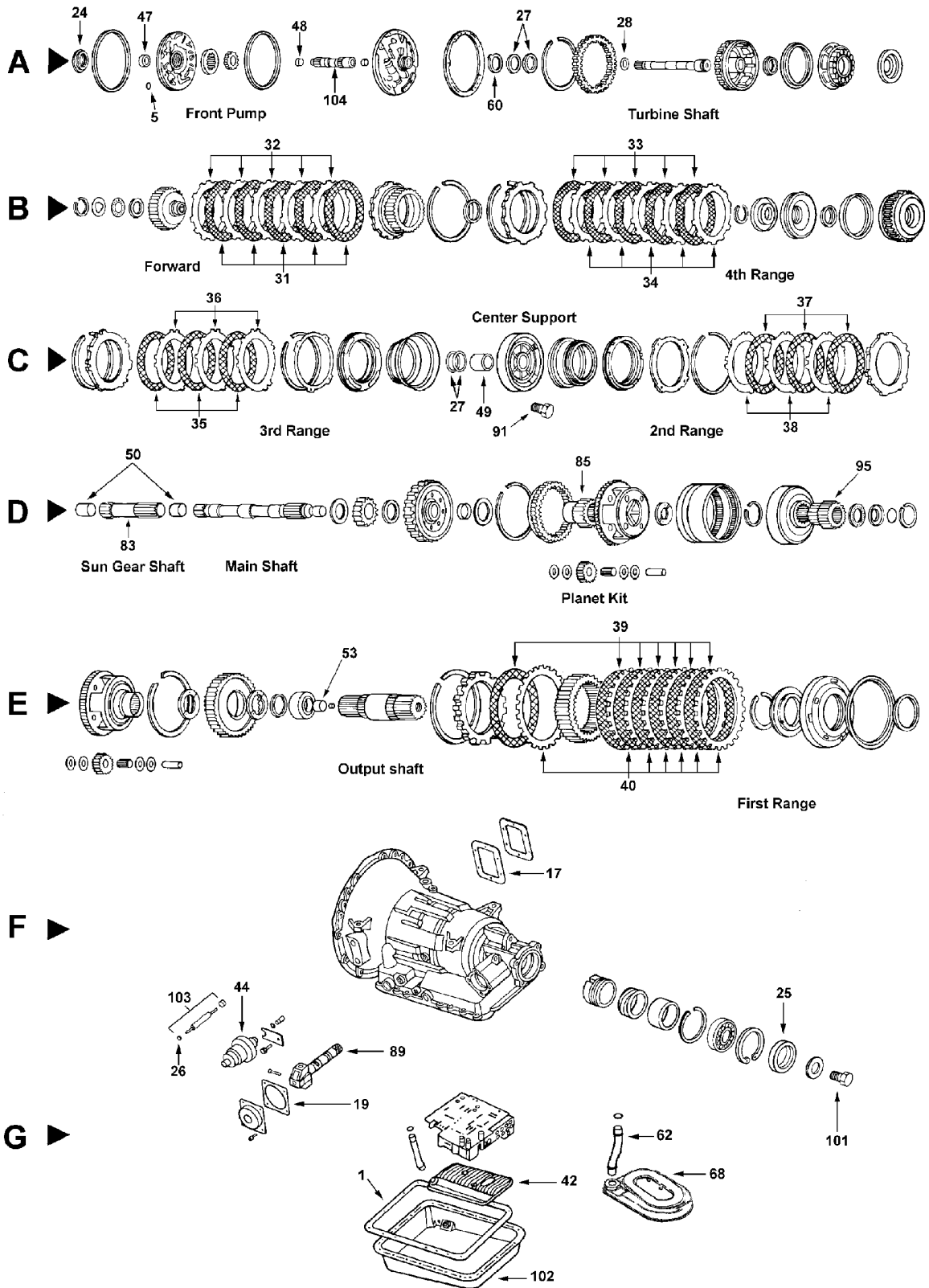
MISCELLANEOUS

REF	ALTO	DESCRIPTION	Spline	Inch (ODxIDxThk)	MM (ODxIDxThk)
N115485	DA-502	DAMPER CARRIER PLATE	N/A	13.869 x 2.507 x .086	352.27 x 63.68 x 2.18
N115495	DA-503	DAMPER CARRIER PLATE	N/A	11.878 x 2.018 x .064	301.70 x 51.26 x 1.63
105890	DA-504	DAMPER CARRIER PLATE	N/A	13.000 x 2.507 x .082	330.20 x 63.68 x 2.08
115456	DA-504	DAMPER CARRIER PLATE	N/A	13.000 x 2.507 x .082	330.20 x 63.68 x 2.08
106083	DA-505	DAMPER CARRIER PLATE	N/A	11.865 x 2.507 x .064	301.37 x 63.68 x 1.63
UCL11911-19	DA-505	DAMPER CARRIER PLATE	N/A	11.865 x 2.507 x .064	301.37 x 63.68 x 1.63
1060836	DA-506	DAMPER CARRIER PLATE	N/A	11.836 x 2.507 x .062	301.32 x 63.68 x 1.57
UCL11911-146	DA-506	DAMPER CARRIER PLATE	N/A	11.836 x 2.507 x .062	301.32 x 63.68 x 1.57

ALLISON

AT540, 542, 543, 545, 1545, VS

1970-On



ALLISON

AT540, 542, 543, 545, 1545, VS
1970-On

KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit - AT540, 542, 545	70-On	055752C	055753B	055800	055901LS	055901 *
	* Note: for Super Kit AT540, 542 70-On order Alto# 055901SK	70-On					
	* Note: for Super Kit AT545 70-91 order Alto# 055901SK	70-91					
	* Note: for Super Kit AT545 92-On order Alto# 055901BSK	92-On					
KT	Rebuilding Kit - AT540, 542, 545 with OE Style Gasket Set	70-On	055752C	055753B	055800A	055901ALS	055901A *
	* Note: for Super Kit (OE Style Gasket) AT540, 542 70-On order Alto# 055901ASK	70-On					
	* Note: for Super Kit (OE Style Gasket) AT545 70-91 order Alto# 055901ASK	70-91					
	* Note: for Super Kit (OE Style Gasket) AT545 92-On order Alto# 055901CSK	92-On					

MISCELLANEOUS GASKETS & KIT COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	055645	K11900-2	Front Pump Seal Kit - contains Pump Gasket, Pump Seal & Pump Washers		70-On	1	
1G	055816	29501160	Gasket, oil pan	Cork/Rub	70-On	1	
1G	055815A	29501160	Gasket, oil pan - Armstrong (Solid)	Fiber	70-On	1	
1G	055815	29501160	Gasket, oil pan - Armstrong	Fiber	70-On	1	
17F	055006	23016683	Gasket, PTO cover	Cork/Rub	70-On	1	
17F	055006A	23016683	Gasket, PTO cover - Armstrong	Fiber	70-On	1	
19G	055007	23018625	Gasket, Governor cover	Cork/Rub	70-On	1	
19G	055007A	23018625	Gasket, Governor cover - Armstrong	Fiber	70-On	1	
3A	031050	23016559	Lathe Cut, Front pump body		70-On	1	
4B	031051	8623101	Lip Seal, Forward & 4th cl outer		70-On	1	
5B	031054	8623102	Lip Seal, Forward & 4th cl inner		70-On	1	

FRICITION CLUTCHES *Featuring Carbonite® Friction Material

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
31B	055700-200	23042197	Forward *	.080/2.03	70-On	5	Crb - 42T - OD: 5.89"
40E	055702B246	23042198	1st Range *	.097/2.46	70-On	7	Crb - 60T - OD: 8.15"
37C	055724A255	23042199	2nd Range *	.100/2.55	70-On	3-4	Crb - 80T - OD: 9.100"
35C	055724A255	23042199	3rd Range *	.100/2.55	70-On	3-4	Crb - 80T - OD: 9.100"
35/37 C	055704B250	29537887	2nd & 3rd Range - Hardened spline *	.100/2.55	70-On	6-8	Crb - 80T - OD: 9.100"
33B	055700-200	23042197	4th Range *	.080/2.03	70-On	5	Crb - 42T - OD: 5.89"
NI	055710	NA	VS series	.107/2.70	70-On	AR	Heg - 59T - OD: 8.38"

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
32B	055701-230	6836518	Forward	.091/2.30	70-On	4-5	12T - ID: 4.6"
		29530330					
NI	055701W250	29505875	Forward - wave	.098/2.55	92-On	1	12T - ID: 4.6"
40E	055703	6831705	1st Range	.098/2.55	70-On	7	30T - ID: 6.5"
38C	055705	29515399	2nd Range	.098/2.55	70-On	3	9T - ID: 7.25"
36C	055705	29515399	3rd Range	.098/2.55	70-On	3	9T - ID: 7.25"
36C	055705A255	NA	3rd Range CaseSaver™ steel	.098/2.55	70-On	3	9T - ID: 7.25"
34B	055701-230	6836518	4th Range	.091/2.30	70-On	5-6	12T - ID: 4.6"
		29530330					
NI	055711	NA	VS series	.089/2.25	ALL	AR	15T - ID: 6.15"

OEI® Original Equipment Improvements

ALLISON

AT540, 542, 543, 545, 1545, VS
1970-On

OEI® Original Equipment Improvements

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	055758	NA	CaseSaver™ 3rd Range		70-On	1	

FILTER KITS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	FK031946	6884270 29540976	Filter Kit, thin Stainless Steel Filter with OE Style Gsk		70-On	1	
KT	FK031946A	6884270 29540976	Filter Kit, thin Stainless Steel Filter with Cork Gsk		70-On	1	
KT	FK056940A	23019201	Filter Kit, thick filter OE Style Gsk without tube		70-On	1	Aftermarket style
KT	FK056940B	23019201	Filter Kit, thick filter Cork Gsk without tube		70-On	1	Aftermarket style
KT	FKF153A	29502302	Filter Kit, thick filter OE Style Gsk without tube		70-On	1	OE style
KT	FKF153B	29502302	Filter Kit, thick filter Cork Gsk without tube		70-On	1	OE style

FILTERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
42G	031946	29502295 29503617	Filter - thin with stainless steel screen		70-On	1	
42G	031948A	6259423	Filter - Brass		70-On	1	
68G	056940A	29528474	Filter - thick with Grommet, without filter tube		70-On	1	Aftermarket style
68G	F153A	6883044	Filter - thick without filter tube		70-On	1	OE style
			Note: To convert AT540 to AT545 requires filter tube and thick filter				

METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
24A	055400	23015975	Front Pump	Vamac®	70-On	1	
25F	055405	6778050 29536379	Extension Housing		70-On	1	
26G	032410C	23010610	Manual Lever		70-On	1	

SEALING RINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	055600	NL	Sealing Ring Kit (with Teflon)		70-On	1	
KT	055600A	NL	Sealing Ring Kit (with Vespel®)		70-On	1	
27A	055100	23046598	Sealing Ring, Front pump	Teflon	70-On	2	
27A	055100A	23046598	Sealing Ring, Front pump	Vespel®	70-On	2	
28A	055101	8616052	Sealing Ring, Input Shaft	Metal	70-On	1	
27C	055100	23046598	Sealing Ring, Center Support	Teflon	70-On	2	
27C	055100A	23046598	Sealing Ring, Center Support	Vespel®	70-On	2	

MODULATORS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
44F	055500	8629941	Modulator - Large Black cannister		70-On	1	with O Ring
44F	055502	3039092	Modulator - Dual Diaphragm		70-On	1	with O Ring

BUSHINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	055625	NL	Bushing Kit AT540, AT542		70-On	1	
KT	055625	NL	Bushing Kit AT545 early		70-91	1	
KT	055625A	NL	Bushing Kit AT545 late		92-On	1	
47A	055200	23018806	Front Pump	Bronze	70-On	1	
48A	031201	6836272	Stator Shaft - Front	1.125 OD	70-On	1	
49C	055205	23012990	Center Support	1.54 OD	70-On	1	
49C	055205A	29506468	Center Support (AT545 Only)	1.60 OD	92-On	1	
50D	031201	6836272	Sun Gear Shaft Front	1.125 OD	70-On	1	

ALLISON

AT540, 542, 543, 545, 1545, VS

1970-On

BUSHINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
50D	055201	29522949	Sun Gear Shaft Front (AT545 only)	1.1910 OD	92-On	1	
50D	031201	6836272	Sun Gear Shaft Rear	1.125 OD	70-On	1	
53E	055208	8622947	Output Shaft	.775 OD	70-On	1	
53E	055208A	29502231	Output Shaft (AT545 Only)	.815 OD	92-On	1	
2D	055206	23045072	Front Planetary Carrier	1.88 OD	70-On	1	

WASHERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
60A	055150-147	6831620	TW, Front Pump - "0"	.058	70-On	AR	
60A	055150-188	6831621	TW, Front Pump - "1"	.074	70-On	AR	
60A	055150-230	6831622	TW, Front Pump - "2"	.091	70-On	AR	
60A	055150-272	6831623	TW, Front Pump - "3"	.107	70-On	AR	
60A	055150-312	6831624	TW, Front Pump - "4"	.123	70-On	AR	
60A	055150-355	6831625	TW, Front Pump - "5"	.140	70-On	AR	
N I	055152-015	6837429	TW, Turbine Brg. shim - Gold	.015	70-On	AR	AT543
N I	055152-030	6837430	TW, Turbine Brg. shim - Chrome	.030	70-On	AR	AT543
N I	055152-042	6837431	TW, Turbine Brg. shim - Plain	.042	70-On	AR	AT543
N I	055152-060	6837432	TW, Turbine Brg. shim - Black	.060	70-On	AR	AT543
N I	055152-075	6837433	TW, Turbine Brg. shim - Copper	.075	70-On	AR	AT543
N I	031157	23013454	Washer, 4th clutch driving hub		70-On	AR	

SHAFTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
15D	055379	23013474	Shaft - Main		70-On	1	
15D	055379PS	23013474	Shaft - Main (heavy duty)		70-On	1	
16A	055380	29525516	Shaft - Turbine		70-On	1	
83D	055381	6835937	Shaft - Sun Gear		70-On	1	

HARD PARTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	055354A	6831679	Planetary Repair Pin		70-On	4	
N I	055354B	29501499	Planetary Repair Needle Roller		70-On	76	
N I	055354C	6831680	Planetary Repair Washer - steel		70-On	8	
N I	055354D	6839376	Planetary Repair Washer - bronze		70-On	8	
N I	TBA	29541833	Torque Converter Kit - AT545		70-On	1	
N I	TBA	29541338	Pump Body and Gear - AT545		70-On	1	
N I	TBA	29503064	Governor Drive Gear - AT545		70-On	1	
KT	TBA	6883938	Governor gear kit		70-On	1	
89G	TBA	6881466	Governor assembly - ID no 460		70-On	1	
89G	055351	6885570	Governor assembly - ID no 461		70-On	1	
89G	055352	6885571	Governor assembly - ID no 462		70-On	1	
85D	TBA	6835936	Sun Gear - Center		70-On	1	
95D	TBA	6884902	Sun Gear - Rear		70-On	1	
83D	TBA	6835937	Sun Gear Shaft		70-On	1	
104A	055375	23014304	Ground Sleeve - with bushing & bearing		70-On	1	
102G	TBA	23045906	Deep oil pan - ribbed with heater hole		70-On	1	
102G	TBA	29501358	Deep oil pan - dual fill tube locations		70-On	1	

MISCELLANEOUS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
62G	056565	6883046	Oil Filter tube		70-On	1	
N I	055557	23010915	Torque Converter bolt - Metric	M8	70-On	AR	
N I	055558	6885391	Torque Converter bolt - English	3/8" - 16	70-On	AR	
5A	055003	29512113	Washer, Front pump bolts		70-On	17	
N I	055552	3909063	Washer (Lock), Center support retainer		70-On	8	
91C	055554	6836587	Bolt, Center support to case		70-On	1	

ALLISON

AT540, 542, 543, 545, 1545, VS

1970-On

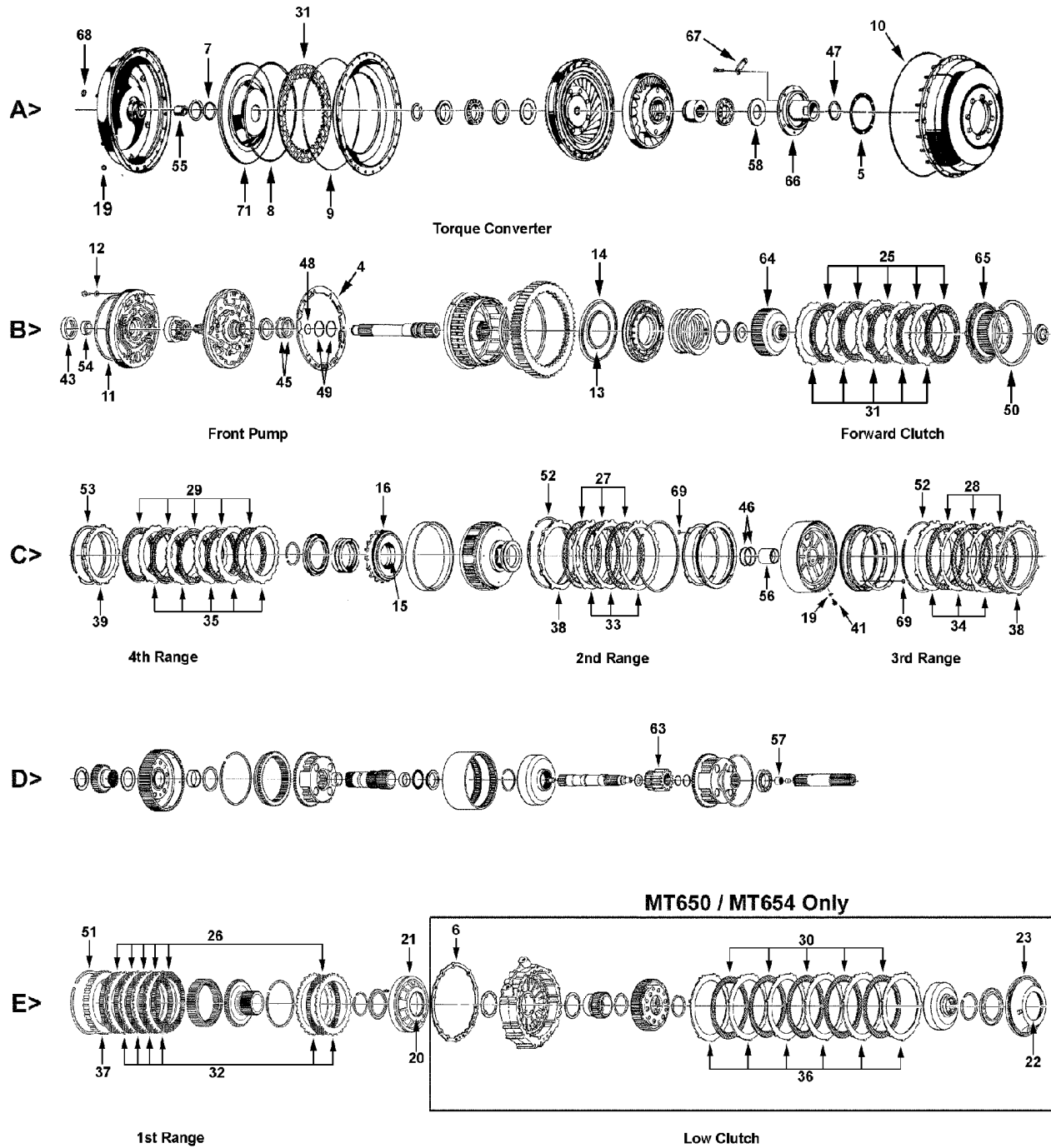
MISCELLANEOUS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
101F	056557	29510838	Bolt, Output shaft		70-On	1	
KT	TBA	NA	Manual Control lever repair kit		70-On	1	
NI	TBA	9436642	Plug for heater hole in pan		70-On	1	

ALLISON

MT640, 643, 644 - 4 Speed

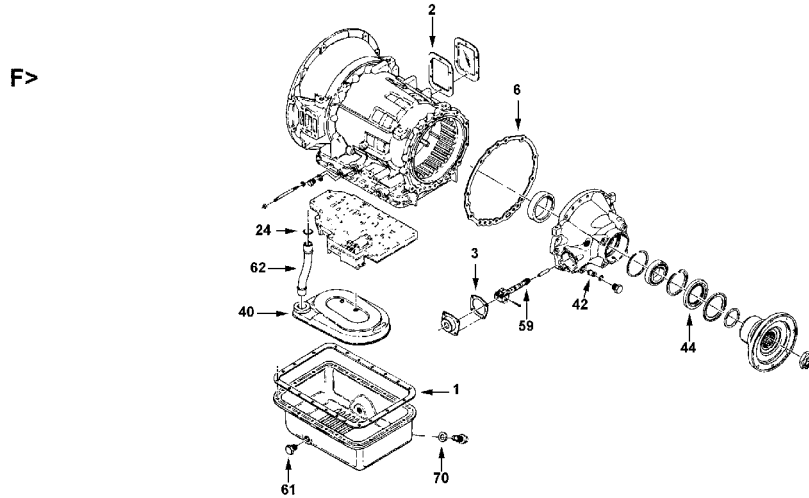
MT650, 653, 654 - 5 Speed



ALLISON

MT640, 643, 644 - 4 Speed

MT650, 653, 654 - 5 Speed



KITS								*Add Suffix SK for Super Kit
ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit	
KT	Rebuilding Kit - MT640, 643, 650, 653 (contains 1 front pump seal #056401)	72-On	056752D	056753	056800	056901LS	056901	
KT	Rebuilding Kit - MT640, 643, 650, 653 (contains 2 front pump seals #056400A & 056401)	72-On	056752D	056753	056800B	056901BLS	056901B	
KT	Rebuilding Kit - MT640, 643, 650, 653 with OE Style Gasket Set (contains 2 front pump seals #056400A & 056401)	72-On	056752D	056753	056800A	056901ALS	056901A	
KT	Rebuilding Kit - MT644, 654 (Phase 1)	72-On	056752E	056753A	056802	056903LS	056903	
KT	Rebuilding Kit - MT654 (Phase 2)	72-On	056752F	056753B	056802	056903ALS	056903A	

MISCELLANEOUS GASKETS & KIT COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
1F	055816	29501160	Gasket, Oil pan	Cork/Rub	72-On	1	
1F	055815A	29501160	Gasket, Oil pan - Armstrong (Solid)	Fiber	72-On	1	
1F	055815	29501160	Gasket, Oil pan - Armstrong	Fiber	72-On	1	
2F	055006	29501161	Gasket, PTO cover	Cork/Rub	72-On	1	
2F	055006A	29501161	Gasket, PTO cover - Armstrong	Fiber	72-On	1	
3F	055007	23018625	Gasket, Governor cover	Cork/Rub	72-On	1	
3F	055007A	23018625	Gasket, Governor cover - Armstrong	Fiber	72-On	1	
4B	056001	23046344	Gasket, Front Pump		72-On	1	
N I	056008	6884872	Gasket, Lube valve adapter		72-On	1	
5A	055008	6759971	Gasket, TC Hub - except MT644/654		72-On	1	
5A	056005	6771366	Gasket, TC Hub - MT644/654		72-On	1	
6EF	056007	23045099	Gasket, Adapter to case		72-On	2	
7A	010136B	6770820	O Ring, Lockup clutch - inner	Poly	72-On	1	
N I	056835	NA	Kit, Torque Converter Seal MT643		72-On	1	contains 5 seals
8A	056061	6758036	Lathe Cut, Lockup clutch - outer		72-On	1	
9A	055055	23016564	Lathe Cut, Lockup clutch backing plate		72-On	1	
10A	055055	23016564	Lathe Cut, TC pump cover - except MT644/654		72-On	1	
11B	056050	23016347	Lathe Cut, Front pump to case		72-On	1	
12B	056006	6834908	Washer, Front pump bolt		72-On	12	
KT	001015	NA	Kit, Lipseal		72-On	1	contains 12 Lipseals
13B	031052	23015880	Lipseal, Forward clutch - inner		72-On	1	
14B	056058	6833981	Lipseal, Forward clutch - outer		72-On	1	
15C	031052	23015880	Lipseal, 4th Clutch - inner		72-On	1	
16C	056058	6833981	Lipseal, 4th Clutch - outer		72-On	1	

ALLISON

MT640, 643, 644 - 4 Speed

MT650, 653, 654 - 5 Speed

MISCELLANEOUS GASKETS & KIT COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
17C	056055	23011471	Lipseal, 2nd & 3rd Clutch - inner		72-On	1	
18C	056056	6883035	Lipseal, 2nd & 3rd Clutch - outer		72-On	1	
20E	056053	6883031	Lipseal, 1st Clutch - inner		72-On	1	
21E	056054	6883033	Lipseal, 1st Clutch - outer		72-On	1	
22E	056053	6883031	Lipseal, Low Clutch - inner		72-On	1	
23E	056056	6883035	Lipseal, Low Clutch - outer		72-On	1	
24F	010216B	6762127	O Ring, Filter tube		72-On	1	
N I	010115B	8658110	O Ring, Modulator		72-On	1	
N I	010116B	6882689	O Ring, Governor feed filter		72-On	1	
68A	056552A	23014462	Nut, Flexplate bolt		72-On	6	
19A	056566	190139	Nut, Torque Converter		72-On	24	

FRICITION CLUTCHES *Featuring Carbonite® Friction Material

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
25B	056700C255	23042200	Forward Clutch *	.100	72-On	5-6	Crb - 30T - OD:7.182" - PLI
26E	055704B250	29537887	1st Range - Hardened spline *	.100	72-On	6	Crb - 80T - OD:9.119" - PLI
26E	055724A255	23042199	1st Range *	.100	72-On	6	Crb - 80T - OD:9.119" - PLI
27C	056702C325	6835720	2nd Range *	.128	72-On	3-4	Crb - 50T - OD:10.841" - PLI
28C	056702C325	23042201	3rd Range *	.128	72-On	3	Crb - 50T - OD:10.841" - PLI
29C	056700C255	23042200	4th Range *	.100	72-On	4-5	Crb - 30T - OD:7.182" - PLI
30E	056702C325	6835720	Low Range except phase 2 *	.128	72-On	5-6	Crb - 50T - OD:10.841" - PLI
30E	056722B315	23042210	Low Range phase 2 only *	.125	72-On	7	Crb - 71T - OD:10.481" - PLI
31A	056712	23048511	Lockup Clutch (TC) - MT644/654	.205	72-On	1	Heg - 73T - OD:14.600" - PLI
31A	056712A	23046108	Lockup Clutch (TC) - except MT644/654	.186	72-On	1	Heg - 56T - OD:12.389" - PLI

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
31B	056701	23016610	Forward	.100	72-On	4-6	18T - ID: 5.530"
32E	056703	23016606	1st Range	.100	72-On	6	36T - ID: 7.333"
33C	056705	23016608	2nd Range	.100	72-On	3-4	11T - ID: 8.825"
34C	056705	23016608	3rd Range	.100	72-On	3	11T - ID: 8.825"
35C	056701	23016610	4th Range	.100	72-On	5-6	18T - ID: 5.530"
36E	056705	23016608	Low Range except Phase 2	.100	72-On	6-7	11T - ID: 8.825"
36E	056705A	23045054	Low Range Phase 2 only	.100	72-On	8	11T - ID: 9.198"

PRESSURE PLATES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
37E	TBA	23046721	1st Range backing (#5)	.676	72-On	1	
38C	TBA	23046745	2nd & 3rd Range backing - selective (#7)	.482	72-On	1	
38C	TBA	23046746	2nd & 3rd Range backing - selective (#8)	.455	72-On	1	
38C	TBA	23046718	2nd & 3rd Range backing - selective (#9)	.468	72-On	1	
39C	056763A	29516333	4th Range backing		72-On	1	
N I	055761	23016957	Backing Plate		72-On	1	

FILTER KITS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	FK056940A	NA	Filter Kit - thick filter OE Style Gsk without tube		72-On	1	
KT	FK056940B	NA	Filter Kit - thick filter Cork Gsk without tube		72-On	1	
KT	FKF153A	NA	Filter Kit - thick filter OE Style Gsk without tube - SPX		72-On	1	
KT	FKF153B	29502302	Filter Kit, thick filter Cork Gsk without tube		72-On	1	OE style
KT	FK056940C	NA	Filter Kit - thick filter for Shallow Pan with tube - OE Style Gsk		72-On	1	

ALLISON

MT640, 643, 644 - 4 Speed

MT650, 653, 654 - 5 Speed

FILTER KITS

KT	FK056940E	29538491	Filter Kit - thick filter for Deep Pan with tube - OE Style Gsk		72-On	1	
----	-----------	----------	---	--	-------	---	--

FILTERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
40F	056940A	29538474	Filter without tube - AFTMKT		72-On	1	
40F	F153A	6883044	Filter without tube - SPX		72-On	1	
N I	056942	NA	Filter - Deep pan with pipe		72-On	1	
N I	056942X	NL	Filter - Shallow pan with pipe		72-On	1	
41C	056560	23010654	Screen - Center Support		72-On	1	
42F	055553	8624471	Screen - Governor oil (early)		72-On	1	Thimble type
42F	056559	6882687	Screen - Governor oil (late)		72-On	1	Barrel type

METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
43B	056400A	23016643	Front Pump	3.885	72-On	1	
43B	056401	23045556	Front Pump	3.378	72-On	1	
43B	056402	6837228	Front Pump	3.362	72-On	1	
44F	055405	6778050	Extension Housing	3.632	72-On	1	MT640/643/644
44F	056405	6773311	Extension Housing	4.758	72-On	1	MT650/653/654

SEALING RINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	056600	NA	Sealing Ring Kit - 4T/4M		72-On	1	AFTMKT
KT	056600A	NA	Sealing Ring Kit - 4V/4M		72-On	1	OE (Vespel®)
KT	056100A	23014632	Sealing Ring Kit - Front Pump/Center Support 4V		72-On	1	OE (Vespel)
45B	056100	NA	Front Pump stator	Teflon	72-On	2	
46C	TBA	23015617	Front Pump Stator	Vespel®	72-On	2	Not available separate
46C	056100	NA	Center Support	Teflon	72-On	2	
46C	TBA	23015617	Center Support	Vespel®	72-On	2	Not available separate
47A	056101	6830187	Torque Converter Hub	Metal	72-On	1	
48B	056102	6839163	Input Shaft	Metal	72-On	1	
49B	056103	6833999	Input Shaft to Forward drum	Metal	72-On	2	

SNAP RINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	056259	6836676	Internal Torque Converter		72-On	1	
50B	TBA	23018867	Forward Drum		72-On	1	
51E	TBA	6884275	1st Range Drum		72-On	1	
52C	TBA	6836267	2nd & 3rd Range Drum		72-On	1	
53C	TBA	23018867	4th Range Drum		72-On	1	

BUSHINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	056625	NA	Bushing Kit		72-On	1	with early front pump
KT	056625A	NA	Bushing Kit - MT640, 650, 653		72-On	1	with OEM front pump
KT	056625B	NA	Bushing Kit - MT644, 654		72-On	1	with OEM front pump
KT	056630	NA	Bushing Kit - MT640 Series		72-On	1	without front pump
54B	056200	23046153	Front Pump body - MT640, 650, 653		72-On	1	
		29527101					
54B	056200A	23046152	Front Pump body - MT644, 654		72-On	1	
56C	056201	23011924	Center Support		72-On	1	
N I	056202	6834503	Sun Gear		72-On	2	
55A	056203	6756782	Torque Converter cover		72-On	1	
N I	056204	6835385	Front Planetary Cover		72-On	1	
57D	056205	23016859	Output Shaft		72-On	1	
N I	056206	29516211	Sun Gear		72-On	2	

ALLISON

MT640, 643, 644 - 4 Speed

MT650, 653, 654 - 5 Speed

BUSHINGS

NI	056207	6835398	Low Planetary		72-On	1	
----	--------	---------	---------------	--	-------	---	--

WASHERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	056635	na	Washer Kit (4)		72-On	1	
NI	056151	6839364	Washer - Front Planetary Sun Gear		72-On	AR	Bronze
NI	056152	6835386	Washer		72-On	AR	Bronze
NI	056153	6834389	Washer		72-On	AR	Bronze 2.191" ID
NI	056154	9432512	Washer race roller bearing		72-On	AR	Bronze
58A	055152-015	6837429	Spacer, TC turbine	.015	72-On	AR	Gold
58A	055152-030	6837430	Spacer, TC turbine	.030	72-On	AR	Silver
58A	055152-042	6837431	Spacer, TC turbine	.042	72-On	AR	Plain
58A	055152-060	6837432	Spacer, TC turbine	.060	72-On	AR	Black
58A	055152-075	6837433	Spacer, TC turbine	.075	72-On	AR	Copper

SHAFTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	056379	23013456	Shaft - Main 640, 643, 650, 653		72-On	1	
NI	056379A	23017699	Shaft - Main 644, 647, 654		72-On	1	
NI	056380	23012785	Shaft Turbine Alli MT643		72-On	1	

HARD PARTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
59F	055351	6885570	Governor Assembly - ID # 461		72-On	1	
59F	055352	6885571	Governor Assembly - ID # 462		72-On	1	
59F	056302	6885572	Governor Assembly - ID # 463		72-On	1	
59F	056303	6881471	Governor Assembly - ID # 465		72-On	1	
59F	056304	6882737	Governor Assembly - ID # 738		72-On	1	Brass
59F	056305	6882736	Governor Assembly - ID # 739		72-On	1	Brass
NI	055354A	6831679	Planetary Repair Pin		72-On	4	
NI	055354B	29501499	Planetary Repair Needle Roller		72-On	76	
NI	055354C	6831680	Planetary Repair Washer - steel		72-On	8	
NI	055354D	6839376	Planetary Repair Washer - bronze		72-On	8	
60F	056350	23045906	Deep oil pan - ribbed with heater hole		72-On	1	
60F	056350A	29501358	Deep oil pan - dual fill tube locations		72-On	1	
63D	056352	6883901	Sun Gear - rear planetary (except MT653)		72-On	1	
NI	TBA	29516215	Sun Gear - shaft assembly		72-On	1	
64B	056353	6834222	Forward clutch drive hub		72-On	1	
65B	056354	6834221	4th Range clutch drive hub		72-On	1	
65B	056354A	23017267	4th Range clutch drive hub		72-On	1	use with 18T piston
NI	056358	23014527	Ground sleeve with bearing - use with 056356		72-On	1	
NI	056359	29507674	Ground sleeve with bearing - MT644/654		72-On	1	(23014306)
71A	056301	6770845	Piston, Lockup clutch (TC)		72-On	1	

MISCELLANEOUS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
62F	056564	6883045	Oil Filter tube (updates prior to S/N 58071)		72-On	1	
61F	056306	29501131	Plug for heater hole in pan		72-On	1	
66A	056356	23016722	Converter Hub, (bolt on) MT643/653		72-On	1	
66A	056357	23017446	Converter Hub, MT654		72-On	1	
NI	056672	23013906	Converter Hub, MT654		72-On	1	
67A	055555	6769631	Lock strip, TC hub bolt		72-On	4	
69C	055552	3909063	Retainer, center support bolts		72-On	8	Black
NI	056553	23013398	Bolt, Center support to case	2.5	72-On	1	
NI	056555	23045343	Bolt, Center support to case	3.0"	72-On	1	
NI	056557	29510838	Bolt, Output shaft		72-On	1	
NI	056558	29500739	Washer, Output shaft bolt		72-On	1	

ALLISON

MT640, 643, 644 - 4 Speed

MT650, 653, 654 - 5 Speed

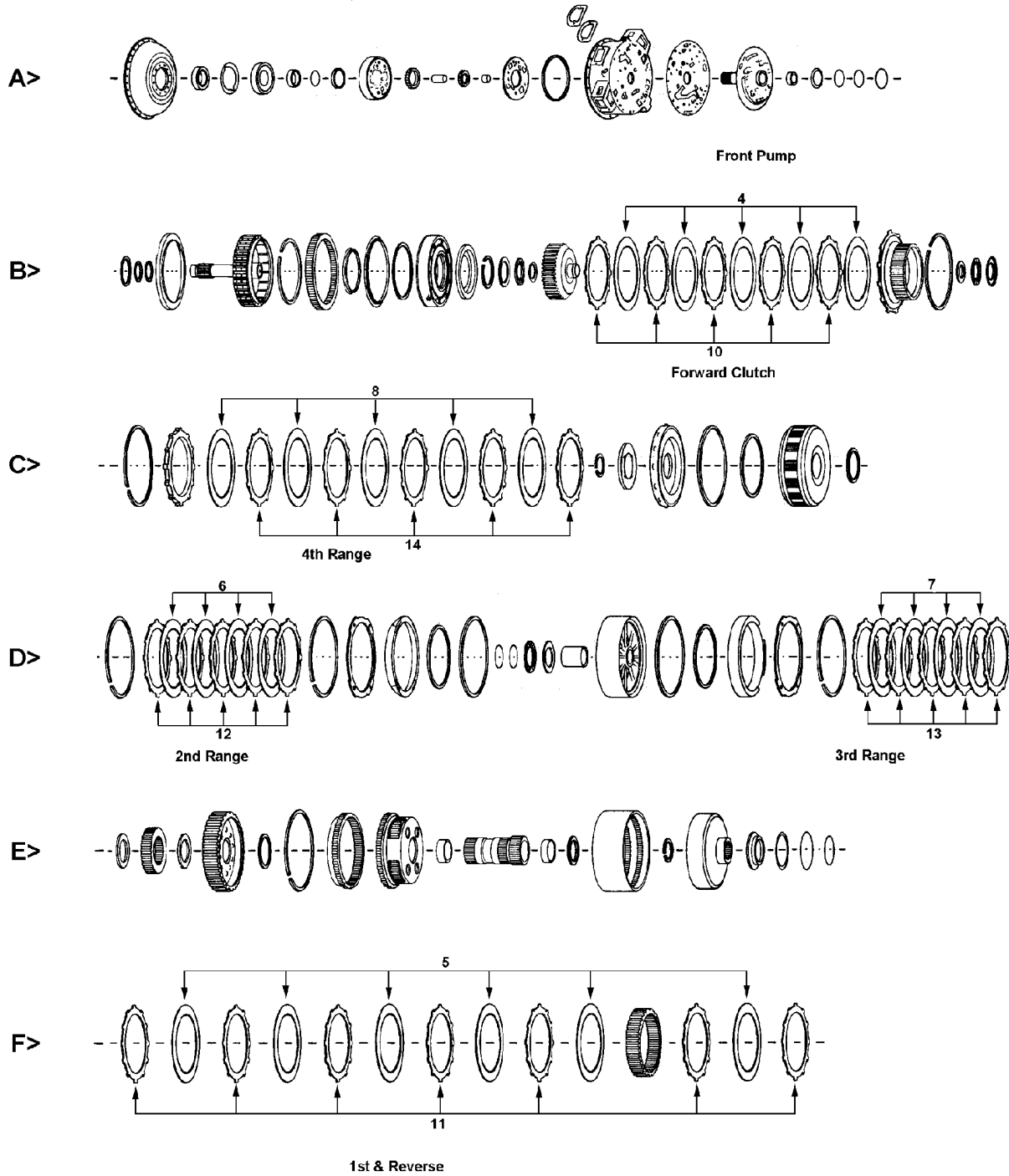
MISCELLANEOUS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
70F	056009	29507909	Washer, Drain plug		72-On	1	
N I	056307	29513517	Accordian Spring, TC stator freewheel unit	.896"	72-On	1	MT640, MT643
N I	056308	6774966	Accordian Spring, TC stator freewheel unit		72-On	1	MT640,643,650.653
KT	056466	23017610	Manual Control Lever repair kit		72-On	1	Shaft & Nut
N I	001033	23018535Kit	Spring, Stator Freewheel Unit - 10 Pc. Kit		72-On	1	

ALLISON

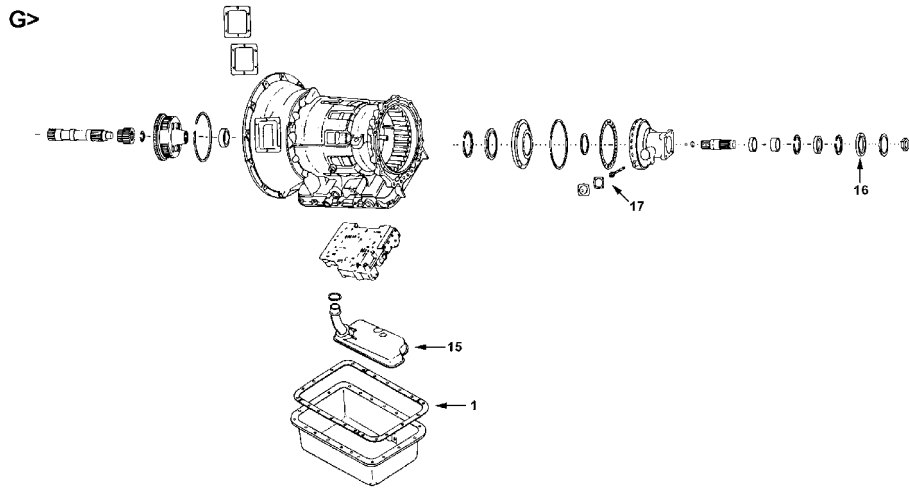
HT740, 747, 750, 754, V730

1972-On



ALLISON

HT740, 747, 750, 754, V730
1972-On



KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit - with Forward & 4th Range Hardened Spline Frictions	72-On	056752G	056753C	056804B	056905LS	056905

MISCELLANEOUS GASKETS & KIT COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
1G	056816	23010652	Gasket, Oil Pan		72-On	1	
1G	056815	23010652	Gasket, Oil Pan- Armstrong	Fiber	72-On	1	
1G	056815A	23010652	Gasket, Oil Pan- Armstrong (Solid)	Fiber	72-On	1	
2G	055006	29501161	Gasket, PTO cover	Cork/Rub	72-On	1	
2G	055006A	29501161	Gasket, PTO cover - Armstrong	Fiber	72-On	1	
3G	055007	23018625	Gasket, Governor cover	Cork/Rub	72-On	1	
3G	055007A	23018625	Gasket, Governor cover	Fiber	72-On	1	

FRICION CLUTCHES *Featuring Carbonite® Friction Material

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
4B	055724A255	23042199	Forward *	.100	72-On	6	Crb - 80T -OD: 9.119" - PLI
4B	055704B250	29537887	Forward with hardened spline *	.100	72-On	5	Crb - 80T -OD: 9.119" - PLI
5F	056710B380	23010439	1st Range *	.148	72-On	6	Crb - 62T -OD:12.557" - PLI
		23041786					
6D	056710B380	23010439	2nd Range *	.148	72-On	6	Crb - 62T -OD:12.557" - PLI
		23041786					
7D	056710B380	23010439	3rd Range *	.148	72-On	4	Crb - 62T -OD:12.557" - PLI
		23041786					
8C	055704B250	29537887	4th Range with hardened spline *	.100	72-On	5	Crb - 80T -OD: 9.119" - PLI

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
10B	056713	6834679	Forward	.103	72-On	5	14T - ID: 7.206"
11F	056711	23047771	1st Range	.103	72-On	7	38T - ID: 10.825"
11F	056711A	23047772	1st Range - selective	.120	72-On	AR	38T - ID: 10.825"
12D	056715	6834488	2nd Range	.103	72-On	AR	16T - ID: 10.746"
12D	056715A	6834720	2nd Range	.120	72-On	AR	16T - ID: 10.746"
13D	056715	6834488	3rd Range	.103	72-On	AR	16T - ID: 10.746"
13D	056715A	6834720	3rd Range	.120	72-On	AR	16T - ID: 10.746"

ALLISON

HT740, 747, 750, 754, V730

1972-On

STEEL CLUTCHES

14C	056713	6834679	4th Range	.103	72-On	5	14T - ID: 7.206"
-----	--------	---------	-----------	------	-------	---	------------------

FILTERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	056942A	29532584	Filter - lo aluminum pan w/8" Tube		72-On	1	
15G	056944	6839636	Filter - w/6" Tube		72-On	1	
15G	056944A	23013625	Filter - w/7" Tube		72-On	1	

METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	056403	23016947	Front Pump		72-On	1	
G16	056405	6773311	Rear Cover		72-On	1	
N I	032410C	23010610	Manual Lever		72-On	1	

HARD PARTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
17G	055351	6885570	Governor Assembly - ID # 461		72-On	1	
17G	055352	6885571	Governor Assembly - ID # 462		72-On	1	
17G	056302	6885572	Governor Assembly - ID # 463		72-On	1	

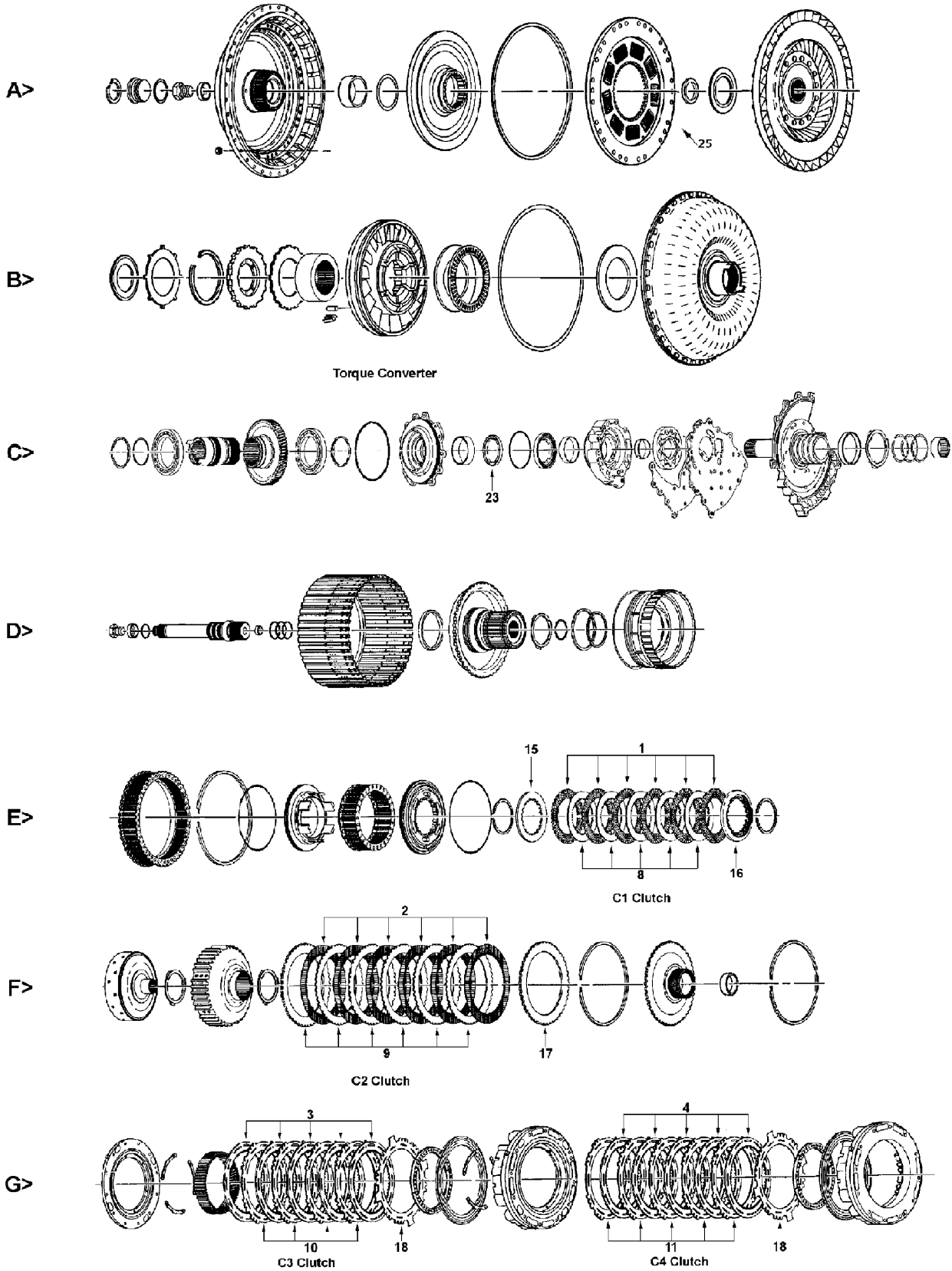
MISCELLANEOUS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	001033	23018535Kit	Spring, Stator Freewheel Unit - 10 Pc. Kit		72-On	1	
N I	001034	6837976Kit	Roller, Stator Freewheel Unit - 10 Pc. Kit		72-On	1	

ALLISON WORLD

MD3060, 3066, 3070, 3560

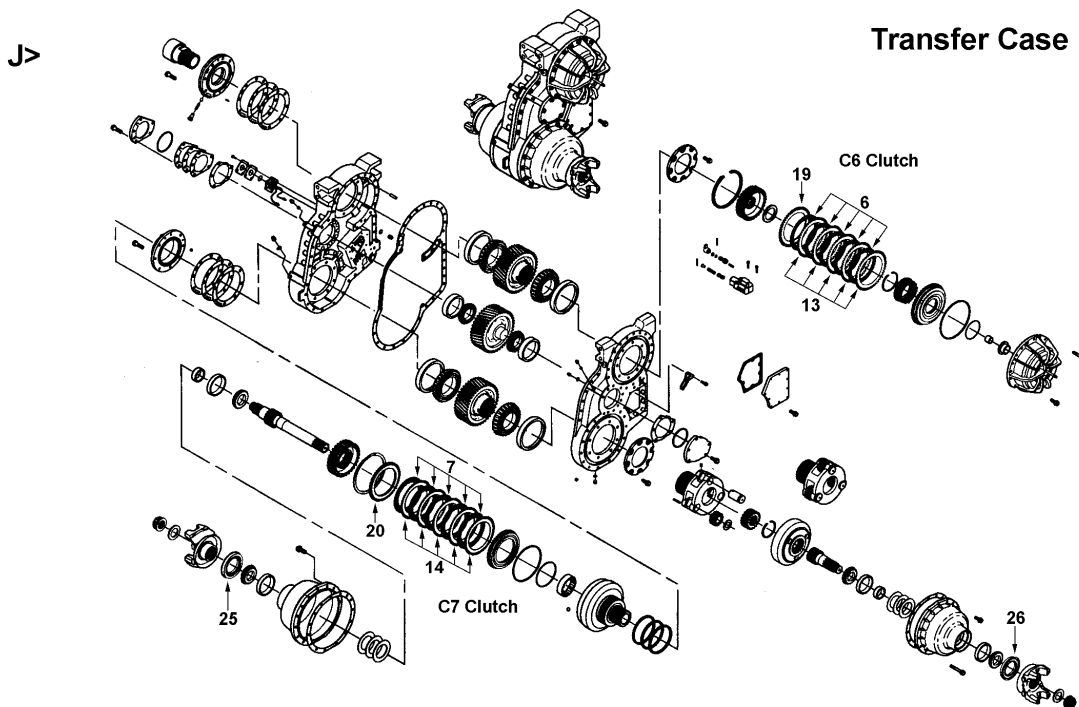
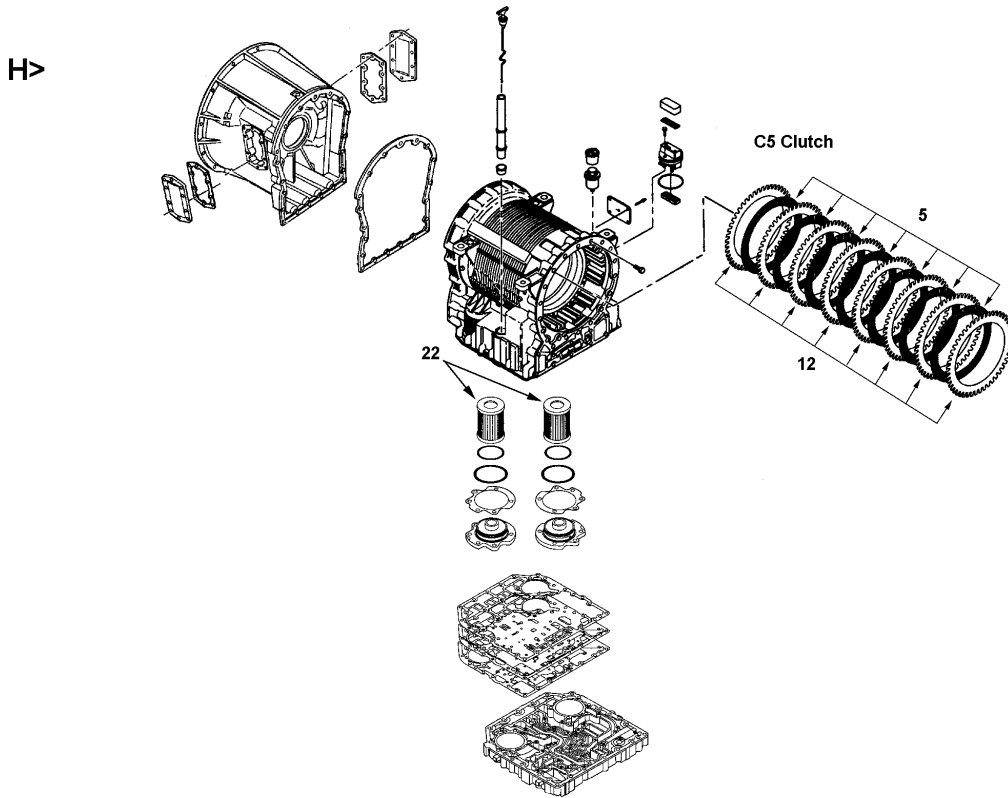
B300, 400, 3000MH 1995-On



ALLISON WORLD

MD3060, 3066, 3070, 3560

B300, 400, 3000MH 1995-On



ALLISON WORLD

MD3060, 3066, 3070, 3560

B300, 400, 3000MH 1995-On

KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit - 3rd Generation: Transmission only with OE style gasket set & control module	95-On	148752	148753	148800X	148901XLS	148901X
KT	Kit - 3rd Generation Control Module	95-On			148801V		
KT	Kit - 4th Generation Control Module	06-On			148803V		
KT	Rebuilding Kit - Transfer Case	95-On	TBA	TBA	TBA	TBA	TBA

FRICION CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
1E	148700A250	29536334 23045588	C1 Clutch - 2 teeth removed	.098	95-On	6	Heg - 44T - OD: 7.072" - PLI
2F	148702-250	29516170	C2 Clutch	.098	95-On	6	Heg - 84T - OD: 9.950" - PLI
2F	148712-250	29536335	C2 Clutch - 2 teeth removed	.098	00-On	6	Heg - 82T - OD: 10.5350" - PLNI
3G	148704-250	29516171 29536336	C3 Clutch	.098	95-On	5	Heg - 76T - OD: 9.550" - SM
4G	148704-250	29516171 29536336	C4 Clutch	.098	95-On	5	Heg - 76T - OD: 9.550" - SM
5H	148706-320	29516172 29536337	C5 Clutch	.127	95-On	7	Heg - 81T - OD: 10.00" - PLI
6J	148710-400	23048735	C6 Clutch (Transfer Case)	.157	95-On	5	Heg - 34T - OD: 8.589" - PLI
7J	055702B246	23042198	C7 Clutch (Transfer Case)	.098	95-On	5	Crb - 60T - OD: 8.150" - PLI
27A	148714	29544144 29530092	Torque converter damper assembly		95-On	1	

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
8E	148701-245	23045589	C1 Clutch	.095	95-On	5	44T - ID: 4.231"
9F	148703-245	29503141	C2 Clutch	.095	95-On	6	48T - ID: 8.540"
10G	148705-250	29501423	C3 Clutch	.098	95-On	5	24T - ID: 7.700"
11G	148705-250	29501423	C4 Clutch	.098	95-On	5	24T - ID: 7.700"
12H	148707-248	23045573	C5 Clutch	.097	95-On	8	48T - ID: 8.165"
13J	148711-250	29506073	C6 Clutch (Transfer Case)	.098	95-On	5	40T - ID: 7.090"
14J	148709-220	29502156	C7 Clutch (Transfer Case)	.086	95-On	5	67T - ID: 6.580"

PRESSURE PLATES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
15E	TBA	29534575	C1 Clutch - backing (MD models)	.315	98-On	1	stepped (retros)
N I	TBA	29539665	C1 Clutch - backing (MD models)	.545	98-On	1	22T - OD: 6.500"
15E	TBA	29534572	C1 Clutch - backing (HD models)	.315	98-On	1	stepped (retros)
16E	TBA	29534574	C1 Clutch - apply (MD models)	.178	98-On	1	22T - OD: 6.497" flat (retros)
16E	TBA	29534573	C1 Clutch - apply (HD models)	.157	98-On	1	flat (retros)
17F	TBA	23049224	C2 Clutch - apply (without PTO)		95-On	1	
17F	148761-630	23048530	C2 Clutch - apply (with PTO)	.249	95-On	1	
18G	148762-345	29501424	C3/C4 Clutch - apply	.136	95-On	2	
19J	TBA	29506074	C6 Clutch - backing		95-On	1	
20J	TBA	29508167	C7 Clutch - backing		95-On	1	

FILTER KITS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	FK148942A	29540493	Filter Kit - 4"		95-On	2	
KT	FK148942B	29540494	Filter Kit - 6"		95-On	2	

FILTERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	148940	29536860	Filter		95-On	1	
22H	148942	23049248	Filter - 2"		95-On	2	

ALLISON WORLD

MD3060, 3066, 3070, 3560

B300, 400, 3000MH 1995-On

FILTERS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
22H	148942A	29501202	Filter - 4"		95-On	2	
22H	148942B	29509723	Filter - 6"		95-On	2	
N I	TBA	29537067	Suction Filter		95-On	1	

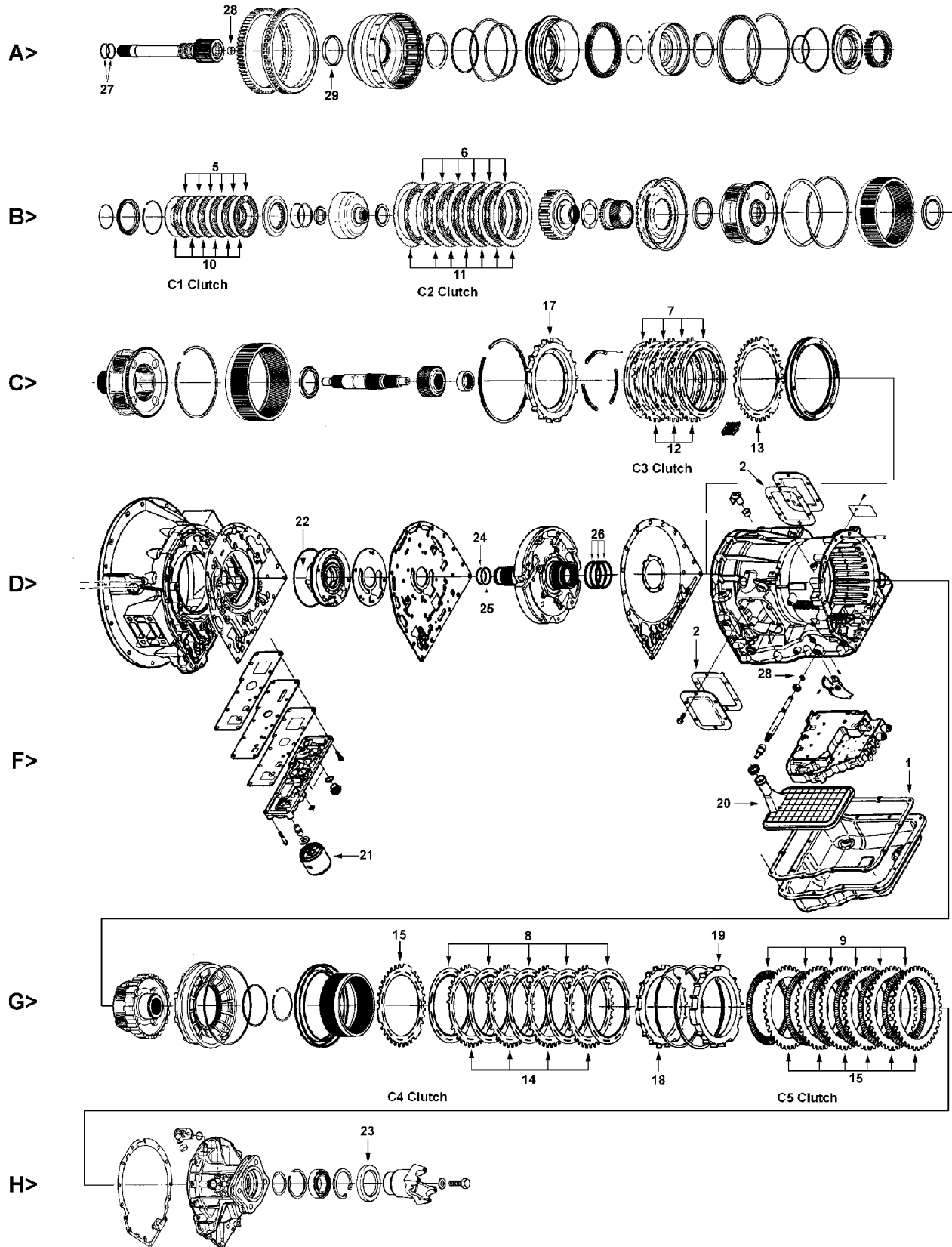
METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
23C	148400	29507528	Front Pump		95-On	1	
24H	148405	29515690	Extension Housing		95-On	1	
N I	148406	29545518	*** NEED DESCRIPTION		95-On	1	
25J	148425	29503336	Front Output (Transfer Case)		95-On	1	
26J	148425	29503336	Rear Output (Transfer Case)		95-On	1	

HARD PARTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	TBA	29501543	Shaft, Main		95-On	1	
N I	148375	29513484	Shaft, Stator support		95-On	1	

ALLISON
1000, 2000, 2400 SERIES
1999-On



ALLISON

1000, 2000, 2400 SERIES

1999-On

KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit without Bonded Pistons	99-05	152752	152753	152800	152901LS	152901
KT	Rebuilding Kit with Bonded Pistons	99-05	152752	152753	152800A	152901ALS	152901A
KT	Rebuilding Kit without Bonded Pistons	06-On	152752	152753	152802	152903LS	152903
KT	Rebuilding Kit with Bonded Pistons	06-On	152752	152753	152802A	152903ALS	152903A

MISCELLANEOUS GASKETS & KIT COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
1F	152816	29536526	Gasket, Oil Pan		99-On	1	
2D	055006	29501161	Gasket, PTO cover	Cork/Rub	99-On	2	
2D	055006A	29501161	Gasket, PTO cover - Armstrong	Fiber	99-On	opt.	

FRICTION CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
5B	152700-250	29530312 29538468	C1 Clutch - external Teeth	.098	99-On	6	Red - 36T - ID: 3.230" - PLNI
6B	152702-248	29530313 29538469	C2 Clutch	.097	99-On	6	Red - 24T - OD: 7.500" - PLNI
7C	152704-246	29531049	C3 Clutch - Red Eagle®	.097	99-On	4	Red - 117T - OD: 8.670" - SM
8G	152704-246	29531049	C4 Clutch - Red Eagle®	.097	99-On	5	Red - 117T - OD: 8.670" - SM
9G	152706-250	29537393	C5 Clutch - Red Eagle®	.098	99-On	6	Red - 115T - OD: 8.670" - SB

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
10B	152701-218	29530314	C1 Clutch - Internal Teeth	.086	99-On	6	34T - OD: 4.743"
11B	152703-218	29530315	C2 Clutch	.086	99-On	7	42T - ID: 6.302"
12C	152705-250	29531048	C3 Clutch	.098	99-On	3	27T - ID: 7.111"
14G	152705-250	29531048	C4 Clutch	.098	99-On	4	27T - ID: 7.111"
15G	TBA	29531046	C4 Clutch - wave		99-On	1	27T
16G	152707-250	29536482	C5 Clutch	.098	99-On	5-6	36T - ID: 7.108"
16G	152707-200	29536481	C5 Clutch - selective	.078	99-On	AR	36T - ID: 7.108"
16G	152707-300	29536483	C5 Clutch - selective	.118	99-On	AR	36T - ID: 7.108"

PRESSURE PLATES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
13C	152761B635	NA	C3 Clutch, C4 Clutch - apply	.250	99-On	1	30T
NI	152766	29538521	C1 Clutch- top		99-On	1	
13C	152761L3175	29535637	C3 Clutch, C4 Clutch - apply	.125	99-On	1	30T with slots
17C	TBA	29535639	C3 Clutch - backing		99-On	1	
18G	TBA	29535640	C4 Clutch - backing		99-On	1	
19G	TBA	29531058	C5 Clutch - backing		99-On	1	

OEI® Original Equipment Improvements

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	152755	NA	PowerPack® C1 Clutch		99-05	1	
KT	152755A	NA	PowerPack® C1 Clutch		06-On	1	
KT	152756	NA	PowerPack® C2 Clutch		99-05	1	
KT	152756A	NA	PowerPack® C2 Clutch		06-On	1	
KT	152757	NA	PowerPack® C3 Clutch		99-05	1	
KT	152757A	NA	PowerPack® C3 Clutch		06-On	1	
KT	152758	NA	PowerPack® C4 Clutch		99-05	1	
KT	152758A	NA	PowerPack® C4 Clutch		06-On	1	
KT	152759	NA	PowerPack® C5 Clutch		99-On	1	
KT	152985	SK®	VB Shift Kit SK® Allison-Jr - 1000 Series	Transgo®	05-On	1	
KT	152986	SK®	VB Shift Kit SK® Allison Shift Kit - 1000-2400 Series	Transgo®	01-04	1	

ALLISON

1000, 2000, 2400 SERIES

1999-On

FILTERS (add Prefix FK for FILTER KIT)

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
20F	152940	29537617	Filter - Deep pan		99-On	1	
		29537966					
20F	152941	29537514	Filter - Shallow pan		99-On	1	
		29537965					
21F	152942	29537268	Filter - Spin on		99-On	1	

METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
22D	152400	29536299	Front Pump		99-On	1	
23H	152405	29536379	Extension Housing		99-On	1	
28D	032410C	23010610	Manual Lever		99-On	1	

SEALING RINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	152600	NA	Kit		99-On	1	
24D	152100	29531037	Front Pump stator - Front	Vespel®	99-On	1	comes in kit 29536405
25D	152101	29531038	Front Pump stator - Front	Vespel®	99-On	1	
26D	152102	29531036	Front Pump stator - Rear	Vespel®	99-On	3	
27A	152100	29531037	Input Shaft	Vespel®	99-On	2	comes in kit 29536405

BUSHINGS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	152200	29536703	Front Pump body		99-On	1	
N I	152201	29534369	Stator Support - rear	33.8mm	99-On	1	
28A	152202	29531084	Input Shaft - rear	20mm	99-On	1	
29A	152203	29531072	C1/C2 Clutch drum		99-On	1	
N I	152204	19531005	Output Shaft		99-On	1	

SHAFTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	152378	NA	Output Shaft		99-On	1	
N I	152378HP	NA	Output Shaft Hi-Performance for 4WD		99-On	1	300M

ELECTRONIC CONTROL COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	062504	24212690	Solenoid TCC/PWM (BW)		99-On	1	

ALLISON

500, 500P, 500R, 500PR
HD4560 B500 1995-On

KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit	95-05	149752	149753	149800	149901LS	149901
KT	Rebuilding Kit	06-On	149752	149753	149802	149903LS	149903

FRICION CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	149700-322	29511462 29536338	C1 - external spline	.125/3.18	95-On	7	Crb - 38T - ID: 5.203" - PLI
N I	149702-322	29505823 29536339	C2 Clutch	.127/3.23	95-On	7	Crb - 98T - OD: 12.368" - PLI
N I	149704-381	29529291 29536340	C3 Clutch, C4 Clutch	.151/3.84	95-On	5/5	Crb - 76T - OD: 12.632"
N I	149706-381	29541825 29527014 29536341	C5 Clutch (hardened spline)	.149/3.78	95-On	8	Crb - 78T - OD: 12.637" - PLNI

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	149701-246	29536347	C1 Clutch - internal spline	.097/2.46	95-On	6	48T - OD: 7.484"
N I	149703-249	29536348	C2 Clutch	.098/2.5	95-On	7	56T - ID: 10.047"
N I	149705-246	29536349	C3 Clutch, C4 Clutch	.097/2.5	95-On	4/5	24T - ID: 10.992"
N I	149707-251	29536350	C5 Clutch	.097/2.5	95-On	9	56T - ID: 10.992"
N I	TBA	29506616	Torque Converter		95-On		
N I	TBA	29501543	Mainshaft		95-On		

FILTER KITS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
KT	FK148942A	29540493	Filter Kit - 4"		95-On	2	
KT	FK148942B	29540494	Filter Kit - 6"		95-On	2	

Z F

ECOMAT 4HP500, 5HP500, 4HP590, 5HP590 4HP600, 5HP600, 6HP600, W360

KITS *Add Suffix SK for Super Kit

ILL	Description	Years	Friction Module	Steel Module	Overhaul Kit	Banner Kit	Master Kit
KT	Rebuilding Kit	90-On	121752	121753	121800	121901LS	121901
	Also available: Torque Converter Kit, Cover Plate Kit & Sealing Ring Kit - Inquire for Details				Main Body Kit		
KT	Rebuilding Kit - 6HP600 only	90-On	121752A	121753A	TBA	TBA	TBA

MISCELLANEOUS GASKETS. REPAIR KITS & COMPONENTS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	121816	4139-301-579	Gasket, Oil Pan	Fiber	90-On	1	
NI	121803A	4139-298-943	Repair Kit		90-On	1	
NI	121803B	4139-298-939	Repair Kit - Front cover		90-On	1	
NI	121803C	4139-298-937	Repair Kit		90-On	1	
NI	121803D	4139-298-942	Repair Kit - Lip seal		90-On	1	
NI	121803E	4139-298-941	Repair Kit - Lip seal		90-On	1	
NI	121803F	4139-298-938	Repair Kit		90-On	1	
NI	121803G	4139-298-940	Repair Kit - Front cover		90-On	1	
NI	121803H	4139-298-954	Repair Kit - Lip seal		90-On	1	
NI	121803J	4139-298-945	Repair Kit		90-On	1	

FRICION CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	121700	4139-270-025	A Clutch - external Teeth	.118 / 3.00	90-On	6-8	Heg - 10T - ID: 4.967" - PLNI
NI	121702	4139-233-177	B Clutch (Except 6HP600)	.115 / 2.90	90-On	4-5	Heg - 42T - OD: 10.100" - PLNI
NI	121702-315	NA	B Clutch (6HP600)	.124 / 3.15	90-On	4-5	Heg - 42T - OD: 10.100" - PLNI
NI	121702	4139-233-177	C Clutch (Except 6HP600)	.115 / 2.90	90-On	4	Heg - 42T - OD: 10.100" - PLNI
NI	121702-315	NA	C Clutch (6HP600)	.124 / 3.15	90-On	4	Heg - 42T - OD: 10.100" - PLNI
NI	121704	4139-233-178	D Clutch	.118 / 3.00	90-On	3-4	Heg - 46T - OD: 10.932" - PLNI
NI	121704	4139-233-178	E Clutch	.118 / 3.00	90-On	6-7	Heg - 46T - OD: 10.932" - PLNI
NI	121704	4139-233-178	F Clutch	.118 / 3.00	90-On	6-8	Heg - 46T - OD: 10.932" - PLNI
NI	121704A262	4139-233-307	D, E, F Clutch - selective	.103 / 2.62	TBA	AR	Heg - 46T - OD: 10.932" - SB
NI	121708-300	NA	G Clutch (6HP600)	.118 / 3.00	90-On	9	Heg - 48T - OD: 10.930" - PL
NI	121706	4166-238-037	Torque Converter (Except 6HP600, 5HP590)	.118 / 3.00	90-On	2	Grn - 18T - OD: 12.930" - SM
NI	121706A320	NA	Torque Converter (6HP600)	.124 / 3.15	90-On	2	Heg - 36T - OD: 15.398" - PL
NI	121706B305	0501-213-150	Torque Converter (5HP590)	.079 / 2.00	90-On	6-8	Heg - 59T - OD: 13.365" - PLNI
NI	121706C310	4166-236-134	Torque Converter (W360)	.122 / 3.10	90-On	AR	Heg - 59T - OD: 12.96"

PRESSURE PLATES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	121701-300	4139-333-694	A Clutch - Bottom	.118 / 3.00	90-On	1	32T - OD: 6.417"
NI	121703-300	4139-333-373	B Clutch - Bottom	.118 / 3.00	90-On	1	34T - ID: 8.708"
NI	TBA	4139-333-437	C Clutch - Bottom		90-On	1	
NI	121705-300	4139-333-263	D Clutch - Bottom	.118 / 3.00	90-On	1	24T - ID: 9.304"
NI	TBA	4139-333-766	E Clutch - Bottom	.118 / 3.00	90-On	1	
NI	121763	4139-333-480	F Clutch - Top	.079 / 2.00	90-On	1	24T - ID: 9.304

FILTERS (add Prefix FK for FILTER KIT)

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	121940	0750-131-003	Filter		90-On	1	

METAL CLAD SEALS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
NI	121400	0750-111-044	Front Pump	150mm	90-On	1	
NI	121405	0750-111-018	Extension Housing (without PTO)	125mm	90-On	1	
NI	121420	0734-310-353	Speedometer	15mm	90-On	1	

VOITH

OVERHAUL KIT

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	125800	59.3597.10	Overhaul Kit Voith D1WA			1	

FRICITION CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	125706-320	58.4150.12 *	Input - US 3.2mm	.126/3.2		4	Heg - 50T - OD: 10.15" - PLNI
N I	125706-320	58.4150.12 *	Lock-Up US 3.2mm	.126/3.2		4	Heg - 50T - OD: 10.15" - PLNI
N I	125706-300	58.4150.12 *	Input, Lock-Up selective Non-US 3.0mm	.118/3.0		AR	Heg - 50T - OD: 10.15" - PLNI
		NA	* Note: Some Non-US Units may require 3.0mm thickness frictions				
N I	125704	58.2460.13	Pump Brake	.118/3.0		2	Tan - 50T - OD: 10.15" - PLNI
N I	125708	5.7147.16	Reverse	.136/3.45		6	Heg - 63T - OD: 12.50" - CGSM
N I	125714	58.2250.12	Torque Converter	.138/3.5		3	Brz - 63T - OD: 12.51" - Sprl
		58.2250.13					

STEEL CLUTCHES

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	125707	NL	Input	.079/2.0		1	12T - ID: 8.173"
N I	125707-300	50.7920.10	Input	.118/3.0		1	12T - ID: 8.173"
N I	125707-350	52.6306.10	Input	.138/3.5		3	12T - ID: 8.173"
N I	125705	50.7715.20	Input - backing	.118/3.0		2	12T - ID: 8.173"
N I	125705A300	52.6303.10	Input - backing (2 short teeth)	.118/3.0		2	12T - ID: 8.173"
N I	125707	NL	Lock-up	.079/2.0		1	12T - ID: 8.173"
N I	125707-350	52.6306.10	Lock-up	.138/3.5		3	12T - ID: 8.173"
N I	125707-350	52.6306.10	Pump Brake	.138/3.5		2	12T - ID: 8.173"
N I	125705A300	52.6303.10	Pump Brake	.118/3.0		1	12T - ID: 8.173" (2 Short Teeth)
N I	TBA	54.8208.10	Pump Brake - backing	.277/7.0		1	12T
N I	125709	54.9141.10	Reverse	.098/2.5		7-8	12T - ID: 10.41"
N I	125715	50.9743.13	Torque Converter	.098/2.5		4	12T - ID: 10.429"

FILTER KITS

ILL	ALTO No.	REF No.	Description	Spec	Year	Qty	Notes
N I	FK125940	59.3255.10	Filter Kit Voith 851, 851.2, 851.3			1	filter, gasket, washers

VELVET DRIVE® S5000, S5000 "V" Drive

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
340800	2001-410-001	OVERHAUL KIT S5000 Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
340800V	2002-410-001	OVERHAUL KIT S5000 V Drive Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
340901	NL	MASTER OVERHAUL KIT S5000 Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
340901V	NL	MASTER OVERHAUL KIT S5000 V Drive Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
340750	NL	CLUTCH PLATE MODULE Includes 16 Bronze Plates and 18 Steel Plates	1	
CLUTCHES				
340702	2001-666-001	Friction - Drive	16	Bronze .066
340703	2001-166-002	Steel - Drive	14	Flat .077
340705	2001-062-002	Steel	4	Flat .044
023186	2001-062-003	Steel - Backing clutch outer	1	Flat .197
MISC. PARTS				
340020	2001-045-005	Gasket - Front Pump S5000 & V Drive	1	
340021	2001-045-003	Gasket - Valve Housing S5000 & V Drive	1	
340022	2001-145-002	Gasket - Adapter - S5000	1	
340021V	2002-045-002	Gasket - Adapter - V Drive	1	
018101	2000-016-050	Sealing Ring - Pinion Carrier	AR	S5000 1Pc,V Drive 4 Pcs
340101	1000-016-021	Sealing Ring - In Shaft	AR	S5000 1Pc,V Drive 2 Pcs
340420	1000-044-065	Metal Clad Seal - Adapter S5000 & V Drive	2	
340421	1000-044-066	Metal Clad Seal - Coupling S5000	1	
340422	2000-044-003	Metal Clad Seal - Output Shaft Side V Drive	1	
340423	2000-044-004	Metal Clad Seal - Output Flange Side V Drive	1	
010045	1000-141-045	Oring - Piston	2	
010123	1000-141-123	Oring - Control Valve	1	
010130	1000-141-130	Oring - Clutch Piston	2	
010214	1000-141-214	Oring - Tube Assembly	1	
010241	1000-141-241	Oring - Clutch Piston	2	
340051	1000-016-020	Seal - Piston In	2	
340052	1000-016-019	Seal - Piston Out	2	
340053	2000-141-502	Oring - Pump V Drive	1	
340054	2000-141-500	Oring - Output V Drive	1	
340055	2000-141-501	Oring - Pump Housing V Drive	1	
340251	1000-139-069	Snap Ring	2	
340252	1000-139-071	Snap Ring	1	
340253	1000-139-068	Snap Ring	5	
099328	1000-640-004	Neutral Safety Switch	1	
023320	1000-149-034	Nut - Output Shaft with Washer	1	
340321	2001-031-001	Output Flange	1	
340322	1000-132-055	Needle Bearing	6	
340940	2001-238-001	Filter - Oil Screen	1	

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801	10-17-410-002	GASKET SET (Includes Rubber Parts)	1	
023801B	A4867HA	OVERHAUL KIT (Includes Gasket Set)	1	
023901LS	NL	BANNER KIT Includes Overhaul Kit and Bronze Plates	1	
023901	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS (Continued)				
023750D	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates and 6 Steel Plates	1	
023750H	NL	CLUTCH PLATE MODULE - VD71 Only Includes 7 Bronze Plates and 5 Steel Plates	1	
023752D	NL	FRICTION PLATE MODULE Includes 10 Bronze Plates	1	
023755	A4867AE	10-17 FORWARD CLUTCH PACK Only Includes Forward Clutch Bronze Plates, Steel Plates and Front & Rear Pressure Plates	1	
023755A	A4867AB	10-18 FORWARD CLUTCH PACK Only Includes Forward Clutch Bronze Plates, Steel Plates and Front & Rear Pressure Plates	1	
CLUTCHES				
049722	W-1597A	Friction Forward Small K2 (Grooved)	5-7	HEG .063
049700BR	5C-A66A	Friction Forward Small	5-7	Bronze .060
023701	3-176	Steel Forward Small	4-6	Flat .068
023701A	10-16-166-001	Steel Forward Small (3 Teeth missing)	4-6	Flat .068
023701-040	NL	Steel Forward Small - Selective (1.02mm)	AR	Flat .040
023701-120	NL	Steel Forward Small - Hi-Performance	AR	Flat .047
023701-140	NL	Steel Forward Small - Hi-Performance	AR	Flat .058
023703	3-65	Steel Forward - MODEL 73 Only		Dish .068
023760	5C-175A	Pressure Plate Forward/ Front	1	
023761	5L-67	Pressure Plate Forward/Rear	1	
023738	10-17-666-001	Friction Reverse Large	1-3	Fiber .115
023738BR	72-A66B	Friction Reverse Large	1-3	Bronze .115
023738BR155	72-A66	Friction Reverse Large	2	Bronze .061
023739	72-176	Steel Reverse Large	0-2	Flat .070
023767	3-37	Steel Forward Belleville Spring	1	Dish
MISC. PARTS				
023020	71-144B	Gasket - Forward/Reverse Adapter	1	
023021	L4-145	Gasket - Front Adapter	1	
023022	71-14	Gasket - Valve Cover	1	
023023	L4-146	Gasket - Rear Adapter	1	
023024	L4-147	Gasket - Rear Retainer - Reduction Early	1	
023025	71-147	Gasket - Rear Retainer - MODEL 10-17	1	
023026	72-147	Gasket - Rear Retainer - MODEL 10-18	1	
023002	3-61	Seal - Front Pump	1	
023050A	4805A	Seal - Reverse Clutch Outer	1	
023054A	5L-36	Seal - Forward Clutch Outer	1	
010210A	4804H	Oring - Control Valve	1	was Alto #1390734
010226B	5M122	Oring - Forward Clutch Inner	1	was Alto #1391984
010226B	4804G	Oring - Reverse Inner	1	was Alto #1391984
023941	1000-238-002 72C-98	Filter - Oil	1	
099328	1000-640-004	Neutral Safety Switch	1	
099329	1000-140-004	Switch - Oil Temperature 190°	1	
099329A	87-88031	Switch - Oil Temperature 230°	1	
018101	4806B TAW-408	Sealing Ring - Pinion Carrier	4	2.0 x .0935 HJ
038105	4806J TAW-1320	Sealing Ring - Drive Gear	2	1.7465 x .0935 HJ
023420	1000-044-014 UE-0282E	Metal Clad Seal - Front Pump		OD: 53mm/2.08"
023422	1000-044-017 UH-0049E	Metal Clad Seal - Coupling		OD: 83mm/3.271" Late Type Reduction
023421	71C-110 UH-0341E	Metal Clad Seal - Coupling		OD: 68mm/2.69" Early Type Reduction
023320	1000-149-034	Output Shaft Nut - Coupling Nut with Washer		All Late Reduction Units

VELVET DRIVE® 71 & 72

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
023321	4775L	Nut - Output Shaft Coupling (Fits 4" & 5" couplings)	1	
023604	NL	Sealing Ring Kit		Contains: 4 Pc. 018101, 2 Pc. 038105
023680	1095-410-002	Snap Ring Service Kit	1	
023250	4766	Snap Ring - Adapter	1	
023251	4821	Snap Ring - Control Valve	1	
023252	4822	Snap Ring - Reverse Gear	1	
023253	R6A-7-1/2	Snap Ring - Drive Gear Large MODEL 10-17 Only	1	
023254	4766B	Snap Ring - Drive Gear Large MODEL 10-18 Only	1	
023255	4734	Snap Ring - Drive Gear Small MODEL 10-17 Only	2	
023256	4559A	Snap Ring - Drive Gear Small MODEL 10-18 Only	1	
023257	4755	Snap Ring - Ring Gear	1	
023258	1000-139-048	Snap Ring - Ring Gear Yellow MODEL 10-17	1	.033-.037
023258-130	1000-139-049	Snap Ring - Ring Gear Pink MODEL 10-17	1	.050-.054
023258A130	4768	Snap Ring - Ring Gear Green MODEL 10-18	2	.050-.054
023258A160	1000-139-018	Snap Ring - Ring Gear Purple MODEL 10-18	1	.062-.066
023258A190	4768A	Snap Ring - Ring Gear Orange MODEL 10-18	1	.074-.078
023258A250	4768B	Snap Ring - Ring Gear White MODEL 10-18	1	.096-.100
023259	4495	Snap Ring - Drive Gear Assembly	1	
023260	4756D	Snap Ring - Drive Gear Assembly	1	Reduction Only
023261	4756E	Snap Ring - Drive Gear Assembly	1	Reduction Only
023262	4816	Snap Ring - Drive Gear Assembly	1	Reduction Only
023263	4766A	Snap Ring - Drive Gear Assembly	1	Reduction Only
023276	71-97	Spring - Reverse Pressure Plate	11	
023338	5C-33 1000-139-101	Bearing Ring VD72 Forward Clutch Shuttle		
023337	4920	Tapered Roller Bearing		Timken NA 44163/90048
023337A	4920A	Tapered Roller Bearing		Timken NA 44143/90035
023337B	4920B	Tapered Roller Bearing		Timken NA53178/90062
023350A	71CA60	Oil Pump	1	
023339	71C-3A16	Drive Gear & Pump Assembly	1	
023322	4840D	Needle Bearing - Forward & Reverse Adapter	1	
023325	B308AGS 1000-130-018	Roller Bearing	1	
023326	B107A (6007J)	Roller Bearing	1	
023326A	B108A (6008J) 1000-130-016	Roller Bearing	1	
023247	71-28C (4867VVKIT)	Bushing - Case Housing Forward/Reverse	2	
023248	71-9C (4867DDKIT)	Bushing - Carrier Assembly	2	
023323	4547AY	Coupling 5 - MODEL 10-18 Only	1	
023324	4547BA	Coupling 4 - MODEL 10-17 Only	1	
023327	1000-031-001	Coupling - Current Reduction	1	Fine Spline
023328	4912	Coupling - Early Reduction	1	Fine Spline
023196	71-17	Thrust Washer	1	
023187	1016-193-001	Washer	1	
023188	71-15B	Washer	1	
023189	73C-15	Thrust Washer	1	
023376	71C-3A116	Shaft - Input VD71	1	
023377	72C-2A116	Shaft - Input VD72	1	

VELVET DRIVE® 71 & 72 "V" Drive

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801CB	1308-410-001	OVERHAUL KIT Includes Gasket Set, Orings, Metal Clad Seals and Nut	1	
MISC. PARTS				
023027	1308-045-001	Gasket - V DRIVE Housing Up to 1991	1	
023028	1308-045-004	Gasket - V DRIVE Housing 1992-On	1	
023029	1308-045-002	Gasket - V DRIVE Trans	1	
023030	1308-045-003	Gasket	1	
010235B	1000-141-235	Oring - Pre-Load Cap	2	was Alto #1393109
023421	71C-110	Metal Clad Oil Seal - Output UP to 1989	1	
023422	1000-044-017	Metal Clad Oil Seal - Output 1990-On	1	
023320	1000-149-034	Nut - Output Shaft	1	
023335	1308-410-015	Flange Kit - V DRIVE Conversion Kit	1	
023332	1308-027-005	Flange - Housing	1	
023333	942-1652	Bolt - Flange Housing	6	
023334	NL	Lockwasher - Flange Housing Bolt	6	
023335	1308-410-015 25662	Flange Kit - V DRIVE Conversion Kit HEAVY DUTY	1	

VELVET DRIVE® 71 & 72 Damper Assemblies

DAMPER ASSEMBLIES				
DA-101	1004-650-001		1	
DA-102	1004-650-002 AS4-K1C	6.18" OD, 1.353 Spline	1	26 Teeth
DA-103	1004-650-003	8.0" OD, 1.35 Spline (8 Equally Spaced Holes)	1	26 Teeth
DA-106	1004-650-006 AS4-K2C	6.66" RAD (Triangle), 1.353 Spline	1	26 Teeth
DA-106A	120-8-1446 AS8-K2C	6.66" RAD Same as DA-106 except with Cut Off Rounded Ears	1	26 Teeth
DA-107	1004-650-007 AS7-K2C	13.25" OD Fits Engines up to 430 C.U. 1.353 spline	1	26 Teeth Purple Spring
DA-108	1004-650-008 AS5-K2C	13.25" OD Fits Engines up to 370 C.U.	1	White Spring
DA-111	132-008-2246	Lite "Maximum Rating 500 H.P." 13.25" OD	1	26 Teeth
DA-302	2301-650-001	152mm x 123mm 10/23/29 Teeth DIN 5464 with Dowel Pin Holes	1	45 Degree x 8

PRM-NEWAGE Model 175-750

CLUTCHES				
326700BR	MT731	FR NEWAGE INNER DRIVE PLATE BRONZE	7	Brz Spiral 1.55mm/.061" 24 Teeth

BORG WARNER T-22

CLUTCHES				
308700	1008-666-004	Friction	16	Black PL 2.8mm/.110" 44 Teeth
308700A	AT-220-66 1008-666-001	Friction	16	Bronze 2.8mm/.110" 44 Teeth
308701	22-176	Steel	16	Flat 1.7mm/.068"
308703	1008-166-001	Steel	8	Flat 3.5mm/.138"

**BORG WARNER (CR-2) / VELVET DRIVE
1013/14 DROP CENTER**

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
023801DB	1013-410-001	OVERHAUL KIT Includes Gaskets, Metal Clad Seals and Sealing Rings	1	
023901B	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023901BLS	NL	BANNER KIT Includes Overhaul Kit and Bronze Plates	1	
023750D	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates and 6 Steel Plates	1	
CLUTCHES				
049700BR	5C-A66A	Friction Forward	5-7	Bronze .060
023738BR	72A-66B	Friction Reverse	1-3	Bronze .115
023701	3-176	Steel Forward	4-6	Flat .068
023739	72-176	Steel Reverse	1-2	Flat .070
MISC. PARTS				
023050A	4805A	Seal - Reverse Clutch Outer	1	
023054A	5L-36	Seal - Forward Clutch Outer	1	
023002	3-61	Seal - Front Pump	1	
023020	71-144B	Gasket - Case & Adapter	1	
023022	71-14	Gasket - Valve Cover	1	
023041	1013-045-002	Gasket - Reduction Housing	1	
023042	1013-045-001	Gasket - Adapter	1	
010210A	4804H	Oring - Control Valve		was Alto #1390734
010226B	5M-122	Oring - Forward Clutch Inner		was Alto #1391984
010226B	4804G	Oring - Reverse Clutch Inner		was Alto #1391984
023420	1000-044-014	Metal Clad Seal - Front Pump		
023428	1000-044-003	Metal Clad Seal - Coupling		
023111	4806S 4806L	Sealing Ring - Teflon	2	
038105	4806J	Sealing Ring	5	

CLUTCHES				
340700	2301-666-001	Friction	10	Bronze .062
340701	2301-166-001	Steel	8	Flat .068

VELVET DRIVE ® S500

CLUTCHES				
044700	1023-666-001	Friction Forward/Reverse	7	Fiber .090
044701	1023-166-001	Steel Forward/Reverse	7	Flat .071

VELVET DRIVE ® 1500

CLUTCHES				
027700	1023-666-003	Friction Forward/Reverse	7	Fiber .086
027701	1023-166-002	Steel Forward	7	Flat .068

VELVET DRIVE ® 7000

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
023748	1026-666-001	Friction Forward/Reverse	15	Fiber .061
023749	1026-166-001	Steel Forward/Reverse	15	Flat .068

PARAGON MODELS P21, P31, OW1 (SN5M-P)

KITS				
023809D	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809DB	Z-7601	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909D	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750E	KN-10031X	CLUTCH PLATE MODULE Includes 6 Bronze Plates and 7 Steel Plates	1	
CLUTCHES				
049700BR	11759	Friction	6	Bronze .060
023751	11758	Steel	7	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023034	11083	Gasket - Rear	1	
2101100	16196	Oring	1	
1395734	10280	Oring - Outer	1	
010223A	11352	Oring - Forward & Rear Coupling	2	was Alto #1391609
010236A	12221	Oring - Reverse Piston	1	was Alto #1393234
1030737	12222	Oring - Piston	1	
010028A	11769	Oring - Control Valve	1	was Alto #0701364
010114B	11779	Oring - Relief Valve	1	was Alto #1030612
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023427	2XE-446A	Metal Clad Seal - Rear	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODELS P32A-P35B, P22-P25, OW2-OW5 (SN5M-5P & 6A & LATER)

KITS				
023809	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809B	Z-7988 Z-7603	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750G	KN-10031	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 9 Steel Plates, 2 Clips and 2 Screws	1	

**PARAGON MODELS P32A-P35B, P22-P25, OW2-OW5
(SN5M-5P & 6A & LATER)**

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES (Continued)				
049700BR	11759	Friction	6-8	Bronze .060
023751	11758	Steel	7-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023034	11083	Gasket - Rear	1	
023039	RA20-15A	Gasket - Reduction	1	1.5:1 & 2:1 Only
023040	RB20-15A	Gasket - Reduction	1	2.5:1 & 3:1 Only
023321	13000	Nut - Ouput Shaft Coupling (Fits 4" & 5" couplings)	1	
1395734	10280	Oring - Outer	1	
010223A	11352	Oring - Forward & Rear Coupling	2	was Alto #1391609
010236A	12221	Oring - Reverse Piston	1	was Alto #1393234
1030737	12222	Oring - Piston	1	
010028A	11769	Oring - Control Valve	1	was Alto #0701364
010114B	11779	Oring - Relief Valve	1	was Alto #1030612
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023423	11518	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

**PARAGON MODELS P34-P35, P42-P45
(SN5M-5P & 6A & LATER)**

KITS				
023809A	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809AB	Z-7989 Z-7604	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909A	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	Combo Fits SN5M-5P & 6A & Later
023750G	KN-10031	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 9 Steel Plates, 2 Clips & 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	6-8	Bronze .060
023751	11758	Steel	7-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023034	11083	Gasket - Rear	1	
023035	RC20-15A	Gasket - Reduction	1	
023036	P11397	Gasket - Reverse-Gear Ring	1	
023040	RB20-15A	Gasket - Reduction	1	2.5:1 & 3:1 Only
023321	13000	Nut - Ouput Shaft Coupling (Fits 4" & 5" couplings)	1	
1395734	10280	Oring - Outer	1	
010223A	11352	Oring - Forward & Rear Coupling	2	was Alto #1391609
010236A	12221	Oring - Reverse Piston	1	was Alto #1393234
1030737	12222	Oring - Piston	1	

**PARAGON MODELS P34-P35, P42-P45
(SN5M-5P & 6A & LATER)**

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
010028A	11769	Oring - Control Valve	1	was Alto #0701364
010114B	11779	Oring - Relief Valve	1	was Alto #1030612
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023423	11518	Metal Clad Seal - Coupling	1	
023424	12316	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

**PARAGON MODEL P41
(SN5M-5P & 6A & LATER)**

KITS				
023809E	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809EB	Z-7802 Z-7987	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	Combo Fits SN5M-5P & 6A & Later
023909E	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	SN5M-5P
023909F	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	SN6A & Later
023750J	NL	CLUTCH PLATE MODULE Includes 7 Bronze Plates, 8 Steel Plates, 2 Clips and 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	7-8	Bronze .060
023751	11758	Steel	8-9	Flat .060
MISC. PARTS				
023031	12640	Gasket - Front	1	
023032	12227	Gasket - Cover	1	SN5M-5P
023032A	12576	Gasket - Cover	1	SN6A & Later
023036	P11397	Gasket - Reverse-Gear Ring	1	
023321	13000	Nut - Output Shaft Coupling (Fits 4" & 5" couplings)	1	
1395734	10280	Oring - Outer	1	
010223A	11352	Oring - Forward & Rear Coupling	2	was Alto #1391609
010236A	12221	Oring - Reverse Piston	1	was Alto #1393234
1030737	12222	Oring - Piston	1	
010028A	11769	Oring - Control Valve	1	was Alto #0701364
010114B	11779	Oring - Relief Valve	1	was Alto #1030612
0700801	11683	Oring	2	
023425	11791	Metal Clad Seal - Front Pump	1	
023426	RB446	Metal Clad Seal - Coupling	1	
023110	HF-1094	Sealing Ring - Collar	2	
023099	11573	Washer - Seal	1	
023501	11240	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODEL P200, 300, 400

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
049740	11759-P	Friction Forward	6-8	Fiber .060
049700BR	11759	Friction Forward	6-8	Bronze .060
023751	11758	Steel Forward	7-9	Flat .060

PARAGON MODEL HF7 (Direct Drive)

KITS				
023811A	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809CB	Z-7279	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals and Sealing Rings	1	
023911B	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023750E	KN-10031X	CLUTCH PLATE MODULE Includes 6 Bronze Plates, 7 Steel Plates, 2 Clips & 2 Screws	1	
CLUTCHES				
049700BR	11759	Friction	6	Bronze .060
023751	11758	Steel	7	Flat .060
MISC. PARTS				
023033	11736	Gasket - Front Housing	1	
023034	Y-11083	Gasket - Rear Housing	1	
023037	Y-11767	Gasket - Cover Housing	1	
023321	13000	Nut - Ouput Shaft Coupling (Fits 4" & 5" couplings)	1	
0700801	X-11683	Oring	1	
010028A	X-11769	Oring - Control Valve	1	was Alto #0701364
010114B	X-11779	Oring - Relief Valve	1	was Alto #1030612
010148B	X-11777	Oring	1	was Alto #1032737
010223A	X-11352	Oring - Coupling	1	was Alto #1391609
1395734	X-10280	Oring - Outer	1	
2101100	X-16196	Oring	1	
023425	X-11791	Metal Clad Seal - Front	1	
023427	2X3-446A	Metal Clad Seal - Rear	1	
023096	X-11726	Seal - Washer	1	
023098	X-11353	Seal - Washer	12	
023099	11573	Washer - Seal	1	
023110	HF-1094	Sealing Ring - Oil Dist.	2	
023501	112409	Clip	2	
023502	11237	Lock Screw	2	

PARAGON MODEL HJ7

KITS				
023811C	NL	GASKET SET Includes Paper and Rubber Parts Only	1	
023809BB	Z-7401	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
023911	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
023750J	NL	CLUTCH PLATE MODULE Includes 7 Bronze Plates, 8 Steel Plates, 2 Clips and 2 Screws	1	

PARAGON MODEL HJ7

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES (Continued)				
049700BR	11759	Friction	7	Bronze .060
023751	11758	Steel	8	Flat .060
MISC. PARTS				
023031	Z-12640	Gasket - Front Housing	1	
023037	Y-11767	Gasket - Cover Housing	1	
023038	Y-11397	Gasket - Rear Housing	1	
023321	13000	Nut - Ouput Shaft Coupling (Fits 4" & 5" couplings)	1	
0700801	X-11683	Oring	1	
010028A	X-11769	Oring - Control Valve	1	was Alto #0701364
010114B	X-11779	Oring - Relief Valve	1	was Alto #1030612
010148B	X-11777	Oring	1	was Alto #1032737
010223A	X-11352	Oring - Coupling	1	was Alto #1391609
1395734	X-10280	Oring - Outer	1	
023425	X-11791	Metal Clad Seal - Front	1	
023426	RB446	Metal Clad Seal - Rear	1	
023096	X-11726	Washer - Seal	1	
023097	11176	Washer - Seal	6	
023098	11353	Washer - Seal	6	
023099	11573	Washer - Seal Detent	1	
023110	HF-1094	Sealing Ring - Oil Dist.	2	
023501	112409	Clip	2	
023502	11237	Lock Screw	2	

MERCUISER II-TR, S

CLUTCHES				
049740	C9AP-7B164A B-62691A1-KIT	Friction Forward	8	Fiber .060
049702	C9AP-7B164SEL B-62691A1-KIT	Friction Forward	1	Fiber .072
023736	C9AP-7B164SEL B-62691A1-KIT	Friction Forward	1	Fiber .0876
023701	C8AZ-7B442A B-62691A1-KIT	Steel Forward	4	Flat .068
049700	E0AZ-7B164A C9AZ-7B164A B6AZ-7B164R B5AZ-7B164B 3193139 3186574	Friction		Tan PL .061
049700BR	5C-A66A B5AZ-7B164A B6AZ-7B164A	Friction		Bronze .061
049700BR235	NL	Friction		Bronze .093
023738BR	72-A66B	Friction		Bronze .115
023739	72-176	Steel		Flat

CAPITOL HYDRASMOOTH

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
087700	17-80032	Friction Direct Small	9	Fiber .072
087701	17-80029	Steel Direct Small	AR	Flat .071
087711	17-80029	Steel Direct Small	AR	Flat .061
087702	17-80031	Friction Reverse Large	5	Fiber .092

CAPITOL MARINE

HY400, 6900, HY7700, 24000, 25000

CLUTCHES				
305700	1-00230-4900	Friction	12-14	Bronze .155
305701	1-00233-1200	Steel	12-14	Flat .091

CAPITOL MARINE

5HD-200, HE 10200, 10700, 11200, 11720

CLUTCHES				
305702	1-00230-2000	Friction	12-14	Bronze .135
305703	1-00233-0070	Steel	12-14	Flat .095
305703-390	1-00229-1700	Steel	1	Flat .155

CAPITOL MARINE

M105, 125

CLUTCHES				
305704	1-14186-0000	Friction	12	Bronze .125
305705	1-14185-0000	Steel	12	Flat .065

YAMAHA 7.4 Liter Hydra-Drive

CLUTCHES				
338700	6U1-16321-00	Friction	14	Bronze .085
338701	6U1-16324-00	Steel	14	Flat .048

YANMAR MARINE KBW-10, KBW-20

CLUTCHES				
336700	177090-03080	Friction - Forward / Reverse	8	Bronze 1.7mm / .067
336701	177090-03090	Steel - Forward / Reverse	6	Steel 1.4mm / .056

TWIN DISC MG-502

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
332701	B3337	Steel Forward/Reverse	18	52 Teeth Flat .051
332700	B3336A	Friction Forward/Reverse	16	79 Teeth Bronze .085

TWIN DISC MG-506

CLUTCHES				
332703	204097	Steel Forward/Reverse	18	42 Teeth Flat .061
332702	B3060B	Friction Forward/Reverse	16	Bronze .085

TWIN DISC MG-509-512

CLUTCHES				
332705	A-4939 P-4371	Steel Forward/Reverse - MG-509 Only	14	45 Teeth Flat .062
332705-200	4720762	Steel Forward/Reverse - MG-509 Only 2.mm	14	45 Teeth Flat .079
332704	A-4480A,B,M P-4251A,B,C	Friction Forward/Reverse - MG-509 & MG-512	14	Bronze .112

TWIN DISC MG-514A, B, C

CLUTCHES				
332707	A-6567C	Steel MG-514A, MG-514B - Early	14	Flat .091
332709	A-6567E	Steel MG-514A, MG-514B - Late		Step .091
332709	A-6567E	Steel MG-514C		Step .091
332706	A-6566E	Friction - All Models	14	Bronze .122

TWIN DISC (Various)

CLUTCHES				
332708	206177M	Friction		
332711-228	215736	Steel - MG-518		Flat .090
332712	206106X	Friction - MG-518		Grn WF .125
MISC. PARTS				
332501UP12	B1432	Bearing Retainer (Pack of 12 Pcs.)	12	
332502UP26	B3073C	Drive Block, Rubber - Large (Pack of 26 Pcs.)	26	
332503UP26	A3905E	Drive Block, Rubber - Small (Pack of 26 Pcs.)	26	

HURTH MARINE HBW 5, 50, 100

KITS				
316801B	500427	GASKET SET Includes Paper and Rubber Parts Only	1	
316901	500437	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
CLUTCHES				
316700	288757	Friction	8	Bronze .063
316701	288758	Steel	6	Flat .056
MISC. PARTS				
316003	288739	Gasket	4	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Seal - Lever	1	OD: 26mm ID: 20mm
316401	280135	Metal Seal	1	OD: 37mm ID: 27mm
316402	105153	Metal Seal	1	OD: 45mm ID: 32mm
2000950	105524	Oring - Shift Shaft HBW-50	1	

HURTH MARINE HBW 5, 50, 100

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
MISC. PARTS (Continued)				
2401230	105679	Oring - Intermediate Shaft HBW-100	1	
316187	288748	Thrust Washer	2	
316187-396	288748	Thrust Washer (OE Design)	2	
316645		Shim Kit - Bearing (Contains 1 Each Shim)	1	
316150-050	288735	Shim Bearing	1	.50mm
316150-030	288734	Shim Bearing	1	.30mm
316150-020	288733	Shim Bearing	1	.20mm
316150-015	288732	Shim Bearing	1	.15mm
316150-010	288731	Shim Bearing	1	.10mm
316646		Shim Kit - Clutch (Contains 1 Each Shim)	1	
316151-040	288760	Shim Clutch	1	.40mm
316151-050	288761	Shim Clutch	1	.50mm
316151-060	288762	Shim Clutch	1	.60mm
316151-070	288763	Shim Clutch	1	.70mm

HURTH MARINE HBW 10, 150

KITS				
316803B	500428	GASKET SET Includes Gaskets, Orings and Metal Clad Seals	1	
316903	500438	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316903A	NL	MASTER OVERHAUL KIT - LATE Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750A	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
316750E	NL	CLUTCH PLATE MODULE - LATE Includes 8 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316702	288912	Friction	8	Bronze .063
316702-150	407231	Friction - Thin	8	Bronze .059
316703	187872	Steel	6	Flat .056
316703-100	NL	Steel - Thin	8	Flat .039
MISC. PARTS				
316002	254715	Gasket	4	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316403	215875	Metal Clad Seal - Front	1	OD: 52mm ID: 30mm
316404	105159	Metal Clad Seal - Rear	1	OD: 52mm ID: 40mm
3001400	105530	Oring - Intermediate Shaft HBW 150	1	
316188	344787	Thrust Washer	2	
316645A		Shim Kit - Bearing (Contains 1 Each Shim)		
316150A010	206474	Shim - Bearing	1	.10mm
316150A015	206475	Shim - Bearing	1	.15mm
316150A020	206476	Shim - Bearing	1	.20mm
316150A050	228540	Shim - Bearing	1	.50mm
316150A100	228539	Shim - Bearing	1	1.0mm
316646A		Shim Kit - Clutch (Contains 1 Each Shim)		
316151A040	195714	Shim - Clutch	1	.40mm
316151A050	195715	Shim - Clutch	1	.50mm
316151A060	195716	Shim - Clutch	1	.60mm
316151A070	195717	Shim - Clutch	1	.70mm

HURTH MARINE HBW 150V

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
316803VB	500429	GASKET SET Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316903V	500439	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316903VA	NL	MASTER OVERHAUL KIT - LATE Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750A	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 6 Steel Plates	1	
316750E	NL	CLUTCH PLATE MODULE - LATE Includes 8 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316702	288912	Friction	8	Bronze .063
316702-150	407231	Friction - Thin	8	Bronze .059
316703	187872	Steel	6	Flat .056
316703-100	NL	Steel - Thin	8	Flat .039
MISC. PARTS				
316002	254715	Gasket	2	
316005	254716	Gasket - Shift Cover	1	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316403	215875	Metal Clad Seal - Front	1	OD: 52mm ID: 30mm
316406	401647	Metal Clad Seal - Rear	2	OD: 90mm ID: 65mm
3004950	105590	Oring	1	
2508500	291618	Oring	2	

HURTH MARINE HBW 20, 220, 250

KITS				
316805B	500430	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316905	500440	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750B	NL	CLUTCH PLATE MODULE Includes 10 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
316704	288889	Friction	10	Bronze .063
316705	206026	Steel	8	Flat .056
MISC. PARTS				
316001	274251	Gasket	4	
316410	106864	Metal Clad Seal - Lever	1	OD: 26mm ID: 20mm
316404	105159	Metal Clad Seal	1	OD: 52mm ID: 40mm
316405	284260	Metal Clad Seal	1	OD: 90mm ID: 65mm
316189	327395 277109	Oring	1	
316645B		Shim Kit - Bearing (Contains 1 Each Shim)		
316150B010	274252	Shim - Bearing		.10mm
316150B015	274253	Shim - Bearing	1	.15mm
316150B020	274254	Shim - Bearing	1	.20mm
316150B050	274255	Shim - Bearing	1	.50mm
316150B100	274256	Shim - Bearing	1	1.0mm
316646A		Shim Kit - Clutch (Contains 1 Each Shim)		
316151A040	195714	Shim - Clutch	1	.40mm
316151A050	195715	Shim - Clutch	1	.50mm
316151A060	195716	Shim - Clutch	1	.60mm
316151A070	195717	Shim - Clutch	1	.70mm

HURTH MARINE HBW 360, 450, 630

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
CLUTCHES				
316706	326380	Friction	AR	Paper .063
316707	408265	Steel	AR	Flat .056

HURTH MARINE Damper Assemblies

DAMPER ASSEMBLIES				
DA-301	947-77-601-02 254750	121.5mm X 100mm 10/23/29 Teeth DIN 5464	1	45 Degree x 8
DA-302	947-44-601-03 254762	152mm x 123mm 10/23/29 Teeth DIN 5464 w/DOWEL PIN HOLES	1	45 Degree x 8
DA-303	288240	157mm X 123mm 10/23/29 Teeth DIN 5464	1	72 Degree x 5

HURTH MARINE HSW 800 SERIES (Reduction) & V DRIVE

KITS				
316807CB	NA	OVERHAUL KIT - (800 REDUCTION) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316807BB	NL	OVERHAUL KIT - (V DRIVE) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316907A	500435	MASTER OVERHAUL KIT - (800 REDUCTION) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316907AV	NL	MASTER OVERHAUL KIT - (V DRIVE) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750D	NL	CLUTCH PLATE MODULE - (800 REDUCTION AND V DRIVE) Includes 10 Bronze Plates and 12 Steel Plates	1	
CLUTCHES				
316708	97827315013 455-786 813319	Friction	10	Bronze .079
316709	97827314013 455-787 813320	Steel	12	Wave .067
MISC. PARTS				
316004	27-813301 408-388	Gasket - Shift Cover	1	
316051	0634303505	Oring - Output Shaft	1	OD: 61.5mm
316405	26-813286 413-883	Metal Clad Seal - Input	1	OD: 52mm ID: 35mm
316407A	634319104	Metal Clad Seal - Output - REDUCTION	1	OD: 95mm ID: 73mm
316408A	105-113	Seal - Output V DRIVE	1	105 X 130 X 12
316409A	480-762	Seal - Output V DRIVE	1	80 X 100 X 10
TBA		Metal Clad Seal - Control Valve	1	OD: 43mm ID: 30mm
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings		
1180748	25-813406 105-542	Oring - Inner Filter Cover	1	
2362244	25-813407 442-731	Oring - Outer Filter Cover	1	
1581496	25-813329 105-571	Oring - Output Flange	1	
0790882	NL	Oring - Control Valve	2	
316102	53-813312 447-038	Sealing Ring - Shaft	3	

HURTH MARINE HSW 630 (Hydraulic) & 630 V DRIVE

ALTO NO.	OEM NO.	DESCRIPTION	USAGE	NOTES
KITS				
316807B	NL	OVERHAUL KIT - (630 HYDRAULIC) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316807AB	500-423	OVERHAUL KIT - (630 V DRIVE) Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
316907	NL	MASTER OVERHAUL KIT - (630 HYDRAULIC) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316907V	NL	MASTER OVERHAUL KIT - (630 V DRIVE) Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
316750C	NL	CLUTCH PLATE MODULE - (630 HYD & 630 V DRIVE) Includes 8 Bronze Plates and 10 Steel Plates	1	
CLUTCHES				
316708	97827315013 455-786 813319	Friction	8	Bronze 2.0mm / .079 OD: 134mm / 5.27 36 Teeth
316709	97827314013 455-787 813320	Steel	10	Wave 1.77mm / .067 ID: 96.5mm / 3.8
MISC. PARTS				
316004	27-813301 408-388	Gasket - Shift Cover	1	
316405	26-813286 413883	Metal Clad Seal - Input	1	OD: 52mm ID: 35mm
316407	26-813292 442-135	Metal Clad Seal - Output	1	OD: 72mm ID: 55mm
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings	1	
1180748	25-813406 105-542	Oring - Inner Filter Cover	1	
2362244	25-813407 442-731	Oring - Outer Filter Cover	1	
1581496	25-813329 105571	Oring - Output Flange	1	
0790882	101-101	Oring - Control Valve	2	
TBA	101-100	Metal Clad Seal - Control Valve	1	OD: 43mm ID: 30mm
316102	53-813312 447-038	Sealing Ring - Shaft	3	
316408	444-070	Seal - Output V DRIVE	1	85 x 110 x 12
316409	444-071	Seal - Output V DRIVE	1	65 x 85 x 12

HURTH MARINE HSW 450A-2

KITS				
315800	NL	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
315900	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
315750	NL	CLUTCH PLATE MODULE Includes 8 Bronze Plates, 10 Steel Plates	1	
CLUTCHES				
315700BR	489120	Friction	8	Bronze 1.7mm / .066 OD: 110mm / 4.325 27 Teeth
315701	489119	Steel	10	Wave 1.5mm / .059 ID: 85mm / 3.335 6 Teeth

HURTH MARINE HSW 450A-2

MISC. PARTS (Continued)				
316004	408388	Gasket - Control Block	1	
315401	374056	Metal Clad Seal - Output Shaft	1	45 x 62 x 8
315402	500065	Metal Clad Seal - Dist. Shaft	1	30 x 43 x 8/9.5
316405	413883	Metal Clad Seal - Input Shaft	1	52 x 35 x 8
1581181	105559	Oring - Output Shaft	1	
TBA	438742 437653	Seal - Suction Pipe	1	
315250	489122	Retainer Ring	1	
315251	393124	Snap Ring	2	
316940	438337	Filter	1	
FK316940	463772	Filter Kit - Includes Filter & 2 Orings	1	

HURTH MARINE / ZF IRM 220, 220A

KITS				
322800	3205199501	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
322901	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
322750	3205199504	CLUTCH PLATE MODULE Includes 26 Bronze Plates, 24 Steel Plates, 2 Pressure Plates	1	
322750X	3205199504X	CLUTCH PLATE MODULE Includes 26 Bronze Plates, 24 Steel Plates	1	
CLUTCHES				
322700-220	3205302057	Friction Forward & Reverse	22	Bronze .087
322702-180	3205302056	Friction Forward & Reverse (1 Sided)	4	Bronze .071
322701-140	3205302062	Steel Forward & Reverse	24	Waved .055
322760A700	3205302059	Steel Forward & Reverse Pressure Plate	2	Step
MISC. PARTS				
322100	0634402538 03380100	Ring, Sealing Lock	4	
322400	0634319110	Metal Clad Seal - Input	1	
322402	063400069	Metal Clad Seal - Output	1	

HURTH MARINE / ZF 301, 301A

KITS				
322802	0741728	OVERHAUL KIT Includes Gaskets, Orings, Metal Clad Seals & Sealing Rings	1	
322903	NL	MASTER OVERHAUL KIT Includes Overhaul Kit, Bronze Plates and Steel Plates	1	
322750A	NL	CLUTCH PLATE MODULE Includes 9 Bronze Plates, 8 Steel Plates	1	
CLUTCHES				
322704-200	044114009	Friction	9	Bronze .079
322705-150	3209303035 043013457254	Steel	8	Flat .059
MISC. PARTS				
322020	NL	Gasket	1	
322420	NL	Seal	1	75-95-10
322421	NL	Seal	1	42-55-8
322101	NL	Ring, Sealing Lock	4	

MARINE DAMPER ASSEMBLIES

VELVET DRIVE ®

DAMPER ASSEMBLIES				
DA-101	1004-650-001		1	
DA-102	1004-650-002 AS4-K1C BBD3108UL	6.18" OD, 1.353 Spline	1	26 Teeth Red Spring
DA-103	1004-650-003	8.0" OD, 1.35 Spline (8 Equally Spaced Holes)	1	26 Teeth
DA-106	1004-650-006 AS4-K2C BBD0107UL	6.66" RAD (Triangle), 1.353 Spline	1	26 Teeth Red Spring
DA-106A	120-8-1446	6.66" RAD Same as DA-106 except with Cut Off Rounded Ears	1	26 Teeth
DA-107	1004-650-007 AS7-K2C BBD3131UL	13.25" OD Fits Engines up to 430 C.U. 1.353 spline	1	26 Teeth Purple Spring
DA-108	1004-650-008 BBD3132UL	13.25: OD Fits Engines up to 370 C.U.	1	26 Teeth White Spring
DA-111	132-008-2246	Lite "Maximum Rating 500 H.P."	1	
DA-112	070-008-1918		1	

Velvet Drive is a registered trademark of Borg Warner Corporation

VOLVO PENTA

DAMPER ASSEMBLIES				
DA-302	2301-650-001	152mm x 123mm 10/23/29 Teeth DIN 5464 with Dowel Pin Holes	1	45 Degree x 8
DA-201	841893-1 1866-018-131	B30, D21, D40 ENG. 287mm x 123mm	1	6 Teeth
DA-202	841896-4 1866-031-101	D20, D32 ENG. 267mm xs 123mm	1	10 Teeth
DA-203	841894-9 1866-026-131	MD21, MD32 ENG. 287mm x 133mm	1	26 Teeth
DA-204	841892-3 1866-039-001	MD21/RB ENG 267mm x 123mm	1	10 Teeth
DA-205	855617-7 1866-118-031	TAM D41 ENG 287mm x 159mm	1	26 Teeth
DA-206	855389-3 1866-032-231	B21, B21 ENG	1	

HURTH MARINE

DAMPER ASSEMBLIES				
DA-301	947-77-601-02 254750 1866-050-002	121.5mm X 100mm 10/23/29 Teeth DIN 5464	1	45 Degree x 8
DA-302	947-44-601-03 254762 1866-052-001	152mm x 123mm 10/23/29 Teeth DIN 5464 w/DOWEL PIN HOLES	1	45 Degree x 8
DA-303	288240 1866-061-001	157mm X 123mm 10/23/29 Teeth DIN 5464	1	72 Degree x 5

GLOBAL MANUFACTURER & DISTRIBUTOR

ALABAMA

- Corporate Headquarters & Main Manufacturing Facility
- +1 251 368 7777

CONNECTICUT

- Manufacturing Plant
- +1 860 747 2736

LOS ANGELES

- West Coast Sales & Distribution
- +1 909 980 7771

MIAMI

- Latin America Headquarters & Distribution
- +1 305 892 7777

SAN JUAN, PR

- Caribbean Sales & Distribution
- +1 305 892 7777

MONTERREY

- Mexico Operations
- +52 81 8059 1964

DUBAI

- Middle East Operations
- +971 4 886 1741

SHENZHEN

- China Operations
- +86 755 2586 5100

NETHERLANDS

- Europe Headquarters & Distribution
- +31 610 432 191

NEW DELHI

- Sales Office
- +91 99 9994 5692





WE ARE PLEASED TO ANNOUNCE OUR
ISO 14001 CERTIFICATION - International Standard for Environmental Management Systems
ISO/TS16949 CERTIFICATION - International Automotive Quality System Standard

We are proud of our entire team for enabling us to achieve these certifications

Automatic and Standard Clutches • Rebuilding Kits • OEI Products • Hi-Performance Clutches • Friction Material

