



STRONG PARTNERS. TOUGH TRUCKS.



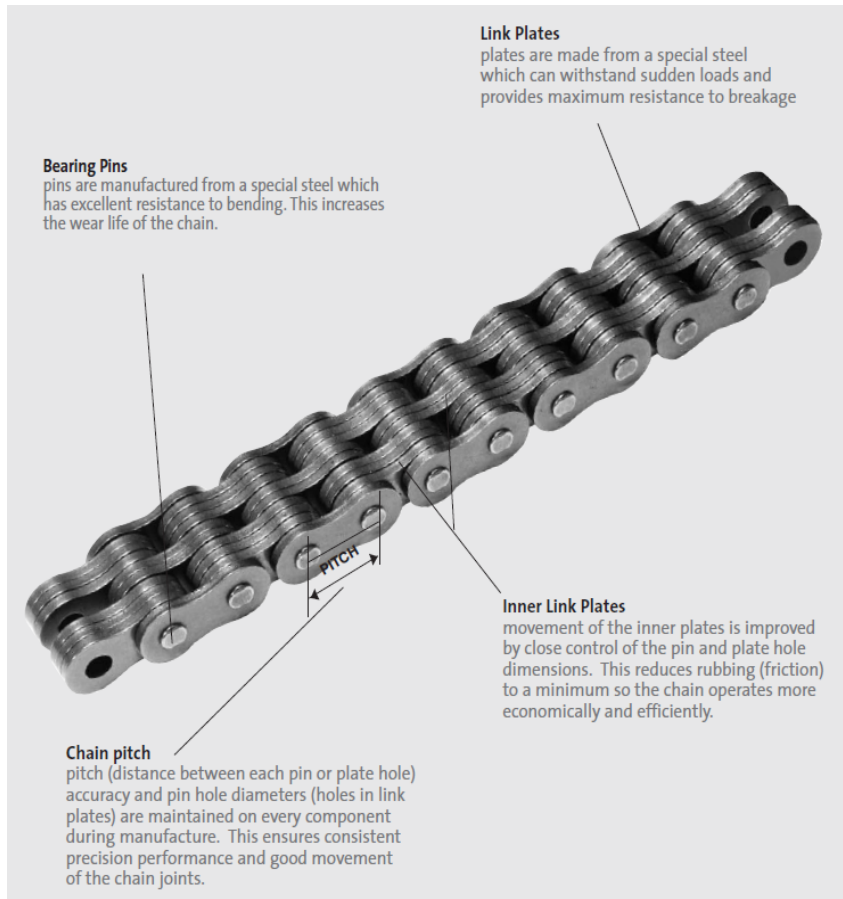
**HYSTER LEAF CHAIN OFFERING
2011**

LEAF CHAIN

Leaf Chains are used for, amongst others, Fork Lift Masts.

This type of chain is regulated by ANSI B29.8M, DIN 8152 and ISO 4347.

These STEEL chains have a very simple construction: Link plates and Pins.



The chain number indicates the pitch and the lacing of the links. Below find an example for AL6 and BL6 Series

(See Figure “Lacing/ Pin combination”)

Figure “Lacing/ Pin combination”

Lacing	2x2	4x4	6x6
Chain size	AL622	AL644	AL666

Lacing	2x3	3x4	4x6
Chain size	BL623	BL634	BL646

Chain types

There are A- and B- type chains in leaf chain series. Both AL series and BL series are available with the same pitch length , but they differ in pin diameter as shown in the figure below.

See example below: Pitch is 19.05 mm

	AL6 Series	BL6 series
Pin diameter	5.96	7.94
Plate width	2.44	3.3
Plate depth	15.62	18.11
Pitch	19.05	19.05

Note: All dimensions in mm

HYSTER LEAF CHAIN

Durability, efficiency, reliability and versatility are standard features of all Hyster lift chain. Hyster lift chain is available for most major brands of lift truck.

Special design features

- High Fatigue strength
- Long Service Life
- Maximum Resistance to wear
- Compact Design

The reference tables hereafter will assist you which Hyster part numbers to order once you have selected the right chain.

The ISO or ANSI reference is linked to the corresponding Hyster part number.

- LH = chain based on ISO4347
- BL is identical to LH (US terminology)
- AL = obsolete standard and no longer covered by ISO or ANSI standards

Example **BL646** or **LH1246**:

The left hand numbers **BL6** or **LH12** refer to the chain pitch size in 1/8 (or 1/16 for LH) inch units i.e. 3/4"pitch. The right hand numbers **46** refer to the plate combination i.e. 4 x 6

LEAF CHAIN AL SERIES OBSOLETE STANDARD

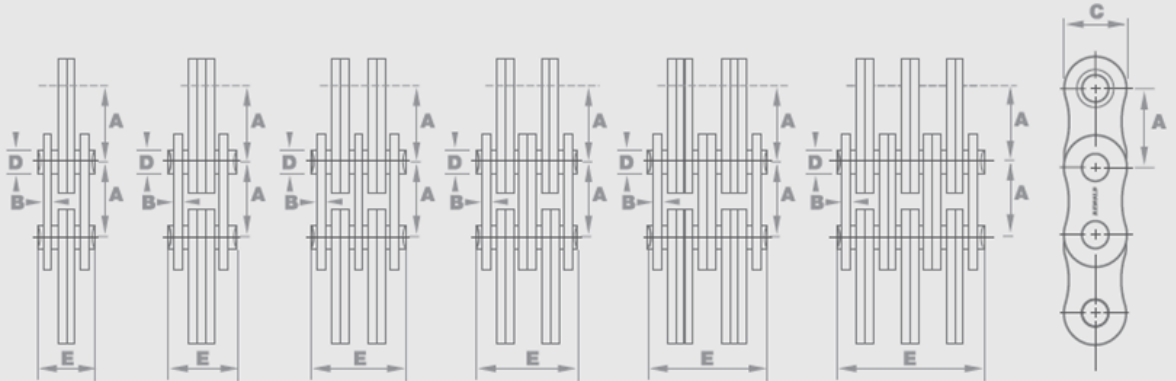
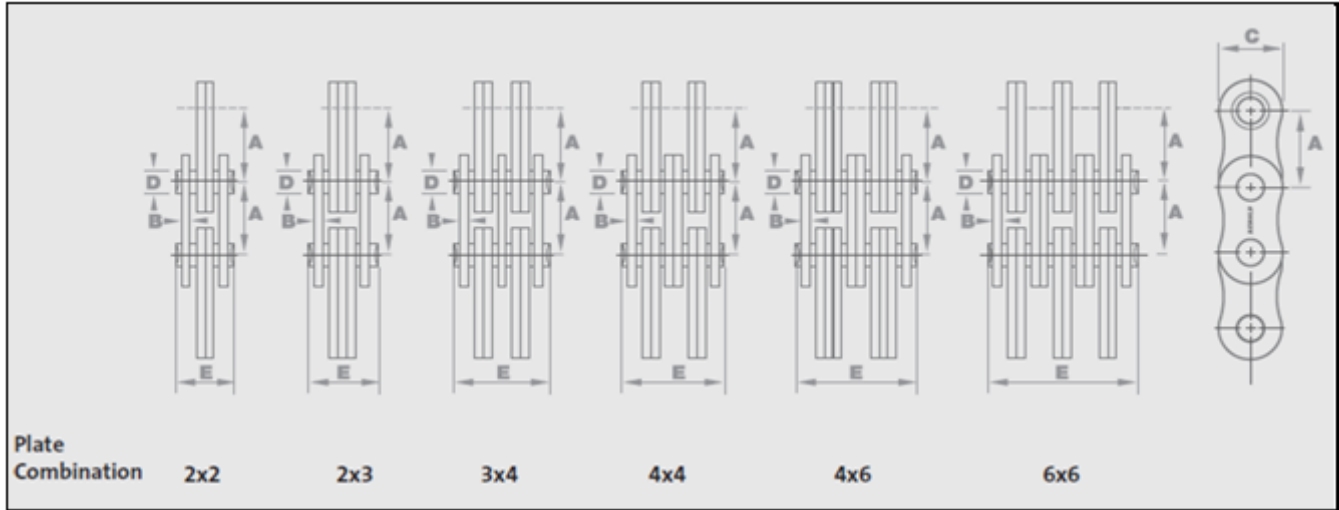


Plate Combination 2x2 2x3 3x4 4x4 4x6 6x6

CHAIN REFERENCE				SPECIFICATION DATA (mm)						
ISO Reference	ANSI Reference	Hyster reference	Available length cm	Pitch (inch) NOM	Pitch mm NOM	Plate combination	Pin diameter	Plate Depth	Plate Width	Width Over Pin
				A	A		MAX D	MAX C	MAX B	MAX E
-	AL 466	3116022	2500	0.500	12.700	6x6	3.98	10.41	1.55	21.34
-	AL 566	3116016	2500	0.625	15.875	6x6	5.09	13.03	2.08	27.99
-	AL 644	3116663	2500	0.750	19.050	4x4	5.96	15.62	2.44	22.78
-	AL 844	3116248	2500	1.000	25.400	4x4	7.94	20.83	2.44	22.78
-	AL 866	3116240	2500	1.000	25.400	6x6	7.94	20.83	3.30	44.20
-	AL1066	3116173	1500	1.250	31.750	6x6	9.54	25.70	4.00	54.00

LEAF CHAIN LH/ BL SERIES

ISO4347 / DIN8152 / ANSI B29.8



CHAIN REFERENCE				SPECIFICATION DATA (mm)						
ISO Reference	ANSI Reference	Hyster reference	Available length cm	Pitch (inch) NOM	Pitch mm NOM	Plate combination	Pin diameter MAX	Plate Depth MAX	Plate Width MAX	Width Over Pin MAX
				A	A		D	C	B	E
LH0846	BL 446	3116034	2500	0.500	12.700	4x6	5.09	12.07	2.08	23.75
LH1034	BL 534	3116181	2500	0.625	15.875	3x4	5.96	15.09	2.44	20.32
LH1044	BL 544	3116216	2500	0.625	15.875	4x4	5.96	15.09	2.44	22.78
LH1046	BL 546	3116093	2500	0.625	15.875	4x6	5.96	15.09	2.44	27.74
LH1066	BL 566	3116189	2500	0.625	15.875	6x6	5.96	15.09	2.44	32.69
LH1223	BL 623	3116155	2500	0.750	19.050	2x3	7.94	18.11	3.30	20.73
LH1234	BL 634	3116057	2500	0.750	19.050	3x4	7.94	18.11	3.30	27.43
LH1244	BL 644	3116140	2500	0.750	19.050	4x4	7.94	18.11	3.30	30.78
LH1246	BL 646	3116070	2500	0.750	19.050	4x6	7.94	18.11	3.30	37.49
LH1266	BL 666	3116367	1500	0.750	19.050	6x6	7.94	18.11	3.30	44.20
LH1622	BL 822	3116256	2500	1.000	25.400	2x2	9.54	24.13	4.09	21.34
LH1623	BL 823	3116197	2500	1.000	25.400	2x3	9.54	24.13	4.09	25.48
LH1634	BL 834	3116115	2500	1.000	25.400	3x4	9.54	24.13	4.09	33.76
LH1644	BL 844	3116208	2500	1.000	25.400	4x4	9.54	24.13	4.09	37.90
LH1646	BL 846	3116100	2500	1.000	25.400	4x6	9.54	24.13	4.09	46.18
LH1666	BL 866	3116148	2500	1.000	25.400	6x6	9.54	24.13	4.09	54.46
LH2034	BL1034	3116085	1500	1.250	31.750	3x4	11.11	30.18	4.90	40.23
LH2046	BL1046	3116107	1500	1.250	31.750	4x6	11.11	30.18	4.90	55.09
LH2066	BL1066	3116201	1500	1.250	31.750	6x6	11.11	30.18	4.90	65.00
LH2434	BL1234	3116026	1500	1.500	38.100	3x4	12.71	36.20	5.77	47.07
LH2446	BL1246	3116065	1500	1.500	38.100	4x6	12.71	36.20	5.77	64.52
LH2466	BL1266	3116297	1500	1.500	38.100	6x6	12.71	36.20	5.77	76.15
LH2846	BL1446	3116123	2500	1.750	44.450	4x6	14.29	42.24	6.55	73.18
LH3244	BL1644	3116132	1500	2.000	50.800	4x4	17.46	48.26	7.52	69.29
LH3266	BL1666	3116049	1500	2.000	50.800	6x6	17.46	48.26	7.52	99.57

Maintenance and Inspection

Lift truck chains are subject to considerable stress and can suffer premature failure when abused or improperly maintained. Failures can generally be attributed to shock loading or fatigue of chains that have been weakened by corrosion and excessive wear.

Chain life is dependent on correct maintenance. Comprehensive chain maintenance covers the inspection, adjustment, cleaning, lubrication protection in hostile environments and replacement of chain.

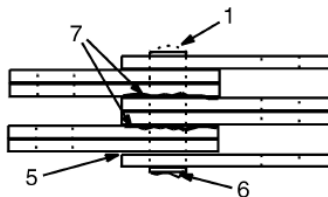
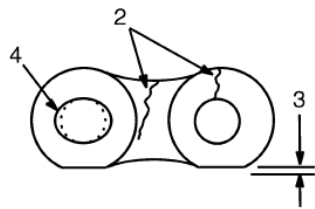
Defects

Check every link for defects.

A chain or chain anchor is considered unserviceable when one of the following can be detected:

- Cracked, corroded or missing link plates
- Excessively elongated holes
- Worn, loose or damaged pins
- Pins normally have flats at each side aligned with the length of the chain; pins that have turned from this alignment can provide warning of a problem

See Figure below.



- | | |
|-----------------|---------------------|
| 1. WORN PIN | 2. CRACKS |
| 3. EDGE WEAR | 4. HOLE WEAR |
| 5. LOOSE LEAVES | 6. DAMAGED PIN |
| 7. RUST | 8. CHAIN WEAR SCALE |

Wear

A lift chain becomes longer when it is worn. If a section of chain is 3% longer than a similar section of new chain, the chain is worn and must be replaced.

If a chain scale is available, check lift chains as shown on the chain scale.

If a chain scale is not available measure 20 links of chain.

Measure from the center of a pin to the center of another pin 20 pitches away and compare the length with the table below.

Replace chain if the length of 20 links of the worn section is more than the maximum wear limit.

BL CHAIN

 Pitch	Total Length of 20 pitches measure chain for wear, where it moves over sheaves	Wear Limit (The maximum length over 20 pitches)
12.70 mm	254.0 mm	261.6 mm
15.88 mm	317.5 mm	327.0 mm
19.05 mm	381.0 mm	392.4 mm
25.40 mm	508.0 mm	523.2 mm
31.75 mm	635.0 mm	654.1 mm
38.10 mm	762.0 mm	784.9 mm
44.45 mm	889.0 mm	915.7 mm
50.80 mm	1016.0 mm	1046.5 mm

Replacement

Hoist chains must be replaced when:

- Any part of the chain exhibits defects as mentioned above
- The chain is worn excessively

In absence of visible defects, it is recommended to replace chains after:

- 3 years of service or 6000 hours (normal applications) or
- 2 years of service or 4000 hours (cold store applications) whichever is earlier

Never replace just the worn section of a chain. Replace the complete chain. Never replace just one chain of a chain pair, always renew both together.

Cleaning and Lubrication

Under normal operating conditions, chains should be removed every 2000 hrs or 12 months and thoroughly cleaned and re-lubricated.

The chain should be cleaned only with paraffin, petrol, diesel fuel or white spirit.

The use of steam jets is not recommended due to the difficulty of removing all traces of water and the possibility of corrosion

Inadequate maintenance accounts for the majority of complaints of unsatisfactory chain performance. Reliability, efficiency and performance can only be maintained if the chain has proper care and maintenance.

Additional lubricant may be applied to chains whenever daily checks indicate that this is necessary.

For interim lubrication Hyster recommends a chain lube to prolong the life of your chain.



Part number 0171350

For chains, cables, hinges and ball joints. Hyster chain lube is specially formulated to penetrate to the inner surfaces of lift chain and cables - even through old lubricant. This product has excellent adhesion characteristics and is also an anti-corrosive.

Available lengths – Hyster Leaf Chain

Chain Type	Length cm	Hyster #	Links
AL 466	400	3116020	315
	500	3116021	395
	2500	3116022	1969
AL 566	500	3116015	315
	2500	3116016	1575
AL 644	310	3116159	163
	350	3116160	185
	400	3116161	211
	500	3116162	263
	2500	3116163	1313
AL 844	310	3116244	123
	350	3116245	139
	400	3116246	159
	500	3116247	197
	2500	3116248	985
AL 866	310	3116236	123
	350	3116237	139
	400	3116238	159
	500	3116239	197
	2500	3116240	985
AL1066	300	3116171	95
	400	3116172	127
	1500	3116173	473
BL 446	310	3116030	245
	350	3116031	277
	400	3116032	315
	500	3116033	395
	2500	3116034	1369
BL 534	310	3116177	195
	350	3116178	221
	400	3116179	253
	500	3116180	315
	2500	3116181	1575
BL 544	310	3116212	195
	350	3116213	221
	400	3116214	253
	500	3116215	315
	2500	3116216	1575

Chain Type	Length cm	Hyster #	Links
BL 546	288	3116086	181
	310	3116089	195
	366	3116088	231
	404	3116094	255
	456	3116095	287
	2500	3116093	1575
BL 566	310	3116185	195
	350	3116186	221
	400	3116187	253
	524	3116192	331
	2500	3116189	1575
BL 588	310	3116274	195
	350	3116275	221
	400	3116276	253
	500	3116277	315
	2500	3116278	1575
BL 623	362	3116156	191
	400	3116157	231
	440	3116158	n.a.
	2500	3116159	1313
BL 634	310	3116053	163
	350	3116054	185
	400	3116055	211
	500	3116056	263
	2500	3116057	1313
BL 644	310	3116136	163
	350	3116137	185
	400	3116138	211
	500	3116139	263
	2500	3116140	1313
BL 646	143	3116071	75
	2500	3116070	131
BL 666	150	3116363	79
	177	3116364	93
	200	3116365	105
	253	3116366	133
	1500	3116367	787

Available lengths – Hyster Leaf Chain

Chain Type	Length cm	Hyster #	Links
BL 822	310	3116252	123
	350	3116253	139
	400	3116254	159
	500	3116255	197
	2500	3116256	985
BL 823	310	3116193	123
	350	3116194	139
	400	3116195	159
	500	3116196	197
	2500	3116197	985
BL 834	310	3116111	123
	382	3116109	151
	422	3116110	167
	524	3116117	207
	2500	3116115	985
BL 844	310	3116205	123
	400	3116206	159
	500	3116207	197
	2500	3116208	985
BL 846	310	3116097	123
	454	3116103	179
	514	3116108	203
	2500	3116100	985
BL 866	318	3116143	125
	364	3116149	143
	432	3116150	171
	500	3116147	197
	2500	3116148	985

Chain Type	Length cm	Hyster #	Links
BL1034	245	3116082	77
	289	3116083	91
	328	3116084	103
	1500	3116085	480
BL1046	245	3116104	77
	289	3116105	91
	328	3116106	103
	1500	3116107	480
BL1066	1500	3116201	480
BL1234	1500	3116026	480
BL1246	271	3116061	71
	317	3116062	83
	355	3116063	93
	393	3116064	103
	1500	3116065	400
BL1266	1500	3116297	400
BL1288	1500	3116167	400
BL1446	263	3116119	59
	307	3116120	69
	387	3116121	87
	929	3116124	129
	2500	3116123	563
BL1666	300	3116045	59
	453	3116046	89
	514	3116047	101
	575	3116048	113
	1500	3116049	300
BL1688	321	3116038	63
	453	3116039	89
	595	3116040	117
	1500	3116041	300