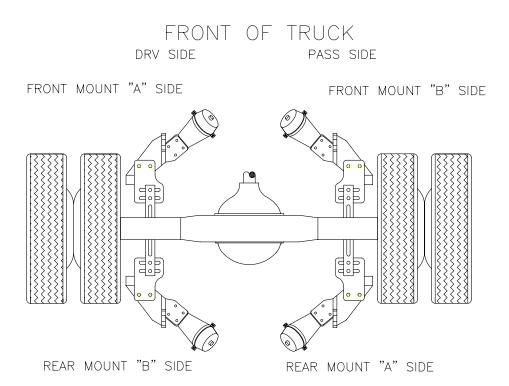
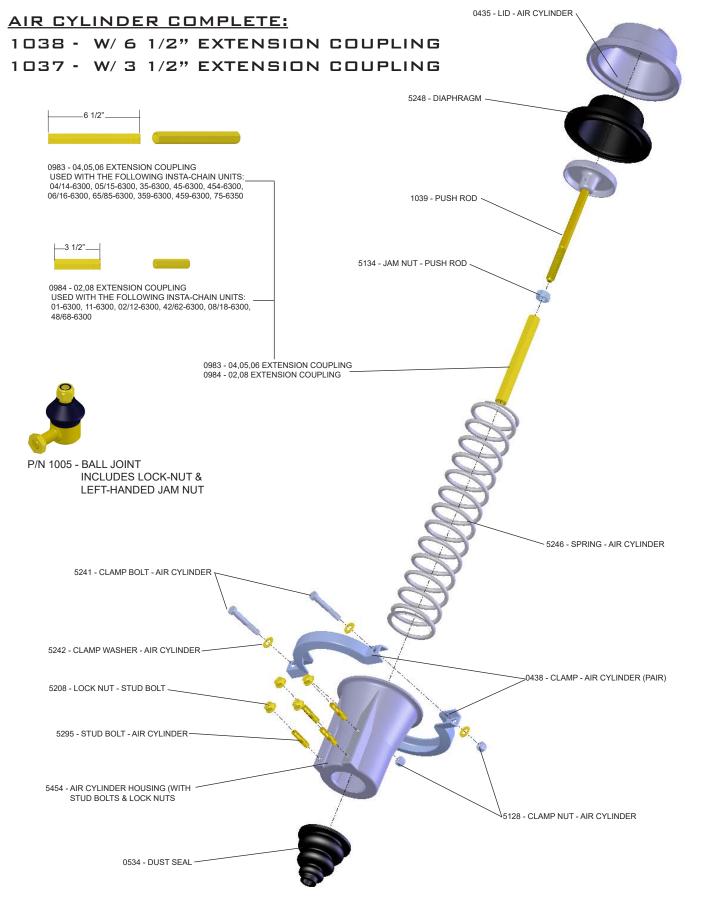


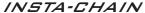
Welcome to the Insta-Chain catalog and thank you for your interest in our product. We would like you to make note of the following items as they may have changed or you may be unfamiliar with our product.

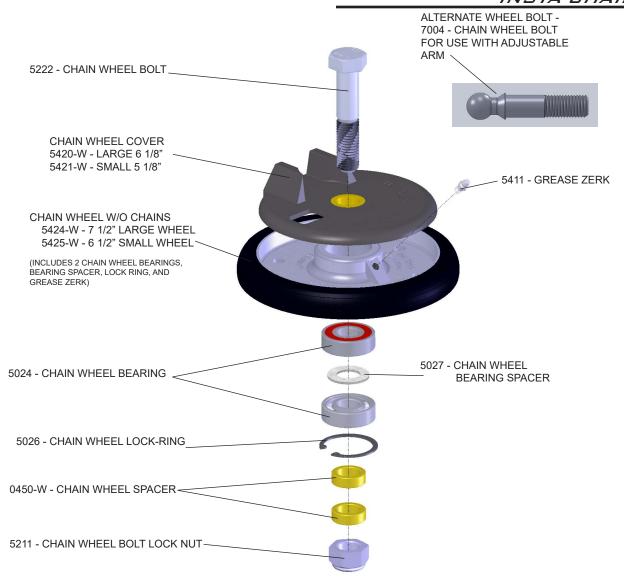
1. You will note that in the part numbers instead of seeing L and R, you will see A and B. This is due to how the Insta-Chain Units can mount either in front or behind the axle. For example: if your Chain Unit is mounted in FRONT of the axle the Left side would be the "A" side and the Right side would be the "B" side. If your Chain Unit is mounted to the REAR of the axle then the Left side would be the "B" side and the Right side would be the "A" side (see diagram below).



INSTA-CHAIN







CHAIN WHEELS COMPLETE AND REPLACEMENT CHAIN STRANDS

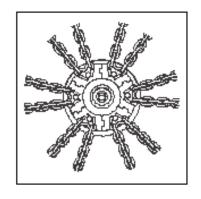
6 STRAND MODEL

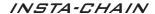
DESCRIPTION	INDIVIDUAL STRANDS	WHEELS COMPLETE
LARGE SINGLE SMALL SINGLE - 8 LINK SMALL SINGLE - 10 LINK LARGE SINGLE STAINLESS STEEL	0951 0953-8 0953-10 0959	0961 0963-8 0963-10 0969



12 STRAND MODEL

DESCRIPTION	INDIVIDUAL STRANDS	WHEELS COMPLETE
LARGE DOUBLE	0952	0962
SMALL DOUBLE - 8 LINK	0958-8	0968-8
SMALL DOUBLE - 10 LINK	0958-10	0968-10
LARGE DOUBLE STAINLESS STEEL	09569	09669





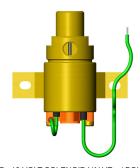


5080 - BRASS ELBOW 90° 3/8" x 1/4"





5122 - BRASS T



5047 - 12 VOLT SOLENOID VALVE w/ BOLTS, NUTS, AND WASHERS



5189 - PIGGY BACK CONN. - 14/16 GA



5200 - TOGGLE SWITCH



5183 - RING CONNECTOR - 1/4" STUD / 14GA



5184 - SPADE CONNECTOR - 14GA - 1/4"

SOLENOID PACKET INCLUDES:

1 - 5047 - 12V SOLENOID VALVE W/ BOLTS, NUTS, AND WASHERS

1 - 5198 - TOGGLE SWITCH W/ GUARD

1 - 5122 - BRASS "T"

4 - 5080 - BRASS ELBOW 90° 3/8" x 1/4"

4 - 5184 - SPADE CONNECTOR 14GA - 1/4"

2 - 5183 - RING CONNECTOR - 1/4" STUD / 14GA

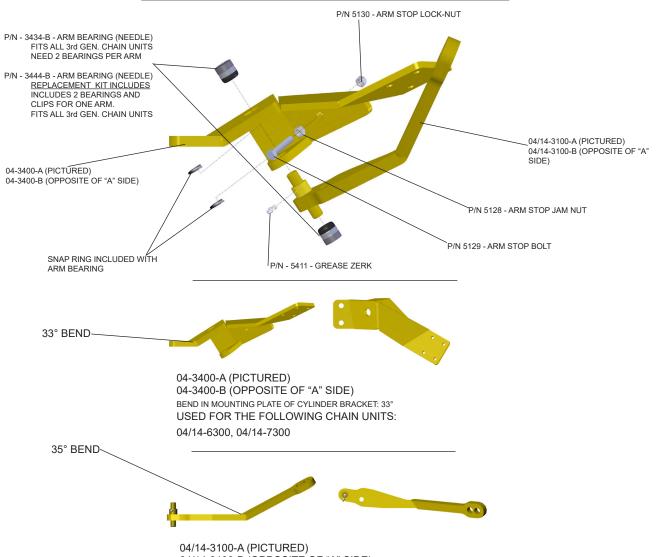
2 - 5189 - PIGGY BACK CONNECTOR - 14/16 GA

1 - 5181 - BUTT CONNECTOR - BLUE - 16/14GA 25FT - 5123 - 3/8" AIRLINE (NOT PICTURED)

40FT - 5180 - 14GA ELECTRICAL WIRE (NOT PICTURED)

04/14-6300 CHAIN UNIT

*NOTE - SOME OF THE ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE ARMS LIE IN THE LENGTH OF THE ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



04/14-3100-A (PICTURED) 04/14-3100-B (OPPOSITE OF "A" SIDE) BEND IN ARM: 35° USED FOR THE FOLLOWING CHAIN UNITS: 04/14-6300, 04/14-7300, 08/18-6300, 08/18-7300

04/14-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



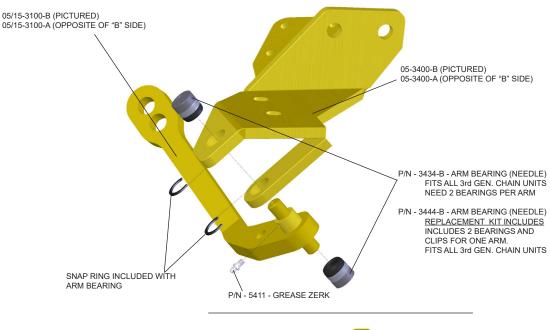
P/N 1038 - 04, 05, 06 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET

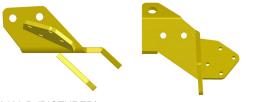


STINU NI

05/15-6300 CHAIN UNIT

*NOTE - SOME OF THE ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE ARMS LIE IN THE LENGTH OF THE ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.





05-3400-B (PICTURED) 05-3400-A (OPPOSITE OF "B" SIDE)

USED FOR THE FOLLOWING CHAIN UNITS: 05/15-6300, 05/15-7300



05/15-3100-A (OPPOSITE OF "B" SIDE) 05/15-3100-B (PICTURED) BEND IN ARM: 43° USED FOR THE FOLLOWING CHAIN UNITS: 05/15-6300, 05/15-7300

05/15-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



P/N 1038 - 04, 05, 06 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET

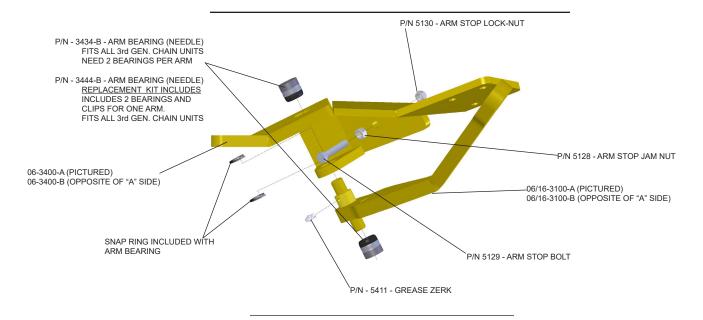
NOT INCLUDED IN REGULAR PRICE OF UNIT



P/N 05-8000 - 05 CHAIN TRAY 05-8000-B (SHOWN) 05-8000-A (OPPOSITE OF "B" SIDE)

06/16-6300 CHAIN UNIT

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.





06-3400-A PICTURED 06-3400-B (OPPOSITE OF "A" SIDE) BEND IN MOUNTING PLATE OF CYLINDER BRACKET: 25° USED FOR THE FOLLOWING CHAIN UNITS: 06/16-6300, 06/16-7300



06/16-3100-A (PICTURED) 06/16-3100-B (OPPOSITE OF "A" SIDE) BEND IN ARM: 27° USED FOR THE FOLLOWING CHAIN UNITS: 06/16-6300, 06/16-7300, 02/12-6300, 02/12-7300

06/16-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



P/N 1038 - 04, 05, 06 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET

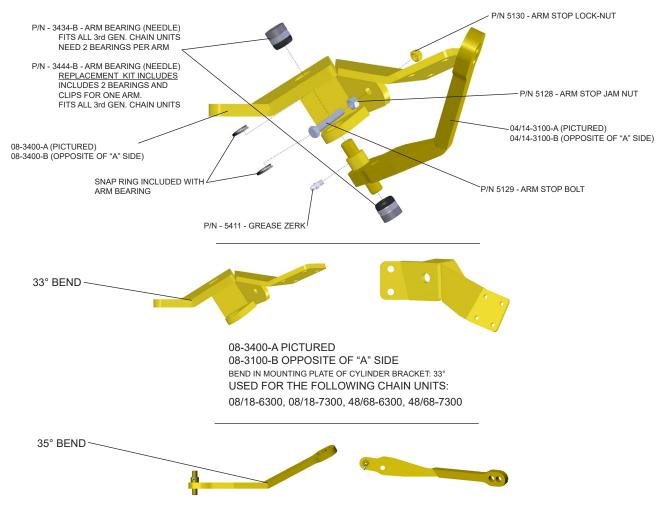


EHAIN UNITE

08/18-6300 CHAIN UNIT

(LOW FLOOR BUS MODEL)

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



04/14-3100-A (PICTURED) 04/14-3100-B (OPPOSITE OF "A" SIDE) BEND IN ARM: 35° USED FOR THE FOLLOWING CHAIN UNITS: 04/14-6300, 04/14-7300, 08/18-6300, 08/18-7300

08/18-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT

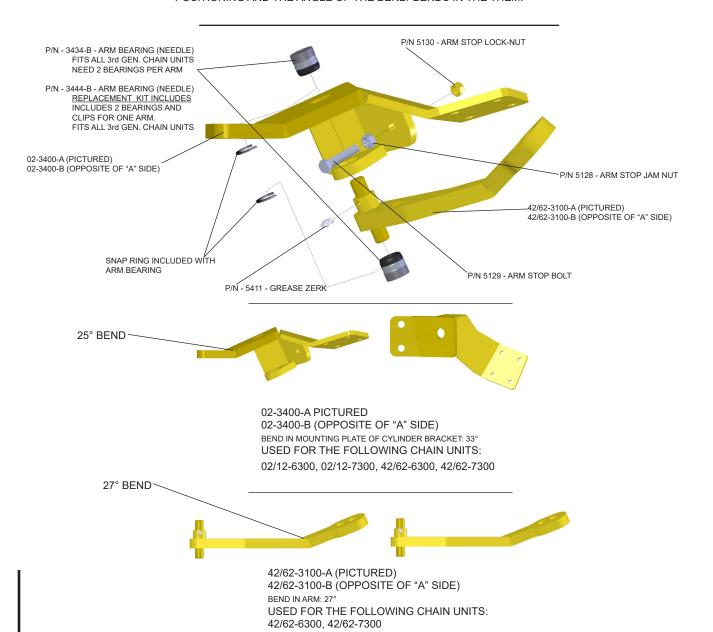


P/N 1037 - 02,08 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET



42/62-6300 CHAIN UNIT

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



42/62-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT

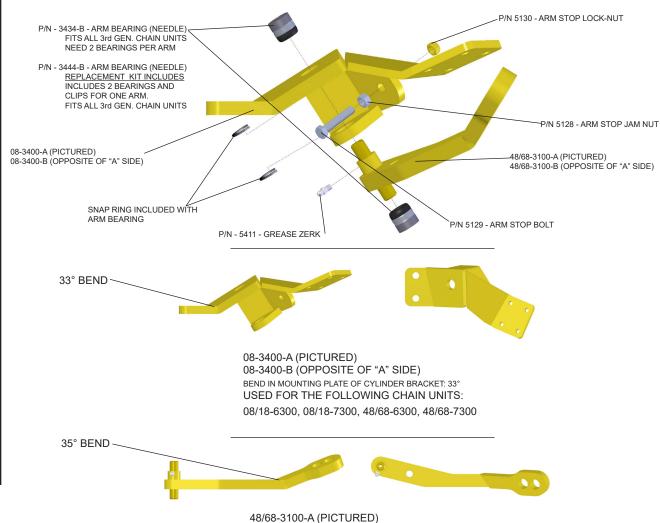


P/N 1037 - 02,08 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET



48/68-6300 CHAIN UNIT

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



48/68-3100-A (PICTURED) 48/68-3100-B (OPPOSITE OF "A" SIDE) BEND IN ARM: 35° USED FOR THE FOLLOWING CHAIN UNITS: 48/68-6300, 48/68-7300

48/68-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



P/N 1037 - 02,08 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET

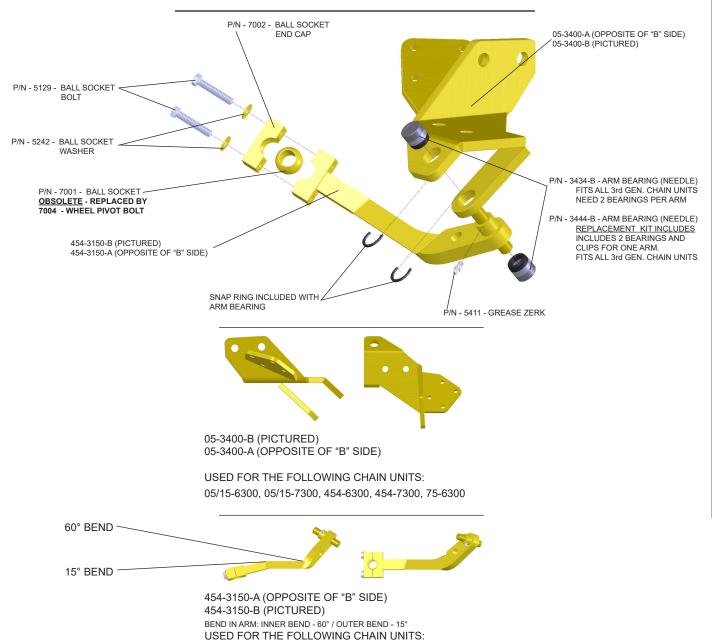


P/N 42-8000 - CHAIN TRAY USED FOR THE FOLLOWING CHAIN UNITS: 04/14-6300, 06/16-6300, 08/18-6300, 42/62-6300, 48/68-6300

454-6350 CHAIN UNIT

(LOW FLOOR BUS MODEL)

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



454-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS

454-6350, 454-7350



P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



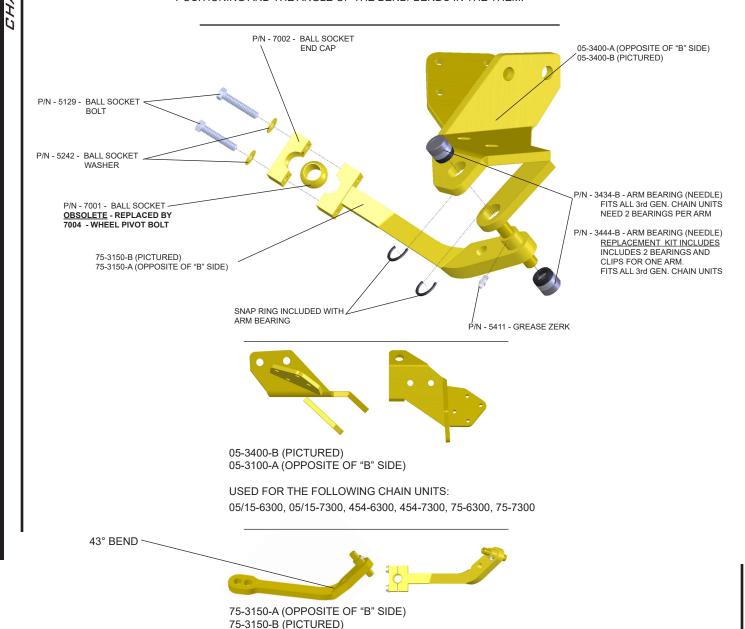
P/N 1038 - 04, 05, 06 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET



P/N 05-8000 - 05 CHAIN TRAY 454-8000-B (SHOWN) 454-8000-A (OPPOSITE OF "B" SIDE)

75-6350 CHAIN UNIT

*NOTE - SOME OF THE CYLINDER BRACKETS AND ARMS LOOK SIMILAR, THE DIFFERENCES IN THESE LIE IN THE LENGTH OF THE BRACKET/ ARM AND THE POSITIONING AND THE ANGLE OF THE BEND/ BENDS IN THE THEM.



USED FOR THE FOLLOWING CHAIN UNITS: 75-6350, 75-7350

BEND IN ARM: BEND - 43°

75-6300 CHAIN UNITS ALSO USES THE FOLLOWING PARTS



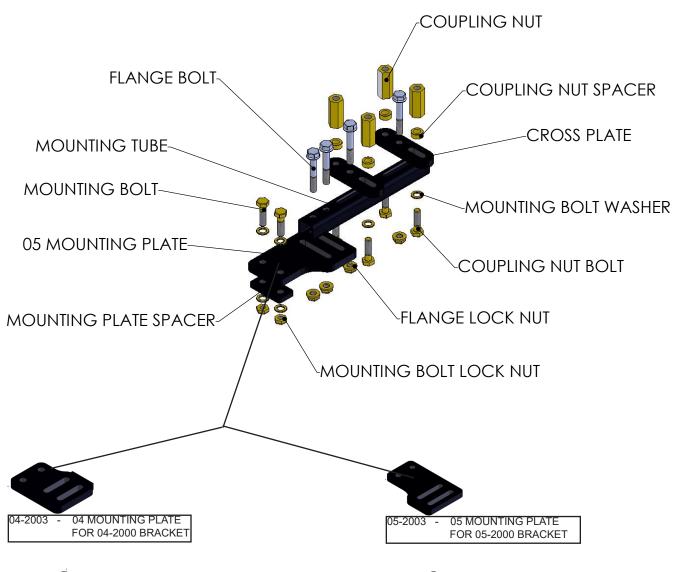
P/N 1005 - BALL JOINT INCLUDES LOCK-NUT & LEFT-HANDED JAM NUT



P/N 1038 - 04, 05, 06 AIR CYLINDER COMPLETE INCLUDES STUD BOLT LOCK-NUTS & CYLINDER BRACKET GASKET



P/N 05-8000 - 05 CHAIN TRAY 75-8000-B (SHOWN) 75-8000-A (OPPOSITE OF "B" SIDE)





04-2004 - 04 MOUNTING PLATE W/ 4° BEND FOR 04-2204 BRACKET



05-2004 - 05 MOUNTING PLATE W/ 4° BEND FOR 05-2204 BRACKET



4-2008 - 04 MOUNTING PLATE W/ 8° BEND FOR 04-2208 BRACKET



05-2008 - 05 MOUNTING PLATE W/ 8° BEND FOR 05-2208 BRACKET



4-2012 - 04 MOUNTING PLATE W/ 4° BEND FOR 04-2212 BRACKET



05-2012 - 05 MOUNTING PLATE W/ 12° BEND FOR 05-2212 BRACKET

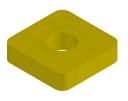


2002 - UNIVERSAL MOUNTING TUBE



MOUNTING PLATE SPACERS

P/N	DESCRIPTION
1014-S	1/4" MTG PLATE SPACER
1012-S	1/2" MTG PLATE SPACER



CROSS PLATE SPACERS

P/N	DESCRIPTION
2415	1/4" CROSS PLATE SPACER
2515	1/2" CROSS PLATE SPACER





COUPLING NUT SPACERS

P/N	DESCRIPTION
0625-FW	5/8" Flat Washer
6254-FW	1/4" Coupling Nut Spacer
1050-S	1/2" Coupling Nut Spacer
1075-S	3/4" Coupling Nut Spacer
1100-S	1" Coupling Nut Spacer

Combine Coupling Nut Spacers for larger Spacing needs, i.e. for a 1 7/8" Spacer combine a 1" + a 3/4" + a 5/8" Flat Washer (1/8" Spacer)



2001 - UNIVERSAL CROSS PLATE

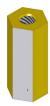


GRADE-8 BOLTS ALL BOLTS ARE COARSE (UNC) THREADED UNLESS OTHERWISE STATED

P/N	DESCRIPTION
0150	5/8" x 1 1/2" (Coupling Nut Bolt)
0175	5/8" x 1 3/4" (Coupling Nut Bolt)
0200	5/8" x 2" (Coupling Nut Bolt)
0225	5/8" x 2 1/4" (Coupling Nut Bolt)
0250	5/8" x 2 1/2" (Coupling Nut Bolt)
0275	5/8" x 2 3/4" (Coupling Nut Bolt)
0300	5/8" x 3" (Coupling Nut Bolt)
0325	5/8" x 3 1/4" (Coupling Nut Bolt)
0350	5/8" x 3 1/2" (Coupling Nut Bolt)
0375	5/8" x 3 3/4" (Coupling Nut Bolt)
0400	5/8" x 4" (Coupling Nut Bolt)
0425	5/8" x 4 1/4"
0450	5/8" x 4 1/2"
0500	5/8" x 5"
0600	5/8" x 6"
0700	5/8" x 7"
0800	5/8" x 8"
0900	5/8" x 9"
10100	1" x 10" (Hanger Bolt)
1070	1"-14 x 7"
1220	1/2" x 2" - 20 BOLT
1225	1/2" x 2" (Set Screw)
1230	1/2"-13 x 3" (Set Screw)
1240	1/2" x 4" (Set Screw)
1250	1/2" x 5" (Set Screw)
1260	1/2"-13 x 6" (Set Screw)
13130	5/16" x 1" BOLT
1415-90	M16x1.5 - 90MM LONG GD 10.9
1615-40	M16x1.5 - 40MM LONG GD 10.9
1615-60	M16x1.5 - 65MM LONG GD 10.9
1615-70	M16x1.5 - 70MM LONG GD 10.9
16150	M16x1.5 - 150MM LONG GD 10.9
1620-40	M16x2.0 - 40MM LONG GD 10.9
1620-45	M16x2.0 - 45MM LONG GD 10.9
1620-50	M16x2.0 - 50MM LONG GD 10.9
1620-60	M16x2.0 - 60MM LONG GD 10.9
1620-65	M16x2.0 - 65MM LONG GD 10.9
1620-70	M16x2.0 - 70MM LONG GD 10.9
1620-80	M16x2.0 - 80MM LONG GD 10.9
1620-90	M16x2.0 - 90MM LONG GD 10.9
1620-100	M16x2.0 - 100MM LONG GD 10.9
1620-150	M16x2.0 - 150MM LONG GD 10.9



GRADE-8 NUTS	
P/N	DESCRIPTION
0226	5/8" MOUNTING LOCK NUTS
1071	1" UNC LOCK NUT
1072	1" UNF LOCK NUT
1121-F	7/8"-14 UNF TOP-LOCK NUT
1122-F	1"-14 UNF TOP-LOCK NUT
1123-F	3/4"-16 UNF TOP-LOCK NUT
1213	1/2" x 13 LOCK NUT
1226	1/2" x 13 SET SCREW NUT
1255	1/2" x 20 UNF TOP LOCK NUT
1256	1/2" x 20 UNF LOCK NUT
1415-61	M14x1.5 GD 10.9 LOCK NUT
1620-61	M16x2.0 GD 10.9 LOCK NUT



COUPLI	NG NUTS
P/N	<u>DESCRIPTION</u>
3410	3/4"-10 Coarse Coupling Nut (White)
3416	3/4"-16 Fine Coupling Nut (Green)
7809	7/8"-9 Coarse Coupling Nut (Black)
7814	7/8"-14 Fine Coupling Nut (Blue)
1014	1" - 14 Fine Coupling Nut (Red)
1125	1 1/8"-12 Fine Coupling Nut (Pink)
1815	18mm x 1.5 Coupling Nut (Orange/White)
2015	20mm x 1.5 Coupling Nut (Purple)
2025	20mm x 2.5 Coupling Nut (Silver)
2215	22mm x 1.5 Coupling Nut (Brown)
2225	22mm x 2.5 Coupling Nut (Yellow)
2420	24mm x 2.0 Coupling Nut (Orange)
l	





GRADE-8	FLANGE BOLTS & NUTS
P/N	DESCRIPTION
2400	5/8"x 4" FLANGE BOLTS
0227	5/8" FLANGE LOCK-NUTS

INSTA-CHAIN QUICK REFERENCE PARTS APPLICATION GUIDE								
CHAIN UNIT	Cylinder Bracket	Bend Deg.	Arm	Length	Pivot-Bend	Bend Deg.	Bearing Kit	Air Cylinder
01-6300	01-3400-A/B	n/a	01-3100-A/B	12.75	4.75	45	3444-B	1037
11-6300	01-3400-A/B	n/a	11-3100-A/B	12.75	5.5	36	3444-B	1037
04/14-6300	04-3400-A/B	33	04/14-3100-A/B	18.5	8.5	27	3444-B	1038
05/15-6300	05-3400-A/B	43	05/15-3100-A/B	13.38	5	43	3444-B	1038
06/16-6300	06-3400-A/B	25	06/16-3100-A/B	18.75	8.5	27	3444-B	1038
08/18-6300	08-3400-A/B	33	04/14-3100-A/B	18.5	8.5	35	3444-B	1037
42/62-6300	02-3400-A/B	25	42/62-3100-A/B	14	8.25	27	3444-B	1037
48/68-6300	08-3400-A/B	33	48/68-3100-A/B	13.63	8.25	35	3444-B	1037
565-6300	565-3400-A/B	43	565-3100-A/B	12.5	3.5	47	3444-B	1038
65-6300	65-3400-A/B	47	65-3100-A/B	13	3.5	47	3444-B	1038
75-6300	75-3400-A/B	43	75-3100-A/B	11.5	3.5	43	3444-B	1038
85-6300	65-3400-A/B	41	85-3100-A/B	13	3.5	41	3444-B	1038
35-6300	05-3400-A/B	43	35-3100-A/B	13.38	3.5	53/10	3444-B	1038
45-6300	05-3400-A/B	43	45-3100-A/B	13.75	3.5	53/10	3444-B	1038
259-6300	059-3400-A/B	43	259-3100-A/B	11.5	3.5	55	3444-B	1038
359-6300	059-3400-A/B	43	35-3100-A/B	13.63	3.5	53/10	3444-B	1038
459-6300	059-3400-A/B	43	45-3100-A/B	13.75	3.5	53/10	3444-B	1038

Parts common to All

P/N	Description
1005	Ball Joint
5248	Diaphragm
0439	Clamp Kit, Air Cylinder
0435	Air Cylinder Lid
3444-B	Arm Bearing Kit, 2 Bearings, 2 Clips



FASTENING TORQUE SHEET

INSTA-CHAIN PART NUMBER	FASTENER DEATIALS	INSTA-CHAIN DESCRIPTION	NOMINAL TORQUING FT/LBS		
			DRY TORQUING FT/LBS	LUBRICATEI TORQUING FT/LBS	
CHAIN UNIT HARDWAR	E				
5211-W	M20x2.5 Nut GRD 8	Chain Wheel Nut	13	135	
5438	M10x2.0 Nylon Nut	Ball Joint Nut	45		
5134	M14x1.5 Nut	Extension Coupling Jamb Nut	75		
4613	3/8"-24 Lock Nut	Chain Plate Nut	45		
5207	3/8"-24 Lock Nut	Air Cylinder Nut	35		
5409-T	3/8"-16 Nylon Nut	Air Cylinder Clamp Nut	30		
5130-В	3/8"-16 Lock Nut	Stop Bolt Nut	30		
5135	3/8"-16x1 3/4 GRD 12 Bolt	Ball & Socket Arm Bolt	60	45	
MOUNTING BRACKET H	ARDWARE SPECS				
0226	5/8"-11 GRD 8	Mounting Hole Lock Nut	102		
0250	5/8"-11 x 2 1/2" GRD 8	Mounting Hole Bolt	102		
Varies by Length	5/8"-11 GRD 8	Coupling Nut Bolt	175		
0226	5/8"-11 GRD 12	Mounting Hole Lock Nut	130		
90250	5/8"-11 x 2 1/2" GRD 12	Mounting Hole Bolt	130		
Varies by Length	5/8"-11 GRD 12	Coupling Nut Bolt	185		
MOUNTING CONFIGURA	TION HARDWARE SPECS (See I	FIG.1 for Hardware Identification)			
Varies by U-Bolts	OEM U-Bolt Sized	Coupling Nut (When Installed Underneath Original OEM Nuts)	130	100	
Varies by U-Bolts	OEM U-Bolt Sized	Coupling Nut (When OEM Nuts are Removed and Replaced)	See OEM U-Bolt Specs		
Varies by Model	1"-14 Bolt GRD 8	Bar-Pin Mounting Bracket	See OEM Bar-Pin Specs		
Varies by Model	3/4"-16 U-Bolt GRD 8	U-Bolt Saddle Mounting Bracket	312		
Varies by Model	5/8"-18 U-Bolt GRD 8	U-Bolt Saddle Mounting Bracket	175		
OLENOID SYSTEM HAR	RDWARE				
5206	1/4"-20 Lock Nut	Solenoid Mounting Nut	5 (50 in/lbs.)		
5406	1/4"-20 Bolt	Solenoid Mounting Bolt	5 (50 in/lbs.)		
DEM U-BOLTS					
No P/N	Vehicle U-Bolt	OEM U-Bolts Replacement	See OEM Torque Specs		

MUST READ IMPORTANT TIPS FOR INSTALALING INSTA-CHAIN PRODUCTS

- 1.) Insta-Chains coupler nuts are required to be fastened underneath OEM U-Bolt nuts with an Anti-Seize.
- 2.) Mounting bracket bolts are required to have high strength locking fluid when fastening bracket to its fixture.
- 3.) ALL LOCK NUTS can only be re-used and fastened THREE times (otherwise the lock nut will lose its locking set)
- 4.) 5.) All OEM U-Bolts Should be Fastened by using the OEM specs of torquing.
- 5.) Always tighten bolts in cross patterns and in 1/2 torque stages until the appropriate torque is reached.
- 6.) Never exceed torque specs over 5% this will result in stretched bolts.
- 7.) Lubricated Torquing is defined as fastening a nut or bolt by using a thread locker or Anti-seize. (Anti-Sieze is to be used on all through pins, coupling nuts and ubolts when fastening them)

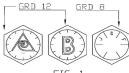


FIG. 1

