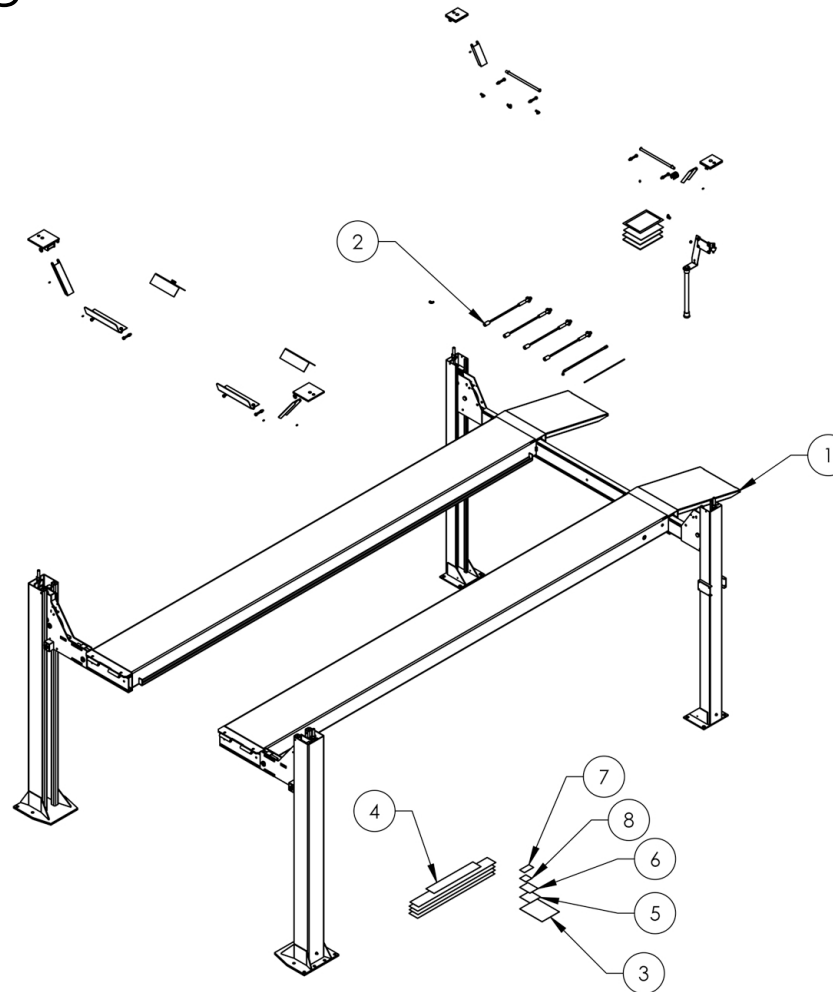


Service Manual

Service Parts & Diagrams

HDSO-14

BendPak SKU 5260519
HDSO-14 Four-Post Car Lift
Version C
09/16/2016



This guide is a troubleshooting reference used for maintaining and servicing your BendPak product. It provides comprehensive information on identifying serviceable parts and components and assists in troubleshooting problems and performing assembly/disassembly procedures.



BendPak, Inc. Corporate Office

1645 Lemonwood Drive
Santa Paula, CA 93060 USA
Toll Free US/Canada: 1-800-253-2363
Fax: 1-805-933-9160
info@bendpak.com

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Customer Service Representatives
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customerservice@bendpak.com

Parts Orders

Customer Service Representatives
Office Tel: 1-805-933-9970
Toll Free US/Canada: 1-800-253-2363
Fax: 1-805-933-9160
parts@bendpak.com

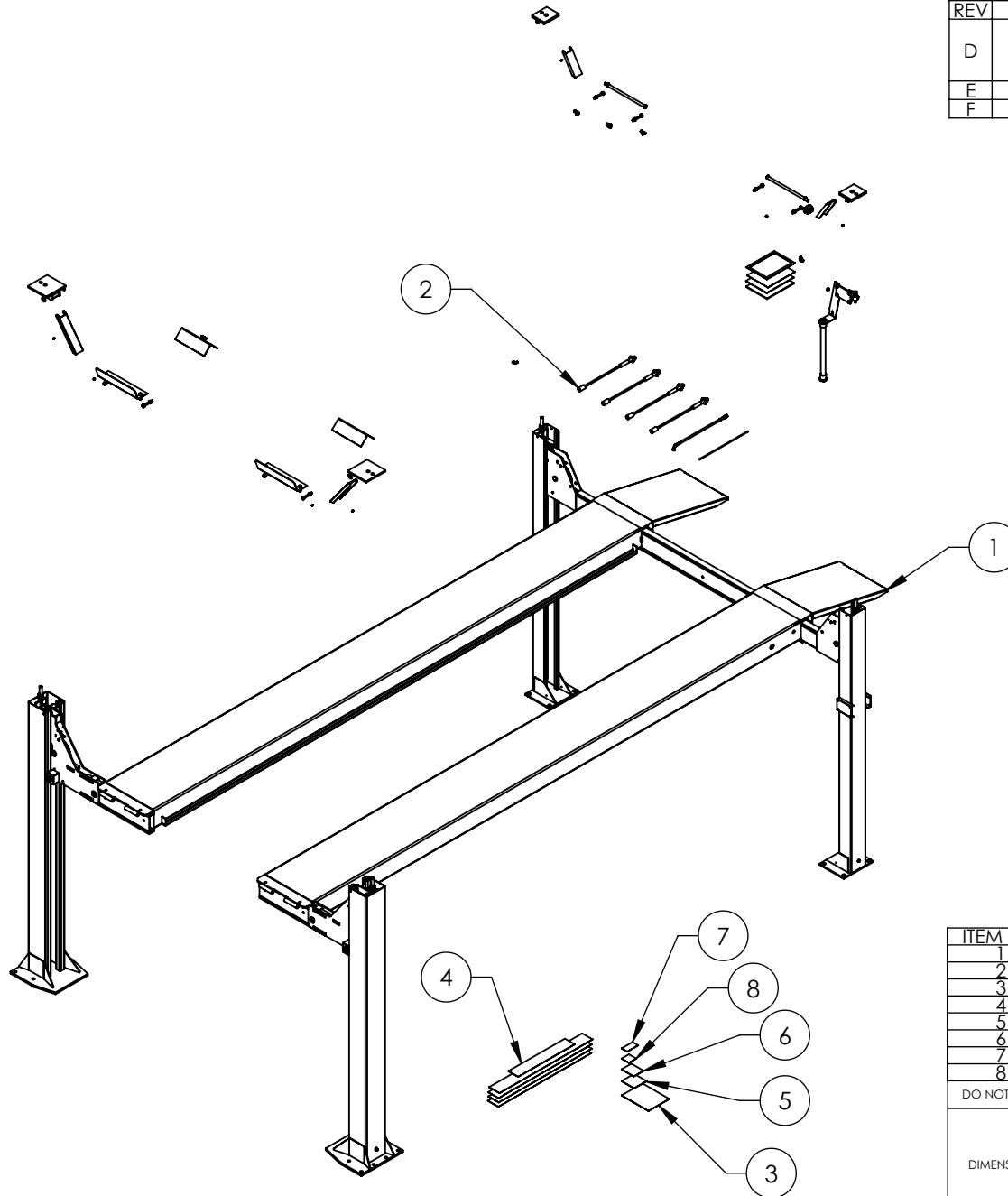
Domestic Sales & Service

USA Sales Representatives
Office Tel: 1-805-933-9970
Toll Free US/Canada: 1-800-253-2363
Fax: 1-805-933-9160
sales@bendpak.com

International Sales & Service

Office Tel: 1-805-933-9970
Exports Department: 1-805-933-9970 Ext. 192
Toll Free US/Canada: 1-800-253-2363
Fax: 1-805-933-9160
bpkexports@bendpak.com

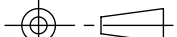
REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
D	REPLACED 5930605 WITH 5905953, REPLACED 5905557 WITH 5905402 UPDATED BOM REVISIONS	12/10/2015	JM	00724
E	UPDATED BOM REVISIONS	12/24/2015	JM	00741
F	UPDATED BOM REVISION	08/24/2016	TM	00775

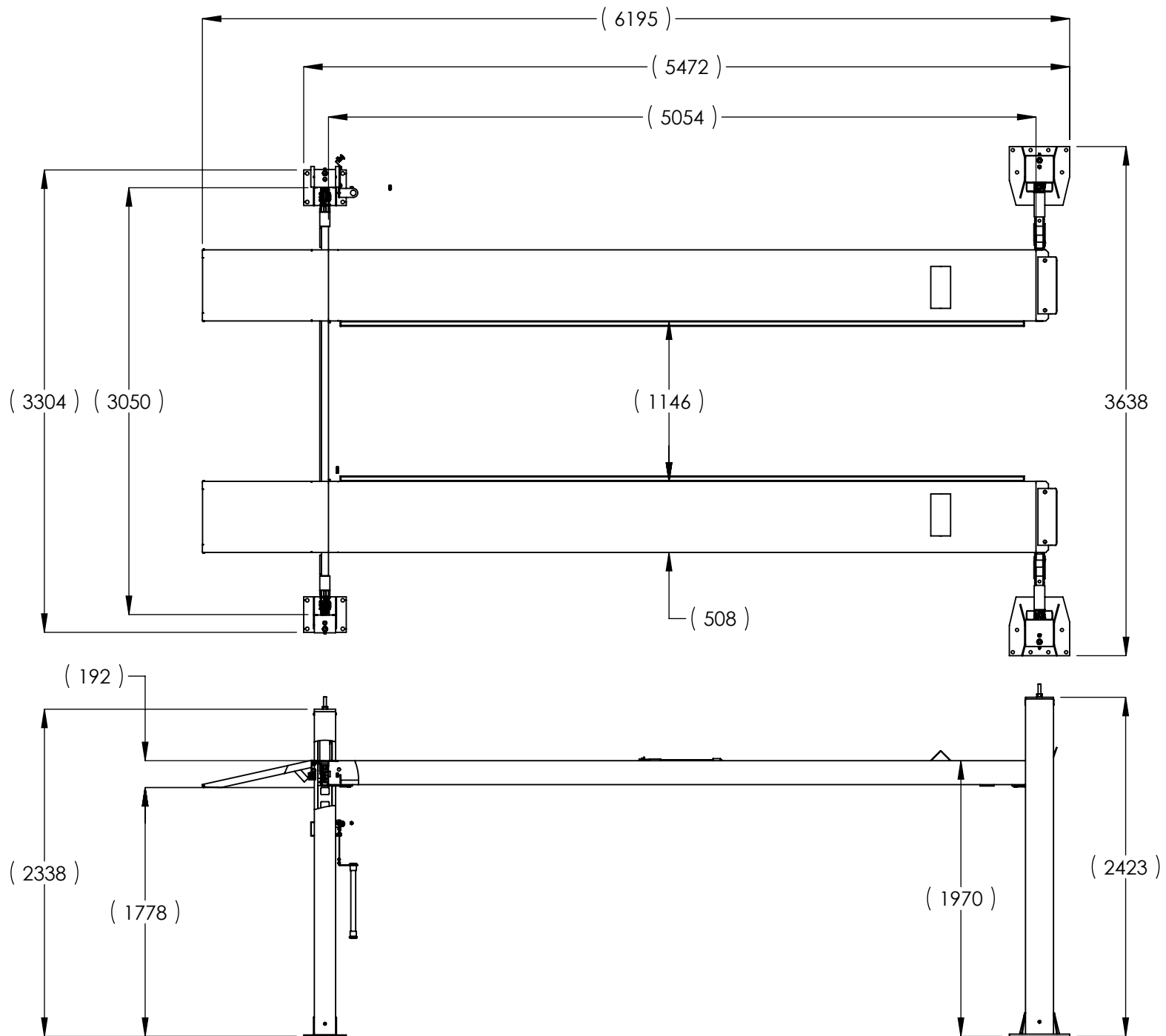


NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. ALL LABELS TO BE APPLIED TO POSTS AFTER PAINTING.
3. SEE ATTACHED LABEL PLACEMENT SHEET

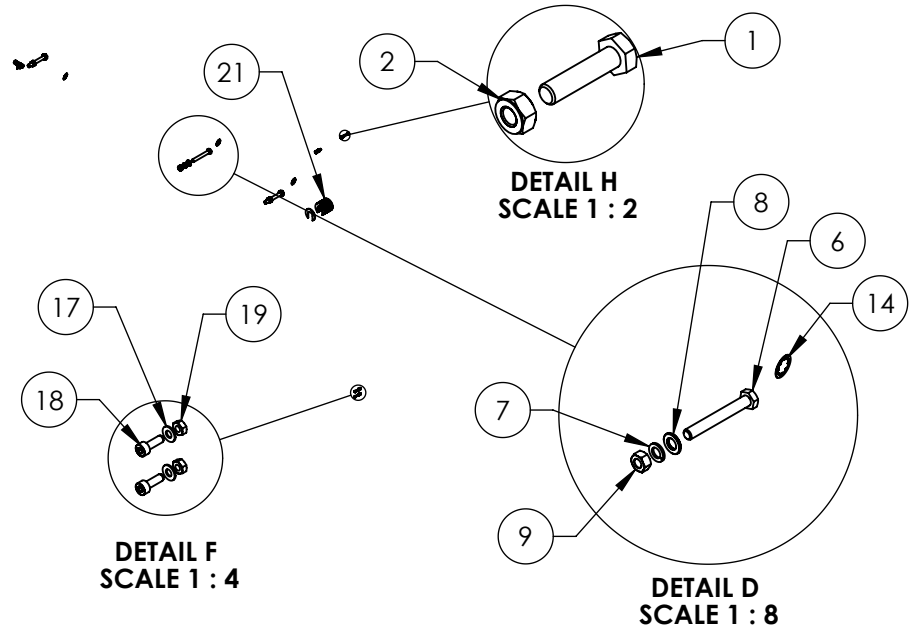
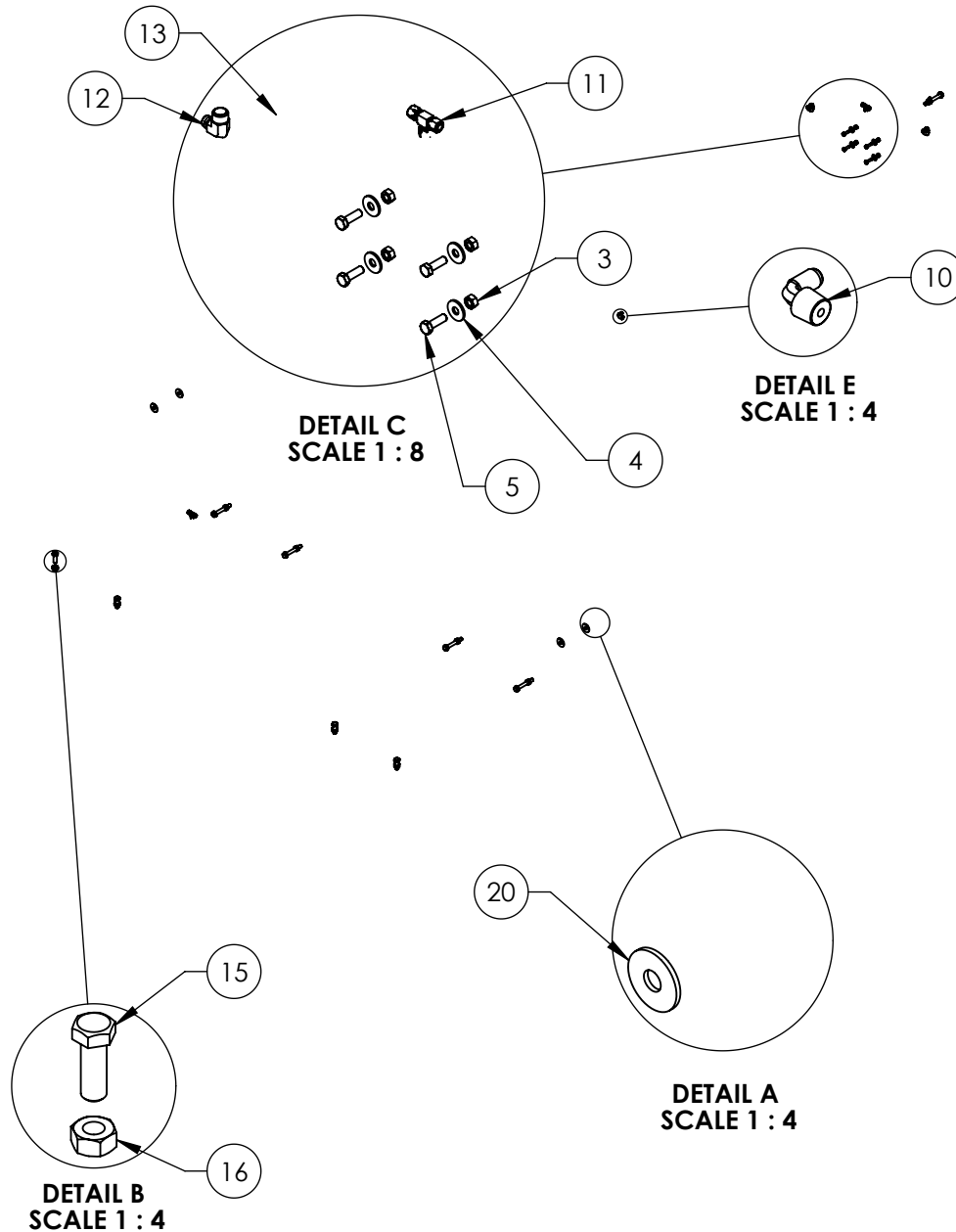
ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5245398	HDSO-14 LIFT SUPERSTRUCTURE	1	F
2	5250182	PARTS BOX HDSO-14	1	E
3	5905103	WARNING ALI/WL 200	1	--
4	5905200	4 POST DECAL KIT, LESS ALI	1	B
5	5905465	MANUFACTURER LABEL	1	--
6	5905557	MAX CAP DANGER 14K	1	--
7	5905940	PRODUCT DATA LABEL	1	--
8	5905953	5905953-2015 SERIAL TAG-D	1	--

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060		
DIMENSIONS ARE IN MM		DRAWN	TM			08/12/2014
		CHECKED	DB			09/07/2016
		THIRD ANGLE PROJECTION			TITLE:	
					HDSO-14 PRODUCTION LIFT VER C (CE CERT)	
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.			SIZE DWG. NO.	REV
					A 5260519	F
SCALE: 1:50					SHEET 1 OF 2	



 BendPak 1645 LEMONWOOD DR. PROVIDING AUTOMOTIVE SERVICE SOLUTIONS SANTA PAULA, CA 93060		
TITLE: HDSO-14 PRODUCTION LIFT VER C (CE CERT)		
SIZE	DWG. NO.	REV
A	5260519	F
SCALE:1:40		SHEET 2 OF 2

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
B	ADDED (20) 5545535	12/22/2009	AC	00326
C	ADDED (1) 5550489	11/22/2010	TM	00427
C-001	UPDATED NEXT ASSEMBLIES	05/21/2013	TM	00593
D	REPLACED 5550004 WITH 5550089, 5550489 WITH 5550395, UPDATED NEXT ASSEMBLIES	10/29/2013	TM	00593



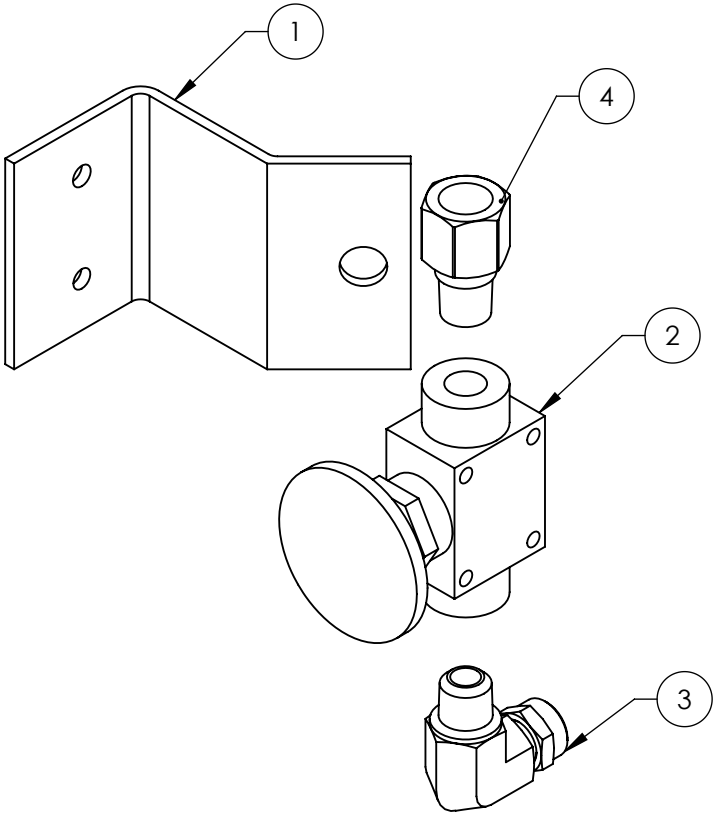
ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5530756	HHB M6 x 1 x 25	4	-
2	5535357	NUT M6 x 1.0 NL	4	-
3	5535001	NUT M8 x 1.25 NL	4	-
4	5545340	WASHER M8 x24 FLAT	4	-
5	5530010	HHB M8 x 1.25 x 25	4	-
6	5530009	HHB M12 x 1.75 x 90 C18.8	8	-
7	5545201	WASHER M12 SPRING LOCK	8	-
8	5545347	WASHER M12 FLAT WASHER	8	-
9	5535354	NUT M12 x 1.75	8	-
10	5550106	FTG ELB -04 JIC-06 NPT	1	-
11	5550395	FTG TEE -04 COMP x -04 COMP x -04 COMP	3	-
12	5550089	FTG ELB -04 COMP x -06 NPT	2	-
13	5550008	FTG ELB -04 JIC -06L ORB	1	-
14	5505032	ROTOR CLIP 18mm SS	4	-
15	5530107	HHB M14 x 2.0 x 40	4	-
16	5535107	NUT M14 x 2.0	4	-
17	5545009	WASHER Ø4.3 x Ø9mm x 0.8mm	2	-
18	5530008	SHCS M4 x 0.7mm x 12mm	2	-
19	5535010	Nut. M4 X 0.7	2	-
20	5545027	WASHER M12 x Ø37 x 3mm	4	-
21	5545535	C WASHER SHIM FOR LIFTS	20	-

DO NOT SCALE DRAWING		NAME	DATE
DIMENSIONS ARE IN MM		DRAWN	AC 08/08/2008
		CHECKED	
		THIRD ANGLE PROJECTION	
MATERIAL: ---			
SIZE: ---		Proprietary and Confidential THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.	
Next Assembly 5250182 5250183		TITLE: PARTS BAG HDSO-14 SERIES SIZE DWG. NO. A 5174099 REV D	
		SCALE: 1:30 SHEET 1 OF 1	

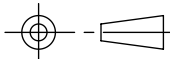
NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
E	REPLACED 5550481 WITH 5550087	10/29/2013	TM	00593
F	REPLACED 5590240 WITH 5590175, UPDATED NEXT ASSEMBLIES	05/05/2015	MR	00683
G	SWITCHED POSITIONS OF 5550087 AND 5550486, UPDATED NEXT ASSEMBLY	06/16/2016	TS	00765



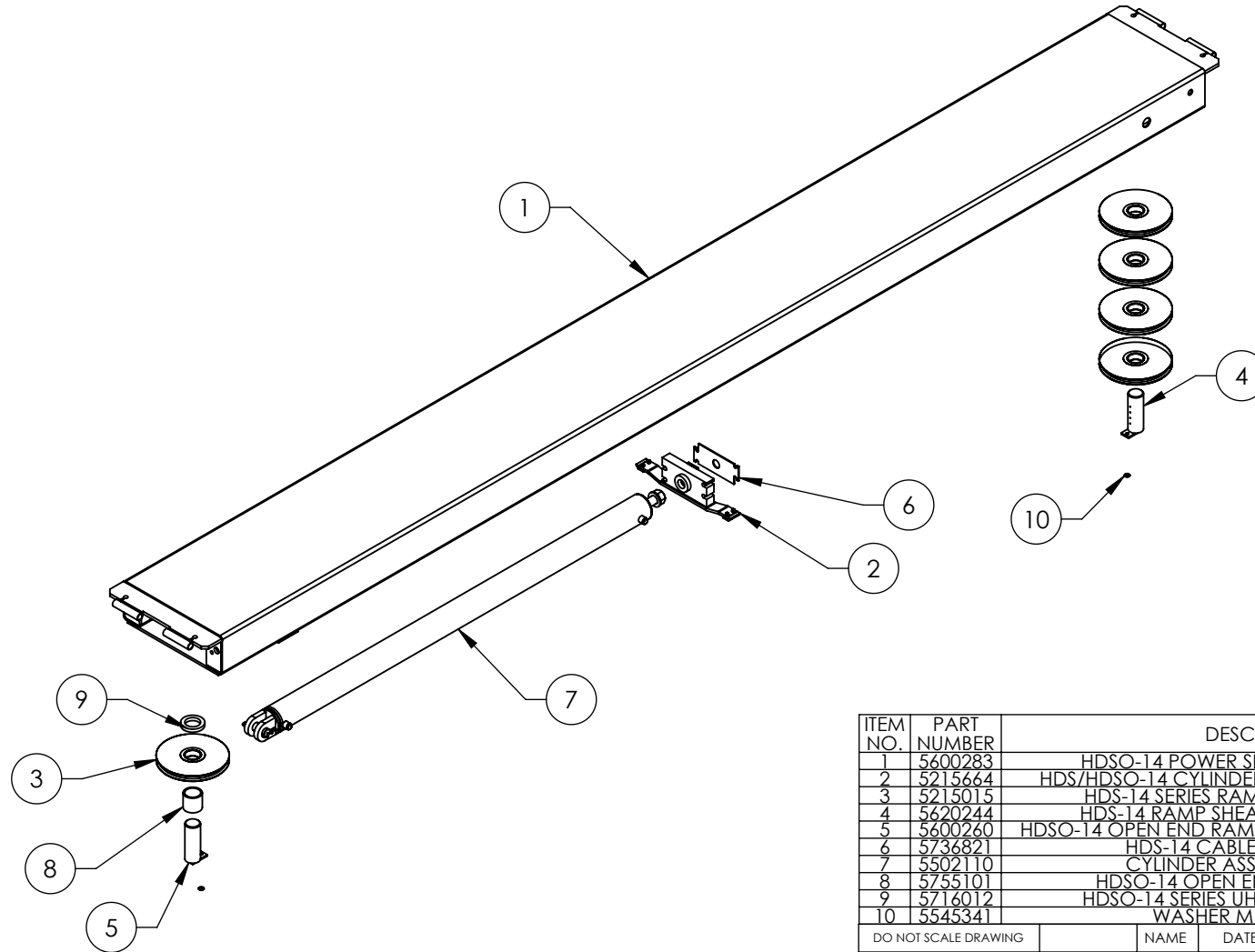
ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5700031	ZERO ANGLE MTG BRACKET	1	C
2	5590175	PUSH BUTTON AIR VALVE	1	B
3	5550087	FTG ELB -04 COMP x -02 NPT	1	-
4	5550486	FTG NPL -02 NPT x -04 F NPT	1	-

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. WORKING AIRCRAFT SERVICE EQUIPMENT		1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
DIMENSIONS ARE IN MM 		DRAWN	AC	3/14/2008			
		CHECKED	CA	09/02/2015			
		THIRD ANGLE PROJECTION				TITLE:	
						PUSH BUTTON AIR ASSEMBLY	
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.					
		SIZE	DWG. NO.				REV
		A	5215096				G
		SCALE: 2:3					SHEET 1 OF 1

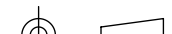
NOTE: UNLESS OTHERWISE SPECIFIED.
1. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
HD/HDS/HDSO
SERIES
5250118
5250249
5250364

REVISION		DATE	EDITED BY	ECO#
REV	DESCRIPTION			
K	REPLACED 5736027 WITH 5736821, 5215033 WITH 5215664, UPDATED BOM REVISIONS AND NEXT ASSEMBLY	07/31/2014	TM	00664
L	REMOVED 5505350, 5535027, 5545007, UPDATED BOM REVISION	05/05/2015	MR	00683
M	REMOVED 5550026	10/19/2015	TM	00724



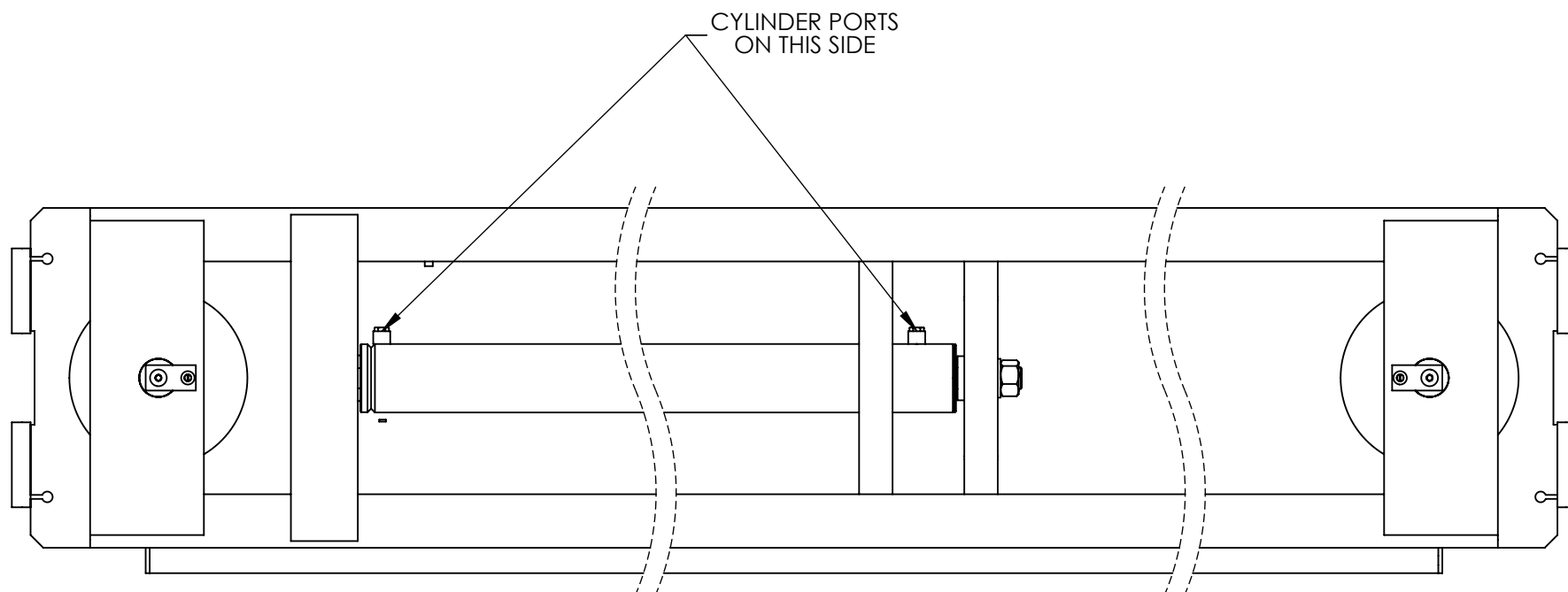
ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5600283	HDSO-14 POWER SIDE RAMP WELDMENT	1	E
2	5215664	HDS/HDSO-14 CYLINDER FLANGE ARM ASSEMBLY	1	A
3	5215015	HDS-14 SERIES RAMP SHEAVE ASSEMBLY	5	B
4	5620244	HDS-14 RAMP SHEAVE SHAFT WELDMENT	1	B
5	5600260	HDSO-14 OPEN END RAMP SHEAVE SHAFT WELDMENT	1	B
6	5736821	HDS-14 CABLE RETAINER PLATE	1	A
7	5502110	CYLINDER ASSEMBLY Ø3.5 x 70	1	F
8	5755101	HDSO-14 OPEN END SHEAVE SPACER	1	B
9	5716012	HDSO-14 SERIES UHMW SHEAVE SPACER	1	B
10	5545341	WASHER M10 x Ø20 FLAT	2	--

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. MOVING AUTOMATIC SERVICE SOLUTIONS SANTA PAULA, CA 93060		
DRAWN		GJZ	11/17/2008			
CHECKED		CA	02/03/2016			
DIMENSIONS ARE IN MM		THIRD ANGLE PROJECTION		TITLE: HDSO-14 POWER SIDE RAMP ASSEMBLY		
				SIZE	DWG. NO.	REV
				A	5215097	M
Y		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		SCALE: 1:25		SHEET 1 OF 2

NOTE: UNLESS OTHERWISE SPECIFIED.

1. VERIFY CYLINDER PORTS AND CAPPED WITH 3/8" NPT STEEL PLUGS
2. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
3. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5245398



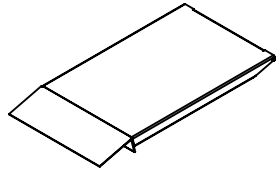
BendPak 1645 LEMONWOOD DR.
HYDRAULIC AUTOMATIC SERVICE EQUIPMENT SANTA PAULA, CA 93060

TITLE: HDSO-14 POWER
SIDE RAMP ASSEMBLY

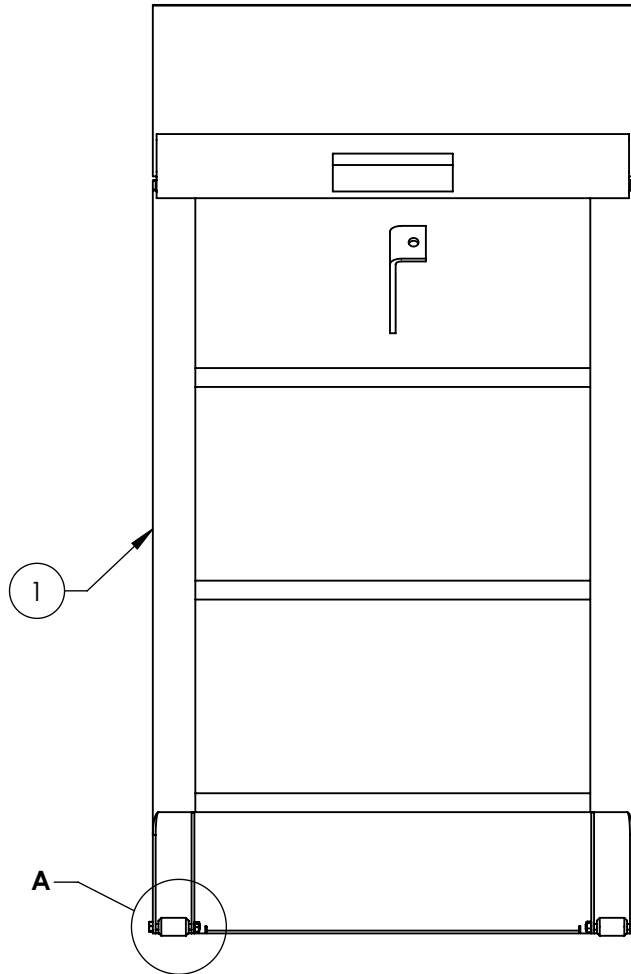
SIZE	DWG. NO.	REV
A	5215097	M

SCALE: 1:10

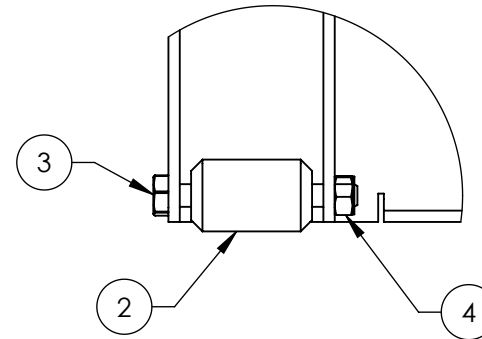
SHEET 2 OF 2



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE

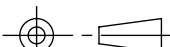


		REVISION			
REV	DESCRIPTION	DATE	EDITED BY	ECO#	
E	ADDED HD/S-14 SERIES TO TITLE	10/05/2009	AC	00300	
E-001	UPDATED NEXT ASSEMBLY	02/24/2010	AC	00333	
F	REPLACED 5530064 WITH 5530097	06/03/2010	AC	00366	
G	UPDATED BOM REVISION	07/30/2010	TM	00387	
G-001	UPDATED NEXT ASSEMBLY	05/17/2011	TM	00456	
G-002	UPDATED NEXT ASSEMBLY	10/28/2011	TM	00487	
G-003	UPDATED NEXT ASSEMBLY	05/16/2013	TM	00593	
G-004	UPDATED NEXT ASSEMBLY	08/13/2014	TM	00664	



DETAIL A
SCALE 1 : 2

ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5600138	HD/S-14 SERIES DRIVE UP RAMP WELDMENT	1	F
2	5716149	HD-7500/9, HD/S-14 SERIES DRIVE UP RAMP PLASTIC ROLLER	2	F
3	5530097	HHB M6 x 1.0 x 50	2	-
4	5535357	NUT M6 x 1.0 NL	2	-

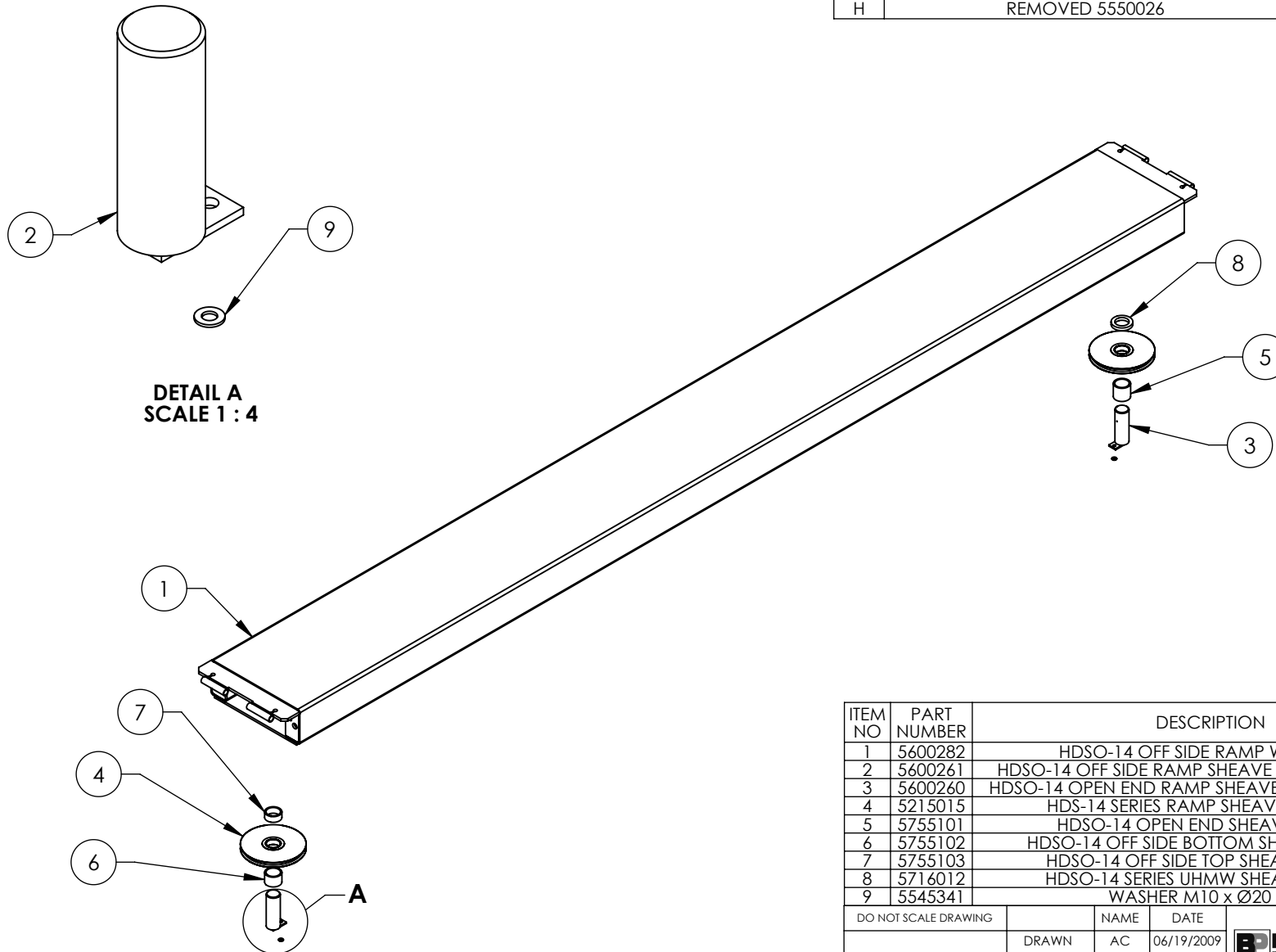
DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. MOVING AUTOCAR SERVICE SOLUTIONS SANTA PAULA, CA 93060			
DIMENSIONS ARE IN MM 		DRAWN	TM			06/04/2008	
		CHECKED					
		THIRD ANGLE PROJECTION 					
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		TITLE: HD/S-14 SERIES DRIVE UP RAMP ASSEMBLY			SIZE	DWG. NO.	REV
					A	5215104	H
		SCALE: 1:8				SHEET 1 OF 1	

NEXT ASSEMBLY
5245397
5245398
5245399
5245400
5245401
5245402

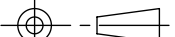
NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. ASSEMBLE ITEMS AS SHOWN

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
F	UPDATED BOM REVISIONS AND NEXT ASSEMBLY	08/08/2013	TM	00593
F-001	UPDATED NEXT ASSEMBLY	08/13/2014	TM	00664
G	UPDATED BOM REVISION	01/07/2015	MR	00675
H	REMOVED 5550026	10/19/2015	TM	00724



ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5600282	HDSO-14 OFF SIDE RAMP WELDMENT	1	E
2	5600261	HDSO-14 OFF SIDE RAMP SHEAVE SHAFT WELDMENT	1	B
3	5600260	HDSO-14 OPEN END RAMP SHEAVE SHAFT WELDMENT	1	B
4	5215015	HDS-14 SERIES RAMP SHEAVE ASSEMBLY	2	B
5	5755101	HDSO-14 OPEN END SHEAVE SPACER	1	B
6	5755102	HDSO-14 OFF SIDE BOTTOM SHEAVE SPACER	1	A
7	5755103	HDSO-14 OFF SIDE TOP SHEAVE SPACER	1	A
8	5716012	HDSO-14 SERIES UHMW SHEAVE SPACER	1	B
9	5545341	WASHER M10 x Ø20 FLAT	2	--

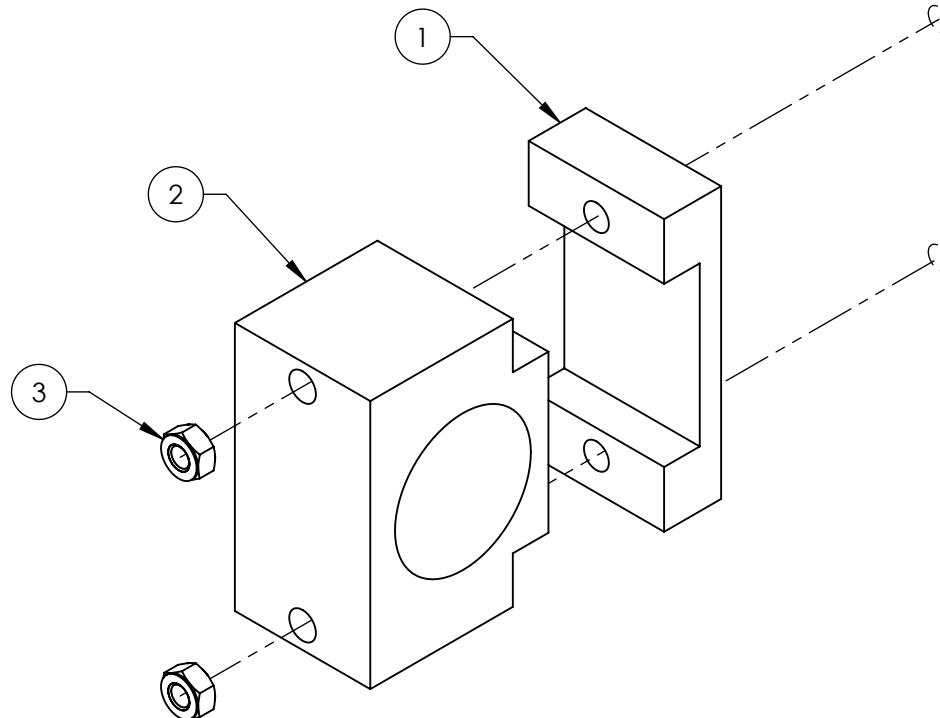
DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. MOVING AUTOMATIC SEW SOURCE SANTA PAULA, CA 93060	
DIMENSIONS ARE IN MM 		DRAWN	AC	06/19/2009	TITLE: HDSO-14 OFF SIDE RAMP ASSEMBLY
		CHECKED	CA	02/02/2016	
		THIRD ANGLE PROJECTION 			
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.			
		SIZE	DWG. NO.		REV
		A	5215298		H
		SCALE: 1:25			SHEET 1 OF 1

NOTE: UNLESS OTHERWISE SPECIFIED.

- SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
- ASSEMBLE ITEMS AS SHOWN

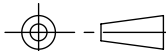
NEXT ASSEMBLY
5245398

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
D	UPDATED BOM REVISION, 5530056 WAS 50mm NOW 56mm	04/10/2012	MT	00510
E	UPDATED BOM REVISION AND NEXT ASSEMBLY	04/09/2013	TM	00593
F	REPLACED 5716158 WITH 5736900, UPDATED NEXT ASSEMBLY	09/11/2014	TM	00664



ITEM NO.	PART NUMBER	DESCRIPTION		QTY.	REV
1	5736900	HDSO-14 SERIES BRASS CARRIAGE SLIDER		1	A
2	5736337	HDSO-14 SERIES CARRIAGE SLIDER HOLDER		1	A
3	5535357	NUT M6 x 1.0 NL		2	B

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. MOVING AND MORE SERVICE SOURCES SANTA PAULA, CA 93060		
		DRAWN	AC			09/30/2010
		CHECKED				

DIMENSIONS ARE IN MM		THIRD ANGLE PROJECTION		TITLE: HDSO-14 SERIES CARRIAGE SLIDER ASSEMBLY	
					

PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		SIZE	DWG. NO.	REV
		A	5215402	F

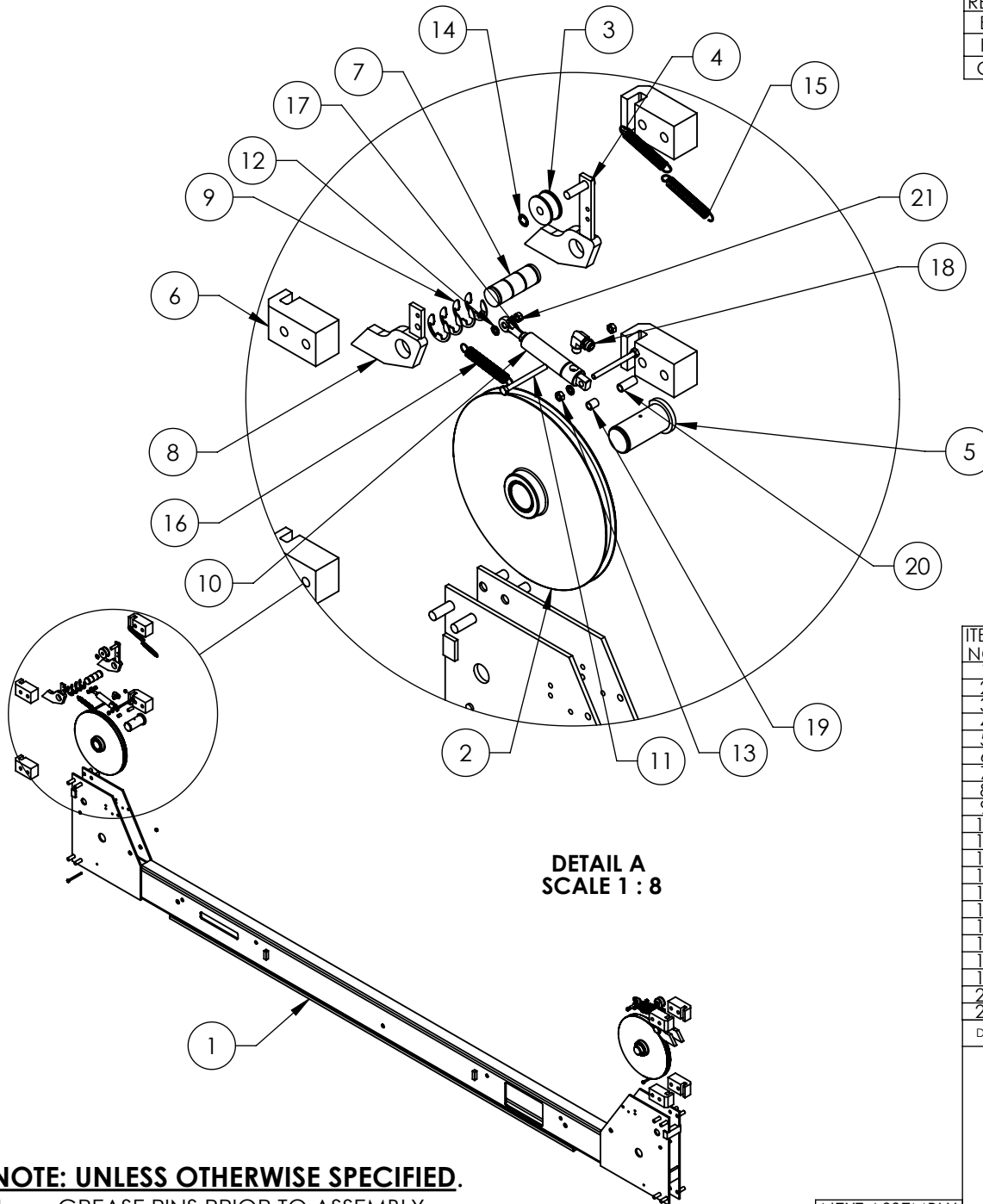
SCALE: 2:3			SHEET 1 OF 1
------------	--	--	--------------

NOTE: UNLESS OTHERWISE SPECIFIED.

1. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5215606
5215615

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
E	REPLACED 5545026 WITH 5545005	03/25/2015	MR	00683
F	REMOVED 5550025 AND 5716629	09/14/2015	TM	00724
G	UPDATED BOM REVISIONS	12/28/2015	JM	00741



DETAIL A
SCALE 1 : 8

ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5600284	HDSO-14 CROSSTUBE WELDMENT	1	H
2	5215013	HDS-14 CROSSTUBE SHEAVE ASSEMBLY	2	B
3	5575380	HD/HDS/HDO/HDSO-14 SERIES SAFETY ROLLER	2	C
4	5600044	HD/HDS LIGHT DUTY SERIES SLACK SAFETY WELDMENT	2	F
5	5600173	HD/S/O-14 SHEAVE PIN WELDMENT	2	G
6	5716005	HD-7/7500/9/14/HDSO-14 PLASTIC SLIDE BLOCK	8	J
7	5746008	HD/HDS-7/7500/9/14, HDSO-14 SAFETY PIN	2	E
8	5600760	HD/HDS LIGHT DUTY SERIES SAFETY WELDMENT	2	B
9	5540275	E RING Ø25mm OD DIN 6799 0250	8	-
10	5502195	AIR CYLINDER, Ø19mm x 25 STROKE	2	-
11	5530005	HHB M6 x 1 x 70	6	-
12	5545005	M6 FLAT WASHER	4	-
13	5535112	NUT M6 x 1.0	4	-
14	5505030	ROTOR CLIP 10mm SS	2	-
15	5540065	SPRING Ø13mm x 90mm, SLACK SAFETY	4	A
16	5540070	SPRING Ø13mm x 89mm, AIR CYLINDER	2	B
17	5505625	FEMALE ROD END M6 x 33mm	2	-
18	5550087	FTG ELB -04 COMP x -02 NPT	2	-
19	5755136	HD AIR CYLINDER SPACER 12mm	2	B
20	5755137	HD AIR CYLINDER SPACER 25mm	2	B
21	5535357	NUT M6 x 1.0 NL	4	-

DO NOT SCALE DRAWING

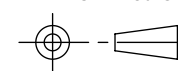
NAME DATE

DRAWN TM 04/29/2013

CHECKED DB 06/20/2016

DIMENSIONS ARE IN MM

THIRD ANGLE PROJECTION



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS
THE SOLE PROPERTY OF BENDPAK INC. ANY
REPRODUCTION IN PART OR AS A WHOLE WITHOUT
THE WRITTEN PERMISSION OF BENDPAK INC. IS
PROHIBITED.

BendPak 1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: HDSO-14 SERIES
CROSSTUBE ASSEMBLY

SIZE DWG. NO. REV

A 5215605 G

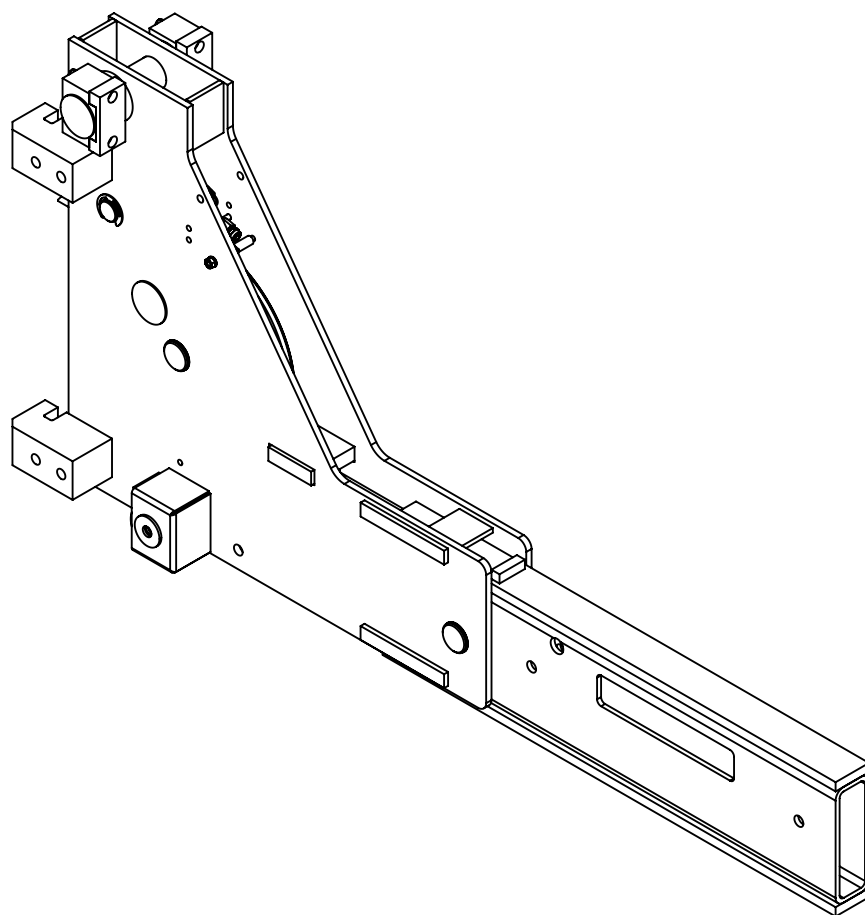
SCALE: 1:25

SHEET 1 OF 1

NOTE: UNLESS OTHERWISE SPECIFIED.

1. GREASE PINS PRIOR TO ASSEMBLY
2. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5245397
5245398



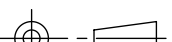
NOTE: UNLESS OTHERWISE SPECIFIED.

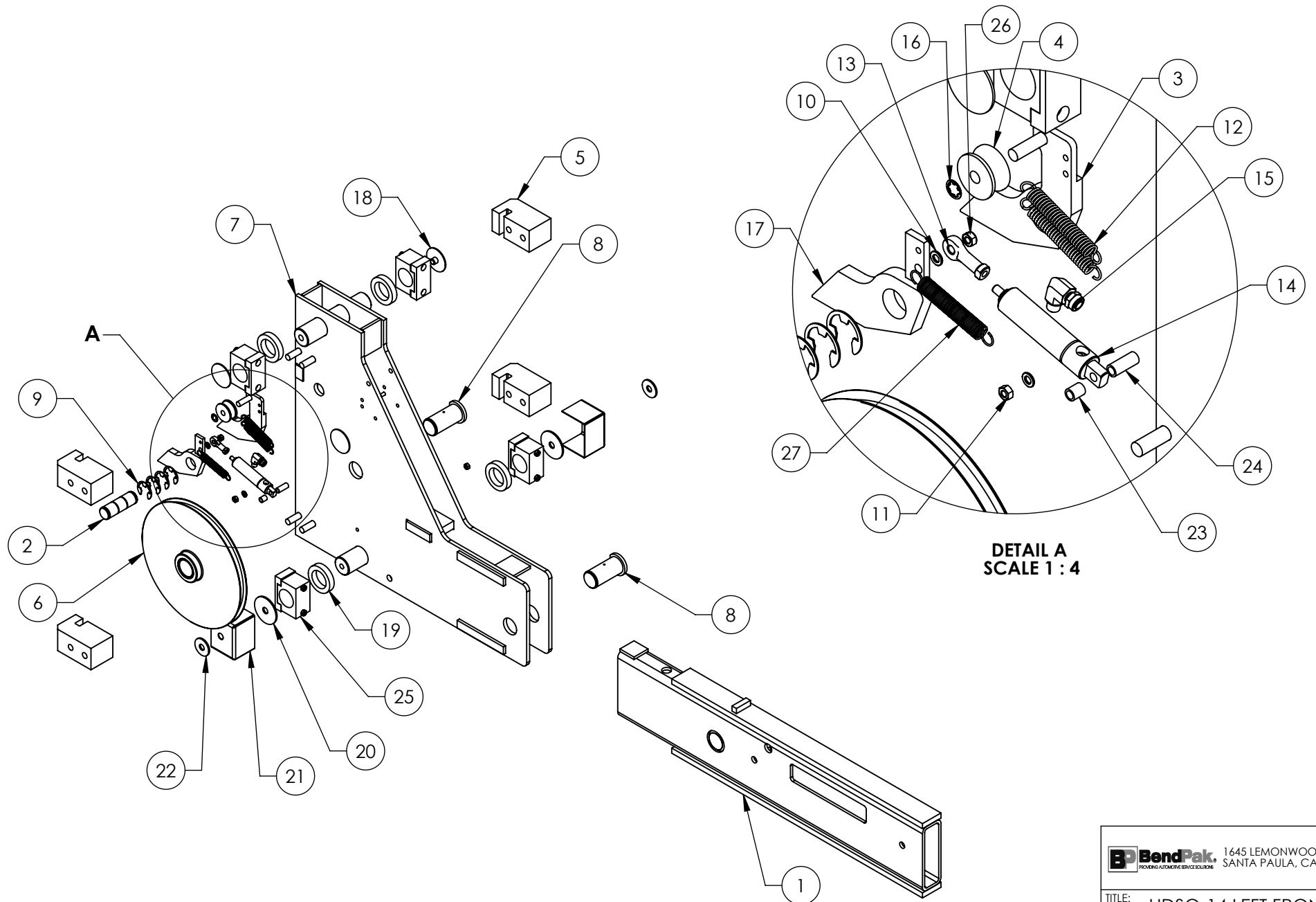
1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5245397
5245398

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
E	REPLACED 5716021 WITH 5716031, REMOVED 5550025 AND 5716631	09/14/2015	TM	00724
F	UPDATED BOM REVISIONS	12/24/2015	JM	00741
G	UPDATED BOM REVISIONS	08/24/2016	TM	00775

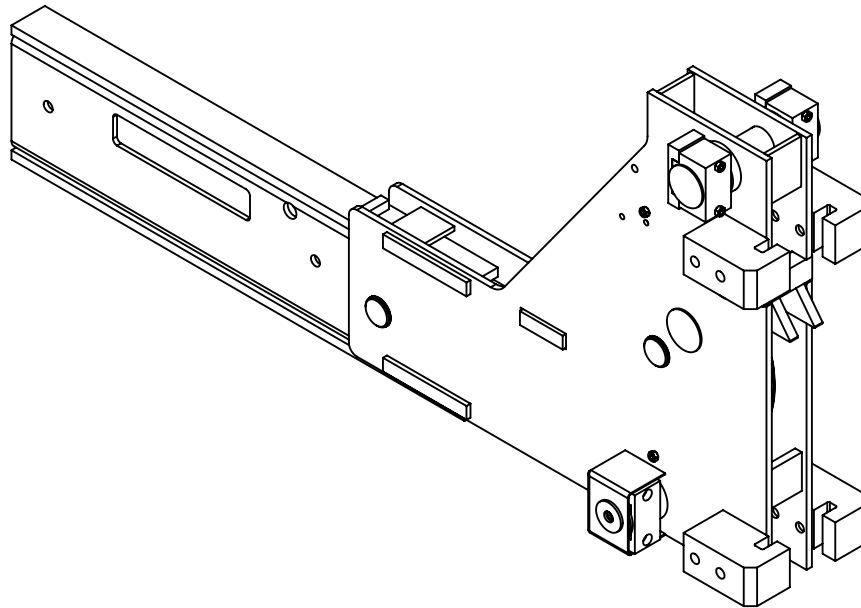
ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5600287	HDSO-14/14LSX SHORT CROSSTUBE LEFT WELDMENT	1	B
2	5746080	HDSO-14 SAFETY PIN	1	D
3	5600763	HDSO-14 SERIES SLACK SAFETY LATCH PLATE WELDMENT	1	B
4	5575380	HD/HDS/HDO/HDSO-14 SERIES SAFETY ROLLER	1	C
5	5716031	HDSO-14 PLASTIC SLIDE BLOCK	4	B
6	5215013	HDS-14 CROSSTUBE SHEAVE ASSEMBLY	1	B
7	5600285	HDSO-14 LEFT CARRIAGE WELDMENT	1	H
8	5600173	HD/S/O-14 SHEAVE PIN WELDMENT	2	G
9	5540275	E RING Ø25mm OD DIN 6799 0250	4	-
10	5545005	M6 FLAT WASHER	2	-
11	5535112	NUT M6 x 1.0	3	-
12	5540065	SPRING Ø13mm x 90mm, SLACK SAFETY	2	A
13	5505625	FEMALE ROD END M6 x 33mm	1	-
14	5502195	AIR CYLINDER, Ø19mm x 25 STROKE	1	-
15	5550087	FTG FLB -04 COMP x -02 NPT	1	-
16	5505030	ROTOR CLIP 10mm SS	1	-
17	5600760	HD/HDS LIGHT DUTY SERIES SAFETY WELDMENT	1	B
18	5716019	HDSO-14 BUTTON SLIDE	4	B
19	5716022	HDSO-14 CARRIAGE ROLLER BEARING	4	A
20	5716023	HDSO-14 ROLLER COVER BEARING	2	A
21	5700158	HDSO-14 ROLLER COVER	2	B
22	5545027	WASHER M12 x Ø37 x 3mm	2	-
23	5755136	HD AIR CYLINDER SPACER 12mm	1	B
24	5755137	HD AIR CYLINDER SPACER 25mm	1	B
25	5215402	HDSO-14 SERIES CARRIAGE SLIDER ASSEMBLY	4	F
26	5535357	NUT M6 x 1.0 NL	1	-
27	5540070	SPRING Ø13mm x 89mm, AIR CYLINDER	1	B

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060 MOVING AUTOMOTIVE SERVICE SOLUTIONS			
DIMENSIONS ARE IN MM		DRAWN	TM			04/29/2013	
		CHECKED	DB			09/07/2016	
		THIRD ANGLE PROJECTION			TITLE:	HDSO-14 LEFT FRONT CARRIAGE ASSEMBLY	
					SIZE	DWG. NO.	REV
					A	5215606	G
					SCALE: 1:8		SHEET 1 OF 2



BendPak 1645 LEMONWOOD DR. HYDRAULIC AUTOMATIC SERVICE SOLUTIONS SANTA PAULA, CA 93060		
TITLE: HDSO-14 LEFT FRONT CARRIAGE ASSEMBLY		
SIZE	DWG. NO.	REV
A	5215606	G
SCALE: 1:10		SHEET 2 OF 2

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
E	REPLACED 5716021 WITH 5716031, REMOVED 5550025 AND 5716631	09/14/2015	TM	00724
F	UPDATED BOM REVISIONS	12/24/2015	JM	00741
G	UPDATED BOM REVISION	08/24/2016	TM	00775



ITEM NO.	PART NUMBER	DESCRIPTION	QTY	REV
1	5600288	HDSO-14/14LSX SHORT CROSSTUBE RIGHT WELDMENT	1	B
2	5600763	HDSO-14 SERIES SLACK SAFETY LATCH PLATE WELDMENT	1	B
3	5575380	HD/HDS/HDO/HDSO-14 SERIES SAFETY ROLLER	1	C
4	5716031	HDSO-14 PLASTIC SLIDE BLOCK	4	B
5	5215013	HDS-14 CROSSTUBE SHEAVE ASSEMBLY	1	B
6	5600286	HDSO-14 RIGHT CARRIAGE WELDMENT	1	H
7	5746080	HDSO-14 SAFETY PIN	1	D
8	5600173	HD/S/O-14 SHEAVE PIN WELDMENT	2	G
9	5540275	E RING Ø25mm OD DIN 6799 0250	4	-
10	5545005	M6 FLAT WASHER	2	-
11	5535112	NUT M6 x 1.0	1	-
12	5540065	SPRING Ø13mm x 90mm, SLACK SAFETY	2	A
13	5505625	FEMALE ROD END M6 x 33mm	1	-
14	5502195	AIR CYLINDER, Ø19mm x 25 STROKE	1	-
15	5550087	FTG ELB -04 COMP x -02 NPT	1	-
16	5540070	SPRING Ø13mm x 89mm, AIR CYLINDER	1	B
17	5505030	ROTOR CLIP 10mm SS	1	-
18	5600760	HD/HDS LIGHT DUTY SERIES SAFETY WELDMENT	1	B
19	5716019	HDSO-14 BUTTON SLIDE	4	B
20	5716022	HDSO-14 CARRIAGE ROLLER BEARING	4	A
21	5700158	HDSO-14 ROLLER COVER	2	B
22	5716023	HDSO-14 ROLLER COVER BEARING	2	A
23	5545027	WASHER M12 x Ø37 x 3mm	2	-
24	5755136	HD AIR CYLINDER SPACER 12mm	1	B
25	5755137	HD AIR CYLINDER SPACER 25mm	1	B
26	5215402	HDSO-14 SERIES CARRIAGE SLIDER ASSEMBLY	4	F
27	5535357	NUT M6 x 1.0 NL	3	-

DO NOT SCALE DRAWING

DIMENSIONS ARE IN MM



NAME	DATE
DRAWN TM	04/30/2013
CHECKED DB	09/07/2016

THIRD ANGLE PROJECTION



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.

BendPak 1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

TITLE: HDSO-14 RIGHT FRONT CARRIAGE ASSEMBLY

SIZE	DWG. NO.	REV
A	5215615	G

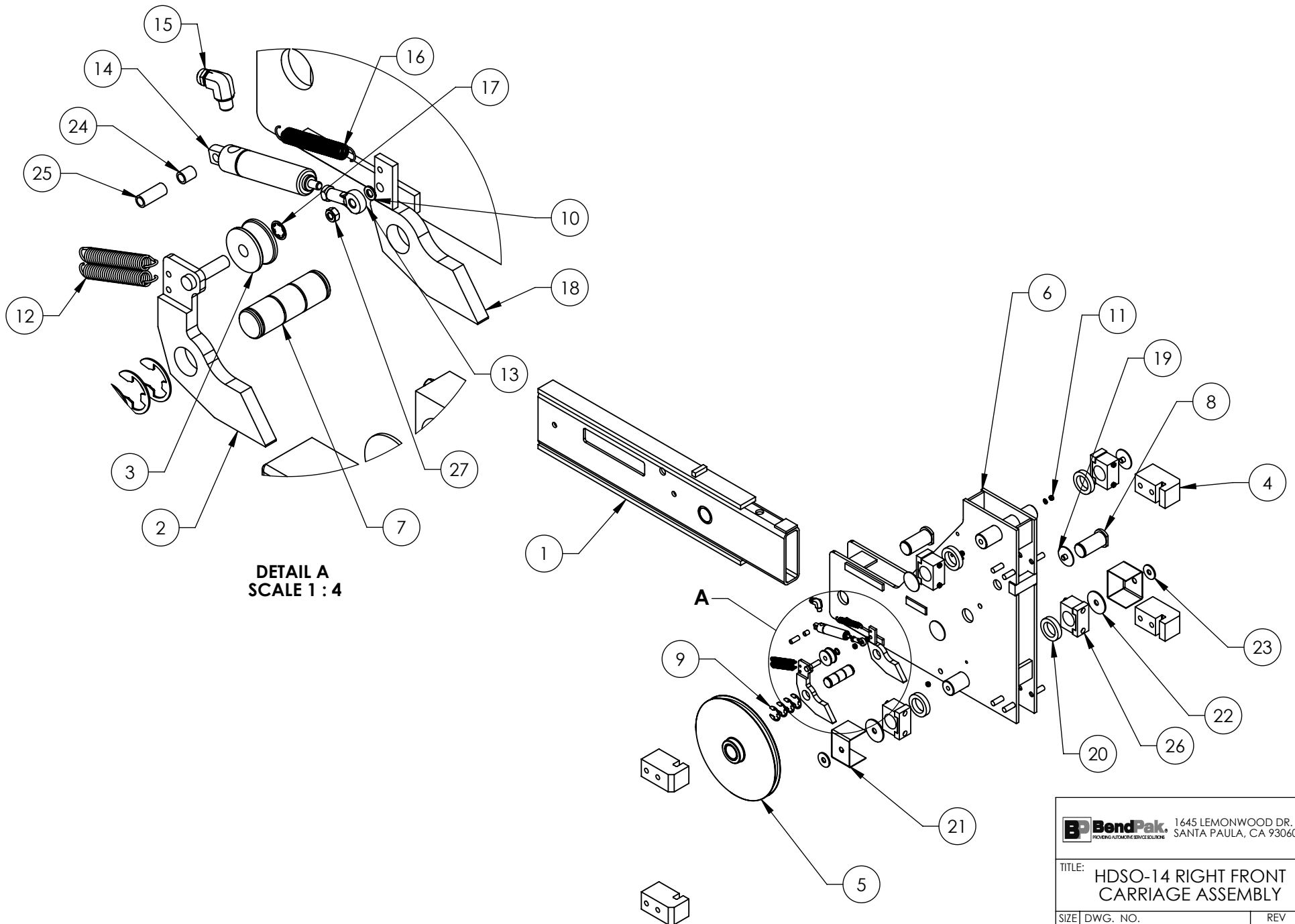
SCALE: 1:8

SHEET 1 OF 2

NOTE: UNLESS OTHERWISE SPECIFIED.

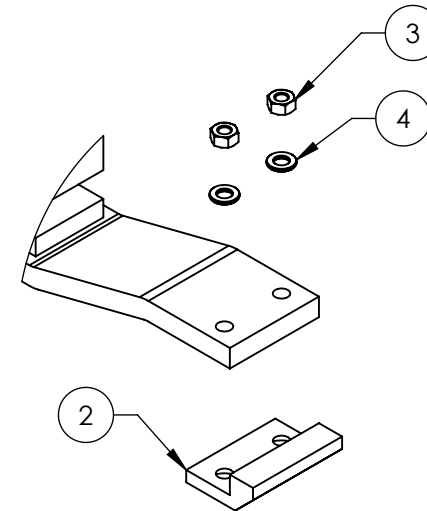
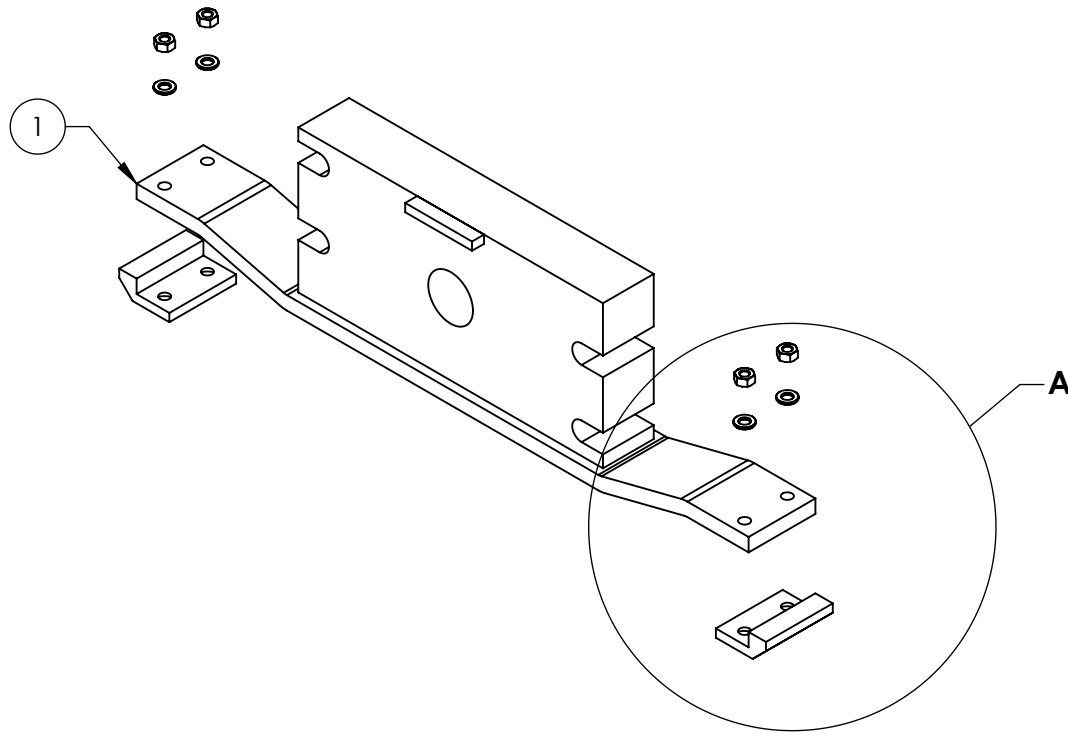
- SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
- ASSEMBLE ITEMS AS SHOWN

NEXT ASSEMBLY
5245397
5245398



BendPak HYDRAULIC AUTOMATIC SERVICE EQUIPMENT		1645 LEMONWOOD DR. SANTA PAULA, CA 93060
TITLE: HDSO-14 RIGHT FRONT CARRIAGE ASSEMBLY		
SIZE	DWG. NO.	REV
A	5215615	G
SCALE: 1:12		SHEET 2 OF 2

REV	DESCRIPTION	REVISION	DATE	EDITED BY	ECO#
A	PRODUCTION RELEASE, DREIVED FROM 5215033		08/04/2014	TM	00664

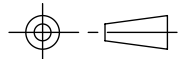


DETAIL A
SCALE 1 : 3

NOTE: UNLESS OTHERWISE SPECIFIED.

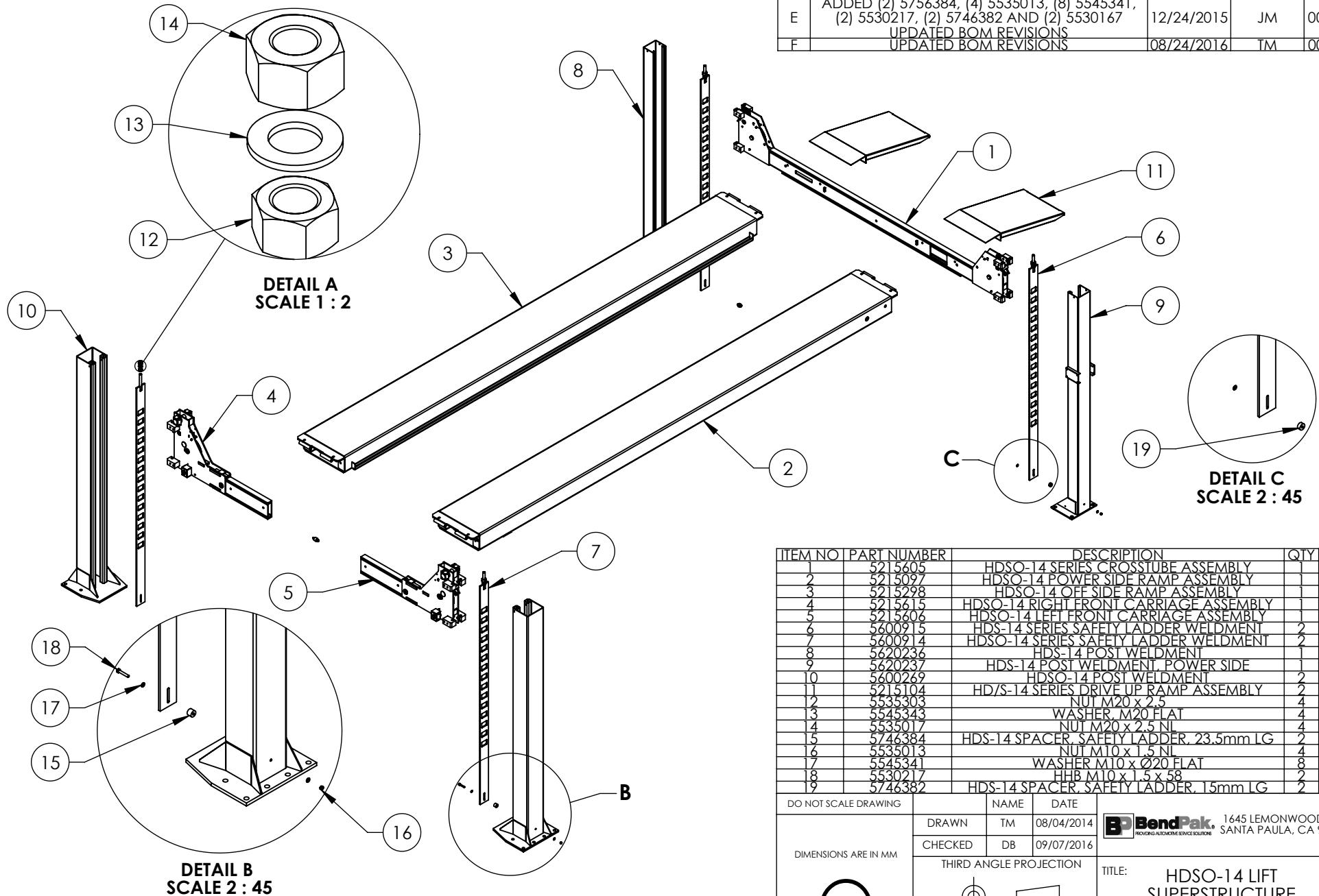
1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. ASSEMBLE ITEMS AS SHOWN

ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5600924	HDS/HDSO-14 CYLINDER FLANGE ARM WELDMENT	1	A
2	5716006	HD-14 CYL. FLANGE ARM SLIDE	2	D
3	5535112	NUT M6 x 1.0	4	-
4	5545005	M6 FLAT WASHER	4	-

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060
DRAWN		TM	08/04/2014	
CHECKED				
DIMENSIONS ARE IN MM 		THIRD ANGLE PROJECTION		TITLE: HDS/HDSO-14 CYLINDER FLANGE ARM ASSEMBLY
				SIZE DWG. NO.
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		REV
		A		5215664
		SCALE: 1:4		SHEET 1 OF 1

NEXT ASSEMBLY
5215072
5215097
5215239
5215241

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
D	UPDATED BOM REVISIONS	09/14/2015	TM	00724
E	ADDED (2) 5756384, (4) 5535013, (8) 5545341, (2) 5530217, (2) 5746382 AND (2) 5530167	12/24/2015	JM	00741
F	UPDATED BOM REVISIONS	08/24/2016	TM	00775



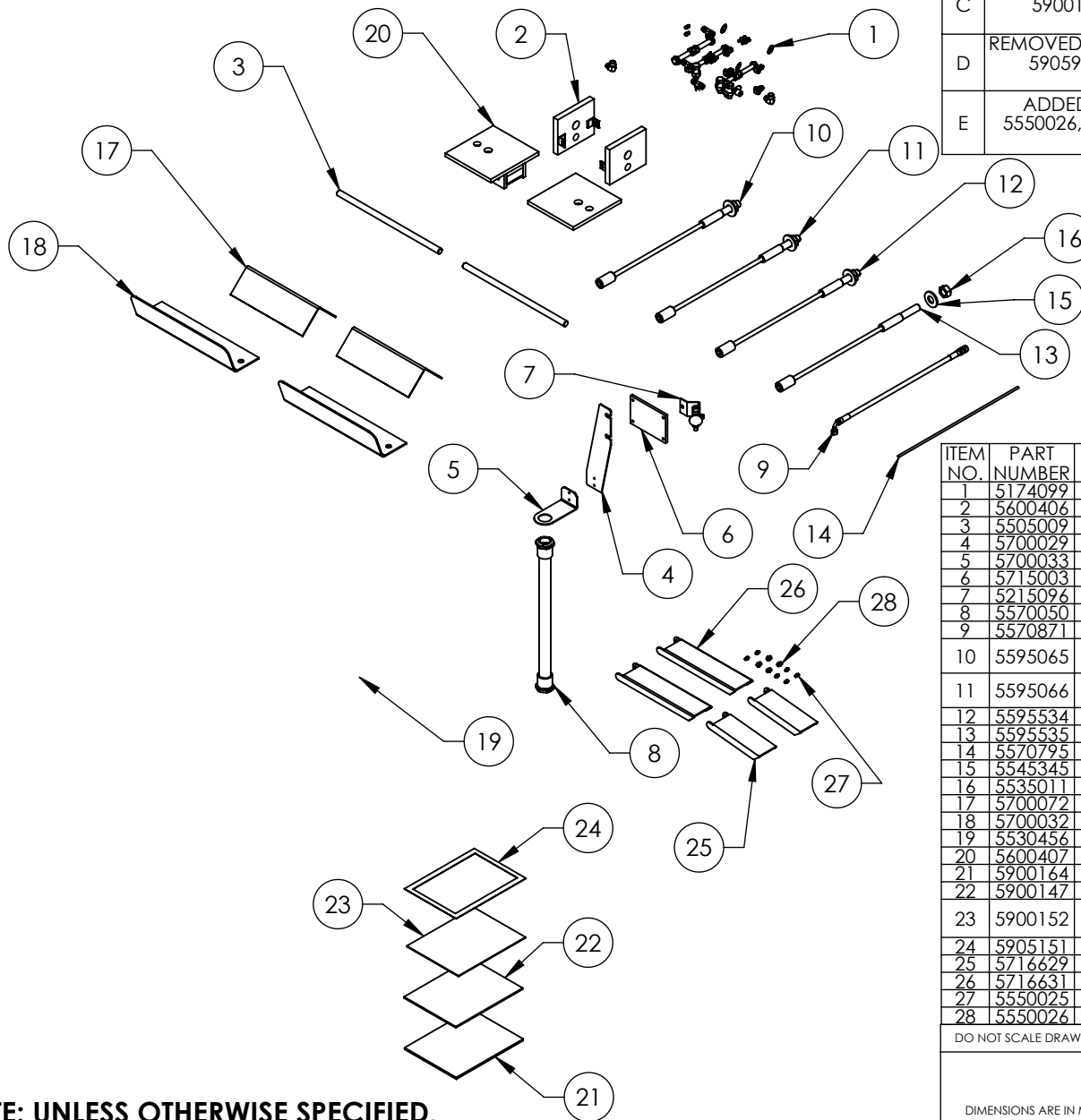
NOTE: UNLESS OTHERWISE SPECIFIED.

- SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
- ASSEMBLE ITEMS AS SHOWN

ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5215605	HDSO-14 SERIES CROSSTUBE ASSEMBLY	1	G
2	5215097	HDSO-14 POWER SIDE RAMP ASSEMBLY	1	M
3	5215298	HDSO-14 OFF SIDE RAMP ASSEMBLY	1	H
4	5215615	HDSO-14 RIGHT FRONT CARRIAGE ASSEMBLY	1	G
5	5215606	HDSO-14 LEFT FRONT CARRIAGE ASSEMBLY	1	G
6	5600915	HDS-14 SERIES SAFETY LADDER WELDMENT	2	B
7	5600914	HDSO-14 SERIES SAFETY LADDER WELDMENT	2	B
8	5620236	HDS-14 POST WELDMENT	1	F
9	5620237	HDS-14 POST WELDMENT, POWER SIDE	1	F
10	5600269	HDSO-14 POST WELDMENT	2	D
11	5215104	HD/S-14 SERIES DRIVE UP RAMP ASSEMBLY	2	E
12	5535303	NUT M20 x 2.5	4	-
13	5545343	WASHER, M20 FLAT	4	-
14	5535017	NUT M20 x 2.5 NL	4	-
15	5746384	HDS-14 SPACER, SAFETY LADDER, 23.5mm LG	2	A
16	5535013	NUT M10 x 1.5 NL	4	-
17	5545341	WASHER M10 x Ø20 FLAT	8	-
18	5530217	HHB M10 x 1.5 x 58	2	-
19	5746382	HDS-14 SPACER, SAFETY LADDER, 15mm LG	2	A

DO NOT SCALE DRAWING		NAME	DATE	BendPak 1645 LEMONWOOD DR. SANTA PAULA, CA 93060
DIMENSIONS ARE IN MM		DRAWN	TM 08/04/2014	
		CHECKED	DB 09/07/2016	
		THIRD ANGLE PROJECTION		TITLE:
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		HDSO-14 LIFT SUPERSTRUCTURE
		SIZE DWG. NO. A 5245398	REV F	
SCALE: 1:45				SHEET 1 OF 1

NEXT ASSEMBLY
5260519



NOTE: UNLESS OTHERWISE SPECIFIED.

1. SEE SHIPPING INSTRUCTIONS FOR FINAL PACKAGING
2. INSERT PARTS BAG INTO PARTS BOX FOR SHIPMENT
3. THREAD 5535011 WITH 5545345 ONTO CABLES FOR SHIPMENT
4. HOSES AND CABLES IN REPRESENTATIONAL FORM
5. (*) LENGTH FOR REFERENCE ONLY

NEXT ASSEMBLY
5260519

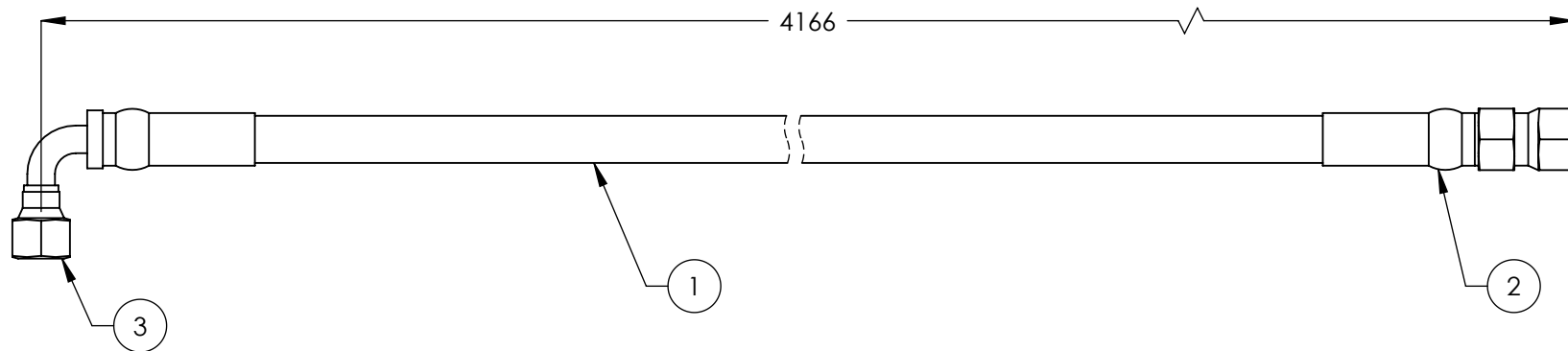
REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
C	REMOVED 5701730, 5600762, 5530093 5535112, 5900153 AND 5215637, UPDATED NEXT ASSEMBLY	08/08/2014	TM	00664
D	REMOVED 5905103, 5905200, 5905465, 5905557, 5905940, AND 5930605, UPDATED BOM REVISION	08/13/2015	TM	00675
E	ADDED 5716629, 5716631, 5550025 AND 5550026, REMOVED 5900151, UPDATED BOM REVISIONS	09/14/2015	TM	00724

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5174099	PARTS BAG HDSO-14 SERIES	1	D
2	5600406	HD-14T/HDS-14 TOP PLATE WELDMENT	2	B
3	5505009	HD/HDS-14 DRIVE UP RAMP PIN	2	D
4	5700029	HD-SERIES FLEX TUBE BRACKET PLATE	1	F
5	5700033	HD-SERIES FLEX TUBE ANGLE	1	E
6	5715003	POWER UNIT VIBRATION DAMPENER	1	B
7	5215096	PUSH BUTTON AIR ASSEMBLY	1	G
8	5570050	FLEX TUBE ASSEMBLY 1320mm	1	B
9	5570871	HDS-14L/HDSO-14 SERIES HOSE ASSY Ø6.4 x 4166mm	1	A
10	5595065	HDS/HDSO-14/14LSX/14LSXE, HDS-14X CABLE ASSEMBLY Ø12 x 4100mm ST	1	C
11	5595066	HDS/HDSO-14/14LSX/14LSXE, HDS-14X CABLE ASSEMBLY Ø12 x 5732mm ST	1	C
12	5595534	HDSO-14/14LSX CABLE ASSEMBLY Ø12 x 11152mm ST	1	C
13	5595535	HDSO-14/14LSX CABLE ASSEMBLY Ø12 x 9499mm ST	1	C
14	5570795	1/4" POLY-FLO TUBING	24000mm*	--
15	5545345	WASHER M22 x 50mm FLAT	4	B
16	5535011	NUT M22 x 2.5 NL	4	--
17	5700072	WHEEL CHOCK	2	A
18	5700032	TIRE STOP	2	C
19	5530456	AB 3/4" x 4 - 3/4"	20	--
20	5600407	HDSO-14 TOP PLATE WELDMENT	2	B
21	5900164	HDSO-14 SERIES INSTALLATION MANUAL	1	--
22	5900147	SAFETY MANUAL ALL / SM 93-1	1	--
23	5900152	ALIGN OIM OPERATION INSPECTION & MAINTENANCE	1	--
24	5905151	SAFETY TIPS CARD ALL-ST 90	1	--
25	5716629	HDS-14 CROSSTUBE COVER, PLASTIC	2	A
26	5716631	HDSO-14 CARRIAGE CLOSEOUT COVER, PLASTIC	2	A
27	5550025	FIG GRS M6x1	6	--
28	5550026	FIG GRS 1/8NPT	4	A

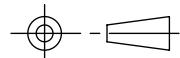
DO NOT SCALE DRAWING		NAME		DATE	
DRAWN		TM		05/09/2013	
CHECKED		CA		02/03/2016	
DIMENSIONS ARE IN MM		THIRD ANGLE PROJECTION		TITLE:	
				PARTS BOX HDSO-14	
				SIZE DWG. NO. REV A 5250182 E	
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		SCALE: 1:20		SHEET 1 OF 1	

BendPak 1645 LEMONWOOD DR.
SANTA PAULA, CA 93060

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
A	DERIVED FROM 5570040, PRODUCTION RELEASE	07/16/2009	AC	00249
A-001	UPDATED NEXT ASSEMBLIES	05/20/2013	TM	00593



ITEM NO	PART NUMBER	DESCRIPTION	QTY.	REV
1	5570110	Ø6.4 ID HYDRAULIC HOSE	4088mm*	-
2	5550325	FTG NPL Ø1/4 CRIMP x-04 JIC		-
3	5550345	FTG ELB Ø1/4 CRIMP x-04 JIC		-

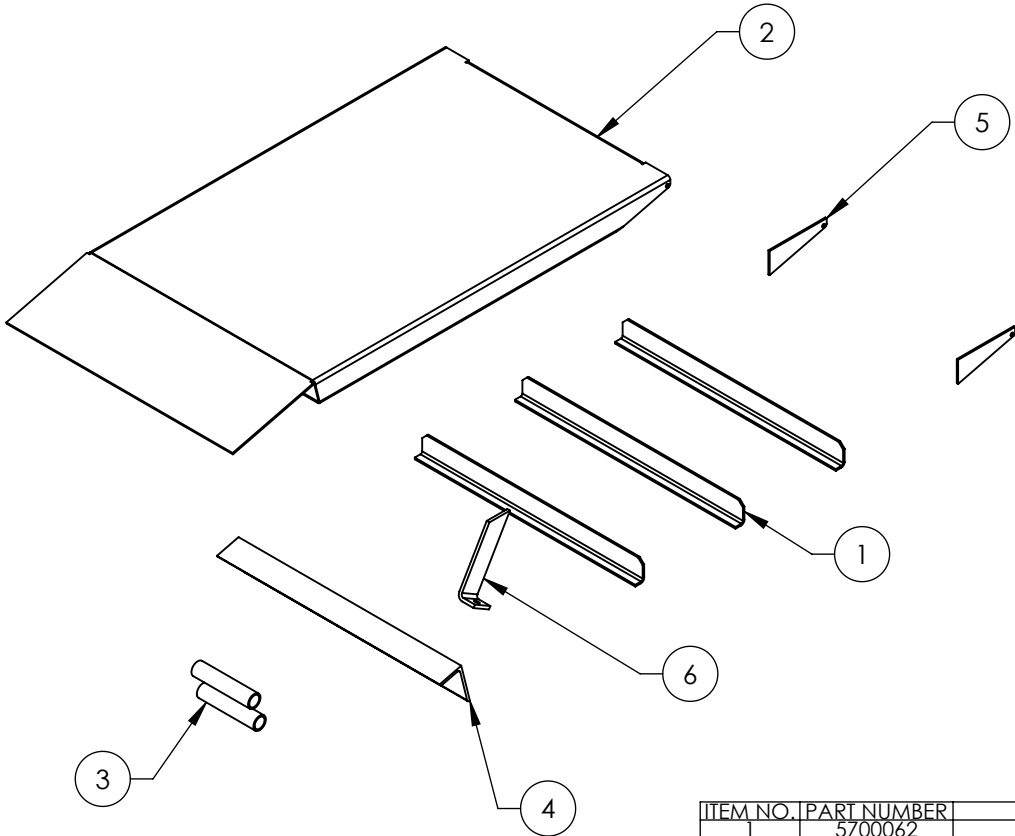
DO NOT SCALE DRAWING		NAME	DATE	 BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
DIMENSIONS ARE IN MM		DRAWN	AC		
TOLERANCES: 0. = ±1.5 0.0 = ±0.5		CHECKED			
ANGULAR: 0. = ±2°		THIRD ANGLE PROJECTION			
SURFACE FINISH 1.6 ISO Ra µm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED		TITLE: HDS-14L/HDSO-14 SERIES HOSE ASSY Ø6.4 x 4166mm			
MATERIAL: --		SIZE DWG. NO.		REV	
SIZE: --		A 5570871		A	
		SCALE: 1:2			
		SHEET 1 OF 1			

NOTE: UNLESS OTHERWISE SPECIFIED.

- FOR ITEM 1 SPECIFICATIONS REFER TO PART SPECIFICATION FORM
- ITEM 1 QTY FOR REFERENCE ONLY

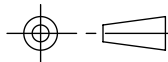
NEXT ASSEMBLY
5250182
5250183
5250194
5250195

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
D	UPDATED DRAWING, REMOVED 5755028, ADDED ONE 5755027, CHANGED ROLLER CLEVIS PLATE DISTANCE 38 WAS 57 (2ND PAGE)	06/16/2008	TM	00206
D-001	CHANGED SURFACE FINISH FROM 3.2 μm TO 1.6 $\text{Ra } \mu\text{m}$	09/09/2008	GJ	00237
E	ADDED HD/S-14 SERIES TO TITLE	10/05/2009	AC	00300
F	UPDATED BOM REVISION	07/30/2010	TM	00387
F-001	CHANGED PAINT COLOR FROM BLUE TO YELLOW AND ADDED PAINT SPEC NUMBER	12/08/2010	TM	00427

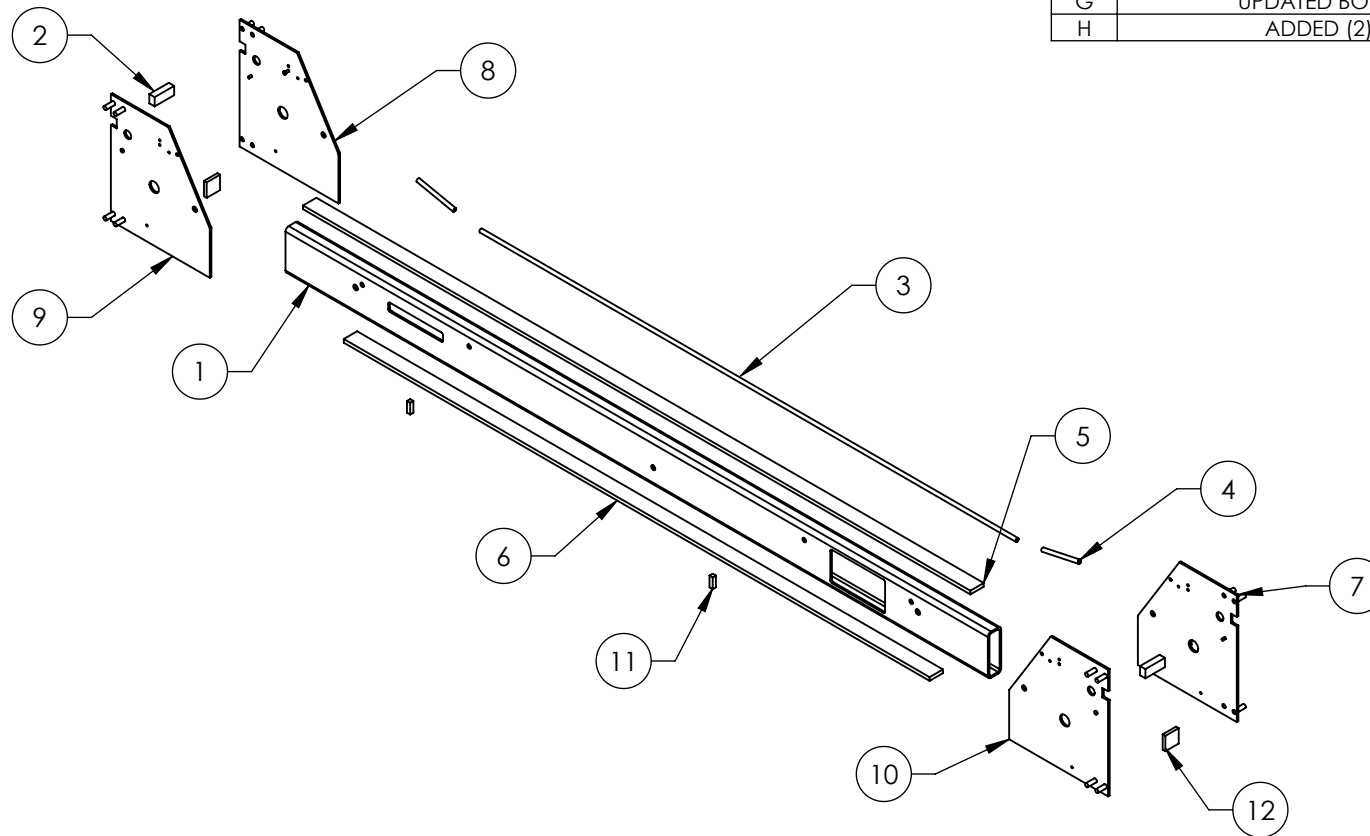


- NOTE: UNLESS OTHERWISE SPECIFIED.**
1. BREAK AND DEBURR ALL SHARP EDGES 0.3mm
 2. REMOVE ALL WELD SPLATTER
 3. GRIND/SAND EXTERIOR CORNERS/WELDS SMOOTH
 4. PAINT BENDPAK YELLOW 583-2T
 5. APPLY #30 GRIT ALUMINUM OXIDE WHEN PAINTING TO TOP ONLY AFTER WELDING

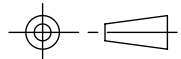
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5700062	RAMP SUPPORT	3	C
2	5701034	DRIVE UP RAMP SHELL	1	D
3	5755027	RAMP HINGE	2	C
4	5700063	SUPPORT ANGLE	1	D
5	5736083	ROLLER CLEVIS PLATE	2	E
6	5730012	RAMP STOP	1	C

DO NOT SCALE DRAWING		NAME	DATE	 BendPak. PROVIDING AUTOMOTIVE SERVICE SOLUTIONS	1645 LEMONWOOD DR. SANTA PAULA, CA 93060		
DIMENSIONS ARE IN MM		DRAWN	JR			04/30/2008	
TOLERANCES: 0. = ±1.5 0.0 = ±0.5		CHECKED	AC			12/13/2010	
ANGULAR: 0. = ±2°	THIRD ANGLE PROJECTION			TITLE: HD/S-14 SERIES DRIVE UP RAMP WELDMENT			
SURFACE FINISH 1.6 ISO Ra μm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED							
MATERIAL: --		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.			SIZE	DWG. NO.	REV
SIZE: --					A	5600138	F
5600138							
--							
					SCALE: 1:12		SHEET 1 OF 2

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
F	UPDATED BOM REVISIONS AND NEXT ASSEMBLY	04/25/2013	TM	00593
G	UPDATED BOM REVISION	03/31/2014	TM	00648
H	ADDED (2) 5735073	01/22/2016	JM	00741



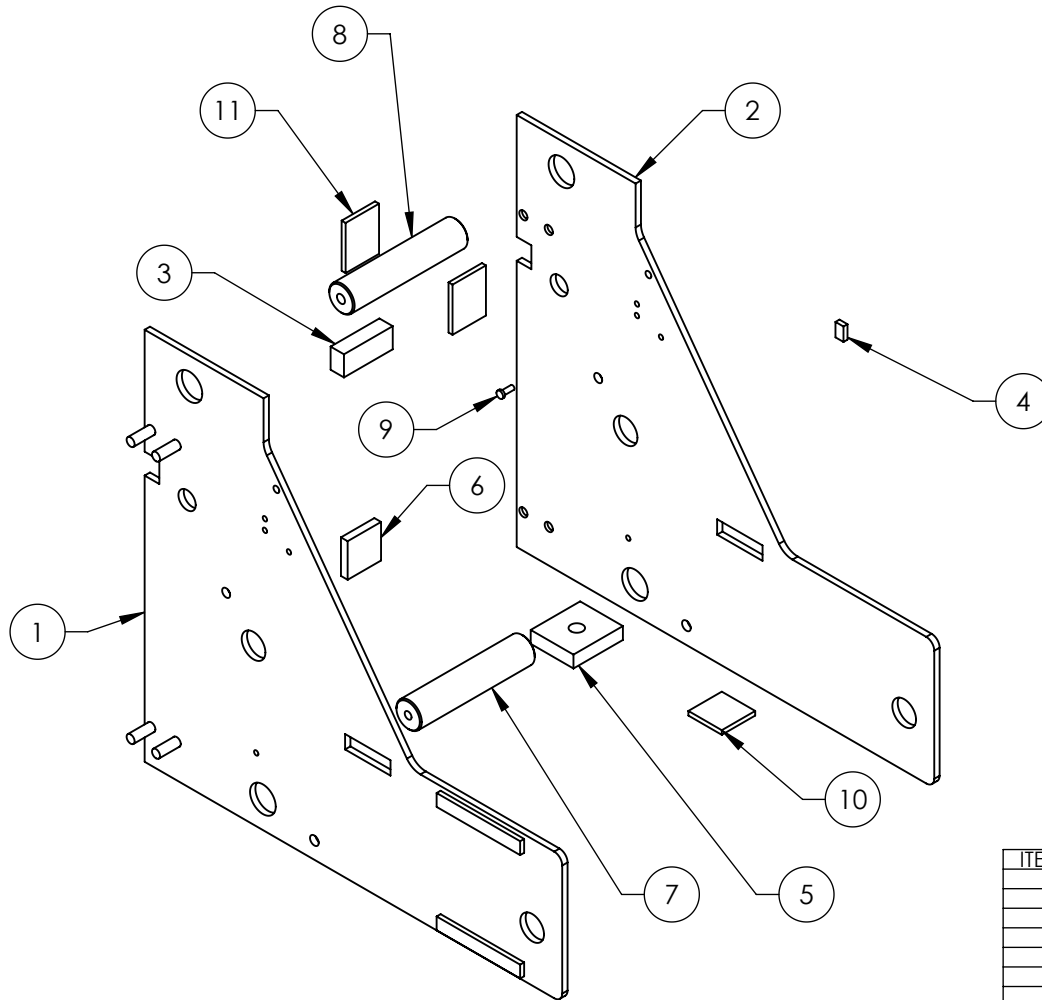
ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5766121	HDSO-14 CROSSTUBE	1	B
2	5735027	CROSSTUBE SAFETY BLOCK	2	B
3	5755030	HDSO-14 LONG CROSSTUBE AIR SAFETY TROUGH	1	A
4	5755011	SMALL AIR SAFETY TROUGH	2	C
5	5735023	HD-14 SERIES TOP CROSS TUBE STRAP	1	E
6	5735039	HD/HDSO-14 BOTTOM CROSS TUBE STRAP	1	E
7	5620228	HDS-14 CROSSTUBE END PLATE #1 WELDMENT	1	G
8	5620229	HDS-14 CROSSTUBE END PLATE #2 WELDMENT	1	F
9	5620230	HDS-14 CROSSTUBE END PLATE #3 WELDMENT	1	E
10	5620231	HDS-14 CROSSTUBE END PLATE #4 WELDMENT	1	F
11	5760003	HD-12/14 RAMP STOP	2	D
12	5735073	HDO/HDSO-14 CARRIAGE TIE BLOCK	2	B

DO NOT SCALE DRAWING		NAME	DATE	 BendPak 1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
DRAWN		AC	06/18/2009		
CHECKED		DB	06/16/2016		
DIMENSIONS ARE IN MM TOLERANCES: 0. = ±1.5 0.0 = ±0.5 ANGULAR: 0. = ±2° SURFACE FINISH 1.6 ISO Ra μm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED		THIRD ANGLE PROJECTION		TITLE: HDSO-14 CROSSTUBE WELDMENT	
				SIZE DWG. NO. REV	
NEXT ASSEMBLY 5215605		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		A 5600284 H	
				SCALE: 1:20 SHEET 1 OF 2	

NOTE: UNLESS OTHERWISE SPECIFIED.

- BREAK AND DEBURR ALL SHARP EDGES 0.3mm
- REMOVE ALL WELD SPLATTER
- PAINT BENDPAK BLUE

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
F	UPDATED BOM REVISIONS AND NEXT ASSEMBLY	04/25/2013	TM	00593
G	SHT 2, ADDED 100 DIM. TO SIDE VIEW	12/24/2015	JM	00741
H	UPDATED BOM REVISIONS	08/26/2016	TM	00775



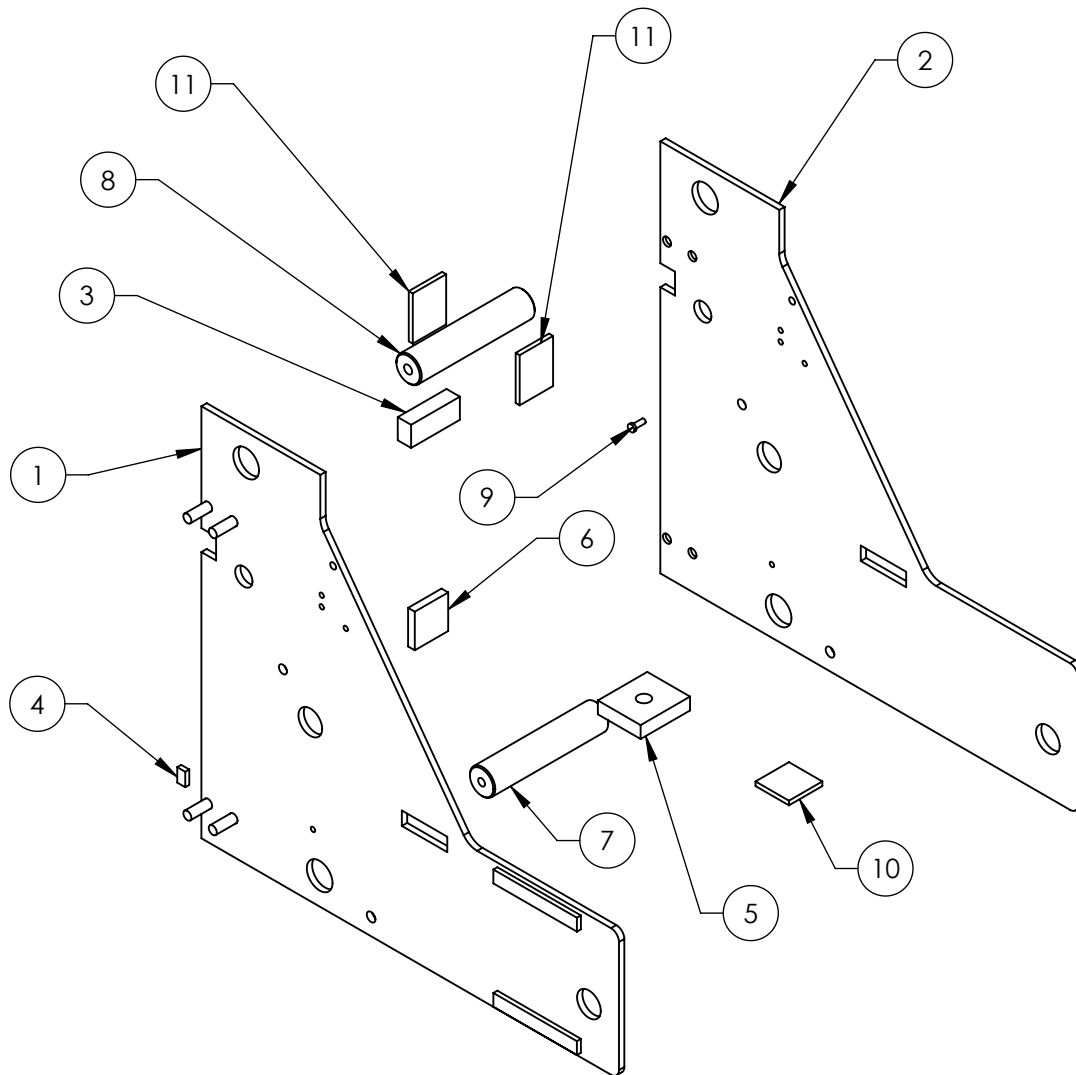
NOTE: UNLESS OTHERWISE SPECIFIED.

1. BREAK AND DEBURR ALL SHARP EDGES 0.3mm
2. REMOVE ALL WELD SPLATTER
3. DIMENSIONS SHOWN ARE AFTER PAINTING
4. PAINT BENDPAK BLUE

ITEM NO	PART NUMBER	DESCRIPTION	QTY	REV
1	5620178	HDSO-14 RIGHT END PLATE WELDMENT	1	G
2	5620116	HDSO-14 LEFT END PLATE WELDMENT	1	F
3	5735027	CROSSTUBE SAFETY BLOCK	1	B
4	5735028	PIN STOP	1	B
5	5736015	HDSO-14 ADJUSTMENT BLOCK	1	B
6	5735073	HDO/HDSO-14 CARRIAGE TIE BLOCK	1	B
7	5746147	HDSO-14 CARRIAGE BOTTOM ROLLER PIN	1	A
8	5746126	HDSO-14 CARRIAGE TOP ROLLER PIN	1	A
9	5746012	SPRING CLEVIS PIN	1	B
10	5735067	HDO/HDSO-14 CARRIAGE TIE BLOCK	1	B
11	5735181	HDSO-14 INTERIOR CARRIAGE GUSSET	2	A

DO NOT SCALE DRAWING		NAME		DATE		 BendPak.		
DIMENSIONS ARE IN MM TOLERANCES: 0. = ±1.5 0.0 = ±0.5		DRAWN		AC		09/24/2008		
		CHECKED		DB		09/07/2016		
ANGULAR: 0. = ±2° SURFACE FINISH 1.6 ISO Ra µm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED		THIRD ANGLE PROJECTION				TITLE:		
						HDSO-14 LEFT CARRIAGE WELDMENT		
Y		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.				SIZE	DWG. NO.	REV
						A	5600285	H
						SCALE: 1:8		SHEET 1 OF 3

NEXT ASSEMBLY
5215606



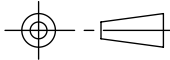
NOTE: UNLESS OTHERWISE SPECIFIED.

1. BREAK AND DEBURR ALL SHARP EDGES 0.3mm
2. REMOVE ALL WELD SPLATTER
3. DIMENSIONS SHOWN ARE AFTER PAINTING
4. PAINT BENDPAK BLUE

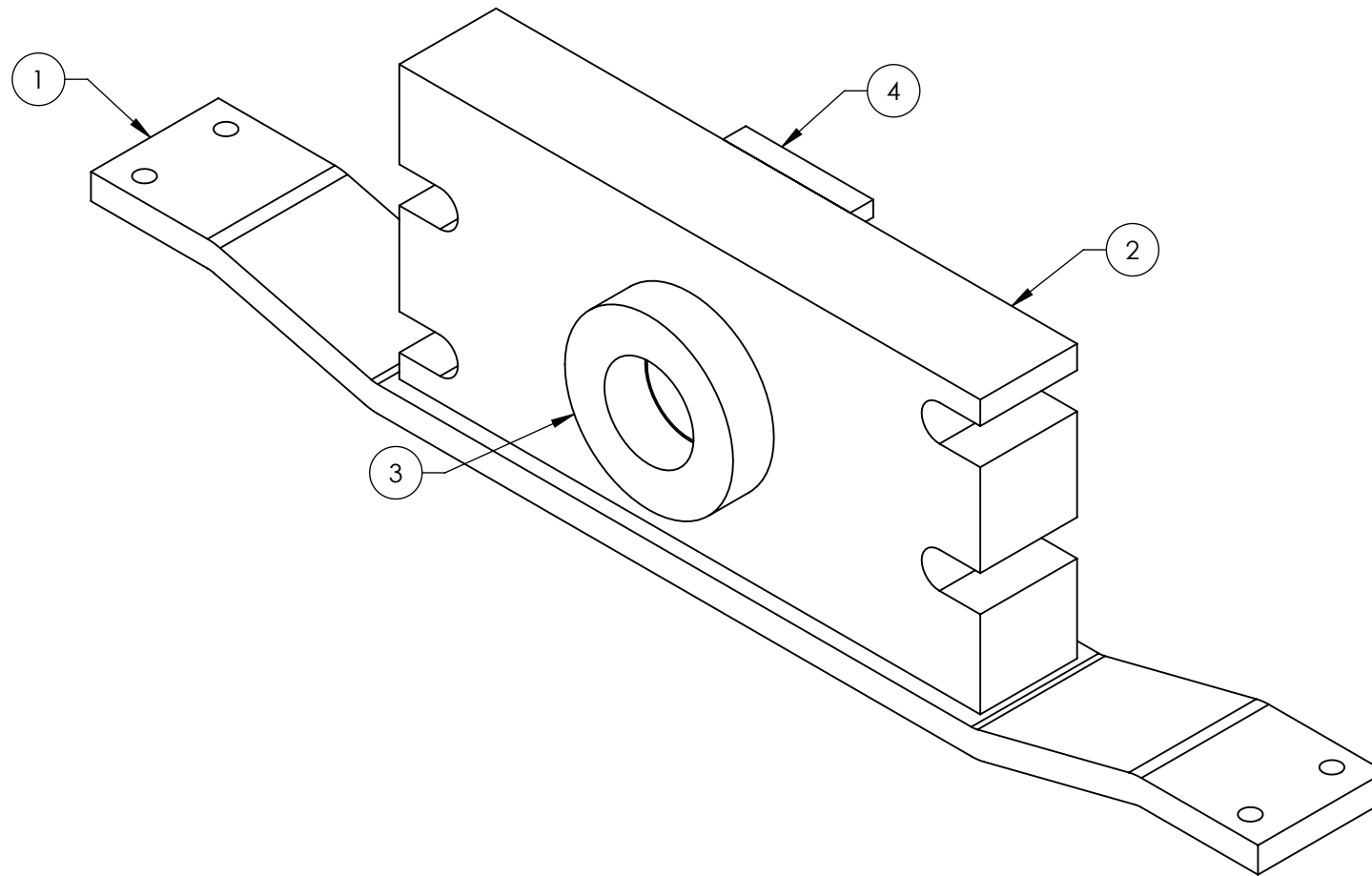
NEXT ASSEMBLY
5215615

REVISION				
REV	DESCRIPTION	DATE	EDITED BY	ECO#
F	UPDATED BOM REVISIONS	04/25/2013	TM	00593
G	SHT 2, ADDED 100 DIM. TO SIDE VIEW UPDATED NEXT ASSEMBLY	12/24/2015	JM	00741
H	UPDATED BOM REVISIONS	08/26/2016	TM	00775

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5620178	HDSO-14 RIGHT END PLATE WELDMENT	1	G
2	5620116	HDSO-14 LEFT END PLATE WELDMENT	1	F
3	5735027	CROSSTUBE SAFETY BLOCK	1	B
4	5735028	PIN STOP	1	B
5	5736015	HDSO-14 ADJUSTMENT BLOCK	1	B
6	5735073	HDO/HDSO-14 CARRIAGE TIE BLOCK	1	B
7	5746147	HDSO-14 CARRIAGE BOTTOM ROLLER PIN	1	A
8	5746126	HDSO-14 CARRIAGE TOP ROLLER PIN	1	A
9	5746012	SPRING CLEVIS PIN	1	B
10	5735067	HDO/HDSO-14 CARRIAGE TIE BLOCK	1	B
11	5735181	HDSO-14 INTERIOR CARRIAGE GUSSET	2	A

DO NOT SCALE DRAWING		NAME	DATE	 1645 LEMONWOOD DR. SANTA PAULA, CA 93060			
DIMENSIONS ARE IN MM TOLERANCES: 0. = ±1.5 0.0 = ±0.5 ANGULAR: 0. = ±2° SURFACE FINISH 1.6 ISO Ra μm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED		DRAWN	AC			06/18/2009	
		CHECKED	DB			09/07/2016	
THIRD ANGLE PROJECTION  PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.		TITLE: HDSO-14 RIGHT CARRIAGE WELDMENT			SIZE	DWG. NO.	REV
					A	5600286	H
		SCALE: 1:8			SHEET 1 OF 3		

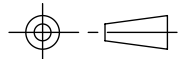
REV	DESCRIPTION	REVISION	DATE	EDITED BY	ECO#
A	PRODUCTION RELEASE, DERIVED FROM 5600079		08/04/2014	TM	00664



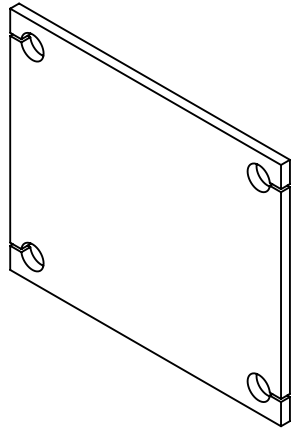
NOTE: UNLESS OTHERWISE SPECIFIED.

1. BREAK AND DEBURR ALL SHARP EDGES 0.3mm
2. REMOVE ALL WELD SPLATTER
3. PAINT BENDPAK BLUE

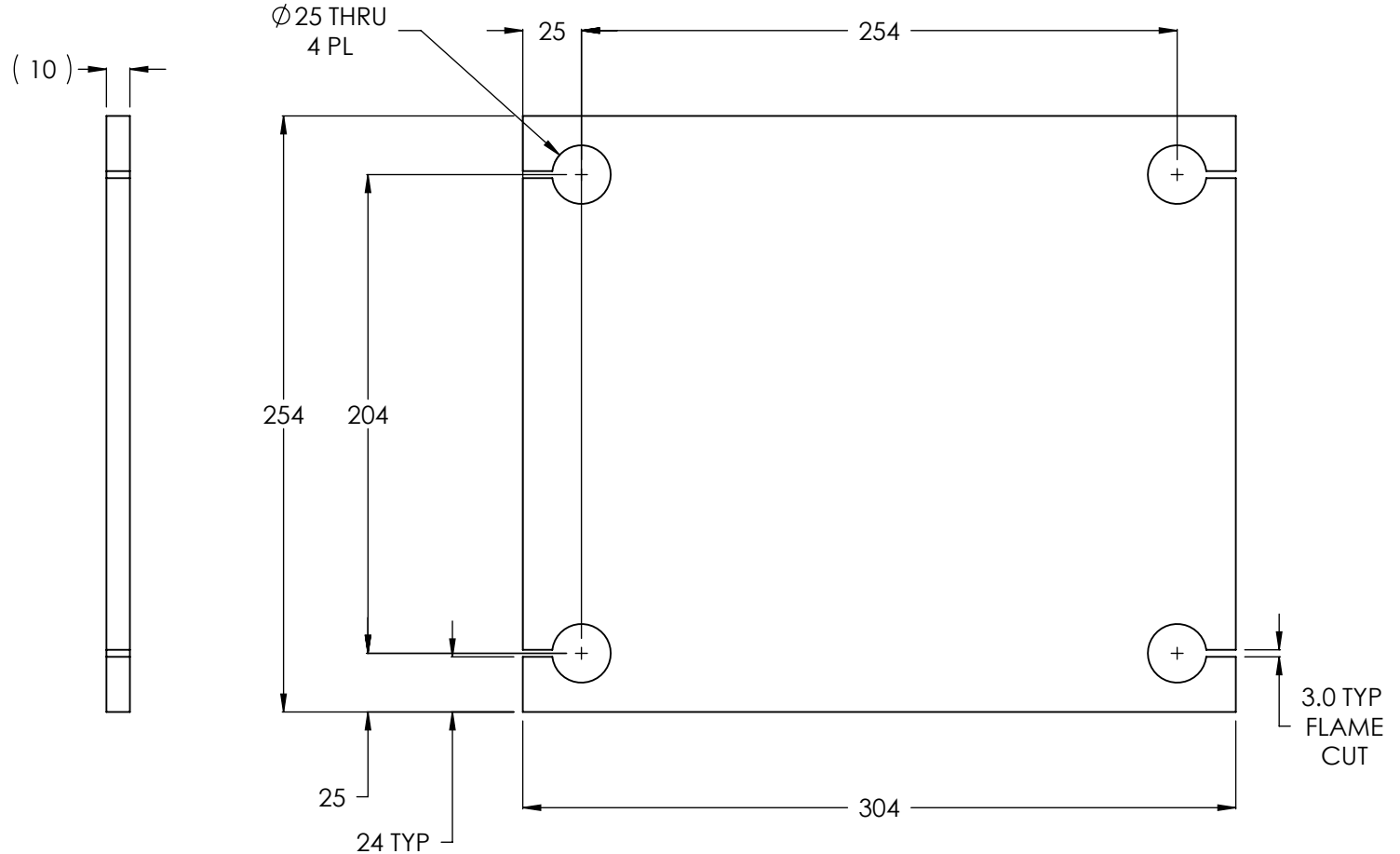
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	REV
1	5701732	HDS-14 CYLINDER FLANGE ARM	1	A
2	5736820	HDS/HDSO-14 CABLE RETAINER BLOCK	1	A
3	5745317	HD-14 SERIES CYLINDER FLANGE ARM SPACER	1	B
4	5735289	HD/HDS-14 CYLINDER FLANGE ARM SPACER	1	B

DO NOT SCALE DRAWING	NAME	DATE	 BendPak. 1645 LEMONWOOD DR. SANTA PAULA, CA 93060
DIMENSIONS ARE IN MM TOLERANCES: 0. = ± 1.5 0.0 = ± 0.5 ANGULAR: 0. = $\pm 2^\circ$ SURFACE FINISH 1.6 ISO Ra μm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED	DRAWN	TM	
	CHECKED		
	THIRD ANGLE PROJECTION		TITLE: HDS/HDSO-14 CYLINDER FLANGE ARM WELDMENT
 PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.	SIZE	DWG. NO.	REV
	A	5600924	A
SCALE: 1:2			SHEET 1 OF 2

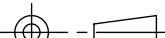
NEXT ASSEMBLY
5215664



ISOMETRIC VIEW
FOR REFERENCE ONLY
DO NOT SCALE



REVISION				
REV.	DESCRIPTION	DATE	EDITED BY	ECO#
B	UPDATE SHEET TEMPLATE	03/31/2008	MT	00157
B-001	CHANGED SURFACE FINISH FROM 3.2 μm TO 1.6 $\text{Ra } \mu\text{m}$	09/10/2008	GJ	00237
B-002	UPDATED NEXT ASSEMBLY	10/30/2008	AC	00174
B-003	UPDATED NEXT ASSEMBLY	11/12/2008	TM	00249
C	UPDATED TITLE TO REFLECT WHERE USED	02/26/2010	AC	00333
D	UPDATED TITLE TO REFLECT WHERE USED	06/02/2010	AC	00366
D-001	UPDATED NEXT ASSEMBLIES	11/01/2011	TM	00487

NEXT ASSEMBLY 5600182 5600183 5600184 5600185 5600524 5600525 5600639 5600640 5600903 5600904 5620236 5620237	DO NOT SCALE DRAWING	NAME		DATE		 BendPak. PROVIDING AUTOMOTIVE SERVICE SOLUTIONS		1645 LEMONWOOD DR. SANTA PAULA, CA 93060	
	DIMENSIONS ARE IN MM TOLERANCES: 0. = ±1.5 0.0 = ±0.5	DRAWN	GJZ	02/29/2008					
	ANGULAR: 0. = ±2°	CHECKED					TITLE: HD-7P/7500/9/14 SERIES POST BASE PLATE		
	SURFACE FINISH 1.6 ISO Ra μm FOR MACHINED SURFACES UNLESS OTHERWISE SPECIFIED	THIRD ANGLE PROJECTION							
	MATERIAL: HR ASTM A36 OR Q235 GB/T 700	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BENDPAK INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BENDPAK INC. IS PROHIBITED.							
	SIZE: 10mm THK	SIZE		DWG. NO.		REV			
		A		5731632		D			
SCALE: 1:3				SHEET 1 OF 1					

NOTE: UNLESS OTHERWISE SPECIFIED.

1. BREAK AND DEBURR ALL SHARP EDGES 0.3mm.

PART SPECIFICATION FORM

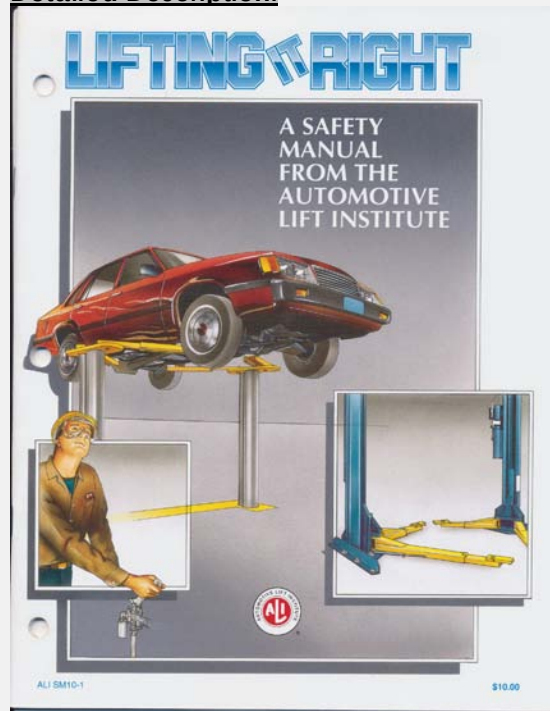
BENDPAK Number:	5900147
MRP Description:	SAFETY MANUAL ALI / SM 93-1
Date:	12/28/2010
ECO :	00431

1. Engineering Specification

Application:

ALI SAFETY MANUAL

Detailed Description:



2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

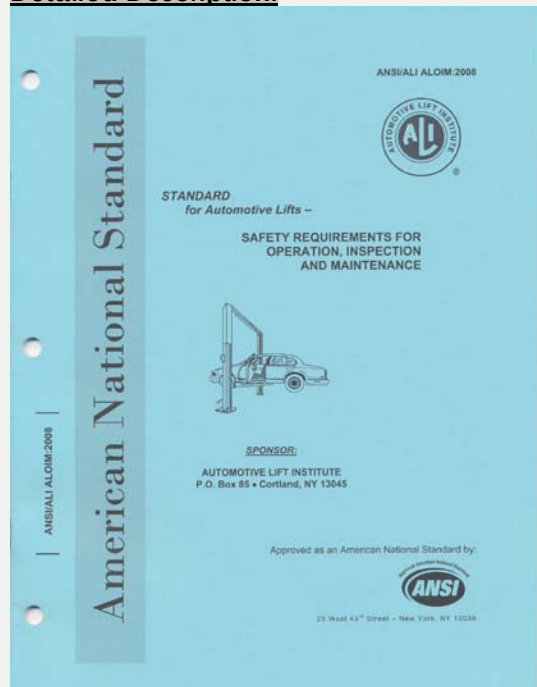
BENDPAK Number:	5900152
MRP Description:	ALIGN OIM OPERATION INSPECTION & MAINTENANCE
Date:	12/28/2010
ECO :	00431

1. Engineering Specification

Application:

ALI OPERATION INSPECTION & MAINTENANCE MANUAL

Detailed Description:



2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5900164
MRP Description:	HDSO-14 SERIES INSTALLATION MANUAL
Date:	07/12/2013
ECO :	00593

1. Engineering Specification

Application:

INSTALLATION MANUAL

Detailed Description:

WARNING

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS
 PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING WITH LIFT INSTALLATION AND OPERATION YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.
 REV D 06/12/2013
 p/n 5900164

INSTALLATION AND OPERATION MANUAL

14,000 POUND CAPACITY
 COMMERCIAL GRADE
 FOUR-POST OPEN FRONT
 ALIGNMENT LIFTS

Model:
 HDSO-14
 HDSO-14LSX



READ FIRST



Keep this operation manual near the machine at all times. Make sure that ALL USERS read this manual.

RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed Bill of Lading is acknowledgement by the shipping carrier as receipt of this product as listed in your invoice as being in a good condition of shipment. If any of these goods listed on this Bill of Lading are missing or damaged, do not accept goods until the shipping carrier makes a notation on the freight bill of the missing or damaged goods. Do this for your own protection.

BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased with proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside. Keep this operation manual near the lift at all times. Make sure that ALL USERS read and understand this manual.

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905103
MRP Description:	WARNING ALI/WL 200
Date:	05/06/2013
ECO :	00593

1. Engineering Specification

Application:

ALI 4 POST SAFETY STICKER KIT

Detailed Description:



SIZE: 11" L x 8.5" W (279mm x 216mm)

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

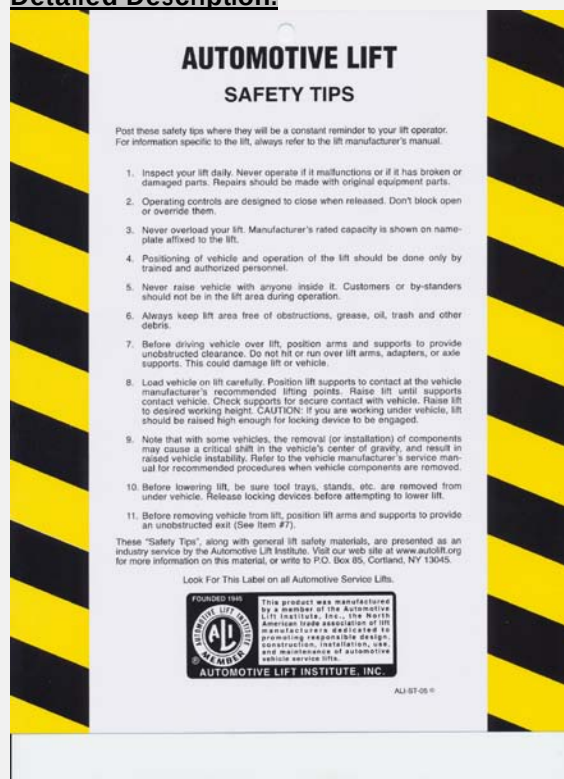
BENDPAK Number:	5905151
MRP Description:	SAFETY TIPS CARD ALI-ST 90
Date:	12/28/2010
ECO :	00431

1. Engineering Specification

Application:

ALI SAFETY TIPS

Detailed Description:



2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905311
MRP Description:	BENDPAK LABEL; 4 x 38" WHITE INK
Date:	05/13/2015
ECO :	00689

1. Engineering Specification

Application:

BENDPAK LABEL

Detailed Description:



SIZE: 38" L x 4.25" W (965mm x 108mm)

- Material: Yellow Represents Clear Adhesive PET
- Size: 4.25"W x 38"H
- Thickness: 4 Mil
- Finish: Polished
- Ink: U.V. protected, Opaque White
- Print Process: Silk Screen, 85 line-screen (Opaque White ink, clear adhesive PET will fill in blank areas.)
- Lamination: Clear-gloss over-laminate for abrasion, chemical, and ultra violet protection

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905465
MRP Description:	MANUFACTURER LABEL
Date:	05/07/2013
ECO :	00593

1. Engineering Specification

Application:

MANUFACTURER LABEL

Detailed Description:

MFD. BY BENDPAK INC.

LIFT TYPE: SURFACE MOUNT CAPACITY: MED/HVY DTY
 POWER: ELECTRIC/HYDRAULIC ANCHORS: AS EQUIPPED
 INSTALLATION - SEE OWNERS GUIDE OR CONTACT FACTORY

SHIPPING DAMAGE CLAIMS

WHEN THIS EQUIPMENT IS SHIPPED, TITLE PASSES TO THE PURCHASER UPON RECEIPT FROM THE CARRIER. CONSEQUENTLY, CLAIMS FOR THE MATERIAL DAMAGED IN SHIPMENT MUST BE MADE BY THE PURCHASER AGAINST THE TRANSPORTATION COMPANY AT THE TIME SHIPMENT IS RECEIVED.

PLEASE READ ALL OPERATORS/USERS MANUAL(S) PRIOR TO INSTALLATION AND OPERATION. UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF EACH MANUAL(S) PRIOR TO INSTALLATION AND OPERATION. DELIVER THE MANUAL(S) TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

IMPORTANT NOTE:

BENDPAK LIFTS ARE SUPPLIED WITH CONCRETE FASTENERS MEETING THE CRITERIA AS PRESCRIBED BY ASTM E488 - 96(2003). LIFT BUYERS ARE RESPONSIBLE FOR ANY SPECIAL REGIONAL STRUCTURAL AND/OR SEISMIC ANCHORING REQUIREMENTS SPECIFIED BY ANY OTHER AGENCIES AND/OR CODES SUCH AS THE UNIFORM BUILDING CODE (UBC) AND/OR INTERNATIONAL BUILDING CODE (IBC).



INTERNAL BAR CODE - FOR FACTORY AUDIT ONLY 34086

BPK	STYOT	P20KVR	X18576	HVY DTY/ GVR
				832

THE MANUFACTURE, USE, SALE OR IMPORT OF THIS PRODUCT MAY BE SUBJECT TO ONE OR MORE UNITED STATES PATENTS, OR PENDING APPLICATIONS, OWNED BY BENDPAK, INC.

ENGINEERED BY BENDPAK INC USA

MADE IN CHINA

SIZE: 5.125" L x 5.125" W (130mm x 130mm)

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905556
MRP Description:	4-POST SAFETY DECAL
Date:	05/06/2013
ECO :	00593

1. Engineering Specification

Application:

4-POST SAFETY DECAL

Detailed Description:



SIZE: 23" L x 4" W (584mm x 100mm)

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905557
MRP Description:	MAX CAP DANGER 14K
Date:	05/06/2013
ECO :	00593

1. Engineering Specification

Application:

LIFT CAPACITY STICKER

Detailed Description:

SIZE: 5" L x 4" W (127mm x 100mm)



2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905940
MRP Description:	PRODUCT DATA LABEL
Date:	05/06/2013
ECO :	00593

1. Engineering Specification

Application:

PRODUCT DATA LABEL

Detailed Description:



SANTA PAULA, CA USA
 WWW.BENDPAK.COM

LIFT TYPE: SURFACE MOUNT CAP: MED/HVY DTY MFG. BPK SEE DATA PLATE FOR PRODUCT DETAILS
 POWER: ELECTRIC/HYDRAULIC INSTALLATION - SEE OWNERS GUIDE OR CONTACT FACTORY

SAFETY INSTRUCTIONS: IF ATTACHMENTS, ACCESSORIES OR CONFIGURATION MODIFYING COMPONENTS THAT ARE LOCATED IN THE LOAD PATH, AFFECT OPERATION OF THE LIFT, AFFECT THE LIFT ELECTRICAL LISTING OR AFFECT INTENDED VEHICLE ACCOMMODATION ARE USED ON THIS LIFT AND, IF THEY ARE NOT CERTIFIED FOR USE ON THIS LIFT, THEN THE CERTIFICATION OF THIS LIFT SHALL BECOME NULL AND VOID. CONTACT THE PARTICIPANT FOR INFORMATION PERTAINING TO CERTIFIED ATTACHMENTS, ACCESSORIES OR CONFIGURATION MODIFYING COMPONENTS.

BENDPAK LIFTS ARE SUPPLIED WITH CONCRETE FASTENERS MEETING THE CRITERIA AS PRESCRIBED BY ASTM E488 - 96(2003). LIFT BUYERS ARE RESPONSIBLE FOR ANY SPECIAL REGIONAL STRUCTURAL AND/OR SEISMIC ANCHORING REQUIREMENTS SPECIFIED BY ANY OTHER AGENCIES AND/OR CODES SUCH AS THE UNIFORM BUILDING CODE (UBC) AND/OR INTERNATIONAL BUILDING CODE (IBC).

THE MANUFACTURE, USE, SALE OR IMPORT OF THIS PRODUCT MAY BE SUBJECT TO ONE OR MORE UNITED STATES PATENTS, OR PENDING APPLICATIONS, OWNED BY BENDPAK, INC.
 DO NOT REMOVE ENGINEERED BY BENDPAK INC. USA MADE IN CHINA

SIZE: 2.3" L x 4.5" W (58mm x 114mm)

2. Vendor Information

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			

PART SPECIFICATION FORM

BENDPAK Number:	5905953
MRP Description:	2015_SERIAL_TAG-D-5905953
Date:	07/19/2016
ECO :	00752

1. Engineering Specification

Application:

DATA SERIAL TAG, 4-POST LIFTS, CE

Detailed Description:

SIZE: 3" L x 3" W (76.2mm x 76.2mm)

 BendPak.		Santa Paula, CA USA www.bendpak.com
MODEL NUMBER		
SERIAL NUMBER		
LIFT CAPACITY	DESCRIPTION	
ROLLING JACK MAX CAP.	MAX PSI / BAR	
VOLTAGE		
☐ 110-240VAC, 50-60 Hz, 1 Ph	☐ 380-415VAC, 50-60 Hz, 3 Ph	
☐ 208-240VAC, 50-60 Hz, 1 Ph	☐ 208-440VAC, 50-60 Hz, 3 Ph	
DATE OF MFG.		
 DANGER! Disconnect Power Before Servicing		
WARRANTY VOID IF DATA PLATE IS REMOVED   PN 5905953		

2. Vendor Information (Or for Reference)

Approved Vendor	Vendor Part #	Contact #	Preferred Vendor
1)			
2)			
OR BENDPAK ENGINEERING APPROVED EQUIVALENT			