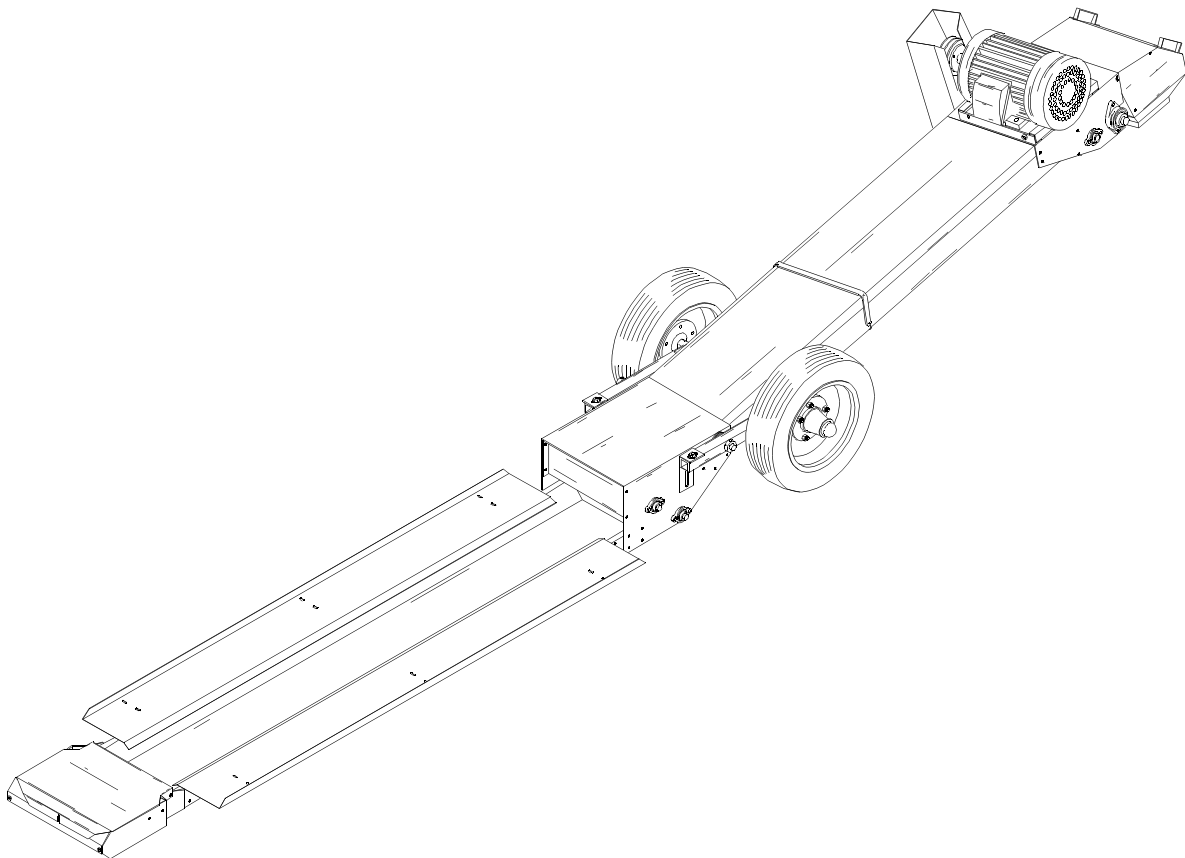




ELEVATING UNDERCAR CONVEYOR

12" & 16" FLUSH - TYPE

OWNER'S MANUAL

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Introduction

Read this manual carefully. It will instruct you on how to operate and service your machine safely and correctly. Failure to do so could result in personal injury and/or equipment damage.



WARNINGS!!!



1. **DO NOT** service undercar before stopping all motors and locking out power source.
2. **DO NOT** operate the undercar before checking for proper clearance for operation and clearing the area of people.
3. **DO NOT** operate the undercar without familiarizing yourself with the operator's manual.
4. **DO NOT** operate the undercar if guards or shields have been removed.



**Owner's and User's
Statement of Responsibility**
Flush Type
Elevating Undercar Conveyor



I have had explained to me and accept responsibility for the following:

I understand this undercar conveyor is a heavy, powerful, and bulky unit of equipment capable of causing injury or death when used improperly. I accept the responsibility associated therewith.

I understand the danger of high voltage power lines in relation to high profile equipment and accept responsibility for its safe use in dangerous surroundings.

I understand that neither I, any of my workers, nor anyone else should be allowed to work around the undercar conveyor area while it is in operation, or unstabilized for any reason.

I understand the undercar can cause serious injury or death instantly. Therefore, I accept responsibility to avoid, and to cause my workers to avoid, working in an area or manner that would cause unnecessary risk of injury or death.

I hereby acknowledge that I have been adequately instructed in the safe operation of this undercar conveyor and accept responsibility for same.

I recognize that this list of potential risk and dangers is not necessarily complete and agree to exercise good common sense and judgement in the use of this undercar conveyor.

Owner

Date

Safety Precautions

1. Operator should read and understand operator's manual before operating undercar.
2. Never stand or climb on the undercar conveyor before disconnecting and locking out power source.
3. Disconnect and lock out power source before adjusting and servicing undercar conveyor.
4. Do not operate without guards and shields in place.
5. Stay away from hopper inlet when operating.
6. Stay away from moving belt when operating.
7. Keep area clean.
8. Operator should be familiar with controls and operation sequence prior to start up.
9. Read and understand all material safety data sheets (MSDS) for any chemical or material you are handling.
10. All electrical components should be wired by a qualified electrician. All federal, state, and local codes should be followed.

Specifications

12" and 16" Flush Type Elevating Undercar Conveyor

Undercar Pan	14 Ga 304 stainless steel
Head Frame	3/16" 304 stainless steel
Tail Frame	3/16" 304 stainless steel
Motor Mount	10 Ga 304 stainless steel
Bearings	Regreasable flange mount ball bearings
Head Pulley	6" O.D. lagged x 1 5/16" bore
Tail Pulley	3 1/2" O.D. lagged x 1" bore
Belt	Poly-vinyl chloride 12" and 16" wide PVC with chevron top
Power Requirements	12" 3 HP 1800 RPM 16" 5 HP 1800 RPM
Wheel Hubs	5-bolt 15" Automotive
Capacity	12" up to 70 TPH 16" up to 120 TPH

Lubrication and Maintenance



CAUTION: STOP ALL MOTORS AND LOCK OUT POWER SOURCE BEFORE SERVICING CONVEYOR.



CAUTION: IF GUARDS OR SHIELDS ARE REMOVED TO SERVICE UNIT, REPLACE IMMEDIATELY AFTER COMPLETION OF WORK.



IMPORTANT: THE LUBRICATION PERIODS RECOMMENDED ARE BASED ON NORMAL USAGE. SEVERE OR UNUSUAL CONDITIONS MAY REQUIRE MORE FREQUENT LUBRICATION.



IMPORTANT: CLEAN FITTINGS THOROUGHLY BEFORE LUBRICATING. REPLACE MISSING OR DAMAGED GREASE FITTINGS IMMEDIATELY.

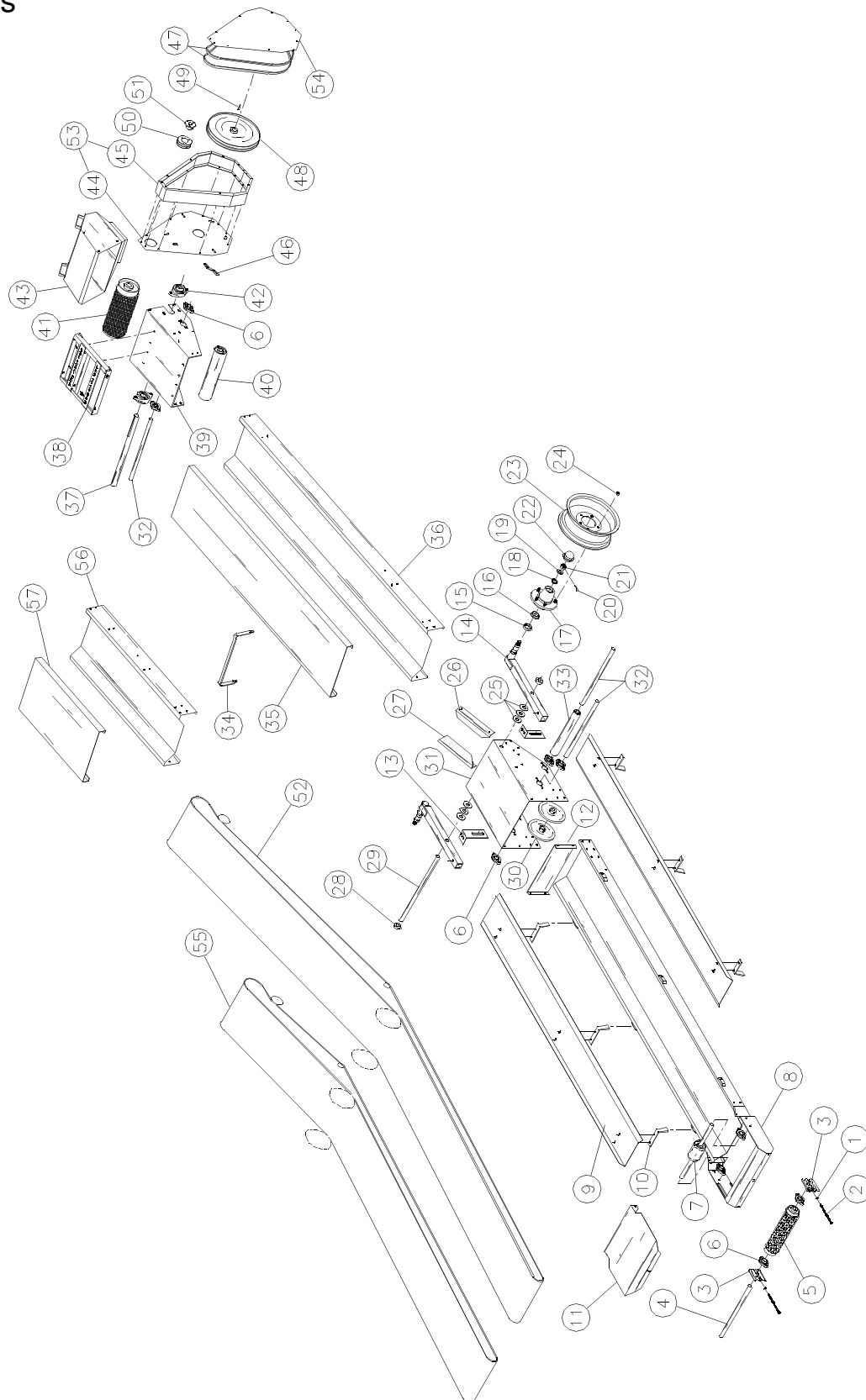
SERVICE/YEARLY (PRIOR TO START UP)	LUBRICANT:
Electric Motor 1 to 2 Full Strokes	Shell Oil Co. "Dolium R" Chevron Oils "SRI No. 2" Texaco Inc. "Premium RB"

SERVICE/WEEKLY (20 HOURS)	LUBRICANT:
1" Flange Bearings	SAE Multi-Purpose Grease

Flush Type Undercar Maintenance

Due to the characteristics of certain materials, a residue may build up. If this is a problem or gets excessive, wash out the undercar. Allow to dry before using.

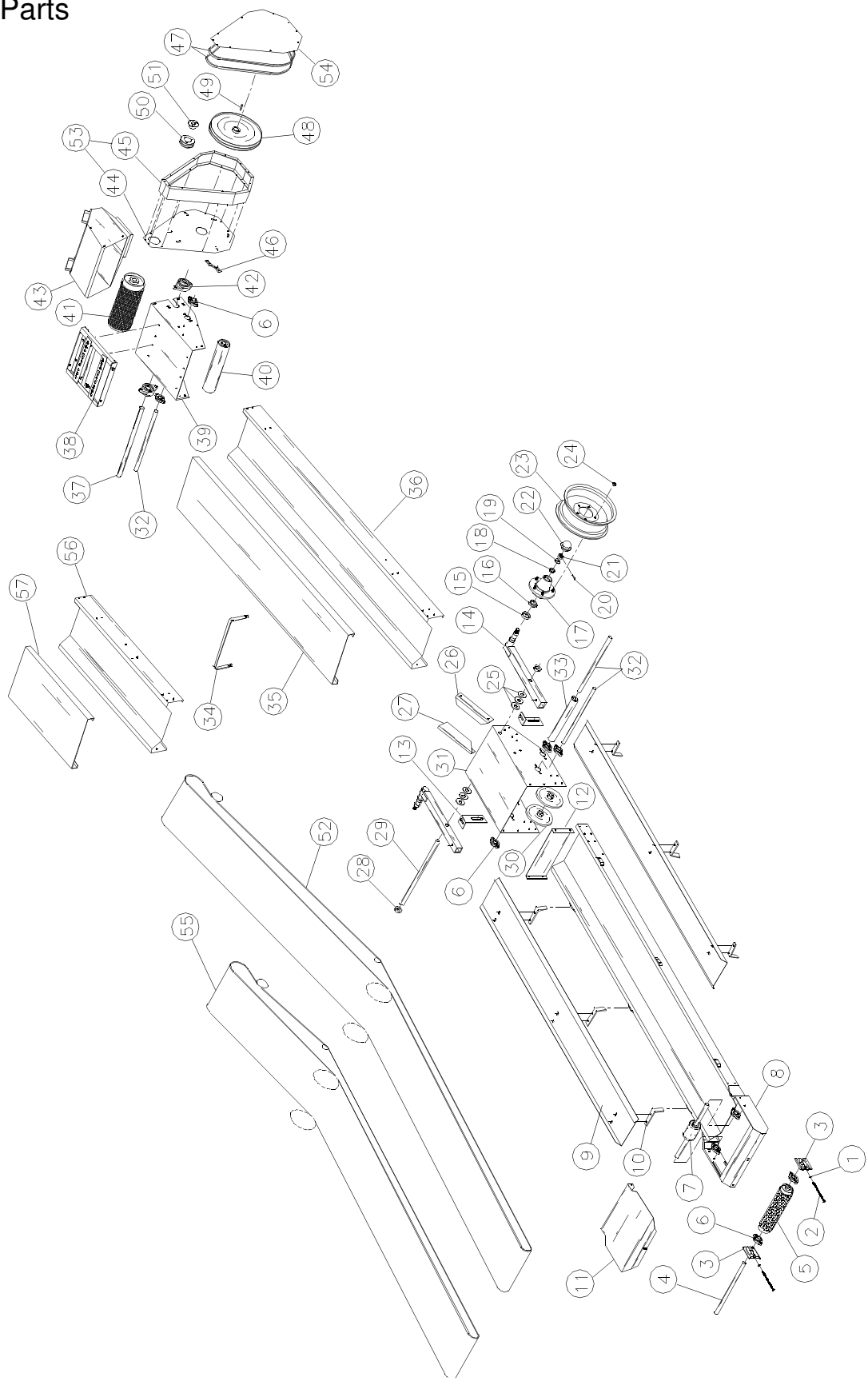
12" Flush Type Elevating Undercar Repair Parts



12" Flush Type Elevating Undercar Repair Parts

Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	2	01560200	Nut .375 SS Square	30	2	80541600	Hold Down Wheel
2	2	83103200	Take-Up Bolt .375 x 7.500	31	1	13752100	Plt SS .188 x 24 x 40.375
3	2	13379300	Sht SS 10ga 4.18 x 4.31	32	3	11851300	CRR .995 x 18.156
4	1	10080000	CRR .995 x 15.750	33	1	80010200	Roller Weldment 2 x 12
5	1	88001300	Roller Lagged 3.5 x 12.5	34	1	06498000	Strap 15" Rubber w/hooks
6	10	03001500	Bearing 1" 2 Bolt Flange	35	1	13751300	Cover 8' Pan
7	1	82140500	Roller Weldment 3.5 x 5	36	1	82632100	Transition Pan 8'
8	1	81640500	Pan Weldment	37	1	19598200	CRR 1.307 x 21.875
9	2	20066700	Sht SS 16ga 15.00 x 96.00	38	1	60000700	Motor Mount Assembly
10	6	20061800	SS Flat .250 x 1.25 x 8.50	39	1	19619600	Plt SS .188 x 21.5 x 34.563
11	1	11861200	Sht SS 12ga 19.50 x 17.50	40	1	80011000	Roller Weldment 3.5 x 12.5
12	1	11453800	Sht SS 16ga 7.00 x 15.75	41	1	61685400	Roller Lagged 6 x 12.5
13	2	15842800	Plt SS .188 x 3.00 x 9.00	42	2	03018900	Bearing 1.313 2B Flange
14	2	83570200	Axle Arm Weldment	43	1	82101700	Enclosed Spout Weldment
15	2	05702600	Grease Seal	44	1	14783500	Guard Back Plate
16	2	03040300	Bearing Inner	45	2	14782700	Guard Side
17	2	05707500	Hub 5 Bolt w/cones	46	3	16801300	SS Flat .188 x 1.00 x 6.625
18	2	05741400	Bearing Outer	47	2	03525300	V-Belt B-60
19	2	02080000	Spindle Washer	48	1	04275400	Sheave 2B15 x 1.313 Bore
20	2	02154300	Cotter Pin .156 x 1.500	49	1	12003000	CD Square .313 x 2.000
21	2	01581800	Hub Nut	50	1	04293700	Sheave 2B 3.6 SH
22	2	05703400	Dust Cap	51	1	04388500	Bushing 1.125 SH QD
23	2	530238	Wheel 5 Bolt 15"	52	1	76047000	Belt Assembly 8' Pan
24	10	01580000	Wheel Nut	53	1	61589800	Guard Assy
25	6	330407	Washer 1" Flat	54	1	14784300	Guard Front Plate
26	1	13749700	Sht SS 14ga 5.375 x 14.50	55	1	62398300	Belt Assembly 4' Pan
27	1	13750500	Sht SS 14ga 5.375 x 14.50	56	1	82135500	Transition Pan 4'
28	2	06409700	Set Collar 1.000	57	1	17404500	Cover 4' Pan
29	1	19603000	CRR .995 x 20.750				

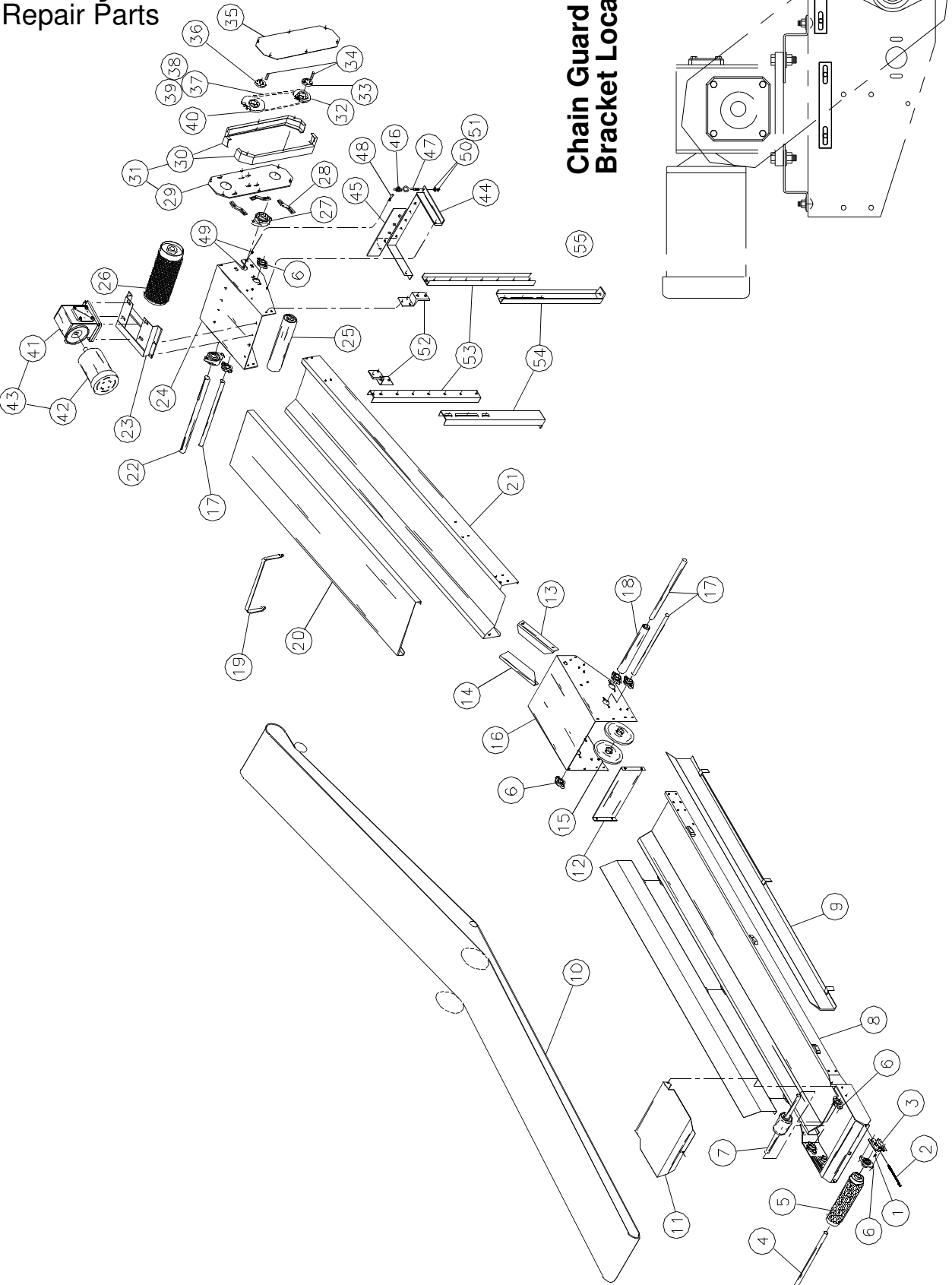
**16" Flush Type
Elevating Undercar**
Repair Parts



16" Flush Type Elevating Undercar Repair Parts

Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	2	01560200	Nut .375 SS Square	30	2	80541600	Hold Down Wheel
2	2	83103200	Take-Up Bolt .375 x 7.500	31	1	19612100	Plt SS .188 x 24 x 44.375
3	2	13379300	Sht SS 10ga 4.18 x 4.31	32	3	19607100	CRR .995 x 21.500
4	1	19602200	CRR .995 x 19.750	33	1	84227800	Roller Weldment 2 x 16.25
5	1	88558200	Roller Lagged 3.5 x 16.5	34	1	06498000	Strap 15" Rubber w/hooks
6	10	03001500	Bearing 1" 2 Bolt Flange	35	1	19610500	Cover 8'
7	1	84224500	Roller Weldment 3.5 x 9	36	1	84228600	Transition Pan 8'
8	1	81641300	Pan Weldment	37	1	19799600	CRR 1.307 x 24.750
9	2	20066700	Sht SS 16ga 15.00 x 96.00	38	1	60000700	Motor Mount Assembly
10	6	20061800	SS Flat .250 x 1.25 x 8.50	39	1	19613900	Plt SS .188 x 21.5 x 38.563
11	1	11982600	Sht SS 12ga 19.50 x 21.50	40	1	81339400	Roller Weldment 3.5 x 16.5
12	1	19614700	Sht SS 16ga 7.00 x 19.75	41	1	88826300	Roller Lagged 6 x 16.5
13	2	15842800	Plt SS .188 x 3.00 x 9.00	42	2	03018900	Bearing 1.313 2B Flange
14	2	83570200	Axle Arm Weldment	43	1	84229400	Enclosed Spout Weldment
15	2	05702600	Grease Seal	44	1	14783500	Guard Back Plate
16	2	03040300	Bearing Inner	45	2	14782700	Guard Side
17	2	05707500	Hub 5 Bolt w/cones	46	3	16801300	SS Flat .188 x 1.00 x 6.625
18	2	05741400	Bearing Outer	47	2	03525300	V-Belt B-60
19	2	02080000	Spindle Washer	48	1	04275400	Sheave 2B15 x 1.313 Bore
20	2	02154300	Cotter Pin .156 x 1.500	49	1	12003000	CD Square .313 x 2.000
21	2	01581800	Hub Nut	50	1	04293700	Sheave 2B 3.6 SH
22	2	05703400	Dust Cap	51	1	04388500	Bushing 1.125 SH QD
23	2	530238	Wheel 5 Bolt 15"	52	1	89354500	Belt Assembly
24	10	01580000	Wheel Nut	53	1	61589800	Guard Assy
25	6	330407	Washer 1" Flat	54	1	14784300	Guard Front Plate
26	1	13749700	Sht SS 14ga 5.375 x 14.50	55	1	61409900	Belt Assembly 4'
27	1	13750500	Sht SS 14ga 5.375 x 14.50	56	1	81245300	Transition Pan 4'
28	2	06409700	Set Collar 1.000	57	1	14228100	Cover 4'
29	1	12218400	CRR .995 x 25.000				

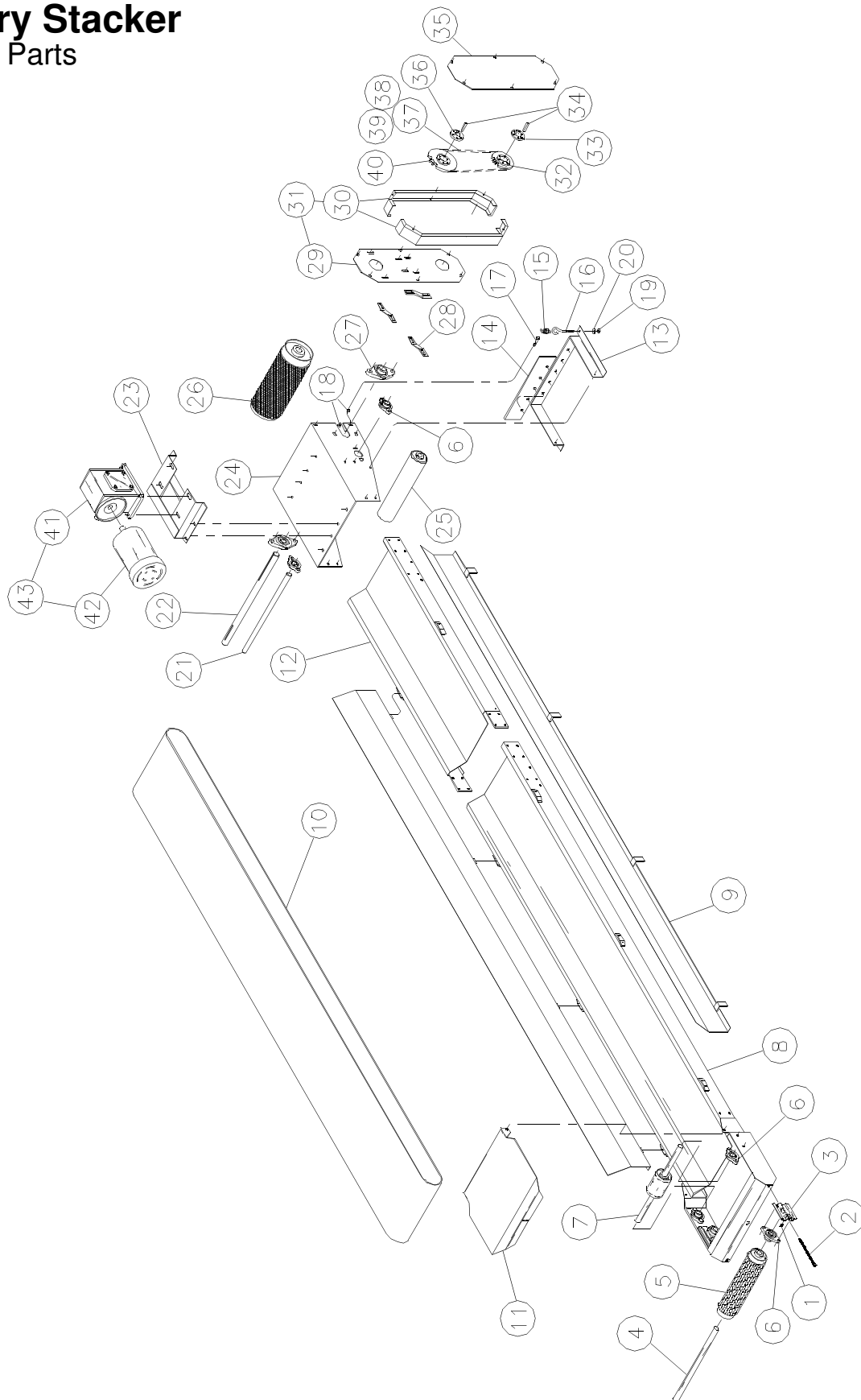
16" Flush Type Elevating Undercar Rotary Stacker Repair Parts



16" Flush Type Elevating Undercar Rotary Stacker Repair Parts

Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	2	01560200	Nut .375 SS Square	30	1	16391500	Chain Guard Sides
2	2	83103200	Take-Up Bolt .375 x 7.500	31	1	62204300	Chain Guard Assembly Includes Items #29 & #30
3	2	13379300	Sht SS 10ga 4.18 x 4.31	32	1	01432400	Sprocket #60 24T SDS
4	1	19602200	CRR .995 x 19.750	33	1	04325700	Bushing 1.250 SDS QD
5	1	88558200	Roller Lagged 3.5 x 16.5	34	1	16389900	Chain Guard Front
6	10	03001500	Bearing 1" 2 Bolt Flange	35	1	12003000	Key .313 x 2.000
7	1	84224500	Roller Weldment 3.5 x 9	36	1	04416400	Bushing 1.313 SDS QD
8	1	81641300	Pan Weldment	37	1	11766300	Chain #60 x 61 Pitches
9	2	81831000	Deflector	38	1	02044600	Chain #60 Connector Link
10	1	62206800	Belt Assembly 16" x 41'-3" Smooth	39	1	05215900	Chain #60 Ofrset Link
11	1	11982600	Sht SS 12ga 19.50 x 21.50	40	1	04539300	Sprocket #60 B 18T SDS
12	1	19614700	Sht SS 16ga 7.00 x 19.75	41	1	02719300	Gear Box TMQ226
13	1	13749700	Sht SS 14ga 5.375 x 14.50	42	1	03127800	Motor 1.5 HP 3 Phase 1725 TEFC C-Face
14	1	13750500	Sht SS 14ga 5.375 x 14.50	43	1	61560900	Motor/Gear B ox Assembly Includes Items #41 & #42
15	2	80541600	Hold Down Wheel	44	1	81942500	Scraper Weldment
16	1	19612100	Plt SS .188 x 24 x 44.375	45	1	16815300	Scraper
17	3	19607100	CRR .995 x 21.500	46	2	01482900	Spring 1" x 2½"
18	1	84227800	Roller Weldment 2 x 16.25	47	2	333898	Eyebolt
19	1	06498000	Strap 15" Rubber w/hooks	48	2	01211200	HHCS 5/16" x 2" SS
20	1	19610500	Sht SS 16ga 23.625 x 81	49	4	01512300	Hex Nut 5/16" SS
21	1	84228600	Transition Pan Weldment	50	2	01549500	Hex Nut 3/8" SS
22	1	19799600	CRR 1.307 x 24.750	51	2	02219400	Flat Washer 3/8" SS
23	1	81824500	Gear Box Mount	52	2	16817900	Support Stand Bracket
24	1	19613900	Plt SS .188 x 21.5 x 38.563	53	2	19695600	Support Stand Leg Extension
25	1	81339400	Roller Weldment 3.5 x 16.5	54	2	19696400	Support Stand Leg
26	1	88826300	Roller Lagged 6 x 16.5				
27	2	03018900	Bearing 1.313 2B Flange				
28	3	16387300	Chain Guard Brackets				
29	1	16390700	Chain Guard Back				

16" Flush Type Horizontal Undercar Rotary Stacker Repair Parts

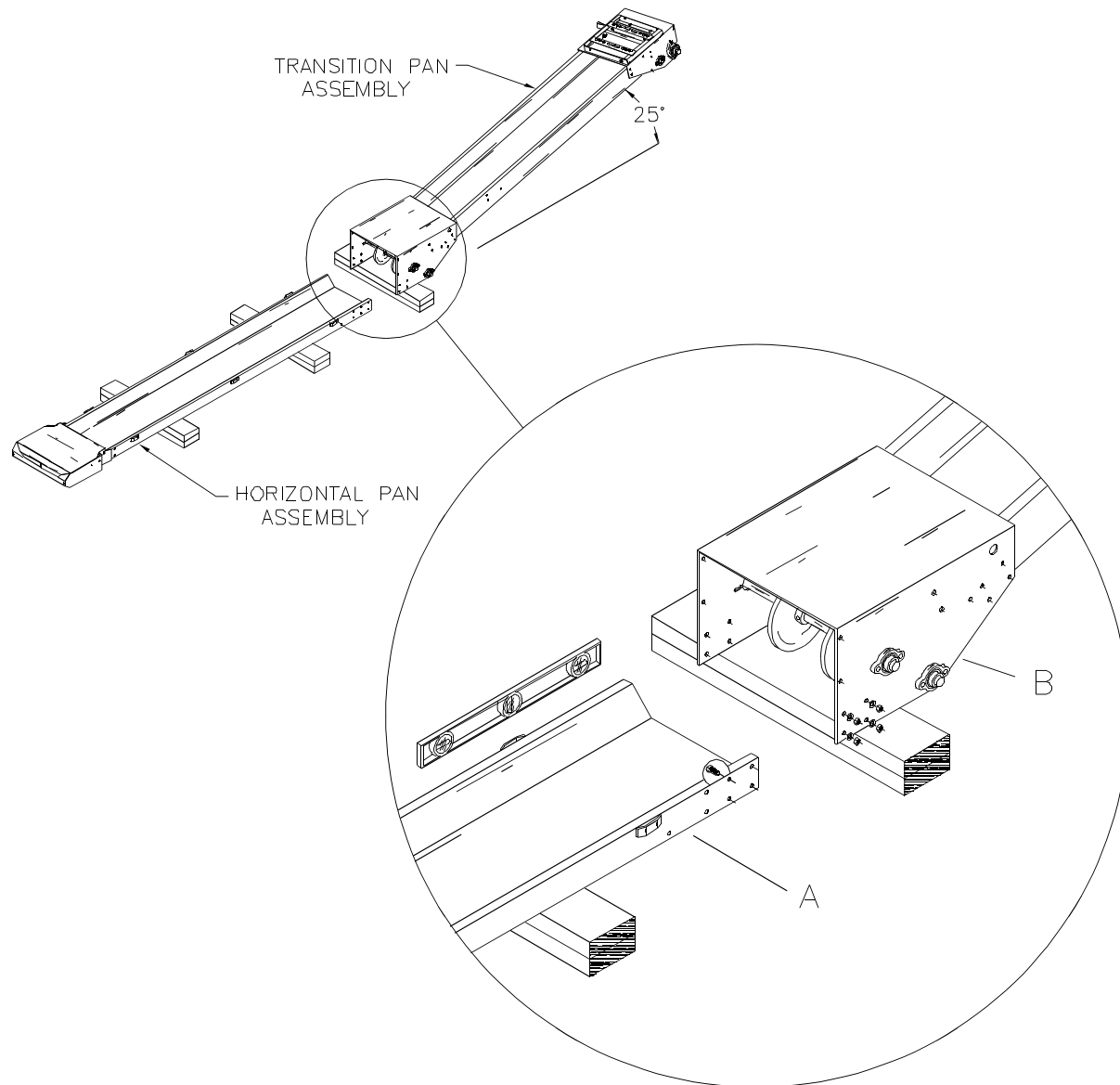


16" Flush Type Horizontal Undercar Rotary Stacker Repair Parts

Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	2	01560200	Nut .375 SS Square	24	1	19613900	Plt SS .188 x 21.5 x 38.563
2	2	83103200	Take-Up Bolt .375 x 7.500	25	1	81339400	Roller Weldment 3.5 x 16.5
3	2	13379300	Sht SS 10ga 4.18 x 4.31	26	1	88826300	Roller Lagged 6 x 16.5
4	1	19602200	CRR .995 x 19.750	27	2	03018900	Bearing 1.313 2B Flange
5	1	88558200	Roller Lagged 3.5 x 16.5	28	3	16387300	Chain Guard Brackets
6	6	03001500	Bearing 1" 2 Bolt Flange	29	1	16390700	Chain Guard Back
7	1	84224500	Roller Weldment 3.5 x 9	30	1	16391500	Chain Guard Sides
8	1	81641300	Pan Weldment	31	1	62204300	Chain Guard Assembly
9	2	81984700	Deflector				Includes Items #29 & #30
10	1	62284500	Belt Assembly 16" x 30'-1" Smooth	32	1	01432400	Sprocket #60 24T SDS
11	1	11982600	Sht SS 12ga 19.50 x 21.50	33	1	04325700	Bushing 1.250 SDS QD
12	1	84231000	4' x 16" Pan Weldment	34	1	16389900	Chain Guard Front
13	1	81942500	Scraper Weldment	35	1	12003000	Key .313 x 2.000
14	1	16815300	Scraper	36	1	04416400	Bushing 1.313 SDS QD
15	2	01482900	Spring 1" x 2½"	37	1	11766300	Chain #60 x 61 Pitches
16	2	333898	Eyebolt	38	1	02044600	Chain #60 Connector Link
17	2	01211200	HHCS 5/16" x 2" SS	39	1	05215900	Chain #60 Ofrset Link
18	4	01512300	Hex Nut 5/16" SS	40	1	04539300	Sprocket #60 B 18T SDS
19	2	01549500	Hex Nut 3/8" SS	41	1	02719300	Gear Box TMQ226
20	2	02219400	Flat Washer 3/8" SS	42	1	03127800	Motor 1.5 HP 3 Phase
21	1	19607100	CRR .995 x 21.500				1725 TEFC C-Face
22	1	19799600	CRR 1.307 x 24.750	43	1	61560900	Motor/Gear B ox Assembly
23	1	81824500	Gear Box Mount				Includes Items #41 & #42

Assembly Instructions

Figure #1



IMPORTANT: Before starting assembly procedures, refer to the illustrated parts list and familiarize yourself with these parts.

Open the parts carton and lay out parts for easy identification.

In addition to standard hand tools, a carpenter's level and protractor will be required.

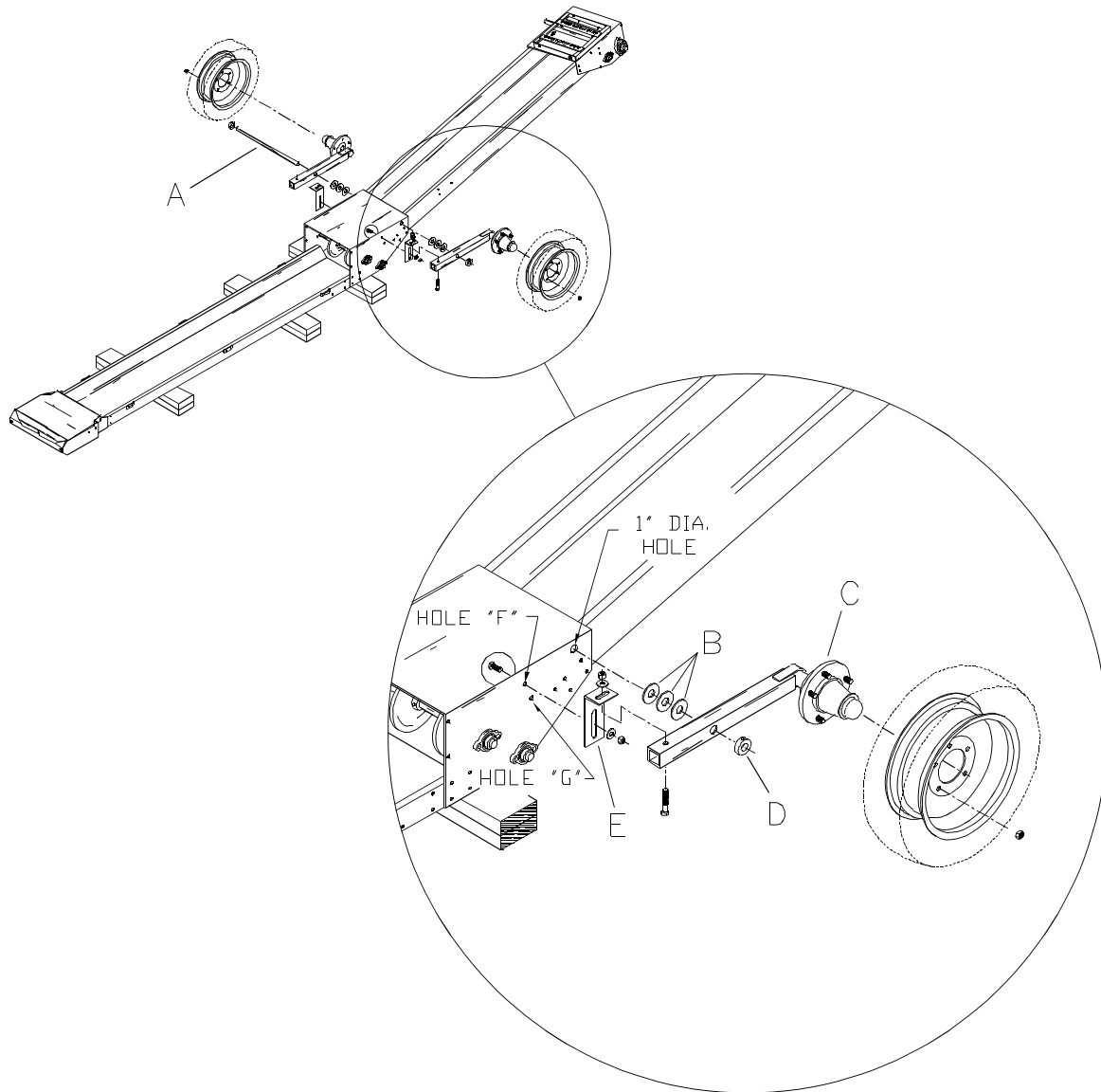
STEP #1. Refer to Figure #1. Set the undercar pan "A" and the transition frame "B" on wooden blocks of the same height.

STEP #2. Refer to Figure #1. Slide the undercar pan "A" into the transition frame "B" until the first four (4) bolt holes in the undercar pan line up with the bolt holes in the transition frame. Install eight (8) 3/8" x 1" bolts, lock washers, and lock nuts. **DO NOT TIGHTEN THESE FASTENERS AT THIS TIME.**

STEP #3. Refer to Figure #1. Level the undercar pan "A" using a carpenter's level and then position the transition pan at an angle of 25°. The eight (8) bolts that were previously installed can now be tightened.

Assembly Instructions

Figure #2



STEP #1. *Refer to Figure #2.* Slide the undercarriage shaft "A" through the 1" dia. hole in the transition frame. Install three (3) 1" flat washers "B" and one (1) axle arm assembly "C" to each side of the transition frame and secure with two (2) 1" set collars "D".

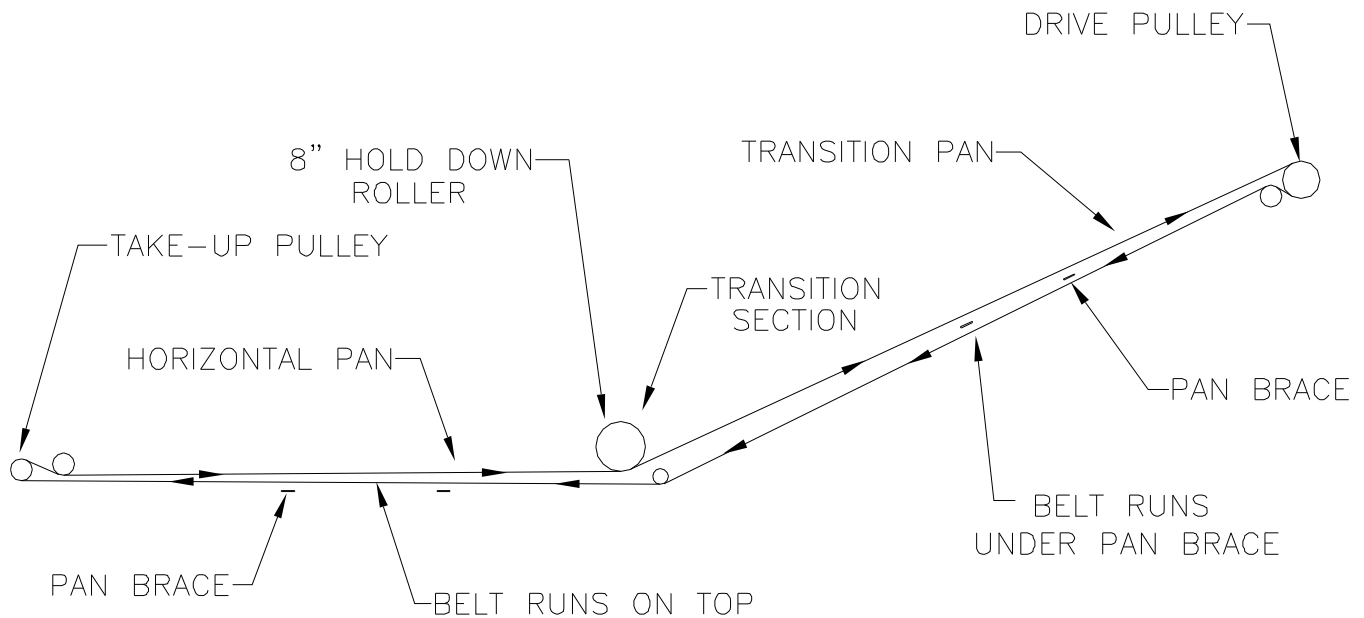
STEP #2. *Refer to Figure #2.* Assemble one (1) axle arm bracket "E" on each axle arm "C" as shown using one (1) ea. 1/2" x 3" bolt, flat washer and hex nut. Rotate the axle arm and bracket assembly so the slot in the axle arm bracket lines up with hole "F" in the transition frame. Attach the axle arm bracket to the transition frame using one (1) ea. 1/2" x 1 1/4" bolt, flat washer and hex nut.

NOTE: The height of the undercar pan may be adjusted by relocating the axle arm bracket to hole "G", or by sliding the axle arm forwards or backwards in the slot that is located in the top of the axle arm bracket.

STEP #3. *Refer to Figure #2.* Assemble the 15" wheels with tires mounted to the axle arms. (Tires are furnished by customer.)

Assembly Instructions

Figure #3



STEP #1. Refer to Figure #3. Install the conveyor belt with the slider surface down against stainless steel pan.

STEP #2. Refer to Figure #3. Start in the middle of the horizontal pan sliding the belt through the transition section under the two (2) 8" dia. hold down rollers, and over the top of the two (2) belt guides that are bolted inside the transition section.

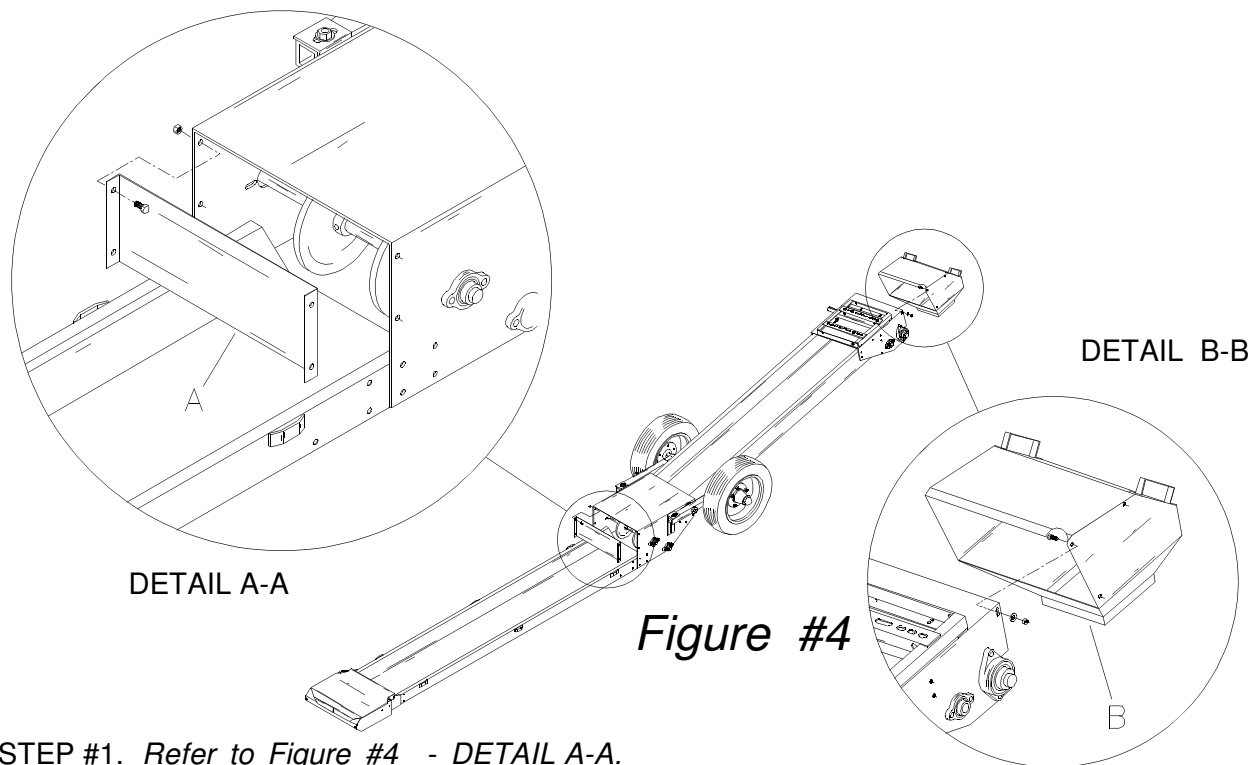
STEP #3. Refer to Figure #3. Pull the belt up the transition pan, over the top of the drive pulley, and back over the top of the 3 1/2" roller. Then pull along the underneath side of the transition pan making certain that it is on the outside of the pan brace.

STEP #4. Refer to Figure #3. Thread the belt under the return idler mounted on the bottom of the transition frame and back underneath the horizontal pan. Make sure it goes between the pan brace and the bottom of the pan. Route the belt up and around the take-up pulley, under the short snub idler, and bring ends together.

STEP #5. Mesh the two ends of the conveyor belt, and install the cable splice pin. After cable splice pin is installed, clip the ends off so they will not hook on the undercar pan.

IMPORTANT: See the belt tensioning and alignment instructions on page 18 before operating the undercar.

Assembly Instructions



STEP #1. Refer to Figure #4 - DETAIL A-A. Assemble the transition back "A" to the transition frame using four (4) 5/16" x 3/4" bolts and hex nuts.

STEP #2. Refer to Figure #4 - DETAIL B-B. Assemble the spout "B" to the head frame using four (4) 5/16" x 3/4" bolts, flat washers, and hex nuts.

STEP #1. Refer to Figure #5. Bolt the electric motor "A" to the motor mount using four (4) 3/8" x 1 3/4" bolts, flat washers, and hex nuts.

NOTE: The diagram does not necessarily show the motor in its proper location on the motor mount.

STEP #2. Refer to Belt Guard Bracket Location Drawing on page #16, and loosely assemble the belt guard back half assembly at this time.

STEP #3. Refer to Figure #5. Install the 2B 15" sheave "B" to the head frame shaft using one (1) 5/16" x 2" key "C". DO NOT TIGHTEN SHEAVE AT THIS TIME!

STEP #4. Refer to Figure #5. Install the 2B 3.6 sheave "D" and the 1 1/8" SH QD bushing "E" to the motor shaft. Using a straight edge, align the sheaves and secure.

STEP #5. Assemble the two (2) B-60 V-belts and tighten.

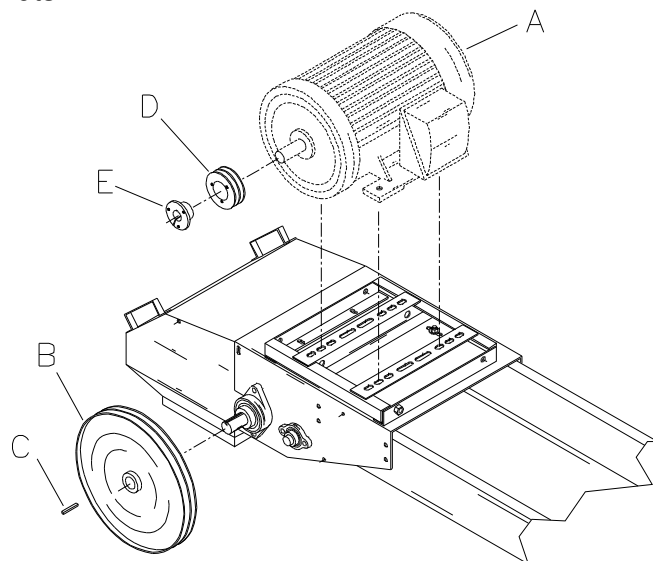
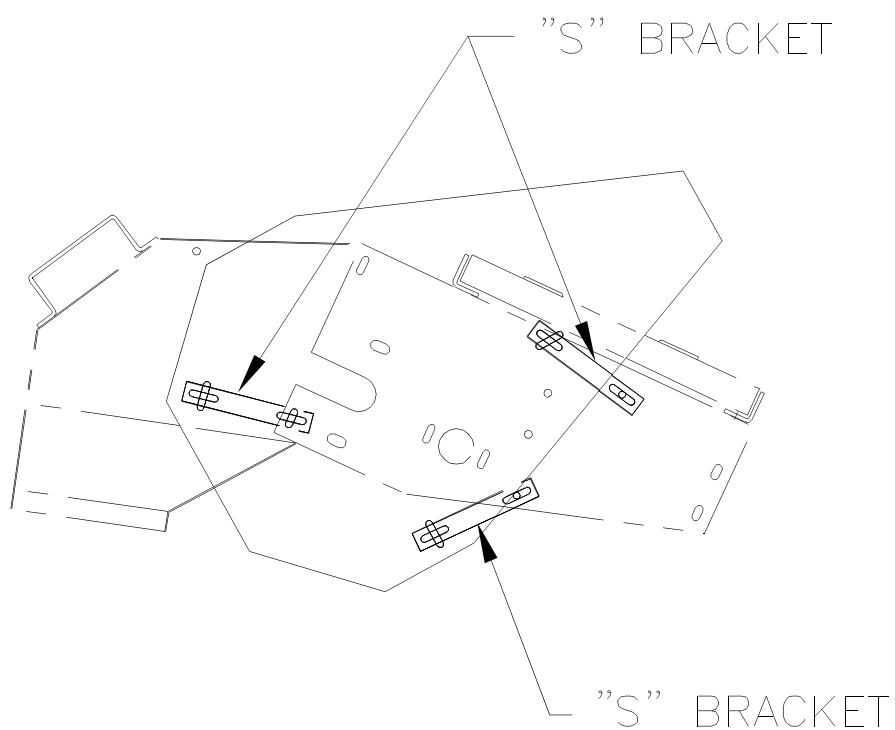


Figure #5

Assembly Instructions

Figure #6

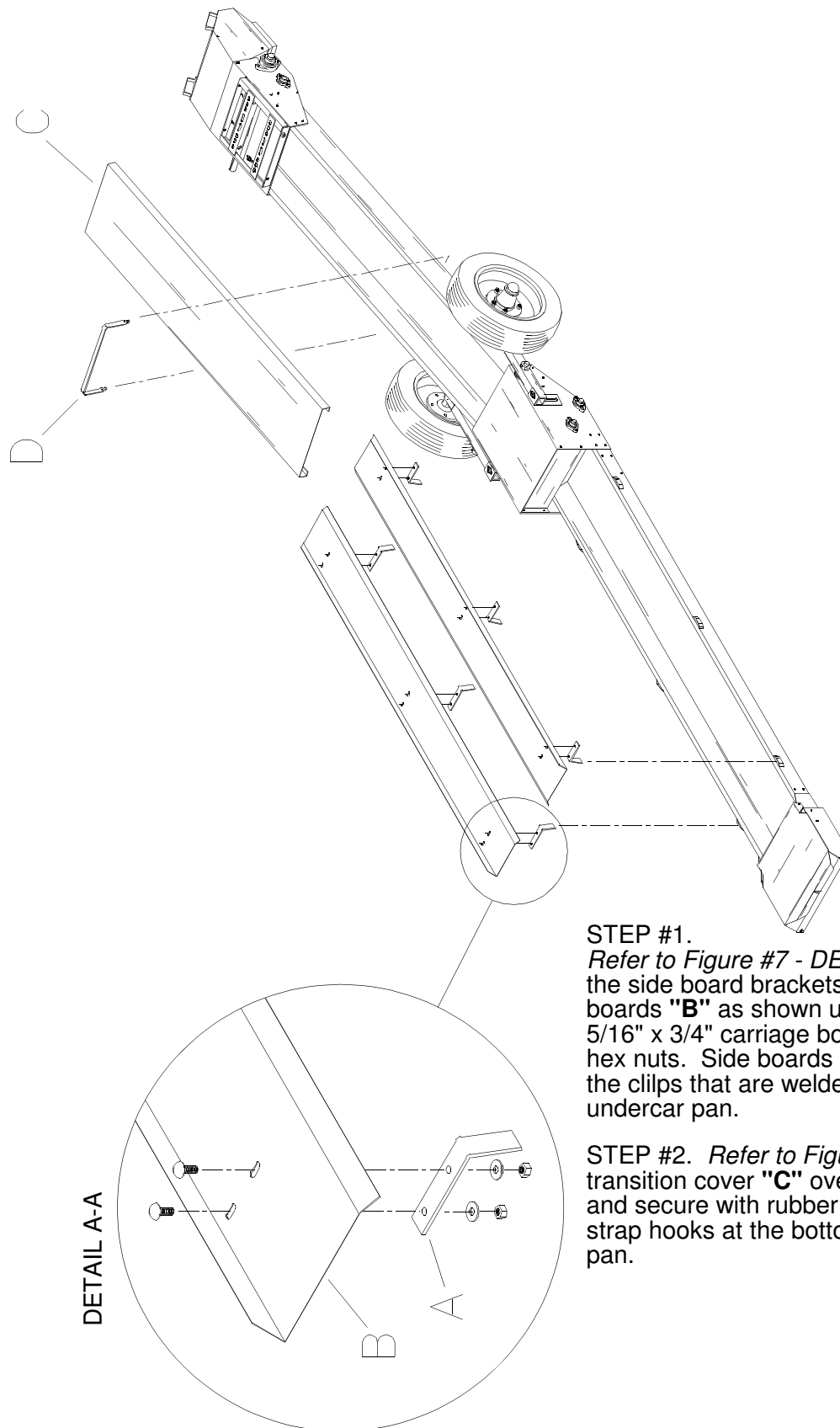
BELT GUARD BRACKET LOCATION



IMPORTANT: Check to make sure there is adequate clearance between belts and sheaves and the belt guard sides before operating.

Assembly Instructions

Figure #7



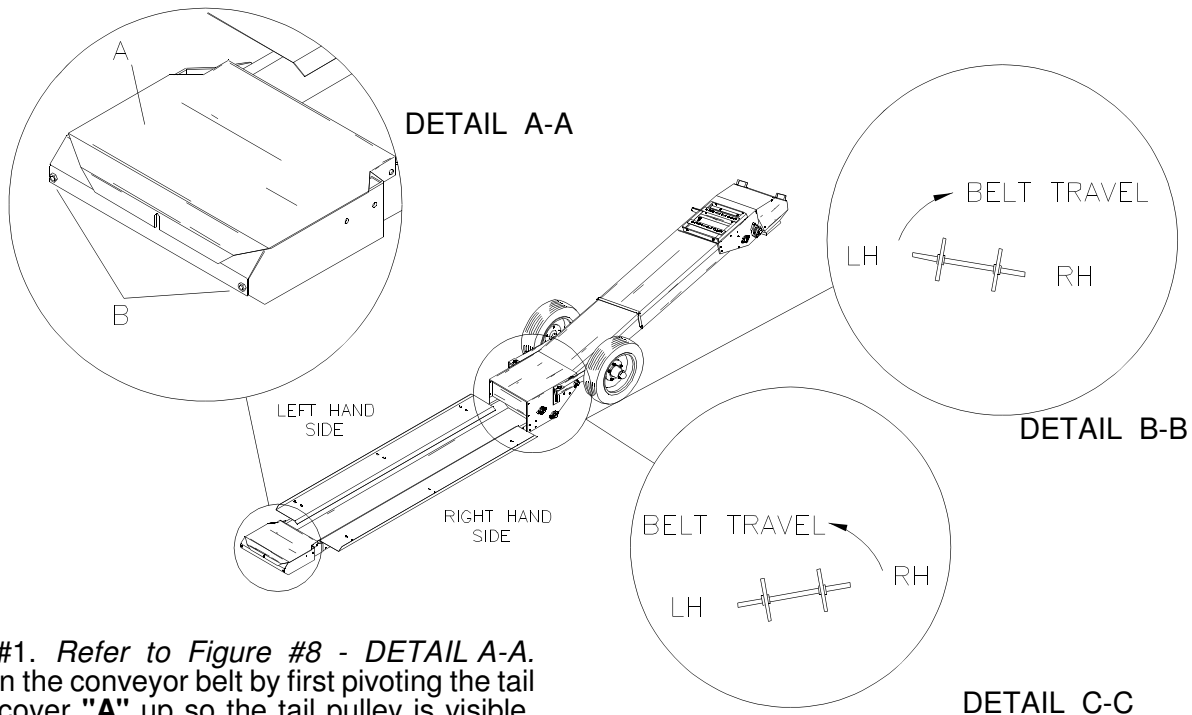
STEP #1.

Refer to Figure #7 - DETAIL A-A. Assemble the side board brackets "A" to the side boards "B" as shown using twelve (12) ea. 5/16" x 3/4" carriage bolts, flat washers, and hex nuts. Side boards may now be fitted into the clips that are welded to the side of the undercar pan.

STEP #2. Refer to Figure #7. Assemble the transition cover "C" over the transition pan and secure with rubber strap "D". The rubber strap hooks at the bottom of the transition pan.

Belt Tensioning & Alignment Instructions

Figure #8



STEP #1. Refer to Figure #8 - DETAIL A-A. Tension the conveyor belt by first pivoting the tail pulley cover "A" up so the tail pulley is visible. Check the tail pulley and make sure it is as square as possible in the tail frame. Tighten the conveyor belt using the adjustment bolts "B".

IMPORTANT: The adjustment bolts should be tightened at the same rate in order to keep the tail pulley square.

CAUTION !!!



During the initial start-up of the conveyor, make certain someone is at the starter control to shut the unit down in case the belt rides excessively to one side or the other. This is important, for if the conveyor is not shut down promptly the belt may be damaged.

STEP #2. With the conveyor running, check the belt alignment going through the transition section (where the belt passes under the two (2) hold down rollers.) If the belt is tracking to the left hand side of the conveyor, bring it back into alignment by sliding the left hand bearing forward and/or the right hand bearing back. Refer to Figure #8 - DETAIL B-B.

Likewise, if the belt is tracking to the right hand side of the conveyor, slide the right hand bearing forward and/or the left hand bearing back. Refer to Figure #8 - DETAIL C-C. The same adjustment applies to the head and tail pulleys.

IMPORTANT NOTES:

1. If an adjustment is made to the tail pulley it will affect how the belt is tracking through the transition. The same applies to the transition. If an adjustment is made to the hold down rollers it will affect how the belt is tracking over the head pulley.
2. It takes very little adjustment in the rollers to create a lot of movement in the belt. Make small adjustments, checking belt alignment after each adjustment.
3. The end result of adjusting rollers is to force the belt to run as close as possible to the center of both the head and tail pulleys, the hold down rollers, and idler rollers.
4. Some re-alignment may be necessary after the belt has run under load.



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