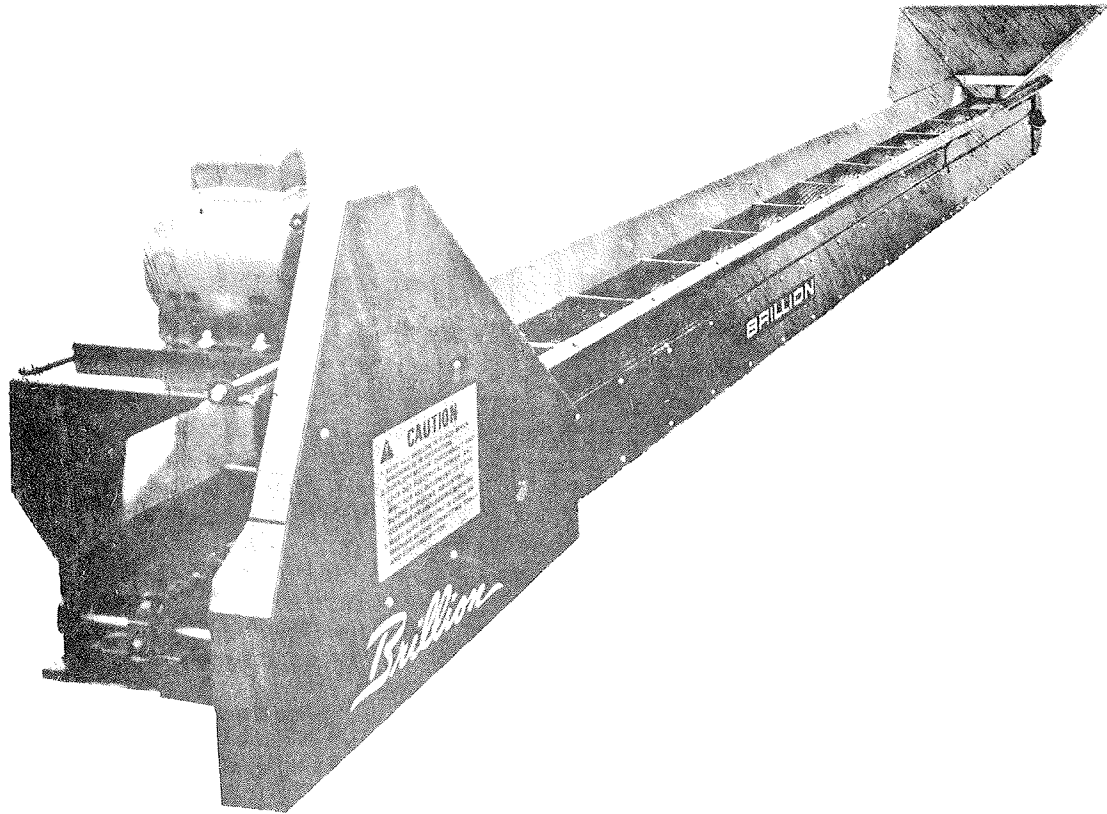


# *Brillion* FEED CONVEYOR



## Erection - Operation Maintenance - Parts

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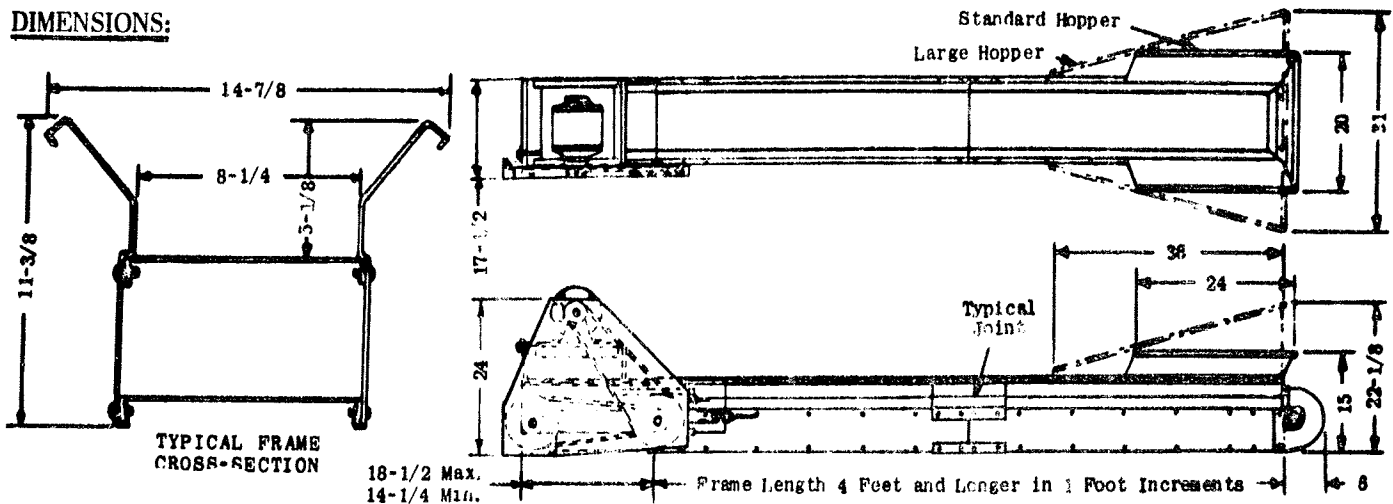
**BRILLION IRON WORKS**

**BRILLION, WISC. 54110**

MAKERS OF 'FARM IMPLEMENTS WITH A FUTURE'

Revised June 1980

## DIMENSIONS:



## PACK INFORMATION:

PACK NO.	DESCRIPTION	APPROX. WT., LBS.
5D-586	Head and Base Kit	84
5D-587	Drive Guard	14
5D-588	4 Foot Frame Section	57
5D-589	5 Foot Frame Section	67
5D-590	6 Foot Frame Section	80
5D-591	8 Foot Frame Section	103
5D-592	10 Foot Frame Section	126
5D-593	Standard Hopper	8
5D-594	Large Hopper	17

For a complete conveyor less motor and hopper, a head and base kit, a drive guard, and one or more frame sections are required.

## HOW COMPONENTS ARE SHIPPED:

The components of the head and base kit are shipped in a single carton assembled except for the motor mount assembly and drive items.

The drive guard and brackets for mounting the guard are shipped in a separate carton.

The frame sections are shipped knocked down each in its own carton. Each frame section includes the parts for one joint.

## ASSEMBLY INSTRUCTIONS:

The reference numbers given in these instructions are shown on the assembly drawing and on the parts list.

### FRAME SECTIONS:

First, uncarton the frame sections needed for the length of conveyor required. Assemble the frame parts for each section as shown on the assembly drawing. Note the support extension with the notch fastened to the underside of the upper trough (51) should point toward the loading end of the conveyor.

The lower trough (48) should be assembled so the splice bracket which extends beyond the trough end is also pointed toward the loading end of the unit. The frame side panels (46) are identical for each frame section and can be assembled on either side.

The assembly of the main parts of the frame sections requires only a large screw driver to tighten the slotted round head screws as the special nuts are pre-assembled to the flanges of the upper and lower troughs.

Before joining the sections together, it is suggested a section of the chain and flights assembly (55) be threaded through the bottom of the frame sections. Remember on this bottom run the chain will be on top of the flights and the front of the flights should point toward the loading end of the conveyor.

Align the frame sections and assemble the upper splice brackets (50) and the lower splice angles (49) at each joint. Also install the cap screws in the mating splice angles of the adjoining lower troughs. Before tightening the fasteners at each joint, visually check the alignment of mating frame sections to be sure the joint is straight.

As each frame section is furnished with joint parts so it can be used as an extension section, there will be an extra set of joint parts for each conveyor. To add to the length of an assembled conveyor, additional frame sections can be installed at the head end, base end, or at any joint between frame sections.

### BASE SECTION:

The next step is to assemble the base section at the loading end of the conveyor. To do this, first remove the end screws of the upper and lower troughs.

Then after threading the chain around the sprocket, move the base section in position over end of frame section making sure the upper trough slides into the slot of foot sprocket guard (38).

Reassemble the end screws of lower trough through the mating holes of base section. Similarly, install the longer (1 in. length) screws provided with the base section in end positions of the upper trough.

The ends of these longer screws should pass through the holes in the side flanges of the sprocket guard (38). In this way the sprocket guard is suitably held in position.

### HEAD SECTION:

First, assemble the motor mount (8) in place on the side sections. Then assemble the upper mounting bracket (44) for the drive guard using the fasteners for the mount clamp (9) as shown in the assembly drawing. Then assemble the lower mounting bracket

(45) for the drive guard using the fasteners for the upper trough extension (3).

Remove the first 3 screws of the upper trough on each side of the forward frame section and slide the head section into position over the frame. The rear extensions of the drive section fit outside the frame and the head end bottom trough (4) fits inside the frame.

Before the jackshaft (21) is assembled, the takeup brackets (5) and spacers (6) should be assembled on both sides. The spacers (6) fit in the slots of the drive section sides and the takeup brackets outside the spacers. These takeup parts are fastened with the longer screws listed under (6) in the parts list and are used in the same positions of the screws removed from the frame section.

Now assemble the takeup bolts (7) with the heads of the bolts in front of the flange of bracket (5), one nut in front of the flange on the drive section side, and the lockwasher and other nut on the rear side of the same flange. Reassemble the jackshaft bracket.

#### CHAIN AND FLIGHTS ASSEMBLY:

The next step is to connect the chain and flights assembly. As the chain is furnished in segments with the various conveyor components, each segment is purposely slightly longer than the theoretical length to be sure that, when connected to make a complete assembly, there will be enough length. Consequently, it may be necessary, particularly on long units to remove one or more links so all of the chain take-up is not used up on initial assembly.

The chain should be only long enough so it can be easily connected while the drive section is in its rearwardmost position. If more than one link of chain has to be removed, it is suggested they be removed from different segments to avoid an extremely short flight spacing at the connection point.

#### ELECTRIC MOTOR:

The mounting plate (10) is provided with holes to mount standard 3/4, 1, and 1-1/2 HP electric motors. Mount electric motor on plate (10) and assemble motor sheave (60) so it is in line with the outer sheave of jack sheave (19). Assemble the motor V-belt (29).

By far the greatest single cause of unsatisfactory operation of electric motors is low voltage. This can be caused by insufficient voltage level at the service entrance and/or wire of too small size from service entrance to motor.

Check with your dealer or local power company for recommendations for suitable wiring for your installation.

#### SUGGESTED MOTOR SIZES:

Total Length of Frame Sections in Conveyor	Suggested Motor Horsepower
Up Through 16 Feet	3/4
17 Through 24 Feet	1
25 Through 40 Feet	1-1/2

#### DRIVE GUARD:

After adjusting the V-belts, mount the drive guard (43). With the drive guard properly assembled, adequate clearance is provided for the V-belts.

#### HOPPER ACCESSORIES:

To assemble either the Standard Hopper or the Large Hopper, first remove the flapper (31) and flapper strap (32). Insert the corner reinforcements into the openings in the curls of the hopper sides and back. Bolt the hopper back to the hopper sides and the sides to top flanges of the frame. Reassemble flapper parts inside hopper.

#### BEFORE STARTING UNIT:

1. Adjust tension of chain. Chain is properly tightened if on 16 foot unit it can be raised from bottom of trough at center of conveyor 5 to 8 inches. Measurement for 24 foot unit should be from 7 to 9 inches. For shorter or longer units, center measurement should be in proportion to the figures given for the 16 and 24 foot lengths.
2. Be sure nothing interferes with the movement of the drive or chain.
3. Grease the jackshaft bearings through the pressure gun grease fitting using a good grade of grease.
4. Adjust the tightness of the drive V-belts. These should be only tight enough to prevent slippage. Excessive tightness causes undue strain and unnecessary wear.



## CAUTION

1. KEEP ALL SHIELDS IN PLACE WHEN MACHINE IS IN OPERATION.
2. TURN OFF MOTOR, DISCONNECT AND LOCK OUT ELECTRICAL POWER, AND WAIT FOR ALL MOVEMENT TO STOP BEFORE SERVICING, ADJUSTING, CLEANING OR UNCLOGGING MACHINE.
3. MAKE SURE EVERYONE IS CLEAR OF MACHINE BEFORE CONNECTING POWER AND STARTING MOTOR.

#### OPERATING INSTRUCTIONS:

ALWAYS START MOTOR AND BE SURE CONVEYOR IS OPERATING PROPERLY BEFORE MATERIAL IS LOADED INTO UNIT.

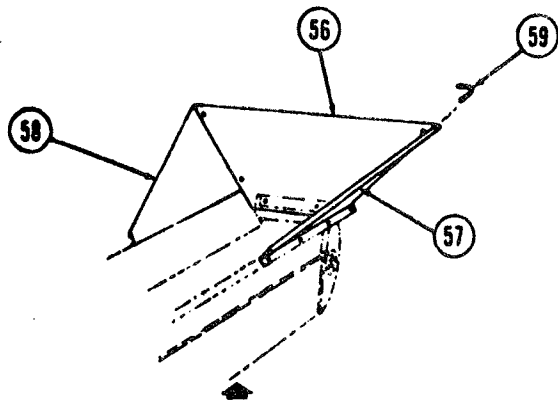
The greatest capacity is obtained when the conveyor is loaded just enough to keep the flights carrying all they can at a given angle of operation. Trying to force the capacity beyond this point will actually result in less material being handled.

ALWAYS ALLOW CONVEYOR TO EMPTY COMPLETELY BEFORE STOPPING MOTOR. This will assure no material is left to cause unnecessary corrosion or to freeze in the winter to cause trouble on re-starting.

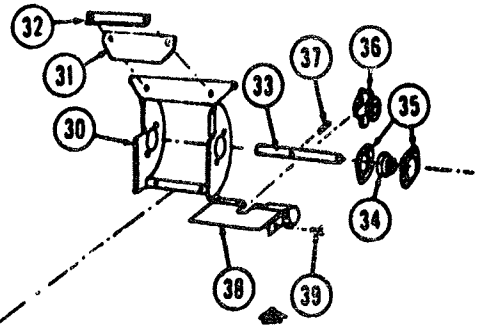
#### MAINTENANCE:

Regrease jackshaft bearings as necessary to flush out accumulated dirt and to provide adequate lubrication for the bearings at all times.

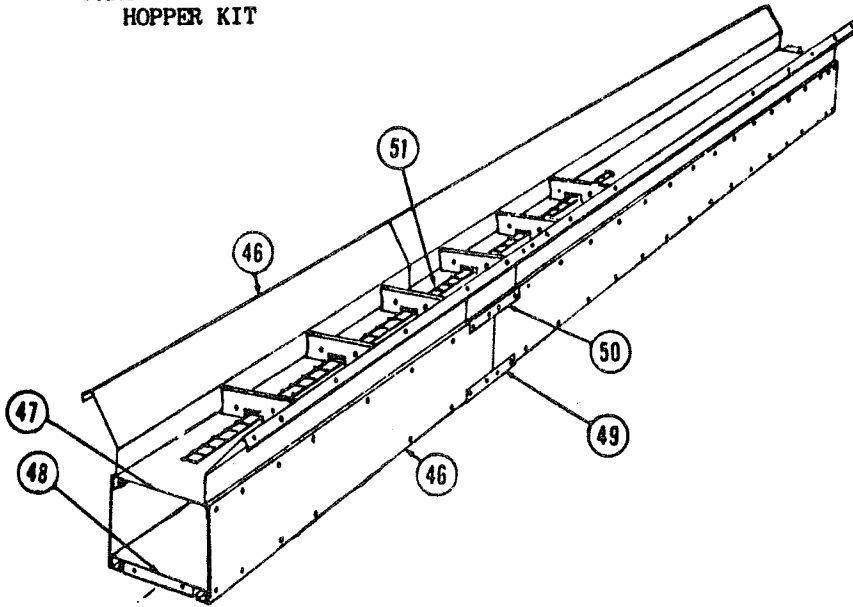
Replace worn or damaged parts before their condition causes damage to other parts or loss of efficiency of the unit.



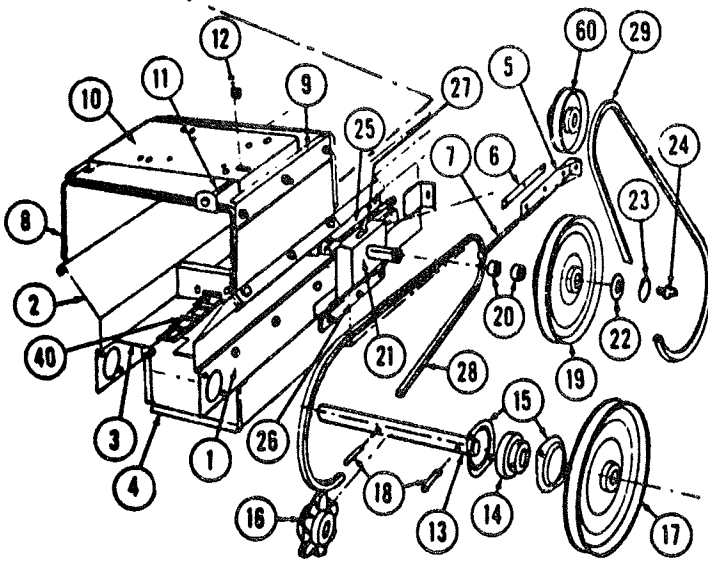
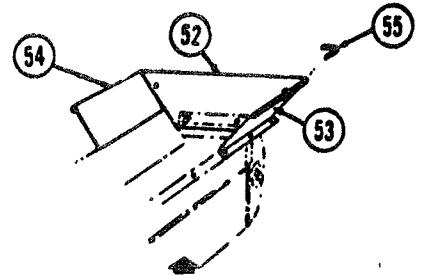
PARTS FOR 5D-594  
HOPPER KIT



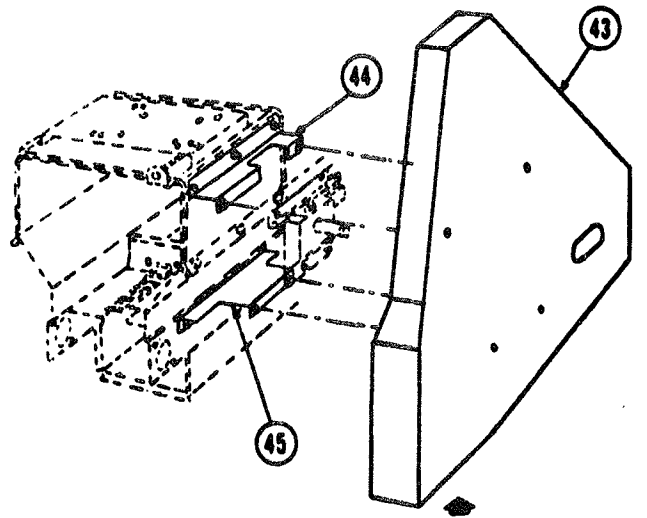
BASE SECTION PARTS FOR  
5D-586 HEAD AND BASE KIT



PARTS FOR 5D-593  
HOPPER KIT



HEAD SECTION PARTS FOR  
5D-586 HEAD AND BASE KIT



PARTS FOR 5D-587  
DRIVE GUARD

**PARTS LIST:**

In the following parts list, fasteners required for assembly of parts are generally listed immediately following parts involved.

REF. NO. PART DESCRIPTION  
NO. PER UNIT NUMBER

**5D-586 HEAD AND BASE KIT PARTS:**

**Head Section Parts:**

	3J-952	Head Section Assy. (Less Chain), Complete
1	1 5D-597	Drive Section Side Weldment, Left Hand
2	1 5D-598	Drive Section Side Weldment, Right Hand
3	1 5D-599	Upper Trough Extension
4	1 5D-600	Head End Bottom Trough
6	Sets	Cap Screw, Hex. Hd., 5/16-18 x 3/4, Lockwasher and Hex. Nut
5	2 5D-601	Takeup Bracket Weldment
6	2 5D-602	Takeup Bracket Spacer
6	1C-367	Machine Screw, Rd. Hd. 1/4-20 x 3/4
7	2 5D-603	Takeup Bolt
2	Sets	Two Hex. Nuts, 3/8-16, and Lockwasher
8	1 5D-604	Motor Mount Weldment
6	Sets	Cap Screw, Hex. Hd., 5/16-18 x 3/4, Lockwasher and Square Nut.
9	2 5D-605	Mount Clamp
6	Sets	Carriage Bolt, 1/4-20 x 5/8, Lockwasher and Hex. Nut
10	1 5D-606	Mounting Plate Weldment
11	1 5D-607	Takeup Bolt
12	1	Square Nut, 5/16-18
13	1 5D-608	Head Shaft
14	2 5D-609	Bearing Assembly, Fafnir No. RA014NPPB with Collar, or Equivalent
15	4 1D-617	Bearing Flange, 2 Hole, Fafnir No. 52MST-C2 or Equivalent
4	Sets	Carriage Bolt, 5/16-18 x 3/4, Lockwasher and Hex. Nut
16	1 5D-611	Sprocket, 6 Tooth (7/8 Bore)
17	1 5D-612	Head Sheave (7/8 Bore)
18	2 5D-596	Roll Pin, 1/4 Dia. x 1-3/8
19	1 5D-613	Jack Sheave
20	2 5D-614	Bearing, Kaydon No. KN163012
21	1 5D-615	Jack Shaft Weldment
22	2 5D-621	Washer, Steel, 1-5/8 O.D., 1-1/64 I.D. x 16 Gage
23	1 8C-772	Snap Ring, Waldecs No. 5100-100
24	1 5D-595	Grease Fitting, 1/4-28 Thrd., Straight
25	1 5D-616	Upper Jack Shaft Gib
26	1 5D-617	Lower Jack Shaft Gib
5	Sets	Carriage Bolt, 1/4-20 x 5/8, Lockwasher and Hex. Nut
27	1 5D-618	Takeup Bolt
1	Set	Two Hex. Nuts, 5/16-18, Flat Washer and Lockwasher
28	1 5D-619	'A' Size V-Belt, 54 In. Outside Length,
29	1 5D-620	'A' Size V-Belt, 57 In. Outside Length,

**Base Section Parts:**

	1J-978	Base Section Assy., Complete
30	1 5D-622	Base Section Frame Weldment
2	Sets	Cap Screw, Hex. Hd., 5/16-18 x 3/4, Lockwasher and Hex. Nut
31	1 5D-623	Flapper
32	1 5D-624	Flapper Strap
2	Sets	Machine Screw, Rd. Hd., 1/4-20 x 3/4, Lockwasher and Hex. Nut
33	1 5D-625	Foot Shaft
34	2 5D-609	Bearing Assembly, Fafnir No. RA014NPPB with Collar, or Equivalent
35	4 1D-617	Bearing Flange, 2 Hole, Fafnir No. 52MST-C2 or Equivalent
4	Sets	Carriage Bolt, 5/16-18 x 3/4, Lockwasher and Hex. Nut
36	1 5D-611	Sprocket, 6 Tooth, (7/8 In. Bore)
37	1 5D-596	Roll Pin, 1/4 Dia. x 1-3/8
38	1 5D-661	Foot Sprocket Guard Weldment
39	2 2C-312	Machine Screw, Rd. Hd., 1/4-20 x 1
40	1 5D-626	Chain and Flights Assembly (Length Required for Both End Sections)
3	5D-627	Flight Assembly (One Flight Riveted to No. 55 Attachment Link and one Leading Plain No. 55 Link)
22	5D-628	Plain No. 55 Steel Detachable Chain Link

Parts are determined to be either left or right hand by viewing the unit from loading end to discharge end.

REF. NO. PART DESCRIPTION  
NO. PER UNIT NUMBER

**5D-587 DRIVE GUARD PARTS:**

43	1 5D-629	Drive Guard Weldment
44	1 5D-630	Bracket with Speednuts (Upper)
45	1 5D-631	Bracket with Speednuts (Lower)
4	1C-365	Machine Screw, Rd. Hd., 1/4-20 x 1/2

**FRAME SECTION PARTS:**

The following listing includes parts for 4, 5, 6, 8, and 10 foot frame sections. The information for each frame length is indicated by the numbers in ( ).

46	2 5D-632 (4)	Frame Side Panel
	5D-633 (5)	
	5D-634 (6)	
	5D-635 (8)	
	5D-636 (10)	
47	1 5D-637 (4)	Upper Trough Weldment with Tinnerman
	5D-638 (5)	Type J Speednuts
	5D-639 (6)	
	5D-640 (8)	
	5D-641 (10)	
48	1 5D-642 (4)	Lower Trough Weldment with Tinnerman
	5D-643 (5)	Type J Speednuts
	5D-644 (6)	
	5D-645 (8)	
	5D-646 (10)	
49	2 5D-647	Lower Splice Angle
36	(4) 1C-365	Machine Screw, Rd. Hd., 1/4-20 x 1/2
42	(5)	
48	(6)	
68	(8)	
72	(10)	
2	Sets	Cap Screw, Hex. Hd., 5/16-18 x 3/4, Lockwasher and Hex. Nut
50	2 5D-648	Upper Splice Bracket
8	Sets	Machine Screw, Rd. Hd., 1/4-20 x 1/2, Lockwasher and Hex. Nut
51	1 5D-649 (4)	Chain and Flights Assembly
	5D-650 (5)	
	5D-651 (6)	
	5D-652 (8)	
	5D-653 (10)	
7	(4) 5D-627	Flight Assembly (One Flight Riveted to No. 55 Attachment Link and One Leading Plain No. 55 Link)
9	(5)	
11	(6)	
15	(8)	
18	(10)	
46	(4) 5D-628	Plain No. 55 Steel Detachable Link
57	(5)	
68	(6)	
89	(8)	
113	(10)	

**5D-593 STANDARD HOPPER PARTS:**

52	1 5D-654	Hopper Back
53	1 5D-655	Hopper Side, Left Hand
54	1 5D-656	Hopper Side, Right Hand
55	2 5D-657	Hopper Corner Reinforcement
8	Sets	Machine Screw, Rd. Hd., 1/4-20 x 1/2, Lockwasher and Hex. Nut

**5D-594 LARGE HOPPER PARTS:**

56	1 5D-658	Hopper Back
57	1 5D-659	Hopper Side, Left Hand
58	1 5D-660	Hopper Side, Right Hand
59	2 5D-657	Hopper Corner Reinforcement
12	Sets	Machine Screw, Rd. Hd., 1/4-20 x 1/2, Lockwasher and Hex. Nut

**MOTOR SHEAVES:**

60	1 5D-662	Motor Sheave for 'A' Size V-belt, 3.5 In. Pitch Diameter, 8/8 In. Bore
1	5D-663	Motor Sheave as Above with 7/8 In. Bore

