Operation/Maintenance

CHAIN CONVEYOR, WASTE BALE HANDLING

SAFETY PRECAUTIONS

To prevent bodily injury and additional hazards resulting from damage to equipment, SYSTEM SAFETY PRECAUTIONS noted in the Safety Documents at the front of this volume and the following **SPECIAL PRECAUTIONS** MUST BE OBSERVED. Some of these precautions may not apply to your equipment, depending on options:

1. **DO NOT CLIMB, WALK OR RIDE ON THE CONVEYOR.**
2. **KEEP HANDS, TOOLS, ETC., AWAY FROM THE CONVEYING CHAINS WHEN THE CONVEYOR IS OPERATIONAL.**
3. **DO NOT OPERATE MACHINE ACTUATED OR PRODUCT ACTUATED SWITCHES BY HAND.**
4. **EXERCISE CARE AROUND THE CONVEYOR WHENEVER IT IS OPERATIONAL. DO NOT OPERATE THE CONVEYOR UNLESS ALL COVERS, GUARDS OR SAFETY DEVICES ARE IN PLACE AND SECURED.**
5. **USE EXTREME CARE WHEN ADJUSTING THE CHAIN/BELT WITH THE CONVEYOR OPERATING.**

FEATURES

- S-drive and individual take-ups
- Solid bed with 18 inch side walls for debris containment
- 5-strand W78 chain conveying surface
- Vehicle sensor (optional)

OPERATION SEQUENCE

FUNCTION

The Waste Bale Handling Conveyor receives bales of material at one end and transports them to the other end for discharge to another station or conveyor.

DESCRIPTION

The conveyor consists of a chain conveyor, U-drive and a motor drive.

The chain conveyor consists of a fabricated framework of rectangular tubing to support and contain five parallel strands of conveying chains. A set of idler wheels is mounted at the top of and at each end of the frames. The chains are powered by an S-Drive. The tension of the chains is adjusted by the threaded rods and nuts on the pivoting brackets for the take-up sprockets near the U-Drive.

The load chains have welded links that are replaceable. The load chains travel along the conveyor on top of the replaceable wear strips, around the head idler wheels, the take-up sprockets and drive sprockets, through the conveyor to the other end, around the tail idler wheel and back to the top surface. The replaceable high-density polymer wear strips are secured to the top of a solid steel deck above the tubes, providing a low-friction bearing surface for the load chains to ride on. The chain returns through the tubes. The tubes have a replaceable wear surface inside to prevent a loose chain from striking the tube.

The S-Drive consists of idler wheels and take-up sprocket assemblies each mounted within the frame tubes.

The drive sprocket shaft has sprockets and is mounted on sealed bearings bolted to plates suspended on the frame tubes below the head sprocket. The chain wraps approximately 180° around each drive sprocket. Each take-up sprocket bracket pivots on the pin at the top and is adjusted at the bottom of the conveyor by the attached threaded rod and nuts.

The shaft for the drive sprockets is driven directly by the reducer, mounted at one end of the drive shaft. A key in the drive shaft fits in a slot in the hollow reducer drive tube. An electric motor mounts directly on the reducer at a right angle to the drive shaft.

OPERATION

The conveyor can be operated in either the forward or reverse direction by automatic or manual controls as defined in the *Functional Description* found elsewhere in this manual.

The conveyor usually runs in the forward direction under automatic controls. A photo-light near the drive end senses the position of the loads on the conveyor.

MAINTENANCE SCHEDULE

Observe and follow all Safety Precautions noted in the Safety Documents in the front of this volume and in this section while performing maintenance. Some maintenance procedures may not be required for your equipment depending on options.

DESCRIPTION	FREQUENCY
1. N/A	Daily
1. Clean photo-light lenses and reflectors, if applicable	Weekly
1. Inspect and clean wear strip grooves 2. Inspect condition of all switches and actuators 3. Inspect condition and operation of electric motor brake, if applicable	Monthly
1. Adjust tension in conveying chains, if applicable 2. Inspect sprockets, guide wheels and chain for wear due to misalignment 3. Inspect and ensure that all fasteners, including set screws in sprockets, are secured	3 months
1. Inspect drive reducer for wear per vendor data 2. Inspect condition of all wiring and connectors	6 months
1. N/A	Yearly

LUBRICATION SCHEDULE

Observe and follow all Safety Precautions noted in the Safety Documents in the front of this volume and in this section while performing maintenance. Some maintenance procedures may not be required for your equipment depending on options. **NOTE**: If a drive reducer is used on this machine, it requires filling with lubricant prior to operation.

DESCRIPTION	FREQUENCY
1. N/A	Weekly
1. N/A	Monthly
1. Lubricate the U-Drive shaft bearings 2. Lubricate the chain take-up screw threads	3 months
1. Service the drive reducer per vendor data, if applicable	6 months
1. Drain, flush, and replenish lubricant in drive reducer per vendor data	Yearly

LAMB.

CHAIN CONVEYOR

SERIAL NUMBER

11990359-102

PARTS LIST

@ indicates recommended spare parts

9/15/99

KEY	QTY	PART #		DESCRIPTION
000.01	1	45E86A		ASSEMBLY, CHAIN
000.02	1	45E87A		ASSEMBLY, S-DRIVE
000.03	1	45E88A		ASSEMBLY, S-DRIVE
001	1	45E84A		FRAME, HEAD
002	20	30C22F-120	@	WEARSTRIP, TOP
003	10	30C22F-109C	@	WEARSTRIP, TOP
004	20	27D05P	@	WHEEL, IDLER
004A	30	192551		WASHER FLAT
005	15	15B91Y		SHAFT
007	1	10B05Z		PLATE L.G.H. SERIAL
008	2	04C74M-002		LOGO 16*DIAMOND
009	4	695038		SIGN SAFETY
010	1	30C35Q		FRAME, SUPPORT
017	1	45E85A		FRAME, TAIL
018	1	30C33Q		FRAME, SUPPORT
019	1	30C34Q		FRAME, SUPPORT

LAMB

CHAIN CONVEYOR

SERIAL NUMBER

11990359-102

PARTS LIST

@ indicates recommended spare parts

9/15/99

KEY	QTY	PART #		DESCRIPTION
020	1	779611	@	REDUCER, SHAFT MTD
020B	1	101785		SCREW, HEX HD CAP
021	1	15B94Y		REMOVAL TOOL
022	1	30C36Q		TORQUE BRACKET
023	2	15B92Y		BEARING MOUNT
025	1	779745	@	BEARING, FLANGE
026	3	779630	@	BEARING
027	1	30C37Q		SHAFT, DRIVE, 6 KEYED
028	5	804465	@	SPROCKET, DRIVE
029	5	V0411135-0004		KEY
029A	1	V0411135-0007		KEY
030	1	27D12W		GUARD
031	2	27C41N		PHOTO BRACKET
035	5	713928	@	CHAIN
035A	5	718997	@	PIN CONNECTING
040	5	27D92Q		CLEVIS, TAKE-UP

@ indicates recommended spare parts

9/15/99

KEY	QTY	PART #		DESCRIPTION
041	5	15B07W		BLOCK, GLIDE
042	5	15B08W		SHAFT
043	10	549815		NUT, HEX FLANGE
050	10	15B63S-175	@	WEARSTRIP, BOTTOM
051	5	15B63S-097	@	WEARSTRIP, BOTTOM
052	5	15B63S-208	@	WEARSTRIP, BOTTOM
120	2	25C80U-04A		TERMINAL BOX
001	2	251928		TERMINAL BOX
002	2	39306		PANEL
003	14	656567		BLOCK TERMINAL
004	2	656612		BARRIER END
005	4	656728		ANCHOR END
006	2	466566		RAIL DIN
007	28	656744		MARKER TERMINAL
008	2	656642		JUMPER CENTER
162	2	14B99V		BRACKET SENSOR

LAMB.

CHAIN CONVEYOR

SERIAL NUMBER

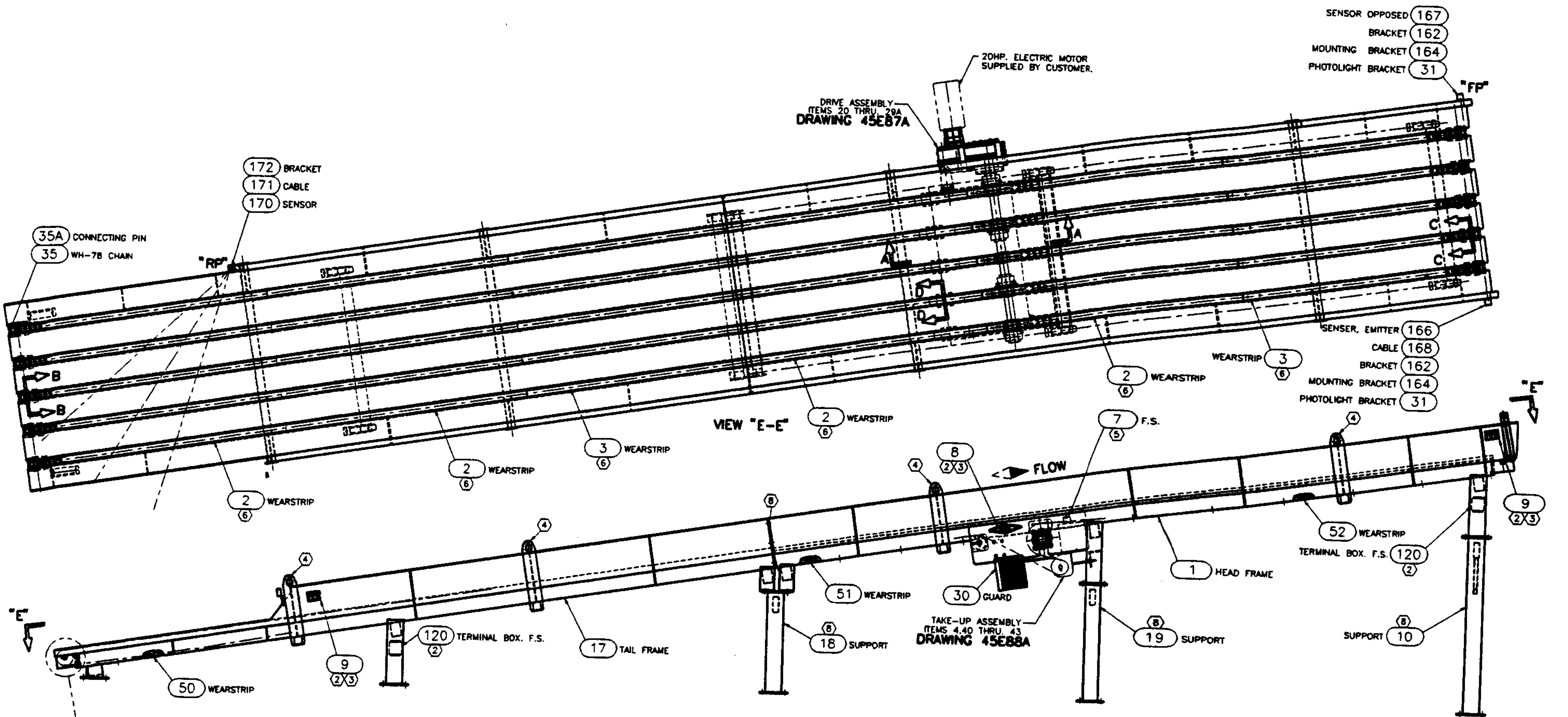
11990359-102

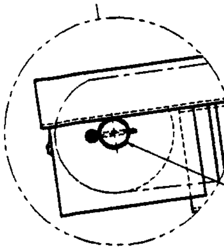
PARTS LIST

@ indicates recommended spare parts

9/15/99

KEY	QTY	PART #		DESCRIPTION
164	2	655892	@	BRACKET MOUNTING
166	1	655875	@	SENSOR EMITTER
167	1	656362	@	SENSOR OPPPOSED
168	1	655889	@	CABLE
170	1	607278	@	SENSOR
171	1	549476	@	CABLE
172	1	408010		BRACKET MOUNTING





PIN CONNECTION DETAIL
SCALE 1/4

NOTES:

1. LUBRICATION POINT.
2. LOCATE AND MOUNT AT ASSEMBLY.
3. BOTH SIDES.
4. LIFTING POINT.
5. LOCATE ON DRIVE SIDE, NEAR DRIVE REDUCER APPROXIMATELY AS SHOWN.
6. APPLY LOCTITE #242 (OR EQUIVALENT) TO THREADS OF FASTENERS SO NOTED.
7. REFERENCE SHEET 2 FOR SECTIONS "A-A" THRU "D-D"
8. ASSEMBLE TO CHECK FIT, DISASSEMBLE FOR SHIPPING.

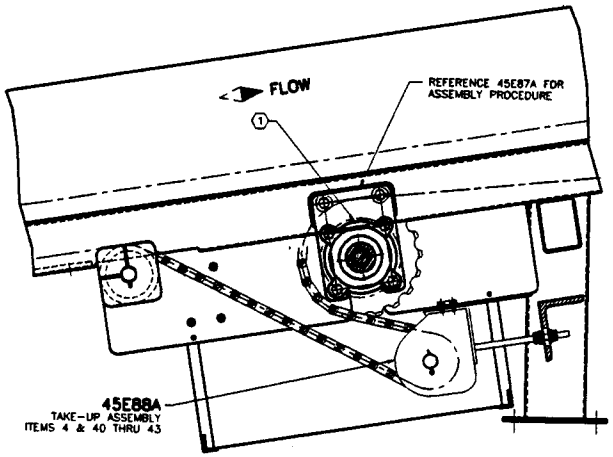
Symbol	Meaning
◆	ANCHOR BOLT
✧	MILL AIR SUPPLY
⬡	NOTE
◪	MOTOR JUNCTION BOX
◐	CO-ORDINATE MARKER
▶	FLOW - PRIMARY
▷	FLOW - MANUAL REVERSE (JOG)
▷	FLOW - SECONDARY
◣	TERMINAL BOX

ABCS PROJECT No. D08H-003
DONOHUE INDUSTRIES INC. SHELDON, TEXAS.
DEINK EXPANSION PROJECT.
DI PROJECT No. 8305. / P.O. D-82471
DONOHUE EQUIPMENT No. 45-1-7080-10
DONOHUE EQUIPMENT No. 45-1-7080-10
DONOHUE EQUIPMENT NAME. No.1 STAGING CONV.
DONOHUE EQUIPMENT NAME. No.2 STAGING CONV.
LAMB REFERENCE No. 11980369-102
LAMB REFERENCE No. 11980369-202

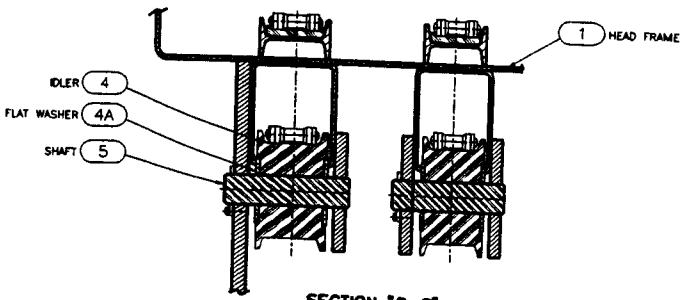
D-498

THE DESIGN COVERED BY THIS DRAWING IS THE PROPERTY OF LAMB AND NO PORTION OF IT IS TO BE USED WITHOUT WRITTEN PERMISSION

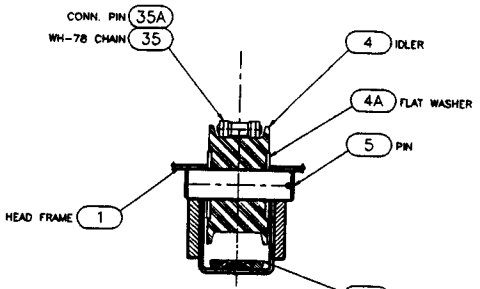
DRAWN BY: MEH	ASSEMBLY, CHAIN CONVEYOR		REF. DWG. 44E43S
CHECKED: MSC			P.A. NR. 256-02
APPROVED			STATUS CODE
SCALE 1 : 24			LAMB CODE
DATE AUG 20 99			DRAWING NR 45E86A REV. 0 SHEET 1 OF 2



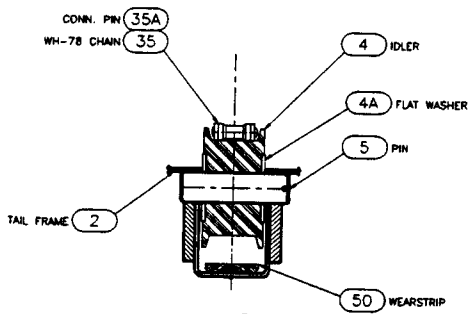
SECTION "A-A"
FROM SHEET 1.



SECTION "D-D"
SCALE 1:4
FROM SHEET 1
TYPICAL



SECTION "C-C"
SCALE 1:4
FROM SHEET 1
TYPICAL



SECTION "B-B"
SCALE 1:4
FROM SHEET 1
TYPICAL

LEGEND

- ANCHOR BOLT
- CONDUIT
- MILL AIR SUPPLY
- NOTE
- MOTOR JUNCTION BOX
- FLOW - PRIMARY
- FLOW - MANUAL REVERSE (JOG)
- FLOW - SECONDARY
- TERMINAL BOX
- CO-ORDINATE MARKER

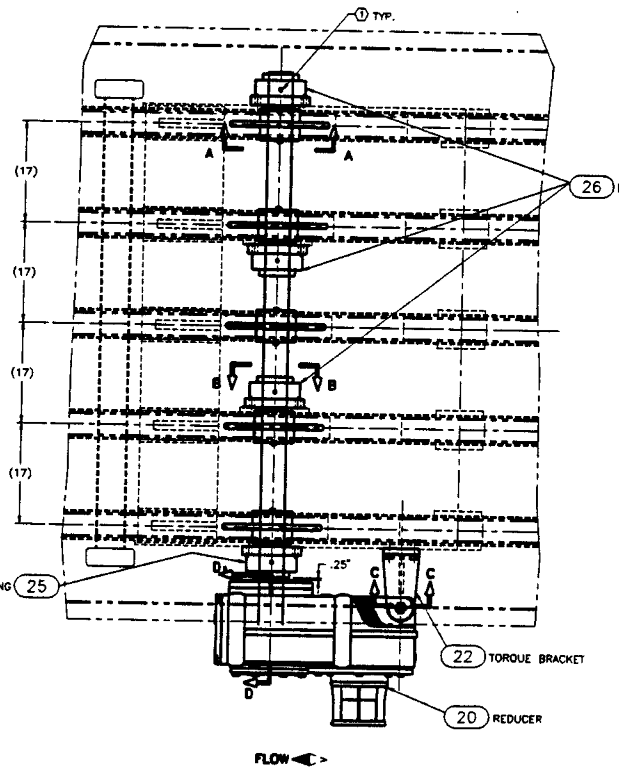
DRAWN	MEH
CHECKED	MSC
APPROVED	
SCALE	1 : 8
DATE	AUG 20 99

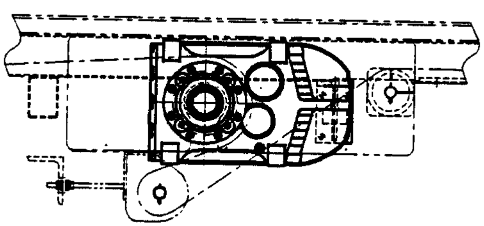
ASSEMBLY
CHAIN CONVEYOR

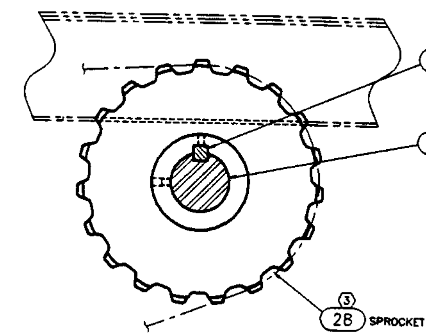
D-499

44E43S

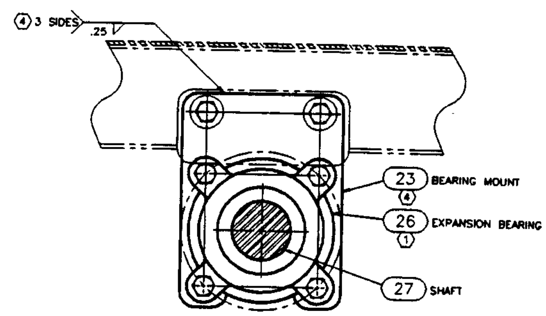
45E86A - 0
SHEET 2 OF 2



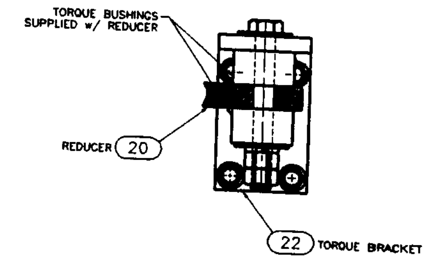




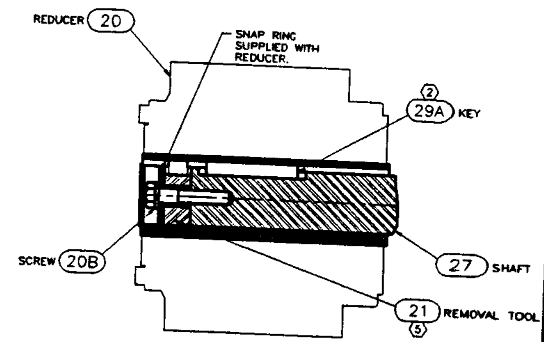
SECTION "A-A"
SCALE 1:4
TYPICAL 5X



SECTION "B-B"
SCALE 1:4
ROTATED 180° CW



SECTION "C-C"
SCALE 1:4



SECTION "D-D"
SCALE 1:4
ROTATED 90° CW

NOTES:

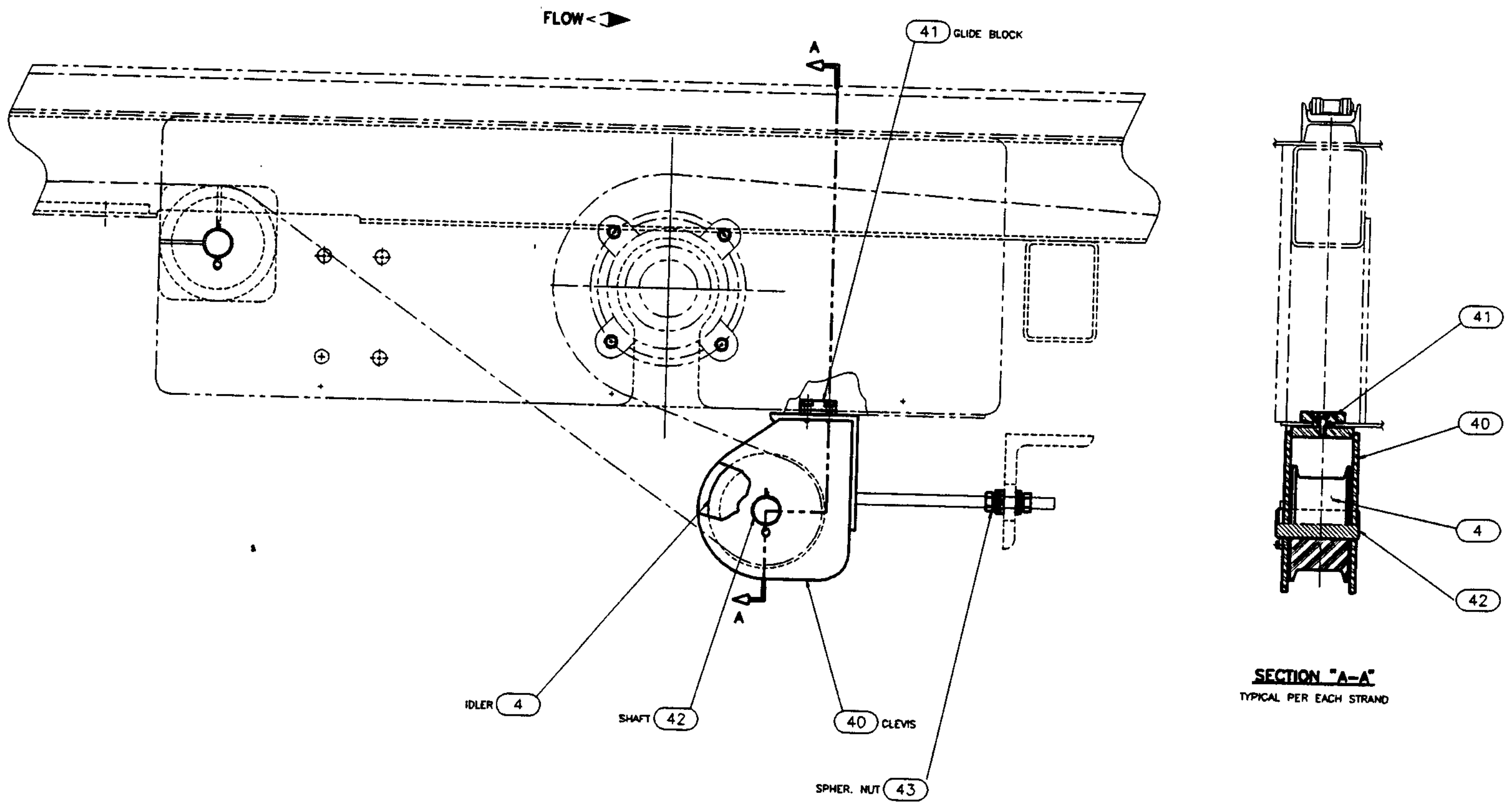
1. LUBRICATION POINT.
2. LIBERALLY COAT KEYS (ITEM 29 & 29A) WITH ANTI-SEIZE COMPOUND.
3. SPOT DRILL DRIVE SHAFT (ITEM 27) UNDER DRIVE SPROCKET (ITEMS 28) SET SCREW TO PROVIDE GOOD PURCHASE. (USE DRILL SIZE .4218 FOR .500-13NC SET SCREW)
4. LOCATE AND MOUNT ITEM 23 (BRG MNT) ON CONVEYOR FRAME. AFTER FINAL ALIGNMENT WELD ITEM 23 TO FRAME. CONFIRM THAT SHAFT IS FREE TURNING.
5. TO REMOVE REDUCER, TAKE OUT THE LOCKING SCREW, 20B,AND WASHERS AND INSTALL A 1"-8NC SQUARE HEAD SET SCREW TO PROTECT THE THREAD IN SHAFT,KEY 27. THREAD A 1.5"-12NF SCREW x APPROX.16"LONG THOUGH THE REMOVAL TOOL, KEY 21. BY ROTATING THIS SCREW THE REDUCER WILL BE DRAWN OFF THE END OF THE SHAFT.

[illegible] PROJECT No. [illegible]-003
DONOHUE INDUSTRIES INC. SHELDON, TEXAS.
DEINK EXPANSION PROJECT.
DI PROJECT No. [illegible] / P.O. D-[illegible]471
DONOHUE EQUIPMENT No. 45-1-70[illegible]0-10
DONOHUE EQUIPMENT No. 45-1-70[illegible]0-10
DONOHUE EQUIPMENT NAME. No.1 STAGING CONV.
DONOHUE EQUIPMENT NAME. No.2 STAGING CONV.
LAMB REFERENCE No. 11[illegible]-102
LAMB REFERENCE No. 11[illegible]-202

CO-ORDINATE MARKER	
ANCHOR BOLT	FLOW - PRIMARY
MILL AIR SUPPLY	FLOW - MANUAL REVERSE (JOG)
NOTE	FLOW - SECONDARY
MOTOR JUNCTION BOX	TERMINAL BOX

D-500

MEH	ASSEMBLY, DRIVE	44E33S
MSC		256-02
1:10	S-DRIVE, LEFT HAND 5-STRAND @ 17x17x17x17 REDUCER FA127LP256TC	
AUG 19 99		45E87A - 0 SHEET 1 OF 1



LEGEND

- ANCHOR BOLT
- CONDUIT
- MILL AIR SUPPLY
- NOTE
- MOTOR JUNCTION BOX
- FLOW - PRIMARY
- FLOW - MANUAL REVERSE (JOG)
- FLOW - SECONDARY
- TERMINAL BOX
- CO-ORDINATE MARKER

ABGS PROJECT No. DOSH-003
DONOHUE INDUSTRIES INC. SHELDON, TEXAS.
DEINK EXPANSION PROJECT.
DI PROJECT No. 8306. / P.O. D-62471
DONOHUE EQUIPMENT No. 46-1-7080-10
DONOHUE EQUIPMENT No. 46-1-7080-10
DONOHUE EQUIPMENT NAME. No.1 STAGING CONV.
DONOHUE EQUIPMENT NAME. No.2 STAGING CONV.
LAMB REFERENCE No. 11980388-102
LAMB REFERENCE No. 11980358-202

D-501

DRAWN BY: MEH
CHECKED: MSC
APPROVED:
SCALE: 1:4
DATE: AUG 19 99

ASSEMBLY,
S-DRIVE TAKE-UP
WH-78 CHAIN

REF. DWG. 44E32S
P.O. NO.
DRAWING NO. 45E88A REV. -0
SHEET 1 OF 1