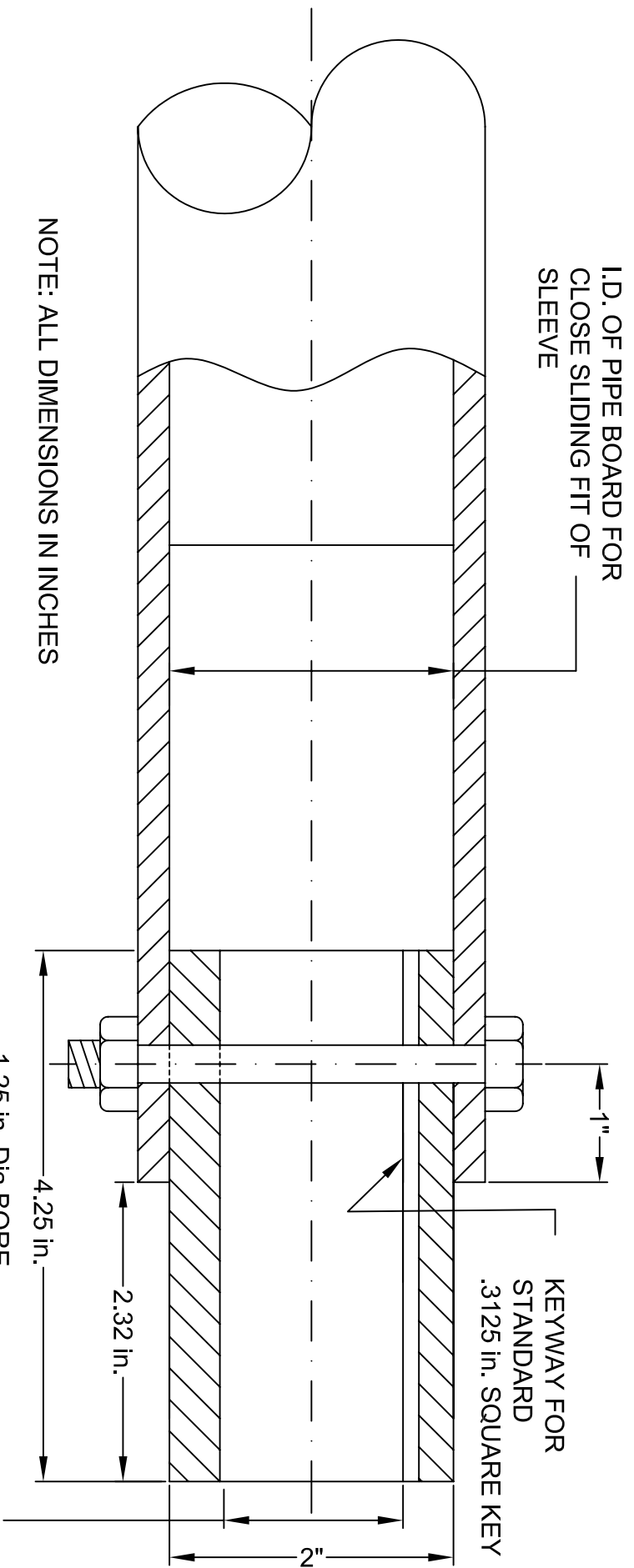


# VIEW SHOWING DRIVE SLEEVE REVERSED FOR DIRECT DRIVE OF 1994 AND UP, STAINLESS AND RUBBER THROUGH SPREADERS

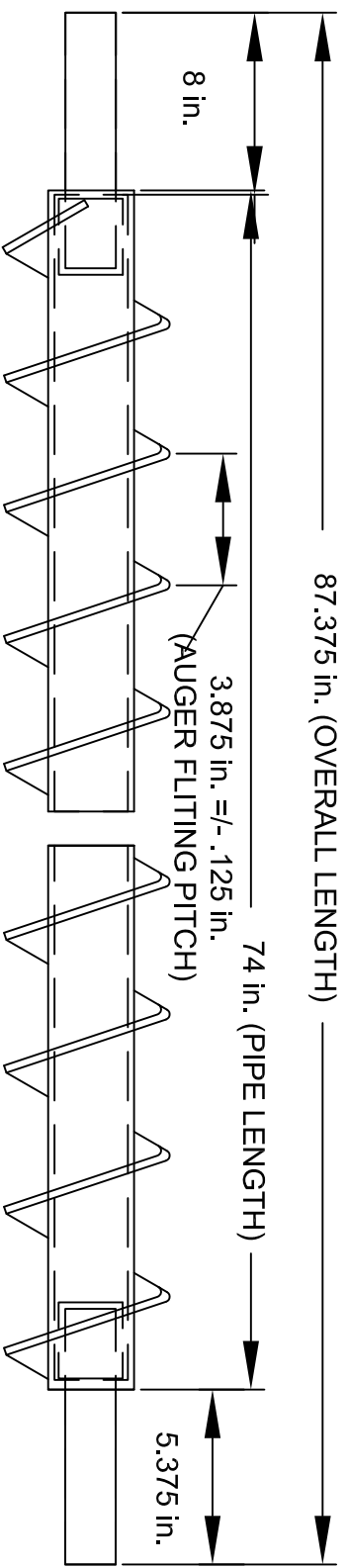


NOTE: ALL DIMENSIONS IN INCHES

## SPREADER TAILGATE

<b>PA DEPARTMENT OF TRANSPORTATION</b>			
<b>REVISIONS</b>		<b>Auger Drive Sleeve Instructions</b>	
NO.	DATE	BY	
1	05-22-02	DWG	
2	10-02-06	CJW	
3			
	DRAWN BY	SCALE	EQU-N-3
	DLW	N/A	
	DATE	CHG'D BY	SHEET 1 OF 2
	01-02-98	WHM	





HELICOID FLIGHT (RIGHT HAND)  
 SINGLE CONTINUOUS SCREW TYPE  
 (BAR SIZE, BEFORE ROLLING, TO BE  
 SUCH THAT FLITING O.D. IS AS SHOWN  
 IN END VIEW AT RIGHT, AND OUTER  
 EDGE THICKNESS IS AS SHOWN IN  
 FLITING THICKNESS SPECIFICATION)

VIEW SHOWING COMPLETE  
 AUGER WELDMENT

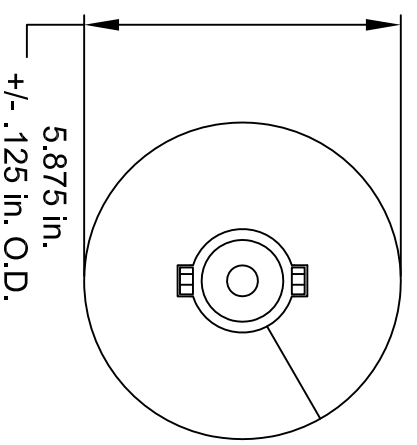
2 in. (2.375 O.D.)  
 SCHEDULE 80 (.20 in. WALL)  
 CARBON STEEL PIPE  
 (PIPE SIZE E.R.W. TUBING ACCEPTABLE)

- SPECIFICATION NOTES**
1. PIPE PORTIONED WORTH (WITH WELDED FITTING) TO BE STRAIGHT TO GIVE MAXIMUM OF .20 IN. TOTAL RUNOUT
  2. BOTH STUB SHAFT CENTERLINES TO LIE ON PIPE CENTERLINE TO GIVE MAXIMUM OF .20 IN. TOTAL RUNOUT
  3. ALL SURFACES OF SLEEVE, SHAFT, AND OTHER PIPE WHICH MAKE CONTACT WITH EACH OTHER TO BE COATED WITH ANTI-SEIZE COMPOUND
  4. SHAFT IS REMOVED, AND NOT USED. WHEN AUGER IS USED IN A DIRECT DRIVE APPLICATION

DO NOT SCALE DRAWING  
 TOLERANCES  
 (UNLESS OTHERWISE NOTED)

FLAME CUTTING, NIBBLING & WELDING	+/- .060
SHEARING & FORMING	+/- .030
PUNCHING	+/- .020
HOLE DIAMETERS	+ .015/- .005
ANGLES	+/- 2 DEG
DECIMAL MACHINING	0.0- +/- .040
	0.00- +/- .020
	0.000- +/- .005

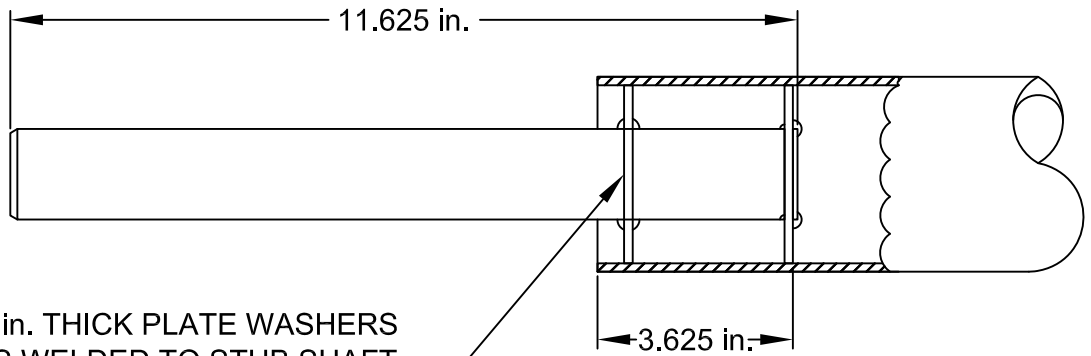
IMPLIED TOLERANCES DO NOT APPLY TO REFERENCE DIMENSIONS



**PA DEPARTMENT OF TRANSPORTATION**

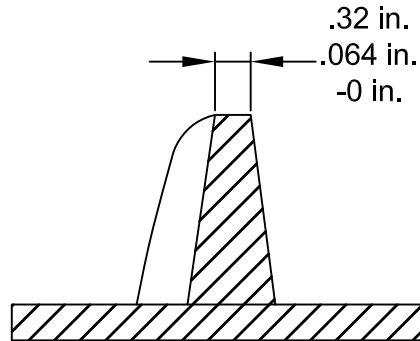
REVISIONS		DRAWN BY		SCALE	
NO.	DATE	BY			
1	01-09-98	DLW		N/A	EQN-6
2	05-28-02	DWG	DLW		
3	9-14-07	BAG		W/HM	SHEET 1 OF 3

PennDOT SPREADER AUGER DETAIL  
 (S/S & RUBBER THOUGH)



.125 in. THICK PLATE WASHERS  
CONTINUOUS WELDED TO STUB SHAFT  
AND AUGER PIPE

WASHERS TO FIT I.D. OF PIPE WITH  
CLOSE SLIDING FIT SO NO FLEXING  
OF SHAFT EXISTS AFTER FINAL WELDING



**FLITING THICKNESS SPECIFICATION  
(BEFORE HARDSURFACING)**

.125 in. (MINIMUM)  
HARDSURFACE

CONTINUOUS WELD  
BOTH SIDES OF  
FLITING



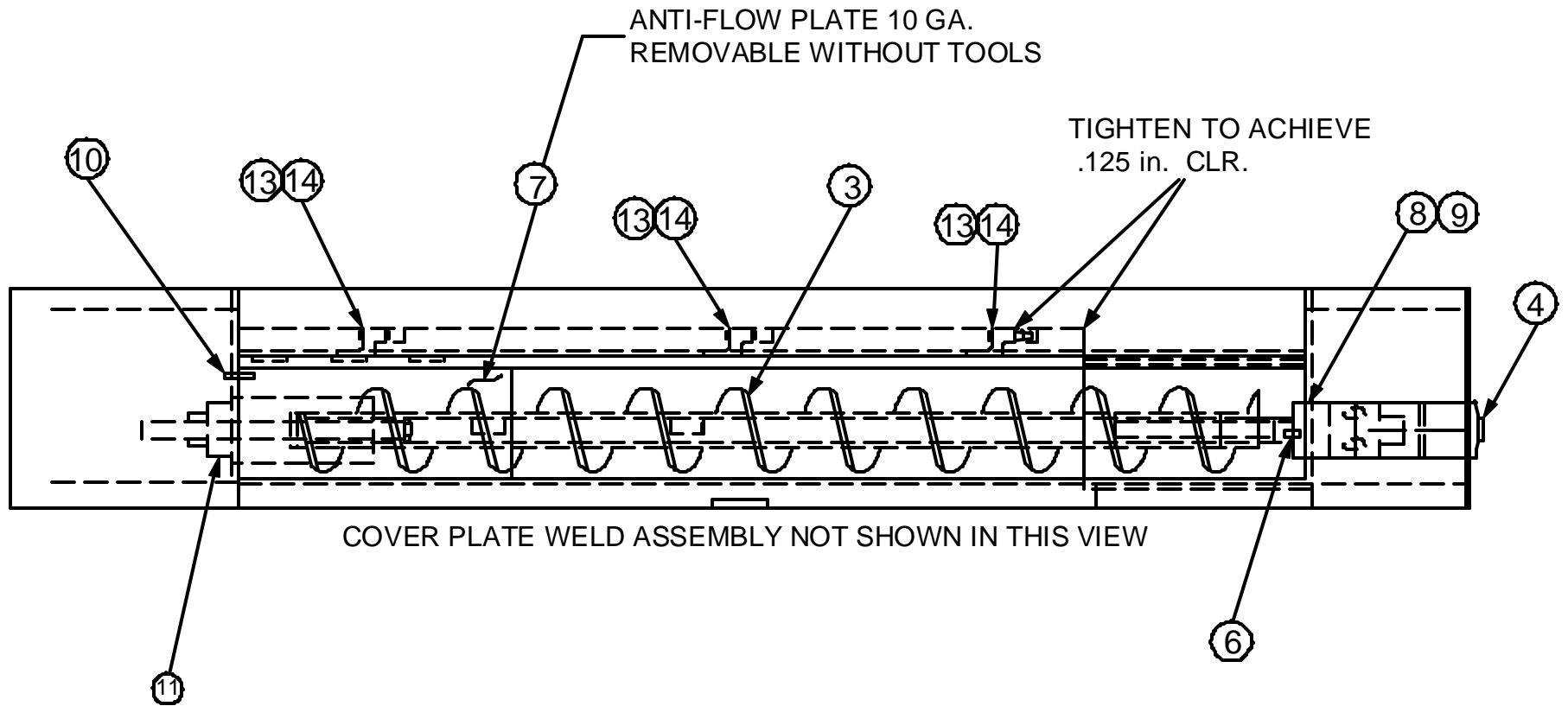
OUTER FLITE PERIPHERY CONTINUOUSLY  
HARDSURFACED WITH ABRASIVE RESISTANCE  
WELDING ROD (OR WIRE) EQUIVALENT TO  
STUDY 121 (ROCKWELL HARDNESS C-44),  
AND TO BE FULL WIDTH OF FLITING  
THICKNESS AT OUTEREDGE

**WELDING AND HARDSURFACE SPECIFICATION**

**PA DEPARTMENT OF TRANSPORTATION**

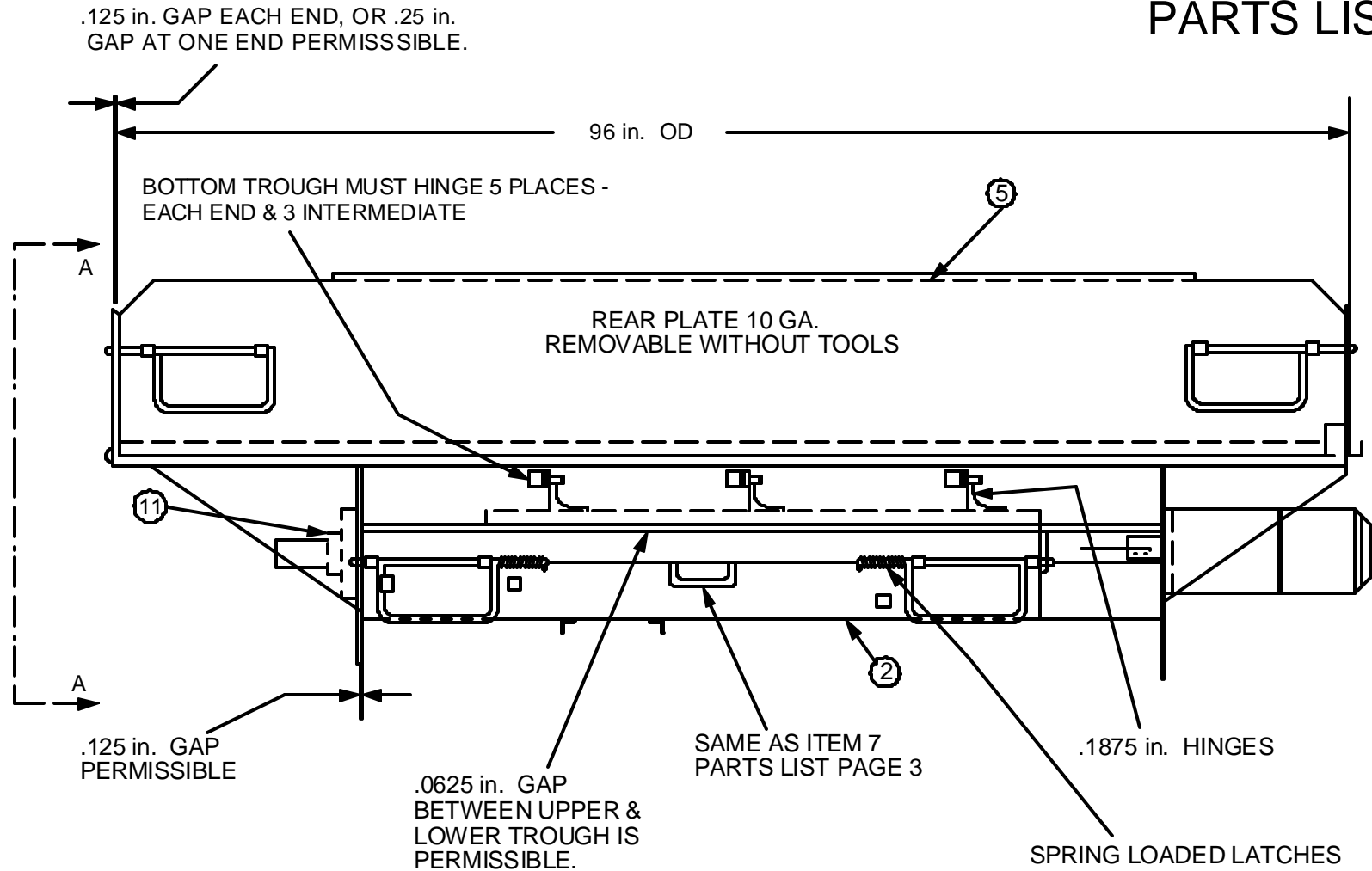
REVISIONS			PennDOT SPREADER AUGER DETAIL (S/S & RUBBER THROUGH)			
NO.	DATE	BY	DRAWN BY	SCALE		
1	1-09-98	DLW				
2	05-28-02	DWG	DLW	N/A	EQN-6	
3	09-20-07	BAG	01-09-98	CHK'D BY	WHM	SHEET 3 OF 3

# PARTS LIST A



REVISIONS			COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION			
NO.	DATE	BY	DRAWN BY		SCALE	MATERIAL
1	01/10/96	SWW	DLW		N / A	EQN-9 SHEET 1 OF 5
2	02/03/98	DLW	DLW			
3	06/03/02	DWG	DLW			
4			CHKD	WHM	DATE 02/03/98	
5						

# PARTS LIST A

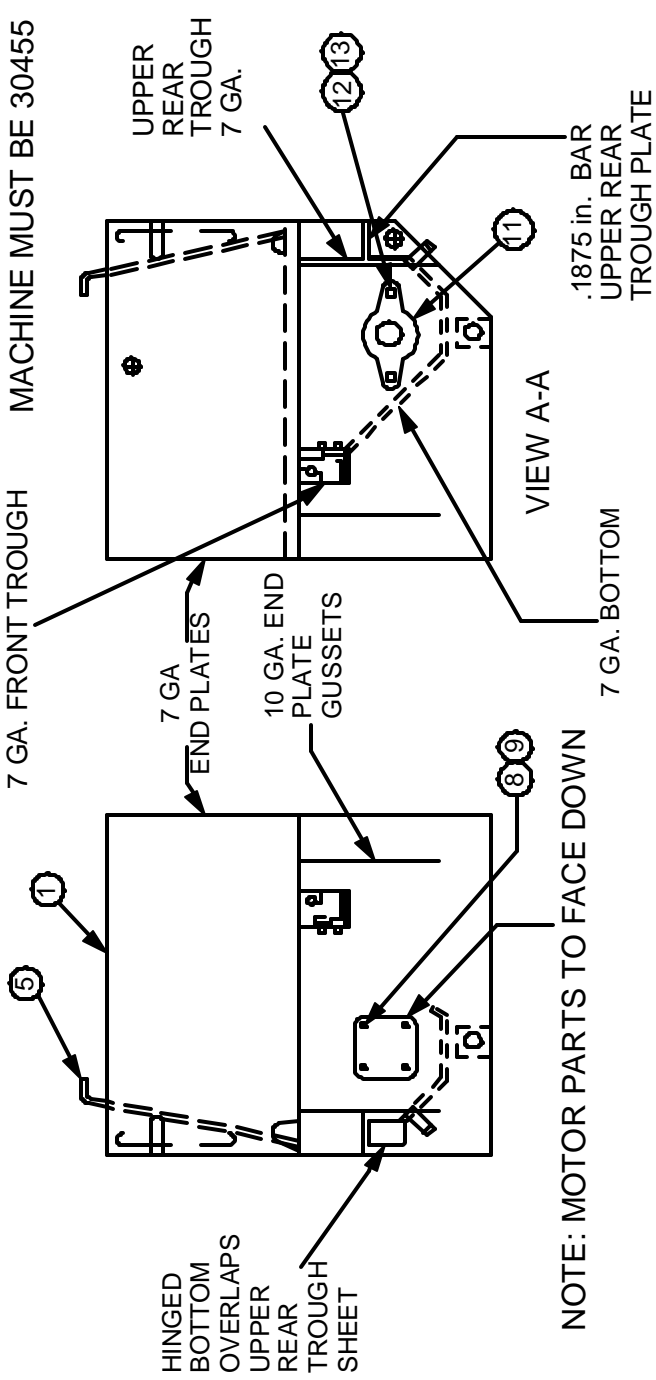


**NOTE:**

OVERALL HEIGHT AND DEPTH 18 in.  
 INSIDE TROUGH WIDTH OPENING 81 in.  
 + or - .50 in.

REVISIONS			COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION				
NO.	DATE	BY	STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER				
1	01/10/96	SWW					
2	02/03/98	DLW					
3	06/03/02	DWG	DRAWN BY	DLW	SCALE	N / A	MATERIAL
4			CHKD	WHM	DATE	02/03/98	DRW NO.
5							<b>EQN-9</b>
							SHEET 2 OF 5

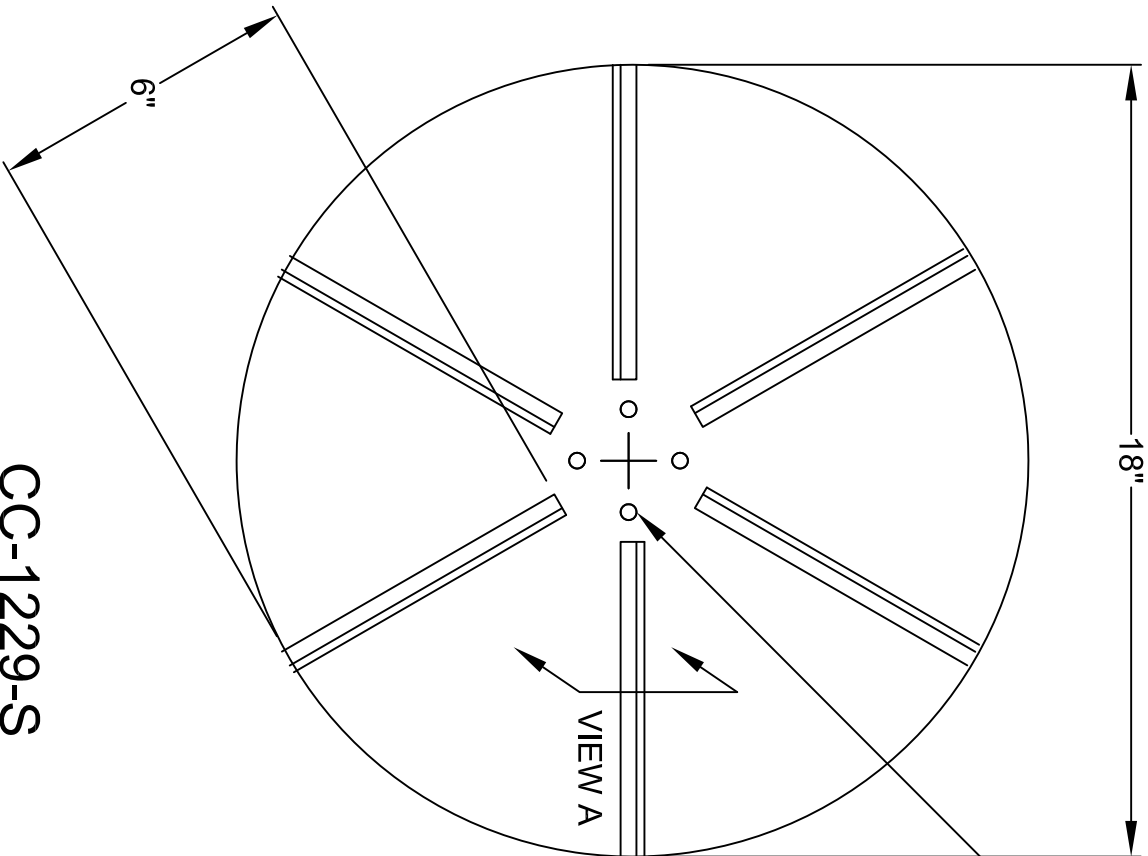
# PARTS LIST A



PARTS LISTING FOR PAGES 1, 2, & 3.

PARTS LIST A	
ITEM	QTY. NAME
2	1 LOWER TROUGH ASSEMBLY
3	1 AUGER ASSEMBLY
4	1 AUGER MOTOR
5	1 COVER PLATE ASSEMBLY
6	1 SOCHD CUP PT SET SCR .3125 in. - 18 NC x .25 in.
7	1 GATE OPENING BAFFLE WELD ASSEMBLY
8	4 HEX HEAD CAP SCREW .375 in. - 16 NC x .75 in.
9	4 LOCK WASHER .375 in.
10	1 HAIRPIN COTTER (.20 in. x 1.875 in.)
11	1 FLANGED BALL BEARING UNIT 2 BOLT MOUNTING 1.25 in.
12	3 HEX HEAD CAP SCREW (.375 in. - 16 NC x 1.50 in.)
13	6 HEX HEAD LOCK NUT (.375 in. - 16 NC - GRIPCO)
14	3 HEX HEAD CAP SCREW (.375 in. - 16 NC x 1 in.)

REVISIONS		COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY	
1	01/10/96	SWW	STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER
2	02/03/98	DLW	
3	06/03/02	DWG	DRAWN BY DLW SCALE N/A MATERIAL
4		CHKD WHM	DATE 02/03/98
5			DRW NO. EQN-9 SHEET 3 OF 5

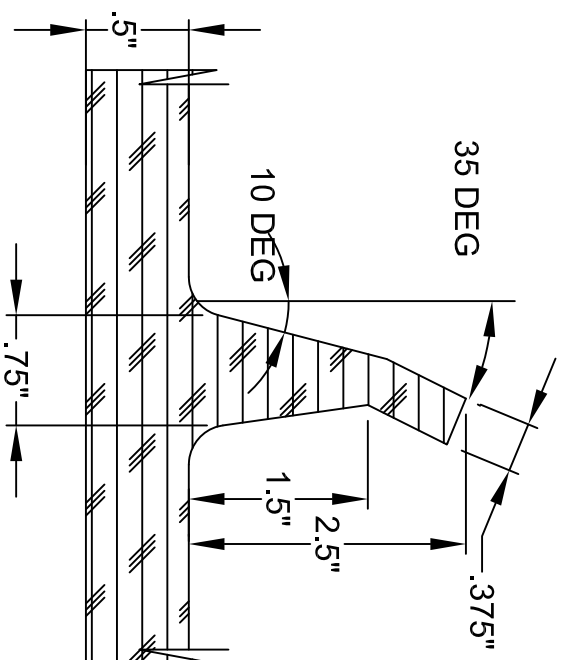


CC-1229-S

.375 Dia. HOLE REINFORCED WITH STEEL WASHERS (4) PLACES ON 4" B.C.

NOTES:

1. MATERIAL 80 DURO. URETHANE
2. WEIGHT 8.1 lbs. PER PIECE
3. ROTATION: COUNTER CLOCKWISE
4. ALL DIMENSIONS IN INCHES.



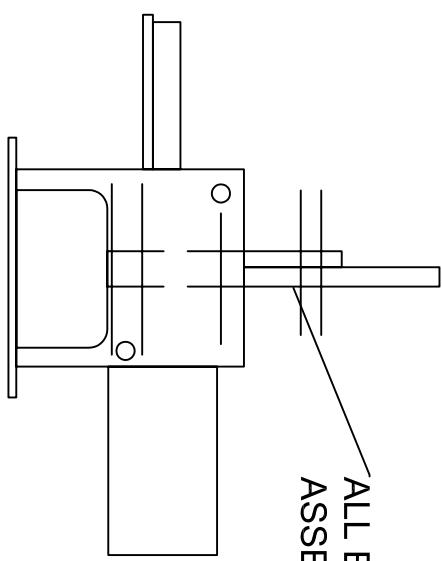
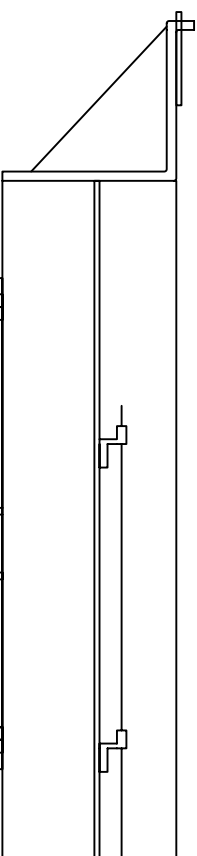
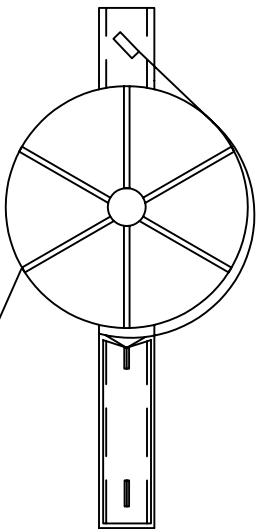
PA DEPARTMENT OF TRANSPORTATION

REVISIONS		SPINNER / SPREADER TAILGATE URETHANE	
NO.	DATE	BY	SCALE
1	06-03-02	DWG	N/A
2	05-23-07	CJW	EQN-9B
3			

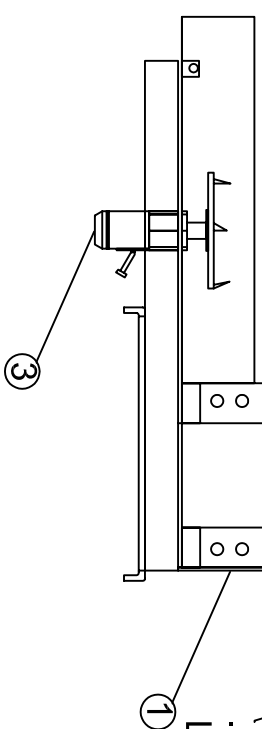
C.U.E. Inc  
 11 Leonberg Township  
 16066 U.S.A.



SPINNER ASSEMBLY		
MK	QTY	DESCRIPTION
1	1	MAIN FRAME
2	1	DISC (REF: EQN-9B)
3	2	HYDRAULIC DRIVE MOTOR



.75 x 23.75 in. LONG (APPROX)  
LATERAL ADJUSTMENT STAINLESS STEEL ROD



**NOTES:**

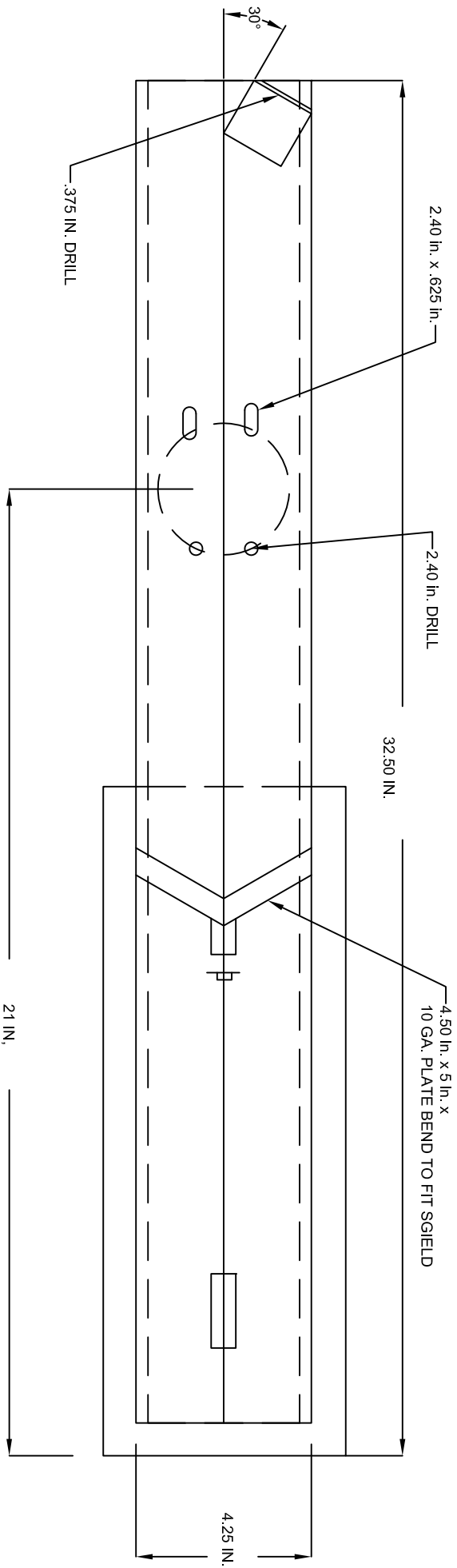
ALL SPINNER PARTS EXCLUDING THE DISC,  
MOTOR  
AND HUB SHALL BE AISI TYPE 304 STAINLESS  
STEEL  
ALL DIMENSIONS IN INCHES  
ALL ANGLES .1875 IN THINK

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS		SPREADER / SPINNER STAINLESS STEEL	
NO.	DATE	BY	
1	02-17-98	DLW	
2	06-03-02	DWG	
3	07-26-07	BAG	

DRAWN BY	DLW	SCALE	N/A	EQN-9C
DATE	02-05-98	CHECK BY	WHM	SHEET 1 OF 6

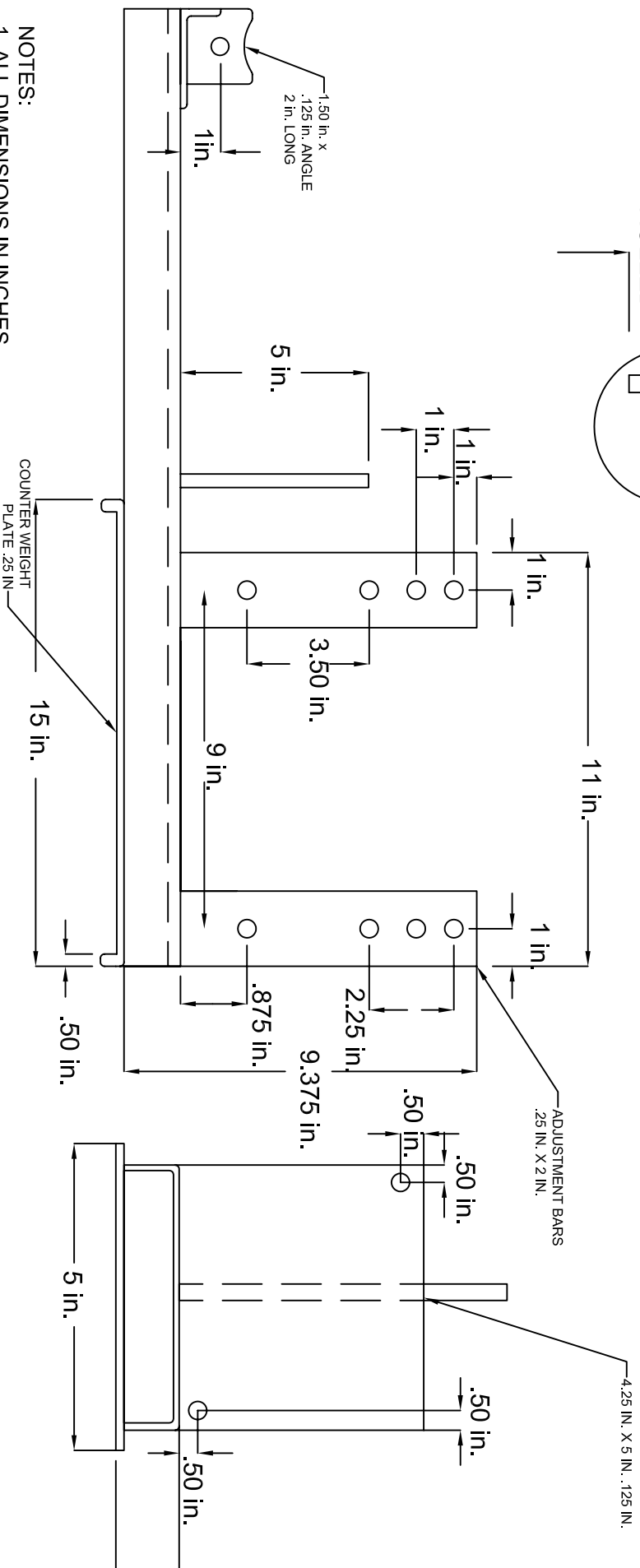
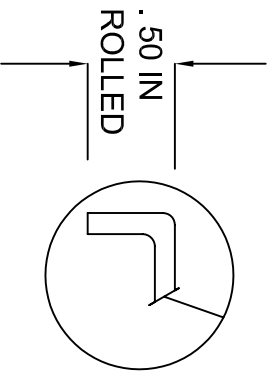


**MAIN FRAME**  
 WITHOUT DISC / SPINNER MOTOR  
 PAGES 2 & 3

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			SPREADER / SPINNER STAINLESS STEEL		
NO.	DATE	BY	SCALE	CHK'D BY	EQU-NUM
1	2-17-98	DLW	N/A	WHM	EQN-9C
2	06-04-02	DWG			
3	07-26-07	BAG			

NO.	DATE	BY	SCALE	CHK'D BY	EQU-NUM
1	2-17-98	DLW	N/A	WHM	EQN-9C
2	06-04-02	DWG			
3	07-26-07	BAG			



**NOTES:**

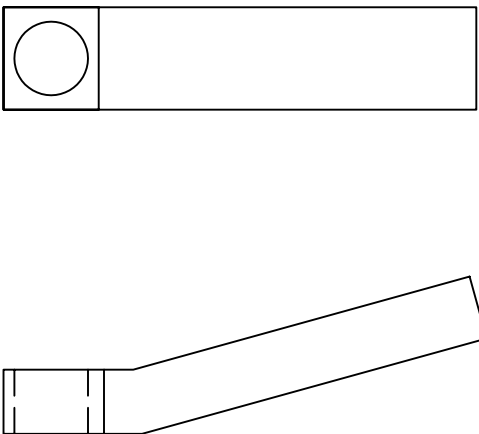
1. ALL DIMENSIONS IN INCHES
2. SPINNER MOTOR SHALL HAVE HOSE CONNECTIONS AND THEY SHALL BE MADE WITH 45 DEGREE FITTING TO ENSURE THAT HOSES ARE ROUTED OUTSIDE AND AWAY FROM THE STAINLESS STEEL
3. STAINLESS STEEL AS PER AISI TYPE 304

**PA DEPARTMENT OF TRANSPORTATION**

**SPREADER / SPINNER STAINLESS STEEL**

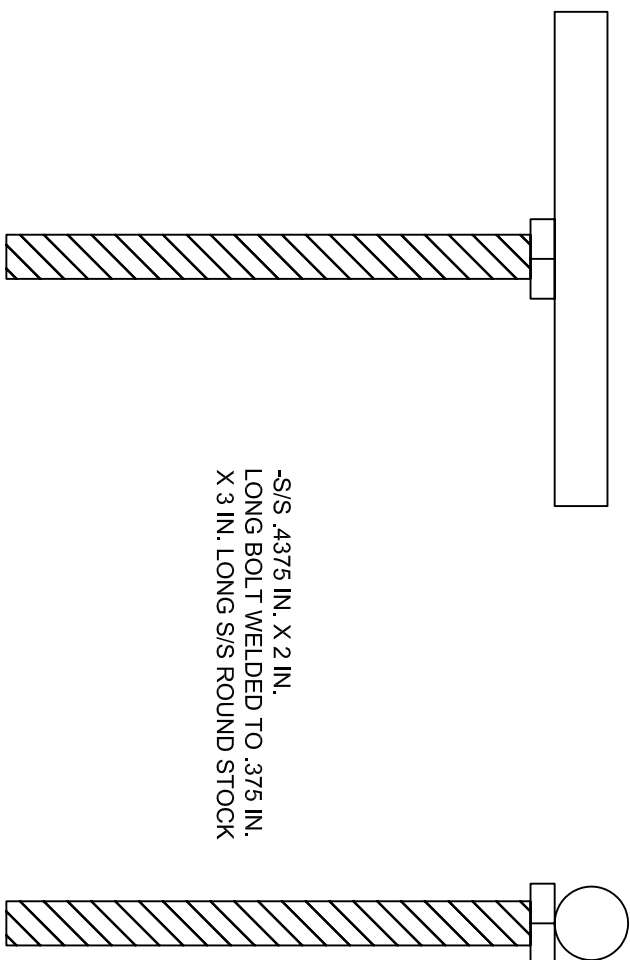
REVISIONS		DRAWN BY		SCALE	
NO.	DATE	BY			
1	02-17-98	DLW	DLW	N/A	EQN-9C
2	06-04-02	DLW	DLW	N/A	EQN-9C
3	07-20-07	BAG	BAG	WHM	SHEET 3 OF 6

**DETAIL B  
LOCK BAR**



-0.25 IN. X .75 IN.  
X 3.5 IN. S/S BAR WITH A  
.4375 IN. DIA. TAP HOLE

**DETAIL C  
TEE BOLT**

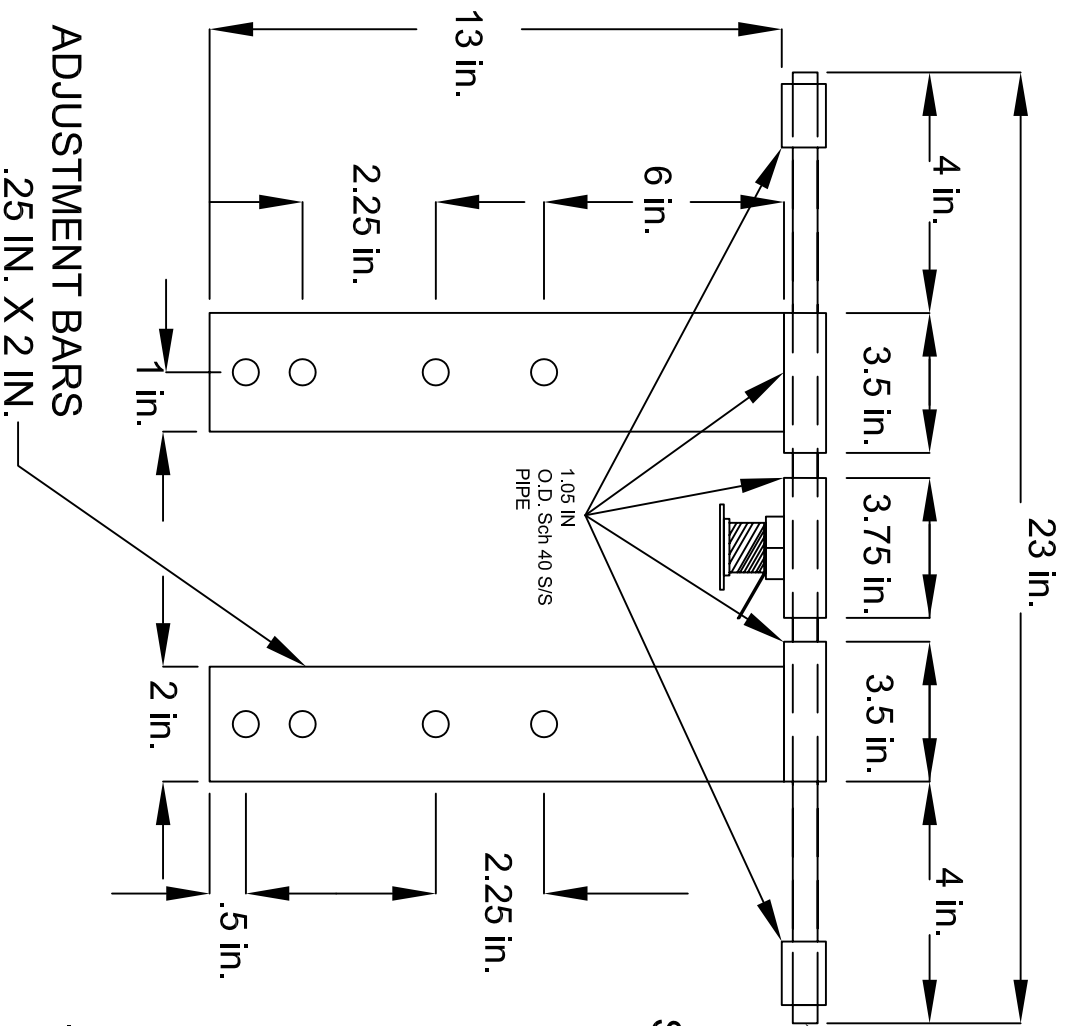


-S/S .4375 IN. X 2 IN.  
LONG BOLT WELDED TO .375 IN.  
X 3 IN. LONG S/S ROUND STOCK

- NOTES:**
1. ALL DIMENSIONS IN INCHES.
  - 2 STAINLESS STEEL AS PER AISI TYPE 304

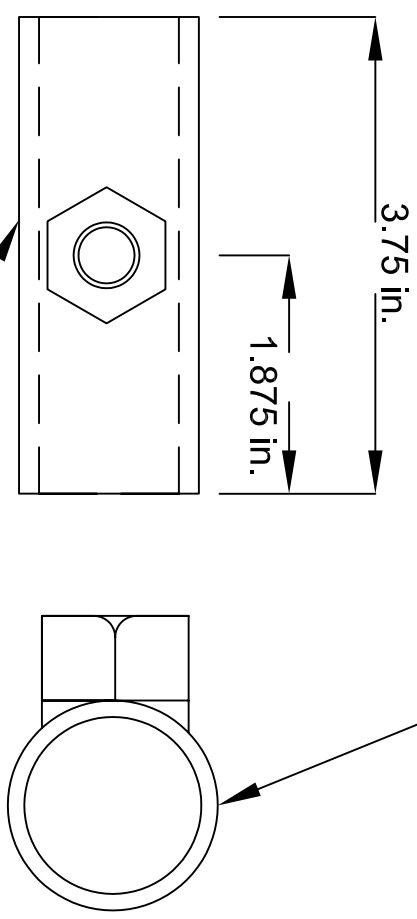
REVISIONS			SPREADER / SPINNER STAINLESS STEEL		
NO.	DATE	BY	DATE	SCALE	
1	02-17-98	DLW	02-05-98	N/A	EQN-9C
2	02-04-02	DWG			
3	07-26-07	BAG			

**PA DEPARTMENT OF TRANSPORTATION**



TABS AS SHOWN ON SHEET 1 OF EQN-9 AND 9C ACCEPTABLE

.5625 IN. HOLE WITH .4375 IN. X 14 NC-28 S/S NUT WELDED OVER THE HOLE

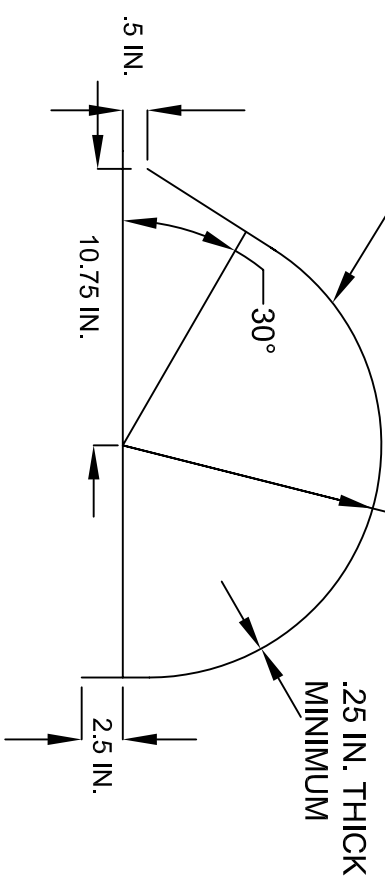


DETAIL A  
LATERAL ADJUSTMENT LOCK  
.4375 IN. DIA. HEX NUT

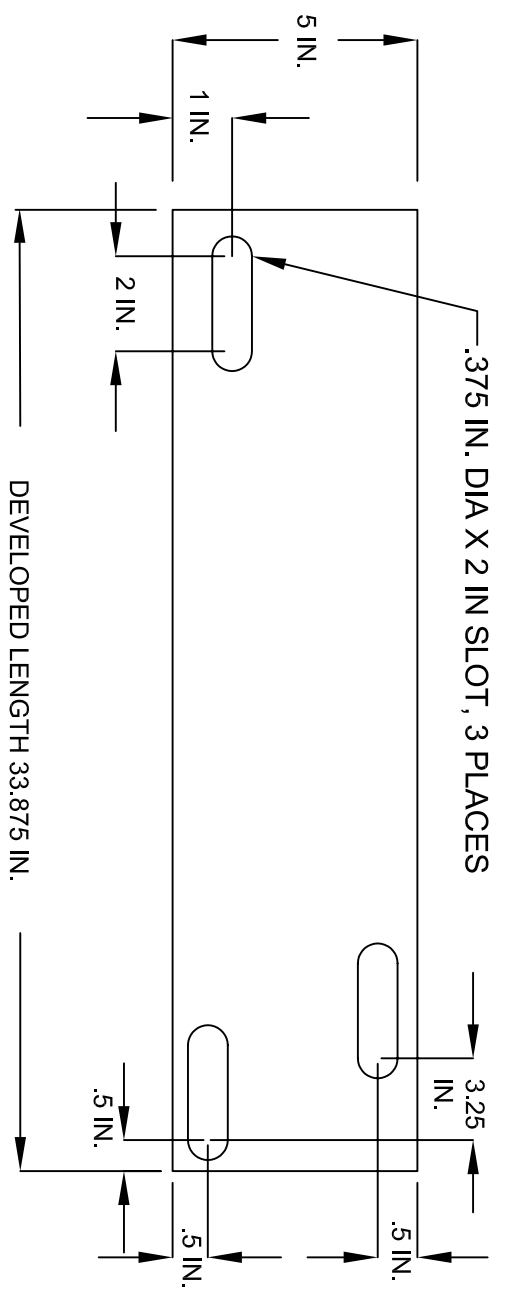
- NOTES:
1. ALL DIMENSIONS INCHES
  2. STAINLESS STEEL AS PER AISI TYPE 304

PA DEPARTMENT OF TRANSPORTATION			
REVISIONS		SPREADER / SPINNER STAINLESS STEEL	
NO.	DATE	BY	
1	02-17-98	DLW	
2	02-04-02	DWG	
3	07-26-07	BAG	
DRAWN BY		DLW	SCALE
DATE		02-05-98	N/A
CHECKED BY		WHM	
SHEET		50F 6	EQN-9C

BEND RADIUS TO PROVIDE  
 .375 IN. CLEARANCE  
 WITH DISC.



SPINNER DISC SHIELD



- NOTES:  
 1. ALL DIMENSIONS IN INCHES / CM  
 2. STAINLESS STEEL AS PER AISI TYPE 304

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			SPREADER / SPINNER STAINLESS STEEL		
NO.	DATE	BY	DATE	SCALE	
1	02-17-98	DLW	DLW	N/A	EQN-9C
2	02-04-02	DWG	02-05-98	WHM	SHEET 6 OF 6
3	07-26-07	BAG			

DRIVE BEARINGS:

THE FOLLOWING SHALL INDICATE MINIMUM REQUIREMENTS INCLUDING ALL GENUINE PARTS, ACCESSORIES, EQUIPMENT, AND SAFETY FEATURES CONSIDERED STANDARD, WHETHER MENTIONED HEREIN OR NOT. THE VEHICLE SHALL COMPLY WITH ALL CURRENT APPLICABLE FEDERAL SAFETY STANDARDS AND OSHA REQUIREMENTS.

THE PURPOSE OF THESE SPECIFICATIONS IS TO DESCRIBE A BEARING CAPABLE OF BEING USED ON OUR TAILGATE SPREADERS.

UNLESS OTHERWISE SPECIFIED, EACH UNIT SHALL INCLUDE ALL SPECIFIED PARTS, MADE AVAILABLE FOR THE INDICATED MODEL BY THE EQUIPMENT MANUFACTURER.

SPECIFIED ITEMS NOT AVAILABLE THROUGH THE EQUIPMENT MANUFACTURER SHALL CONFORM TO THE BEST QUALITY STANDARDS KNOWN TO THAT PARTICULAR INDUSTRY.

EACH UNIT SHALL BE CLEAN, LUBRICATED, AND SERVICED READY FOR IMMEDIATE OPERATION.

PERFORMANCE:

THE PROPOSED UNIT SHALL BE IDENTICAL WITH THE STANDARD OR IMPROVED MODEL AND A CURRENT PRODUCTION UNIT IN USE BY THE INDUSTRY FOR THE PAST TWELVE MONTHS PRECEDING THIS BID OPENING.

IT SHALL BE THE RESPONSIBILITY OF THE BIDDER TO ASSURE THAT THE PROPOSED EQUIPMENT CONFORMS TO THE SPECIFICATIONS AND PERFORMS SATISFACTORILY ACCORDING TO THESE SPECIFICATIONS.

GRADE:

REFERENCE: AMERICAN FRICTION BEARING MANUFACTURERS ASSOCIATION #1, PRECISION

TYPE:

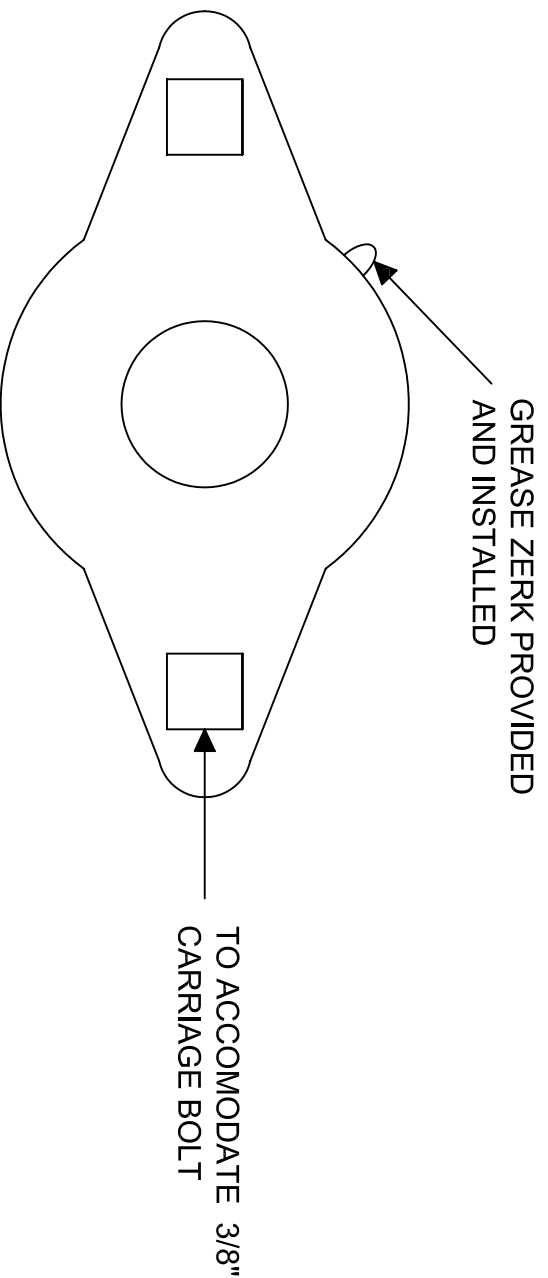
SELF-ALIGNING, ANTI-FRICTION, THRUST, RE-LUBE TYPE.

MOUNTING:

2 BOLT UNIT FLANGED UNIT TYPE. SEE DRAWING.

REVISIONS			SPREADER BEARING INFORMATION		
NO.	DATE	BY	DRAWN BY	SCALE	EQN-#
1	4-4-07	KNH	DLW	N/A	10
2					
3			06/26/97	WHM	SHEET 1 OF 2

MOUNTINGS:  
 2 BOLT (SQUARE HOLES) FLANGED UNIT TYPE. SEE DRAWING.



SHAFT DIAMETER: 1-1/4"

LOCKING: RETAINING COLLAR SHALL BE ECCENTRIC WITH SET SCREW.

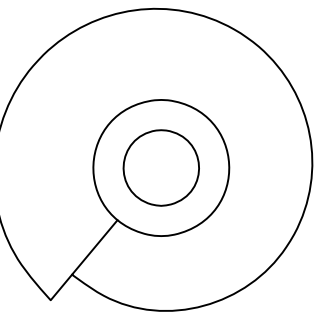
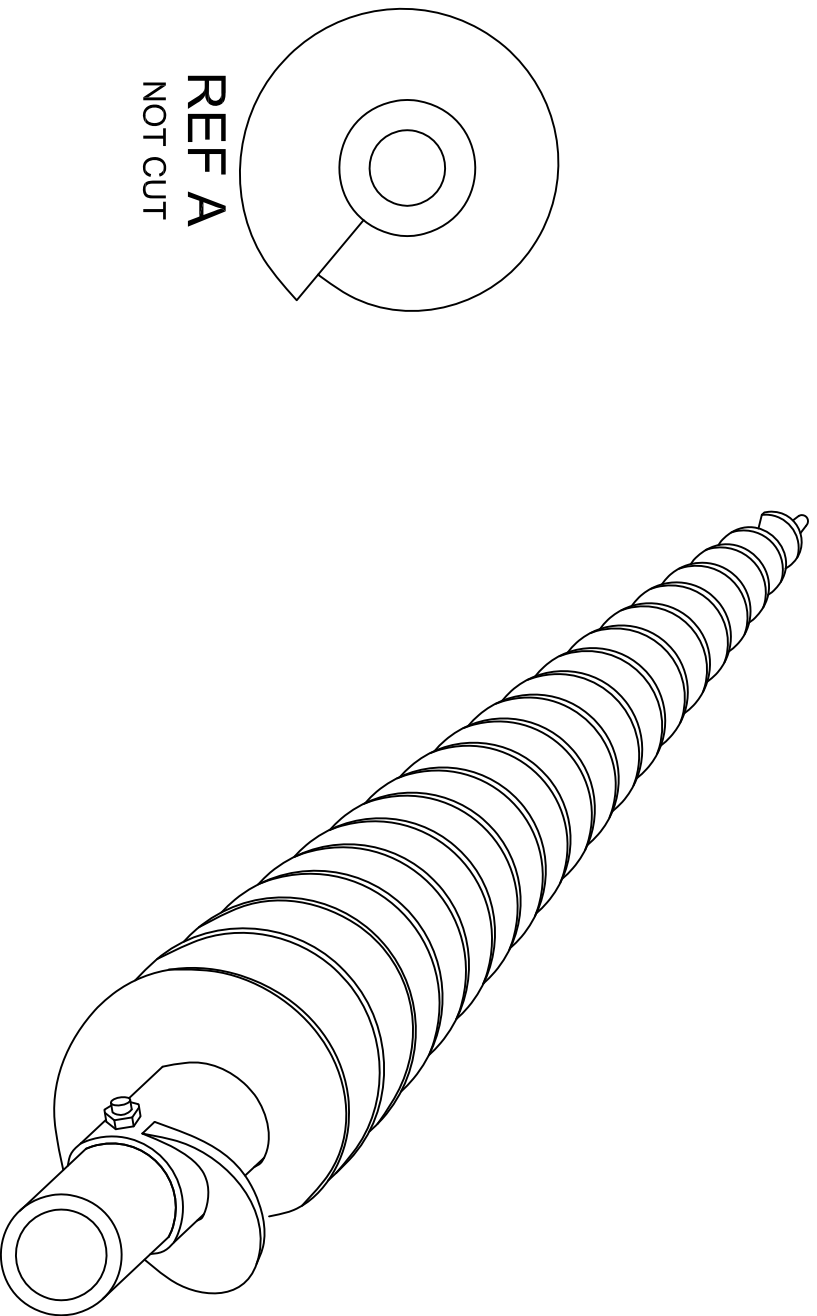
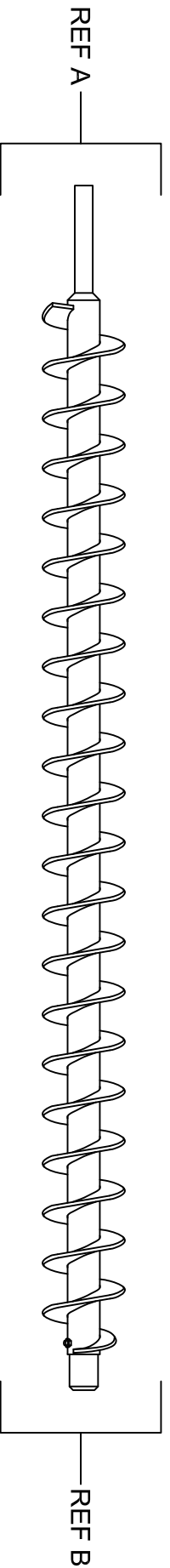
HOUSING: CASE, DUCTILE OR MALLEABLE IRON.

REFERENCE: LINK BELT FXWG 2E2ou, FAFNIR GVF TDS, ROBERTS FBpz-20L, BROWNING MODEL #V/F2E-120SM, SST MODEL #SAFG 206-20G, IPTCI MODEL SALF 206-20

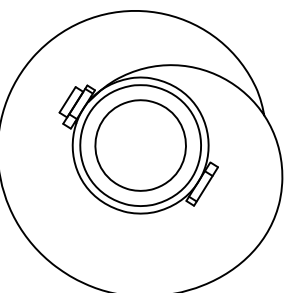
NOTE: ALL SET SCREWS HOLDING BEARING COLLARS SHALL BE TREATED WITH LOCKTITE AND PROPERLY TORQUED.

<b>PA DEPARTMENT OF TRANSPORTATION</b>		
<b>SPREADER BEARING INFORMATION</b>		
NO.	DATE	BY
1	4-4-07	KNH
2		
3		
DRAWN BY		DLW
SCALE		N/A
DATE		06/26/97
CHK'D BY		WHM
EQU-# 10 SHEET 2 OF 2		





**REF A**  
NOT CUT



**REF B**  
BEVEL CUT ON MOTOR  
SIDE OF AUGER

**PA DEPARTMENT OF TRANSPORTATION**

REVISIONS			BEVEL CUT AUGER		
NO	DATE	BY			
1					
2					
3					

DRAWN BY		HMR	SCALE	N/A	EQN-29
DATE		08-08-17	CHK'D BY		SHEET 1 OF 1