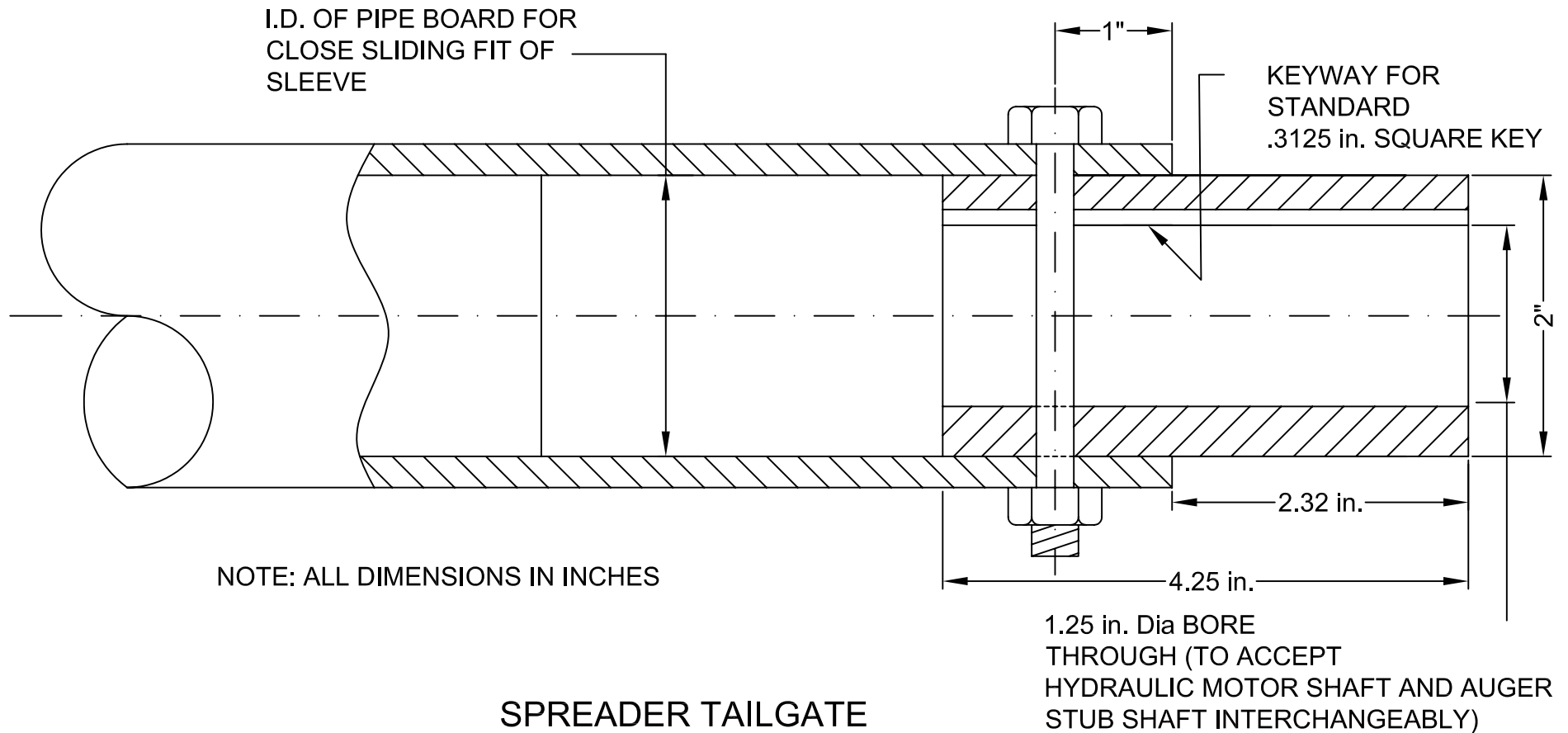
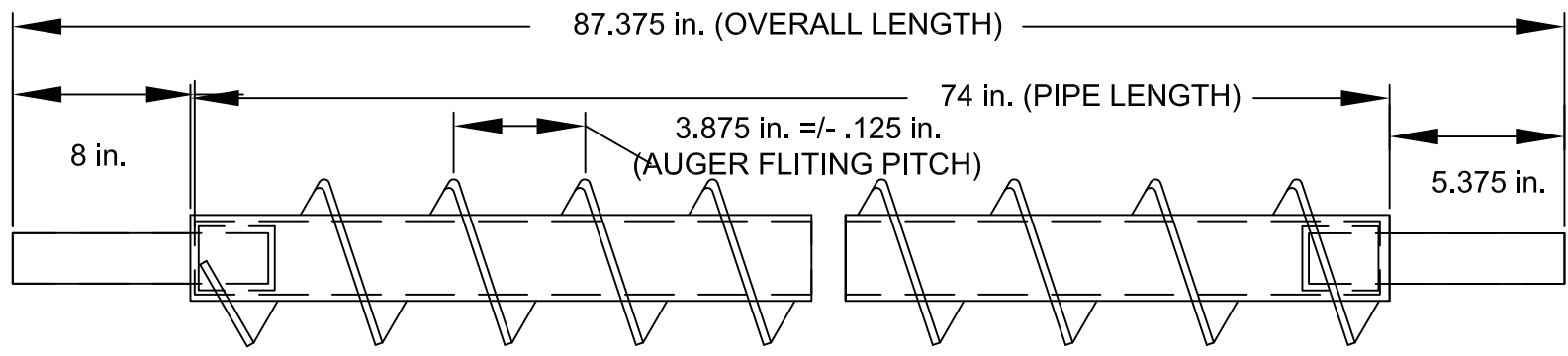


VIEW SHOWING DRIVE SLEEVE REVERSED FOR DIRECT DRIVE OF 1994 AND UP, STAINLESS AND RUBBER THROUGH SPREADERS



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



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

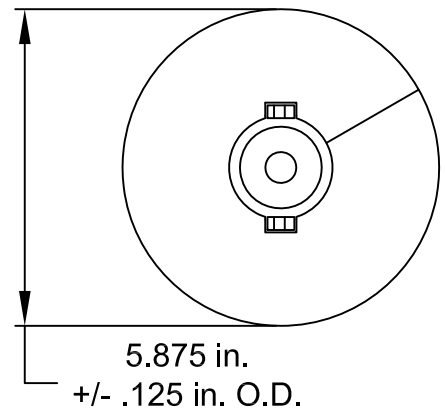
SPECIFICATION NOTES

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

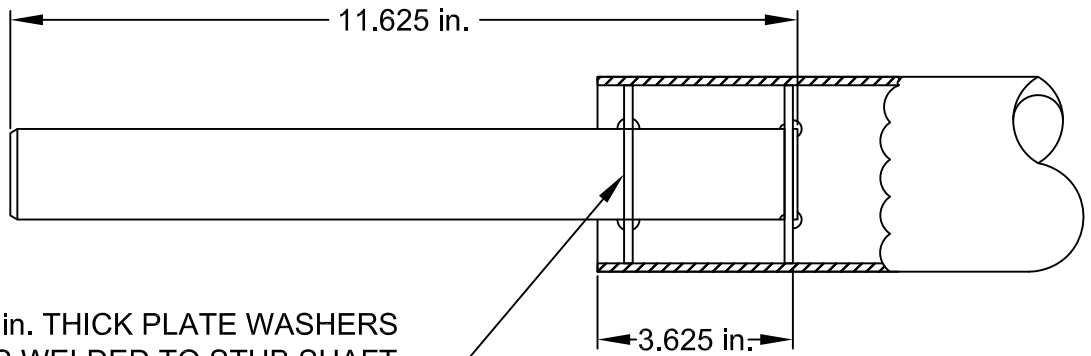
DO NOT SCALE DRAWING
 TOLERANCES
 (UNLESS OTHERWISE NOTED)

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

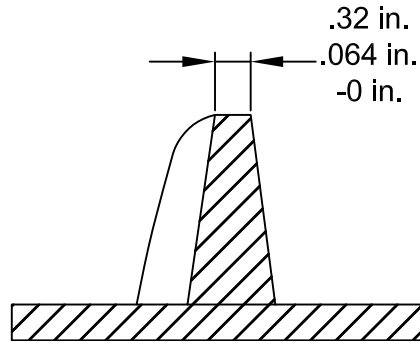


PA DEPARTMENT OF TRANSPORTATION							
REVISIONS			PennDOT SPREADER AUGER DETAIL (S/S & RUBBER THOUGH)				
NO.	DATE	BY					
1	01-09-98	DLW	DRAWN BY	DLW	SCALE	N/A	EQN-6
2	05-28-02	DWG	DATE	01-09-98	CHKD BY	WHM	SHEET 1 OF 3
3	9-14-07	BAG					



.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



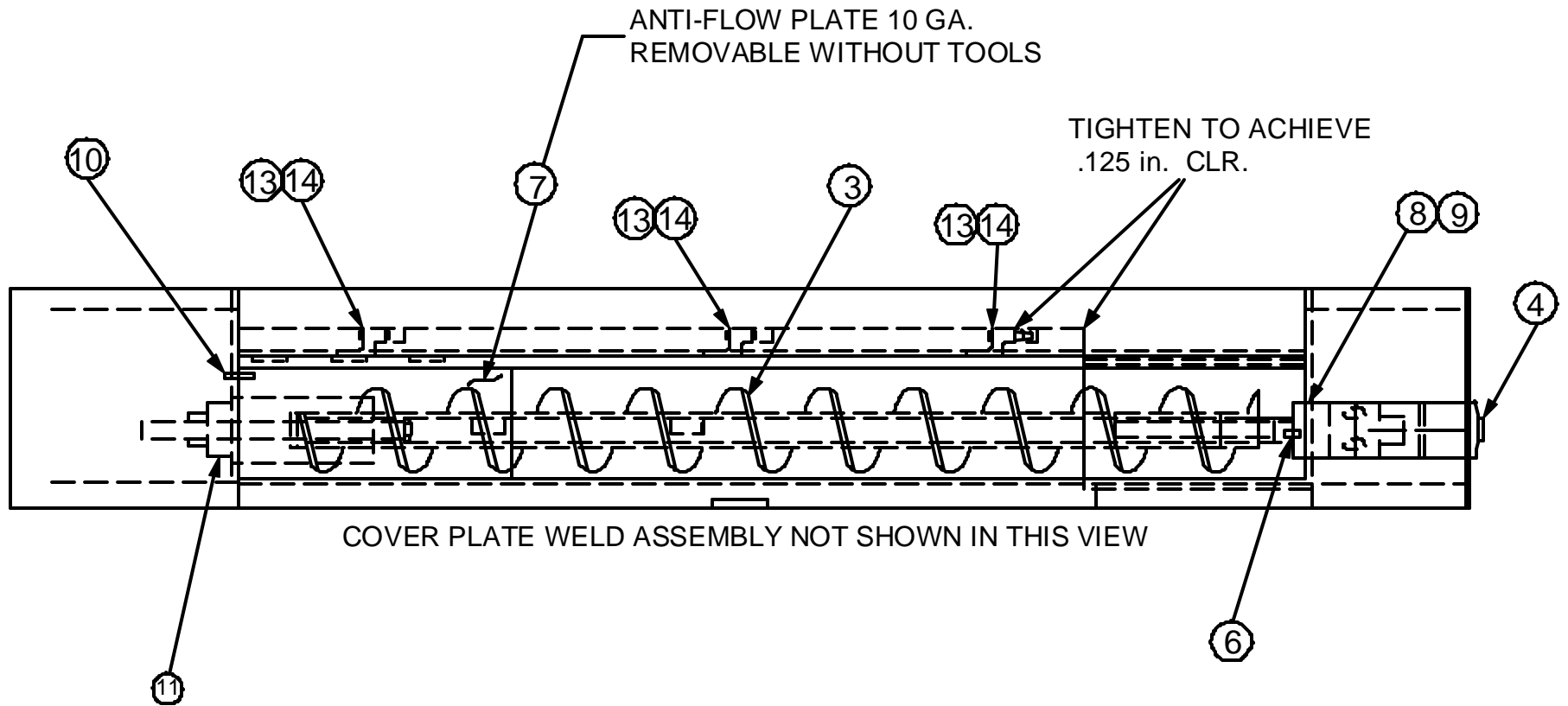
OUTER FLITE PERIPHERY CONTINUOUSLY
HARDSURFACED WITH ABRASIVE RESISTANCE
WELDING ROD (OR WIRE) EQUIVALENT TO
STUDY 121 (ROCKWELL HARDNESS C-44),
AND TO BE FULL WIDTH OF FLITING
THICKNESS AT OUTEREDGE

WELDING AND HARDSURFACE SPECIFICATION

PA DEPARTMENT OF TRANSPORTATION

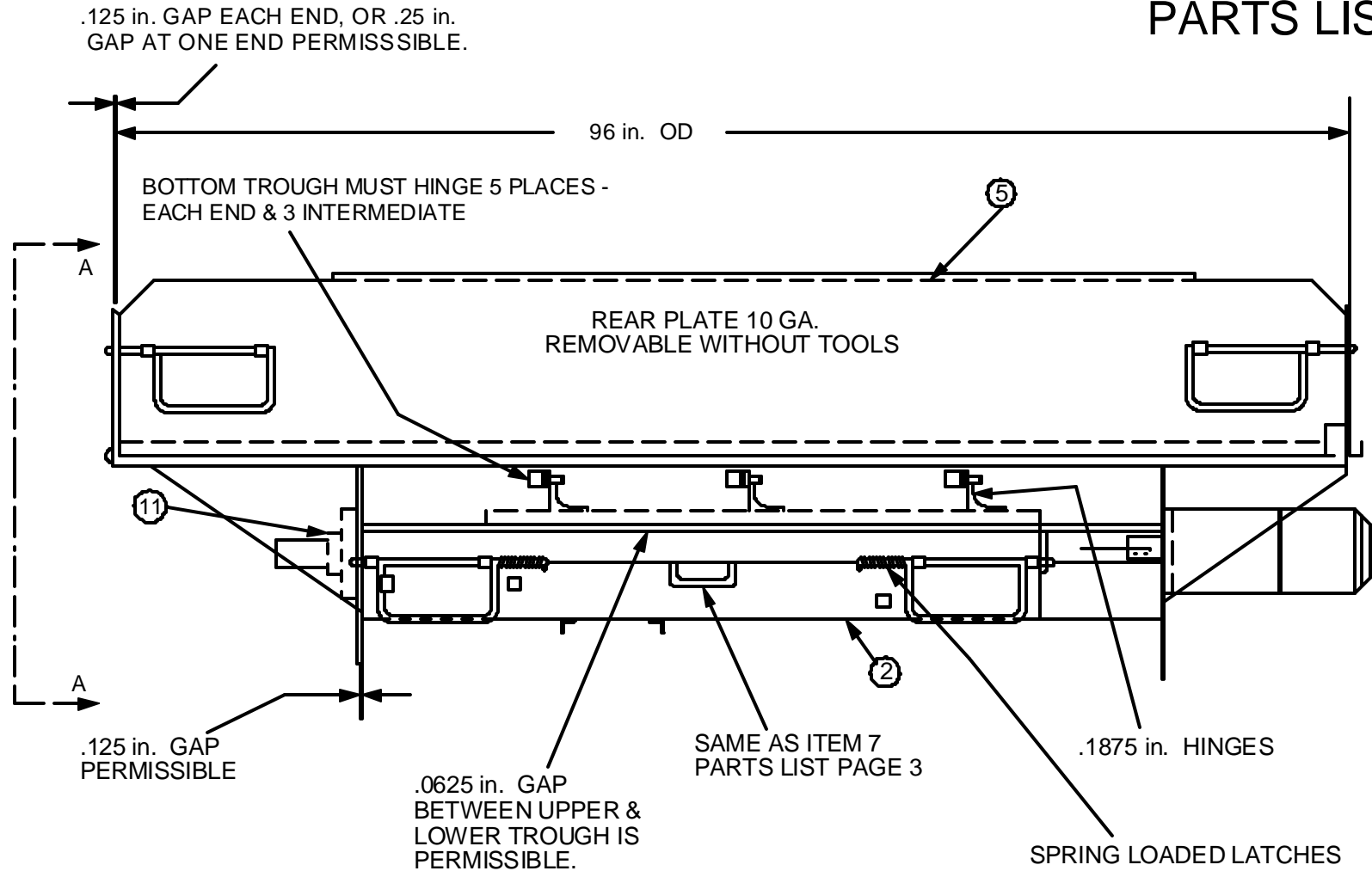
REVISIONS			PennDOT SPREADER AUGER DETAIL (S/S & RUBBER THROUGH)			
NO.	DATE	BY	DRAWN BY	SCALE		
1	1-09-98	DLW				
2	05-28-02	DWG	DLW	N/A	EQN-6	
3	09-20-07	BAG	01-09-98	WHM	SHEET 3 OF 3	

PARTS LIST A



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

PARTS LIST A



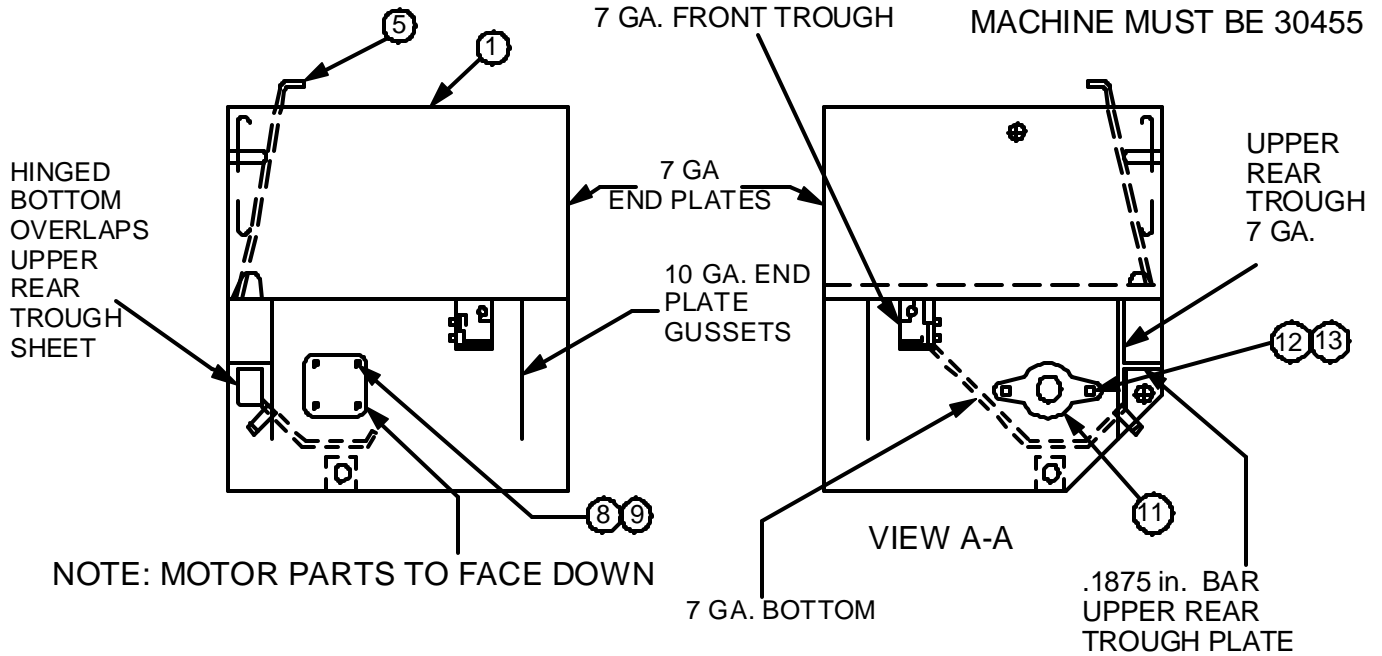
NOTE:

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
4			CHKD	WHM	DATE	02/03/98
5						
					MATERIAL	
					DRW NO.	EQN-9
					SHEET 2 OF 5	

PARTS LIST A

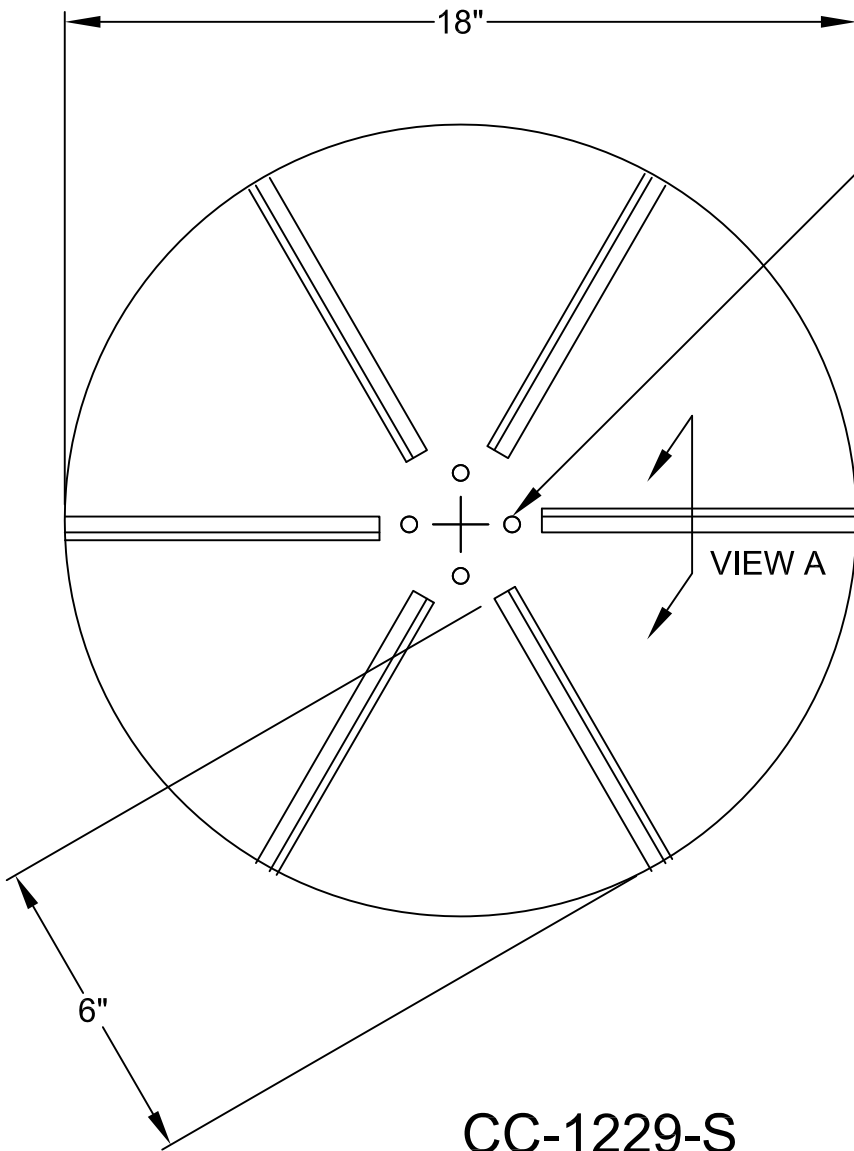
NOTE:
ALL HARDWARE ON
MACHINE MUST BE 30455



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	SOC HD 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.)

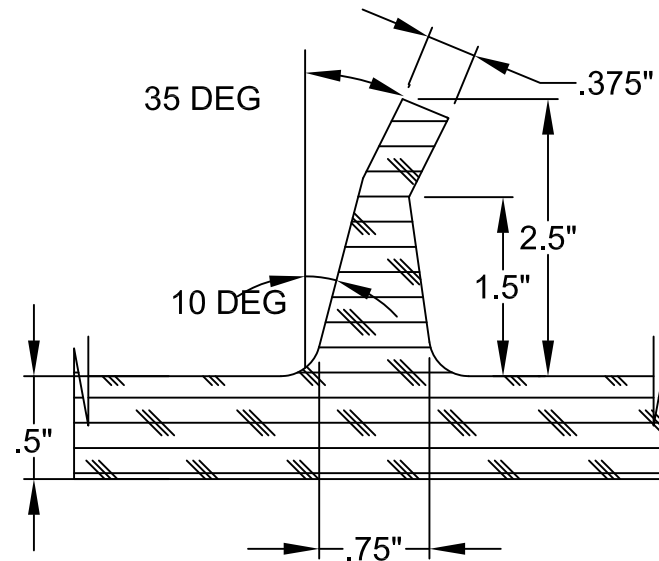
REVISIONS			COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION				
NO.	DATE	BY	STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER				
1	01/10/96	SWW					
2	02/03/98	DLW					
3	06/03/02	DWG	DRAWN BY	DLW	SCALE	N/A	MATERIAL
4			CHKD	WHM	DATE	02/03/98	DRW NO.
5							EQN-9
							SHEET 3 OF 5



.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.

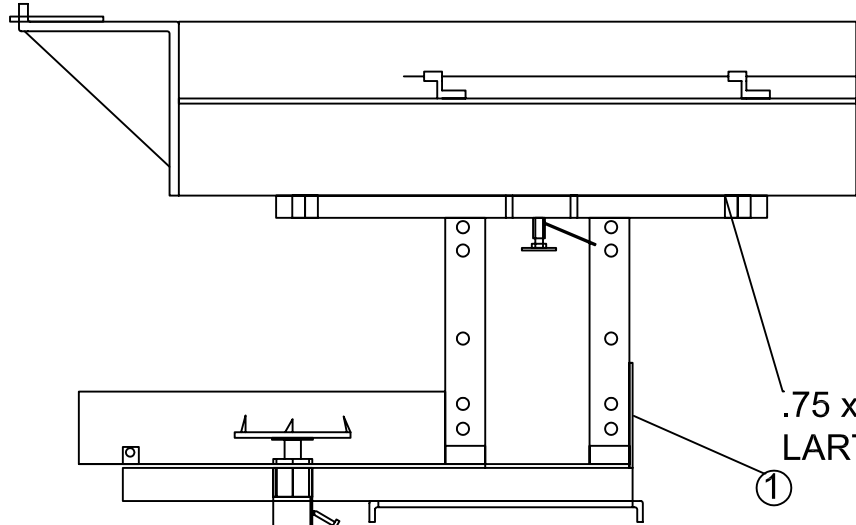
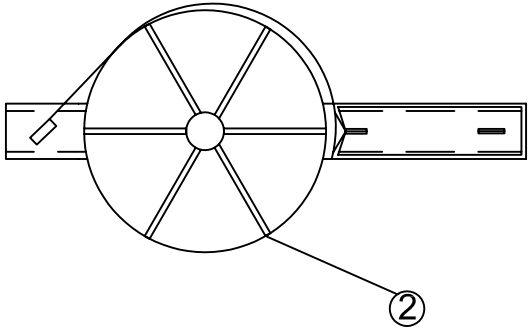


CC-1229-S

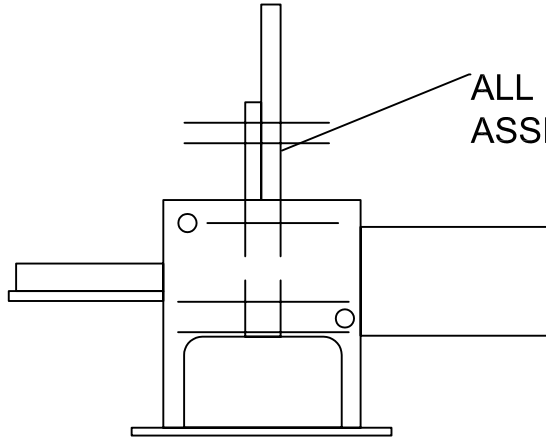
C.U.E. InC
11 Leonberg Township
16066 U.S.A.

PA DEPARTMENT OF TRANSPORTATION							
REVISIONS			SPINNER / SPREADER TAILGATE URETHANE				
NO.	DATE	BY	DRAWN BY	SCALE	DATE	CHK'D BY	
1	06-03-02	DWG	DLW	N/A			EQN-9B
2	05-23-07	CJW					
3					02-03-98	WHM	SHEET 1 OF 1

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



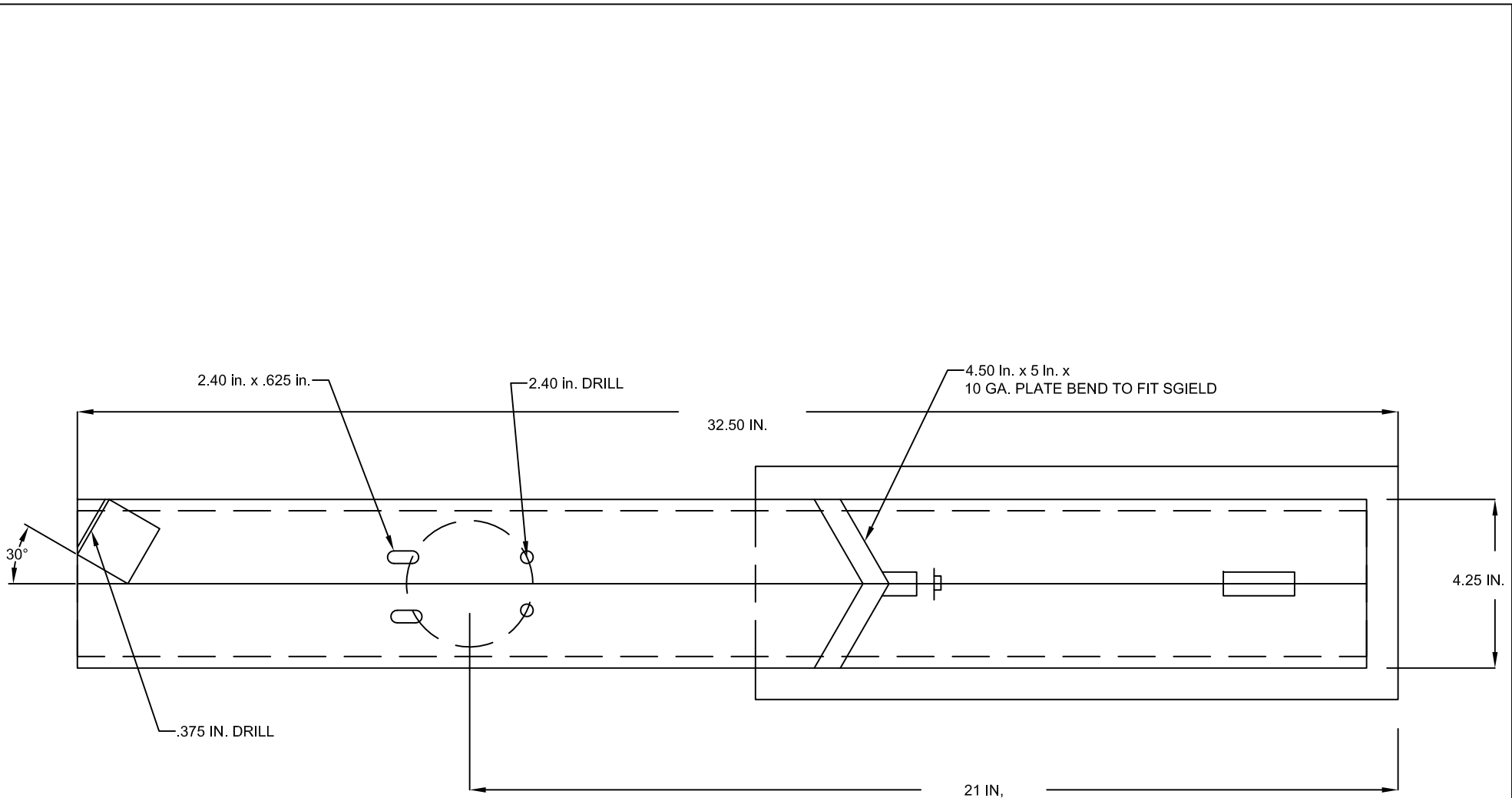
.75 x 23.75 in. LONG (APPROX)
LATERAL ADJUSTMENT STAINLESS STEEL ROD



ALL BAR IN HANGER HINGE
ASSEMBLY .25 IN X 2IN.

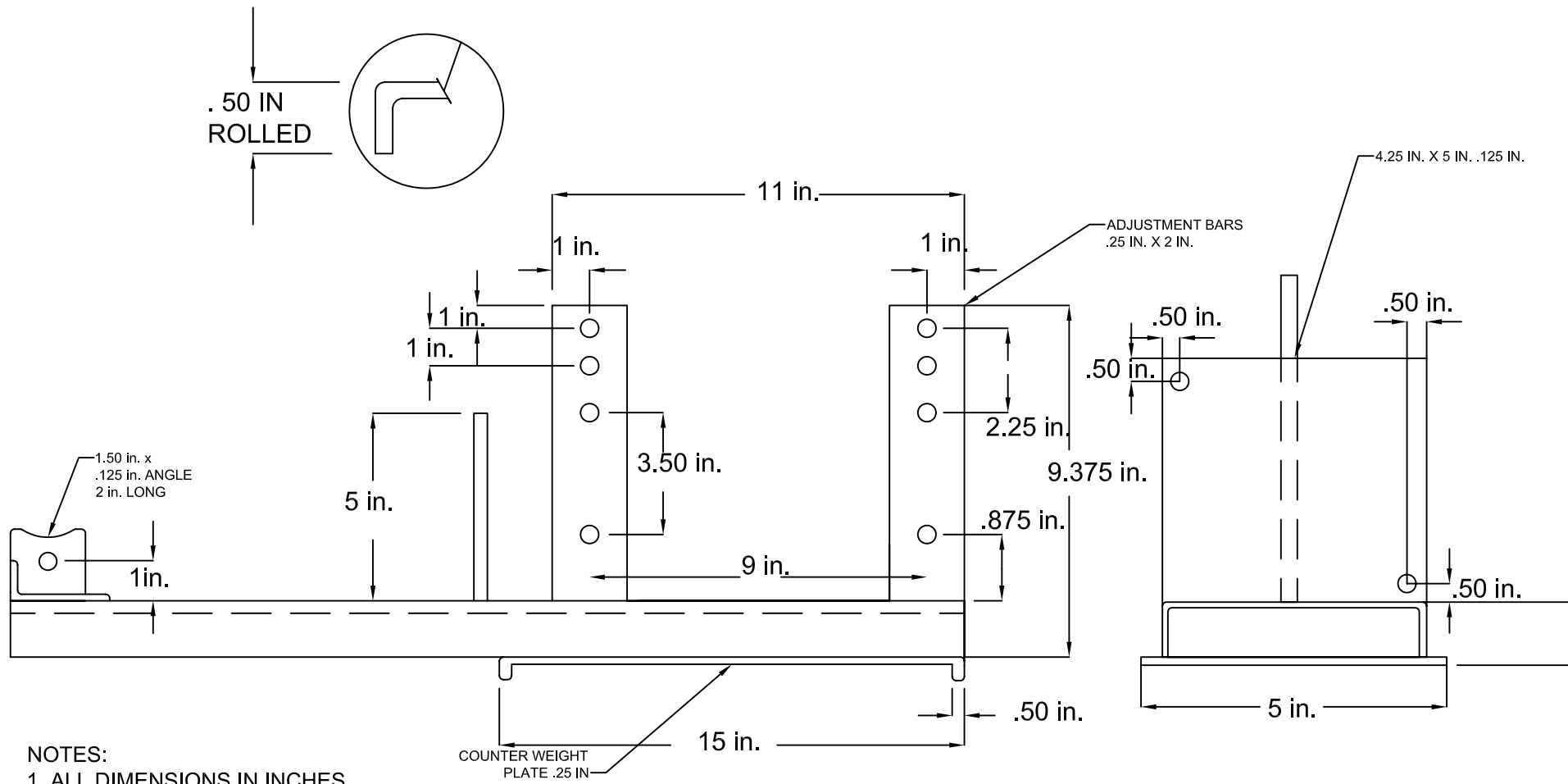
NOTES:
ALL SPINNER PARTS EXCLUDING THE DISC,
MOTOR
AND HUB SHALL BE AISI TYPE 304 STAINLESS
STEEL
ALL DIMENSIONS IN INCHES
ALL ANGLES .1875 IN THICK

PA DEPARTMENT OF TRANSPORTATION					
REVISIONS			SPREADER / SPINNER STAINLESS STEEL		
NO.	DATE	BY			
1	02-17-98	DLW			
2	06-03-02	DWG	DRAWN BY DLW	SCALE N/A	EQN-9C
3	07-26-07	BAG	DATE 02-05-98	CHK'D 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					
1	2-17-98	DLW					
2	06-04-02	DWG	DRAWN BY	DLW	SCALE	N/A	EQN-9C
3	07-26-07	BAG	DATE	02-05-98	CHK'D BY	WHM	SHEET 2 OF 6

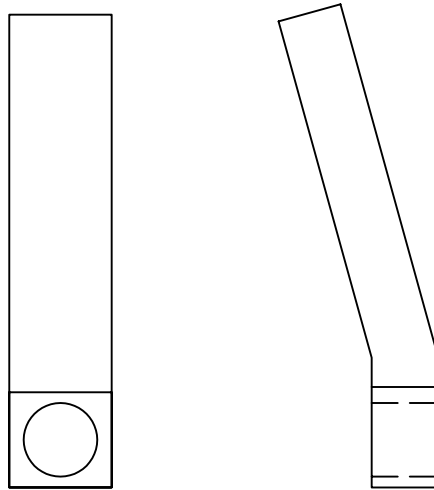


NOTES:

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 COUNTER BALANCE HOUSING
3. STAINLESS STEEL AS PER AISI TYPE 304

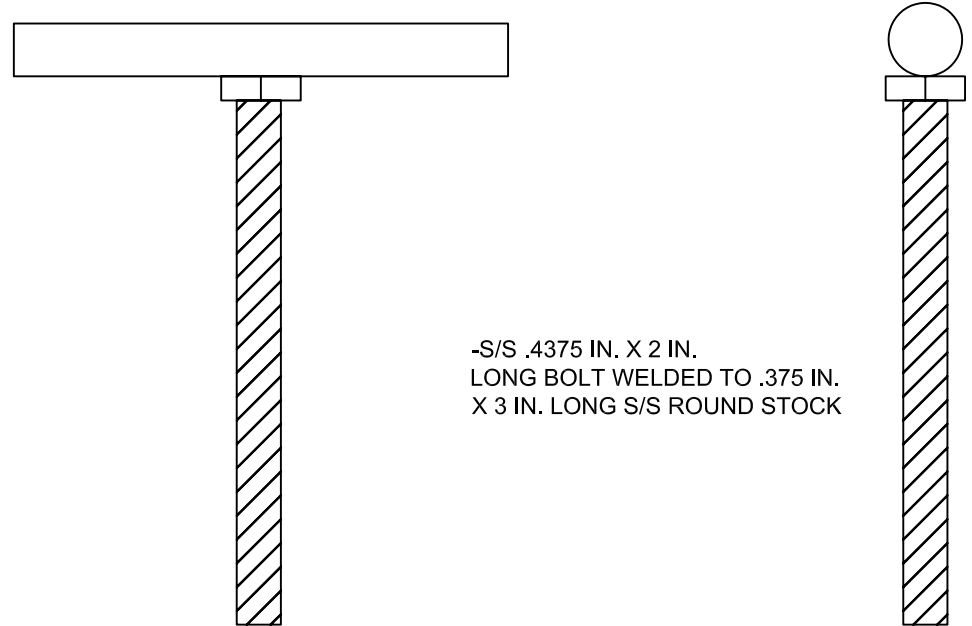
PA DEPARTMENT OF TRANSPORTATION			
REVISIONS			SPREADER / SPINNER STAINLESS STEEL
NO.	DATE	BY	
1	02-17-98	DLW	
2	06-04-02	DWG	
3	07-20-07	BAG	
DRAWN BY		DLW	SCALE
DATE		02-05-98	N/A
CHK'D BY		WHM	EQN-9C
			SHEET 3 OF 6

DETAIL B
LOCK BAR



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

DETAIL C
TEE BOLT

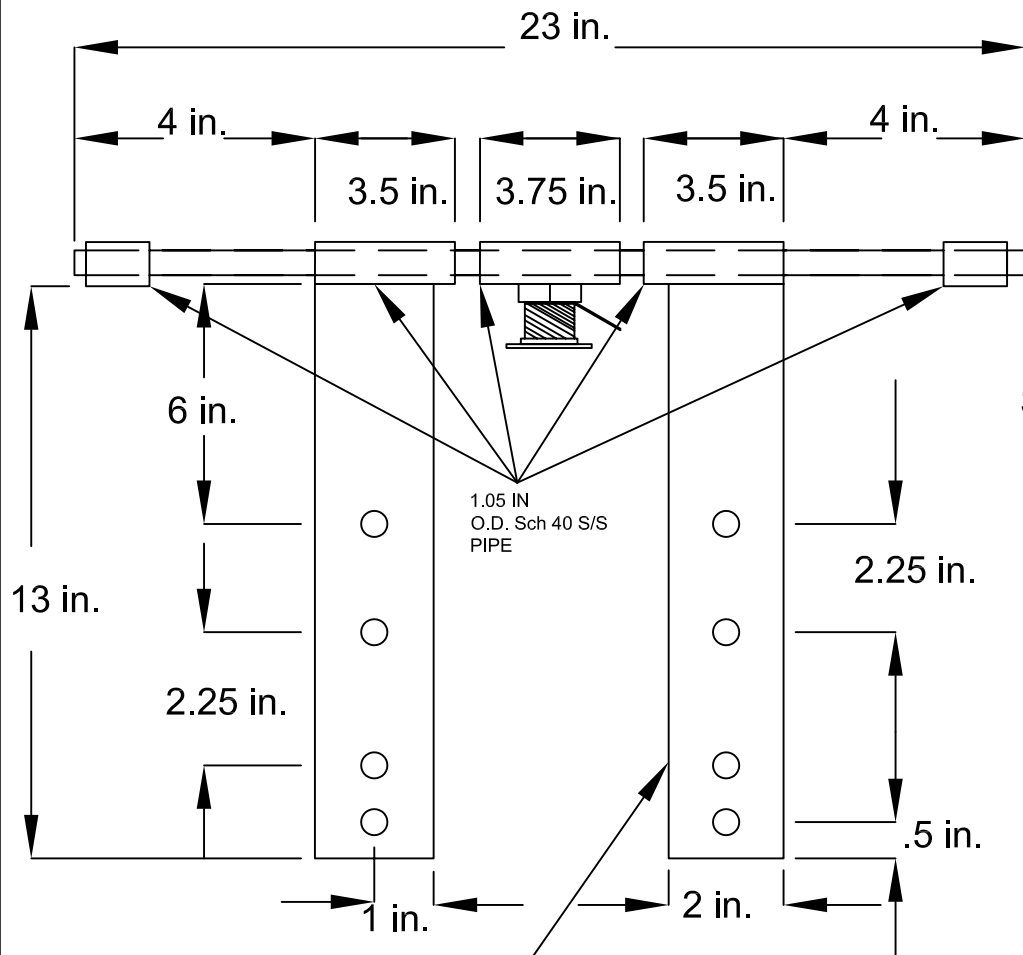


-S/S .4375 IN. X 2 IN.
LONG BOLT WELDED TO .375 IN.
X 3 IN. LONG S/S ROUND STOCK

NOTES:

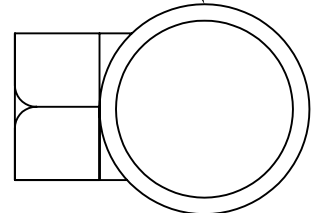
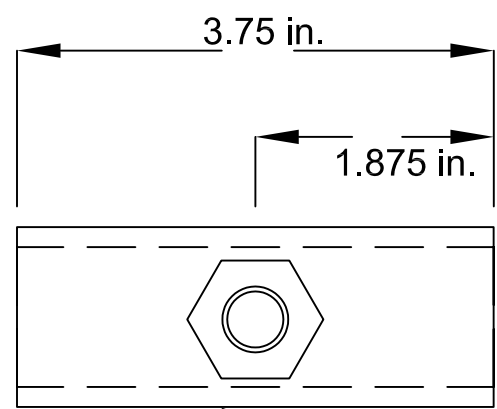
1. ALL DIMENSIONS IN INCHES.
- 2 STAINLESS STEEL AS PER AISI TYPE 304

PA DEPARTMENT OF TRANSPORTATION							
REVISIONS			SPREADER / SPINNER STAINLESS STEEL				
NO.	DATE	BY	DRAWN BY		SCALE	EQN-9C	
1	02-17-98	DLW	DLW		N/A	EQN-9C	
2	02-04-02	DWG	DLW		N/A	EQN-9C	
3	07-26-07	BAG	DATE	02-05-98	CHK'D BY	WHM	SHEET 4 OF 6



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



.4375 IN. DIA. HEX NUT

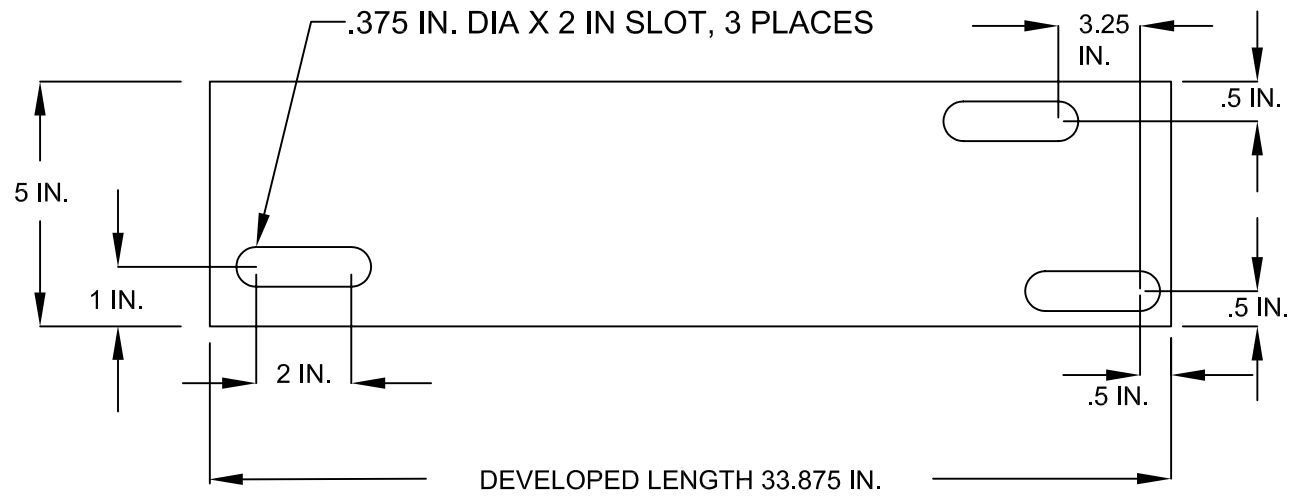
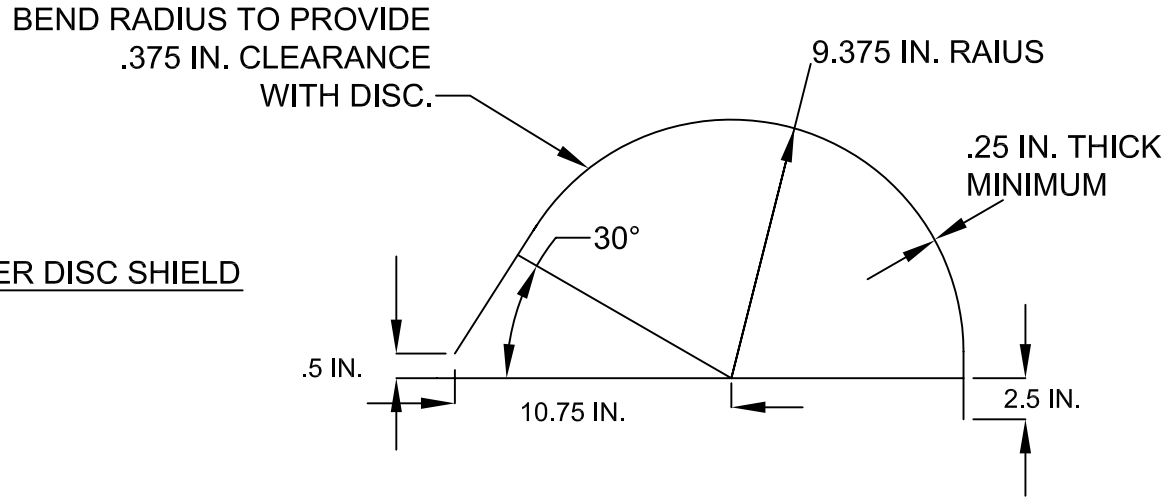
ADJUSTMENT BARS
.25 IN. X 2 IN.

DETAIL A
LATERAL ADJUSTMENT LOCK

- 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	DRAWN BY	DLW	SCALE	N/A	EQN-9C
3	07-26-07	BAG	DATE	02-05-98	CHK'D BY	WHM	SHEET 50F 6

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					
1	02-17-98	DLW					
2	02-04-02	DWG	DRAWN BY	DLW	SCALE	N/A	EQN-9C
3	07-26-07	BAG	DATE	02-05-98	CHK'D BY	WHM	SHEET 6 OF 6

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 PUPPOSE OF THESE SPECIFICAATIONS 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

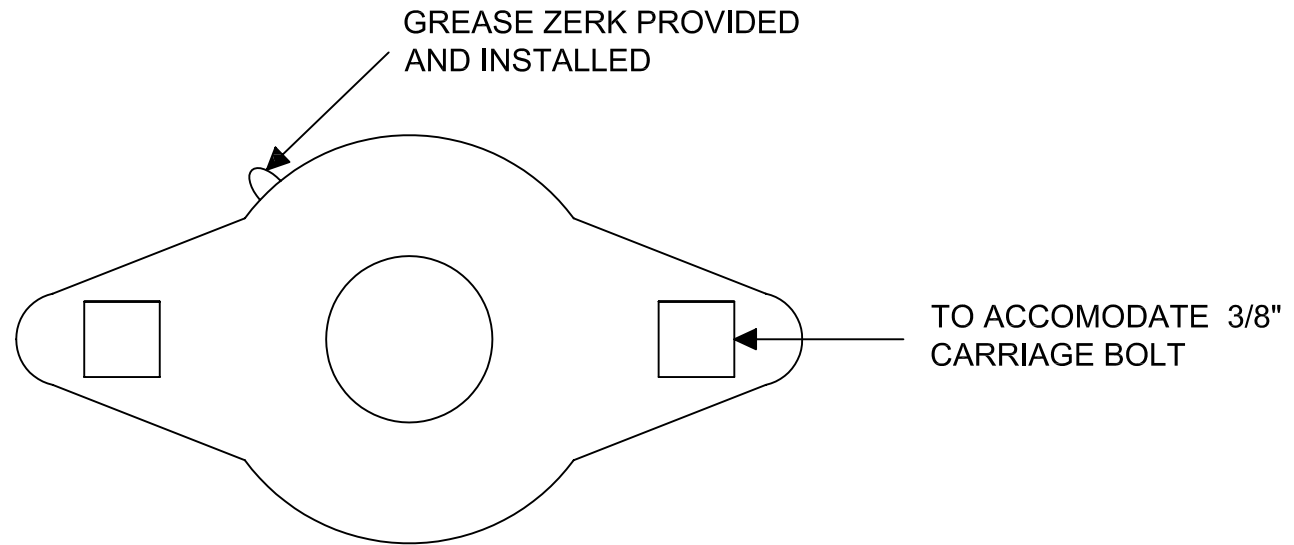
TYPE: SELF-ALIGNING, ANTI-FRICTION, THRUST, RE-LUBE TYPE.

MOUNTING: 2 BOLT UNIT FLANGED UNIT TYPE. SEE DRAWING.

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

MOUNTINGS:

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



SHAFT DIAMETER: 1-1/4"

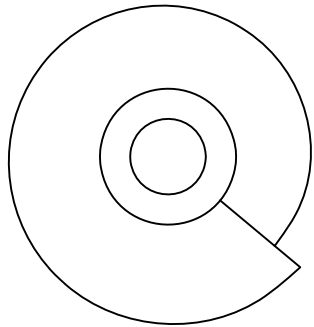
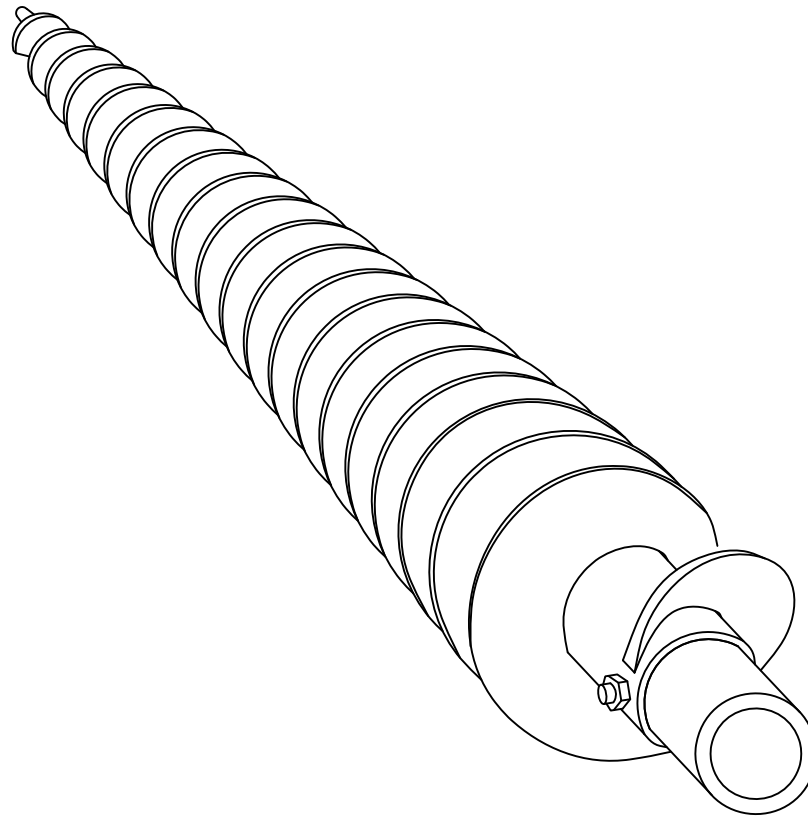
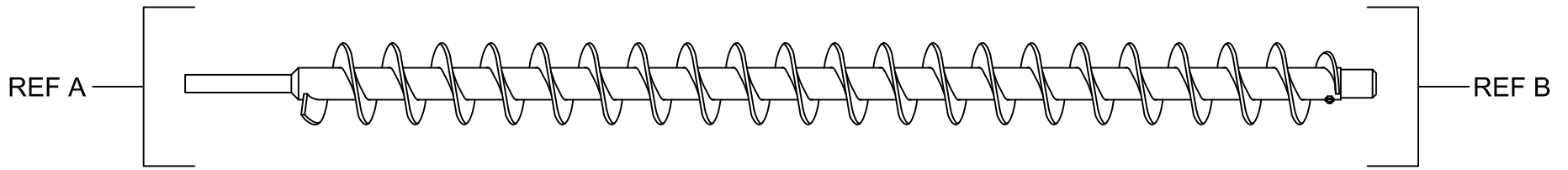
LOCKING: RETAINING COLLAR SHALL BE ECCENTRIC WITH SET SCREW.

HOUSING: CASE, DUCTILE OR MALEABLE IRON.

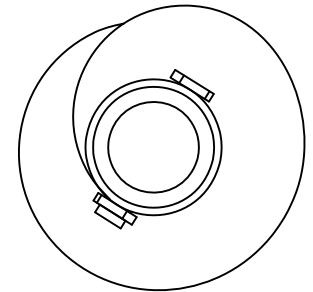
REFERENCE: LINK BELT FXWG 2E2ou, FAFNIR GVFTDS, ROBERTS FBPZ-2OL, BROWNING MODEL #VF2E-120SM, SST MODEL #SAFG 206-20G, IPTCI MODEL SALF 206-20

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

PA DEPARTMENT OF TRANSPORTATION					
REVISIONS			SPREADER BEARING INFORMATION		
NO.	DATE	BY	DRAWN BY	SCALE	EQN-#
1	4-4-07	KNH			
2			DLW	N/A	EQN-# 10
3			DATE 06/26/97	CHK'D BY WHM	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			DRAWN BY	HMR	SCALE N/A	EQN-29
3			DATE	08-08-17	CHK'D BY	SHEET 1 OF 1