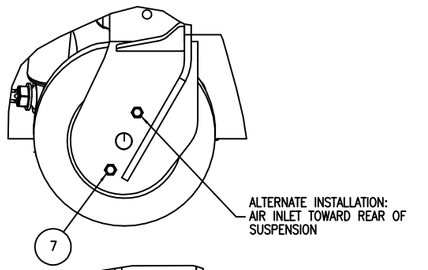
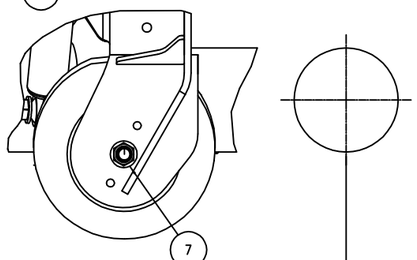
PART NUMBER	REV.
UBL-401	5
UBL-402	5

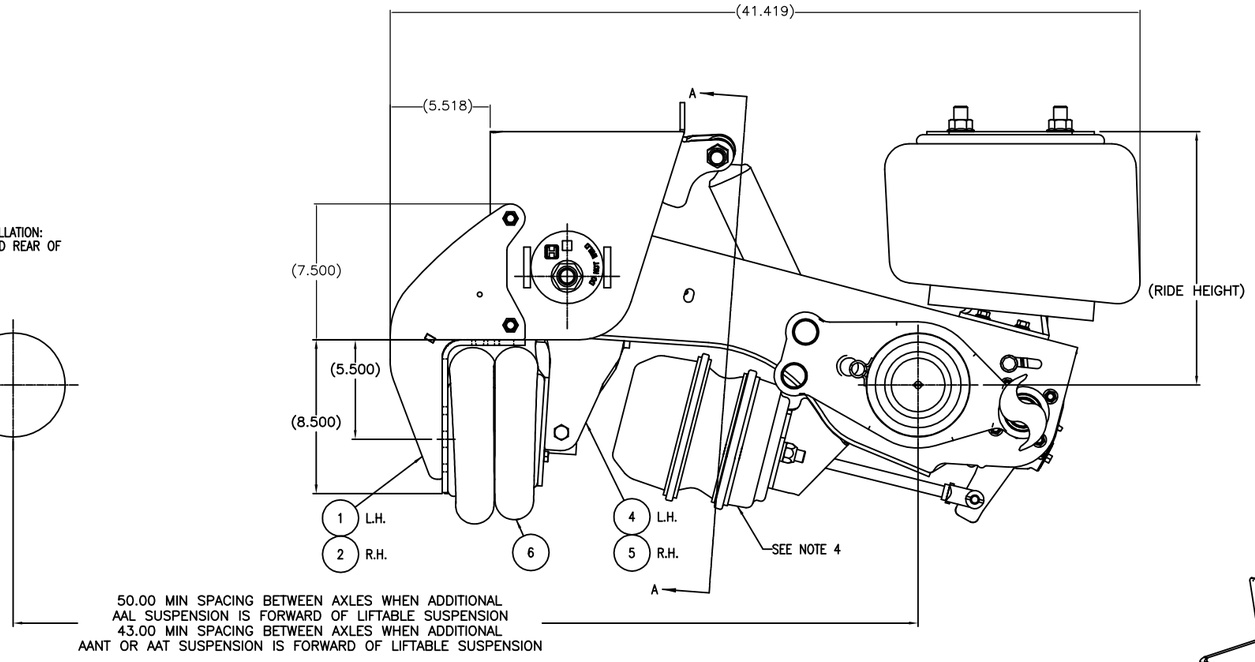
BILL OF MATERIALS: UBL-			401	402
ITEM	PART NUMBER	DESCRIPTION	QTY.	QTY.
1	C-32038-1C	FRONT BRACKET ASSEMBLY, L.H.	1	–
1	C-32038-1GV	FRONT BRACKET ASSEMBLY, L.H.	–	1
2	C-32038-2C	FRONT BRACKET ASSEMBLY, R.H.	1	–
2	C-32038-2GV	FRONT BRACKET ASSEMBLY, R.H.	–	1
3	C-28614	REAR BRACKET ASSEMBLY	2	2
4	C-28617-1	LIFT BRACKET, L.H.	1	1
5	C-28617-2	LIFT BRACKET, R.H.	1	1
6	C-23114	AIR SPRING	2	2
7	A-30634-1	LIFT ASSEMBLY BOLT KIT	1	1
8	*DWG D-33373	UBL-4XX LIFT KIT DRAWING	1	1
9	*T91001	UBL INFORMATION AND INSTALLATION	1	1

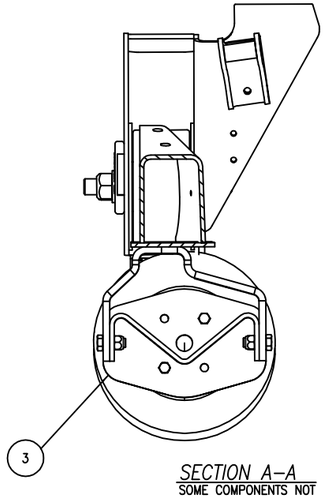
⑤ ⑤

* NOT SHOWN

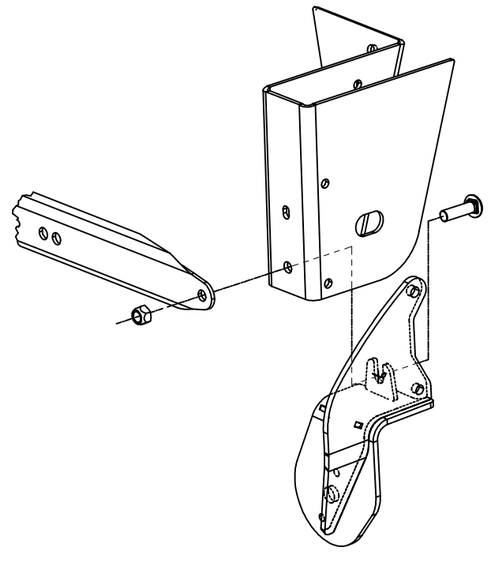








SECTION A–A
SOME COMPONENTS NOT
SHOWN FOR CLARITY.



VIEW B–B
SOME COMPONENTS NOT
SHOWN FOR CLARITY.

NOTES:

1. 14" RIDE HEIGHT SHOWN. INSTALLATION IS SAME FOR ALL RIDE HEIGHTS.
2. WEIGHT: 59.32 LB.
   INCLUDES .25 LB FOR ATTACHMENT WELDS.
3. WELDING PARAMETERS:
   NOTE: A WELDER QUALIFIED IN 2G POSITION PER ANSI/AWS D1.1–94 SECTION 5 PART C "WELDER QUALIFICATIONS" MUST PERFORM THE WELDING.

   FOR ALL WELDED CONNECTIONS, USE THE FOLLOWING PARAMETERS TO ACHIEVE SPRAY ARC TRANSFER:

   SURFACE PREP: THE ITEMS TO BE WELDED MUST BE AT A MINIMUM TEMPERATURE OF 60°F (16°C) AND MUST BE FREE OF MOISTURE, DIRT, SCALE, PAINT AND GREASE.

   STANDARD ELECTRODE: AWS E–7018 (OVEN DRIED); .125 DIAMETER; 120–140 AMPS DC; ELECTRODE POSITIVE

   .156 DIAMETER; 120–160 AMPS DC; ELECTRODE POSITIVE

SETTINGS FOR .045 DIAMETER WIRE

STANDARD WIRE:	AWS ER–70S–6; .045 DIAMETER
OPTIONAL WIRE:	AWS ER–70S–3; .045 DIAMETER
VOLTS:	26 – 30 DCRP
CURRENT:	275 – 325 AMPS
WIRE FEED SPEED:	380 – 420 IPM
ELECTRODE EXTENSION:	3/4 – 1 INCH
GAS:	86 PERCENT ARGON AND 14 PERCENT CO2 AT 30 TO 35 CFH

SETTINGS FOR .035 DIAMETER WIRE

STANDARD WIRE:	ER80S–D2 0.035" DIAMETER
VOLTS:	25 – 27.5 DCRP
CURRENT:	160 – 180 AMPS
WIRE FEED SPEED:	390 – 425 IPM
ELECTRODE EXTENSION:	3/4 – 1 INCH
GAS:	85 PERCENT ARGON AND 15 PERCENT CO2 AT 35 TO 45 CFH

NOTE: ANY DEVIATION FROM THESE WELDING PARAMETERS MUST BE APPROVED IN WRITING BY HENDRICKSON TRAILER COMMERCIAL VEHICLE SYSTEMS.

WELD DIRECTION:
STOP START

4. BRAKE CHAMBERS, IF ALREADY MOUNTED, MUST BE REMOVED BEFORE INSTALLING LIFT KIT.
5. BOLT–ON FRONT BRACKET ASSEMBLY CAN BE USED IN CONJUNCTION WITH BOLT–ON LATERAL BRACE. IN SUCH CASES, THE FRONT MOUNTING BOLT (SHOWN IN STEP 4, PAGE 3) IS USED FOR ATTACHING BOTH UBL BRACKET AND LATERAL BRACE. FOR LATERAL BRACES OTHER THAN THOSE SUPPLIED BY HENDRICKSON, CARE MUST BE TAKEN NOT TO OBSTRUCT THE FRONT MOUNTING HOLE. SEE VIEW B–B.
6. IF POSSIBLE, IT IS HIGHLY RECOMMENDED THAT THE LIFT BRACKET WELDING SHOWN ON PAGE 2 BE PERFORMED WITH THE SUSPENSION INVERTED, TO ALLOW THE WELDS TO BE APPLIED IN THE DOWNHAND POSITION.

H. HENDRICKSON
TRAILER COMMERCIAL VEHICLE SYSTEMS
2070 INDUSTRIAL PLACE S.E., CANTON, OH 44707–2600 U.S.A.

UNLESS OTHERWISE NOTED: TOLERANCES ARE: DIMENSIONS ARE: INCHES
X: ± .1
XX: ± .06
XXX: ± .030
ANGULAR: ± .05°
3RD ANGLE PROJECTION
DIMENSIONS ADHERE TO ANSI Y14.5M–1982

REV.	ECN NO.	BY	DATE
5	33569	JAR	03/06/20
4	31103	PK	02/14/18
3	22780	DJD	01/22/14
2	22096	DJD	04/09/13

DRAWN BY K.REED 18–JUN–12
CHK'D BY C. RADCLIFF
APP'D BY E. FABRIS
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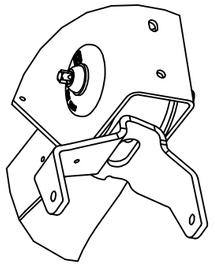
UBL–401 AND–402
LIFT KIT FOR AANT

P
PRODUCTION

UNDER BEAM LIFT

SCALE .25=1.00 | SIZE D | PAGE 1 OF 3
DRAWING No. D–33373

LIFT BRACKET INSTALLATION



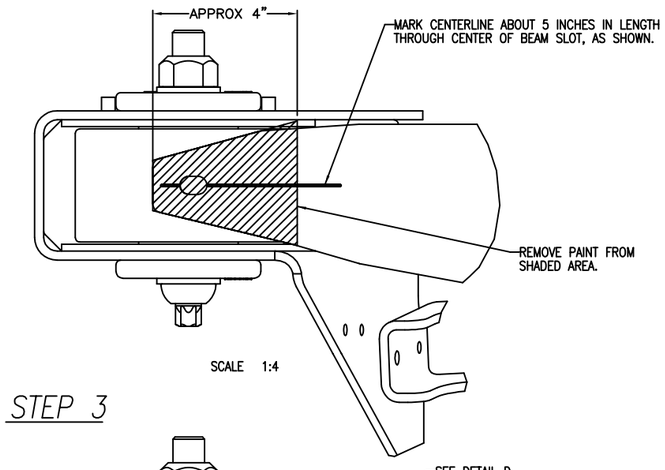
ASSEMBLY PROCEDURE

*UBL CANNOT BE INSTALLED WITH SUSPENSION ASSEMBLED TO FRAME BRACKET (UNITIZED), AS EXCESSIVE WELDING HEAT WILL DAMAGE THE PIVOT BUSHING. SUSPENSION MUST BE DISASSEMBLED FROM FRAME BRACKETS BEFORE WELDING.

1. *PREPARING THE BEAM SURFACE.*
   REMOVE PAINT FROM UNDERSIDE OF TRAILING ARM BEAM AS INDICATED BY THE SHADED AREA.
2. *MARKING THE CENTERLINE.*
   MARK OR SCRIBE A LINE THROUGH THE CENTER OF THE SMALL OVAL SLOT ON THE UNDERSIDE OF THE TRAILING ARM BEAM, AS SHOWN. THE LINE SHOULD BE AT LEAST 5 INCHES IN LENGTH AND PARALLEL TO THE OUTBOARD SIDE OF THE BEAM.
3. *POSITIONING THE LIFT BRACKET.*
   LOCATE LIFT BRACKET (ITEM 4 – L.H., ITEM 5 – R.H.) TO UNDERSIDE OF BEAM, ALIGNING TAB AT REAR OF LIFT BRACKET TO MARKED LINE. MAKE SURE BRACKET SLOT IS PARALLEL TO MARKED LINE, AND FRONT OF THE BRACKET SLOT LINES UP WITH THE FRONT OF THE BEAM SLOT. TACK INTO PLACE.
4. *FILLING THE SMALL SLOT.*
   PRIOR TO MAKING THE 3–PASS WELD, COMPLETELY FILL THE SMALL SLOT ON THE UNDERSIDE OF THE BEAM.
5. *WELDING THE LIFT BRACKET.*
   COMPLETE ATTACHMENT OF LIFT BRACKET BY WELDING THE LARGE OVAL SLOT IN THE BRACKET TO THE BEAM. THIS IS A 3–PASS WELD. ALL THREE PASSES MUST BE UNINTERRUPTED AROUND THE FRONT OF THE SLOT, AS INDICATED IN "STEP 5" ILLUSTRATION. NO WELDING IS REQUIRED OUTSIDE OF THE SLOT AREA.
6. ASSEMBLING AIR SPRING MOUNTING PLATE
   INSTALL REAR BRACKET ASS'Y (ITEM–3) USING (4) 1/2–13 X 1.25 HEX CAP SCREWS AND (4) 1/2–13 NUTS AND TIGHTEN TO SPECIFIED TORQUE.

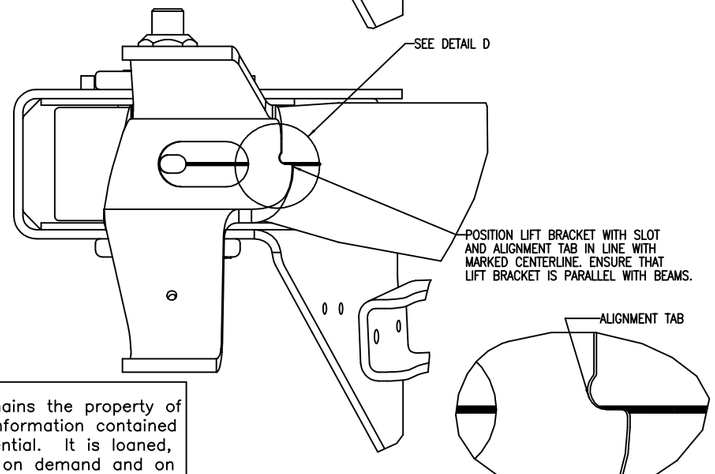
SEE PAGE 3 FOR FRONT BRACKET ASSEMBLY INSTRUCTIONS.

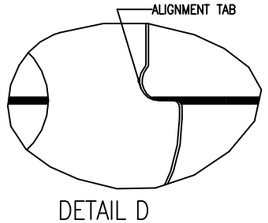
STEPS 1 & 2



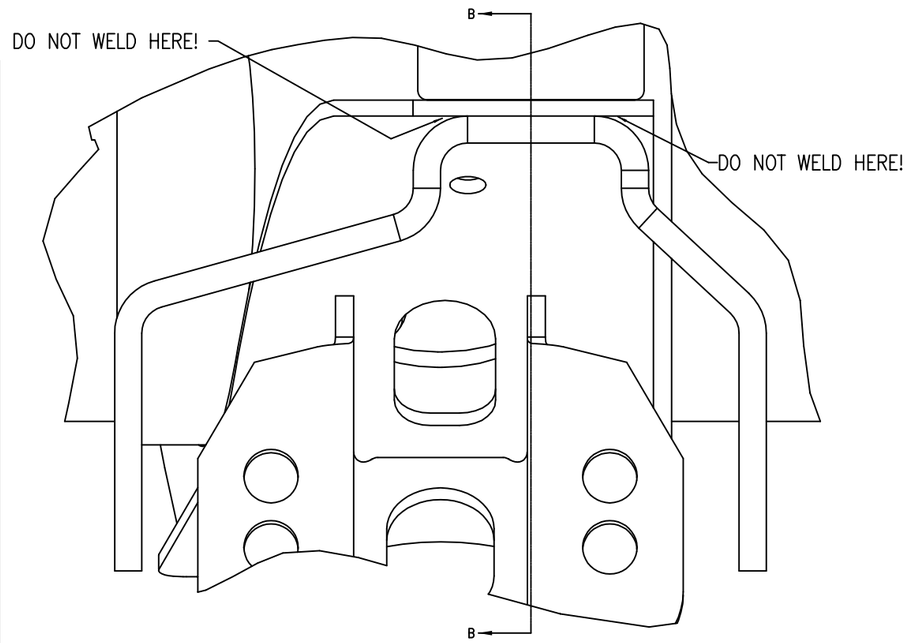
SCALE 1:4

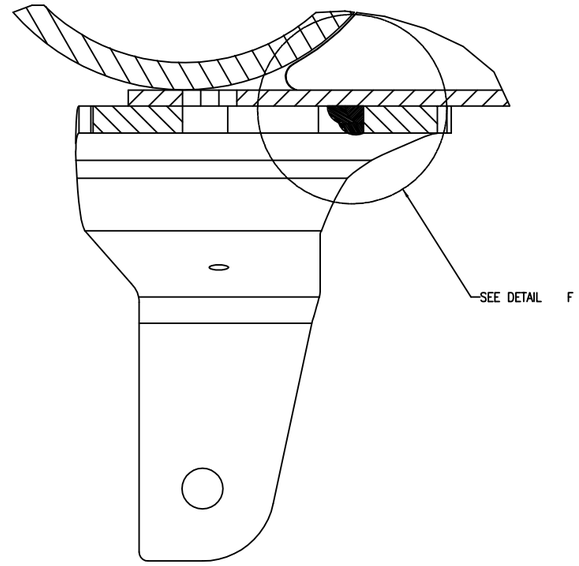
STEP 3





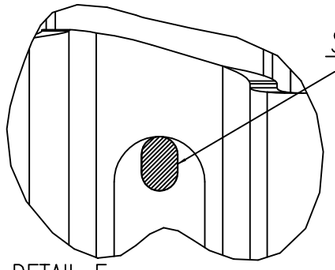
DETAIL D
ALIGNMENT TAB
SCALE 3:2





SECTION B–B

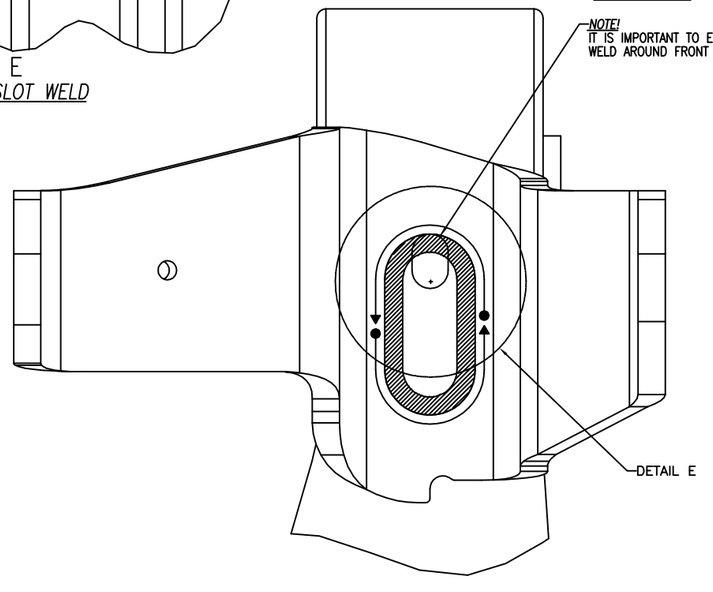
STEP 4

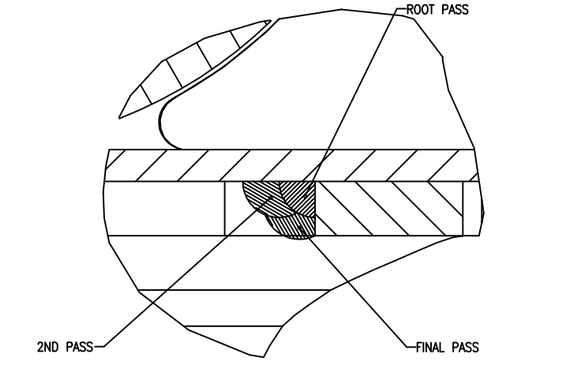


DETAIL E
SMALL SLOT WELD
SCALE 1:1

FRAME BRACKET, BRAKES, AND ASSOCIATED COMPONENTS NOT PICTURED FOR CLARITY.
SCALE 1:1

STEP 5

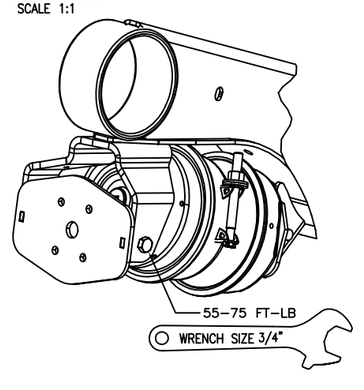




DETAIL F
TRIPLE–PASS WELD SEQUENCE
SCALE 2:1

STEP 6

SCALE 1:1



H. HENDRICKSON TRAILER COMMERCIAL VEHICLE SYSTEMS 2070 INDUSTRIAL PLACE S.E., CANTON, OH 44707–2600 U.S.A.	UNLESS OTHERWISE NOTED: TOLERANCES ARE: DIMENSIONS ARE: INCHES .X: ± .1 .XX: ± .06 .XXX: ± .030 ANGULAR: ± .05° 3RD ANGLE PROJECTION DIMENSIONS ADHERE TO ANSI Y14.5M–1982	5	33569	JAR	03/06/20	DRAWN BY K.REED	18–JUN–12
		4	31103	PK	02/14/18	CHK'D BY C. RADCLIFF	THIS DRAWING IS THE CONFIDENTIAL PROPERTY OF HENDRICKSON
		3	22780	DJD	01/22/14	APP'D BY E. FABRIS	
		2	22096	DJD	04/09/13		
		REV.	ECN NO.	BY	DATE		

UNDER BEAM LIFT

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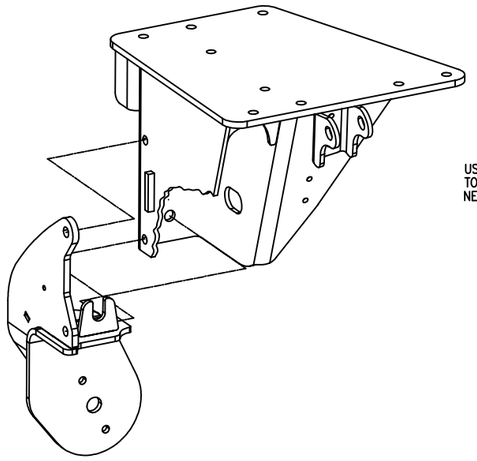
PRODUCTION

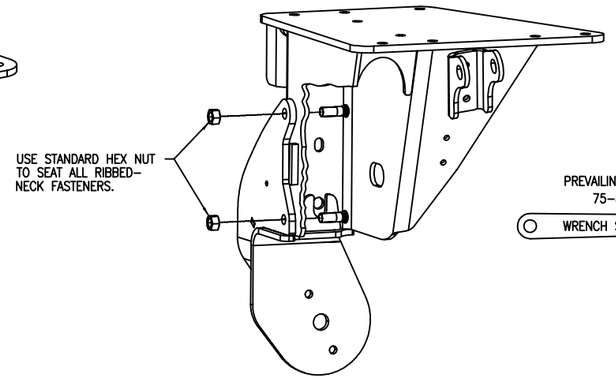
SCALE .25=1.00 | SIZE D | PAGE 2 OF 3

DRAWING No. D–33373

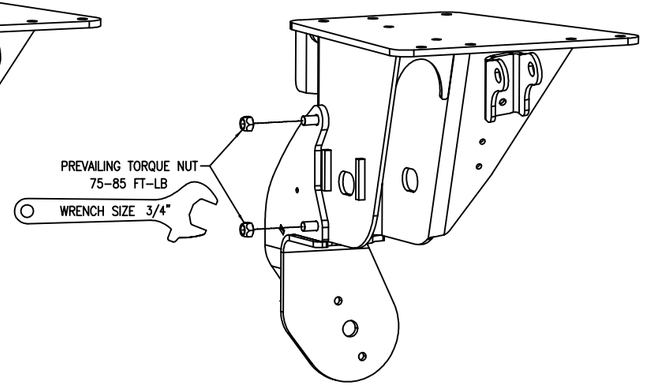
STEP 1



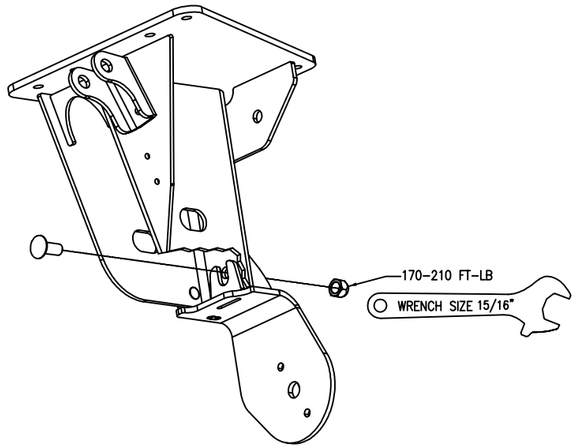
STEP 2



STEP 3



STEP 4



FRONT BRACKET ASSEMBLY PROCEDURE

** FRONT BRACKET MUST BE IN PLACE BEFORE SEATING THE RIBBED–NECK BOLTS. BRACKET CANNOT BE INSTALLED IF BOLTS ARE INSTALLED PRIOR TO POSITIONING OF THE BRACKET.

1. *FITTING BRACKET INTO PLACE.*
SLIDE FRONT BRACKET INTO PLACE, MAKING SURE THAT ALL MOUNTING HOLES IN UBL BRACKET ALIGN WITH HOLES IN FRAME BRACKET.

2. *INSERTING SIDE MOUNTING BOLTS.*
HOLDING THE FRONT BRACKET IN PLACE, PUSH RIBBED NECK FASTENERS INTO MOUNTING HOLES FROM INSIDE OF FRAME BRACKET. INSERT AND TIGHTEN THE PROVIDED 1/2–13 STANDARD (NON–LOCKING) HEX NUT ON EACH RIBBED–NECK FASTENER. AS THE NUT IS TIGHTENED, THE FASTENER WILL BE DRAWN INTO THE FRAME BRACKET MOUNTING HOLES. TIGHTEN THE NUT UNTIL THE HEAD OF THE FASTENER IS FLUSH WITH THE INSIDE OF THE HANGER.
(HEX NUT CAN BE REUSED TO SEAT ALL FOUR RIBBED–NECK FASTENERS. DO NOT USE PREVAILING TORQUE NUTS TO SEAT RIBBED–NECK BOLTS)

3. *TIGHTENING SIDE MOUNTING BOLTS.* PLACE 1/2–13 PREVAILING TORQUE NUTS ONTO RIBBED–NECK FASTENERS AND TORQUE TO SPECIFIED VALUE.

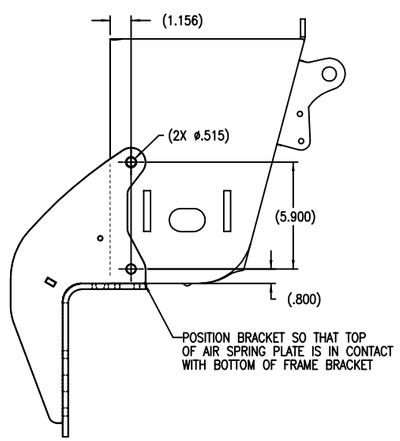
4. *INSTALLING FRONT MOUNTING BOLT.* PLACE 5/8–11 X 1.50 CARRIAGE BOLT THROUGH FRONT MOUNTING HOLE WITH THE BOLT HEAD ON THE INSIDE OF THE FRAME BRACKET (NEAREST THE PIVOT BUSHING). HOLD CARRIAGE BOLT IN HOLE AND PLACE 5/8–11 PREVAILING TORQUE HEX NUT ONTO BOLT AND TORQUE TO SPECIFIED VALUE

5. *AIR SPRING ASSEMBLY.* ASSEMBLE THE AIR SPRING WITH THE AIR INLET FACING TO THE FRONT OR REAR, DEPENDING ON AIR LINE ORIENTATION PREFERENCE. TIGHTEN THE 3/4–16 FLANGE NUT AND 3/8–16 X .88 BOLTS TO SPECIFIED TORQUES.

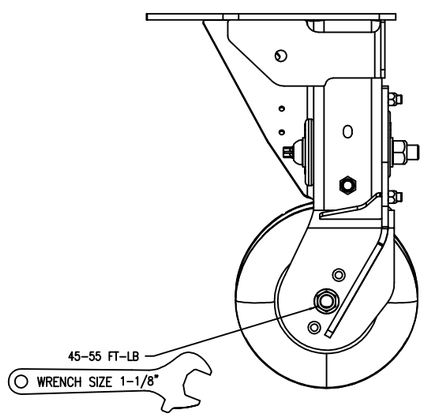
MODIFICATIONS NECESSARY IF FRAME BRACKETS ARE NOT EQUIPPED WITH MOUNTING HOLES

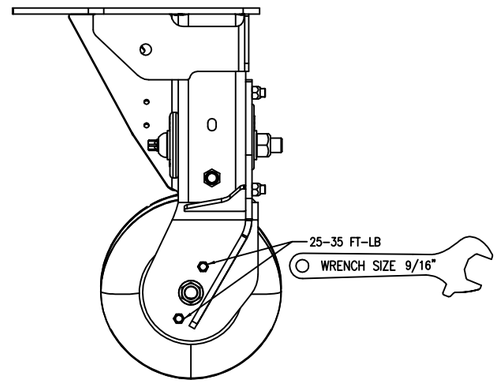
1. POSITION FRONT LIFT BRACKET ONTO SUSPENSION FRAME BRACKET.
2. OUTBOARD HOLES: USING TRANSFER PUNCH, CENTER PUNCH TO LOCATE CENTER OF FRONT LIFT BRACKET HOLES ONTO THE OUTBOARD SIDE OF THE SUSPENSION FRAME BRACKET.
3. DRILL PILOT HOLES, SIZE OPTIONAL.
4. DRILL FINISH HOLES USING 33/64" DRILL (.515" DIA.)
5. FRONT HOLE: CENTER PUNCH AT THIS LOCATION, PILOT DRILL, AND FINISH DRILL USING A 41/64" DRILL (.640" DIA.)
6. FINISH: IF FRAME BRACKETS HAVE BEEN GALVANIZED, SURFACE OF DRILLED HOLES WILL NEED TO BE SUITABLY RECOATED.

HOLE LOCATIONS



STEP 5





ALTERNATE INSTALLATION:
AIR INLET TOWARD REAR OF SUSPENSION

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DRAWN BY K.REED
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18–JUN–12

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PAGE 3 OF 3
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