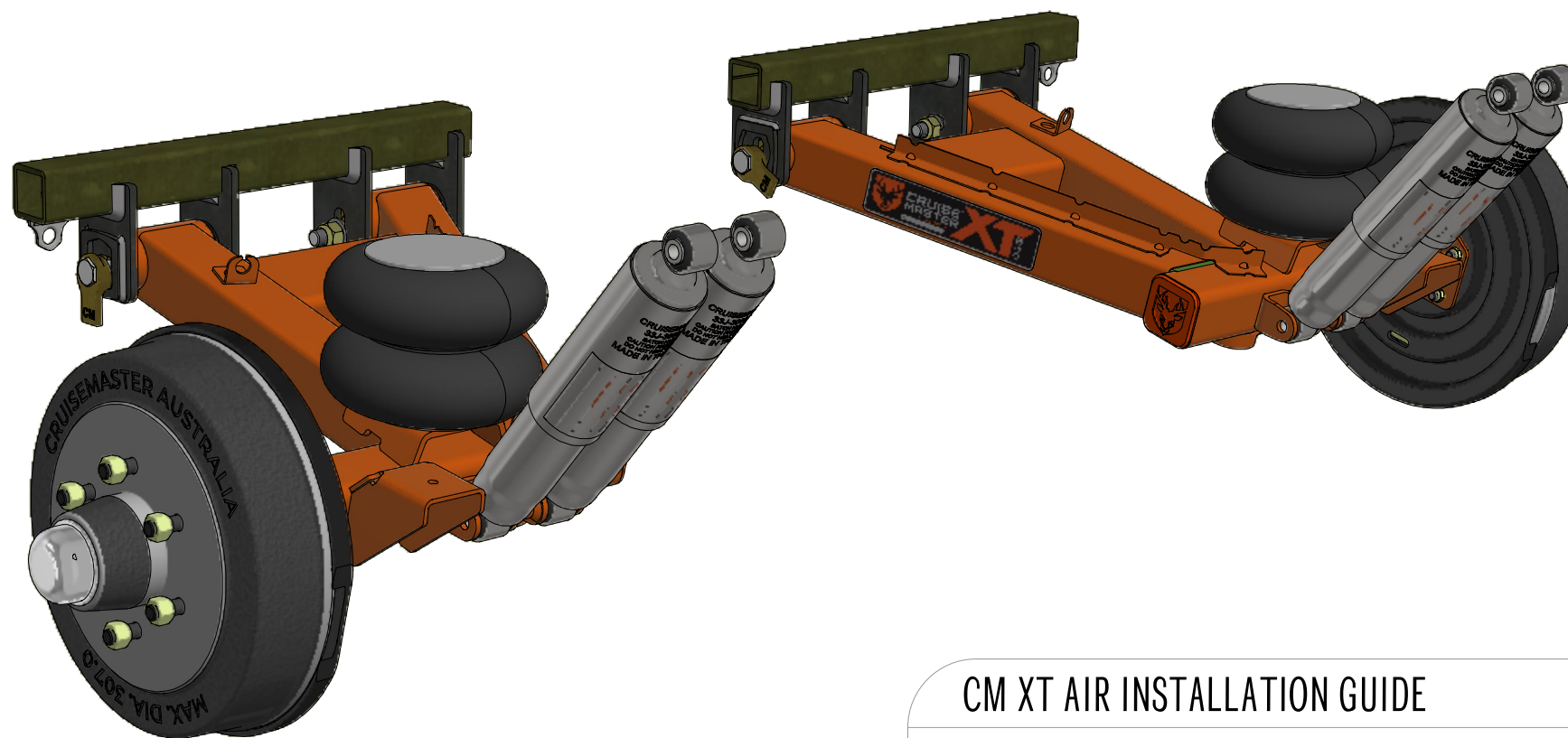




## CHASSIS PREPARATION AND SUSPENSION INSTALLATION GUIDE

- 2. LAYOUT
- 3. WELDING
- 4. ASSEMBLY
- 5. ALIGNMENT
- 6. PARTS LIST



REV	DESCRIPTION	ECN	NAME	DATE
3	Update air bracket model	2030	BM	27/07/2021
2	Correct notes and format	1706	BM	08/09/2020
1	Release for Production	1706	BM	03/09/2020

CM XT AIR INSTALLATION GUIDE

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33XT AIR

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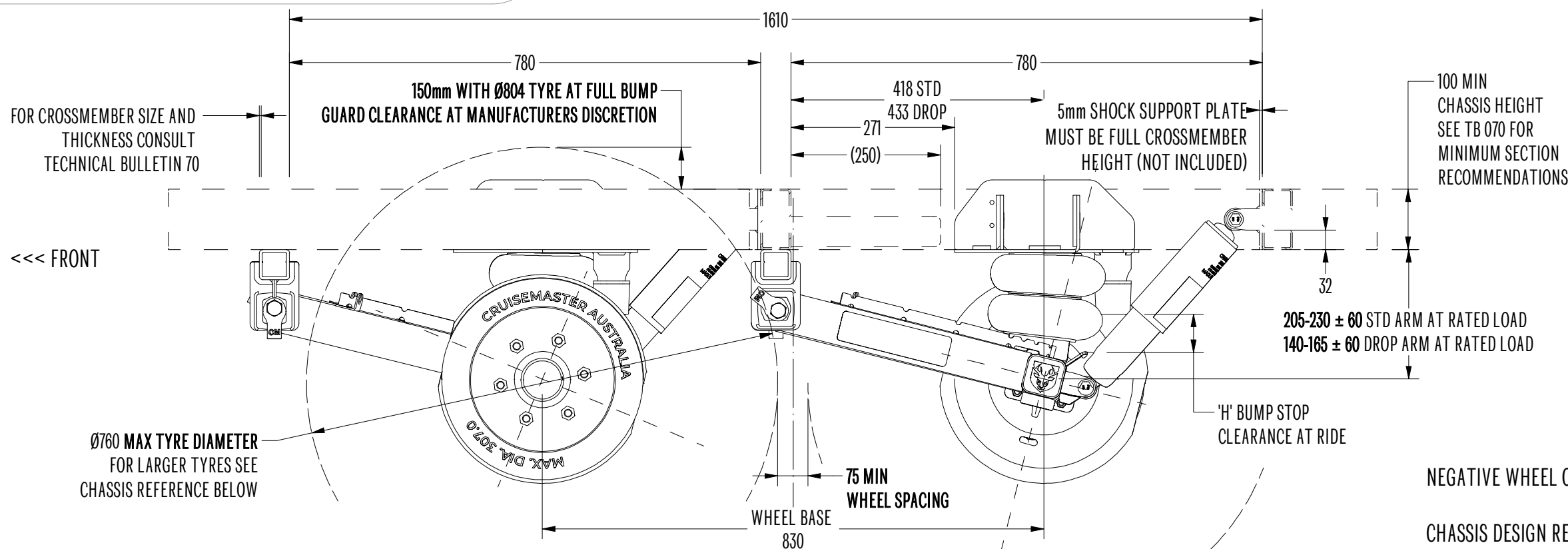
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# 2 - LAYOUT



SPRING	BUMP STOP 'H'
AB 0121-V	65
AB 0136-V	75
AB 0140-V	85

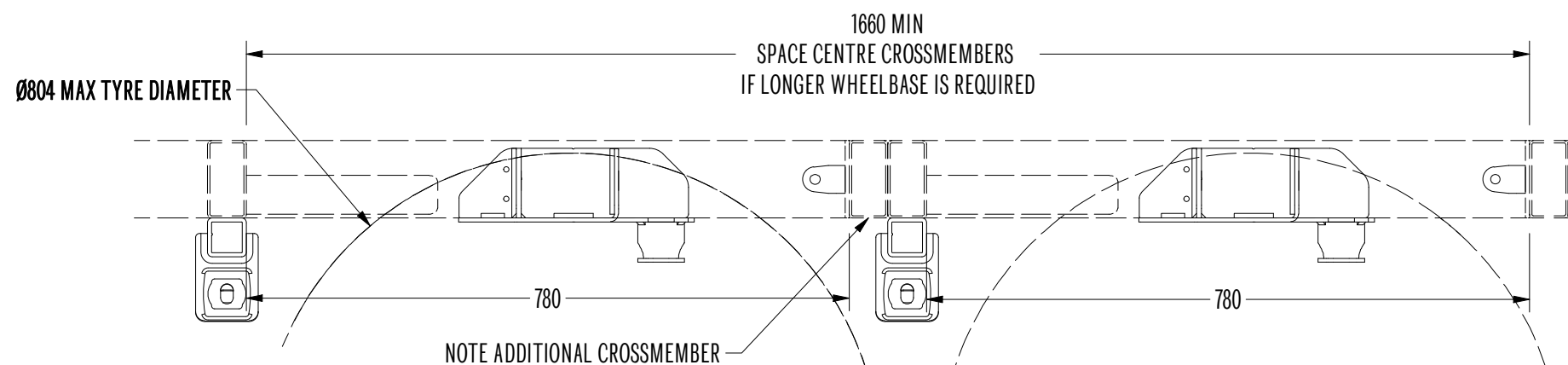
NEGATIVE WHEEL OFFSET NOT ALLOWED

CHASSIS DESIGN RESPONSIBILITY LIES WITH MANUFACTURER. CONTACT CRUISEMASTER ENGINEERING FOR DESIGN ADVICE

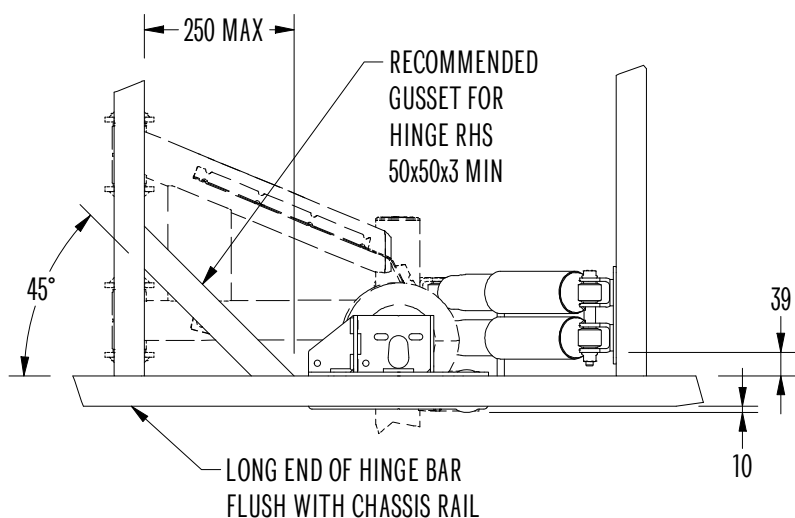
**MINIMUM OUTER CHASSIS RAIL WIDTH 1150mm.**  
CROSSMEMBERS AND OUTRIGGERS MUST BE FULL CHASSIS RAIL HEIGHT

**NOTE FOR TANDEM AXLES**  
THIS IS A CLOSE COUPLED, NON-LOAD SHARING SUSPENSION. ENSURE THAT THE LOAD ON THE AXLE GROUP DOES NOT EXCEED THE REQUIREMENTS OF THE NATIONAL CODE OF PRACTICE (VSB 1 - BUILDING SMALL TRAILERS)

**LUBRICATION**  
GREASE BORE AND FLANGE OF POLYURETHANE BUSHES DURING INSTALLATION AND REGULARLY DURING SERVICE USING AUTOMOTIVE BEARING GREASE. INJECT THROUGH GREASE NIPPLE UNTIL GREASE STARTS COMING OUT BETWEEN HINGE AND BUSH.



LONG WHEELBASE CHASSIS DETAIL



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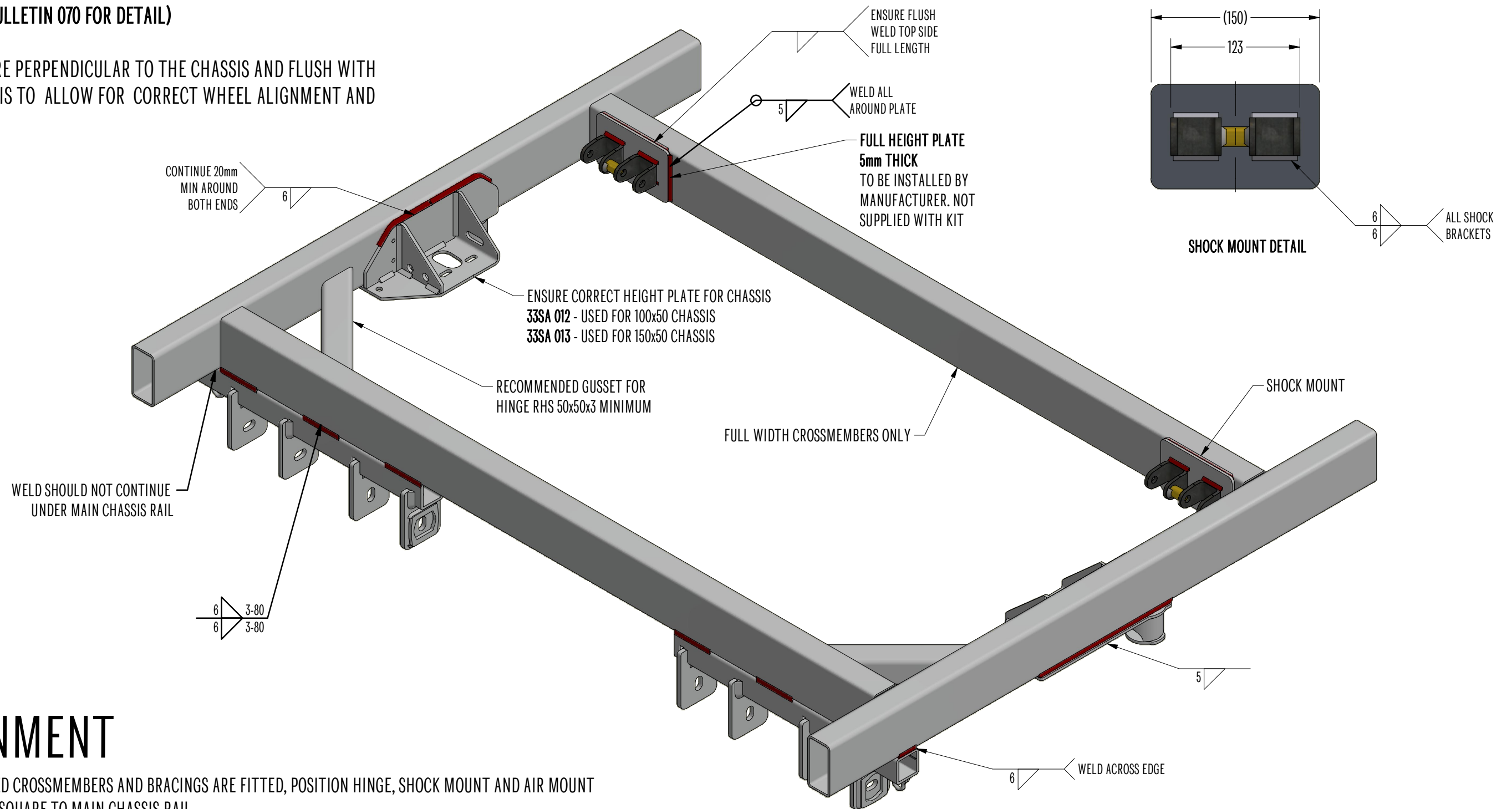


# 3 - WELDING - AIR



ALL CHASSIS RAILS AND SUPPORTING CROSSMEMBER SECTIONS MUST BE OF SUFFICIENT STRENGTH TO SUPPORT THE TRAILER AT MAXIMUM LOAD (SEE TECHNICAL BULLETIN 070 FOR DETAIL)

ENSURE HINGES ARE PERPENDICULAR TO THE CHASSIS AND FLUSH WITH OUTSIDE OF CHASSIS TO ALLOW FOR CORRECT WHEEL ALIGNMENT AND ADJUSTMENT



## 1. ALIGNMENT

ENSURE ALL REQUIRED CROSSMEMBERS AND BRACINGS ARE FITTED, POSITION HINGE, SHOCK MOUNT AND AIR MOUNT  
ENSURE HINGES ARE SQUARE TO MAIN CHASSIS RAIL .

## 2. HINGES

WELD HINGES TO CROSSMEMBERS AS SPECIFIED

## 3. SHOCK AND AIR MOUNTS

ENSURE SHOCK AND AIR MOUNTS ARE FITTED AS SHOWN

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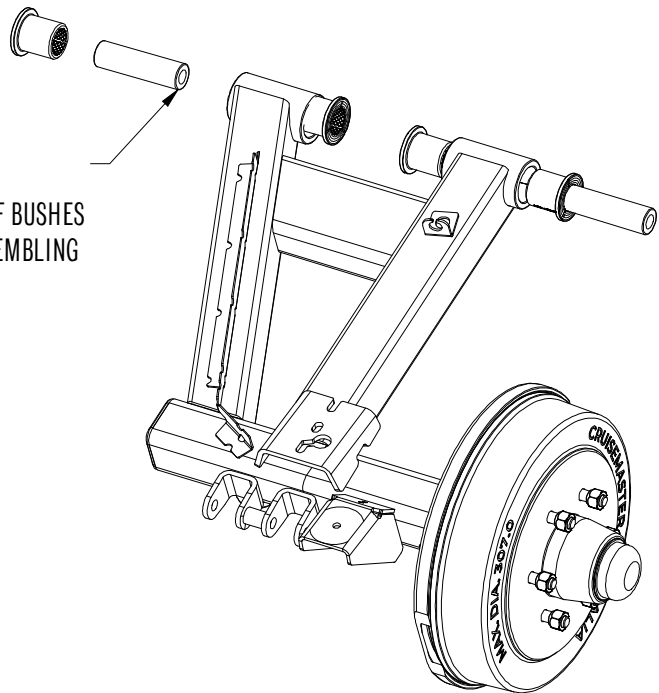


# 4 - AIR ASSEMBLY



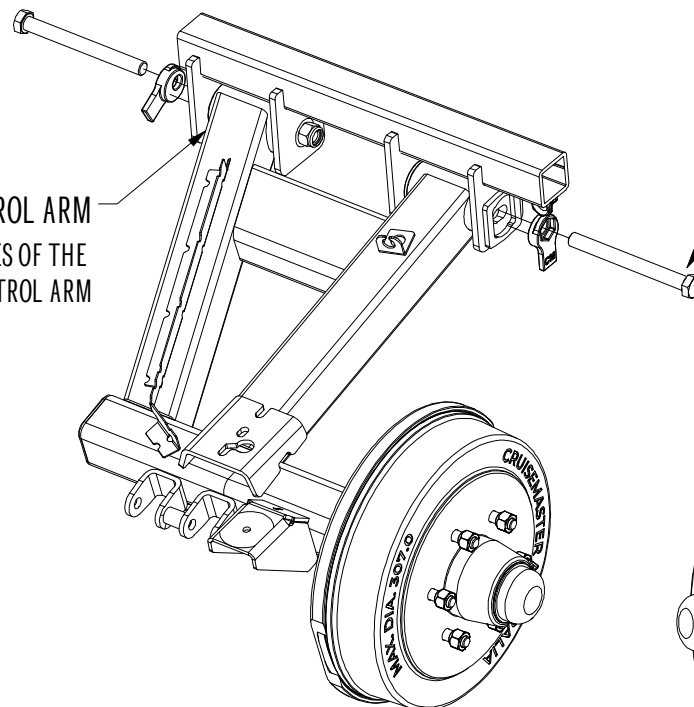
## 1. BUSHES

GREASE BORE AND FACE OF BUSHES AND SPINDLE BEFORE ASSEMBLING IN TO CONTROL ARM



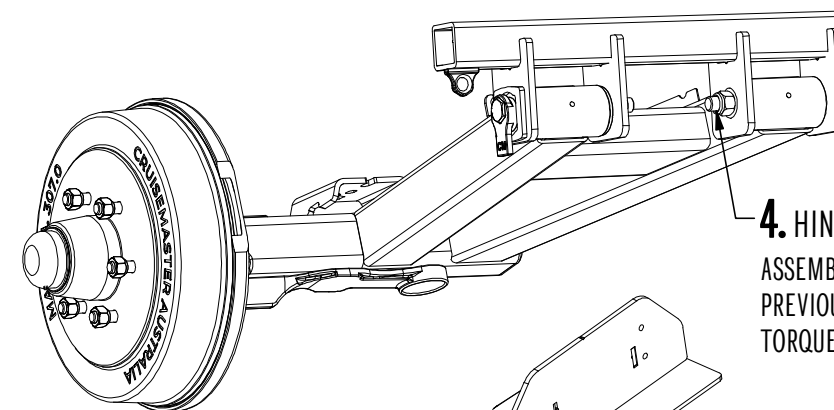
## 2. CONTROL ARM

LIGHTLY GREASE THE INSIDE FACES OF THE HINGE PLATES AND FIT THE CONTROL ARM



## 3. HINGE BOLTS

ASSEMBLE THE BOLTS WITH ADJUSTERS FROM OUTSIDE HINGE FACES



## 4. HINGE NUTS

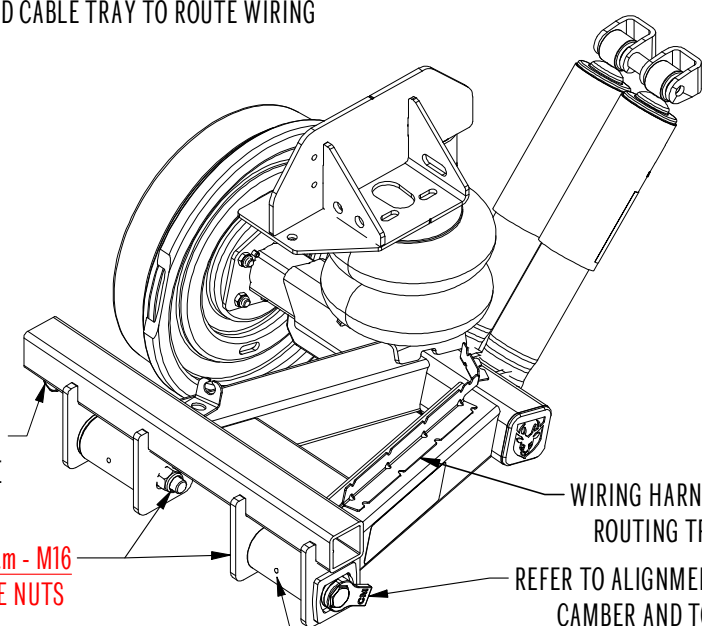
ASSEMBLE NUTS TO PREVIOUSLY ASSEMBLED BOLTS TORQUE TO SPEC ONCE ALIGNED

## 7. TORQUE AND GREASE

- REFER TO WHEEL ALIGNMENT FOR ADJUSTER POSITIONING
- USE GREASE NIPPLE TO FILL HINGE CAVITY (GREASE SHOULD SQUEEZE FROM BUSHES)
- ONCE HINGE IS ASSEMBLED TORQUE ALL BOLTS AS SPECIFIED
- USE PROVIDED CABLE TRAY TO ROUTE WIRING

HANDBRAKE CABLE GUIDE  
ROUTE CABLE THROUGH BEFORE  
ATTACHING TO BRAKE

190 N.m - M16  
HINGE NUTS



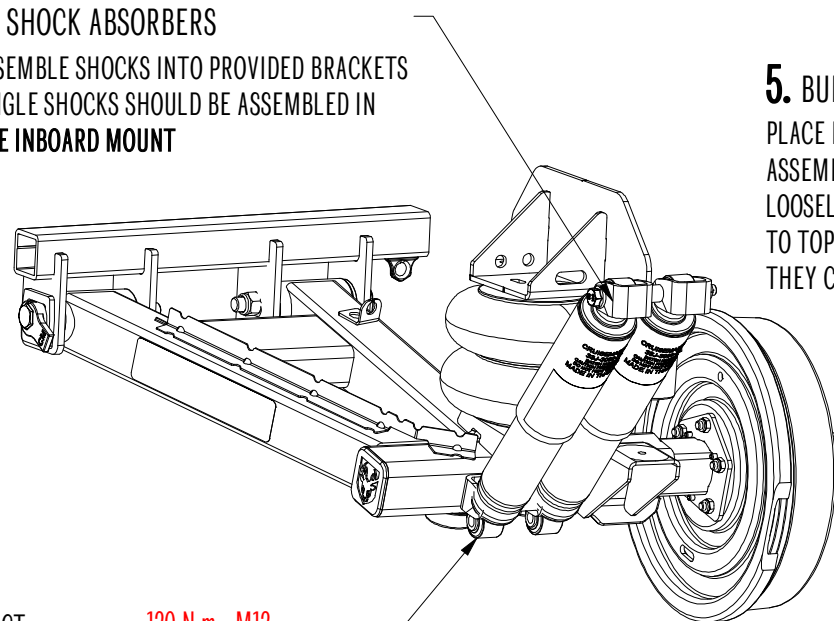
WIRING HARNESS  
ROUTING TRAY

REFER TO ALIGNMENT FOR CORRECT  
CAMBER AND TOE ADJUSTMENT

STANDARD GREASE NIPPLE FITMENT IS M6 STRAIGHT  
M6 x 90 DEGREE AVAILABLE ON REQUEST

## 6. SHOCK ABSORBERS

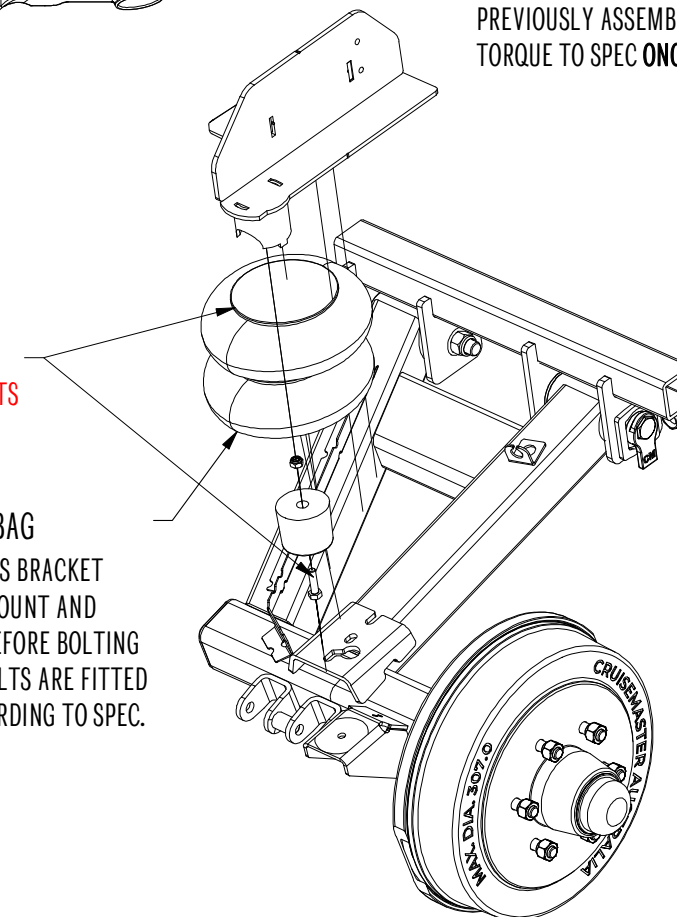
ASSEMBLE SHOCKS INTO PROVIDED BRACKETS  
SINGLE SHOCKS SHOULD BE ASSEMBLED IN  
THE INBOARD MOUNT



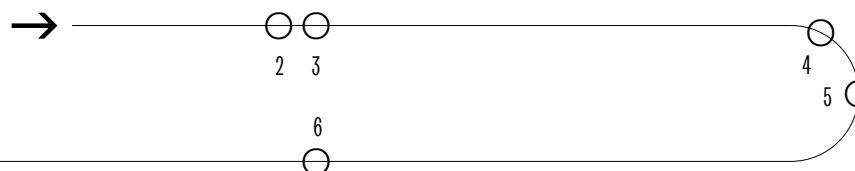
120 N.m - M12  
SHOCK ABSORBER BOLTS

## 5. BUMP STOPS AND AIRBAG

PLACE BUMP STOP ON CHASSIS BRACKET  
ASSEMBLE AIRBAG TO ARM MOUNT AND  
LOOSELY ASSEMBLE BOLTS BEFORE BOLTING  
TO TOP MOUNT. ONCE ALL BOLTS ARE FITTED  
THEY CAN BE TORQUED ACCORDING TO SPEC.



16 N.m - 3/8 UNC  
AIRBAG MOUNTING BOLTS



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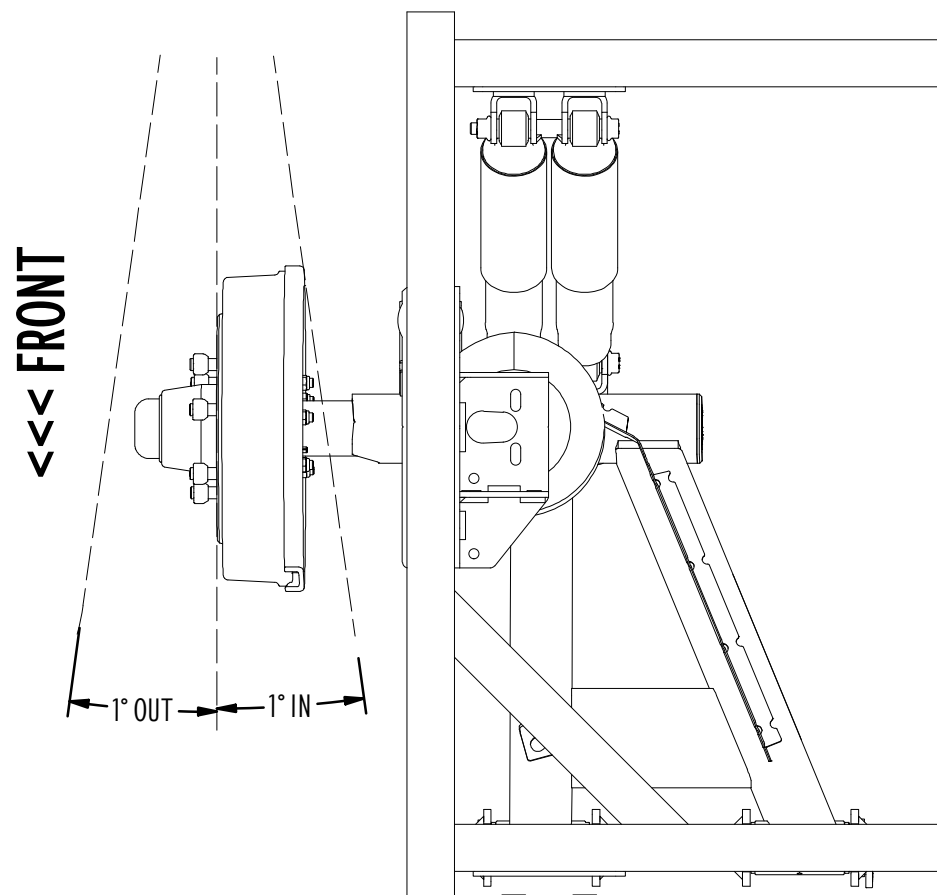
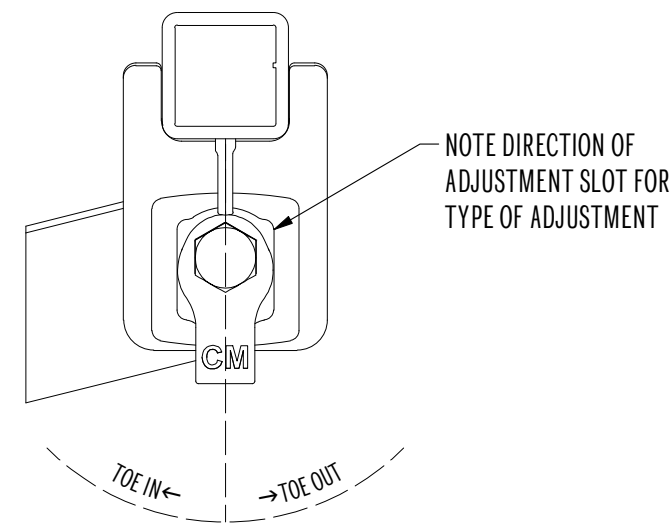
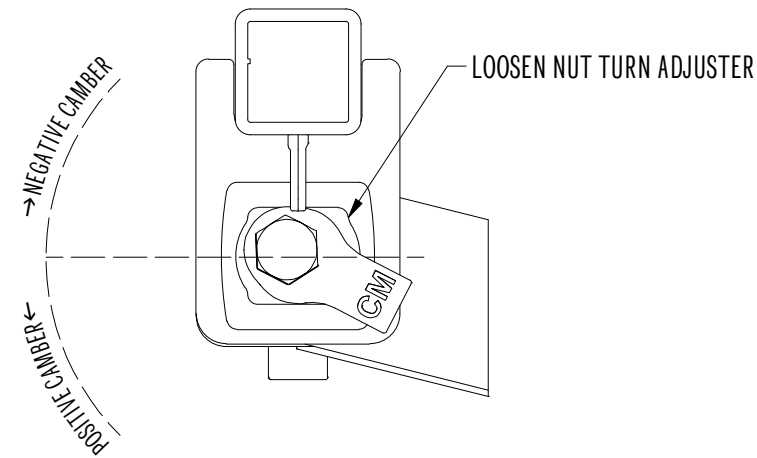
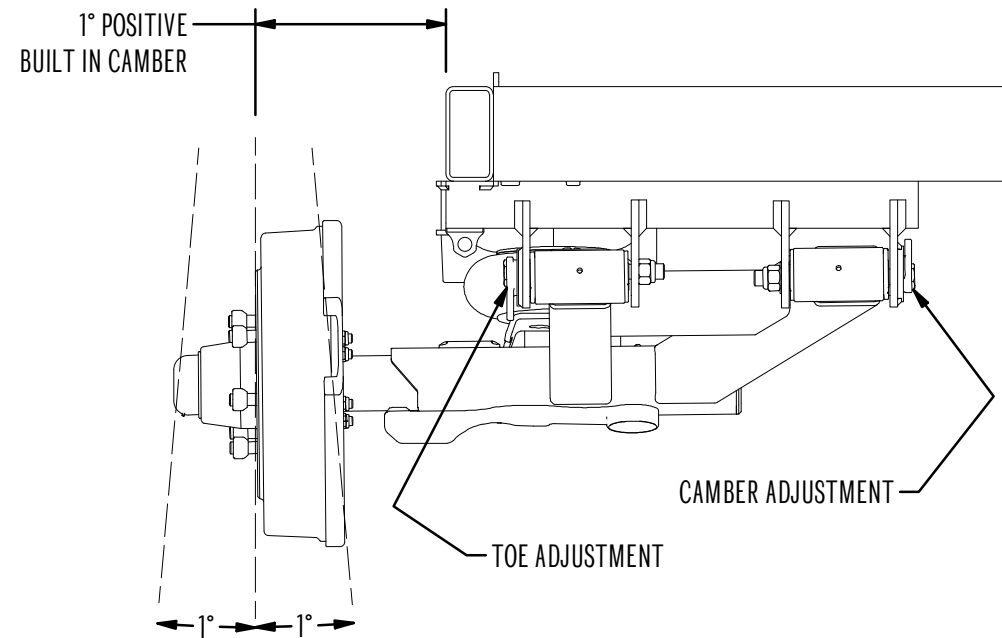
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## 5 - ALIGNMENT

### CAMBER ADJUSTMENT

THE SUSPENSION HAS 1 DEGREE OF POSITIVE CAMBER BUILT IN TO ENSURE THE WHEELS ARE ALIGNED CORRECTLY UNDER LOAD. WHEELS ARE RECOMMENDED TO HAVE 0° TO 0.5° NEGATIVE CAMBER AT RATED LOAD.



### WHEEL ALIGNMENT PROCEDURE

1. ENSURE THE TRAILER IS FULLY LOADED AND ON A FLAT SURFACE, MOVE THE TRAILER BACKWARDS AND FORWARDS TO ELIMINATE ANY TWIST IN THE WHEELS.

### MEASUREMENT

2. PLACE A STRAIGHT EDGE ACROSS THE WHEEL, EDGE OF RIM OR DRUM FACE THEN MEASURE THE DISTANCE FROM THE STRAIGHT EDGE TO THE CHASSIS RAIL. (WHEELS ON A SINGLE OR TANDEM FRONT AXLE SHOULD BE ADJUSTED TO HAVE 2MM TOE-IN. WHEELS ON TANDEM REAR AXLE SHOULD MEASURE PARALLEL FROM THE CHASSIS RAIL.)

3. IT IS RECOMMENDED TO USE A DIGITAL SPIRIT LEVEL TO MEASURE CAMBER ACROSS THE WHEEL RIM OR DRUM FACE.

### TOE OR CAMBER ADJUSTMENT

4. LIFT THE VEHICLE TO UNLOAD THE SUSPENSION. DO NOT CLIMB UNDER A VEHICLE WHICH IS ONLY SUPPORTED BY JACKS, ENSURE PROPER VEHICLE STANDS ARE USED.

5. LOOSEN THE HINGE NUT AND TURN THE ADJUSTER IN THE DIRECTION REQUIRED TO OBTAIN DESIRED ADJUSTMENT.

6. LOWER THE VEHICLE TO FULLY LOAD THE SUSPENSION AND MEASURE THE ALIGNMENT AGAIN TO CHECK ADJUSTMENT IS SATISFACTORY.

7. IF THE NECESSARY ALIGNMENT HAS NOT BE ACHIEVED, REPEAT FROM STEP 4

8. WHEN ADJUSTMENT IS COMPLETED, TIGHTEN AND TORQUE HINGE NUT. (SEE ASSEMBLY SHEET)

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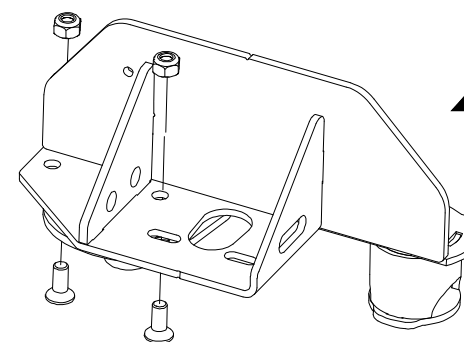
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# 6 - OPTIONS AND PARTS LIST AIR



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	33XT-SA100-VT93-P-D-HS	XT BASE FRAME KIT
2	1	33XT-SPINDLE-BUSH-KIT	SPINDLE KIT
3	4	33J-*VARIES*	SEE SHOCK TABLE
4	2	33SA-AB0	SEE SPRING TABLE
5	2	33S-221	PLASTIC END CAP 65
6	2	33EA 017	INDEPENDENT HINGE ASSY
7	2	09-*VARIES*	SEE BEARING TABLE
8	2	33S-306	XT ARM STICKER
9	1	BRAKES *VARIES*	SEE BRAKE TABLE
10	1	33B 021	FORGED CABLE GUIDE



**\*OPTIONAL\***  
**33XT COIL BOLT ON KITS** ARE AVAILABLE TO CONVERT EXISTING AIR CHASSIS WITH THE COIL/AIR BRACKET FROM AIR TO COIL

SEE AIR INSTALLATION GUIDE FOR WELDING INFORMATION

### (4) SPRING / (7) BEARING OPTIONS

AXLES	RATING - ATM / GTM (kg)	STD BEARING	STD BRAKE (INCH)	SPRING
SINGLE	1400 / 1260	SLM / VT	10 / 12	AB 0121-V
SINGLE	1700 / 1530	SLM / VT	10 / 12	AB 0136-V
SINGLE	2600 / 2340	VT	12	AB 0140-V
TANDEM	2800 / 2520	SLM / VT	10 / 12	AB 0121-V
TANDEM	3400 / 3060	VT	12	AB 0136-V
TANDEM	4500 / 4050	VT	12	AB 0140-V

### COIL MOUNT OPTIONS

33XT-COIL PART #	DESCRIPTION	BUMP STOP
BOLT/ON-HD-TS	BOLT ON HD TWIN SHOCK	33SC-110 - RED
BOLT/ON-SS	BOLT ON SINGLE SHOCK	33SC-107 - BLUE
BOLT/ON-TS	BOLT ON TWIN SHOCK	33SC-107 - BLUE

\*NOTE: CHASSIS BUILT WITH AIR COMPONENTS CAN BE CONVERTED TO RUN COIL WITH THE CORRECT BOLT ON KIT TO SUIT THE TRAILER ATM

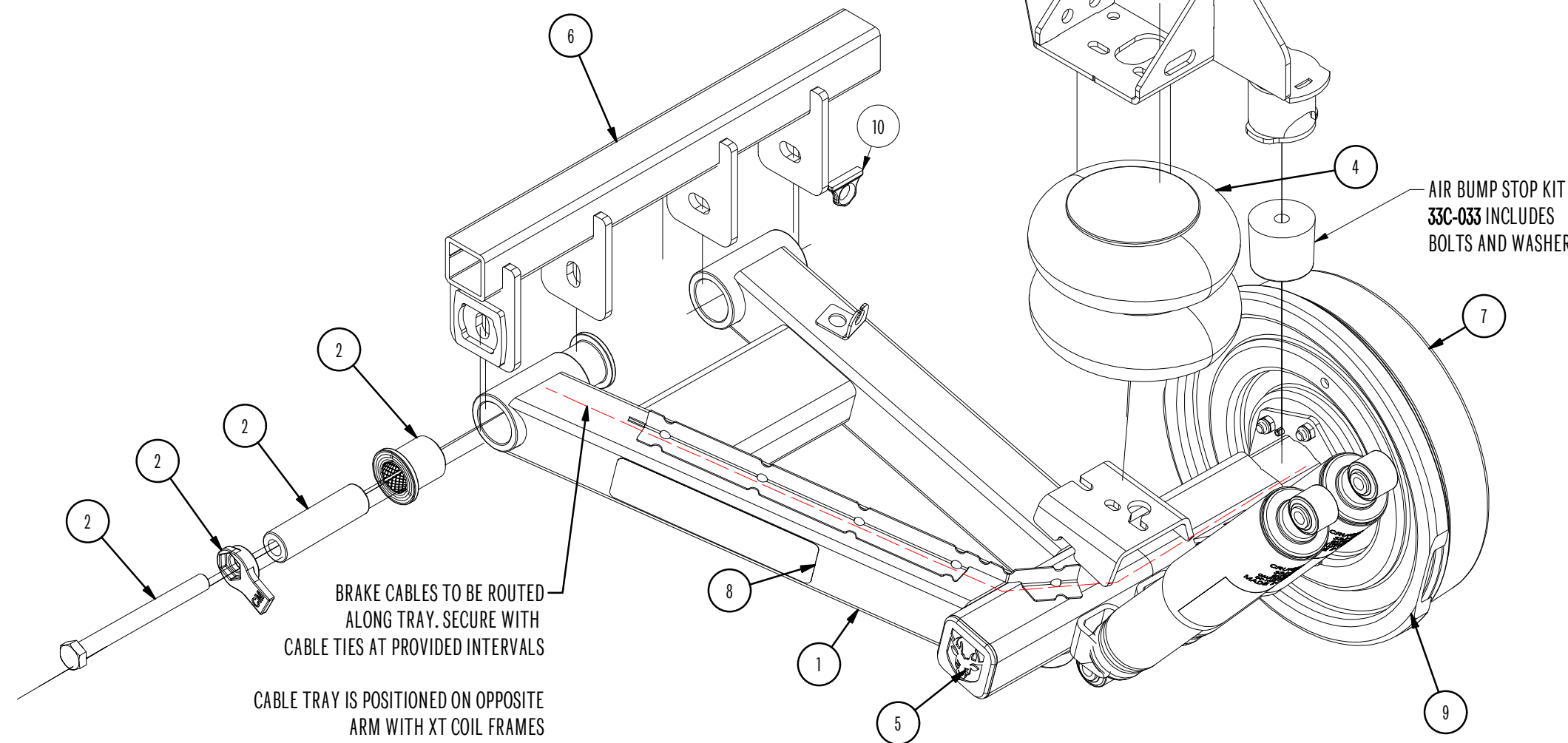
### (9) BRAKE OPTIONS

OPTION	CONDITIONS
CRUISEMASTER ELEC.	
DEXTER ELEC.	
ALKO ELEC.	
DEEMAXX DISC	VT ONLY

\*NOTE: **33XT-HYD-CONV** KITS AVAILABLE TO CONVERT EXISTING 12" ELECTRIC BRAKE KITS TO DEEMAXX DISC WHERE COMPATIBLE\*

### (3) SHOCKS

PART	KIT	BOLT KIT
33J-2900	SINGLE STD WHITE	33C-030
33J-3000	SINGLE HD SILVER	33C-030
33J-2900	DUAL STD WHITE	33C-031
33J-3000	DUAL HD SILVER	33C-031



BRAKE CABLES TO BE ROUTED ALONG TRAY. SECURE WITH CABLE TIES AT PROVIDED INTERVALS

CABLE TRAY IS POSITIONED ON OPPOSITE ARM WITH XT COIL FRAMES

### CHASSIS TO FACE OPTIONS

POSITIVE OFFSET WHEELS CAN BE USED TO REDUCE EFFECTIVE CHASSIS TO FACE WITHIN PERMISSIBLE RANGE

RED ZONE DENOTES UNACCEPTABLE C/F AND WEIGHT COMBINATION

SINGLE AXLE BY ATM								TANDEM AXLE BY ATM							
2,600								4,500							
1,700								3,400							
1,400								2,800							
	200	210	220	230	240	250	260		200	210	220	230	240	250	260

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