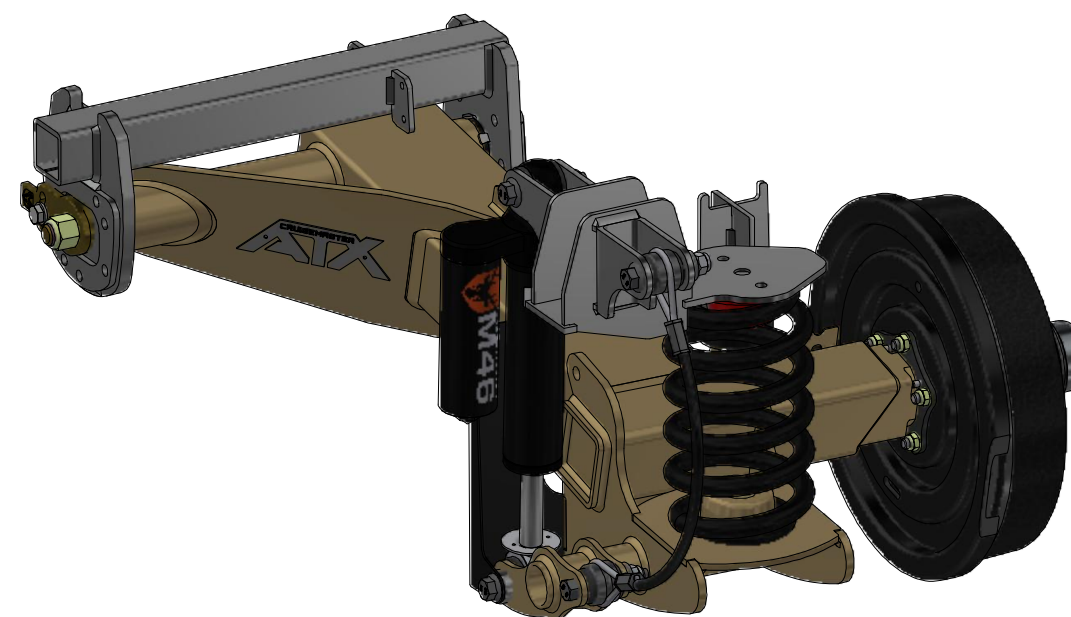
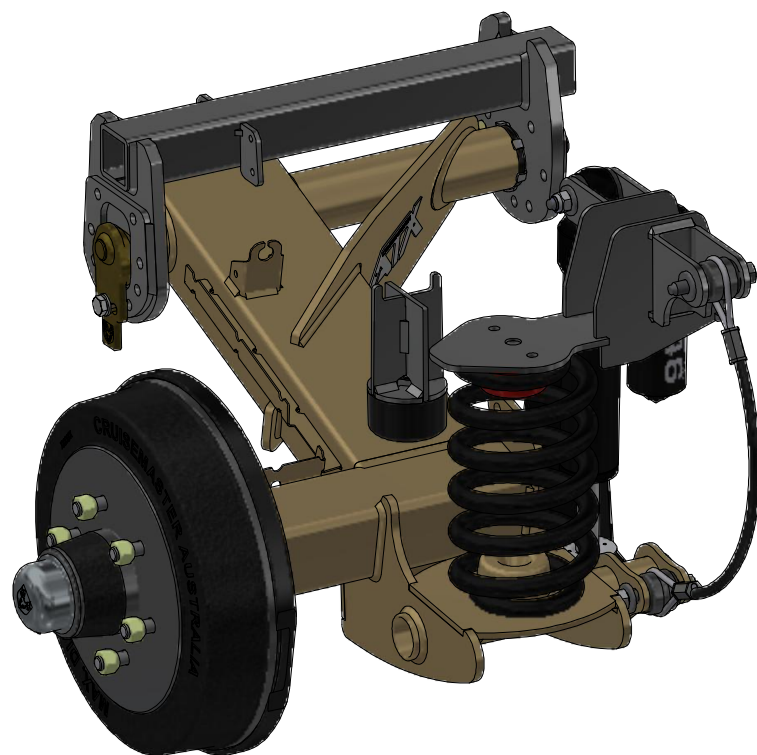


## CHASSIS PREPARATION AND SUSPENSION INSTALLATION GUIDE

2. CHASSIS TO FACE
3. GENERAL LAYOUT
4. WELDING
5. ASSEMBLY
6. ALIGNMENT
7. PARTS LIST
8. KIT CONFIGURATIONS
9. KIT CONFIGURATIONS
10. M60 SHOCK UPGRADE
11. M60 SHOCK ADJUSTMENT



REV	DESCRIPTION	ECN	NAME	DATE
13	Weld detail added to shock mount + shock bolts detail updated + part number builder	2238	BT	09/04/2026
12	Update for 3T/ATXU + M60 shock absorbers	2096	TM	20/12/2023
11	Added note for shock absorber crossmember size	2096	LL	27/02/2023

CM ATX INSTALLATION GUIDE

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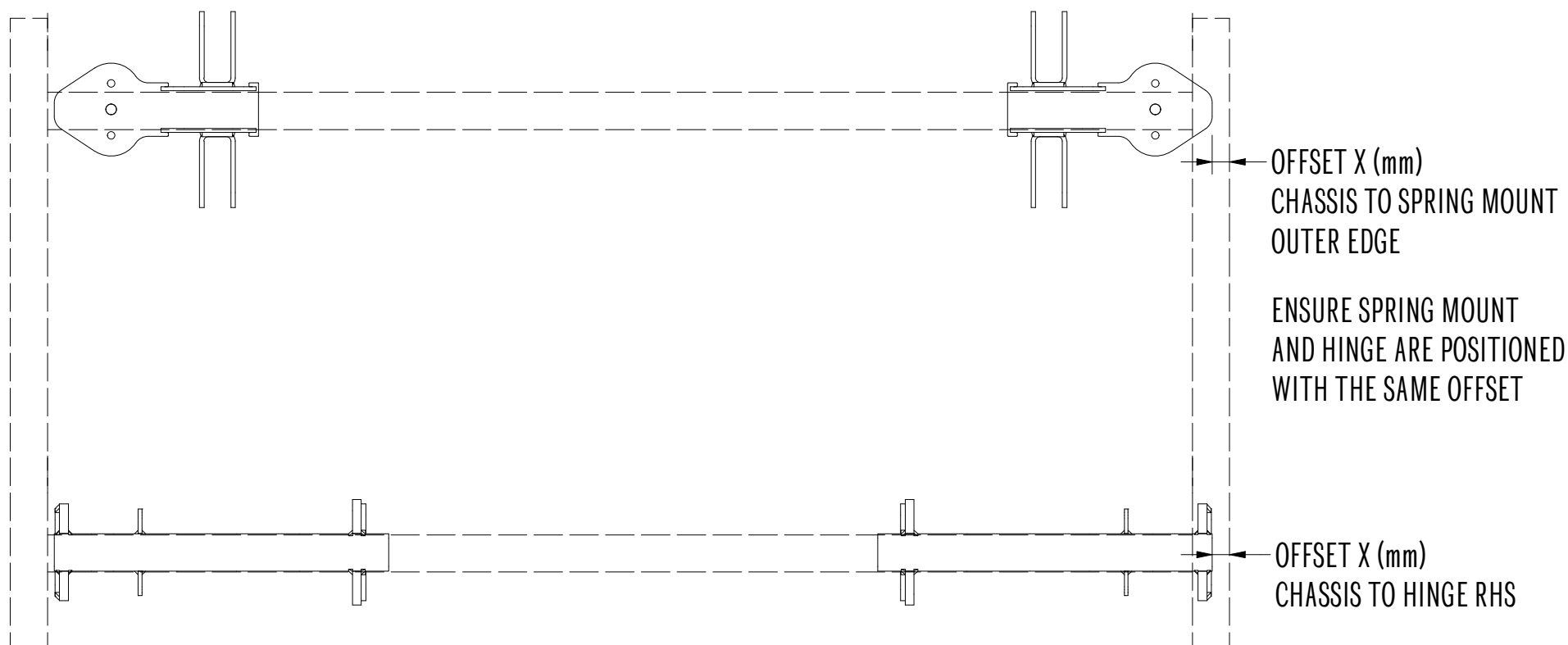


## 2 - CHASSIS TO FACE

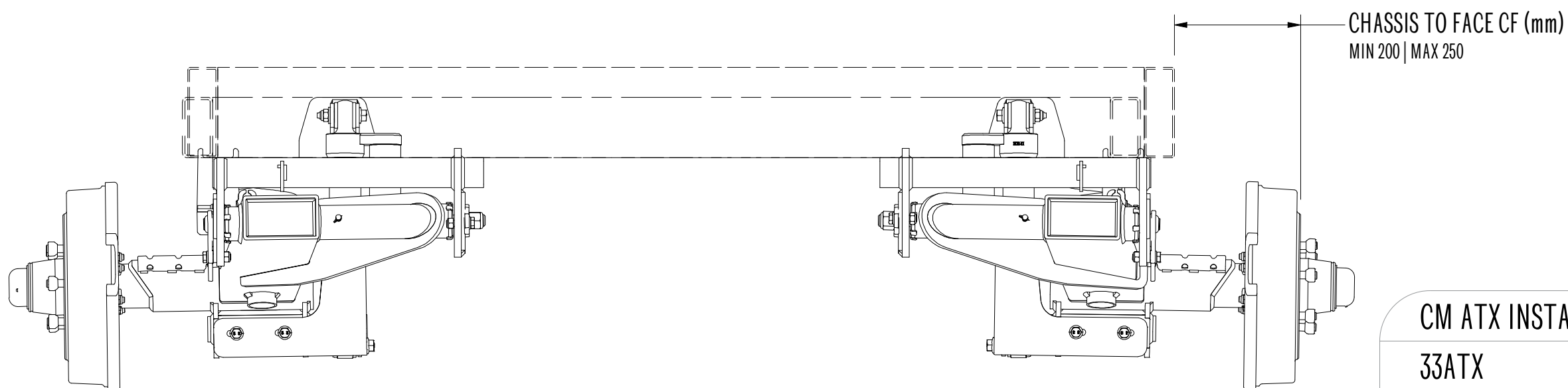
### NOTES

**2.1** FOR A CHASSIS TO FACE CF SMALLER THAN 250mm THE SPRING MOUNT AND HINGE NEED TO BE OFFSET X (mm) FROM THE OUTSIDE OF THE CHASSIS

**2.2** USE THE TABLE BELOW TO CALCULATE THE OFFSET X (mm) BASED ON CHASSIS TO FACE CF REQUIRED



WELD ON POSITION FROM OUTER CHASSIS WALL (mm)		
CF	X (ELECTRIC) = 250 - CF	X (DISC) = 250 - CF
250 MAX C/F	0	7
225	25	32
200 MIN C/F	50	57



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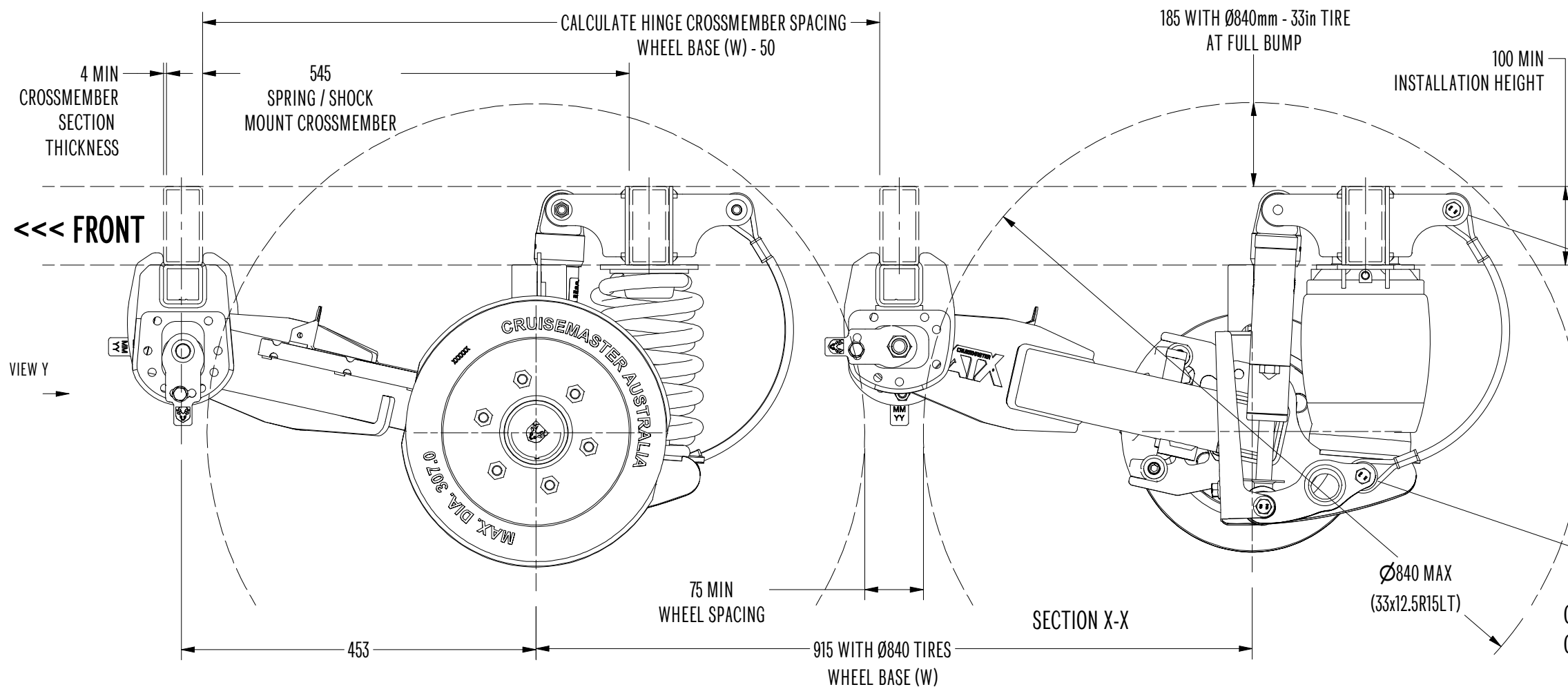
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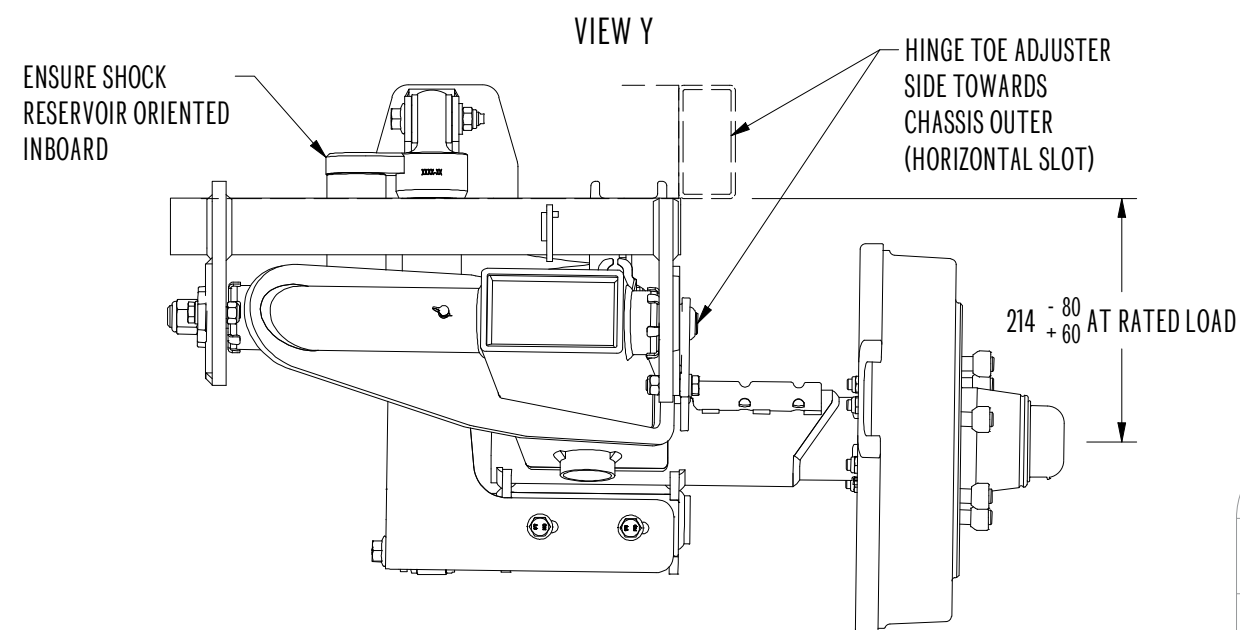
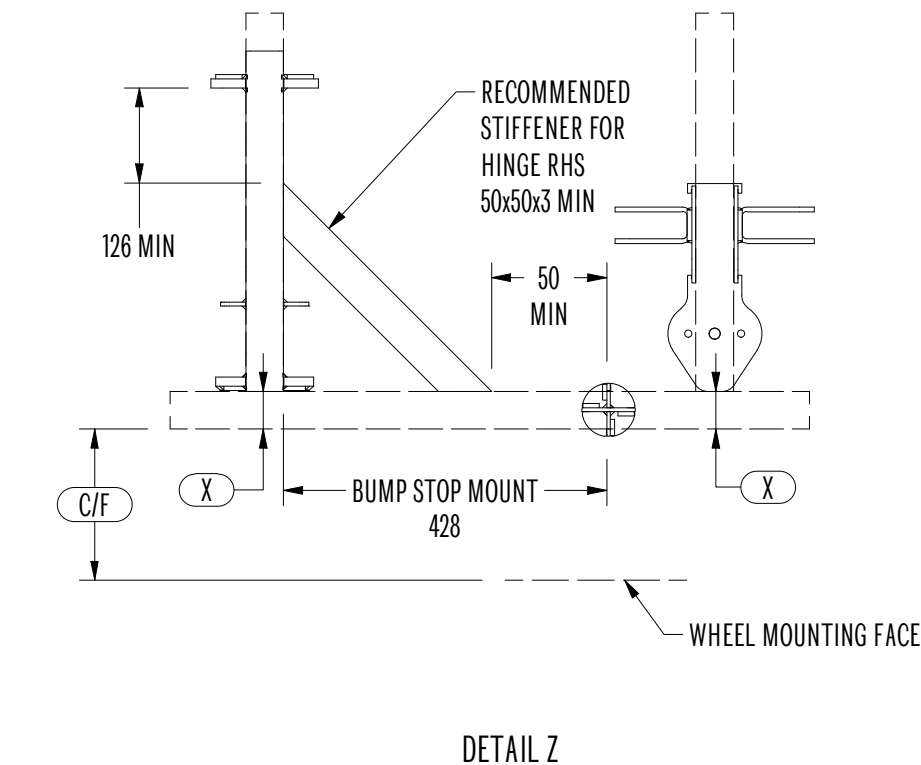
# 3 - GENERAL LAYOUT



WELD ON POSITION FROM OUTER CHASSIS WALL (mm)

CF	X (ELECTRIC) = 250 - CF	X (DISC) = 250 - CF
250 MAX	0	7
225	25	32
200 MIN	50	57

NEGATIVE WHEEL OFFSET NOT ALLOWED



**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.

CM ATX INSTALLATION GUIDE	TITLE
33ATX	DRAWING NUMBER

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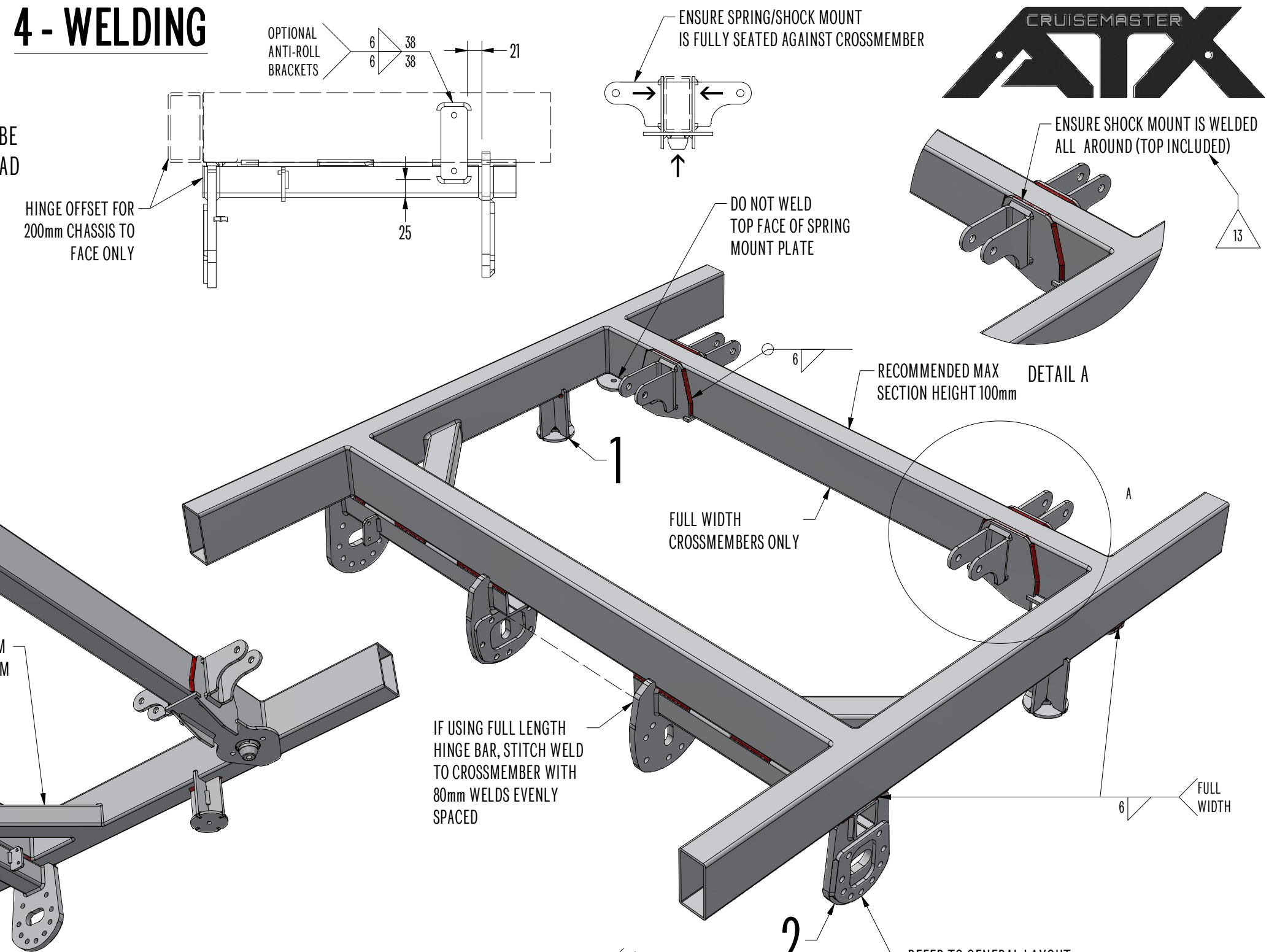
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## 4 - WELDING

ALL CHASSIS RAILS AND SUPPORTING CROSSMEMBER SECTIONS MUST BE OF SUFFICIENT STRENGTH TO SUPPORT THE TRAILER AT MAXIMUM LOAD

ENSURE HINGES ARE PERPENDICULAR TO THE CHASSIS TO ALLOW FOR CORRECT WHEEL ALIGNMENT AND ADJUSTMENT



## 1. ALIGNMENT

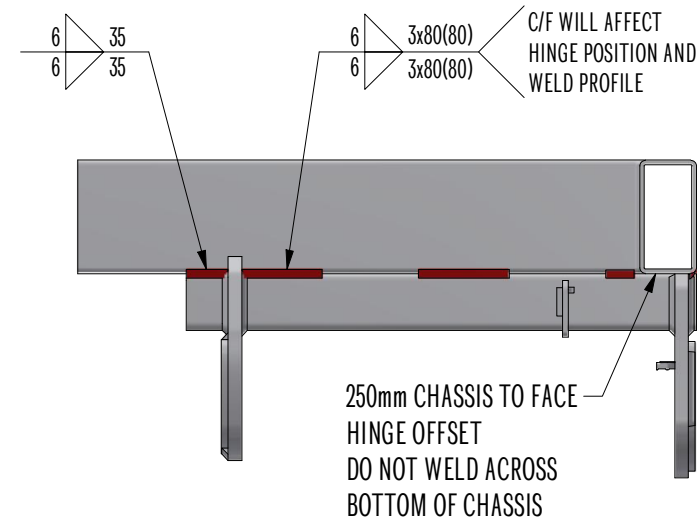
ENSURE ALL REQUIRED CROSSMEMBERS AND BRACINGS ARE FITTED, POSITION HINGE, BUMP STOP AND SHOCK/COIL MOUNT  
ENSURE HINGES ARE SQUARE TO MAIN CHASSIS RAIL AND CROSSMEMBER

## 2. HINGES

WELD HINGES TO CROSSMEMBERS AS SPECIFIED

## 3. SHOCK AND COIL MOUNTS

ENSURE SHOCK AND COIL MOUNTS ARE FITTED AS SHOWN



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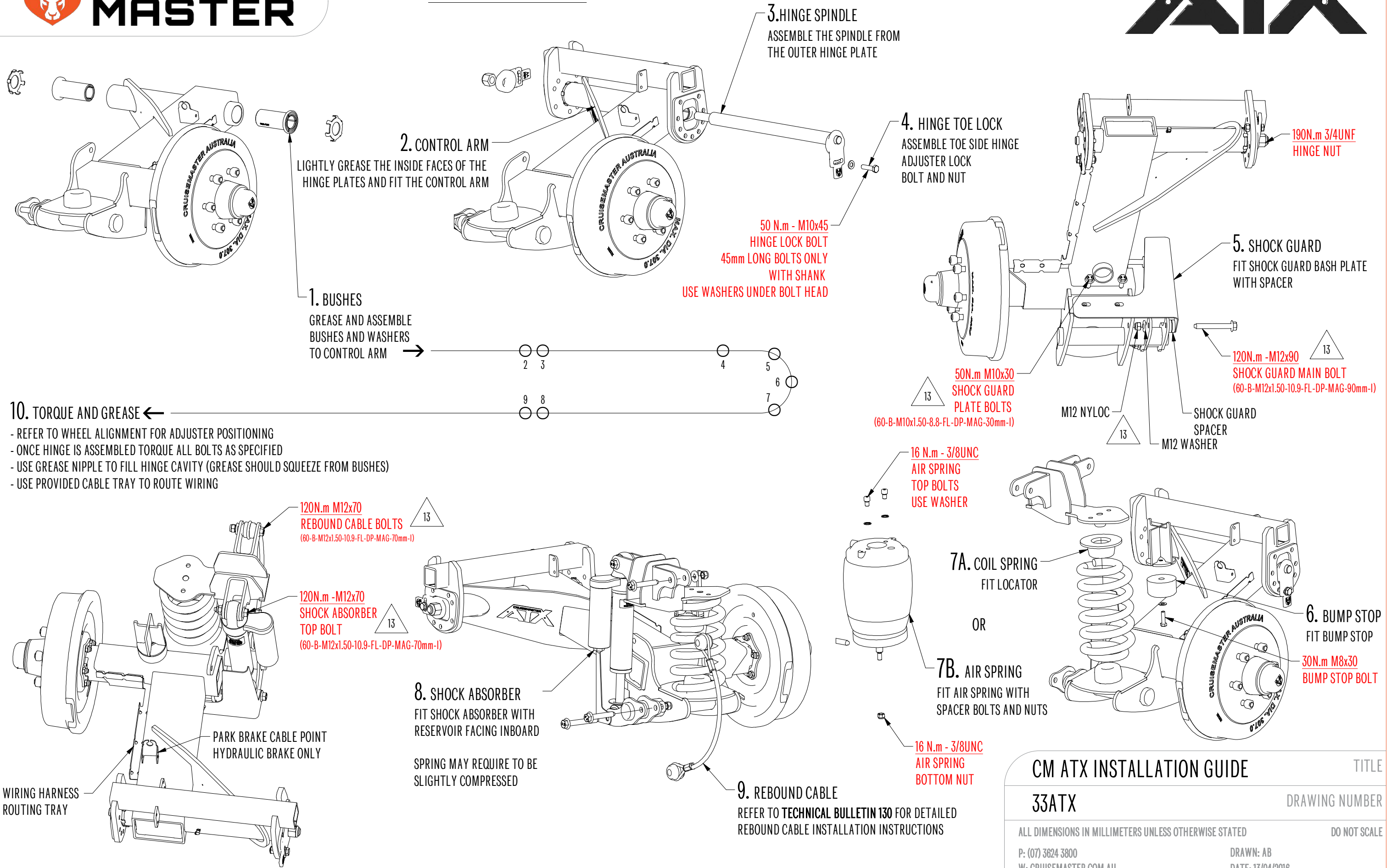
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# 5 - ASSEMBLY



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

3. HINGE SPINDLE  
ASSEMBLE THE SPINDLE FROM THE OUTER HINGE PLATE

4. HINGE TOE LOCK  
ASSEMBLE TOE SIDE HINGE ADJUSTER LOCK BOLT AND NUT

190N.m 3/4UNF HINGE NUT

50 N.m - M10x45 HINGE LOCK BOLT  
45mm LONG BOLTS ONLY WITH SHANK  
USE WASHERS UNDER BOLT HEAD

5. SHOCK GUARD  
FIT SHOCK GUARD BASH PLATE WITH SPACER

120N.m - M12x90 SHOCK GUARD MAIN BOLT  
(60-B-M12x1.50-10.9-FL-DP-MAG-90mm-I)

50N.m M10x30 SHOCK GUARD PLATE BOLTS  
(60-B-M10x1.50-8.8-FL-DP-MAG-30mm-I)

SHOCK GUARD SPACER  
M12 WASHER

16 N.m - 3/8UNC AIR SPRING TOP BOLTS  
USE WASHER

7A. COIL SPRING  
FIT LOCATOR

OR

7B. AIR SPRING  
FIT AIR SPRING WITH SPACER BOLTS AND NUTS

16 N.m - 3/8UNC AIR SPRING BOTTOM NUT

6. BUMP STOP  
FIT BUMP STOP  
30N.m M8x30 BUMP STOP BOLT

120N.m M12x70 REBOUND CABLE BOLTS  
(60-B-M12x1.50-10.9-FL-DP-MAG-70mm-I)

120N.m - M12x70 SHOCK ABSORBER TOP BOLT  
(60-B-M12x1.50-10.9-FL-DP-MAG-70mm-I)

PARK BRAKE CABLE POINT  
HYDRAULIC BRAKE ONLY

WIRING HARNESS ROUTING TRAY

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# 6 - ALIGNMENT

VISIT [cruise-master.com.au](http://cruise-master.com.au) FOR ADDITIONAL INFORMATION  
SEE CRUISEMASTER CAMBER TOW IN ADJUSTER (CIS 20)

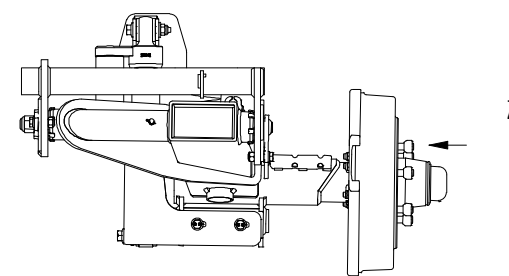
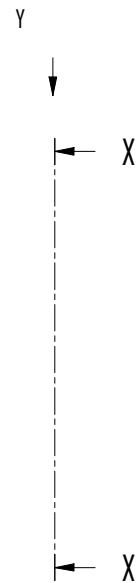
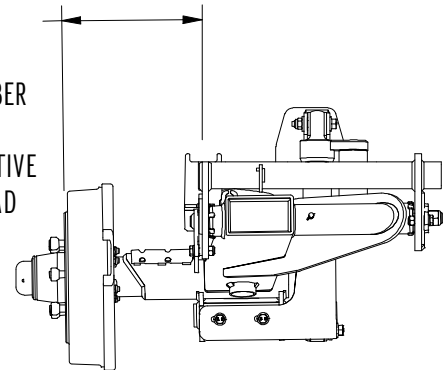


## CAMBER ADJUSTMENT

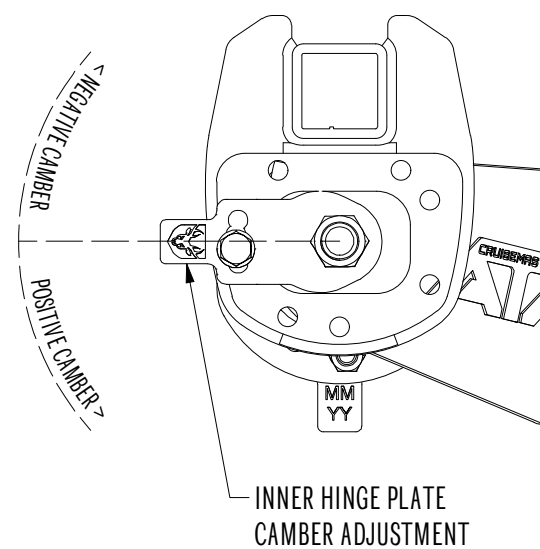
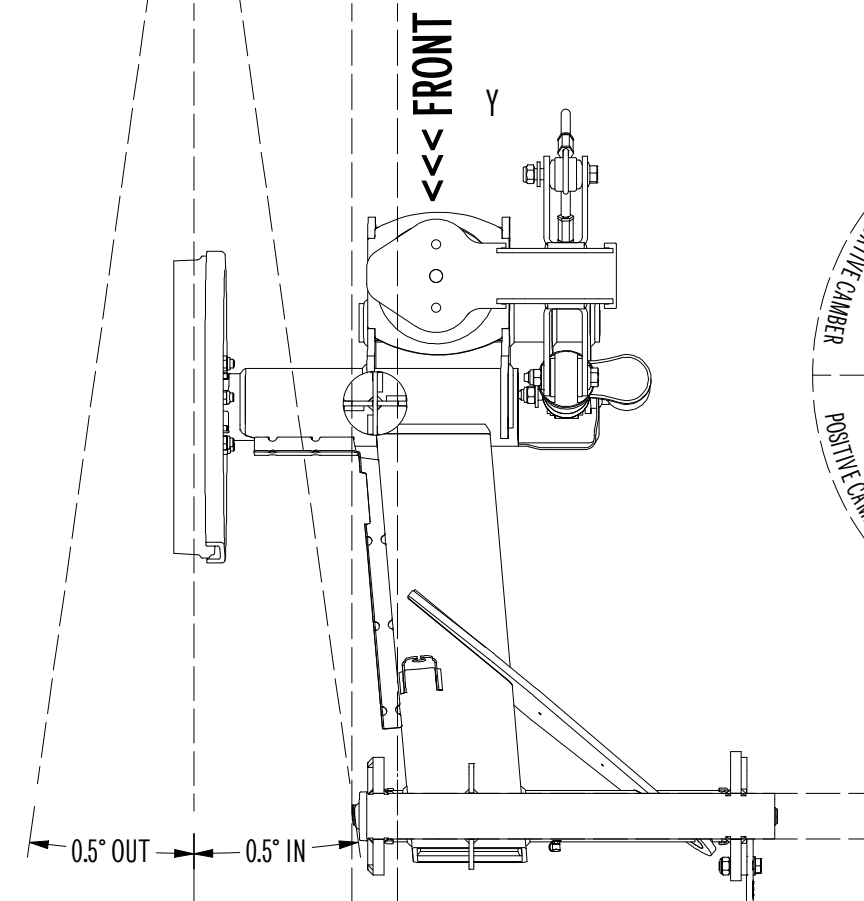
THE SUSPENSION HAS A DEGREE OF POSITIVE CAMBER BUILT IN TO ENSURE THE WHEELS ARE ALIGNED CORRECTLY UNDER LOAD. WHEELS ARE RECOMMENDED TO HAVE 0° TO 0.5° NEGATIVE CAMBER AT RATED LOAD.

1° BUILT IN POSITIVE CAMBER

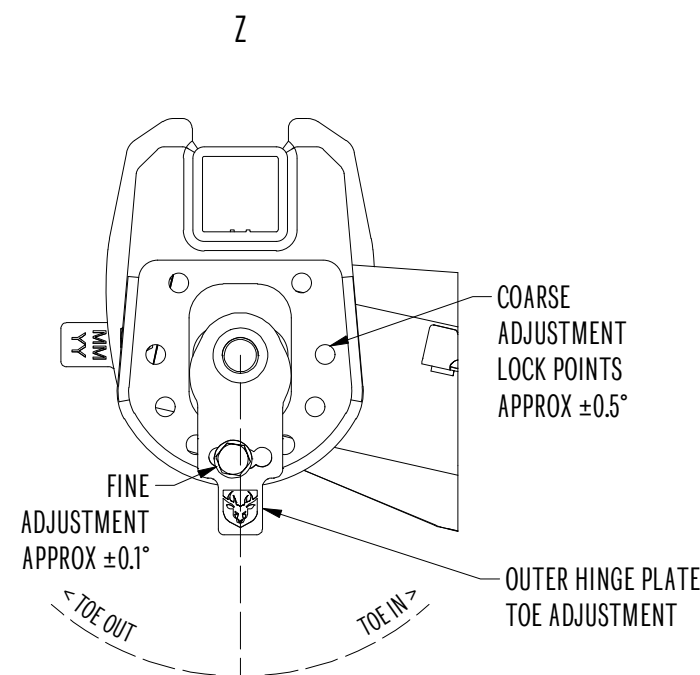
0° TO 0.5° NEGATIVE AT RATED LOAD



X1  
GENERAL TOE SETTINGS  
0° TO 0.2° FOR FRONT AXLES (X1 - X2 = 0mm to 2mm)  
0° FOR REAR AXLES (X1 = X2)



SECTION X-X



0.5° OUT ← 0.5° IN →

X2  
MEASURE DISTANCE FROM CHASSIS TO TYRE FACE USING A STRAIGHT EDGE  
USE DIFFERENCE TO DETERMINE TOE  
X1 - X2

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

## 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 REMOVE THE ADJUSTER LOCKING BOLTS.

6. TURN THE ADJUSTER IN THE DIRECTION REQUIRED AND ALIGN WITH THE NEAREST BOLT HOLES. USE BOTH COARSE AND FINE ADJUSTMENTS TO FIND THE OPTIMAL POSITION AND USE LOCKING BOLTS TO HOLD THE ADJUSTER IN PLACE.

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, TORQUE ADJUSTMENT LOCKING BOLTS AND HINGE NUT. (SEE ASSEMBLY SHEET FOR TORQUES)

CM ATX INSTALLATION GUIDE

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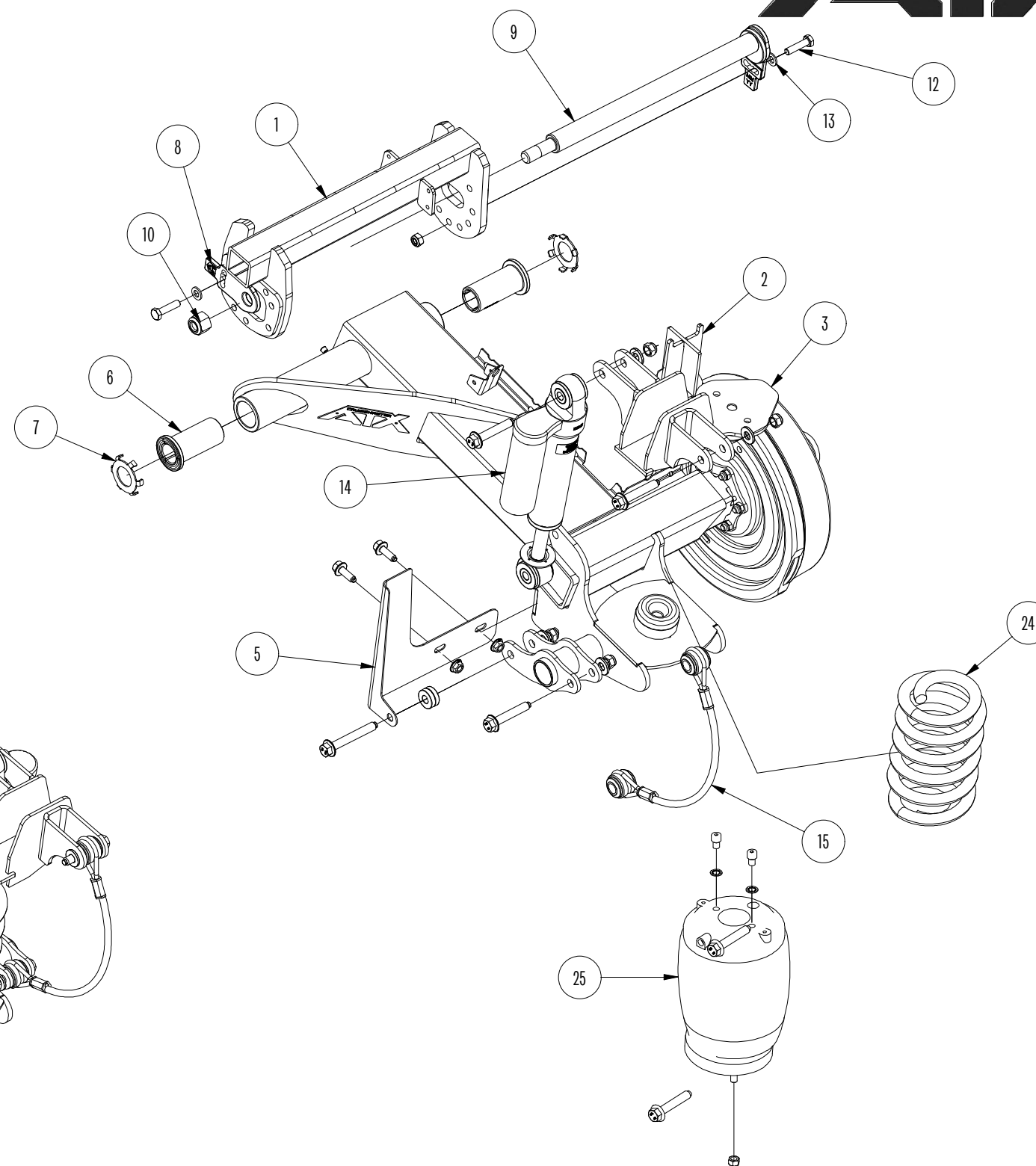
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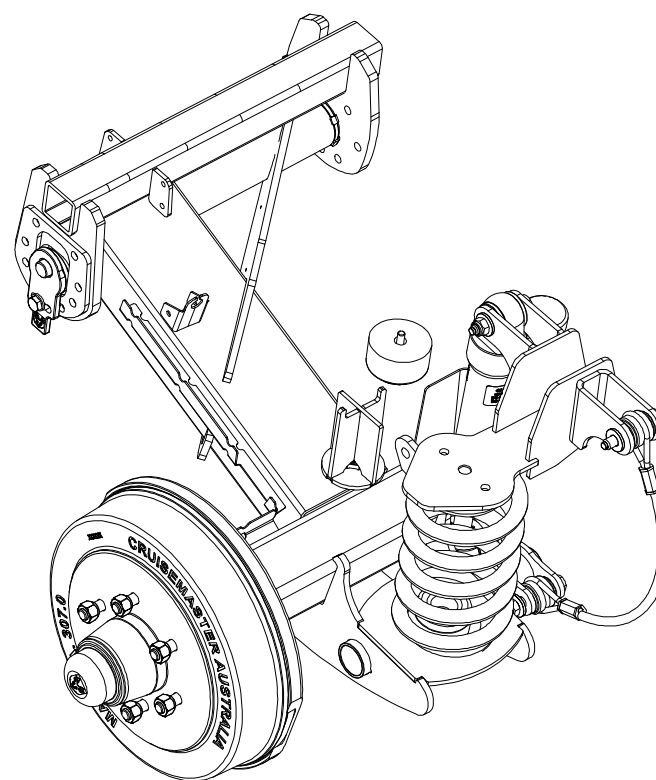
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# 7 - PARTS LIST



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	33S-8200	ATX HINGE
2	2	33S-8410	ATX BUMP STOP MOUNT
3	2	33S-8400	ATX SPRING MOUNT
4	2	33S-8056	ATX BADGE
5	1	33C 022	CM ATX SHOCK GUARD KIT
6	4	33S-707	CM HINGE BUSH D
7	4	33S-8042	HINGE SLIDE WASHER
8	2	33S-8310	ATX LOCKABLE ADJUSTER
9	2	33S-8300	ATX HINGE SPINDLE
10	2	60-N-3/4-UNF-NYL	NUT 3/4 UNF NYLOC
11	4	60-N-M10NYL	NUT ZINC NYLON INSERT M10
12	4	60-B-M10x40	BOLT HEX 8.8 M10x40 Z/P
13	4	60-WF-M10	WASHER FLAT M10 Z/P
15	1	33C 017	CM ATX RB STRAP KIT
16	1	33C 021	CM ATX BUMP STOP KIT
17	2	60-M-GN-COV	GREASE NIPPLE DUST COVER
18	2	60-M-GN-M6	GREASE NIPPLE M6
19	1	33S 8816L	ATX 1365 VC EL LEFT
20	1	33S 8816R	ATX 1365 VC EL RIGHT
21	0	33S-220	PLASTIC END CAP 75
14	2	33J-6000	M46 MONO TUBE SHOCK ABSORBER
22	1	19-3069-DEXT	BR/KIT 12EL DEXTER
23	2	03-12VC-93-LC6-1/2	H/DRUM 12" VC 93 FITTED LC6 1/2
24	1	33ATX-CC	CM ATX COIL SPRING KIT
25	1	33ATX-AK	CM ATX AIR SPRING KIT



## 7.1. M60 ADJUSTABLE SHOCK ABSORBER UPGRADE KIT

REFER TO PAGES 9-10 FOR INSTALL INSTRUCTIONS AND ADJUSTMENT METHOD FOR M60 ADJUSTABLE SHOCK ABSORBER UPGRADE KIT.

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# 9- KIT CONFIGURATIONS NEW PN FORMAT

13



## PART NUMBER BUILD GUIDE

CONFIGURE SUSPENSION KITS FOR SIMPLER ORDERING

(A) SPRING			
(A)	AXLES	PART NUMBER	ALLOWABLE ATM (kg)
COIL	SINGLE	C1	2200,2600,2800,3000
COIL	TANDEM	C2	3700,4500
AIR	SINGLE	A1	2800,3000
AIR	TANDEM	A2	4500

(B) ATM (WEIGHT RATING)	
B (kg)	PART NUMBER
2200	22
2600	26
2800	28
3000	30
3700	37
4500	45

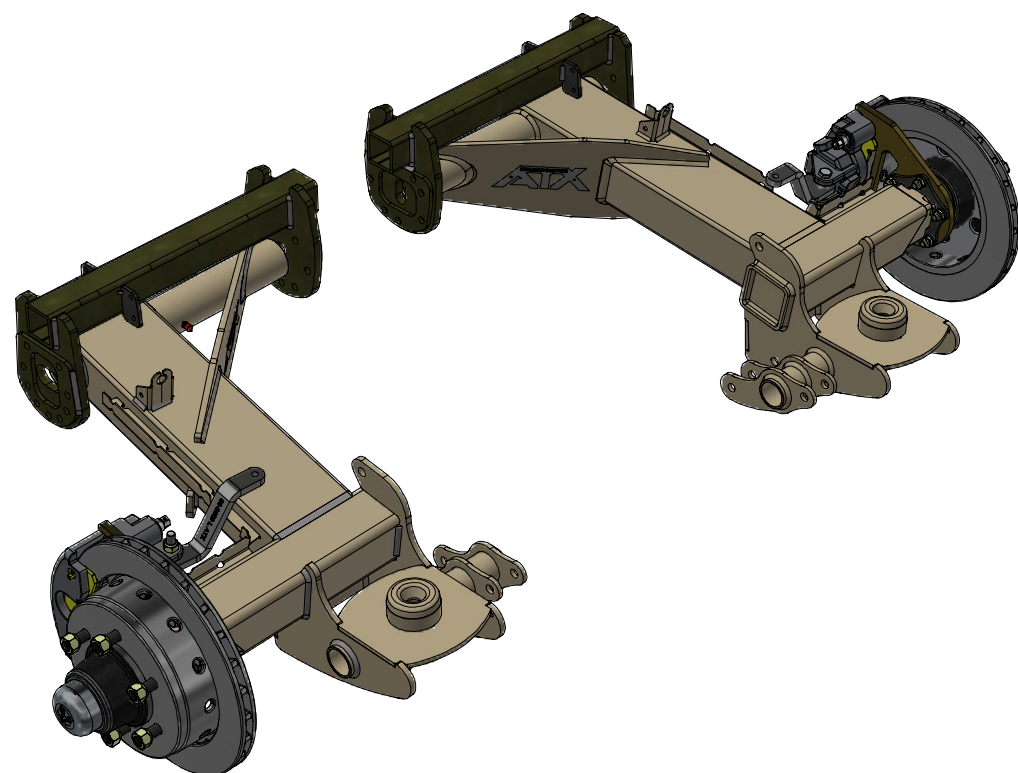
(E) STUD TYPE		
PATTERN	(E)	PART NUMBER
LC6	1/2"	01A
LC6	M12	01C
LC5	M14	02D
NP6	M14	07D

(F) SHOCK TYPE	
(F)	PART NUMBER
M46	M1
M60	M2

A5  -SKG  -25PJ  -   -01XXS

(C) COLOUR	
(C)	PART NUMBER
DOESKIN	12
ONYX	13

(D) BRAKE TYPE		
(D)	FEATURE	PART NUMBER
ELECTRIC DRUM	ACTIVE	E
ELECTRIC DRUM	ABS	A
HYDRAULIC DISC	ACTIVE	F



### EXAMPLE

**A5A2-SKG45-25PJ13-A01A-01XXSM2**

- TANDEM AXLE
- 4500kg AIR SPRINGS
- VC BEARING
- PREMIUM DOESKIN POWDERCOAT
- ABS ENABLEDELECTRIC BRAKES
- LANDCRUISER 6 STUD PATTERN - 1/2in STUDS
- M60 SHOCKS

NOTES:  
1. LC5 NOT AVAILABLE ON 3.0T

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# 10 - M60 SHOCK UPGRADE

## 1. EXISTING HARDWARE

IF FITTED, REMOVE THE EXISTING SHOCK ABSORBERS AND STONE GUARDS BY REMOVING THE TOP AND BOTTOM SHOCK BOLTS AS WELL AS THE TWO BOLTS ATTACHING THE STONE GUARD TO THE ARM.

## 2. TOP BOLT

FIT THE M60 SHOCK ABSORBER, STARTING WITH THE TOP M12X70MM BOLT

## 3. BOTTOM BOLT

FIT THE M12X90MM LOWER MOUNTING BOLT. FASTENING THE SHOCK GUARD, SPACER AND SHOCK ABSORBER AS PER DIAGRAM.

THIS WILL REQUIRE SOME COMPRESSION OF THE SHOCK ABSORBER TO ALIGN THE FITMENT BOLT. SETTING THE SHOCK ABSORBER TO "SOFT" WILL ASSIST IN THIS MANUAL COMPRESSION.

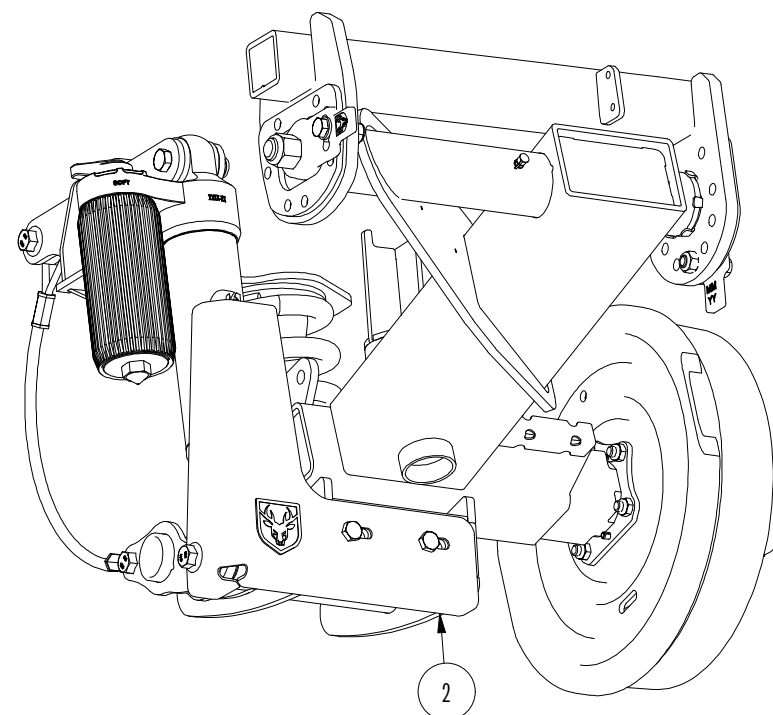
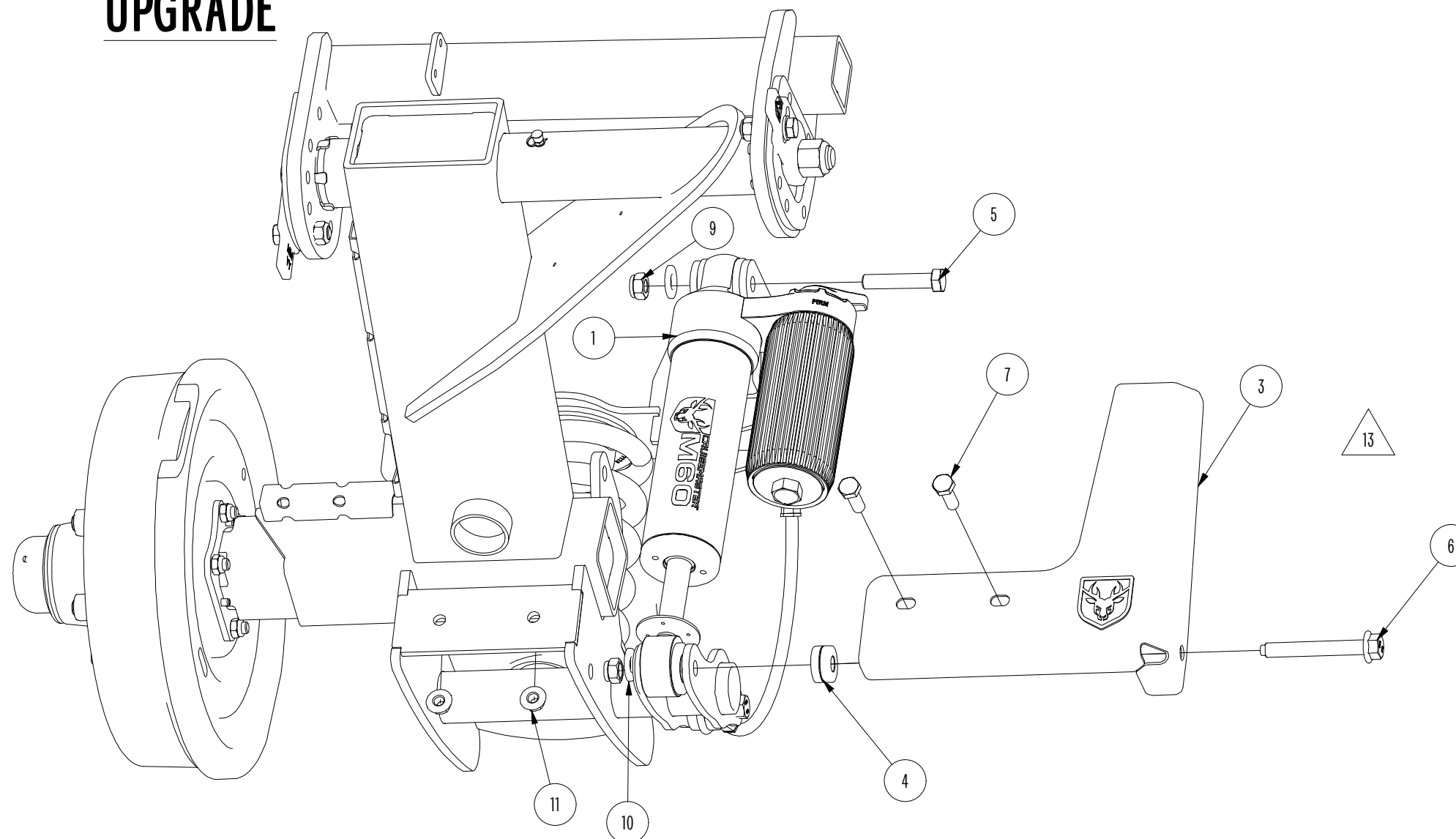
## 4. FRONT BOLTS

FIT THE REMAINING TWO M10X30MM SHOCK GUARD BOLTS THAT ATTACH THE GUARD TO THE ATX ARM.

## 5. TORQUE HARDWARE

TORQUE ALL BOLTS AS PER THE SPECIFIED TORQUE REQUIREMENTS (PAGE 5).

BOLTS USED AND THEIR REQUIRED TORQUE SETTINGS MAY CHANGE OVER TIME. PLEASE REFER TO THE TORQUE SETTINGS LISTED ON THE SUPPLIED BOLT BAG FOR THE DEFINITIVE REQUIREMENT.



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	33C 034	M60 ADJUSTABLE 60mm SINGLE SHOCK KIT
2	1	33S 8075L	SHOCK GUARD UNLEASHED LEFT
3	1	33S 8075R	SHOCK GUARD UNLEASHED RIGHT
4	2	33S 8079	BASH PLATE SPACER EXTENDED
5	6	60-B-M12x1.50-10.9-FL-DP-MAG-70mm-I	BOLT EN 1685 CLASS 10.9 M12x1.50x70
6	2	60-B-M12x1.50-10.9-FL-DP-MAG-90mm-I	BOLT EN 1685 CLASS 10.9 M12x1.50x90
7	4	60-B-M10x1.50-10-FL-DP-MAG-30mm-I	BOLT HEX 8.8 M10X30 Z/P
8	4	60-B-M10x1.50-8.8-FL-DP-MAG-45mm-I	BOLT EN 1685 CLASS 10.9 M12x1.50x90
9	8	60-N-M12x1.5 CL10NYL - NUT M12 NYLOC	NUT M6 NYLOC
10	8	60-W- M12X27X3 MAGNI HV300	M12 HV300 MAGNICOATED WASHER 3mm
11	8	60-N-M10x1.50-8-FL-MAG-I	NUT DIN 6923 CLASS 8 M10x1.50

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## 11 - M60 SHOCK ADJUSTMENT



### **FIRM SETTING**

THE FIRM SETTING IS DESIGNED FOR SEALED ROAD USE, PROVIDING AN INCREASED LEVEL OF DAMPING COMPARED TO THE M46 SHOCK ABSORBER. THIS REDUCES BODY ROLL AND IMPROVES THE STABILITY AND CONTROL OF THE TRAILER DURING CORNERING AT HIGH SPEED.

### **NEUTRAL SETTING**

WHEN TRAVELING AT HIGH SPEED ON UNSEALED ROADS, THE NEUTRAL SETTING IS RECOMMENDED, PROVIDING A DAMPING LEVEL EQUIVALENT TO THE M46 SHOCK ABSORBER.

THIS SETTING GIVES A COMBINATION OF HIGH SPEED HANDLING, STABILITY AND BUMP ABSORPTION ABILITY THAT HAS BEEN PROVEN ON THOUSANDS OF ATX SUSPENSION SYSTEMS.

### **SOFT SETTING**

THE SOFT SETTING IS DESIGNED FOR LOW TO MEDIUM SPEED OFF ROAD USE, PROVIDING A REDUCED LEVEL OF DAMPING COMPARED TO THE M46 SHOCK ABSORBER.

IT ALLOWS THE SUSPENSION TO ABSORB BIGGER IMPACTS WITHOUT EXCESSIVELY ROCKING THE TRAILER, WHICH IMPROVES OFF ROAD STABILITY. THE DECREASED DAMPING REDUCES THE FORCE AND VIBRATION LEVELS TRANSMITTED THROUGH TO THE TRAILER FROM THE ROAD OR TRACK SURFACE, REDUCING THE STRAIN ON THE TRAILER AND ITS CONTENTS.

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