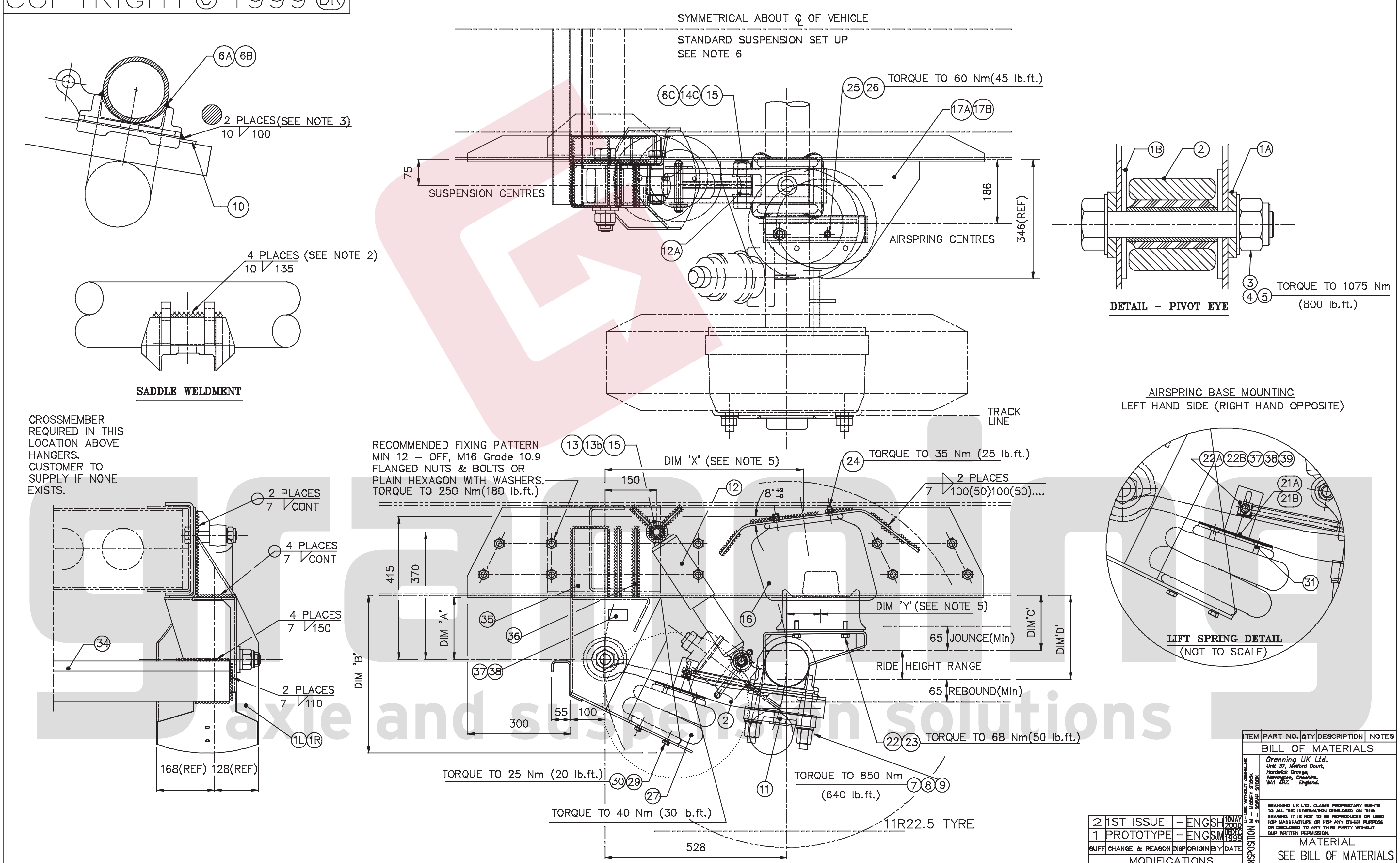
Important Note : This drawing is for information purposes, and may be subject to change. Any deviation must be requested, and approved in writing. The specification and installation of this equipment is soley the resposibility of the installer. This equipment is intended for normal road use, its correct operation and maitenace is the responsibility of the operator, recommendations and further information available at www.granninglynx.com

DCN10/482



SYMMETRICAL ABOUT ℄ OF VEHICLE
STANDARD SUSPENSION SET UP
SEE NOTE 6
TORQUE TO 60 Nm(45 lb.ft.)
6A 6B
6C 14C 15
25 26
17A 17B
2 PLACES(SEE NOTE 3)
10 100
10
75
SUSPENSION CENTRES
186
346(REF)
AIRSPRING CENTRES
12A
1B 2 1A
3 4 5
TORQUE TO 1075 Nm
(800 lb.ft.)
DETAIL - PIVOT EYE
4 PLACES (SEE NOTE 2)
10 135
SADDLE WELDMENT
TRACK LINE
AIRSPRING BASE MOUNTING
LEFT HAND SIDE (RIGHT HAND OPPOSITE)
CROSSMEMBER REQUIRED IN THIS LOCATION ABOVE HANGERS. CUSTOMER TO SUPPLY IF NONE EXISTS.
RECOMMENDED FIXING PATTERN MIN 12 - OFF, M16 Grade 10.9 FLANGED NUTS & BOLTS OR PLAIN HEXAGON WITH WASHERS. TORQUE TO 250 Nm(180 lb.ft.)
13 13b 15
DIM 'X' (SEE NOTE 5)
150
12
8°+2 -0
24
TORQUE TO 35 Nm (25 lb.ft.)
2 PLACES
7 100(50)100(50)....
2 PLACES
7 CONT
4 PLACES
7 CONT
4 PLACES
7 150
2 PLACES
7 110
34
1L 1R
168(REF) 128(REF)
415
370
DIM 'A'
DIM 'B'
35
36
37 38
16
DIM 'Y'(SEE NOTE 5)
65 JOUNCE(Min)
RIDE HEIGHT RANGE
65 REBOUND(Min)
DIM'C'
DIM'D'
55 100
300
2
22 23
TORQUE TO 68 Nm(50 lb.ft.)
TORQUE TO 25 Nm (20 lb.ft.)
30 29
27
11
TORQUE TO 850 Nm
(640 lb.ft.)
7 8 9
TORQUE TO 40 Nm (30 lb.ft.)
11R22.5 TYRE
528
22A 22B 37 38 39
21A
21B
31
LIFT SPRING DETAIL
(NOT TO SCALE)
granning axle and suspension solutions

MODEL	DIM'A'	DIM'B'	DIM'C'	DIM'D'
RM(E) 20-75	180	460	160	245
RM(E) 25-75	225	505	205	290
RM(E) 30-75	275	555	255	340

DO NOT SCALE-IF IN DOUBT ASK

THIRD ANGLE PROJECTION

ALL DIMENSIONS ARE IN MILLIMETRES

ORIGINAL FRAME SIZE 809mm x 562mm

DESIGNED FOR RETRO - MID AXLE CONVERSIONS - 7500 Kgs

COMPONENTS TO CARRY PART NO. AT LOCATION BATCH-DATE SUPPLIER CODE

BURRS AND SHARP EDGES TO BE REMOVED

UNSPECIFIED TOLERANCES	
NO DECIMALS	± 1mm
ONE	± 0.5mm
TWO	± 0.2mm
ANGULAR	± 0° - 3'

SUFF	CHANGE & REASON	DISP	ORIGIN	BY	DATE
2	1ST ISSUE	-	ENG	SH	10MAY 2000
1	PROTOTYPE	-	ENG	SJM	08DEC 1999

MODIFICATIONS

DRAWN BY MORAN

DATE 08 DEC 99

ALL ALTERATIONS TO BE VIA CAD

WEIGHT ESTIMATED ACTUAL —

AUTHORISED

CHECKED

SCALE 1:5

SUPERSEDES

ITEM	PART NO.	QTY	DESCRIPTION	NOTES

BILL OF MATERIALS

Granning UK Ltd. Unit 37, Melford Court, Hardwick Grange, Warrington, Cheshire, WA1 4RZ. England.

DISPOSITION

MATERIAL SEE BILL OF MATERIALS

FINISH

TITLE INSTALLATION RM 20/25-75 (E)

DRAWING NO. 18200

SHEET 1 OF 2 A1

Important Note : This drawing is for information purposes, and may be subject to change. Any deviation must be requested, and approved in writing. The specification and installation of this equipment is soley the resposibility of the installer. This equipment is intended for normal road use, its correct operation and maitenace is the responsibility of the operator, recommendations and further information avaialable at www.granninglynx.com DCN10/482

NOTE 1 :– SUSPENSION SELECTION

THIS SUSPENSION IS ONLY SUITABLE FOR FITMENT WITH SINGLE R22.5" TYRES.
IF ANY DEVIATION FROM THIS IS REQUIRED CONTACT GRANNING LYNX ENGINEERING.

1) ON A FLAT LEVEL SURFACE MEASURE FROM THE GROUND TO THE UNDERSIDE OF THE CHASSIS – .....DIM 'H'

IF THE VEHICLE IS FITTED WITH DRIVE AXLE AIR SUSPENSION;

2a) DECIDE WHETHER VEHICLE IS LADEN OR UNLADEN.

IF LADEN 'RIDE HEIGHT' = DIM 'H' – PROPOSED TYRE STATIC LADEN RADIUS.

IF UNLADEN 'RIDE HEIGHT' = DIM 'H' – $\frac{\text{PROPOSED TYRE ROLLING RADIUS + MAX RADIUS}}{2}$

RIDE HEIGHT LADEN = RIDE HEIGHT UNLADEN

IF THE VEHICLE IS FITTED WITH MECHANICALLY SUSPENDED DRIVE AXLE

2) DECIDE WHETHER VEHICLE IS LADEN OR UNLADEN.

IF LADEN 'RIDE HEIGHT' = DIM 'H' – PROPOSED TYRE STATIC LADEN RADIUS.

IF UNLADEN 'RIDE HEIGHT' = DIM 'H' – $\frac{\text{PROPOSED TYRE ROLLING RADIUS + MAX RADIUS}}{2}$

IF ONLY ONE CASE OR AN INTERMEDIATE LOADING IS ALL THAT CAN BE MEASURED THEN REFER TO THE VEHICLE BRAKE LOAD SENSING VALVE SETTING PLATE FOR THE DEFLECTION OF THE DRIVE AXLE SPRINGS BETWEEN LADEN(DRIVE AXLE PLATED MAX MASS) AND AN UNLADEN DRIVE AXLE MASS, TO BE ESTIMATED BY THE CONVERTOR:– DIM'f'.

LADEN RIDE HEIGHT + DEFLECTION 'f' = RIDE HEIGHT UNLADEN
UNLADEN RIDE HEIGHT – DEFLECTION 'f' = RIDE HEIGHT LADEN

3) REFER TO TABLE ON SHEET 1 OF THIS DRAWING.
SELECT A SUITABLE SUSPENSION SO THAT BOTH LADEN AND UNLADEN RIDE HEIGHTS REMAIN WITHIN THE RIDE HEIGHT RANGE OF THE SUSPENSION.
FOR MECHANICALLY SUSPENDED VEHICLES ATTENTION SHOULD BE PAID TO WHETHER THE VEHICLE IS BODIED WHEN MEASURED, WHAT TYPE OF BODY IS GOING TO BE FITTED AND WHAT IMPLICATIONS THIS MAY HAVE ON THE CHASSIS HEIGHT.

FOR MECHANICALLY SUSPENDED DRIVE AXLES IT IS PERMISSIBLE TO EXTEND THE TRAVEL UPTO 30mm INTO THE REBOUND RANGE ON THE ASSUMPTION THAT WHEN UNLADEN THE AXLE SHOULD BE LIFTED.

IF TWO SUSPENSION RANGES ARE APPLICABLE IT IS USUALL TO FIT THE SHORTER SUSPENSION IN ORDER TO OBTAIN GREATER GROUND CLEARENCE WHEN THE AXLE IS LIFTED AND GREATER GROUND CLEARENCE OF THE HANGER BRACKETS.

NOTE 2:– PRE–HEATING

AXLE TUBE SHOULD BE PRE–HEATED IF AMBIENT TEMPERATURE IS LESS THAN 68°F, 20 °C.

NOTE 3:– AXLE TRACKING

TRACKING PLATE (ITEM 10) WELD AFTER TRACKING AXLE.
ARCING AND SPLATTER.

NOTE 4:– BOLT TORQUES

ALL BOLTS TO BE TORQUED WITH SUSPENSION IN RIDE HEIGHT POSITION, SEE THIS DRAWING AND 12678 TORQUE SETTING PLATE FOR CORRECT TORQUE SETTINGS.
PROTECTION SPRING BEAM FROM 12678 TORQUE SETTING PLATE TO BE ATTACHED TO CHASSIS BY CONVERTOR.

NOTE 5 : AIRSPRING LONGITUDINAL POSITIONING

IF VEHICLE FITTED WITH MECHANICALLY SUSPENDED DRIVE AXLE SUSPENSION.
DIM 'X' = 575mm DIM 'Y' = 100mm

REFER TO DRAWING 18734 (AM521) & 18567 FOR SUSPENSION AIR PIPING, AND DRAWING 80107 FOR SUSPENSION PRESSURE CHARACTERISTIC.

IF VEHICLE FITTED WITH AIR SUSPENDED DRIVE AXLE SUSPENSION.
WRITE HERE AXLE PLATING;
DRIVE AXLE .....kg :– MASS 'DR'
MID AXLE .....kg :– MASS 'M'

FROM VEHICLE BRAKE LOAD SENSING VALVE SETTING PLATE ASCERT THE PRESSURE (IN bar) IN THE DRIVE AXLE SUSPENSION FOR MASS 'DR'
DRIVE SUSPENSION PRESSURE :–.....bar :– PRESS 'P'

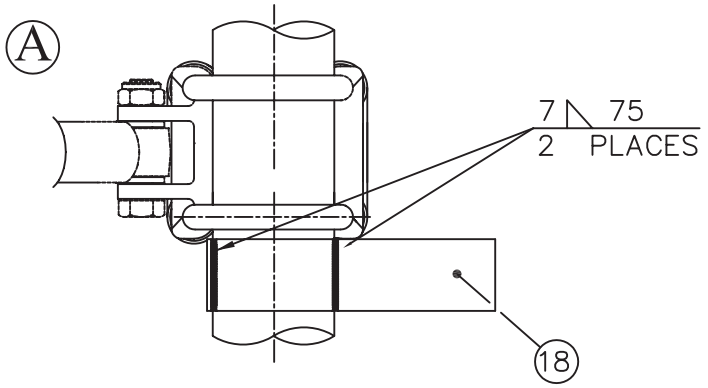
USE THE BELOW FORMULA TO CALCULATE DIMS 'X' & 'Y'. (SEE PAGE 1).

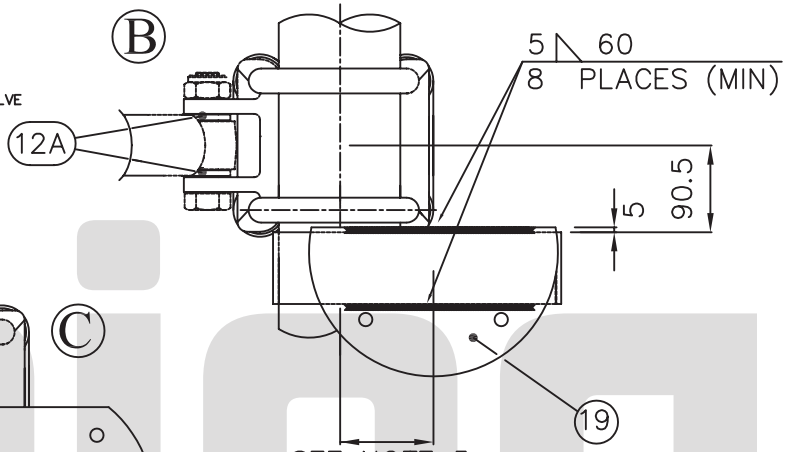
DIM 'Y' = FRRV RATIO x 0.565 x $\left(\frac{\text{MASS 'M' – 700}}{\text{PRESS 'P'}}\right)$ – 530
{IF REQUIRED}

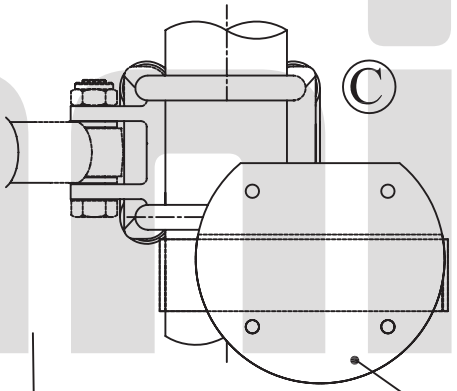
DIM 'Y' NEEDS TO BE IN THE ORDER OF –50 to + 200 FOR EASE OF ASSEMBLY
IF IT FALLS OUTSIDE OF THESE DIMENSIONS THEN USE FIXED RATIO REDUCTION VALVE AS PER PIPING DIAGRAM, 18704 FOR AM505 & 18705 FOR AM506.

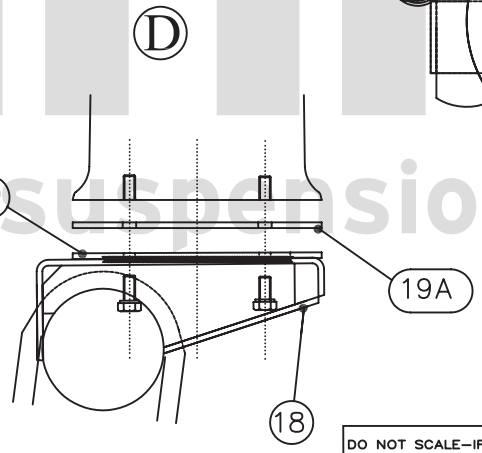
INSERT RATIO INTO FORMULA. RATIO'S AVAILABLE ARE:–
1.15 : 1
1.25 : 1
1.35 : 1
1.5 : 1
1.8 : 1
2.0 : 1

DIM 'X' = DIM 'Y' + 475









ITEM	PART NO.	QTY	DESCRIPTION	NOTES
BILL OF MATERIALS				

Granning UK Ltd.
Unit 37, Kelford Court,
Hardwick Grange,
Warrington, Cheshire.
WA1 4RZ. England.
granning lynx AXLE SUSPENSIONS

DISPOSITION	CHANGE & REASON	DISP	ORIGINATED BY	DATE
	MODIFICATIONS			
A	FIRST ISSUE	–	ENGS	12/MAY/2000
1	PROTOTYPE	–	ENGS	08/DEC/1999

MATERIAL
SEE BILL OF MATERIALS

FINISH

TITLE
INSTALLATION
RM 20/25–75 (E)

DRAWING NO. 18200

SHEET 2 OF 2 A1

DO NOT SCALE–IF IN DOUBT ASK
THIRD ANGLE PROJECTION

DESIGNED FOR
RETRO – MID AXLE CONVERSIONS – 7500 Kgs

DRAWN BY MORAN
08 DEC 1999

AUTHORISED

CHECKED

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ACTUAL

SUPERSEDES

ALL DIMENSIONS ARE IN MILLIMETRES

ORIGINAL FRAME SIZE 809mm x 562mm

COMPONENTS TO CARRY AT LOCATION
PART NO. Ⓟ
BATCH DATE Ⓑ
SUPPLIER CODE Ⓢ
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UNSPECIFIED TOLERANCES
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TWO
ANGULAR