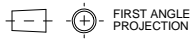


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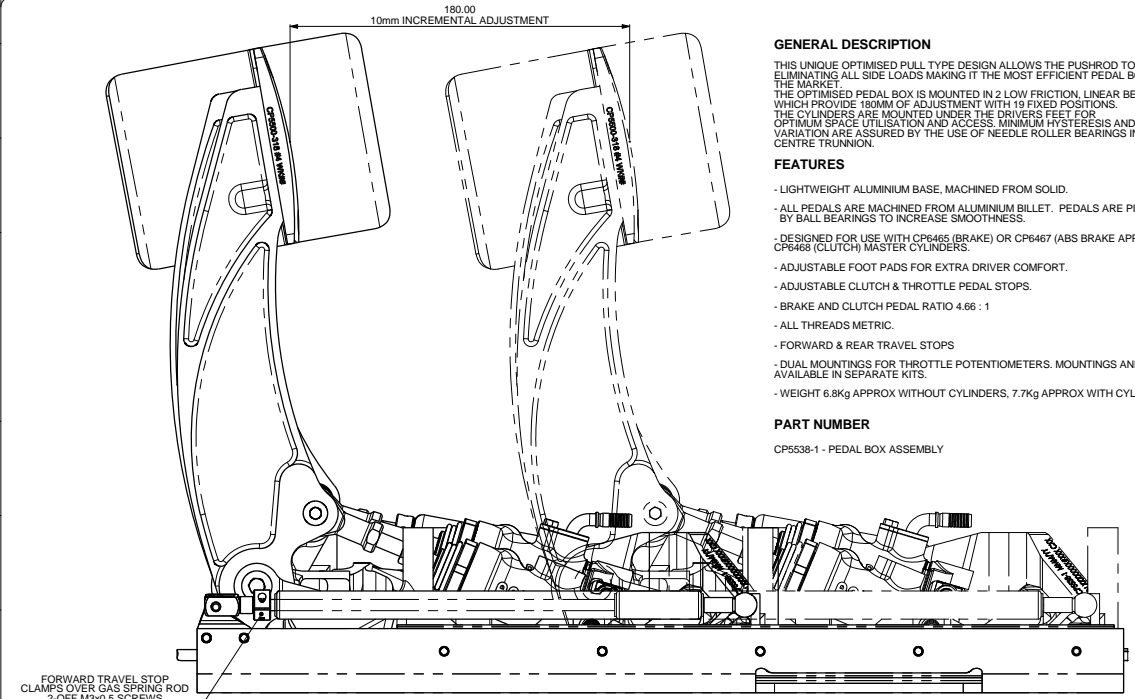
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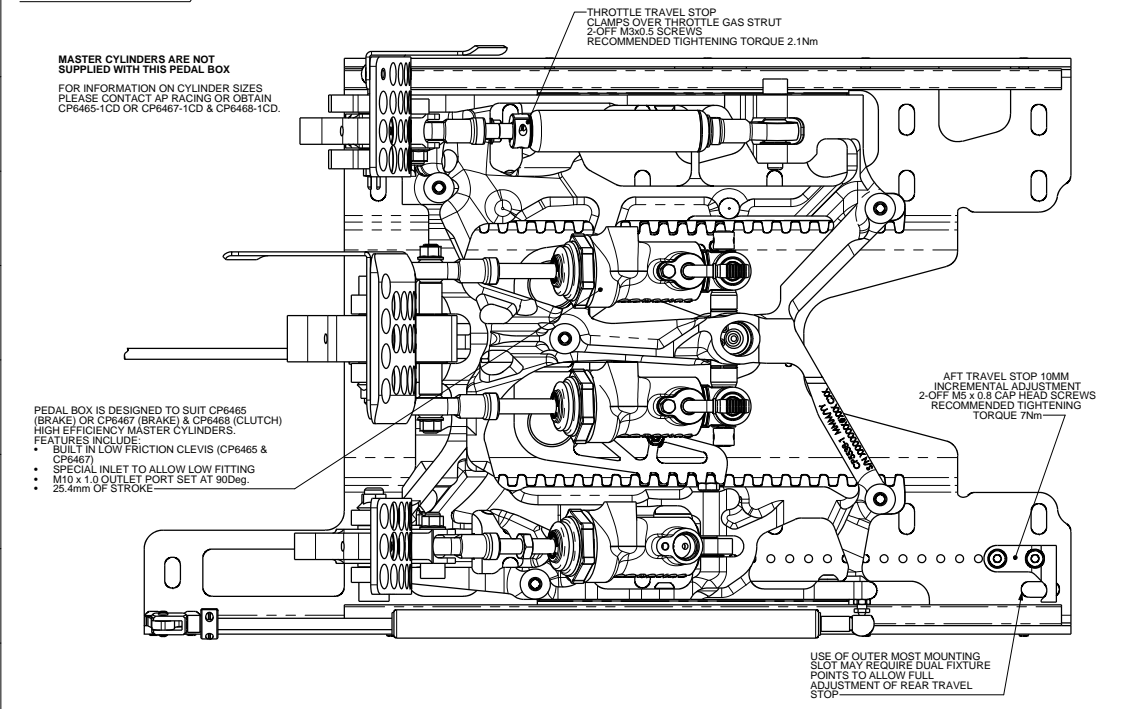
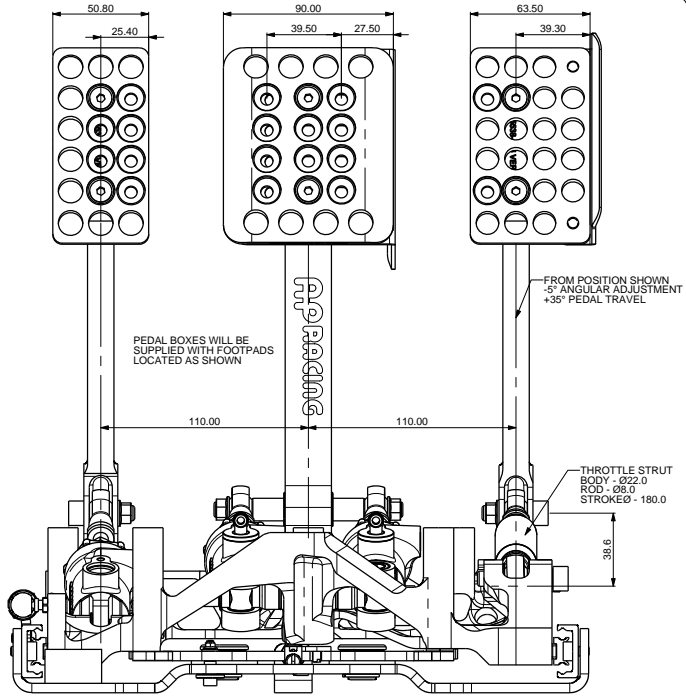
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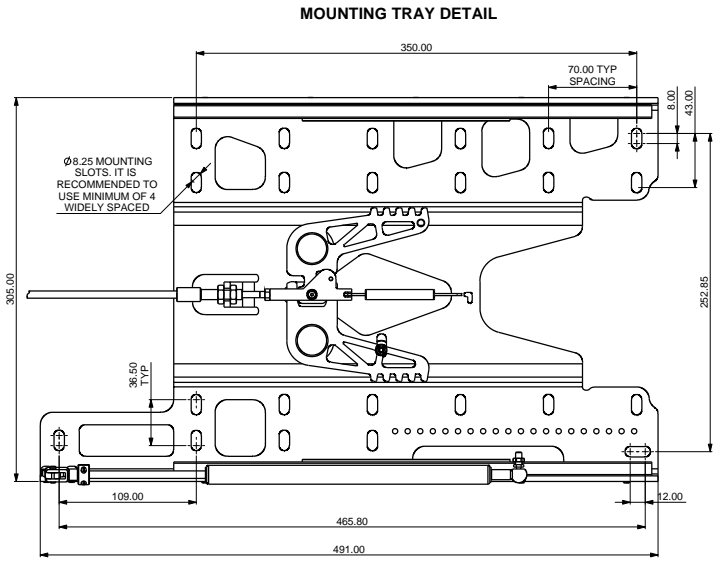
Alterations		Zones	Initials
Date & No.	Particulars		
1 04/02/16 B7058	FIRST ISSUE		SAT
2 17/03/16 B7058	PEDAL RATIO DETAILS UPDATED ADDITIONAL MOUNTING SLOT ADDED TO TRAY	11A	SAT
3 22/03/16 B7058	SHEET 2 CABLE ATTACHMENT DETAILS ADDED		SAT
4 17/08/16 B7601_01	CHANGES TO BASEPLATE AND CLUTCH AND THROTTLE PEDAL STOPS		DW
5 25/01/17 B7601_06	MOUNTING TRAY MODIFIED SHEET 3 CP5538-21 WAS -17 LOCKING MECH SUB ASSY SHEET 4 THROTTLE SENSOR OPTIONS ADDED SHEET 5 ADDED THROTTLE SENSOR AND RELEASE CABLE DETAILS	B2	SAT



- GENERAL DESCRIPTION**
- THIS UNIQUE OPTIMISED PULL TYPE DESIGN ALLOWS THE PUSHROD TO REMAIN STRAIGHT, ELIMINATING ALL SIDE LOADS MAKING IT THE MOST EFFICIENT PEDAL BOX ON THE MARKET. THE OPTIMISED PEDAL BOX IS MOUNTED IN 2 LOW FRICTION, LINEAR BEARING RAILS WHICH PROVIDE 180MM OF ADJUSTMENT WITH 13 FIXED POSITIONS. THE CYLINDERS ARE MOUNTED UNDER THE DRIVERS FEET FOR OPTIMUM SPACE UTILISATION AND ACCESS. MINIMUM HYSTERESIS AND BALANCE VARIATION ARE ASSURED BY THE USE OF NEEDLE ROLLER BEARINGS IN THE CENTRE TRUNNION.
- FEATURES**
- LIGHTWEIGHT ALUMINIUM BASE, MACHINED FROM SOLID.
 - ALL PEDALS ARE MACHINED FROM ALUMINIUM BILLET. PEDALS ARE PIVOTED BY BALL BEARINGS TO INCREASE SMOOTHNESS.
 - DESIGNED FOR USE WITH CP6465 (BRAKE) OR CP6467 (ABS BRAKE APPLICATIONS) & CP6468 (CLUTCH) MASTER CYLINDERS.
 - ADJUSTABLE FOOT PADS FOR EXTRA DRIVER COMFORT.
 - ADJUSTABLE CLUTCH & THROTTLE PEDAL STOPS.
 - BRAKE AND CLUTCH PEDAL RATIO 4.66 : 1
 - ALL THREADS METRIC.
 - FORWARD & REAR TRAVEL STOPS
 - DUAL MOUNTINGS FOR THROTTLE POTENTIOMETERS. MOUNTINGS AND SENSORS AVAILABLE IN SEPARATE KITS.
 - WEIGHT 6.8kg APPROX WITHOUT CYLINDERS, 7.7kg APPROX WITH CYLINDERS.
- PART NUMBER**
- CP5538-1 - PEDAL BOX ASSEMBLY



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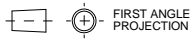


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SCALE 1:1	SHEET 1 OF 5
DRAWN Steve Thomas	
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DERIVED FROM	
TITLE FLOOR MTG REVERSE PULL TYPE SLIDING PEDAL BOX	
DRG NO. CP5538-1CD	

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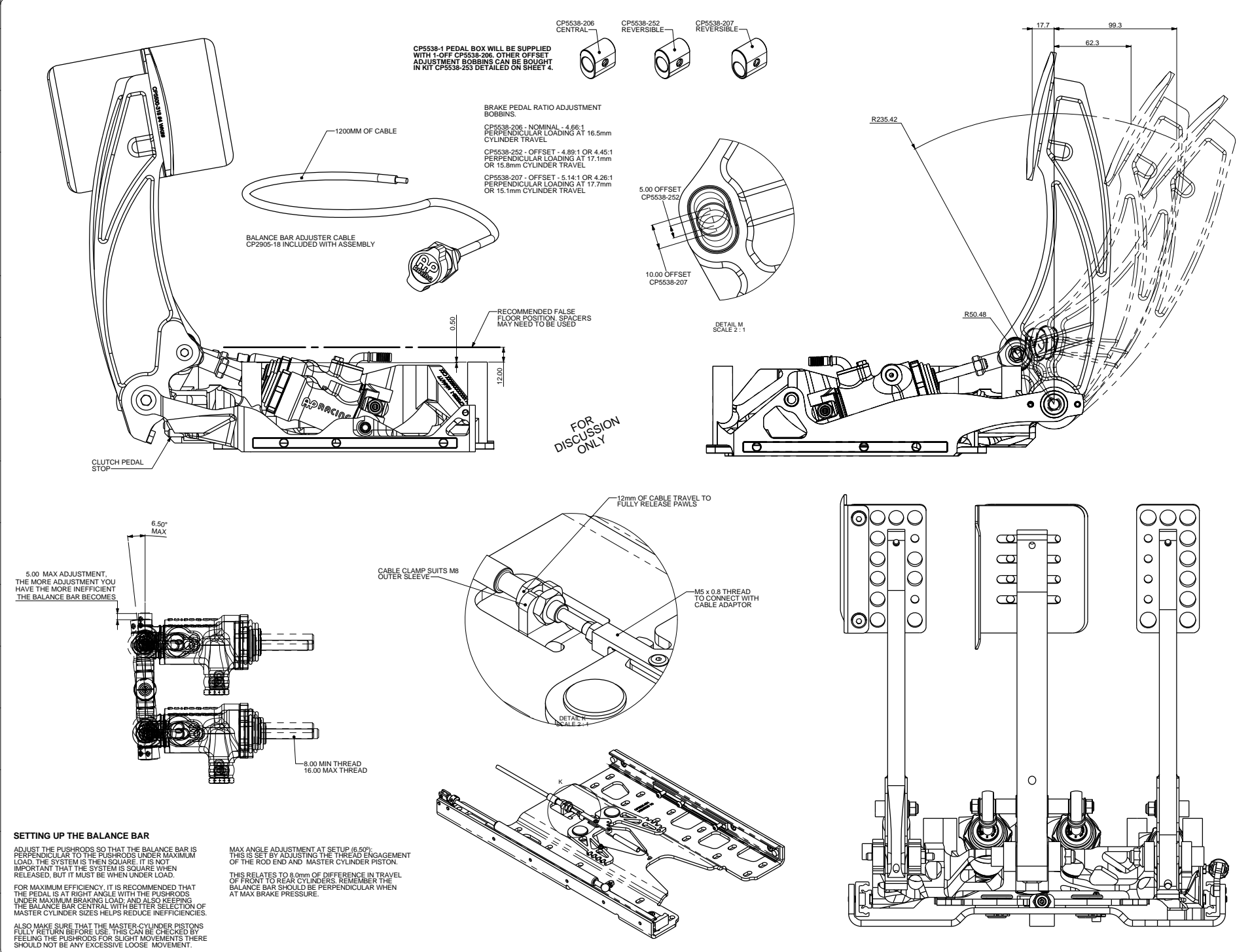
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Alterations		Zone	Index
Date & No.	Particulars		
-	SEE SHEET 1 FOR ISSUE INFORMATION.	-	-
<div>FOR DISCUSSION ONLY</div>			
SCALE 1:1		SHEET 2 OF 5	
DRAWN	Steve Thomas		
APPROVED			
DERIVED FROM	CP5516-7		
TITLE			
FLOOR MTG REVERSE PULL			
TYPE SLIDING PEDAL BOX			
DRG NO.		CP5538-1CD	

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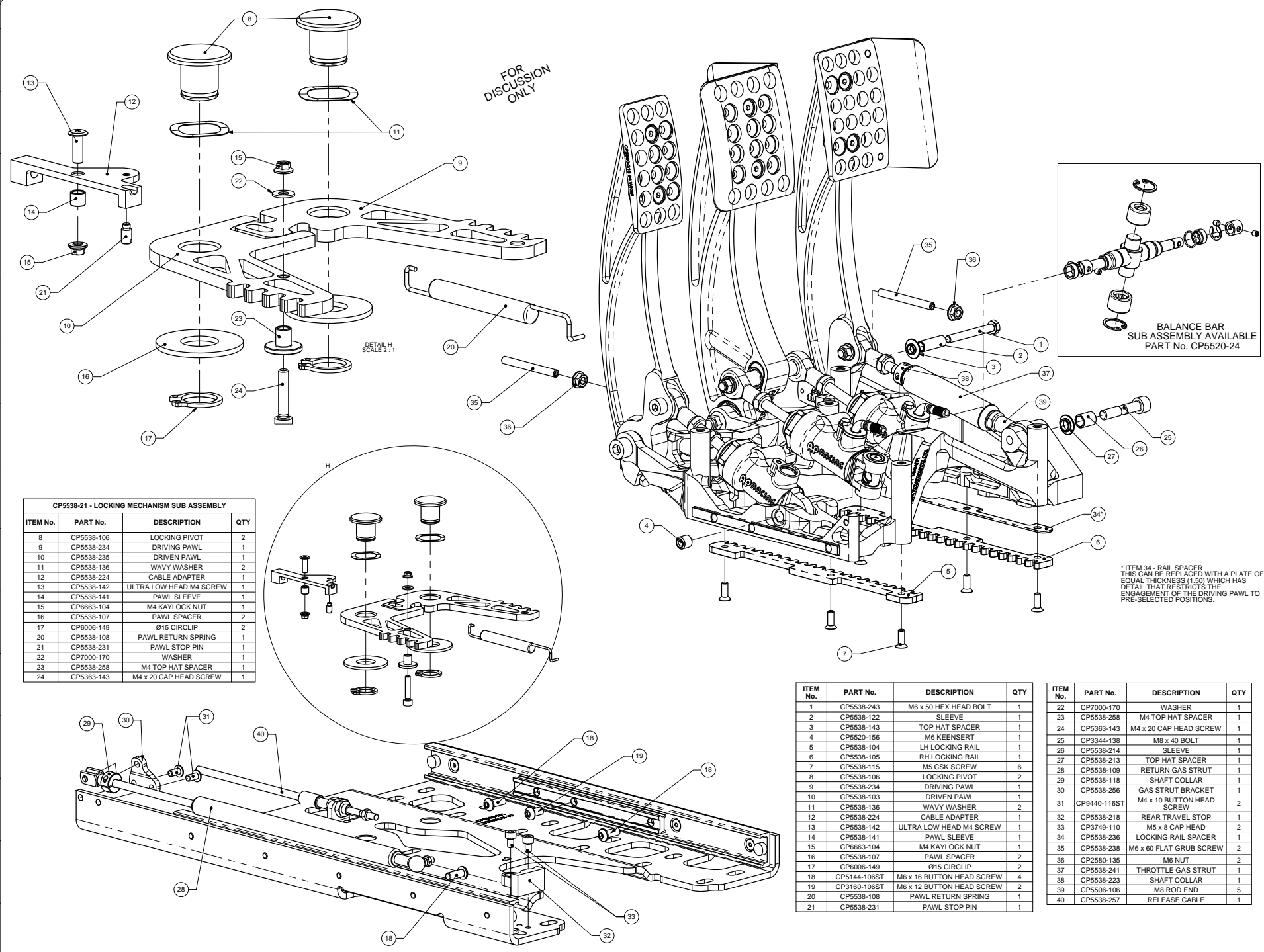
FIRST ANGLE PROJECTION

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CP5538-21 - LOCKING MECHANISM SUB ASSEMBLY			
ITEM No.	PART No.	DESCRIPTION	QTY
8	CP5538-106	LOCKING PIVOT	2
9	CP5538-234	DRIVING PAWL	1
10	CP5538-235	DRIVEN PAWL	1
11	CP5538-136	WAVY WASHER	2
12	CP5538-224	CABLE ADAPTER	1
13	CP5538-142	ULTRA LOW HEAD M4 SCREW	1
14	CP5538-141	PAWL SLEEVE	1
15	CP6663-104	M4 KAYLOCK NUT	1
16	CP5538-107	PAWL SPACER	2
17	CP6006-149	Ø15 CIRCLIP	2
20	CP5538-108	PAWL RETURN SPRING	1
21	CP5538-231	PAWL STOP PIN	1
22	CP7000-170	WASHER	1
23	CP5538-258	M4 TOP HAT SPACER	1
24	CP5363-143	M4 x 20 CAP HEAD SCREW	1

ITEM No.	PART No.	DESCRIPTION	QTY
1	CP5538-243	M6 x 50 HEX HEAD BOLT	1
2	CP5538-122	SLEEVE	1
3	CP5538-143	TOP HAT SPACER	1
4	CP5520-156	M6 KEENSERT	1
5	CP5538-104	LH LOCKING RAIL	1
6	CP5538-105	RH LOCKING RAIL	1
7	CP5538-115	M5 CSK SCREW	6
8	CP5538-106	LOCKING PIVOT	2
9	CP5538-234	DRIVING PAWL	1
10	CP5538-103	DRIVEN PAWL	1
11	CP5538-136	WAVY WASHER	2
12	CP5538-224	CABLE ADAPTER	1
13	CP5538-142	ULTRA LOW HEAD M4 SCREW	1
14	CP5538-141	PAWL SLEEVE	1
15	CP6663-104	M4 KAYLOCK NUT	1
16	CP5538-107	PAWL SPACER	2
17	CP6006-149	Ø15 CIRCLIP	2
18	CP5144-106ST	M6 x 16 BUTTON HEAD SCREW	4
19	CP3160-106ST	M6 x 12 BUTTON HEAD SCREW	2
20	CP5538-108	PAWL RETURN SPRING	1
21	CP5538-231	PAWL STOP PIN	1

ITEM No.	PART No.	DESCRIPTION	QTY
22	CP7000-170	WASHER	1
23	CP5538-258	M4 TOP HAT SPACER	1
24	CP5363-143	M4 x 20 CAP HEAD SCREW	1
25	CP3344-138	M8 x 40 BOLT	1
26	CP5538-214	SLEEVE	1
27	CP5538-213	TOP HAT SPACER	1
28	CP5538-109	RETURN GAS STRUT	1
29	CP5538-118	SHAFT COLLAR	1
30	CP5538-256	GAS STRUT BRACKET	1
31	CP9440-116ST	M4 x 10 BUTTON HEAD SCREW	2
32	CP5538-218	REAR TRAVEL STOP	1
33	CP3749-110	M5 x 8 CAP HEAD	2
34	CP5538-236	LOCKING RAIL SPACER	1
35	CP5538-238	M6 x 60 FLAT GRUB SCREW	2
36	CP2580-135	M6 NUT	2
37	CP5538-241	THROTTLE GAS STRUT	1
38	CP5538-223	SHAFT COLLAR	1
39	CP5506-106	M8 ROD END	5
40	CP5538-257	RELEASE CABLE	1

Alterations

Date & No.	Particulars	Zone	Index
-	SEE SHEET 1 FOR ISSUE INFORMATION.	-	-

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SCALE 1:1

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SHEET 3 OF 5

TITLE FLOOR MTG REVERSE PULL TYPE SLIDING PEDAL BOX

DRG NO. CP5538-1CD

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FIRST ANGLE PROJECTION

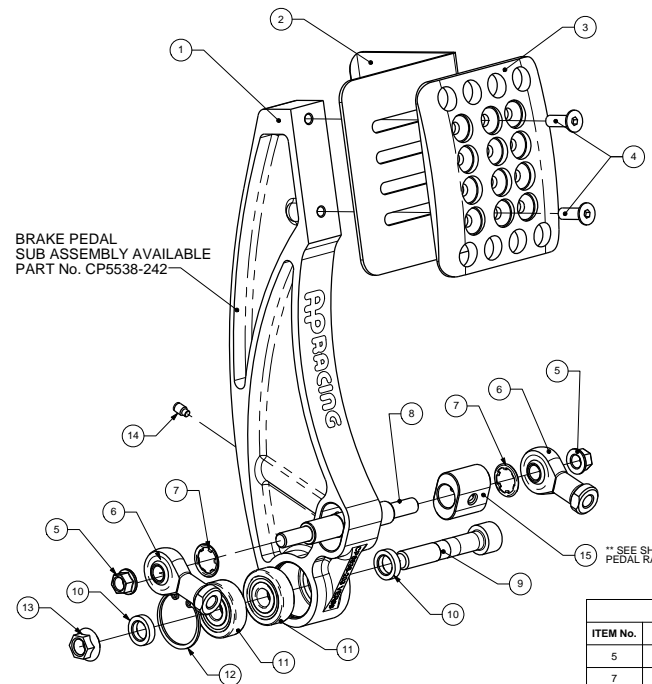
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Alterations	
Date & No.	Particulars
9/10/12	SEE SHEET 1 FOR ISSUE INFORMATION.

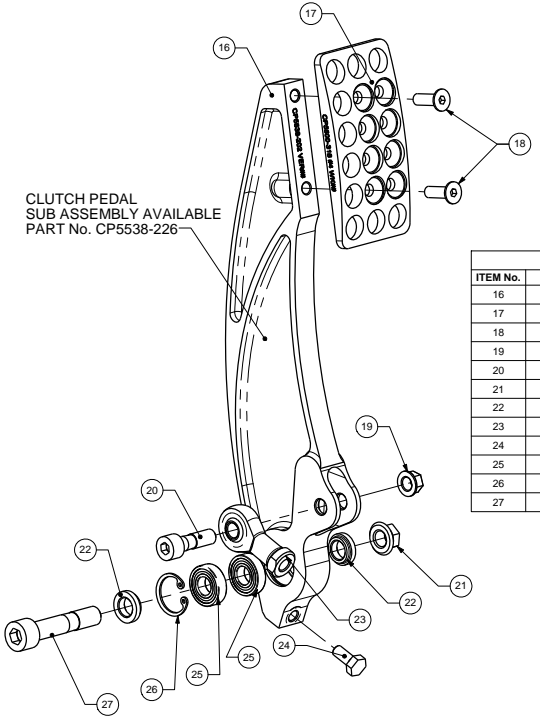


Brake Pedal Sub Assembly Available Part No. CP5538-242

BRAKE PEDAL			
ITEM No.	PART No.	DESCRIPTION	QTY
1	CP5538-203	BRAKE PEDAL	1
2	CP5538-210	GUARD PLATE	1
3	CP5500-330	FOOTPAD	1
4	CP3881-104	M6 x 20 CSK SCREW	2
5	CP4611-111	M8 KAYLOCK NUT	2
6	CP5506-106	M8 ROD END	2
7	CP5516-124	GRIP RING	2
8	CP5506-110	BRAKE PULL ROD	1
9	CP5200-108	M10 x 58 CAP HEAD	1
10	CP5516-108	SPACER	2
11	CP5516-106	BEARING	2
12	CP5516-107	CIRCLIP	1
13	CP5427-101	M10 KAYLOCK NUT	1
14	CP4325-122	M5 x 8 GRUB SCREW	1
15A	CP5538-206	PEDAL RATIO BOBBIN - NOM	1
15B	CP5538-207	PEDAL RATIO BOBBIN - OFFSET	1
15C	CP5538-252	PEDAL RATIO BOBBIN - OFFSET	1

** SEE SHEET 2 FOR DIFFERENT PEDAL RATIO BOBBINS

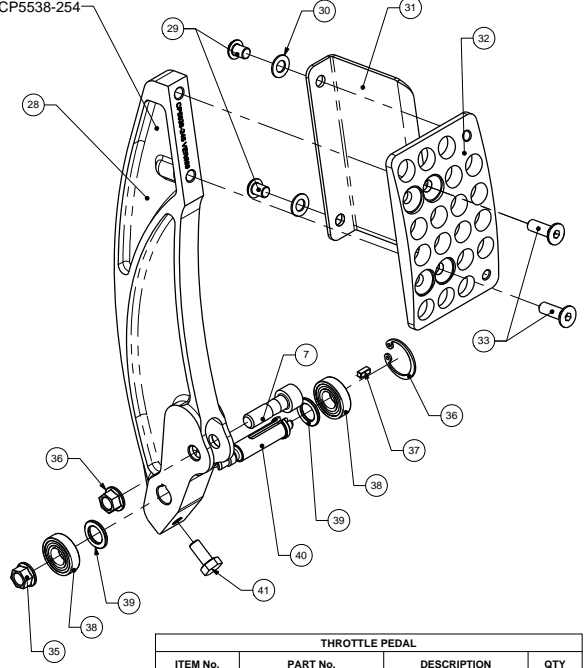
CP5538-253 - BRAKE PEDAL RATIO BOBBIN KIT			
ITEM No.	PART No.	DESCRIPTION	QTY
5	CP4611-111	M8 KAYLOCK NUT	2
7	CP5516-124	GRIP RING	2
15A	CP5538-206	PEDAL RATIO BOBBIN - NOM	1
15B	CP5538-207	PEDAL RATIO BOBBIN - OFFSET	1
15C	CP5538-252	PEDAL RATIO BOBBIN - OFFSET	1



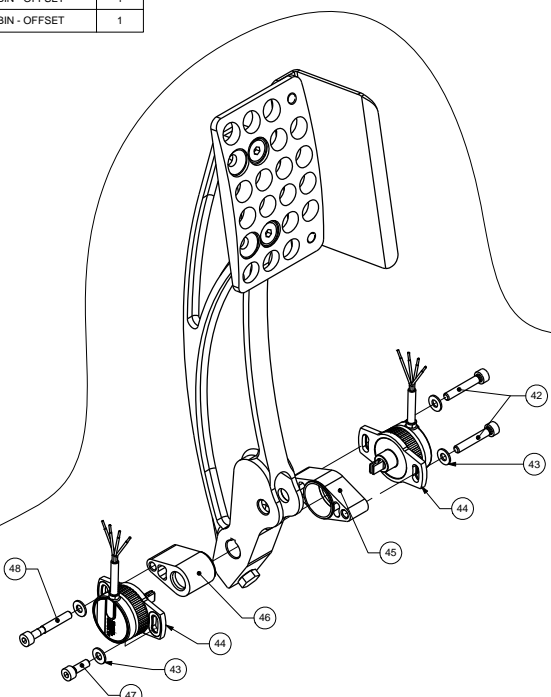
Clutch Pedal Sub Assembly Available Part No. CP5538-226

CLUTCH PEDAL			
ITEM No.	PART No.	DESCRIPTION	QTY
16	CP5538-202	CLUTCH PEDAL	1
17	CP5500-318	FOOTPAD	1
18	CP3881-104	M6 x 20 CSK SCREW	2
19	CP4611-111	M8 KAYLOCK NUT	1
20	CP2494-2061	M8 x 27 CAP HEAD	1
21	CP5427-101	M10 KAYLOCK NUT	1
22	CP5516-141	SPACER	2
23	CP5506-106	M8 ROD END	1
24	CP3125-122	M6 x 13 HEX SCREW	1
25	CP5516-140	BEARING	2
26	CP5516-162	CIRCLIP	1
27	CP2561-105	M10 x 50 CAP HEAD	1

Throttle Pedal Sub Assembly Available Part No. CP5538-254



THROTTLE PEDAL			
ITEM No.	PART No.	DESCRIPTION	QTY
28	CP5538-246	THROTTLE PEDAL	1
29	CP2749-194	M6 x 8 SCREW	2
30	CP2494-1305	WASHER	2
31	CP5516-164	GUARD PLATE	1
32	CP5516-167	FOOT PAD	1
33	CP3881-104	M6 x 20 SCREW	2
34	CP2494-2061	M8 x 27 CAP HEAD	1
35	CP4611-111	M8 KAYLOCK NUT	2
36	CP5516-162	CIRCLIP	1
37	CP5540-209	KEY	1
38	CP5516-140	BEARING	2
39	CP5538-208	SPACER	2
40	CP5538-240	PIVOT SHAFT	1
41	CP3125-122	M6 x 13 HEX SCREW	1



THROTTLE SENSOR OPTIONS

THROTTLE SENSOR SPACER KIT - CP5538-19			
ITEM No.	PART No.	DESCRIPTION	QTY
42	CP7350-109	M4x25 CAP HEAD BOLT	2
43	CP7000-170	M4 WASHER	4
45	CP5538-221	THROTTLE SENSOR DOUBLE SPACER	1
46	CP5538-222	THROTTLE SENSOR SINGLE SPACER	1
47	CP3215-115	M4x12 CAP HEAD SCREW	1
48	CP7742-108	M4x30 CAP HEAD BOLT	1
THROTTLE SPACER AND SENSOR KIT - CP5538-20			
CP5538-20 INCLUDES CP5538-19 WITH THE ADDITION OF CP5540-220 SENSOR			
44	CP5540-220	ROTARY CONTACTLESS SENSOR	2

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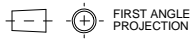
SHEET 4 OF 5

TITLE FLOOR MTG REVERSE PULL TYPE SLIDING PEDAL BOX

DRG NO. CP5538-1CD

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THROTTLE SENSOR DETAIL

PERFORMANCE

Electrical		
Measurement range	Vdc	20° to 360° in 1° increments
Supply voltage	Vdc	9 to 30 (unregulated) and 5 ±0.5 (regulated)
Over voltage protection	mA	Up to 40 (-40 to +60°C)
Maximum supply current		<25
Reverse polarity protection		Yes
Short circuit protection		Yes
Output to GND		Yes
Output to supply		In 5V regulated mode only
Power-on settlement time	S	<1
Resolution	%	0.025 of measurement range (12 bit)
Non-linearity*	%	<±0.4
Temperature coefficient ppm/°C		<±30 in 5V supply mode; <±90 in 9-30V supply mode

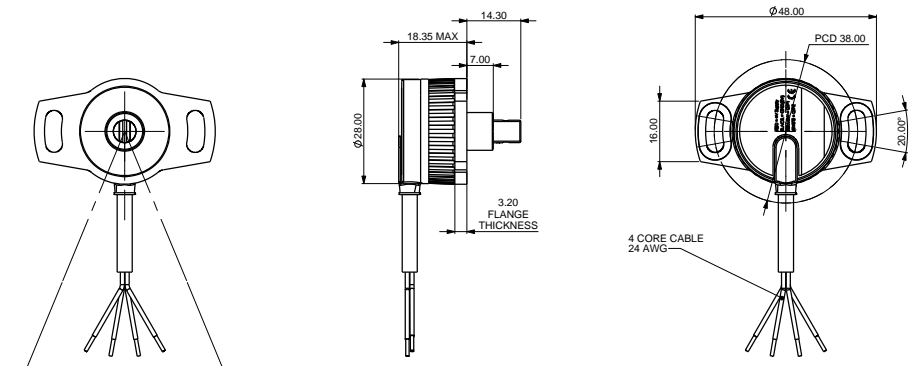
* Non-linearity is measured using the least-squares method on a computerised calibration system

Analog Output		
Voltage output range	Vdc	Absolute voltage, 0.1 to 4.9 over measurement range (±3%)
9-30V supply	Vdc	Ratiometric output voltage - 2 to 98% (A4) of Vs over measurement range (±1%)
5V supply	Vdc	0.05 (1%) and 4.95 (99%) nominal
Monotonic range		10k minimum (resistive to GND)
Load resistance	mVrms	<1
Output noise	mS	<2
Input/output delay		

Mechanical		
Mechanical angle	°	360, continuous
Operating torque	g-cm	120 Max
Weight	g	<35
Mounting		Use 2 x M4 socket head cap screws and M4 washer - maximum tightening torque 2Nm
Phasing		When shaft ident mark is facing toward the cable exit, output is at mid travel. The sensor housing allows for ±10° adjustment via the mounting flange slots.

Environment		
Protection class		IP68 (to 2m depth for 1 hour)
Life		20 million operations (10 x 106 cycles) of ±75°
Dither life		Contactless - no degradation due to shaft dither
Operational temperature† °C		-40 to +140 (5V supply) -40 to +135.7 (9V supply) Derate upper temperature limit by 1.7°C for every 1V increase in supply: e.g. -40 to +100 @30V -55 to +140
Storage temperature °C		BS EN 60068-2-64:1995 Sec 8.4 (31.4gn rms) 20 to 2000Hz Random
Vibration		3m drop onto concrete
Shock		BS EN 61000-4-3:1999, to 100V/m, 80MHz to 1GHz and 1.4GHz to 2.7GHz (2004/108/EC)
EMC immunity level		

Other		
Measurement Range	°	45 both channels
Output		Analog voltage
Output direction		Channel 1 clockwise, Channel 2 anti-clockwise
Cable length		0.5m

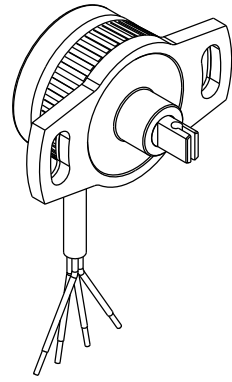


Electrical Connections

4-core cable: FDR-25 sheathed, with 55A spec (24AWG) cores

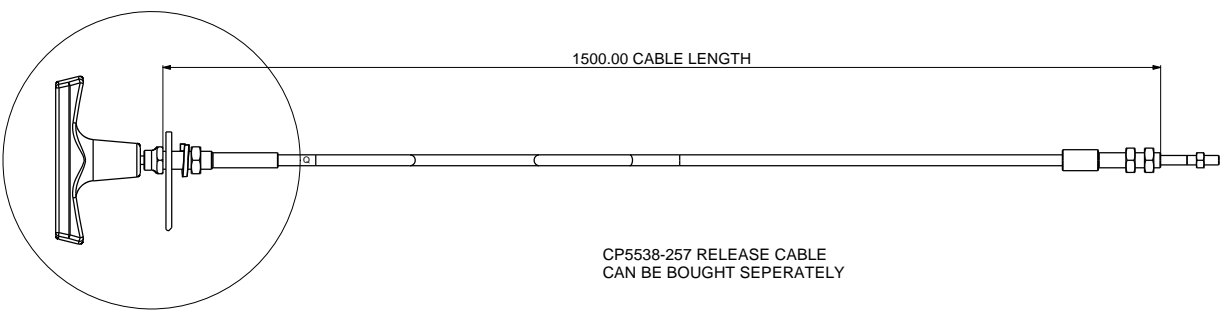
Cable colour	Description
Red	+V Supply
Yellow	Output 1
White	Output 2
Black	0V Supply (GND)

When connecting the sensor, care should be taken with the correct connections. The sensor is provided with reverse polarity protection and short circuit protection between outputs (Yellow & White) to GND (Black), but if the outputs (Yellow & White) are connected to the supply this will result in device failure.

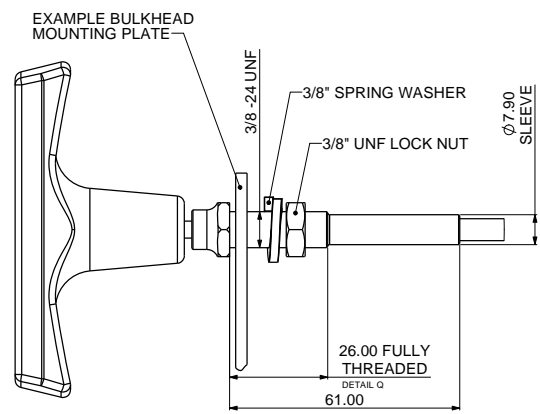


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RELEASE CABLE DETAIL



RELEASE CABLE MOUNTING DETAIL



Alterations		Zone	Index
Date & No.	Particulars		
-	SEE SHEET 1 FOR ISSUE INFORMATION.	-	-
FOR DISCUSSION ONLY			
SCALE 2:1		SHEET 5 OF 5	
DRAWN	Steve Thomas		
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TITLE			
CONTACTLESS ROTARY SENSOR			
DRG NO.		CP5538-1CD	