Training Notes

(Note: The 'Rev.03, Aug 2019' is a supplementary training note for new Dominar 400UG. For information on old Dominar 400 please refer training note 'Rev.00, Feb 2017')

DOMINAR 400

BAJAJ | THE WORLD'S FAVOURITE INDIAN

Dominar 400UG

The Training Notes are a comprehensive training guide on service and maintenance operations and procedures to be followed by service personnel at authorised service centres and dealerships whilst attending to the Bajaj **Dominar 400UG.**

The Training Note covers standard workshop producers, simplified for easy learning and understanding for service technicians worldwide.

NOTICE

All information contained in this Training Note is based on the latest product information at the time of publication. Bajaj Auto Limited accepts no liability for any inaccuracies or omissions in this publication, although every possible care has been taken to make it as complete and accurate as possible. All procedures and specifications subject to change without prior notice. The right is reserved to make such changes at any time without prior notice.

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Contents

CHAPTER 1

Supplementary Dominar 400 UG 1

Technical Specifications....2
PDI Check Sheet....5
Tightening Torque & Service....10
Speedometer Related Information....17
BOSCH Diagnostic Tool Updation....28
Wiring Harness Routing....39
EVAP Routing....43
Hose / Speed Sensor Routing....45
USD Fork Information....52
Special Tools....53
Important SOP....54
Part Identification....86
Electrical Circuit Diagrams....111

Key Learning Points

- Understanding the Technical Specifications
- Important points to be remembered during PDI
- Periodic Maintenance Standard Operating Procedure

CHAPTER 1

Supplementary Dominar 400 UG

Technical Specifications
PDI Check Sheet
Torque Values & Service Limits
Speedometer Related Information
BOSCH Diagnostic Tool Updation
Wiring Harness Routing
EVAP Routing
Hose / Speed Sensor Routing
USD Fork Information
Special Tools
Important SOP
Part Identification
Electrical Circuit Diagrams

Technical Specifications

Engine & Transmission

Type	:	4 Stroke, Single Cylinder
Bore	:	89 mm
Stroke	:	60 mm
Displacement	:	373.27 cc
Max.Net Power	:	Dominar UG : 39.9 PS @ 8650 RPM
	:	Dominar : 35 PS @ 8000 RPM
Max. Net Torque	:	Dominar UG : 35 N.m @ 7000 RPM
	:	Dominar : 35 N.m @ 6500 RPM
Ignition system	:	12V DC
Spark plugs Qty	:	3 Nos
Spark plug gap	:	0.8 ~ 0.9 mm
Transmission	:	6 speed constant mesh
Gear shifting pattern	:	1 Down 5 Up
Engine Lubrication	:	Pressurized oil supply
Engine Cooling	:	Water (Liquid) cooling
Engine Oil Details :		
Grade	:	Bajaj DTS-I 10000 (SAE 10W50 API 'SL' / JASO 'Ma2')
Drain & Refill	:	Dominar UG : 1700 ml
	:	Dominar : 1500 ml
Overhaul	:	Dominar UG : 1950 ml
	:	Dominar : 1800 ml

Chassis & Body

Frame Type	:	Perimeter
Suspension Conventional	:	Front : Dominar UG : USD & Dominar :
	:	Rear : Mono suspension with Nitrox
Brakes	:	Front & Rear : Twin channel ABS
Tyres	:	Front : 110 / 70 - R17, Tubeless
	:	Rear : 150 / 60 - R17, Tubeless
Tyre Pressure	:	Front : 2.04 Kg/Cm^2 (29 PSI)
	:	Rear (Solo) : 2.25 Kg/Cm^2 (32 PSI)
	:	Rear (Pillion) : 2.25 Kg/Cm^2 (32 PSI)

Technical Specifications

Fuel tank capacity :		
Full	: 13 Liters	
Reserve	: Nil	
Fuel Grade	: Unleaded, RON - 91 Minimum.	
Fork Oil Details :		
	: Dominar 400	Dominar 400UG
Grade	: SAE 10W20	PRF001
Quantity / leg	: 420 ml	440 ml

Dimensions

Length	: 2156 mm	
Width	: Dominar UG : 836 mm	Dominar : 813 mm
Height	: 1112 mm	
Wheel Base	: 1453 mm	
Ground Clearance	: 157 mm	
Vehicle Kerb Weight	: Dominar UG : 184.5 Kg	Dominar : 182 Kg
Vehicle Gross Weight	: Dominar UG : 334.5 Kg	Dominar : 332 Kg

Electricals

Electrical System	: 12 V (DC)
Battery	: 12V 8Ah, VRLA
Head Lamp	: LED
Position Lamp	: LED
Tail / Stop Lamp	: LED
Side Indicator Lamp	: LED (4 nos, Orange)
Neutral Indicator	: LED, Green
Hi Beam Indicator	: LED, Blue
Turn Signal Indicator	: LED, Green
Speedometer Back Light	: LCD, Blue
Fuel Level Indicator	: LCD Bar
Low Oil Pressure Indicator	: LED, Red Alert message in DOT matrix display
Malfunction Indicator	: LED, Yellow

Technical Specifications

Coolant Temperature Indicator	:	LED, Red Alert message in DOT matrix display
Low Battery Indicator	:	LED, Red Alert message in DOT matrix display
Bajaj Logo	:	LED, Blue Display in DOT matrix
RPM Limit	:	LED, Amber
Service Reminder	:	LCD, Alert message in DOT matrix display
Side Stand Indicator	:	LED, Red Alert message in DOT matrix display
ABS Indicator	:	LED, Yellow
Rear Number Plate Lamp	:	LED
Horn	:	12V, DC

Preventive Maintenance Chart

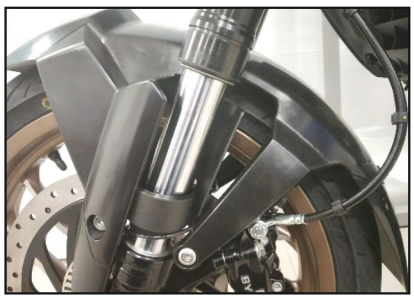
Same as Dominar 400 (available on Portal & E-SSM) except following added point.

Sr. No.	PM Check Points	RECOMMENDED FREQUENCY								Remarks
		Servicing	1st	2nd	3rd	4th	5th	6th	7th	
		Kms	500 ~ 750	4500 ~ 5000	9500 ~ 10000	14500 ~ 15000	19500 ~ 20000	24500 ~ 25000	29500 ~ 30000	
30.	Front fork inner pipe & dust cap cleaning	C,CL	C,CL	C,CL	C,CL	C,CL	C,CL	C,CL	C,CL	

C: Check, A: Adjust, CL: Clean, R: Replace, T: Tighten, L: Lubricate

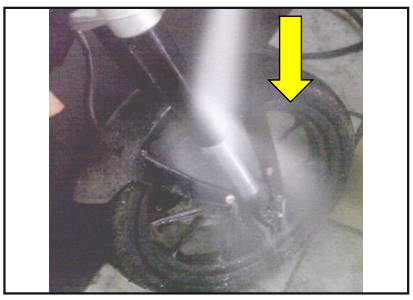
Following items are chargeable to Customer.
Oil, Coolant, Filters, All types of greases, Cleaning agents, Cables, Wear & tear parts, Rubber O rings / oil seals / pipes, Gaskets etc.

Front fork inner pipe & dust cap cleaning



- Remove dust cap

- Clean front fork inner pipe & dust cap by water wash(Water pressure spray mode to be applied from top to bottom)
- Wipe off water by compressed air & then by clean lint free cotton cloth. Ensure that all water traces are removed from inner pipe & dust cap.
- Refit the dust cap.



PDI Check Sheet

PDI Check sheet (Torque Values given for Dominar 400 UG)			
Dealer's Name		Dealer's code	
Model		City	
Frame No		Date of PDI	
Engine No		PDI done by	

1. Check Points before starting the vehicle

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools, equipment & consumables required
Engine Oil	1. Engine oil level. 2. Oil leakages, if any.	Vehicle to be parked on center stand. (Vehicle without center stand - Oil level to be checked at vehicle upright position, both wheel resting on plain surface)	1. Engine cold condition - Oil level should be in betn lower & upper mark of oil level window. 2. Check this point after test ride on road.	-	1. Engine oil filling funnel. 2. Bajaj Genuine oil 10W50.
Fuel Pipe	1. Pipe & Circlip fitting 2. Fuel leakage.	Visual	-	-	-
Mirror	1. Fitment. 2. Adjustment.	Mirror adjustment as per user's requirement.	Clear rear view setting on vehicle.	-	-
Leg & Saree guard	Ease of fitment	-	Hardware fully tightened.	-	-
Coolant	1. Coolant level. 2. Coolant leakage, if any.	Vehicle without center stand - Coolant level to be checked at vehicle upright position, both wheel on plain surface.	1. Engine cold condition - Coolant level betn MIN & MAX mark, top up if required. 2. Check this point after test ride on road.	-	BAJAJ Koolex coolant.

PDI Check Sheet

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools, equipment & consumables required
Brake Fluid	1. Level in Front & Rear reservoir. 2. Brake Fluid leakage if any.	Visual	1. Brake fluid level above MIN mark, top up if required. 2. Check this point after test ride on road.	-	DOT 4 brake fluid. Syphon pump for air bleeding.
Lock Operation	Smooth operation of Steering cum Ignition lock, Seat lock, LHS cover lock, Petrol Tank cap lock.	By using vehicle key.	Insert vehicle key in lock & check operation of respective lock.	-	-
Battery *(Initial charging of @12 hrs is required for 2.5Ah battery by filling electrolyte)	Battery charge condition.	As per SOP.	Green LED - Battery fully charged. Yellow LED - Battery partially discharged. Red LED-Battery deep discharged.	-	1. Midtronics battery tester. 2. Battery chargers (Flooded & VRLA). 3. Distilled water. 4. Battery grade electrolyte. 5. Filling dropper. 6. Petroleum jelly.
	Battery terminals tightness & Petroleum jelly application.	Carry out cable connections.	Ensure firm connection of +ve & -ve terminals, apply petroleum jelly & ensure protection cap fitment on +ve terminal.		
Tyre Pressure	Air pressure in Front & Rear tyre.	1. Check air pressure in both tyres using tyre pressure gauge. 2. Refill air using by Pneumatic connection / Good quality foot pump.	Refer air pressure sticker affixed on chain case / swing arm for specs.	-	1. Tyre pressure gauge. 2. Good quality foot pump / Pneumatic connection with air filling provision.

PDI Check Sheet

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools, equipment & consumables required
Brakes	Free play of front brake lever.	Use free play checking gauge.	Not applicable for Disc brake vehicles.	-	Free play gauge.
	Free play of rear brake pedal.	Use free play checking gauge.	Not applicable for Disc brake vehicles.	-	Brake pedal play / chain slackness checking gauge.
Clutch Lever / Throttle	Free play of Clutch lever & Throttle.	Use free play gauge.	Free play 2 - 3 mm.	-	Free play gauge.
Drive Chain	Slackness	Use chain slackness checking gauge.	Slackness 20 - 30 mm	-	Brake pedal play / chain slackness checking gauge
Check Point	**What to check**	**How to check**	**Recommendation / Reference**	**Workshop Observation**	**Tools, equipment & consumables required**
Fasteners Torque values	Front Axle	Using dial torque wrench	10.0 Kgfm (98.1 N.m)	-	Dial torque wrench 20 Kgf-m
	Rear Axle		10.0 Kgfm (98.1 N.m)		
	Swing arm Shaft		13.0 – 15.0 Kgfm (127.5 – 147.2 N.m)		
	Rider foot rest		2.8 Kgfm (27.5 N.m)		
	Engine foundation bolts		Fr : Top 2.4 - 2.6 Kgfm (23.5-25.5 Nm), Bottom 4.5 -5.0 Kgfm (44.1-49.1Nm) Rear Top & Bottom - 6.5 Kgf (63.8 Nm)		
2. Check Points during / after starting the vehicle					
Switch Operation	RH & LH control switch, ignition switch, clutch switch & brake switches	Check for smooth operation & functioning	-	-	-

PDI Check Sheet

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools, equipment & consumables required
Horn	Coupler connection, Horn sound.	By hearing	-	-	-
All Bulbs Working	Head lamp Tail / stop lamp, Side indicators, Speedo bulb, No. plate lamp	Check functioning	-	-	-
Speedometer	Working of speedometer, Odometer, Trip meter, Fuel gauge, Clock.	Fuel gauge - By filling fuel. Clock - Set clock if required as per SOP.	Speedometer, ODO meter & trip meter working to be checked during / after test ride.	-	Funnel for filling petrol & measuring jar
	Working of all signal indicators icons (N, Turn signal, High beam, oil pressure, Engine Temp, Low battery, FI, ABS, Service reminder & B Logo)	By observing speedo Indications after switching ON ignition switch.	ABS icon will turn off if vehicle speed is more than 5 Kmph. Fi icon will glow if there is any malfunction in FI system.	-	-
Headlamp	Head light Lo & Hi beam focus checking	As per head light focus checking SOP.	Refer head light focus values chart. Focus to be checked with rider & from a distance of 5 meters.	-	Head light Focus display chart with 5m mark.
3. Check Points during Test Ride					
Gear shifting	Smooth operation	-	In case of any issue during test ride, vehicle to be attended in workshop.	-	A. P. Grease, Feeler gauge, Multimeter.
Driveability	Throttle response, Brakes effectiveness - Front & Rear	-		-	
Engine noise	No abnormal noise	-		-	

PDI Check Sheet

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools, equipment & consumables required
4. If performance related issue is observed, then carry out Idling RPM & CO% measurement.					
Idling RPM	Idling RPM	As per CO% checking SOP	At Engine oil temp - 60 Deg.	-	Digital Thermometer. Tachometer.
CO % Check	CO %		-	-	
5. Visual inspection for dent, scratches, rust etc					
6. Clean the vehicle thoroughly before delivery to customer.					

Note :

Vehicle FIFO system required with monitoring system.

Vehicles to be dispatched to network only after carrying out PDI activity at Dealership.

Not applicable for Dominar

Tightening Torque - Engine

Sr.No.	Parameter	Torque Values	
		Kg.m	N.m
1	Cylinder head cover bolts	1.0 - 1.2	9.8 - 11.8
2	Cylinder head bolts	"Big bolt 6.0 - 6.5	"58.9 - 63.8
		Small bolts 1.0 - 1.2"	9.8 - 11.8"
3	Chain Tensioner mounting bolts	1.0 - 1.2	9.8 - 11.8
4	Output sprocket bolts	1.0 - 1.2	9.8 - 11.8
5	Silencer mouth flange nuts	2.0 - 2.25	19.6 - 22.1
6	Silencer bracket bolts	1.8 - 2.0	17.7 - 19.6
7	Clutch cover bolts	1.0 - 1.2	9.8 - 11.8
8	Oil filter cover bolts	1.0 - 1.2	9.8 - 11.8
9	Crankcase joining bolts	1.0 - 1.2	9.8 - 11.8
10	Oil pump mounting screws	1.0 - 1.2	9.8 - 11.8
11	Nut securing primary gear	14.5 - 15.0	142.2 - 147.2
12	Magneto cover bolts	1.0 - 1.2	9.8 - 11.8
13	Nut securing clutch assly. On input shaft	12.0 - 12.2	117.7 - 119.7
14	Cam shaft sprocket allen bolt	4.1 - 4.3	40.2 - 42.2
15	Stator motor mounting bolt	1.0 - 1.2	9.8 - 11.8
16	Magneto rotor mounting nut	10.0 - 10.5	98.1 - 103.0
17	Spark plugs	1.9 - 2.1	18.6 - 20.6
18	Oil strainer cap (18 mm A/F)	1.0 - 1.2	9.8 - 11.8
19	Temp sensor on head	1.2 - 1.4	11.8 - 13.7
20	Drum / cam allen bolt	1.1 - 1.2	10.8 - 11.8
21	Inhibitor nut	1.1 - 1.2	10.8 - 11.8
22	Manifold mounting bolts	0.7 - 0.9	6.9 - 8.8
23	Clutch spring bolts	0.8 - 1.2	7.8 - 11.8
24	Stator mounting bolt	1.0 - 1.2	9.8 - 11.8

Tightening Torque - Engine

Sr.No.	Parameter	Torque Values	
		Kg.m	N.m
25	Clutch nut	12.0 - 12.2	117.7 - 119.7
26	Cam holder bolts	0.8	7.8
27	Exhaust pipe A & Muffler assembly band clip bolt	Same as existing Dominar 400	
28	Air filter assembly bolts		
29	Balancer drive gear lock nut		
30	Evacuation pump bolts		
31	Water pump cover bolts		
32	Water pump drain bolt		
33	Pipe coolant T Assembly bolts		
34	Rotor water pump nut		
35	Balancer driven gear bolt		
36	Cover LH RR bolts		
37	Position plate oil seal bolts		
38	TDC Locking hole dummy bolt		
39	Slack side chain guide bolt		
40	Chain guide top bolt		
41	Chain guard screws		
42	Plug Evacuation strainer		
43	Pick up coil harness plate bolt		
44	Pick up coil bolt		
45	Sprocket drive lock nut (Crankshaft sprocket nut)		

Tightening Torque - Frame

Sr.No.	Parameter	Torque Values	
		Kg.m	N.m
1	Front Axle Nut	10.0	98.1
2	Rear Axle Nut	10.0	98.1
3	Rear sprocket mounting nut	3.5 - 3.8	34.3 - 37.3
4	Handle bar holder bolts	2.0 - 2.2	19.6 - 21.6
5	Fork center nut	5.0	49.1
6	Steering stem nut slotted	0.5	4.9 - 0.0
7	Fork Pipe Top Bolts	2.5 - 3.0	24.5 - 29.4
8	Handle bar weight	0.8 - 1.0	7.8 - 9.8
9	Fork under bracket bolts	1.3 - 1.6	12.8 - 15.7
10	Fork upper bracket bolts	1.8 - 2.0	17.7 - 19.6
11	RSA mounting bolt (Upper)	4.5	44.1
12	RSA mounting bolt (Lower)	4.5	44.1
13	LH & RH Pillion stay Bolts (Rider Foot Rest Mtg)	2.8	27.5
14	Disc mounting bolt (Front)	2.7 - 3.3	26.5 - 32.4
15	Disc mounting bolt (Rear)	0.9 - 1.1	8.8 - 10.8
16	Rear brake pedal bolt	3.0 - 3.5	29.4 - 34.3
17	Calliper mtg bolts (M8)	2.2 - 2.8	21.6 - 27.5
18	Front fender	1.0 - 1.2	9.8 - 11.8
19	Side stand bracket mounting bolts	1.8 - 2.2	17.7 - 21.6
20	Tank front mtg	1.8 - 2.2	17.7 - 21.6
21	Flange bolt - Tank rear mtg	1.8 - 2.2	17.7 - 21.6
22	Swing arm shaft	13.0 - 15.0	127.5 - 147.2
23	Bracket rear no. plate	0.8 - 1.0	7.8 - 9.8

Tightening Torque - Frame

Sr.No.	Parameter	Torque Values	
		Kg.m	N.m
24	Engine foundation bolts - Front Bottom	4.5 - 5.0	44.1 - 49.1
25	Engine foundation bolts - Rear (Top & bottom)	6.5	63.8 - 0.0
26	Engine foundation bolts - Front-Top	2.4 - 2.6	23.5 - 25.5
27	Clamping allen bolt on Axle clamp RH	1.3 - 1.7	12.8 - 16.7

NOTES:

Service Limit - Engine

Sr. No.	Parameter	Standard Specification (mm)	Service Limits (mm)
1	Engine compression pressure	8-12 bar	-
2	Valve tappet clearance	"Inlet :- 0.08 - 0.12 mm & Exhaust :- 0.13 - 0.17 mm"	- -
3	Rocker arm shaft diameter	7.5 0/-0.009	7.47
4	Cam sprocket root diameter	64.16 0/-0.2	-
5	Cam lobe height (Exhaust)	31.1271	31.0771
6	Cam lobe height (intake)	34.3014	34.2518
7	Valve spring free length	40.28	39.28
8	Valve stem diameter intake	5 -0.01/-0.025	4.957
9	Valve stem diameter exhaust	5 -0.03/-0.045	4.95
10	Valve stem bent	0.01	0.015
11	Cylinder head warp	0.05	-
12	Cam chain 20 links length	133.35	132.9
13	Cyl. inside diameter at ht 40mm from cyl. head seating face	89.01~89.024	89.054
14	Piston diameter at height 8 mm from bottom	88.942~88.958	88.978
15	Cylinder - piston clearance	0.060-0.075	0.115
16	Piston Ring end gap (Top ring)	0.20-0.35	0.55
17	Piston Ring end gap (second ring)	0.40-0.55	0.75
18	Piston Ring end gap (oil ring)	0.20-0.70	1
19	Clutch spring free length	52.1	51
20	Friction plate thickness	2.92~3.08	2.72
21	Steel plate thickness	1.6	1.5
22	Friction plate warp	0.1	0.2
23	Steel palte warp	0.1	0.15
24	Gear shift fork guide pin diameter	4.960~4.990	4.91
25	Gear shift drum groove width	5.050~5.150	5.155
26	Crankshaft runout	0.02	0.1

Service Limit - Engine

Sr. No.	Parameter	Standard Specification (mm)	Service Limits (mm)
27	Connecting rod side (axial) clearance	-	0.4
28	Cam lobe width	'Ex 9.4-9.6 & 8.4-8.6 In 9.4-9.6 "	-
29	Shaft fork shift OD	9.966~9.984	9.922
30	Fork shift ID	10~10.027	10.067
31	Clutch assly stackup height	32.936-33.34	30.6

NOTES:

Service Limit - Frame

Sr. No.	Parameter	Standard Specification (mm)	Service Limits (mm)
1	Fr. Brake pad thickness	9.44 mm	4.74 mm
2	Rr. Brake pad thickness	9.0 mm	3.9 mm
3	Axle run out	TIR 0.1or less	TIR 0.2 or less
4	Axial wheel run out	0.8	TIR 2.0
5	Radial wheel run out	0.8	TIR 2.0
6	Drive chain slack	20~30	35~45
7	Drive chain length	317.5	323.8
8	Rear sprocket warp	0.2	0.5
9	Fr. Fork spring free length	345 mm	320 mm
10	Tyre tread depth	Front : 4 +/-0.3 mm Rear : 6 +/-0.3 mm	UP TO TWI UP TO TWI

NOTES:

Speedometer Related Information

Primary Speedometer image & Power On cycle

Power ON Cycle -

- All LCD segments and icons are turned ON.
- Speed display shows 188 & Tachometer bar increases from 0 to 13000 & comes back to Zero.
- Fuel Gauge bars come ON from E to F.
- LCD back light & all Tale-tell indicators (except High beam & Turn Indicators) are turned ON.
- DOT matrix display continues to show default display of BAJAJ logo.
- After completion of power ON cycle, speedometer parameters are displayed as per input signal.

Primary Speedometer - Warning Indicators.

All LCD segments and icons are turned ON

Sr. No.	Indicator	Symbol	Colour	Description
1	ABS		Yellow	ON-Speed less than 5 kmph or ABS malfunction OFF-Vehicle speed is more than 5 kmph.
2	High Beam		Blue	ON-Engine running with a) light sw off b) light sw on, H/B sw on or pass sw on
3	Neutral		Green	ON - Vehicle is in neutral gear
4	Malfunction (MIL)		Yellow	ON - EMS ECU malfunction
5	Turn Indicator		Green	Blinks - when side indicator switch is pushed to L or R.
6	Warning Indicator		Amber	Continuously ON if alarm message = 1. Blinks if alarm messages are more than 1

Speedometer Related Information

Sr. No.	Indicator	Symbol	Colour	Description
7	RPM limit		Amber	For ODO<=2000km blinks if 6700<=RPM<7000,continuously on if RPM>=7000 For ODO>2001km blinks if 9200<=RPM<9500, continuously on if RPM>=9500
8	Backlight		White	ON- when Ignition is made ON. Light intensity changes as per ambient light condition.
9	Low fuel		LCD	• Fuel bar = 1- Bar 1 glows steady & low fuel symbol blinks. • Fuel bar is less than 1-Bar 1 & low fuel symbol both will blink simultaneously. • Fuel bar = 2-Low fuel symbol shall remain ON continuously.

Speedometer Related Information

Procedure to access information available in primary and secondary speedometer -

1. Function lines ODO, Trip1, Trip2, InFO are displayed in Secondary speedometer
2. Changeover from ODO®Trip1®Trip2®InFO can be done by pressing Mode button in Secondary Speedo

Select ODO mode →	Press SET button →	Primary speedometer will display • Dynamic fuel consumption • Distance to service in kms.
Select TRIP 1 mode →	Press SET button momentarily for scrolling display. →	Primary speedometer will display following • Average fuel consumption in TRIP1 • Average speed in TRIP 1. • Time vehicle was running in TRIP1. • Vehicle may travel xx kms depending on fuel available in tank.
	If SET button is held pressed for more than 5 sec. →	Distance indicated under Trip1 and all above information will be reset to 0.
Select TRIP 2 mode →	Press SET button momentarily for scrolling display. →	Primary speedometer will display following • Average fuel consumption in TRIP 2 • Average speed in TRIP 2. • Time vehicle was running in TRIP 2. • Vehicle may travel xx kms depending on fuel available in tank.
	If SET button is held pressed for more than 5 sec. →	Distance indicated under Trip2 and all above information will be reset to 0.
Select INFO mode →	Press SET button →	Primary speedometer will display active warning messages

User can select any of the above screens and the screen at ignition OFF condition will be retained in next ignition ON cycle.

Speedometer Related Information

Primary Speedometer : Dot matrix display functions - lines

Definition of terms :-

Dynamic Fuel consumption	Instantaneous fuel consumption (km/L),updates after every 1.5 second according to the throttle input when riding the bike. Value changes for next 1.5 sec as per throttle input changes during that period and hence this is dynamic value changing frequently as per throttle input when riding the bike.
Average Fuel Consumption	Average fuel consumption (km/L) for a particular trip selected, updates after every 1 minute according to throttle input changes in driving condition. It is a cumulative value of fuel consumption for a given trip once selected and the data from 0 km till next reset will be displayed based on cumulative average.
Active warning	Information about warning alarms displayed in DOT matrix.
Average speed	Average speed (km/h) with which the vehicle was driven in a particular trip since last reset, a cumulative average from 0 km till trip reset.
Trip Time	Engine run time(minutes) in particular trip since last reset, sum of all engine run events from 0 km till trip reset.
Fuel range (Distance to Empty)	Approximate Distance(km) which can be covered in a particular trip till fuel tank becomes empty based on the average fuel consumption calculated and hence the value changes as per throttle input changes in driving condition. The value indicated is to be treated as a reference or guidance to estimate probable distance covered with the rest fuel. (To be treated as an indication only)

Notes :-

1. If TRIP 1/2 is reset-Trip 1/2 time, Average speed, average fuel consumption get reset to zero.
2. 24 hour clock and Trip1,2 (and associated values) get reset if permanent battery supply is removed.
3. Odometer value and units are retained if permanent battery supply is removed.

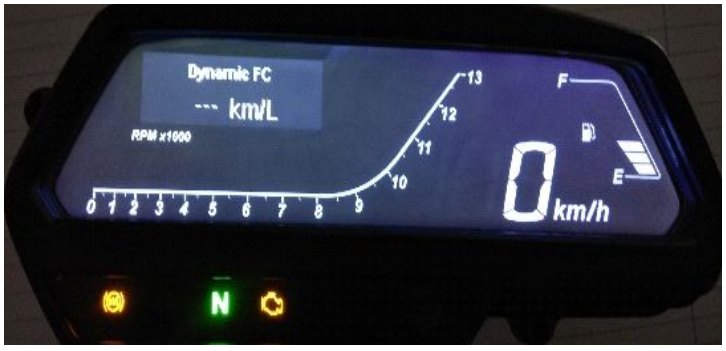
Primary Speedometer : Dot matrix display functions - alarms

Message Display Area

Information messages (A)			
Information messages will be displayed according to selection of ODO / TRIP 1 / TRIP 2 / Info in secondary speedometer.			
ODO	TRIP 1	TRIP 2	Info
Dynamic fuel consumption	Average fuel consumption 1	Average fuel consumption 2	Active warning 1
	Average Speed 1	Average Speed 2	Active warning 2
Distance to Service	Trip Time 1	Trip Time 2	Active warning 3
	Fuel range	Fuel range	Active warning 4

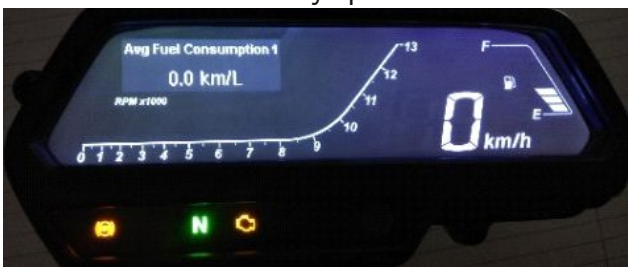
Speedometer Related Information

Primary Speedometer : Dot matrix display information (ODO)

Information messages in Odo Mode	
Information messages will be displayed according to selection of ODO and pressing 'SET' button of secondary speedometer in below sequence -	
ODO (Seen in secondary speedo) Note: Secondary speedo is mounted on tank.	Secondary speedo 
Dynamic fuel consumption (Seen in dot matrix window of primary speedo)	Primary speedo 
Distance to Service (Seen in dot matrix window of primary speedo)	Primary speedo 

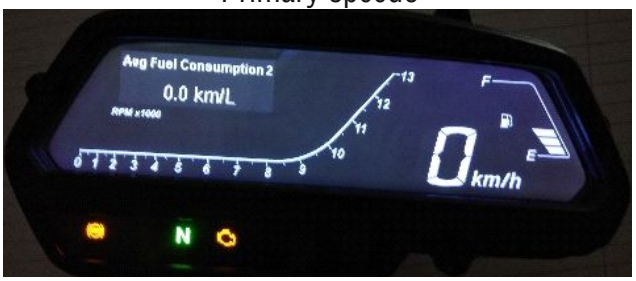
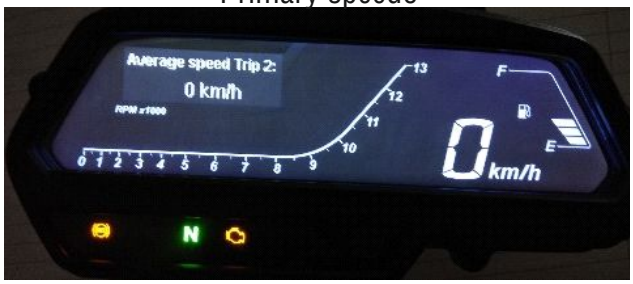
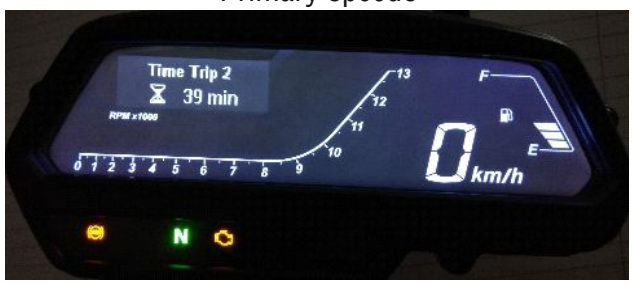
Speedometer Related Information

Primary Speedometer : Dot matrix display information (Trip1)

Information messages in Trip1 Mode	
Information messages will be displayed according to selection of TRIP 1 and pressing 'SET' button of secondary speedometer in below sequence -	
TRIP 1 (Seen in secondary speedo)	Secondary speedo 
Average fuel consumption 1 (Seen in dot matrix window of primary speedo) Note: Will be able to see after few kms ride.	Primary speedo 
Average Speed 1 (Seen in dot matrix window of primary speedo)	Primary speedo 
Trip Time 1 (Seen in dot matrix window of primary speedo)	Primary speedo 
Fuel range (Distance to Empty) (Seen in dot matrix window of primary speedo) Note: Will be able to see after few kms ride.	Primary speedo 

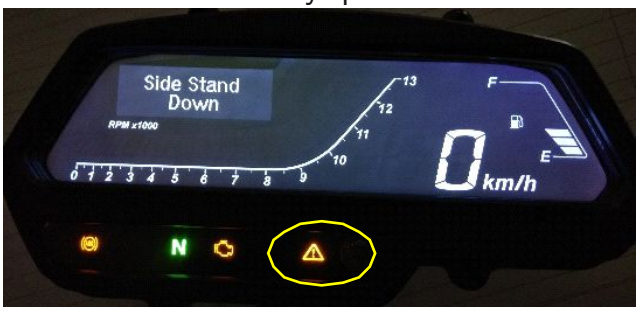
Speedometer Related Information

Primary Speedometer : Dot matrix display information (Trip2)

Information messages in Trip2 Mode	
Information messages will be displayed according to selection of TRIP 1 and pressing 'SET' button of secondary speedometer in below sequence -	
TRIP 2 (Seen in secondary speedo)	Secondary speedo 
Average fuel consumption 2 (Seen in dot matrix window of primary speedo) Note: Will be able to see after few kms ride.	Primary speedo 
Average Speed 2 (Seen in dot matrix window of primary speedo)	Primary speedo 
Trip Time 2 (Seen in dot matrix window of primary speedo)	Primary speedo 
Fuel range (Distance to Empty) (Seen in dot matrix window of primary speedo) Note: Will be able to see after few kms ride.	Primary speedo 

Speedometer Related Information

Primary Speedometer : Dot matrix display warning messages (Info)

Warning messages in Info mode -	
Information messages will be displayed according to selection of “Info” and pressing ‘SET’ button of secondary speedometer. “Generic alarm” LED will be ON if warning message is triggered. If more than one messages, the “generic alarm” LED will start blinking at 1 Hz.	
Info (Seen in secondary speedo)	Secondary speedo 
Active warning 1 (Seen in dot matrix window of primary speedo)	Primary speedo 
Active warning 2	Refer list of warning messages - Alarm message displayed on next page.
Active warning 3	Refer list of warning messages- Alarm message displayed on next page.

Speedometer Related Information

Primary Speedometer : warning messages
Alarm Messages seen are as below -

Priority	Parameter	Alarm message text Description
1	ECU CAN communication failure	ECU communication lost
2	ABS CAN communication failure	ABS communication lost
3	'S' CAN communication failure	Secondary speedo communication lost
4	Engine Kill ON	Engine kill ON
5	Side stand Down	Side Stand Down.
6	Low Oil pressure	Low Oil pressure
7	High Coolant temperature	High Coolant Temperature
8	Low Battery	Low Battery (Battery voltage 11.5VDC for more than 60 sec)
9	Low Fuel level / REFUEL	Low Fuel Level.(Fuel bars =2)
		REFUEL(Fuel bars=1)
10	Fuel level sensor failure	Fuel level sensor failure (open or short circuit in fuel levelsensor)
11	Coolant Sensor failure	Coolant sensor failure
12	Service Reminder (Icon)	Service Reminder with service icon

S CAN - Secondary speedo
P CAN - Primary speedo

Notes -

- If there is more than one message, display priority will be as per above table
- If there are more than 1 message they will scroll after every 5 sec.

Other Alarms :

Parameter	Signal / Input	Alarm message text Description
Odometer roll over	Odometer reading > 9,99,999 kms.	ODO roll over = 1 for 10 sec at Ignition ON ODO roll over = 2 if ODO has crossed 9,99,999 kms. twice

Notes - Generic alarm LED status

- Continuously on for error message =1
- Blink for error message >1

Speedometer Related Information

Secondary Speedometer Image & Description.

Notes -

- The secondary speedo is mounted on fuel tank.
- Secondary Speedometer shall establish communication with Primary Speedometer automatically.
- MODE & SET push buttons status is transmitted to primary speedometer through CAN interface.
- After POWER ON-LCD backlight, all LCD segments & icons are turned ON. After approx 3 secs the speedometer parameters are displayed as per input signal.

Odometer Display -

- Type: 6 digits with ODO & km icons.
- Indication: 0 to 9,99,999 km.
- Input signal: Primary speedometer shall send ODO reading to secondary speedometer.
- When no data is received from primary speedometer, then ODO segments shall display "-----"
  S CAN communication failure will be displayed on DOT matrix display of primary speedometer.
- Rolls over to zero after 9,99,999 kms & starts recounting.
  After Power ON cycle, a dot matrix message will be displayed as "ODO ROLL OVER = 1 for 10 secs.

TRIP METER (Trip 1 & Trip 2) -

- Type: 4 digits with icons for Trip 1 or 2.
- Indication: 0 to 999.9 km.
- Input signal: Primary speedometer shall send TRIP 1 / 2 reading to secondary speedometer.
- When no data is received from primary speedometer, then ODO segments shall display "-----"
  S CAN communication failure will be displayed on DOT matrix display of primary speedometer.
- Trip meter does not reset automatically after 999.9 kms, but needs to be reset.
  For resetting trip meter set button is to be pressed for more than 5 sec.
  TRIP 1,TRIP 2 & ODO shall update simultaneously.

CLOCK -

- Type: Digital 7 segment with 3-1/2 digits.
- Indication: 12 hour format with AM & PM.
  HH : MM With (:) blinks.

Speedometer Related Information

Gear Indication -

- Type: Digital Indication with one 7 segment digit.
- Input signal: 6 Inputs for gear (1 for each gear) & for Neutral it is thru CAN..
- When neither Neutral or Gear input is present then secondary speedo shall not display any gear position and "GEAR" icon will blink.
  If more than 1 input is available,"GEAR" icon will blink & lowest value among all inputs will be displayed.
  Displays 0 When vehicle is in Neutral.

Service reminder reset is possible in all modes. Engine & vehicle speed should be Zero.	Default value of service schedule before 1st service is 450 kms. 2nd service @4450 kms. 3rd service @ 9450 kms. 4th service @ 14450 kms & so on. till 9,99,450 kms.

Service reminder reset SOP -

- Engine & vehicle speed should be Zero.

1) Press and hold mode button for 10 sec at ignition ON condition.
2) Speedometer dot matrix should show blinking spanner on dot matrix after 10 sec.
3) once blinking spanner is seen release mode button and press and hold set button for 5 sec.
   Note :
   I. Set button should be pressed within 5 sec after releasing mode button.
   II. If set button is not pressed in 5 sec after releasing mode button, service reminder reset procedure will be ignored and speedometer will go to previous state (on primary speedometer Distance to service will remain same).
   III. Ignition and battery should be connected.
      a) If ignition is made off during process, speedometer Mode and set button functionality on primary speedometer will not work.
      b) To come out of this, service reminder procedure has to be followed with out ignition / battery interruption.
4) After set button for 5 sec, speedometer dot matrix will show next service distance in km on dot matrix and on ODO area in secondary speedometer. This confirms service reset is done.

Example : service reset done at ODO= 350 km.

After successful completion, next service km shown should shown as 4450-350= 4100 km on Dot matrix. After procedure, check distance to service for confirmation.

Normal & prior Service reminder reset -

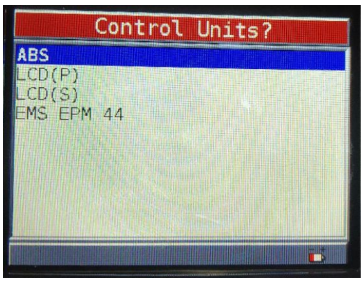
- Normal service reminder reset : Distance to service > 450 km AND prior service reset is not done for present applicable interval

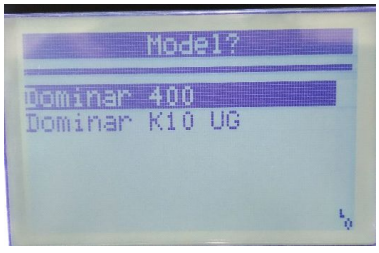
e.g. If you are resetting @ > = 9450 km & < 14000, next service schedule shall be displayed as 14450 km

- Prior service reminder reset : Distance to service < = 450 km AND prior service reset is not done for present applicable interval

e.g. If you are resetting @ > = 14000 km & < 14500, next service schedule shall be displayed as 19450 km

BOSCH Diagnostic Tool Updation

Bosch Diagnostic Tool Type	Existing SW ID	New SW ID	Remark
ES 200 	C016	C021 (As on 16th Aug 2019)	Following features included – • Flashing of Primary, Secondary speedometers for Dominar 400UG.  LCD (P) : Primary speedometer fitted above headlight assembly LCD (S) : Secondary speedometer fitted in cover petrol tank Refer Dominar 400 / Pulsar RS 200 Service station manual for Bosch tool updation SOP
ES 300 	B264	B278 (As on 16th Aug 2019)	

Bosch Diagnostic Tool Type	Existing SW ID	New SW ID	Remark
ES 200 	C019	C021 (As on 16th Aug 2019)	• Addition of “X” character in VIN update. • Avenger 160S ABS added and place created for Platina, Discover models. • Dominar brand added separately.  
ES 300 	B270	B278 (As on 16th Aug 2019)	

BOSCH Diagnostic Tool Updation

Refer Dominar 400 / Pulsar RS 200 Training Notes for “Hex File Download” SOP

Hex files should be paired for primary and secondary as per the below matrix. If not paired there might be a possibility of synchronizing or communication error.

Sr. No	Primary Speedo	Secondary speedo
1	1v07.s19	0v74
2	1v08.s19	0v78
3	1v12.s19	0v79
4	1v15.s19	0v80
5	1v16.s19	0v81

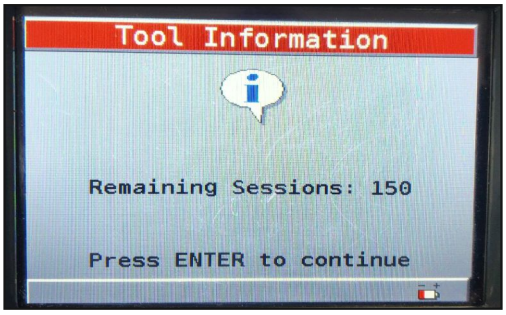
Below matrix is of Hex files for EMS & ABS

Hex file	Model
BAK10AS1922001.hex	Dominar UG EURO3 (Without EVAP)
BAK101N1922004.hex	Dominar UG BS4 (With EVAP)

BOSCH Diagnostic Tool Updation

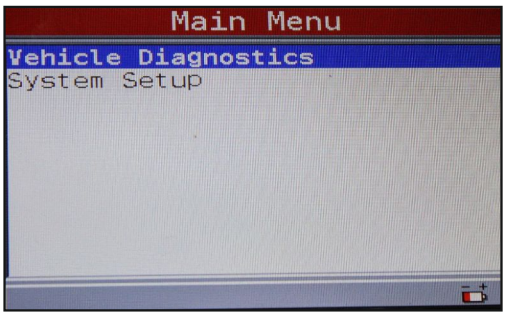
Primary & Secondary Speedometer Flashing

- Switch ON ignition switch & Kill switch.
- Remove pillion rider seat with vehicle ignition key.
- Connect diagnostic tool coupler to CAN communication port.

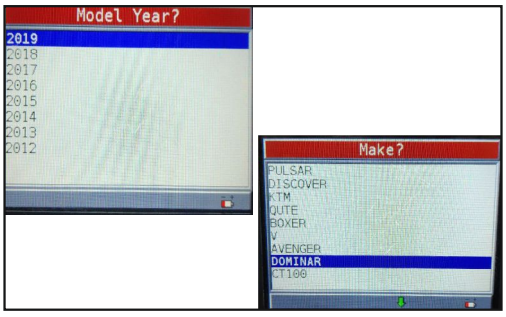


- "Tool usage" message will appear on diagnostic tool screen.

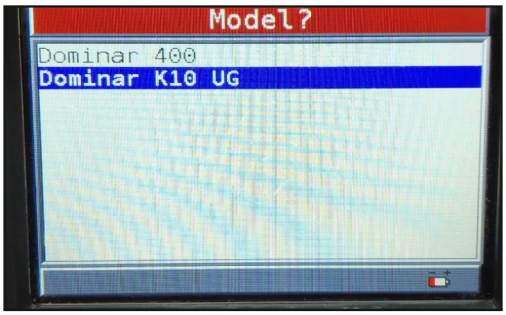
  Press Enter.



- Select "Vehicle Diagnostics" from main menu appeared on tool screen & press Enter.

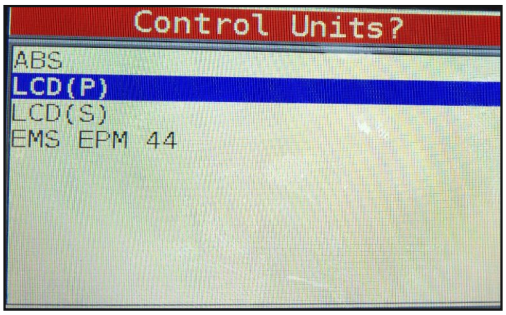


- Select the year "2019" from Model years appeared on tool screen & press Enter.
- Select the "Dominar" from Make appeared on tool screen & Press Enter.

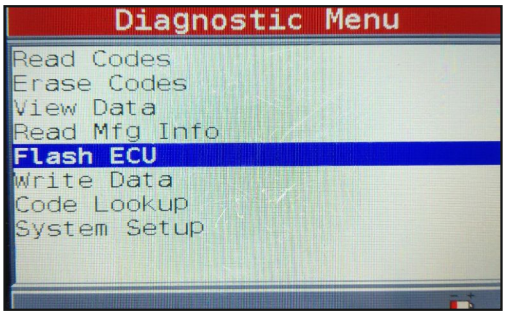


- Select the "Dominar K10 UG" from models appeared on tool screen & Press Enter.

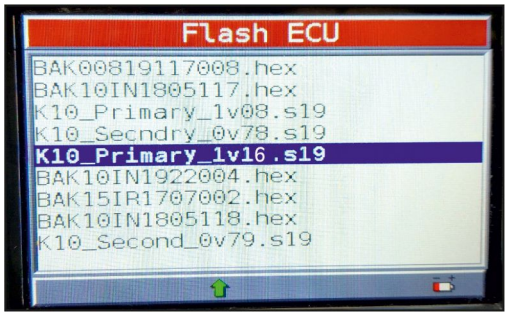
BOSCH Diagnostic Tool Updation



- Select the LCD (P) or LCD (S) from control units appeared on tool screen depending upon speedometer is to be flashed.
- For illustrative purpose –
  select "LCD (P)" & Press Enter

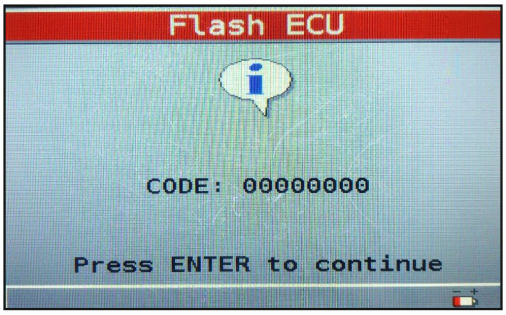


- Select the "Flash ECU" from Diagnostic Menu appeared on tool screen & Press Enter.

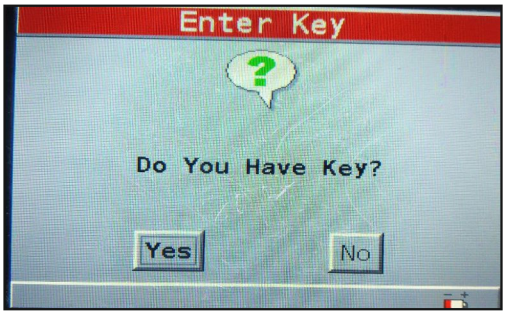


- Select the hex file "K10_Primary_1v16.s19" from Flash ECU appeared on tool screen & Press Enter.

  Note: For information on speedo hex files refer the matrix on page number 29. For latest information refer the technical bulletin.

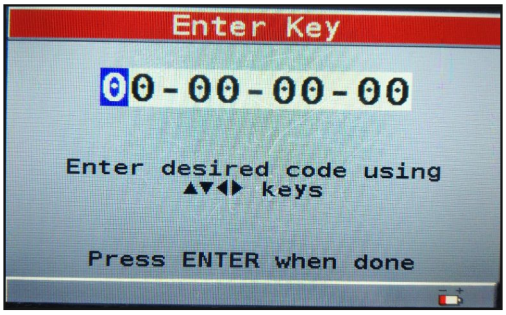


- 8 digit CODE will be displayed on tool screen.
- Press Enter.

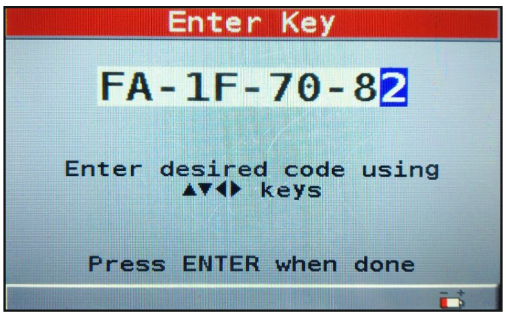


- Message as shown in photograph will appear on tool screen.
- Select Yes & press Enter.

BOSCH Diagnostic Tool Updation



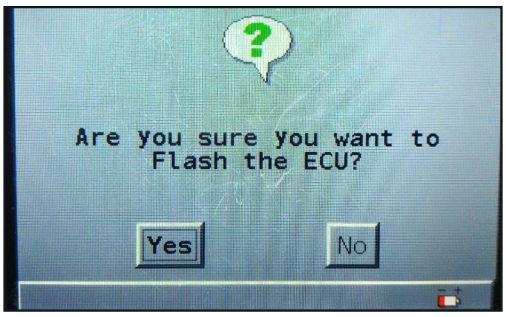
- Message as shown in photograph will appear on tool screen.



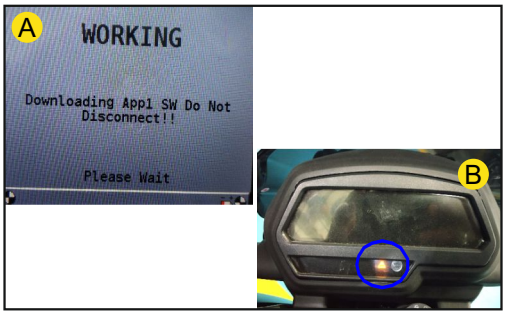
- Enter the default key “FA – 1F – 70 – 82” as shown in photograph & press Enter.

  Note : After flashing primary speedometer check secondary speedometer hex file, it should be matched as per the given matrix. If not, do the flashing and pair the correct hex file as per matrix. Hex files to be shared by respective country service managers.

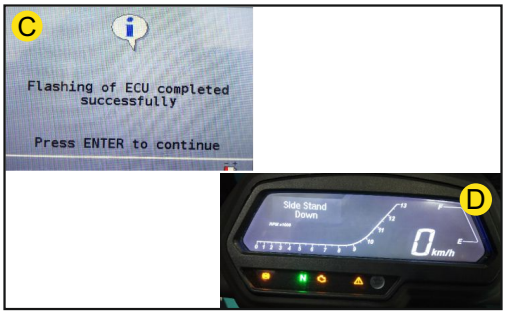
- Key should be generated by built OTP application.



- Message as shown in photograph will appear on tool screen.
- Select Yes & press Enter.



- Message as shown in photograph-A will appear on tool screen. This indicates flashing is in process. It will take @ 3 to 5 min.
- At the same time speedometer (selected for flashing) goes OFF, only “generic Alarm (⚠) will glow or blink as shown in photograph-B

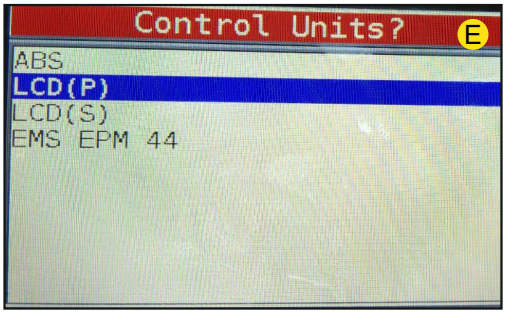


- Message as shown in photograph - C will appear on tool screen. This indicates flashing is completed.
- At the same time speedometer (Selected for flashing) goes ON as shown in photograph - D.
- Press Enter & disconnect the diagnostic tool.
- Note : After flashing LCD (P) or LCD (S), reset the clock.

Note : As per given table as shown in ‘Page number 29' pairing should be done, if not done properly it may cause error of sync.

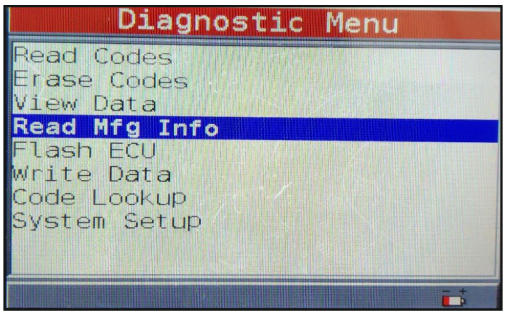
BOSCH Diagnostic Tool Updation

Confirmation

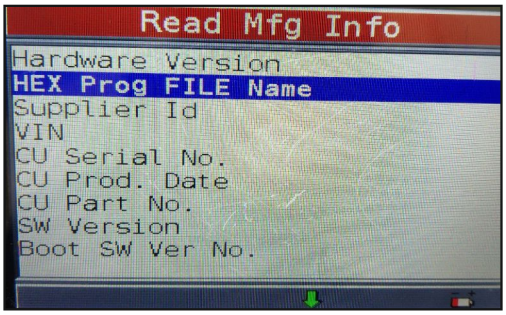


- Reconnect the tool.
- Select –

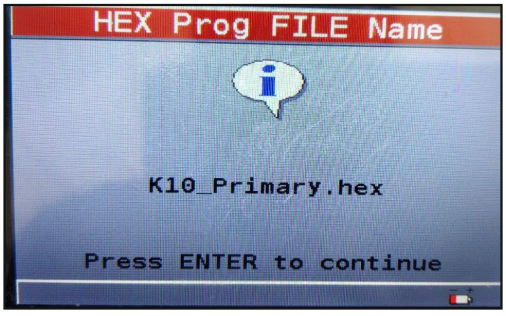
  Vehicle Diagnostics / 2019 / Dominar / Dominar K10UG
- Message as shown in photograph-E will appear on tool screen.
- Select LCD (P) or LCD (S) from control units appeared on tool screen depending upon speedometer flashed.
- Select "LCD (P)" & Press Enter.



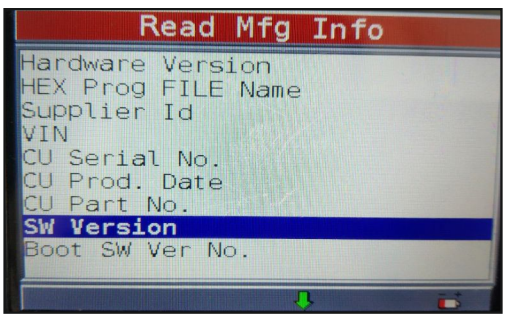
- Select the "Read Mfg Info" from Diagnostic Menu appeared on tool screen & Press Enter.



- Select the "Hex Prog FILE Name" from Read Mfg Info menu appeared on tool screen & Press Enter.



- Hex file name (which is already flashed for LCD (P)) "K10_Primary . Hex" will appear on tool screen.
- Press Enter.



- Select the "SW Version" from Read Mfg Info menu appeared on tool screen & Press Enter.

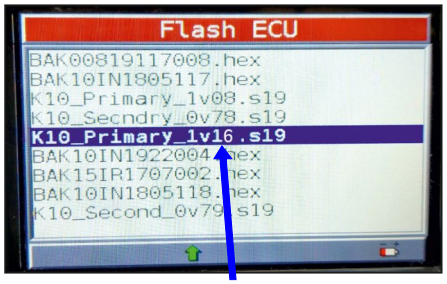
BOSCH Diagnostic Tool Updation

- SW version “001_16” will appear on tool screen as shown in photograph.

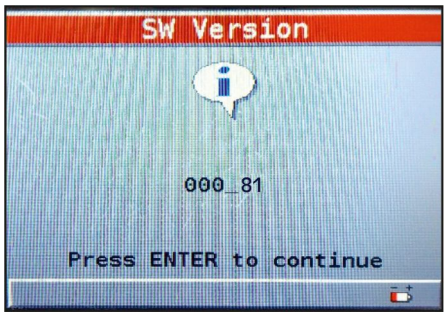
  Note: 001_16 nothing but the same as 1v16.

Version shown on tool screen 001_16
Read as 1v16

- Check whether hex file version selected for LCD (P) flashing is same as version appeared on tool screen.

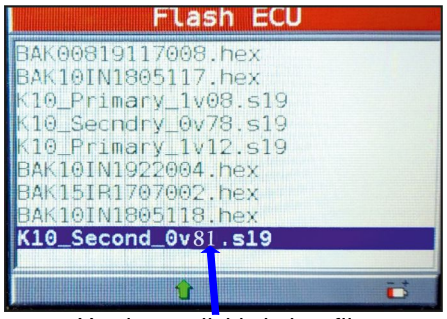


Version available in hex file name – 1v16. Read as 1.16



Version shown on tool screen 000_81
Read as 0v81

- Similarly for LCD (S), hex file version can be checked.
- Press Enter & disconnect the tool.



Version available in hex file name – 0v81. Read as 0.81

Steps to be carried out after primary speedometer and secondary speedometer flashing.

- Press MODE Button to select ODO mode.
- Press SET button till Gear indicator & Time feature appears on Primary speedometer.
- Once done above steps, Gear indicator & Time feature appears every time when ignition switch is made ON.

Already available in secondary speedometer

“Gear indicator & Time“ feature will be available in Primary Speedometer after flashing of both the speedometers.

NOTE : For Neutral gear position,

Primary speedometer shows “N” &

Secondary speedometer shows “0”.

BOSCH Diagnostic Tool Updation

Replacement of speedometer on vehicle

1) Replacement only one of the speedometer.
   a) Replacement of primary speedometer : After ignition on, primary speedometer will show Synchronisation in progress and then synchronization completed. No need to do anything on primary speedometer if replaced.
   b) Replacement of secondary speedometer : After ignition on, primary speedometer will automatically write ODO value in new secondary speedometer. Message Synchronisation in progress and then synchronization completed can be seen on the primary speedometer during the process. To confirm, please check ODO value after. ODO value shall be updated to the current ODO reading of vehicle.
   No need to write ODO using D&F tool.

Precaution :

   a) When replacing new speedometer on vehicle, make sure ignition is Off.
   b) Switch ON ignition only when speedometer are connected.

2) Replacement of both Primary and secondary speedometer.
   Precaution to be taken :

1) Note down ODO value before replacing speedometer on vehicle.
2) Do not replace speedometers while ignition is on.
3) Replace both speedometer and then only switch on ignition.
   a) If ignition is made on after replacing one of the speedometer, then ODO value will update automatically to the previous value.

- Types of error and proposed actions to be taken for speedometer from service team :

1) Primary speedometer showing “S CAN Failure” on dot matrix.
   Action : Replacement of secondary speedometer required. Check software version before replacing. If software version is as per released version, replace speedometer. If software version is old, reflash and check again.
2) Secondary speedometer ODO area showing “-------” continuously.
   Action : Replacement of primary speedometer required. Check software version before replacing. If software version is as per released version, replace speedometer. If software version is old, re-flash and check again.
3) Primary speedometer is not changing dot matrix message when mode and set button pressed on secondary :
   Action :

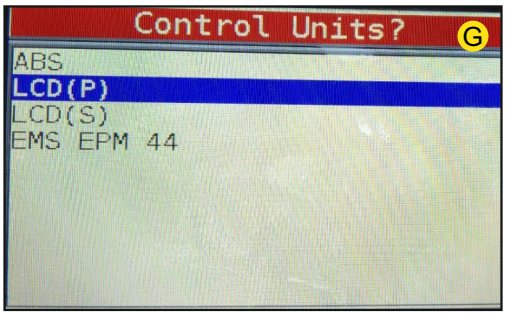
a) Check if Primary speedometer is showing ‘S’ CAN FAILURE message. If yes, replace secondary speedometer.
b) If S CAN FAILURE message is not present, ride the vehicle to some KM and check is Dynamic fuel consumption is updating or not.
   i) if dynamic fuel is updating, reflash speedometer software in both speedometer.
   ii) if Dynamic fuel consumption is not updating, replacement is required to confirm the defect.

BOSCH Diagnostic Tool Updation

ODO Writing

Precaution : Note down Km covered before removing both speedometers from vehicle.

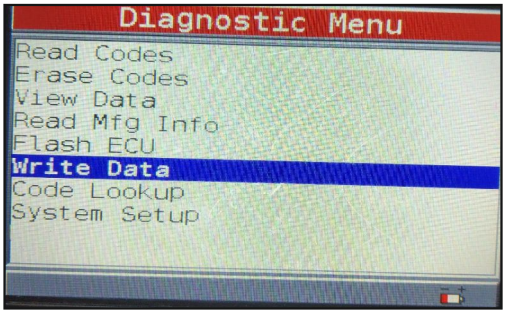
When to Do : Primary & secondary speedometer are replaced on vehicle, ODO reading is to be entered in new speedometer after fitment in vehicle.



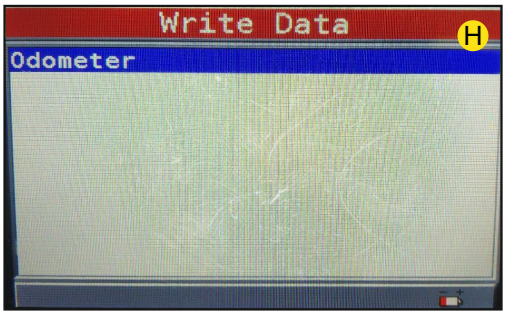
- Connect the tool & Select –

  Vehicle Diagnostics / 2019 / Pulsar / Dominar K10UG
- Message as shown in photograph - G will appear on tool screen.
- Select LCD (P) from control units appeared on tool screen & press Enter.

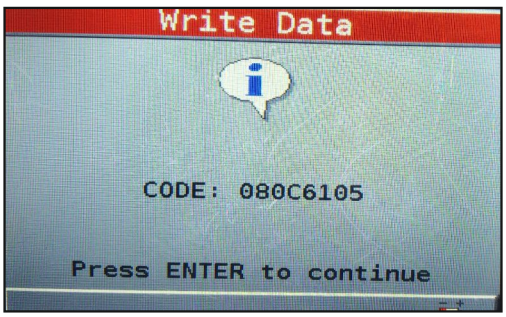
  NOTE : For “ODO write”, select only LCD (P).



- Select the “Write Data” from Diagnostic Menu appeared on tool screen & Press Enter.



- Message as shown in photograph - H will appear on tool screen.
- Press Enter

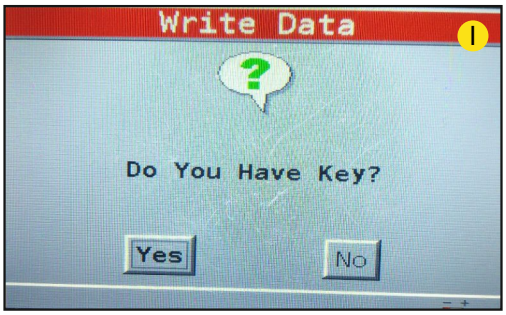


- 8 digit code will appear on tool screen.

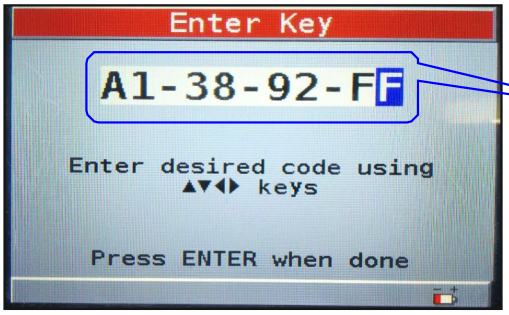
  Note down this eight digit code for key generation.

  DO NOT disconnect the diagnostic tool.
- Using BuiltOTP software (already available with you), generate key. (Same way as done during ECU flashing)

BOSCH Diagnostic Tool Updation



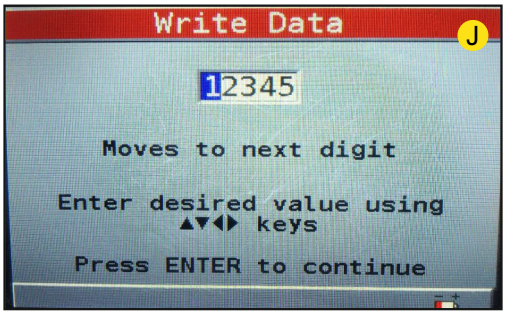
- Message as shown in photograph-I will appear on tool screen.
- Select Yes & press Enter.



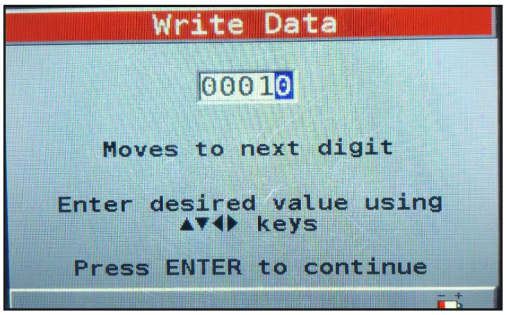
- Enter the key generated from BuiltOTP software.

Sample key entered in tool.
Do not enter this key.

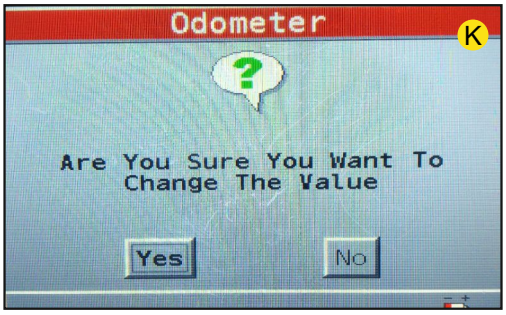
- Press Enter



- Message as shown in photograph-J will appear on tool screen.

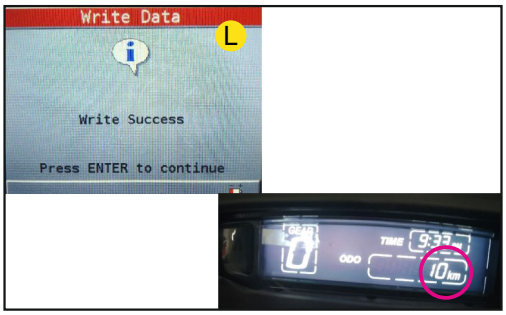


- Entered the noted Km reading.
- Press Enter.



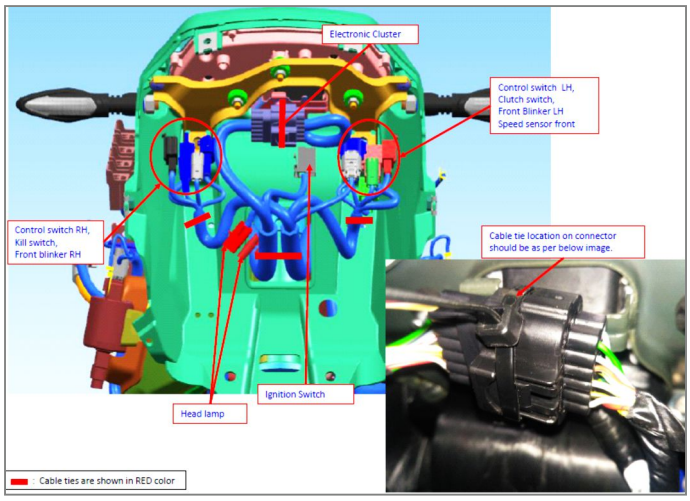
- Message as shown in photograph-K will appear on tool screen.
- Select Yes & press Enter.

BOSCH Diagnostic Tool Updation

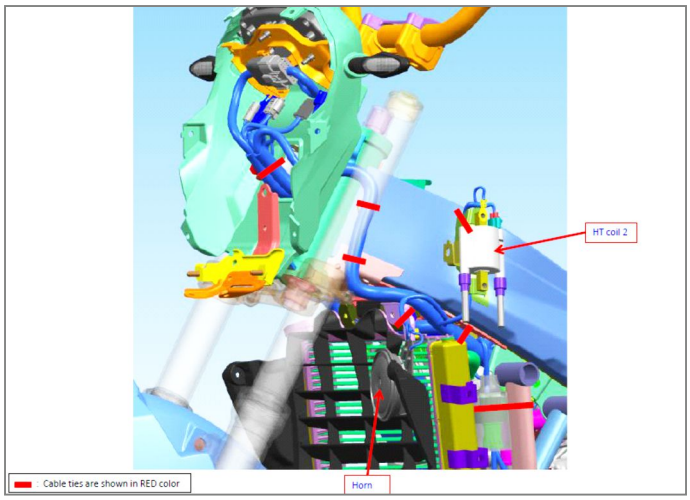


- Message as shown in photograph-L will appear on tool screen.
- Enter Km reading will be displayed on secondary speedometer as shown.
- Press Enter & disconnect the tool.

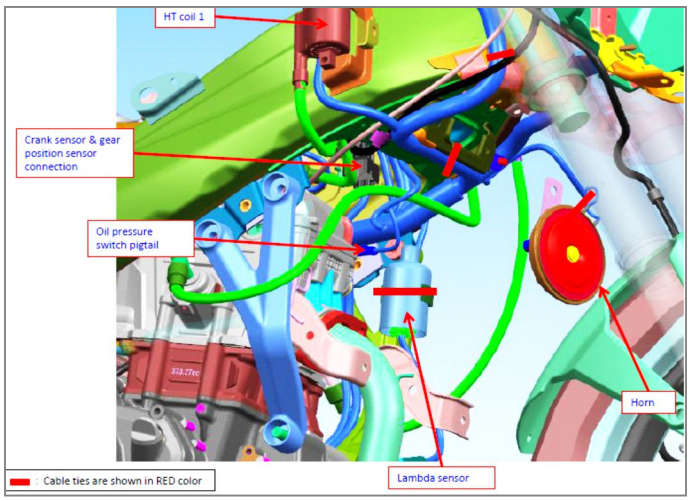
Wiring Harness Routing



1. Route wiring harness as shown in photograph.

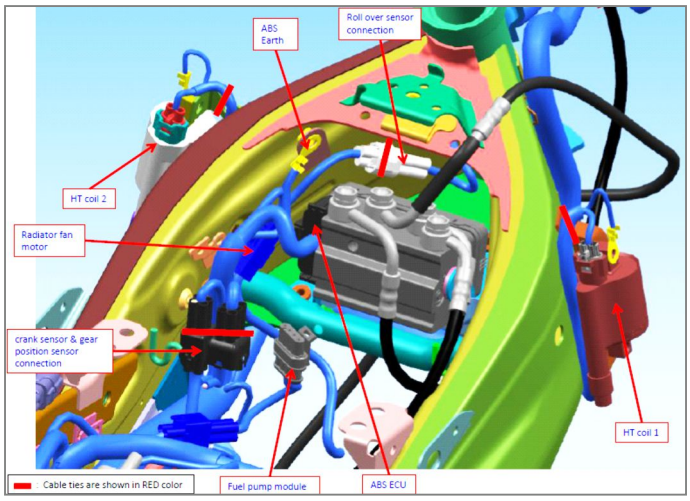


2. Route wiring harness as shown in photograph.

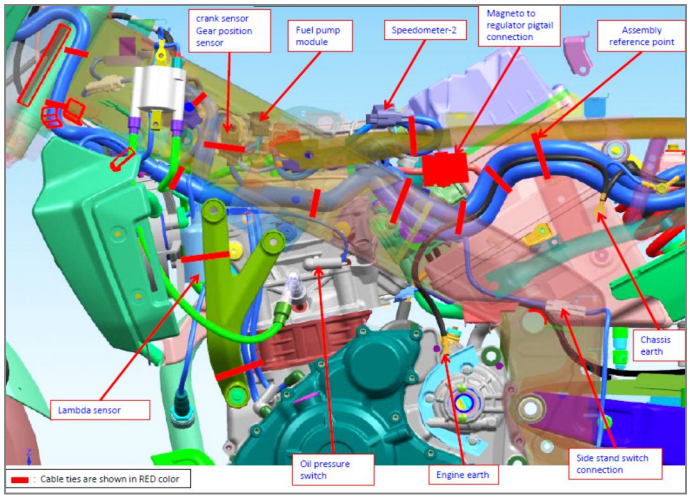


3. Route wiring harness as shown in photograph.

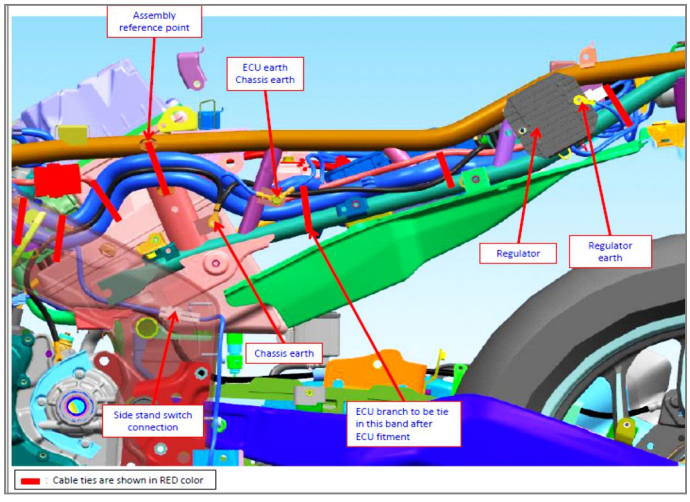
Wiring Harness Routing



4. Route wiring harness as shown in photograph.

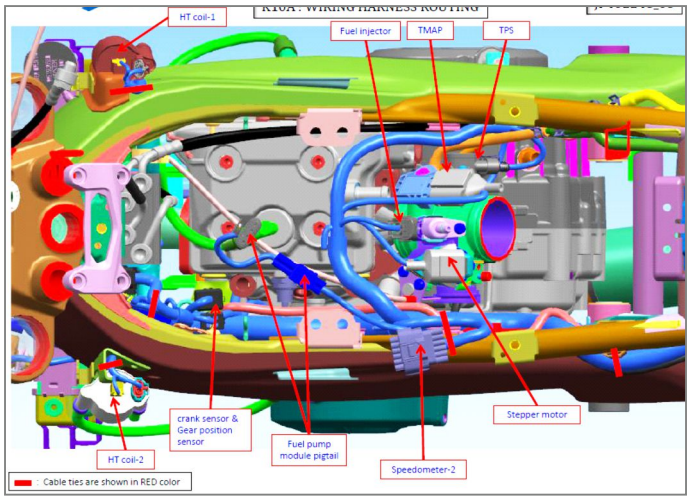


5. Route wiring harness as shown in photograph.

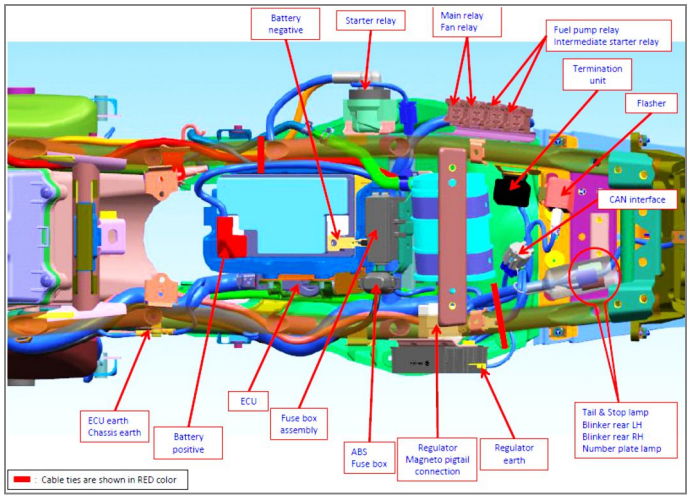


6. Route wiring harness as shown in photograph.

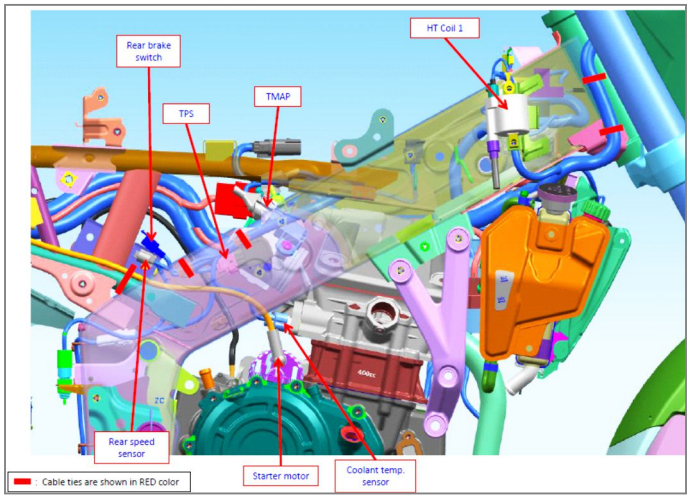
Wiring Harness Routing



7. Route wiring harness as shown in photograph.

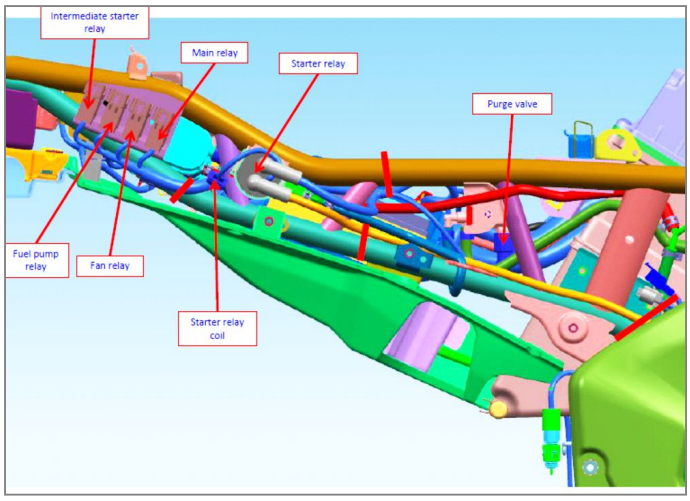


8. Route wiring harness as shown in photograph.

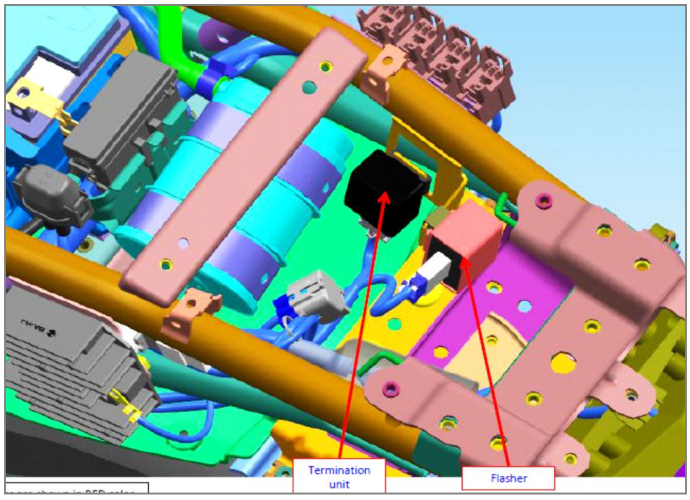


9. Route wiring harness as shown in photograph.

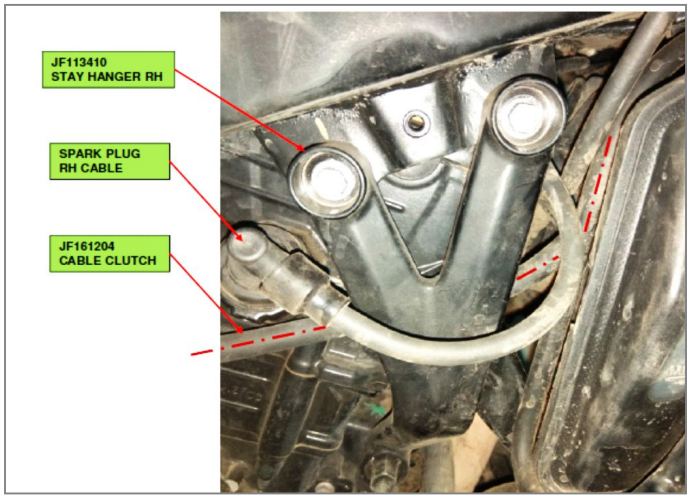
Wiring Harness Routing



10. Route wiring harness as shown in photograph.

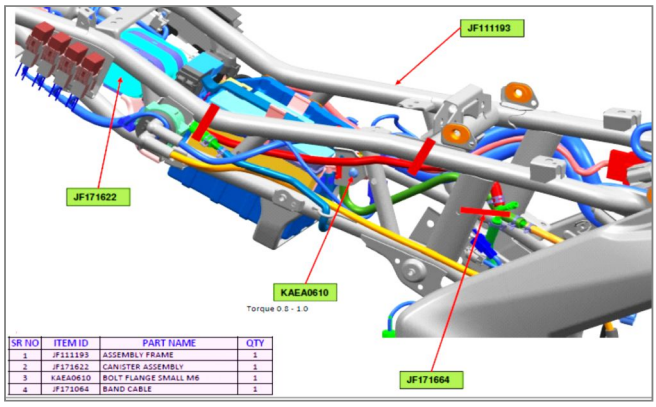


11. Route wiring harness as shown in photograph.

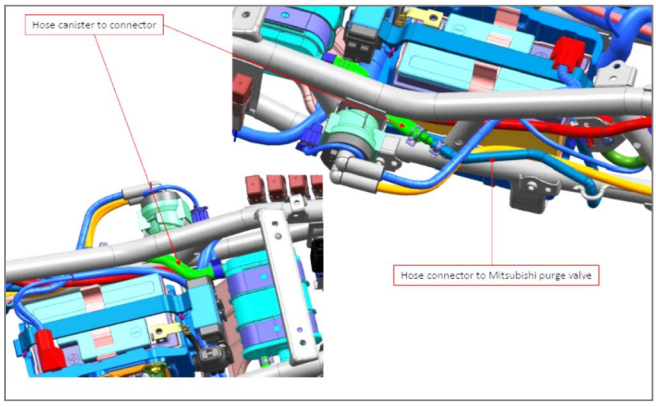


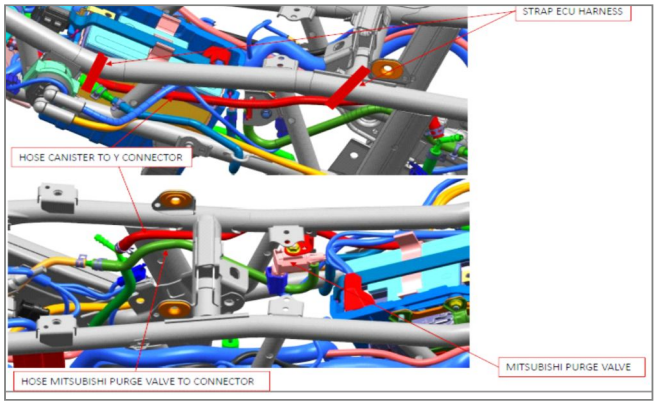
12. Route wiring harness as shown in photograph.

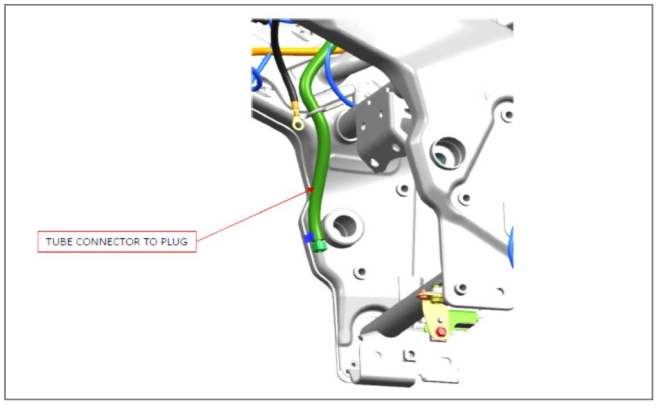
EVAP Routing



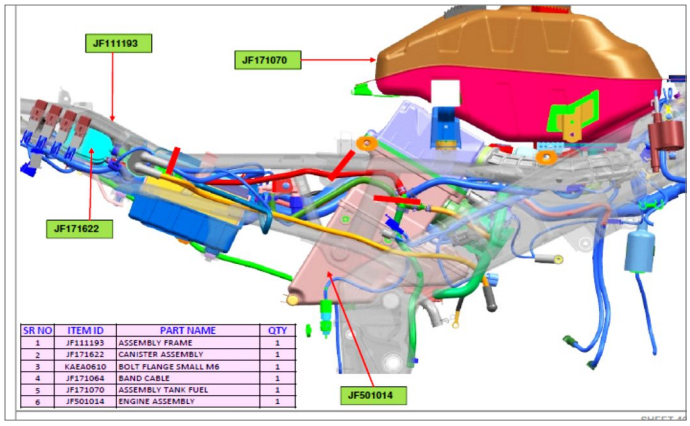
SR NO	ITEM ID	PART NAME	QTY
1	JF111193	ASSEMBLY FRAME	1
2	JF171622	CANISTER ASSEMBLY	1
3	KAEA0610	BOLT FLANGE SMALL M6	1
4	JF171064	BAND CABLE	1



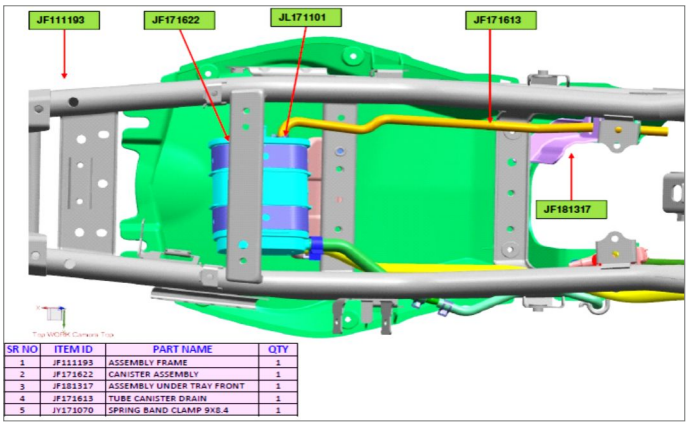




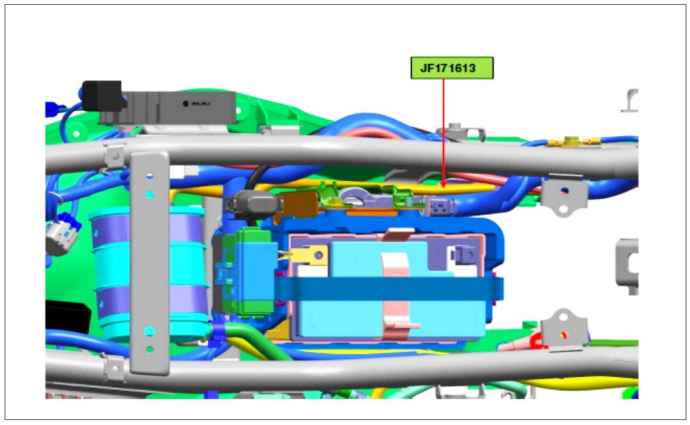
EVAP Routing



SR NO	ITEM ID	PART NAME	QTY
1	JF111193	ASSEMBLY FRAME	1
2	JF171622	CANISTER ASSEMBLY	1
3	KAEA0610	BOLT FLANGE SMALL M6	1
4	JF171064	BAND CABLE	1
5	JF171070	ASSEMBLY TANK FUEL	1
6	JF501014	ENGINE ASSEMBLY	1

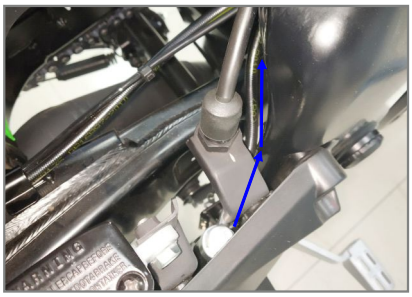


SR NO	ITEM ID	PART NAME	QTY
1	JF111193	ASSEMBLY FRAME	1
2	JF171622	CANISTER ASSEMBLY	1
3	JF181317	ASSEMBLY UNDER TRAY FRONT	1
4	JF171613	TUBE CANISTER DRAIN	1
5	JY171070	SPRING BAND CLAMP 9X8.4	1

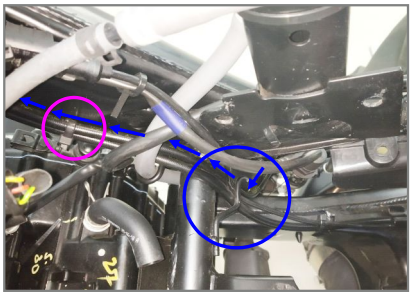


Hose / Speed Sensor Routing

Rear Brake Hose - Master Cylinder to ABS Unit Routing

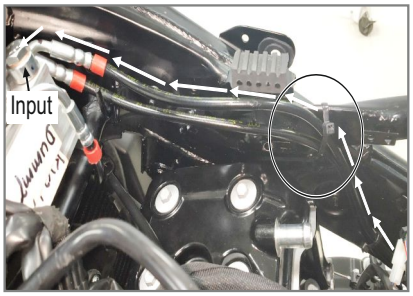


- Route brake hose from rear master cylinder as shown in photograph.

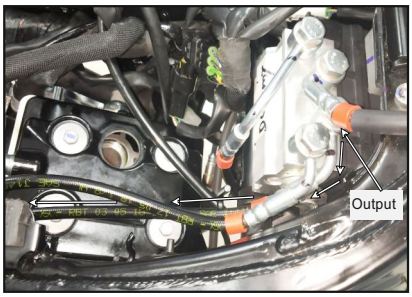


- Route brake hose through metal bracket as shown by blue circle.
- Tie brake hose to frame with cable tie (PA402204) as shown by pink circle.

- Tie brake hose to frame with cable tie (PA402204) as shown by pink circle.
- Tie brake hose to frame with cable tie (PA402204) as shown by pink circle.

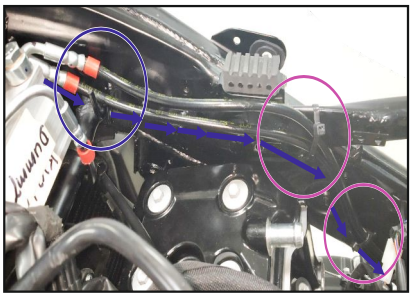


Rear Brake Hose - ABS Unit to Caliper Routing

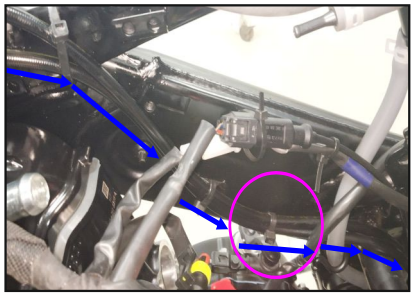


- Route brake hose from ABS unit as shown in photograph.

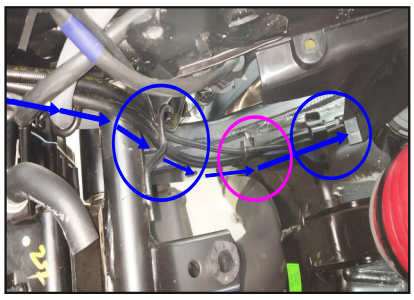
Hose / Speed Sensor Routing



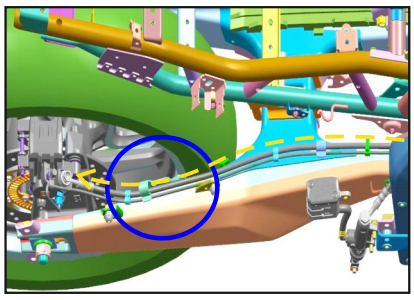
- Route brake hose through metal bracket as shown by blue circle.
- Tie brake hose to frame with cable tie (PA402204) as shown by pink circle.



- Tie brake hose to frame with cable tie (PA402204) as shown by pink circle.



- Route brake hose through metal brackets as shown by blue circles.
- Tie brake hose & rear speed sensor cable together with cable tie (PA402204) as shown by pink circle.

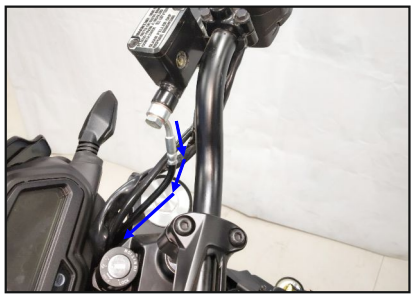


- Route brake hose through metal bracket as shown by blue circle.

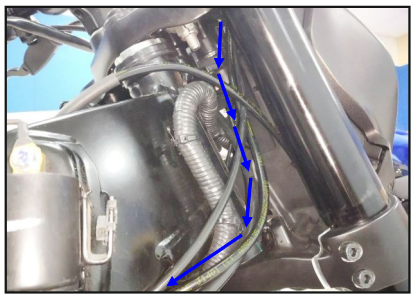
  Cable tie (PA402204) - 6 Nos

Hose / Speed Sensor Routing

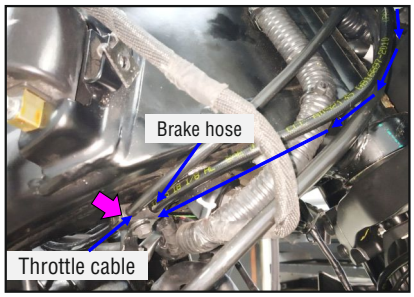
Front Brake Hose - Master Cylinder to ABS Unit Routing



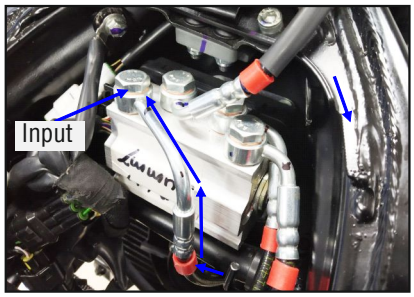
- Route brake hose from master cylinder as shown in photograph.



- Route brake hose as shown in photograph.



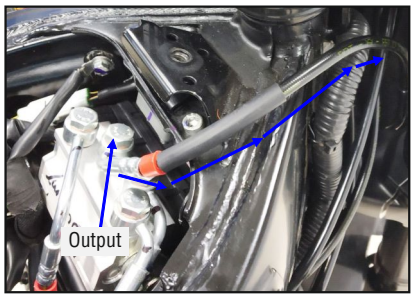
- Route brake hose through clamp ABS hose (DT131875 fitted on frame, above radiator) as shown by pink arrow.



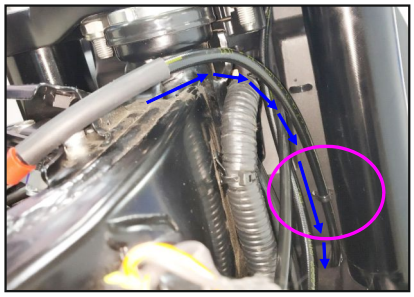
- Route brake hose as shown in photograph.

Hose / Speed Sensor Routing

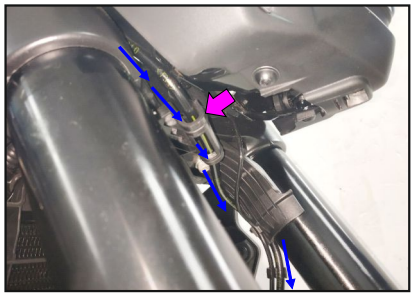
Front Brake Hose - ABS Unit to Caliper Routing



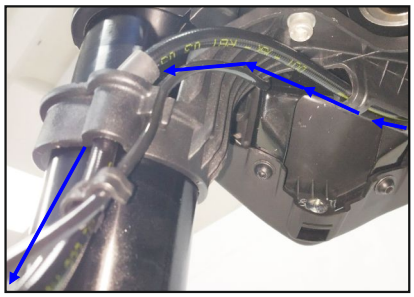
- Route brake hose from ABS unit as shown in photograph.



- Tie brake hose to speedo flap with cable tie (JD402217) as shown by pink circle.

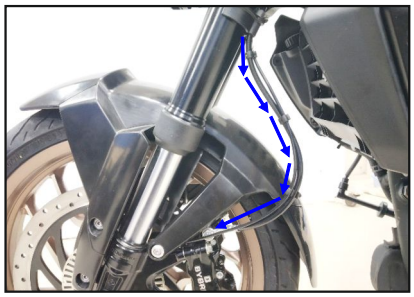


- Route brake hose through clamp brake hose (JF113851) as shown by pink arrow.



- Route brake hose as shown in photograph.

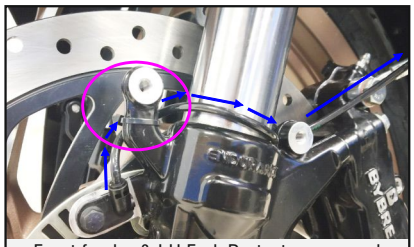
Hose / Speed Sensor Routing



- Route brake hose as shown in photograph.

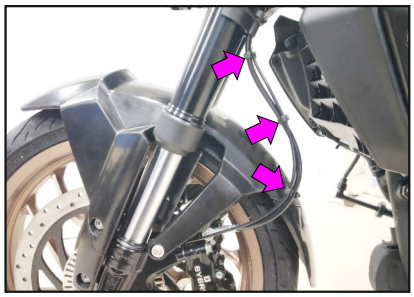
  Cable tie (JD402217) - 1 Nos.

Front Speed Sensor Routing

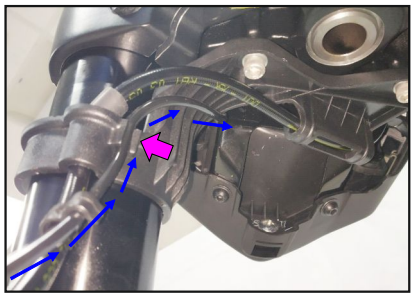


Front fender & LH Fork Protector removed for better clarity of cable routing

- Tie the speed sensor cable to fork leg with cable tie as shown by pink circle.

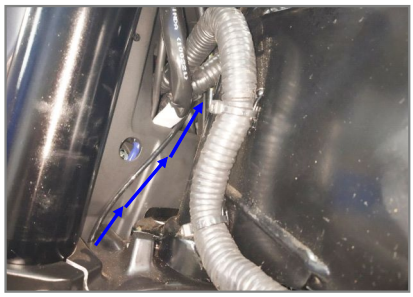


- Route speed sensor coupler through “W clamps” (DT131878) (fitted on brake hose) as shown by pink arrow.

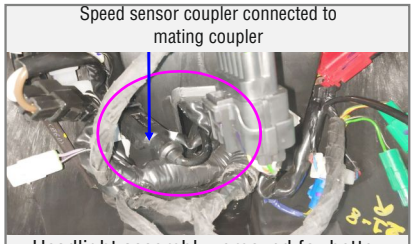


- Route speed sensor cable through slot (as shown by pink arrow) provided on clamp brake hose.

Hose / Speed Sensor Routing



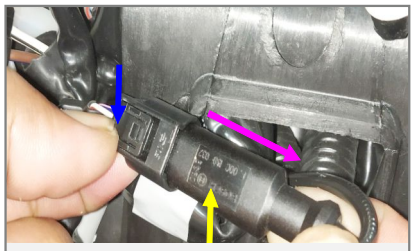
- Route speed sensor cable as shown in photograph & pass cable through window provided on speedo flap.



Headlight assembly removed for better clarity of cable routing

- Take out speed sensor cable from window provided on speedo flap.

  Connect cable to it's mating coupler.

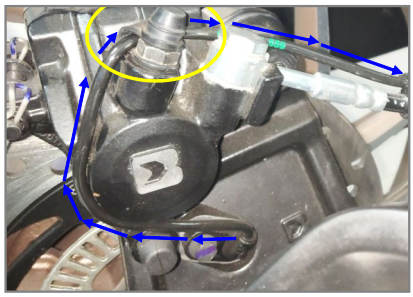


Speed sensor coupler

Skill tip for removing front & rear wheel speed sensor coupler :

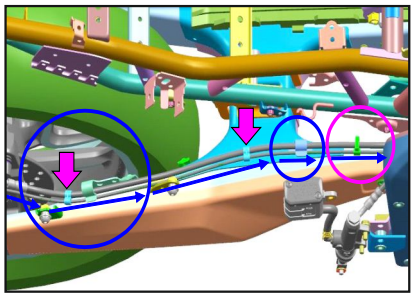
Press the lock as shown by blue arrow & pull out speed sensor coupler in the direction of pink arrow.

Rear Speed Sensor Routing

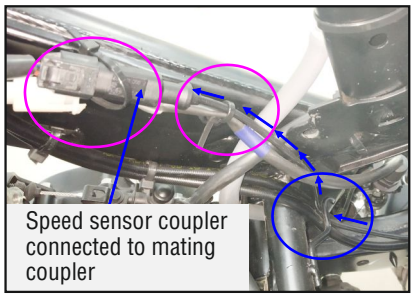


- Route rear speed sensor cable through rubber cap - bleeder nut as shown by yellow circle.

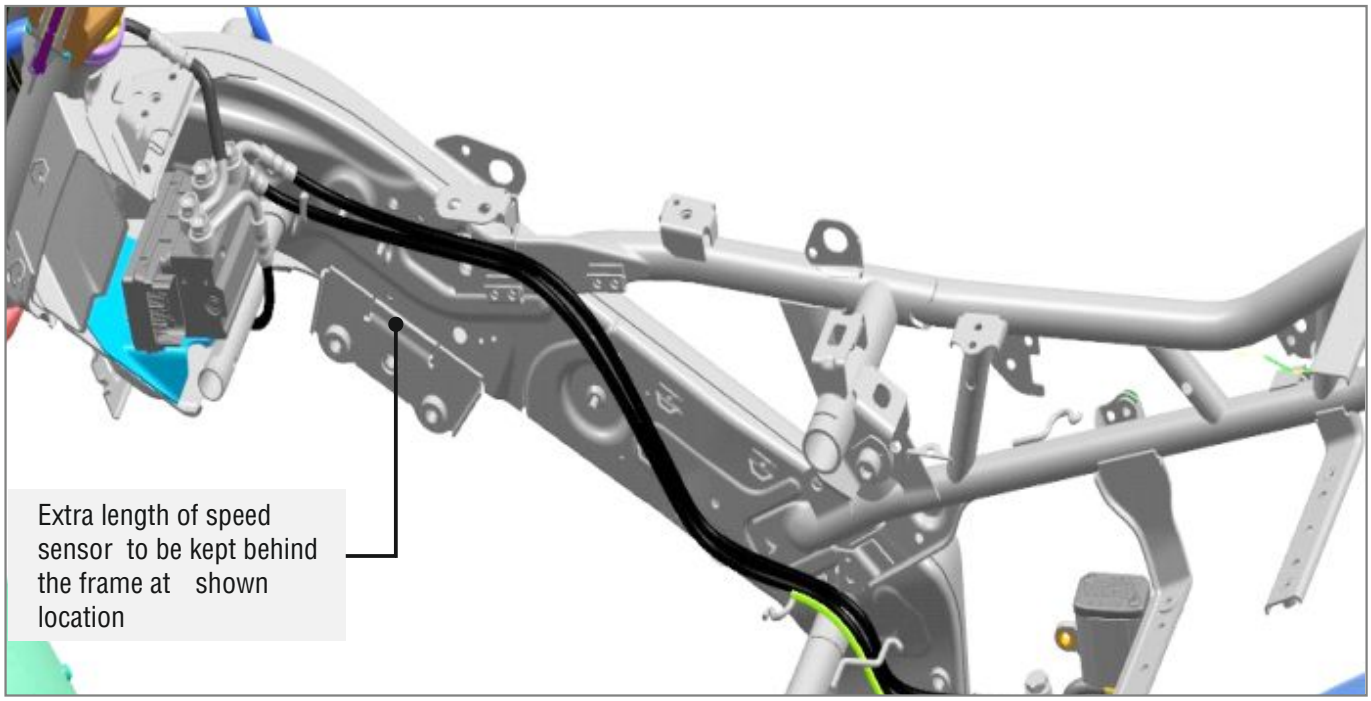
Hose / Speed Sensor Routing



- Route sensor cable through metal brackets as shown by blue circles.
- Route sensor cable through W clamps (DT131878) (fitted on brake hose) shown by pink arrows.
- Tie brake hose & rear speed sensor cable together with cable tie (PA402204) as shown by pink circle.

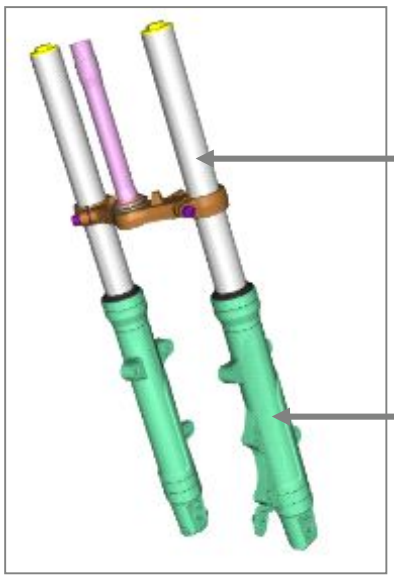
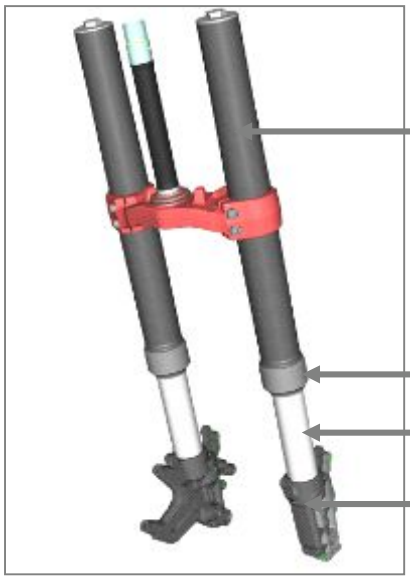


- Route sensor cable through metal bracket as shown by blue circle.
- Tie sensor cable to frame with cable tie as shown by pink circles.
- Connect speed sensor coupler to it's mating coupler in harness which is also tied to frame with cable tie shown by pink circle.



USD Fork Information

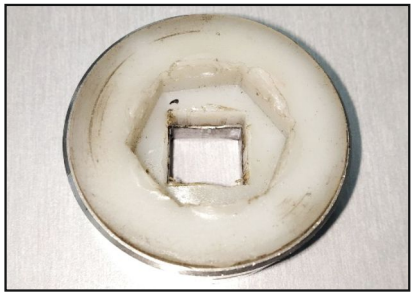
Upside Down (USD) Fork Assembly Information

Dominar 400 – Conventional Fork Assembly	Dominar 400 UG – USD Fork Assembly
	
• Outer tube - Bottom side & Inner tube - Upper side	• Outer tube - Upper side & Inner tube - Bottom side

Advantages of Upside Down (USD) Fork Assembly :

- Lighter in handling (turning and maneuvering specially during city driving).
- Higher rigidity of USD on account of larger guide span and longer outer tube, provide better high speed handling and braking performance.
- Soft bottoming feel even in harsh potholes and on bad roads because of rubber bump stopper inside the fork assembly
- Enhances vehicle premium looks

Special Tools



Adaptor - Fork top bolts

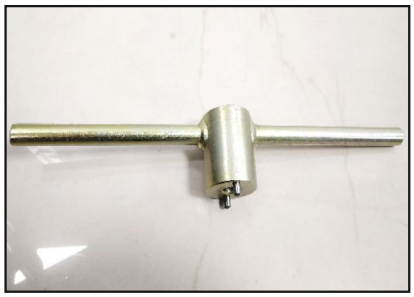
Part No : 37 0044 14

For tightening & Loosening, fork top bolts.

Hot Air Blow Gun

Part No : 37 0044 13

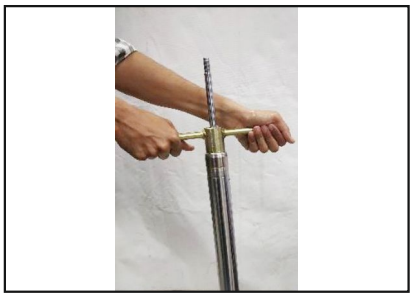
For heating fork inner pipe before removal of screw cap inner pipe.

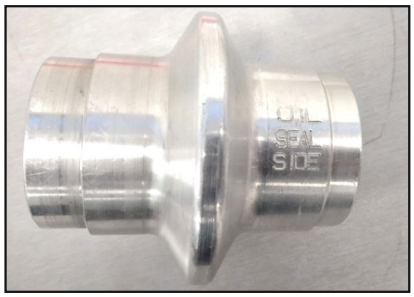


Adaptor – Screw cap inner pipe

Part No : 37 0041 89

For tightening & Loosening screw cap inner pipe

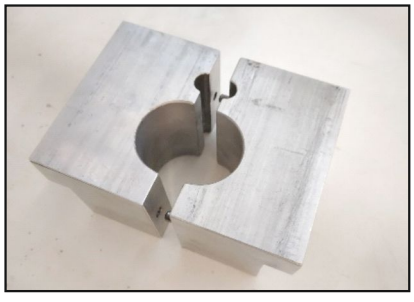




Oil seal & Guide bush fitment tool

Part No : 37 0042 89

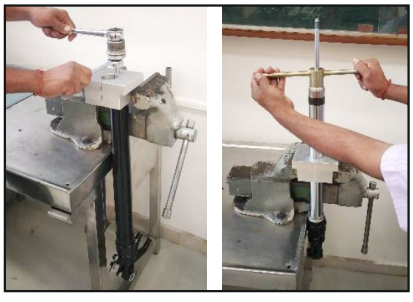
For fitment of oil seal & guide bush.



Fork clamping Block

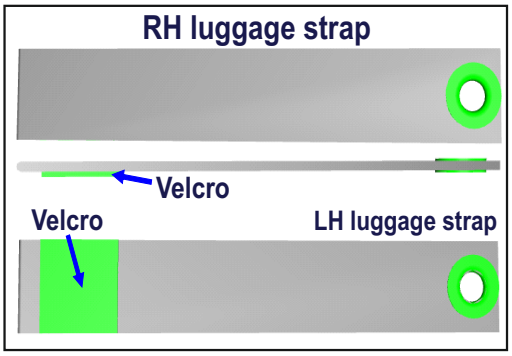
Part no : 37 0044 12

- Holding piston during lock nut removal & fitment.
- Holding fork inner pipe during screw cap inner pipe removal & fitment.

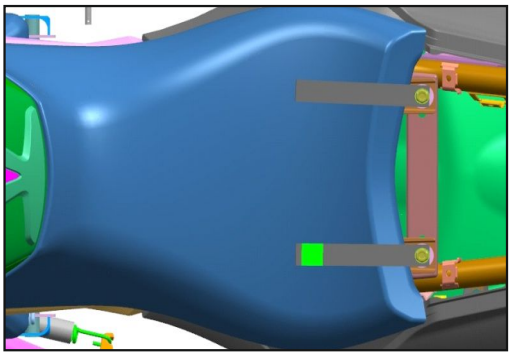


Important SOP

"Luggage Straps" fitment



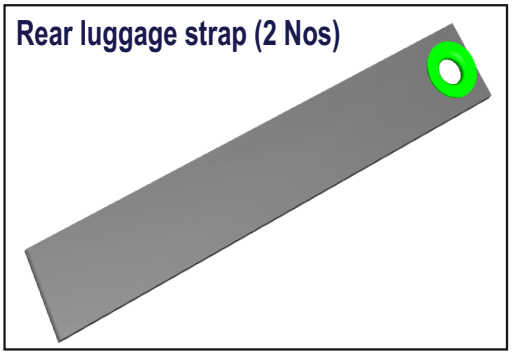
- Remove pillion rider seat.
- Remove rider seat mounting bolts (2 nos) using 10 mm spanner.
- Take front LH & RH luggage straps



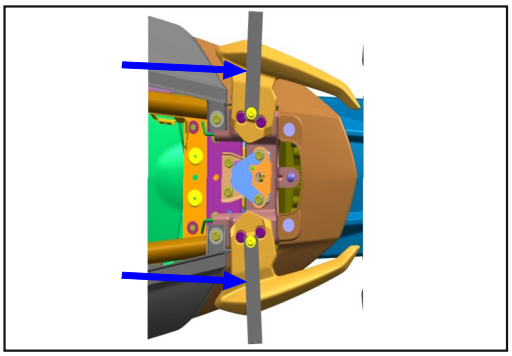
- Fit front LH & RH luggage straps as shown in photograph & tighten mounting bolts to recommended torque (0.8 – 1.2 Kgfm)

Note :

- The straps at front should be parallel to vehicle Center plane, as shown in photograph.



- Take rear LH & RH luggage straps



- Fit rear LH & RH luggage straps as shown in photograph & tighten mounting bolts to recommended torque (0.8 – 1.2 Kgfm)

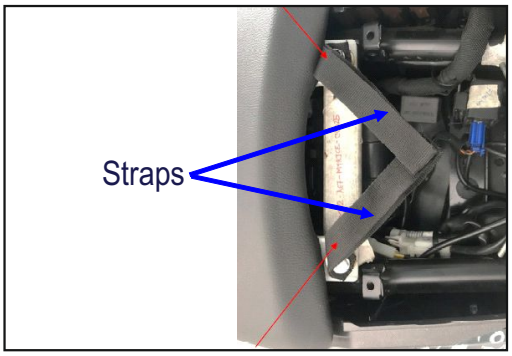
Note :

The straps at rear should be perpendicular to vehicle center plane, as shown in photograph.

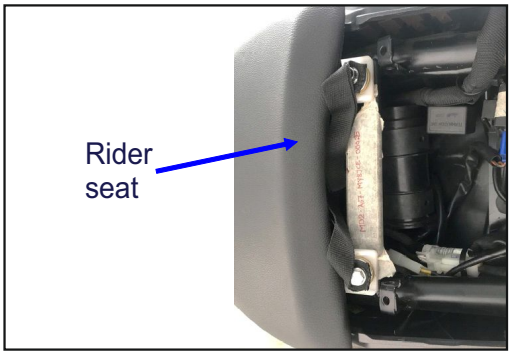
- Refit the pillion rider seat.

Important SOP

"Front Luggage Straps" Routing when not in use

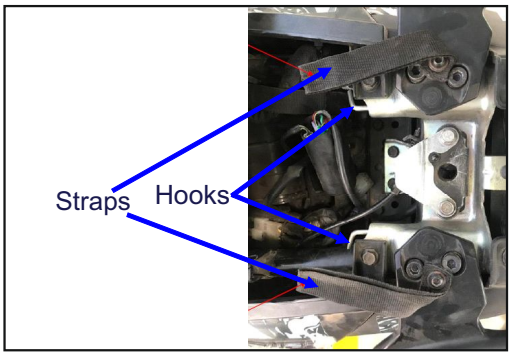


- Fold front luggage straps neatly.
  Join LH and RH strap at Velcro as shown in photograph.

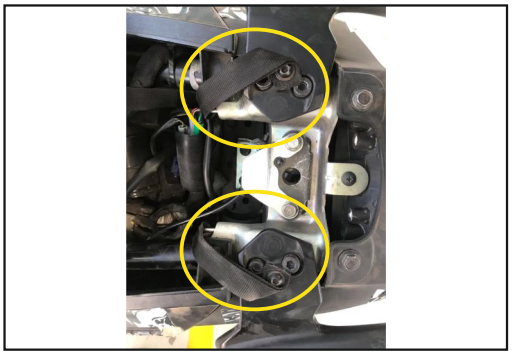


- Insert the folded straps under rider seat as shown in photograph.

"Rear Luggage Straps" Routing when not in use



- Fold rear luggage straps as shown in photograph to approach towards hook.

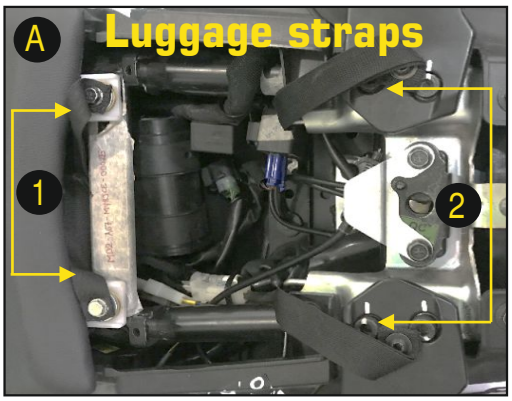


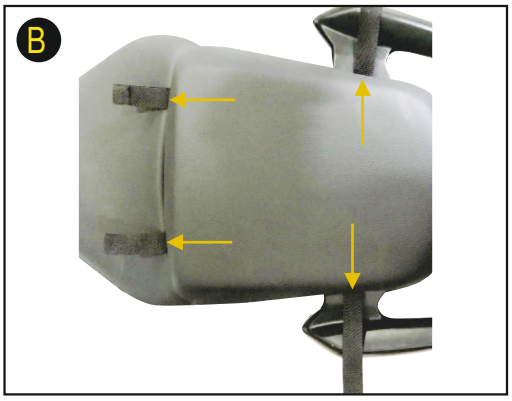
- Insert luggage straps in hooks as shown in photograph.

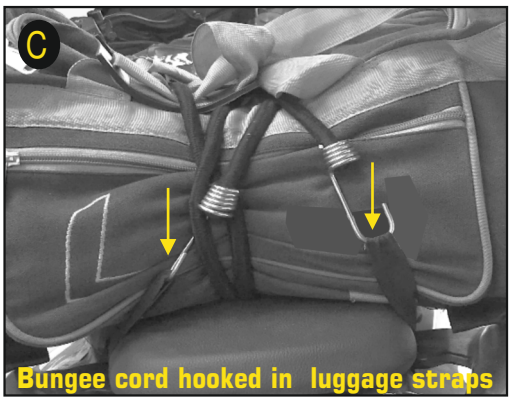
  Luggage straps should be kept below the pillion seat

Important SOP

USAGE OF 'LUGGAGE STRAPS' WITH BUNGEE CORD







If provided, luggage straps below pillion seat, then these straps to be used for bungee cords for clamping luggage on vehicle.

Procedure to use luggage straps :

- Open Pillion seat & take out front and rear luggage straps.(refer photographs A)
- Re-fit pillion seat on its position (B).
- Now you can use luggage straps to hook 'Bungee cord' (not supplied with vehicle) for clamping luggage on vehicle ©. (Maximum allowed luggage load is 15 Kg)

Caution :

Luggage straps can be used only for strapping a luggage bag or similar as shown in the pictures (C & D). The total weight of the bag and its contents shall not exceed 15Kgs.

While using the strap the user shall ensure that necessary precautions are taken in order to ensure that the:

- Luggage / luggage bag is well balanced on the seat and securely tied with help of suitable cord / rope which are strong enough for the purpose.
- Parts of the Vehicle are not damaged due to in appropriate luggage or due to the additional hardware used for securing same.

It is not recommended to use these straps to carry any articles which may damage the vehicle parts or affect the stability of the bike while driving

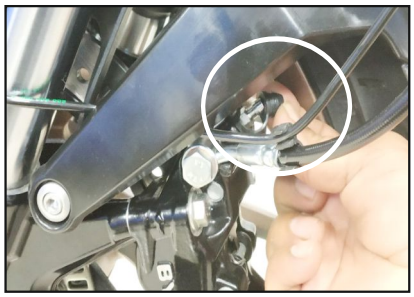
Warranty is not applicable for any damages arising due to luggage over weight, sharp edges.

When luggage straps are not in use follow below steps.

1. Front straps to be folded with velcro on strap ends & Insert the folded straps under rider seat
2. Rear straps to be folded neatly to approach the hooks & insert straps in hooks.

Important SOP

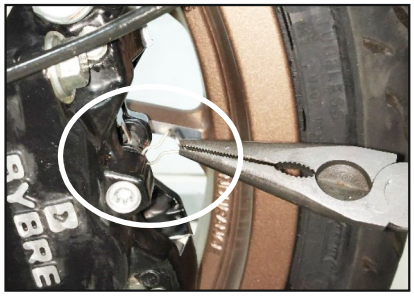
Front Caliper Overhaul



- Clean caliper assembly thoroughly by low pressure water spray before opening caliper bleeder nut.
- Remove bleeder nut rubber cap.

- Drain the brake fluid from caliper assembly by loosening air bleeder nut using 8 mm spanner & using transparent PUC tube which will avoid spillage of brake fluid on caliper body / disc pads & also powder coating peel off / inefficient braking.

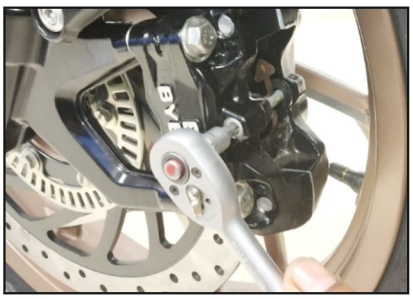
- Remove front brake hose banjo bolt with copper washers (2 nos) using 14 mm spanner.



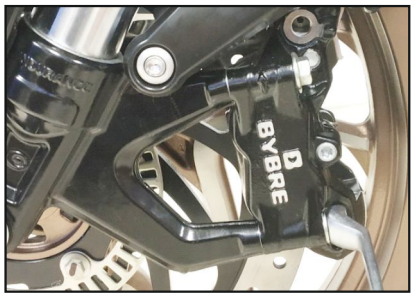
Skill Tip :
Before removing caliper assembly from vehicle -

- Pull out lock clip fitted on brake pad pin using plier to avoid lock clip bending / breakage issue.

- loosen brake pad pin using star bit T-30 from force ratchet box.



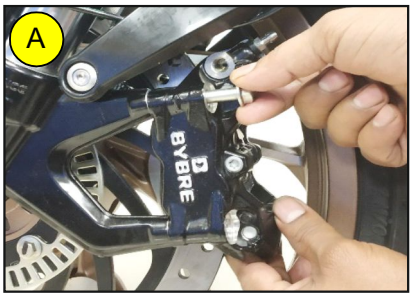
Important SOP

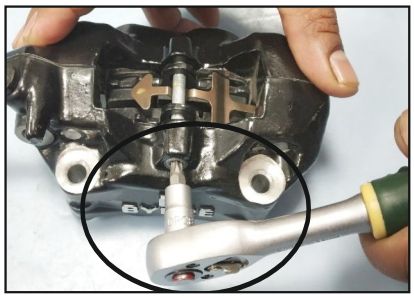


- Remove caliper mounting bolts (2 nos) using 12 spanner & take out caliper assembly.

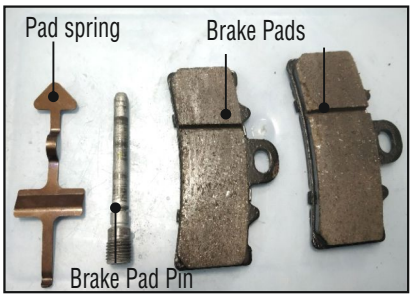
Note :

While removing caliper mounting bolts, hold caliper body to avoid falling of caliper body (Refer photograph - A)





- Remove brake pad pin using star bit T-30 from force ratchet box.
- Take out brake pad pin, pad spring & brake pads.

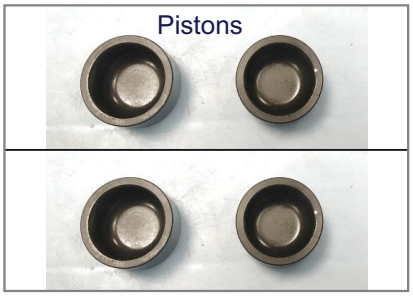


- Remove bleeder nut using 8 mm spanner from caliper body.

- Remove caliper pistons (4 nos) by applying compressed air through banjo bolt hole.

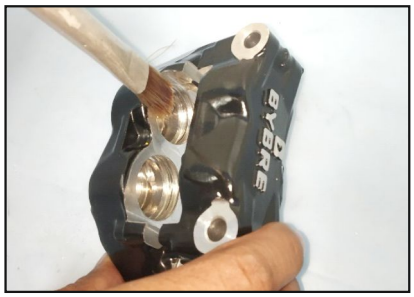
Note :

Use cotton cloth while removing pistons from caliper body as “piston fly out” may cause damage to it & any one in the vicinity.

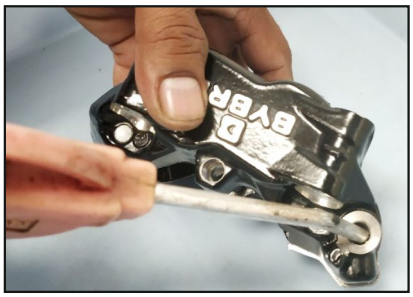


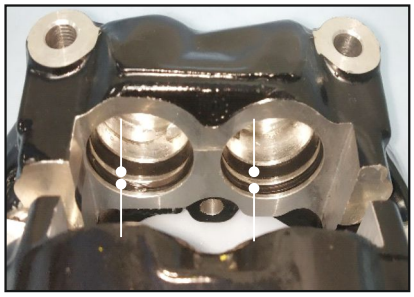
Important SOP

- Remove dust seals (4 nos) & oil seals (4 nos) from caliper body.

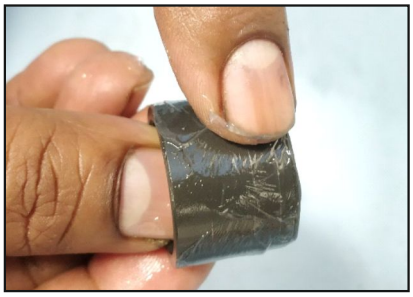


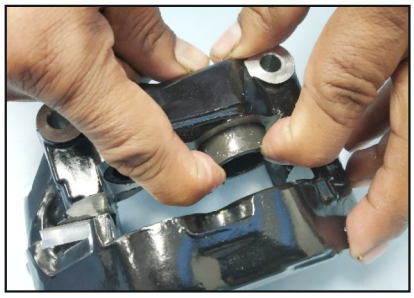
- Clean the caliper body by diesel / kerosene.
- Dry the caliper body by applying low pressure compressed air.





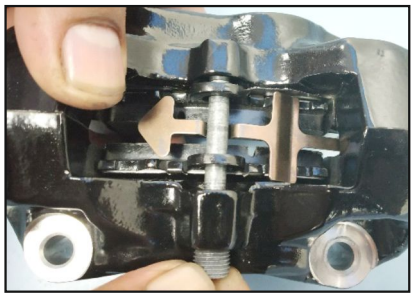
- Refit the oil seals & dust seals in caliper body.
- Smear the silicon grease on piston OD & rubber seals.





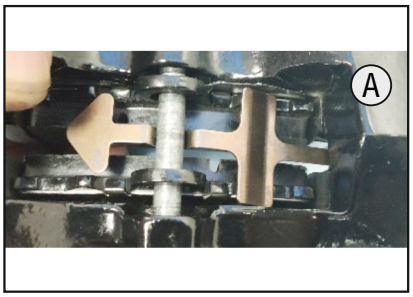
- Fit all the pistons in caliper body.
- Clean the brake pads by smooth emery paper.

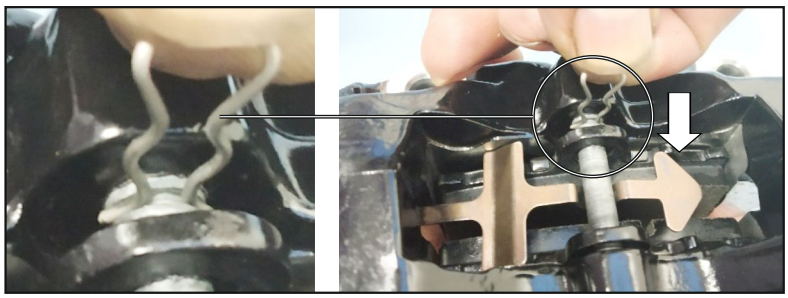
Important SOP



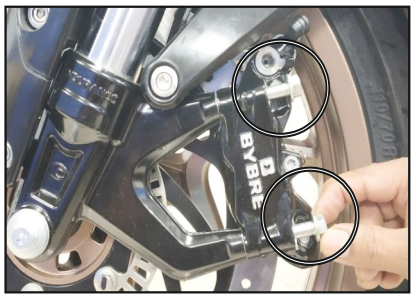
- Fit pad spring, brake pads & prefit brake pad pin.
  Tighten the brake pad pin to recommended torque (0.5 – 0.7 Kgfm) by torque wrench

  Note : Fit pad spring as shown in photograph - A.

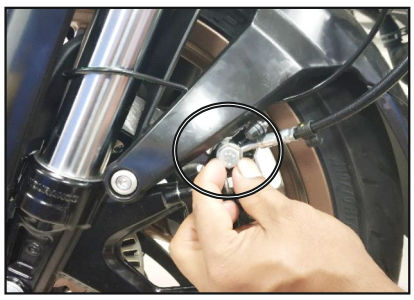




- Hold lock clip on groove provided on brake pad pin & press lock clip in the direction of arrow as shown in photograph.



- Prefit the bleeder nut using 8 mm spanner.
- Fit the caliper assembly on LH fork leg.
  Prefit the caliper mounting bolts & tighten it to recommended torque by torque wrench.



- Prefit the brake hose mounting bolts & tighten it to recommended torque (2.1 – 2.8 Kgfm) by torque wrench.

  Note : Always replace banjo bolt copper washers whenever opened with new one.

Important SOP

- Remove master cylinder cover mounting screws (2 nos) using phillips head screw driver & take out master cylinder cover.

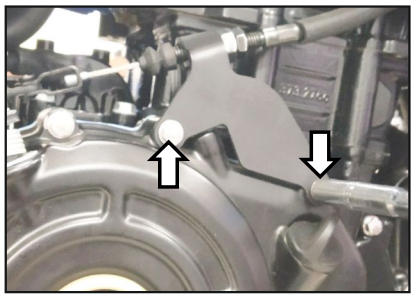
- Take out PVC cap & rubber diaphragm.

- Fill the master cylinder reservoir by recommended brake fluid.
- Carry out air bleeding.(Refer PM Encyclopedia page no. - 155 Air Bleeding SOP)

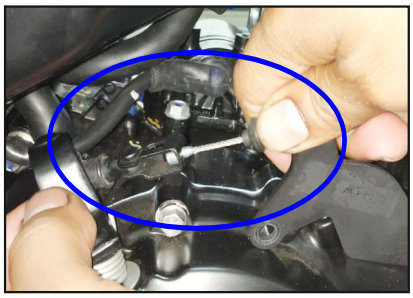
- Tighten the bleeder nut & fit it's rubber cap.
- Fit rubber diaphragm, PVC cap & master cylinder cover.

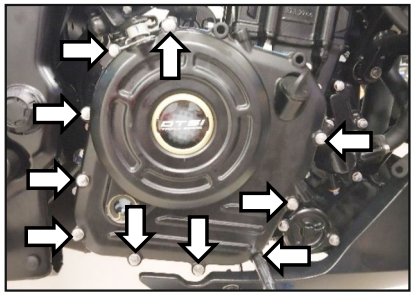
Important SOP

Tappet Check & Adjust

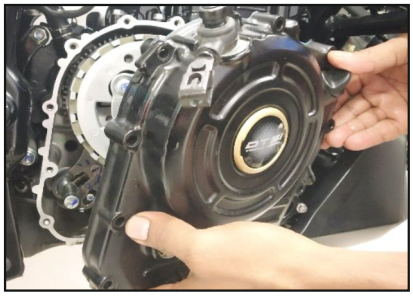


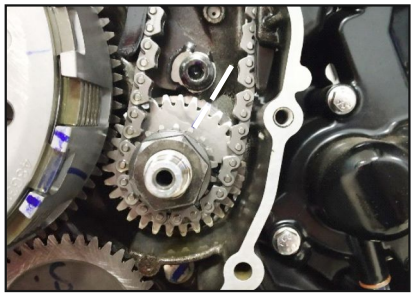
- Remove clutch cable bracket mounting bolts (2 nos) with 8 mm spanner.
- Remove clutch cable from clutch release shaft.





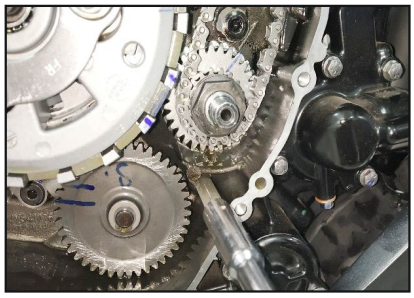
- Remove clutch cover mounting bolts (10 nos) with 8 mm spanner & take out clutch cover.





- Ensure the piston is at TDC by aligning primary gear mark with crankcase mark using 24 mm spanner.

  Ensure T mark on cam sprockets should be upwards.

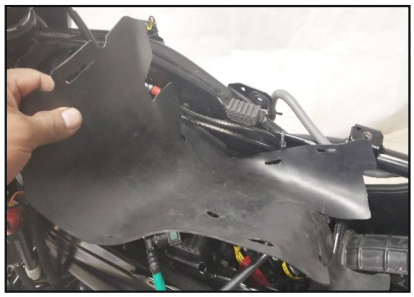


- Piston TDC confirmation :

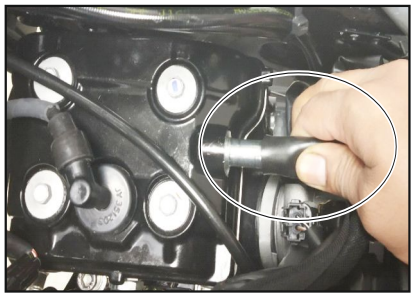
  Remove dummy bolt from crankcase using 10 mm spanner & Fit the crankshaft locker tool (P/N : 37104332) in dummy hole.

  If the crankshaft locker tool fits in crankshaft, it means that piston is at TDC.

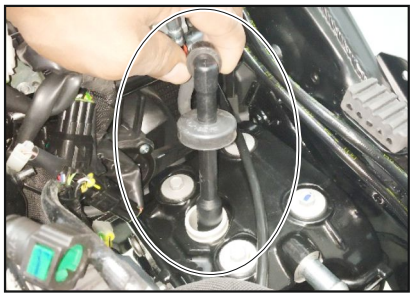
Important SOP

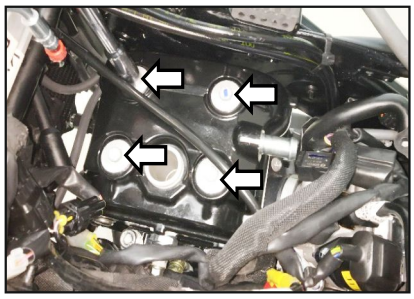


- Remove air filter element (Refer earlier Dominar 400 training note for complete SOP)
- Remove heat insulating rubber sheet from restraining slots.

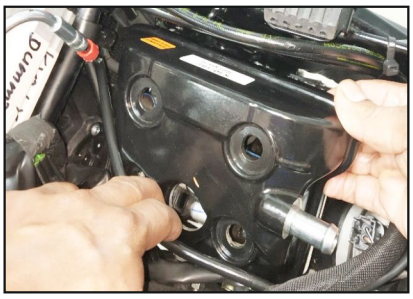


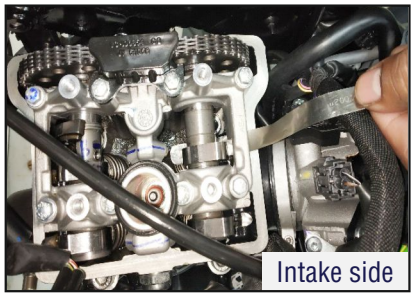
- Pull out breather pipe clip & take out breather pipe from cover cylinder head.
- Take out central spark plug cap.





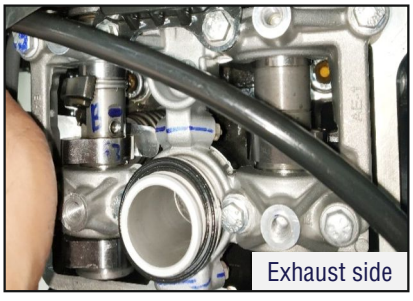
- Remove cover cylinder head mounting bolts (4 nos) using 10 mm spanner.
- By adjusting throttle cable, take out cover cylinder head & it's gasket.



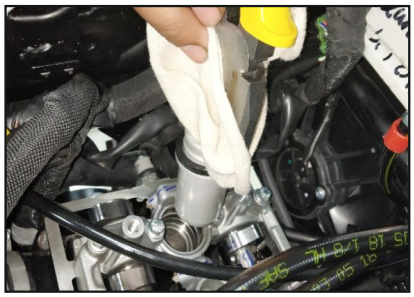


- With the help of feeler gauge, check the tappet clearance.

Specifications :
Intake : 0.08 - 0.12 mm
Exhaust : 0.13 - 0.17 mm

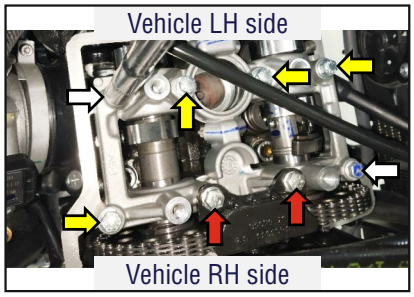


Important SOP



If the tappet clearance is not as per specification –

- Remove chain tensioner.
- Using cotton cloth & plier, take out sleeve central spark plug.



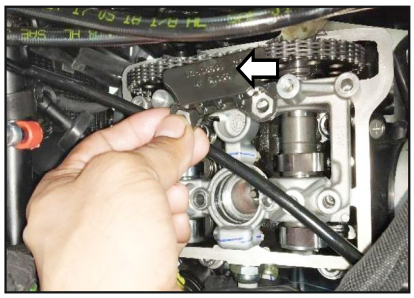
- Remove cam holder & Guide chain top mounting bolts (8 nos) with 8 mm spanner.

  Length of bolts :

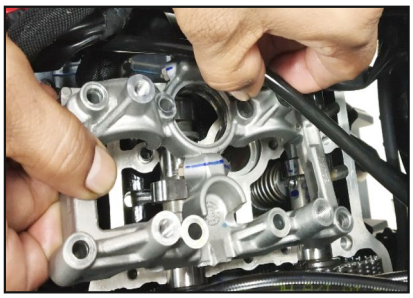
  Bolts shown by yellow arrow : @ 41 mm

  Bolts shown by White arrow : @ 46 mm

  Bolts shown by Red arrow : @ 51 mm

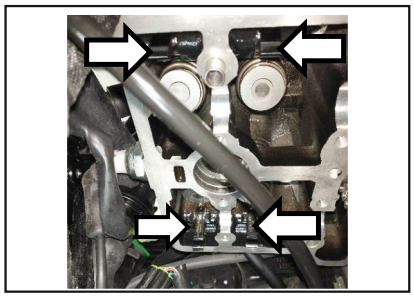


- Take out guide chain top.
- By adjusting throttle cable, take out cam holder.

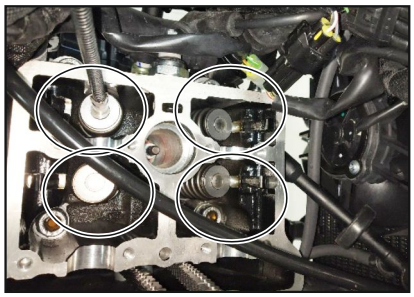


- Holding the cam chain take out camshaft assembly.
- Tie cam chain using copper wire & take out other cam shaft assembly.

Important SOP



- Lift all four Rocker Arms by hand.

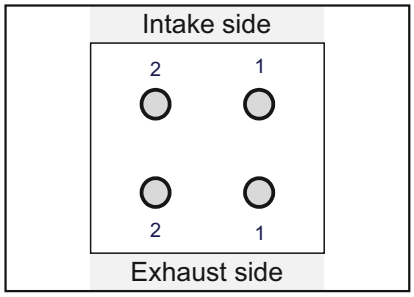


- At a one time, take out one shim only using Flexible Wire With Magnetic Tip (P/N:37104345).

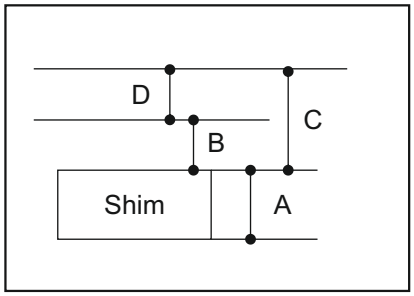
  Note down shim sizes removed from vehicle as follows –

  Intake 1 : _____, Intake 2 : _____

  Exhaust 1 : _____, Exhaust 2 : _____



- Shim thickness to be checked with calibrated Micrometer.



Shim calculation for increased tappet clearance :

A - Existing Shim thickness

B - Standard Tappet Clearance

C - Measured Tappet Clearance

D - Increase in Tappet clearance = C - B

E - Shim to be used = A+D

Shim to be used :

For Exhaust valve -

A - 2.40 mm , B - 0.10 mm

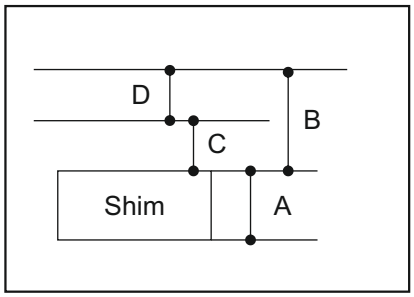
C - 0.14 mm, D - 0.04 mm

E - Shim to be used = A +D

= 2.40 + 0.04

= 2.44 mm

Important SOP



Shim calculation for decreased tappet clearance :-

A - Existing Shim thickness

B - Standard Tappet Clearance

C - Measured Tappet Clearance

D - Decrease in Tappet clearance = B - C

E - Shim to be used = A- D

Shim to be used :-

For Exhaust valve -

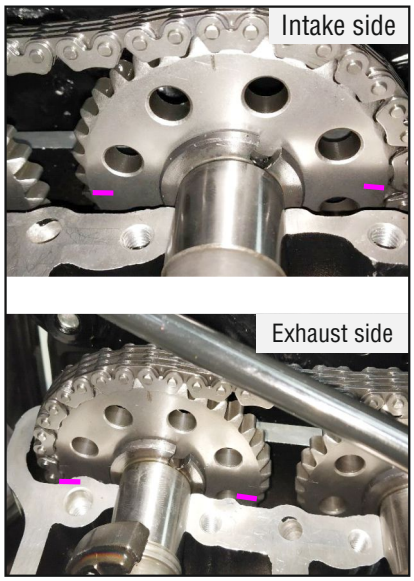
A - 2.40 mm , B - 0.10 mm

C - 0.06 mm, D - 0.04 mm

E - Shim to be used = A - D

= 2.40 - 0.04

= 2.36 mm

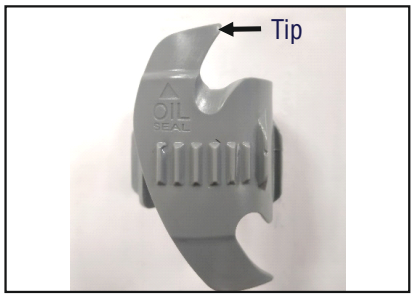


- Fit new shim.
- Fit cam shaft assemblies.

  NOTE :

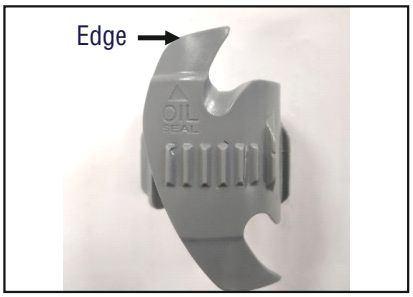
  Ensure that two horizontal lines marked on cam sprocket are parallel to cylinder head face as shown in photograph.
- Fit cam holder & chain guide top.
- Fit tensioner.
- Feeler gauge should have a mild resistance when being slid out after setting valve clearances.
- Remove crankshaft locker tool, complete one rotation & recheck the tappet clearance.
- Fit sleeve spark plug.
- Fit cover cylinder, gasket cover head & heat resistant cover.
- Refit all removed parts.

Front Fork Oil Leakage Confirmation

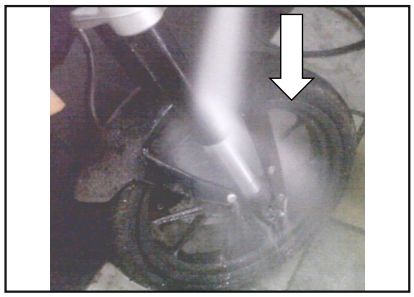


Fork oil seal cleaner Dia. 35 – 45 mm
Identification - Grey colour

Check point before use :
If tip / edge is damaged, then scrap the fork seal cleaner & order new one.

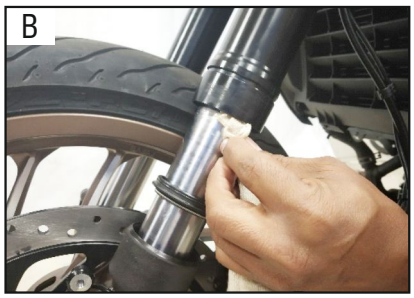


Important SOP



- Clean front fork by water wash (Water pressure jet to be applied from top to bottom side)
- Remove front fender & fork protector.

- Wipe off water by clean lint free cotton cloth as shown in photograph - A.
- Take out dust cap & dust seal from its seat & clean oil / dust accumulated on oil seal surface area by lint free cotton cloth as shown in photograph - B.



- Inspect inner pipe for scoring marks using ball pen point as shown in photograph. Turn one complete round of ball pen on outer surface of inner pipe.

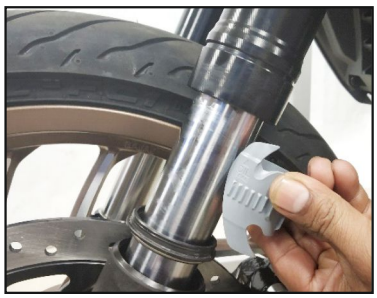
Important SOP

- If deep scoring marks are observed (which can be felt while checking by ball pen tip) on inner pipe, then replace inner pipe with axle clamp, dust seal & oil seal. (Do not replace fork inner pipe only by observing scoring marks visually)

  Refer “Fork inner pipe replacement” SOP for fork inner pipe & oil seal-dust seal replacement.

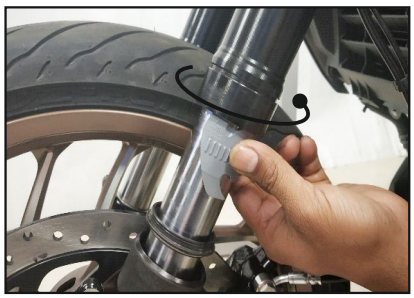
- If scoring marks are not observed, then drive the vehicle in dust cap & dust seal removed condition for about 2 kms on rough road.

- If no oil comes out on inner pipe, then refit dust seal & dust cap in outer pipe & handover vehicle to customer & keep vehicle under monitoring.



- If oil comes out & seen on inner pipe then follow steps as given below -

  Oil seal cleaning
- Insert fork seal cleaner tool on inner pipe as shown in photograph in such way that oil seal cleaning side is ready for use.



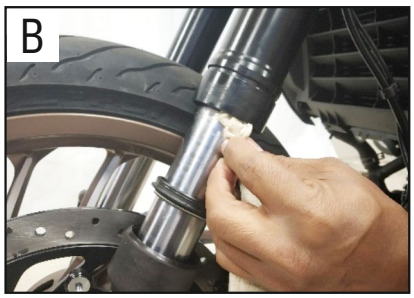
- Insert fork seal cleaner tool’s oil seal side between oil seal & inner pipe. After insertion, rotate in clockwise direction by 90 deg. & confirm cleaner is inserted correctly.

- Now rotate the fork seal cleaner in anti - clockwise direction for 2 turns without any jerks.

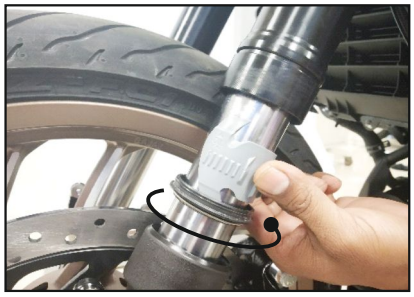
Note: For ease in rotation of the special tool it is recommended to remove wheel & Front fender

Important SOP

- Take out fork seal cleaner tool from fork inner pipe.
- Clean dust / foreign particles accumulated on oil seal side edge by clean lint free cotton cloth.
- Repeat the steps as per the point 10 & 11 for one more time.



- Carry out front fork pumping for 8 ~ 10 times.
- Clean oil traces on oil seal surface area as shown in photograph - B.



Dust seal Cleaning

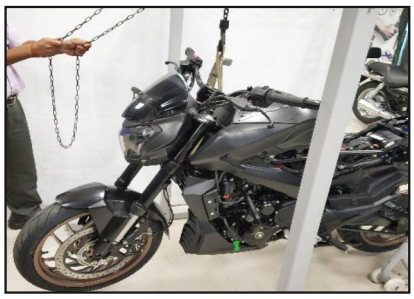
- Insert the fork seal cleaner tool on inner pipe.
- Insert dust - cleaning side between dust seal & inner pipe as shown in photograph.

  Rotate the tool for two turns in anti-clockwise direction.
- Clean dust seal & inner pipe by clean lint free cotton cloth.

- Drive the vehicle in dust cap & dust seal removed condition for about 2 kms on rough road.
- If no oil traces are observed, then refit dust seal & dust cap in outer pipe & handover vehicle to customer & keep vehicle under monitoring.
- If oil traces are observed, replace the dust seal & oil seal in pair. Refer “Dust seal & Oil seal Replacement” SOP.

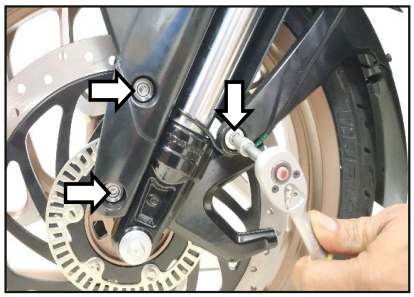
Important SOP

Dust seal & Oil Seal Replacement

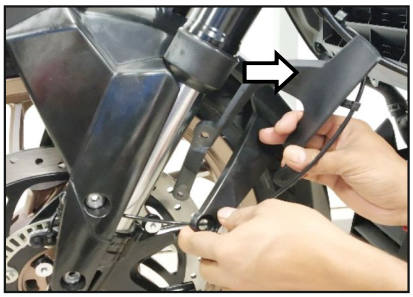


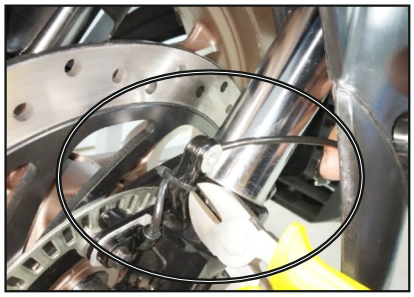
- Lift the vehicle from front side using suitable arrangement.

- Remove caliper mounting bolts (2 nos) with 12 mm spanner & take out caliper assembly.

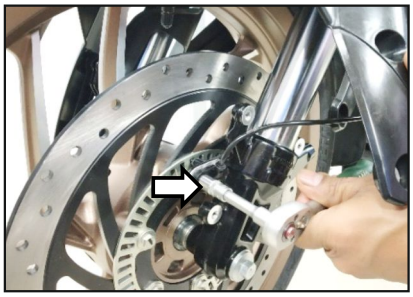


- Remove front fender & fork protector mounting bolts (3 nos) with 5 mm allen key.
- Take out fork protector.

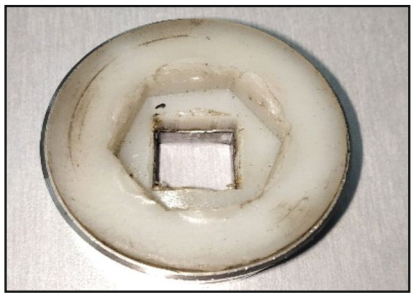




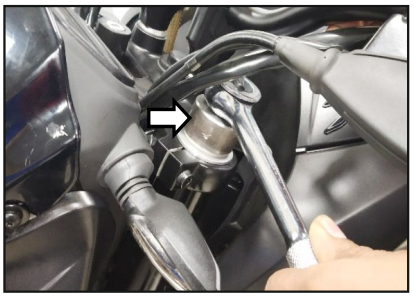
- Cut wheel speed sensor cable tie by adjusting fender position as shown in photograph.
- Remove wheel speed sensor mounting bolt with 8 mm spanner as shown in photograph & take out wheel speed sensor.

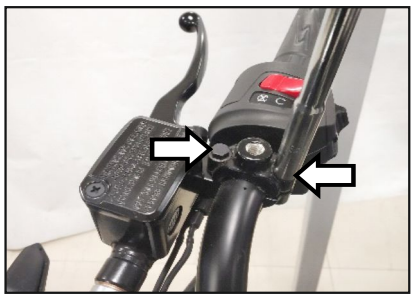


Important SOP

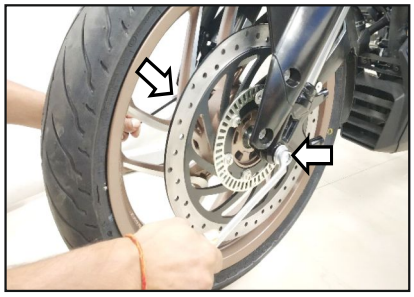


- For vehicle LH side fork top bolt loosening :- Using adaptor fork top bolt (P/N :- 37 0044 14), loosen fork top bolt on vehicle only.
  Skill tip :
  Loosen 1 - 2 threads of upper bracket side bolt before opening fork top bolt.

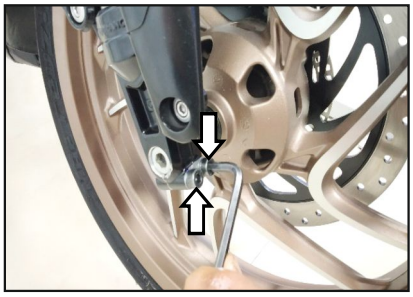




- For vehicle RH side fork top bolt loosening-
- Loosen 1 - 2 threads of clamp holder RH mounting bolts with 8 mm spanner.

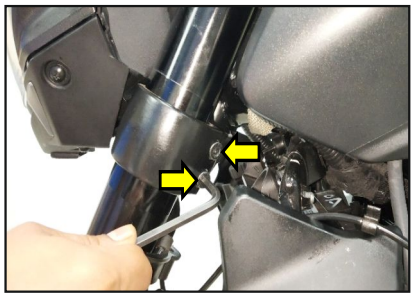


- Remove front axle bolt with 13 mm spanner holding axle with 10 mm allen key.
- Loosen clamping bolts (2 nos) with 6 mm allen key.



- Take out front axle & front wheel.
- Loosen upper bracket side bolt with 6 mm allen key.

Important SOP

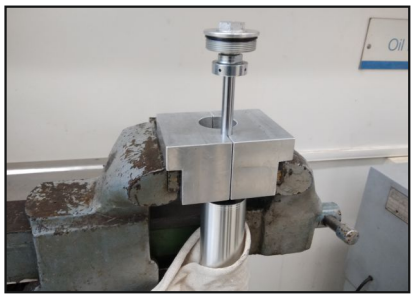


- Loosen under bracket side bolts (2 nos) with 6 mm allen key.

NOTE :

Hold the fork leg assembly to avoid dropping of a leg assembly during loosening of Under bracket side bolts.

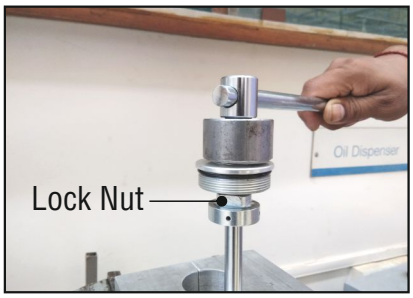
- Take out fork leg assembly from vehicle.
- Remove outer pipe from fork top bolt threading as shown in photograph.



- Hold piston rod using fork clamping block (P/N 37 0044 12) & bench vice as shown in photograph.

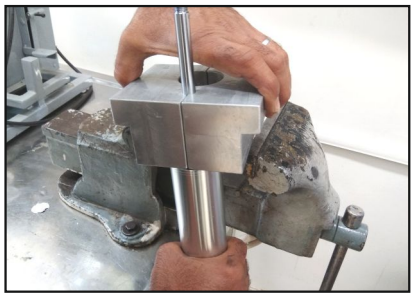
Note : Cover the outer pipe by clean cotton cloth to avoid metal contact.

- Remove fork pipe top bolt using adaptor fork top bolt (P/N 37 0044 14) holding lock nut on piston rod with 19 mm spanner.

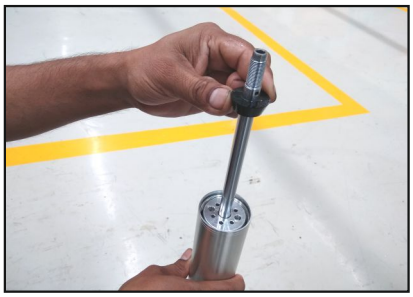


- Take out fork pipe top bolt & lock nut.

Important SOP



- Remove fork leg from clamping block & vice.
- Take out rubber damper.



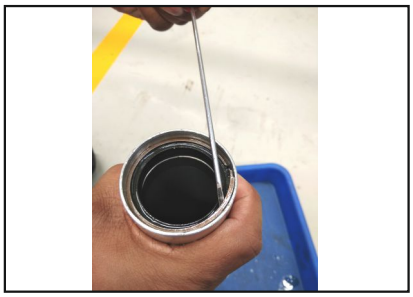
- Drain fork oil.

- Hold fork leg assembly as shown in photograph & pull out the outer pipe.

- Remove the dust cap.

Important SOP

- Using appropriate size flat head screw driver, remove dust seal.
- Remove the oil seal circlip.



Note :
Ensure no dent / damage happen to fork outer pipe while using screw driver when removing oil seal circlip.

- Using hot air blow gun heat the fork outer pipe suitably to remove the oil seal.

Note :

Please refer the information on hot air blow gun before its usage.

Hot Air Blow Gun(P/N 37 0044 13) Information :

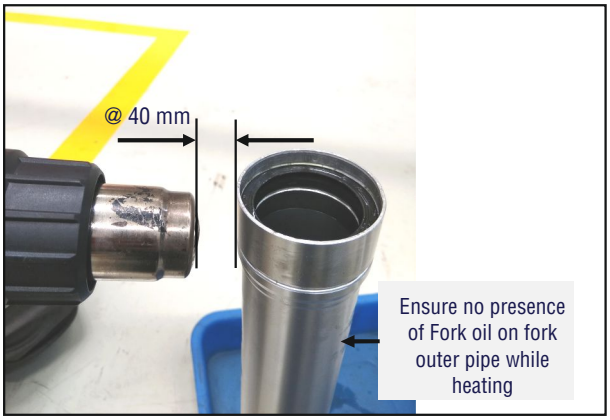
A – Outlet Nozzle
B – Heating mode selection button
C – Chord with pin
D – Slow heating mode
E – Fast heating mode
F – Heat mode selection button “OFF”

Important SOP

Precautions to be taken :

- Always keep nozzle away from chord.
- Always ensure that heat selection button is “OFF” & disconnected from power supply when unattended.
- Always store in dry & locked up place.
- Always stay alert during usage of gun.
- Do not touch the outlet nozzle in any condition during usage or immediately after usage.
- Do not direct hot air blast towards people or flammable objects.

- Connect hot air blow gun chord socket to 230V AC single phase power supply & start the supply.
- Put Heating mode selection button to “fast heating mode” & hold gun at a distance @ 40 mm from Outer pipe as shown in photograph for suitably.
- Put OFF supply to hot air gun & keep it on safe place.



- Tap the fork outer pipe to remove the oil seal & spacer.

Note:
Keep a piece of cloth & tap the pipe gently to remove oil seals.

Caution:
The outer pipe will be in hot condition. Please take suitable care.

NOTES:

Important SOP

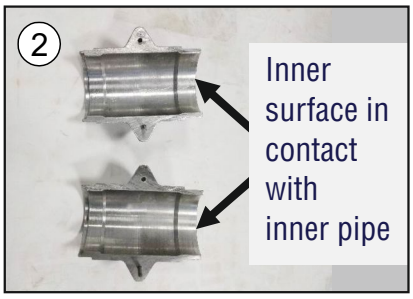
Oil Seal & Dust Seal Fitment

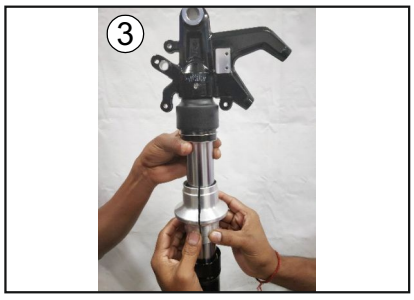
Note : Clean fork outer pipe with diesel or kerosene before fitting new oil seal

- Use Special tool for Oil seal fitment (P/N 37 0042 89).

  1 – Assembled condition of special tool

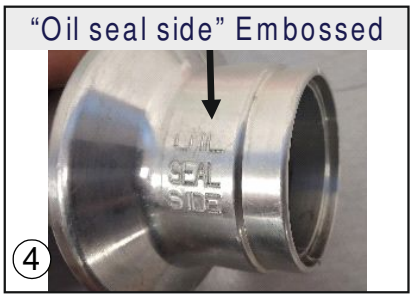
  2 – Split condition of special tool





3 – Application of special tool on fork inner pipe.

4 – Identification : Oil seal side , to be used for oil seal fitment is marked on the special tool.



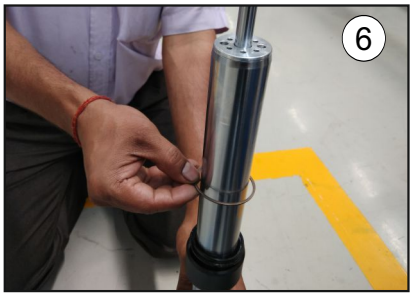
Note :

- Do not use special tool If dent / scratch mark found on tool inner surface (in contact with inner pipe), oil seal fitment side.

- Oil seal fitment in inner tube-

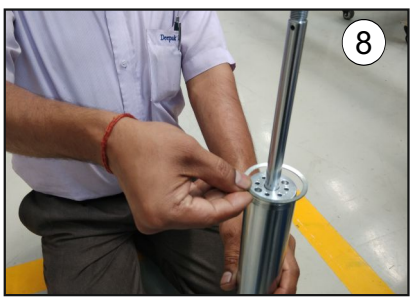
5 - Insert dust cap on inner tube followed by dust seal

6 - Insert the circlip.



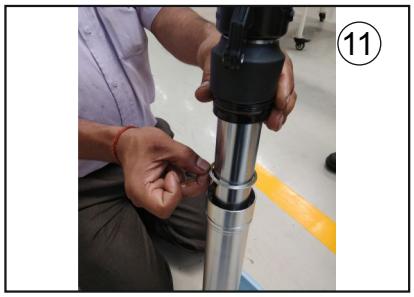
7 - Insert the oil seal.

8 - Insert washer.



Important SOP

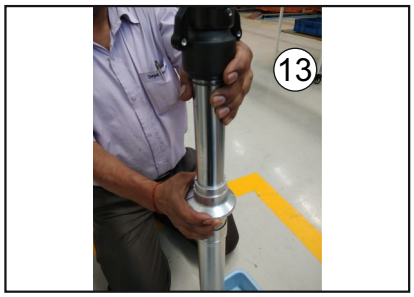
9 - Insert the outer pipe
10 - Turn it upside down.



One by one fit following parts.

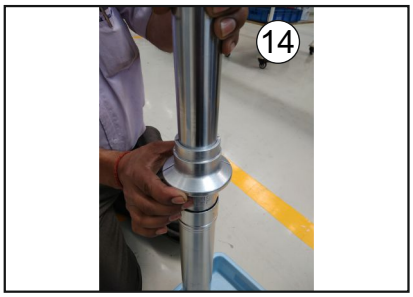
11 - Washer.

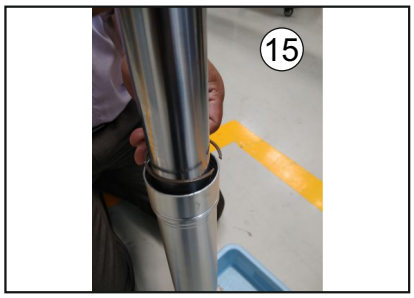
12 - Oil Seal



13 - Assemble Special tool on inner pipe & make ready to lift the oil seal.

14 - Fit the oil seal firmly. Confirm seal fitment & then remove special the tool.

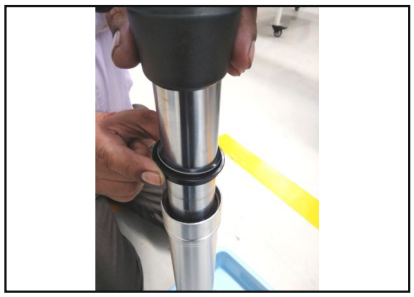




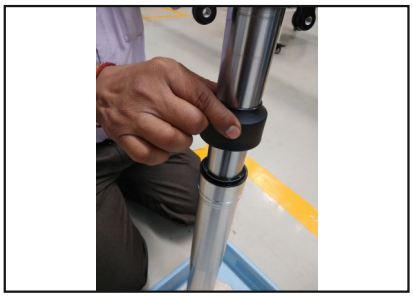
15 - Fit lock oil seal using appropriate size flat head screw driver.

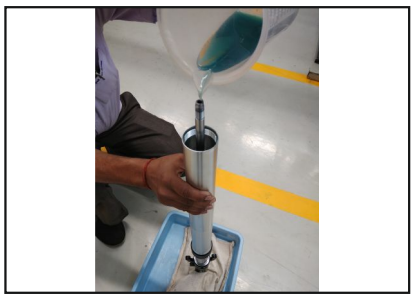
- Ensure that ‘click’ sound is heard during lock oil seal fitment in it’s groove.
- Ensure that lock oil seal is freely rotating in groove by using screw driver.

Important SOP

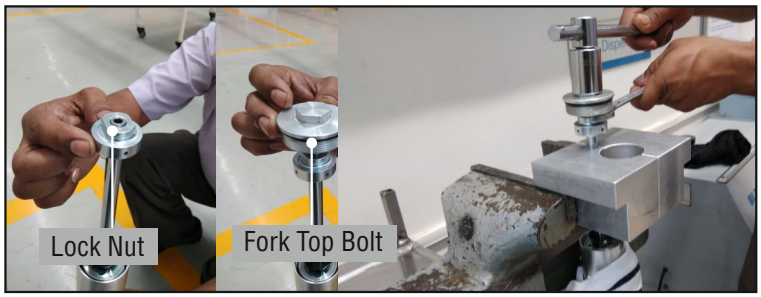


- Fit dust seal & dust cap.





- Fill the correct qty of (440 ml / Leg assembly) of recommended fork oil.
- Fit the bump stop rubber.



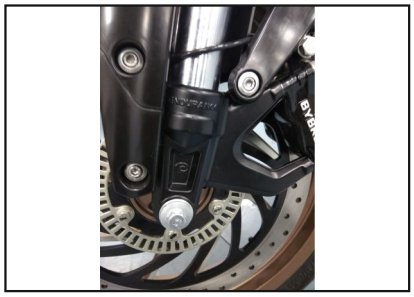
- Prefit lock nut completely. Prefit fork top bolt completely as shown in photograph.
- Hold piston rod using fork clamping block (P/N 37 0044 12) & bench vice as shown in photograph.

  Note : Cover the outer pipe by clean cotton cloth to avoid metal contact.
- Holding fork top bolt, loosen lock nut by hand till it touches to top bolt.
- Tighten lock nut with 19 mm spanner, holding fork top bolt as shown in photograph.

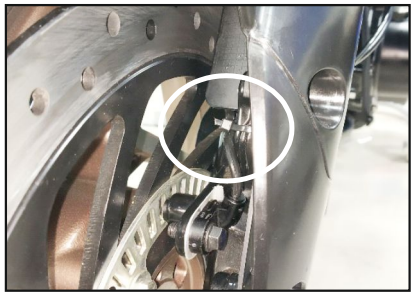
- Prefit fork top bolt in outer pipe.
- Check the working of fork leg assembly by pressing outer tube from top side 2/3 times.

Important SOP

- Fit the fork leg assembly on vehicle.
- Insert axle to ensure both fork pipes are in same plane. Ensure axle should be free in both clamps hole.



- Tighten upper bracket & Under bracket side bolts to recommended torque. Take out front axle.
- Tighten front fork top bolt using adaptor - fork top bolt to recommended torque on vehicle..
- Fit front wheel & axle. Tighten axle bolt to recommended torque.



- Tighten the clamping allen bolts to recommended torque.
- Prefit front wheel speed sensor bolt, tie wheel speed sensor cable using cable tie (shown by blue circle) & tighten it to recommended torque. Ensure that wheel sensor cable is routed as shown in “Front wheel sensor routing” section.

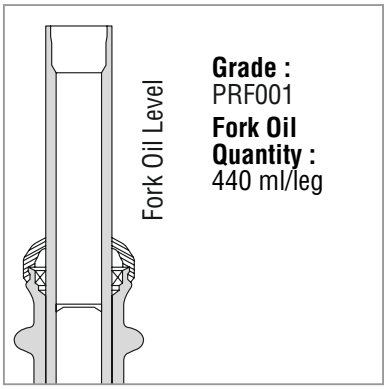
- Fit fork protector & fender front, tighten its mounting allen bolts to recommended torque.
- Fit caliper assembly & tighten its mounting bolts to recommended torque.
- Take the vehicle down & remove overhead structure hanging belt from vehicle.

Important SOP

"Key Precautions" to remember during Dust seals & oil seals replacement

- Always use "Adaptor-Fork top bolt with nylon insert" for removing & tightening fork top bolt. If not used, top bolt will gets damage.
- Take due care while handling fork inner pipe & outer pipe to avoid dent / damage / paint chip off.
- Take utmost care for maintaining overall cleanliness during oil seals/dust seal replacement.
- Use recommended fork oil grade & quantity for desired fork performance. (DO NOT USE FORK OIL BEING USED FOR OTHER MOTORCYCLE i.e. 10W20)

Front Fork Oil Grade & Quantity

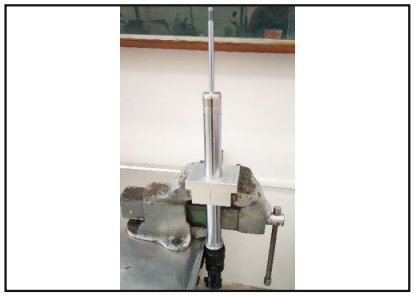


NOTES:

Important SOP

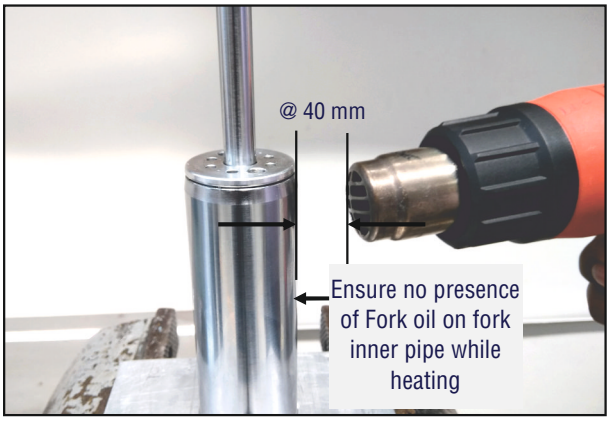
Fork Inner Pipe Replacement

Note: Please follow the oil seal removal SOP that is communicated from page No. 226 to 231. Further follow the below process to remove the fork inner pipe for replacement.

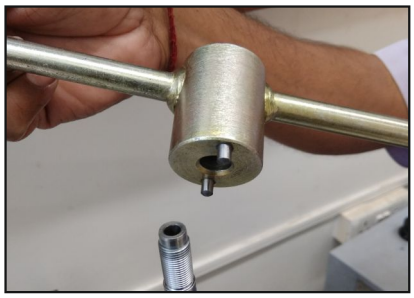


- Hold fork inner pipe using fork clamping block (P/N 37 0044 12) & bench vice as shown in photograph.

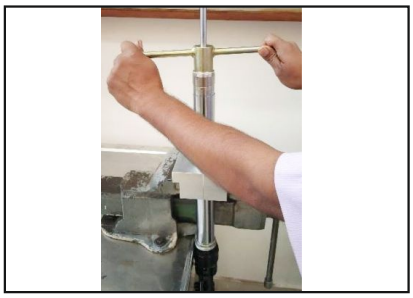
- Connect hot air blow gun chord socket to 230V AC single phase power supply & start the supply.
- Put Heating mode selection button to “fast heating mode” & hold gun at a distance @ 40 mm from inner pipe as shown in photograph suitably.
- Put OFF supply to hot air gun & keep it on safe place.



Note:
Loctite is applied to screw cap inner pipe threads.

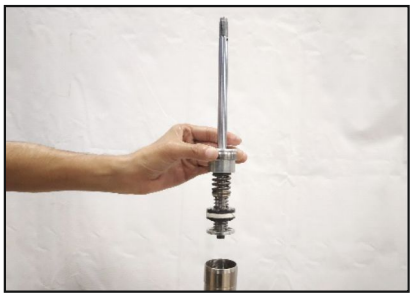


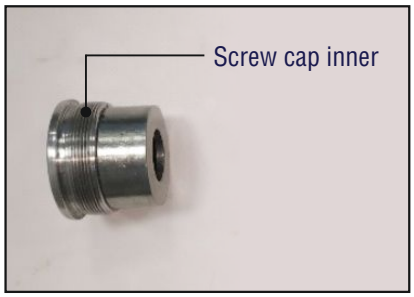
- Remove screw cap inner pipe with adaptor screw cap inner pipe (P/N - 37 0041 89).



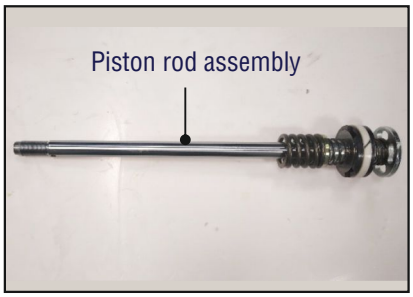
Important SOP

- Take out adaptor screw cap inner pipe.
- Take out piston rod assembly along with screw cap inner pipe.





- Take out screw cap inner pipe from piston rod assembly.
- Take out fork inner pipe from clamping block & vice.



- Take out fork oil as shown in photograph.

- **Take out :**

  Spacer

Important SOP

- **Take out :**

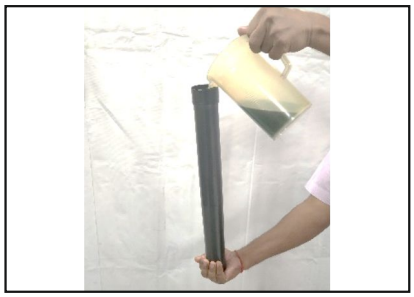
  Spacer tube

  Main spring

Fork sub parts cleaning :-

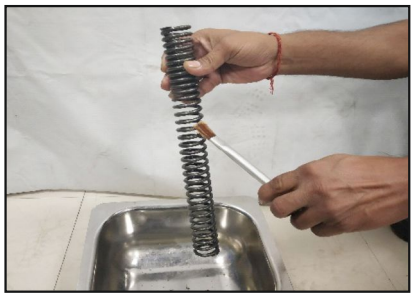
- Clean fork inner pipe, internal threaded portion & screw cap inner external threaded portion using nylon brush.

- Clean fork inner pipe & outer tube with clean lint free cotton cloth.
- Pour diesel / kerosene in fork inner pipe by closing other end with hand
- After pouring diesel / kerosene, shake fork inner pipe as shown in photograph.



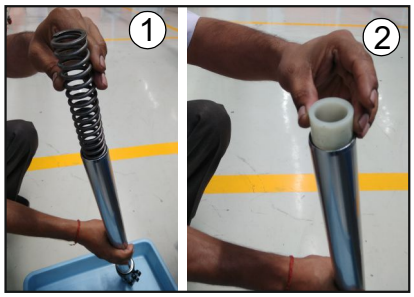
- Pour diesel / kerosene in fork outer tube by closing other end with hand.
- After pouring diesel / kerosene, shake fork outer tube.
  Blow low pressure compressed air through inner pipe & outer pipe.

Important SOP



- All fork sub parts to be cleaned using diesel / kerosene.

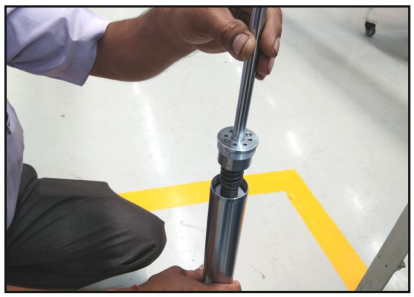
  Note :
  Ensure rubber parts (O rings, seal etc) are not to be cleaned with above mention cleaning agent



Assembly

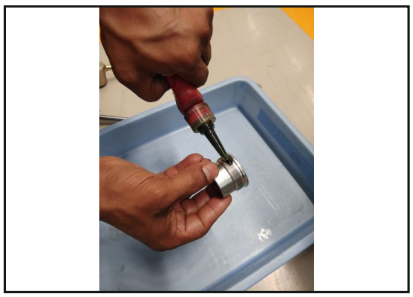
- Insert the following parts in fork inner pipe as shown in photograph-
  1 - Main spring
  2 - Spacer tube
  3 - Spacer

Main spring to be assembled as shown in photograph

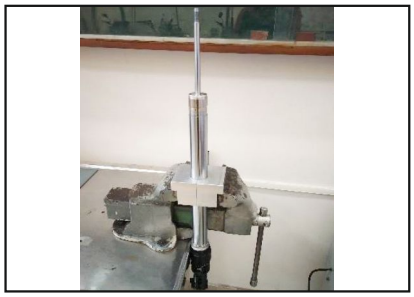


- Insert piston assembly.
- Apply 2 to 3 drops of “Loctite Thread locker (243)” on threading of screw cap inner pipe.

  Note : Loctite should not drop on any other part except thread area of screw cap inner pipe.

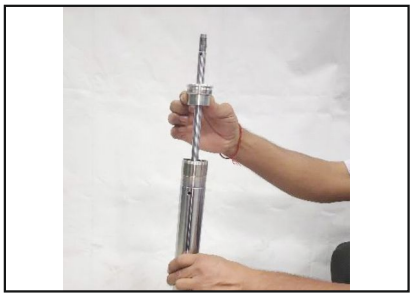


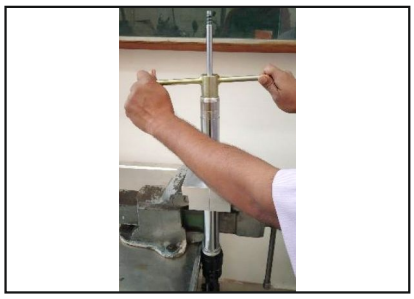
Important SOP



- Hold fork inner pipe with clamping block & clamp it on bench vice.
- Insert screw cap inner pipe. Prefit it with hand & confirm proper thread matching.

Note: Clean the Loctite spillage if any.



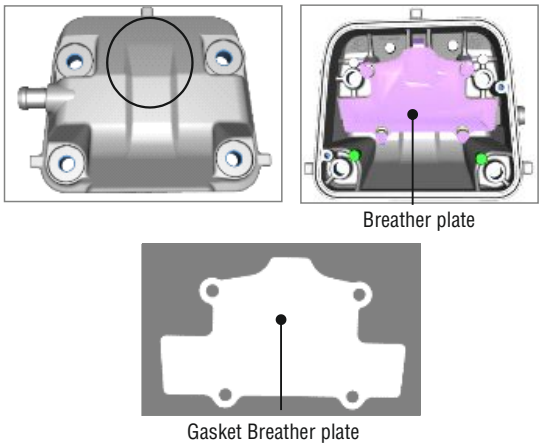
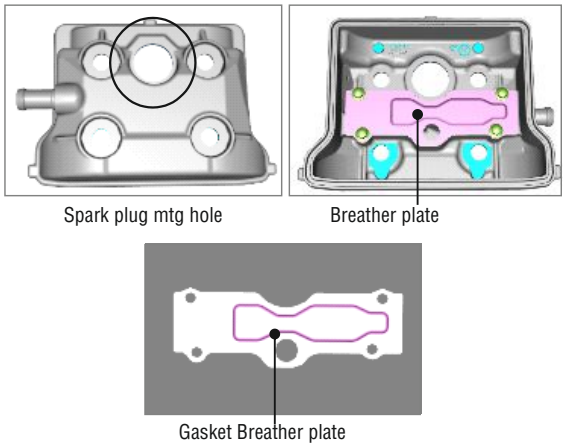


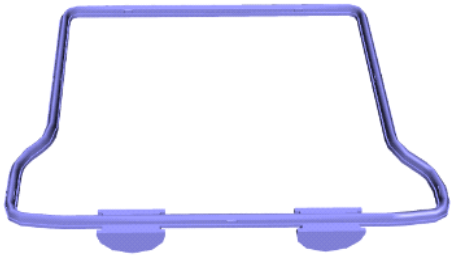
- Then use Adaptor – screw cap inner pipe special tool for complete tightening as shown in photograph.

For fitting of the oil seal & dust seal please follow the SOP that is mentioned on page no. 232 to 235.

NOTES:

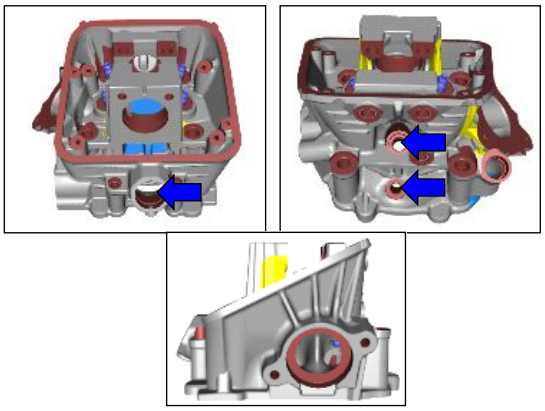
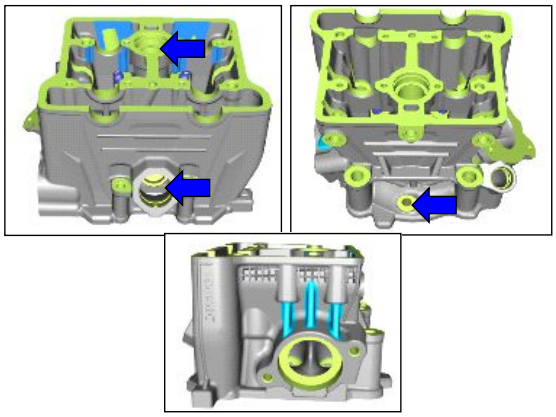
Part Comparison

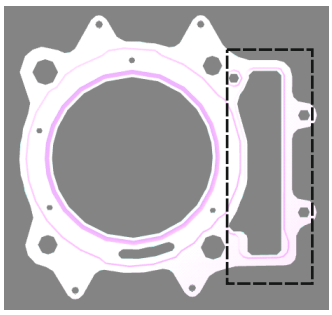
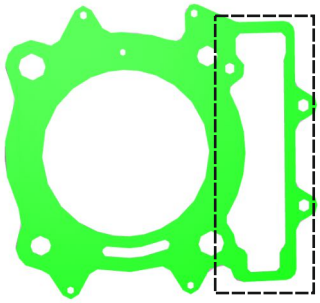
Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Assembly Cover Cylinder Head**	**Assembly Cover Cylinder Head**
Part No	JF511041	DT511027
Description	• Without provision for spark plug mounting • With big breather plate • With big gasket breather plate	• With provision for spark plug mounting • With small breather plate • With small gasket breather plate
Identification	Visual	Visual

Photograph		
Part Name	**Gasket Cover Head**	**Gasket Cover Head**
Part No	JF511046	JY511128
Description	Suitable for single cam shaft design	Suitable for twin cam shaft design
Identification	Visual	Visual

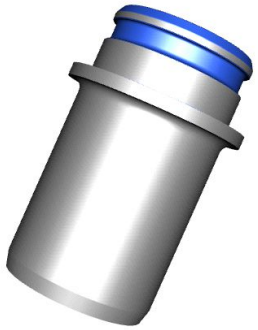
For part numbers refer spare part catalogue available on Portal

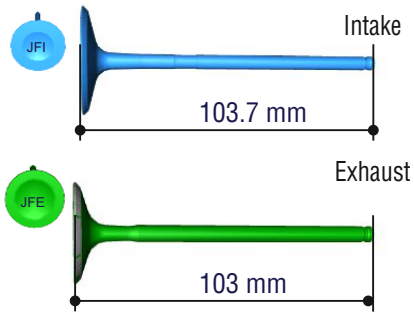
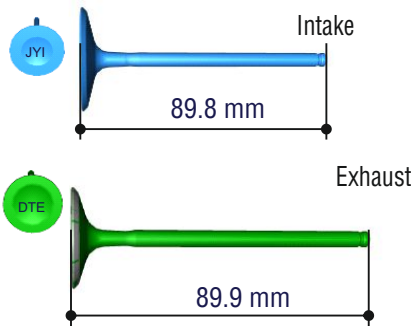
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Assembly Cylinder Head**	**Assembly Cylinder Head**
Part No	36JF0050	Refer SPC
Description	• Suitable for single cam shaft design • Spark plug fitment (Shown blue arrow) LH side - 2 nos, RH side - 1 nos • Top face - Inclined design	• Suitable for twin cam shaft design • Spark plug fitment(Shown blue arrow) LH side – 1 nos, RH side – 1 nos, Top – 1 nos • Top face - Straight design
Identification	Visual	Visual

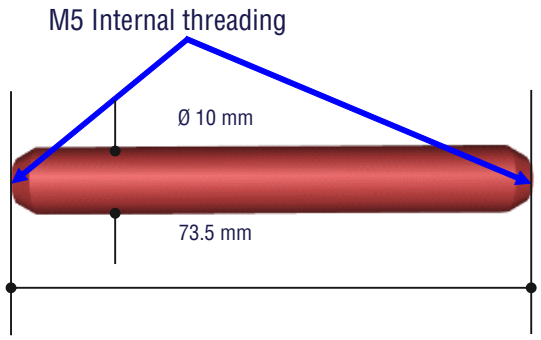
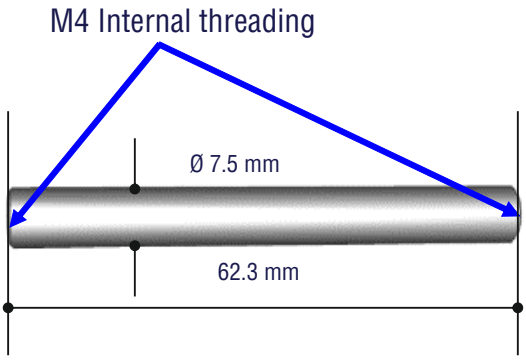
Photograph		
Part Name	**Gasket Cylinder Head**	**Gasket Cylinder Head**
Part No	JF511049	JY511139
Description	Chain guide cavity is different than Dominar 400UG	Chain guide cavity is different Dominar 400
Identification	Visual	Visual

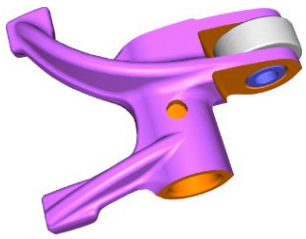
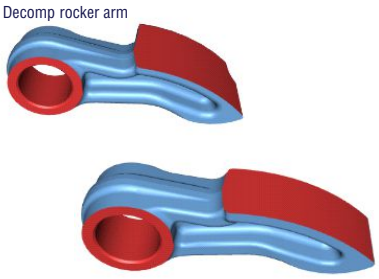
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Sleeve spark plug - top side**	**Sleeve spark plug - top side**
Part No	-	JY511068
Description	• Without sleeve spark plug-top side	• With sleeve spark plug-top side
Identification	Visual	Visual

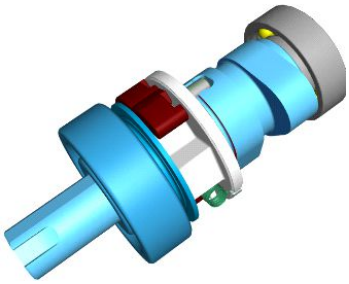
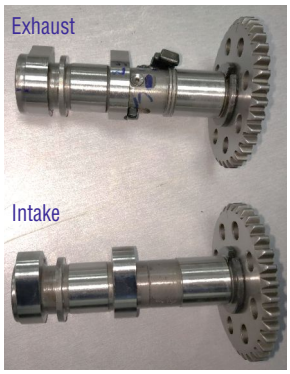
Photograph		
Part Name	**Valves**	**Valves**
Part No	Intake - JF511204, Exhaust - JF511208	Intake - JY511221, Exhaust - DT511270
Description	• Intake Valve : Total length – 103.7 mm • Exhaust Valve : Total length – 103 mm	• Intake Valve : Total length – 89.8 mm
Identification	Intake : JFI embossed & Intake : JFE embossed	Intake : JYI embossed & Intake : DTE embossed

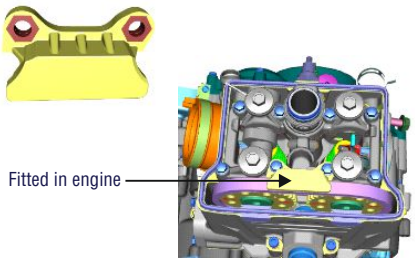
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Shaft Rocker Arm**	**Shaft Rocker Arm**
Part No	JF511042	JY511226
Description	• Length : 73.5 mm • Outer diameter : Ø 10 mm • M5 internal threading at both ends • Conical at ends	• Length : 62.3 mm • Outer diameter : Ø 7.5 mm • M4 internal threading at both ends • Straight at ends
Identification	Visual	Visual

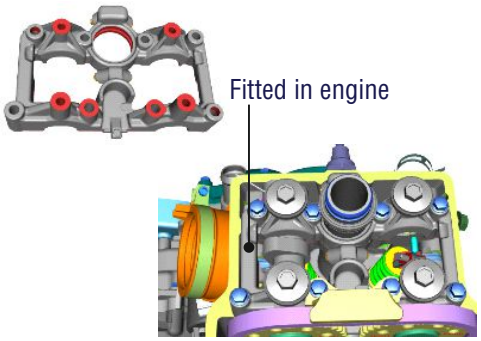
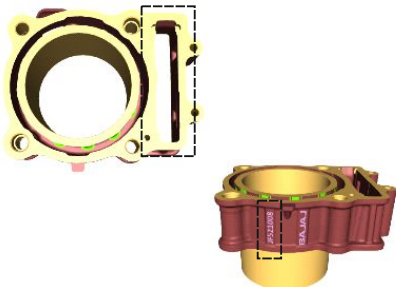
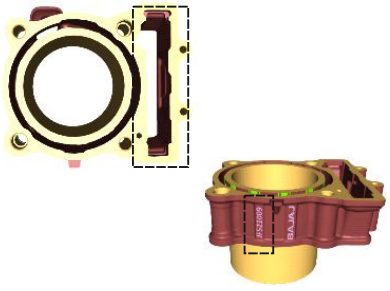
Photograph		
Part Name	**Rocker Arm**	**Rocker Arm**
Part No	Intake - JF511233, Exhaust - JF511234	JU511204 – 3 nos, JY511212-Decomp rocker arm
Description	Design is different than Dominar 400 UG	Design is different than Dominar 400
Identification	Visual	Visual

Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Assembly Cam shaft	Assembly Cam shaft
Part No	JF511222	Intake - JF511253, Exhaust - JF511255
Description	Single cam shaft assembly	Twin cam shaft assembly
Identification	Visual	Visual

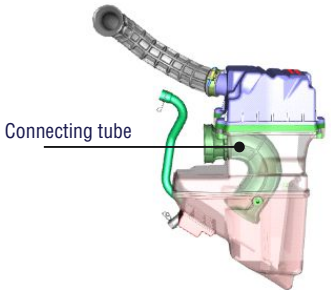
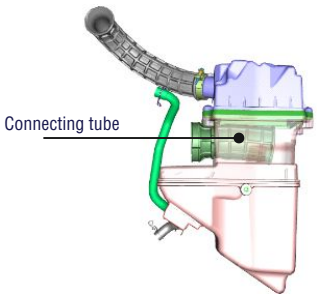
Photograph		
Part Name	Guide Chain Top	Guide Chain Top
Part No	-	JY511058
Description	• Without guide chain top	• With guide chain top
Identification	Visual	Visual

Part Comparison

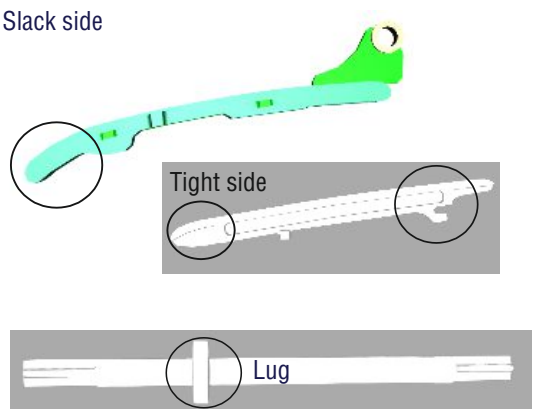
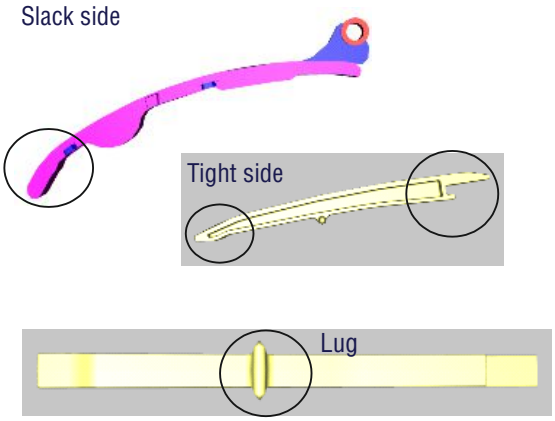
Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Cam Holder**	**Cam Holder**
Part No	-	JY511058
Description	Without guide chain top.	With guide chain top.
Identification	Visual	Visual
Photograph		
Part Name	**Block (Sub part of Kit cylinder block - piston)**	**Block (Sub part of Kit cylinder block - piston)**
Part No	36JF0059	Refer SPC
Description	• Chain guide cavity is different than Dominar 400UG • "JF521008" embossed	• Chain guide cavity is different than Dominar 400 • "JF521009" embossed
Identification	Visual	Visual

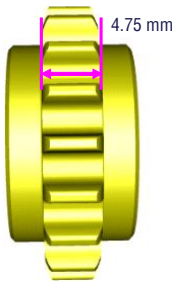
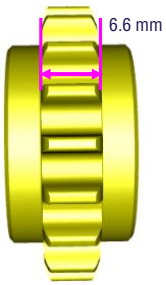
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Piston (Sub part of Kit cylinder block - piston)**	**Piston (Sub part of Kit cylinder block - piston)**
Part No	36JF0059	Refer SPC
Description	Marked as “K10”	Marked as “K10 UG”
Identification	Visual	Visual

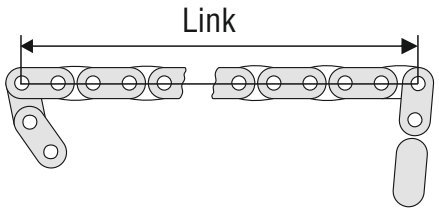
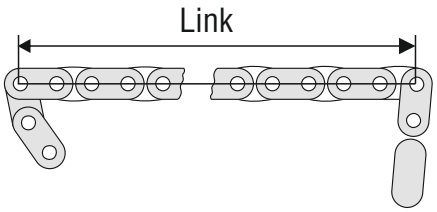
Photograph		
Part Name	**Assembly Air Filter**	**Assembly Air Filter**
Part No	DT581079	JF581029
Description	Bent connecting tube	Straight connecting tube
Identification	Visual	Visual

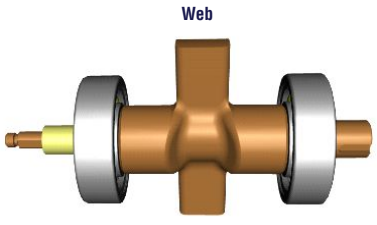
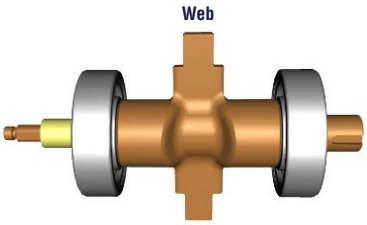
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Chain Guide**	**Chain Guide**
Part No	36JF0055	Refer SPC
Description	• Slack side : less bend at end • Tight side : End profile is different than Dominar 400 UG Lug is rectangular type	• Slack side : More bend at end • Tight side : End profile is different than Dominar 400 Lug is round type
Identification	Visual	Visual

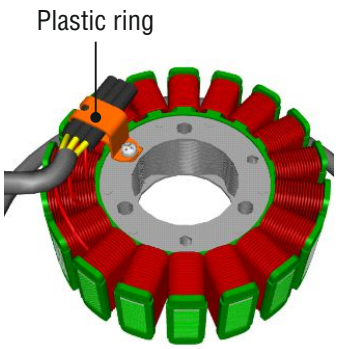
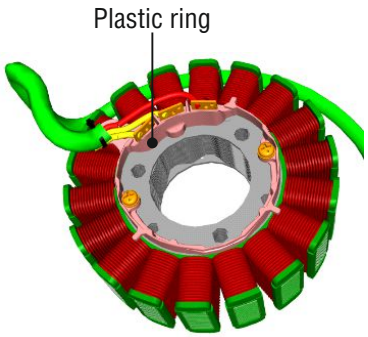
Photograph		
Part Name	**Sprocket Crankshaft**	**Sprocket Crankshaft**
Part No	JF511223	JY511220
Description	Teeth width : 4.75 mm	Teeth width : 6.6 mm
Identification	Visual	Visual

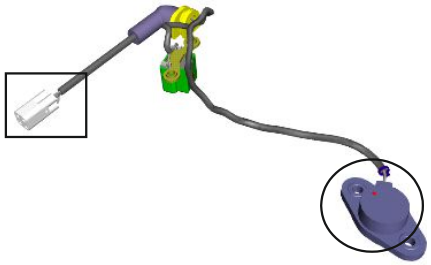
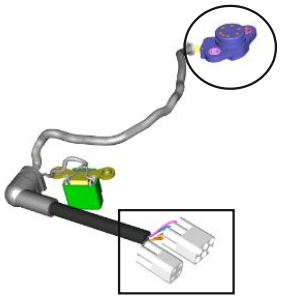
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Cam Chain	Cam Chain
Part No	JF511223	JY511220
Description	No of link : 106	No of link : 130
Identification	Visual	Visual

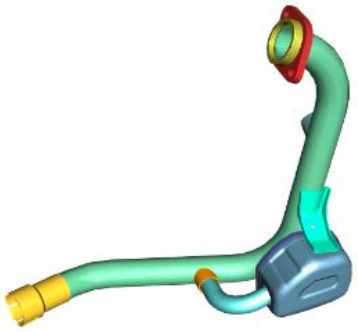
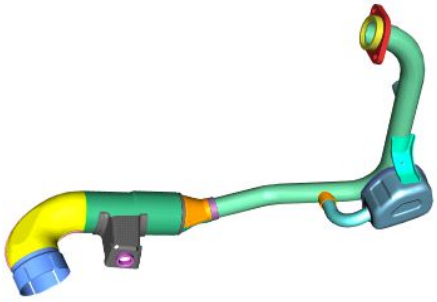
Photograph		
Part Name	Balancer Assembly	Balancer Assembly
Part No	DT531200	JY531220
Description	Web without step	Web with step
Identification	Visual	Visual

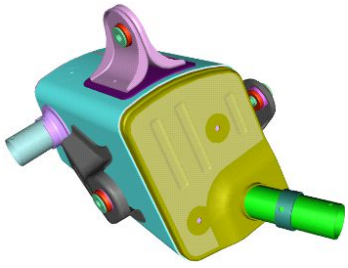
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Stator Assembly**	**Stator Assembly**
Part No	JF351011	JF351016
Description	With clamp	With plastic ring
Identification	Visual	Visual

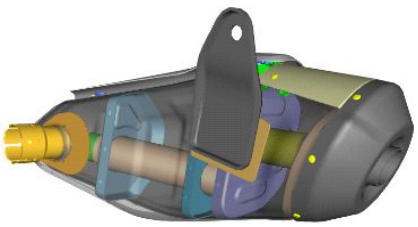
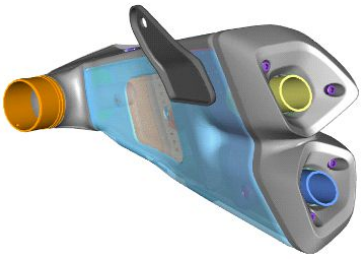
Photograph		
Part Name	**Gear Indicator switch + Crank Angle Sensor**	**Gear Indicator switch + Crank Angle Sensor**
Part No	DT351800	JY351800
Description	• Provision for Neutral Switch only • With single coupler	• Provision for Neutral & Gear Indication • With 2 couplers
Identification	Visual	Visual

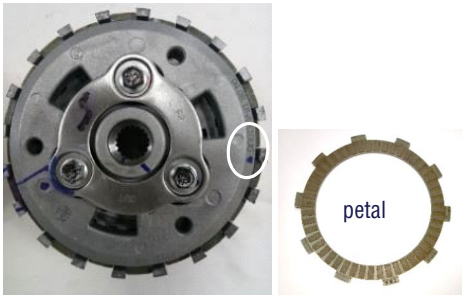
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Pipe A Assembly**	**Pipe A Assembly**
Part No	JF591116	JF591213
Description	• Small in size • Straight at muffler fitment side	• Big in size • Bend at end chamber fitment side
Identification	Visual	Visual

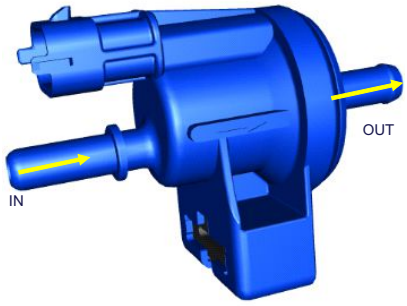
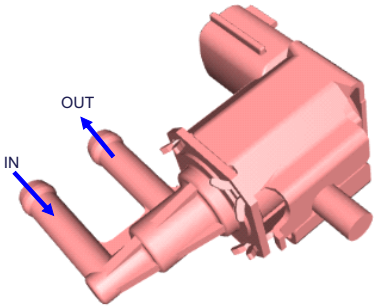
Photograph		
Part Name	**Assembly Muffler**	**Assembly Muffler**
Part No	JF591065	-
Description	With muffler	Without muffler
Identification	Visual	Visual

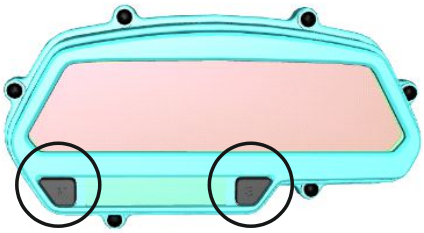
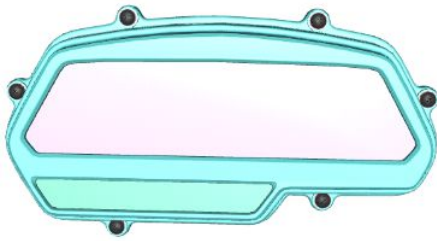
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Assembly End Chamber**	**Assembly End Chamber**
Part No	JF591120	JF591099
Description	• Without glass wool • With single exhaust	• With glass wool • With dual exhaust
Identification	Visual	Visual

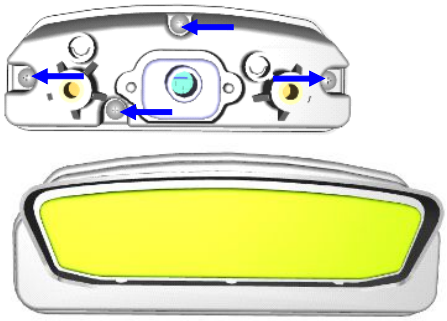
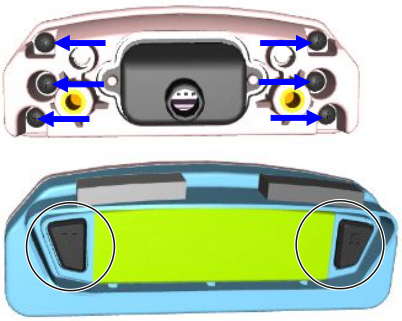
Photograph		
Part Name	**Assembly Clutch**	**Assembly Clutch**
Part No	JF551500	JF551419
Description	No. of petals on friction plate : 48	No. of petals on friction plate : 40
Identification	Visual – K10 marking	Visual – K10UG marking

Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Purge Valve	Purge Valve
Part No	JG171601	JU171606
Description	Shape is different than Dominar 400UG	Shape is different than Dominar 400
Identification	Visual	Visual

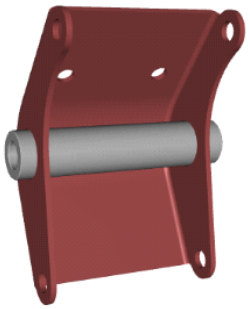
Photograph		
Part Name	Speedometer	Speedometer
Part No	JF402406	DT402409
Description	With MODE & SET push buttons	Without MODE & SET push buttons
Identification	Visual	Visual

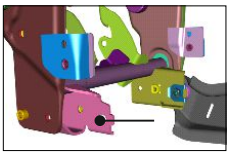
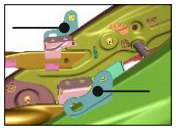
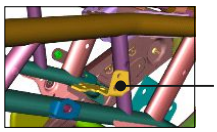
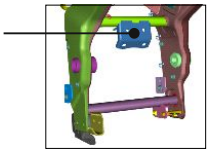
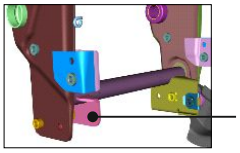
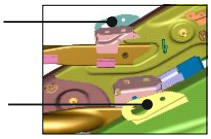
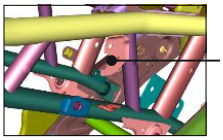
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Secondary Speedometer	Secondary Speedometer
Part No	JF402407	DT402410
Description	• Without MODE & SET push buttons • 4 point mounting top cover	• With MODE & SET push buttons • 6 point mounting top cover
Identification	Visual	Visual

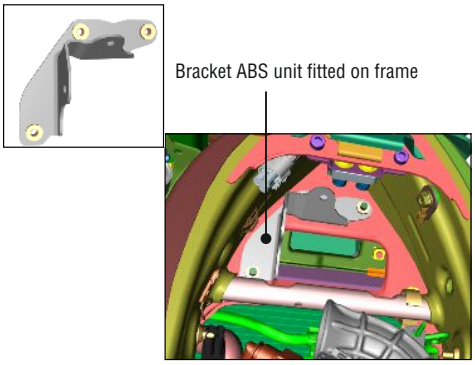
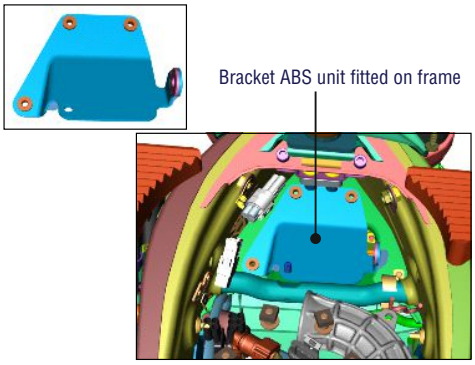
Photograph		
Part Name	Bracket Secondary Speedometer	Bracket Secondary Speedometer
Part No	JF171043	JF171087
Description	• Shape is different than Dominar 400UG	• Shape is different than Dominar 400
Identification	Visual	Visual

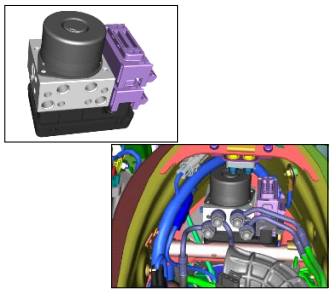
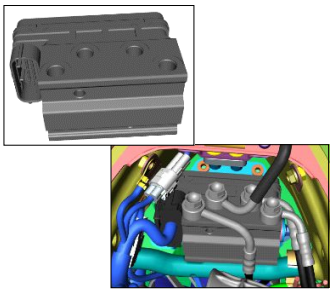
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Bracket Engine Mounting Rear Middle	Bracket Engine Mounting Rear Middle
Part No		JF113424
Description	With bracket engine mounting rear middle	With bracket engine mounting rear middle
Identification	Visual	Visual

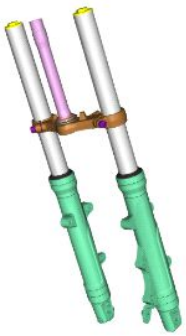
Photograph	 LH/RH Bracket Engine mtg rear  Bracket muffler mtg rear LH   LH/RH Bracket side cover mtg front	 Bracket Engine mtg rear Top  Bracket silencer mtg rear LH  LH/RH Bracket side cover mtg front  Bracket purge valve
Part Name	Frame Assembly	Frame Assembly
Part No	DT111134	JF111192
Description	• With LH/RH Bracket engine mounting rear • With bracket muffler mounting rear LH • LH/RH bracket side cover mounting front - shape is different than Dominar 400UG • Bracket purge valve mounting - Location & shape is different than Dominar 400UG	• With Bracket engine mounting rear top & bracket engine mounting rear middle • Without bracket muffler mounting rear LH • LH/RH bracket side cover mounting front - shape is different than Dominar 400 • Bracket purge valve mounting-Location & shape is different than Dominar 400

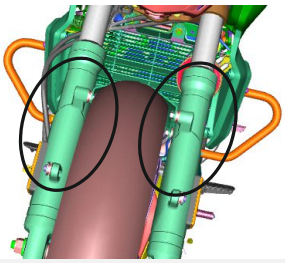
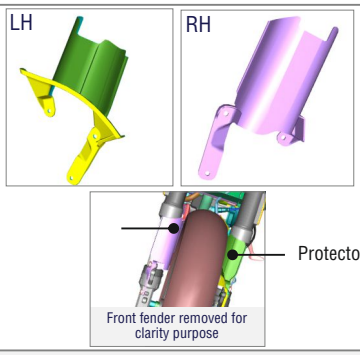
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Bracket ABS unit**	**Bracket ABS unit**
Part No	DT113850	JF113852
Description	Shape is different than Dominar 400UG	Shape is different than Dominar 400
Identification	Visual	Visual

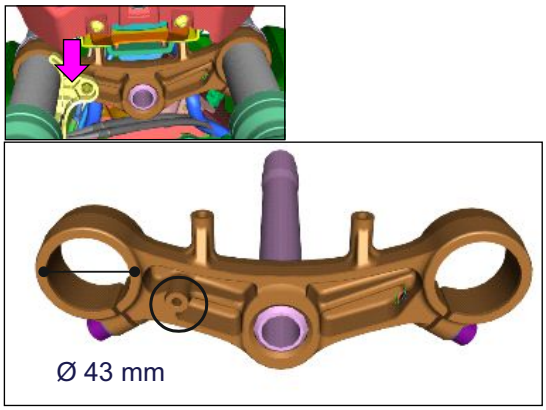
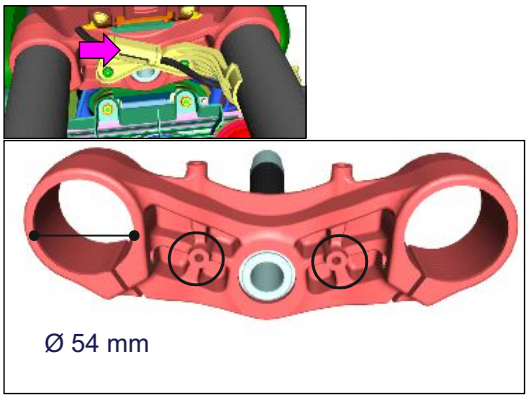
Photograph		
Part Name	**ABS Unit**	**ABS Unit**
Part No	JF131815	JF131882
Description	Big size ABS unit	Small size ABS unit
Identification	Visual	Visual

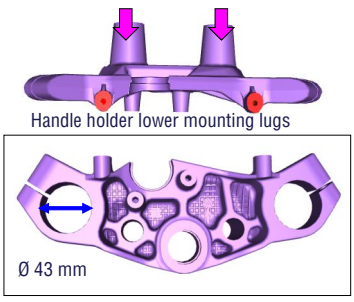
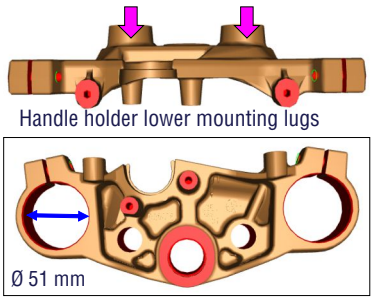
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Assembly Front Fork**	**Assembly Front Fork**
Part No	JF121050	JF121018
Description	Conventional fork design (Outer tube - Bottom side & Inner tube - Upper side)	USD fork design (Outer tube - Upper side & Inner tube - Bottom side)
Identification	Visual	Visual

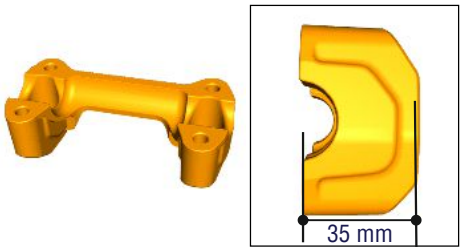
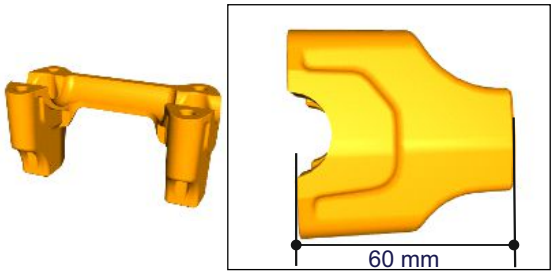
Photograph	 Front fender removed for clarity purpose	
Part Name	**Protector Fork**	**Protector Fork**
Part No	-	LH - JF181471, RH - JF181472
Description	Without protector fork	With protector fork
Identification	Visual	Visual

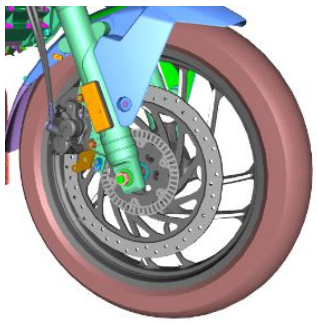
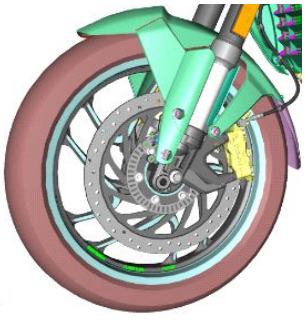
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Assembly Underbracket**	**Assembly Underbracket**
Part No	JF121047	JF121020
Description	• Inner diameter : Ø 43 mm • With single holes for bracket clamp hose fitment (shown by pink arrow)	• Inner diameter : Ø 54 mm • With two holes for Clamp brake hose fitment (shown by pink arrow)
Identification	Visual	Visual

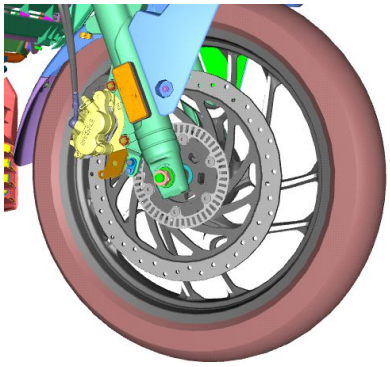
Photograph		
Part Name	**Upper Bracket**	**Upper Bracket**
Part No	JF121030	JF151040
Description	• With larger Handle holder lower mounting lugs • Inner diameter : Ø 43 mm	• With smaller Handle holder lower mounting lugs • Inner diameter : Ø 51 mm
Identification	Visual	Visual

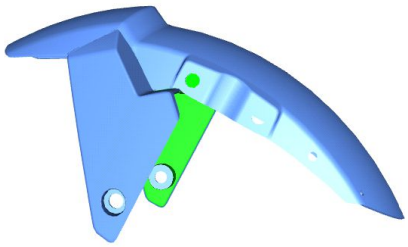
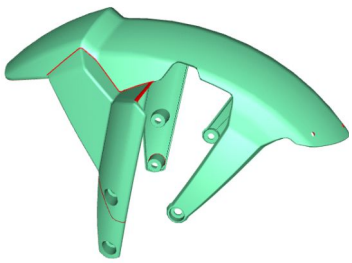
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Lower Handle Holder	Lower Handle Holder
Part No	JF151045	JF151053
Description	• Small size • Height is 35 mm	• Big size • Height is 60 mm
Identification	Visual	Visual

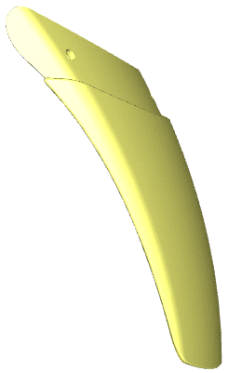
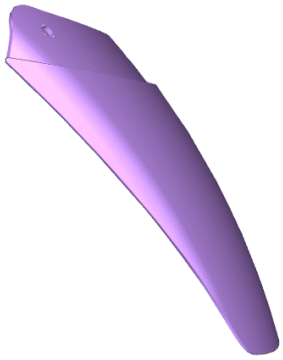
Photograph		
Part Name	Front wheel	Front wheel
Part No	JF131012	JF131026
Description	Brake fitment on wheel – On Vehicle LH side	Brake fitment on wheel – On Vehicle RH side
Identification	Visual	Visual

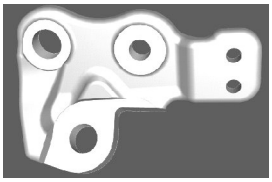
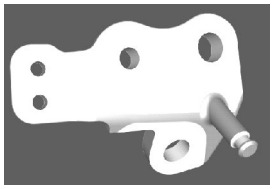
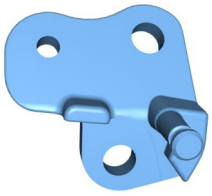
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Front Caliper Assembly	Front Caliper Assembly
Part No	JF131012	JF131026
Description	• Fitment on wheel – On Vehicle LH side • Compatible for conventional fork design	• Fitment on wheel – On Vehicle RH side • Compatible for inverted fork design • Also called as Radial caliper as caliper is radially mounted (Parallel to forward direction)
Advantages		• More rigid • Allows more precise braking &crispier feeling brakes.

Photograph		
Part Name	Front Fender	Front Fender
Part No	Refer SPC	Refer SPC
Description	Shape is different than Dominar 400UG	Shape is different than Dominar 400
Identification	Visual	Visual

Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	Flap Front Fender	Flap Front Fender
Part No	JF181434	JF181423
Description	Shape is different than Dominar 400UG	Shape is different than Dominar 400
Identification	Visual	Visual

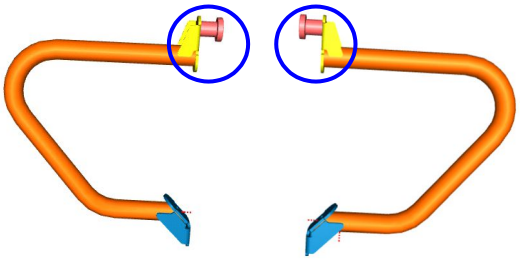
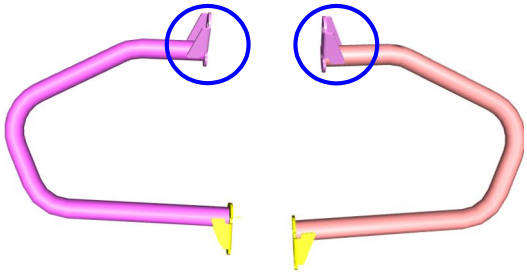
Photograph	  Front Back	  Front Back
Part Name	Bracket Side stand	Bracket Side stand
Part No	DT113205	JF113209
Description	With provision for side stand switch & cover side stand switch fitment	Without provision for side stand switch & cover side stand switch fitment
Identification	Visual	Visual

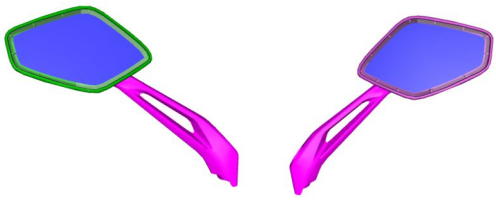
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph		
Part Name	**Side stand**	**Side stand**
Part No	JF113204	JF113212
Description	Straight design	Bent design
Identification	Visual	Visual

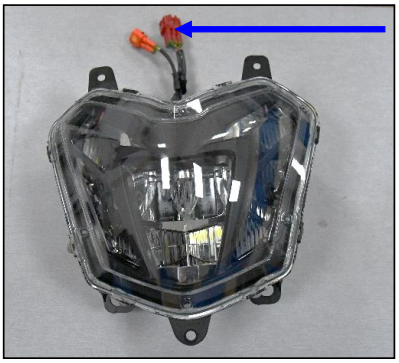
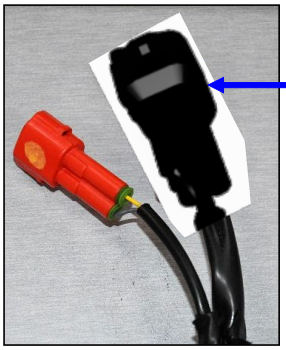
Photograph		
Part Name	**Reservoir Rear Brake**	**Reservoir Rear Brake**
Part No	JG131821	Refer SPC
Description	Circular design	Rectangular design
Identification	Visual	Visual

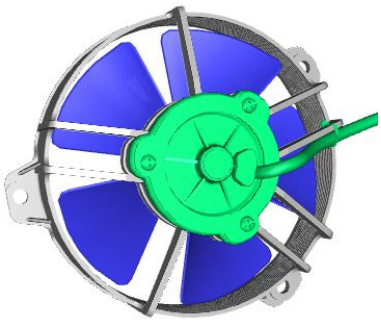
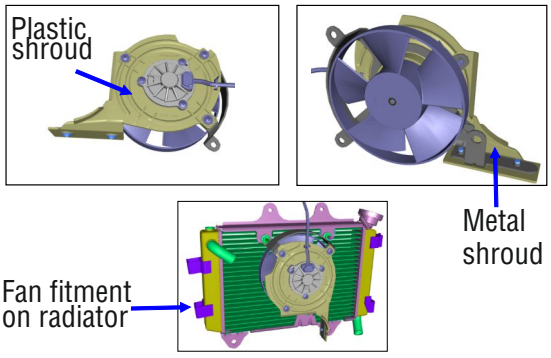
Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph	 LH RH	 LH RH
Part Name	**Leg Guard**	**Leg Guard**
Part No	LH - JF 2312 16, RH - JF 2312 17	LH - JF 2312 09, RH - JF 2312 10
Description	• Shape is different than Dominar 400UG • With collar (Shown by blue circle)	• Shape is different than Dominar 400 • Without collar (Shown by blue circle)
Identification	Visual	Visual

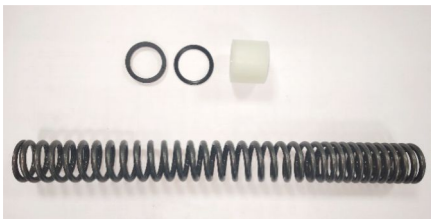
Photograph	 LH RH	 LH RH
Part Name	**Mirror**	**Mirror**
Part No	LH - JL 2316 00, RH - JL 2316 01	LH - JF231608, RH - JF231609
Description	Shape is different than Dominar 400UG	Shape is different than Dominar 400
Identification	Visual	Visual

Part Comparison

Model	Dominar 400	Dominar 400 UG
Photograph	 Red color coupler	 Black color coupler
Part Name	**Headlight Assembly**	**Headlight Assembly**
Part No	DT401020 (Same for Dominar 400 existing & Dominar 400UG)	
Description	Without Pullup resistor addition	With Pullup resistor addition
Identification	6 pole Coupler color - RED	6 pole Coupler color - BLACK
Part Replacement in field	• Headlight with 6 pole coupler color RED can be used only • Headlight with 6 pole coupler color BLACK can also be used	Headlight with 6 pole coupler color BLACK to be used only

Photograph		
Part Name	**Assembly Radiator Fan**	**Assembly Radiator Fan**
Part No	JG601237	JF601400
Description	Without plastic shroud & metal shroud fitted on fan	With plastic shroud & metal shroud fitted on fan

Part Comparison

LH Pipe Inner & Axle Clamp - YJF19003	RH Pipe Inner & Axle Clamp - YJF19004	Piston rod assembly - YJF19005
		
Screw cap inner pipe -YJF19006	Spring & Spacer Assembly-YJF19007	Rubber Damper -YJF19008
		
Lock nut - YJF19009		
		

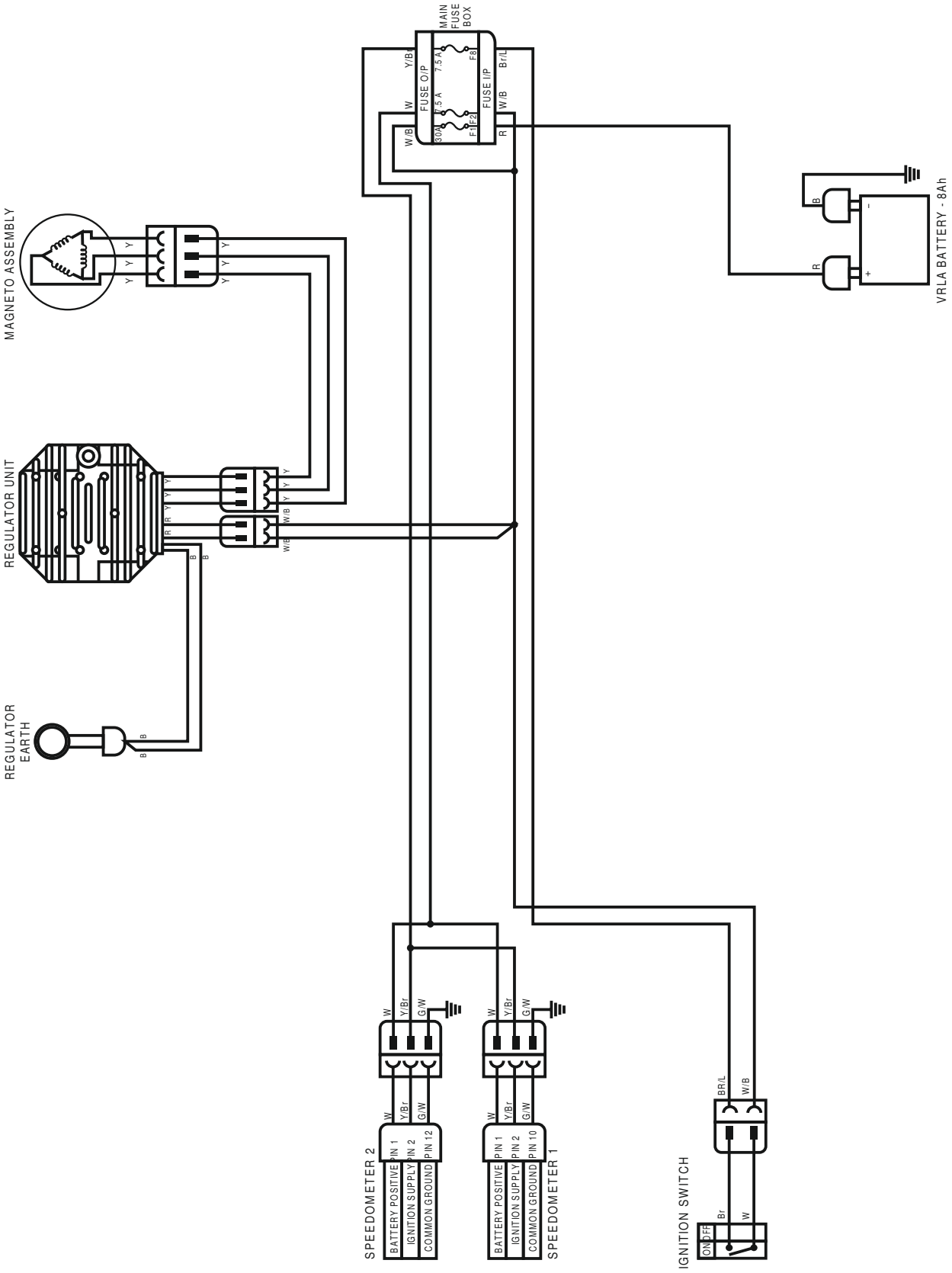
NOTES:

Electrical Circuit Diagrams

Sr. No.	Description	Remarks
1	Battery Charging & Low Battery Indication Circuit	New
2	Side Stand Circuit	New
3	Radiator Fan Motor Circuit	New
4	Side Indicator Circuit	New
5	Fuel Meter Circuit	New
6	MIL Indication Circuit	New
7	Low Oil Pressure Indication Circuit	New
8	Engine RPM Indication Circuit	New
9	ABS Circuit	New
10	Gear Indication Circuit	New
11	Starter Motor Circuit	New
12	Ignition Circuit	Refer Existing Dominar 400 SSM
13	Horn Circuit	Refer Existing Dominar 400 SSM
14	Brake Lamp Circuit	Refer Existing Dominar 400 SSM
15	Fuel Pump Circuit	Refer Existing Dominar 400 SSM
16	Fuel Injector Circuit	Refer Existing Dominar 400 SSM
17	Purge Valve Circuit	Refer Existing Dominar 400 SSM
18	Lighting Circuit	Refer Existing Dominar 400 SSM

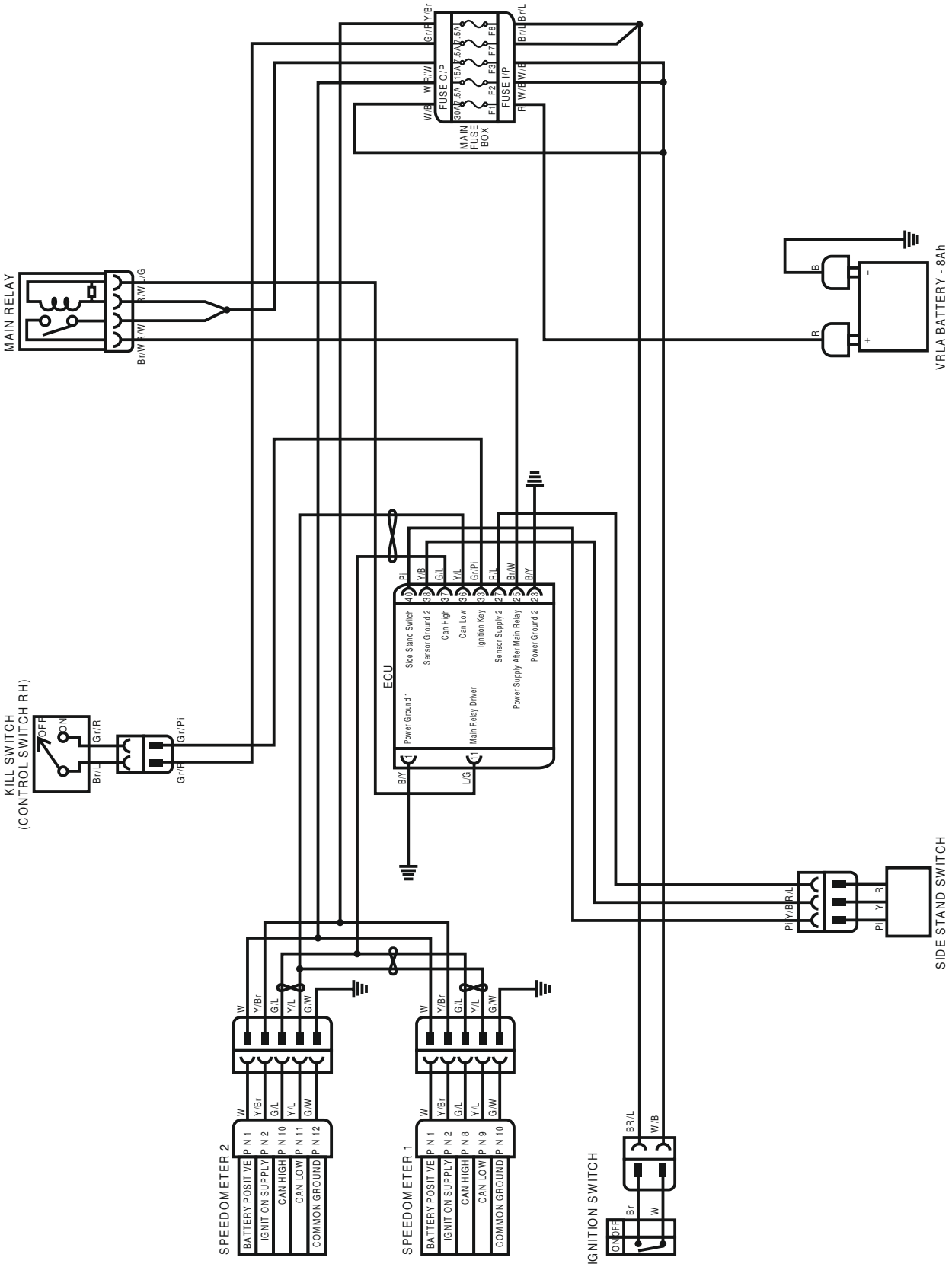
Electrical Circuit Diagrams

Battery Charging & Low Battery Indication Circuit



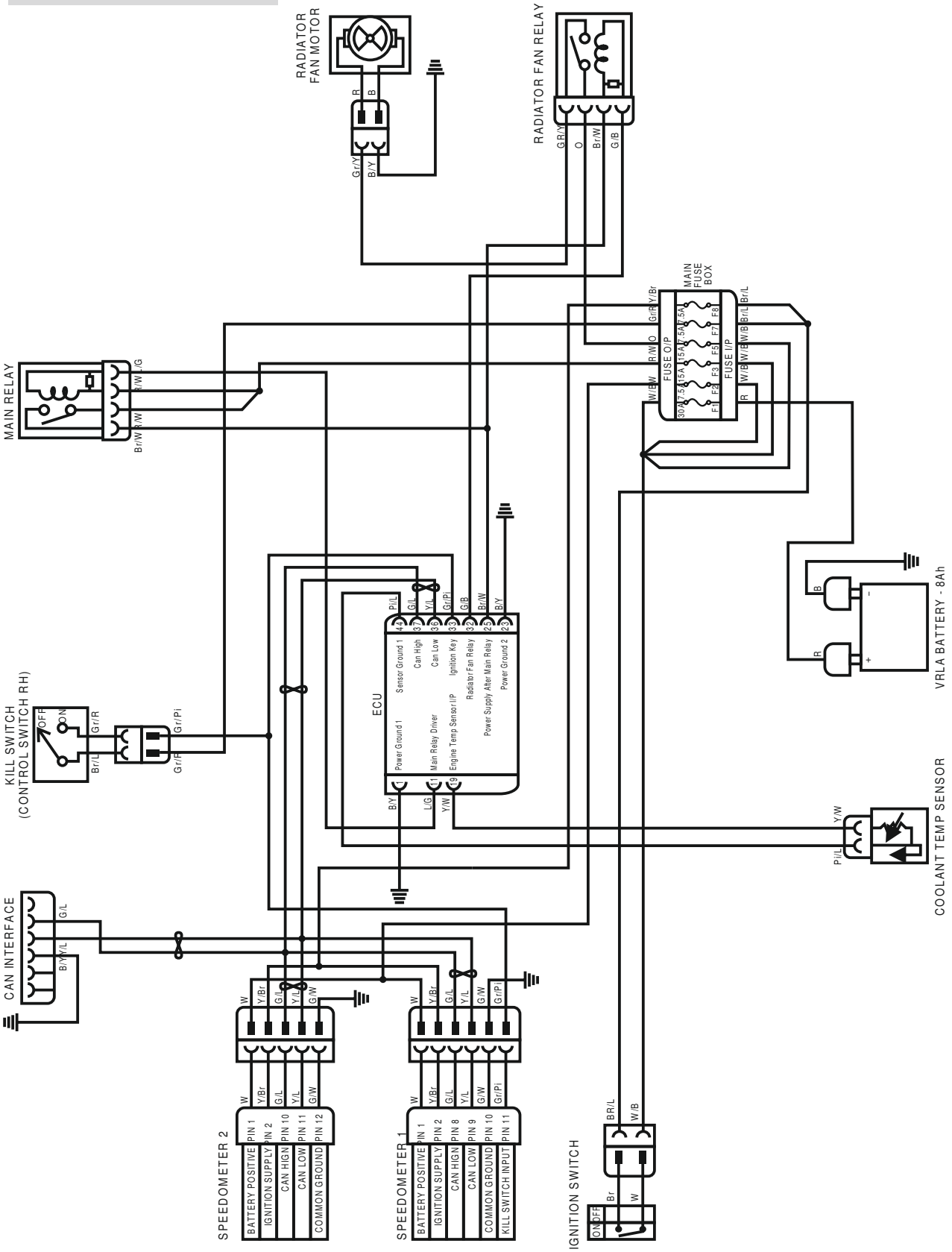
Electrical Circuit Diagrams

Side Stand Circuit



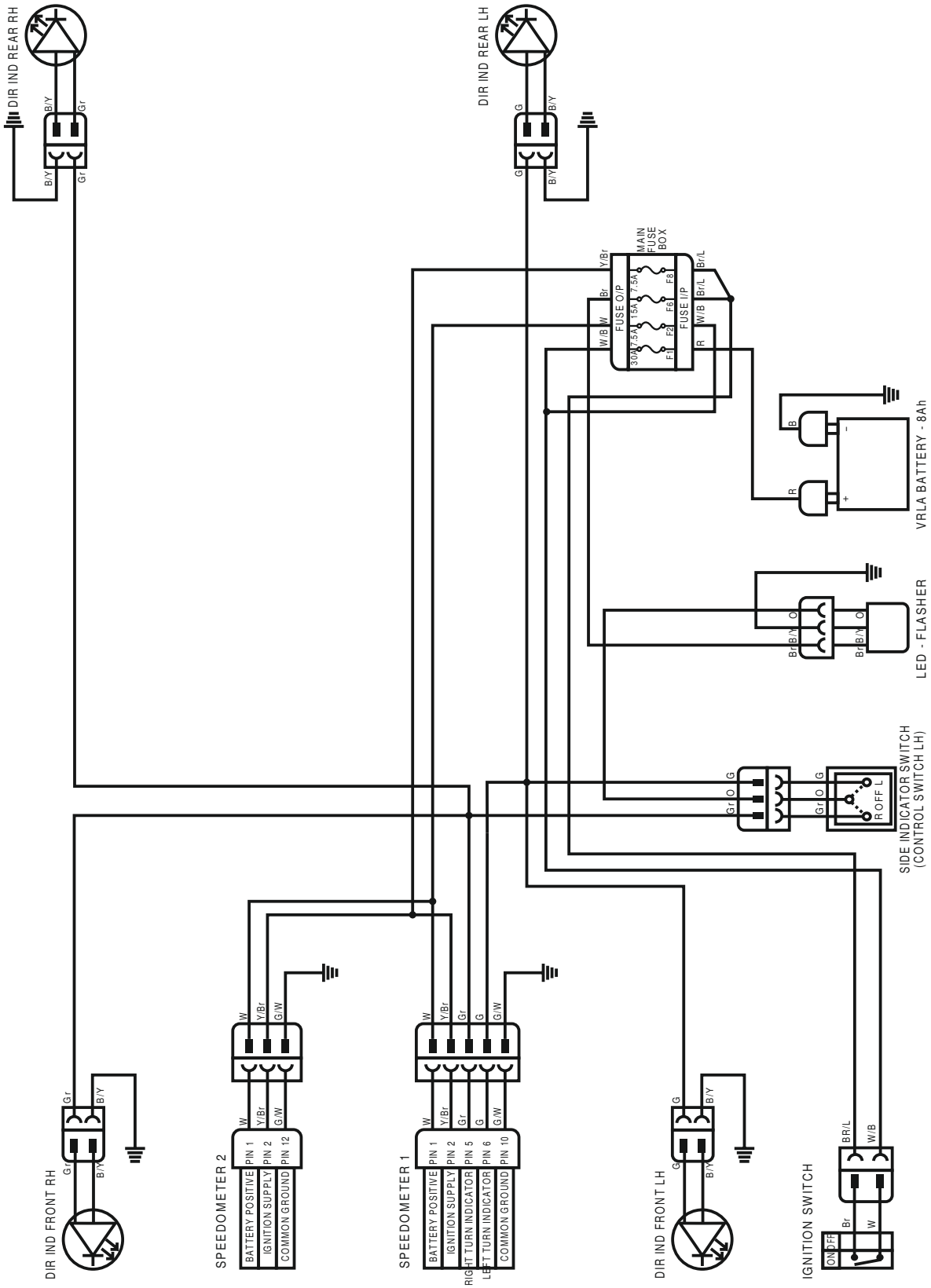
Electrical Circuit Diagrams

Radiator Fan Motor Circuit



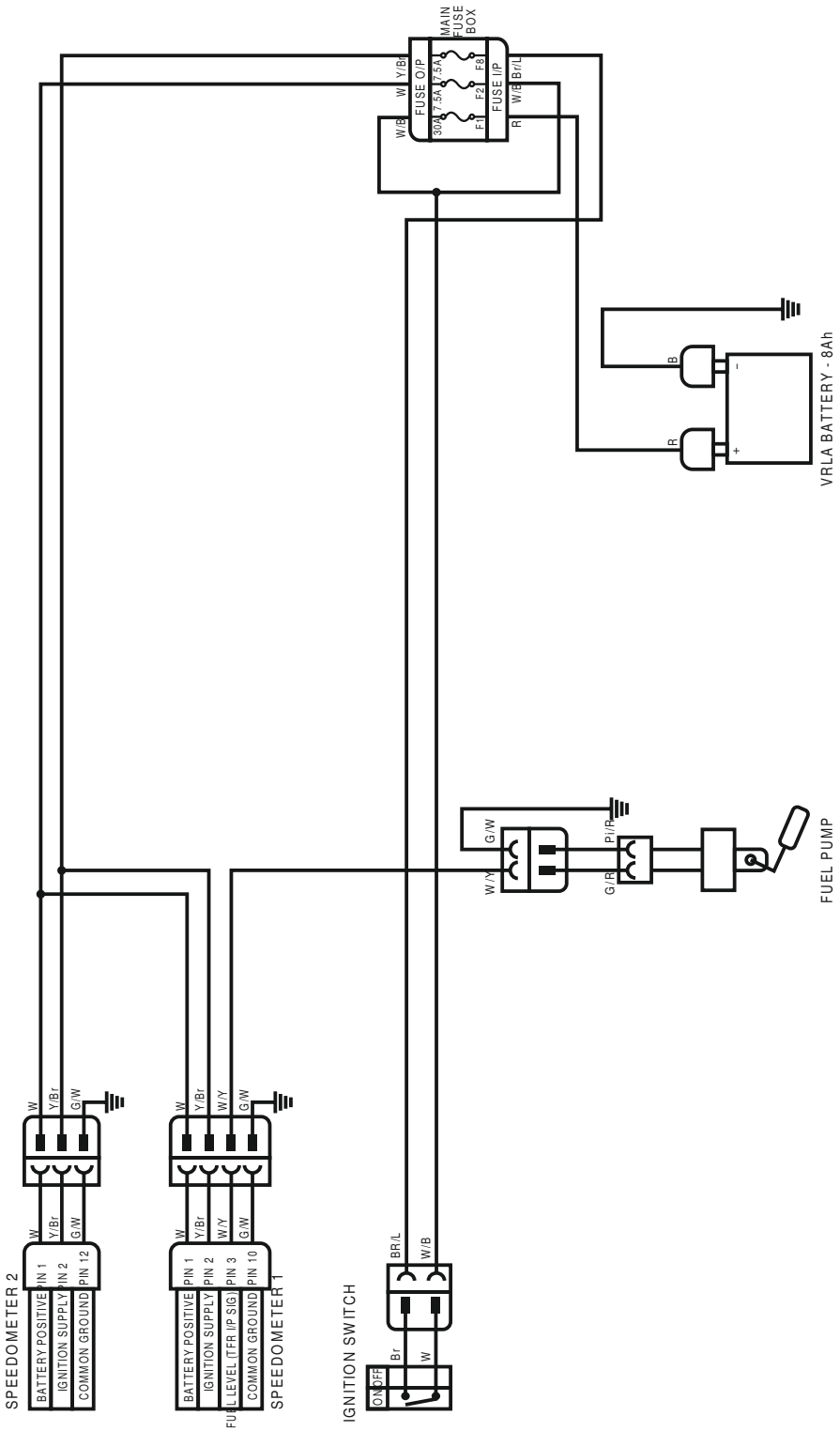
Electrical Circuit Diagrams

Side Indicator Circuit



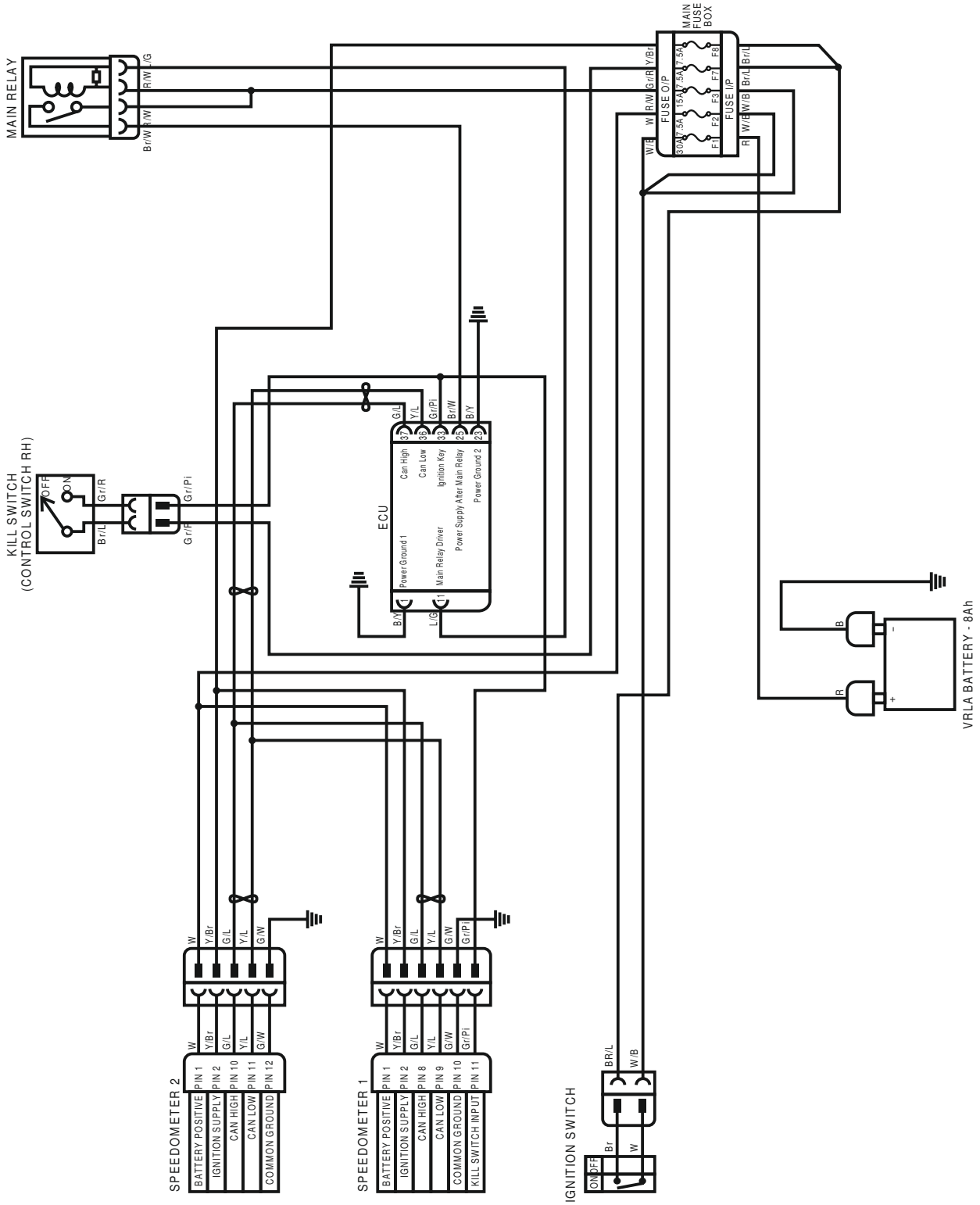
Electrical Circuit Diagrams

Fuel Meter Circuit



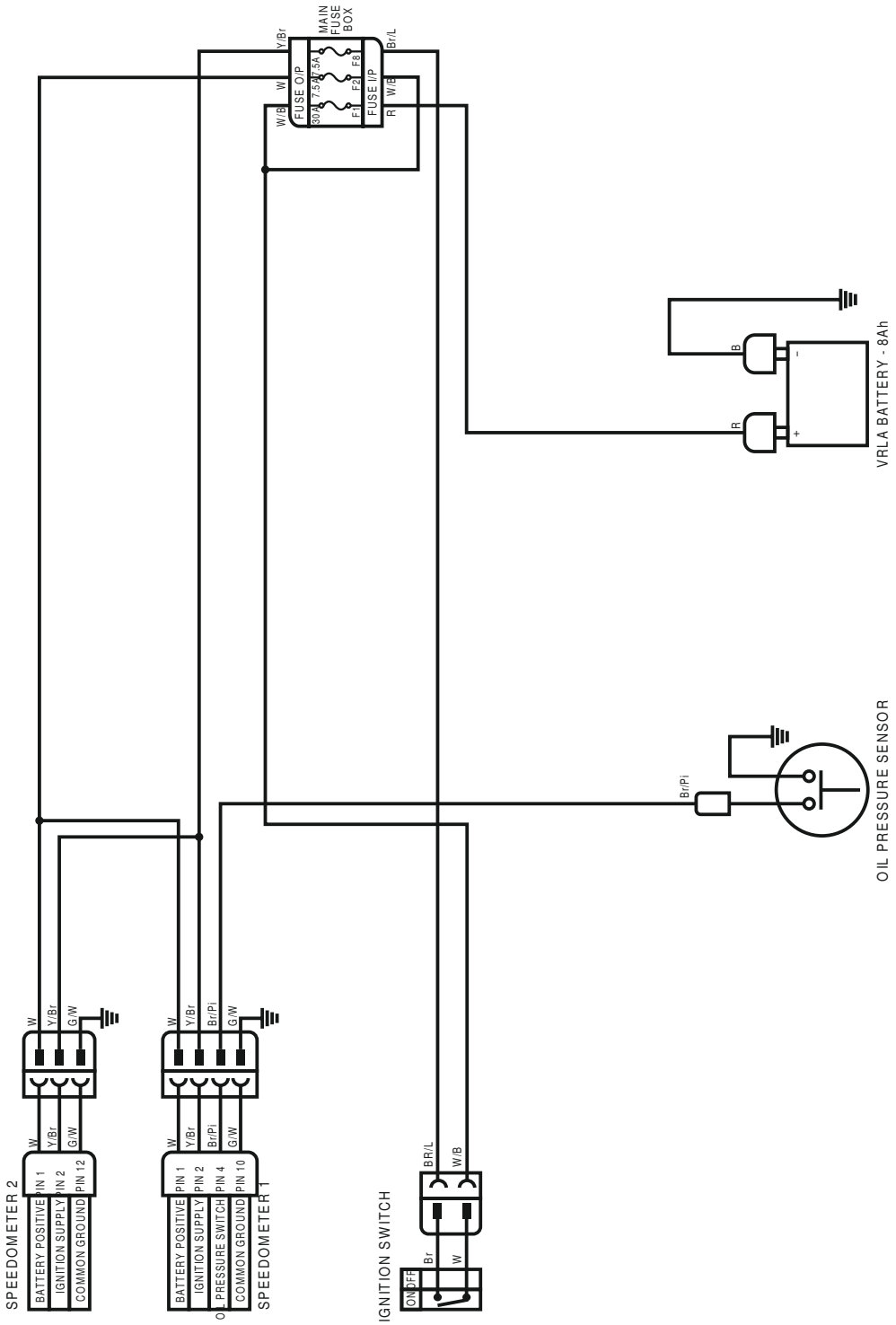
Electrical Circuit Diagrams

MIL Indication Circuit



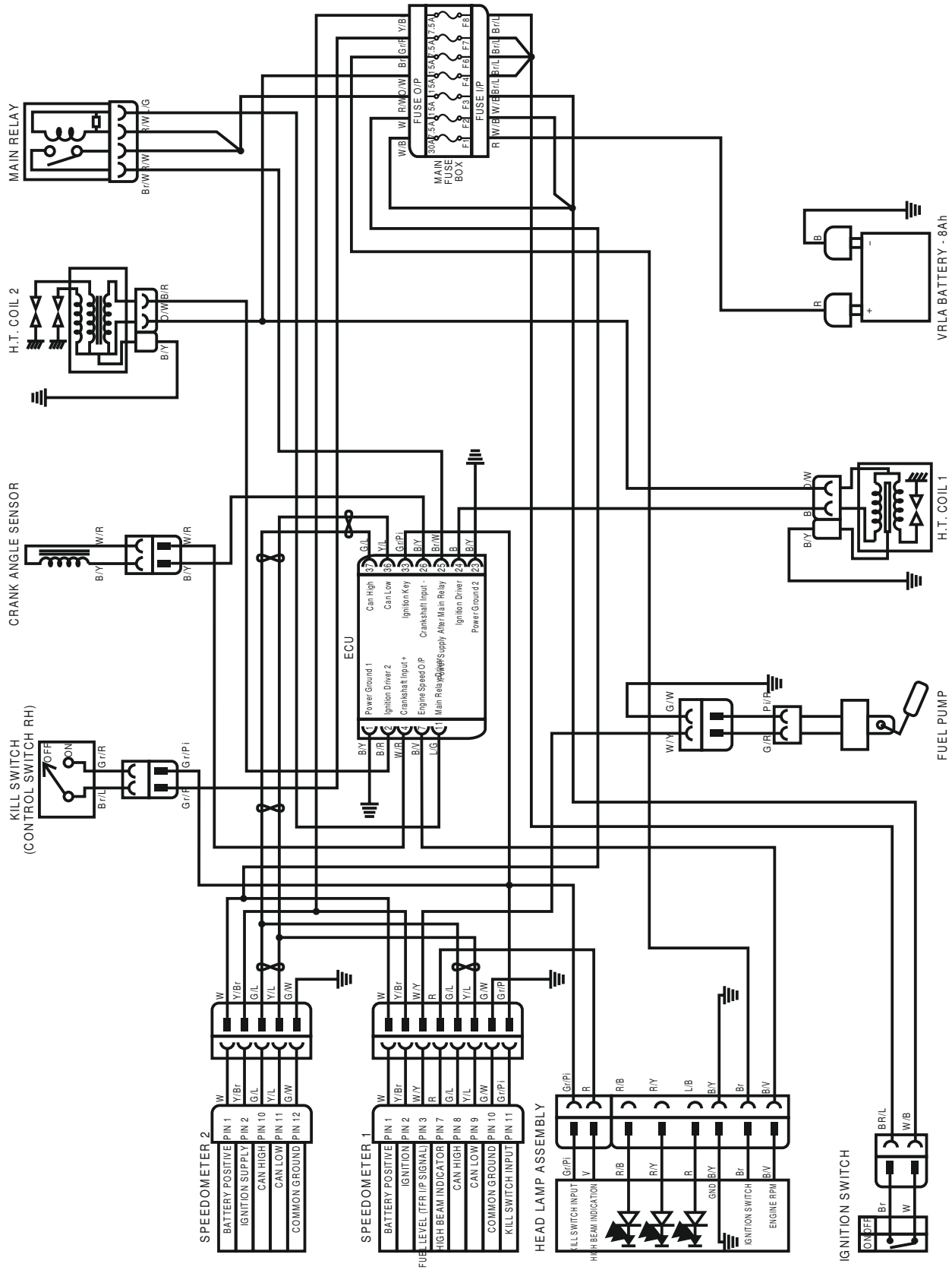
Electrical Circuit Diagrams

Low Oil Pressure Indication Circuit



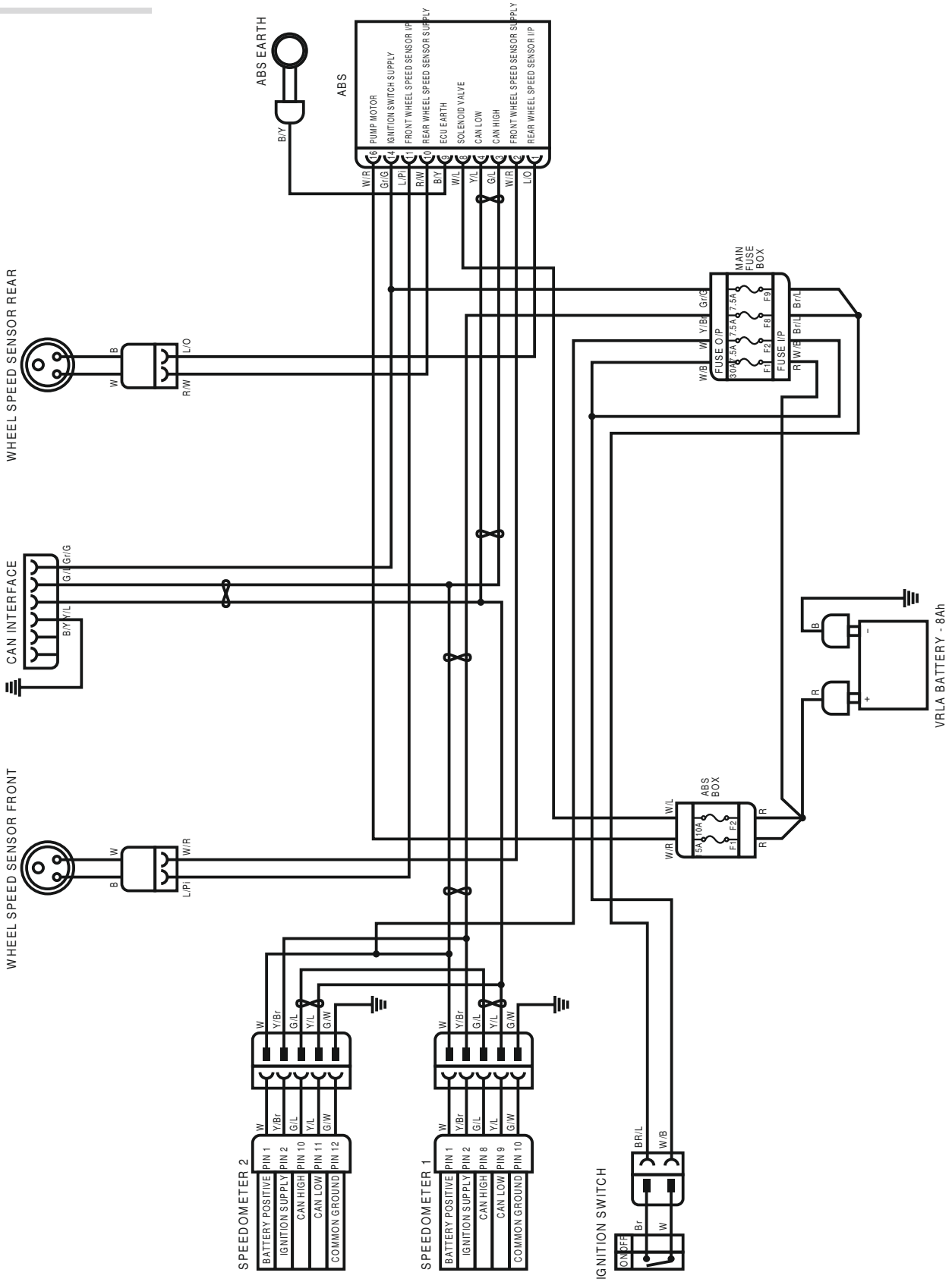
Electrical Circuit Diagrams

Engine RPM Indication Circuit



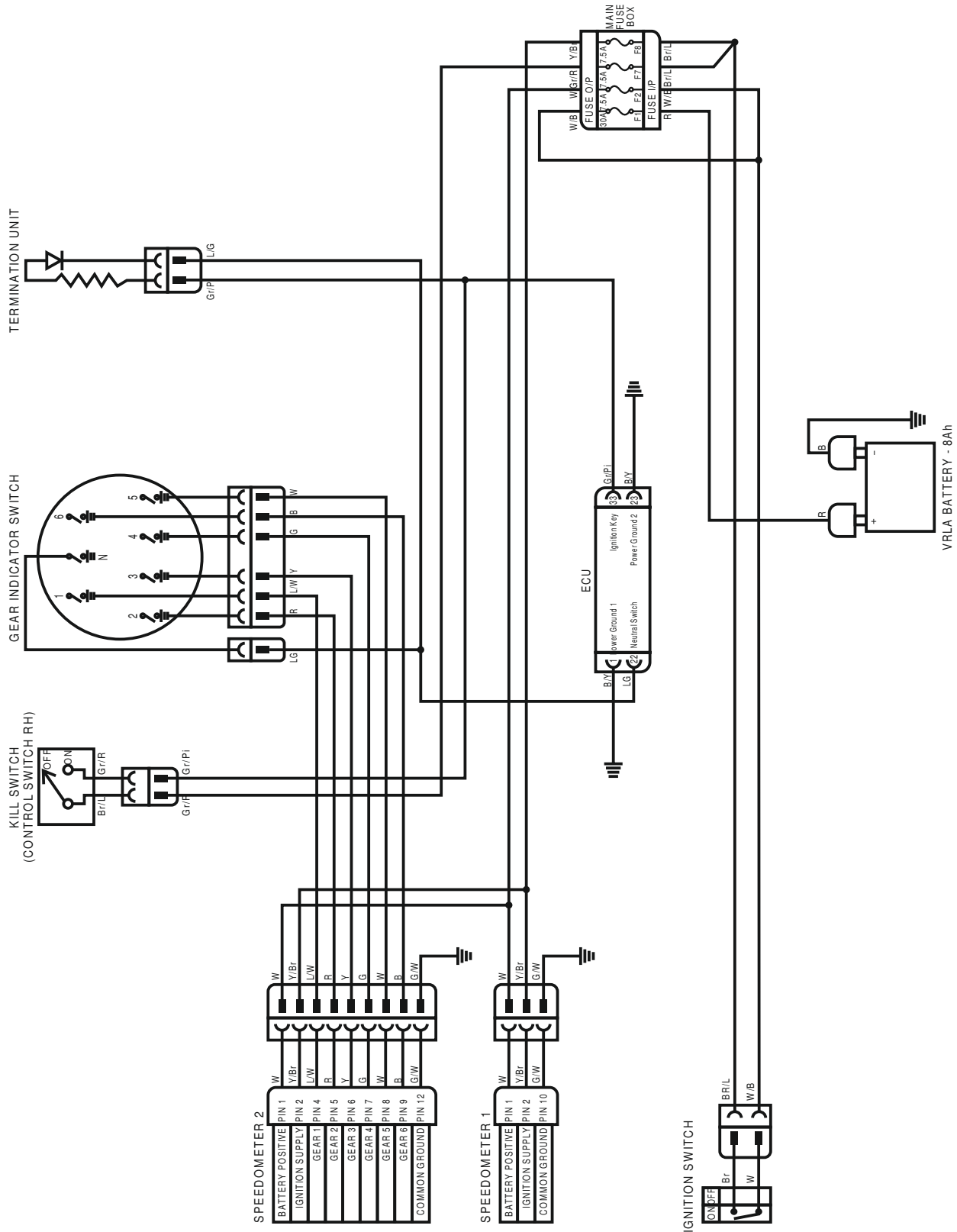
Electrical Circuit Diagrams

ABS Circuit



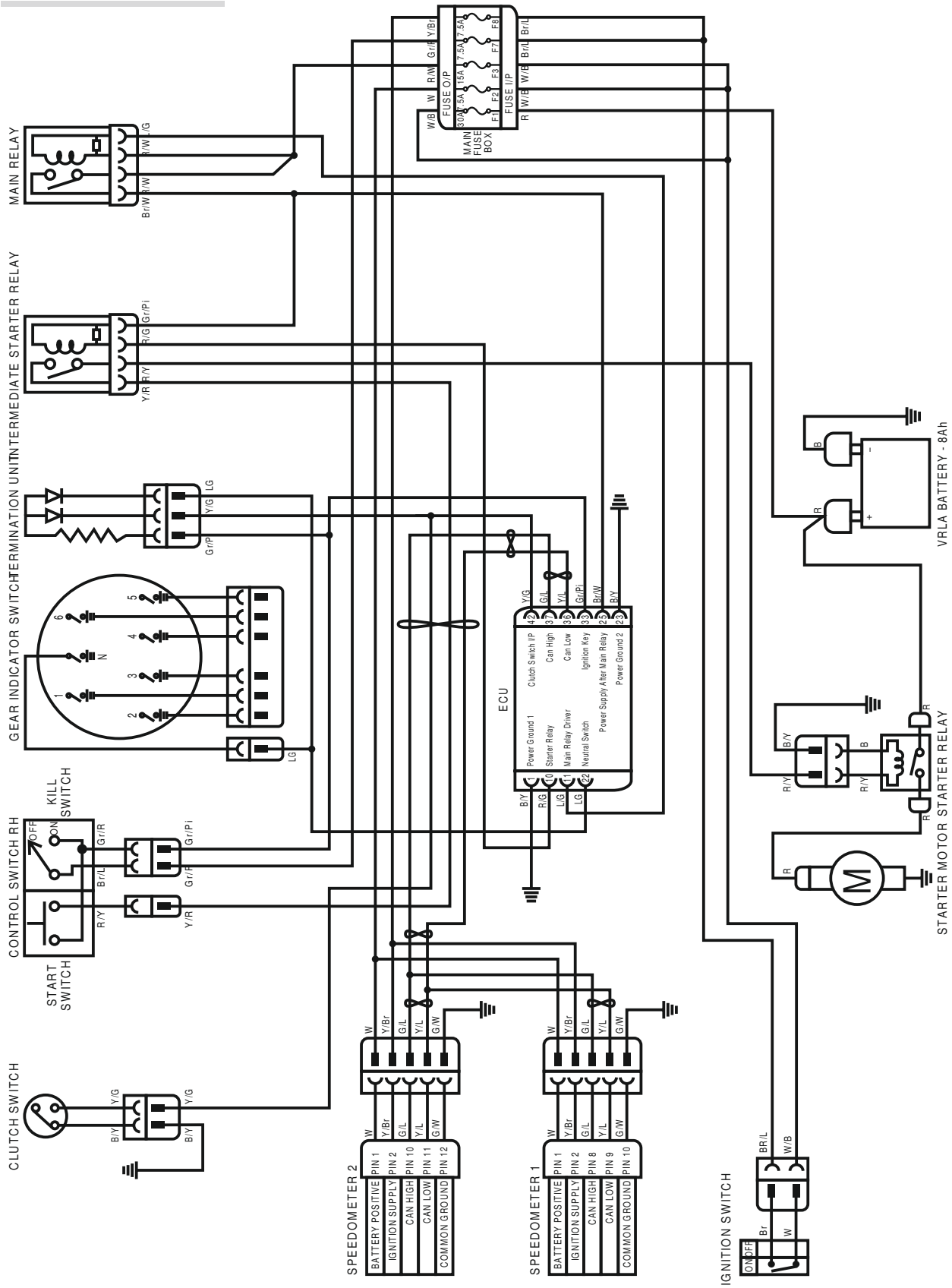
Electrical Circuit Diagrams

Gear Indication Circuit



Electrical Circuit Diagrams

Starter Motor Circuit



Dominar 400UG

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