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GT 125X

BAJAJ | THE WORLD'S FAVOURITE INDIAN

Service Station Manual

All information contained in this service station manual 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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Sr. No	Rev No	Date	Reason for change
1			
2			
3			
3			

INDEX

Technical Information

- Technical Specifications
- Preventive Maintenance Chart
- PDI check sheet
- Speedometer Information

Parameter		CT 110X ES Drum Drum	CT 125X ES Disc Drum / 125X Drum Drum
Engine			
Type		Single cylinder, 4 stroke, Air cooled	Single cylinder, 4 stroke, Air cooled
Bore		50 mm	52 mm
Stroke		58.8 mm	58.6 mm
Displacement		115.45 cc	124.45 cc
Idling speed		1300 ± 100 rpm	1300 ± 100 rpm
Max.Net Power		8.60 PS @ 7500 rpm	10.87 PS @ 8000 rpm
Max. Net Torque		9.81 Nm @ 5000 rpm	11Nm @ 5500 rpm
Ignition system		DC	DC
Spark plugs Qty		2 Nos	2 Nos
Spark plug gap		0.8 - 0.9 mm	0.8 - 0.9 mm
Lubrication		Splash	Splash
Transmission		4 speed constant mesh	5 Speed constant mesh
Gear shifting pattern		All Down	All Down
Engine oil Grade		BAJAJ DTSi 10000 BS6 Compliant Engine oil. Grade – SAE 10W30 API SL MIN	BAJAJ DTSi 10000 BS6 Compliant Engine oil Grade – SAE 20W50 API SL MIN
Engine oil Drain & Refill quantity		1000 ml	1000 ml
Overhaul quantity		1100 ml	1100 ml
Frame			
Frame		Square tube, single down tube with lower cradle	
Suspension	Front	Telescopic suspension, Ø 30 mm dia fork	
	Rear	Twin suspension with spring in spring (SNS) type	
Brakes	Front	Drum, Ø 130 mm	Disc, Ø 240 mm / Drum, Ø 130 mm
	Rear	Drum, Ø 110 mm	Drum, Ø 130 mm
Tyres	Front	2.75 X 17", 41 P – Tube Type,	80/100-17, 46P, Tubeless tyre
	Rear	3 X 17", 50 P – Tube Type	100/90-17, 55P, Tubeless tyre
Tyre Pressure	Front	2 Kgf/cm² (28 PSI)	
	Rear (Solo)	2 Kgf/cm² (28 PSI)	
	Rear (Pillion)	2.25 Kgf/cm² (32 PSI)	
Fuel Tank Capacity Full		11 Litres	
Fork oil Grade		SAE 10W20 Bajaj Genuine Fork oil	
Fork oil Quantity / leg		146 ml	

Parameter	CT 110X ES Drum Drum	CT 125X ES Disc Drum / 125X Drum Drum
Length	1998 mm	2000 mm
Width	753 mm	810 mm
Height	1098 mm	1102 mm
Wheelbase	1285 mm	1285 mm
Ground Clearance	170 mm	170 mm
Vehicle Kerb Weight	127 Kg	Drum – 130 Kg / Disc – 131.5 Kg
Vehicle Gross Weight	257 Kg	Drum – 260 Kg / Disc – 261.5 Kg
Electrical		
System	12V DC	
Battery	3Ah, VRLA	
Head Lamp	35W/35W	
Position Lamp	LED	
Tail / Stop Lamp	12V 10W/5W	
Side Indicator Lamp	12V 10W	
Neutral Indicator Icon Lamp	12V 2W	
Hi Beam Indicator Icon Lamp	12V 2W	
Turn Signal Indicator Icon Lamp	12V 2W	
Speedometer back light	12V 2W	
Fuel Level Indicator	Analogue	
Malfunction Indicator Icon Lamp	12V 2W	
Rear Number Plate Lamp	Part of Tail lamp	
Horn	12V 2A	

NOTE • All dimensions are under UNLADEN Condition. • Above information is subject to change without any notice.• This vehicle complies to BS VI standards • AHO is government regulation. Always maintain minimum 3 litres fuel in fuel tank for smooth functioning of vehicle.

Sr. No.	Activities / Check points	Recommended frequency -- Service interval & Kms																Remarks
		Servicing	1st (Free)	2nd (Free)	3rd (Free)	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	
		Kms	500 - 750	4500 - 5000	9500 - 10000	14500 - 15000	19500 - 20000	24500 - 25000	29500 - 30000	34500 - 35000	39500 - 40000	44500 - 45000	49500 - 50000	54500 - 55000	59500 - 60000	64500 - 65000	69500 - 70000	74500 - 75000	
1	Servicing with water wash	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Ensure to prevent water entry in Petrol tank, Silencer & electrical parts. Use caustic free detergent for washing.
2	Engine oil (Bajaj DTSI 10000 oil)	Top up, R	R	Top-up	R	Top-up	R	Top-up	R	Top-up	R	Top-up	R	Top-up	R	Top-up	R	Top-up	Use BGO 20W50 BS6 Oil level window cleaning at every 10000 kms by petrol spray & nylon brush.
3	Engine oil Filter	R	R		R		R		R		R		R		R		R		Replace oil filter in 1st service & at every 10000 Kms
4	Oil strainer	CL	CL		CL		CL		CL		CL		CL		CL		CL		Oil strainer cleaning at the time of oil change.
5	Air cleaner element** & air filter cover 'O' ring. Drain tube cleaning.	CL,R	CL	CL	CL	R	CL	CL	R	CL	CL	R	CL	CL	R	CL	CL	R	Replace air cleaner element at every 15000 Kms. Replace air filter cover O ring along with filter.
6	Fuel pipes for cracks.	C,R	C	C	C	R	C	C	R	C	C	R	C	C	R	C	C	R	Replace at every 15000kms
7	Spark plug clean & check gap	CL,A,R			CL,A		CL,A		R		CL,A		CL,A		R		CL,A		Replace at every 30000 kms
8	Valve tappet clearance	C,A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	C, A	
9	Carburettor float chamber cleaning**	CL				CL			CL			CL			CL			CL	
10	Carburettor rubber duct (Sleeve) for hard resulting in loose fitment.	C,R				C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	Replace if required
11	Engine breather tube for cracks.	C,R			C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	Replace if required
12	EVAP system Hoses - check for cracks	C,R		C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	Drain EVAP "Y" connection drain tube.Replace if found cut / damaged
13	Silencer drain hole cleaning	CL			CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	CL	
14	Wiring harness connections, routine & Conduit / PVC sleeve inspection.	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	C,A,T	Damaged conduit / PVC sleeves protection by applying electrical tape film.
15	Battery connections & health by load tester. +ve terminal cap fitment.	C,A,L,T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	C,A,L, T	Apply Petroleum jelly on battery terminals. Use Midtronics battery tester.
16	Ignition switch contacts cleaning	CL,L			CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	Use recommended WD40 spray
17	HT coil connections (Primary and Secondary)	C,T		C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	
18	Starter motor & starter relay connections	C,T		C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	

Sr. No.	Activities / Check points	Recommended frequency -- Service interval & Kms																Remarks
		Servicing	1st (Free)	2nd (Free)	3rd (Free)	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	
		Kms	500 - 750	4500 - 5000	9500 - 10000	14500 - 15000	19500 - 20000	24500 - 25000	29500 - 30000	34500 - 35000	39500 - 40000	44500 - 45000	49500 - 50000	54500 - 55000	59500 - 60000	64500 - 65000	69500 - 70000	74500 - 75000	
19	Check fault code, Clear fault history, Update latest hex file if applicable	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	
20	Non- sealed Drive chain wear**- Clean, Lubricate & adjust. Replace if required	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	CL,L,A	During 1st Free Service :Use lint free cloth for cleaning & SAE 90 oil for lubrication without removing from vehicle .During all other services: Remove, Clean by Diesel & Lubricate using molten chain grease.
21	Drive chain link lock	R					R				R				R				Replace at every 20000kms
22	Main stand & side stand both pivot pin	C,L					C,L				C,L				C,L				Use recommended AP grease.
23	Steering play	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	
24	Steering stem bearing & Cap steering bearing (Plastic)**	C,CL,L			C,CL,L		C,CL,L		C,CL,L		C,CL,L		C,CL,L		C,CL,L		C,CL,L		Replace if required. Use Limaplex grease for lubrication
25	Front fork oil & seal	C,R	C,R	C,R	C,R	C,R	C,R	C,R	R	C,R	C,R	C,R	C,R	C,R	R	C,R	C,R	C,R	Replace oil and oil seal + dust seal in pair at every 30000 kms
26	Brake shoe / Pad for wear limit	C,R	C,R	C,R	C,R	R	C,R	C,R	R	C,R	C,R	R	C,R	C,R	R	C,R	C,R	R	Replace at every 15000 Kms
27	Brake cam cleaning & lubrication	CL,L		CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	CL,L	Use AP grease.
28	1. Check source of leakages if any in the brake system. 2. Check Front brake hose condition. 3. Check Brake fluid level and top up, if needed.	C,A,R	C,A	C,A	C,A	C,A	C,A	C,A	R	C,A	C,A	C,A	C,A	C,A	R	C,A	C,A	C,A	Check & Top up DOT4 brake oil in every service. Replace brake oil & Master / Caliper seals at every 30000kms
29	Rear sprocket fasteners for looseness.	C,T	C,T		C,T		C,T		C,T		C,T		C,T		C,T		C,T		3.2 - 3.8 Kgf-m
30	Rear wheel rubber shock dampers for excess play.	C,R			C,R		C,R		C,R		C,R		C,R		C,R		C,R		Replace rear wheel rubber shock damper if required

Sr. No.	Acivities / Check points	Recommended frequency -- Service interval & Kms																Remarks
		Servicing	1st (Free)	2nd (Free)	3rd (Free)	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th	
		Kms	500 - 750	4500 - 5000	9500 - 10000	14500 - 15000	19500 - 20000	24500 - 25000	29500 - 30000	34500 - 35000	39500 - 40000	44500 - 45000	49500 - 50000	54500 - 55000	59500 - 60000	64500 - 65000	69500 - 70000	74500 - 75000	
31	All cables free play adjustment	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	Replace cables if operation found hard.
32	Head light focus adjustment	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	
33	Check & confirm all bulbs / switches working.	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	Contact type switches if found sticky then use recommended WD40 spray
34	General lubrication – Clutch lever / front brake lever & kick lever, rear brake lever	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	Use recommended AP grease.
35	Tyre air pressure.	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	Front : 2 Kgf/cm² (28 PSI) Rear (Solo) : 2 Kgf/cm² (28 PSI) Rear (Pillion) : 2.25 Kgf/cm² (32 PSI)
36	Mirror position & joint firmness.	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	C,A	
37	Mobile USB port	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	C,R	Charging OK to be checked in engine start condition using LED USB light
38	All fasteners tightness	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	C,T	
	Front axle																		4.5 - 5.5 Kgf-m
	Rear axle																		8 - 10 Kgf-m
	Swing arm axle																		4.5 – 5.5 Kgf-m
	Rider foot rest.																		LH : 2.8 – 3.2 Kgf-m RH : 1.8 – 2.2 Kgf-m
	Engine foundation front & top																		1.8 – 2.2 Kgf-m
	Engine foundation Rear.																		2.8 - 3.2 Kgf-m

** More frequent cleaning may be required while driving in dusty environment.
C : Check, A : Adjust, CL : Clean, R : Replace, T : Tighten, L : Lubricate
Note : Periodic parts, Oil, Filters, All types of greases, Cleaning agents, Cables, Wear & tear parts, Rubber 'O' rings / oil seals / pipes, Gaskets to be replaced as per Periodic Maintenance and Lubrication Chart are mandatory and the same are chargeable to customer.

PDI Check sheet					
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.	1. Engine cold condition -- Oil level should be in between lower & upper mark of oil level window. 2. Check this point after test ride on road.		1. Engine oil filling funnel. 2. BGO 20W50 BS VI Compliant
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.		
Lock Operation	Smooth operation of Steering cum Ignition lock, LHS cover lock, Petrol Tank cap lock	By using vehicle key.	Insert vehicle key in lock & check operation of respective lock.		
Battery	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 charger 3. 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	Check air pressure in both tyres using tyre pressure gauge.	Front- 2 Kgf/cm² (28 PSI) Rear Solo-2 Kgf/cm² (28 PSI) Rear Pillion-2.25 Kgf/cm² (32 PSI)		Tyre pressure gauge.
Brakes	Front brake free play	Use free play checking gauge.	2-3 mm		Free play checking gauge.
	Free play of rear brake pedal	Use free play checking gauge.	Brake pedal free play 20 - 30 mm		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
Fasteners Torque values	Front Axle	Using dial torque wrench	4.5 - 5.5 Kgf-m		Dial torque wrench 20 Kgf-m
	Rear Axle		8 - 10 Kgf-m		
	Swing arm Shaft		4.5 - 5.5 Kgf-m		
	Rider foot rest.		LH : 2.8 – 3.2 Kgf-m RH :1.8 – 2.2 Kgf-m		
	Engine foundation front		1.8 – 2.2 Kgf-m		
	Engine foundation Rear.		2.8 - 3.2 Kgf-m		

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools , equipment & consumables required
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	–		
Horn	Coupler connection,Horn sound.	By hearing	–		
All Bulbs Working	Head lamp, Tail / stop lamp, Side indicators, Speedo bulb, DRL	Check functioning.	–		
Speedometer	Working of speedometer, Fuel gauge	Fuel gauge-By filling fuel.	Speedometer, 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, MIL & B Logo)	By observing speedo Indications after switching ON ignition switch.			
Headlamp	Head light Low & 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				
4. Visual inspection for dent, scratches, rust etc					
5. 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.
Do not drive vehicle in speed sensor dis connected condition & same to be instructed to customer.

PDI Check sheet					
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.	1. Engine cold condition -- Oil level should be in between lower & upper mark of oil level window. 2. Check this point after test ride on road.		1. Engine oil filling funnel. 2. BGO 20W50 BS VI Compliant
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.		
Brake Fluid	1. Level in Front 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, LHS cover lock, Petrol Tank cap lock	By using vehicle key.	Insert vehicle key in lock & check operation of respective lock.		
Battery	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 charger 3. 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	Check air pressure in both tyres using tyre pressure gauge.	Front- 2 Kgf/cm² (28 PSI) Rear Solo-2 Kgf/cm² (28 PSI) Rear Pillion-2.25 Kgf/cm² (32 PSI)		Tyre pressure gauge.
Brakes	Free play of rear brake pedal	Use free play checking gauge.	Brake pedal free play 20 – 30 mm		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
Fasteners Torque values	Front Axle	Using dial torque wrench	4.5 - 5.5 Kgf-m		Dial torque wrench 20 Kgf-m
	Rear Axle		8 - 10 Kgf-m		
	Swing arm Shaft		4.5 - 5.5 Kgf-m		
	Rider foot rest.		LH : 2.8 – 3.2 Kgf-m RH :1.8 – 2.2 Kgf-m		
	Engine foundation front		1.8 – 2.2 Kgf-m		
	Engine foundation Rear.		2.8 - 3.2 Kgf-m		

Check Point	What to check	How to check	Recommendation / Reference	Workshop Observation	Tools , equipment & consumables required
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	–		
Horn	Coupler connection,Horn sound.	By hearing	–		
All Bulbs Working	Head lamp, Tail / stop lamp, Side indicators, Speedo bulb, DRL	Check functioning.	–		
Speedometer	Working of speedometer, Fuel gauge	Fuel gauge-By filling fuel.	Speedometer, 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, MIL & B Logo)	By observing speedo Indications after switching ON ignition switch.			
Headlamp	Head light Low & 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				
4. Visual inspection for dent, scratches, rust etc					
5. Clean the vehicle thoroughly before delivery to customer.					

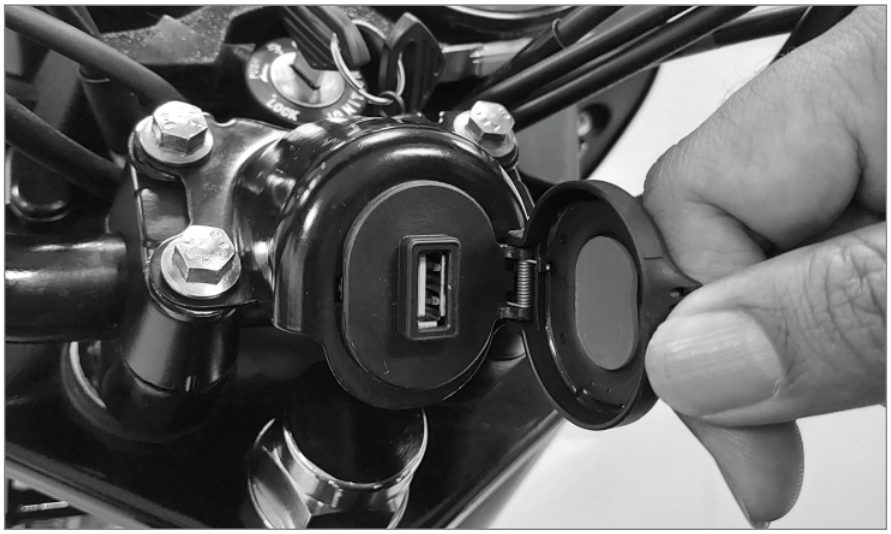
Note-
Vehicle FIFO system required with monitoring system.
Vehicles to be dispatched to network only after carrying out PDI activity at Dealership.
Do not drive vehicle in speed sensor dis connected condition & same to be instructed to customer.

1. Odometer : The Odometer shows the total distance that the vehicle has accumulated.
2. Speedometer : The Speedometer pointer shows the speed of vehicle.
3. Fuel Level Indicator : Fuel level indicator shows approximate available fuel in fuel tank.
4. Turn Signal Indicator (Green) : When Turn signal switch is turned to Left or Right, Turn pilot indicator LH or RH will flash.
5. Neutral Indicator (Green) : When the transmission is in Neutral & Ignition switch 'ON', the Neutral indicator will get 'ON'.
6. Hi Beam Indicator (Blue) : When Headlight is 'ON' & Hi beam is selected, Hi beam indicator will get 'ON'.
7. Malfunction Indicator ( ) **:** It glows (Amber color) whenever any abnormality is noticed in functioning of Ignition / BS VI carburettor components.

Mobile Charger

- Mobile charging socket has been provided on handle bar (handle bar upper holder).
- The charger socket has been provided with cap to protect charger socket from dust & water entry during washing / during rain.
- Always ensure charger cap is firmly fitted on socket when charger socket is not in use.
- The mobile charger will supply output voltage only in engine running condition.
- Customer to use suitable USB cable for mobile charging.

⚠ **Caution:**
Do not use mobile phone while driving. Momentary lapse in concentration might result in an accident.



SOP to prevent fuel stains on Fuel tank

- After fuel refilling & before shutting the cap wipe the spilled fuel from the painted areas around the cap, wipe by soft dry cotton cloth.
- Shut and lock the cap fully.
- This practice needs to be followed to maintain the shine of color on fuel tank.

Matte Finish Painted Parts Cleaning

Do's :

1. Use Colin or caustic free solution for cleaning. (1 spoon in ½ bucket water) Remove foreign substances like insect remains, road debris using a soft brush.
2. Use microfiber cleaning cloths Ex.- Muslin cloth for painted parts cleaning.

- In case fuel is spilled out on fuel tank, it is to be immediately cleaned with clean soft cotton cloth to prevent permanent stain marks on fuel tank.

Don'ts :

- Do not use any gloss enhancement products / wax / sprays.
- Do not use products that are even mildly abrasive, such as polishes, glazes, or rubbing compounds.
- Do not use mechanical cleaners/polishers.
- Do not use terrycloth or paper towels or shine enhancement products.
- Do not rub the finish vigorously, this will burnish the paint finish, causing a permanent shiny spot. Shiny spots cannot be removed.
- No Polishing/Teflon coating on painted parts.

Purpose of Frame Grip

- Holding Grip for Pillion rider .
- Small luggage carrier.

Note : Maximum Allowable load on Frame Grip is 7 Kg.

- Do not hang any item on frame grip which may damage near by parts.
- Luggage should not have an overhang from Frame Grip.
- Ensure luggage is secured & will not shift while riding.
- Loosely secured luggage may affect riding & stability of motorcycle.
- Do not carry excessively heavy or huge luggage on the motorcycle.

⚠ **Warning :**

Please exercise utmost caution while carrying luggage on the motorcycle. Failure to adhere to above precaution can cause loss of control on the motorcycle leading to potential accident resulting in serious injury to both rider & other road users besides causing severe damage to motorcycle.

Side Stand Switch Interlocking

Side stand condition	Side stand Indication in speedometer	Gear position	Remark
Down	No	Neutral	Self start / kick start possible
	No	Gear is applied in vehicle start condition by pressing clutch lever	Engine will get cut off.
Down	No	Gear	Engine will not start by self / kick

Lights & DRL Working

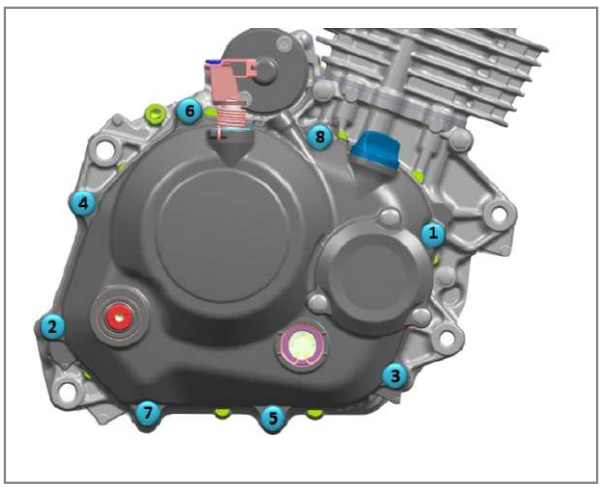
Ignition switch	Light switch	Engine OFF / Running	High / Low beam selector switch	Result
ON	OFF or ON	Engine OFF	Any	DRL with high intensity , Taillamp ON
ON	OFF or ON	Engine OFF	Any + Pass switch is pressed	Headlight High beam gets ON & DRL with intensity low
ON	OFF	Engine running	Any	DRL with high intensity , Taillamp ON. MIL gets disappear(only if no any abnormality is noticed in functioning of Ignition / BS VI carburetor components)
ON	ON	Engine running	Low beam	Headlight low beam gets ON & DRL with intensity low
ON	ON	Engine running	High beam	Headlight high beam gets ON & DRL with intensity low
ON	ON	Engine running	Low beam + Pass switch is pressed	Headlight high beam gets ON & DRL with intensity low
ON	ON	Engine running	High beam + Pass switch is pressed	Headlight high beam gets ON & DRL with intensity low, No effect of pass switch pressing

Engine

- Torque Value
- Service Limit
- Special Tools
- Important SOP
- Engine Oil Flow Path
- Engine Oil / Loctite / Grease Application Matrix
- Part Identification

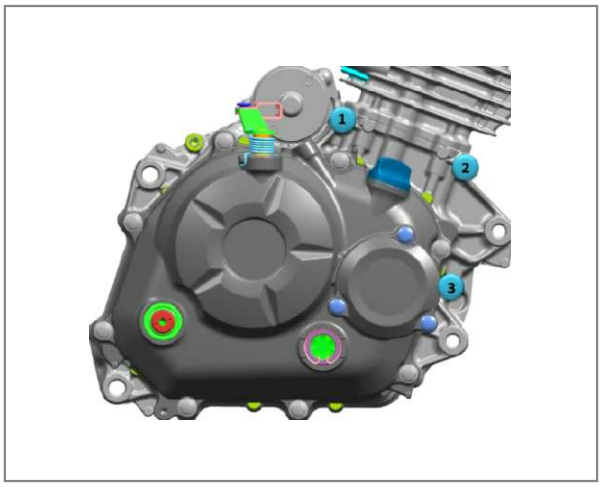
Sr. No.	Parameter	Torque value (Kgf-m)
1	Cover cylinder head bolts	1 - 1.1
2	Cylinder head tower bolts	2.3 - 2.5
3	Intake Pipe moutning screw	0.9 - 1
4	Camshaft sprocket mounting bolt	1.8
5	Chain tensioner mounting bolt	1 - 1.1
6	Chain guide moutning bolt	1 - 1.1
7	Primary gear nut	6.5 - 7
8	Clutch nut	5 - 5.5
9	Rotor bolt	6.5 - 7
10	Lock plate on Output sprocket mounting	0.6 - 0.8
11	Cam drum change moutning bolt	1 - 1.1
12	Gear change lever bolt	0.8 - 1.2
13	Cap oil filter moutning bolt	1 - 1.1
14	Inhibitor nut	1 - 1.1
15	Oil stariner cap (oil Drain)	1 - 1.1
16	Oil pump mounting screw	0.5 - 0.7
17	Clutch cover mounting bolts	1 - 1.1
18	Magneto cover mounting bolts	1 - 1.1
19	Cover LH RR moutning bolts	0.6 - 0.8
20	Air filter mountings on frame	0.5 - 0.8
21	Silencer mounting nut on cylinder head	2 - 2.2
22	Silencer mounting bolt on RH Stay	2.8 - 3.2

Sr. No.	Parameter	Torque value (Kgf-m)
23	One way clutch bolts on rotor	1.4 - 1.5
24	Starter Motor bolts	1 - 1.1
25	Kick lever bolt	2.3 - 2.5

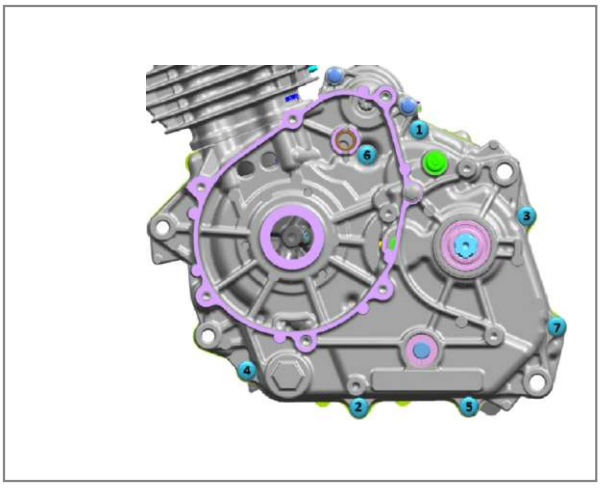


Clutch Cover Mounting bolts

Magneto Cover Mounting bolts

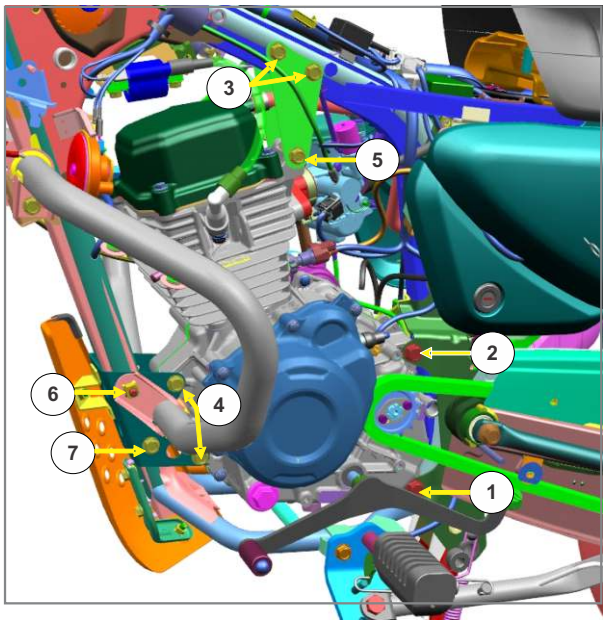


RH Crankcase Mounting bolts



LH Crankcase Mounting bolts

Engine Mounting bolts



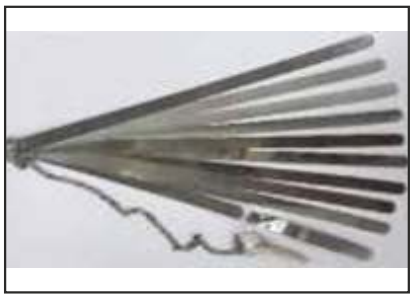
Sr. No.	Parameter	Standard (in mm)	Service Limit (in mm)
1	Engine compression pressure	12- 13 kgf/cm^2	Min : 9.5 kgf/cm^2
2	Valve tappet clearance Intake	0.05 - 0.07	Not Applicable
3	Valve tappet clearance Exhaust	0.1 - 0.12	Not Applicable
4	Rocker arm shaft diameter	9.97 - 9.98	9.965
5	Cam sprocket root diameter	59.91 - 60.11	Not Applicable
6	Cam lobe height (Exhaust)	30.01	29.96
7	Cam lobe height (Intake)	30.04	29.99
8	Valve spring free length (Inner)	38.74	37.53
10	Valve stem diameter Intake	4.96 - 4.98	4.95
11	Valve stem diameter Exhaust	4.94 - 4.96	4.93
12	Valve stem bent	0.01	0.015
14	Cylinder head warp	0.03	0.05
15	Cam chain 20 links length	127 - 127.05	127.55
16	Cylinder - piston clearance	0.028 - 0.052	0.1
17	Piston Ring end gap (Top ring)	0.10 - 0.25	0.5
18	Piston Ring end gap (second ring)	0.15 - 0.30	0.55
19	Piston Ring end gap (oil ring)	0.2 - 0.7	1
20	Clutch spring free length	33.8 - 36.2	32.8
21	Friction plate thickness	2.9 - 3	2.7
22	Steel plate thickness	1.55 - 1.65	1.5
23	Friction plate warp	0.1	Not Applicable
24	Steel plate warp	0.1	0.2

Sr. No.	Parameter	Standard (in mm)	Service Limit (in mm)
25	Gear shift fork guide pin diameter	4.45 - 4.49	4.43
26	Gear shift drum groove width	4.6 - 4.7	4.75
27	Crankshaft runout	0.02	0.05
28	Cam lobe width	6.9 - 7.1	Not Applicable
29	Shaft fork shift outer diameter	9.97 - 9.98	9.96
30	Fork shift inner diameter	10 - 10.02	10.03

Tappet setting tool

Part No. : 37104355

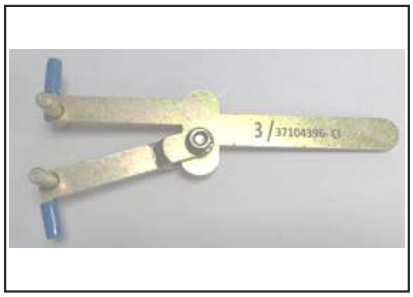
Usage : For adjusting tappet clearance



Free Play Gauge & Tappet Feeler Gauge

Part No. : 37104390

Usage : For checking tappet clearance



Cam sprocket Holder

Part No. : 37104396

Usage : For holding cam sprocket during tightening & loosening of cam sprocket mounting bolt.

3/8" Universal joint for central spark plug

Part No. : 37104333

&

Extension 1/2" hand tool with connector 3/8" to 1/2 " for 37104333 universal Joint

RL Spark Plug

Part No. : 37104402

Application : For removal & fitment of both spark plug.

RH Spark plug

Spark plug sleeve removal tool

Part No. : 37104309

Usage : For removing RH side spark plug sleeve.

Temperature Sensor Removal & Fitment Tool

Part No. : 37104388

Usage : For removal & fitment of temperature sensor

Chain Tensioner adjustment tool

Part No. : 37104387

Usage : For adjusting chain tension.

Shaft rocker arm removal & fitment

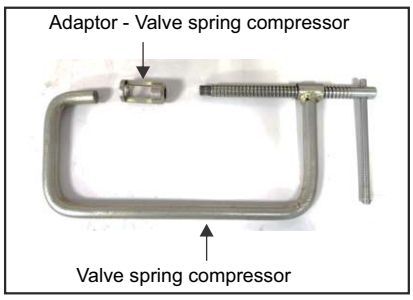
Part No. : 37104399

Usage : For removal & fitment of shaft rocker arm.

Drift Piston pin

Part No. : 37104392

Usage : For removal of piston pin



Valve Spring Compressor

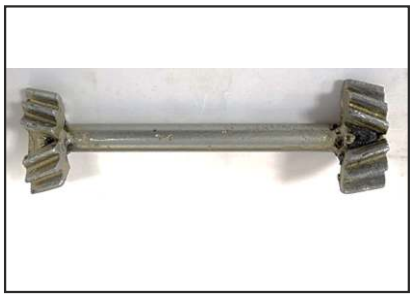
Part No. : 37103107

Usage : For compressing valve spring.

Adaptor Valve Spring Compressor

Part No. : 37103108

Usage : This adaptor is to be used with Valve Spring Compressor.



Primary gear Holder

Part No. : F41AJA11

Usage : For holding primary drive & driven gears during clutch nut / Primary gear nut tightening & loosening.

Clutch nut tool

Part No. : 37104316

Usage : For tightening & loosening of clutch nut.

Magneto rotor holder

Part No. : 37104391

Usage : For holding rotor during tightening & loosening of rotor mounting nut.

Magneto rotor puller

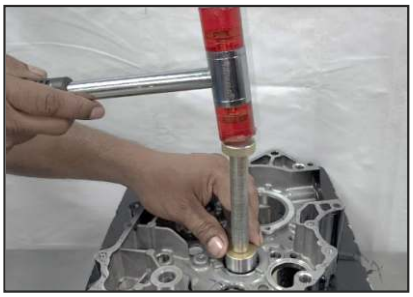
Part No. : 37104369

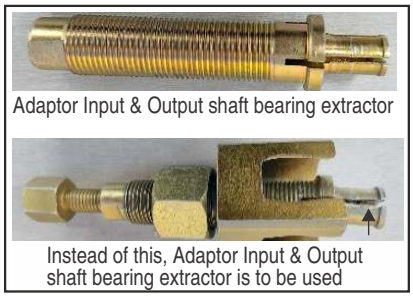
Usage : For pulling rotor assembly from crankshaft.

Bearing driver set

Part No. : 37103061

Usage : For removing & fitment of bearing from crankcase.





Adaptor Input & Output shaft bearing extractor

Instead of this, Adaptor Input & Output shaft bearing extractor is to be used

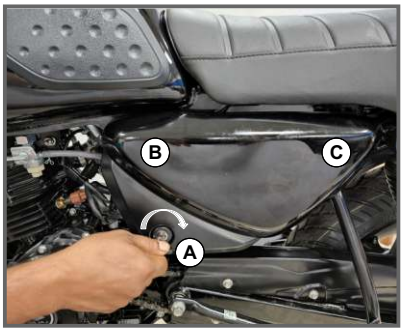
Adaptor Output shaft bearing extractor from RH crankcase

Part No. : 37104410

Usage : For removal of output shaft bearing from RH crankcase only

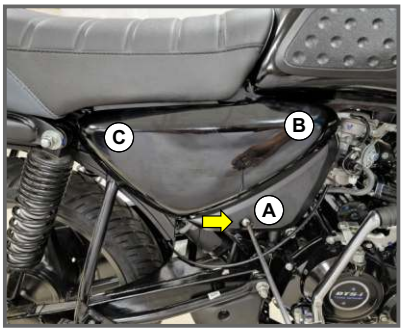
NOTE : This adaptor is to be used with Bearing extractor (Part Number -37104397)

Magneto Side All Part Removal



Side cover LH.

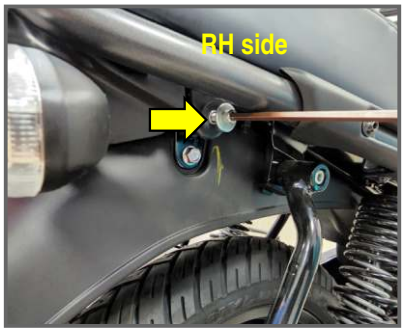
- Insert the key into the cover lock (A) and turn the key clockwise.
- Hold cover with both hands & pull front side first (B) & Slide rear side (C) towards front wheel side.
- Take out Side cover LH.



Side Cover RH

- Remove Side Cover mounting Screw (A) with Screwdriver.
- Hold cover with both hands & pull front side first (B) & Slide rear side (C) towards front wheel side.
- Take out Side cover RH.

- Remove seat assembly mounting bolts (2 nos – 1 each in LH & RH side) with metal washers using 5 mm allen key.



- Lift the seat from rear side and take out Seat assembly by sliding towards rear Wheel side.

- Shift Fuel tap assembly knob to OFF position.
- Pull out Fuel pipe clamp.
- Take out Fuel pipe from Fuel tap assembly

- Remove Circlip of Fuel tank mounting.
- Remove metal Washer.

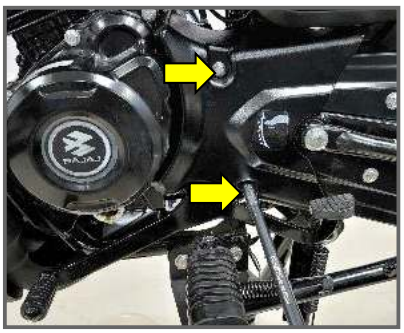
Lift Fuel tank and remove:

- Fuel gauge coupler connection.
- Fuel tank EVAP pipe

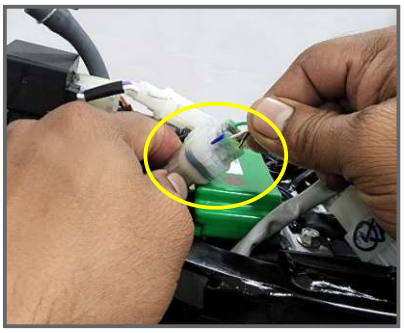
- Remove Fuel tank

- Using engine oil drain funnel, remove drain bolt with 18 mm Spanner. Vehicle should be in warm up condition before draining engine oil.

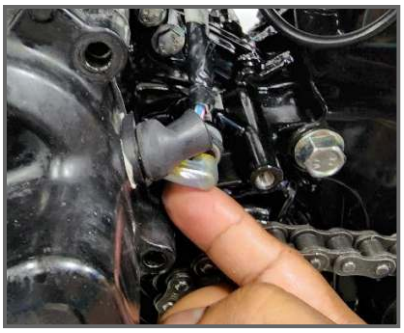
- Take out Oil Strainer



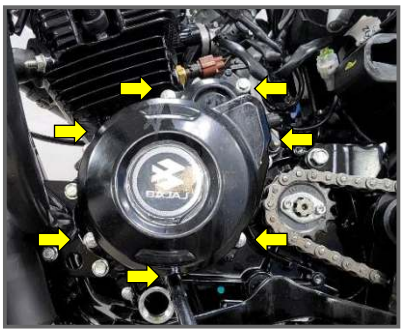
- Remove cover rear LH mounting bolts(2 Nos) using 8 mm spanner & take out cover LH rear



- Remove Stator Assembly coupler connection

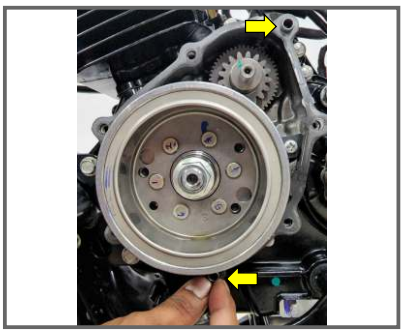


- Remove Neutral Switch connection



- Remove Magneto cover mounting bolts (7 nos) with 8 mm T Spanner in cris-cross pattern.

- Take out Magneto cover.



- Remove Dowels (2 nos) & magnet cover gasket

- Remove gear starter clutch stopper plate mounting screw with Phillips head Screwdriver.
- Take out gear starter clutch stopper plate.

- Using magneto rotor holder, remove magneto rotor nut with 19 mm socket.

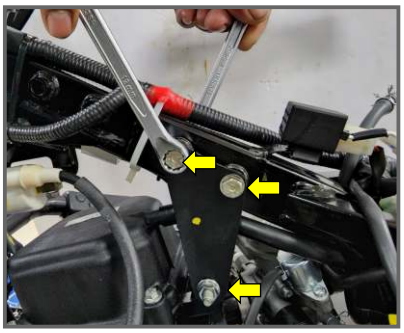
- Take out magneto rotor nut & washer

- Using magneto rotor puller & 32 mm spanner, take out magneto rotor assembly along with gear starter clutch

- Take out Woodruff key.
- Remove Gear drive starter

Cam Chain / Clutch Cover Side All Parts Removal On Vehicle

- Remove Fuel tank, drain engine oil as explained in “Magneto Side All Part Removal on Vehicle SOP”.

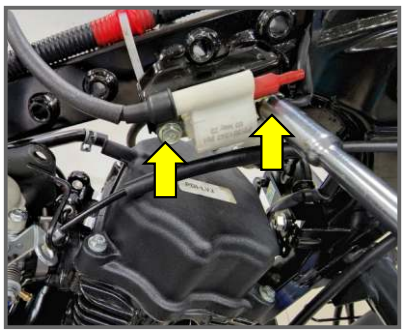


- Remove Engine top mounting bracket nuts (3 nos) by holding bolts head using 12 mm spanner.
- Take out Engine top mounting bracket.

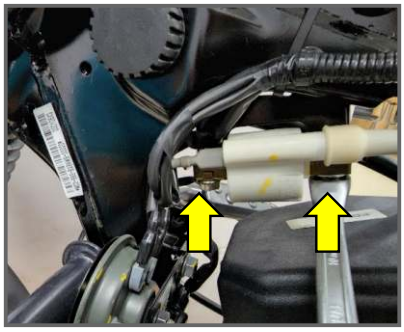
- Pull out breather pipe clamp and take out breather pipe from cylinder head cover
- Remove RH spark plug cap

- Remove RH side spark plug using universal Joint as shown in photograph.
- Remove LH plug cap & remove LH side spark plug as shown for RH side spark plug

- Disconnect RH H.T. coil connection.
- Remove RH H.T. coil mounting bolts (02 nos) with 8 mm Spanner & take out RH H.T. Coil.



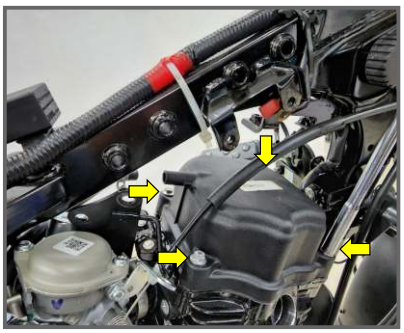
- Disconnect LH H.T. coil connection.
- Remove LH H.T. coil mounting bolts (02 nos) with 8 mm Spanner & take out LH H.T. Coil.



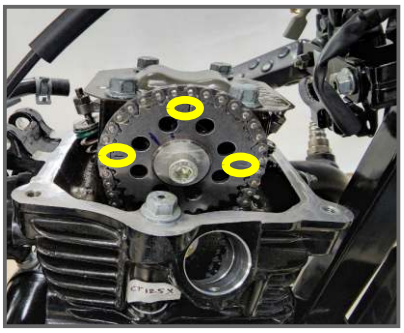
- Remove spark plug sleeve grub screw using 2.5 mm allen key.

- Remove spark plug sleeve, using spark plug sleeve removing tool.

- Remove chain tensioner centre bolt using 10 mm spanner.
- Using chain tensioner adjustment tool, rotate chain tension screw to take plunger backward & lock it.
- Remove chain tensioner mounting bolts (02 nos) by using 8 mm spanner and take out chain tensioner.



- Remove cylinder head cover mounting bolts (04 nos) with 8 mm spanner.
- Take out cylinder head cover.

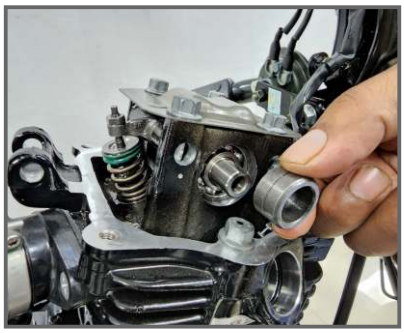


Check TDC position.

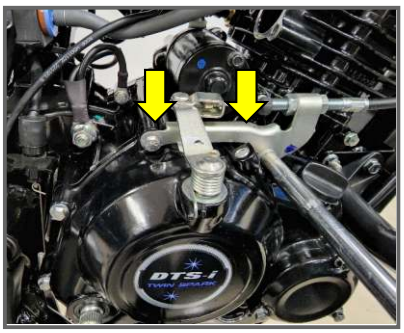
- Align magneto rotor mark with respect to crankcase LH mark.
- Check cam sprocket marks from RH side.

- Using cam sprocket holder tool, remove cam sprocket allen bolt with 6 mm allen key.
- Take out cam sprocket allen bolt along with washer.

- Take out Cam sprocket and collar cam sprocket.
- Tie cam chain with soft copper wire.

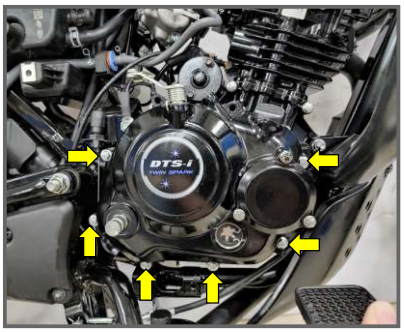


- Remove kick lever mounting bolt with 12 mm spanner and take out kick lever.



- Remove clutch cable bracket mounting bolts (2 nos) with 8 mm T Spanner
- Remove clutch cable connected to clutch release shaft.

- Remove Rider RH footrest (Stay RH) mounting bolts (02 nos) with 12 mm spanner for ease of clutch cover removal.



- Remove clutch cover mounting bolts (6 nos) with 8 mm T spanner & take out clutch cover.

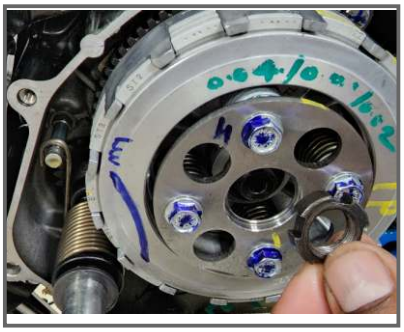
- Remove dowels (2 nos) and clutch cover gasket

- Remove push rod & clutch release shaft assembly

- Remove plunger from Crankshaft

- Remove Clutch bearing.
- Using primary gear holder special tool, loosen Primary gear drive nut with 19 mm spanner.

- Using primary gear holder & clutch nut special nut, remove clutch nut (LH type threading).



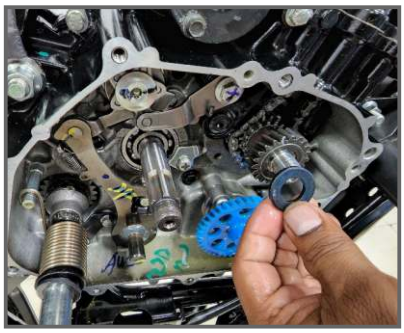
Take out:
- Clutch nut
- Plain washer
- Belleville washer

- Take out clutch stack complete

- Take out washer & Clutch housing complete

- Take out clutch spacer & washer.

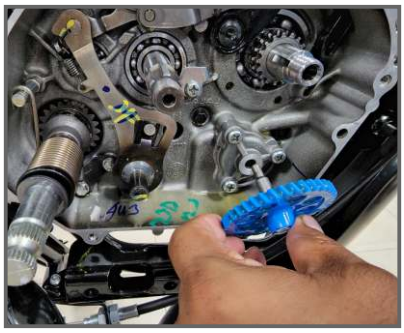
- Take out Primary gear nut & washer.



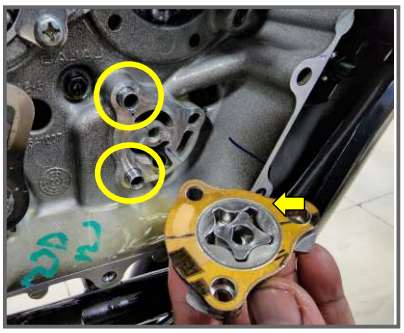
- Take out Primary gear.

- Take out key & spacer.

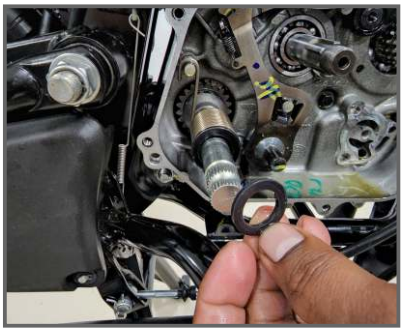
- Take out Cam chain
- Remove oil pump driven gear.



- Remove oil pump mounting screws (3 nos) with Philips head screwdriver & take out pump.



- Remove oil pump dowels (02 nos) & gasket



- Remove washer from kick shaft

- Remove kick shaft spring from spring mounting rod & take out kick shaft.

- Take out washer

- Remove inhibitor complete gear shift mounting nut with 10 mm T Spanner.

Take out inhibitor complete gear shift assembly.

- Inhibitor bolt
- Inhibitor
- Washer
- Spring

- Remove lever gear shift mounting bolt with 8 mm spanner & take out lever gear shift assembly.

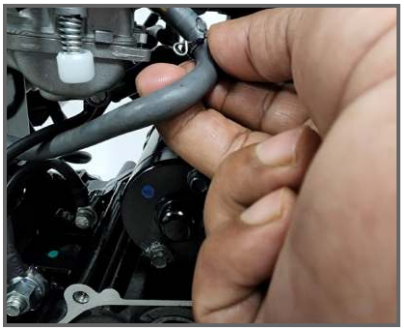
- Take out lever complete gear shift (LCGS).

- Remove cam drum change mounting bolt with 5 mm allen key & take out cam drum change with 4 pins.

Cylinder Head/ Block-Piston Removal on Vehicle

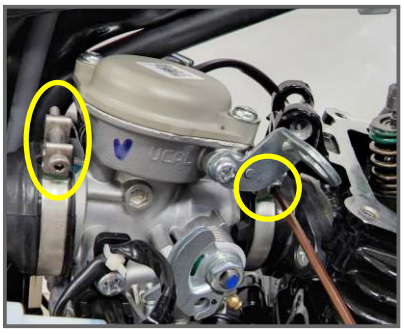
- Remove Fuel tank as explained in “Magneto Side all parts removal SOP”
- Remove Magneto side parts as explained in “Magneto Side All Part Removal on Vehicle SOP”
- Remove cam sprocket as explained in “Clutch side parts all parts /Cam chain Removal on Vehicle SOP”

- Remove grommet from throttle cable bracket & take out throttle cable from throttle drum.

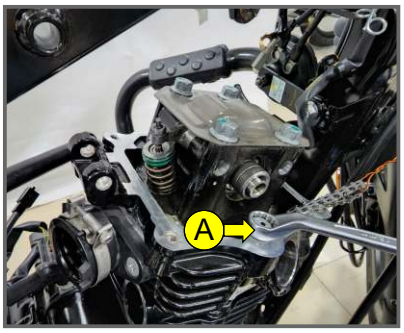


- Pull out purge valve pipe clip & remove purge valve pipe from carburetor.
- Remove Air solenoid coupler connection.

- Remove Auto choke coupler connection.
- Remove TPS coupler connection.



- Loosen both clamps of carburetor using 3 mm allen key.
- Take out carburetor assembly.



- Remove cylinder head mounting bolt (A) using 12 mm spanner.

- Loosen silencer front mounting bolts using 12 mm spanner.
- Take out silencer front mounting nuts.

Skill tip:

Only Silencer mounting nuts to be removed, Silencer mouth to be pulled slightly but not to be removed. This skill tip is applicable during cam shaft/Rocker arm removal on vehicle only for easy removal of plate cylinder head bolts.

- Remove cylinder head mounting bolts (4Nos) with 12 mm spanner in criss-cross pattern.

Skill tip: While removing Cylinder head mounting bolt H (RH side rear bolt) as shown in photograph, tilt bolt H slightly towards RH side and remove the bolt.

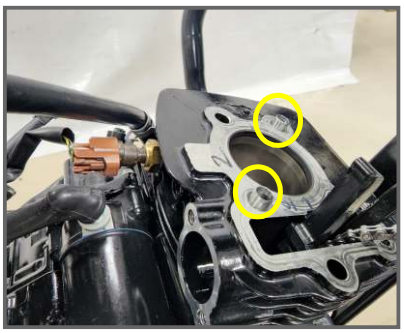
- Take out plate cylinder head.

- Using rocker arm shaft removing tool, remove rocker arm shaft of both inlet & outlet side.
- Take out rocker arm (2 nos).

- Remove camshaft circlip.
- Tale out camshaft.

- Remove Oxygen sensor coupler connection.
- Remove Silencer mounting bolt on RH stay by using 8 mm allen key.
- Take out silencer assembly.

- Take out Cylinder head assembly.
- Take out cylinder head gasket.



- Take out dowels (02 nos).

- Remove engine temperature sensor coupler connection.
- Remove engine temperature sensor with washer using special tool.

- Take out chain guide (exhaust side)
- Take out Cylinder block.

- Take out cylinder block gasket.
- Take out dowels (02 nos).

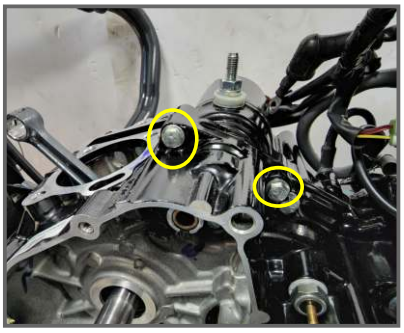
- Cover crankcase bore with clean lint free cloth.
- Remove piston pin circlip.
- Remove piston pin using piston pin removal tool and tale out piston assembly.

- Remove chain guide (inlet side) mounting bolt by using 5 mm allen key and take out guide.

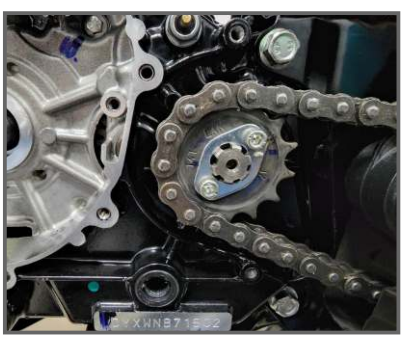
Crankcase (Engine) Assembly Removal from Vehicle

- Remove Magneto side & Clutch side parts “Magneto Side all parts removal SOP”.
- Remove Cylinder Head & Block piston as explained in “Cylinder Head/ Block-Piston Removal on Vehicle”

- Pull out rubber grommet and take out starter motor ring terminal by removing it’s nut using 10 mm spanner.



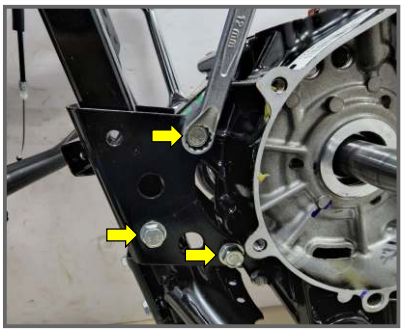
- Remove starter motor mounting bolts (2 nos) using 8 mm spanner and take out starter motor.
- Remove earthing connection by using 8 mm spanner.



- Remove output sprocket mounting bolts (2 nos) using 4 mm allen key.
- Take out plate output sprocket & output sprocket.

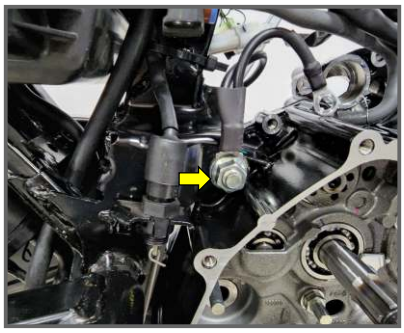
- Remove belly pan mounting bolts (2 nos) by using 5 mm allen key & take out belly pan.

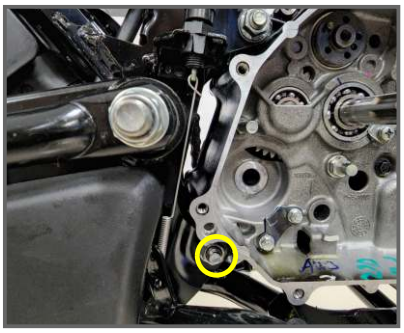
- Remove Leg guard lower mounting bolt by using 12 mm spanner



- Remove Engine front mounting bolts (3 Nos) (hold head and remove nut) using 12 mm spanner.

- Rear Engine rear top mounting nut holding bolt head with 14 mm spanner. Take out earthing cable.



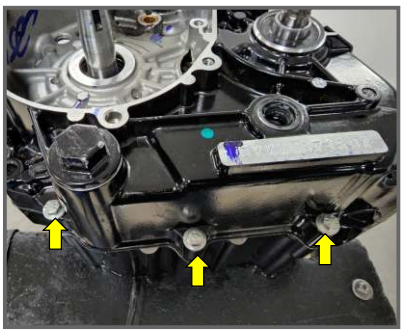


- Rear Engine rear bottom mounting nut by 14 mm spanner.

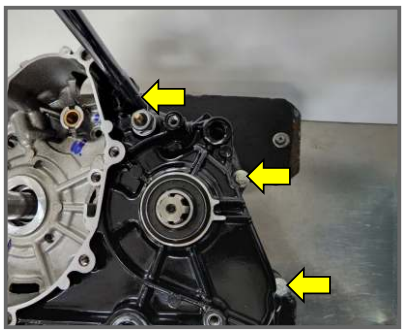
- Take out engine mounting bolts(2 Nos) & remove crankcase assembly from frame.

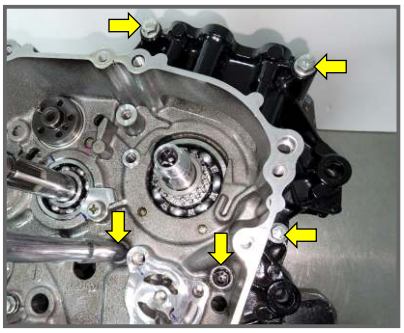
Crankcase Splitting

- Remove LH crankcase joining inner side bolt (1 nos) using 8 mm spanner.



- Remove LH crankcase joining bolts (6 nos) using 8 mm spanner.
- All LH side bolts (7 nos) are of same length.





Remove RH crankcase joining bolts:

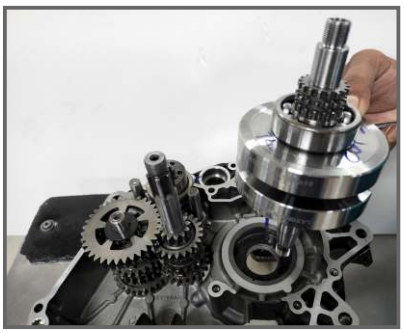
- Inner side bolt (2 nos) using 8 mm spanner.
- RH crankcase joining bolts (3 nos) using 8 mm spanner.

Note: Inner side bolts (02 nos) are of black color.

- Crankcase upper bolts are longer in length, while side bolt is of short length.

- Take out Crankcase RH

- Take out Crankcase gasket & dowels (02 nos).

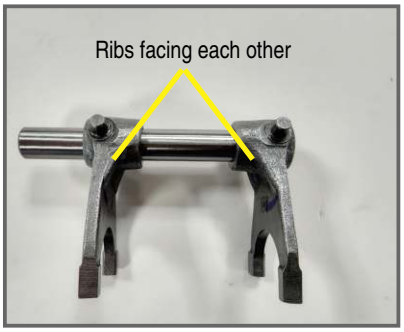


- Take out crankshaft & damper.

- Remove shaft input fork gear shift.

- Remove shaft output fork gear shift
- Separate out fork gear shift from gear change drum and take out drum gear shift..

- Take out input fork gear shift.
- Take out output fork gear shift (2 nos).



Note: While fitment of output fork gear shift, ribs must face each other as shown in fig.

- Take out output shaft washer (thick).

- Takeout input shaft & output shaft assembly together.

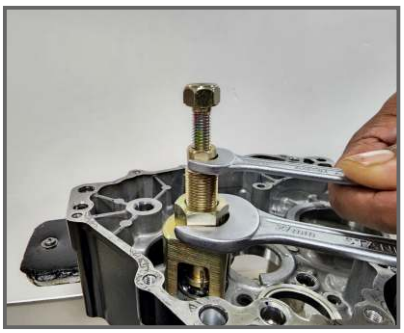
- Takeout input shaft bottom side washer (thin).

- Remove oil seal output shaft.

- Remove output shaft bearing (LH crankcase) using bearing driver set.

- Remove input shaft bearing lock plate using screwdriver and take out input shaft bearing lock plate.

- Remove input shaft bearing using bearing driver set.



- Remove output shaft bearing from RH crankcase using bearing extractor tool.

Engine Assembly

Skill tips before crankcase assembly :

- Engine oil passages:
- Ensure that oil passages are clear by pumping engine oil into passage.
- Apply low compressed air through the oil passage in reverse direction of oil flow for cleaning.

- Cleaning of all jets in engine.
- During Engine overhaul, always clean all jets in engine by applying low pressure are in direction opposite to engine oil flow.

Gaskets / O Rings / Oil seals replacement

- Always replace gaskets / O rings / Oil seals with new one whenever engine is dismantled

Foreign particles free engine parts :

- Ensure all the foreign particles are removed from engine parts

Lubrication of engine parts :

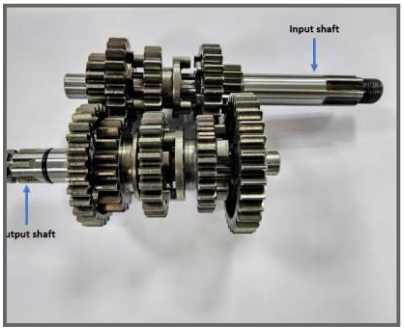
- Lubricate gears/Shafts/Bearings/Block piston assembly/ Camshaft/ Rotor with recommended engine oil by rotating the parts

Crankcase Assembly

- Fit all the bearings in both crankcase using Bearing Driver set.

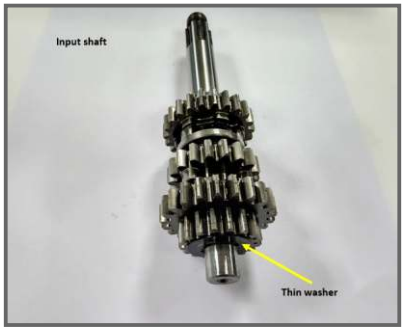
- Prefit input shaft bearing lock plate mounting bolt & tighten to recommended torque.

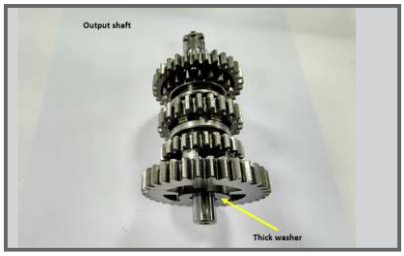
- Assemble input & output shaft assembly with gears in LH crankcase



Skill Tip:

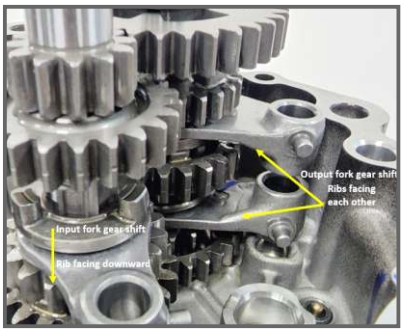
- When fitted on crankcase LH –
- Thin washer on bottom side of input shaft
- Thick washer on top side of output shaft.





Assemble output & input fork gear shifts:

- Input fork gear shift: 1 Nos
- Output fork gear shift: 2 Nos.



Skill Tip:

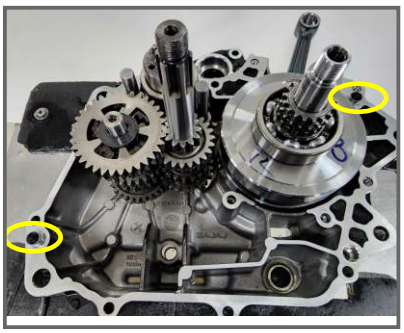
- Input & Output fork gear shift fitment as shown in photograph:
- Input fork gear shift: rib facing downward
- Output fork gear shift: ribs facing towards each other.

- Assemble gear change drum

- Assemble shaft input & output fork gear shift.
- Before joining crankcase LH & RH, ensure that transmission gears are in neutral position

- Fit crankshaft damper

- Fit crankshaft assembly.

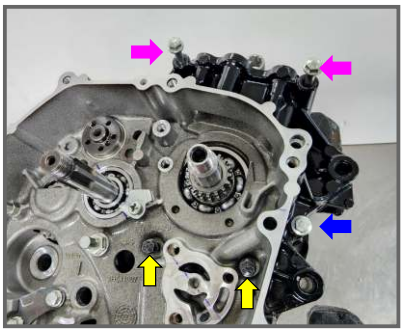


- Fit dowels (2 nos) on crankcase.

- Fit new crankcase gasket.

  Ensure crankcase face is clean before application of new gasket.

- Fit RH Crankcase on LH crankcase.

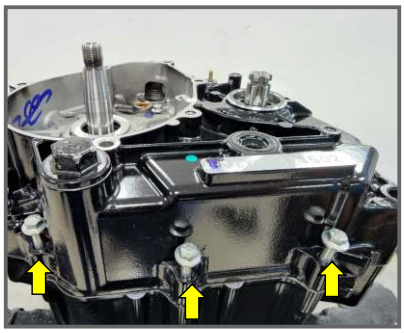


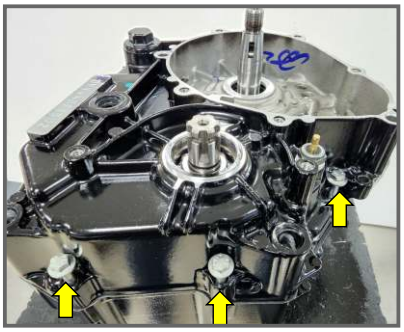
Prefit RH crankcase mounting bolts (5 nos) as shown in photograph & tighten to recommended torque.

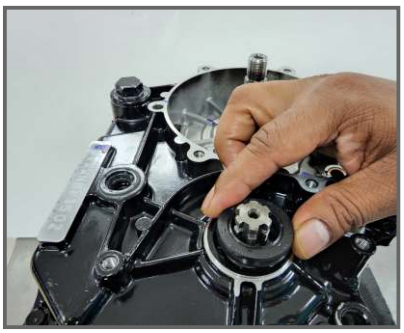
- 2 nos: Inner bolt – Black color (shown by Yellow color).
- 2 nos: Long bolts–Outer side (shown by Pink color)
- 1 nos: short bolt – Outer side (shown by Blue color)

- Change crankcase assembly position so that LH crankcase is on top side.
  Prefit LH crankcase mounting bolts (7 nos) as shown in photograph and tighten to recommended torque.
- 1 nos: Inner bolt – shown by pink color.
- 6 nos: Outer side – shown by yellow color

Note: all 7 bolts are of same size.







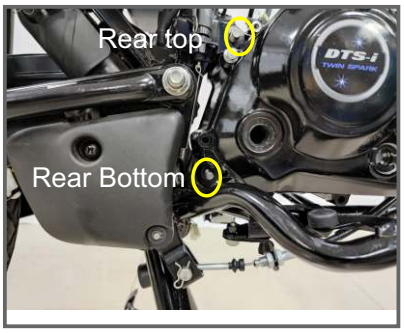
- Fit output shaft oil seal.
- Fit clutch cover and magneto cover on crankcase assembly to avoid any dust entry and cover crankcase bore with clean lint free cotton cloth.

Note:

- Only pre-fit both covers bolts(2 Nos per cover in crisscross pattern).
- Do not fit both cover gaskets.

- Place crankcase assembly on jack and align as shown in photograph.

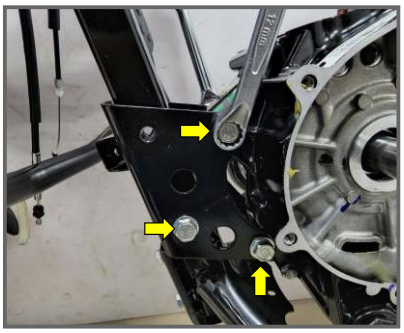
- Lift the engine assembly and place on cradle



- Fit crankcase rear top & bottom mounting bolts

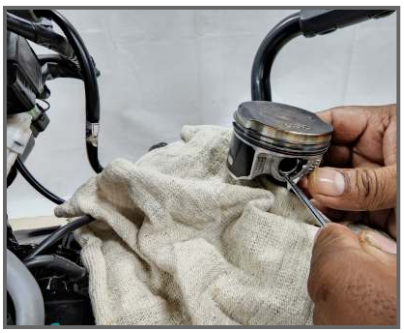
Note:

Ensure that earthing connection is fitted before fitting nut and tightening Rear upper Engine mounting bolt.



- Fit Engine front mounting bolts (03 nos) as shown in photograph.

- Align Leg guard and fit mounting bolt.



- Remove clutch cover & magneto cover from crankcase assembly.

- Assemble piston assembly, piston pin & new circlips.
- Take out cloth.

- Assemble dowels (2 nos) & new cylinder block gasket.

- Ensure that no any foreign particles are fallen in crankcase bore.

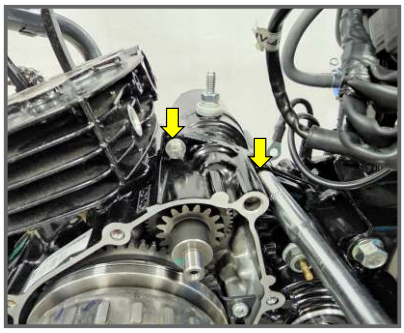
- Assemble cylinder block & cover it with clean lint free cotton cloth

Magneto side parts assembly

- Fit Gear drive starter.

- Assemble rotor key, rotor assembly with one way clutch & gear starter clutch on crankshaft assembly.
- Apply Loctite 243 to rotor mounting nut. Using rotor holder, prefit rotor mounting nut with thick spacer & tighten to recommended torque(5 – 5.5 Kgf-m).

- Fit gear starter clutch stopper plate mounting screw
- Assemble starter motor. Prefit starter motor mounting bolts & tighten to recommended torque.



Fit starter motor cable ring terminal followed by plain washer, spring washer & 10 mm nut & tighten as per recommended torque.

- Fit rubber boot properly covering the starter motor terminal.

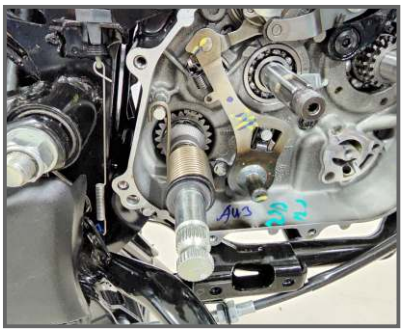
Clutch side parts assembly

- Assemble special bolt guide chain slack side with chain guide. Apply Loctite 243 to special bolt guide. Prefit special bolt guide & tighten to recommended torque (1 – 1.1 Kgf-m).
- Fit cam drum change location pins (4 nos)

- Assemble guide gear. Apply Loctite 243 to guide gear bolt. Prefit guide gear mounting bolt & tighten to recommended torque (1 – 1.1 Kgf-m).

- Assemble lever complete gear shift(LCGS).

- Assemble spring inhibitor, washer & inhibitor. Prefit inhibitor mounting bolt & tighten to recommended torque.



- Assemble plain thin washer towards Gear pinion kick and thick washer towards outer side and fit kick shaft assembly.

- Assemble oil pump dowels (2 nos) & Oil pump gasket.

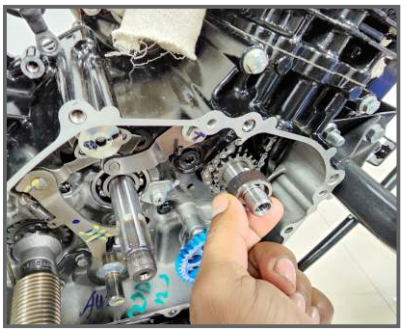
- Assemble oil pump. Prefit oil pump mounting bolts & tighten to recommended torque.

- Ensure dot marks on rotor as shown in photograph.

- Assemble gear oil pump. Ensure gear is rotating freely.

- Fit Chain guide exhaust side.

- Insert cam chain.
- Tie cam chain using copper wire.

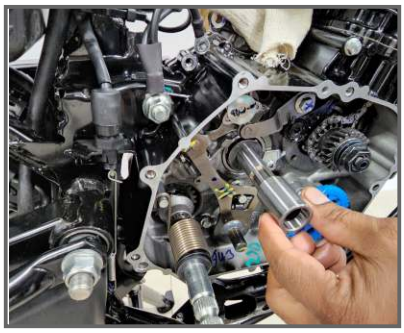


- Assemble spacer for primary gear.

- Apply Loctite 243 to primary gear nut & assemble key, primary gear, washer & it's mounting nut.

- Insert plunger in crankshaft.

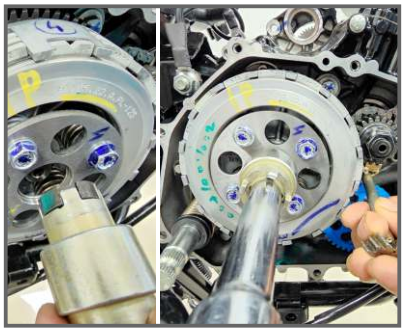
- Assemble washer & clutch spacer.



- Assemble clutch housing & thick washer.

- Insert clutch stack.

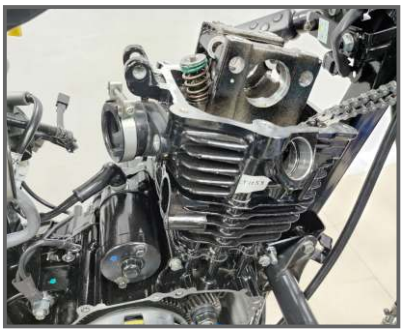
- Assemble clutch washer. Apply Loctite 243 to clutch nut & prefit clutch nut.
- Using primary gear holder & special clutch nut tool, tighten clutch nut to recommended torque(5 – 5.5 Kgf-m).
- Using primary gear holder tool & & 19 mm spanner, tighten primary gear nut to recommended torque(6.5 – 7 Kgf-m).



- Assemble clutch thrust bearing.

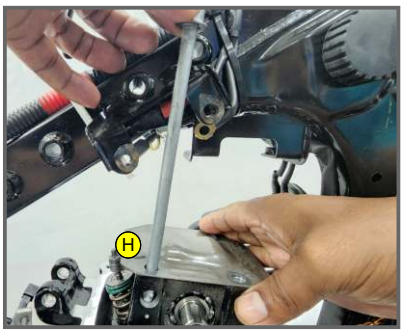
Top side assembly

- Remove cotton cloth from block cylinder.
- Assemble dowels (2 nos) and new cylinder head gasket.



- Assemble head cylinder assembly.
- Fit camshaft assembly & camshaft circlip.

- Assemble rocker arm & rocker arm shaft of both inlet & outlet side.

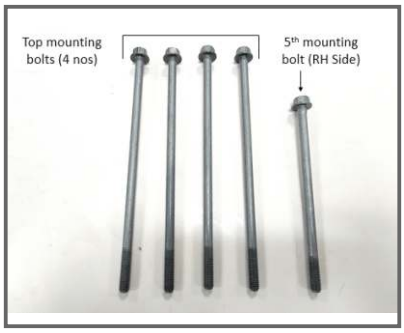


- Pre fit cylinder head mounting bolts (4 nos) & tighten as per recommended torque.

Skill tip:

While fitting Cylinder head mounting bolt H, tilt bolt H slightly towards RH side and fit the bolt.

- Prefit & tighten cylinder head 5th bolt as per recommended torque.



- Assemble collar cam sprocket on camshaft.
- Remove copper wire tied to cam chain.
- Assemble cam sprocket on cam chain & assemble on camshaft assembly.

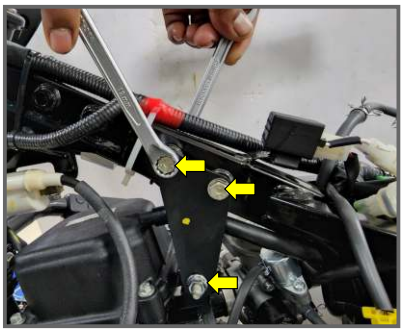
- Apply Loctite 243 to cam sprocket bolt.
- Prefit cam sprocket mounting bolt & tighten to recommended torque (1.8 Kgf-m) using cam sprocket holder tool.

- TDC Confirmation:
- Ensure cam sprocket mark are aligned.
- Ensure rotor mark is aligned with mark on crankcase.

- Check & adjust valve tappet clearance (both inlet & exhaust side) as per recommended specification using tappet setting special tool.

- Assemble cover head cylinder. Prefit it's mounting bolts (4 nos) & tighten to recommended torque.

- Assemble breather pipe in cylinder head cover and fit breather pipe clamp.



- Assemble engine top mounting bracket. Prefit it's bolts (03 nos) & tighten to recommended torque.

- Assemble chain tensioner. Unlock to load & remove chain tensioner adjustment tool.

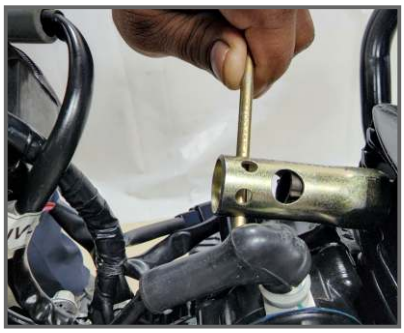
- Assemble earthing connection.

- Assemble carburettor assembly & throttle cable.
- Connect following coupler connections of carburettor assembly:

- TPS coupler connection
- Auto choke coupler connection
- Air solenoid coupler connection
- Purge valve pipe

- Assemble sleeve spark plug & fit it's grub screw.
- Using special tool, fit LH & RH side spark plugs.
- Fit both caps spark plug.

- Assemble temperature sensor using special tool.
- Fit temperature sensor coupler.



- Assemble dowels (2 Nos) & new gasket clutch cover

- Assemble clutch cover, bracket clutch cable with cable clutch.
- Prefit clutch cover mounting bolts & tighten to recommended torque.

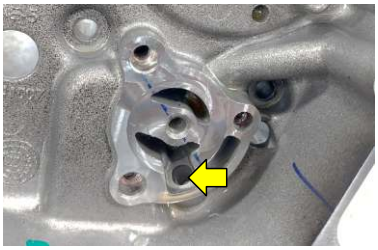
- Assemble dowels (2 Nos) & new gasket magneto cover

- Prefit magneto cover mounting bolts & tighten to recommended torque.

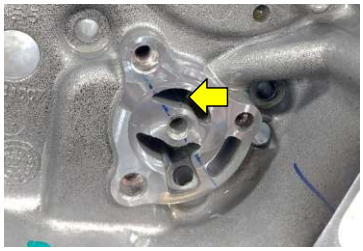
- Fit all remaining parts.

- Refill fresh recommended BS VI 20W50 engine oil (1100 ml).

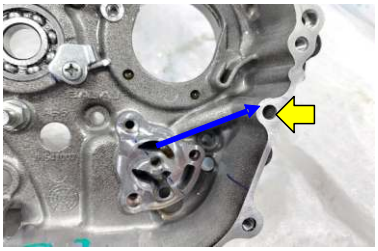
Oil Strainer



Oil pump Inlet



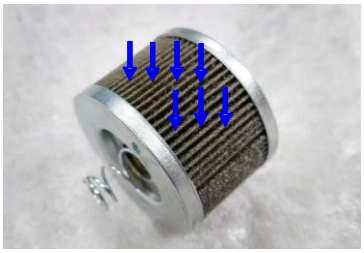
Oil pump outlet



Oil pump outlet to RH Crankcase hole

Inlet hole of engine oil filter chamber

Entry in engine oil filter chamber



Oil filtration through engine oil filter

Filtered Oil Entry hole in clutch cover

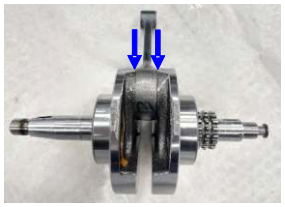
Clutch cover inlet hole

Towards Crankshaft through Plunger

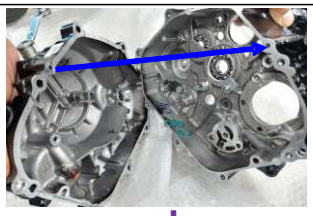
Exit from jet for clutch lubrication

Clutch cover top hole

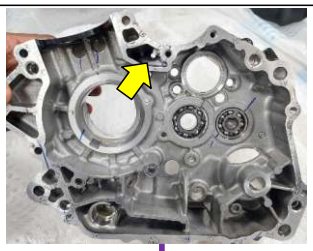
Exit from con rod slots for piston lubrication



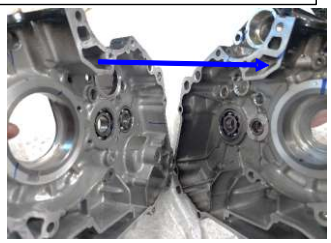
From clutch cover to RH crankcase



RH crankcase Inner oil gallery



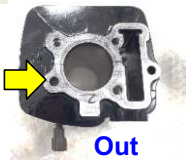
From RH crankcase to LH Crankcase



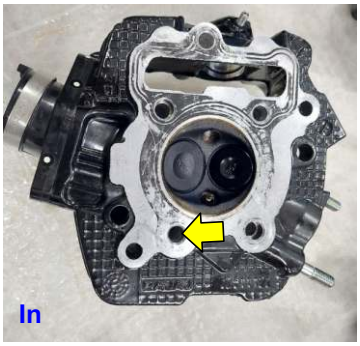
From LH Crankcase to Top face

Entry in head-block mounting bolt hole

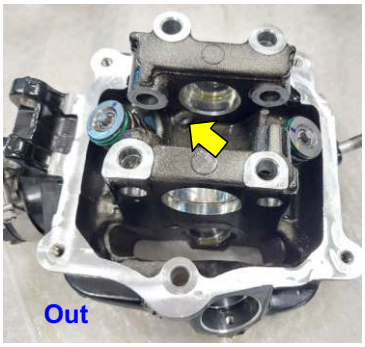
Cylinder Block In & out from block



Cylinder Head In



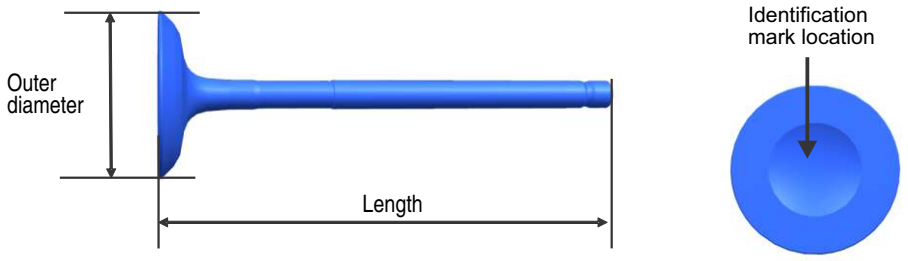
Cylinder Head Out

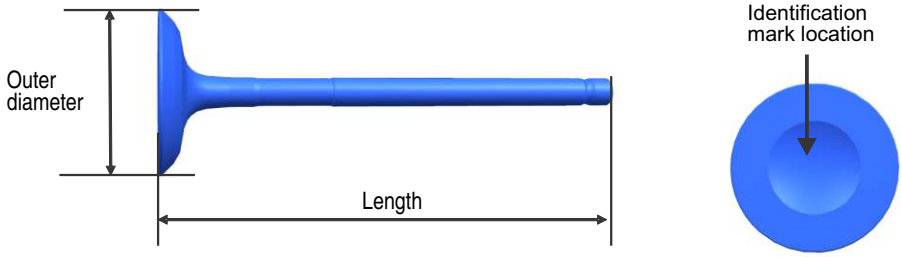


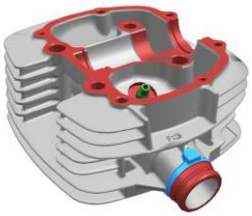
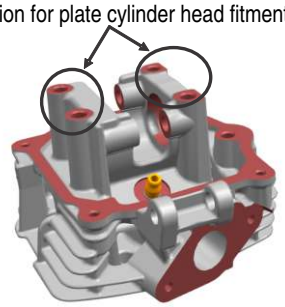
Loctite Application	
Part Name	**Type of Loctite**
Cam sprocket allen bolt	Loctite 243
Pickup coil screws	Loctite 243
Gear stopper screw (gear starter clutch)	Loctite 243
Kick guide bolts	Loctite 243
Output sprocket bolts	Loctite 243
Oil pump screw	Loctite 243
Allen bolt securing guide gear on shift drum	Loctite 243
Screw securing stopper for input shaft bearing	Loctite 243
Special bolt guide chain slack side	Loctite 243
Nut inhibitor mounting	Loctite 243
Nut clutch mounting	Loctite 243
Stator mounting bolts	Loctite 243
Stator harness bracket screw	Loctite 243

Engine oil application	
Part Name	**Engine oil**
All ball bearings & needle roller bearing	SAE 20W50
Crank shaft big end bearing	SAE 20W50
Transmission shaft & gear teeth	SAE 20W50
Fork shaft	SAE 20W50
Drum groove & cam drum change	SAE 20W50
Block /piston skirt	SAE 20W50
Rocker assly. & Rocker pivot bearing	SAE 20W50
Cam shaft lobes	SAE 20W50
Body starter clutch rollers	SAE 20W50
Small end connecting rod & piston pin	SAE 20W50
Clutch damper spring	SAE 20W50
Cam chain	SAE 20W50
Oil pump rotor while assly.	SAE 20W50

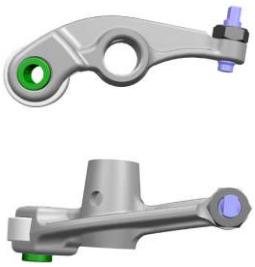
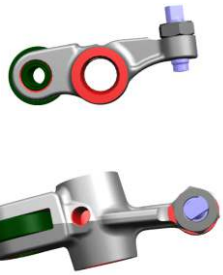
Grease application	
Engine Valve stem	AP Grease
Gear shifter shaft	AP Grease
Clutch lever	AP Grease
Oil seals lip	AP Grease
Fork bushes	AP Grease

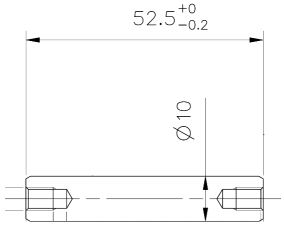
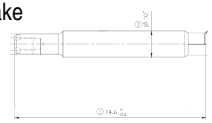
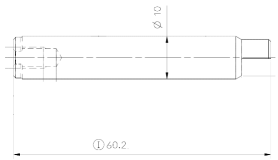
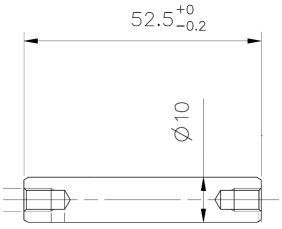
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Valve Intake		
Photograph			
Part Number	JE511267, Qty : 2 Nos	DH102535, Qty : 1 NOS	36JH0028, Qty : 1 Nos
Description	• Outer diameter : Ø 20.5 mm • Length : 87.34 mm • Identification mark : 2BI	• Outer diameter : Ø 29 mm • Length : 92.3 mm • Identification mark : 19I	• Outer diameter : Ø 27.5 mm • Length : 80.48 mm • Identification mark : B5AI

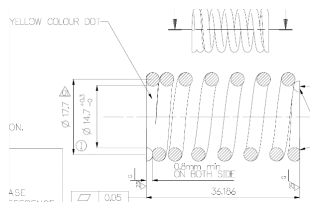
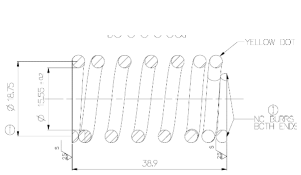
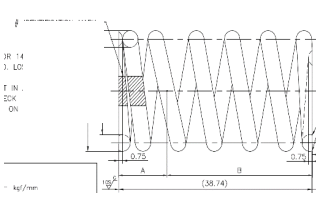
Part Name	Valve Exhaust		
Photograph			
Part Number	JE511268, Qty : 2 Nos	DS101024, Qty : 1 Nos	36JH0028, Qty : 1 Nos
Description	• Outer diameter : Ø 17.5 mm • Length : 87.2 mm • Identification mark : 2BE	• Outer diameter : Ø 22.5 mm • Length : 91.05 mm • Identification mark : DS	• Outer diameter : Ø 24 mm • Length : 79.63 mm • Identification mark : B5A

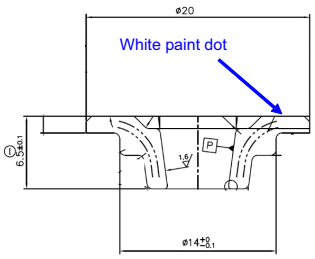
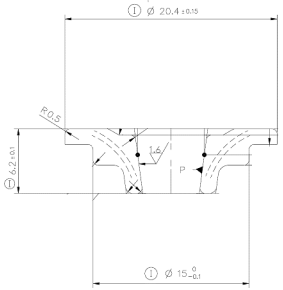
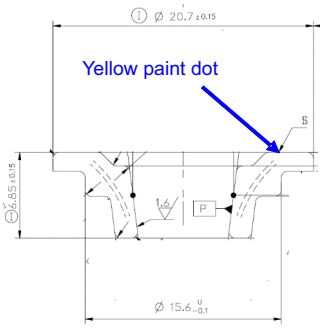
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Cylinder Head		
Photograph			Provision for plate cylinder head fitment 
Part Number	JE511160	DH102533	JZ511122
Description	• 4 valve design • Curved fins • Without provision for plate cylinder head fitment	• 2 Valve design • Straight fins • Without provision for plate cylinder head fitment	• 2 Valve design • Straight fins • With provision for plate cylinder head fitment

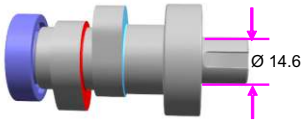
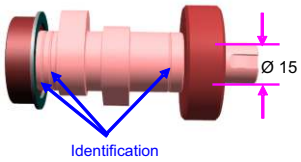
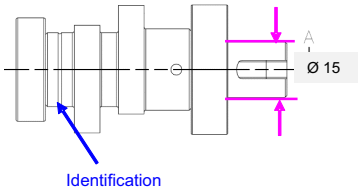
Part Name	Assembly Cover Cylinder Head		
Photograph			
Part Number	JE511156	DK102023	JZ511021
Description	Rocker arm fitment in cylinder head	Rocker arm fitment in cover cylinder head	Rocker arm fitment in cylinder head

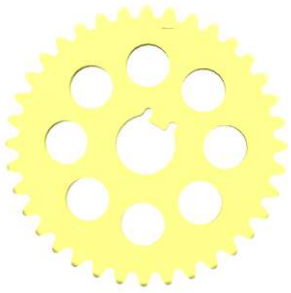
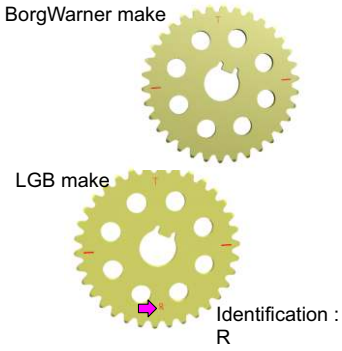
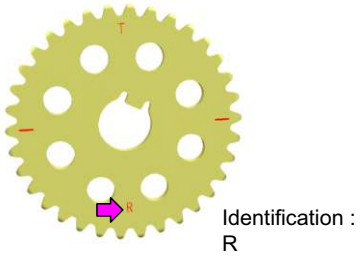
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Rocker Arm Assembly		
Photograph			
Part Number	JE511269	Dk101755	JH511210
Description	Compatible for 4 valve design.	Compatible for 2 valve design.	Compatible for 2 valve design

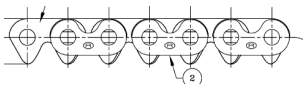
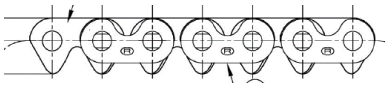
Part Name	Shaft Rocker Arm		
Photograph		Intake  Exhaust 	
Part Number	DK101751, Qty – 2 Nos	DK102023	JZ511021
Description	Length : 52.5 mm	Length : Intake – 74.6 mm Exhaust – 60.2 mm	Length : 52.5 mm

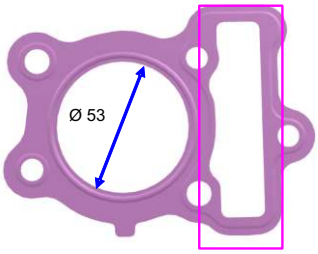
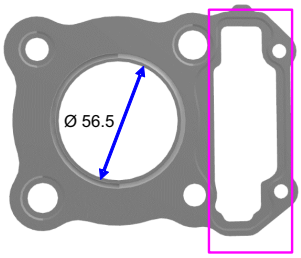
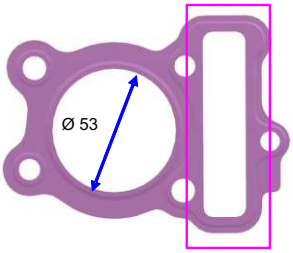
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Spring Valve		
Photograph			
Part Number	JE511216, Qty – 4 Nos	JF511217, Qty – 2 Nos	JZ511202, Qty – 2 Nos
Description	Length : 36.18 mm Inner diameter : Ø 14.7 mm Wire diameter : Ø 3 mm Identification mark : Yellow dot over coils	Length : 38.9 mm Inner diameter : Ø 15.5 mm Wire diameter : Ø 3.2 mm Identification mark :Yellow dot over coils	Length : 38.74 mm Inner diameter : Ø 16.2 mm Wire diameter : Ø 3 mm Identification mark : Yellow paint to close coil end

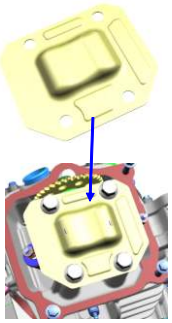
Part Name	Retainer Valve		
Photograph			
Part Number	JD511205, Qty – 4 nos	JF511214, Qty – 2 nos	DY511202, Qty – 2 nos
Description	• Diameter : Ø 20 mm • Diameter : Ø 14 mm • Height : 6.5 mm • Identification : White paint dot	• Diameter : Ø 20.4 mm • Diameter : Ø 15 mm • Height : 6.2 mm • Identification : Not present	• Diameter : Ø 20.7 mm • Diameter : Ø 15.6 mm • Height : 6.85 mm • Identification : Yellow paint dot

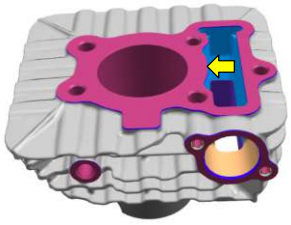
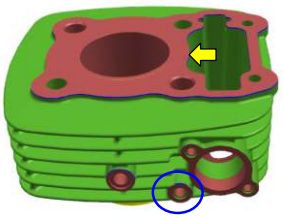
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Camshaft Assembly		
Photograph			
Part Number	JE511265	PD511256	Jz511226
Description	• Diameter : Ø 14.6 mm • Identification mark : Not present	• Diameter : Ø 15 mm • Identification mark : Groove at 3 places	•Diameter : Ø 15 mm •Identification mark : Groove

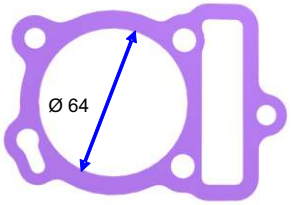
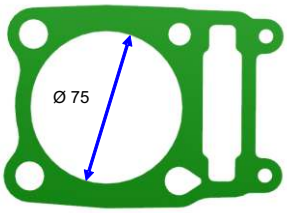
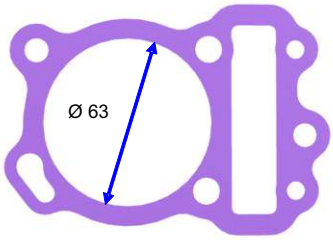
Part Name	Cam Sprocket		
Photograph			
Part Number	JE511234	JE511237 – BorgWarner make PF511258 – LGB Make	PF511258
Description	Number of teeth : 36	Number of teeth : 34	Number of teeth : 34

Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Cam Chain		
Photograph		BorgWarner make  LGB make 	
Part Number	JE511233	PD511084 – BorgWarner make DH103758 – LGB make	DY511208
Description	Number of links : 102	Number of links : 100	Number of links : 96

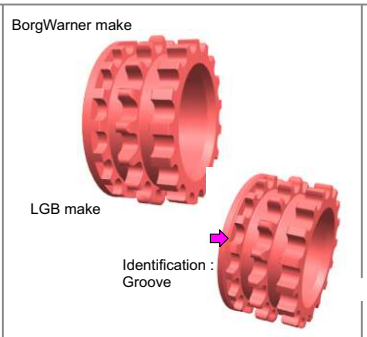
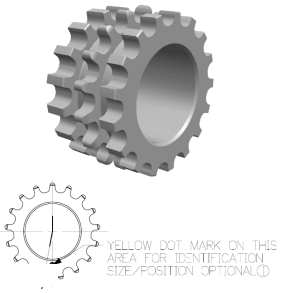
Part Name	Gasket Cylinder Head		
Photograph			
Part Number	JE511170	DH102230	PA511098
Description	• 5 holes • Diameter : Ø 53 mm	• 6 holes • Diameter : Ø 56.5 mm	• 5 hole • Diameter : Ø 53 mm

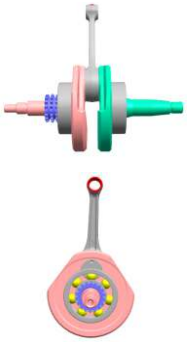
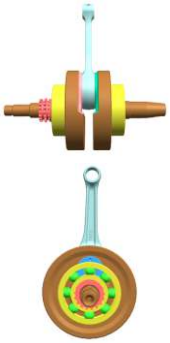
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Plate Cylinder Head		
Photograph	NA	NA	
Part Number	NA	NA	PA511039
Description	NA	NA	With plate cylinder head

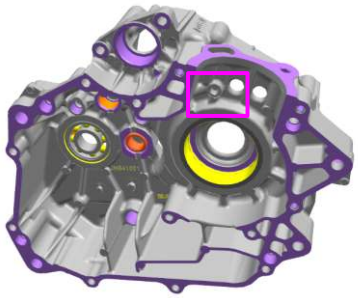
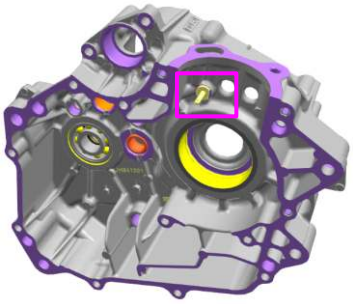
Part Name	Block cylinder (Sub part of Kit Block piston)		
Photograph			
Part Number	36JF0226	36DH4262	36DY0032
Description	• Without ribs • Without hole for oil pipe fitment	• Without ribs • With hole for oil pipe fitment	• With ribs • Without hole for oil pipe fitment

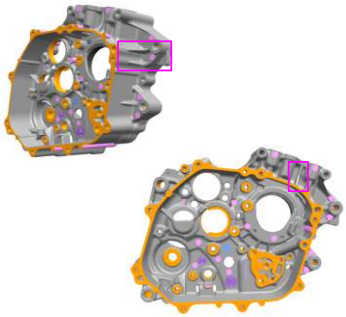
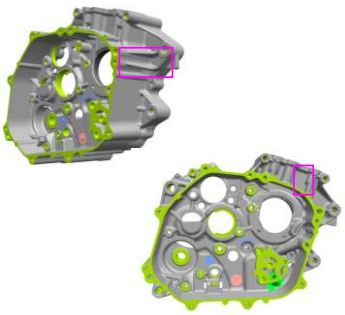
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gasket Block Cylinder		
Photograph			
Part Number	JE521030	DK101063	JH521007
Description	• Diameter : Ø 64 mm	• Diameter : Ø 75 mm	• Diameter : Ø 63 mm

Part Name	Piston (Sub part of Kit Block piston)		
Photograph			
Part Number	36JF0226	36DH4262	36DY0032
Description	• 4 Valve cut out • Identification : K201B	• 2 valve cut out • Identification : K19	• 2 valve cut out • Identification : C101B

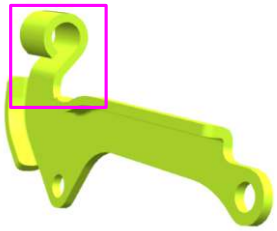
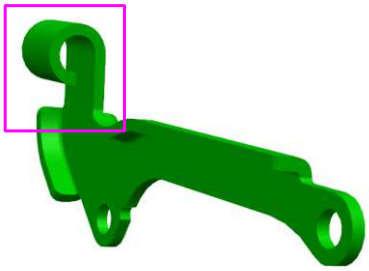
Model	Pulsar NS125	Pulsar 125	CT 125X ES Disc & CT 125X ES Drum
Part Name	Sprocket Crankshaft		
Photograph			
Part Number	JE531033	DK101068 - BorgWarner make DK102019 – LGB Make	PF531057
Description	Number of teeth : 18	Number of teeth : 17	Number of teeth : 17

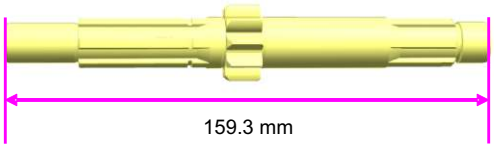
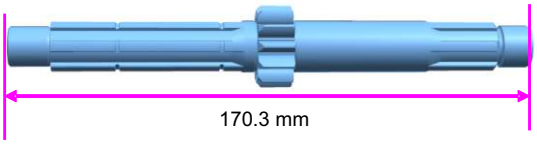
Part Name	Crankshaft Assembly		
Photograph			
Part Number	JE531054	Dh102540 - BorgWarner DH102565- LGB make	DY531008
Description	Design are different from each other		

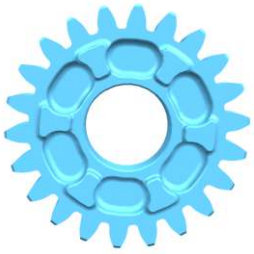
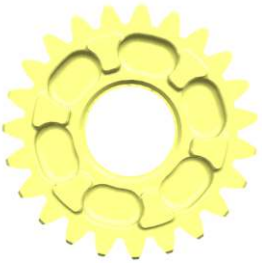
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Lever Brake Cam	
Photograph		
Part Number	PF541029	PF541066
Description	Without nozzle oil jet	With nozzle oil jet

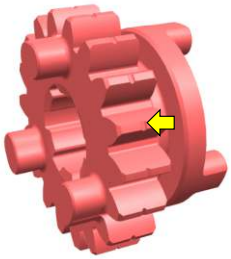
Part Name	Crankcase RH	
Photograph		
Part Number	JH541010	JH541007
Description	• Shorter ribs • With rib	• Longer ribs • Without rib

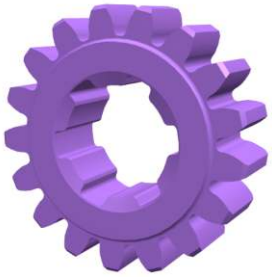
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Shaft Assembly Clutch release	
Photograph		
Part Number	JV541208	DY541213
Description	NA	Design is different than CT 110X

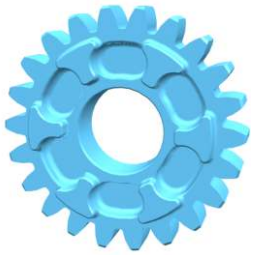
Part Name	Bracket Clutch Cable	
Photograph		
Part Number	PF541255	DY541215
Description	NA	Design is different than CT 110X

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Input Shaft	
Photograph		
Part Number	PA551002	JZ551010
Description	Total Length : 159.3 mm	Total Length : 170.3 mm

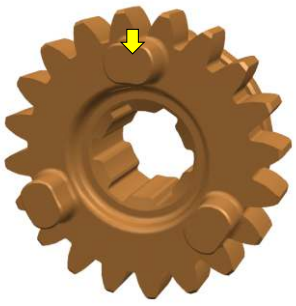
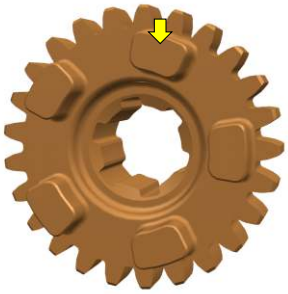
Part Name	Gear 4th Drive	
Photograph		
Part Number	PA551207	JZ551202
Description	Number of teeth : 22	Number of teeth : 23

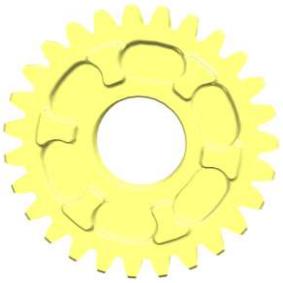
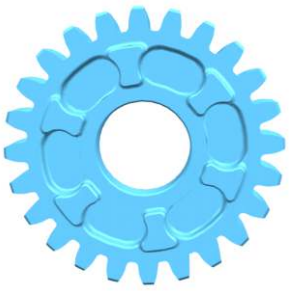
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear 3rd Drive	
Photograph		
Part Number	PF551201	JE551209
Description	• Number of teeth : 22 • Without groove on teeth	• Number of teeth : 18 • With groove on teeth

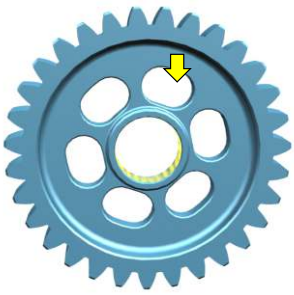
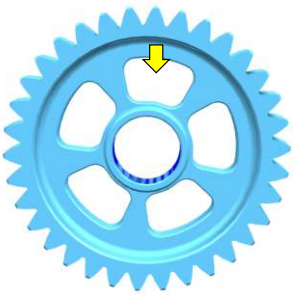
Part Name	Gear 2nd Drive	
Photograph		
Part Number	Pf551229	JE551200
Description	Number of teeth : 15	Number of teeth : 17

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear 5th Drive	
Photograph	NA	
Part Number	NA	JZ551213
Description	NA	Number of teeth : 22

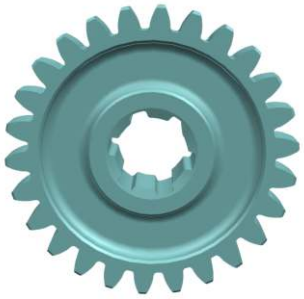
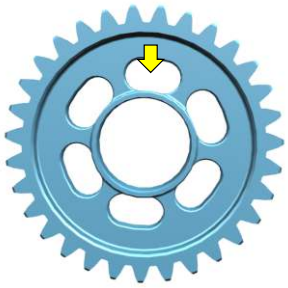
Part Name	Output shaft	
Part Number	PF551003	JZ551008
Description	Total Length : 123.2 mm	Total Length : 132.2 mm

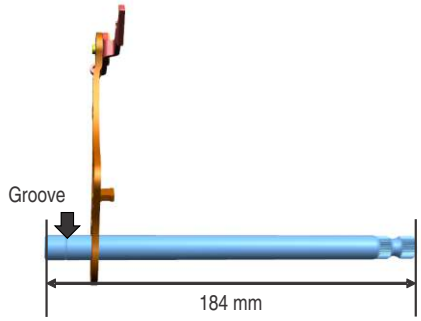
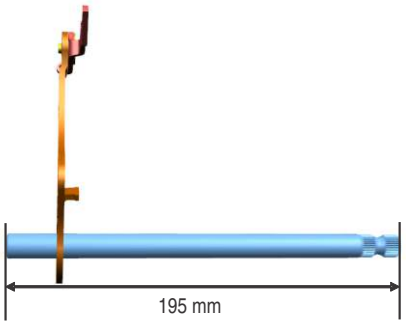
Part Name	Gear 4th Driven	
Photograph		
Part Number	PA551206	JH551211
Description	• Number of teeth : 20 • Number of lugs : 3	• Number of teeth : 25 • Number of lugs : 5

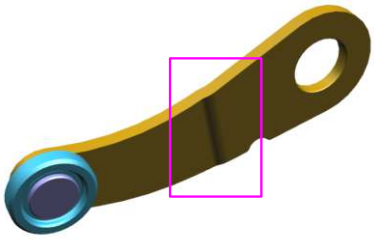
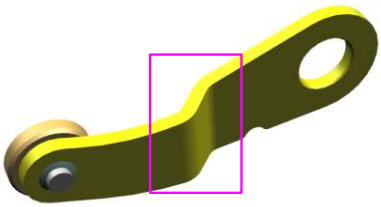
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear 3rd Driven	
Photograph		
Part Number	PF551204	JE551210
Description	Number of teeth : 27	Number of teeth : 24

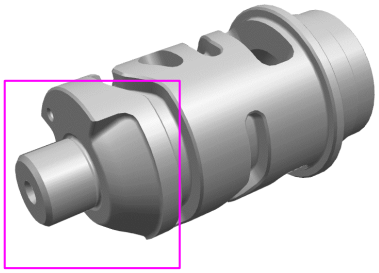
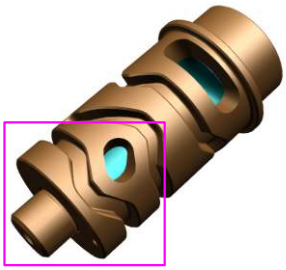
Part Name	Gear 1st Driven	
Photograph		
Part Number	PA551205	JE551215
Description	• Number of teeth : 31 • Number of slots : 6	• Number of teeth : 34 • Number of slots : 5

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear 5th Driven	
Photograph	NA	
Part Number	NA	JZ551211
Description	NA	Number of teeth : 20

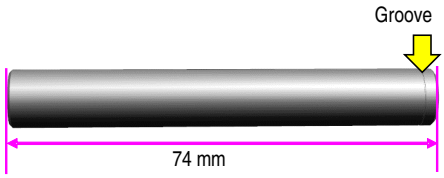
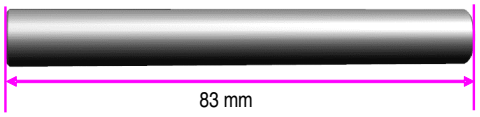
Part Name	Gear 2nd Driven	
Photograph		
Part Number	PF551203	JE551205
Description	• Number of teeth : 26 • Without slots	• Number of teeth : 31 • With 6 Nos slots

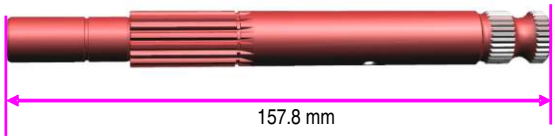
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Shaft Assembly Gear Shift (LCGS)	
Photograph		
Part Number	PF561200	JK561200
Description	• Total Length : 184 mm • With groove	• Total Length : 195 mm • Without groove

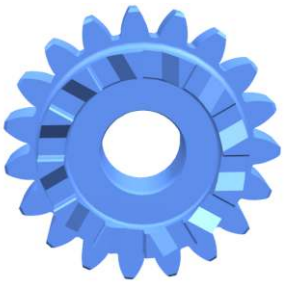
Part Name	Inhibitor Gear Shift	
Photograph		
Part Number	JH561200	PA561209
Description	NA	Design is different than CT 110X

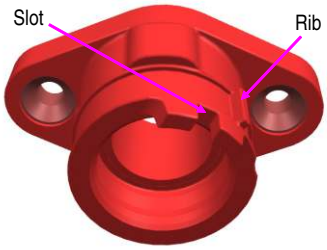
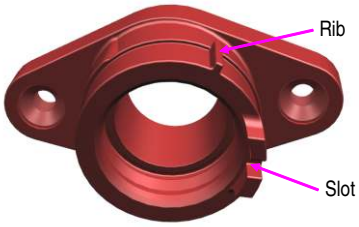
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear Change Drum	
Photograph		
Part Number	PF561001	PA561001
Description	NA	Design is different than CT 110X

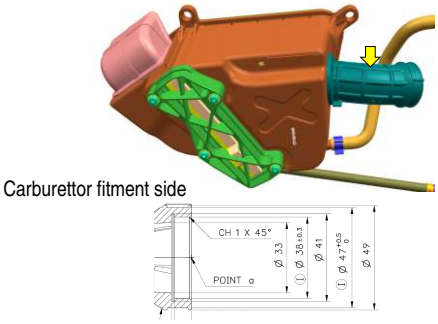
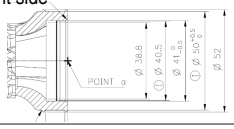
Part Name	Cam Drum Change	
Photograph		
Part Number	JA561002	JE561005
Description	NA	Design is different than CT 110X

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Shaft Fork Gear Shift	
Photograph		
Part Number	PF561002	JD561006
Description	• Total length : 74 mm • With groove	• Total length : 83 mm • Without groove

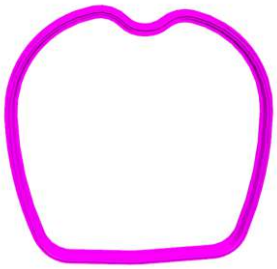
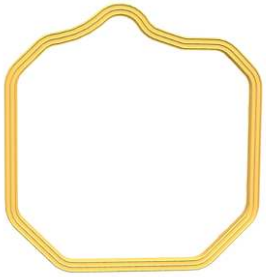
Part Name	Kick shaft	
Photograph		
Part Number	PF621003	PA621007
Description	Total length : 148.8 mm	Total length : 157.8 mm

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gear Kick Pinion	
Photograph		
Part Number	PF621004	PA621008
Description	Number of teeth : 19	Number of teeth : 21

Part Name	Intake Pipe	
Photograph		
Part Number	DY581410	DY581415
Description	NA	Rib & slot position is different than CT 110X

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Air Filter Assembly	
Photograph	 Carburettor fitment side	 Carburettor fitment side 
Part Number	DY581046	DY581056
Description	NA	Connecting tube is bigger than CT 110X

Part Name	Rotor Assembly	
Photograph		
Part Number	JB351033	JZ351028
Description	Without groove on bush magneto	With groove on bush magneto

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gasket Cover cylinder head	
Photograph		
Part Number	JV511012	JD511010
Description	NA	Design is different than CT 110X

Part Name	Carburetor	
Part Number	DY581215	DY581236
Description	Throttle position sensor - JB351800 (CTS Make)	Throttle position sensor - JD351800 (Flash make)

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Gasket Crankcase	
Part Number	36001062	JH541015
Description	Liquid gasket	Paper gasket

Frame

- Torque Value
- Service Limit
- Special Tools
- Important SOP
- Hose / Cable Routing
- Part Identification

Sr.No.	Parameter	Torque Value (Kgf-m)
1	RR Unit bolts	0.6 - 0.7
2	HT Coil bolts	0.8 - 1.2
3	Front seat rear bolts	0.5
4	Engine mounting bolt top	1.8 - 2.2
5	Engine mounting bolt front	1.8 - 2.2
6	Engine mounting bolt rear	2.8 - 3.2
7	Steering slotted nut	0.5
8	RSA Top nut	3.2 - 3.8
9	RSA Bottom nut	3.2 - 3.8
10	Swing arm shaft nut	4.5 - 5.5
11	LH Stay bolt	2.2 - 2.5
12	RH Stay bolt	2.2 - 2.5
13	Rider footrest bolt LH	2.8 - 3.2
14	Rider footrest bolt RH	1.8 - 2.2
15	Brace fender bolts	1.8 - 2
16	Side stand bolt	3 - 3.2
17	Front axle nut	4.5 - 5.5
18	Rear axle nut	8 - 10
19	Front disc mtg bolt	2.7 - 3.3
20	Front Caliper mtg bolts	2.2 - 2.8
21	Rear sprocket nut on coupling	3.2 - 3.8
22	Rear coupling sleeve nut	8
23	Torque rod nut (on panel)	3 - 3.2
24	Rear brake pedal bolt	0.6 - 0.8
25	Handle bar upper holder bolts	2 - 2.2
26	Handle bar lower holder bolts	2 - 2.2
27	Fork top mtg bolt	3 - 3.5

Sr.No.	Parameter	Torque Value (Kgf-m)
28	Fork underbracket bolt	2.5 - 3.0
29	Upper Bracket center nut (Big)	4.5 - 5
30	Fuel gauge bolt	0.35 - 0.5
31	Fuel cock bolt	1.2 - 1.6
32	Speedometer mtg nuts	0.6 - 0.8
33	Headlight mtg nuts / bolts (Focus adjustment bolt & pivot bolt)	0.6 - 0.8
34	Chain cover bolt	1 - 1.2
35	Leg guard bolt	1.8 - 2.2
36	Saree guard bolt	1.8 - 2 (Top) 3.2 - 3.5 (bottom)
37	Grab handle bolt (Rear)	2 - 2.2

Sr.No.	Parameter		Standard (mm)	Service Limit (mm)
1	Brake Panel cam hole diameter	Front	12 - 12.03	12.15
		Rear	12 - 12.03	12.15
2	Brake cam diameter	Front	11.95 - 11.98	11.88
		Rear	11.95 - 11.98	11.88
3	Brake disc run out		0.1	Not Applicable
4	Brake disc thickness		3.8 - 4.2	3.5
5	Brake pad thickness	Front	5	1
6	Brake Shoe lining thickness	Front	4	2
		Rear	4	2
7	Brake drum inside diameter	Front	130 - 130.16	130.75
		Rear	130 - 130.16	130.75
8	Axle run out		0.1	0.2
9	Axial wheel run out		0.8 or Less	2 or Less
10	Radial wheel run out		0.8 or Less	2 or Less
11	Drive chain slackness		20 - 30	Upto 40
12	Drive chain length		254 - 254.6	260
13	Rear sprocket warp		0.15 or Less	0.5 or Less
14	Front Fork spring free length		377.5	Not Applicable
15	Tyre tread depth	Front	5	Upto TWI
		Rear	7	Upto TWI

Balancer lock nut loosening & tightening tool for steering slotted nut

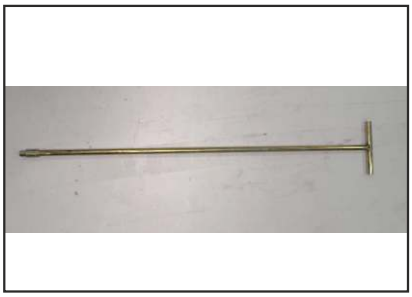
Part No. : 37004160

Usage : For tightening & loosening of steering slotted nut.

Fork seal cleaner

Part No. : 37004362

Usage : For cleaning dust seal & oil seal.



Fork seat pipe holder 11 mm

Part No. : 37004320

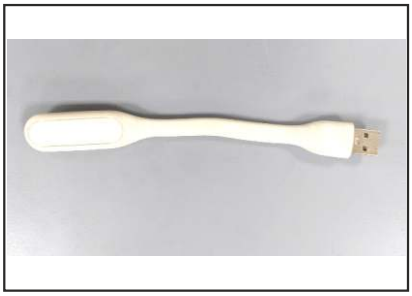
Usage : For holding seat pipe during tightening & loosening of outer tube bottom bolt.

Oil Seal Fitment Driver

Part No. : 37174030

Usage : For fitment of oil seal

NOTE : *Oil seal driver (Part No -37174030) is to be used with oil seal driver (Part No – 37174034)*



LED USB Light

Part No. : 37004482

Usage : For checking USB charger in engine start condition.

Oil seal removing tool

Part No. : 37174029

Usage : For removing oil seal from outer tube

Underbracket cone removal tool

Part No. : 37004479 & 37004480

Usage : For removing underbracket cone.

Underbracket cone fitment tool

Part No. : 37004480

Usage : For fitment of underbracket cone.

Bearing race extractor

Part No. : 37180506

Usage : For removal of bearing race

Bearing Race Fitment Tool

Part No. : 37174035

Usage : For fitment of bearing race in frame.

CBS brake adjustment tool(Disc version)

Part No. : 37004354

Usage : For adjusting CBS front brake.

Front Fork Overhaul

- Remove front axle nut with washer using 17 mm spanner, holding front axle head with 14 mm spanner.

- Hold wheel assembly & take out front axle.

- Take out brake panel assembly from wheel.

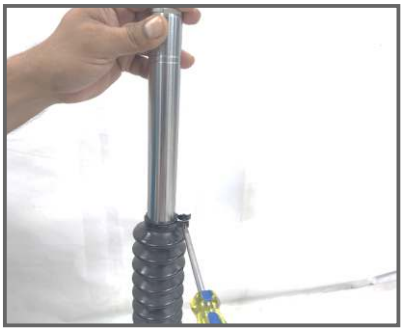
- Take out wheel assembly.

- Remove front fender mounting bolts (2 Nos) using 12 mm spanner.

- Remove front fork top bolt using 17 mm spanner.

- Remove under bracket bolt using 14 mm spanner.

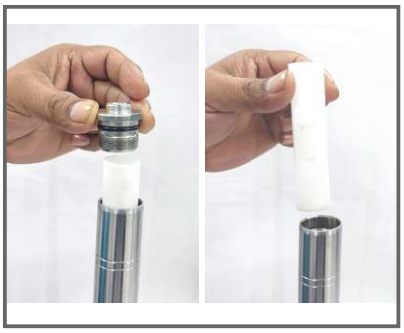
- Take out fork leg assembly from vehicle.



- Remove rubber bellow mounting clamp screw using phillips head screwdriver.

- Remove rubber bellow from outer tube groove & take out rubber bellow.

- Remove fork top bolt using 27 mm spanner.



- Take out fork top bolt with o ring & spacer tube.

NOTE:
Take care while removing fork top bolt, as bolt & spacer tube may fly off causing injury to person.

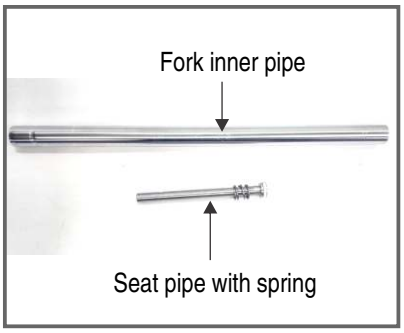
- Take out main spring & fork oil.

- Insert seat pipe holder & hold the fork leg assembly as shown in photograph.

- Remove outer tube bottom bolt using 6 mm allen key & take out allen bolt with copper washer.

- Hold the fork leg assembly as shown in photograph & take out seat pipe holder.

- Take out fork inner pipe from outer tube.



- Take out seat pipe with spring from fork inner pipe.

- Hold fork outer tube as shown in photograph & take out cap oil lock.

- Using small flat head screwdriver, remove dust seal.
- Ensure no dent/damage to outer tube while using small flat head screwdriver.

- Take out lock oil seal using small flat head screwdriver.

- Insert oil seal removal tool (Part No : 37174029) as shown in photograph.

- Insert locking pin in oil seal removal tool.

- Hold oil seal removing tool central stud with 15 mm spanner & tighten locking pin with 17 mm spanner.

- Hold oil seal removing tool central stud with 15 mm spanner & tighten nut with 30 mm spanner to extract oil seal from outer tube.

- Take out oil seal removing tool with oil seal as shown in photograph.

- Hold oil seal removing tool central stud with 15 mm spanner & remove locking pin with 17 mm spanner.

- Remove nut as shown in photograph.

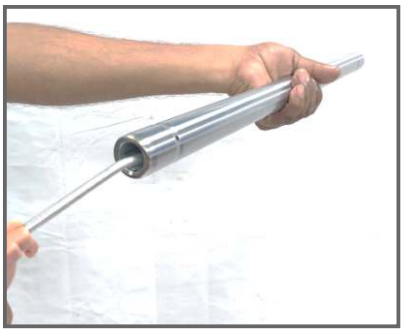
- Take out cap of oil seal removing tool.

- Take out oil seal as shown in photograph.

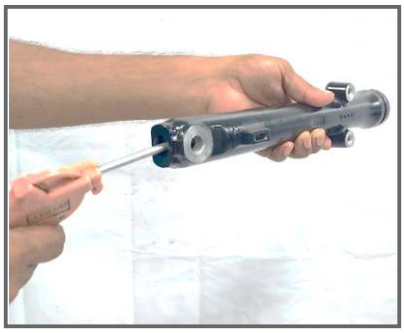
Assembly :

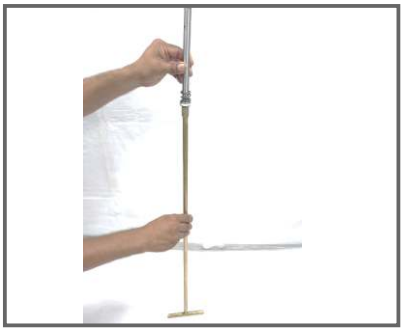
- Clean fork inner pipe & outer tube with clean lint free cotton cloth.

- Pour diesel in fork inner pipe & outer tube by closing other end with hand.
- After pouring diesel, close both ends of fork inner pipe with hands, then shake inner pipe. Repeat this step for outer tube .
- Nylon brush can be used for removing burr/muck particles for inner/outer tube.



- Blow compressed air through form inner pipe & fork outer tube.





- Assemble piston with spring on seat pipe holder.

- Insert fork inner pipe, cap oil lock & outer tube.

- Fit new copper washer. Pre-fit outer tube bottom bolt & tighten using 6 mm allen key. Torque value : 1.5 – 2.5 Kgf-m

- Hold fork leg assembly with seat pipe holder as shown in photograph & take out seat pipe holder.

- Assemble new oil seal as shown in photograph.

Notes about oil seal :

- Never reuse oil seal.
- Always replace the fork oil seal along with dust seal of same manufacturer.
- Front fork oil seal fitment direction should be as shown in photograph.

- Using Oil seal fitment driver (Part No : 37174030) & oil seal driver (Part No – 37174034), fit the oil seal.

- Insert lock oil seal & fit lock oil seal.

- Insert new dust seal.

- Insert main spring & spacer tube.

- Refill recommended fork oil (SAE 10W20,qty : 146 ml per leg).

- Pre-fit fork top bolt & tighten using 27 mm spanner.
- Check the working of leg assembly by pressing inner pipe from top side in the direction of arrow as shown in photograph.

- Insert the rubber bellow with clamp. Fit rubber bellow in groove on outer tube. Tighten rubber bellow mounting clamp screw with phillips head screwdriver.

- Fit fork leg assembly on vehicle

- Prefit fork top bolt, under bracket bolt & tighten to recommended torque.

  Torque value :
  Fork top bolt : 3 - 3.5 Kgf-m
  Under bracket bolt : 2.5 - 3 Kgf-m

- Insert front axle through both leg assemblies & ensure that it is free in both outer tube holes. If axle is not free, adjust leg assembly accordingly.
- Take out front axle.

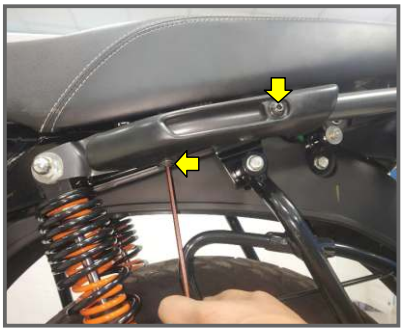
- Prefit front fender mounting bolts & tighten to recommended torque.

  Torque value : 1.8 - 2 Kgf-m

- Fit front wheel with brake panel assembly & insert axle.
- Fit washer. Prefit axle nut & tighten to recommended torque.

  Torque value : 4.5 – 5.5 Kgf-m

Trim Frame Grip Replacement

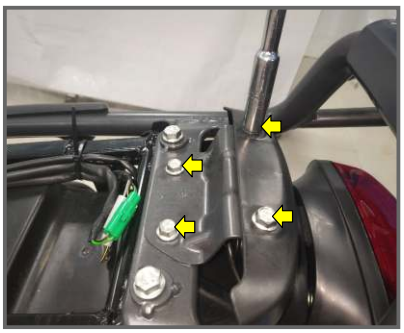


- Remove trim frame grip mounting bolts (2 nos) using 4 mm allen key.

- Take out trim frame grip.
- Prefit trim frame grip mounting bolts (2 nos) & tighten them to recommended torque (0.8 – 1 Kgf-m).

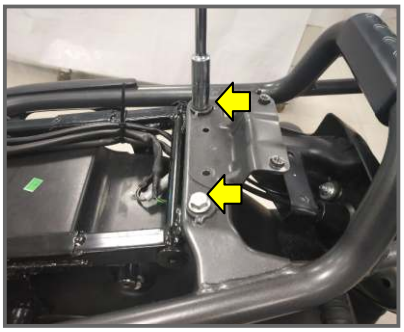
Frame Grip Replacement

- Remove LH & RH RSA top nut using 17 mm spanner.
- Take out spring washer & metal washer from RSA Stud.



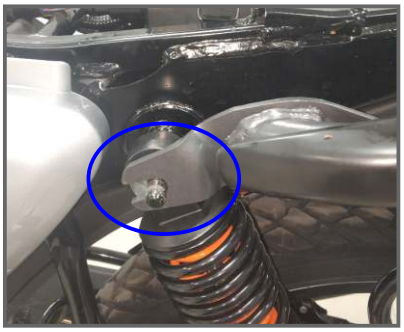
- Remove holder taillamp mounting bolts (4 Nos) using 10 mm spanner.

- Lift holder tail lamp & keep Holder taillamp with taillamp assembly & indicators as shown in photograph.



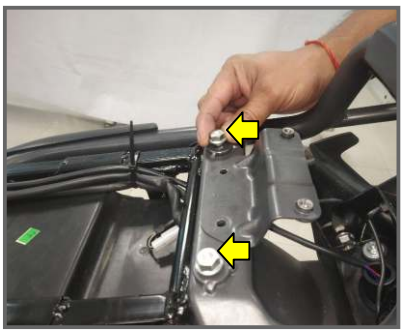
- Remove frame grip mounting bolts (2 Nos) using 12 mm spanner.

- Take out frame grip.



Assembly

- Place frame grip slots on both side RSA Studs.

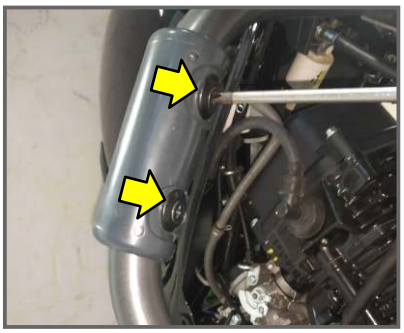


- Prefit frame grip mounting bolts & tighten to recommended torque (2 – 2.2 Kgf-m)

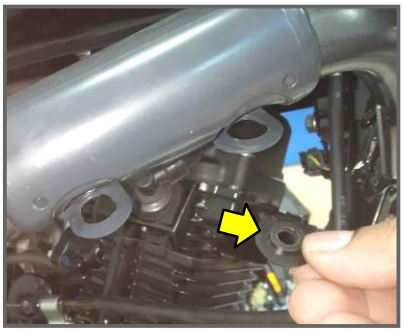
- Fit holder tail lamp on frame grip as explained in “Wire Holder / Housing Taillamp / Holder Taillamp Replacement SOP”.

- Prefit frame grip (RSA) mounting bolts & tighten to recommended torque (3.2 – 3.8 Kgf-m)

Trim Leg Guard Replacement



- Remove trim leg guard mounting screws(2 Nos) with phillips head screw driver.



- Take out collars (2 Nos)

- Split trim leg guard & take out trim leg guard as shown in photograph.

Fitment

Orientation of trim leg guard :

Textured portion is towards rider side when seated on vehicle.

- Prefit trim leg guard on leg guard to achieve it's correct fitment as explained in "Orientation of trim leg guard".
- Prefit trim leg guard mounting screws & collars. Tighten trim leg guard mounting screws using phillips head screw driver.

Saree Guard Fitment

- Take Kit for assly.
- Take saree Guard and fasteners for assembly

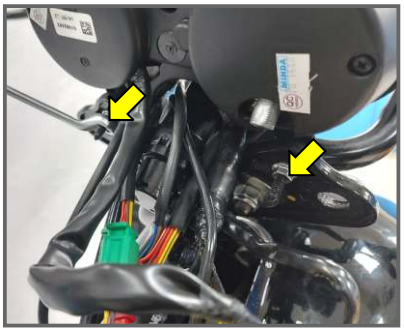
Position Top bolt and only Pre-FIT

- Position Bottom Bolt and Apply Force to downward & Position the Bolt and pre fit.

- In few cases can be positioned by loosening the stay top bolt as it has oblong hole for free float & alignment.

Steering Overhaul

- Remove both fork leg assembly & front fender.
- Remove headlamp assembly.
- Front indicator couplers.
- Remove Speedo cable from speedometer end & front brake cable from lever brake cam end.
- Take out lamp shade with indicators.



- Remove speedometer mounting nuts(2 Nos) using 10 mm spanner.

- Remove speedometer couplers.

- Take out speedometer.

- Remove fork center nut using 32 mm spanner & take out handle bar assembly.

- Hold underbracket assembly & Using Balancer lock nut tool (Part Number : 37004160), remove steering slotted nut.

- Holding underbracket assembly, take out steering slotted nut, Cap steering nut, upper cone & underbracket assembly.

- Take out upper & lower bearing cage.

- Using nylon brush, clean steering cone kit by diesel & kerosine.

- Apply limaplex HTX3 grease on cone, races & bearing cage.

  For removal of races from frame, petrol tank is to be removed.

- Refit all the parts in reverse order of removal.

Swing Arm Replacement

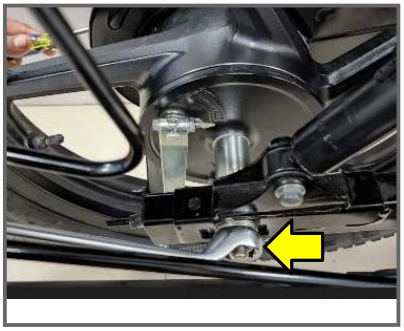
- Remove torque rod mounting nut locking clip using plier.

- Remove torque rod mounting nut using 14 mm spanner.
- Take out torque mounting nut & washer.

- Press torque rod mounting bolt & take out torque rod mounting bolt.

- Remove brake rod mounting nut using 14 mm spanner.

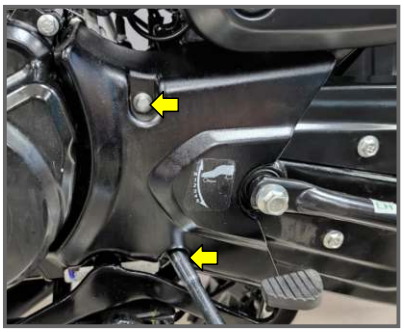
- Press rear brake pedal & remove brake rod from rear lever brake cam.



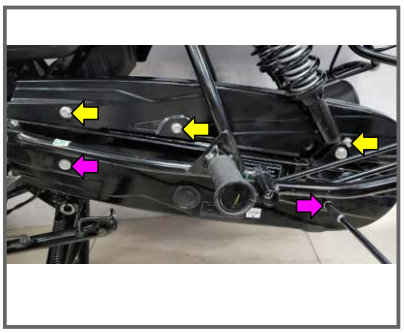
- Insert screwdriver in axle head hole & remove rear axle nut with washer using 22 mm spanner.

- Take out rear axle & wheel assembly.

- Take out brake panel assembly from rear wheel.



- Take out cover LH RR mounting bolts (2 nos) using 8 mm spanner and take out cover LH RR.



- Remove chain cover mounting bolts (5 nos) using 10 mm spanner.

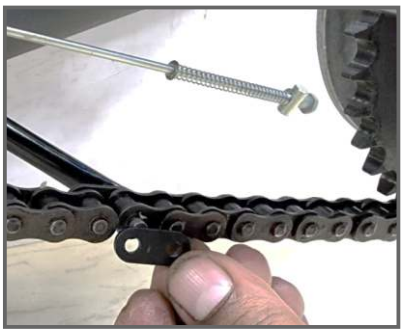
Note :
Hold lower chain cover while removing it's mounting bolts (shown by pink arrow) to avoid falling of lower chain cover.

- Take out lower & upper chain cover.

- Remove drive chain link lock using plier.

- Take out lower & upper chain cover.

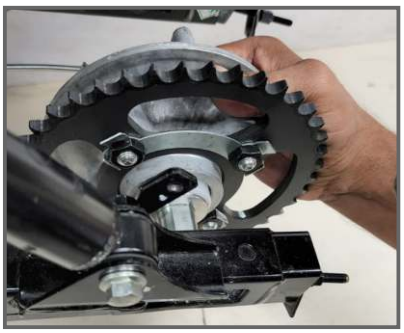
- Remove drive chain link lock using plier.



- Take out lock plate.

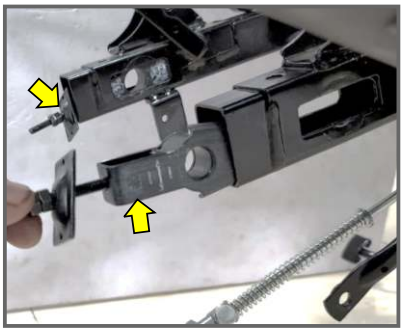
- Take out drive chain locking link & drive chain

- Take out coupling sleeve nut with washer using 27 mm spanner.

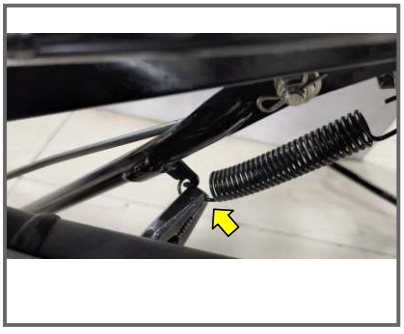


- Take out coupling assembly.

- Remove LH & RH Rear shock absorber mounting bolts using 12 mm spanner.



- Take out LH & RH Chain adjusters.

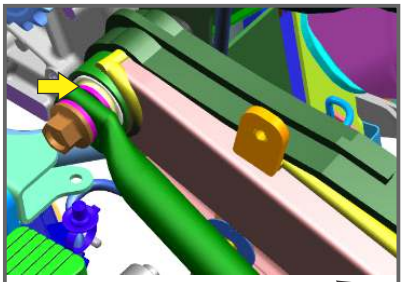


- Remove brake return spring connected to torque rod using plier.

- Remove swing arm shaft nut using 17 mm spanner holding axle head with 14 mm spanner.

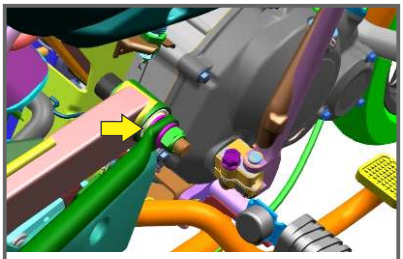
- Hold swing arm assembly & take out swing arm shaft.

- Take out swing arm assembly.



LH Stay

- Swing arm hardware details :



RH Stay

- Clean swing arm shaft using diesel/kerosine.

- Apply AP grease to swing arm shaft.

- Remove chain slider mounting screws (2 nos) with washer using phillips head screwdriver.

- Take out chain slider.
- Refit all the parts in reverse order of removal.
- Adjust chain slackness & CBS free play.

Brake Cam Replacement

- Remove rear brake panel assembly from wheel as explained in “Swing arm replacement SOP”.
- Remove both brake shoe.

- Remove springs brake shoe.

- Hold lever brake cam mounting bolt using 8 mm spanner & remove using 10 mm spanner. Take out nut, washer & lever brake cam mounting bolt

- Take out lever brake cam.

- Take out wear indicator.

- Take out brake cam & o ring brake cam.

- Clean brake cam using diesel/kerosine.

- Apply AP grease to brake cam.
- Refit all the parts in reverse order of removal.
- Adjust chain slackness & CBS free play.

Coupling Replacement

- Remove coupling assembly from swing arm as explained in “Swing arm replacement SOP”.
- Remove spacer from coupling.

- Remove sleeve from coupling.

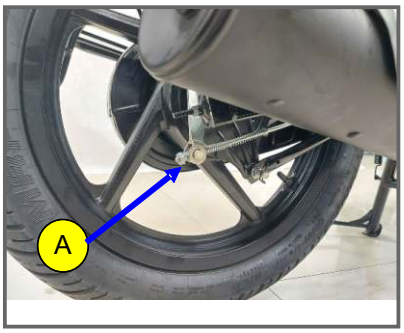
- Using bearing driver set (Part Number : 37103061), remove bearing from coupling.

- Using flat head screwdriver & hammer, open lock plate.

- Remove coupling sprocket mounting nuts (4 Nos) using 17 mm spanner.
- Take out coupling sprocket & lock plates (2 nos).
- Refit all the parts in reverse order of removal.
- Adjust chain slackness & CBS free play.

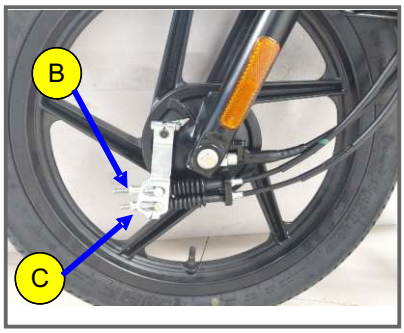
CBS Free Play Setting (Drum Version)

Frequency :- Check & Adjust at every service



- Ensure following adjusters are completely loose - -

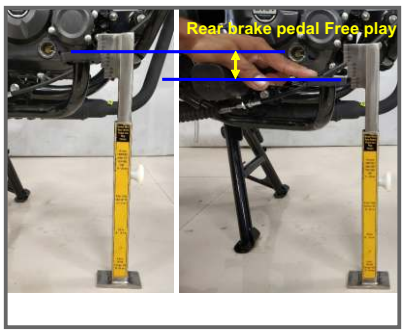
  A. Rear brake pedal free play adjuster nut
  B. Adjuster nut CBS cable brake pedal to panel front
  C. Adjuster nut front brake cable



- Adjust front brake cable inner free play by tightening adjuster nut (C).
  Use free play gauge P No : 37004350 (being used for clutch play setting)
  Specification : 2 - 3 mm.
  Ensure front wheel freeness after setting.

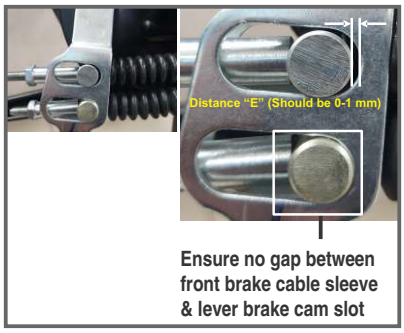
- Adjust rear brake free play by adjusting rear brake pedal free play adjuster nut (A).
  Use rear brake pedal free play gauge
  Part No : 37004307

  Specification : 20 - 30 mm.
  Ensure rear wheel freeness after setting.



- Tighten CBS cable brake pedal to panel front adjuster nut (B) & ensure gap between CBS front brake cable sleeve & cam lever slot. (Distance E)

  Specification : 0 - 1 mm.
  Ensure front wheel freeness after setting.



- Press rear brake pedal 2-3 times & ensure distance E is maintained.

  Ensure front and rear wheel freeness.

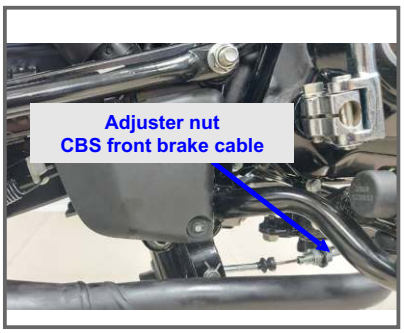
Confirmation stage :
Use universal vehicle support stand (Part No 37004333) in such a way that both wheels are lifted from ground level.
Rotate both rear & front wheels by hand & apply only rear brake, ensure --

- With normal force, rear wheel gets locked but front wheel still rotates.
- Further increase pressure on rear brake pedal & ensure that front wheel also gets locked

This confirms, CBS cable free play setting is OK.

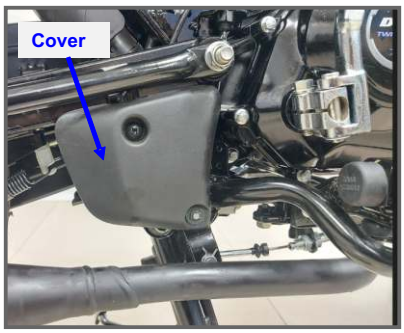
- Do not set / adjust rear brake free play adjuster after CBS front brake setting.

- CBS Free play setting is to be done whenever any of the following activity is carried out-
  - Front / rear brake shoes replacement.
  - Front /rear wheel removed & refitted for any work like wheel rim replacement, tyre replacement etc.
  - Drive chain sprocket set replacement.
  - Any of the CBS part removed /replaced.



- Do not adjust CBS front brake cable at rear brake pedal end as shown in photograph.

- Do not open cover at rear brake pedal mounting as shown in photograph during CBS Free play setting.



Instruction for customer

Brake setting guideline in case rear wheel puncture and repair done on road side garage.

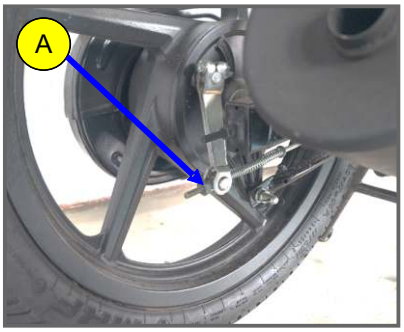
To achieve optimum benefits of CBS, take the vehicle to BAL Authorized dealership / ASD for CBS Free play setting.

To achieve optimum braking performance, use both brakes simultaneously.

CBS Free Play Setting (Disc Version)

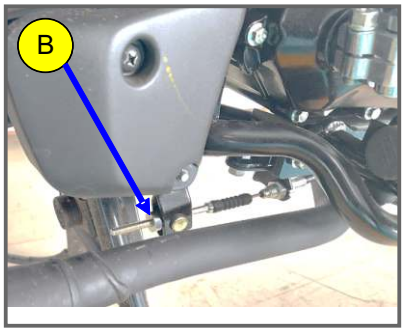
Frequency :- Check & Adjust at every service

- Ensure front disc brake bleeding is done & front wheel is rotating freely.



- Ensure following adjusters are completely loose - -

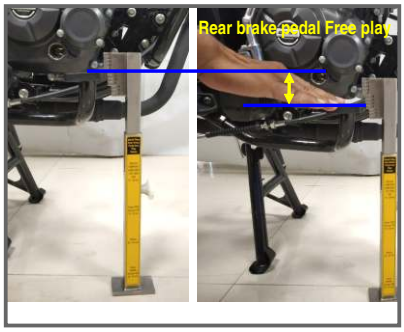
A. Rear brake pedal free play adjuster nut
B. Adjuster nut on CBS cable (brake pedal to master cylinder)



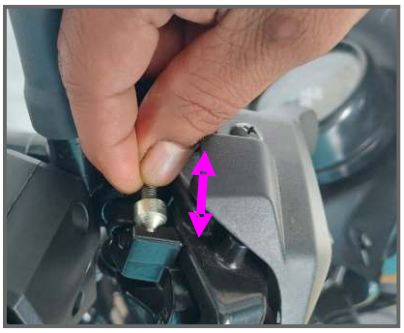
- Adjust rear brake free play by tightening rear brake pedal free play adjuster nut (A).

  Use rear brake pedal free play gauge
  P No : 37004307

  Specification : 20 – 30 mm.
  Ensure rear wheel freeness after setting.



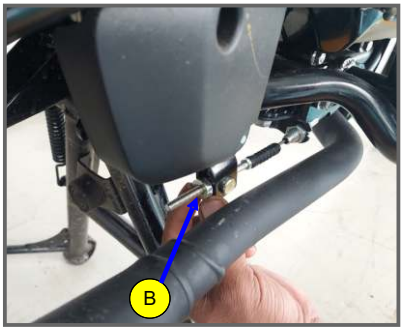
- Put “CBS Front brake adjustment tool (Part No – 37004354)” between lever front brake slot & master cylinder slot as shown in photograph.



- If tool moves freely in the slots, take out tool & adjust tool length by rotating adjuster knob provided on CBS Front brake adjustment tool till it tightly fits between two slots.

Adjusting tool length by rotating adjuster knob

- Tighten adjuster nut (B) on CBS cable(brake pedal to master cylinder) by hand till it is not allowed to rotate
- Take out “CBS Front brake adjustment tool”



- Press brake pedal 2-3 times. Check front wheel freeness.
- If wheel is not free, loosen adjuster nut(B) on CBS cable(brake pedal to master cylinder) in step of half thread till front wheel gets free.

Photo of Discover 125 given for illustration purpose only

- Confirmation stage :

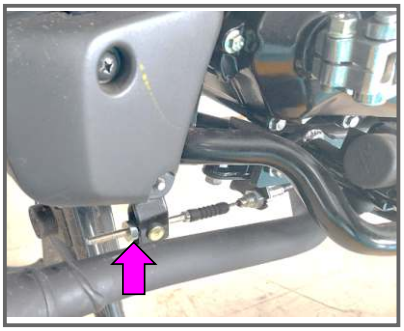
  Use universal vehicle support stand (Part No 37004333) in such a way that both wheels are lifted from ground level.

Rotate both rear & front wheels by hand & apply only rear brake, ensure --

- With normal force, rear wheel gets locked but front wheel still rotates.
- Further increase pressure on rear brake pedal & ensure that front wheel also gets locked

This confirms, CBS cable free play setting is OK.

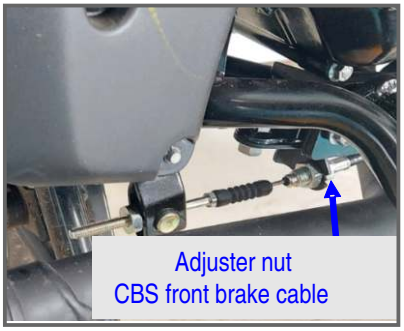
CBS Free Play Setting (Disc version) - Precautions



- Do not overtighten adjuster nut on CBS cable (brake pedal to master cylinder) by any tool.
- Do not set / adjust rear brake pedal free play adjuster nut after CBS front brake setting.

- CBS Free play setting is to be done whenever any of the following activity is carried out-

- Front Disc pads / rear brake shoes / Front master cylinder & it's sub parts / CBS Actuating link / CBS front brake cable / Lever Main front brake / Lever front brake replacement.
- Front / rear wheel removed & refitted for any work like wheel rim replacement, tyre replacement etc.
- Drive chain sprocket set replacement.
- Any of the CBS part removed / replaced.



- Do not adjust CBS brake cable at rear brake pedal end as shown in photograph.
- Do not open cover link CBS as shown in photograph during CBS Free play setting.

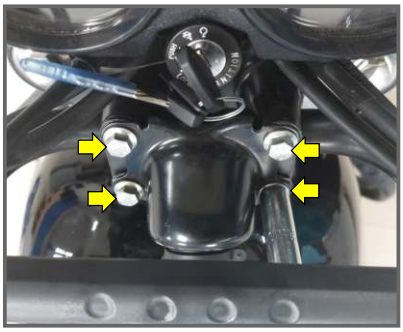
- Do not open cover lever brake as shown in photograph during CBS Free play setting.

Instruction for customer

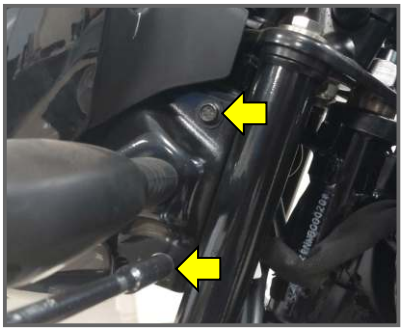
Brake setting guideline in case rear wheel puncture and repair done on roadside workshop.

- Adjust rear brake pedal free play (A) to set brake pedal free play (Specification : 20 – 30 mm).
- To achieve optimum performance of CBS, take the vehicle to BAL Authorized dealership / ASD for CBS cables free play setting.
- To achieve optimum braking performance, use both brakes simultaneously.

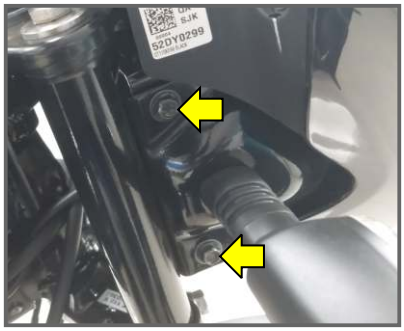
Bracket USB Charger / USB Charger Replacement



- Remove handlebar upper holder mounting bolts (4 Nos) using 10 mm spanner. Take out handle holder upper.
- Keep cloth on fuel tank & keep handlebar assembly on fuel tank.

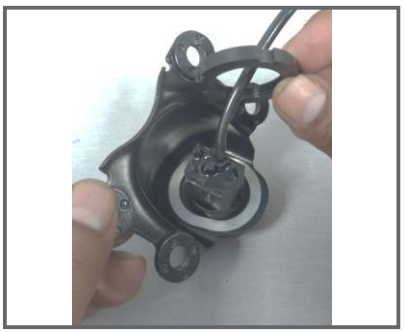


- Remove headlamp mounting bolts (4 Nos) using 10 mm spanner.

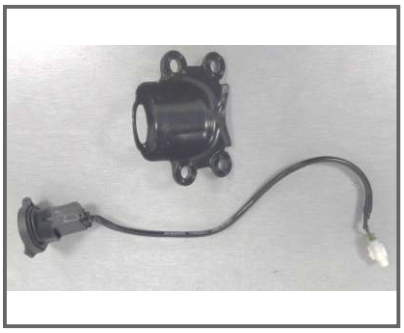


- Hold headlamp assembly & remove USB charger coupler connection.
- Take out USB charger with bracket USB Charger.

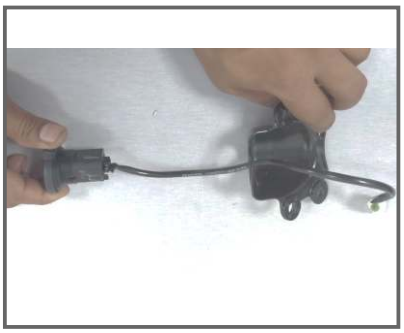
- Remove USB charger slotted nut using flathead screwdriver.



- Take out USB charger slotted nut & spacer.



- Take out USB charger from bracket USB charger.



Assembly :

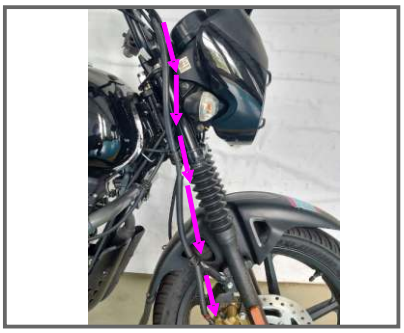
- Insert USB charger in bracket USB charger.
- Fit spacer as shown in photograph.

- Prefit USB charger slotted nut & tighten using flathead screwdriver.
- Assemble USB Charger with bracket USB charger as shown in photograph.
- Connect USB charger coupler to it's mating coupler.

- Hold handlebar assembly in it's place, assemble handlebar upper holder & USB Charger with bracket USB charger.
- Prefit handlebar upper holder bolts & tighten to recommended torque (2 – 2.2 Kgf-m).
- Prefit headlamp mounting bolts (4 Nos) & tighten to recommended torque (0.6 – 0.8 Kgf-m).

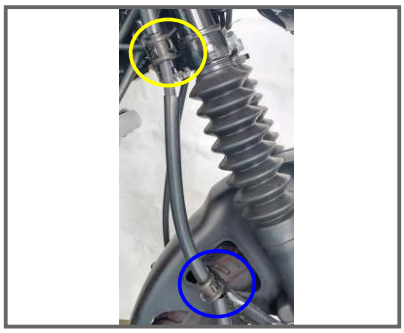
Brake hose Routing

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



- Fit rubber grommet on hose in clamp fitted on underbracket (as shown by yellow circle).

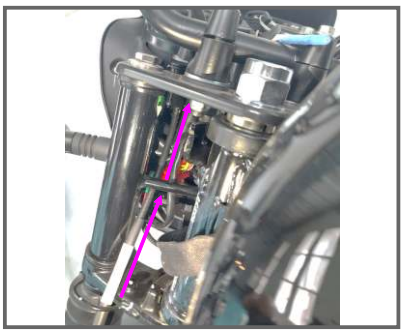
- Fit rubber grommet on hose in clamp hose fitted on underbracket (as shown by blue circle) & further connect to caliper assembly.



Speedometer Cable Routing-Disc version

- Route speedometer cable through metal clamp as shown by yellow circle in photograph.

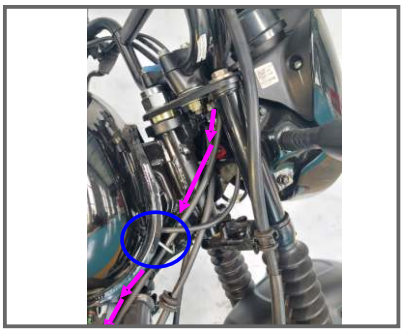
- Route speedometer cable through metal hook near underbracket as shown by blue circle in photograph.



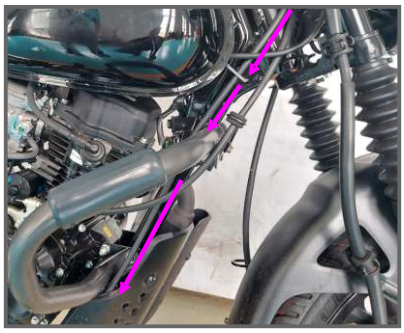
- Route speedometer cable as shown in photograph & connect to speedometer.

CBS Cable – Pedal to Master cylinder Routing

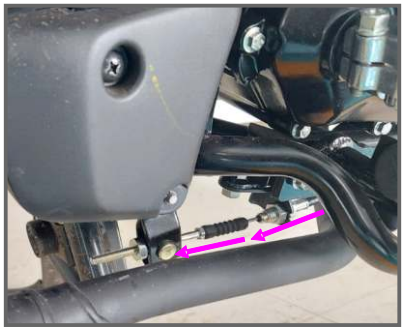
- Route the CBS brake cable from master cylinder actuating link as shown in photograph.
- Route the CBS brake cable as shown in photograph.



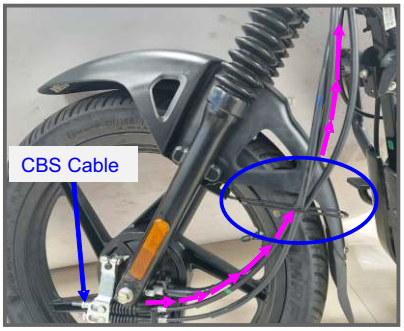
- Route the CBS brake cable through metal clamp as shown by blue circle in photograph.
- Route the CBS brake cable as shown in photograph.



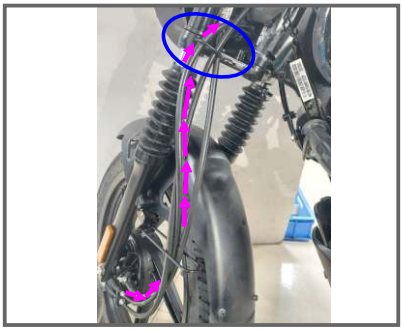
- Route the CBS brake cable as shown in photograp
- Connect the CBS brake cable to secondary link of brake pedal as shown in photograph..

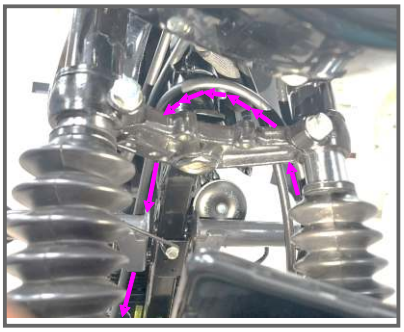


CBS Cable – Pedal to Front Brake panel Routing

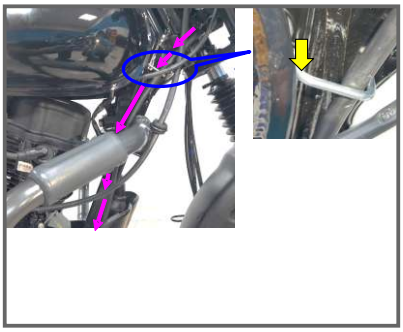


- Route the CBS brake cable from metal bracket as shown by blue circle in photograph.
- Route the CBS brake cable from metal hook as shown by blue circle in photograph.

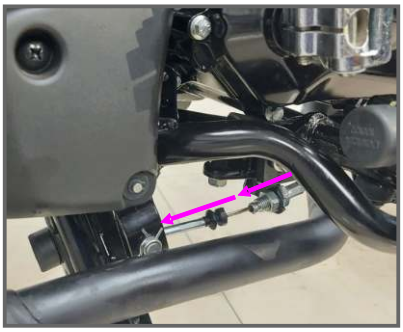




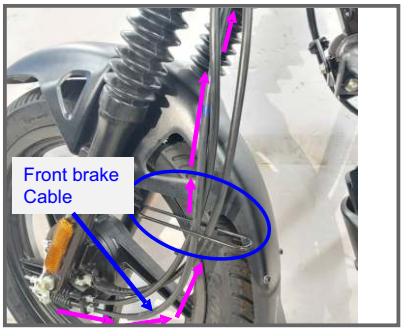
- Route the CBS brake cable as shown in photograph.
- Route the CBS brake cable from metal hook as shown by blue circle in photograph.



- Route the CBS brake cable as shown in photograph.
- Connect the CBS brake cable to secondary link of brake pedal as shown in photograph.



Front Brake Cable Routing

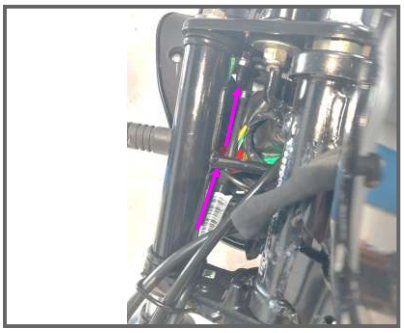


- Route the front brake cable from metal bracket as shown by blue circle in photograph.
- Route the front brake cable from metal hook as shown by blue circle in photograph.

- Route the front brake cable as shown in photograph & connect to front brake lever.

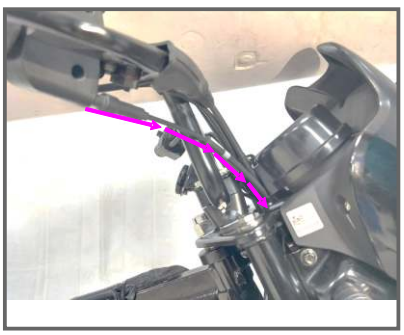
Speedometer Cable Routing-Drum version

- Route speedometer cable through metal clamp as shown by yellow circle in photograph.
- Route speedometer cable through metal hook near underbracket as shown by blue circle in photograph.

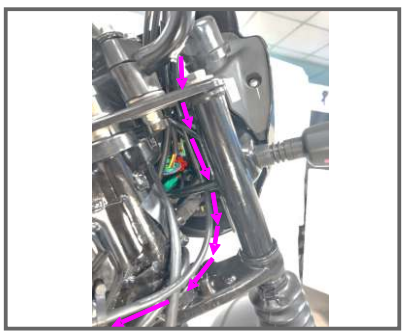


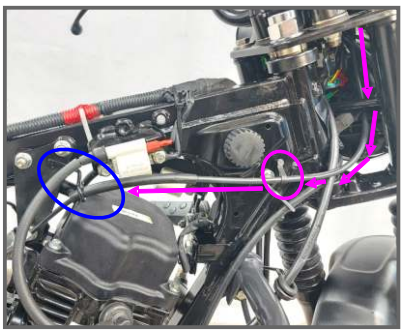
- Route speedometer cable as shown in photograph & connect to speedometer.

Throttle cable Routing (For Disc & Drum version)

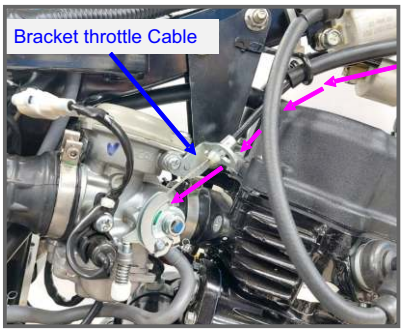


- Route the throttle cable as shown in photograph.
- Route the throttle cable as shown in photograph.



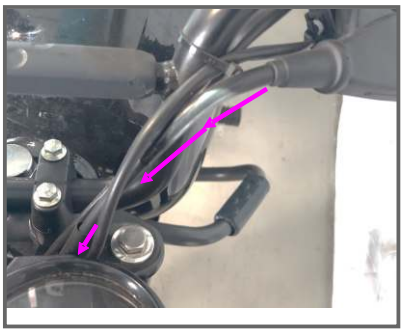


- Route the throttle cable through harness clamp fitted in frame hole as shown by pink circle in photograph.
- Route the throttle cable through metal hook as shown by blue circle in photograph.

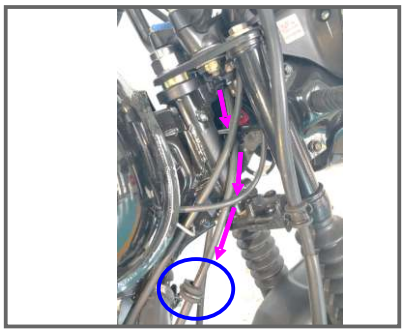


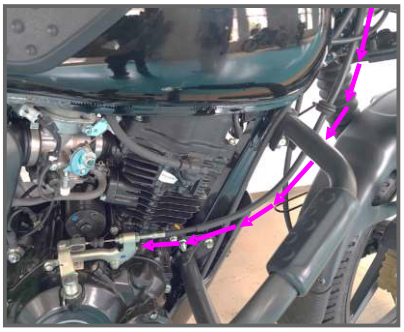
- Route throttle cable through bracket throttle cable fitted on carburettor & connect to throttle drum as shown in photograph.

Clutch cable Routing (For Disc & Drum version)



- Route the clutch cable as shown in photograph.
- Route the clutch cable through metal clamp as shown by blue circle in photograph.

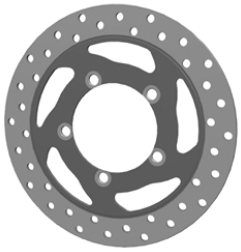


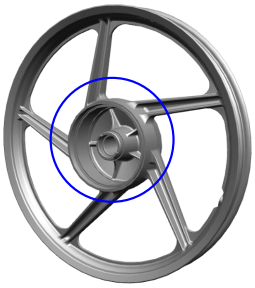
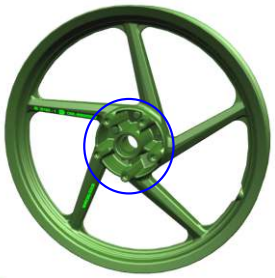


- Route the clutch cable through leg guard as shown in photograph.
- Further connect the clutch cable to clutch release shaft through bracket clutch cable.

NOTE : For Part numbers, Always Refer Spare Parts Catalogue Available on E-SSM

Model	CT 110X ES Drum	CT 125X ES Disc
Part Name	FRONT FORK	
Part Number	DY121015	DY121020
Description	Without provision for caliper mounting on outer tube.	With provision for caliper mounting on outer tube

Part Name	BRAKE DISC FRONT	
Photograph	NA	
Part Number	NA	JK131815
Description	NA	Outer diameter : Ø 240 mm

Part Name	Wheel Front	
Photograph		
Part Number	JZ131042	JK131048
Description	Compatible for drum brake	Compatible for disc brake

Model	CT 110X ES Drum	CT 125X ES Disc
Part Name	BRAKE SYSTEM FRONT	
Part Number	Drum brake with CBS	Disc brake with CBS

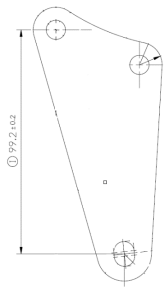
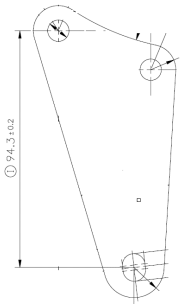
NOTE : For Part numbers, Always Refer Spare Parts Catalogue Available on E-SSM

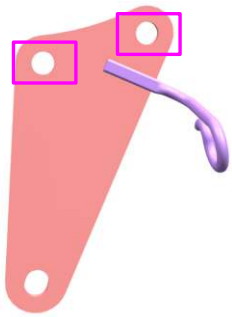
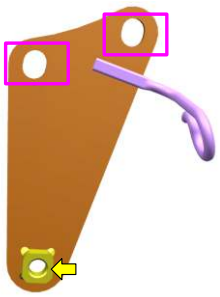
Model	CT 110X ES Drum	CT 125X ES Disc
Part Name	Wheel Front	
Part Number	JZ131042	JK131046
Description	Size : 1.40 x 17	Size : 1.85 x 17

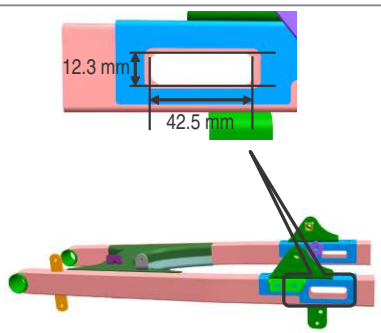
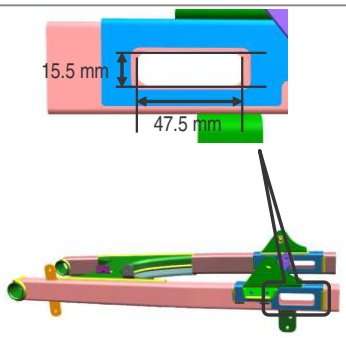
Part Name	CBS Cable –Rear brake pedal to Lever brake cam front	
Photograph	CBS Cable –Lever brake cam front to LH Lever distributor  CBS Cable –RH Lever distributor to rear brake pedal  With adjuster nut at brake pedal end 	 No adjuster nut at brake pedal end 
Part Number	NA	JK131815
Description	NA	Outer diameter : Ø 240 mm

Common for – CT 125X ES Disc -00DY07ZZ & CT 125X ES Drum -00DY06ZZ

NOTE : For part numbers, always refer spare parts catalogue available on e-ssm.

Model	**CT 110X ES Drum**	**CT 125X ES Disc & CT 125X ES Drum**
Part Name	Engine Hanger LH	
		
Part Number	DY113406	PF113402
Description	Center distance : 99.2 mm	Center distance : 94.3 mm

Part Name	Engine Hanger RH	
Photograph		
Part Number	DY113409	DY113411
Description	• Top hole : circular type • Without square nut welded	• Top hole : Oblong type • With square nut welded

Model	CT 110X ES Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Assembly swing arm	
		
Part Number	DY122020	DY122050
Description	Axle fitment slot dimensions : 12.3 mm x 42.5 mm	Axle fitment slot dimensions : 15.5 mm x 47.5 mm

Part Name	Axle Rear	
Part Number	PA131239	PF131208
Description	Outer Diameter : Ø12 mm	Outer Diameter : Ø15 mm

Part Name	Tyre / Tube	
Part Number	Tyre : Front - JV131024, Rear - JV131240 Tube : Front - DS151049, Rear - DS151053	Front - JF131010 , Rear - JF131211
Description	Conventional tyre & tube type	Tubeless

Part Name	Chain Adjuster RH	
Part Number	DX151014	DJ151037
Description	Inner Diameter : Ø12.2 mm	Inner Diameter : Ø15.2 mm

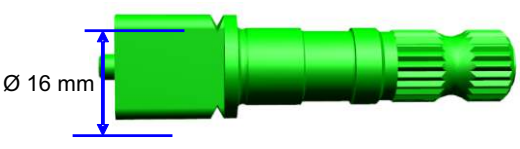
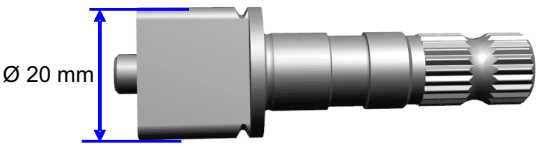
Model	CT 110X ES Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Damper Coupling	
		
Part Number	31151021, Qty : 4 Nos	DK151094
Description	NA	Design is different than CT 110X

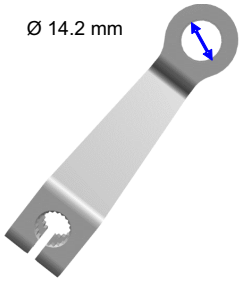
Part Name	Wheel Rear	
Part Number	DU151078	DH151144
Description	Size : 1.85 x 17	Size : 2.15 x 17

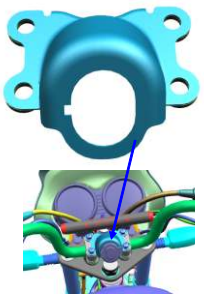
Part Name	Coupling	
Photograph		
Part Number	PA131208	DS151068
Description	NA	Design is different than CT 110X

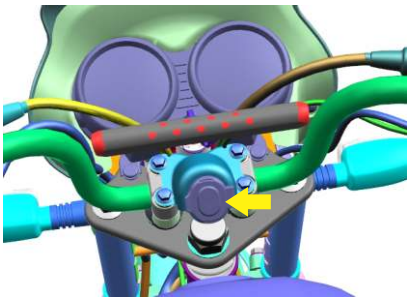
Model	CT 110X ES Drum			CT 125X ES Disc & CT 125X ES Drum		
Part Name	Kit chain sprocket					
Kit Part No.	36DY0020			36DY0040		
Part Name	Output sprocket	Drive chain	Coupling sprocket	Output sprocket	Drive chain	Coupling sprocket
Kit sub parts Part Number (Not serviceable)	JZ551004	PF141003	PA131278	JZ551004	PF141003	DX151023
Description	Same for CT 110X & CT 125X		Number of teeth : 41	Same for CT 110X & CT 125X		Number of teeth : 42

Part Name	Brake Panel Rear	
Photograph		
Part Number	JA131205	DS151069
Description	NA	Design is different than CT 110X

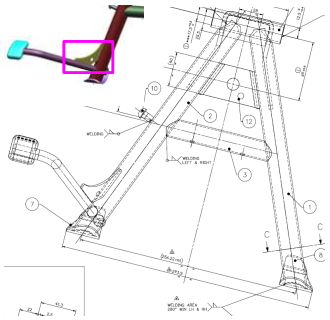
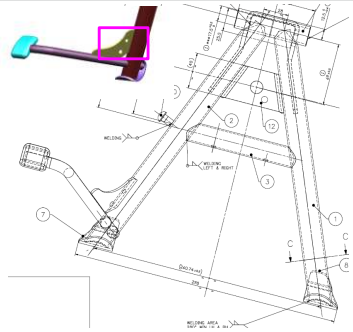
Part Name	Brake Cam	
Photograph		
Part Number	31151023	30151012
Description	Outer diameter : Ø 16 mm	Outer diameter : Ø 20 mm

Model	CT 110X ES Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Lever Brake Cam	
Photograph		
Part Number	DU151046	31151037
Description	Inner diameter : Ø 14.2 mm	Inner diameter : Ø 12.2 mm

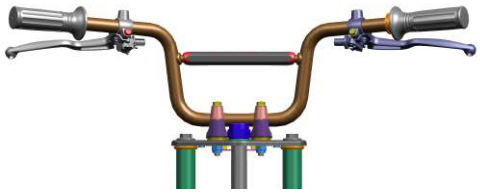
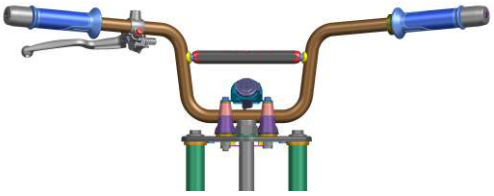
Part Name	Bracket Assembly Socket Charger	
Photograph	NA	
Part Number	NA	DY403400
Description	NA	With bracket for socket charger fitment

Model	CT 110X ES Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Socket Charger	
Photograph	NA	
Part Number	NA	PF403400
Description	NA	With socket charger

Part Name	Seat Assembly	
Photograph		
Part Number	DY191005	DY191014
Description	NA	Design is different than CT 110X

Model	CT 110X ES Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Stand Center	
Photograph		
Part Number	PF113202	DY113206
Description	• Center stand base dimension : 293.5 mm • Single hole on bracket	• Center stand base dimension : 298 mm • Twin holes on bracket

Part Name	LH Grip Handle	
Photograph		
Part Number	DU191009	JH151002
Description	NA	Design is different than CT 110X

Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Handlebar	
Photograph		
Part Number	DU181155	DY151011
Description	Without provision for weight handle bar fitment	With provision for weight handle bar fitment

Part Name	Kick Lever Assembly	
Photograph		
Part Number	DU101050	DY621202
Description	NA	Design is different than CT 110X

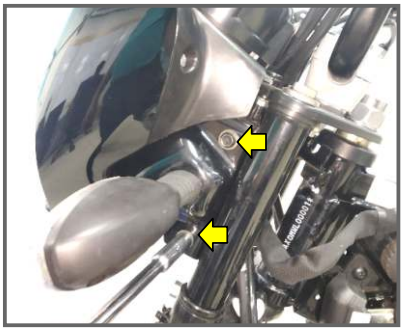
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Assembly grip RH	
Photograph		
Part Number	PF151032	JH151003
Description	NA	Design is different than CT 110X

Part Name	Weight Handlebar	
Photograph	NA	
Part Number	NA	DH181022
Description	NA	With weight handle bar

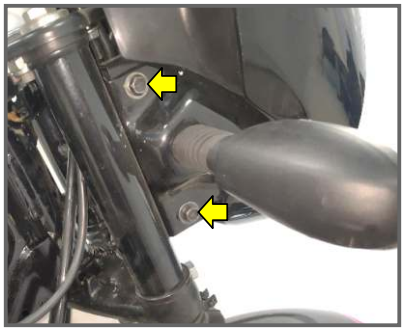
Electrical

- Important SOP
- Wiring Harness Routine
- Part Identification
- Circuit Diagram

Bulb - Headlamp Replacement



- Remove headlamp assembly mounting bolts (4 Nos) with metal washers using 10 mm spanner.



- Hold the assembly as shown in photograph.

- Pull out dust cap of headlamp harness.

- Remove headlamp coupler.

- Remove bulb holding clip.

- Take out bulb.

Assembly

- Fit bulb in reflector.

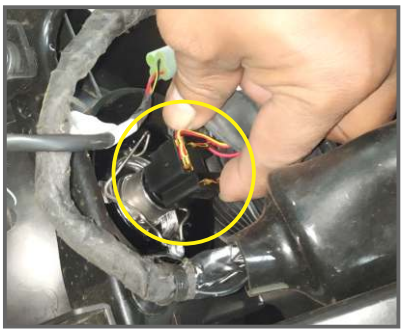
- Fit bulb holding clip.

- Fit headlamp coupler.

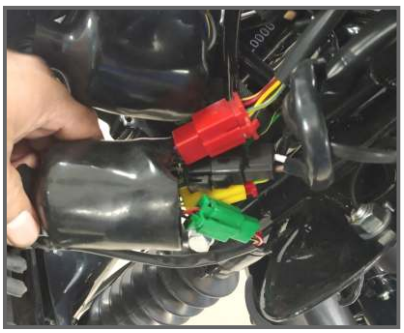
- Fit dust cap properly to avoid any dust/water entry.

- Pre-fit headlamp mounting bolts & tighten to recommended torque(0.6 - 0.8 Kgf-m).

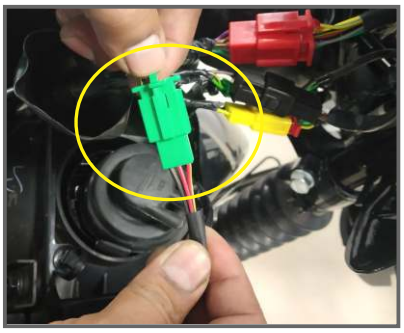
Harness Headlamp Replacement



- Remove headlamp coupler as explained in “Bulb - Headlamp Replacement SOP”.

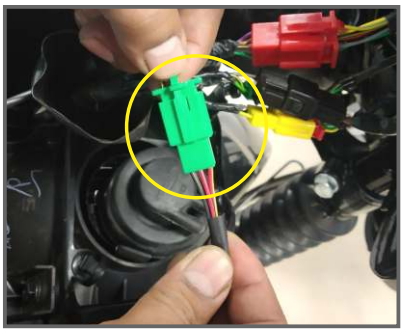


- Pull out the rubber bellow.



- Remove headlamp harness coupler from wiring harness.

- Take out headlamp harness.



Assembly

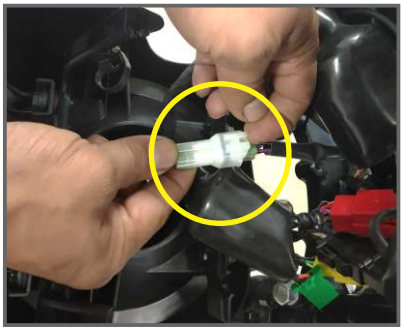
- Fit headlamp harness coupler to its mating coupler in wiring harness.

- Fit rubber bellow properly to avoid any dust/water entry. All the couplers should be inside rubber bellow.

- Fit headlamp coupler, dust cap & headlamp assembly on lampshade as explained in “Bulb - Headlamp Replacement SOP”.

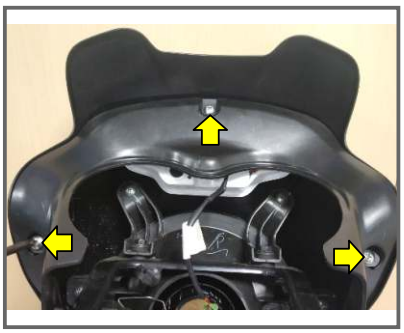
Headlamp Assembly / Fairing Headlamp/ DRL Unit / Speedo Flap / Headlamp Mounting Brackets Replacement

- Remove bulb headlamp & harness headlamp coupler as explained in “Bulb - Headlamp Replacement SOP” & Harness Headlamp Replacement” SOP.
- Cut cable tie lock (2 nos) fitted on upper bracket.

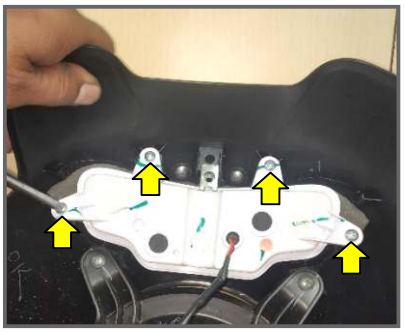


- Remove DRL unit coupler.

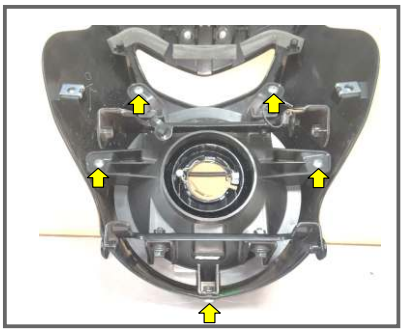
- Remove headlamp assembly with fairing.



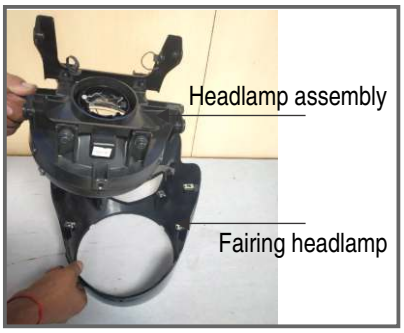
- Remove speedo flap mounting screws (3 nos) using phillips head screwdriver & take out speedo flap.



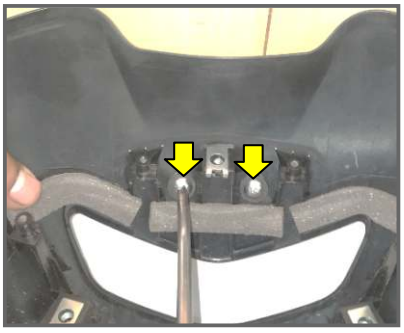
- Remove DRL unit mounting screws (4 nos) using phillips head screwdriver & take out DRL unit.



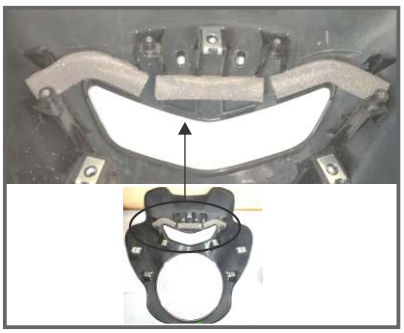
- Remove fairing headlamp mounting screws (5 nos) using phillips head screwdriver.



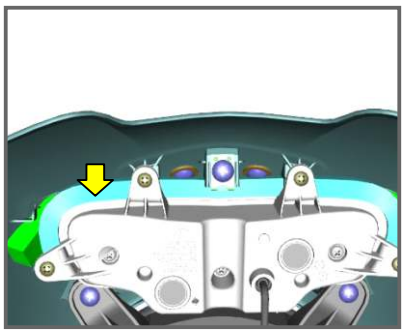
- Take out headlamp assembly from fairing headlamp.



- Remove bracket front number plate mounting screws (2 Nos) with metal washers using phillips head screwdriver and take out bracket front number plate mounting.

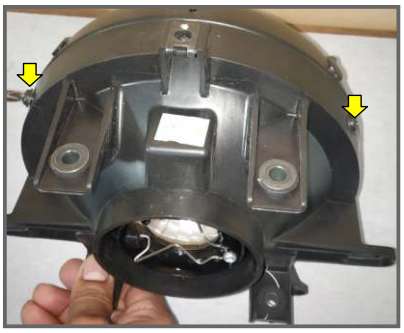


- Ensure foams on fairing & DRL unit are intact and in good condition. Replace with new one if found cut / torn / peel off.



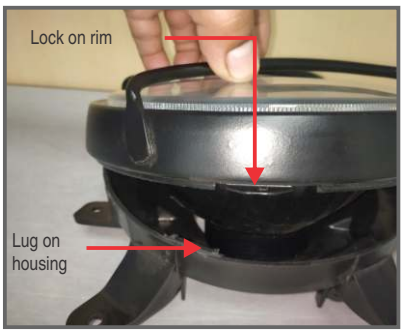
- Remove bracket headlamp upper & bracket headlamp lower mounting bolts (2 Nos each) using 10 mm spanner.

- Take out bracket headlamp upper & bracket headlamp lower



- Remove housing headlamp mounting screws (2 Nos) with phillips head screw driver.

- Take out housing headlamp from reflector.



Assembly

Rim lock & Lug on Housing headlamp details

Lock on rim should get lock beneath lug on housing

- Fit reflector with rim in housing headlamp.
- Rotate reflector with rim holding housing in the direction of yellow arrow.

- Pre-fit housing headlamp screws & tighten them using phillips head screw driver.

- Prefit bracket headlamp upper & bracket headlamp lower mounting bolts & tighten them to recommended torque (0.45 – 0.48 Kgf-m).

- Fit headlamp assembly on fairing. Prefit headlamp mounting screws & tighten them using phillips head screw driver.

- Prefit bracket front number plate mounting screws (2 Nos) with metal washers & then tighten them using phillips head screwdriver.

- Prefit DRL unit mounting screws (4 Nos) & then tighten them using phillips head screwdriver.

- Fit speedo flap on headlamp assembly. Prefit speedo flap mounting screws (3 Nos) & then tighten them using phillips head screwdriver.

- Fit bulb in headlamp, lock clip, harness headlamp coupler on bulb & dust cap properly.

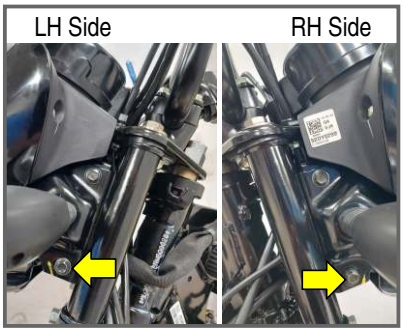
◀ • Fit harness headlamp coupler & DRL unit coupler to it's mating coupler in wiring harness.

- Fit rubber bellow properly to avoid any dust/water entry. All the couplers should be inside rubber bellow.

- Fit 2 nos cable ties.

- Prefit headlamp mounting bolts (4 Nos) & tighten them to recommended torque (0.6 – 0.8 Kgf-m)

Headlamp Focus Adjustment



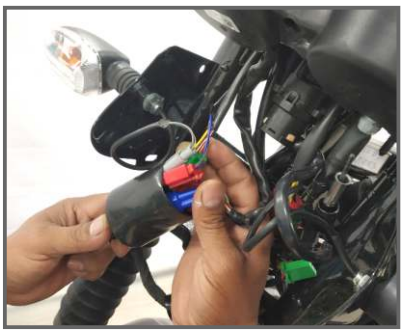
- Adjust headlamp focus as per following chart-

Models	Low beam & High beam setting in mm
CT 110 / 110X / 125X	730 - 830

Speedometer Replacement

- Remove headlamp assembly with fairing from vehicle as explained in “Headlamp Assembly / Fairing Headlamp/ DRL Unit / Speedo Flap / Headlamp Mounting Brackets Replacement SOP”.

- Remove speedo cable from speedometer assembly.

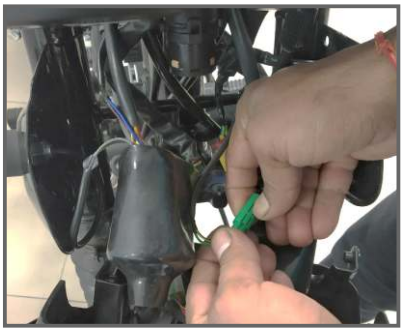


- Pull out the rubber bellow.

- Remove speedometer couplers.
- Remove speedometer mounting nuts(2 Nos) using 10 mm spanner & take out speedometer assembly.
- For assembly on vehicle, follow the reverse steps of removal SOP.

Front Indicator Replacement

- Remove headlamp assembly with fairing from vehicle as explained in “Headlamp Assembly / Fairing Headlamp/ DRL Unit / Speedo Flap / Headlamp Mounting Brackets Replacement SOP”.
- Pull out the rubber bellow.

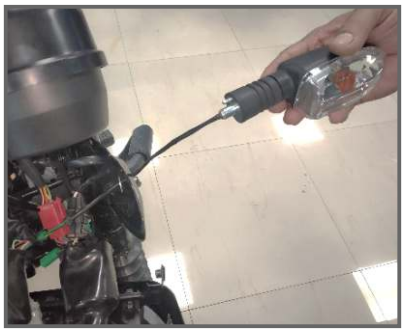


- Remove indicator coupler.

- Insert 14 mm spanner as shown in photograph & remove indicator mounting nut with washer.

- Remove indicator mounting nut & washer from indicator harness branch. Take out indicator.

- For assembly on vehicle, follow the reverse steps of removal SOP.



Bulb Taillamp / Lense with gasket / Reflector Replacement

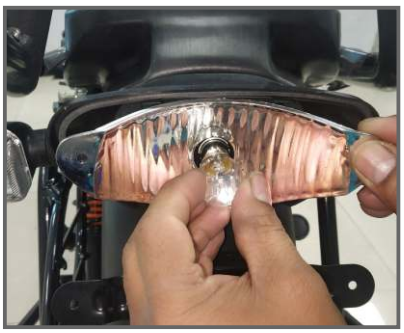
- Remove Lense mounting screws (2 Nos) using phillips head screw driver & Take out lense.

- Hold the reflector as shown in photograph to avoid falling of reflector, take out bulb taillamp. Take out reflector.

- Take out Lense gasket.

Assembly

- Fit Lense gasket

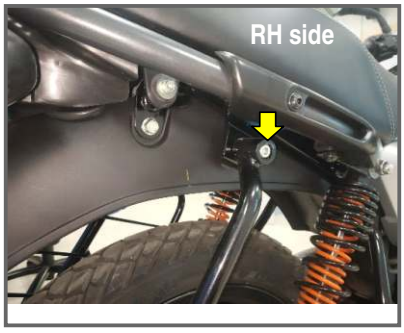


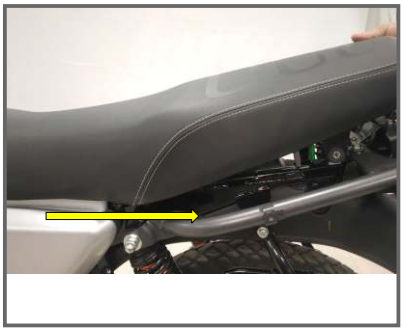
- Hold the reflector as shown in photograph, fit bulb taillamp.

- Fit lense, prefit lense mounting screws & tighten them using using phillips head screw driver.

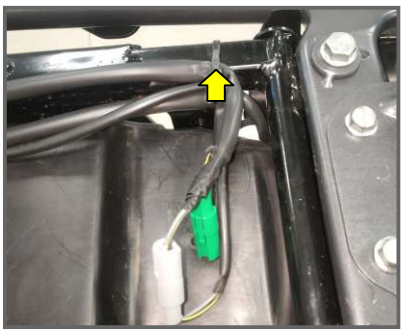
Wire Holder / Housing Taillamp / Holder Taillamp Replacement

- Remove seat assembly mounting bolts (2 Nos) with metal washers using 5 mm allen key.



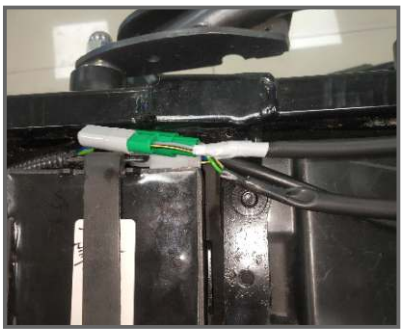


- Lift the seat assembly from rear side & slide in the direction of arrow as shown in photograph to take out seat assembly.

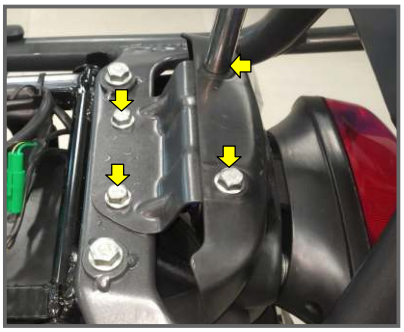


- Cut the cable tie as shown in photograph.

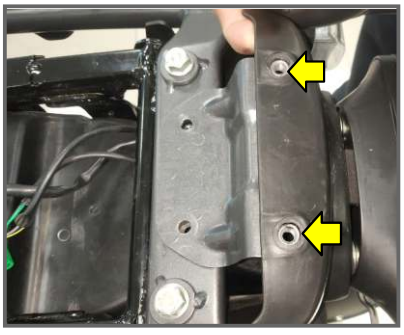
- Remove rear indicator couplers.



- Pull out the harness branches near CU & remove wire holder taillamp coupler.



- Remove holder taillamp mounting bolts (4 Nos) using 10 mm spanner.

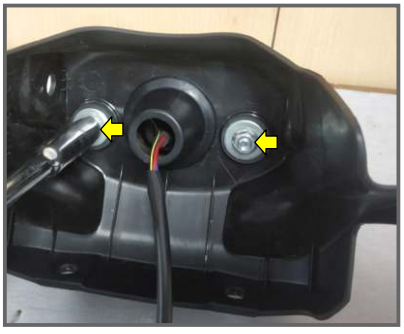


- Lift holder taillamp from collars & take out holder taillamp with tail lamp assembly, wire holder tail lamp & indicators as shown in photograph.

- Remove Lense, Gasket, Bulb taillamp & reflector as explained in “Bulb Taillamp / Lense with gasket / Reflector Replacement SOP”.
- Insert 15 mm spanner through indicator harness branch & remove indicator mounting nuts.

- Remove nut from indicator harness branch & take out indicator. Similary remove other indicator also.

- Take out bracket indicator mounting.



- Remove housing taillamp mounting nuts (2 Nos) with 4 Nos metal washers using 10 mm spanner.

- Take out housing taillamp with wire holder.

- Remove wire holder from housing taillamp.

- Replace 2 nos foams on housing taillamp if found peel off / damaged with new one.

- Take out boot from holder taillamp.

Assembly

- Fit boot in holder taillamp.

- Insert wire holder in holder taillamp.

Fit wire holder in Housing taillamp.

- Fit 2 nos metal washer on housing taillamp studs as shown in photograph.

- Fit housing taillamp in holder taillamp.

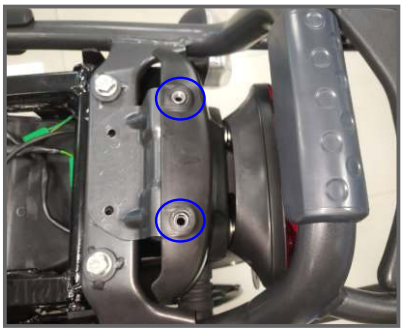
- Fit 2 nos metal washer on housing taillamp studs as shown in photograph.

- Prefit housing taillamp mounting nuts & tighten to recommended torque (0.5 Kgf-m)

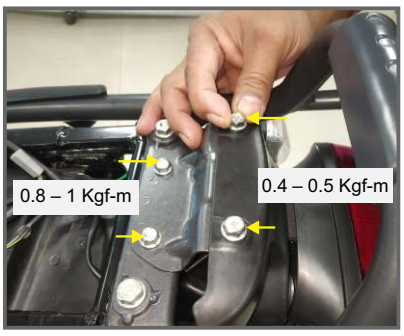
- Hold reflector with one hand & fit bulb taillamp.

- Prefit lense screws & tighten them using phillips head screw driver.

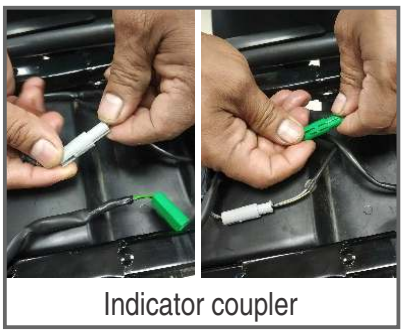
- Fit bracket indicator mounting & indicators.



- Fit taillamp assembly on frame. Fit holder taillamp holes on collar.

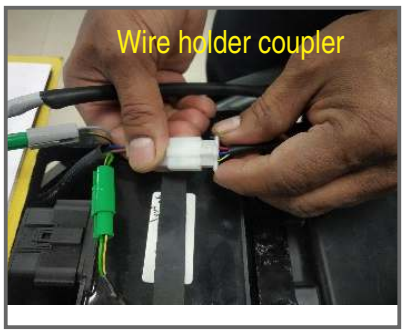


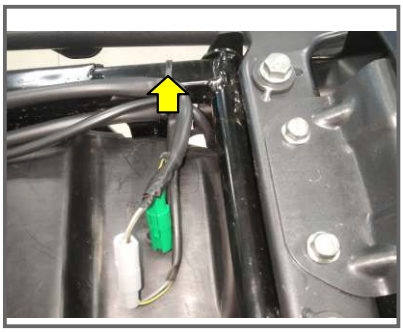
- Prefit holder taillamp mounting bolts & tighten them to recommended torque.



Indicator coupler

- Fit indicator couplers, wire holder couplers.



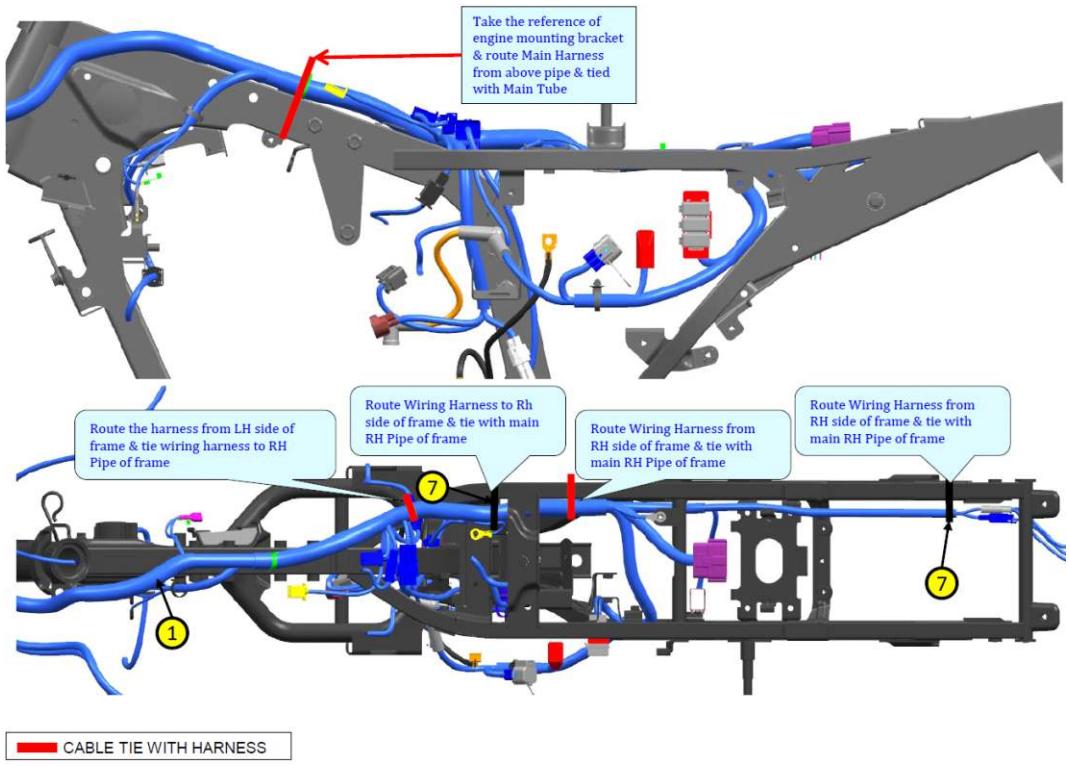


- Fit cable tie.

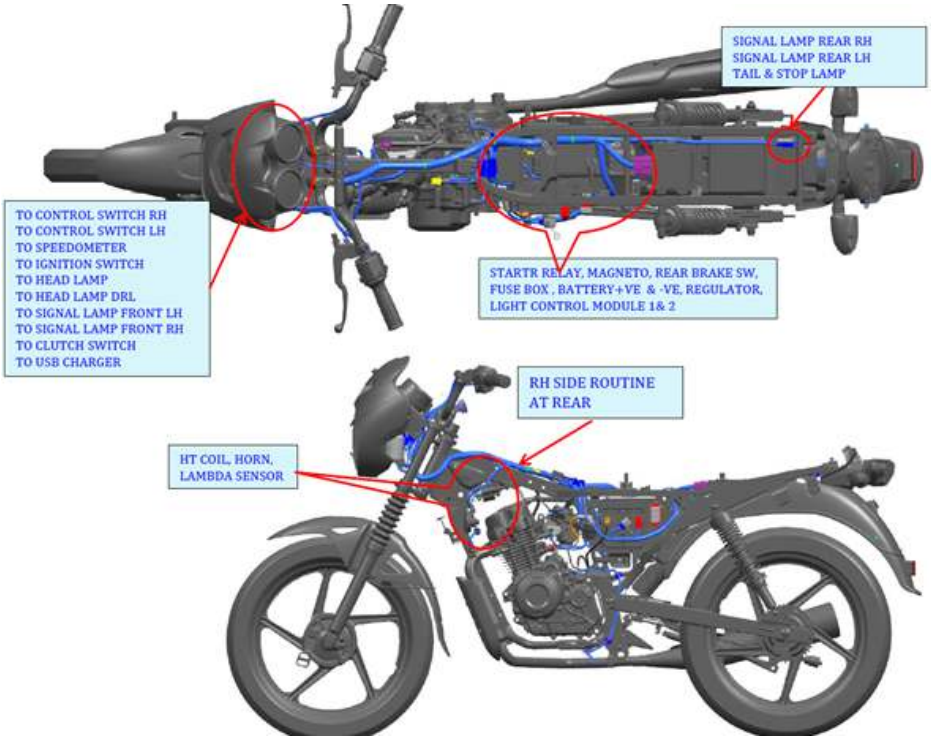
- Fit indicators & wire holder branches in space between CU & Frame rod as shown in photograph.

SR NO	PART NAME	PART NUMBER	QTY
1	HARNESS WIRING	DY402222	01
2	CABLE ASSY ST RELAY TO MOTOR	JV402204	01
3	CABLE EARTH	DY402202	01
4	CLAMP HARNESS(STRIP CLAMP)	DK201049	01
5	WASHER TOOTHED-ID 6.4XOD11XT 0.7	LDF00001	01
6	BOLT FLANGED M6X1	KAED0610	02
7	BAND(LENGTH 200MM)	JD402212	04
8	CLAMP TIE CABLE	JD402216	01

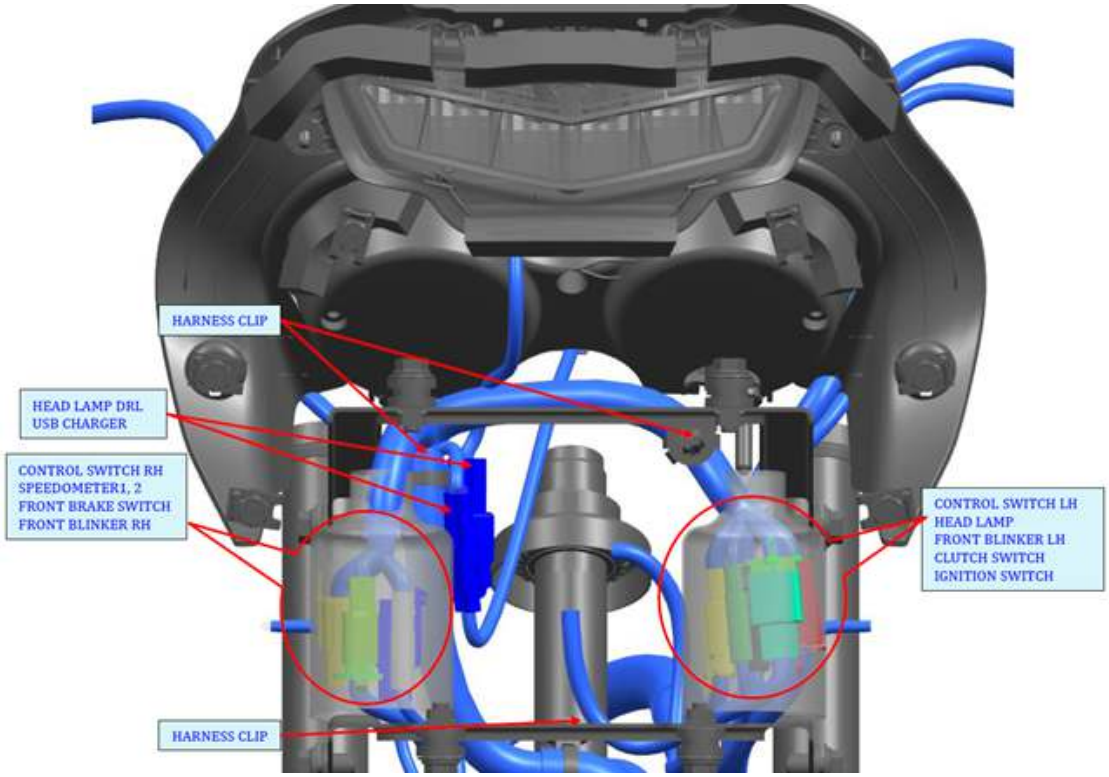
• Route the wiring harness as shown in photograph.



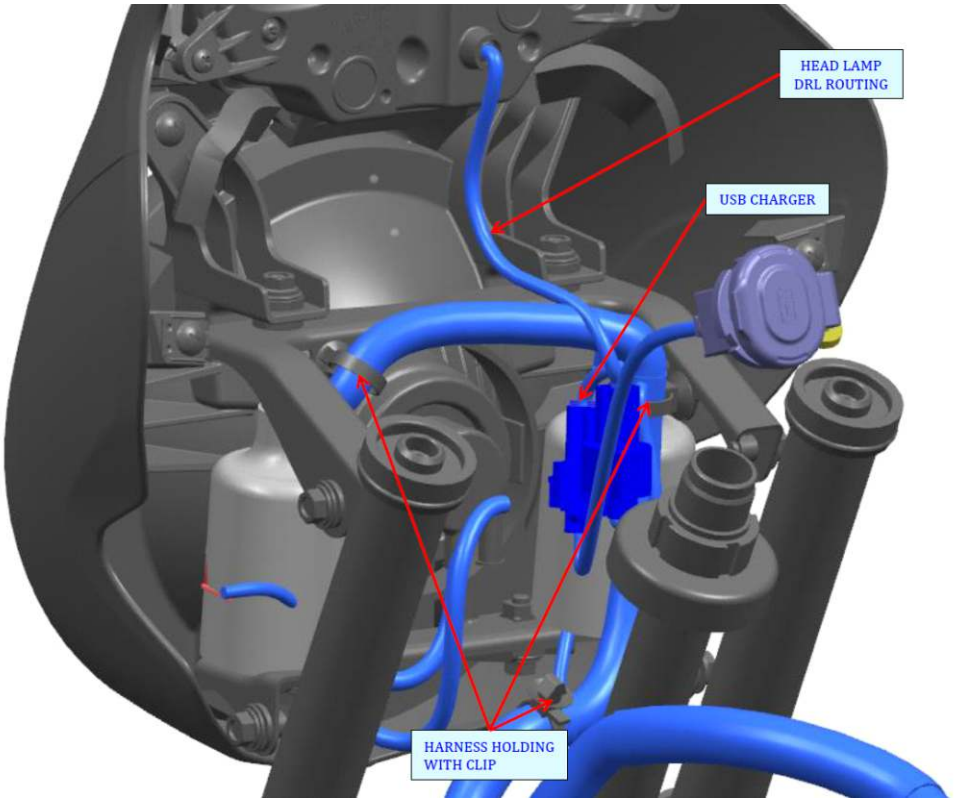
• Route the wiring harness as shown in photograph.



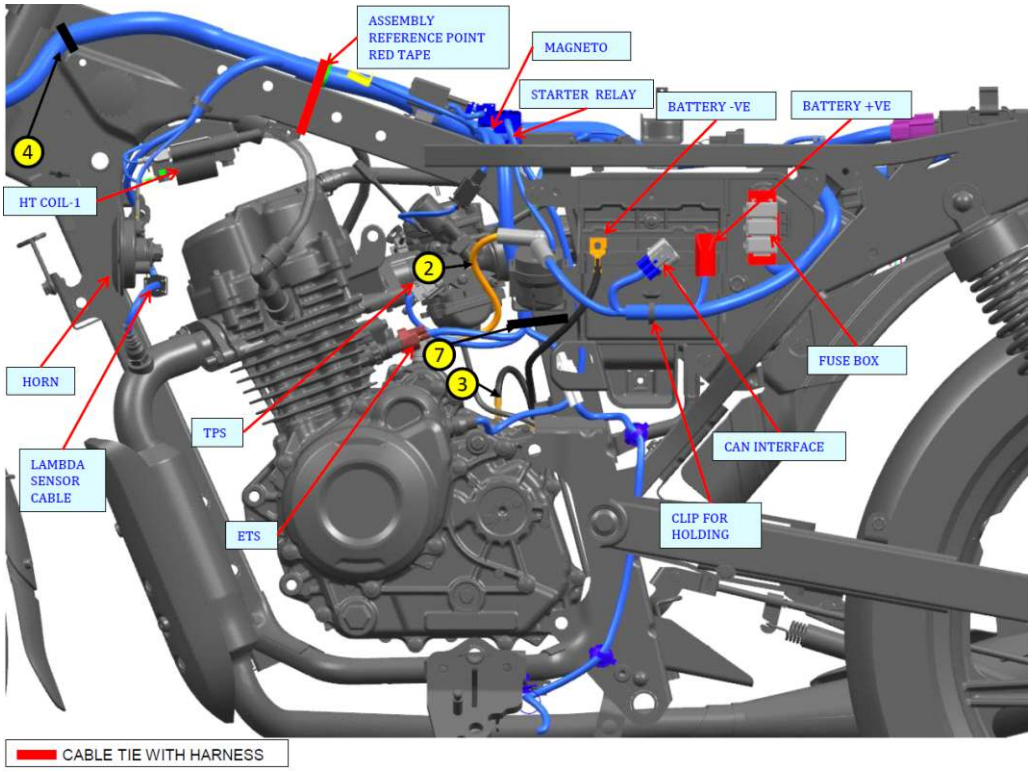
• Route the wiring harness as shown in photograph.



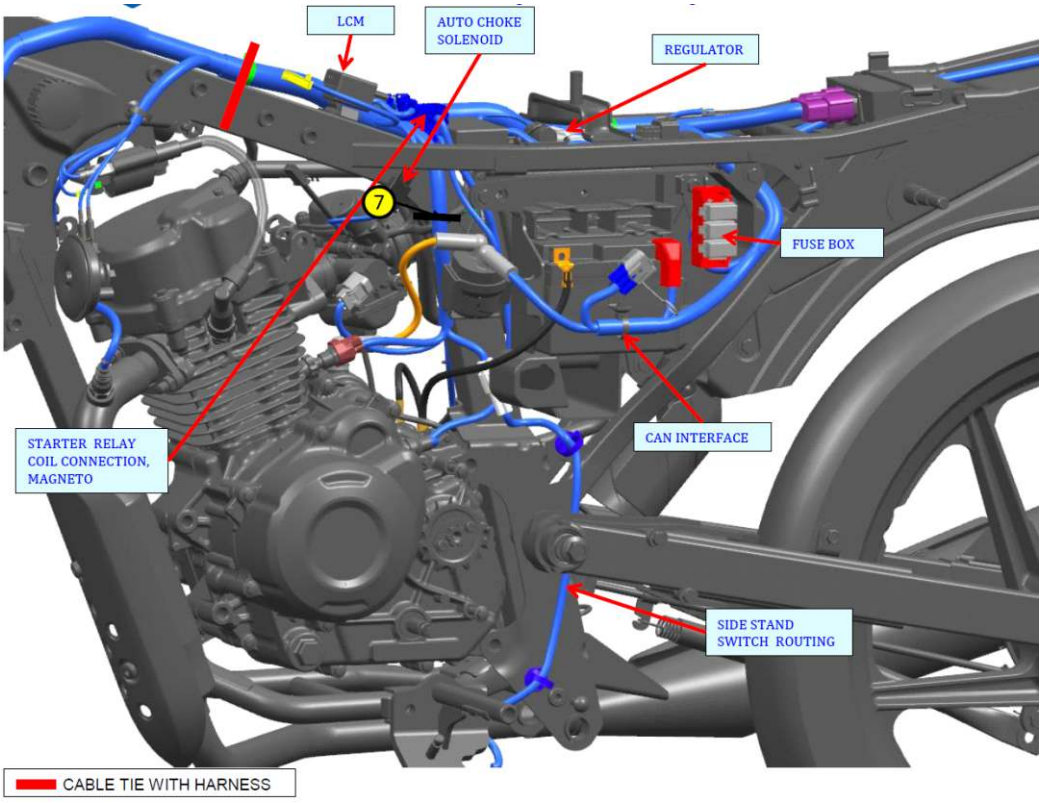
• Route the wiring harness as shown in photograph.



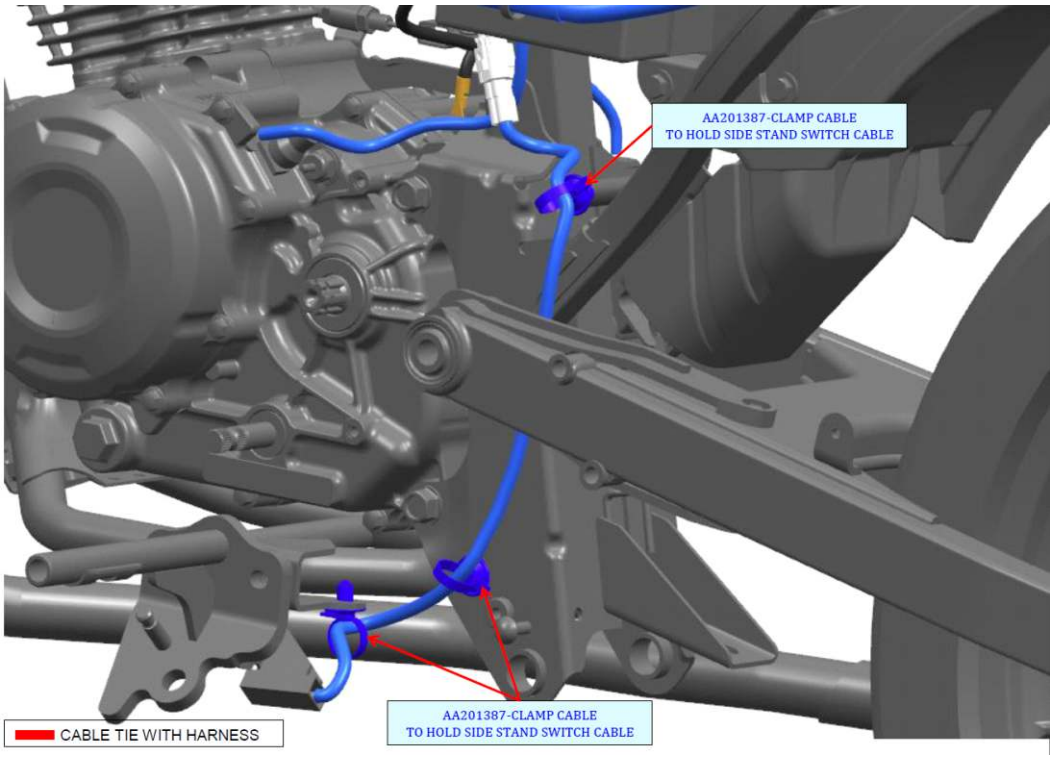
• Route the wiring harness as shown in photograph.



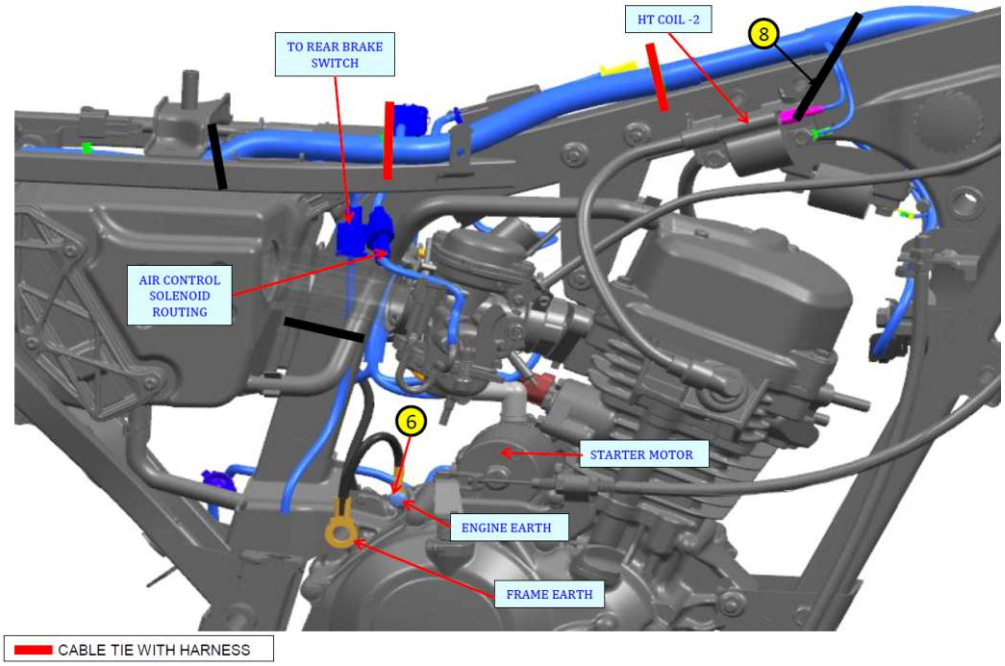
• Route the wiring harness as shown in photograph.



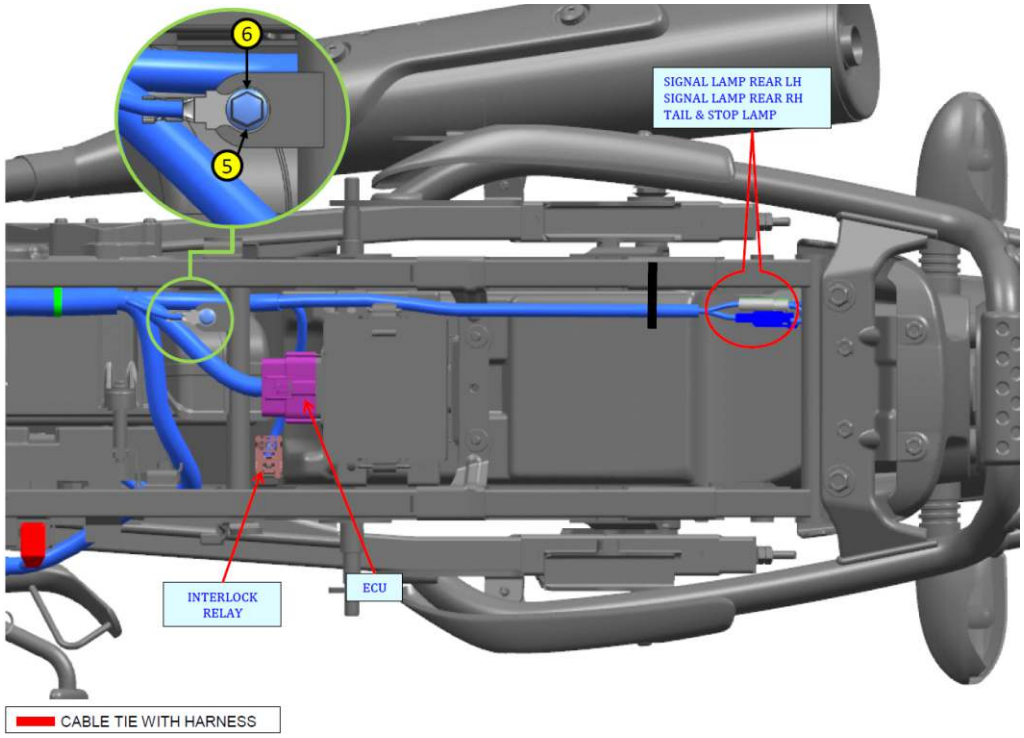
• Route the wiring harness as shown in photograph.



• Route the wiring harness as shown in photograph.



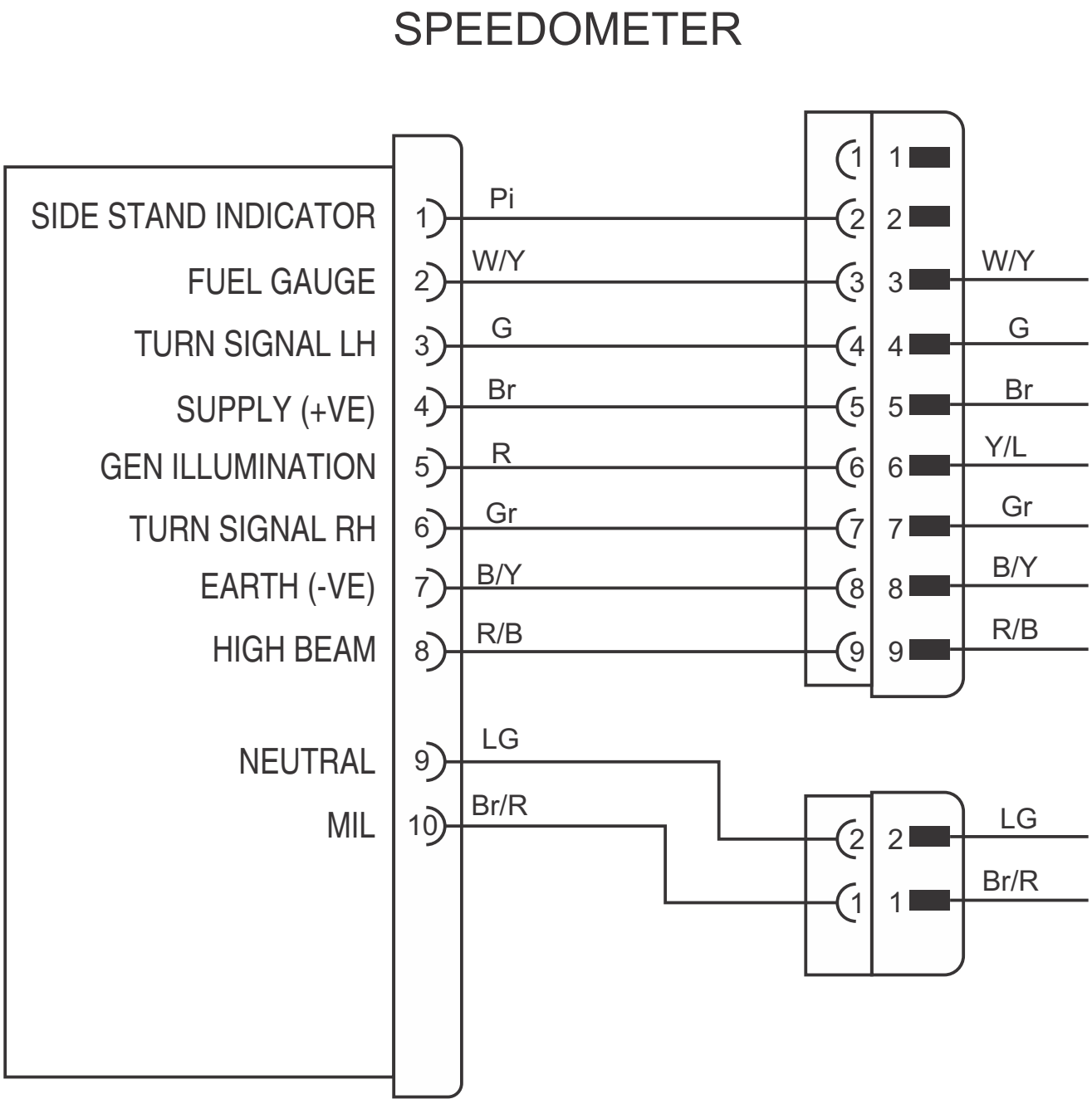
• Route the wiring harness as shown in photograph.



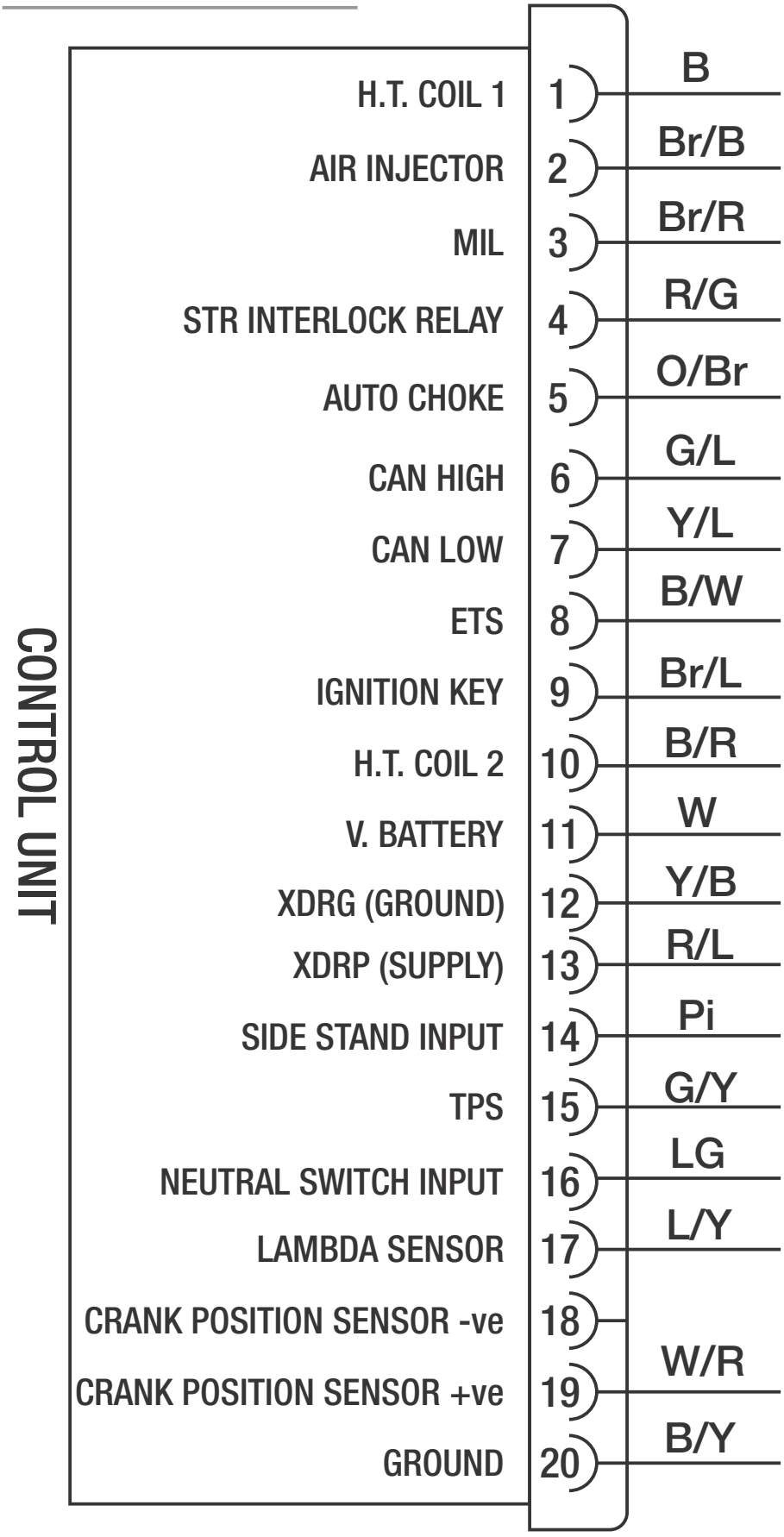
Model	CT 110X ES Drum Drum	CT 125X ES Disc & CT 125X ES Drum
Part Name	Light control Module / DC Flasher	
Part Number	DS201025	JL402004
Description	With DC flasher	With light control module

Part Name	Wiring Harness	
Part Number	DY402214	JL402004
Description	With provision for fitment of – DC Flasher	With provision for fitment of –Socket charger, Light control module

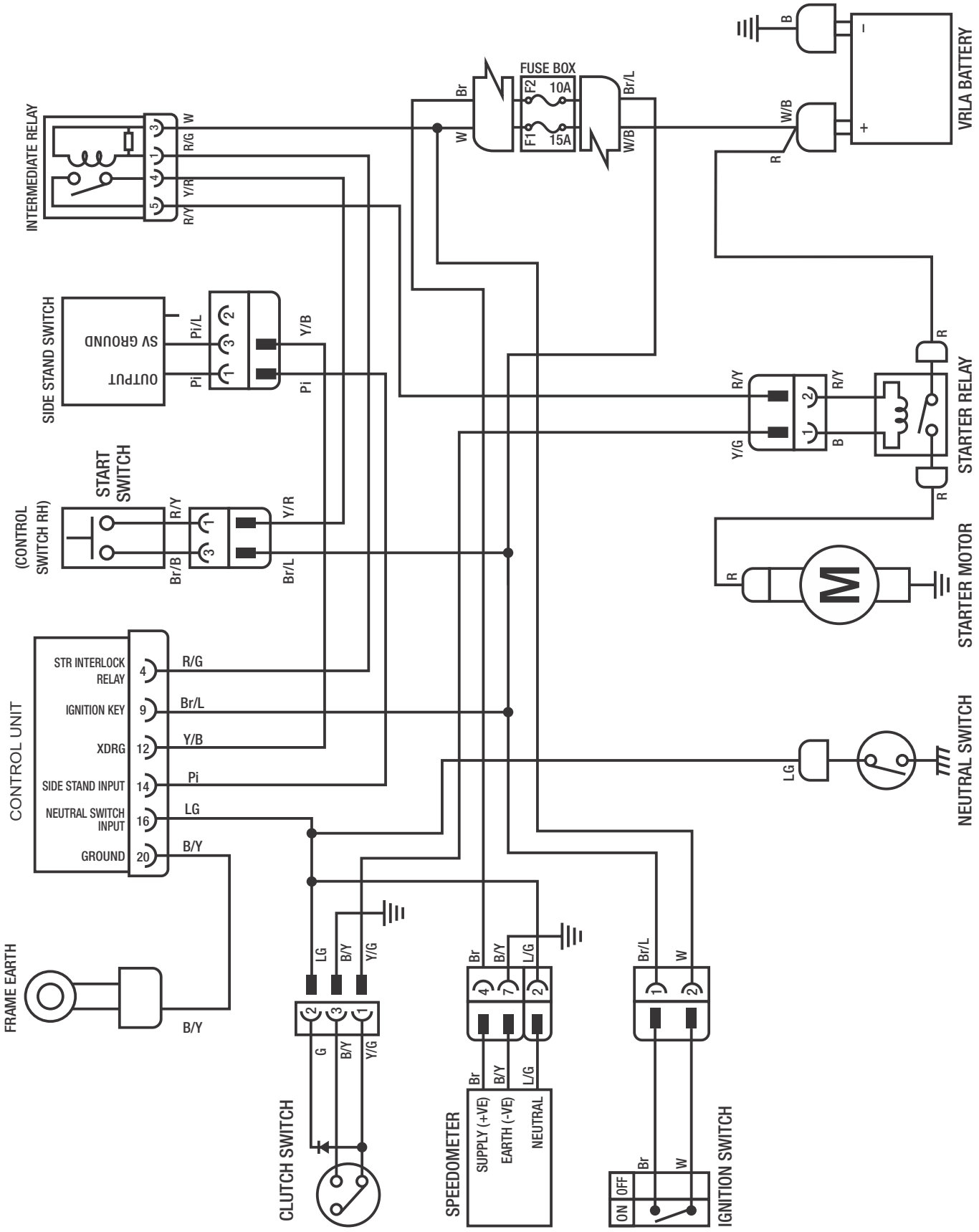
SPEEDOMETER PIN DETAILS



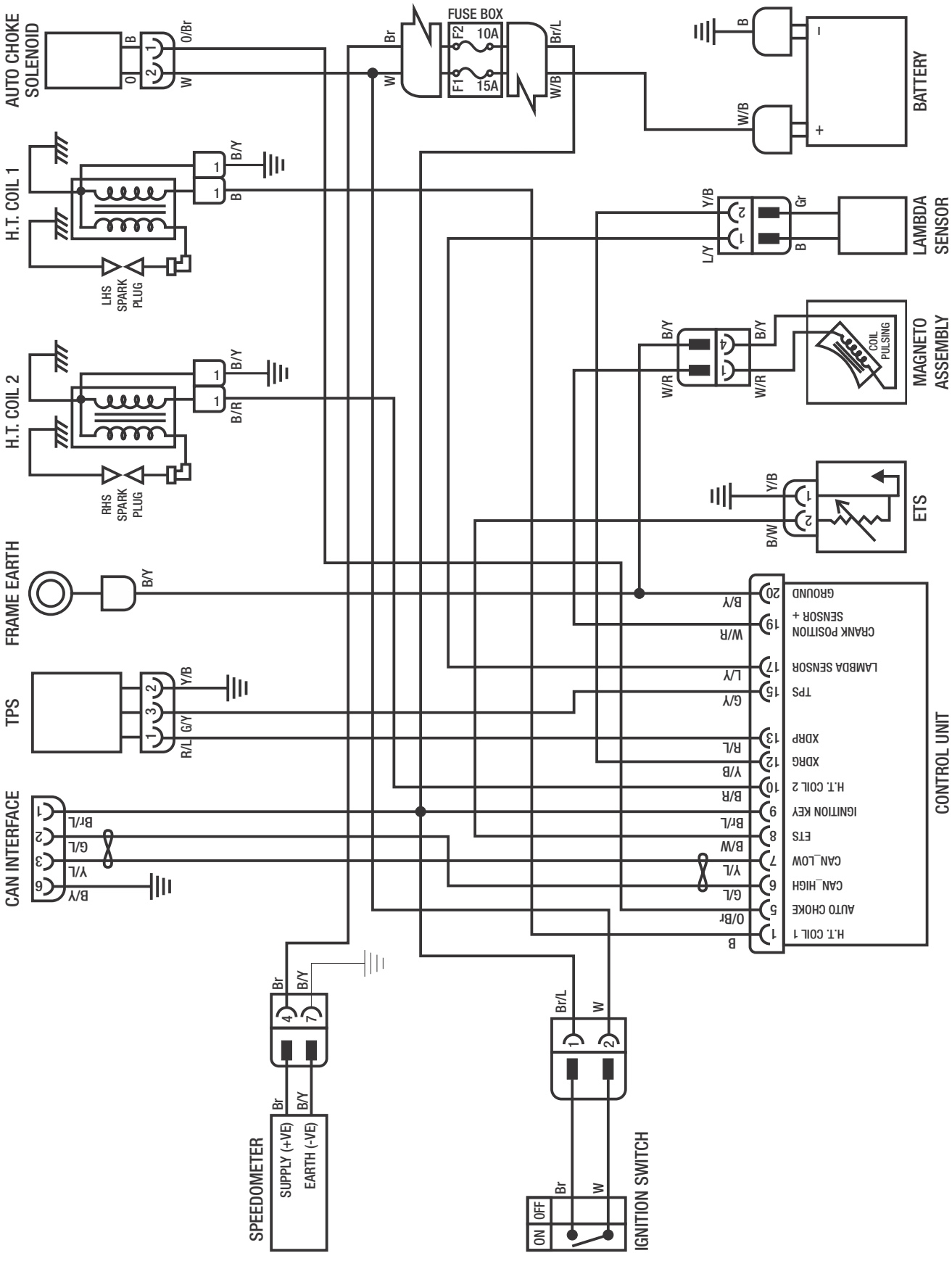
CONTROL UNIT PIN DETAILS



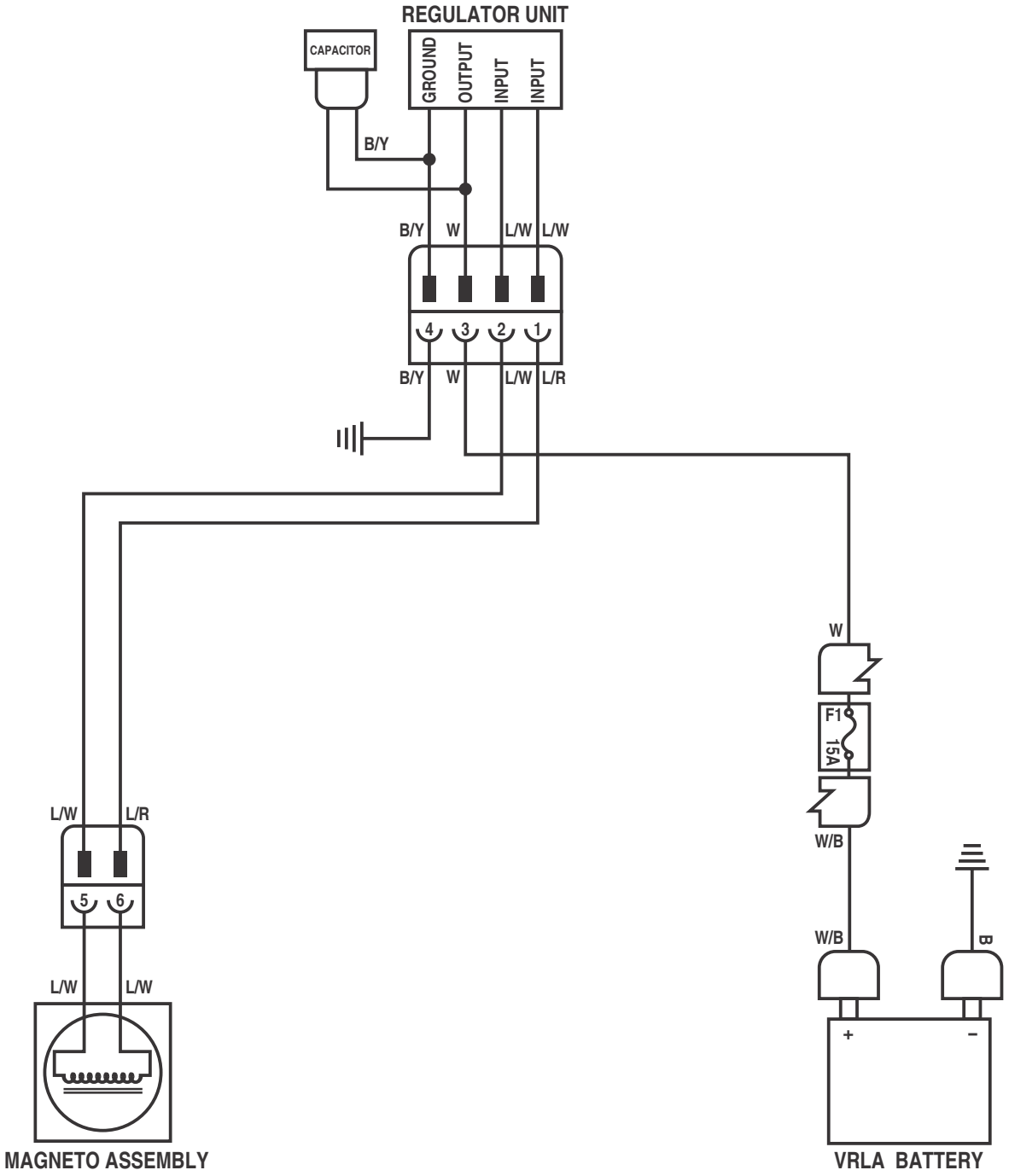
STARTER MOTOR CIRCUIT CUM SIDE STAND INDICATION



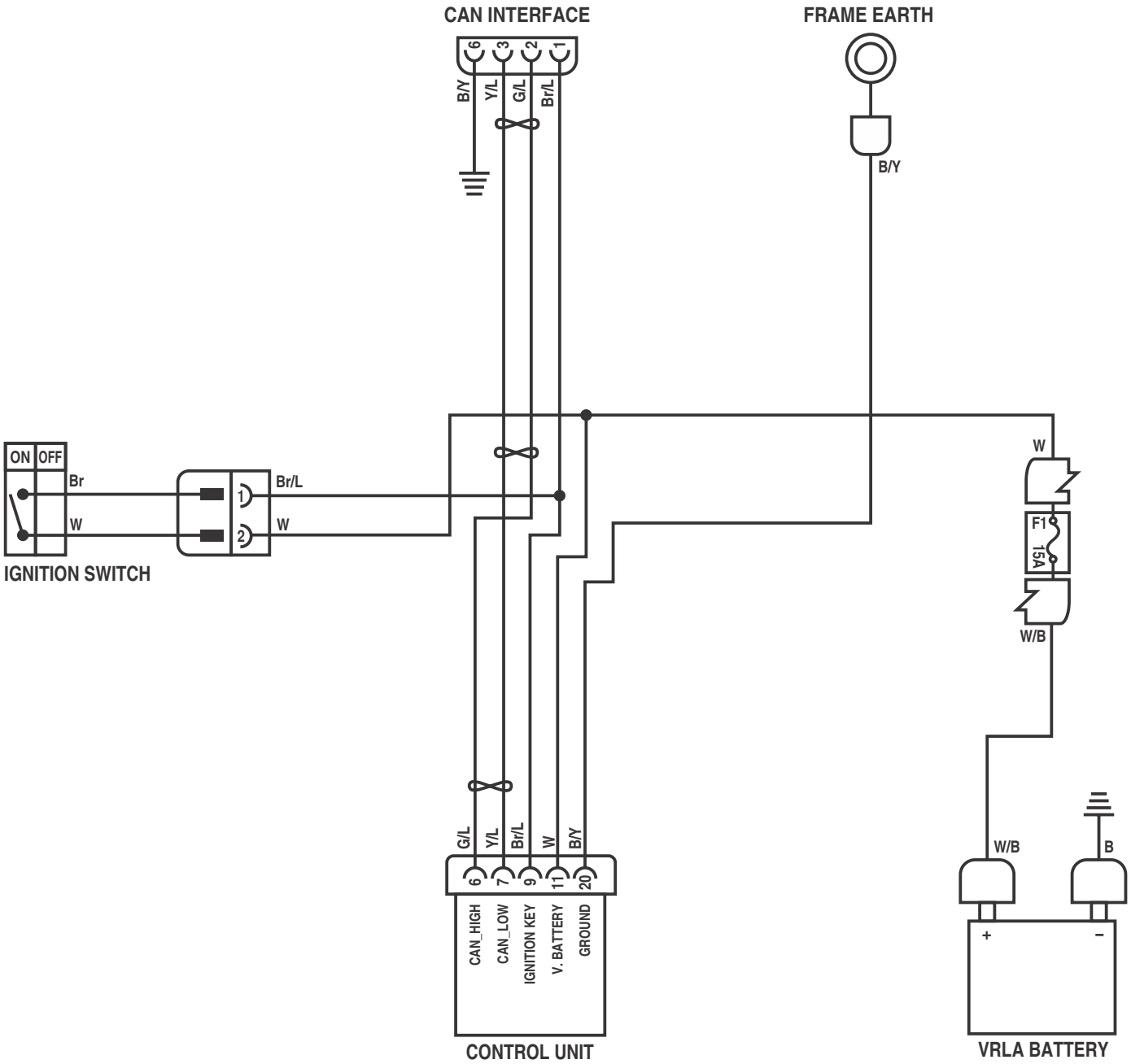
IGNITION CIRCUIT



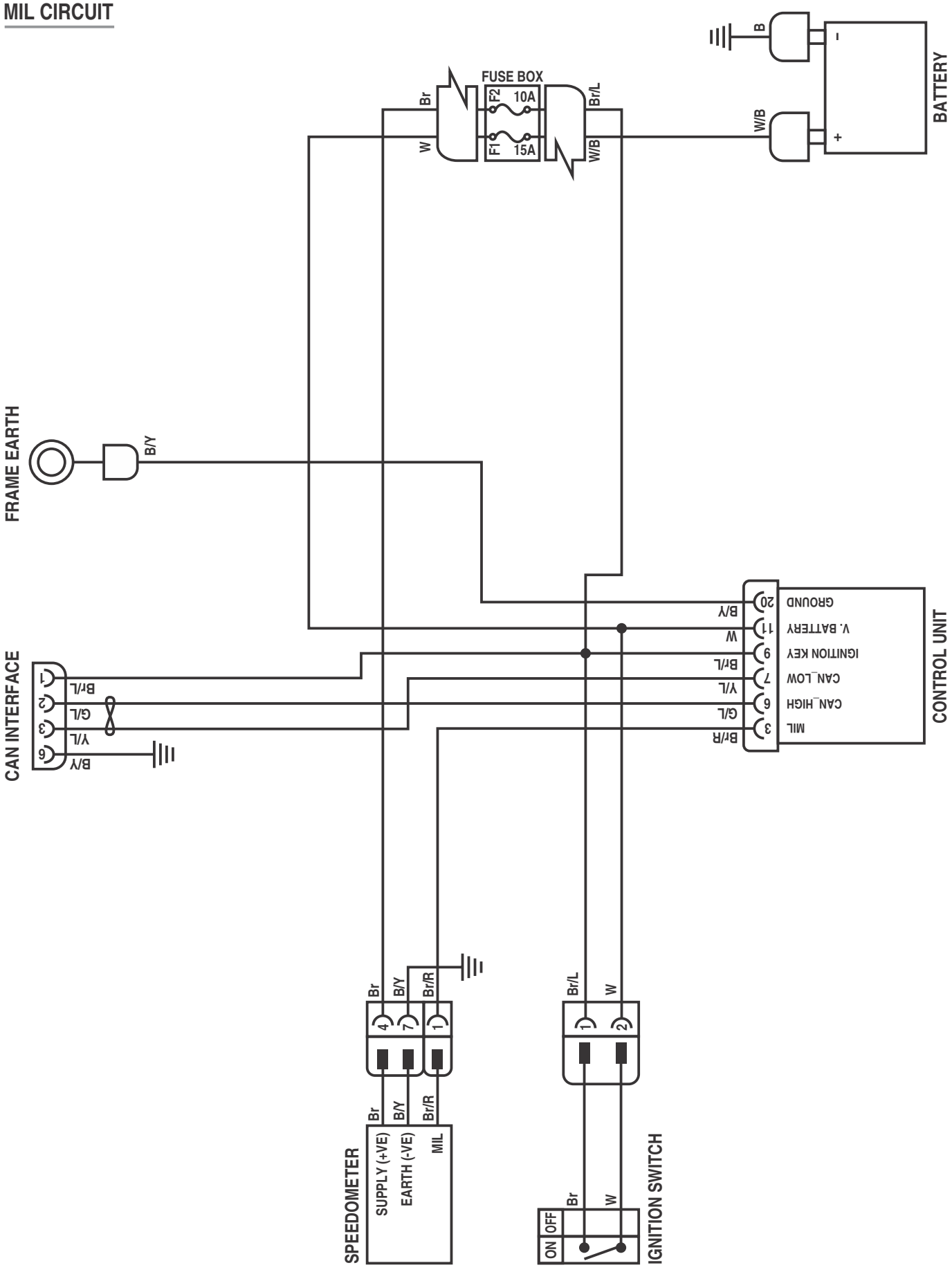
BATTERY CHARGING CIRCUIT



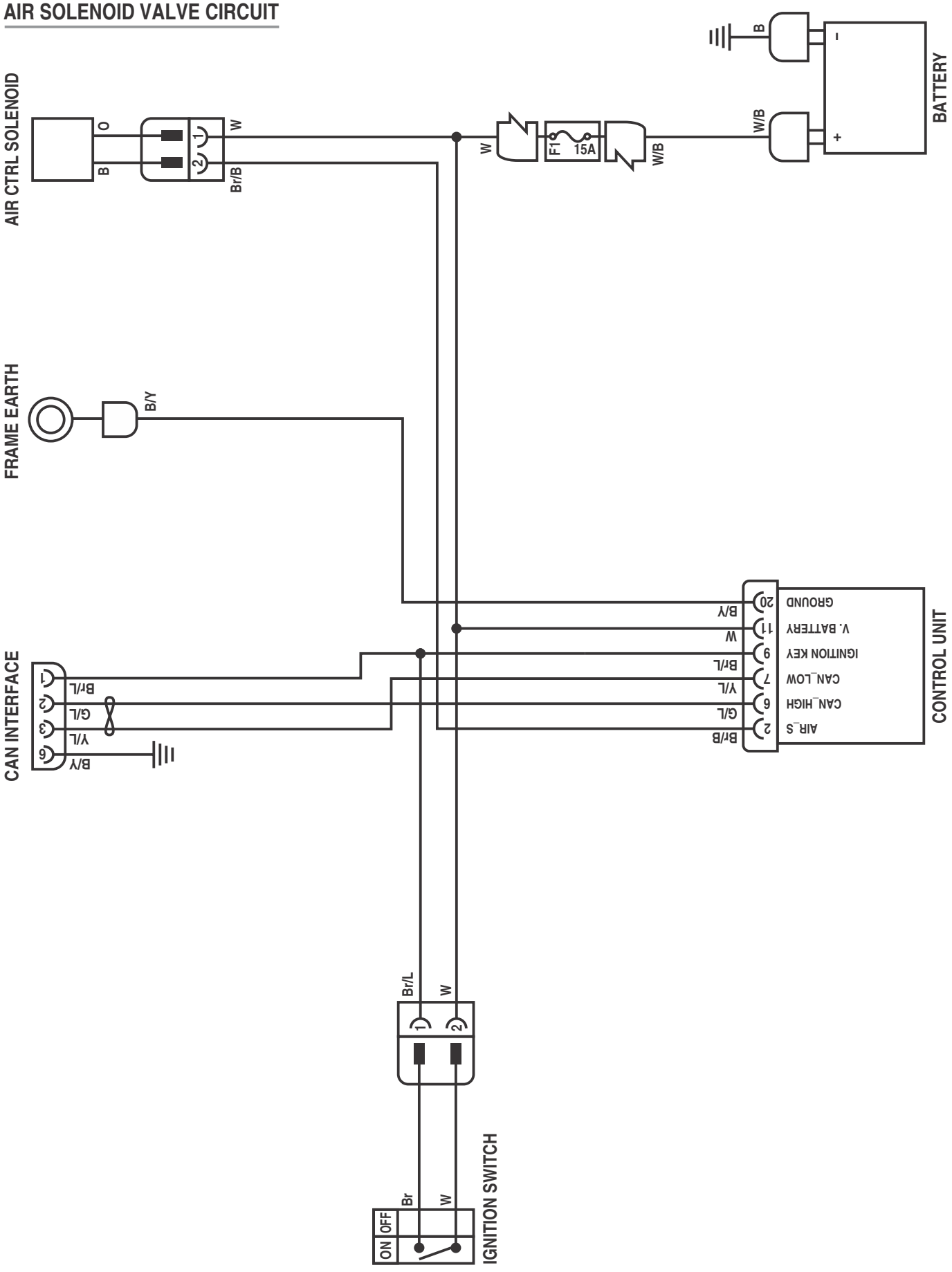
CAN CIRCUIT


CAN INTERFACE
6
3
2
1
B/Y
Y/L
G/L
Br/L
FRAME EARTH
B/Y
ON
OFF
Br
W
1
2
Br/L
W
IGNITION SWITCH
W
F1
15A
W/B
G/L
Y/L
Br/L
W
B/Y
6
7
9
11
20
CAN_HIGH
CAN_LOW
IGNITION KEY
V. BATTERY
GROUND
CONTROL UNIT
W/B
B
+
-
VRLA BATTERY

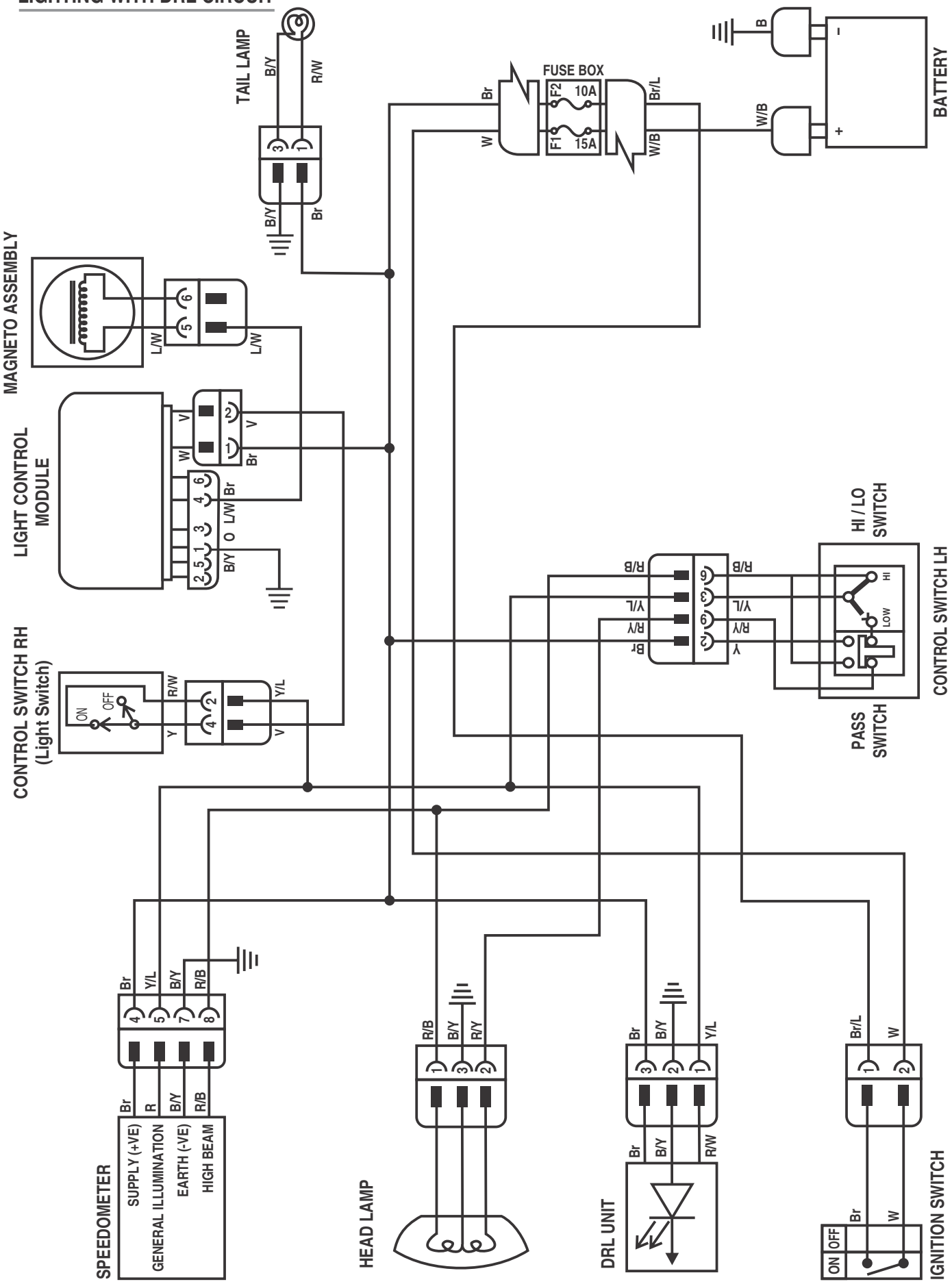
MIL CIRCUIT


BATTERY
B
-
+
W/B
FUSE BOX
Br
W
F2 10A
F1 15A
Br/L
W/B
FRAME EARTH
B/Y
CONTROL UNIT
20 GROUND
11 V. BATTERY
9 IGNITION KEY
7 CAN_LOW
6 CAN_HIGH
3 MIL
B/Y
W
Br/L
Y/L
G/L
Br/R
CAN INTERFACE
1 Br/L
2 G/L
3 Y/L
6 B/Y
SPEEDOMETER
SUPPLY (+VE)
EARTH (-VE)
MIL
Br
B/Y
Br/R
4
7
1
IGNITION SWITCH
Br/L
W
1
2
Br
W
OFF
ON

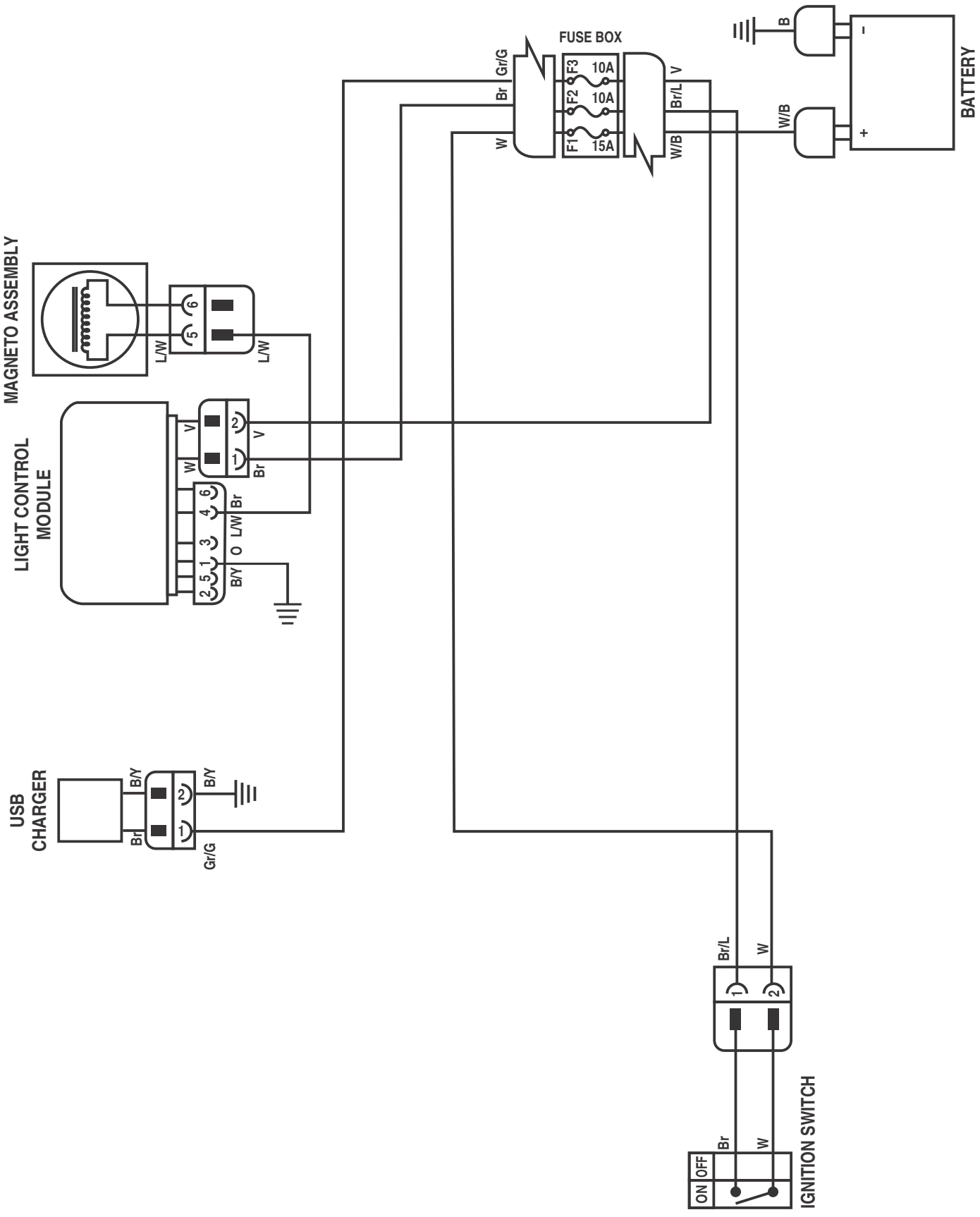
AIR SOLENOID VALVE CIRCUIT



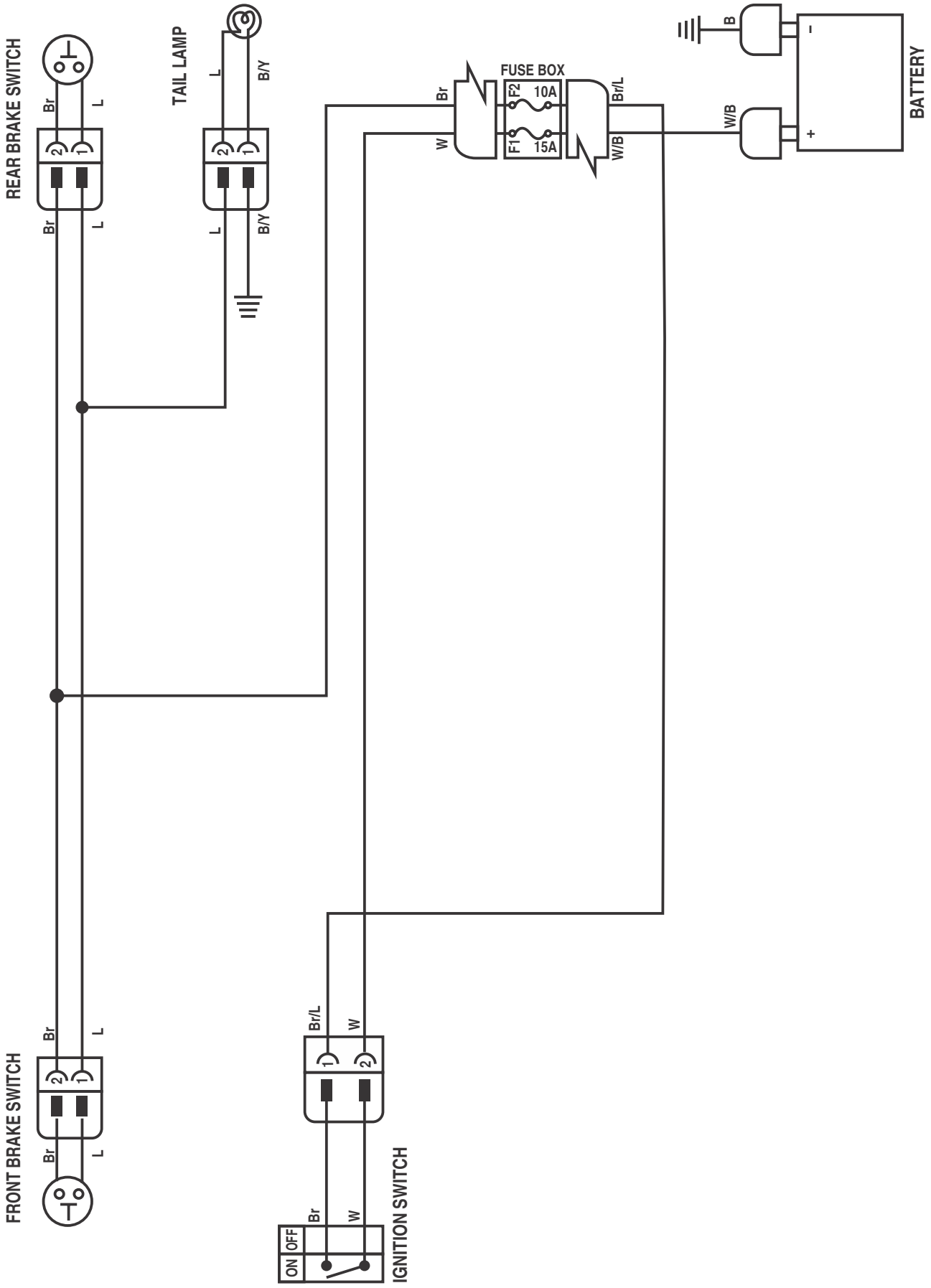
LIGHTING WITH DRL CIRCUIT



USB CHARGER CIRCUIT



BRAKE LAMP CIRCUIT



SIDE INDICATOR CIRCUIT