# Training Notes

BAJAJ LOVED IN 70 COUNTRIES

pulsar P150

***Single Channel Disc Brake***
***(with Mikuni + VARROC make ECU)***

- The Training Notes are a comprehensive training guide on service and maintenance operations and procedures to be followed by service personnel at authorised service centres and dealerships whilst attending to the Bajaj Pulsar 150 Single Channel Disc Brake (with Mikuni + VARROC make ECU)
- The Training Note covers standard workshop producers, simplified for easy learning and understanding for service technicians worldwide.

**NOTICE**

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

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**Key Learning Points**

- Understanding of Mikuni Make System

CHAPTER 1

# Pulsar 150 Single Channel Disc with Mikuni make ECU

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Torque Values & Service Limit
Part Identification
Rear Brake Hose Routing
Wiring Harness Routing

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Technical Specifications

| Parameter | Pulsar N160 (Single channel ABS) | | Pulsar P150 (Single channel ABS) |
|---|---|---|---|
| Type | 2 Valve, Single cylinder | | |
| Bore | 58 mm | | 56 mm |
| Stroke | 62.38 mm | | 60.77 mm |
| Displacement | 164.82 cc | | 149.68 cc |
| Idling speed | 1400 ± 100 rpm | | |
| Max.Net Power | 16 PS @ 8750 rpm | | 14.5 PS @ 8500 rpm |
| Max. Net Torque | 14.65 Nm @ 6750 rpm | | 13.5 Nm @ 6000 rpm |
| Ignition system | DC, Fuel Injection | | |
| Spark plugs Qty | 2 Nos | | 1 Nos |
| Spark plug gap | 0.8 - 0.9 mm | | |
| Lubrication | Wet Sump Forced Lubrication | | |
| Transmission | 5 Speed, Constant mesh | | |
| Gear shifting pattern | 1 Down, 4 Up | | |
| Engine oil Grade | Bajaj DTS-i 10W40 BS6 Compliant SAE 10W40 JASO 'MA2' API SN | | |
| Engine oil Drain & Refill qty. | 1250 ml | | 1150 ml |
| Overhaul quantity | 1450 ml | | 1250 ml |
| **FRAME** | Tubular frame | | |
| Suspension | Front | Front : Telescopic suspension, Ø 31 mm | |
| | Rear | Rear : Mono suspension, without canister | |
| Brakes | Front | Single channel ABS, Disc Ø 280 mm | Single channel ABS, Disc Ø 260 mm |
| | Rear | Disc Ø 230 mm | Ø 130 mm, Drum Brake |
| Tyres | Front | 100/80 -17, 52P, Tubeless | 80/ 100 - 17 46P, Tubeless |
| | Rear | 130/70 -17, 62P, Tubeless | 100/90 - 17 55P, Tubeless |
| Tyre Pressure | Front | 1.75 Kgf/cm² (25 PSI) | |
| | Rear (Solo) | 2 Kgf/cm² (28 PSI) | |
| | Rear (Pillion) | 2.25 Kgf/cm² (32 PSI) | |

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Technical Specifications

| Parameter | Pulsar N160 (Single channel ABS) | Pulsar P150 (Single channel ABS) |
|---|---|---|
| Fuel Tank Capacity Full | 14 Litres, No Reserve | |
| Fork oil Grade | Bajaj Genuine, SAE 10W20 | |
| Fork oil Quantity / leg | 156 ml | 154 ml |
| Length | 1989 mm | 2068 mm |
| Width | 743 mm | 764 mm |
| Height | 1050 mm | 1052 mm |
| Wheelbase | 1358 mm | 1352 mm |
| Ground Clearance | 165 mm | |
| Vehicle Kerb Weight | 153 Kg | 140 Kg |
| Vehicle Gross Weight | 303 Kg | 290 Kg |
| **ELECTRICAL** | | |
| System | 12V DC | |
| Battery | 12V 4Ah, VRLA | |
| Head Lamp | LED | |
| Position Lamp | LED | |
| Tail / Stop Lamp | LED | |
| Side Indicator Lamp | Bulb type, 12V 10W | |
| Neutral Indicator | LED | |
| Hi Beam Indicator | LED | |
| Turn Signal Indicator | LED | |
| Speedometer back light | LCD | |
| Fuel Level Indicator | LCD | |
| Low Oil Pressure Indicator | LED | Not Applicable |

# Technical Specifications

| Parameter | Pulsar N160 (Single channel ABS) | Pulsar P150 (Single channel ABS) |
|---|---|---|
| Malfunction Indicator | LED | |
| High Engine oil Temp. Indicator | Not Applicable | |
| Low Battery Indicator | LED | |
| REV Indicator | LED | |
| Service Reminder | LCD | |
| Side Stand Indicator | LED | |
| ABS Indicator | LED | |
| Rear Number Plate Lamp | 12V,5W | |
| Horn | 12V 2A, DC | |

**Note :**

- Always maintain Minimum 3 Litres fuel in fuel tank for smooth functioning of vehicle.
- 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

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Preventive Maintenance Chart

For Pulsar P150,Preventive maintenance chart is same as Pulsar N160 except change in following PM point.

| Sr. No. | Activities / Check points | Recommended frequency -- Service interval & Kms | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th | 13th | 14th | 15th | 16th |
| | | 500 ~ 750 | 4.5 ~ 5 K | 9.5 ~ 10 K | 14.5 ~ 15 K | 19.5 ~ 20 K | 24.5 ~ 25 K | 29.5 ~ 30 K | 34.5 ~ 35 K | 39.5 ~ 40 K | 44.5 ~ 45 K | 49.5 ~ 50 K | 54.5 ~ 55 K | 59.5 ~ 60 K | 64.5 ~ 65 K | 69.5 ~ 70 K | 74.5 ~ 75 K |
| 1 | Valve Tappet Clearance | | | C,A | | C,A | | C,A | | C,A | | C,A | | C,A | | C,A | |

# Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

## PDI Checklist

| 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.<br>2. Oil leakages, if any. | Vehicle to be parked on center stand. (Vehicle without center stand -Oil level to be checked at vehicle upright position, both wheel resting on plain surface) | 1. Engine cold condition Oil level should be in between MAX & MIN mark.<br>2. Check this point after test ride on road. | | 1. Engine oil filling funnel.<br>2. BGO 10W40,BS6 Compatible |
| Side stand | Side stand operation & magnet holder bolt tightness. | Visual | Smooth side stand operation Magnet position for dislocation / proper position. | | Visual |
| Mirror | 1.Fitment.<br>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 & Rear (for twin disc only)reservoir.<br>2. Brake Fluid leakage if any. | Visual | 1. Brake fluid level above MIN mark, top up if required.<br>2. Check this point after test ride on road. | | DOT 4 brake fluid.<br>Syphon pump for air bleeding. |
| Lock Operation | Smooth operation of Steering cum Ignition lock,(to be checked on LH side only.)<br>Seat 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.<br>Yellow LED - Battery partially discharged.<br>Red LED- Battery deep discharged. | | 1. Midtronics battery tester,<br>2. Battery chargers ( VRLA)<br>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 | 1.Check air pressure in both tyres using tyre pressure gauge.<br>2.Refill air using by Pneumatic connection / Good quality foot pump. | Front - 1.75 Kgf/cm² (25 PSI)<br>Rear solo - 2 Kgf/cm² (28 PSI)<br>Rear with 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 15-25mm. | | 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 |

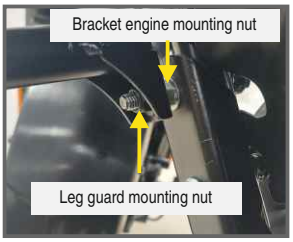
# Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

## PDI Checklist

| Check Point | What to check | How to check | Recommendation / Reference | Workshop Observation | Tools , equipment & consumables required |
|---|---|---|---|---|---|
| Fasteners Torque values | 1.Front & rear axle | Using dial torque wrench | Front : 5 to 6 Kgf-m<br>Rear : 8 to 10 Kgf-m | | Dial torque wrench 20 Kgf-m |
| | 2.Engine foundation | | Engine foundation-<br>Front bottom : 4 to 4.2 Kgf-m | | |
| | 3.Rider (bottom bolt only)/Pillion foot rest holder (Stay) | | 1.8 to 2.2 Kgf-m | | |
| **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, No. plate lamp | Check functioning. | _ | | |
| Speedometer | Working of speedometer, Odometer, Trip meter, Fuel gauge , Clock. Gear indicator, AFE, DTE | Fuel gauge -By filling fuel.<br>Clock -Set clock if required as per SOP. | Speedometer,Odo meter & trip meter working to be checked during / after test ride | | Funnel for filling petrol & measuring jar |
| | Working of all signal indicators icons (N, Turn signal, Side stand, High beam, Low battery, MIL, ABS, Service reminder & B Logo) | By observing speedo Indications after switching ON ignition switch. | ABS icon will turn off if vehicle speed is more than 5 Kmph .<br>Fi icon will glow if there is any malfunction in FI system. | | |
| Headlamp | Head light Low beam focus checking | As per head light focus checking SOP. | Refer head light focus values chart.<br>Focus to be checked with rider & from a distance of 5 meters. (760mm from ground) | | 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 : About Leg Guard Fitment

- Fit Leg guard top side(LH & RH) mounting nut a shown in photograph.



# Special Tools

**Set Adaptor for Swing arm NRB removal & fitment**

Part No. : 37004498

Usage : For swing arm NRB removal & fitment of Pulsar P150

*NOTE : These set of Adaptor is to be used in place of adaptors available in existing Swing arm NRB removal & fitment tool (Part Number : 37004473)*


*NOTE : All other tools are same as Pulsar N160.Refer Pulsar N160 Training Note available on GO2 Portal.*

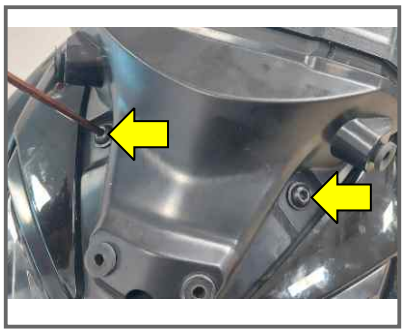
# Important SOP

## Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement

- Remove bracket number plate front mounting bolts (2 nos) using 8 mm spanner.

- Remove windshield mounting bolts (2 nos) with plastic washer using 4 mm allen key.

- Take out windshield with bracket number plate front.



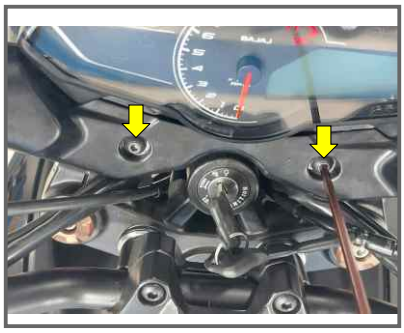
- Remove fairing assembly mounting bolts as follows :

  - Top : 2 nos bolts using 4mm allen key

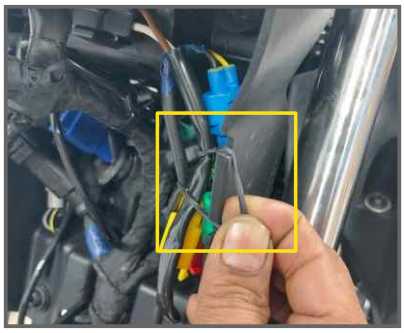
  - Bottom : bolt using 10 mm spanner

# Important SOP

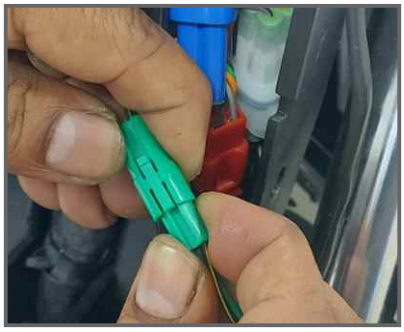
- Remove headlamp coupler connection & take out front fairing assembly from vehicle.



- Remove speedo flap mounting bolts (2 nos) using 4 mm allen key & take out speedo flap.



- Pull out rubber band holding couplers together from slots of fairing structure.



- Remove LH indicator coupler connection.

# Important SOP

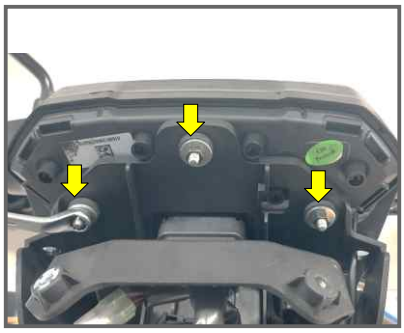
- Remove LH indicator harness from hole provided on fairing structure as shown in photograph.

- Remove LH indicator mounting nut using 14 mm spanner.

- Remove indicator mounting nut & washers from indicator harness branch as shown in photograph.

- Take out LH indicator . Follow same SOP for RH indicator removal.

# Important SOP



- Remove speedometer mounting nuts (3 nos) using 8 mm spanner.

- Lift speedometer from it's mounting holes & remove speedometer coupler connection.Take out speedometer.

**Fitment :**

- Assemble speedometer and do the coupler connection.
- Prefit speedometer mounting nuts & tighten to recommended torque(0.3 – 0.4 Kgf.m)
- Refit indicator. Connect the indicator coupler connection & fit rubber band in slots.
- Prefit speedo flap mounting bolts (2 nos) & tighten to recommended torque(0.3 – 0.4 Kgf.m)

- Fit headlamp coupler connection.
- Prefit fairing assembly mounting bolts as follows :

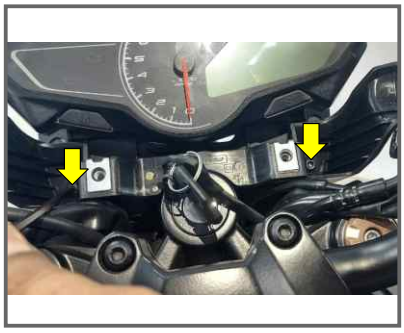
  - Top : 2 nos bolts & tighten to recommended torque (0.6 – 0.7 Kgf.m))

  - Bottom : bolt & tighten to recommended torque (0.6 – 0.7 Kgf.m)

- Prefit windshield & bracket number plate mounting bolts & tighten to recommended torque (0.1 Kgf.m).

# Important SOP

## Bracket indicator Replacement



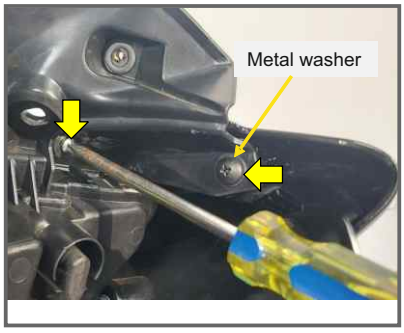
- Remove both front indicators as explained in “Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement "SOP.
- Remove bracket indicator mounting bolts (2 nos) using 4 mm allen key.

- Take out bracket indicator mounting.

**Fitment :**

- Assemble bracket indicator mounting.
- Prefit bracket indicator mounting & tighten to recommended torque (0.6-0.7 Kgf.m)
- Refit both indicators as explained in “Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement "SOP.

## Carrier mask / Headlamp / Headlamp Fairing Replacement




- Remove front fairing assembly as explained in “Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement” SOP.
- Remove headlamp LH side fairing mounting as follows :

  - Screw with metal washer using phillips head screwdriver.

  - Screw using phillips head screwdriver.

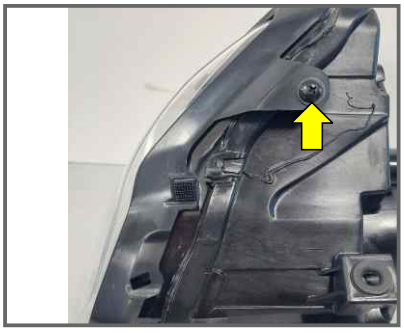
  - Screw with plastic washer using phillips head screwdriver.

# Important SOP

- Hold headlamp & pull out headlamp LH side fairing bullet from grommet on headlamp.

- Take out headlamp LH side fairing.
- Follow same steps to remove headlamp RH side fairing

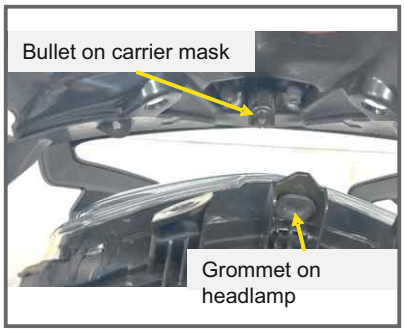
- Remove carrier mask LH & RH Side mounting screw with metal washer using phillips head screwdriver.



- Hold headlamp & pull out carrier mask bullet from grommet on headlamp.

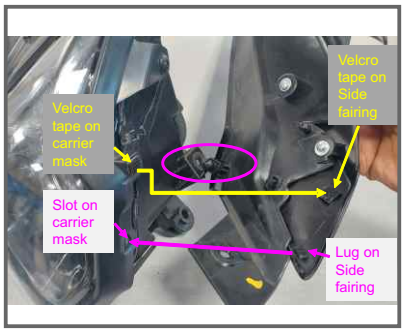
# Important SOP

- Separate out carrier mask & headlamp assembly.




**Fitment :**

- Assemble carrier mask on headlamp. Fit carrier mask bullet in grommet on headlamp.
- Prefit carrier mask LH & RH Side mounting screw & tighten to recommended torque (0.3 – 0.35 Kgf.m)




- Assemble both side fairing on carrier mask.

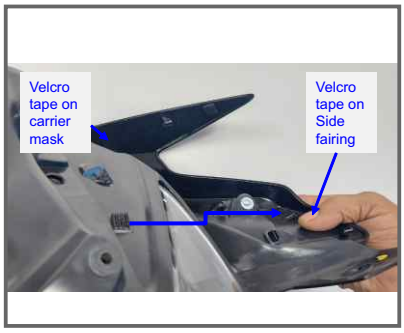
Ensure proper fitment of :

- Side fairing bullet fitment in grommet on headlamp(shown by pink circle)

- Side fairing lug fitment in slot on carrier mask (shown by pink arrow)

- Bottom side : Side fairing Velcro tape is fitted properly on velcro tape on carrier mask (shown by yellow arrow)

- Top side : Side fairing Velcro tape is fitted properly on velcro tape on carrier mask (shown by blue arrow)

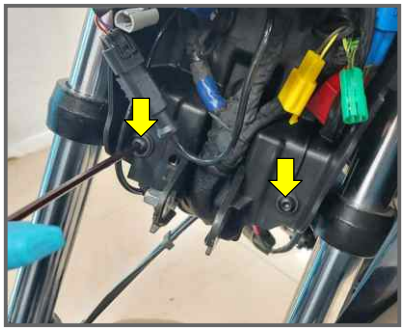


# Important SOP


- Prefit LH & RH side fairing mounting as follows :
  - Screw with metal washer & tighten to recommended torque (0.3 – 0.35 Kgf.m)
  - Screw & tighten to recommended torque (0.1 – 0.15 Kgf.m)
  - Screw with plastic washer & tighten to recommended torque (0.4 – 0.45 Kgf.m)

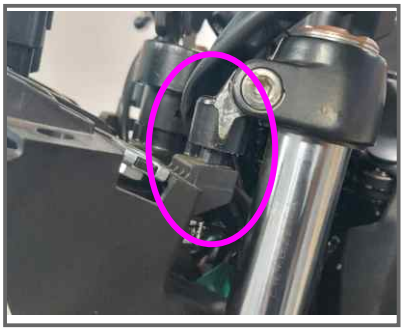

- Refit front fairing assembly as explained in “Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement” SOP.

## Structure Fairing/Bracket Top (headlamp mounting) Replacement

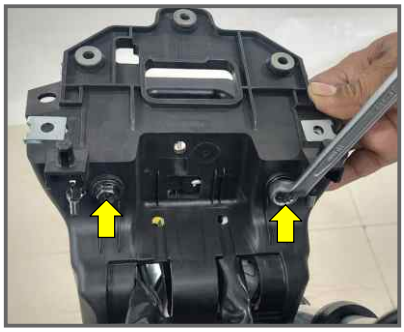


- Remove speedometer as explained in“Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement” SOP.
- Remove bracket indicator as explained in “Bracket indicator Replacement” SOP.
- Remove structure fairing mounting bolts (2 nos) using 4 mm allen key.

- Pull down fairing structure to remove it’s locating bullet from holes on upper bracket.

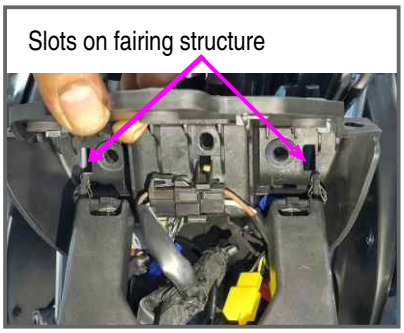


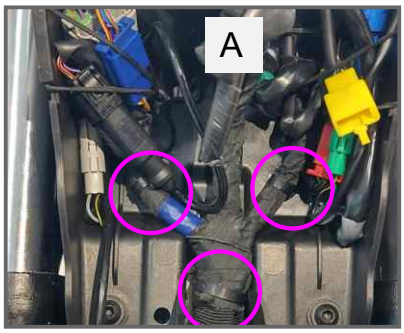
# Important SOP



- Remove bracket top (headlamp mounting C bracket) mounting bolts (2 nos) using 10 mm spanner.

- Push bracket top metal clip & take out bracket top with metal clips from slots on structure fairing.



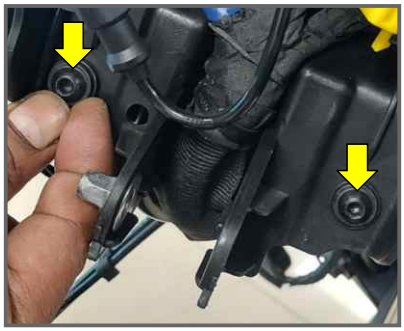

- Remove 3 tie bands holding harness on fairing structure.
- Remove 2 rubber bands & remove all coupler connections.
- Remove harness branches from fairing structure & take out fairing structure.

**Fitment :**

- Route the harness through fairing structure.
- Refit 3 cable ties. Connect all the coupler connections.
- Refit 2 rubber bands on fairing structure slots as shown in photograph-A.
- Push bracket top with metal clips in slots provided on fairing structure.
- Prefit top bracket mounting bolts & tighten to recommended torque (0.35 – 0.45 Kgf.m)

# Important SOP

- Fit fairing structure bullets in upper bracket holes.



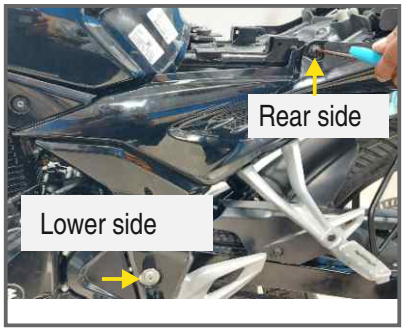
- Prefit fairing structure mounting bolts & tighten to recommended torque (0.6 – 0.7 Kgf.m).
- Refit bracket indicator as explained in “Bracket indicator Replacement” SOP.
- Refit speedometer as explained in“Fairing Assembly / Speedometer/Front indicator/Flap speedometer Replacement” SOP.

## Throttle Body Replacement

- Insert key & turn clockwise. Lift the seat from rear end.

- Slide seat assembly in the direction of arrow. Take out seat assembly.

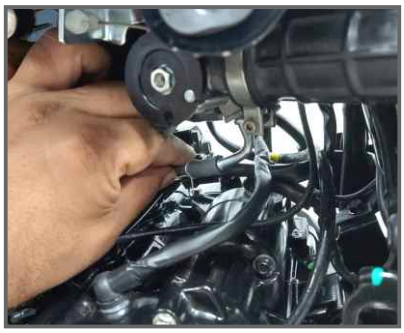
# Important SOP




- Remove LH side cover assembly mounting :
  - Rear side : 1 bolt using 4 mm allen key
  - Lower side : 1 bolt with thick spacer using 5 mm allen key
  - Bottom side : 1 bolt using 4 mm allen key

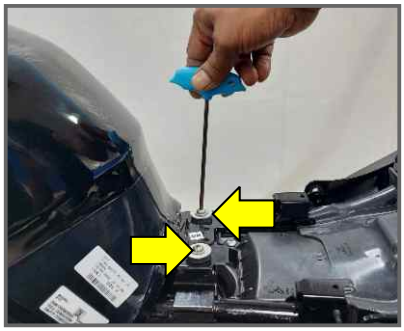

- Pull out side cover assembly in the direction of yellow arrow to remove bullet from grommet.
- Remove side cover assembly hole from lug.

- Take out LH side cover assembly. Similarly remove RH side cover assembly.

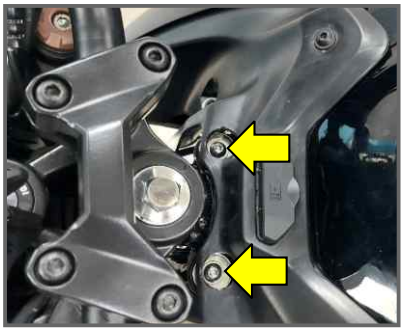


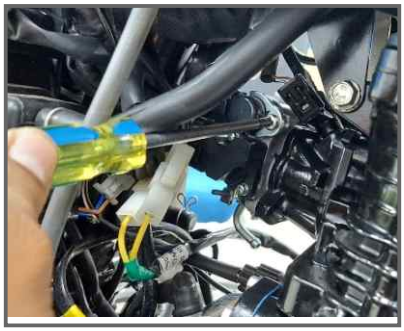
- Pull out EVAP pipe clip & remove EVAP pipe from throttle body.

# Important SOP

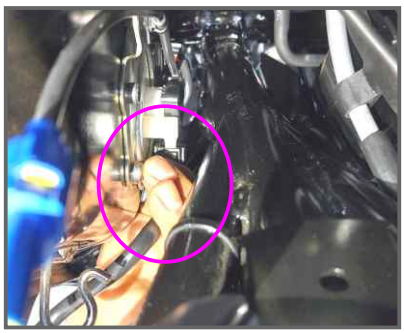


- Remove grommet (2 Nos) at fuel tank mounting front side.
- Remove fuel tank mounting bolts (4 nos) using 4 mm allen key.
  Lift fuel tank using fuel tank holding fixture.

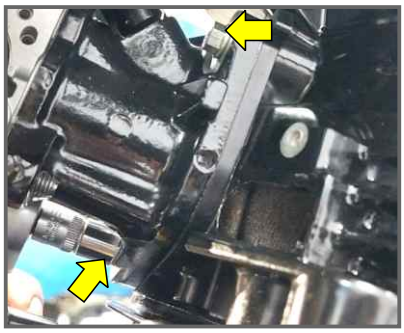




- Remove stepper motor coupler.
- Remove stepper motor mounting bracket & screw using phillips head screwdriver.
- Take out stepper motor.



- Remove injector hose coupler connection from fuel pump end.
- Remove injector coupler connection.



- Remove intake manifold mounting bolts (2 nos) using 8 mm spanner.

# Important SOP

- Remove throttle body mounting clamp bolt using 3 mm allen key.

- Push & take out rubber plug.

- Push throttle cable as shown in photograph.

- Remove throttle cable from throttle body drum & take out cable from bracket throttle body as in photograph.

# Important SOP

- Take out throttle body assembly along with intake manifold & sleeve.
- Refit all the parts in reverse order of removal.

## Gear Change Lever removal from vehicle

- Remove both side cover assembly with lower cover.
- Remove both side spacers.

- Remove gear change arm mounting bolt using 8 mm spanner. Take out arm from lever complete gear shift.

- Hold the footrest & remove holder step rider mounting bolt using 6 mm allen key as shown in photograph.

# Important SOP

- Remove swing arm shaft nut using 19 mm spanner.
- Push swing arm shaft from RH side till holder assembly is free to rotate & not touching to swing arm while rotating.

- Rotate holder step assembly as shown in photograph

- Use 12 mm socket, extension handles & ratchet as shown in photograph for removal of bracket footrest mounting bolt removal.

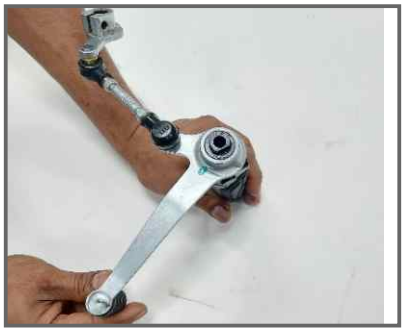
- Hold holder footrest assembly & from RH side, remove bracket footrest mounting bolt shown in photograph.

# Important SOP

- Take out footrest assembly with gear change lever assembly.

- Take out washer & gear change assembly as shown in photograph.

- Clean bracket footrest mounting using nylon brush & apply AP grease.



**Fitment :**

- Assemble gear change lever assembly & washer.

# Important SOP

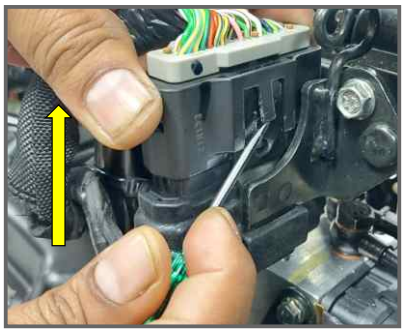
- Assemble footrest assembly with gear change lever in holder footrest hole as shown in photograph.

  Match bracket footrest mounting in holder footrest hole properly as shown by pink circle.

- Hold holder footrest assembly from LH side & from RH side, prefit bracket footrest mounting bolt & tighten to recommended torque(1.6 – 1.8 Kgf.m) shown in photograph.

- Prefit holder step rider mounting bolt & tighten to recommended torque(1.8 – 2.2 Kgf.m)
- Prefit swing arm shaft nut & tighten to recommended torque(12 – 14 Kgf.m).
- Assemble gear change arm on lever complete gear shift. Prefit gear change arm mounting bolt & tighten using 8 mm spanner.
- Refit both side spacers.
- Refit both side cover assembly with lower cover.

## ECU / Bracket ECU Replacement

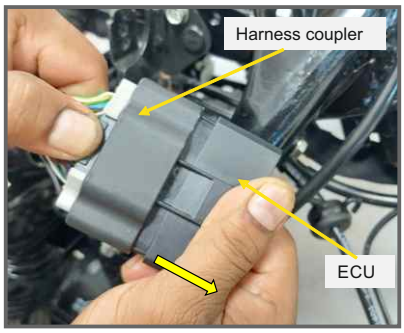


- Remove petrol tank assembly from vehicle.

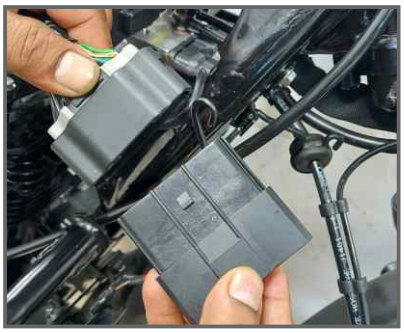
- Using small flathead screwdriver, pull out ECU coupler lock & pull coupler in the direction of yellow arrow to remove coupler from bracket ECU

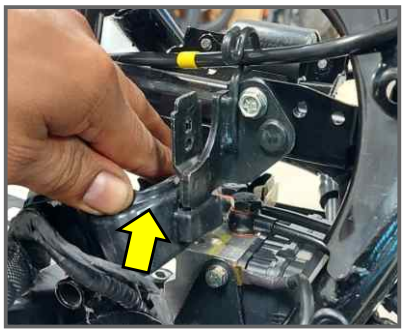
# Important SOP

- Take out harness coupler with ECU as shown in photograph.




- Press black color lock in harness coupler & pull out ECU from harness coupler



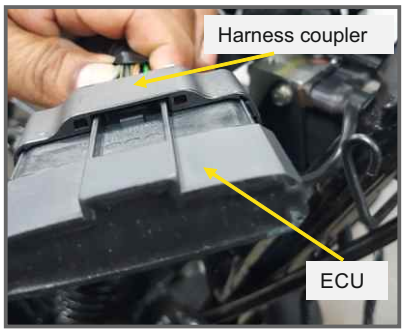


- Pull out holder ECU from bracket ECU

- Remove throttle cable from bracket ECU.

# Important SOP

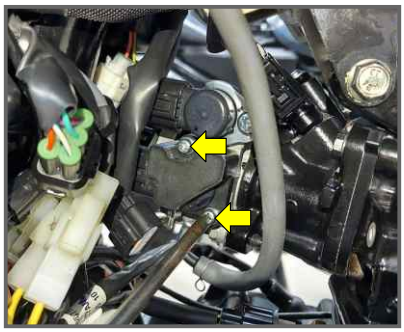
- Remove bracket ECU mounting bolt using 10 mm spanner & take out bracket ECU.




**Fitment :**

- Prefit bracket ECU mounting bolt & tighten to recommended torque(0.8 – 1 Kgf.m)
- Fit throttle cable in bracket ECU.
- Fit holder ECU on bracket ECU.
- Fit ECU in harness coupler as shown in photograph. Click sound confirms proper fitment of ECU in coupler.
- Fit coupler with ECU on bracket ECU.
- Refit petrol tank assembly on vehicle

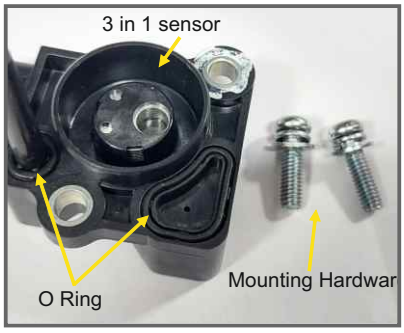
## 3 in 1 Sensor Replacement



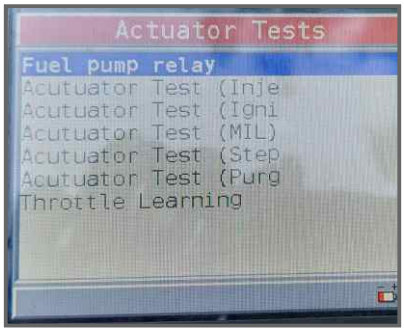
- Lift fuel tank using fuel tank holding fixture.
- Remove 3 in 1 sensor coupler connection in ignition switch OFF condition.
- Remove 3 in 1 sensor mounting screws (2 nos) using phillips head screwdriver.

- Take out 3 in 1 sensor.

# Important SOP

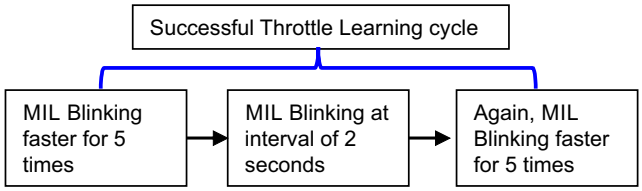



- Take out new 3 in 1 sensor assembly as shown in photograph.




- Assemble new 3 in 1 sensor on throttle body. Prefit it's mounting screws & tighten using phillips head screwdriver.
- Put ignition switch & kill switch to ON position.
- Connect bosch tool. Go to "Actuator tests" in diagnostic menu & press Enter.
- Select "Throttle Learning" & press Enter.

- MIL icon blinks faster for 5 times.




- Then MIL Blinks at interval of 2 seconds. During this blinking, when MIL is ON in speedometer, put throttle to Wide open throttle(WOT) condition & hold to WOT till MIL is ON.
- When MIL goes OFF, release the throttle completely.
- Repeat above procedure for 2 more times.
- After successful throttle learning only, again MIL icon blinks faster for 5 times.
- If by mistake "MIL icon blinking faster for 5 times" is not happening, only MIL Blinking at interval of 2 seconds is there, put OFF ignition switch. Put ON ignition switch & carry out above procedure till "MIL icon blinking faster for 5 times" is achieved.

- Confirmation using Bosch tool: In view data , % throttle opening & voltage can be checked using bosch tool.(Method is same as existing TPS).

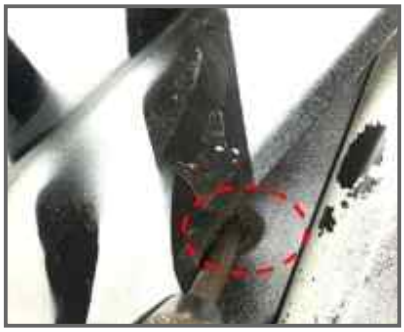
| Condition | Output voltage (V) | % Throttle opening |
|---|---|---|
| Idle throttle | 0.9 | 0 |
| WOT | 4.1 | 100 |

- Refit the fuel tank assembly.

# Important SOP

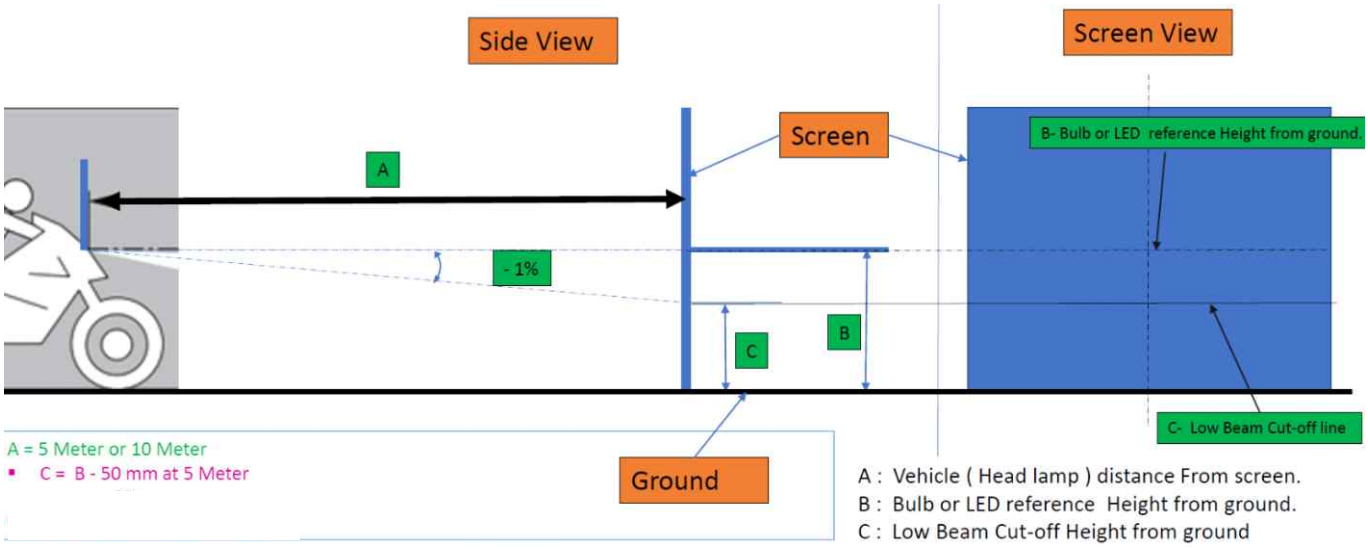
## Headlamp focus adjustment SOP

- Remove rubber plug given on LH side fairing structure/back cover

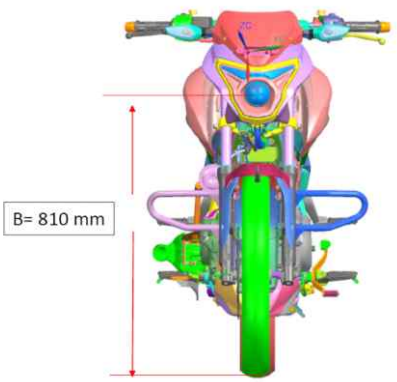


- Using phillips head screwdriver, set headlight focus adjustment screw.

**Standard** : Low beam cut-off height at a Distance 760 mm from ground.




- Set Low beam cut-off height at a Distance C (760 mm) from ground.



# Tightening Torque - Engine

| Sr. No. | Parameter | Torque value (Kgf.m ) |
|---|---|---|
| 1 | Cover cylinder head bolts | 1 - 1.2 |
| 2 | Cylinder head bolts | 4 - 4.5 |
| 3 | Intake Manifold fitted on head bolts | 0.7 - 0.9 |
| 4 | Camshaft sprocket bolt | 3 - 3.2 |
| 5 | Chain tensioner bolt | 1 - 1.2 |
| 6 | Chain guide bolt | 1 - 1.2 |
| 7 | Primary gear nut | 11 - 11.2 |
| 8 | Clutch nut | 6 - 6.5 |
| 9 | Rotor bolt | 12 - 12.2 |
| 10 | Output sprocket bolt fitted on O/P shaft | 1 - 1.2 |
| 11 | Guide gear bolt on gear change drum | 1 - 1.2 |
| 12 | Cover engine oil filter bolt | 1 - 1.2 |
| 13 | Inhibitor bolt | 1.2 |
| 14 | Drain bolt | 1.2 - 1.4 |
| 15 | Oil pump bolts | 1 - 1.2 |
| 16 | Kick assembly bolt | 2.4 -2.6 |
| 17 | Cap strainer | 1.2 -1.4 |
| 18 | Clutch cover bolts | 1 - 1.2 |
| 19 | Position plate bolt fitted on clutch cover | 1 - 1.2 |
| 20 | Magneto cover bolts | 1 - 1.2 |
| 21 | Cover LH RR Bolts | 1 - 1.2 |
| 22 | Air filter assembly bolts | 0.6 - 0.8 |
| 23 | Cover air filter bolts | 0.25 - 0.3 |
| 24 | Silencer mtg bolt at cylinder head | 2 - 2.25 |
| 25 | Muffler bolt on right side | 0.8 - 1 |
| 26 | Muffler top bolt | 1.6 - 1.8 |
| 27 | Starter Motor bolts | 1 - 1.2 |

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Tightening Torque - Frame

| Sr.No | Parameter | Torque value (Kgf.m) |
|---|---|---|
| 1 | RR Unit bolts | 0.6 - 0.7 |
| 2 | HT Coil bolts | 0.8 - 1.2 |
| 3 | Engine mounting bolt top | 2.2 - 2.4 |
| 4 | Engine mounting nut front | 4 - 4.2 |
| 5 | Engine mounting bolt rear | 4 - 4.2 |
| 6 | Bracket engine mounting nut front on frame | 2.8 - 3 |
| 7 | Steering slotted nut | 0.5 |
| 8 | RSA Top nut | 4.5 - 5 |
| 9 | RSA Bottom nut | 4.5 - 5 |
| 10 | Swing arm shaft nut | 12 - 14 |
| 11 | LH/RH Stay (Footrest Holder -Rider & Pillion) bolt | 1.8 - 2.2 |
| 12 | Front fender bolt | 0.5 - 0.6 |
| 13 | Brace fender bolts | 1.8 - 2 |
| 14 | Side stand mounting nut | 3 - 3.5 |
| 15 | Center stand mounting bolt | 3 - 3.5 |
| 16 | Front axle nut | 5 - 6 |
| 17 | Rear axle nut | 8 - 10 |
| 18 | Front disc mtg bolt | 2.7 - 3 |
| 19 | Front Sensor disc bolt | 2.7 - 3 |
| 20 | Front Caliper mtg bolts | 2.2 - 2.8 |
| 21 | Front master cylinder mounting bolts | 1 - 2.5 |
| 22 | Rear Sensor disc bolt | 2.7 - 3 |
| 23 | ABS mounting bolt on bracket ABS | 0.6 - 0.8 |
| 24 | Bracket ABS mounting bolt | 0.8 - 1.2 |
| 25 | Rear sprocket nut on coupling | 3.2 - 3.8 |
| 26 | Rear brake pedal mounting nut | 1.5 - 1.8 |
| 27 | Bracket RH rider footrest mounting bolt | 1.6 - 1.8 |
| 28 | Gear change lever mounting bolt on holder step LH (Inside) | 1.6 - 1.8 |
| 29 | Handle bar upper holder bolts | 1.8 - 2 |
| 30 | Handle bar lower holder nuts | 2 - 2.2 |
| 31 | Weight handle bar bolt | 0.8 - 1 |
| 32 | Fork top mounting (Upper bracket side)bolt | 1.4 - 1.6 |
| 33 | Center top bolt on upper bracket | 4.5 - 5 |
| 34 | Fork underbracket bolt | 2.5 - 3 |

# Tightening Torque - Frame

| Sr.No | Parameter | Torque value (Kgf.m) |
|---|---|---|
| 35 | Fuel Tank mounting bolt | 0.8 - 1.2 |
| 36 | Fuel gauge mounting nut | 0.3 - 0.5 |
| 37 | Fuel pump mounting bolt | 0.6 - 0.8 |
| 38 | Front Fairing assembly mounting bolts | 0.6 - 0.7 |
| 39 | Chain cover assembly bolt | 0.8 - 1 |
| 40 | Leg guard bolt | 2 - 2.2 |
| 41 | Saree guard bolt | 0.8 - 1.2 |
| 42 | Cover LH RR Mounting bolts | 1 - 1.2 |
| 43 | Grab handle bolt | 1.8 - 2.2 |
| 44 | Fork cap (top) bolt | 0.8 - 1 |
| 45 | Front/Rear speed sensor bolt | 0.6 - 0.7 |
| 46 | Side footrest mounting bolt | Top : 1.8 - 2.2<br>Bottom : 3 - 3.5 |

# Service Limit - Engine

| Sr.No | Parameter | Standard (in mm) | Service Limit (in mm) |
|---|---|---|---|
| 1 | Engine compression pressure | 11 - 12 Kgf/cm2 | 9 - 10 Kgf/cm2 |
| 2 | Valve tappet clearance IN/EX | In : 0.03 - 0.07, Ex : 0.06 - 0.1 | Not Applicable |
| 3 | Rocker arm shaft diameter | 9.98 - 9.99 | Not Applicable |
| 4 | Cam lobe height (Exhaust) | 30 | Not Applicable |
| 5 | Cam lobe height (intake) | 30.66 | Not Applicable |
| 6 | Valve spring free length | 44.22 | Not Applicable |
| 7 | Valve stem diameter intake | 4.97 - 4.98 | 4.96 |
| 8 | Valve stem diameter exhaust | 4.97 - 4.95 | 4.96 |
| 9 | Valve stem bent | 0.01 | 0.03 |
| 10 | Cylinder head warp | 0.05 | Not Applicable |
| 11 | Cam chain 20 links length | 127 | 127.64 |
| 12 | Cylinder - piston clearance | 0.03 - 0.05 | 0.1 |
| 13 | Piston Ring end gap (Top ring) | 0.10 - 0.25 | 0.50 |
| 14 | Piston Ring end gap (second ring) | 0.30 - 0.45 | 0.65 |
| 15 | Piston Ring end gap (oil ring) | 0.2 - 0.7 | 1 |
| 16 | Clutch spring free length | 42.2 | 41.2 |
| 17 | Friction plate thickness | 2.92 - 3.08 | 2.72 |
| 18 | Steel plate thickness | 1.92 - 2.08 | 1.87 |
| 19 | Steel palte warp | < 0.1 | 0.2 |
| 20 | Gear shift fork guide pin diameter | 6 | 5.94 |
| 21 | Gear shift drum groove width | 6 | 6.2 |

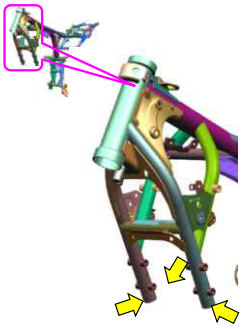
# Service Limit - Engine

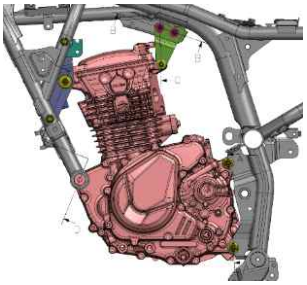
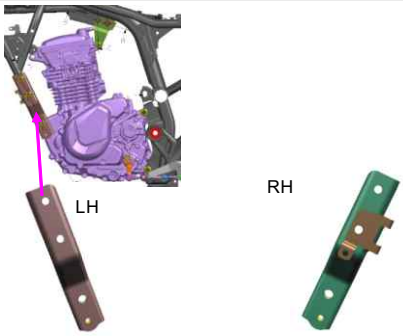
| Sr.No | Parameter | Standard (in mm) | Service Limit (in mm) |
|---|---|---|---|
| 22 | Crankshaft runout | 0.02 | 0.05 |
| 23 | Connecting rod side (axial) clearance | 0.1 - 0.35 | 0.5 |
| 24 | Shaft fork shift OD | 10 | 9.95 |
| 25 | Fork shift ID | 10 | 10.03 |
| 26 | Clutch assly stackup | 17.42 -18.42 | Not Applicable |

# Service Limit - Frame

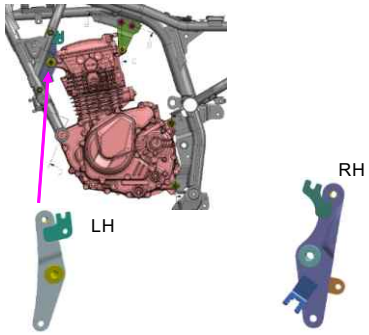
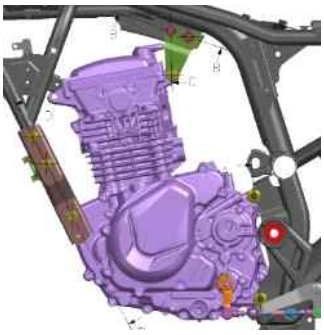
| Sr.No. | Parameter | Standard (mm) | | Service Limit (mm) |
|---|---|---|---|---|
| 1 | Br.Panel cam hole dia | Front | NA | NA |
| | | Rear | 14 | 14.15 |
| 2 | Brake cam dia | Front | NA | NA |
| | | Rear | 14 | 13.88 |
| 3 | Brake pad thickness | Front | 8 | 3.5 – 4 |
| | | Rear shoe | 3.85 - 4.15 | 2 |
| 4 | Brake disc run out | Front | 0.15 | NA |
| | | Rear | Not Applicable | Not Applicable |
| 5 | Brake disc thickness | Front | 4 | 3.5 |
| | | Rear | Not Applicable | Not Applicable |
| 6 | Axle run out | 0.1 max. | | Not Applicable |
| 7 | Wheel Axial wheel run out | 0.5 | | Not Applicable |
| 8 | Wheel Radial wheel run out | 0.5 | | Not Applicable |
| 9 | Drive chain slackness | 20 - 30 | | 40 - 50 |
| 10 | Drive chain length(20 links) | 254 | | 258.57 |
| 11 | Rear sprocket warp | < 0.15 | | 0.15 |
| 12 | Fr. Fork spring free length | 481.2 | | Not Applicable |
| 13 | Tyre tread depth | Front | MRF : 5.3 ± 0.3 mm<br>EUROGRIP : 4.8 ± 0.5 mm<br>CEAT : 5.0 ± 0.5 mm | up to TWI |
| | | Rear | MRF : 7.5 ± 0.3 mm<br>EUROGRIP : 6.8 ± 0.5 mm<br>CEAT : 6.6 ± 0.5 mm | up to TWI |

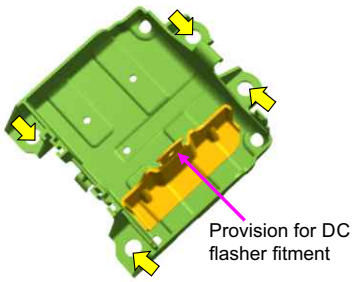
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FRAME ASSEMBLY | |
| Photograph |  |  |
| Part Number | JR111130 | JR111040 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HANGER ASSEMBLY ENGINE – FRONT BOTTOM | |
| Photograph |  |   |
| Part Number | NA | LH - JR113425, RH - JR113426 |
| Description | Not provided | With brackets provision for engine front bottom mounting. |

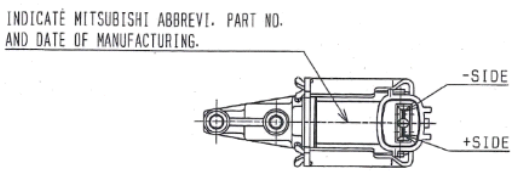
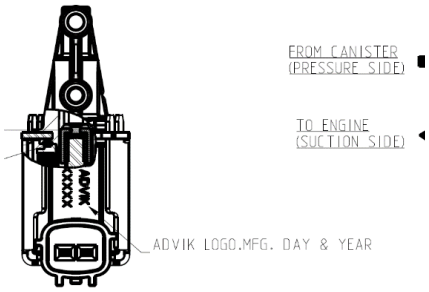
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HANGER ASSEMBLY ENGINE –FRONT TOP | |
| Photograph |  |  |
| Part Number | LH - JR113406, RH - JR113407 | NA |
| Description | With brackets provision for engine front top mounting | Not provided |

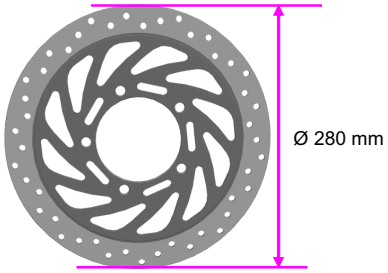
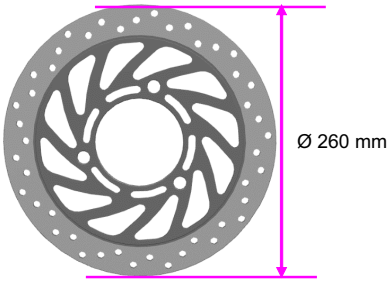
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CASE BATTERY | |
| Photograph |  |  |
| Part Number | JR113823 | JR113822 |
| Description | • 4 point mounting<br>• With provision for DC flasher fitment | • 3 point mounting<br>• Without provision for DC flasher fitment(Fitted inside seat cowl, on frame) |

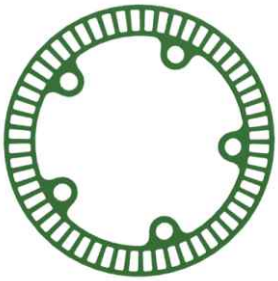
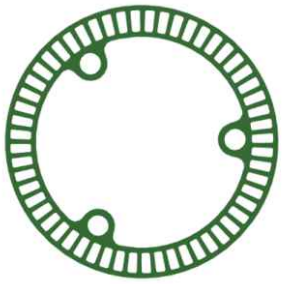
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FUEL TANK | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | With bracket front lower | Without bracket front lower |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | PURGE VALVE | |
| Photograph |  |  |
| Part Number | JU171606 | Jr171621 - Advik make<br>JU171606 - Mitsubishi electric corporation |
| Description | Mitsubishi electric corporation make | Both Mitsubishi electric corporation & Advik make |

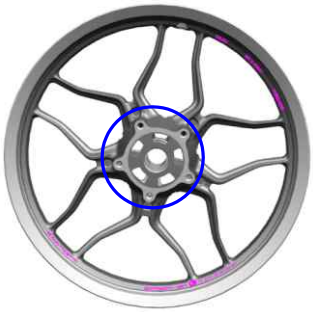
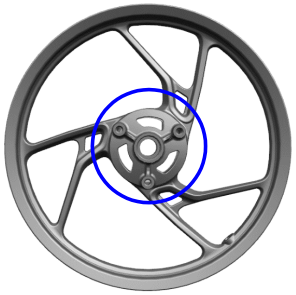
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BRAKE DISC | |
| Photograph |  |  |
| Part Number | JR131013 | JR131801 |
| Description | • Outer diameter : Ø 280 mm<br>• 5 point mounting | • Outer diameter : Ø 260 mm<br>• 3 point mounting |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SENSOR DISC FRONT | |
| Photograph |  |  |
| Part Number | JR131041 | JR131058 |
| Description | 5 point mounting | 3 point mounting |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | REAR WHEEL | |
| Photograph |  |  |
| Part Number | JR131246 | JZ131294 |
| Description | • NA<br>• Size : 3x17 | • Spoke design is different than Pulsar N160<br>• Size : 2.15x17 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | WHEEL FRONT | |
| Photograph |  |  |
| Part Number | JR131040 | JZ131064 |
| Description | • With provision for 5 point mounting brake disc<br>• NA<br>• Size : 2.15x17 | • With provision for 3 point mounting brake disc<br>• Spoke design is different than Pulsar N160<br>• Size : 1.85x17 |

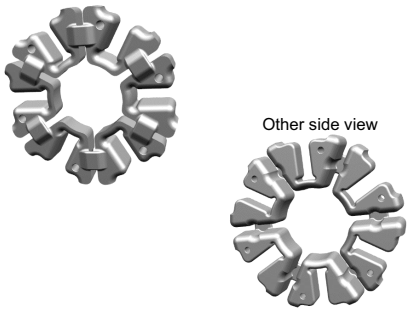
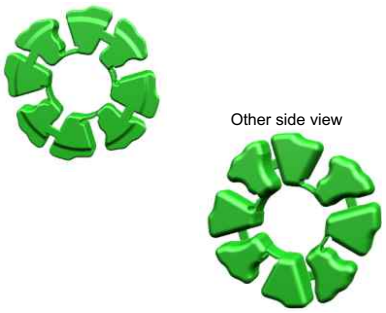
# Part Identification

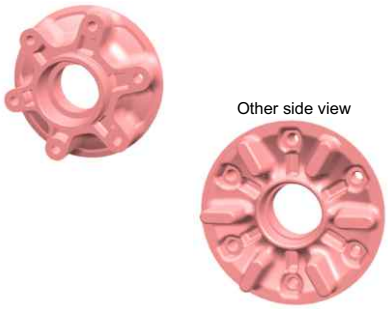
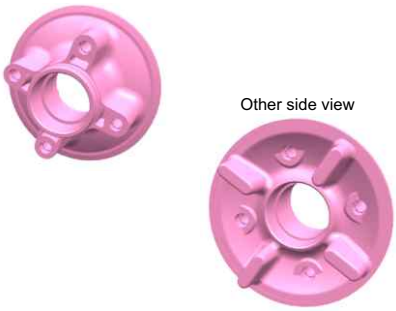
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | TYRE FRONT | |
| Part Number | DT131018 | JF131010 |
| Description | Size : 100/80-17 52P, Tubeless | Size : 80/100-17 46P, Tubeless |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | TYRE REAR | |
| Part Number | DT131222 | JF131211 |
| Description | Size : 130/70-17 62P, Tubeless | Size : 100/90 – 17 55P, Tubeless |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CANISTER | |
| Part Number | JY171077 | JR171620 |
| Description | Working capacity is more (16 gms) | Working capacity is less (12 gms) |

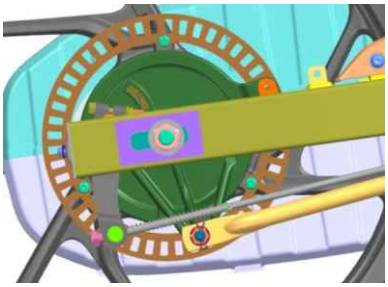
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | DAMPER COUPLING | |
| Photograph |   |   |
| Part Number | JL131232 | JG131219 |
| Description | NA | Design is different than Pulsar N160 |

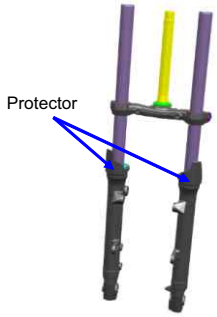
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | COUPLING | |
| Photograph |   |   |
| Part Number | Jr131237 | JR131245 |
| Description | NA | Design is different than Pulsar N160 |

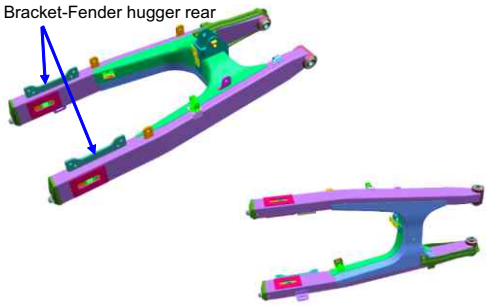
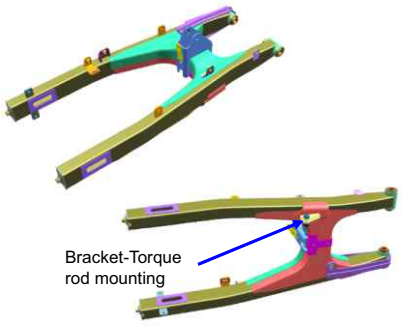
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SPROCKET DRIVEN (SUB PART OF KIT CHAIN SPROCKET) | |
| Photograph |  |  |
| Part Number | 36JR0109 | 36JR0130 |
| Description | NA | Design is different than Pulsar N160 |

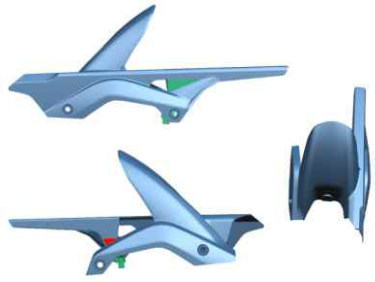
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | REAR BRAKE SYSTEM | |
| Photograph |  |  |
| Part Number | NA | NA |
| Type | Disc brake system | Drum brake system |

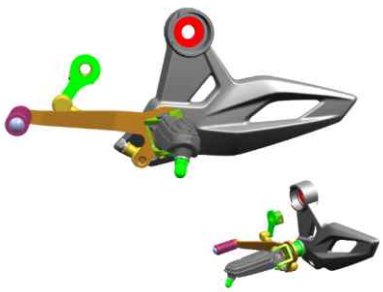
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FRONT FORK ASSEMBLY | |
| Photograph |  |  |
| Part Number | JR121084 | JR121005 |
| Description | Without protector | With protector |

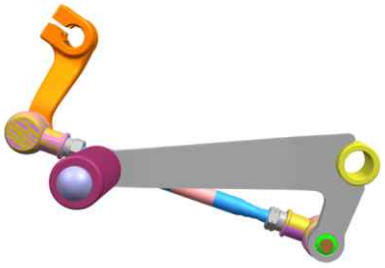
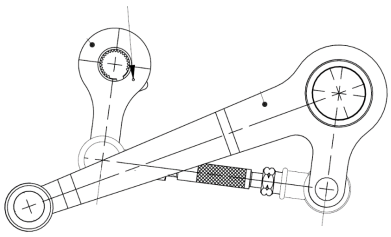
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SWING ARM ASSEMBLY | |
| Photograph |  |  |
| Part Number | JR122073 | JR122003 |
| Description | • Without bracket provision for torque rod mounting<br>• With bracket provision for fender hugger rear fitment | • With bracket provision for torque rod mounting<br>• Without bracket provision for fender hugger rear fitment |

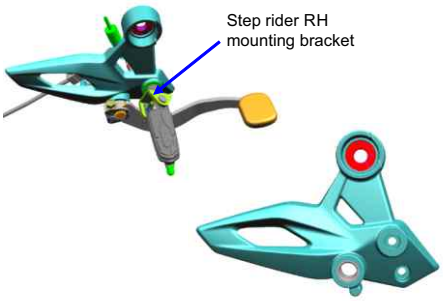
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | COVER ASSEMBLY CHAIN | |
| Photograph |  |  |
| Part Number | JR181239 | JR183577 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HOLDER ASSEMBLY STEP LH | |
| Photograph |  |  |
| Part Number | JR113040 | JR113043 |
| Description | Separate mounting provision for gear change lever & step rider fitment | No separate mounting provision for gear change lever & step rider fitment |

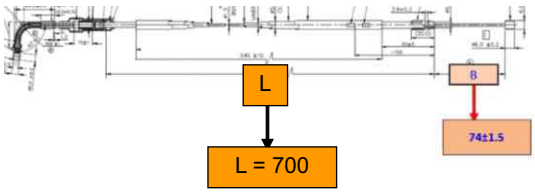
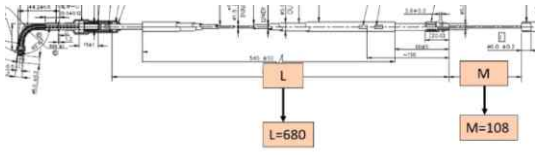
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GEAR CHANGE LEVER ASSEMBLY | |
| Photograph |  |  |
| Part Number | JR561401 | JR561200 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HOLDER ASSEMBLY STEP RH | |
| Photograph |  |  |
| Part Number | JR113042 | JR113044 |
| Description | • Step rider RH mounting bracket : integral part of Holder Assembly Step RH<br>• NA | • Step rider RH mounting bracket : Not an integral part of Holder Assembly Step RH<br>• Design is different than Pulsar N160 |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BRAKE PEDAL | |
| Photograph |  |  |
| Part Number | JR161044 | JR161006 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | THROTTLE CABLE | |
| Photograph |  |  |
| Part Number | JR161210 | Jr161228 |
| Description | Length : 700 mm | Length : 680 mm |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FRONT BRAKE SYSTEM | |
| Vendor | Endurance | Endurance |
| ABS Unit | Endurance & Bosch make | Endurance & Bosch make |

| Part Name | CLUTCH CABLE | |
|---|---|---|
| Part Number | JR161206 | JR161227 |
| Description | With bend tube at handle bar side | Without bend tube at handle bar side |

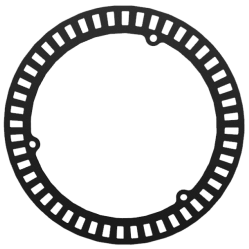
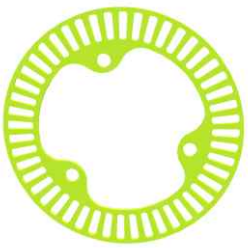
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HANDLEBAR | |
| Photograph |  |  |
| Part Number | JR151020 | Jr151053 |
| Description | NA | Design is different than Pulsar N160 |

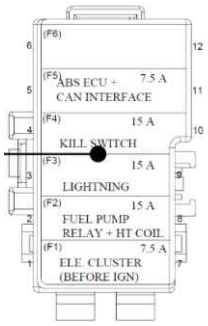
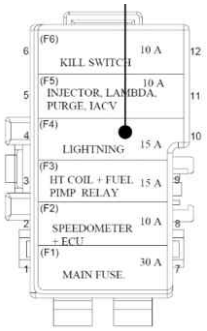
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | UPPER BRACKET | |
| Photograph |  |  |
| Part Number | JR151031 | JR151054 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | STARTER RELAY | |
| Photograph |  |  |
| Part Number | JP403000 | JN351604 |
| Description | • Main fuse on starter relay<br>• 4 pin coupler | • Main fuse in fuse box assembly<br>• 2 pin coupler |

# Part Identification

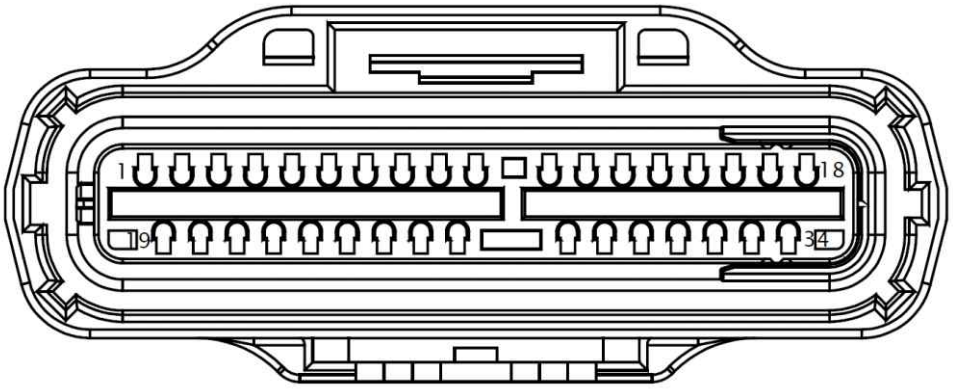
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SENSOR DISC REAR | |
| Photograph |  |  |
| Part Number | JR131083 | JU131802 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | WIRING HARNESS | |
| Photograph |  |  |
| Part Number | JR402284 (For ECU Varroc make) | JR402267 |
| Description | • Separate coupler for position lamp<br>• 48 pin ECU Coupler<br>• 30A Main fuse is on starter relay<br>• 4 pin coupler for starter relay | • No Separate coupler for position lamp<br>• 34 pin ECU Coupler<br>• 30A Main fuse is in fuse box assembly<br>• 2 pin coupler for starter relay |

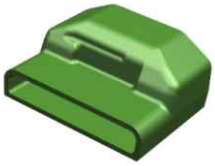
# Part Identification

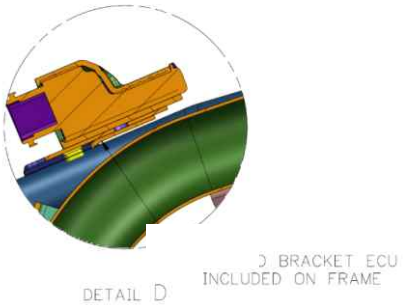
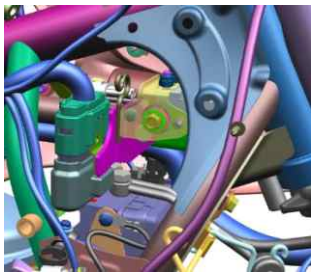
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | ECU EMS ASSEMBLY | |
| Photograph |  Bosch  Varroc | Mikuni  |
| Part Number | Refer SPC | Refer SPC |
| Description | Bosch make :44 pin<br>Varroc make : 48 Pin | Mikuni make : 34 pin |

**Mikuni ECU mating Coupler details**

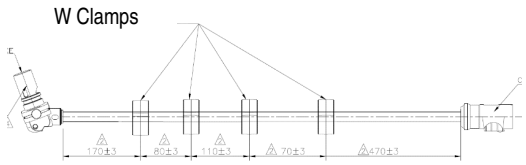
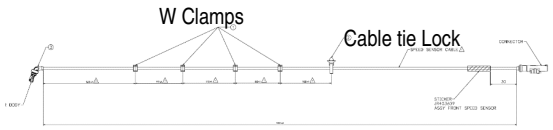


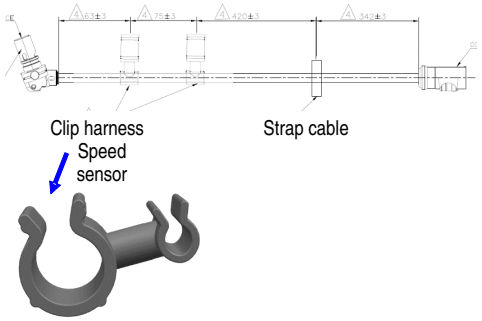
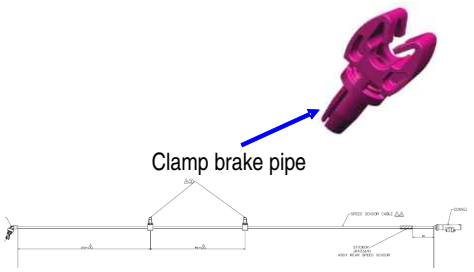

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | HOLDER ECU | |
| Photograph |  Bosch  Varroc | Mikuni  |
| Part Number | Bosch Make - JR113923, Varroc make - JR113907 | JR113900 |
| Description | NA | Design is different than Pulsar N160 |

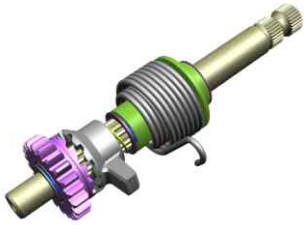
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BRACKET ASSEMBLY - ECU | |
| Photograph |   |   |
| Part Number | NA | JR113939 |
| Description | NA | With separate bracket for ECU holder mounting |

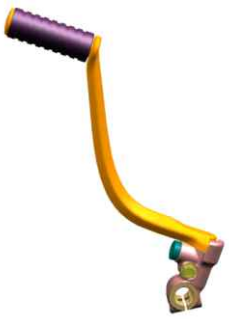
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SPEED SENSOR ASSEMBLY - FRONT | |
| Photograph |  |  |
| Part Number | JR403606 | JR403609 |
| Description | With 4 W clamps | With 4 W clamps & 1 cable tie lock |

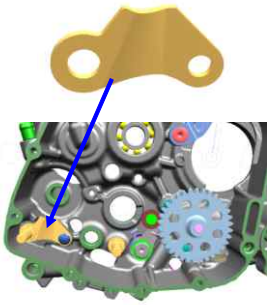
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SPEED SENSOR ASSEMBLY - REAR | |
| Photograph |  |  |
| Part Number | JR403607 | JR403610 |
| Description | With 2 nos clip harness & 1 nos strap cable | With 2 Nos clamp brake pipe |

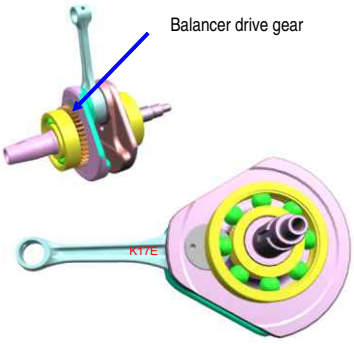
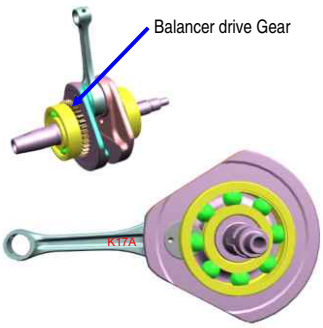
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | KICK SHAFT ASSEMBLY | |
| Photograph | NA |  |
| Part Number | NA | PD621007 |
| Description | NA | With kick shaft assembly |

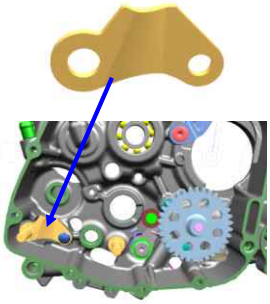
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | KICK LEVER ASSEMBLY | |
| Photograph | NA |  |
| Part Number | NA | PD621200 |
| Description | NA | With kick lever |

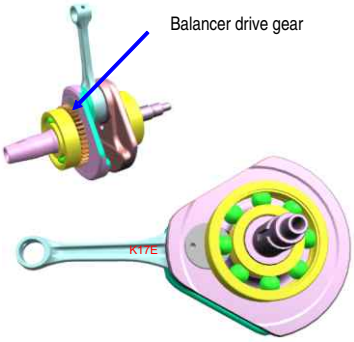
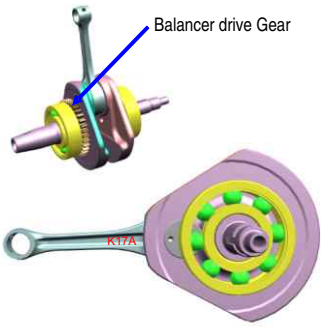
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GUIDE KICK | |
| Photograph | NA |  |
| Part Number | NA | PD621003 |
| Description | NA | With guide kick |

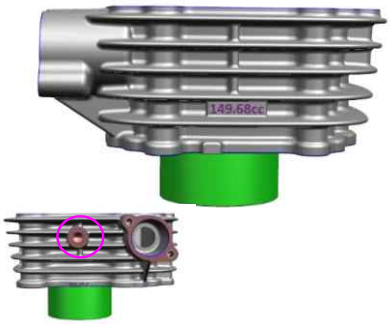
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CRANKSHAFT ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD531037 | PD531022 |
| Description | • Number of teeth on balancer drive gear : 39<br>• K17E mark on conrod | • Number of teeth on balancer drive gear : 34<br>• K17A mark on conrod |

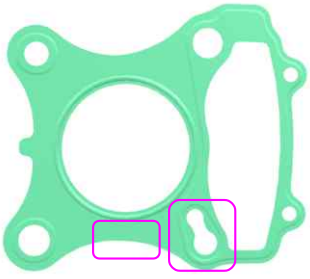
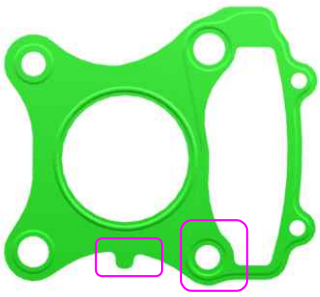
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GUIDE KICK | |
| Photograph | NA |  |
| Part Number | NA | PD621003 |
| Description | NA | With guide kick |

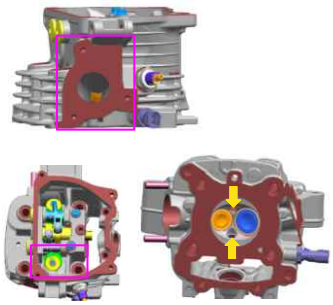
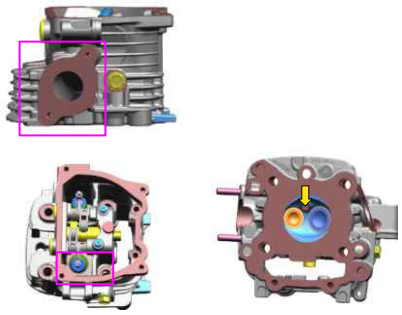
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CRANKSHAFT ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD531037 | PD531022 |
| Description | • Number of teeth on balancer drive gear : 39<br>• K17E mark on conrod | • Number of teeth on balancer drive gear : 34<br>• K17A mark on conrod |

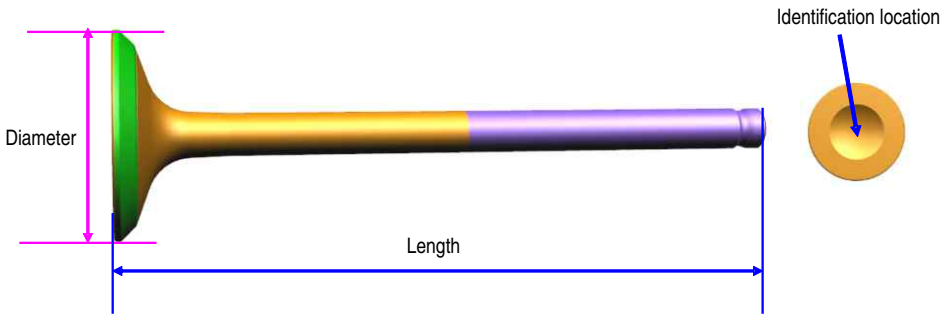
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CYLINDER BLOCK (SUB PART OF KIT BLOCK PISTON) | |
| Photograph |  |  |
| Part Number | 36JR0099 | 36JR0128 |
| Description | • Bore Diameter : Ø 58 mm<br>• 164.82 cc is embossed<br>• Without provision for Temperature sensor mounting on block | • Bore Diameter : Ø 56 mm<br>• 149.68 cc is embossed<br>• With provision for Temperature sensor mounting on block |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GASKET HEAD CYLINDER | |
| Photograph |  |  |
| Part Number | PD511172 | PD511502 |
| Description | NA | Design is different than Pulsar N160 |

# Part Identification

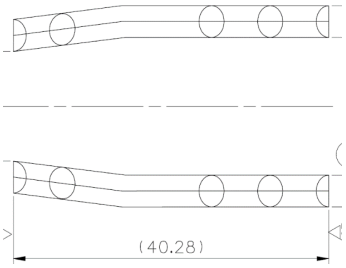
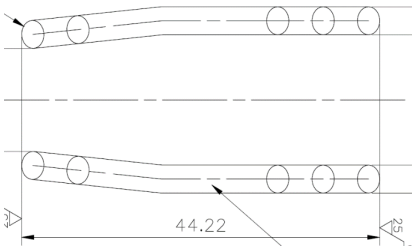
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CYLINDER HEAD | |
| Photograph |  |  |
| Part Number | Pd511081 | PD511195 |
| Description | • With provision for Temperature sensor mounting on head<br>• Compatible for twin spark plug<br>• Intake manifold : 3 point mounting<br>• With provision for Oil pressure sensor mounting on head<br>• With shim design | • Without provision for Temperature sensor mounting on head<br>• Compatible for single spark plug<br>• Intake manifold : 2 point mounting<br>• Without provision for Oil pressure sensor mounting on head<br>• With conventional tappet screw design |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | KIT VALVE | |
| Photograph |  | |
| Part Number | 36JR0101 | 36JR0129 |
| Description | | |

| Parameter | Intake | Exhaust |
|---|---|---|
| Diameter Ø (mm) | 31 | 24 |
| Length (mm) | 80.4 | 79.1 |
| Identification | 1I | 1E |

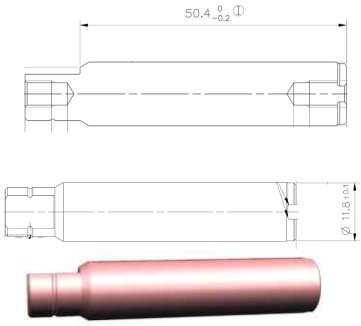
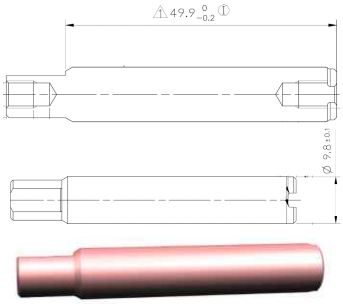
| Parameter | Intake | Exhaust |
|---|---|---|
| Diameter Ø (mm) | 29 | 22.5 |
| Length (mm) | 85.42 | 84.22 |
| Identification | AI | AE |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | Spring Valve | |
| Photograph |  |  |
| Part Number | DK102028, Qty – 2 Nos | PD511242, Qty – 2 Nos |
| Description | Length : 40.28 mm | Length : 44.22 mm |

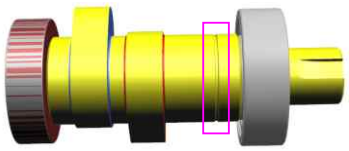
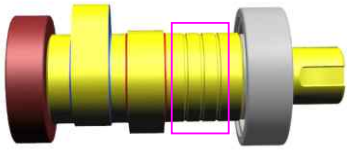
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | Retainer Valve Spring | |
| Photograph |  |  |
| Part Number | PD511208, Qty – 2 Nos | Pd511266, Qty – 2 Nos |
| Description | NA | Design is different than Pulsar N160 |

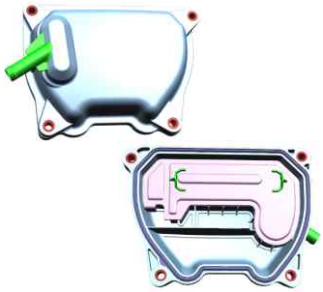
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SHAFT ROCKER ARM | |
| Photograph |  |  |
| Part Number | PD511309, Qty – 2 Nos | PD511317, Qty – 2 Nos |
| Description | • Outer diameter : Ø 11.8 mm<br>• Dimension : 50.4 mm<br>• With groove | • Outer diameter : Ø 9.8 mm<br>• Dimension : 49.9 mm<br>• Without groove |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | ROCKER ARM ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD511237, Qty – 2 Nos | PD511218, Qty – 2 Nos |
| Description | Compatible for shim design | Compatible for tappet screw design |

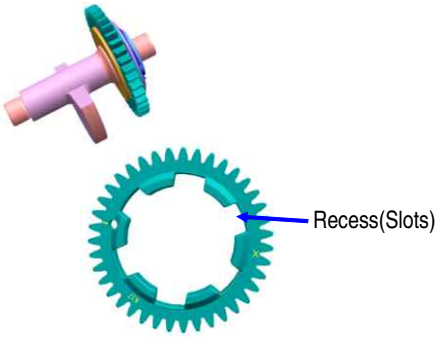
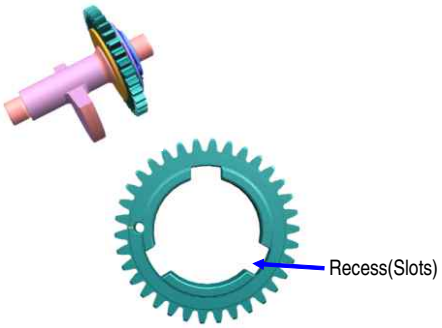
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CAMSHAFT ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD511235 | PD511216 |
| Description | • With 1 nos identification grooves<br>• NA | • With 3 Nos identification grooves<br>• Lobe height is different than Pulsar N160 |

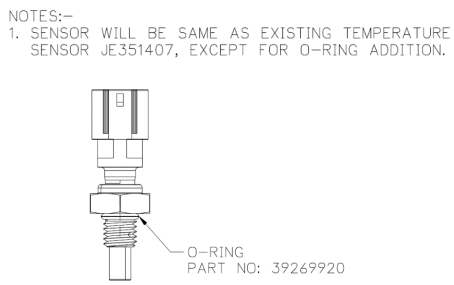
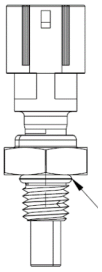
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | ASSEMBLY COVER HEAD CYLINDER | |
| Photograph |  |  |
| Part Number | PD511536 | PD511576 |
| Description | NA | Design is different than Pulsar N160 |

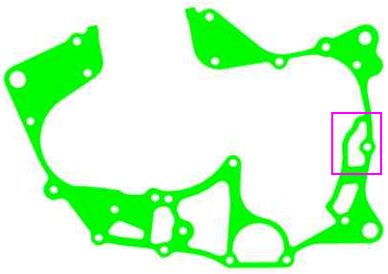
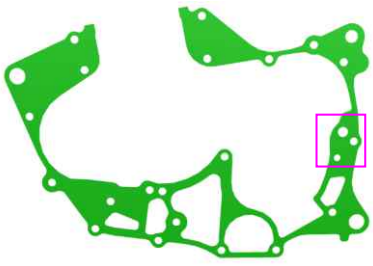
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | COVER CLUTCH ASSEMBLY | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | NA | Design is different than Pulsar N160 |

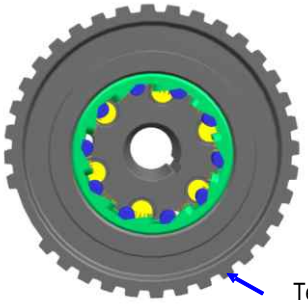
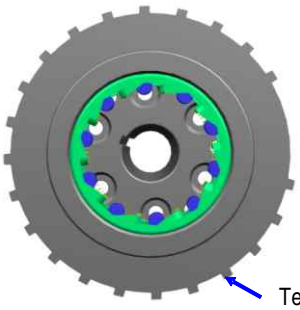
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BALANCER ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD531239 | PD531204 |
| Description | • Number of teeth on balancer driven gear : 39<br>• Number of recess(slots) : 6 | • Number of teeth on balancer driven gear : 34<br>• Number of recess(slots) : 3 |

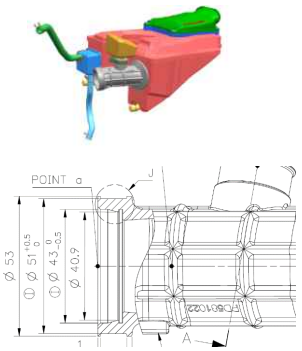
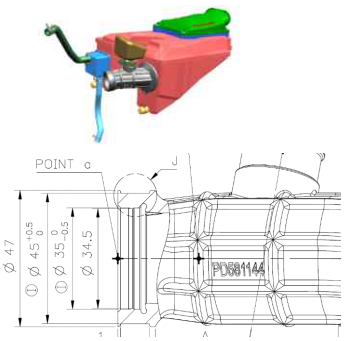
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | ENGINE TEMPERATURE SENSOR | |
| Photograph |  |  |
| Part Number | PD351808 | JE351407 |
| Description | With O ring | Without O ring |

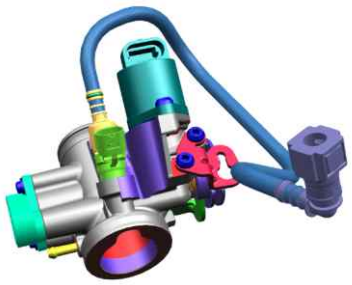
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GASKET CRANKCASE | |
| Photograph |  |  |
| Part Number | Pd541049 | PD541028 |
| Description | NA | Design is different than Pulsar N160 |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | ROTOR ASSEMBLY | |
| Photograph |   |   |
| Part Number | PD351007 | PD351057 |
| Description | Number of teeth on bush : 34 | Number of teeth on bush : 22 |

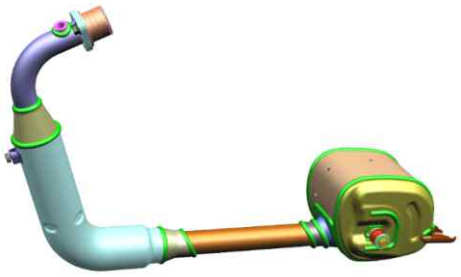
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | AIR FILTER ASSEMBLY | |
| Photograph |   |   |
| Part Number | Pd581021 | PD581143 |
| Description | NA | Connecting tube design is different than Pulsar N160 |

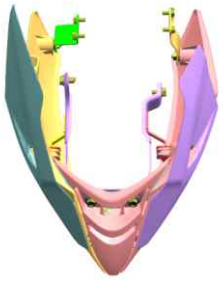
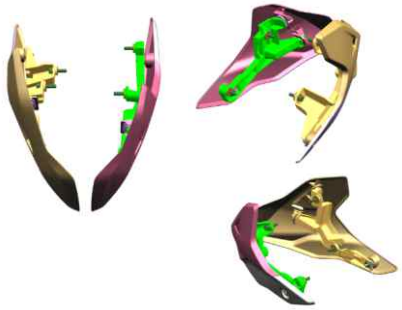
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | THROTTLE BODY ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD611205 | DH121327 |
| Description | Injector mounting on throttle body intake side | Injector mounting on intake manifold, not on throttle body |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | INTAKE PIPE | |
| Photograph |  |  |
| Part Number | Pd581432 | PD581445 |
| Description | NA | Design is different than Pulsar N160 |

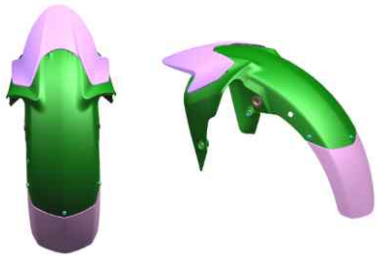
# Part Identification

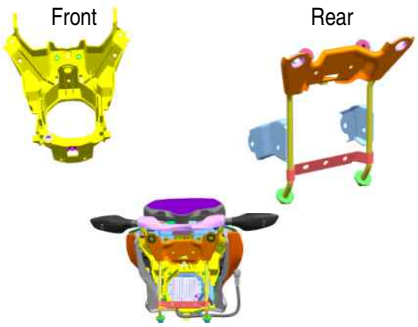
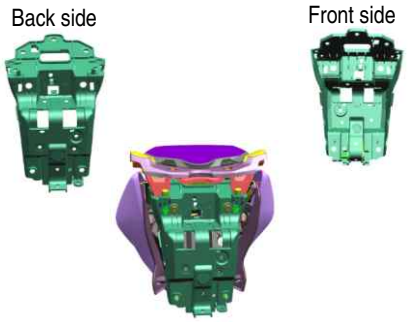
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SILENCER ASSEMBLY | |
| Photograph |  |  |
| Part Number | PD591463 | PD591651 & PD591624 |
| Description | • Exhaust pipe & muffler assembly are two separate parts, joined by clamp<br>• Muffler assembly : Big in size than Pulsar P150 | • Exhaust pipe & muffler assembly are connected parts<br>• Muffler assembly : Small in size than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BELLY PAN ASSEMBLY | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | NA | Design is different than Pulsar N160 |

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FENDER ASSEMBLY FRONT | |
| Photograph |  |  |
| Part Number | JR181452 | JR181460 |
| Description | NA | Design is different than Pulsar N160 |

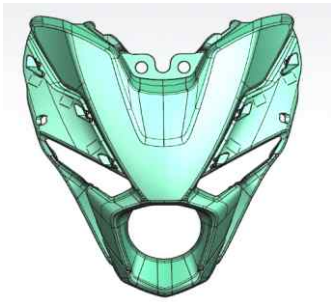
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | STRUCTURE ASSEMBLY FAIRING | |
| Photograph |   |   |
| Part Number | NA | NA |
| Description | Plastic mould type on front side<br>Metal bracket type on rear side | Plastic mould type |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BRACKET FLAP SPEEDOMETER | |
| Photograph |  |  |
| Part Number | JR181353 | JR181928 |
| Description | NA | Design is different than Pulsar N160 |

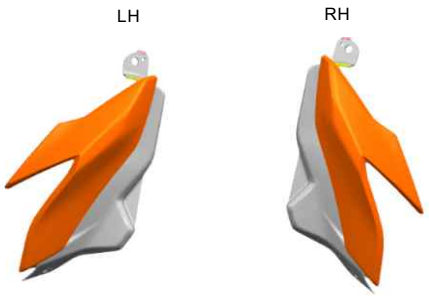
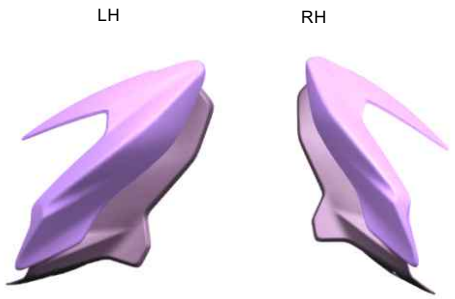
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SPEEDOMETER ASSEMBLY | |
| Photograph |  |  |
| Part Number | JR402411 | JR402432 |
| Description | • With oil pressure icon<br>• With blue light | • Without oil pressure icon<br>• With amber light |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CARRIER MASK | |
| Photograph |  |  |
| Part Number | JR181273 | JR181908 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | LAMP HEAD | |
| Photograph |  |  |
| Part Number | JR401017 | JR401035 |
| Description | NA | Design is different than Pulsar N160 |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SIDE FAIRING | |
| Photograph |   |   |
| Part Number | Refer SPC | Refer SPC |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | BRACKET PLATE NUMBER - FRONT | |
| Photograph |  |  |
| Part Number | Jr232809 | JR232817 |
| Description | NA | Design is different than Pulsar N160 |

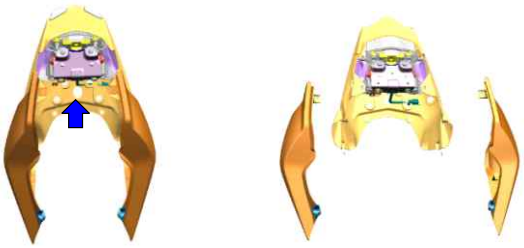
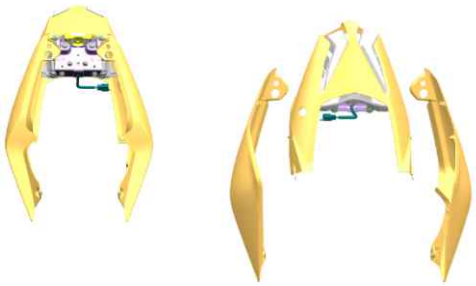
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | WIND SHIELD | |
| Photograph | NA |  |
| Part Number | NA | JR181249 |
| Description | NA | With wind shield |

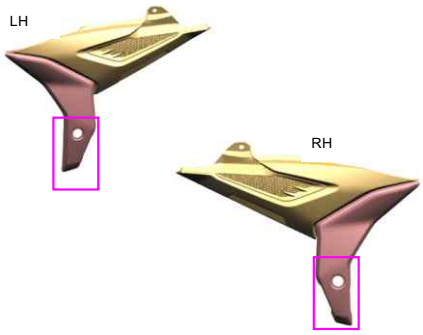
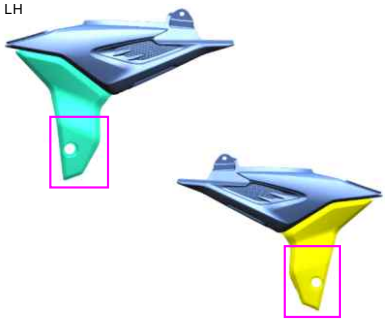
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FLAP SPEEDOMETER | |
| Photograph |  |  |
| Part Number | JR181356 | JR181240 |
| Description | NA | Design is different than Pulsar N160 |

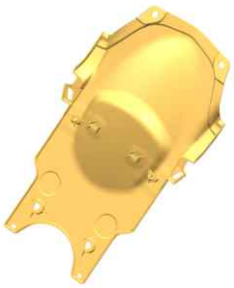
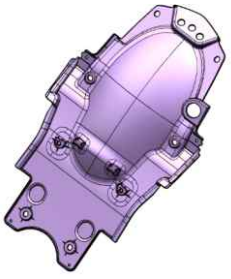
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | MIRROR | |
| Photograph |  |  |
| Part Number | LH - JR231612, RH - JR231613 | LH - JR231602, RH - JR231603 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SEAT COWL ASSEMBLY | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | NA | Design is different than Pulsar N160 |

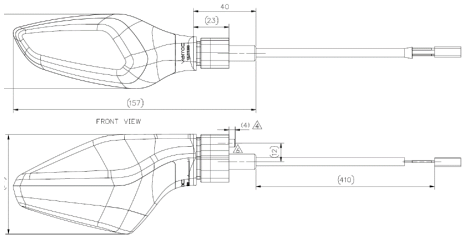
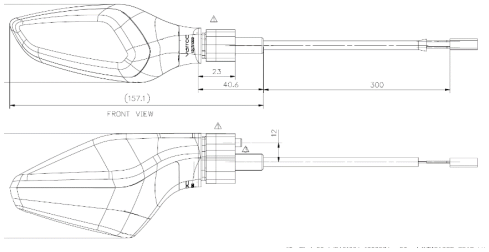
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SIDE COVER ASSEMBLY | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | UNDERTRAY FRONT | |
| Photograph |  |  |
| Part Number | JR181413 | JR181004 |
| Description | NA | Design is different than Pulsar N160 |

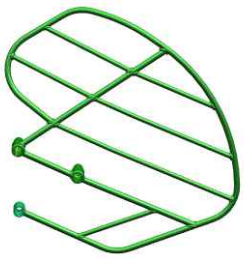
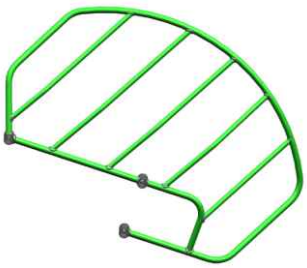
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | FENDER ASSEMBLY REAR | |
| Photograph |  |  |
| Part Number | NA | JR181409 |
| Description | NA | With rear fender design |

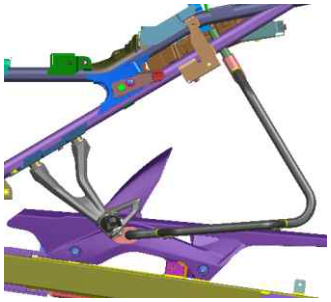
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | REAR INDICATOR | |
| Photograph |  |  |
| Part Number | LH - JR401013, RH - JR401012 | LH - JR401026, RH - JR401027 |
| Description | Cable length : 410 mm | Cable length : 300 mm |

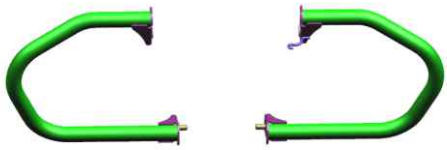
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SEAT ASSEMBLY | |
| Photograph |  |  |
| Part Number | Front - JR191014, Rear – JR191017 | JR191011 |
| Description | Split seat | Single seat |

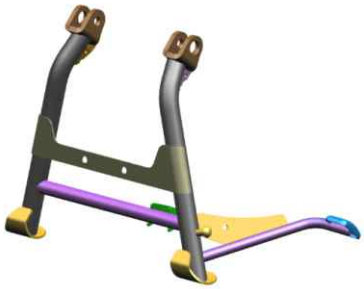
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SAREE GUARD | |
| Photograph |  |  |
| Part Number | JR231204 | JR231216 |
| Description | NA | Design is different than Pulsar N160 |

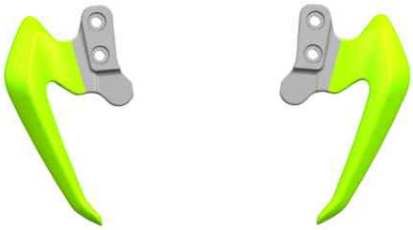
# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | SIDE FOOTREST | |
| Photograph | NA |  |
| Part Number | NA | JR113109 |
| Description | NA | With side footrest |

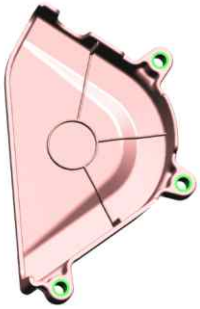
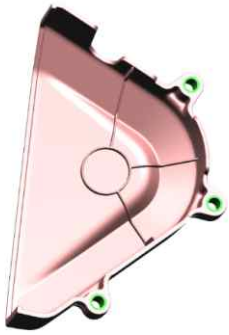
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | LEG GUARD | |
| Photograph |  |  |
| Part Number | JR231201, Qty – 2 Nos | LH - JR231202, Rear - JR231203 |
| Description | NA | Design is different than Pulsar N160 |

# Part Identification

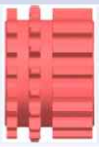
| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | CENTER STAND | |
| Photograph |  |  |
| Part Number | JR113223 | JR113214 |
| Description | NA | Design is different than Pulsar N160 |

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | GRAB HANDLE | |
| Photograph |  |  |
| Part Number | LH - JR231405, RH - JR231406 | JR231403 |
| Description | Split type | Single |

# Part Identification

| Model | Pulsar N160 Single channel ABS | Pulsar P150 Single channel ABS |
|---|---|---|
| Part Name | COVER REAR LH | |
| Photograph |  |  |
| Part Number | 52JR0278 | PD541231 |
| Description | NA | Design is different than Pulsar N160 |

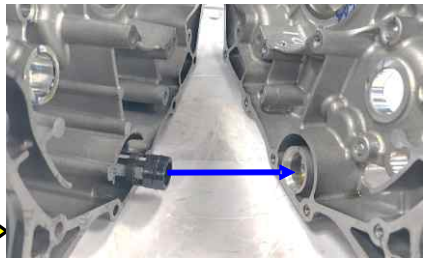
## CAM CHAIN / CAMSHAFT SPROCKET / CRANKSHAFT SPROCKET MATRIX

| Borg Warner | | LGB | |
|---|---|---|---|
| Part | Identification | Part | Identification |
| Crankshaft Sprocket (PD531046) | No groove On flange  | Crankshaft Sprocket (PD531013) | Groove (green highlighted) on flange  |
| Chain (PD511084) | Guide link have radius at bottom And "MORSE" punched  | Chain (DH103758) | Guide link is Flat at bottom And "Ⓡ" punched  |
| Camshaft Sprocket (JE511234) | No identification Punch mark  | Camshaft Sprocket (JE511271) | "R" Punch mark  |

Borg Warner & LGB parts not interchangeable.

# Engine Oil Flow Path

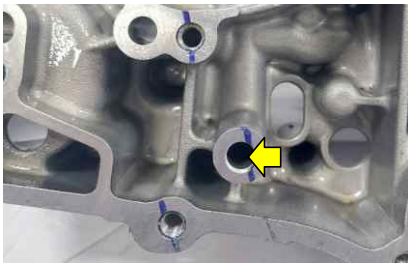
Engine oil out through oil strainer



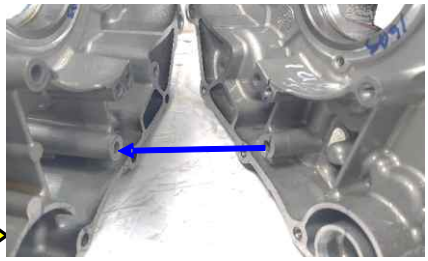
Oil enters in Crankcase RH

Oil pump IN hole

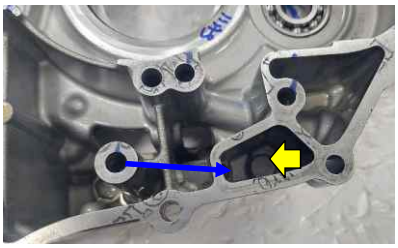
Oil pump OUT hole



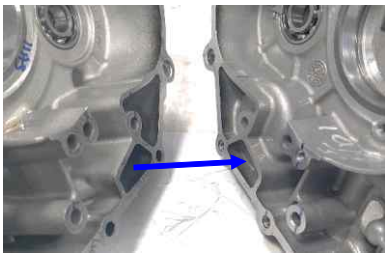
RH Crankcase inside hole



RH Crankcase hole to LH Crankcase hole



LH Crankcase hole to inner side cavity



LH Crankcase cavity to RH Crankcase cavity

Entry in Oil filter chamber

Oil entry in oil filter for filtration

Filtered oil from oil filter

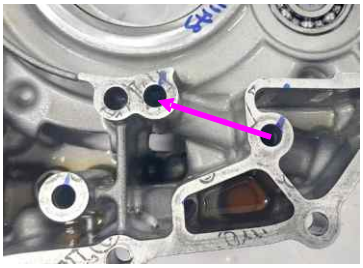
Filtered oil out

Filter oil flow through filter chamber hole

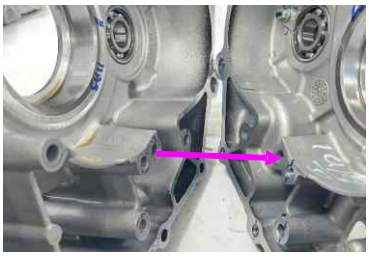
RH crankcase inner side hole

# Engine Oil Flow Path

RH Crankcase hole to LH Crankcase hole



Oil flow in LH crankcase inner side



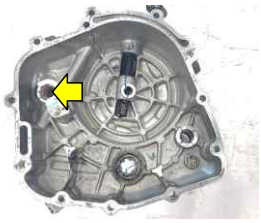
LH Crankcase to RH crankcase Hole

RH Crankcase cavity

RH Crankcase cavity to Clutch cover cavity

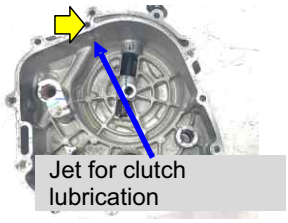
Clutch cover cavity

Towards crankshaft fitment hole



Oil entry in crankshaft

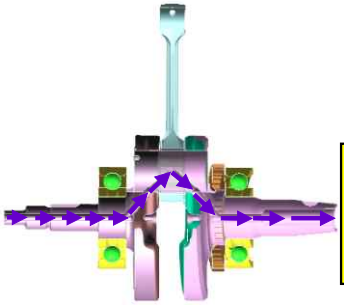
Towards clutch top side hole




Clutch cover top hole to RH crankcase hole

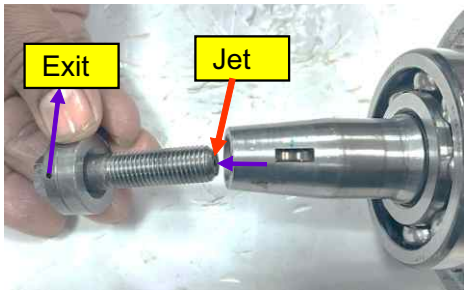
# Engine Oil Flow Path

Oil flow through crankshaft

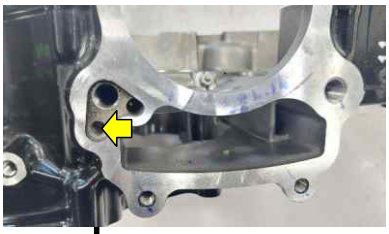


Exit from magneto side

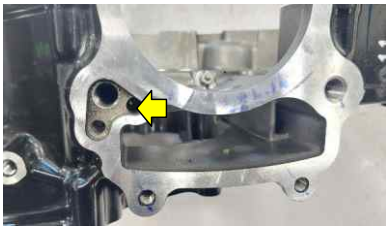
Oil flow through Jet in rotor mounting bolt & exit through hole on bolt collar for stator lubrication




Entry in RH Crankcase Top Side gallery



Towards crankshaft bearing hole



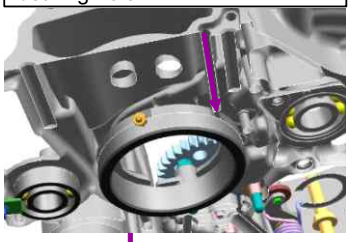
Towards Block & cylinder head

Oil flow through RH Crankcase oil gallery

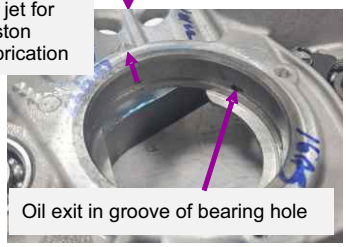
Jet in RH Crankcase oil gallery

# Engine Oil Flow Path

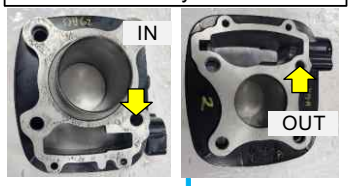
Oil flow towards crankshaft bearing hole



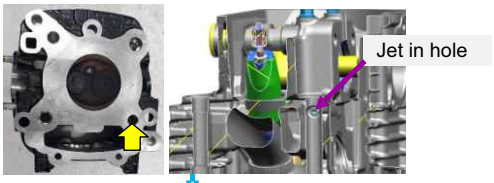
To jet for piston lubrication



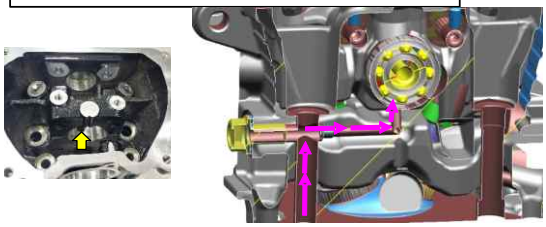

Block Cylinder




Entry in Cylinder head

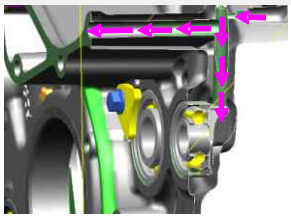



Entry in cam shaft bearing fitment area hole



Towards Output shaft bearing in Crankcase RH

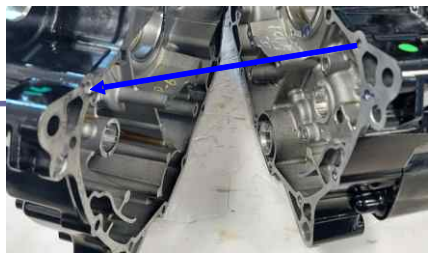
Oil flow : Jet to I/P shaft bearing lubrication



Towards Crankcase RH inner side hole

From LH Crankcase inner side hole towards input shaft bearing

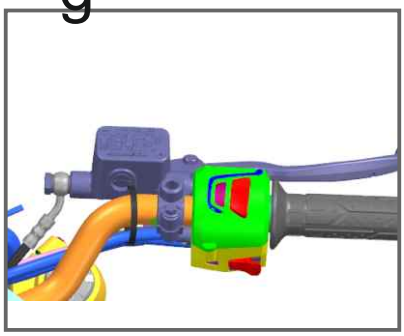
Crankcase RH inner side hole to LH Crankcase inner side Hole



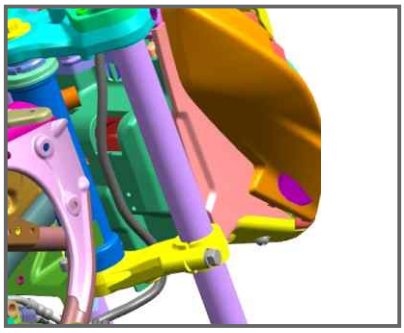
# Cable Hose Routing

## Front Brake hose Routing

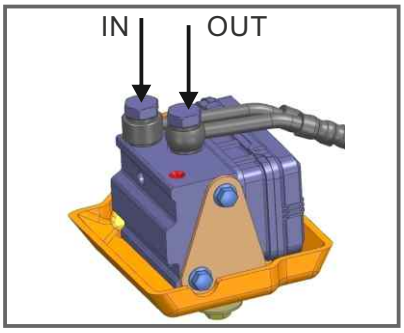
g

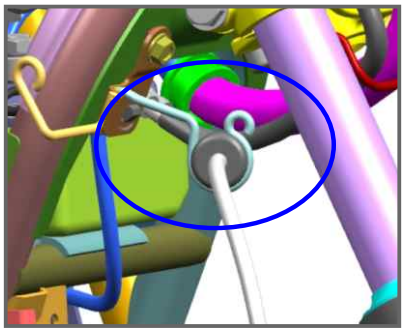


- Route the brake hose from master cylinder as shown in photograph.

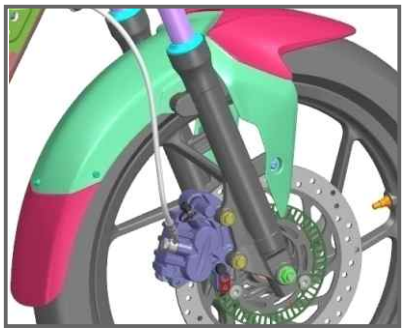


- Route the brake hose from master cylinder as shown in photograph & further connect to ABS unit



- Fit rubber grommet on brake hose in metal hook as shown in photograph.



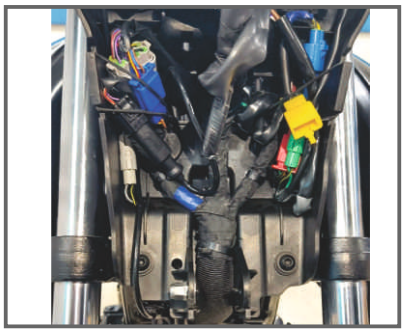
- Route brake hose as shown in photograph & connect to caliper assembly front.

# Cable Hose Routing

## Front Speed Sensor Routing

Fit w clamps on speed sensor cable on brake hose as shown in photograph.

- Fit body clip on speed sensor cable in hole provided on fairing structure as shown in photograph.



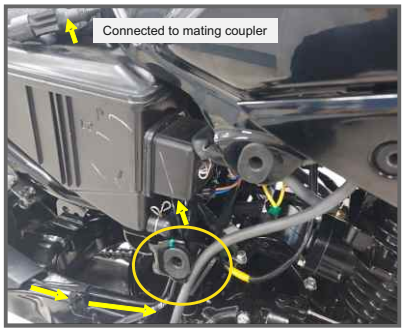
- Route rubber band on speed sensor cable as shown in photograph & connect to mating coupler.

## Rear Speed Sensor Routing

- Route speed sensor cable through clamp fitted on swing arm as shown in photograph.

# Cable Hose Routing


- Route speed sensor cable through clamps fitted on swing arm as shown in photograph.

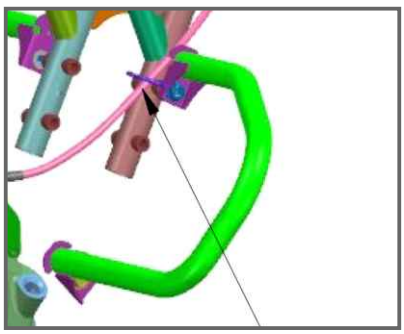



- Route speed sensor cable through cable guide as shown in photograph & connect to mating coupler.

## Clutch Cable Routing

- Route the clutch cable from clutch lever as shown in photograph.

- Route the clutch cable as shown in photograph.



- Route the clutch cable through hook as shown in photograph.

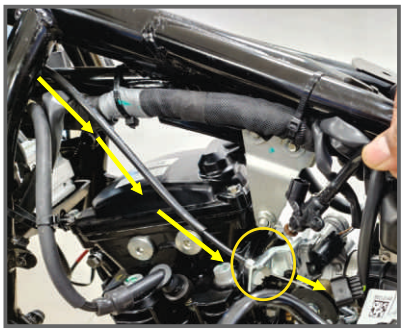
# Cable Hose Routing

- Route the clutch cable through bracket clutch cable as shown in photograph.

## Throttle Cable Routing

- Route the throttle cable as shown in photograph

- Route the throttle cable through hook & pass to LH side as shown in photograph



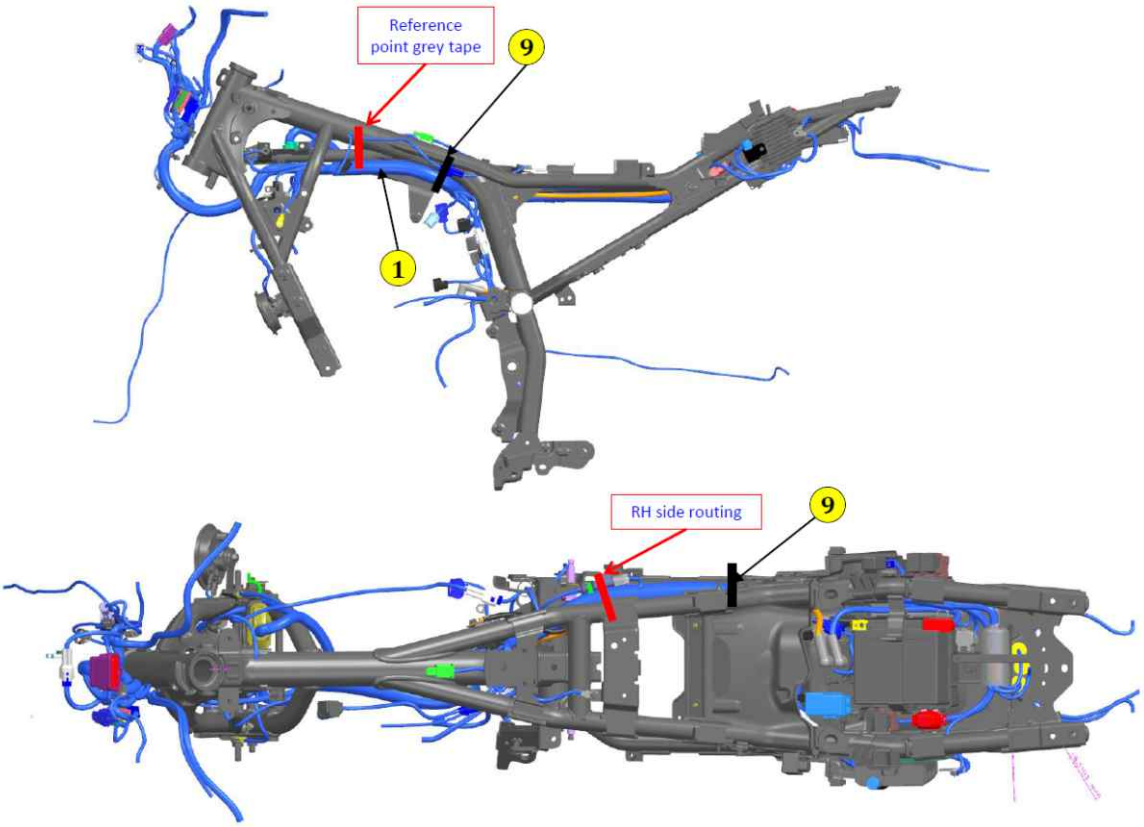
- Route the throttle cable through metal bracket fitted on throttle body & connect to throttle drum as shown in photograph

## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Wiring Harness Routing - Mikuni make ECU

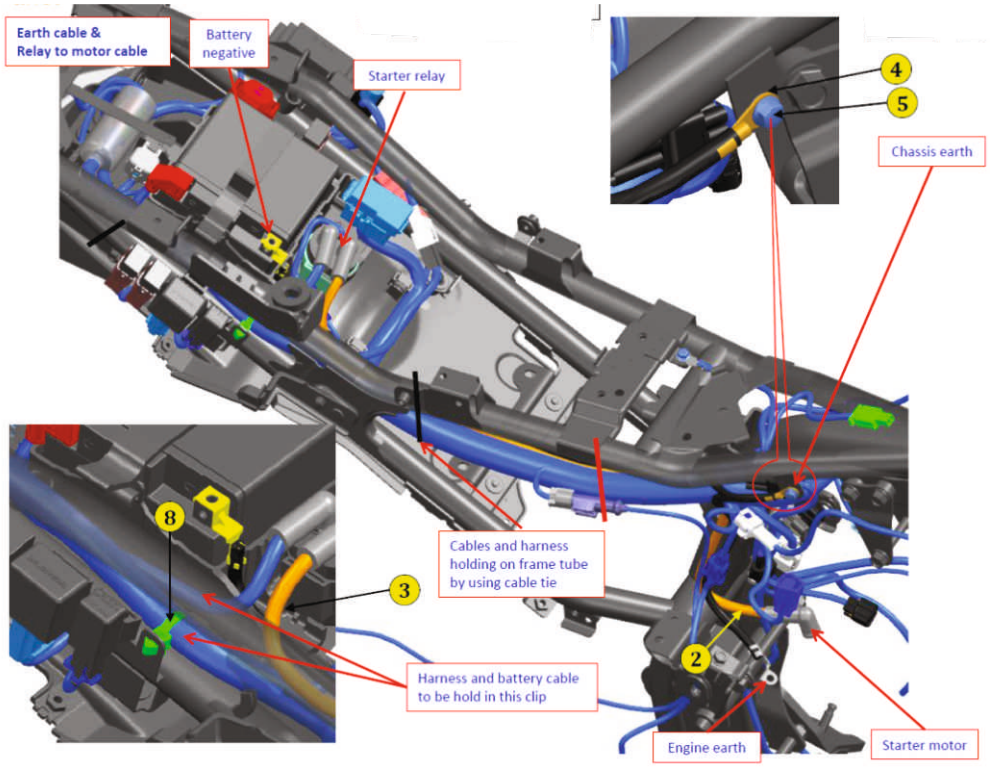
| SR. NO. | PART NO. | PART DESCRIPTION | QTY. | TORQUE (kg.m) |
|---|---|---|---|---|
| 1 | JR402267 | HARNESS WIRING | 1 | |
| 2 | JR402220 | CABLE EARTH | 1 | |
| 3 | JR402219 | CABLE RELAY-MOTOR STARTER | 1 | |
| 4 | LDF00001 | WASHER TOOTHED-ID 6.4XOD11XT 0.7 | 4 | |
| 5 | KAED0610 | BOLT FLANGED M6X1 | 4 | 0.8 - 1.0 |
| 6 | JP402221 | CABLE EARTH ABS | 1 | |
| 7 | JD402217 | STRAP CABLE | 3 | |
| 8 | 60111420 | CABLE TIE LOCK 4.8 1.2 160 PA66 B | 6 | |
| 9 | JD402212 | BAND(LENGTH 200MM) | 5 | |
| 10 | JY113853 | RUBBER STRAP | 1 | |
| 11 | PD402211 | CLAMP FOR HEAD LAMP HARNESS | 2 | |
| 12 | GL402239 | CLIP | 1 | |
| 13 | JD402215 | BAND | 1 | |

• Route the wiring harness as shown in photograph.

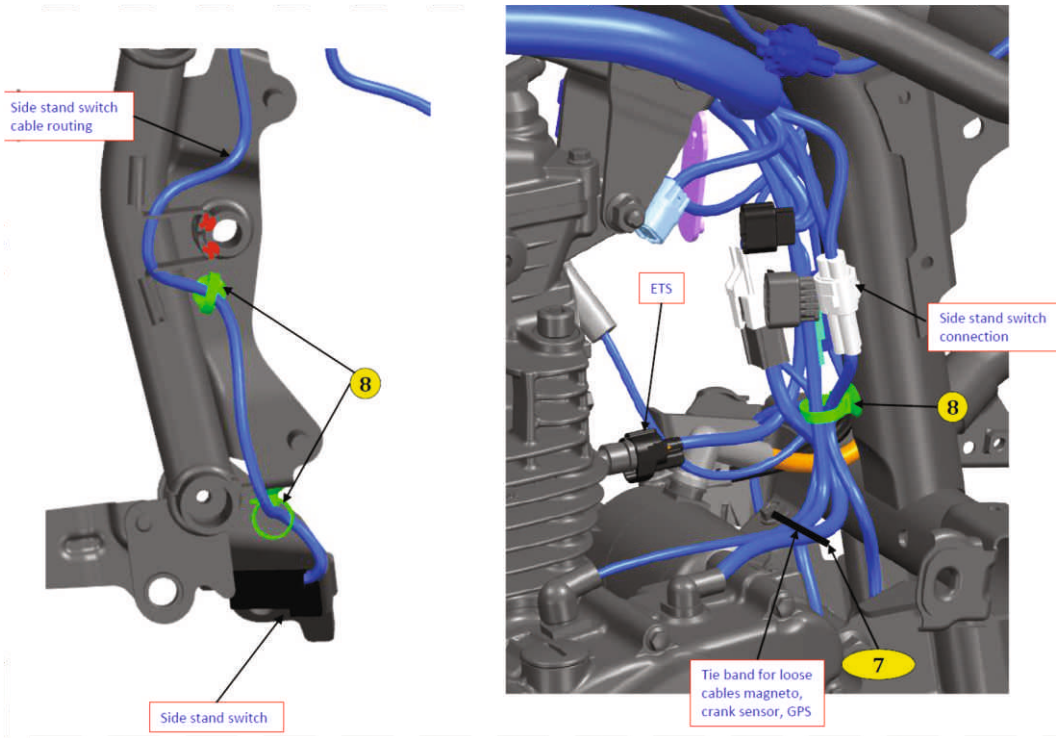


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

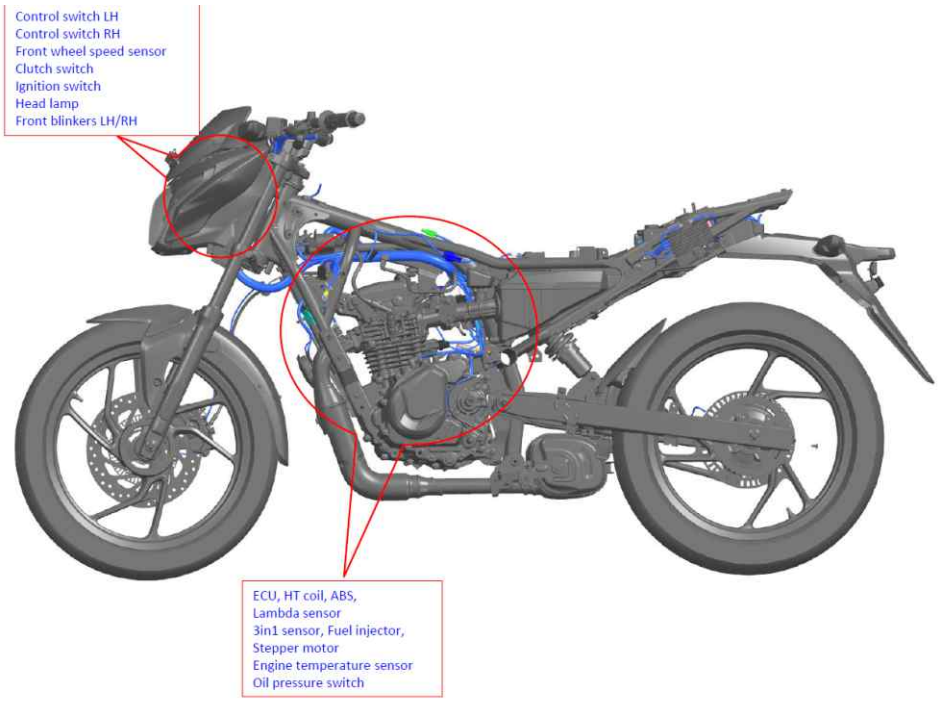



• Route the wiring harness as shown in photograph.

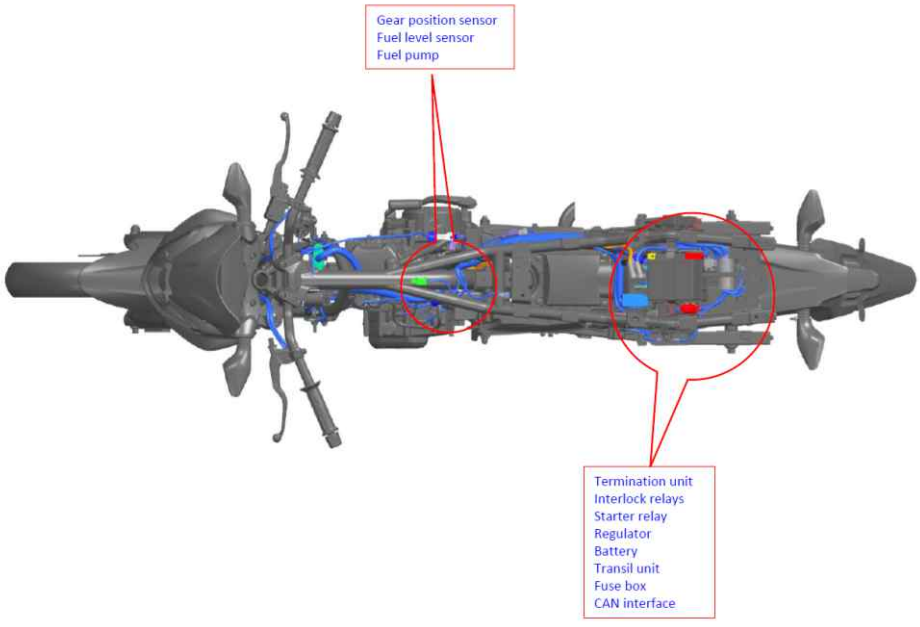


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

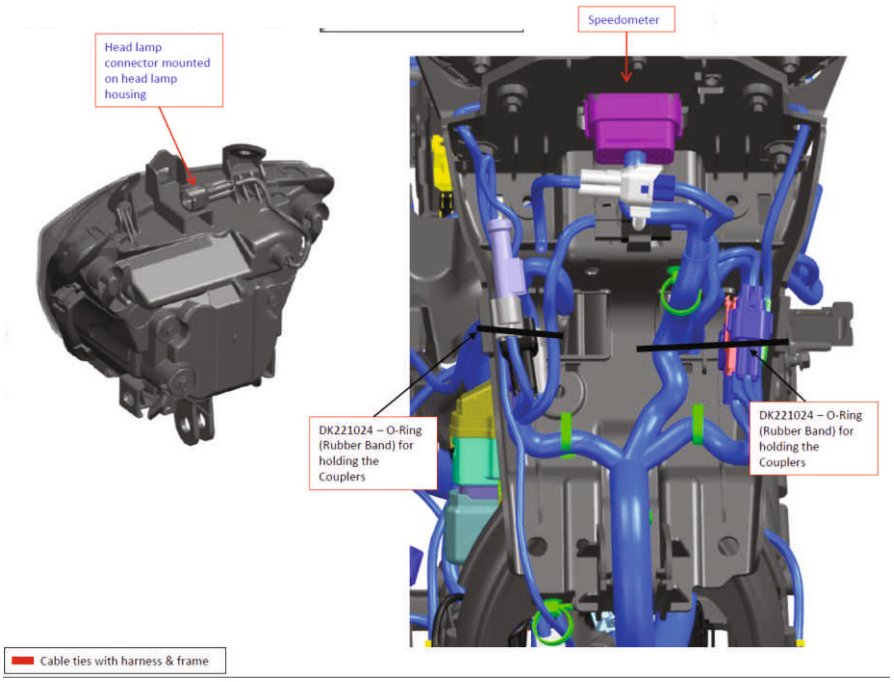



• Route the wiring harness as shown in photograph.

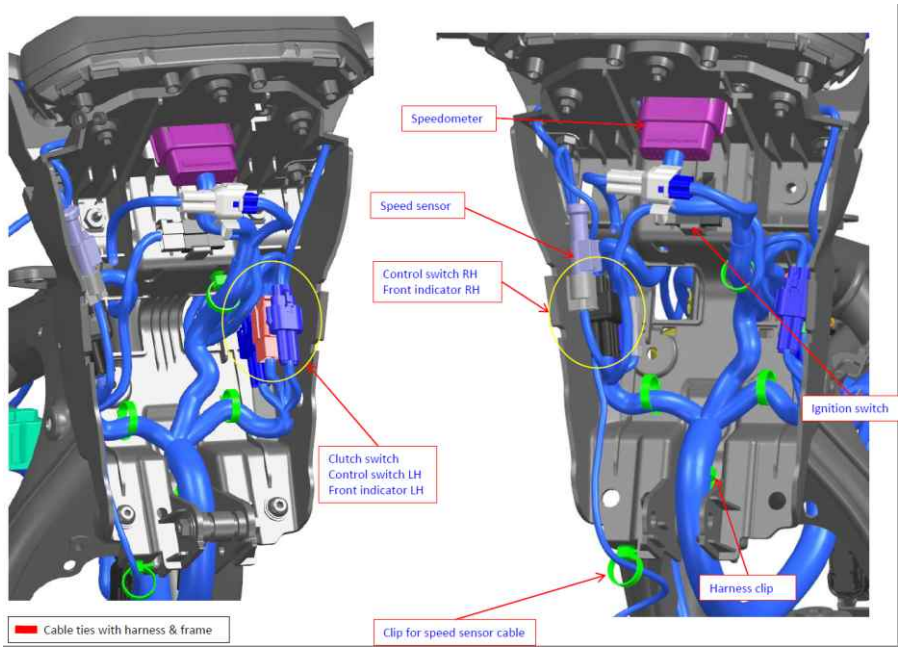


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

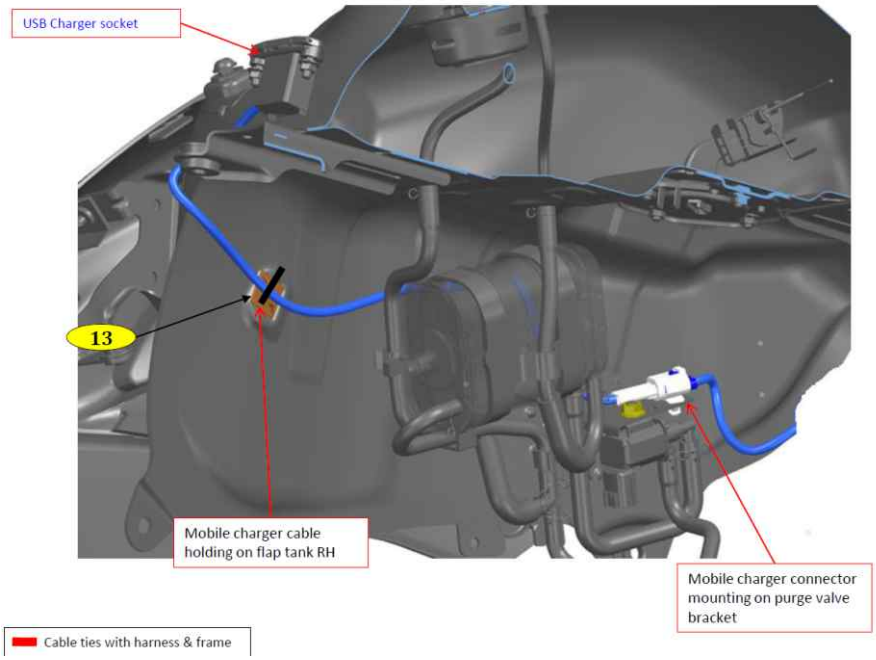



• Route the wiring harness as shown in photograph.

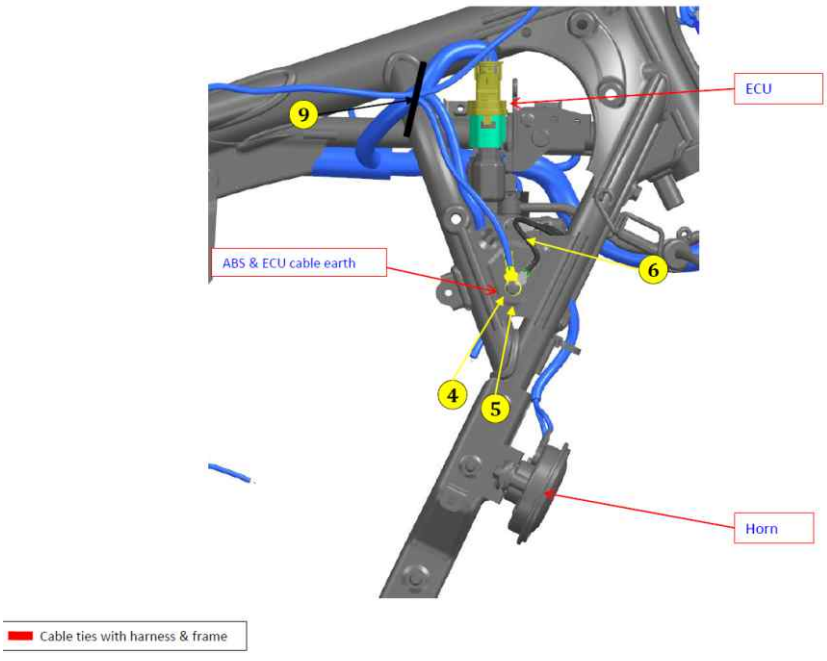


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

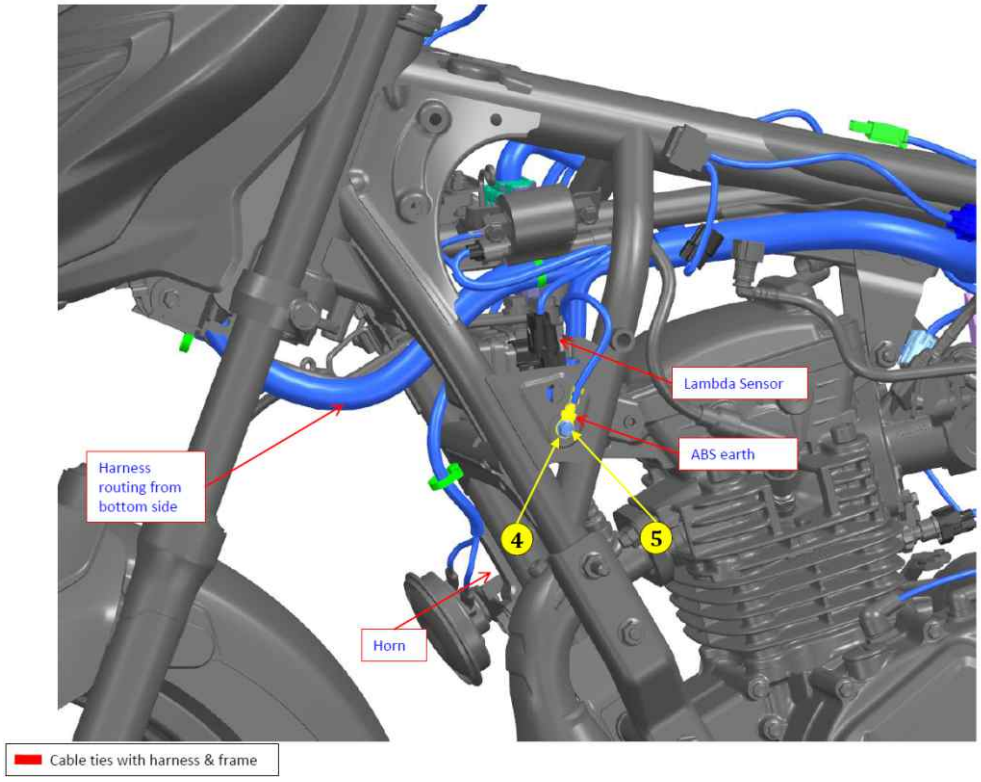



• Route the wiring harness as shown in photograph.

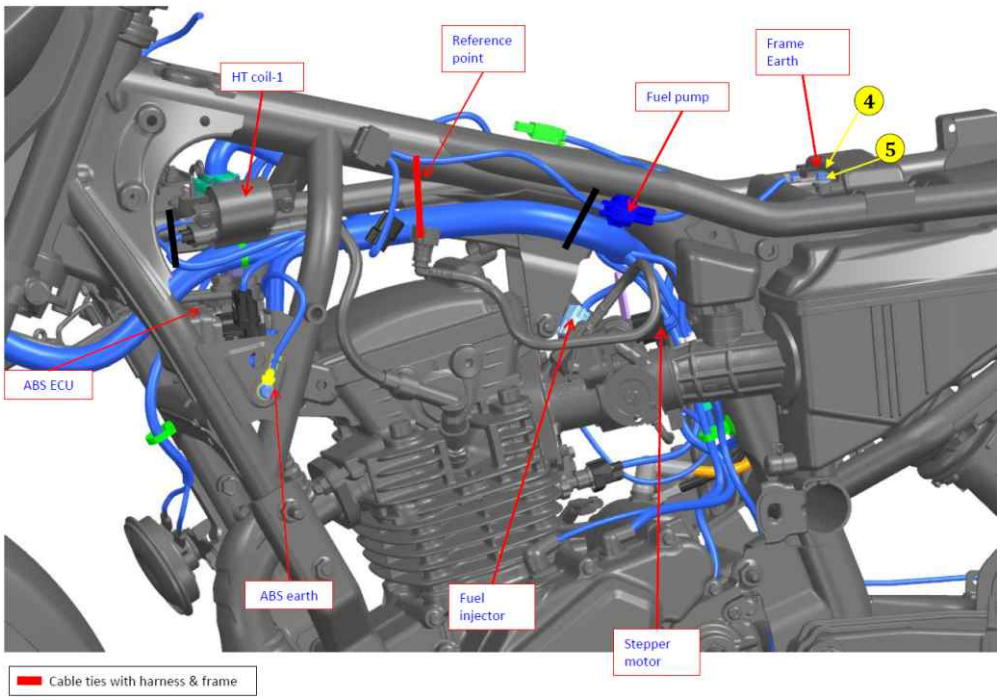


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

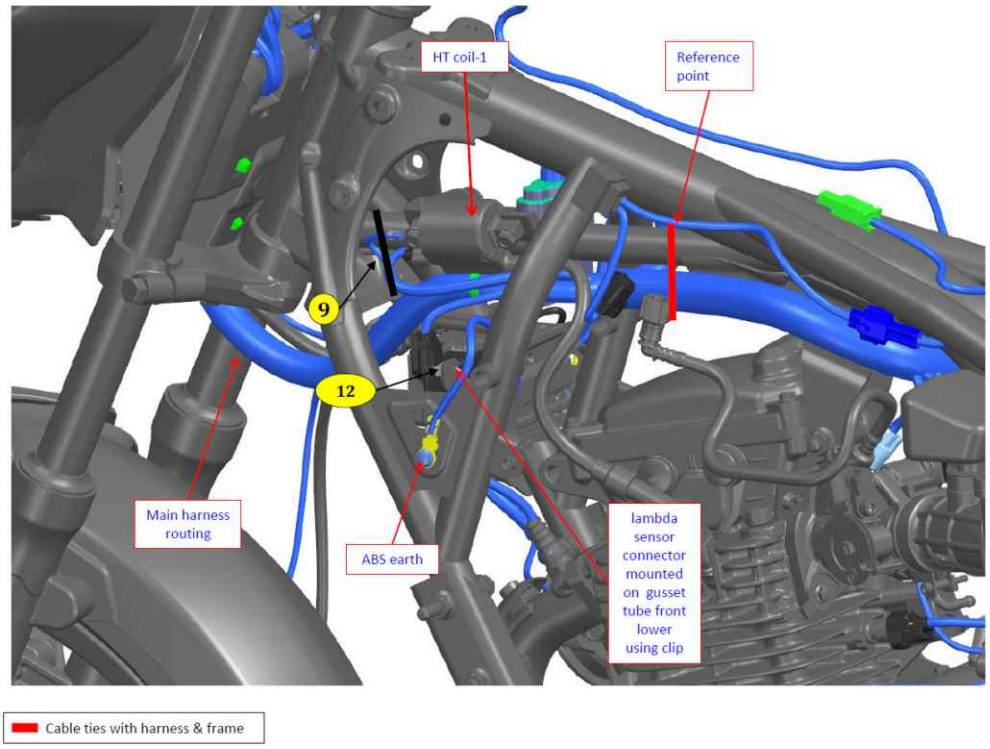



• Route the wiring harness as shown in photograph.

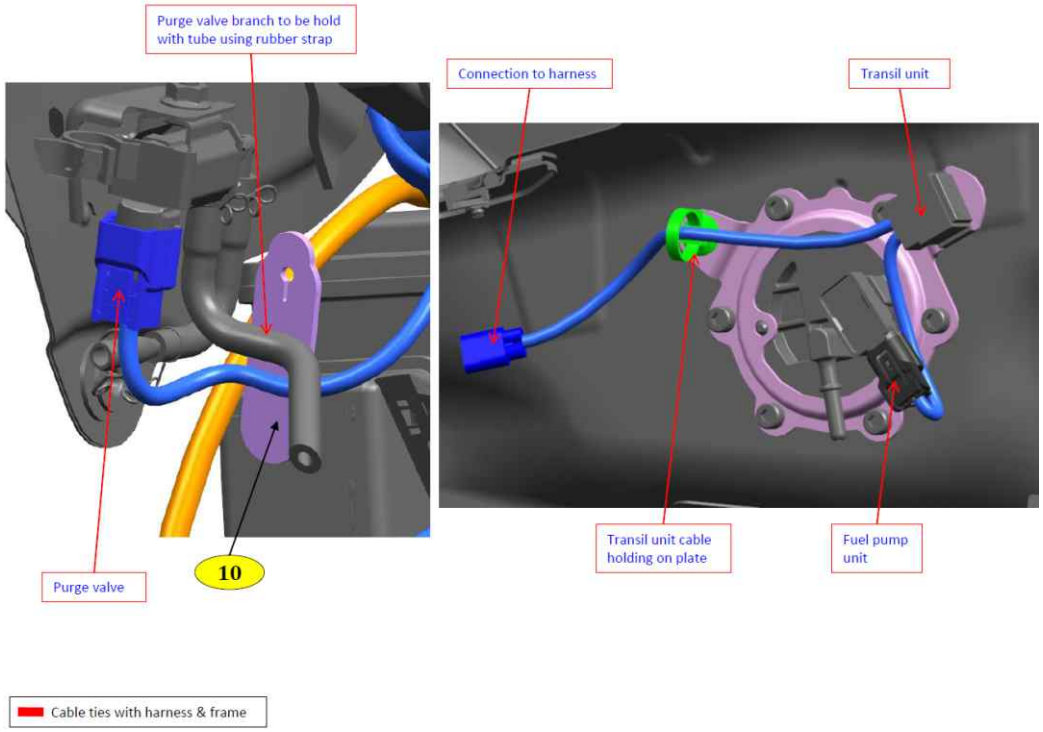


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

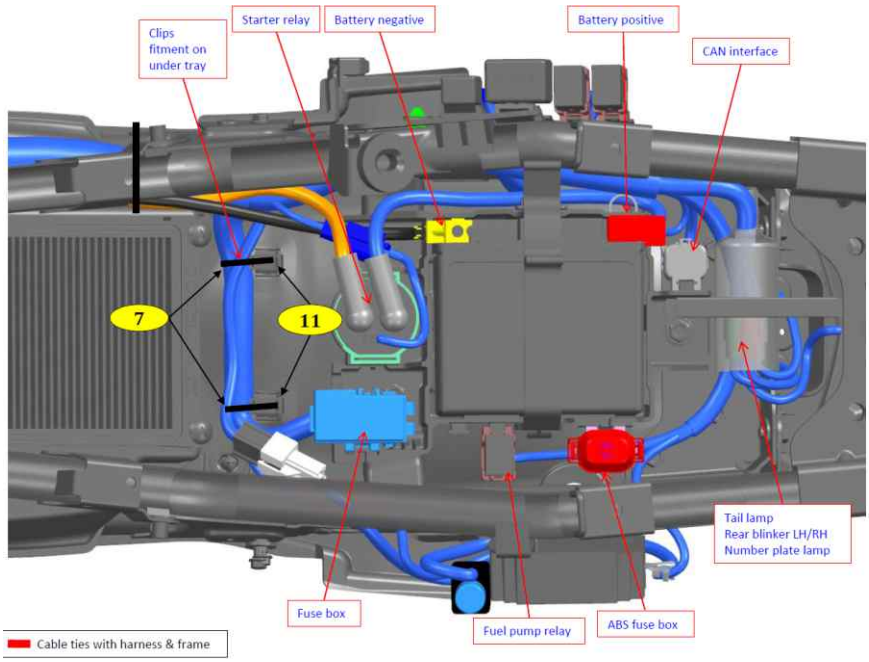



• Route the wiring harness as shown in photograph.



# Wiring Harness Routing - Mikuni make ECU

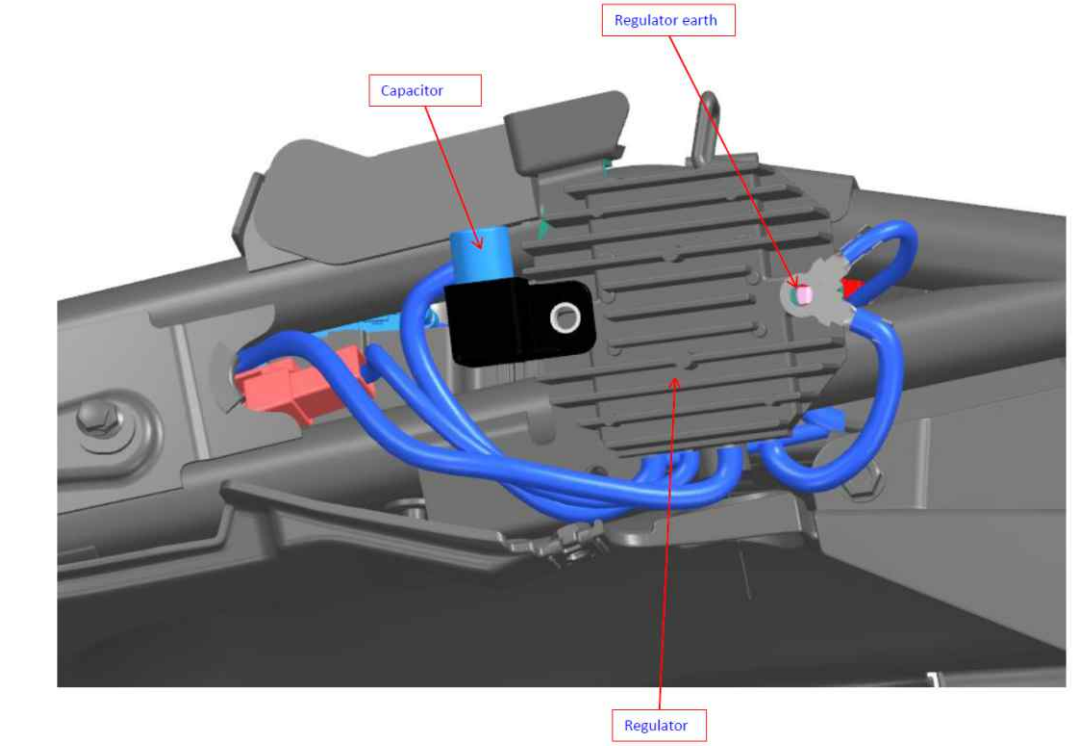
• Route the wiring harness as shown in photograph.



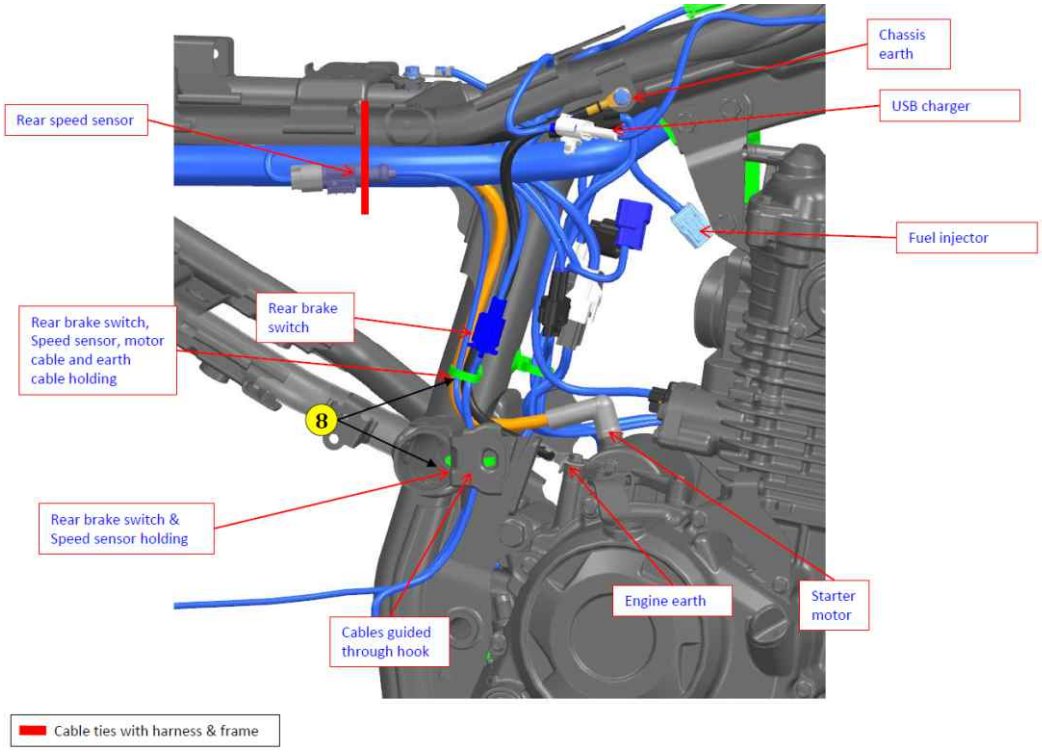

• Route the wiring harness as shown in photograph.

# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

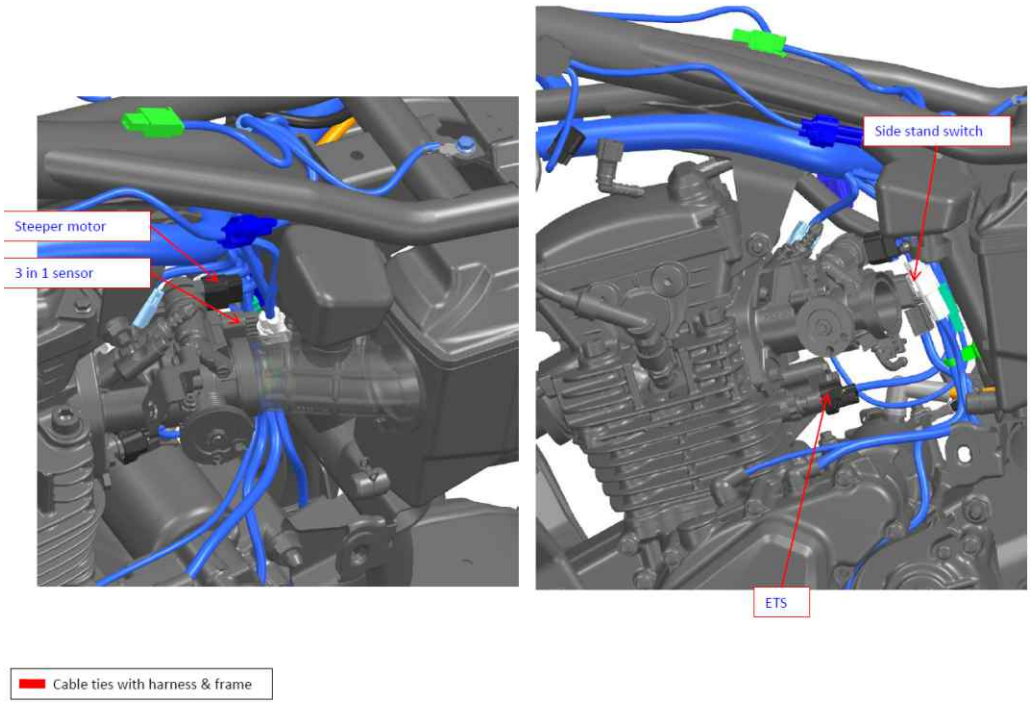



• Route the wiring harness as shown in photograph.

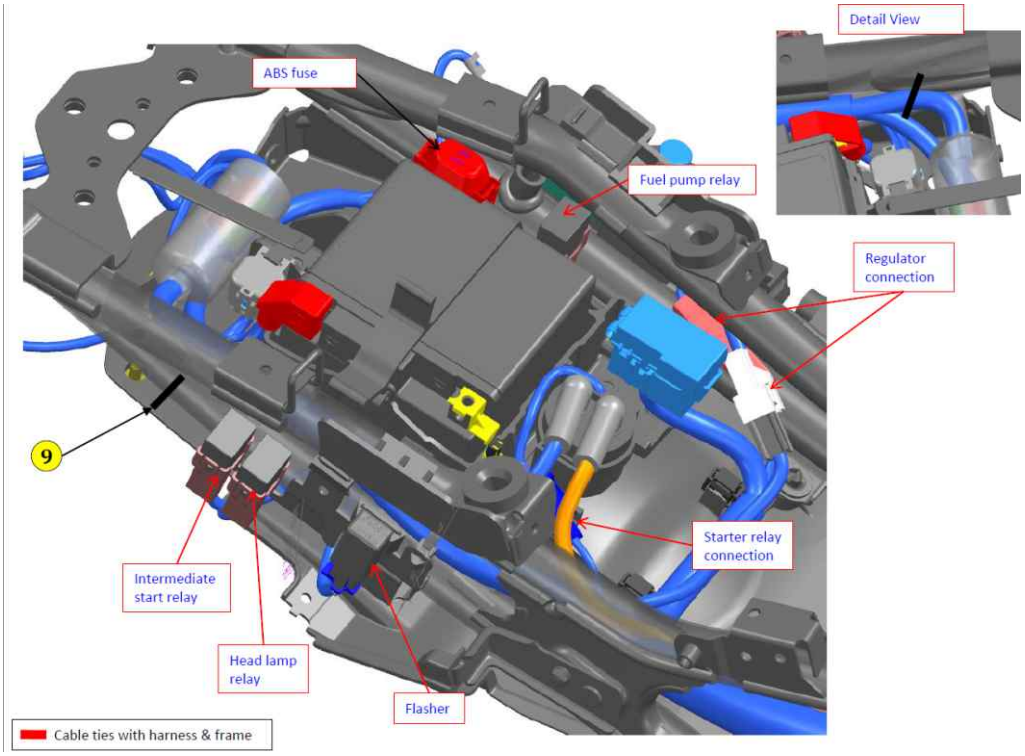


# Wiring Harness Routing - Mikuni make ECU

• Route the wiring harness as shown in photograph.

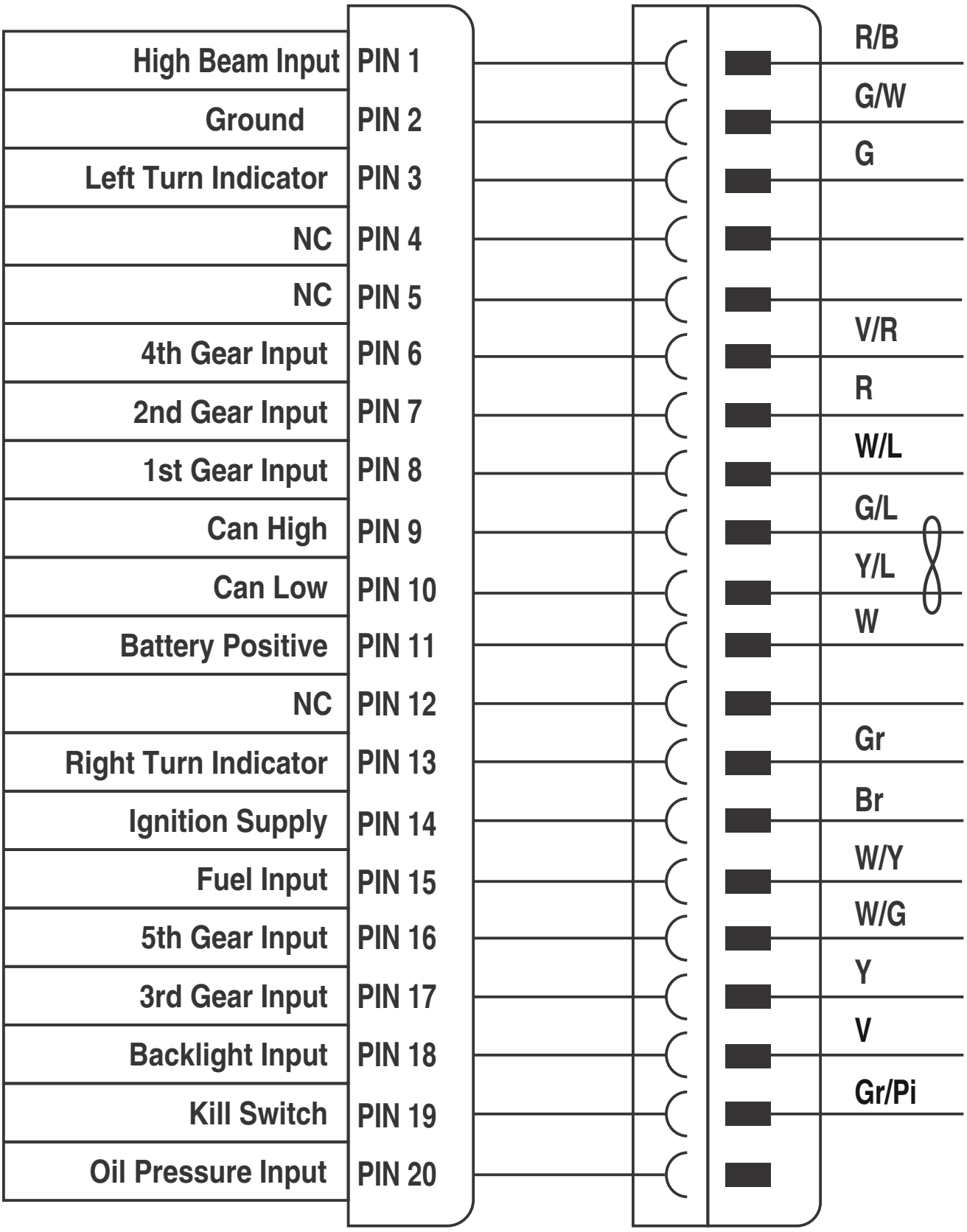



• Route the wiring harness as shown in photograph.



# Circuit Diagrams

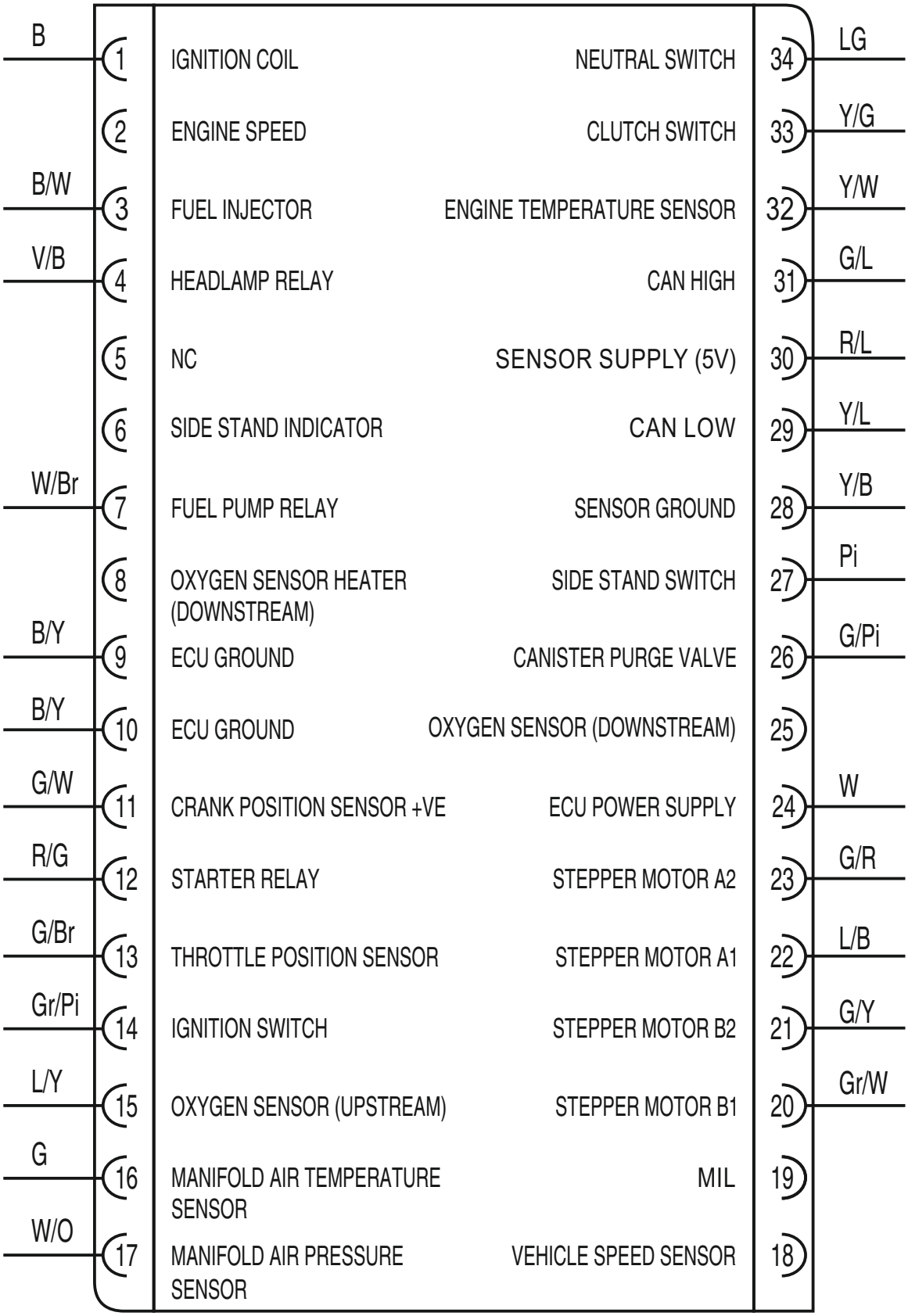
## SPEEDOMETER



# Circuit Diagrams

## ECU PIN DETAILS

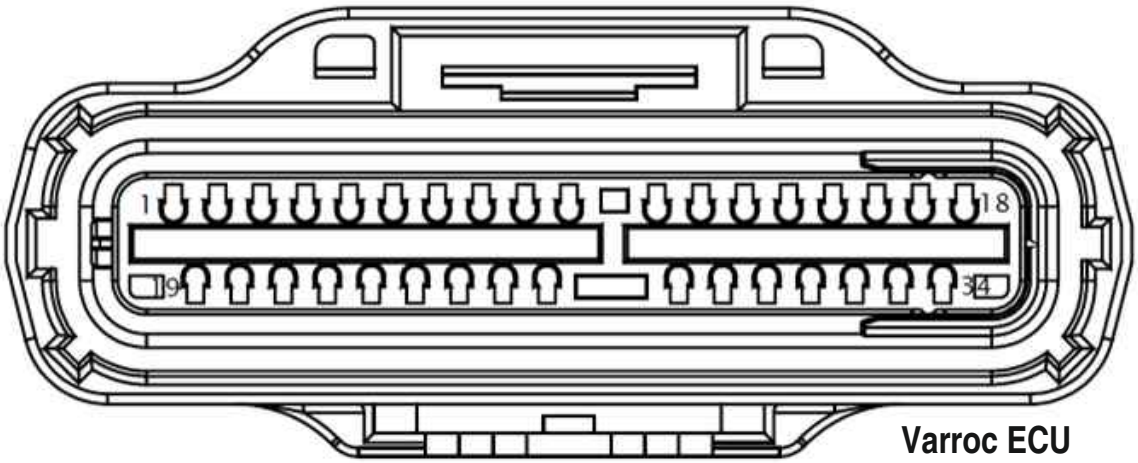
**Roll Over Sensor is integrated in ECU. No separate roll over sensor is provided**



## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

# Circuit Diagrams

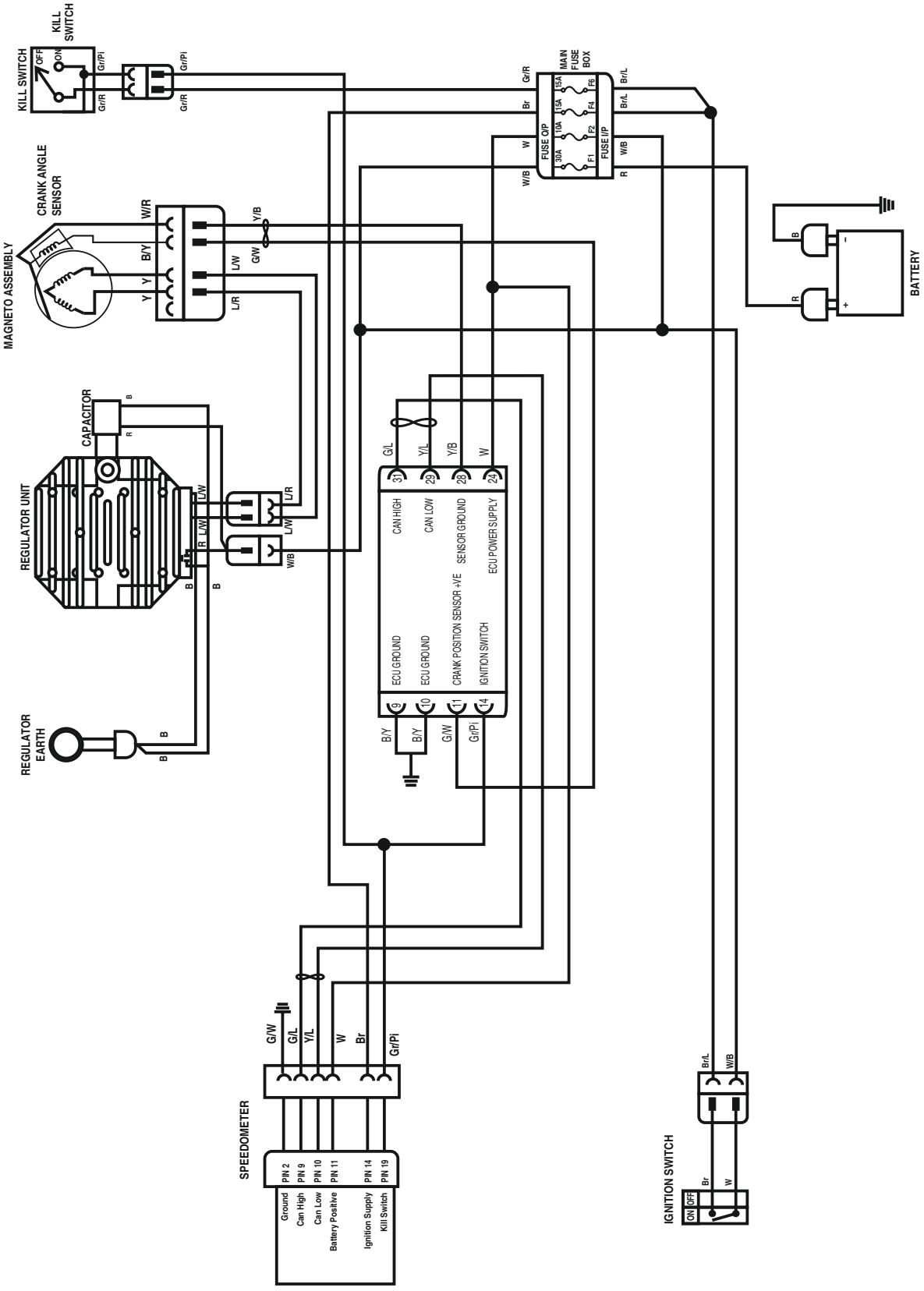
### ECU PIN


Varroc ECU

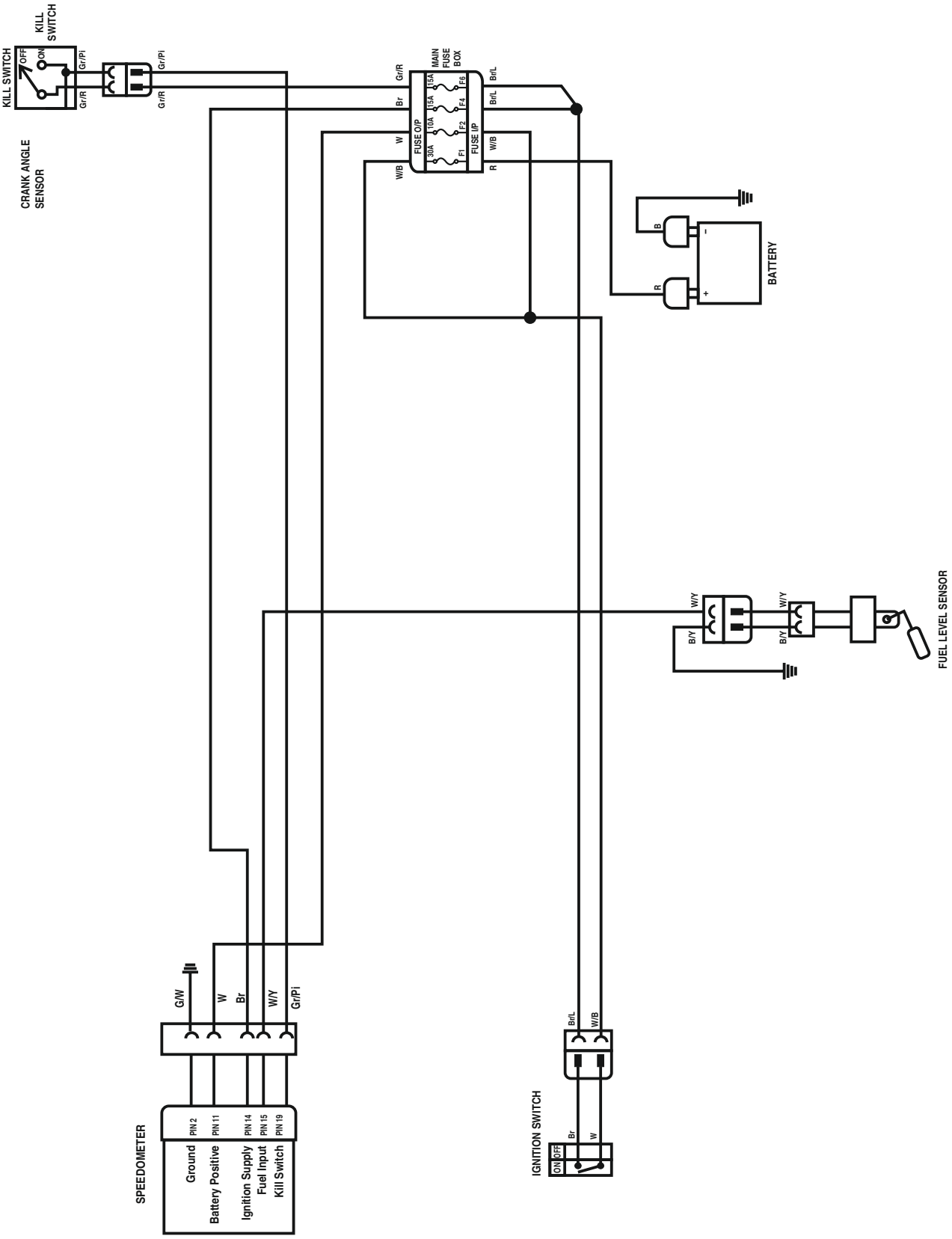
# Circuit Diagrams

## BATTERY CHARGING



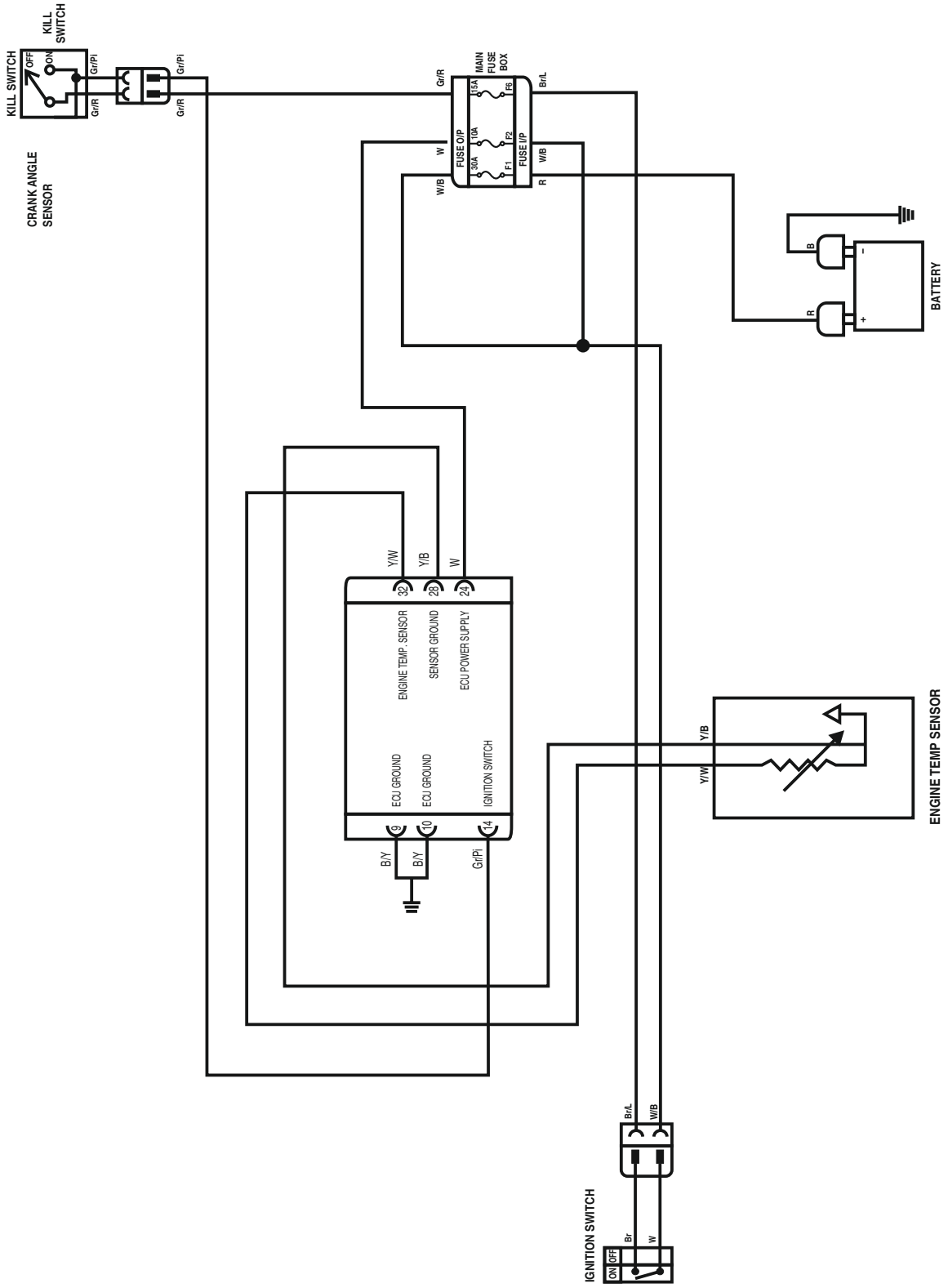
# Circuit Diagrams

## FUEL METER



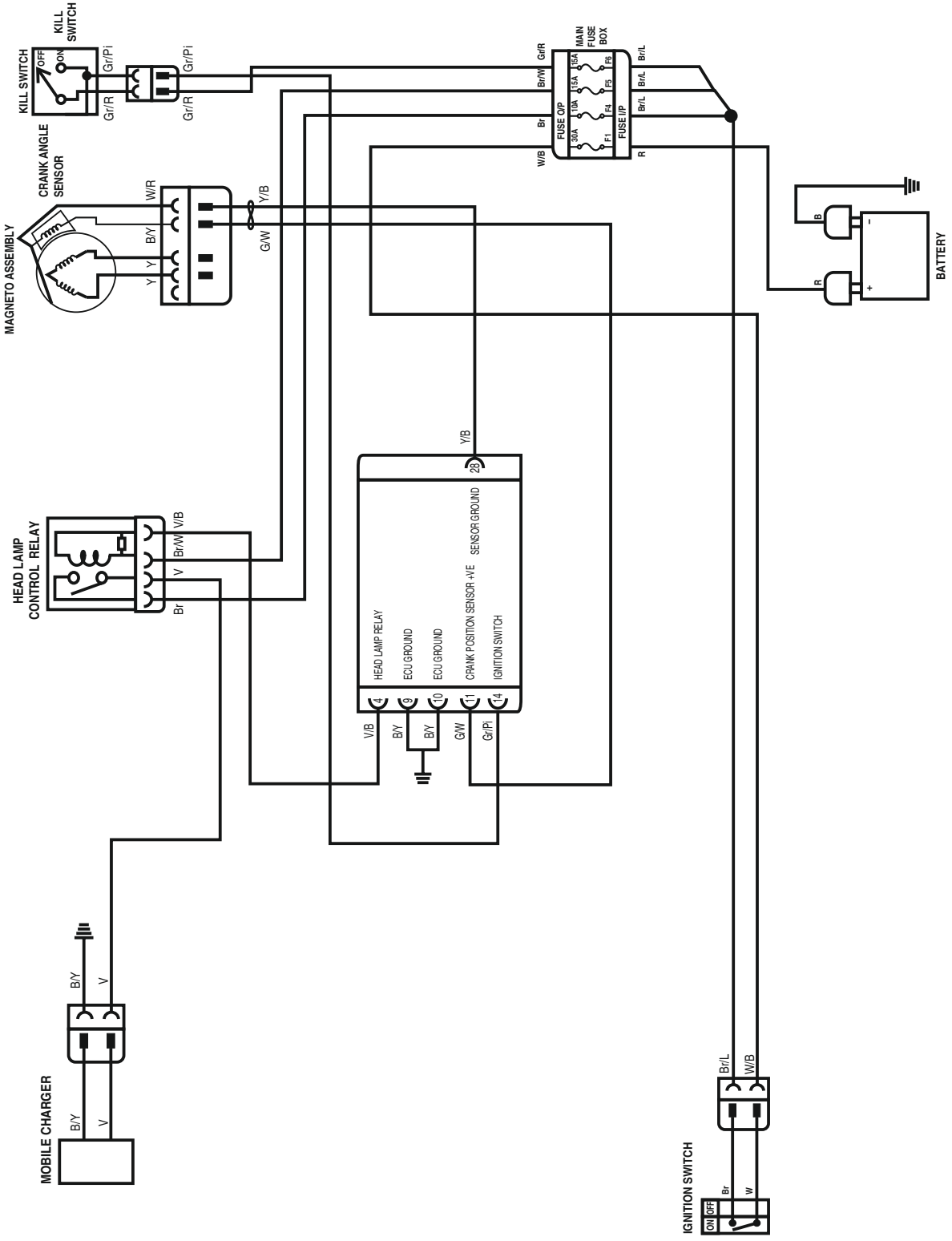
# Circuit Diagrams

## ENGINE TEMPERATURE SENSOR



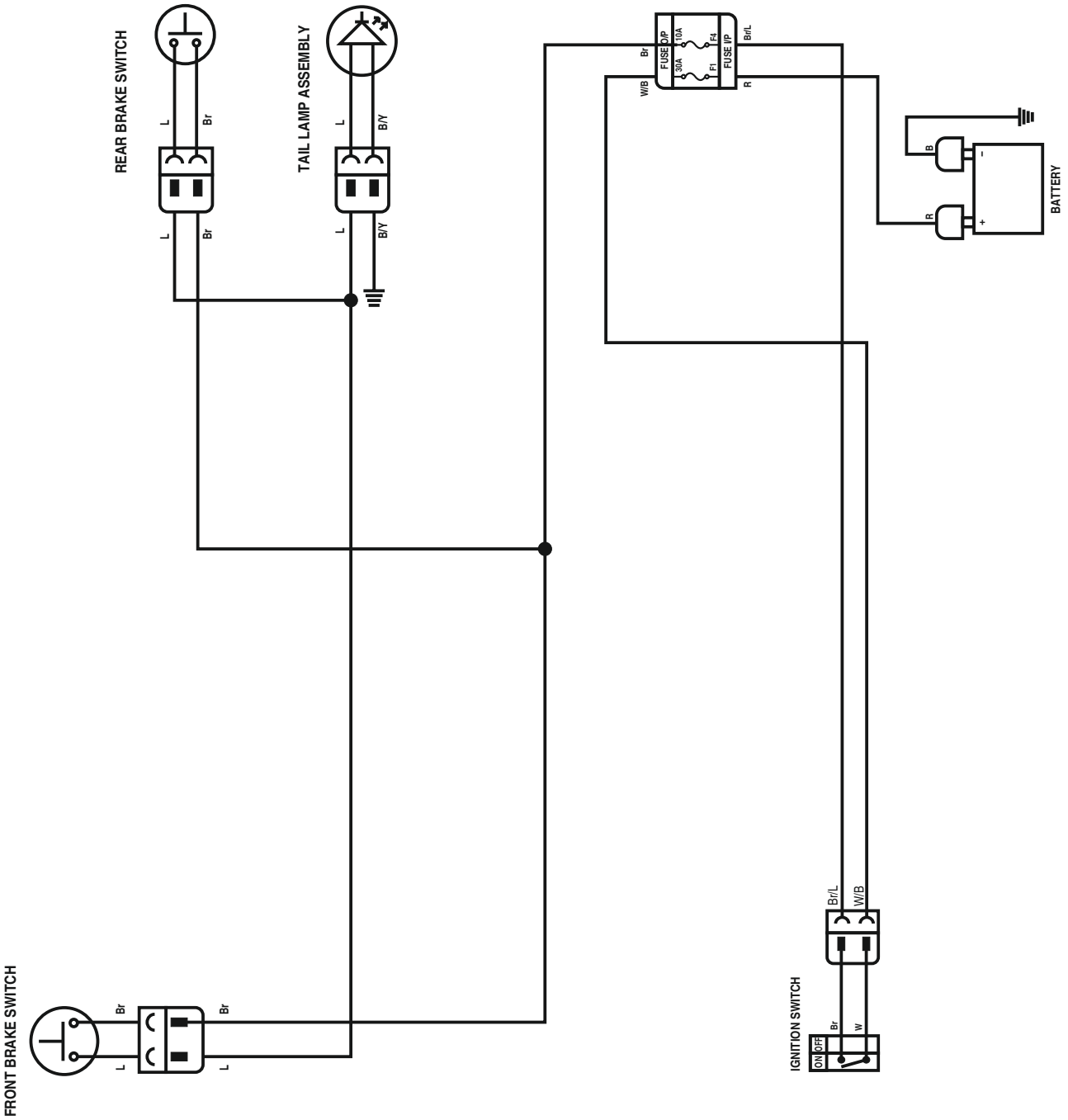
# Circuit Diagrams

## USB SOCKET CHARGER



# Circuit Diagrams

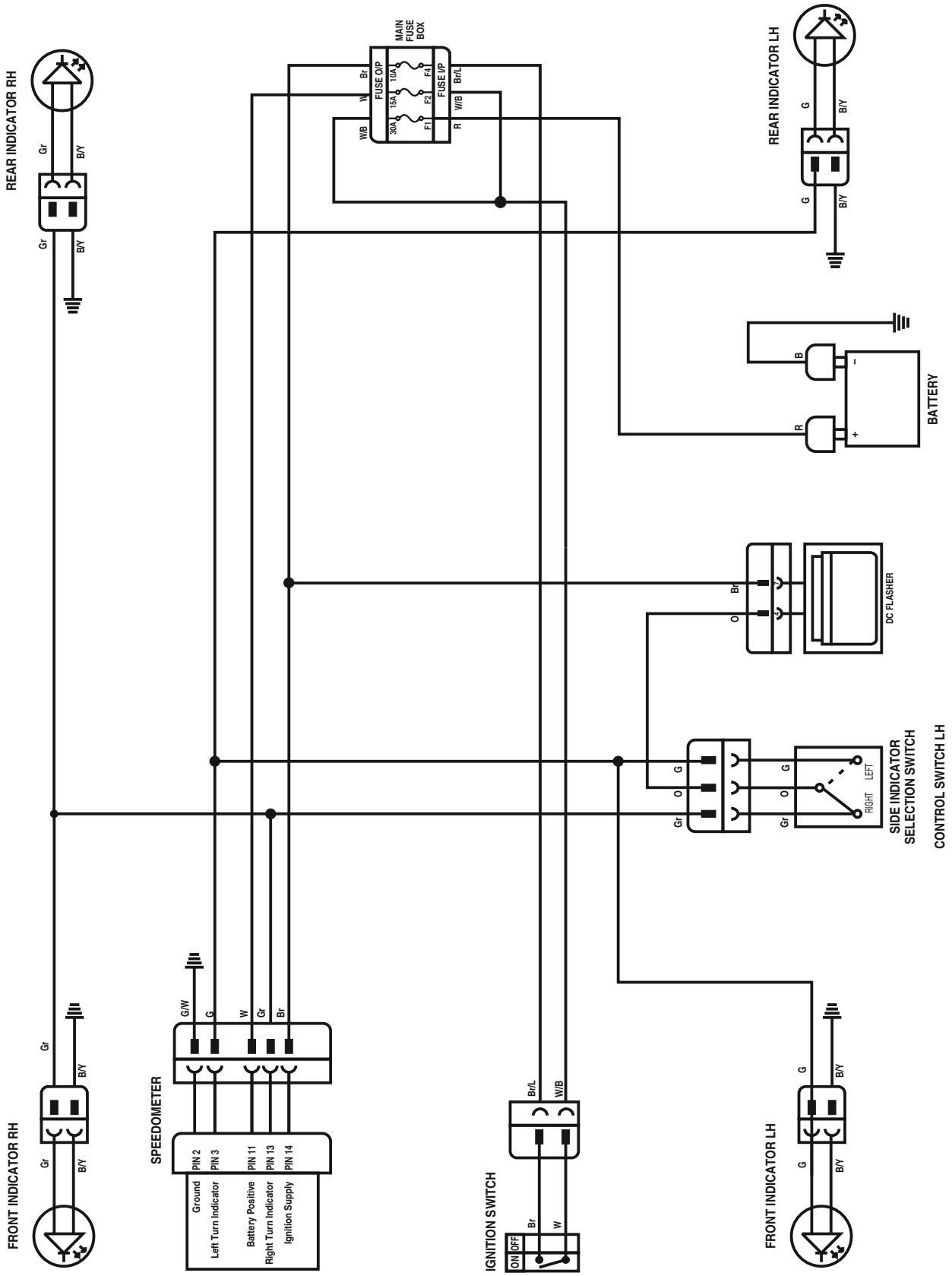
## BRAKE LAMP



## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

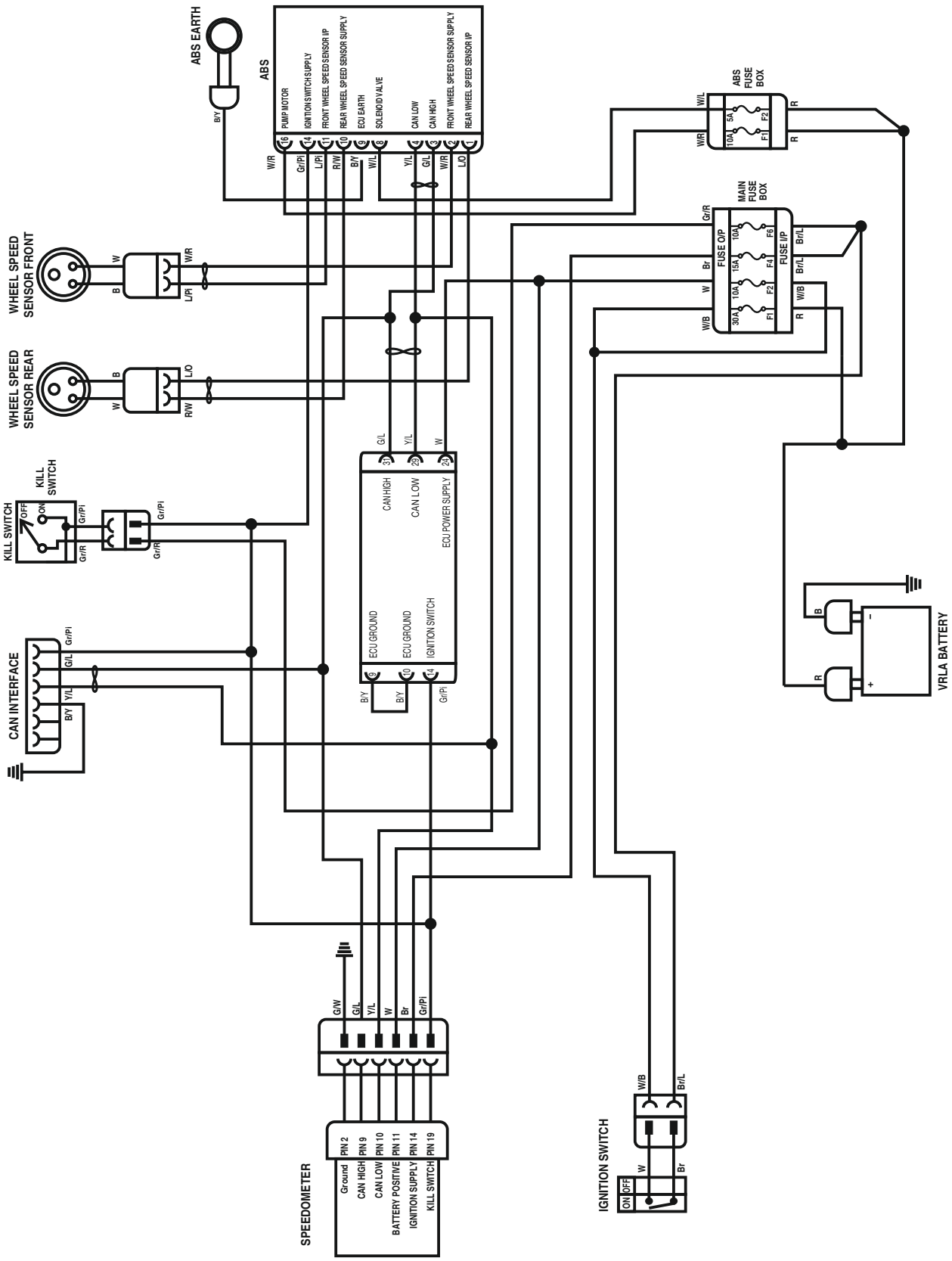
# Circuit Diagrams

### SIDE INDICATOR



# Circuit Diagrams

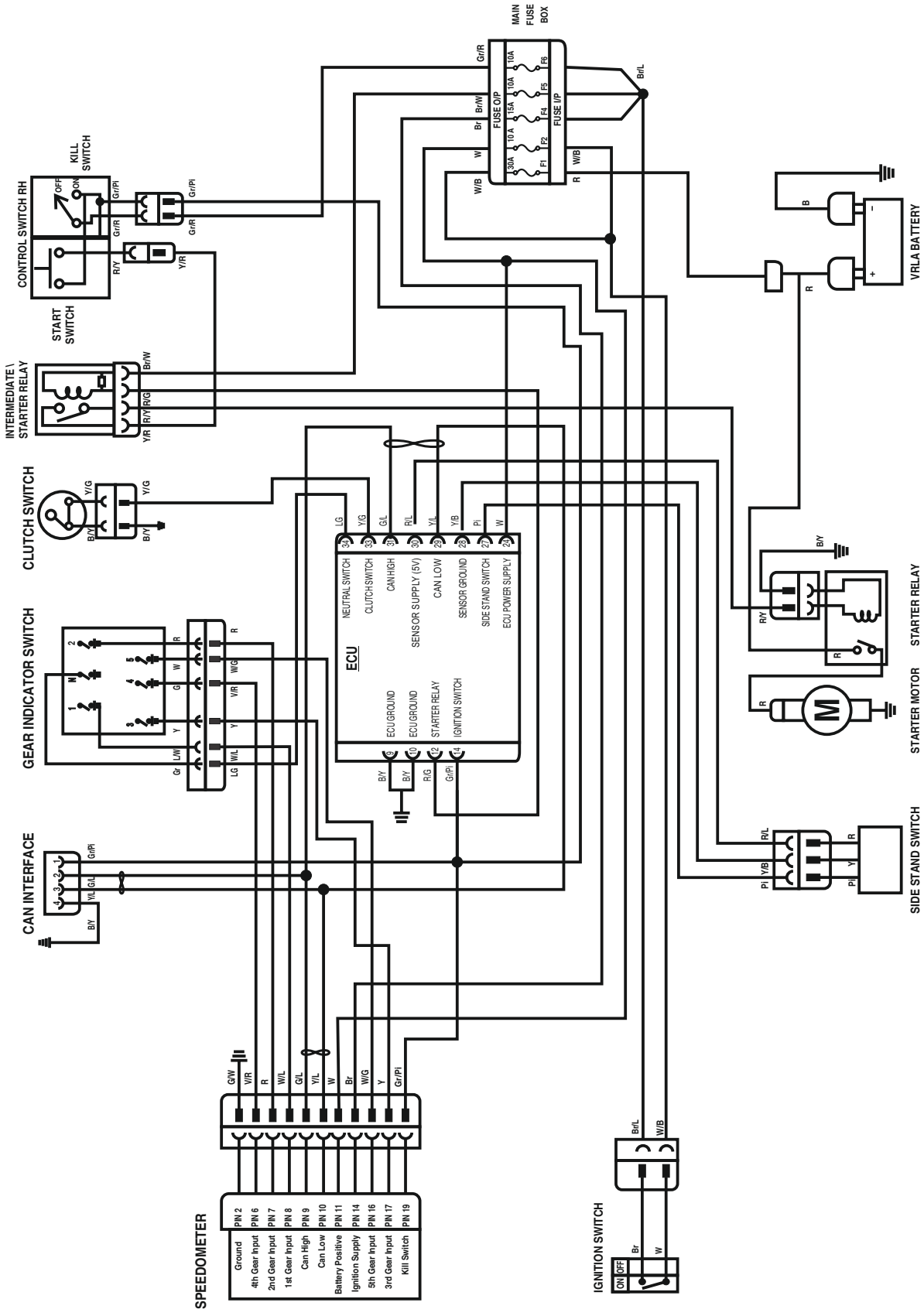
## ABS CIRCUIT



## Pulsar 150 Single Channel Disc Brake with Mikuni make ECU

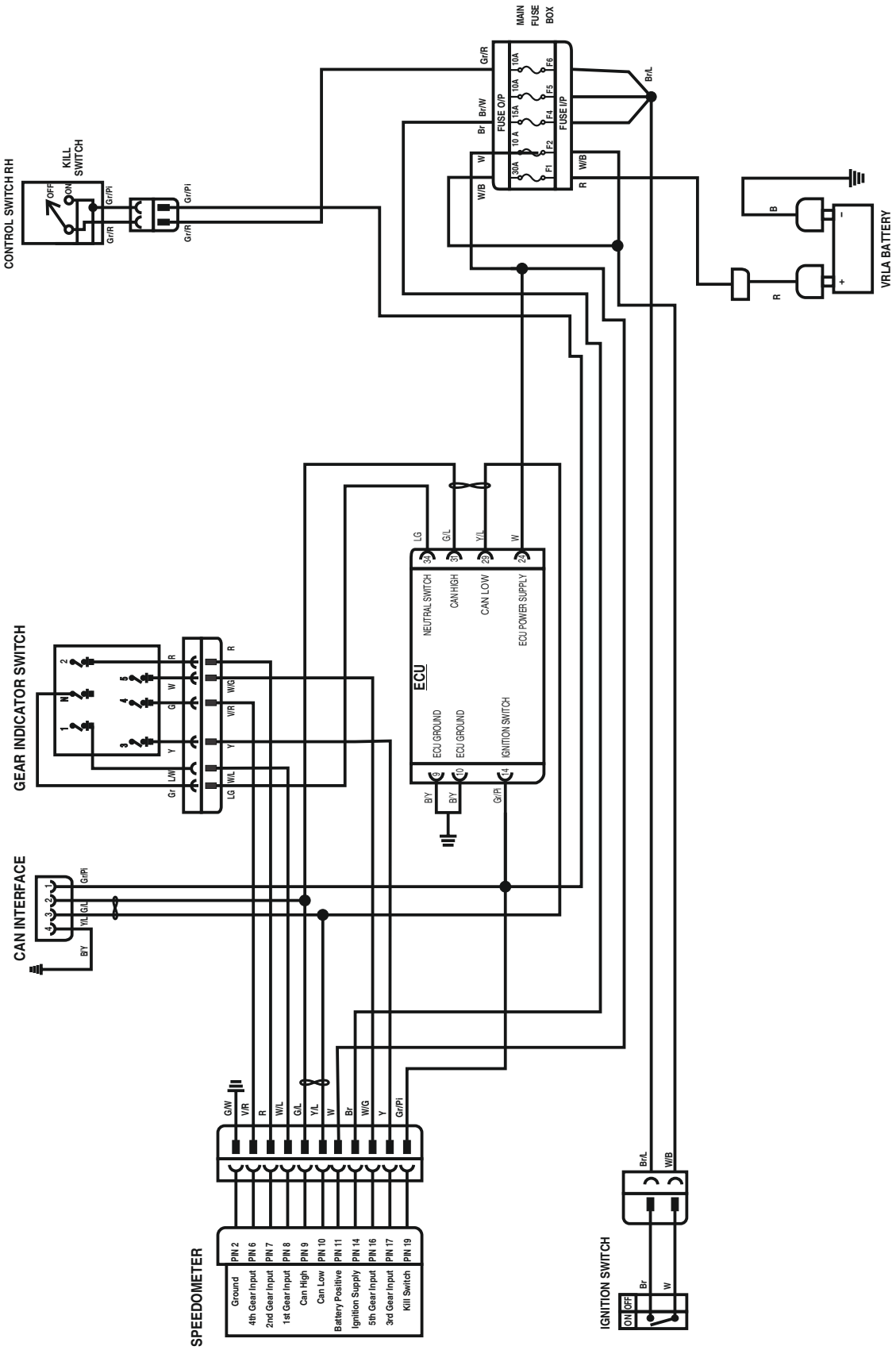
# Circuit Diagrams

### STARTER MOTOR CUM SIDE STAND INDICATOR



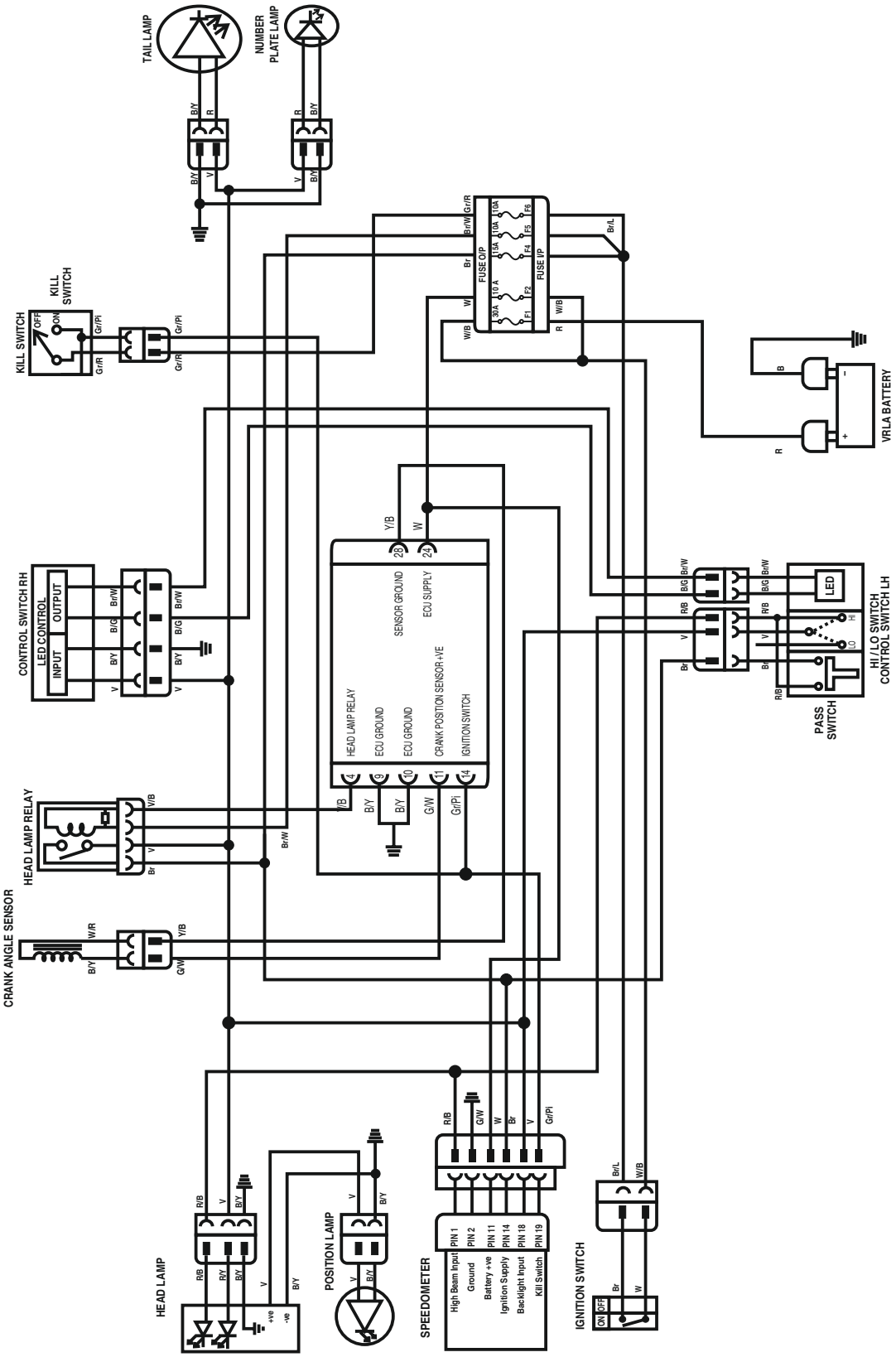
# Circuit Diagrams

## NEITRAL AND GEAR INDICATION CIRCUIT



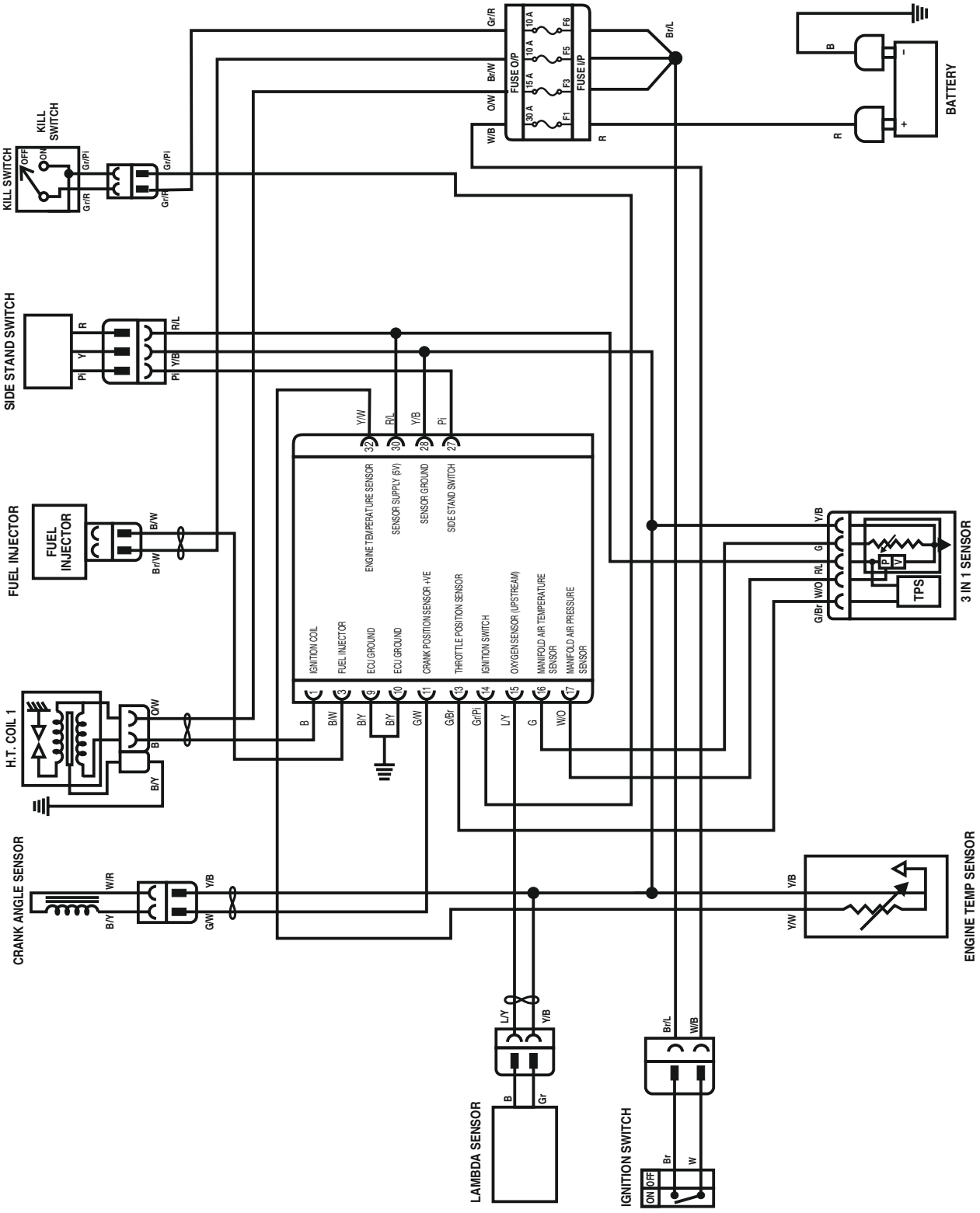
# Circuit Diagrams

## LIGHTING CIRCUIT



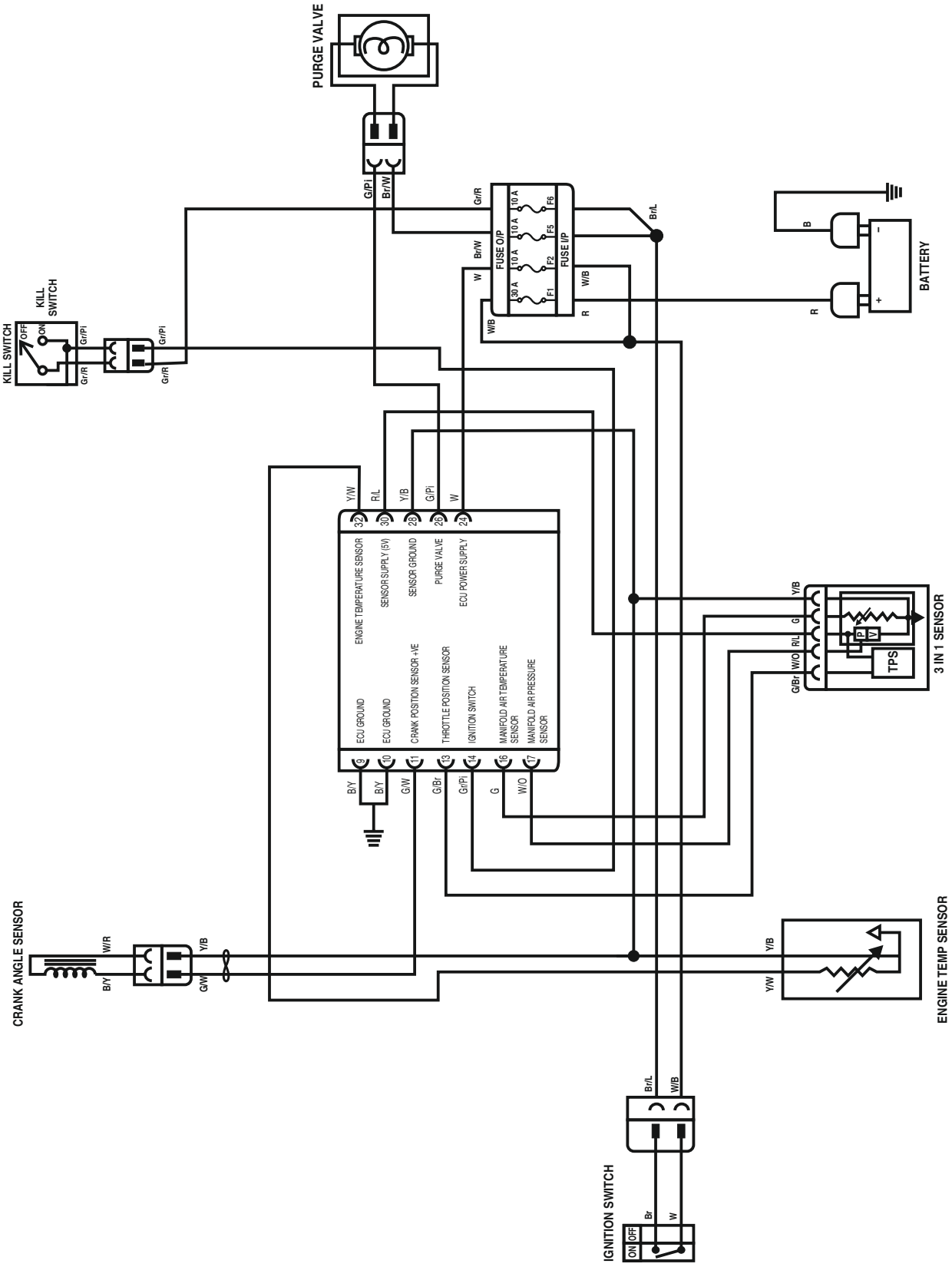
# Circuit Diagrams

## IGNITION CIRCUIT



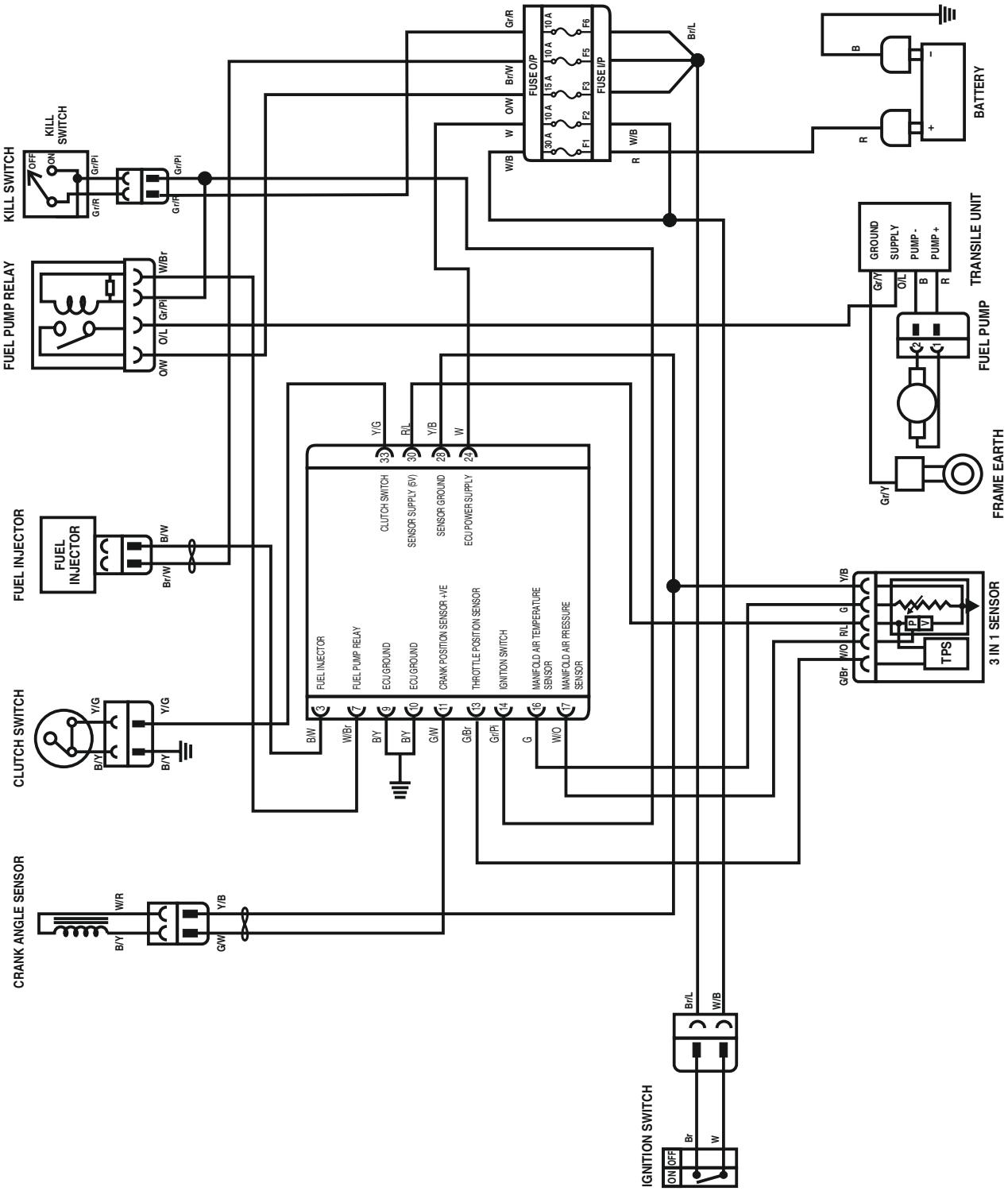
# Circuit Diagrams

## EVAP PURGE VALVE CIRCUIT



# Circuit Diagrams

## FUEL PUMP & INJECTOR CIRCUIT



## Key Learning Points

- Understanding of VARROC Make System

CHAPTER 2

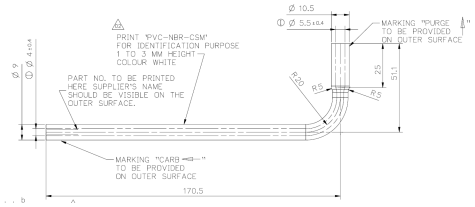
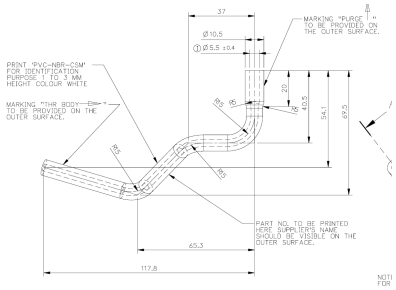
# Pulsar 150 Single Channel Disc with VARROC Make ECU

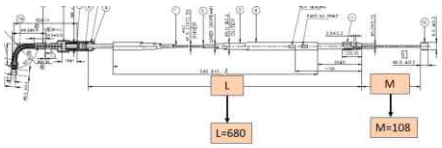
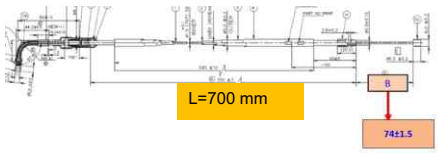
Part Identification

Wiring Harness Routing - VARROC make ECU

Circuit Diagrams

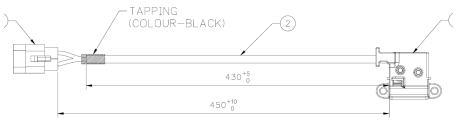
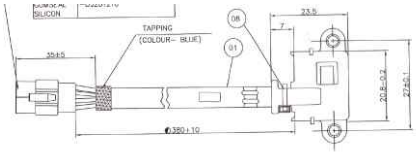
# Part Identification

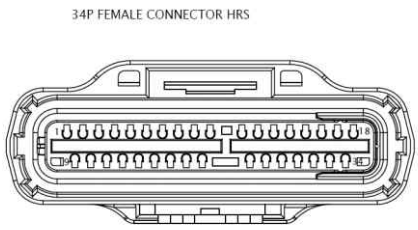
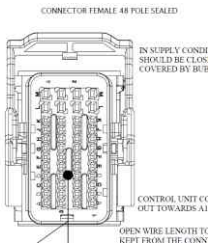
| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Pipe –Purge valve to throttle body | |
| Photograph |  |  |
| Part Number | DU141271 | JR171805 (Same as Pulsar N160 with Varroc ECU) |
| Description | NA | Design is different than Pulsar P150 with Mikuni ECU |

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Throttle Cable | |
| Photograph |  |  |
| Part Number | JR161228 | JR161210 (Same as Pulsar N160 with Varroc ECU) |
| Description | Length : 680 mm | Length : 700 mm |

## Pulsar 150 Single Channel Disc Brake with VARROC make ECU

# Part Identification

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Clutch Switch | |
| Photograph |  |  |
| Part Number | JG401426 | JY401404 (Same as Pulsar N160 with Varroc ECU) |
| Description | • Harness Length : 450 mm<br>• Identification : Black Tapping near coupler | • Harness Length : 380 mm<br>• Blue Tapping near coupler |

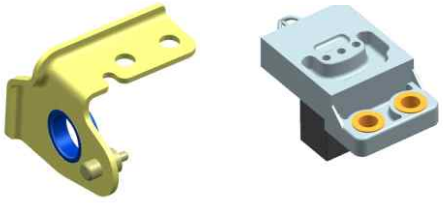
| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Wiring Harness | |
| Photograph |  |  |
| Part Number | JR402267 | JR402270 |
| Description | • 34 pin ECU coupler<br>• Without 3 pin roll over sensor coupler(roll over sensor is a integrated part of ECU) | • 48 pin ECU coupler<br>• With 3 pin roll over sensor coupler |

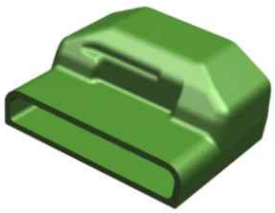
# Part Identification

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Termination unit | |
| Photograph | NA |   |
| Part Number | NA | JL403201 (Same as Pulsar N160 with Varroc ECU) |
| Description | NA | With termination unit |

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Starter Relay | |
| Photograph |  |  |
| Part Number | JN351604 | DH201124 |
| Description | • Main fuse in fuse box assembly<br>• 2 pin coupler | • Main fuse on starter relay<br>• 4 pin coupler |

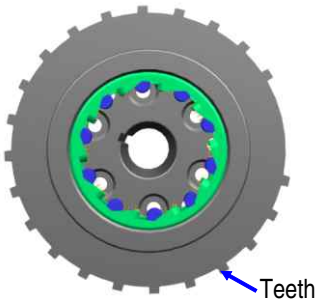
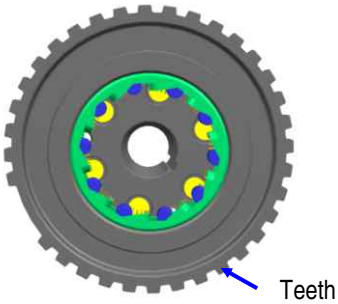
# Part Identification

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Bracket Roll Over Sensor & Roll Over Sensor | |
| Photograph | NA |  |
| Part Number | NA | Jr113858 – Bracket roll over sensor (Same as Pulsar N160 with Varroc ECU)<br>JY403604 – Roll over sensor (Same as Pulsar N160 with Varroc ECU) |
| Description | Roll over sensor is a integrated part of ECU | With separate roll over sensor & it's mounting bracket |

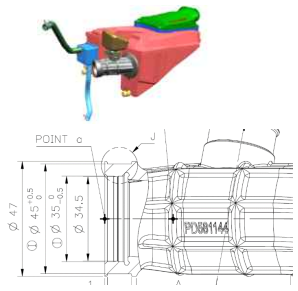
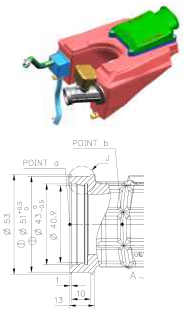
| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Holder ECU | |
| Photograph |  |  |
| Part Number | JR113900 | JR113907 (Same as Pulsar N160 with Varroc ECU) |
| Description | NA | Design is different than Pulsar P150 with Mikuni ECU |

# Part Identification

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | ECU EMS Assembly | |
| Photograph |  |  |
| Part Number | Refer SPC | Refer SPC |
| Description | 34 Pin | 48 Pin |

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Rotor Assembly | |
| Photograph |   |   |
| Part Number | PD351057 | PD351007 |
| Description | Number of teeth on bush : 22 | Number of teeth on bush : 34 |

# Part Identification

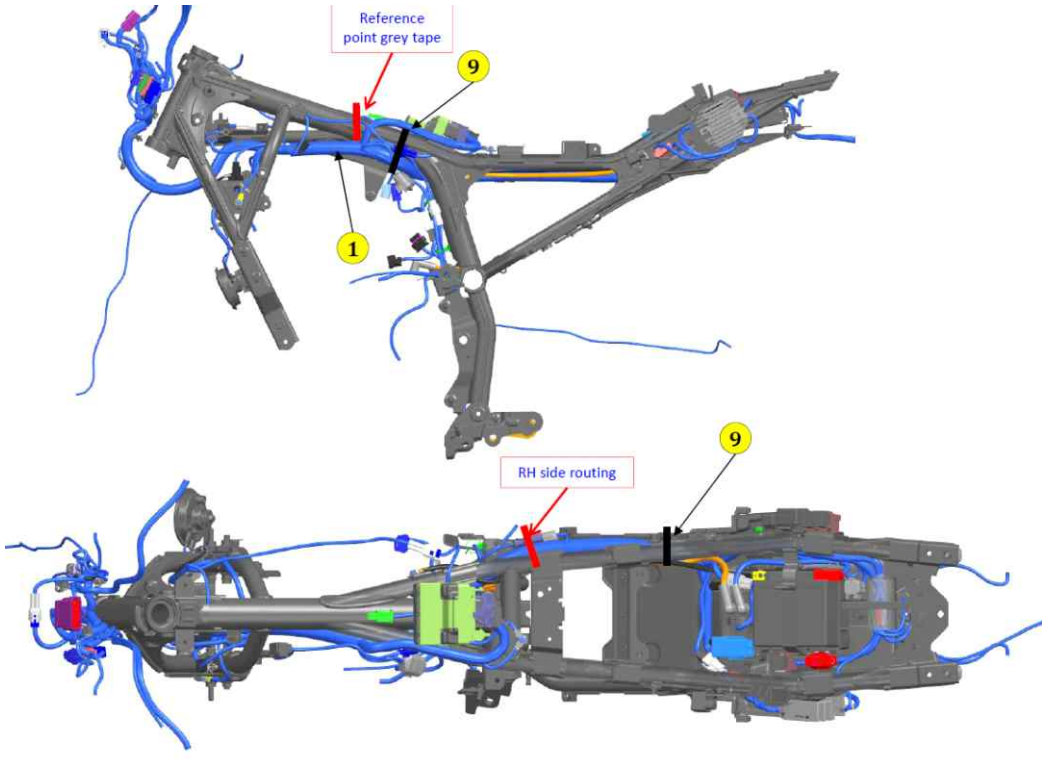
| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Air Filter Assembly | |
| Photograph |  |  |
| Part Number | PD581143 | PD581137 |
| Description | NA | Connecting tube design is different than Pulsar P150 with Mikuni ECU |

| Model | Mikuni Make ECU | Varroc Make ECU |
|---|---|---|
| Part Name | Throttle body assembly | |
| Photograph |  |  |
| Part Number | DH121327 | PD611224 |
| Description | Injector mounting on intake manifold, not on throttle body. | Injector mounting on throttle body intake side |

# Wiring Harness Routing - VARROC Make ECU

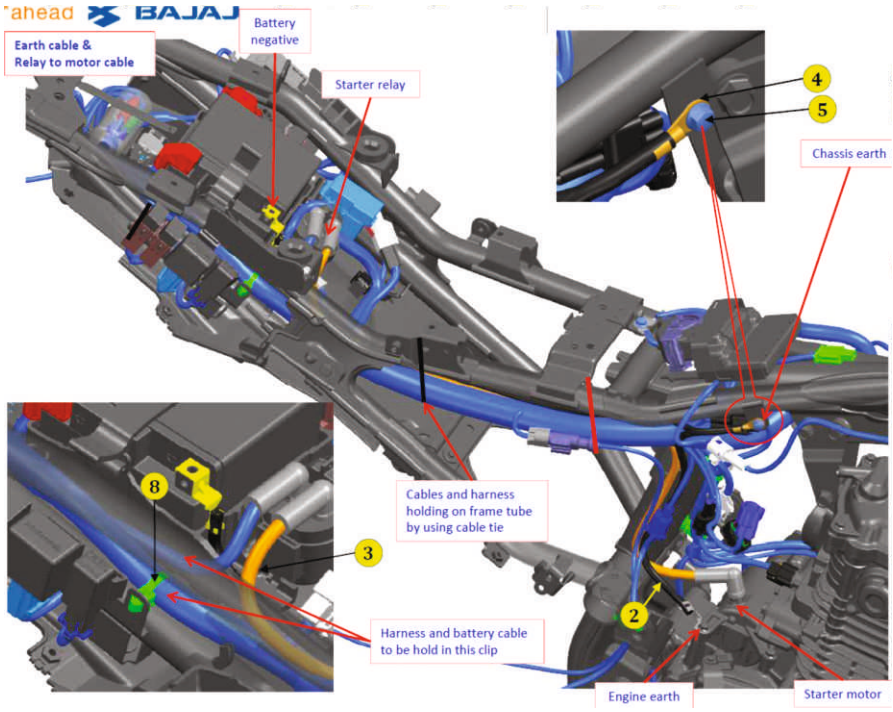
| SR. NO. | PART NO. | PART DESCRIPTION | QTY. | TORQUE (kg.m) |
|---|---|---|---|---|
| 1 | JR402270 | HARNESS WIRING | 1 | |
| 2 | JR402220 | CABLE EARTH | 1 | |
| 3 | JR402219 | CABLE RELAY-MOTOR STARTER | 1 | |
| 4 | LDF00001 | WASHER TOOTHED-ID 6.4XOD11XT 0.7 | 4 | |
| 5 | KAED0610 | BOLT FLANGED M6X1 | 4 | 0.8 - 1.0 |
| 6 | JP402221 | CABLE EARTH ABS | 1 | |
| 7 | JD402215 | BAND | 1 | |
| 8 | 60111420 | CABLE TIE LOCK 4.8 1.2 160 PA66 B | 7 | |
| 9 | JD402212 | BAND(LENGTH 200MM) | 5 | |
| 10 | JD402217 | STRAP CABLE | 3 | |
| 11 | PD402211 | CLAMP FOR HEAD LAMP HARNESS | 2 | |
| 12 | GL402239 | CLIP | 1 | |

• Route the wiring harness as shown in photograph.



# Wiring Harness Routing - VARROC Make ECU

• Route the wiring harness as shown in photograph.

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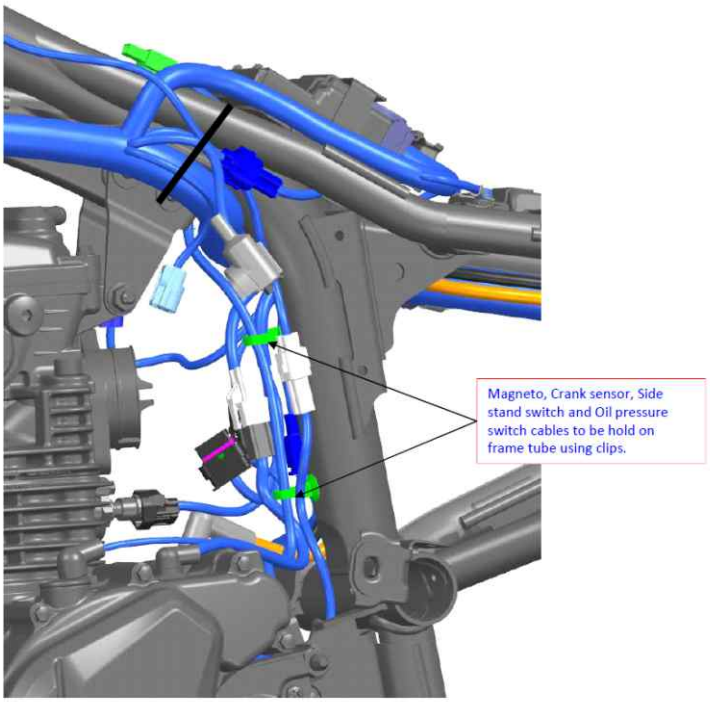

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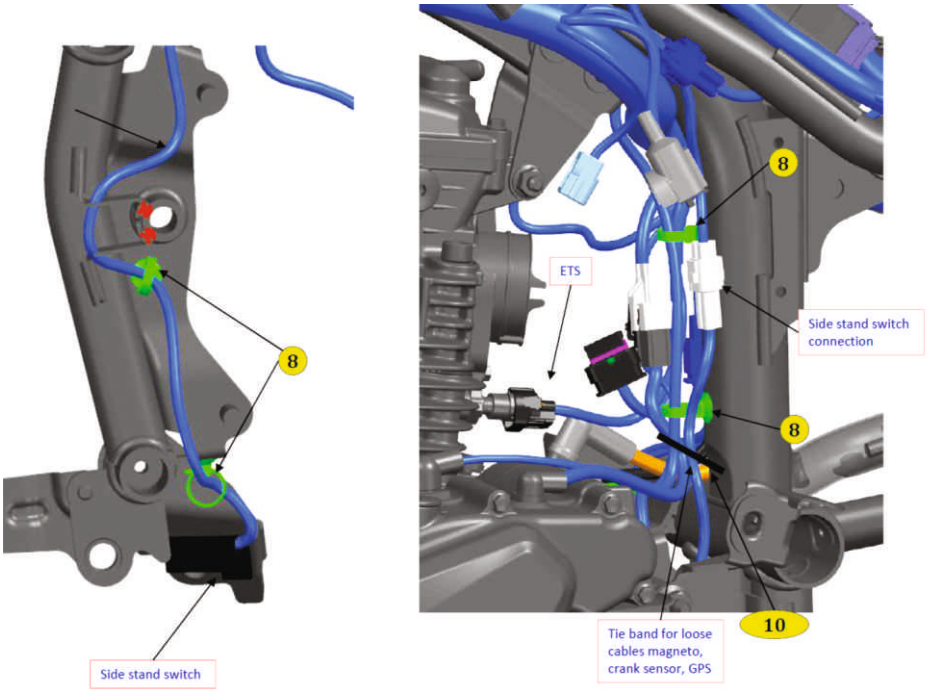


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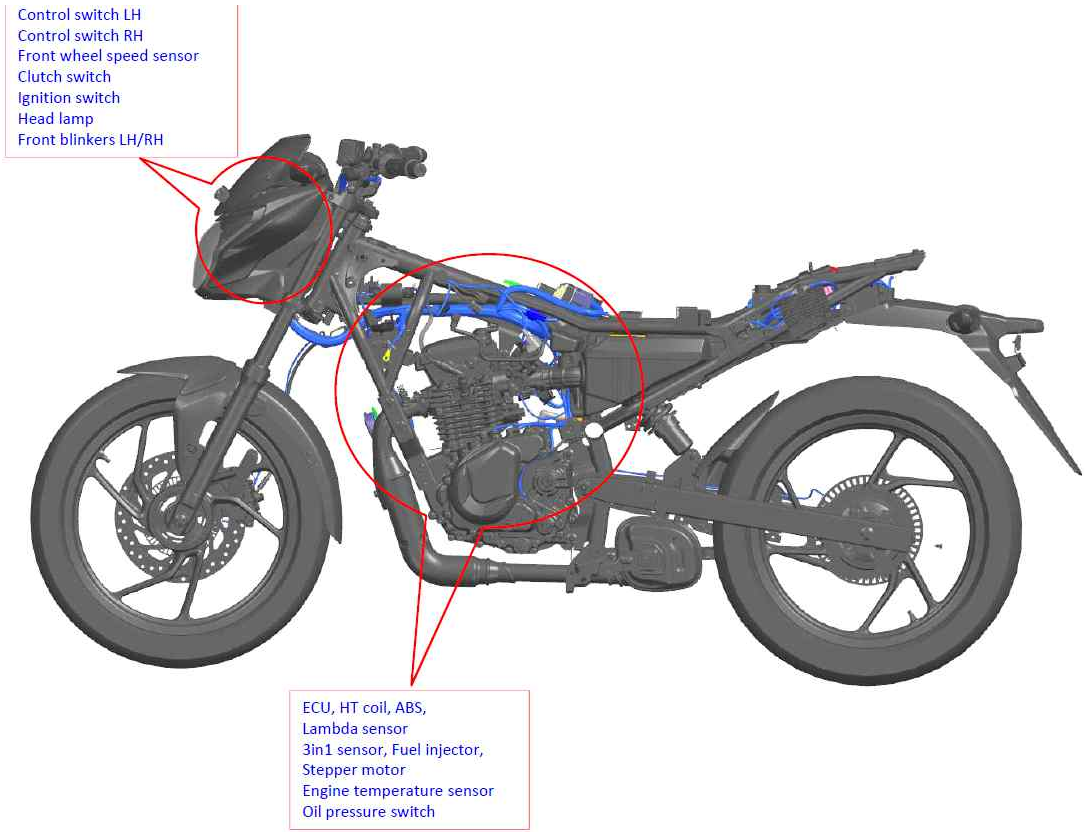

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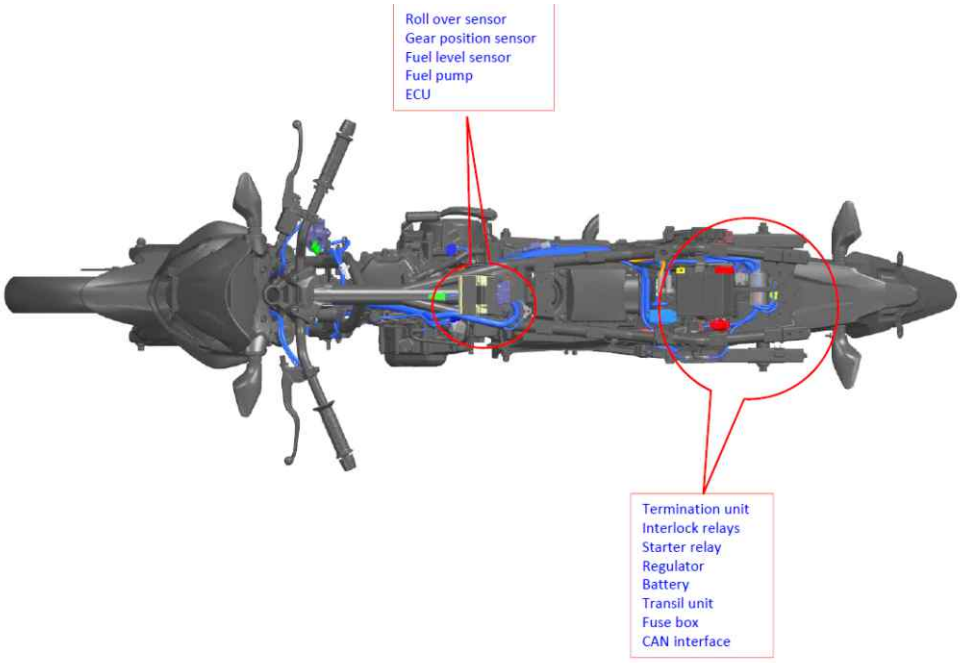


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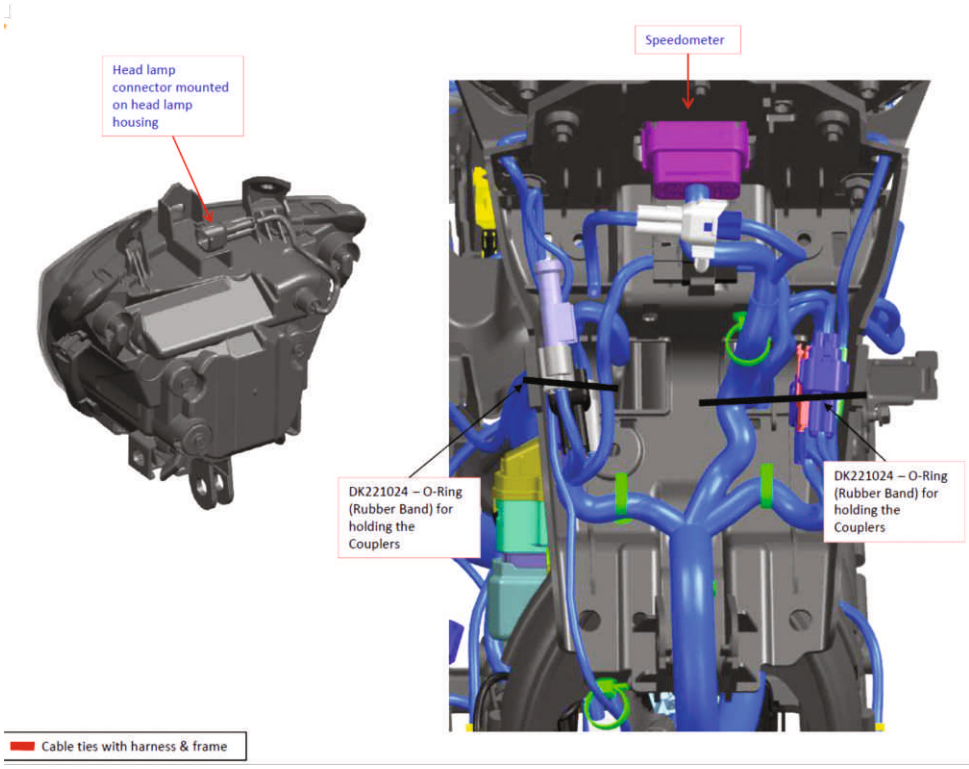

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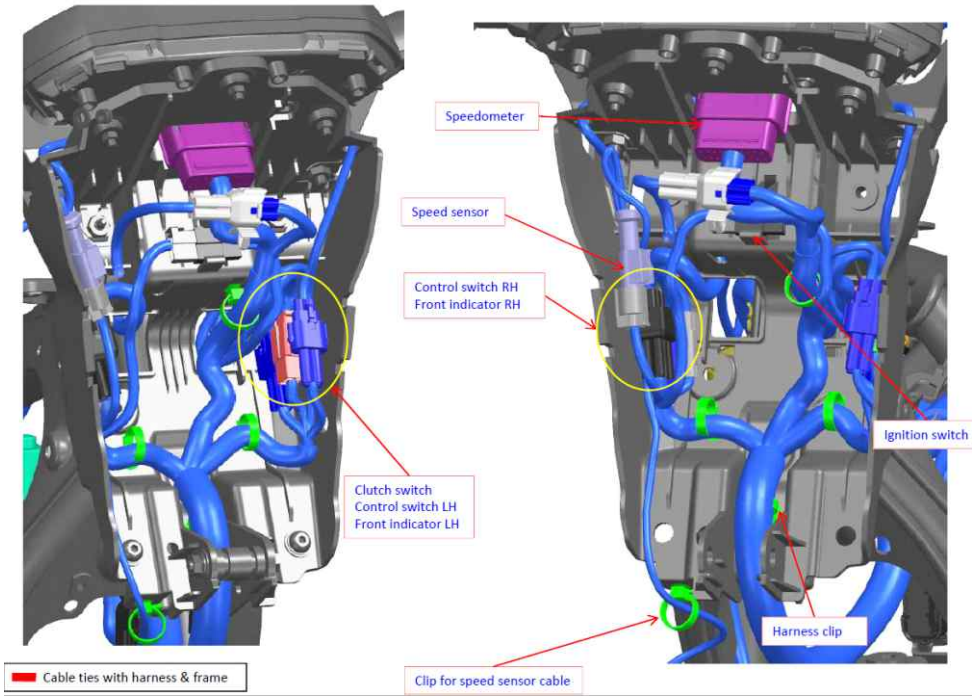


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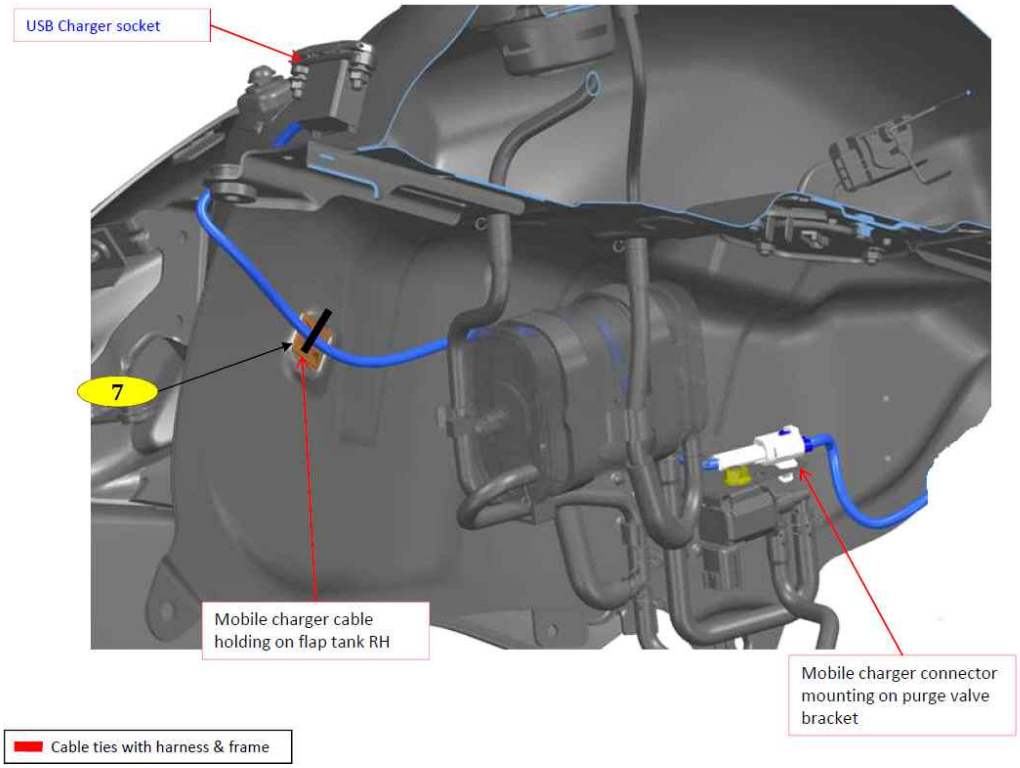

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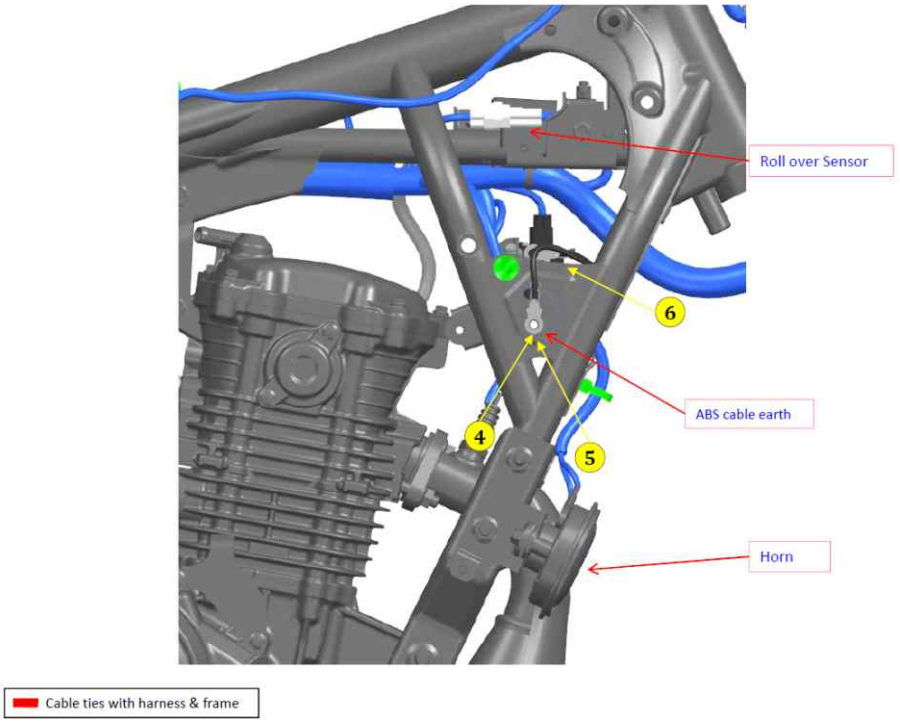
• Route the wiring harness as shown in photograph.

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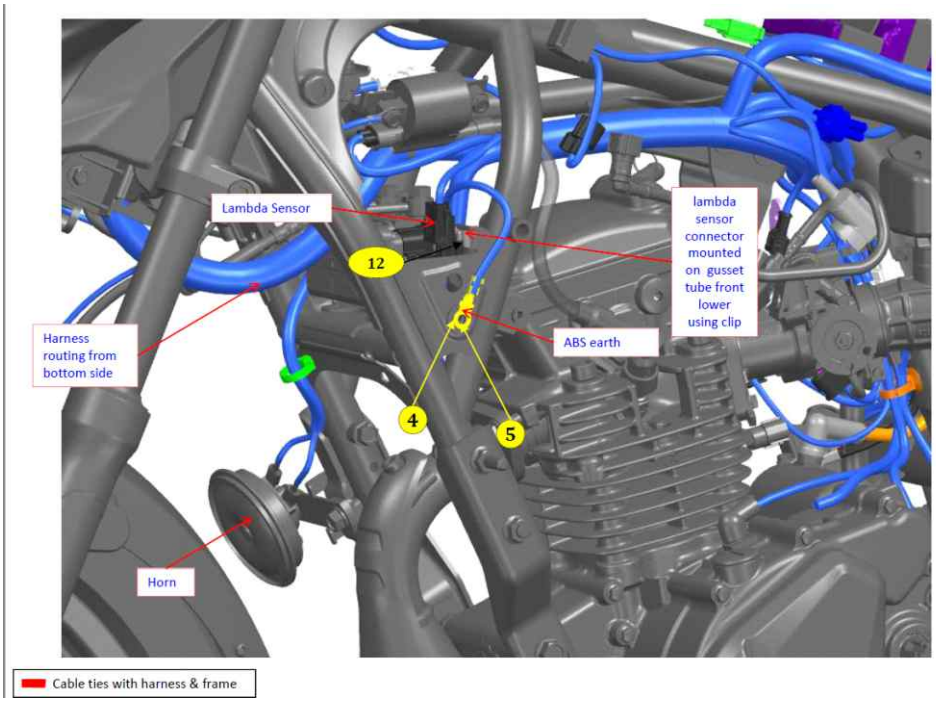

# Wiring Harness Routing - VARROC Make ECU

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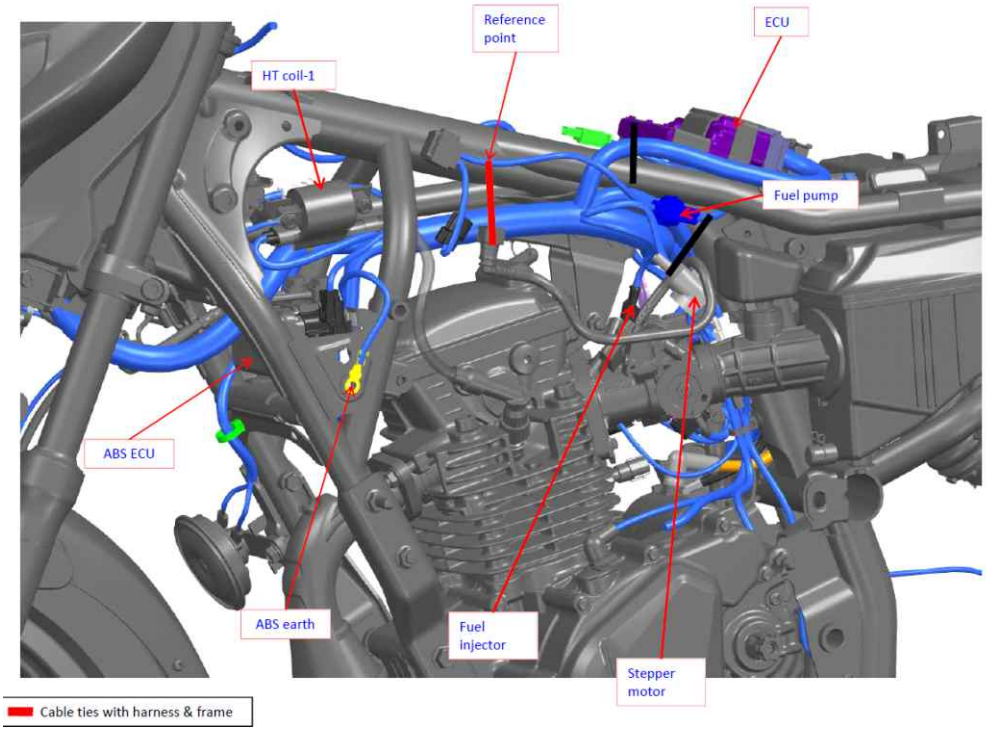


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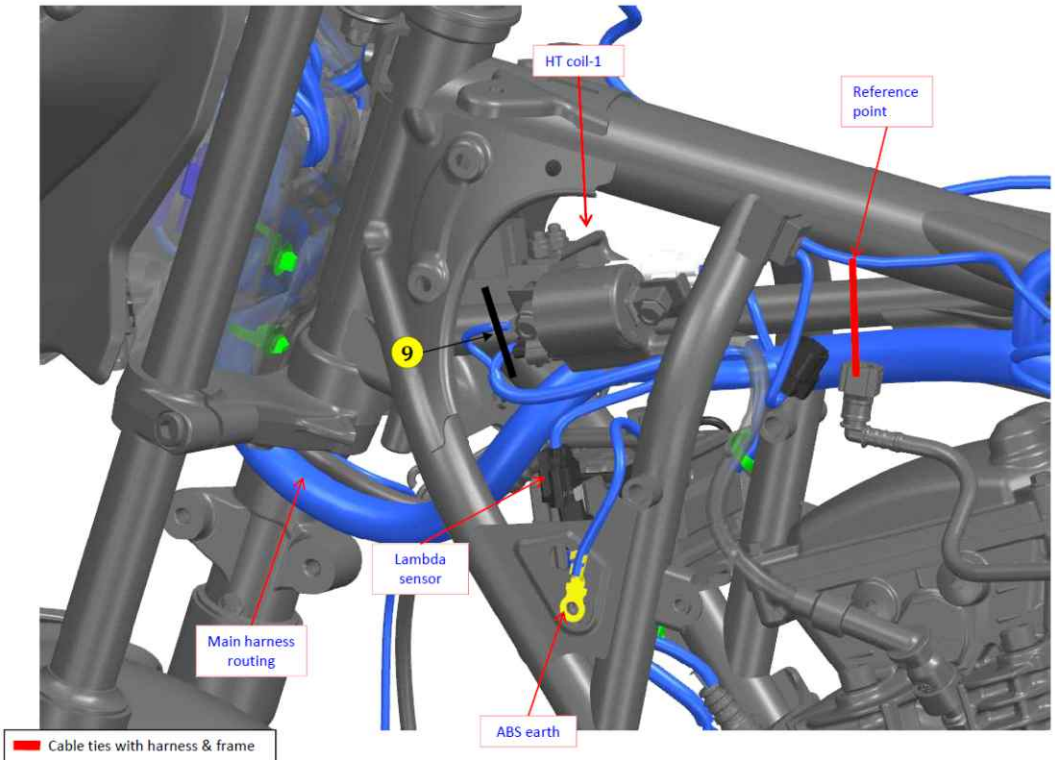

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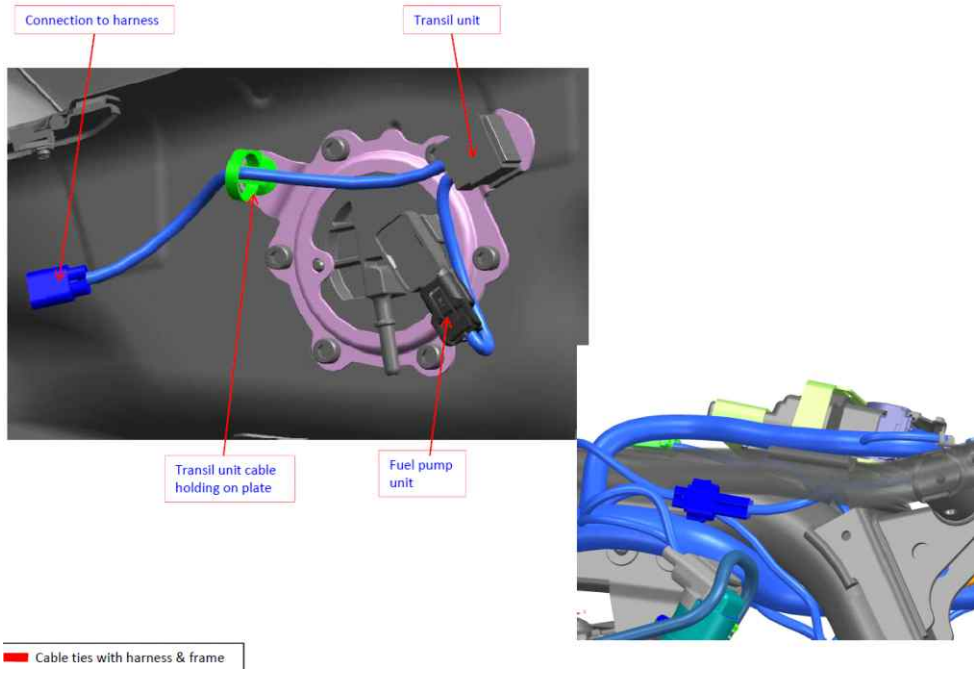
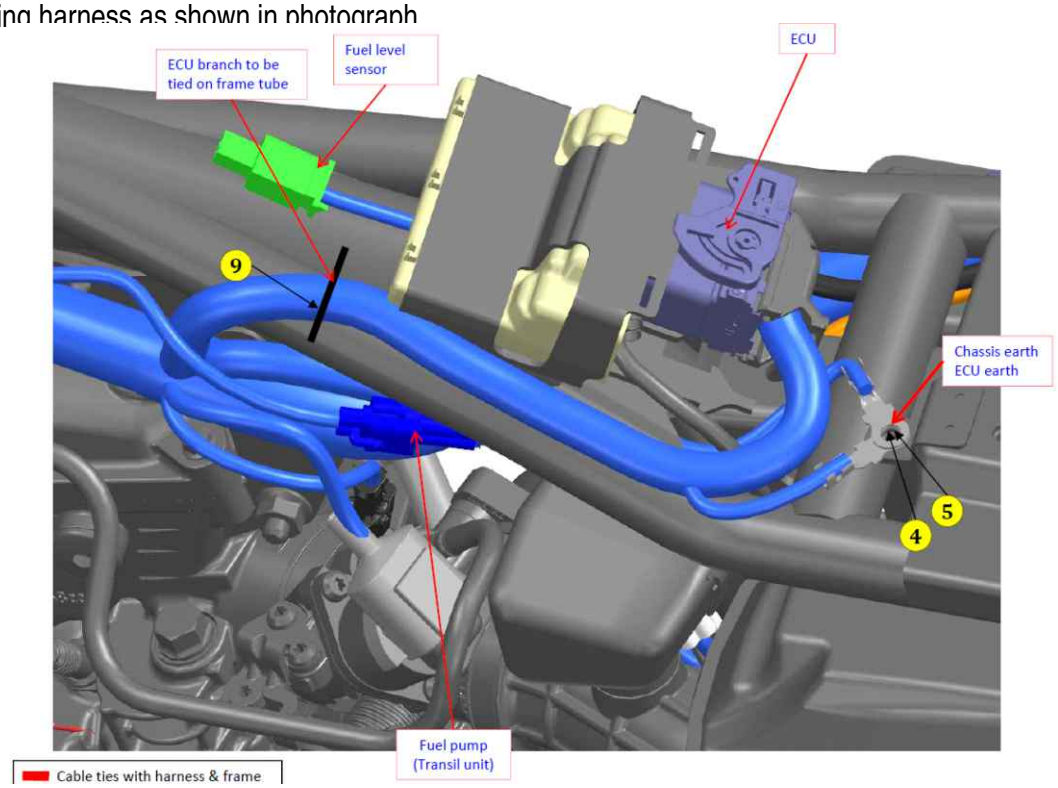
• Route the wiring harness as shown in photograph.

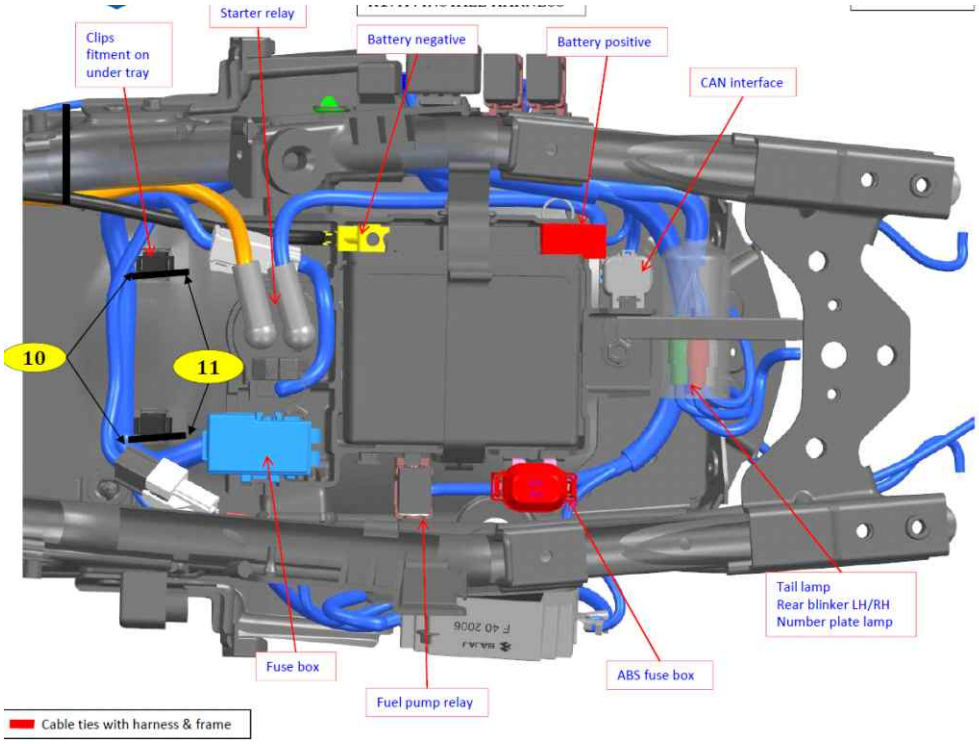



• Route the wiring harness as shown in photograph



# Wiring Harness Routing - VARROC Make ECU

• Route the wiring harness as shown in photograph.

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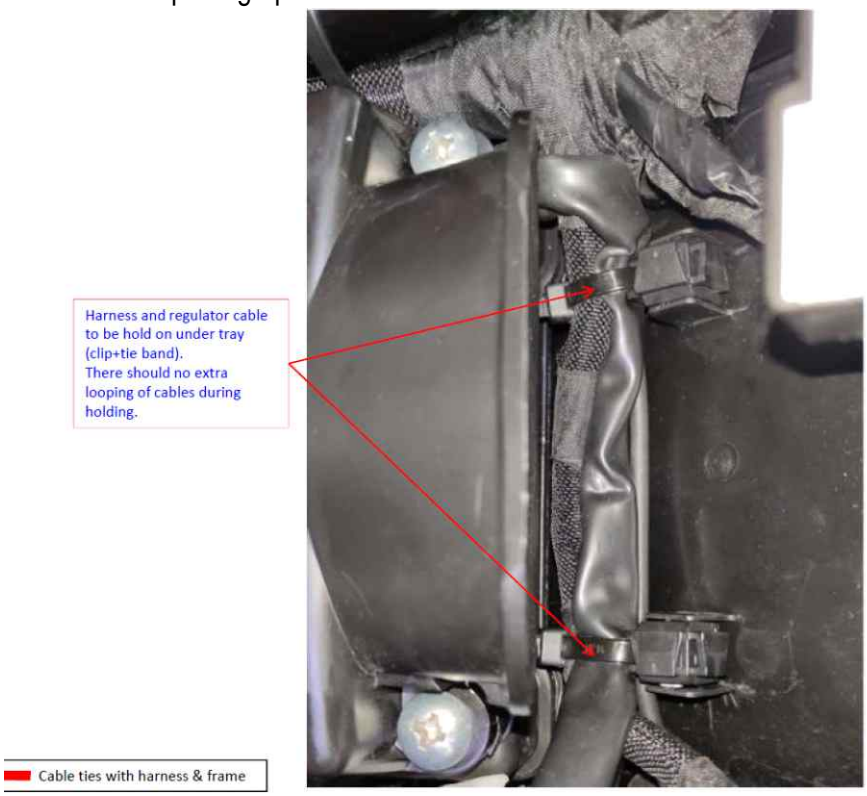
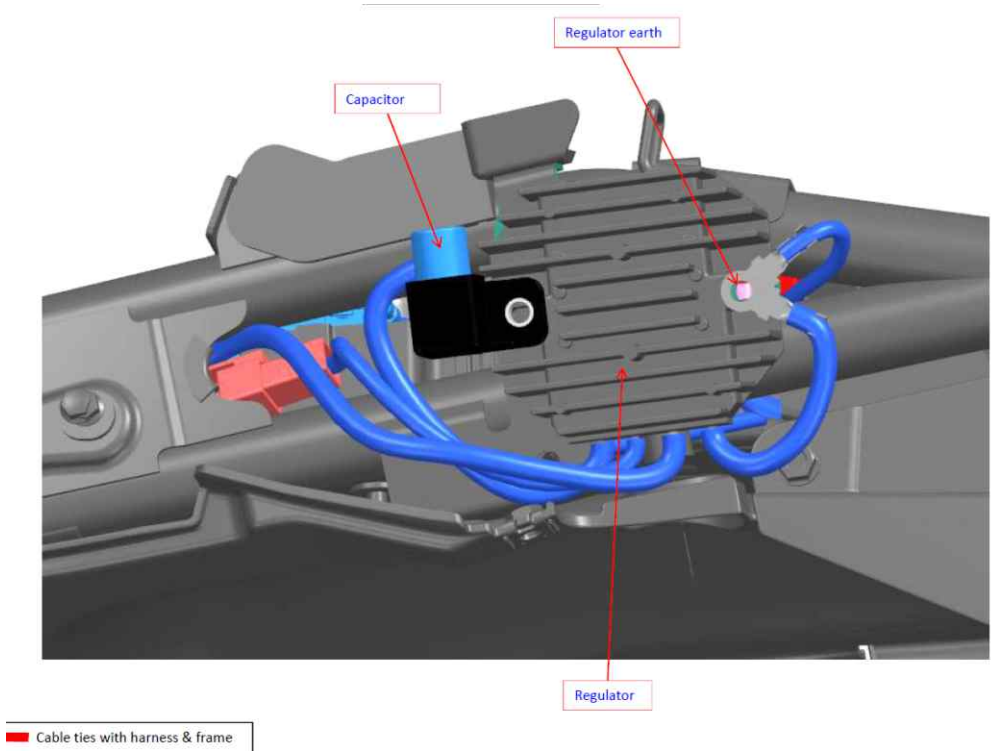
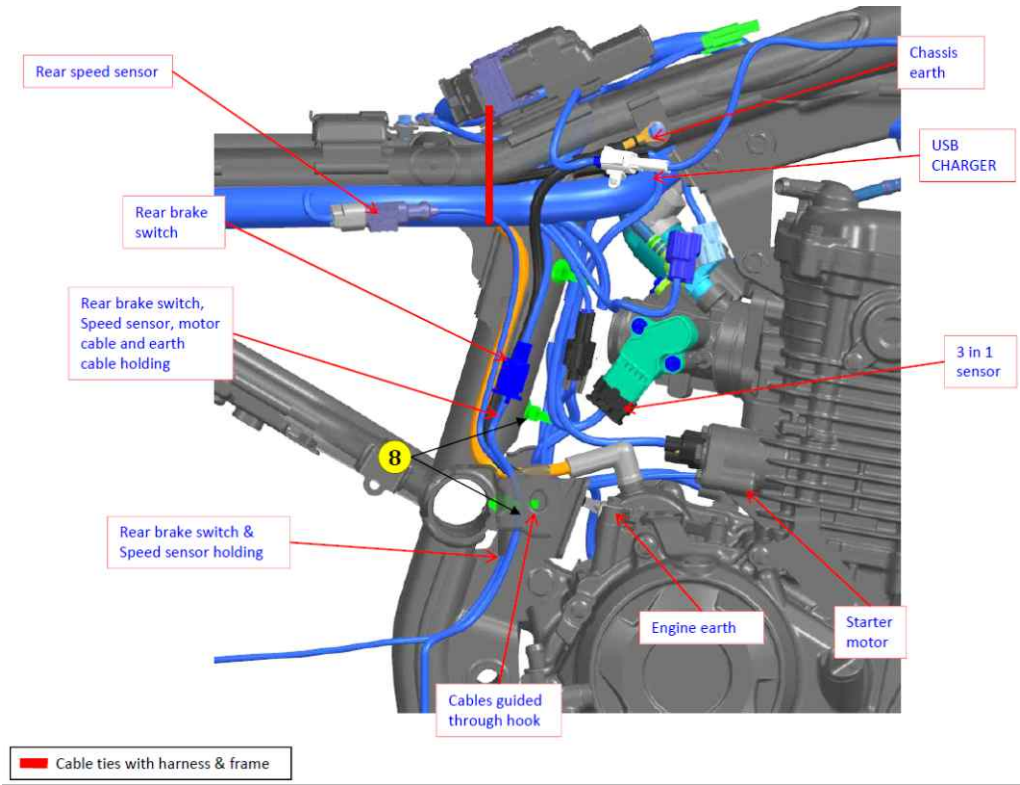


# Wiring Harness Routing - VARROC Make ECU

• Route the wiring harness as shown in photograph.

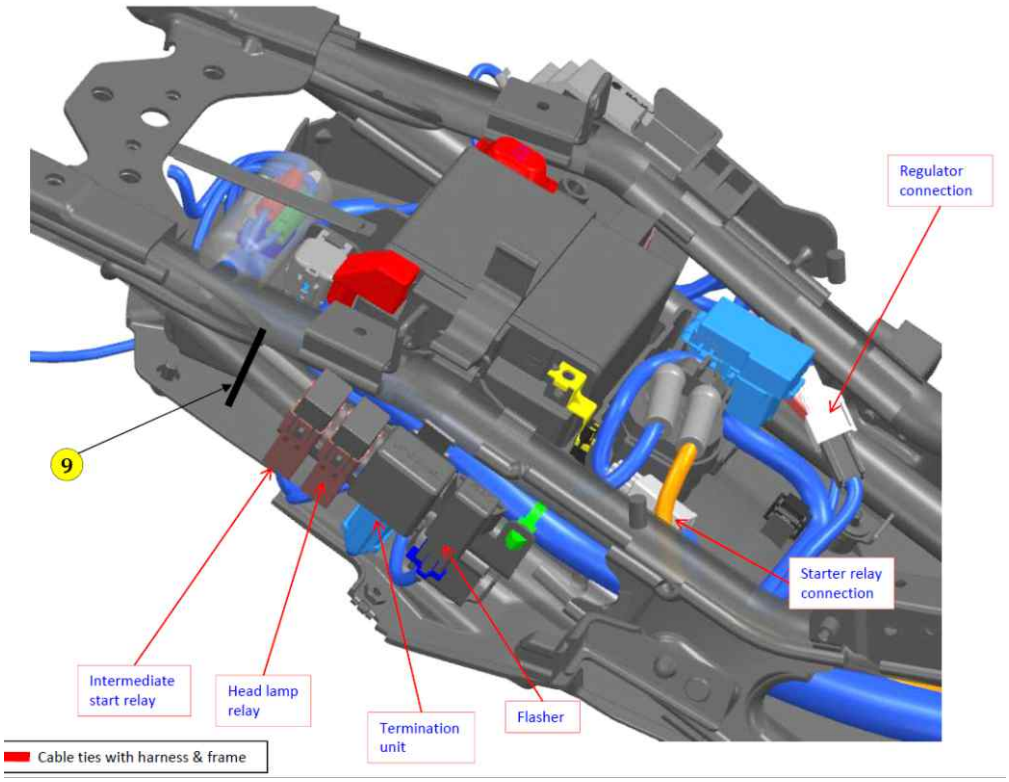



• Route the wiring harness as shown in photograph.



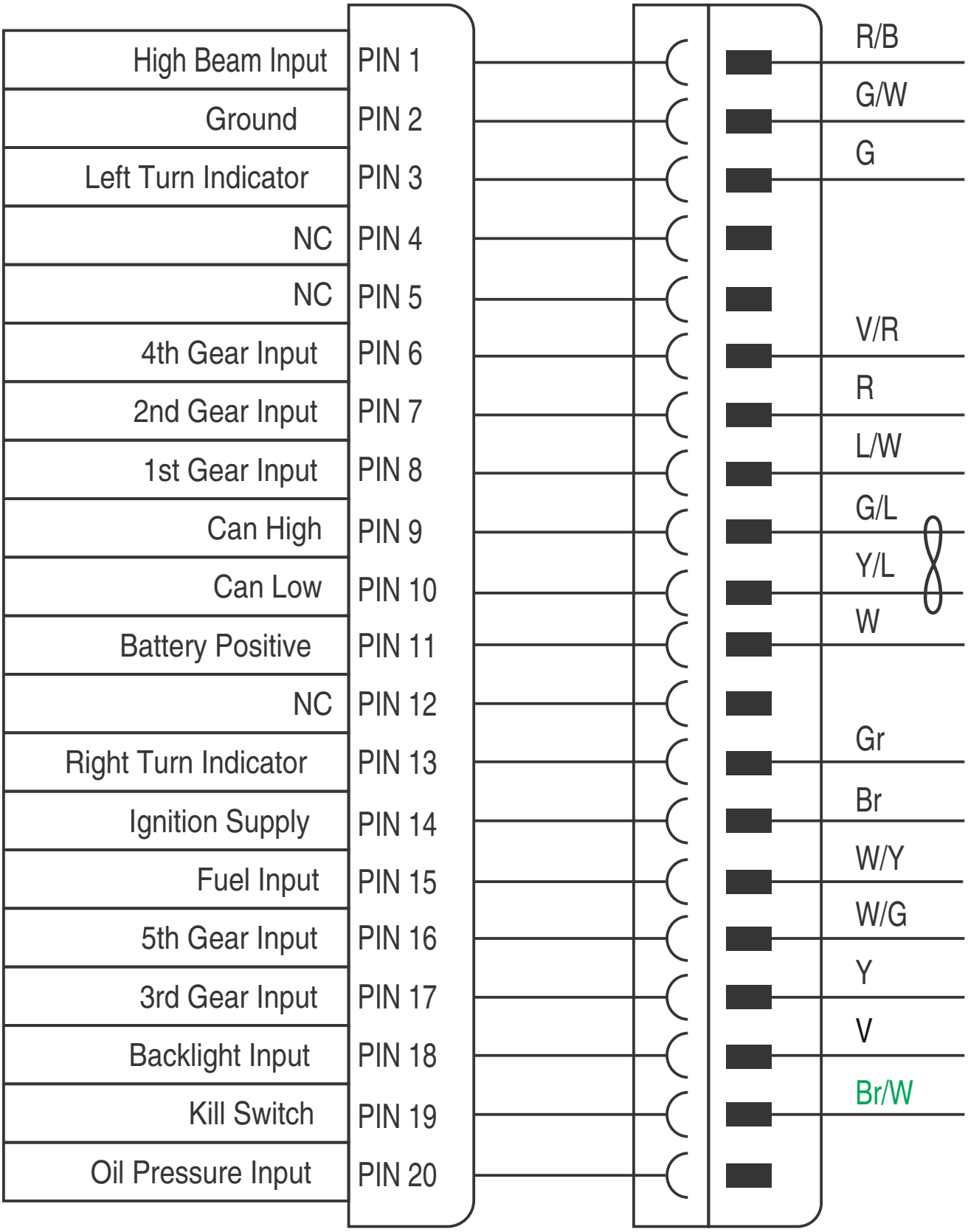
# Wiring Harness Routing - VARROC Make ECU

- Route the wiring harness as shown in photograph.



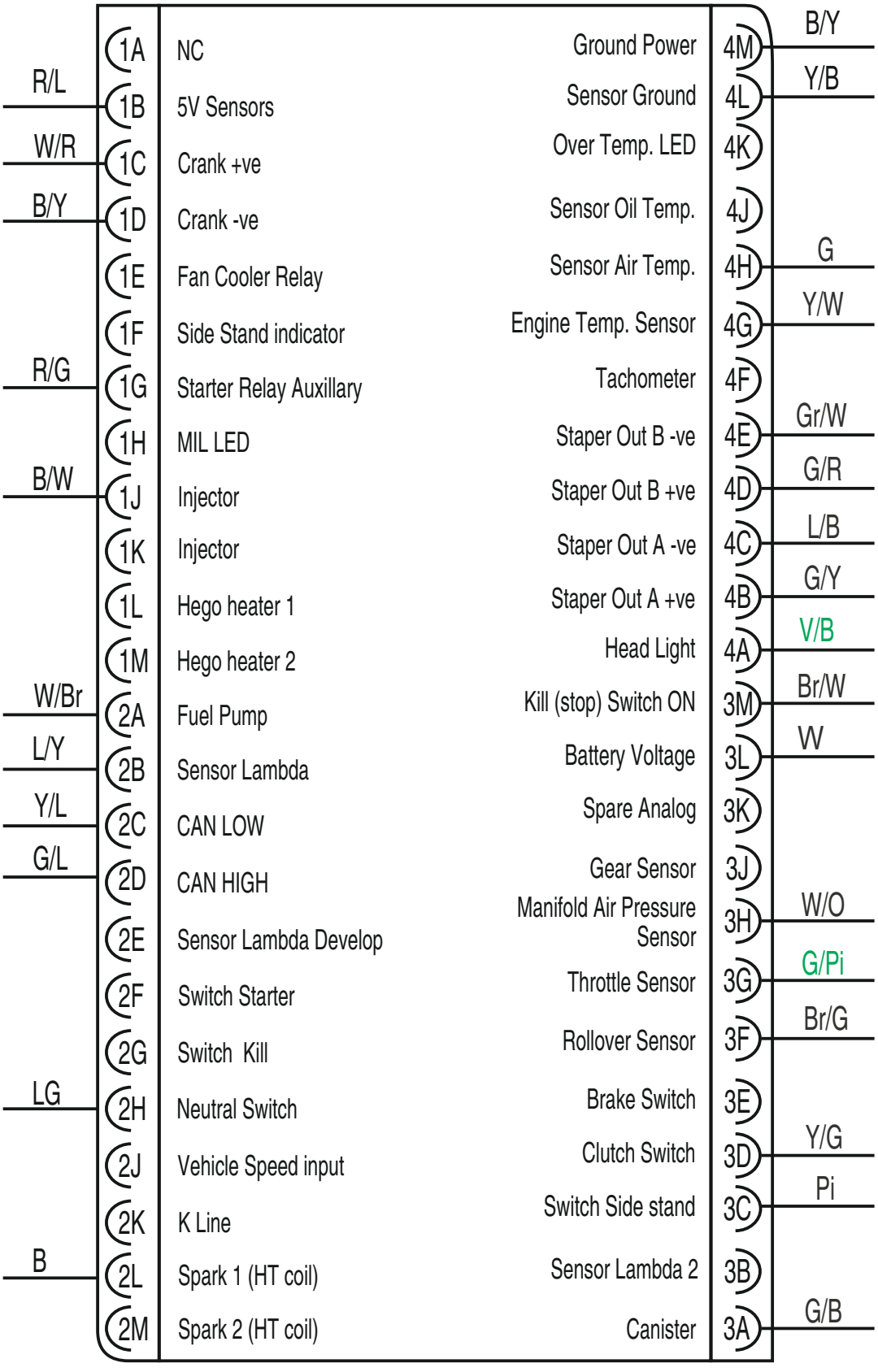
# Circuit Diagrams

## SPEEDOMETER



# Circuit Diagrams

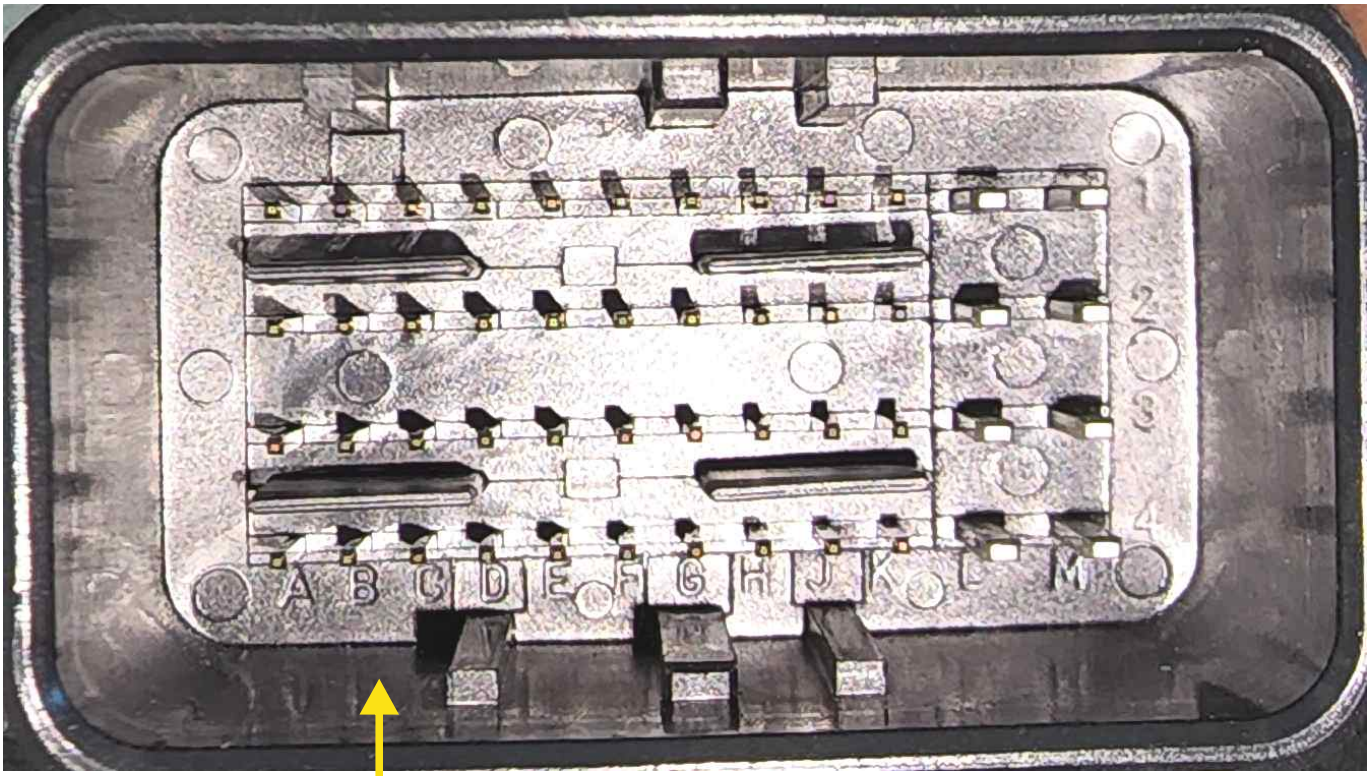
## ECU PIN DETAILS

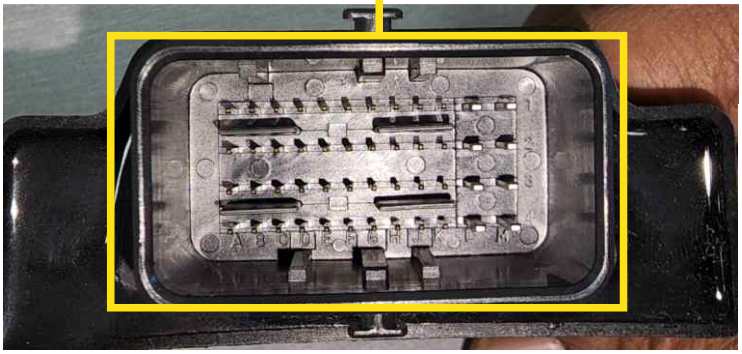


## Pulsar 150 Single Channel Disc Brake with VARROC make ECU

# Circuit Diagrams

### ECU PIN

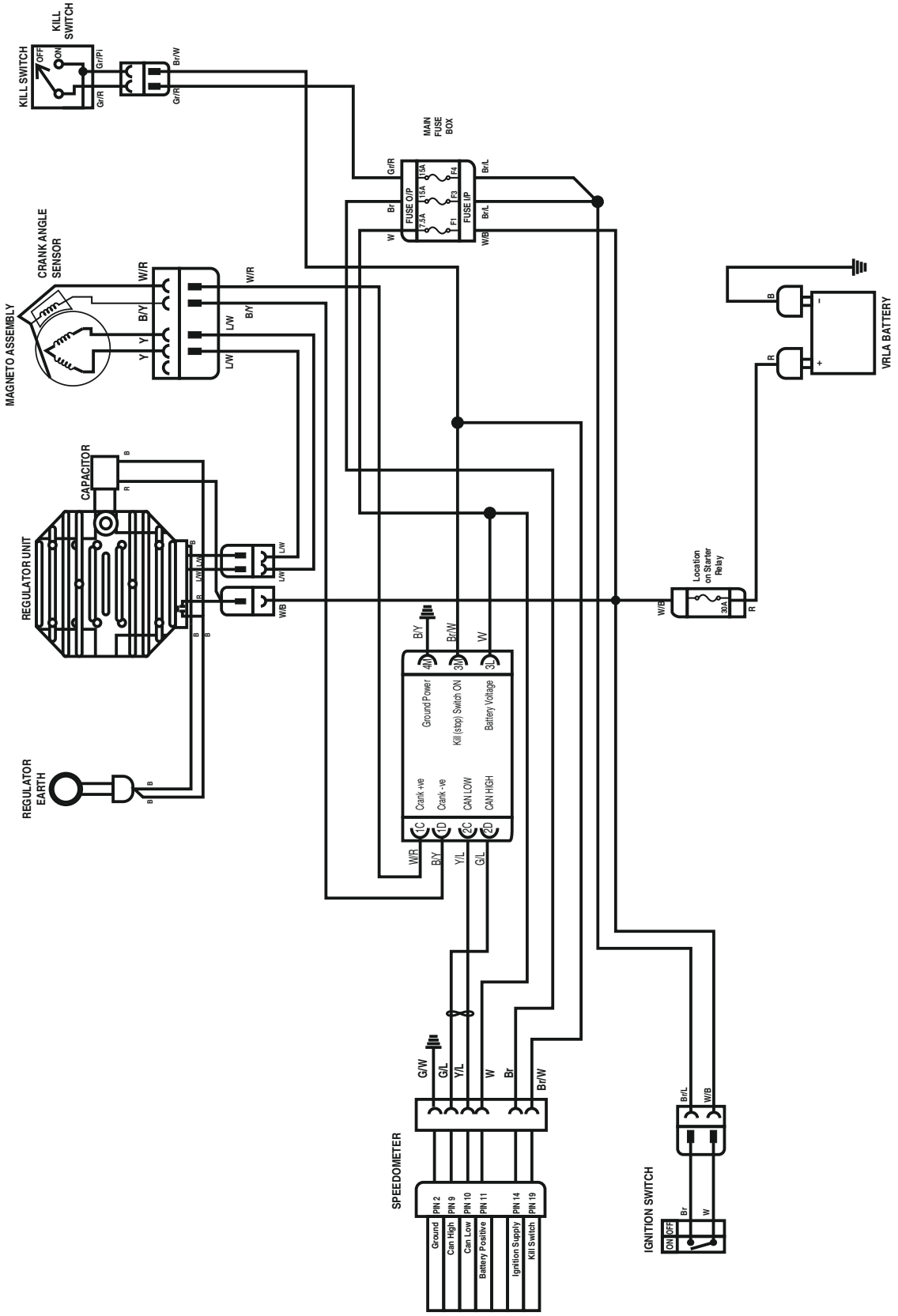


### Varroc ECU

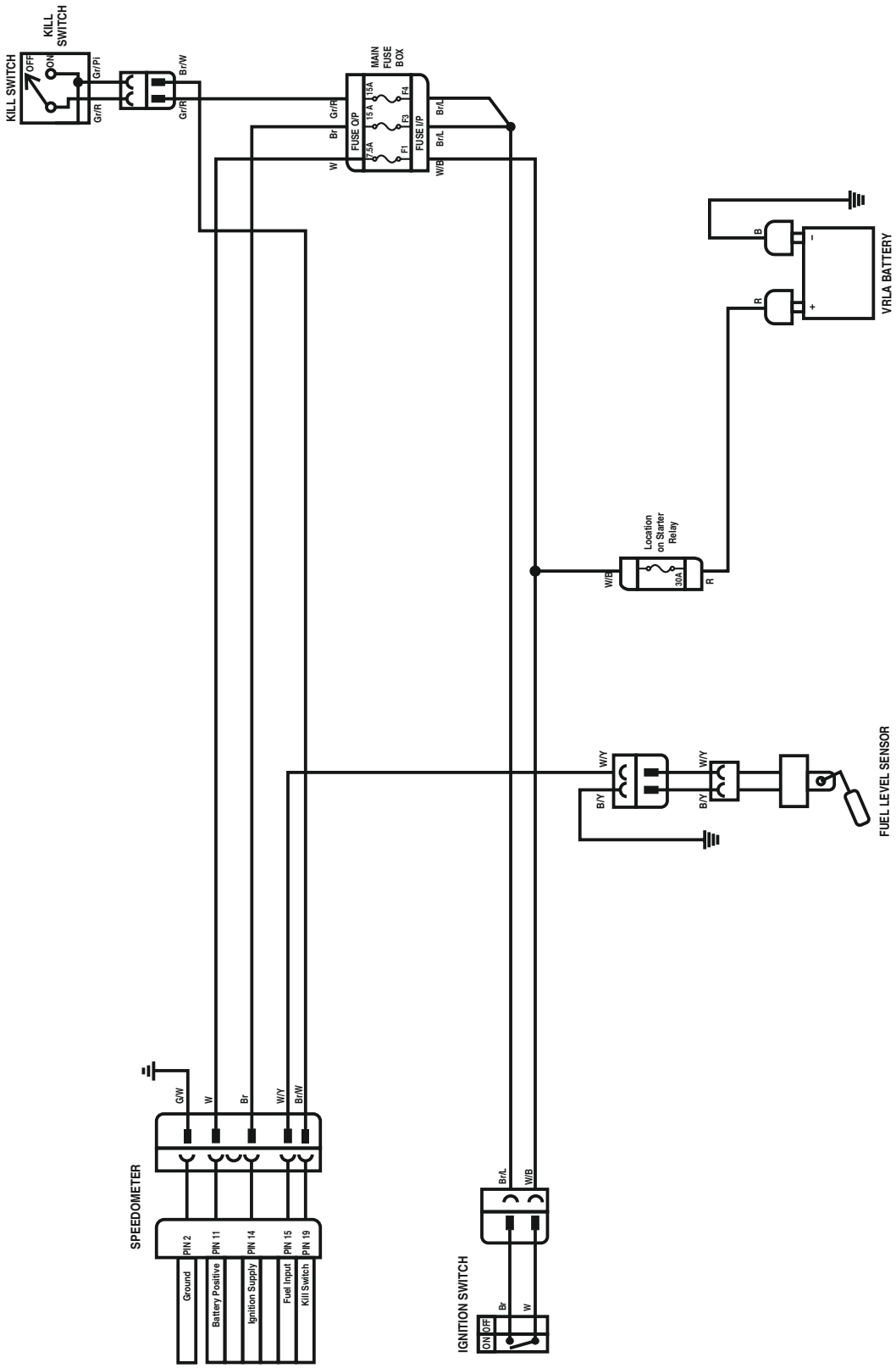
# Circuit Diagrams

## BATTERY CHARGING



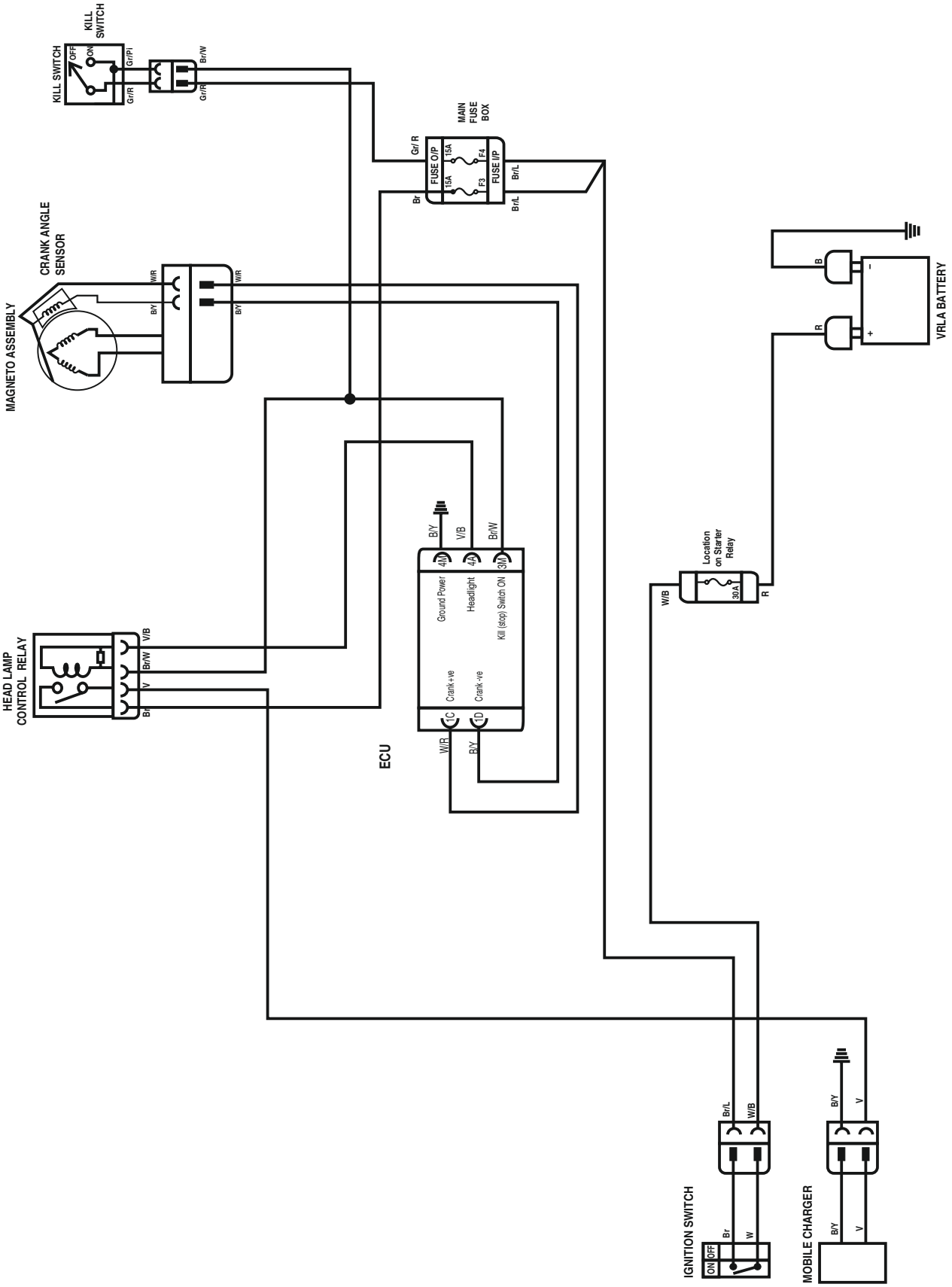
# Circuit Diagrams

## FUEL METER



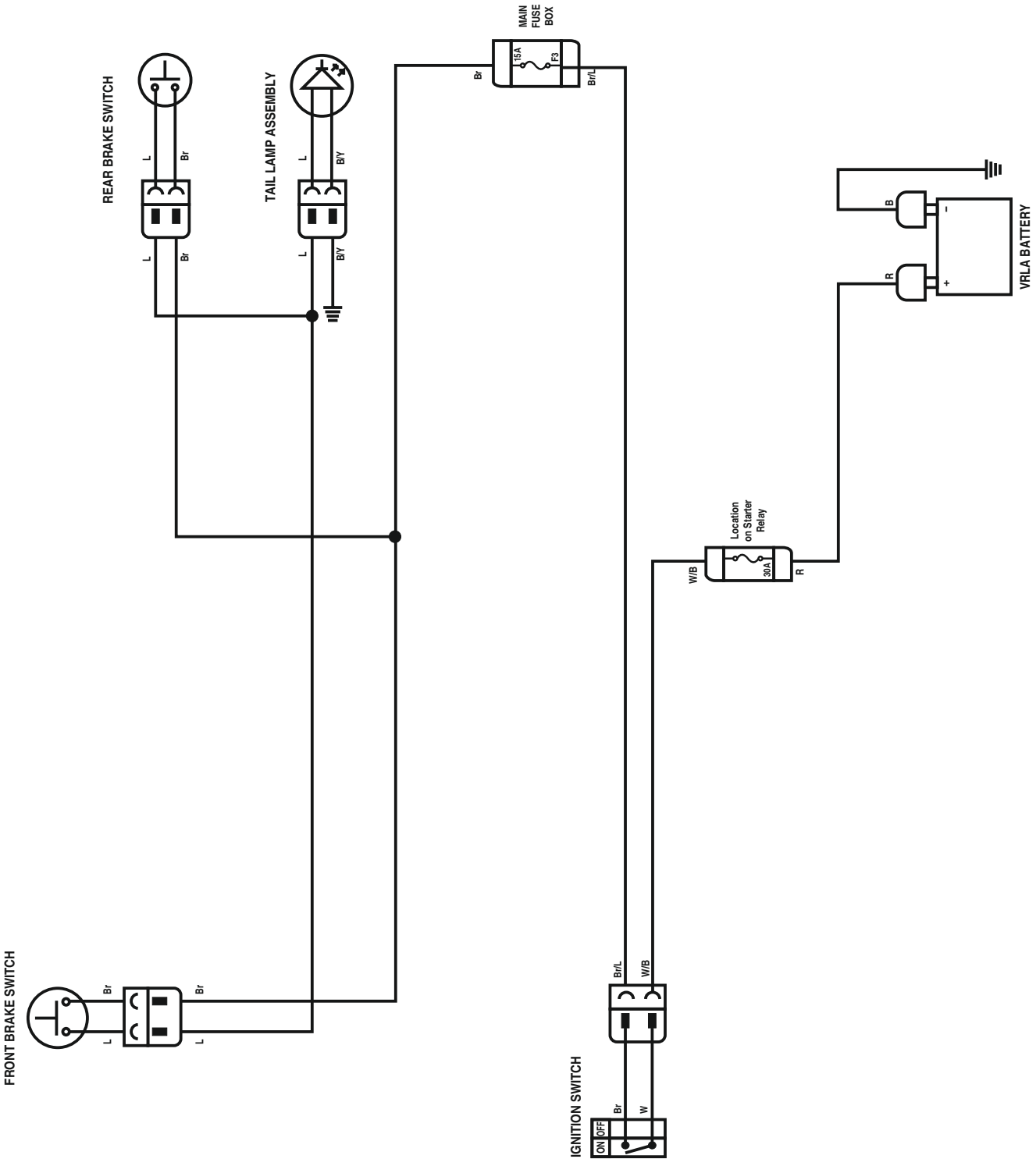
# Circuit Diagrams

## USB SOCKET CHARGER



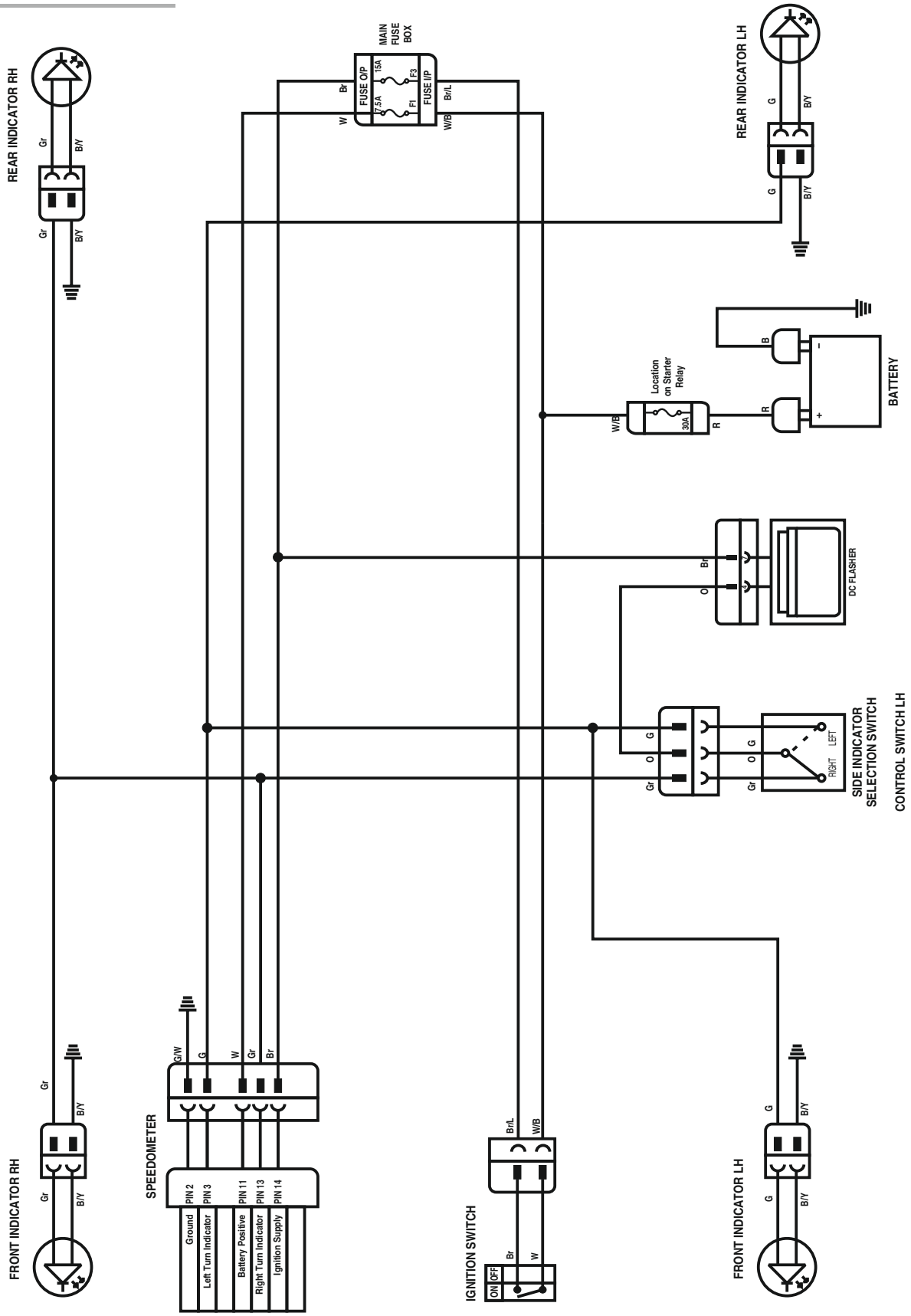
# Circuit Diagrams

## BRAKE LAMP



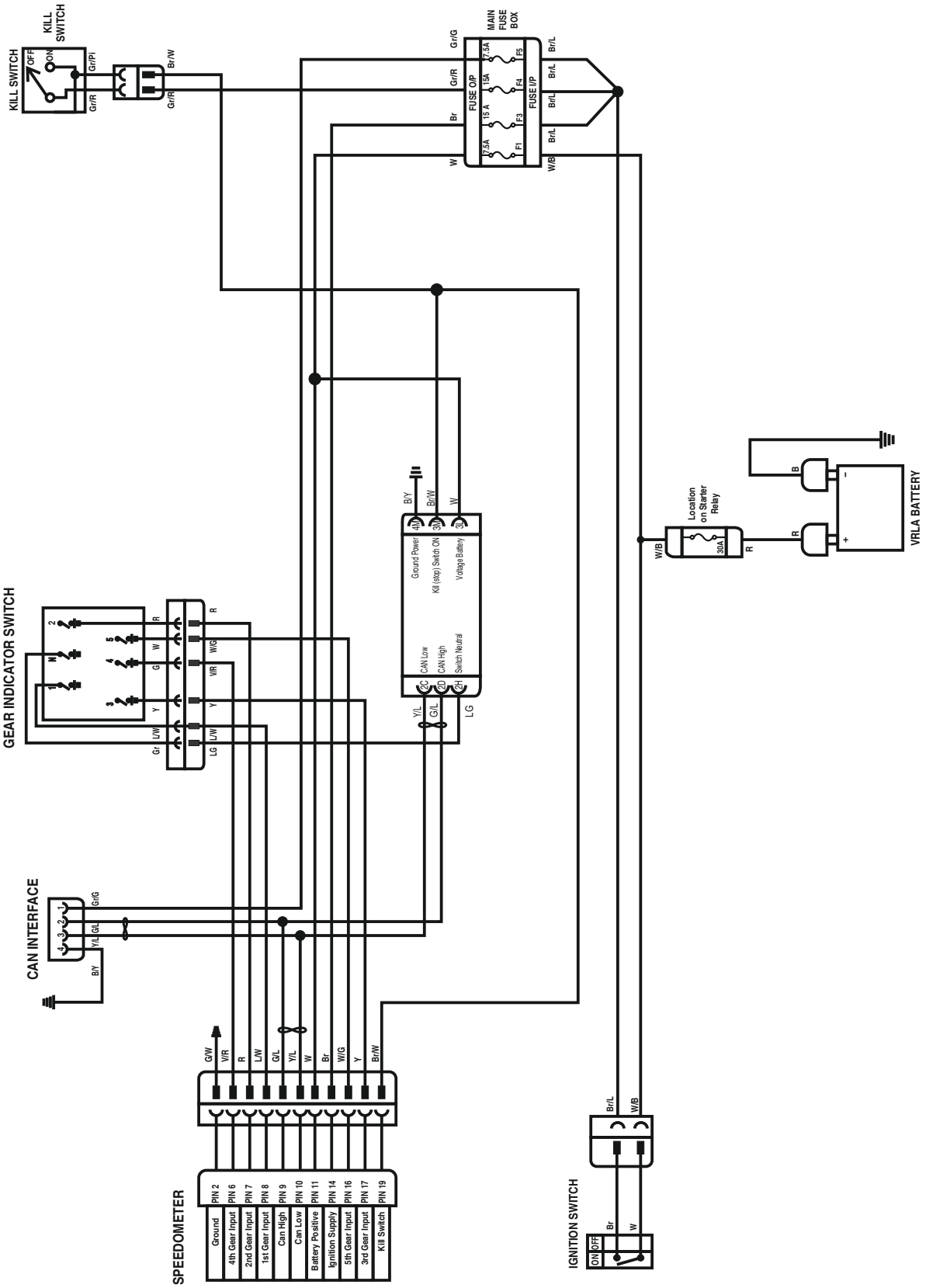
# Circuit Diagrams

## SIDE INDICATOR



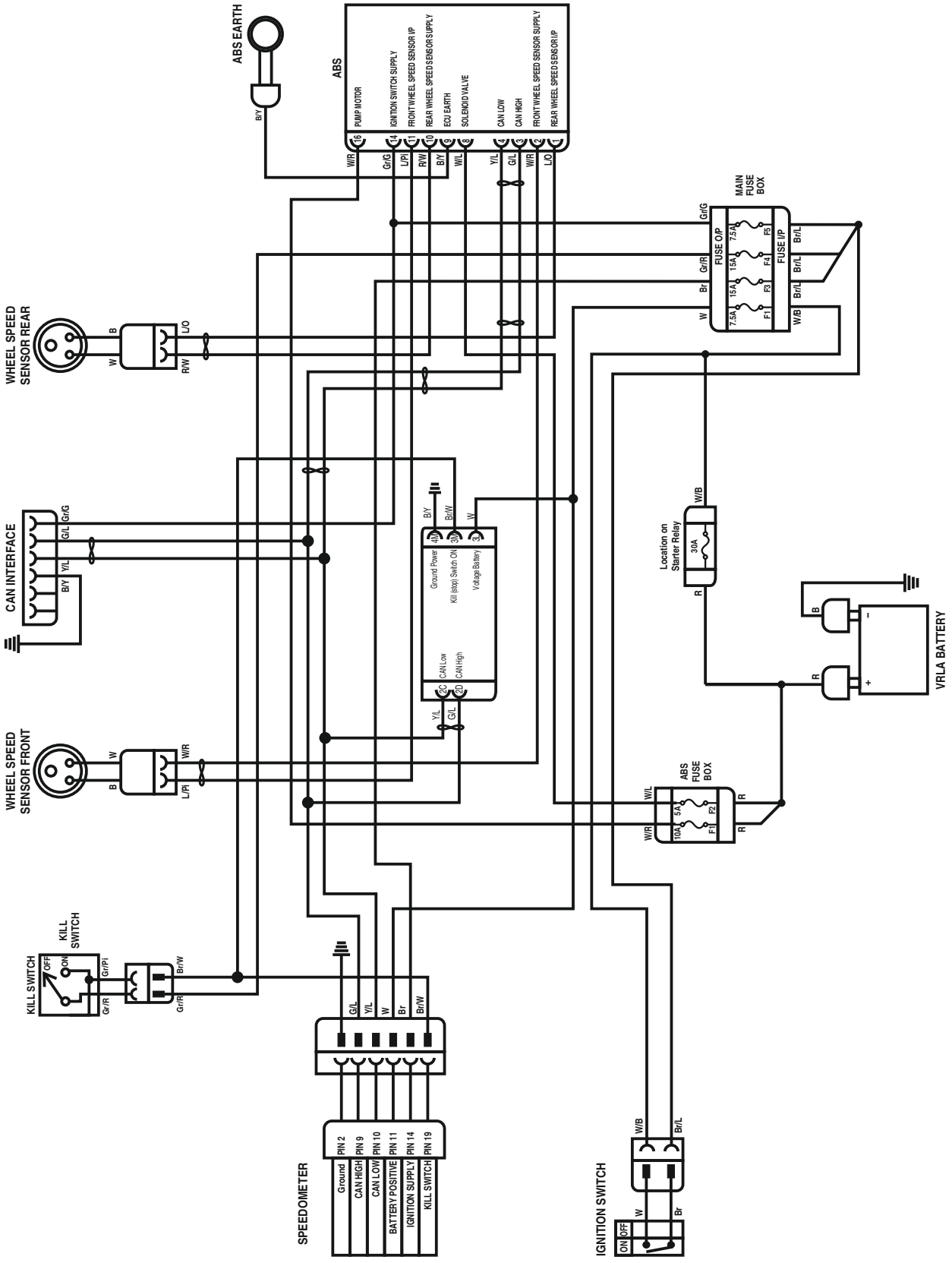
# Circuit Diagrams

## NEUTRAL & GEAR INDICATION



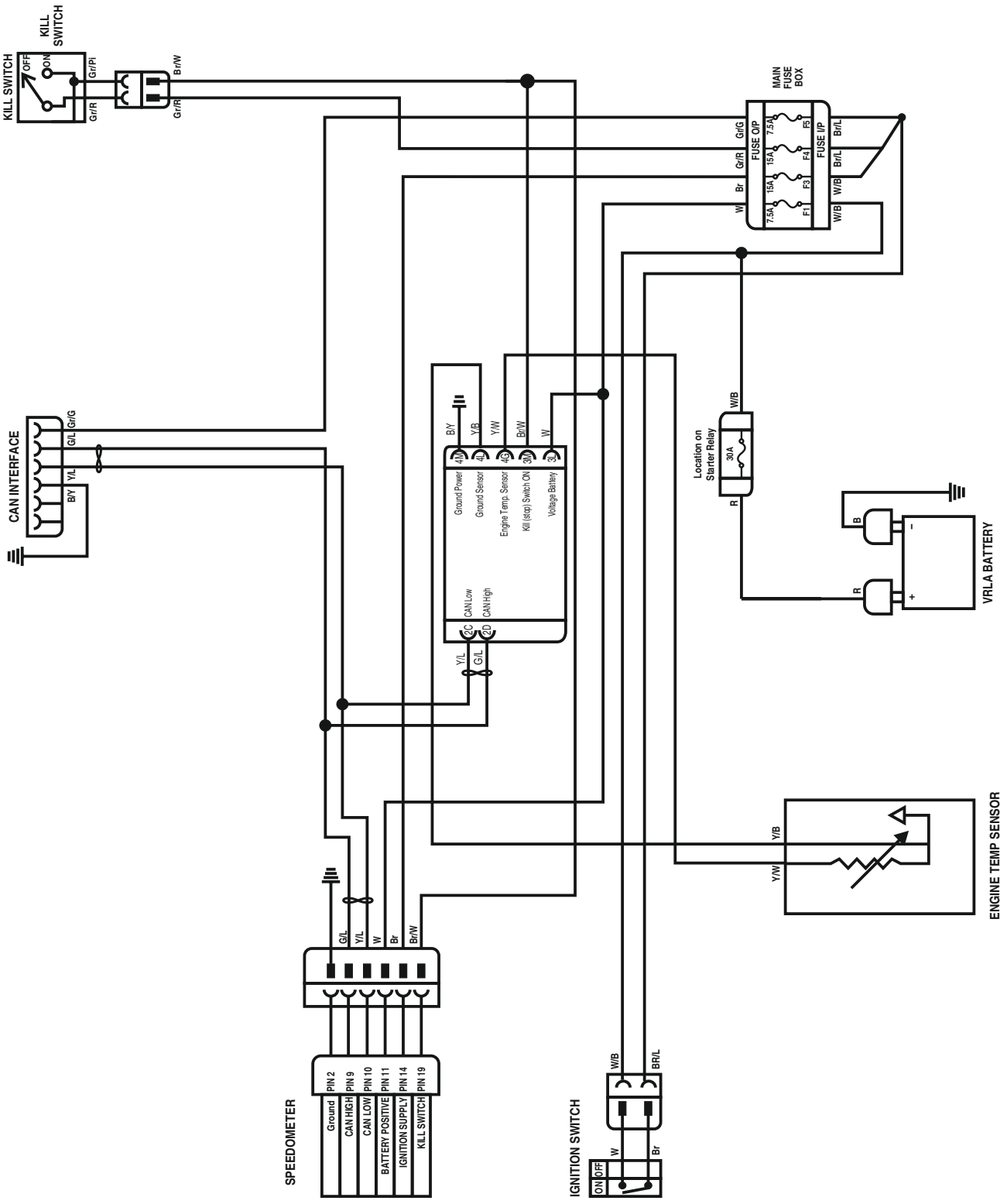
# Circuit Diagrams

## ABS CIRCUIT



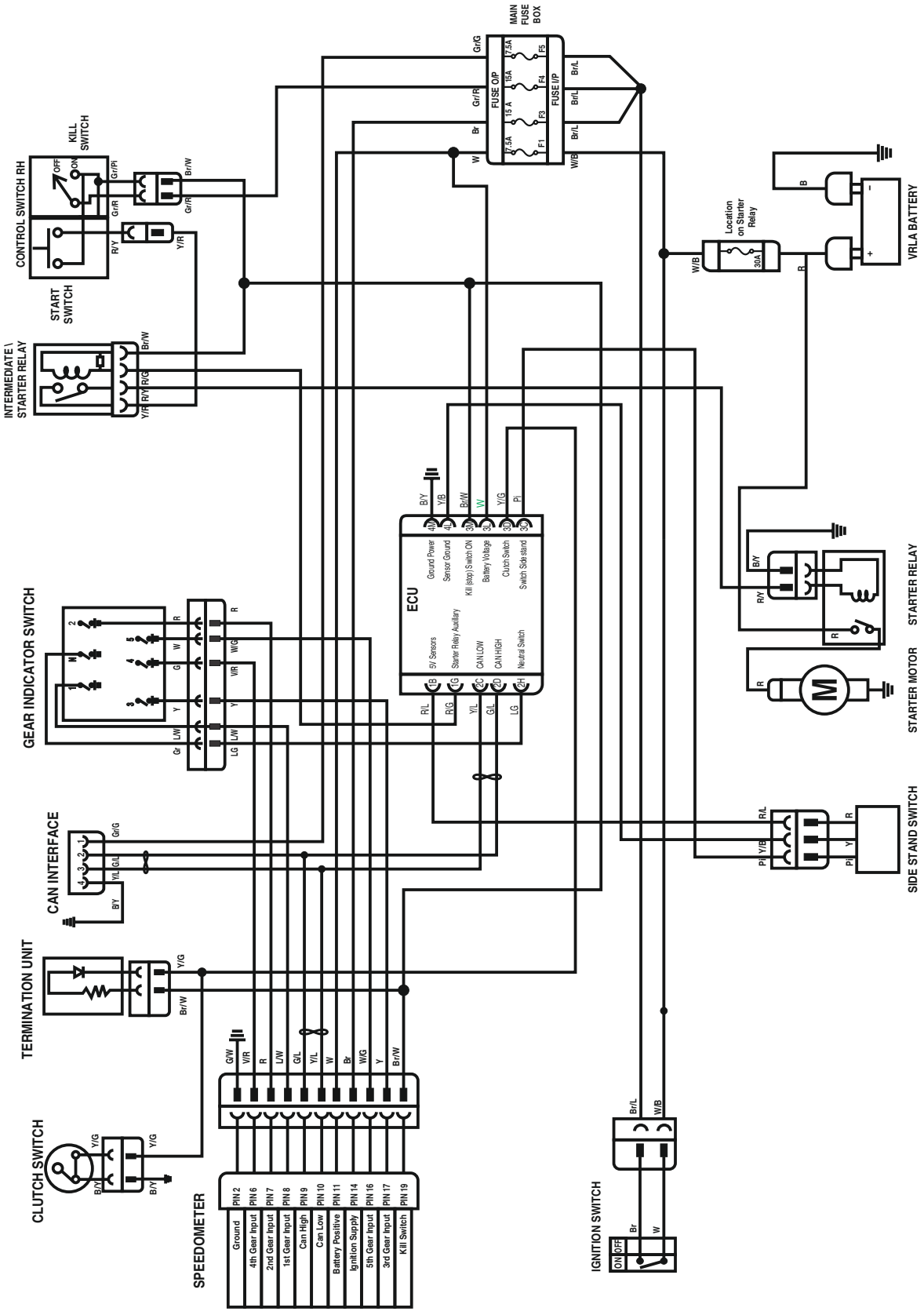
# Circuit Diagrams

## HIGH ENGINE TEMPERATURE



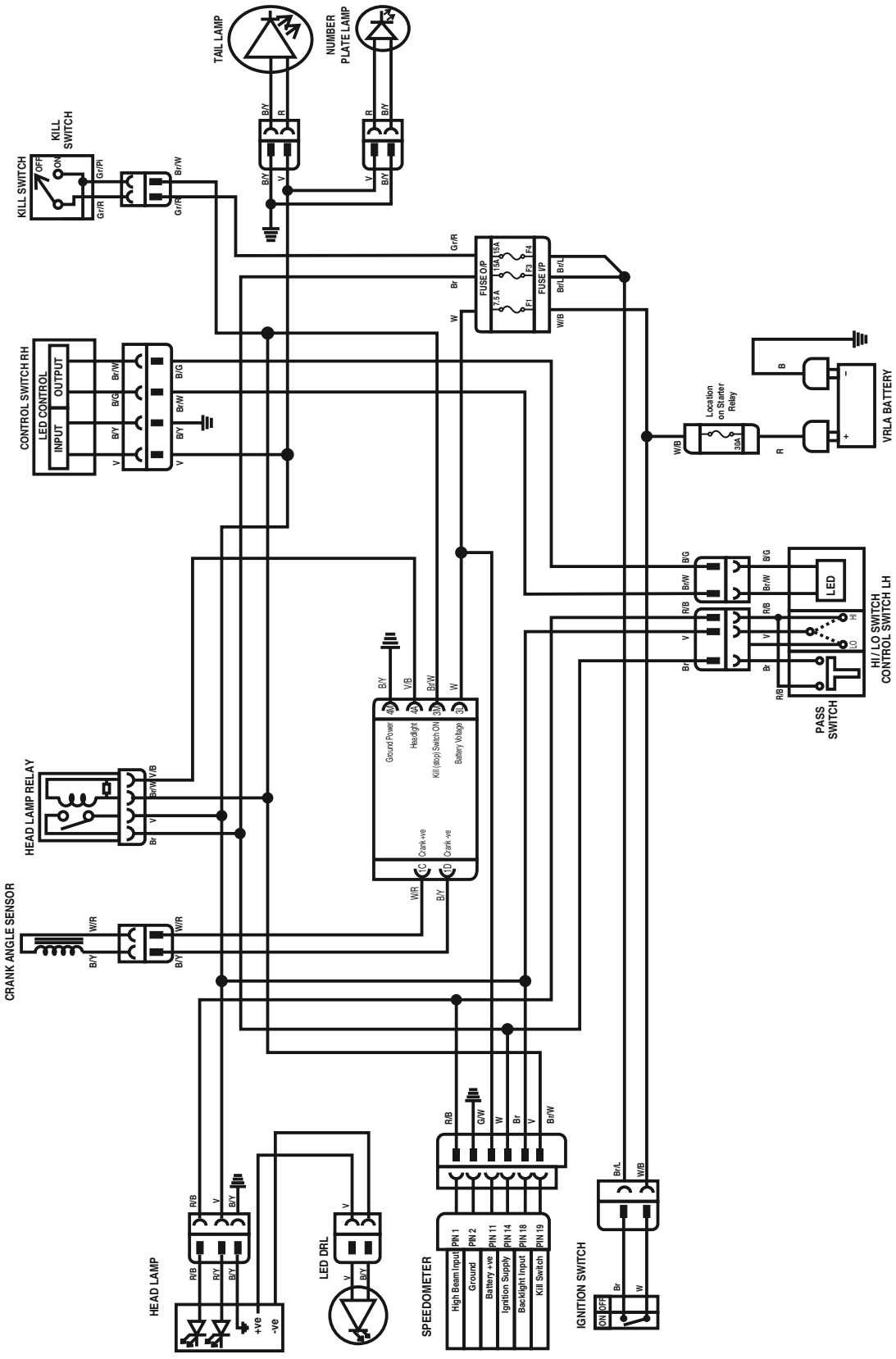
# Circuit Diagrams

## STARTER MOTOR CUM SIDE STAND INDICATOR



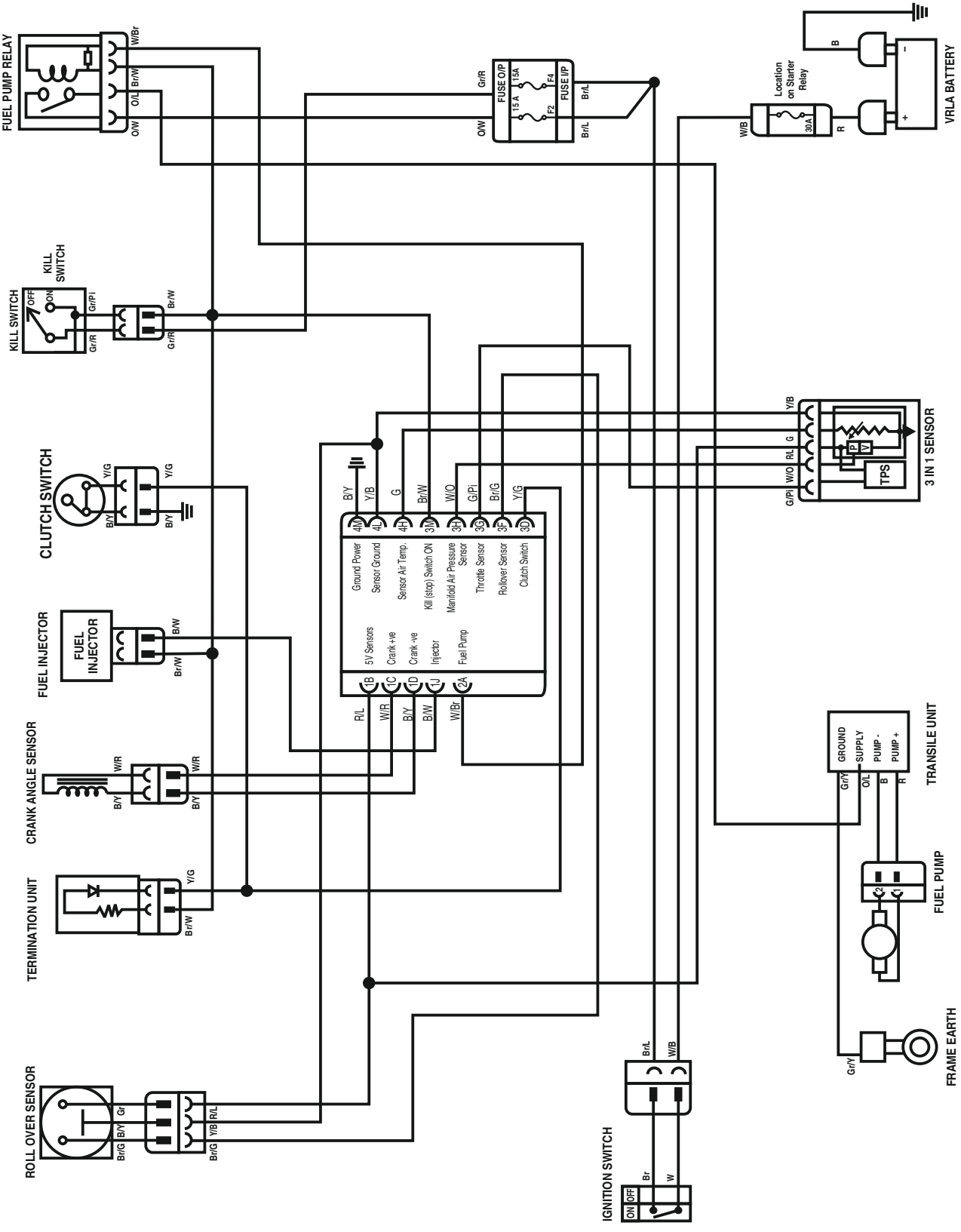
# Circuit Diagrams

## LIGHTING CIRCUIT



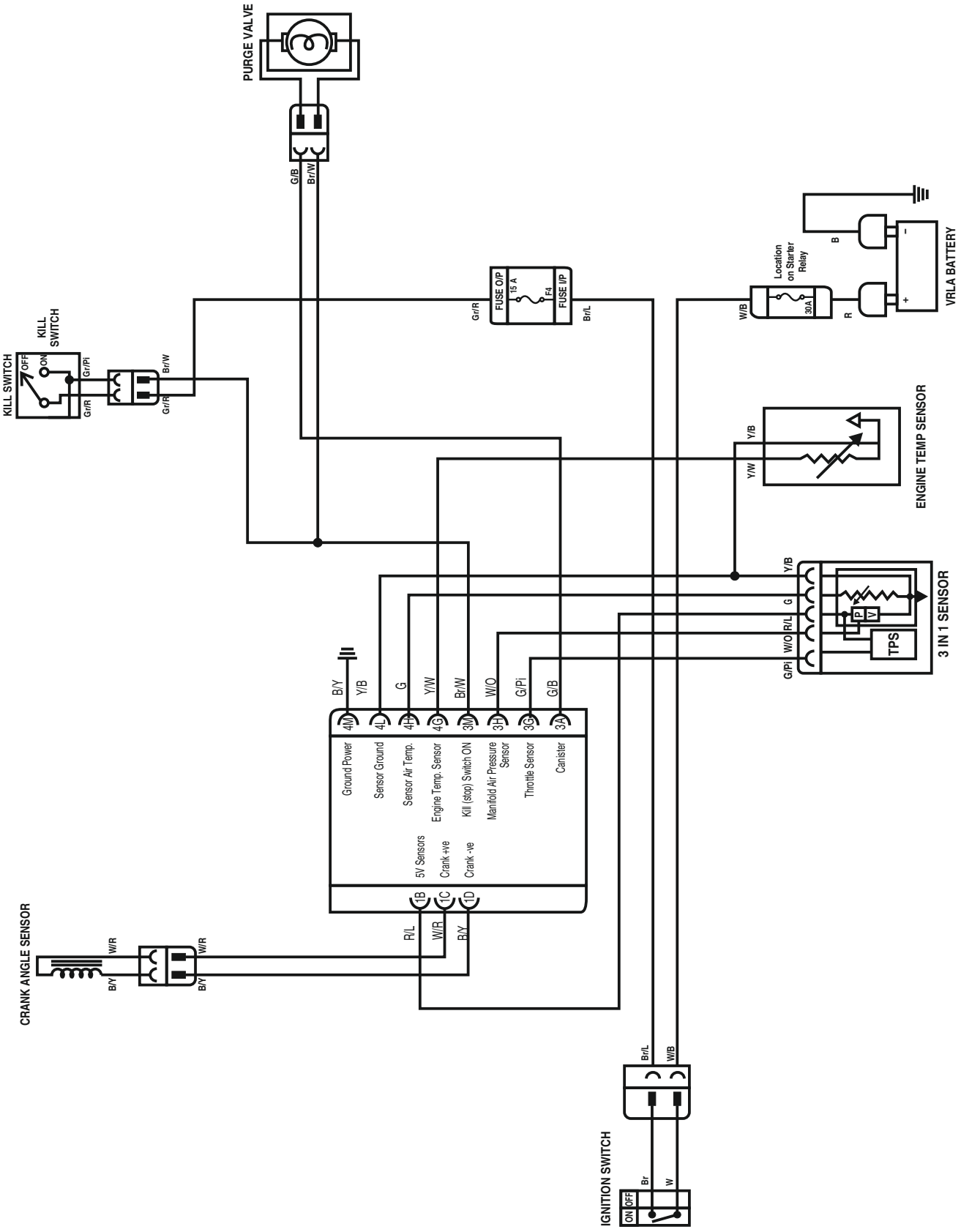
# Circuit Diagrams

## FUEL PUMP & INJECTOR



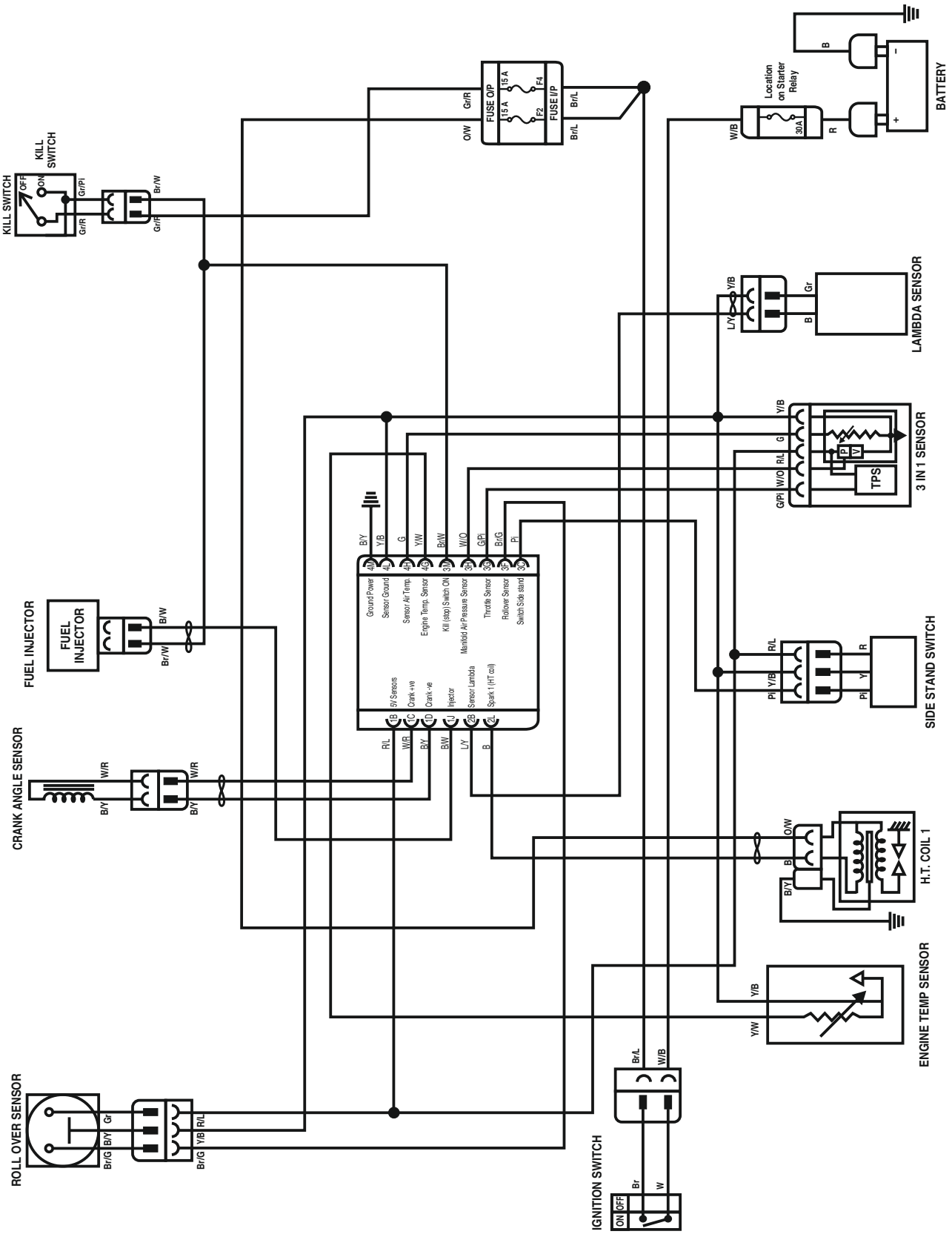
# Circuit Diagrams

## EVAP PURGE



# Circuit Diagrams

## IGNITION CIRCUIT



pulsar P150

***Single Channel Disc Brake***
***(with Mikuni + VARROC make ECU)***

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