

# HAP ALZINA

3074 BROADWAY  
Oakland 11, California, U.S.A.

IMPORTERS  
WESTERN UNITED STATES

# Direct Lighting Set for Scramblers

AND ROAD MODELS



MOTORCYCLES

With this equipment and instructions you can install Direct Lighting on Spitfire, Catalina, Alloy Clipper models. Also applicable to any road model with Lucas D.C. equipment.

LEGAL REQUIREMENTS: Check your local legal requirements on automotive lighting before installing a direct lighting set, as no battery is used and lights burn only when motor is running.

GEARING FOR ROAD RUNNING: Scrambles gearing is too low for extended road running. If machine is to be used on the road regularly, the gearing must be changed to standard road ratio. See Bulletin.

DIRECT LIGHTING CAN BE INSTALLED ON A-10 SPITFIRE SCRAMBLERS, B-34 GOLD STAR CATALINA SCRAMBLERS, B-34 ALLOY CLIPPERS, AND ON ANY ROAD MODELS ON WHICH IT IS DESIRED TO RUN WITHOUT A BATTERY, BY FOLLOWING THE WIRING AND PARTS DIAGRAMS SHOWN BELOW. IN THE CASE OF THE CATALINA AND CLIPPER MODELS IT IS NECESSARY TO REPLACE THE PRESENT MAGNETO WITH A MAGDYN. ON THE "A" MODELS, ADDING A GENERATOR WILL SUFFICE. MOUNTING INSTRUCTIONS FOR THE MAGDYNOS ARE GIVEN IN BSA SERVICE SHEET NO. 305. FOR "A" MODEL GENERATORS SEE SERVICE SHEET NO. 208. REMAINDER OF WIRING HOOKUP AND PARTS REQUIRED ARE SHOWN BELOW.

## TYPE NO. 1

SINGLE BEAM HEADLIGHT AND TAILLIGHT

### PARTS REQUIRED:

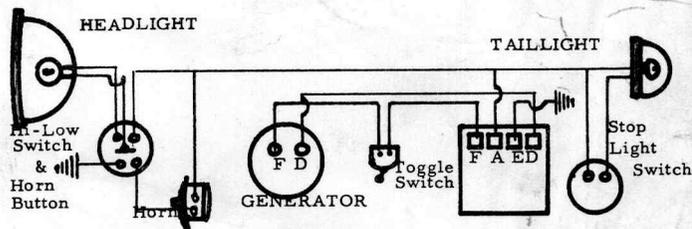
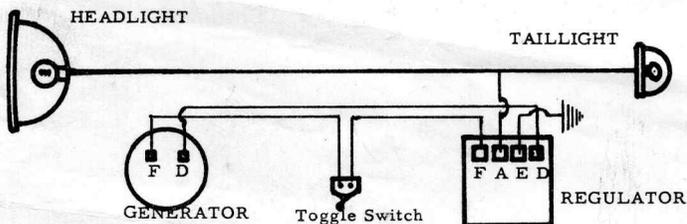
- 1 BA-502 HEADLIGHT "A & B" MODELS
- 1 BA-503 HEADLIGHT BRKT. "A & B" MODELS
- 1 67-727 GENERATOR SPROCKET "A" MODELS
- 1 110500/522 GENERATOR CHAIN "A" MODELS
- 1 67-1876 GENERATOR STRAP "A" MODELS
- 2 67-353 GENERATOR STUD "A" MODELS
- 1 29-2203 GENERATOR EYE BOLT "A" MODELS
- 1 2-833 GENERATOR EYE BOLT NUT MODELS
- 1 29-4662 EYE BOLT WASHER "A & B" MODELS
- 1 65-2352 GENERATOR STRAP PLUG "A & B" MODELS
- 1 20036 GENERATOR "A" MODELS
- 1 46043 MAGDYN "B" MODELS
- 1 BA504 TOGGLE SWITCH "A & B" MODELS
- 1 37127 VOLTAGE REGULATOR "A & B" MODELS
- 1 BA506 REGULATOR & SWITCH BRKT. "A & B" MODELS
- 1 65-1427 GENERATOR STRAP (LONG) "B" MODELS
- 1 29-4661 GENERATOR STRAP BOLT "B" MODELS
- 1 200380 GENERATOR PACKING WASHER "A" MODELS
- 1 850641 CONNECTOR
- 4 900269 TERMINALS
- 1 BA505 TAILLIGHT "A & B" MODELS
- 1 LENGTH AUTOMOTIVE WIRE

## TYPE NO. 2

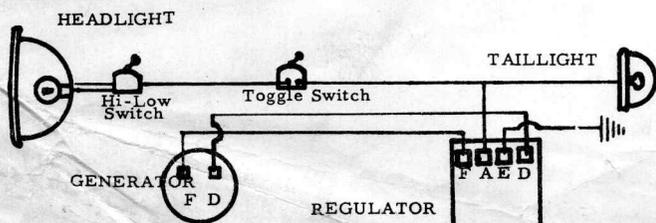
HI-LOW HEADLIGHT, TAILLIGHT, STOPLIGHT AND HORN

### PARTS REQUIRED:

- 1 BA502 HEADLIGHT "A & B" MODELS
- 1 BA503 HEADLIGHT BRACKET "A & B" MODELS
- 1 31220 DIPPER SWITCH "A & B" MODELS
- 1 20036 GENERATOR "A" MODELS
- 1 46043 MAGDYN "B" MODELS
- 1 37127 REGULATOR "A & B" MODELS
- 1 BA506 VOLTAGE REG. & SWITCH BRKT. "A & B" MODELS.
- 1 BA507 TOGGLE SWITCH "A & B" MODELS
- 1 67-727 GEN. SPROCKET "A" MODELS
- 1 67-297 GEN. CHAIN "A" MODELS
- 1 65-1427 GEN. STRAP (LONG) "B" MODELS
- 1 29-4661 GEN. STRAP BOLT "B" MODELS
- 1 67-1876 GEN. STRAP "A" MODELS
- 2 67-353 GEN. STUD "A" MODELS
- 1 29-2203 GEN. EYE BOLT "A & B" MODELS
- 1 2-833 GEN. EYE BOLT NUT "A & B" MODELS
- 1 29-4662 GEN. EYE BOLT NUT WASHER "A & B" MODELS
- 1 65-2352 GEN. PLUG STRAP "A & B" MODELS
- 1 65-2353 GEN. STRAP EYE PLUG (TAPPED) "B" MODELS
- 1 31281 S/L SWITCH "A & B" MODELS
- 1 315543 SWITCH SPRING "A & B" MODELS
- 1 42-9027 SWITCH SPRING LINK "A & B" MODELS
- 3 850641 CONNECTORS "A & B" MODELS
- 11 900269 TERMINALS "A & B" MODELS
- 1 BA505 TAILLIGHT "A & B" MODELS
- 1 ROLL AUTOMOTIVE WIRE "A & B" MODELS

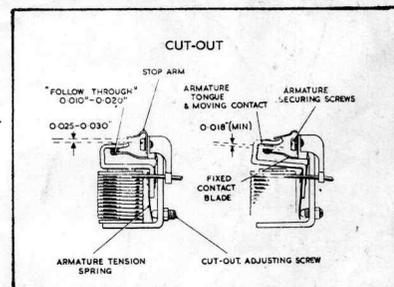


SOME INSTALLATIONS ARE PERMANENTLY WIRED INTO THE TAILLIGHT BY RUNNING A WIRE DIRECT FROM THE HOT SIDE OF THE TOGGLE SWITCH TO THE TAILLIGHT, KEEPING THE TAILLAMP BURNING CONTINUOUSLY. THE PURPOSE OF THIS BEING TO KEEP THE COMMUTATOR CLEAN BY CONSUMING THE GENERATOR CURRENT. IN SOME INSTANCES EXPERIENCE WITH DIRECT LIGHTING HAS INDICATED THAT LONG PERIODS OF OPERATION WITHOUT USING THE LIGHTS TENDS TO ALLOW THE BRUSHES TO "RIDE" THE COMMUTATOR AND DEPOSIT BRUSH WIPINGS THAT "DIRTY" THE COMMUTATOR AND THEN WHEN LIGHTS ARE REQUIRED, NO CURRENT RESULTS UNTIL THE COMMUTATOR HAS BEEN WIPED CLEAN. CONTINUOUS TAILLIGHT OPERATION SEEMS TO ALLAY THIS CONDITION AND MAKES THE LIGHTING CURRENT INSTANTLY AVAILABLE. ALTERNATE WIRING DIAGRAM FOR THIS TYPE OF HOOKUP IS SHOWN BELOW.



ON SOME INSTALLATIONS OWNERS CLOSE THE CUTOUT IN THE REGULATOR BY BENDING DOWN THE STOP ARM UNTIL IT FIXES THE POINTS IN A CLOSED POSITION. THE POINTS ARE THEN SOLDERED ACROSS TO EFFECT A PERMANENTLY CLOSED POSITION OF GOOD CONTACT. THE REASON BEHIND THIS VARIATION IN DIRECT LIGHTING IS TO INSURE SOME MEASURE OF LIGHTING AT LOW ENGINE RPM. ORDINARILY THE CUTOUT POINTS OPEN WHEN THE VOLTAGE DROPS TO ABOUT 4 1/2 - 5 VOLTS AND THE LIGHTS IMMEDIATELY CUT OFF.

BY CLOSING THE CIRCUIT SOME MEASURE OF LIGHTING IS AVAILABLE DOWN TO MINIMUM RPM AND THE RETURN OF VOLTAGE IS EFFECTED IMMEDIATELY THE THROTTLE IS SLIGHTLY OPENED.



No responsibility is assumed in supplying these direct lighting instructions. It shall be the responsibility of the dealer to see that such installations comply with the laws of his state.