

ALLSTATE

ALLSTATE 150

MODEL	ALLSTATE, SEARS 150
Displacement-cc	121.07
Bore-MM	52
Stroke-MM	57
Oil-Fuel ratio	1:24
Plug gap-MM	0.5-0.6
Inch	0.020-0.025
Point gap-MM	0.4
Inch	0.016
Ignition timing-advance	Fixed
BTDC-MM	4.5
Inch	0.177
Electrical system voltage	6
Tire size	2.75x16
Tire pressure-	
Front-kg/cm ²	1.4
Psi	20
Rear-kg/cm ²	1.7-1.8
Psi	25-26
Chain free play-MM	22
Inch	7/8
Number of speeds	3
Weight (approx.)-kg	71.66
Pounds	158

MAINTENANCE

SPARK PLUG. Electrode gap should be 0.5-0.6MM (0.020-0.025 in.). Recommended spark plug is Allstate 60410. Champion L-10 can be used.

CARBURETOR. Fisher-Amal 19EIK carburetor is shown in Fig. A2-1. Main jet (9) standard size is 90. Needle valve clip (3) should be in-

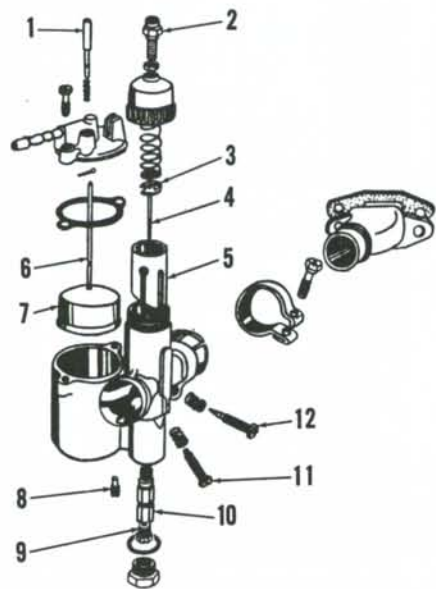


Fig. A2-1—Exploded view of Fisher-Amal carburetor.

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|----------------------|--------------------------|
| 1. Primer | 7. Float |
| 2. Cable adjuster | 8. Idle jet |
| 3. Clip | 9. Main jet |
| 4. Valve needle | 10. Needle jet |
| 5. Throttle slide | 11. Idle speed screw |
| 6. Fuel inlet needle | 12. Idle mixture needle. |

stalled in third groove from top of needle (4). Idle speed is adjusted at screw (11) and idle mixture at needle (12). Initial setting for mixture needle (12) is 1-1½ turns open. Turning the needle counter-clockwise leans the mixture.

IGNITION AND ELECTRICAL. A flywheel type magneto is used as shown in Fig. A 2-2. Electrical current for stop light is provided by coil (6) and current for other lights and horn is provided by coils (3 & 5).

Ignition breaker point gap should be 0.4MM (0.016 in.) and points should just open when piston is 4.5MM (0.177 in.) BTDC. If ignition timing is incorrect, the coil stator plate can be moved in the elongated holes after removing the flywheel and loosening the three stator mounting screws.

LUBRICATION. The engine is lubricated by mixing SAE 40 two stroke motor oil with the fuel. Oil to gasoline ratio should be 1:16 for the first 200 miles and 1:24 after the break-in period. The gear box is lubricated by approximately 0.9 pint of SAE 40 (SAE 30 in winter) motor oil. Oil should be maintained at 11MM (7/16 in.) below the clutch adjustment hole in the right side cover (Fig. A 2-3). Oil should be drained, flushed and filled with new oil after the first 600 miles and then every 7,500 miles.

CLUTCH. The clutch, located on the right end of the transmission input shaft, is of multiple disc wet type. Adjustment is accomplished after removing small cover as shown in Fig. A2-3. The center adjusting screw (S) should be adjusted to provide 2-3MM (3/32-¼ in.) free play at end of lever (L). The clutch cable should be adjusted to just take up excessive play in controls

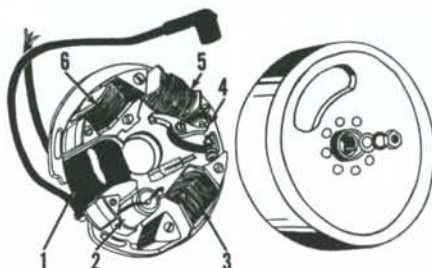


Fig. A2-2—View of flywheel magneto.

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|------------------|--------------------|
| 1. Ignition coil | 4. Breaker points |
| 2. Condenser | 5. Lighting coil |
| 3. Lighting coil | 6. Stop light coil |

without causing any pre-load. The clutch spring adjusting nuts can also be adjusted. Make certain that all are adjusted evenly.

SUSPENSION. The front fork is shown in Fig. A2-4. Oil should be drained every 3,000-4,000 miles and refilled with SAE 40 motor oil (SAE 20 or 30 in winter). Each unit should contain 80cc (2½ fl. oz.) of oil.

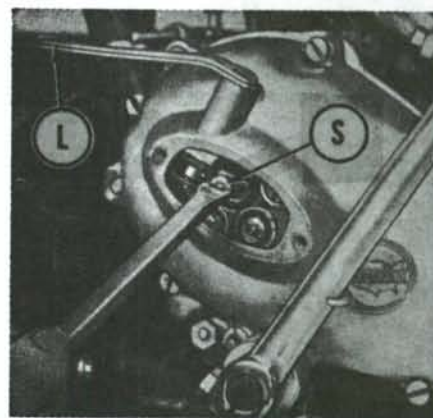


Fig. A2-3—Clutch is adjusted at screw (S). Refer to text.

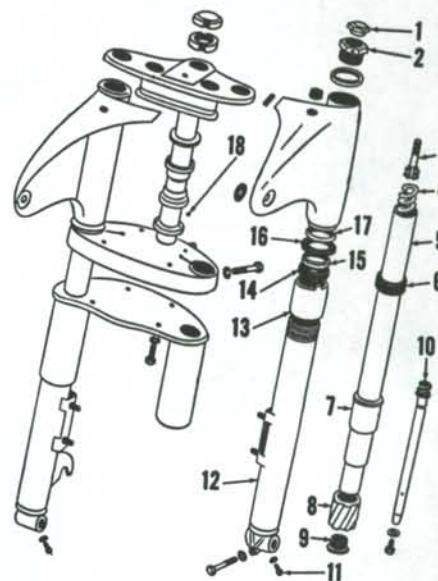


Fig. A2-4—Exploded view of front fork and suspension.

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|------------------------|--------------------|
| 1. Filler plug | 11. Drain screw |
| 2. Retaining nut | 12. Sliding tube |
| 3. Top spring retainer | 13. Retainer nut |
| 4. Spring | 14. Seal |
| 5. Tube | 15. Felt washer |
| 6. Bumper ring | 16. Rubber washer |
| 7. Bushing | 17. Centering ring |
| 8. Bushing | 18. Ball bearing |
| 9. Plug | (42 used) |
| 10. Spring support | |

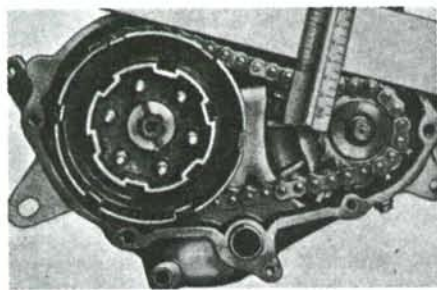


Fig. A2-5—Primary chain tension is not adjustable. Renew chain if slack exceeds 0.4 inch.

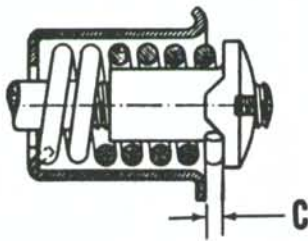


Fig. A2-6—Clearance (C) should be more than 0.06 inch. If clutch slips when adjusted to minimum clearance, renew plates as necessary.

REPAIRS

PISTON, RINGS AND CYLINDER. The piston can be removed after first removing cowl, exhaust pipe, carburetor cylinder head and cylinder. Ring end gap should be within limits of 0.1-0.8MM (0.004-0.032 in.). Ring side clearance in groove should be 0.10-0.15MM (0.004-0.006 in.). Stan-

dard cylinder bore nominal diameter is 52MM (2.0472 in.). Piston and rings are available in standard size and Oversizes of 52.5MM and 53MM.

When installing piston, cut-away side should be toward rear (carburetor) and sides (transfer ports). Make certain that ends of rings engage the pins in grooves.

CONNECTING ROD AND CRANKSHAFT. To remove the crankshaft and connecting rod, the crankcase halves must be separated. The connecting rod, crankpin bearing and crankshaft are available only as a complete unit and should NOT be disassembled. Crankshaft end play should be adjusted to 0.2MM (0.008 in.) by adding shims between main bearing inner races and crankshaft flywheels. **DO NOT PRELOAD BEARINGS.**

CLUTCH. Refer to Fig. A2-7 for exploded view of clutch assembly. Renew friction discs and/or steel plates (12 & 13) which show any evidence of wear, overheating or damage. Primary drive chain tension is not adjustable. Primary chain and (if necessary) sprockets should be renewed if chain slack is more than 0.4 inch (Fig. A2-5). When installing clutch plates, install thick (2MM) steel plate in clutch drum, then one friction disc (13—Fig. A2-7). Alternate regular steel plates and friction discs. The last (outside) steel plate has

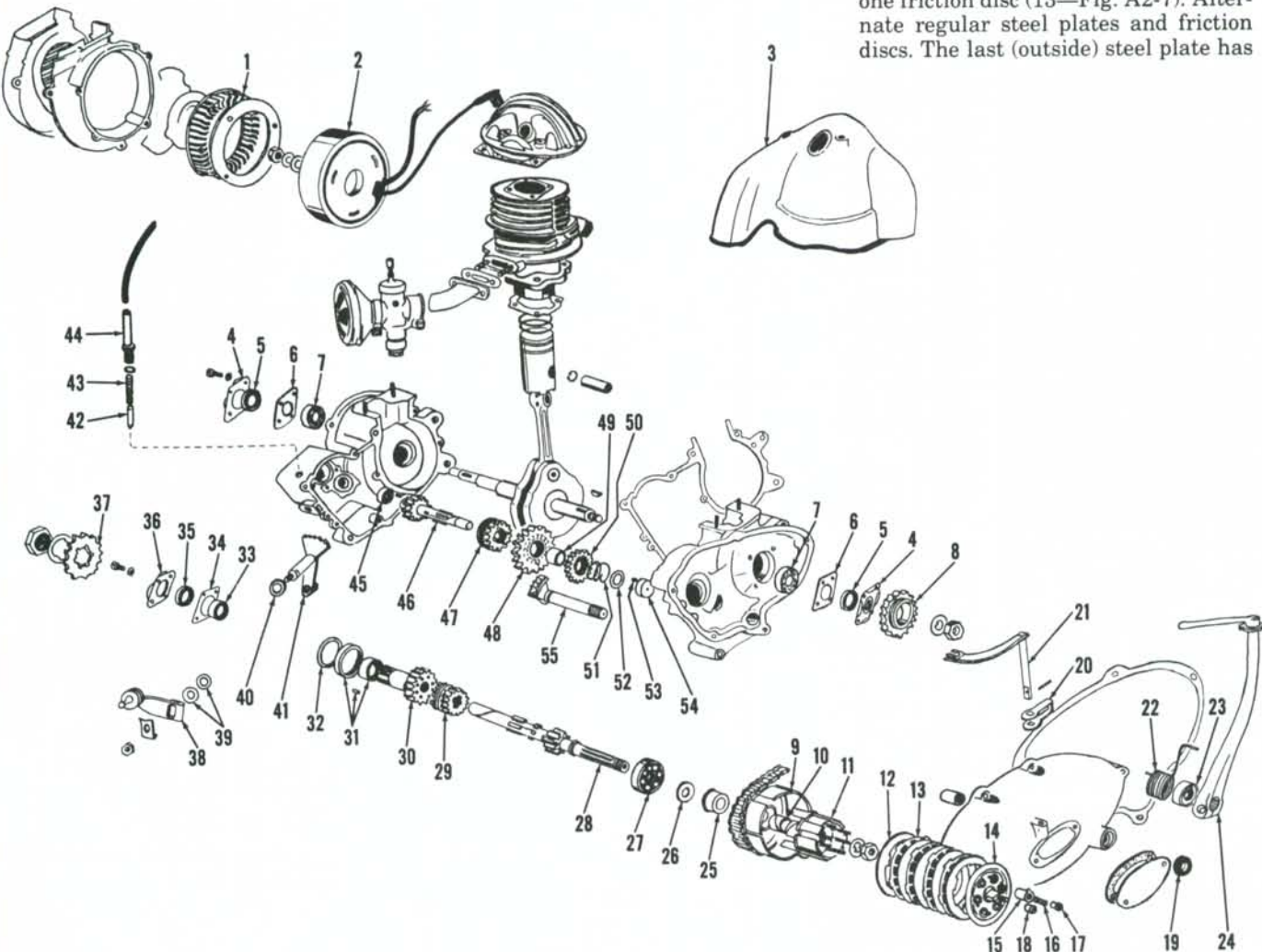


Fig. A2-7—Exploded view of engine assembly. Spark plug is located toward rear.

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|---------------------|--------------------|------------------------|---|---------------------------------|------------------------|
| 1. Fan | 11. Clutch hub | 21. Clutch lever | 31. Bearing races and rollers (24 used) | 40. Washer | 47. Sliding gear (2nd) |
| 2. Magneto | 12. Driven plates | 22. Return spring | 32. Thrust washer | 41. Shift plate | 48. Gear (1st) |
| 3. Top cowl | 13. Friction discs | 23. Spring cup | 33. Spacer | 42. Detent | 49. Bushing |
| 4. Retainer | 14. Pressure plate | 24. Starter pedal | 34. Gasket | 43. Spring | 50. Starter gear |
| 5. Seal | 15. Spring cup | 25. Bushing | 35. Seal | 44. Retainer and breather | 51. Spring |
| 6. Gasket | 16. Spring | 26. Thrust washer | 36. Retainer | 45. Roller bearing (17 rollers) | 52. Thrust washer |
| 7. Main bearings | 17. Nut | 27. Ball bearing | 37. Output sprocket | 46. Counter shaft | 53. Rollers (17 used) |
| 8. Primary sprocket | 18. Adjusting nut | 28. Input shaft | 38. Shift lever | | 54. Bearing outer race |
| 9. Clutch drum | 19. Seal | 29. Sliding gear (2nd) | 39. Washers | | 55. Kick starter |
| 10. Bushing | 20. Clutch yoke | 30. Output shaft | | | |

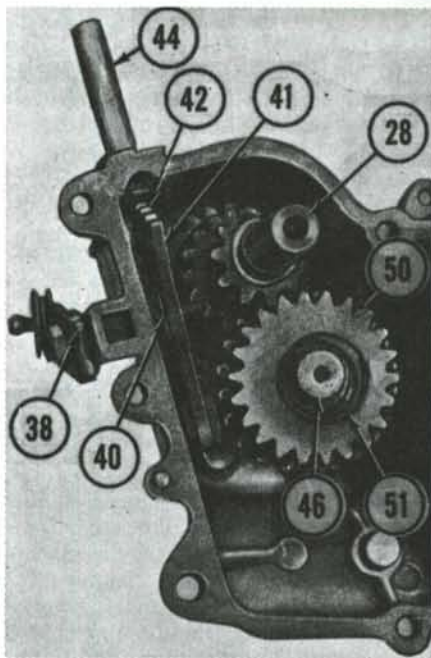


Fig. A2-8—View of transmission gears and shafts installed. Refer to Fig. A2-7 for legend.

the internal drive lugs bent in (toward the gear case). When adjusting the clutch spring nuts (17), tighten all nuts evenly until clutch does not slip. Springs can be adjusted through the small cover on right side cover after unit is assembled. Minimum clearance between adjuster nuts (17) and spring cups (15) is 0.06 inch as shown at (C—Fig. A2-6).

CRANKCASE AND GEAR BOX.

To disassemble the crankcase and gear box, the engine must first be removed. Remove the cowling, cylinder head, cylinder, piston, flywheel clutch and crankshaft gear. Remove screws that attach crankcase halves together and carefully separate the halves. Dowel pins are installed between halves. Be careful not to damage sealing surfaces of crankcase. The transmission is shown in Fig. A2-7.

Use light grease to hold the 17 loose rollers in the bearing cages (45 & 54) when assembling. Before installing the

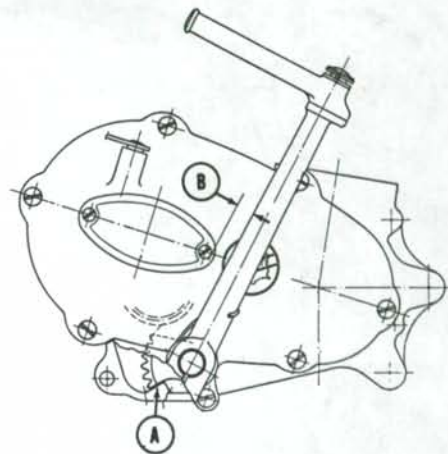


Fig. A2-9—Refer to text when installing the kick starter pedal.

kick starter pedal (24), turn the starter shaft counter-clockwise until gear contacts case as shown at (A—Fig. A2-9). Install starter lever on shaft so that distance (B) between lever and front of screw is 1/4-1/2 inch, then hook return spring over lever.

BENELLI

125CC MODELS

MODEL	COBRA, CALIFORNIA & SCRAMBLER
Displacement—cc	123.6
Bore—MM	54
Stroke—MM	54
Oil-fuel ratio	1 to 20
Plug gap—MM	0.55
Inch	0.022
Point gap—MM	0.4
Inch	0.016
Ignition timing—Advance	Fixed
Degrees BTDC	29
Tire size—Front	2.75 x 18
Rear	3.00 x 18
Tire pressure—	
Front—kg/cm ²	1.54
Psi	22
Rear—kg/cm ²	1.96
Psi	28
Rear chain free play—inch.	1/2
Number of speeds	4
Weight—Lbs. (Approx.)	205

MAINTENANCE

SPARK PLUG. Spark plug electrode gap should be 0.022 inch. Standard spark plug is Beru 1348/2.

CARBURETOR. Del'Orto ME 18 BS carburetor is shown in Fig. BE1-1. Idle speed is adjusted at screw (7). Idle mixture needle (6) initial setting is 1 turn open. Turning the needle counter-clockwise leans the mixture. Clip (1) should be in center (2nd notch of needle (3). Main jet (8) standard size is 76.

IGNITION AND ELECTRICAL. Ignition point gap can be checked and adjusted through slots in flywheel after the left side cover is removed. Point gap should be 0.016 inch (0.4MM). The flywheel and crankcase are marked to

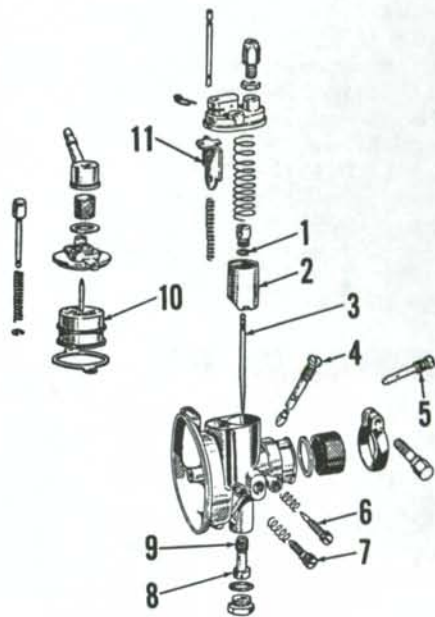


Fig. BE1-1—Exploded view of Del'Orto carburetor. Idle mixture is adjusted at needle (6).

- 1. Clip
- 2. Throttle slide
- 3. Valve needle
- 4. Pilot jet
- 5. Minimum jet
- 6. Idle mixture needle
- 7. Idle speed screw
- 8. Main jet
- 9. Nozzle
- 10. Float
- 11. Choke slide

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