

January, 1965

Films For 4-H Tractor Project

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All films are 16 mm movies unless designated otherwise.

ENGINES:

Diesel Engine

8 minutes sound-black and white
Audio-Visual Center - WSU

How the engine works and its thermal efficiency; demonstrated by animated drawings of the diesel cycle and a diagrammatic derivation of the ideal engine and the resulting work-heat ratio.

Diesel Story

18 minutes sound-black and white
Audio-Visual Center - WSU

History of the heat engine; animated diagrams of principle of engine as developed; Rudolph Diesel's part in introducing improvements and overcoming failures; use of modern engines in trucks, tractors, ships and in submarines.

Gasoline Engine

6 minutes sound-black and white
Audio-Visual Center - WSU

The six processes that are repeated in the gasoline engine cycle; concept of thermal efficiency; effects of efficiency lowering factors.

FUELS:

Farm Petroleum Safety

25 minutes sound-color
Audio-Visual Center - WSU

It is a safety demonstration at a fair showing basic safety precautions.

Story of Gasoline

24 minutes sound-color
Audio-Visual Center - WSU

Demonstrations and animated drawings illustrate the nature of various hydrocarbons and show how crude oil is separated into its various useful compounds; blending gasoline and testing effectiveness of gasoline fuels.

HAND TOOLS:

ABC of Hand Tools, Part I

18 minutes sound-color
Audio-Visual Center - WSU

Proper handling of hammers, screwdrivers, pliers, and wrenches; contrasts proper and improper use of tools through wrong doings of a comic character.

ABC of Hand Tools, Part II

15 minutes sound-color
Audio-Visual Center - WSU

Use and abuse of files, saws, chisels, planes, drills and punches; demonstrations in animation, with cartoon character, as in Part I.

ORGANIZATION OF TRACTOR CLUBS:

4-H Tractor Trails

20 minutes sound-color
American Oil Company, P. O. Box 898, Salt Lake City, Utah

It vividly dramatizes the birth of a 4-H Tractor Club and depicts the interesting activities of a volunteer leader and his group at the state fair.

Live Power Harvest

25 minutes sound-color
Audio-Visual Center - WSU

The work of the organization for tractor maintenance within the 4-H club; how such organizations are formed and the activities they sponsor.

SAFETY:

Farm Tractor Safety

20 minutes sound-black and white
Audio-Visual Center - WSU

Farm Tractor Safety (continued)

A model tractor, built to scale, demonstrates unsafe practices and safety measures. Shows care in fueling, carrying riders and traveling with a tractor on public roads.

Miracle in Paradise Valley

35 minutes sound-color
Audio-Visual Center - WSU

Produced in collaboration with U. S. Department of Agriculture and the National Safety Council to show how farm and home accidents may be prevented. Outstanding safety film.

Safety Pin

24 minutes sound-color
Audio-Visual Center - WSU

Setting up farm safety program; use of boys and girls to find safety hazards on farm, types of common hazards; tractor accidents and highway accidents.

Setups for Upsets

16 mm filmstrip black and white

Cartoons and drawings with titles. Explains good and poor methods of handling a tractor. (Order on loan basis from E. H. Davis, Extension Agricultural Engineer at WSU.) Can be purchased from the National Safety Council, 425 North Michigan Avenue, Chicago, Illinois.

Your Rural Road Challenge

35 mm color slide set with script.
Audio-Visual Center - WSU

This set points out importance of proper road signs, good and poor construction and maintenance of rural roads, traffic hazards with slow moving equipment. About 1/3 of the set deals with tractor and machinery operation on rural roads.

TRACTOR DRIVING:

Ready for a Man's Work

15 minutes sound-color
American Oil Company, P. O. Box 898, Salt Lake City, Utah

It depicts tractor operation and a 4-H Tractor Driving Contest.

TRACTOR MECHANICS:

Ethyl Corporation Film Kit #2

sound-color

American Oil Company, P. O. Box 898, Salt Lake City, Utah

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|--------------------------|------------|
| <u>Cooling System</u> | 10 minutes |
| <u>Fuel Injection</u> | 8 minutes |
| <u>Electrical System</u> | 7 minutes |
| <u>Distributor</u> | 10 minutes |
| <u>Spark Plugs</u> | 5 minutes |
| <u>Valves</u> | 7 minutes |
| <u>Carburetor</u> | 9 minutes |
| <u>Shock Absorbers</u> | 10 minutes |

Friction

11 minutes sound-black and white
Audio-Visual Center - WSU

Demonstrations and explanations of the nature of friction and how we reduce it when undesirable and increase it when it can help us.

How We Get Our Power

11 minutes sound-black and white
Audio-Visual Center - WSU

Our dependence on natural sources for power; applications of wind, water, fuels, explosives, and the atom to various needs of man.

Ignition and Spark Plugs

21 minutes sound-color
Audio-Visual Center - WSU

Diagrams and animated drawings show the principles of an ignition system and the importance of spark plugs to engine operation. Servicing and testing spark plugs are pictured.

Principles of Dry Friction

16 minutes sound-black and white
Audio-Visual Center - WSU

Definition of friction, advantages and disadvantages of friction, forces involved in friction, static and kinetic friction, and the calculation of the coefficients of static and kinetic friction.

Principle of the Generator

10 minutes sound-black and white
Audio-Visual Center - WSU

Elementary principles of electromagnetic induction; animations show their relation to the operation of the generator.

Story of the Modern Storage Battery

27 minutes sound-color
Audio-Visual Center - WSU

Demonstrations of forms of the primary cell and how the principles apply to the construction and functioning of the storage battery; the chemistry of the storage battery; how the battery is made; battery failure and care.

NOTE

4-H Leaders and county extension agents can contact local farm equipment dealers for additional educational movie films, filmstrips, colored slides, and charts pertaining to the tractor project.