the line pressure below 105 pounds per square inch on air brake systems.

The air cleaners used throughout the system should be cleaned regularly.

In the case of self-lubricated air compressors the oil should be checked daily and drained at the proper intervals.

In the case of engine lubricated air compressors, the oil line feeding the compressor should be checked regularly.

In average service the diaphragms in brake chambers should be replaced at least once a year. In severe service the diaphragms should be replaced more often.

Power units of the piston-cylinder type should be inspected regularly and in extreme heat or dust or in winter operation two ounces of S.A.E. 10 oil should be put into the atmospheric end of the power cylinder.

If an air brake system is not operating properly, it is advisable to first check the entire system for leaks and attempt to determine which unit is causing the trouble. Ordinary soap suds are generally used for locating leaks in an air brake system.

All air brake reservoir tanks should be drained daily in order to eliminate any condensation from the system.

STOPPING DISTANCE CHART

With brakes in perfect operating condition, the stopping distance depends upon the friction between the tire and road surface. It can be readily understood that even with perfect brakes a vehicle cannot make a very rapid stop on a slippery pavement. The stopping distances from various speeds for a vehicle with perfect brake equipment and tire treads operating on the average dry, concrete, brick or cold asphalt road surface would be as shown below. Incidentally, a vehicle with perfect brake equipment must have a sufficiently powerful brake on each wheel so that all wheels may be brought up to the locking point. The vehicle is stopping at the fastest rate just as skidding is impending at all four wheels.

In order to find the actual total stopping distances from the various speeds it is necessary to add from 20 to 80 feet, depending on the car speed, to take care of the distance the car travels during the time interval between the instant the driver decides to stop and the instant his foot actually applies the brake. The stopping distances after the brakes are applied and the total stopping distances which take into account the average driver reaction time of ¾ second are as follows:

Speed of Car	Reaction Distance	Braking Distance	Total Stopping Distance
20 M.P.H.	22 ft.	18 ft.	40 ft.
30 M.P.H.	33 ft.	40 ft.	73 ft.
40 M.P.H.	44 ft.	70 ft.	114 ft.
50 M.P.H.	55 ft.	110 ft.	165 ft.
60 M.P.H.	66 ft.	160 ft.	226 ft.
70 M.P.H.	77 ft.	220 ft.	297 ft.

It should be remembered that the above figures are for a vehicle with perfect brakes and tire treads operating on a dry brick, concrete or cold asphalt road. Under less favorable conditions, the vehicle could not be stopped in as short a distance as shown here.