

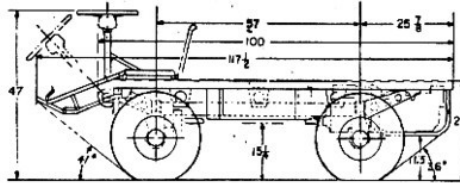
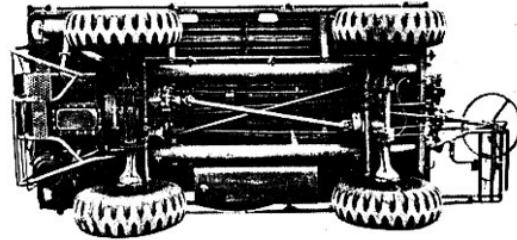
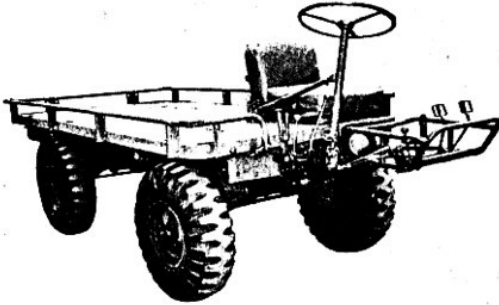
CHARACTERISTIC SHEET

ORDNANCE TANK-AUTOMOTIVE COMMAND

VEHICLE: CARRIER, LIGHT WEAPONS, INFANTRY,  $\frac{1}{2}$  TON, 4x4, M274 (MECHANICAL MULE)  
 WHEELBASE: 57 IN TYPE WEAPONS CARRIER

PROJECT NO. T13-793

SECT: TV-1  
 CODE: TV-400  
 SHEET: FINAL



CURB WEIGHT, FULLY EQUIPPED,  
 LESS PAYLOAD & PERSONNEL  
 FRONT AXLE 320 LBS.  
 REAR AXLE OR BOGIE 510 LBS.  
 TOTAL 830 LBS.

SUSPENSION: NONE

GROSS LOAD, CROSS COUNTRY 1830 LBS.

WHEELS: WILLEYS NO. W.O. 810821 TYPE DROPCENTER DIAL 10x5.50 IN.  
 SEAL HUMP TYPE SINGLE REAR YES DUAL REAR NO

TOWING LOAD ALLOWANCE, NOT APPLICABLE

TIRES: TYPE MILITARY SIZE 7.50x10 PLY 4P.R.  
 TREAD DESIGN: ORDNANCE NDCG NO. SPARES NONE

TIPPING DIMENSIONS, CU. FT. 155 REDUCIBLE TO 72  
 SQ. FT. 40.5 REDUCIBLE TO 32  
 LENGTH 117.5 IN. REDUCIBLE TO 100 +H.  
 WIDTH 49.5 IN. REDUCIBLE TO 46.4 IN.  
 HEIGHT, 47 IN. REDUCIBLE TO 27 IN.

STEERING: MODEL ROSS TYPE CAM & LEVER  
 RATIO: 12 TO 1  
 \*TWO OR FOUR WHEEL STEERING SYSTEM  
 BRAKES: SERVICE MAKE BENDIX TYPE INTERNAL EXPANDING  
 DRUM SIZE: 5.5 IN. DIA.  
 EFFECTIVE AREA: 17.315 SQ. IN.

TREAD, FRONT 37.34 IN. REAR 37.34 IN.

\*SINGLE BRAKE MOUNTED ON FRONT AXLE HOUSING, HAND OR FOOT OPERATED  
 BRAKES: PARKING: INTEGRAL WITH SERVICE BRAKE

MINIMUM GROUND CLEARANCE, REAR AXLE 12.25 IN. UNDER CHASSIS 15.2 IN.

ELECTRICAL SYSTEM: WATERPROOF YES RADIO SUPPRESSED MIL-S-10379A  
 POTENTIAL 6 VOLT. STARTING SYSTEM: MANUAL PULL WITH REWIND CABLE

ANGLE OF APPROACH 41°  
 ANGLE OF DEPARTURE 36°  
 MIN. TURNING RADIUS (OVER CORNER) LEFT 9 FT. 11 IN.  
 RIGHT 10 FT. 1 IN.

GENERATOR NONE  
 BATTERY (IES) NONE  
 MAGNETO IGNITION SYSTEM\* REGULATOR: NONE  
 LIGHTING: HEADLAMPS: NONE S.O. DRIVING LAMP NONE  
 B.O. MARKER LAMPS: NONE TRAILER COUPLING SOCKET NONE  
 \*IGNITION CUT OUT GOVERNOR INTEGRAL WITH MAGNETO

FORDING DEPTH, WITH KIT (NOT REQUIRED) 18 IN. LESS KIT 18 IN.

PERFORMANCE: MILES PER GALLON 17.8 @ 5 MPH CRUISING RANGE HIGHWAY 100 MI.  
 GRADE ABILITY: DIRECT 14.5 % FOR G.V.W. (GTW) OF 1830 LBS.  
 LOW 60 % FOR G.V.W. (GTW) OF 1830 LBS.  
 MAXIMUM SPEED 25 MPH AT ENGINE GOVERNED SPEED 4500 RPM  
 PLATFORM: FLAT BED FABRICATED OF EXTRUDED MAGNESIUM ALLOYS  
 SIZE: 96 IN. LONG x 46 IN. WIDE

ENGINE:  
 MAKE CONTINENTAL MODEL O-53 TYPE: AIR COOLED, 4 CYL. 4 CYCLE OPPOSED  
 DISPLACEMENT 53 CU. IN. BORE x STROKE 2.75 x 2.25 COMPRESSION RATIO 7:1  
 FUEL GASOLINE CAPACITY 8 GALS. GOV. SPEED 1500 RPM.  
 HORSEPOWER: MAX. GROSS 18 @ 3200 RPM  
 TORQUE: MAX. GROSS 31 LB. FT. @ 2100 RPM  
 LUBRICATION: CONVENTIONAL CRANK CASE CAPACITY 2 QTS.  
 GOVERNOR: IGNITION CUT OUT TYPE: INTEGRAL WITH MAGNETO  
 COOLING SYSTEM CAPACITY AIR COOLED

WIRING: NOT REQUIRED

FUEL SYSTEM: CARBURETOR: MAKE ZENITH MODEL 87-B5 TYPE SIDE DRAFT  
 FUEL PUMP: MAKE AC TYPE: DIAPHRAGM

FITTING BOOK: NOT REQUIRED  
 TIE DOWN: NONE

CLUTCH: MODEL AUBURN TYPE SINGLES, DRY DISC DIAM 6 1/2 IN.  
 EFFECTIVE AREA 34,588 SQ. IN.

DEVELOPMENT FACILITY: WILLEYS MOTOR, INC.  
 TOLEDO 1, OHIO

TRANSMISSION: MODEL SPICER\* NO. OF SPEEDS 3 FWD. 1 REV.  
 RATIOS: 1ST.: 2.93 2ND.: 1.71 3RD.: 1.00 REV.: 2.93

LUBRICANT CAPACITY: 1-3/4 QTS  
 \*INTEGRAL WITH TRANSFER CASE  
 TRANSFER CASE: MODEL SPICER\* NO. OF SPEEDS 2 FWD. 2 REV.  
 RATIOS: HIGH 2.84 LOW 5.31 REVERSE HIGH 2.84 LOW 5.31  
 \*CONTROL OF LEAN ASSIST DRIVE CONSTANT FOUR WHEEL LUB. CAPACITY \* QTS.  
 \*INTEGRAL WITH TRANSMISSION DRIVE \*INCLUDED WITH TRANSMISSION  
 AXLES: FRONT: MODEL SPICER TYPE INVERTED DROP CENTER  
 RATIO 4.26 : 1 TORQUE RATING LB. FT. LUB. CAP. 3/16 QTS.  
 REAR: MODEL SPICER\*\* TYPE INVERTED DROP CENTER  
 SPIRAL BEVEL DRIVE WITH HELICAL GEAR REDUCTION AT WHEEL HUBS INCLUDED WITH THE TRANSMISSION  
 \*INTEGRAL WITH TRANSMISSION AND TRANSFER FRAME: TUBULAR (TWO TUBES) DIMENSIONS: SIDEBAR 3.5 IN. DIAM -.064 THICK  
 SECTION MODULUS .574 IN. NO. OF CROSS-MEMBERS NONE REINFORCED NO  
 \*FRAME MEMBERS TIED DIRECTLY TO AXLES  
 FOR PURPOSE, REFERENCE ITEMS, HISTORY AND CURRENT STATUS, SEE REVERSE SIDE.

PROJECT ENGINEER *[Signature]*  
 BRANCH CHIEF *[Signature]*  
 DIVISION CHIEF *[Signature]*  
 CHIEF ENGINEER *[Signature]*  
 DATE APPROVED 11 March 1957

SECTION: TV-1  
CODE: TV-400  
SHEET: FINAL  
DATE: 11 MARCH 1957

ORD. PROJ. NO TT3-793

NOMENCLATURE: CARRIER, LIGHT WEAPONS, INFANTRY, 1/2-TON,  
4x4, XM274.

1. Purpose:

To develop a low cost, super light weight infantry weapons carrier of simple design, requiring minimum driver training and maintenance, for use in combat zones by Infantry, Airborne Infantry and other combat troops.

2. References:

a. OTCM 34195, approved 24 April 1952 established military characteristics, MCV 248, and initiated project for development of the XM274 Carrier.

b. OTCM 36178, approved 26 April 1956, classified the XM274 as a standard type, revised military characteristics and terminated project TT3-793.

3. History:

a. There has long been a requirement for improving the infantryman's effectiveness by reducing his burden and increasing his mobility. A small low cost, extra light weight carrier with high cross country mobility and maneuverability for tactical use was desired to permit supporting weapons and ammunition of infantry units to accompany and keep pace with the rifleman at foot speeds in combat. The vehicle would in many respects perform tasks formerly accomplished by the Army mule.

b. On 30 June 1953 Willys Motors, Inc. was awarded a contract for design, development and fabrication of five pilot model vehicles for Ordnance and Using Service tests. Facility completed the first two models in late 1953 which were shipped to 'O- for test, following which deficiencies were corrected and remaining pilots were delivered to the government in May 1954.

c. Further tests were conducted by Aberdeen Proving Ground and several Using Services during which time the design was improved and the vehicles were modified. Tests were completed in April 1956 shortly before the vehicle was standardized by OTCM 36178.

4. Current Status:

Engineering service and production contracts were issued in June 1956 for a quantity of M274 vehicles for delivery in July 1957 for use by Army combat units.