Introduction & Calculations

Arizona farmers make substantial investments in machinery and equipment as they strive to increase productivity and reduce costs. This publication provides equipment cost information for financial decisions.

Equipment costs include ownership costs and operating costs. Costs that do not vary with machine use are considered "fixed" or ownership costs while those that vary with the hours of machine use are "variable" or operating costs.

Ownership Costs	Operating Costs
Depreciation	Repairs
Interest	Fuel and oil
Taxes, Housing, and Insurance (THI)	Labor

Estimation methods developed by agricultural economists and engineers were followed in estimating these costs. Each cost is discussed briefly below.

Equipment Purchase Prices

Equipment purchase prices used in this report are a simple average of the list or "sticker" prices for new equipment. Prices are collected for each item from participating Arizona farm equipment dealers. To insure comparability, dealers quoted prices on each item equipped in a standard way. For example, each dealer was asked to quote a price on a 40 PTO horsepower tractor, with mechanical front wheel drive (MFWD), equipped with a gear transmission, power steering, category hitch (three point hitch), and a roll guard to protect the driver, etc. Suggested retail prices are used for consistency of data. Most farmers will buy farm equipment at prices below sticker price. Farmers buying large amounts of equipment will often receive discounts. Actual purchase prices for new equipment are negotiated between buyer and seller. For purchase price values, other than those listed herein, see the adjustment calculations described on pages 7 and 8.

Depreciation

Machinery values decline over time due to use (wear and tear), age, and obsolescence. This loss in value is referred to as depreciation and is estimated for each year of use. Three methods for estimating annual depreciation are the straight-line, declining balance, and sum of years digits methods. For machinery, the declining balance method more nearly coincides with the loss in value as reflected in the marketplace.[1] Annual costs for each item of equipment listed in this publication are calculated using two methods.

Straight-line Depreciation

Table A for each item of machinery uses the straight-line method with the annual cost based on constant average annual hours of use throughout the life of the item. Constant costs result because: 1) the straight-line method is used for calculating depreciation, (2) the average annual value is used in computing opportunity interest[2] and THI costs, and 3) to obtain annual repair costs, the total projected repair costs are divided by years of life.

MACRS/GDS Depreciation

Table B for each item of machinery uses the Modified Accelerated Cost Recovery System (MACRS) with the yearly cost over the life of new equipment based on a seven-year life.[3] Annual costs fall every year as the item ages and its value declines.

If the declining balance method were used alone, this method would not fully depreciate an item at the end of its life. To depreciate the item to zero, the straight-line depreciation method is adopted when

---

[1] For a discussion of depreciation methods, see *Farm Management* by Ronald Kay and William M. Edwards, Third Edition, McGraw Hill, 1994.

[2] Capital invested in machinery would earn interest or other revenue in alternative investment opportunities. Either the interest paid for the use of the capital or its opportunity cost, in the case the investment is for savings, should be assigned as a cost for the use of the capital (see page 5 for further discussion of this issue).

[3] Seven years of life is used to coincide with the GDS property class. The majority of farm machinery falls in the seven-year classification.

straight-line depreciation, for the remaining years life, provides higher yearly depreciation. This modified declining balance method will fully depreciate the item to zero at the end of the seventh year.

The modified declining balance depreciation method is the same as the General Depreciation System (GDS) of the MACRS used for tax depreciation. GDS establishes six property classes (3-year, 5-year, 7-year, 10-year, 15-year, and 20-year). Most farm equipment is in the 7-year category while special purpose structures are in the 10-year property class and other farm buildings are the 20-year one.

Straight-line Depreciation Calculation

When calculating straight-line depreciation, it is assumed that the machinery item will be used until it is worn out or traded before the end of its useful life. If annual usage is low, the machine becomes obsolete before it is worn out. Table 1 (page 3) provides wear values (hours) for the estimated life of various types of machinery. Table 1 also provides repair factors used in the repair cost equation discussed on page 7. The equation for estimating the useful life (L) of a machine in years is

$$L = \frac{WEAR}{USE} \text{ or 25 years to trade, whichever is smaller}$$

where

WEAR = estimated life of the machine in hours (H) (see Table 1)

USE = projected hours of annual use.

The equation for calculating straight-line average annual depreciation is

$$DEP = \frac{PRICE - RFV_n}{L}$$

where

DEP = average annual depreciation (straight-line)

PRICE = price of the machine

RFV_n = remaining farm value (salvage value) of the machine at the end of its useful life as calculated by using the appropriate RFV equation applicable to the machine, listed on page X.[4]

Remaining farm values (RFV_n) are used to calculate depreciation. They represent the remaining value of the machine at the end of its useful life. RFV_n is calculated by using the appropriate RFV equation (Table 2 on page 5) for each specific class of machinery.

MACRS/GDS Depreciation Calculation

The equation for calculating accelerated depreciation (ADEP) using the MACRS (GDS) is

$$ADEP = BOOK\ VALUE * 1.5 * \frac{1}{CLASS}$$

or

$$ADEP = BOOK\ VALUE * 1.5 * \frac{1}{RLIFE}$$

whichever is greater

where

ADEP = annual depreciation for each year of life (GDS)

BOOK VALUE = purchase price minus previous depreciation

CLASS = property class

$1.5 * \frac{1}{CLASS}$ = 1.5 times the straight-line depreciation percentage for 7 years, 10 years, etc.

$\frac{1}{RLIFE}$ = annual straight-line depreciation percentage for the remaining life (CLASS minus years used)

[4] For a discussion of salvage value, see *2003 Standards,* published by American Society of Agricultural Engineers, St. Joseph, Michigan, 49805.

Table 1. Field Efficiency, Field Speed, and Repair and Maintenance Cost Parameters (Page 1 of 2)

Machine	Field Efficiency			Field Speed			Est. Life	Total Life R&M Cost	Repair Factors	
	Range %	Typical %	Range MPG	Typical MPG	Range KM/H	Typical KM/H	H	% of List Price	RF1	RF2
Tractors										
2-Wheel Drive & Stationary							12,000	100	0.007	2.0
4-Wheel Drive & Crawler							16,000	80	0.003	2.0
Tillage and Planting										
Moldboard Plow	70–90	85	3.0–6.0	4.5	5.0–10.0	7.0	2,000	100	0.29	1.8
Heavy-Duty Disk	70–90	85	3.5–6.0	4.5	5.5–10.0	7.0	2,000	60	0.18	1.7
Tandem Disk Harrow	70–90	80	4.0–7.0	6.0	6.5–11.0	10.0	2,000	60	0.18	1.7
(Coulter) Chisel Plow	70–90	85	4.0–6.5	5.0	6.5–10.5	8.0	2,000	75	0.28	1.4
Field Cultivator	70–90	85	5.0–8.0	7.0	8.0–13.0	11.0	2,000	70	0.27	1.4
Spring Tooth Harrow	70–90	85	5.0–8.0	7.0	8.0–13.0	11.0	2,000	70	0.27	1.4
Roller-Packer	70–90	85	4.5–7.5	6.0	7.0–12.0	10.0	2,000	40	0.16	1.3
Mulcher-Packer	70–90	80	4.0–7.0	5.0	6.5–11.0	8.0	2,000	40	0.16	1.3
Rotary Hoe	70–85	80	8.0–14.0	12.0	13.–22.5	19.0	2,000	60	0.23	1.4
Row Crop Cultivator	70–90	80	3.0–7.0	5.0	5.0–11.0	8.0	2,000	80	0.17	2.2
Rotary Tiller	70–90	85	1.0–4.5	3.0	2.0–7.0	5.0	1,500	80	0.36	2.0
Row Crop Planter	50–75	65	4.0–7.0	5.5	6.5–11.0	9.0	1,500	75	0.32	2.1
Grain Drill	55–80	70	4.0–7.0	5.0	6.5–11.0	8.0	1,500	75	0.32	2.1
Harvesting										
Corn Picker Sheller	60–75	65	2.0–4.0	2.5	3.0–6.5	4.0	2,000	70	0.14	2.3
Combine	60–75	65	2.0–5.0	3.0	3.0–6.5	5.0	2,000	60	0.12	2.3
Combine (SP)*	65–80	70	2.0–5.0	3.0	3.0–6.5	5.0	3,000	40	0.04	2.1
Mower	75–85	80	3.0–6.0	5.0	5.0V10.0	8.0	2,000	150	0.46	1.7
Mower (Rotary)	75–90	80	5.0–12.0	7.0	8.0–19.0	11.0	2,000	175	0.44	2.0
Mower-Conditioner	75–85	80	3.0–6.0	5.0	5.0–10.0	8.0	2,500	80	0.18	1.6
Mower-Conditioner (Rotary)	75–90	80	5.0–12.0	7.0	8.0–19.0	11.0	2,500	100	0.16	2.0
Windrower (SP)	70–85	80	3.0–8.0	5.0	5.0–13.0	8.0	3,000	55	0.06	2.0
Side Delivery Rake	70–90	80	4.0–8.0	6.0	6.5–13.0	10.0	2,500	60	0.17	1.4

Table 1. **Field Efficiency, Field Speed, and Repair and Maintenance Cost Parameters (Page 2 of 2)**

Machine	Field Efficiency			Field Speed			Est. Life	Total Life R&M Cost	Repair Factors	
	Range %	Typical %	Range MPG	Typical MPG	Range KM/H	Typical KM/H	H	% of List Price	RF1	RF2
Harvesting (continued)										
Rectangular Baler	60–85	75	2.5–6.0	4.0	4.0–10.0	6.5	2,000	80	0.23	1.8
Large Rectangular Baler	70–90	80	4.0–8.0	5.0	6.5–13.0	8.0	3,000	75	0.10	1.8
Large Round Baler	55–75	65	3.0–8.0	5.0	5.0–13.0	8.0	1,500	90	0.43	1.8
Forage Harvester	60–85	70	1.5–5.0	3.0	2.5–8.0	5.0	2,500	65	0.15	1.6
Forage Harvester (SP)	60–85	70	1.5–6.0	3.5	2.5–10.0	5.5	4,000	50	0.03	2.0
Sugar Beet Harvester	50–70	60	4.0–6.0	5.0	6.5–10.0	8.0	1,500	100	0.59	1.3
Potato Harvester	55–70	60	1.5–4.0	2.5	2.5–6.5	4.0	2,500	70	0.19	1.4
Cotton Picker (SP)	60–75	70	2.0–4.0	3.0	3.0–6.0	4.5	3,000	80	0.11	1.8
Miscellaneous										
Fertilizer Spreader	60–80	70	5.0–10.0	7.0	8.0–16.0	11.0	1,200	80	0.63	1.3
Boom-Type Sprayer	50–80	65	3.0–7.0	6.5	5.0–11.5	10.5	1,500	70	0.41	1.3
Air-Carrier Sprayer	55–70	60	2.0–5.0	3.0	3.0–8.0	5.0	2,000	60	0.20	1.6
Bean Puller-Windrower	70–90	80	4.0–7.0	5.0	6.5–11.5	8.0	2,000	60	0.20	1.6
Beet Topper/Stalk Chopper	70–90	80	4.0–7.0	5.0	6.5–11.5	8.0	1,200	35	0.28	1.4
Forage Blower							1,500	45	0.22	1.8
Forage Wagon							2,000	50	0.16	1.6
Wagon							3,000	80	0.19	1.3

*SP indicates self-propelled machine.

Source: *2003 Standards,* published by American Society of Agricultural Engineers, St. Joseph, Michigan, 49805.

Table 2. Remaining Values as a Percentage of List Price

	Equipment Type	C_1	C_2	C_3
1	30-79 HP Tractors	0.9809	0.0934	0.0058
2	80-150 HP Tractors	0.9421	0.0997	0.0008
3	150+ HP Tractors	0.9756	0.1187	0.0019
4	Mowers	0.7557	0.0672	—
5	Balers	0.8521	0.1014	—
6	Combines	1.1318	0.1645	0.0079
7	Swathers	0.7911	0.0913	—
8	Plows	0.7382	0.0510	—
9	Disks	0.8906	0.1095	—
10	Planters	0.8826	0.0778	—
11	Manure Spreaders	0.9427	0.1111	—
12	Skid Steer Loaders	0.7858	0.0629	0.0033
13	Vehicles	n/a	n/a	n/a

Equation for items 1–12: $RFV_n = 100[C_1 - C_2 (n^{0.5}) - C_3(AU^{0.5})]^2$
where

RFV_n = remaining value at the end of n years of age,
AU = annual hours of use, and
C_1, C_2 & C_3 are the remaining value coefficients developed from the ASAE standards.

Equation for item 13 (vehicles): $RFV_n = 0.15 * Price$
Source: *ASAE 2003*.

The "half year" convention used by the IRS is adopted for this publication. Therefore, all equipment is assumed to be purchased at mid-year and the ADEP for the first year is divided by 2.

With the MACRS (GDS) method, the yearly depreciation cost decreases as the book value declines in later years.

Capital Investment

The annual capital investment in each item estimated is then used to calculate opportunity interest, and THI costs. Equations for estimating annual capital investment for the two methods are

Straight-line

The average annual investment for depreciable assets is the value at the beginning of the item's useful life divided by years of useful life. When a straight-line depreciation method is used, the average annual investment is the average of the value at the beginning of the first year (i.e., PRICE), and the value at the beginning of the last year. The value at the *beginning* of year t is the value at the end of the year t-1, called the Remaining Farm Value (RFV), plus the depreciation taken in the year t-1 (DEP), so that

$$\text{Average Annual Investment}_t = PRICE_t + RFV_{t-1} + DEP_{t-1})/2$$

MACRS (GDS)

$$\text{Annual Investment} = \text{beginning year book value}$$

Interest

Funds invested in farm machinery come from one of two sources—either the farmer borrows funds or uses owner funds to purchase equipment. There is a cost of capital that should be charged in either case. In the first case, the charge is the interest charged by the lender for the loan. In the second case, the charge is the forgone interest that the farmer would have received from an alternative investment with the same funds. The interest earned by an investor is typically less than interest charged by a lender. The interest rate used in this publication is the "opportunity" interest rate on equity capital based on "one year" CD rates of 6%, which is projected to be representative of the rates available in 2003.

Average annual interest is calculated by multiplying the appropriate interest rate times the annual investment in the machine, which varies according to the depreciation method used. For the straight-line method, the opportunity interest cost is constant over the life of the equipment item. With the MACRS (GDS) method, the yearly opportunity interest cost decreases as the book value declines in later years.

Equations for estimating opportunity interest are

Straight-line

Opportunity Interest = average annual investment * interest rate

MACRS (GDS)

Opportunity Interest = beginning year book value * interest rate

Taxes, Housing, and Insurance

Taxes

In Arizona, farmers are assessed personal property taxes on all owned farm machinery.

Housing

Exposure of machinery to the sun and weather results in deterioration and a consequent loss in value. The cost of machinery housing is included. Although machinery may not be housed, a charge should be assessed to reflect loss of value beyond normal depreciation due to weather exposure.

Insurance

Machinery is insured against losses from fire, theft, vandalism, etc., and the premiums paid for this protection represent a cost of owning machinery.

Because THI costs vary from farm to farm, set standard percentages are used in estimating these costs. The American Society of Agricultural Engineers (ASAE) has derived typical percentages of average investment to charge to various machinery groups (see Table 3 on page X). The average annual THI cost is calculated by applying the appropriate THI percentage to the average investment in the machine. With the MACRS (GDS) method, the yearly THI cost lessens as the book value declines in later years.

The equations for estimating THI are

Straight-line

Table A. THI = average annual investment * THI rate

MACRS (GDS)

Table B. THI = beginning year book value * THI rate

where

THI rate = the appropriate THI percentage applicable to the machine, selected from Table 3.

Table 3. THI Percentage

Machinery Group	Taxes[a]	Housing	Insurance	Total
Tractors	1.0%	0.75%	0.25%	2.00%
Pickups & Automobiles	1.0%	0.75%	3.25%	5.00%
Heavy-Duty Trucks	1.0%	0.75%	3.25%	5.00%
Harvesters, Self-Propelled	1.0%	0.75%	0.25%	2.00%
Implements	1.0%	0.75%	0.25%	2.00%

[a] Farm machinery is assessed at 16% of its market value for tax purposes.

Source: *2003 Standards,* published by American Society of Agricultural Engineers, St. Joseph, Michigan, 49805.

Repairs

The cost of repairing machinery varies with hours of use. These costs are difficult to estimate because of wide variations among farmers with respect to their repair and maintenance policies.

The equation for calculating total repair cost is

$$\text{REPAIRS} = \text{PRICE} * \text{RF1} * \left[\frac{\text{accumulated hours}}{1000}\right]$$

where

REPAIRS = total accumulated repair costs
RF1 = repair factor 1 (see Table 1)
RF2 = repair factor 2 (see Table 1)

Agricultural engineers use a formula for estimating total repair costs over the life of the equipment; the same formula is used in this analysis.[5] The RF1 and RF2 repair factors are based on a statistical analysis of farmer records and they represent the relationship between accumulated repairs and machine use. These values include the costs of parts and labor.

Under the straight-line method (Table A), the average annual repair cost is calculated by dividing total accumulated repairs by years life.

Under the MACRS (GDS) method (Table B), the annual repair cost is calculated as the total accumulated repair cost through the current year, minus accumulated repairs for prior years. It should be noted that this method projects repair costs to be substantially higher as the equipment ages, as would be expected. Repair costs do not account for the fact that a warranty on equipment may take care of repairs for the first two to five years. Thus, the overall repair costs will be somewhat lower than reported in this publication.

Fuel and Oil

Fuel and oil costs vary with the hours of machine use and the extent of loading placed on the engine. A tractor of a given horsepower consumes more fuel per hour when working under a heavy load than under a light load. The extent of loading is expressed as a percentage of maximum horsepower utilized. Fuel and oil cost per hour is the annual cost of fuel and oil divided by the hours of annual use.

Equations used to estimate annual fuel and lubrication costs are

Tractors

$$\text{FUEL} = \text{FE} * \text{LOAD} * \text{PTO} * \text{PFUEL} * \text{USE} * 1.15$$

where

FUEL = annual fuel and oil cost
FE = fuel efficiency
FE (for gasoline) = $0.54 * \text{LOAD} + 0.62 - (0.04 * \sqrt{697 * \text{LOAD}})$
FE (for diesel) = $0.52 * \text{LOAD} + 0.77 - (0.04 * \sqrt{738 * \text{LOAD}})$
LOAD = load factor percentage (the ratio of engine power used to the engine power available) divided by 100
PTO = PTO horsepower of the tractor
PFUEL = price of a gallon of gasoline or diesel, including state and federal taxes to the extent applicable, or the price of diesel, including state sales tax
USE = hours of annual use
1.15 = a constant, which assumes oil cost at 15% of fuel cost

Other Powered Equipment

$$\text{FUEL} = \text{GPH} * \text{PFUEL} * \text{USE} * 1.15$$

where

GPH = FE * LOAD * PTO

Adjustments to Purchase Price

Ownership costs shown in Table A for each equipment item are a function of the purchase price of the item. Purchase prices used herein are "suggested retail prices" and are frequently higher than what a farmer will pay when the actual selling price is negotiated. Cost information for any piece of equipment can be modified using an "adjustment factor" to correct ownership costs to the price actually paid by the farmer.

[5] For a more in-depth discussion, see *2003 Standards,* published by American Society of Agricultural Engineers, St. Joseph, Michigan, 49805.

The equation for the "adjustment factor" is

$$ADJ = \frac{PRICE\ PAID}{PRICE}$$

where

ADJ = adjustment factor
$PRICE\ PAID$ = price paid by farmer
$PRICE$ = purchase price listed in this publication for each item of equipment as shown herein.

The "adjustment factor" can be applied to the ownership costs in Table A for the projected hours of annual use. The adjustment is accomplished by multiplying the factor times the cost shown.

$$DEPREC_{adj} = ADJ * DEPREC$$
$$OPPINT_{adj} = ADJ * OPPINT \text{ (average annual investment * interest rate)}$$
$$THI_{adj} = ADJ * THI$$

Since adjustment factors are only applied to the ownership costs, repair and fuel/oil costs are operating costs that *should not be* adjusted.

Presentation Format

Table 4 (page 9) lists the abbreviations for the equipment options used herein. Table 5 (page 10) identifies tractor models, associating common equipment model numbers with a nominal horsepower group. Horsepower ratings are *not* identical to the group name but are approximate.

The remainder of this report contains summary tables, showing the costs of owning and operating individual items of farm machinery. The information for each machinery item is contained in two tables.

Table A shows the constant average annual and hourly costs for ranges of assumed average annual hours of use. Depreciation is calculated using the straight-line method. All other costs are estimated to be the same for each year of life. The straight-line method assumes that the equipment will be kept either until it wears out or for a maximum period of 25 years.

Table B shows the annual change in ownership and operating costs as the item of equipment ages and its value declines. Yearly depreciation is projected using the 1 1/2 declining balance method in early years, then transitions to a straight-line method for remaining years. Table B depreciation (and all other costs) in year one is based on the assumption that the equipment item was purchased mid-year. This coincides with the "half year convention" described in the annual "Farmer's Tax Guide." With the exception of year one, depreciation is greatest in the early years and, accordingly, the book value declines more rapidly in the early years. This reflects the actual decline in market value of new items of equipment.

Other ownership costs (opportunity interest and THI) are based on beginning year book value and, therefore, these yearly costs decline in later years as the book value declines. Repair costs increase in later years to accurately show the increase expected with older equipment. Fuel/oil costs are based on hours of use and are the same each year if the hours are constant.

Table B information estimates how costs change as the equipment gets older. While constant average annual costs, as shown in Table A, are useful in planning and budgeting costs, it is important for farmers and vendors to be aware of actual cost changes over time.

Table 4. List of Abbreviations Used for the Equipment Options

Abbreviation	Option
AC	Air Conditioning
Art	Articulating
AT	Automatic Transmission
BC	Cotton Picker Basket Compactor
BU	Bushel
CAP	Capacity
CAT	Category Type Hitches
CC	Closed Cab with Air Conditioning
COMP	Compartment
DW	Dual Wheels
GW	Gauge Wheels
GT	Gear Transmission
HDC	Hydraulic Drum Control for Cotton Picker
HP	Horsepower
HS	Hydrostatic Transmission
LH	Left Hand Delivery Hay Rake
MFWD	Mechanical Front Wheel Drive
PB	Power Brakes
PC	Pressurized Cab
PS	Power Steering
PSB	Power Steering & Brakes
PTO	Power Takeoff
RAD	Radio
RC2	Row Crop Head for Forage Harvester, Number of Rows
RH	Right Hand Delivery Hay Rake
RG	Roll Guard
RGS	Roll Guard With Shade
SB	Step Bumper
SB14	Sickle Bar Head for Forage Harvester, 14.0 ft
SP	Self-Propelled
WP6.2	Windrow Pickup Head for Forage Harvester, 6.2 ft
2R	2-Row
5S	5-Speed Transmission
4WD	4-Wheel Drive
190BU	190-Bushel Bin Capacity

Table 5. Tractor Models Divided into Generic Tractor Groups by HP

Tractor, 25 PTO HP
FORD 1720 23.5 PTO
CASE IH 265 24 PTO
CASE IH 1130, 23 PTO

Tractor, 35 PTO HP
FORD 2120 34.5 PTO
JD MODEL 4600 - 35 PTO
CASE IH 395 35 PTO

Tractor, 40 PTO HP
CASE IH 3220 43 PTO
FORD 3430 38 PTO
CASE IH 495 42 PTO
Massey-Ferguson 231-S

Tractor, 50 PTO HP
CASE IH 3230 52 PTO
CASE IH 595 52 PTO
Massey-Ferguson 263

Tractor, 60 PTO HP
CASE IH 4210 62 PTO
FORD 5610 'SPECIAL' 62 PTO
CASE IH 695 62 PTO
Massey-Ferguson 271
FORD 4630 55 PTO

Tractor, 70 PTO HP
CASE IH 4230 72 PTO
FORD 6610 'SPECIAL' 72 PTO
CASE IH 895 72 PTO
Massey-Ferguson 281
JD MODEL 6210 - 66 PTO

Tractor, 85 PTO HP
FORD 7740 86 PTO
Massey-Ferguson 4253

Tractor, 100 PTO HP
CASE IH 5240 - 100 PTO
FORD 8340 106 PTO
CASE IH 1896 - 100 PTO
Massey-Ferguson 4270

Tractor, 135 PTO HP
CASE IH 8910 135 PTO
JD MODEL 7710 - 130 PTO
CASE IH 7110 130 PTO
Massey-Ferguson 8220

Tractor, 150 PTO HP
FORD 8670-MC9 145 PTO HP
JD MODEL 7810 - 150 PTO
CASE IH 7220 155 PTO

Tractor, 180 PTO HP
JD MODEL 8200 - 180 PTO
CASE IH 8930 180 PTO
FORD 8870-RC9 180 PTO

Tractor, 200 PTO HP, 4WD
MODEL 8300 MFWD - 200 PTO
CASE IH 8940 205 PTO
JD MODEL 8300 MFWD - 200 PTO
Massey-Ferguson 8270

Tractor, 250 Eng HP, Art.
JD MODEL 9100 260 PTO/235 EHP
CASE IH 9330 240 Engine HP
VERSATILE 9282 250 ENG HP

Tractor, 300 Eng HP, Art.
JD MODEL 9200 310 PTO/300 EHP
CASE IH 9350 310 Engine HP
VERSATILE 9482 300 ENG HP

Tractor, 350 Eng HP, Art.
CASE IH 9370 360 Engine HP
VERSATILE 9680 350 ENG HP
VERSATILE 9682 350 ENG HP

Tractor, 375 Eng HP, Art.
JD MODEL 9300 360 PTO/370 EHP
CASE IH 9380 400 Engine HP
VERSATILE 9880 400 ENG HP
CASE IH 9280 375 Eng HP

Tractor, Crawler, Rubber Track
CHALLENGER 65 - 256 Eng HP